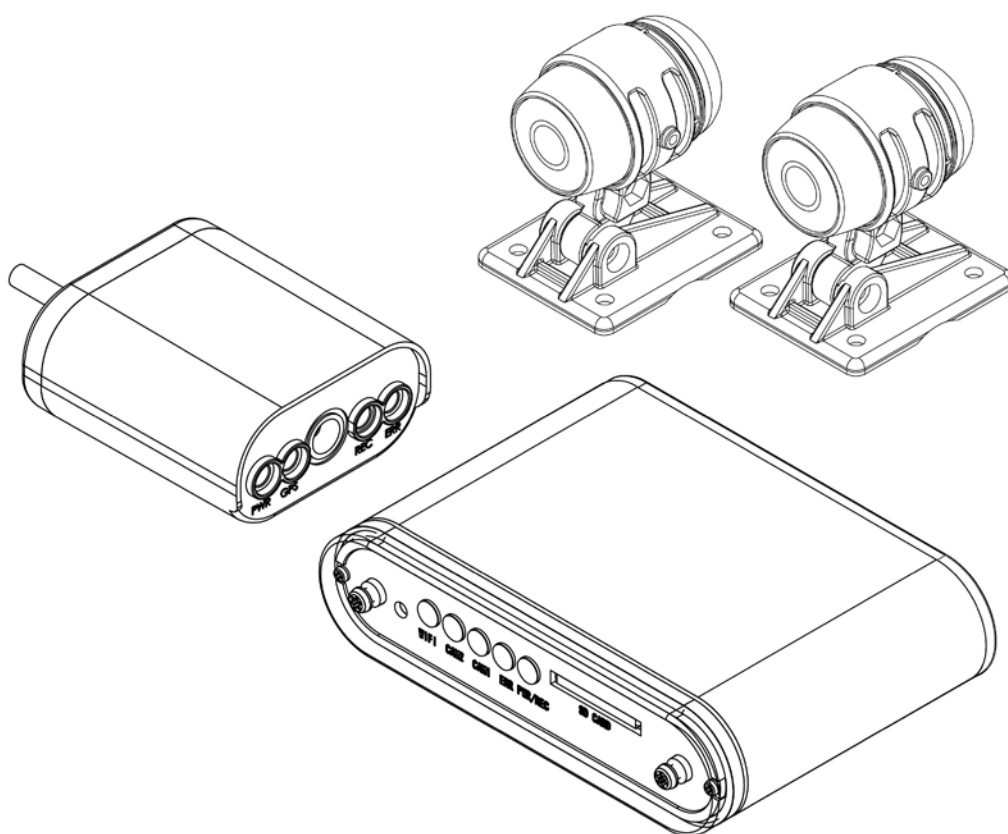


# 2CH Vehicle Video Recorder

## Operation Manual

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2017 FEB V1.0



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# Safety Precautions

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Dear Vacron user,

Appreciate for you purchase Vacron products. Please contact your local distributor if you meet any question or need for any assistance. We will offer you complete and in time service via local distributor. However, we still have rights to upgrade software and hardware without any kind notice beforehand. Please read this manual carefully prior to use of this product.

## Installation Precautions

- Before installation, please insure wires and cables connect correctly.
- Device has to install in ventilated environment and the installation have to guide or help by professional device installer.
- Please use storage device that recommended by manufacture, and purchase the storage device from official purchase channel.
- Please contact local distributor and technology support service if you have any question and need any help during product usage

## In Use Precautions

- Please avoid any solid or liquid get into the inner components.
- Please do not disassemble the equipment for warranty issue.  
Please contact local dealers or the manufacturer for prompt service.
- Please remove the battery if remote control keeps idle for quite a long while.
- The equipment best connects with ground wire in case of outdoor cameras connection or alarm I/O connection. This is to keep the DVR away from static electricity damage.

## Surrounding

- Please have the DVR under recommended temperature set it away from the sun and heating source.
- Please keep this equipment away from humid surrounding.
- Please keep this equipment away from smoke and dust environment.
- Please avoid strongly collision and do not drop the equipment.
- Please set this equipment in ventilation space, and do not block the device' s ventilator.
- Please use device under rated voltage and Amp.
- Please keep flammable objects away from the equipment.

## A. Accessories

Please check every accessory we list below, make sure everything include in the product package before use. If you found any thing missing, please contact local distributor.

Note: The product set does not come with memory card, please purchase the memory card separately.

### Standard set:

- Power cable
- Multi-functional OBD display (built in GPS and microphone)
- USB WiFi Dongle
- 2 pcs camera
- 2 Pcs camera cable
- Product CD
- Velcro tape

**B. Features:**

- a) Aluminum casing make it durable and waterproof.
- b) Small independent system, 2 channels video and 1 channel audio recording.
- c) H.264 compression format, 1080 P video resolution.
- d) Low power consumption and efficient heat dissipation, no build-in Lithium battery to prevent possible danger and heat explosion.
- e) Devices starts recording automatically when engine is on, file is well formatted and saved securely with extension recording by super capacitor.
- f) Have GPS route tracking function, can display the route tracking by click Google map during video playing in PC player.
- g) Can connect with USB WiFi dongle, connection for mobile phone application to display, playback and backup file directly.

## C. Specifications

### ● CAR DVR

Item	Specification
Video Input	2CH 1080P
Resolution	1080P CH1 NTSC/PAL:30FPS/25FPS 、 CH2 NTSC/PAL:30FPS/25FPS
Power Consumption	(a) DC12V input, power consumption is approx. 1A. (b) DC12V input, ACC OFF standby power consumption is approx.2.5mA. (c) Operation voltage: DC10.0v ~ DC15.6v. (d) Initial voltage: DC8V above.
Prolonged Recording	(a) Extensional power supply for 10 seconds after ACC OFF. (b) Build-in super capacitor.
Operation Temperature	Operation -20℃ ~ 60℃ ( In disclosed space) . Storing temperature: -40℃ ~ 85℃ .
Storage Device	Class 10, 8GB storage and above SDHC Card, max. to 128GB.
Recording mode	Continuous recording after power ON.
Data Content	Video, date, time, audio, GPS, external alarm trigger log, G-Sensor.
Storage Format	Secured data format, please use suggested player.
Audio Input	Secured data format, please use suggested Multi-functional OBD display.
Time Setting	GPS time zone auto calibration, and initialize with build-in calendar if no GPS signal. Please do GPS time calibration after installation, time memory is kept with car battery, no battery power supply

