V200HD User Manual

WINYCAM HD
Vehicle Drive Recorder

Vehicle Drive Recorder

Before Use

- Thank you for purchasing V200HD.
- This Manual contains important information about the proper use and cautions in use of the product. Please read carefully before use.
- V200HD is an auxiliary product to alert users for safe driving and prevent accidents, by recording video during driving. Also purpose for evidence of an accident.
- V200HD does not however guarantee that all accidents are recorded. Minor shock may not detect sensor to record.
- WinyTechnology shall not be liable for any loss or damage to data or to the product which may be caused by accident or impact.
- All rights vested in the design and software of V200HD are the property of Winy Technology Co., Ltd. and protected by the Copyright Law.
- V200HD may change without notice for further function improvement.
- This User Manual is published based on the current state of the product, and may contain typographical errors or omissions.
- Contents of this User Manual may be modified, changed or supplemented without notice for further improvement.

Contents

Safety Precautions

⚠ Operational and Security Precaution

- Do not operate the product during driving. It may cause accident.
- The product must be installed at a point which would not obstruct the driver's view.
- Do not allow unauthorized disassembly or alteration to the product. It may cause malfunction, and the consequent product damage will not be covered under the warranty.
- If the product is damaged or power is cut off by a serious accident, the product may not be able to record such event
- Always keep the windshield clean to enable clear recording.
- Since the product is purpose to record video data during driving, video quality may be deteriorated when in/out the tunnel, and at night or by contrast and backlight.
- Contaminated camera lens may deteriorate the video quality. Keep the lens clean.
- Do not place the product under direct sunlight or inside the closed vehicle as it may cause malfunction.
- Do not use chemicals or detergent to clean the product. Clean gently with soft cloth.
- Use of the product at temperature below -20℃ or above 60℃ may cause malfunction or breakdown. (This caution should be applied when product is unused.)
- Do not use the product in places in high temperature/humidity.
- Do not exert excessive force to the product (especially to LCD buttons and to bracket) as it may cause breakdown.
- Operate the product for 3-5 minutes to check for correct recording, before each use.
- Extended exposure to sunlight and high temperature in the summer may cause malfunction.
- Do not turn off power, or remove the SD card during firmware upgrading as it may cause malfunction.
- Do not touch the cigar lighter cable with wet hand as it may cause electric shock.
- Do not use a damaged cigar lighter cable as it may cause electric shock or fire.
- Do not place the cigar lighter cable in near heating devices.
- Do not leave the product connected to the cigar lighter if not in use for a long period of time. Remove the cable from the product.
- Insert the cigar lighter securely.
- Do not bend or pull the cigar lighter cable by excessive force, or place heavy objects on the cable. (It may damage the cord and as a result it may cause electric shock or fire.)
- Do not touch the LCD excessive force as it may cause malfunction.

Safety Precautions

⚠ SD Card Precaution in use

- In order to confirm normal operation of the product, please check the image of a SD card and format it on a regular basis.
-   (PC format needed one to two times per month)
- Because an SD card is consumables, if it is used for a long time, you may lose the data or may not record due to an error, so please check it periodically.
- When the product is in recording or the power is on, do not eject the SD card forcibly. It may cause a failure of the SD card and data loss.
- If temperature gets too high in the vehicle, data storing may be disabled, or data may be damaged. Park your vehicle in the shade in the summer.
- When identify the car's accident or damage, please keep the SD card separately. Due to overwrite, important data may be deleted.
- When turn off the power of the body and remove the SD card before LED is turned off, the last recording file may not be saved, so please be careful.
- When turn off the power of the body and remove the SD card before LED is turned off, the last recording file may not be saved, so please be careful.
- When driving a car, do not remove the SD card. Make sure to remove it safely when a car is in parking or stop.
- After turning on the power, make sure that it is in normal operation.
- Please note that the warranty period of an SD card is six (6) months, and replace it at the time of more than six (6) months.
- Please purchase and use SD Card that manufacture recommended specification.
- The SD card randomly purchased other than the one we provide, shall be excluded from the warranty, and we shall not take any responsibility for loss and damage of the data recorded in the SD card in any case.

Product Feature

High Quality Lens and High Image Quality / Resolution support
- 2 Mega Pixel image sensor mounting in Front / Rear.
- Wide mega lens
- HD(1280×720) High Image Quality Resolution and total 30fps(Front 20 + Rear 10).

Various Recording Function and Video Data Acknowledgement
- Touch LCD display apply, recording image and recorded image can be confirmed on LCD
- Normal, Manual, Event, Motion and auto change to Parking recording mode
- Driving records can be stored with GPS data. (optional)
- G sensor built-in Automatic parking recording mode change and event recording mode.
- External video output. (real-time video image can be checked in another monitor)
- Configuration setting is available on LCD menu.
- PC viewer program are provided to change various setting values and map data can be checked when using GPS.
- (In the general video player (e.g. Windows media player), recorded video can be played)
- SD card can be formatted as the product itself, without connecting to a PC.
- Each capacity of a normal / event/ motion folder can be set in PC Viewer.

High Quality Voice Record and Voice Guidance
- Operating instructions service by voice guidance
- Voice recording On/Off function and speaker output On/Off function.
- High performance microphone built-in

Back-up battery and Car constant power discharge protection function
- Stored recorded image safety by built-in high-capacity capacitor when power is off.
- Car constant power discharge protection function
- (Selectable ON/OFF on viewer, Not required another equipment for this function)
- Consume less than 2mA when power shutdown (Based on 12V)
- When using car constant power discharge protection functions, If user car voltage is 12V and the voltage of less than 11.8V
  is maintained for more than 30 seconds the product power will be shuts-off
  (Note: Shutdown time depend on the Type of Car and car condition.)

Other
- Soft look and emotional design. (easy removable body)
- Security LED light are mounted on front body (LED Lighting function On/Off can be set in PC viewer / LCD menu)

Standard Package

V200HD Body	**Cigar Lighter**	**3M tape for bracket**	**Bracket**	**Quick Guide Manual**
	Cable Clip	**Micro SD card**	**Rear Camera**	**Rear Camera Video Cable**

Option Accessories

Null Cable (Option)	**GPS (Option)**	**TV OUT Cable (Option)**

- **PC viewer program is stored in packaged Micro SD card.**
  *Note : Viewer Please save PC Viewer program in advance in the computer, etc. so that the program can't be deleted.
  (If the program is lost, please download from Winycam website.)
- **The packaged product picture of the user manual may differ from the actual product.**
- **Video cable is used for connection to the TV / car navigation, and can monitor real-time. But please note that depend on monitors, Video input type is different and check the user manual of monitor.**

Product Parts

Front camera

SD Card Slot

Security LED

WINYCAM V200HD 2.0MEGA PIXEL
Vehicle Drive Recorder
WINYCAM HD
Vehicle Drive Recorder

