

TracPhone® V7 Azimuth Limit Switch Replacement Instructions

The following instructions explain how to adjust or replace the azimuth limit switch in a TracPhone V7 system.

Replacement Steps

1. Remove the Radome, 2
2. Remove the Faulty Limit Switch, 2
3. Install the New Limit Switch, 4

Tools Required

This procedure requires the following tools:

- #2 Phillips screwdriver
- 3/8" nut driver or wrench
- 7/16" open-end wrench
- Needle-nose pliers
- Cutting pliers

Technical Support

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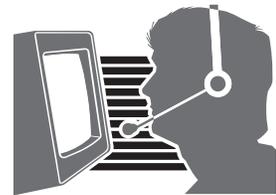
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Step 1 - Remove the Radome

Follow the steps below to remove the radome.



CAUTION

For your own safety, be sure to disconnect power from all wired components before performing this procedure.

- Disconnect power from the TracPhone V7 system and any connected receivers and/or multiswitch.
- Using a #2 Phillips screwdriver, remove the six screws securing the radome to the baseplate (see Figure 1). Set the screws aside in a safe place.

Figure 1 Radome Screws

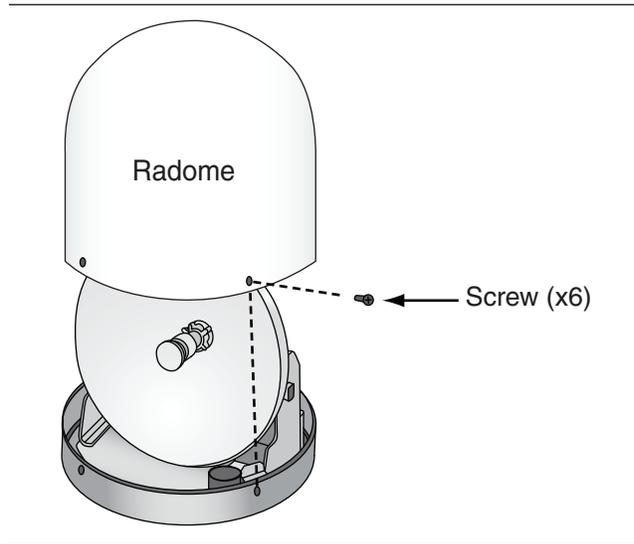
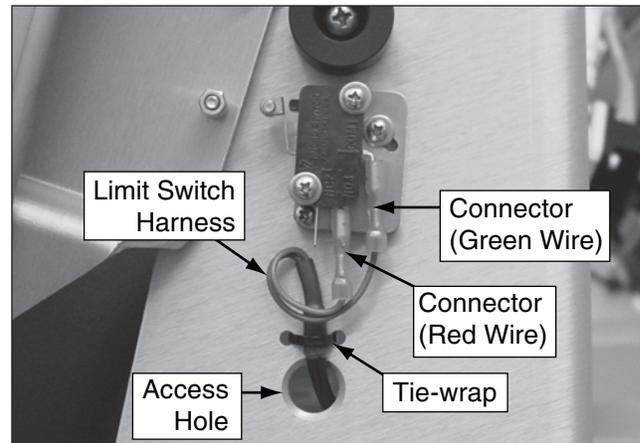


Figure 2 Limit Switch Harness Connectors/Tie-wrap

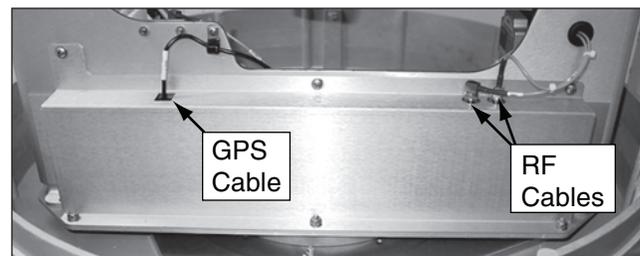


Step 2 - Remove the Faulty Limit Switch

Follow the instructions below to remove the faulty azimuth limit switch.

- Locate the elevation limit switch on the side of the antenna frame (see Figure 2). Then, using cutting pliers, cut and remove the tie-wrap securing the limit switch harness (see Figure 2).
- Using needle-nose pliers, disconnect the limit switch harness connectors from the elevation limit switch (see Figure 2).
- Using a 7/16" open-end wrench, carefully disconnect the two RF cables from the PCB. To avoid stressing the cables, hold the top of the connector while loosening (see Figure 3).
- Disconnect the GPS cable from the PCB (see Figure 3).