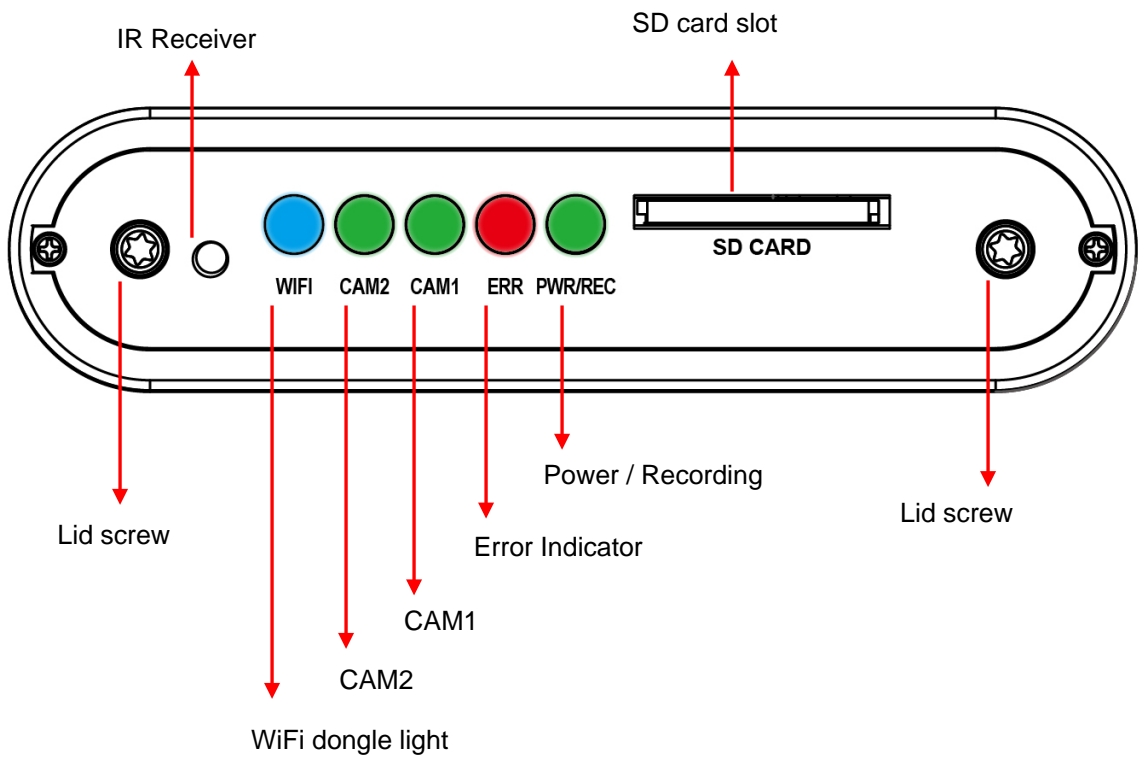
	will result setting return to default, please do time calibration after connecting to power.
Display Mode	TV-Out, Wifi AP mode by APP
OBD Indicator	<p>(a) Green light flashing: recording. (Higher flashing frequency for event recording).</p> <p>(b) Red light: install or set incorrect.</p> <p>(c) Blue light: WiFi connection.</p> <p>(d) Green light: CAM 1 on</p> <p>(e) Green light: CAM 2 on</p>
Input	<p>(a) Power and signal input:</p> <ul style="list-style-type: none"> <li>i. Power input DC12V</li> <li>ii. ACC signal: power input range DC10.0v ~ DC15.5v °</li> <li>iii. LAMP signal: power input range DC10.0v ~ DC15.6v for external alarm triggered force event recording.</li> </ul> <p>(b) Video input</p> <p>(c) Monitor input: GPS, speed, microphone audio input.</p> <p>(d) Infrared remote control reception.</p> <p>(e) SD card slot</p>

Notes : The product specification is subject to change without prior notice

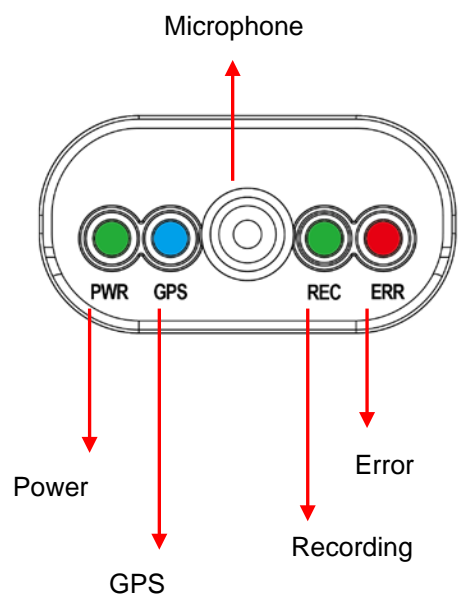


D. Product appearance

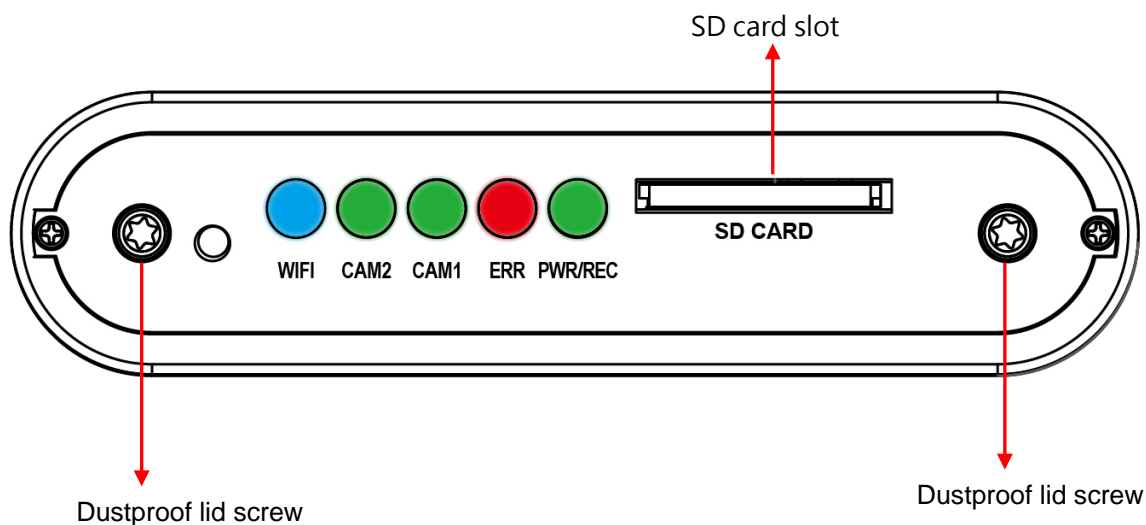
- Mobile DVR unit:



- OBD (On Board Display)



## E. Installation of SD card



- (1). Counterclockwise to unscrew the screw of dustproof lid to install/takeoff the SD card.
- (2). Format/ restoration SD card refer to other chapter description.



