

## 9002-9511 Wiring Instructions (Auto Dimming/Comp/Temp/Onstar Video Display Mirror)

**IMPORTANT:** Read before installing. For the latest full color instructions please visit [www.brandmotion.com](http://www.brandmotion.com).

**Mirror Mounting Covers (the 2012 Equinox is shown below on the left). Refer to our application guide for affected vehicles** – Remove with a plastic trim tool. If your vehicle has a center portion, that requires removal first. Using a die grinder remove the striped area, of the center cover, that is shown below. The cover next to it is after the rework.



**Mirror Mounting-** This mirror has a Wedge/ D-tab style mounting base. Please check our application guide to ensure sure it is compatible with your vehicle (adapters are available for specific applications separately). Slide the mirror onto the tab. Torque for the mirror screw that attaches to the windshield tab is 1.8 Nm (16 lb-in) and cannot exceed 2.2 Nm (19.5 lb-in).

**Camera requirements-** The camera signal must be strong enough for the mirror to detect signal when reverse is engaged. We recommend that the camera be connected to mirror prior to installation to confirm compatibility. Best results are on cameras that have a .8- 1.6 VDC coming out of video composite lead (commonly a yellow RCA jack). Depending on camera output it may require reverse to be supplied by a 12V switched ignition rather than reverse feed. To test this use a multimeter set to DC and connect the (-) lead to the camera RCA shield and the (+) lead to the camera RCA tip with the camera powered ON.

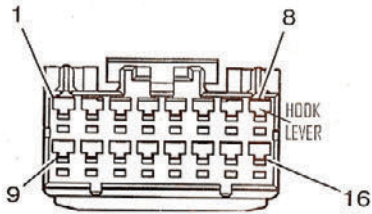
**Powering up the camera-** The mirror stays ON for over 1 second when reverse is disengaged and if the camera is connected to the reverse tail lamp then the screen will flash Blue. If the camera does not power up instantly when the vehicle is shifted into reverse the screen will not detect the camera and will not display an image. For these reasons we recommend that the camera be connected to Ignition (+).

**About OnStar-** OnStar does get any of its electrical signal from the same leads as the LCD portion of the mirror and so just testing that the OnStar works does NOT signify that the mirror is getting all of its needed power.

**16 Pin Connector required-** This kit will only work on vehicles that are equipped with the 16 pin connector in the illustration below. Some GM vehicles with OnStar are equipped with a 10 pin connector. You will need a 10 to 16 pin adapter part number 9002-6006a (not supplied) in these cases. Download the latest application guide at [www.brandmotion.com/docs2/rvsappguide.pdf](http://www.brandmotion.com/docs2/rvsappguide.pdf) for current list of GM vehicles with a 10 pin connector.

**Low Speed LAN Circuit-** It is important that if the vehicle you are working has a wire in cavity 3 that you **remove and isolate** it from the mirror connector. Not doing so will cause the vehicle computer to malfunction and the vehicle **will not start**.

**Connector face and back of mirror images**



**Harness Pinout:**

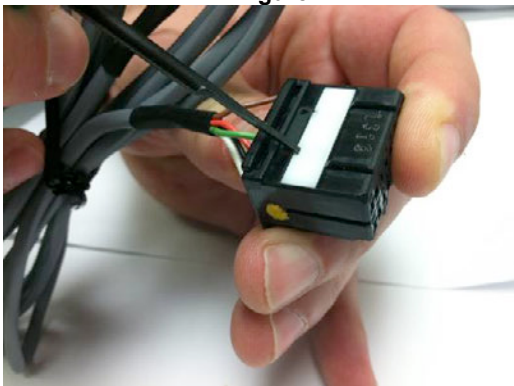
Pin	Wire Color	Function
1	White	Video +
2	Brown	Video -
3	Dark Green	Low Speed LAN
4	N/A	N/A
5	N/A	N/A
6	Red*	Temp Probe +
7	Black*	Temp Probe -
8	Black	Ground
9	Green	Reverse Signal 12V+
10	N/A	N/A
11†	Varies	OnStar Keypad Signal
12†	Varies	OnStar Keypad Supply Voltage
13	Red	Ignition Controlled 12V+
14†	Varies	OnStar Keypad Green LED Signal
15†	Varies	OnStar Keypad Red LED Signal
16	N/A	N/A

†These pins may be populated in vehicles equipped with OnStar.

