Tri-Americas™ LNB Installation Guide

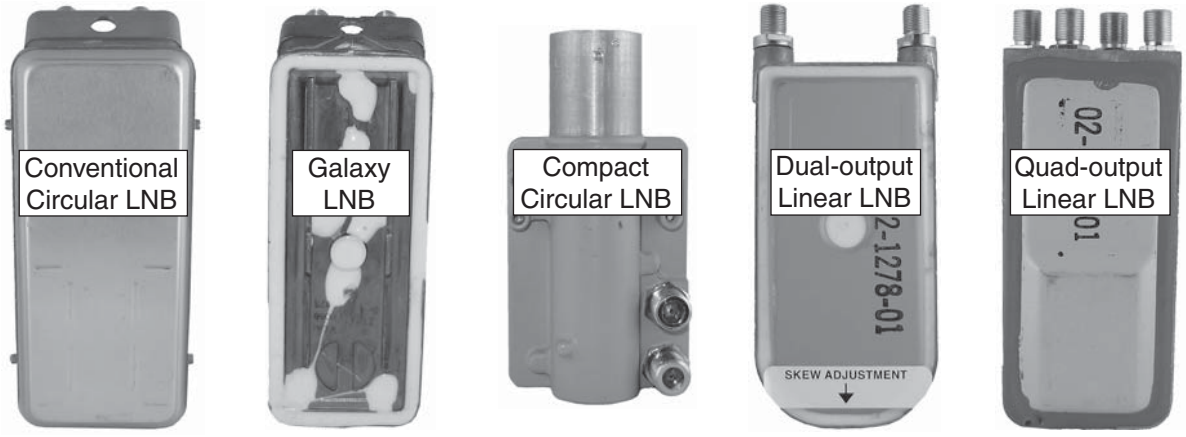
TracVision M9 Configuration

These instructions explain how to install the Tri-Americas LNB in your TracVision® system. With the Tri-Americas LNB, you no longer need to climb up to the antenna and change the LNB when you travel between North America, the Caribbean, Central America, and South America.

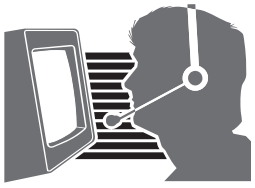
Depending on the LNB currently installed in the antenna, you might need to bypass the inverter PCB. Follow the guidelines below.

Steps Required

Currently Installed LNB:	Perform Steps:
• Conventional Circular • Galaxy	1. Initial Steps (page 3) 2. Bypass the Inverter PCB (page 4) 3. Install the Tri-Americas LNB (page 7) 4. Install the Tone Generators (page 9)
• Compact Circular • Linear Dual-output • Linear Quad-output	1. Initial Steps (page 3) 2. Install the Tri-Americas LNB (page 7) 3. Install the Tone Generators (page 9)



Technical Support



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Initial Steps

Follow these steps to begin the LNB installation.

a. Gather all of the tools listed below. You will need these tools to complete the process.

- #2 Phillips screwdriver
- 5/64" allen hex key
- Wire cutters
- 7/16" open-end wrench

CAUTION

For your own safety, disconnect power from all system components before you start working on the antenna.

b. Disconnect power from all system components, including the receiver(s).

c. Using a #2 Phillips screwdriver, remove the eight #10-32 screws securing the radome to the antenna's baseplate (see Figure 1). Remove the radome and set it aside in a safe place.

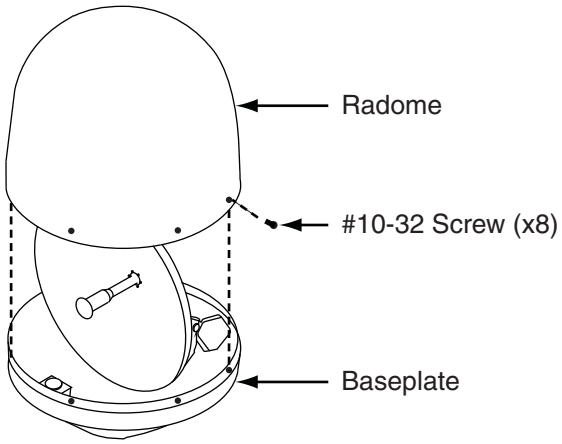
IMPORTANT!

Avoid causing sharp bends in cables when securing or routing cables. Sharp bends or kinks can degrade antenna performance.

IMPORTANT!

Trim the excess portion of any tie-wraps you install and collect all tie-wrap trimmings to avoid damage when the antenna rotates.

