

# 2CH Vehicle Video Recorder

## Operation Manual



\*Illustration, camera please purchase separately.

2017 Jun. V1.0

---

# Table of Contents

---

A. Accessories .....	4
B. Features:.....	5
C. Specifications.....	6
D. Appearance.....	10
E. Memory Card Installation .....	11
F. Wire installation instruction.....	13
G. Installation diagram .....	15
H. Recording and Stop recording .....	18
I. PC player .....	19
J. Data backup.....	21
K. Memory card setting .....	23
L. Google Map drive track playback(Only work with GPS included device).....	25
M. Data Playback .....	26
N. Snapshot .....	27
O. Format / Restore Memory card .....	28
P. WiFi Connection .....	30

---

## Safety Precautions

---

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 install device, please insure wires and cables connect correctly.
- System installation is required professional installers and ventilation space.
- Please use storage device which recommended by manufacturer and meet the device work requirement. For ensure the storage device quality, please purchase the device from official channel.
- Please contact your local distributor if you meet any question or need for any assistance during product usage.

### System usage precautions

- Please avoid any solid or liquid get into the inner components
- Do not try to disassemble, repair or replace components of the device. Please contact distributor or manufacturer immediately if you meet any problem that cause device stop working. Once we receive the report, we will solve the problem as soon as possible.
- Remove battery for remote controller if you not use remote controller for a long time.
- Avoid static electricity and others burn host, the equipment best connects with ground wire if device installed the outdoor cameras which connected with alarm I/O or other accessories.

**Usage environment:**

- Please use this device 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.
- **Before you using the 3G product, make sure you have read the following safety precautions:**
  - Companies or users are not allowed to change frequency , power, original design and function for the qualified and certified low power radio frequency motor without our permission.
  - Using the low power radio frequency motor shall not affect flight safety and interfere with legitimate communications; Stop the motor immediately if found interference happened.
  - The legitimate communication is the radio communication which followed and worked by telecommunications law. Low-power RF motors are required to tolerate the interference of legitimate communications or industrial, scientific and medical radioactive electrical equipment. 「To reduce the influence of electromagnetic waves, please use it properly」

## 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:

1. Power cable
2. Product CD
3. Velcro tape

■ Optional:

1. SD card reader by USB
2. 8/16/32G Class10 above SD card
3. USB WiFi Dongle DWA-121 ◦
4. Camera cable (2.5meter 、 3.5meter 、 5meter 、 10meter or 15meter)
5. Vehicle camera(chose by user requirement )

**B. Features:**

1. Waterproof function
2. Micro-vehicle video recording system, 2 channels video input .
3. H.264 compression format, support 720P video resolution.
4. Low power consumption and efficient heat dissipation, no build-in Lithium battery to prevent possible danger and heat explosion.
5. Device starts recording automatically when engine is on; Device automatically save records and shutdown when engine is off.
6. Built-in supercapacitor, ensure file is well formatted and saved securely in memory card with extension recording time after engine off.
7. Capable connect with USB WiFi dongle, watch and backup live video through mobile device.
8. Made in Taiwan, three years warranty for host.

## C. Specifications

### ● DVR host specifications

Terms	Specifications
Video input	Support 2 CH AHD 720P camera
Resolution	720p CH1+CH2: Max.60FPS Default setting as CH1 30FPS, CH2 30FPS.
Power Consumption	(a) DC12V input, power consumption is approx. 500mA ° (b) DC12V input, ACC OFF standby power consumption is approx. 30mA. (c) Operation voltage: DC10.0v ~ DC14.5v ° (d) Initial voltage: DC11v above.
Delay recording	(a) ACC OFF, support software setting ACC delay shut down device function. (b) Built-in super capacitor extension power supply and delay recording about 3 sec ensure records write back to SD card.
Operation Temperature	Operation Temperature:-20°C ~ 60°C (Non-confined spaces with natural ventilation) Storing temperature: -40°C ~ 85°C.
Storage Device	Class 10, 8GB storage and above SDHC Card
Recording mode	Auto recording after power ON.
Records	Video, date.
Storage Format	Specific file format, play video with a dedicated player; has local playback function. Some specific devices do not have remote control receiver and local playback function.
Audio input	N/A
Time Setting	Built-in perpetual calendar clock with button battery to maintain RTC time, time can be re-calibrated using the playback software.
Display Mode	(a) USB WiFi Real-time display (optional)

