VACRON
ADVANCES IN SECURITY SOLUTIONS

Full HD 1080P
Vehicle Video Recorder
User Manual

2013 FEB V1.0

3" LCD | view 105° | H.264 | MIC Built-in | -10℃~70℃ | Remote

P •REC | 3D G-Sensor | | | | SD

Index

A. Feature Description

■ Built-in Full HD 5M CMOS Sensor. Viewing angle approx. 105 degrees.

■ Suitable for all types of vehicles use. Small Design, Easy Installation。

■ Equipped with 3 inch TFT LCD screen to make the adjustment of recording angle easily; also providing photo shooting manually.

■ During playback of video footage and photo, the built-in screen direction sensor will detect screen side.

■ Video record outside driving conditions and audio record inside the vehicle simultaneously.

■ SD card Class 10 or above recommend. MAX to 32GB

■ G-sensor sensitivity can be adjusted according to vehicles and road situations. When detecting a strong shock, system will start emergency recording and keep the files without being overwritten.

■ Motion detection recording function during car stopping (External power source is needed)

B. Specification

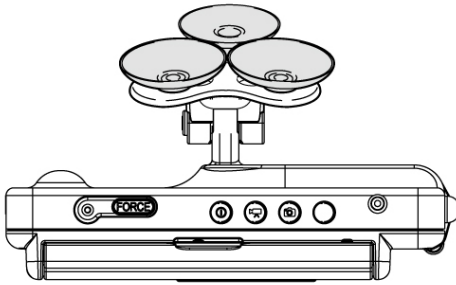| Items	Description
Chipset	Ambarella H.264 image compression chip
Sensor Device	Full HD 5M CMOS Sensor
View Angle	Approx. 105 degrees
Display	LCD 3 inch 4:3 monitor
Voltage	Start at 5V±5%；650mA (5V/1A Power Adaptor)
Operating Temperature	-10℃～+70℃
Storage Device	For the performance issue, use SanDisk SD card Class 10 or above read/write speed 15MB/s recommend. (min capacity 4G, Max 32G)
Recording Frame and Content	1920x1080（Full HD1080P／30F）；1280x720 (HD720P／30F). Auto recording when power up system.
	Maximum Recording frame: 30fps (NTSC/PAL)
Camera Mode	Resolution 3M, 5M, 8M
	Photo Shooting by Manually/ G-Sensor/ Timer
Recording Content	Date, Time, Image, Sound, G-Sensor data
Recording Format	Specific format for exclusive player (Recording Mode)
Microphone	Built-in Dual High Sensitivity Microphone.
Time Setup	Built-in clock will be used.
G-Sensor	Built in Internal 3D G-Sensor

C. Accessories

■ Standard:
1. 5V cigarette Power adapter   2. Remote controller
3. Product Disc   4. Suction cup bracket
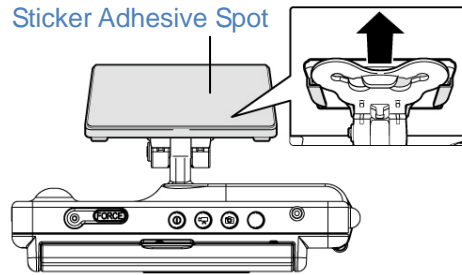5. Bracket holder   6. Quick user guide

■ Optional:
1. 16G _Class 10 SD card
2. 5M RCA Video output cable

D. Schematic Diagram of The Installation Steps

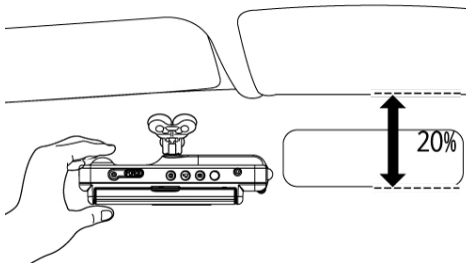1. To install the device on the windshield by "Suction Cups" or "Stick-Holder" Type

Sticker Adhesive Spot

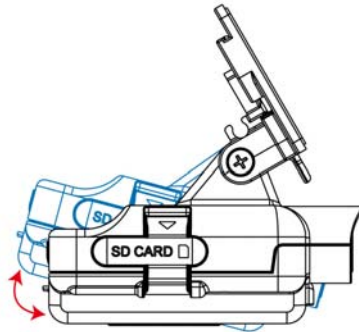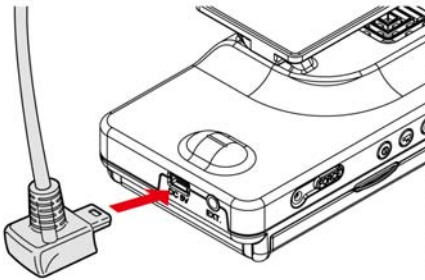Suction Cups Type   Stick-Holder Type

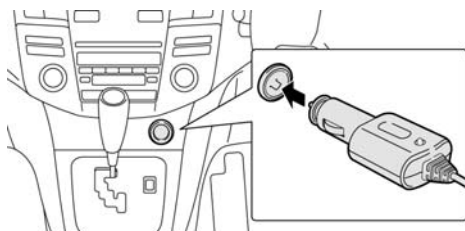2. The best position to install the device on the windshield
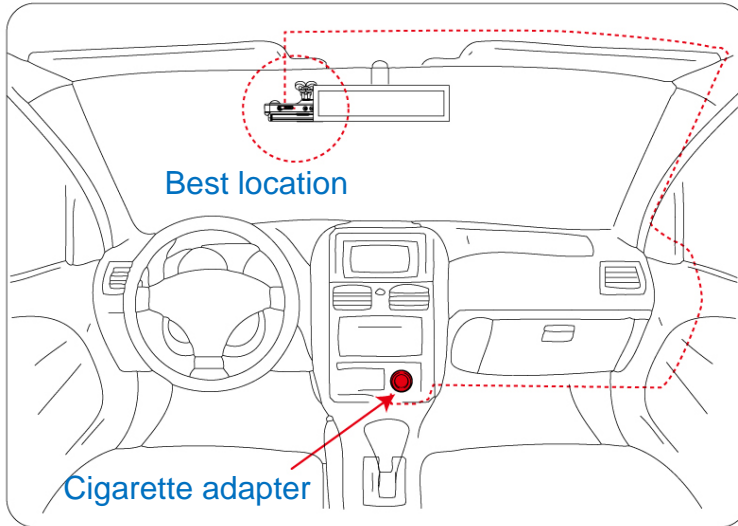
3. To adjust the recording angle properly

20%

SD CARD

4. Plug in DC5V Power Supply

5. Plug in the Cigarette Charger

6. VVR installation


Best location

Cigarette adapter

Description：

(a) Indicator Lighting Mode- Day and Night mode/Auto Detection.

