

A997-0095 Revision F May 2019

Instruction Manual, - 350mm (13.8") Profile Panel Antennas

General

This instruction manual contains all necessary information required to assist in the correct installation of Panel Antennas of 350mm (13.8") width. These antennas can be supplied with either fixed beam downtilt, manually adjustable electrical downtilt or AISG-compatible remotely controlled electrical downtilt. Mechanical downtilt is also available if required, depending on the type of mounting kit selected.

Following symbols can be found next to text outlining important information.



Please follow the procedure marked with this symbol precisely. Non-compliance may lead to damage of the product.



Handy tips when installing product.

Unpacking

Make sure that the antenna and the accessory items listed below are provided and have not been damaged during transport.

- Antenna
- Mounting kit (mounting kit components for each configuration are shown in Figures 2 and 3).
- Hex key 6mm AF (supplied with adjustable downtilt antennas only).

Mounting Kit Type	Mounting Kit Type	Mounting Kit Type	Mounting Kit Type	Mounting Kit Type
Fixed Downtilt	F-042-GL-E	F-042-GL-E	F-042-GL-E	F-042-GL-E
Mechanical Downtilt	T-095-GL-E	T-045-GL-E	T-041-GL-E	T-029-GL-E
Tilt range	0° -15° in 3° steps	0°, 2° -10° in 1° steps	0° - 12° in 2° steps	0° - 8° in 1° steps
Mounting Bracket Spacing Dim A (Fig 4)	480mm (18.9")	716mm (28.2")	976mm (38.4")	1400mm (55.1")

Table 1: Mounting Kit Part Numbers for Different Antennas



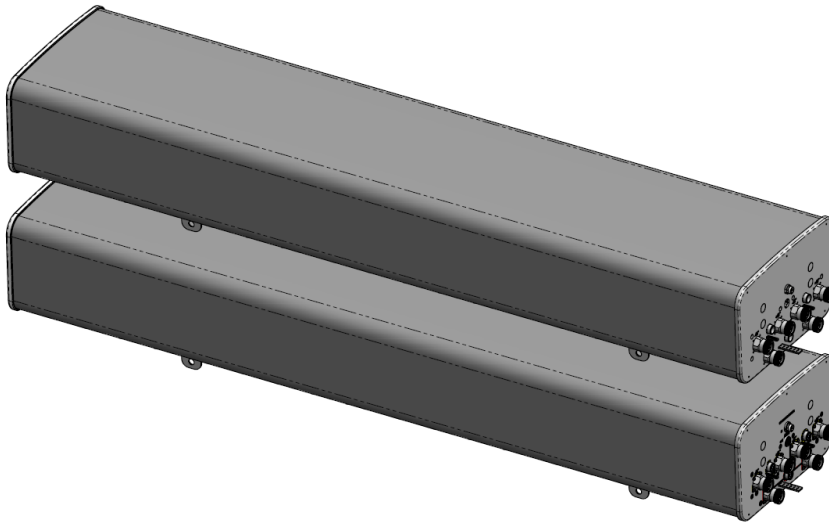
Do not install near power lines. Power lines, telephone lines, and guy wires look the same. Assume any wire or line can electrocute you



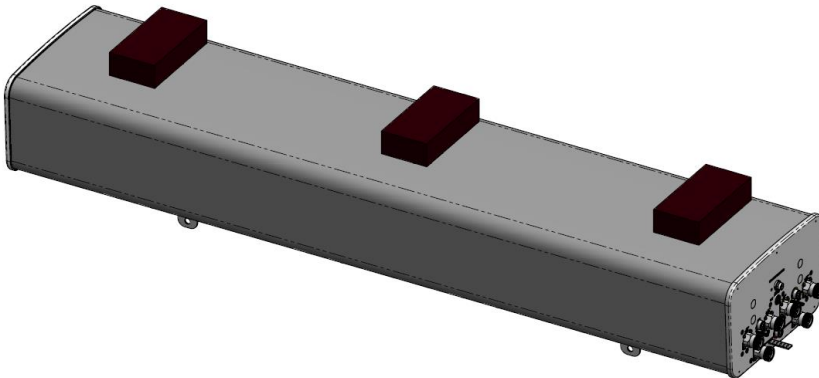
Do not install on a wet or windy day or when lightning or thunder is in the area. Do not use metal ladder.



Wear shoes with rubber soles and heels. Wear protective clothing including a long-sleeved shirt and rubber gloves.



