



HCE-C205RD

REAR VIEW CAMERA

• OWNER'S MANUAL

Please read before using this equipment.

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Designed by ALPINE Asia Pacific
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Operating Instructions

WARNING

This symbol means important instructions. Failure to heed them can result in serious injury or death.

WHEN USING A CAMERA SYSTEM, THE DRIVER MUST VISUALLY CHECK ACTUAL CONDITIONS AROUND THE VEHICLE. MAKE SURE THERE ARE NO PERSONS OR ANIMALS IN THE AREA IN WHICH YOU ARE MANOEUVRING OTHERWISE YOU COULD INJURE THEM.

A camera assists the driver by sending images to the screen showing conditions in view of the camera. The camera uses a wide-angle lens. Therefore, there is a difference in distance perspective between what is normally seen and what appears on the screen. Also, the images shown by the rearview camera are reversed, so as to appear the same as what is seen through the rearview mirror.

The camera may not perform to full capability due to variables such as:

- weather conditions such as hard rain, snow, fog or mud
- extremely high or low temperatures near camera
- slope of vehicle and/or roadway
- direct exposure to very bright light such as headlamp or bright sunlight
- moving from very dark to very bright light and vice versa such as in parking garages or tunnels
- extremely low light areas
- walls or objects that are located diagonally in relation to the camera
- retracted mirrors that change camera viewing angle
- open doors or trunks
- changes to height of vehicle due to loading capacity or hydraulic suspensions
- obstacles located at the corner of the vehicle

DO NOT DISASSEMBLE OR ALTER.
Doing so may result in an accident, fire or electric shock.

KEEP SMALL OBJECTS SUCH AS BOLTS OR SCREWS OUT OF THE REACH OF CHILDREN.
Swallowing them may result in serious injury. If swallowed, consult a Doctor immediately.

USE THE CORRECT AMPERE RATING WHEN REPLACING FUSES.
Failure to do so may result in fire or electric shock.

USE ONLY IN CARS WITH A 12 VOLT NEGATIVE GROUND.
(Check with your dealer if you are not sure.) Failure to do so may result in fire, etc.

BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL.
Failure to do so may result in electric shock or injury due to electrical shorts.

DO NOT USE BOLTS OR NUTS IN THE BRAKE OR STEERING SYSTEMS TO MAKE GROUND CONNECTIONS.

Bolts or nuts used for the brake or steering systems (or any other safety-related system), or tanks should NEVER be used for installations or ground connections. Using such parts could disable control of the vehicle and cause fire etc.

DO NOT DAMAGE PIPE OR WIRING WHEN DRILLING HOLES.

When drilling holes in the chassis for installation, take precautions so as not to contact, damage or obstruct pipes, fuel lines, tanks or electrical wiring. Failure to take such precautions may result in fire.

MINIMISE DISPLAY VIEWING WHILE DRIVING.

Viewing the display may distract the driver from looking ahead of the vehicle and cause an accident.

DO NOT SPLICE INTO ELECTRICAL CABLES.

Never cut away cable insulation to supply power to other equipment. Doing so will exceed the current carrying capacity of the wire and result in fire or electric shock.

DO NOT INSTALL IN LOCATIONS WHICH MIGHT HINDER VEHICLE OPERATION, SUCH AS THE STEERING WHEEL OR GEAR LEVER.

Doing so may obstruct forward vision or hamper movement etc. and results in serious accident.

DO NOT ALLOW CABLES TO BECOME ENTANGLED IN SURROUNDING OBJECTS.

Arrange wiring and cables in compliance with the manual to prevent obstructions when driving. Cables or wiring that obstruct or hang up on places such as the steering wheel, gear lever, brake pedals, etc. can be extremely hazardous.

DO NOT ROUTE ELECTRICAL CABLES NEAR HOT OR MOVING PARTS

Route the cables and wiring away from hot or moving parts, and fix them securely to avoid heat/mechanical damage to the cable insulation, which may result in short circuit, fire or electric shock.

MAKE THE CORRECT CONNECTIONS.

