

# The Krell EVO-402 Stereo Power Amp (and the EVO-202 Line-stage)

by Roy Gregory

If any single brand can be said to define the UK notion of the US high-end, then it's Krell. Big, heavy, hot and expensive, they exploded onto the British market in the mid-80s – often literally, until people got to realize the implications of DC offset in the popular Audio Research pre-amps with which they were so often paired. The amplifiers have evolved through many iterations since the heady days of JMH running three KSA 50s with his Magneplanar MG3as, losing cooling fans and growing heat-sinks, dropping the class-A claims and adopting various proprietary output topologies instead. Yet, in a classic case of “everything changes, everything stays the same” unpacking and installing the EVO-402 created such a strong sense of *deja-vu* that for a moment I thought I was back in the downstairs dem room at KJ.

First, there's the all enclosing casework; neater by far than the old KSAs, and lacking the signature handles, its complex extruded panels and extensive machining demonstrate the advances in CNC technology as much as the rise in the company's fortunes. Then there's the strict admonition in the manual to only connect tube pre-amps to the (DC blocking, capacitor coupled) single-ended inputs. Finally there's the weight; thankfully the 402 is devoid of sharp edges and is compact enough to get a decent hold of, but at 135lbs the question remains, how can something so (relatively) small weigh so much? The answer lies in the power supply and Krell's other great claim to fame; this was the first amplifier to popularize the notion of doubling its output into half the impedance. It wasn't the first amp to do it, but it was the first to make

those numbers stick in the public consciousness. The 402 sticks with tradition; two huge 5000VA transformers deliver peak output currents of 37A/channel and rated power of 400W into 8 Ohms and 800W into four. Running flat out that translates into a 6400 BTU/hr heat dissipation, giving this amp a carbon footprint that's equivalent in its cringe-worthiness to a very large SUV with a single child seat in the back.

Krell has ever been about conspicuous consumption and that hasn't changed.

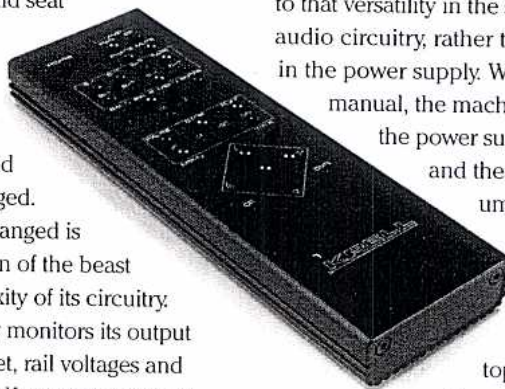
What has changed is the sophistication of the beast and the complexity of its circuitry. The 402 not only monitors its output current, DC off-set, rail voltages and temperature, it self protects and even tells the owner why it's shut itself down. The back panel offers three different input options (balanced, single-ended and CAST, which we'll get to later) as well as spade-only binding posts and a 20Amp power socket. The front panel switch glows red in standby, blue in operate and its LED can be defeated by a small switch on the rear. Inside, the circuit features Current Mode and Active Cascode topologies, Krell's way of telling you that this is a current (as opposed to voltage) amplifier, and uses multiple, parallel devices in each stage in order to minimize distortion. All those transistors, even sharing the load, generate all that heat, hence the four huge chimney slots that run top to bottom of the casework – ideal for warming ones gloves before winter morning training rides.

The 402 arrived accompanied by the more expensive of the two EVO line-stage options, the two-box 202. It offers all the usual versatility and user configuration options that we've come to expect these days, from individual input gain and balance to display functionality and input naming. More surprising is the fact that the 202 eschews current fashion by locating the microprocessor essential to that versatility in the same box as the audio circuitry, rather than off-board in the power supply. What's more, the manual, the machined recesses in

the power supply top-plate and the incredibly short umbilical supplied all insist that the two units are stacked directly on top of each other.

