No.90-702798B Firmware Ver.1.1.1 (As of Jul. 2024)



d^Action **DC2000RA**

Instruction Manual

What to do after an accident

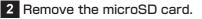
Check the surrounding area for safety before working.



Remove all the cables connected to the main camera to stop recording.



Remove the power cable terminal after the cable cover. (Refer to page 82)



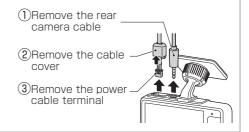


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Introduction

About this manual

Thank you for purchasing DC2000RA.

This instruction manual is your guide book to using the DC2000RA (hereinafter "Product"). To use this Product properly and safely, please read and understand the contents of this manual prior to use.

After reading, please keep this manual nearby for future reference or troubleshooting.

Download the latest instruction manual below https://carmate-usa.com/



Disclaimer

Please note that Car Mate takes no responsibility for any loss arising from the use or failure of this Product, or from any damage to any recorded video and/or data.

Using this Product safely

In order to use this Product safely and prevent any damages caused to you and surrounding people/property, please ensure to read this manual carefully before use.

Cautionary symbols

Graphic symbols are used in this manual to indicate cautionary matters, based on both the level of seriousness and the subject matter.

Please ensure a thorough understanding of what each symbol represents before reading.



If the Product is handled improperly. possibility of death or serious injury is anticipated.



If the Product is handled improperly. possibility of injury or property damage is anticipated.



Improper handling of the Product may be regarded as violation of the law.



Useful tips to know when handling the Product

For your safety, please follow the instructions below:

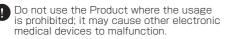
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Do not use this Product if it is broken. not working, or shows any other signs. suggesting an abnormality. To prevent possible accidents or fire from occurring. stop using the Product immediately if it you notice any smoke, abnormal noises. or abnormal smells etc.



Check that Product is securely mounted before driving your car. A Product that has detached or fallen down may result in iniury or accidents occurring.

Do not suddenly accelerate or make any sharp turns for the sole purpose of checking the performance of the Product. Operating your vehicle in such a way may lead to injury or accidents.



Keep the power cable and terminal Departions clean, wiping away any dust or dirt that may have gathered. Dust and dirt can prevent secure electrical contact. which may lead to electric shock or fire.

This product is not dustproof, rainproof, $\Delta \Omega$ or waterproof. To prevent electric shock, fire, or product failure, do not touch it with wet hand, and keep it away from water and other foreign matter.

Do not use the Product if condensation $\angle \Omega$ (water droplets) has formed on the inside. Condensation is more likely to form when the Product is subjected to sudden change of temperature, and may cause the Product to malfunction or heat up.

Except into the power reset button, do not \bigtriangleup insert metal items such pins or needles. directly into holes or gaps in the product. Doing so may result in product malfunction or electric shock

- Do not operate the Product or keep watching the Product's screen while vou are driving. Doing so may lead to accidents. Keeping your eye on such display devices while operating a vehicle is prohibited by law.

This product is for use only in Japan and ${\cal Y}$ United States. Please follow the local and state laws.

To prevent electric shock, fire, or product $\Delta \Delta$ failure, do not disassemble, attempt to repair, or alter this Product in any way.

Installing the Product

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Do not mount the Product or distribute its cables around areas where operation of the vehicle's airbags may be obstructed. In the event of car crash, the airbag may not work properly, or lead to an accident/injury upon inflating.

Install this Product properly according to this manual. Keep the camera body attached to the mount while driving and during inspection. Car products mounted incorrectly may not only be regarded as a violation of your local traffic laws, but may further lead to road accidents. Please follow the local and state laws.



Do not install the Product on a vehicle equipped with a sliding rear window.



Double-sided tape should be attached to the glass surface.

- Images/video on the LCD screen may become darker if the rear window of your car is tinted or coated with film.
- A high mounted stop light at the rear of your car or headlamps of the car behind may make it difficult to recognize images/ video on the LCD screen.
- Radio-frequency interference may occur with other electrical devices such as the radio or vehicle GPS systems. If such interference has occurred, change the installation location and/or the distribution of cables.

Powering the Product



Use the power cable plug alone. Overloading or splitting the connection may lead to the abnormal generation of heat or fire. \wedge

Hold the connector portion of the power cable when unplugging. A damaged power cable may cause electric shock or fire.

Use this Product only with DC 12V negative-earth vehicles. Using this Product with other vehicles may result in product malfunction.

Some cars (such as those imported from overseas) are designed to keep supplying electrical power to their cigarette lighter receptacle, even with the engine switched off. If your car falls into this category, unplug the Product when the engine is switched off.



Do not press the power reset button unless a forced shutdown has been performed to restart the camera. After the camera is switched on, it may take up to approximately 15 seconds to begin recording. It will take even longer when the ambient temperature exceeds the operating temperature range.

In some cars with an idling-stop system, the supplied voltage may be reduced in order to restore the electric power for restarting the engine. Due to this, the power supply to this Product may be stopped.

The camera

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Do not drop or apply excessive force to the Product.



To prevent product failure or the loss of data, do not place the Product near magnetic objects.



To prevent possible deformation or fire from occurring, do not leave the camera body in areas where temperatures can rise quickly, such as on the dashboard.



If the camera body has become hot after using it for a long period of time, do not touch it to avoid potential burns.

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When cleaning the camera body, do not use solutions containing abrasive compounds, alcohols, or organic solvents.



To prevent possible product failure, avoid exposing the camera lens and/or its LCD screen to direct sunlight for long period of time. Do not press forcibly on the camera LCD screen or touch it with the tip of sharpedged objects such as fingernail or a pen. Doing so may lead to product failure or iniury by broken LCD screen.

To prevent possible product failure or damaged to data, do not switch off the camera while updating the camera body.

If the surface of the lens has collected dirt, wipe it clean using a dry, clean and lint-free cloth.

Due to the characteristics of the electrical components of this Product, the surface/ internal temperatures of the camera may increase depending on the conditions of use. When the ambient temperature exceeds the operating temperature range, Product operation will be stopped for protection. If Product operation is stopped. resume operation once the camera temperature has decreased.

To protect the camera in high temperatures, the display time of LCD screen may be shorter than the preset time. This is not considered product failure

In extreme temperatures, LCD screen display may be slower or darker, or afterimages may appear on it. This is due to the characteristics of LCD screens, and not to be considered product failure.

- Due to the characteristics of LCD screens. vou may not be able to see the screen display clearly when seeing at certain viewing angles. This is not considered product failure.
- Due to the characteristics of LCD screens, small dots, horizontal or vertical lines, or differences in brightness may be observed on the screen display. Occurrence of these phenomena however, is not considered product failure.
- You may not be able to see the screen display at all when wearing a pair of polarized sunglasses.

Due to the characteristics of LCD screens. some pixels do not light up while some do. Occurrence of this phenomenon however, is not considered product failure.

GPS (Global Positioning System)

- The precise position and the speed of your car cannot be determined if this Product is unable to receive GPS signals.
- Depending on the ambient environment or geographical factors, this Product may not be able to adequately receive GPS signals or receive GPS signals at all.
- GPS satellites are controlled by the U.S. Department of Defense and their accuracy is subject to change without prior notice.
- Do not use this Product near other GPS products or VICS receiver units. Doing so may cause such products/units and this Product to malfunction



- Sing this Product near a TV antenna may cause a deterioration in the reception sensitivity, flickering and/or noise from the TV set
- In order to receive clear GPS signals, do not place obstructive items around the Product.
- When the Product is switched on, it may take time until it starts receiving GPS signals. Allow between 30 seconds to a few minutes, depending on the signal reception environment, weather, vehicle conditions, and position of the Product.
- GPS signal reception may be hindered if the front windshield of your car has been surface-treated with a coating, etc.

Recording images and video

In some cases, your recorded images, video and/or data may constitute an infringement on the legal rights of a third party.

Car Mate takes no responsibility for any matters with regard to, and arising from, the content of the images, videos and/or data recorded on this Product

- This Product is not guaranteed to produce valid evidence as proof for any accidents, or to identify any license plate, model or color of any vehicle.
- This Product is not guaranteed to record in all circumstances.
- This Product is not guaranteed to record any and all impacts on your car in Event Recording.

- Recording performance and time may vary depending on the object being recorded or on the ambient environment.
- In certain circumstances, other electronic components or devices may hinder the recording operation of this Product.
- Electrical components in the vehicle may generate noise in the video or audio recorded on this product.

microSD card

Always use the microSD card included with the product (Item No.DCP31), or dedicated cards (Item No. DC3A/4A/5A). Using a different microSD card may result in errors occurring in recorded image, movie or sound.



If the microSD card has become hot after using it for a long period of time, do not touch it to avoid potential burns.



To prevent product failure, do not touch the memory card with oily or wet hands. To protect your microSD card and data recorded on it from static electricity, remove static charge from your hands before handling it.



To prevent possible data breakage and failure, do not insert or remove the microSD card while the camera is powered on.



To protect the microSD card and data recorded on it, insert and eject the microSD card carefully.

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To prevent possible breakage, failure and malfunction of the microSD card, do not deform it with sharp-edged objects, or apply excessive force to it.



To prevent possible breakage, failure and malfunction of the microSD card, do not insert any foreign objects into its slots, and do not touch its terminal portion.

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To prevent possible data breakage and failure, insert the microSD card in the correct orientation until it clicks in place.

When the microSD card has been connected to a non-Windows device such as Apple products or Android smartphones, ensure to back up the video/audio data on a PC or other storage medium before inserting it back to the camera. Initialization of the microSD card may be required on the camera if it has been connected to a non-Windows device. All data will be deleted on an initialized (formatted) microSD card.

To prevent possible data breakage and failure, do not affix any stickers or labels on the microSD card.

Initialize (format) your microSD card when:

- * You wish to delete all the data on the microSD card.
 - * The camera has warned you to format the microSD card.
- The microSD card is an expendable supply. After writing data on it a certain number of times, or after its period of use, normal recording may be impeded due to breakage in part of its memory sector. It is recommended you replace your microSD card with a new one every year and a half, assuming you use it two hours a day on average.
- Ensure to back up important data on other devices. Data stored on a microSD card may be overwritten or deleted.
- Store your microSD cards in a dry, cool, clean place.

