BASSBONE • V2

USER GUIDE

True to the Music

Made in Canada

RADIAL BASSBONE • V2
USER GUIDE

Table of Contents   **Page**

Thank you for choosing the Radial Bassbone V2 bass command center. This analog pedal lets you connect one or two basses, control their EQ, connect effect pedals, a tuner, stage amplifier and output the signal to the PA or recording system. The Bassbone has been developed to help you take control of your live performance and open the door to creativity in the studio.

Before you get started we kindly ask that you take a few minutes to read the user guide. This explains many of the functions, and how to get the most out of them. If after reading you find yourself asking questions, we suggest you visit the Bassbone FAQ page on the Radial web site. This is where we post questions from users and product updates. If you can not find an answer to your question we invite you to contact us at info@radialeng.com and we will do our very best to answer you in short order.

Now get ready to take command of the stage!

OVERVIEW

The Bassbone V2 is a powerful two channel instrument preamp that is able to handle all types of bass instruments and pickups depending on how it is configured. Some examples include:

1. Using with one bass: When one bass is connected, the Bassbone automatically converts to a two channel preamp. You can toggle to channel-B and use the powerful EQ to make a vintage passive bass sound like a modern active.
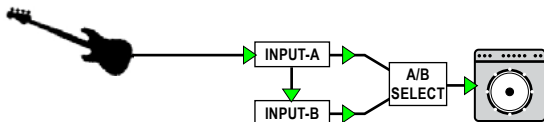

2. Using with two basses: Connecting a second instrument to the INPUT-B jack turns the Bassbone into a two *instrument* preamp. You can toggle between instruments by stomping on the footswitch.
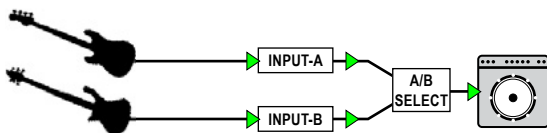
3. Switching between upright bass and electric bass: The Bassbone is equipped with a special PZB booster circuit that allows a passive piezo transducer to connect directly to INPUT-B. This lets you quickly transition from an electric bass to a piezo equipped upright bass.
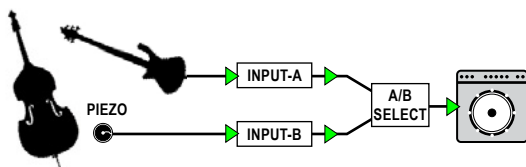
4. Mixing two pickups: Players that use acoustic/electric basses with two pickup systems can employ the Bassbone's unique BLEND function. This turns both channels on and lets you mix the sound of both pickups.
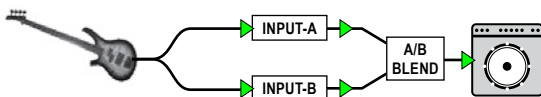
FEATURES

1. SELECT FOOTSWITCH: Selects between channels when used with one bass. Selects between instruments when used with two basses. Features a large, bright LED indicator for each channel.

2. LEVEL-A and LEVEL-B: Adjusts instrument level for each channel.

3. 3-BAND EQ: The EQ on channel-B lets you carve your tone to suit any playing style or instrument. Low +/-12dB @ 75 Hz, Mid +/-10dB @ 470 Hz, High +/-16dB @ 5.6 Khz.

4. LOOP WET/DRY: Rotary control lets you mix the original 'dry' bass sound with the 'wet' effects loop.

5. BOOST: Controls the amount of signal boost from 0-12dB, variable.

6. BOOST FOOTSWITCH: Activates power booster or the mute function. With a large, easy to see LED indicator.

7. LOOP ASSIGN: Three position switch used to assign the effects loop to one or both channels.

8. HPF-2: High pass filter on channel-B rolls-off excessive low frequency resonance and cleans up signal. Choose between 60Hz, 80Hz and off.

9. LOOP FOOTSWITCH: Turns the effects loop on and off. Features a large, bright LED indicator.

10. EQ-1: Three position switch selects between flat and two preset EQ contour curves on channel-A.

11. INPUT-A: Primary ¼" instrument input. The signal is also automatically sent to channel-B when no instrument is connected to the input-2 jack.

