Operation Guide

Roadmaster (USA) corp.

Wireless Car Rear View Camera

and Receiver

Model No.: VRBCS335WCA

CONTENTS

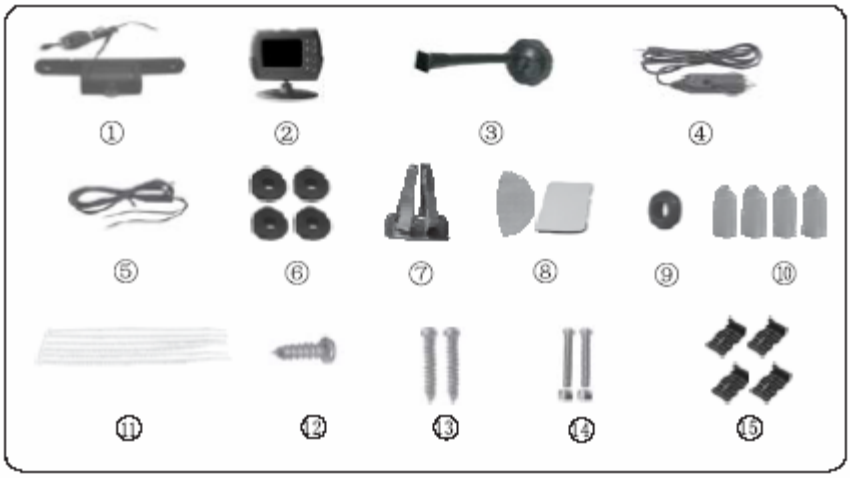
* Video/Power In Socket is for wired camera and power to camera.
* USB Connector Socket can power to mobile etc via USB cable.

*** Do not plug or pull out the Video/Power In Connector when the system is powering.**

FOREWORD

CONGRATULATIONS. The Wireless Back Up Camera, 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.

PACKING LIST

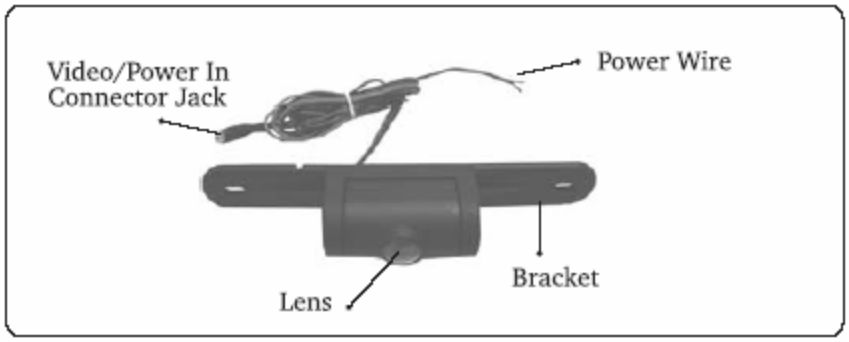


VRBCS335 means GB8910+GB7603

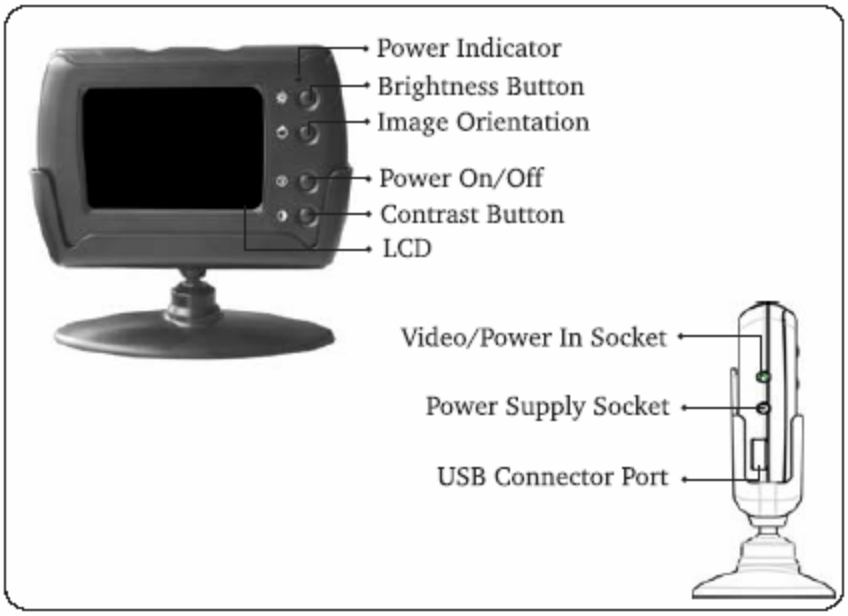
① 2.4GHz Wireless Back Up Camera
② 2.4GHz Wireless TFT-LCD Monitor
③ Mount Holder
④ +12/+24 Volt car power Adapter
⑤ Monitor Wiring Harness
⑥ Wedge Shaped Mounting Shims
⑦ Special Holder
⑧ Hook & Loop Style Fastener
⑨ Grommet
⑩ Special Holder Cover
⑪ Cable Ties
⑫ Sheet Metal Screw
⑬ License Plate Screws
⑭ License Plate Nuts & Bolts
⑮ In-Line Wire Connectors

STRUCTURE

BACK UP CAMERA



TFT-LCD Monitor



INSTALLATION

These installation instructions do not apply to all vehicles. They are meant as only as a general guide due to the large number of vehicle makes & models. For vehicle specific questions, contact your vehicle's manufacturer.
Consult your local motor vehicle laws on the use of this product.

MONITOR INSTALLATION

When choosing a location to mount the monitor, make sure the monitor is on a smooth, flat, level area that will not obstruct your vision while driving, or otherwise interfere with the safe operation of the vehicle. There are three ways to install the monitor. The first one is the special holder, the second one is the mount holder, the third one is the universal bracket.

1. Using the specical holder to install the monitor.(Fig.1)

   Special holder is plugged into the window of car air conditioner

Fig.1

2. Using the mount holder to install the monitor.(Fig.2)

   Mount holder is stamped on the front window glass.

Fig.2

3. Using the universal bracket to install the monitor.(Fig.3)

   The universal bracket is stamped on the dashboard.

Fig.3

3.1 Choose a Location and Power Cable

3.1.1 Temporarily place the monitor stand in the location that you have chosen.

3.1.2 If you are using the supplied Monitor Wiring Harness, route the power cable to the vehicle's fuse box. If you are using the 12/24V adapter, route the power cable to the vehicle's cigarette lighter socket or 12/24V power outlet.
The cable must not interfere with the safe operation of the vehicle.

Monitor with the 12/24 Volt Cigarette Lighter Adapter

3.2 Mounting the Monitor

Before permanently mounting the monitor, clean the mounting area well with isopropyl alcohol, then dry thoroughly.

3.2.1 With the two pieces of the oval Hook & Loop fastener attached to each other,peel the backing paper from "Loop" side the oval shaped Hook & Loop fastener.(Fig. 1)

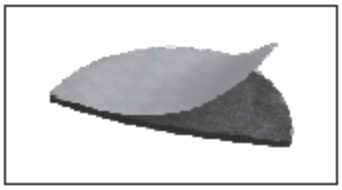


Fig. 1

3.2.2 Next align the Hook & Loop fastener with the bottom of the monitor stand and press firmly to adhere.(Fig. 2)

Fig. 2

3.2.3 With the "Hook" half of the hook & loop fastener attached to the "Loop" half you just attached to the monitor, peel off the backing paper.(Fig. 3)

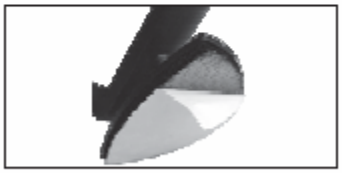


Fig. 3

3.2.4 Then press the monitor stand firmly onto the area you just cleaned. Adhesive reaches maximum strength in 24 hours. Moving the fastener from its original position will weaken the adhesive and may damage the mouning surface.(Fig.4)

Fig. 4

To maximize the effectiveness of the Hook & Loop fastener, it is recommended that the application be performed under the following conditions:

Surface temperature should be between 21℃ and 38℃(70℉and 100℉)
Application below -10℃(50℉) should be avoided.
Application should not occur in direct sunlight.
Mounting should be protected from exposure to direct sunlight for a period of 24 hours.

Note: Under extremely bright lighting conditions, the image on the monitor may take a few seconds to become stable.
Please wait until the image has stablized before backing up.

MONITOR POWER CONNECTION

There are two ways to supply the monitor with power, one uses a 12/24 Volt cigarette lighter adapter plugged into the vehicle's cigarette lighter socket, and the other uses a wiring harness hard wired to the vehicle's box.

12/24 Volt Cigarette Lighter Adapter Using the Monitor's ON/OFF Button

1. Plug the end of the power cable into the monitor.
2. Plug the 12/24 V car power adapter into car power socket.
3. The monitor will be automatically activated when you back up the car. The monitor will be automatically shut when the car goes forward.

Hard Wired to Fuse Box Using the Monitor's ON/OFF Switch

GB7603

1. Disconnect the negative battery cable from the vehicle's negative battery terminal.
2. Connect the Red wire to the 12/24 Volt Positive terminal in the vehicle's fuse box. See vehicle's owner's manual for fuse box diagram.
3. The ground wire must be located on an area of metal on the vehicle's body/firewall that does not have any vehicle components behind it. Sand off any paint to reveal bare metal, this area will be your chassis ground.
4. Drill a hole for the supplied self tapping sheet metal screw. Make sure there are no vehicle components behind where you are drilling the hole.
5. Strip the insulation from the end of the black wire 1.3cm and wrap the wire around the self-tapping sheet metal screw before tightening.
6. Re-connect the negative battery cable.
7. Plug the power cord into the monitor.
8. The monitor will be automatically activated when you back up the car.

CAMERA INSTALLATION

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

1.Loosen the license plate bolts/screws, then remove the rear license plate.

2.Insert each license plate bolt into a supplied wedge, then through the bolt holes of the camera, then through the remaining wedges and the license plate. (Fig.1)

Fig. 1

3.Align with holes on vehicle and temporarily tighten the license plate bolts/screws. The wedges will angle the camera down.

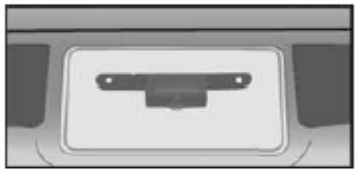


Fig. 2

4.You will need to choose a route for the camera's power wire through the vehicle's body to the reverse light circuit.(Fig. 2)

5.Some vehicle's may have a hole available to pass the wire through, (Fig. 3) such as where the license plate light is mounted, or you can drill a hole close to where the power wire is attached to the camera. (Fig. 4) Once you have chosen where the wire will enter the vehicle's body, remove the camera. If you able to use an existing opening, skip the next two steps.

Using an Existing Opening for Access

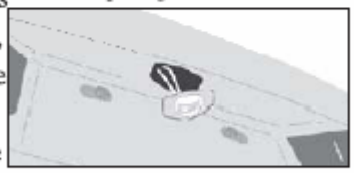


Fig. 3

Drilling an Access Hole

Fig. 4

6.If you are going to drill a hole, choose a location as close to the camera where the power wire 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 vehicles components, such as electrical parts or fuel system components behind where you are drilling, you must take whatever precaution is necessary not to damage them. Remove the license plate and camera before drilling.

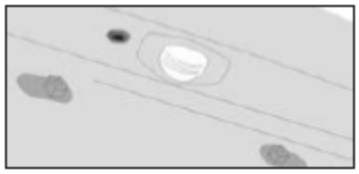


Fig. 5

7.After you have drilled a hole, insert the supplied grommet(Fig. 5), then pass the power wire through the grommet into the vehicle(Fig. 6). You must use the grommet to prevent the metal edge of the hole from cutting the power cable.

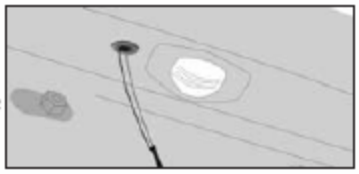


Fig. 6

8.Next you'll need to find the vehicle's reverse lights. Turn the vehicle's reverse lights. Turn the vehicle's ignition key to the accessory position, 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, they are the white lights.

Fig. 7

To locate the reverse light's 12/24VDC wire it will be necessary to gain access to the rear of the vehicle's tail light.

For help locating the vehicle's reverse light circuit contact your vehicle's manufacturer for vehicle specific wiring diagrams.

9.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 wire to prevent it from being caught on any vehicle component such as the trunk hinge(Fig. 7). Never route the cable on the outside of the vehicle.

10.The reverse light sockets on most vehicles have two wires connected to them. Usually the negative wire is black and the positive wire is a

colored wire. If you are uncertain about the wiring, you can use a 12/24 volt test light available at most auto parts stores to determine which is the positive wire.

a.Remove the reverse light socket from its housing, then remove the blub from the socket.

b.Engage the parking brake, turn the ignition key to the ON position, but do not start the vehicle. Put the gear shift in the reverse position.

c.Attach the ground wire of the test light to the vehicle ground, then touch one of the socket's contacts with the positive lead.

d.If the test light lights up, then the wire corresponding to that contact is the positive wire. If it doesn't light up the opposite wire is the positive wire.

Follow the manufacturer's instructions for the safe use of the test light.

11.After determining which wire is the positive and which is the negative, turn off the ignition key, then remove the battery's negative cable.

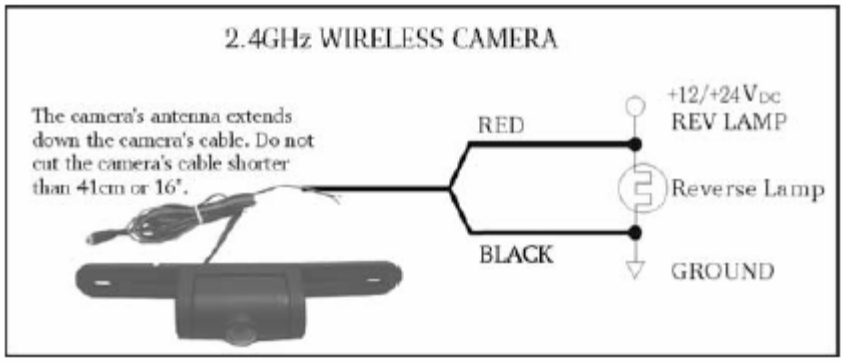
12.Following the In-Line Wire Connector instructions section, splice the Red wire using the supplied In-Line Wire Connector to the reverse light's positive(+) wire.
Use a set of slip joint pliers to squeeze the TAP and insure good connection.

13.Next splice the black wire of the camera's power wire to the reverse light's negative(-) wire or ground.

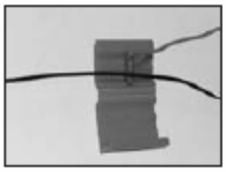
14.Replace the reverse light bulb, then re-install the light socket. Secure all the wire with cable ties or electrical tape. Re-attach the negative battery cable to the battery.

CAMERA WIRING DIAGRAM

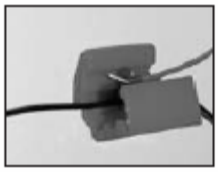
The camera is equipped with Reverse Voltage Protection. If the camera does not operate, please check that the Red wire is connected to positive (+) and the Black wire is connected to negative(-).



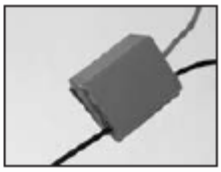
In-Line Wire Connector Instructions



Insert the existing wire to be tapped.



Insert the wire to be attached.



Crimp tap then close lock

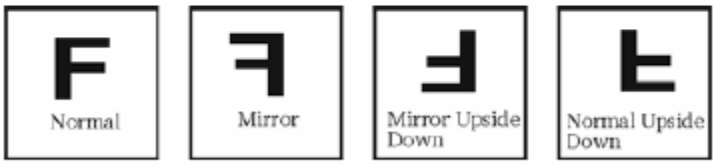
You do not need to use the In-Line Wire Connectors. The camera can be wired directly to the reverse light circuit by stripping the reverse light wires then twisting the camera wires to the exposed reverse light wires. Once connected, wrap with electrical tape. Do not attempt this if you are not knowledgeable with electrical installation practices.

TESTING THE SYSTEM

1.Re-attach the vehicle's negative battery cable.
2.Engage the parking brake and turn the ignition key to the ON position. DO NOT start the vehicle. Put the gear shift into reverse.
3.The camera will start broadcasting, and the monitor will detect the signal and turn itself ON. If the monitor does not come ON press the ON/OFF button.

4.If the image does not match your rear view mirror, press the top button on the monitor to change the image until it matches your rear view mirror.
5.When you take the gear shift out of reverse the camera will turn OFF, and the monitor will turn black.

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



There different views allow you to mount the camera and/or monitor either right aide up or upside down and still display the image correctly on the monitor. The image displayed should match your rear view mirror.
After testing the unit, fully tighten the license plate bolts.
Route all wire behind interior panels or under carpeting so they are hidden.
Use supplied cable ties to neatly gather any excess wire.

Keep camera lens and minotor clean to ensure optimum picture quality.

FCC INFORMATION

This device complies with part15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference,
(2) this device must accept any interference received, including interference that may cause undesired operation.
Changes or modifications not expressly approved by the party responsible for compliance could void the user’ s authority to operate the equipment.

SPECIFICATIONS

	Items	8910AQ
CAMERA	Imaging Sensor	CMOS
	Total Pixels	720×480(PAL) / 720×576(NTSC)
	Horizontal View Angle	80 degree
	Operation Frequency	2,468MHz
	Horizontal Resolution	410TV Lines
	Transmission Power	2mW/FCC,10wm/CE
	Minimum Illumination	5 Lux
	Modulation Type	FM
	Bandwidth	18MHz
	Power Supply	+12/+24VDC
	Consumption Current (Max.)	90mA
	Dimensions (W x D x H)	215 ×46×38mm
	Weight (about)	160g
	Operating Temperature	-20°C~+60°C/ -4°F~+140°F
RECEIVER	Modulation Type	FM
	Operation Frequency	2,468MHz
	LCD Screen Type	3.6″ TFT-LCD
	Effective Pixels	960 × 240
	Video System	NTSC/PAL
	Color Configuration	R.G.B.delta
	Received Sensitivity	≤-80dBm
	Consumption Current (Max.)	240mA
	USB Output Current (Max.)	150mA
	Unobstructed Effective Range(Min.)	50m
	Dimensions(W×D×H)	130 ×22×90(Excluding Bracket)mm
	Weight (About)	158g
	Power Supply Voltage	+12/+24VDC
	Operating Temperature	-10°C~+50°C/+14°F~+122°F
	Operating Humidity (Max.)	85%RH

* Actual transmission range may vary according to the weather, location, interference and building construction.
* All the specifications are subject to minor change without prior notice.

CAUTIONS

- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- Turn off the Camera/Receiver if the system is not in use.
- The adapter is used as the disconnect device from the mains. The adapter shall remain readily operable.
- The Camera/Receiver can only be completely disconnected from the mains by unplug the adapter.
- Do not cut the DC power cable of the apparatus to fit with another power source.
- Attention should be drawn to the environment aspects of battery disposal.

EU Environmental Protection

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

The graphics included are subject to minor change without notice.

FCC Warning:

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Changes or modifications to this unit not expressly approved by the party responsible for compliance will void the user's authority to operate the equipment. Any change to the equipment will void FCC grant.

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 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 connected.
--Consult the dealer or an experienced radio/TV technician for help.

The equipment compliance with FCC radiation exposure limit set forth for uncontrolled Environment