



VRBCS300W Back-Up Camera and Monitor

Dear Customer,
CONGRATULATIONS. The VRBCS300W Back-up Camera System, when used as described, will give you years of dependable service in your car, truck, RV, or mini-van. We have taken numerous measures in quality control to ensure that your product arrives in top condition, and will perform to your satisfaction. In the rare event that your VRBCS300W Back-up Camera System contains a damaged or missing item, does not perform as specified, requires warranty service, or you have an installation problem, DO NOT RETURN THIS PRODUCT TO THE STORE. PLEASE CALL OUR TOLL FREE NUMBER FROM THE U.S.A. AND CANADA 1-800-445-1797 and ask to speak with a member of our technical service team, or submit your questions by e-mail to customerservice@vr-3.com and a member of our technical service team will respond by e-mail to your questions. Our in-house technical service team will expedite delivery of your part, advise you on installation, or help troubleshoot a problem with you. If your product needs warranty service, our technical service team representative will help you obtain the fastest remedy possible under the warranty.

Before You Install

Automotive video equipment installations can be difficult at times, even to the most experienced of installation technicians. If you are not confident working with electrical wiring, removing and reinstalling interior panels, carpeting, dashboards or other components of your vehicle, please call our Toll-Free Help Line 1-800-445-1797 and our in-house technical service team will answer your installation questions. If you have vehicle specific questions, contact the vehicle's manufacturer, or consider having the VRBCS300W professionally installed.



GIVE US A CALL, WE'LL HELP YOU INSTALL.

PLEASE DO NOT RETURN PRODUCT TO STORE.

Visit us on the WEB

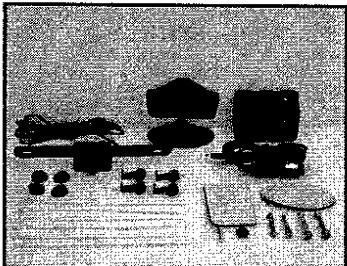
WWW.vr-3.com

For Information and Technical Assistance,
Call Toll-Free in U.S.A. and Canada.

1-800-445-1797

Parts

- 1 - Back Up Camera
- 1 - TFT LCD Monitor
- 1 - Monitor Mounting Stand
- 1 - Monitor Power Cable
- 2 - Sets of Hopk & Loop Style Fastener
- 2 - License Plate Screws
- 2 - License Plate Bolts & Nuts
- 4 - Wedge Shaped Mounting shims
- 4 - In-Line Wire Connectors
- 1 - Sheet Metal Screw
- 1 - Grommet
- 6 - Cable ties



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Installation & Operation

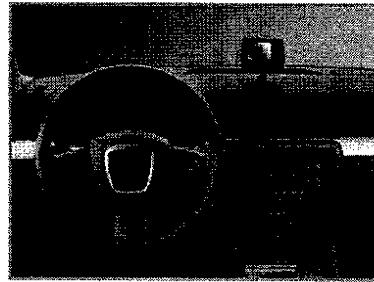
These instructions do not apply to all vehicles. They are only meant as a general guide due to the number of different makes & models.

For vehicle specific questions contact your vehicle's manufacturer.

MONITOR INSTALLATION

When choosing a location to mount the monitor, make sure the monitor is in an area that will not obstruct your vision while driving. It can be placed on the dashboard, or on the windshield depending on the angle.

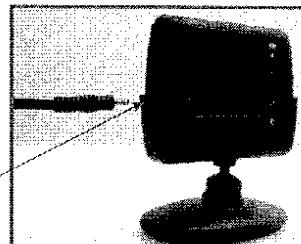
1. Temporarily place the monitor stand in the location that you have chosen. Make sure the driver's vision is not obstructed in any way.
2. Choose a route for the cable from the monitor to the cigarette lighter socket. It can be a direct route with the wire exposed or a route around the dashboard hidden under the vehicle's interior trim. When using a direct route for the power cable, make sure the power cable is secured and will not interfere with the operation of the vehicle. When routing the power cable behind the vehicle's interior trim be careful not to cut the wire on sharp edges or pinch the cable and damage it when re-installing the trim.
3. If you are satisfied with the location of the monitor and the cable route you have chosen, attach the monitor or stand with the supplied hook & loop fastener.



