

DUAL CHANNEL FULL HD 1080P HIDDEN RECORDING SYSTEM



USER GUIDE

Please read this manual carefully before using.
This manual should be kept for future reference.

Warning:

The camera should be fixed firmly before using.
Cable connection should always be maintained while recording.
Please use the supplied power source. A incompatible power
adapter may damage the system.

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- Do not expose the recorder to dusty, dirty or sandy conditions, if these gets into the camera or on the lens it can damage the components.
- The normal operating temperature of the recorder is -10°C to 60°C (14°F to 140°F), it is environment temperature (air temperature in vehicle); and the storage temperature is -20°C to 80°C (-4°F to 176°F) environment.
Please refer the temperature curve chart in TEMPERATURE section in page 12.
- Do not expose the recorder to high temperatures.
High temperatures can shorten the life span of electronic device, and extremely high temperature will shorten the battery and/or degrade the plastic components. Please notice extreme temperatures can achieve 70°C (158°F) or even higher in parked vehicles under direct sunlight. Expose the recorder in strong sunlight with Motion Detection mode or Parking Guard mode recording may cause the recorder malfunction or damaged.
There is temperature protection in this recorder which will shut the recorder down when the main-board temperature reach 90°C (194°F) but please notice that is just a auxiliary method.
Keep the recorder recording in high temperature condition will be on yourself risk.
- Do not expose the recorder to a cold environment.
Extremely low temperatures can also damage the electronic components; if there is water moisture in cold environment, freezing water can cause damage.
- Do not try to dismantle or open the casing. Doing so may result in electrical shock and will most likely result in damaging the recorder. Dismantle the recorder will make it out of warranty.
- Do not mistreat the recorder, dropping, sudden impact, and vibration can cause damage.
- Do not clean the recorder with chemicals, cleaning solution or a high concentration detergent. Only a slightly damp cloth should be used.
- The recorder accept 8GB to 256GB SDHC/SDXC/UHS-I/UHS-III microSD cards, minimum writing speed 6MB/S (class 6 at least, class 10 or higher is recommended). MLC chip microSD card is recommended for longer life time.
- Please set your time zone in setting once you get the recorder.

UPGRADING

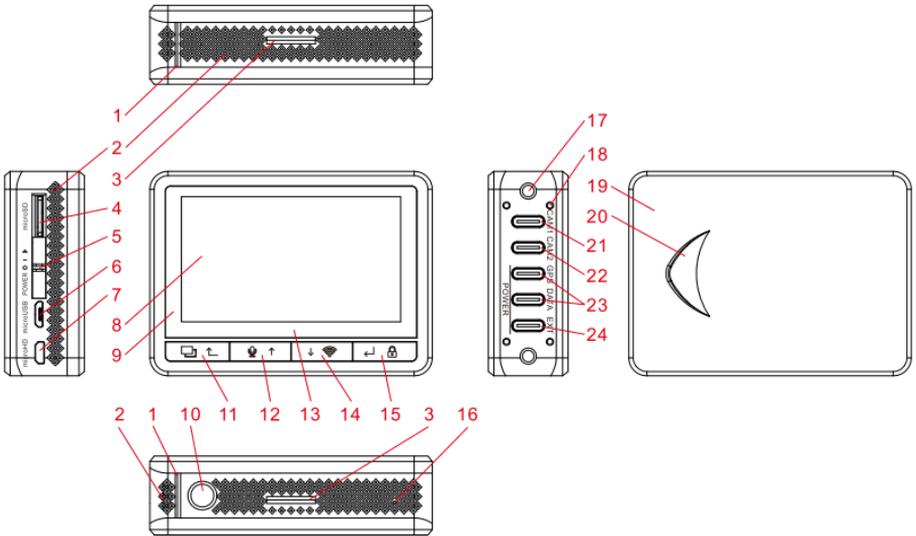
Please download the latest firmware from www.roadcam.us to upgrade the recorder for improved stability and extra functions.

Extract the FIRMWARE.BIN file to the root folder of your microSD card; insert the card into your recorder and power on. The recorder will auto examine the FIRMWARE.BIN file and start upgrading procedure with the LED blinking but black screen. The recorder will automatically reboot to recording mode after upgrading finished.
Please remember to set your time zone in setting after upgrading finished.
Enjoy~

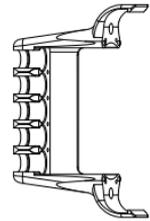
The FIRMWARE.BIN file will be automatically deleted after upgrading finished to avoid repeated upgrading when next boot up.

APPEARANCE

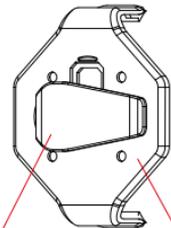
recorder body



- 1 - cable holder locking groove
- 2 - heat dissipation hole
- 3 - clip holder locking groove
- 4 - microSD card slot
- 5 - sliding power button
- 6 - backup microUSB power/data port
- 7 - microHDMI output port
- 8 - 2.7" TFT display screen
- 9 - protecting glass panel
- 10 - 1/4-20 thread mounting hole
- 11 - mode button
- 12 - up button
- 13 - working status indicator
- 14 - down button
- 15 - OK button
- 16 - reset button (hidden)
- 17 - 4#-40 thread cable fixing hole
- 18 - cable holder locating hole
- 19 - back cover
- 20 - assisted hollow for back cover sliding
- 21 - camera 1 (master) port
- 22 - camera 2 (slave) port
- 23 - GPS/data/power port
- 24 - external device extending port / power port



extending cable holder



clip holder clamp
recorder clip holder

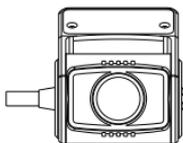
GPS receiver
microphone speaker



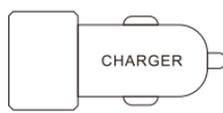
whistle camera



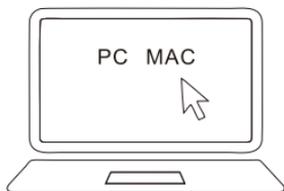
whistle camera



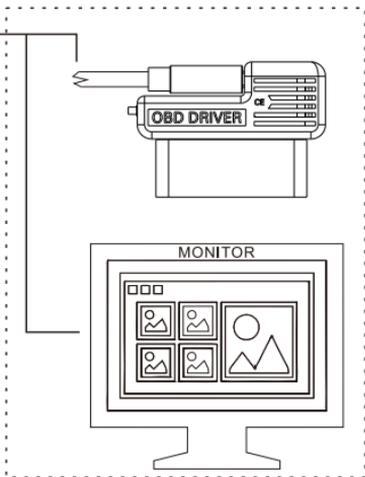
hardwire kit



charger



computer

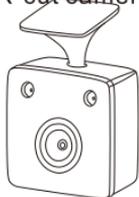


external device

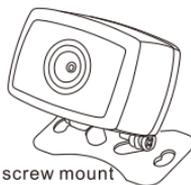
waterproof
sport camera



low lux
IR-cut camera



waterproof
reverse camera



screw mount

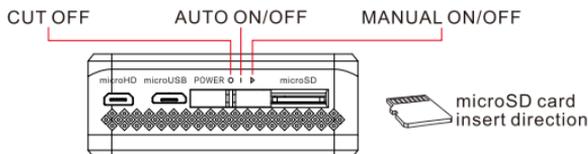
there are other remote
cameras for your
special application:

water-proof sport
camera,
low lux IR-cut camera,
water-proof reverse
camera

POWER SUPPLY

When you got the recorder please check if all the units are functional properly first.

