



f890g

**Car Camcorder
User Manual**

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About this Guide

The content in this document is for information purpose and is subject to change without prior notice. We have made every effort to ensure that this User Guide is accurate and complete.

However, no liability is assumed for any errors or omissions that may have occurred.

The manufacturer reserves the right to change the technical specifications without prior notice.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate, 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

WEEE Notice

Disposal of Waste Electrical and Electronic Equipment and/or Battery by users in private households in the European Union



WEEE



Battery

This symbol on the product or on the packaging indicates that this cannot be disposed of as a household waste. You must dispose of your waste equipment and/or battery by handing it over to the applicable take-back scheme for the recycling of electrical and electronic equipment and/or battery. For more information about recycling of this equipment and/or battery, please contact your city office, the shop where you purchased the equipment or your household waste disposal service. The recycling of materials will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and environment.

CE Regulatory Notice

The product herewith complies with the requirements of the Low Voltage Directive 2014/35/EU, the EMC Directive 2014/30/EU, battery directive 2006/66/EC, the R&TTE Directive 1999/5/EC and the RoHS Directive 2011/65/EC.

Battery Warning

- ❖ Never dismantle, crush, or pierce the battery, or allow the battery to short-circuit. Do not expose battery being placed in high temperature environment, if battery leaks or bulges, stop continue to use.
- ❖ Always charge using the system. Risk of explosion if battery is replaced by an incorrect type.
- ❖ Keep the battery out of reach of children.
- ❖ Batteries may explode if exposed to open fire. Never dispose of batteries in a fire.
- ❖ **Never replace the battery on your own; have the dealer do it for you.**
- ❖ Disposed of used batteries observing local regulations.

Notes on Installation

1. Please measure the front windshield viewing area, make sure not to block driver's front view, install the camcorder below the rearview mirror (the central, higher right position of the front windshield). And we recommend that the sky and the land occupied by the screen 50%, fix the car holder and then adjust the camcorder so that the lane is aligned with the screen. Proper installation enables the camcorder to maximize the efficiency also can enhance the accuracy of LDWS.
2. Make sure that the lens is within the wiping range of the windscreen wiper to ensure a clear view even when it rains.
3. Do not touch the lens with your fingers. Finger grease may be left on the lens and will result in unclear videos or pictures. Clean the lens on a regular basis.
4. Do not install the camcorder on a tinted window. Doing so may damage the tint film.
5. Make sure that the installation position is not hindered by the tinted window.
6. This product is suitable for light windshield or light color heat-resistant film windows , it will affect video quality if install it on the dark windows or dark heat-resistant film windows.
7. Use the products of the attached power charger only, please do not use other brand power charger, in order to avoid equipment burn or cause the battery explosion.

Caution

- ❖ Due to local laws and vehicles safety considerations, do not operate the camcorder while driving.
- ❖ Set up time zone, time and date accurately before you use this camcorder.
- ❖ Please use SuperCar software under the condition that Electronic Map are functioning normally.
- ❖ The firmware function in the camcorder is for reference only, drivers are advised to exercise discretion based on actual road conditions.

- ❖ The results of GPS positioning are only for reference, and should not affect the actual driving situation. The camcorder also cannot ensure the positioning accuracy.
- ❖ GPS positioning accuracy may differ depending on weather and location such as high buildings, tunnels, undergrounds, or forests. GPS satellite signals cannot pass through solid materials (except glass). Tinted window will also affect the performance of the GPS satellite reception.
- ❖ GPS reception performance on each camcorder may differ. The camcorder cannot determine the accuracy of the positioning results from different hardware.
- ❖ The values displayed in this camcorder, such as speed and position, may be inaccurate due to the influence of surrounding environment. They are for your reference only.
- ❖ This product is used only for non-commercial use, within the maximum limits permitted by applicable law. We do not take any responsibilities for the loss of use of the product.
- ❖ This camcorder gets warm when in use; this is normal.
- ❖ Improper use or operation of the product may result in damage of the product or its accessories and void the warranty.
- ❖ HP Inc. is NOT responsible for the loss of any data/content during operation.

Before you start using the product, it is assumed that you agree to the above statement.

1 Introduction

Thank you for purchasing this advanced Car Camcorder. This product is specifically designed for real time video recording when driving. It also supports a HP rear camera. You might ask distributor for further information.

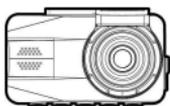
1.1 Features

- Quad HD recording videos (2560x1440P@30fps)
- 3.0" TFT-LCD color screen
- Wide angle lens
- Collision Detection, when a collision is detected, the camcorder will automatically trigger the emergency recording
- Parking Mode, the system will automatically power on and start recording when the camcorder senses the vibration
- Multifunction traffic safety reminder
- Support SDHC class 10 and microSD memory storage 16GB or above (support up to 32GB)

1.2 Package Contents

The package contains the following items. In case there is any missing or damaged item, contact your dealer immediately.

Car Camcorder



Bracket



CD-ROM



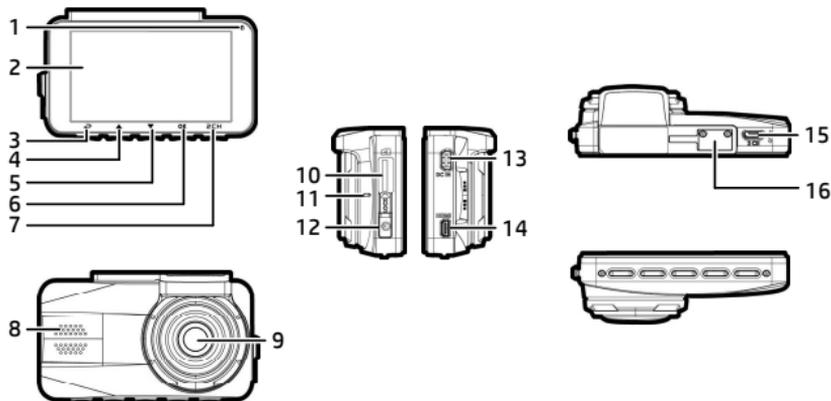
Quick Start Guide



Car Adapter



1.3 Product Overview



No.	Item
1	LED Indicator
2	LCD Color Screen
3	Menu / Back Button (☰ / ↶)
4	Add Speed Point / Up Button (📍 / ▲)
5	Snapshot / Down Button (📷 / ▼)
6	Emergency Recording / Confirm Button (⚠️ / ⏹)
7	Switch Camera Button (📷↔️)
8	Speaker

No.	Item
9	Wide Angle Lens
10	Memory Card Slot
11	Microphone
12	Power Switch
13	Power Connector Port
14	HDMI Connector Port
15	Micro USB Connector Port
16	Bracket Socket

Note:

Please press the button (3~7) according to the diagram notice shown on screen.

