

NAV-TV

INTERFACING THE FUTURE

BHM
01/20/19
NTV-DOC340

3950 NW 120th Ave, Coral Springs, FL 33065 TEL 561-955-9770 FAX 561-955-9760
www.nav-tv.com info@nav-tv.com

RGBMW

NTV-KIT909



Overview

The RGBMW adds an aftermarket backup camera to the factory navigation screen in select BMW vehicles (with no separate SYNC wire present). 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



RGB Converter
NTV-ASY311



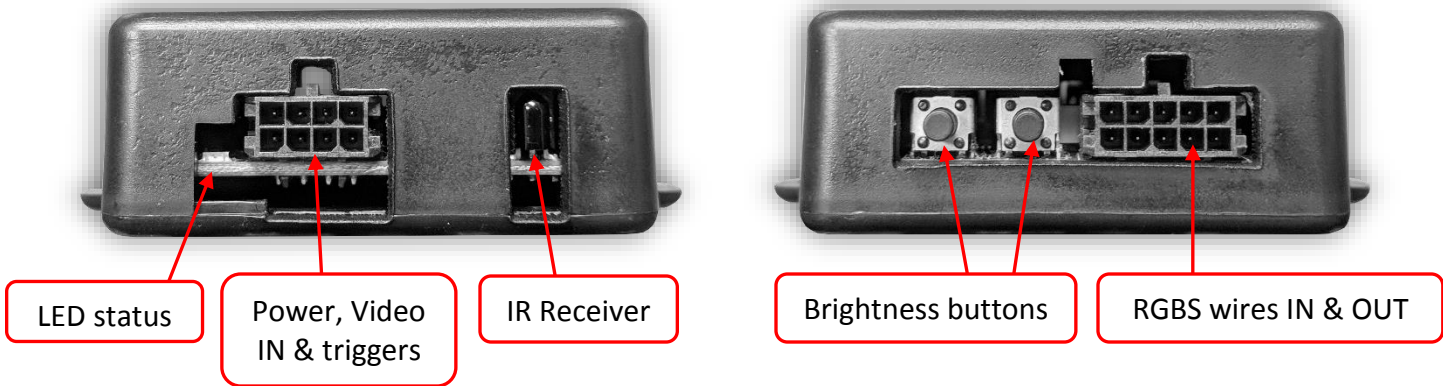
RGB Video
Harness
NTV-HAR323



Remote Control
NTV-REM004



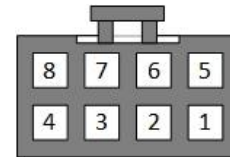
RGBMW Interface Connectors



RGBMW 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

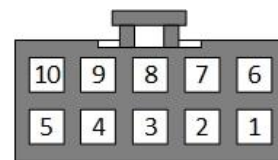
Power Harness



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

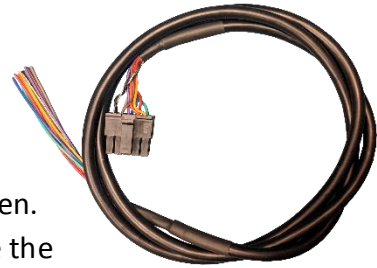


Wire Side

RGBMW Installation

NOTE: If your kit came with a Plug & Play T-Harness, refer to that instruction set and do NOT cut any wires. After harness connection, skip this page and begin at Page 4.

1. Connect this interface at the factory Navigation drive.
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 and blue signals** (like you would with a relay).
4. Find the RGB 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 RGB wires will typically be surrounded by sheathing to block interference.
5. Cut the **Red, Green & Blue SIGNAL wires in half, one at a time. The colors of these wires are rarely red for red sig, green for green sig, 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 and Blue sig **one at a time**, and with each cut you should **lose the corresponding signal color on the NAV screen**.
 - e. **NOTE: the SYNC wire in these vehicles (if sold this RGBMW kit) are on the Green signal and are not present as a separate wire. Do not use the GRAY or BROWN wire from the module.**
 - 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). 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 4 to complete wiring to the Power Connection Harness.**



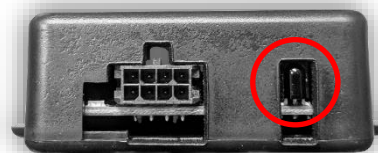
RGBMW Power Connections (ALL)