- 1, connect the remote cameras to CAM1 and CAM2 port (at least the CAM1 port connected);
- 2, connect power to GPS/DATA or EXT port; all the 3 ports can be used for power supply. The GPS and DATA port are full compatible and exchangeable for GPS or DATA use.
- 3, If the power button is placed at "AUTO ON/OFF" location at midst, the recorder will auto boot on and enter recording mode according power supply status;
- 4, when the power supply is cut off, the recorder will automatically power down if the power switch is placed at "AUTO ON/OFF" location.



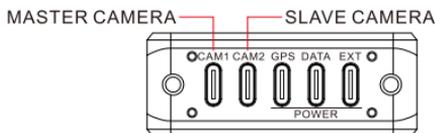
5, if the power button is placed at "CUT OFF" location, the recorder will not response the power input, you need to slide the power button to "MANUAL ON/OFF" location to manually power on the recorder.

6, If you are using a constant power supply, when you want to power off the recorder you can slide the power switch to "CUT OFF" directly, or slide to "MANUAL ON/OFF" and hold 2 seconds to power off the recorder, the switch will auto reset to "AUTO ON/OFF" location after you release the switch. When you want to power on the camera next time, just slide the switch to "MANUAL ON/OFF" location and release, the switch will auto reset to "AUTO ON/OFF" location and the recorder will boot up.

7, the power switch is designed to be a microSD card locker to avoid mistaking pop out. Only when the power switch is placed at "CUT OFF" location, the microSD card can be taken out.

The recorder accept 8GB to 256GB SDHC/SDXC/UHS-I/UHS-III microSD cards, minimum writing speed 6MB/S (class 6 at least, class 10 or higher recommended). MLC chip microSD card is recommended for longer life time.

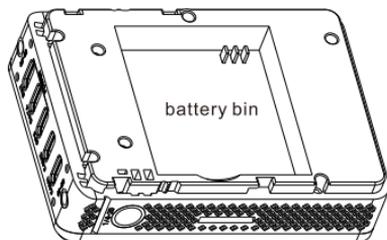
8, If camera 1 is not connected, the camera can only be boot to playback and setting mode. This is a special design when you want to playback on recorder without remote cameras installed.



9, There is built-in super capacitor in the recorder, which can provide 5 seconds backup power to help to correctly save the last video and correctly power down. The super capacitor need at least 10 minutes recharging before a power down procedure.

10, if you want to use the recorder as a sport camera and power by battery, you need the Lithium Polymer Battery Pack.

Slide the recorder back cover, install the Lithium Polymer Battery Pack into the battery bin, close the back cover. Then slide the power switch to "MANUAL ON/OFF" location and release to power on the camera. The recorder will work until battery drain or when you manually slide the switch to "MANUAL ON/OFF" and hold 2 seconds to power off. The Lithium Polymer Battery Pack is 3.7V 1000mAh, which can support more than one hour recording time without external power supply.



BUTTON and DISPLAY

Once the recorder power on, it will get into recording mode if there is a correct microSD card prepared.

Please press and hold the MODE button to switch between RECORDING MODE, PLAYBACK MODE, SETTING MODE.

The main display interface is shown below. Here we list the icons you will find in different working condition:

RECORDING MODE



- white balance
- loop duration
- main camera available
- slave camera available
- battery status
- recording status
- over-speed warning
- WiFi status
- GPS status
- microphone status
- speaker status
- mainboard temperature
- WDR activate
- video protected

mode button up button down button OK button

short press switch view ON/OFF speaker ON/OFF indicator protect video

long hold switch to playback ON/OFF MIC ON/OFF WiFi un-protect video

PARKING GUARD MODE

When the recorder is used as Parking Guard Monitor with a Parking Guard power adapter, the recorder will launch Parking Guard mode if it receive the parking signal.

The Parking Guard display interface is shown below. The difference with normal recording is the Parking Guard display icon. It will show different icon according which parking mode you chosen in SETTING. See more detail in "PARKING GUARD" section.

The video resolution is fixed to 720P2 in Time Lapse mode to save storage space.



- ACC motion lapse, parking activated
- ACC motion detection, parking activated
- ACC time lapse, parking activated
- G-sensor motion detection, parking activated
- G-sensor time lapse, parking activated
- ACC motion lapse, parking invalid
- ACC motion detection, parking invalid
- ACC time lapse, parking invalid
- G-sensor motion detection, parking invalid
- G-sensor time lapse, parking invalid

OPERATION

PLAYBACK MODE

When the recorder in RECORDING mode, press and hold the MODE button for 1 second to switch to PLAYBACK mode.

FILE LIST



	mode button	up button	down button	OK button
short press	return to latest	previous item	next item	confirm
long hold	switch to setting	previous page	next page	open menu

PLAYING

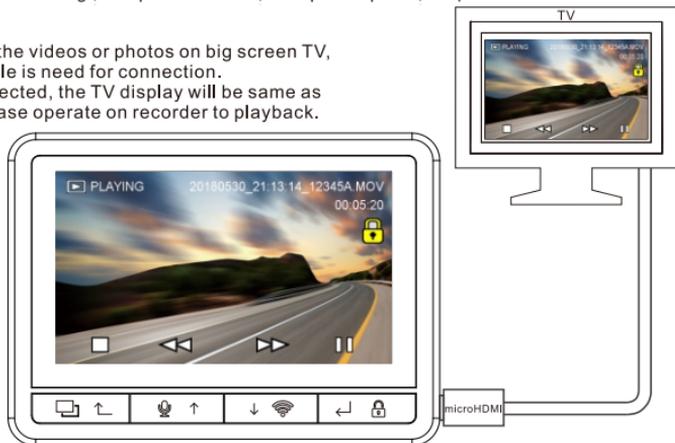


	mode button	up button	down button	OK button
short press	return file list	previous frame	next frame	play/pause
long hold	switch to setting	speed down	speed up	open menu

PLAYBACK ON TV

If you want to playback the videos or photos on big screen TV, a microHDMI-HDMI cable is need for connection.

