



USER'S MANUAL

Smart Reco[®]
New Standard of smart car life

WHSR-S100



Table of contents

01. Precautions	3
02. Prohibitions	4
03. Cautions for use	6
04. Product features	9
05. Standard items	12
06. Name and functions	13
07. How to power on/off	15
08. How to insert/remove memory card	16
09. Installation - Precautions during installation	17
10. Button function and voice guidance operations	21
11. LED operation - main body	22
12. LED operation - side camera	23
13. Product functions	24
14. Ultra-low power mode	28
15. How to set up a smartphone app	29
16. Firmware update	48
17. PC viewer installation	50
18. PC viewer overview	51
19. PC viewer function	52
20. PC viewer - full screen mode	55
21. PC viewer - digital zoom	56
22. PC viewer - driving record	57
23. PC viewer - file open	59
24. Folder structure in SD card	60
25. Video files	62
26. Product specifications	69
27. Frequently Asked Questions	71
28. Warranty	74

01. Precautions

This product is a two-channel dashcam that records the left video, right video, and indoor audio when a vehicle accident or impact is detected. It records data to assist in analyzing the causes of roadside accidents.

- SmartReco® is a registered trademark of Whitehouse Corporation.
- All contents of this manual are protected by copyright law.
- The product names and other brand names mentioned in this manual are the trademarks or registered trademarks of their respective companies.
- We are not responsible for any failures or accidents that may occur as a result of improper use, installation, or modification.
- To ensure safe driving, please refrain from using electronic devices while operating a vehicle.
- The images shown in this manual may differ from the actual product.
- Please read this manual before using the product to ensure proper and safe usage.

- | This product is a vehicle safety driving assistance device. In the event of an accident, All responsibility lies with the user. Please use the product for its intended purpose.
- | This manual may be subject to change without notice in order to improve product functionality.

02. Prohibitions



Warning

This indicates that "there is a risk of death or serious illness."



Caution

This indicates that "there is a risk of damage or property damage."



Warning

. Please do not operate while driving.

It may cause accidents or injuries.

Be sure to stop the vehicle in a safe place before operating or inserting the microSD card.

. Do not disassemble, repair, or modify the product.

Be sure to contact your nearest authorized dealer or seller for repairs or servicing.

. If it gets wet, never dry it with a heat source such as a microwave oven or hair dryer, etc.

It can cause an explosion, deformation, or malfunction.

Do not touch with wet hands.

It can cause a fire, electric shock, or malfunction.

. Do not plug in or unplug the cord.

Not only can it cause communication problems, but it can also lead to fires, electric shocks, or malfunctions due to disconnections or short circuits.

. Do not insert any foreign objects into the device.

It may cause malfunctions, fires, electric shocks, and other hazards. Please exercise extra caution and avoid approaching infants or young children.

. Never install in a location that obstructs visibility while driving.

It may cause accidents or injuries.

. Never install in a location that will interfere with the airbag.

If the airbag does not operate properly or activates unexpectedly, the product may malfunction, leading to accidents or injuries.

. Do not use this product if it is broken or defective.

If any malfunction or abnormality occurs, please immediately stop using the product and contact the nearest authorized dealer or seller. Continued use may result in an accident, fire, or electric shock.

. Keep the microSD card out of reach of children.

. Please ensure that this product is securely attached to prevent any separation or accidental dropping.

If the attachment is weak, it may come loose or fall off while driving, potentially causing an accident or injury. Performance may also be affected by vibrations.

. Please do not clean this product.

Do not use chemicals such as benzene, thinner, or alcohol, etc. as they may cause an explosion or fire. When performing maintenance, first unplug the power cord from the main unit. Make sure that the power is turned off. Then, gently wipe the unit with a soft cloth that has been lightly dampened with water. Finally, dry the unit.



Caution

- Avoid using the parking monitoring mode for extended periods, typically exceeding 24 hours. If you want to use it for an extended period of time, utilize the ultra-low power mode to operate and prevent draining the vehicle battery.

If the vehicle is not used for an extended period of time, please remember to turn off the parking monitoring switch. Even if the power cutoff function is activated, starting the engine may still be difficult. After activating the power cutoff function, no video is being recorded.

- Do not drop or expose this product to strong shocks.
- Avoid leaving it in hot weather or locations with high temperatures or extreme cold for extended periods of time.

If the temperature of the main body is outside the operating temperature range (-20°C – 70°C), the main body functions will not operate properly. Also, if the main body is located between the sunshade and the windshield, it may become excessively hot and fail to function properly. Some car models have sun visors or sun shades that may obstruct the rear camera. In that case, it is advisable to avoid using sun visors or sun shades while recording. If you do use them, make sure they do not obstruct your view.

- Ensure that cables/cords are routed in a way that does not obstruct driving or getting on and off the vehicle.
- This product cannot be used on vehicles driven on unpaved roads, such as off-road vehicles or competition vehicles.
- Videos recorded with this product cannot be used without permission, except for personal use, due to regulations such as the Copyright Act and the Personal Information Protection Act. Depending on the method of usage, individual rights, such as privacy, may be violated.
- This product is not designed to prevent accidents. Depending on the situation, video files may not be recorded.
- Always keep the glass on which this product is mounted clean.

Please note that normal driving videos cannot be recorded if the camera lens is dirty.

- There is a possibility that the image quality may be significantly reduced due to light reflecting off the vehicle's glass surface.
- There is a possibility that the image quality may deteriorate, especially at night, due to the density of tinted glass and window film. Please conduct a shooting test after installing the product and make sure to verify the image quality before using it.
- LED traffic lights flash at a high speed that is imperceptible to the naked eye, making it challenging to accurately capture them in photographs. If you are unable to judge based on the signal, please make your judgment based on the before and after images and the surrounding vehicle situation.
- The main unit features a self-diagnosis function, which leads to a startup time of approximately 20 seconds after powering on.

Video recording does not begin until the main unit is started, so please make sure that the main unit is started before driving the car.

03. Cautions for use

[Scope of Warranty and Liability]

- . This product is an auxiliary device for safe driving. Damage caused by product malfunction and data loss, we are not responsible for any other damages resulting from the use of this product.
 - . If you have recorded an important video, remove the microSD card from the main unit and store it carefully to prevent any loss of files. Please keep it.
 - . This product is a device designed to record and save driving conditions of vehicles. However, there may be instances where recording does not take place or recorded files cannot be played due to unforeseen circumstances.
 - . We are not liable for any malfunctions or accidents that may arise during the disassembly, repair, or modification of this product.
 - . We are not responsible for any malfunctions or accidents resulting from improper usage or installation.
 - . This product and its instruction manual may be changed or modified without notice in order to improve quality.
 - . The backup function may not work depending on changes over time or conditions of use.
 - . The copyright for all software and hardware used in this product belongs to our company.
- Unauthorized use, duplication, processing, or distribution of the copyright and intellectual property rights associated with this product is strictly prohibited.
- . This product is an auxiliary device for safe driving. One of its purposes is to help verify accidents. It does not guarantee its effectiveness as conclusive evidence.
 - . Damage caused by impact occurs when the image is not recorded or when the recorded data is damaged. We are not liable for any malfunctions or damages that may occur as a result of using this product.
 - . We are not responsible if an accident or malfunction occurs due to improper use that does not comply with the instructions in this manual.
 - . Please refrain from using this product for pranks or engaging in activities that may inconvenience or annoy others.
- Please never use it for purposes other than its intended use. We do not take any responsibility.
- . Depending on the performance of your PC, PC viewers may not play properly. Specifications are necessary to ensure smooth video playback.
 - . To view maps in the PC viewer, you must be connected to the internet.
 - . Before using this product, make sure to thoroughly review the information provided in the user manual and use it safely.
- Please ensure that you keep this manual in a readily accessible location at all times.

Please install PC viewer in an environment connected to the Internet.

If you install in an environment that is not connected to the Internet, the installation may not be installed properly.

03. Cautions for use

[FCC Compliance Information]

. 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 redesigned to provide reasonable protections 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.
- Only shielded interface cable should be used.

[FCC Radiation Exposure Statement]

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the user's authority to operate such equipment.

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

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation of this device.

FCC ID : 2BC9S-WHSR-S100

Caution

Any change or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

CE Warning

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

It is desirable that it be installed and operated with at least 20cm or more between the radiator and a person's body (excluding extremities: hands, wrists, feet, and ankles)

【 microSD card Precautions for use】

- Make sure to insert the microSD card with the power turned off. If the microSD card is inserted while the power is on, not only may the microSD card be damaged, but there is also a risk of product malfunction. While data is being written to the microSD card (indicated by the LED lamp being on), never remove the microSD card. Not only can the microSD card be damaged, but there is also a risk of product malfunction. When removing the microSD card, press and hold the button on the main unit to power it off. Additionally, please turn off the engine and make sure that all LED lamps on the main unit are turned off. Please perform this task after confirming that the light is turned off.
- If the power is cut off while saving a file, the LED will briefly turn on while the last file is being saved using the backup function. Please do not remove the microSD card from the main unit.
- Before using the main unit, please confirm that images are saved on the microSD card before starting to use it. Please remember to regularly check the microSD card.
- Do not store any data on the microSD card other than what is recorded using this product.
- To ensure proper functionality of this product, please review the recorded data on a weekly basis.
- Please remember to regularly back up your saved files. If the storage capacity is exceeded, the oldest files will be overwritten. Therefore, it is important to regularly back up your files to prevent accidental deletion of essential data.
- Make sure to use an authentic microSD card specified by our company. If you use a microSD card other than the one specified by our company, recording may not be possible.
- Please regularly check the functionality of the microSD card. We strongly recommend formatting the dashcam regularly, approximately every two months, using a PC.
- Consider replacing the microSD card after 6 months of use.
- To ensure stable operation of the main unit, please check the firmware version of the dashcam main unit every two months and update it to the latest version.

• microSD card is a consumable item. Micro SD cards generally have a limited lifespan, so new data may not be recorded if they are used for an extended period of time. In this case, prepare a new microSD card. Please understand in advance that we do not assume any responsibility for the damage or destruction of data under any circumstances.

• Please note that if you remove the card while writing to the microSD card, the last data will not be recorded. We are not responsible in any way for such incidents.

To prevent important data such as accident videos from being overwritten, immediately remove the microSD card from the main unit and store it in a different location. It's a good idea to own multiple microSD cards.※ For purchasing and detailed information, please visit Smart Reco's official website.

04. Product features

| **Parking supervision mode**

While parking, parking recording is performed so that only necessary images such as hit-and-runs due to motion sensors and impacts can be clearly saved.

✂ For details, please refer to page 64.

| **Left and right 2CH recording function**

This is a dashcam that records video through left and right side cameras mounted indoors.

✂ For details, please refer to page 61.

| **Voice guidance function**

You can check the operating status of the dashcam through voice guidance.

If there is a hit-and-run during parking monitoring mode, a voice guidance will sound when the engine is started.

| **FHD high-definition video recording**

All cameras record with optimal resolution and viewing angle so that driving and parking surveillance videos can be saved clearly.

| **Equipped with format-free function**

Equipped with a format-free function, there is no need to regularly format the micro SD card.

(However, formatting may be necessary depending on the condition of the device)

| **Continuous recording function**

While driving, record 60 seconds as 1 file.

| Event (shock) forced recording

When an impact is detected while driving or the parking monitoring switch on the front camera is briefly pressed, the 5 seconds before and 15 seconds after the button was pressed (total of 20 seconds) are saved in the event folder.

| Automatic memory management function

In order to continuously preserve driving videos on the microSD card, folders for each recording method are sequentially overwritten from older video files.

| PC viewer support

the dashcam video with a PC viewer, you can play the front and rear videos simultaneously and check various information.

| Equipped with power-off function to prevent battery consumption

There is a built-in device that turns off the dashcam power to prevent the vehicle's battery from being depleted. The dashcam automatically turns off during parking monitoring mode according to the set blocking voltage/blocking time to prevent battery exhaustion caused by the dashcam.

- Parking supervision mode uses power from the vehicle battery.
- If a battery warning appears, the vehicle's battery may be weak. Please contact your authorized dealer/seller.

| Radio interference measures completed

- However, when a rear camera is installed, radio reception sensitivity may decrease depending on some regions and reception environments.

| Traffic light misrecognition avoidance policy

| Long-term recording mode (time lapse) ✖ Only for parking monitoring
4 images per second and saves them as a movie. In places where there is a lot of traffic of people or vehicles, you can use the long-term recording mode (time lapse) to record for a longer period of time than regular parking surveillance.

| Hyperlapse ✖ Only in constant mode
4 images per second and saves them as a movie. Hyperlapse allows you to record for longer periods of time compared to regular driving recording.

| SD card lifespan notification (only when using a genuine SD card)
A voice guide notifies you when it is recommended to replace the SD card you are using.

| Equipped with security LED
While parking, the blue LED blinks to signal parking supervision.

| Smartphone app support (optional)
There is a built-in Wi-Fi module, and you can access the dashcam from a smartphone app.

| Supports Wi-Fi station mode
By connecting the smartphone app to your home Wi-Fi network, you can view dashcam information while in parking mode.

05. Standard items

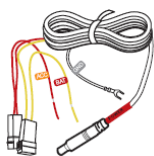
After purchasing the product, please check whether the main body and all accessories are included.

