



S3-A150.4 S3-A200.2

User manual



MODELS

S3 Series Technical Data

Specification overview for S3-A150.4 and S3-A200.2 amplifiers.

Specification	S3-A150.4	S3-A200.2
Power voltage	10-16 V	10-16 V
RMS power, 2 Ω (14.4 V)	260 W x 4	380 W x 2
RMS power, 4 Ω (14.4 V)	160 W x 4	220 W x 2
Bridged power, 2 Ω	n/a	n/a
Bridged power, 4 Ω	520 W x 2	760 W x 1
THD	< 0.05 %	< 0.05 %
Frequency response	10 Hz - 50 kHz	10 Hz - 50 kHz
S/N ratio (A-weighted)	≥ 100 dB	≥ 100 dB
Input sensitivity	0.5 - 8 V	0.5 - 8 V
Input impedance	6 kΩ	6 kΩ
Low pass	50 Hz - 500 Hz	50 Hz - 500 Hz
High pass	50 Hz - 500 Hz	50 Hz - 500 Hz
Crossover slope	12dB / oct	12dB / oct
Crossover mode	HPF / FULL / LPF	HPF / FULL / LPF
Remote control	Optional	Optional
Dimensions (W x H x L)	409 x 50.3 x 215 mm	409 x 50.3 x 215 mm

 **Do not run your amp under rated impedance!** 

SCB (Smart Controlled BIAS) – Intelligent Real-Time BIAS Management



The AI-Sonic S3-Series amplifiers feature the unique SCB (Smart Controlled BIAS) technology, designed to continuously monitor and optimize amplifier BIAS operation in real time.

In conventional amplifier designs, BIAS is typically fixed or manually adjustable. While effective, these approaches rely on predetermined settings that cannot adapt to changing operating conditions. SCB continuously monitors amplifier load, signal level, and temperature, automatically optimizing the output stage BIAS for ideal performance.

The result is cleaner sound reproduction, lower distortion, improved thermal management, and optimized efficiency - without the need for manual adjustments.

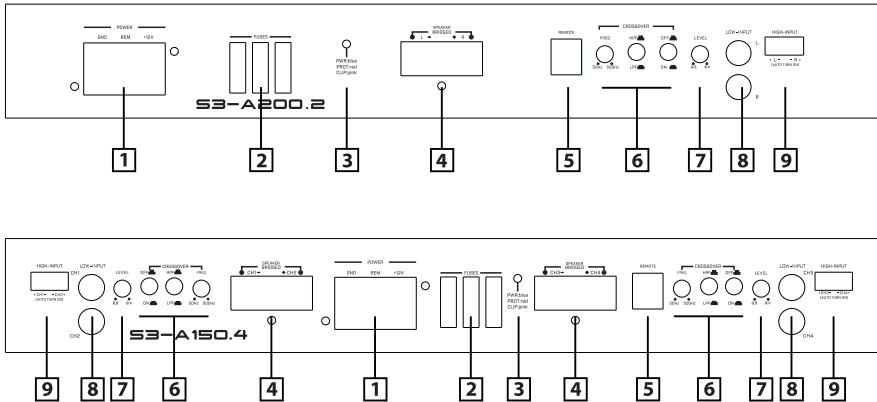
Benefits of SCB Technology

- Automatically optimized BIAS under all operating conditions
- Cleaner and more natural sound reproduction
- Extremely low distortion across the entire operating range
- Enhanced thermal management and long-term reliability
- Optimized efficiency without compromising sound quality
- No manual adjustments or calibration required

SCB represents one of the key innovations of the AI-Sonic S3 Series. It allows the amplifier to continuously deliver the ideal balance of audio performance, efficiency, and reliability, ensuring a premium listening experience in every situation.

CONTROLS & TERMINALS

Controls & Features



- 1. Power terminal** (GND, REM, +12V)
- 2. Fuses** (Replace a damaged fuse only with a new fuse of the same rated value)
- 3. Status LED** (PWR: BLUE PROT: RED CLIP: PINK)
- 4. Speaker terminal** max. 2,5mm² wires
- 5. Remote socket** (Available separately: S2-BASS KNOB)
- 6. Crossover switch** HPF LPF OFF ON
- 7. Sensitivity control** 0.5 - 8 V
- 8. Line input (RCA)**
- 9. High level input** (Auto turn on function)

GND = max. 20mm² / 4 AWG

+12V = max. 20mm² / 4 AWG

REM = max. 2,5mm² / 13 AWG

Speaker cable = max. 2,5mm² / 13 AWG

We recommend always using oxygen-free copper cables to ensure best performance.

