

POWER ACOUSTIK

RAZOR

***1-Channel Digital
Subwoofer Amplifier***

RZR1-2500D



www.POWERACOUSTIK.COM

Features RZR1-2500D

- Class - D 1-Channel Amplifier (2 - ohm Stable)
- Applying New Concept "Low-Heat Producing Circuit".
- One - Channel Monoblock Design
- Full MOSFET DC-DC PWM Power Supply.
- Four way Amplifier Protection.
- Double Sided FR-4 PC Board.
- SMD Amplifier Technology.
- Hi-Level Input Capability.
- Remote Dash Mounted Gain Control.
- Nickel Plated RCA Input Connectors.
- Adjustable Low-Pass, Bass Boost, Subsonic Controls.
- 8 Gauge Input Power Terminal and 8 Gauge Speaker Out Block Terminal.
- Ultra Slim Digital Amplifier Profile

Specification

- 450W x 1 Ch. 4 - Ohm Mono
- 650W x 1 Ch. 2 - Ohm Mono
- 2,500W Max Power Rating
- Variable 35Hz-250Hz 12dB Low Pass Filter
- Variable 10Hz-50Hz 12dB Subsonic Filter
- Variable 0dB-12dB At 45Hz Bass Boost
- Total Harmonic Distortion : 0.5%
- Frequency Response : 20Hz-150KHz
- Signal - to - Noise Ratio: 85dB
- Damping Factor: >100
- Input Sensitivity: 250mV - 6.0V
- Amplifier Dimension 4.75" W x 1.75" H x 11" L



Power Connections

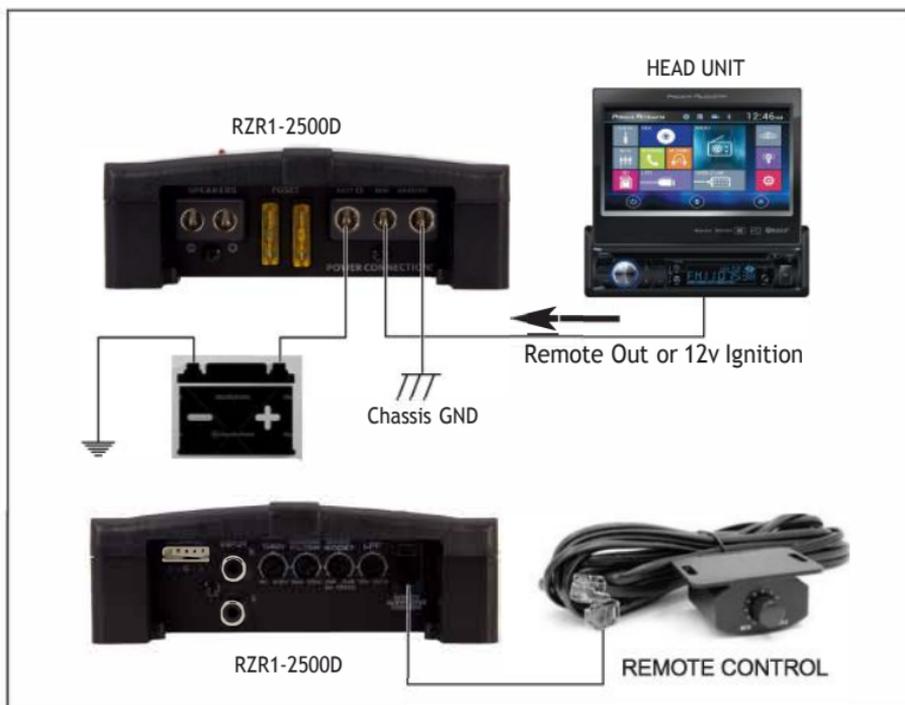
It is crucial to have good quality power and ground connections. Remember, to complete an electrical circuit; the ground connection is just as important as the positive power connection. Before any power connections are made, disconnect the ground cable of the battery. Use 8 gauge or larger automotive grade wire if the distance from the battery to the amp is excessive. Avoid sharp or rough edges as a safeguard against short-circuiting and potential fire hazards.