Figure 1: Removing the Radome



Bypassing the Inverter PCB

If your TracVision system is currently equipped with a **Galaxy** or **conventional circular LNB**, you must first bypass the inverter PCB (see Figure 2).

The following instructions explain how to bypass the inverter PCB.

a. Using a 7/16" open-end wrench, disconnect and remove the RF cable connecting the inverter PCB to the RF PCB (see Figure 3).

b. Disconnect the RF cable from the inverter PCB's "RF1 TO LNB" connector and connect it to the RF PCB's "TO LNB" connector (see Figure 4).

Figure 2: Location of Inverter PCB

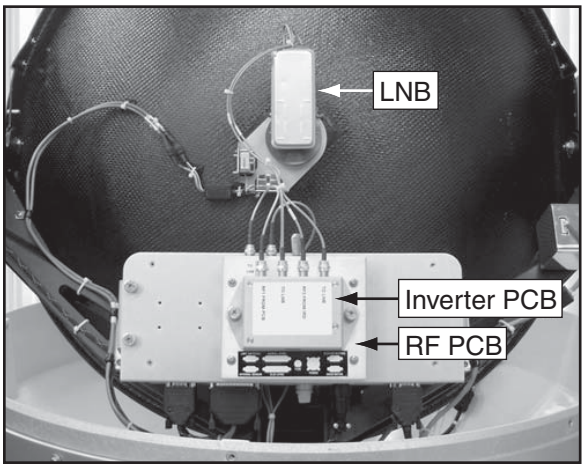


Figure 3: Cable Connecting the Inverter PCB to the RF PCB

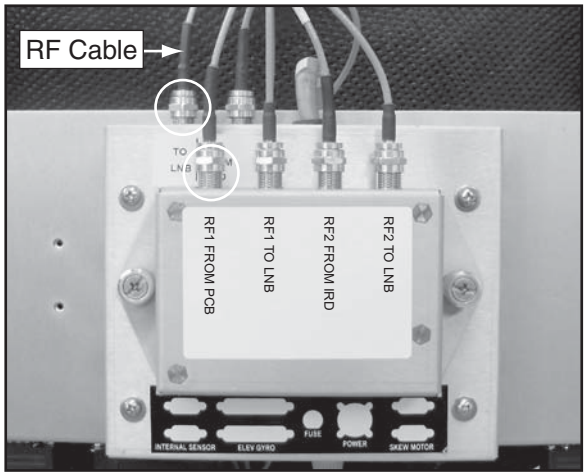
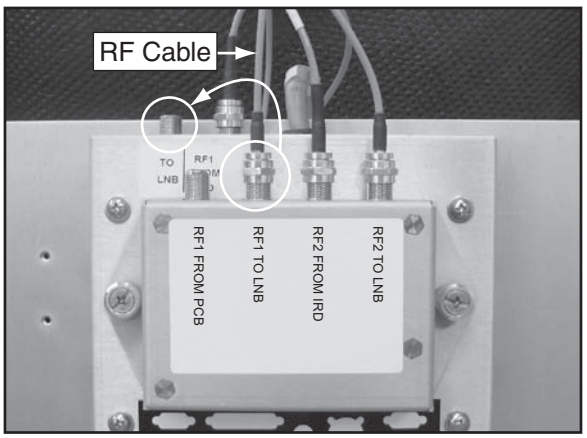


Figure 4: Moving the RF1 Cable



Continued Bypassing the Inverter PCB

c. Apply an "RF2" label to the RF cable connected to the inverter PCB's "RF2 FROM IRD" connector (see Figure 5).

d. Using wire cutters, cut and remove the tie-wraps at the three locations shown in Figure 6.

