

# NAV-TV

INTERFACING THE FUTURE

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## **NTX54-Nissan**

*Nissan/Infiniti Garmin Navigation System*

**NTV-KIT405**

**NTV-KIT468: with LT**

**NTV-KIT478: with trim kit**

**NTV-KIT479: with LT & trim kit**



**GARMIN**™



DS, BM  
July 8, 2013  
NTV-DOC138

**Included Parts:**



Garmin Navigation system and GPS antenna  
*NTV-NAV009*



NTX54-Nissan module  
*NTV-ASY184*



OEM Nissan touch screen monitor  
*NTV-NAV010*



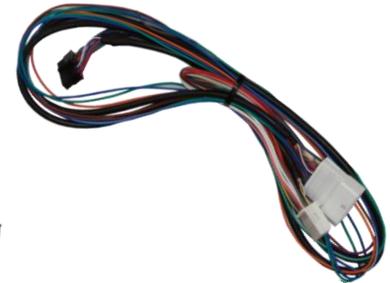
USB Cable  
*NTV-CAB009*



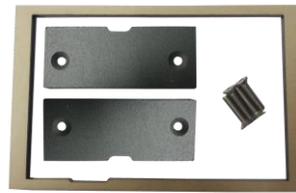
Garmin Harness  
*NTV-HAR225*



NTX54 Power T-Harness  
*NTV-HAR232*



NTX54 Screen T-Harness  
*NTV-HAR233*



**LCD Trim kit Included in  
*NTV-KIT478 & 479***



**LT antenna Included in  
*NTV-KIT468 & 479***



**Needed Tools:**



Zip Ties



Long Phillips Screwdriver



Plastic panel tool



Velcro

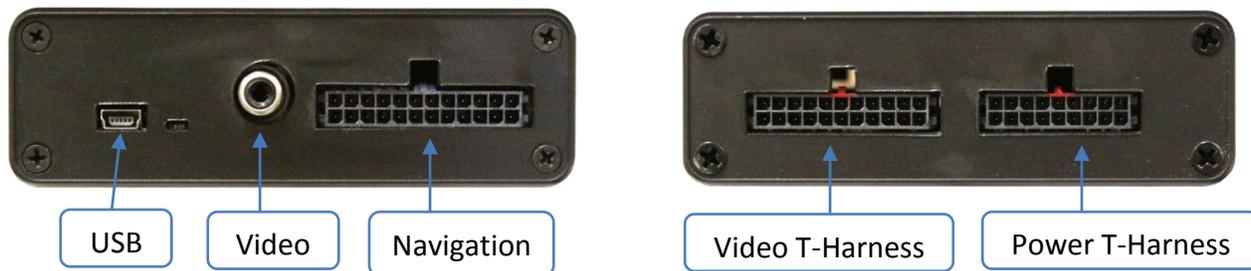


Straight pick

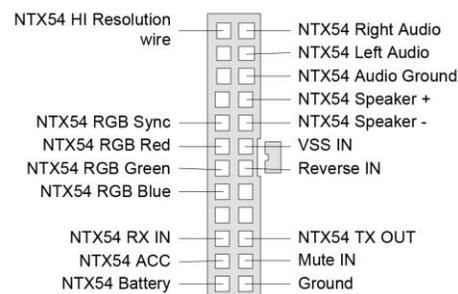
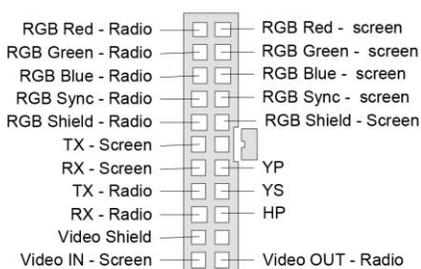
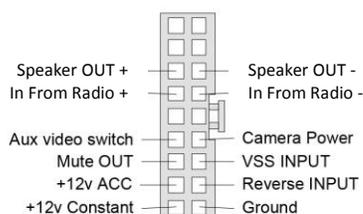