Output device	<p>(a) Green light flashing: recording.</p> <p>(b) Red light: install or set incorrect.</p> <p>(c) Blue light: WiFi connection. (optional) Higher flashing frequency for software updating, please do not cut off device power.</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 ~ DC14.5v</li> </ul> <p>(b) Video input: please protect with waterproof tape on connectors after wiring.</p> <p>(c) USB WiFi slot (optional)</p> <p>(d) SD card slot</p>
Explanation	<p>(a) Please install device by professional installation engineer; temporary installation is suggest fixing with tape included; please take high attention from damaging motor oil and power supply.</p> <p>(b) Please keep device wiring from gasoline tube and oil tank; please install DVR when engine is off.</p> <p>(c) Please do not use micro-SD adaptor as recording device, it may cause intermittent recording and unstable connect from driving vibration.</p> <p>(d) Please use tape to seal connector well after wiring, in order to prevent wire loosens and dirt, oil, water from entering.</p> <p>(e) All wires should be installed with fuse protection.</p> <p>(f) DVR should be fixed well to prevent moving and causes device from damages.</p> <p>(g) GPS positioning precision is interfered by installation position and weather condition.</p>
Attention	<p>(a) Camera video and signal may be electromagnetic interfered of installing on non-EMC certified vehicles.</p> <p>(b) Please use alcohol to clean cable connectors to eliminate dust, mud, oil, ...etc. to ensure signal transmission and video quality.</p>



- (c) NTSC or PAL frequency should be set according to local TV system.
- (d) NTSC or PAL have different video output, which require user select different device and screen type. °
- (e) SD card can appear compatibility issues following manufacture process change or adjust. The device cannot guarantee compatible with all memory cards that sell in market. If you found the device showing compatibility issues, please change other memory card.
- (f) The machine consumes micro electric current when standby. If the vehicle would not be used for long time, please remove DVR power to prevent power consumption to car battery. User needs to do time calibration after reconnect the DVR to car battery.
- (g) If user does not use the player to format memory card, the machine will force to format the entire memory card and then start recording.
- (h) Boot screen and OSD interface is subject to change according to software update or revision change without notice.
- (i) Memory card has the number of reading and life issues, please check and use the computer to play video regularly in order to make sure the memory card can read and write properly.
- (j) Collision and vibration may cause SD card defective and result intermittent recording, please check data and backup file periodically.
- (k) When even happened, please take off the SD card and lock it, to avoid overwrite
- (l) Ensure power off before install or remove camera, prevent power supply problem or short-circuit
- (m) Device will auto power off when it cannot receive ACC signal, the time keep working by battery power

---

	supply, no battery power supply will result in reset time by GPS.
--	-------------------------------------------------------------------

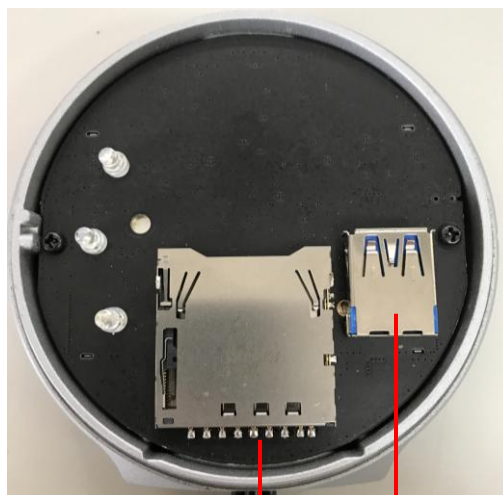
Notes: The product specification is subject to change without prior notice

## D. Appearance

- Host



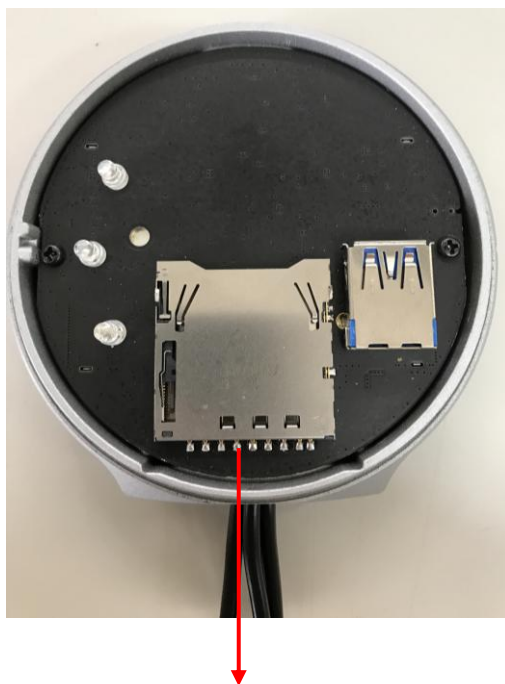
### Internal structure



SD CARD Slot

USB Slot

## E. Memory Card Installation



SD CARD Slot



Positioning tag

- (1). Turn and open the cover by counterclockwise to install / remove the memory card.
- (2). Turn and lock the cover to positioning tag.
- (3). Format/Restore memory card, please refer to other sections.