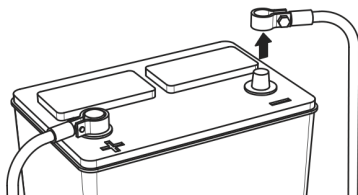
BEFORE WIRING

Safe Installation Procedure

Disconnect power first, route cables carefully and mount the amplifier to a ventilated surface.

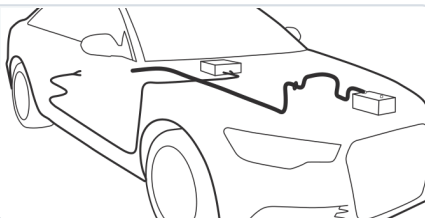
1 Disconnect negative battery terminal

Place the terminal in a secure position so it cannot accidentally contact the negative battery post.



2 Run cables

Properly route power, speaker and RCA cables through the vehicle.



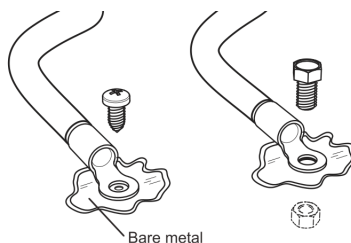
3 Mount amplifier

Choose a mounting location that provides adequate ventilation. Mount the amplifier to a secure surface. Do not mount the amplifier upside down.



4 Chassis ground

The chassis ground connection is critical to amplifier performance. Choose a location close to the amplifier. Scrape away paint and use a nut and bolt if possible. Do not use an existing factory bolt.



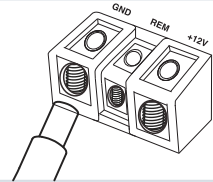
POWER AND SIGNAL

Amplifier Connections

Complete amplifier-side power, remote, input and level control connections before connecting the battery.

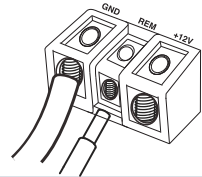
5 Negative power connection

Attach the chassis ground cable to the amplifier negative terminal. Make sure the connection is very tight. We recommend using wire end sleeve. It protects cable so that strands do not get cut when wire is tightened to terminal.



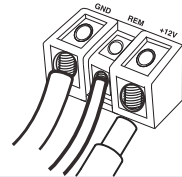
6 Remote turn-on connection

Attach the remote turn-on wire to the amplifier remote output of the source unit.



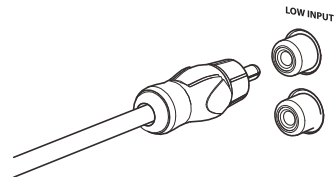
7 Positive power connection

Attach the main power cable to the amplifier +12 V terminal. The cable must run directly to the battery and be properly fused.



8 Signal input connection

Connect the RCA cables to the INPUT connectors.



9 Level control

Turn the LEVEL control completely counter-clockwise to minimum.



OUTPUT WIRING

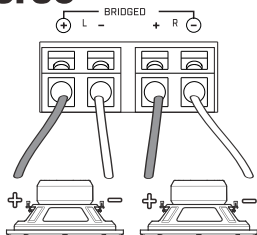
Speaker Configuration

Use the diagram that matches your speaker configuration and observe correct polarity.

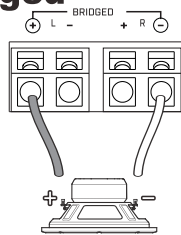
10 Speaker connections

Using spade terminals, connect the speaker cables to the speaker output connectors. Follow the diagram that best fits your speaker configuration.

Stereo



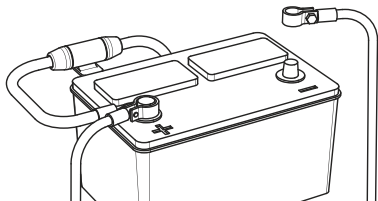
Bridged



⚠ Do not run your amp under rated impedance! ⚠

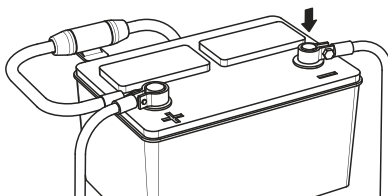
11 Positive battery connection

Connect the power cable to the positive battery terminal. The power cable must be fused within 18 inches of the battery terminal.



12 Re-connect negative battery terminal

Re-connect the negative battery terminal and make sure it is securely tightened.



CONTROLS

Configuration Controls

Set operating mode, crossover range and input options before final level matching.

