

V3HD



2CH V3 HD

User's Manual

User's Manual

rev.01

Before you use

Thank you for purchasing CVR V3HD.

This manual explains how to Install and use the device.

Please read the information below before using the device to avoid the discomfort in using the device.



Notice

- Please understand there might be some error in describing and editing this manual.
- Can be changed without any notice to improve product performance.

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Caution for the safety

- 3 to 5 minutes or more after the first time, or insert the SD memory format create a file system check and SD memory recording begins. Therefore, do not remove the SD memory or turn off the device during operation.
- Do not put the device to excessive shock or dust(The device can be damaged or it can cause the fire and the electric shock)
- Please avoid the excess tinted or a special glass to the windshield. (The video may be distorted or GPS reception can be interfered)
- Please make sure to remove the SD card only after you turn off the device to protect the SD card from being damaged)
- Please do not disassemble modify the device.(It causes the defectiveness and it will void the warranty).
- **The time can be reset in case that the device is not be used for the long time. When GPS signal is locked, it is to be automatically set by the live time.**
- Do not operate the device during driving for the safe driving.
- Do not clean the device with the liquid or the the volatility chemical.(It may cause the damage, fire or electric shock on the device)
- Leaving or operating the device under the high temperature for the long time can cause the malfunction or defectiveness of the device.
- If there are some dirty on the lens or the windshield, they cause the poor video quality.
- Protect the device from the drop and the impact .
- **The power is to be automatically shut down in case the power voltage is less than 11.7V to protect the battery of the car. When 13V power comes, the normal operation restarts.**










Caution to the SD card

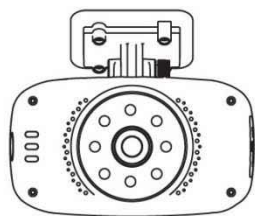
1. The SD Card is a consumable item. Its read/write characteristics has a lifetime. The recording, prolonged use may not be periodic management is required
 - a. Please prepare for a spare SD card against the case when SD card defectiveness happens.
 - b. Please prepare for a spare SD card against the car accident.
2. In the car accident, please save the recorded data of SD card to your computer because the accident data can be erased due to the overwriting.
3. Please do not remove SD memory in power-on and recording.
 - a. Recorded images may be lost.
 - b. The defectiveness happens or the life of the SD memory may be reduced
4. If some data except the viewer program and recorded data in SD card, they are to be automatically removed to increase stability.
5. Please format SD card on your PC on a regular basis twice a month to keep the maintenance.
 - a. The dive format function in the viewer program is recommended.
 - b. Please download the SD formatter program on <http://www.sdcard.org> to check the SD card.
 - c. MLC Type, Class 10 for this device is to be recommended.
6. SD card is the consumable item.
 - a. There is the life time for writing & reading and Record error can happen in using the device in high temperature for the long time.
 - b. Please understand that the maker is not responsible for the record error due to the past life SD card.
 - c. Warranty for the bundle SD card is 6 months since your purchasing date.
7. 3 to 5 minutes or more after the first time, or insert the SD memory format create a file system check and SD memory recording begins.

If SD card is removed on creating data, the record operation cannot be made.

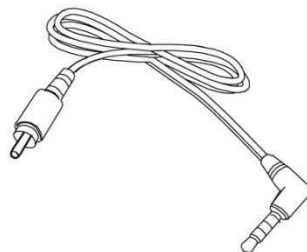
1. About Product

 mart WDR WDR	■ Clear video quality, WDR Support
 mart HD HD	■ 720P/30fps Both internal view cam & Front view cam
 mart Recovery Recovery	■ SD card Auto recovery function
 mart Inf or mation	■ Voice guide- to inform the condition of the device
 mart Wi-Fi Wi-Fi	■ Transfer one image per each event through Wi-Fi to PC server.
 mart ecurity ecurity	■ High bright security LED
 mart aving aving	■ Support constant power discharge protection function Power Off-11.7V, Power On – 13V

