HAMRON 012441 Rear View Camera Instruction Manual

Contents

HAMRON 012441 Rear View Camera

REVERSING CAMERA

OPERATING INSTRUCTIONS

Important! Read the user instructions carefully before use. Save them for future reference. (Translation of the original instructions).

EU DECLARATION OF CONFORMITY

This declaration of conformity is issued under the sole responsibility of the manufacturer

REVERSING CAMERA

Directive/Regulation	Harmonised standard
RED 2014/53/EU	EN 60950-1:2006+A11+A1+A12+A2, EN 62311:2008, Draft EN 301 489-1 V2.2.0, Draft EN 301 489-17 V3.2.0, ETSI EN 300 328 V2.1.1, EN 62311:2008
RoHS 2011/65/EU + 2015/863	EN 50581:2012

SAFETY INSTRUCTIONS

- Reverse the vehicle slowly when using the reversing camera.
- Never reverse the vehicle by just looking at the man itor.
- Do not use the reversing camera when there is crossing traffic, or the risk of accidents and personal injury.
- Note that the area shown on the monitor is limited.
- Installation required knowledge of electrical installations and the removal and fitting of panels and other items in the car. If in doubt, have an experienced technician familiar with electrical systems install the unit. Incorrect connection of the power cable can result in damage to the vehicle and personal injury.
- The device is not sensitive to interference from mobile phones, Bluetooth, Wi-Fi routers, live wires and other electrical equipment.
- Never modified or attempt to repair the camera.
- Do not look into the infrared diodes on the camera, this can cause eye damage.
- Do not install the monitor so that it blocks the view of the driver.
- Do not install the monitor in such a way that it could be hit by a triggered airbag, or could prevent an airbag from working properly.

SYMBOLS

- Read the instructions.
- Approved in accordance with the relevant directives.
- Recycle discarded product in accordance with local regulations.

TECHNICAL DATA

Camera

Supply voltage	8–30 VDC
Power consumption	max 350 mA
Image sensor	CMOS
Resolution	720 x 480
Lens	2.1 mm / F2.0
Transmit frequency	2.4 GHz (ISM band)
Max transmission distance in open air	250 m
Protection rating	IP65

Monitor

Supply voltage	8–30 VDC
Power consumption, standby mode	max 200 mA
Power consumption, operating mode	max 250 mA
Monitor size	10.9 cm / 4.3 inch
Resolution	480 x 272
Operating temperature	–10 to 50°C

Electromagnetic interference/ radio interference

The product is not sensitive to interference from Bluetooth, mobile phones, Wi-Fi routers, power lines and other electrical equipment.

DESCRIPTION

- Connects to the car’s 12/24 V system.
- Wide-angle camera ideally mounted at the rear of the truck, caravan or trailer.
- Mounting occurs either on the licence plate or on a flat surface.
- Equipped with an external antenna for a long-range, light boost with IR light and adjustable camera angle.
- Wireless digital transfer to a 4.3″ LCD display.

- Brightness, contrast and colour can be adjusted.

1. Monitor and holder
   Power cable for monitor
2. Camera and mounting plate
3. Ferrite core for camera cable
4. Assembly parts