### Attention

- (1). Suggest using class 10, 8GB above.
- (2). Before using the memory disk, please format the disk first by using the software player in the CD-ROM. If not, device will automatically erase all data in the memory disk before recording.
- (3). To ensure recording quality, please do not use adapter card with Micro SD card. Doing so may lead to bad connection due to shock and vibration.
- (4). All memory disks have limited lifespan. Please regularly watch videos on PC and check the memory disk to ensure proper functioning.
- (5). Collision and vibration may cause SD card defective and result intermittent recording, please check data and backup file

periodically.

- (6). When you using new memory card insert host, the device will format the memory card, and beginning recording after approx. 2 second.
- (7). After SD card format by device or PC player, 8G, 16G, 32G, 64G or 128G SD card all showing 80.5MB storage space under Windows system, other storage space as hindden files, user have to play video records by professional player that offer by manufacturer. The restore SD card also have to use the manufacturer player refer to format/restore memory card chapter.
- (8). When accident happen, please remove SD card and set it as write protection condition, for avoid record being over writing or tampering.

## F. Cable Installation

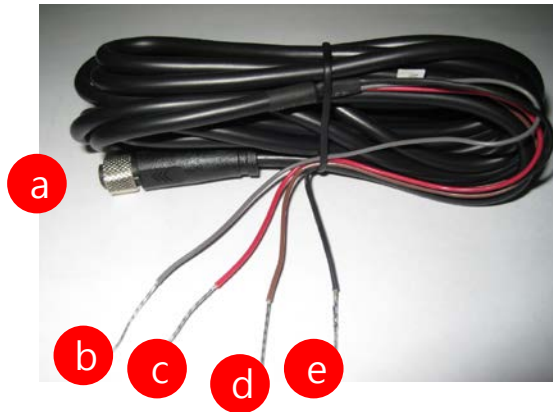
- Cables



- (1) Power connector
- (2) Multi-functional OBD display connector
- (3) WiFi dongle slot
- (4) Video out
- (5) Camera 1 connector
- (6) Camera 2 connector

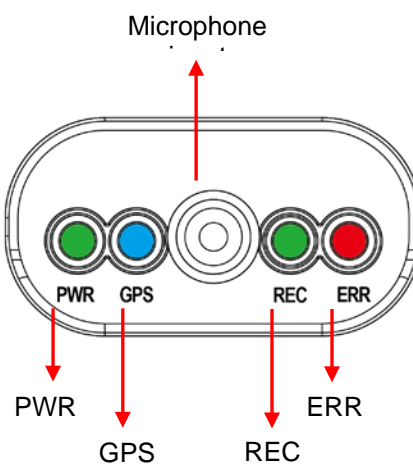
Note: Please use specified camera that provide by manufacture.

- Power cable



- (a) Power connection: reception
- (b) Alarm recording (Grey cable): Pre-reserved function
- (c) Power cable (Red): connect to power positive connector.
- (d) ACC activation cable (Brown): connect to motorcycle power switch (+).
- (e) Ground (Black): connect to power supply (-).

- OBD



- (A) PWR (Green) : power indication.
- (B) GPS (Blue) : Flashing mean GPS 3D positioning searching. Consistent blue light on means 3D positioned successfully.
- (C) Microphone : built-in microphone input.
- (D) REC (Green) : Flashing means continuous recording.
- (E) ERR (Red) : Error diagnosis, please check camera signal, OBD display, SD storage and so on.

## G. Installation diagram

- Installation on motorcycle



### Attention

- (1). Please install this device with the help of professional technician to avoid damaging your vehicle.
- (2). For installation by none-technician, please use tapes instead of boring tools to avoid damaging the electrical and gasoline system.
- (3). For safety, switch off ignition before installation, and please keep away from gasoline pipeline and tank.
- (4). Before inserting wires through holes, temporarily wrap the terminal with tape to prevent bad connection from accumulated dirt or debris.
- (5). Tightly seal all electrical connection with tape to prevent loose connection or leak leaking to the connection.
- (6). Connect the power behind the key ignition and fuse (not directly to

- 
- the vehicle battery) to avoid depleting the battery.
- (7). The device should be fixed to the vehicle. Tumbling inside the storage trunk will damage the device.
  - (8). GPS positioning accuracy may be affected by the installation position, sun-screen or weather condition.
-

## ● DVR installation diagram

- (a) DC12V input is approx. 1A consumption ; Standby power consumption when ACC OFF is 2.5mA.
- (b) Operation electric pressure : DC10.0v ~ DC15.6v.
- (c) Device initiate by power DC8v above.

