

# Digital Wireless Backup Camera System

Product Manual / Installation Instructions



Rear View Camera Systems

Model # RVS-091406

## What's in the Box?



- 1 Color MT9V136 Weather Proof Camera with Infra-Reds
- 1 4.3" TFT LCD Color Monitor
- 1 Cigarette Lighter Power Cable
- 1 Power Cable for Camera
- 1 Digital Transmitter
- Suction cup mount
- 1 Screw Kit for Installation

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# Introduction

Congratulations on purchasing a Rear View Backup Camera System! With this manual you will be able to properly install and operate the unit.

The Backup Camera System is intended to be installed as a supplement aid to your standard rear view mirror that already exists in your vehicle. The Backup Camera System should not be used as a substitute for the standard rear view mirror or for any other mirror that exists in your vehicle.

In some jurisdictions, it is unlawful for a person to drive a motor vehicle equipped with a TV viewer or screen located forward of the back of the driver's seat or in any location that is visible, directly or indirectly, to the driver while operating the vehicle.

## Safety Information

Please read the entire manual and follow the instructions and warnings carefully. Failure to do so can cause serious damage and/or injury, including loss of life. Be sure to obey all applicable local traffic and motor vehicle regulations as it pertains to this product. Improper installation will void manufacturer's warranty.

### USAGE

- The Rear View Camera System is designed to help the driver safely detect people and/or objects helping to avoid damage or injury. However, you the driver, must use it properly. Use of this system is not a substitute for safe, proper or legal driving.
- Never back up while looking at the monitor alone. You should always check behind and around the vehicle when backing up, in the same way as you would if the vehicle did not have the Rear View Camera System. If you back up while looking only at the monitor, you may cause damage or injury. Always back up slowly.
- The Rear View Camera System is not intended for use during extensive back-up maneuvers or backing into cross traffic or pedestrian walkways.
- Please, always remember, the area displayed by the Rear View Camera System is limited. It does not display the entire panorama that is behind you.

# Safety Information

## INSTALLATION

- Electric shock or product malfunction may occur if this product is installed incorrectly.
- Use this product within the voltage range specified. Failure to do so can cause electronic shock or product malfunction.
- Take special care when cleaning the monitor.
- Make sure to firmly affix the product before use.
- If smoke or a burning smell is detected, disconnect the system immediately.
- Where the power cable may touch a metal case, cover the cable with a friction tape. A short circuit or disconnected wire may cause a fire.
- While installing the Rear View System be careful with the wire positioning in order to avoid wire damage.
- The Rear View System should only be used when the vehicle is in reverse.
- Do not watch movies or operate the monitor while driving; as it may cause an accident.
- Do not install the monitor where it may obstruct drivers view or obstruct an air bag device.
- Dropping the unit may cause possible mechanical failure.

## Safety Information

If you have questions about this product, contact:

Customer Service:  
Rear View Safety  
1797 Atlantic Avenue  
Brooklyn, NY 11233  
Tel: 800.764.1028

IN NO EVENT SHALL SELLER OR MANUFACTURER BE  
LIABLE FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES OF  
ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM  
ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.



## Settings/Maintenance

We recommend doing a benchmark test before installation to insure that all components are working properly.

### SYSTEM COMES PAIRED.

- But if there is no image on monitor, your system is NOT paired and needs to be paired. (see page 13)

#### Camera Connection:

- Locate the clearance lights wiring on your vehicle. You may need to remove the interior panel in order to locate. Connect the power cables for camera: Red wire to light's positive; Black wire to chassis ground.

#### Monitor Connection:

- Firmly insert the lighter plug to cigarette lighter socket. Do not install the monitor where it may obstruct driver's view or obstruct and air bag device.
- 

### Cleaning

- If dirt, rain or snow attaches to the camera, the monitor may not clearly display objects.
- Do not use alcohol, benzene or thinner to clean the camera. This will cause discoloration. To clean the camera, wipe with a clean cloth dampened with mild cleaner diluted with water and then wipe with a dry cloth.