12. INPUT-B: ¼" instrument input jack for a second bass.

13. PZB (INPUT-2): Recessed switch turns on the piezo booster and increases impedance to 10 meg-ohms and gain by 10dB. Push inward to activate or leave outward for instruments with standard active/passive pickups.
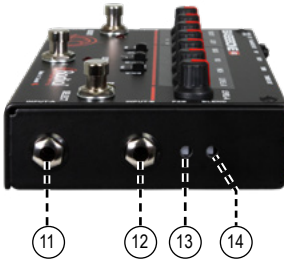
14. BLEND: Recessed switch turns on both channels for instruments with dual electric/acoustic pickup systems. Push the switch in to mix channels-1 and 2 or out for normal use. When pushed in the channel SELECT footswitch is deactivated.

15. BOOST/MUTE: Recessed switch assigns the BOOST footswitch to either the power booster or mute.

16. OUT: ¼" instrument output jack connects to your bass amplifier.

17. TUNER OUT: ¼" output for a tuner. Always on for tuning on the fly or used in conjunction with the mute footswitch for silent tuning.

18. SEND & RECV: Send and receive ¼" jacks for the effects loop.

19. 180° (XLR): Recessed switch reverses pins-2 and 3 at the balanced XLR output to phase align sound with PA or to reduce feedback.

20. BALANCED OUT: Direct XLR output sends the 'post-EQ' Bassbone sound to the PA or recording console.

21. LIFT: Recessed ground lift switch disconnects pin-1 on the XLR output to help eliminate hum and buzz caused by ground loops.

22. 15VDC: Connection for the Radial 15VDC/400mA power supply (included).

23. CABLE CLAMP: Prevents accidental power disconnection by locking down the AC adapter cable.

GETTING STARTED

Make sure the volume levels on your amp and audio system are turned down before making connections. This will help avoid plug-in and turn-on transients that can damage more sensitive components such as tweeters.

Set the controls and switches as illustrated in the diagram below. This represents a neutral starting position for the Bassbone from where further adjustments will be made.

Some of the Bassbone functions are controlled by 'set & forget' switches on the side panels. These switches are recessed to prevent accidental use and can be accessed with a small screwdriver when needed. Ensure all five of these switches are set to their outward positions to start with.
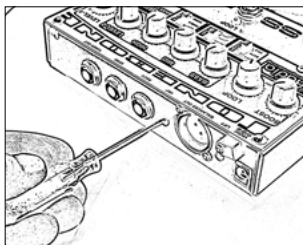
Use a small screwdriver to access the set-n-forget
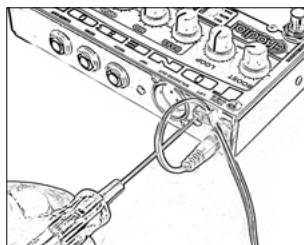
Using the cable clamp prevents accidental power disconnection.

There is no power switch on the Bassbone. As soon as you connect the 15VDC power supply, it will turn on and either the channel-A or B LED will illuminate. A handy cable clamp located next to the power jack can be employed to prevent accidental power disconnection. Use a hex 1/16" driver to loosen the cable clamp. Loop the cable through the clamp and re-tighten.

MAKING CONNECTIONS

As described earlier in this guide, a cool thing about the Bassbone is that it can be configured in various ways, depending on your desired setup. However, we suggest testing with one bass and your amplifier before adding additional instruments, effects and electronics. This way troubleshooting is kept to a minimum. If you start by connecting everything at once it can be very hard to figure things out should you run into a problem.

Both Bassbone channels employ standard ¼" instrument inputs that accept active and passive pickups. Use standard coaxial instrument cable to make your connections.

Start by connecting your bass to the channel-A input. Next, connect the Bassbone's ¼" OUT jack to your amplifier. If the channel-A LED is not already illuminated, press the SELECT footswitch.

Slowly turn the gain up on your amplifier and test at a low volume to ensure everything is working before turning up the volume to a comfortable listening level.