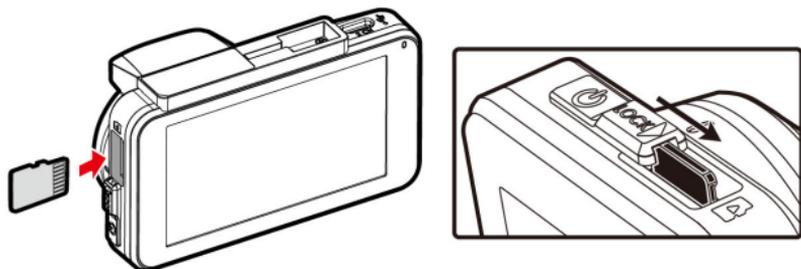
2 Getting Started

2.1 Storage Media

2.1.1 Insert the Memory Card

Insert memory card with the pins facing forward and the screen of the camcorder facing forward too, see the picture as below:

Also, insert the SD card into the camcorder until the lock can be smoothly slid. Card will be protruding in normal use, and damage may occur if pressed too hard. Please read the instructions carefully on the screen layer.



2.1.2 Remove the Memory Card

If the camcorder is power on, please power off first and wait for the procedure of switching off the camcorder completed before removing the memory card. Please refer **Manual Power On/Off** (2.5.2).

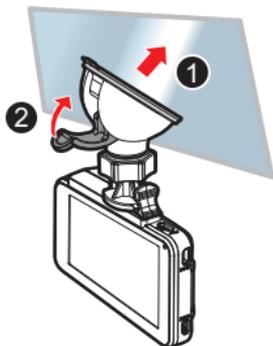
Note:

1. Do not remove or insert the memory card when the camcorder is turned on. This may damage the memory card.
2. Support SDHC class 10 and memory storage 16GB or above (support up to 32GB).
3. Please format the microSD cards before the initial use. The formatted file type for this camcorder is FAT32 file.

2.2 Installing in Vehicles

2.2.1 Mount the Camcorder to Windshield

1. Push the bracket into bracket slot on top of camcorder until a click sound is heard.
2. Connect the power cable then power on to enter preview screen and confirm the field of view. Then clean the surface of the windshield with alcohol to ensure that the adhesion surface is clean. Please refer to **Connecting to Power** (2.3), and **Powering the Camcorder On / Off** (2.5).
3. Remove the protective layer on the bottom of the bracket.
4. Release the lever of the bracket, install the bracket onto the windshield, then lock the lever to complete the installation.



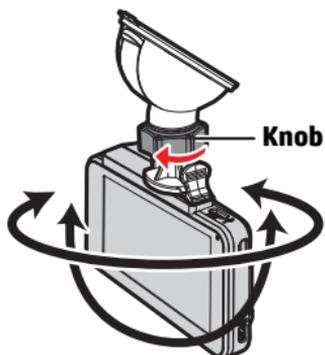
5. Make sure the bracket is firmly installed onto the windshield.

Note:

1. Do not install the camcorder on a tinted window. Doing so may damage the tint film.
2. This product is suitable for light windshield or light color heat-resistant film windows, it will affect video quality if install it on the dark windows or dark heat-resistant film windows.
3. Remove the protective layer on the bottom of the bracket.

2.2.2 Adjust the Camcorder

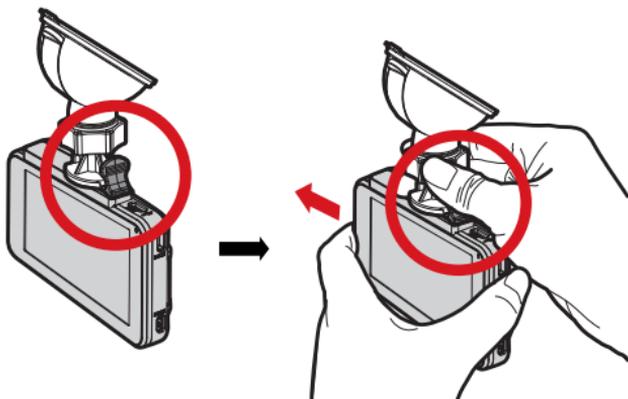
1. Loosen the knob to swivel the camcorder vertically or horizontally.



2. Then tighten the knob to make sure the camcorder is securely locked in place.

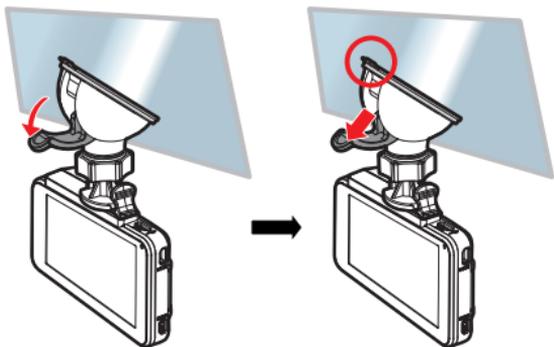
2.2.2.1 Dismount the Camcorders

For removing the camcorder, press the slot to the left to remove camcorder as the picture shown.



2.2.2.2 Dismount the Bracket

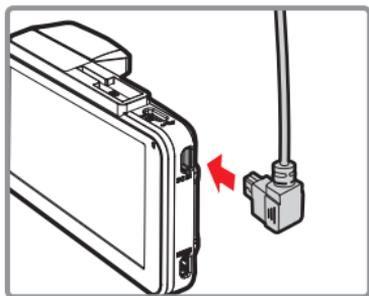
To dismount the bracket, first release the nut then pull top point to dismount the bracket.



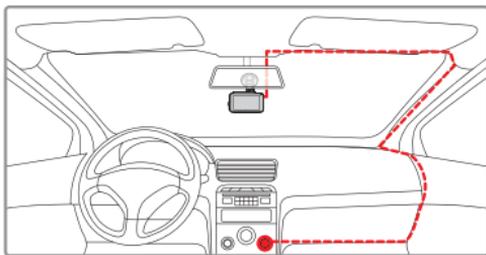
2.3 Connecting to Power

Use only the attached power connector for activating the camcorder and charging the built-in battery.

1. Connect one end of power connector to power connector port on the camcorder. USB port input: DC 5V / 1.0A.



2. Plug the other end of the car adapter to the cigarette lighter socket of your vehicle. Once the vehicle engine is started, the camcorder automatically turns on. Car charger input: DC 12 / 24V.



Note:

Please measure front windshield viewing area, so as not to block the driver's field of view, and install the camcorder under the driving mirror (upper central of the front windshield). And we recommend that the sky and the land occupied by 50% in the recording screen, please adjust the camcorder so that the alignment icon is aligning the driving lane. Proper installation enables the camcorder to maximize the efficiency and improve the accuracy of LDWS.

