



Color CCD Camera (true image)
CC-2002E

Installation manual

“Mirror Image” means the image taken by the camera is reversed right-to-left in the same way you would see the scene if viewing through your rear-view mirror.

“True Image” means the image taken by the camera appears the same as if you were viewing it directly.

1. PRECAUTIONS

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to consult the dealer or an experienced radio/TV technician for help.

INFORMATION FOR USERS:

CHANGES OR MODIFICATIONS TO THIS PRODUCT NOT APPROVED BY THE MANUFACTURER WILL VOID THE WARRANTY AND WILL VIOLATE FCC APPROVAL.

WARNING

- This device has been designed exclusively for use with a vehicular mounted television system. It should not be used for other purposes.
 - Disconnect the vehicle's negative (-) terminal when installing wiring.
 - Do not attempt to disassemble or modify this product.
 - In the event it is necessary to drill holes in the vehicle for mounting, confirm that the drill bit or camera wiring will not strike or interfere with piping, gas tank, electrical wiring or other functional parts of the vehicle.
 - Do not rely solely on the monitor image.
- A vehicle-mounted camera/monitor system is an auxiliary device meant for confirming safety conditions inside and to the front/rear of the vehicle, and it is limited in its range. The system should be used only in conjunction with direct visual observations.
- Do not use when the imaging surface or other parts are malfunctioning.
 - When installation and wiring are completed, confirm that the vehicle's horn, brake and warning lights, and other electrical equipment function properly as designed.

CAUTION

- Install only as directed in the Installation Manual.
 - Install accessory parts as directed.
 - When drilling holes in the vehicle for installation of wiring, always use insulated grommets in the holes to protect the wiring.
 - If holes are drilled in the vehicle to install the camera, or when installing wiring, use silicon sealant to seal any gaps.
 - Do not damage or scar the camera wiring.
 - After completing the camera wiring, use cable clamps or insulation tape to bundle the wiring together.
 - Do not use high-pressure car washing devices around the camera.
- The camera is a high-precision instrument and should not be subjected to high-pressure water stream impacts.
- Periodically check the tightness of the installation screws and retighten if necessary.

2. PACKAGE CONTENTS

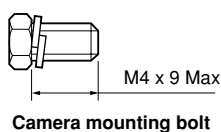
• Camera	1
• Mounting bracket	1
• Camera cover	1
• Accessory bag	1
• M4 x 9 hex bolts with spring washer (to attach the camera to the mounting bracket)	4
• M5 x 20 hex bolts with washer (to attach the mounting bracket to the vehicle)	2
• M5 flange nuts (to attach the mounting bracket to the vehicle)	2
• M4 flat washers (to attach the camera to the mounting bracket)	4
• M4 bushes (to attach the camera to the mounting bracket)	4

Note:
• Specifications and design are subject to change without notice for further improvement.

3. INSTALLATION

Cautions on Installation

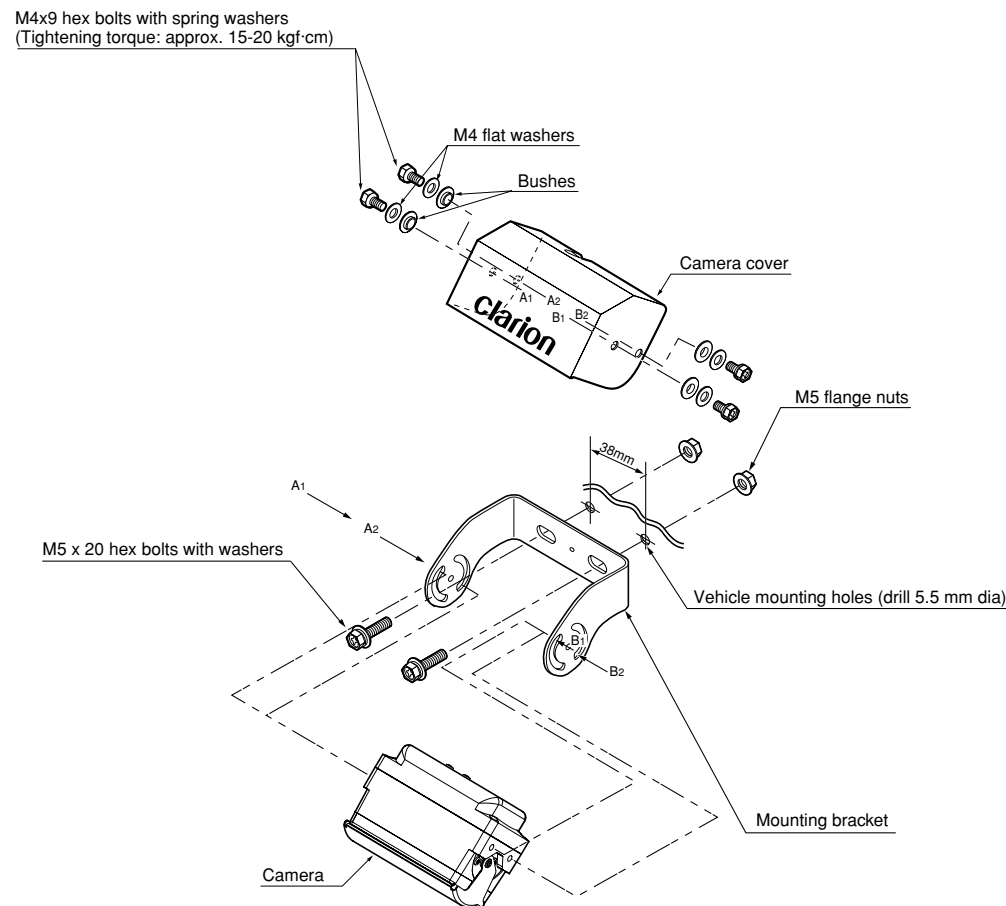
- ① When installing the camera, use only the supplied M4 x 9 hex bolts with stainless spring washer.



