

FEATURE AND FUNCTIONS

- ①

INPUT jack connects the cable from your instrument.
- ②

TUNER jack common output that can be used for an electronic tuner. It is always on.
- ③

OUTPUT-A jack connects to your main amp.
- ④

OUTPUT-B jack connects to your second amp.
- ⑤

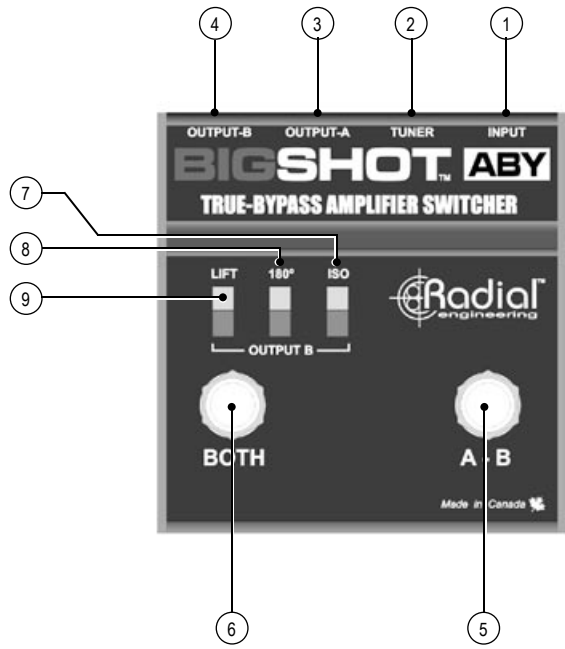
TOGGLE footswitch selects between output A or B.
- ⑥

BOTH footswitch turns outputs A and B on at the same time.
- ⑦

ISO switch engages the internal isolation transformer on output B to eliminate ground loop hum.
- ⑧

180° switch reverses the phase on output B. This switch only works when the ISO transformer is engaged.
- ⑨

LIFT switch disconnects or 'lifts' the ground from the cable shield on output B.



IMPORTANT NOTICE!



The Radial BigShot ABY is a passive switcher that is specifically designed for use with amplifiers with proper electrical safety grounds that have been approved by nationally recognized electrical authorities such as UL in the United States, CSA in Canada and other similar bodies in countries around the world.

It is further understood that due to the unpredictable nature of connecting any number of different amplifiers and pedals together, using the BigShot ABY can pose a potential for electric shock, and as such, the user is completely responsible for any and all consequences as these are beyond our control.

This means that you are completely responsible to ensure the safe and proper use of the BigShot ABY and to clearly understand that using the BigShot ABY confirms you have taken full responsibility. If you are not 100% sure of your actions, please consult a qualified technician for advice before using this device or connecting any of your equipment to it.

RADIAL LIMITED THREE YEAR TRANSFERABLE WARRANTY

Radial Engineering - a division of JP Cabletek Electronics Ltd. warrants this product to be free from defects in material and workmanship to the original owner and will remedy any such defects free of charge according to the terms of this warranty. Radial Engineering will repair or replace at its option any defective component(s) of this product, excluding the finish, the footswitch (footswitch is warranted for 90 days) and wear and tear from normal use, for a period of three (3) years from the original date of purchase. In the event that a particular product is no longer available, Radial Engineering reserves the right to replace the product with a similar product of equal or greater value. To make a request or claim under this limited warranty, the product must be returned prepaid in the original shipping container (or equivalent) to Radial Engineering or to an authorized repair centre and you must assume the risk of loss or damage. A copy of the original invoice showing date of purchase and the dealer name must accompany any request for work to be performed under this limited warranty. This limited warranty shall not apply if the product has been damaged due to abuse, misuse, misapplication, accident or as a result of service or modification by any other than an authorized repair centre.