Parking Mode

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/	When using the camera in Parking Mode,
<u> </u>	When using the camera in Parking Mode, ensure to connect the Parking Option add-
	on provided exclusively for this Product. To
	avoid possible drainage of your car battery
	or malfunction, DO NOT use any other
	third-party cables to connect directly to
	the power source.

Car Mate takes no responsibility for any damage or loss arising from the drainage of your car battery while using the Product in Parking Mode.

- If the Parking Mode is running at night without sufficient light source around the camera, recorded image/video may become unclear, or the camera may not start recording at all.
- For some cars, imported cars in particular, user mistakes may occur as to the location of the power supply cable (when Parking Option is connected). After the installation is complete, wait a while to see if the camera operates as expected. Incorrect installation may cause the product to stop operating sooner than its set time.
- As this product uses the battery of your vehicle as its power source while Parking Mode, the battery will be loaded even while the car engine is turned off. If your car battery is old, it is recommended to replace it with a new one and (re)charge it fully before using this product. Even if your car is new, we recommend you to ensure its battery is fully charged beforehand.

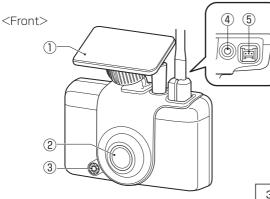
Other considerations

- According to copyright law, you cannot use recorded images, videos and/or data without permission of their right holder for any purposes other than your own personal use. If you plan to use this Product at live demonstrations, shows or exhibitions, follow the rules of the organizers.
- ▲ If you use a car window sunshade, heat tends to generate around it, which may cause the camera to malfunction or come away. As such, ensure the camera is not tucked between the sunshade and the windshield.
- Do not remove the product label placed on the Product. It will be required for product identification, as when claiming product warranty.

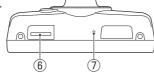
Parts Names and Accessories

Before use, check the Product for the following contents.

Main camera (Front camera)



<Bottom>



Main camera

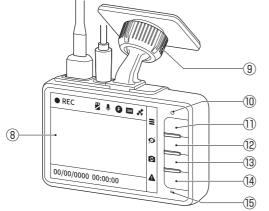
1	Main camera mount
2	Front camera
3	Speaker
(4)	Rear camera cable terminal
(5)	Power cable terminal
6	Card slot
7	Power reset button

32GB microSD card (Item No. DCP31)

The microSD card is already set in the main camera.

32gb DCP31

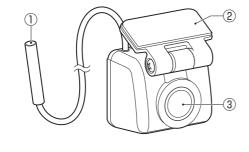




	camera

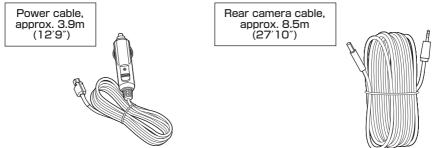
LCD Screen
Angle adjustment knob
LED
Button 1
Button 2
Button 3
Button 4
Microphone

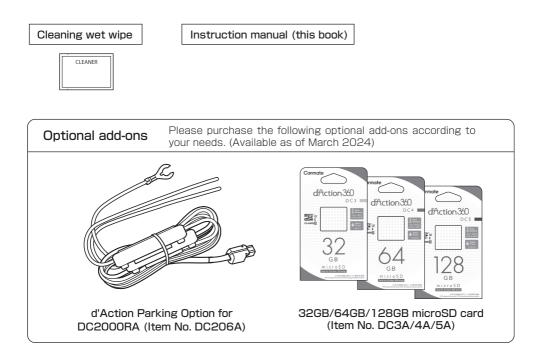
Rear camera



Rear camera

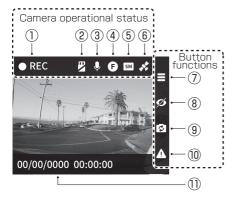
- ① Rear camera relay cable terminal
- 2 Rear camera mount
- ③ Rear camera



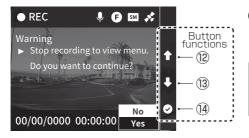


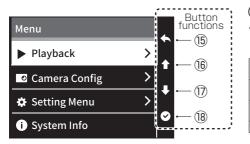
LCD screen display

- The operational status of the camera is displayed on the upper side of the LCD screen.
- Each of the four buttons on the right side of the camera corresponds to the adjoining icon displayed vertically on the right side of the screen. Each icon has its own function which changes as the operational status changes.



REC mode Indicates that recording is in progress. Indicates the status of the microSD card : Card is not inserted (2) : Error has occurred on the card : Speed is slowing. (3) Indicates that voice recording is in progress. Indicates the camera that is recording the video (F) : The front camera is recording the video. (4) (R) : The rear camera is recording the video. : Both the front and the rear cameras are recording the video. Indicates the recording quality of the operating cameras. :2880×1616(Front camera) 5M (5) :1920×1080(Rear camera) FHD "5M" will appear when images on both the front and rear cameras are recording. Indicates GPS signal the camera receives. (6) Solid light : Receiving GPS signal Flashing : Not receiving GPS signal $\overline{(7)}$ Press button 1 to switch to Menu items display. Press button 2 to switch between Display and (8) Non-Display. Press button 3 to switch to each video of the (9) other cameras that are recording. (10) Press button 4 to start Manual Recording. 1 Current date and time





Menu items display

- Press button 1 while REC mode, to switch to Menu display.
- Press button 2 to go up to a menu item above.
 Press button 3 to go down to a menu item below
 Press button 4 to confirm.

Menu display

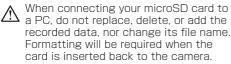
Select "Yes" while Menu items display, to switch to Menu display.

(15)	Press button 1 to switch back to the previous display.
(16)	Press button 2 to go up to a menu item above.
1	Press button 3 to go down to a menu item below.
(18)	Press button 4 to confirm.

While selecting the top-most menu item, press button 2 (to go up) to switch to the bottom-most menu item, and while selecting the bottom-most menu item, press button 3 (to go down) to switch to the top-most menu item.

About microSD card Review cautionary advice on page 10.

To prevent possible data breakage and failure, do not insert or remove the microSD card while the camera is powered on. After powering off the camera (refer to page 23), insert and remove your microSD card.



- When the microSD card has been connected to a non-Windows device such as Apple products or Android smartphones, ensure to back up the video/audio data on a PC or other storage medium before inserting it back to the camera. Initialization of the microSD card may be required on the camera if it has been connected to a non-Windows device. All data will be deleted on an initialized (formatted) microSD card.
- Since this product is equipped with regular-reformat-free system, formatting SD card regulary is not required while normal use. Every time a new microSD

card is inserted into the camera, initial formatting is required.

- To use this Product, a microSD card is required.
- The microSD card set in the main camera is provided exclusively for DC2000RA.
- Initialize (format) your microSD card when:
 - * You wish to delete all the data on the microSD card.
 - * The camera has warned you to format the microSD card.
- The microSD card is an expendable supply. After writing data on it a certain number of times, or after its period of use, normal recording may be impeded due to breakage in part of its memory sector. It is recommended you replace your microSD card with a new one every year and a half, assuming you use it two hours a day on average.
- Ensure to back up important data on other devices. Data stored on a microSD card may be overwritten or deleted.

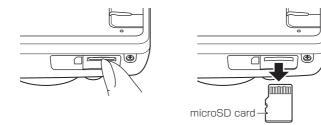
A microSD card is already set in the camera at the time of purchase.

Removing microSD card

1 Check that the camera is powered off.

 \bigwedge If the camera is powered on, power it off. (Refer to page 23)

2 Push in the microSD card until it clicks out. Pull it out as it ejects.



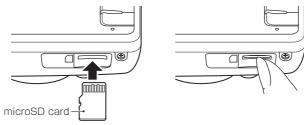
Inserting microSD card

1 Check that the camera is powered off.

 \triangle If the camera is powered on, power it off. (Refer to page 23)

2 Insert the microSD card until it clicks in place.

📆 Insert the card straight into the slot with its terminal surface facing the LCD screen.

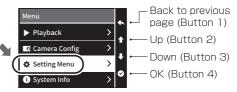


Initializing (formatting) microSD card

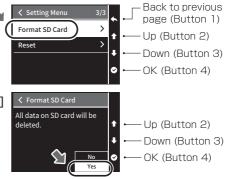
Delete all files on the microSD card to optimize its folder structure. Formatting a microSD card erases all of the exisiting files stored on it. Back up any important data onto a storage device (such as a PC) prior to formatting.

1 Display Menu screen.

- If recording is in progress, refer to page 18 and switch to Menu items display.
- 2 Press button 2 / button 3 to select [Setting Menu]. Press button 4 [OK] to confirm.



- **3** Press button 2 / button 3 to select [Format SD card]. Press button 4 [OK] to confirm.
- 4 Press button 2 / button 3 to select [Format SD card]. Press button 4 [OK] to confirm.
 - When formatting is complete, [Operation is complete.] appears on the screen. Press button 4 [OK] to go back to Menu display.



Powering the Product

When the camera is powered on, the LED lights up and an initial display appears on LCD screen. When the camera is powered off, the LED goes off and LCD screen blacks out.

When using Power cable

- When using Power cable, there are 3 ways to power on and off the camera as below.
 - 1) Switch on the car engine to power on the camera, and switch off the engine to power off the camera.
 - 2) While the car engine is switched on, press and hold button 4 for approximately 5 seconds to power off the camera. Press button 4 again to power on the camera.



3) While the car engine is switched on, unplug the power cable from the vehicle cigarette lighter receptacle to power off the camera. Plug the power cable again to power on the camera.

When Parking Option add-on is installed and set in operation

- While the car engine is switched on, press and hold button 4 for approximately 5 seconds to power off the camera. Press button 4 again to power on the camera.
- •When the car engine is switched off, the camera automatically switches to Parking Mode. LCD screen on the camera blacks out, but the camera has not been powered off, and its LED stays lit solid. To power off the camera during Parking Mode, press and hold button 4 for approximately 5 seconds.
- After the camera is powered off by pressing and holding button 4 during Parking Mode, pressing button 4 again does not restart Parking Mode. To start Parking Mode again, switch on the engine, and switch it off.

