

Krell Evolution 302e Stereo Power Amplifier

December 15, 2012



Following my tour of the the YG Acoustics factory, Yoav Geva sent me a pair of his Carmel loudspeakers for audition (review forthcoming). YG Acoustics uses a dCS digital source and Krell amplifiers in its listening room, as well as when demonstrating its products at trade shows. Fortuitously, I had been in discussions with Bill McKiegan, President of Krell, about possible components for review. To duplicate YG Acoustics listening room setup as closely as possible, I asked to review Krell's new Evolution 302e power amplifier, and Bill was kind enough to accommodate me. Although, I did not have a dCS Scarlatti stack at my disposal, I did have the dCS Debussy DAC on hand for playback of digital audio files (review also forthcoming). All together, it is a system with few peers in its price range.

Krell has been among the top echelon of high-end audio manufacturers for over three decades. I doubt there are many audiophiles out there who haven't had, or at least aspired to own, a Krell amplifier at one time or another during their journey toward sonic nirvana. Even twenty year old models command premium prices on the used market, a testament both to their sound quality and reliability. Though Krell went through a hiccup a few years ago when Dan D'Agostino left to form his own company, it quickly regrouped, and with its management and engineering teams intact, has come out with a steady stream of state-of-the-art products which have met with universal acclaim. I think they are in a better position now than at any time in their history, with a comprehensive, but highly rationalized, offering of components and loudspeakers.

At \$12,500, the Krell Evolution 302e lies the sweet spot of Krell's stereo amplifier line. Below it lies the 250 watt/channel Evolution 2250e and above it the 400 watt/channel Evolution 402e. More power requires that you shift to monoblock

configuration, with the Evolution 400e, Evolution 600e, and Evolution 900e providing 400 watts, 600 watt and 900 watts, respectively, at 8 ohms. All of Krell's power ratings are specified at 0.1% THD from 20Hz to 20,000Hz with all channels driven. Krell also offers multi-channel amplifiers for home theater in the form of the upgradeable S-1500 five, six or seven channel amplifier, and the Evolution 3250e and 403e three channel amplifiers. Now \$12,500 is a lot of money in anyone's book, but compared to other top tier amplifiers with similar power ratings, its price is downright affordable. It is also all the amplifier you are ever likely to need, unless you have large, hard to drive loudspeakers in an enormous room. It also may be the last amplifier you ever buy.

There is no getting around it: the Krell Evolution 302e is a beast. It arrived double-boxed in a foam cocoon strapped down on a custom vacuum-formed particle board pallet. Getting it back to my listening room through the maze which is my house was tricky, but not nearly as tricky as it would have been had stairs been involved. Weighing in at 120 pounds, I was just able to wrestle it out of its packaging and pin it down between my speakers. It is easily three times the size of my reference Meridian 557 amplifier, in large measure due to its over-specified 3000 VA toroidal transformer, which allows the amplifier to double its output power as impedance is halved, providing 300 watts/channel into 8 ohms, 600 watts/channel into 4 ohms, and, for demanding speakers, 1200 watts/channel into 2 ohms. Its peak current output is an astounding 35 amps. Notwithstanding its size, however, once I got back to my listening seat, I was surprised at how elegant it looked, in an understated way, in its aluminum enclosure. This is definitely a component you will want to have on display.



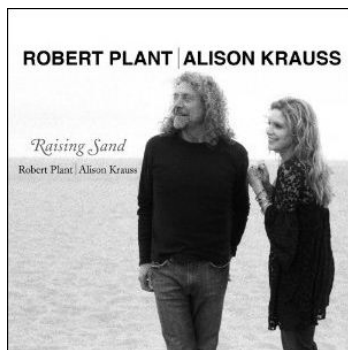
Operation is straight-forward. I used the heavy gauge power cable supplied with the unit because none of my power cords were equipped with the required 20 amp IEC connector. After removing the shorting pins, I connected the balanced leads from the dCS Debussy, and then connected my speaker cables to the two pair of hurricane-style, spade-only, speaker binding posts. They tighten down securely with a minimum of effort. Unbalanced inputs, as well as Krell's proprietary CAST inputs, are also provided. I flipped the power breaker switch on the back panel to put the amplifier in standby, and the halo around the front power button glowed green. In standby, the unit draws only 2 watts of power, meeting EU standards and saving you a boatload on your electric bill. Pre-existing Krell 302s can be upgraded to the more efficient "e" status. Pressing the front panel button set off a series of relay clicks. The power indicator pulsed blue before settling down to a steady glow indicating the amplifier was ready for use. When taken out of standby, a myriad of small internal red LEDs visible through a plethora of ventilation slots light up. The amplifier is completely silent and the top panel was never more than moderately warm to the touch at any time, even when listening at elevated levels, indicating that its massive heatsinks were fulfilling their intended function.

