

APM40-E4

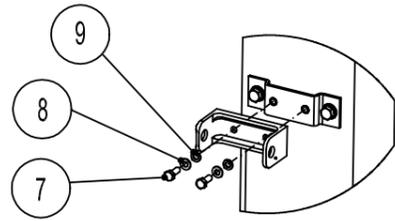


Figure 2 : Interface Bracket Assembly

Attach interface bracket to antenna with M6 hardware where required. Top and bottom mounting points are identical.

APM40-2

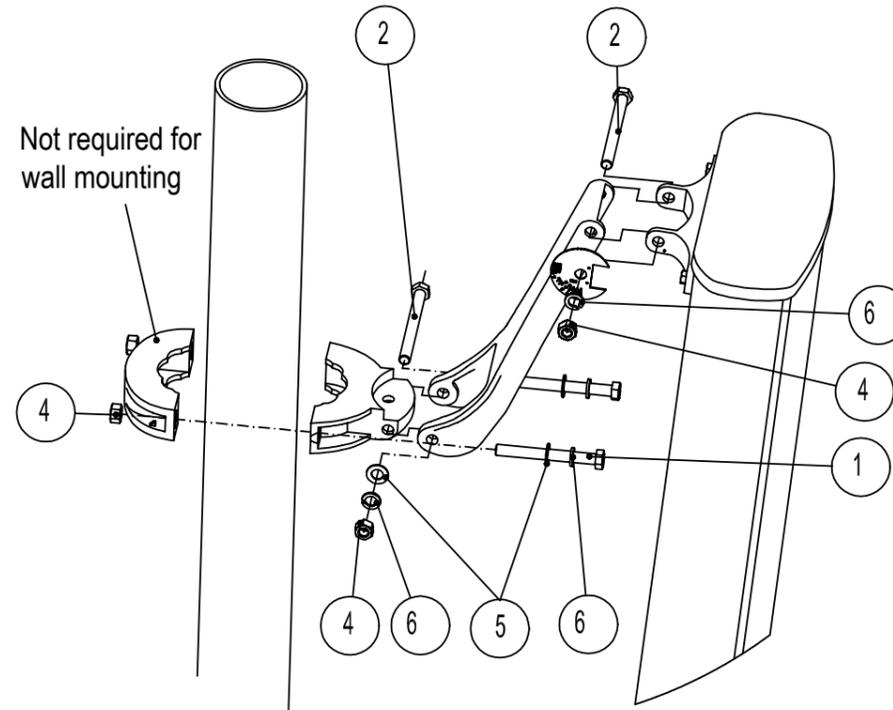


Figure 4 : Beam Tilt Assembly (downtilt shown)

This assembly attaches to top of antenna for downtilt. Bottom mount assembly is the same as direct mount (Figure 3). Ensure tilt indicator has BEAM tilt markings visible. For uptilt, invert assembly and attach to bottom of antenna.

APM40-2 and APM40-E2

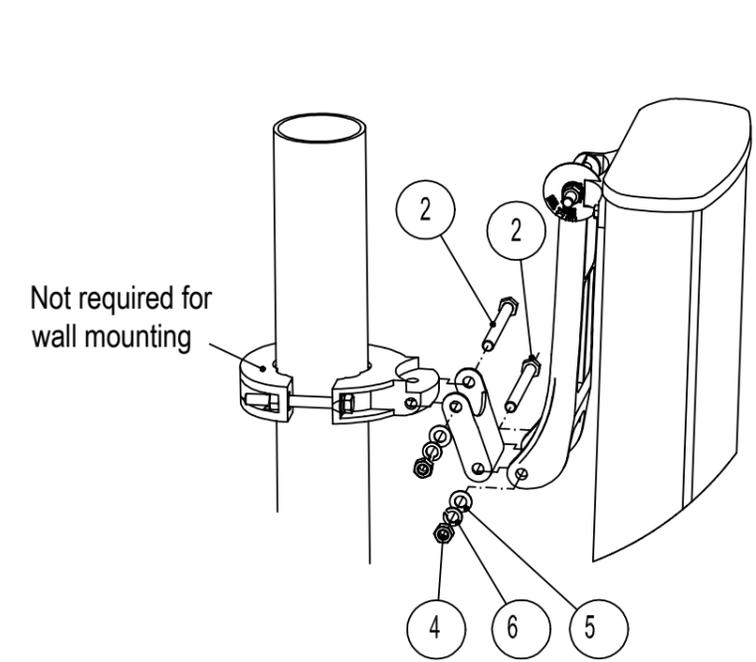


Figure 5 : Beam Tilt with Scissor Upgrade Assembly

Insert scissor arm into beam tilt assembly. Bottom mount assembly is the same as direct mount (Figure 3). Reverse tilt indicator to have SCISSOR tilt markings visible. For uptilt, invert assembly and attach to bottom of antenna.

