

AMPULLA®

Sentry

User Manual



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1. Introduction

Thank you for choosing Ampulla. You've made a smart choice by purchasing a Sentry HD Dash Cam. It provides peace of mind by continuously recording the road ahead of you in beautiful 1080P Full HD video. With cutting edge features, phenomenal video quality, and an industry-leading focus on user experience, Sentry HD Dash Cams are the best solution to *Record Your Ride*.

This user manual contains information on how to operate your Ampulla Sentry dash properly. Before using the product, please read through this manual carefully. Please also keep the manual properly for future reference.



1.1 SAFETY INSTRUCTIONS

To maintain user safety and avoid damage to property, please read through this manual so as to use the product in the correct way. Please follow the directions bellow:

- Do not disassemble, repair, or modify the product yourself.
- If any foreign matter gets inside the product, detach the power cord straightaway. Contact the seller's customer support for repair replacement.
- Do not operate the product while driving. Stop or park your car in a safe place to operate it.
- Do not install the product where it can interfere with the driver's vision.
- Do not use a damaged or modified car charger. Use the car charger provided by the manufacturer.
- Do not use a damaged or modified car power cord. Use the cords provided by the manufacturer.
- Do not operate the product with wet hands.
- Do not install it in an environment with high humidity, or combustible gases or liquids.
- Do not expose it in the hot sun for a long time. The product has overheat protection, when it is too hot, it will stop working. Restart it when it cools down.

- Use a genuine micro SD card of class 10 and above 8 GB. It supports a micro SD card of capacity up to 32 GB.
- Format the card before using. Do not remove the micro SD card while it is saving or reading data.
- Do not leave the product where infants, children, or pets can reach it.
- While cleaning the inside of the car, do not spray water or wax directly onto the product.
- If smoke or an unusual smell is emitted from the power cord, detach it immediately. Contact the seller's customer support for repair or replacement.
- Keep the terminal of the power cord clean.
- Use the correct input voltage.
- Connect the power cord firmly so that it cannot easily be disconnected.
- Do not cover the product with any material.
- Clean the lens regularly.

2. Sentry HD Dash Cam Features

1080P Full HD - All Sentry HD Dash Cams record the road ahead in 1080P Full HD featuring excellent image quality, night vision performance, and advanced dynamic range

3.0" LCD Screen - Large LCD Display with video playback directly on the device.

170° Viewing Angle - Ultra wide-angle view gives you a full view of the road while at the same time minimizing edge distortion.

Continuous Loop Recording - Footage is stored in 2, 3, or 5 minute clips. When the memory card gets filled up, the camera automatically deletes the oldest video segments to make room for new ones.

Emergency Lock - Automatic or Manual - If you don't want a clip to be overwritten, simply click the Emergency Lock button and the current clip will be protected. Clips are automatically protected if an impact is detected.

G-Sensor - 3-axis accelerometer senses sudden accelerations, stops, and collisions and automatically protects footage surrounding the incident.

Parking Mode - While in Parking Mode, Sentry HD cameras will only record video when motion is detected. This feature is helpful for vehicles that have an always-on accessory port or units that are hardwired to power.

Wide Dynamic Range - Optimized to automatically maximize video clarity in daylight or nighttime conditions

Simple Installation - Mount the unit on the windshield, apply power, and leave it there. Sentry HD cameras will automatically start recording without the need for complex configuration.

Built-in Microphone & Speaker - Records and plays audio along with video. The microphone can easily be toggled off if you prefer not to record audio.

