



KRELL SOLO-375XD 375w Monoblock power amps class-A w/ iBias technology / cast

KL 15 AM S375

NZ\$32,995.00 pr (incl. GST)

A comment on the new Krell sound from our XD upgraded amplifiers...Initially, there's no comparison between the two models (pre and post XD upgrade) – the jump in resolution and musicality is massive. It's like they are channeling the sound that made Krell famous, while incorporating the changes in technology that have come to be over the last 35 years



Krell Class A iBias Technology

Krell's new line of iBias amps promise class A performance without the usual pitfalls—high power consumption and lots of heat. The new amps use a fan-cooled chassis to pull off that trick and the result is a series of highly powerful yet compact amplifiers. The new iBias design allows the amp to actively measure the current flow to the speakers and adjusts the amps bias to meet demand—if full power is called for, then full power is what you get. However, if full power is not needed, the amp adjusts the bias so that energy isn't wasted the way it is in traditional class a designs.

The new amps fit in a standard rack—something that was not possible with old-school Krell amps. This was achieved by using ultra-quiet fans—active ventilation. That makes these new amps a great fit for high-end audio and home theatre installations. The new amps are as transparent and dynamic as we have come to expect from Krell.

Krell's history is rich with breakthrough Class A amplifiers that have helped build the Krell legacy of offering the best sounding amplifiers available. Audiophiles have always considered Class A technology to be the best sounding operating state for amplifiers. However, despite Class A's unrivaled sound quality, it has fallen out of fashion because of recent demands to reduce power consumption and heat in home electronics products. Krell engineering took this challenge and redefined the meaning of high performance power amplifier. Our goal - unmatched performance, elegant design, and a compelling array of features. The breakthrough - a patent pending circuit delivering Class A operation without the excessive heat and wasted energy of conventional designs, housed in a striking new form factor, with network connectivity for advanced access and monitoring. The sound is open and unconstrained, in a manner that rivals live performance and the true sound of voices and instruments. Music and dialogue are reproduced with a richness, detail, and startling dynamics that fill a room.

When developing the SOLO375-XD, David Goodman, our Director of Product Development, whom has been with Krell since 1987 and was largely responsible for design work on all Krell products, discovered that with modifications to the output stage, we could vastly improve sound quality, across the board, to all of our amplifiers.

THE RESULT

A deeper, darker, blacker background that provided significantly better macro and micro dynamics, more silence between the notes. Vocals and midrange took on an organic, yet more vibrant tone, enabling us to hear much more body, and even though our amps were great before, there was a very significant improvement.

The speakers disappeared; yet, instruments were more focused with appropriate size and specific soundstage locations. All in all, a much better sounding, much improved experience that was easily, immediately heard by all that listened.

Plainly stated, Class A designs are the most musically accurate circuit topology available. Class A amplifiers do not suffer from the inherent distortions that all Class AB amplifiers experience. In a traditional Class A design, the output transistors conduct

full current at all times regardless of the actual demand from the speakers. Often, only a fraction of this power is needed to reproduce an audio signal at normal listening levels. The rest of the power is dissipated through the amplifiers heat sinks, producing large amounts of wasted heat. With Krell's iBias™ technology, bias is dynamically adjusted, so the output transistors receive exactly as much power - but only as much power - as they need.

Krell's iBias Class A technology allows our latest amplifiers to run in full Class A mode to full power while minimizing heat generation. Previous efforts at using a "tracking" bias, while effective, only measured the incoming signal and set bias levels from this information. Our new patent pending iBias technology significantly elevates the effectiveness of previous designs by calculating bias from the output stage. This seemingly small change in topology results in a dramatic improvement in sound quality, especially midrange richness and purity.

The core of the technology is an innovative, patent pending design for a dynamic intelligent bias circuit. Our iBias Class A circuit directly measures the output current of the amplifier and adjusts the bias to the optimum level. Because iBias Class A measures the output current, the real time demands of the specific speaker connected to the amp are directly incorporated into the circuit function. In addition, iBias Class A even reduces the bias when the signal is at very low levels, making its operation undetectable by ear and even by standard amplifier measurements.

