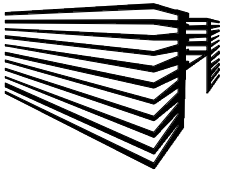

STUDIO 100

Owner's Manual

Studio Series
Power Amplifier

A.R.P.A. OF AMERICA CORP.
MADE IN MODESTO, CA *U.S.A.*

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What Is The Studio 100?

Thank you for purchasing a ZAPCO product! This product has been hand-crafted in the USA with the attention to detail and quality that has made ZAPCO a legend in the car audio industry. You can be sure that you have purchased one of the highest quality car stereo components available anywhere in the world today.

The Studio 100 is a stereo/two-channel amplifier that is conservatively rated at 100 watts. It can produce 50 watts per channel into a four ohm load and 80 watts per channel into a 2 ohm load. The Studio 100 combines a very efficient MOSFET switching power supply with high current, fully symmetrical BIPOLAR output devices to achieve unyieldingly accurate audio performance.

The protection circuits in the Studio 100 simply shut down the power supply, rather than altering the audio signal or reducing the power. The amplifier is protected for any conceivable problem, including over-voltage, speaker shorts, overheating and reverse polarity.

Studio 100 Key Features

- 100% symmetrical circuitry for low THD, TIM and IMD.
- Low global feedback.
- Can drive highly reactive loads.
- Gold plated power, RCA and speaker connectors.
- Separate LED’s for power and protection.
- Short circuit, high temperature, reverse voltage, DC offset and over-voltage protection.
- Load stability down to two ohms.
- Precision 1% resistors used throughout.
- Low radiated noise for clean AM/FM reception.
- Quality ZAPCO construction.
- Designed and manufactured in the U.S.A.

Unpacking the Studio 100

Included in your Studio 100 packing box you will find the warranty registration card. Please fill it out and return it to the factory.

If for any reason your Studio 100 must be returned to the factory, we suggest you retain the original packing box for safe transportation. We also suggest that you record the serial number of your Studio 100 in the space below for your permanent records.

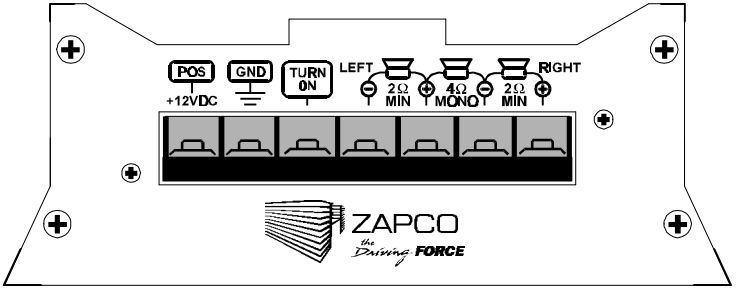
Serial number: _____ Purchase date: _____

Mounting Guidelines

Mounting the Studio 100 is easy. Keep in mind the following guidelines:

- The amplifier may be mounted in any direction, on wood, metal or carpet. The metal case of the amplifier my be grounded or left isolated.
- The amplifier requires adequate ventilation. Position the amplifier with sufficient surrounding area for proper cooling.
- Keep the amplifier out of the engine compartment and other locations that may cause excessive heat or moisture.

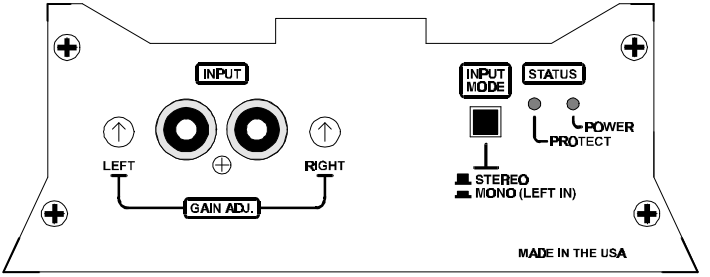
Power Wiring Guidelines



Amplifier Power Endplate

1. Connect the 12V “POS” terminal (FUSED +12VDC) to the battery with 10 gauge (or heavier) wire.
2. Fuse the wire within 18” of the battery with a 30 amp fuse or circuit breaker. Although the amplifier is already fused, a short between the amplifier and the battery could cause a fire. See the section titled “Warnings”.
3. Connect the “NEG” terminal to the vehicle chassis with the shortest possible 10 gauge wire. Do not make this connection directly to the battery. Do not use seat or seat belt bolts for grounding. Do not share this connection with other equipment. A “single point” ground for high current connections will degrade the system’s performance. Inadequate power supply connections will result in REDUCED POWER OUTPUT.
4. Connect the “TURN ON” terminal to the radio’s “amp turn on” or in some cases “power antenna” lead. This connection requires very little current and may be connected with a light gauge wire such as #22. Applying 12 volts to this terminal turns the amplifier on.

Signal Wiring Guidelines



Control Endplate

Input Connection:
Connect the right and left input signals to the corresponding RCA input jacks on the end of the Studio 100. Keep these wires close to each other and far away from power and speaker wires. When using in bridged mono mode, put the input mode switch in the “MONO” position.