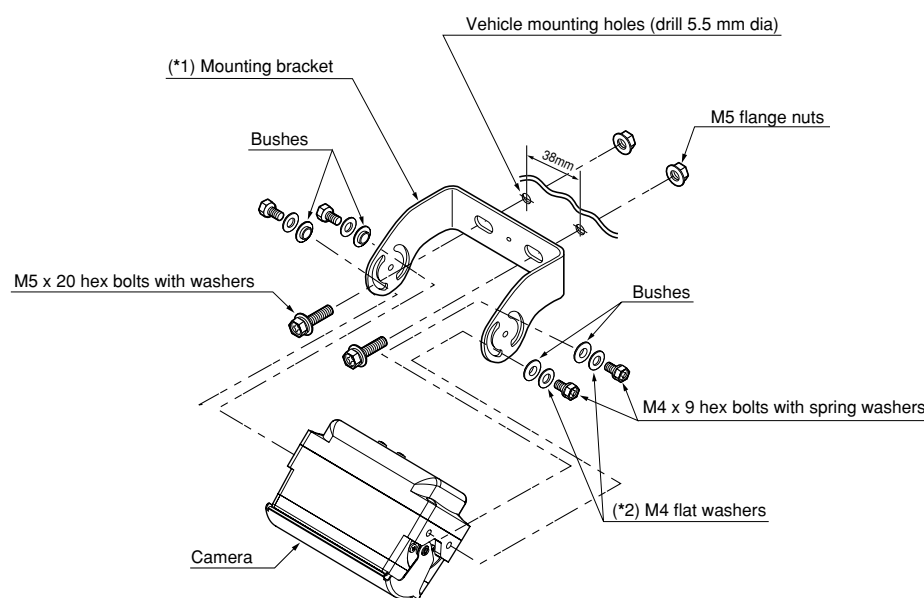
<CAUTION>
The camera case is sealed inside for protection against water, so using longer bolts will damage the threads.

- ② To prevent vibration, install the camera in a stable location. If no such location is available, take the necessary measures for reinforcement.
<CAUTION>
Avoid installing the camera in locations where the lens can easily be soiled by mud, exhaust gas, etc.
- ③ This camera is not submersible. Do not use it in water.
- ④ NEVER loosen the screws on the camera or take the camera apart.
Doing so will reduce water resistance and may lead to malfunction.
- ⑤ NEVER swing the camera by its cable or pull strongly on the cable.
Doing so can reduce water resistance, damage the cable, and otherwise impair camera performance.
- ⑥ Be sure to use sealant, etc., to waterproof the holes used to install the camera mounting bracket on the vehicle, the bolts, and the cable holes.
- ⑦ This camera is designed with a narrow angle of view, and may result in a blind spot in your field of vision, so great care should be taken during use.

When using the camera cover



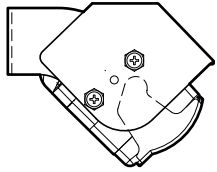
When not using the camera cover



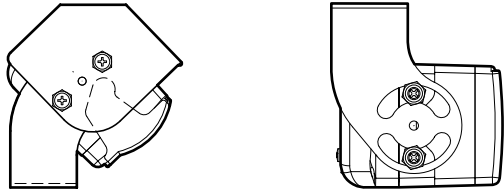
Notes:
*1 Never attempt to mount the camera by using only two screws on one side (right or left) of the mounting bracket.
*2 Always use the supplied M4 flat washers. Failure to include the washers will result in damage to the unit.