Power LED

MIC LED

PWR
REC
GPS
MIC

LCD

3.0 Touch LCD DYNAMIC VU

GPS Signal LED

Microphone

Reset

REC Button by manual

TV-OUT

Rear Camera Connection

DC Jack

GPS Connection

TV-OUT R-CAM DC 12-24V GPS
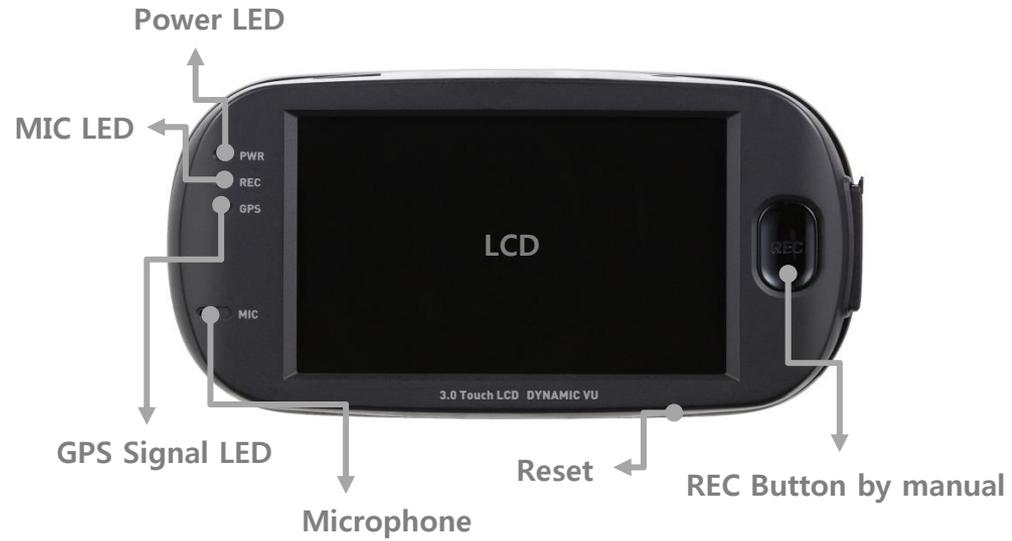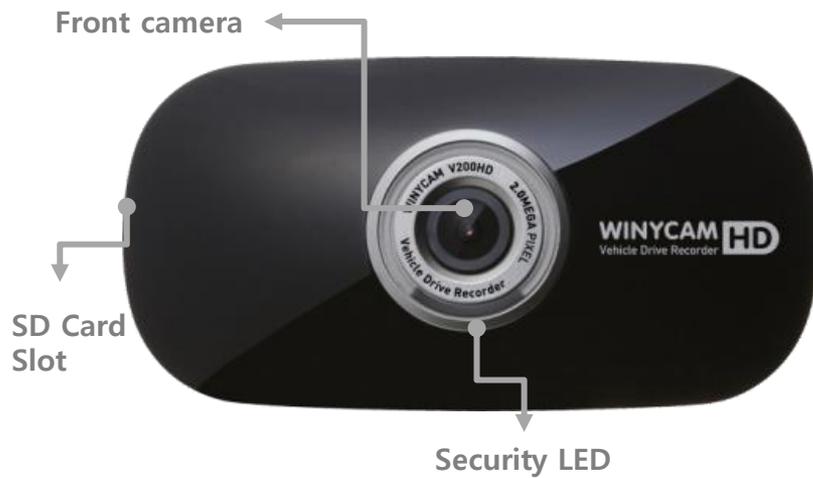
V200HD Front Camera Installation

1.

Insert Micro SD card to V200HD SD card slot.
(Check the SD card direction)

2.

Remove the protect sticker.

3.

Attach the V200HD in place on windshield.

4.

Adjust the angle of body and fix it.

5.

Connect packaged cigar lighter to a cigar socket.

6.

Arrange a power cable.

V200HD Rear Camera Installation

1. **Shutdown a car battery
and power off 200HD first
before installing a rear camera.**

2. **Install a rear camera**
**Remove a protect sticker and attach
a rear camera in proper location
in windshield.**

3. **Adjust a rear camera angle**
**After attached a rear camera, adjust an angle.
Adjust angle is e right angle to lens face or
little downward facing.**

4. **Connect video cable**
**Connect a rear power /video
cable to a rear camera and a
TV-Out jack on front camera.**

5. **Check an operation**
**After connecting a power/video cable,
Please check the recorded image
that is stored in SD card if V200HD
can record properly.**

6. **Arrange a front/rear camera cable**
**After checking recording
operation, well-arrange a cable.
If you embed cable to car wall ,
please check cable connection.
Also after embedded double-
check if V200HD can record
properly.**

External GPS/TV-OUT Cable Installation

▶ External GPS Installation

Connect External GPS to GPS connection on V200HD body.

Attach GPS module at well visual place and tidy up a cable.

⚠ GPS module may be affected by main body or by other electronic devices if it is too close each other.
Keep a distance as much as possible.
The receiving signal may become poor depending on the climate, satellite status and geography in the neighborhood.
The receiving signal may become poor if the windshield is heavy sun-coated or fixed with metallic materials.

▶ TV OUT Cable Installation

Connect a TV-Out cable to the TV-Out jack on a V200HD body.

Connect a TV-Out cable to a AV-in jack you car navigation.

⚠ When connecting to your Car Navigation, you need an applied Car Navigation video cable. With a specific Car Navigation, installation may be restricted, and/or extra service charge may be incurred.

How to record

1. **Record : V200HDis automatically boot at power on, and a constant(normal) recording starts as an initial recording mode.**
2. **Recording Mode : it is classified into driving recording mode and parking (motion) recording mode**
3. **Recording Method: it is classified into a Normal recording, event recording, motion recording.**

※ **For automatic recording and manual recording methods, please refer the below table.**

REC Mode	REC Method	Auto REC Mode	Manual REC Mode (Button Control)	REC Time	Recording folder
Driving Mode	Normal REC	-	-	Set 30 / 60 / 120 sec in configuration	Normal
	Event REC	In G-sensor detect shock	One short press button		Event
Parking (Motion) Mode	Motion REC	In G-Sensor is not detected for more than 10 minutes Auto change to a motion REC mode.	3 sec long press button	10 sec before Event/Motion detect. 20 sec after Event/Motion detect	Motion
	Event REC	In G-sensor detect shock	One short press button		Event

※ **After change to parking REC mode by manual, if you want to change normal REC mode again, please press "REC" button for 3 sec in motion standby. (during event recording, mode cannot be changed.)**

LED Operation

Item	CH	Front LED	PWR LED (first)	MIC LED (second)	GPS LED (third)
Booting	-	On	Red On		
FW update	-	Off	Orange On		
Normal, Event, REC standby	1CH	Flashing 3LEDs right-left interval at 1.5 sec. Flash mid LED as On/Off	Red flashing interval at 1.5 sec	Red lighting On/Off based on audio REC setting	GPS signal received Green lighting Non-received : Off
Normal, Event, REC standby	2CH		Green flashing interval at 1.5 sec		
In detect a shock (Normal, Event REC)	1CH	Flashing On/Off interval at 0.5 sec	Red flashing interval at 0.5 sec		
In detect a shock (Normal, Event REC)	2CH		Green flashing at 0.5 sec		
Parking REC standby	1CH	Cross flashing 3LEDs right-left interval at 0.5 sec (1, 2, 3, 3, 2, 1, ...)	Red/Green flashing interval at 1.5 sec		
Parking REC standby	2CH				
Parking REC (Motion, Event)	1CH	Flashing On/Off interval at 0.5 sec	Red/Green flashing interval at 0.5 sec		
Parking REC (Motion, Event)	2CH				
Menu (included Calibration, Play)	1CH	Off	Red lighting		
Menu (included Calibration, Play)	2CH		Green lighting		
No SD Card (Including other error)	-	Off	Red flashing interval at 0.5 sec		

※ GPS signal sensitivity is different depend on a location and signal status.