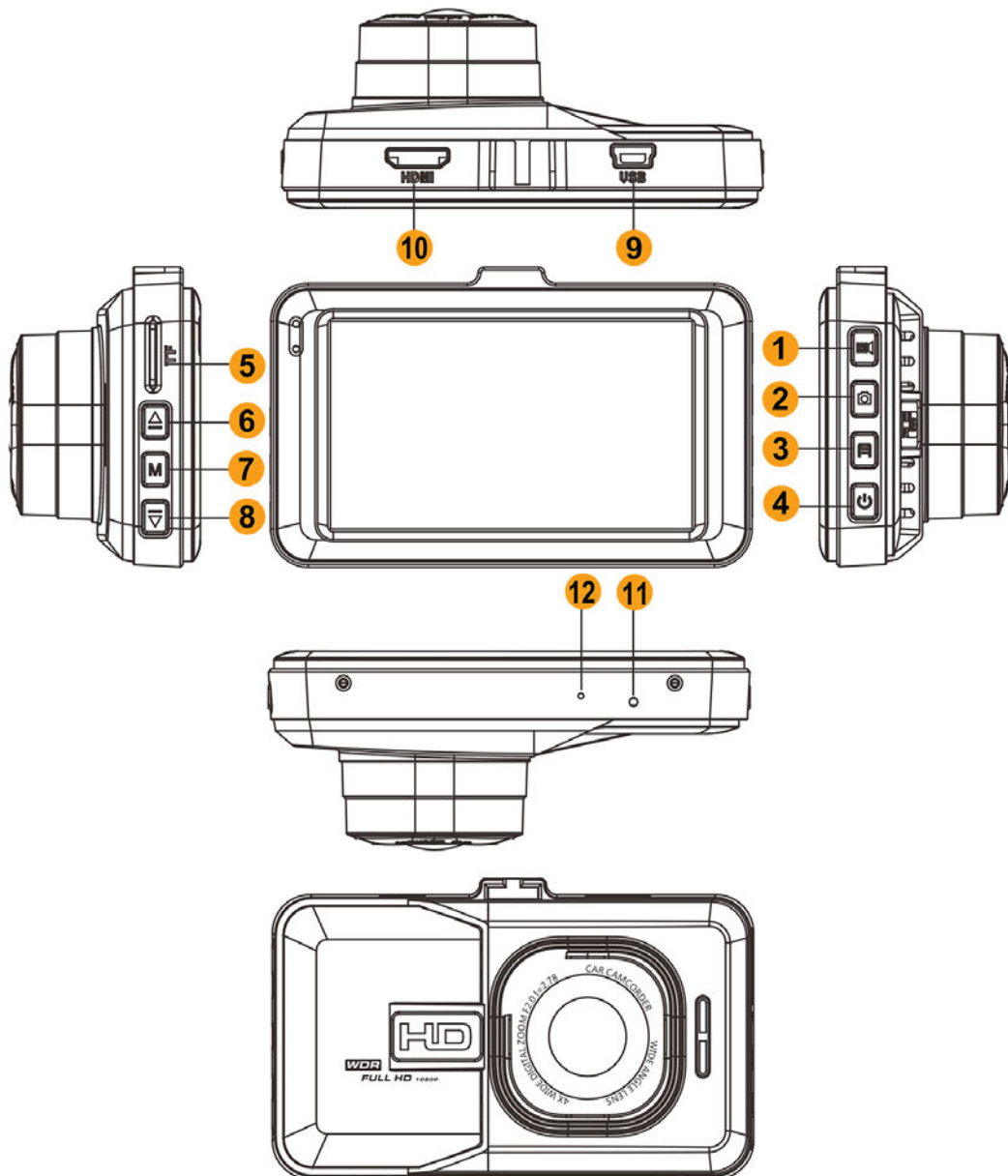
Auto-Record and Auto-Power Off - As soon as power is applied, the dash cam turns on and starts recording. When power is removed the dash cam will continue recording for 5 seconds and then automatically shut down.

Built-in Lithium Ion Battery - Continues recording for up to 1-2 clips if power connection is cut off.

