



# RV Telescoping Tower Owner's Manual

Assembly & Installation Instructions

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MADE IN THE **USA**

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## 1) Before Installation

### IMPORTANT INSTRUCTIONS

Read instructions carefully before assembling your RV Telescoping Tower.

#### I-1 Package Contents

Before you begin, inspect the contents to make sure there is no damage or missing parts.

- Tower base assembly (1)
- Tower upright assembly (1)
- Telescoping Tower assembly (1)
- Hex Bolt 3/8" - 24 x 3" (4)
- Hex Nut 3/8" - 24 (4)
- Lock Washer 3/8" (4)
- Flat Washer 3/8" (8)
- Polypropolyne Clamp Halves (1 pair)
- Flat Washer 3/8" (2)
- Cap Screw 1/4" - 20 x 5" (2)
- Nylock Nut 1/4" - 20 (2)
- Flat Washer 1/4" Narrow (2)
- 2.6 x 5.9 x 1/16" Yaw Clamp Pad (1)

#### I-2 Items Not Included in This Kit

- Turbine to battery wire
- Butt connectors for turbine output wires to battery wires.
- Electrical tape or shrink tube insulators
- Ring terminal for battery wire connection
- Over current protection (fuse or circuit breaker) at the battery positive wire connection

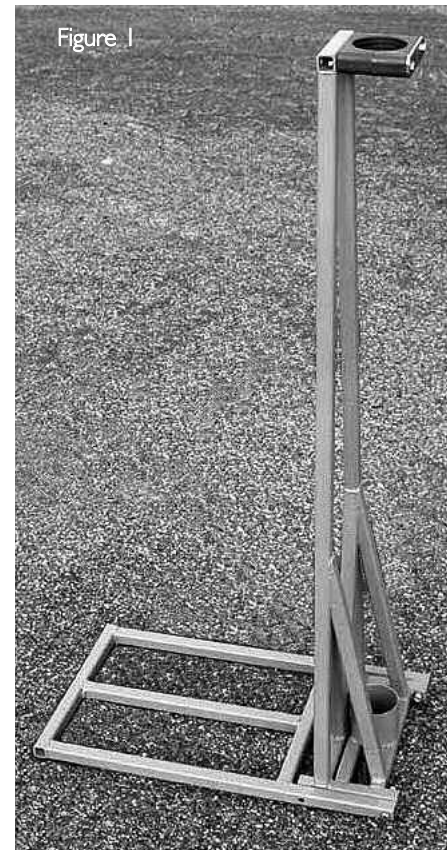
#### I-3 Tools Required for Assembly

- Turbine to battery wire
- 1/2" spanner wrenches (2) and 7/16" spanner wrench (1) or adjustable spanner wrenches (2)
- 3/16" allen wrench (1)
- Pocket knife
- Wire cutters
- Wire strippers
- Soldering iron and solder (if necessary)

## 2) Base Assembly Instructions

1. Remove the two steel welded base components from the package. Stand the upright assembly on the floor and position the lower base adjacent to the upright assembly so the bolt holes are aligned.
2. Insert two of the 3/8" bolts through the holes closest to the end of the lower base assembly with a 3/8" flat washer on each side and a 3/8" lock washer behind the 3/8" nut.
3. Loosely tighten the 3/8" bolts with the 1/2" spanner wrenches (or adjustable spanner wrenches).

**Note:** The base assembly is now ready for use and can be folded flat for storage.



### 3) Telescoping Tower Assembly

1. Remove the aluminum telescoping tower from the shipping tube.
2. Lay the tower flat on the floor in the nested condition.
3. Position the battery wires in a loose coil at the top of the tower (small end) and carefully push the wire through the inside of the tower until it protrudes from the bottom of the tower. Pull the remaining wire through the tower until approximately 6" of wire is left extending from the top of the tower.



**Note:** Refer to the wire size chart in the Air X owner's manual and determine the appropriate size wire for the distance between your battery connection and the top of the tower (in the extended condition). It is recommended you use an "SO" type multi-conductor service cable in this application.

4. Connect the turbine output wire to the turbine to battery wire with an appropriate butt connector. If you use a crimp style butt connector, back up the connection with solder.
5. Insulate the connectors with tape or shrink tube.
6. Replace the yaw pad that was provided with the Air X with the thinner pad that is provided with the RV Telescoping Tower kit.
7. Carefully position the Air X onto the upper end of the telescoping tower while pulling the excess battery wire out at the bottom.
8. Connect the appropriate ring terminal for the battery connections (including the overcurrent protection). If you use crimp style connectors back up the connection with solder. Make note of the battery wire polarity (battery positive and battery negative) terminals.

