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IMPORTANT NOTE:

Technical support on this product is only available via e-mail. Before submitting a technical support e-mail please thoroughly read through this installation guide and double check your installation.

If you have a technical question please send an e-mail to support@navvideo.com. Technical support e-mails will be returned within 2 business days.



NV_RGB_X

OEM Navigation Dual Video Input Interface Module With Wiring Harness

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Pre-Installation Disclaimer:

By purchasing and installing our products, you agree that NAV VIDEO Inc., its employees and affiliates cannot be held responsible for any accidents, tickets, misuse of products or damage caused to your vehicle. The driver must always keep their eyes and attention on the road at all times. Our products are intended for passenger entertainment and off-road use. In some states it is illegal to have a TV viewable by the driver while the vehicle is in motion, please obey your state laws. In addition it is your responsibility to provide this disclaimer to any party that may purchase your NAV VIDEO navigation interface from you, in or out of your vehicle. NAV VIDEO cannot be held responsible for discrepancies, or inconsistencies that may occur due to vehicle manufacturing changes. Please adhere to all state and federal laws when operating your video interface.

RGB Module Connections & Controls

The NV_RGB_X Video Interface is capable of both single video and dual video modes of operation. For dual video mode, the optional remote control pad is recommended for switching between the video inputs on the module.

The NV_RGB_X Video Interface has a number of connections and controls on the module, they are outlined below:

Video1	Composite Video Input For Backup Video Camera (or any other video device)
Video2	Composite Video Input For Any Video Device
BRI	Brightness POT Control
COL	Color POT Control
CON	Contrast POT Control
TIN	Tint Pot Control
Source	Five dip switches used to configure the sync setting of the module which varies from vehicle to vehicle, a complete list of sync settings can be found in the next section of this installation guide.
OEM Video Harness	This is where the wiring harness provided with the module will be connected. In addition the wiring harness has several important wires which are outlined below: <ul style="list-style-type: none"> • (RED) 12V (accessory position) switched power • (BLACK) Chassis Ground • (BLUE) Parking Brake or Ground • (GRAY) Reverse Light or 12V Signal To Activate Video1 Input For Camera
Black "Switch" Wire	The black wire that is labeled "Add A Switch To Ground" is intended to be connected to a momentary switch (not included). The other connector on the switch will be attached to ground. When the module senses a ground connection, it will switch to the next video input. Going from the OEM Nav Screen -> Video 1 -> Video 2 and back.

Source - DIP Switch Settings

Manufacturer	1	2	3	4	5
Audi	ON	OFF	ON	OFF	OFF
BMW	OFF	OFF	OFF	ON	OFF
Ford / Lincoln	OFF	OFF	ON	OFF	OFF
GM / Cadillac / Hummer	OFF	OFF	ON	OFF	OFF
Honda / Acura	OFF	OFF	ON	OFF	OFF
Mercedes Command 2.0	OFF	OFF	ON	OFF	OFF
Mercedes Command 2.5	OFF	OFF	ON	OFF	ON
Nissan / Infiniti	OFF	OFF	ON	OFF	OFF
Subaru	OFF	OFF	ON	OFF	OFF
Toyota / Lexus	OFF	OFF	ON	OFF	OFF
Universal	OFF	OFF	ON	OFF	OFF
Volkswagen	OFF	OFF	ON	OFF	OFF
Volvo	<i>Internal Jumper JP1 – Volvo Must Be Jumpered. Open Case & Connect Jumper.</i>				

Installation With Plug And Play Factory Harness

If your RGB unit came with an OEM fit factory harness, simply find the GPS navigation computer (either in the trunk, under a seat, or behind the LCD head unit) and remove the existing factory connector attached to it. Plug the new RGB wiring harness in, then connect the vehicle connector to the other end of the new RGB wiring harness. Each vehicle manufacturer varies, but in general here are the locations we recommend for each respective manufacturer:

Manufacturer	
Audi	Behind The LCD Screen Radio Head Unit
BMW	GPS Navigation Computer In The Trunk Or Under The Seat
Ford / Lincoln	Behind The LCD Screen Radio Head Unit
GM / Cadillac / Hummer	Behind The LCD Screen Radio Head Unit / Ribbon Cable Connected Inside Radio
Honda / Acura	GPS Navigation Computer In The Trunk Or Under The Seat
Mercedes Command 2.0	Behind The LCD Screen Radio Head Unit
Mercedes Command 2.5	Behind The LCD Screen Radio Head Unit
Nissan / Infiniti	Behind The LCD Screen Radio Head Unit
Subaru	GPS Navigation Computer In The Trunk Or Under The Seat
Toyota / Lexus	GPS Navigation Computer In The Trunk Or Under The Seat
Universal	GPS Navigation Computer In The Trunk Or Under The Seat
Volkswagen	Behind The LCD Screen Radio Head Unit
Volvo	GPS Navigation Computer In The Trunk Or Under The Seat

Installation With Universal Harness

The universal harness has two sets of sets of shrink wrapped cables, IN and OUT. The cable colors represent the following signals:

- Red** Red Signal
- Green** Green Signal
- White** Blue Signal
- Black** Sync Signal

To install the RGB unit using the universal wiring harness you need to locate the Red, Green, Blue and Sync wires on the vehicles factory connector and “splice in” to these wires. After cutting these wires, you will put the RGB universal wiring harness in-line of the signal, by connecting one end of the cut wire coming from your GPS navigation computer to the respective IN wire on the RGB harness, then connect the OUT wire on the RGB harness to the cut wire going to your LCD screen. There will be a total of four wires you will need to do this to.

If you do not know which wires represent R,G,B and Sync on your vehicles factory harness you can do one of two things. First, NAV VIDEO has a guidebook containing many pin assignments for various vehicles, contact us to see if your vehicle is in our book. Second, you can “learn” which wires represent the R,G,B and Sync cables by trial and error. For example, if you remove a wire and you loose all the “blue tint” on the screen, then this wire represents the blue signal, the same applies to red and green. If you remove the wire and the screen image starts rolling or shifting, then this wire represents the sync wire of the vehicle.

Installation For GM / Cadillac / Hummer Vehicles

Please see NAV VIDEO NavVideo RGB Installation Manual for GM vehicles.

General Installation

Once you have connected the video module wiring harness to the vehicle you can continue with the following steps below:

- Connect a switched 12V line to the red wire of the video wiring harness.
- Ground the black wire on the video wiring harness
- The blue wire must be attached to the parking brake ground for the module to be installed safely. When the blue wire is attached to ground (i.e. when the parking brake is enabled) the module will be able to switch between navigation and video sources. When ground is not applied to the blue wire, the module will only show the GPS navigation display.
- The gray 12V wire is used to force the display of video1 (the backup camera video input) onto the LCD screen. When 12V is applied to this wire, video1 will automatically be shown. This wire is usually connected to the reverse line of the vehicle, which is given 12V when the vehicle is put into reverse gear. Effectively switching to a device such as a backup video camera. You can also use this video input for any other video source, and instead connect this gray wire to a toggle switch, which is then connected to 12V, effectively creating a manual switch to toggle between navigation and video1.
- You will need to use a momentary toggle switch (not provided) to switch between the video inputs. The module comes with a single black wire attached to the module it should be labeled accordingly. This black wire will switch between the OEM GPS video signal and aux video inputs when grounded. Thus, attaching this wire to a toggle switch connected to ground will allow manual switching between the sources.
- The gray 12V reverse camera wire also has a similar feature, however the polarity of the switching circuit is reverse. So instead of applying ground to activate the video, 12V is applied. In this case, it will activate video1.
- You can make adjustments to the brightness, color, contrast and tint using the potentiometers on the outside of the unit.

NAV VIDEO RGB 16pin Molex Connection Diagram

