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CU-9-5000 Unun

450 to 50Ω (9:1)

1.8-31 MHz

5 KW PEP

For end fed antenna matching



Model CU-9-5000 is a 9:1, five core voltage unun housed in a NEMA enclosure box with top stud/ side stud (ground) used to translate a 50 ohm input up to 450 ohms unbalanced at RF power levels up to 5 KW PEP when used with a matched 450 ohm load. With a matched 450 ohm load the SWR over the frequency range 1.8 to 31 MHz is less than 2:1 on the coax feed side. SO-239 input and top/side studs/wing nuts are used for output. Side stud is used for counterpoise if needed.

Application. For end fed, traveling wave and certain types of telescoping vertical antennas, the 9:1 balun makes a good transformer for converting to 50 ohm coax to the 450 ohm feed point. If you use the antenna on multiple bands, the feed point impedance may not always be 450 ohms and use of the balun at high (>600 ohms) or low (<300) will require reduced power input or the balun/unun may have its power ratings exceeded and damage to the balun may occur. The (9:1 conversion ratio will change for loads other than 450 ohms balanced).

If you intend to use this impedance transformer for end fed wire antennas using the coax as a counterpoise we recommend the following antenna length:

Suggested wire lengths (measured from antenna wire connection at top of CU-9-7500):

Bands Covered (meters)	Wire Length (feet)
40-30-20-15	35-43, 49-63, 70-85
40-30-20-17	35-45, 54-64, 67-77
40-30-20-17-15-12-10	38-44, 55, 60, 68-73
80-40-30-20-17-15-12-10	68-73, 85, 92, 102, 120-125
160-80-40-30-20-17-15-12-10	135, 141, 173, 203

The recommended coax feed line length is a minimum of 65 feet and you will need an antenna tuner to match the coax to the transceiver/transmitter for best results.

DO NOT TRY TO FEED BALANCED LOADS (E.G. LADDER LINE FED ANTENNAS) BY USING THE GROUND (SIDE) TERMINAL OF THE OUTPUT AS SERIOUS DAMAGE TO THE UNIT MAY OCCUR

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