DO NOT STACK
UNPACKED
ANTENNAS



DO NOT PLACE
POINT LOADS ON
ANTENNA RADOME

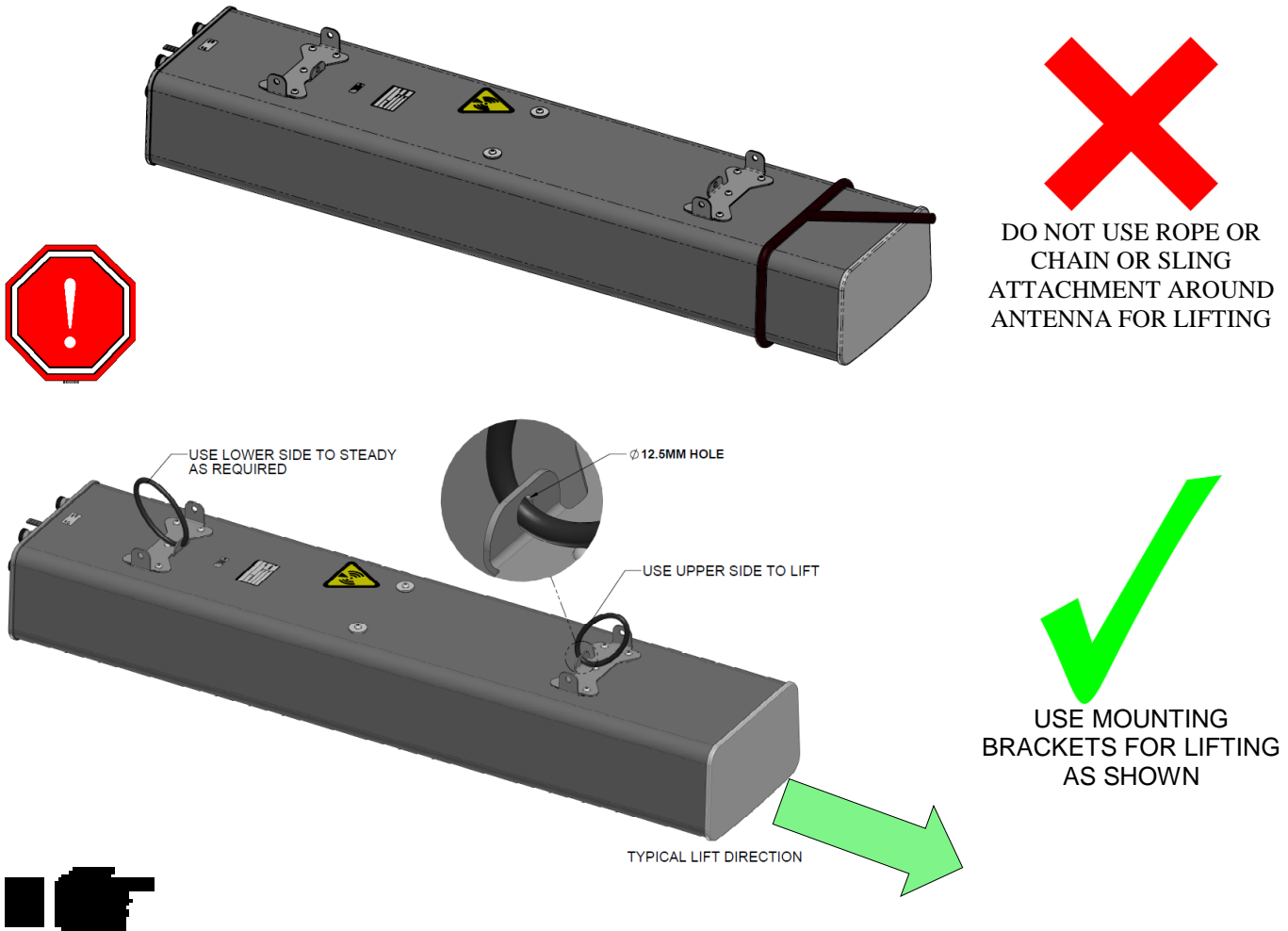
Installation Instructions



Ensure a torque spanner is used when tightening fasteners, see the mounting kit diagrams on the following pages for the correct torque recommendations.



Ensure antenna is installed with the connectors at the bottom.



