

Thank you for purchasing the AA-3915 RF Isolator. Nobody wants “RF-in-the-shack,” and the AA-3915 is a sure-fire way to prevent it. Common-mode RF current coming in on coax lines can be problematic—and dangerous. On transmit, it can alter microprocessor controller settings, cause equipment failures, and even deliver painful RF burns. On receive, the same electrical pathway can introduce local RFI, masking weak signals and knocking out DX communication. Rated for 1500 Watts PEP, the AA-3915 is specifically designed to “choke off” and prevent disruptive RF energy levels from reaching your operating desk.

## **THEORY OF OPERATION**

Unlike DC current, RF current propagates along the surface of electrical conductors, a condition called “skin effect.” Due to skin effect, coaxial cable presents three conductive pathways for RF energy: (1) the inner conductor, (2) the inside surface of the coax shield, and (3) the outside surface of the coax shield. The AA-3915 allows RF current to flow unimpeded along the inside surfaces of coax cable (1,2) but surrounds the outside surface (3) with ferrite beads that interrupt the RF current path.

## **INSTALLATION**

Install the AA-3915 at your operating location, in series with the coaxial line that exits the building. Alternatively, install it outside at the point where your coax enters the building.

**Important Warning:** Do not install the AA-3915 between your transceiver and amplifier! Doing so will interrupt an important ground path.

## **SWR MEASUREMENTS**

Electrically, the AA-3915 has no effect on RF being fed to your antenna. However, to common-mode RF energy returning down the coax shield, the AA-3915 looks like an open circuit. This change in load may alter the antenna’s feed point impedance and resonant frequency. Before operating at high power with the isolator installed, check SWR using an analyzer or low-power transmission and make any necessary adjustments to the antenna element or amplifier tuning.

## **WEEP HOLE**

The AA-3915 has a “weep hole” drilled in one end of its housing to relieve condensation buildup. If installing outside, orient the weep hole downward to prevent rain from leaking in.



### **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.