When HDMI cable connected, the TV display will be same as on recorder screen, please operate on recorder to playback.



PLAYBACK ON COMPUTER

If you want to playback the videos or photos on computer, a microSD card reader is recommended.

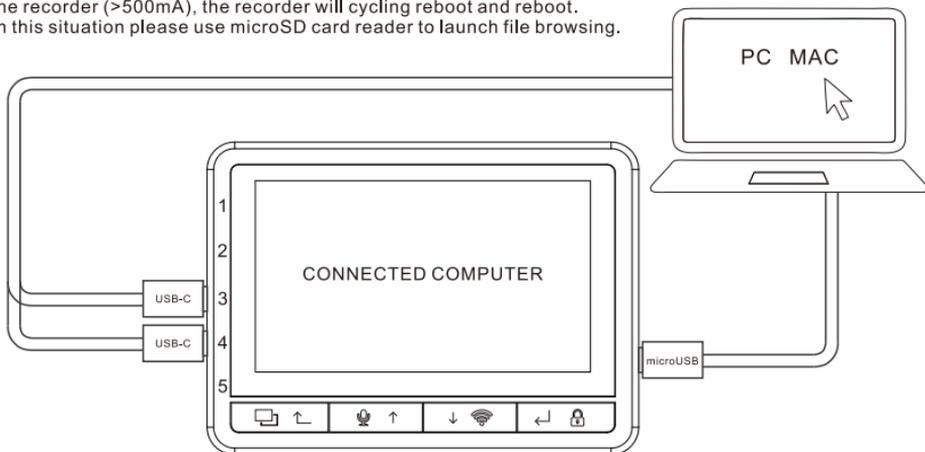
The rdCAM PLAYER download link and firmware download link are placed in the "service.html" file in the root folder of microSD card, which can playback the recorded videos with GPS traces.

You can also use a compatible media player to playback the video files directly without GPS trace. (You may need a codec for the media playback to decoding the MOV/MP4 videos, K-lite Codec Pack is recommended.)

If you don't have a microSD card reader on hand, you can connect the recorder to your computer with the supplied USB to USB-C cable or your own USB-microUSB cable; the dash camera will be recognized as a mass storage device on computer.

Please notice if your computer USB port can't provide enough power for the recorder (>500mA), the recorder will cycling reboot and reboot.

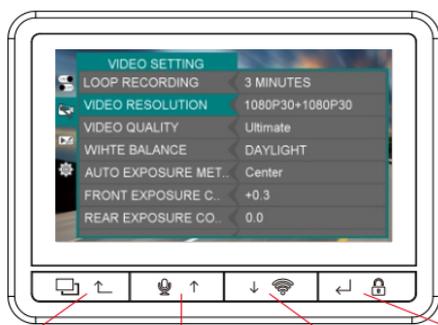
In this situation please use microSD card reader to launch file browsing.



SETTING MODE

When the recorder in PLAYBACK mode, press and hold the MODE button for 1 second to switch to setting mode.

- function switch
- video setting
- stamping setting
- system setting



	mode button	up button	down button	OK button
short press	go back	previous item	next item	confirm
long hold	switch to recording			

For setting details, please check the SETTING section at page16.

Press and hold MODE button again will go back to recording mode.

OPERATION

RECORDING VIEW SWITCHING

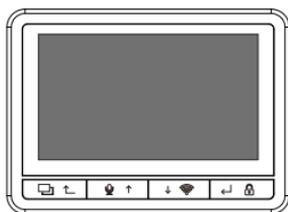
When the recorder in RECORDING mode, short press the MODE button to switch display of CAM1, CAM2, CAM1+CAM2, CAM2+CAM1, OBD monitor, and screen OFF.



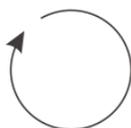
CAM1



CAM2



SCREEN OFF



CAM1+CAM2



OBD monitor



CAM2+CAM1

RESOLUTION & VIDEO QUALITY & CARD CAPABILITY

video quality ULTIMATE	video bit rate	32GB card capability
1080P30+1080P30	20Mb+16Mb	1.8hours
1080P30+720P30	20Mb+12Mb	2hours
720P30+720P30	12Mb+12Mb	2.7hours
1080P30 (CAM1)	20Mb	3.3hours
720P2+720P2	1Mb+1Mb	40hours

video quality DELUXE	video bit rate	32GB card capability
1080P30+1080P30	16Mb+14Mb	2.2hours
1080P30+720P30	16Mb+10Mb	2.5hours
720P30+720P30	10Mb+10Mb	3.3hours
1080P30 (CAM1)	16Mb	4.1hours
720P2+720P2	1Mb+1Mb	50hours

video quality GOOD	video bit rate	32GB card capability
1080P30+1080P30	12Mb+12Mb	2.7hours
1080P30+720P30	12Mb+8Mb	3.3hours
720P30+720P30	8Mb+8Mb	4.1hours
1080P30 (CAM1)	12Mb	5.5hours
720P2+720P2	1Mb+1Mb	60hours

video quality ECONOMY	video bit rate	32GB card capability
1080P30+1080P30	8Mb+8Mb	4.1hours
1080P30+720P30	8Mb+6Mb	4.7hours
720P30+720P30	6Mb+6Mb	5.5hours
1080P30 (CAM1)	8Mb	8.3hours
720P2+720P2	1Mb+1Mb	80hours

WiFi MODE

When the recorder is in recording mode, you can press and hold the DOWN button to enter WiFi mode. In WiFi mode, the camera will be a WiFi hot spot for mobile device connection. When you want to quit WiFi mode, please press and hold the DOWN button again. If there is no device connection for 3 minutes when WiFi hot spot is ON, the recorder will automatically turn off WiFi.



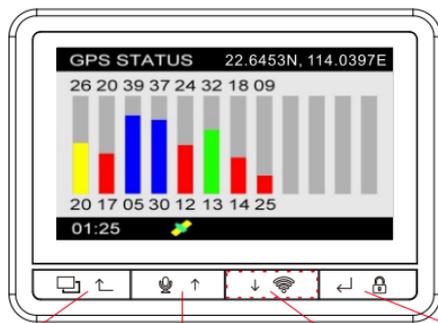
mode button up button down button OK button

short press
long hold

turn off WiFi

GPS TEST MODE

If you want to check the GPS connection quality, you can use the GPS test mode. Please press and hold the DOWN button, then power on the recorder; hold the DOWN button until the GPS test mode screen shows up. There is GPS satellite number and signal quality shown in the histogram. Press and hold the OK button to quit GPS test mode.



mode button up button down button OK button

TIPS

PRESS operation means press the button down then release quickly;
HOLD operation means press the button down and wait around 1 second then release for related operation.