GND = Connect the proper gauge ground wire to the amplifier GND terminal. Locate the position on the chassis of the car where the amplifier will be grounded. Use solder or a crimped ring terminal to connect the ground wire. Pre-drill the prepped chassis to bolt the ground ring terminal with a nut, bolt, and lock washer. Insulate the metal and the connector with paint or silicone to prevent rust and oxidation. Silicone also works great to prevent nuts and bolts from working loose in harsh environments of an automobile. Upon completion of the ground connection, grab the wire and connector to confirm the connection is solid. To prevent engine noise, it is recommended to ground the head unit and other electronic audio devices to the exact location.

REM = Connect the remote wire (power antenna output) from the head unit to the REM terminal. If the head unit is not equipped with a remote/antenna output, locate a wire controlled by the key's accessory position. It is crucial to have the amplifier turn off with the radio or key. If the amplifier remains on, the battery will drain.

12V = Connect the proper gauge power wire to the B+ terminal. Trace the power wire through the car to the in-line fuse or circuit breaker that is no more than 18" from the battery. Remember, the in-line fuse or circuit breaker protects the vehicle in the event of short circuit. Connect the in-line fuse or circuit breaker to the battery, but do not install the fuse or activate the circuit breaker yet.

Power Connection.



Hi-Level Input Connections

The hi-level inputs are for use with speaker-level wiring. Most factory source units do not have RCA outputs. Use this connection if your source unit does not have RCA outputs. The amplifier will automatically turn off and on using hi-level inputs, no need for remote wire input.

CAUTION: Never use the hi and low-level inputs at the same time!

RZR1-2500D



Hi - level input connector

HEAD UNIT



Speaker Output

RCA Input Connection

RZR1-2500D



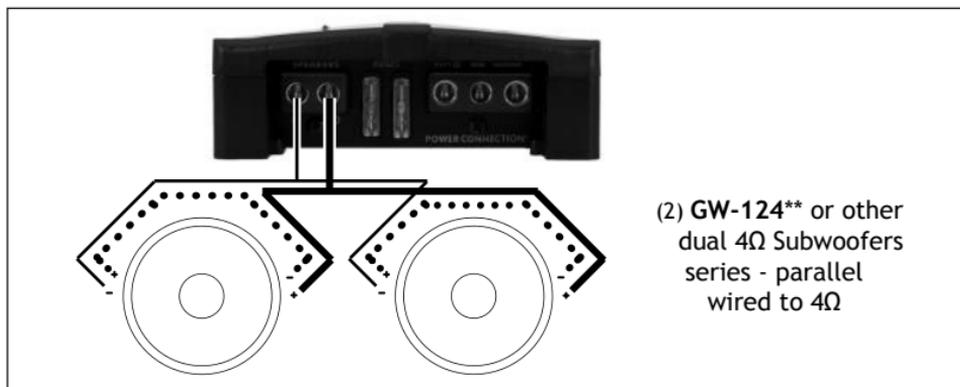
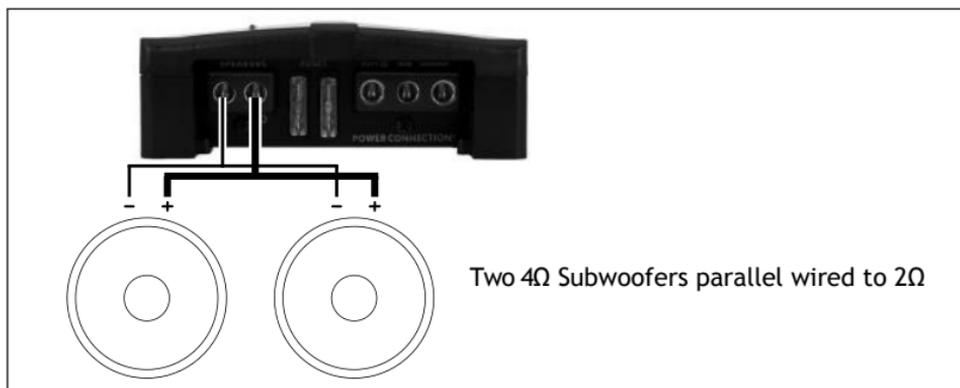
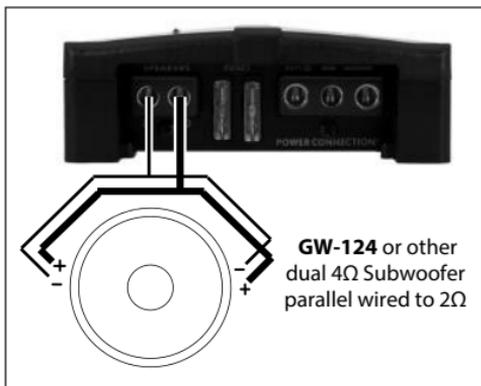
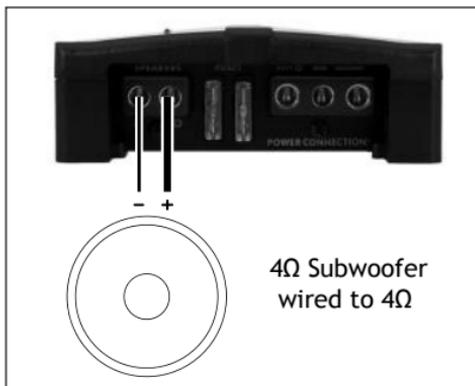
RCA Jack (Optional)

