



Model 8226 GPS Antenna Surge Suppressor

Spectracom recommends the use of an inline coaxial protector for all products connected to an outside antenna. Spectracom offers the Model 8226 GPS Antenna Surge Suppressor to protect the receiver from damaging voltages occurring on the antenna coax. Voltages exceeding the impulse suppresser trip point are shunted to the system ground. The Model 8226 is designed to withstand multiple surges.

Install the suppressor indoors, preferably where the coax enters the building. Connect the largest-gauge grounding wire available to the Model 8226 ground stud. Optionally, the suppressor can be mounted to a grounding panel or bulkhead using the BF adapter bracket, part number MP10-0000-0002, as shown in Figure 1.

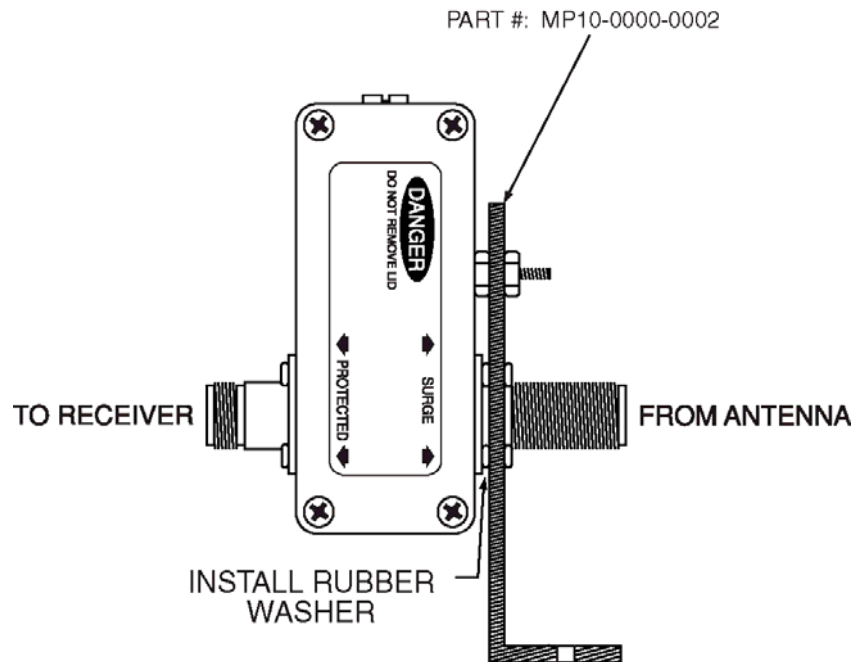


Figure 1: Model 8226 with Optional Mounting Bracket

Spectracom offers a **Surge Protector Grounding Kit**, part number **8226-0002-0600**, that serves as a single point ground connection for the Model 8226 GPS Antenna Surge Suppressor. The kit includes a copper grounding plate on melamine-covered particle board, mounting hardware, copper strapping, strap clamps, ground wire, a ground clamp, copper paste, an appropriate mounting bracket, and ancillary hardware. A single point ground system is recommended to provide optimum protection from lightning strikes.

Mount the grounding panel indoors, preferably close to where the antenna coax enters the building and direct access to the system ground is available. Refer to Figure 2 for installation guidelines. The grounding panel must be connected to a low impedance (both low resistance and low inductance) ground system to assure proper operation of the surge protection equipment. To minimize the inductance between the ground plate and system ground interconnection, keep the copper grounding strap as straight as possible. Limit bends to a

radius of 8 inches or larger. Thoroughly clean the copper panel to remove any oxidation or contaminants prior to installation. Apply the supplied copper paste to all junctions on the copper panel to maintain a low-impedance connection.

