



**AUDIOVOX®**  
ELECTRONICS CORP.

## **Rear Observation System Package Model RVMPKG2 Installation Manual**



### **Features:**

- **Rearview Mirror with 4" LCD**
- **2 Built in Speakers**
- **Rearview Camera Input**
- **Auxiliary Video Input**
- **Video System Auto Detection for PAL/NTSC**
- **Audiovox Navigation Input**
- **Cellular Phone Hands Free Input**
- **Hands Free Microphone Built-In**

**NOTE:** Hands free feature may not operate with all cellular phones and/or an adapter may be required. Rearview camera optional.

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## **Cautions!**

1. The product is intended to assist in safe driving and to allow the driver to have a broader rearview while the vehicle is in reverse. You, as the driver, are solely responsible for the safe operation of your vehicle and the safety of your passengers according to the country and their local traffic regulations. Do not use any features of this system to the extent it distracts you from safe driving. Your first priority while driving should always be the safe operation of your vehicle. Audiovox Electronics Corporation cannot accept any responsibility whatsoever for accidents resulting from failure to observe these precautions or safety instructions.
2. This product utilizes high voltage. Any unauthorized modifications or damage to the products may result in electrical shock. Handle all components with care. Inspect regularly for damage to components and cabling.
3. You shall be responsible to ensure that the installation of this product does not void or affect the vehicle manufacturer's warranty. Audiovox Electronics Corporation, or its branches are not liable in full or in part for improper installation resulting in loss or damage to your property, or for voiding all or part of the vehicle manufacturer's warranty.
4. Do not apply excessive force to any of the components contained within this kit. Excessive force used before, during or after installation that results in a damaged or non-functional part shall void all warranties.
5. Please follow the procedure from this user manual. Improper installation or modification of this product shall void all warranties.

# Preface

There is a blind spot that exists at the back of a vehicle while the vehicle is in reverse. Equipped with a camera, this rearview mirror/monitor ensures safety by providing the driver with a clear and wide image of the area behind the vehicle while it is in reverse.

## **WARNING:**

### **Backing up vehicle**

Do not back up vehicle while watching the mirror/monitor screen. Always look in the direction of vehicle motion. Use the mirror/monitor as an aid in safety confirmation. The distance looks different in the monitor. The actual distance is shorter than it looks in the monitor.

## **Packing list**

The Rear Observation System Package Model RVMPKG2 consists of the following items:

1. Rear View Mirror
2. Camera Cable
3. Control Box
4. Mobile Phone Hands Free Cable Plug
5. Mobile Phone Adhesive Magnetic Seat
6. Fastening Belts
7. Wire Clips
8. Adhesive Foam Backing

# 1. Installation Instructions

- (1) Mount the mirror/monitor onto the existing rearview mirror.
  - a) Stick two adhesive foam backings on to the back of mirror in the two small rectangle indents.
  - b) Take the two seven inch belts and slide them into the slots on the top rear of the mirror with grooved side of the belt facing down.

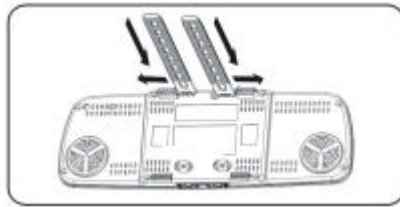


Figure 1

- c) Take the buckles and slide them into the lower slots on the rear of the mirror with the buckle facing down toward the seven-inch strap.

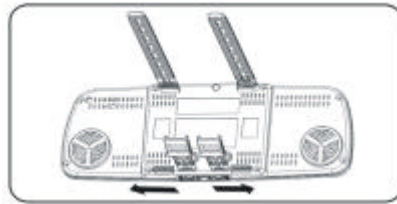


Figure 2

**NOTE:** The large opened rectangle on the buckle will face away from the seven-inch strap.

- d) Mount the new rearview mirror/monitor onto the existing one. Add the rearview mirror onto the existing mirror from one side with one fixed belt. Then fasten the other belt on the other side of the mirror. To prevent the RVMPG2 from falling off, tighten the belts until secure to the factory rearview mirror on both sides.

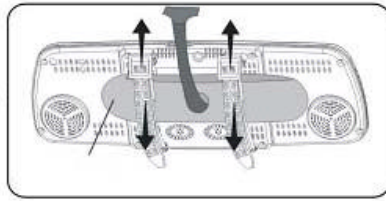


Figure 3

- e) Cut off the excess part of the 7-inch strap
- (2) Plug the Mitsumi connector from the Audiovox navigation monitor cable (part #112C3080) into the receptacle at the top backside of the mirror/monitor screen. Route the rest of the monitor cable to the Navigation computer.
- (3) Connect the control box monitor cable to the rearview mirror/monitor cable. Route the monitor cable behind the headliner of the windshield then down the A pillar behind the plastic shroud to the under dash area.
- (4) Connect the 5 wires in the following manner.
  - a) Red wire - 12 volt constant (positive)
  - b) Black wire - Chassis ground (negative)
  - c) Blue wire - 12-volt ignition (12 volt with ignition on)
  - d) Green wire - Reverse light switch (12 volt when vehicle is in reverse)
  - e) Yellow wire – Parking brake light switch (Negative when parking brake on)

**WARNING:** Observe polarity when connecting the cables. The cable must not be reversed or modified.

## 2. Install the mobile phone hands free seat

- (1) Select a suitable and convenient location for the mobile phone. Clean the selected location

- (2) Tear off the adhesive tape on the back of the hands free seat. Press tightly to seat on to the selected surface for 30 seconds till the two surfaces are tightly glued.

**NOTE:** Make sure the two surfaces are glued tightly!

- (3) Clean a place on the back of the cell phone, keeping it dry. Remove the adhesive tape of the rounded metal sheet and stick it to the selected place on the back of the cell phone.

**NOTE:** Do not attempt to move the phone within 24 hours after gluing.

**CAUTION:** The rounded metal sheet can only be glued once, so be sure it is at the right place!



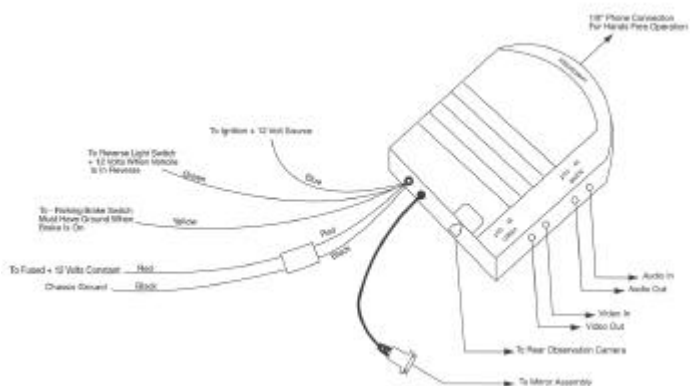
**Figure 4**

### 3. Signal Inputs

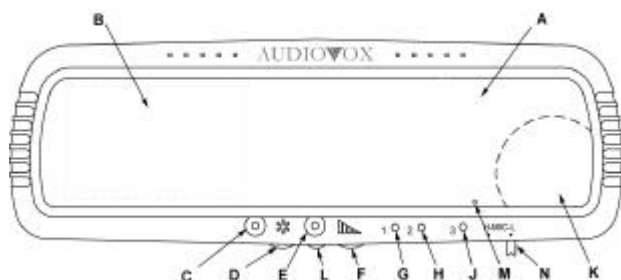
The signal input connections for the system include:

- (1) Rear Camera: By connecting rear camera with control box plug, users can see the rearview when the vehicle is in reverse.
- (2) Hands Free Jack: Put the hands free plug (3.5mm) into hands free jack and put the other side of plug into the headphone jack of the mobile phone. (If necessary, find a compatible adapter).
- (3) Navigation: The navigation signal is supplied via the connector plugged directly into the rear of the mirror.
- (4) Video In, Video Out, Audio In, Audio Out, Audio/Video Input and Output Plugs (3.5mm) are located in the control box. By connecting video and audio signals with these plugs, the user can enjoy watching video, **only** while the parking brake is on.
- (5) Navigation Voice command display timer: There is a three position switch located on the bottom right rear of the mirror/monitor. The three settings are 30 seconds, 150 seconds and 300 seconds. The vehicle operator can select to engage the navigation display timer by pressing SW 1 while the vehicle is going forward. The Navigation Display will appear for the preset time whenever the navigation system issues an audible voice command.





**Figure 5**



**Figure 6**

## 4. Controls and Indicators

Figure 6 illustrates the controls and indicators of the RVMPKG2 rear view mirror:

- |   |                                |
|---|--------------------------------|
| <b>A:</b> Rearview mirror                           | <b>B:</b> 4" LCD panel         |
| <b>C:</b> Hands free Microphone                     | <b>D:</b> Brightness Control   |
| <b>E:</b> Power indicator (Red when ignition is on) | <b>F:</b> Volume Control       |
| <b>G:</b> Switch 1 (see below)                      | <b>H:</b> Switch 2 (see below) |
| <b>J:</b> Switch 3 (see below)                      | <b>K:</b> Speakers             |

**L:** Infra- RED receiver for  
Navigation remote control

**M:** 3-position switch for Navigation  
voice command display timer on rear  
of mirror (30 sec., 150 sec., 300 sec.)

**N:** 2-position switch for hands free  
microphone sensitivity High/Low select

## SW1, SW2 and SW 3:

### 1. **Vehicle Reversing:**

SW 1: No function

LCD automatically turns on

SW 2: No function

Rearview camera image appears on  
the mirror

SW 3: No function

### 2. **Vehicle driving:**

SW1: Turn on the Navigation display timer mode. When SW1 is pressed, the LED will turn yellow. The navigation image will appear for the preset time 30sec, 2.5 minutes or 5 minutes. Once the preset time has expired, the LCD will return to its previous state. The navigation image will reappear with the next voice command prompt from the navigation computer.

SW2: Turns the navigation screen image on and off. Press once to turn on the continuous Navigation display.

Press again to turn off the Navigation display. Then press Sw1 if you want to engage the Voice command navigation display timer.

SW3: When pressed and held, the rear camera image appears on the mirror. When released, the LCD will return to its previous appearance.

### **3. Vehicle Parked:**

SW1: Used to turn the LCD on/off when using the AUX video and audio input. The parking brake must be engaged.

SW2: Used to turn off and on the Navigation image.

SW: 3 When pressed and held, the rear camera image appears on the mirror. When released the LCD will return back to its previous appearance.

# Specifications

## General

Power Supply	12VDC
Power Consumption	<12W
Current Draw	<500 mA
Video Input	1Vp-p@ 75 Impedance
Audio Input	<=1V
Audio Power Output	0.5W × 2 (16O)
Operating Temperature	-10°C to 60°C
Overall Dimension	11W×3.75H×1.25D inch

## Display System

Screen	4 ” TFT Color LCD
Brightness	250 nit
Contrast ratio	150:1
Viewing Angle	Top-10°, Bottom 30°, Left 45°, Right 45°
Resolution	480×234
Video Format	PAL/NTSC auto detect
Display Format	4 : 3

# Maintenance

## Maintenance

Your rearview mirror requires little care, however to maintain it in optimum condition follow the procedures below:

1. Keep your system away from excessive moisture, extreme heat or cold and magnetic fields.
2. Keep liquids away from the display.
3. Do not place external devices or other objects on the top of the mirror.

Occasionally clean the surface of the mirror with a soft cloth moistened with water, or a window cleaner.

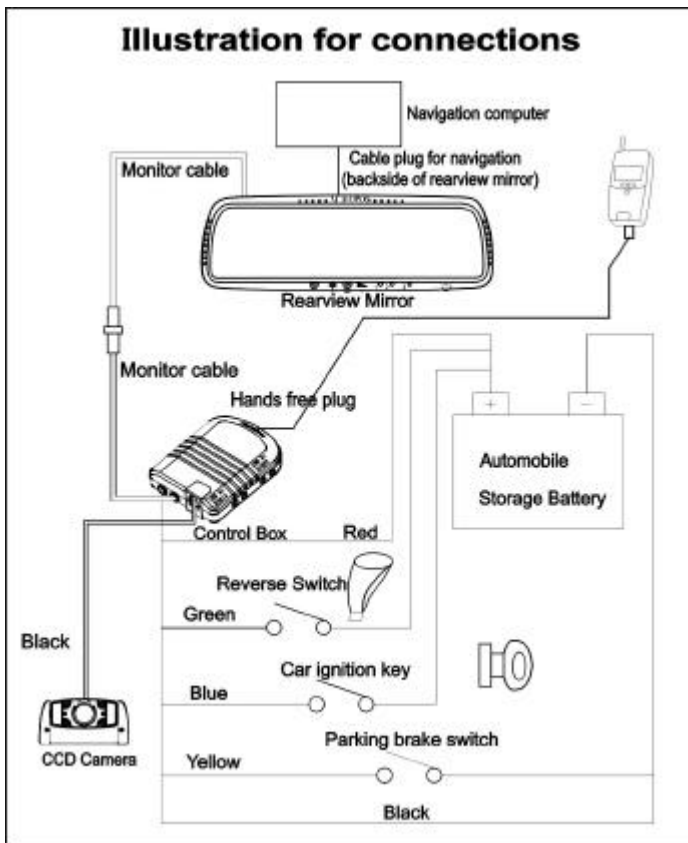
# Troubleshooting

**Table 1 Rearview Mirror**

Symptoms	Solutions
The ON/OFF signal light <E> is not on after the car is started?	<ol style="list-style-type: none"><li>1. Check the installation-wiring diagram.</li><li>2. Ensure that the parallel red and black line from the control box is connected properly.</li><li>3. Check for 12 volts on the blue wire while Ign on.</li></ol>
No video signal appears while reversing the car?	<ol style="list-style-type: none"><li>1. Check the LCD Contrast (Brightness) control knob whether the contrast knob is set too low.</li><li>2. Check the rearview Camera lens.</li><li>3. Check the rearview Camera wiring and connection.</li><li>4. Check the cable from the rearview mirror is connected to the control box.</li><li>5. Check out the wire connection (to find out whether the system's reverse wire cable is connected to the reverse switch gear of the car)</li></ol>
Video image is not sharp enough??	<ol style="list-style-type: none"><li>1. Clean the lens of the camera.</li></ol>

**Table 2 Hands Free Phone**

Symptoms	Solutions
When the Hands Free Phone Function is not working?	<ol style="list-style-type: none"> <li>1. Check the volume control knob whether the volume is set too low.</li> <li>2. Check to see if the hands free cable plug to the phone hand set input jacket is properly connected.</li> <li>3. Check whether the mobile phone hands free cable plug is properly connected to the control box.</li> </ol>



**Figure 7**



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