HEAD UNIT



RCA Line Output

Output Wiring Configurations



** GW-124 is a Power Acoustik Dual Voice Coil Subwoofer sold exclusively with Walmart

RAZOR Pre-Amp Features

1. Remote Level Control Connection

Connect the remote level control to this terminal. The remote level control allows adjustment of the subwoofer level from a remote location in the vehicle.

2. Low Pass Crossover

Adjust the frequency setting of the low pass crossover. The frequency range is 35Hz-250Hz. Frequencies higher than the setting will be filtered out of the audio signal.

3. Subsonic Crossover

Adjust the frequency setting of the subsonic crossover. The frequency range is 10Hz-50Hz. Frequencies lower than the setting will be filtered out of the audio signal.

4. Power & Protection Indicator LED

When the amplifier is on, and in proper working condition, the green LED will illuminate. Refer to the Troubleshooting Guide for possible solutions if the amplifier will not power on. If the amplifier activates its protection mode, the red LED will illuminate. Refer to the Troubleshooting Guide for possible solutions if the amplifier activates its protection mode.

5. Level Sensitivity

Adjust the amplifier's pre-amp sensitivity level. The minimum sensitivity level is 250mv, while the maximum level is 6V

6. RCA Audio Input Connection

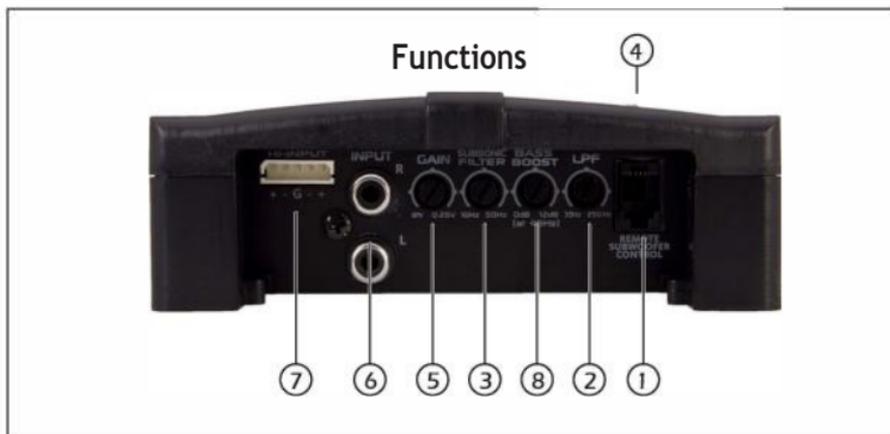
Using high-quality shielded stereo RCA cables, connect the source signal to the amplifier RCA inputs.

7. Hi-Level Input

Connect the speaker outputs from the head unit to the hi-level input if RCA outputs are not available. NEVER use hi-level and RCA inputs at the same time.

