

Model: PRO-500

Instructions

This antenna can be used for reception of XM Satellite Radio or Sirius. It's internal voltage regulator allows for both 4.5 VDC (XM and new SIRIUS) and 6.5 VDC (old SIRIUS) inputs.

Unlike other satellite radio antennas it has a much narrower beam width and exhibits superior gain, multi-path and out-of-band signal rejection capability. As such it may take a little more effort to point it at the satellite to achieve optimum performance. Here are important tips for its installation:

- Mount the antenna outdoors with the supplied wall mount or pole mount bracket. Operation indoors or behind windows is not recommended. Window panes can have tinted coatings which can attenuate the signal. The attenuation of these coatings can vary greatly as function of temperature
- Use the menus in the radio to peak the satellite signal reception on one of the satellites. It is not necessary to position the antenna for simultaneous reception of multiple satellites
- The antenna is designed to drive up to 200 feet of RG-6 cable with no signal loss. For longer cable runs use an in-line amplifier (Pixel SBA-1) to boost the signal.
- Although this antenna can receive signals from terrestrial repeaters, it is recommended to always use the satellite signals for primary reception at fixed sites. The satellite signals are much more stable and are not affected by many uncontrolled variables that can impact reception signal quality greatly over time.
- Seal all outdoor coax connector fittings with a sealant or weatherized tape to eliminate moisture ingress.

This package includes the following components:

<u>QTY</u>	<u>Description</u>
1	Antenna Panel
1	Wall mount bracket
1	Pole mount bracket
1	F-female to SMB-plug adapter cable (3 feet)
1	Rubber weather boot
1 lot	Mounting and assembly hardware

Figure 3 shows all supplied items

Assembly

Wall mount: (See Figures 4, 5 and 7)

- 1 Remove the wall mount bracket from its box and attach it to the rear of the antenna panel on the two threaded studs with the supplied hardware.
- 2 Mount the wall mount bracket to a flat surface with the supplied hardware.
- 3 Attach the RG-6 cable and point the antenna for best reception. Tighten all hardware and seal the outdoor connectors to prevent moisture ingress. Provide a strain relief for the cable.

Pole Mount (see Figures 5, 6 and 8)

- 1 Mount the antenna panel to the pole mount bracket using the supplied hardware as shown in Figure 5.
- 2 Attach the RG-6 cable and point the antenna for best reception. Tighten all hardware and seal the outdoor connector to prevent moisture ingress. Provide a strain relief for the cable.

XM Reception

XM has satellites located in fixed orbital positions in the southern sky (at 115° W longitude and 85° W longitude). These satellites each carry all of the XM channels, so it is only required to have an un-obscured line-of-sight to one of these orbital locations. To initially set up the antenna, orient it approximately due south at an up elevation angle of approximately 45°. Use this as starting spot and peak the signal reception for maximum on one of the XM satellites using the antenna alignment menu in the radio.

Sirius Reception

Sirius has three satellites in elliptical orbit that are constantly moving in various orbits over the earth. These orbits are arranged so that two satellites are always in view at any point in time at relatively high elevation angles (from +45° to almost 90°) in the sky (see Figure 6). Figure 1 shows relative azimuth pointing guidelines for reception in different regions of the US. Because the satellites' positions are constantly changing, signal strength will vary somewhat at different times of the day.

