

JAEWONCNC

My Driving Partner

ROAD DRIVING RECORDER

ROAD
IONE-290V

User's Manual

BEBUTTON.COM
ONLINE STORE



Please visit the website(www.navinc.co.kr) to get information of latest firmware and dedicated viewer.
Product specification and function can be changed in order to improve performance of the product without notice.

Read user's manual carefully in order to protect the user's safety and ensure the accurate use of the product.

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Please read this manual carefully before you use the product. This manual contains product description and operating methods

The product specification and function could be changed in order to improve the performance of the product without notice

Warranty and Limitation of Liability

JAEWONCNC Inc. is not liable for any problems caused by violating the statements written in the this manual

- JAEWONCNC is not liable for the product malfunction, loss of data and any damages incurred when using the product
- A consistent care and attention is essential to handle SD card which saves the recorded data
- IROAD IONE-290V is the product developed to utilize recording and saving the images of vehicle accidents or its impact on vehicle. But IONE-290V shall not be liable to record and save every stream of recordings

Precaution

The power supply should use the legal voltage, otherwise it may cause damage of product and fires

- Use the recommended stable voltage otherwise, it can cause malfunction of the product or fires
- Do not arbitrarily disassemble and modify the product, otherwise it might cause damage of the product and the electric shock. It should be considered user's fault and void the warranty
- Make sure that the power cable is not cut or damaged when attaching other electronic gadgets on the vehicle, otherwise it can cause product failure or danger of electric shock
- It is highly recommended not to connect the uninterrupted power cable to vehicle because it can cause malfunction of the product by different conditions of vehicle and surrounding environments (JAEWONCNC is not liable for vehicle battery discharges or fires caused by the uninterrupted power cable)

3. Precaution

SD CARD

Make sure that the power cable should be plugged off and LED should be turned off before inserting or removing the SD memory card in order to check the saved data in the SD card

- Do not disassemble the SD card by force, it can cause the damage to the product
- Do not disconnect the SD card while the product activates, it can cause data corruption and damage of the SD card
- Be advised to keep the SD card with the card case when you keep or move it, otherwise data can be corrupted by static electricity or external power voltage
(Do not use the product at the place under high-temperature humidity and possible corrosion)
- It is highly recommended to store the important data in HDD, CD or other external storage device
- It is highly recommended to check the recorded data at least once a week and do regular format the SD card once a month
- SD card is expendable item which is highly recommended to have regular check and backup. The lifetime of SD card can be shorten by a long time use and it causes the product malfunction and being unable to save any more recording in the SD card

If SD card is to be inserted to the product after format, folders will be automatically created and recorded also

How to remove SD card

IONE-290V will be shutdown in less than 3 minutes by switching off the ignition or disconnecting the power cable from the product

Make sure to follow the order below when you insert or remove the SD card then plug off the power cable from the product

1. Remove SD card

- Switch off the ignition of vehicle
- Make sure that the LED is turned off
- **Remove the SD card when the LED is completely turned off**

(SD card will come out by a light press, removing the SD card by force can cause a damage of the product)

2. Insert SD card

- Insert SD card into the slot on the main unit
- Switch on the ignition after product is connected with cigar power supply

※ Insert or remove SD card when the power cable is disconnected

Safety Instruction

Please make sure follow guidelines below, otherwise it can cause damage of the SD card or fires

※ It is highly recommended to use the SD card which is designated by JAEWONCNC

Make sure to prevent IONE-290V from malfunctioning by staying under the shelter to escape direct light as the internal temperature of vehicle can jump up in summer season

Do not try to control the product while driving. Please make sure to control the product in safe environment

Do not touch the SD card or the product with oily or wet hands

Do not insert impurities into the SD card slot

Do not use water or volatile chemicals when you clean the product but use the soft and dry cloth
If the product is physically damaged or disconnected to power supply, the product cannot record and save data at all

Do not use dark tinting films on the vehicle windscreen and remove impurities, otherwise it can disturb recording and result in degrade recording quality

Check video recordings to ensure if the camera angle is properly adjusted when you change location of the product

Contact your sales representatives or A/S center immediately if there is any product malfunctions

Do not give the product violent forces, otherwise it can cause damage of the product

Even though the product is operated normal at the point of installation, the change of location can cause the product malfunction. Fix the product firmly on the spot and do not give it violent force to change the location of product

Do not use other SD cards rather than those are recognized authentic or recommended SD card. The use of other SD cards can cause the product or the SD card malfunction

Do not disconnect the SD card from the product or ignition off the vehicle during firmware upgrade, otherwise it can cause the SD card malfunction or a serious loss of data

5. Product Features



MOTiON Automatic Motion Detection

The parking mode is changed into the Motion Detection Mode in 20 minutes if no movement is detected by the sensor. Recorded data files are saved in the park directory Recording 10 seconds before and 20 seconds after motion detect This function can be operated with using the uninterrupted power cable



