TracVision® M9 LNB Replacement Instructions

These instructions explain how to replace an LNB with a new LNB of the same type in a TracVision M9.

Installation Steps

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Tools Required

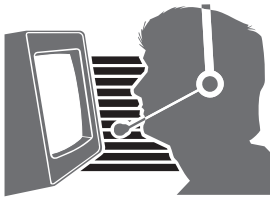
This procedure requires the following tools:

- #1 Phillips screwdriver
- #2 Phillips screwdriver
- Cutting pliers
- 5/64" hex wrench
- 7/16" open-end wrench
- Digital level (or equivalent)
- PC with the latest version of the Flash Update Wizard installed

  TIP: *The Flash Update Wizard is available to KVH-authorized dealers through the KVH Partner Portal at www.kvh.com/partners.*

Technical Support

If you need technical assistance, please contact KVH Technical Support:



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54-0533 Rev. B

Circular LNB Replacement Instructions

Follow the instructions below to replace a circular LNB with a new circular LNB of the same type. LNB types are shown in Figure 1.

NOTE: *If you need to replace a linear LNB instead, refer to "Linear LNB Replacement Instructions" on page 4.*

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.

a. Disconnect power from the TracVision system and any connected receivers and/or multiswitch.

b. Remove the eight Phillips screws securing the radome to the baseplate. Then set the radome aside in a safe place (see Figure 2).

Figure 1 LNB Types

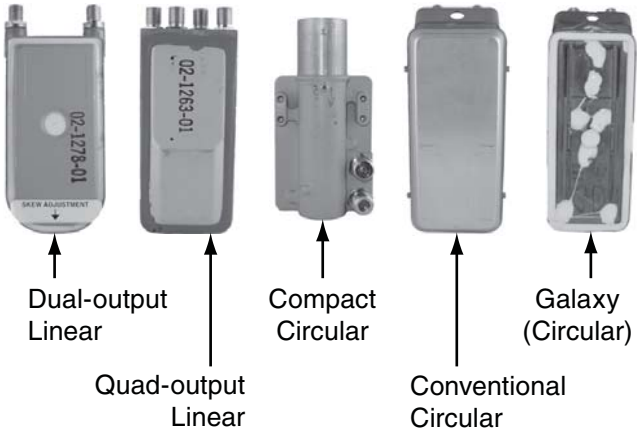
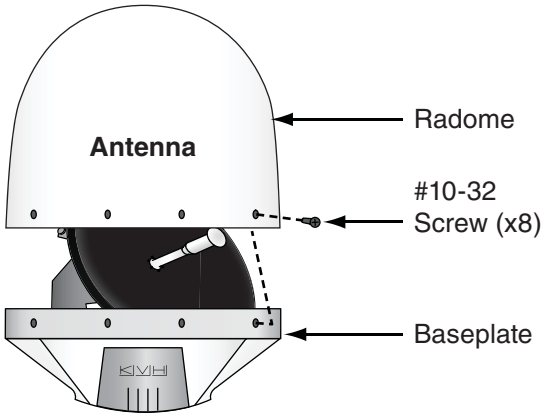


Figure 2 TracVision M9 Radome Screws



Step 2 - Replace the LNB

Follow the instructions below to replace the circular LNB.

a. If a tie-wrap is securing the LNB cables to the LNB, cut and remove the tie-wrap (see Figure 3).

b. Using a 7/16" open-end wrench, disconnect the RF cables from the LNB. Then connect them to the same connectors on the new LNB (see Figure 3 and Figure 4).

c. Using a 5/64" hex key, loosen the two hex screws securing the LNB to the choke feed (see Figure 4).

NOTE: *Some antennas use wing screws instead of hex screws to secure the LNB to the choke feed.*

d. Remove the LNB.

e. Insert the new LNB into the choke feed. Be sure to fully insert the LNB into the choke feed to ensure optimal performance.

f. Using a 5/64" hex key, tighten the two hex screws to secure the LNB to the choke feed (see Figure 4).

g. Reinstall the radome and restore power to the TracVision system and any connected receivers and/or multiswitch.

The procedure is complete!