APM40-1

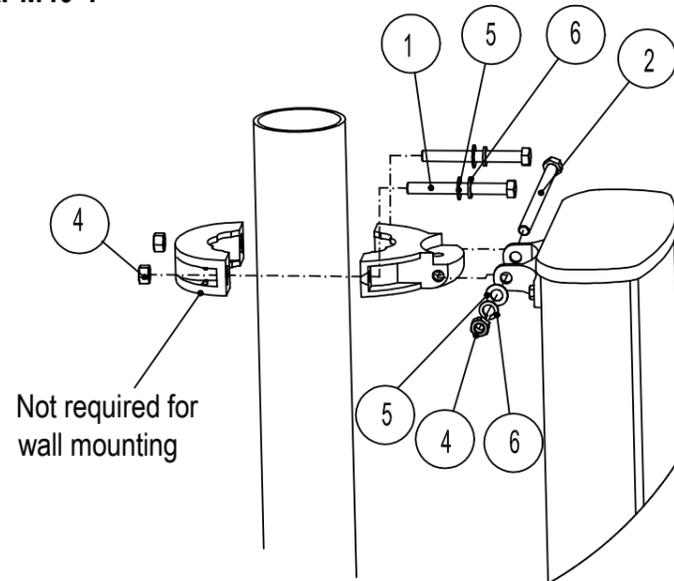


Figure 3 : Direct Mount Assembly

Pipe mounting shown. For wall mounting, refer to Figure 1b. Rear pipe bracket is not required. Top and bottom mounting arrangements are identical.

APM40-2 and APM40-E3

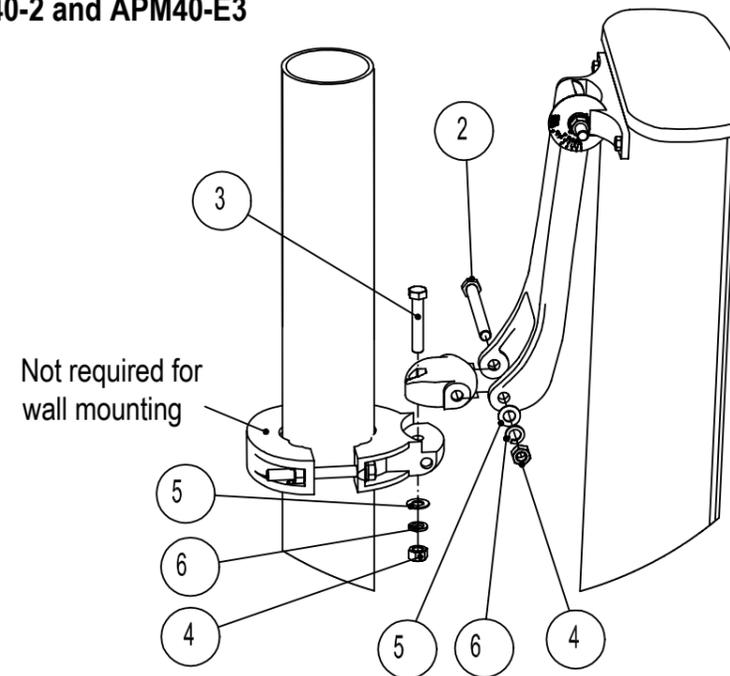


Figure 7 : Beam Tilt with Azimuth Upgrade Assembly

Insert azimuth bracket between arms of tilt beam, bolting down onto flat surface of pipe bracket. Bottom arrangement as shown in Figure 6. For uptilt, invert assembly and attach to bottom of antenna.