### Attention

1. Suggest use Class 10 above SDHC Card (8G 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.

## F. Wire installation instruction

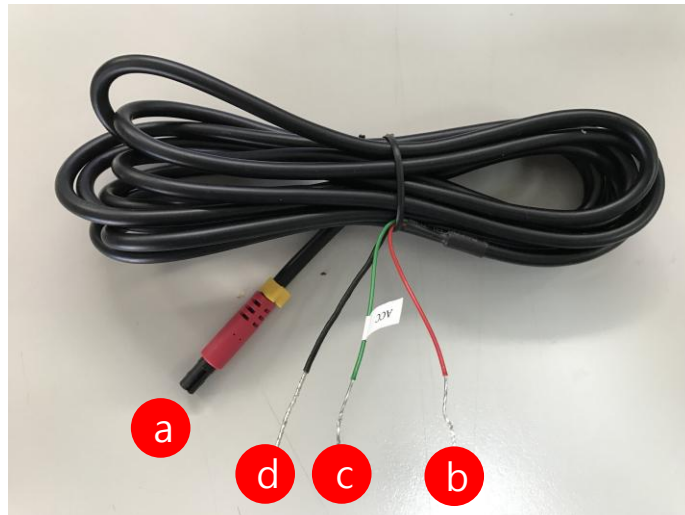
- Device wire



- (1) Power connector
- (2) Camera 1 connector
- (3) Camera 2 connector

Note: Device using with the dedicated drive recording camera

## Power cable



- (a) Power connection jack-female
- (b) Fire wire(Red): connect to positive electrode
- (c) ACC activate control wire (Green): connect to positive electrode of vehicle engine start switch.
- (e) Ground wire(Black): Connect to negative electrode

## G. Installation diagram

### Installation on Motorbike



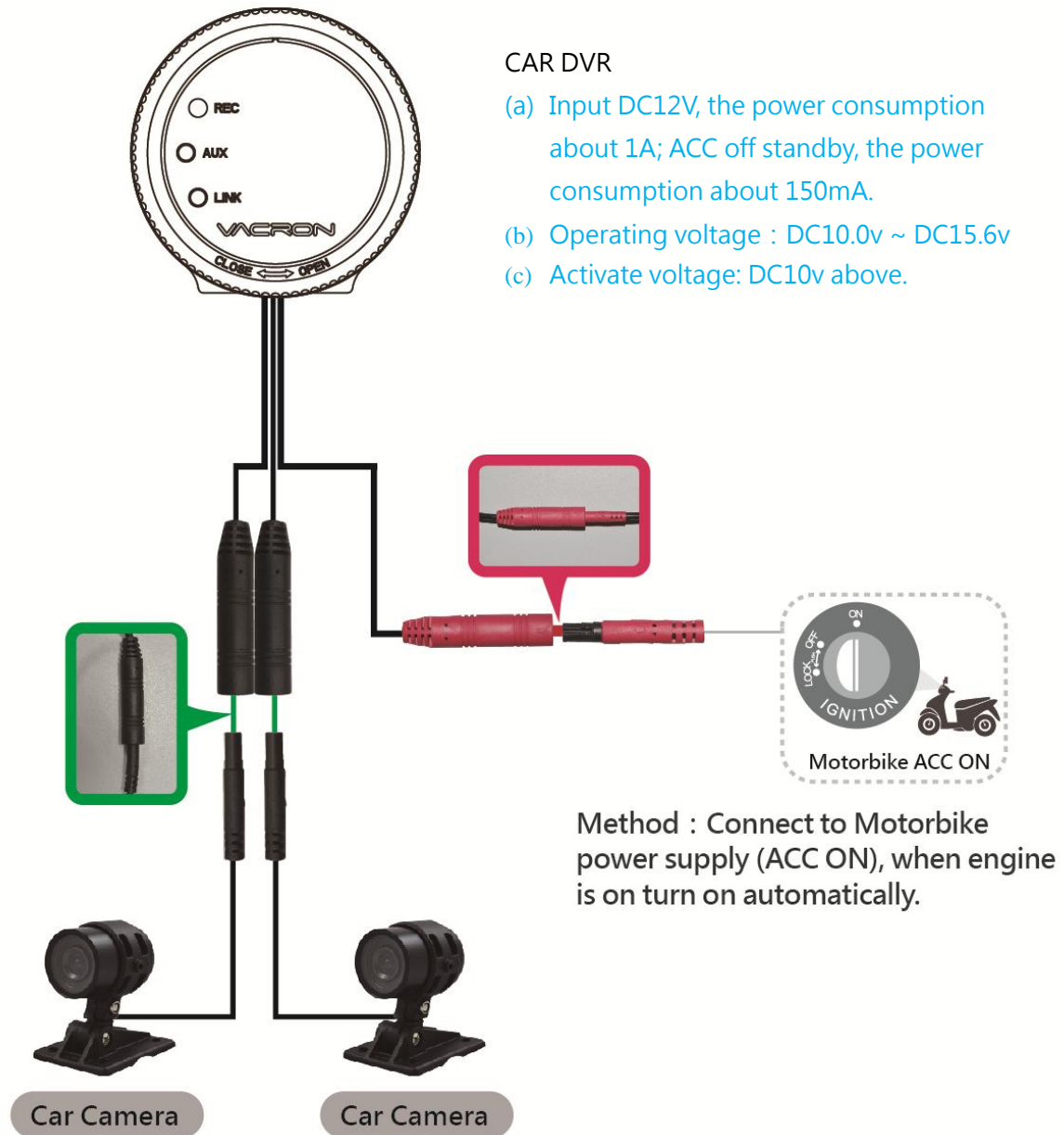
### Notes

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



## H. Recording and Stop recording

### 1. System initialization/Recording:

System initializes within 30 seconds when power is on. During the process of system initializes, the green light keeps lighting. When the REC green light flashing, which represent for device start recording.



