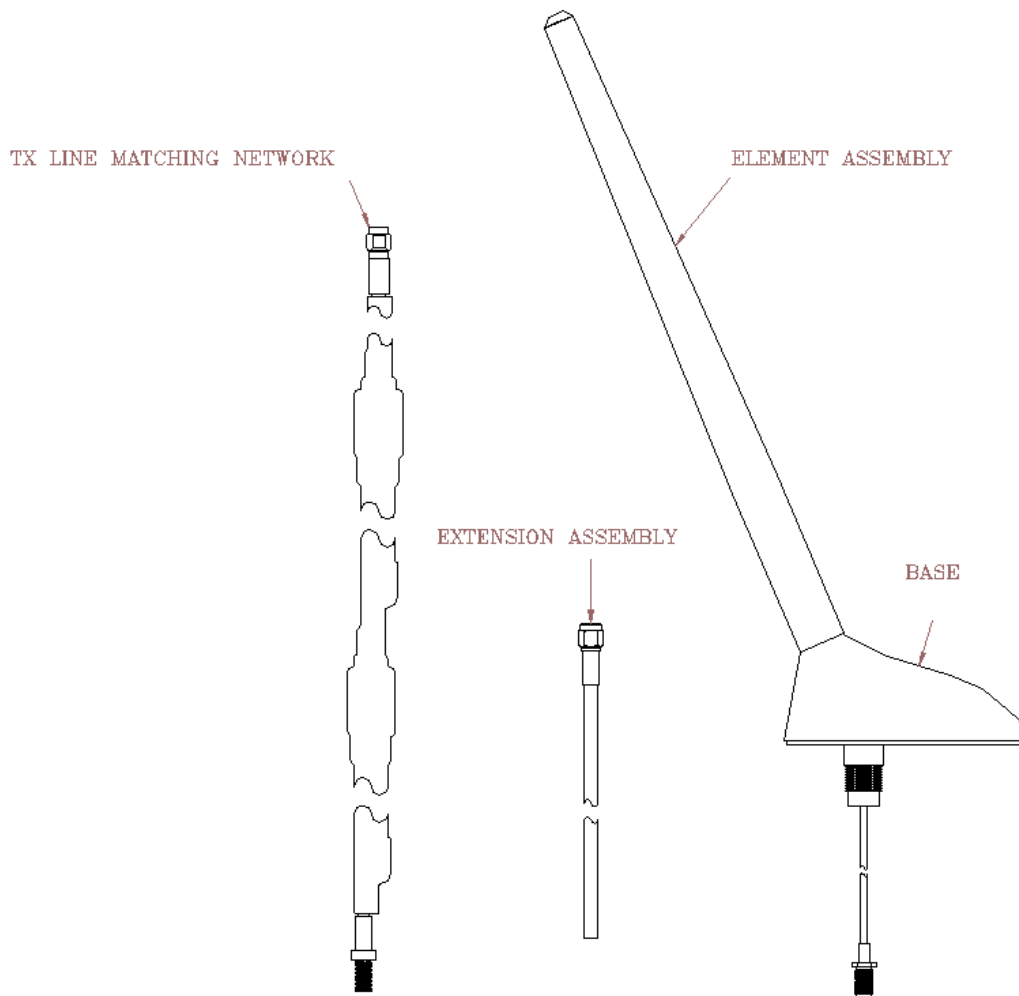


# OEM Roof Mounted Installation Instructions Dualband VHF (150-174 MHz) and UHF (406-430 MHz) Antenna

**MODEL:** CPMT-DB-VHF/UHF

**VERIFY:**

- A. System Parts:** The system package includes (1) antenna base with pigtail, (1) element assembly, (1) matched coupler, (1) transmission line matching network, (2) 17 foot cable extension, and RF connectors (if applicable). Use only components supplied with the antenna system (Refer to Figure 1.).



**Figure 1: Antenna System Parts**

- B. Bandwidth:** This is a dual band (VHF/UHF) antenna. It was designed to operate between 150 and 174 MHz and 406-430 MHz only. Using this antenna at other frequencies could result in damage to the radio system.



## INSTALLATION:

### A. Antenna Mounting Location

This antenna may be mounted anywhere on the metal roof or metal trunk of the vehicle. Do NOT mount this antenna on a fiberglass or composite surface.

**WARNING!** If the antenna is not mounted as described above and depicted below it will likely not function as designed. The operator will likely see a sharp increase in SWR if not mounted properly.

### B. Antenna Mounting Procedure

1. Remove "one way clips" on the inside roof panel near the window and set aside.
2. Remove OEM antenna connection for the AM/FM radio. **Note: Some applications do not have existing OEM antennas. In that case a 3/4" hole is required.**
3. Using an adjustable wrench, remove the OEM antenna.
4. Position the disguised antenna mount into the mounting hole from the top of the vehicle. Note: This step may require an assistant to hold and align the new antenna.
5. Connect the coupler to the antenna's cable (pigtail). Connect the shrink tubed matching network to the VHF port on the coupler. Connect one of the 17 foot cable extensions to the other end of the matching network. Connect the other cable extension to the UHF port on the coupler. Trim any excess cable from both cable extensions. **Note: Do NOT overtighten the SMA connectors.**
6. Conceal excess cabling under the headliner.
7. Test antenna before re-installing the vehicle's trim. (See below)

**Note:** Take care not to tear the sheath of the cable when pulling through sharp body panels. If a hole appears in the cable's sheath, cover with several layers of a high quality electrical tape.

## TESTING:

Installation testing, if required, must take place at the transmitter side of the feedline. This will ensure that the cable connectors and cables have the proper continuity. Make sure all doors; hood, and trunk are closed.

- A. Reflective Power:** A measurement of reflective power using a wattmeter, you can expect up to 11% reflected power. When results are greater than 11%, recheck the grounding.
- B. SWR:** A measurement of SWR (standing wave ratio) will yield better than 2:1. If greater than 2:1, recheck the grounding.

**Note:** Some vehicles are sensitive to VHF frequencies. STI-CO suggests that you isolate the transmission line and check for unwanted interference with the ignition switch on.