**Note:** The nested telescoping tower is now ready for use and can be safely stored in this condition.

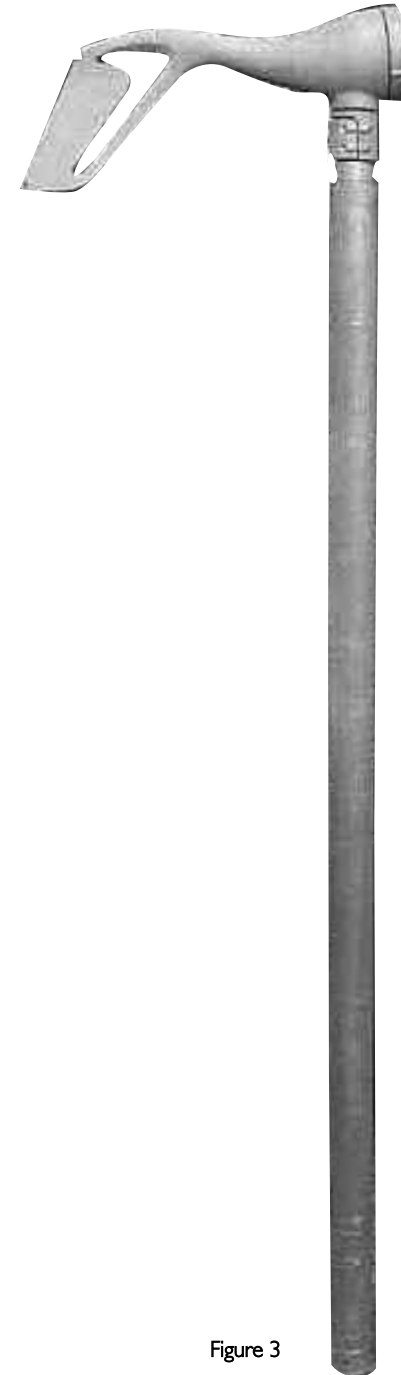


Figure 3

#### 4) Using Your RV Telescoping Tower Assembly

1. Rotate the lower base assembly so it is 90 degrees from the upright and loosely fit the inner 3/8" bolts in their respective holes with a 3/8" flat washer on each side and a lock-washer behind the nut.
2. Position the lower base plate ahead or behind the RV or vehicle tire with 3-5 inches of separation between the base upright and the side of the RV or vehicle. See Figure 4

**Warning:** Do not use the RV Telescoping Tower mount on very soft soil, sand or mud. Damage to your RV or vehicle may result if the base upright comes in contact with the side of your RV or vehicle.

3. Carefully drive the RV or vehicle on to the lower base while making sure that adequate clearance between the base upright and the side of the RV or vehicle is maintained. See Figure 5.
4. Position the telescoping tower assembly near the tower base and pull the battery wire through the tower base socket and the slot in the base assembly on which ever side will direct the wire toward your battery connections.
5. Position the polypropylene clamp halves around the tower approximately 48" from the bottom of the tower and insert the 1/4"-20 x 5" cap screws through the clamp halves with the 1/4" narrow flat washer behind the head of each cap screw.
6. While holding the clamp halves assembly securely with one hand, position the bottom of the telescoping tower above the socket on the base assembly.
7. Position the polypropylene clamp halves adjacent to the holes in the top of the tower base upright and assemble the clamp halves and tower to the tower base upright with a 1/4" Nylock nut on the back of the base upright and a 1/4" flat washer behind each nut.
8. Lower the bottom of the telescoping tower into the base assembly socket and carefully pull any excess battery wire through the slot. See Figure 8.
9. Securely tighten the clamp half and tower assembly with a 3/16" allen wrench and 7/16" spanner wrench to 3.25 lb ft torque (4.5 Nm).
10. Remove the inner 3/8" bolts from the base assembly and tip the upright away from the RV or vehicle. See Figure 9.
11. Carefully extend the telescoping tower sections to their full extent and rotate each tower section in a "J" motion to engage the locking mechanism between each section. See Figure 10.

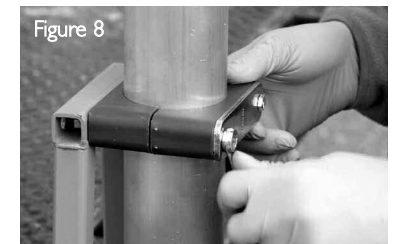


Figure 4. Position base.

Figure 5. Drive onto base.

Figures 6 & 7. Remove clamp halves.

Figure 8. Clamp tower.





**Warning:** Insure the lock is engaged and you cannot push the section back into the nested condition before raising the tower.

12. Secure the turbine blade and hub assembly onto the Air X and install the nose cone.

**Note:** Please refer to the Air X installation manual for instruction on how to properly assemble the blade and hub assembly.

13. Carefully tip the tower and turbine upright. See Figure 11.

14. While holding the base upright up fit the inner 3/8" bolts back in their holes with all washers and nuts as previously described and securely tighten all the 3/8" bolts to 12 lb ft of torque (16.3 Nm).

**Warning:** Insure the polarity of the battery wire connections before you connect to the battery. A reverse polarity connection will damage the turbine!

15. Connect the battery wires to the battery connections.

16. The turbine is now ready to charge your RV or vehicle battery! See Figure 12.

17. Reverse the order of assembly when you are finished using your Air X to charge your RV or vehicle battery.



Figure 10



Figure 11



Figure 12

Figure 9. Ready to extend tower.

Figure 10. Telescope tower.

Figure 11. Tilt tower upright.

Figure 12. Raised tower.



Figure 9