In sliding bias schemes, the circuit merely estimates how much bias is needed based on the input signal and an "assumed speaker load." Compared with iBias Class A, these sliding bias technologies are much less effective - and much less accurate.

Power Supply Highlights

Power supply technology has always been an important contributor to the Krell sound. The power supplies of our Krell iBias Class A amplifiers have been optimized for use with the iBias circuit. Depending on the model, up to four toroidal transformers feed amplifier modules that include the audio circuitry, rectifier, and power supply filtering mounted to an individual heat sink. This design shortens the electrical path from the power supply to the output transistors, reducing the overall impedance and allowing the circuit to respond faster and control the speakers even better and more accurately.

Unlike traditional Class A amplifiers, iBias Class A amps have a compact design that allows rack-mounting, making them ideal for custom installation as well as traditional audiophile systems. This convenient form factor is made possible through thermostatically controlled ventilation fans. The fans used are specifically chosen for quiet operation, and operate at the speed required to maintain the ideal internal temperature. They run only during periods of peak energy demand - when the music is at its loudest - so they are inaudible in normal use.

Network Connectivity

The new amplifiers include RJ 45 Ethernet connectivity and an internal web page that is accessible from any smartphone, tablet, or laptop. Network connectivity brings convenience, monitoring, and reporting to end users. Amplifier configuration options include display brightness and timeout. For energy conservation, the amplifiers can be programmed to power off at a preset time of inactivity. Individual channels can be muted and firmware updates can be initiated from the web server.

Once the amplifier is connected to a network router with Internet access, the amplifier's advanced protection systems are now viewable on an Internet-connected device. Excessive current, output DC, fan speeds, short circuit, and overheating are all monitored in real time. If an issue occurs, the fault is displayed on the front panel and reported on the web server interface. Emails will automatically be sent to as many as three email addresses to notify the end user and/or the dealer of the condition.

Circuitry Highlights

The new iBias circuitry is built on a foundation of core Krell circuit technologies. All signal gain is realized in the current domain using proprietary multiple-output current mirrors with extraordinary open loop linearity. Each amplifier channel uses all discrete components. There are no generic integrated circuits or op amps used anywhere. Gain is distributed among several stages, allowing each to have a large linear operating area.

Audio signal voltages are converted to current at the amplifier input, and the audio signal remains in the current domain throughout the entire amplifier. Current mirrors in the final gain stages use a new output power device that operates at a 73% higher voltage, delivers almost 10% more current, and offers 120 watts of additional power handling capability as compared to other devices. With this combination, the iBias amplifiers may now deliver substantially more power while using a smaller footprint. Normally used in demanding, high-bandwidth video circuits, these transistors allow the design of gain stages with superb accuracy and very low distortion. The signal path is fully complementary and fully balanced from input to output. Independent complementary pre driver and driver stages for the positive and negative output transistors make the output stages extremely fast and linear. This unique circuit is impervious to low-impedance or reactive loads; it simply drives any loudspeaker with absolute confidence, achieving the very best possible sonic results.

Most amplifiers use coupling capacitors in the signal path to block DC and prevent damaging offset voltages from reaching your speakers. Krell amplifiers are fully direct-coupled, with no capacitors in the audio signal path. This design gives the Krell amplifiers lower internal impedance, which allows firmer, more precise control of your speakers. It also provides flatter, more extended low-frequency response, because coupling capacitors not only block DC but also affect the lowest bass frequencies. Krell employs expensive, non-intrusive DC servos that remove DC without impacting the musical signal. Thus, the iBias Class A amplifiers deliver the full breadth of the music with detail, impact, and space intact.