Light signal:

- REC : System starts to recording when REC **green light** is flashing.
- AUX : **Red light** keep lighting for install or setting error, may have error in camera signal, SD card connection and so on.
- LINK : **Blue light** flash for WIFI dongle detected, keep lighting stand for WIFI connecting.

### 2. Shut off / Stop recording

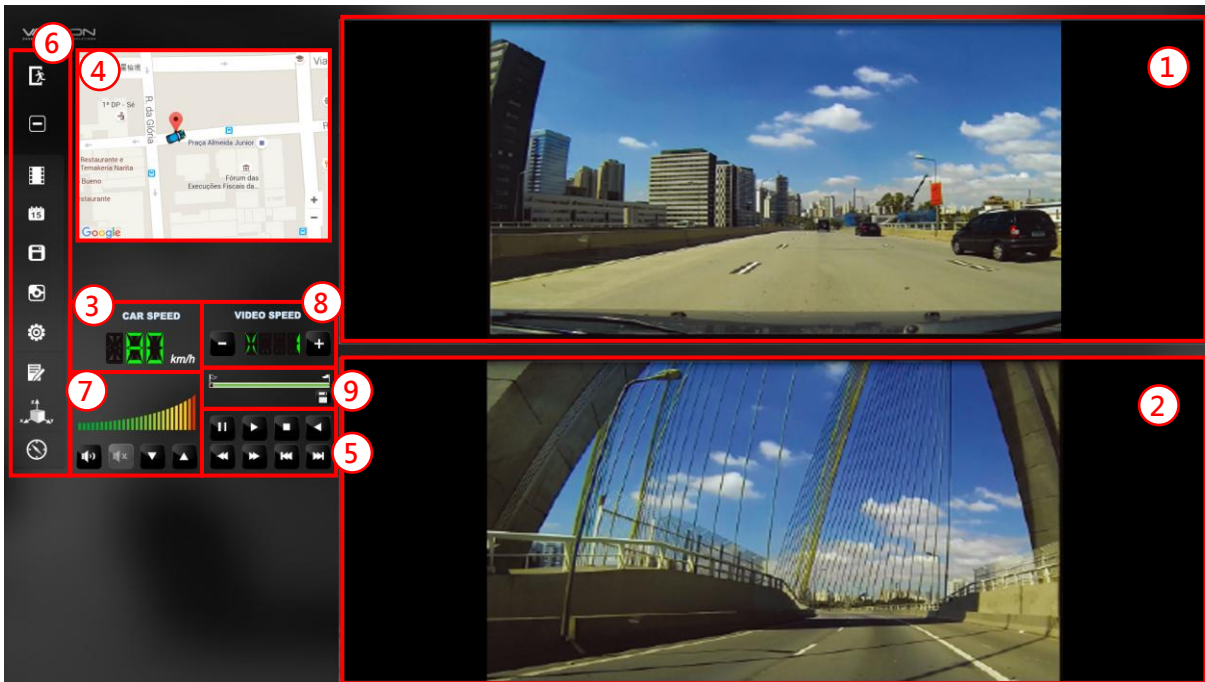
Device offer prolong 3 seconds recording after power off to ensure date is well stored, user can take out the SD card when indication is off.

# I. PC player

Run the player software  in product CD, showing image as below:











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

## 1. Viewer Interface











1	CAM1
2	CAM2
3	Car speed
4	Google Map / File list
5	Operation control interface
6	Function control interface
7	Volume control
8	Play speed
9	Time bar/ File mark

## 2. Function control interface

	Close
	Minimal
	Play files, select the file that user wants to play.
	Calendar
	Backup, select the backup path
	Snapshot
	Configuration
	Toolbox, capable format SD card, setting language.
	G-sensor
	Compass

