



BLACKVUE™

DR490L-2CH

Manual



ENGLISH

www.blackvue.com

Table of Contents

Introduction	4
---------------------	----------

Important safety information	5
-------------------------------------	----------

Overview	8
-----------------	----------

In the box	8
------------	---

At a glance	9
-------------	---

Front camera	9
--------------	---

Removing and attaching the front camera	11
---	----

Rear camera	12
-------------	----

Removing and inserting the rear camera	12
--	----

Installation	13
---------------------	-----------

Installing the BlackVue dashcam	13
---------------------------------	----

Playing and Managing Videos	19
------------------------------------	-----------

Playing video files on the LCD screen	19
--	-----------

LCD main menu composition	19
---------------------------	----

Quick menu	20
------------	----

Playing video	21
---------------	----

Playing video files on the LCD screen	21
---------------------------------------	----

Playing and managing video files using your computer (Windows/Mac)	23
---	-----------

Removing the microSD card	23
---------------------------	----

Opening video files in BlackVue Viewer	24
--	----

Viewer screen composition	25
---------------------------	----

Windows Viewer	25
----------------	----

Mac Viewer	26
------------	----

Playing video	27
---------------	----

Playing back videos	27
---------------------	----

Identify video files by recording type	27
--	----

Checking the displayed time	29
-----------------------------	----

Using BlackVue Viewer	29
-----------------------	----

Exploring the timeline and G-Sensor graph	30
---	----

Zoom options	31
--------------	----

Checking the GPS data	32
-----------------------	----

Managing videos	33
------------------------	-----------

Capturing or printing a still image from video	33
--	----

Deleting videos	33
-----------------	----

For Windows users	33
-------------------	----

For Mac users	34
---------------	----

Exporting videos	35
------------------	----

For Windows users	35
-------------------	----

Copying videos	36
----------------	----

For Windows users	36
-------------------	----

For Mac users	37
---------------	----

Tips for optimal performance	38
-------------------------------------	-----------

Formatting the microSD card	38
------------------------------------	-----------

Formatting the card in the BlackVue	38
-------------------------------------	----

Format using BlackVue Viewer (Windows)	38
--	----

Format using BlackVue Viewer (macOS)	39
--------------------------------------	----

Upgrading the firmware	41
-------------------------------	-----------

Upgrading the firmware using a computer (Windows or Mac)	42
--	----

Changing settings	44
--------------------------	-----------

Adjusting the settings on the LCD screen	44
---	-----------

Video settings	46
----------------	----

Brightness	46
------------	----

Saturation	46
------------	----

Advanced Driver Assistance Systems (ADAS) settings	47
--	----

Lane Departure Warning System (LDWS)	47
--------------------------------------	----

Time settings	48
---------------	----

System settings	50
-----------------	----

Cut-off voltage	50
-----------------	----

Screen timeout	51
----------------	----

Language	51
----------	----

High temperature cut-off	51
--------------------------	----

Volume	51
--------	----

Recording settings	52
Night vision	52
Image quality.....	52
Recording mode setting	53
Rear camera recording.....	53
Mic Volume.....	53
Motion detection (Parking mode)	54
G-Sensor (Normal mode) / G-Sensor (Parking mode)	54
Other settings	55
Camera info	55
Storage allocation.....	55
Calibrate touch	55
Format (microSD card)	56
Reset settings.....	56

Changing settings using your computer (Windows/Mac) ... 57

BlackVue Viewer settings	58
Select language.....	58
Speed unit on map.....	58
Select map service	58
Firmware settings	59
Basic settings	60
Video settings	60
Recording settings.....	61
Sensitivity settings	62
G-Sensor (Normal mode) / G-Sensor (Parking mode)	62
Motion detection (Parking mode)	62
System settings	63
Security LED (Front camera).....	63
Cut-off voltage.....	63
Screen timeout	64
Volume	64
Storage allocation	64
Applying the settings.....	65

Optional accessories66

GPS receiver (Optional).....	66
------------------------------	----

Product specifications.....67

Recording time69

Introduction

Thank you for purchasing this BlackVue dashcam made by Pittasoft Co., Ltd.

This instruction manual contains information on how to operate your dashcam.

Before using your dashcam, we recommend that you read through this manual to ensure correct usage.

To improve the performance of the product, the contents of this manual are subject to change without prior notice.

Note

- A microSD card is provided with the BlackVue dashcam when you purchase the product. After inserting the microSD card and turning on the dashcam, the microSD card will be initialized.

Important safety information

For user safety and to avoid property damage, read through this manual and follow these safety instructions to use the product correctly.



DANGER

Failure to observe the following directions could result in death or property damage:

- **Do not disassemble, repair, or modify the product yourself.**
Doing so may cause fire, electric shock, or malfunction. For internal inspection and repair, contact the service center.
- **If any foreign matter gets inside the product, detach the power cord immediately.**
Contact the service center for repair.
- **Do not adjust the product while driving.**
Doing so may cause an accident. Stop or park your car in a safe place before installing and setting up the product.
- **Do not install the product in a location where the product can interfere with the driver's field of vision.**
Doing so may cause an accident.
- **Do not use a damaged or modified power cord. Only use the cords provided by the manufacturer.**
Damaged or modified power cords may cause an explosion, fire, or malfunction.
- **Do not operate the product with wet hands.**
Doing so may cause electric shock.
- **Do not install the product in an environment with high humidity, or combustible gases or liquids.**
Doing so may cause an explosion and/or fire.



WARNING Failure to observe the following directions could result in death or serious injury:

- **Do not leave the product near infants, children, or pets.**

There is a risk of them swallowing small components, and/or their saliva may get into the product, causing an explosion due to a short circuit.

- **Do not spray water or wax directly onto the product while cleaning the inside of the car.**

Doing so may cause fire, electric shock, or malfunction.

- **If smoke or an unusual smell is emitted from the power cord, detach the power cord immediately.**

Contact the service center or your distributor.

- **Keep the terminals of the power cord clean.**

Failure to do so may cause excessive heat and fire.

- **Use the correct input voltage.**

Failure to do so may cause explosion, fire, or malfunction.

- **Plug in the power cord firmly so that it cannot easily be disconnected.**

Failure to do so may cause fire.

- **Do not cover the product with any material.**

Doing so may cause external deformation of the product or fire. Use the product and peripherals in a well-ventilated location.

**CAUTION**

Failure to observe the following directions could result in injury or property damage:

- **Do not spray cleaning products directly onto the product.**

Doing so may cause discoloration, cracks, or malfunction.

- **If the product is used outside the optimal temperature range (-20°C – 70°C/-4°F – 158°F), performance can decline or malfunctions may occur.**

- **Make sure that the product is installed properly.**

If installed incorrectly, vibrations may cause the product to fall, and may cause physical injury.

- **When entering or exiting a tunnel, when directly facing into bright sunlight, or when recording at night without lighting the quality of recorded video may deteriorate.**

- **If the product is damaged or the power supply is cut due to an accident, video may not be recorded.**

- **Excessively tinted windshield glass can distort the recorded video or cause recorded video to be indistinct.**

- **Prolonged use of the product can increase the interior temperature and cause burns.**

- **microSD cards are consumables, so replace microSD cards after prolonged use.**

microSD cards may not record video correctly after extended use, so check the microSD card's recording capability periodically and replace as necessary.

- **Clean the lens regularly.**

Foreign material attached to the lens can affect the recording quality.

- **Do not remove the microSD card while the microSD card is saving or reading data.**

The data can be damaged or malfunctions may occur.

- **It is recommended that you install the software and firmware from the BlackVue downloads page (www.blackvue.com).**

- **It is recommended that you remove the power cord if the product is not used for an extended period of time.**

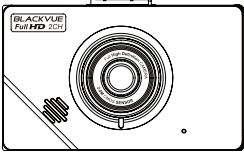
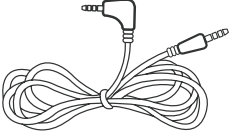

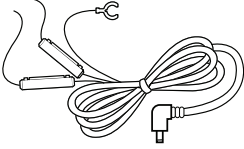

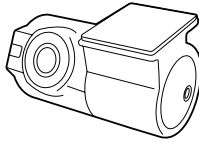
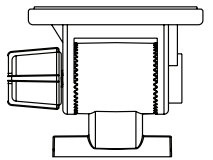
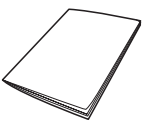


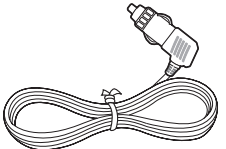
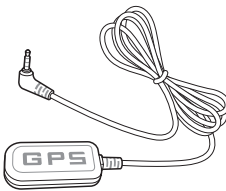
- **Do not press the LCD screen with a sharp object.**

- **Do not press the LCD screen too firmly.**

Overview

In the box

Check the box for each of the following items before installing the BlackVue dashcam.

	Front camera		Rear camera connection cable		microSD Card
	Hardwire cable		Cable clips (8 EA)		Rear camera
	Bracket		Quick start guide		Pry tool
	microSD card adapter		Power cord		External GPS (Optional)

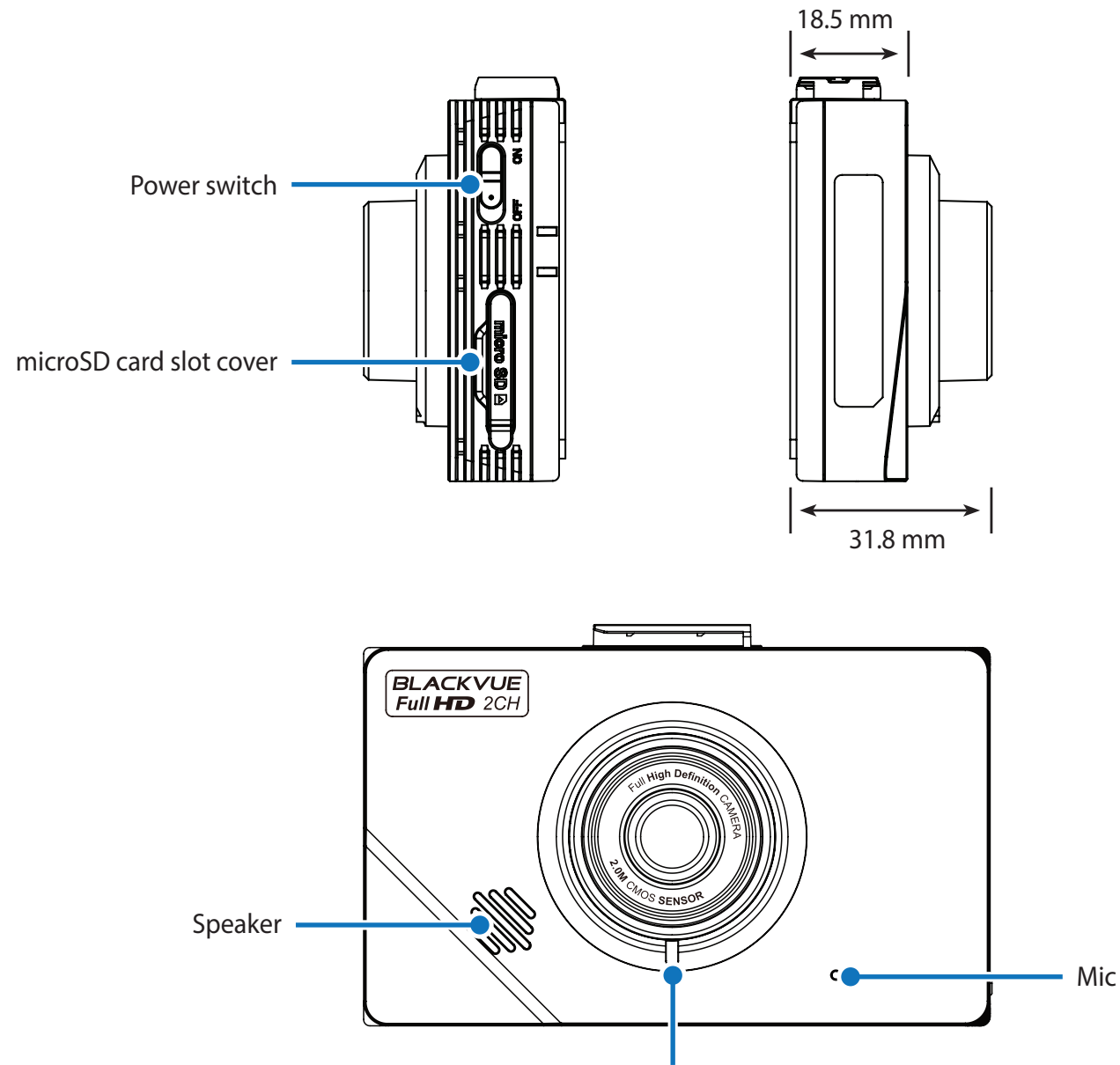
Note

- The illustrations in this manual may differ from the product.
- To improve the performance of the product, the contents of this manual are subject to change without prior notice.
- For more information about the package components and accessories, visit the BlackVue website (www.blackvue.com).

➤ At a glance

The following diagrams explain each part of the BlackVue dashcam.

□ Front camera

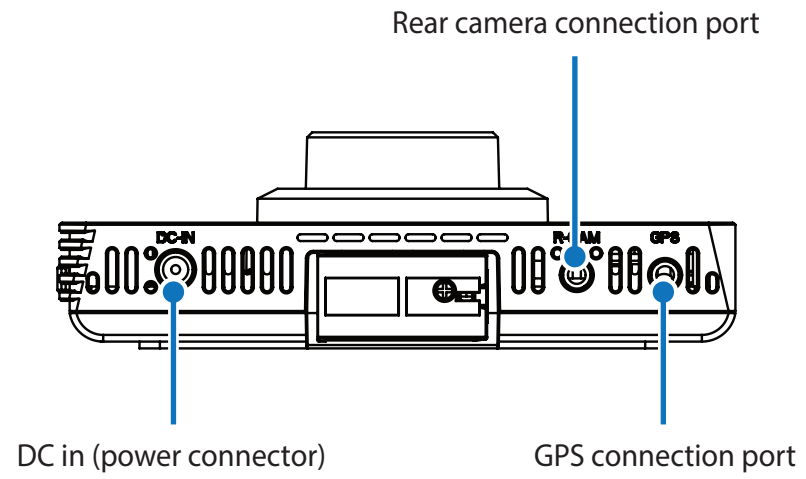


Front security LED


□ : Blinks white slowly in normal mode or event standby mode.

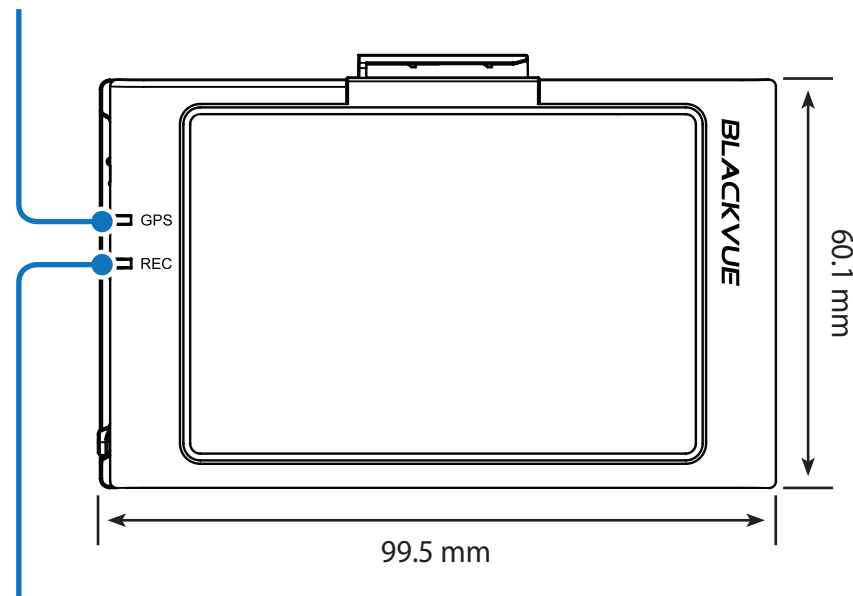
□ : Blinks white quickly:

- (i) when an event is being recorded (impact detected);
- or
- (ii) in parking mode.




GPS LED

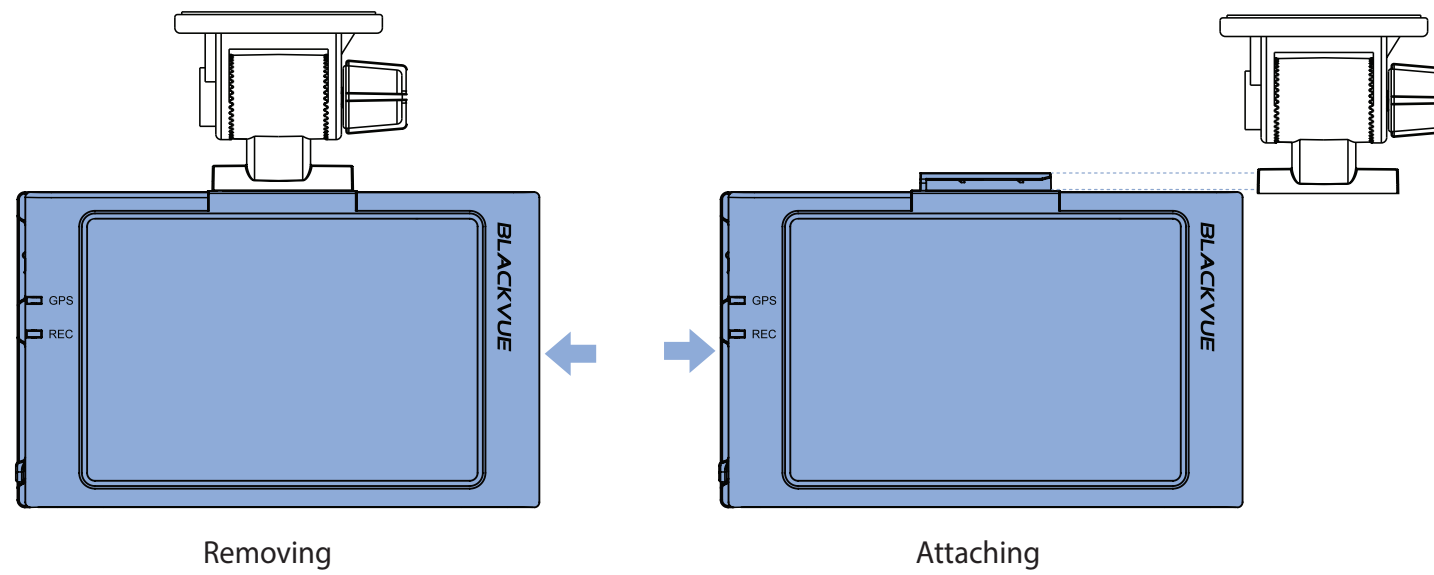
: Blue LED is on when GPS is on; blinks when there is no GPS signal.
LED is off when no GPS is connected.