Krell CAST™

Reserved for the Solo 375 and Solo 575 is our CAST inputs and circuitry. Current Audio Signal Transmission, termed CAST, is a revolutionary method of connecting analog audio components for unparalleled sonic performance. In traditional audio systems, each component is a discrete entity with unique characteristics that act upon the musical signal independently. Each component is unaware of the other components in the system. The cables that connect the components also have their own electrical characteristics, which affect the sonic presentation of the entire system. Krell CAST™ unifies individual components and interconnects them into an electrically linked whole. The original signal remains unaltered from source to speaker. Still equipped with standard connections for use with other components, the full expression of Krell technology is realized when the system is connected using Krell CAST MMF interconnects. Krell CAST connected systems offer significant improvements in every performance area: speed, precision, dynamic range, depth and width of the sound stage, transient impact, and tonal balance.

Everything Audiophiles and Home Theater Fans Could Want in an Amplifier

Krell iBias Class A amplifiers are the first to deliver the rich musicality of Class A amplifiers, the uncompromised dynamics of classic Krell amplifiers, and the efficiency and low power consumption of Class G and H amplifiers.

Because the iBias circuit eliminates crossover distortion, the amplifier is able to resolve more of the detail and microdynamics in even the best analog recordings. Simply put, the music breathes. Whether an iBias amplifier is called on to reproduce the extreme dynamic range of high-resolution digital files, the minute intricacies of a 45-rpm, 180-gram vinyl record, or the complexity of today's latest blockbuster action film, it does so without altering or abating the music in any way.

The iBias amplifiers' unprecedented ability to retrieve the subtlest details gives their sound an incredible dimensionality, with an ambient, broad and extraordinarily deep soundstage. As spacious as the sound is, though, the amplifiers are still able to produce pinpoint stereo imaging if the recording calls for it.

It's all the power and control for which Krell has always been famous, with a level of resolution and musicality in the midrange and treble that has simply never been heard before.

In short, the new patent pending iBias Class A Krell amplifiers give today's audiophiles and home theater fans everything they could possibly want in an amplifier.

Specifications

Output power

300 W RMS at 8 Ω
540 W RMS at 4 Ω

Frequency response

20 Hz to 20 kHz +0, -0.13 dB
0.5 Hz to 100 kHz +0, -3 dB

Signal-to-noise ratio

>98 dB, wideband, unweighted, referred to full power output
>116 dB, "A"-weighted

Gain: 26.2 dB

Total harmonic distortion

<0.045% at 1 kHz, at 400 W, 8 Ω
<0.17% at 20 kHz, at 400 W, 8 Ω

Input Impedance

Single-ended: 100 kΩ
Balanced: 200 kΩ

Input sensitivity

Single-ended or balanced: 2.4 V RMS

Output voltage

138 V peak-to-peak
49 V RMS

Output current: 16 A peak

Slew rate; 40 V/?s

Output impedance: <0.017 , 20 Hz to 20 kHz

Damping factor: >470, 20 Hz to 20 kHz, referred to 8 ?

Power consumption

Standby: 4 W

Idle: 180 W

Maximum: 1600 W

Heat output

Standby: 13.7 BTU/hr.

Idle: 615 BTU/hr.

Maximum: 5677 BTU/hr.

Inputs

2 single-ended via RCA connector

2 balanced via XLR connector

Outputs; 2 pairs binding posts

Dimensions; 434 mm W x 194 mm H x 536mm D

Weight

36.4 kg (shipping)

31.8 kg (unit only)

Review

I've never encountered another amp that combines the Solo's 375 warm, wonderful, involving sound with such a practical and versatile design. - Brent Butterworth

REVIEW SUMMARY: Spending this sort of money on a pair of mono-block amps is a lot, but the Solo 375 delivers a lot. It combines a very smooth, un-solid-state, un-hill sound with loads of power and dynamics, plus a design that works great whether you're plopping the amps on the floor by the speakers or shoving them out of sight into a closet or equipment cabinet. In fact, I'd go so far as to say I've never encountered another amp that combines the Solo's 375 warm, wonderful, involving sound with such a practical and versatile design.

Link

<http://www.audioreference.co.nz/product/krell-solo-375xd-375w-monoblock-power-amps-class-w-ibias-technology-cast>