Voice Guide

Situation	Voice Guide
Remove SD card / SD card Error	"Please check your SD card."
Firmware Update Start	"The firmware update is starting."
Firmware Update Completed	"The firmware update has been completed."
Constant (Normal) Recording Start (In booting)	"Constant Recording will start."
* Event Recording Start (In booting)	"Event Recording will start."
Parking Recording start	"Parking Recording will start."
Recording end	"The Recording will end."
Alarm tone in a Rear Camera disconnect (the error for 2CH REC)	"Ding-Dong, Ding-Dong"

* Only when event REC mode is set in the configuration, the voice guiding "event recording will start" will announce

LCD Configuration

All configuration cab be set in LCD menu.
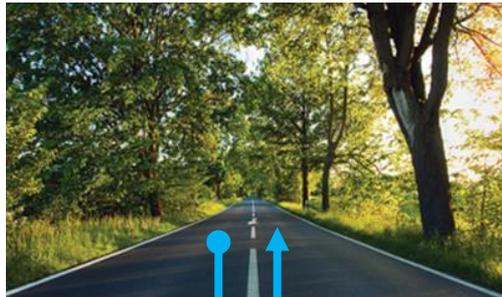
[Touch Main Screen]

[Touch except pop-up window]
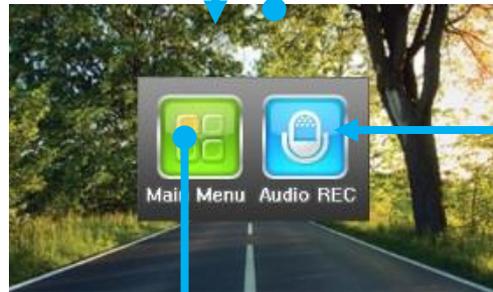
[Mute]

Menu		Function
Playback		Playback by setup condition on configuration
REC List		Display REC list
REC	REC Mode Setting	Set REC Mode
	Video Quality	REC Video Quality
	REC Time	Set Normal REC Time
	REC CH	Set REC Channel
	Motion Sensitivity	Set Motion Sensitivity
	G-Sensor Sensitivity	Set 3D Sensor Sensitivity
	Voice Guide Volume Level	Set Voice Guide Volume Level
	REC Volume Level	Set REC Volume
	SD Card Folder Capacity Adjustment	Set SD Car Capacity Rate by mode
	Parking Mode Change	Set Auto Change to Parking mode
Configuration	Breaking Voltage	Set Car Constant Power Discharge Protection Function
	Front Camera Sensor Setting	Set front camera sensor
	LCD Screen Saver Setting	Set LCD Screen Save Time
	TV out	Set TV Output Format
	LCD Video Format	Set LCD Video Format
	OSD Setting	Set OSD output on LCD
	Front LED Setting	Set Security LED
Time Setting	Time Setting	Set Time
	Standard Time	Set Standard Time
	Summer Time	Set Summer Time
Other Setting	FW Update	FW Upgrade Function
	SD Card Format	SD Card Format Function
	Touch Calibration	LCD Touch Screen Calibration
	Configuration Initialization	Initialize Configuration
	System Information	Display System Information

PC Original Viewer Program Installation

1.   System Requirements
- Windows XP(32bit), Windows Vista(32bit), Window7(32/64)
- Pentium4 2.8GHz & RAM over 1GB.
- Display monitor resolution: 1024 * 768
- DirectX Support (WPF)

2.   Install
- Playback program is in packaged Micro SD card.
- Insert this SD card into the USB card reader and connect to the computer.
- An executable file is in the SD card as below figure.

If you run "**setup.exe**", Winy BB Viewer will be installed. And then, installation will be continued according to the installation sequence of setup dialog box.

* Installation may tale long depend on PC Usage environment.

①

Next

②

Select file location and click "Next"