3. What's in the Standard Box

 <p>Sentry Dash Cam</p>	 <p>Suction Windshield Mount</p>
 <p>USB cable</p>	 <p>Dash Cam Adaptor for Car</p>
 <p>User Manual</p>	 <p>Rear Camera with Cable & Adhesive Sticker (optional)</p>

4. Product Overview



5. Controls and Connection

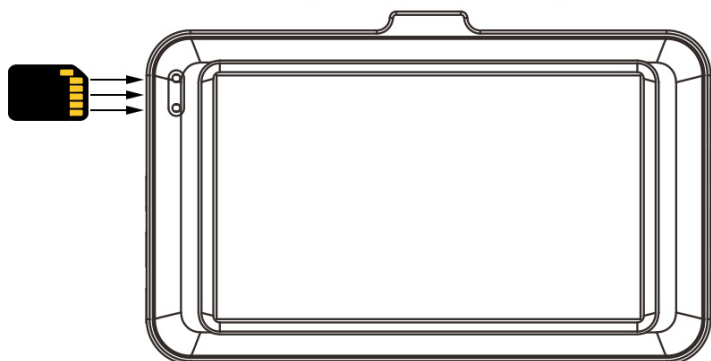
No.	Name	Description
1	OK	Confirms the setup; Start/Stop recording or playing video.
2	Mode switch	Switch between video mode, photo mode & playback mode.
3	Emergency Lock	Manually lock the current video when emergency or encountering beautiful shot
4	Power	Power ON/OFF
5	SD Card Port	Location for the memory card
6	Up	Upward selection, view mode switch (with rear camera only)
7	MENU	Enter/exit setup menu/delete the video clip (Playback Mode)
8	Down	Downward selection; MIC ON/OFF while recording
9	Mini USB Port	USB port for charging or data transferring
10	HDMI/AV Port	Location for rear camera connection or HDMI cable.
11	Reset	Press to reset the device
12	Microphone	Records audio along with video

6. Installation

6.1 Front Camera Quick Setup

① Insert Memory Card

Insert the class 10 Micro SD card in the correct direction as shown following. Make sure you are facing the camera screen and the side of memory card with metal, and push the card until you hear a click sound.



② Power

Plug one end of the supplied **12V** Vehicle Power Adapter into your vehicle's cigarette lighter, and the other end into the Mini USB port. The unit will automatically turn on and start recording. To manually turn on the device, **PRESS AND HOLD** the **POWER** button until the display activates.

③ Mount

To install the **Suction Cup Windshield Mount**, peel the plastic film off of the suction cup if there is one. **Unlock** the buckle on the side of the locking lever before apply it on glass. Press the suction cup **FIRMLY** onto the windshield. Flip the locking lever to secure the suction cup in place. The suction cup can be moved freely by disengaging and re-engaging the locking lever. Tighten the thumbwheel nut against the Suction Cup Mount once it is correctly positioned.



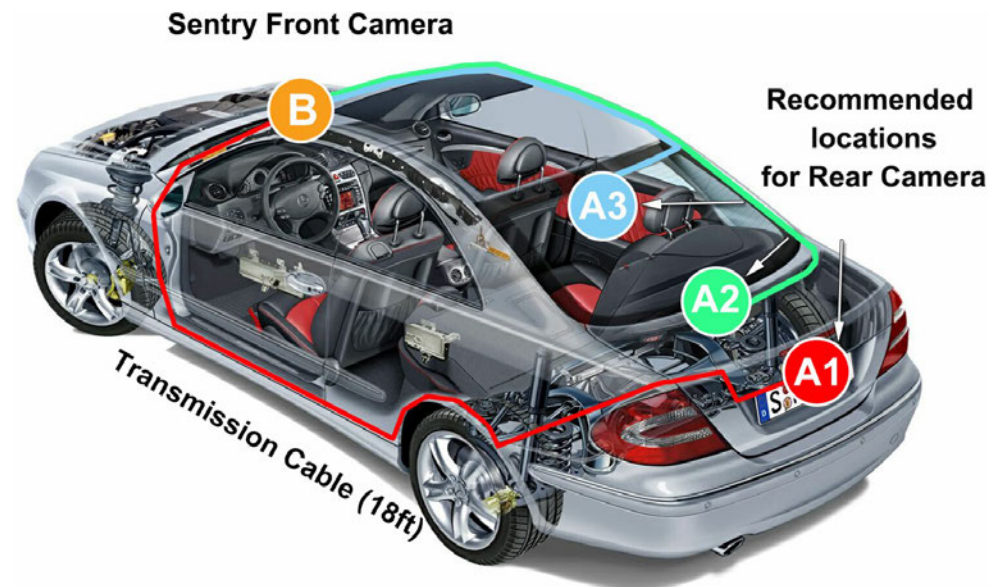
④ Drive!