Telescoping Magnet

## Module connector layout



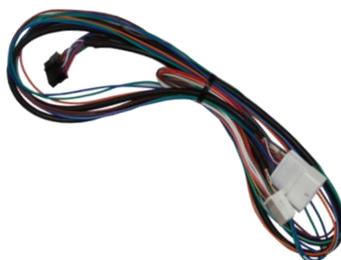
## NTX54-Nissan Module pin out (wire side)



Power T-Harness (18-pin)

Video T-Harness (22-pin)

Navigation Harness (24-pin)



The connector pin outs above are for the black mini Molex connectors that plug into the NTX-NIS/INF interface module. The view is from the back side of the Molex connectors (the view you would see if the connectors were plugged into the NTX-NIS/INF module). From left to right is the 18 pin mini Molex from the 20 pin power plug T-harness, the 22 pin mini Molex from the 24 pin video T-harness and the 24 pin mini Molex from the 24 pin to 24 pin NTX-NIS/INF module to the NTX-54 navigation module.

**\*Note: Wire colors may change without warning. Always reference pin locations, not wire colors!**

## Overview:

The NTX Nissan/Infiniti is a touch screen Navigation interface for compatible 2008 to current Nissan and Infinity vehicles. The module will also allow the integration of a video source or a front facing camera. During the installation the original color LCD monitor will be replaced. **The installation is performed entirely AT THE RADIO and not at the monitor.** FAILURE TO FOLLOW THESE INSTRUCTIONS MAY LEAD TO PRODUCT FAILURE OR AN AIRBAG MALFUNCTION LIGHT.



### G37 Radio & Screen Removal:



Remove the plastic trim ring around the shifter using a plastic pry tool.



With a pick tool, remove the shift lock hole cover.



Insert the pick tool or a small screwdriver into the shift lock hole and depress the shift lock mechanism



Make sure that the emergency brake is engaged and then move the shifter into reverse.

The accessory of the vehicle must be off during the next several steps. Make sure that either the key is removed from the key cylinder or that the push to start switch is in the off position. If this step is ignored you will receive an airbag light warning!



Remove the screws from the left and right bottom corners and pull the HVAC panel from the bottom up and away from the dash.



Gently pull the top section back and away from the dash to release the top clips. Make sure that the vehicle is off and disconnect all the harnesses from the back of the HVAC panel. DO NOT turn the key or push the push to start button until after the HVAC panel has been plugged back in during later steps.



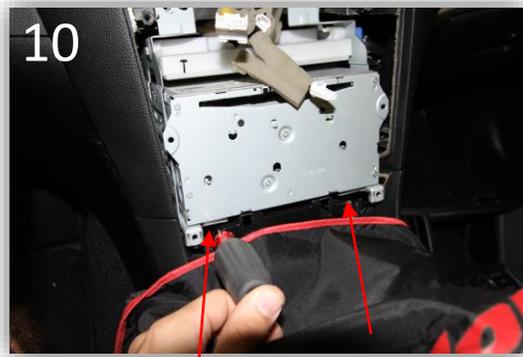
Remove the screws on the bottom left and right that holds the monitor trim in place. These screws were hidden by the HVAC panel.



Pull the monitor shroud up and back towards the rear of the vehicle and remove it. The ribbon cable attached to the shroud should have already been removed in step 6.



Remove the two screws holding the top of the radio bracket and the bottom of the monitor brackets.



Using a long Phillips screwdriver, remove the two screws holding the bottom of the radio bracket. You may need the magnet to retrieve these screws if they drop inside the dash.



Pull the radio out of the dash, disconnect all wiring and set aside.



Swing the bottom of the monitor upwards to release the top of the monitor brackets from their U shaped top mount. Note: There are no top bolts and only a locking mount. Disconnect the monitor and set it aside.



**Armada Radio & Screen Removal: Warning! The ignition MUST be off!**



Using a soft pry tool remove the cover below the HVAC panel by prying gently around it to dislodge it from the retaining clips. Disconnect all plugs and set it aside.



Remove the two screws at the bottom left and right with a phillips screwdriver. Above and at a 45 degree angle behind these two screws are 2 more screws. You must use a long phillips screwdriver to access them. Remove these screws as well.



Using a soft pry tool, pry around the outside of the HVAC fascia to release the clips all the way around. Pull the entire fascia towards the back of the vehicle to release the clips, disconnect all the wiring harnesses and set aside.