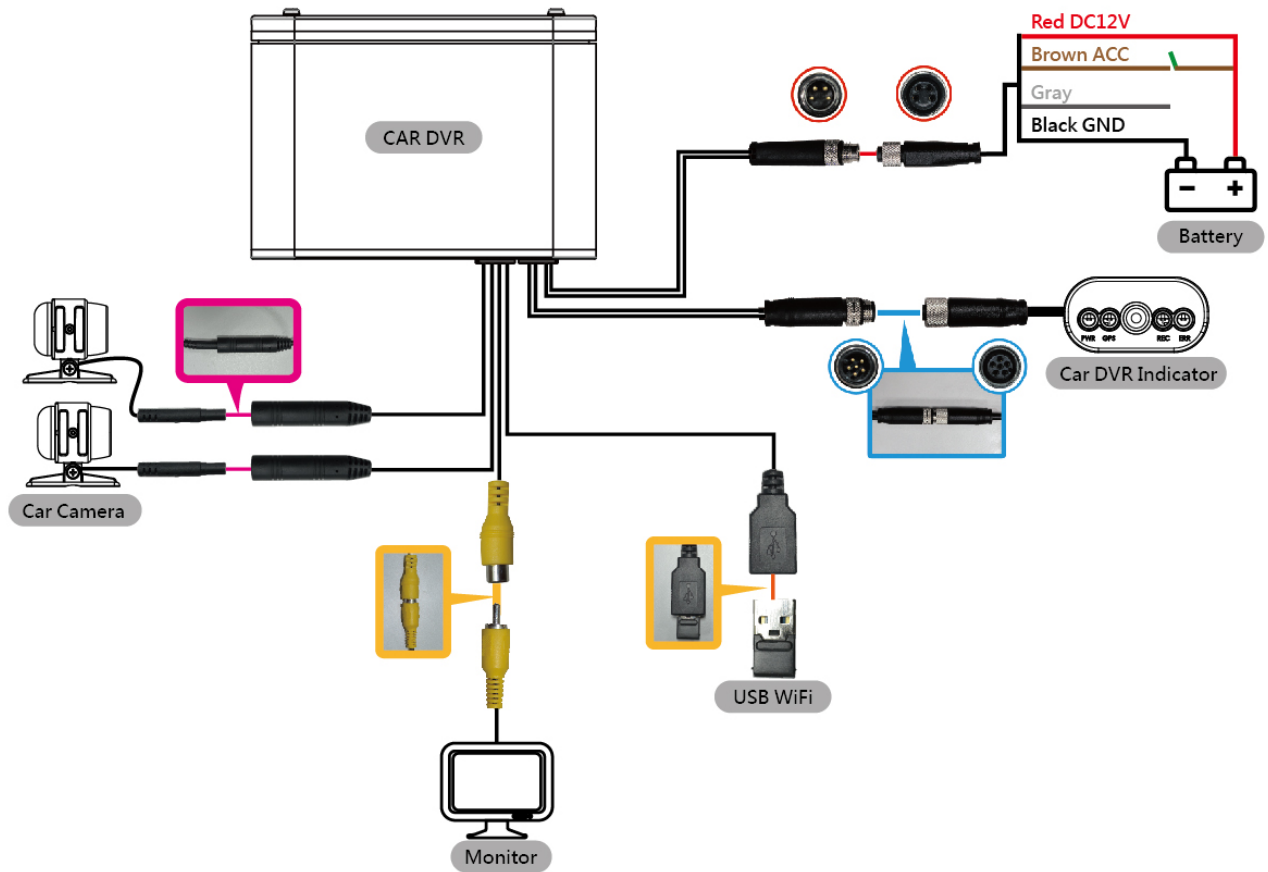
Power supply:

Red cable: DC (+)

Brown cable: ACC power DC current

Grey cable: Pre-reserved function

Black cable: Ground cable






H. Remote Controller (optional)



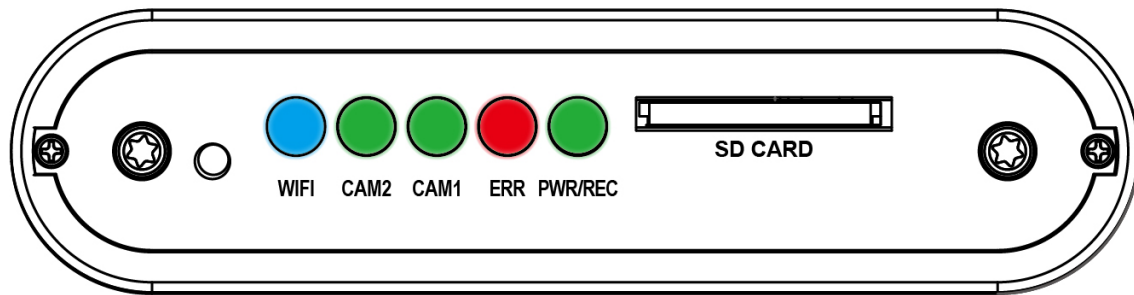
Button Description			
No.	Description	No.	Description
1	Split screen display	7	Enter
2	Force Record	8	-
3	Quad display	9	Fast Forward
4	Mute	10	Play back
5	Menu	11	Pause
6	Arrow keys	12	Stop

<p>How to check if the remote controller is not workable?</p> 	<ul style="list-style-type: none"><li>✓ Check the mercury cell is installed in Correct direction. (Check the pole)</li><li>✓ √ Check the cell power is exhaust or not.</li><li>✓ √ Check the sensor is covered or not</li><li>✓ √Check if it nearby Fluorescent Lamp.</li></ul>
---	---

## I. Recording and stop recording

### 1. System initialization / Recording:

System initializes within 30 seconds when power is on. PWR green light ON when system is rebooting. System starts to recording when REC green light is flashing.



Light Indication:

- PWR/REC : **GREEN** on means device POWER is on, Flashing resembles recording.
- ERR : **RED** on means abnormal, please check possible reason such as camera signal, HUD display, SD card ...etc.
- CAM 1 : **GREEN** means in connection.
- CAM 2 : **GREEN** means in connection.
- WiFi : **BLUE** means the WiFi dongle has been detective.






### 2. Shut off/ Stop recording

Device offer prolonged 3 seconds recording after power off to ensure data is well stored; user can take out the SD card when indication is off.

## J. Live view:

(1) The monitor can display video record from CH1, CH2 or both CH1 and CH2.

(2) Icon Description:

- : Recording
- : GPS sensor position successfully.
- : Microphone ON
- : Activate event recording
- : Alarm

(3) OBD Main menu operation and parameter setting description

Recording Setting	<b>Record FPS</b>	NTSC	1080P	5-30fps
		PAL	1080P	5-25fps
	<b>Record Quality</b>	regular	Good	Excellent
Image Setting	Setting the brightness, contrast, color adjustment by chooses different channels.			
Image input	For lens image adjustment, you can set the normal mode, mirror mode, flip mode			
Time Setting	When GPS signal successful positioning, the system will automatically adjust time and time zone by GPS. If device cannot receive GPS signal, user can directly setting the time on device			
GPS Setting	Select and display the vehicle speed and speed unit on live view video screen.			
Vehicle License Plate Number	Input range: A~Z and 0~9			