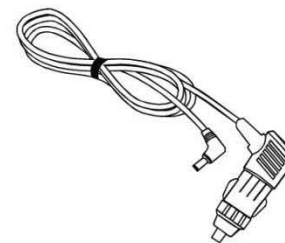
2. Configuration of the product



Main body



Video out cable



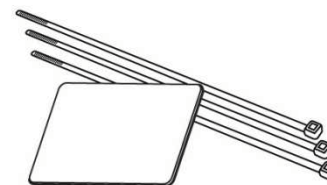
Cigar jack power cable



User's manual

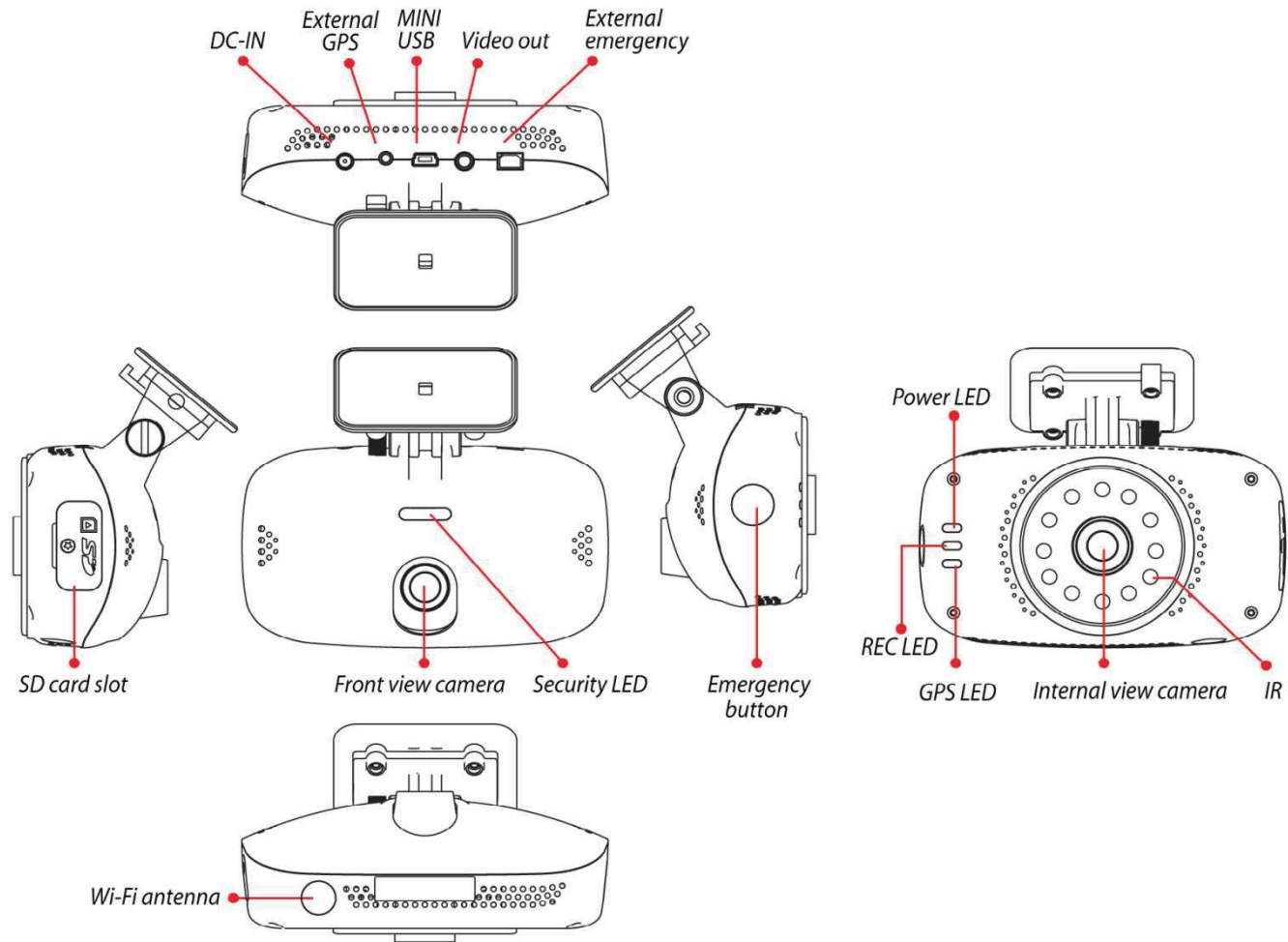


SD memory card



Cable tie & Double side tape

3. Name of Each part



4. Specification

CVR V3HD	
Image sensor	Front view camera : WDR 1M pixel Internal view camera : WDR 1M pixel
Audio Input	Built-in Mic
Video compression	H.264
Audio compression	ADPCM
Recording resolution	Front view camera : 720P(1280*720) Internal view camera : 720P(1280*720)
Recording Speed	Max 30fps/Each Channel
Emergency/External Emergency button	Event record by the emergency button
G-Sensor	Event record by the external impact
Voice guide(speaker)	Alarm and voce to inform the condition of the device
GPS	For connecting with E-Google map(Built-in)
Record media	SD card (Basic: 16GB, Maximum: 128GB) Recommend spec : Over MLC Class 10, Operation termperture : Over 85°C
Lens	Front view camera : About 130° wide angle lens Internal view camera : About 130° wide angle lens
Viewer	Windows XP/ VISTA/ 7/ 8-32Bit/ 64Bit
Power	DC 12V ~ 24V
Operation temperature	-20°~60°C(Storage temperature: -20° ~ 90°C)
Humidity	10~95%
Weight	150g
Dimension (W x D x H)	64(W) x 112(D) x 47.2(H)mm

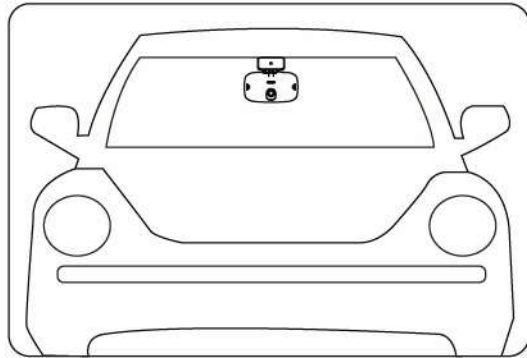
5. Installing the product



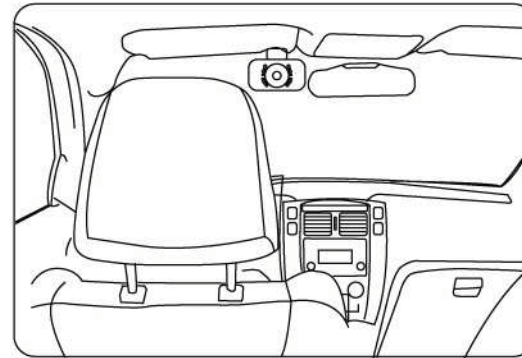
Caution in installing the product

Once installed, it is not easy to move the adhesive bracket to other position on a windshield or a rear window. Please install the device not to obscure the field of vision of driving.