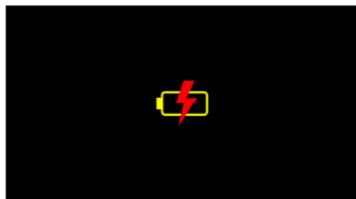
Battery Status Indicator:

Icon	Description
	Full battery power.
	2/3 battery power.
	1/3 battery power.
	Out of battery power.
	Battery is charging.
	Connect the car adapter to charge the battery, battery is fully charged.

Note:

1. Use the products of the attached power charger only, please do not use other brand power charger, in order to avoid equipment burn or cause the battery explosion.
2. Please take note if the environment temperature reaches 45°C or above, the car adapter can still supply power to camcorder, but it will not charge the Lithium-ion battery. This is the characteristic of Li-polymer and is not a malfunction.

Low Voltage:



Note:

If the camcorder is connected to the car adapter and turned on, and the screen displays a charging reminder symbol such as the image above, it means that the available voltage is too low. Please wait for a few minutes until the charging reminder symbol disappears before entering the video recording mode to prevent invalid recording or file damage.

2.4 LED Indicator

Status Explanation	LED Indicator Color
Power off, battery charging	Red
Power off, battery full charged	LED light off
Power on, battery charging	Red
Power on, battery full charged	Green
Standby / Standby and screen off	Green
Recording/ Recording and screen off	Flash red

2.5 Powering the Camcorder On / Off

2.5.1 Auto Power On/Off

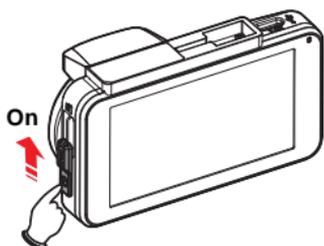
If the camcorder is connected to the vehicle power supply, once start the car engine, the camcorder will automatically power on and start recording.

Once the vehicle engine shuts down, the camcorder automatically saves the recording and turns off the power within 10 seconds.

2.5.2 Manual Power On/Off and Reset

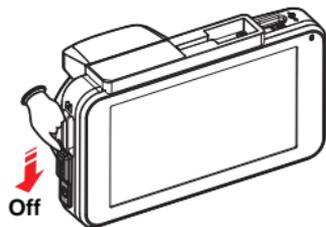
2.5.2.1 Manual Power On

Push the **power switch** and make sure that the power switch locks on the memory card slot.



2.5.2.2 Manual Power Off

Push the **power switch** and make sure that the memory slot is released and the camcorder starts power off sequence. Do not power on the camcorder when it is in the power-off sequence, or the recorded file may become corrupt.



2.5.2.3 Reset the Camcorder

In case the camcorder fails to function normally due to unknown causes, push the **power switch** and verify the memory card is in the removable state; wait for 10 seconds and push the power switch again to restart the camcorder.

2.6 Initial Settings

Before using the camcorder, we recommend you setup the correct **Time zone, Date and Time**.

Note:

Please note that if you press the  button during recording, the system will stop recording and enter OSD menu. Make sure the recording is already stopped then continue operating the menu.

2.6.1 Set Time zone

To set the time zone, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Set Time zone**, and then press the  button for entering function menu.
3. Press the  button to set the current time zone, and then press the  button to complete setting.



4. Press the  button to return to recording screen.

City	UTC	City	UTC	City	UTC	City	UTC	City	UTC
Accra	0	Budapest *	+1	Houston *	-6	Melbourne	+10	Santiago	-4
Addis Ababa	+3	Buenos Aires	-3	Indianapolis *	-5	Mexico City *	-6	Santo Domingo	-4
Adelaide **	+9	Cairo	+2	Islamabad	+5	Miami *	-5	São Paulo	-3
Algiers	+1	Calgary *	-7	Istanbul *	+2	Minneapolis *	-6	Seattle *	-8
Almaty	+6	Canberra	+10	Jakarta	+7	Minsk	+3	Seoul	+9
Amman *	+2	Cape Town	+2	Jerusalem *	+2	Montevideo	-3	Shanghai	+8
Amsterdam *	+1	Caracas **	-4	Johannesburg	+2	Montreal *	-5	Singapore	+8
Anadyr	+12	Casablanca *	0	Kabul **	+4	Moscow	+4	Sofia *	+2
Anchorage *	-9	Chicago *	-6	Karachi	+5	Mumbai **	+5	St. John's **	-3
Ankara *	+2	Columbus *	-5	Kathmandu **	+5	Nairobi	+3	Stockholm *	+1
Antananarivo	+3	Copenhagen *	+1	Khartoum	+3	Nassau *	-5	Suva	+12
Asuncion	-4	Dallas *	-6	Kingston	-5	New Delhi **	+5	Sydney	+10
Athens *	+2	Dar es Salaam	+3	Kinshasa	+1	New Orleans *	-6	Taipei	+8
Atlanta *	-5	Darwin **	+9	Kiritimati	+14	New York *	-5	Tallinn *	+2
Auckland	+12	Denver *	-7	Kolkata **	+5	Oslo *	+1	Tashkent	+5
Baghdad	+3	Detroit *	-5	Kuala Lumpur	+3	Ottawa *	-5	Tegucigalpa	-6
Bangalore	+5	Dhaka	+6	Kuwait City	+8	Paris *	+1	Tehran **	+3
Bangkok	+7	Doha	+3	Kyiv *	+2	Perth	+8	Tokyo	+9
Barcelona *	+1	Dubai	+4	La Paz	-4	Philadelphia *	-5	Toronto *	-5
Beijing	+8	Dublin *	0	Lagos	+1	Phoenix	-7	Vancouver *	-8
Beirut *	+2	Edmonton *	-7	Lahore	+5	Prague *	+1	Vienna *	+1
Belgrade *	+1	Frankfurt *	+1	Las Vegas *	-8	Reykjavik	0	Warsaw *	+1
Berlin *	+1	Guatemala	-6	Lima	-5	Rio de Janeiro	-3	Washington DC *	-5
Bogota	-5	Halifax *	-4	Lisbon *	0	Riyadh	+3	Winnipeg *	-6
Boston *	-5	Hanoi	+7	London *	0	Rome *	+1	Yangon **	+6
Brasilia	-3	Harare	+2	Los Angeles *	-8	Salt Lake City *	-7	Zagreb *	+1
Brisbane	+10	Havana *	-5	Madrid *	+1	San Francisco *	-8	Zürich *	+1
Brussels *	+1	Hong Kong	+8	Managua	-6	San Juan	-4		
Bucharest *	+2	Honolulu	-10	Manila	+8	San Salvador	-6		

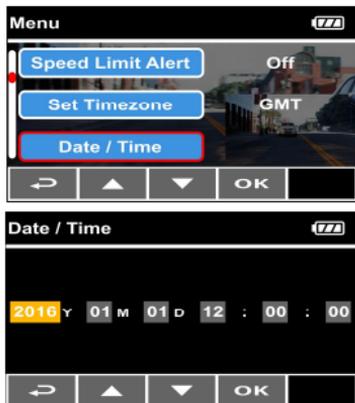
Note:

1. If **Time Sync.** is on, camcorder clock will be calibrated via satellite clock signal based on **Set Time zone.** Please refer to **Satellite Synchronization** (4.2).
2. If satellite positioning is not successful, camcorder clock will run based on user defined time.