When making connections to the vehicle's electrical system, be aware of the factory installed components (e.g. on-board computer). Do not tap into these leads to provide power for this unit. When connecting the device to the fuse box, make sure the fuse for the intended circuit of the device has the appropriate amperage. Failure to do so may result in fire or damage to the unit and/or the vehicle. When in doubt, consult your Alpine dealer.

USE THIS PRODUCT FOR MOBILE 12 VOLT APPLICATIONS.

Use for other than its designed application may result in fire, electric shock or other injury.

CHECK THAT THE CAMERA MOUNTINGS IS ATTACHED SECURELY, AND THAT THE SCREWS ARE TIGHT BEFORE DRIVING.

Failure to do so may result in an accident.

WHEN INSTALLING OR CHECKING A CAMERA, DO SO AFTER PARKING THE CAR IN A LEVEL, SAFE PLACE, TURNING OFF THE ENGINE, AND APPLYING THE HAND BRAKE.

Failure to do so may result in an accident.

WHEN USING A DRILL TO MAKE A HOLE, TAKE PRECAUTIONS SUCH AS WEARING GOGGLES SO FRAGMENTS DO NOT GET INTO THE EYES.
Failure to do so may result in injury.

CAUTION

This symbol means important instructions. Failure to heed them can result in injury or material property damage.

HAVE THE WIRING AND INSTALLATION DONE BY EXPERTS.

The wiring and installation of this unit requires special technical skill and experience. To ensure safety, always contact the dealer where you purchased this product to have the work done.

ARRANGE THE WIRING SO IT IS NOT CRIMPED OR PINCHED BY A SHARP METAL EDGE.

Route the cables and wiring away from moving parts (like the seat rails) or sharp or pointed edges. This will prevent crimping and damage to the wiring.

USE SPECIFIED ACCESSORY PARTS AND INSTALL THEM SECURELY.

Be sure to use only the specified accessory parts. Use of other than designated parts may damage this unit internally or may not securely install the unit in place. This may cause parts to become loose resulting in hazards or product failure.

CONNECT LEADS PROPERLY

Be sure to connect the colour coded leads according to the diagram. Incorrect connections may cause the unit to malfunction or cause damage to the vehicle's electrical system.

HALT USE IMMEDIATELY IF A PROBLEM APPEARS.

Failure to do so may cause personal injury or damage to the product. Return it to your authorized Alpine dealer or the nearest Alpine Service Center for repairing.

EXCEPT FOR THE CAMERA, DO NOT ATTACH ANY PARTS TO AREAS WHICH WILL GET WET, OR WHERE THERE IS A LOT OF HUMIDITY OR DUST.

Failure to do so may result in fire or damage.

DO NOT ATTACH THE CAMERA TO FLUOROCARBON RESIN FINISHED CAR BODIES OR GLASS.

Doing so reduces the strength of the camera's mounting. This could cause it to fall off and cause injury or damage to the car's body.

DO NOT ATTACH THE CAMERA TO ANY SURFACE WHERE THE ENTIRE ADHESIVE SURFACE CANNOT BE APPLIED.

Doing so reduces the strength of the camera's mounting. This could cause it to fall off and cause injury or damage to the car's body.

NOTICE

- About Care of Device
Do not assert any excess pressure to the camera or the mounting, as this could cause the camera direction to shift, or the camera mounting bracket to come off.
- To prevent the camera lens, mounting and cords from changing color or shape, or from deteriorating, wipe with a chemical-free, damp cloth.
- Do not use an automatic car wash or high-pressure washer. Doing so could cause the camera to come off, damage to the device cord, or may allow water to enter the camera or the inside of the car.
- In some cases, to attach the device, a hole must be drilled in the car body, requiring use of touch-up paint (retail product) for rust-prevention, and should be prepared beforehand.
- Be sure to disconnect the cable from the (-) battery post before installing your HCE-C205RD. This will reduce any chance of damage to the unit in case of a short-circuit.
- Be sure to connect the color coded leads according to the diagram. Incorrect connections may cause the unit to malfunction or damage to the vehicles electrical system.
- When making connections to the vehicles electrical system, be aware of the factory installed components (e.g. on-board computer). Do not tap into these leads to provide power for this unit. When connecting the HCE-C205RD to the fuse box, make sure the fuse for the intended circuit of the HCE-C205RD has the appropriate amperage. Failure to do so may result in damage to the unit and/or the vehicle. When in doubt, consult your Alpine dealer.
- About Rear Camera
The rear camera is optimized for use in this system, as a dedicated product, it should not be used in other systems.
- About Power Connection
Connect the reverse input wire (orange/white) to the power wire of the reverse lamp. Consult your Alpine dealer for details. Confirm that this connection is made to the negative side of the reverse lamp.
- Do not use mobile phones and wireless devices near the camera.
Doing so may result in noise on the screen or malfunction. It is recommended to use mobile phones or wireless devices away from the camera.
- About Camera Installation Location
Before installing, make sure there is a enough space to be able to install the camera. If possible, install the camera in the center of the bumper. If the camera is installed off-center, the image may differ from the actual view. Calibration is necessary.
- Confirming the Display Function
To connect the unit, confirm that the monitor will require a compatible Alpine's connector.