**All other Nissan & Infiniti vehicle Radio & Screen Removal: Warning! The ignition MUST be off**



Remove the screws around the monitor bracket, unplug the monitor and set the monitor and bracket aside.

The removal of all other Nissan and Infiniti vehicle radios are similar to either the G37 or Armada. Remove the radio and screen from the vehicle and then proceed to the next steps. **MAKE SURE that the ignition is off in all Nissan/Infiniti vehicles as the airbag indicator light is on the part of the dash that you will be removing. Although it will cause no damage to the vehicle, the air bag indicator malfunction light will illuminate if the ignition is turn on while this indicator light is unplugged.**



**Screen Replacement ALL VEHICLES EXCEPT FX.**



Mark the bracket on the side where the monitor has an angle. Remove and retain the 2 screws on each side of the factory monitor and remove it from the bracket.

Beveled corner of touchscreen is the bottom



Mount the included touch screen monitor into the bracket, making sure that the angle side is facing the mark, secure it with the factory screws and reinstall the monitor back into the vehicle.



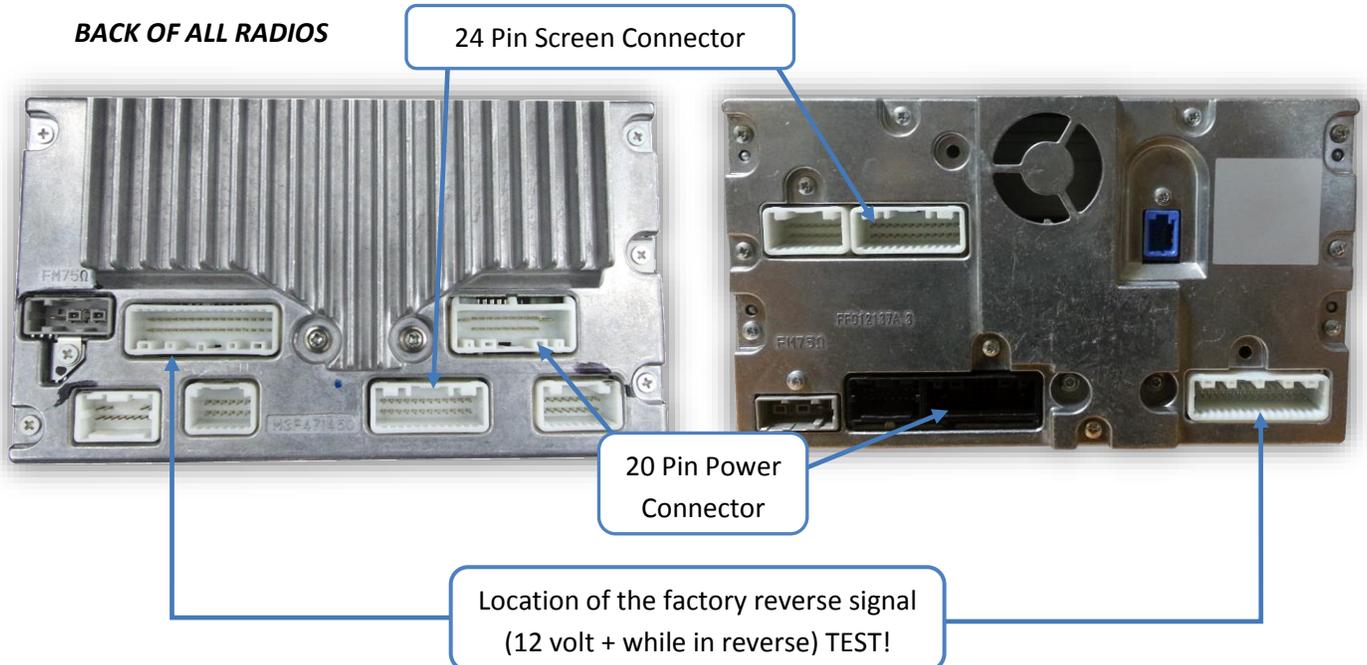
## Screen Replacement FX.

