

Wire Colors:

Red: 12v Power , **Black:** Ground,
Green: Reverse Trigger (optional)

Back-up Camera Connections

To find factory wire color information for your vehicle's reverse lighting circuit(s), visit DIY wiring resources like www.eAutoRepair.com or www.AllDataDIY.com. Review the back-up camera manufacturer's installation instructions for specific details for wiring connections to the camera.

Connect Reverse Light Power

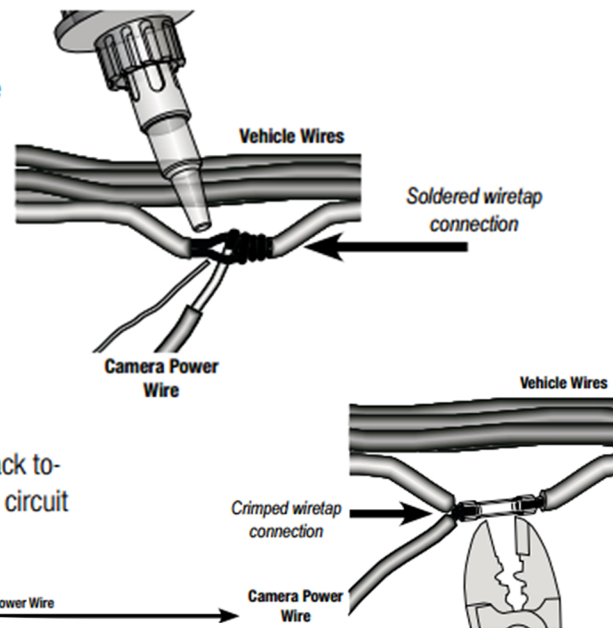
Most back-up cameras require a connection to the vehicle's positive (+) 12-volt reverse lighting circuit, which provides power to the camera only while the vehicle is in reverse. However, some cameras are wired to an integration device or an in-dash receiver that provides the power connection directly to the camera. This type of connection provides power to the camera only when the vehicle is in reverse, just as if it was wired into the reverse lighting circuit. This connection would be located on the receiver's (or integration device's) wiring harness labeled as 'power output to camera.'

Locate the positive (+) 12-volt reverse light wire and verify its operation using a Digital Multimeter (DMM). Complete the wiretap connection as follows:

- 1) Strip a 1/2" to 3/4" of insulation from the end of the back-up camera's power wire.
- 2) Strip a 1/2" section of the vehicle's (+) 12-volt reverse light trigger wire insulation. Do not cut the wire.
- 3) Separate the copper strands of the vehicle's reverse light wire into two sections, creating an opening in the middle of the reverse light wire through which the back-up camera's power wire can be inserted.
- 4) Insert the back-up camera power wire into the vehicle reverse light wire.
- 5) Wrap the end of the back-up camera power wire around the exposed vehicle reverse light wire.
- 6) Solder the new wiretap connection.
- 7) Use electrical tape to cover the soldered connection.

If soldering the wiretap connection is not possible, cut the factory wires, then use a butt connector to crimp them back together along with the camera's power wire. Please note that some video display screens may also require a reverse circuit connection to switch the screen on the camera video input.

Note: Depending on where the camera is mounted (such as in a trunk lid), you may need to drill a hole above or behind the mounting surface large enough for the power and ground to pass into the trunk or vehicle interior to facilitate connections.



Caution:

For vehicles with low voltage (+5 volt), pulse width modulated (PWM) or low current LED based reverse lamp circuits, seek professional installation for the electrical connection. These circuits cannot directly connect to a +12 volt power source and may require special vehicle specific adapter devices or electronic parts. The individual vehicle determines the required parts to provide the proper reverse lighting circuit power to the camera. If you can't locate a dedicated +12 volt reverse light wire using a DMM at the reverse light wiring harness, your vehicle may have one of these special circuits. As an alternative, use a +12 volt accessory (key switched) circuit for power to the camera.

Back-up Camera Connections (Continued)

Connect Chassis Ground

Connect the ground wire's ring terminal to a solid metal point on the vehicle body or chassis using the hardware supplied with the back-up camera. Avoid using a factory ground point to eliminate voltage spike-induced noise, which will appear as lines on the screen displaying the reverse camera image.

- 1) Locate a suitable ground point with no obstructions on, around, or behind it (such as fuel tanks, wiring harnesses, etc.)
- 2) Drill a 1/8" hole. Clean the painted surface around the hole and remove the paint by sanding down to bare metal. This step helps ensure good electrical conductivity.
- 3) Attach the ground wire's ring terminal to the location using a #8 sheet metal screw (or supplied hardware).

Connect Video Signal

All wired camera systems require a video connection to an in-dash or on-dash LCD screen or monitor. This connection can be a proprietary multi-pin cable matched to a specific screen or video receiver (that may also contain power and chassis ground wires within the cable). It can also be a standardized composite video connection (the yellow RCA connector). If a composite video RCA cable is required, but not included with the back-up camera, it can be purchased separately.

- 1) Connect the VIDEO OUT on the back-up camera to a composite video RCA cable.
- 2) Route the cable from the back-up camera to the location of the video screen, which may be an in-dash video receiver, rear view mirror with LCD screen, or dedicated back-up camera screen.

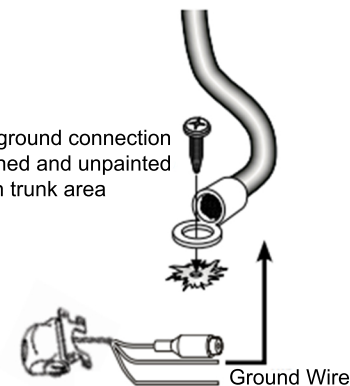
Note: Depending on where the camera is mounted, you may need to drill a hole above or behind the mounting surface large enough for the video connector to pass into the trunk or vehicle interior to facilitate connecting to the screen. If the camera is located in a trunk or hatch, the cable must run through the wiring 'boot' that houses the factory wiring. Follow factory wiring paths for the best results.

- 3) Connect to the REAR VIEW CAMERA INPUT on the screen (if present) or simply the VIDEO INPUT connection, if there is not a dedicated rear camera input.
- 4) If the video receiver or screen requires a hard-wired connection to the reverse light circuit to recognize the reverse camera image and display it properly, run the reverse light power input wire on the receiver (typically labeled 'reverse input') to the back of the car and connect it to the vehicle's reserve light wire using the same method described to connect the camera power on the previous page.
- 5) If the receiver or screen provides a 'power output to camera' wire, connect the camera's power wire to this wire instead of directly to the reverse lighting circuit. This allows the receiver or screen to provide power to the camera through its connection to the reverse lighting circuit.

Backup Camera Loop Wires

White Wire: Cut white wire to disable parking grid lines

Blue Wire: Cut to enable PAL standard (European Standard)



Chassis ground connection to a cleaned and unpainted section in trunk area

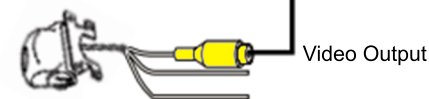
Rear View Mirror w/ Screen



OR



Video Receiver / Monitor



Video Output