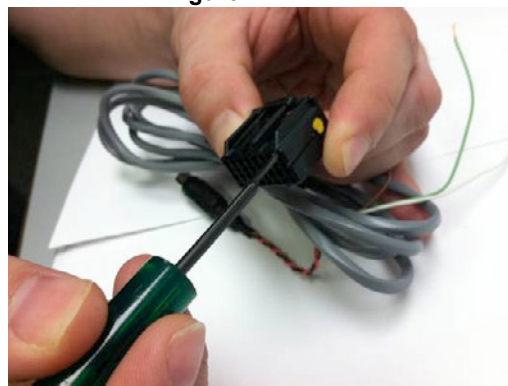
**Wiring:** (It may not be necessary for you to use the Black, Green and Red supplied wires below, most GM vehicles already have these locations populated. If wires already exists in these locations simple test the leads using a multimeter for the correct signal).

**Inserting/ removing pins:** located on the bottom side of the mirror connector is a rectangular white tab. This tab must first be released (see figure 1). A small flathead watch repair screw driver works best. The tab will only lift about 1/10<sup>th</sup> of an inch. Then insert the same screwdriver (or Delphi terminal tool 12094429) on the face of the connector and lift the plastic tab that holds the pin in place (see figure 2).

**Figure 1**



**Figure 2**



**Pin 3** If present in vehicle it **MUST be extracted** and isolated (see Low Speed LAN note above)

**Pin 8** Use Black wire from supplied harness and insert into connector, connect opposite end of wire to a good solid chassis ground.

**Pin 9** Use Green wire from supplied harness and insert into connector, connect opposite end of wire to the reverse lead from the tail light circuit.

**Pin 13** Use Red wire from supplied harness and insert into connector, connect opposite end of wire to the Ignition circuit of vehicle. 12v+ when key is turned ON & 14.4 or better when vehicle is running.

**Video signal:** Connect RCA to camera video output. (See camera requirements above).

**Pin 1** Camera video input positive- Insert White wire from supplied harness (the opposite end of wire is attached to the video input RCA). **Note:** If lead exists in this cavity remove and isolate as it is not needed.

**Pin 2** Camera video input negative- Insert Brown wire from supplied harness (the opposite end of wire is attached to the video input RCA). **Note:** If lead exists in this cavity remove and isolate as it is not needed.

**Temperature Probe (9002-6008) Note:** If the mirror you are replacing already has a Temperature/ Compass display on the right hand side of the glass you may not need to install the supplied probe. Check to see if there are already wires in cavities 6 & 7 and if so connect the mirror and if a temperature reading is displayed then you are done. If OC is displayed on LCD then you must add temperature probe to vehicle.

Mount Temperature probe behind grille in a well ventilated area making sure that it is not close to the radiator for best temperature reading.

Route the supplied cable through the firewall and up the A- pillar to the 16 pin connector (if the locking tab on the bottom on the connector is set see **Inserting/ removing pins** instructions listed on Page 2 to release).

Insert the Red lead of the Temperature probe into cavity 6 and the Black lead into cavity 7.

#### **Operation:**

##### **Temporary Monitor Manual Shut Down:**

If while in reverse you require to turn OFF the camera monitor simply press and release the POWER button on the mirror. (Note: once reverse is disengaged the mirror will go back to normal operation and will turn ON next time reverse is engaged).

##### **Temperature and Compass Set up, Calibration and Testing (if equipped)**

Your mirror maybe equipped with a screen which displays the current temperature as well as the current orientation of the vehicle. Once the mirror is installed it is necessary to calibrate and test the function of these features.

##### **Temperature settings:**

The temperature may require approximately 20 -30 minutes after installation in order to achieve proper temperature reading.

The mirror can display either Fahrenheit or Celsius. In order to select either mode simply press and hold the POWER button for 4 seconds until F or C appear, press POWER button to toggle between each mode and once correct reading is set wait 4 seconds and it will be stored on the mirror.

**Compass Calibration:**

In some cases CAL will be displayed on the LED readout. If this not being displayed simply press and hold the POWER button for 12 seconds to initiate calibration mode.

- 1) Identify the appropriate zone from the chart below and then press and the POWER button until Z plus the current zone is displayed on the LCD.
- 2) Press and release the power button to toggle through the available zones until the appropriate zone is displayed.
- 3) After the LED displays the selected zone wait 4 seconds and the zone will be stored into the mirror.
- 4) Locate an open area in which the vehicle can be driven at 5MPH or less in circles approximately 2-3 times.

Once the system calibrates the CAL message will disappear from the LED display.