8. Bass Boost

Adjust the amplifier's 45Hz Bass Boost level up to 12dB.



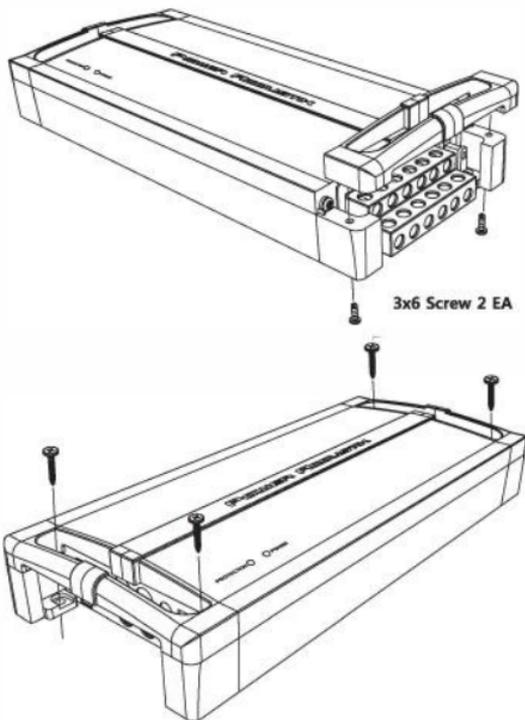
Mounting Your RAZOR

Choosing the best mounting location for your RAZOR amplifier is crucial. The amplifier should be mounted to any wood, metal, or carpeted surface. The heat-sink can be mounted directly to the chassis of the car or isolated for best performance. It needs proper ventilation, so avoid mounting the amp under seats, engine bay, or any other area that moisture might accumulate. Be sure the mounting screws do not penetrate the fuel tank, brake lines, or other crucial fluid lines. Never mount the amplifier to a subwoofer enclosure, as excessive vibrations can cause damage.

Warning!!

Power Acoustik highly recommends that an in-line fuse or circuit breaker be installed within 18" of the battery. Although your RAZOR amplifier has adequate internal protection, a damaged wire between the component and the battery may result in a fire. The in-line fuse or circuit breaker should be installed in a location that is easy to access, and all wiring should be routed safely, following the below suggestions:

- Avoid placing wires near hot or moving objects
- Always use wire grommets when routing wire through the firewall or any other metal surfaces
- Avoid the potential for damaged wires by routing all wires away from moving hinges, seats, brake & gas pedals, hood and trunk hinges, etc.



Setting the Gain:

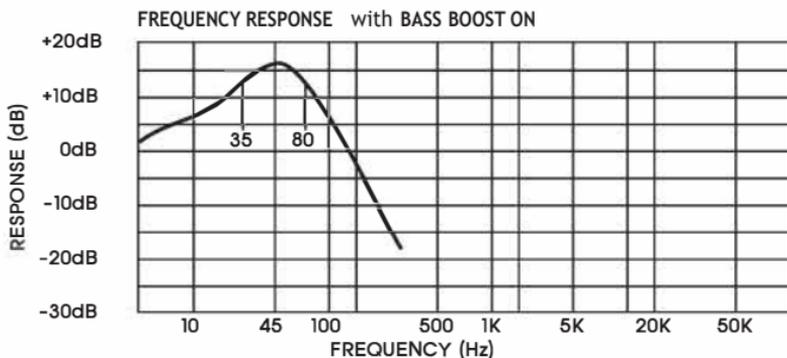
It is a fact that very few people, including professional installers, know how to set gains correctly. Failure to do so yields higher distortion, a higher noise floor which decreases dynamic headroom, less than optimum operating conditions for electronic equipment, and a higher failure rate for both the electronic equipment and transducers alike.

While most people set this control by ear to how loud they want their music, this is not the intent of this control. The range is from 0.25 volts to 6 volts. The control is meant for matching the output of the source unit's signal voltage. For example, if you have a source unit with low output voltage, you would probably have the control set reasonably high, towards the 0.25V range. Many head units have 4 volts of output signal voltage which means that your power would be set midway through the scope. If you happen to have a line driver (signal booster) that yields 6 volts or more, you will set the gain at the minimum position towards the 6V range.

