Pioneer

VREC-150MD
DASH CAMERA

Owner's Manual

Contents

Thank you for buying this Pioneer product.
Please read through these instructions so you will know how to operate your model properly. After you have finished reading the instructions, keep this document in a safe place for future reference.

Precaution

Certain country and state laws may prohibit or restrict the placement and use of this product in your vehicle. Please comply with all applicable laws and regulations regarding the use, installation and operation of this product. It is the user's responsibility in compliance with all applicable laws and ordinance.

Information for users on collection and disposal of old equipment and used batteries

(Symbol for equipment)   (Symbol examples for batteries)

These symbols on the products, packaging, and/or

accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items

These symbols are only valid in the European Union.

For countries outside the European Union:
If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

⚠ CAUTION
- There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type.
- Do not expose a battery to high or low extreme temperatures during use, storage or transportation.
- Do not dispose of a battery into fire or a hot oven, or crush mechanically or cut a battery, that can result in an explosion.
- The graphical symbol $\overline{\underline{}}$ placed on the product means direct current.

⚠ WARNING
- Batteries (battery pack or batteries installed) must not be exposed to excessive heat such as sunshine, fire or the like.

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Safety Precautions

Always observe the precautions described here to prevent harm to yourself and others and to prevent damage to property before it happens.

Important safeguards

⚠ **WARNING**

- Do not install this product in your vehicle if its location or use would obstruct the driver's clear view of the road or the operation of any vehicle airbag. It is also the driver's responsibility to know and comply with the laws, rules, and regulations of the driving location, including, for example, passenger privacy rights, and not to use the device in any location where its installation or use is prohibited.
- It is the user's responsibility in compliance with all applicable laws and ordinance.
- Pioneer is not liable for any damage, due to installation other than described, or use of the product. Pioneer does take responsibility whatsoever for any damage or losses incurred as a result.
- It is the user's responsibility to drive whilst keeping a safe distance between vehicles, whilst correctly judging the road, traffic and weather, and surrounding conditions.
- Do not operate this product if doing so will divert your attention in any way from the safe operation of your vehicle. Always observe safe driving rules and follow all existing traffic regulations. If you experience difficulty in operating this product or reading the display, park your vehicle in a safe location and apply the handbrake before making the necessary adjustments.
- The laws in your location may require you to provide notice to passengers that a recording device is in use. If so, you should place the notice sticker in a location clearly visible to your passengers.
- Any obstruction of or other interference with the airbag, either deployed or non-deployed, or with the clear view of the road must be avoided and, accordingly, professional installation is required.
- We recommend that this product be set up and installed by a technician who has special training and experience in mobile electronics.

Important safety information

⚠ **WARNING**

- Do not allow this product to come into contact with liquids. Electrical shock could result. Also, damage to the product, smoke, and overheating could result from contact with liquids.
- If liquid or foreign matter should get inside this product, park your vehicle in a safe place, turn the ignition switch off (ACC OFF) and unplug the cigarette lighter plug immediately, and consult your dealer or the nearest authorised Pioneer Service Station. Do not use this product in this condition because doing so may result in a fire, electric shock, or other failure.
- If you notice smoke, a strange noise or odour from this product, or any other abnormal signs on the LCD screen, turn off the power immediately and consult your dealer or the nearest authorised Pioneer Service Station. Using this product in this condition may result in permanent damage to the system.
- Do not disassemble or modify this product, as there are high-voltage components inside which may cause an electric shock. Be sure to consult your dealer or the nearest authorised Pioneer Service Station for internal inspection, adjustments or repairs.

Before using this product, be sure to read and fully understand the following safety information:
- Do not operate this product if doing so will divert your attention in any way from the safe operation of your vehicle. Always observe safe driving rules and follow all existing traffic regulations. If you experience difficulty in operating this product or reading the display, park your vehicle in a safe location and apply the handbrake before making the necessary adjustments.
- Never set the volume of this product so high that you cannot hear outside traffic and emergency vehicles.
- Keep this manual handy as a reference for operating procedures and safety information.

- Certain functions (such as viewing of screen and certain button operations) offered by this product could be dangerous (possibly resulting in serious injury or death) and/or unlawful if used while driving. Screen display is disabled for this product while the vehicle is moving.
- It is the user's responsibility to act upon the image displayed from the rear camera. Pioneer is not liable and does not take responsibility whatsoever for any damage or losses incurred as a result of the rear camera image.
- It is the user's responsibility in compliance with all applicable laws and ordinance.
- Pioneer is not liable for any damage, due to installation other than described, or use of the product. Pioneer does take responsibility whatsoever for any damage or losses incurred as a result.

English

To ensure safe driving

⚠ WARNING
- In some countries the viewing of video image on a display inside a vehicle even by persons other than the driver may be illegal. Where such regulations apply, they must be obeyed.

Precautions before connecting the system

⚠ CAUTION
- Firmly install this product so it does not fall. If this product is not firmly installed, it may fall while driving and cause an accident. Periodically inspect this product.
- Secure all wiring with cable clamps or electrical tape. Do not allow any bare wiring to remain exposed.
- It is extremely dangerous to allow cables to become wound around the steering column or gearstick. Be sure to install this product, its cables, and wiring away in such so that they will not obstruct or hinder driving.
- Make sure that the cables and wires will not interfere with or become caught in any of the vehicle's moving parts, especially the steering wheel, gearstick, handbrake, sliding seat tracks, doors, or any of the vehicle's controls.
- Do not route wires where they will be exposed to high temperatures. If the insulation heats up, wires may become damaged, resulting in a short circuit or malfunction and permanent damage to the product.
- Do not shorten any cables. If you do, the protection circuit (fuse holder, fuse resistor or filter, etc.) may fail to work properly.
- Never feed power to other electronic products by cutting the insulation of the power supply cable of this product and tapping into the cable. The current capacity of the cable will be exceeded, causing overheating.

To prevent damage

⚠ WARNING
- When replacing the fuse, be sure to only use a fuse of the rating prescribed on this product.

Precautions before installation

⚠ CAUTION
Never install this product in places where, or in a manner that:
- Could injure the driver or passengers if the vehicle stops suddenly.
- May interfere with the driver's operation of the vehicle, such as on the floor in front of the driver's seat, or close to the steering wheel or gearstick.
- To ensure proper installation, be sure to use the supplied parts in the manner specified. If any parts are not supplied with this product, use compatible parts in the manner specified after you have the parts' compatibility checked by your dealer. If parts other than supplied or compatible ones are used,

they may damage internal parts of this product or they may work loose and the product may become detached.