(b) Mini-USB Port reserved for USB PC Link.

⚠ Notice

(1). This device should be installed in the area where the windshield will be able to be cleaned.

(2). Formatting SD card on the device before beginning to use.

(3). NTSC or PAL setting through OSD.

(4). Electricity consumption: 650mA. If power supplied by PC, please use Y Type USB Cable.

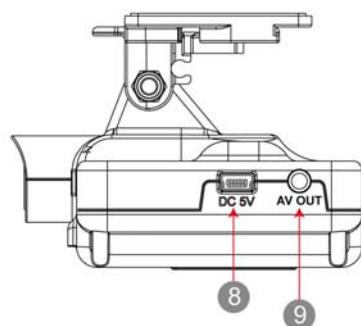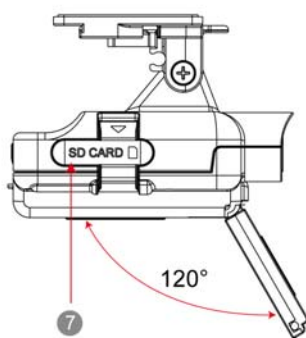
E. Product Function Introduction
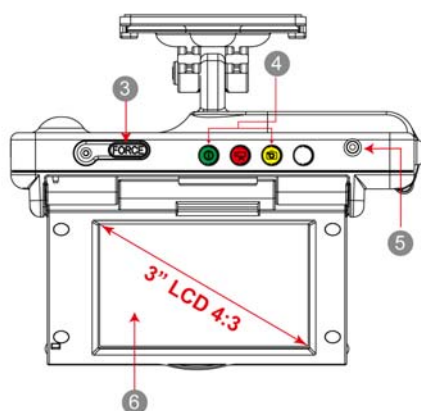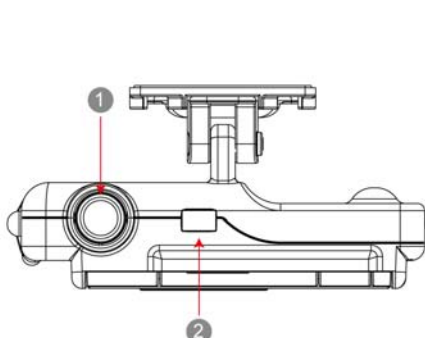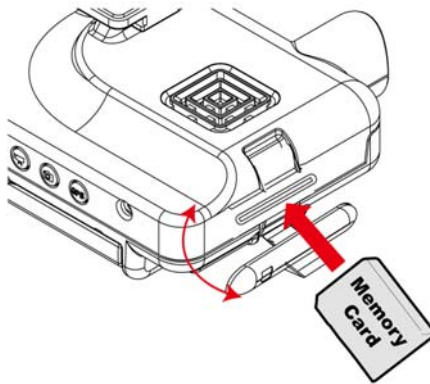
Light Indicator
- 🟢 Green light：Power
- 🔴 Red light：Recording
- 🟡 Yellow Light：Playback

3" LCD 4:3

SD CARD

120°

DC 5V   AV OUT

1. Lens
2. USB cover / Reserved for USB PC Link
3. Force recording
4. Indicator
5. IR Receiver
6. Screen
7. SD card Slot
8. DC5V
9. AV OUT

F. SD Card Installation

(1). Open SD card cover on the device to insert of remove SD card.

(2). Format memory card; please refer to the other chapter "Formatting memory card" for more detail.
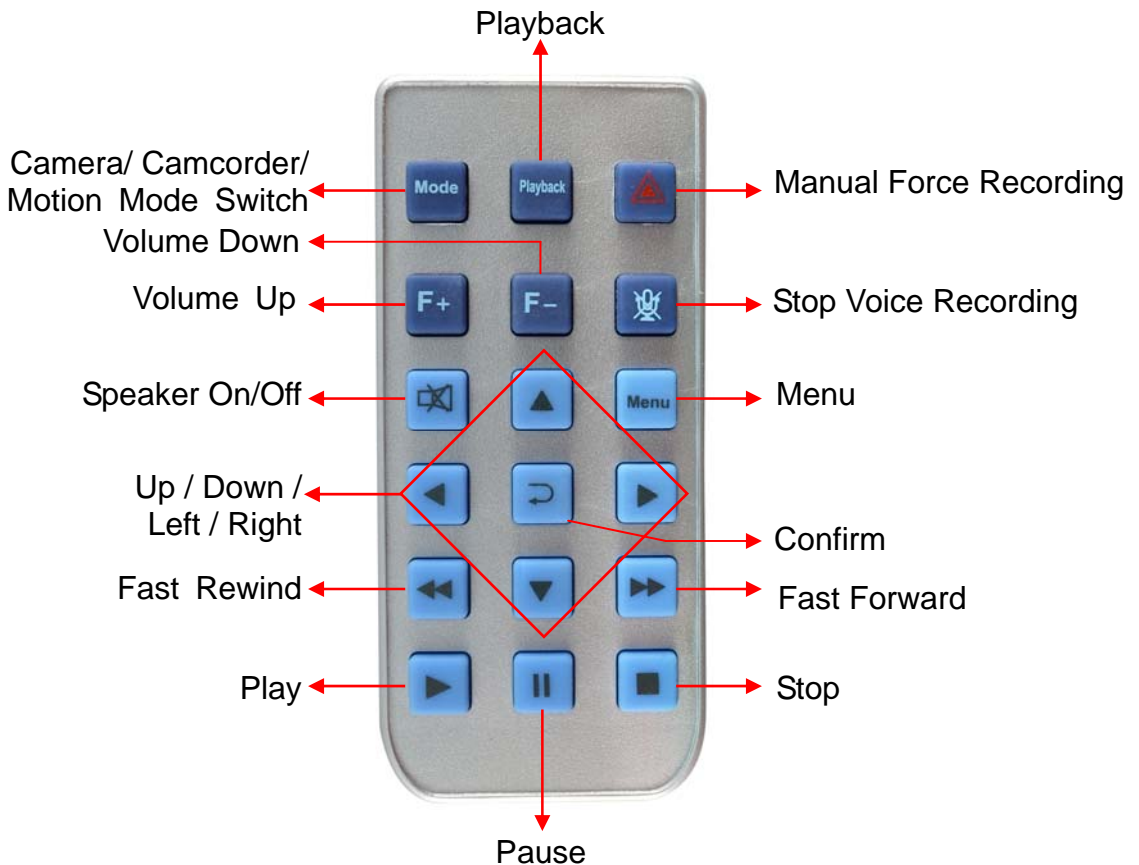
Remark: Memory Card is optional

