

NAV-TV

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Volvo CAM/Volvo CAM12

NTV-KIT294/368



Overview

The Volvo Cam kit adds an aftermarket back up camera to the factory 6.5" screen in select Volvo vehicles. Additionally, this module will enable video in motion (VIM) and navigation control in motion (CIM) if equipped. This installation requires no cutting of any factory wires and is fully Plug & Play behind the media screen.

Kit Contents



Plug & Play T-Harness
KIT294: NTV-HAR207

KIT368: NTV-HAR204 & NTV-HAR207



Volvo Cam module
NTV-ASY160



NAV-TV CAM 6
NTV-CAM046



SMB to RCA adapter
NTV-CAB007



USB Cable (updates)
NTV-CAB009



CAM 6 Extension Power/Signal
NTV-CAM046

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Volvo Cam Module Pin Outs

Pin #	Description	Color
1	12v Constant (+)	Yellow
5	-not used-	Gray
6	-not used-	Blue
8	CAN HI (Radio Side)	Green
9	CAN HI (Vehicle Side)	White
10	Ground (-)	Black
11	Output 1 (12v w/ CAN)	White/Red
12	Output 2 (12v w/ REV)	White/Blue
13	Output 3	White/Purple
14	-not used-	Gray/White
15	-not used-	Pink/Black
16	-not used-	Pink
17	CAN LO (Radio Side)	White/Green
18	CAN LO (Vehicle Side)	Brown

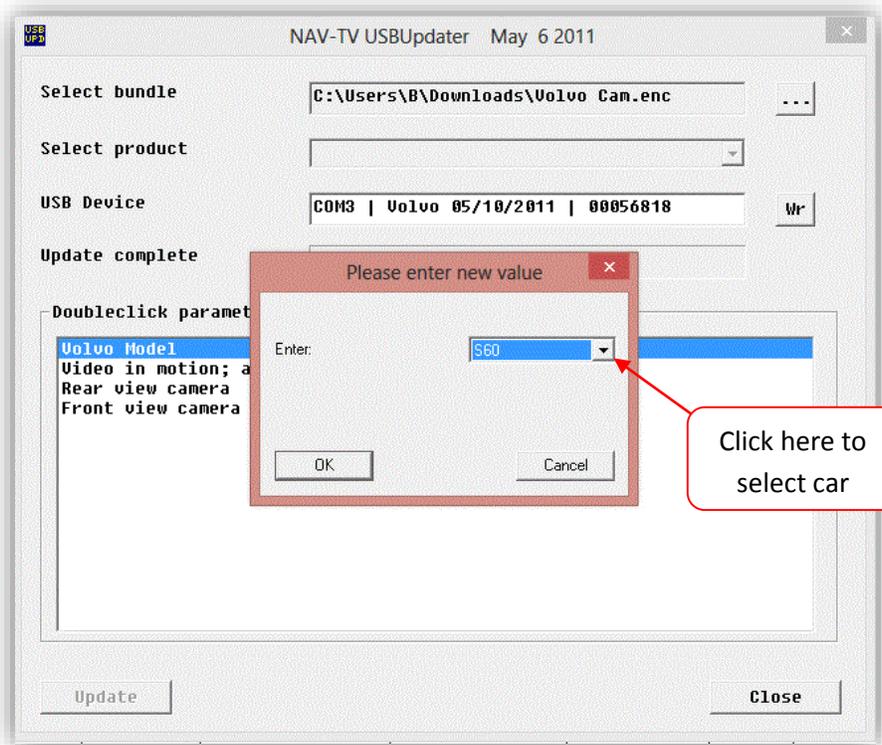
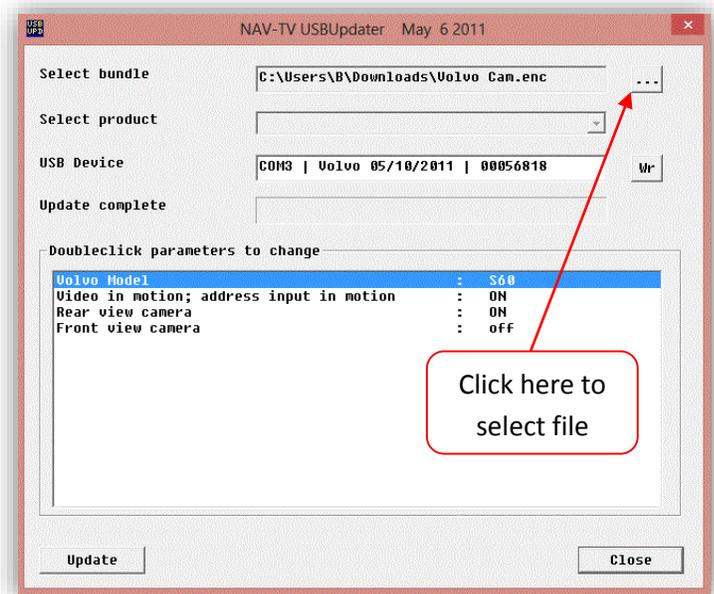


Module Programming

1. The Volvo Cam module will come preprogrammed with the most popular working file, but you may need to adjust it for your particular Volvo type/year.
2. Refer to <https://navtv.com/products/NTV-KIT368/volvo-cam-12.html> and click on the 'Files' button at the bottom.
3. After downloading, unzip the compressed folder into another folder.
4. If you've never updated a NAV-TV module before, you'll need to install one of the USB drivers from the same unzipped folder (win 7+ or XP driver, respectively).
5. Open the Volvo USB Updater (blue icon) found in the extracted folder from step 3.
6. Connect the Volvo Cam module to the computer using the provided USB to mini-USB cable.
7. The 'USB Device' field should populate after 5-10 seconds.
8. Click the 3 dots at the top right of the updater window. Navigate to the same extracted folder from step 3. Select the 'VolvoVIMCam.enc' file and press 'Open'.
9. Double click 'ON' for VIM or address in motion to adjust ON or OFF.
10. Double click 'ON' for Rear view camera to adjust ON or OFF.
11. Double click 'off' for Front view camera to adjust ON or OFF.

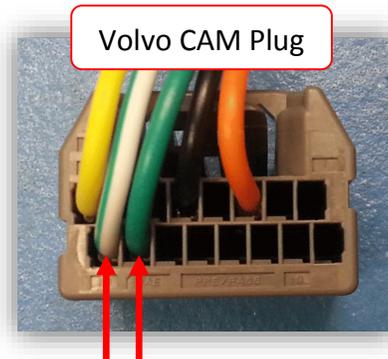
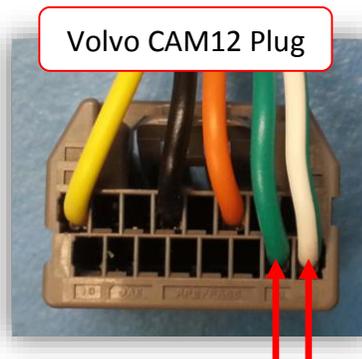
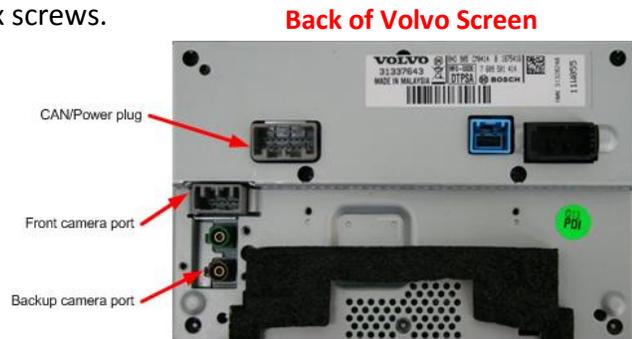
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12. Double click 'S60' and a new window will appear. Select from the drop down according to which Volvo type you're installing the kit into and then press 'OK'.
13. Press the 'Update' button and wait for the loader to finish updating.
14. Disconnect the module from the computer, reconnect to the T-Harness in the car and retest for proper operation.