MONITOR POWER CONNECTION

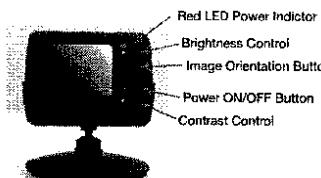
Power Cable with 12 Volt Cigarette Lighter Adaptor

1. Insert the small 12 Volt DC plug of the power cable into the left side of the monitor.
2. Plug the 12 Volt cigarette lighter adaptor into the vehicle's cigarette lighter socket.
3. Press the ON/OFF button to turn the monitor ON.



MONITOR CONTROLS

Red LED Power Indicator - When the monitor is ON the red LED will be lit. If there is power to the monitor, but the monitor is OFF, the red LED will be OFF.
Power Button - Press the Power button to turn the display ON, the red LED will be lit to indicate the monitor is ON. Press it again to turn the display OFF, the red LED will turn off.



2.4 GHz Devices Such as Cell Phones, Bluetooth, and Wi-Fi Systems MAY CAUSE Momentary Interference

Installation & Operation

MONITOR CONTROLS

Image Orientation - There are 4 different camera views. Each press of the Image Orientation button will change the orientation of the image displayed by the camera.



Normal
Image



Mirror
Image



Forward
Upside Down



Mirror
Upside Down

You can change the camera's orientation to compensate for how the camera is mounted on the vehicle.

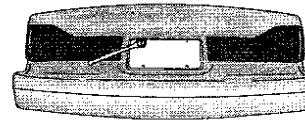
Contrast Control - There are 13 levels of contrast. To adjust the contrast, press the Contrast Control button. Each press of the button will advance to the next level of contrast. Pressing the button at the highest contrast level will bring you to the lowest contrast level.

Brightness - There are 13 levels of brightness. To adjust the brightness, press the Brightness Control button. Each press of the button will advance to the next level of brightness. Pressing the button at the highest brightness level will bring you to the lowest brightness level.

CAMERA INSTALLATION

You may mount the camera using the license plate's top or bottom mounting bolts or screws. When mounting the camera you must make sure that its field of view is not obstructed. Depending on the vehicle, you may mount the camera on the top or bottom of the license plate. To adjust the angle that the camera is mounted to the vehicle use the supplied wedge shaped shims.

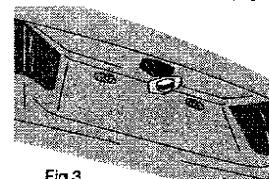
1. Remove the license plate bolts or screws from the rear license plate. (Fig.1)



2. Assemble the camera, supplied wedges, and license plate bolts or screws as shown in Fig. 2. The wedges should angle the camera down. Temporarily tighten the license plate bolts or screws.



3. The camera's power cable will have to be routed through the vehicle's body to the reverse light circuit. Some vehicles may have an existing hole available to pass the wire through, you can use an existing opening (Fig.3) like where a license plate light is mounted, or drill a hole close to where the power cable is attached to the camera. (Fig.4)



Using an Existing Opening for Access



Drilling an Access Hole

Installation

- If you are going to drill a hole, choose a location as close to the camera where the power cable comes out of it. BEFORE YOU DRILL A HOLE YOU MUST CHECK AND SEE WHAT IS BEHIND WHERE YOU ARE DRILLING. If there are any vehicle components, such as electrical parts, wires, or fuel system components behind where you are drilling, you must take whatever precaution necessary not to damage them. Remove the license plate and camera before drilling.
- After you have drilled a hole, insert the supplied grommet as shown in Fig. 5, then pass the power cable through the grommet into the vehicle as shown in Fig. 6. You must use the grommet to prevent the metal edge of the hole from cutting the power cable.