1. Follow the directions on the previous page under "Screen Replacement All Vehicles except FX" to remove the factory monitor from the mounting bracket.
2. The original monitor in the FX has an oversized monitor housing. In order to replace the original monitor with the new touch screen monitor you must use the included (FX Kit only) trim, shims and longer replacement screws to center the new monitor in the mounting brackets.
3. Reinstall the new monitor and mounting bracket back into the vehicle and place the included (FX Kit only) trim fascia around the new monitor. Note: The fascia is a pressure fit and does not require adhesive to stay in place.



## Plug-and-play installation is performed at the radio for ALL VEHICLES.

**NOTE: if the FM antenna port on the radio is not rectangular (and is circular instead), this vehicle has half-year electronics and is not compatible with this kit.**

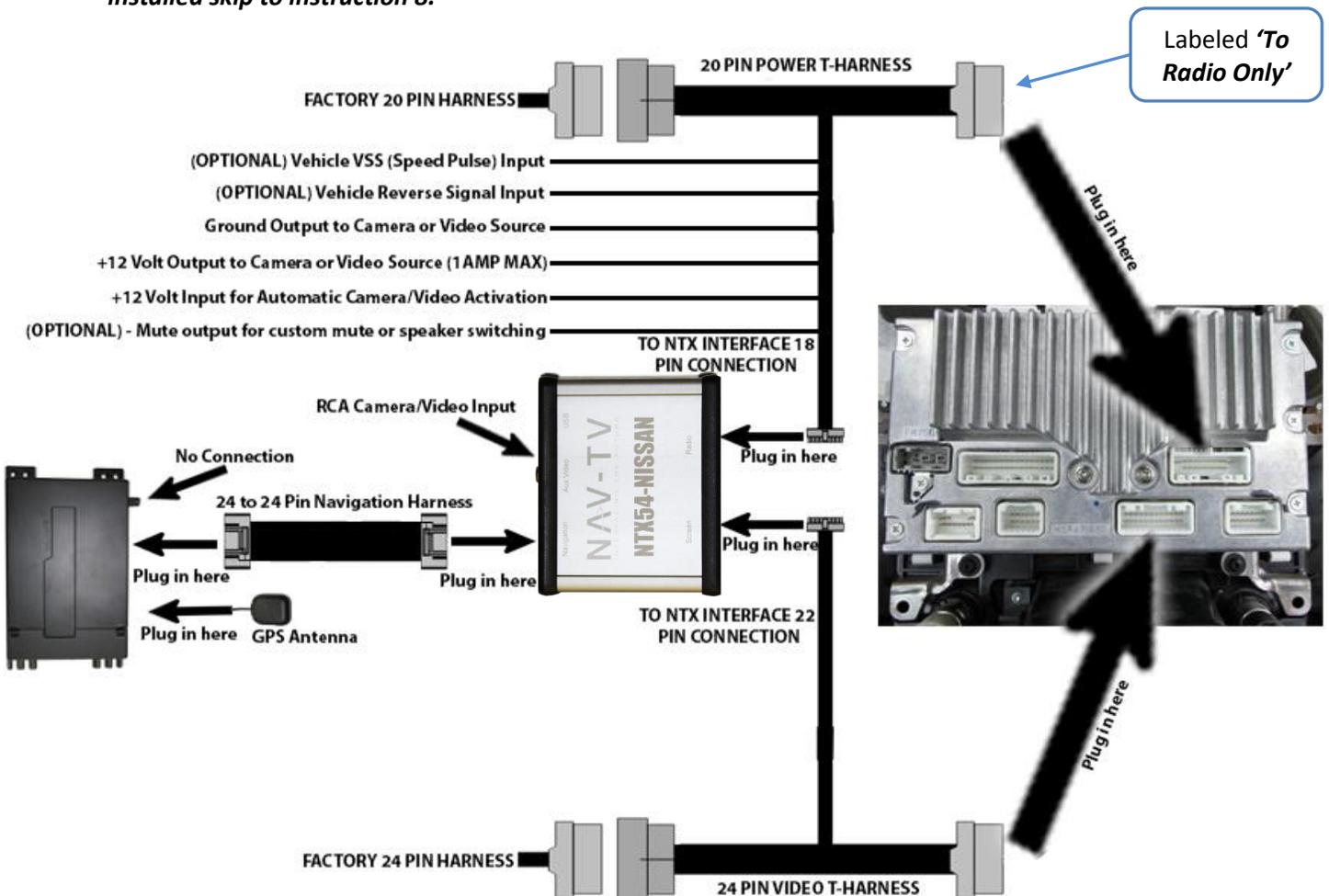


**At this stage the monitor should be reinstalled in the vehicle with the factory connector plugged into the monitor. If you have failed to follow these instructions and ANY aftermarket harness is plugged in at the