



# Instruction Manual

*G-Series Backup Camera System  
With Built-In Hidden Dash Camera*

RVS-776718-HBB



 **REAR VIEW  
SAFETY**  
A Safe Fleet Brand



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## NOTE!

***Please read all of the installation instructions carefully before installing the product. Improper installation will void manufacturer's warranty.***

***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.

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.

## 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 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.

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

***Rear View Safety  
1797 Atlantic Avenue  
Brooklyn, NY 11233  
Tel: 1.800.764.1028***

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.



Before drilling please check that no cable or wiring is on the other side of the wall. Please clamp all wires securely to reduce the possibility of them being damaged while vehicle is in use. Keep all cables away from hot/moving parts and electrical noisy components.

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

Step 1: Choose the monitor and camera locations.

Step 2: Install all cables in vehicle, when necessary a 0.8 (20mm) hole should be drilled for passing camera cable through vehicles walls. Install split grommets where applicable.

Step 3: Once all cables and wiring have been properly routed, perform a system function test by temporarily connecting the system.

### *Camera*

1. Attach camera bracket close to rear marker lights, centered on vehicle.
2. Attach camera to bracket using screws provided and adjust the angle.

### *Cable*

1. Be sure to position the cable properly. The camera cable uses aircraft grade connectors which means the camera cable can be exposed to all weather elements. Do not run the cable over sharp edges, do not kink the cable and keep away from HOT and rotating parts.
2. Fasten all cables and secure all excess cable.

### *Monitor*

1. To Attach the Pedestal mount to the dashboard or to the head-liner use self-tapping screws and/or the adhesive pad.
2. Attach monitor to mount, and adjust mounting angle to allow optimum driver viewing comfort. (see figure 1.1 on page 12)



## *Wiring*

After connecting the camera to the “camera cable” the camera should be plugged into AV2 input. Connect the RED 12V power wire to a ignition power source and the BLACK 12V ground wire to a chassis ground. The GREEN wire is the REVERSE trigger wire. Connect this wire to the vehicle’s backup light circuit to activate the rear-view image whenever the vehicle shifts into reverse. To connect additional cameras, connect to the corresponding input. Figure 2.1, Figure 2.2

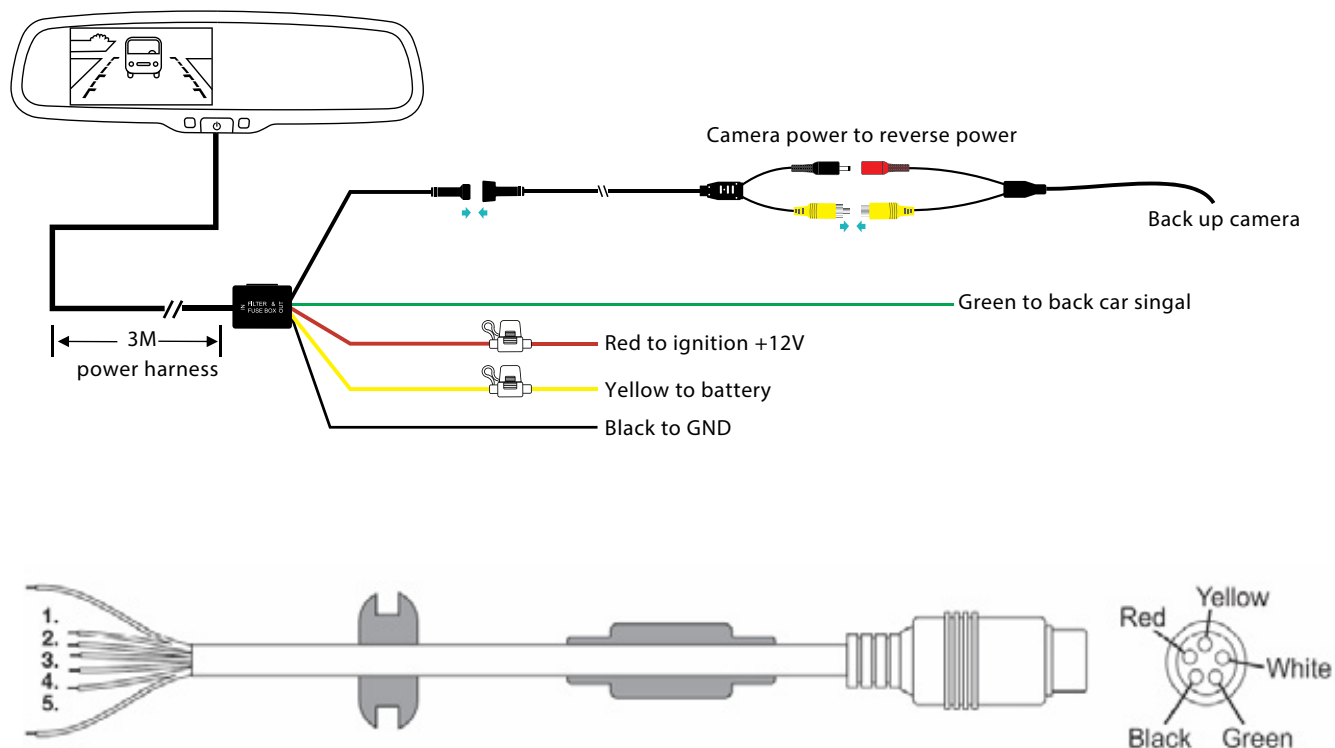
## *Precautions for use of Mirror Monitor*

