

# NAV-TV

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## ALLSYNC-XG

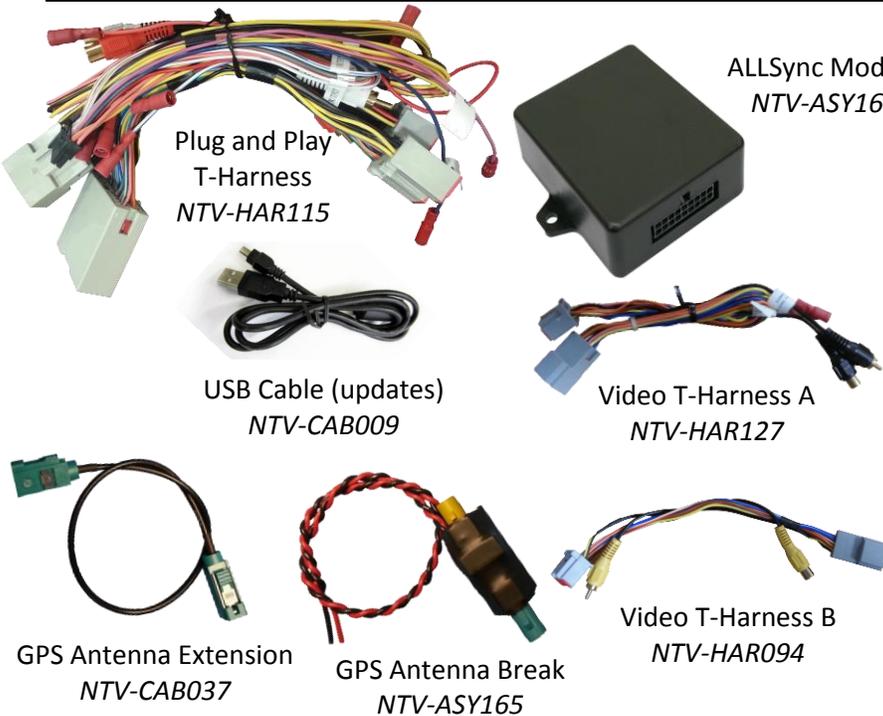
Rear Camera Interface, Video in Motion & CIM  
(RSE Optional)

NTV-KIT229/230/242/257



JR, BM  
04/17/18  
NTV-DOC053

## Kit Content



AVSWv2 NTV-KIT781



*Included with NTV-KIT 229/257 only*

## Overview

### ***The ALLSync-XG kit allows:***

- Rear Camera input, Forced Rear Camera
- 2 Audio Video inputs (SYNC AVSW required)
- Video in Motion (VIM)
- Navigation/Bluetooth input Control in Motion (CIM)

**Rear Camera Programming:** If the vehicle doesn't have a factory installed camera, the radio can be programmed to accommodate an aftermarket camera system.

**Forced Rear Camera:** Allows the viewing of the rear view camera at any time.

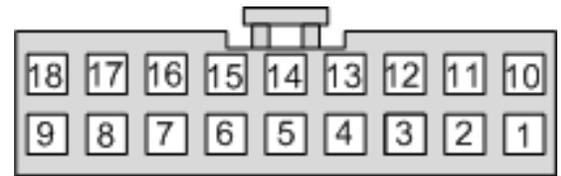
**Audio/Video inputs:** Provides an input for 2 external audio/video devices to be displayed on the navigation screen. If the vehicle is equipped with factory Rear Seat Entertainment, allows the radio to accept video in from rear system (requires a send in modification of the rear system).

**Video in motion (VIM):** Allows the video to be unlocked for the passenger's enjoyment of the entertainment system while in motion.

**Control in Motion (CIM):** Bluetooth, Navigation entry and DVD control can be used without the need to stop the vehicle or slow down below 5 mph. (Only needed on select vehicles.)