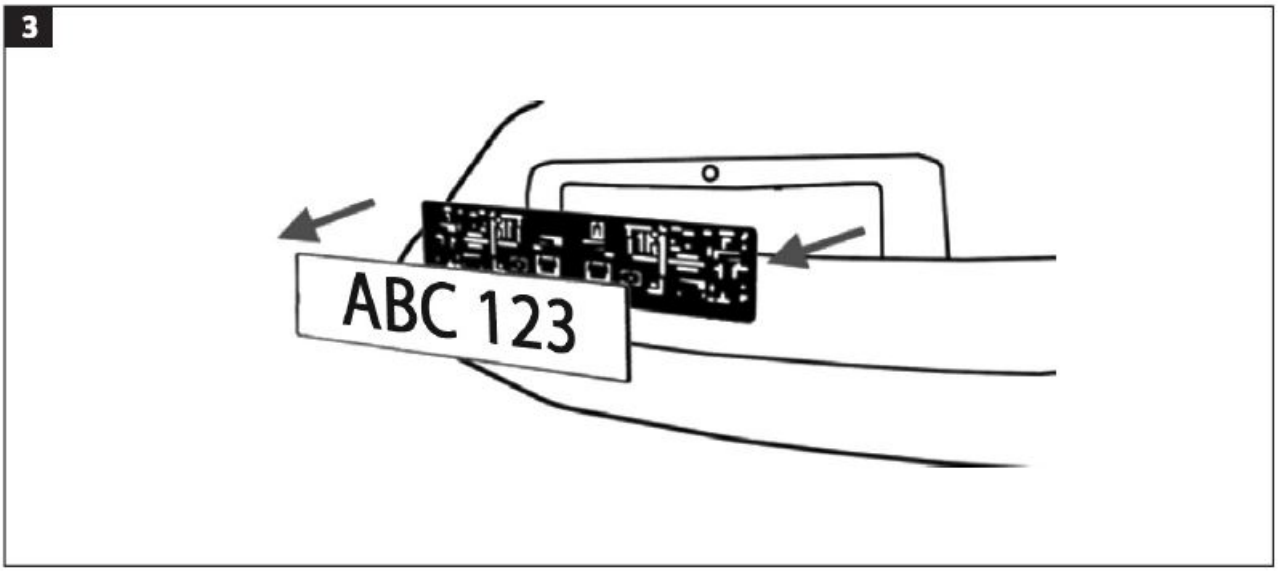
INSTALLATION

- This product is universal. The instructions are therefore a guide and do not apply to all vehicles. For specific questions concerning vehicle, contact the vehicle manufacturer.
- Incorrect installation can invalidate the warranty.
- If necessary get an automotive electrician or other qualified person to conned to the vehicle’s electrical system.
- Never route the cable on the outside of the vehicle.

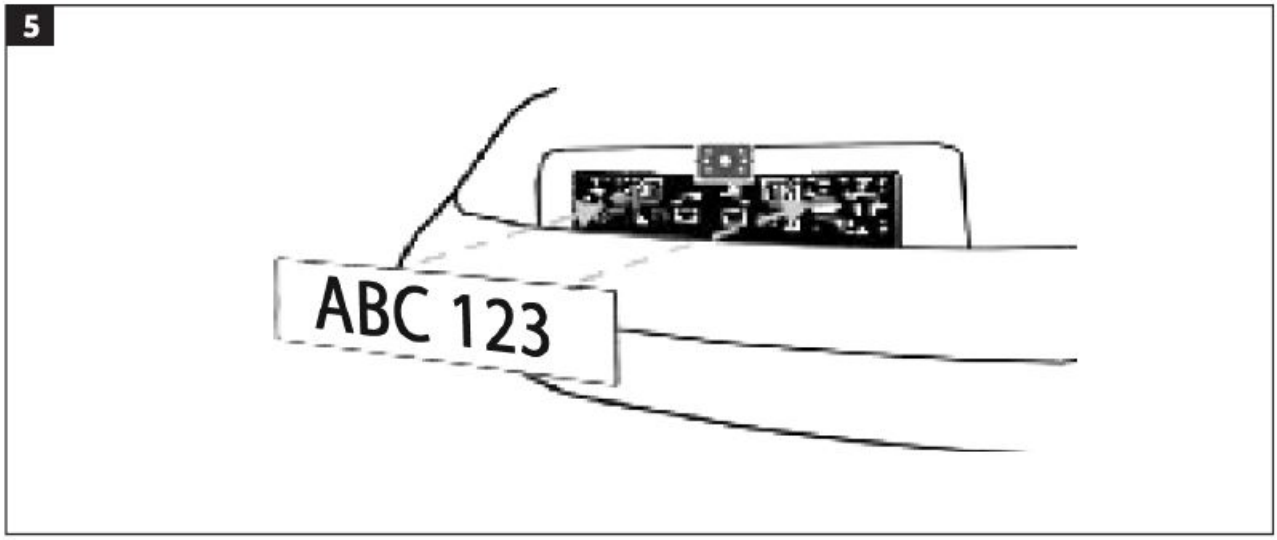
The camera and transmitter can be installed as a reversing camera on the back of a vehicle and is then connected to the reversing light circuit, or internally in a vehicle to monitor the doors, for example in a van or bus, whereby it is connected to interior light circuit or other suitable 8-30 VDC circuit. Note the polarity of the power supply circuit; the positive wire (+) is normally red and the negative wire(-) is usually black. Disconnect the voltage to the electrical system or take other precautions or insulation measures so that the electrical system cannot be short circuited during the installation – short circuiting can result in fire or other material damage. The camera is protected from incorrect polarity and will not be damaged if it is connected incorrectly.

