



Model: CAM335

**Wired License Plate / Rear Mounted
Camera**

Installation Manual



Features

- Very Small Compact Camera
- High Resolution, 1/3 inch CMOS Color Camera
- Waterproof Housing
- 160 Degree Wide View Angle
- Selectable Image: Normal/Reverse
- Multiple Camera Mounts including Behind License Plate – Does Not Obstruct Plate
- Adjustable Camera Angle

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Warnings

The product is intended to assist in safe driving and to allow the driver to have a broader rear view 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 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.

1. This product utilizes high voltage. Any unauthorized modifications or damage to the product may result in electrical shock. Handle all components with care. Inspect regularly for damage to components and cabling.
2. You are responsible for ensuring that the installation of this product does not void or affect the vehicle manufacturer's warranty. Audiovox Electronics Corporation or its subsidiaries 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.
3. 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 will void all warranties.
4. Please follow the procedures in this installation manual. Improper installation or modification of this product will void all warranties.

Product Description

This revolutionary camera design integrates a backup camera with your vehicle's rear license plate without covering the license plate. The camera is easy to mount on your car, truck, or van with the bracket being hidden by your license plate. We have also included a surface mount bracket to help with other installation methods.

This Wired Camera is compatible with most monitors/TFT screens and can be connected using a standard RCA connector.

Packing List

Parts	Barcode #	Quantity
Camera	31492040	1
Power Cable & Adaptor Cable	30192160	1
Mounting Screw	30242010	1
CAM335 Bracket	30242060	1
5 meter male to female RCA Cable	31191390	1
Manual	31492020	1

Camera Installation

License Plate Mounting Instructions



5. Remove the rear license plate.
6. Examine the vehicle to determine the best way to run the power wires to the reverse lights and the extension cable through the car.
7. The Camera can be mounted above or below the plate. (For surface mounting with the included bracket, see the next section.) Determine the mounting location that best suits your needs. Be sure to verify that your installation plan complies with local laws and requirements. Most states require that the state name, registration stickers, and license number are not obstructed in any way.
8. Place the camera bracket behind the license plate and line up the holes. Fasten the camera mounting bracket and the license plate to the vehicle using the anti-theft screws provided. After installation of screws with the tool provided, place the tool in the glove compartment or other safe place for future use.

NOTE: If you decide to mount the camera at the bottom of the license plate, you must first remove the screw that holds the camera to the

bracket and flip the camera over so the picture will not be displayed upside down.

9. Route the camera wiring into the vehicle. The wire can be run through an existing grommet, behind a tail lamp, under the trunk molding, or if necessary, through a 5/8 inch hole drilled near the vehicle's rear license plate. **When choosing a wiring path, make sure the cable will not be damaged or pinched, as this may cause a short circuit that is not covered by the warranty.** If drilling a hole, perform the following steps:
 - a) Acquire a 5/8 inch drill bit, rust preventive, all of which can be purchased at a hardware store.
 - b) Check behind the intended drilling location before drilling to verify that no wires or mechanisms can interfere with or be damaged during drilling.
 - c) Check for interference with license plate lights and the hatch release switch and/or mechanism.
 - d) Drill a 5/8 inch hole at the selected location.
 - e) Coat the edge of the hole with rust preventative.
 - f) Route the camera cable through the grommet and then through the hole.
 - g) Insert the grommet in the hole to keep water from entering the vehicle.

Surface Mounting Instructions

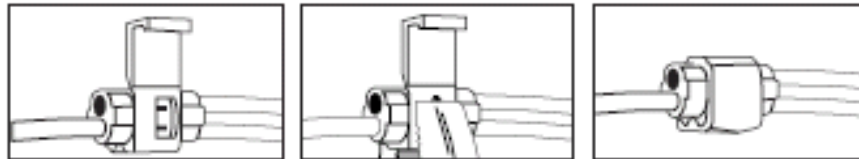


10. Find a suitable location on the vehicle where the bracket will not interfere with any equipment or doors, or block the line of sight. Verify that the planned mounting location is accessible from behind and that you have access to route the wiring inside the vehicle. Be sure that the mounting screws will not hit any wires or equipment inside the vehicle.
11. Attach the surface mounting bracket to the vehicle with the hardware included.
12. Route the camera wiring into the vehicle. The wire can be run through an existing grommet, behind a tail lamp, under the trunk molding, or if necessary, through a 5/8 inch hole drilled near the vehicle's rear license plate. **When choosing a wiring path, make sure the cable will not be damaged or pinched, as this may cause a short circuit that is not covered by the warranty.** If drilling a hole, perform the following steps:
 - h) Acquire a 5/8 inch drill bit, rust preventive, and a 5/8 inch rubber grommet, all of which can be purchased at a hardware store.
 - i) Check behind the intended drilling location before drilling to verify that no wires or mechanisms can interfere with or be damaged during drilling.
 - j) Check for interference with license plate lights and the hatch release switch and/or mechanism.
 - k) Drill a 5/8 inch hole at the selected location.
 - l) Coat the edge of the hole with rust preventative.
 - m) Route the camera cable through the grommet and then through the hole.