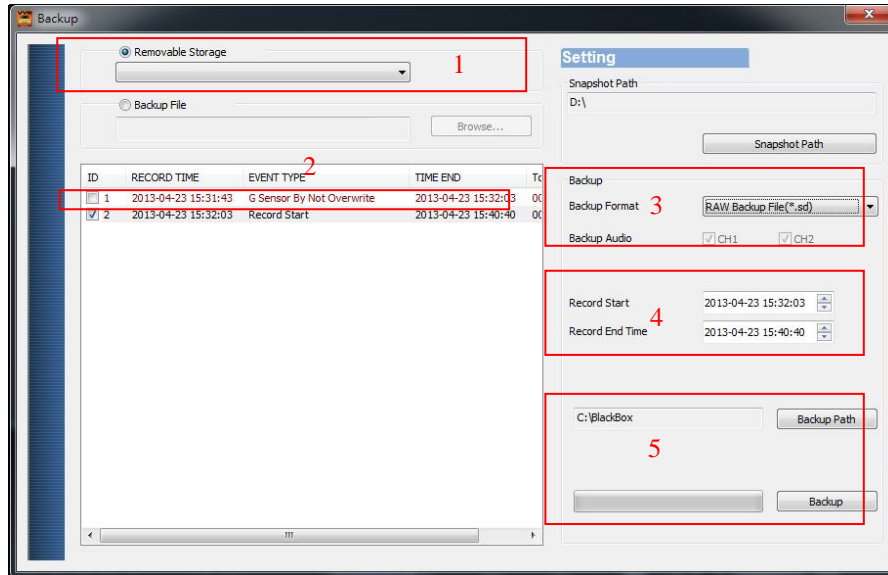
## 2. Play & Setting Icon Instruction

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

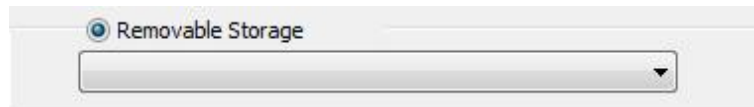
## J. Data backup

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
1	2013-04-23 15:31:43	G Sensor By Not Overwrite	2013-04-23 15:32:03	00
2	2013-04-23 15:32:03	Record Start	2013-04-23 15:40:40	00

Step3. Choose backup data format




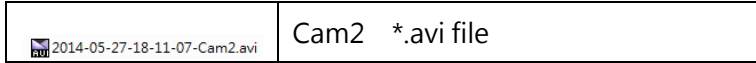
Data format :

1. SD card original format (RAW)

 2014-05-27-18-10-03.sd	RAW file *.sd
------------------------------------------------------------------------------------------------------------	---------------

2. AVI Format (\*.avi)

 2014-05-27-18-11-07-Cam1.avi	Cam1, *.avi file
------------------------------------------------------------------------------------------------------------------	------------------

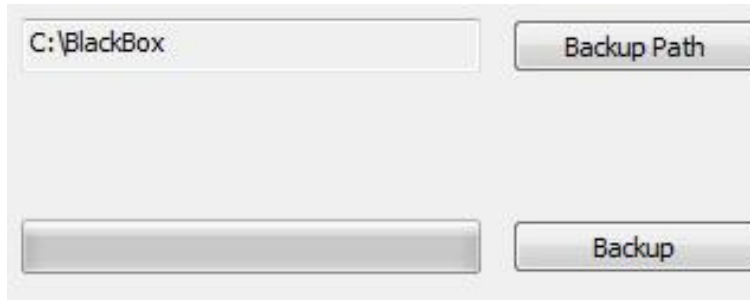


Note: backup to memory card in original format, the format will be containing GPS latitude and longitude, speed, recorded data such as G-SENSOR, if the backup date in \*.AVI format, it contains only video and audio, so back up in original format is recommended.

Step4. Select the backup beginning time point



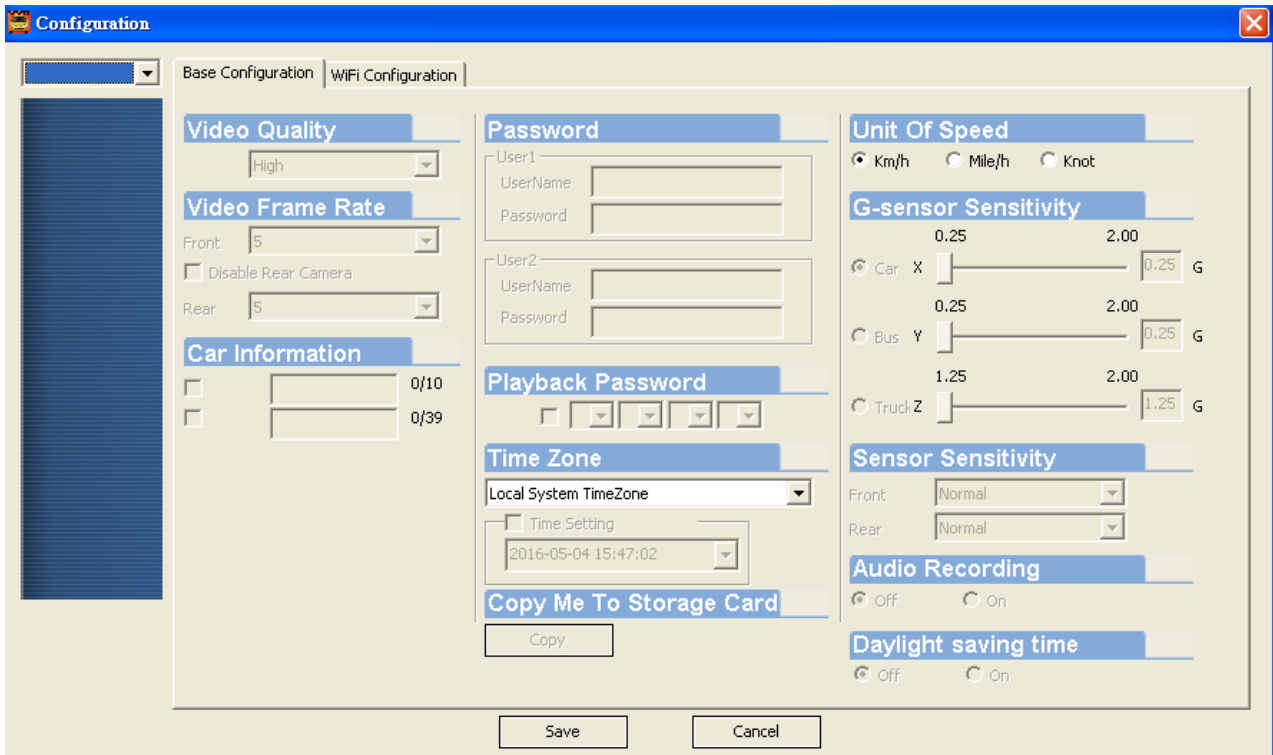
Step5. Select the path and start backing up