Recording LED

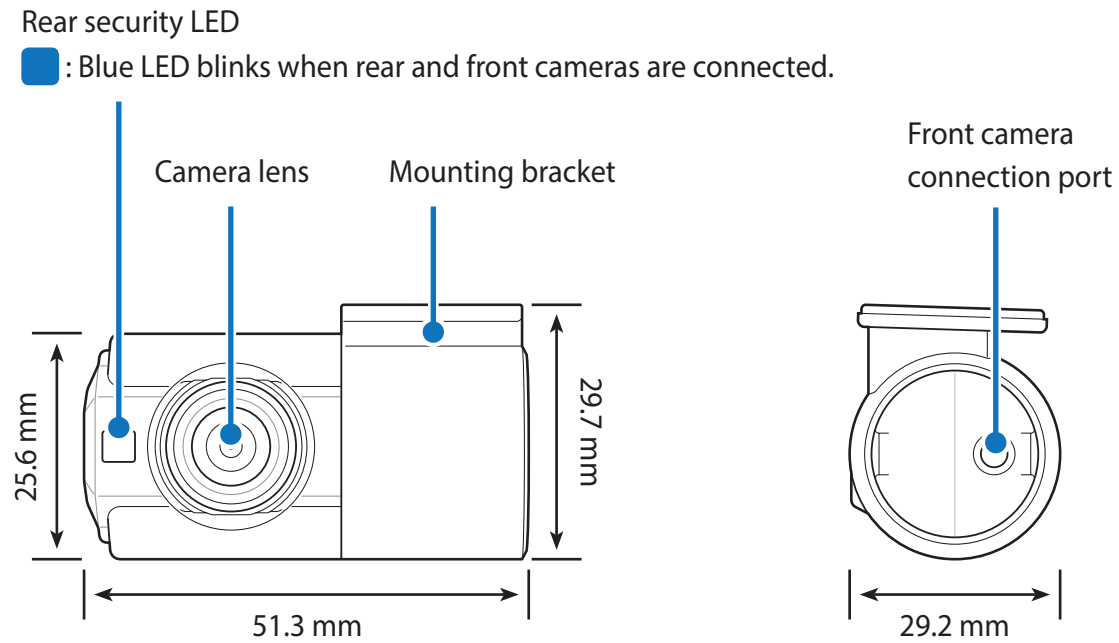
: Red LED is on in normal mode, event standby mode and when saving a parking recording (motion detected).
Red LED blinks when an event is being recorded (impact detected).
Red LED is off in parking standby mode.

Removing and attaching the front camera

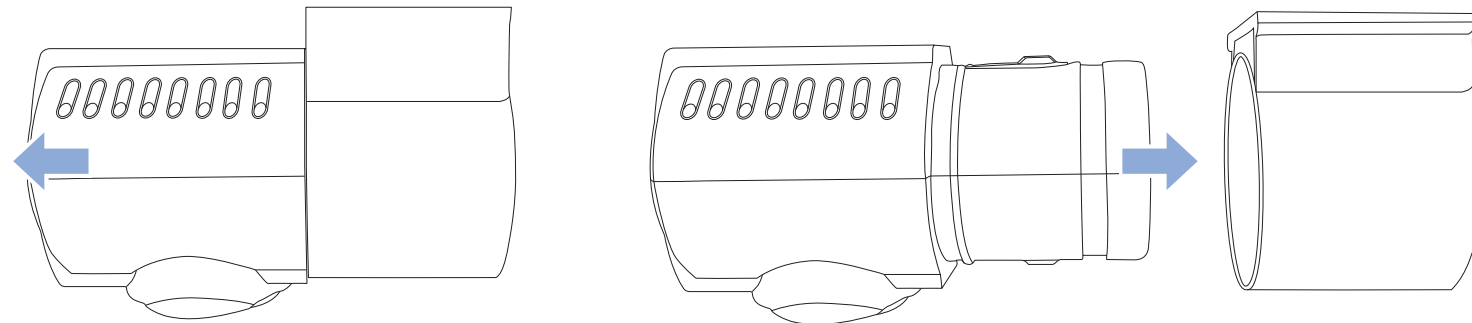


- To remove the camera from its mounting bracket, slide the camera unit to the left.
- To attach the camera, slide the camera unit to the right.

□ Rear camera



□ Removing and inserting the rear camera

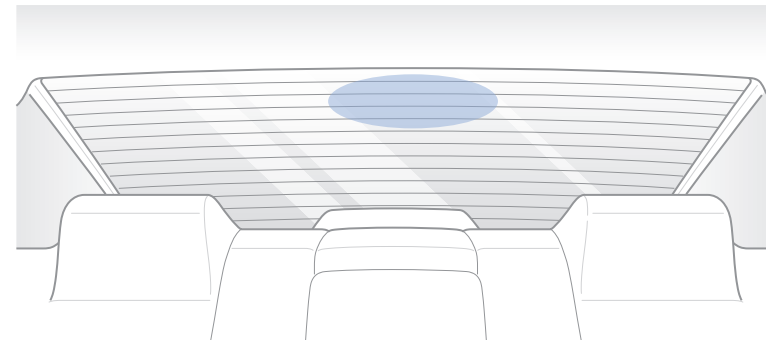
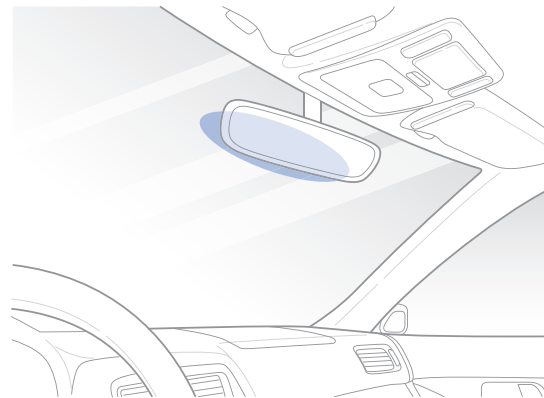


- To remove the rear camera from its bracket, rotate the camera until the lens points directly away from bracket foot and pull the rear camera out.
- To insert the rear camera into its bracket, point the lens directly away from the bracket foot and push the rear camera into the mounting bracket.

Installation

➤ Installing the BlackVue dashcam

Install the front camera behind the rear view mirror. Install the rear camera at the top of the back windshield. Remove any foreign matter and clean and dry the windshield before installation.

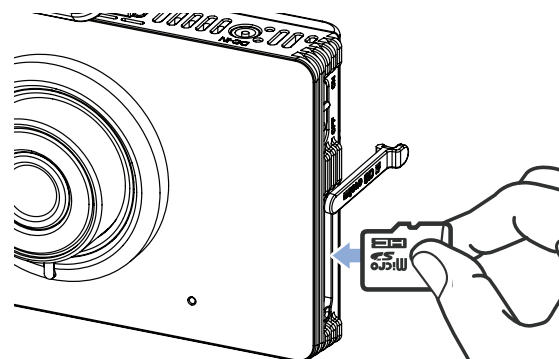


⚠ Warning

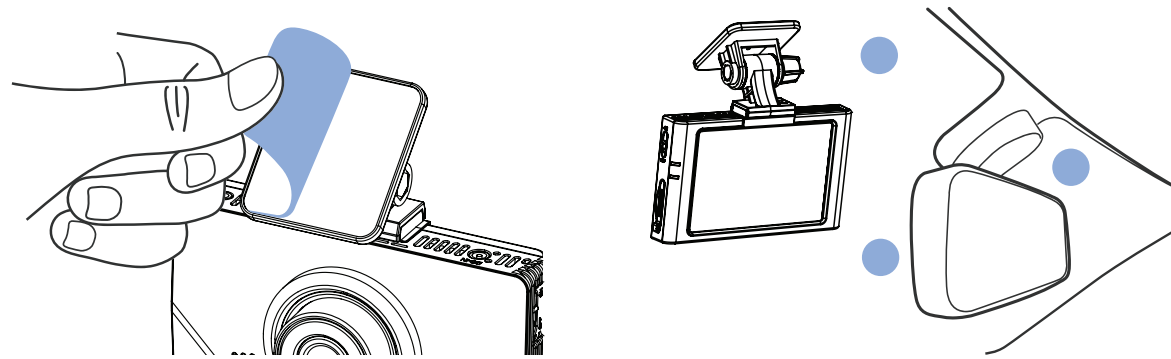
- Do not install the product in a location where it can obstruct the driver's field of vision.

1 Turn off the engine and make sure accessory power is off. Flick the power switch to the off position.

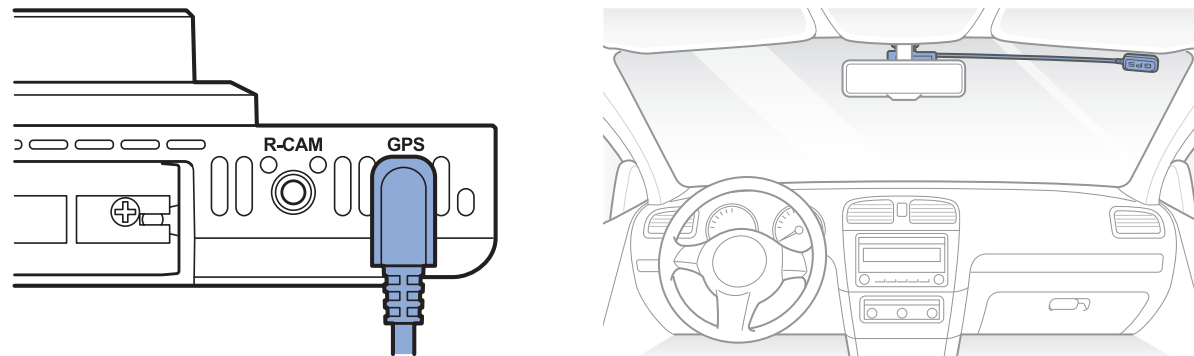
Open the cover of the microSD card slot, gently push the card into the slot until it locks into place and close the cover.



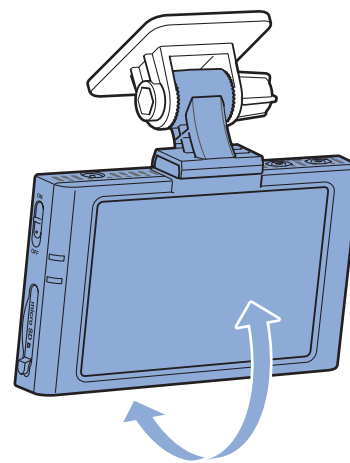
- 2 Peel off the plastic film from the lens. Peel off the protective film from the double-sided tape and attach the front camera to the windshield behind the rear-view mirror.



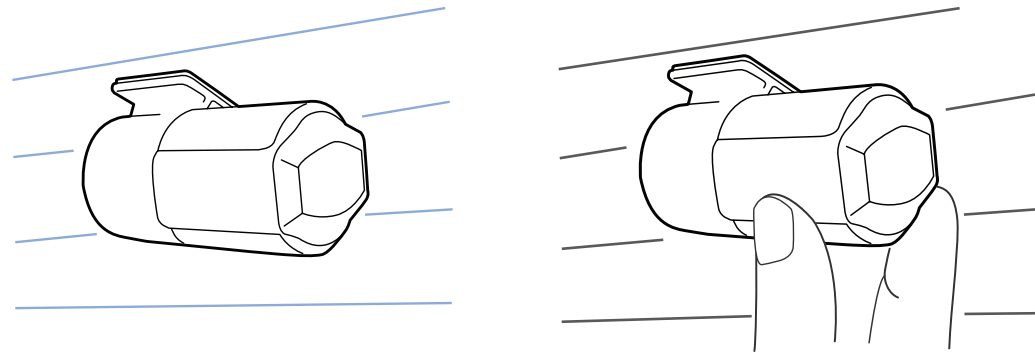
- 3 **Optional GPS receiver:** Plug in the GPS receiver and attach it in a corner of the windshield. Tuck the cable into the windshield trim using the pry tool.



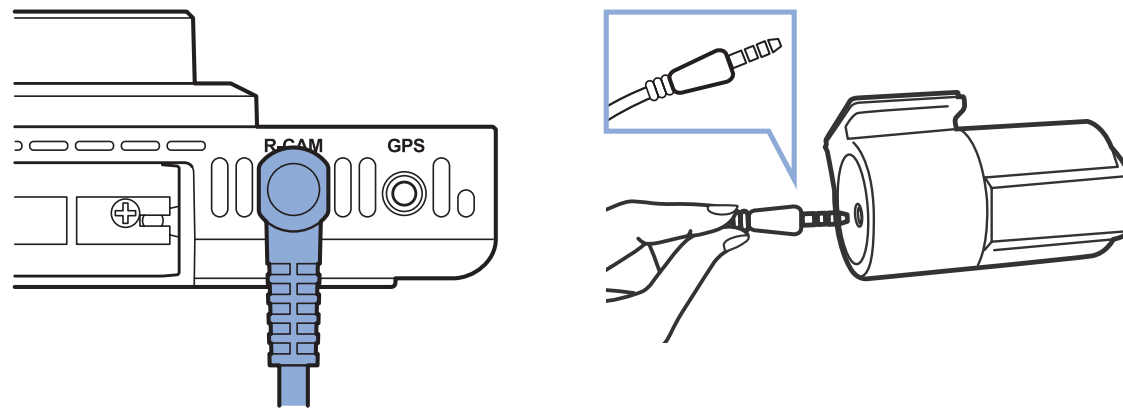
- 4 Adjust the angle of the lens by loosening the nut and rotating the front camera. We recommend pointing the lens slightly downwards ($\approx 10^\circ$ below horizontal), so as to record video with a 6:4 road to background ratio. After installation the camera angle can be adjusting in real time with the LCD screen on.



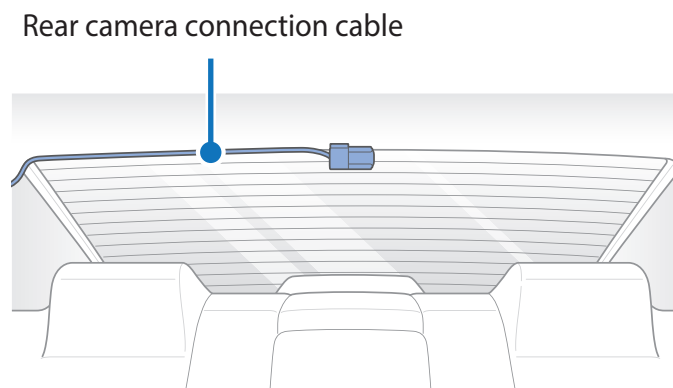
- 5 Peel off the protective film from the double-sided tape and attach the rear camera to the rear windshield. Adjust the angle of the lens by rotating the body of the rear camera.



- 6 Connect the front camera ('R CAM' port) and the rear camera using the rear camera connection cable.

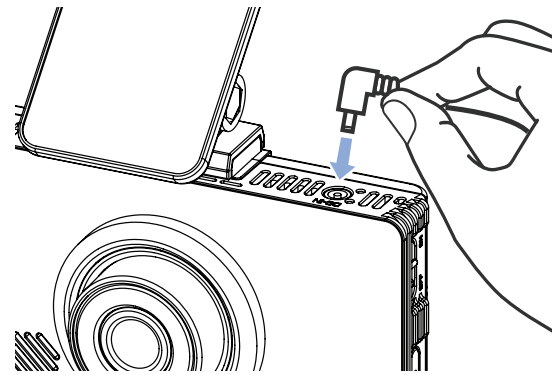


- 7 Use the pry tool to lift the edges of the rubber window sealing and molding and tuck in the rear camera connection cable.



8 To record in parking mode you must hardwire the dashcam to your car's fuse panel using the hardwire cable. Normal mode and event mode will also be available while driving. Plug the **hardwire cable** into the DC-IN port on the front camera. Proceed to Step I.

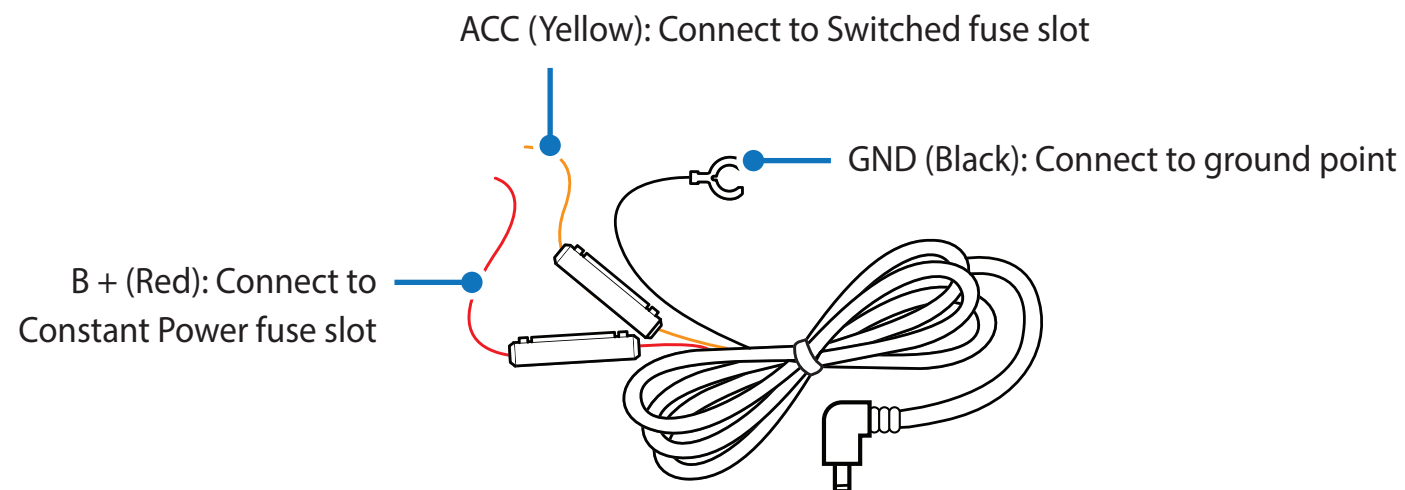
Alternatively, if you power the dashcam from the cigarette lighter socket you will not be able to record in parking mode. Normal mode and event mode will only be available while driving. Plug the **power cord** into the cigarette lighter socket and the DC-IN port on the front camera. Proceed to Step L.