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True to the Music

BigShot ABY  
Owner's Manual

Part # R800 7200



CAUTION: PLEASE READ THE IMPORTANT NOTICE ON THE BACK COVER BEFORE USING THE BIGSHOT ABY

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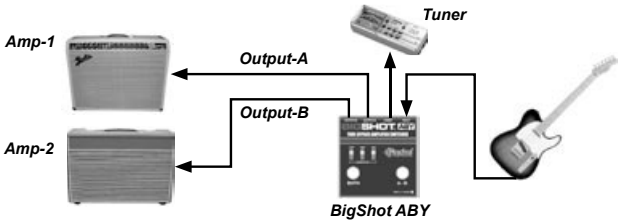
**CONGRATULATIONS** on your purchase of the Radial BigShot ABY. The Radial BigShot ABY is a foot-controllable device that allows you to toggle your guitar signal between two amplifiers or have them both play at the same time. The ABY is completely passive to ensure 100% true bypass performance.

To add greater versatility, the BigShot ABY incorporates an audio transformer that may be inserted into the signal path between the guitar and OUTPUT-B. This is used along with the ground lift switch to help eliminate buzz and hum caused by ground loops, a common occurrence when connecting two amps together. A 180° polarity reverse switch can also be engaged that lets you play both amps in phase. Finally, a third tuner output is provided that is always on to allow you to monitor your guitar for on-the-fly tuning. Although primarily intended for guitars, the Radial BigShot ABY may be used for all types of instruments in applications where you want to feed two amplifiers from a single source.

**CONNECTING AND TESTING**

The BigShot ABY is a passive device. This means that it does not require any power supply whatsoever to make it work. It is recommended to begin testing the system without a tuner connected. Add the tuner to the setup when you are sure the BigShot ABY and both amplifiers are working properly. **Before connecting the BigShot ABY, make sure your amplifiers are unplugged from AC power, turned off and the volume controls turned all the way down.**

1. Begin by connecting the 1/4" guitar cables. Connect your guitar to the BigShot's INPUT. Connect the BigShot's OUTPUT-A to your main amplifier and OUTPUT-B to your second amp.



2. **At this point it is important to read the caution statement on the back cover and ensure all your equipment is properly grounded.** If your equipment meets all electrical safety requirements, you may connect the amplifiers to an AC power outlet.

3. Turn the amps on and begin testing at a low volume level. Confirm that both amps are working with the A - B toggle footswitch. Try depressing the BigShot's BOTH switch to test for ground loop hum. If you encounter a loud hum or buzz, first try lifting the ground by engaging the LIFT switch. If the noise persists, try engaging the isolation transformer with the ISO switch. If possible, test the system with more than one guitar. With some pickups, engaging the ISO switch can cause a change in the sound. See the section "USING THE BIGSHOT ABY" further on in this manual for more information. If all sounds OK, you are now set to turn your amps up.

4. Test your amps for phase. Depress the BOTH switch so both amps are on. Turn the amplifiers up until you can see the loudspeakers move in and out when you play. For correct phase, confirm the loudspeakers in both amps are moving in the same direction. It helps to have the amps side by side and to play a sharp staccato note while observing loudspeaker movement. If one amp is out of phase, it's loudspeakers will move in the opposite direction from the other amp. If this is the case, engage the 180° and ISO switches and confirm that both loudspeakers are moving in the same direction.

**USING THE BIGSHOT ABY**

Using the BigShot ABY is simple. It is designed to allow you to toggle between two amps or play both amps at the same time. Because it is 100% passive, the guitar signal is switched directly for true bypass performance. This also means that when you are driving more than one amp, you will notice a slight drop in volume because the signal is split to drive more than one input. This is normal as there is no preamplifier or buffer in the BigShot ABY circuit. The drop in level can be more noticeable with lower output pickups. If a buffer or preamp is placed before the BigShot ABY in your signal chain, the drop in level when driving two amps is often inaudible.

The BigShot ABY is equipped with an isolation transformer that is designed to eliminate noise by isolating OUTPUT-A from OUTPUT-B. If you are using the ISO switch to eliminate ground loop hum, you will also notice a slight tonal shift on OUTPUT-B as the signal passes through the transformer. This is easily compensated for by adjusting the tone controls on the amp connected to OUTPUT-B. Placing a buffer or preamp before the BigShot will minimize this effect.