Positioning the camera
A suitable position when used as a reversing camera is near the number plate. On some vehicles it is not advisable or impossible to mount the camera near the number place and another more suitable place needs to be chosen.

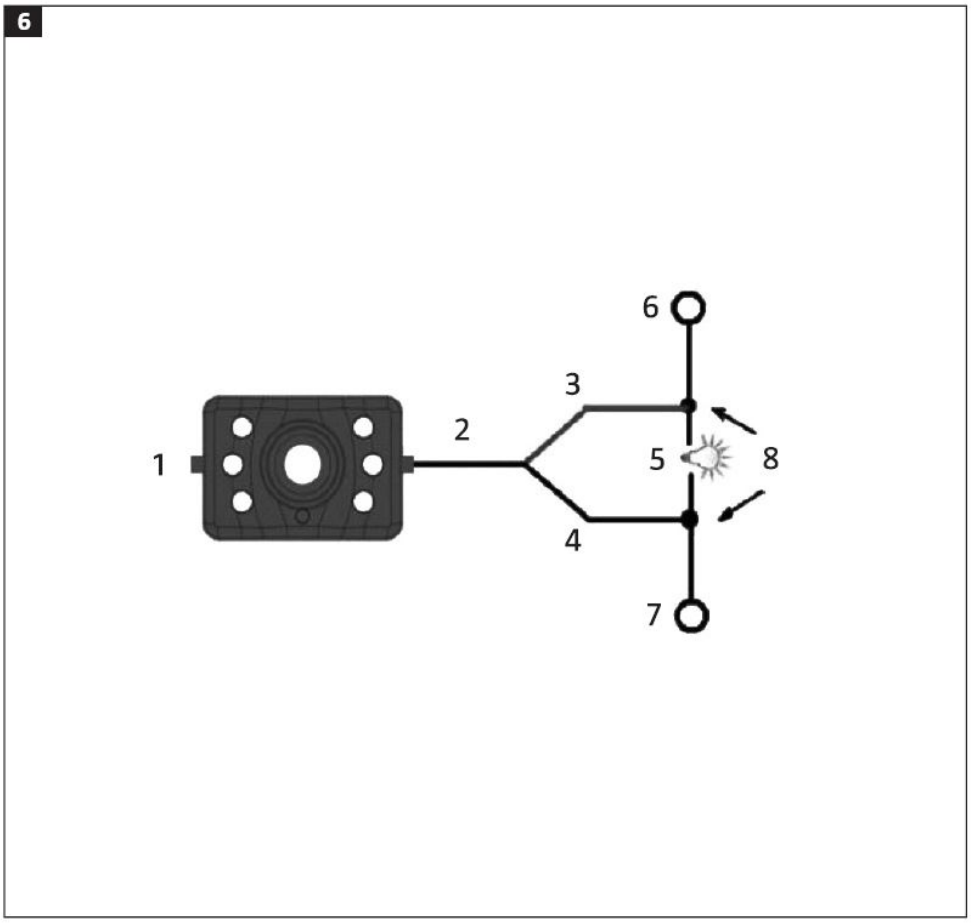
1. Remove the rear number plate, holder and screws from the vehicle.
2. Fit the camera mounting plate (with the camera on) behind the plate holder. Screw the number plate holder and mounting plate in place with the screws.
3. Replace the number plate in the holder.