- Do not install this product where it may
  (i)   obstruct the driver's vision,
  (ii) impair the performance of any of the vehicle's operating systems or safety features, including airbags, hazard lamp buttons or
  (iii) impair the driver's ability to safely operate the vehicle.
- Never install this product in front of or next to the place in the dashboard, door, or pillar from which one of your vehicle's airbags would deploy. Please refer to your vehicle's owner's manual for reference to the deployment area of the frontal airbags.
- Consult with your nearest dealer if installation requires drilling holes or other modifications of the vehicle.
- Before making a final installation of this product, temporarily connect the wiring to confirm that the connections are correct and the system works properly.
- Do not install this product in places subject to high temperatures or humidity, such as:
  — Places close to a heater, vent or air conditioner.
  — Places that may be exposed to rain, such as close to the door or on the vehicle's floor.

Disclaimer

- Given the large number of variables and conditions that can be involved in an accident, Pioneer cannot guarantee that every accident or occurrence will trigger the recording feature in this device.
- This product features may not operate properly due to the effects of settings, how this product is installed, the condition of the microSD card, and driving conditions (including the road conditions).
- If brightly coloured objects are placed on the dashboard, they may be reflected in the front windscreen and the camera image. Do not place brightly coloured objects on the dashboard.
- This product is not guaranteed to be effective as evidence in an accident.
- This product is not guaranteed to save video in all situations.
- You may not be able to recognise the conditions in the front of the vehicle in recorded video, depending on the ambient conditions, such as the weather and time.
- LED traffic signals or street lamps on the road may appear as flashing or flickering when recorded with this product. The colour may also not be correctly identifiable. Pioneer Corporation accepts no responsibility whatsoever for these phenomena.
- This product saves video before and after an accident occurs by detecting the impact (acceleration) with the G-sensor (accelerometer). However, this product is not guaranteed to save video in all situations.
- Pioneer Corporation accepts no responsibility whatsoever for product failures or damage that occur due to the microSD card wearing out.
- Pioneer Corporation does not make any assurances that microSD card problems will be repaired by formatting the card. Pioneer Corporation bears no responsibility for files that are erased from the microSD card or damage that occurs from formatting the card. Format the microSD card according to your own judgement and at your own responsibility.
- Always install this product in the specified installation position to ensure a safe field of view while driving and to achieve full performance from the product. Pioneer is not liable for any damage, due to installation or use of the product.

English

How to read this Manual

Notation	Meaning
⚠️	These symbols are used to draw your attention to items you should be aware of when using this product and items you should be aware of to maintain its performance.
Note /Notes	Notes provide useful tips and extra information about product features.
[○○]	Square brackets are used to indicate selectable items displayed on the screen.
→ "○○○○"	Quotation marks are used to indicate references and settings.

English

- The illustrations and example screens used in this manual may differ from the actual product.
- The actual screens of the product may be changed without prior notification for the purpose of improvements to product performance and features.
- In this manual, the microSDHC / microSDXC memory card is referred to as "the microSD card" for convenience.

Usage Precautions

⚠ **Precautions When Handling this product**

- The driver may manually set the device to save video to assist in the monitoring of driver performance.
- There are limits to the scope of video that can be recorded with this product (→*"Specifications"*). First check the video that will be recorded before using this product.
- Do not use this product in locations subjected to high temperatures of 60℃ or higher, low temperatures of –10℃ or lower, or high humidity.
- Be careful not to infringe on the privacy of any subject in video recorded with this product when using said video. You are fully responsible for the use of said video. Video recorded with this product may include personal information, such as numbers on number plates.
- Recording time may shorten or recording may not be possible when the power supply to the product stops (vehicle engine is turned off, or the cigarette lighter power cable is removed).
- Be sure to use the included power cable for charging the battery.
- Pioneer Corporation does not offer a data recovery service for corrupted or deleted files.
- The storage areas on the microSD card are split into the four areas shown in the following diagram according to the type of recording.

| Front: Video / SOS (Event) / Photo file storage area |
| Rear: Video / SOS (Event) file storage area |

- Note that files will be overwritten when there is insufficient free space in the file storage areas. We recommend that you back up any important files you want to keep. →*"Backing Up Recorded Files"*
- To ensure that important files, such as files containing records of accidents, are not overwritten, always turn the power off before removing the microSD card and store the card in a safe place. →*"Inserting and Ejecting the microSD Card"*
- You can view video files on your PC. However, the video may stutter or stop depending on the performance of the PC.
- If this product is used near another device that uses GPS, such as a car navigation system, that device may temporarily be unable to receive radio waves from GPS satellites due to radio interference. There may also be a negative impact on the functions of surrounding devices.
- The internal battery is a consumable part. This battery is for retaining the time, and may fail to retain the time after repeated use. Contact Pioneer support if the time resets frequently.
- The internal battery is a consumable part. The operating time will slowly decrease as the battery is repeatedly charged. Contact Pioneer support if you feel that the operating time has become too short.
- Do not touch the lens with your hands. Wipe the lens off with a soft cloth if you touch it.

English

⚠ Precautions When Handling the microSD Card

- Keep the microSD card out of the reach of small children to prevent them from accidentally swallowing it.
- To prevent data loss and damage to the microSD card, never remove it from this product while data is being transferred.
- If data loss or corruption occurs on the microSD card for any reason, it is usually not possible to recover the data. Pioneer accepts no liability for damages, costs or expenses arising from data loss or corruption.
- Never insert or eject an microSD card while driving.
- This product supports the following microSD Cards.

	microSDHC
Capacity	8 GB ~ 64 GB
File System	FAT32
Speed Class	Class 10 or better

- Not all microSD cards are guaranteed to work with this product.
- Pioneer does not guarantee microSD Card compatibility.
- microSDHC / microSDXC memory card (sold separately).
- Format the microSD card before using it. Do not use a microSD card that contains other data, such as that from a PC.
- Periodically format the microSD card.
- Do not eject the microSD card when it is being accessed. The file or card may be corrupted.
- Even if the microSD card is used normally, you may no longer be able to write data to the card or erase data from the card normally.
- The service life of the microSD card is not covered under the warranty.
- The microSD card is a consumable part. We recommend that you regularly replace the microSD card with a new card. If you use the microSD card for a long period of time, this product may no longer be able to save data to the card correctly due to bad sectors, or an error may occur and the card will no longer be usable.
- On rare occasions, a microSD card that is recognised by your computer may not be recognised by this product. In this case, depending on the problem with the microSD card, this product may be able to recognise the card by formatting it with this product format feature →*"This Product Settings"* - *"Configurable Features"* - *"System"* - *"Format SD Card"*. However, all files, including protected files, saved to the microSD card will be erased when it is formatted. Always back up the files on the microSD card before formatting it.
- Pioneer Corporation does not make any assurances that microSD card problems will be repaired by formatting the card. Pioneer Corporation bears no responsibility for files that are erased from the microSD card or damage that occurs from formatting the card. Format the microSD card according to your own judgement and at your own responsibility.
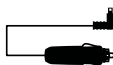
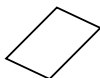# Check the Accessories

Main Unit×1

Mounting Attachments ×2
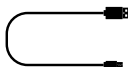
USB Cigarette Lighter Power Cable 5 m×1

Quick Start Guide×1

Warranty×1

Rear Camera Cable 6 m×1

PC - USB mini USB 1 m×1

Note

• All images in this document are for illustrative purpose only and subject to change.