If there is any damage or abnormality to the main unit or accessories, immediately contact the store where you purchased the product.

Basic configuration



main body
including Wi-Fi
module)



power connection
cable



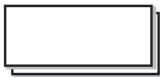
SmartReco only
microSD card



Side camera (left)
Window Bracket
Double-sided tape
(4ea)



Side camera
(right)
Window Bracket
Double-sided tape
(4ea)



camera fixation
Double-sided
tape



User's Guide



camera extension
cable
(4m)



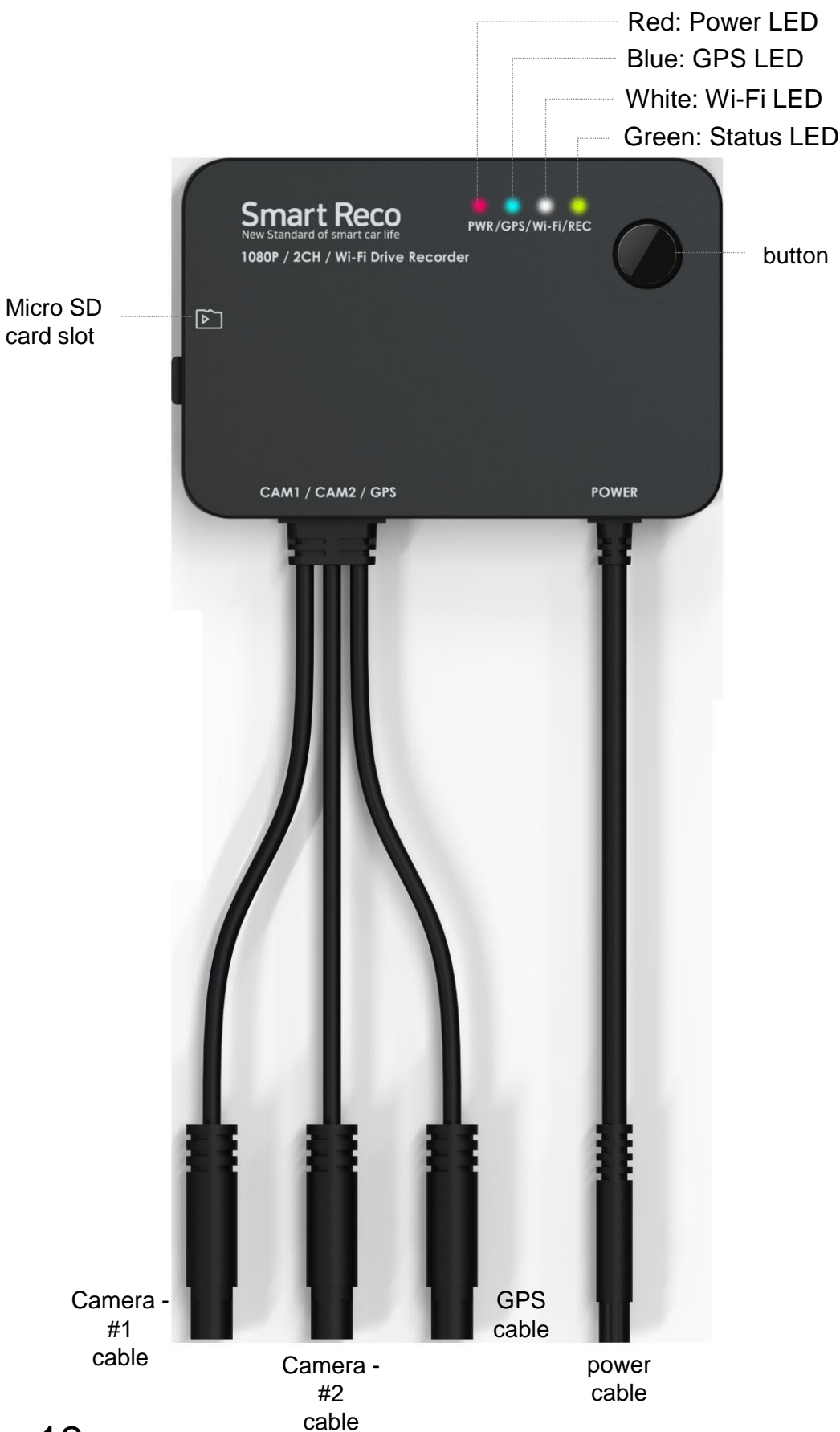
camera extension
cable
(7m)



External GPS module

The above accessories are subject to change without notice.
(The above is an image and may differ from the actual product.)

06. Name and functions – Main body



06. Name and functions – Side camera



designation	explanation
① Window bracket	Adhesive side
② Camera lens	side camera lens
③ Security LED	During continuous recording, the blue LED lights truns on. During parking monitoring mode, the blue LED blinks. ※ You can turn it ON/OFF by setting.
④ Status LED	During continuous recording, the blue LED lights turns on. During parking monitoring mode, the blue LED turns off. ※ You can turn it ON/OFF by setting.

07. How to power on/off



You can switch the power ON and OFF with the power ON/OFF button on the top of the main unit.

How to change Parking mode

During continuous recording, press and hold the button on the top of the main unit (within 2 to 4 seconds) When released, you can toggle parking mode ON/OFF.

you press and hold the button (within 2 to 4 seconds) and then release it, the voice guidance 'Parking mode ON' or 'Parking mode OFF' is output.

When 'Parking Mode OFF' is set, turning off the vehicle's engine turns off the dashcam and does not record while parking.

※ You can also switch parking monitoring mode ON/OFF using the smartphone app.

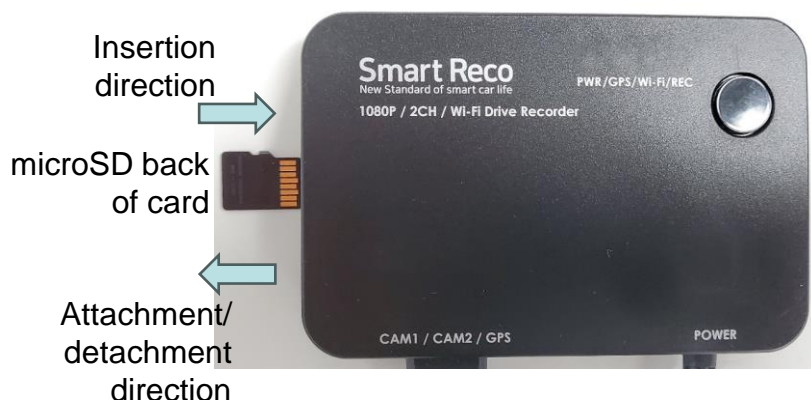
08. How to insert/remove memory card

※ Be sure to turn off the main unit power before performing this operation.

◦ Insertion method

Insert the micro SD card in the direction of the arrow until it clicks.

※ Please pay attention to the direction.



◦ How to separate

the inserted microSD card into the
Press and slowly release your hand.



Caution

This content “ may cause damage or property damage.

※ If the microSD card is forcibly inserted, the main unit and the microSD card may be damaged. We are not responsible for any problems that result in damage.

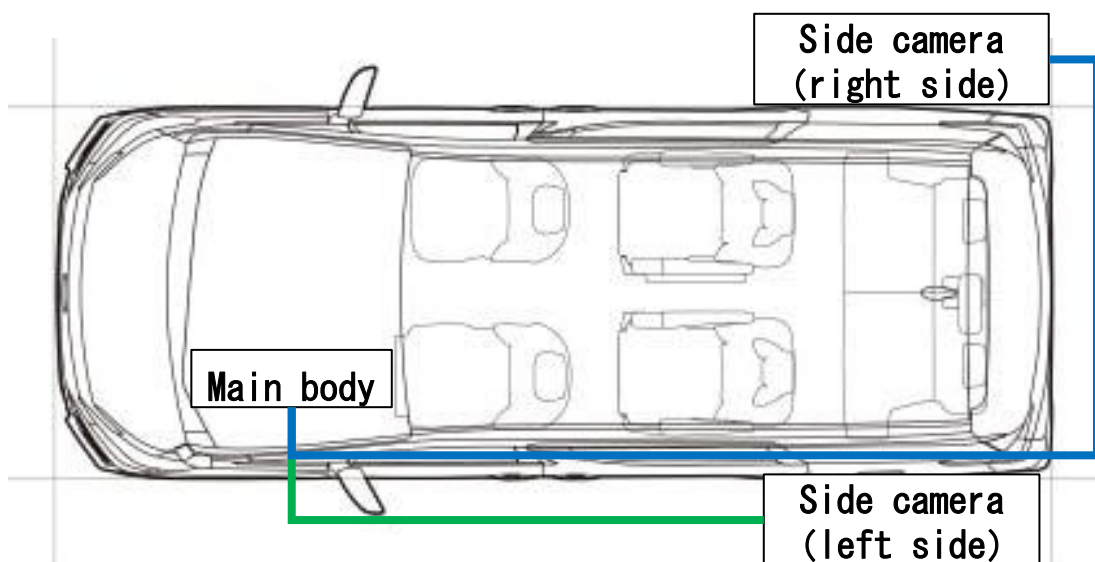
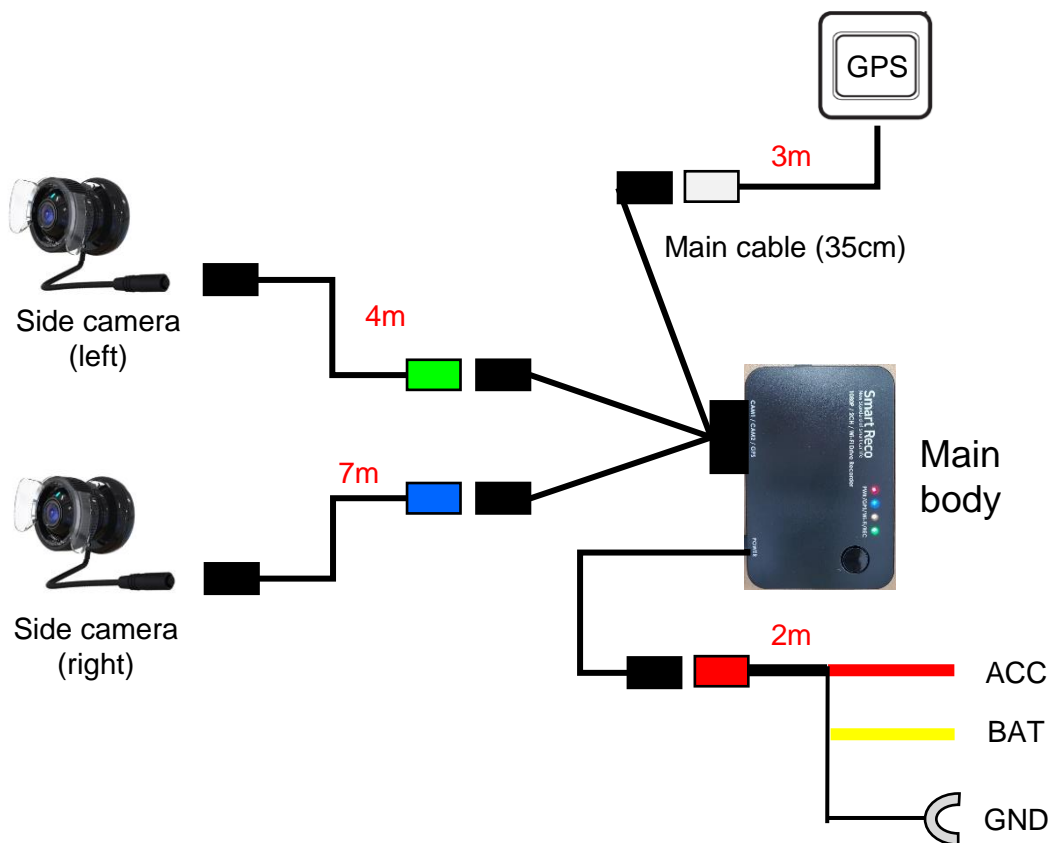
◦ Precautions when using memory cards