This works for all the operation in this manual.

OPERATION

OBD and SPEED-CAM

If a OBD power driver (optional exclusive accessory) connected to EXT port of the recorder, the recorder will auto detect and record the OBD data 1fps.

You can press the MODE button to switch to OBD data screen to live-view the throttle value, engine rpm, vehicle speed, accumulator voltage information.



If you exceed the setting speed limit, there will be over-speed warning icon shown and voice alarm at the same time.

If you are using a customized firmware with SPEED-CAM function, There will be speed limit icon shown on screen and voice reminder automatically if passing by a speed camera.



 setting speed limit

 over-speed warning

REMOTE CONTROLLER

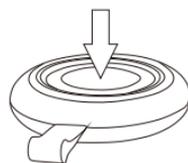
When the recorder is recording video, a remote controller can be used to take a photo and protect the current video by short press the remote controller button.

When you press and hold the remote controller button, it will turn on the recorder WiFi MODE for mobile connection; press and hold again to turn off WiFi.



TIPS

There is a small blue LED on the remote control for working status indicating. You can replace the CR2032 battery in the remote control if the blue LED is dark which means the battery was drain.



The remote controller use a CR2032 battery

There is a LED indicator in the recorder to indicate the working status. If you don't want the indicator lighting, please set the indicator setting to OFF, or short press the DOWN button to turn off indicator quickly.

There are backup LED indicators on GPS receiver also, they can be used to indicate the recorder status if you made a hidden installation.



indicators ring

indicator

mode button	up button	down button	OK button
short press	switch view	ON/OFF speaker	ON/OFF indicator
long hold	switch to playback	ON/OFF MIC	ON/OFF WiFi
			un-protect video

Indicator light status:

no light – recorder off, not recording, no card, indicator OFF

constant lighting – standby, playback

blinking quickly – card error, warning

periodical lighting – recording

shading periodical lighting – WiFi mode

slow shading periodical lighting – Parking mode

VOICE REMINDER

When the recorder working status changes, the recorder will remind you by voice. There is a speaker in GPS receiver. When you hidden install the recorder, the speaker in GPS receiver will broadcast the voice reminder for better audition. (The sound quality from GPS receiver speaker is not as good as the sound from recorder built-in speaker because signal lose on the long cable.) The voices are created by free Balabolka TTS engine.

If you want to adjust the voice volume, please set in Speaker Volume setting. If you want to mute the speed cam warning voice in low speed condition, please set in LOW SPEED SILENT setting. This function need GPS module or OBD driver support for realtime speed information.

If you want to mute all the voice reminder and other sound reminder quickly, please press the UP button to turn ON/OFF speaker while recording.

TIPS

The REMOTE CONTROLLER unit can be stuck to somewhere for easy operating with the round VHB sticker provided; but please be noticed that should not effect the driving. The button of remote controller is big enough for blind operating so please keep your eyes on traffic.

TEMPERATURE

TEMPERATURE DISPLAY

There is a temperature display at the top-right corner of LCD screen, the temperature is recorder main-board temperature.

You can define the temperature unit to Celsius or Fahrenheit in setting. The temperature will be shown (stamping) on recorded video also.



TEMPERATURE IN VEHICLE

When a vehicle parked in direct sunlight, the vehicle inside temperature will dramatic increase in the first 10 minutes and then stable after 25 minutes parking.

Please refer the figure below to find out the temperature difference between inside and out side of the vehicle.

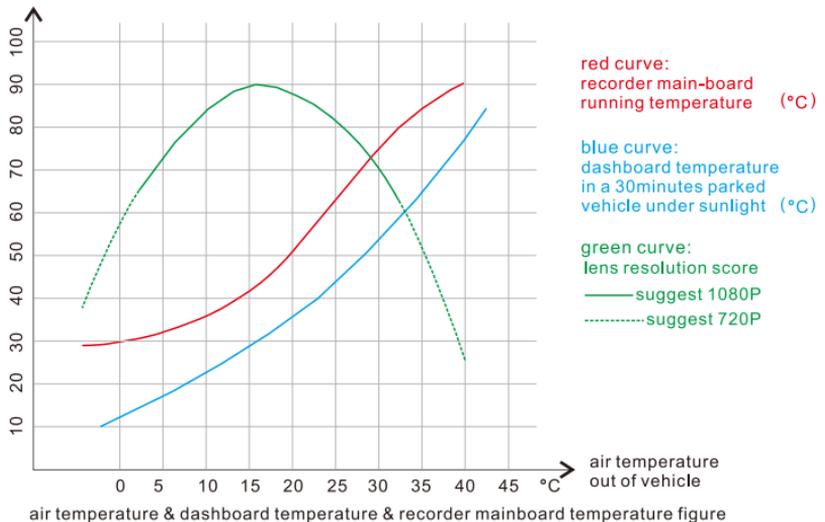
The temperature can achieve 70°C (158°F) or even higher in parked vehicles under direct sunlight in summer, it is dangerous for all consumer electronics.

Expose a dash camera in strong sunlight with Motion Detection mode or Parking Guard mode recording may cause the dash camera malfunction or damaged.

TEMPERATURE PROTECTION

The temperature protection function in this recorder will shut the camera down when the main-board temperature reach 90°C (194°F) , to help to reduce the damage risk and keeping protect your recorder and vehicle all the time even under sunlight, with Parking Guard or Motion Detection working.

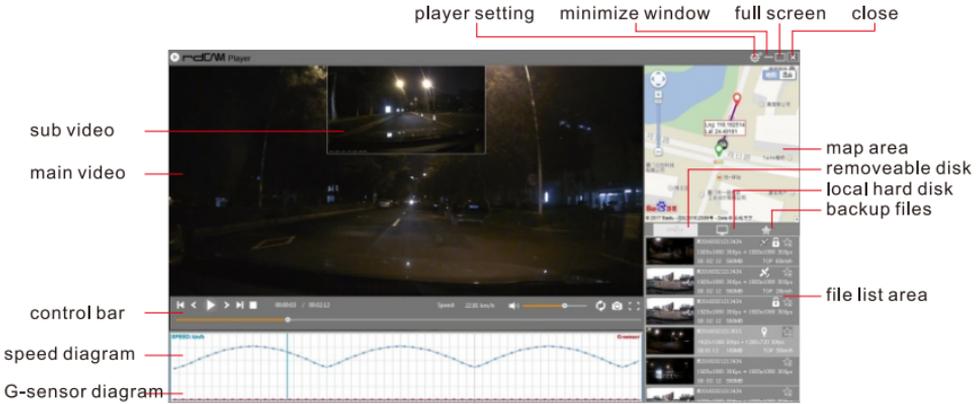
Please be noticed the temperature protection is just a auxiliary method, keep the recorder working in high temperature condition will be on yourself risk.



please notice this is a reference figure, the curves will be different in different condition.

