

DUAL FERRITE ISOLATORS

BASIC TUNING INSTRUCTIONS

The following tuning instructions are provided for use when only a wattmeter is available. Tuning range with this method is approximately +/- 1 MHz at VHF, +/- 2 MHz at UHF, and +/- 5 MHz at 800/900 MHz. Maximum tuning range requires a more complex procedure and a network analyzer, and is also available from Telewave for a nominal fee. The initial tuning should be done at the lowest power available to prevent damage to the transmitter or cavities during the tuning procedure. Turn the transmitter off to prevent damage whenever connections are changed. This procedure can also be used to tune 2 single isolators joined with a barrel connector.

Install the isolator in its permanent mounting position if possible. Connect the cable from the transmitter directly to the isolator port A (Fig. 1). Remove the snap plugs from adjustment holes #1, #2, #3 and #4. Adjustment #5 & #6 are factory set and should not be changed. Connect a terminating wattmeter, or a wattmeter with an appropriate load attached, to the output port B. Using a non-metallic tool, tune adjustment #1, #2, #3, & #4 for a maximum reading.

Special Note - Models T-7560 and T-8660 do not have a hole #3. This is not required above 700 MHz. Models in all bands may have reversed connections for cable routing. (Fig. 4) Port numbers always have the same function, regardless of location.

Remove the wattmeter and the dummy load and connect the antenna and cavity to the isolator. Remove the supplied termination from port C and connect the wattmeter and termination in its place (Fig. 2). Now tune adjustment #2 & #3 for minimum reading on the wattmeter. Retune these adjustments several times to ensure a minimum reading. Remove the wattmeter and termination, and reconnect the original termination to port C. Next, remove the termination from port D and install the wattmeter & load in its place (Fig. 3). Now tune adjustment #4 for minimum reading on the wattmeter.

Finally, tune the cavity* (Fig. 3) for a minimum reading through the wattmeter. This will establish the highest Q of the cavity and maximum power to the antenna. Adjustment #4 may be "touched up" at this time. Adjust for a minimum reading on the wattmeter. If the reading is high or the load becomes hot, problems may exist with the antenna or transmission line. Further testing should be done. When testing / tuning is complete, remove the wattmeter and reconnect the supplied termination to port D.

**When a cavity is under power, high RF currents exist on the internal surfaces. Tuning under full power may damage the cavity. If there are no other options, use the lowest power available with minimum tuning adjustments.*