USING ONE BASS

With a single instrument connected to INPUT-A the Bassbone will automatically operate as a two channel preamp. Depressing the SELECT footswitch toggles between the Bassbone channels. This works because INPUT-B is equipped with a special switching jack that, when unused, routes the signal from the INPUT-A jack to channel-B when selected.
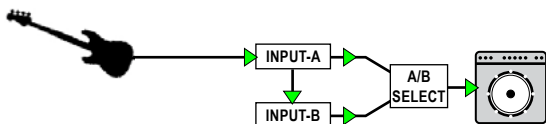
When using a single instrument with the Bassbone, this feature allows you to use channel-A for your traditional bass/amp sound, and then use the powerful EQ controls on channel-B to create a completely different bass tone with the same instrument.

CHANNEL-A

Think of channel-A as a 'straight-through' channel whereby you will use the EQ on your amp to set up the tone of your primary bass. Channel-A is equipped with a control for adjusting the instrument level and a three position switch for selecting one of two EQ presets.

Start with the LEVEL-A control set to the 2 o'clock position and use your instrument amplifier to set the overall volume and tone.

After you have dialed-in your traditional bass sound on your amp, try the EQ-1 presets with your amp. This switch can introduce one of two carefully crafted preset EQ curves designed to bring a more modern character to older vintage bass amps that may not have the tonal range needed for a particular gig.

CHANNEL-B

Depress the SELECT footswitch to switch to channel-B. Think of channel-B as the 'override' channel. This features a powerful active EQ that lets you override the tone settings on your amplifier to create an entirely different bass sound.

Start with the LEVEL-B control at the 2 o'clock position and adjust the level to match channel-A. Use the three-band EQ to create a different tonal response from channel-A. Stomp the SELECT footswitch to toggle between channels and compare sounds.
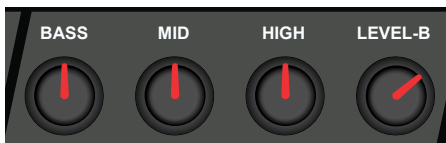
The three-band EQ can dramatically increase or decrease the amount of gain depending on the settings. For instance, rolling off low end with the EQ will reduce the overall gain. Compensate by adjusting the LEVEL-B gain until it matches channel-A. Once the EQ and level controls are set, you can toggle between channels without adjusting your amplifier's volume or EQ settings.

Channel-B is also equipped with a 3-position high-pass filter HPF-2 that is used to reduce excessive low frequency resonance that can cause a bass to sound muddy and indistinct. The HPF-2 filter can be particularly advantageous for acoustic bass players who experience resonant feedback when playing live.

The HPF-2 filter has a flat setting (filter bypassed) and two settings that gently roll off bass. The middle setting rolls off low frequencies below 60Hz and the bottom setting below 80Hz.

USING A SECOND BASS

Many players employ two basses when they perform. These typically include a traditional passive bass such as a Fender P-Bass® and a new generation 5 or 6 string with active pickups. These basses produce very different output levels and tonal ranges. This poses a problem when switching from one instrument to the other, as the amplifier settings must be dramatically adjusted to suit each instrument.

The Radial Bassbone V2 solves this problem because each channel features separate level and equalization controls. You can preset channel-A for your active bass and use channel-B, with it's enhanced EQ, to shape the sound of your passive bass.

Connecting a second bass to the channel-B input jack automatically changes the Bassbone V2 into a two instrument preamp. With two basses, use the SELECT footswitch to transition between instruments.
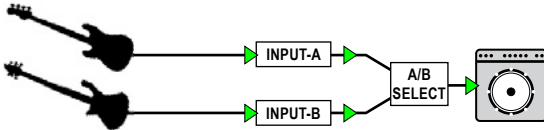
Adjust the 3-band EQ settings to suit your second bass and use the LEVEL-B control to match the volumes.

CONNECTING PIEZO PICKUPS

The trouble with most piezo pickup systems is that they are not very faithful to the original tone when you plug them directly into a regular instrument amplifier or direct box. The sound is often thin and peaky. To accommodate acoustic upright players that use piezo pickups we added the Radial PZB™ piezo booster to channel-B. The PZB booster allows you to connect a piezo transducer directly to the Bassbone.