We recommend to use the simple rdCAM player to playback the videos and GPS log on computer/MAC.

Please use a USB3.0 microSD card reader for the card with videos, the rdCAM player will auto scan the card and sort the video files to play list. If you don't have a USB3.0 card reader then a low speed USB2.0 card reader or the recorder plus a data cable also works but the transmitting speed is slow so the loading time will be very long.



The rdCAM player can be downloaded from www.rdcam.com

There is a compatible player DashCamViewer which works well with varied functions. Please check and download at www.dashcamviewer.com

MOBILE APP & APK

Please scan the QR code on your mobile device to download the APP / APK. Please turn on the WiFi function on recorder and connect mobile WiFi to the recorder WiFi hot spot, then open the APP / APK on mobile device. Enjoy the wireless life.



LuckyCAM on Apple Store



LuckyCAM on Google Play

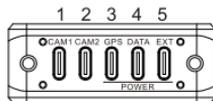


MOUNTING

CABLE MOUNTING

There are 5pcs USB-C port on the recorder for remote cameras, GPS, data or power, and external device. Please refer the port definition:

CAM1 port must connect a external camera for recording, CAM2 port can be blank if you don't need 2nd channel video, GPS and data cable can be connected to port 3 or port 4, external device can only be connected to port 5, power cable can be connected to port 3 or 4 or 5,



cameras and GPS can be extended with extending cable up to 6 meters.

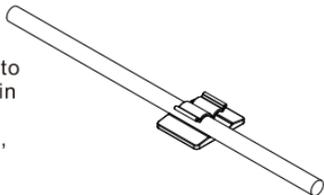


When cables connected, please use the cable holder to fix the cables, to avoid vibration. Please check and make sure the cable holder clip to recorder body firmly.

If you are using the recorder in a heavy duty vibrating condition, you may need to fix the cable holder to recorder body with 2pcs 4#-40 screws.

When you route the cables in vehicle, it is recommended to use the cable clamps to fix the cables, to make them tidy in vehicle.

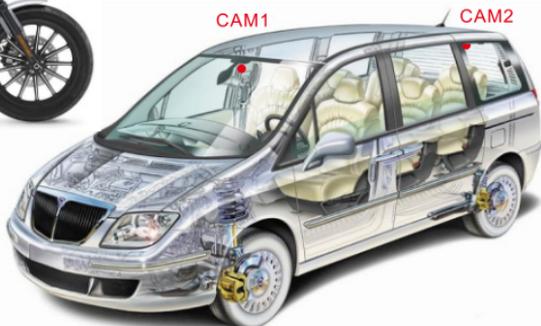
The cable clamps can be stuck to glass or plastic surface, please clean the surface before stick the cable holder.



CAMERA MOUNTING

You can customize your mounting location of the cameras.

The recording image can be set up-side-down in recorder setting.



The shown mounting image maybe different with your real motorcycle or vehicle.

RECORDER MOUNTING

There are 5 mounting methods to fix the recorder, for different working condition.

Magnet mounting – the easiest mounting method in vehicle;

Back clip mounting – recommended for sport using;

Wall screw mounting – a strongest method to fix the recorder to a surface;

pad sticker mounting – alternative of screws mounting, easier & quicker;

1/4-20 thread mounting – most universal mounting method to tripod or sucker bracket.



GPS MOUNTING

The GPS receiver can be mounted wherever you want, with the extending cable up to 6meters MAX. But please notice the GPS antenna side must facing to sky.

For example, if you want to place the GPS receiver on console board, please sticker the adhesive pad to speaker side then place on console board;

If you want to place the GPS receiver on windshield glass, please stick the adhesive pad to GPS side then stick to windshield glass.



If you don't need the indicator lighting, please press the DOWN button on recorder to turn OFF / ON indicators.

TIPS

SETTING

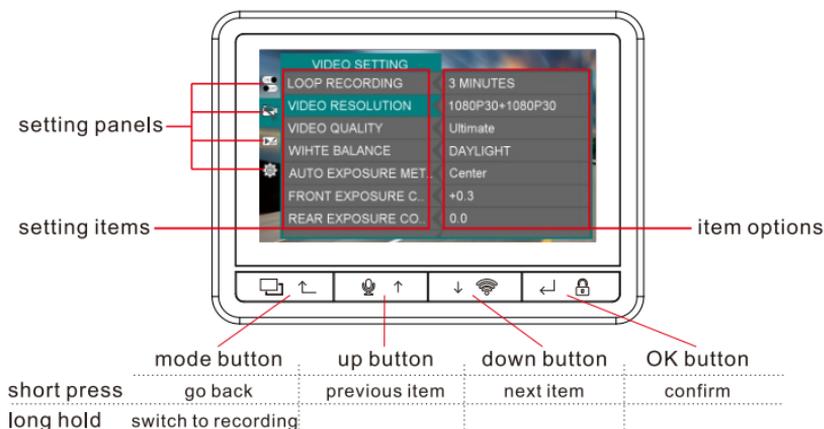
The camera is pre-configured to provide you a simple plug and play experience - the default settings are the most popular options.

If you are not satisfied with the default setting, you can customize your own favorites. Please read this section to help to customize the camera setting, when you require a slightly different experience.

When you finished the setting operation, please press and hold the MODE button to save setting and enter recording mode. The settings are saved in recorder ROM so you don't need to change setting every boot up.

There are 4 setting panels which are classified with different sorts:

-  function switch – this is used to turn ON / OFF functions, or set the switching / activation parameters;
-  video setting – this is used to set video recording parameters;
-  stamping setting – this is used to turn ON / OFF video stamping functions, or set the stamping parameters;
-  system setting – this is used to set system basic parameters, or execute basic system operations, or check basic system information;



Here are the details of setting item and item options for your better understanding:

FUNCTION SWITCH

WiFi HOST

Here you can activate / disable the WiFi host function to allow a mobile device to connect to the recorder for live view or playback.

The default WiFi host SSID is K2S-ABCDEF, (ABCDEF is the first 6 characters of the built-in network card MAC address), the default password is 12345678. You can customize the SSID and password in mobile APP when connected.

The mobile APP can be downloaded by scan the QR image at MOBILE APP&APK section.

You can also turn ON / OFF WiFi HOST quickly by long hold the DOWN button (shortcut). If the WiFi host is turn on but no mobile device connected in 3minutes, the recorder will automatically turn off WiFi to make sure system stable.