4. Route the power cable from the camera to a suitable connection point in the reversing light circuit. Get professional help with the installation if necessary – Some vehicles already have holes through which the cable can be routed, for example the hole for the cable to the number plate lighting. otherwise drill a hole in the bodywork near the cable inlet in the camera housing. Remove the camera from the vehicle after choosing the place for the cable inlet in the bodywork. Skip the next two steps if an existing hole is used.
5. Before drilling the inlet hole in the bodywork, carefully check what there is on the inside of the bodywork. Take the necessary steps to avoid damaging any vehicle components, electrical equipment or parts of the fuel system. Remove the number plate and camera before drilling the hole.

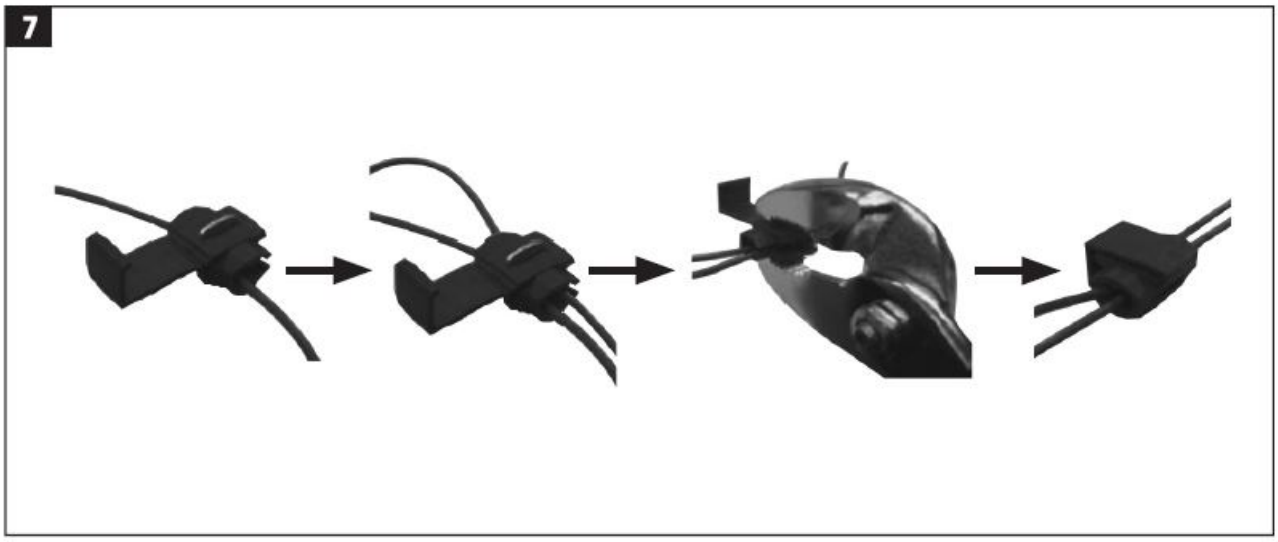


6. Drill and deburr the hole, insert the supplied grommet and route the cable for the camera through the grommet in to the vehicle. The grommet should always be used, otherwise the sheet metal can damage the cable.
7. Localise the reversing lights on the vehicle. Turn the ignition key to garage mode, apply the parking brake and put the vehicle in reverse to switch on the reversing lights. Go behind the vehicle and check where the reversing lights (white) are. To localise the +12 V/+24 Vwires to the reversing lights you need access to the back of the reversing lights. You may need the wiring diagram to find the reversing lights and suitable connection points -contact the vehicle manufacturer.
8. After finding a suitable connection point to the reversing light circuit, route the cable to this point. Carefully install and fix the cable, making sure that it cannot chafe against or fasten in any part of the vehicle, such as the hinges for the boot. Never route the cable on the outside of the vehicle.
9. Two wires are connected to the reversing lights in most vehicles. The negative wire is usually black and the positive wire is coloured. If in doubt, use a multimeter or other suitable measuring instrument to determine which wire is the positive one. Use the multimeter in accordance with the instructions of the instrument manufacturer.



