



Guide for Using DIRECTV® SWM Technology with Winegard® Mobile Satellite TV Antennas



**For up-to-date information on receiver compatibility & programming,
visit www.winegard.com/receivers**

Receivers Compatible with SWM Technology

Winegard mobile satellite TV antennas that operate with Multi-switch technology require separate accessories to operate with DIRECTV Single Wire Multi-switch (SWM) only technology receivers. For an up-to-date list of DIRECTV DVR and non-DVR receiver models that are only compatible with SWM technology, visit www.winegard.com/directv. This website also lists Winegard mobile satellite TV antennas that are compatible with DIRECTV. If unsure of your receiver model, check the back of the receiver or the inside front door of the smart card slot.

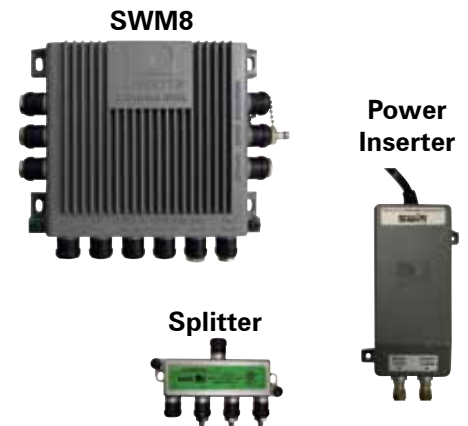


Model number

SWM Kit Parts

For proper SWM operation with Winegard satellite TV antennas that operate with Multi-switch technology, the SWM8, DIRECTV PI-28 or PI-29 power supply, and DIRECTV approved splitter (typically 2, 4, or 8 port) must be used. Failure to use this equipment may cause issues with your system. Note that Model SK-SWM3 SWM TRAV'LER® antenna operates with DIRECTV SWM technology without separate accessories.

The DIRECTV power inserter PI-28 or PI-29 may damage a DIRECTV receiver if improperly connected in the system. The SWM output of the power inserter should never be directly applied to the input of a receiver. During installation, verify all wiring before applying power to the power inserter.



Calculating Tuners for SWM Installation

DIRECTV SWM8 allows the use of up to eight tuners with a Winegard satellite antenna. Count the tuners in your SWM installation to check that there are less than or equal to eight tuners being used with SWM8. Keep in mind the following when counting the number of tuners:

- A non-DVR receiver counts as one tuner.
- A DVR receiver has dual tuners and counts as two tuners (even though only one coaxial cable is needed to connect to a DVR receiver). The exceptions are the DIRECTV Genie™ and HR34 DVR receivers, which have five tuners and count as five tuners when calculating tuners for a SWM installation.

Number of non-DVR receivers + 2 x Number of DVR receivers = Total tuners for SWM8 installation

Maximum of 8 non-DVR receivers

Maximum of 4 DVR receivers

Total tuners ≤ 8 for SWM8 installation

Example







Two non-DVR receivers and three DVR receivers are being used for a SWM8 installation.

2 non-DVR receivers + 2 x 3 DVR receivers = 8 total tuners for SWM installation

Warnings

- Never use B-Band converters with SWM8.
- Do not use a DIRECTV PI-21 power inserter with a SWM8. Use a DIRECTV power inserter PI-28 or PI-29.
- Never power on all receivers at once. Sequentially power receivers since every receiver must get a SWM assignment.
- The power inserter must be installed inside the vehicle.

Winegard Mobile Satellite TV Antennas that Require Separate Accessories to Operate with SWM Technology

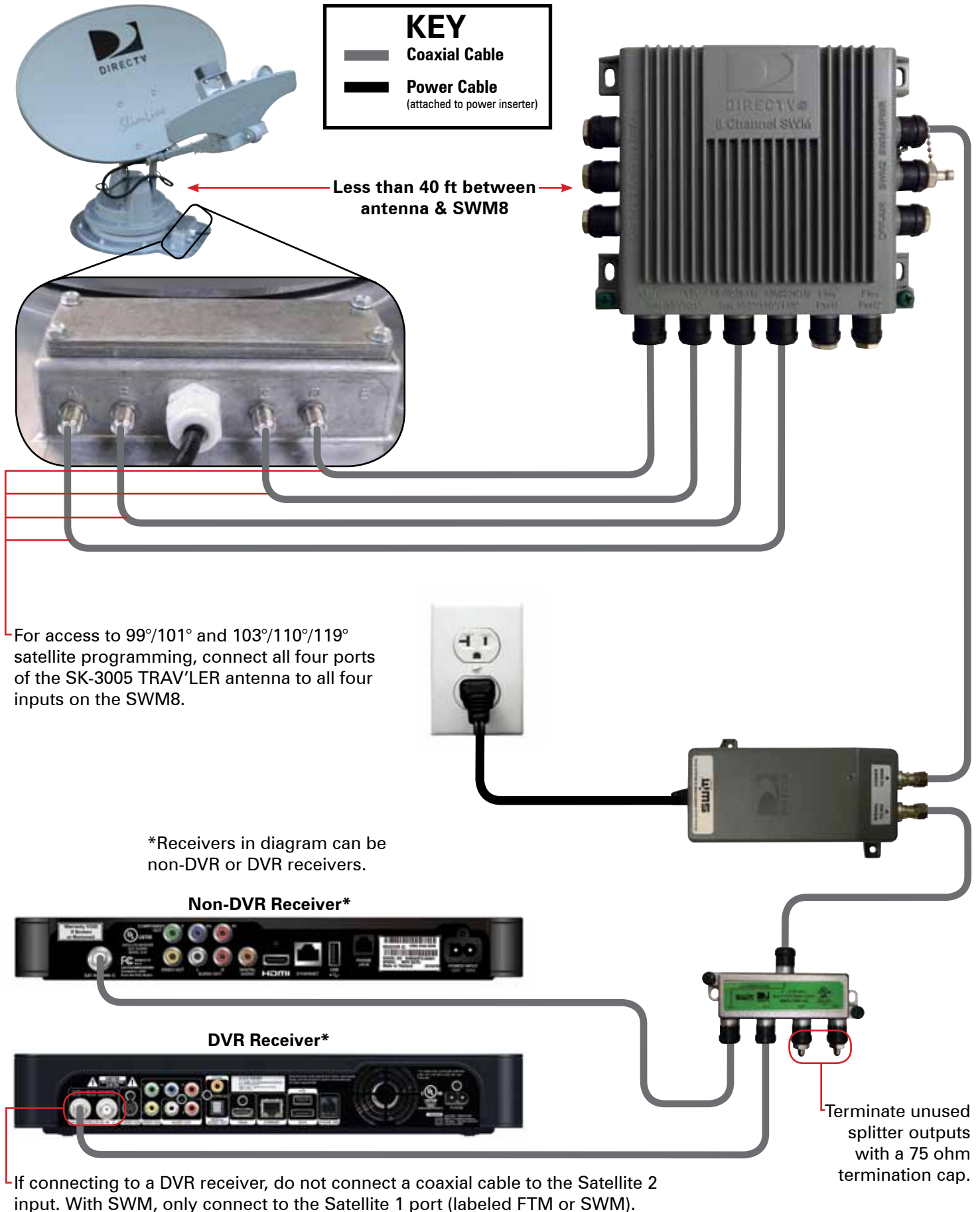
Antennas	Sat 99°	Sat 101°	Sat 103°	Sat 110°	Sat 119°	Wiring diagram
 <p>TRAV'LER SK-3005 DIRECTV Slimline</p>	✓	✓	✓	✓	✓	See page 3 for a SWM8 installation, pages 7–10 for an SK-3005 combined with a dome antenna***, or page 4 for a SWM8 installation using SWM1 & SWM2 outputs. See page 15 for receiver settings.
 <p>TRAV'LER SK-3003 DIRECTV Triple LNB</p>		✓		✓**	✓**	See pages 11–12 for two wiring options for a SWM8 installation or page 4 for a SWM8 installation using SWM1 & SWM2 outputs. See page 15 for receiver settings.
 <p>Carryout® automatic & G2, RoadTrip® Mission® & MiniMax™, and DuraSAT®</p>		✓*				See page 5 for a SWM8 installation with dome antennas or page 4 for a SWM8 installation using SWM1 & SWM2 outputs. See page 15 for receiver settings.
 <p>Carryout Anser®</p>		✓*				See page 6 for a SWM8 installation or page 4 for a SWM8 installation using SWM1 & SWM2 outputs. See page 15 for receiver settings.
 <p>Carryout MP1™</p>		✓*				See page 13 for a SWM8 installation or page 4 for a SWM8 installation using SWM1 & SWM2 outputs. See page 15 for receiver settings.
 <p>Crank-ups, Dish & Tripod Kits (TR-6018, PM-2000)</p>		✓*				See page 14 for a SWM8 installation or page 4 for a SWM8 installation using SWM1 & SWM2 outputs. See page 15 for receiver settings.