screen, disconnect it and insert the factory plug. In vehicles where the screen mounts behind the fascia, like the Armada, the screen can be reattached with the factory screws and mounted permanently. In vehicles like the G37 where the radio top mounts are in the same location as the monitor bottom screws, reattach the top mechanical hinge mount but leave the bottom retaining screws out until the installation is completed and only reattach during final reassembly.**

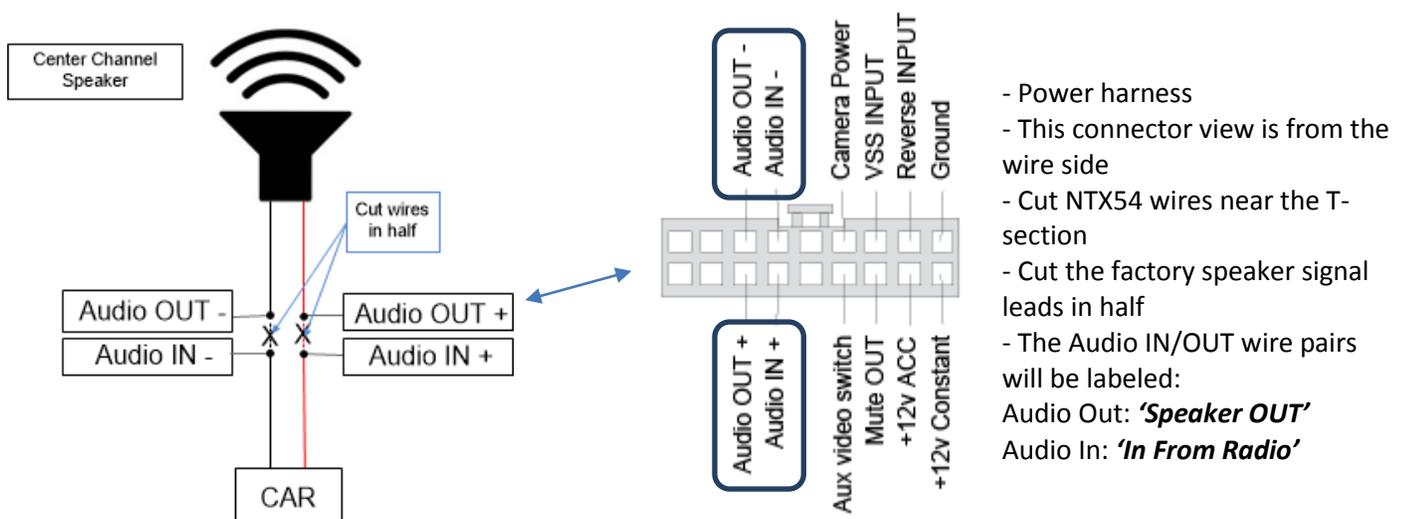


## Installation of the T-harnesses for all vehicles

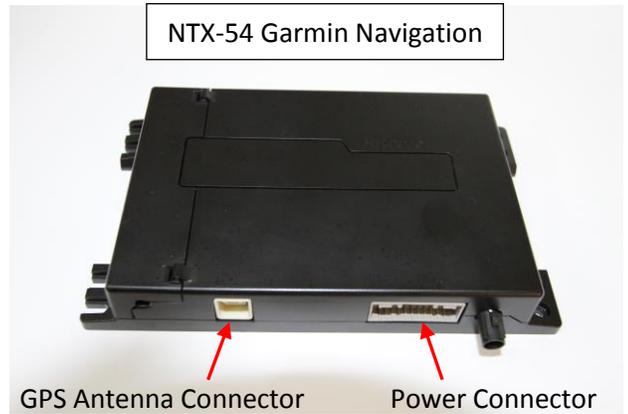
1. Plug the female end of the 24 pin Video T-Harness into the factory male 24 pin plug behind the radio.
2. Plug the female end of the 20 pin Power T-harness into the factory male 20 pin plug behind the radio.
3. Run both the extension harnesses with the 22 pin and 18 pin black mini Molex ends to a location near the radio with enough room to properly house and mount the NTX-NIS/INF integration module.
4. ***If installing a video source, or a front or camera, continue with instruction 5. If no camera or video source is being installed skip to instruction 8.***