9 **Connect the yellow [ACC] wire to a Switched fuse.** Referring to your vehicle Owner's Manual/Handbook, identify a Switched (accessory power) fuse in your interior fuse panel. Typical examples are the cigarette lighter and car stereo fuse slots.

Remove the identified Switched fuse. Many cars come with a fuse puller tool in the engine compartment fuse panel.

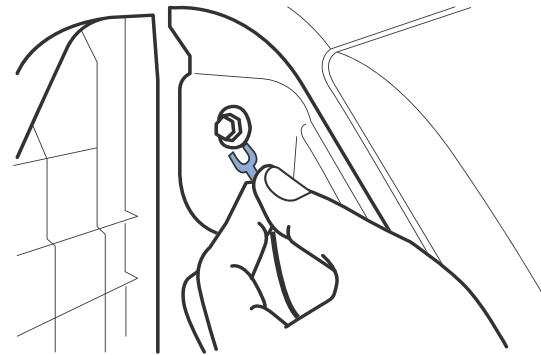
Remove the sleeve from the end of the yellow [ACC] wire, and wrap the wire around one of the blades of the Switched fuse. Reinsert the fuse back into the fuse panel.



- 10 Connect the red [B +] wire to a Constant Power fuse.** Identify a Constant Power (battery power) fuse in your fuse panel. Typical Constant Power fuses are the hazard light (emergency lamp), tail lights and interior light fuses. If your car has a “Battery Saver Function” please utilize the hazard light fuse.

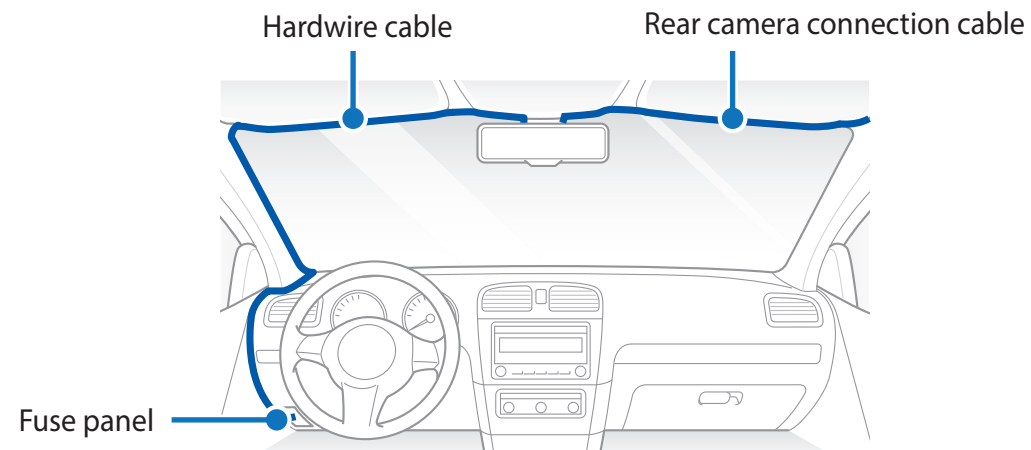
Remove the identified Constant Power fuse. Remove the sleeve from the end of the red [B +] wire, and wrap the wire around one of the blades of the Constant Power fuse. Reinsert the fuse back into the fuse panel.

- 11 Connect the black [GND] wire to a ground point.** Locate a ground point, such as a bolt, that is directly on a bare metal part of the vehicle's frame. Secure the ground wire to the bare metal frame (for example by securing it under the bolt).

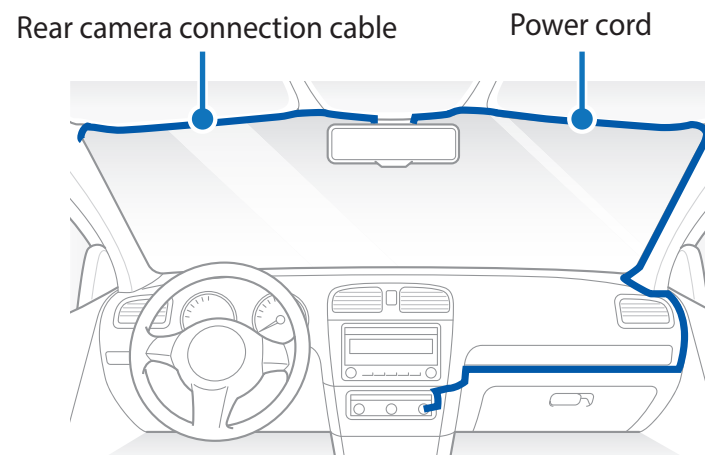


- 12 Use the pry tool to lift the edges of the windshield trim/molding and tuck in the hardwire cable.**

Hardwire cable installation:



Alternative cigarette lighter socket installation:



- 13** Turn on the engine and switch on the dashcam. The BlackVue dashcam will power up and start recording. Video files are stored on the microSD card. When the microSD card fills up, the newest video files will start to replace the oldest video files (called **loop recording**) – so you will always have the most recent video files.

 **Note**

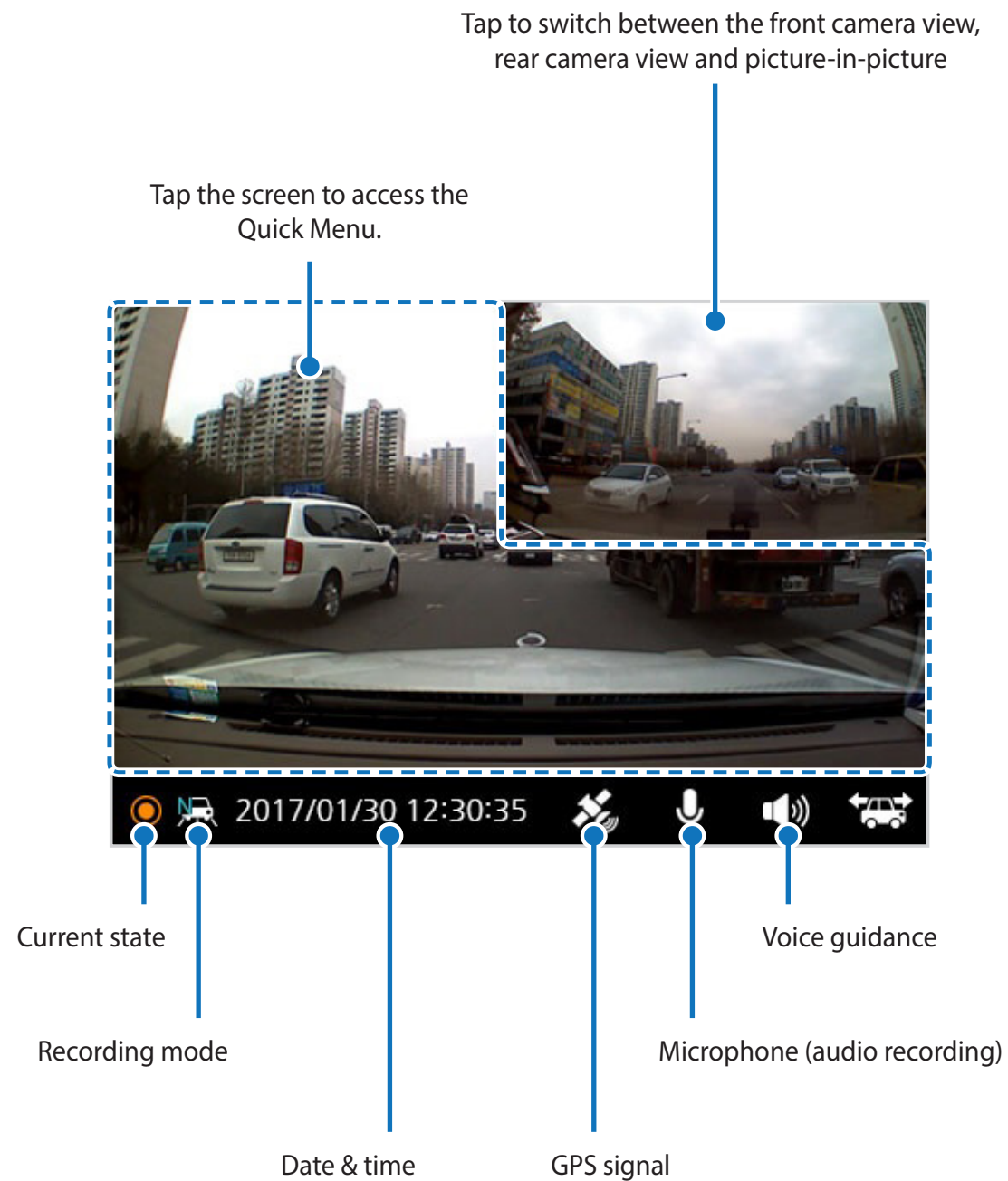
- There are 3 recording modes: Normal, Event and Parking. The dashcam starts recording in normal mode, switches to event mode when an impact is detected, and switches to parking mode when the engine is off. A low voltage power cut-off function protects the automotive battery from discharge.

Playing and Managing Videos

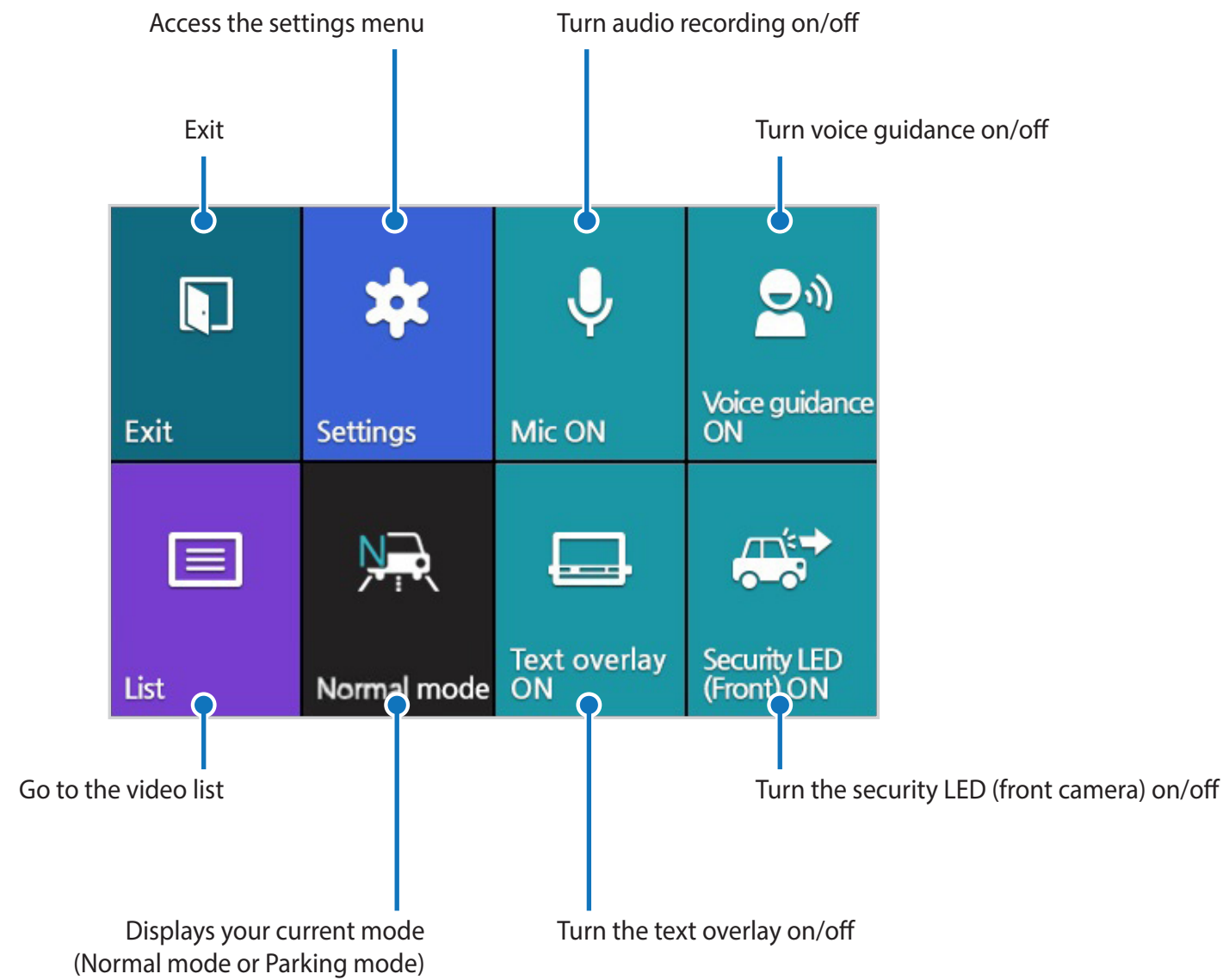
▶ Playing video files on the LCD screen

▶ LCD main menu composition

Tap the LCD screen anywhere when it is off to turn the LCD on.

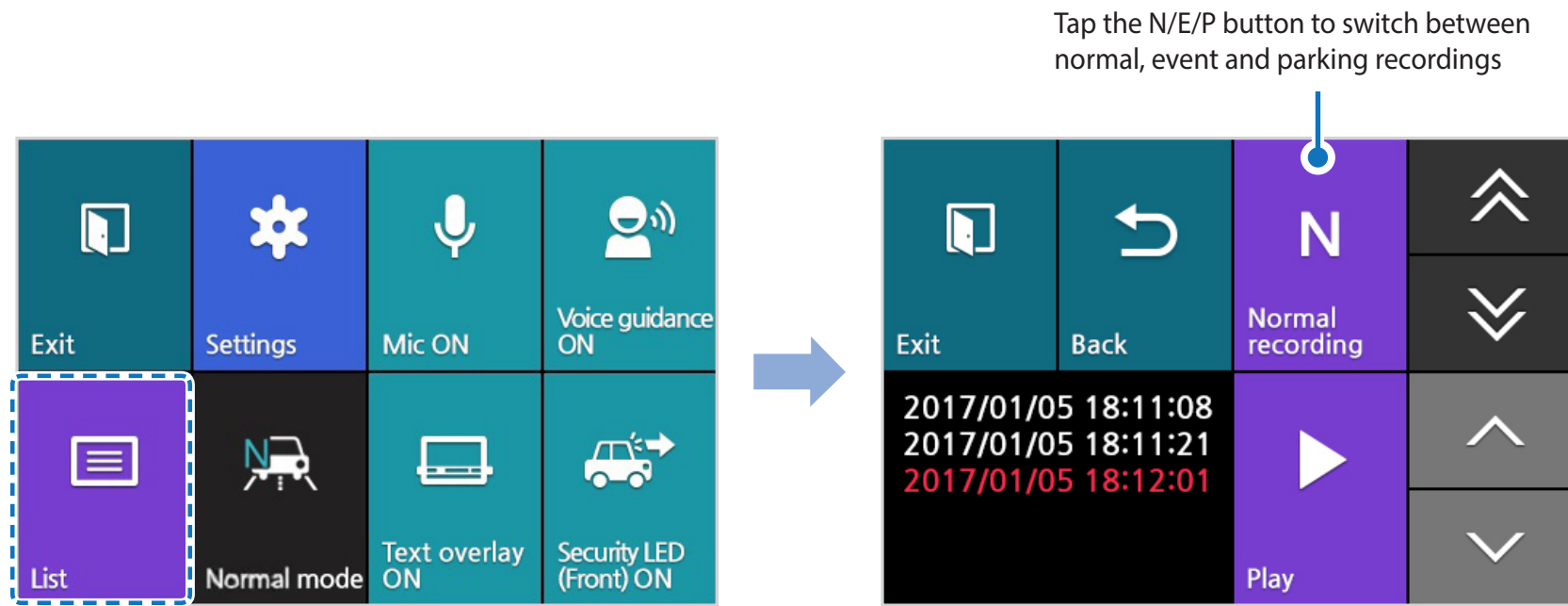


Quick menu



▶ Playing video

□ Playing video files on the LCD screen



- Select the **List** button from the Quick Menu.
- Use the arrows to select a recording and press the **Play** button.

N	Normal	Normal mode recordings
E	Event	When the dashcam detects an impact while in normal or parking mode, it switches to event mode and saves an event recording beginning 10 seconds before the event trigger.
P	Parking	In parking mode the dashcam continuously buffers video. When motion is detected in the dashcam's field of view, it saves a parking recording beginning 10 seconds before the motion detection.

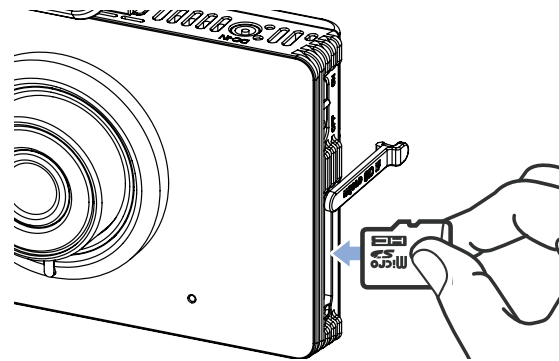
 **Note**

- Video is not recorded while accessing the quick menu, video list and settings menu.
- Video recordings cannot be deleted using the LCD screen interface. To manage video recordings please use BlackVue Viewer on your computer.
- To record in parking mode the dashcam must be hardwired to your car's fuse panel using the hardwire cable.