Please preferably install this device away from other electronic products such as navigation.



External vehicle

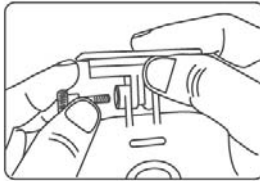


Internal Vehicle

Installation location

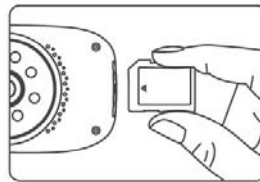
First, please make the position on the front of rearview mirror and set the device on the middle of top of windshield by the camera with keeping it horizontally.

Mounting Method



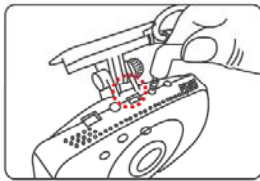
1 Assemble the main body with a bracket.

Fix the main body and the bracket with a screw



2 Insert a SD card.

Open the SD card slot cover and insert a SD card in the correct direction with checking the front side and the rear side.



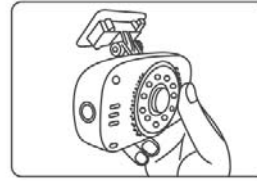
3 Connect with GPS.

Connect GPS jack of the bracket into the GPS port of the main body



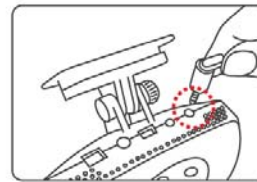
4 Remove the cover from the adhesive double side tape.

Please detach the cover from the adhesive double side tape on the bracket



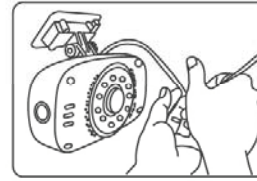
5 Install the device.

After installing the device on the proper position, please adjust the right angle of the camera with spinning the bracket. Avoid obstacles in the front of the camera

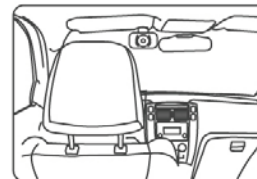


6 Connect the Cigar jack power cable.

Connect the Cigar jack power cable with the main body



7 Put the power cable in order with the cable fix holder and connect the power.



8 Complete the installation.

After the vehicle starts up, please check whether LED of the device turns on. LED turns on with the beep sound and the record starts after several seconds.



Caution about how to use the SD card

- Do not use the SD card of this device for other purpose. It is to be automatically removed in this device.
- Due to the SD card compatibility, please purchase the genuine.
- Please remove the SD card after powering off the device and checking out REC LED power-off. (SD card might be damaged).
- Please use a SD card having the specification over MLC Class 10 and operation temperature over 85 °C
- Warranty period of SD card is 6 months, except the bundle SD card, we are not responsible for its AS

- How to insert theSD card

- If the SD card is not properly fitted, the recording cannot start. Please push the SD card until you hear a “click” sound.
- 3 to 5 minutes or more after the first time, or insert the SD memory format create a file system check and SD memory recording begin
- When “Recording starts” voice guide comes up, the device starts recording.

6. Description of Product Use

Power ON	<ul style="list-style-type: none">- After installing powering on this device, all LEDs start flickering.- Recording starts with “Recording starts” voice guide and powering on REC LED.- In disconnecting with an external GPS, GPS LED Powers off.
Power OFF	<ul style="list-style-type: none">- When the device is disconnected with the power, REC LED powers off.
GPS	<ul style="list-style-type: none">- GPS LED starts flickering then if 3D reception status comes, GPS LED keeps bright.
Emergency	<ul style="list-style-type: none">- When the emergency button shortly pressed, “emergency” recording starts.

Record mode

Normal	<ul style="list-style-type: none">- Once powering on the device, the normal recording starts.- Security LED is to flick once for 1 sec.
Impact	<ul style="list-style-type: none">- If some impact is applied to the moment of car accident, the built-in sensor defects it and make the device recording "Impact" event model with flickering REC LED.- After the end of the event record mode, the normal recording automatically restarts.
Parking	<ul style="list-style-type: none">- If G-sensor does not detect any motion in stopping or parking in case of checking the parking mode, the device automatically is to enter into the parking mode after 5 minutes.- Recording with 10FPS to extend the recording time.- Security LED is to flick once for 1 sec- Normal recording automatically is to restarts once the vehicle moves.
Motion	<p>If the motion is detected in 3 meter in front of the vehicle in the parking mode, motion mode recording is to start.(This can be influenced with the circumstance and light).</p> <ul style="list-style-type: none">- After the end of the motion recording, the parking mode restart.