5. If installing a video source or front camera, connect the RCA from the device to the NTX-NIS/INF interface at the "video in" RCA connection. As long as your device does not draw in excess of 1 AMP you may connect the power and ground of the device to the wires on the 20 to 20 pin T-harness labeled "ground" and "12v+ CAM out". If in doubt measure the current demand or **use a relay**.
6. If installing an aftermarket reverse camera, connect the RCA from the rear view camera to the NTX-NIS/INF interface at the "video in" RCA connection. When installing the rear view camera, run an additional wire with the power, ground and RCA from the camera that you will tie in to the reverse wire at the rear of the vehicle (if not found in the 32 pin connector – see graphic on page 11). This wire will connect to the PINK "INPUT" wire on the 20 pin to 20 pin T-harness. Whenever the PINK "INPUT" wire sees 12v (+), the video input will be seen automatically on the monitor. Attach the power and ground of the rear view camera to the Ground & "12v+ CAM out" at the 20 pin to 20 pin Power T-harness. If the rear view camera requires more than 1 amp of current make sure to use a relay.
7. **AREAS WITH TUNNELS, PARKING GARAGES AND TALL BUILDINGS (OPTIONAL)**. The NTX54 navigation system operates via a technology called "dead reckoning", utilizing only GPS satellite information to detect speed and location. In some areas with a large amount of obstacles that may block the GPS antennas ability to receive GPS coordinates, such as tunnels, parking garages and tall buildings, the NTX54's performance may be affected. If you experience issues in these areas we recommend connecting the vehicle VSS (speed sense wire) and the vehicle reverse signal to the "VSS in" and "VRS in" at the 20 pin to 20 pin T-harness.
8. Plug the 22 pin extension harness (black molex plug) into the NTX54-Nissan interface port labeled '**Screen**'.
9. Plug the 18 pin extension harness (black molex plug) into the NTX54-Nissan interface port labeled '**Radio**'.
10. Plug the black 24 pin molex of the Navigation harness into the NTX54-Nissan interface port labeled '**Navigation**'.
11. If the vehicle **DOES NOT** have Bose, the turn-by-turn directions and all audio commands will be heard automatically through the driver's front speaker. You may skip to step 13 for all NON BOSE sound systems.
12. If the vehicle has a Bose sound system you must use the audio IN and audio OUT wires (in the POWER harness) to break open the center channel speaker. Refer to the diagram below.



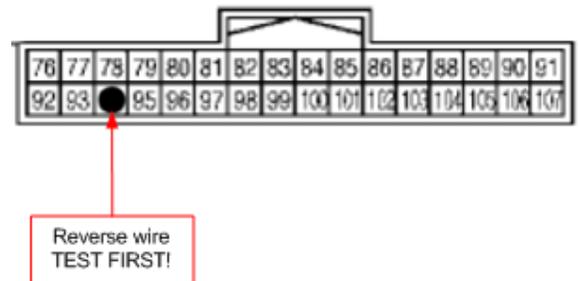
13. Locate a spot near the mounting location of the NTX-NIS/INF integration module with enough room to house and mount the NTX54 navigation brain. Run the Navigation harness from the NTX-NIS/INF integration module to the NTX54 navigation module and plug it in.
14. The included GPS antenna needs to be installed right side up in a location with a clear line of sight to the sky. The antenna can be mounted on top of the dash or below the plastic dash pad as long as there is no metal obstruction. To avoid the antenna from moving we recommend mounting it with either Velcro or double sided tape.
15. Run the GPS antenna cable to the NTX54 navigation box and plug it into the GPS antenna connector jack. Excess cable should be looped neatly into a circle to eliminate kinking of the cable and zip tied securely inside the dash or kick panel.
16. Secure the NTX54 navigation and NTX-NIS/INF integration module in their mounting spots with Velcro. For added stability a large zip tie may also be used.
17. Secure all cabling to existing wiring harnesses or bracket with zip ties making sure that they are not routed near moving parts or sharp metal surfaces.
18. Reinstall the radio and dash bezel in the reverse order of removal and test the Navigation and camera functions.