- I.** The Mirror Monitor is made of glass. Do not subject it to a mechanical shock by dropping it from a high place, etc.
- II.** Do not apply excessive force to the monitor surface or the adjoining areas since this may cause the color tone to vary.
- III.** Clean with a soft dry cloth and/or Windex only.
- IV.** Do not attempt to disassemble the mirror monitor.

## *Safety*

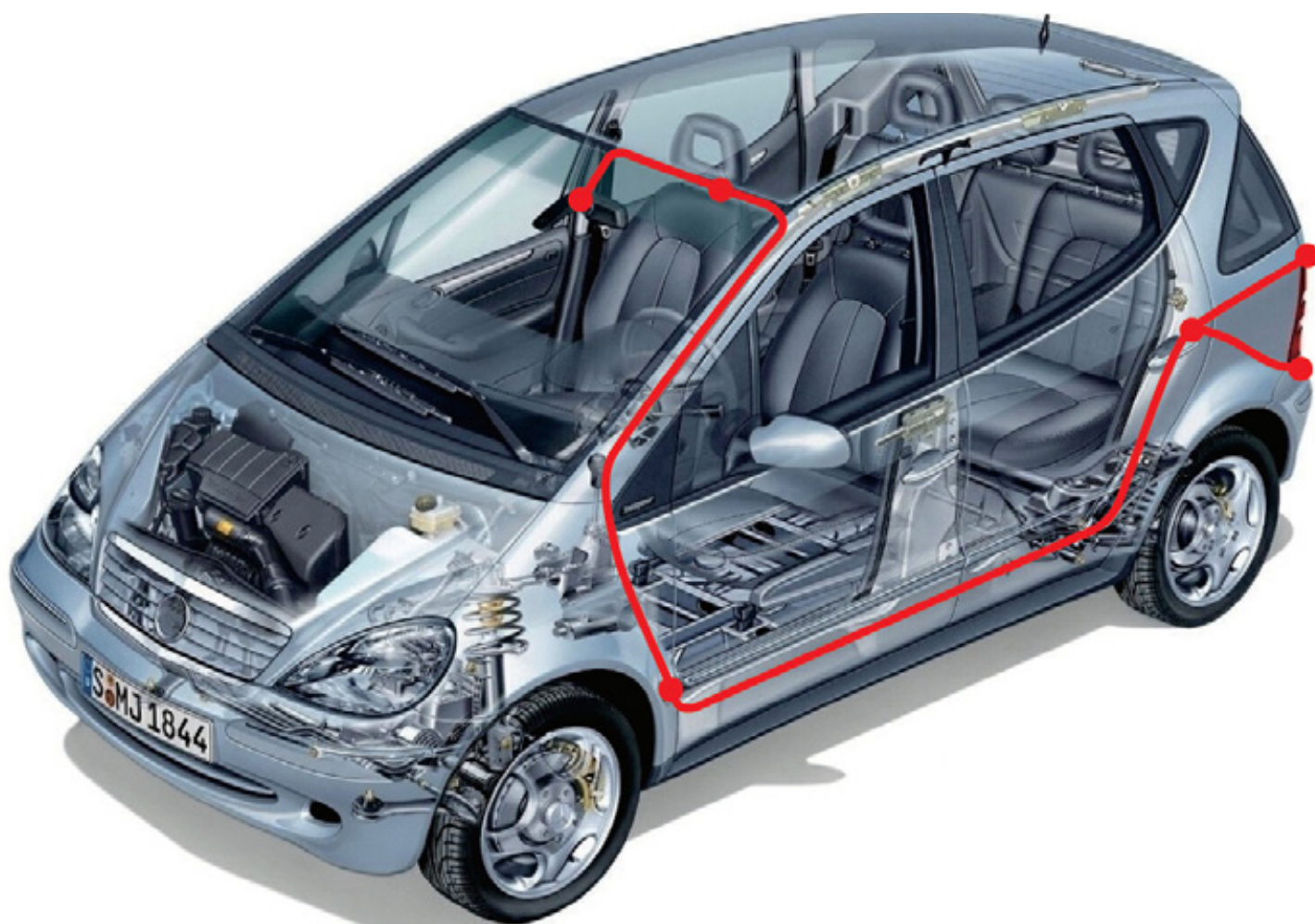
- Before drilling, be sure no cable or wire is on the other side.
- Feed as much cable as possible into vehicle & clamp securely. This reduces the possibility of cable being hooked or snagged.