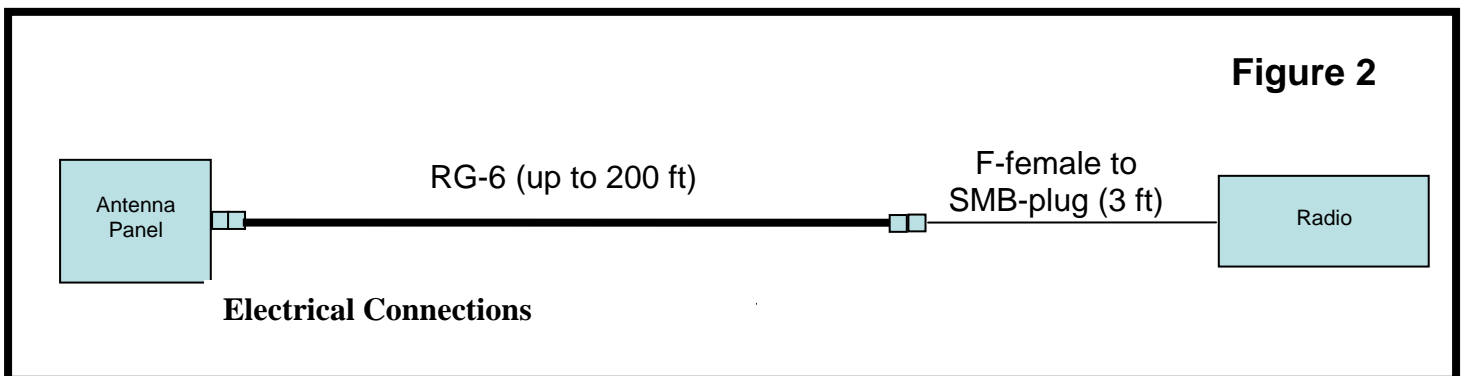
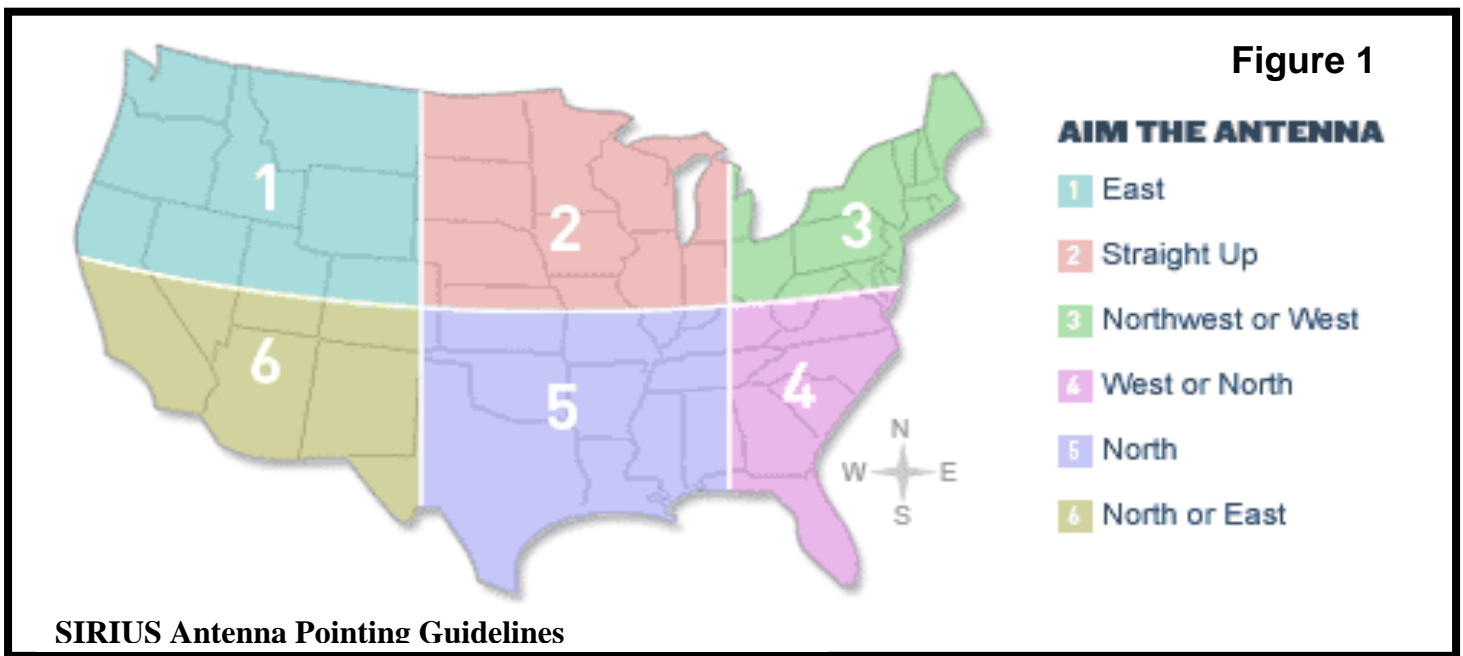