▶ **Playing and managing video files using your computer (Windows/Mac)**

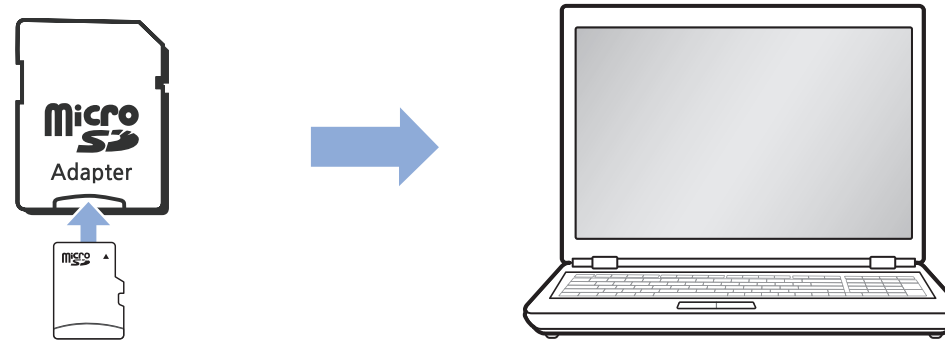
➤ **Removing the microSD card**

- 1** Flick the power switch to the off position.
- 2** Open the cover of the microSD card slot.
- 3** To remove the microSD card, gently press on the card to release the lock then carefully pull the card out.
To insert the microSD card, gently push the card into the slot until it locks into place and close the cover.



➤ Opening video files in BlackVue Viewer

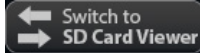
- 1 Remove the microSD card from the dashcam.
- 2 Use the included microSD card adapter to connect the card to a computer.

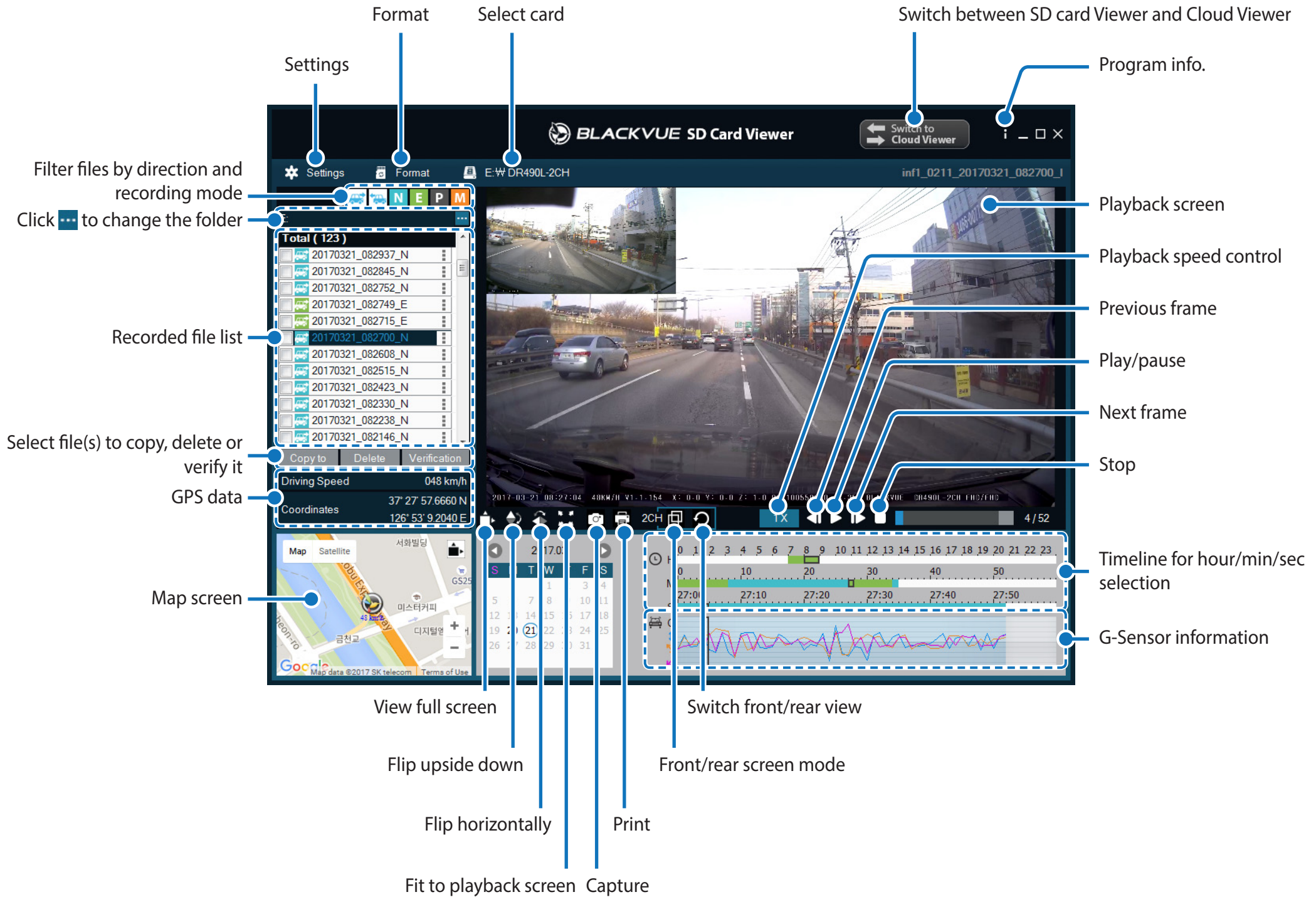


- 3 Download BlackVue Viewer from www.blackvue.com > **Support** > **Downloads** and install it on your computer.
- 4 Run BlackVue Viewer.

Viewer screen composition

Windows Viewer

When you launch the program you will see the Cloud Viewer window. Click the  button to open the SD Card Viewer window.




Note

- All images shown are for illustration purposes only. Actual program may differ from images shown.

Mac Viewer

When you launch the program you will see the Cloud Viewer window. Click the  button to open the SD Card Viewer window.



The screenshot shows the BlackVue SD Card Viewer application window. The main display area shows a video playback from a front camera. On the right side, there are several data panels: a G-Sensor Information graph, GPS Data showing speed (108 Km/h) and coordinates, and a Recorded File List table. The bottom of the window features a playback control bar with a timeline for minute and second selection, and various playback controls like play/pause, next frame, and volume control. A 'MyWay Viewer' window is also visible in the top right corner.

Labels and their corresponding controls:

- Settings
- Format
- Switch between SD card Viewer and Cloud Viewer
- MyWay Viewer
- Capture
- Print
- G-Sensor Information
- GPS Data
- Recorded File List
- Timeline for sec selection
- Playback time
- Volume control
- Playback speed control
- Play next file
- Next frame
- Playback/Pause
- Timeline for min selection
- Previous frame
- Full Screen view
- View upside-down
- Flip horizontally
- Front/Rear screen mode
- Front/Rear reverse view
- Normal screen size
- Play previous file
- Playback Screen (rear camera)
- Playback Screen (front camera)

Type	Date	File name
NR	2017-01-03	20170103_170932_NR
NF	2017-01-03	20170103_171032_NF
NR	2017-01-03	20170103_171032_NR
NF	2017-01-03	20170103_171132_NF
NR	2017-01-03	20170103_171132_NR
NF	2017-01-03	20170103_171232_NF
NR	2017-01-03	20170103_171232_NR
NF	2017-01-03	20170103_171332_NF
NR	2017-01-03	20170103_171332_NR
NF	2017-01-03	20170103_171432_NF
NR	2017-01-03	20170103_171432_NR
NF	2017-01-04	20170104_081019_NF
NR	2017-01-04	20170104_081019_NR

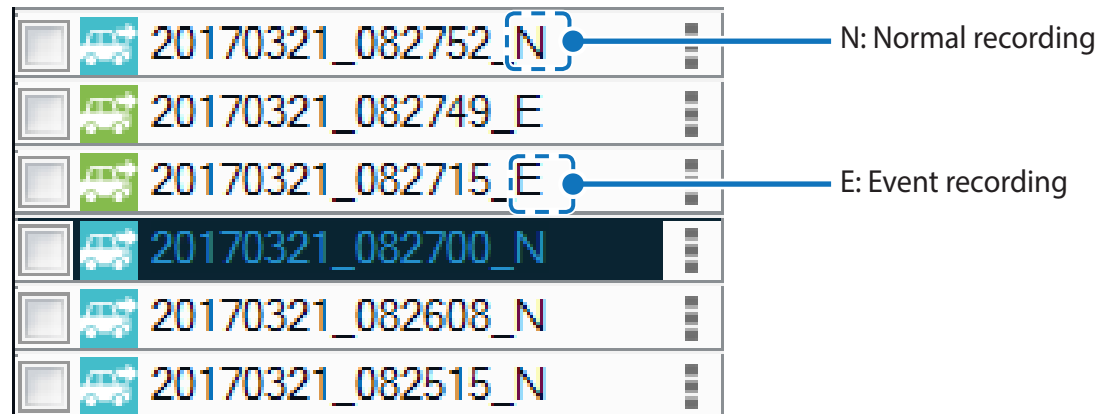
▶ Playing video

□ Playing back videos

In BlackVue Viewer double click a video file to play.




BlackVue Viewer shows by default the files in the microSD card. To see files in another folder click the  button and browse to the folder.

□ Identify video files by recording type



- **Recording type:**
 - N: Normal
 - E: Event
 - P: Parking mode motion detection
- **Example file name:** 20170104_150838_N
 - Date & time:* 4th January 2017, 03:08:38 PM
 - Recording type:* Normal

- Use the **N E P** buttons to filter the video list by recording type.

	Normal	The dashcam records in normal mode by default.
	Event	When the dashcam detects an impact while in normal or parking mode, it switches to event mode and saves an event recording beginning 10 seconds before the event trigger.
	Parking	In parking mode the dashcam continuously buffers video. When motion is detected in the dashcam's field of view, it saves a parking recording beginning 10 seconds before the motion detection.

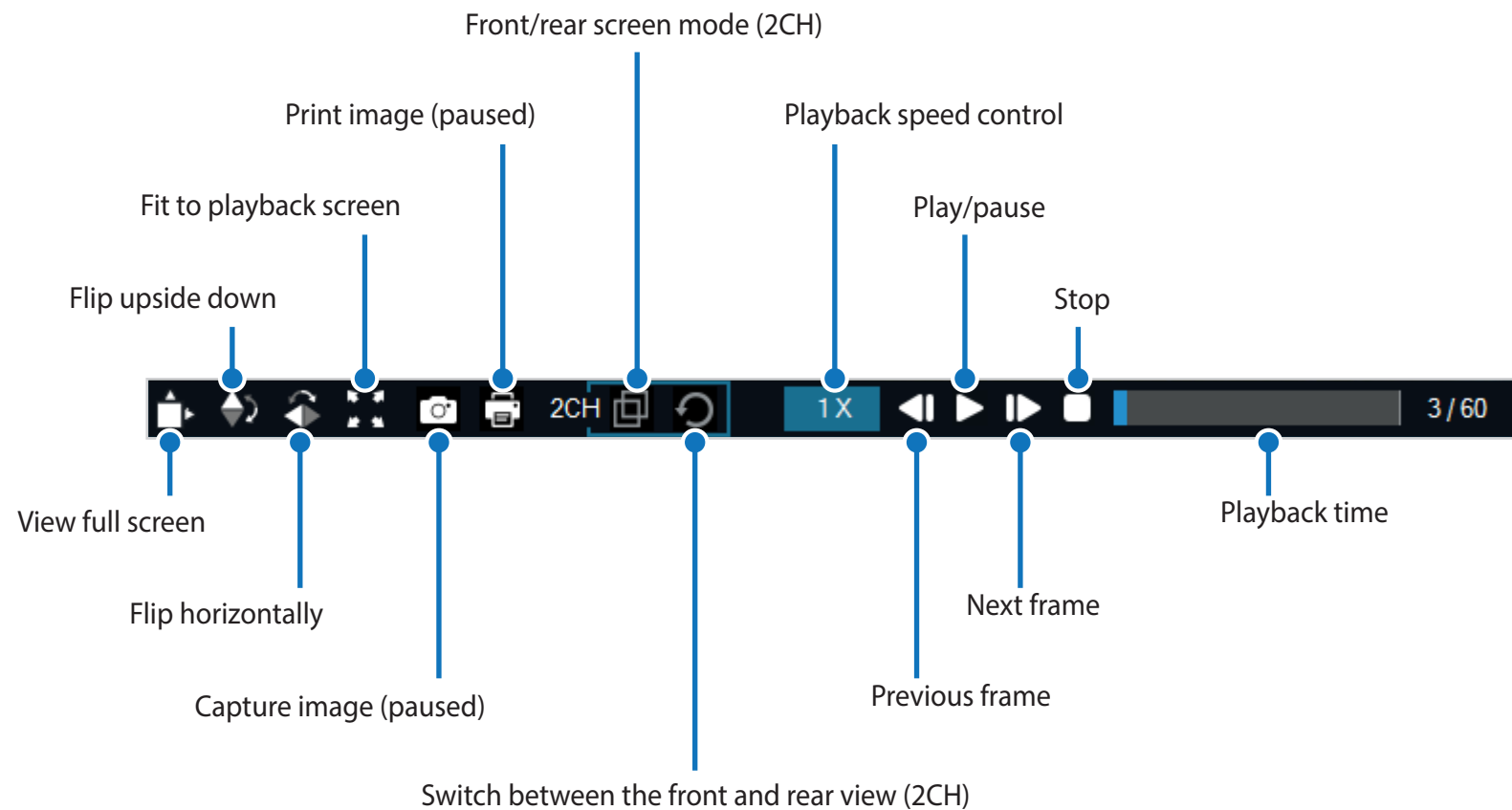
 **Note**

- To record in parking mode the dashcam must be hardwired to your car's fuse panel using the hardwire cable.

☐ Checking the displayed time

If text overlay is on the camera displays the time at the bottom of the video. If the displayed time in the recorded videos is incorrect please see **"Time settings"** on page 48.

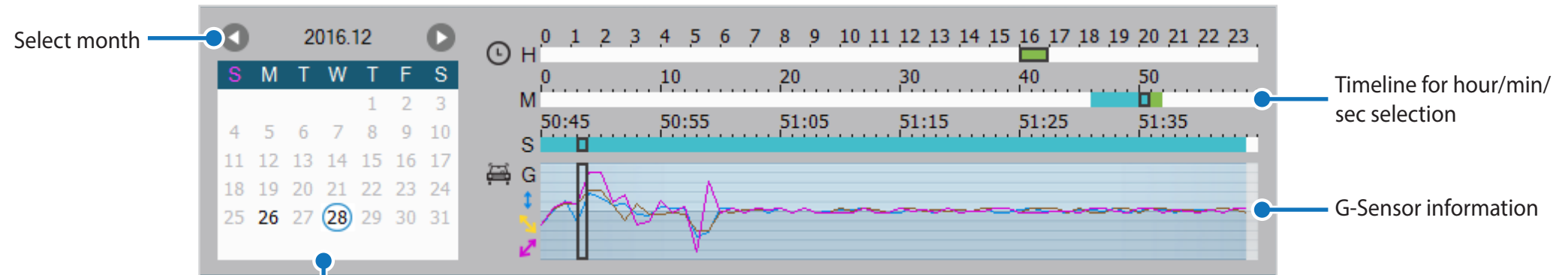
☐ Using BlackVue Viewer



Exploring the timeline and G-Sensor graph

You can explore the timeline for the playback of the recorded videos by date, hour, minute and second using the timeline.

You can check the impact sensitivity (G-Sensor) information in the line graph.

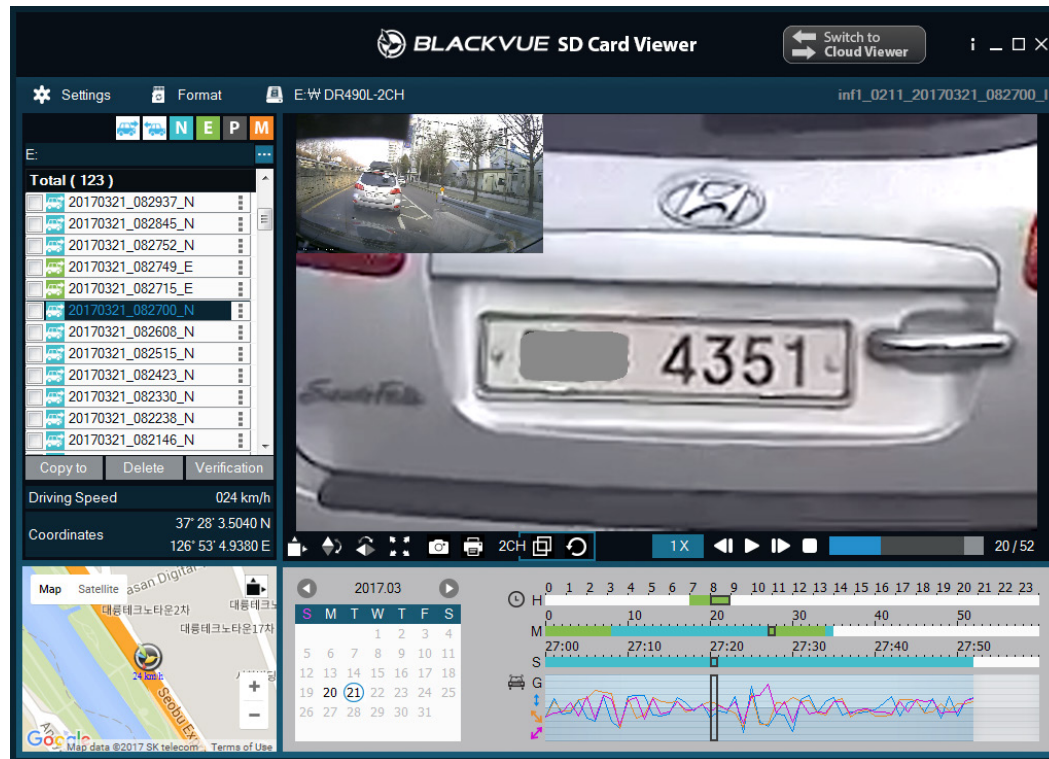


Select date

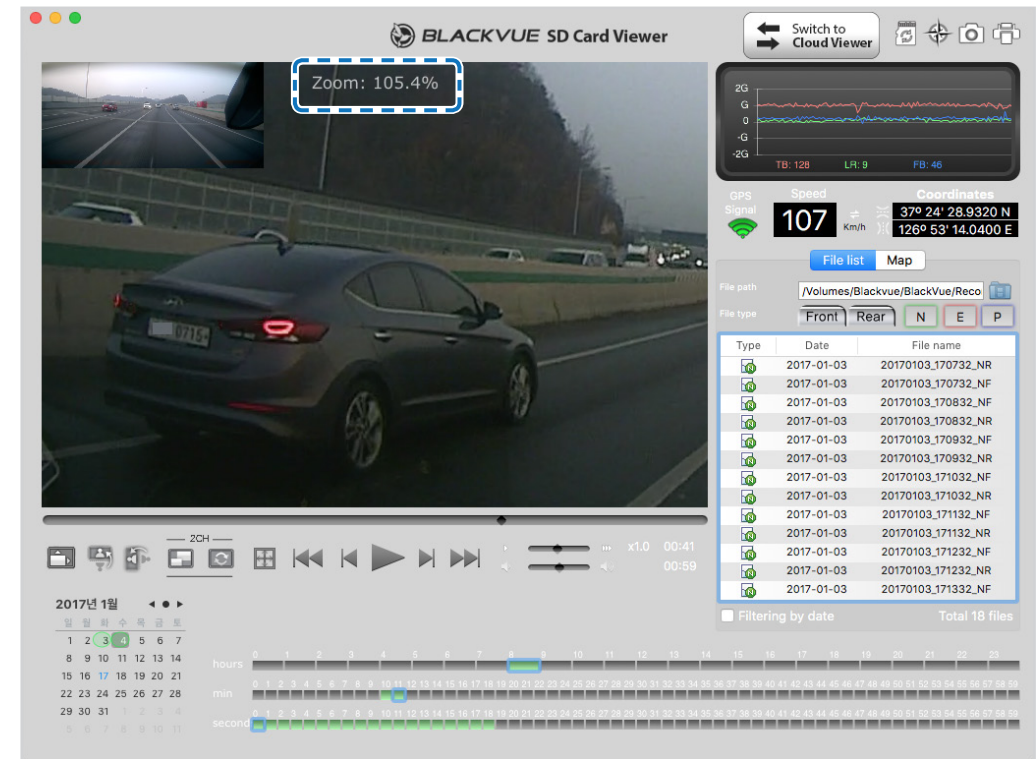
- Dates with recordings are black
- Click a date to filter recordings (date changes to red and circled)

Zoom options

- Use the mouse scroll wheel zoom. Right clicking will restore the video to the default size.
- You can resize the playback frame or the BlackVue Viewer window by dragging the borders.
- **Full-screen view:** Double click on the video image to enter full-screen view. Double click again or tap ESC to return to the default view.