Voice guide

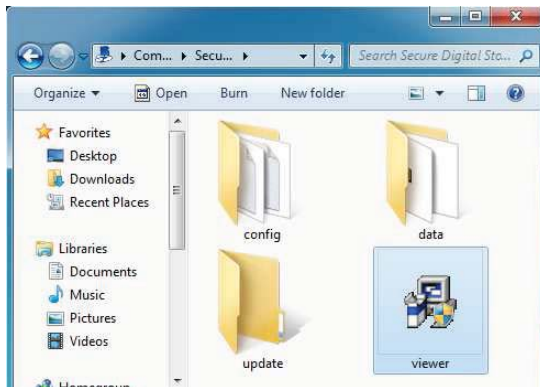
Start the normal recoding	-	Start recording
Complete the system	-	The system is to be shut down.
Overwrite	-	Recording does not have enough available. Please check overwriting setting.
GPS connected	-	GPS is connected.
Abnormal recording	-	Video is not being entered.
Changing the parking mode to the normal recording	-	Driving mode to start recording. Safe driving.
For mat the SD card	-	On formatting the SD card. Please wait.
No inserting SD card	-	No SD card
Defective SD card	-	On formatting the SD card. Please wait.
Recover SD card's file system	-	Reboot because of the damaged SD card. Please replace the SD card if this occurrence continues.
Normal FW update	-	Firmware update in process, please do not power off.
Fail updating FW	-	Firmware update process has been terminated.

7. Installing the viewer program in PC

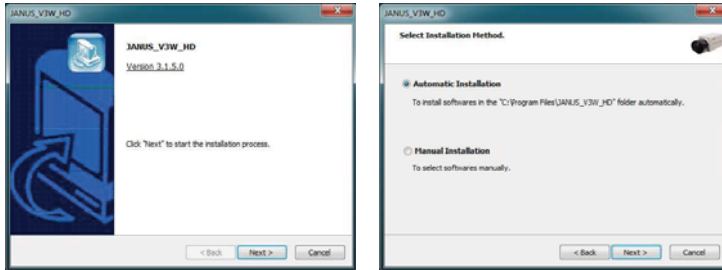
Caution

Over CPU-Dual 2.4G, Over RAM-2G and Over VGA512M as PC specification are required for playing back the Full HD.
In the low spec PC, the recorded data cannot be properly played back.

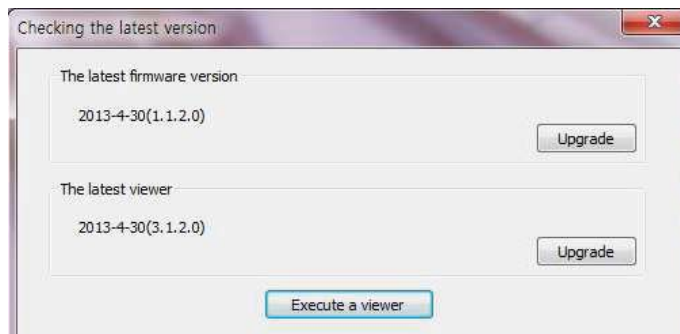
- ① In a SD card to be used at the first time or a formatted one, the viewer program is not installed.
- ② First, please insert a SD card into the device and power on device.
- ③ Recording time can be different in accordance with a SD storage capacity. Please do not power off the device for 3~5minutes to create the data file system(after normal booting with flickering all LEDs, recording start with turning on REC LED).



- ④ Please take out SD card and insert it in PC.
- ⑤ Please execute "Viewer.exe" file in PC.
- ⑥ Please click "Yes(Y)" in "User account control" menu.



- ⑦ Please choose “Automatic installation” and click “Next”.



- ⑧ If the network is connected, the latest version confirmation window about the firmware and viewer program pops up. If you want to upgrade them, please click “Upgrade”. If the network is not connected, CVR V3HD viewer program runs.



- ⑨ When the installation is completed, CVR V3HD viewer program automatically runs and CVR V3HD viewer program icon is to be created on PC.



- ⑩ Open a file- when you click “Open” in the viewer, please choose one removal Disk then click “confirm”