A Crossover

HPF / LPF Filter Selector

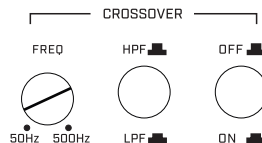
Select the filter mode:

- HPF (High Pass Filter): Passes frequencies above the selected cutoff frequency.
- LPF (Low Pass Filter): Passes frequencies below the selected cutoff frequency.

Adjust the cutoff frequency from 50 Hz to 500 Hz using the frequency control.

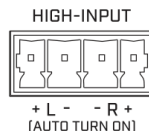
Filter ON/OFF Switch

- ON: Filter enabled.
- OFF: Filter bypassed (full-range signal).



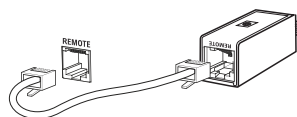
B High input

Head units without RCA pre-amplifier outputs can be connected via the high-level input. When used, the amplifier turns on automatically. Do not use high-level and RCA inputs simultaneously.



C Remote level control

The S3 series amplifiers support a level control. (S2-Bassknob is sold separately.)



FINAL CALIBRATION

Input Sensitivity Matching

The LEVEL control matches the amplifier to the source unit. It is not a volume control.

D Level

Adjusts the amplifier input sensitivity from 0.5 V to 8 V to match the output level of the source unit. Turn clockwise to decrease sensitivity (higher input voltage) and counterclockwise to increase sensitivity (lower input voltage).

This is a critical step to ensure the amplifier matches the source unit output level.

THIS IS NOT A VOLUME CONTROL!

- 1** With the source unit off, confirm that the primary volume control is turned down counter-clockwise.
- 2** Turn on the source unit and confirm the volume is down. Set balance, fader, bass and treble to center or "0". Make sure the blue LED on the amplifier is illuminated.
- 3** Play a clean music selection you know well. CD is preferred. Do not use radio signals for level setting. Press play and start increasing the source volume.
- 4** Stop increasing source volume at approximately 3/4 (about 75%) or when the speakers begin to produce slight distortion.
- 5** Increase the amplifier LEVEL clockwise until distortion is heard, then back the level down counter-clockwise until the distortion is eliminated. Small adjustments may be needed to balance multiple amplifiers.

Final tuning should always be completed with care. If the system is used with multiple amplifiers, match all amplifier levels evenly before critical listening.

TIPS FOR PROPER INSTALLATION

Installer responsibility

RISK OF FIRE, ELECTRICAL DAMAGE, OR PERSONAL INJURY

Improper installation, wiring, or operation of this amplifier may result in fire, electrical damage, vehicle damage, or personal injury. Always disconnect the negative (-) battery terminal before beginning installation. Use only properly rated power cables, fuses, and installation hardware. Replace damaged fuses only with fuses of the same type and rating. Professional installation is recommended.

INSTALLATION SAFETY

Before drilling, cutting, or mounting the amplifier, carefully inspect the area behind the mounting surface. Failure to verify the drilling location may result in damage to fuel lines, brake lines, hydraulic lines, electrical wiring, vehicle safety systems, or other critical vehicle components. Such damage may cause serious injury, death, or property damage. The installer is solely responsible for ensuring that the mounting location is safe and suitable for installation.

MOUNTING LOCATION

This amplifier is designed for installation inside the passenger compartment, trunk, or other protected interior areas of the vehicle only. Do not install the amplifier in the engine compartment, underneath the vehicle, or in any location exposed to water, moisture, road debris, excessive heat, or direct weather conditions. Failure to follow these instructions may result in equipment failure, fire, electrical hazards, or personal injury. Ensure that the amplifier is securely mounted to a solid surface with adequate ventilation. Do not mount the amplifier upside down or in a location that restricts airflow.

HEARING DAMAGE

This amplifier is capable of producing sound pressure levels that may cause permanent hearing damage. Exercise caution when listening at high volume levels. Prolonged exposure to excessive sound levels may result in hearing loss. Always operate the audio system responsibly and remain aware of surrounding traffic and road conditions while driving.

LIABILITY DISCLAIMER

The manufacturer assumes no responsibility for damage to vehicles, property, equipment, or persons resulting from improper installation, misuse, modification, or operation of this product in a manner inconsistent with these instructions.

WARRANTY EXCLUSIONS

This warranty does not cover damage or failure caused by:

- Unauthorized opening, modification, repair, or tampering of the product.
- Exposure to water, moisture, or other liquids.
- Improper installation, wiring, or operation contrary to the instructions in this manual.
- Misuse, abuse, neglect, accident, or physical damage.
- Operation below the minimum rated speaker impedance (including damage caused by low battery voltage).
- Fire, flooding, lightning, or other external causes.

Any unauthorized opening or modification of the product will void this warranty.



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