2.6.2 Set the Date / Time

To set the correct date and time, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Date / Time**, and then press the  button for entering function menu.
3. Press the  button to adjust the value, and then press the  button to set the next field.



4. Repeat step 3 until the date and time setting is completed.

Note:

To ensure the accuracy of the video file time, please reset the date and time when the battery power runs out or when not in use over 7 days.

3 Using the Car Camcorder

3.1 Automatic Record

If the camcorder is connected to the vehicle power supply and slide the power switch, once start the car engine, the camcorder will automatically power on and start recording.

Recording will automatically stop when the engine is switched off.

Note:

1. Some vehicle power supply would not turn on / off automatically with the car engine start, if the camcorder cannot automatically power on/off with the car engine, please manually connect the power supply with the vehicle power, and then power on, or manually power off the camcorder and then release the connector with the car power supply.
2. It can be configured to save a video file for every 1 or 3 minutes of recording. Please refer to **Record Interval** (4.2).
3. All the videos and photos are saved in the memory card, if memory card is full, loop recording will be generally overwrite the oldest video file.

3.1.1 Resolution

2K HD@30 (1440P 30fps) / FHD@60 (1080P 60fps) / FHD HDR (1080P HDR 30fps) / FHD@30 (1080P 30fps) / HD@120 (720P 120fps).

3.1.2 The Recording Screen



No.	Icon	Item	Description
1		Recording Duration	Indicates the video current duration.
2		Date / Time	Indicates the current recording date and time.
3		Menu Button	During video recording, press the button to enter the OSD menu.
4		Add Speed Point Button	During video recording, press the button to add a speed cam point.
5		PIV (Photo in Video) Button	Press to capture video screen shots from the front camera.
6		Emergency Recording Button	During video recording, press the button to enter emergency recording mode. Please refer to Emergency Recording (3.1.3).
7		Switch Camera Button	Press to switch VIV screen. (Rear Camera is not included in standard package. Please contact distributor for further information.)

8		Voice Record icon	Indicates voice recording sets as off, the sound will not be recording.
9		Resolution icon	Indicates the video resolution.
10		Satellite Positioning icon	Indicates the strength of satellite positioning. If the  icon shows up on screen, it indicates that the camcorder cannot complete the satellite positioning.
11		Battery Power icon	Indicates battery or camcorder charging status.
12		VIV (Video in Video)	Indicates rear camera recording screen. (Rear Camera is not included in standard package. Please contact distributor for further information.)

3.1.3 Emergency Recording

To Start the Emergency Recording, do the following:

1. During Video Recording, press the  button to enter emergency recording mode, the “**Emergency**” message will be shown immediately on the upper left corner of the screen, and the recorded file will be protected.
2. The emergency video recording length is same as the recording interval setting. When the emergency recording length reaches the setting, the system will return to the general recording mode. Please refer to **Record Interval** (4.2).



Note:

1. If the **Collision Detection** function is enabled and a collision is detected, the camcorder will automatically trigger the emergency recording. Please refer to **Collision Detection** (3.4.4).
2. The emergency recording file is created as a new file, which will be protected to avoid being overwritten by normal cycling recording. A memory card can save up to 20 emergency video files if record interval time is 1 minute, and save up to 10 emergency video files if record interval time is set as 3 minutes.
3. The notice message of “**Emergency files are full**” will pop up on the screen when the emergency recording folder is full, and the later emergency files will be saved in the **Normal Video** folder which will be over written if memory is full. Thus, if you want to keep newest emergency video file, please manually delete the oldest files in the emergency video folder to release more capacity. Please refer to **File Deletion** (4.2).

3.2 Add Speed Point

You may customize speed cam positions in this product.

1. When the GPS positioning is completed , press \triangle to update speed camera points.
2. This product features a capacity of 200 speed cam positions. In case you are trying to add more than that the system prompts with message "**Speed Position is full**".

Note:

You may delete custom speed cam positions by selecting the **Delete Last Position** or **Delete All Position** option from the **Speed Position Management** menu. Please note that all of your existing speed cam positions are deleted once the **Delete All Position option** is selected. Make sure you are ready to recreate your custom speed cam positions before running this option.

3.3 Picture in Video

You can also use this camcorder to take snapshots of the current scene.

1. In recording status, press ∇ to capture recording screen shots from the front lens.
2. When the icon  shows in the central of screen, it means the screenshots is completed.



Note:

1. The screen shots image resolution quality is depending on the photo resolution setting. Please refer to **Resolution** (4.2).
2. The definition of picture in video by this product, the picture resolution is limited by the speed of the target object and changes in ambient lighting. The photograph function is better used for taking still pictures in accident scenes or when the car is stopped to wait for a traffic light.
3. It is available only for the front camera if user wants to take pictures during recording.

3.4 Driving Safety

The following driving safety function is for reference only. Drivers are advised to exercise discretion based on actual road conditions.

Note:

1. The **Driving Safety** function is limited to triggering no more than two alarms at the same time. If a voice and alert message have been triggered, any other alarm will be ignored until either of the two is settled.
2. Satellite positioning must be completed before functions such as **Speed Cam Alert**, **Speed Position Management**, **Speed Limit Alert**, **LDWS** and **FCWS** to be enabled. Be sure to check that Satellite positioning has been completed prior to using the product.
3. The detections of **LDWS**, **FCWS** and **FCMD** may be inaccurate when used in rain, at night or in environments of insufficient lighting. Drivers are advised to exercise discretion based on actual road conditions.

3.4.1 Speed Cam Alert

If the **Speed Cam Alert** function is enabled, once your car's location is determined by GPS and approaches a speed cam, this product produces audible alert and screen message.

To enable the Speed Cam Alert, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Speed Cam Alert**, and then press the  button for entering function menu.
3. Press the  button to select **On**, and then press the  button to enable the function.



4. Press the  button to return recording screen.
5. The alarm screen turns red to remind you to slow down if you are driving faster than the speed limit.



Note:

The speed cam alert function must have the speed cam datum from the country you use. The function will be void if the product is used in any others countries. Please consult with the shop you purchased if the function is void. There is no guarantee the speed cam datum will be included for the worldwide countries.