8. Menu

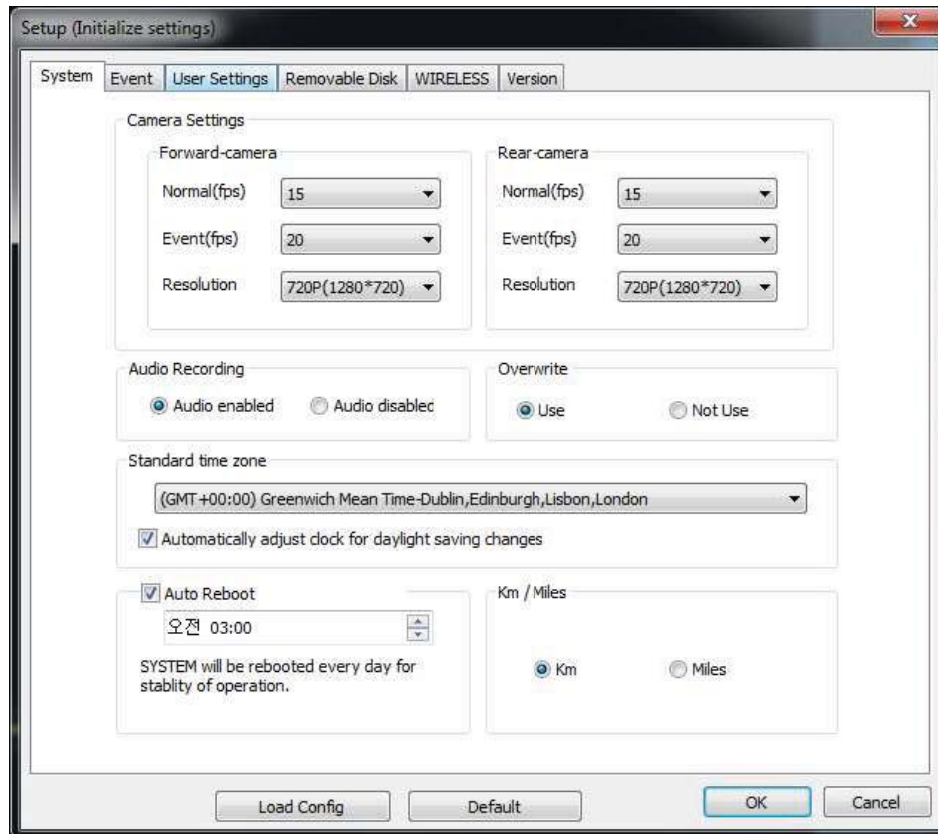
① Icon of basic menu



	Reverse/Play		Panorama
	Pause		Draw Lanes
	Repeat a event		Print
	1 frame playback		Back-up
	next event		Setting menu
	Play back speed		Open a file
	Adjust the audio volume		Switching screen, Black white screen
	Speed (only case that a GPS is connected)		Play list
	E-Google map on internet (only case that a GPS connected).		GPS signal bar(only case that a GPS connected)
			G-sensor graph

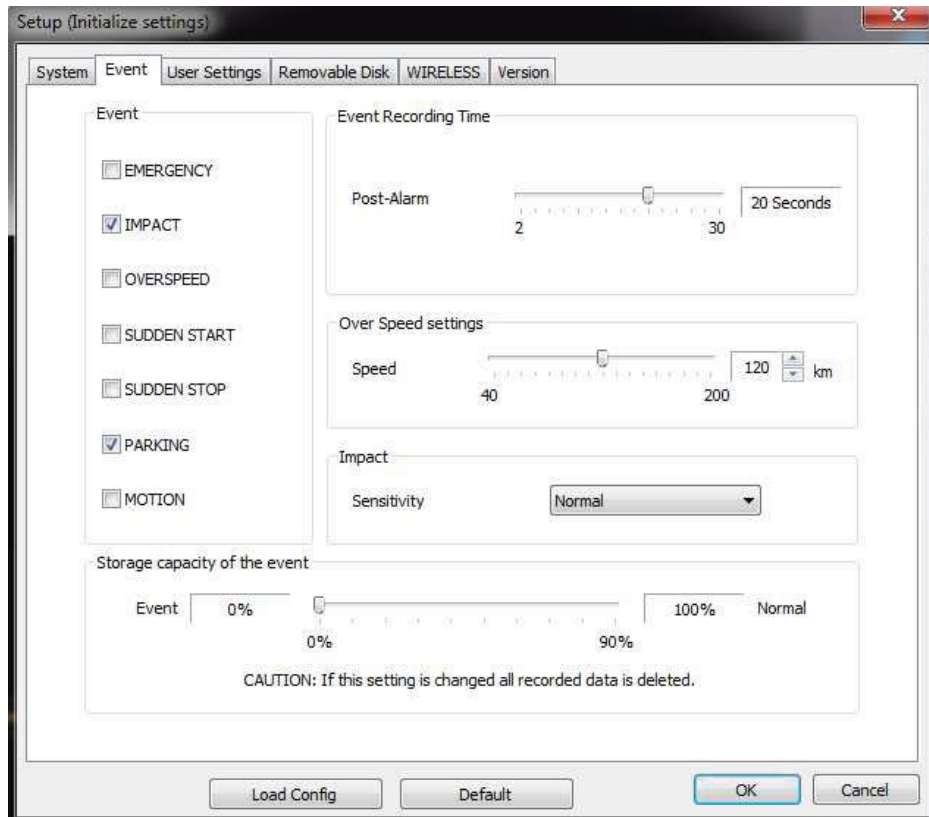
② ettin

a . y te



- Resolution
 - Front view camera : HD(720P) & (450P)
 - Internal view camera : HD(720P) & (450P)
- Normal /Event – Adjust the frame per a second.
Above items are related with the data size and SD memory storage space.
- Audio- Recorded with voice or not.
- Overwrite- In checking “use”, when the SD memory card is full, it will automatically overwrite only the normal mode data saved on to the SD card from the beginning.
In checking “Not use”, it will not record after writing the last data in SD card.
- Standard time zone : Setting the appropriate time for each country
- Auto Reboot -Set the auto reboot once daily for keeping the stable operation
- Km/Miles- Choose Kilometers or Miles on viewer.

Event



- Event-Emergency/Impact /Over speed /Sudden deceleration /Sudden acceleration/parking/motion
- Event recording time
 - Record after the event : Set the time for recording the data by set FPS after the event.
- Impact - Adjust the sensitivity of the impact(G-Sensor).
- Over Speed setting – Set the over speed to activate the event.
- Storage of the event – Set each proportion of Normal folder and event folder.