The BigShot ABY is also equipped with a 180 degree phase reverse switch. This switch only works when the ISO transformer is engaged. It reverses the polarity on output-B to allow you to phase match your amps. As there is no standard for amp polarity, you have to test and listen. You will know when your amps are in phase when the sound becomes centered and richer. Out of phase amps will sound hollow and unfocused, especially in the low and mid registers. Make sure you have the BOTH footswitch depressed and both amps ON to test for phase.

**SWITCHING A OR B and A PLUS B**

The BigShot ABY is called an ABY switcher as it allows you to select or toggle between two amps or have both play at the same time. The BigShot ABY is very easy to use. Depressing the AB TOGGLE switch will select between amp A and amp B, while depressing the BOTH switch will activate both outputs at the same time. Depressing the BOTH switch again will revert back to A • B mode.

Although the BigShot is very quiet, it is not uncommon to hear a slight click when switching amps. To totally eliminate switch noise you must use an active switcher that employs buffers and opto-couplers. This type of switching is available on the more expensive Radial Switchbone™.

**USING THE ABY ON YOUR PEDALBOARD**

The BigShot ABY is normally going to be the last pedal in your signal chain before connecting to your amps. This does not, however, mean that you cannot put pedals after the ABY. You may, for instance, have an EQ or effect that you use in front of your B amp for soloing. Experiment and have fun! There are no rules.

**USING THE TUNER OUTPUT**

Connect your electronic tuner to the TUNER output. Some tuners can introduce ticking (clock noise) back into the signal chain when they are on. The BigShot ABY does not have any buffer transistors to block this type of noise. This is why we recommend testing your system without a tuner connected. Add your tuner to a properly working system to judge it's effect.

**USING THE ABY AS A TUNING MUTE**

The BigShot ABY can also be used as a mute switch to allow silent tuning. This would be in lieu of having two amps on stage. Simply connect your electronic tuner to output-B and you are set! Now, when you hit the toggle switch, the sound going to your amp will shut off while diverting your guitar signal to your tuner. By depressing the BOTH switch, you can tune on-the-fly as both the amp and tuner will be on.

**FAQ**

***Can I use the BigShot ABY as a channel switcher on two channel amps?***

Yes. Simply connect OUTPUT-A to the first channel and OUTPUT-B to the second channel and you are set to go! The ABY will now toggle between either channel seamlessly.

***Can I use vintage amps that have a 2-pronged AC plug with the BigShot ABY?***

Yes, but we cannot recommend this due to legal liability issues. Back when the first tube amplifiers came round, there was no safety ground or 3rd prong on the AC plug. Using old amps with ABY switchers can be dangerous due to the likelihood of electrical shock. If you plan to use the ABY in your system, have a technician check your system for ground potential and safety. By connecting all of your equipment on a single power bar, you can often reduce shock hazards.

***What is the difference between the BigShot ABY and the Tonebone Switchbone?***

The BigShot ABY is passive while the Switchbone employs active buffering. The ABY is designed for those that prefer a direct guitar-to-amp connection. The BigShot ABY is also considerably more affordable than the Switchbone! The Switchbone is designed for those that need to run longer cables, insist on eliminating all switching noises and do not want to deal with loading issues.

***Will the transformer change the tone of the second output?***

Yes. You will hear a slight tonal difference as the signal passes through the transformer. Because the BigShot ABY is a passive device, it does not employ buffering to counteract the phenomenon. However, you can easily make up the tonal difference using the tone controls on the amplifier. The tonal shift of the transformer can be minimized by placing a buffer in front of the BigShot ABY such as another effect pedal equipped with a buffered output.

***Why are there no LED indicators on the BigShot ABY?***

For LED indicators to be added, we would have to increase the size, add power and add cost. We considered the options and felt that having channel ID lights would be nice, but would not justify the extra cost or provide any form of sonic advantage. LED indicators, and many more features, can be found on the Radial Switchbone.

***I hear a slight clicking when I switch amps. Is this normal?***

Yes. The BigShot ABY is passive and the click occurs as the switch selects between the two amps. This type of clicking is usually only noticeable with high gain amps. This occurs with direct switching ABY units like the BigShot ABY and relay-based switchers too. The only switchers that do not click are the types that employ opto-couplers, like the Tonebone Switchbone.