Please read this manual before using system. The product may be different from how it is described based on what software version is being used.
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① Record key    ② Left/CH L Shortcut key    ③ Left/CH L Shortcut key    ④ Menu
⑤ Down/CH B Shortcut key    ⑥ Up/CH F Shortcut key    ⑦ OK/Dual/Triplex/Quad Swith    ⑧ Power
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 or 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.
Monitor Features
- Monitor is very durable and can be used with tractors, harvesters, passenger buses or other heavy duty vehicles
- 7" high resolution color TFT-LCD monitor, 4 video inputs, multiple viewing options (single/dual/tri/quad)
- Built-in DVR supports 256M-32G SD cards
- Power input: DC11-32V
- Brightness: 400 cm/m2 (LED backlight display has constant voltage/current circuit protection. This prolongs LED life and raises the working temperature range)
- PAL/NTSC
- Monitor circuit has battery reverse protector (+/-)
- Monitor OSD menu features: trigger delay setting, 4 channel image modes (NOR/MIR/UP/DOWN), adjustable display mode for each trigger cable
- Shortcut key (↑, ▼, ←, →) to each channel single image display
- Some display modes can be turned ON/OFF, adjustable trigger priority
Operating Precautions
1. The device may be powered by a 12/24 volt battery or the vehicle's electrical system.
2. Make sure all cables are connected properly. Improper cable connections may damage the monitor. Remove power cable connections when not using monitor.
3. The back-up battery can be recharged when the power is on.
4. When battery is fully charged, recharging will automatically stop.
5. If battery is not used for a while, it may take longer to charge.

Warning!

1. This monitor is high voltage. Only professionals should open the monitor's case.
2. Do not watch the video while driving unless you are monitoring the rear view camera display.

Special Note
Occasionally, a few highlights or dark spots may appear on the LCD screen. This doesn’t necessarily indicate any monitor defects. Never try to repair this device yourself. If any problems occur, immediately turn the display off and notify our company or an authorized dealer. Any disassembly or modification may lead to damage and will also void the warranty.
### Monitor Technical Parameters

<table>
<thead>
<tr>
<th>Display Device</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>7inch</td>
</tr>
<tr>
<td>Interface</td>
<td>Digital TTL</td>
</tr>
<tr>
<td>Resolution</td>
<td>800×(RGB)×480</td>
</tr>
<tr>
<td>View Angle (LR/UD)</td>
<td>140 / 110</td>
</tr>
<tr>
<td>Contrast Ratio</td>
<td>500:1</td>
</tr>
<tr>
<td>Brightness(nits)</td>
<td>400</td>
</tr>
<tr>
<td>Response Time(ms)</td>
<td>25</td>
</tr>
<tr>
<td>Video Image Compression</td>
<td>MPEG-4</td>
</tr>
<tr>
<td>Recording Audio Compression</td>
<td>PCM</td>
</tr>
<tr>
<td>Recorder Storage</td>
<td>SD card(256M-32G)</td>
</tr>
<tr>
<td>Video storage format</td>
<td>ASF</td>
</tr>
<tr>
<td>Application Power Supply</td>
<td>1.AC power supply—AC Adapter (DC11-32V)</td>
</tr>
<tr>
<td></td>
<td>2. Automobile storage battery(12V/24V) Automobile adapter</td>
</tr>
<tr>
<td>Speaker</td>
<td>16Ω/1W</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>8W Max (Without load)</td>
</tr>
<tr>
<td>Connector</td>
<td>DVI24+1</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>−20℃～+70℃</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>−30℃～+80℃</td>
</tr>
<tr>
<td>External dimension (mm)</td>
<td>185mm<em>123mm</em>50mm</td>
</tr>
</tbody>
</table>

#### Accessories

- U-support bracket & screws
- Remote
- Split cable
**Remote Control Operation**

**Note:** Make sure polarity is not reversed when installing CR2025 (3V) battery. This may cause damage.
Monitor OSD Menu Operation

Pressing the "MENU" button will display MONITOR/DVR. Select an option by pressing the "OK" button. These are the monitor options.

1. Picture: ![Picture Icon]

![Monitor OSD Menu Options](image)

The Brightness/Contrast/Saturation may be adjusted from 0 - 100. The default is 50.

Hue may be adjusted from -5 - 5. The default is 0.
2. Channel Reverse Setting:

Use this setting to toggle between normal and mirror views. Press ↑↓ to toggle the image view.
3. Channel Switch:

There are 9 display modes: single image (F, B, L, R), dual image (F/B, L/R), triplex image (B/L/R) and quad (F/B/L/R, "H" shaped)

Use the channel switch to turn the 6 menu modes ON/OFF.

Single image (B,F) and dual image (F/B) modes are always on.
4. Trigger Setting:

Each trigger cable can be set to trigger any display mode.

Trigger function isn’t available if there is "X" near the option.

**Note:** Options cannot be changed while the system is triggered.
5. Reverse Priority Setting: [ ]

Trig Priority 1  T1 B
Trig Priority 2  T2 L X
Trig Priority 3  T3 R
Trig Priority 4  T4 F

Use this setting to change your trigger priority. Reverse priority isn’t permitted if there is "X" near the option.
5. Trigger Delay Setting:

You may change how long a monitor stays in the view after a trigger is stopped. The options are 0 secs / 5 secs / 10 secs / 15 secs / 20 secs / 25 secs / 30 secs. The default is 0 secs.

**Note:** If the display mode is turned off, this setting will not work. Options cannot be changed while the system is triggered.
7. System Setting:  

Auto Bright  
Screen brightness automatically adjusts depending on ambient light. Select ON/OFF

Distance Indicator  
ON: Distance indicator line will always appear in the single channel image (B/L/R/F)  
TRIG: Only show when the single channel (B/L/R/F) is triggered  
OFF: No distance indicator line

Note: The distance indicator works only when there is a video signal input, it doesn’t work if there is no signal or if system is in multi-image display mode.
5. Reverse Priority Setting:

Languages options are English/Chinese/French/German. English is the default language.
Pressing the "MENU" button will display MONITOR/DVR as shown above. Select an option by pressing the "OK" button. These are the DVR options.
1. DVR Image Setting:

After selecting icon, press the "OK" button to enter menu.

- Video Quality: High / Mid / Low
- Frame Rate: 30 FPS / 15 FPS / 5 FPS
- Resolution: D1/720X480, VGA/640X480, QUGA/320X240
2. DVR REC Setting:

After selecting the icon, press the "OK" button to enter menu.

- Scheduled Recording: Schedule specific time to record.

- Overwrite Footage: Allow footage to be overwritten. Select YES / NO.

- Clip Length: Length of individual recording clip. Select 15 min / 30 min / 60 min.

- Motion Detection: Mask area/sensitivity options
  - Mask area: Change area of motion detection
  - Sensitivity Options: High / Mid / Low
3. DVR REC Mode

After selecting the icon, press the "OK" button to enter menu.

- **Manual Mode**: Record manually
- **Schedule Mode**: Record automatically at an adjustable predetermined time
- **Motion Detection Mode**: Automatically starts recording video when motion is detected in predetermined area

Note: Pressing the "MENU" button returns to the previous menu.
4. DVR Playback

After selecting the icon, press the "OK" button to enter menu. Use this setting to playback or delete video files.
5. DVR System Setting

After selecting the icon, press the "OK" button to enter menu.

- Language: Choose between English and Chinese
- Time: Set time on DVR
- Format: Format SD card/clear files
- Card Info: View SD card storage capacity

Note: Save by pressing "OK" button
System Tips

⚠️

Insert SD Card!

If the above image is displayed, the SD card is broken or not in the system. Please insert SD card to use the system.
Camera Dimensions

- 18 Infra-red illuminators (enable you to see in total darkness)
- 1/4 Sharp® Color CCD, 250k pixels
- 2.1 mm wide lens with 130° viewing angle
- 20G vibration and 100G shock rating
- Built-in high gain microphone
## Camera Specifications

- **Sensor**: 1/4” Sharp® Color CCD
- **Picture Elements**: 250,000 pixels
- **Gamma Correction**: 0.45 to 1.0
- **Image Sensor**:
  - PAL: 500 (H) x 582 (V)
  - NTSC: 510 (H) x 492 (V)
- **Lens**: 2.1mm
- **View Angle**: 130°
- **Waterproof Rating**: IP69k
- **Sync System**: Internal Synchronization
- **Infra-red distance**: 50 Feet (18 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, 75 Ω
- **IR Switch Control**: ACDS Automatic Control
- **Vibration and Shock Rating**: 20G / 100G
- **Operating Temperature**: -40°C ~ +80°C / RH 95% Max
- **Storage Temperature**: -40°C ~ +60°C / RH 95% Max
- **Net Weight**: 22oz
## Troubleshooting

<table>
<thead>
<tr>
<th>Phenomena</th>
<th>Possible Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Indicator Light/Picture</strong></td>
<td>System is off. Improper adapter connection. Problem with power source.</td>
</tr>
<tr>
<td><strong>Dark Picture</strong></td>
<td>Brightness/contrast adjusted incorrectly.</td>
</tr>
<tr>
<td><strong>No Sound</strong></td>
<td>Volume is off, or at a low level.</td>
</tr>
<tr>
<td><strong>No Color</strong></td>
<td>Color is improperly adjusted.  Incorrect color system (monitor only supports PAL/NTSC)</td>
</tr>
<tr>
<td><strong>No Backing Video</strong></td>
<td>Reverse cable is not connected well. Check the brown/blue reverse cable.</td>
</tr>
<tr>
<td><strong>Will Not Record</strong></td>
<td>No SD card or SD card isn't formatted. Re-insert or reformat SD card.</td>
</tr>
<tr>
<td><strong>Remote won't work</strong></td>
<td>Not enough power. Install a new CR2025 (3V) battery.</td>
</tr>
<tr>
<td></td>
<td>Improper battery installation, reinstall battery.</td>
</tr>
<tr>
<td></td>
<td>Remote isn’t pointed at infrared receiver</td>
</tr>
<tr>
<td></td>
<td>Remote is too far away from monitor.</td>
</tr>
<tr>
<td></td>
<td>Obstacles are blocking remote control path.</td>
</tr>
</tbody>
</table>
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.

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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.