Caution

If the device is powered on after changing the proportion of event folder, SD card is always formatted automatically. Please note this point and please back up the important recorded data in advance.

User's settings

Setup (Initialize settings)

System Event **User Settings** Removable Disk WIRELESS Version

Vehicle Info

Vehicle Info

Driver Info

License plate No

User Info

User ID

Password

☒ LBP

Power On: ☐ 12.4V ☐ 12.7V ☒ 12.9V ☐ 13.1V ☐ 13.3V

Power Off: ☐ 11.3V ☐ 11.5V ☒ 11.8V ☐ 12V ☐ 12.3V

☐ Time set

2013-07-22 오후 06:16

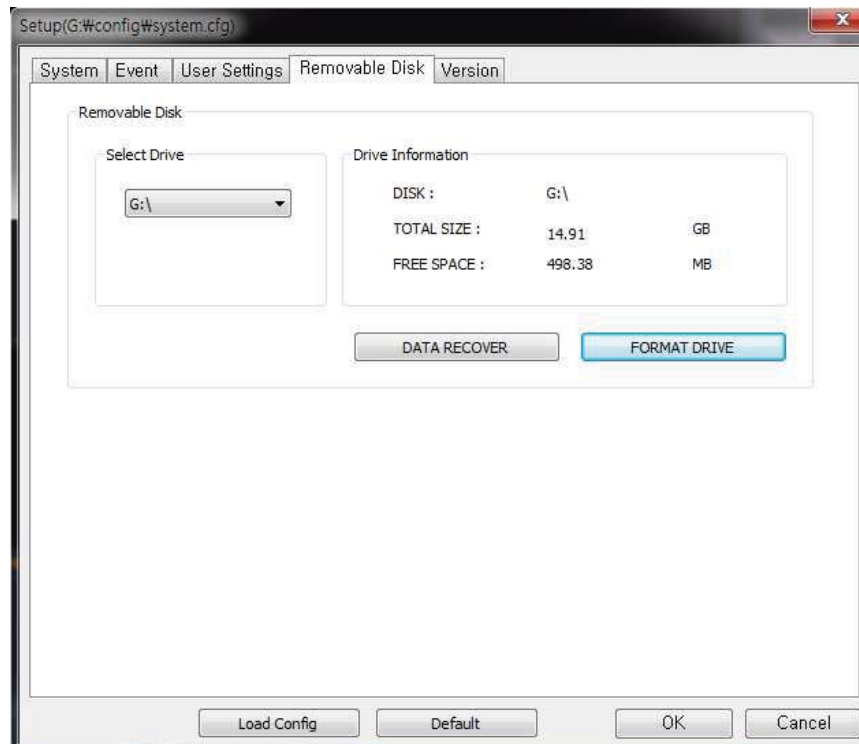
Load Config Default OK Cancel

- Vehicle Info- Input the kind of vehicle.
- Deriver info-Input the driver's name.
- License plate no.- Input the license plate number.
- User's info:
 - User's ID- Input ID in the main screen.(Default : admin).
 - Password- Set the password to log in. (Default-No password).
- LBP: Low battery protection function to adjust the power voltage.
- Setting time- In case that an external GPS is connected, a user can sets manually set the time.

Caution

- This menu is for the private information. Please keep this information from the disclosure.
- In case of forgetting the password, you never log and watch the recorded data at all in the viewer program.

Removable Disk



- In case that some errors happen in SD card, this function is for restoring or formatting the data of SD card. Before this work, please back up the recorded data in SD card in preparation for the worst case to lose the recorded data.

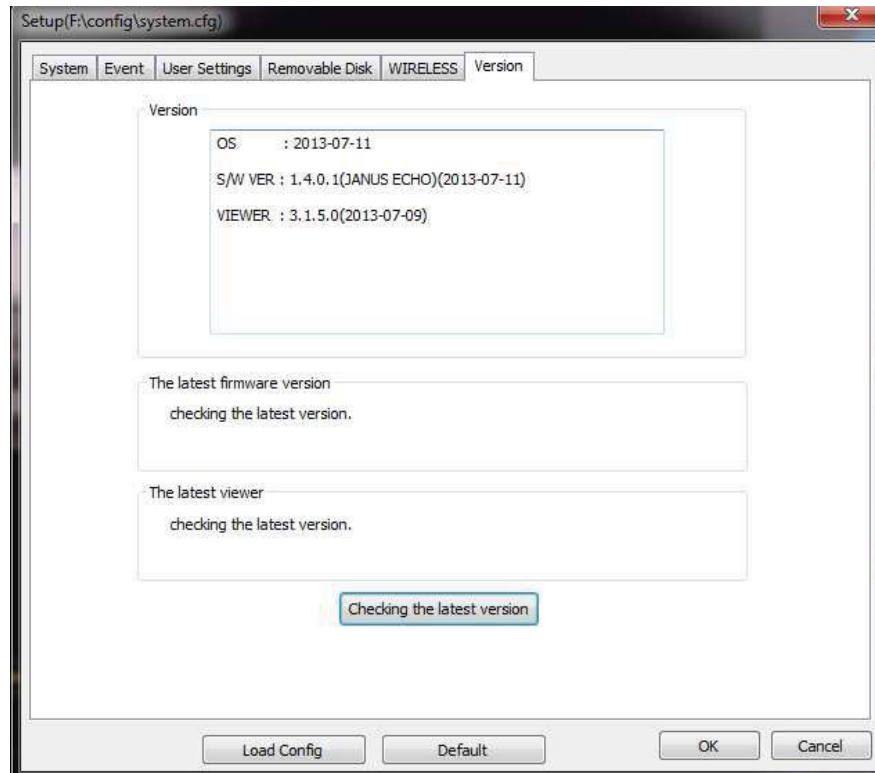
- Select the drive where is installed with the SD card.
- Select the function you want.
- Drive format remove all recorded data..