If the WiFi host is turn on and mobile device connected, but there is no data transmission in 3minutes, the recorder will automatically turn off WiFi to make sure system stable.

options: **OFF**
ON

The WiFi data transmission will take huge system resource, which may bring unstable factor or unpredictable system crash. It is recommend not to playback by WiFi and recording at the same time. If the recorder crash please reboot the recorder to recover.

PARKING GUARD

Parking Guard function is used to monitor the vehicle outside for safety after vehicle parked. There are 6 options for different Parking Guard working mode, each have a different icon expect normal recording:

normal recording

- require Hardwire Kit provide power

The recorder will continue record normal video after vehicle parked. The hardwire kit provide power to support recorder working.



ACC motion lapse

- require Parking Guard Hardwire Kit support

The recorder will auto switch to record 720P2+720P2 time lapse video when received parking signal from Parking Guard Hardwire Kit; if there is motion detected the recorder will switch to record 720P30+720P30 video until 10 seconds after motion stop then switch back to 720P2. When receive engine start signal the recorder will switch to normal recording.

All the switching operation are automatically done by recorder itself.

if no Parking Guard Hardwire Kit connected, the function can't be activated.



ACC motion detection

- require Parking Guard Hardwire Kit support

The recorder will auto switch on motion detection function when received parking signal from Parking Guard Hardwire Kit; it will auto record if detected motion occurs until 10seconds after motion stop. When receive engine start signal the recorder will switch to normal recording.

All the switching operation are automatically done by recorder itself.

if no Parking Guard Hardwire Kit connected, the function can't be activated.



ACC time lapse

- require Parking Guard Hardwire Kit support

The recorder will auto switch on time lapse function when received parking signal from Parking Guard Hardwire Kit and record 720P2+720P2 videos. When receive engine start signal the recorder will switch to normal recording.

All the switching operation are automatically done by recorder itself.

if no Parking Guard Hardwire Kit connected, the function can't be activated.



G-sensor motion detection

- require Hardwire Kit provide power

The recorder will auto switch on motion detection function after G-sensor data stop for 1 minute which means vehicle parked; it will auto record if detected motion occurs until 10seconds after motion stop. When G-sensor data regain which means vehicle start the recorder will auto switch to normal recording.

All the switching operation are automatically done by recorder itself.



G-sensor time lapse

- require Hardwire Kit provide power

The recorder will auto switch on time lapse function after G-sensor data stop for 1minute which means vehicle parked and record 720P2+720P2 videos. When G-sensor data regain which means vehicle start the recorder will auto switch to normal recording.

All the switching operation are automatically done by recorder itself.

If there is G-sensor data sudden change while Parking Guard recording, the recorder will automatically lock and protect the recording videos.

When the Parking Guard option set, there will be grey icon shown at the bottom-left corner of screen; when vehicle parked the icon will be activated to colorful.



ACC motion lapse, parking invalid



ACC motion lapse, parking activated



ACC motion detection, parking invalid



ACC motion detection, parking activated



ACC time lapse, parking invalid



ACC time lapse, parking activated



G-sensor motion detection, parking invalid



G-sensor motion detection, parking activated



G-sensor time lapse, parking invalid



G-sensor time lapse, parking activated

The air temperature in vehicle may get too high in summer, then the recorder built-in temperature protection will help to keep the camera safe on Parking Guard mode. The recorder will automatically turn off when the main-board temperature go up to 90°C (194°F) and automatically turn on when the main-board cooling to 65°C(149°F).



OVER SPEED WARNING

Here you can define a speed limit for your driving; if the GPS speed data exceed the limit, the recorder will play a voice warning "over speed warning" to remind you for safety.

options: **OFF**
80KM/H
100KM/H
120KM/H

LOW SPEED SILENT

Here is the switch for speaker silent; if it is set to ON, the speed cam function will be silence if the GPS speed is lower than 30KM/H.

This is used for a temporary low speed driving condition. If you don't have speed cam function, this item will not work.

options: **OFF**
ON

SPEAKER VOLUME

Here is the switch you can adjust the volume of recorder built-in speaker.

If it set to OFF, the speaker will be mute all the time.

You can also turn ON / OFF speaker quickly by short press the UP button (shortcut).

options: **HIGH**
LOW
OFF

MICROPHONE

Here is the switch you can turn ON / OFF the recorder built-in microphone.

If it set to OFF, there will be no sound recorded in videos all the time.

You can also turn ON / OFF microphone quickly by long hold the UP button (shortcut).

options: **ON**
OFF

LED INDICATOR

Here is the switch you can turn ON / OFF the recorder built-in LED indicator; the indicator is used to show the recorder working status.

If the indicator is set to OFF and screen is OFF, it will be not easy to find if the recorder is working or not. It is used when you want to hide the recorder well.

You can also turn ON / OFF indicator quickly by short press the DOWN button (shortcut).

options: **ON**
OFF

SCREEN OFF DELAY

If there is no button action when the recorder is on standby or recording mode, the recorder will auto turn off the screen to save power & decrease attention.

Here you can define the delay time.

options: **OFF**
15 SECONDS
30 SECONDS
1 MINUTE

G-SENSOR SENSITIVITY

The G-sensor is used to detect the 3-axis impacting forces (vibration acceleration).

If any impact over the threshold value is detected, the current recording file will be locked (protected) to avoid being over-written.

Here you can define the sensitivity level.

options: **OFF**
LOWEST – for big vibration working condition only, for example on motorcycle
LOW
MEDIUM
HIGH

VIDEO SETTING

LOOP RECORDING

The recorder supports automatically loop recording when the card is full. Here you can set the segment length (loop duration) according your requirement. (please be noticed the maximum file size limit on FAT32 card is 4GB)

options: 1 MINUTE
3 MINUTES
 5 MINUTES
 10 MINUTES

VIDEO RESOLUTION

Here you can choose the video resolution you want to record; higher resolution videos will take more storage space.

options: **1080P30+1080P30**
 1080P30+720P30
 720P30+720P30
 1080P30 (CAM1 only)

VIDEO QUALITY

Here you can adjust the video quality of recording; video quality will affect video grain, sharpness, contrast and so on. Better quality videos will result in higher bit rate and take more storage space.

options: ULTIMATE
 DELUXE
GOOD
 ECONOMY

WHITE BALANCE

Here you can set the image white balance mode to improve the colour balance in video/image in different weather and lighting conditions. AUTO is recommended to fit most conditions.

options: **AUTO**
 DAYLIGHT
 CLOUDY
 TUNGSTEN
 FLUORESCENT

AUTO EXPOSURE METERING

Here you can set the measuring area for Auto Exposure; this setting will affect the video brightness and quality. CENTER is recommended if there is no special requirement.