3.4.2 Speed Limit Alert

If the **Speed Limit Alert** function is enabled, this product produces audible alert and screen message once your car's location is determined by GPS and its running speed exceeds the set limit.

To set the Speed Limit Alert, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Speed Limit Alert**, and then press the  button for entering function menu.
3. Press the  button to set up a Speed Limit Alert to trigger this product's alarm [Off / 50 ~ 200 km/h (30~125 mph)], and then press the  button to complete setting.



4. Press the  button to return recording screen.
5. The alarm screen turns red to remind you to slow down if you are driving faster than the speed limit.

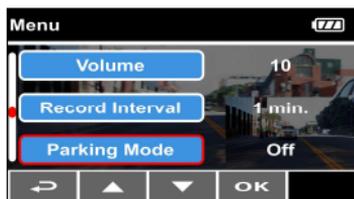


3.4.3 Parking Mode

To monitor the vehicle when it is parked, you can activate **Vibration Detection**, or **Motion and Collision Detection**.

Follow the steps below to change the settings for Parking Mode:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Parking Mode**, and then press the  button for entering function menu.



3. Press the  button to configure Parking Mode (Vibration Detection / Motion and Collision Detection / Off), and then press the  button to complete setting.
 - **Vibration Detection:**
 - If disconnected external power supply when the camcorder is powered on, the system alert message “**Wait 10 seconds to enter Vibration Detection.**” This means the system will power off and enter Vibration Detection automatically in 10 seconds.
 - Once Vibration Detection Mode is triggered, when the camcorder detects any collision, it will automatically power on and start recording, the event will be recorded for 60 seconds (per file).
 - In this mode, car camcorder is powered off until event happens. This mode is more power saving.
 - **Motion and Collision Detection:**
 - If disconnected external power supply when the camcorder is powered on, the system alert message “**Enter parking**

mode after 10 sec." This means the system will enter Motion and Collision Detection automatically in 10 seconds, and then LCD screen turn off after 30 seconds (the camcorder will turn off the screen temporarily, but still in standby detection status. Press any button to turn on the operation screen).

- In the Motion and Collision Detection mode, when the camcorder detects any motion in front of lens, or when the camcorder detects collision, the automatic record will be activated.
- In this mode, when the camcorder detects collision or any motion in front of lens, the video recording will be triggered and the event will be recorded for 10 seconds (per file). If the event lasts more than 10 seconds, the camcorder will keep recording up to 2 minutes.
- In this mode, the camcorder is in standby mode until event happens. This mode will consume more battery power.
- **Off:** No parking monitoring activated.

4. Press the  button to return recording screen.

Note:

1. When **Vibration Detection** or **Motion and Collision Detection** is on, if the external power supply is disconnected accidentally, the camcorder will record events by front camera.
2. If battery in a fully charged condition, it can record about 30 minutes video in **Motion and Collision Detection** mode. As the camcorder is used, the battery storage capacity will decrease gradually. This is a normal phenomenon for the battery.
3. The video files taken in Parking Mode will be saved in "Parking Mode" folder, which will not be overwritten by normal video files. However, if the remaining memory capacity is not enough to save the last normal video file, the oldest Parking Mode video will be deleted. Please always make sure you backup Parking Mode video files.
4. Parking Mode folder can save about 40 parking mode files, when parking mode files are full, loop recording will overwrite the oldest file.

3.4.4 Collision Detection

If the **Collision Detection** function is enabled, this camcorder begins emergency recording once it detects any collision. Sensitivity of the Collision Detection function is set to medium by default, if user wants to change the settings of Collision Detection, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Collision Detection**, and then press the  button for entering function menu.
3. Press the  button to change the sensitivity of this camcorder's collision detection (High Sensitivity / Normal Sensitivity / Low Sensitivity / Off), and then press the  button for entering function menu.
4. Press the  button return to recording screen.



Note:

1. The emergency recording file is created as a new file, which will be protected to avoid being overwritten by normal cycling recording. If record interval time is set as 1 minute, a memory card can save up to 20 emergency video files, and save up to 10 emergency video files if record interval time is set as 3 minutes.
2. The alert message of "**Emergency files are full**" will pop up on the screen when the emergency recording folder is full, and the later emergency files will be saved in the Normal Video folder which will be overwritten if memory is full. Thus, if you want to keep newest emergency video file, please manually delete the oldest files in the emergency video folder to release more space. Please refer to **File Deletion** (4.2).

3.4.5 Driver Fatigue Alert

If the **Driver Fatigue Alert** function is enabled, this product produces audible alert and screen message one hour after it has begun recording and repeats the alerts every half an hour afterwards.

To enable the Driver Fatigue Alert, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Driver Fatigue Alert**, and then press the  button for entering function menu.
3. Press the  button to select **On**, and then press the  button to enable the function.
4. Press the  button return to recording screen.
5. This product produces audible alert and screen message when **Driver Fatigue Alert** activates.



3.4.6 Headlight Warning

The **Headlight Warning** function produces audible alert and screen message when it detects poor lighting conditions through the recording displays of this camcorder, including driving in rainy or cloudy weather, at night, and in basements, parking lots, and tunnels.

To enable the Headlight Warning, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Headlight Warning**, and then press the  button for entering function menu.
3. Press the  button to select **On**, and then press the  button to enable the function.



4. Press the  button to return recording screen.
5. This product produces audible alert and screen message when **Headlight Warning** activates.

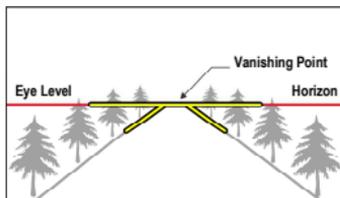


3.4.7 LDWS

Once your car's location is determined by GPS and the **LDWS** function is enabled, this camcorder produces audible alert and screen message when you drive off of or change lanes at speeds over 70 km/h (43 mph).

To set the LDWS (Lane Departure Warning Systems), do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **LDWS**, and then press the  button for entering function menu.
3. Press the  button to select **On**, and then press the  button to enable the function.
4. Press the  button to return to recording screen.
5. After enabling **LDWS**, the screen will display traffic lane align icon , please adjust the camcorder so that the horizontal line and the eye level are overlapped and the slash lines are centered in the driving lane.



6. This product produces audible alert and screen message when **LDWS** is activates.



Note:

1. Please measure front windshield viewing area, do not block the driver's forward field of vision, and install the camcorder below rearview mirror (upper central of the front windshield). We recommend that the sky and the ground occupied 50 % of the video screen, install the bracket then adjust the camcorder to make the lane is aligned to the lane alignment icon. Correct installation makes the camcorder to maximize the efficiency and improve the accuracy of LDWS.
2. Make sure that traffic lane align icon will not be obscured other things (e.g. hood). It may cause misjudgment if the endpoint is obscured.