Figure 5: "RF2 FROM IRD" Connector on Inverter PCB

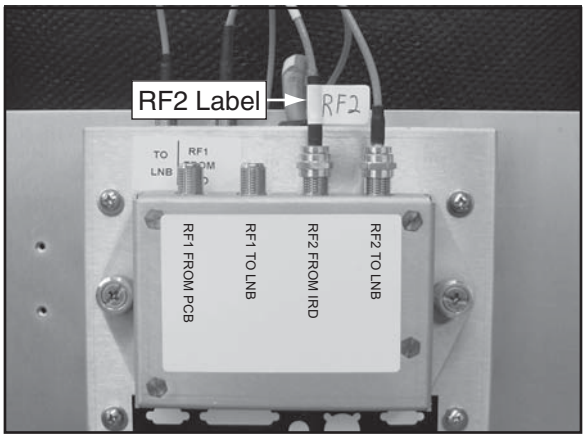
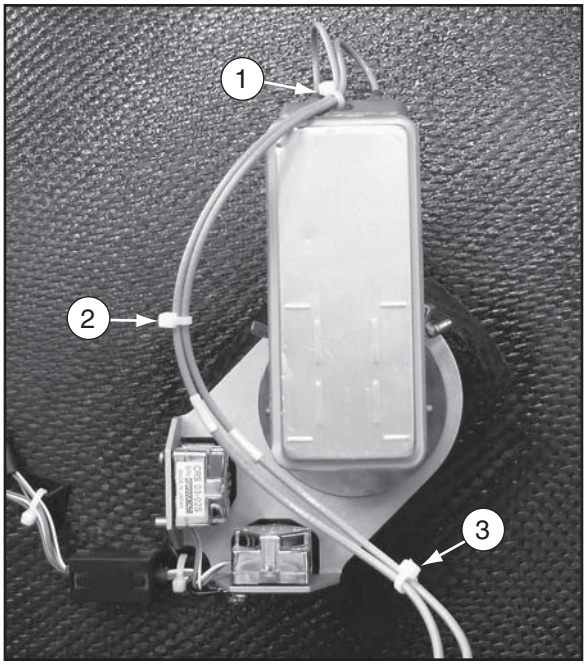


Figure 6: Cable Bundle Tie-wrap Locations



Continued Bypassing the Inverter PCB

e. Cut and remove the tie-wrap securing the RF cables to the back of the PCB module (see Figure 7).

f. Disconnect and remove the cable connecting the inverter PCB to the LNB's RF2 connector (see Figure 8).

g. Disconnect the "RF2"-labeled cable from the inverter PCB (see Figure 5 on page 5).

h. Temporarily connect the "RF2"-labeled cable to the LNB's RF2 connector (see Figure 9).

i. Apply an "RF1" label to the other RF cable that is connected to the LNB (see Figure 9).

Figure 7: Tie-Wrap Securing RF Cables to the PCB Module

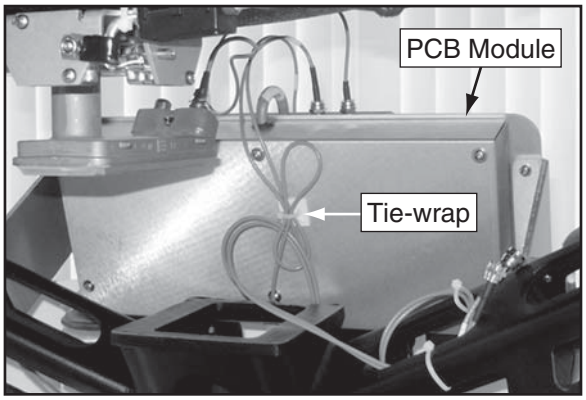


Figure 8: Removing the RF2 Cable

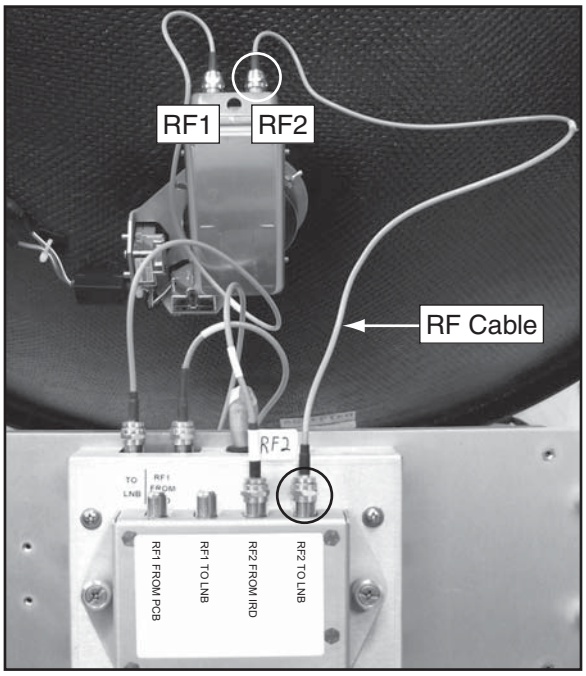
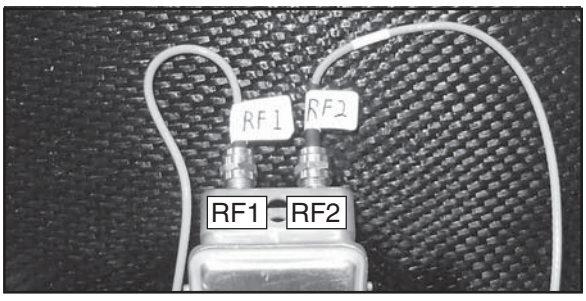