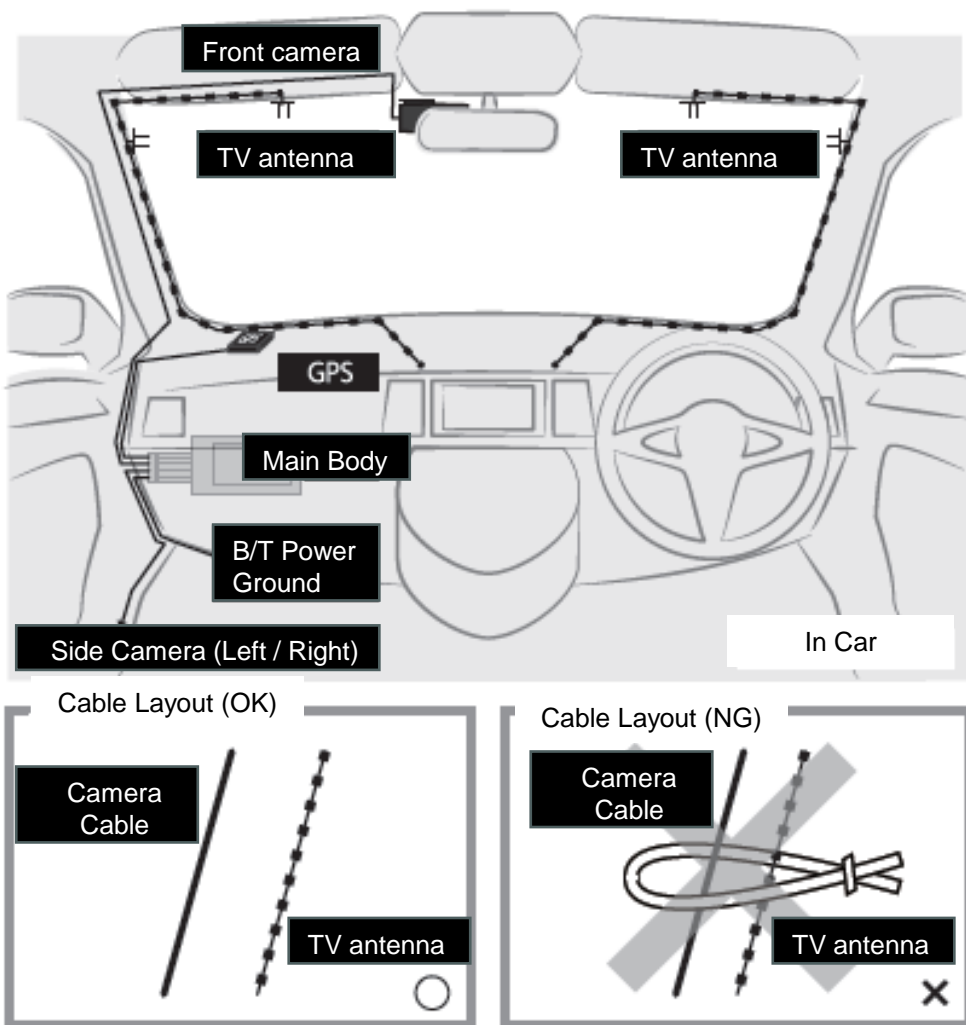
- Recording may not be performed properly if the memory card exceeds its 6-month lifespan, as it is a consumable item. Please replace the memory card that has reached the end of its lifespan.
- We recommend checking the data at least once a week to ensure the normal operation of the product. Make sure to use genuine memory cards. We are not responsible for any problems that may arise if you use a non-genuine memory card.
- Remove the memory card when the main unit is turned off. If you remove it during recording, the memory card and main body may be damaged.
- To prevent data loss, it is recommended to back up important recorded video data to a separate PC or smartphone instead of relying solely on a memory card.

09. Installation – Precautions

- | When installing this product, make sure that the main body and all accessories are present. Verify the installation method and then proceed to install it following the prescribed procedure. If the installation involves disassembly or maintenance, or if power is supplied directly from the vehicle harness, it is important to have it performed by a certified automobile repair technician or a designated factory representative.
- | It is important to perform installation work in a horizontal position whenever possible, with the negative terminal of the battery disconnected.
- | Never install it in a location that could interfere with vehicle safety devices, such as SRS (airbags) or other devices.
- | Install the product, avoiding painted areas on glass, light-blocking films, and heating wires, etc. When attaching or detaching, there is a risk that the painted part, light-blocking film, heating wire, etc. may peel off.
- | Always keep the left and right side glass of this product clean.
- | Image quality may deteriorate due to the brightness of the installation location or reflections on the glass. After installation, conduct a shooting test and position the camera in an area where there are no concerns regarding image quality.

Connection diagram





- | TV antenna mounted on the windshield as shown in the picture, there is a possibility that radio wave interference from the TV may occur. Do not watch TV while driving.
 - | As shown in the picture, install the product's wiring and TV antenna cables as far apart as possible.
 - | Radio interference caused by simultaneous use of this product with a TV or radio is not covered by the warranty.
- Thank you for your understanding in advance.

Side camera installation

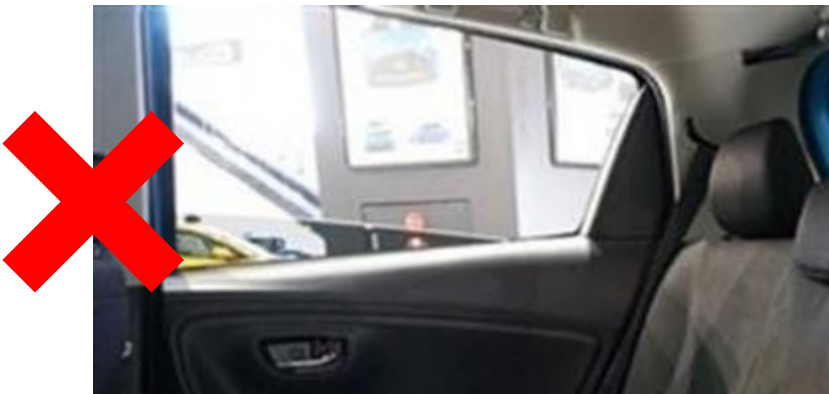
For vehicles with rear quarter glass, such as wagons, SUVs, minivans, and coupes, install the side camera on the rear quarter glass.



For vehicles without quarter glass, such as hatchbacks and sedans, install it on the rear door glass triangle through the interior of the rear door.



Caution ! Some compact cars, hatchbacks, etc., whose rear door glass is fully movable, cannot be equipped with a side camera.



10. Button function and voice guidance operations

[Button Operation Scenario]

Function	Operation	Explanation
Power On	longer than 1 sec	Body Power Off state + ACC on state
Manual record	Click	Event Recording
WiFi is used or not	longer than 2 sec	WiFi On \leftrightarrow Off (Toggle)
Parking on/off	longer than 4 sec	Parking mode On \leftrightarrow Off (Toggle)
Power Off	Long press to continue	Main body Power On state

After 1 second of pressing the key, a “ding” sound occurs every second.

[Voice guidance - Speaker operation]

Main situation	Voice guidance	Note
Start recording	“ Start recording.”	
Stop recording	“ Stop recording.”	
Event	“ Beep beep ”	
GPS connection	“GPS signal received.”	
SD card error	“ Please check the SD card.”	
FW Upgrade	(Start) “ Start updating.” (End) “ Update was successful.”	
Format	“SD card needs to be formatted. If you want to format, please press the button again.” voice After the comment, press the Button to proceed with formatting.	
Power Off	“ Tiri-ring ”	
Whether or not to use parking mode	“ Parking mode ON”/“ Parking mode OFF”	
WiFi usage	“ WiFi ON”/“ WiFi “OFF”	
Change camera state	“ The camera status has changed and the system needs to be restarted.	

11. LED operation – main body



LED operation

mark	LED color	function	How it works
PWR	RED	Power	Normal (lights up) System error (flashing) Off (lights out)
GPS	BLUE	GPS	Connected, and fixed (lights on) Not Connected, or not fixed (lights off)
Wi-Fi	WHITE	Wi-Fi	Enabled (lit) When connected to the app and the set (flashing for 10 seconds) Disabled (lights off)
REC	GREEN	Status	Normal recording (lights on), event recording (flashing for 0.5 seconds)

% When updating or formatting, all LEDs blink.
When the power is turned on, all LEDs light up until normal operation.

12. LED operation – side camera

Security LED



Status LED



Security LED operation

	Setting value	Normal	Event
Always mode	On	light on	light on
	Off	lights out	lights out
parking mode	On	light on	blinking
	Off	lights out	lights out

Status LED operation

	LED status
Always mode	light on
parking mode	lights out

13. Product functions

Operation	situation	movement	voice guidance	LED indication
mode transform	Parking mode → (ACC ON)	Continuous recording mode operation	“ Switches to continuous recording mode ”	Body red , white, green LED lights up
	Always mode → (ACC OFF)	Parking supervision mode operation	“ Switches to parking monitoring mode ”	Body red , white, green LED lights up
main body button	Press once briefly	Forced event recording	2 beeps _	Body green LED blinks
	long (2 seconds -3 seconds)	Wi-Fi ON/OFF	“Wi-Fi ON” or “Wi-Fi OFF”	Body white LED on/off
	long (4 seconds -5 seconds)	Parking mode ON/OFF	“ Parking mode ON” or “ Parking mode “OFF”	-
	long (approximately 6 seconds or more)	Power Off	buzzer sound	Body LED lights off
Continuous recording Mode (ACC ON)	Continuous recording	Continuous recording in	-	Body green LED lights up
	When shock occurs	shock detection Save	2 beeps _	Body green LED blinks
	When receiving	'G' at the bottom of the recorded video to start measuring speed and saving driving records	"A GPS signal has been received "	Body blue LED lights up
Hyperlapse (ACC ON)	Long time recording mode recording	Continuous recording in	-	Body green LED lights up
	When shock is detected	video	-	Body green LED blinks

Operation	situation	movement	voice guidance	LED indication
Parking surveillance mode (ACC OFF)	When waiting for detection	-	-	Body green LED lights up / Side camera blue LED lights up
	When detecting motion	video	-	Body green LED blinks / Side camera blue LED blinking
	When shock is detected	Shock video	beep 2 times	Body green LED blinks / Side camera blue LED blinking
	Cutoff voltage, cutoff time, shutdown	blocked records on	buzzer sound	-
long time recording mode (Time Lapse) (ACC OFF)	Long time recording mode recording	Continuous recording in	-	Body green LED lights up / Side camera blue LED lights up
	When shock is detected	video	-	Body green LED blinks / Side camera blue LED blinking
	Cutoff voltage, cutoff time, shutdown	blocked records on	buzzer sound	-
ultra low power mode (ACC OFF)	From the moment of shock detection After	After saving the parking impact file (20 seconds), save	-	Body green LED blinks / Side camera blue LED blinks quickly

- ※ When switching to Parking/Always on, video is not recorded until the dashcam restarts.
- ※ Depending on the volume and parking mode LED settings, voice guidance and parking LED may not work.



Operation	situation	movement	voice guidance	LED indication
etc	Parking surveillance mode switches to constant mode after impact recording	notification message	“ An impact was detected during parking monitoring.”	-
	When the camera is disconnected	Restart	“ The camera state has changed and the system will be restarted.”	-
	the SD capacity is changed or settings are reset	Restart	“ The app will reboot the system to reflect the settings change.”	-
	firmware update	Restart	-	Body red, blue, white, green LED blinking
	a new SD card is inserted	Format notification message	“ The SD card needs to be formatted. If you want to format, please press the button again. ”	-
	SD card is not inserted	Restart	" Please check SD card "	-
	If there is something wrong with			
	the app changes to		“ The app will reboot the system to reflect the settings change.”	

※ When switching to Parking/Always on, video is not recorded until the dashcam restarts.
※ Depending on the volume and parking mode LED settings, voice guidance and parking LED may not work.

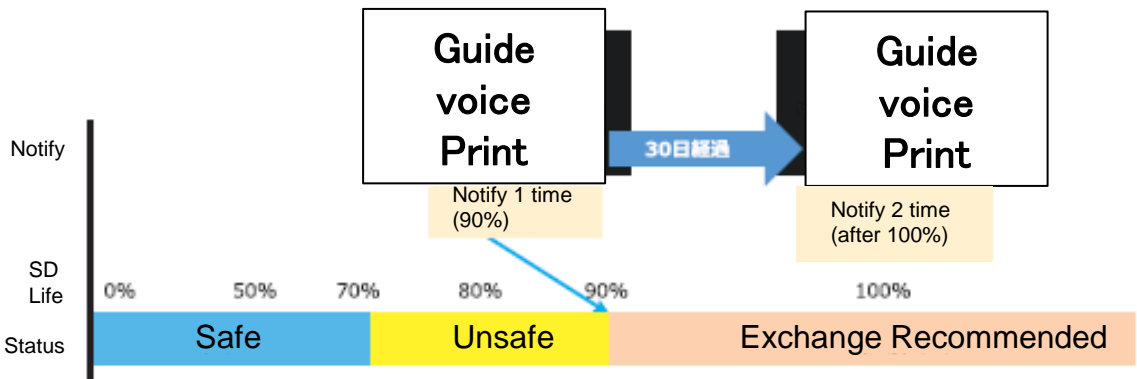
About SD card life notification

The SD card life notification is first sent at machine startup when the status of the SD card indicates the need for replacement.

When the notification appears, it indicates that the SD card is nearing the end of its lifespan.

Please consider replacing your SD card with a new, authentic one.

If not replaced, a notification will be displayed again upon booting after 30 days.



※ Guidance voice : “We recommend replacing the SD card for stable recording.”

14. Ultra-low power mode

Ultra-low power mode refers to a state in which the dashcam remains in sleep mode to minimize power consumption while in parking mode. It only wakes up from sleep when an impact is detected in order to record videos.

When using the ultra-low power mode in parking surveillance mode, this setting is optimized to protect the battery and minimize vehicle battery consumption. It is designed for motion detection recording and long-time mode recording.

In ultra-low power mode, recording starts approximately 1.5 seconds after impact detection and continues for 20 seconds, capturing video.

Video is not recorded before or at the moment of impact.

※ If you need video footage of the moment of impact, do not use ultra-low power mode.

After waking up from sleep mode and completing a 20-second parking shock recording, it continues to record parking shocks for another 20 seconds before returning to sleep mode.