- Camera
- Cable
- Red
- Black
- Reversing light
- Positive (+)
- Negative (-)
- Slip on terminal

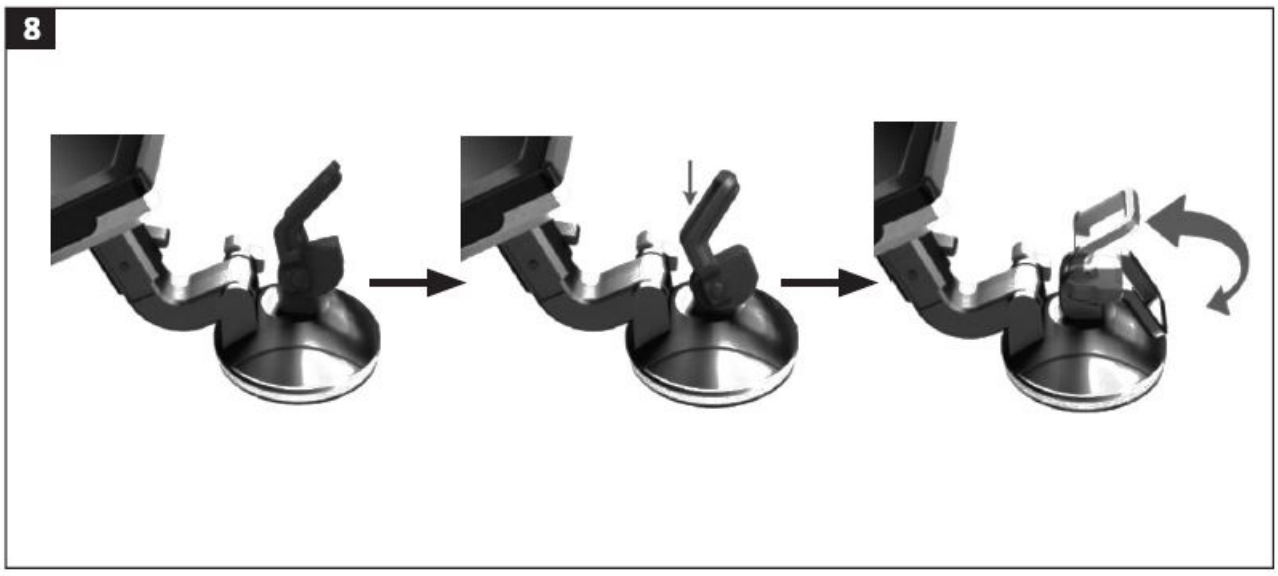
10. When the polarity (positive and negative wires) has been determined, switch off the ignition and disconnect the negative lead from the battery.
11. Connect the red wire to the positive wire for the reversing light with the supplied slip on terminal. Press in the tap on the terminal with a pair of pliers to ensure good electrical connection.
12. Connect the black wire to the negative wire for the reversing light or earth it to the chassis.
13. Replace the bulb in the socket and refit the socket. Ca refu I ly fasten a 11 the wires with insulating tape or cable ties.
14. Reconnect the negative lead to the battery.



