

OVERVIEW

All MISSION RTU's are now shipped with a new combination wall and pole mount kit. This bracket and antenna connection is intended to be mounted outside the station enclosure, and as high above ground as possible. Integral or attack resistant antennas are still available by special order.

The Universal Antenna Mount consists of three main parts – the curved “L” bracket, the transmitting whip, and the coaxial cable.



Installation of Antenna and Mounting Bracket

The Universal Antenna Mount can be attached in a variety of ways. It can be mounted directly to the face of a flat enclosure, mounted to a conduit, or even to a tower leg using the included pipe clamps.

After installing the main bracket, it is important to secure the antenna cable to ensure that the weight of the cable does not damage the antenna base. There should be enough slack in the cable so as it does not rest or touch the top surface of the mounting bracket.



Proper Antenna Installation is Vital

The single most common cause of poor RTU performance can be attributed to poor antenna installations. With the new “third generation” digital cellular radio transceivers, antenna installation becomes even more important. For best operation of the MISSION RTU, the antenna should be mounted outside any site structures. For this reason, MISSION no longer supplies antennas that are built into the top of the RTU enclosures.

Additional Antennal Installation “Do’s” and “Don’ts”

- **DO** mount the antenna as high as possible, preferably above the roof.
- **DO** mount the antenna above all metal surfaces close to the installation.
- **DO** run an 8 to 10 gauge ground wire to the MISSION RTU enclosure (back plate for NEMA-4) to ensure that the antenna base and RTU have the same ground potential.
- **DO** wrap excess coax in loose circles of 8-12 inches in diameter. Pinching or tight bends in the coax can restrict the radio signal path in much the same way water flow is restricted through a tight bend in a pipe.
- **DO NOT** mount the antenna inside a metal control cabinet! Although fiberglass cabinets may only attenuate the signal a small amount, MISSION always recommends the antenna be mounted outside and above all surfaces.
- **DO NOT** mount the antenna on the side of a metal cabinet. Metal surfaces will reflect the radio signal, preventing it from traveling in all directions.
- **DO NOT** mount the antenna underground, in a dry well, or inside a “canned” lift station.
- **DO NOT** mount the antenna horizontally (sideways) or bend the antenna whip.
- **DO NOT** cut, lengthen, or shorten the coaxial cable. MISSION can supply antenna extension cables and connectors up to 50 feet. For lengths above this limit, another RTU mounting location should be made.

Follow these simple rules and the MISSION RTU will have the best signal possible.