# Installation Guide

Diagram A

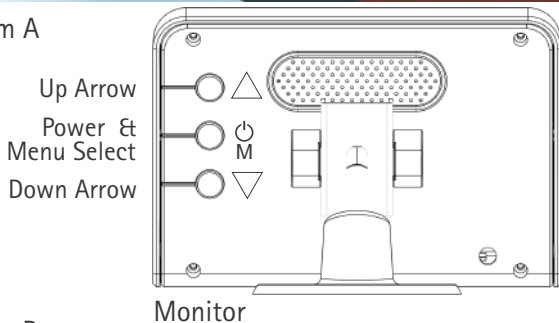
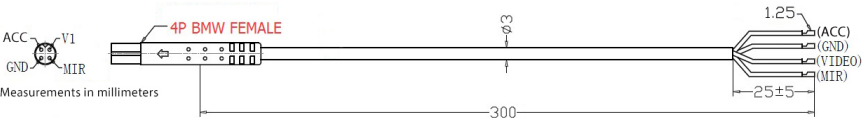
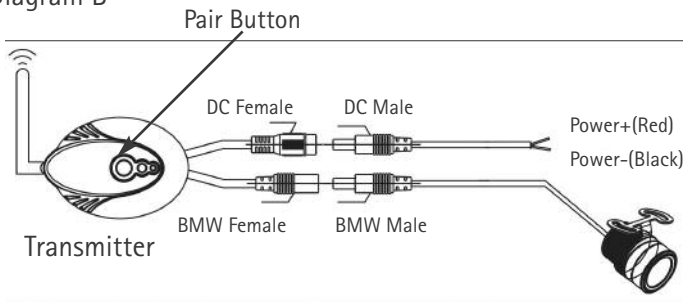


Diagram B



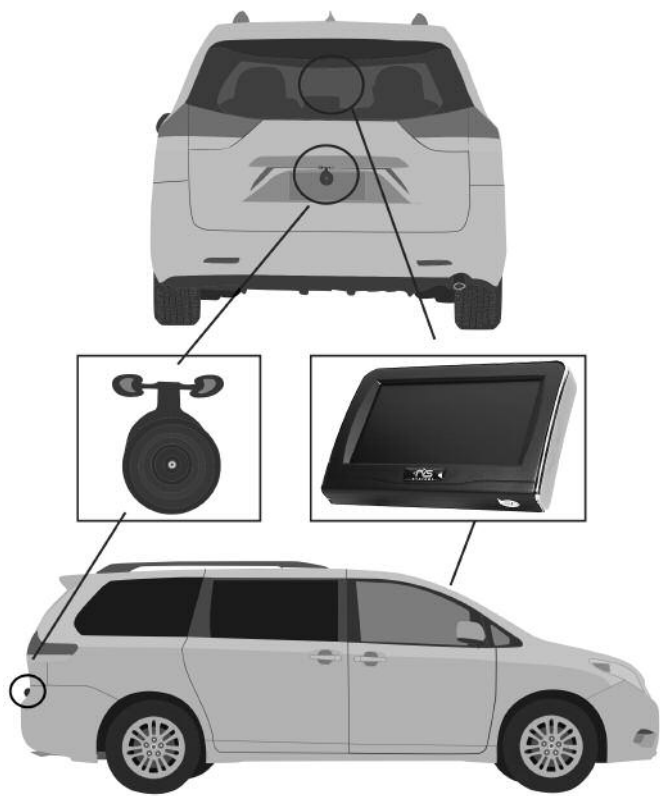
## Installation Guide

1. Locate the reverse taillights wiring behind your reverse light. You may need to remove the interior panel in order to locate. You only need to attach the signal booster power wire to ONE of the reverse lights, not both. If you cannot manually locate the tail light cables, please contact the vehicle manufacturer or reference a wiring diagram for your vehicle.
2. At your taillight, remove the light bulb socket from the reverse light housing.
3. Determine the reverse light power wires for your car, designating the positive and negative wires.
4. Connecting the Power Cables:  
Insert the power cable into the transmitter (red input).  
Connect red wire to reverse light's positive wire.  
Connect black wire to reverse light's negative wire.
  - Plug the attached wire from the Camera into the Wireless Transmitter. Ensure that the wires are not tangled.
  - Determine the best place to mount the Transmitter. The Transmitter is not waterproof and needs to be protected.
5. Determine the best route for the Camera Cable from the top of your license plate to the Transmitter. You may need to drill a small hole in the panel behind where the license plate is situated.

## Installation Guide

6. While sitting in the driver's seat of the car with the key in the ignition position. The monitor will automatically start when vehicle is put in reverse. If when you place the vehicle in reverse there is no image, you may need to pair the camera with the monitor. (see page 13)
  7. Put the vehicle in reverse. If you have a clear picture, put the vehicle back in park and turn the key to the off position. You are now ready for final step.
  8. Take the Wireless Transmitter and using the double sided 3M Sticker attach the box to the inside of your car.
  9. Replace the light socket back into the reverse light housing.
  10. Replace any interior panels that may have been removed to access the taillight and close your trunk or rear hatch.
- 1. Power ON/OFF**
    - The Dash Monitor will automatically turn ON when it is connected to a power source, and the camera is receiving power.
  - 2. Rearview Image**
    - Rearview image will automatically appear on the screen during reverse and will remain in standby when the vehicle is in any other gear.

## Positioning



## Pairing & Connecting

Pairing is not necessary as the unit has already been paired. If you are not able to connect the camera, please try to pair the camera by the following steps:

1. Press "Pair" button See page 9, Diagram B) on the Wireless Digital Transmitter. You will see the LED Blinking in RED/BLUE. The unit will remain in Pair mode for 15 seconds
2. Go to the monitor and do the following step:
  - a. Press "MENU"
  - b. Go to camera settings, push menu again to start pairing sequence. (Below Figure 1)
  - c. The unit is now in pair mode - if the unit was able to search and connect with the camera, the display will show "Pair OK". (If you see "Timed Out", please repeat all steps.)
  - d. Press and hold "MENU" button on rear of monitor (see page 9, Diagram A) until picture appears.
3. Distance Grid: select grid line on/off.



Figure 1



Figure 2

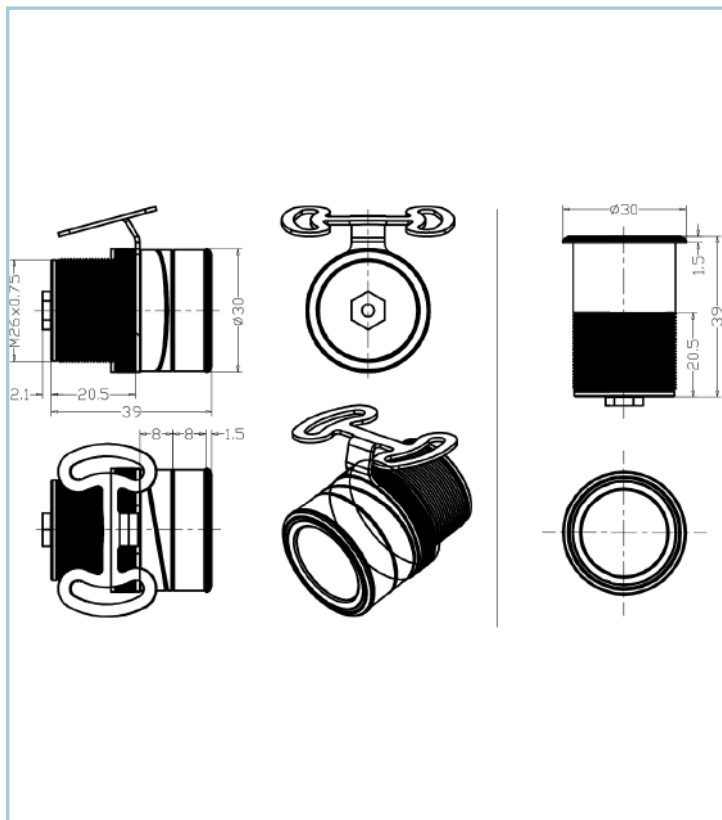
## Monitor Dimensions



# Monitor Specifications

TFT LCD Monitor	
Screen Size	4.3"
Dot Resolution	1400(H) x 234 (V)
Display Format	16:9
Display Brightness	350cd/m <sup>2</sup>
Viewing Angle	90° Min
Video Input	1 channel
Video Source	1Vp-p, 75Ω
Power Supply	DC 12V-24V (+/- 10%)
Power Consumption	5W
Operating Temperature	-10°C ~ +65° C
Video System	Auto NTSC/PAL
Overall Dimensions	5"L x 4"H x 1"D
Weight	400G
Impact Rating	5G
Active Area	154.08(h) x 86.58(v)
Sync System	Internal

# Camera Dimensions





## Camera Specifications

Camera	MT9V136
Picture Elements	250,000 pixels
Gamma Correction	$r=0.45$ to 1.0
Image Sensor	420TV lines, PAL 500(h)x 582(v),NTSC:510(h)x492(v)
Lens	2.1mm
View Angle	130°
Sync System	Internal Synchronization
Infrared distance	30 Feet (9 Infrared)
Usable Illumination	0 Lux (IR On)
Power Source	DC 12V-24V (+/- 10%)
S/N Ratio	More than 48dB
Electronic Iris	1/50, 160-1/100,000sec
Video Output	1Vp.p 75ohm
IR Switch Control	ACDS Automatic Control
Impact Rating	10G / 100G
Operating Temperature	-10°C ~ +50°C/RH 95% Max
Storage Temperature	-25°C ~ +60°C/RH 95% Max

# Troubleshooting

## Monitor Displays Blue Screen & Displays No Signal

- Do a hard reset, unplug all cables and power cables from multiplexer (silver box) leave out for 1 minute and then re-connect them.
  - Check to ensure that the connection to the camera is tight.
  - Verify camera cable is plugged into port labeled Backup Camera
  - Verify that the blue positive trigger on power harness is put to power 12v+.
- If the problem still persists, verify that alternate ports work. If alternate ports do not work, remove Blue Trigger wire from 12V+ and select alternate channels.

## Monitor Will Not Power-Up (no backlight on power button)

- Check fuse
- Check 12v+ to monitor
- Check ground connection

## No Image On Screen

- Verify camera is on correct camera input
- Verify cable is connected to monitor
- Verify camera is connected to cable
- Connect known working camera and cable to monitor.
- Verify Blue trigger is receiving power

## Audio on Camera

- Verify chosen camera has audio
- Verify volume setting
- Confirm that the Blue audio trigger is connected to 12v+

## One Year Warranty

Rear View Safety, Inc. warrants this product against material defects for a period of one year from date of purchase. We reserve the right to repair or replace any such defective unit at our sole discretion.

Rear View Safety, Inc. is not responsible for a defect in the system as a result of misuse, improper installation, damage or mishandling of the electronic components. Rear View Safety, Inc. is not responsible for consequential damages of any kind.

This warranty is void if: defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; the damage is due to normal wear and tear, this damage is due to abuse, improper maintenance, neglect or accident; or the damage is due to use of the Rear View Safety, Inc. system after partial failure or use with improper accessories.

## Warranty Performance

DURING THE ABOVE WARRANTY PERIOD, SHOULD YOUR REAR VIEW SAFETY PRODUCT EXHIBIT A DEFECT IN MATERIAL OR WORKMANSHIP, SUCH DEFECT WILL BE REPAIRED WHEN THE COMPLETE REAR VIEW SAFETY, INC. PRODUCT IS RETURNED, POSTAGE PREPAID AND INSURED, TO REAR VIEW SAFETY, INC. OTHER THAN THE POSTAGE AND INSURANCE REQUIREMENT, NO CHARGE WILL BE MADE FOR REPAIRS COVERED BY THIS WARRANTY.

## Warranty Disclaimers

NO WARRANTY, ORAL OR WRITTEN, EXPRESSED OR IMPLIED, OTHER THE ABOVE WARRANTY IS MADE WITH REGARD TO THIS REAR VIEW SAFETY, INC. REAR VIEW SAFETY, INC. DISCLAIMS ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE AND ALL OTHER WARRANTIES IN NO EVENT SHALL REAR VIEW SAFETY, INC. LIABLE FOR ANY INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES OR FOR ANY COSTS, ATTORNEY FEES, EXPENSES, LOSSES OR DELAYS ALLEGED TO BE AS A CONSEQUENCE OF ANY DAMAGE TO, FAILURE OF, OR DEFECT IN ANY PRODUCT INCLUDING, BUT NOT LIMITED TO, ANY CLAIMS FOR LOSS OF PROFITS.

## Disclaimer

Rear View Safety and/or its affiliates does not guarantee or promise that the user of our systems will not be in/part of an accident or otherwise not collide with an object and/or person. Our systems are not a substitute for careful and cautious driving or for the consistent adherence to all applicable traffic laws and motor vehicle safety regulations. The Rear View Safety products are not a substitute for rearview mirrors or for any other motor vehicle equipment mandated by law. Our camera systems have a limited field of vision and do not provide a comprehensive view of the rear or side area of the vehicle. Always make sure to look around your vehicle and use your mirrors to confirm rearward clearance and that your vehicle can maneuver safely. Rear View Safety and/or its affiliates shall have no responsibility or liability for damage and/or injury resulting from accidents occurring with vehicles having some of Rear View Safety products installed and Rear View Safety 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. In no event shall Rear View Safety and/or its affiliates have any liability for any losses (whether direct or indirect, in contract, tort or otherwise) incurred in connection with the systems, including but not limited to damaged property, personal injury and/or loss of life. Neither shall Rear View Safety and/or its affiliates have any responsibility for any decision, action or inaction taken by any person in reliance on Rear View Safety systems, or for any delays, inaccuracies and/or errors in connection with our systems functions.





**If you have any questions  
about this product, contact:**

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Brooklyn, NY 11233  
800.764.1028**

**BETTER CAMERAS. BETTER SERVICE.  
IT'S OUR GUARANTEE.**