The Evolution 302e uses Krell's patented Active Cascode Topology. I'm no electrical engineer, so rather than paraphrase Krell's explanation and get it wrong, I'll just give it to you straight from the horse's mouth:

Krell's new Active Cascode Topology™ is a significant departure from traditional amplifier circuits where the positive and negative rail voltages are each applied entirely across a single row of transistors. High voltage swing and gain requirements dictate that the transistors be "pushed" into non-linear operating regions and, in some cases, dangerously close to breakdown. Krell topology divides the full voltage swing across multiple rows of transistors, and all devices are active-biased (i.e., they all carry the audio signal). Because individual transistors in the cascode array "see" only a proportional fraction of the rail voltage, they operate in a region that provides optimum linearity, gain, and safety. And because the devices are not being pushed to their limits, the amplifier runs cooler and more reliably. The improved linearity and stability greatly reduces the need for negative feedback, which is known to cause sonic degradation. Krell Evolution power Amplifiers use only 14 dB of feedback throughout the topology—a small fraction of the amount implemented in typical designs.

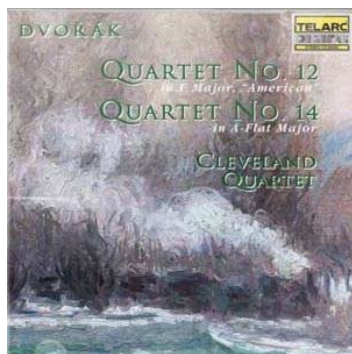
Sounds good to me. What impresses me is the innovation. This is not just another cookbook solid-state amp with a high price tag. Krell is pushing the envelope in amplifier design.

Before getting down to individual albums, let me say that my overall impression of the amplifier is that it has tremendous bass weight and articulation, and, at the same time, tremendous clarity and detail, including an extended and airy high end. Changing from my reference Meridian 557, which is known for its laid-back presentation, it was as if everything snapped into focus. All of the details on the recording were laid bare. At first, I thought it sounded on the clinical side, though as I got used to its sound, I came to appreciate its neutrality. There was no euphonic coloration of any kind being added. That is not to say its midrange was sterile. To the contrary, when the midrange was lush on a recording, so too was the Krell. Regardless of volume level, power is delivered effortlessly. It is a "just the facts, ma'am" amplifier which will reveal the sonic personality of your upstream components and cables. Which is as it should be.



First up was Robert Plant's and Alison Krauss's recent *Raising Sand* album. The opening cut, *Rich Woman*, has a pounding beat from the kick drum and bass, which is visceral. There is no bloat as the pedal strikes the drumhead. It is a clean whack which sets the beat with a punch to the chest, starting and stopping instantly. The bass guitar, which is at a lower frequency, lays a firm foundation, with each note distinct, giving the sound a pulse-like quality. The Evolution 302e is obviously exercising great control over the low end. Interesting, in *Sister Rosetta Goes Before Us*, it sounds as if the drumhead has been loosened, as the bass drum changes tone and vibrates more freely, but is never flabby. *Polly Comes Home* demonstrates just how deep the bass drum can go. Now the floor was shaking. At the same time, the lead electric guitar accents emerge crystalline through the underlying beat, and the vocals reveal themselves from the background

on their own plane. Alison Krauss's ethereal vocals on *Trampled Rose* literally soar above the music, and the dobro carves out its own distinctly resonant corner to the right. Robert Plant's and Alison Krauss's duo on *Stick with Me Baby* demonstrates the ability of the Evolution 302e to resolve the ever so slight physical separation of their vocals. The dense arrangement of *Nothin'*, which could become congealed with a lesser amplifier, is easily sorted out. Each of the many strings of the autoharp in *Your Long Journey* is audible without losing their marvelous blended tone. *Raising Sand* is a *tour de force* and a delight to listen to with the Evolution 302e.



