M48-1-1

A SIMPLE STATIC PROTECTION DEVICE FOR SHORTWAVE RADIOS

I obtained this device after I had $175 worth of repairs done to my ICOM R-70. It seems that I took a very large static discharge from my outdoor antenna, which ran around inside my R-70 trying to see what it could destroy. After regaining my rig, I asked a friend, VE4MA, what I could do to protect my rig. I told him that my antenna was coax-fed and grounded , so what went on? Hey, it was October - not exactly thunderstorm weather! He informed me that large amounts of static could be generated by rain, snow, and wind, as well as by lightning. My ground was a good idea, but it did nothing to get rid of static that travelled down the center feed wire of the coax. He explained that a small 2"x3" box with three parts could save my ICOM from future static damage, We built the box shown in the diagram and it has worked well. I have noticed no loss of signal on my R-70 and now feel safe from static attacks. This will not protect the rig from lightning, but handles static very well.

-- Shawn Axelrod, 21 Knightsbridge Dr, Winnipeg MB R2M 4E7

MATERIALS NEEDED:

1- Metal box about 2x3"(Radio Shack 270-235)
1-Neon bulb NE-2(Radio Shack 272-1101)
1-10K resistor(Radio Shack 271-8034)
1-.01 to .05 micro farad capacitor 500 volts or higher(Radio Shack 272-13
2- SO-239 connectors(Radio Shack 278-201)(If your receiver uses another type of connector substitute them for the SO-239's.)
8-Srews or nuts and bolts to anchor the S0-239
1-Small solder lug that will fit screws or bolts used

CONSTRUCTION INSTRUCTIONS:

-Drill holes into metal box and mount the SO-239 connectors.
-Attach the solder lug to any one of the screws or nuts used to anchor the SO-239's.
-Solder the capacitor to the CENTER of both SO-239's.
-Solder the resistor to the CENTER and the solder lug of one SO-239.
-Solder the neon bulb to the CENTER and the solder lug of the same SO-239.
-Keep all of the leads as short as possible.

INSTALLATION:
- Attach your antenna to the SO-239 that has the resistor and neon bulb soldered to it.
- Attach the other SO-239 to our receiver. This may be done by using a short patch cord or a double male PL-259 connector.
- Make sure you attach the antenna to the end with the neon bulb and the resistor or the device will not protect your rig.