Installation

1. Access the main LCD screen by removing the panels surrounding it. This usually involves pulling the panels and removing Torx screws.
2. Remove the Volvo LCD by removing the (4x) Torx T25 screws that secure it into the dashboard and disconnect all plugs connected to the screen. Set the Screen aside for now.
3. **The Volvo CAM 12 (NTV-KIT368) includes (2x) T-Harnesses. You must determine which is needed for your vehicle by examining the CAN wires on the male side of the provided Power T-Harness:**



Compare the CAN wires on this plug with the factory Volvo screen's plug: make certain the wire locations match (are in the same position).

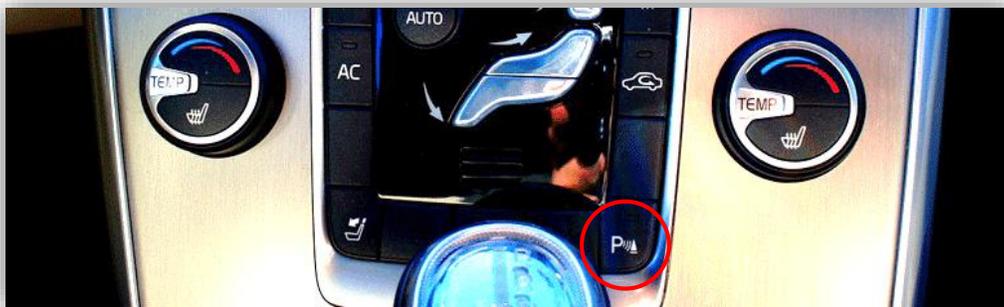
4. Plug the factory power/CAN harness into the female side of the supplied **T-Harness**.
5. Plug the Volvo Cam module into the 18-pin connector located on the supplied **T-Harness**. The LED on this module will light up solid whenever CAN is active in the car.
6. When an aftermarket backup camera is being installed, plug the supplied **SMB to RCA adapter** into the **brown** port behind the screen and the camera output into the RCA end.*
7. Connect the 12v power for the camera to Output 1. Output 1 provides 12v when CAN is active only (car is on).
8. Connect the male end of the supplied **Plug & Play T-Harness** into the Volvo screen. Reconnect the rest of the plugs to the screen and test for proper operation before reassembling dash.

*Note: on the CAM 6 extension, cutting the loop near the camera connector side (labeled 'P Line') will remove generated lines.



Video in Motion (VIM) Operation

VIM and navigation* entry in motion is enabled when the unit is shipped. No user activation is required for most vehicles, but if the module does not function, press the **Parking Sensor** button. This will enable VIM and allow the user to watch DVD movies or control the navigation when the vehicle is in motion.



Backup Camera Operation

When adding the rear camera option, the blank button on the top right of the radio controls will become active. (The factory 'CAM' button is available through the Volvo parts department; part# 3078 2886)

By pressing this button, the rear/front camera will become available while driving. If both front and rear camera are installed and activated, camera selection is done through multiple options.

1. Using the numeric touch pad:
 - a. 2- Front Camera
 - b. 8 – Rear Camera
 - c. 0 – Rear Camera Zoom (not supported on aftermarket cameras)
2. By continuously pressing the "CAM" button, the camera views will cycle in sequence.

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- Using the TUNE knob to cycle to the camera view desired and then pressing “Ok” on the knob.

*Viewing of cameras while in motion is only available if VIM is “ON”. Otherwise, once the vehicle reaches 10 mph, a disclaimer will show stating that viewing of the camera isn’t available.

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