BHM
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NTV-DOC326

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RGBv2

NTV-KIT885

Overview

The RGBv2 adds an aftermarket backup camera to the factory navigation screen in select RGB-based navigation-equipped vehicles. A secondary video input is included on the RGB module and can be viewed at any time by supplying power to an input wire (optional).

Kit Content

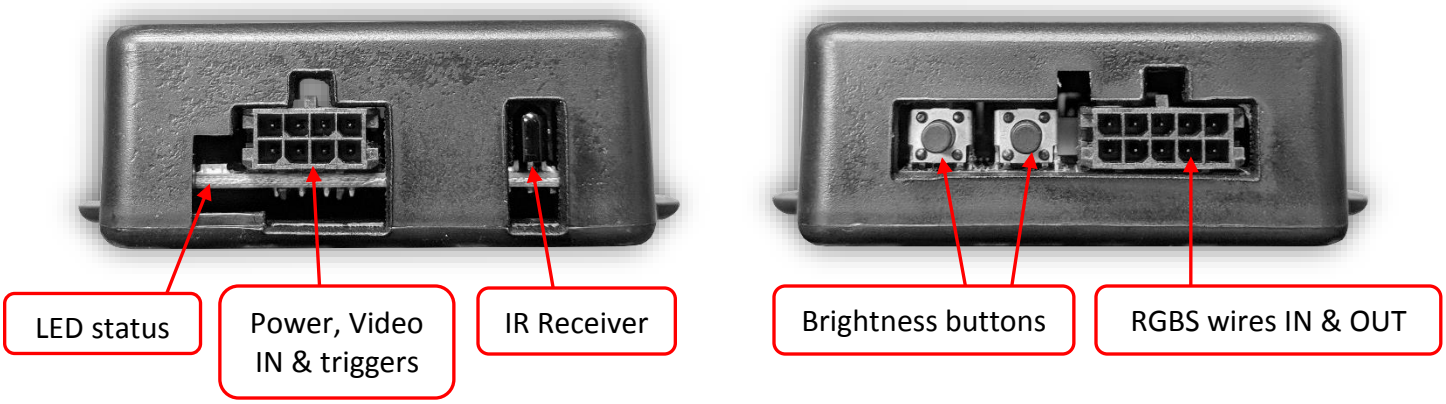
RGB Power Harness
NTV-HAR324

Remote Control
NTV-REM004

RGB Converter
NTV-ASY254

RGB Video Harness
NTV-HAR323

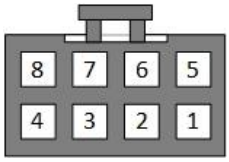
RGBv2 Interface Connectors



RGBv2 Pin Out

PIN #	Description	Color
1	Ground (-)	Black
2	INPUT 2 (AUX VIDEO)	White/Blue
3	Shield (VIDEO 2)	Black
4	Signal (VIDEO 2)	Yellow
5	12v (+) ACC IN	Red
6	INTPUT 1 (CAM VIDEO)	White/Red
7	Shield (VIDEO 1)	Black
8	Signal (VIDEO 1)	Yellow

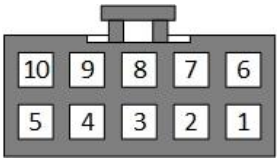
Power Harness



Wire Side

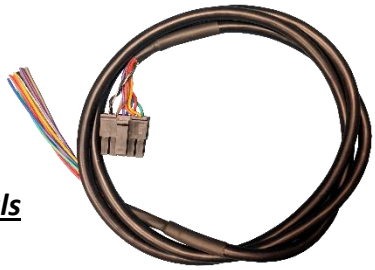
PIN #	Description	Color
1	RGB Ground	Black/Shield
2	SYNC (screen)	Gray
3	Blue Signal (screen)	Blue
4	Red Signal (screen)	Red
5	Green Signal (screen)	Green
6	RGB Ground	Shield
7	SYNC (radio/NAV)	Brown
8	Blue Signal (radio/NAV)	Purple
9	Red Signal (radio/NAV)	Orange
10	Green Signal (radio/NAV)	Yellow