Figure 3 Cable Disconnection from PCB



- e. Using a #2 Phillips screwdriver, remove the three #10-32 screws and washers securing the top of the PCB cover to the antenna frame (see Figure 4).
- f. Using a 3/8" nut driver or wrench, remove the three #10-32 lock nuts and flat washers securing the bottom of the PCB cover to the antenna frame. Remove the cover (see Figure 4).

NOTE: Be sure to handle the cover carefully to avoid damaging or dislodging PCB components.

- g. Cut and remove the two tie-wraps shown in Figure 5.
- h. Disconnect the limit switch harness from the PCB (see Figure 5).
- i. Rotate the antenna frame clockwise until the baseplate contacts the hard stop, preventing further rotation.
- j. While preventing any further rotation, use a #2 Phillips screwdriver to remove the three screws and washers securing the azimuth limit switch assembly to the antenna frame (see Figure 6).
- k. Remove the azimuth limit switch assembly and harness.

Figure 4 PCB Cover Hardware

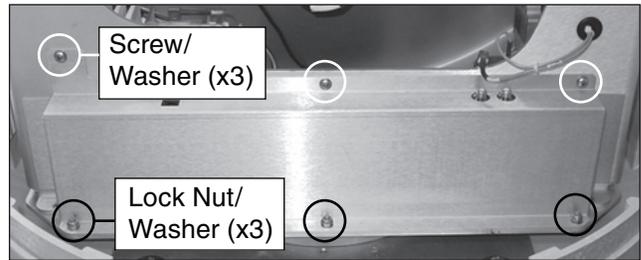


Figure 5 Limit Switch Harness Connector/Tie-wraps

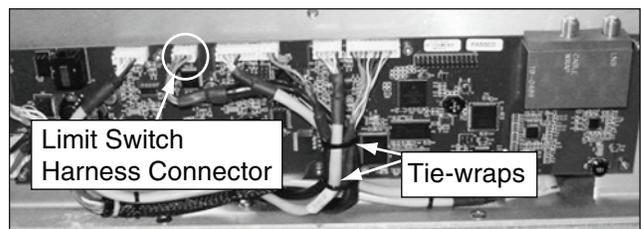
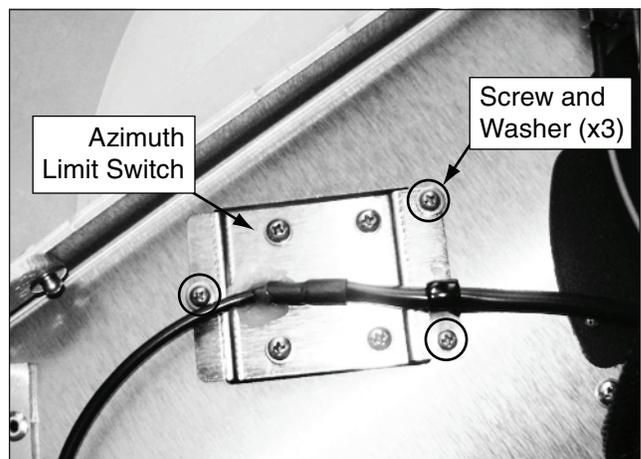


Figure 6 Azimuth Limit Switch Screws/Washers



Step 3 - Install the New Limit Switch

- a. Orient the new azimuth limit switch's cam as shown in Figure 7.

IMPORTANT!

Failure to orient the cam properly might prevent proper operation.

- b. Insert the new azimuth limit switch assembly into the antenna frame. Ensure the stop pin is positioned inside the cam finger notch, as shown in Figure 8.
- c. Using a #2 Phillips screwdriver, secure the new azimuth limit switch assembly to the frame using the three supplied screws and washers (see Figure 6).
- d. Route the end of the limit switch harness with the elevation limit switch connectors through the access hole on the side of the antenna frame (see Figure 9).
- e. Using needle-nose pliers, connect the harness to the elevation limit switch, as shown in Figure 9.
- f. Using a supplied tie-wrap, secure the harness in place, as shown in Figure 9.
- g. Route the other end of the limit switch harness through the access hole to the PCB. Then connect the harness to the PCB's connector (see Figure 10).
- h. Using two supplied tie-wraps, secure the cable harness to the existing cables (see Figure 10).

NOTE: Be sure to handle the cover carefully to avoid damaging or dislodging PCB components.