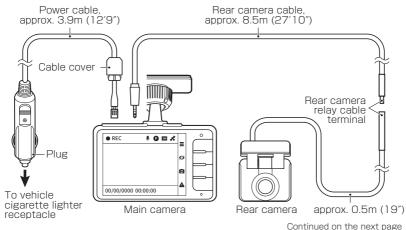
Installation

Wiring diagram



When installing the camera in your vehicle, ensure to use the accessories included in this Product, or optional add-on products exclusively provided for this Product.

- If you are installing the Parking Option add-on to be used with this Product, the power cable will not be required.
- If you are not using the rear camera, deactivate [Rear camera] in [Camera Config] menu. (Refer to page 75.)



Connecting cables

- Insert the power cable and the rear camera cable into the main camera.
 - When inserting the power cable, move the cable cover on the tip backwards away from the tip, so the tip is completely exposed. Leave the displaced cable cover for a while until the camera setup is almost complete.
 - FI Hold the root of the cable terminal. Push the terminal all the way into the slot of the main camera, until the tab is fixated with a clicking sound.
- 2 Connect the rear camera cable and the cable attached to the rear camera together at their respective terminals.

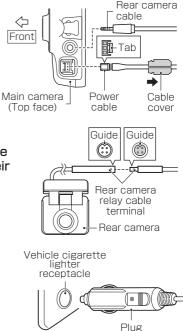


 \bigwedge Connect two terminals by mating each guide.

Insert the plug end of the power cable into 3 the cigarette lighter receptacle. Switch on the car engine.



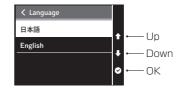
When the camera is powered on, the LED lights up and an initial display appears on LCD screen.



Initialization of the camera

The initial setting screen will appear when you use it for the first time or reset it.

- Please set up the camera outdoors where it can easily receive GPS and other signals.
- 1 Select your language by pressing button 2 / button 3. Press button 4 [OK] to confirm.



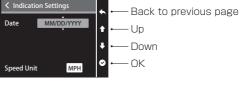
- 2 Select a region, then a city by pressing button 2 / button 3. Press button 4 [OK] to confirm.
 - The date and time will also be set automatically when it receives GPS or other signals.
 - DST stands for Daylight Saving Time. If you turn it on, it will add one hour.

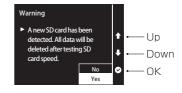


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- 3 Select the order of the year, month and date and the speed unit, and press button 4 [OK].
 - Y stands for year, M for month, and D for day.
- 4 A warning on detection of a new SD card will appear on LCD screen. Select [Yes] by pressing button 2 / button 3. Press button 4 [OK] to confirm.

- When formatting is completed correctly, [Operation is complete.] will appear, and the camera starts Normal recording.
- Proceed with the installation process while the camera is still recording.
- If the Parking Option is installed, proceed with the installation process with the vehicle's engine switch turned on to start constant recording.







Installation Position

Place and hold both the main camera and the rear camera with your hand onto their respective mounting position. Make a layout plan for distribution of the cables inside the car.



In doing this, do not affix the camera mounts yet with the adhesive tapes.



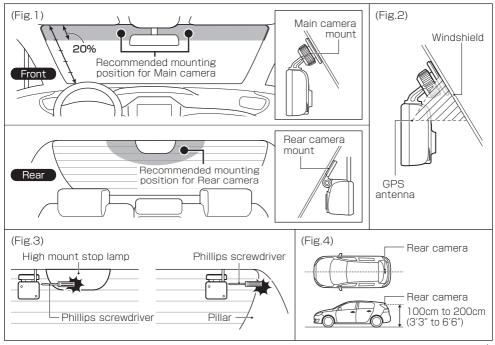
Car products mounted incorrectly may be regarded as a violation of your local traffic laws. Ensure to mount the cameras in compliance with such laws.



Installation position requirements and notes

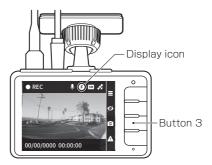
- The camera is mounted within the upper 20% portion of the windshield. (Fig. 1 on page 30)
- The mounted camera does not interfere with the driver's vision and operation of the vehicle.
- The mounted camera does not block the rearview mirror, or obstruct the vehicle's airbags.
- The camera is mounted so that its lens is within the wiping range of the windshield wipers.
- Ensure that the adhesive tape on the camera mount is not affixed over any portion of the heated wire printed on the windshield, antenna or center visor (black dots).
- If additional security or safety cameras are already in place, the mounted camera should not be within the view of such camera.

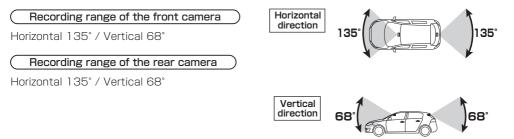
- No cable or metallic objects should be between the front windshield and the GPS antenna. (Fig.2 on page 30)
- If additional security or safety cameras are already in place, observe their instruction manuals.
- •When adjusting the angle of the rear camera, ensure that handling of your Phillips screwdriver does not interfere with the car interior.
- To activate "Rear Approach Warning" and "Rear Approach Warning when stopped" (refer to page 41), ensure that the rear camera is installed at the height of between 100cm (3'3") and 200cm (6'6") from the ground level, as well as at the center of the car.



Recording range and adjusting camera angle

- 1 Place and hold both the main camera and the rear camera with your hand onto their respective mounting position you have found desirable. Press button 3 to switch images, and check the recording range of each camera.
 - As each camera is switched to display its recording range, the corresponding icon changes accordingly.
 - Side portions of the image displayed on LCD screen are cropped out of the actual, recorded image.





When **(F)** icon is shown, the image on front camera appears on LCD screen.



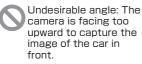
When **B** icon is shown, the image on rear camera appears on LCD screen.

When **FR** icon is shown, a scaled-up on front camera and a scaled-down image of rear camera appear on LCD screen.

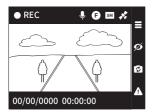




<Check points on the front camera>

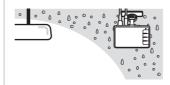






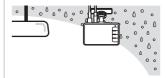


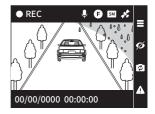
Undesirable example: Outside the wiping range of the windshield wipers.





Correct installation point: The image of the car in front is captured within the wiping range of the windshield wipers.





2 Adjust the camera angle according to its recording range.

Adjusting the main camera angle

Adjust the camera angle by loosening and tightening the angle adjustment knob.



If the angle adjustment knob on the main camera mount is loose, the angle may change during the camera operation or on impact. Check periodically that the knob is tightened. Operate the camera by holding it with one hand, so as not to change the camera angle.

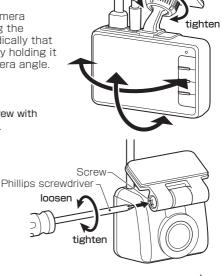
Adjusting the rear camera angle

Adjust the angle by loosening and tightening the screw with a Phillips screwdriver through the joint on the mount.



The screw on the rear camera may be loosened on impact through opening/ closing the rear trunk. Check periodically that the screw is tightened.

To activate "Rear Approach Warning" and "Rear Approach Warning when stopped" (refer to page 41), adjust the lens of the rear camera to be as vertical as possible in relation to the ground.



loosen

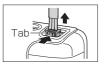
Angle

adjustment knob

Affixing camera

1 Switch off the car engine to power off the camera.

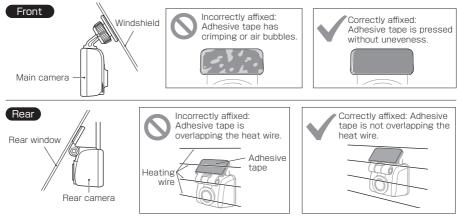
- 2 Detach the power cable and the rear camera cable from the main camera.
 - \bigwedge When detaching the power cable, pull it out by pinching the tab on the terminal.



- 3 Detach the rear camera relay cable terminal.
- 4 Using the included cleaning wet wipe, wipe clean both mounting positions, and dry.



5 Affix both the main camera and the rear camera firmly onto their respective mounting position.



\Lambda Be

Be careful not to overlap the adhesive tape with the heat wire, antenna, or center visor.



Adhere to the adhesive tape by pressing it strongly so that any unevenness in crimping or air bubbles are eliminated.



Leave it on for at least 24 hours to stabilize the adhesive strength. Please note that it is not possible to reattach the mount as the adhesive strength will degrade. When reattaching, please purchase a new mount.

After installation

- Insert the power cable and the rear camera cable into the main camera.
- 2 Connect the rear camera cable and the cable attached to the rear camera together at their respective terminals. Switch on the car engine.
- 3 Check the recording range of the cameras again. Change the angles of the cameras and the lenses if necessary. (Refer to page 31 to 34)

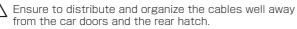
- 4 Switch off the car engine. Detach the power cable and the rear camera cable from the main camera.
- 5 Use cable clips or tieing tools to organize distribution of the cables.

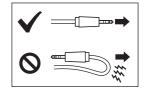


A Handle the cables carefully so as not to apply excessive force on its connecter portion.



The wiring needs to be organized so that it does not interfere with the driver's view or operation.







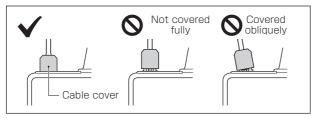
1 The rear camera cable should be routed from the front side of the vehicle for smoother installation

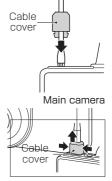


Before distributing the cables, untie and unwind them to ensure they have no kinks. Distribution and installation of kinked cables may cause disconnection.

[📆] If you have accidentally touched the lens(es) during installation, wipe it dry with a clean lint-free cloth. Ensure it has no dirt on its surface.