APM40-2, APM40-E2 and APM40-E3

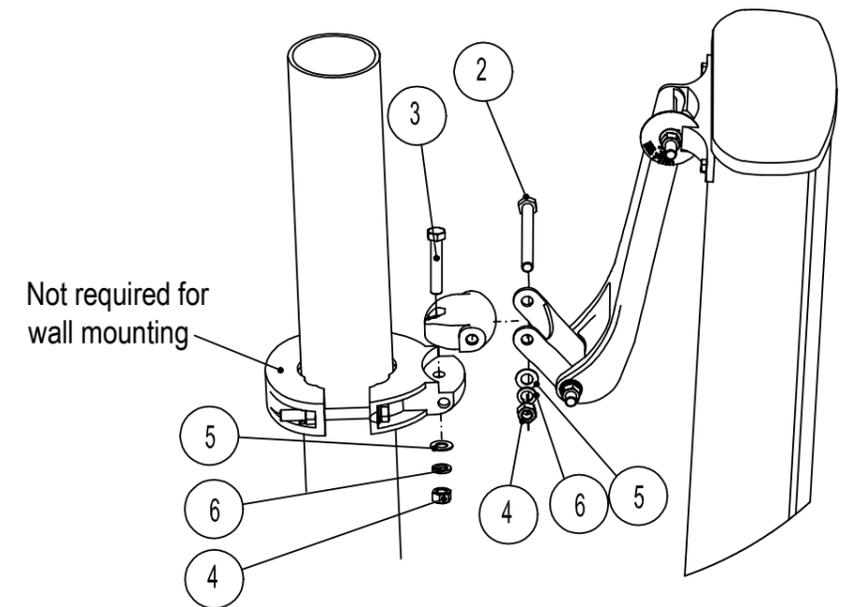


Figure 8 : Beam Tilt with Scissor and Azimuth Upgrade Assembly

Insert scissor arm into tilt beam as shown in Figure 5. Insert azimuth bracket into scissor arm, and bolt down onto flat surface of pipe bracket. Ensure tilt indicator has SCISSOR tilt markings visible. Bottom assembly as shown in Figure 6. For uptilt, invert assembly and attach to bottom of antenna.

APM40-1 and APM40-E3

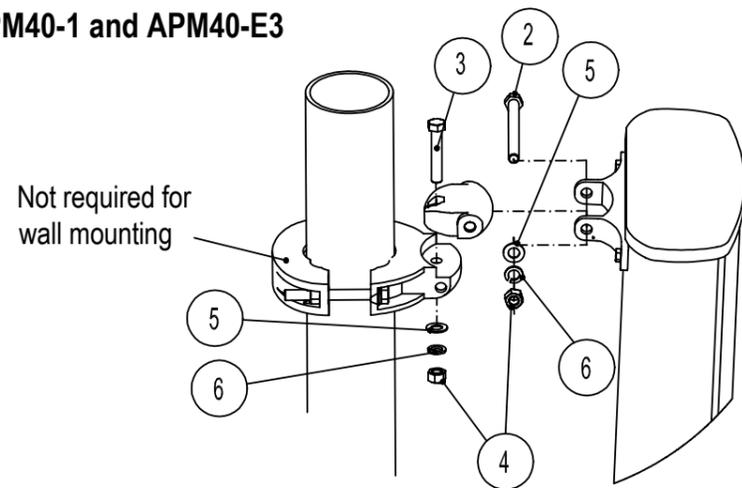


Figure 6 : Direct Mount with Azimuth Upgrade Assembly

Top and bottom mounting arrangements are identical.