Figure 3 Conventional LNB/Tie-wrap

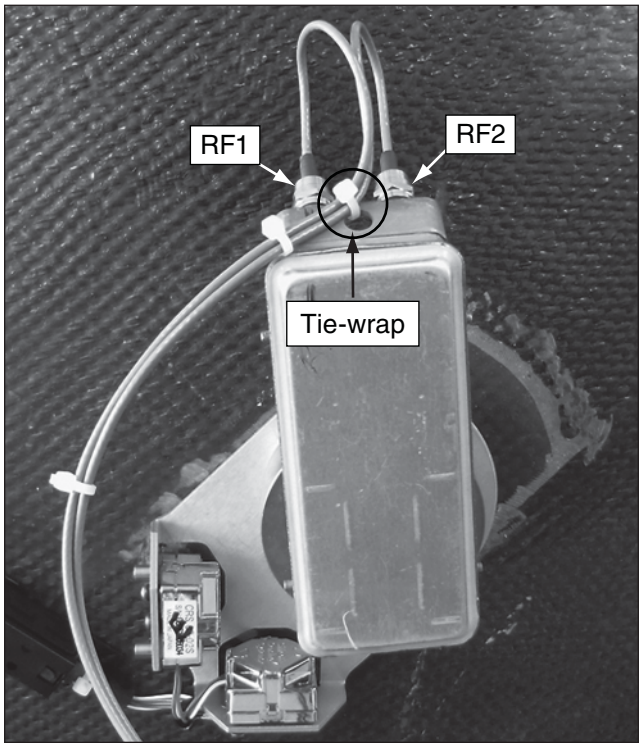
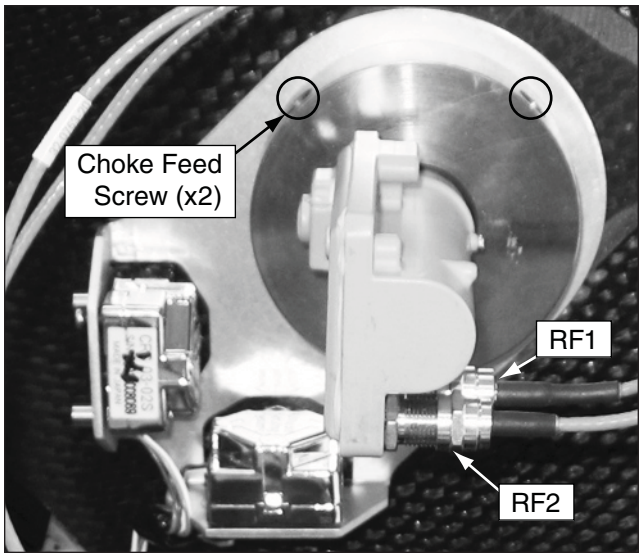


Figure 4 Compact Circular LNB/Choke Feed Screws



Linear LNB Replacement Instructions

Follow the instructions below to replace a linear LNB with a new linear LNB of the same type. LNB types are shown in Figure 5.

NOTE: *If you need to replace a circular LNB instead, refer to "Circular LNB Replacement Instructions" on page 2.*

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.

a. Disconnect power from the TracVision system and any connected receivers and/or multiswitch.

b. Remove the eight Phillips screws securing the radome to the baseplate. Then set the radome aside in a safe place (see Figure 6).

Figure 5 LNB Types

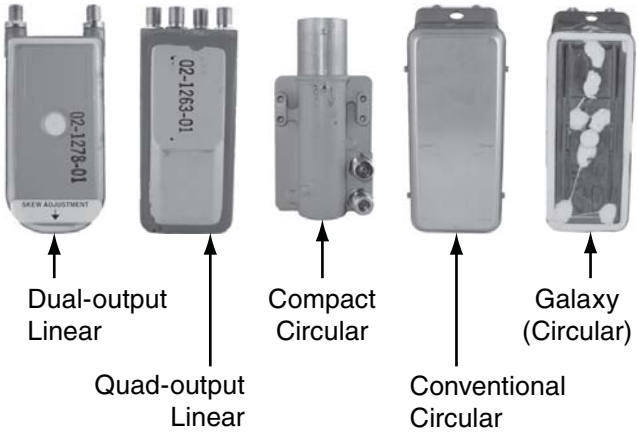
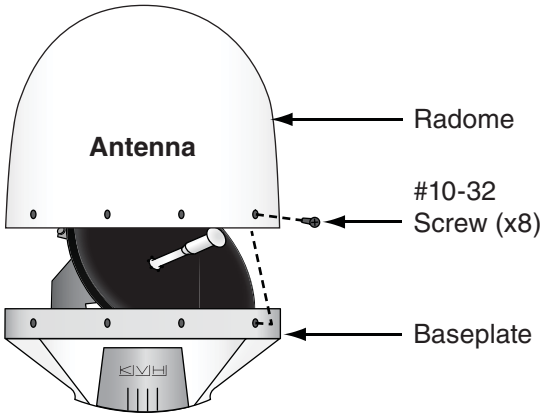