Windows



Mac

☐ Checking the GPS data

You can check the GPS data of the recorded video in BlackVue Viewer while video is playing back. The driving speed and coordinates are displayed above the map frame.

📝 Note

- The external GPS receiver is required to obtain GPS data.
- GPS data is not recorded during parking mode. Map data cannot be displayed for parking mode recordings.

The screenshot displays the BLACKVUE SD Card Viewer software interface. At the top, the title bar reads "BLACKVUE SD Card Viewer" and includes a "Switch to Cloud Viewer" button. Below the title bar, there are menu options: "Settings", "Format", and "E:₩ DR490L-2CH". The main display area is divided into several sections:

- File List:** A list of files on the left side, including "Total (123)" and several files with IDs like "20170321_082937_N".
- Video Playback:** A large central window showing a street view from a car's perspective. The video is playing at 1X speed, and the progress bar shows 4/52.
- Driving Speed:** A display showing "048 km/h".
- Coordinates:** A display showing "37° 27' 57.6660 N" and "126° 53' 9.2040 E".
- Map:** A small map in the bottom left corner showing the current location on a street grid.
- Calendar:** A calendar for March 2017, with the 21st highlighted.
- Timeline:** A timeline at the bottom right showing a speed graph and a time axis from 27:00 to 27:50.




Managing videos

You can manage the recorded videos through the BlackVue Viewer program. You can also format the microSD card.

Note


- If the microSD card is full, by default the dashcam will record over the oldest videos first.

Capturing or printing a still image from video

- 1 Double click a file in the file list to play.
- 2 Click the  pause button to pause the video.
- 3 Select the  capture button to capture the image or the  print button to print directly.

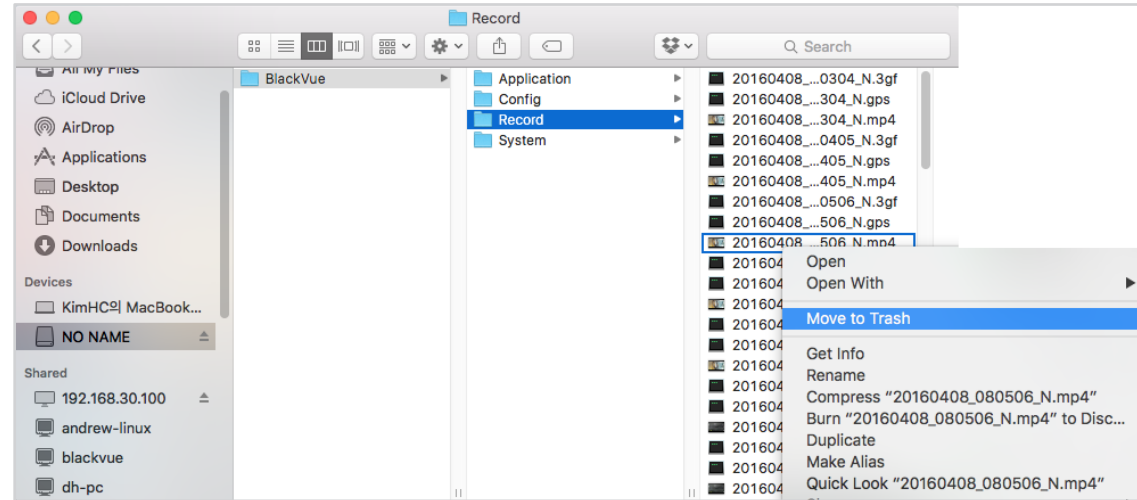
Deleting videos

For Windows users

- 1 Select the video, or videos using the checkboxes, from the recorded video list.
- 2 Click **Delete**.
 - You can also delete individual files by clicking  next to a video in the recorded video list and selecting **Delete**.


■ For Mac users

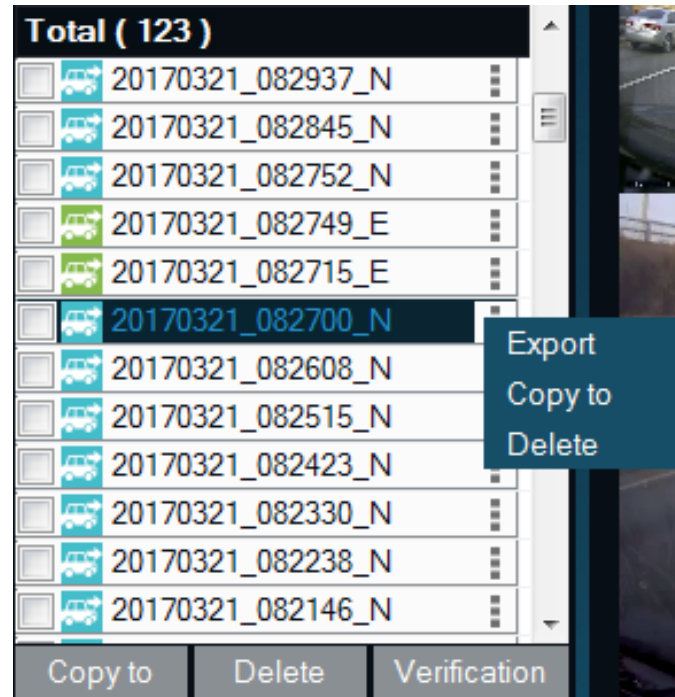
- 1 Go to \BlackVue\Record\.
- 2 Select the video from the recorded video list.
- 3 Click Move to Trash.



Exporting videos

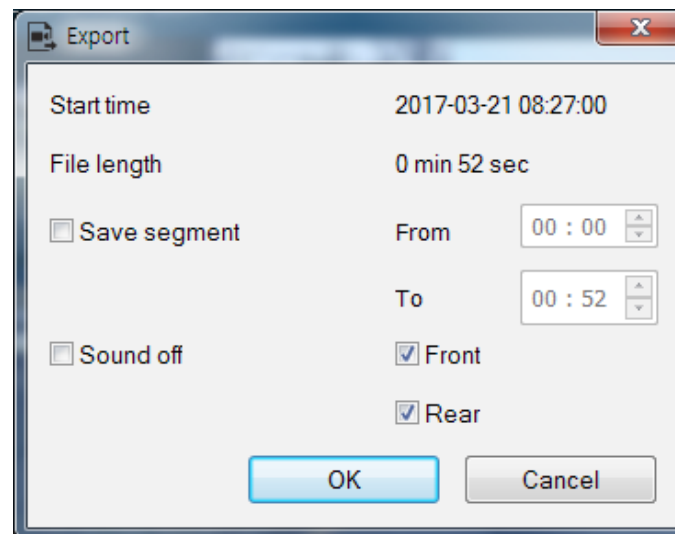
For Windows users

1 Click  next to a video in the recorded video list.



2 Click **Export**.


3 If you want to extract a segment of a file select **Save segment** and edit the start and end second points. To export without audio select **Sound Off**. You can export the **Front** or **Rear** video separately or together.



- 4 Click the **OK** button.
- 5 Select the folder in which to save the file and enter the file name.
- 6 Click the **Save** button.

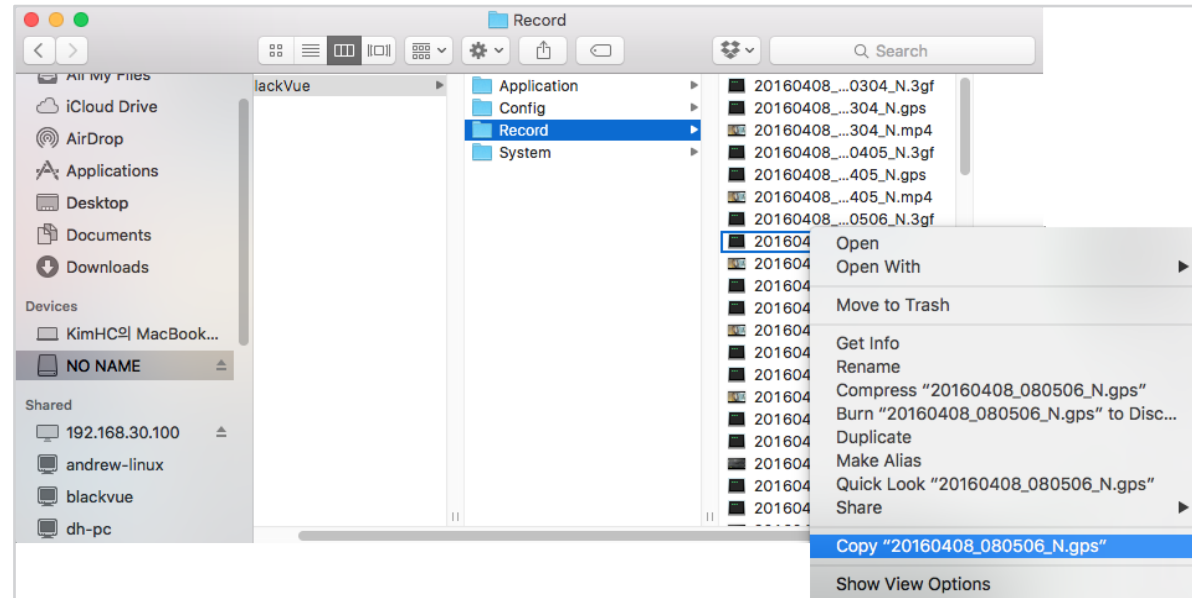
Copying videos

For Windows users

- 1 Click  next to a video in the recorded video list.
- 2 Click **Copy to**.
- 3 Select the folder in which to copy the file and enter the file name.
- 4 Click the **Select folder** button.
 - To copy multiple files at once check the boxes next to the file names and press the **Copy to** button
 - When copying files the segment adjustment and sound off tools are not available.

■ For Mac users

- 1 Go to \BlackVue\Record\.
- 2 Select the video from the recorded video list.
- 3 Click Copy "*file name*".



Tips for optimal performance

▶ Formatting the microSD card


Caution

- Back up important video files such as event recording files before formatting the microSD card. If you format the microSD card, all the video files stored in the microSD card will be deleted. Your saved settings will not be affected.


➤ Formatting the card in the BlackVue

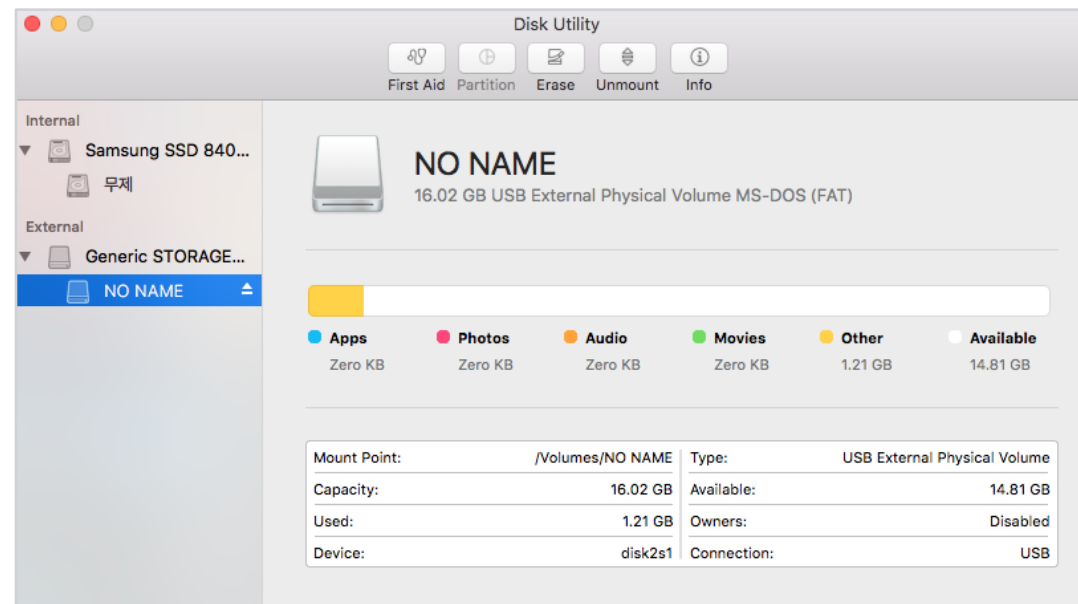
Tap the screen to turn the LCD on. Tap again to access the Quick Menu. Select **Settings > Other > Format (microSD card) > Yes** to format the microSD card.

➤ Format using BlackVue Viewer (Windows)

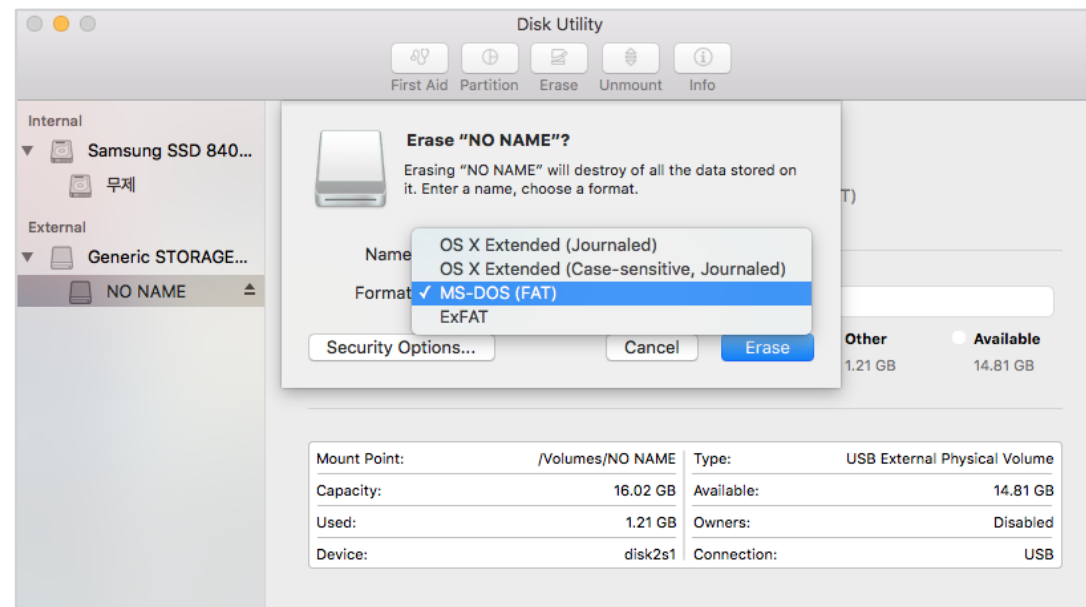
- 1 Insert the microSD card into the microSD card adapter and connect it to your computer.
- 2 Download BlackVue Viewer from www.blackvue.com > **Support > Downloads** and install it on your computer.
- 3 Run BlackVue Viewer.
- 4 Click the  **Format** button, select the card drive and click OK.

➤ Format using BlackVue Viewer (macOS)

- 1 Insert the microSD card into the microSD card adapter and connect it to your computer.
- 2 Download BlackVue Viewer from www.blackvue.com > **Support** > **Downloads** and install it on your computer.
- 3 Run BlackVue Viewer.
- 4 Click the  Format button and select the microSD card from the list of drives in the left frame.



5 After selecting your microSD card select the Erase tab in the main window.



6 Select "MS-DOS (FAT)" from the Volume Format drop-down menu and click Erase.

Note

- Formatting the microSD card once a month is recommended.
- Format the microSD card if the recorded video quality appears to be poor.
- Only use official BlackVue microSD cards. Other cards may have compatibility issues. PitSoft Co., Ltd. will not be held responsible for any problems caused by using another manufacturer's microSD card.



