

CENTAUR II

stereo/mono
power amplifiers

constellation



- New power supply with 3 times the capacitance
- Higher bias current for extended Class A operation
- 250 watts per channel into 8 ohms, 800 into 2 ohms
- Fully discrete balanced bridged circuitry for extraordinary fidelity
- Larger, deep-fin heat sink for efficient cooling and outstanding reliability

Think of Centaur II as a state-of-the-art race car with an upgraded engine. The amplification circuits are essentially the same as in the original Centaur, but the power supply is radically improved. Supply capacitance is now tripled, with 18 10,000-microfarad capacitors replacing the original six. With three times as much stored energy on tap, Centaur II now achieves even stronger deep bass response and more dramatic dynamics.

To make the most of Centaur II's expanded energy stores, we added a larger heat sink with deeper fins. With this additional cooling efficiency, we were free to raise bias current by 25 percent. The amplifier now spends more time running in Class A, which means less crossover distortion and better

retrieval of even the most minuscule musical details.

The new chassis is deeper and 40 percent heavier than the original. Yet the core circuitry, which made the original Centaur one of the world's most acclaimed amplifiers, remains the same. The concept, created by our "dream team" of audio engineers, was to combine multiple small, single-ended amplifier modules to achieve the power of a large amplifier. This gives us the delicacy and detail of a smaller amplifier with the power and dynamics of a large amp.

Perfectly balanced circuitry

Centaur II uses the same balanced

bridged circuit topology found in all Constellation Audio amplifiers. The fully complementary design uses separate amplifiers for the positive and negative halves of the signal, ensuring the lowest possible noise and the best possible frequency response.

Other complementary designs use different types of transistors to amplify the positive and negative halves of the incoming audio, resulting in an imbalanced signal. Centaur II instead uses only N-type output transistors. Along with other circuit refinements, the all-N-type design results in an essentially perfect signal balance—and fidelity exceeded only by our own Hercules II amplifiers.



Such perfect balance in an amplifier benefits the listener only if the incoming signal is perfectly balanced. To this end, Centaur II's input stage is the same Line Stage Gain Module found in the Virgo preamp. Like the rest of the amplifier, this stage is fully complementary, with separate circuits for positive and negative halves of the signal. By using hand-selected, low-noise FETs and servo circuits, the Line Stage Gain Module brings any incoming signal into essentially perfect positive/negative balance. Customers who own Constellation Audio preamps may use the Constellation Link interface to bypass the Centaur II's gain module.

Seemingly endless power

Centaur II's incomparable audio circuitry would achieve little without a clean,

abundant source of power. This is why we used a 1,600-watt, custom-wound toroidal transformer with separate windings for the left and right channels. Each channel effectively has its own source of power, so high demands on one do not affect the other. Fully regulated supplies for all line-level circuits eliminate interference from outside sources.

The power supply's ample current allows Centaur II to drive any speaker, even the most exotic full-range models. The 250-watt-per-channel rating at 8 ohms doubles to 500 watts at 4 ohms. At 2 ohms, an impedance few amplifiers can handle, Centaur II delivers a staggering 800 watts per channel. Even at such high output levels, the modular amplifier design is inherently stable; unlike many amplifiers, it does not need a Zobel network at the output to damp high frequencies.

Thanks to the new deep-fin heat sinks and the air flow provided by hundreds of large ventilation holes in the sides of the chassis, Centaur II runs cool, placing minimum stress on its output transistors and driver circuits. Push it as hard as you like and it answers with impeccable fidelity no matter how demanding the

speakers, the program material or the volume.

A substantial refinement to an extraordinary amp

Centaur II's greatly expanded power supply capacitance and heat sink capacity take our revolutionary amplifier technologies to even greater heights. Centaur II builds on the original Centaur's signature blend of musicality and muscle with improved deep bass performance; the greater detail and smoother textures of extended Class A operation; and dynamics that are, quite literally, staggering. No matter what you expect from a stereo amplifier, Centaur II can deliver far more.

SPECIFICATIONS

	Monoblock	Stereo
Inputs	2 XLR (1 Constellation Link)	4 XLR (2 Constellation link)
Power output per channel, 8Ω (1 kHz @ 1% THD+N)	500 W	250 W
Power output per channel, 4Ω (1 kHz @ 1% THD+N)	1000 W	500 W
Power output per channel, 2Ω (1 kHz @ 1% THD+N)	1600 W	800 W
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	130 lbs / 48.5 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



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Audio That Inspires

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