Figure 6 TracVision M9 Radome Screws



Step 2 - Replace the LNB

Follow the instructions below to replace the linear LNB.

a. Cut and remove the tie-wrap securing the cables to the LNB (see Figure 7).

b. Using a 7/16" open-end wrench, remove the RF cables from the old LNB and connect them to the same connectors on the new LNB (see Figure 7).

c. Using a 5/64" hex key, loosen the two screws securing the old LNB to the choke feed (see Figure 8).

NOTE: *Some antennas use wing screws instead of hex screws to secure the LNB to the choke feed.*

d. Remove the LNB.

e. Insert the new LNB into the choke feed. Be sure to fully insert the LNB into the choke feed to ensure optimal performance. Then tighten the hex screws just enough to secure the LNB in place.

f. Rotate the skew motor assembly counter-clockwise, until the limit switch prevents further rotation, as shown in Figure 8. This will ensure a stable measuring surface in the following step.

g. Using a digital level, ensure there is no more than a 1° difference between the angle of each measuring surface. When the LNB is position, tighten the hex screws to secure it into place.

h. Using a supplied tie-wrap, secure the LNB cables and skew motor cable to the LNB, as shown in Figure 7. Be sure to leave an adequate cable bend radius; sharp bends or kinks in the cables can impair performance.

Figure 7 Tie-wrap/Cable Transfer

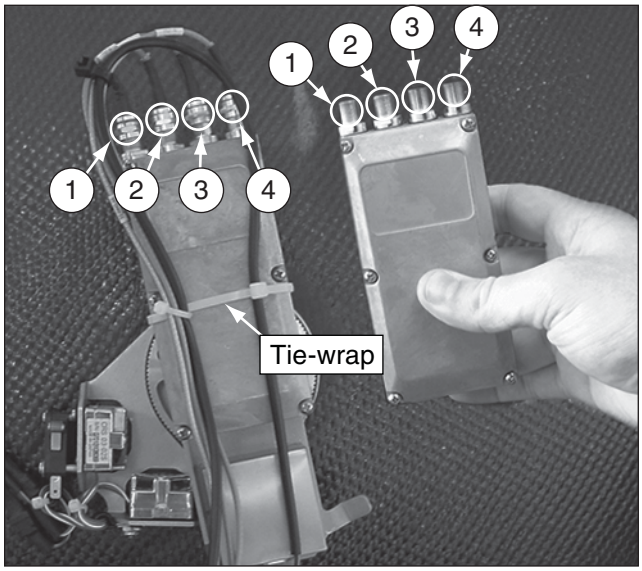
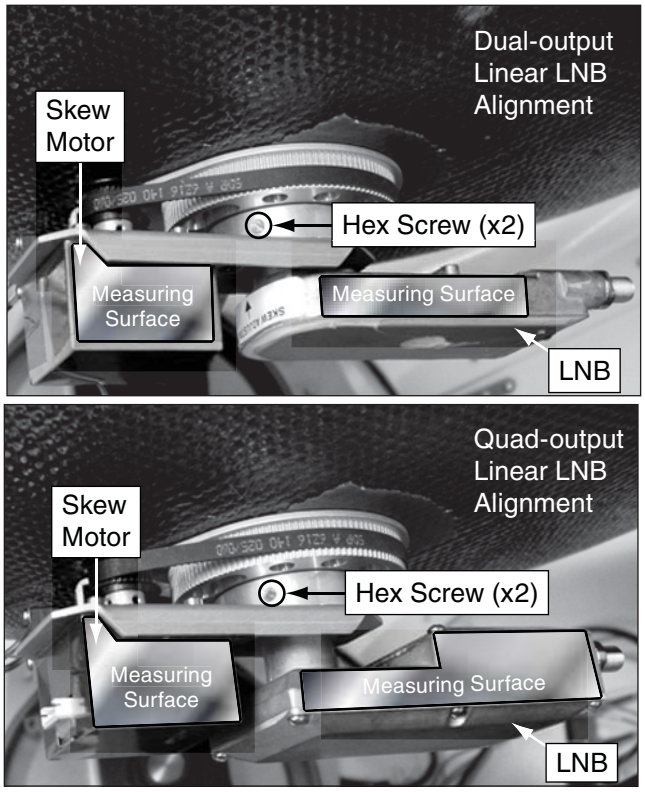


