



## PLEASE READ THESE INSTRUCTIONS PRIOR TO INSTALLING YOUR 3ZB PREAMP

OUR COMMON GOAL IS TO GET YOU BACK TO PLAYING ASAP

The Z-Mode preamp is sold as an upgrade for existing basses, our instructions assume that the mounting holes are already in the instrument. Installation is simple if you have experience with installing music electronics. Typical hand tools for soldering wire connections and assembly are required. If you are uncertain about the installation we recommend you have a trained guitar technician install it for you. You can also send an email to [service@audereaudio.com](mailto:service@audereaudio.com) if you have any questions.

Each product is configured to the customer's order; these are general instructions and apply to most configurations, some portions of it may not be applicable to your particular installation. Refer to the preamp's Wiring Drawing for more specific wiring information. Additional information is available in the Frequently asked Questions (FAQ) page on our web site.

We offer a 10 day return period from receipt of the preamp, see our Satisfaction Guarantee for details. We recommend that you follow our instructions and conduct a "test play" to check out the product's performance before completing the installation and before making any modifications to the product or your instrument.

**Knobs are not provided with the preamp.** Our potentiometers have solid shafts so the knobs need a set screw to secure them. The single potentiometer has a 6mm shaft. Dual potentiometers have an 8mm outer shaft and 6mm inner shaft. These shaft sizes are common to almost all on-board preamps. Some knob resellers do not know the shaft size their knobs fit; knobs which will fit a normal Bart, Aguilar, EMG or East stacked pot should fit.

Every instrument is different; we have made the module small and easy to install but if you find you need to make modifications to your instrument in order to install this product please take extra care. Audere Audio is **not** responsible for any damage or modifications you make to your instrument as part of the product installation of the product. See our Limited Warranty for restrictions on liability.

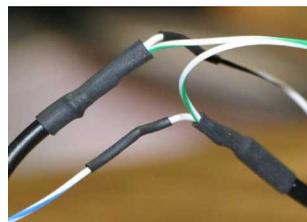


### Step 1) Connecting to the Pickups

The preamp wires used for the pickups are: Green strip on White base color (Green/White) for the pickup common, Black/White (Bridge or single pickup hot) and Blue/White (Neck pickup hot). Refer to the Wiring Drawing for specifics.

If you did not opt for the optional Active/Passive (A/P) switch, the preamp wires will come from the module. If your configuration includes an A/P switch, the preamp wires for the pickups will come from the A/P switch. With the switch in Active position the signal passes to the module, in Passive position it bypasses the module and goes to the output jack.

- Disconnect your pickup wires from the original preamp.
- All wire connections must be insulated to prevent shorting and to keep the leads isolated from the output jack and from the cavity ground.

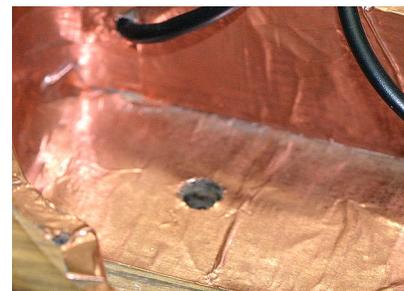


- Prior to connecting the wires, slide the heat shrink tubes over each pickup wire and the module Green/White wire. These tubes will be reduced over the solder joints later.
- For a single pickup system: connect the hot lead from the pickup to the Black/White wire which is located at the upper left corner of the module. Connect the pickup "common" lead to the Green/White wire.
  - For a dual pickup system: connect the bridge pickup hot lead to the Black/White wire. Connect the neck pickup hot lead to the Blue/White wire. Connect both of the pickups "common" leads together and then solder them to the module's Green/White wire.
  - For all systems: Slide the heat shrink over the solder connections and shrink with a heat gun or hair dryer (do not over heat and protect other components from the heat). You may prefer to postpone shrinking the heat shrink until after the play test - just be sure that the exposed wires do not touch anything that will cause an electrical short.

If your pickups have an additional shielding wire; solder it to the output jack ground (center tab) or cavity ground.

Verify that your pickups are not connected on the negative (common) side to the cavity shielding. If the pickups are connected to the cavity remove this connection; the Green/White wire must not be grounded.

Connecting the Green/White wire to the cavity ground will not hurt the preamp but it will increase power pull and the preamp will sound bad with a lot of distortion.



### Step 2) Connect the Preamp to do a Play Test

To test play the preamp prior to a full installation: tape the preamp to the back of the instrument with low tack tape to hold it in place during testing (verify first that the tape will not hurt the finish when it is removed).



- Connect a battery to the new preamp and insert the guitar cable into the new preamp's jack.
- Verify the battery LED lights up on insertion.
- You can now do an initial play test.

Note: it will pick up extra noise while it is out of the shielded cavity. Since this is just a test, we will not adjust the Low Z gain, so the Low Z-Mode may be louder or softer than the other modes. This will be adjusted later. Also note that touching the temporarily ungrounded pots or switches can cause hum.

It is important to prevent any electrical connections from touching and shorting to each other.

If after playing the preamp in this test mode you are satisfied with the sound, proceed with the installation.

### Step 3) Remove the old preamp and Prepare the Cavity

- Remove screws holding the existing output jack plate and remove the jack nut. Set the plate and hardware aside for use with the new output jack.
- Pull jack back into the cavity.
- Remove the knobs from the pots and then remove the nuts and washers from pots and switches.
- Pull out the old preamp circuit.
- Determine the location for the module, battery, LED and any additional holes, if required, for pots and switches.
- Most basses have the cavity shielded with either conductive paint or a foil shield; however some low cost basses do not have a shielded cavity. This is required for quiet operation in any electric bass and for providing a ground connection for the pots and switches. With shielding you don't need to get 100% coverage, but you want to get the best coverage that is reasonably achieved.
- It is important that the pots and switches are grounded to the cavity and that the cavity is grounded to the output jack. If the pots and switches are not grounded they will buzz when you touch them.

Installing a cooper foil shield is easy. Copper foil is available with glue on the back (like tape) and you simple apply it to the wood. If your copper tape does not have a special conductive adhesive then solder the strips of copper tape together at all joints. A simple small tack joint of solder at one spot per joint is all that is required. Conductive paint is also available to shield instruments but copper works better and is probably easier to work with when shielding a single bass.

## Step 4) Installing Switches

The switch bushing diameter is 6.1mm and fits in a 6.35mm (0.25") mounting hole. In addition to the standard Bright Nickel hardware, we have included additional decorative hardware, consisting of a Gold plated nut/washer set and a Black Nickel nut/washer set.

To install a switch, insert the shaft through the body, use the hardware set of your choice on the exterior side of the cavity; test to be sure the switch is properly oriented then tighten.

The different switches have a different number of pin rows

- Z-Mode switch has 1 row of 3 pins
- Optional Active Passive Switch has 4 rows of 3 pins
- Optional Mid Frequency Switch on a 3 band tone control has 2 rows of 3 pins

### Z-Mode Switch

The Z-Mode switch has a High, Mid and Low setting, giving you 3 Impedance (Z) loads to choose from. In addition, the High and Low Z settings have trimmers on the module to give you additional setup flexibility. When the toggle is toward the Blue Dot, you are in Low Z-Mode

### Active/Passive Switch

The Active/Passive (A/P) switch allows you to bypass the bass preamp circuit. Switching in the passive switch mode will effectively wire your pickups directly to the output jack. You may experience a volume shift when moving the switch. When the toggle is toward the Blue Dot then you are in Active Mode.

### Mid Frequency Range Switch

The mid frequency range switch allows you to change the center frequency of the mid control on a 3 band tone control. When the toggle is toward the Blue Dot then the mid frequency is the lowest.

## Step 5) Installing Pots

The pots are all 100K ohm with audio taper for volume pots and linear taper for tone and balance pots. Pots turn clockwise for the maximum setting. These pots are smaller and made to a much higher quality level than the components typically used in guitars.

Single pots have an M7 bushing which fits in a 7mm mounting hole. Stacked/ dual pots have an M9 bushing and fit in a 9mm mounting hole.

- A. **If your existing holes are larger than the single pot's bushing size:** An oversized washer has been provided for use in the cavity interior if required. This larger washer goes over the shaft first. Then add the two rubber spacer rings that fit over the shaft; these go up into the standard sized hole to center the pot shaft.
- B. Check orientation of the control, then secure each pot and switch with a washer and panel nut on the face of the bass.