HCE-C205RD

- REAR VIEW CAMERA (HCE-C205RD) is designed for use with Alpine AV head units or navigation systems with touch-screen operation.

OPERATION

Rearview Camera Operation

Turning the Rearview Camera On and Off

- 1 Place the vehicle's transmission into reverse.

The video images behind the vehicle and its surroundings are displayed while in reverse.

- 2 Shifting out of reverse returns the display to whatever was being shown before backing up.

- Refer also to the owner's manual of the connected monitor/ navigation systems.
- Be sure to also check behind and around the car visually. Use the camera image to assist in showing conditions behind and around the car.
- Depending on where the unit is installed, actual conditions may differ from the displayed image.

Changing the Rear Image Configuration

- 1 Touch the screen while the camera image is displayed.
- 2 Touch [Rear], [Panorama], [Corner] or [Ground] to choose the viewing angle.

[Rear]: Rear View

Displays an image of the area behind the vehicle. Use this when backing into the parking space.

[Panorama]: Panorama View

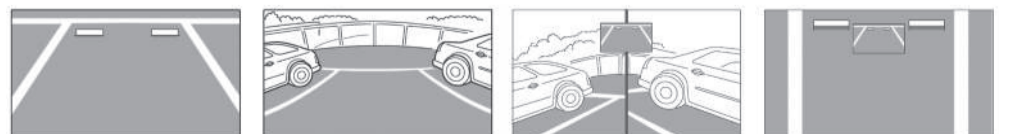
Displays a general perspective of what is behind the car. Use this when you want to check mainly behind the car.

[Corner]: Corner View

Displays a divided image left and right of center. Use this mainly when checking the left and right directional view.

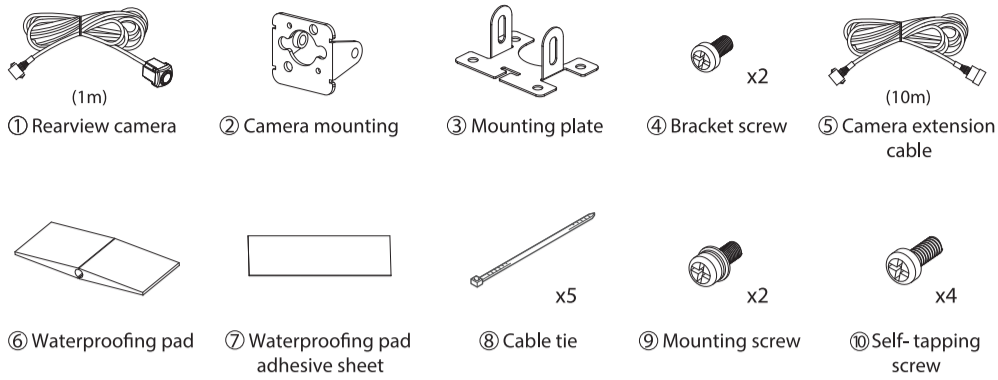
[Ground]: Ground View

Displays a image from above down to the lower section of the car. Use this when to determine the car's position in relation to the curb, etc.