Figure 9: RF Connectors on Old LNB (Example)



Installing the Tri-Americas LNB

Follow these steps to disconnect and remove the old LNB and install the new Tri-Americas LNB in its place.

a. Check the RF cables that are connected to the current LNB. Make sure the cables are labeled appropriately as shown in Figure 10. Label the cables as necessary.

b. Disconnect the RF cables from the current LNB.

c. Connect the RF1 and RF2 cables to their corresponding connectors on the Tri-Americas LNB (Figure 11).

d. Using a 5/64" allen hex key, loosen the two #8-32 set screws securing the current LNB to the choke feed (see Figure 12).

e. Remove the old LNB.

f. Insert the new Tri-Americas LNB fully into the choke feed with the connectors aligned upright.

g. Tighten the two set screws to secure the LNB in place.

Figure 10: RF Connectors on Old LNB

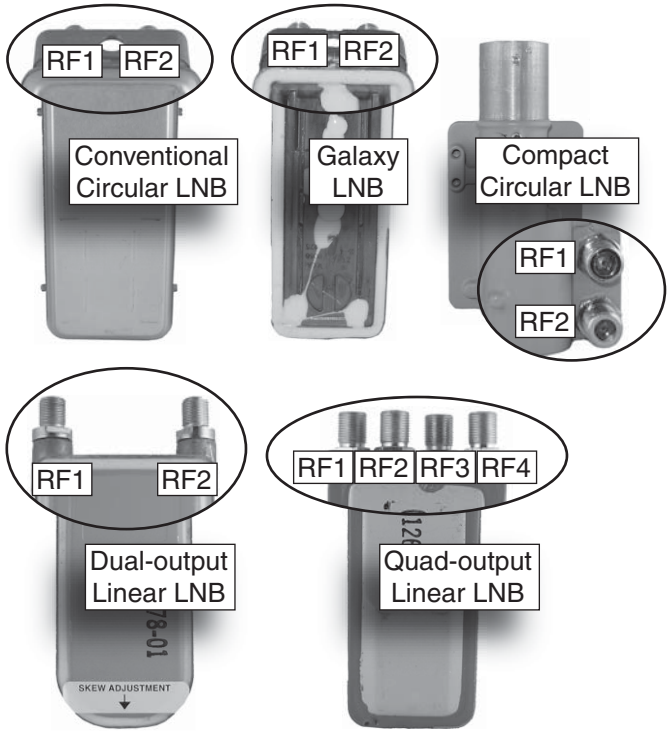


Figure 11: Tri-Americas LNB RF Connectors

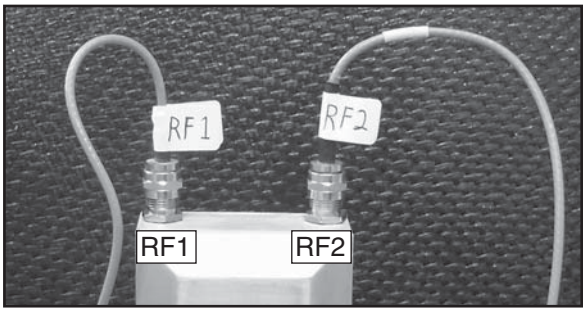
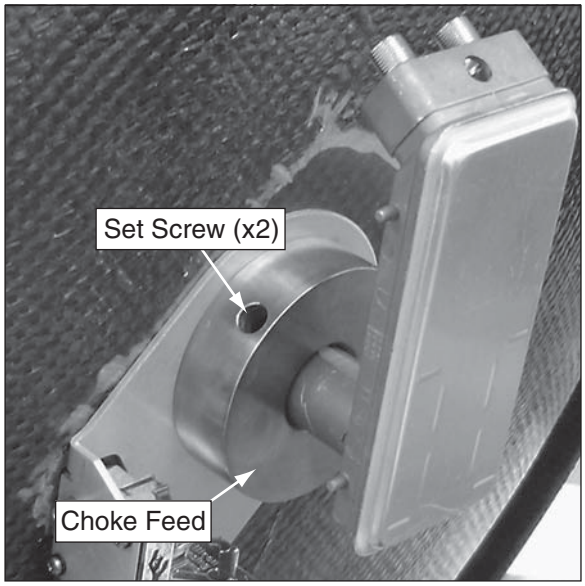