Grounding for the knobs is obtained by the physical contact of the front of the pot with the cavity shielding, as described previously. Do not attempt to solder to the pot's metal bushing, it will not accept a solder connection. You can insert a thin grounding tab washer in-between the case and pot and solder them together with a wire if desired but if the cavity is properly grounded this should not be required.

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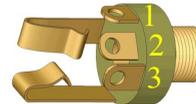
The operation of the pots is written on the back of the pots. For example, T/B would be a stacked Treble/Bass. The codes we use include:

Vol – Volume	T/B – Treble / Bass
Bal – Balance	PT – Passive Treble
V/PT – Volume / Passive	Mid – Mid range (3 band TC)
Treble	HM – High Mid (4 band TC)
Bass – Bass range	LM – Low Mid (4 band TC)
Treb – Treble range	M/M – High Mid / Low Mid

## Step 6) Output Jack

Tab 1-top) Jack Audio Out , Positive - Solid White wire

Tab 2) Jack Ground - center tab: 2-3 Grey/White wires  
The loose Grey/White wire connects to your Cavity Ground.



Tab 3) Jack Negative - Solid Black wire

Secure the jack plate with the original hardware or with the hardware provided on the jack. Set the depth of the jack using an internal panel nut, if required. Reinstall the plate with the original screws

Be aware that when the cable to the amplifier is partially inserted into the jack, the center connector gets the full battery voltage. This is the most common jack used with active basses and this aspect of their use is well known.

The shielded cavity and bridge ground wires need to be connected to the output jack center tab. The output jack has an extra unattached ground wire for this use. Slide heat shrink over the Grey/White wire, then solder this wire to the Bridge and cavity ground wires. Slide the heat shrink over the solder joint and shrink.

## Step 7) Final Installations Details

- A. The LED's diameter is 3mm. You can drill a 3mm hole and insert the led into the hole at any convient location. Normally an LED will simply press-fit and stay in a hole drilled in wood, if the drill size is accurate. If the hole is drilled in plastic or the led will not stay in the hole, a small drop of fast setting glue will secure the mount.
- B. Apply one of the adhesive pads to the base of module; remove the first liner, press into place, then remove the 2nd liner and press the module in to position in the cavity.
- C. Install the battery.
- D. Plug in a cable to check the Battery LED operation. When the battery is at Full strength you should see a short flash for about 3 seconds of light. If you see a 3 step pattern - bright / dim / bright, then the relative strength of the dim flash to the bright indicates the batteries strength. If you see 5 on-off slashes then the battery needs to be replaced.

## Step 8) Preamp Adjustments

- A. **Output gain level adjustment for Low Z setting:** One advantage of the Low Z-Mode is its ability to capture the low frequencies completely. To fully realize this benefit, you may need to make a gain level adjustment. The trimmers for adjusting gain in the Low Z setting are located on the lower edge of the module, on the side away from the wires. This control is an 11 turn pot. Turning the controls clockwise will increase the gain of the Low Z-Mode. Adjust the gain until you get your desired sound level compared with the Mid Z setting. Too high a setting could introduce distortion.
- B. **Capacitance level adjustment for the High Z setting:** You can adjust the capacitance load that is presented to the pickups when in High Z-Mode switch setting. Changing the capacitance loading changes the shape of the frequency response. The trimmers are located at the top of the module, closest to wires. Each pickup has an independent control. The control is an 11 turn pot without end stops. Turning the control clockwise will increase the capacitance load on the associated pickup. Depending on the frequency range of your amplifier system combined with the characteristics of your pickups, you may have to give the pot multiple turns to get a noticeable difference.



With the above adjustments, if after tweaking the adjustments you want to 'start over at ground zero', just turn the pots 11 times counter clockwise to ensure you are at one end of the adjustment range. Then start turning clockwise, noting that in 11 turns you will be at the opposite end of the adjustment range. The pots do not have hard stops. Your preamp comes with an 1mm screwdriver needed to adjust the pots. Keep the screwdriver in a convient place in case you want to make more adjustments in the future.

## Step 9) Finishing Up

- A. Re-Install the electronic cavity cover
- B. Attach your knobs.

Please provide us feedback on how the installion went and how your bass sounds. At Audere Audio we are always interested in how we can improve our products; customer feedback is a key part of the process.

You can email us at [playerfeedback@audereaudio.com](mailto:playerfeedback@audereaudio.com)

Thanks for using Audere preamps

  
David Meadows