On paper at least, the claimed performance is extremely impressive. A fully complementary, zero-feedback circuit with extraordinarily wide bandwidth is supplied by a substantial power supply built around a 170VA transformer, four bridge rectifiers and 39600microF of reservoir capacitance. A separate transformer is used to supply the digital control and monitoring circuitry.

Now, even the most ardent fan of the Krell marque would be hard pushed to suggest that their pre-amps are held in the same esteem as their power amps – which brings us to CAST. This is Krell's proprietary system connection technology, allowing the signal to remain in the current mode rather than being converted to a voltage. In an all Krell set-up, the signal would remain thus ▶



▷ from the output stage of the front-end all the way to the output stages of the power amp, tying the system into a single entity as well as overcoming impedance issues related to inter-connect cables and product interfaces.



Of course, conventional socketry is also provided but Krell make no bones about their belief in the inherent superiority (and cost effectiveness) of the CAST approach. The fact that it ties you into their pre-amps is neither here nor there...

With so many interconnection options, which should you plump for? It took a while to get to grips with the optimum arrangement, not helped by the fact that the CAST and balanced outputs add 12dB of gain to the single-ended 'six. Comparisons of CAST to balanced (using Nordost Valhalla for the balanced runs) showed a clear preference for the livelier, more focused, more transparent and tonally more colourful presentation of the former. But the contest between CAST and single-ended is rather more

complex – and not just because of the level matching issues. The poise, dimensionality and smooth, even control of

the CAST hook-up definitely suffered in comparison to the added vitality, immediacy, micro dynamics and musical phrasing of a pair of single-ended Valhallas. The Nordost cables communicated far more directly with greater musical



substance and purpose, a greater range of tonal colour and shading. Open and shut then... Well, not quite. The problem with the single-ended connection was a hollowness, a recessed mid that made voices nasal,

almost slightly quacky in the case of Nanci Griffith. Handclaps and audience noise were robbed of substance and their precise location, all problems that became markedly more apparent as soon as you used a pre-amp other than the 202. The ACT 2, the Connoisseur and the Vibe/Pulse all came and went, suffering varying degrees of tonal indignity along the way. More troubling still was the disruption to their musical flow and integrity, the end results sounding mechanical and disjointed. It's tempting to point a finger at the input capacitors on the 402's single-ended connections – a theory borne out by experimentation with a whole range of different cables and an eventual switch to the excellent (and severely underrated) Supra Sword interconnects and speaker cables. Their much meatier sound helped to inject some much needed mid-band energy and presence. It still couldn't overcome the hurdle presented to the alternative pre-amps but (somewhat ironically) lifted the sound of the 202's single-ended outputs above the CAST alternative.

Of course, introducing a Krell source component or KPE phono-stage (which can be driven from the 202's power supply) might well change things again. In the meantime it's hard to escape the conclusion that getting the best from the 402 means using a Krell pre-amp, making this arguably the most expensive three-box integrated in the world!

Just to further muddy the waters, the EVO-202 is itself exceedingly picky with inputs – and differently to the power amp. Here (with no Krell disc player or phono-stage on hand and thus no CAST option available) the balanced connections from both ▷

► the Wadia 861SE and the ARC CD7 were dramatically more satisfying than the single-ended alternatives. The phono sockets delivered a dynamically flat sound lacking in texture but more importantly, musical cohesion and tension. Switching to balanced restored the musical presence and vitality, as well as the feeling of pace and flow. Where the single-ended inputs let your attention wander, failing to capture or stretch the musical moment, the XLRs fastened you to your seat, daring you to turn away, egging you on to wick it up. With 400 Watts on tap, the Krells go loud, they do it without any sense of strain and they positively encourage you to use the facility.