Figure 8 Hex Screws/LNB Alignment



Step 3 - Configure the New Linear LNB

The following instructions explain how to configure the antenna to use the new linear LNB.

a. Rotate the skew motor assembly until the LNB's connectors are facing approximately straight downward. Then, using a digital level, measure and record the angle of the LNB, as shown in Figure 9.

b. Reconnect power to the TracVision system. Then connect a PC to the TracVision system.

NOTE: *Connection instructions vary. Refer to the Flash Update Wizard's Help file for connection instructions (see Figure 10).*

c. Open the Flash Update Wizard. Then turn on the TracVision system.Wait 2 minutes for system startup.

d. Type the following commands into the wizard's "Command" box. Press Enter after each command.

HALT
DEBUGON
SKEWMTRON
ZAP

e. The antenna will restart. Wait two minutes for system startup.

f. Type the following commands into the wizard's "Command box." Press Enter after each command.

HALT
DEBUGON
EL,0
SKEW,0

g. Using a digital level, measure and record the angle of the LNB (see Figure 9).

NOTE: *The digital level always displays positive angles. However, the antenna skew mechanism regards angles clockwise from vertical as negative and counterclockwise from vertical as positive (see Figure 11).*

Figure 9 LNB Angle Measurement

Figure 10 Flash Update Wizard Help

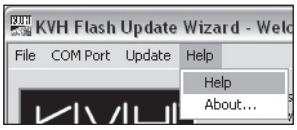
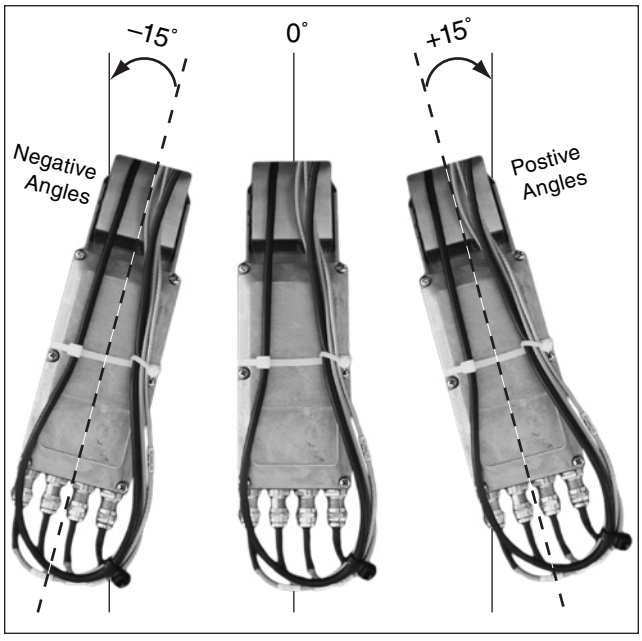


Figure 11 Positive/Negative Skew Angles



h. Type the following command into the wizard's "Command" box. Then press Enter.

=CALSKEW,XX.X

NOTE: *XX.X = the LNB angle you just recorded.*

NOTE: *If the angle you recorded is a negative number, be sure to use a negative (–) sign when entering the angle. For example, if the digital level measures 10.5°, and it is angled clockwise from vertical, you would type* ***=CALSKEW,–10.5****.*

i. Repeat Step g. Verify that the level now reads 0° (within 1°).

j. Reinstall the radome and restore power to the TracVision system and any connected receivers and/or multiswitch.

The procedure is complete!