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Radial BigShot ABY

Radial BigShot ABY True Passive Switcher Instruction Manual

INTRODUCTION

The Radial BigShot ABY is a true passive switcher designed to manage a two-amplifier setup for guitar or bass. This pedal allows users to select between two amplifiers or operate both simultaneously, addressing common issues such as ground loops and phase discrepancies. Its passive, true-bypass design ensures signal integrity, making it a reliable tool for musicians.

KEY FEATURES

- Allows switching between two guitar or bass amplifiers (A/B mode).
- Enables simultaneous operation of both amplifiers (Y mode).
- Integrated ground lift on Output B to eliminate hum caused by ground loops.
- 180-degree polarity reverse switch on Output B to correct phase issues between amplifiers.
- Selectable isolation transformer on Output B for further noise reduction.
- Passive, true-bypass circuit design preserves the instrument's original tone.
- Constructed with durable 14-gauge steel for robust performance.

CONTROLS AND CONNECTIONS

Front Panel Overview



Image: Front view of the Radial BigShot ABY pedal, showing the footswitches, indicator LEDs, and mini-switches for Output B.

- **TOGGLE Footswitch:** Switches between Output A and Output B. The corresponding LED (A or B) will illuminate to indicate the active output.
- **BOTH Footswitch:** Activates both Output A and Output B simultaneously. Both A and B LEDs will illuminate when engaged.
- **A LED (Green):** Indicates that Output A is active.
- **B LED (Red):** Indicates that Output B is active.
- **GND LIFT Switch (Output B):** Lifts the ground connection for Output B to eliminate hum and buzz caused by ground loops.
- **180 POL Switch (Output B):** Reverses the phase of the signal on Output B by 180 degrees. This is used to correct phase cancellations when running two amplifiers.
- **ISO Switch (Output B):** Engages an isolation transformer for Output B, providing electrical isolation to further reduce noise and hum.

Rear Panel Overview



Image: Rear view of the Radial BigShot ABY pedal, showing the input, output, tuner, and power connections.

- **INPUT Jack:** Connect your instrument (guitar, bass, etc.) or the output of your pedalboard here.
- **TUNER Jack:** A dedicated output for connecting a tuner. This output is always active and does not affect the main signal path.
- **OUT-A Jack:** Connect this output to the input of your first amplifier.
- **OUT-B Jack:** Connect this output to the input of your second amplifier.
- **9VDC Power Input:** Connect a standard 9VDC power supply (center-negative) to power the indicator LEDs. The pedal functions passively without power, but LEDs will not illuminate.

SETUP GUIDE

1. **Power Connection (Optional):** Connect a 9VDC power supply to the 9VDC input jack. This is only required for the LED indicators to function. The audio signal path is passive and does not require power.
2. **Instrument Connection:** Connect your instrument or the output of your pedalboard to the BigShot ABY's **INPUT** jack using a standard 1/4-inch instrument cable.
3. **Amplifier Connections:**
 - Connect the **OUT-A** jack to the input of your first amplifier.
 - Connect the **OUT-B** jack to the input of your second amplifier.
4. **Tuner Connection (Optional):** If desired, connect your tuner to the **TUNER** output jack. This output is buffered and always active.
5. **Initial Settings:** Ensure all amplifiers are powered off before making connections. Once connected, power on your amplifiers.

OPERATING INSTRUCTIONS

Switching Between Amplifiers (A/B Mode)

To switch between your two connected amplifiers, press the **TOGGLE** footswitch. Each press will alternate the active output between OUT-A and OUT-B. The corresponding green (A) or red (B) LED will illuminate to indicate which amplifier is currently active.

Using Both Amplifiers Simultaneously (Y Mode)

To send your instrument's signal to both amplifiers at the same time, press the **BOTH** footswitch. Both the green (A) and red (B) LEDs will illuminate, indicating that both outputs are active.

Addressing Noise and Phase Issues (Output B Controls)

- **Ground Lift (GND LIFT):** If you experience a hum or buzz when both amplifiers are connected, especially when using the 'BOTH' mode, engage the **GND LIFT** switch for Output B. This can break ground loops that cause unwanted noise.
- **Phase Reversal (180 POL):** When using two amplifiers simultaneously, you may encounter a thin or hollow sound due to phase cancellation. Engage the **180 POL** switch for Output B to reverse its phase. Listen for a fuller, more robust sound, indicating correct phase alignment.
- **Isolation Transformer (ISO):** For persistent noise issues, particularly when using two amplifiers with different electrical characteristics, engage the **ISO** switch for Output B. This activates an internal isolation transformer to electrically separate Output B from the rest of the circuit, further reducing noise.