③

Next

④

Installing

⑤

Complete installation

※ If viewer program is lost accidentally, please visit our website winycam-eng and download to the SD card
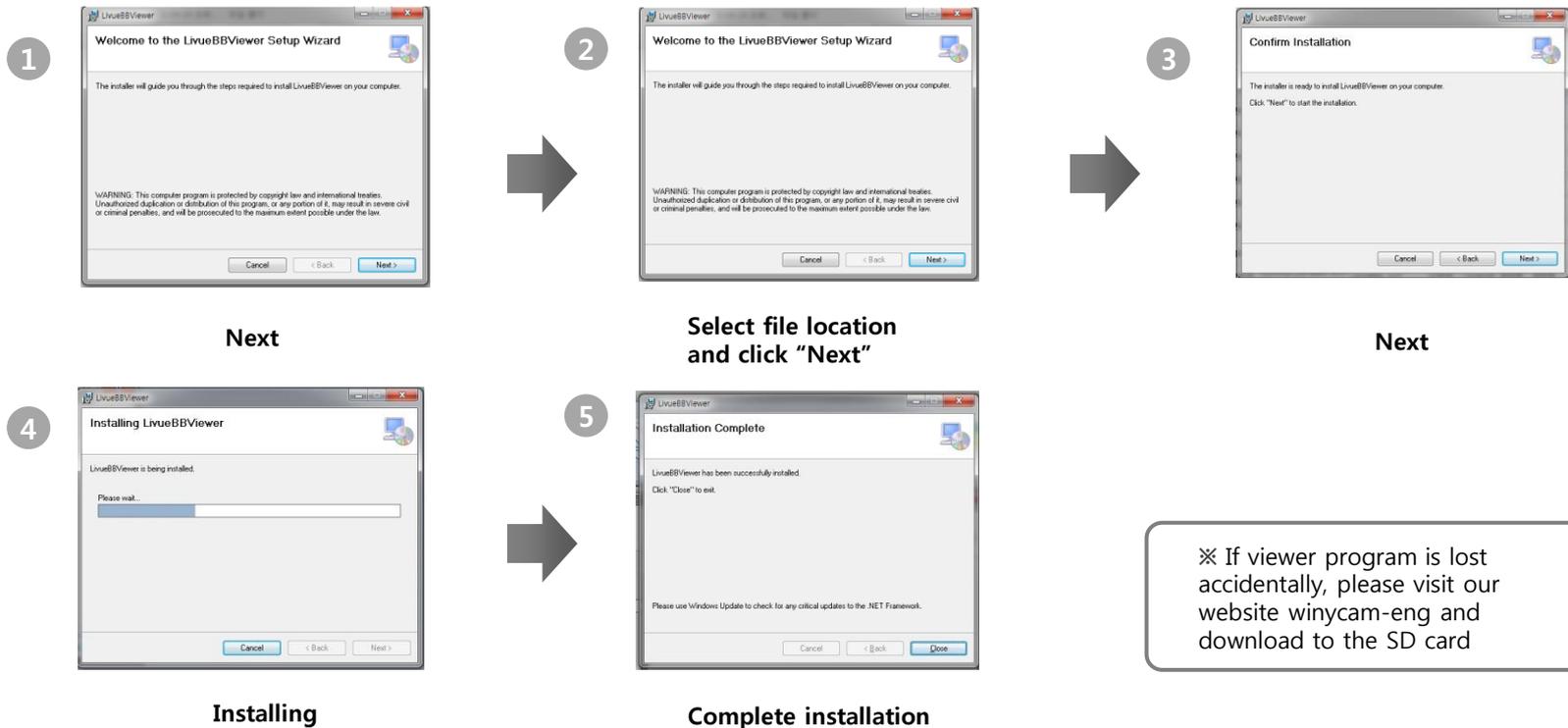
PC Original Viewer – Screen Configuration
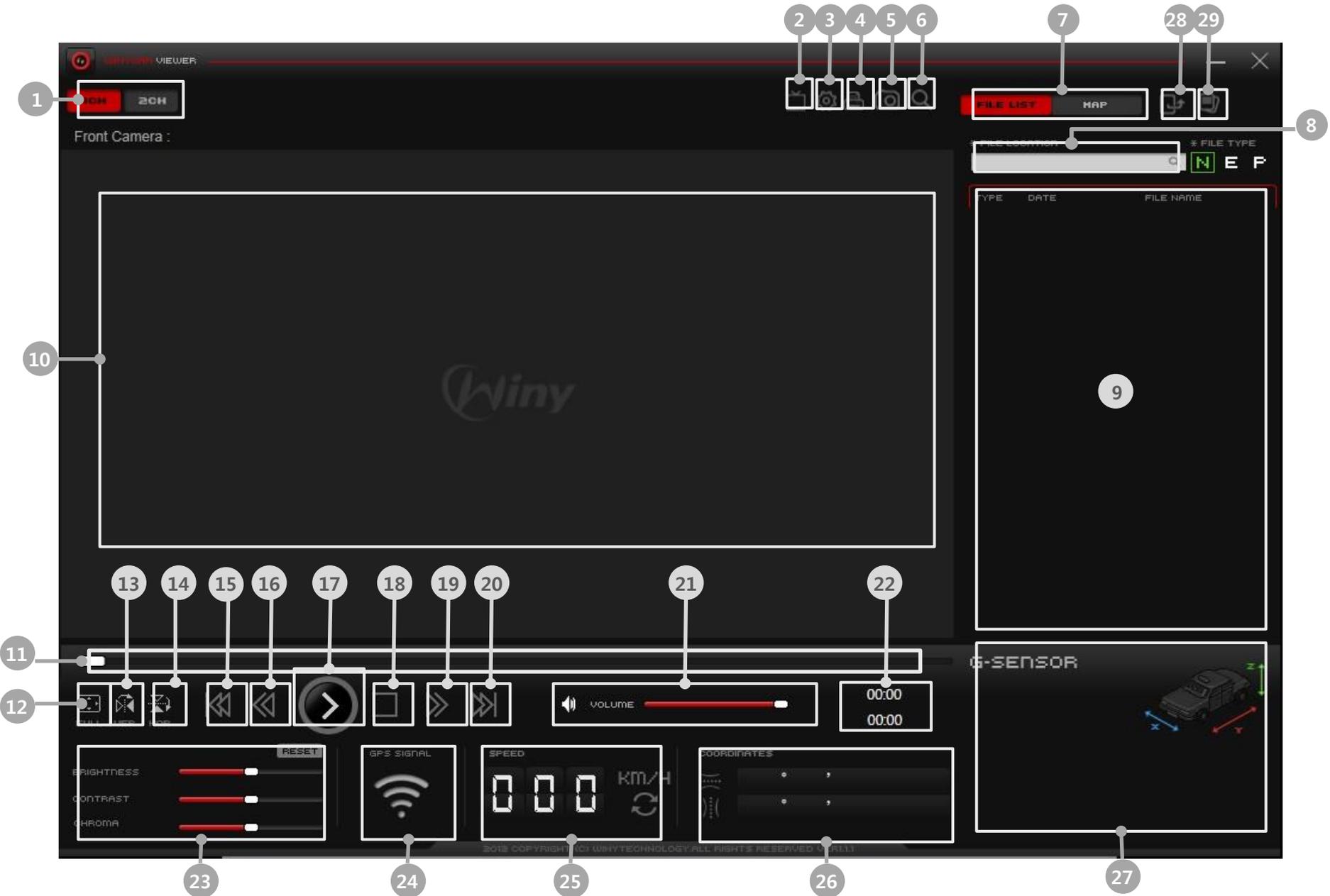
PC Original Viewer – Screen Configuration

Item	Function	Item	Function
1	1CH / 2CH select screen	16	Fast-Rewind
2	Viewer Configuration	17	Playback or Pause
3	System Configuration	18	Stop
4	Screen Capture	19	Fast-Forward
5	Print	20	File Skip
6	Zoom	21	Control Volume
7	Play List/Map Button	22	Total File Time/Playback Time
8	Playback File Location	23	Brightness/Contrast/Chroma
9	REC file list / Map Display	24	GPS signal condition
10	Playback Video Image	25	Driving speed
11	Playback Control	26	Latitude/Longitude
12	Full Screen	27	G-sensor information
13	Flip Horizontal	28	Restored image file
14	Flip Vertical	29	Split image
15	File Skip Back		

PC Original Viewer – Viewer Configuration
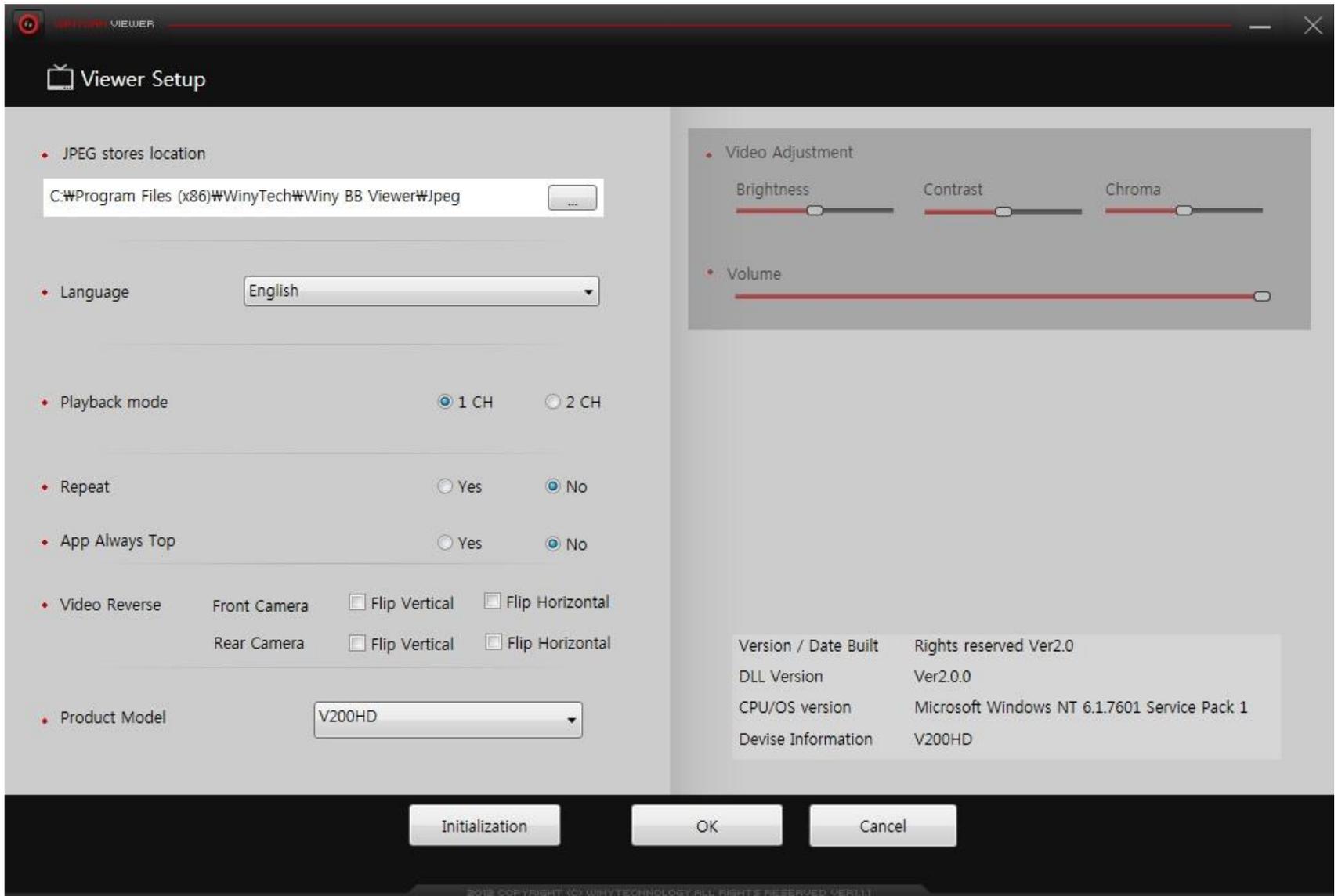
PC Original Viewer – Viewer Configuration

