

The Canopy 5700 radio can be equipped with a passive reflector to increase the ERP of the radio when setting up long distance links. The FCC rules given in part 15.407, subpart (a), paragraph (3), states that for a U-NII device employed in a fixed-point application in the 5725 to 5825MHz band, an external antenna of up to +23dBi gain (providing an ERP of up to +53dBm) may be used. A test reflector providing an additional 19 dBi gain was attached to the Canopy 5700 radio. The radio assembly was mounted on a pole with the EMCO antennas located 20 meters away to avoid near-field measurement error due to the high gain of the reflector (utilizing the relationship $2D^2/\lambda$, with D= largest antenna dimension, the minimum distance to avoid near field errors for the fundamental frequency was 13.48meters). On-channel power and harmonic content measurements were performed and used to calculate equivalent 3 meter data.

The test layout was configured as below:



Radiated data was analyzed to determine the RF channel with the highest harmonic level. Where harmonic levels were the same regardless of operating frequency, data from the nominal (5800MHz) frequency was used. The resulting plots are shown as follows:

The picture below shows the configuration of the test set-up:

