NAV-TV

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REC-AV XG

NTV-KIT276

Overview

The ***REC-AV XG*** adds video input (including rear camera) for select '06-'08 Chrysler/Dodge/Jeep ***REC*** navigation radios. ***NOTE: The REC radio must possess the 3-pin camera port on the back for this kit to be compatible.***

Kit Contents

Camera Input Harness
NTV-ASY142

REC-AV XG Module
NTV-ASY171

(2x) Audio RCA-3.5mm Adapter
NTV-CAB054

Audio-IN Harness
NTV-ASY231

USB Cable (updates)
NTV-CAB009

AVSW Harness
NTV-HAR066

(3x) Male barrel RCA
NTV-CON018

Plug and Play T-Harness
NTV-HAR087

CAN Adapter Harness
NTV-HAR058

FACTORY AV (TO VEHICLE)   AV out (TO RADIO)

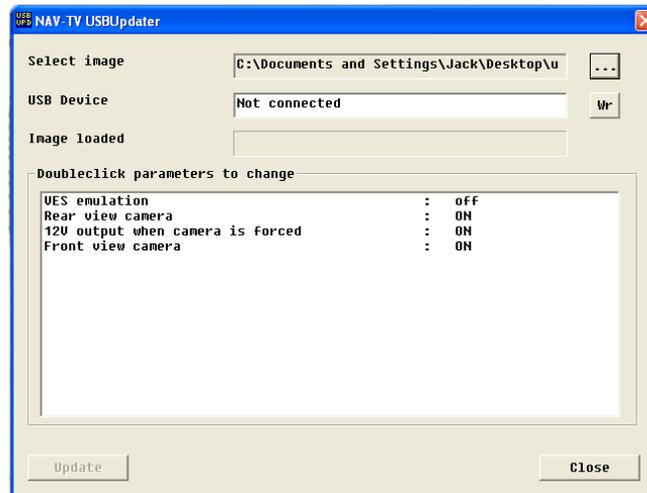NAV-TV SYNC AVSW

V1   V2   A1   A2

AVSW *NTV-ASY170*
(NTV-KIT224 Optional)

REC-AV Programming

Before the product is installed, be sure the module is programmed for needed functions. To change any one of the settings, double click the line with the feature to be enabled/disabled. Down

Adjustable Parameter	Description
VES Emulation	Emulates rear seat entertainment for AV input (Do not turn on if vehicle already has factory VES.)
Rear view camera	Turns on rear camera input to add an aftermarket camera. (Also required for VES video input.)
12V output when camera is forced	Supplies 12v out of Pin 12 when forced camera is enabled or the when in reverse
Front view camera	Supplies 12v out of Pin 11 when front camera is activated.

REC-AV Module Pin Outs

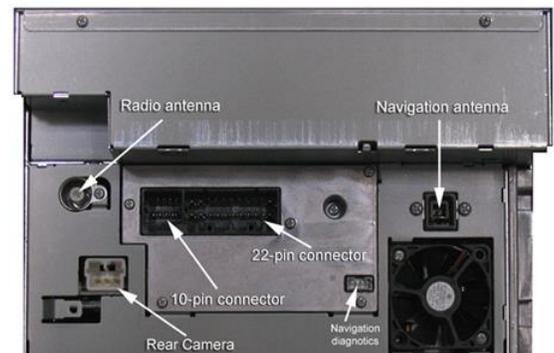| Pin #	Description	Color
1	12v (+) Constant Power	Yellow
6	Relay 1-Common-Video OUT	Yellow
7	RCA Common Shield	[Shield]
8	CAN HI (Radio side)	White/Green
9	CAN HI (Car side)	Brown/Black
10	Ground (-)	Black
11	Output 1 *(Front cam 12v out)*	White/Red
12	Output 2 *(Rear cam 12v out)*	White/Blue
13	Output 3 *(ACC 12v + out)*	White/Purple
15	Relay 1 (normally open) Vid IN	White
16	Relay 1 (normally closed) Cam IN	Red
17	CAN LO (Radio side)	Green
18	CAN LO (Car side)	Brown

Wire side

Installation

1. Remove the radio from the dash.
2. Plug in the supplied T-harness between the radio and factory connection (22 pin connector.)
3. Connect the module to the harness and locate in a secure location in the dash (be sure to program the module for required features before installation.)
4. Run the USB cable from the module to a location that can be accessed in the future, in case the module needs to be reprogrammed or updated.

Backup Camera:

1. Install backup camera, run the video signal and camera power to the radio.
2. Plug the video signal into the RCA attached to the 3 pin plug.
3. The power wire of the camera gets connected to pin 12 (OUTPUT 2) or pin 13 (OUTPUT 3) of the filter.
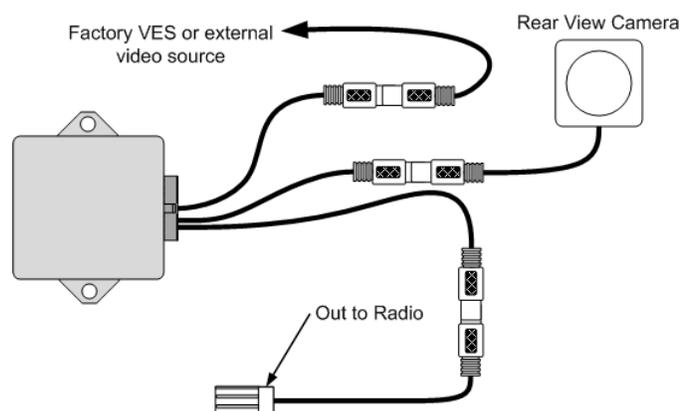

Do not connect the camera power to reverse lights, otherwise forced camera will display a blank screen.

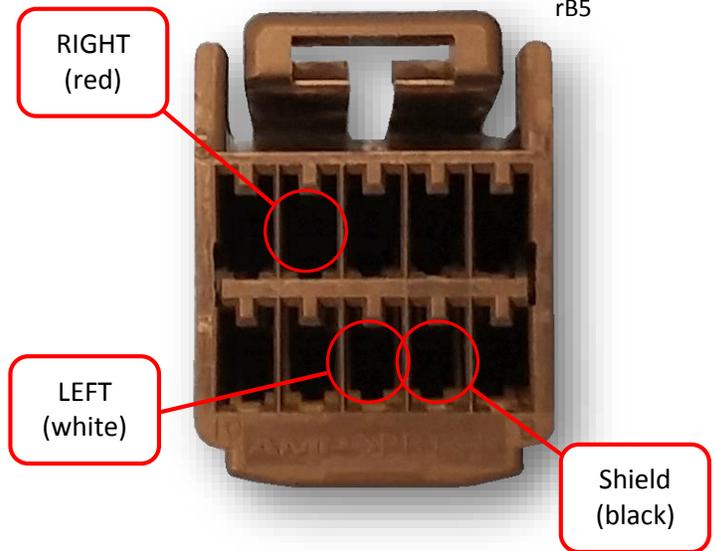### VES/AV Input and Rear Camera:

The REC-AV will internally enable VES* and rear camera switching without the need for an external switcher.

1. Connect the RCA labeled "VIDEO TO RADIO" to the supplied 3-pin to RCA harness.
2. Connect the rear view camera to the RCA labeled "BACKUP CAM". The power from the camera can be connected to pin 12 (OUTPUT 2) or pin 13 (OUTPUT 3).
3. Connect the VES/external video source to the RCA labeled "VIDEO IN".