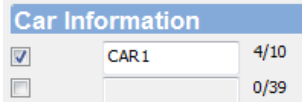
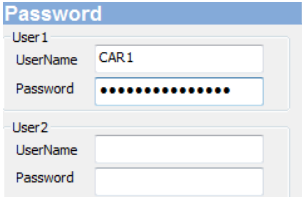


## K. Memory card setting

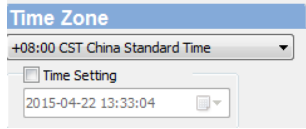

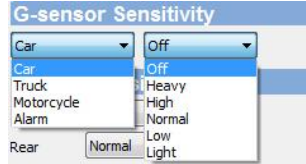

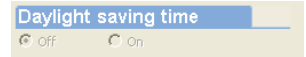
Before recording, insert SD card into card reader, and then insert card reader to PC. Click and run main program on PC to setting recording format and display method. After setting finished, insert SD card back to device, then user capable start recording on vehicle.

click  on player to do setting:



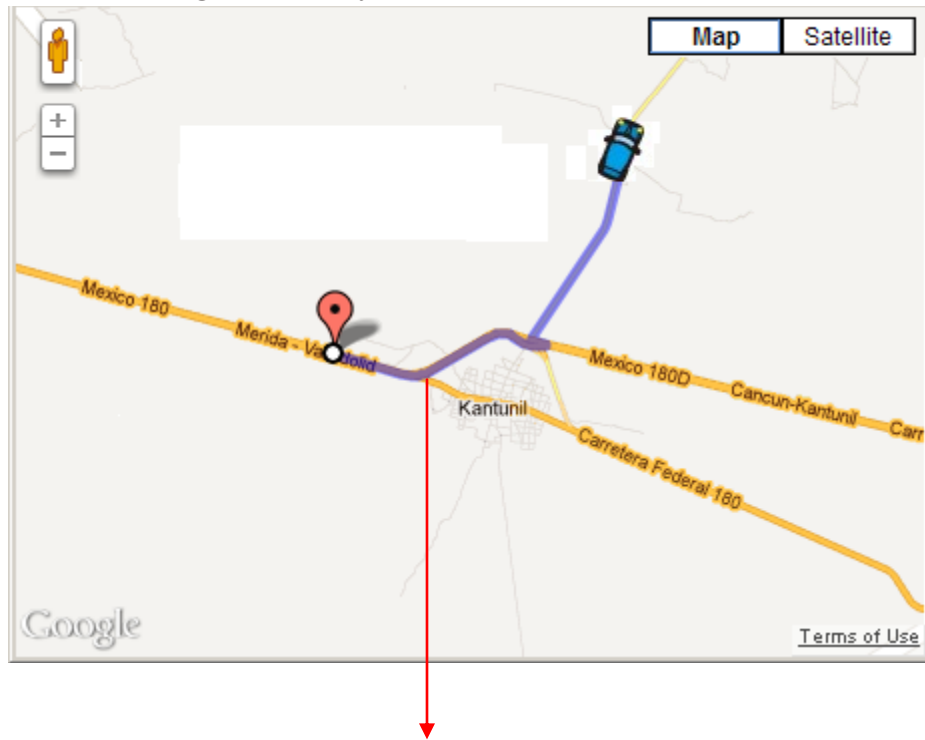
1	Video quality		Select recording image quality as: high/ Normal/ Low
2	Vehicle information		Identification message, can input car license plate number or driver' s name...etc.
3	Password management		This feature can encrypt the memory Card and to prevent unauthorized access. Password length allows to 15 characters For example: 123456789123456