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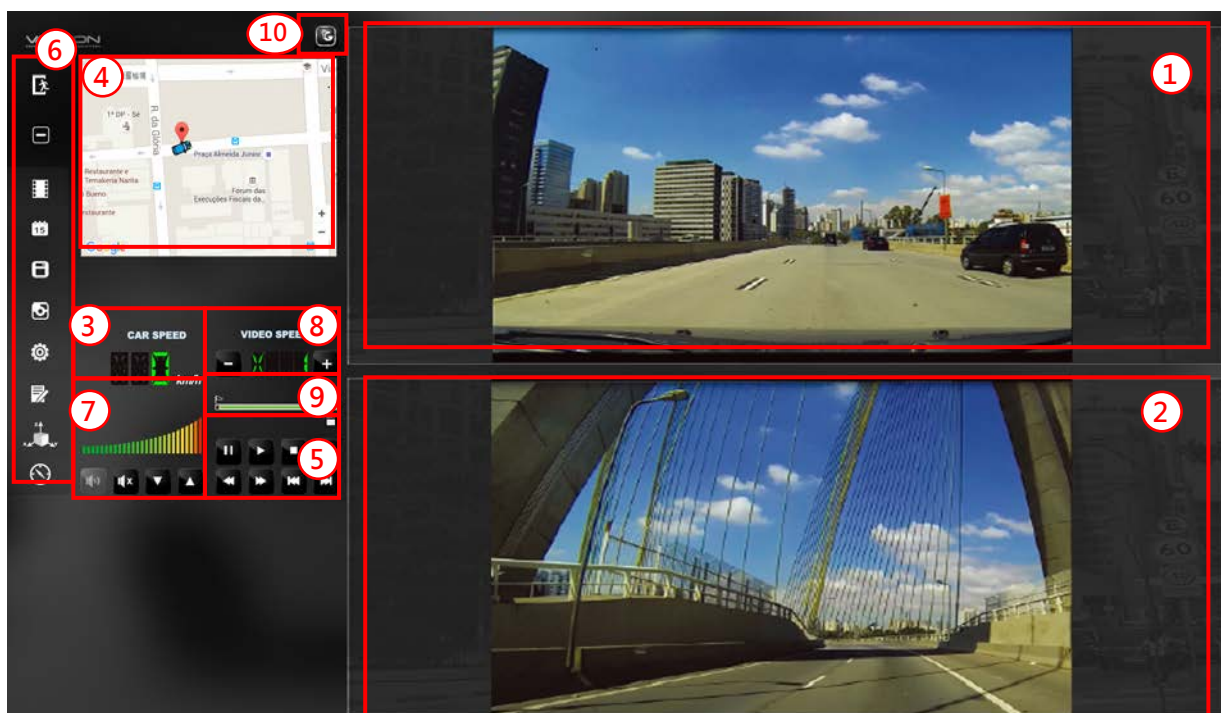
Operating Mode	1.Setting default channel mode 2.Audio record ON/OFF
G-Sensor	The device will activate force recording function, which ensure device keep recording and avoid overwrite records during vehicle collision accident.
Restore default Setting	After restore default setting, the device will restart and restore default setting data.
Format Hard Disk	All the records will delete with Hard Disk format.

## K. PC player

Run the player software  (included in the CD).











©NOTE: The software requires Direct X version 9.0 or above.

### 1. Viewer Interface











1	CAM1
2	CAM2
3	Speed display
4	Google Map / File list
5	Operation control interface
6.	Function control interface
7	Volume control
8	Play speed
9	Time bar/ File mark
10	Free Google map key type in

## 2. Function control interface

	Close
	Minimal
	Playback
	Calendar
	Backup
	Snapshot
	Configuration
	Format
	G-sensor
	Compass

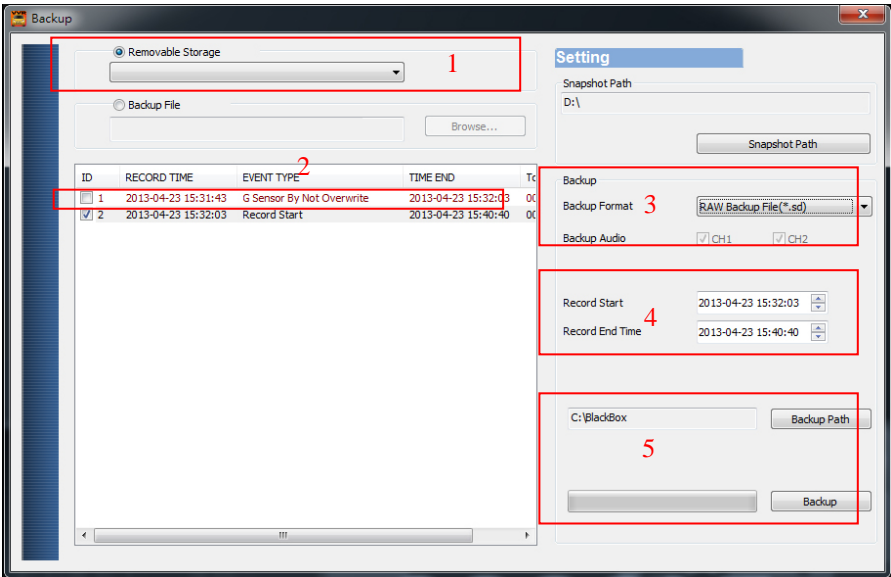
## 3. Play & Settings Icon Instruction:

	Play previous file		Stop
	play previous frame		Play
	play backward		Play next frame
	Pause		Play next file

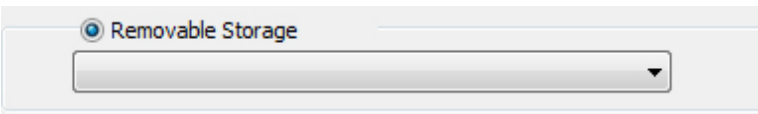
L. Data backup

Save data from SD card to PC or other device.

Use PC player and click  to enter backup interface:



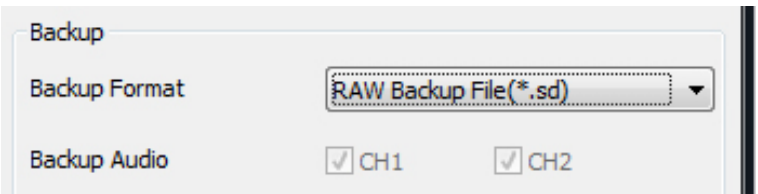
Step1. Choose SD card source:



Step2. Choose backup files

ID	RECORD TIME	EVENT TYPE	TIME END	Tc
<input type="checkbox"/> 1	2013-04-23 15:31:43	G Sensor By Not Overwrite	2013-04-23 15:32:03	00
<input checked="" type="checkbox"/> 2	2013-04-23 15:32:03	Record Start	2013-04-23 15:40:40	00

Step3. Choose backup data format



Data format :


(1) SD card original format (RAW)

<input type="checkbox"/> 2014-05-27-18-10-03.sd	RAW file *.sd
---	---------------

(2) AVI Format (\*.avi)





<input checked="" type="checkbox"/> 2014-05-27-18-11-07-Cam1.avi	Cam1, *.avi file
--	------------------

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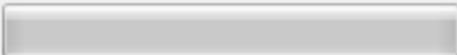
 2014-05-27-18-11-07-Cam2.avi	Cam2 *.avi file
--	-----------------

Note: backup to memory card in original format, the format will be containing GPS latitude and longitude, speed, recorded data such as G-SENSOR, if the backup date in \*.AVI format, it contains only video and audio, so back up in original format is recommended.