RGB Video Harness



Wire Side

Universal RGBv2 Installation (includes BMW7)



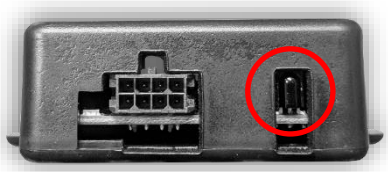
1. If this vehicle has a ***navigation unit*** separate from the radio, connect this interface there. If this vehicle has ***no navigation unit (or NAV is built-in to the radio),*** connect this interface at the screen.
2. Gain access behind the screen/navigation unit and disconnect all connected harnesses before cutting any wires.
3. Examine the wires available from the provided ***RGB Video Harness***. These wires are used for separating the ***red, green, blue and SYNC signals*** (like you would with a relay).
4. Find the RGBS wires connecting the NAV drive (or radio stack) to the screen. Make sure you have the correct harness by disconnecting the plug while the radio is in the NAVIGATION mode: *the image should disappear immediately*. The RGBS wires will typically be surrounded by sheathing to block interference.
5. Cut the ***Red, Green, Blue and Sync SIGNAL wires in half, one at a time. The colors of these wires are rarely red for red, green for green etc.*** The best way to do this:
    a. Strip sheathing back and gain access to the wires (gain extra slack)
    b. Make sure nothing is shorted
    c. Turn the car on and put the radio in NAV mode (if available)
    d. Cut each wire you suspect to be Red sig, Green sig, Blue sig and SYNC sig ***one at a time***, and with each cut you should ***lose the corresponding signal color on the NAV screen.***
    e. Cut the SYNC wire. This will make the image stutter and/or scroll lines either horizontally or vertically. *NOTE: some BMW vehicles require that the SYNC wire stay connected – for these vehicles, do not connect either SYNC wire (from RGB).*
    f. ***Do not cut the RGB ground in half.*** Connect the ground wires together from the RGB Video harness and splice into the RGB ground. See diagram on next page.
6. Connect each wire from the ***RGB Video Harness*** to the NAV/Radio side and Screen side of each signal (red, green, blue, SYNC). Connect the RGB ground wires together and splice them to the RGB ground (sometimes the sheathing itself). *See (universal) diagram for visual aid.*
7. ***Proceed to page 6 to complete wiring to the Power Connection Harness.***

RGBv2 Power Connections (ALL)

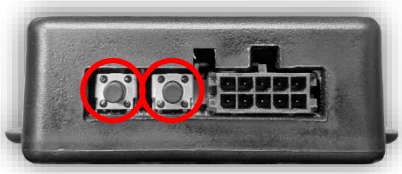
1. From the provided ***RGB Power Harness***, connect the ***black wire*** to chassis ground (-) and the ***red wire*** to an ACC 12v (+) source (cigarette lighter, etc).
2. Connect the ***white/red wire*** *(INPUT 1)* to a 12v (+) reverse wire. Any time this wire receives 12v (+), the video signal provided to ***VIDEO 1*** will be displayed on the media screen (while in NAV mode from the radio).
3. ***Optional:*** If adding a secondary AUX Video source to this vehicle, connect the video signal RCA to the ***VIDEO 2*** port on the *Power Harness*. This source can be viewed at any time when the ***white/blue*** *(INPUT 2)* wire receives 12v (+). *NOTE: VW not supported for additional AUX video input.*

RGBv2 Remote Control / Brightness Setting

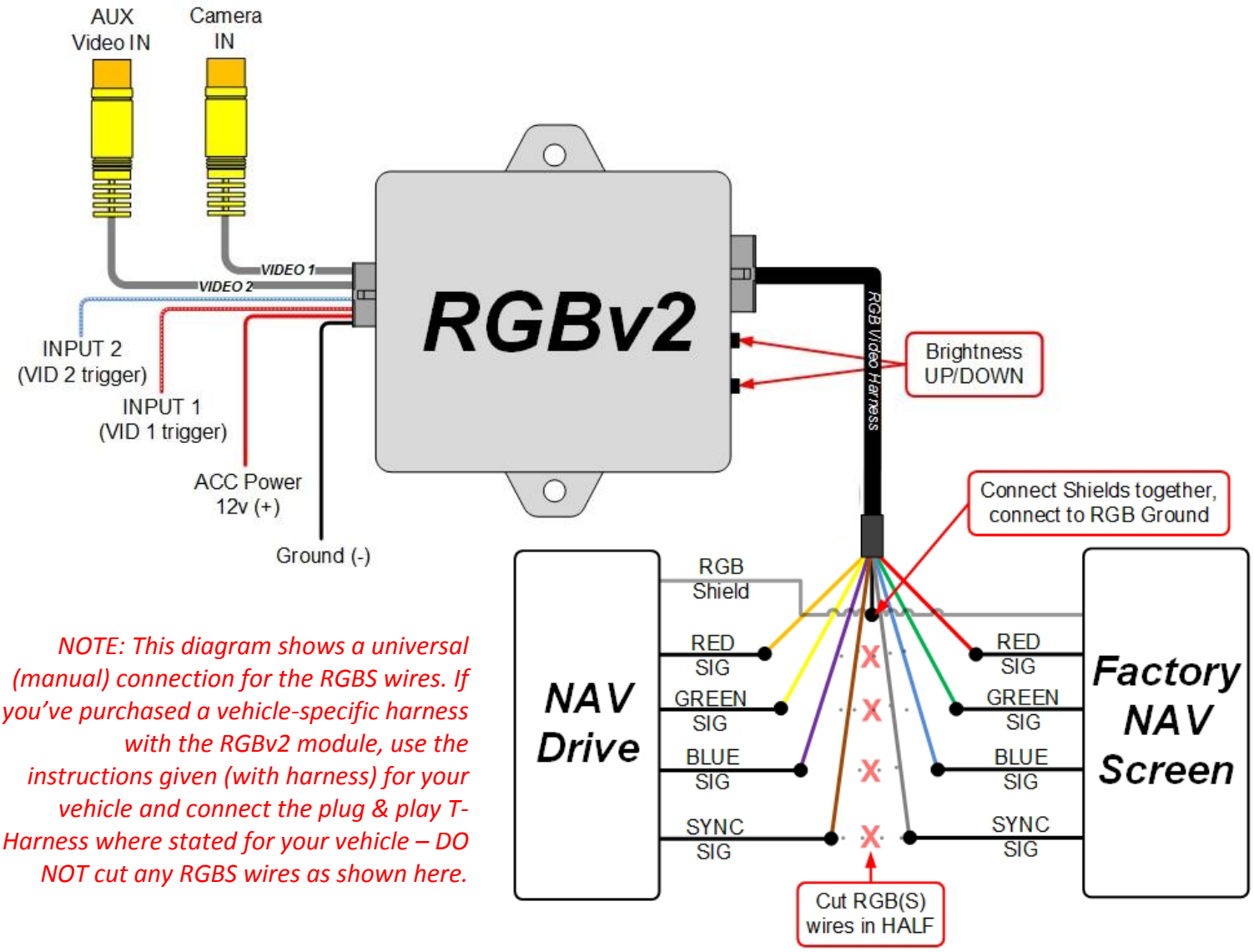
- The RGBv2 uses a (provided) remote for the following optional adjustments:
  - Arrow keys adjust VIDEO 1 or 2 image *LEFT, RIGHT, UP & DOWN* (*OEM pass through image is not adjustable*)
  - Zoom/Page arrows adjust brightness
  - Pressing *MENU>MAP>BACK* (in order) will *default* all settings.