6 Insert the power cable into the main camera. Push down the cable cover over the cable terminal.





Rear camera cable

- To detach the cable cover, pull it out by pinching it on both sides
- To pinch the cable cover more easily, pull out the rear

camera cable first. Insert the rear camera cable into the main camera.



Insert the rear camera cable upright from above. Inserting it forcibly from an oblique direction may cause product failure.

Directions for Use This Product has [Drive Mode] and [Parking Mode].

Drive Mode

In this mode, the camera records while the engine is switched on. We recommend you change the camera settings in advance according to the recording purpose and use. (Refer to page 73 to 75, 78 to 80)

1 Switch on your car engine.

📆 The camera starts Normal Recording no later than 15 seconds after it has started. If the camera is outside its operating temperature range, it may take more time to start Normal Recording.

2 Auto recording (Camera automatically start recording)

📆 The recorded data is automatically sorted and saved by the recording category according to their respective content.



📆 When the recording time exceeds its recordable time determined by the recording category, the recorded data will overwrite the oldest data.

3 Switch off the car engine.

1 The camera stops recording and automatically turns off.

Recording types and contents in Drive Mode

Recording mode	Recording type	Content (Refer to page 47 to 52)	Operational camera	Recording category (Refer to page 62)
	Normal Recording	Recorded segments of every 30 seconds from the switching-on to the switching- off of the camera.		Normal
	Event Recording	Recorded segments of every 30 seconds, including that of 10 seconds before and 10 seconds after an impact detection by the camera.	Front camera and Rear camera	
Drive mode	Manual Recording	Recorded segments of every 30 seconds, including that of 30 seconds before and 30 seconds after Manual Recording command.		Event
	Rear Approach Warning Recording	acording roach when When Recorded segments of every 30 seconds, including 10 seconds before and after the detection of approaching. Rear ca		
	Rear Approach Warning when stopped Recording			

When the recording time exceeds its recordable time determined by the recording category, the recorded data will overwrite the oldest data.

Event Recording

Images recorded when G-sensor of the camera detects impact. The scene of a strong impact such as a collision accident is recorded separately from Normal Recording.

Manual Recording

Images recorded by manually set values. The images are recorded separately from Normal Recording and Event Recording. Images recorded in this mode will be easier to identify for playback, even when there is no occurrence of impact.

• Rear Approach Warning Recording / Rear Approach Warning when stopped Recording Images recorded when the camera detects a dangerous approaching motion from behind the car, either while the car is moving or stopped. The approaching vehicle from behind is detected with image recognition system on the rear camera, after which a warning is given and the rear camera starts recording.



The camera cannot detect such approaching motions if it is in places where it cannot receive signals such as GPS, or GPS has been deactivated on the camera setting. (Refer to pages 73 and 80)



The camera may fail to detect at all depending on the shape of the car approaching from behind, the weather, time of day, and dirt accumulated on the rear window.

By default, Rear Approach Warning and Rear Approach Warning when stopped have been deactivated. If you wish to record such approaching movements behind your car, activate them by referring to pages 73 and 74.

- When activating "Rear Approach Warning", the following consideration should be noted before setting Detection Area for use.
 - Frequent recordings of "Rear Approach Warning" may overwrite other important data such as Event Recording and Manual Recording in the same recording category. If necessary, adjust the depth of Detection Area by referring to page 45.
- When activating "Rear Approach Warning when stopped", the following considerations should be noted before use.
 - When parking your car backwards, the camera may detect the vehicle parked behind yours, irrespective of the direction of the parked vehicle.
 - When a large vehicle approaches from behind your car, the camera may detect it at a farther distance than a typical car.
 - Frequent recordings of "Rear Approach Warning when stopped Recording" may overwrite other important data such as Event Recording and Manual Recording in the same recording category.

Setting Detection Area

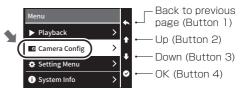
Adjusting Left/Right setting is not required if the rear camera has been installed at the center of the car. (Refer to pages 28 to 30)



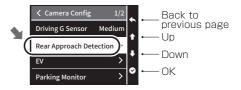
Set your Detection Area in a safe place. The driver must not operate it while driving.

1 Display Menu screen.

- If recording is in progress, refer to page 18 and switch to Menu items display.
- 2 Press button 2 / button 3 to select [Camera Config]. Press button 4 [OK] to confirm.



Press button 2 / button 3 to select
 [Rear Approach Detection]. Press
 button 4 [OK] to confirm.



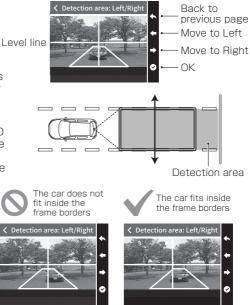
Press button 2 / button 3 to select [Detection Area Setting]. Press button 4 [OK] to confirm.

Detection area: Left/Right

Adjust Detection area on left and right by pressing button 2 / button 3. Press button 4 to confirm.

- Adjust Detection area so your car is in parallel with and fits alongside or inside the left and right borders of the Detection area frame.
- If the level line on the center of LCD screen is below or above the skyline behind your car, align it with the skyline by adjusting the angle of the rear camera. (refer to page 34)

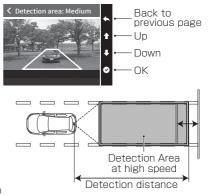




Detection area: Depth

Press button 2 / button 3 to adjust the depth in driving at high speeds. Press button 4 to confirm the setting.

କ୍ୟା The rear camera detects a vehicle that enters inside the borders of the Detection area frame. Set the depth so that the rear camera starts detecting the vehicle behind you driving at the speed of 100km or 62miles per hour, as soon as the vehicle has reached a desired distance from your car. Detection area is automatically adjusted when you are driving at medium to low speeds.





- The depth of detection (detection distance) is longer when it is set to [Highest], and it is shorter when set to [Lowest].
- Detection performance may be poor if the rear camera is installed in vehicles in which the distance between the rear window and the rear edge of the vehicle is comparatively long, such as long sedans and trucks.

Baseline of Detection distance

(when driving at 100km or 62miles per hour)

Detection sensitivity	Highest	High	Medium	Low	Lowest
Baseline of Detection distance	approx. 30m (98')	approx. 20m (65')	approx. 11m (36′)	approx. 8m (26')	approx. 6m (19′)

The values are shown for reference. They vary depending on the shape of the vehicle, and the installation point and the angle of the rear camera.

- Do not make a sudden acceleration or a sudden stop for the sole purpose of checking the detection performance. Doing so will lead to injury or accidents.
- When the rear camera is installed in certain car types (in which their rear windows are so inclined as to run almost parallel with the horizon), the camera lens always faces upward, and this may cause the camera to detect a vehicle in the distance behind you. If this is the case, set the detection sensitivity to [Lowest] first, and adjust it.

When detecting a far-off vehicle



When not detecting a far-off vehicle

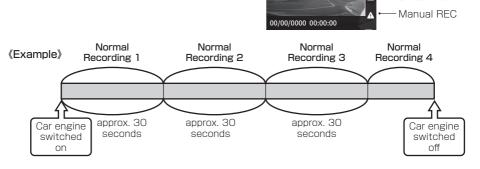


Normal Recording

• The camera records video segments of every 30 seconds from the time it is turned on until it is turned off.

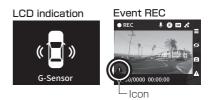


and search



Event Recording

• When impact is detected during Normal Recording, the camera warns as such on display and by voice, and starts recording up to two video segments of every 30 seconds which includes 10 seconds before and 10 seconds after detecting the impact.

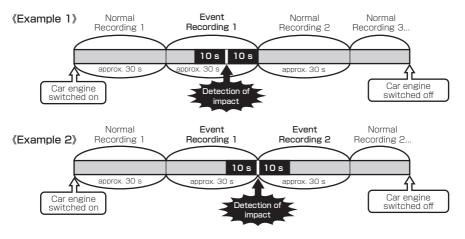


Menu

Display On/Off

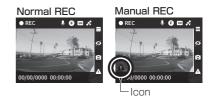
Switch view

- During Event Recording, a red icon appears on the bottom left of LCD screen. After Event Recording, the camera automatically switches back to Normal Recording.
- Sensitivity of G-sensor can be changed according to the car or driving conditions. (Refer to pages 73 and 74)
- This Product is not guaranteed to record any and all impacts on your car in Event Recording.

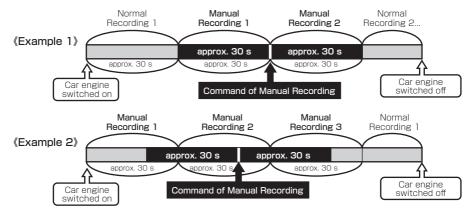


Manual Recording

While the camera is in Normal Recording, press button 4 to command it to switch to Manual Recording. The camera starts recording up to three video segments of every 30 seconds which includes 30 seconds before and 30 seconds after the command of Manual Recording.



• While the camera is in Manual Recording, a red icon appears on the bottom-left of the screen. As soon as Manual Recording is finished, the camera automatically switches back to Normal Recording.



Rear Approch Warnig Recording

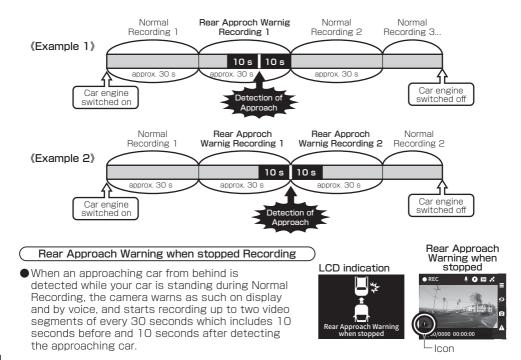
When an approaching car from behind is detected while your car is moving during Normal Recording, the camera warns as such on display and by voice, and starts recording up to two video segments of every 30 seconds which includes 10 seconds before and 10 seconds after detecting the approaching car.
 During Rear Approach Warning Recording, a red icon appears on the bottom left of LCD screen.