*DIRECTV primary 101 programming only. Toggling to alternate satellites is not supported.

**Availability of channels on Satellites 110 and 119 is dependent upon the satellite port to which Port C of the TRAV'LER interface is connected.

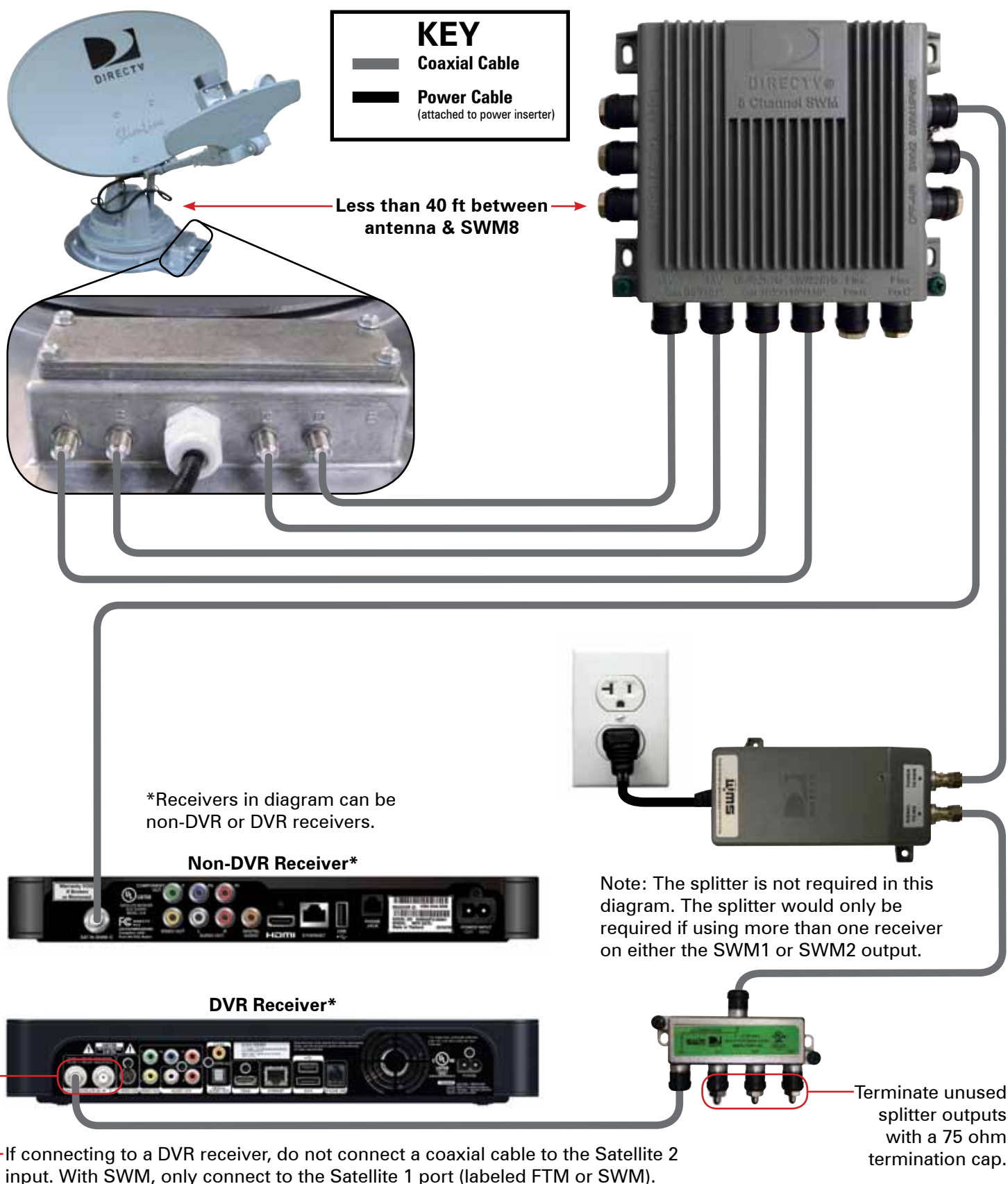
***Each antenna will see satellites as listed in the above table. Note that additional parts (not included) are needed for the combined setup of the TRAV'LER antenna and domed antenna with SWM technology.