Before Installing the Product

⚠ **WARNING**
- When installing the product on vehicles installed with an air bag, never install on the cover of the air bag and at locations that might obstruct the deployment of the air bag. Doing so might prevent the air bag from being deployed normally, cause the product to fly out due to air bag deployment, and cause accident and injury.

⚠ **CAUTION**
- First check with the vehicle manufacturer for precautions related to the installation work when installing the product in a vehicle equipped with airbags. Otherwise there is a risk of airbag malfunction.
- Always use the included parts as specified. There is a risk of product failure if other parts are used.
- Install this product in a location where it will not hinder vehicle equipment and the ability to drive the vehicle.

Installation Precautions
- This product is designed to be mounted on a rear-view mirror only. Do not install the product anywhere else inside or outside the vehicle.
- When installing this product on a rearview mirror, install it in one of the specified positions within the specified limits.
- On some vehicles, installation at the specified location within the specified range may not be possible. For details, contact your dealer.
- Do not cover the main unit or get the lens dirty.
- Do not place reflective objects near the lens.
- Take care when handling the main unit that it does not drop and you do not touch the lens.
- Recording quality may be affected if the front windscreen of the vehicle is coated or has been specially treated.
- Always install this product in the specified installation position to ensure a safe field of view while driving and to achieve full performance from the product.
- Pioneer is not liable for any damage, due to installation or use of the product.

Installation Tips

Before Installing and Securing the Product
- First, temporarily connect this product and confirm that it operates correctly, and then install it. If the product does not operate correctly, check again if there is a mistake in the connection.
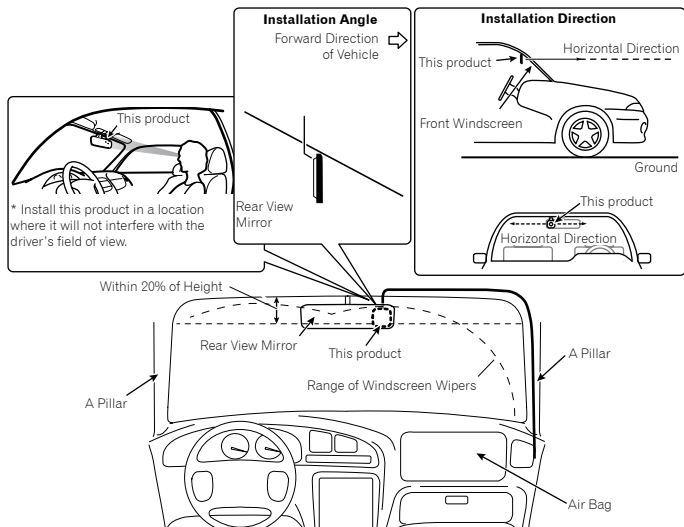
⚠ **CAUTION**
- Install firmly so that it does not come off. Incorrect installation may cause this to detach whilst driving and cause an accident. Inspect the installation state from time to time.

Installation

Specified Installation Position over Rear View Mirror

When installing this product to the rear-view mirror, install in a vehicle and in a position that satisfies all of the following conditions.

- A position where this entire product is within 20% of the top edge of the height of the front windscreen (range within 20% of the actual length, excluding parts overlapping weather strips, mouldings, etc. and masked parts) or is in the shadow of the rear-view mirror as viewed from the driver's seat. Note that "20%" as described above is a rough estimate. Please install the product in accordance with your country's laws and regulations.
- A position where the lens part of this product is within the wiping range of the wiper.
- A position where the lens part of this product does not hang over the sunshade and black ceramic lines/black ceramic pattern.
- A position where this product faces in the horizontal direction to the front and side to side.
- A position where the power cable can be routed without unnecessary force.

Installation Angle

Forward Direction of Vehicle ⇨

Rear View Mirror

Installation Direction

Horizontal Direction

This product

Front Windscreen

Ground

This product

Horizontal Direction

This product

* Install this product in a location where it will not interfere with the driver's field of view.

Within 20% of Height

Rear View Mirror

This product

A Pillar

Range of Windscreen Wipers

A Pillar

Air Bag

⚠ IMPORTANT

Always install this product in the specified installation position to ensure a safe field of view while driving and to achieve full performance from the product.

Install this Product

1   Install this product.

① Using the rubber mounting straps, attach the Dash Camera over the vehicles rear view mirror and adjust the lens to the desired angle.
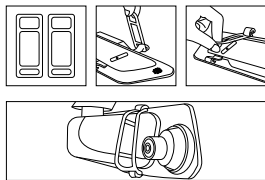
② Insert the USB Cigarette Charger into the vehicle cigarette lighter socket.
③ Insert the Mini USB plug of the power cable into the USB port of the Dash Camera.
④ Connect the plug (2.5mm) of the cable coming from the rear camera to the AV IN port of the main unit.
⑤ Connect the red cable of the rear camera to the + 12V terminal of your vehicle reverse light.
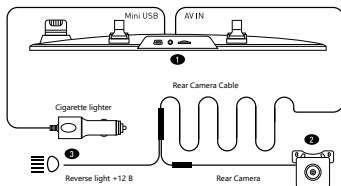
⚠ CAUTION

- Install firmly so that it does not come off. Incorrect installation may cause this to drop while driving and cause an accident. Inspect the installation state from time to time.
- Always use the included parts as specified. There is a risk of product failure if other parts are used.
- Ensure the reverse light of your vehicle is + 12V, as some modern vehicles are equipped with LED rear lights.

2   Rear Camera Connection
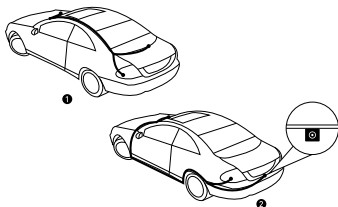
⚠ CAUTION
- These illustrations are for illustration purposes only. The actual connection method is determined by the design of your vehicle.
- Install the rear camera following the instructions above.
- Be careful not to damage the camera.
- We strongly recommend that you entrust this job to a professional
- Ensure the reverse light of your vehicle is + 12V, as some modern vehicles are equipped with LED rear lights.