Upgrading the firmware

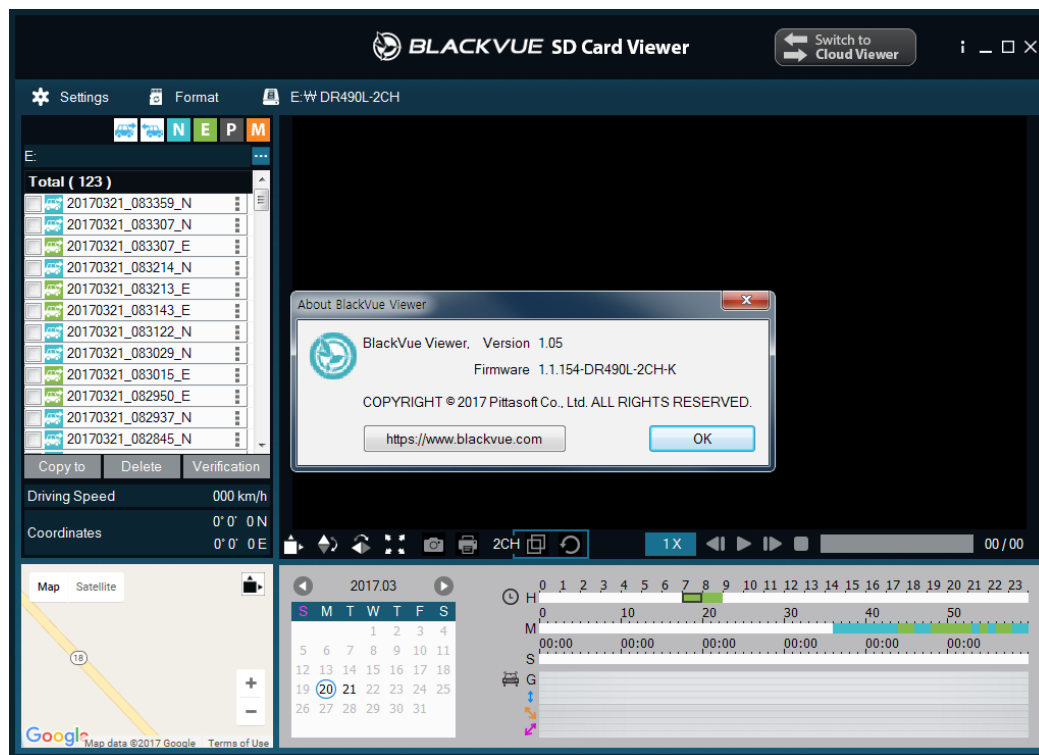
Regularly upgrade the firmware for performance improvements and updated features. Firmware updates will be made available for download at www.blackvue.com > **Support** > **Downloads**.

When upgrading the firmware all settings will be reset to their defaults. Once you have upgraded the firmware please reconfigure your settings.

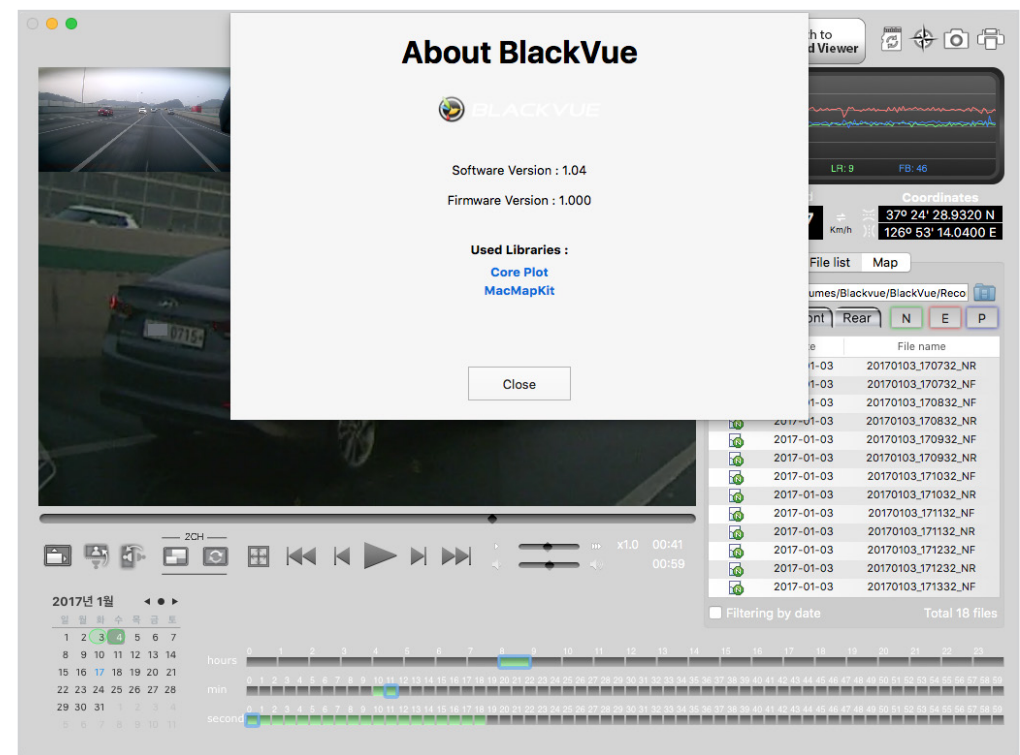
➤ Upgrading the firmware using a computer (Windows or Mac)

Keep your BlackVue dashcam updated by upgrading the firmware to the latest version. Visit the BlackVue website (www.blackvue.com) to check for any new firmware releases for your BlackVue dashcam model.

- 1 Insert the microSD card into the microSD card reader.
- 2 Connect the microSD card reader to a computer.
- 3 Launch BlackVue Viewer and click on the About  button.
 - For Mac users, click  **BlackVue Viewer** and select About BlackVue from the menu.
- 4 Check the current firmware version of your BlackVue dashcam and proceed only if your version is not the latest one.



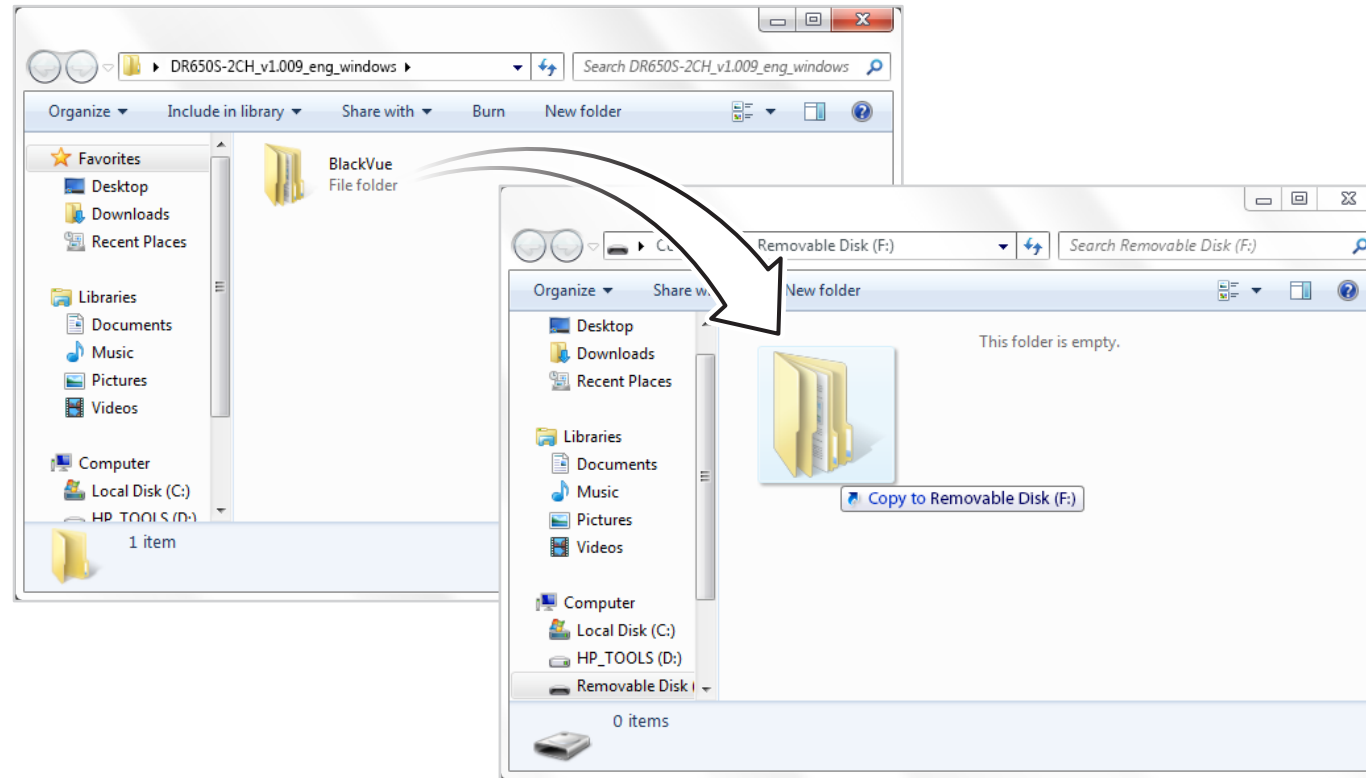
Windows



Mac

- 5 Format the microSD card. See **"Formatting the microSD card"** on page 38.

- 6 Go to the BlackVue website (www.blackvue.com > Support > Download) and download the latest firmware for your BlackVue dashcam model in zip format.
- 7 Unzip the downloaded file and copy the BlackVue folder to the microSD card.



- 8 Insert the microSD card into the dashcam and connect the power to initiate the firmware upgrade. Make sure the power remains on until the upgrade is completed. Any power interruption may prevent the firmware upgrade from completing, resulting in malfunction.

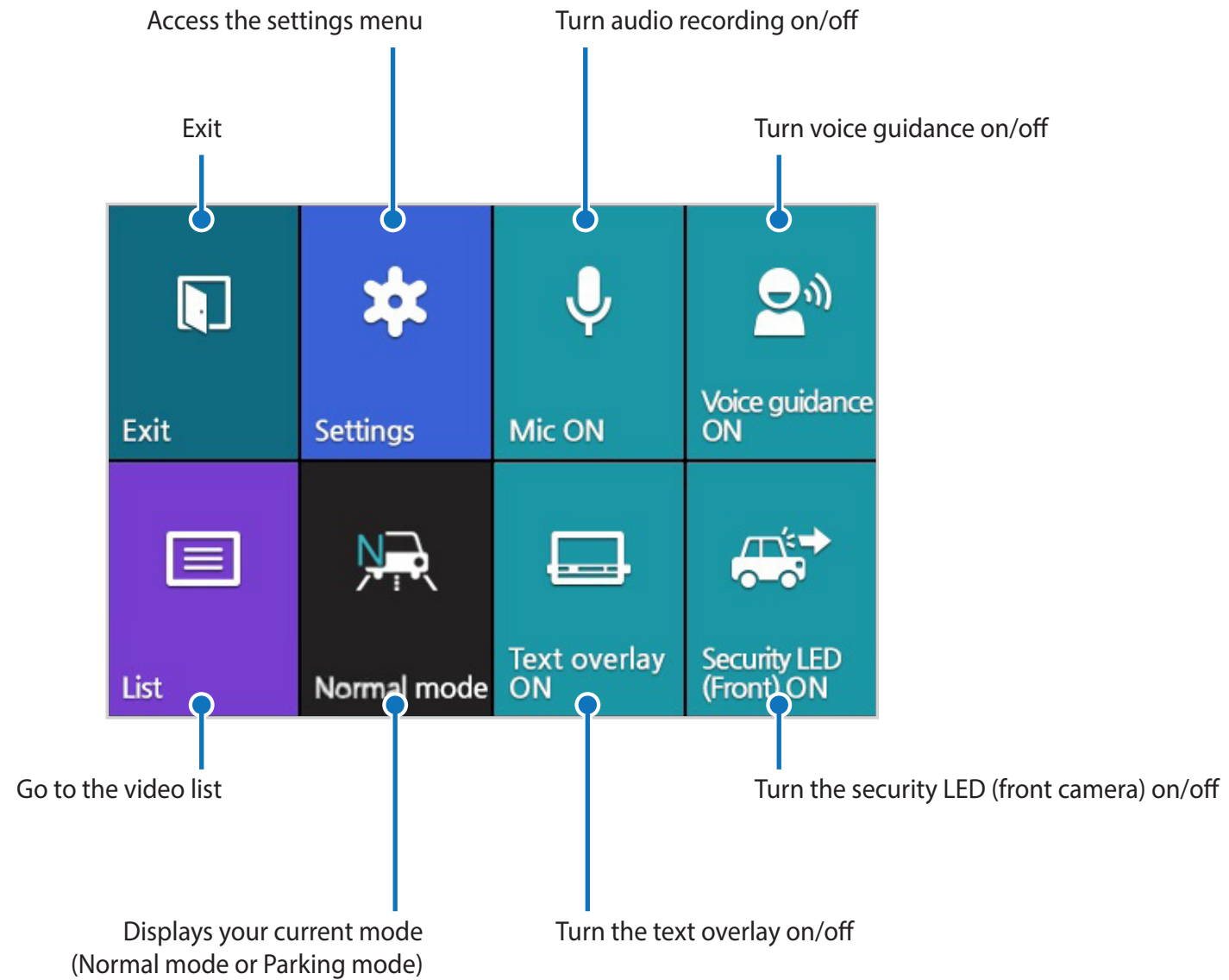
Note

- Do not insert or remove the microSD card when the dashcam is turned on. Doing so may damage the data and cause a malfunction of the microSD card.
- After a firmware upgrade all settings are reset to the defaults to ensure stable operation. Please reconfigure your personal settings (such as the time etc.).

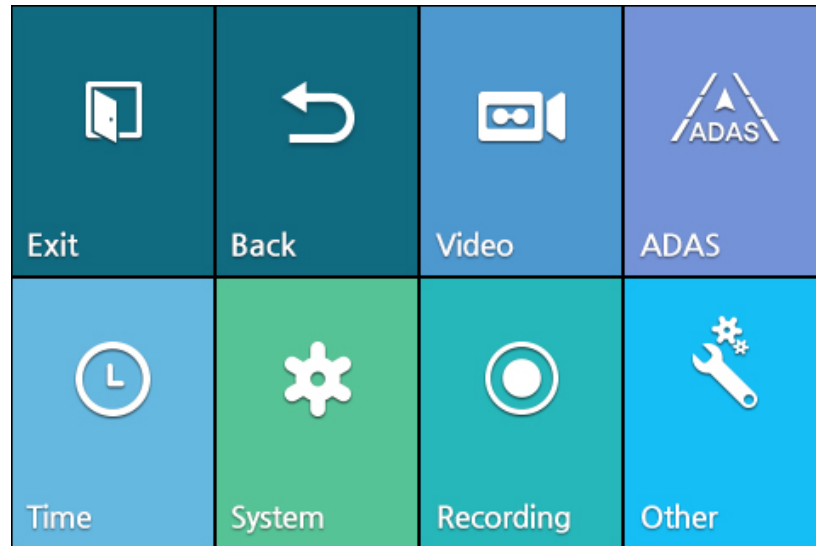
Changing settings

▶ Adjusting the settings on the LCD screen

Tap the LCD screen anywhere when it is off to turn the LCD on. Tap the screen again to access the **Quick Menu**.



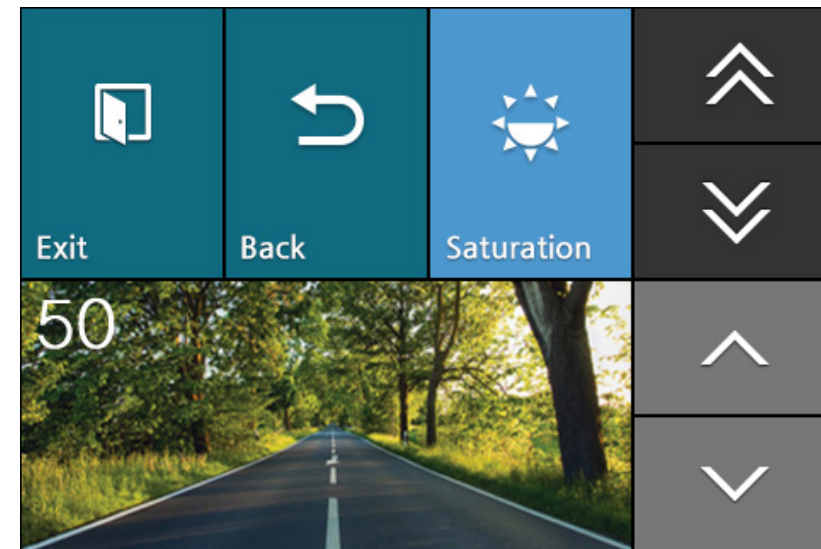
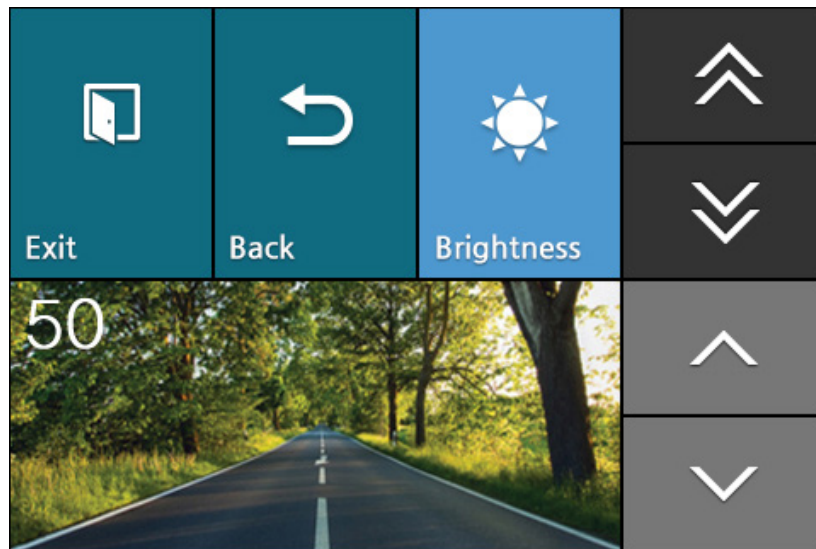
From the Quick Menu select **Settings**.



 **Note**

- Video is not recorded while accessing the quick menu, settings menu and video list.
- All images shown are for illustration purposes only. Actual product may differ from images shown.

▶ Video settings









Brightness

You can adjust the recording brightness level of the cameras.

Saturation

You can adjust the color saturation level of the cameras.

