Figure 2: Interface Bracket Assembly
Attach interface bracket to antenna with M6 hardware where required. Top and bottom mounting points are identical.

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.

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.

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.

Figure 6: Direct Mount with Azimuth Upgrade Assembly
Top and bottom mounting arrangements are identical.

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.

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.
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 9 : Adjusting Tilt with Beam 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.

**Figure 10 : Adjusting Tilt with Scissor Assembly**

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

**Figure 11 : Adjusting Azimuth Angle**

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.

**Table 2 : Bracket Separation 'S', in millimetres**

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

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

**Applications**

- 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
- Weight of kit (kg)
- Mounting kit material
- Packaging dim.
- Packaging material
- Tools required

**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.

**Table 1 : Item Numbers for the Mount Kit Hardware**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Screw Hex M12 x 110</td>
</tr>
<tr>
<td>2</td>
<td>Bolt Hex M12 x 130</td>
</tr>
<tr>
<td>3</td>
<td>Bolt Hex M12 x 65</td>
</tr>
<tr>
<td>4</td>
<td>Nut Hex M12</td>
</tr>
<tr>
<td>5</td>
<td>Washer Flat M12</td>
</tr>
<tr>
<td>6</td>
<td>Washer Spring M12</td>
</tr>
<tr>
<td>7</td>
<td>Screw Hex M6 x 16</td>
</tr>
<tr>
<td>8</td>
<td>Washer Spring M6</td>
</tr>
<tr>
<td>9</td>
<td>Washer Flat M6</td>
</tr>
</tbody>
</table>

**Tightening Torque Values**

<table>
<thead>
<tr>
<th>Dia</th>
<th>Pitch (mm)</th>
<th>Bolt Tension (KN)</th>
<th>Torque (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M6</td>
<td>1.00</td>
<td>2.94</td>
<td>3.5</td>
</tr>
<tr>
<td>M12</td>
<td>1.75</td>
<td>12.40</td>
<td>30.0</td>
</tr>
</tbody>
</table>

**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.

**REFERENCE DATA**

**Table 2 : Bracket Separation 'S', in millimetres**

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

**REFERENCES**

- Document Reference : 30746E000 Version 1.0
- Please contact technical support for more information.

- Radio Frequency Systems
- The Clear Choice in Wireless™

Please visit us on the internet at http://www.rfsworld.com