3   Connect the cigarette lighter power cable to the vehicle accessory socket.
Route the power cable to the passenger seat side. Fully insert this into the vehicle accessory socket to make a good connection. (The location of the accessory socket will differ depending on the vehicle.)

Accessory socket

Cigarette lighter power cable
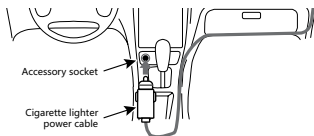
⚠ CAUTION
- The accessory socket will be extremely hot immediately after using the cigarette lighter. The tip of the cigarette lighter power cable may melt or short circuit if it is plugged in while the socket is hot. Wait for the socket to cool before plugging in the cigarette lighter power cable.

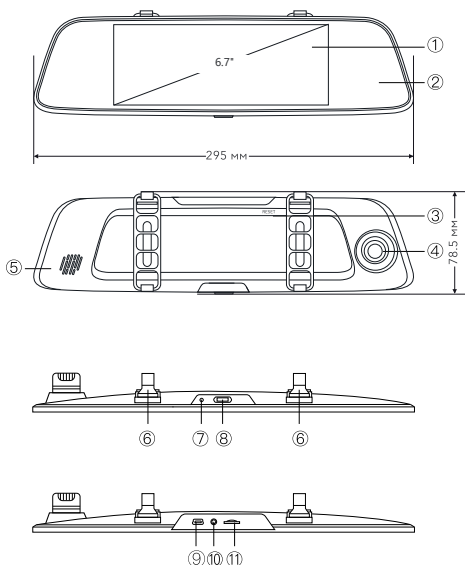## 4   Turn the vehicle engine on to display the recording screen.
Note
A protective film is applied to the lens when the product is purchased. Peel off this film.

5   Removing this product
① Unhook the mounting brackets from the main unit.
② Remove this product.

Part Names

English

① **LCD touchscreen**
   Displaying images and making device settings.

② **Mirror Zone**
   Mirror with rounded edges.

③ **Reset Button**
   Press this button with the tip of a ballpoint pen to reset this product.

④ **Lens**

⑤ **Speaker**

⑥ **Mounting Attachments**
   Attaching Dash Camera to interior mirror.

⑦ **Microphone**

⑧ **Power Button**
   Long press and hold a few seconds to turn on / off the Dash Camera.

   Short press to enable / disable the screen saver.

⑨ **Mini USB Port**
   Designed to connect the Dash Camera to PC.

⑩ **Rear Camera AV IN**
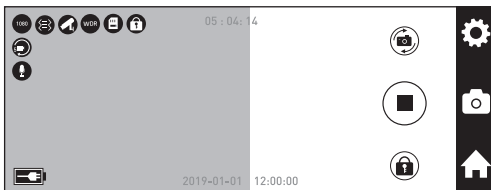   Used to connect the rear-view camera.

⑪ **microSD Card slot**
   8 GB to 64 GB microSD Card capacity

Function Buttons

The functions of the function buttons are indicated by the icons displayed on the LCD touchscreen. The functions of the buttons will depend on the displayed screen.

During MENU screen display

Picture-in-picture mode
After connecting the Rear Camera to the Dash Camera, the picture from it will be displayed in main screen. The front camera image will be displayed in the upper left corner of the screen ("picture in picture"). The mode switch button allows you to change the appearance of the image on the screen.

50 / 50 Mode

A mode in which one half of the screen is occupied by an image from the front camera, and the other half is from the rear camera.
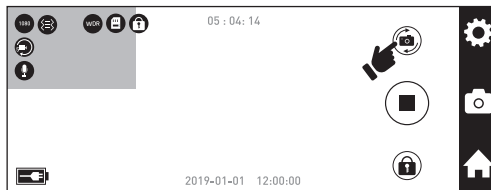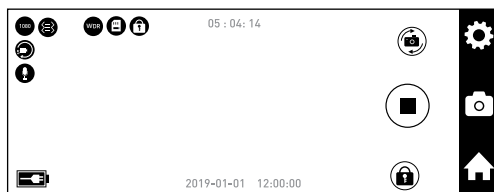
Front view camera mode

In this mode, the rear-view camera is not displayed on the screen of the Dash Camera.

Rear view camera mode

In this mode, the screen displays an image only from the rear-view camera. At this point, recording from the front camera continues.
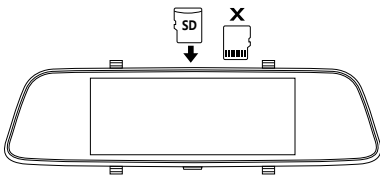
Inserting and Ejecting the microSD™ Card

Turn off the power to this product when inserting and removing the microSD card.
→*"Manually Turning the Power On and Off"*

Inserting the microSD Card

Hold the top edge of the microSD Card, position the microSD Card so that the label is facing the mirror side of the product, and slowly insert it into the microSD Card slot until it clicks.
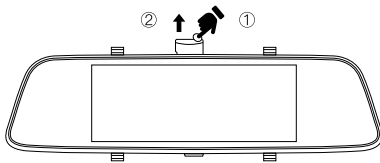

⚠ CAUTION
• Do not insert the microSD card at an angle. Doing so may cause damage.
• Do not insert and eject microSD card repeatedly in a short period.
• Always insert/eject the microSD card slowly.

Ejecting the microSD Card

Slowly push in the top edge of the microSD card until it clicks ①. The lock will be released. Pull out the microSD card ②.

⚠ CAUTION
• Ensure care is taken when handling the microSD card, as it becomes hot after being written.

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Backing Up Recorded Files

When the free space of the file storage areas is low, files are deleted from the oldest file.
We recommend that you back up any important files you want to keep with the following procedure.

Note

Prepare a spare microSD card in advance.

1 Replace the microSD card.

Stop the vehicle in a safe location. Then turn off this product power, eject the microSD card, and replace it with a spare microSD card.

2 Copy or move the files to a PC.

Insert the microSD card into a PC, using a commercially available SD card adapter if necessary.
Copy or move the videos and photo files to back up to a suitable location on the PC.

Folder and File Structure

The structure of folders and files in a microSD card is as follows.

ROOT

📁 Folder   📄 File

Front (Video file / SOS (Event) / Photo)
　　📄 _ ******** _ *******

Rear (Video file / SOS (Event))
　　📄 _ ******** _ *******

Note

The year, month, day, hours, minutes, and seconds are automatically assigned at "********_********".

Using this product

Before using this product, first stop the vehicle in a safe location and apply the handbrake.