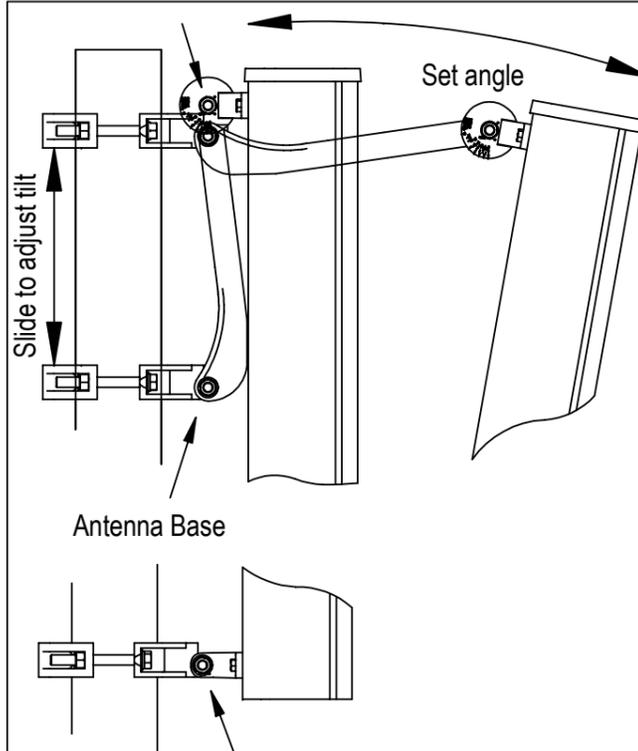


Figure 9 : Adjusting Tilt with Beam Assembly

To adjust tilt, loosen top pipe clamp bolts, bolts through tilt beam, and bolts at antenna bracket base (as shown by arrows). Slide arm up or down pipe to achieve tilt. Align mark with indicator angle. Tighten nuts to lock in position.

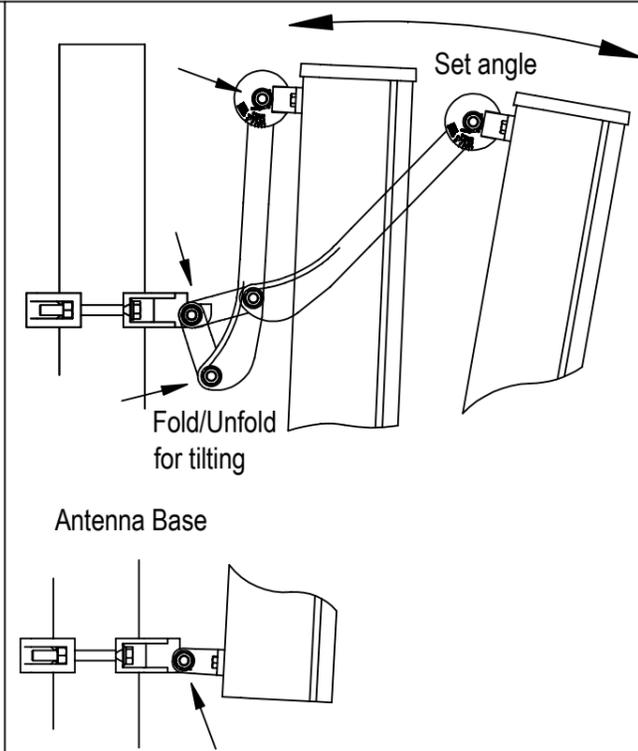


Figure 10 : Adjusting Tilt with Scissor Assembly

To adjust tilt, loosen bolts through scissor and tilt beam. Loosen bolt at base of antenna to allow rotation (as shown by arrows). Fold or unfold scissor to achieve tilt angle. Align mark with indicator angle. Tighten nuts to lock position.

REFERENCE DATA

Table 1 : Item Numbers for the Mount Kit Hardware

Item No.	Description
1	Screw Hex M12 x 110
2	Bolt Hex M12 x 130
3	Bolt Hex M12 x 65
4	Nut Hex M12
5	Washer Flat M12
6	Washer Spring M12
7	Screw Hex M6 x 16
8	Washer Spring M6
9	Washer Flat M6

Table 2 : Bracket Separation 'S', in millimetres

Kits	Separation
Direct	S1
Azimuth	
Scissor	S2
Scissor + Azimuth	
Beam	Variable with tilt
Beam + Azimuth	

S1 = Refer to antenna mount bracket separation for distance
S2 = (S1 - 255) mm

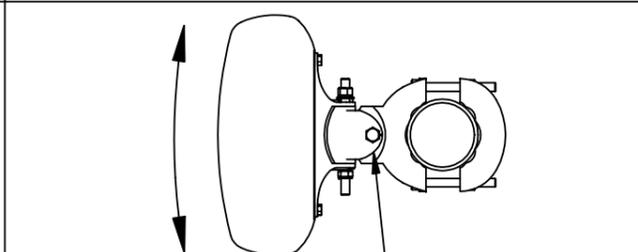
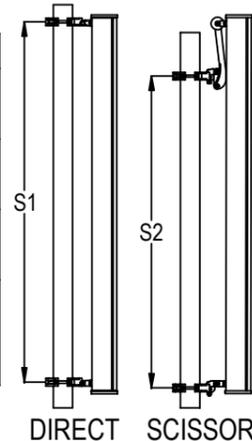


Figure 11 : Adjusting Azimuth Angle

To adjust angle, loosen bolts through azimuth bracket (top and bottom), and rotate to desired angle. Tighten nuts to lock position.

