

SA Series System Amplifiers



Photo is representative of all units and is a SA-3

SA Series System Amplifiers

The Wisdom Audio amplifier/speaker system is designed to take advantage of a fact that has hitherto been understood only by a relatively small number of audiophiles: speakers sound better when they are driven directly by dedicated, high quality amplifiers.

You might think that all speakers are configured to be used in that manner. After all, you connected your receiver or amplifier directly to the loudspeaker cabinet, using high quality wire. But in almost all cases, that connection led to a passive crossover network within the speaker cabinet, made up of resistors, capacitors and coils of wire called inductors. The passive crossover had the job of splitting up the signal to the woofer, midrange, and tweeter inside the cabinet. By design, it created

a complex, reactive circuit between the amplifier and the drivers that actually make the music.

The Wisdom Audio approach does not suffer from this compromise. The SC-1 System Controller includes an active (not passive) crossover that divides the music signal while still at a preamplifier level. It can do so with far greater accuracy and consistency than can passive components of any quality in a speaker box, with their inevitable high current production tolerances. The separate signals at the output of the SC-1 are then routed to dedicated amplifiers which need work with only a portion of the audible range.

This approach is called "bi-amplification" since each speaker is actually using two channels of amplification. It provides several important benefits: greater excitement due to improved dynamics; improved detail and intelligibility thanks to lower distortion; improved clarity and control.

Wisdom Audio systems take this multiple-amp-per-speaker idea even further. When you add one or more dedicated subwoofers that handle only the deepest bass, the system is "tri-amplified." The benefits of enormous power reserves are fairly obvious: freedom from any audible strain, greater dynamic impact, and the ability to hear music and movie soundtracks at their intended volume without worrying about whether the system can handle it.

However, the traditional methods for achieving this required level of performance involve bulky, heavy designs that generate a great deal of heat. When you multiply the number of channels required for a modern home theater application times two (for bi-amplification), and add in one or more dedicated subwoofers, suddenly you have need for smaller, more efficient amplifier designs. While many contemporary amplifiers waste 50% or more of the power they pull from the wall as heat, our SA series amplifiers run at approximately 90% efficiency. As a

SA-1



SA-2



SA-3



result, more power is available for the loudspeaker, and less is wasted as heat in your room.

The high efficiency of the SA series design also means that the amplifiers can be placed in close proximity to each other, as in an equipment rack, without undue overheating. Of course, care must be taken to account for the heat generated by other components in the rack; but the Wisdom Audio SA series amplifiers will not greatly contribute to the thermal management challenges of your system.

All SA series amplifiers are identical in size and are rated at 500 watts per channel, available in 3 channel, 2 channel and single input, two channel output configurations.



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The World's Most Advanced Architectural Loudspeakers.™

SA Series Amplifier Specifications (applies to all models)

All specifications are subject to change at any time, in order to improve the product.

Rated power output per channel	500 w/ch continuous rms power @ 4Ω above power ratings from 20 Hz–20 kHz at <0.5% THD
Peak output current	> 30 amps
Voltage gain	31 dB
Input sensitivity	1.2V for full output
Input impedance	25 kΩ (balanced)
Polarity	Non-inverting, Pin 2 positive
Signal to noise ratio (main outputs)	–103 dB (ref 1V rms, A-wtd.)
Output impedance	less than 0.05Ω from 20–20,000 Hz
Thermal load	7 BTU/minute or less
Mains voltage	100V, 120V, or 230/240V determined by the needs of country for which the unit was manufactured; cannot be reset by dealer or user
Shipping weight	40 lbs. (19 kg)
Power consumption, SA-3 SA-1, SA-2 all 3 models	1870W (±5%) at full power, all channels driven 1255W (±5%) at full power, all channels driven 10W (±5%) at idle and 2W (±5%) in standby

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