With the astonishing weight and clarity of *Raising Sand*, I was interested to see if the Evolution 302e was capable of accurately reproducing the warm tone and subtle nuance of the purely acoustic instruments of a string quartet. I chose Dvorak's *String Quartet No. 12 in F major, Opus 96 "American"* performed by the Cleveland String Quartet on a Telarc recording. Written during Dvorak's 1893 visit to the United States, it is said to have been influenced by American folk songs, much as many of his other works were influenced by the folk melodies of his native Bohemia. The first movement, *Allegro ma non troppo*, begins with the viola introducing a lively pastoral theme. Tuned one fifth below the violin, the viola has a deeper, richer tone. Here it is beautifully captured, and is easily distinguished from the first violin with its resonant woody texture. What is marvelous is how all the instruments are easily identified within the

soundscape without having them spotlighted. It allows you to focus on the interplay of tonal parts without losing the fabric of the whole. In the second movement, the cello is featured more prominently, and provides an underlying framework for the back and forth of the violins and viola. Its tone, like that of the viola, is rich and resonant, and the macro dynamic contrasts are startling, especially on the pizzicato notes. Though you would never confuse its presentation with that of a tube amplifier, the Evolution 302e is anything but cold and calculating, instead being tonally neutral, allowing the instruments to speak for themselves. The final two *vivace* movements are light and energetic, bouncing along to a rousing conclusion. Pace and timing are among the amplifier's strong suits.



Correctly reproducing male and female vocals is the gold standard for audio components. With that in mind, I cued up *Cecilia and Bryn*, a collection of opera duets between soprano Cecilia Bartoli and bass-baritone Bryn Terfel on the Decca label. The disc starts off with *Cinque...dieci...venti*, the instantly recognizable interchange between Figaro and Susanna from Mozart's *The Marriage of Figaro*, as Figaro measures the room for the marital bed. Figaro's voice is deep and nuanced. Susanna responds in her upper register, which on lesser components, runs the risk of sounding harsh. Such is not the case with the Evolution 302e; the high frequency is extended without a hint of glare or etching. When singing together, their voices blend seamlessly yet retain their distinct location in space. In the infectious *Pa-Pa-Pa-Papageno* from Act II of Mozart's *The Magic Flute*, Papageno and Papagena enter from the left

and right and approach one another, exchanging call and response. I generally visualize music being performed, and the movement of the two is lucidly portrayed. The pa-pa-pa is breathy, yet there is no sibilance. Again, the very high notes sung by Papagena are smooth and seem to go on forever. The duet *Dunque io son...tu non m'inganni* from Rossini's *The Barber of Seville* contains vocal fireworks with each performer executing almost impossibly fast sequences of notes. The diction is perfect, with each syllable enunciated clearly. The micro dynamics of the vibrato style are captured exquisitely, vocal tone is reproduced beautifully, and the emotion is conveyed convincingly.

Conclusion

After spending three months with the Krell Evolution 302e, the only conclusion possible is that it is, quite simply, a killer amplifier. With nearly unlimited power reserves, tight-fisted control of the low frequencies, a marvelously detailed and neutral midrange, and an open and extended high frequency, the Evolution 302e checks all the boxes. Add to that innovative design, meticulous execution, and alluring aesthetics and you have the complete package. If you are interested in getting off the upgrade train, a stop at Krell station to pick up an Evolution 302e is a sure way to a lifetime of musical enjoyment. Having to return it is the coal in my stocking this year.

- Frank Berryman

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Associated Equipment

Analog Source: VPI Scout; Dynavector 20X2; Musical Surroundings Phenomena II
Digital Sources: Meridian G08; Mac Mini; dCS Debussy; Wadia 121; Halide Design Bridge and DAC HD; Pure Music
Preamplifiers: Meridian G02, Meridian G68ADV; Power Amplifier: Meridian 557
Loudspeakers: Magnepan 1.7, Meridian DSP5500; YG Acoustics Carmel
Analog Cables: Kimber KS1016 and KS1116; Digital Cables: Kimber D60; Meridian Digital Link; Wireworld Starlight USB
Speaker Cables: Kimber KS6063 and KS9033; Power Cables: Kimber PK10G and PK14G
Accessories: GIK acoustic treatments; dedicated 20 amp circuit; Audience aR2p power conditioner