⚠️ Warning

(1). Recommend Memory Card "SanDisk" or "Transcend" Class 10 or above. (Minimum of 4GB)

(2). If the memory card is not formatted by our exclusive player, the device will automatically erase all the data inside of the memory card after inserting it, start recording at default setting.

(3). Please don't convert Micro SD to SD card to begin recording, to avoid the damage during recording.

(4). Since memory cards have the writing endurance situation, we recommend to inspect the memory card and use pc for playback regularly, to ensure that the memory card can read and write
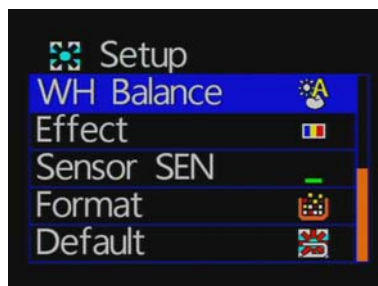

G. Remote Controller Description

Playback

Camera/ Camcorder/
Motion Mode Switch → ← Manual Force Recording

Volume Down →

Volume Up → ← Stop Voice Recording

Speaker On/Off → ← Menu

Up / Down /
Left / Right → ← Confirm

Fast Rewind → ← Fast Forward

Play → ← Stop

Pause

H. Operation Setting

1. OSD List Menu

■ Setup Menu

Setup	**Setup**
Language — ABC	WH Balance — A
Date / Time	Effect
TV standard — TV	Sensor SEN — —
Frequency — Hz	Format
Mic. ON/OFF	Default
1/2	2/2

■ Camcorder Menu   ■ Camera Menu

Camcorder	**Camera**
Resolution — 1080P30	Resolution — 5M
Quality — ≡	Capture Mode — NOR
G sensor — ≡	Cap. Period
Capture Mode	G sensor — ≡

■ Motion Menu

Motion
Motion type
Motion spot zone
Spot size — 50 50
Motion sensitive ≡
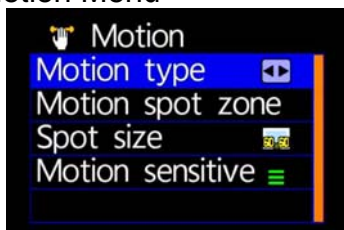
■ Please use IR controller to select function

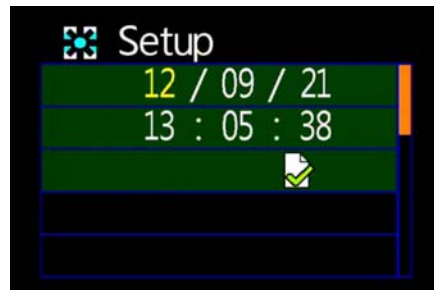| List Function	Key on IR Controller
List Moving	◄ ► [LEFT OR RIGHT]
Bar Moving	▲ ▼ [UP OR DOWN]
Confirmation	⤶ [CONFIRM]
Go to Previous Menu or Main Menu	Menu [MENU]

2.　　Setup Menu

◆ Language Setting

★English / French / German / Italian / Japanese / Korean / Portuguese / Russian / Traditional Chinese / Spanish / Simplified Chinese / Turkish / Dutch…etc
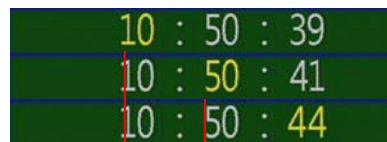
◆ Date/Time Setting

LIST FUNCTION	▲▼ [UP/DOWN]
LIST MOVING	◀▶+⊃+▲▼ [R/L]+[CONFIRMATION]+[UP/DOWN]
CONFIRMATION	⊃ [CONFIRM]
Go to Previous Menu	[Menu] [MENU]
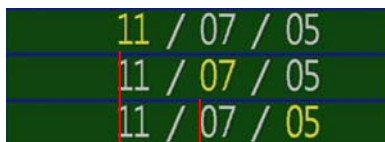
Y　　M　　D　　　　　H　　M　　S

★Year: Last digits of year (11 means 2011).
　Hour: 24 hour.

◆ TV Standard Setting
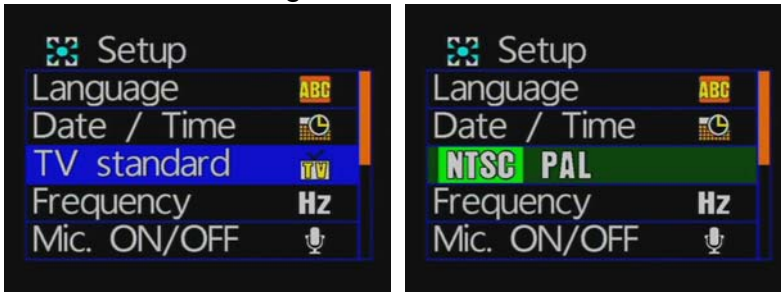
★NTSC/ PAL for selecting