Sentry HD Dash Cams are designed to be set and merged with environment. After initial setup, the unit will turn on and start recording as soon as power is applied.

6.2 Rear Camera Setup (Optional)

1 Mount & Wires Routing

The installation location is actually quite flexible. However, there are some highly recommended locations with different angles of visions.



A1: Traditional rear camera location, limited vision (upper) and professional assistance required

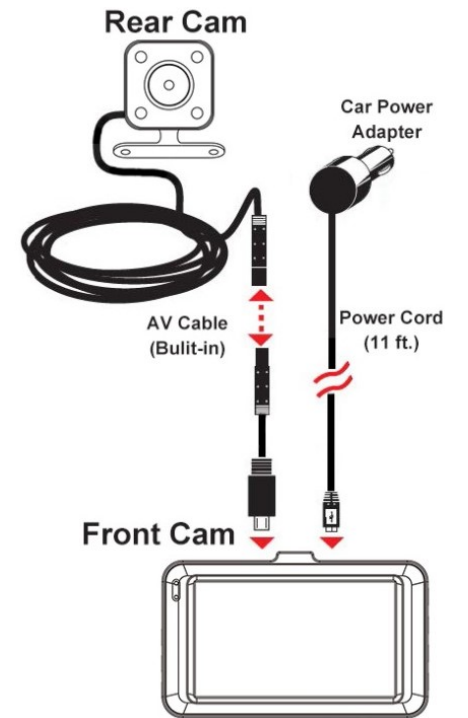
A2: Flat mount Location, limited vision (lower) and very easy to install,

A3: The **best** location of vision from height, very easy to install (**Highly Recommend**)

Organize and tuck cables to make sure that the driver's view is not obstructed. In most vehicles the power cable can be tucked into the headliner and cleanly hide the AV cable along the top wall all the way to the rear of the vehicle (**A2&A3**). The cable may be hidden under the vehicle, but professional installation is recommended for this route (**A1**). Once the location is selected, you can use the sticker (included) or screws (not included) to fix the rear camera.