Experiment with the GND LIFT, 180 POL, and ISO switches on Output B to achieve the cleanest and most harmonically rich sound when using both amplifiers.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No sound from an amplifier.	Incorrect output selected; cable issue; amplifier off.	Ensure the correct output (A or B) is selected via the TOGGLE switch, or both are active via the BOTH switch. Check all cable connections. Verify amplifier power and settings.
Hum or buzz when using two amplifiers.	Ground loop between amplifiers.	Engage the GND LIFT switch on Output B. If hum persists, try engaging the ISO switch on Output B. Ensure all equipment is plugged into properly grounded outlets.
Thin or hollow sound when both amplifiers are active.	Phase cancellation between amplifiers.	Engage the 180 POL switch on Output B to reverse its phase. Listen for a fuller sound.
LEDs are not lighting up.	No 9VDC power connected or faulty power supply.	Connect a standard 9VDC (center-negative) power supply. Verify the power supply is functional. Note that the pedal functions passively without power, only the LEDs require it.

SPECIFICATIONS

- **Model:** BigShot ABY
- **Circuit Type:** Passive, True-Bypass

- **Input:** 1/4-inch instrument jack
- **Outputs:** 2 x 1/4-inch amplifier outputs (OUT-A, OUT-B), 1 x 1/4-inch Tuner output
- **Controls (Output B):** Ground Lift, 180° Polarity Reverse, Isolation Transformer
- **Power Requirement:** 9VDC (center-negative) for LED indicators only (power supply not included)
- **Construction:** 14-gauge steel chassis
- **Item Weight:** 1.4 pounds (0.64 kg)
- **Product Dimensions:** 6.4 x 4.1 x 3 inches (16.26 x 10.41 x 7.62 cm)
- **Signal Format:** Analog
- **Hardware Interface:** 1/4-inch Audio

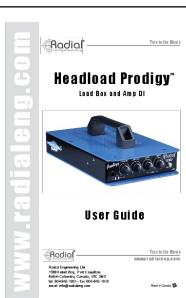
SAFETY INFORMATION

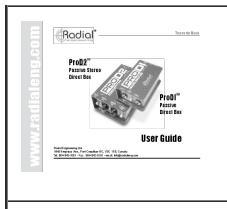
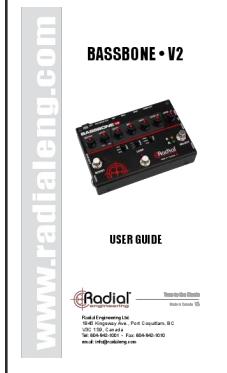
- Always ensure all audio equipment is powered off before making or changing connections to prevent damage to speakers, amplifiers, or the BigShot ABY.
- Use only a regulated 9VDC center-negative power supply for the LED indicators. Using an incorrect power supply may damage the unit.
- Do not expose the unit to moisture or extreme temperatures.
- Avoid dropping or subjecting the unit to severe impacts.
- Refer all servicing to qualified service personnel.

WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official Radial Engineering website or contact your authorized dealer. Keep your purchase receipt as proof of purchase.

Related Documents - BigShot ABY

 www.radialeng.com	<p>Radial Headload Prodigy User Guide: Load Box and Amp DI</p> <p>Comprehensive user guide for the Radial Headload Prodigy, a versatile load box and amp DI. Learn about its features, connections, usage modes, specifications, and warranty for guitar and bass amplifiers.</p>
 www.radialeng.com	<p>Radial Phazer™ Owner's Manual: Phase Alignment Tool</p> <p>Comprehensive owner's manual for the Radial Phazer™ phase adjustment tool, detailing its features, connections, operation, applications, and specifications for audio engineers and musicians.</p>

	<p>Radial ProDI and ProD2 Passive Stereo Direct Box User Guide</p> <p>User guide for the Radial ProDI and ProD2 passive direct boxes, covering features, connections, FAQs, and specifications. Learn how to use these versatile audio tools for live sound and studio recording.</p>
	<p>Radial Bassbone V2 User Guide: Bass Preamp and DI Box</p> <p>Comprehensive user guide for the Radial Bassbone V2, a two-channel bass preamp and DI box. Learn about its features, connections, controls, effects loop, direct output, and specifications.</p>
	<p>Radial HotShot DM1 User Guide: Mute and Redirect Microphone Signals</p> <p>Comprehensive user guide for the Radial HotShot DM1, a foot-controllable device for dynamic microphones. Learn about its features, connection diagrams, testing procedures, applications like stage muting and communication, FAQ, and warranty information.</p>
	<p>Radial J48 Active Direct Box: Comprehensive User Guide and Specifications</p> <p>Detailed user guide for the Radial J48 Active Direct Box, covering features, setup, specifications, and troubleshooting. Learn about phantom power, impedance matching, and ground loop elimination for professional audio.</p>