In all of these examples, the amplifier will put out the total volume when properly level matched. Setting the control above the appropriate point may cause damage to the amplifier and speakers and result in poor sound quality and overall undesirable results.

Bass Boost Control:

The Monoblock amplifiers feature a variable Bass Boost control, centered at 45Hz. You can adjust the amount of boost from 0dB to 18dB.



Trouble shooting.

SYMPTOMS	CHECK	REMEDY
NO SOUND	Is the power LED illuminated? (NO)	Check all fuses to amplifier. Be sure Turn-on lead is connected Check signal leads. Check gain control. Check Tuner/Deck volume level. Clean contacts on fuse holders.
	Is the Diagnostic LED illuminated? (YES)	Check for speaker short or amplifier overheating.
AMP NOT SWITCHING ON	No power to power wire	Repair power wire or connections.
	No power to remote wire with receiver on	Check connections to radio.
	Burnt or broken fuse	Replace fuse
NO SOUND, ON ONE CHANNEL	Check Speaker Leads	Inspect for short circuit or an open connection.
	Check Audio Leads	Reverse Left and Right RCA inputs to determine if the problem is occurring before the amp.
AMP TURNING OFF MEDIUM/ HIGH VOLUME	Check Speaker load impedance	Be sure proper speaker load impedance recommendations are observed. (If you use an ohmmeter to check speaker resistance, please remember that DC resistance and AC impedance may not be the same.)
PROTECTION LAMP ON	Shut down	Turn radio down Wait for AMP to cool
	Speaker wires shorted	Separate speaker wires and insulate

Warning

Investigate the layout of your vehicle before drilling or cutting any holes. Take care when working near the gas tank, brake lines, hydraulic lines, and electrical wiring. Please do not use the amplifier without securely mounting it, as the amp or vehicle may be damaged in the event of an accident. Do not mount the amplifier where the wire connections are unprotected or are subject to pinching or damage from other vehicle components. The 12V power wire must be fused within 18" of the battery. Ensure the source unit is powered off before making any wiring connections. If you need to replace the fuses, use only the same type and size. Using a fuse of a different type or rating may damage the amplifier or vehicle, which will not be covered under the manufacturer's warranty.

LIMITED 90-DAY CONSUMER WARRANTY
LIMITED ONE-YEAR CONSUMER WARRANTY WITH PURCHASE AND
INSTALLATION BY A POWER ACOUSTIK AUTHORIZED DEALER

Power Acoustik Electronics warrants the original retail purchaser of its products that should include this product under everyday use and conditions proven defective in material or workmanship within one year from the original date of professional purchase installation or 90 Days if self-installed. Those items with the manufacturer's defects will be repaired or replaced at our option without charge for parts and repair labor.

To obtain repair or replacement within the terms of this warranty, the product or products are to be returned with proof of warranty coverage (e.g., a copy of the receipt for your purchase and installation), Specific information of the nature of the defect(s), all transportation costs are to be paid by the sender including a cashier's check for \$25.00 to cover the return freight and packing.

This warranty does not extend to the elimination of externally generated static or noise or to cover installation costs for initial installation, removal, or re-installation of the products or to damaged media sources (DVD's, Speakers, Amplifiers, Car Stereo's or Electrical System Failures).

This warranty does not apply to any product or part thereof which, in the opinion of the company, has been abused or damaged through alteration or modification, improper installation, mishandling, misuse, neglect, accident, or by the removal of the unit. The Extent of the company's liability under this warranty is limited to the repair or replacement provided above. In no event should the company's liability exceed the purchase price paid by the purchaser for the product.

Warranty is in lieu of all other express warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. Any action for breach of warranty hereunder, including any implied warranty of merchantability, must be brought within 12 months from the original date of purchase. In no case shall the company be liable for any consequential or incidental damages for breach of this or any other warranty, express or implied whatsoever. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states do not allow limitations on how long an implied warranty lasts or exclude incidental or consequential damage, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Power Acoustik Electronics
1550 S. Maple Ave.
Montebello, CA 90640
Direct (800) 832-4647

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