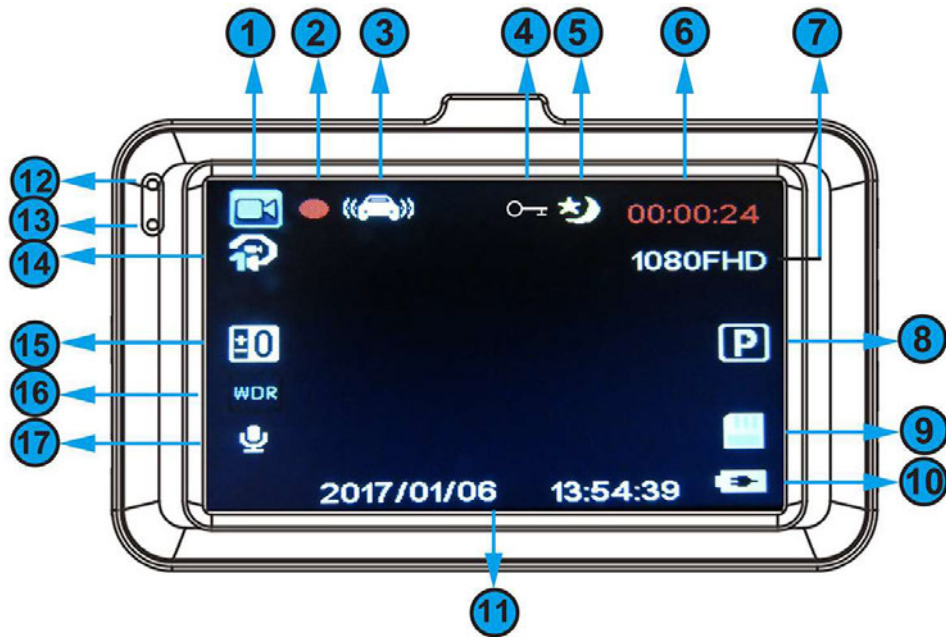
2 Power

Plug the Cable into the AV Port on the Front Cam, the power will be connected. The Sentry dash cam utilizes an AV port and Rear Cam Extender AV Cable to offer maximum flexibility and clean installation. You can always press UP button to switch the view mode of front and rear camera.



7. Screen Configuration

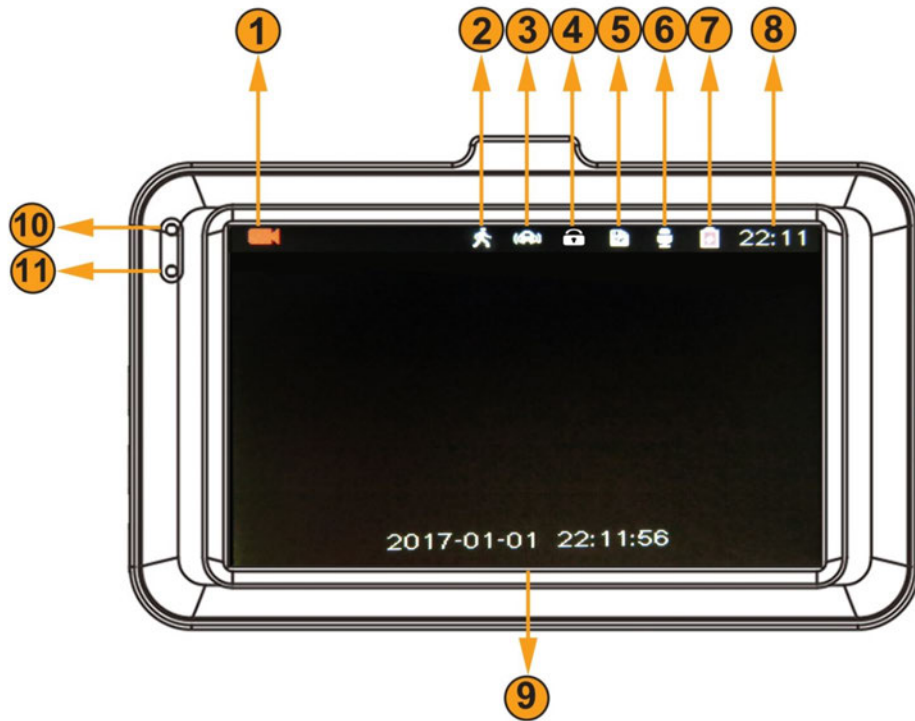
7.1 Sentry Only (Novatek chip)






No.	Name	Description
1	Mode Indicator	Video Mode, Photo Mode, Playback Mode
2	Recording Indicator	This icon indicates the camera is currently recording.
3	G-Sensor	This icon indicates the G-sensor has been turned on.
4	Video Lock Indicator	This icon indicates the current video is locked.