Voice recording is not possible in ultra-low power mode.

Wi-Fi is turned off in ultra-low power mode.
Cannot connect to smartphone.

※ The first few frames of video recorded after waking up from sleep may make the video look strange. This is not a product defect and is intended to intentionally record video while the camera is initializing in order to secure as much video as possible immediately after impact.

※ Please note that when set to ultra-low power mode, video at the time of impact will not be recorded.

15. How to set up a smartphone app

※ The image is of the Android version.



1. Install the Smart Reco app on your smartphone.

The app, search for ' SmartReco ' in the Google Play Store or App Store.



2. After booting the app, touch ' Black Box Connection '.



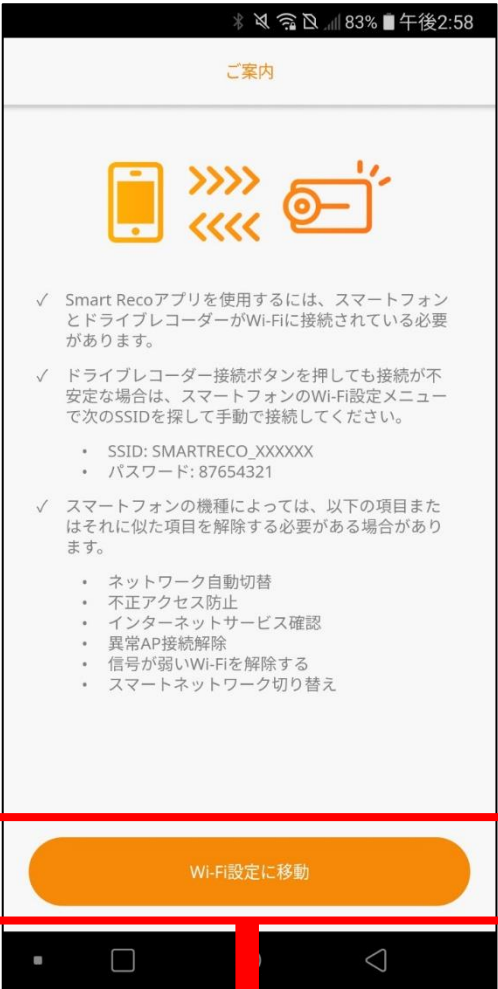
How to set up a smartphone app

3. Connect Smart Reco and smartphone via wireless LAN.

Select SSID "SMARTRECO_XXXXXX" from the smartphone Wi-Fi list
You can access the dashcam by entering the initial password (87654321).

※ You can change the password to a random password in Wi-Fi settings.

※ For information on how to connect a smartphone to a wireless LAN, Please refer to your smartphone user guide.



How to set up a smartphone app

4. After connecting to the wireless LAN, touch Smart Record App > Black Box Connection.

Once the connection is complete, Smart Record information will be displayed in the center.



Smartphone app home page



① Ver. information

You can check the version of the current dashcam body.

② Dashcam settings

You can change various settings of the dashcam body.

③ Dashcam video

the SD card and the video currently being recorded in the dashcam.

④ System log

You can check the operation records of the dashcam.

⑤ Storage

You can check videos saved on your smartphone.

⑥ Information

wireless LAN, please refer here.

⑦ Support

Supporting information is provided.

⑧ App settings

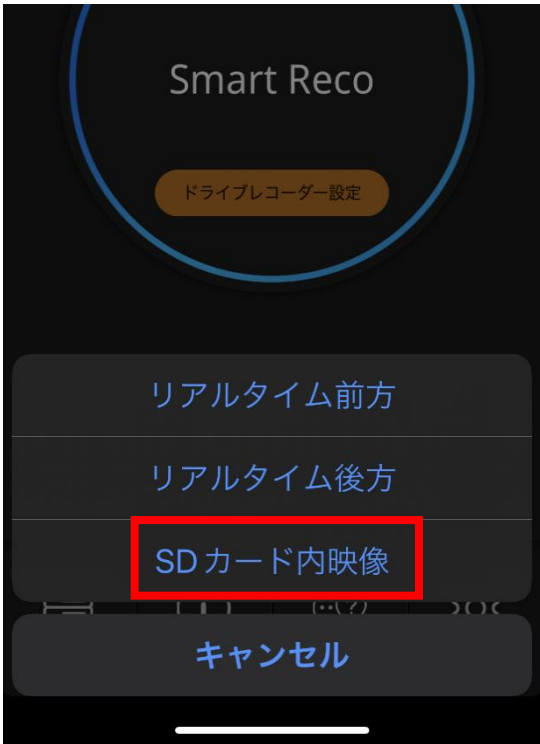
/ delete smartphone storage space.

Smartphone app (playback)

1. Touch the Black Box video button.

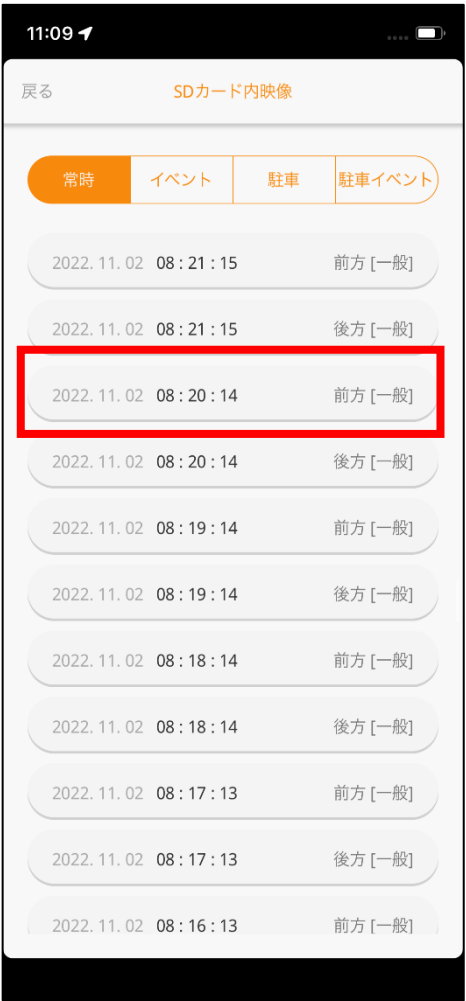


2. Touch the video in the SD card.

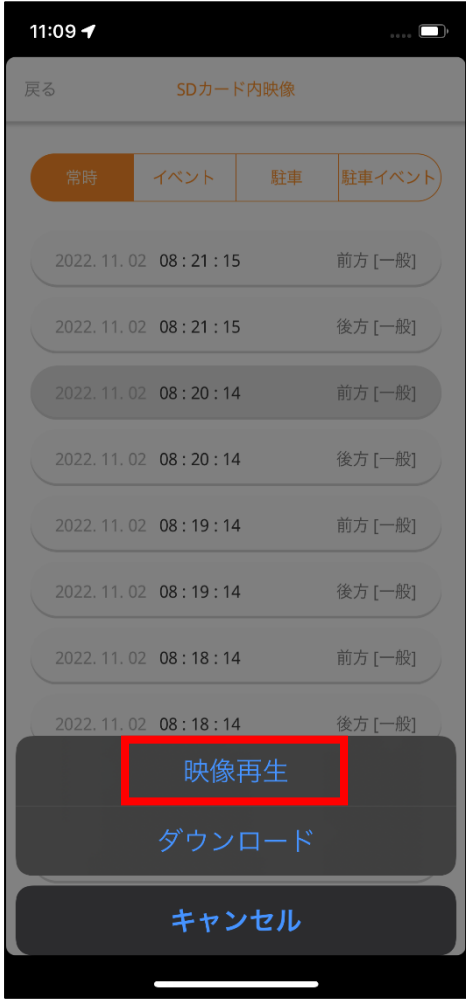


Smartphone app (playback)

3. Touch the video you want to play in the list.



4. Touch Play video.



Smartphone app (playback)



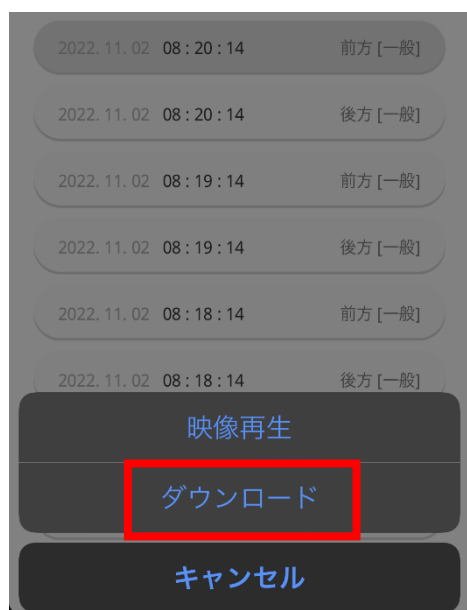
5. You can play the touched video.

Rotate your smartphone to play in full screen.

To return to the list screen, press the “Back” button.



How to save



1. When saving video to a smartphone, touch the video you want to save from the video list, and then touch Download.



2. After the download starts, you will see “Saved to storage.” When a message appears, saving to your smartphone is complete.



How to save

3. Downloaded videos can be played from “Storage” within the app.

In addition to playing the saved video, you can share it with other apps, edit cuts, and delete it.



※ For details on how to operate the smartphone app, please refer to the Smart Record website.
<https://www.smartreco.jp/>

Smartphone app – preferences menu



① Recording Settings

Use of voice recording, parking motion sensitivity, constant impact amount, parking impact amount, use of parking mode, parking operation mode, parking capacity, use of hyperlapse You can set things like this.

② Time setting

You can set the dashcam current time, time synchronization, and manual settings.

③ Screen settings

You can set left/right inversion, up/down inversion, regular LED operation, and parking LED operation for the left and right cameras, respectively.

④ System settings

Volume setting, blocking voltage value, blocking time setting and SD card format You can reset your preferences.

⑤ Dashcam information

You can check the firmware version, Wi-Fi MAC address, and battery voltage value, and also update the firmware.

⑥ Wi-Fi settings

You can check and change the dashcam Wi-Fi password, set up parking mode connection for use in STA mode (STATION mode), and set parking mode reception number.

Smartphone app – recording settings menu



① Voice recording

Whether or not to use voice recording. You can set it. The initial setting is voice recording on.

② Parking motion sensitivity

Change motion sensitivity during parking monitoring mode.

You can set it to Medium(Normal, Default Setting)/High(Sensitive).

③ Regular impact amount

Set the sensitivity for event recording when an impact is detected during continuous recording mode.

You can set it among Lowest(least sensitive)/Low(insensitive)/Medium(normal, default setting)/High(sensitive)/Highest(most sensitive).

④ Parking impulse

Set the sensitivity for event recording when an impact is detected during parking monitoring mode. You can set it among low(insensitive)/medium(normal, default setting)/high(sensitive).

⑤ Parking mode

You can set whether to use parking mode or not. The initial setting is Parking Mode On. not used When set to (Off), the power is turned off during transition from regular mode to parking mode.

⑥ Parking operation mode

The parking operation mode can be set to motion detection (default setting)/time lapse/ultra low power mode.

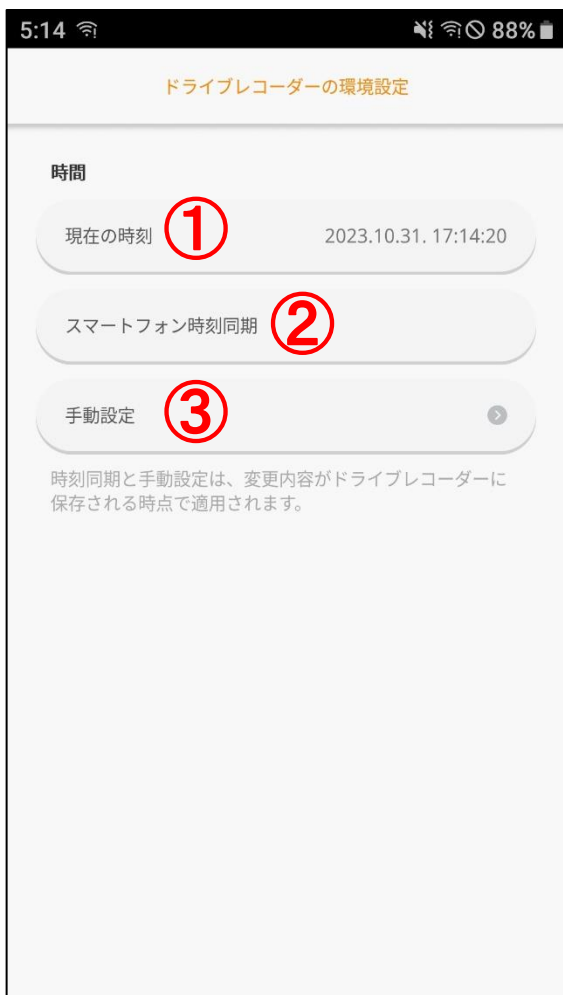
⑦ Parking capacity

You can select parking capacity from 0%, 25%, and 50%. The initial setting is 25%.

⑧ Hyperlapse

You can set whether to use Hyperlapse in constant mode. When using Hyperlapse, permanent files are continuously saved at a rate of 4 per second.