Figure 3. Supplied Components

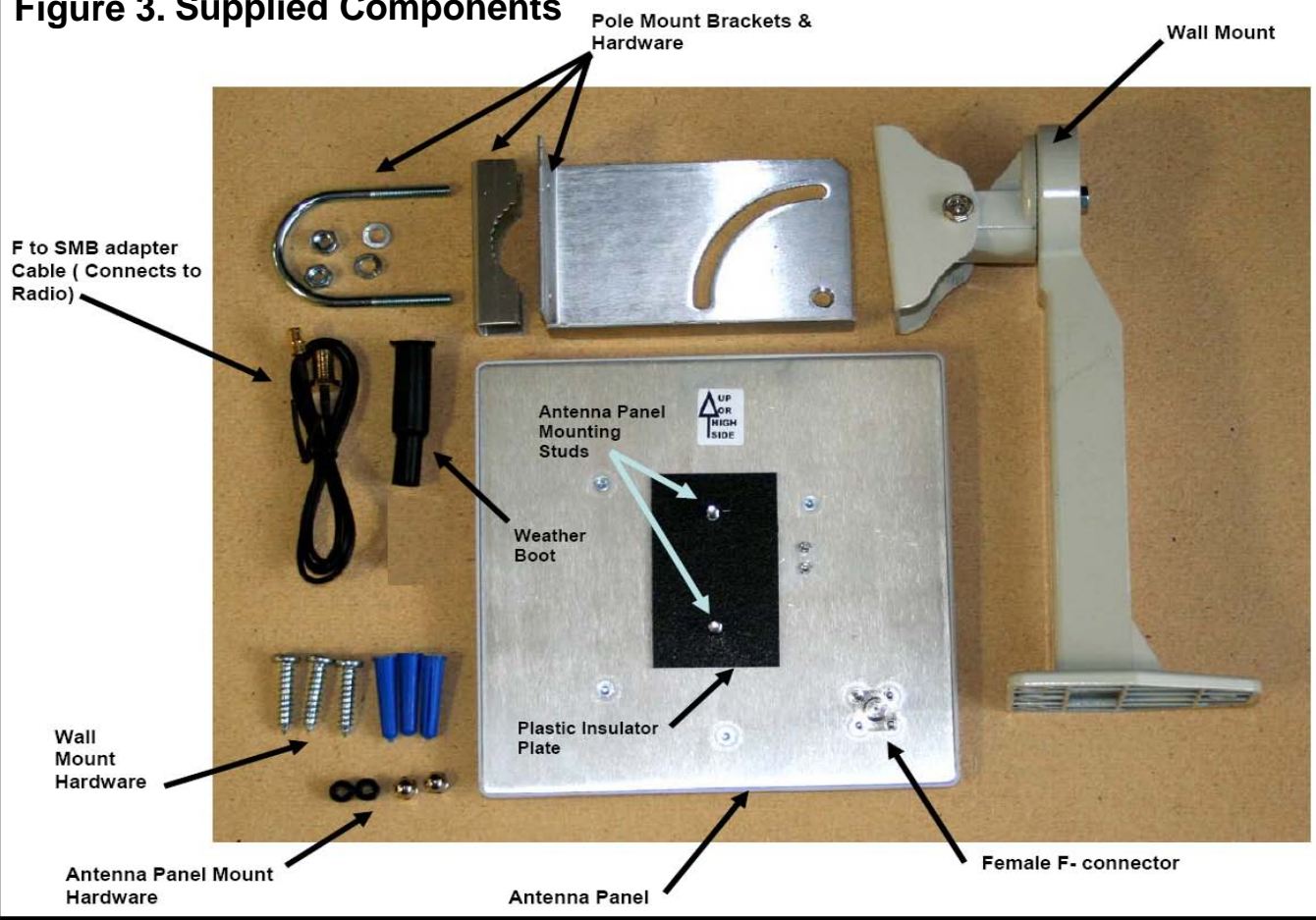