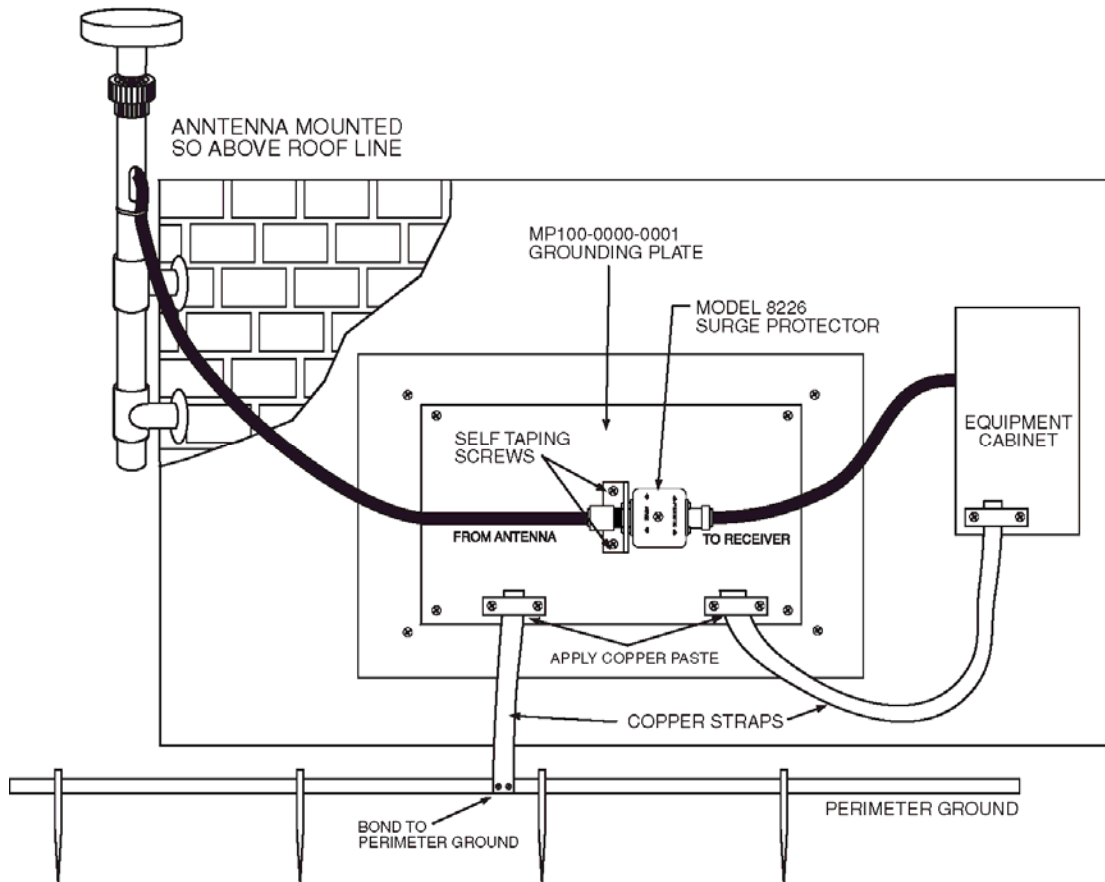


Figure 2: Grounding Panel Installation

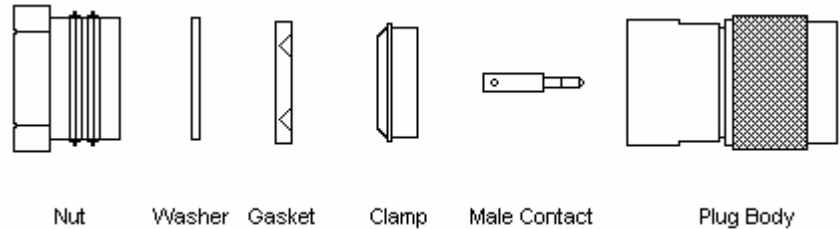
Each Model 8226 includes two clamp type male N connectors. These connectors can be used to splice the Model 8226 into the antenna coax. The connectors are compatible with Spectracom CAL7xxx cable assemblies and Times Microwave LMR-400 equivalent coax. Connector assembly instructions are shown in the following pages.