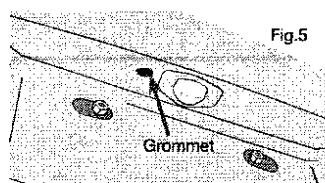


Fig.5

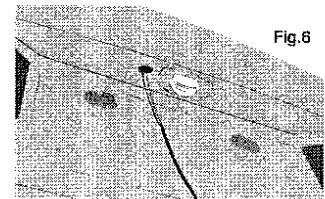


Fig.6

- Next you'll need to find the vehicle's reverse light circuit. Turn the vehicle's ignition key to the accessory position, but do not turn the engine on. Engage the parking brake and put the car in reverse. Look at the vehicle's tail lights to see where the reverse lights are located. To locate the reverse light's 12V+ positive wire, it will be necessary to gain access to the rear of the vehicle's tail light. Usually located in most cars in the trunk area. For help locating the vehicle's reverse light circuit contact your vehicle's manufacturer for vehicle specific wiring diagrams.
- Once you have located the reverse light circuit, you will have to route the camera's power cable to that location. You must securely fasten the power cable to the vehicle's body with included cable ties to prevent it from being damaged. If the cable is attached to one of the trunk's hinges, then make sure when closing the trunk the cable doesn't get damaged by the closing action. Never route the cable out the outside of the vehicle.
- After routing the camera's power cable to the wires of the reverse light you will need to determine the polarity of the wires. The sockets for most vehicle's reverse lights will have two wires, one is positive and one is negative. To determine which is positive you will need a 12V test light available at any auto parts store, or a multi-meter. Follow the instructions that came with the test light or multi-meter to determine the polarity of the wires.

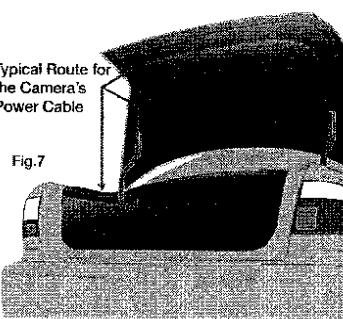


Fig.7

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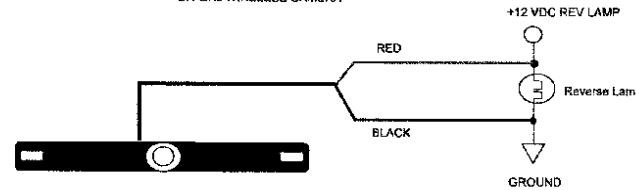


Installation

- After determining which wire is the positive and which is the negative, turn off the ignition key, then remove the battery's negative cable.
- Following the Scotch-Lok® instructions, splice the red wire using the supplied in-line Scotch-Lok® wire connectors to the reverse light's positive (+) wire.
- Next splice the black wire of the camera's power cable to the reverse light's negative (-) wire. Secure all wires with cable ties or electrical tape.

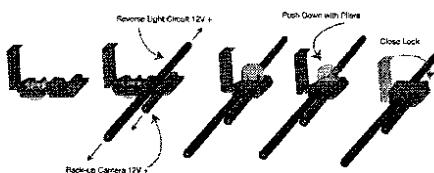
CAMERA WIRING DIAGRAM

2.4 GHz WIRELESS CAMERA



NOTE: On newer vehicles that have their lights ON at all times you may splice the camera's power cable into the license plate light's circuit. The camera will come on when the vehicle is started when wired this way.

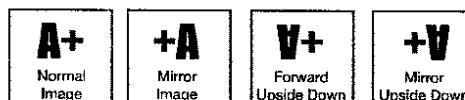
SCOTCH-LOK® INSTRUCTIONS



TESTING THE SYSTEM

- Reattach the vehicle's negative battery cable.
- Turn the ignition key to the accessory position, do not start the vehicle.
- Engage the parking brake, then put the shifter in the reverse position.
- Turn the monitor ON by pressing the ON/OFF button on the monitor.
- Look at the monitor, if the image does not match your rear view mirror press the Image Orientation button on the monitor to correct the image.

There are four different views for the monitor, each time the button is pressed the image will change.



These different views allow you to mount the camera and/or monitor either right side up or upside down and still display the image correctly on the monitor.

After testing the unit and you are satisfied with the route you have chosen for the cabling, you must permanently install it.

Fully tighten the license plate bolts.

