

SA-200.2 & SA-500.1 Power Amplifiers

White paper

OVERVIEW

The introduction of the Model SA-200.2 and SA-500.1 solid-state amplifiers represents a departure from traditional Cary amplifier design, and is a clean sheet design from the ground up. They embody a new modular approach that ensures consistency in performance, and ease of manufacture and serviceability. In implementing the new design, we have dramatically improved performance and current-handling capacity over our previous models while still maintaining the highest levels of sonic quality. Like most Cary products, these amplifiers are designed and built at our facilities in North Carolina.

BACKGROUND

Cary has been in the forefront of vacuum tube amplification for over 20 years, and over the past few years has branched out into solid-state and digital audio. The SA-200.2 and SA-500.1 are our latest offerings, and are fully in keeping with our proud heritage. The SA-200.2 is a 200 watt per channel stereo amplifier (into 8 ohms, 350 w/ ch into 4 ohms) with both balanced and single-ended inputs. The SA-500.1 is a 500 watt monoblock amplifier (into 8 ohms, 1000 watts into 4 ohms), and is essentially a bridged SA-200.2 with a balanced or single ended input. Both models exhibit very high current capability, are stable into low impedance loads, and feature 3 dB of dynamic headroom.

DESIGN PHILOSOPHY

Dependability

When we designed this amplifier one of our primary goals was to create a product that would give years of consistent and reliable use without any maintenance. To achieve that goal we took a hard look at the design and choice of components. For example, we use high-precision metal film resistors in almost all our circuitry, even in places where their use is not required. We have overbuilt the output stage and increased the heat dissipating capabilities of the amplifiers by as much as 50% over our previous designs. The changes encompass almost every part of the design, down to the choice of thickness of the chassis sheet metal. The monolithic front end brought major advantages to the amplifier design with improved temperature stability, low offset, and a substantial reduction of all types of distortion across the full frequency spectrum.