The recessed PZB switch is located next to the channel-B input jack and is used to turn the piezo booster on/off. Use a small screwdriver to access the switch. When the PZB switch is set to the outward position the piezo booster is off and channel-B accepts standard electric bass signals from active or passive magnetic pickups. Pushing the PZB switch inward turns the piezo booster on increasing the input impedance to 10 meg-ohms and boosting the gain by 10dB. The higher impedance widens the piezo's frequency response to bring out your instruments natural tone.
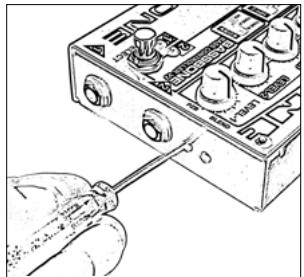
USING THE POWER BOOSTER

The Bassbone is equipped with a footswitch activated power booster designed to add gain for soloing. It can also be used to compensate for effect pedals that reduce the amount of bass frequencies, such as pedals made for guitar. The power booster consists of a footswitch with LED indicator and a boost level control.


Set the BOOST level fully counter-clockwise for the minimum amount of boost. Next, depress the BOOST footswitch and increase the amount of gain by slowly turning the BOOST level control clockwise.

MUTE FUNCTION

Since some bass players do not require a power booster the BOOST footswitch can be converted to a mute that turns off the ¼" AMP and XLR direct outputs. You can use the mute footswitch to put one bass in standby mode while changing to another instrument, or tune in silence using the ¼" TUNER output.

The recessed BOOST/MUTE switch located on the side next to the ¼" output lets you choose between the boost or mute functions. Push the switch inward to convert the footswitch from boost to a mute function. The switch is recessed to prevent accidental use and can be accessed with a small screwdriver.
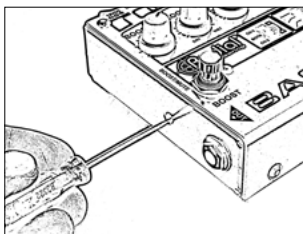

CONNECTING A TUNER

The Bassbone is equipped with a buffered ¼" output for your tuner. This output is always on for tuning on the fly and may be used in conjunction with the mute footswitch function for silent on-stage tuning.

USING THE BLEND CONTROL

Some electric basses are equipped with a stereo jack that outputs the signals from two pickups such as a magnetic pickup and a piezo bridge transducer at the same time. To accommodate, the Bassbone is equipped with a BLEND switch that turns on both channels simultaneously and lets you use the LEVEL-A and B controls to mix the sound of both pickups. The BLEND switch is recessed to prevent accidental use. Using a small screwdriver, push the switch inward to turn the blend function on.
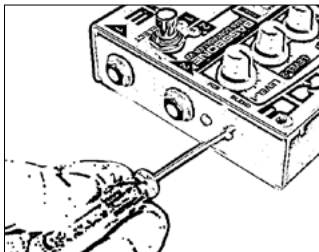
Depending on your instrument the pickups can connect in a couple of ways. If your bass has separate ¼" outputs for each pickup you can simply connect to channels-A and B using standard coaxial instrument cables.

PIEZO

MAG
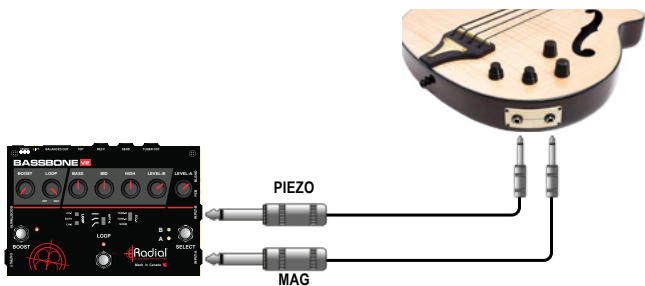
Some basses use a 'stereo' jack to output both pickup signals. If your bass uses one stereo TRS ¼" jack you can use an 'insert' type cable where the signal is sent to separate ¼" plugs. Because channel-B is optimized for acoustic piezo pickups, you will want to ensure the the piezo pickup is connected to channel-B.