- To adjust brightness of VIDEO 1 or 2 image, use the buttons on the RGB side of the module and adjust to suit. *NOTE: when completing install, mount the RGBv2 module so that the buttons are not being pressed.*



Hard-wired RGBv2 connection diagram



NOTE: This diagram shows a universal (manual) connection for the RGBS wires. If you've purchased a vehicle-specific harness with the RGBv2 module, use the instructions given (with harness) for your vehicle and connect the plug & play T-Harness where stated for your vehicle – DO NOT cut any RGBS wires as shown here.

General Notes

- In some vehicles (typically Lexus), reverse camera/aux video will only display while in ***NAV MODE***
- For vehicles with no navigation, the installation must happen at the screen. For cars with navigation, installation must happen at the navigation unit (trunk, under pass seat etc.)
- Some BMW vehicles require that the SYNC wire stay connected – for these vehicles, do not connect either SYNC wire (from RGB).
- ***Aston Martin and Volvo*** vehicles require inverting the sync jumper:
    1. Remove all plugs, then remove (4x) screws on the back side of the module
    2. Remove RGB circuit board from plastic case
    3. Examine board for SYNC jumper resting on 2 pins
    4. Remove jumper 2-PIN header and discard as shown below.
    5. Reinstall circuit board back into RGBv2 case. Test for proper operation.

FIG 1: Normal SYNC utilization.

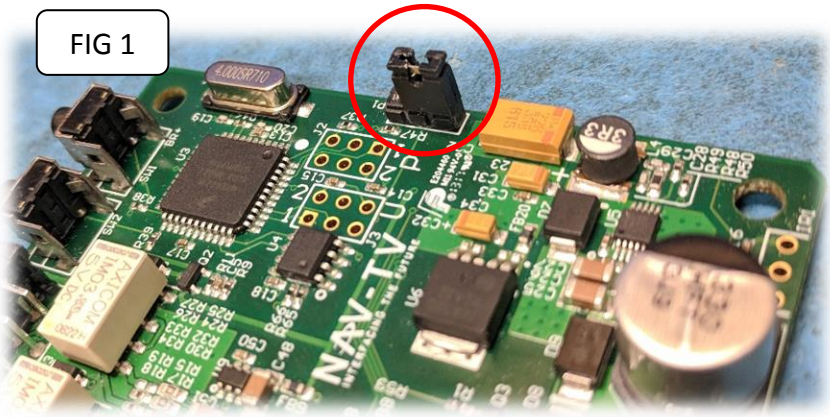
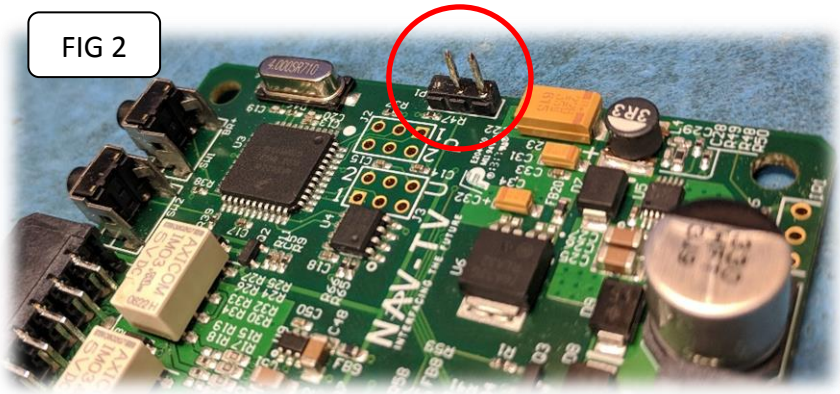


FIG 2: Inverted SYNC utilization (Aston Martin, Volvo)



RGBv2 Operation

After all connections are properly made:

- When the vehicle is placed into reverse (white/red wire on the interface receives 12v +), the navigation screen will switch to ***Video 1*** source (reverse camera).
- In any other gear (but reverse) toggling the white/blue wire (12v (+) to the white/blue wire) will switch the factory navigation screen to ***Video 2*** source*.

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