

Thank you for purchasing the AA-3918 1:1 Current Balun. Nobody wants “RF-in-the-shack”; installing the AA-3918 is the ideal way to stop it at the source. In transmit mode, common-mode RF current propagating down the coax line can flip microprocessor settings, distort your audio, cause equipment to fail, and even deliver painful RF burns! During reception, the same electrical pathway introduces local RFI and masks weak signals, knocking out DX communication. Rated at 1500 Watts PEP, the AA-3918 prevents unwanted RF from reaching your operating desk, ensuring your RF power stays on the antenna where it belongs!

THEORY OF OPERATION

Unlike DC, RF current propagates along the surface of electrical conductors, a condition called “skin effect.” Due to skin effect, coaxial cable can present three conductive pathways for RF current to flow: (1) along the inner conductor, (2) along the inside surface of the coax shield, and (3) along the outside surface of the coax shield. When an unbalanced coax line feeds a balanced radiator (dipole), the outside surface of the coax shield acts like a second length of wire connected in parallel with one antenna leg. Depending on electrical length, this unwanted pathway can rob power, distort the radiation pattern, alter resonant frequency, and create mismatch. Installing the AA-3918 cuts off that third wire, bringing your dipole back into balance and allowing it to perform the way it was designed!

INSTALLATION

- Strip and clean each antenna leg back about one foot – it must be solderable.
- Bend each wire back on itself about four inches from the end.
- Install each wire through a horizontal eyelet on the AA-3918 and wrap tightly 3-4 times.
- Bend each balun pigtail to form a “rain loop” and wrap the end onto the antenna wire.
- Solder the connections, allowing solder to flow all the way around.

Ensure the balun eyebolts carry all the pull exerted by the antenna wire. The pigtails should droop, forming a letter “U” that allows rain to run off. Also, when soldering, be careful not to overheat the pigtail wire, as it may melt the PVC on the balun enclosure.

SWR CHECK

Electrically, the AA-3918 has no effect on RF being fed to the antenna. However, by electrically breaking the common-mode path and eliminating the “third wire,” it may alter both the antenna’s feed point impedance and resonant frequency. Before operating at high power with the balun installed, check your SWR at low power and make any necessary adjustments to the antenna length or amplifier tuning.



TWO YEAR LIMITED WARRANTY

This Limited Product Warranty is provided by the Dealer where your Intellitron product was purchased. The Product Warranty extends only to the original purchaser of the product and is valid for a period of two years from the date of purchase. Please keep your dated sales receipt as evidence of the date of purchase. You will need it to receive warranty service. Your Dealer warrants the product will be free from defects in workmanship and materials under normal use. If the product fails to conform to the warrant and is within the warranty period of two years, contact your original dealer for a return authorization. Your dealer may choose to either repair or replace the non-conforming product.