options: **CENTER**
 AVERAGE
 SPOT

CAM1 EXPOSURE COMPENSATION

Here you can manually adjust the Exposure Values of main camera to improve the image brightness. An unsuitable setting will make the image too bright or too dark.

options: -2.0
 -5/3
 -4/3
 -1.0
 -2/3
 -1/3
0.0
 +1/3
 +2/3
 +1.0
 +4/3
 +5/3
 +2.0

CAM2 EXPOSURE COMPENSATION

Here you can manually adjust the Exposure Values of slave camera to improve the image brightness. An unsuitable setting will make the image too bright or too dark.

options: -2.0
-5/3
-4/3
-1.0
-2/3
-1/3
0.0
+1/3
+2/3
+1.0
+4/3
+5/3
+2.0

CAM1 TRANSFORM

This setting help to flip the main camera image up-side-down to fit your camera mounting location & direction. When you finished the camera mounting, if the image is UP-DIDE-DOWN, please choose UP-SIDE-DOWN setting here to correct the image direction.

options: **NO**
UP SIDE DOWN

CAM2 TRANSFORM

This setting help to flip the slave camera image up-side-down to fit your camera mounting location & direction. When you finished the camera mounting, if the image is UP-DIDE-DOWN, please choose UP-SIDE-DOWN setting here to correct the image direction.

options: **NO**
UP SIDE DOWN

STAMPING SETTING

LOGO STAMPING

The recorder can show the brand logo on the bottom left corner of recorded video. You can choose here if the logo should be stamped onto video.

options: **ON**
OFF

GPS STAMPING

The recorder can record your driving trace and stamp the GPS location data (longitude and latitude) on video.

Please notice there maybe electronic interference on GPS signal from camera, radar detector, wireless transmitter, or something else; which may delay the GPS connecting speed or mistake the GPS data.

Here you can define if the GPS data stamping working.

options: OFF
LOG ONLY
STAMP ON

SPEED STAMPING

The recorder can record your driving speed data and stamp on video. If you have OBD power driver, the speed data will be collected from OBD instead of GPS. Please notice the GPS speed data maybe little delay than your real driving speed. Here you can define the speed data stamping unit.

options: **OFF**
KM/H
MPH

DRIVER STAMPING

The recorder can stamp your driver number or customized phrase on video. Please define the driver number or phrase in next item. Here is the switch.

options: **OFF**
ON

DRIVER NUMBER

Here you can define the driver number or customized phrase to stamp on video. Total 9 characters or numbers or underline.
000000000

Please use UP and DOWN button to adjust number and OK button to move to next place, use MODE button to exit this setting.

DATE STAMPING

Here you can define the date stamping format for date stamping on video.

options: **OFF**
YYMMDD
MMDDYY
DDMMYY

TIME STAMPING

Here you can define the time stamping format for time stamping on video.

options: **OFF**
12 HOURS
24 HOURS

TEMPERATURE STAMPING

There is a temperature sensor built in the recorder main-board so the recorder can monitor the main-board temperature; if the main-board temperature get too high the recorder will automatically shut down to protect itself. You can stamp the temperature on recorded video for debug use.

Here you can define the temperature stamping format for temperature stamping on video.

options: **OFF**
FAHRENHEIT °F
CELSIUS °C

⚙️ SYSTEM SETTING**AC POWER FREQUENCY**

The AC power frequency is different in different country or region, 50Hz or 60Hz. Wrong AC power frequency setting will make the recorder capture traffic light or road lamp flicker.

if you are not sure about the AC frequency in your country please research the article "[List of Worldwide AC Voltages and Frequencies](#)" to find out then set the AC power frequency here.

Please manually set the AC power frequency in your region here.

options: **50 Hz**
60 Hz

AV-OUT MODE

The TV mode is different in different country or region, PAL or NTSC.

Some old television can not identify the video signal if the AV-OUT mode set wrong.

Please manually set the AV-OUT mode in your region here.

options: **PAL**
NTSC

TIME ZONE

Please set your time zone here manually when you get the recorder or the first boot up after firmware upgrading.
The system date & time will be automatically updated once GPS connected; the recorder need the correct time zone setting to calculate the correct system time.

You may need to manually add or minus time zone for daylight saving time.

UTC/GMT +0:00

DATE TIME SETTING

The system date & time will be automatically updated once GPS connected.
Please set the correct time zone setting first so the recorder can calculate the correct system time.

You can also set the date & time here manually if you don't have GPS.

05 / 30 / 2018
21 : 13 : 14

Please use UP and DOWN button to adjust number and OK button to move to next place, use MODE button to exit this setting.

LANGUAGE

Here you can set the system display language you prefer.

options: **ENGLISH**
РУССКИЙ
Le français
Español
Português
日本語
繁體中文

FORMAT CARD

Here you can format the microSD card in camera.
Please be noticed all files will be lost once you start the formatting process.
It is recommended to re-format the microSD card every month to remove the file segments and keep the file system tidy to avoid card writing problems.

options: **CANCEL**
OK

RESTORE DEFAULTS

Here you can restore the system to factory setting.
Please be noticed all the setting you changed will be lost once you start the restore process.
Please remember to set the TIME ZONE after the restore process.

options: **CANCEL**
OK

FIRMWARE VERSION

Here you can check the version number of the current firmware in recorder.
You may need this information when you are trying to upgrade the camera to a later firmware.
The firmware version is sorted by release date, the suffix number means the sequence on that date.

K2S-FW-20180530V1

TIPS

When you hold the MODE button to quit SETTING, the setting will be saved. If you use POWER button to power off or use RESET button to re-boot the recorder while setting, the setting may not be stored.
Please take care the correct operation process.

SPECIFICATION

- ⊙ dual cameras both up to fullHD 1080P 30fps
- ⊙ both cameras extending up to 6 meters
- ⊙ optional sticker camera / water-proof camera
- ⊙ Sony ExmorR StarVIS low lux image sensor
- ⊙ 2.7" TFT screen for live view and playback
- ⊙ 150Mbps IEEE802.11N(B/G) WiFi host
- ⊙ 2.4G RF wireless remote controller
- ⊙ recording storage microSD card up to 256GB
- ⊙ external GPS with indicator and speaker
- ⊙ optional Speed Cam module
- ⊙ G-sensor vibration detect, Motion Detection
- ⊙ voice reminder for easy operation
- ⊙ built-in super capacitor backup battery
- ⊙ optional 1000mAh rechargeable Li-Po battery
- ⊙ support OBD data monitoring and recording
- ⊙ AV-out to monitor for live view and playback
- ⊙ micro-HDMI output to high resolution TV
- ⊙ optional screw mounting / clip mounting / magnet mounting / sticker mounting
- ⊙ built-in auto temperature protection
- ⊙ built-in over-voltage input protection
- ⊙ support vehicle battery drain protection
- ⊙ exclusive PIP playback player with GPS map
- ⊙ support auto switching Parking Guard
- ⊙ mini camera, hidden installation