Smartphone app – time setting menu



① Dashcam current time

Shows the current time.

② Time synchronization

You can update the dashcam time by synchronizing it with the current time on your phone. When synchronizing the time, the dashcam time is updated when the dashcam preferences are saved and exited. There may be a time difference depending on the time of renewal.

③ Manual setting

You can update the dashcam time by year / month / day / hour / minute / second directly in the app. When synchronizing the time, the dashcam time is updated when the dashcam preferences are saved and exited. There may be a time difference depending on the time of renewal.

Smartphone app – screen settings menu



[Left camera]

① Left/Right Inversion

You can set whether to invert left or right. The default setting is Off(normal).

② Flip upside down

You can set the presence or absence of upside-down inversion. The default setting is Off(normal).

③ Always-on LED left side

You can set whether to use the Security LED in constant mode.

④ Left side

You can set whether to use the Security LED in parking monitoring mode. The default setting is On.

[Right camera]

⑤ Left/right inversion

You can set whether to invert left or right. The default setting is Off(normal).

⑥ Flip upside down

You can set the presence or absence of upside-down inversion. The default setting is Off(normal).

⑦ Always-on LED right side

You can set whether to use the Security LED in constant mode.

⑧ Parking LED right side

You can set whether to use the Security LED in parking monitoring mode.

Smartphone app – system settings menu



① Volume

You can set the voice guidance volume to 4 levels (disabled / level 1 / level 2 (default setting) / level 3).

② Cutoff voltage

The blocking voltage for parking monitoring mode can be set to

“11.7V/11.9V/12.1V (default setting)/12.3V”.

③ Cutoff time

The cutoff time for parking monitoring mode is “Disabled.”

You can set it by selecting “3 hours /6 hours (default setting)/12 hours /24 hours ”.

④ SD card format

Format the SD card.

⑤ Reset settings

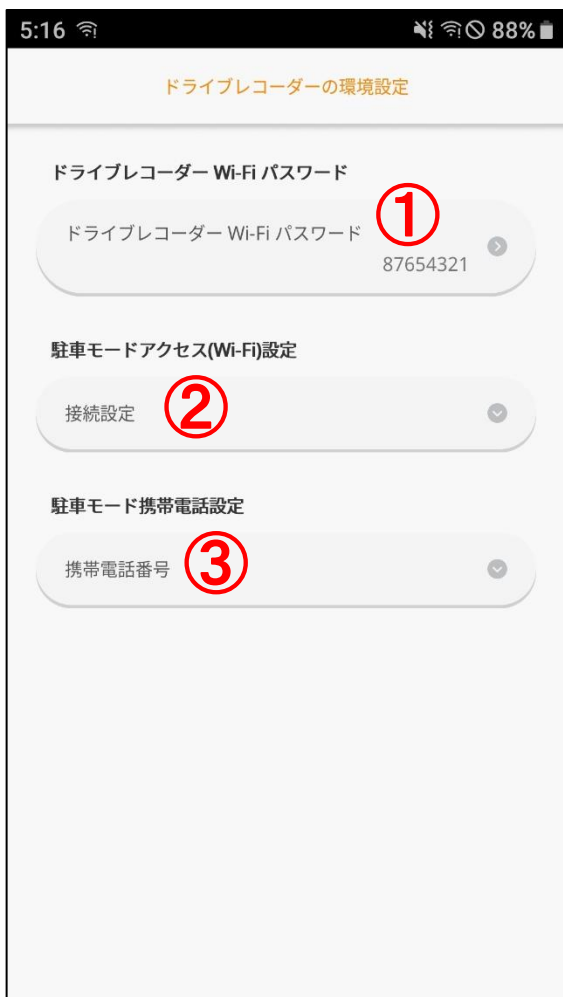
Return all settings to factory defaults and format the SD card.

Smartphone app – Information



- ① **Firmware version**
Shows the dashcam firmware version.
- ② **Firmware update**
the server has a firmware version that is newer than that of the dashcam terminal, you can update the firmware.
- ③ **MAC address**
The MAC address of the Wi-Fi module is currently displayed on the dashcam terminal.
- ④ **Battery voltage**
Shows the voltage value currently input to the dashcam terminal.

Smartphone app – Wi-Fi settings menu



① Dashcam Wi-Fi Password

You can check and change the dashcam Wi-Fi password.

② Parking mode connection settings

You can configure parking mode connection settings. You can register up to 3 router SSID information.

③ Parking mode reception number setting

You can set the parking mode reception number. You can register information for up to 3 recipient numbers.

Wi-Fi Utility

■ The dashcam Wi-Fi operation mode has two operation modes: AP mode and station mode.

■ AP mode connects to the dashcam Wi-Fi in the app and allows you to set up the drive recorder, view real-time video, download recorded video, and update firmware. When the dashcam and smartphone are connected, Internet connection is not possible.

■ In station mode, the dashcam can connect to the Wi-Fi router in use at home or the office and send push notifications to the user with information generated while parking. The dashcam and smartphone are connected through a Wi-Fi router, and the smartphone you are using is connected to the Internet.

■ If the Wi-Fi setting is ON in constant mode, the dashcam operates in AP mode.

■ If the Wi-Fi setting is turned on in parking mode and the parking mode Wi-Fi setting information and mobile phone number setting information are registered, the dashcam operates in station mode.

■ However, if the Wi-Fi setting is ON but the parking mode Wi-Fi setting information and mobile phone number setting information are not registered, the dashcam operates in AP mode.

※ The app is available on Google Play Store or
Search for “Smart Reco”, just install it.



About “access point(AP) mode”

Wi-Fi settings are turned on in constant mode, the dashcam operates in AP mode.

┃ The always-on mode app can access the dashcam by selecting “SMARTRE CO_XXXXXXX” as the SSID from the smartphone Wi-Fi list and entering the initial password (87654321).
(XXXXXXX is the Wi-Fi MAC address of the dashcam.)

┃ You can check video from all cameras of the dashcam in real time through the app installed on your smartphone.

┃ You can check the list of video files saved on the SD card and download the necessary files or play them right away.

┃ Firmware update is also possible.

About “station(STA) mode”

┃ If you switch to parking mode with the Wi-Fi setting turned on, the dashcam, which was operating in AP mode in constant mode, switches to STA mode.

┃ While operating in parking mode, you can check notification messages from the dashcam in the app installed on your smartphone.

┃ Messages notified from the dashcam include notification of switching to parking mode, notification of parking event occurrence, and notification of power off(blocking voltage, blocking time, high temperature cut-off).

※ However, for STA mode operation, parking mode Wi-Fi setting information and mobile phone number setting information must be properly registered.

※ To install the app, search for ‘ SmartReco ’ in the Google Play Store or App Store.


Mobile phone number settings

- To use station mode, you must access the access point mode (AP mode) from the app installed on the smartphone in always-on mode and register the customer's router information (see P00) and mobile phone information with parking mode Wi-Fi settings.
- Information on notifications (parking mode switching, parking event, power off) generated in parking monitoring mode is sent to recipients who have installed the app and registered their mobile phone information.
- Mobile phone settings information displays information for up to three mobile phone numbers registered in the app.
- To identify the phones you want to receive notifications from, enter them in the app installed on each smartphone.
- You can select or deselect the mobile phone number setting item depending on whether you want to receive parking information notifications.
- Please note that if you do not register your mobile phone number setting information in the app installed on your smartphone, you will not be able to access station mode from parking mode.
- If you reinstall the app, you must delete and re-register the mobile phone number (1, 2, 3) registered in the app.
If not registered, parking monitoring mode operates in AP mode rather than station mode.

※ Registering, deleting, and confirming the recipient's mobile phone number is only possible through the app.

16. Firmware update

[Update method (Internet connected environment)]

1. You can check and update the PC viewer and firmware version by clicking the program information button() on PC viewer main screen. (If you insert a microSD card with firmware version information saved, the firmware information as shown in ① is displayed.)
2. Check the drive where the microSD card is inserted and click the Update button. The latest firmware file will be downloaded to your microSD card.
3. Once the download is complete, the update file (WHSR-S100.bin) will appear on your microSD card.

①



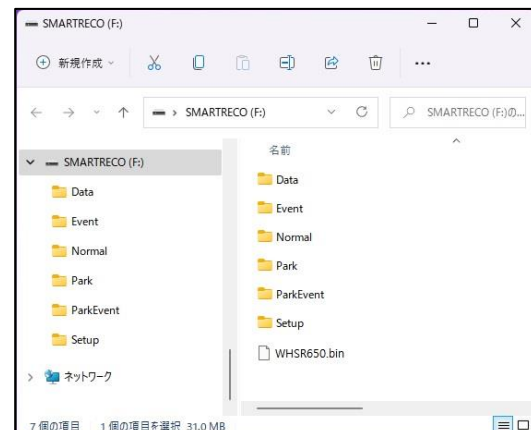
③




②



④





4. Turn off the dashcam and insert the micro SD card containing the firmware file.

5. When you turn on the dashcam, the update starts.

It will automatically reboot when the update is complete.

6. When the dashcam reboots, it starts recording.

✂ During the update, never turn off the power or remove the microSD card.

✂ Depending on the update contents, you may need to format the micro SD card after the update.

✂ Recording stops during update.

✂ If the update fails, download the update file (WHSR-S100.bin) again.

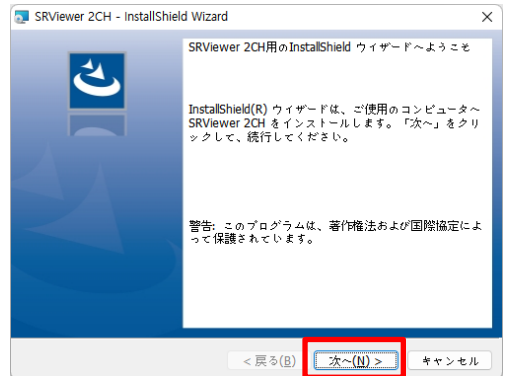
17. PC viewer installation

1. Run the PC viewer installation file (**SRViewer 2CH.exe**) saved on the microSD card and click in the following order to complete installation.
2. Once installation is complete, PC viewer shortcut icon will appear on the desktop. When starting the PC viewer later, double-click the shortcut icon to boot.

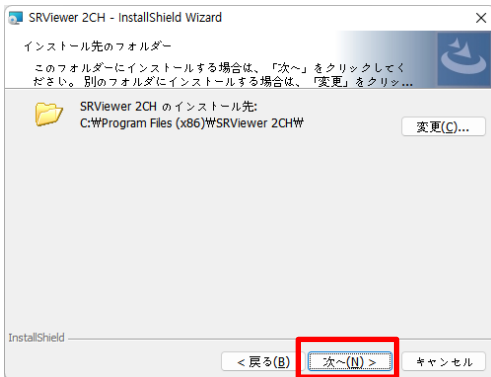
1



2



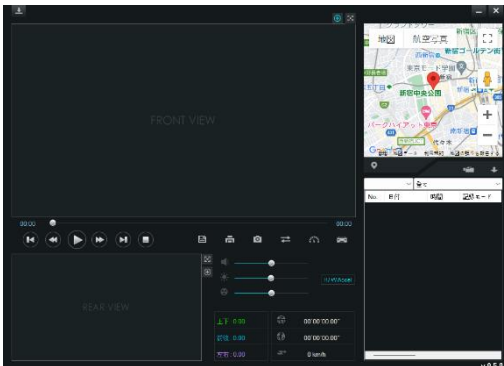
3



4



5



※ PC viewer can be installed in an environment connected to the Internet.

[PC environment]

- OS : Windows 8.1, 10, 11
 - CPU・Memory : Intel Core i5 or higher / Quad core or higher / 8GB RAM or higher
 - Web browser : Microsoft Edge 86.0.616.0 or higher
 - Microsoft Edge Webview2 Runtime 86.0.616.0 or higher
 - Display resolution 1366X768 or higher
 - Tablets are not supported.
- ※ The window size is 1020X730.
※ Not supported on MacOSX.

18. PC viewer overview



① Viewer / firmware version information and automatic update

② Left image

③ Video operation button

④ Right video

⑤ Screen zoom in/out, full screen

⑥ Volume, brightness, playback speed

⑦ Playback of driving records

⑧ Hardware acceleration ON/OFF

⑨ G sensor impact value / latitude / longitude / speed

⑩ Map ON/OFF

⑪ Open and sort files

⑫ Playlist

- Speed and map information will not be displayed if the GPS module does not properly receive radio waves.

- Video recorded with audio OFF (noise) is displayed as (M), and GPS reception is displayed as (G) in the lower right corner of the front video.

19. PC viewer function



Program information

You can check and update the firmware version with a PC viewer.

※ To check firmware version information, you must connect SD card to the computer.



Zoom in/out

Displays the left/right image enlarged/reduced.

You can zoom in by scrolling your mouse.



Full screen display

Displays the left/right video in full screen.

Double-clicking the left/right playback screen also displays it in full screen.



Return to main screen

Returns to the viewer main screen during full screen display. Double-clicking the playback screen while displaying full screen will return to the viewer's main screen.



Play previous file/next file

While playing a video, play the previous/next file.











Play/Pause

Plays the selected file in the playlist or pauses the currently playing file.

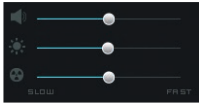


Move to previous frame/next frame

While playing a video, clicking this button will pause it and send the video in 1-second increments.

-
8.  **Copy files**
Copy the left/right video files of the currently playing or selected video to your PC.
(Storage location : C:¥BlackBox¥Backup)
 9.  **Print screen**
Prints the image being played.
 10.  **Screen capture**
Save the two playback screens on the left and right sides of the viewer as PNG files on your computer.
 11.  **Switch left and right screens**
Switches the display positions of the left and right screens of the PC viewer.
 12.  **Display velocity / acceleration graph**
Clicking the Show Graph button displays another window.
 13.   **Speed / acceleration switching**
Displays velocity and acceleration graphs.
※ If the GPS module does not receive radio waves properly, it will not be displayed.
 14.  **Playback driving records**
Displays driving records.
※ If the GPS module does not receive radio waves properly, it will not be displayed.

15.



Playback options




You can adjust the volume, brightness, and playback speed of the video.

16. Hardware acceleration ON/OFF



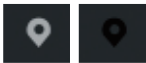
You can set whether to use hardware acceleration for your graphics card. On computers that do not support hardware acceleration, smooth video playback is possible with it turned off. (Initial setting :ON)

17. Impact, location information

上下 : 0.00	 00°00'00.00"
前後 : 0.00	 00°00'00.00"
左右 : 0.00	 0 km/h

Displays shock value, latitude, longitude, and speed. GPS module is not receiving radio waves correctly, it will not be displayed.

18.



Show / hide map

The driving location information of the video being played is displayed on the map. GPS module does not receive radio waves properly, driving location information will not be displayed.

19. Open file



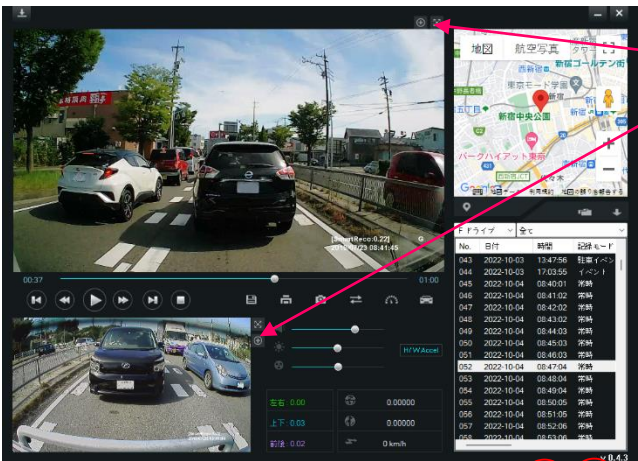
Select video files. You can select multiple files at the same time by holding down the Shift or Ctrl key and clicking on the files.

20. Switch between ascending / descending order






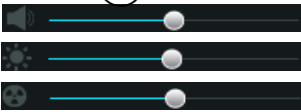


You can change the sorting of playlist files.

20. PC Viewer – full screen mode

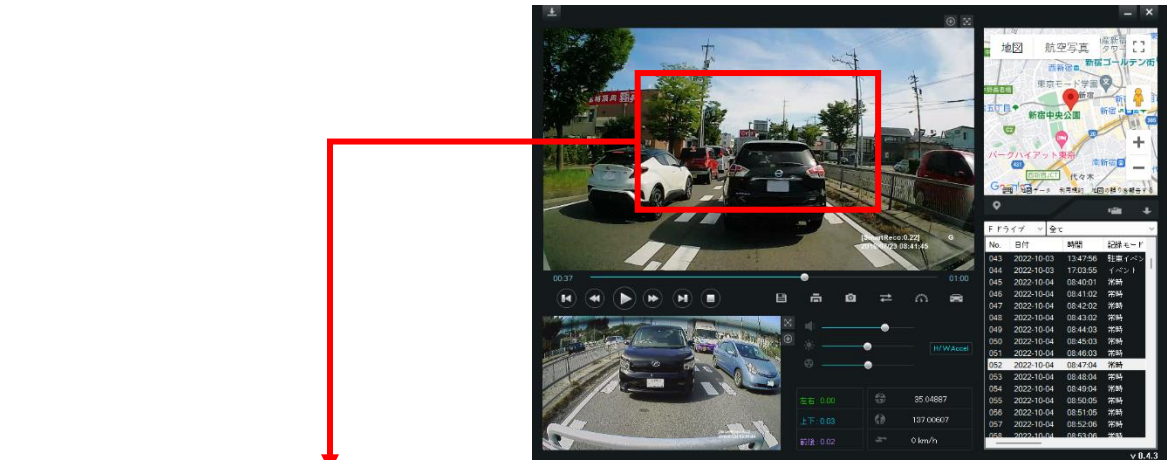
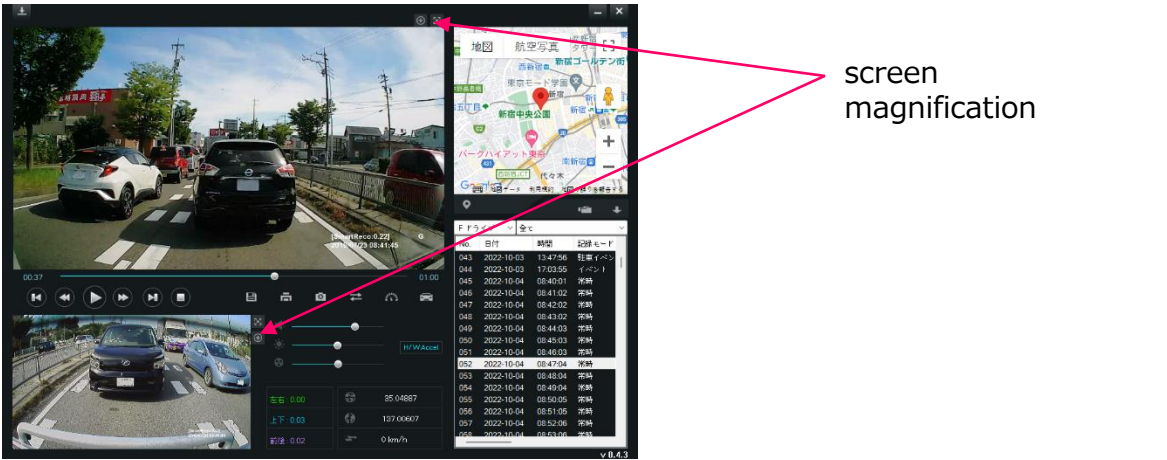


on the left / right side of the screen
[Toggle full screen]
button

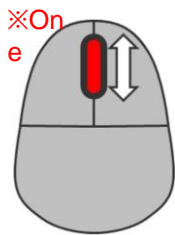


icon	explanation
① 	Minimize screen You can hide the full screen display without exiting the program.
② 	Return to main screen Returns to the viewer main screen from full screen view.
③ 	Exit viewer Exit the viewer.
④ 	Playback Options , brightness, and playback speed of the video.
⑤ 	Left and right screen switching Switches the display positions of the left and right screens.
⑥ 	playlist Displays a list of videos on the SD card.

21. PC viewer – digital zoom



[Enlarge left image on main screen]



[Enlarge the left image part]

You can adjust the size of the video by clicking on the video on the left / right side of the playback or clicking the screen enlargement button, then using the mouse scroll (※1).
| You can move the position by dragging the screen while zoomed in.

22. PC viewer – driving record

Driving records are recorded every 10 seconds while driving and saved in the Data folder of the micro SD card in DAT file format.









Up to one week of driving records are stored in one file and a list of driving records by date is displayed. (However, this is limited to cases where the GPS module is normally receiving radio waves.)



1. Connect the microSD card to the PC and click the button in the viewer to display the driving record mode (car icon picture above).
2. Click the Open button(folder icon) on the left to view a list of DAT files in the Data folder of the micro SD card, and select a file from the list to view a list of driving records by date.
3. Click the desired file in the list, and the navigation path is displayed on the right.

※ Up to 30 DAT files (30 weeks) can be saved.

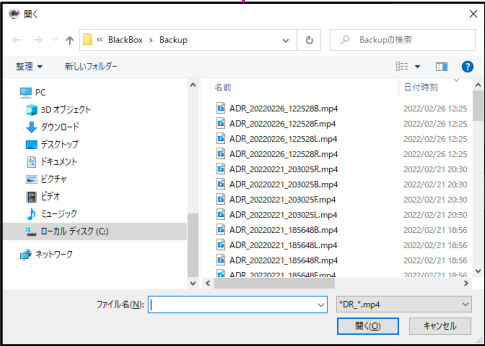
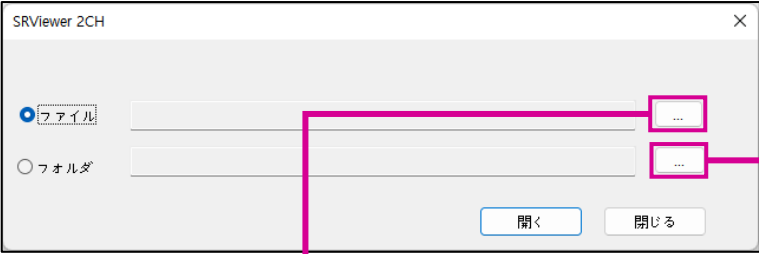
◆ The table below explains the icons on the driving record screen.

icon		explanation
①		Open the driving record file (.DAT) saved in the Data folder on the microSD card.
②		Capture the driving history screen and save it as a jpg file. (preservation office : C:\BlackBox\CAPTURE)
③		Print the trip history screen.
④		Displays the date and time of your trip while playing the route.
⑤		Plays the items selected from the list in the order of the movement path.
⑥		During playback of the path taken, a marker is displayed on the path taken.
⑦		When playing the movement path, it plays at 0.5, 1, 1.5, or 2 times speed.
⑧		Exit the trip history screen.

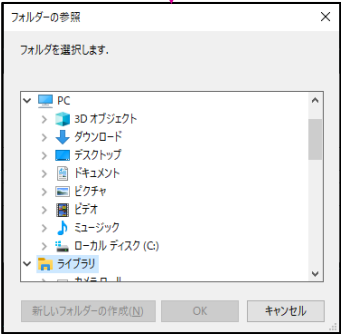
23. PC viewer – file open

The viewer can select and play back videos from the dashcam stored on the microSD card or PC.

- 1. Click the button on the viewer main screen.
- 2. Select the file or folder reading method, select the file or folder, and click the “Open” button.
- 3. The selected video is displayed in the playlist.



[File selection screen]



[Folder selection screen]

24. Folder structure in SD card

| **Normal** folder : Continuously saves images in normal mode.

- 1) Normal mode : Continuously saves 60 seconds of video in normal mode.
- 2) Using Hyperlapse : Captures 4 still images per second. compresses **2 minutes and 28 seconds into** 20 seconds, and stores them continuously.

| **Event** folder : Stores images of events (forced preservation or event recording) that occurred during continuous mode.

- 1) Normal mode : Saves images 5 seconds before and 15 seconds after an impact is detected (total of 20 seconds).
- 2) Using Hyperlapse : Saves **43 seconds** (4fps) of footage before detecting an impact and 15 seconds (29.1fps) afterwards (total of **58 seconds**).

| **Park** folder : Saves images in parking surveillance mode.

- 1) Normal mode (using motion detection): Saves video for 5 seconds before and 15 seconds after motion detection (total of 20 seconds).
- 2) Using long – time recording mode : Captures 4 still images per second, compresses **2 minutes and 28 seconds into** 20 seconds, and stores them continuously.
- 3) Ultra–low power mode recording : After impact detection recording ends, video is saved for 20 seconds.

| **ParkEvent** Folder : Saves images caused by events (impacts) in parking monitoring mode.

- 1) Normal mode (with motion detection): Saves video 5 seconds before and 15 seconds after (total of 20 seconds) an impact is detected.
- 2) Using long–time recording mode : Records video for **43 seconds** (4fps) before detecting an impact and 15 seconds (29.1fps) thereafter (total of **58 seconds**).
- 3) Ultra–low power mode recording : Activates after detecting an impact and saves video for 20 seconds.

| **Setup** folder : This is the folder where the black recorder's environmental settings and power–off record (CUTOFF.txt) are saved.

| **Data** folder : Saves driving record data.

Example of video file name

MDR_202310 01 _093100L.mp4

Channel classification

L: Left image (CAM-1 image)

R: Right image (CAM-2 image)

Video Type Year / Month / Date Hour / Minute / Second Channel Category

※ In the case of the video file name above, the forward file will be at

Types of videos

MDR	Driving / Hyperlapse Video
EDR	Driving Event / Force save video
PDR	Parking video (motion detection, time lapse)
ADR	parking event video

Power-off recording records the date and time that parking monitoring mode was blocked in a text file (CUTOFF.txt).

Example)-2023/10/1 9:31:00 CUTOFF_METHOD_TIME,TIME_06H

- Stopped because the parking monitoring mode setting time (6 hours) has passed.

- 2023/10/1 9:31:00 CUTOFF_METHOD_V,12.1V

Stopped because the voltage has dropped to the cut-off set point.

