

# NAV-TV

INTERFACING THE FUTURE

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## ALLSYNC-F CAM

Video in Motion, Control in Motion, Forced Front Cam

(RSE Optional)

NTV-KIT418/419



## Kit Contents



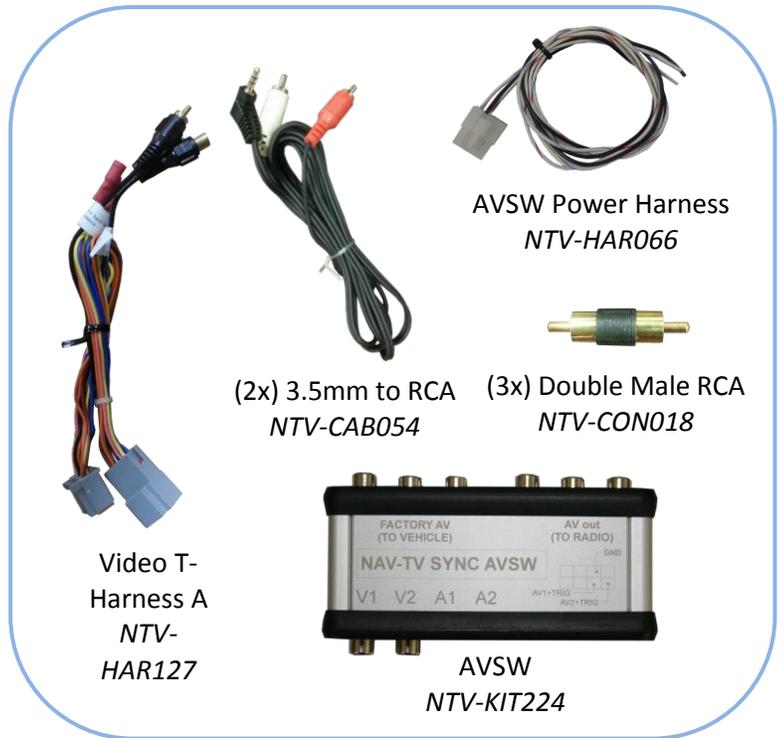
Plug and Play  
T-Harness  
NTV-HAR063



ALLSync Module  
NTV-ASY166



USB Cable (updates)  
NTV-CAB009



Video T-  
Harness A  
NTV-  
HAR127

(2x) 3.5mm to RCA  
NTV-CAB054

AVSW Power Harness  
NTV-HAR066

(3x) Double Male RCA  
NTV-CON018

AVSW  
NTV-KIT224

**Included with NTV-KIT419 only**

## Overview

### **The ALLSync-F CAM kit allows:**

- Forced Rear Camera
- Forced Front 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.

**Forced Front Camera:** Allows the viewing of the *factory* front camera at any time

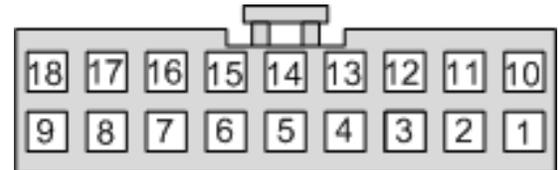
**Audio/Video inputs:** Provides an input for 2 external audio/video devices to be displayed on the navigation screen. If the vehicle is equipped with factory Rear Seat Entertainment, allows the radio to accept video in from rear system (requires a send in modification of the rear system).

**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	LIN (f Cam) Break-Open wire (Camera Side)	Blue
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	LIN (f Cam) Break-Open wire (BCM Side)	Plum
17	CAN LO (Radio Side)	Yellow
18	CAN LO (Vehicle Side)	Pink



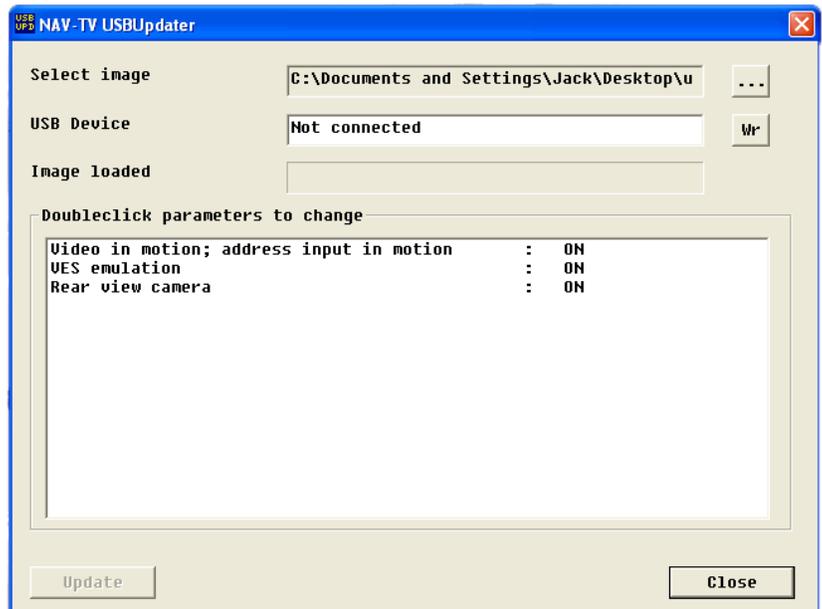
**Wire side**

## 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.

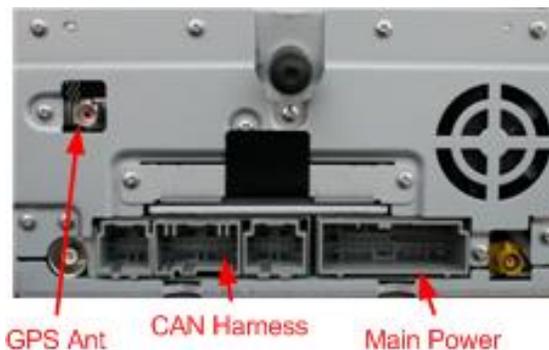
To enable or disable any tagged option, just double click the ON switch. In the ON position the selected function will be enabled on the radio.