- n) Insert the grommet in the hole to keep water from entering the vehicle.
13. Remove the camera from the license plate bracket and attach it to the surface mount bracket on the vehicle.

Obtaining Reverse Power

14. Locate the reverse lamp in the tail light assembly.
15. Using the tap connector supplied, perform the following steps:
- o) Place the un-stripped positive lead from the tail lamp in the run channel, which runs completely through the connector.
 - p) Insert the un-stripped red power wire from the camera completely into the other channel in the connector.
 - q) Make the connection between the wires by crimping down the metal connector with a pair of pliers, making sure the metal is flush with the plastic insulator.
 - r) Close the top plastic hinged cover until latched.
16. Attach the black wire to the ground (negative).
17. Repeat the above steps for the red wire.



Connecting the Video Signal

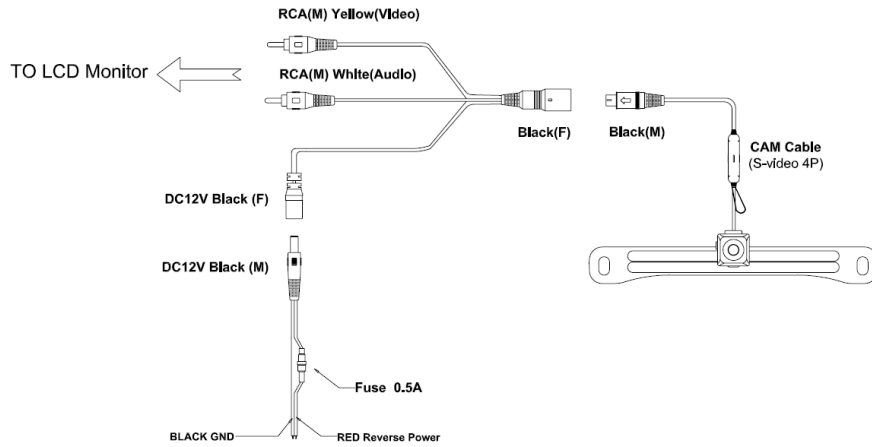
18. If used with an Advent LCD Monitor such as LCD4WM or LCDM42 the camera power and signal will be provided through a single cable to the monitor (supplied with the monitor).
19. If using an alternative monitor, use the adaptor harness to split the signal to RCA connections then connect to the female RCA input on the alternative monitor.

Reverse/Normal Image Adjustment

The camera comes standard with a reversed image, designed for mounting at the rear of the vehicle. If you need to change to a forward or normal image view, clip the blue jumper wire loop on the wiring cable (labeled “Mirror Selection” below) to change the camera image to normal. Secure the clipped wires with electrical tape. To change back to reverse image view, reconnect the blue wires and secure with electrical tape.

Camera Wiring

20. Note: If used with an Advent LCD Monitor such as LCD4WM or LCDM42 the camera power and signal will be provided through a single cable to the monitor (supplied with the monitor).



Camera Parking Line Setup

21. The CAM335 has 9 selections of Parking Line Styles. Once the camera is installed completely and working you can select the parking line style.

Engage the parking brake and vehicle brake, cycle the vehicle in and out of reverse 5 times. On the 5th time keep in reverse and the display will show the first set of parking lines. The camera will cycle through 9 sets including a “no lines” option, when you see the lines you want to use take the vehicle out of reverse gear. Your selection will be saved. To change again repeat the above instructions.

Specifications

- 22. Voltage: DC12V
- 23. Current: 50 mA
- 24. Signal System: NTSC
- 25. Image Sensor: 1/3" CMOS Sensor
- 26. Horizontal Resolution: 480 lines
- 27. Viewing Angle: 160 degrees
- 28. Minimum Illumination: 0.1 Lux
- 29. Image Display: Selectable Normal/Reverse Image
- 30. Adjustable Viewing Angle
- 31. Dimensions:
 - Camera: 18mm W
 - License Plate Bracket: 196mm W x 36mm H

Troubleshooting

Symptom	Solution
No video signal appears while reversing the vehicle	<ul style="list-style-type: none">• Check the rear view camera lens and clean if needed.• Check the rear view camera wiring connection and RCA connection.• Check the fuse, if blown replace ONLY with the correct size.
Video image is not sharp enough	Clean the camera lens.

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