INSTALLATION OF MONITOR

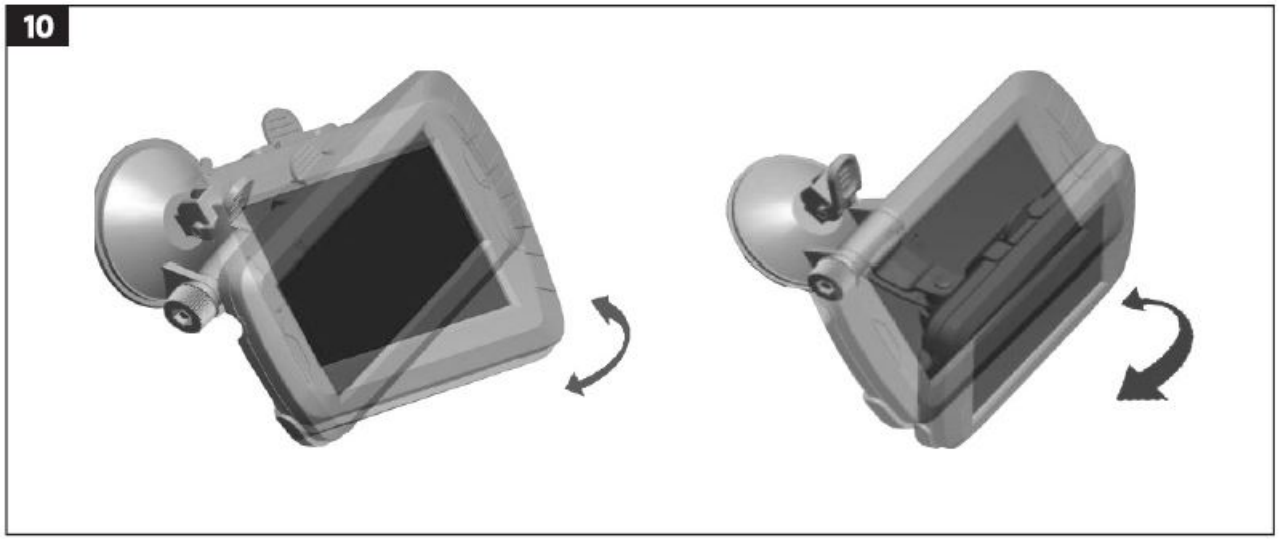
IMPORTANT:
Install the monitor where it does not obstruct the view when driving.

1. Clean the surface before mounting the monitor.
2. Place the suction cup on a smooth surface where the monitor can be easily seen.
3. Press the suction cup against the smooth surface and press down the locking lever to lock it to the surface.



4. Click the monitor into the suction cup.

5. Adjust the arms of the suction cup so that the monitor is at the right angle and lock this position by tightening the screws.



6. Lead the monitor cable to the 12/24 V
7. Put the small 12/24 VDC plug in the port on the right side of the monitor.
8. Put the large 72/24 V plug in the socket.
9. For best functionality and secure grip the suction cup should be mounted when:
    - The surface temperature is between 27 to 38°C.
    - The ambient temperature is at least 10°(.
    - Do not mount in direct sunlight and protect the suction cup from direct sunlight for the first 24 hours after mounting.

NOTE

In very bright conditions it can take a few seconds for the image on the monitor to stabilise. Wait until the image has stabilised before reversing.

TESTING THE INSTALLATION

1. Reconnect the negative lead to the battery, if this has not already been done.
2. Turn the ignition key to garage mode. Do not start the engine.

3. Apply the parking brake and engage reverse gear.
4. After testing and routing the cable should be installed permanently.
5. Route all cables behind the interior panels or under the floor mats. Wind together surplus length of cable and fix with the supplied cable ties.

USE
Before using for the first time the monitor and camera must be paired, see “Pairing” section below.

POWER SUPPLY
The monitor is supplied with power from the 72/24 V socket in the vehicle. The monitor automatically switches on when connected.

NOTE
The monitor switches off automatically if there is no signal from the camera and the blue status light flashes. An image is shown if there is a signal from the camera and the blue status light stops flashing and stays on.