After Rear Approach Warning Recording, the

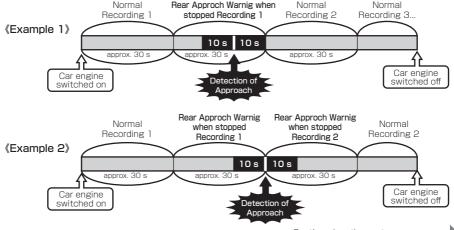
camera automatically switches back to Normal Recording.



- This Product is not guaranteed to record any and all approaching vehicles from behind toward your car.
- The camera can be set only to warn you (on display and by voice) without recording (Rear Approach Warning Recording) when detecting an approaching vehicle. (Refer to page 74)



- During Rear Approach Warning when stopped Recording, a red icon appears on the bottom left of LCD screen. After Rear Approach Warning when stopped Recording, the camera automatically switches back to Normal Recording.
- This Product is not guaranteed to record any and all approaching vehicles from behind toward your car while it is standing or parked.
- The camera can be set only to warn you (on display and by voice) without recording (Rear Approach Warning when stopped Recording) when detecting an approaching vehicle. (Refer to page 74)



Recording in Parking Mode (Requires Parking Option, sold separately)

In Parking Mode, the camera operates while the car engine is switched off.

- 🗊 On the camera setting, you need to activate [Parking Monitor]. (Refer to pages 73 and 76)
- We recommend that you change the camera settings in advance according to the recording purpose and use. (Refer to pages 56 to 59, 73 and 76)

Switch off your car engine.

- 🖘 LED light starts flashing. After approximately one minute, which is default Deactivation time. Parking Mode starts.
- 😭 During Parking Mode, the LCD screen turns off but the camera is still operating and the LED indicator is still on
- 🖘 One-Touch Parking Mode Starter: A deactivated Parking Mode can be started by pressing button 4 within approximately 10 minutes after the car engine is switched off

One-Touch Parking Mode Starter

One-Touch Parking Mode Starter enables you to activate Parking Mode as needed even when the setting has deactivated it.

- none-Touch Parking Mode Starter does not switch the [Parking Monitor] setting to activate it. You need to press button 4 every time the car engine is switched off

2 During Parking Mode

Recorded data are saved by Parking recording category.

When the recording time exceeds its recordable time determined by Parking Recording category, the recorded data will overwrite the oldest data.

3 Stopping Parking Mode

- \mathbb{T} When the preset time for Parking Mode has elapsed, the camera automatically switches off.
- 1 If you get in the car during Parking Mode, the camera may start Event Recording, Motion Recording or Peeping Detection Recording. In this case, switch on the car engine while the recording is in progress. This will stop recording and delete the data recorded when you got in.

🖘 When you have switched on the car engine during Parking Mode to start Drive Mode, vou will hear a recorded voice announcing "There is one or more parking mode files on the SD card.", which indicates the camera detected and recorded some sort of Event (an impact, moving object or peeping person) during Parking Mode.

📆 The camera will forcefully be powered off even before the end of preset time, when the voltage value of the car battery falls below a preset value on the camera for approximately ten minutes on end, to prevent the car battery from draining. Values for [Battery protection voltage] can be set depending on the car battery condition. (Refer to page 73 and 77)



😭 When the camera becomes hot, it will switch from Before/After Recording to After Recording, or stop recording in order to prevent the high temperature from increasing further. If you operate the camera in Parking Mode during summertime, we recommend you park your car where ambient temperatures are kept as low as nossible



🖘 To stop Parking Mode, switch off the car engine, and deactivate [Parking Monitor]. (Refer to pages 73 and 76)

- 😭 When a microSD card is not inserted, or the camera cannot record due to an error, the camera can forcefully be powered off by switching off the engine, to protect the batterv.
- Even if Parking Mode is set to active, the camera power can be turned off (stop Parking Mode) by pressing and holding button 4 on the camera after the car engine is switched off.

Recording types and contents in Parking Mode

Recording mode in Parking Mode	Recording type	Content	Operational camera	Recording category (Refer to page 62	
	Event Recording	A 40-second video segment with 10 seconds before and 30 seconds after detecting an impact.			
Before/After Recording	Motion Recording	A 40-second video segment with 10 seconds before and 30 seconds after detecting a moving object.	Front camera Rear camera		
	Peeping Detection Recording	A 40-second video segment with 10 seconds before and 30 seconds after detecting a peeping person.		Dediar	
	Event Recording	A 30-second video segment with approximately 2 seconds after detecting an impact.		Parking	
After Recording	Motion Recording	A 30-second video segment with approximately 2 seconds after detecting a moving object.	Front camera		
	Peeping Detection Recording	A 30-second video segment with approximately 2 seconds after detecting a peeping person.			

Before/After Recording and After Recording	Parking Mode can be set in combination of Before/After Recording and After Recording.	Parking	
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When the recording time exceeds its recordable time determined by the recording category, the recorded data will overwrite the oldest data.

Event Recording

Images recorded when G-sensor of the camera detects an impact during Parking Mode. Events such as hit-and-runs and door dings while your car is unattended are recorded by Parking Recording category. Both the front and the rear cameras record in Before/After Recording, and only the front camera records in After Recording.

Motion Recording

Images captured on the camera during Parking Mode, in which a moving object is detected through image transition. Movements around the car are recorded by Parking Recording category. Both the front and the rear cameras detect and record in Before/After Recording, and only the front camera detects and records in After Recording.

As the camera detects a moving object through image transition, any object that moves including movements listed below will be detected as such. To prevent unnecessary Motion Recording, ensure your parking space is neither surrounded by objects that are constantly moving nor shone by varying light source. Motion detection function varies depending on ambient circumstances, environments or weather conditions.

•Change of lighting or rays of sunshine

 $\cdot \text{Moving}$ trees, grasses, or flags

- If motions have been detected and recorded intermittently on the camera, important data such as Event Recording recorded in Parking Recording category may be overwritten.
- By default, [Motion Detect] is disabled. To use Motion Recording, enable [Motion Detect]. (Refer to page 73 and 76)

Peeping Detection Recording

Images captured on the camera during Parking Mode, in which a person(s) approaching the car is detected. Movements around the car are recorded by Parking Recording category. Both the front and the rear cameras detect and record in Before/After Recording, and only the front camera detects and records in After Recording.

- Whenever the camera recognizes as "a human being approaching the car", it detects such an event as a peeping activity. The functionality of Peeping detection may vary, including detection of animals or other objects rather than human beings, depending on the surrounding brightness and weather. In addition, the camera may fail to detect a person depending on his/her clothing, posture, and physique.
- If peeping activities have been detected and recorded intermittently on the camera, important data such as Event Recording recorded in Parking Recording category may be overwritten.
- By default, [Peeping Detection] is deactivated. Activate it when you wish to detect and record such activities. (Refer to pages 73 and 77)

Using Motion Recording / Peeping Detection Recording

In Motion Recording, the camera detects various moving objects and circumstances including humans, cars, and change of lighting. Motion Recording is mainly recommended in places such as a home garage, in which little movements are happening, to detect such objects and circumstances.

On the other hand, Peeping Detection functions only when the camera recognizes "a human being approaching the car", and does not detect cars and objects. As such, if you wish to keep your car under surveillance outdoors or in parking lots surrounded by a lot of traffic, Peeping Detection Recording is recommended instead of Motion Recording, which frequently detects various movements.

Monitoring time set for Parking Mode

Monitoring time can be set to Before/After Recording, After Recording, or Before/After Recording + After Recording depending on the purpose. If Before/After Recording is selected, you can set your own monitoring duration. (Refer to pages 73 and 77)

Recording in Parking Mode		Surveillance time settings	When to set time	
Before/ After	Front camera	0.5 hours / 1 hour / 3 hours	Car is unattended for up to 3 hours, as in shopping.	
Recording	Rear camera	6 hours / 12 hours	Car is unattended for up to 12 hours, as in school or office.	
After Recording	Front camera only	Up to 48 hours	Car is unattended for more than two days, parked at home garage.	
Before/ After Rear camera		Before/After Recording 3 hours + After Recording 24 hours	Car is unattended for at least 3 hours up to 24 hours.	
Recording and After Recording	and Front camera only	Before/After Recording 12 hours + After Recording 6 hours	Car is unattended for up to 18 hours.	

Deactivation time

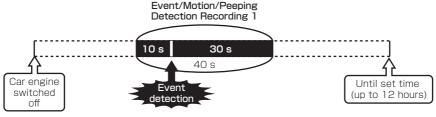
To prevent the cameras from recording unnecessary motion such as vibration caused when the driver/passengers exit the car, set the deactivation time to start the camera in Parking Mode after one minute. Change the default time setting of one minute either to 5 minutes or 10 minutes for a longer deactivation time, if, for example, your passengers need more time to get out of your car, or more time is needed to unload it. (Refer to pages 73 and 77)

Recording Deactivation

If you get in the car during Parking Mode, either Event Recording, Motion Recording, or Peeping Detection Recording may be activated. While such recording is in progress, switch on the car engine to stop recording and delete the recorded data.

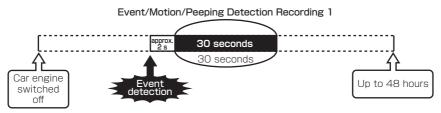
Event/Motion/Peeping Detection Recording in Before/After Recording

- •When the camera detects an event caused by an impact, a moving object or a peeping person, it records a video segment of 40 seconds in total, including that of 10 seconds before and 30 seconds after the event detection. When a series of events are detected, recording time will be longer.
- •After Event/Motion/Peeping Detection Recording, the camera automatically switches back to Parking Mode.
 - Sensitivity of G-sensor can be changed according to conditions of the parked car. (Refer to pages 73 and 76)
 - This Product is not guaranteed to record any and all impacts, moving objects, and peeping activities.



Event/Motion/Peeping Detection Recording in After Recording

- •When the camera detects an event caused by an impact, a moving object or a peeping person, it records a video segment of 30 seconds, approximately 2 seconds after the event detection.
- •After Event/Motion/Peeping Detection Recording, the camera automatically switches back to Parking Mode.
- Sensitivity of G-sensor can be changed according to conditions of the parked car. (Refer to pages 73 and 76)
- This Product is not guaranteed to record any and all impacts, moving objects, and peeping activities.