***Make sure that the ignition is not turned on until after the HVAC panel is fully plugged in.*** Proceed to the "setup" section below.

### If adding an aftermarket backup camera:

1. Connect the camera's composite video cable to the NTX54 'Aux Video' port (silver box).
2. Program the NTX module for both video input and rear view camera (page 12).
3. Tap the car's reverse wire and connect it to the PINK 'INPUT' wire from NTX power harness. The factory reverse wire can be found in **most** Nissan/Infiniti's in the 32 pin connector behind the radio.



### If only adding a video source (such as DVD video, front cam etc.):

Supply the video signal to the NTX54 module's 'Aux Video' port. To display the video on screen, press the top left corner of the touch screen while in radio mode for 2 seconds (page 13).

## Setup:

IF YOU ARE NOT INSTALLING ANY AFTERMARKET CAMERAS OR VIDEO INPUT, SKIP THIS SECTION AND GO STRAIGHT TO THE "OPERATION" SECTION.

### Quick Start User's Guide

NTX-54 Nissan/Infiniti Navigation System

#### Programming Video Input:

While in the factory screen mode press and hold the top left corner of the screen until the screen goes completely black (this will take about 20 seconds). Release the top left corner and wait until the factory image can be seen again.



### Quick Start User's Guide

NTX-54 Nissan/Infiniti Navigation System

#### Programming PINK 'INPUT' wire for REV Cam:

When this wire is programmed, the screen will display 'Aux Video' from the silver NTX54 module when the PINK 'INPUT' wire sees 12v (+), regardless of what source is currently displayed. This must be programmed if adding a rear camera.

While in the factory screen mode, press and hold the top right corner of the screen until the screen goes completely black (this will take about 20 seconds). Release the top right corner and wait until the factory image can be seen again.



#### Note:

- These programming sequences only need to be performed one time. To deprogram, just repeat the above step(s).
- If the factory image does not reappear, press anywhere on the touchscreen. When the screen returns the factory image, the feature should be programmed.

## Quick Start User's Guide

### NTX-54 Nissan/Infiniti Navigation System

**Enter Navigation:** Tap one time anywhere on the touch screen.



**Exit Navigation:** Press and hold the bottom left corner of the touch screen for 1 second.



## Quick Start User's Guide

### NTX-54 Nissan/Infiniti Navigation System

**Enter Video Input:** Press and hold the upper left corner of the screen for 2 seconds while in the factory screen mode and NOT in the Navigation mode.



**Exit Video input:** Momentarily press anywhere on the touch screen to exit and return to the factory screen.



#### Note:

**For Video input:** This will only display the AFTERMARKET camera/video source from the NTX54 module and will not force the factory rear view camera on if equipped.

## FAQ's

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**Q.** I've connected everything, but I have no image on the screen.

**A.** Press and hold the bottom left corner of the touch screen for 2 seconds (so as to bring it back to the factory screen from NAV mode) to rule out navigation mode causing the issue.

**Q.** I hear no audio when NAV guidance playback should be heard.

**A.** Verify that the external speaker is plugged into the Garmin harness (if BOSE equipped). If not BOSE equipped, make sure the 3.5mm audio cable (part of the GARMIN harness) is connected to the 3.5mm audio input of the same harness.

**Q.** I've installed the NTX54 system, and now my **factory** reverse camera does not function.

**A.** You must connect the vehicle reverse wire to the purple wire on the NTX54 power harness labeled 'reverse'.

**Q.** While attempting to program the NTX54, the screen jumps to Garmin NAV mode.

**A.** You're either letting up too soon or moving your finger (assuming you're holding the correct corner). Commit to the spot and after you've made contact with your finger press firmly for **25 seconds** and do not let up. The screen should go black or post the image when programmed. Also, programming can only take place in the factory screen and NOT in NAV mode.

For technical assistance on installation or usage call NAV-TV at (866) 477-3336.

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