- 2023/10/1 9:31:00 CUTOFF_METHOD_T,85T

- Stopped because the body temperature reached

<Caution> _ _

1. Please note that if you change the contents of the SD card (delete files, create files, create folders, etc.), problems may occur with stability during recording. Additionally, when booting, a message is displayed on the main unit recommending formatting. It operates normally after formatting. (Copying video files to PC is no problem.)

2. If you formatted the SD card on your computer, it will work normally after reformatting it on the main unit.

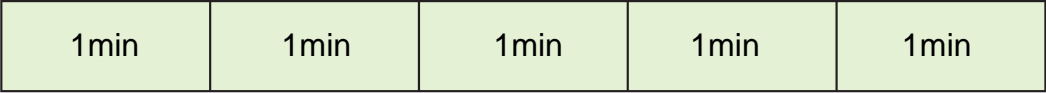
25. Video files – driving recording

| Continuously recorded files

permanent file

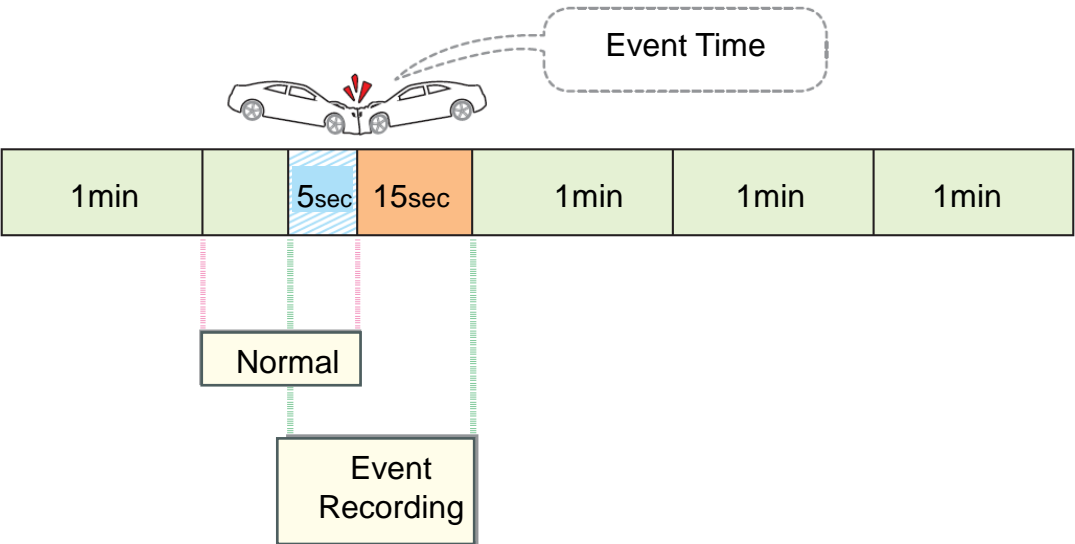
Permanent event file

- Videos are continuously saved in 60-second increments.



| Permanent event file

- Saves 15 seconds (total of 20 seconds) of video from 5 seconds before the event (forced retention shock) that occurred during driving mode.
- In the case of regular files, the video recorded before the event occurs is saved in the event file.



※ When an event occurs, the point at which the video of the regular file and the event file overlap (before the event occurs) 5 seconds), both regular files and event files are saved.

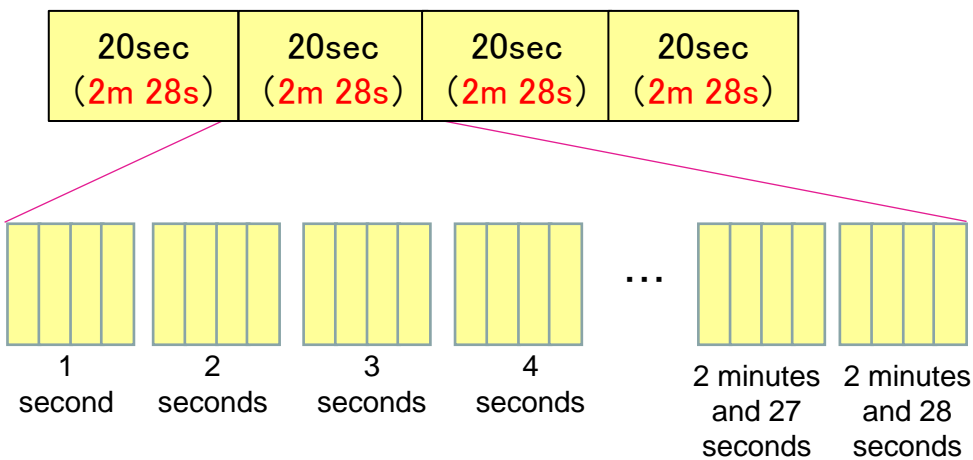
25. Video files – hyperlapse recording

| Hyperlapse file

hyperlapse file

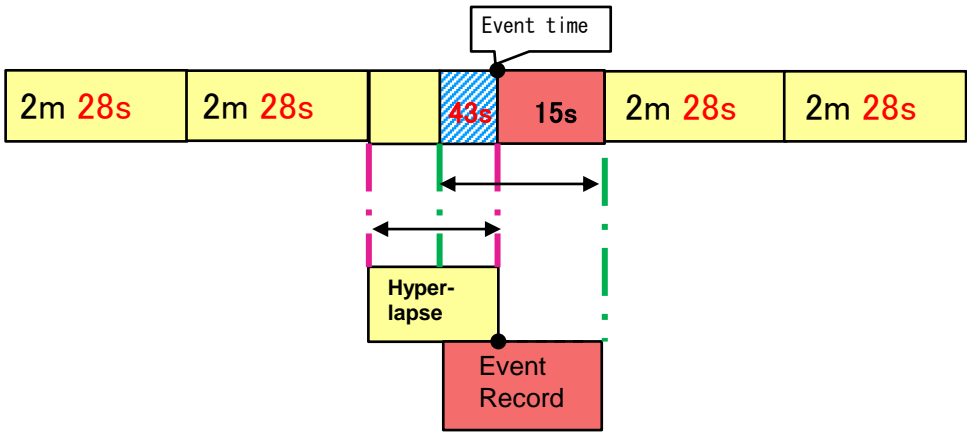
Hyperlapse Shock File

- Captures 4 still images per second, compresses 2 minutes and 28 seconds into 20 seconds, and stores them continuously.



| Hyperlapse Shock File

- If an impact occurs during continuous saving of a hyperlapse file, the video is saved from 43 seconds (4fps) before the impact to 15 seconds (29.1fps) thereafter (58 seconds in total).



- ✖ When an impact occurs, the point at which the video of the hyperlapse file and the hyperlapse impact file overlap (43 seconds before the impact occurs) is saved in both the hyperlapse file and the hyperlapse impact file.
- ✖ When set to hyperlapse mode, the moment of accident, etc. may not be recorded depending on the situation.
- ✖ In hyperlapse mode, audio is not recorded in the video.

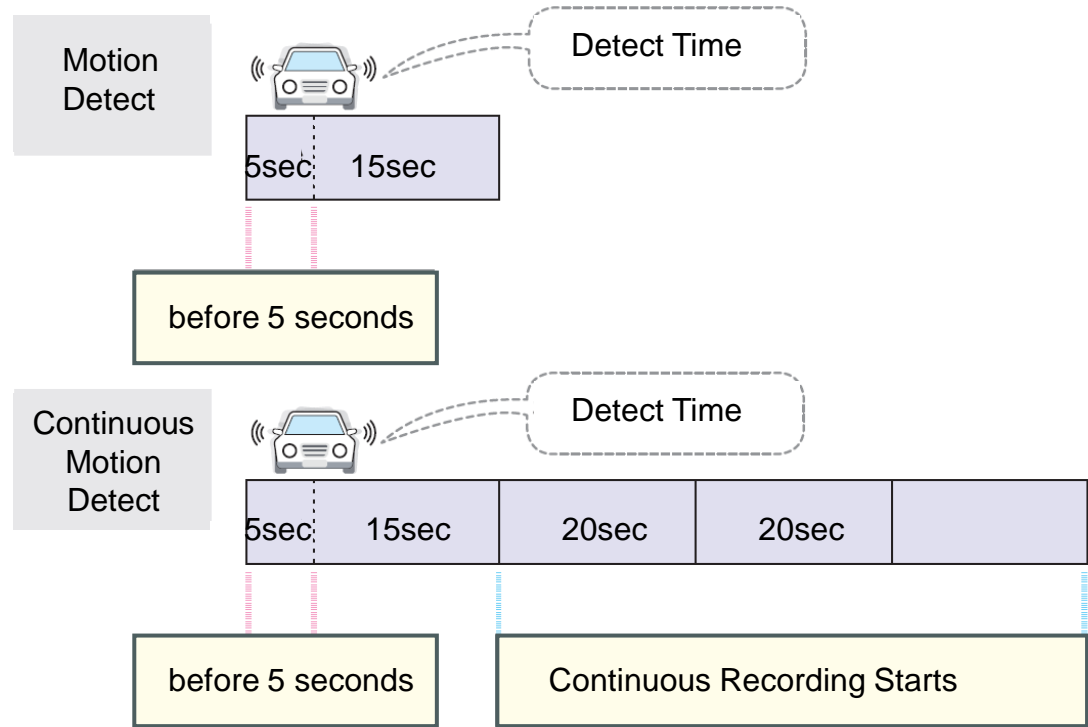
25. Video files – parking surveillance recording

| Parking motion file

parking file

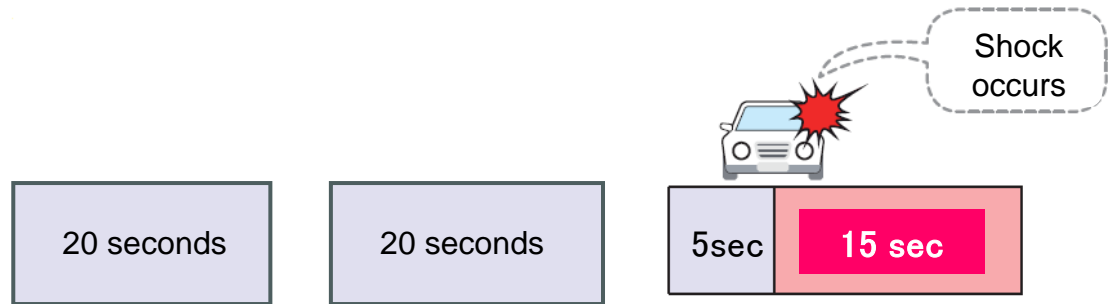
parking event file

- If motion occurs during parking mode, video from 5 seconds before and 15 seconds after the motion occurs (total of 20 seconds) is saved.
- If continuous motion occurs, the next parking motion file will continue to record video without video from 5 seconds before.



| Parking event file

- If an impact occurs during parking recording, a video impact file is recorded from 5 seconds before and 15 seconds after the impact (total of 20 seconds).

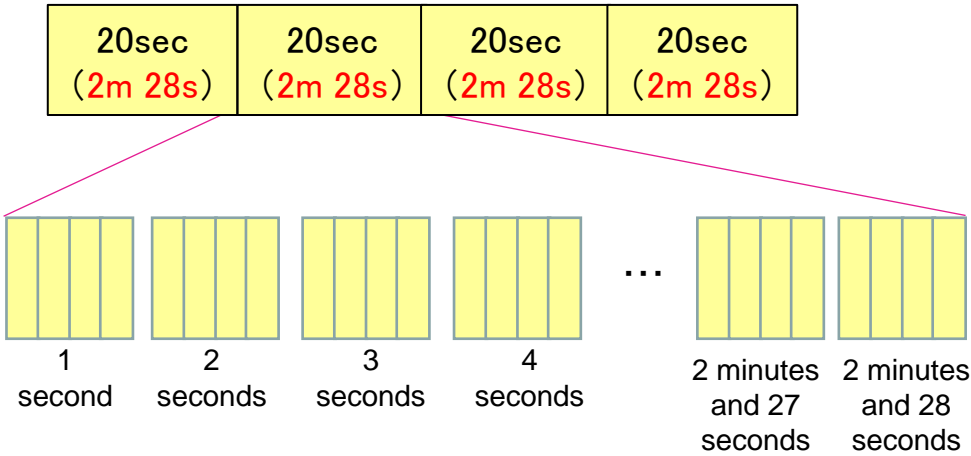


25. Video files – timelapse recording

| Long-time parking file

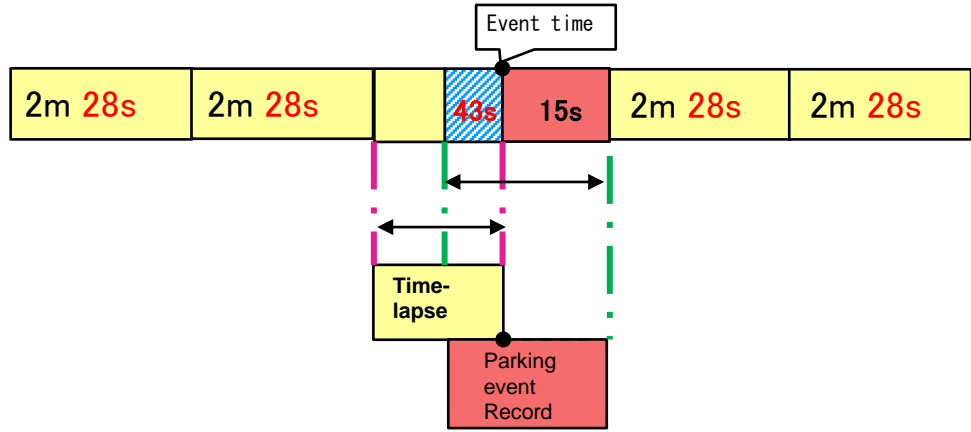
- long time parking file
- long time parking shock file

- Captures 4 still images per second, compresses 2 minutes and 28 seconds into 20 seconds, and stores them continuously.



| Long time parking shock file

- If an impact occurs during continuous storage of long-term parking files, video from 43 seconds (4fps) before the impact occurs to 15 seconds (29.1fps) thereafter (58 seconds in total) is saved.