PIEZO

MAG

TRS ¼"
STEREO
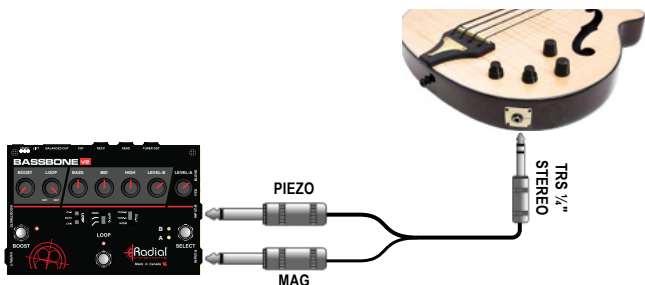
USING EFFECT PEDALS WITH THE BASSBONE

Effect pedals can be positioned in a number of ways depending on what you are attempting to do. For example, you could have some effects dedicated to one bass by inserting them between the instrument and the Bassbone input.

You could also introduce a series of pedals between the Bassbone's ¼" output and your amp. This way the pedals can be heard through your amp but the effects will not be sent to the PA system if using the balanced XLR output.


To take things one step further, the Bassbone is equipped with an unique effects loop designed specially for bass. The effects loop lets you insert pedals by depressing a footswitch and mix the effects with the original bass signal to preserve the fundamental tone of your bass. You can also assign the effects loop to channel-A, channel-B or both, giving you absolute freedom. Connected this way, the pedals will be heard through your amp and in the PA system.
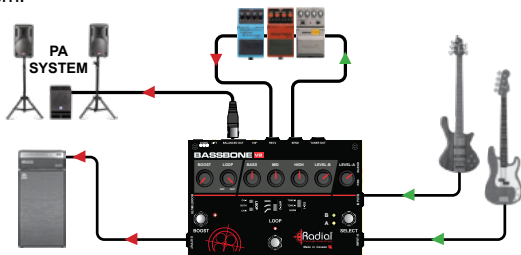
USING THE ON-BOARD EFFECTS LOOP

Start by connecting the SEND jack to the input of your effect pedal and the output from your pedal to the RECV (receive) jack using standard ¼" coaxial guitar cables. In order to familiarize yourself with the setup, start with one pedal. This will make trouble shooting much easier.
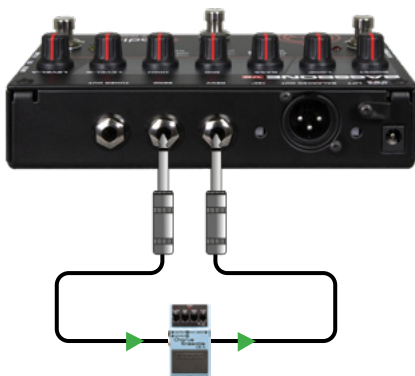

Depress the LOOP footswitch to turn the function on, the LED indicator will illuminate. *Note: If there are no pedals connected to the SEND and RECV jacks the LOOP footswitch will have no effect on the sound. You cannot accidentally mute your sound because there are no pedals connected.*

Start with the 3-position LOOP switch on the top panel set to BOTH. This way the effects will be heard on both channels. You can use this switch to assign the effects to one channel exclusively.
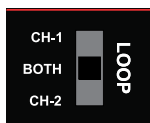

The LOOP WET/DRY control lets you dial-in as much of the effects as you like and helps preserve the original bass tone. Set the WET/DRY control to the 12 o'clock position and adjust to either increase or decrease the amount of effect you hear in comparison to your original bass tone. In some instances, you will want a lot of effect, in others only a little bit. Have fun and experiment.
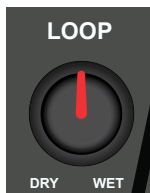
THE RADIAL DIRECT BOX

The Bassbone V2 is equipped with a built in Radial direct box with a balanced XLR direct output. The direct output is used to feed a PA or recording console. You can use it to reinforce the sound from your bass amp or go direct without an amp using the Bassbone to control your sound through the PA. The direct output is particularly handy in the studio for direct recording, or where bringing an amplifier may not be practical. Simply connect the XLR direct output to the mixer and use the Bassbone as your miniature preamp. All your EQ settings are now right at your feet!