FUNCTION KEYS

1. **Menu and return button**
   Press the button to show the monitor menus or return to the previous menu
2. **Up arrow button**
   Press the button to step forward in the menus.
3. **Power switch button**
   Press the button to switch the power supply on and off, or in monitor menu mode to confirm choice and settings.
4. **Down arrow button**
   Press the button to step back in the menus.
5. **Help line button**
   Press the button to show help lines on the monitor.

PAIRING

1. Press the menu button to go to the main menu and then press the power switch button to open the pairing menu.
   - Pairing
   - Settings
   - Picture
2. When the pairing menu opens, press the
3. Press the button on the camera to pair the camera with the monitor. The text “Paired” is shown when the pairing has been correctly completed.

Image settings
Press the up or down arrow to go to settings.

- Auto display
- Mirror

- Version

Auto display
Press the power switch button to select Camera 1, Camera 2, or Split.

- Cam 1
- Cam 2
- Split

Mirror
Select Mirror to go to the options Normal, Up, Flip, Up 8 Flip, select the required option and press the power switch to confirm.

- Normal
- Up
- Flip
- Up 8 Flip

Version
Select Version and press the power switch to show information on the programme version for the monitor and camera. Paired channels can be deleted on the version information image. Press the up arrow button for 5 seconds to delete paired channels. Use this function carefully-two paired channels are deleted at the same time and must be recoded after deletion.

Picture
Screen image for picture settings. Press the power switch to select Brightness, Contrast or Saturation.

- Brightness
- Contrast Saturation

Brightness
Select Brightness, press the power switch to open the setting and then adjust the brightness with the up or down arrow button.

Contrast
Select Contrast, press the power switch to open the setting and then adjust the contrast value with the up or down arrow button.

Saturation
Select Saturaiton, press the power switch to open the setting and then adjust the saturation value with the up or down arrow button.

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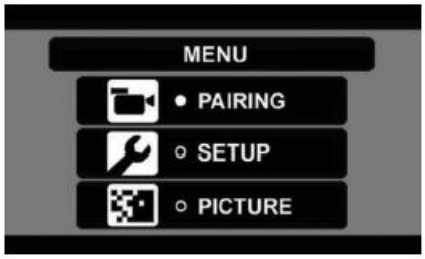

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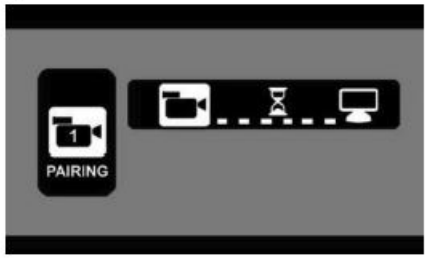

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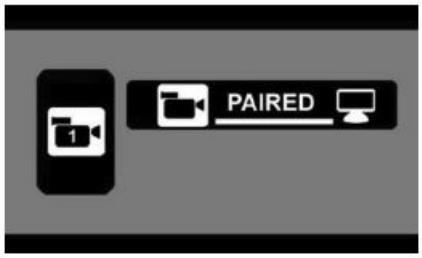

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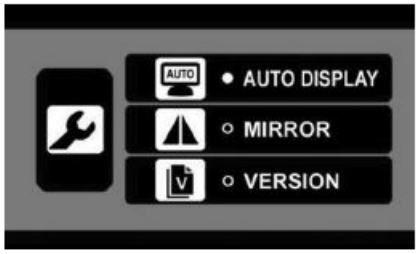

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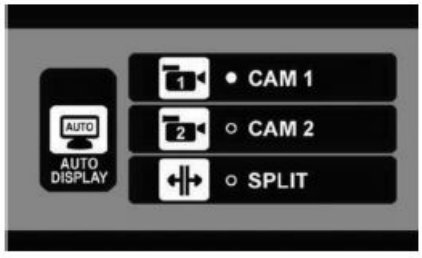