✖ When an impact occurs, the point at which the images of the long-time parking file and the parking impact file overlap (43 seconds before the impact occurs) are saved in both the long-time parking file and the long-time parking impact file.

✖ When set to long-term recording mode, the moment of accident, etc. may not be recorded depending on the situation.

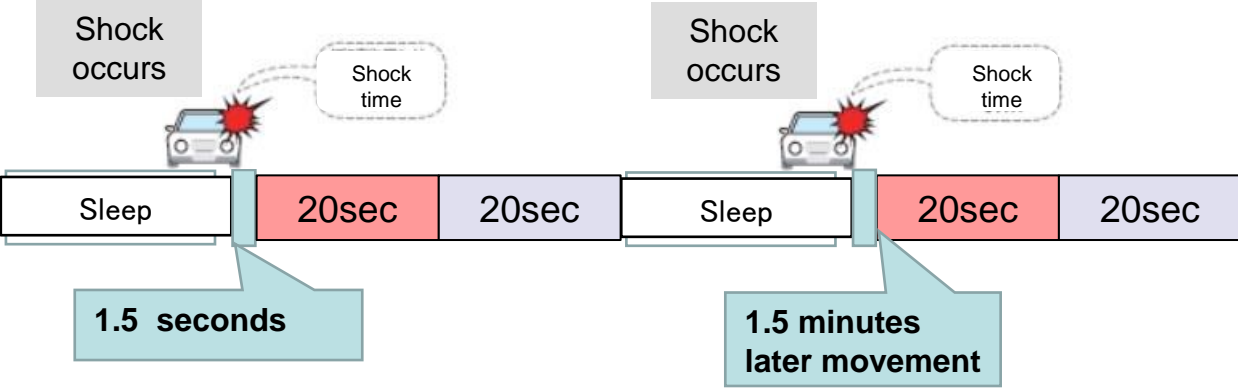
✖ In long-time recording mode, audio is not recorded in the video.

25. Video files – ultra low power mode recording

Ultra-low power mode parking event file

- ULP parking file
- ULP parking event file

- Ultra low power If an impact occurs during the mode, 20 seconds of video is saved from the time of startup (approximately 1.5 seconds) after the impact, and then 20 seconds of video is saved as a parking file.



※ Ultra-low power mode After saving the parking event file / parking file, it goes to sleep until the next shock occurs. Recording is not performed during sleep.

- ※ Please note that when set to ultra-low power mode, video at the time of impact will not be recorded.
- ※ In ultra-low power mode, audio is not recorded in the video.

25. Video files – storage ratio and file size

Normal folder, Event folder, Park folder, and ParkEvent in the entire capacity of the micro SD card. Folders are allocated and stored as much as the capacity set for each type. The number of files varies depending on the capacity of the micro SD card.

When "parking usage" is 25%

SD Card	N (60%)		E (15%)		P (20%)		P.E (5%)	
	File No.	Time (m)	File No.	Time (min)	File No.	Time (min)	File No.	Time (min)
32GB	202	101	130	21	174	29	42	7
64GB	404	202	260	43	346	57	86	14
128GB	802	401	516	86	688	114	172	28

When "parking usage" is 50%

SD Card	N (40%)		E (10%)		P (40%)		P.E (10%)	
	File No.	Time (m)	File No.	Time (min)	File No.	Time (min)	File No.	Time (min)
32GB	134	67	86	14	348	58	86	14
64GB	270	135	172	28	694	115	172	28
128GB	534	267	344	57	1376	229	344	57

When "parking usage" is 0%

SD Card	N (85%)		E (15%)		P (0%)		P.E (0%)	
	File No.	Time (m)	File No.	Time (min)	File No.	Time (min)	File No.	Time (min)
32GB	288	144	130	21	0	0	0	0
64GB	574	287	260	43	0	0	0	0
128GB	1138	569	516	86	0	0	0	0

<Caution> __ 1. If the storage percentage allocated for each folder is exceeded, delete old files and create new recording files.
2. In order to operate the format-free system stably, some areas are allocated to the system.

Hyperlapse

Parking usage : 25%

SD Card	N (60%)		E (15%)	
	File No.	Time (m)	File No.	Time (m)
32GB	606	707	130	54
64GB	1212	1414	260	108
128GB	2406	2807	516	215

Parking usage : 50%

SD Card	N (40%)		E (10%)	
	File No.	Time (m)	File No.	Time (m)
32GB	402	469	86	35
64GB	810	945	172	71
128GB	1602	1869	344	143

Parking usage : 0%

SD Card	N (85%)		E (15%)	
	File No.	Time (m)	File No.	Time (m)
32GB	402	469	86	35
64GB	810	945	172	71
128GB	1602	1869	344	143

Timelapse

Parking usage : 25%

SD Card	P (20%)		P.E (5%)	
	File No.	Time (m)	File No.	Time (m)
32GB	174	203	42	17
64GB	346	399	86	35
128GB	688	798	172	71

Parking usage : 50%

SD Card	P (40%)		P.E (10%)	
	File No.	Time (m)	File No.	Time (m)
32GB	348	406	86	35
64GB	694	805	172	71
128GB	1376	1603	344	143

- File size (2CH)
 - Normal: Up to 200MB / 1 minute / 148 seconds (100MB on the left / 100MB on the right)
 - Event: Up to 80MB / 20 seconds / 58 seconds (40MB on the left / 40MB on the right)
 - Park: Up to 80MB / 20 seconds / 148 seconds (40MB on the left / 40MB on the right)
 - ParkEvent : Up to 80MB / 20 seconds / 58 seconds (left 40MB / right 40MB)

26. Product specifications

product name	WHSR-S100	
Power Consumption	When connected to Wi-Fi, GPS and 1 camera : Max 3.3W When connected to Wi-Fi, GPS and 2 cameras : Max 4.7W Ultra-low power mode (standby) : Max 0.05W	
side camera	1920 × 1080 [angle of view] : 168° [D] / 138° [H] / 70° [V]	
	STARVIS mounted / Cable length : side (short) 4m / side (long) 7m	
video frame	Up to 29.1fps / 4fps	
audio	[Microphone] Built-in microphone, PCM storage [Speaker] Voice guidance	
video	H.264 (file extension name : mp4)	
G sensor	3-axis acceleration sensor	
security led	Side camera blue LED ON/OFF possible (Continuous recording mode : lights off, parking surveillance recording mode When operating lights up)	
Status LED	PWR LED	When Continuous recording mode, LED ON
	GPS LED	When GPS is not received, LED OFF / When receiving GPS, LED ON
	Wi-Fi LED	When Parking surveillance recording mode Green LED turns off
	REC LED	When Continuous recording mode, LED ON
Wi-Fi	Built-in (802.11b/g/n 2.4GHz)	
GPS	External GPS module (supports QZSS)	
operating voltage	DC 12V/24V	
Recording method	Continuous recording / Event recording / Forced recording / Hyperlapse recording / Parking motion recording / Parking event recording / Long-term recording mode (time-lapse) recording / Ultra-low power mode recording	
storage media	Genuine micro SD Card Class 10 (up to 128 GB)	



External dimensions	Body: 90 x 60 x 13.3 mm
	Side camera : 44.5 x 44.5 x 40 mm
weight	Body : 87g (including microSD card) / Side camera : 41g (including transparent cradle)
operating temperature	-20℃ ~ 60℃
storage temperature	-30℃ ~ 70℃
Power off function	Power-off by parking surveillance recording mode settings (time and voltage)
	Time settings : 3 hours / 6 hours / 12 hours / 24 hours / Disabled (Initial setting : 6 hours)
	Battery Voltage : 11.7V / 11.9V / 12.1V / 12.3V (Initial setting : 12.1V)
certification	FCC, CE, J-MIC
Viewer supported OS	Windows 8.1,10,11
App supported OS	iOS 13 and above
	Android OS 10 or higher



FCC ID : 2BC9S-WHSR-S100



※ This product and product specifications may be changed or modified without notice to improve quality.

27. Frequently Asked Questions

Q. The machine restarts repeatedly.

A. microSD If there is a problem with the card, there is a risk of repeated reboots or freezes. Please format the microSD card with your computer. If symptoms do not improve even after formatting, you may be concerned about the lifespan of the microSD card. Please consider replacing the micro SD card.

※ Before formatting, make sure there are no unfamiliar scratches or dents on the vehicle.

If there are any scratches, do not format but check the parking recording video using a PC viewer. You may have been involved in a prank or hit-and-run while parking.

Q. The main unit's lamp no longer lights up.

A. Turn the power OFF once and then turn it ON.

If the symptom cannot be improved, turn on the engine with the micro SD card removed. If the card not inserted warning does not appear, there may be a problem with the power wiring. Please consult with your installation shop. If a card not inserted warning appears, there may be a problem with the microSD card. Please format the microSD card with your computer. If symptoms do not improve even after formatting, there may be a problem with the micro SD card. Please contact your dealer or TCL Information Center.

Q. The computer viewer program has disappeared.

A. You can download it from the download page below URL:

URL: <https://www.whitehouse.co.jp/smartreco/download/>

Download password : **smareco**

Q. I installed the viewer, but it doesn't boot.

A. You need to check your computer specifications, etc. Detailed countermeasures are provided on our website. Please check the page below.

URL: <https://www.whitehouse.co.jp/smartreco/faq/>

Q. Are event files not overwritten ?

A. There is a maximum capacity for storing event files. If the capacity is exceeded, the oldest files will be overwritten, so please save files that should not be overwritten on a PC or smartphone.

Q. Parking monitoring mode does not work (When the engine is stopped, voice guidance is displayed: " Please turn on the parking monitoring switch." and " SD allocation capacity for parking mode is set to 0% and cannot be switched. ")

A. Please check your settings. Parking supervision mode does not work in the settings below.

1. The parking monitoring mode setting is 'P-OFF'.
2. The parking monitoring mode usage capacity is set to 0%.

Q. Parking monitoring mode does not work

A. Please check the two things below.

1. A power outage may have occurred due to low battery voltage.

Please check CUTOFF.txt in the Setup folder. Also check the car battery voltage.

2. The body may have become overheated and blocked.

Please check CUTOFF.txt in the Setup folder.

※ Please refer to page 61 for CUTOFF.txt.

Q. Can it be used in 24V powered vehicles such as trucks and buses ?

A. It can also be used with A.24V power. The blocking voltage in parking monitoring mode operates at a voltage twice the set value.

Example : If set to 11.9V, it will be cut off at 23.8V ($11.9 \times 2 = 23.8$).

Q. I can't connect from parking mode to station mode.

A. Check the Wi-Fi settings (station mode) items of page 44.

Also, there may be cases where Wi-Fi signals cannot be received because the distance between your car and your home (office) is too far.

28. Warranty

[Product Warranty Regulations]

1. The warranty period is 2 years from the date of product purchase.
2. If the product breaks down due to normal use according to the user manual, it will be repaired or exchanged for an equivalent product free of charge. In that case, this warranty and proof of purchase (receipt, etc.) issued by the retailer are required.
3. In the following cases, paid repairs or handling may not be possible even within the warranty period.
 - Breakdown due to customer careless handling.
 - Malfunction caused by improper use or handling of this product.
 - Falling or damage during transportation or movement after purchase, etc.
 - Breakdown or damage caused by earthquakes, lightning, wind and flood damage, fire, other natural disasters, and traffic accidents.
 - Malfunction or damage to this product due to use of an inappropriate card or other connected devices.
 - When repairs, modifications, or disassembly are performed at a service center other than that designated by our company.
 - Consumables (including microSD card)
 - If you cannot present this certificate. If you cannot present proof of purchase.
 - If the defects in the repair request cannot be confirmed, a basic inspection fee may be charged.
 - This warranty is only valid within Japan.
 - This warranty will not be reissued, so please keep it carefully.



【 Planning / Publisher 】

TCL Co., Ltd.
〒465-0024 Meito Ward, Nagoya City, Aichi Prefecture Hongo 3-139
URL: <https://www.kk-tcl.co.jp/>

【TCL Information Center 】

0561-67-5511
Business hours : 10:00~18:00 (excluding holidays designated by our company)
URL: <https://www.smartreco.jp/>

〒 470-0153
Aichi Prefecture Aichi-gun Togo-cho Wago-Kitakagaya 29-1

Product Warranty		
Model Name	WHSR-S100	
Manufacturing Number		
Warranty	2 years Limited Warranty	
Customer	Name	Contact
	Address	
Store		