Figure 7 Cam Position

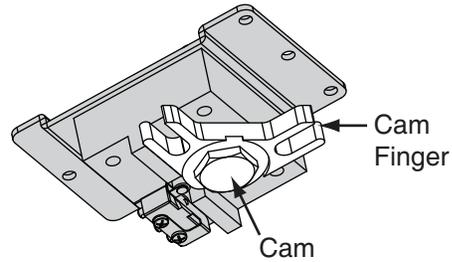


Figure 8 Cam/Stop Pin Alignment

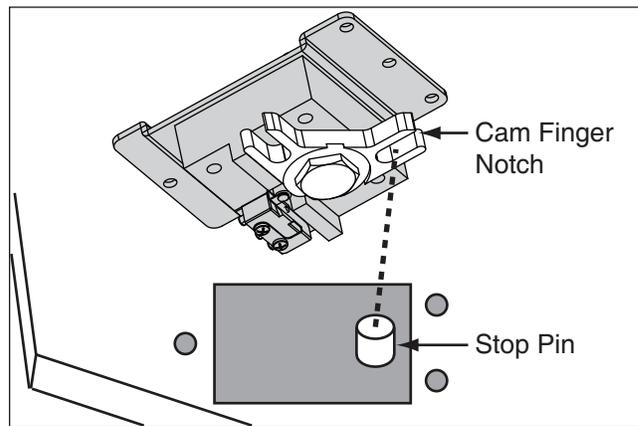


Figure 9 Limit Switch Harness Connectors/Tie-wrap

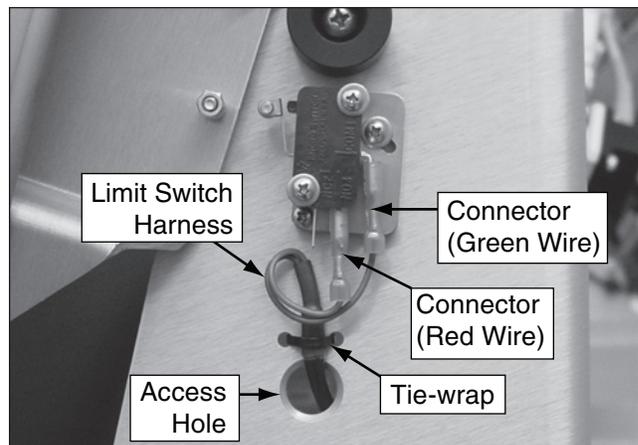
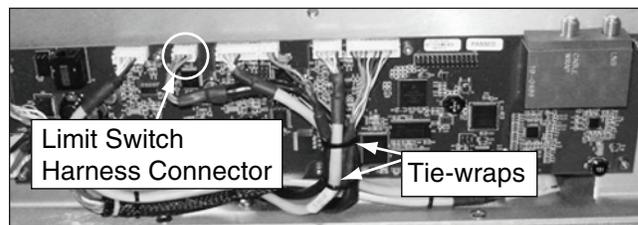


Figure 10 Limit Switch Harness Connector/Tie-wraps



- i. Using a #2 Phillips screwdriver, install the three #10-32 screws and washers to secure the top of the PCB cover to the antenna frame (see Figure 11).
- j. Using a 3/8" nut driver or wrench, install the three #10-32 lock nuts and flat washers securing the bottom of the PCB cover to the antenna frame.
- k. Connect the GPS cable to the PCB (see Figure 12).
- l. Using a 7/16" open-end wrench, carefully connect the RF cable with the right-angle connector to the innermost connector on the PCB. Then connect the RF cable with the straight connector to the outermost connector on the PCB (see Figure 12). To avoid stressing the cables, hold the top of the connectors while tightening.
- m. Reinstall the radome. Then reconnect power to the TracPhone V7 system.

The procedure is complete!

Figure 11 PCB Cover Hardware

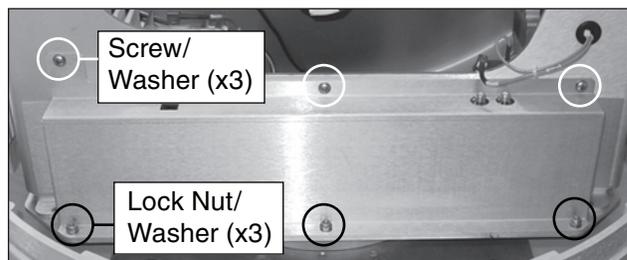


Figure 12 PCB Cable Connections