* Factory VES requires a send in modification for video to be viewed on the radio.
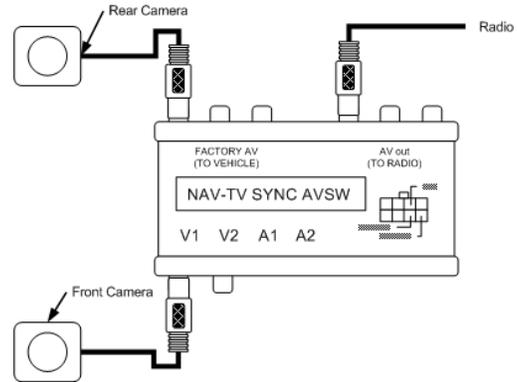
RIGHT (red)

4. For Audio IN, use the provided 10-PIN connector with RCA. You will need to populate the provided connector as shown here *unless* this vehicle possess this same connector with existing wires. If this connector exists in the car already, populate the *factory connector* instead as shown here:
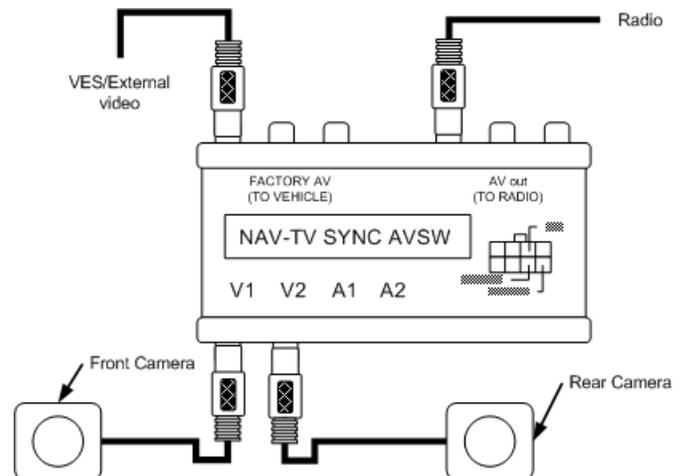
LEFT (white)

Shield (black)

Front and Rear Camera

1. Connect the backup camera to the Yellow RCA labeled "FACTORY AV" of the AV switcher.
2. Plug the supplied 3-pin to RCA harness into the radio. Plug the other end into the Yellow RCA labeled "AV OUT" of the AV switcher.
3. The Front camera signal goes to the RCA labeled "V1" of the switcher.
4. The black wire of the switcher goes to chassis ground.
5. The white/red wire (pin 7) goes to white/red (pin 12) of the REC AV XG module.

VES Input with Rear and Front Camera

1. Connect the supplied 10-pin T-harness with Red and White RCAs between the radio and factory harness. (Note that there may be no factory harness in this location.)
2. Plug the audio out of external AV source to the Red and White RCAs.
3. Connect the external AV video to the Yellow RCA labeled "FACTORY AV" of the AV switcher.

4. Plug the supplied 3-pin to RCA harness into the radio. Plug the other end into the Yellow RCA labeled "AV OUT" of the AV switcher.

5. The Front camera signal goes to the RCA labeled "V1" of the switcher.

6. The Rear camera signal goes to the RCA labeled "V2" of the switcher.

- *Note - If the vehicle has factory VES installed, l*   ***Note - The audio inputs/outputs are not used.**

- *Factory VES requires a send in modification for video to be viewed on the radio*.

When the optional switcher is being used, do not use the RCAs on the REC-AV Plug-n-Play harness.
Multiple video inputs using the optional switcher (AVSW)

When installing rear camera, VES emulation and front camera, an optional switcher is required. This will allow multiple video inputs to be sourced in.

Switcher connections	Input Source
Factory AV	External Video source
AV out	3-pin to RCA plug to Radio
V1	Front Camera
V2	Rear Camera

Switcher	REC-AV Output
Black	Chassis Ground
White/Red (pin 7)	White/Red (pin 12)
White/Blue (pin 8)	White/Blue(pin 11)

Operation

VES: Press the 'MODE' button until VES tab is highlighted. Once the tab is selected, the video input will automatically be displayed.

Reverse Cam/Forced Cam: Double press the main power button on the radio. This will automatically display the backup camera regardless of gear or motion of the vehicle. To return to the factory screen, double press the main radio power button again.

Front Camera: When the *Front view camera* feature is enabled (through programming), every time the radio is placed into forced camera mode it will toggle between the rear camera and the front camera. The order is as follows: *Radio > Rev Cam > Front Cam > Radio*

Double tap