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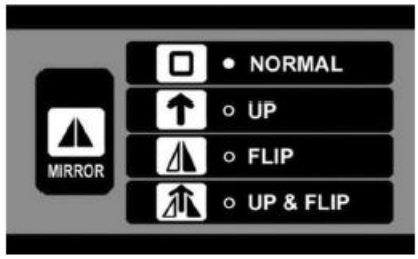

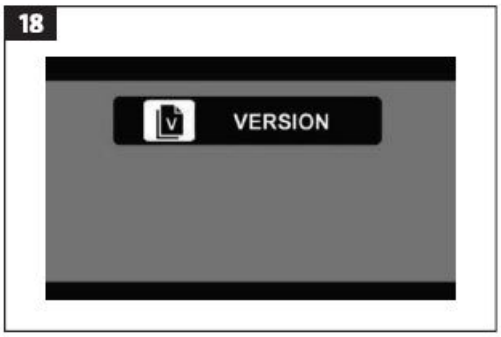

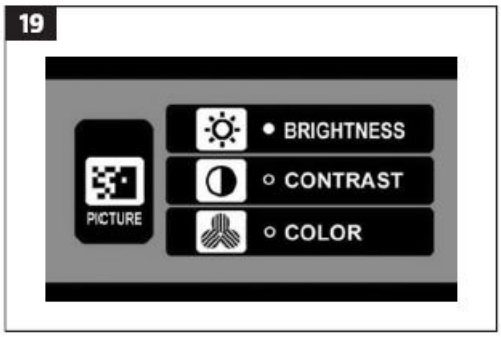

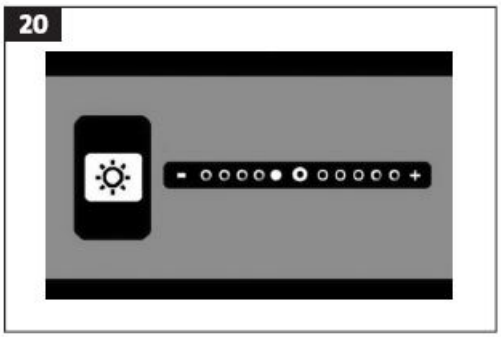

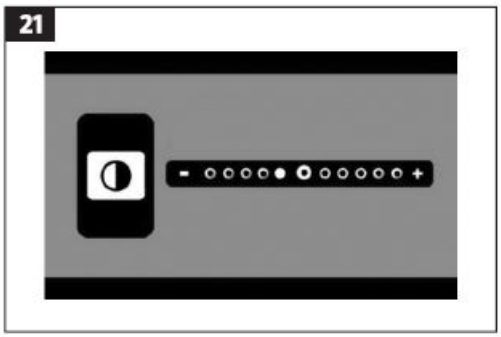

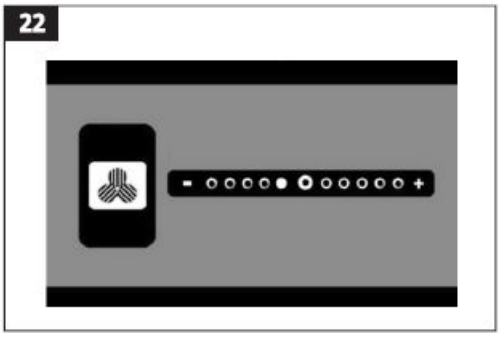

OTHER FUNCTIONS

- Press the up or down arrow to go to Auto display mode when no menus are shown.
- Press the power switch button to select Camera 1, Camera 2, or Camera 1 8 2 when no menus are shown.
- The camera has an IR mode to use in the dark. An IR diode lights up automatically to illuminate the monitored area in poor light.

IMPORTANT:
The IR diode emits a pale red light when it goes on. Avoid looking at the IR diode when it is on – risk of eye damage.

MAINTENANCE

REPAIRS
Do not attempt to open, repair or modify the product. The warranty will be invalidated if the user has opened, repaired or modified the product.

Documents / Resources

	**HAMRON 012441 Rear View Camera** [pdf] Instruction Manual 012441, Rear View Camera