- 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



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

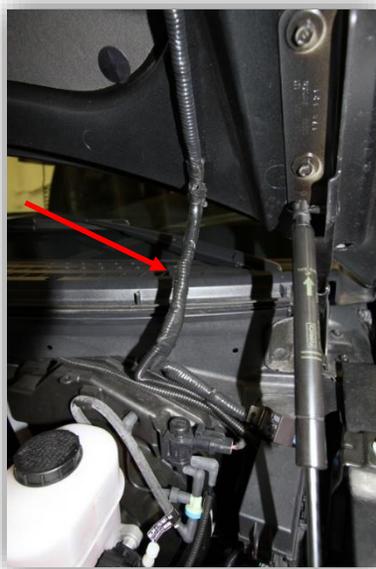
1. Remove radio from dash and unplug all harnesses from behind the radio.
2. Plug factory power and CAN plugs into CAN filter T-harness.
  - *Make sure the audio RCA's (White and Red) on wire harness are joined together. If adding external AV input, refer to separate switcher box instructions.*
3. Plug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



**Front Camera connection:**

6. Under the driver's dash, make a small incision in the rubber harness grommet going through the firewall on the driver's side.
7. Connect a 10' pair of wires to the ALLSync module. Connect one of the wires to pin 6 and the other to pin 16. Route the free end of the wire pair through the firewall (at your incision), into the engine bay of the vehicle. Use silicon or 3M strip caulk to seal the incision.

8. On the underside of the hood, traveling down the driver's side, is the camera harness. Cut the harness open at the bottom of the hood.



9. Locate the gray/violet wire and cut it in half.





11. Reassemble the vehicle and test.

10. Connect the extended wire labeled “Camera” (pin 6), to the camera side of the cut gray/violet wire. Connect the extended wire labeled “BCM” (pin 16) to the vehicle side of the cut gray/violet wire. Insulate and tape the connections when finished.

**\*Note:** When the factory front camera is forced on, the active factory guidelines are not enabled. Only when the vehicle is in 4L will the active guidelines be available.

### Aftermarket Backup Camera Input

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

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 B.
3. a.
- b. If installing AV switcher refer to SYNC AVSW installation manual.
4. Plug other end of T-harness into screen, reassemble and verify operation.

*Video T-harness B has a “DVD OUT” RCA used for external monitors. This output **REQUIRES** a NTV-KIT352 to work properly.*



## Video in Motion

When VIM is activated, DVD's playing in the front player can be viewed while 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 in 1 second OR

**SUV's and Truck's:** Press the vehicles power door "LOCK" button 2 times in 1 second.

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



## 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.

**Vehicle specific (non-SUV/truck):** To enable/disable this function, double press the front defroster button 2 times in 1 second.

**Input 1:** As long as 12 volts is applied, the radio will display the designated video source on the backup camera input. If the user presses any radio button, it will also exit the forced camera mode.



## 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)

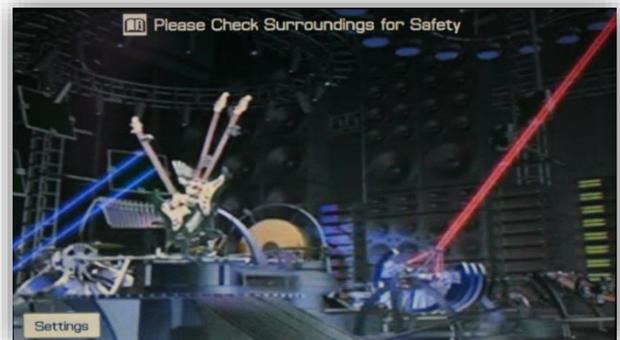
AV input is achieved by emulating the factory Rear Seat Entertainment (RSE). When "Media" button is pressed, 3 new source icons will appear: REAR DVD, REAR AUX and REAR ZONE. REAR DVD and REAR AUX control a switcher that selects 2 external A/V sources (i.e. game console, DVD player, etc). REAR ZONE serves 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. *\*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.*

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



The front camera can be viewed at any time using the factory procedure for activation.

**\*Note: Front camera will not display if VIM is enabled!**



1. Using the steering wheel controls scroll down to the **Truck Apps** function in the instrument cluster.



2. Scroll to the right until "Camera Disabled" is displayed.



3. Press the "OK" button on the steering wheel.



4. The front camera will display on the screen (the active steering lines will not be displayed), the cluster will display 'Press OK to disable'

**5. To disable front camera:**

- a. Make sure the cluster is on the Camera options screen
- b. Press OK.

Q: I activate the front camera in the cluster, but only the rear camera is displaying.

A: Recheck the installation. Verify that the LIN wire for the front camera is cut and connected to the ALLSYNC module. If the wire is cut and connected to the module, verify that the wire labeled "BCM" is going towards the firewall, and the wire labeled "CAM" is going towards the hood.

Q: I activate the camera, the cluster indicates the camera is on, but the audio/navigation image is still on the screen.

A: Video in motion is still enabled. Disable VIM.