5	Night Vision Indicator	This icon indicates the camera has entered night mode.
6	Video Time	Current video time
7	Resolution	Current video resolution
8	Parking Monitoring	This icon indicates the Motion Detection has been turned on.
9	SD card inserted	This icon indicates the Micro SD card has been inserted.
10	Battery Indicator	It shows the status of the battery. Flashing icon is normal.
11	Date & Time	The date watermark will be on the video.
12	Charging Indicator	Red light while charging. No light while the battery is full.
13	Record Indicator	Light on while working. Flash while recording
14	Loop Record Indicator	The number is the length of each video chip (in minutes)
15	Exposure	The number is the exposure Level.
16	WDR	WDR is on while icon shows up.
17	Microphone	It indicates the Microphone has been turned on.

7.2 Sentry with Rear Camera (JL chip)



No.	Name	Description
1	Mode Indicator	 Video Mode,  Photo Mode,  Playback Mode
2	Motion Detection	This icon indicates the Motion Detection has been turned on.
3	Parking Monitoring	This icon indicates the Motion Detection has been turned on.
4	Emergency Lock	This icon indicates if the current video is locked or not.
5	SD card inserted	This icon indicates the Micro SD card has been inserted.
6	Microphone	This icon indicates the Microphone has been turned on.
7	Battery Indicator	It shows the status of the battery.
8	Current Time	Time in HH/MM format.
9	Date & Time	The date watermark will be on the video.
10	Charging Indicator	Red light while charging. No light while the battery is full.
11	Record Indicator	Light on while working. Flash while recording.

8. Basic Operation

8.1 Powering ON/OFF the Device

The device will power ON/OFF automatically with the car when engine starts/stops, and it can also be turned on by PRESSING AND HOLDING the On/Off button until the splash screen is displayed.

8.2 The Micro SD Memory Card

The device needs to operate with a Class10 micro SD memory card. Make sure the card is placed into the slot in the right position and press it further into the slot until it completely locked in the place. To remove the SD card, press firmly on the SD card further into the slot. There will be a click and the SD card will pop out on release.


8.3 Charging the Device

You can charge the device with the included car charger or with the most of USB ports.

The built-in battery is only intended to maintain device's operation after power been accidentally cut off due to an accident or crash. Note that, this battery is not for

long-term recording.

8.4 Navigating Menus

Press **M** MENU to enter settings, press 'UP' or 'DOWN' buttons to find the setting you want to select or change and then press  OK button to select or confirm your changes. Pressing MENU at any time will exit the menu without saving changes.


8.5 Record Setup

8.5.1 Setting Video Resolution

The default setting is 1920x1080P/30fps (fps: Frames per second). Choose the resolution of video recording: 1920x1080P/30fps (FHD), 1920x1080P/30fps (HD).

8.5.2 Setting Loop Recording

You can choose the setting to 1mins, 2 mins, 3 mins or 5 mins. The default setting is usually 3 mins, which means every video clip will be last for 3 minutes.

Once the memory card is full, the camera will continuously overwrite the oldest video clip recorded. To protect a clip so that it will not be overwritten, press the  Emergency Lock button. And the emergency record

icon “Lock” will be shown on the screen.

8.5.3 G-Sensor

The default setting is Medium sensitivity. You can also adjust it into High, Medium, Low or OFF in the menu settings. It can detect any significant shaking forces on the whole car body, no matter they are from front side or back side. If any shaking or collision occurs while recording, the camera will automatically lock up the current video clip. And an icon will appear on the top of the screen (Position 4 in Page 13 &15)

8.5.4 Motion Detection (Move Detect)

The default setting is OFF. The Parking Mode can be triggered by motion detector, which is used to detect the movement in front of the camera. While it detects no movement in front, the camera will stop recording.

Note: The motion detection only works when the camera is powered on (Auto OFF still considered as ON).

8.5.5 Parking Monitor

The "Parking Monitor" can be turned in settings to record any significant motion or vehicle movement when your car is turned off. The parking monitor has to work with

G-sensor and/or motion detection. Any significant shaking force on car body or movement in the sight of the front camera will trigger parking monitor and start recording. The built-in battery can support and capture 4-6 video clips for emergency. If you want to support long time work, you'd better use an external continuous power supply.