Item	Description
JPEG stores location	Set location for captured JPEG image.
Language	Select language.
Playback mode	Select display channel.
Repeat	Select repeated playback.
App location	Select App is always the top of another window.
Video reverse	Select video reverse.
Device select	Select the model.
Video adjustment	Control Brightness/Contrast/Chroma
Playback speed	Control playback speed
Volume	Control recording volume level

PC Original Viewer – Configuration

Setup [V200HD]

- REC Mode Setting
  Normal

- Front Camera Video Quality
  Super High Video Qu

- Rear Camera Video Quality
  Super High Video Qu

- REC Time
  1 Min

- REC Channel
  2 CH

- Motion Sensitivity
  3

- Voice Guide Volume Level
  2

- REC Volume Level
  2

- Breaking Voltage
  12.1(24.2)V

- Parking Mode Change
  Automatic

- LCD Screen Saver Setting
  30 Sec

- Video Out Format
  NTSC

- LCD Video Format
  Front + Rear

- OSD Setting
  YES

- Front LED Setting
  YES

- Time Setting
  2013-05-07T11:41:41

- Apply Time Setting
  NO

- Standard Time
  Seoul (UTC+09:00)

- Camera Sensor
  Sensor Initialization
  Contrast
  Brightness
  Color

- SD Card Folder Capacity Adjustment
  Some files would be deleted during start-up.
  0% 20% 40% 60% 80% 100%
  ■ Movie ■ Motion ■ Event

- Driving Mode G-Sensor X
  5

- Driving Mode G-Sensor Y
  5

- Driving Mode G-Sensor Z
  5

- Parking Mode G-Sensor X
  5

- Parking Mode G-Sensor Y
  5

- Parking Mode G-Sensor Z
  5

- Summer Time
  NO

  Model Name :
  Serial Number :
  Firmware Ver. :

Initialization   OK   Cancel

PC Original Viewer – Configuration

Item	Description
Mode Setup	Select the recording mode
Time Setting	Set your current time in PC
Front Camera Video Quality	Select video quality in a front camera
Rear Camera Video Quality	Select video quality in a rear camera
REC Time	Select recording time for each file
REC Channel	Select a recording channel
Motion Sensitivity	Select a motion sensitivity level
Voice Guide Volume Level	Select voice guide volume level
REC Volume Level	Select a recording audio level
Breaking Voltage	Select a breaking voltage for a constant power discharge protection function
Parking Mode Change	Select a parking mode auto-change function
LCD Screensaver Setting	Select LCD screensaver function
Video Out Format	Select a video out format
LCD Video Format	Select LCD video out format
OSD Setting	Select OSD out on LCD
Front LED Setting	Select front security LED function
Apply Time Setting	Apply set time to V200HD
Standard time	Auto-apply an actual location when using GPS
SD Card Folder Capacity Adjustment	Select the capacity of each recording mode in SD card
Camera Sensor	Select Brightness, Contrast, Chroma. Back to default value after click sensor initialization
G-Sensor	Select a shock sensor sensitivity level
Summer Time	Select apply a summer time

Configuration Default Setting

Item	Setting Value	Item	Setting Value
Mode Setting	Normal REC	Front Camera Video Quality	Super High Video Quality
REC Time (each file)	1 min	Rear Camera Video Quality	Super High Video Quality
REC Channel	2 CH	Motion Sensitive level	3
Voice Guide Volume Level	2	Parking Mode Change	Auto
Audio REC Volume	2	LCD Screen Saver	30 sec
TV-Out Format	NTSC	LCD Video Out	Front + Rear
Front LED Output	YES	OSD Out	YES
Time Setting	NO	Breaking Voltage	12.1(24.2)V
Standard Time	Seoul, Korea	Summer Time	NO
Camera Sensor	Contrast	Middle	
	Brightness	Middle	
	Color	Middle	
SD Card Folder Capacity Adjustment (%)	Movie (Normal)	50	
	Motion (Parking)	20	
	Event	30	
Driving / Parking Mode G-Sensor X,Y,Z		5	

Playback

1. Playback on LCD
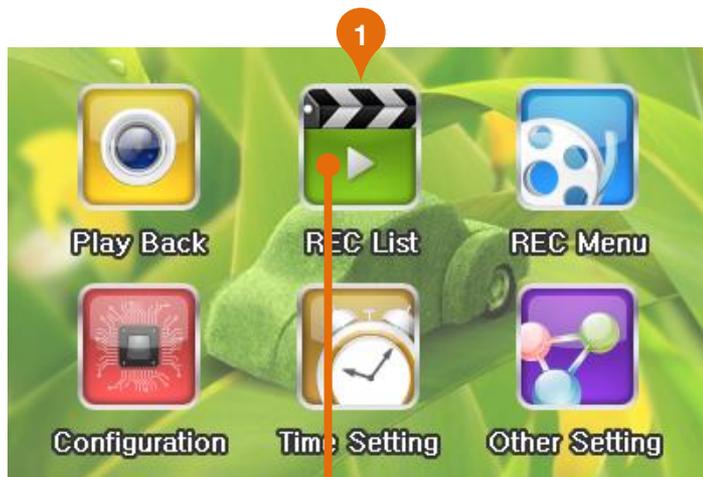
No	Item	Display	Description
1	REC List	Icon	Display REC List
2	Normal	Tab	Normal REC file list display tab
3	Event	Tab	Event REC file list display tab
4	Motion	Tab	Motion REC file list display tab
5	REC File List	List	REC File list that is selected tab
6	Video Window	Window	REC video playback window
7	Stop	Button	Stop playback video [Default]
8	Back	Button	Skip REC file back
9	Playback	Button	Playback REC file
10	Forward	Button	Skip REC file
11	Front / Back	Button	Toggle front / rear video diplay
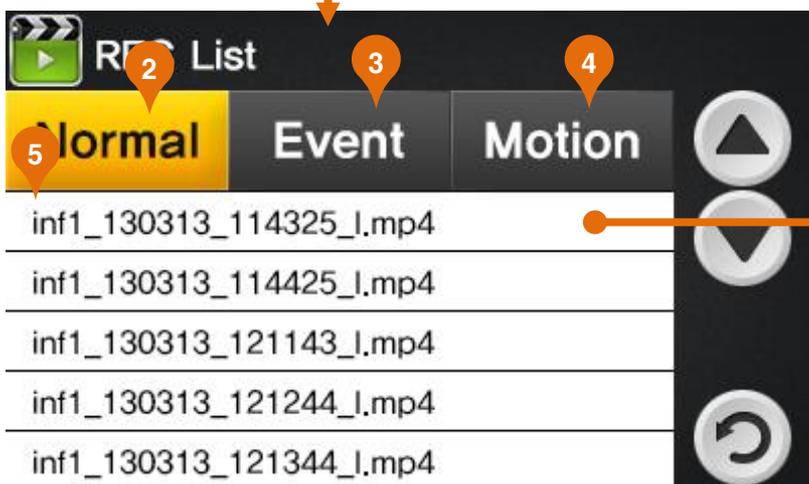
2. Playback in a standard video player
(GOM, Quicktimer, Window Media Player)