ASSEMBLY INSTRUCTIONS

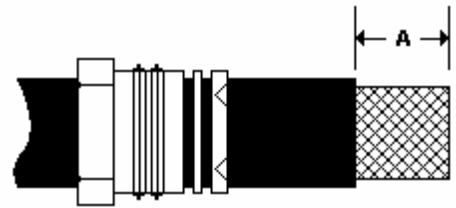
PART NUMBER P051-0001-0100 TYPE N CONNECTORS

The table below lists the recommended tools needed to assemble the connectors. Verify all parts of the connector have been received as shown in connector diagram below.

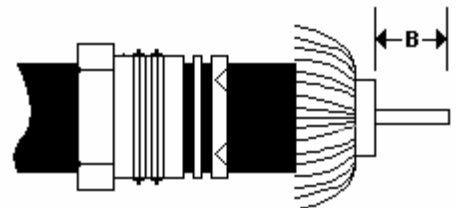
Tools Required
Sharp Knife or Razor Blade
Cable Cutter
Soldering Iron and Solder
Ruler
Wire Cutters/Scissors
5/8" Open End Wrench
11/16" Open End Wrench
Multimeter



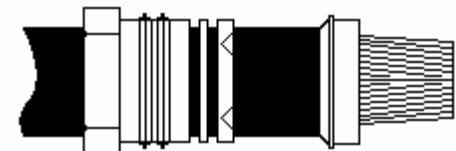
Step 1 Cut the cable end squarely and place the nut, washer, and gasket onto the cable as shown. Make certain the gasket's "V" groove is oriented towards the end of the cable. Cut the cable jacket back to dimension A of 0.359 inches (9.1 mm). **Do not cut or nick the braid.**



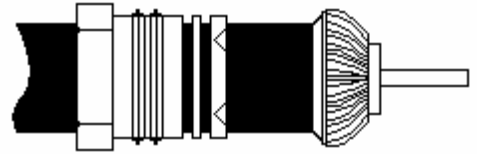
Step 2 Comb out the braid and fold it back to expose the dielectric. Cut the dielectric back to dimension B of 0.234 inches (6.0 mm). **Do not cut or nick the center conductor.**



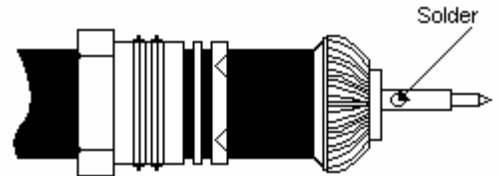
Step 3 Comb the braid forward and slide the clamp onto the cable as shown. Make certain that the beveled edge of the clamp is oriented towards the gasket "V" groove to form a weatherproof seal.



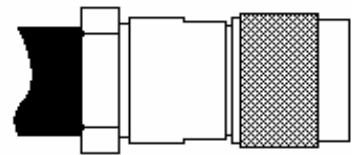
Step 4 Fold the braid back over the clamp. Comb the braid to evenly distribute it over the clamp and trim to the proper length as shown.



Step 5 Verify that there is no braid or dielectric foil that may short against the center conductor. Tin the center conductor and then solder on the male contact as shown.



Step 6 Insert the cable assembly into the connector body. Verify the gasket "V" grooves fit into the clamp edges. Hold the body with the 11/16" wrench and tighten the nut using the 5/8" wrench. Using the multimeter, measure continuity of the center conductors on each end of the cable. It should be close to 0 Ω. Measure the continuity between the center conductor and connector body. It should be an open circuit.



Revision Level	ECN Number	Description
A	-	Legacy documentation.
B	2017	Reformatted instructions for latest style standards. Made minor text edits throughout. Added reference to Grounding Kit, 8226-0002-0600.