■ Installation Examples

■ Example of vertical installation 1



■ Example of horizontal installation



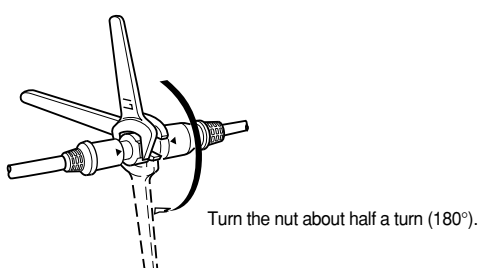
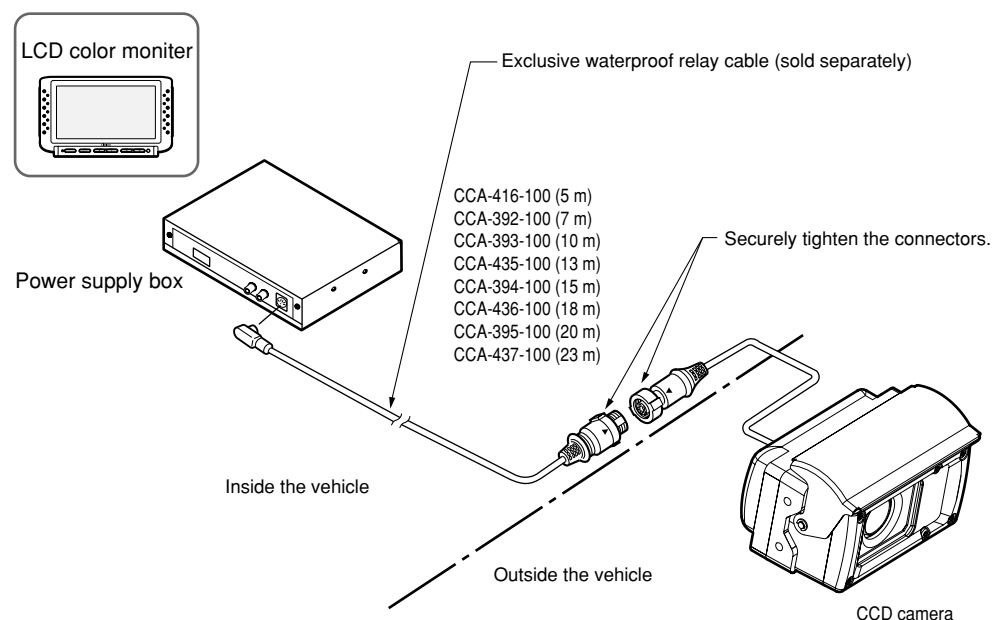
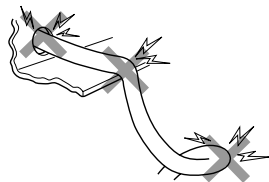
Notes:

- This camera is designed with a narrow angle of view, and may result in a blind spot in your field of vision, so great care should be taken during use.
- The illustrations shown here depict merely one possible installation example.

4. WIRING

Cautions on Wiring

- ① Cables should be located inside the vehicle in order to avoid scrapes and other damage. If wiring on the outside of the vehicle is unavoidable, fix it securely to the vehicle surface, to prevent its flapping in the wind or being caught by tree branches or other obstructions. Also, confirm that all connectors are fastened securely and located in places where they will be protected from moisture.
- ② Route cables away from the engine, transmission, exhaust pipes and other locations that emit heat, as well as moving parts such as cooling fans, alternators and sources of noise. Place cables inside corrugated tubes and use clamps to secure them.
- ③ The cables supplied with the camera are coaxial cables that must not be cut.
- ④ When glaze-painting the vehicle, wire the cables after the vehicle has been glaze-painted.
- ⑤ Use protective tubes, grommets, etc. in places where cables are likely to be damaged, for example, where they are routed through openings in metal parts or around sharp edges. Make sure that cables are secured without being bent or twisted as this could lead to internal short-circuiting. Note that a scratch in the sheath will reduce resistance to water.



Note:

- See the Instruction Manual supplied with the monitor for information regarding wiring, operation, and composition of the monitor unit.

■ Waterproof Connector Fastening Procedure and Cautions

Use two wrenches (for 17 mm nuts), one for turning the nut and the other for holding the connector in place. Tighten as described in the instructions.

NEVER tighten by immobilizing the plastic parts using pliers, etc. Doing so will damage the connectors and reduce the waterproofing efficiency, leading to water leakage.

Tightening procedure

- ① Line up parts "▼" of the connectors, then turn the nut by hand until it stops.
- ② First finger tighten the nut. Then place one wrench on the nut and the other on the connector. Turn the nut about half a turn (180°).

Tightening torque: Approx. 25 kgf·cm

Clarion

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CE DECLARATION of CONFORMITY

We Clarion Europa GmbH

(supplier's name)

Hessenring 19-21, 64546 Mörfelden-Walldorf, GERMANY
(address)

declare under our sole responsibility that the product

CCD Video Camera

MODEL:CC2002

Product code:CC2002E

TYPE: 1042569

(name, type or model, possibly sources and numbers of items)

to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

EN 61000-6-3: 2001 EN 61000-6-1:2001

(title and/or number and date of issue of the standard(s) or other normative document(s))

(if applicable) following the provisions of 2004/108/EC Directive.

And following the provisions of 2004/104/EC Directive, according to paragraph 3.2.9 of Annex I, meets the limits defined in paragraph 6.5, 6.6, 6.8 and 6.9 of Annex I

(supplier's comment)

Susumu Yamakawa

Mörfelden-Walldorf, GERMANY

Susumu Yamakawa

8 NOV 2007

President

(Place and date of issue)

(name and signature or equivalent marking of authorized person)

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