1) Remove a SD Card from V200HD

Open a SD Card slot cover and press softly, then a SD Card can be removed easily.

2) Connect a SD Card to PC

Insert a SD card to SD Card Reader or adapter, and connect it to PC.

3) Playback

Open a removal disc, you can see each folders. And click files to playback which is stored in each folders.

⚠ - Each recorded video is saved in below folder automatically.
Normal : Normal (Constant) record
Event : Event record which is detected a shock by shock sensor.
- Motion : Motion record which is detected by motion detection sensor. (Parking mode)
- GPS Information is displayed in the original viewer.

3. Playback in the original viewer program

1~2) Same method to playback as a standard video player.

3) Original Viewer Program
Click icon for the original viewer.

4) Select Product Model
Go to Viewer Setting and select "product Model" as V200HD.

4) Find a REC file location
Click "FILE LOCATION" in original viewer on upper right. Choose file location, video file list will be shown

5) Playback

Click
N : Normal REC file list
E : Event REC file list
P : Parking REC file list

4. Playback in a TV/Car Navigation

1) Connect TV Out cable

Connect TV Out cable to TV-OUT terminal on the product.
Connect TV Out cable to video input terminal on the TV /Car navigation. (TV Out cable : Option)

2) Set the video input mode

Set the video input mode on TV/Car navigation first and playback video for real-time monitoring. Real-time recording image ONLY.
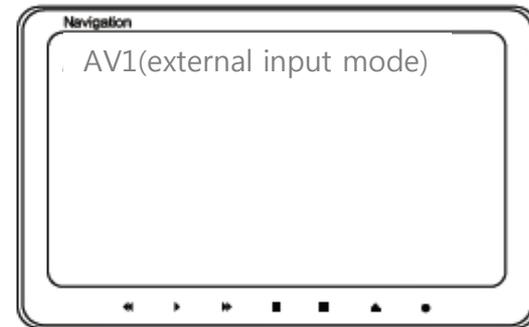
> ⚠️ Available only TV/ Car navigation has external input terminal.
> Please check the TV/Car navigation supplier for an external monitor cable.
> Mode change method is different for each modes, please refer user manual of TV/Car navigation.
> If remove or insert TV Out cable during recording, recording will end and start reboot.

To save video file on your PC

1. Enter to removal disc after insert SD card to your PC.
2. Go to the folder where recorded video files are stored.
3. Create the new folder in same location.
4. Drag the particular file to the new file to copy.
   (If you drag a folder, the whole folder will be copied.)
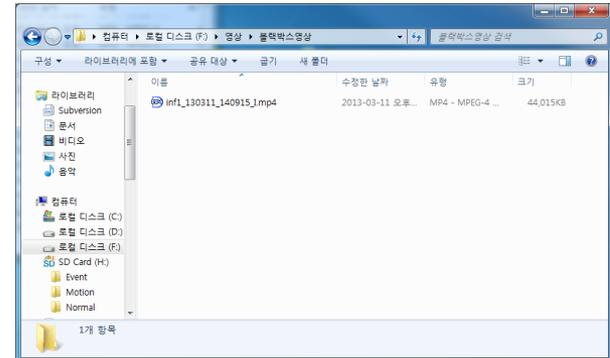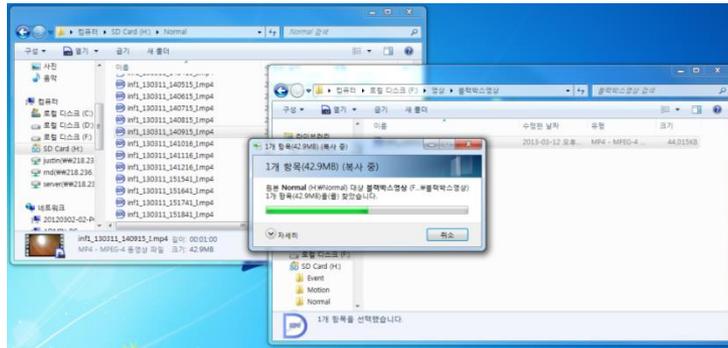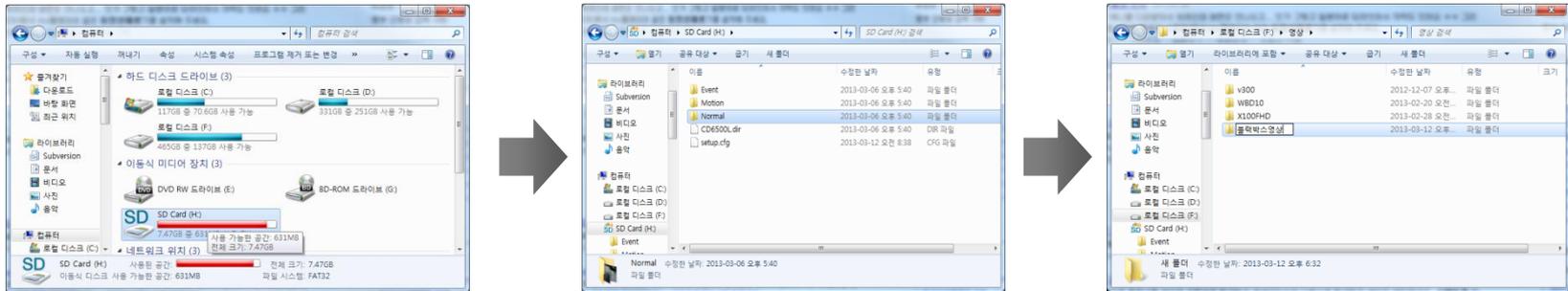
To separate recorded video files

