#### RVS-M610-RCA

# Commercial Grade 9 Inch Monitor with RCA Connection

**Product Manual** 





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### Introduction

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.

### 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 exstensive 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: RVS Systems 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.



# Before Beginning Installation

### Before Beginning Installation

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 17).

### Installation Guide

#### Cable

- 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

- To Attach the Pedestal mount to the dashboard or to the headliner 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)

Note: The camera and monitor can always be activated by manually pushing the power button on monitor. This is in addition to utilizing the positive triggers.

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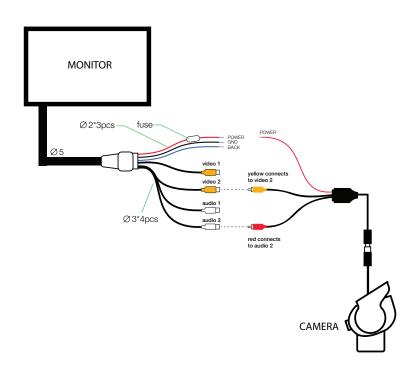
### Installation Guide

- To power the system connect the power (RED) 12V+ wire to ignition power and the ground (BLACK) wire to chassis ground.
- These are the only wires needed to power the entire system and all the cameras. Each camera can be seen at any time by simply pressing the power button and using the V1/2 button to toggle.
- The trigger wire represents channel 2 and will turn on when the trigger wire is energized with 12V.
- To automatically have camera and monitor turn ON when vehicle is turned on, plug camera in channel 2 and twist BLUE positive trigger 12V+ to RED power line 12V+ and wire to ignition power.

- Audio: There is continuous audio on both channel 1 and channel 2.
- Grid-lines: The grid-lines are carried through the blue wire. To use the grid-lines for reversing, connect the blue wire to a reverse power.
- There is a built-in voltage regulator for our systems which can handle 12-24 volts. Real consumption is 10 to 30 Volts.

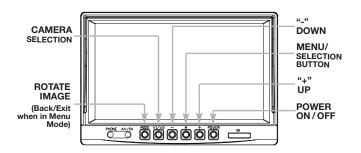
Note: If connecting power directly to battery, the camera is always ON and therefore can drain battery. Therefore it is recommended to connect power to an ignition switched accessory power source.

# Installing the Monitor



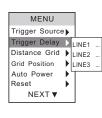
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### **Monitor Operation**



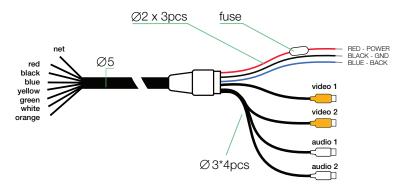


- Use "BRIGHTNESS" "CONSTRAST" "SATURATION" "SHARPNESS" to adjust the image properties.
- Day/Night Mode: Mode 1 will turn on the Back-lit buttons. Mode 2 will turn on the auto-dim feature on the monitor.



- Name: Change the name of each individual channel.
- Trigger source: Change the channel destination for each trigger.
- Trigger delay: Adjust the delay time on each trigger.
- Distance Grid: Choose what channel the distance grid will display on.
- Grid Position: Move the grid-lines.
- Reset: Reset all settings to factory default.

# Splitting & Splicing

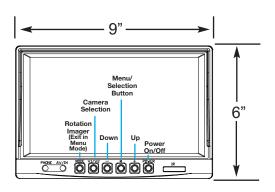


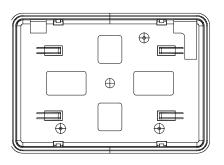
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# **Monitor Specifications**

TFT LCD Digital Monitor	
Screen Size	9"
Dot Resolution	800н x 3 (RGB) x 480v
Display Format	16:9 / 500:1
Display Brightness	400cd/m <sup>2</sup>
Viewing Angle	U:50° / D:60° / R:70°
Video Input	2 Channel
Video Source	1Vp-p, 75□
Power Supply	DC 12V-24V (+/- 10%)
Power Consumption	5W
Operating Temperature	-30°C ∼ +80° C
Video System	Auto NTSC/PAL
Overall Dimensions	9"L x 6"H x 1"D
Weight	400G
Impact Rating	5G
Dot Pitch	0.192н х 0.1805∨
Sync System	Internal

# Monitor Dimensions







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### **Troubleshooting**

### Monitor Displays Blue Screen & Displays No Signal

- Do a hard reset, unplug all cables 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

### Warranty

#### One Year Warranty

RVS Systems, 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. RVS Systems, Inc. is not responsible for a defect in the system as a result of misuse, improper installation, damage or mishandling of the electronic components. RVS Systems, 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 RVS Systems, Inc. system after partial failure or use with improper accessories.

#### Warranty Performance

DURING THE ABOVE WARRANTY PERIOD, SHOULD YOUR RVS Systems PROD-UCT EXHIBIT A DEFECT IN MATERIAL OR WORKMANSHIP, SUCH DEFECT WILL BE REPAIRED WHEN THE COMPLETE RVS Systems, INC. PRODUCT IS RE-TURNED, POSTAGE PREPAID AND INSURED, TO RVS Systems, INC. OTHER THAN THE POSTAGE AND INSURANCE REQUIREMENT, NO CHARGE WILL BE MADE FOR REPAIRS COVERED BY THIS WARRANTY.

#### Warranty Disclaimers

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### Disclaimer

RVS Systems 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 requlations. The RVS Systems 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. RVS Systems and/or its affiliates shall have no responsibility or liability for damage and/or injury resulting from accidents occurring with vehicles having some of RVS Systems products installed and RVS Systems 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 RVS Systems 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 RVS Systems and/or its affiliates have any responsibility for any decision, action or inaction taken by any person in reliance on RVS Systems systems, or for any delays, inaccuracies and/or errors in connection

with our systems functions.



If you have any questions about this product, contact:

RVS Systems, Inc. 1797 Atlantic Avenue Brooklyn, NY 11233 800.764.1028

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IT'S OUR GUARANTEE.