You can play back the recorded video on both Play / delete video the main camera and PC.

Playing the recorded video on the main camera

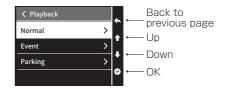


Switch to Menu on the LCD screen.

- 2 Press button 2 [Up]/ button 3 [Down] to select [Playback]. Press button 4 [OK] to confirm.
- 3 Press button 2 / button 3 to select the recording type for playback. Press button 4 to confirm.

Recording category	Recording type
Normal	Normal Recording in Drive Mode
Event	Event Recording in Drive Mode Manual Recording Rear Approach Warning Recording Rear Approach Warning when stopped Recording
Parking	Event Recording in Parking Mode Motion Recording Peeping Detection Recording



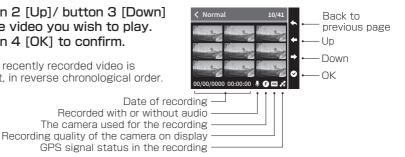


[📆] If recording is in progress, refer to page 18 and switch to Menu items display.

4 Press button 2 [Up] / button 3 [Down] to select the video you wish to play. Press button 4 [OK] to confirm.



The most recently recorded video is listed first, in reverse chronological order.



5 Press button 4 to play the video.

- Press button 3 [Select display camera] to switch to the video recorded on the front camera or the rear camera

To check the details of the video, play it on PC.

By using the d'Action software for PC, you can play back the images on both the front camera and the rear camera at the same time, check the recording locations on the map, speeds of the car, and speeds of acceleration. (Refer to page 67)



Pause

During playback, press button 4 to pause the video. Press button 4 again to resume the video playback.

Playback



Fast-rewind / Fast-forward

During Playback, press and hold button 2 to fast-rewind the video. Press and hold button 3 to fast-forward.

Frame-by-frame rewind / Frame-by-frame forward

During Pause, press button 2 to rewind the video frame by frame. Press button 3 to forward it frame by frame.

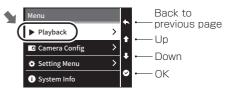
Pause

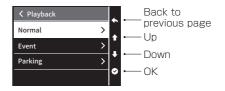


Delete the recorded video on the main camera

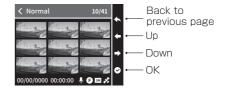
- 1 Switch to Menu on the LCD screen.
 - If recording is in progress, refer to page 18 and switch to Menu items display.
- 2 Press button 2 [Up]/ button 3 [Down] to select [Playback]. Press button 4 [OK] to confirm.
- 3 Press button 2 / button 3 to select the recording type that contains the image to delete. Press button 4 to confirm.

Recording category	Recording type	
Normal	Normal Recording in Drive Mode	
Event	Event Recording in Drive Mode Manual Recording Rear Approach Warning Recording Rear Approach Warning when stopped Recording	
Parking	Event Recording in Parking Mode Motion Recording Peeping Detection Recording	





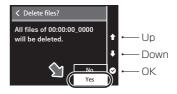
- 4 Press button 2 / button 3 to select the image to delete. Press button 4 to confirm.
 - The most recently recorded video is listed first, in reverse chronological order.



5 Press button 2 [Delete] to delete the selected image.



- 6 Press button 2 / button 3 to select [Yes], and press button 4 to confirm.
 - All videos recorded on all cameras on the selected file are deleted.



Playing the recorded video on PC

 Δ Do not replace, delete, or add recorded data, nor change its file name on a PC.

Download the d'Action 360D software on your PC.

PC software is available free of charge on the website below.

 \mathbb{T} d'Action software is for PC (Windows) only. Software for Mac is not available.

https://carmate-usa.com/pages/daction-download-center

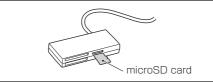
2 Install the downloaded file on your PC as shown below.

 Extract the zip file you downloaded.
 Execute [DC2000RSetup.msi] in the folder.
 When installation is completed, [DC2000R] will be added on the start menu.



Connect microSD card to PC

Remove the microSD card from the main camera. Connect the card to the PC using a card reader.



Power off the camera before removing the microSD card. (Refer to page 23)

/ Please confirm in advance that the card reader or other device is compatible with the microSD card standard and capacity you are using.



/ Use of a card reader or conversion adapter that has deteriorated over time or is otherwise defective may corrupt the data on the microSD card.



When the microSD card has been connected to a non-Windows device such as Apple products or Android smartphones, ensure to back up the video/audio data on a PC or other storage medium before inserting it back to the camera. Initialization of the microSD card may be required on the camera if it has been connected to a non-Windows device. All data will be deleted on an initialized (formatted) microSD card.

- 4 Activate d'Action software. Select the folder that contains the image for playback. Select the date of the image on the calendar.
 - If the microSD card is 128GB, it will take longer to read data.
 - To prevent breakage of data on the microSD card, do not remove any data input device such as a card reader, while the data is being transferred.



To play back video

Select the video you wish to play. Click [Play] button. (Refer to page 70 and 71)

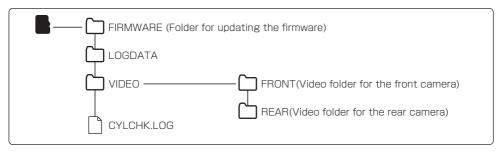
Function of the PC software 67 (5) (4) (1 d'Action (2) Event Recordin 173907ZDV001 (00:00:30) 31029T174007ZDV001 17:40:0 (00:00:30 ------231029T174037ZDV001 5 17:40:3 1029T174107ZDV001 (00:00:30) (3) 231029T174137ZDV001. (00:00:30 10/29/2023 231029T174208ZDV001 17:42:08 17:39:41 (00:00:30) 231029T174238ZDV001 Apply Privacy Protection Blur 17:42:38 Rear / Front Front / Rear (00:00:30 231029T174338ZDV002 <u>. 85</u> (00:00:30 00:00:04 0.00.04 [E,E] 13 (14)(15) 8 9 (11)(12) (16) (10)

1	Menu bar		Switching video to play;
2	This is a folder that contains all playable files. All: List all the recorded videos. Normal Recording: Shows the list of Normal Recording in Drive Mode. Event Recording: Shows the lists of Event Recording,	9	 Front/Rear: Images on the front camera are magnified, and those on the rear camera are reduced in size. Rear/Front: Images on the rear camera are magnified, and those on the front camera are reduced in size.
C	Shows the lists of Event Recording, Manual Recording, Rear Approach Warning Recording, and Rear Approach Warning when stopped Recording during Drive Mode.		Front: Videos on the front camera are shown on the monitor.Rear: Videos on the rear camera are shown on the monitor.
	Parking Recording: Shows the lists of Event Recording, Motion Recording, and Peeping Detection	1	You can playback, pause or fast-forward videos.
	Recording in Parking Mode.	C	Speed of acceleration at the time of recording is shown.
3	Recorded videos are listed chronologically in the selected folder.	(12	You can adjust play back speed of videos.
4	The size of video to play can be scaled up or down.	13	Recording dates are shown on the LCD upper screen. The time on display may delay by one second.
5	By moving your mouse while clicking mouse buttons, you can render blur effects to videos, including adjusting the blur intensity.	Œ	When geotagging is obtained, the vehicle
6	The video shown on the PC screen can be captured and saved on the PC.	Œ	You can play back video in full screen mode.
0	The video shown on the PC screen can be screen-recorded and saved on the PC.	Œ	
8	Brightness of video can be adjusted.		geotagging is obtained.)

Folder structure

Folder structure on the memory card is as follows.

Since this product is equipped with regular-reformat-free system, formatting SD card regulary is not required while normal use. On a PC-standardized video player, video data on the card to play back may be partial.



When connecting your microSD card to a PC, do not replace, delete, or add the recorded data, nor change its file name. Formatting will be required when the card is inserted back to the camera.

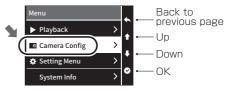
Various settings

Changing settings

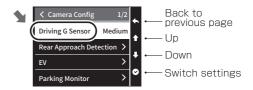


Switch to Menu on the LCD screen.

- 🗊 If recording is in progress, refer to page 18 and switch to Menu items display.
- 2 Press button 2 [Up]/ button 3 [Down] to select the menu you wish to change. Press button 4 [OK] to confirm.



3 Press button 2 / button 3 to select the item to change. Press button 4 to confirm.



List of recording items

Bold symbols or letters are initial values.

☆(Activated) / O(Deactivated) on the setting menu indicates the following statuses.

♥ The functionality or setting is activated, or selected.

O The functionality or setting is deactivated, or not selected.

Item		De	etails	Description
Driving	Driving G Sensor		/ Low / Medium / Highest	You can set the detection sensitivity of G-Sensor in Drive Mode.
	Detection Area Setting		(Refer t	to page 41 to 45)
	On (Warning)	<pre>@(Activated) / O(Deactivated)</pre>	By activating [On (Warning)], the camera only warns on display and by voice,	
	Rear Approach Warning	On (Warning+REC)	<pre>@(Activated) / O(Deactivated)</pre>	without recording. By activating [On (Warning+REC)], the camera warns on display and by voice,
Rear Approach Detection	Warning	Off	♦(Activated) / ○ (Deactivated)	and starts recording. By activating [Off], Rear Approach Warning will not function.
	Rear	On (Warning)	<pre>@(Activated) / O(Deactivated)</pre>	By activating [On (Warning)], the camera only warns on display and by voice,
	Approach Warning when	On (Warning+REC)	<pre>@(Activated) / O(Deactivated)</pre>	without recording. By activating [On (Warning+REC)], the camera warns on display and by voice,
	stopped	Off	⊘(Activated) / ○ (Deactivated)	and starts recording. By activating [Off], Rear Approach Warning when stopped will not function.

lt	em	Details	Description
	Front	-3/-2/-1/ 0 /1/2/3	You can set the exposure levels individually of the front camera and the rear camera. If it is set to towards plus
EV	Rear	-3/-2/-1/ 0 /1/2/3	(+) value, the recorded video becomes brighter, and towards minus (-) value, it becomes darker.
Parking	g Monitor	(Ref	er to page 76)
Audio	Record		You can set to record or not to record audio at the time of recording.
Rear	Camera	 	You can set to activate or deactivate the rear camera operation. As long as the rear camera is connected correctly, it stays [Activated] at all times. If the rear camera is set [Deactivated], no error message is given even when the rear camera is not connected.
	Date/Time	(Show) / O (Hide)	You can set to show or hide Date/Time.
Video	Speed	(Show) / O (Hide)	Speed, and GPS coordinates on the recorded data which is saved on the
Stamp	GPS Coordinates		microSD card.
Select dis	play camera	F / R / FR	Videos on LCD screen can be switched. F shows video images on the front camera, R shows video images on the rear camera, and FR shows video images on the front and the rear cameras.