			User have to key in password for video Playback, settings, memory card format after password is set ★ Note: please pay attention for font case in password, and mean while record password prevent forget it.
4	Time setting		Please manual adjust time when in no GPS cover environment. Time zone Would automatically calibrated to GMT time when GPS connect
5	Copy to SD Card player		Copy Player to SD card storage
6	G sensor		G-sensor decide doing or not doing force recording by detect the strength of the vehicle shaking during driving.
7	Sound Recording		Set audio record: OFF/ ON
8	Daylight saving Time		Set daylight saving time: OFF/ ON

### L. Google Map drive track playback(Only work with GPS included device)


If there is GPS recording, user will be able to read driving path, direction, speed information when doing video playback.

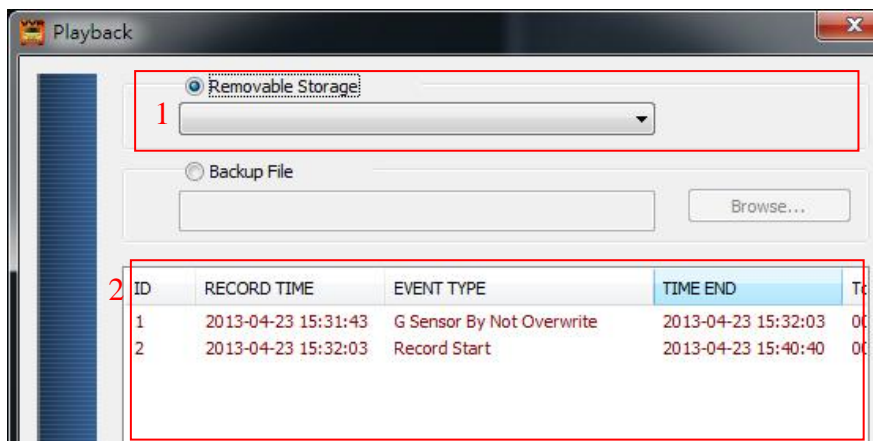


Drive Tracking path

## M. Data Playback


- Playback on PC player


Click  to enter playback mode:

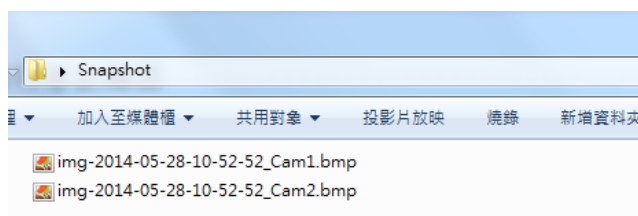
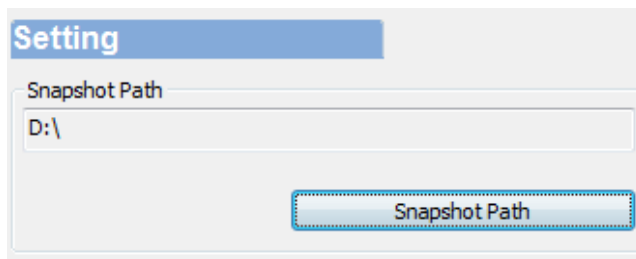


- (1). Select the path of the memory disk or a backup file on the hard disk
- (2). Double click the desired footage to play the file.

## N. Snapshot

User can take a snapshot of the current frame by pressing  to save screenshot during video playing.

The screenshot image will save at C:\BlackBox, user can enter  to change image save destination folder, the saved image format as \*.bmp.




## O. Format / Restore Memory card

Q1. When does user require to format SD card?

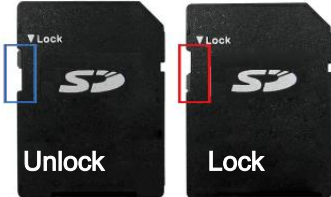
When user uses brand new SD card, please format it before use.

Q2. When does user have to restore SD card?

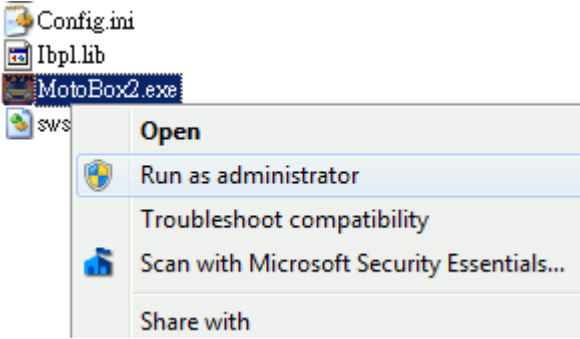
When the SD card finish recording and backup records on PC, user want to repurpose the memory disk for other uses (e.g for computer or digital camera), it require to restore the disk.