3.4.8 FCWS

Once your car's location is determined by GPS and the **FCWS** function is enabled, this camcorder produces audible alert and screen message when you drive at speeds over 60 km/h (37 mph) and are less than 15m away from the car in front of you. If the camcorder not completes the satellite positioning, and the leading vehicle distance below 15 meters, it will also produce a warning screen and voice reminder.

To set the FCWS (Forward Collision Warning System), do the following:

1. Press the  button to enter the OSD menu.

2. Press the  button to select **FCWS**, and then press the  button for entering function menu.

3. Press the  button to select **On**, and then press the  button to enable the function.



4. Press the  button to return recording screen.

5. This product produces audible alert and screen message when **FCWS** is activates.



3.4.9 FCMD

If FCMD function is enabling, the camcorder will determine it from front car about 0.3 ~ 4 meters. When the front object moves about 3 ~ 5 seconds and the car did not start to drive forward, the camcorder will issue audible alert and screen message.

To set the FCMD (Front Car Move Detection), do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **FCMD**, and then press the  button for entering function menu.
3. Press the  button to select **On**, and then press the  button to enable the function.



4. Press the  button to return recording screen.
5. This product produces audible alert and screen message when **FCMD** activates.



Note:

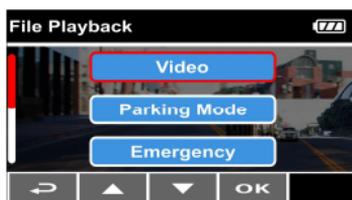
The camcorder will detect the front image change to determine FCMD notification alert, so if the car is in rest condition and front object moves, the camcorder may be false judgment occur, and please judge it according to the actual driving situation.

3.5 File Playback

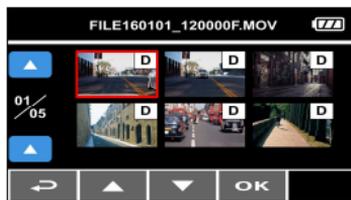
3.5.1 Playing Videos

Playback video record files as follows:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **File Playback**, and then press the  button for entering function menu.
3. Press the  button to select **Video / Parking Mode / Emergency**, and then press the  button for entering menu.



4. Press  button to browse video files, select the video file and then press  button to enter **Playback Mode**. If thumbnail shows  icon, it indicates that the file is dual-lens recording. In the recording mode, you can use  button to switch the front and rear lens recording file. (Rear Camera is not included in standard package. Please contact distributor for further information.)



5. Press the  repetitively to return recording screen.

3.5.2 Viewing Pictures

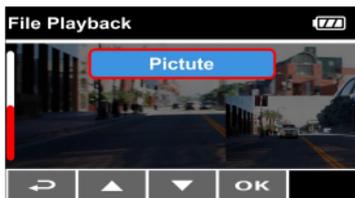
View pictures as follows:

1. Press the  button to enter the OSD menu.

2. Press the  button to select **File Playback**, and then press the  button for entering function menu.



3. Press the  button to enter **Picture**, and then press the  button for entering menu.



4. Press  button to browse the photo file, select the file and then press  button to enter the photo **Playback Mode**.



5. Press the  repetitively to return recording screen.

3.5.3 Playback Screen

Video Playback Screen



Picture Playback Screen



No.	Icon	Item	Description
1	1/30	File Number / Total File	Indicates of the total number of files.
2	4X	Fast Forward / Fast Rewind icon	Indicates video fast-forward and rewind status.
3	FILE160101_120000F.MOV	File name	Indicates the file name of video / picture.
4	Return icon	Return	Press the button to return preview screen of video or picture. Press the button repetitively to return recording screen.
5	Fast Rewind / Previous File Button	Fast Rewind / Previous File Button	When playing videos, press the button will reverse the playback. Press button to view previous file.
6	Fast Forward / Next File Button	Fast Forward / Next File Button	When playing videos, press the button to fast forward playing of video. Press button to view next file.
7	Playback/ Pause button	Playback/ Pause button	Press the button to play or pause the video.

No.	Icon	Item	Description
8		Lens Switch Button	In playback mode, press  button to switch files with dual lens recording file. (Rear Camera is not included in standard package. Please contact distributor for further information.)
9		Battery icon	Indicates Battery or charging status.
10	00:10 / 01:00	Playback Duration / Total Duration	Indicates video playback time and total duration.
11	2016/01/01 12:00	Date and time	Indicates the date and time of filming.
12		Previous File	When viewing pictures, press the  button will switch over to the previous file.
13		Next File	When viewing pictures, press the  button will switch over to the next file.

3.6 Deleting Files

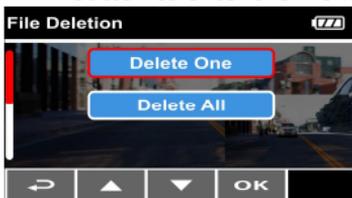
To delete file(s), do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **File Deletion**, and then press the  button for entering function menu.
3. Press the  button to select **Video / Parking Mode / Emergency / Picture**, and then press the  button for entering menu.

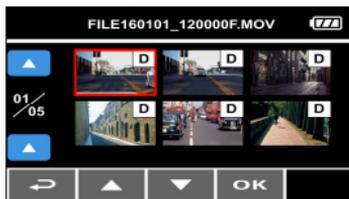


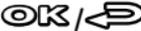
- **Delete One:**

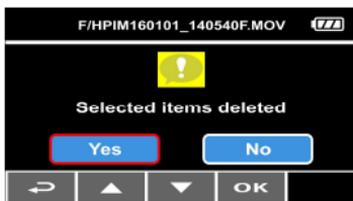
- Press the  button to select **Delete One**, and then press the  button to enter the menu.



- Press  button to browse files, select the files you want to delete and then press  button to enter the menu.

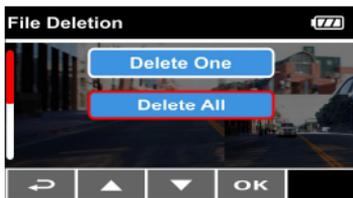


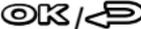
- Press the  button to select item, and then press the  button to confirm or cancel the selection.

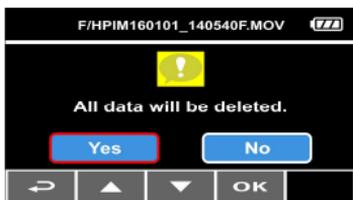


- **Delete All:**

- Press the  button to select **Delete All**, and then press the  button to enter the menu.



- Press the  button to select item, and then press the  button to confirm or cancel the selection.