Step4. Select the backup beginning time point

Record Start	2013-04-23 15:32:03	 
Record End Time	2013-04-23 15:40:40	 

Step5. Select the path and start backing up

C:\BlackBox	Backup Path
	Backup

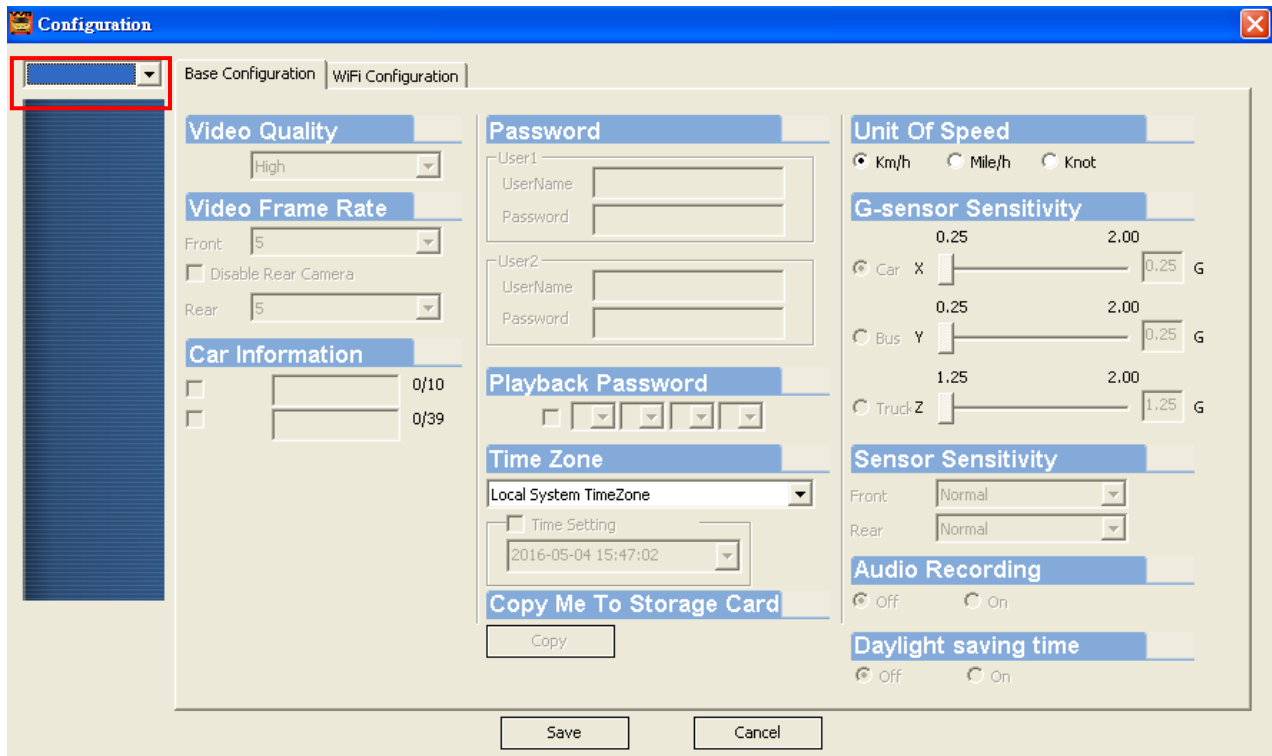


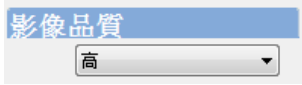
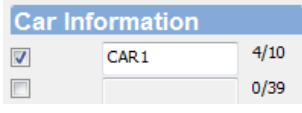
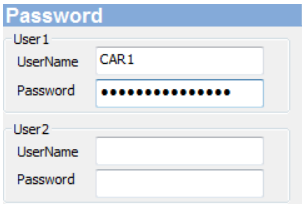
## M.Configuring the Memory Disk

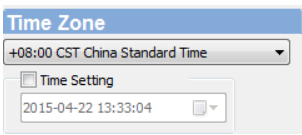
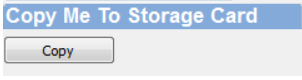
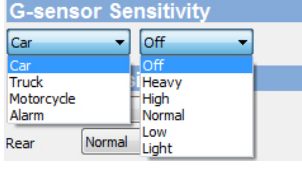
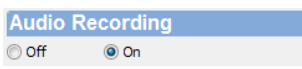
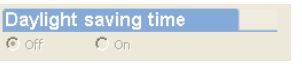
Please insert SD card into card reader and launch player on your computer to do card formatting.

Click  on player to do setting:

Choose disk

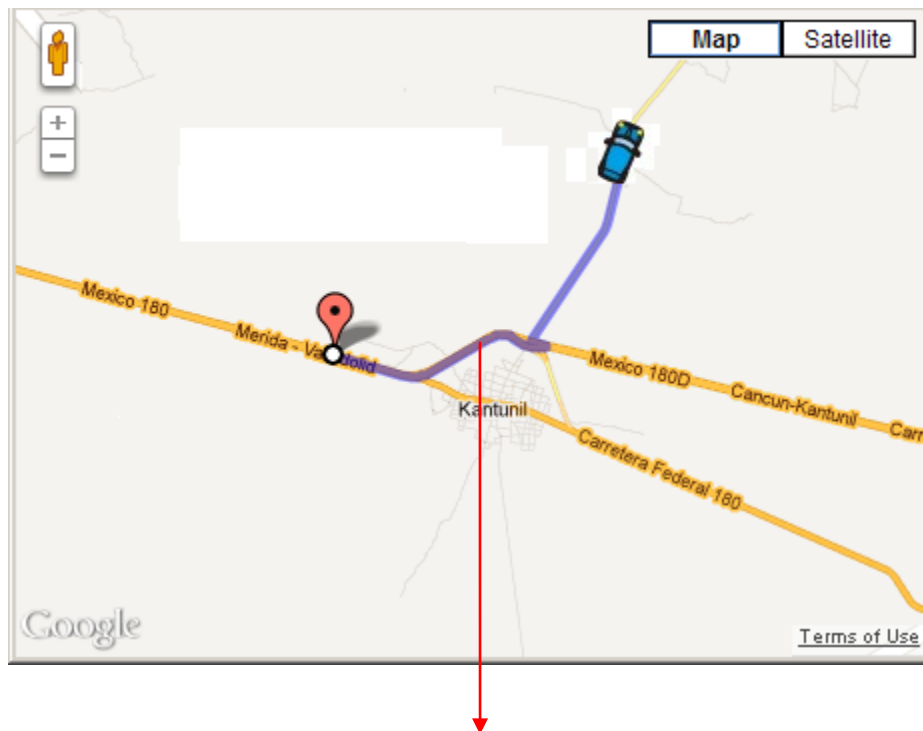


1	Video Quality		Select video recording quality as : High, Normal, Low.
2	Car machine message		Identification message, can input car plate number or driver's name...etc.
3	Password Management		This feature encrypts the hard drive to prevent other person access to data. Set the password up to 15 characters. For access the file, setting, and format disk require enter the password. ★Note: pay attention with capital letter during password setting, keep your password safely prevent password forgetting.

4	Time Setting		Greenwich Mean Time, adjust it with desired time zone to display.
5	Copy to SD card player		Copy files from Player to SD card storage
6	G sensor		Use X-Y-Z axis vibration detection to determine the collision and forced recording.
7	Audio Recording		Set audio record: OFF / ON
8	Daylight Saving Time		Set the daylight saving time: OFF/ON

## N. Google Map track playback

If there is GPS signal files, the device will be able to record route track, and playback the route track during video file playback.

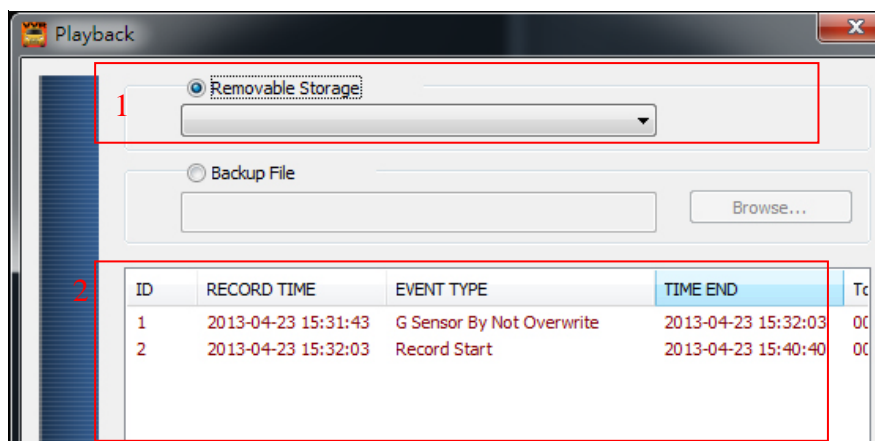


Tracking path

## O. Data Playback



Playback on PC player

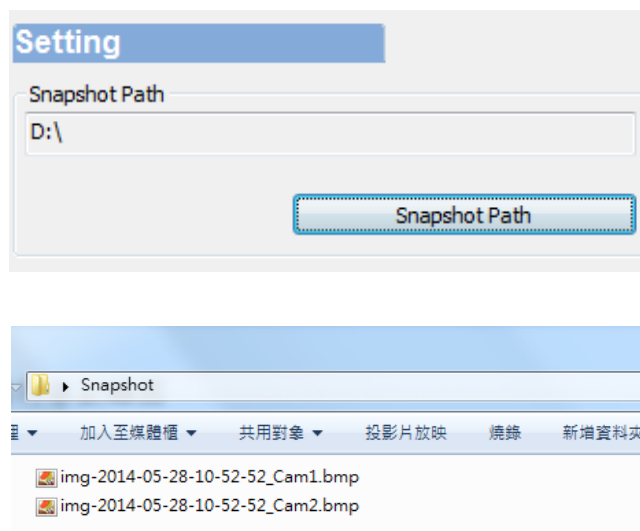
Click  to enter playback mode:



- (1). Select the path of the memory disk or a backup file on the hard disk.
- (2). Double click the desired footage to play the file.

## P. Image Snapshot

User can take a snapshot of the current frame by pressing  to save screenshot. Snapped image is default saved to C: /BlackBox, user can enter  to set image path. Data format is \*.bmp



## Q. Format / Restore Memory card

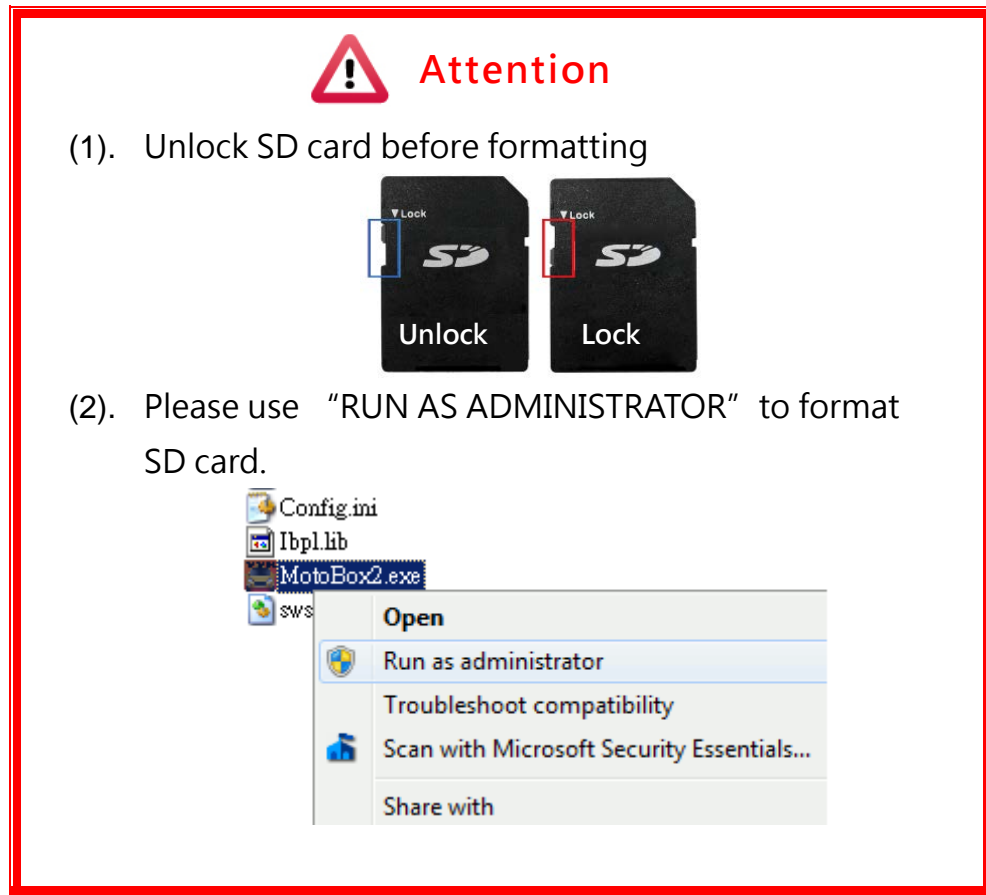
Q1. When do user need to format SD card?