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.**

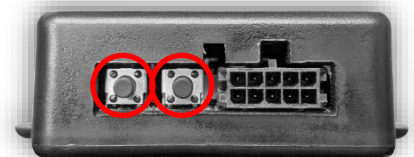


RGBMW Remote Control / Brightness Setting

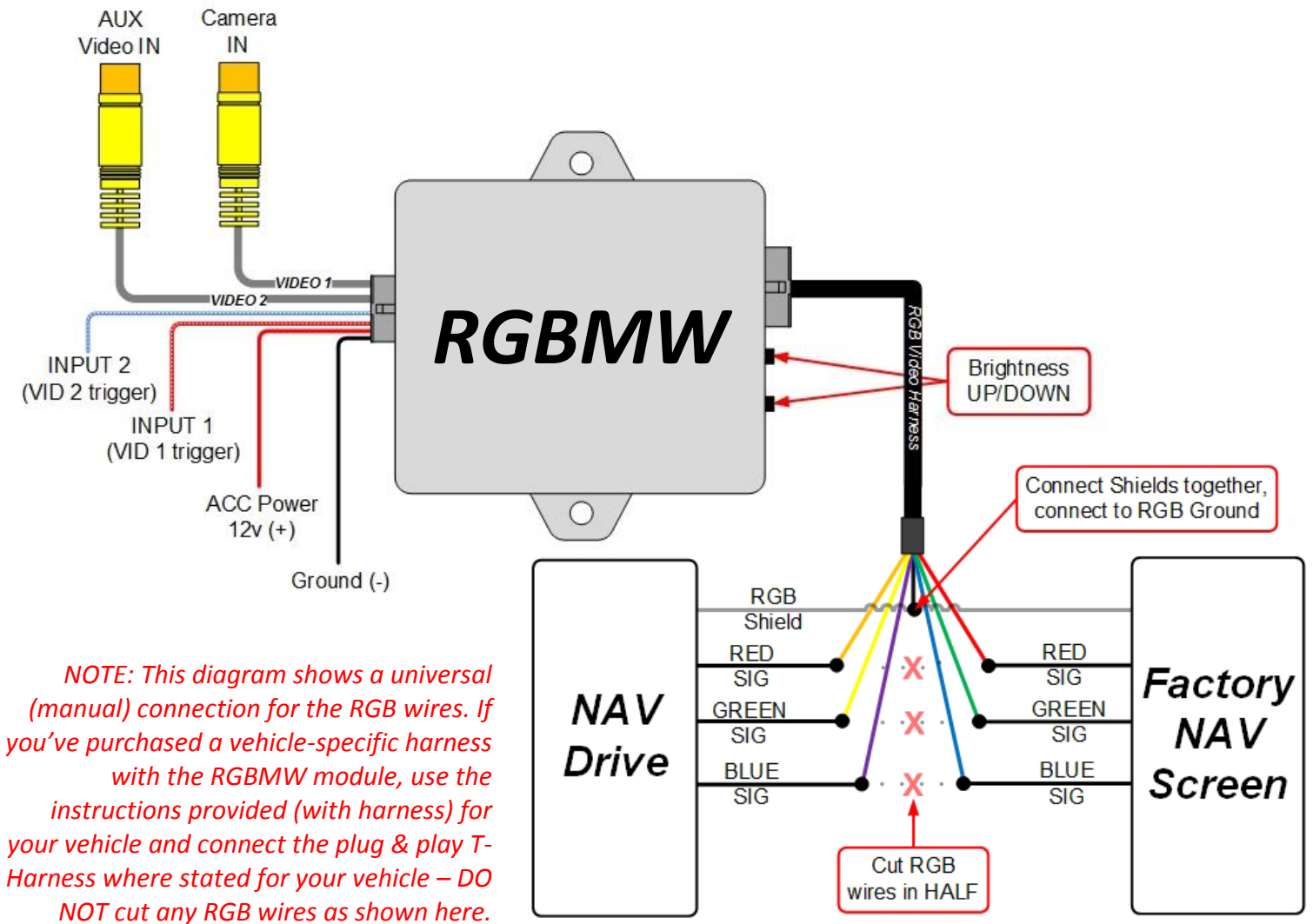
- The RGBMW uses a (provided) remote for the following optional adjustments:
 - Arrow keys adjust VIDEO 1 or 2 image *LEFT, RIGHT, UP & DOWN* (*OEM pass through image is not adjustable*)
 - Zoom/Page arrows adjust brightness
 - Pressing *MENU>MAP>BACK* (in order, quickly) will *default* all settings.



- 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 RGBMW module so that the buttons are not being pressed.*



Hard-wired RGBMW connection diagram



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

RGBMW 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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