

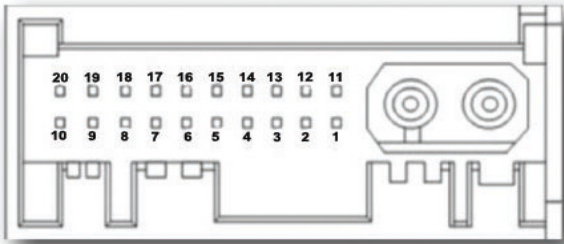
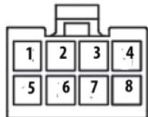
## W221CAMUSB

Camera Interface for 2007 – Up Mercedes-Benz S-Class, CL-Class

What's in the box	Package Contents
<ol style="list-style-type: none"> <li>1. Interface Module</li> <li>2. Interface Harness</li> <li>3. (3) Female RCA and (1) Male RCA connectors with pinned cables.</li> <li>4. (2) Male – Male RCA Couplers.</li> <li>5. (1) 120 Ohm Resistor. Note: Using Interface as Node, adds a camera or video input.</li> <li>6. Video Switcher module.</li> <li>7. Video Switcher power harness.</li> <li>8. USB cable. Have the "A" connector side of the cable accessible to the passenger side of the vehicle cabin, but hidden from view.</li> </ol>	<p>1. Interface Module</p> <p>2. Interface Harness</p> <p>3. RCA cables</p> <p>4. (2) RCA M to M adapters</p> <p>5. 120 Ohm Resistor</p> <p>6. Video Switcher</p> <p>7. Video Switcher Power harness</p> <p>8. USB cable</p>

Radio Removal	Radio Dash Images
<ol style="list-style-type: none"> <li>1. Pop out cover under radio. Remove (2) T20 Torx screws from behind cover.</li> <li>2. Remove (2) T20 Torx screws from behind hidden cover above radio cover hinges.</li> <li>3. Remove (4) T20 Torx screws securing the radio in place. Then remove and unplug radio.</li> </ol>	

## Installation Instructions

Pinout	Car wiring	W221 CAM Wiring
+12 Volt	Pin (10) Thick Red	Pin (7) Red
Ground	Pin (20) Thick Brown	Pin (3) Black
CAN High	Pin (1) Yellow / White	Pins (1, 5) Yellow / Black
CAN Low	Pin (11) Yellow	Pins (2, 6) Yellow
Video +	Pin (7)	
Video -	Pin (17)	
Right Audio	Pin (5)	Red RCA +
Left Audio	Pin (15)	Black RCA +
Common Audio	Pins (6, 16)	RCA Shield -
	<p><b>Factory Radio harness connector</b></p> 	<p><b>NAV-TV Interface harness connector</b> 8 pin Molex connector</p>  <p>View from wired side</p>
		<p><b>Pin (4) White/Red – Video Acc 12V out. 500mA Max!!!!</b></p> <p><b>Pin (8) White/Blue – Reverse 12V out. 500mA Max!!!!</b></p>

**NOTE:** The W221CAM module operates in (2) configurations. It can either be used to add a backup camera to a vehicle or to enable an additional video input on a vehicle that is already equipped with a factory backup camera. Depending on the desired configuration the module can be programmed for **Filter: OFF** when adding a camera or **Filter: On** when a camera already exists. The configurations can be changed by using the USB Updater (downloaded from [www.nav-tv.com](http://www.nav-tv.com)). The initial configuration when the module is shipped is designated on both the product box and the module itself.

The installation of the module is also dependant on the vehicle's configuration, so please verify the availability of the factory camera prior to installation, and re-program the module if necessary.



Wiring WITHOUT Factory Camera: Filter Off	Wiring WITH Factory Camera: Filter On
<ol style="list-style-type: none"> <li>1. Solder <b>TOP CAN</b> pair, Yellow/Black and Yellow, to the matching wires on the Radio Connector (Pins 1 &amp; 11) <b>DO NOT CONNECT THE BOTTOM PAIR.</b></li> <li>2. Solder supplied 120 ohm resistor across <b>CAN High</b> and <b>CAN Low, Radio Side</b> of interface harness (Pins 1 &amp; 2)</li> <li>3. Insert Female Red Video RCA connector into cavities 7 (Signal) &amp; 17 (Shield) on the Radio connector. Connect Camera or Video Switcher to RCA connector</li> </ol>	<ol style="list-style-type: none"> <li>1. Cut vehicle <b>CAN</b> wires, Yellow/White &amp; Yellow on Radio connector. <b>Solder Top CAN</b> pair to vehicle side of factory harness. <b>Solder Bottom CAN</b> pair to radio side of factory harness. Yellow/Black to Yellow/White and Yellow to Yellow.</li> <li>2. Remove factory camera wires from factory radio harness connector (<b>Pins 7 &amp; 17</b>), and connect to supplied Camera input RCA and plug into Video Switcher.</li> <li>3. Insert Female Red Video RCA connector into factory radio harness connector cavities 7 (Signal) and 17 (Shield). Connect Video Switcher to RCA connector.</li> <li>4. Connect the Video Switcher's black wire to ground, red wire to the White/Blue wire on the interface harness (Pin 8). The switcher will then automatically activate when in reverse.</li> </ol>

## AUX Audio Wiring

**AUX AUDIO:** If vehicle is not equipped with Factory iPod interface, Insert RCA pin into factory radio harness connector cavities 5 (Right Audio), 15 (Left Audio), 6, 16 (Audio Common).

If vehicle is equipped with factory iPod and Aux audio is required, you must cut the existing iPod audio lines at said pins and connect a stereo switcher.

### Programming Interface

1. Press and hold the steering wheel  While quickly tapping the Volume up (+) button 3 times: (Hold  ) +++
2. Release buttons and observe the Cluster and Radio. Both enter **DIAGNOSIS** mode and then reset. If Radio did not enter **DIAGNOSIS**, Repeat step 1.
3. After Radio resets, Check the availability of new **"AUX"** feature under the **"AUDIO"** Menu.
4. Set the instrument cluster to "Rearview Camera – **ON** when in reverse".
5. Proceed to checking the system functions described in the "Operations Instructions".

### Radio Programming Images



## Operation Instructions

### To Activate Rear View Camera

1. With the brake pedal depressed and engine running, engage reverse gear.
2. Rear View Camera picture will show on **COMMAND** display.

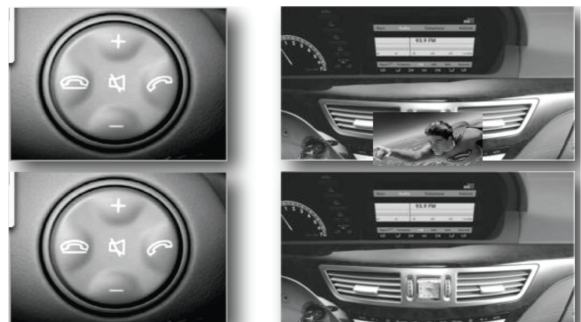
### Rear View Camera Image



### To Activate Video Monitoring

1. Double Click the Steering wheel **Mute** button. External Video is now displayed on **Command** screen.
2. Double Click the Steering wheel **Mute** button again to return to normal **Command** display.

### Video Activation Images



### To Activate AUX Audio (option)

Select **"Audio"** > **AUX**

### AUX Audio Images



**Agreement:** End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.