4. Press the  repetitively to return recording screen.

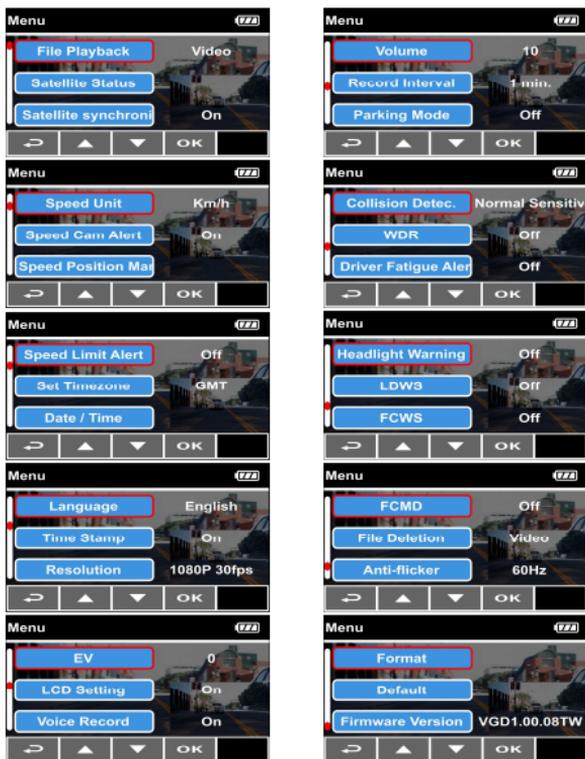
Note:

1. Only front camera thumbnails will be display in Menu, if you choose to delete the file has the  icon, and then the files records with rear lens will be deleted. (Rear Camera is not included in standard package. Please contact distributor for further information.)
2. Deleted files cannot be recovered. Ensure the files have already backup before deletion.

4 Adjusting the Settings

4.1 Using the Menu

You can customize the general settings via the on-screen display (OSD) menus.



1. Press the  button to enter the OSD menu.
2. Press the  button to select menu item, and then press the  button for entering function menu.
3. Press the  button to select or adjust the value, and then press the  button to confirm setting.
4. Press the  button to return recording screen.

4.2 Menu Items

Refer to the below table for details of main menu and function list.

Menu option	Description	Available option
File Playback	Select the file category that you want to view.	Video / Parking Mode / Emergency / Picture
Satellite Status	Displays the current state of the satellite reception.	
Satellite Synchronization	If the satellite time is enabled, the car camcorder clock will synchronize according to the satellite time zone you set. When you turn on this feature, it will display the satellite time preferentially, and cannot be manually changed.	On / Off
Speed Unit	The system displays the speed setting unit.	Km/h / mph
Speed Cam Alert	If the Speed Cam Alert function is enabled, once your car's location is determined by GPS and approaches a speed cam, this product produces audible alert and screen message.	On / Off
Speed Position Management	<p>Add Speed Point: The satellite positioning will manually add speed camera location. You can add up to 200 speed camera locations to the built-in system.</p> <p>Delete Last Position: Delete the last speed camera point.</p> <p>Delete All Position: Delete all speed camera point.</p>	Add Speed Point / Delete Last Position / Delete All Position

Menu option	Description	Available option
Speed Limit Alert	Set a customized maximum speed limit. When the vehicle speed exceeds the maximum, an audible alert is automatically triggered and a warning message is displayed on the screen.	Press the \triangle/∇ button to set the speed limit. You can set the off, or set speed limit from 50 to 200km/h (30 to 125mph)
Set Time zone	Set the time zone you are in.	Press the \triangle/∇ button to set the satellite time. You may customize it between GMT -12:00 ~ GMT +14:00
Date / Time	Set the date and time.	Press the \triangle/∇ button to adjust the value, and then press the OK button to set the next field, and complete setting
Language Settings	Language setting.	According to the actual shipping regions.
Time Stamp	If the time stamp is enabled, recording files or photos will show the date and time.	On / Off
Resolution	Setting of video resolution.	2K HD@30 (1440P 30fps) / FHD@60 (1080P 60fps) / FHD HDR (1080P HDR 30fps) / FHD@30 (1080P 30fps) / HD@120 (720P 120fps)
EV	Setting of exposure value.	Press the \triangle/∇ button to set the exposure value. It can be set between -2 ~ +2
LCD Setting	Set LCD off time. Camcorder screen will be off after a set time if no operation is detected during the standby or record mode.	On / Off After 30 sec. / Off After 3 min. / Off

Menu option	Description	Available option
	Press any button will switch it on. (Recording is not affected when screen is off).	
Voice Record	Setting for activating audio in the video.	On / Off
Volume	Adjust the sound volume.	Press the \triangle/∇ button to set the volume. It can be set between 1 ~ 10.
Record Interval	Save respective video files in a length of the selected duration.	1 min. / 3 min.
Parking Mode	<p>Vibration Detection: If Vibration Detection is enabled, please disconnect the external power supply camcorder in power on status, it will automatically power off and enter the detection mode after 10 seconds. The camcorder will automatically power on and start recording when the camcorder detects vibration.</p> <p>Motion and Collision Detection: If Motion and Collision Detection is enabled, please disconnect the external power supply camcorder in power on status, it will automatically power off and enter the detection mode after 10 seconds. The camcorder will automatically power on and start recording when the camcorder detects motion and collision.</p> <p>Off: No parking monitoring activated.</p>	Vibration Detection / Motion and Collision Detection / Off

Menu option	Description	Available option
Collision Detec.	If Collision Detection is activated, this camcorder starts emergency recording once it detects any collision.	High Sensitivity / Normal Sensitivity / Low Sensitivity / Off
WDR	Present a crisp and clear picture quality with harmonious contrast in a high contrast, high discrepancy environment.	On / Off
Driver Fatigue Alert	When Driver Fatigue Alert is enabled, audible alert and screen message will be activated 1 hour after the camcorder is powered on, with a repetition every 30 minutes.	On / Off
Headlight Warning	When Headlight is activated, camcorder will issue an audible alert and screen message reminding that insufficient brightness is sensed on the recording face.	On / Off
LDWS	Once your car's location is determined by GPS and the LDWS function is enabled, this camcorder produces audible alert and screen message when you drive off of or change lanes at speeds over 70 km/h (43 mph).	On / Off
FCWS	When FCWS is activated after satellite positioning, camcorder will issue audible alert and screen message when vehicle speed is above 60 km/h (37 mph) and the distance with the front vehicle is less than 15m.	On / Off

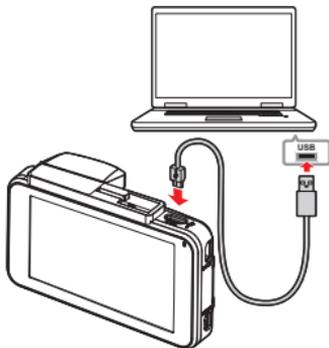
Menu option	Description	Available option
FCMD	If FCMD function is enabled, the camcorder will determine it from front car about 0.3 ~ 4 meters. When the front object moves about 3 ~ 5 seconds and the car did not start to drive forward, the camcorder will issue audible alert and screen message.	On / Off
File Deletion	Delete the file(s).	Video / Parking Mode / Emergency / Picture
Anti-flicker	Domestic power supply varies by area. It is recommended that you should check the "Table of voltage and frequency of different countries" for the correct setting.	60Hz / 50Hz
Format	Format the memory card inserted in the equipment. All the files in the card will be erased.	Yes / No
Default Setting	The system reverts to the default setting.	Yes / No
Firmware Version	Indicates the current firmware version.	