Caution

- The speed of the SD card declines significantly when used for a long period of time.
- The management of SD card is important.
- Check and format the SD card once every a week .

Version






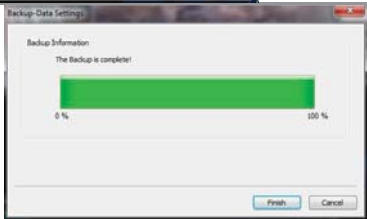
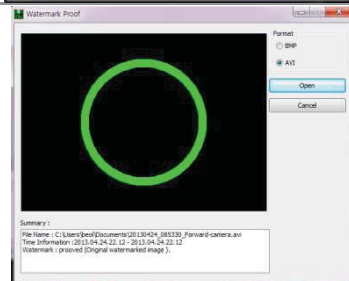
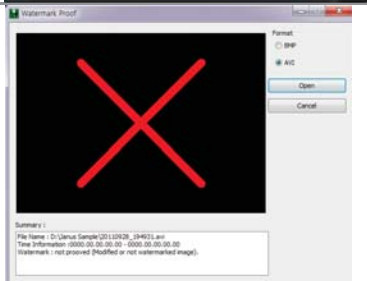
- OS – Show the creation date of the device's OS.
- S/W VER- Show the creation date of the device's application.
- VIEWER-Show the version of PC viewer program.
- Latest firmware/Latest viewer – Click “Check the latest version” to update the firmware and the viewer software.





Caution

- Please make sure to connect the internet and insert the SD card into PC then make progress for upgrading the firmware.
- In case that the latest firmware is downloaded without SD card, please copy and paste the downloaded file in the “update” folder of SD card used in the device.

③ Functions

	 	<ul style="list-style-type: none"> a. Image (JPEG, BMP), AVI Backup, JDR backup, G-sensor backup. b. AVI file can be played in the Windows Media Player and other AV media player. c. JDR backup file can played back only in CVR V3HD viewer program. d. Image backup file can be showed in the image viewer or the paint program.
Backup	 	<ul style="list-style-type: none"> e. Backing up image, AVI and JDR- Select the time of the recorded data to be back up and press the back-up button f. In case of backing up the audio together with video, check “Audio” and nominate the path of data then press “Next” button to make progress of the back-up.
	 	<ul style="list-style-type: none"> g. . AVI backup function can be used to tamper-proof By selecting “open” button to execute “ Watermark Proofer” program, you can check whether the back-up data has been tampered or not.

Full screen		<p>Double click the left button of the mouse to convert the full screen from the main screen. To return the main screen, click the left button of mouse again.</p>
Magnification		<p>On the play screen, click the right button of the mouse on the position to make the zoom. You can move everywhere for the zoom after pressing the button of the mouse. Press the right mouse to remove the Magnification function.</p>

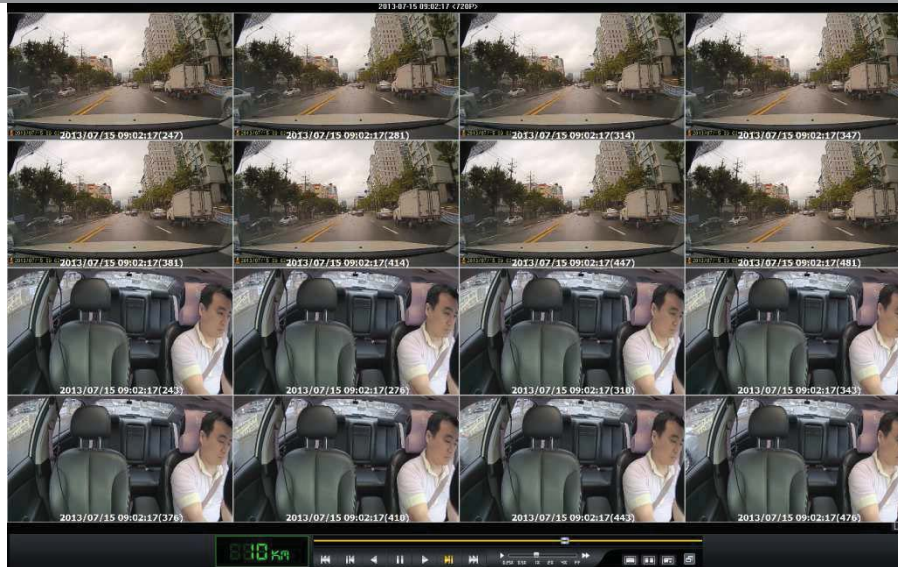


Draw
Lane



Click Draw a lane icon as above to pop up screen, adjust the line to match lane. Select "Draw lane" on the load and click Apply button to start.
To cancel "Draw the lane", unselect Draw lane on the load and click "Apply" button.