PACKAGING CONTENT (standard version)

K2S recorder body X1
 remote camera unit X2
 remote GPS receiver X1
 2meters extending cable X2
 4meters extending cable X1
 6meters extending cable X1
 1.5meters data&power cable X1
 remote controller X1
 external device adapter X1
 extending cable holder X1
 cable holder screw 4#-40 X3
 recorder clip holder X1
 clip holder clamp X1
 clip holder screw 4#-40 X5
 extending cable clamp X12
 3M pads for mounting X8
 tiny magnet mount X1
 user manual X1
 cleaning kit X1

PC SYSTEM REQUIREMENT

Windows XP or later operating system, MAC 10.1 or later
 Intel Pentium 4 2.8GHz CPU or above (recommended 3GHz)
 at least 2GB RAM or above (recommended 4GB)
 internet connection (for GPS log playback)

Q: What is the microUSB port on recorder used for?

A: the microUSB port is an alternative of USB-C data / power port; just in case you don't have USB-C cable on hand. You can use this microUSB port to power the camera or connect computer to read card.

Q: What is the Lithium Polymer Battery used for?

A: the Lithium Polymer Battery can support more than one hour recording without external power supply. If you want to use the recorder as a sport camera or outdoor camera temporarily, a Lithium Polymer Battery will help. Or an external power bank will instead of the built-in battery also but external cables needed.

Q: What should I do for Parking Guard recording?

A: a constant power source is needed for parking recording. The constant power source can be hardwire kit in vehicle, power bank, or other device which can provide USB 5V power. The common hardwire kit will provide 5V power for constant recording, the drain protecting is not accurate; there is no parking signal so please select the G-sensor Parking Guard mode; (see page 17)

The exclusive Parking Guard Hardwire Kit will provide stable 5V power and parking signal, with advanced 4 bands battery drain protecting (11.8V 12.0V 12.2V 12.4V auto cutting off) to protect your vehicle accumulator. You can use all the advanced Parking Guard modes (see page 17)

The exclusive OBD power Driver will provide stable 5V power, parking signal and OBD data at the same time, with advanced 4 bands battery drain protecting to protect your vehicle accumulator. You can use all the advanced Parking Guard modes (see page 17)

A big capacity power bank can provide power for several hours recording so it can be used for Parking Guard also, but there is no parking signal from vehicle so you will have to use the G-sensor Parking Guard mode (see page 17). Power bank can be a temporary power source for Parking Guard not a long time method because you need to re-charge the power bank continually.

Q: What is the shortage of Parking Guard Hardwire Kit?

A: the Parking Guard Hardwire Kit is an advanced and safe power source for the recorder, but it is not such an easy work for a beginner to install the hardwire kit. You need to find out the correct constant power cable and ACC (ignited) power cable with vehicle user manual or a multimeter and route the long cable and shield in your vehicle seal parts.

Cigar lighter charger is an easy & fast power supply method, the recorder will be powered once the vehicle engine started; the disadvantage is cigar lighter charger will engage a cigar lighter socket and don't support Parking Guard recording.

OBD power driver is a new easy & fast power supply device for cameras, which provide good plug & play experience for easy installation. The OBD driver will provide stable 5V power, parking signal and monitoring OBD data at the same time, with advanced 4 bands battery drain protecting (11.8V 12.0V 12.2V 12.4V auto cutting off) to protect your vehicle accumulator. An OBD power driver is recommended for Parking Guard recording.

Q: Is the recorder water-proof? Can I use it in water?

A: the recorder is not water-proof, please keep it away from water. If you want to record in water, please keep the recorder out of water (please ensure) and use a water-proof remote lens (see page 3). If you need to record with full device in water, please try a sport/action camera with a water-proof housing.

Q: Why not put the locked videos in a separate folder?

A: the common default setting is to move the locked videos to a separate folder, but when you replay the videos in media player the locked videos will not be auto loaded so the playback will not be consistent, will "jump" from last video to the next but missing the locked one.

There is a quick approach to locate the locked file:

open the video folder in windows explorer, switch display method to "details", add the "attributes" column, the videos with "-RA" property are read-only means they are locked / protected.

Q: Why there is only sound but no image when I playback videos?

A: there is no codec for MP4/MOV video file in windows media player, you need to install the additional codec pack for playing. Please download and install the K-lite codec pack then you will get the videos playback correctly.

Q: Why the recording stop and the recorder shut down automatically?

A: there are several reasons which will make the recorder stop recording: power supply cut off, storage card full or mistake, recorder over heat. If you checked there is no power supply problem, please consider a card error. Please re-format the storage card every month to keep file system tidy, and be noticed the card has a life time. The life time of modern TLC chip card is only 300 to 500 cycles over-write so an MLC chip card is recommended.

Q: Why the playback is in "high speed" ?

A: the video is recorded as Time Lapse in Parking Guard mode; the recording is 2fps and playback is 30fps so the playback in player is 15times speed of the real time.

Q: Recording not stop?

A: There is not a pause recording function, if you want to stop recording, please turn off the recorder, or press and hold the MODE button to switch to PLAYBACK or SETTING mode.

If the recorder is working on Motion Detection mode in Parking Guard; when there is motion detected, the recorder will capture the video until 10seconds after motion still. If the motion don't stop, the capture will not stop. You can turn off the recorder or switch to PLAYBACK or SETTING mode to stop recording temporarily.

Q: The recorder can't power on?

A: First please remove all the cables and microSD card, then plug a power cable to recorder to check if it can boot up. If it still no respond, mostly like the firmware in recorder was damaged. If you cut off power supply while upgrading, the upgrading will be interrupted and firmware will be damaged. Please copy the firmware.bin into microSD root folder and insert into recorder then power on, to re-upgrade the firmware. When the upgrading finished the recorder will auto reboot and delete the firmware.bin file from microSD card.

Q: How Motion Detection work ?

A: The recorder will keep monitoring the video signals from cameras and compare every image with last one. If it found a image change it will start video recording. When the image change stop, the recorder will continue record 10seconds then stop.

Both main camera and slave camera will be monitored for images calculating for motion detection.

Q: Occasional freeze and not responding ?

A: please turn off the camera and wait several seconds then reboot. If the power off operation doesn't work, please try the reset button (it is a small hole at bottom, see page 2) then report what happened with the working condition and related files to service@camdii.net so we can find out the causation and solution.

It is recommended to do a RESTORE DEFAULT settings before check again.

DUAL CHANNEL FULL HD 1080P
HIDDEN RECORDING SYSTEM



MORE THAN A CAMERA