★ TV output format, according to different national systems using the input format for the TV set, the system is preset to NTSC (Taiwan TV image is NTSC). When input the image causing TV screen which appears black and white, beat, we can switch to PAL TV screen to check returning to normal status.
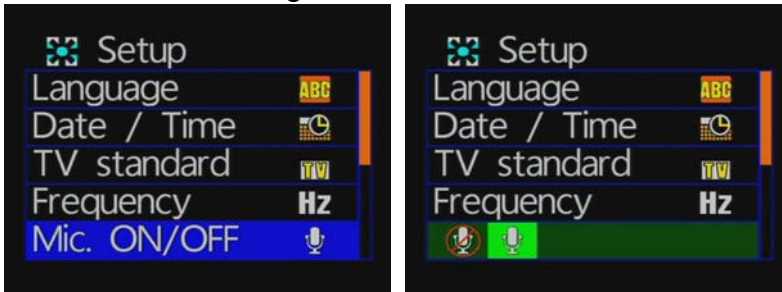
◆ Frequency Setting
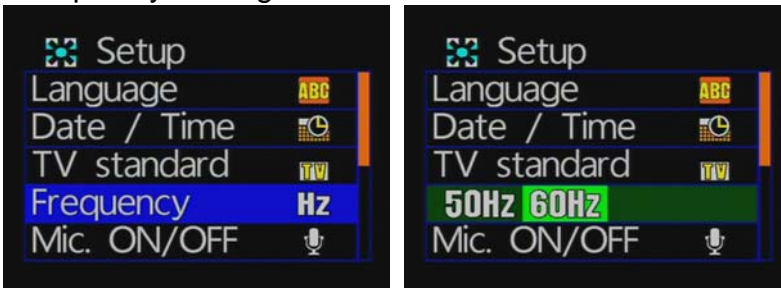
★km/h(kilometer) or mph(knot)

★ Light frequency: according to different power frequency flicker and, thus, the wavelength, the wavelength is caused by the human eye brightness of the most important factor; general, the higher the frequency of light, the brighter the ambient feel. As the use of Taiwan's general power frequency 60HZ, 60HZ recommended to set the frequency for the light source is more suitable environment in Taiwan.
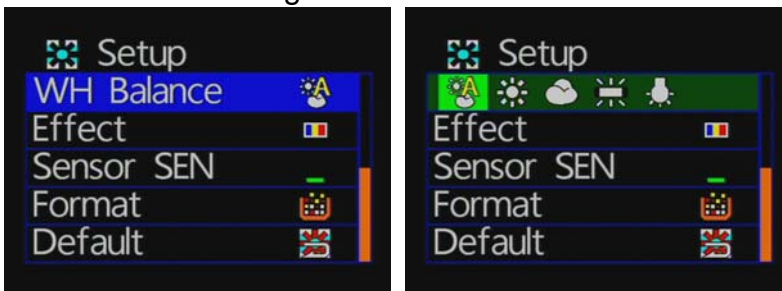
◆ Mic ON/OFF Setting

⊞ Setup		⊞ Setup	
Language	ABC	Language	ABC
Date / Time	🕒	Date / Time	🕒
TV standard	TV	TV standard	TV
Frequency	Hz	Frequency	Hz
Mic. ON/OFF	🎤	🚫🎤	

🚫🎤 : Microphone off   🎤 : Microphone on

★ Microphone to record the sound of inside vehicle information, if concern about personal privacy information, proposed close microphone function (off microphone function, converting the image files to video without sound state).

◆ WH Balance Setting

⊞ Setup		⊞ Setup	
WH Balance	☀A	☀A ☀ ☁ ☼ 💡	
Effect	🇷🇴	Effect	🇷🇴
Sensor SEN	_	Sensor SEN	_
Format	📷	Format	📷
Default	🔀	Default	🔀

★ Five ambient light option for selecting Auto / Daylight / Cloudy / Fluorescent / incandescent light

★ White balance mode is set, regardless of the state in the camera or photography will open automatically.
★ When take recording, suggest white balance set to automatic mode in order to open the white balance automatically to avoid the screen unclear.

The following table shows picture taken in various white balance mode.

Icon	Description	Picture	Application instructions
☀A	Automatic mode		The machine set automatically.

☀	Daylight mode		For fine weather.
☁	Cloudy mode		For cloudy, dark or twilight.
☼	Fluorescent mode		For warm white, cool white (3-wavelength) fluorescent lighting
💡	Incandescent mode		For incandescent lamps and bulb-type 3-wavelength fluorescent

◆ Effect Setting
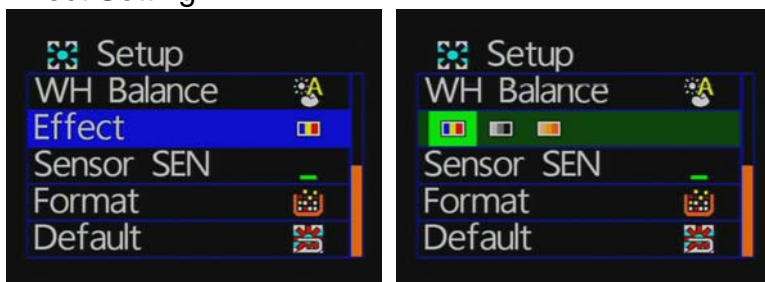
★Color / B & W / Retro color

★ Effects model setting, whether in photography or video mode it will automatically open.