PARKING Automatic Parking Mode

Support efficient saving service with limited memory space. but it is possible to set it manually The impact sensor works when it change into Auto Parking Mode Turn it back to normal recording mode when it gets impact or starts drive again



G-Sensor Built-in 3 dimensional G-sensor

Built-in 3G-Sensor can detect and record impact and acceleration, deceleration(3 Axis, XYZ)



FORMAT One-touch Format function support

Format the SD card by the one-touch format function on the backside of device (Please format the SD card regularly)
Saved video files are overwritten from the oldest recording file



LED Front High Brightness Security LED

The security LED indicator ensures your car is protected whilst parked with the parking mode and motion detecting function enabled



GPS(optional) Speed,Map Support

High quality external GPS records speed and location whenever the device is in progress



SMART Simple Smartphone Playback

Wherever simply check the recordings from smartphone(Android). there are also various ways to check the video file



Uninterrupted Recording and Event Recording

- Continuous Recording : Every 60 seconds recording
- Event Recording : Separately save video recordings in the event folder when it detects



Voice Recording

Playback video recordings and sound at the same time



Firmware Update

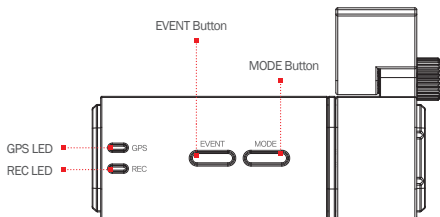
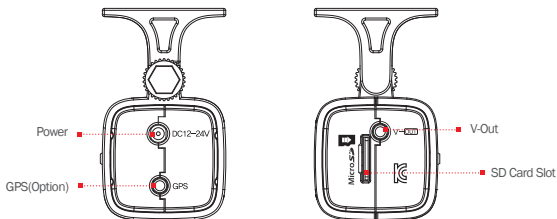
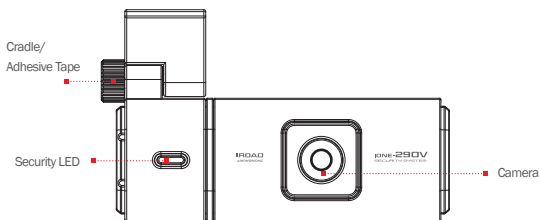
Possibly the performance could be upgraded and changed additional features of product by updating firmware

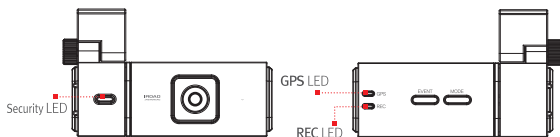


Dedicated PC Viewer

Easily check GPS information and impacted recording at the same screen
It also playbacks on smartphone and 3rd party players (without GPS information)

7. Name of Each Part





		Operation & function	Voice announcement	LED			Note
				Security (B)	REC G	GPS (B)	
Power On				—	—	—	—
Device Booting		Power On	"Please have a safe driving " today, too."	●	●	●	System Check
Power Off		Power Off	Alert Sound	○	○	○	Save Video and Power off
Recording Mode		Constant Recording	—	○	○	●	LED on/ off by GPS built-in
EVENT Button	Event Recording	Automatic or Short press Event button	Alert Sound	○	○	●	—
	SD card format	Long press Event button (4 Sec. or more)	"It starts the initialization of SD card."	●	○	○	Cross flickering between REC LED (→) GPS LED (Auto reboot after format)
MODE Button	MUTE	Short press Mode button	Sound	○	○	●	Set: GPS LED Flickering once Clear: GPS LED flickering twice GPS Reception is activated after flickering
	PARKING MODE (Motion)	Long press Mode button (2 Sec. or more)	Sound	○	○	○	-Auto parking mode is activated if the vehicle is not moved for ten minutes -Long Press Mode button or drive away vehicle
Security		Security	—	○	○	●	—
GPS		Power On	—	○	○	●	②
SD card malfunction or the product malfunction		Alert	You can't use SD card. Please replace it with new one	○	○	○	Audio-visual Alert (Sound, LED flickering)
Firmware Update		③	—	Flickering in order			Power off the device can cause the device malfunction while updating.

① Recording LED : It shows the status of LED . ● Active: On ○ Non-active : Off ○ Flickering

② GPS: The reception may not be good enough if the vehicle is at the area of non-reception area (basement garage, tunnel and highway) or under the bad weather or the electromagnetic interference from other electronic devices inside vehicle or different types of vehicle.

③ F/W update: It is possible to upgrade firmware with copying it to the SD card and inserting the SD Card to the product

▶ The function related to the product operation can be changed without prior notice in order to improve the performance of the product.

