

# Palomar-Engineers.com Common Mode Noise Test

## Do you have common mode noise on your coax?

Make this simple test to find out.



Coax Center Conductor Only—measure noise level



Coax Center Conductor and outer shield — measure noise level. If higher, then you have common mode noise

1. Remove the coax connector and measure the noise level.
2. Now insert the coax connector CENTER CONDUCTOR ONLY into the SO-239 antenna input and measure the noise level (it should be higher and include possible signals)
3. Now connect the OUTER SHELL of the coax connector to the antenna input and measure the noise level. If it is higher you have common mode noise and the common mode noise filter will help suppress this noise which is carried on the outside of the coax braid (acting as a second receive antenna).

Common mode noise suppression with the Palomar CMNF series of filters is typically 25-36 dB which is equivalent to 4-6 "S" units on radios with 6 dB/"S" unit or may be more on radios with 3dB/"S" unit.

Note for antenna switch users, perform the above test on each antenna coax lead separately to determine if that particular antenna braid is contributing noise to the receiver – use a coax noise filter on the antennas that have common mode noise.