Icon	Description	Picture
	Color mode	
	Black mode	

	Retro mode	

◆ Sensor SEN Setting

★Caution: You can adjust the sensitivity level (more number of green bars stands for higher sensitivity)

★When vehicle drives through darker areas, "sensitivity" decides whether "white balance" is going to be functioned or not. If "sensitivity " is set more sensitive, as vehicle drives into darker areas, " white balance" will automatically be on, and under the situation, it may cause the video image too bright.
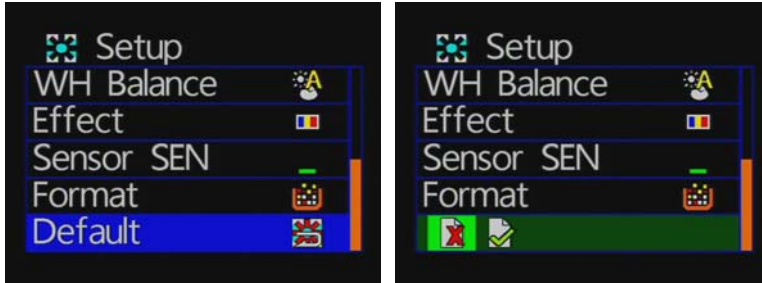
◆ Format Setting

★Cancel / Confirm Formatting

★When selecting "Cancel Formatting", it goes to "Main Menu."
★During formatting, existed data will be erased. Please backup the needed data before the process
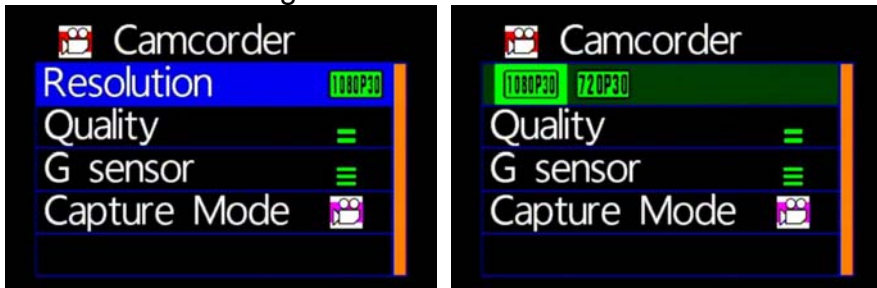★Brand-new SD cards must be formatted before using.

◆ Default Setting

★Cancel Factory Default Setting / Confirm Factory Default Setting

★When selecting "Default", it goes to "Main Menu".
★When going to "Default", it will automatically go to factory default setting. For changing further setting, please go to main menu.
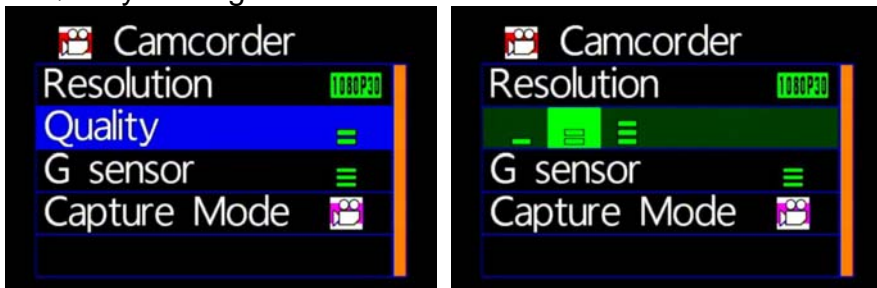
3. Camcorder Menu

◆ Resolution Setting

★2 resolution: 1080P(30) / 720P(30)
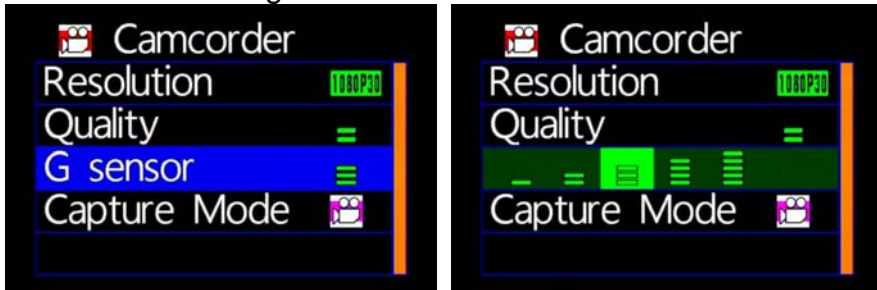
◆ Quality Setting

★Notice: More stripes appear; more video resolution does

◆ G-Sensor Setting

★NOTICE: More Stripes; More Sensitivity to trigger G-sensor easily for forced recording.

★Each time for triggering force recording, it will be automatically saving 3 more minutes before and after the accident.

◆ Capture Mode Setting

: Motion mode / : Normal mode

★During Motion mode, it will be switched to normal recording mode after restart

★To start the function of motion and LDWS recording, please turn on this.

4. Camera Menu

◆ Resolution Setting
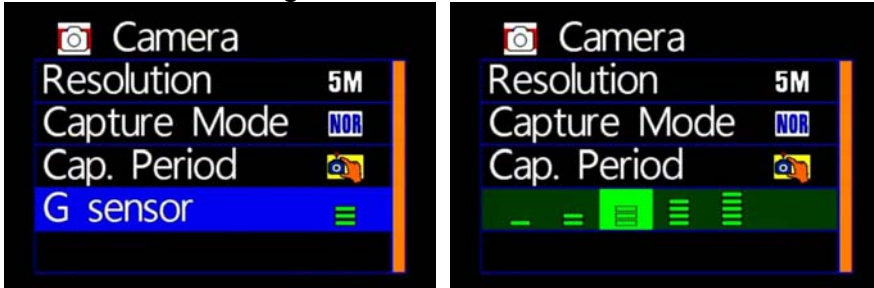
★3 Resolution modes: 3M/ 5M/ 8M

◆ Capture Mode Setting

★NOR: Normal, G-S: G Sensor mode, three continuous snapshots

◆ Capture Frequency Setting

★Normal / 30sec /1 minute/5 minutes /30minutes
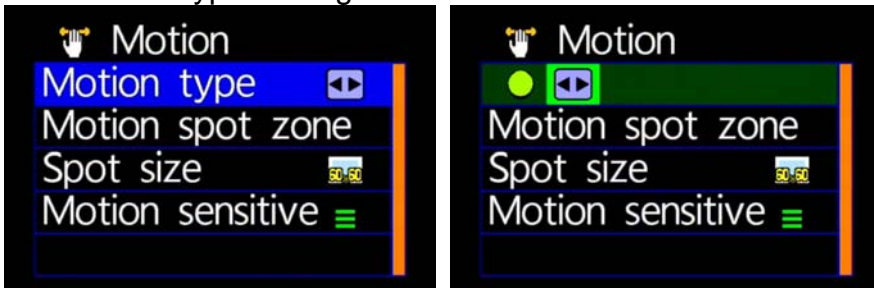
◆ G-sensor Setting

★Notice: Higher sensitive of G-sensor, Easier to trigger forcing video recording.
After force recording is triggered, 3 consecutive pictures will be taken
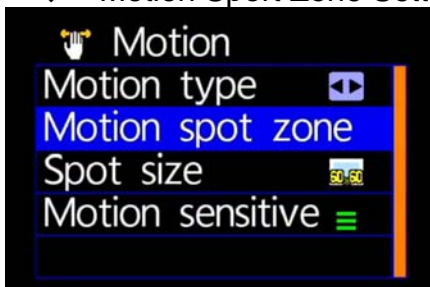automatically.