Route all wires behind interior panels or under carpeting so they are hidden.

Use supplied cable ties to neatly gather all excess wire.

Frequently Asked Questions

Why doesn't red LED light up?

Make sure the 12V adaptor is fully inserted into the cigarette lighter socket/12V power outlet. If the 12V adaptor is fully inserted, check the 12V adaptor's fuse.

- If the red LED on the monitor is ON, why isn't there an image on the monitor? There won't be an image on the monitor, if the camera is not broadcasting. Check the camera's electrical connections and the in-line fuse. If the camera's connection and in-line fuse are good, then make sure the vehicle is in reverse.
- Why is there interference on the monitor? Interference can be caused by cell phones with Bluetooth®, and other types of electronic devices. If you have a cellphone with Bluetooth® turn the phone off while using the VRBCS300W.

FCC Information

WARNING: Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
- Consult the dealer or an experienced radio/TV technician for help.

Limited Warranty

VIRTUAL REALITY VIDEO LABS® warrants, to the original purchaser, that its products are free from defects in material and workmanship for 30 days from the date of original purchase, as part of our commitment to product excellence. VIRTUAL REALITY VIDEO LABS® and/or its affiliates routinely improve the designs, materials or production methods of its existing products. Because it is impractical to publicize all changes in every product, we reserve the right to make such changes without notice.

CONDITIONS OF WARRANTY:

- If during the 30 day warranty period your new product is found to be defective, VIRTUAL REALITY VIDEO LABS® will repair such defect, or replace the product, without charge for parts or labor subject to the following conditions:
- All repairs must be performed by VIRTUAL REALITY VIDEO LABS® and/or its affiliates in Eatontown, New Jersey.
 - The equipment must not have been altered or damaged through negligence, accident, or improper operation.
 - The replacement of parts are exempted from this warranty when replacement is necessary due to normal wear and tear.
 - All repairs must be accompanied by a copy of a sales receipt or bill of sale.
 - Repair or replacement parts supplied by VIRTUAL REALITY VIDEO LABS® under this warranty are protected only for the unexpired portion of the original warranty.
 - In the case of car stereos, this warranty does not extend to the elimination of car static or motor noise; correction of antenna problems; costs incurred for the removal or reinstallation of the product; damage to tapes, speakers, accessories or car electrical systems.

2. VIRTUAL REALITY VIDEO LABS® will not be responsible for any charge incurred for installation.

OWNER'S RESPONSIBILITIES:
VIRTUAL REALITY VIDEO LABS® will make every effort to provide warranty service within a reasonable period of time. SHOULD YOU HAVE ANY QUESTIONS ABOUT SERVICE RECEIVED, OR IF YOU WOULD LIKE ASSISTANCE IN OBTAINING SERVICE, PLEASE CALL TOLL FREE 1-800-445-1797, 8:30am - 4:30pm EST.

- In order to provide you with the proper warranty service, we request that you adhere to the following procedure:
- Include a copy of your sales receipt or bill of sale with your unit when it is returned for warranty service.
 - If it is necessary to return your product for service, please return it securely packed, preferably in the original shipping carton, and freight and insurance prepaid to the following address: VIRTUAL REALITY VIDEO LABS, Service Department, 41 James Way, Eatontown, New Jersey 07724.
 - Please include a detailed explanation of the problem you are having.

4. If your product is found by VIRTUAL REALITY VIDEO LABS® to have a defect in material or workmanship, within the warranty period, it will be repaired or replaced at no charge and returned to you prepaid. Where permitted by law VIRTUAL REALITY VIDEO LABS® liability shall be limited to that set forth in this warranty. This warranty shall be the exclusive remedy of the consumer.

VIRTUAL REALITY VIDEO LABS® makes no other warranty of any kind, expressed or implied; and all implied warranties, are hereby disclaimed by VIRTUAL REALITY VIDEO LABS® and excluded from this warranty. VIRTUAL REALITY VIDEO LABS® and/or its affiliates, the manufacturer, distributor and seller shall not be liable for any injury, loss or damage, incidental or consequential, arising out of the use or intended use of the product.