Figure 12: LNB Retaining Screws



Continued Installing the Tri-Americas LNB

h. Using 9 tie-wraps *(supplied in the kit)*, secure the RF cables to each other and to the LNB in the locations shown in Figure 13. These tie-wraps will prevent the cables from getting snagged while the antenna is in motion.

i. Using a tie-wrap, secure the RF cables to the back of the PCB module in location #1 shown in Figure 14 (if it is not already in place).

j. **If you are replacing a linear quad-output LNB**, apply rubber caps over the connectors of the unused RF3 and RF4 cables to protect their center conductors. Then, using 3 tie-wraps, secure the RF3 and RF4 cables to the antenna frame at locations #2-4 shown in Figure 14.

k. Reattach the radome (see Figure 1 on page 3).

Figure 13: Securing RF Cables to the LNB

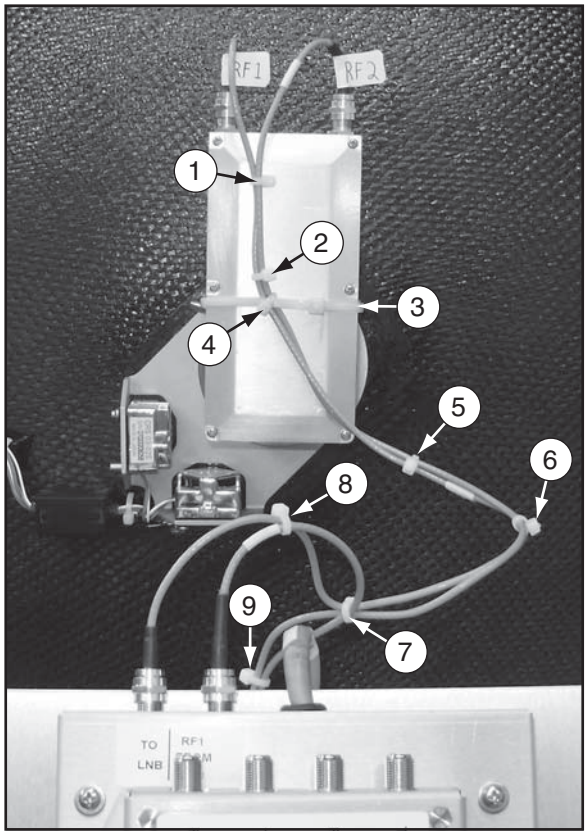
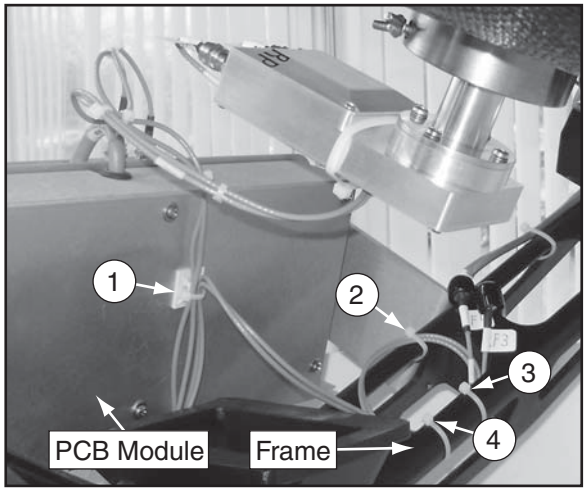


Figure 14: Securing RF Cables to the PCB Module and Frame



Installing the Tone Generators

One or Two Receivers

Two 22KHz tone generators are supplied in the kitpack. Install these devices in-line with the antenna's RF cables as explained below. **If a multiswitch is installed, skip to page 10.**

a. Disconnect the RF1 cable from the primary receiver's "Satellite In" connector.

b. Connect the RF1 cable to the 22KHz tone generator's "LNB" connector.

c. Connect a supplied RG-179 RF cable from the 22KHz tone generator's "REC" connector to the primary receiver's "Satellite In" connector.

d. If you have a second receiver installed, repeat steps a-c to install the second 22KHz tone generator between the secondary receiver and the RF2 cable.

e. Set the 22KHz tone generator's "22KHz OFF/ ON" switch to the proper position for the satellite TV service you wish to receive:

OFF = DIRECTV, DISH Network, ExpressVu

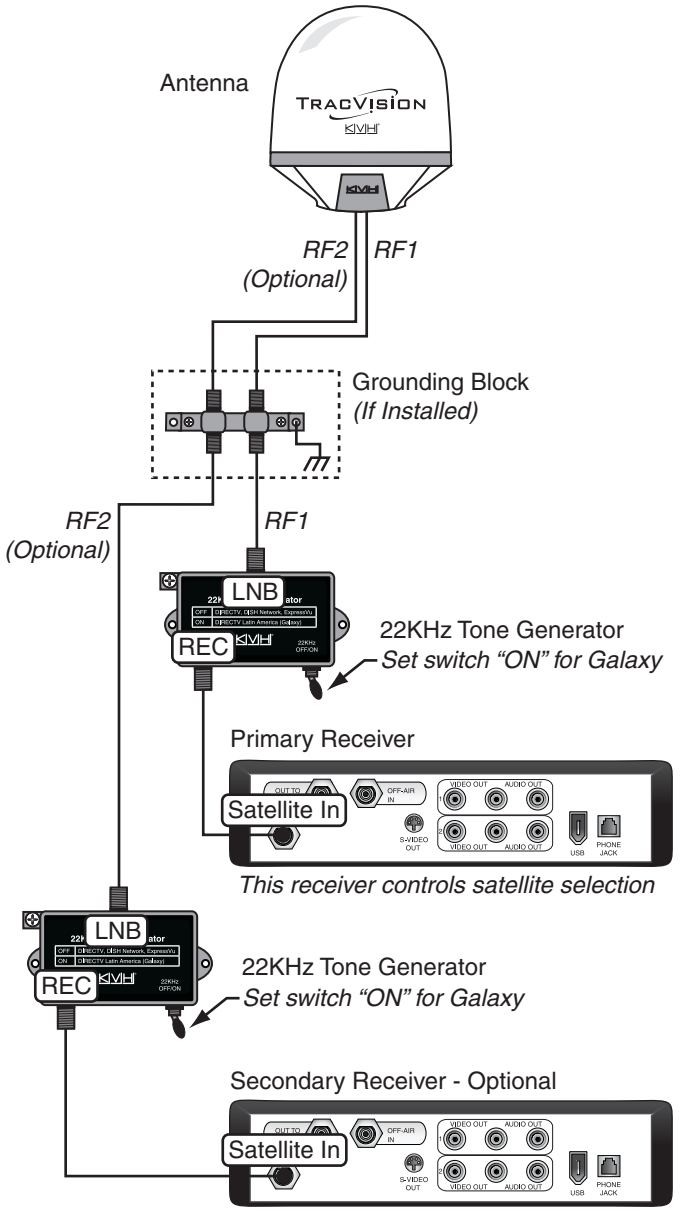
ON = DIRECTV Latin America (Galaxy)

If you have two receivers installed, set the switch on both 22KHz tone generators.

f. Reconnect power to the TracVision system components.

g. Turn on the TracVision antenna and configure it to track satellites that are compatible with the Tri-Americas LNB. These include DIRECTV, DISH Network (EchoStar), ExpressVu, or Galaxy. *Refer to the TracVision M9 User's Guide for details.*

Figure 15: Tone Generator Wiring



Installing the Tone Generators

Three or More Receivers

If a multiswitch is installed, follow these steps to install the supplied 22KHz tone generators.

a. Disconnect the RF1 cable from the multiswitch's "13V" connector.

b. Connect the RF1 cable to the 22KHz tone generator's "LNB" connector.

c. Connect a supplied RG-179 RF cable from the 22KHz tone generator's "REC" connector to the multiswitch's "13V" connector.

d. Disconnect the RF2 cable from the multiswitch's "18V" connector.

e. Connect the RF2 cable to the second 22KHz tone generator's "LNB" connector.

f. Connect a supplied RG-179 RF cable from the second 22KHz tone generator's "REC" connector to the multiswitch's "18V" connector.

g. Set the "22KHz OFF/ON" switch on both 22KHz tone generators to the proper position for the satellite TV service you wish to receive:

OFF = DIRECTV, DISH Network, ExpressVu

ON = DIRECTV Latin America (Galaxy)

h. Reconnect power to the TracVision system components.

i. Turn on the TracVision antenna and configure it to track satellites that are compatible with the Tri-Americas LNB. These include DIRECTV, DISH Network (EchoStar), ExpressVu, or Galaxy. *Refer to the TracVision M9 User's Guide for details.*

Figure 16: Tone Generator Wiring, Multiswitch Configuration