Thumbnail



Click 'Panorama' icon as above to start.
16 divided screens will show up, each screen shows individual frame in sequence. Double click on one screen to show full screen.
To cancel Panorama mode, click Restore screen button as red marked.

Event
Shuffle
playback





Click Repeat event icon as above to setup repeat section. Click desired Starting point and Ending point during playback, playback will repeat on the selected time. Click Release to clear Starting point and Ending point. Repeat event is possible in one event.

OSD



In playing back the data, time, date and speed shows up in the bottom left of the video screen. Notation about time and date is applied to all the back-up file.

④ Folder in the SD card

	<ul style="list-style-type: none"> ■ Only after powering off, please remove the SD card. ■ Please insert that SD card in PC. ■ Please select the removable disk in the explorer menu.
	<ul style="list-style-type: none"> ■ Folders in the removable disk are displayed like the left picture. ■ “event” folder can be created if over 10% is set as the proportion of the event data saving.
<ul style="list-style-type: none"> ■ Config(System management folder) 	<ul style="list-style-type: none"> - Log.txt: The operating status of the device is to be saved in the log file. - Version.ini: Saving the version information of the device
<ul style="list-style-type: none"> ■ Data(Normal data folder) 	<ul style="list-style-type: none"> - Recorded data is to be saved. According to SD card' capacity, the quantity JDR folder is different and creates the folders in advance to make the room.
<ul style="list-style-type: none"> ■ Event(Event folder) 	<ul style="list-style-type: none"> - Event(over speed, sudden start, sudden stop, emergency, impact, parking, motion) data are to be saved.
<ul style="list-style-type: none"> ■ Update(firmware update folder) 	<ul style="list-style-type: none"> - If the latest firmware is to be saved in the update folder, upgrading the firmware is being automatically proceeding. .



Caution

- Freely deleting and formatting files in SD card are strictly prohibited.
- Please back up the important recorded data in the PC.

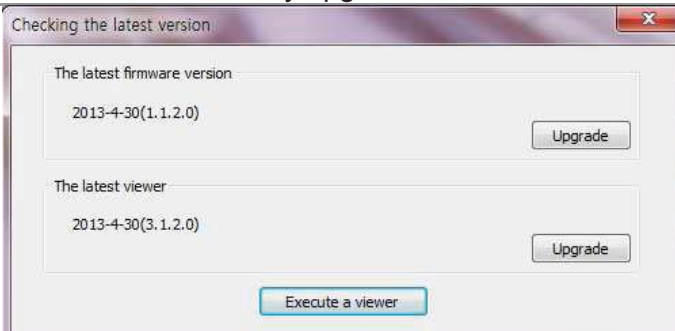
9. How to upgrade the firmware

■ How to manually upgrade the firmware



- ① Please disconnect the power with the device.
- ② Please remove SD card from the device and insert it into PC. Then please copy and paste the downloaded firmware to the “update” folder in SD card.
- ③ Please insert that SD card into the device. At this time, please make sure that the device should be disconnected with the power.
- ④ Start up the vehicle.
- ⑤ After inserting the SD card, please connect the power cable with the device.
- ⑥ On booting, the firmware is to be upgraded with the voice guide and flashing LED.
- ⑦ When upgrading firmware is completed, the device is to reboot then normally operates.

■ How to automatically upgrade the firmware



- ① When the viewer is installed and executed, the menu pops up like the left picture at the first screen.
- ② Connecting the internet and inserting the SD card into PC should be needed for the automatic firmware upgrade.
- ③ If you press “Upgrade” button in “the latest version” menu, the upgrade file is automatically copied into the “update” folder of the SD card.
- ④ The process after ③ is same with the manual upgrading process.

10. Wi-Fi

Setup(F:\config\system.cfg)

System | Event | User Settings | Removable Disk | **WIRELESS** | Version

FTP Server

ID :

Password :

IP Address : 192 . 168 . 0 . 2

WLAN

Network Name(SSID) :

Network Key :

Auth Mode : OPEN

Encryption Type :
 ☒ Unused ☐ TKIP ☐ AES

UPLOAD

☒ Event Only

Start Time : 20 Min.

Load Config Default OK Cancel

- Encryption Type: Choose one among TKIP and AES.

- ① FTP Server
 - ID : No use
 - Password : No use
 - IP Address : IP Address of PC sever to where the image is transferred.
- ② UPLOAD
 - Event Only : When this is checked, only image of event data is to be transferred. If this is not checked, each one image of each data is to be transferred to the PC server.
 - Start Time: The time for transferring of the data after booting.
Not to transfer the data for the period to be set
Because it is regarded that the set Wi-Fi AP is near a
vehicle in the first booting.
- ③ WLAN
 - Network Name (SSID): Set a name of wireless AP to be accessed.
 - Network Key : Set a password of wireless AP
 - Auth Mode : Set a auth mode of AP. Choose one among OPEN, WPAPSK and WPA2PSK.

11. FCC Notice to users

This device complies with Part 15 of the FCC's Rules. Operation is subject to the following two Conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesirable operation.

Any changed or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technical for help.

RF exposure requirement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This device should be installed and operated with minimum distance 20cm between the radiating element of this device and the user.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.