5 Connecting to Other Devices

5.1 Connecting to the Computer

You can connect the camcorder to a desktop computer or notebook to transfer or view files.

1. Connect micro USB cable to the camcorder micro USB port.
2. Connect the other end of the micro USB cable to an available USB port of your computer.



3. Power on the camcorder, the computer screen will show up the message when the computer detects your camcorder, select "Open folder to view files", or open the "Removable Disk", then users can save the files to your computer.

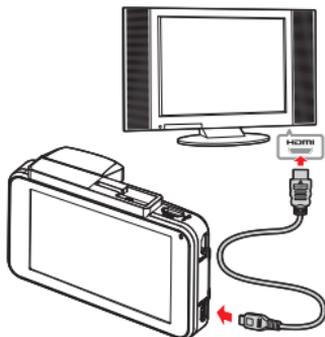
Note:

1. This only indicates the camcorder can connect to the computer; micro USB cable is not included in standard package.
2. Under dual-lens mode, the recording files will be saved separately in different folders, "F" folder is for front camera files, "R" folder is for rear camera files.
3. If user only delete front camera files with **D** on computer, then the rear camera files would be unavailable, also it couldn't be overwritten by loop recording. To avoid residual files occupy memory capacity, please delete the files by computers, or format the memory card by the camcorder. Please refer to **Format** (4.2).
4. If user only delete rear camera files with **D** on computer, then the camcorder can only review the front camera files which hasn't be deleted.
5. The micro USB cable will not supply the power to the camcorder, please power on the camcorder and make sure the power, or take out the memory card to read the files.
6. Rear Camera is not included in standard package. Please contact distributor for further information.

5.2 Connecting to TV

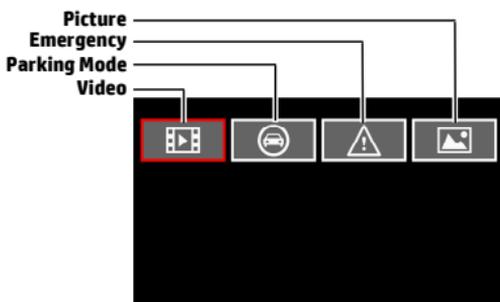
You can use HDMI cable transfer to TV to play the file.

1. Power on the camcorder.
2. Connect HDMI cable to camcorder HDMI port.
3. Connect HDMI cable to TV HDMI port.



4. Power on TV, switch TV signal input to HDMI, TV screen will show below icons, please operate by camcorder

← / △ / ▽ / ○ / OK / → buttons.



Note:

1. It only indicates this camcorder can connect to TV, HDMI cable is not included in standard package.
2. Please make sure the camcorder power is on before using HDMI cable connecting to TV.

6 Installing the Software

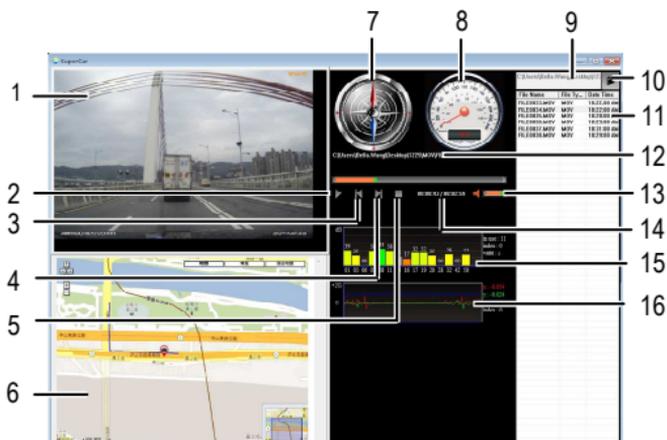
1. Place the attached CD ROM into the CD player.
2. If the CD does not execute automatically, please use Windows File Manager to execute the Install_CD.exe file in the CD.

The following screen will be shown up.



3. Press the [Menu] item to start the installation process according to the instructions on-screen.

7 SuperCar



No.	Item
1	Video Player
2	Play / Pause
3	Previous
4	Next
5	Stop
6	Electronic Map
7	Compass
8	Speed Meter

No.	Item
9	File Path
10	Browser File
11	File List
12	File Name
13	Volume
14	Playback Duration / Total Duration
15	Signal Noise Ratio (SNR)
16	G-Sensor

Note:

- To display the route on Electronic Map, please make sure the internet is connected before starting the video playback.
- Video files of front-view camera (MOV) and GPS/G-Sensor files (NMEA) must be stored in the same folder before starting the playback.
- The SuperCar software is only applicable to Windows operating system. For Mac users, please search "SuperCar"  App in built-in Mac App Store.

8 Specifications

Item	Description
Image Sensor	1/3" CMOS sensor
Effective Pixels	2688 (H) x 1520 (V)
Storage Media	Support SDHC class 10 and 16GB microSD card (up to 32GB)
LCD Display	3.0" TFT LCD color screen
Lens	Wide Angle Fixed Focus lens F1.8, f=2.94mm
Focus Range	1.5m~Infinity
Satellite System	GPS
Movie Clip	Resolution: 2K HD@30 (1440P 30fps) / FHD@60 (1080P 60fps) / FHD HDR (1080P HDR 30fps) / FHD@30 (1080P 30fps) / HD@120 (720P 120fps) Format: MOV
Still Image	Resolution: 4M (2688 x 1520) Format: JPEG
Shutter	Electronic shutter Auto: 1/120 ~1/2000 sec.
G-Sensor	3-Axis G-Force sensor
ISO	Auto
White Balance	Auto
Microphone	Yes
Speaker	Yes
Interface	Micro USB; Mini D Type HDMI
Battery	Built-in 470mAh Li-polymer rechargeable

Item	Description
Operating Temperature	0° ~ 60° C
Operating Humidity	20 ~ 70% RH
Storage Temperature	-20° ~ 70° C
Dimensions	89 x 28.5 x 53 mm
Weight	Approx. 86g (without memory card)

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE