

Instruction Manual

7" Waterproof Quad View Monitor

RVS-9900Q



Please read this manual before using monitor.
The product may be different from how it is described in the manual
depending on what software version you are using.



Introduction.	03
Safety Information.	04-06
Before Beginning Installation.	07
Installation Guide.	08-09
Components.	10
Monitor.	11-14
Connections.	15
Remote.	16-17
OSD Setup.	18
Trigger Setting	19
Jump Key.	20
System Setup.	21
Touch Screen Operations.	22-25
Camera.	26-27
Troubleshooting.	28
Warranty & Disclaimer.	29-30

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:

- This 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.
- Cover the power cable with friction tape where it may touch a metal case. 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 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. If the system seems to not be operating properly see troubleshooting (page 28).

Wiring

After connecting the monitor to the power harness, plug the camera into the CAM 3 input. Connect the RED 12V power wire to an ignition power source and the BLACK 12V ground wire to a chassis ground. The BROWN 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 attach a second camera, connect it to the CAM 1 input.

Precautions For Use Of Monitor

- I.** The monitor is made of glass and plastic. 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.** Only clean with a soft dry cloth and/or Windex.
- IV.** Do not attempt to disassemble the mirror monitor.

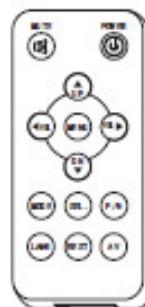
Safety

- 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.

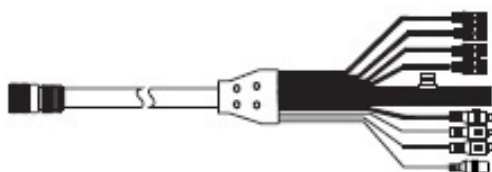
Components



Monitor



Remote Control



Power Harness



Swivel Head Mount



Removable Sunshade



U-Bracket With
Mounting Screws

7" Waterproof Quad View Monitor with a TFT LCD digital color touch screen display. Monitor comes with a U-Bracket, swivel head mount, and a waterproof rating of IP69K.

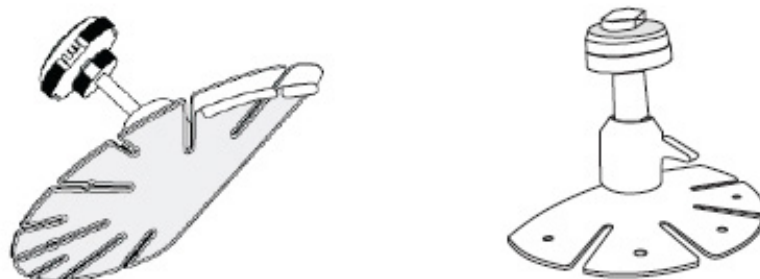


- 7" Quad View Display with multiple viewing options
- Completely waterproof - IP69K
- Touch screen display
- Optional distance grid lines
- Built-in speaker

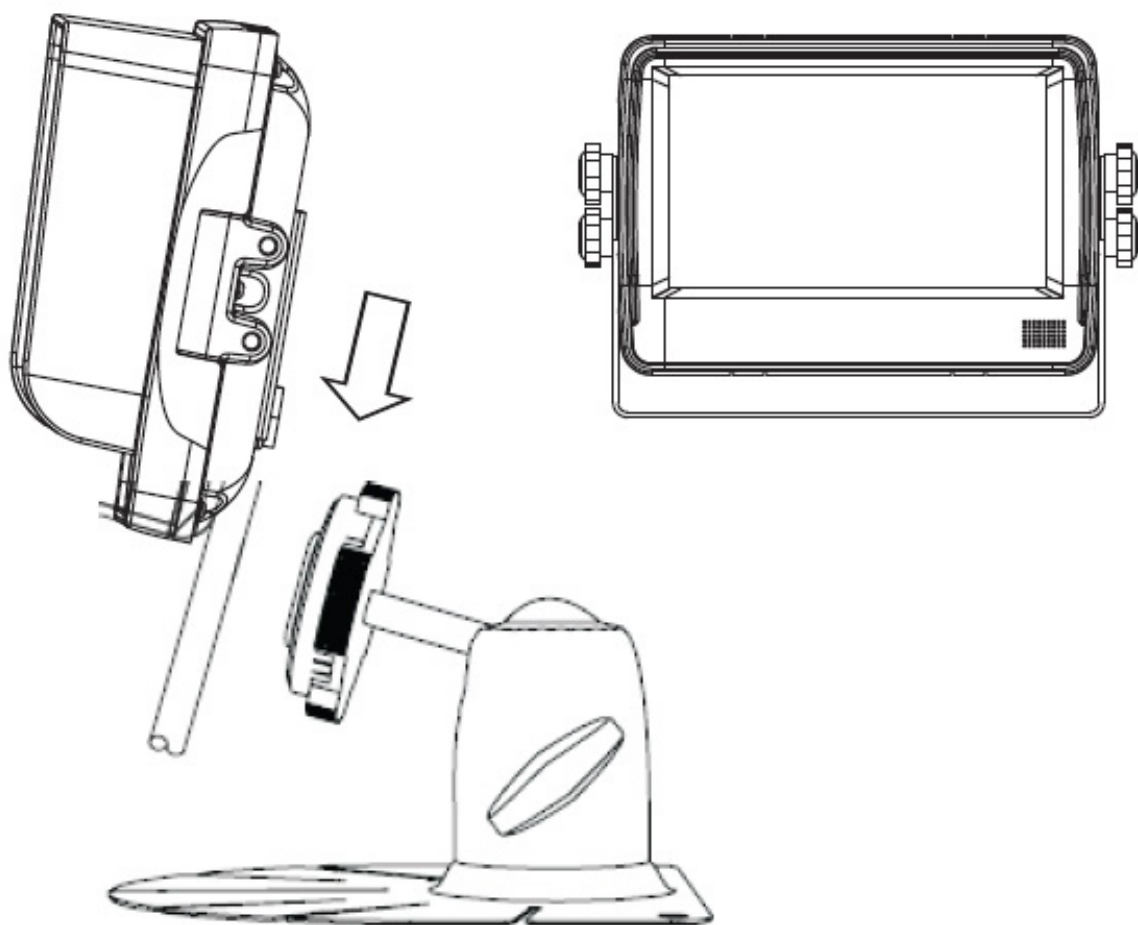
Monitor Dimensions

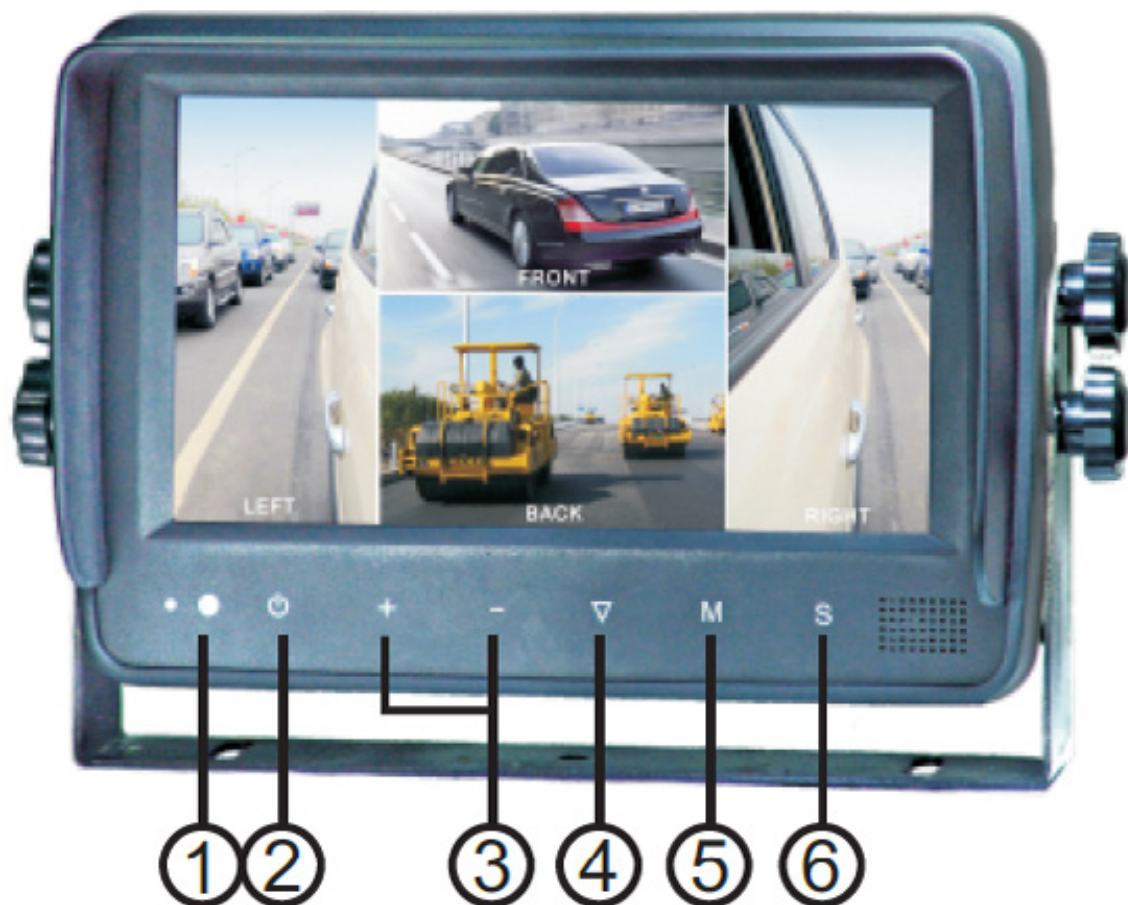


Dimension	7"
TV System	NTSC/ PAL
Resolution	800 x 3 (RGB) x 480
Brightness	400 cd/m ²
Contrast	500 :1
Viewing Angle	U: 50°/ D: 60°, R/L: 70°
Aspect Ratio	16:9
Operating Temperature	-10 ~ +65°C
Storage Temperature	-30 ~ +80°C
Power Consumption	Max. 25W
Power for Cameras	Max. 4×300mA, 12V
Dot Pitch	0.192 (H) x 0.1805 (V)
Video Inputs	4 Video Inputs, 1 DVD Input
Audio Inputs	4 Audio Inputs; 1 DVD input
Video Outputs	1 Rec Video Output
Audio Output	1 Live Audio Output
Waterproof Rating	IP69K
Touch Screen Transmittance	≥80%
Screen Operation Pressure	10~110g
Screen Response Time	<10ms



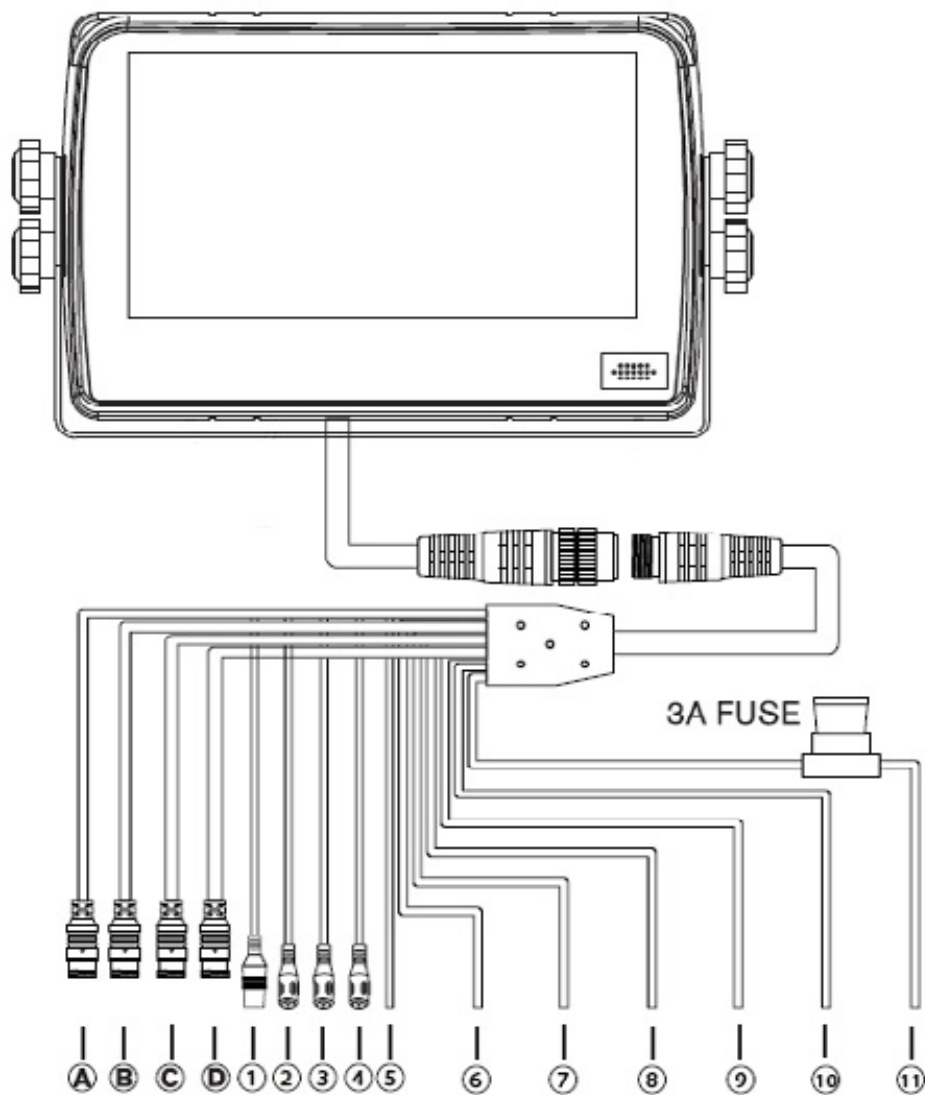
Swivel Head Mount





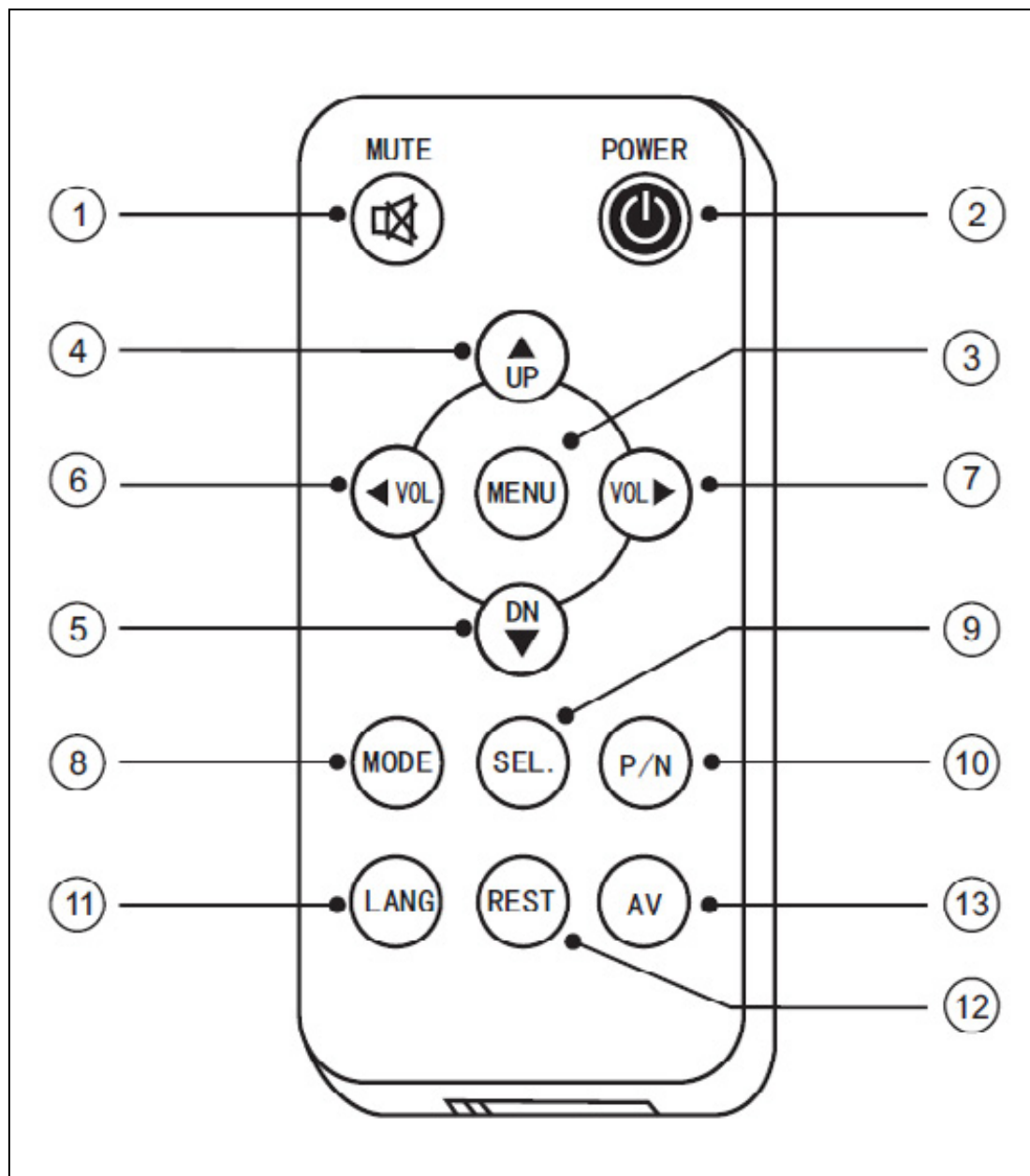
1. Remote control signal sensor
2. Power button
3. Increase / decrease volume and switch sub-menu values
4. Menu selection and toggle display mode (SINGLE/DUAL/TRIPLE/QUAD/PIP IMAGE)
5. Menu button
6. Jump Key - Immediately view predetermined display mode

Connections



- | | | | |
|-----------------------|-------------------------|--------------------------|------------|
| Ⓐ Camera 4 | Ⓑ Camera 3 | Ⓒ Camera 2 | Ⓓ Camera 1 |
| ① AUX audio input | ② Green: Rec. V. output | ③ Yellow: Live V. output | |
| ④ White: Audio output | ⑤ White: Trigger 1 | ⑥ Blue: Trigger 2 | |
| ⑦ Green: Trigger 3 | ⑧ Brown: Trigger 4 | ⑨ Yellow: Split trigger | |
| ⑩ Black: Ground | ⑪ Red: Power | | |

Remote Operations

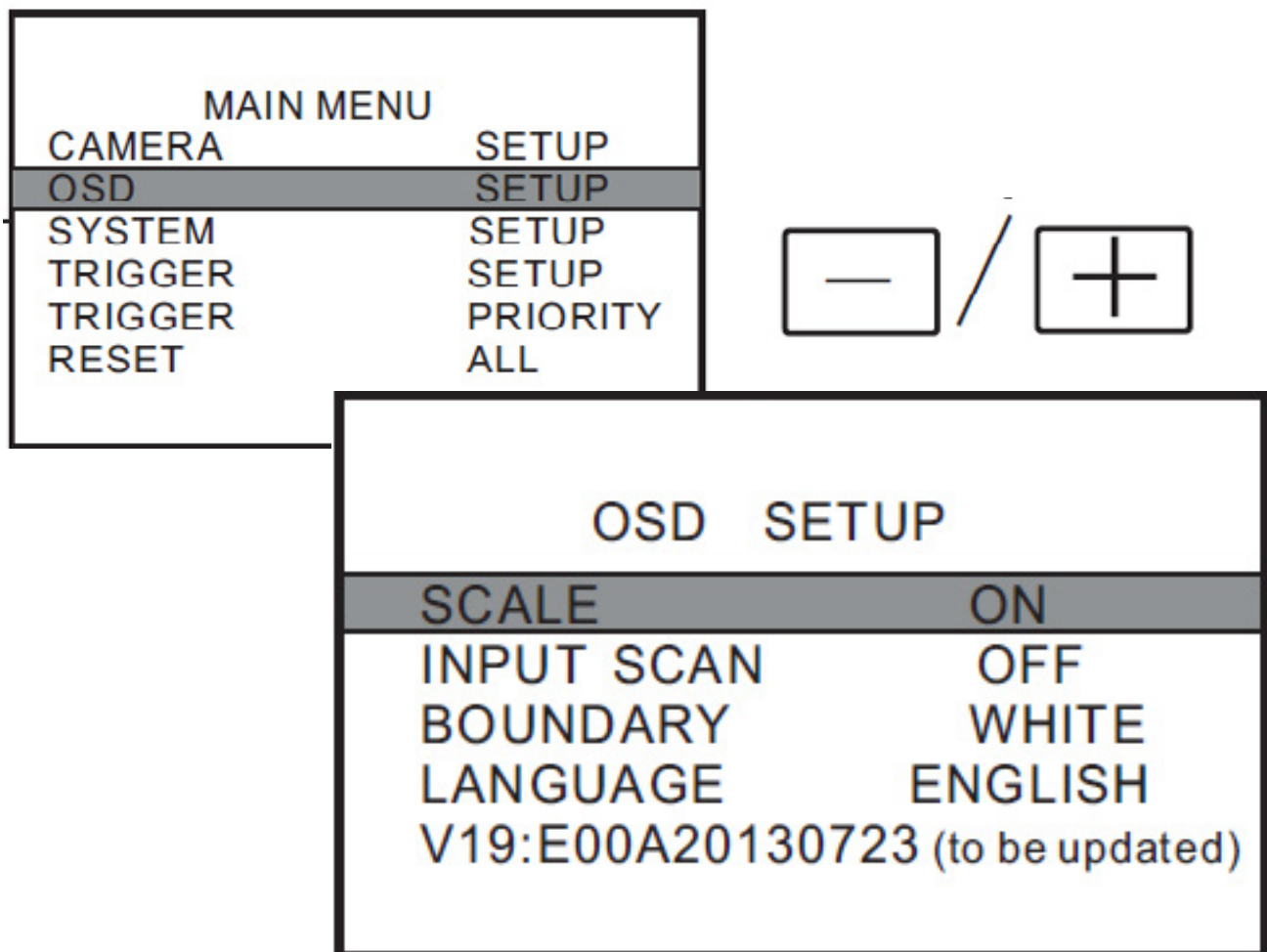


- 1. MUTE: MUTE / UNMUTE volume
- 2. POWER: Turn monitor ON / OFF
- 3. MENU: Toggle between menus
- 4. Δ UP: Toggle selection UP

5. ▽ DN: Toggle selection DOWN & toggle display mode (SINGLE/DUAL/TRIPLE/QUAD/PIP IMAGE)
6. ◀ VOL: Decrease volume & toggle sub-menu values
7. ▶ VOL: Increase volume & toggle sub-menu values
8. MODE: Toggle display mode (SINGLE/DUAL/TRIPLE/QUAD/PIP IMAGE)
9. SEL.: Toggle jump key
10. P/N: Toggle between PAL/NTSC
11. LANG: Toggle language
12. REST: Restore factory settings
13. AV: Enter/leave DVD channel

On-Screen Display (OSD)

- SCALE: Toggle distance grid lines ON/OFF. When ON, distance grid lines will be displayed when backup camera (CAM 3) is triggered.
- INPUT SCAN: Toggle camera input auto identification. When ON, monitor will display connected cameras and skip inputs not connected.
- BOUNDARY: Toggle border color between camera inputs (WHITE/GRAY/BLACK/UNCOLORED).
- LANGUAGE: Toggle OSD language (ENGLISH/FRENCH/DUTCH/SPANISH/GERMAN).
- Software version appears under LANGUAGE.



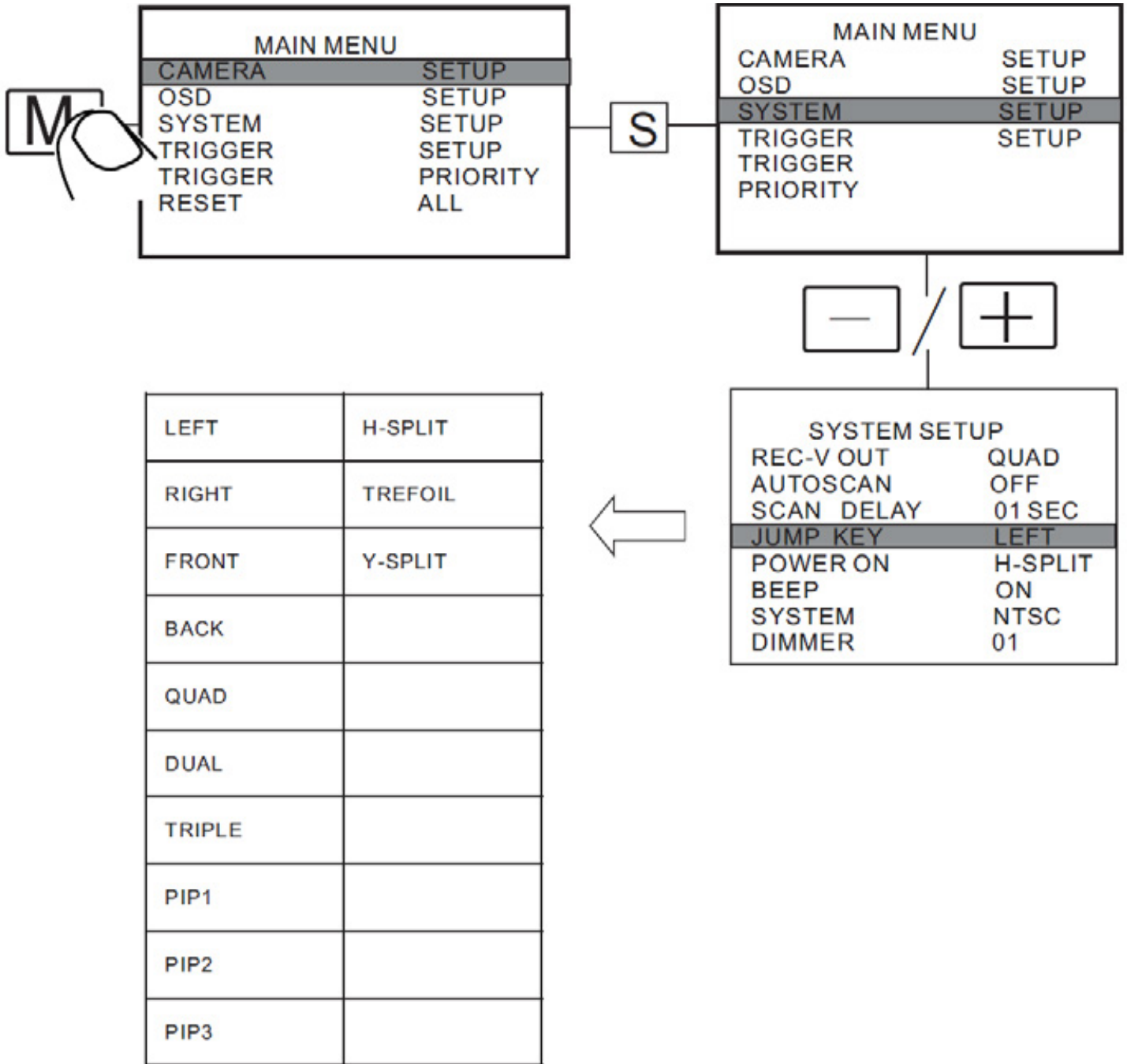
Trigger Setting

- **TURN IMAGE:** Display options when side cameras (CAM 1, CAM 2) are triggered. When on SINGLE, the corresponding camera will display when either camera is triggered. When on SPLIT, a split image of side and rear view camera will be displayed when either side camera is triggered.
- **REAR IMAGE:** Display options when backup camera is triggered. When on BACK, just the backup camera will display when triggered. When set as TRIPLE, the left, right, and backup camera will simultaneously display.
- **TRIGGER DELAY:** Toggle duration (seconds) of video display when trigger signal goes off (0-30 seconds).
- **SPLIT SCREEN:** Display options when "SPLIT" trigger wire is activated.
- **AUDIO:** Toggle audio output.

MAIN MENU			
CAMERA	SETUP	<div>− / +</div>	
OSD	SETUP		
SYSTEM	SETUP		
TRIGGER	SETUP		
TRIGGER	PRIORITY		
RESET	ALL		

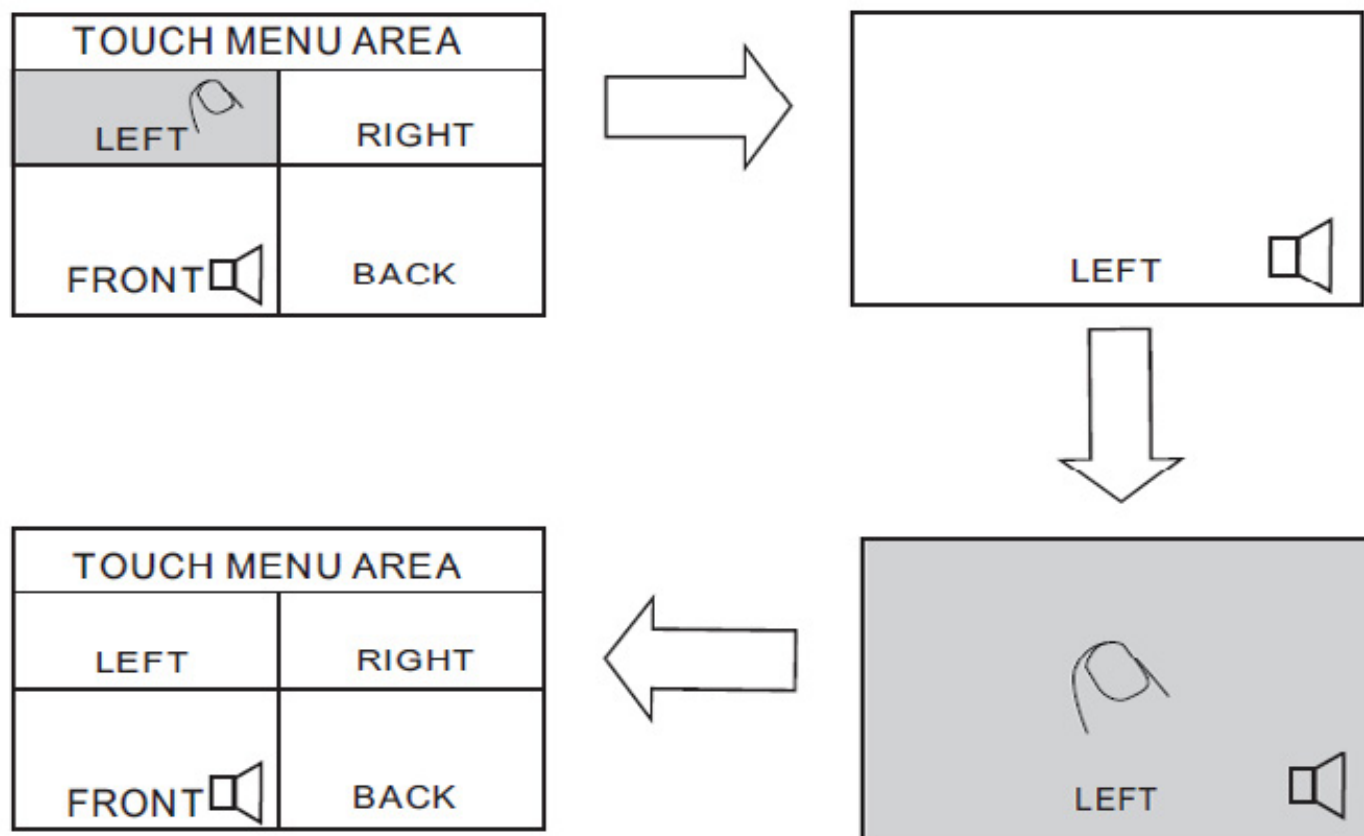
TRIGGER	SETUP
TURN IMAGE	SINGLE
REAR IMAGE	BACK
TRIGGER DELAY	03 SEC
SPLIT SCREEN:	
LEFT	LEFT
RIGHT	RIGHT
AUDIO	LEFT

Jump Key

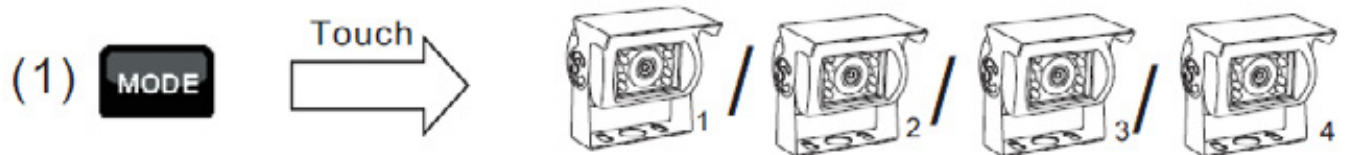
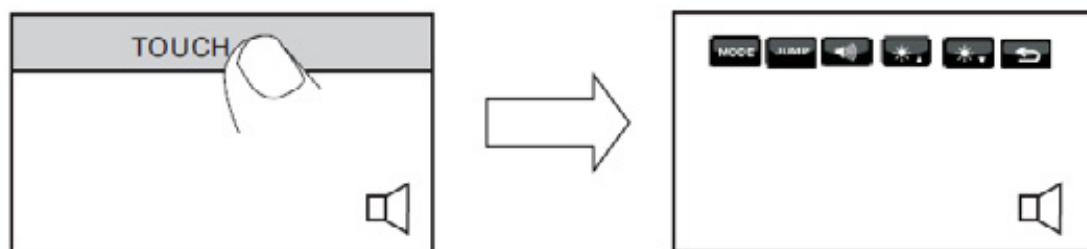


- REC-V OUT: Toggle which camera view will record when a DVR is attached (LEFT/RIGHT/FRONT/QUAD).
- AUTOSCAN: When setting is ON, the monitor automatically switches between connected camera inputs and quad view.
- SCAN DELAY: Toggle AUTOSCAN delay (0-60 seconds).
- JUMP KEY: Toggle jump key destination. Select from 13 display modes as shown on the left.
- POWER ON: Toggle default display mode. Select from 13 display modes as shown on the left.
- BEEP: Control audible alert (beep) when buttons are pressed. Turn ON/OFF.
- SYSTEM: Toggle PAL / NTSC.
- DIMMER: Toggle screen backlighting brightness. Choose from 5 levels and AUTO. When AUTO is selected, backlighting automatically adjusts in accordance with brightness conditions.

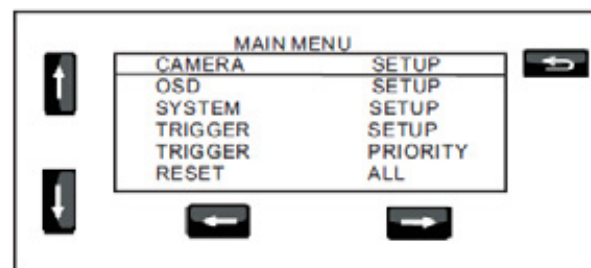
When in quad view, press any channel to view full screen



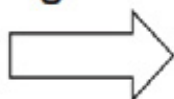
Touch screen menu



(5) Touch



Touch



again

The previous display mode

(6)



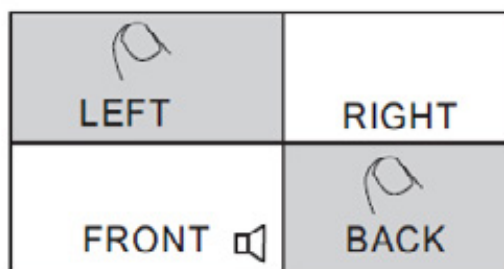
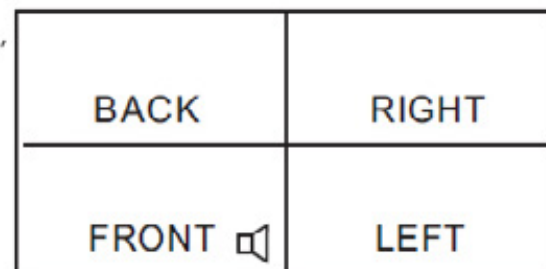
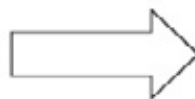
Toggle menu selection UP/DOWN

(7)

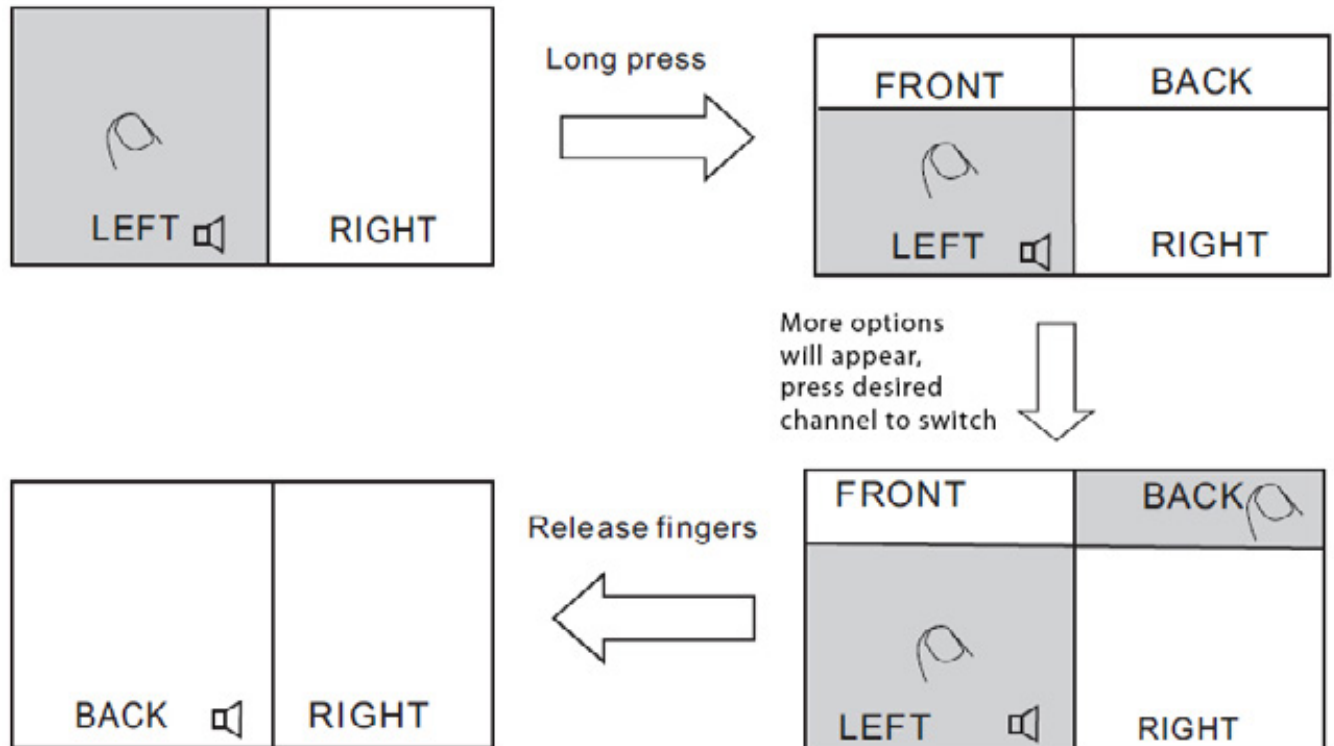


Toggle sub-menu values

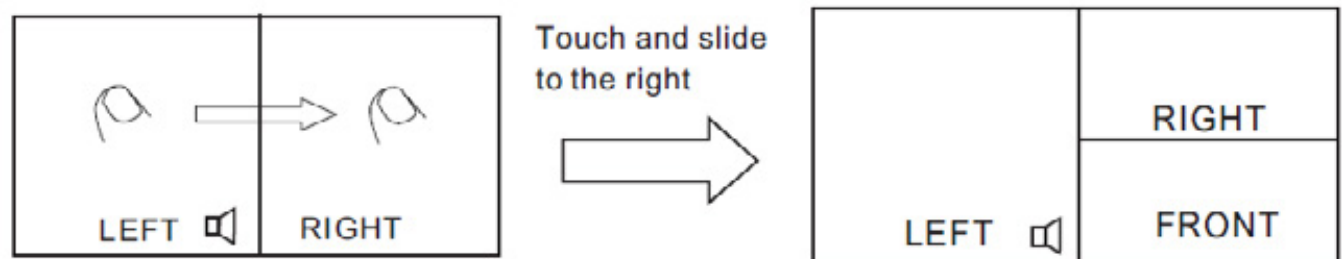
Swap display position (quad view)

Press until areas darken,
then release

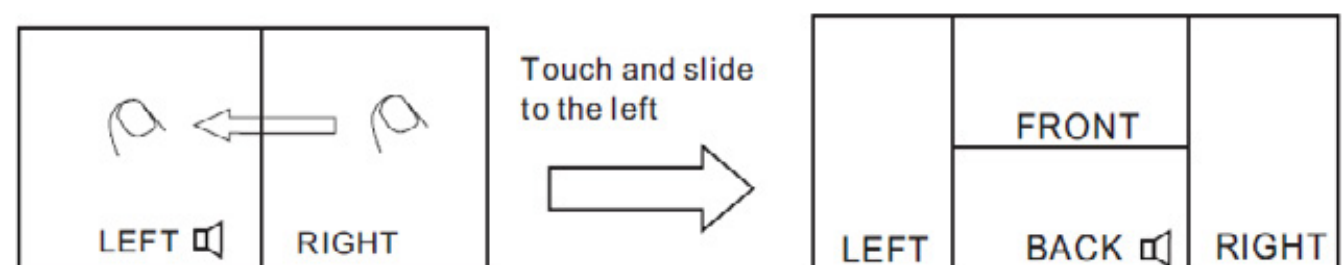
Swap display position (dual/ triple view)



Switch to next display mode



Switch to previous display mode



Camera Dimensions



- 18 infra-red illuminators (enables you to see in total darkness)
- 1/4 Sharp® color CCD, 250k pixels, 2.1 mm wide lens with 130° angle
- Shock resistant with a 20G Vibration and 100G impact rating
- Built-in high gain microphone

Camera Specifications

SENSOR	1/4" SHARP® COLOR CCD
PICTURE ELEMENTS	250,000 PIXELS
GAMMA CORRECTION	R=0.45 TO 1.0
IMAGE SENSOR	600 TV LINES, 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	220Z

Troubleshooting

Problem	Possible Causes/Solutions
No picture/sound	Adaptor is connected incorrectly. Improper power supply. Unit is off.
No picture	Check cable connection.
No sound	Audio cable improperly connected. Volume is off or set very low.
Dark picture	Adjust brightness/contrast. Low environmental temperature.
No color	Adjust the color settings.
Upside down/inverted picture	Use horizontal/vertical selection switch on remote control.
Backup camera does not display when car is in reverse	Check reverse connection.

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 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.***

