

CENTAUR II 500/ stereo power amplifier

constellation



Double the power of Centaur II Stereo

Ultra-high-A toroidal transformer from Hercules II

New capacitor bank with increased power capability

500 watts per channel into 8 ohms, 1,000 into 4 ohms

Fully discrete balanced bridged circuitry for unsurpassed fidelity

When our “dream team” of the world’s finest audio engineers created the Centaur II Stereo, they soon realized that they’d accomplished more than they expected. The numerous upgrades they’d made greatly increased the amplifier’s potential output, beyond even what the existing power transformer could deliver. “What would happen if we replaced that transformer with one of the transformers from the Reference Series Hercules II?” they wondered.

Centaur II 500 is the answer. It’s a stereo amplifier with double the power of the Centaur II Stereo, and the same power as a pair of Centaur II monoblocks. With 500 watts per channel into 8 ohms, doubling to 1,000 watts per channel into 4 ohms, the Centaur II 500

has enough muscle to product maximum performance from even the largest, most demanding tower speakers.

The Centaur II already enough power supply capacitance to handle the demands of a doubled power rating. However, we had to increase the maximum voltage of each of the 18 capacitors by 30 percent to handle the Centaur II 500’s higher rail voltages—which give us the nice side benefit of even greater total energy storage.

Because the overbuilt output stages and upgraded heat sinks from the Centaur II could easily handle the increased demands presented by the doubled power rating, we were able to achieve Centaur II 500’s incredible power output without

expanding the chassis. The end result is a fully optimized design in which every component works in concert, with performance uncompromised by any other component’s limitations.

Musically, this means that even on the most extreme dynamic peaks, with the most difficult-to-drive speakers, the Centaur II 500 always has plenty of energy to spare. No taiko drum, pipe organ or bass thumb slap can faze it in the slightest.

Incredible power, unmatched delicacy

Because the Centaur II 500 uses the same Balanced Bridged topology as the Centaur II Stereo, it delivers all the



Centaur II Stereo's musicality—plus an increase in headroom, more detail, and more authority in the bass at all listening levels.

Our Balanced Bridged design starts with a fully complementary topology, with separate circuits for the positive and negative halves of the audio signal. This doubles the slew rate and thus increases frequency response. What Balanced Bridged offers that other fully complementary amplifiers do not is that each amplification circuit is a separate, single-ended module using only N-type output transistors. Other complementary amplifiers use a mix of N-types and P-types, which means each half of the signal encounters a different amplification path. This inconsistency creates an imbalance that can obscure subtle details.

An added benefit to the Balanced Bridged design is that it is inherently stable. Unlike many high-powered amplifiers, it does not require a Zobel filter network at the output to damp high frequencies.

The ideal input stage

Such attention to detail in the output stage pays off only if the input stage is equally capable. For this reason, all of our amplifiers feature the same Line Stage Gain Module topology found in all of our preamps. The Line Stage Gain Module uses ultra-low-noise FETs and a unique servo circuit to maintain an essentially perfect balance between the positive and negative halves of the audio signal, even if the signal from the source device is not perfectly balanced.

The Centaur II 500 also includes a Direct input that, when used with a Constellation preamp, forms the Constellation Link. This connection bypasses the Line Stage Gain Module, thus removing an amplifier stage from the signal chain and increasing overall system transparency to a degree conventional preamp/amplifier combinations cannot equal.

Made to meet music's most extreme demands

Centaur II 500 is for audiophiles who refuse to compromise. Who refuse to shy away from large, demanding speaker loads because they might be difficult to drive. Who will not settle for less than realistic sound levels. Who insist that musicality and delicacy be preserved in the pursuit of effortless dynamics. With the Centaur II 500 in a system, all concerns about amplifier performance simply vanish—leaving nothing but the music.

SPECIFICATIONS

Inputs	2 XLR (1 for Constellation Link), 1 RCA, 3.5mm jack for 12V trigger, USB control jack
Outputs	metal binding posts
Power output per channel, 8Ω (1 kHz @ 0.05% THD+N)	500 watts
Power output per channel, 4Ω (1 kHz @ 0.05% THD+N)	1,000 watts
Power output per channel, 2Ω (1 kHz @ 0.05% THD+N)	1,600 watts
Frequency response	10 Hz to 100 kHz, +1/-0.5 dB
Gain	14 dB (Constellation Direct) 26 dB (balanced & RCA)
THD+N (1 kHz @ rated power)	<0.05%
Output impedance	0.05Ω
Damping factor (8Ω load)	160
Input impedance	100KΩ unbalanced, 200KΩ balanced
Output noise	<70 μV, 500 kHz BW, -116 dB @ 250 watts
Weight	150 lbs / 68 kg
Dimensions	11.5 x 18.75 x 24.25 in (hwd) 292 x 476 x 616 mm (hwd)

Constellation reserves the right to change designs, and / or specifications


 Audio That Inspires

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