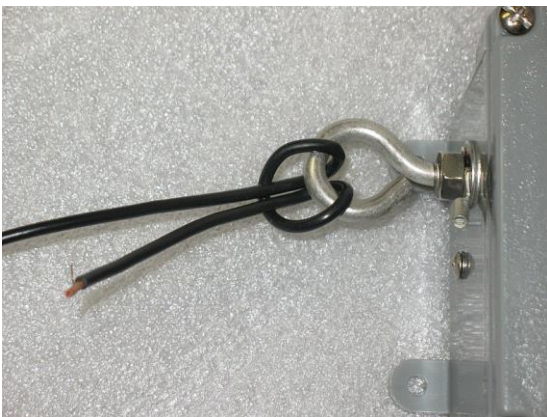
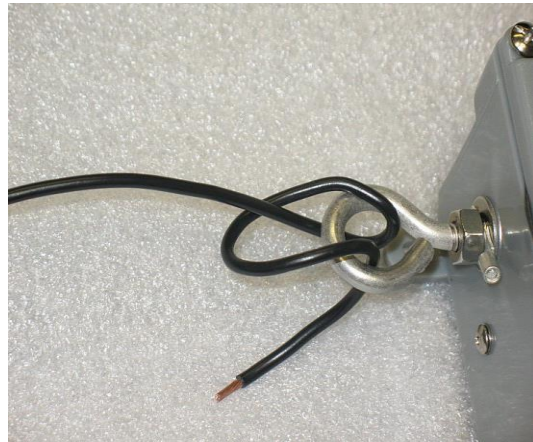
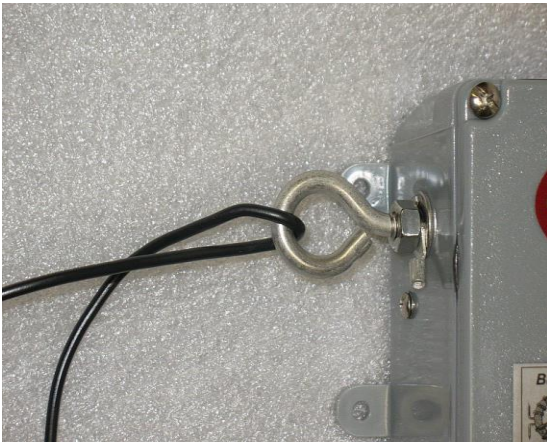
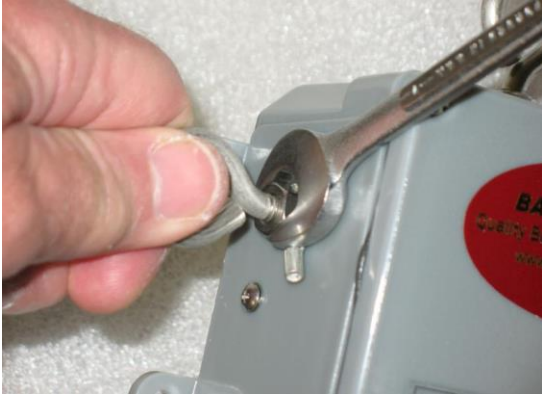


Installation Notes for Baluns & Ununs

Thank you for purchasing from **Balun Designs**. Your balun or unun is built to provide a very long service life by following a few simple installation procedures:

- Although the balun enclosure is weatherproof, connectors are not. Please be sure to wrap all coax and wire connections in coax seal or your favorite weather sealant to prevent moisture from seeping in through the openings. To avoid problems caused by corrosion, ring terminals supplied with your unit **should be soldered, not just crimped!**
- Neoprene gasket material for the cover of the grey Carlon enclosures is applied at the factory as a liquid. Consequently the area where the beginning and end overlap becomes thicker when the mixture cures. In many cases you will notice a “bulge” in this material when the cover is secured. This is normal and does not detract from the integrity of the seal. Please **do not trim** this material as it will degrade the long term effectiveness of the gasket.
- Weep holes are intentionally omitted on most models because the units final mounted orientation is unknown. **However, weep holes are very important** to the longevity of your balun/unun. If they are not installed, weather changes over a period of time can cause condensate to build up inside the enclosure and potentially cause a short or abnormal operation. They may be added by drilling **two** 1/16th holes at the low point of the enclosure using the balun’s final mounted orientation. Holes are usually drilled in the corners or sides, opposite each other, but can be added in any location. Weep holes are installed during production on models where the final orientation is known. Models with weep holes already installed should be mounted with the holes pointing down. If your balun/unun will be used strictly indoors then weep holes are not required.
- **Do not to over tighten the cover of the enclosure.** The neoprene gasket under the cover is very effective and will provide the best seal by leaving approximately a 1/16th inch gap at the corners under the closing screws. Over tightening the screws can **warp the cover** causing the middle of the cover’s sides to lift up. This will create a gap under the seal compromising the weatherproof integrity of the enclosure.
- Any of the baluns with a ratio other than 1:1 and many ununs **will show a dead short at DC**. This is caused by the manner in which they are wound and is not the case when RF is present. Terminals that indicate a short when checked with a DVM are not an indication of incorrect assembly.
- After installation, **MAKE SURE ALL LOCKING NUTS ARE SECURE!!!** Failure to tighten stud or eyebolt outer locking nuts can cause erratic operation and/or create high contact resistance. This resistance leads to excessive heating and can ultimately cause failure of the ferrite core(s). This type of failure is not covered under our Lifetime Warranty.
- 1:1 Baluns with studs will have a polarity marking shown with a “+”. This marking indicates which stud is directly connected to the center conductor of the feedline connector, but there are no polarity requirements with this type of balun unless your particular installation calls for it. 1:1 baluns with dual SO-239 connectors are bidirectional and can be installed without regard to input or output.
- **Power limits shown are measured at resonance and should not be exceeded.**

- If you purchased a model with eyebolts, the solder lugs are easily removed by holding the eyebolt with one hand while using a 7/16ths open end wrench to loosen the external locking nut with the other. The lug has been modified for easy removal once the nut has been loosened. **It is not necessary to open the enclosure.** Nylok nuts are used on the inside of the eyebolt to prevent any movement of the internal locking nut. Failure to remove the lugs before soldering can permanently damage the enclosure!



- If you purchased a **Tuner Balun**, there will be markings for connection polarity. Following polarity markings is required **only** when the antenna in use has a direct ground at the feed point such as a long wire. Reversing these connections can potentially cause damage to your equipment and/or the balun or unun. Polarity of the connections is not a concern if you are using the balun with ladder line or window line feeding a balanced antenna such as a loop or dipole.
- **Scratches and scuffs on the sides and/or bottom of the enclosure are from the manufacturer's bulk shipping method and not from prior use.** These enclosures are purchased in large quantities to help maintain low pricing for our products and movement in the boxes sometimes cause minor scratches and scrapes.

In no case will **Balun Designs** be liable for any incidental or consequential damages, which include, but is not limited to, damage to equipment connected or attached to any product we sell. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Balun Designs makes no representations or warranties, either express or implied, of any kind with respect to products sold by **Balun Designs**, including but not limited to, merchantability and fitness for a particular purpose. You agree that the sole and exclusive maximum liability that **Balun Designs** has arising from any product sold by **Balun Designs** shall be the price of the product ordered. In no event shall **Balun Designs**, its owners, its officers, employees or other representatives be held liable for special, indirect, consequential, or punitive damages related to products sold.