

Buckmaster Off-Center-Fed (OCF) Dipole - Multi-Band Antenna

4-Band does 40, 20, 10 and 6 meters, **no tuner required!**

7-Band does 75/80, 40, 20, 17, 12, 10 and 6 meters, **no tuner required!**

8-Band does 160, 75/80, 40, 20, 17, 12, 10 and 6 meters, tuner may be required for 160.

OVERVIEW:

The antenna is fed with a SO-239 connector attached to an integral 6:1 balun (auto-transformer.) The custom designed balun is permanently sealed in a special epoxy potting compound for moisture protection and corrosion free operation. The balun is internally crimped and hard soldered to a silvered beryllium copper pin, Teflon barrel, SO-239 coax connector. An integral PVC moisture drip ring around the connector shields and protects the coax connection. A heavy-duty 1/4 inch stainless eyebolt with lock nut supports the center insulator/balun used with your support rope.

The two legs of the antenna are different lengths. The 4-Band legs are 23 and 45 feet, 7-Band legs are 45 and 90 feet, and 8-Band legs are 90 and 180 feet. With the legs at a 120 degree angle as viewed from the side and depending on how you secure the ends, the 4-Band antennas need at least 60 feet of ground space from end-to-end. The 7-band antennas need at least 120 feet of ground space end-to-end. 8-band antennas need 239 feet of ground space end-to-end.

The antenna is completely assembled and no adjustments are necessary, just screw in your coax and raise the antenna as detailed below. It is unique not only because of the extremely high quality engineering, design and construction, but also because the antenna wire provides amazing performance. It is a flexible, 65-strand, 12 Ga. (or 14 Ga., 41-strand with the 100 W model) PVC coated wire, with EVERY copper strand tinned to prevent corrosion. You can put this antenna up and forget it! There is no external hardware to loosen or corrode, and no external splices, connectors or soldering in the antenna wire. It survives severe weather environments with ease. It's even been to Antarctica!

INSTRUCTIONS:

- The antenna should be installed, as viewed from the side, with the legs at least 120 degrees (inverted vee) up to 180 degrees (flat top.) It should not look like a Christmas tree as viewed from the side. An ideal installation will have the balun 30 ft. high, the ends of the antenna 10 ft. or higher (for safety so no one can touch the antenna while you are transmitting) and "in the clear" away from any metal objects. No trimming, counterpoise or ground lead required. As viewed from above the legs of the antenna should be in a straight line, but you can turn/bend them slightly if necessary. ***Be sure to keep all parts of the antenna and coax away from metal objects of a resonant length.***
- Do not block the small weep holes on the side of the balun enclosure, they are there in case any condensation collects inside. Moisture cannot affect the balun as it is enclosed in epoxy.
- Attach a high quality 50 ohm coaxial cable (e.g. Belden 9913, LMR400, RG8X or RG213) to the SO-239 connector at the feed point of the antenna. Keep the coax as short as possible to minimize signal loss.
- The antenna is designed to be hung from the center stainless eyebolt. The simplest way to erect the antenna is to hang the center from a tree. Throw UV-protected rope over a tree branch that is 25 feet or higher, hoist the balun up, then tie the end of the rope off on the tree. Then using more rope tie the ends off at least 8-10 feet high on 2 other trees. If using a mast, PVC or fiberglass is preferred. If hanging the antenna from a tower, you need to use a horizontal 5 foot or longer PVC or fiberglass pole to keep the antenna away from the tower. Or, you can hang the antenna from a 10 foot piece of rope tied to the tower and use the legs of the antenna to pull the balun away from the tower. If you don't have any way to support the center, secure a "messenger line" tightrope between two supports, then hang the antenna from that.
- After raising the antenna, let the coax hang straight down, the one-piece SO-239 connector is plenty strong enough to support it. Then run the coax away from the antenna at a 90 degree (perpendicular) angle to the OCF legs.
- Check your SWR on all bands before using a tuner or running full power. If your SWR is not the same or better than the numbers published on our website, check the troubleshooting section below. If your SWR is around 2.5:1 or greater, you must run with reduced power whether you are using a tuner or not.

TROUBLESHOOTING:

- Verify your coax and connectors by attaching a dummy load and checking the SWR. It should be 1:1. Wiggle the connectors on each end of your coax to ensure the 1:1 SWR is consistent.
- Is there any metal in the vicinity of the antenna? Metal that is resonant on the band you are trying to work can couple to the OCF and rob signal from an antenna. If possible keep all parts of the antenna at least 10 feet from metallic objects.
- Be sure to let the coax hang straight down from the antenna, don't tie it to a metal pole or tower, or any other wires/cables. RF shielding on coax is not always perfect.
- As viewed from the side, are the legs at a 120 to 180 (flat top) angle? If the angle is less than 120 the SWR will suffer.
- Due to the characteristics of the antenna, it is normal for the balun (auto-transformer) to test as a short on an ohmmeter.

Thanks for being our customer. Let us hear from you about your experience.