Oh, and one final thing; both the 202 and 402 allow you to switch off their pretty blue displays and status lights. Do it! Perhaps it's a reflection of the astonishingly low noise floor, but killing the lightshow, whilst it makes the Krells look a lot less impressive certainly adds a welcome additional sense of flow and freedom to their musical delivery, making performances more engaging and expressive. There are few products I've heard in which the benefits are quite so obvious (or beneficial).

By now you'll have gathered that it took a while to get the best out of these amps. Was it worth the bother? Well, as a customer you'd expect your dealer to sort all that out, but it also depends on what you are looking for in a system. With the requisite care devoted to configuration and cabling – and a considerable warm-up time from switch-on\* these Krells offer one of

\* Thankfully, both the 202 and 402 have standby modes that keep the audio circuits warm, but expect a good two to three days for them to hit their stride from stone cold.

the most unflappable and controlled sounds around. If you're a solo instrument, acoustic recording, sonata or solo female vocal kind of guy then you're

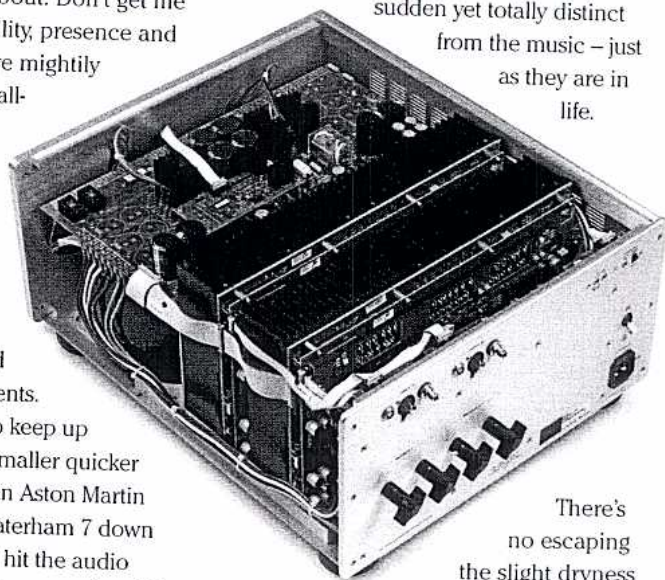


going to crave the intimacy and breathy immediacy that you get from little amps and efficient speakers. That's not what these amps are about. Don't get me wrong; their stability, presence and dimensionality are mightily impressive on small-scale works, giving singers a physical substance and delivering a palpable sense of acoustic space, particularly around individual instruments. But they struggle to keep up with the agility of smaller quicker systems, a bit like an Aston Martin trying to chase a Caterham 7 down a country lane. But hit the audio equivalent of the open round and the Krells simply take off.

Power-chords stacked on top of each other or the six-lane blacktop of the Gorecki *3rd Symphony* take on a sweeping power and presence that

builds with a magisterial substance and scale. The crashing layers of the Cure's *Head On The Door* (an overlooked and seriously underrated masterpiece out now in a deluxe edition) have both the impact and the structure they demand. The opening of the Gorecki builds with a gloriously inevitable sweep as the music swells to fill the massive stage. This new live hybrid SACD recording from Polski Radio ([www.polskieradio.pl/raf/](http://www.polskieradio.pl/raf/)) offers a fabulously heartfelt and emotive performance conducted by the composer himself. The Krells imbue it with a stately poise and steady purpose based on the

separation and stability of the instrumental voices within the orchestra, as well as the beautiful initial fragility and blossoming power of soprano Zofia Kilanowicz' singing. Incidental noises within the audience and orchestra are sudden yet totally distinct from the music – just as they are in life.