**FIGURE 2.1**



1. RED- Power (+)
2. YELLOW- Video
3. GREEN- Mirror / Normal Imaging
4. WHITE- Audio
5. BLACK- Ground (-)

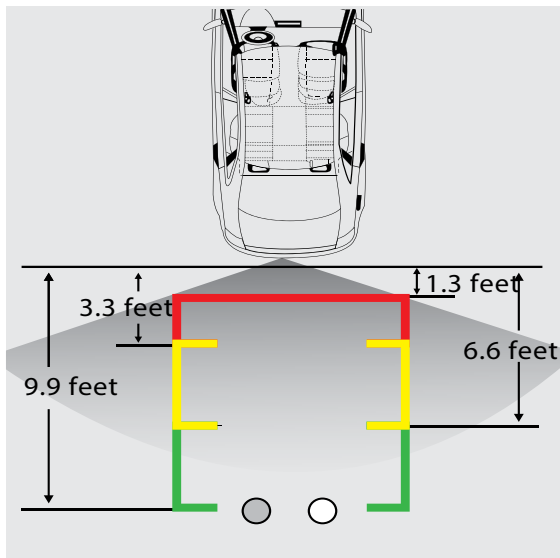
**FIGURE 2.2**



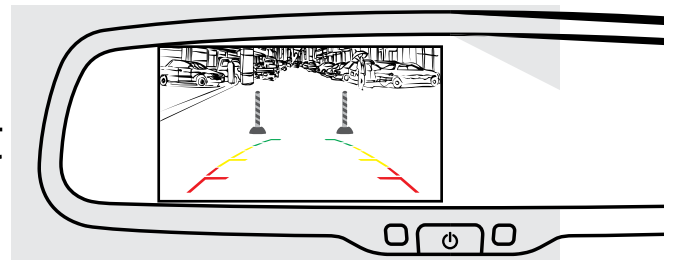
INSTALLATION AND WIRE

## Grid Lines

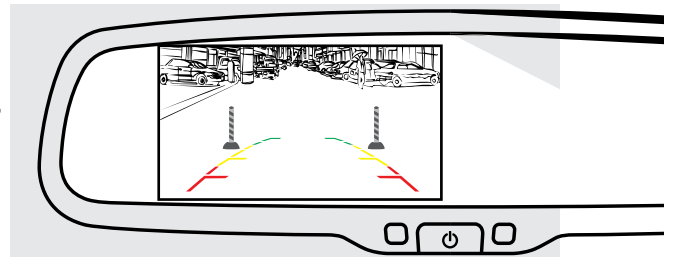
Generally, to help drivers estimate the distance from obstacles, there are three lines for reference- red, yellow, and green. Those three lines are displayed on the monitor when car is reversing. The green line is 10 feet from the back of the car and the yellow line is 6.5 feet away. The distant red line is 3.3 from the backside of car while the closed red line is 1.3 feet from the car. Both reference lines on the left and right should leave 0.65 feet from the car.



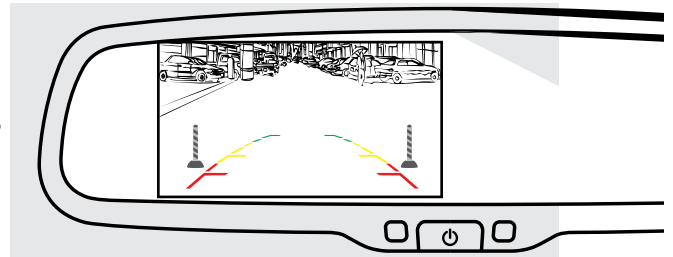
9.9 feet



6.6 feet

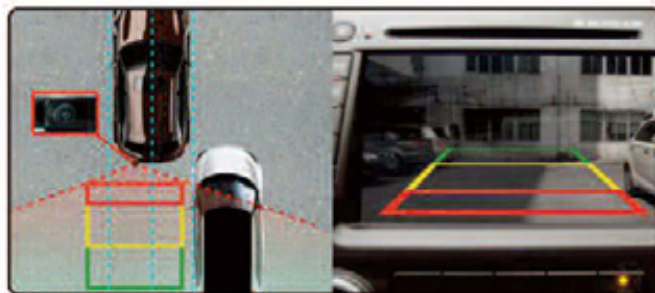
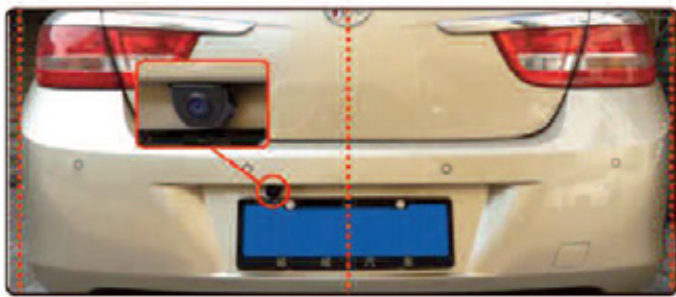


3.3 feet

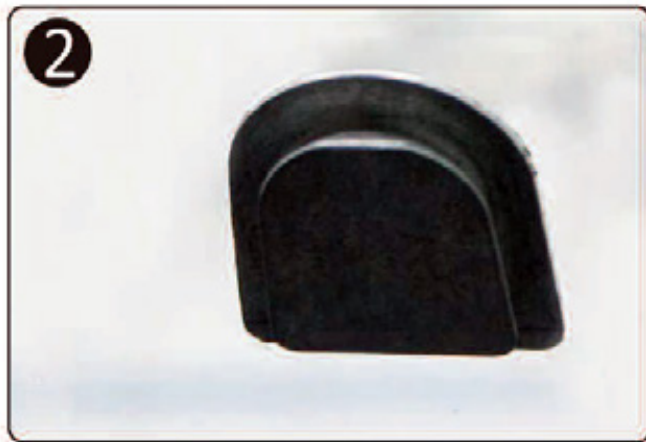


## Accuracy

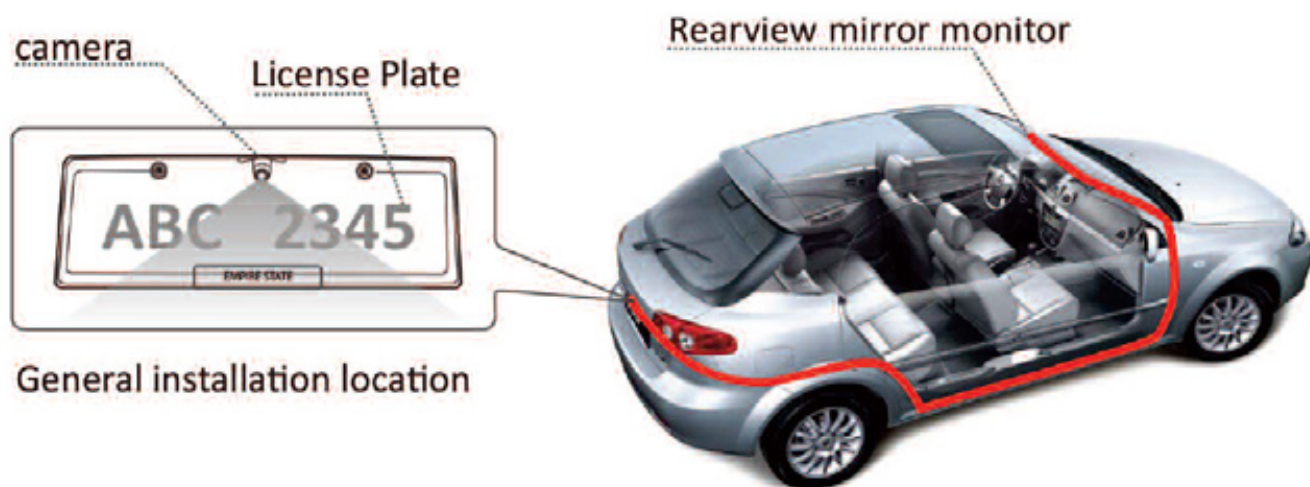
The accuracy of the grid-lines can vary based on how you angle your camera. Therefore to compensate for inaccuracies, you can adjust the grid lines to your camera angle.



**FIGURE 1.1**

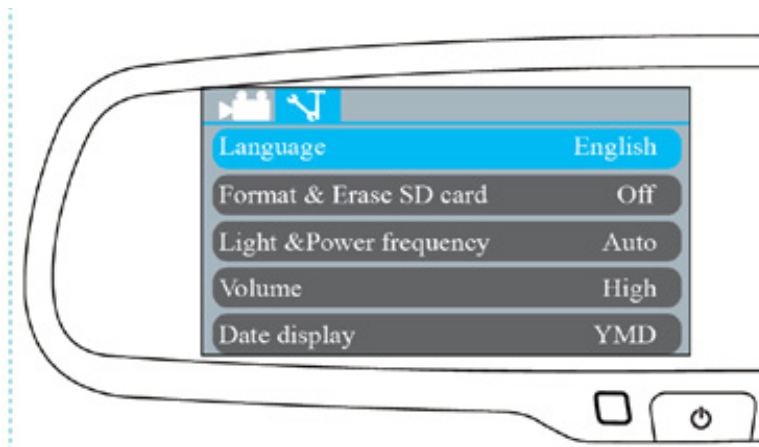


**FIGURE 1.2**



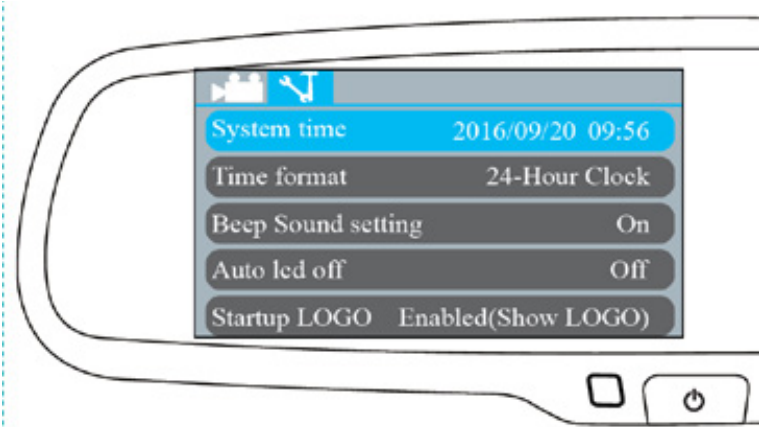


## Language



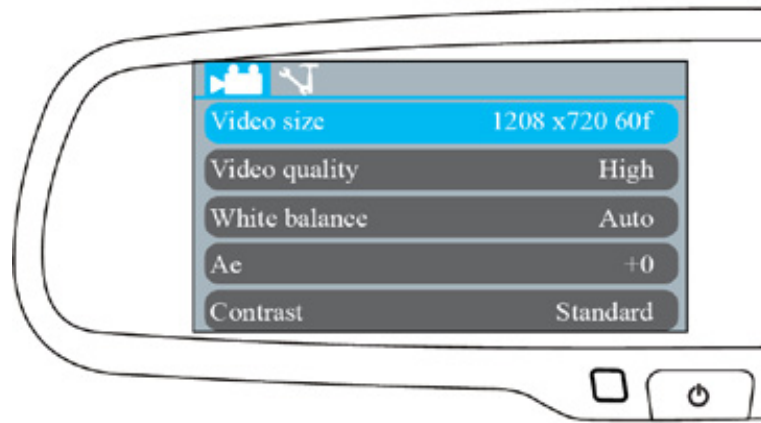
To toggle between 12 languages, first stop recording. Press "Menu" twice to enter system setting menu. Toggle to "Language" with UP/DOWN buttons. Press "REC" to toggle language.