Installation Instructions – Adjustable Downtilt Mounting Kit T-029-GL-E, T-041-GL-E, T-045-GL-E, T-095-GL-E

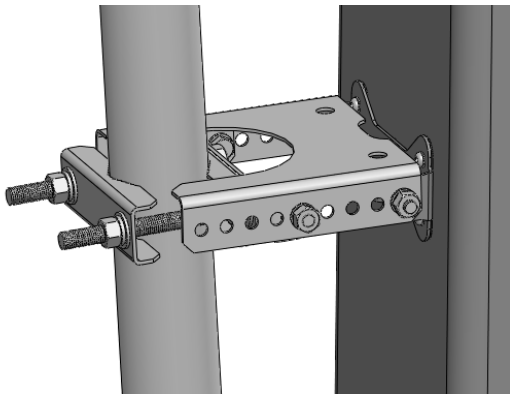
Assemble mounting kits as per Figure 2 and 3 of this document.



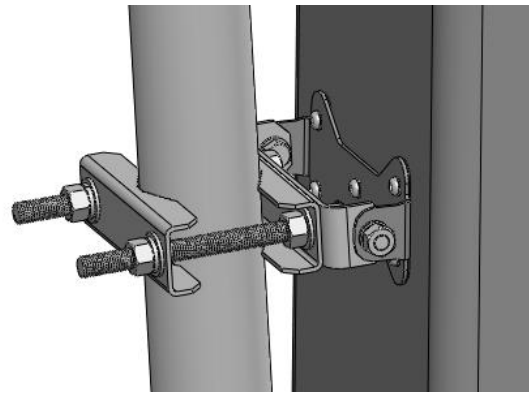
1. Attach the mounting kit assembly to the antenna, before trying to clamp the brackets to the pole.
2. For 0° downtilt the tilt arm may be stowed as show in Figure 4.
3. An inclinometer or other angular measuring device may be used to verify downtilt angle as required.



For typical installations of antennas up to 1575mm (62") long the minimum recommended pipe diameter is 60mm (2.4"). For antennas over 1575mm (62") long the minimum recommended pipe diameter is 75mm (3").



Upper Mounting Bracket Assembly
(To Suit Pipes OD 75-115 mm)



Lower Mounting Bracket Assembly
(To Suit Pipes OD 75-115 mm)

Figure 1: Correctly Assembled Mounting Kit Using Clamp Bracket for Mechanically Adjustable Downtilt Antenna

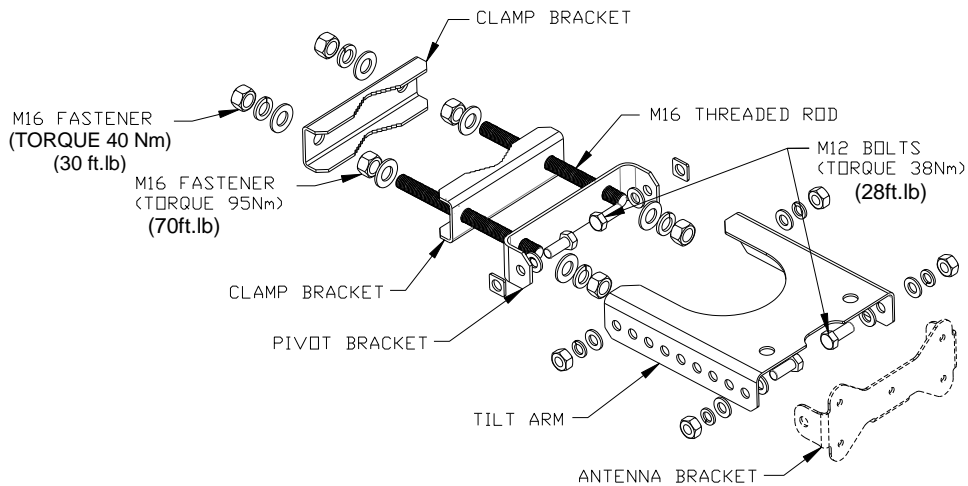


Figure 2: Typical Exploded Assembly for Upper Mounting Bracket using Clamp Bracket