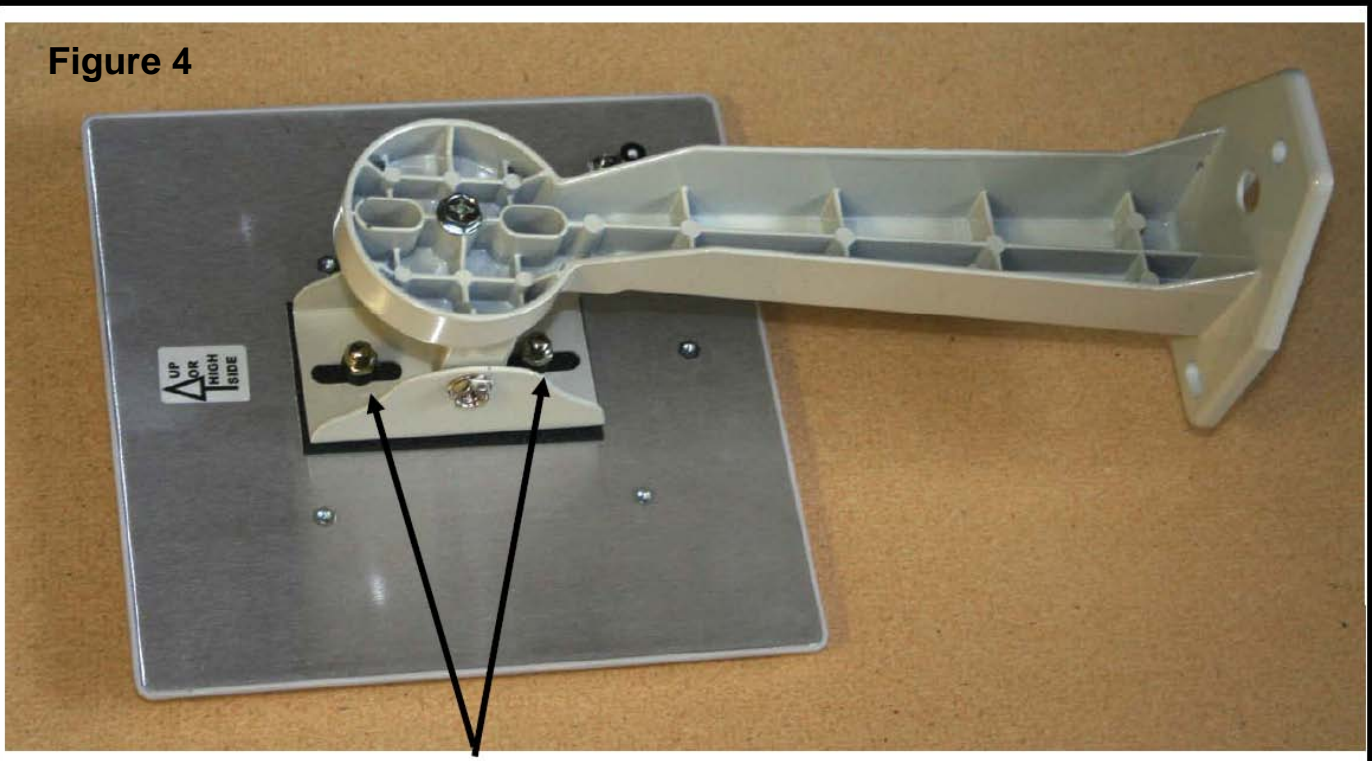