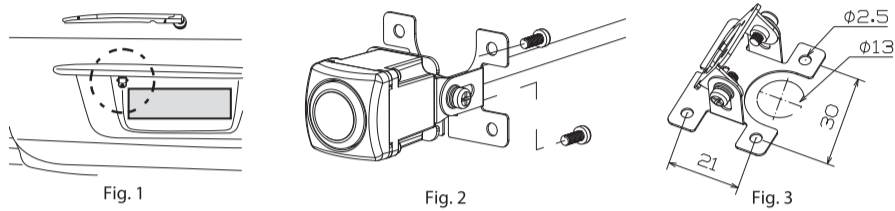


Installation

Check Accessory Parts



Install to the Rear Garnish



- 1 Attach the mounting bracket to the camera mounting stage with the angle adjustment screw as shown in the figure.
- 2 Attach the camera to the camera mounting bracket ②. Pull the camera cable through to the camera mounting bracket ②, and secure with the Camera mounting screws ③ (see Fig. 2).
- 3 Loosen the camera mounting bracket ② and angle adjustment screw. Determine the mounting angle, and carefully tighten the angle adjustment screw.
- 4 Make a 13 mm hole in the surface where the camera is mounted (see Fig. 3).
- 5 Pull the camera cable inside the car through the hole made in step 3.
- 6 Peel off the adhesive seal from the camera mounting bracket and attach the camera mounting bracket on the chassis of the vehicle. If required, fix the camera mounting bracket using self-tapping screws.

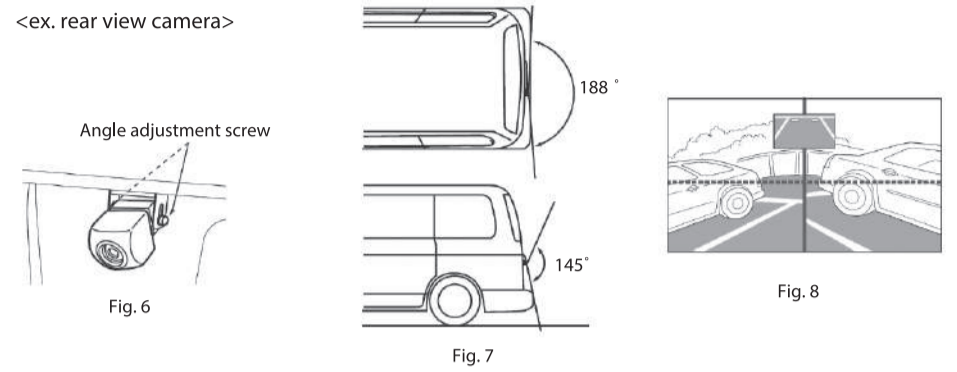
- Attach the camera in a position where it does not touch the number plate.
- Use retail touch-up paint to paint the surface and surrounding area when a hole has been made in a metal surface.
- Make sure water cannot enter the hole made for the camera cable. Use commercially available waterproof tape or sealant.
- If necessary, use a self-tapping screw ⑩ to fix the camera mounting bracket (In the case of a plastic mount area).

Adjusting the Camera Angle

- For further details on the camera angle adjustment, refer to "Adjusting the Camera Angle (HCE-C205RD)" of these Operating Instructions.

Adjusting the Camera Angle (HCE-C205RD)

