

# CENTAUR / stereo/mono power amplifiers

constellation



Balanced Bridged design for extraordinary fidelity

250 watts/8 ohms per channel stereo or 500 watts mono

The power of a large amplifier with the delicacy of single-ended designs

Large heat sink and ample ventilation for efficient cooling and reliability

Fully discrete circuitry with high-quality components and no analog audio ICs

The Centaur brings the revolutionary amplification concepts pioneered in our original Reference Series Hercules monoblock to a more practical form factor. This amplifier produces immense power yet can also reproduce the same sonic delicacy and detail for which small single-ended amplifiers are revered.

Why does the Centaur sound like a single-ended amplifier? Because it is built from multiple single-ended modules. Most high-powered amps are built by bulking up smaller designs with more transistors. Many audiophiles feel that with these amps, finesse is lost as muscle is added. This is why Constellation Audio's "dream team" of engineers built the Centaur in a modular fashion from multiple smaller amplifiers. We built

the best-sounding 125-watt single-ended amplifier module we could, then combined several of them to create a 250-watt-per-channel stereo design and a 500-watt monoblock.

The only difference between the stereo and mono versions, besides the monoblock's higher output, is that the mono version has only a single set of inputs, and its output terminals are paralleled in dual mono rather than wired for stereo.

### Perfectly balanced circuitry

The Centaur uses the same Balanced Bridged circuit topology originated in the Reference Series Hercules, our very first amplifier, which leading reviewers considered a new standard both for trans-

parency and for sheer power. The fully complementary design uses separate amplifiers for the positive and negative halves of the signal, thus ensuring the lowest possible noise and the best possible frequency response and slew rate.

However, other complementary designs use different types of transistors to amplify the positive and negative halves of the incoming audio, resulting in an imbalanced signal. The Centaur 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 a level of sonic fidelity otherwise unachievable.

Such perfect balance in an amplifier benefits the listener only if the incoming



signal is itself perfectly balanced. To this end, the Centaur's input stage uses the same Line Stage Gain Module topology found in all of our preamps. Like the Centaur's power stage, the Line Stage Gain Module is fully complementary, with separate circuit halves for the 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.

Thus, even if you use the Centaur with another brand of preamp, the audio will be perfectly balanced. Customers who own Constellation Audio preamps may use the Constellation Link interface to bypass the Centaur's gain module.

## Seemingly endless power

Even the Centaur's incomparable amplification circuitry would achieve little without a clean, abundant source of power. This is why we have equipped the Centaur with a 1,600-watt, custom-wound toroidal transformer. In the stereo version, we use separate windings for the left and right channels, so each channel effectively has its own source of power. Large storage capacitors and fully regulated supplies for all line-level circuits assure that any interference or influence from outside sources is removed.

The power supply's high current allows the Centaur to drive any speaker, even the world's finest and most exotic full-range models. The stereo version's 250-watt-per-channel rating at 8 ohms doubles to 500 watts at 4 ohms. At 2 ohms, an impedance few speakers present because so few amplifiers can handle it, the Centaur delivers a staggering 800 watts per channel. These numbers double for the monoblock.

Even when the amplifier is pushed to its limits, it remains stable and reliable. 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 high thermal mass of the Centaur's large aluminium heat sinks, and to the free air flow provided by the hundreds of large ventilation holes in the sides of the chassis, the Centaur 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.

## Simply the world's most capable stereo amp

By building the revolutionary technology from the massive Reference Series Hercules into a practically sized amplifier, we have created something truly extraordinary. The Centaur has the delicacy of a single-ended tube amp. It has the power of a state-of-the-art transistor amp. No speaker, no music, no volume level can challenge it. When you power it up, it will always deliver more than you expect—no matter what you expect.

## SPECIFICATIONS

	Stereo	Monoblock
Inputs	2 stereo XLR (1 Constellation Link) 1 stereo RCA	2 mono XLR (2 Constellation link) 1 mono RCA
Outputs		metal binding posts
Power output per channel, 8Ω (1 kHz @ 1% THD+N)	250 watts	500 watts
Power output per channel, 4Ω (1 kHz @ 1% THD+N)	500 watts	1,000 watts
Power output per channel, 2Ω (1 kHz @ 1% THD+N)	800 watts	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		98 lbs / 44.5 kg
Dimensions		11 x 17 x 20 in (hwd) 280 x 432 x 508 mm (hwd)

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

  
Audio That Inspires

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