Attention

(1).     Unlock SD card before formatting





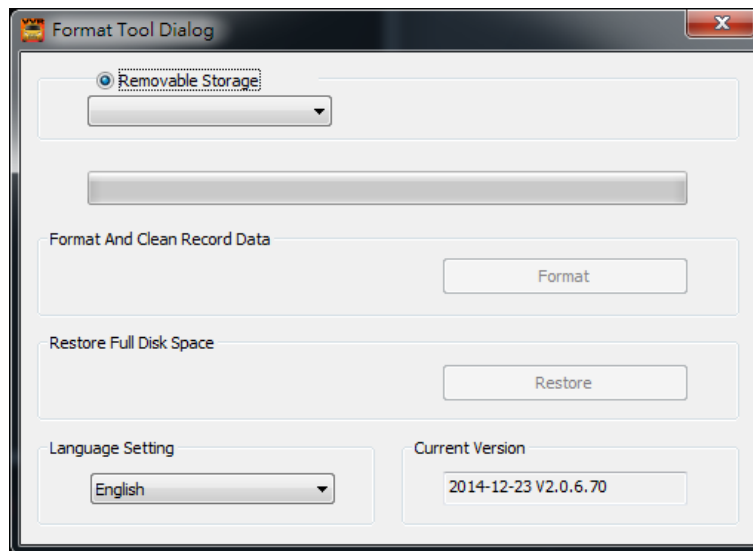
(2).     After unlock SD card, run the software as administrator if system still cannot format SD card.



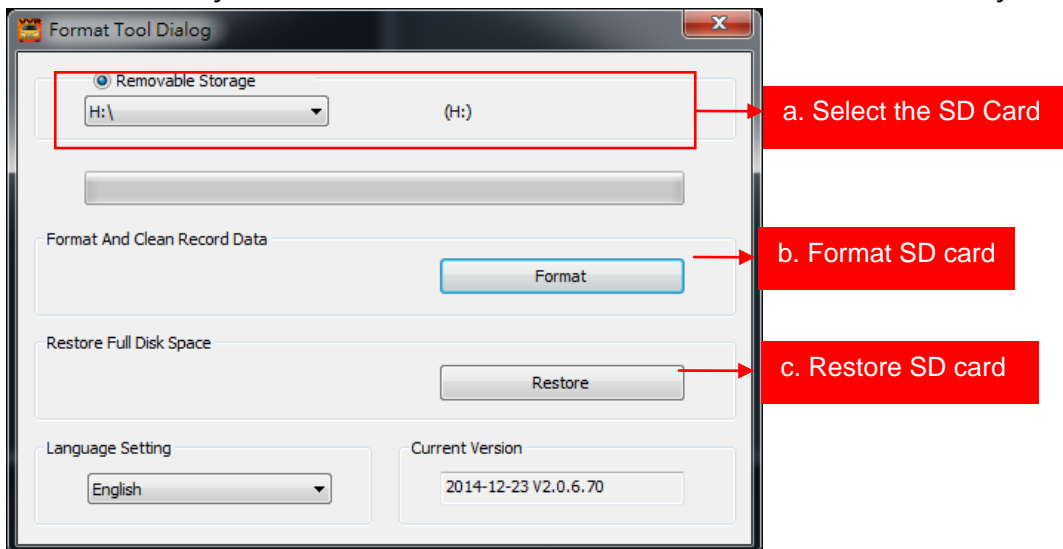
### Q3. How to format/restore SD cards

Follow steps below :

- (1). Put the SD card into card reader and play 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



- (4). User capable use the SD card as their requirement after SD card formatted or restored

## P. WiFi Connection

1. Visit Google store and search for " VacronPlayer " and download
2. Open WLAN name 「 SSID 」 , password 「 12345678 」
3. Run the APP " VacronPlayer" , click 「 Device 」 , 「 Add 」 , type in a preferred device name.
4. Click on device name and choose "All Channel" to see LIVE VIEW
5. App functions: Live view screenshot, live recording, remote video playback, and remote video backup
6. Capable review saved records, which can be divided into image or video.

CH-1



Remote playback



## Data playback



## Device info



## Add device

1. Set and type in a device name
2. Device address: it will show IP address automatically when WIFI connect to your smart phone.
3. Media Port: 80(default)
4. Account: admin(default)
5. Password: as default setting (no need to change)
6. Device channel: change as different device type.

Save and exit



## Device list



Select device, click only display all channels for the device, the screen will showing CH1 live view image.

**Attention**

1. There might be video transmission delay in live view screen due to wireless transmission Live.
2. The remote control function only use for exist files or data, if SD card had been overwrite, files and data cannot be search during the time period.
3. After Vehicle Video Recorder was setup, please reset WiFi system. Otherwise it is not able to connect to the Internet
4. OBD is optional, therefore if there is no OBD on the Vehicle or Motorbike. Suggest backup the Video & Date regularly, make sure all functions running well.



---

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

Made in Taiwan

---