SK-3005 TRAV'LER Antenna with DIRECTV SWM8



DIRECTV SWM8 Using Both SWM1 & SWM2 Outputs

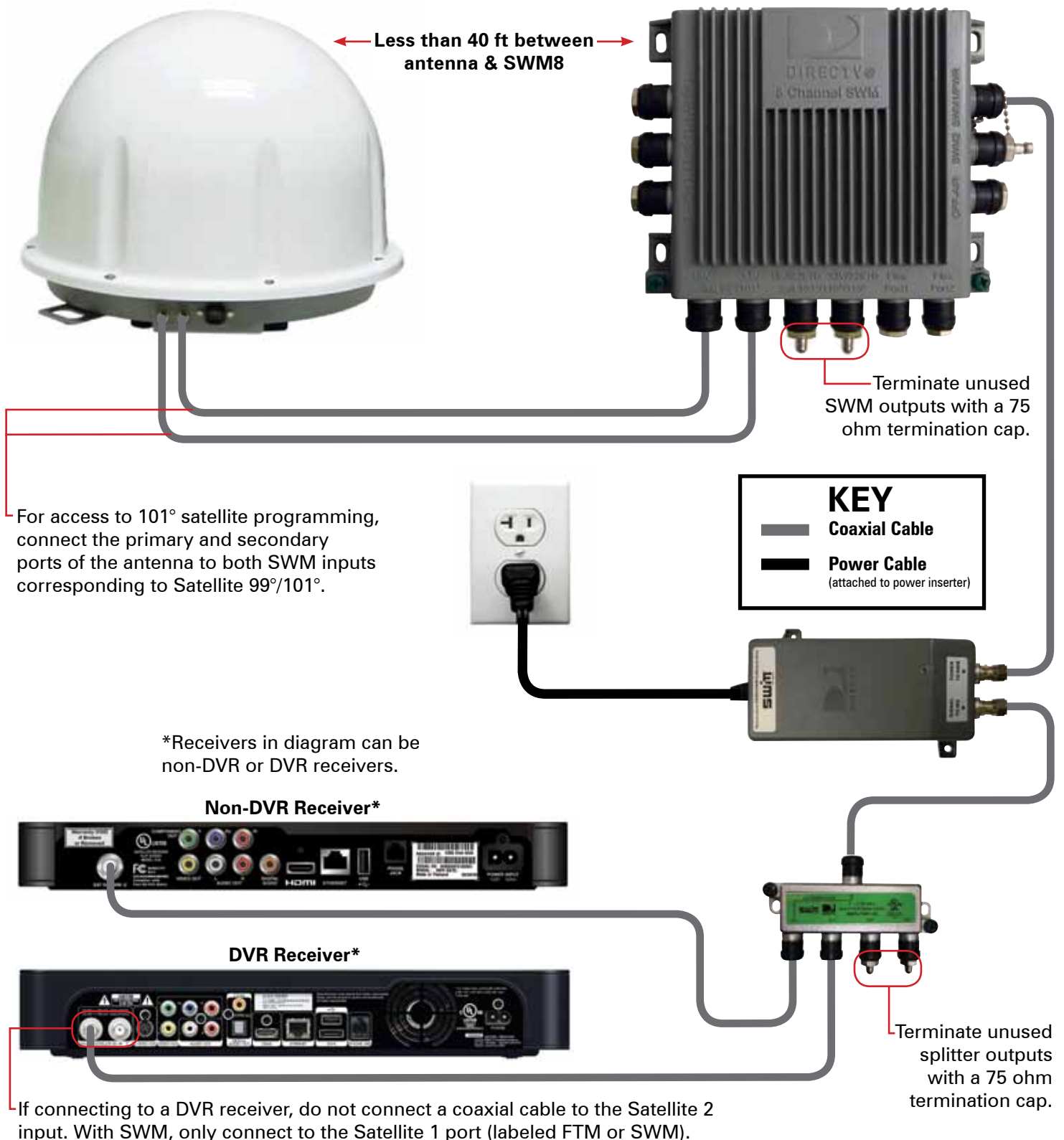
The wiring diagram below applies to all Winegard satellite TV antennas that require separate accessories to operate with SWM technology. This wiring setup does not work with whole-home DVR setup. Model SK-3005 TRAV'LER antenna is shown below.