9. Product Package

Basic Component



Main Unit and Mount Cradle



MicroSD Card



Cigar Power Cable
(12V~24V)



Manual

Optional Accessories



External GPS



Dedicated uninterrupted
Power Cable



SD Card Reader



AV Cable

- ※ Apart from the Main unit, MicroSD, SD card reader are contained that JAEWONCNC is not liable for After-Service (SD card and Micro SD card Reader could be exchanged within 14days of purchase in case of malfunctioning)
- ※ The images of components can be different from the real and some of components can be changed by the situation of company

11. Specification

Resolution	640 X 480 (VGA)
Video Frames	20~30 Frame/sec (VFR)
Video Format	MPEG4
Support Memory	Micro SD 4GB~32GB(Class 4 or higher)
Recording Time	Event 30 seconds(Impact before 10 sec/ after 20sec) /Continuous variable format rate recording
Buttons	EVENT(Manual recording/SD format), MODE(Mute/Parking)
Video Angle	View angle 130°
Acceleration Sensor	3 Axis acceleration sensor (X,Y,Z)
GPS	Location, Time, Speed
Voice Record	Voice Recording(ON/OFF)/MUTE
Recording	Normal, Manual, Event, Parking, Motion Detect
Saving	Over Writing
Time	Built-in RTC
LED	Security LED(High Intensity)
Video Out	NTSC
Time Stamp	Date, Hour, Minutes, Second
Video Remove	PC or Automatic
Voltage	12 ~24V
Power Consumption	12V(120mAh)
Operating Temp	-15 ~ 80 degrees
Storage Temp	-20 ~ 85 degrees
Illumination	Obove 0.5 LUX
OS Support	Microsoft Windows XP, VISTA, 7, 8
Player	Dedicated Viewer, Third-Party Media Player
SD Format	Built-in Format function
Motion Sensor	Automatically get into parking mode
Battery	Built-in Lithium
SIZE	86 x 32 x 32 (mm)

A/V OUT

Watch the real-time recording video by connecting with external device

The size of AV input port could be different by different models of navigation system



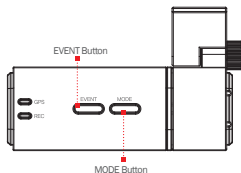
Simple Buttons

EVENT (EVENT / SD Card Format)

- Short press the "EVENT" button that records manually as event happened
- Press "EVENT" button over 5 seconds long that starts quick format the SD card (There will be voice guidance)

MODE (MUTE / PARKING)

- Short press the "MODE" button that starts audio recording to MUTE
- Press "MODE" button over 5 seconds long, PARKING mode is activated



13. Storage / Capacity

Connect the microSD Card which saves the recorded Video files into Smart Phone or PC.

• There are three different folders and the explanations for each folder follow as below

 EVENT (Impact)	 INFINITE (Constant)	 PARKING
20% of micro SD card space and overwrites at over-capacity	70% of micro SD card space and overwrites at over-capacity	10% of micro SD card and overwrites at over-capacity.

© Video Recording Length on each Micro SD Card



60 seconds



60 seconds



120 seconds



240 seconds

© Micro SD Card Capacity

- Time to use the memory card might be changed by firmware upgrade



3hours
~ 3hours 20mins



6hours
~ 6hours 30mins



13hours
~ 13hours 20mins



26hours
~ 26hours 40mins

□ The maximum capacity might be different by the difference of the user's environment

□ Above 8G ~32G class 10 SD card is recommended

□ Battery discharge prevention device can make the lifetime of SD Card shorten, Please periodically change the SD Card every 3 Months



The right way to maintain SD Card

prevent errors on the SD Card, it's also the way to use SD Card longer

1. Format SD Card regularly

By the particular feature of SD Memory,

It highly recommend to format regularly per every 1 week in order to prevent memory errors and it makes the lifetime of SD Card longer

Simply format SD Card when you press "EVENT" button of the backside of product for 5 seconds

2. Check recordings regularly

Please confirm and backup the recorded files regularly, it might be able to happen loss of important data by rewriting function

3. Upgrade latest firmware

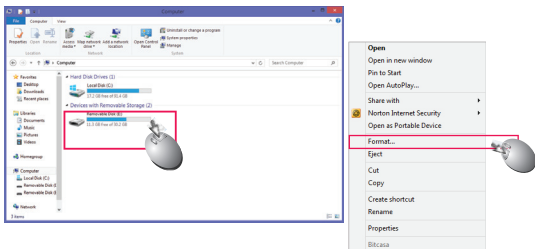
Please maintain latest firmware to confirm regularly, it will prevent possible memory errors

15. SD Card Format

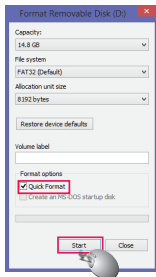
1. Double - click “My computer”



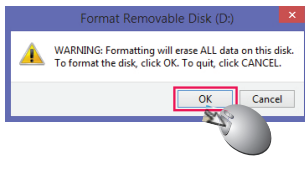
2. Click the right button on the mouse at “Removable Media Device”
Click the left button on the mouse at “Format” of menu bar when the menu bar pops up.