Input Sensitivity:
The input sensitivity or “gain” is user adjustable and can be set anywhere between .230 volts (230 millivolts) and 2.3 volts. If you are unsure of your head unit’s maximum undistorted output level, set these controls to their minimum (quietest) position and then turn the head unit’s volume knob up until you can start to hear audible distortion and reduce the volume until the distortion goes away. At this volume setting, gradually increase the amplifier’s sensitivity until you can start to hear distortion from the amplifier. Then reduce the sensitivity until it goes away. Using this method, the head unit’s volume should reach approximately 3/4 of its maximum or more before distortion is heard in the system.

Speaker Connections:
Connect the speaker wiring to the terminals as they are labeled. The minimum impedance or “ohm load” for each individual channel is two ohms. When bridging the front and rear channel into a mono configuration, the minimum impedance is four ohms.

Warnings

ZAPCO highly recommends that a system protection device (i.e., fuse or circuit breaker) be placed within 18” of the battery. Although ZAPCO products have adequate internal protection, it is possible that power wiring could become pinched between the component and the battery - potentially resulting in a fire. The system protection device should be placed where it can be accessed easily and all wiring should be routed safely and correctly according to the following guidelines:

- Do not run wiring close to hot or spinning objects.
- Always use wire grommets when routing wire through the firewall or any other metal panels.
- Make sure that the potential for pinched wiring is avoided by routing all wires away from moving hinges and seats. This also includes brake, gas and clutch pedals, hood and trunk hinges, etc.

Caution:
Continuous exposure to excessive sound pressure levels may cause permanent hearing loss. ZAPCO strongly advises that you use common sense when setting volume levels.

Specifications

Output Power	50 watts/ch @ 4Ω, 20Hz-20kHz 80 watts/ch @ 2Ω, 20Hz-20kHz
T.H.D. + Noise	<.05%, 20Hz-20kHz @ 50 watts/ch, 4Ω <.1%, 20Hz-20kHz @ 80 watts/ch, 2Ω
S/N Ratio	>100dB
Dynamic Headroom	1.5dB @ 2 ohm load
Separation	>75dB
Damping Factor	>300 @ 4 ohms
Input Type	Fully isolated RCA
Input Sensitivity	230mV - 2.3 Volts, variable
Maximum Input Level	3.5 Volts R.M.S.
Input Impedance	47K ohms
Power Requirements	25 Amperes max. @ 2 ohms
Fuse Rating	Internal, ATO 25 Amperes
Minimum Load	2 ohms stereo - 4 ohms mono
Idle Current	.8 Amperes
Dimensions	10 1/4”L x 5 7/8”W x 2 1/4”H

Technical Assistance

Should you experience a problem with your Studio 100, please contact the dealer that sold you this product. If your dealer is unable to solve your problem, you may contact the factory service department directly.

Phone: (209) 577-4268 Monday - Friday 8am-5pm Pacific time

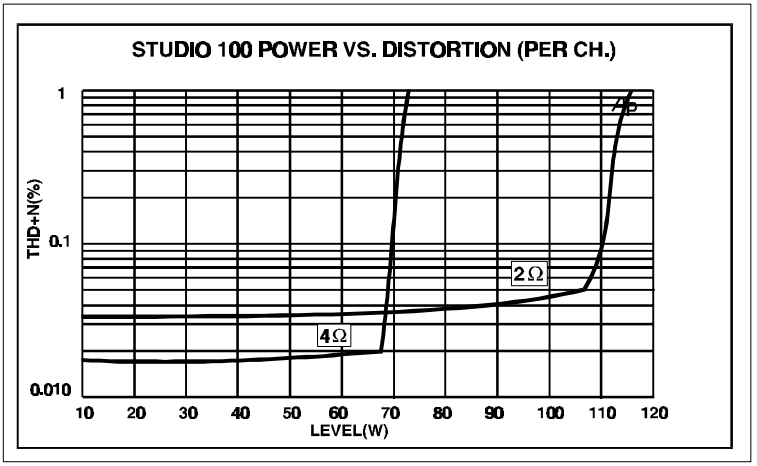
Fax: (209) 577-8548

If you need to return this product for repair, please call the factory for a return authorization number. We will ask you for information which will include your name, return shipping address, daytime phone number, model and serial number, and a detailed description of your problem. A photocopy of your original purchase receipt is necessary to determine warranty status and should also be included. Once we issue you a return authorization number, please write it in a highly visible area on the package. Zapco will not accept any packages that do not have a valid return authorization number clearly marked on the outside of the package.

Send all repairs to:

A.R.P.A. of America Corp.
Attn: Service Department
413 S. Riverside Drive, Suite D
Modesto, CA 95354

Power Vs. Distortion



Manufacturing

This product is designed and manufactured in the USA. The following operations are ENTIRELY performed in our Modesto, California plant.

1. PC board insertion
   The components are inserted into American made printed circuit boards.

2. PC soldering
   The printed circuit board assembly is wave soldered.

3. Testing
   The PC board is 100% tested to design specs.

4. Extrusion machining
   American made aluminum extrusion is cut and machined to precise tolerances.

5. Assembly
   The product is assembled.

6. Final Test
   Every product is tested with the highest quality audio test equipment to meet or exceed their published specifications.

7. Inspection and final packaging.

*Many companies claim that their products are built in the USA, but only a few of the above steps are actually performed in America. Many of these companies only do the final assembly, with steps 1 - 4 being done outside the USA.

A.R.P.A. of America Corp.
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Rev. E
09/96