About Video Stamp

This function indicates the date, time, speed, and GPS coordinates on the recorded data stored on the microSD card. Since the text is small, it can be confirmed by viewing the video on a computer. This is useful for providing images to third parties who do not have dedicated software, as they can check the date, time, speed, and GPS coordinates without the need to use dedicated software on their computer. The video stamp setting is not turned on, it will not be indicated. Also, indicated characters cannot be hidden afterwards.



List of Parking Mode settings

Bold symbols or letters are initial values.

	Item Details Description		Reference page	
Parking	Enable	⊘(Activated) / ○(Deactivated)	You can set to activate() or deactivate () Parking Mode. Even when it is [Activated], this will not run if Parking Option unit is not connected.	53
Monitor	Impact Sensitivity	L/M/H	You can set the detection sensitivity of G-Sensor in Parking Mode.	60, 61
	Motion Detect	(Activated) / O(Deactivated)	You can set to activate(♥) or deactivate (○) the motion detection in Parking Mode.	56, 57

	Item	Details	Description	Reference page
	Peeping Detection	(Activated) / O(Deactivated)	You can set to activate(♥) or deactivate (O) the peeping detection in Parking Mode.	56, 58
	Deactivation time	1min / 5min / 10min	You can set the deactivation time before the camera starts operation in Parking Mode.	59
		Before and After Recording	The camera records 10 seconds before and 30 seconds after an impact or motion detection. The camera keeps monitoring them up to 12 hours.	
	Recording mode -		Only the front camera records for 30 seconds, 2 seconds after an impact detection. The camera keeps monitoring up to 48 hours.	
Parking Monitor		Before/After 3 hours + After 24 hours	You can set combination of Before/After and	56, 59
		Before/After 12 hours + After 6 hours	After Recordings.	
	MAX surveillance time	0.5H / 1H / 3H / 6H / 12H	You can set the effective surveillance time of Before/After Recording. [After Recording] can be set up to 48 hours, which duration is unchangeable.	
	Battery protection voltage	11.8V / 12.0V / 12.2V / 12.4V	Values for [Battery protection voltage] in Parking Mode can be set. When the preset value exceeds the voltage value of the car battery, the camera will forcefully be powered off to prevent the battery from draining due to power consumption of the camera.	54

List of other settings

Bold symbols or letters are initial values.

Item	Details	Description	Reference page
Beep Sound	⊘(ON) / O(OFF)	You can set to have or not to have the button beep sound.	_
Playback volume	L / M / H	The volume in playback can be set from L (low volume) to H (high volume).	_
Notification volume	L / M / H	The volume of the notification sound can be set from L (low volume) to H (high volume).	_
LCD Standby	Stays on / 10sec / 1min / 3min	You can set the time when the LCD screen starts display.	_
Display Brightness	Dark / Normal / Bright	You can adjust the brightness of the LCD screen.	_

Item			Details	Description	Reference page
Date/Time Zone	Set from satellite time	Asia America	Japan / Hong Kong Washington DC / Anchorage / Honolulu / Atlanta / Boston / Chicago / Dallas / Denver / Detroit / Houston / Indianapolis / Las Vegas / Los Angeles / Miami / Minneapolis / New Orleans / New York / Philadelphia / Phoenix / Salt Lake City / San Francisco / Seattle	Your time zone can be set. Date and time are automatically set by receiving GPS signals.	_
		DST	OFF / ON	When an area outside Japan is selected, Summer Time can be set.	_
		Asia	Japan / Hong Kong		
Date/Time Zone 0000-00-00 00:00(Year- Month- Day Hour:Minute)	Manual setting	America	Washington DC / Anchorage / Honolulu / Atlanta / Boston / Chicago / Dallas / Denver / Detroit / Houston / Indianapolis / Las Vegas / Los Angeles / Miami / Minneapolis / New Orleans / New York / Philadelphia / Phoenix / Salt Lake City / San Francisco / Seattle	You can set Date and Time zone manually. If GPS is activated, the manually set time is updated to the Date and Time zone received by GPS.	_
		DST	OFF / ON	When an area outside Japan is selected, Summer Time can be set.	_

Item	ו	Details	Description	Reference page
	Activate	♥(Activated) / O(Deactivated)	You can set to receive or not to receive GPS signals.	
GPS	Speed unit	km/h / MPH	You can set the speed unit on the video stamp.	_
	Date format	YYYY / MM / DD MM / DD / YYYY	You can set the data notation. Y stands for year, M for month, and D for day.	
Langua	age	日本語 / English	You can set your language.	
Format SI	D Card	No / Yes	Your microSD card can be formatted.	22
Rese	et	No / Yes	Settings on the main camera can be reset.	81

Initialization of the camera

Resetting the camera will initialize all preset values.

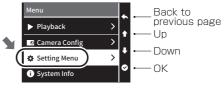


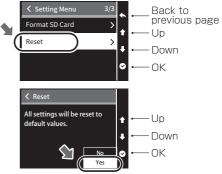
 \mathbb{T} The data recorded on the microSD card are not deleted by resetting the camera.



1 Switch to Menu on the LCD screen.

- FM If recording is in progress, refer to page 18 and switch to Menu items display.
- 2 Press button 2 [Up]/ button 3 [Down] to select the menu you wish to change. Press button 4 [OK] to confirm.
- 3 Press button 2 [Up]/ button 3 [Down] to select the menu you wish to change. Press button 4 [OK] to confirm.
- 4 Press button 2 / button 3 to select [Yes]. Press button 4 [OK] to confirm.





Other information

What to do after an accident

Protect recorded data so that important data, such as the video data recorded at the time of the accident is not over written, by the following procedure.

Check the surrounding area for safety before working.



Unplug all the cables from the camera in the following steps, and stop recording on the camera.

1) Unplug the rear camera cable.

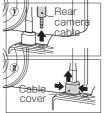
2) Detach the cable cover.

When detaching the cable cover, pull it out while pinching it on both sides.

Unplug the power cable.



To unplug the power cable, pull it out by Δ pinching the tab on the terminal.



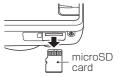






2 Remove the microSD card. (Refer to page 20) Handle the removed card with care.

Keeping a spare microSD card ready is recommended.



Updating firmware

Due to specification changes and additional features, the firmware on the camera body needs to be updated.

Download the most recent firmware from Car Mate website, and copy it on the microSD card to update the camera firmware.

1

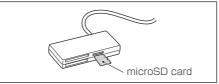
Download the most recent firmware onto your PC.

https://carmate-usa.com/pages/daction-download-center

2 Extract (unzip) the file (firmware_dc2000r.zip) you have downloaded.

3 Connect the microSD card to the PC.

Remove the microSD card from the main camera. Connect the card to the PC using a card reader.



Power off the camera before removing the microSD card. (Refer to page 23)



Please confirm in advance that the card reader or other device is compatible with the microSD card standard and capacity you are using.



Use of a card reader or conversion adapter that has deteriorated over time or is otherwise defective may corrupt the data on the microSD card.



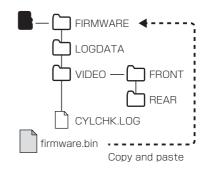
When the microSD card has been connected to a non-Windows device such as Apple products or Android smartphones, ensure to back up the video/audio data on a PC or other storage medium before inserting it back to the camera. Initialization of the microSD card may be required on the camera if it has been connected to a non-Windows device. All data will be deleted on an initialized (formatted) microSD card.

Copy firmware.bin file in the extracted (unzipped) folder. Paste the file in FIRMWARE folder on the microSD card.



To prevent breakage of data on the microSD card, do not remove any data input device such as a card reader, while the data is being transferred.

Do not change a file name. Update cannot be complete if any file name has been changed.

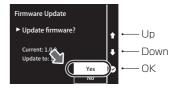


- 5 Remove the microSD card from PC. Insert it into the main camera.
- 6 With the microSD card inserted in the camera, switch on the car engine.
- 7 Press button 2 / button 3 to select [Yes]. Press button 4 [OK] to confirm.

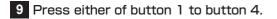


8 Wait until update is complete.

To prevent malfunction, do not turn off the power while updating.









10 When the update is complete, the camera automatically restarts.

Check the Firmware update in [System] section of the menu screen. (Refer to page 96) If update is incomplete, redo it from section 4 on page 84.

Recordable time (Approximate value)

When the recording time exceeds its recordable time determined by the recording type, the recorded data will overwrite the oldest data. Back up important data on storage medium such as a PC.

Recording category (Refer to page 62)	32GB (Included)	64GB	128GB
Normal	40 min	82 min	165 min
Event	26 min	53 min	107 min
Parking	7 min	15 min	31 min

Troubleshooting

If you have some indications for malfunction, please try the followings.

Problem	Cause and explanation	Solution	Reference page
	Power cable and/or the plug are not connected properly.	Check if the power cable and/or the plug are connected properly.	24
	Not using the cable or optional add- on items designed for this product.	Use the cable or optional add-on items designed for this product.	15, 16
Camera will not turn on.	The camera is outside its operational temperature range. To prevent breakage failure, the camera stops operating when it is outside its operational temperature range.	Use the camera within its operational temperature range.	94
	(When Parking option unit is used) Parking option unit is not connected or wired correctly.	Check the cable/wire connection of Parking Option unit.	_
[Rear Camera Connection Error] warning appears on the screen.	Rear camera cable is not connected correctly.	Connect the rear camera cable correctly.	24
Not switched to rear camera image.	On [Comoro Config], roor comoro in	Set rear camera	
Video cannot be recorded on rear camera.	On [Camera Config], rear camera is set [Deactivated].	[Activated] on [Camera Config].	73, 75

Problem	Cause and explanation	Solution	Reference page
The LCD screen goes off.	By default, the display time of the LCD screen is three minutes. It goes off three minutes after the camera has switched on.	On [Setting Menu], reset [LCD Standby].	73, 78
	To protect the camera in high temperatures, the display time of LCD screen may be shorter than the preset time. This is not considered product failure.	Start operating the camera after it has cooled down.	_
	Date and time-zone are not set correctly.	On [Setting Menu], reset [Date/Time Zone]	73, 79
Date and time seem incorrect.	The camera cannot receive GPS signals indoors or in tunnels. In addition, it may take between 30 seconds to a few minutes to start receiving GPS signals depending on the ambient environment or geographical factors.	Check if the camera receives GPS signals in a place that permits a clear view with no obstructive items around it.	_
Information on the location or the speed of my car cannot be obtained.	The camera cannot receive GPS signals indoors or in tunnels. In addition, it may take between 30 seconds to a few minutes to start receiving GPS signals depending on the ambient environment or geographical factors.	Check if the camera receives GPS signals in a place that permits a clear view with no obstructive items around it.	_

Problem	Cause and explanation	Solution	Reference page
Impact Recording does not Record.	The camera does not start Impact Recording until its sensor detects an impact. Impact sensitivity might have been set low.	Reset [Driving G Sensor] on [Camera Config], and [Impact Sensitivity] on [Parking Monitor].	73, 74, 76
Impact Recording starts without apparent impact.	Impact sensitivity might have been set high.	Reset [Driving G Sensor] on [Camera Config], and [Impact Sensitivity] on [Parking Monitor].	73, 74, 76
Recorded data have disappeared.	When the recording time exceeds the recordable time by the recording type, the oldest data is overwritten and deleted.	Ensure to back up important data on other devices.	87
While playing video	[Audio Record] is disabled on recording settings	On [Camera Config], enable [Audio Record].	73, 75
footage, there is no sound.	[Playback volume] might have been set low on [Setting Menu].	On [Setting Menu], reset [Playback volume].	73, 78
After having read a microSD card and checked its video data on PC, the card back in the camera is unrecordable, showing an error.	Due to malfunction of an aging third-party card reader or conversion adapter, the data on the microSD card may have been damaged.	Format the microSD card on the camera main body. If the problem is not solved, replace it with a new microSD card.	_

Problem	Cause and explanation	Solution	Reference page
The video of Motion Recording has no motion.	Motion Recording detects and record a slightest movement around the car such as change in light as one moving object. As such, an object that is moving so slightly cannot be recognized (or difficult to recognize) at playback.	_	_
No person is recorded in Peeping Detection Recording.	Whenever the camera recognizes as "a human being approaching the car", it detects such an event as a peeping activity. The functionality of Peeping detection may vary, including detection of animals or other objects rather than human beings, depending on the surrounding brightness and weather.	_	_
Video recorded in Parking mode has disappeared.	As the microSD card is filled with recorded data by Parking recording type, the oldest data is overwritten. In this regard, the data may have been overwritten by other data by the same Parking recording type, such as Motion Recording and Peeping Detection Recording.	[Deactivate] [Motion Detection] and [Peeping Detection]	73, 76, 77

Problem	Cause and explanation	Solution	Reference page
	In Parking Mode, voltage monitoring function is operating.		
In Parking Mode, the camera stops operating sooner than its set time.	camera stops ating sooner Otherwise, the vehicle voltage fluctuates by car door operation after		12
When the car door is opened or closed during Parking Mode, the d'Action 360 logo appears on the LCD screen.	For Parking Option to operate properly, it must be connected to the right power supply in your car. Otherwise, the vehicle voltage fluctuates by car door operation after a certain amount of time while the car engine is off. As user mistakes occur as to distinguishing/location of the power supply cable installed in some cars, it is possible that the power cable has been connected to the wrong cable.	Review and rectify the vehicle power supply cable portion to which Parking Option is connected.	12

Specifications

		Main camera	Rear camera
Image Sensor		Full-color CMOS sensor 1/2.7	Full-color CMOS sensor 1/2.7
Number of recorded pixels		Approximately 4.6 megapixels 2880×1616	Approximately 2 megapixels FHD 1920×1080
	Horizontal	135°	135°
View angle	Vertical	68°	68°
dialio	Diagonal	171°	171°
F-number		2.0	2.0
Frame	Drive Mode	27.5fps	27.5fps
rate	Parking Mode	5.2fps	5.2fps
Auto adjustment		HDR / WDR	HDR

Recording modes	 Drive Mode: Normal Recording, Event Recording, Manual Recording, Rear Approach Warning Recording, Rear Approach Warning when stopped Recording Parking Mode (requires an optional add-on that is sold separately): Impact Recording, Motion Recording, Peeping Detection Recording
Recording time unit per file of Normal Recording	approx. 30 seconds
File format	MOV(H.264)

GPS	Yes	
G-Sensor	Yes	
Audio recording	Yes (Activate/Deactivate can be set)	
Noise reduction	Yes	
Recording media	Included microSD card, 32GB (Item No. DCP31) or dedicated microSD cards, 32GB (Item No. DC3A), 64GB (Item No. DC4A), or 128GB (Item No. DC5A)	
Video playback media	 Windows software exclusively for DC2000RA Compatible Windows computer is required to use the dedicated software. Supported OS: Windows 10 and 11 	
LCD	2.7 inch full-color TFT	
External dimensions with mount attached	Main camera: H90mm×W87mm×D33mm (H3.5inch×W3.4inch×D1.2inch) Rear camera: H43mm×W39mm×D26mm (H1.6inch×W1.5inch×D1.0inch)	
Weight with mount attached	Main camera: 116 grams (4.0 oz) Rear camera: 38 grams (1.3 oz)	
Power supply voltage	DC12V	
Maximum electrical power consumption	500mA(DC12V)	
Operating temperature range	-10°C to +60°C (14°F to 140°F)	
Warranty period	3 years	

•FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

The unique identifier is any means to positively associate the device with the compliance test reports and records for a specific product approved using the SDoC procedure. This may be a trade name and type number, model number, serial number, or other means employed utilizing the responsible party's internal manufacturing process.

CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note:

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 try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

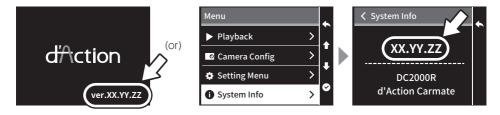
COMPLIANCE INFORMATION STATEMENT

Product Name	: Dashcam
Model No.	: DC2000RA
Responsible party	: Car Mate USA, Inc.
Address : 383 Val	n Ness Avenue, Suite 1603
Torrance	e, CA 90501
Phone : 310-53	3-1647

Item No. DC2000RA Product Name: d'Action D EN Firmware Ver. 1.1.1 (As of Jul. 2024)

How to check the firmware

It can be checked on the opening screen or in the [System Info] section of the menu screen.



• Visit our website for information on registered trademarks owned by other companies.

https://www.carmate.co.jp/global/en/trademarks-japan/



Warranty coverage	Main camera and rear camera *Excluding consumables and accessories
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- 1. In the case of product failure resulting from normal use, Car Mate will repair or exchange the product free of charge within the warranty period. (Three (3) year from the date of purchase)
 - *The customer will be responsible for the cost of installation and removal work.
- Repairs will incur a charge within the warranty period for any of the following: (a)When this Warranty Document is not presented.
 - (b)Product failure and damage due to incorrect use, improper repair and alterations.
 - (c)Failure, damage or loss caused by mail/ freight carriers incurred during shipment of parts to Car Mate Customer Service.
 - (d)When there is evidence of moisture, etc., having infiltrated the product from the outside.
 - (e)Product failure and damage due to fire, earthquake, flood damage, abnormal voltage, pollution, use of power supply outside the specification (voltage/frequency), and other natural disasters and calamities.

- (f)When the warranty certificate information has not been properly completed.
 - Note:Valid dated sales receipt from authorized Car Mate dealer can be accepted as proof of warranty coverage.
- (g)The external portion of the camera has been damaged.
- 3. The loss of products, parts or accessories is not covered under warranty.
- 4. Products received from another person and resold items are not covered under warranty.
- 5. Please present this warranty document prior to requesting repairs at your place of purchase or at a Car Mate Customer Service.
- 6. This Warranty Document will not be reissued, so keep it stored in a safe place.
- 7. This warranty is valid only for service in Americas.

Car Mate USA, Inc.

383 Van Ness Avenue, Suite 1603 Torrance, CA 90501, USA info@carmate-usa.com 310-533-1647 (OFFICE) https://carmate-usa.com/

Warranty Document

This Product has been made available for purchase after having undergone strict quality control and inspection. In the event of a product failure arising from normal use, please contact the dealer at the point of purchase, or Car Mate Customer Service for product repair/replacement.

Purchased Product	DC	2000RA	
Date of Purchase	*Please retain proof of purchase indicating t Month / Day / Year	-	d for free repairs
	First Name	Last Name	
Customer Information	Street City State TEL	Zip Code	Country
Dealer Information	Dealer Name Street City TEL	Zip Code	Country

United States :
Car Mate USA, Inc.
383 Van Ness Avenue, Suite 1603
Torrance, CA 90501, USA
For product questions and technical
support
please contact:
info@carmate-usa.com 310-533-1647 (OFFICE)
https://carmate-usa.com/
https://carmate-usa.com/
For other countries :
CAR MATE MFG. CO., LTD.
5-33-11, Nagasaki, Toshima-ku,
Tokyo 171-0051, Japan
int@carmate.co.jp
https://www.carmate.co.jp/global/en/