When user uses brand new SD card, please format it before use.



**Note:** this recording system cannot delete some specific video file, backup video files that you need before format.

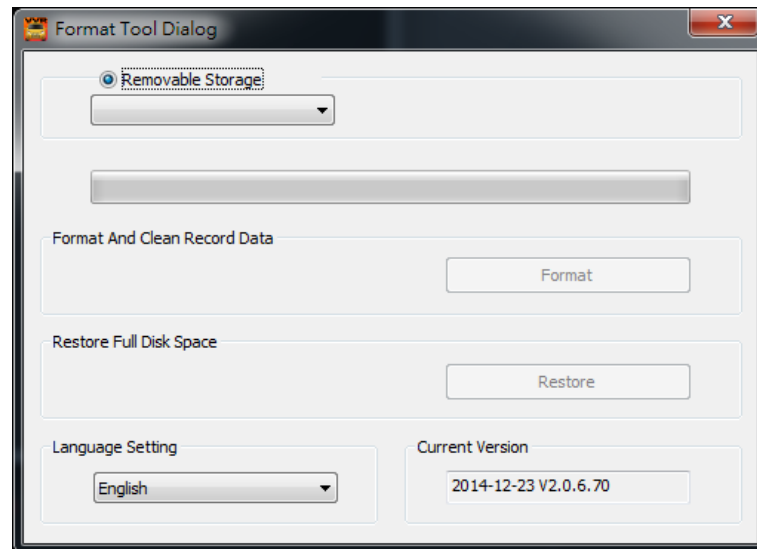
Q2. When does user have to restore SD card?

If you want to repurpose the memory disk for other uses (e.g. for computer or digital camera), you need to restore the disk. All recorded data will be erased from the disk.

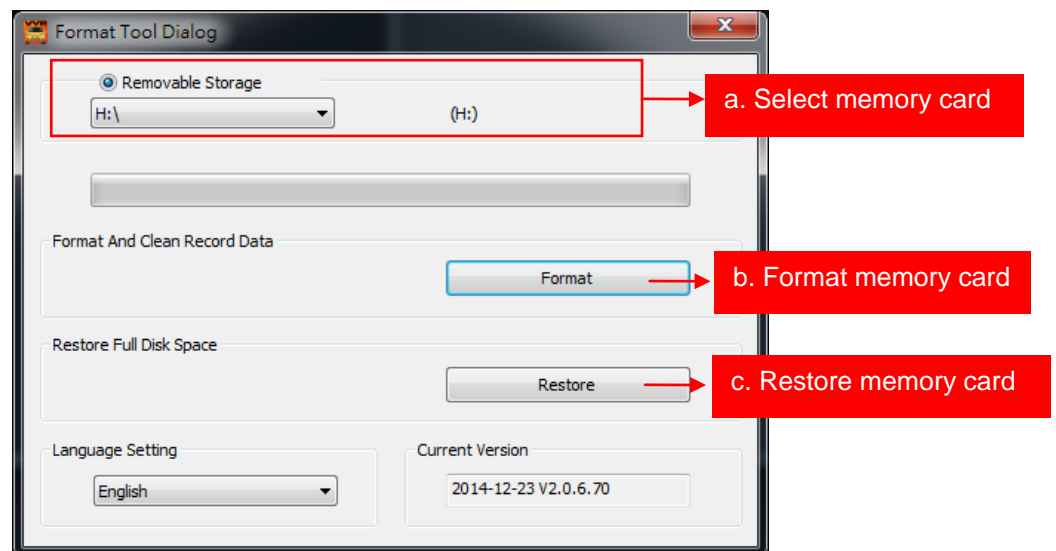


### Q3. How to format/restore SD cards?

- (1). Put the SD card into a card reader and plug the card reader into your computer USB slot.
- (2). Play software, click  to enter formatting tool.



- (3). Select memory card location, and choose "format" or "restore" memory card



## R. WiFi connection

1. Search, download and install " VacronPlayer" through Google play store.
2. Turn on WLAN 「SSID」, password 「12345678」
3. Run APP " VacronPlayer" , click 「device list」 and Add button, type the device name that you preferred.
4. Click the device and chose 「All channel」 get into Live view.
5. App function : Live screenshot、Live recording、remote video playback、remote files backup.
6. Capable review backup video record.

CH-1



Remote playback





### Backup files playback



### Add device



1. Device Name: type a device name
  2. Device Address: WiFi AP mode to smartphone will gave IP automatically.
  3. Media Port: 80 (Default)
  4. Account: admin (Default)
  5. Password: (Default)
  6. Channel: setting as camera number.
- Save and exit

### Devices list



Select device, choose only display all channel from this device, it will showing CH1 live view screen.



### Attention

- (1). There might be video transmission delay due to wireless transmission.
- (2). Remote playback video file only available for SD card record without overwriting
- (3). Please remember to restore WiFi setting to external network after using Vacron Player.
- (4). It is recommended to check regularly with the use of the Laptop player to play the video. Make sure the video system maintain normal operations if OBD is not installed.



For more information  
Please visit VACRON website  
<http://www.vacron.com>

Made in Taiwan

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