## System Time

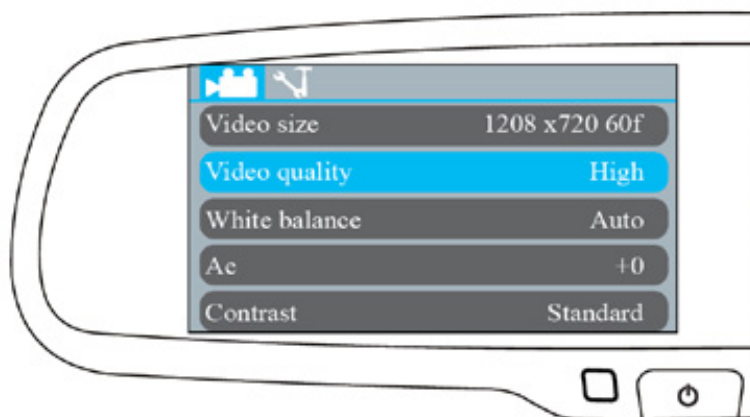


To adjust system time, first stop recording. Press "Menu" twice to enter system setting menu. Toggle to "Language" with UP/DOWN buttons. Find "System Time" and set the date/time with the UP/DOWN buttons. Press "REC" to switch to the next setting.

## Video Size

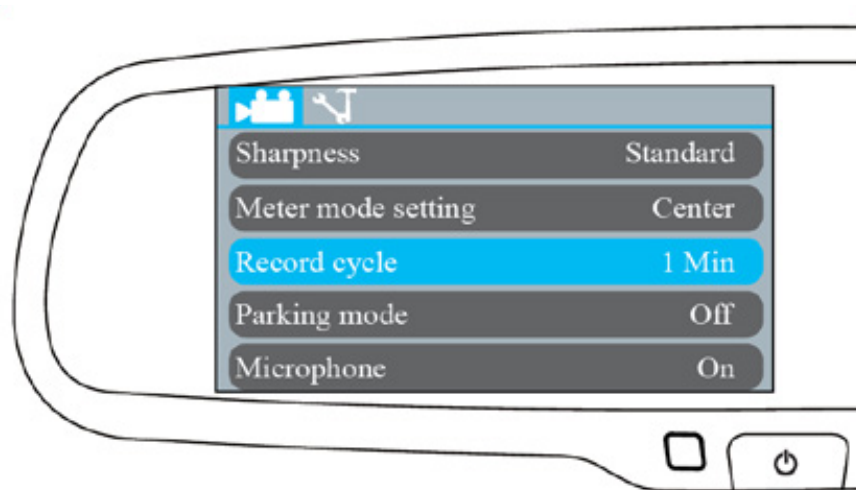


The 4 sizes of video are HDR 1920x1080 30f, 1280x720 60f, 1280 x 720 30f and 7920x1080 30f. To toggle video size, first stop recording. Press "MENU" to enter system setting menu. Toggle to "Video Size" with UP/Down Buttons. Press "REC" to select a different video size.



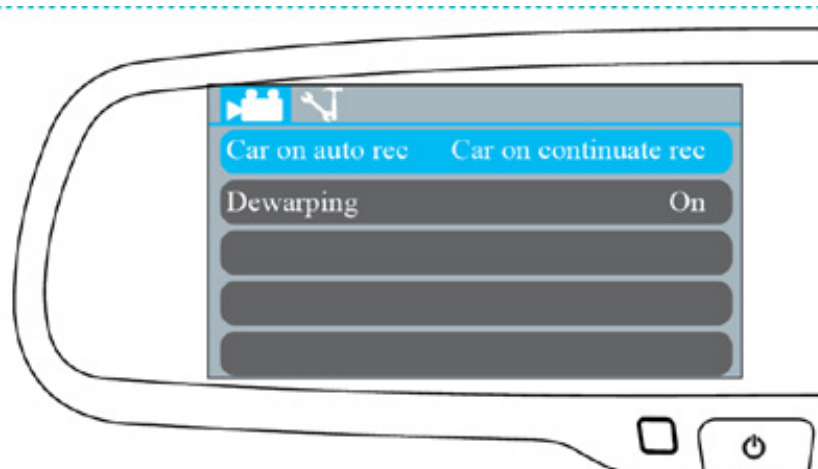
To toggle video quality, first stop recording. Press "MENU" to enter system setting menu. Toggle to "Video Quality" with UP/Down Buttons. Press "REC" to toggle between "High", "Normal", and "Low."