Dome Antenna with DIRECTV SWM8

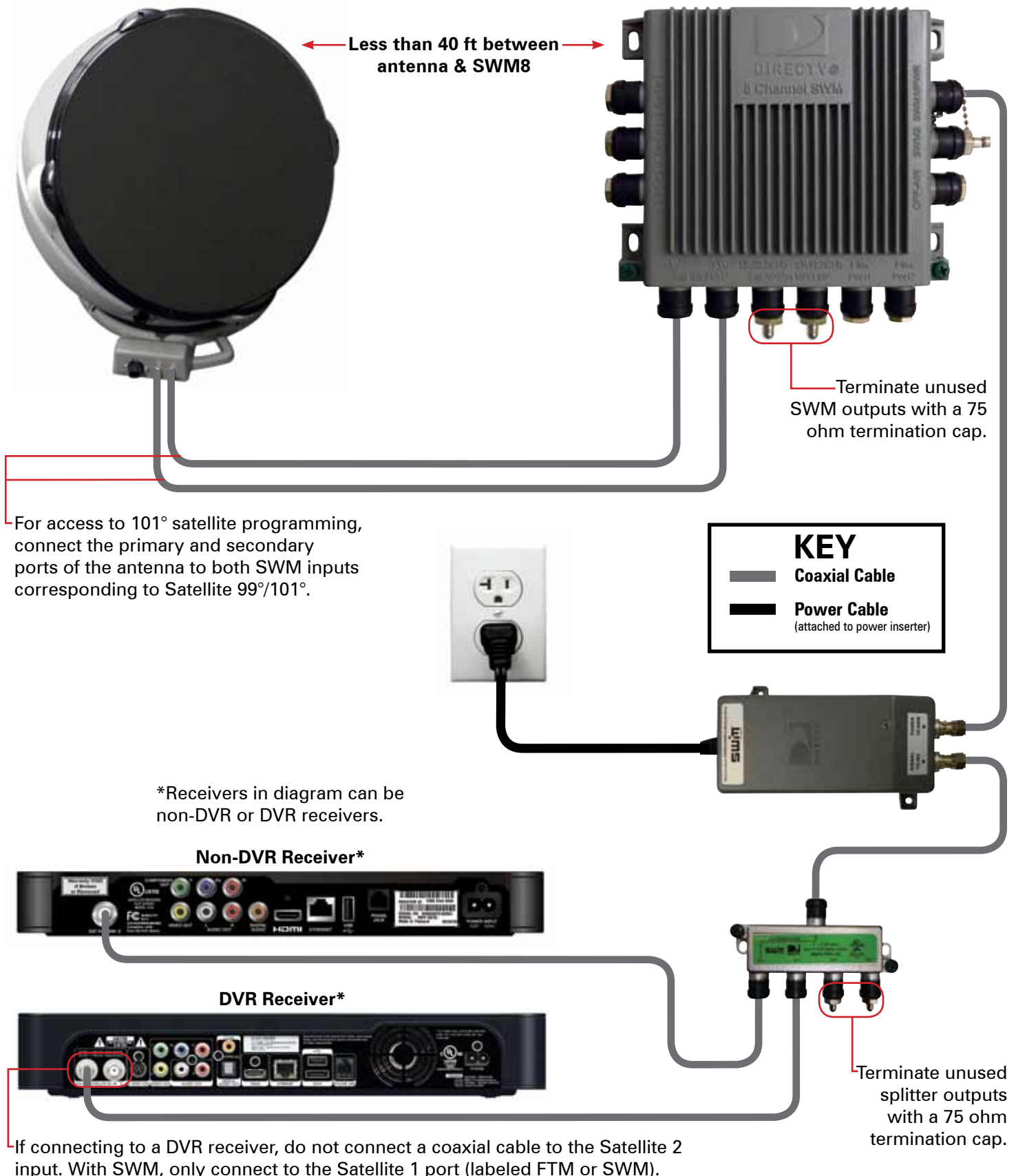
The wiring diagram below applies to dome antennas, including the Carryout GM-1518 & GM-1599, Carryout G2, RoadTrip Mission & MiniMax, and DuraSAT antennas. The diagram applies to both stationary and tracking models. Model GM-1518 Carryout automatic antenna is shown below.

If using an HD receiver with a dome antenna, change the preferences setting in the Display menu to "Hide all HD Channels." Otherwise, the antenna will appear to not be working since the receiver guide will only show HD channels.



Carryout Anser Antenna with DIRECTV SWM8

If using an HD receiver with the Anser antenna, change the preferences setting in the Display menu to "Hide all HD Channels." Otherwise, the antenna will appear to not be working since the receiver guide will only show HD channels.



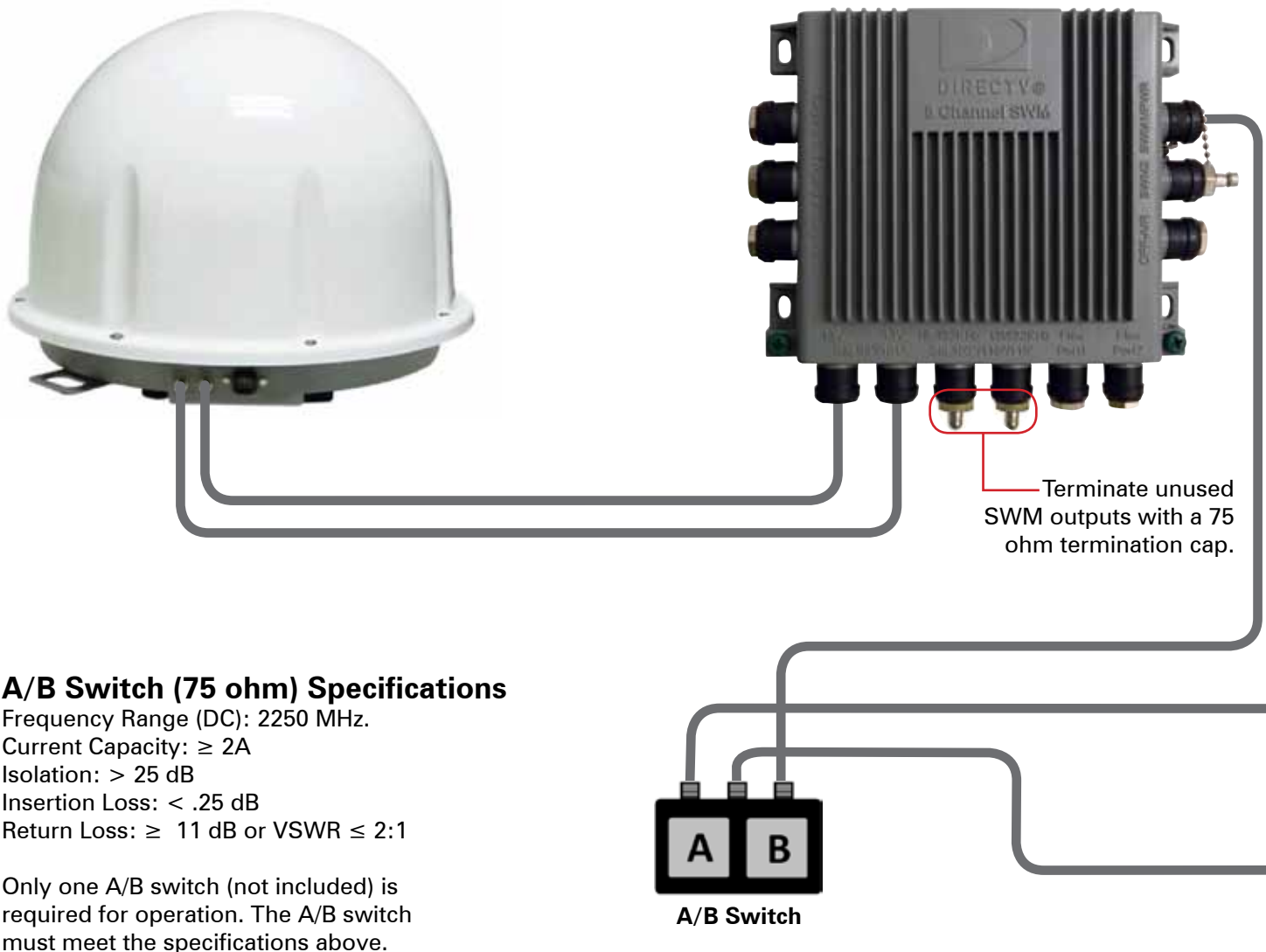
SK-3005 TRAV'LER Antenna with Dome Antenna

Wiring Version 1

Set the Dish Type to 04: Slimline-5, and set the Switch Type to 01: SWM. For more information on receiver setup and complete step-by-step instructions, refer to your product manual, or go online to <http://www.winegard.com/receivers/setupguide.php>.