➤ Advanced Driver Assistance Systems (ADAS) settings

 Exit	 Back	 ADAS
 LDWS activ. speed	 Warning alarm	 LDWS Calibrate LDWS

Lane Departure Warning System (LDWS)

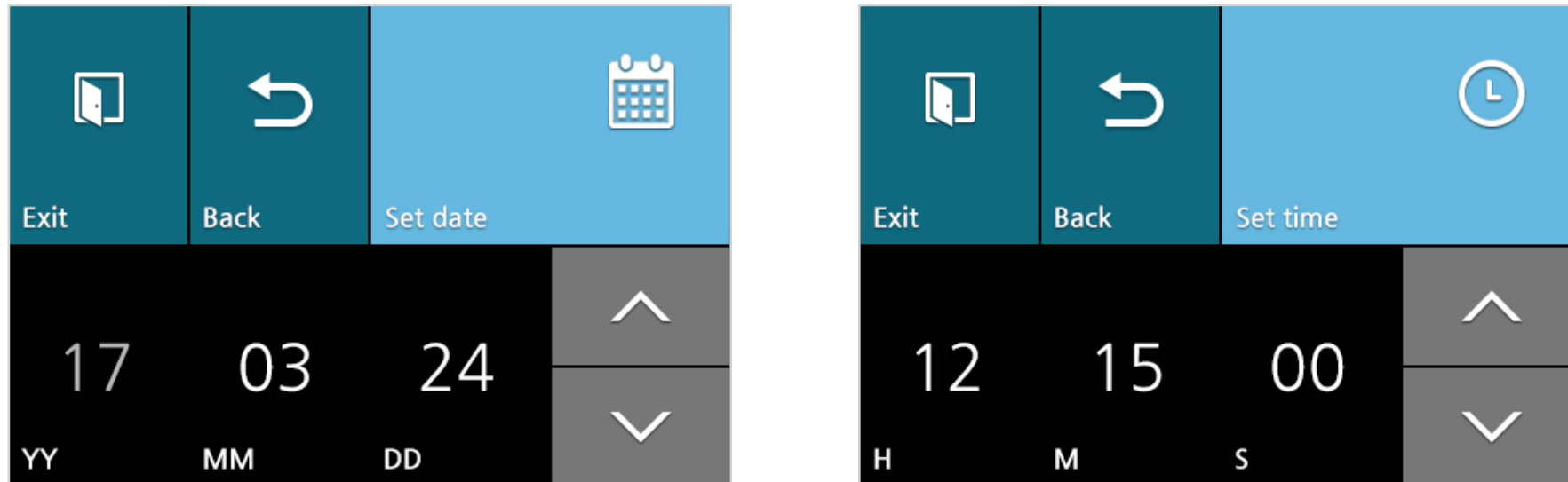
You can adjust the Lane Departure Warning System (LDWS) activation speed (Off, 60km/h, 80km/h, 100km/h), turn the warning alarm on/off, and calibrate LDWS.

Check the BlackVue website for any updated features. Firmware updates will be made available for download at www.blackvue.com
> **Support** > **Downloads**.

➤ Time settings

If you do not connect the GPS receiver:

To manually set the time select **Settings** from the Quick Menu and press the **Time** button. Enter your date (year, month, day) by selecting each field and using the up/down buttons. Tap **Set date** to change to **Set time** and enter your time (hour, minute, second). Tap **Exit** and save the settings.

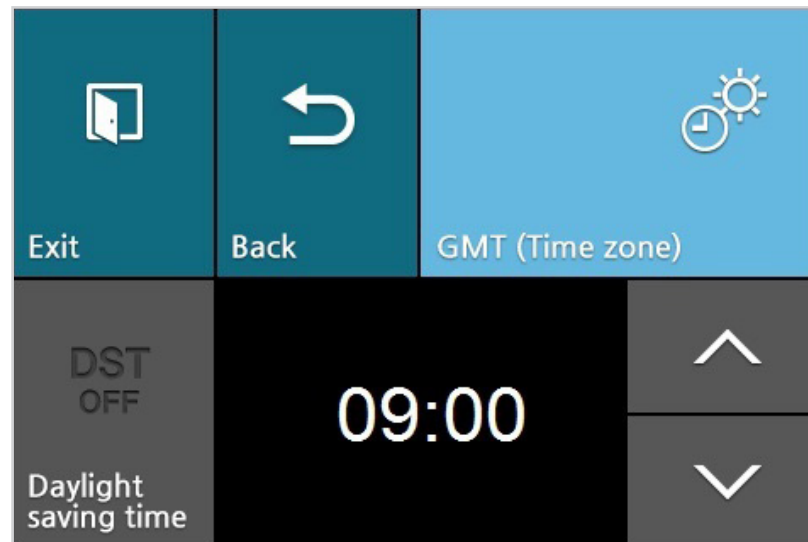


If you connect the GPS receiver:

If you run the dashcam with the GPS receiver connected, it is possible to sync with GPS time. To sync with GPS time select **Settings** from the Quick Menu and press the **Time** button. Tap the top right button (**Set date**) twice to get to **GMT (Time zone)**.

Enter your GMT time zone by selecting the field and using the up/down buttons.

Tap **Daylight saving time** to turn it on or off.

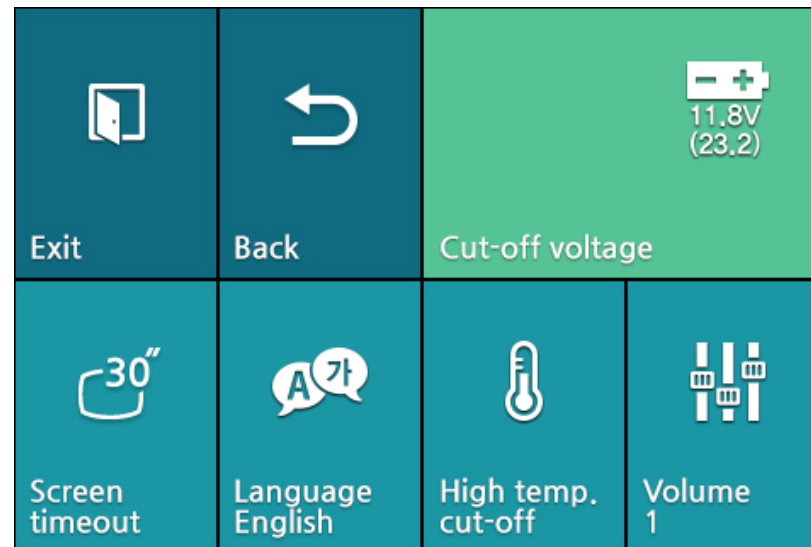


Some examples of time zones are:

Time zone	City
-08:00	Los Angeles
-05:00	New York
+00:00	London
+01:00	Paris
+03:00	Moscow
+08:00	Singapore
+09:00	Seoul
+10:00	Sydney

If you are unsure of your time zone please look up your city on <https://greenwichmeantime.com/>

System settings



Cut-off voltage

The dashcam will be powered in parking mode until your vehicle's battery voltage drops below the configured low voltage cut-off value for more than 5 minutes. The cut-off value can be configured to:

Car (Heavy vehicle)
Off
11.8V (23.2V)
11.9V (23.6V)
12.0V (24.0V)
12.2V (24.4V)
12.4V (24.8V)

Screen timeout

Adjust the screen timeout duration.

Language

Select your preferred language for the BlackVue (English, Simplified Chinese, Russian and Japanese supported). The audio announcements by the dashcam will be in the selected language.

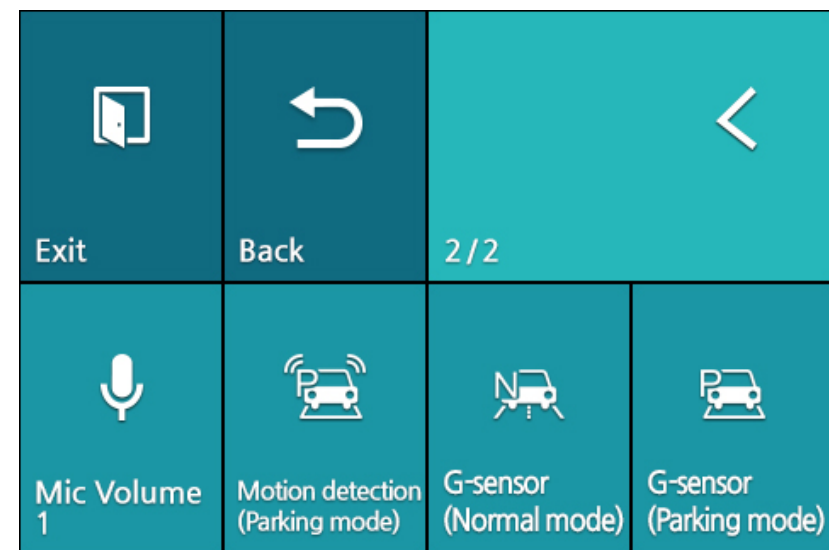
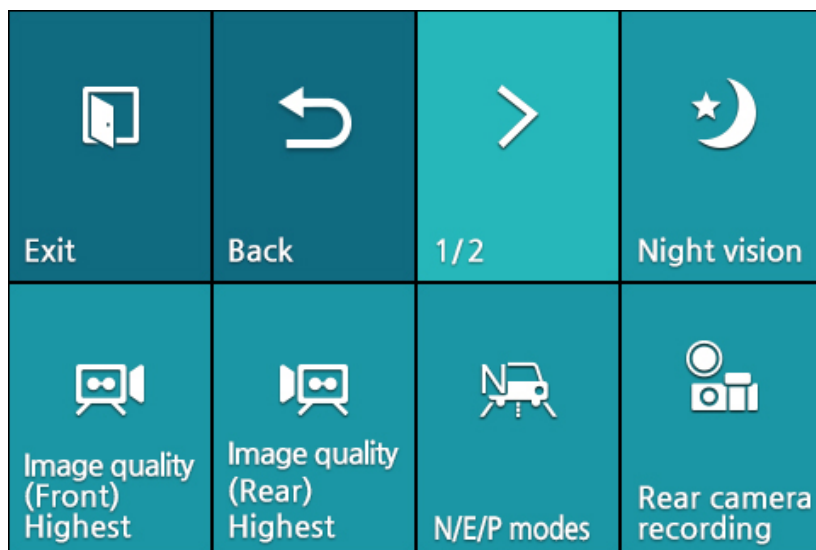
High temperature cut-off

This prevents the dashcam from overheating. When the cut-off is enabled, the dashcam will automatically shut down if its temperature reaches around 70 °C (158 °F).

Volume

You can adjust the volume of the voice guidance/alarms. Turn voice guidance ON in the Quick Menu first.

➤ Recording settings



Night vision

Turning on night vision will brighten the image when recording in low-light environments.

Image quality

You can adjust the recording image quality (bit rate). Choose between:

- Highest (Front: 11 Mbit/s, Rear: 11 Mbit/s)
- High (Front: 9 Mbit/s, Rear: 9 Mbit/s)
- Normal (Front: 7 Mbit/s, Rear: 7 Mbit/s)

Increasing the image quality will increase the size of the video files. Loading and copying time will increase accordingly.

Recording mode setting

– N/E/P modes

All three recording modes (Normal / Event / Parking) will be enabled.

– Event mode

When the dashcam is on and the G-sensor detects an impact the dashcam will save an “Event recording”.

“Normal recording” and “Motion detection (Parking mode)” will be disabled.

Rear camera recording

You can enable or disable rear camera recording.

Mic Volume

When turned off the dashcam does not record audio.

Motion detection (Parking mode)

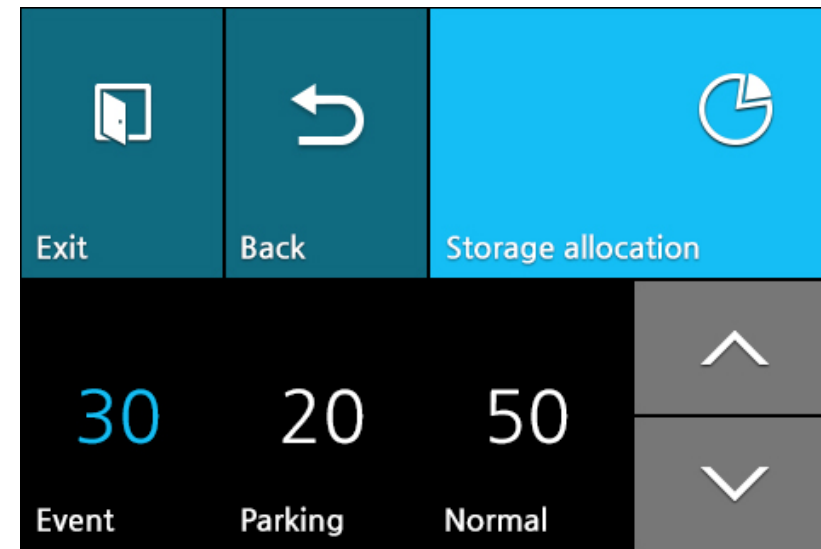
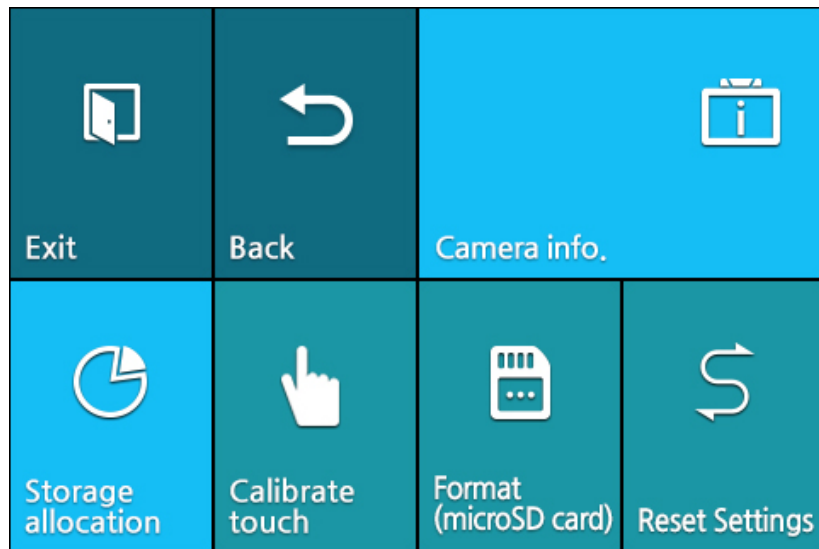
In parking mode the dashcam continuously buffers video and saves a parking recording when motion is detected in the dashcam's field of view.

You can adjust the sensitivity of the motion detection so minor motion caused by wind or rain doesn't trigger a recording. Please take into account your vehicle's surroundings when adjusting the sensitivity.

G-Sensor (Normal mode) / G-Sensor (Parking mode)

The G-sensor measures the movement of your vehicle. When the G-sensor detects significant or sudden movement (such as an impact or collision) it will trigger an event recording. You can adjust the sensitivity so minor incidents and bumps don't trigger an event recording. To turn off event recordings by impact detection set the G-sensor sensitivity to off.

➤ Other settings



Camera info

You can check the model name and firmware version.

Storage allocation

Please backup any important recordings before adjusting the storage allocation. The dashcam may delete some recordings when you save the settings.

You can adjust the percentage of the microSD card storage allocated to Event and Parking mode recordings (10% up to 80%). The remaining space will be allocated to Normal mode recordings.

Calibrate touch

You can re-calibrate the touch screen.

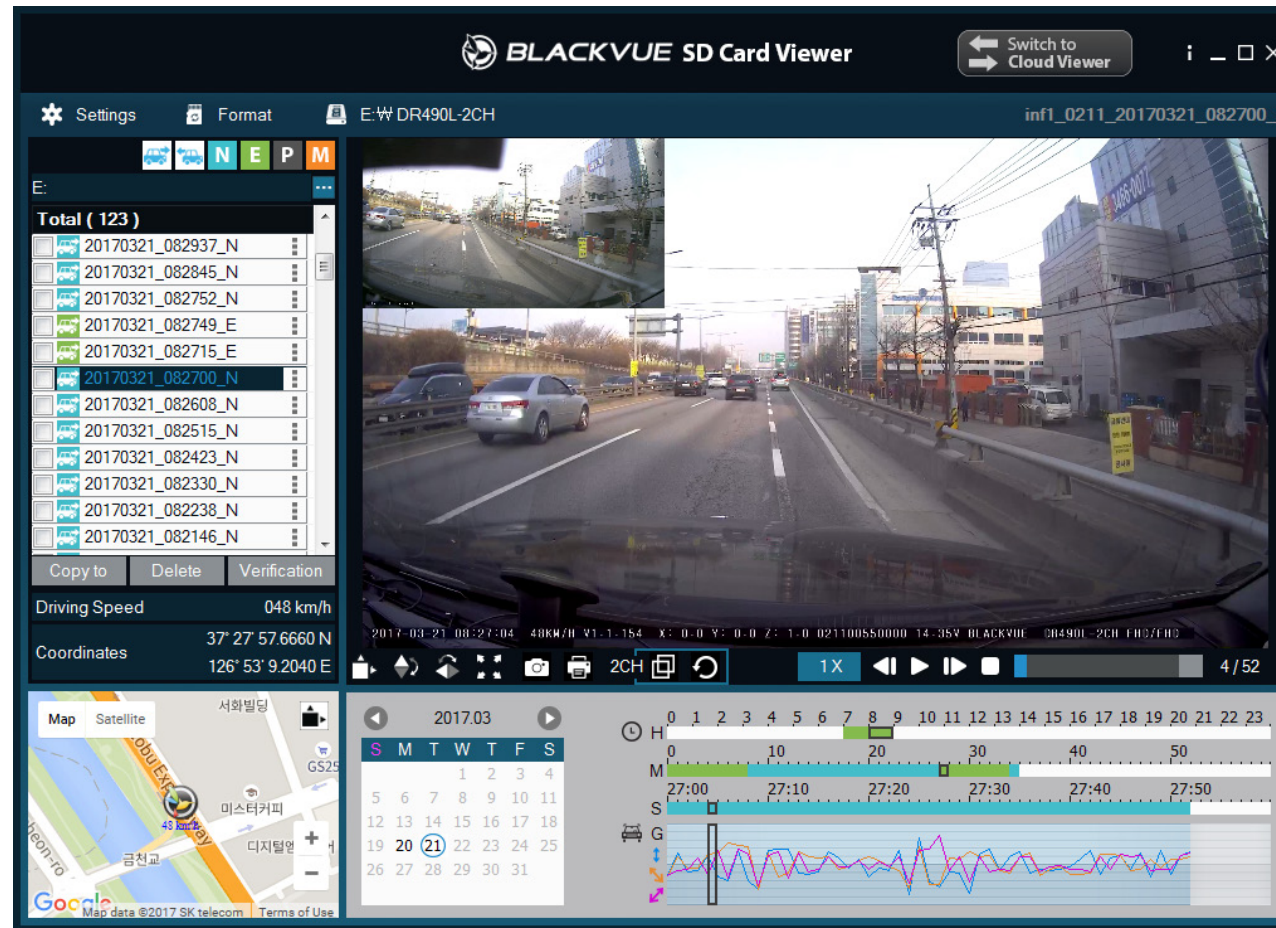
Format (microSD card)



Formatting the microSD card will delete all files stored on the microSD card. Please backup any important videos/data to a computer before formatting the card.