1. Press "Front & Rear Extract" button on the original PC viewer program.

2. Select a video file to separate and click "OK" button.

3. Stored separated file in "C:₩Program Files₩Winy₩Winy BB Viewer₩Video"
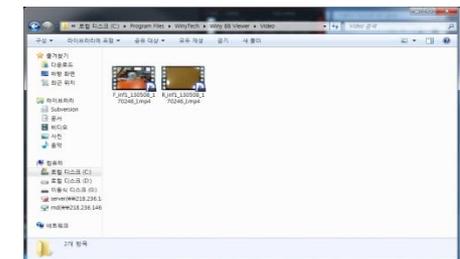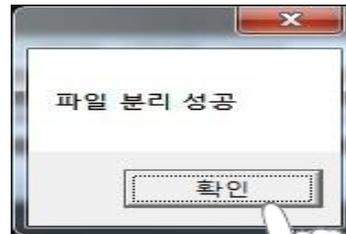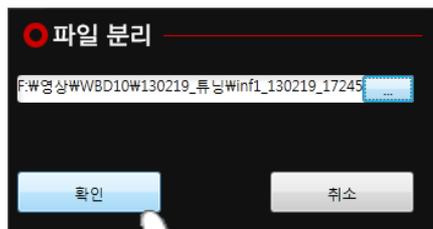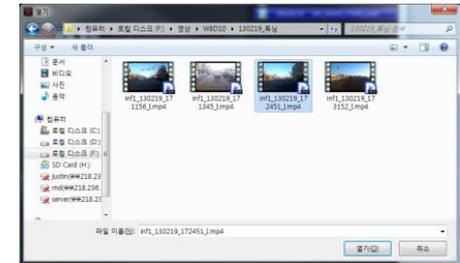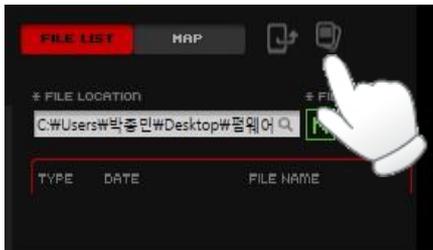
Video File Recovery

1. Press the "File Recovery" button on the original PC viewer program.
2. Press "OPEN" button and specify the file to recover.
3. Press "REPAIR" button, the file will be recovered.
4. The recovered file will be stored as file name "Repair.3GP" in same folder as it was located.
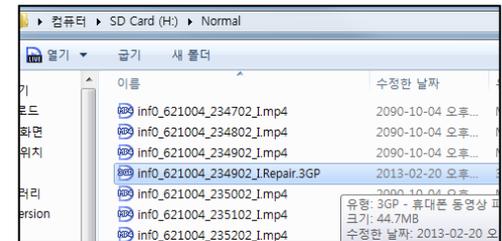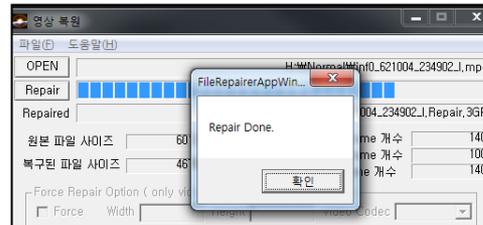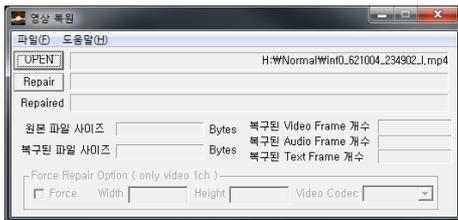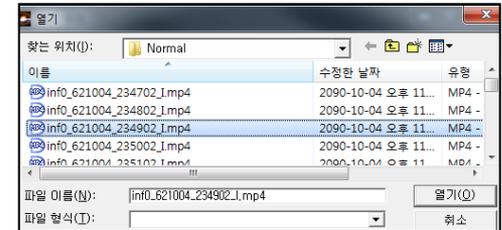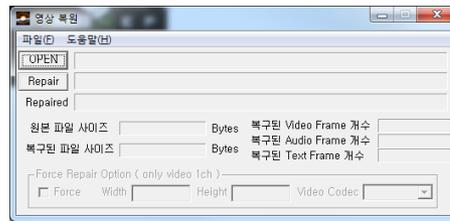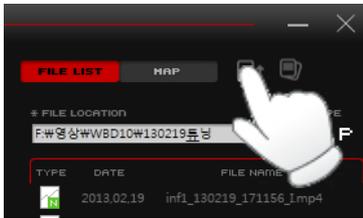
Firmware Upgrade

- **Auto Firmware Upgrade**

  1) Remove the SD card from the black box after turning off the power completely.
  2) backup all files that are stored in the files to your PC.
  3) Format a SD card on PC. (Please refer "how to format" in the quick guide)
  4) Download the latest firmware from our website (http://winycam-eng.com) and copy to a SD card.
  5) Insert the SD card to V200HD. After power ON then firmware will be updated automatically.
  6) During firmware updating, a voice guide will be announced and updating massage will be displayed ion LCD.
  7) When the firmware update is completed, V200HD will be initialized and a voice guide will be announced

- **Manual Firmware Upgrade**

  1) Insert a SD card which new firmware is stored to V200HD.
  2) "Menu > Other Setting > FW Update"
  3) Same progress as above step (6) in auto firmware update.

⚠ **Caution**

- After firmware update completed, the touch calibration will run to ensure for accurate touch sensitivity. Press the "DONE" button after thatching 4 yellow points to finish the Touch Calibration properly. If you have pressed "RESET" button by mistake, V200HD will re-boot and complete the Touch Calibration procedure.

Firmware Upgrade – Touch Calibration

1. How to calibrate scree after booting

Loading Logo will be up after a firmware is completed.
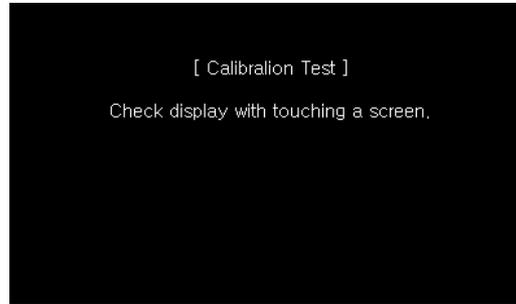
Touch a screen in any point.

Touch a yellow dot correctly.
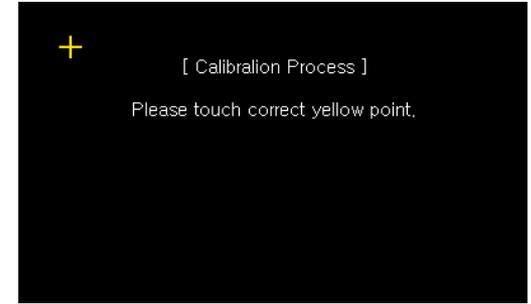
Touch a yellow dot correctly.
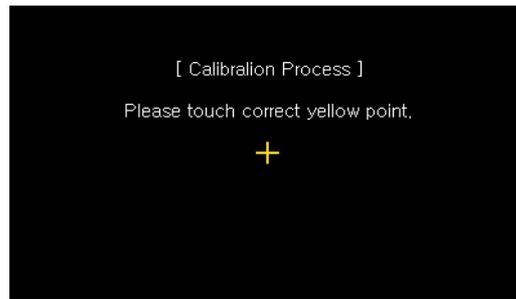
Touch a yellow dot correctly.
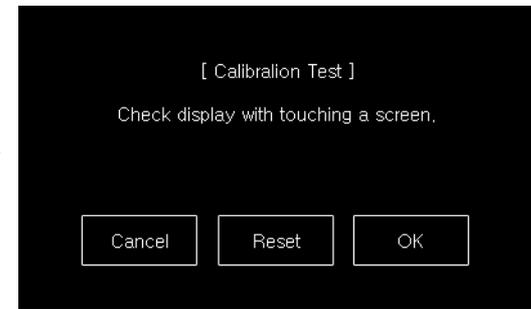
- OK : Completed calibration and turn to Normal REC mode.
- RESET : Go back to a test calibration screen.
- CANCEL : uncompleted a calibration and turn to Normal REC mode.