There's no escaping the slight dryness that these amps bring to music (although it's significantly diminished over earlier Krell designs). It's a tendency that exaggerates the distance between digital and analogue sources, leaving me playing a lot ►

▶ of vinyl but also wondering just what a Krell disc player would bring to the mix. The easy, relaxed flow and energy of the TNT/Titan-i combination, played through the latest Groove Plus proved a perfect foil to the Krells' grip, control and seemingly boundless reserves of level and power. I also have a sneaking suspicion that they like to work, preferring a speaker load that gives them something to get their teeth into. With the relatively benign characteristics of the Isis, they always delivered better results at higher levels, once they'd broken sweat. Something more demanding, like a B&W 800D would be meat and drink to them; a potentially awesome combination.\*



Take a look at the numbers on these amps (the excellent Krell website is the best way to do this) and it's hard not to be impressed, not just by their scale but also by their sheer scope. The range of connection options (audio and control) is pretty mind-boggling, but they pale into insignificance against the astonishing electrical capability of this, the smallest amp in the EVO range!

\* Somewhat belatedly I was able to try an all CAST connected set-up driving Wilson System 8s, an experience that confirmed both the suitability of the speakers and the incredibly low grain and noise floor of the CAST configuration. Resolution of information was phenomenal (quite possibly the best I've ever experienced) with incidental sounds in recordings becoming instantly identifiable. But "identifiable" and "believable" are two different things, and for me the CAST connections still lack the palpable life and presence that comes from the very best cables – albeit at a price.

Those numbers will leave you in no doubt that the Krell EVO amps are about real muscle – operationally as well as musically. Like a Bentley Coupe, there might be quicker or more agile amps, but there are few that are more luxurious yet offer the same sense of sheer power. What's more, you can be confident they'll deliver that power under pretty much any and all circumstances.

These are amps that put musical inclusion ahead of all other qualities; they'll play whatever you throw at them, no matter how big or small. They'll encompass the scale of even the loudest concert or orchestra, never displaying the slightest disquiet.

They deliver phenomenal control of detail in an utterly unvarnished or exaggerated way. They are fuss-free and fail-safe in operation, as well as incorporating everything you might need to include them in a multi-room or multi-channel set up. They represent,

in so many ways, the modern face of the US high-end, putting musical and practical versatility before that last ounce of emotional communication. The question they ask is how you listen and what price you're prepared to pay for that intimacy and connection. Something tells me that these amps are secure enough in their capabilities to be undisturbed by your response. Their utter self-confidence is sobering and they clearly believe that there are enough listeners out there who'll simply

love what they do as well as the way they do it. Be honest with yourself and you might well be one of them. ▶+

#### TECHNICAL SPECIFICATIONS

##### EVO-202 Pre-amp

Type: Two-box solid-state line-stage  
 Inputs: 2x CAST  
 2x balanced XLR  
 3x single-ended phono  
 1x single-ended tape  
 Gain: 12dB (CAST or balanced inputs)  
 6dB (single-ended inputs)  
 Outputs: 2pr CAST  
 1pr balanced XLR  
 1pr single-ended phono  
 1pr single-ended tape  
 Dimensions (WxHxD): 438 x 97 x 464mm ea.  
 Weight (combined): 20.8kg

##### EVO-402 Power amp

Type: Stereo solid-state power amp  
 Inputs: 1pr CAST  
 1pr balanced XLR  
 1pr single-ended phono  
 Input Sensitivity: 3.04V (balanced or single-ended)  
 Input Impedance: 100kOhms (single-ended)  
 200kOhms (balanced)  
 Output Power: 400 Watts/8 Ohms  
 (both channels driven) 800 Watts/4 Ohms  
 Output Current: 37 Amps peak  
 Damping Factor: 125 (20Hz-20kHz, 8 Ohms)  
 Dimensions (WxHxD): 438 x 248 x 560mm  
 Weight: 61.1kg

##### Prices –

EVO-202 £12000  
 EVO-402 £12000

##### UK Distributor:

Absolute Sounds  
 Tel. (44)(0)208 971 3909  
 Net. [www.absolutesounds.co.uk](http://www.absolutesounds.co.uk)

##### Manufacturer:

Krell Industries Inc.  
 Net. [www.krellonline.com](http://www.krellonline.com)