<ex. rear view camera>

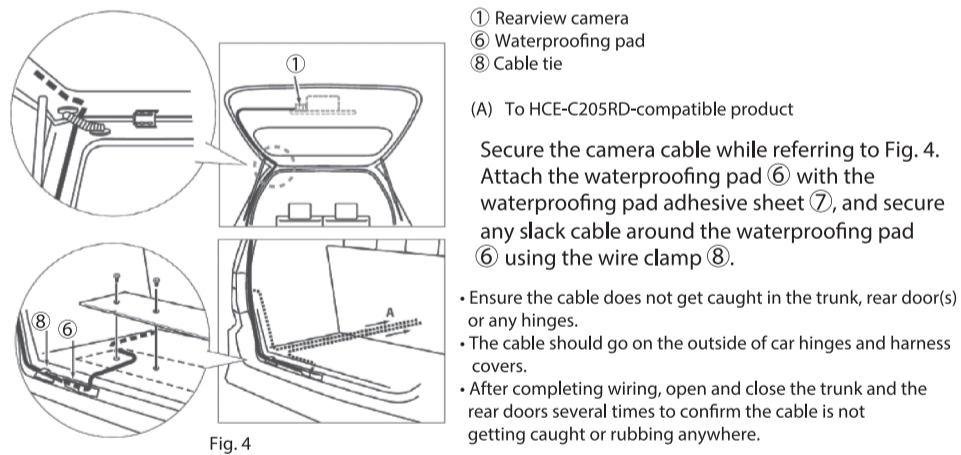


Caution

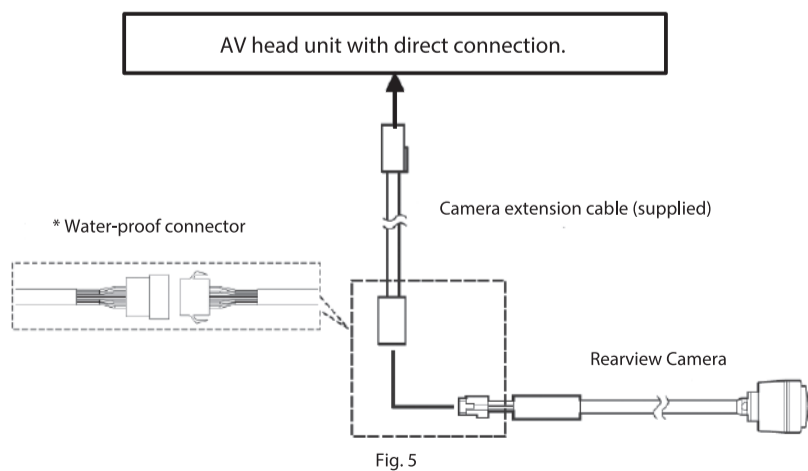
When adjusting the camera angle, do so after turning off the engine and applying the hand brake to avoid an accident.

- 1 Put the gear shift into reverse (R) or press ON/OFF, and check the image from the camera on the display.
When you set the corner view, adjust the angle so that the road may be roughly viewed horizontally (Fig. 8).
- 2 Loosen the camera mounting bracket ② and angle adjustment screw. Determine the viewing angle, and carefully tighten the angle adjustment screw.

Securing the Camera Cable



Connections



- For details on connection, refer to the installation manual of the HCE-C205RD-compatible product.
- Connect the water-proof connector for the camera and camera extension cable securely. When disconnecting the water-proof connector, use a flat-blade screwdriver.
- REAR VIEW CAMERA (HCE-C205RD) is designed for use with Alpine AV head units (i108ED, etc) with touch-screen operation. For information on HCE-C205RD-compatible products, contact your local authorized Alpine dealer or visit the Alpine Website.

Specifications

	HCE-C205RD
Power Requirements	6.0V DC (5.5 to 9.0V DC allowable)
Ground Type	Negative ground type
Max. Power Consumption	0.9W at 6.0V
Output Image	Mirror Image, CVBS(NTSC Video signal) 4:3 Image output
Image Output impedance	75 Ω (1Vp-p)
Image Sensor	1/4 inch CMOS Image sensor, aspect ratio 4:3
Effective Number of Pixels	640 (horizontal) X480 (vertical) approximately 0.3 Mega Pixels
Lens Section	Focal length f=0.8mm, brightness F=2.4
Angle of Field	Approximately 188° horizontally, approximately 145° vertically
Automatic Image Adjusting Function	Automatic exposure adjustment, Automatic white balance adjustment
Synchro-System	Internal synchronization
Luminance S/N	46dB or more
Resolution(horizontal)	330 TV line or more(centre area)
Illumination Range	Approximately 1.5lx to 100klx
Operating Temperature Range	Camera Section -40 to + 185F(-40 to +85°C)
Storage Temperature Range	Camera Section -40 to + 185F(-40 to +85°C)
External Dimensions(WXHXD)	Camera Section 23 X 23 X 30mm (excluding projection on the rear)
Weight	Camera Section 49g(including the cable but not the bracket and Screw)