TIGHTENING TORQUE VALUES

Unless stated otherwise, the following general tightening torque values shall be used for metric hexagon bolts and screws, coarse pitch threads, property class 4.6.

Dia	Pitch (mm)	Bolt Tension (kN)	Torque (Nm)
M6	1.00	2.94	3.5
M12	1.75	12.40	30.0

MAINTENANCE

Under normal conditions, no maintenance is necessary. However, the antenna should be visually inspected at regular intervals for damage. (eg due to lightning strikes, and falling ice). Periodic checks should be performed to verify correct torque and bracket clearance settings.

Applications

The APM40 kits are mounting hardware options to be used for Base Station antennas up to 2.6 metres in length.

Features

Features include ;

- Basic direct mount kit
- Beam sliding tilt mount for mechanical tilt
- Scissor tilt option for fixed at mast (or wall) downtilt
- Option for azimuth adjustment independent of mast
- All kits fully upgradable
- Pipe diameter : 60-120 mm, Wall mount option
- Mechanical downtilt, minimum 10 degrees
- Azimuth adjustment up to +/-30 degrees

Mechanical Specifications

Tilt adjustment range	0 to 10° (min)
Weight of kit (kg)	2.8 (tilt kit) 1.8 (direct kit)
Mounting kit material	Aluminium, Galvanised steel
Packaging dims. H x W x D (mm)	1250 x 200 x 70 (tilt kit) 730 x 200 x 45 (direct kit)
Packaging material	Plastic Sleeve
Tools required	18mm (3/4") AF socket (3/8" drive recommended) 10mm AF spanner or socket

Please contact technical support for more information.

Mounting Options

Refer to the following table to identify mount kits supplied. The packages of the mount kits are marked with the APM variation. Refer to the relevant Figure in the Instruction for assembly information. The letter designation is referenced in the antenna model description.

Letter	Type of Mounting	Mounting kit(s)	Figure Reference
A	Direct pipe (no tilt)	APM40-1	3
B	Azimuth upgrade	APM40-1 & APM40-E3	6
C	Beam tilt	APM40-2	4
D	Beam tilt with azimuth upgrade	APM40-2 & APM40-E3	7
E	Beam tilt with scissor upgrade	APM40-2 & APM40-E2	5
F	Beam tilt with scissor and azimuth upgrades	APM40-2, APM40-E2 & APM40-E3	8
-	Direct to beam upgrade	APM40-E1	4
-	Bracket Interface for APM40	APM40-E4	2
7	No mount kit	-	-

Assembly and Installation

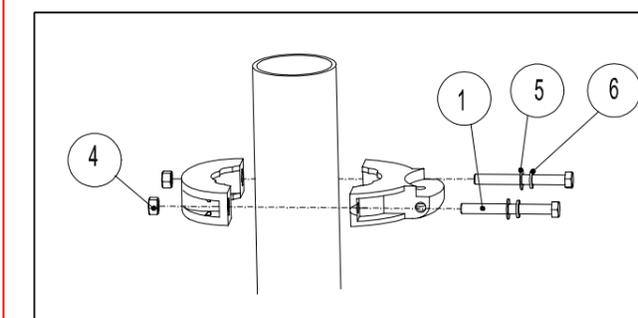


Figure 1a : Pipe Mount Installation

For pipe mounting, bolt front and rear pipe brackets to pipe. Tighten from front as rear bracket holds nut captive. Refer to Table 2 for top to bottom mount bracket separation.

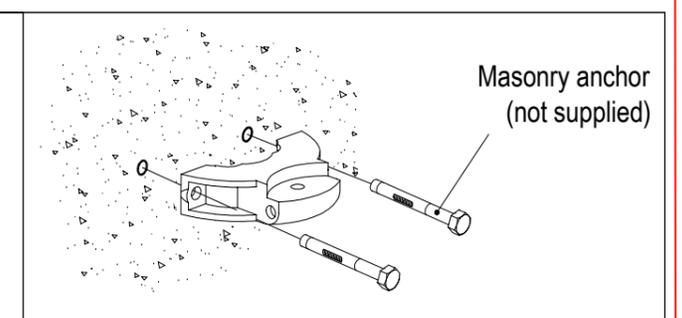


Figure 1b : Wall Mount Installation

For wall mounting, fix front bracket to wall with appropriate masonry anchors. Pre-drill holes with centres 134mm apart, at top to bottom separation shown in Table 2.