## Record Cycle



To adjust record cycle, first stop recording. Press "Menu" to enter video setting menu. Use Record Cycle to toggle the length of each video clip between 1 Min/3 Min/5 Min.

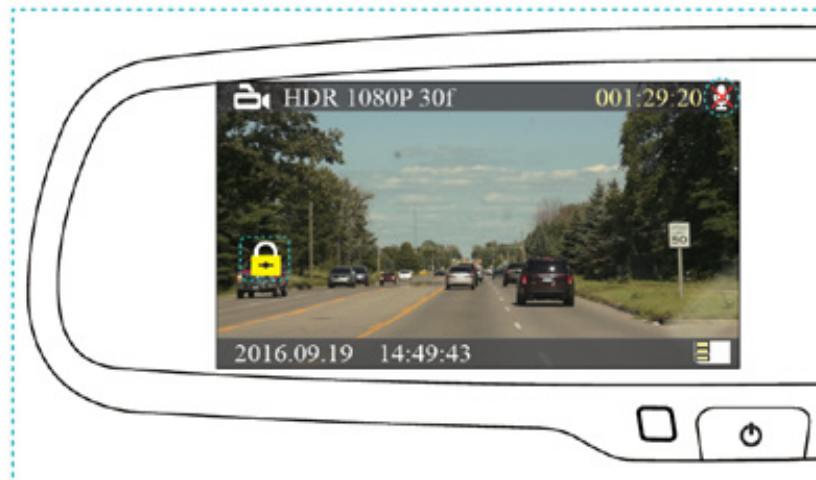
## Auto Record



To adjust record cycle, first stop recording. Press "Menu" to enter video setting menu. Use this setting to toggle auto start on/off.



## Video Recording



While recording, press "MENU" to save current video as a read-only file. Mode to turn volume on/off. In non HDR record mode, press "DOWN" to save current frame as a photograph.



To adjust record cycle, first stop recording. Press "Mode" to enter photograph mode. Press "REC" to take a picture and press "MENU" to toggle resolution/quality.

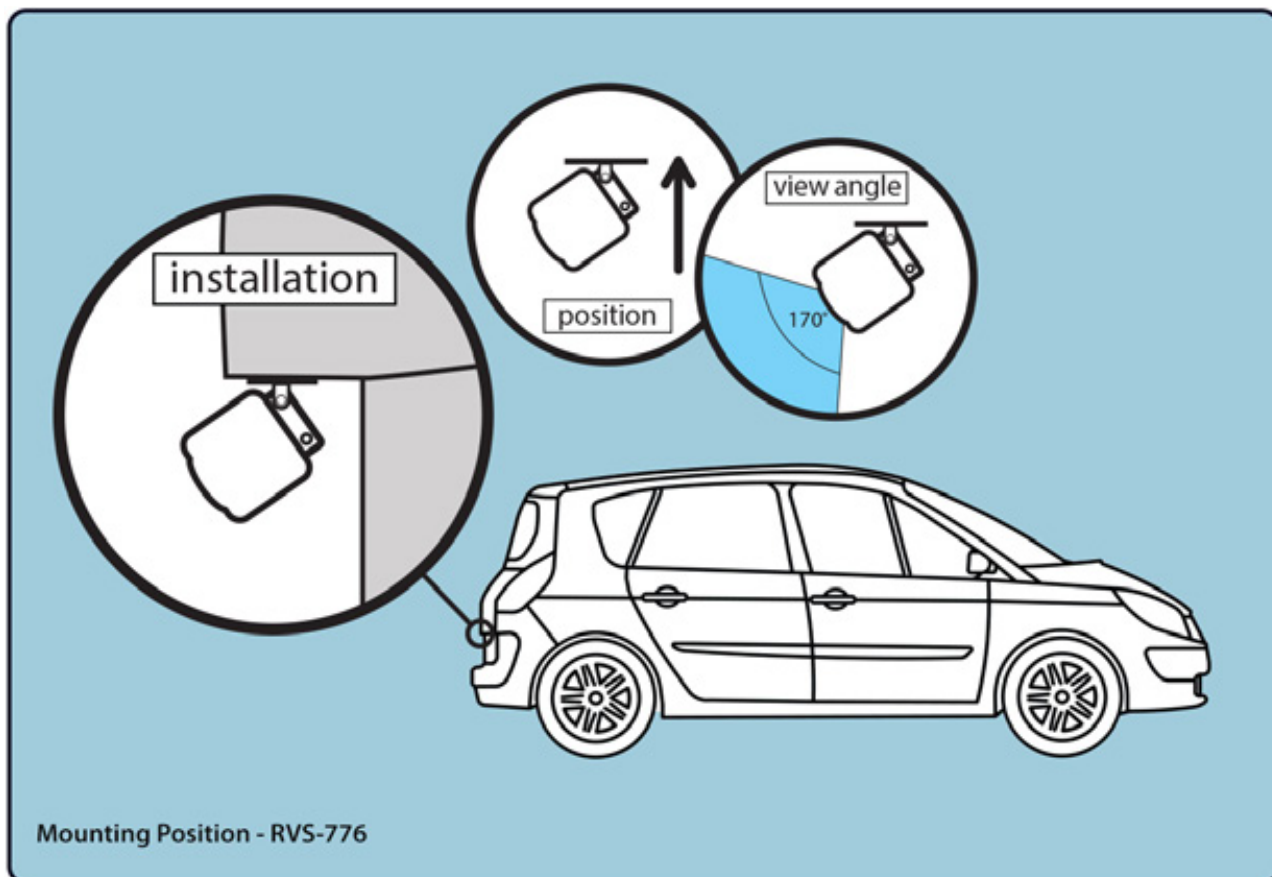
## Hidden Dash Camera



### Full HD Hidden Dash Camera

The camera facing out the windshield records in Full HD 1080p resolution at 30fps

## Mounting Position



## Monitor Information



Screen Size	4.3" (16:9 TFT display)
CPU	Ambarella A7
Memory/Flash	32MB/1GB
Image Sensor	CMOS OV4689-H67A
Video Resolution	1920x1080 30FPS / 1280x720 60FPS /1280x720 30FPS
SD/TF Card	64GB maximum capacity
Power Source	DC 9V - 32V
Focus	12cm-Infinite
Audio	Built-in microphone/speaker
Operating Temperature	Auto NTSC/PAL
Overall Dimensions	-20°C ~ +65°C
Dimensions	800G
Vibration Rating	3.15" (H) x 10.55" (L) x 1" (D)

## Camera Information



Camera	MT9V139
Sensor Format	728 (H) X 560 (V)
NTSC Output	720 (H) X 480 (V)
PAL Output	720 (H) X 576 (V)
Optical Format	1/4"
Lens	2.1mm
TV Lines	480
Viewing Angle	170°
Weatherproof Rating	IP68
Night Vision	Yes
Usable Illumination	0.5 Lux
Power Source	DC 12V-24V (+/- 10%)
S/N Ratio	48dB
Electronic Iris	1/50, 160-1/100,000sec
Cable Length (From Camera)	5.8'
Video Output	1Vp-p, 75 Ω
Shutter Type	Electronic Rolling Shutter (ERS)
Vibration and Shock Rating	10G / 100G
White Balance	Auto
AGC	Auto
Operating Temperature	-40°C ~ +70°C / RH 95% Max
Storage Temperature	-40°C ~ +70°C / RH 95% Max
Overall Dimensions	0.83" (H) x 1.81" (L) x 0.79" (D)

## ***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, NEGLIGENCE 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 MERCHANT-ABILITY 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:

***Rear View Safety, Inc.  
1797 Atlantic Avenue  
Brooklyn, NY 11233  
800.764.1028***

***Better Cameras. Better Service.  
IT'S OUR GUARANTEE.***