5. Motion Menu
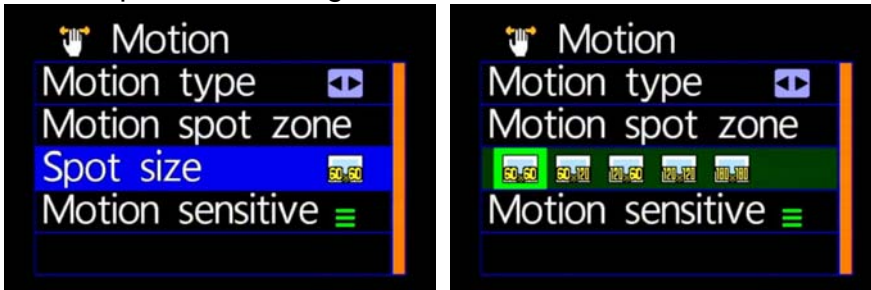
◆ Motion Type Setting

★ ● : Constant Motion Recording.

★ ◄► :Full Screen Motion Recording. (For this setting,

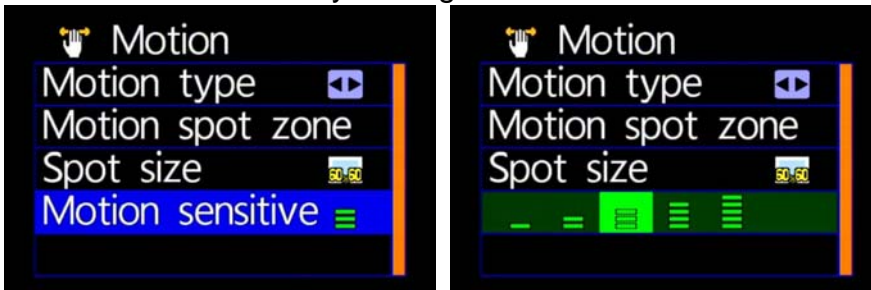it is not necessary to setup the motion detection areas)

◆ Motion Sport Zone Setting

★Use remote controller to sense the movement location
★When setup for constant motion recording mode,
please select the designated areas for motion detection.

◆   Spot Size Setting

★Sizes: 60x60 / 60x120 / 120x60 / 120x120 / 180x180

◆   Motion Sensitivity Setting

★More Stripes, More Sensitivity

I.   Playback

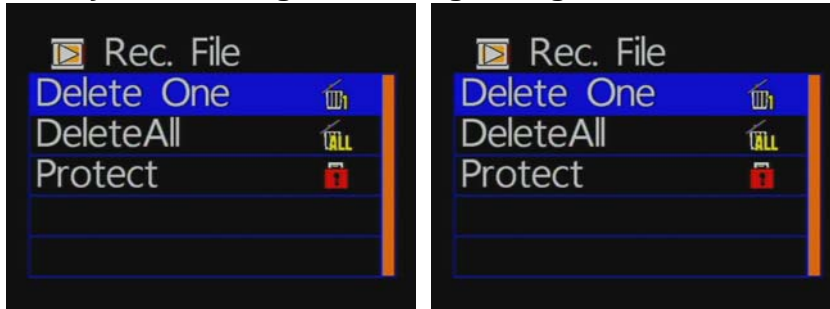## 1.   Direct playback on machine side

Build-in accelerometer, the system automatically determine the level of the screen visualization, and make the screen self-rotated to normal position.

2.   Video modes

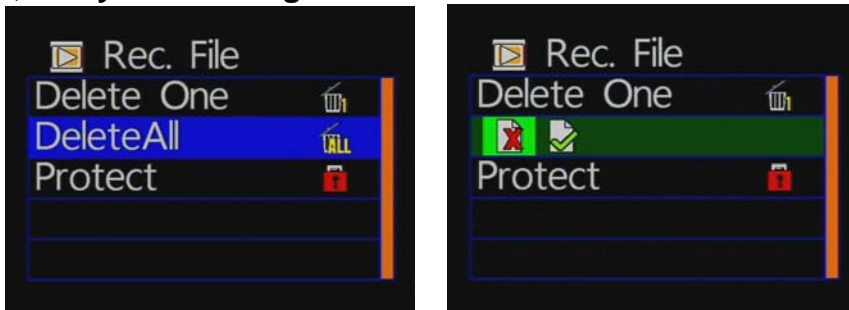Press " Playback" on remote controller into Playback modes. Select the timing of the video by pressing "Play"
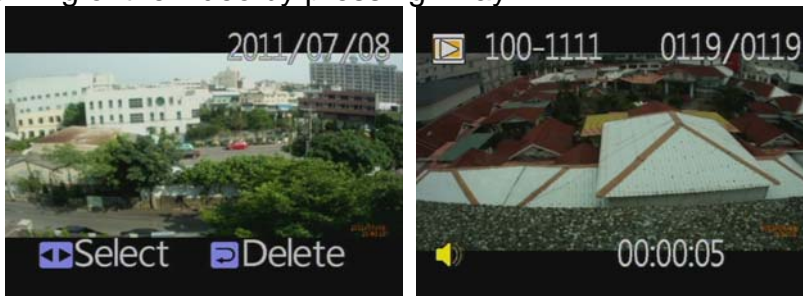
◆ **Playback settings - Deleting a single file**

★ You must disable the protection function first in order to
process the deleting procedures.

◆ **Playback settings- Delete All**

★ You must disable the protection function first in order to process
the deleting procedures.