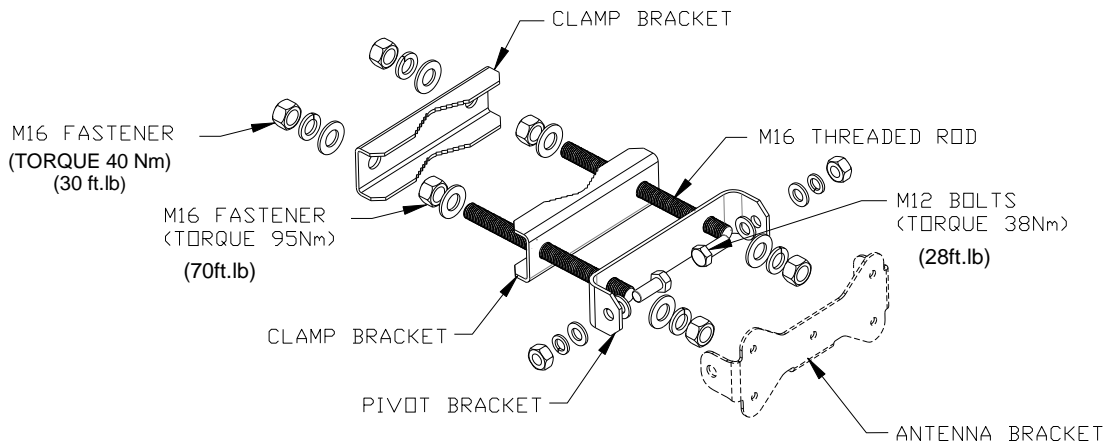


Figure 3: Exploded Assembly for Lower Mounting Bracket using Clamp Bracket
(This configuration should also be used for the upper Mounting Bracket when 0° tilt is required)

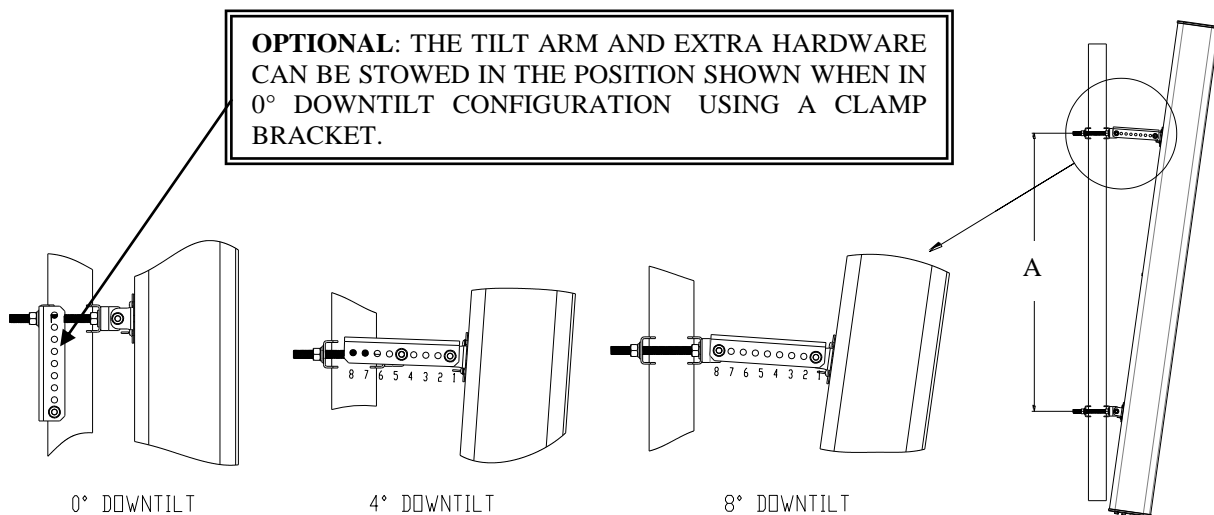


Figure 4: Typical Example of Upper Bracket Placement for Various Downtilts

Operation of Antennas

Fixed Downtilt Antennas

The beam downtilt is factory set.

AISG Compliant RET Antennas

AISG Compliant antennas are compatible with AISG compliant control unit equipment. For operation of downtilt using AISG compliant controllers see the controller documentation. When available the manual override of RET control is provided at the antenna bottom end cap, operation is identical to that described above for MET antennas.

Port and Band Identification

Each RF and/or AISG port on the antenna is numbered and identified in accordance with AISG Standard “AISG Antenna Port Color Coding”.

Remote Electrical Tilt Connection

The AISG connector fitted to the antenna is designed to accept any AISG compliant cable assembly. After ensuring both connectors are dry, push in the mating connector, then hand tighten.



Using excessive torque may damage the AISG connection in the antenna.

RF Cable Connection



The RF female connectors fitted to the antenna are designed to fit jumper cables with a corresponding male connector. After ensuring both mating connectors are dry push the male connector in and tighten the connector coupling to the correct torque setting.