8.5.6 WDR (White Balance)

The default setting is ON. Wide Dynamic Range provides clear images and greater scene details from shadows to highlights than normal, even under backlighting, where the intensity of illumination varies a lot.

8.5.7 Exposure Level

The default setting is 0. The brightness and contrast can be adjusted by changing the exposure from +3 to -3.



8.5.8 Emergency Recording

An Emergency Recording is triggered when the Emergency Record Button (facing the screen, the third top on the right side) is pressed or when the G-Sensor registers an impact. Emergency Recordings create locked files that are not overwritten by Continuous Loop Recording. Files can also be locked from the playback

menu in Video Playback Mode.

8.6 System Setup





8.6.1 Language

The default setting is English. If the system is not in your language, please find the icon  or  in settings to change the language. There are also other language available, including French, Italian, German, Spanish, Korean, Chinese (Traditional), Simplified Chinese (Simplified), Russian, Japanese and etc.





8.6.2 Time & Date

If you want to change the system time and date, please go and find the option named “Date” or “Date/Time” in settings.

For Sentry Only (Novatek chip)

1. Press  MENU button twice to enter the second page of settings;
2. Select “Date/Time” and press  OK button to enter;
3. Press UP or DOWN to change the date and time, and press  OK to move to next time unit;
4. Press  MENU button to save and exit.

For Sentry with Rear Camera (JL chip)

1. Press  MENU button to enter the settings page;
2. Select “Date” and press  OK button to enter;
3. Press UP or DOWN to change the date and time, and press  MODE SWITCH button (under OK) move to next time unit;
4. Press  OK button (Not MENU) to save and exit.

8.6.3 Time Watermark (Date Stamp)

The default setting is NO stamp or watermark. If you want to stamp on the video, please go to the option named “Time watermark” or “Date stamp” in settings and turn it.

8.6.4 Screen Saver

The default setting is OFF.

For Sentry Only (Novatek chip)

You can enter “Screen Saver” in the second page of settings to change it to 3 mins, 5 mins, 10 mins or OFF.

For Sentry with Rear Camera (JL chip)


You can go to settings and enter “Screen Timeout” to change it to 10s, 20s, 30s or OFF.

8.6.5 Formatting

Formatting the Micro SD card will delete all data in it, which is a routine way to empty a full memory card. However, we still strongly recommend you format the memory card in your computer for a stable and clean dash cam system.

8.7 Playback, Delete Files


8.7.1 Video/Image Playback

Choose a video/image and press  OK button to playback and view on the dash cam.

For Sentry Only (Novatek chip)

 OK – Play/Pause the video;

 UP – Previous clip, Rewind (while video playing);

 DOWN – Next clip, fast forward (while video playing);


 MODE SWITCH – Switch back to record mode.

For Sentry with Rear Camera (JL chip)

 OK – Play/Pause the video;

 UP – Previous clip, Rewind (while video playing);

 DOWN – Next clip, fast forward (while video playing);

 MODE SWITCH – Go back to clip selection (while video playing), Switch back to record mode.

8.7.2 Delete a file

Choose an unlocked video/image and press **M** MENU button to delete it.

8.7.3 Reset to Default Setting

“Default setting” or “Factory Reset” option can reset the Sentry to factory default settings. However, we still strongly recommend you reset the dash cam by pressing the RESET button at bottom for a stable and clean dash cam system.

8.7.4 Firmware Information

Displays the device firmware version.

9. Specifications

Sentry Front Camera

Display	3 inch TFT LCD
Lens	170 degree wide viewing angle and full 4 layer glass lens with wide aperture of F2.0
Languages	English, Chinese(Traditional), Simplified Chinese(Simplified), Russian, Japanese, French, Italian, German, Spanish, Korean
Video	H.264 compressed AVI format; 1920x1080P/30fps, 1280x720/30fps,
Image	JPEG
Audio	Microphone and speaker equipped
USB Port	USB 2.0, mini
Memorizer	Support 32GB max, Class 10 Micro SD
Shutter	Electronic shutter
PC System	Support Windows XP/Vista/7/10 ,Mac

Rear Camera (optional)

Lens	160 degree wide viewing angle and multi-layer glass lens
Video	H.264 compressed AVI format; 720x480P/30fps,
Sealing property	IP67 level waterproof, dustproof & snow proof.