This product Power

This product starts when the vehicle's engine is turned on (ACC ON), and it automatically starts recording. (Video recording) →*"Using this product" - "Video Recording"*

⚠ CAUTION
- If you do not use the device for a long time, the battery power in the device may run out.
- If the internal battery is empty, you will need to reset the time / date from the setting menu.
- Please ensure the product is connected to the cigarette lighter socket, and powered on for a minimum of 30 seconds for sufficient battery charge to save the time

Manually Turning the Power On and Off

This product can be manually turned on and off, from the side of the main unit.
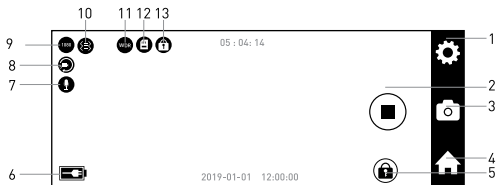The Cigar Charger cable must be connected and the vehicle ACC ON at all times to power the main unit ON/OFF.

When the main unit power is off: Long press ON/OFF Button for 3 seconds to start up.
When the main unit power is on: Long press ON/OFF Button for 3 seconds to shut down.

How to View the Recording Screen

The status display shows the operating status of this product

① **Video Settings**
  Configure video settings.
② **Start / Stop Recording**
③ **Photo Mode**
  Switch from video mode to photo mode.
④ **Home Screen**
⑤ **Protection**
  Protect video file from being overwritten or to remove protection from the file.
⑥ **Power**
  Icon shows when connected with power.

⑦ **Sound Recording**
⑧ **Loop Recording**
⑨ **Video Resolution**
⑩ **G-Sensor**
⑪ **WDR (Wide Dynamic Range)**
⑫ **SD Card**
 If no SD card is inserted, the symbol will be crossed out.
⑬ **Protection**
  Manually protect the current video file.

Video Recording

Recording automatically starts when this product is started. The recorded video is saved to the microSD card as one file of the set increment of time (default: 3 minutes), and when the microSD card runs out of free space, the files are overwritten starting from the oldest file.

Notes

- You can change the video recording time.
  → *"This Product Settings" - "Configurable Features"* - *"Recording Setting"- "Video Clip Length"*
- Video recording will stop under the following circumstances.
  — When switched to photo mode
  — When the power supply is stopped
  — When the microSD Card is removed
  — When the settings menu is selected
- If the recording has stopped by entering any setting menu, when returning to Recording Screen, you need to manually press the red Start Recording icon to start the recording again.
- The recording time may differ depending on the conditions.
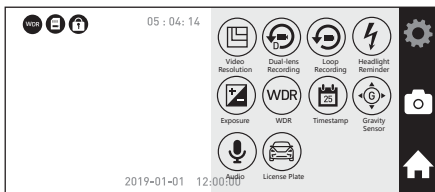
Video Resolution: 1080 p / 720 p
You can select the required video resolution (Full HD / HD).
Default setting: 1080 p (Full HD).

Dual Lens Recording / 2-Channel Recording: Off / On
When this function is enabled, the rear camera will shoot simultaneously with the front one. In this case, the resolution of the video recording of the rear camera will be 720 p. If this function is disabled, video from the rear camera will not be saved.
Default setting: On

Loop Video Recording / Video Clip Length: 1 min / 3 min / 5 min
In this mode, the Dash Camera will cyclically record new video files at specified time intervals. If loop recording is enabled, when the microSD Card is full, the old data will be overwritten with the new one. If the loop recording function is disabled, recording will automatically stop when the SD memory card is full. A warning message appears on the screen indicating that the memory card is full.
Default setting: 3 min

Headlights: Off / On
When this function is active, the system will remind you to turn on the headlights while driving after dusk.
Default setting: Off

Exposure: -3 / -2 / -1 / 0 / +1 / +2 / +3
By default, the system determines the optimal exposure for the entire scene that makes up the image. Meanwhile, this function for determining the exposure allows you to select individual areas. This is useful in cases where, when using the default setting, one or another important area may be strongly overexposed or too dark. After changing this setting, the effect is immediately visible on the screen. If the mode is changed, the camera returns to the exposure metering mode for the entire scene.
Default setting: 0

WDR (Wide Dynamic Range): Off / On
This technology automatically adapts the image in situations where there is significant contrast between light and dark areas.
Default setting: On

Time Stamp: Off / On
When this function is enabled, the system adds a date stamp in the video or photo that the Dash Camera records and saves.
If this function is disabled, video recording and shooting are performed without specifying the date.
Default setting: On

G-Sensor: Off / Low / Mid / High
In the event of a collision, the G-sensor automatically protects the video file from being overwritten, and then the video data cannot be erased even when the loop recording function is on.
Default setting: Mid

Microphone / Sound Recording: On / Off
Allows you to disable audio recording. In this case, video recording is performed without sound.
Default setting: Off

License Plate: On / Off
When enabled, the system will include your license plate stamp in the video.
If this function is disabled, the video is recorded without specifying the license plate.
Default setting: Off

SOS (Event) Recording

Automatic Recording by Detecting Impacts (Event Recording)

The video recording file when an impact is detected by this product (the Dash Camera), such as an impact with another vehicle, is recorded as an event video file.
The number of event video files and recording times will differ depending on when an impact is detected.
If an impact is detected, then the file records for the Video Clip Length (set by the user) after the impact is detected are recorded as an SOS (Event) video files.

### Manual Recording (Manual Event Recording)

If manual record button is pressed during video recording, then this is recorded as a video file for Video Clip Length (set by the user), with the same specifications as an event recording.
Notes
• You can adjust the sensitivity for detecting impacts.
  →**"This product Settings" - "Configurable Features" - "Recording Setting" - "G-Sensor Sensitivity"**

Photo Mode

Make sure the Dash Camera is in photo mode.
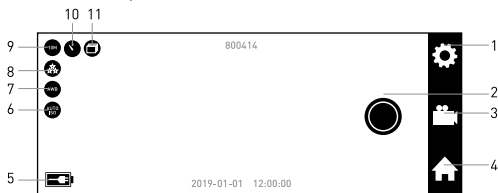
1. Photo Settings
To change the photo options, click the Photo Settings button.

2. Start
To take a photo, press the Start button.

3. Video Mode
The Video mode button is used to switch from photo mode to video mode.

4. Home Screen
To return to the home screen, press the Home button.

5. Power
Icon shows when connected with power.

6. ISO
Shows the ISO setting you have selected for photographing.

7. White Balance
Shows your chosen white balance option for photography.

8. Image Quality
Allows you to view the value specified in the settings for the image quality when photographing.

9. Resolution
Allows you to view the value specified in the settings for the image resolution when photographing.
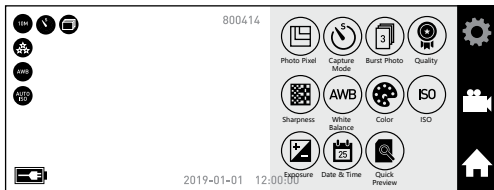
10. Delay
Allows you to view the specified photo delay value.