Figure 4



Attach Wall Mount to Panel Studs Here Using Plastic Shoulder Washers to Insulate Panel from Mount

Figure 5

IMPORTANT INSTRUCTIONS: Electrically isolate the back plate of the antenna from its mount using the plastic insulators as shown below.

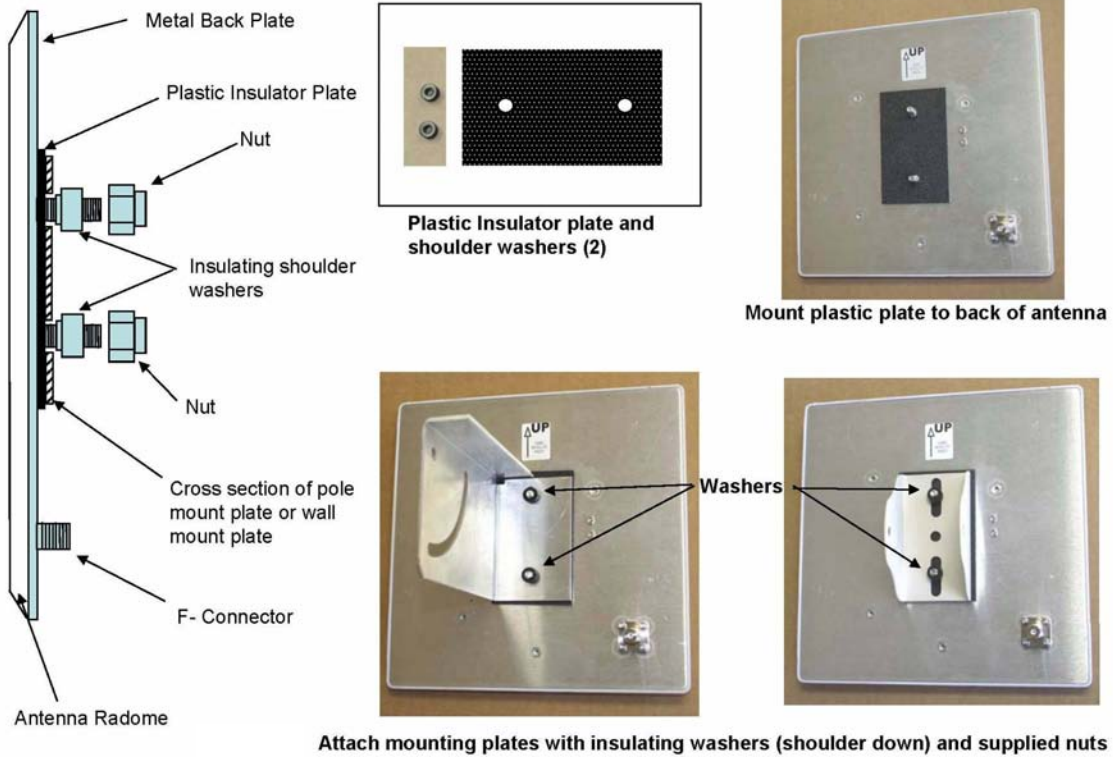


Figure 6



Sirius Reception at High Elevation Angle

Figure 7

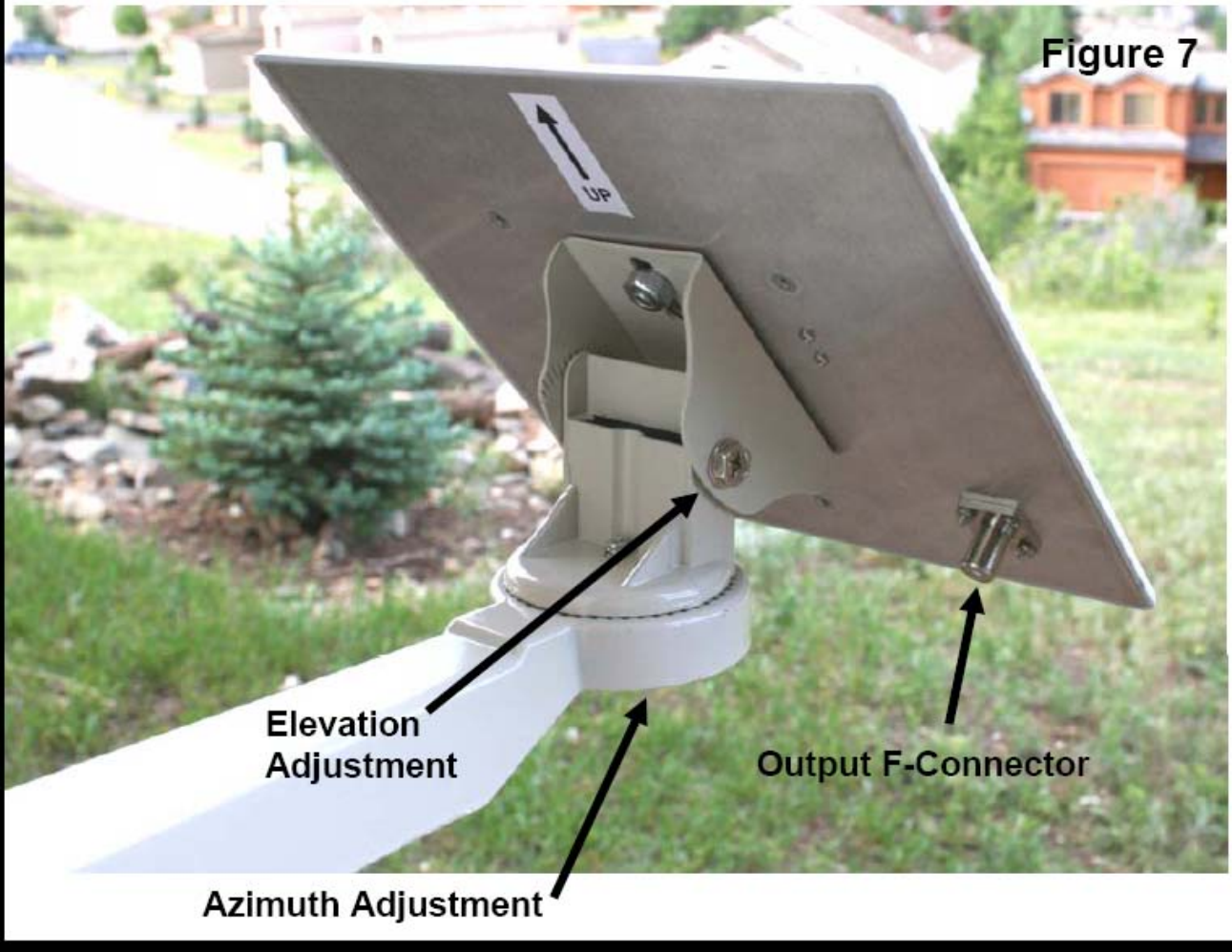


Figure 8



Pole Mount Bracket Assembly