If needed or as required by local procedures a weatherproofing kit may then be fitted to the connection.

If the RF connectors are tightened beyond the recommend torque the RF connection to the antenna may be damaged.

ADJUSTING MECHANICAL DOWN TILT AFTER INSTALLATION T-029-GL-E, T-041-GL-E, T-045-GL-E, T-095-GL-E



1. Use a tether to secure the antenna's hoisting eye to the mounting structure. The tether can be a rope, wire rope, chain, or similar material. The tether should be short enough to prevent the antenna from tilting beyond its maximum downtilt range. This will prevent the antenna from tilting away from the mounting structure when the adjusting bolts are removed.



Installed cables or the antenna may be damaged if they are allowed to strike the mounting structure when the antenna mechanical downtilt is changed.

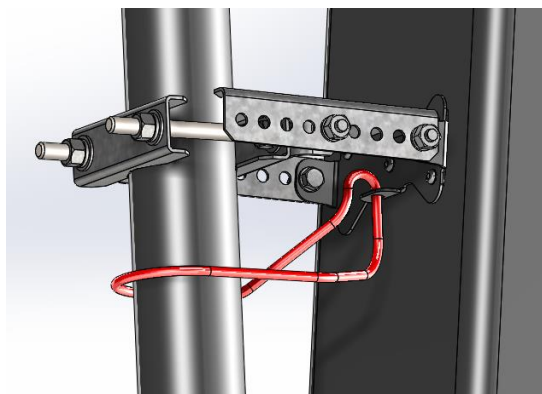


Figure 7: Upper Mounting Bracket Assembly

- Loosen the fasteners holding the bottom antenna bracket to the bottom pivot bracket. Do not remove them.

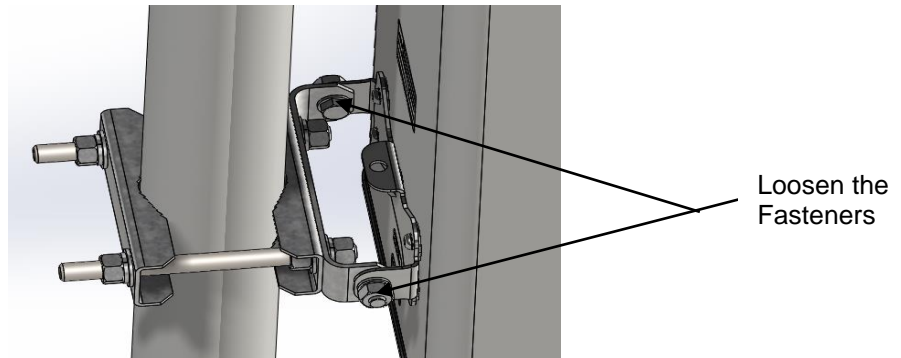


Figure 8: Lower Mounting Bracket Assembly

- Remove the M12 bolts, washers, and nuts from the pivot bracket. The antenna may tilt down to the extent allowed by the tether installed in step 1.

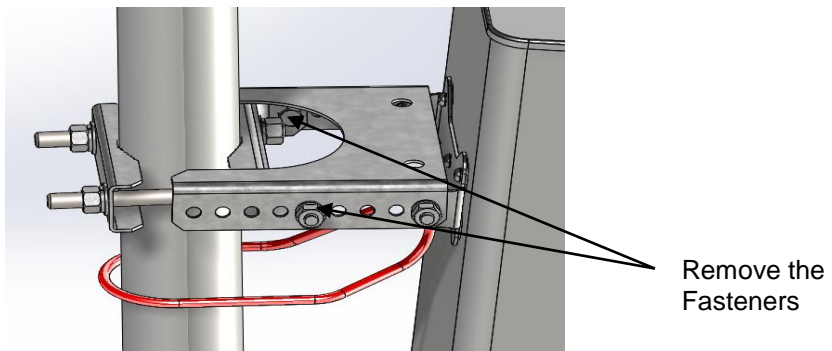


Figure 9: Upper Mounting Bracket Assembly

- The desired downtilt angle may be obtained with the correct adjustment of the tilt arm bracket. See the installation instructions above for detailed information.
- Adjust the antenna downtilt to the desired angle and reinstall the M12 bolts, washers, and nuts between the upper pivot bracket and the tilt arm.
- Tighten all four M12 nuts to 38Nm (28 ft.lb).
- Remove the tether.