When the receiver settings above are used with the SK-3005 TRAV'LER antenna, all HD and SD programming will be available. The same receiver settings will also work for the dome antenna but will display the "Searching for Signal" message on HD channels. To remove the "Searching for Signal" message, change the preferences setting in the Display menu to "Hide all HD Channels" when in dome operation. However, the receiver would need to be changed back to "Display All Channels" or "Hide All SD Duplicates" when changing back to TRAV'LER SK-3005 mode.

NOTE It may take several minutes for the DIRECTV receiver to load HD channels or to purge HD channels from the channel guide.



A/B Switch (75 ohm) Specifications

Frequency Range (DC): 2250 MHz.

Current Capacity: $\geq 2A$

Isolation: $> 25\text{ dB}$

Insertion Loss: $< .25\text{ dB}$

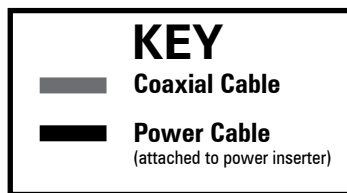
Return Loss: $\geq 11\text{ dB}$ or $VSWR \leq 2:1$

Only one A/B switch (not included) is required for operation. The A/B switch must meet the specifications above.

SWITCH SETTINGS

A \leftarrow - - - - - \rightarrow TRAV'LER Antenna

B \leftarrow - - - - - \rightarrow Dome Antenna



*Receivers in diagram can be non-DVR or DVR receivers.

Non-DVR Receiver*



DVR Receiver*



Terminate unused splitter outputs with a 75 ohm termination cap.

DC Power Pass

If connecting to a DVR receiver, do not connect a coaxial cable to the Satellite 2 input. With SWM, only connect to the Satellite 1 port (labeled FTM or SWM).



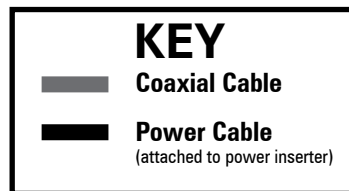
SK-3005 TRAV'LER Antenna with Dome Antenna

Wiring Version 2

Set the Dish Type to 04: Slimline-5, and set the Switch Type to 01: SWM. For more information on receiver setup and complete step-by-step instructions, refer to your product manual, or go online to <http://www.winegard.com/receivers/setupguide.php>.

When the receiver settings above are used with the SK-3005 TRAV'LER antenna, all HD and SD programming will be available. The same receiver settings will also work for the dome antenna but will display the "Searching for Signal" message on HD channels. To remove the "Searching for Signal" message, change the preferences setting in the Display menu to "Hide all HD Channels" when in dome operation. However, the receiver would need to be changed back to "Display All Channels" or "Hide All SD Duplicates" when changing back to TRAV'LER SK-3005 mode.

NOTE It may take several minutes for the DIRECTV receiver to load HD channels or to purge HD channels from the channel guide.



A/B Switch (75 ohm) Specifications

Frequency Range (DC): 2250 MHz

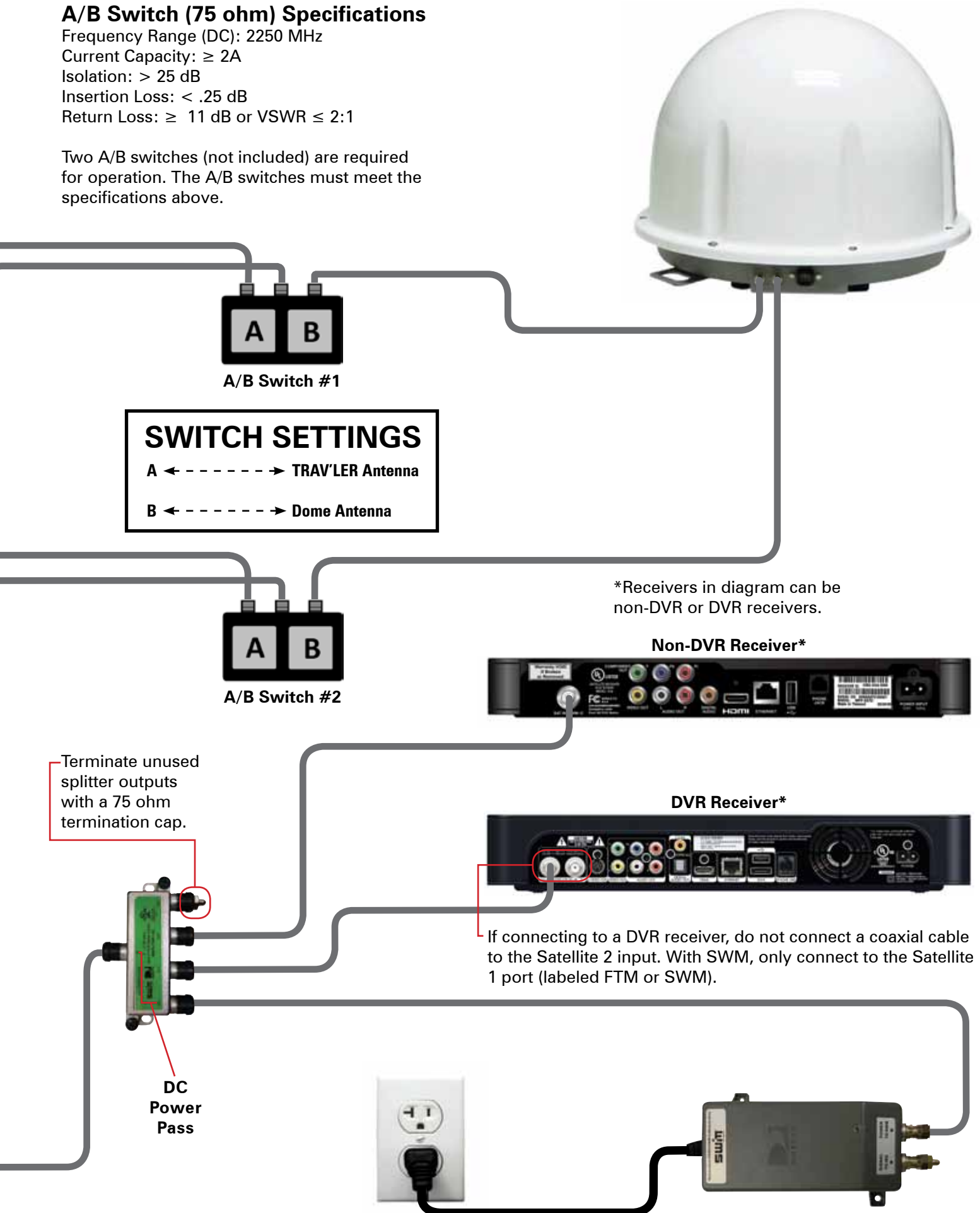
Current Capacity: $\geq 2A$

Isolation: > 25 dB

Insertion Loss: $< .25$ dB

Return Loss: ≥ 11 dB or VSWR $\leq 2:1$

Two A/B switches (not included) are required for operation. The A/B switches must meet the specifications above.



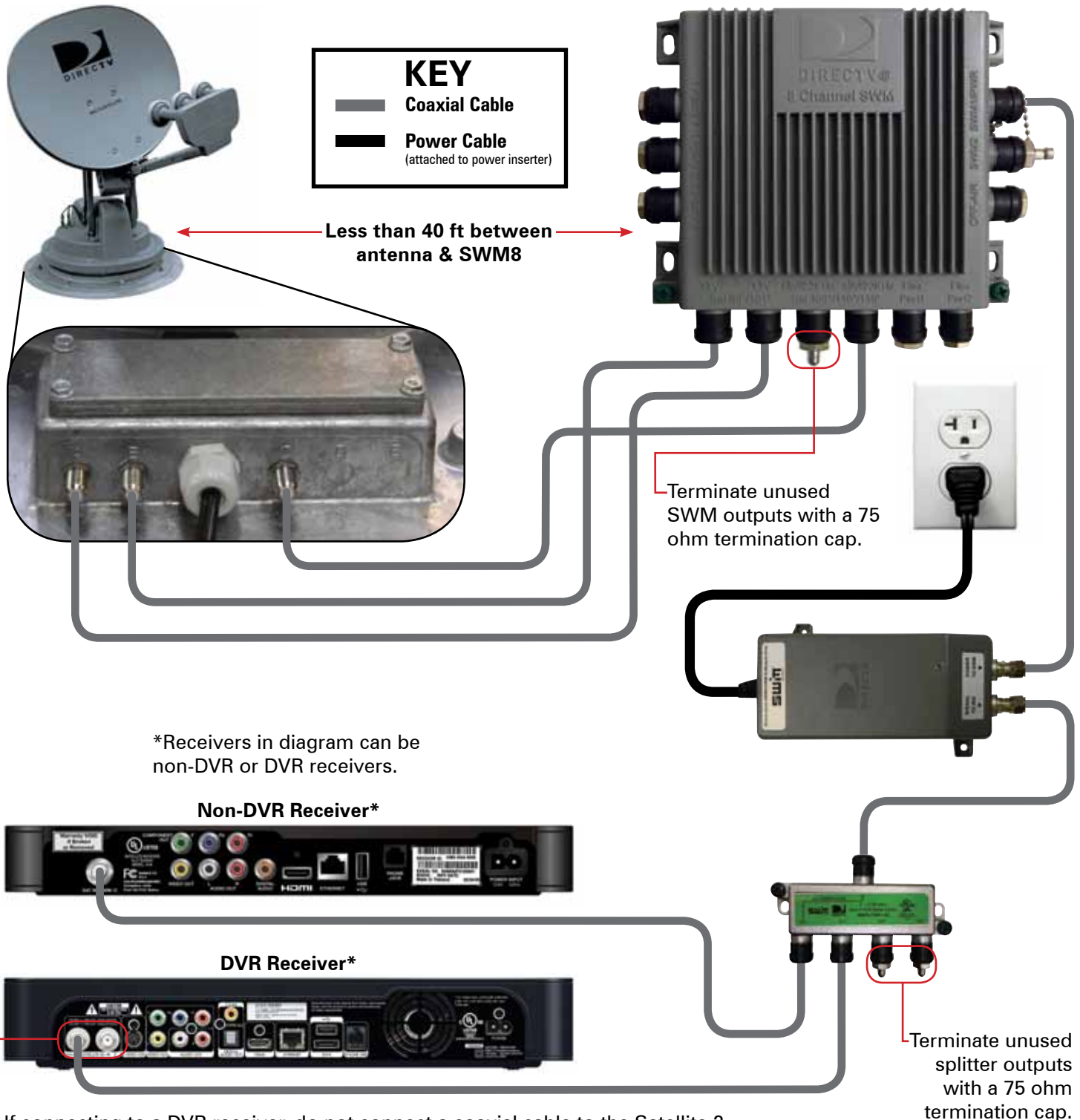
SK-3003 TRAV'LER Antenna with DIRECTV SWM8

Wiring Version 1

All three ports of the SK-3003 TRAV'LER antenna must be connected as shown to three inputs on the SWM8 for access to 101° odd and even transponders, 119° odd transponder only programming.

Even (18V) transponders will not be available in Wiring Version 1.

This will be verified in the receiver installation status screen shown to the right.



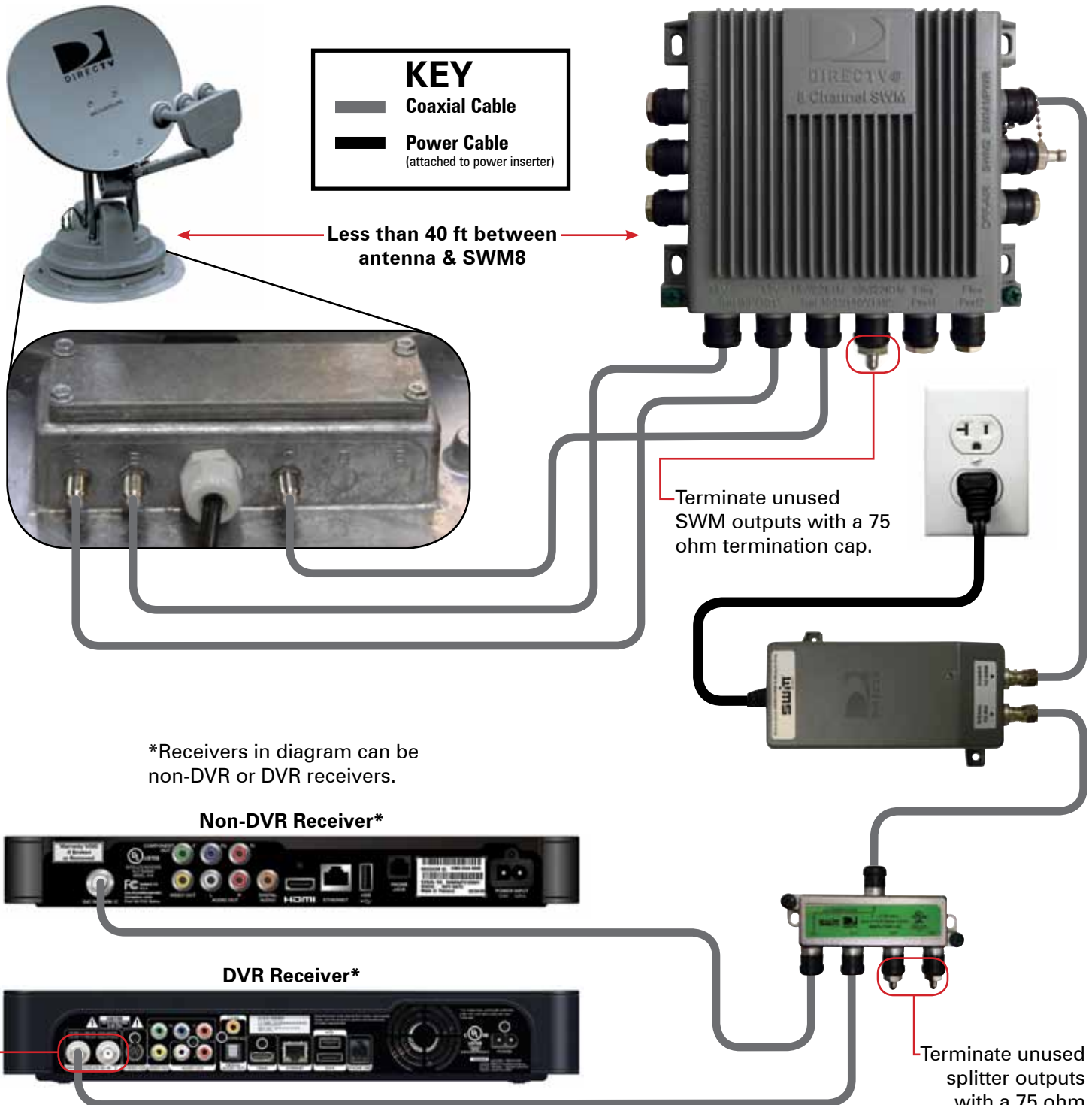
SK-3003 TRAV'LER Antenna with DIRECTV SWM8

Wiring Version 2

All three ports of the SK-3003 TRAV'LER antenna must be connected as shown to three inputs on the SWM8 for access to 101° odd and even transponders, 110° and 119° even transponder programming.

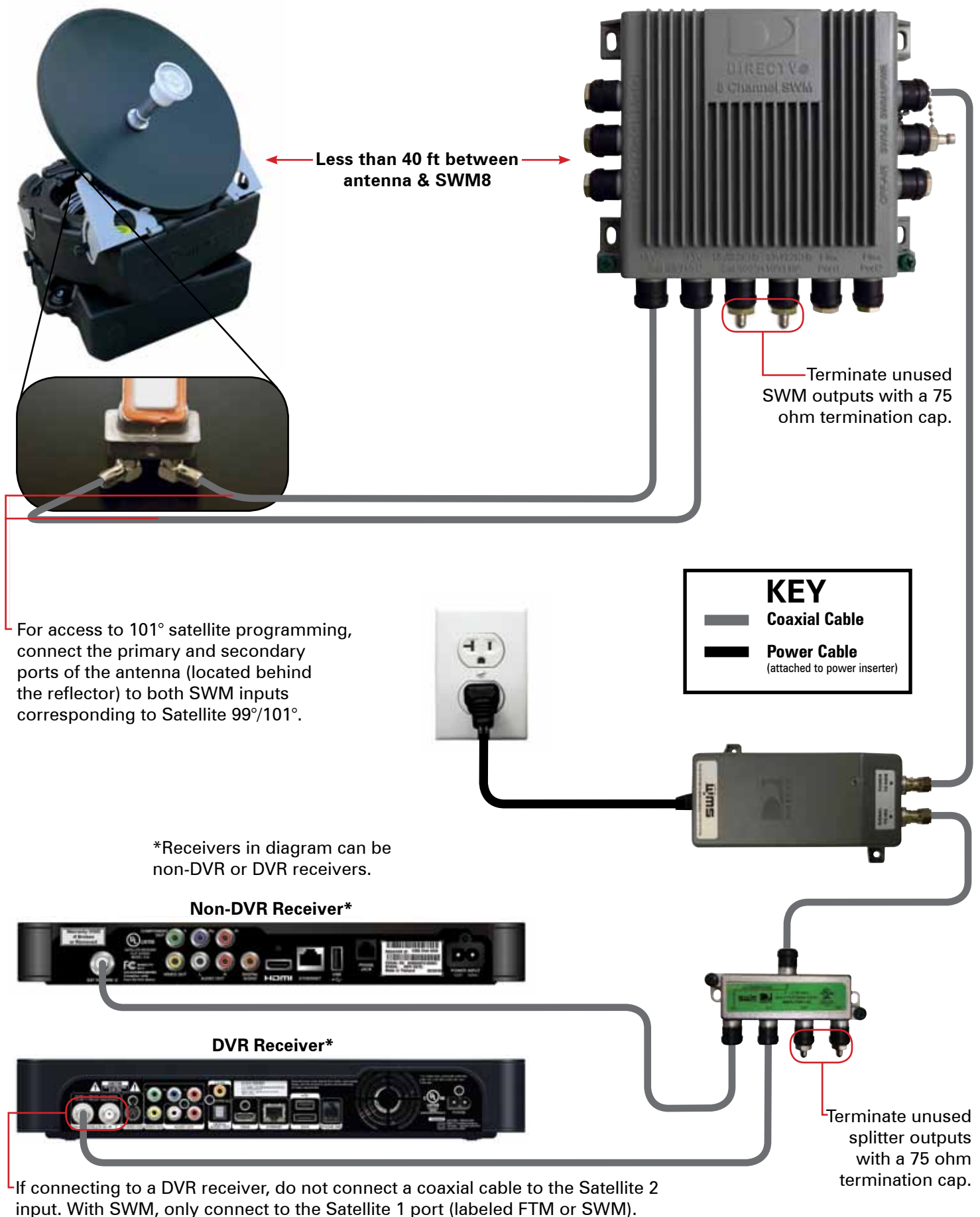
Odd (13V) transponders will not be available in Wiring Version 2.

This will be verified in the receiver installation status screen shown to the right.



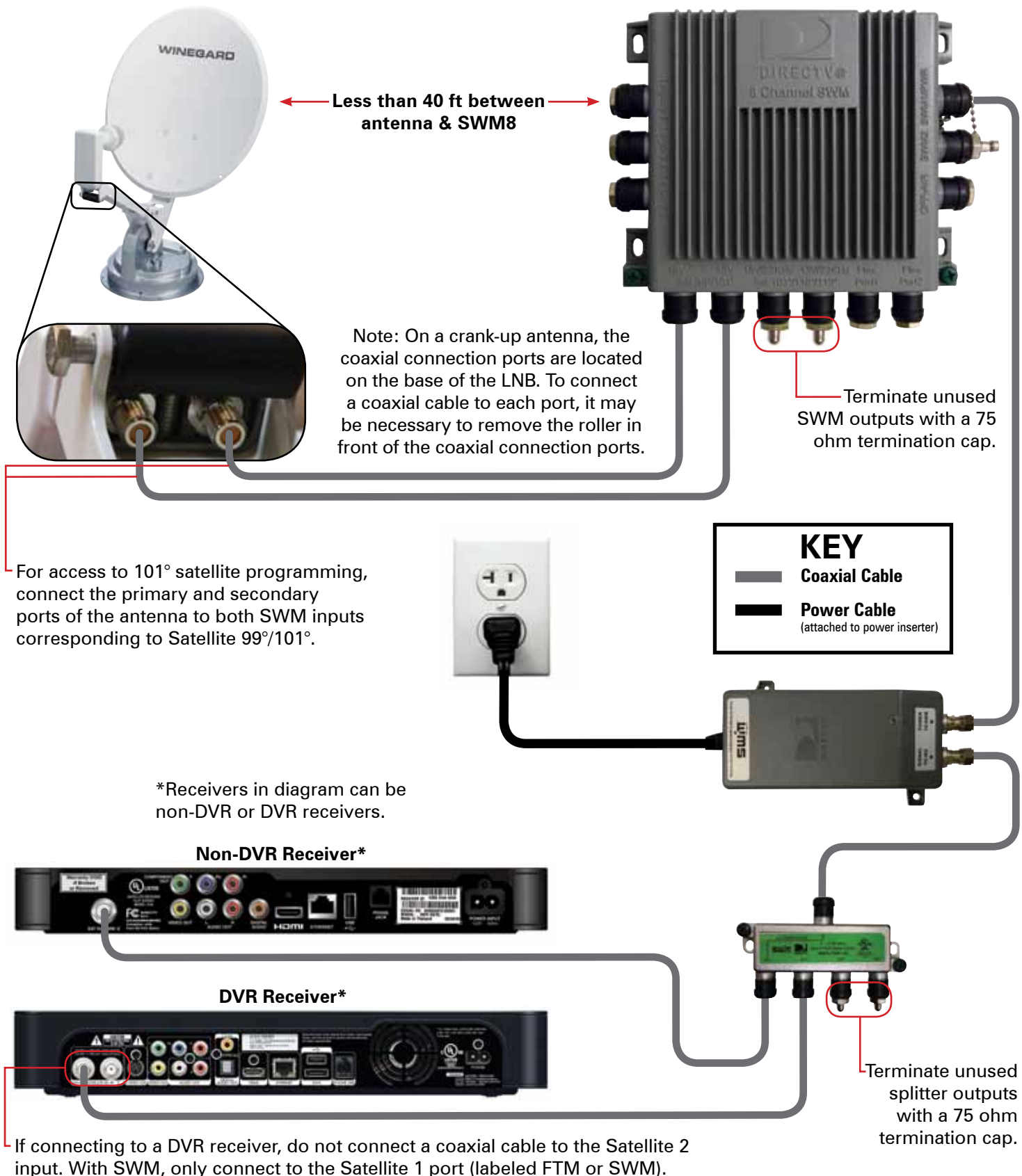
If connecting to a DVR receiver, do not connect a coaxial cable to the Satellite 2 input. With SWM, only connect to the Satellite 1 port (labeled FTM or SWM).

Carryout MP1 Antenna with DIRECTV SWM8



Crank-ups, Dish & Tripod Kits with DIRECTV SWM8

The wiring diagram below applies to most portable dishes and tripod kits not already covered. The coaxial connection ports can be found at the base of the LNB for crank-up antennas, dish and tripod kits. For additional tips on connecting coaxial cables to a crank-up antenna, see the back page. Toggling to alternate satellites is not supported.



DIRECTV Receiver Settings

Receiver settings are listed below for Winegard antennas using SWM technology. For more information on receiver setup and complete step-by-step instructions, refer to your satellite TV antenna manual, or go online to <http://www.winegard.com/receivers/setupguide.php>.



SK-3005 TRAV'LER Antenna Settings

- Set the Dish Type for **04: Slimline-5**.
Set the Switch Type for **01: SWM**.

- Note that B-Band Converters should not be used with SWM Technology.



SK-3003 TRAV'LER Antenna Settings

- Set the Dish Type for **02: 3-LNB (18"x20")**.
Set the Switch Type for **01: SWM**.

- Note that B-Band Converters should not be used with SWM Technology.



Dome Antenna, Carryout Anser & MP1 Antenna, Crank-up Antenna, Dish & Tripod Kit Settings

- Set the Dish Type for **01: Round (18")**.
Set the Switch Type for **01: SWM**.

- Note that B-Band Converters should not be used with SWM Technology.

www.winegard.com/mobile

For help, email help@winegard.com or call 1-800-788-4417

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