It's important to note that because the direct output is post-'everything' all of the Bassbone's EQ, level and effects-loop settings will be heard. This is particularly advantageous when playing gigs without a sound engineer. An example would be on a solo where the engineer would normally increase the bass volume. By engaging the Bassbone's power booster, the level will increase on your bass amp and at the mixer at the same time.
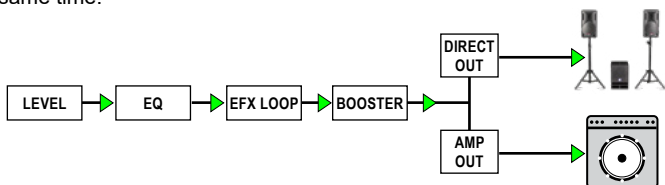
Connect the direct output to the microphone input of a mixing console using standard XLR cable up to 100 meters (300'). The XLR male connector is wired to AES standards with pin-1 ground, pin-2 hot (+) and pin-3 cold (-).

MIXING CONSOLE

The direct output is equipped with a ground lift and a polarity reverse. The recessed ground LIFT switch helps eliminate hum and buzz caused by ground loops. If you hear noise try pushing the ground LIFT switch inward.

POLARITY REVERSE   **GROUND LIFT**

The recessed 180° polarity reverse switch inverts the pins-2 and 3 at the XLR. This is often used to phase-match the PA system to the stage amp in smaller venues where these two audio sources can sometimes compete. It can also be used to electronically change a resonant peak to a phase cancelled null to help alleviate resonant feedback when using an acoustic instrument such as an upright bass on stage. These two set & forget switches are recessed to prevent accidental use so use a small screwdriver to access them.

SPECIFICATIONS

Audio circuit type:	Discrete class-A FET input with low noise ICs.
Frequency response:	20Hz ~ 18kHz
Total harmonic distortion:	0.05% @ -15dBu
Intermodulation distortion:	0.2% @ -20dBu
Dynamic range:	85dB
Input impedance: Input A:	220K
Input impedance: Input B:	220K/10M
Output impedance:	300 Ohms at XLR
Maximum input:	+7 dBu
Gain:	+10dB
Boost Gain:	0 to 12 dB, Variable
Noise floor:	-100dB
Equivalent input noise:	-92dBu at XLR
HPF-2 high pass filter:	Flat, 60Hz and 80Hz (-3 dB/Octave)
XLR configuration:	Pin 2 +, Pin 3 -, Pin 1 Ground
Ground lift:	Lifts pin-1 on the XLR
Power:	+15VDC/400mA adapter included
Construction:	14 gauge steel
Finish:	Powder-coat
Size: (L x W x D).	5.5" x 4.2" x 2" (203 x107 x 48mm)
Weight:	2.55lb (1157 grams)
Conditions:	Use in dry locations only between 5°C and 40°C
Warranty:	Radial 3-year, transferable

THREE YEAR TRANSFERABLE LIMITED WARRANTY

RADIAL ENGINEERING LTD. ("Radial") warrants this product to be free from defects in material and workmanship and will remedy any such defects free of charge according to the terms of this warranty. Radial will repair or replace (at its option) any defective component(s) of this product (excluding finish and wear and tear on components under 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 reserves the right to replace the product with a similar product of equal or greater value. In the unlikely event that a defect is uncovered, please call 604-942-1001 or email service@radialeng.com to obtain a RA number (Return Authorization number) before the 3 year warranty period expires. The product must be returned prepaid in the original shipping container (or equivalent) to Radial or to an authorized Radial repair center 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 and transferable warranty. This 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 Radial repair center.

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To meet the requirements of California Proposition 65, it is our responsibility to inform you of the following:
WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
Please take proper care when handling and consult local government regulations before discarding.