⚠ **Caution**

- If you touch wrong during calibration, press REC button. Then it will be initialized and loading screen will be shown. Keep pressing REC button, a calibration button can be skipped.

SD card format & Set breaking voltage

▶ SD Card Format

1. On PC

Connect the Micro SD card to your PC, and click on 'My Computer'.

Right-click 'Removable Disc' and select on 'Format' from the menu.

Press "Start" to format.

⚠ **The Original PC Viewer Program is in the packaged SD card. If you format the SD card, this program will be deleted. Please save a user manual data and an original viewer PC viewer program to your PC for backup. When format SD card in PC, please select a system as FAT32. please format as 64KB for assigned unit, if you set other format, it may cause SD card error or SD card dis-recognition.**

2. Format on V200HD

Format the SD card on a device. (Menu > Other Setting > SD Card Format)

▶ To set car constant power discharge protection function

This device has the built-in car constant power discharge protection function, and therefore does not require an extra device to cut off constant power.
Set a breaking voltage value on V200HD or PC viewer.
(Please note to set value based on a type of car or An age of car.)

1. Configuration on V200HD
Menu > System > Cut off voltage

2. PC Original Viewer
Operating Configuration > Breaking Voltage
It may have some differences depend on a type of car or an age of car.
(Breaking Voltage Value : 11.8V, 11.9V, 12.0V, 12.1V, 12.2V, Deactivate)

REC Time

▶ Default Setting

CH	Video Quality	Camera	16GB			32GB		
			Normal (50%)	Event (30%)	Motion (20%)	Normal (50%)	Event (30%)	Motion (20%)
1CH	Super High	Front	130	78	51	266	158	105
	High	Front	174	105	69	353	212	141
	Normal	Front	262	157	104	531	318	212
2CH	Super High	Front	141	83	55	285	168	111
		Rear	141	83	55	285	168	111
	High	Front	176	104	69	356	211	140
		Rear	176	104	69	356	211	140
	Normal	Front	265	161	107	535	325	126
		Rear	265	161	107	535	325	216

(Unit : Minute)

⚠ By time: When the memory is full, the oldest file will be automatically deleted.
By mode: Total record files are stored by your setting rate on "SD card Folder Capacity Adjustment".
         When memory is full on a particular recording mode, the oldest file will be automatically deleted
on particular recording mode. Stored file may also be deleted.

Specification

Item	Specification	Item	Specification
Camera	Front / Rear Camera 2M Pixels	Video Output	NTSC / PAL Composite
G-Sensor	3D Shock Sensor	Voice Recording	Built-in high sensitive microphone
GPS	External GPS Module (Option)	Voice Guidance	Built-in speaker
Video Compression	H.264/AVC	Recording Media	Micro SD Card (SDHC)
Audio Compression	AAC	Power Input	DC 12V ~ 24V Free Voltage
Recording Channel	2 Channel	LCD	3.0" TFT LCD, 400 X 240 Resistive Touch Display
Recording Resolution	Front : HD (1280 x 720) Rear : HD (1280 x 720)	Size/Weight	106(W) x 53(H) x 25(D)mm ARO 88g (Bracket excluded) 98g(Bracket included)
FPS	1CH : Front 30FPS 2CH : Front 20FPS /Rear 10FPS	Storage Temperature	-40℃ ~ +85℃
Image Quality	1CH : Super High / High / Normal (bitrate 8/6/4Mbps – HD Standard) 2CH: Super High / High / Normal (bitrate 4/3/2Mbps – HD Standard)	Operating Temperature	-20℃ ~ +60℃

FAQ

1. **Power is not turned on.**
   ※ Check once again if the power cable is properly connected. If the problem is not solved, please contact manufacture.

2. **The map is not shown when a video is played on a PC original viewer program.**
   ※ Check your Internet connection.
   Check if your Internet Explorer is v7.0 or higher.

3. **Power is connected, but LED is not lightning.**
   ※ Check if the power cable is connected properly. Then if still LED dose not lightning, the product or the memory card may be defective.
   Please contact manufacture.

4. **GPS signal dose not recognize. (GPS is sold separately.)**
   ※ GPS signal reception may be interrupted temporarily depending on the environment and locations.
   Drive your car to other location where GPS signal reception is abled. Please wait 3-5 minutes in the GPS signal reception area.
   If the signal still dose not recognized, please contact manufacture

5. **The product does not recognize the memory card.**
   ※ Remove the Micro SD memory card from V200HD after power OFF, and check for any foreign material or abnormality around
   the connecting terminal. Format the SD memory card and try again. If the memory card is old, please replace with a new one.

⚠ **Precaution before use**
1. Please check for any defect on the product before installation. The Company shall not take responsibility for any cost or expense incurred as a result of the failure to check before installation.

2. If installation was held at a service center other than those designated by the Company, the Company shall not take a responsibility for cost or expense charged at such center.

3. If the constant power protect function is set 'OFF', monitoring during parking will be performed only for a certain period of time. If the vehicle battery voltage is lowered for self-protection, power to the device may be disconnected even in the Parking Mode disabling the recording.

4. The Micro SD card should be formatted every other week, as it may cause a recording error, a disabling saving file or playback error.

5. The Micro SD card is a consumable. Use of an aged SD card may cause error. Please replace on a regular basis.

6. When a car accident occurred, turn off power of the product immediately, remove the Micro SD card and save the accident file on your PC. If the file is erased due to the times away, the Company shall not take responsible.

Warranty

■ Warranty
1. The products are manufactured through the strict quality control and inspection process.
2. The defect occurring in normal use of user within the warranty period will be repaired free of charge.

■ Warranty Details (Conditions)
Free Service: The defect occurring under normal use within the warranty period from the date of purchase will be repaired free of charge.
Paid Service: If the warranty period has passed.
Even within the warranty period, following cases shall be repaired at cost:
Failures caused by natural disasters (fire, lightning, flood damage, etc.)
Failures caused by carelessness using (drop, flooding, shock, breakage, excessive operation)
Failures caused by the malfunction of power in use and connected equipment.
Failures caused by any changes of a product and repaired from an unauthorized service center.
.

Body	Accessory	
1 Year (from purchase date)	Within 6 months	SD card, Bracket, Cigar Lighter
	Excluded warrantee	Card Reader, Vided Cable (cut user's mishandling)

• Accessories are not repaired free of charge. The products other than the warranty period shall not be replaced free of charge.
Important data shall be backed-up in a safe place and we shall not be responsible for any loss of the data stored in the product.

Date :   D.   M.   Y.
Distributor :

Customer Service

Manufacture : 303-305, Bucheon Technopark, #365, Samjeong-dong, Ojeong-gu, Bucheon-si, Gyeonggi-do , Korea 421-741

Please download the user manual, program from below website
http://winycam-eng.com   WinyTechnology Co., Ltd.