Reset settings

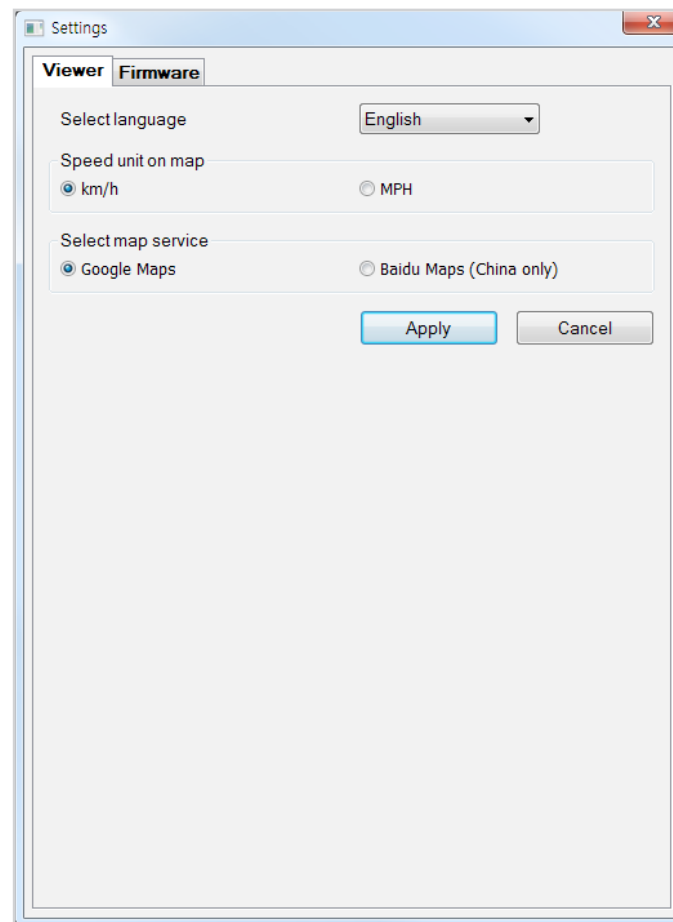
Reset settings (excluding the time and firmware language) to their defaults.

▶ Changing settings using your computer (Windows/Mac)



Click on the  Settings button (Windows) or the  BlackVue Viewer menu (mac OS) to open the BlackVue settings panel. You will be able to change most of the BlackVue settings to customize its operation.

BlackVue Viewer settings



Select language

Select your preferred language for the BlackVue Viewer interface from the dropdown list.

Speed unit on map

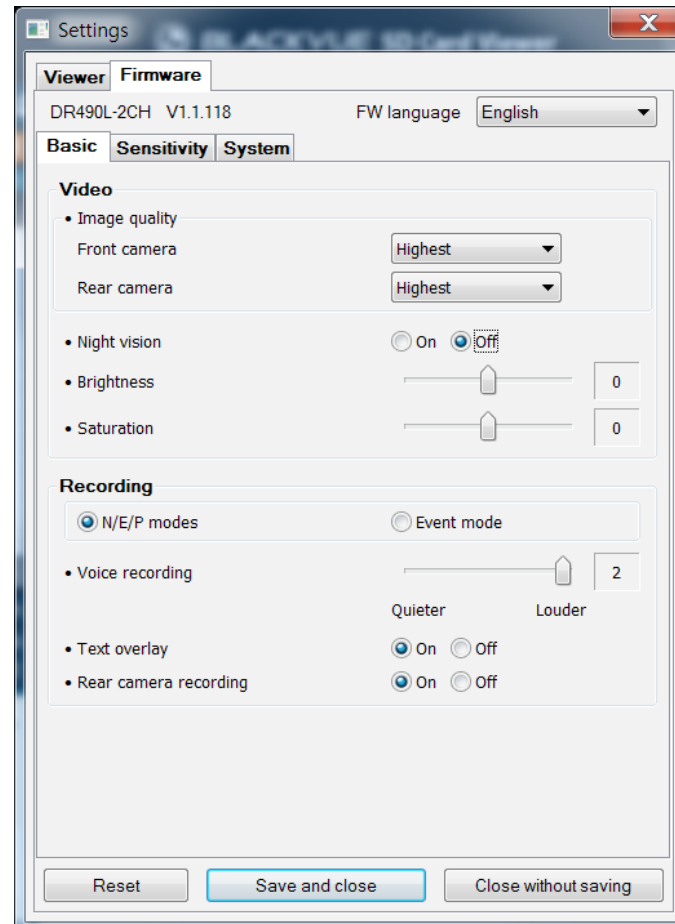
Change the speed unit displayed on the map.

Select map service

Change the mapping service used.

Firmware settings

Select your preferred language for the firmware from the FW language dropdown list. The audio announcements by the dashcam will be in the selected language.



Basic settings

Video settings

– Image quality

You can adjust the recording image quality (bit rate). Choose between:

- Highest (Front: 11 Mbit/s, Rear: 11 Mbit/s)
- High (Front: 9 Mbit/s, Rear: 9 Mbit/s)
- Normal (Front: 7 Mbit/s, Rear: 7 Mbit/s)

Increasing the image quality will increase the size of the video files. Loading and copying time will increase accordingly.

– Night vision

Turning on night vision will brighten the image when recording in low-light environments.

– Brightness

You can adjust the recording brightness level of the cameras.

– Saturation

You can adjust the color saturation level of the cameras.

■ Recording settings

– Recording mode setting

- N/E/P modes

All three recording modes (Normal / Event / Parking) will be enabled.

- Event mode

When the dashcam is on and the G-sensor detects an impact the dashcam will save an “Event recording”.

“Normal recording” and “Motion detection (Parking mode)” will be disabled.

– Voice recording (Mic Volume)

When turned off the dashcam does not record audio.

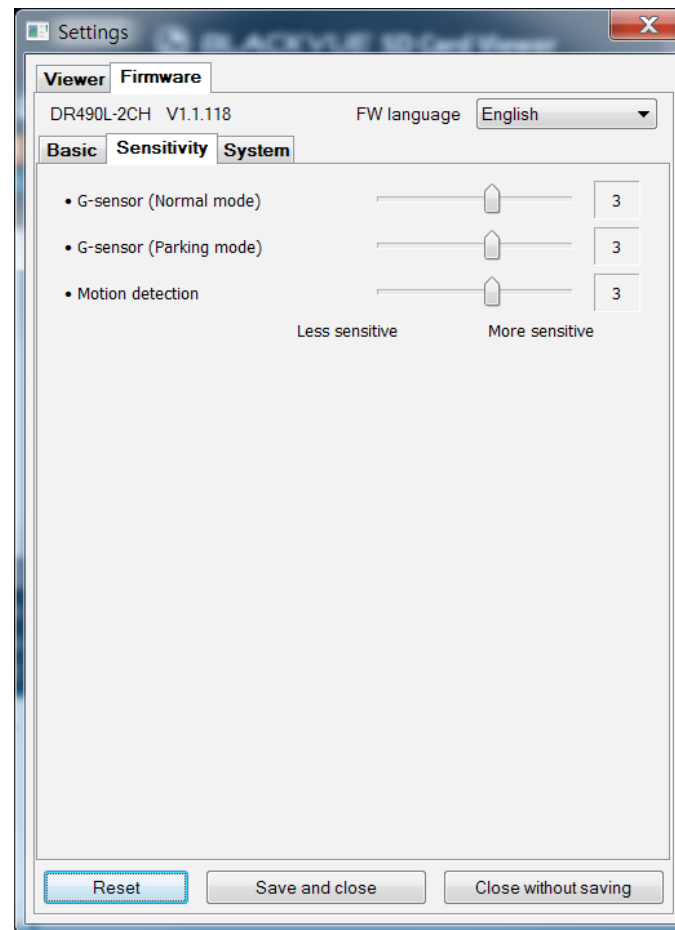
– Text overlay

Turn the text overlay on/off.

– Rear camera recording

You can enable or disable rear camera recording.

□ Sensitivity settings



■ G-Sensor (Normal mode) / G-Sensor (Parking mode)

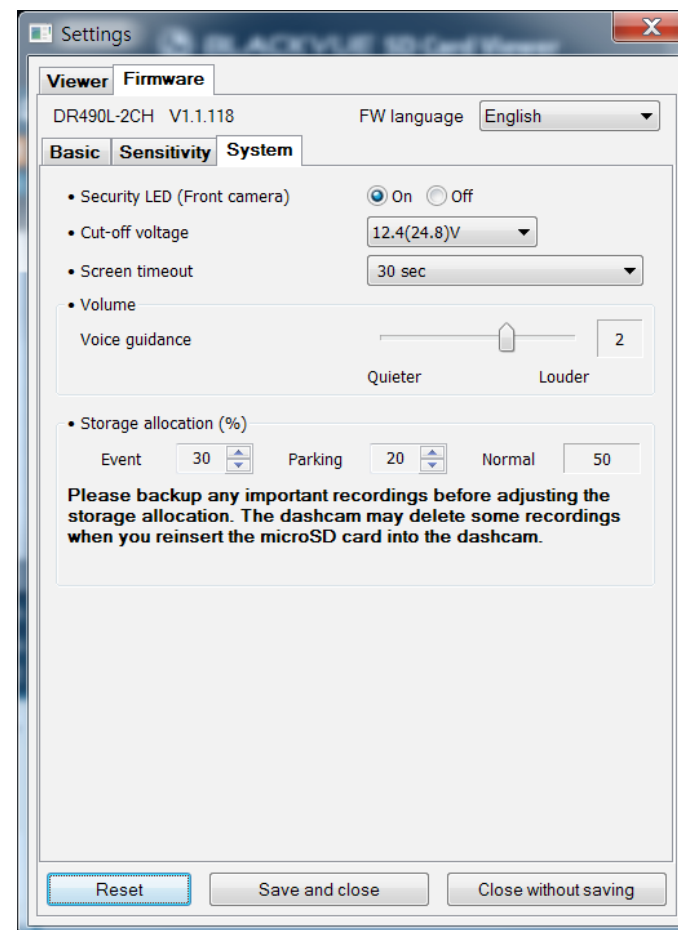
The G-sensor measures the movement of your vehicle. When the G-sensor detects significant or sudden movement (such as an impact or collision) it will trigger an event recording. You can adjust the sensitivity so minor incidents and bumps don't trigger an event recording. To turn off event recordings by impact detection set the G-sensor sensitivity to off.

■ Motion detection (Parking mode)

In parking mode the dashcam continuously buffers video and saves a parking recording when motion is detected in the dashcam's field of view.

You can adjust the sensitivity of the motion detection so minor motion caused by wind or rain doesn't trigger a recording. Please take into account your vehicle's surroundings when adjusting the sensitivity.

System settings



Security LED (Front camera)

You can turn the front security LED on/off.

Cut-off voltage

The dashcam will be powered in parking mode until your vehicle's battery voltage drops below the configured low voltage cut-off value for more than 5 minutes. The cut-off value can be configured to:

Car (Heavy vehicle)

Off

11.8V (23.2V)

11.9V (23.6V)

12.0V (24.0V)

12.2V (24.4V)

12.4V (24.8V)

■ Screen timeout

Adjust the screen timeout duration.

■ Volume

You can adjust the volume of the voice guidance/alarms.

■ Storage allocation

Please backup any important recordings before adjusting the storage allocation. The dashcam may delete some recordings when you reinsert the microSD card into the dashcam.

You can adjust the percentage of the microSD card storage allocated to Event and Parking mode recordings (10% up to 80%). The remaining space will be allocated to Normal mode recordings.

Applying the settings

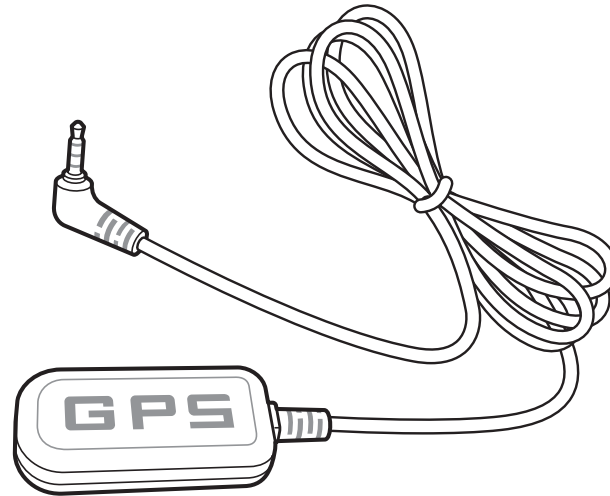
You can automatically apply the configuration by inserting the microSD card into the BlackVue dashcam and turning it on. Configure the settings before using the dashcam.

To reset all settings (except for the time and language settings) to their defaults press the **Reset** button at the bottom of the settings panel.

Optional accessories

➤ GPS receiver (Optional)

If you do not install an external GPS receiver, videos are recorded without GPS coordinates and driving speed information. To include speed, recording location, and the driving route data in the videos, install an external GPS receiver.



Note

- If you purchased the product without an external GPS receiver, please visit the BlackVue website (www.blackvue.com) for information about purchasing a GPS receiver separately.

Product specifications

Model Name	DR490L-2CH
Color/Size/Weight	Front: Black/Width 99.5 mm x Height 60.1 mm x Thickness 31.8 mm/93 g Rear: Black/Width 51.3 mm x Height 29.7 mm x Thickness 29.2 mm/18 g
Memory	microSD Card (16 GB/32 GB/64 GB/128 GB)
Recording Mode	Normal Recording, Event Recording (Impact Detection), Parking Mode Recording (Motion & Impact Detection)
Camera	Front: CMOS Sensor (Approx. 2 megapixels) Rear: CMOS Sensor (Approx. 2 megapixels)
Viewing Angle	Front: Diagonal 130°, Horizontal 113°, Vertical 58° Rear: Diagonal 130°, Horizontal 110°, Vertical 62.5°
Resolution/Frame Rate	<Front - Rear> Full HD (1920x1080) @ 30 fps - Full HD (1920x1080) @ 30 fps
Image Quality	Highest, High, Normal
LCD	3.5 inch touch LCD
Video Compression Mode	AVI
GPS	External
Microphone	Built-in
Speaker (Voice Guidance)	Built-in
LED Indicators	Front: Front Security, GPS, REC Rear: Rear Security
Switch	Power Switch
Sensor	3-Axis Acceleration Sensor
Backup Battery	Built-in super capacitor
Input Power	DC 12 V–24 V (DC Plug(Ø3.5 x Ø1.1) to Wires (Black: GND/Yellow: ACC/Red: BATT))

Power Consumption	<p>Max. 370 mA (4.81 W at 13 V, when GPS and LCD are On)</p> <p>Max. 280 mA (3.64 W at 13 V, when in parking standby mode)</p> <p>* Actual power consumption may vary depending on use conditions and environment.</p>
Operation Temperature	-20 °C–70 °C (-4 °F–158 °F)
Storage Temperature	-30 °C–80 °C (-22 °F–176 °F)
High Temperature Cut-Off	Approx. 70 °C (158 °F)
Low Voltage Cut-Off	Configurable: OFF/11.8 V (23.2)/11.9 V (23.6)/12.0 V (24.0)/12.2 V (24.4)/12.4 V (24.8)
Certifications	<p>Front: FCC, CE, RoHS</p> <p>Rear: FCC, CE, RoHS</p>
Software	<p>BlackVue Viewer</p> <p>* Windows XP or higher (Windows 8 supported) and Mac Yosemite OS X (10.10) or higher</p>
Advanced Driver Assistance Systems (ADAS)	Lane Departure Warning System (LDWS)
Other Features	Format-Free Technology for Stable Recording

Recording time

Your dashcam will automatically start recording when it is switched on.

Camera	Memory Capacity	Image Quality	Total Recording Time (Normal + Event + Parking)
Front + Rear	16GB	Highest	1 HR 38 MIN
		High	2 HR
		Normal	2 HR 33 MIN
	32GB	Highest	3 HR 16 MIN
		High	4 HR
		Normal	5 HR 7 MIN
	64GB	Highest	7 HR 28 MIN
		High	8 HR 2 MIN
		Normal	10 HR 20 MIN
	128GB	Highest	13 HR 11 MIN
		High	16 HR 7 MIN
		Normal	20 HR 44 MIN

Camera	Image Quality	Bit Rate
Front	Highest	11 Mbit/s
	High	9 Mbit/s
	Normal	7 Mbit/s
Rear	Highest	11 Mbit/s
	High	9 Mbit/s
	Normal	7 Mbit/s

 **Note**

- If the microSD card is full, the oldest files of the same recording mode type are deleted first to make space for newly-recorded videos. Copy important files, such as event recording files, to other storage media.
- Total recording time is different depending on the memory capacity of the microSD card, image quality and storage allocation settings.
- You can adjust the percentage of the microSD card storage allocated to Event or Parking mode recordings (minimum 10%; maximum 80%). The remaining space will be allocated to Normal mode recordings. See "**Storage allocation**" on page 55 or 64 for details.

Customer Support

For customer support and firmware updates please visit www.blackvue.com


You can also email a Customer Support expert at cs@pittasoft.com

Before Requesting Service

Please back up all important files and data before requesting service. In order to service the dashcam it may be necessary to delete all files and data from the dashcam. All servicing is provided on the basis that the user has backed up all necessary files and data before requesting service. Therefore Pittasoft Co., Ltd. will not be responsible for the loss of any files or data.

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