◆ Playback file setting-protect

Notice: When an icon of lock is appear, this specific video data is
protected.

3. Snapshot playback
Press " Playback" on remote controller under Snapshot mode.
Select the timing of snapshot pictures.

Rotation	⤶ [Confirm] key
Next	◀ ▶ [R/L]key
Zoom	▲ ▼ [U/D]key

◆ **Photo playback settings-Delete one**

★ You must disable the protection function first in order to process the deleting
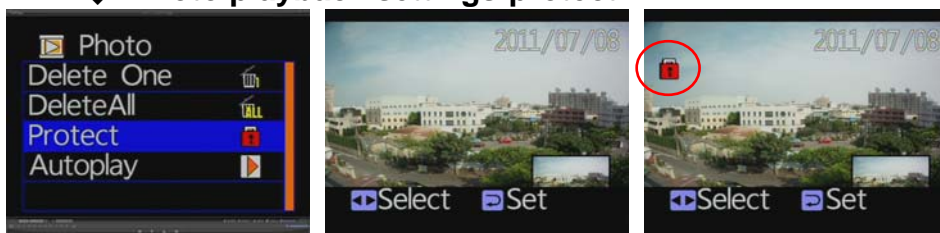procedures.

◆ **Photo playback settings-Delete All**

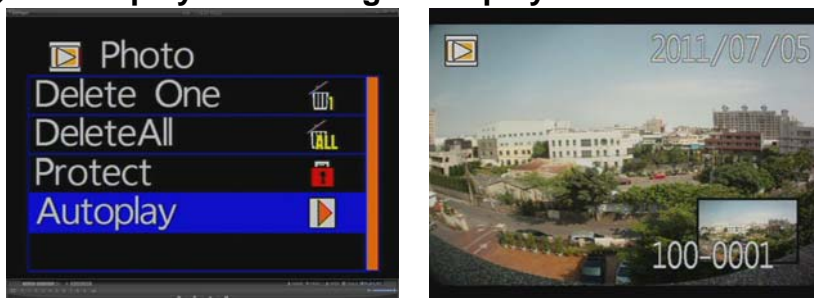★You must disable the protection function first in order to process the deleting
procedures.

◆ **Photo playback settings-protect**

Notice: When an icon of lock is appear, this specific video data is protected.

◆ **Photo playback settings-Autoplay**

Each Snapshot will display in every 5 seconds. Press "Menu" for stop.

J. Software operating instruction

1. Remove SD card from card slot of host side
2. Put the SD card to the card reader
3. Connect card reader to the USB port of PC side
4. Choose the file to play: Execute "TransportStream.exe" , which is located in the product CD folder, Screen shown as below. Choose "Open the document" , and choose the file of memory card or hard disc and then click "Play key" for playback.

◎Note: To perform this software, please install Direct X 9.0 or above.

Viewer interface description

G-Sensor
Play Bar
Play Speed
Voice Volume
Open File
Save the Playing File
Snapshoot
Setting
Playback by Hour
Playback by Minutes
Playback by Date

2. Operating Interface Description:

1	⏮	Return to last file key
2	◀‖	Forward playback
3	◀	Playback key
4	‖	Pause key
5	◼	Stop key
6	▶	Play key
7	‖▶	Forward playback
8	⏭	Go to next file key
9	▶	Mark starting point of back up file
10	▮	Mark ending point of back up file
11	▤	Backup the marking file
12	📁	Open document, select the file to play
13	💾	Backup the current playing file
14	✂	Snapshoot tool
15	⚙	Configuration, Set machine-related settings

3. Player Interface Description:
   - ◼ G-sensor: Impact sensor analyzer, forced saving the accident video before and after 1 to 3 minutes, not covered by other new files, protect the integrity of the incident video.

   X: Induct about level of vehicles moving
   Y: Induct around level of vehicles moving
   Z: Induct Height fluctuation around level of vehicles moving
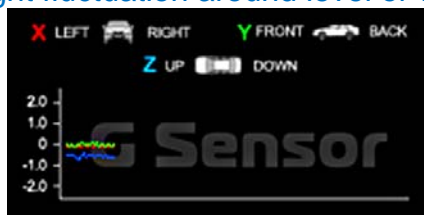
■ Play BAR: Press left button of mouse and move around to pull BAR with fast-moving.

■ Playback speed
Fast forward with 2 times or 4 times, and playback with 0.25 times, 0.0625 times

■Volume control
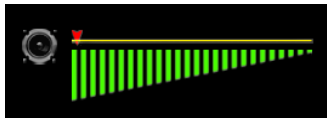
4. Select the file to playback
Select "Open the document" , and then choose the file of memory card or hard disc. (The file format is *.ts)
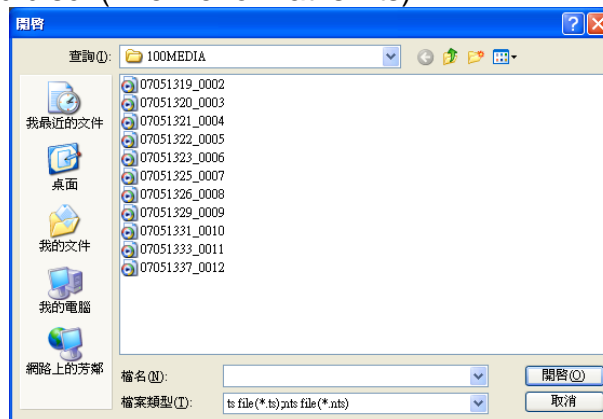
5. File backup
Select " file backup" , and then choose the file of memory card or hard disc to start backup procedures.
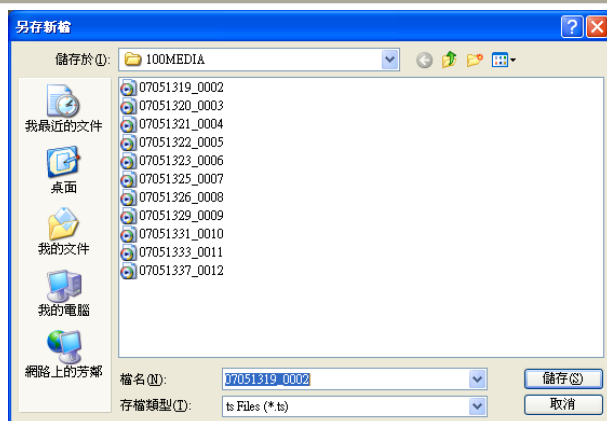
6. [icon] Snapshoot Tool
Play record from SD card first and then use Snapshoot tool to capture the screen. When select [icon] Snapshoot tool, it will appear the following window. (The picture of display screen will save in capture storage folder path.)
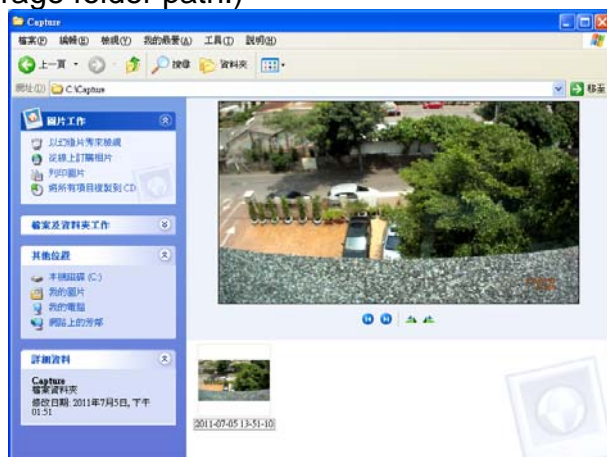
7. [icon] Related settings
Software version related information and SD card data storage settings
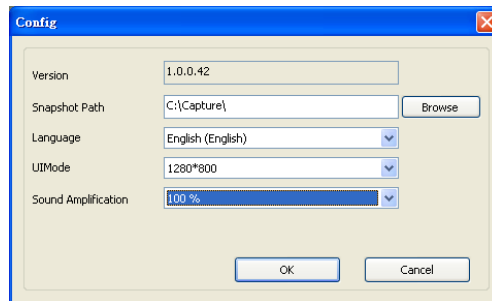
(a) Storage path of Snapshot: the location to save images in the computer
(b) Language: select language settings of playback software. (The settings will work after re-open the software)
(c) The mode of User Interface: Set the display mode of host. (To change the configuration option, it must insert SD card into the Vehicle Video Recorder). It provides 3 different resolutions for selecting: 960x600, 1280x800 and 1920x1080
(d) Sound Amplification: max. 10 times

8. Playback date selection
   ■ Playback selecting by date

Open the player, the "date table" will show date today with gray-brown display. When you click on the file for playback, if the SD card has recorded file, then S the date will display with a red box, that means it has the data to play back.

■ Playback selecting by Hours (24-hours)
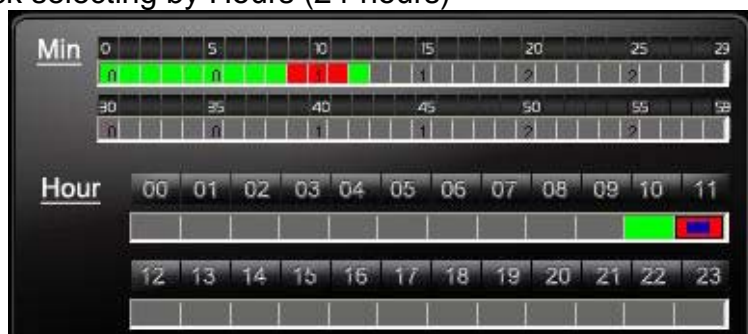
After select the "Date" with Gray-brown color, on
Hour/Minutes table will display Red/Green color.
Green: normal record
Red: force record

■ Playback selecting by minutes

Click the minutes table to change the recording footage
immediately.

K. Formatting memory card
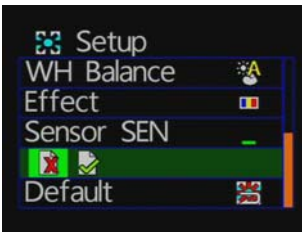
When should you need to format the SD card?
When you purchase a new SD card, you have to format it for
vehicle video recorder to record properly.

Procedures for new SD card formatted as follows:

1. Insert SD card into the SD slot of Vehicle Video Recorder and
   then open the menu. Find the format option and then begin to
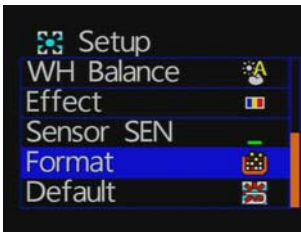   format SD card.

2. Connect power cable to machine, use remote controller to enter
   index menu and select format operation.

Formatting Steps：

Step 1	Step 2	Step 3
Setup WH Balance Effect Sensor SEN Format Default	Setup WH Balance Effect Sensor SEN Default	●11:06:07

3. After formatting is completed, leave the index menu and back to
   live screen. Then the SD card formatting is done and ready to
   use.

L. Record Time Estimation (based on constant record mode with 8GB card)

＊The chart of estimated record time listed below is for reference only.
The length of time recorded can be varied due to variation in image size may be somewhat different.

Video Format (NTSC / PAL)		
Resolution Video Quality	1080P30	720P30
High	110 Min	115 Min
Normal	115 Min	135 Min
Low	135 Min	155 Min

M. Appendix: The Indication of Bright and Dark Spot of LCD

Q: What is Bright/Dark Spot?

A :   • Bright Spot: At dark background, we found the abnormal bright spots, we called those spot are "Bright Spot"

   • Dark Spot: At multiple color background (excluded dark background), we found the abnormal dark spot, we called those spot are "Dark Spot"

Q: The indication of Bright and Dark Spot

(a)   There is no bright spot allowed in Area A, only single dark spot or none is allowed.

(b)   The maximum amount of bright spots and dark spots allowed in Area B are two of each.

(c)   The max total amount of bright and dark spots in Area A and B are three or under

The Diagram of Area A and B

⚠️ Notcie

(1).   There is 30 days exchanges refer to the indication of bright and dark.

(2).   Please keep the receipt and contact your local dealer for exchanging merchandise.

(3).   The maximum valid date is 30 days.

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