10. FAQ (Frequently Asked Questions)

10.1 For ALL Sentry Dash Cam

Q: What is the purpose of the tiny blue tag on the screen?

A: The blue tag is actually the puller of removing the screen protector from manufacturer.

Q: Does "loop recording" overwrite the last loop, or does it just break it into segments?

A: The loop recording feature will overwrite the earliest unlocked footage, but not break it into segments.

Q: How do I set up loop recording or normal recording till card is not full? What are the benefits or disadvantage of keeping motion detection on?

A: You can go to the settings page to activate the loop recording function anytime. However, the default setting is "ON" for loop recording function. Motion detection will automatically pause recording while the view is at rest (e.g. stopping at red light), so it can save some memory card space by this function. However, the disadvantage will be that the video may be cut into many short ones, which may not be so convenient to find the specific footage you want.

Q: The dash cam shows "card is full" and no more recording.

A: I believe you have turned on the "G-sensor" function. The G-sensor will detect concussion and lock the corresponding video clip. A heavy door shut or driving on a bumpy road may activate the G-sensor, so the loop recording function will not overwrite this locked footage. Time by time, the memory card will get full even with loop recording turned on. If you want to avoid this situation, you can change the sensitivity level of G-sensor in the settings or just turn off the "G-sensor"

Q: How do you make the camera record when the car turns on and not stop until the car turns off? It seems to go into standby if it doesn't sense motion.


A: You just need to turn off the motion detection feature to keep the dash camera recording when the car turns on.

Q: What is max capacity of micro SD card that the camera will accept?

A: The Sentry dash camera actually supports SD card up to 32GB, but not 64GB. In order to ensure a stable

high speed transmission of 1080P, a class 10 high speed SD card is required and maximum card capacity is up to 32GB. The larger card size will significantly reduce the transmission speed and stability for the dash cam, which is similar to computer hard disk.

Q: How can I save/lock a video manually?

A: You the press the  Emergency Lock button (facing the screen, the third top on your right) to manually lock the current video any time you want.

Q: It makes a rattling noise when operating, is this item is defected?

A: Firstly we strongly recommend you stop using this SD card in a computer until it is re-formatted. This issue is usually caused by a failure of formatting the SD card. To format the SD card will resolve this issue.

Q: The SD card was deleted in Mac OS X system, but the dash cam still shows card full. Why is that?

A: When you use a MAC, you have to "empty the trash" after you format the SD card. If you are using Disk Utility to format the SD card in Mac as FAT32, please use Master Boot Record instead of GUID Partition Map.

10.2 For Sentry with Rear Camera

Q: Does this product require a professional installation or can I install it myself?

A: A professional installation is recommended but not necessary, and it is actually not a very complicated work. You can refer to Session 7.2 for more details.

Q: How is the rear camera connected to the main, and does the main record both front and back simultaneously?

A: There is a built-in AV cable with the rear camera, which is the connection cable to the main dash camera. And yes, both of front and rear cameras can record simultaneously, and their corresponding footages will be stored separately in two individual folders in the SD card.

Q: Is the cord long enough for the Sentry with the rear camera? How would you connect rear camera on the inside?

A: The connection cord to the rear camera is approximately 18ft long, which will fit the most of the vehicles. There is a built-in AV cable with the rear cam.

Just plug in the cable in the front cam, and it will work together.

Q: How do you switch to the rear camera?

A: In the default setting, the images from both the front and rear cameras will be displayed on the screen. And you always can click the UP button to switch the view mode.

