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› New for Clarion VZ-401 VZ401 Night Vision - Color Rear View Camera Chrome Frame

Absolute USA VZ-401

User Manual: VZ-401 Night Vision Rear View Camera

Brand: Absolute USA | Model: VZ-401

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Absolute USA VZ-401 Night Vision Rear View Camera. This camera is designed to enhance visibility when reversing your vehicle, especially in low-light conditions, by providing a clear, color image of the area behind your vehicle.

The VZ-401 is a license plate frame camera featuring night vision capabilities, weatherproof construction, and a wide viewing angle to assist with parking and maneuvering.

2. SAFETY INFORMATION

Please read all safety instructions carefully before installing or operating this product. Failure to follow these instructions may result in injury or damage to the product or vehicle.

- Ensure the vehicle's ignition is off and the battery is disconnected before beginning installation to prevent electrical shorts.
- Always route cables away from hot surfaces, moving parts, and sharp edges.
- Secure all wiring to prevent interference with vehicle operation.
- This camera is an aid and should not replace careful driving and direct observation of surroundings.
- Do not attempt to disassemble or modify the camera. This will void the warranty and may cause damage.

3. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- Absolute USA VZ-401 Night Vision Rear View Camera (integrated into chrome license plate frame)
- Power Cable (with red RCA connector)
- Video Cable (with yellow RCA connector)
- Mounting Hardware (screws, nuts, washers)



Figure 3.1: Absolute USA VZ-401 Night Vision Rear View Camera integrated into a chrome license plate frame. The camera unit is positioned at the top center of the frame, featuring a central lens flanked by multiple infrared (IR) LEDs on both sides for night vision capabilities. A black cable extends from the camera unit, leading to yellow and red RCA connectors for video and power connections, respectively. The chrome frame is designed to mount around a standard vehicle license plate.

4. PRODUCT FEATURES

- **Night Vision:** Equipped with infrared (IR) LEDs for clear visibility in low-light or dark conditions.
- **Color Rear View:** Provides a full-color image for accurate representation of surroundings.
- **Chrome Frame Design:** Integrates seamlessly with standard license plates for a clean installation.
- **Weatherproof/Waterproof:** IP68 rating ensures durability against water and dust ingress.
- **Vibration Resistant:** Designed to withstand vehicle vibrations.
- **Wide Lens Angle:** 170-degree viewing angle provides a broad perspective of the rear area.
- **High Resolution:** 480TVL / 420TVL horizontal resolution for clear images.
- **Image Sensor:** True CCD/CMD sensor for reliable image capture.
- **System Compatibility:** Supports PAL/NTSC systems (NTSC optional).

5. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance. If you are unsure about any steps, consult a professional installer.

5.1 Pre-Installation Checklist

- Ensure your vehicle's head unit or monitor has an RCA video input.
- Gather necessary tools: screwdriver set, wire strippers, electrical tape, zip ties, multimeter (optional).
- Disconnect the vehicle's negative battery terminal before starting.

5.2 Mounting the Camera

1. Remove your existing license plate from its mounting location.
2. Position the VZ-401 camera frame behind your license plate, aligning the mounting holes.
3. Secure the license plate and camera frame to the vehicle using the provided mounting hardware. Ensure it is firmly attached and does not obstruct the license plate.

5.3 Wiring Connections

1. **Video Connection:** Connect the yellow RCA connector from the camera's video cable to the video input (usually labeled "REAR CAM IN" or "VIDEO IN") on your car's head unit or monitor. Route this cable carefully through the vehicle's interior, avoiding sharp edges or areas where it could be pinched.
2. **Power Connection:**
 - Locate the vehicle's reverse light wiring. This is typically found near the taillight assembly.
 - Connect the red wire from the camera's power cable to the positive (+) wire of the reverse light. This will power the camera only when the vehicle is in reverse.
 - Connect the black wire from the camera's power cable to a good chassis ground point on the vehicle.
 - *Optional:* If your head unit requires a reverse trigger wire, connect a separate wire from the reverse light positive (+) to the "REVERSE" or "BACKUP" input on your head unit. This tells the head unit to switch to the camera input when reverse is engaged.
3. Secure all wiring with zip ties or electrical tape to prevent rattling or damage.
4. Reconnect the vehicle's negative battery terminal.

6. OPERATING INSTRUCTIONS

Once properly installed, the VZ-401 camera operates automatically.

1. Turn on your vehicle's ignition and ensure your head unit/monitor is powered on.
2. Shift your vehicle into reverse gear.
3. The camera image should automatically appear on your connected monitor.
4. The night vision (IR LEDs) will activate automatically in low-light conditions to provide a clear image.
5. Shift out of reverse gear, and the monitor should return to its previous display.

7. MAINTENANCE

To ensure the longevity and optimal performance of your camera, follow these simple maintenance tips:

- Regularly clean the camera lens with a soft, damp cloth to remove dirt, dust, or water spots that may obstruct the view. Avoid abrasive cleaners.
- Periodically check all wiring connections to ensure they are secure and free from corrosion or damage.
- Inspect the mounting hardware to ensure the camera frame remains firmly attached to the vehicle.
- Do not use high-pressure washers directly on the camera lens or housing.

8. TROUBLESHOOTING

If you encounter issues with your VZ-401 camera, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No image on monitor when in reverse.	<ul style="list-style-type: none">◦ Loose or incorrect power connection.◦ Loose or incorrect video connection.◦ Monitor not set to correct input.◦ Blown fuse in vehicle's reverse light circuit.	<ul style="list-style-type: none">◦ Check power and ground connections to the reverse light.◦ Ensure yellow RCA cable is securely connected to both camera and monitor.◦ Verify monitor input is switched to the camera input (e.g., AV-IN, Rear Cam).◦ Check vehicle's fuse box for reverse light fuse.
Image is blurry or distorted.	<ul style="list-style-type: none">◦ Dirty camera lens.◦ Damaged video cable.◦ Interference from other electrical components.	<ul style="list-style-type: none">◦ Clean the camera lens with a soft, damp cloth.◦ Inspect the video cable for kinks or damage. Replace if necessary.◦ Ensure video cable is routed away from power cables or ignition components.
Night vision not working.	<ul style="list-style-type: none">◦ Insufficient power to IR LEDs.◦ Damaged IR LEDs.	<ul style="list-style-type: none">◦ Verify stable 12V power supply to the camera.◦ Contact Absolute USA support if IR LEDs appear non-functional.

9. SPECIFICATIONS

Feature	Detail
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Feature	Detail
Image Sensor	True CCD/CMD
System	PAL/NTSC (NTSC Optional)
Effective Pixels	PAL 628 x 586V
Horizontal Resolution	480TVL / 420TVL
Lens Angle	170 Degrees
Minimum Illumination	0.1 LUX/F=1.2 (0 LUX with IR ON)
Shutter Speed	1/10,000 Seconds
IP Rating	IP68 (Weatherproof / Waterproof)
Power Supply	12 Volt DC
Power Consumption	110mA Max (300mA with IR ON)
Operating Temperature	-20°C to 90°C (-4°F to 194°F)
Product Dimensions	5 x 5 x 5 inches (approximate)
Item Weight	10 pounds (approximate)

10. WARRANTY AND SUPPORT

Specific warranty information for this product is not provided in the available data. For details regarding warranty coverage, technical support, or replacement parts, please contact Absolute USA directly or refer to their official website.

It is important to note that this item is not manufactured by Clarion, and any warranty or support inquiries should be directed to Absolute USA.