11. Burst Shooting
If you enable the burst function in the settings, this icon will be displayed on the screen.

Photo Settings

Switch to the photo settings mode and use the available functions.

Pixels: VGA / 1M / 2M / 3M / 5M / 8M / 10M
Default setting: 10M

Capture Mode: Snap / 2 sec delay / 5 sec delay / 10 sec delay
Shooting is performed at specified intervals.
Default setting: Snap

Burst Photo: Off / On
This mode takes up to 3 shots at a time, which is convenient for capturing fast moving subjects.
Default setting: Off

Image Quality: High / Mid / Low
Default setting: High.

Sharpness: High / Mid / Low
Sharpness level allows you to control the detail of the photo and video image.
Default setting: High

White Balance: Auto / Sunlight / Cloudy / Tungsten / Florescent
White balance allows you to adjust the colour temperature of the photo - "cold", "warm", depending on the lighting conditions. After changing this setting, the effect is immediately visible on the screen.
Default setting: Auto

Colour: Normal / B & W / Sepia
Default setting: Normal

ISO: Auto / 100 / 200 / 400
The ISO setting determines the camera's sensitivity to light, providing a trade-off between brightness and image noise. Noise refers to the amount of grain in the image. In low light, high ISO values produce a brighter image, but with increased noise. Low values produce less noise, but a darker image. After changing this setting, the effect is immediately visible on the screen.
Default setting: Auto

Exposure: + 3 / + 2 / + 1/ 0 / -1 / -2 / -3
By default, the system determines the optimal exposure for the entire scene that makes up the image. Meanwhile, this function for determining the exposure allows you to select individual areas. This is useful in cases where, when using the default setting, one or another important area may be strongly overexposed or too dark.
After changing this setting, the effect is immediately visible on the screen. If the mode is changed, the camera returns to the exposure metering mode for the entire scene.
Default setting: 0

Time stamp: Off / On
When enabled, the system adds a date stamp to the photos you take.
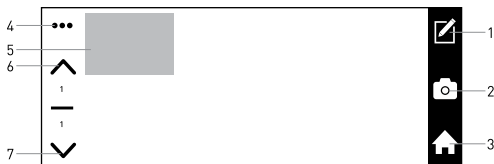If this function is disabled, shooting is performed without specifying the date.
Default setting: On

Quick Preview: Off / 2 sec / 5 sec
Default setting: Off
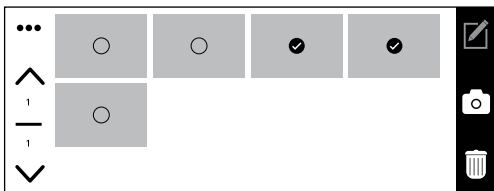
Play / Protect / Unprotect / Delete Files

Put the Dash Camera into playback mode, if there is a lot of data on the microSD memory card, the download may take at least one minute.

1. Selecting Objects
Press the Select button to highlight folders or files to lock / unlock / delete.
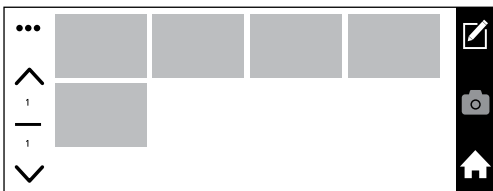If you want to deselect the selection, press the Select button again.

2. Media Type
To select folders or files (videos, photos, locked files) for viewing / locking / unlocking / deleting, press the Media Type button.
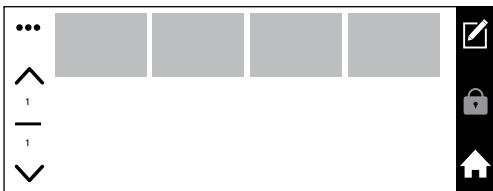
Video files: 📹

Photo files: 📷

Protected files: 🔒

3. Home Screen
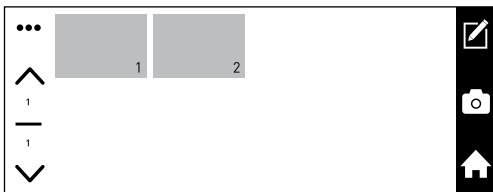To return to the home screen, press the Home button.

4. Return
Press the Return button to return to the previous item.

5. Folder
Press the Folder button to quickly jump to albums.

Note:
- Folder1: All files recorded by the front camera.
- Folder2: All files recorded by the rear camera.
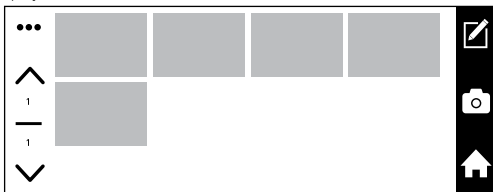

6. Previous Page
Click the Previous Page button to go to the previous page.

7. Next Page
Press the Next Page button to go to the next page.

Playback

Make sure there are recorded files in the album. Click on the desired thumbnail to enter directly into the video / photo playback mode.

1. If the file you want is a video file, click the Play button to view its contents.

2. Tap the screen while the video is playing and the Pause button will appear in the middle of the screen. To pause playback, click the Pause button.
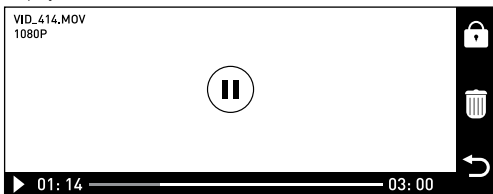
Note:
- To return to the previous step while in video / photo playback mode, press the Return button. During video playback, all operations are stopped.

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Protecting / Unprotecting Files

1. Make sure the Dash Camera is in the video / photo files playback mode. To protect / remove protection from the current file, press the Protect button. The protect / release function is not available during video file playback.

2. Switch to album mode by pressing the select button and highlighting the file(s). To protect / remove protection from the selected files, click the Protect button. If the file is protected, the protection symbol will be present on its icon.
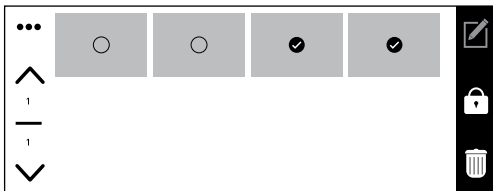
3. Make sure the album contains protected files, press the select button and highlight one or more files. To remove protection from the selected files, click the Protect button. The lock symbol on the locked files icon will disappear.
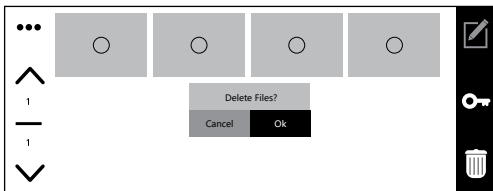
Deleting Files

1. Switch to the album display mode. To delete all files, press the Select button, then the Delete button. If the files are locked, unlock them before deleting them.
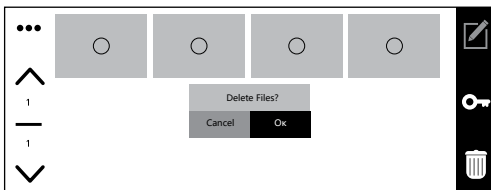
2. Switch to album mode. To delete unneeded files, press the Select button and highlight the files, then press the Delete button to delete them. If the files are locked, unlock them before deleting them.
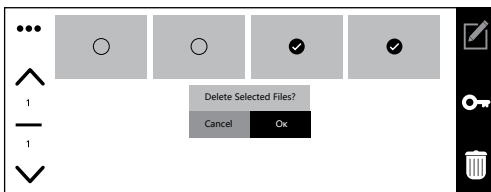
3. Switch to playback mode. To delete the current file, click the Delete button. If the current file is locked, unlock it before deleting it.
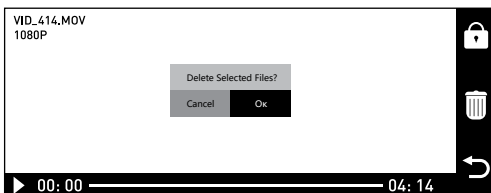
This Product Settings

Before using this product, first stop the vehicle in a safe location and apply the handbrake.

These settings configure this product. You can reset the settings to the default settings. You can also format the microSD card and check this product version information.

Note:
• The video recording will be interrupted while the MENU screen is displayed.

1 Sound recording

During video recording, the Dash Camera can record sound. To enable / disable sound recording, push the Sound recording (Microphone) on-screen button.
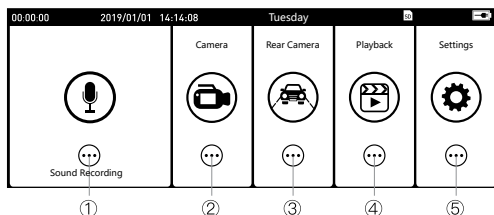
2 Camera

1. To switch from front to back camera or vice versa, press the Toggle button.
2. Click the Start button to start recording video. To stop recording video, press the Start button again.
3. To enter recording settings.
4. Press the Photo button to enter Photo Mode. To take a photo, press the Start button. To adjust the photo settings, click the Settings button.
5. To return to the home screen, press the Home button.
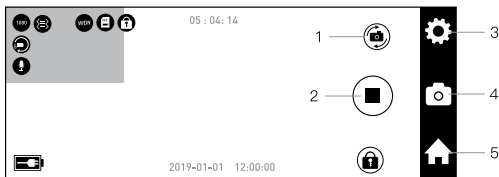
3 Rear Camera

1. To view the rear camera image, press the Rear camera button.
To return to the previous view, click the Return button.

4 Files

1. To view the recorded video or view photos, click the Play button (you need to click on the file itself, then the Play icon will be displayed in the middle).
For more detailed instructions, see the Playback section.

5 Settings

1. Press the Home button to open the main menu.
In each of the screens displayed from here on, the Monitor Display (screen) automatically goes black if you do not perform any operation for approximately 60 seconds.
(This is the Monitor Display default setting).
The video recording is not continuous while the MENU screen is displayed.
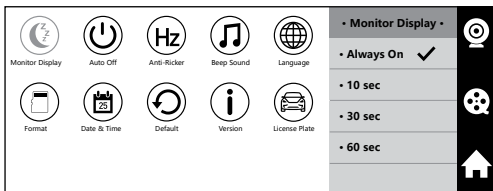
2. Press Function Buttons to select the desired option.
In each menu setting, you can change the settings to your own preference.

Monitor Display: Always ON / 10 sec / 30 sec / 60 sec
Function to turn off the LCD after a specified time of inactivity. To turn the display back on, press the power button or tap the screen.
Default setting: 10 sec

Auto Power Off: Off / 1 min / 3 min / 5 min
Turns off the Dash Camera after a specified time of inactivity. It becomes active only if the recording is not currently in progress (for example, if the recording was interrupted manually by the Start button, if you made settings for the Dash Camera and did not return to the video recording screen.
Default setting: Off

Anti-Flicker Frequency: 50Hz / 60Hz
Default setting: 50 Hz.

Beep Sound: On / Off.
Turns on / off the beep sound when operating functions from the touchscreen.
Default setting: On

License Plate
Please enter your vehicle registration number.

Language: English, German, French, Italian, Spanish, Polish
Default setting: English

Format
To keep the microSD card in good condition, it is recommended to reformat it regularly. In this case, the contents of the card are lost, so first upload the recorded files a PC.

Date and Time
Default setting: YYYY / MM / DD 00:00:00.

Reset
This function returns all settings to their original state.

Version: Check the firmware version of the device
Displays information about the brand, model, and firmware version installed.

PC Connection

Turn off the Dash Camera power and use the supplied PC - USB mini USB cable to connect the Mini USB port of the Dash Camera to the USB port of the PC. The device will display icons for three modes: Memory, PC Camera and Video Recording.

Memory   **PC Camera**   **Video Recording**

Memory: The PC recognises the device as an external USB storage device and you can perform data transfer and file copy / delete operations on the PC.

PC Camera: The Dash Camera can function as a PC web camera.

Video Recording: The Dash Camera turns on and starts operating.

English

Configurable Features

Recording Setting

Setting	Details	Default Settings
Video Resolution	Sets the resolution quality of video recording. [FHD 1920×1080 p or HD 1280×720 p]	FHD 1920×1080 p
Duel-lens Recording (2-channel Recording)	Record data using both the front and rear camera [ON or OFF]	ON
Video Clip Length (Loop Recording)	Sets the recording time for one video recording video file, in video recording. [OFF/ 1 min / 5 min / 10 min]	3 min
Headlight Reminder	Reminds you to turn on headlights.	OFF
Exposure Value	Sets the exposure of video recording. [-3 to +3	0
WDR	Automatically adapts the image where there is significant contrast between light and dark areas. [ON or OFF]	ON
Time Stamp	Adds a date / time stamp in the recorded video or photo [ON or OFF]	ON
G-Sensor	Sets the sensitivity for detecting vibration or impact. This can also be set: [OFF / Low /Mid / High]	Mid
Microphone (Sound Recording)	Sets whether or not to record sound around this product during video recording. [ON or OFF]	OFF
License Plate	Includes the license plate set by the user into the recording. [ON or OFF]	OFF

English

Configurable Features

System Setting

Setting	Details	Default Settings
Monitor Display	Turn off the LCD monitor display after a specified time of inactivity. [Off / 10 sec / 30 sec / 60 sec]	10 sec
Auto Power Off	Powers off after a specified time of inactivity. [Off / 1 min / 3 mins / 5 mins]	OFF
Anti-flicker (Frequency)	Sets the frequency of the lens.	50Hz
Beep Sound	Sets beep tones. [ON or OFF]	ON
Language	Sets the language used to display the screen. [English/French/Spanish/German/Italian/Polish]	English
Format	All files on the microSD card can be deleted.	-
Date/Time	Sets the time manually. [Year/Month/day] [Hour/Min]	-
Default	Reset to the default settings.	-
Version	Allows you to check the product model number and firmware version information of this product.	-
License Plate	User can input license plate data.	-

English

Guide to Recording Time

The following table provides estimates of the video recording times possible with different SD card capacities. The actual values will depend on various factors, such as the microSD card being used, subject being recorded, and recording conditions.

As a percentage of memory card capacity, the video recording time and photos will be 60%, and the event recording time will be 40%.

Guide to Recording Time with an 8 GB microSD Card

Resolution	Video type	16 GB
1080 p	Video Recording	Approx. 18 minutes
1080 p	SOS (EVENT) Recording	Approx. 8 videos (Front: 8 & Rear: 8)
1080 p	No. of Photos	Approx. 500

Guide to Recording Time with a 64 GB microSD Card

Resolution	Video type	32 GB
1080p	Video Recording	Approx. 2.4 hours
1080p	SOS (EVENT) Recording	Approx. 8 videos (Front: 64 & Rear: 64)
1080p	No. of Photos	Approx. 500

Notes

- Default Video Clip Length is 3 min recording time.
- The recording times are estimates. The actual recording times will depend on the scenery being recorded.
- Normal recording and SOS/EVENT Recording both use the cycle erase storage mode. For the key video that is not erased, please export and backup on your computer timely after the incident.
- After many repeated cycles erasing in this storage mode, the microSD Card may possibly get damaged with aging, resulting in unsaved data. If under this situation, please replace with a new microSD Card.

Troubleshooting

Check the following information before sending the product in for repairs.

Symptom	Cause	Action
An error occurred during the display and operation of this product.	The microcomputer in this product is malfunctioning.	Press the reset button. →*"Part Names"*
A file that should have been saved cannot be found.	If there is insufficient space in the storage areas of the microSD card, the files will be overwritten in order from the oldest files.	We recommend that you back up any important files you want to keep. →*"Backing up Recorded Files"*
An accident occurred during driving, but a video file wasn't recorded.	The sensitivity of impact detection may not be appropriate.	Adjust the sensitivity of the sensors to use for detection. → *"This Product Settings" - "Configurable Features" - "Recording Setting" "G-Sensor"*
There's no sound when I play a video file.	The sound recording setting may be OFF.	Check the sound recording setting again. → *"This Product Settings" - "Configurable Features" - "Recording Setting" - "Microphone"*
An error occurred during the display and operation of this product.	The microcomputer in this product is malfunctioning.	Press the reset button. → *"Part Names"*
Button response is slow.	The SD card may be worn out.	Try formatting the SD card. → *"This Product Settings" - "Configurable Features" - "Values" - "System" - "Format SD Card"* If the symptom does not resolve, *try a new SD card.*
A message prompting me to format the SD card is appearing frequently.	The SD card may be worn out.	Try a new SD card.
Blurred image.	The windshield reflects light, which affects the image quality.	Please change the picture settings, tilt angle of the rotating lens, or the position of the Dash Camera itself.

Why does the Dash Camera turn off frequently?	Possibly the design and placement of the cigarette lighter socket of your vehicle.	Turn the charger clockwise, to give it the most stable connection in the cigarette lighter socket.
The Dash Camera will not turn on.	Check if the indicator LED on the charger is illuminated when connected to the cigarette lighter socket.	If not, remove the charger from the vehicle and re-insert it again to reboot the Dash Camera system.
After turning on the Dash Camera, auto recording does not start.	The memory card is full.	Transfer the saved files to your PC so you do not to lose them. Format SD Card using PC or Dash Camera. If this does not solve the problem, use a new SD Card.
Video is output without sound.	The microphone is OFF in the system setting.	Turn ON the microphone from the system settings.
The device gets very hot during operation.	It is normal to generate some heat at normal temperature.	If smoke or odor appears, turn off the unit immediately and contact an authorised Pioneer service center for assistance.
Traffic light signals are not recorded.	LED traffic lights may cause some blinking effect depending on the frequency of the LED traffic light.	The Dash Camera will record the blinking effect.
Cannot write to memory card. The message "Memory error" appears on the screen.	microSD Card not compatible.	Please use well known branded compatible microSD Card. If a problem still exists, reformat the SD Card or try a new SD Card.
Pressing the recording stop button has no effect.		Use the reset button on the back of the device to reboot the Dash Camera.

Specifications

Recording Medium	microSDHC / microSDXC Card, Class 10 (8 GB to 64 GB)
Imaging Element	Approx. 2 million pixels (Built-in high sensitivity CMOS sensor)
Recording Angles	Main unit: 118° horizontal, 60° vertical, 150° diagonal 2nd camera: 105° horizontal, 60° vertical, 120° diagonal
F-Number	Main unit: F2.0 2nd camera: F2.5
Recording Mode	Main unit: Full HD (1920 x 1080 p) 2nd camera: HD (1280 x 720 p)
Image Correction Technology	WDR
G-Sensor	3-Axis G-Sensor (level can be set in 4 steps)
Recording Methods	Normal recording / Event recording / Photo recording
Video File Structure	1 min / 3 min / 5 min
Display	6.7-inch IPS-LCD, touchscreen
Sound Recording	Can be set to ON or OFF (OFF as default)
Frame Rate	Main unit: 30 fps 2nd camera: 25 fps
Compression Method	Video: MOV (H.264) / Photo: JPG
Video Playback Method	On Dash Camera or microSD card in PC
Power Supply Voltage	Main Unit: DC 5 V (12 V / 24 V cigarette lighter power cable incl.)
Power Consumption	Approx. 10.8 W while charging
Operating Temperature	-10° to +60℃
Dimensions (W x H x D)	Main Unit: 295 mm x 33.5 mm x 78.5 mm (W x H x D) 2nd Camera: 26.5 mm x 23.7 mm x 23.7 mm (W x H x D)
Weight	Main unit: 313 g (Excluding mounting bracket, power cord, etc.) 2nd camera: 30.2g Excluding mounting bracket, power cord, etc.)

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https://www.pioneer-car.eu/eur/

Visit **www.pioneer-car.eu/uk/** (or **www.pioneer-car.eu/eur/**) to register your product.

English

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