## ALLSync Module Pin Outs

Pin #	Description	Color
1	12v Constant Power (+)	Yellow
2	Input 1 (Send 12v to force rear cam input)	Red
3	Input 2 (Send 12v for Rev-Cam programming)	Blue
4	Input 3 (Send 12v to enable VIM)	Pink
5	-- N/A --	--
6	-- N/A --	--
7	-- N/A --	--
8	CAN HI (Radio Side)	Yellow/Black
9	CAN HI (Vehicle Side)	Pink/Black
10	Ground (-)	Black
11	Output 1 (ALLSync AV Switcher)	White/Red
12	Output 2 (ALLSync AV Switcher)	White/Blue
13	Output 3 (GPS Antenna Break Relay)	White/Purple
14	-- N/A --	--
15	-- N/A --	--
16	-- N/A --	--
17	CAN LO (Radio Side)	Yellow
18	CAN LO (Vehicle Side)	Pink



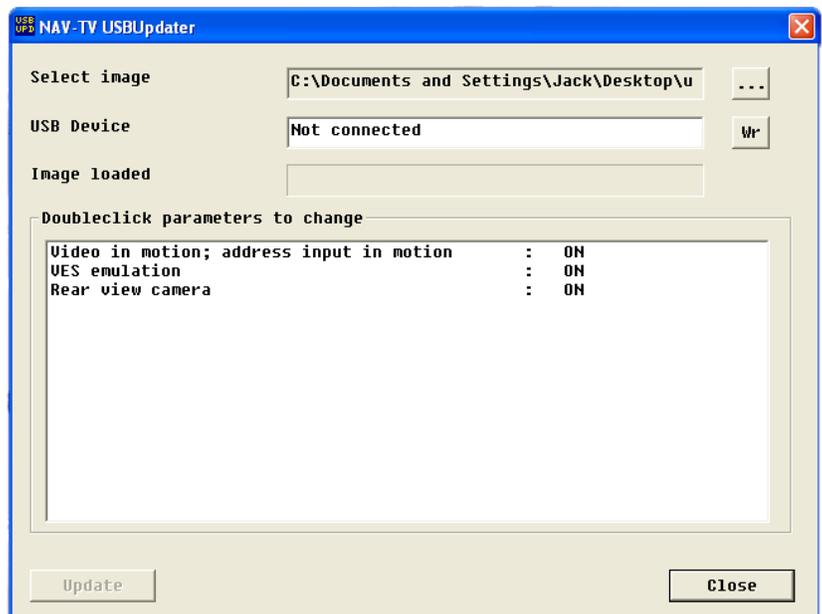
**Wire side**

## Module Programming

All options on the ALLSYNC are programmable using a downloadable file found online at [www.navtv.com](http://www.navtv.com) under support, then downloads.

To enable or disable any tagged option, just double click the ON switch. In the ON position the selected function will be enabled on the radio.

- Rear view Camera ON is for normal camera operation. OFF – If a backup camera is not installed, but needs to have an external video source be displayed. The screen will not flip when vehicle is placed into reverse.
- By default, VES is OFF



**VES:** Vehicle Entertainment System (audio & video input)

## Installation

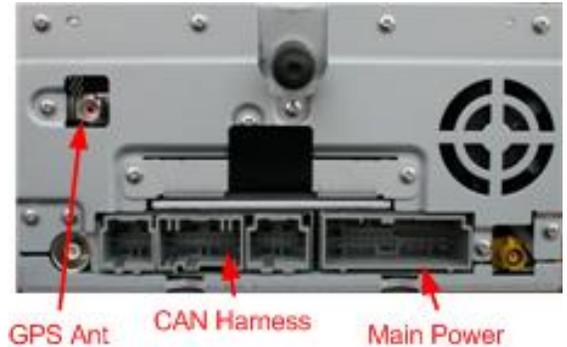
**Installation of this product is very simple. It utilizes Plug-n-Play harnesses to make installation quick and easy.**

### **Double DIN Chassis Install**

1. Remove radio from dash and unplug all harnesses from behind the radio.
2. Plug factory power and CAN plugs into CAN filter T-harness.
  - **Make sure the audio RCA's (White and Red) on the T-harness are joined together.** If adding external AV input, refer to separate switcher box instructions.
3. Plug the other ends into the radio.

*If the vehicle needs an antenna break for navigation input:*

- a. Find the factory GPS antenna cable, it will have a **Pink** FAKRA end attached. Plug this into the Blue connector on the supplied GPS antenna relay board.
  - b. Take the GPS antenna patch cable and plug it into the Tan connector on the relay board. The other end plugs into Pink FAKRA port on the radio.
  - c. The Black wire from the relay board goes to ground. The Red wire goes to the wire marked "OUTPUT 3" on the provided T-harness.
4. Reconnect all other harnesses to radio, plug in filter box and reinstall.
  5. Test all functions and verify operation.



**Note: DVD-OUT is not supported on the Double-DIN Radio Chassis.**

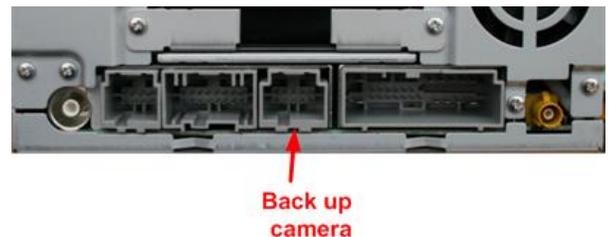
## Aftermarket Backup Camera Input

This cable is used if an aftermarket camera and/or video input for RSE and/or AV input is being installed.

The radio type will determine which harness is going to be used.

### **Double Din Radio (All-in-one unit: Video T-harness B):**

1. When radio chassis is removed from dash, plug factory backup camera plug into video T-harness B.
  - *This plug will only be there if the vehicle is equipped with a factory backup camera; and only 2 wires will be populated.*
2. a. If installing an aftermarket backup camera, plug video out of camera into female RCA of Video T-harness.  
b. If installing AV switcher, refer to SYNC AVSW installation manual.
3. Plug other end of T-harness into radio.



## Separate Screen-Radio (Video T-harness A):

1. Gain access to the back of the radio **screen**.
2. Remove the 12 pin connector from behind the screen, and plug into video T-harness A.
3.
  - a. If installing aftermarket backup camera, plug video out of camera into (Black) female RCA, labeled "Back-up Camera In", of video T-harness B.
  - b. If installing AV switcher refer to SYNC AVSW installation manual.
4. Plug other end of T-harness into screen, reassemble and verify operation.
  - When installing an aftermarket camera, be sure to power it using an Accessory wire instead of the Reverse lights, so Forced Backup image will work properly.



Video T-harness A has a pair of wires (yellow & blue) used for external monitors. This output **REQUIRES** the D2C kit (NTV-KIT352) to work properly. Contact NAV-TV for more info.

## Reverse Camera Programming

Programming of the backup camera is only needed if an aftermarket camera is being installed. To program radio:

1. Press the **Menu** button on the radio.
  2. Then touch the **System Setting** on the radio touch screen.
  3. In the System Settings Menu, touch the **English, Metric** button back and forth 6 times (1 second per press). i.e., Metric-English-Metric-English-Metric-English. (You need to touch each button 3 times in a back and forth sequence, **6 Button presses total.**)
  4. After approximately 5 seconds, 'MS-CAN Diagnostics' will appear on the screen while the module programs the radio. **DO NOT** turn off the radio during this process.
  5. The Radio will then reboot.
  6. Once the radio reinitializes, place vehicle into reverse. Backup camera image should be displayed (as long as a camera is connected, otherwise you'll get a blank screen).
- Once backup camera has been programmed, you cannot reuse that module to program another radio.



Programming using INPUT 2:

1. Apply +12 volt to INPUT 2 for 2 seconds.
2. The LED on the ALLSYNC will turn off.

Remove the wire from the power source, then the radio will go into programming (see step 4 above, proceed from there).

## Video in Motion

When VIM is activated, DVD's playing in the front player can be viewed while the vehicle is in drive. The feature has to be enabled every time the key is cycled. This mode is not needed if using RSE emulation for a video source.

\* Requires radio to be equipped with factory in-dash DVD player.

**Video in Motion (VIM)\*:** Press HVAC power button 2 times within 1 second **OR SUVs and Trucks:** Press the vehicles power door 'LOCK' button 3 times within 1 second.

**Input 3:** Whenever 12 volts is applied, VIM will be active. Once 12 volts is removed, VIM will be disabled.

*\*While this feature is active, the GPS will not be able to track the vehicle.*



## Forced Rear Camera

This function allows the viewing of the rear camera at any time. Forced rear camera will show in all sources except in REAR DVD or REAR AUX (explanation below).

**Forced Rear camera** is enabled/disabled by double-tapping the **radio power button or front defroster button** (depending on vehicle) within 1 second.

\* Requires a factory or aftermarket rear camera to be installed.



**Input 1:** As long as 12 volts is applied, the radio will display the designated video source on the backup camera input. If 12v is removed from input 1 or a button is pressed on the radio, the forced camera image will disappear.

## Control in Motion

CIM will allow input of navigation information, DVD menu control, and Bluetooth use while in motion. When this function is active, GPS navigation/position as well as SAT radio is disabled. Once de-activated, GPS/SAT radio information will return.

To activate CIM, press the "**PHONE**" button on the steering wheel for 5 seconds.

To restore Navigation/SAT radio, de-activate CIM by holding "**PHONE**" button for 5 seconds.



\*Note: Phone button may vary between vehicle types.

## Audio/Video IN (no RSE)

AV input is achieved by emulating the factory Rear Seat Entertainment (RSE). When "Media" button is pressed, 3 new source icons will appear: REAR DVD, REAR AUX and REAR ZONE. REAR DVD and REAR AUX control a switcher that selects 2 external A/V sources (i.e. game console, DVD player, etc). REAR ZONE serves no purpose and therefore is disabled. (Optional A/V switcher required.)

The video from these 2 external sources will not automatically be displayed on the screen; user interaction is required. The video is viewed in the backup camera mode, so it will require the same operation as forced backup camera. When in either REAR DVD or REAR AUX mode, the radio will display external sourced video, not rear camera when forced camera is activated.

\*Since A/V is the same input as the backup camera, the "Settings" icon and disclaimer will still be displayed on the screen while viewing.

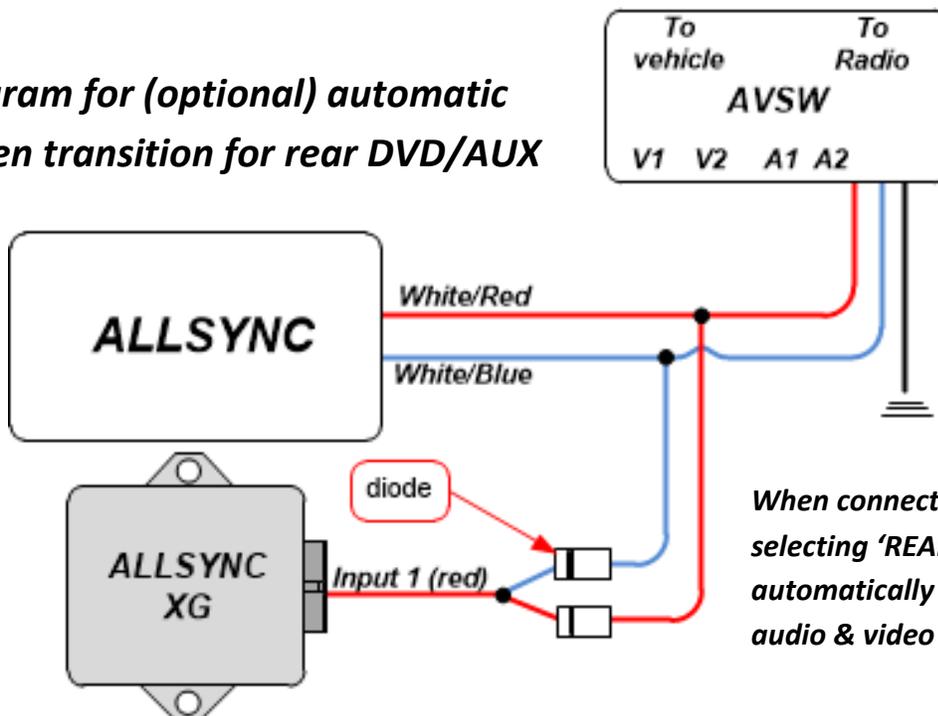


- When this input is selected for viewing, VIM is not required to view image.
- Reverse takes precedence over any image. After shifting out of Reverse, video input mode must be activated to view video again.
- Image cannot be displayed while in accessory position; the vehicle must be in ignition position or running.

\* To enable/disable video for REAR DVD and REAR AUX, double press the **radio power button or front defroster** (varies by vehicle) 2 times within 1 second.



### Diagram for (optional) automatic screen transition for rear DVD/AUX



**When connected in this orientation, selecting 'REAR-DVD' or 'REAR-AUX' will automatically display any connected audio & video input on the screen.**