

## RSS X300 Antenna – Assembly Instructions

The RSS X300 Antenna is a high-gain dual-band (2m/70cm) base station antenna designed for permanent outdoor installation. It comes in two main fiberglass sections with a collinear radiator inside.

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### Before You Start

- Assemble the antenna **on the ground**, not on a mast
  - Keep away from **power lines at all times**
  - Do not open or modify the fiberglass radome
  - Ensure you have two spanners (wrenches) for the joint clamps
  - Avoid installation in rain or strong wind during assembly
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### Step 1 – Identify the Parts

- Upper fiberglass radome section
  - Lower fiberglass radome section
  - Internal radiator element (pre-installed)
  - Upper & lower outer shell joint brackets
  - Gasket / sealing ring
  - Feedpoint section (base)
  - 3 radial elements
  - Mast mounting brackets + support pipe
  - Lock screws & hardware
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## Step 2 – Join the Internal Elements

1. Align the **upper and lower internal radiator sections**
2. Carefully slide them together until fully seated
3. Insert into the **element joint bracket**
4. Tighten gently but firmly to secure the internal connection

✓ Ensure the element is fully inserted before tightening

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## Step 3 – Join the Fiberglass Sections

1. Slide the **upper and lower fiberglass tubes together**
2. Position the **rubber gasket correctly at the joint**
3. Fit the **outer shell joint brackets over the join**
4. Tighten both brackets evenly using two wrenches
5. Continue tightening until:
  - No visible gap remains
  - The seal is fully compressed (waterproof joint)

✓ This step is critical for weatherproofing

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## Step 4 – Install the Radial Elements

1. Locate the base feedpoint section
2. Attach the **three radial arms**
3. Secure each one with its lock nut
4. Angle radials downward slightly as designed

✓ Ensure all radials are evenly tightened

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### **Step 5 – Feedpoint & Mast Pipe Installation**

1. Slide the **support pipe onto the base section**
2. Feed your coaxial cable through the pipe
3. Connect coax to the antenna feedpoint (UHF connector)
4. Align mounting holes on pipe and base
5. Insert and tighten the lock screw

✓ Make sure coax is not twisted or pinched

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### **Step 6 – Mounting on Mast**

1. Attach mast brackets to your pole first
2. Lift antenna carefully into position
3. Secure brackets around mast (typical 30–62 mm mast diameter)
4. Tighten evenly and ensure antenna is vertical

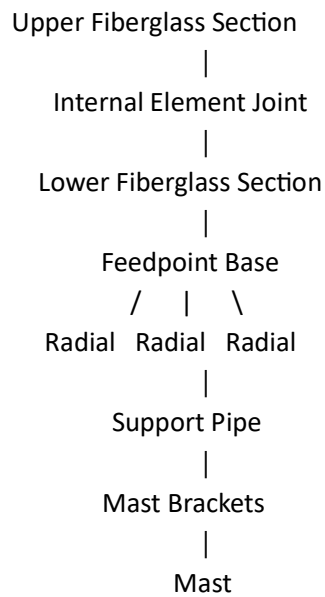
✓ Double-check all clamps before releasing

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### **Final Checks**

- All joints fully tightened (no gaps)
  - Radials firmly secured
  - Coax connector waterproofed (self-amalgamating tape recommended)
  - Mast is stable and properly grounded
  - Antenna is perfectly vertical
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## Simple Layout Overview



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### Important Note

The X300 is factory-tuned. If you see high SWR after installation, it is almost always caused by:

- Coax issues
- Poor connector termination
- Moisture in connectors
- Incorrect grounding or mast contact

Not the antenna itself.