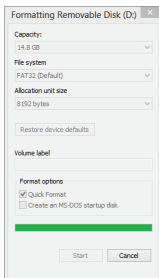
3. Format Window pops up as shown in the picture below. Select “Quick format” and Click the left button of your mouse at “Start” button.



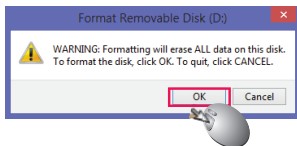
4. Click “Confirm” button when Warning Window pops up.



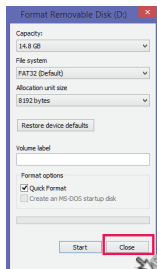
5. Do not click the “Cancel” button but wait until format is completed when green bar is in progress.



6. Click “OK” button when “Format complete” comes up.



7. Click “Close” button in the status bar



8. Format is completed

17. Third-Party Video Player

☐ Player and Codec installation

Visit GOM player or VLC player download website, you can free download

- GOM Player download : <http://player.gomlab.com/eng/download>

- VLC Player download : <http://www.videolan.org/vlc/index.html>

GOM PLAYER GOM Player download : <http://player.gomlab.com/eng/download>

GOM Media Player

The only media player you need - for FREE!

Not only is GOM Media Player a completely FREE video player, with its built-in support for all the most popular video and audio formats, tons of advanced features, extreme customizability, and the Codec Finder service, GOM Media Player is sure to fulfill all of your playback needs. With millions of users in hundreds of countries, GOM Media Player is one of the world's most popular video players.



Like 7.2k Send 225



VLC PLAYER VLC Player download : <http://www.videolan.org/vlc/index.html>



VLC media player

VLC is a free and open source cross-platform multimedia player and framework that plays most multimedia files as well as DVD, Audio CD, VCD, and various streaming protocols.

[Features](#) [Screenshots](#) [Skins](#)



Download VLC

Version 2.0.8 • Windows • 22 MB

[Other Systems](#)

※ You might need to download integrated codec after installing video player

※ You can also playback with other video player like Quick time Player

Smartphone Playback

Easy playback the recorded files on the SD card with smartphone or various digital media devices



One-Touch Format

Easy format the SD card by the one-touch format function without remove SD card from the device

- Press "EVENT" button for about 4 seconds long, it starts easy format function manually

※ If the format function starts, it will be removed all of recorded data. Please carefully run this function

Motion Detect Sensor

The impact sensor works if there is any movement. The device works same as detect a impact in normal recording mode

- Press "MODE" button for about 2 seconds long, it changes into Parking mode manually
(It automatically change into automatic parking mode in 20 minutes while parking)

19. Dedicated Viewer

PLAYBACK



(1) Map On/Off, Screen Capture, Print, Video Convert, Setting, Program Information, Minimize, Exit

(2) Folder : Select the path Where video data recorded

(3) Recording order : Ascending or Descending

(4) Recording list : List up recording files

(5) Memo function : Create new memo and update
(This function is only activated while playback)

(6) Speedmeter : Display driving speed

(7) Click (1) setting  menu : Impact sensor, Parking mode sensitivity, Voice recording On/Off, Effect sound On/Off, Security Flickering interval, Factory initialization

(8) Impact trend graph : Green - Speed graph, RED - Impact graph

(9) Volume : Adjust volume / Mute

PLAYBACK

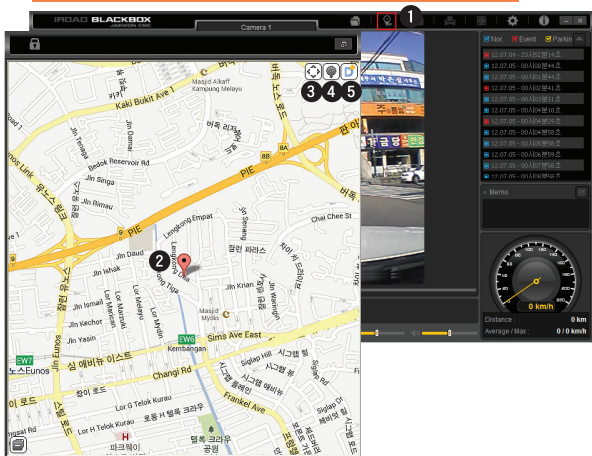


Previous/Previous bookmark/5 Seconds back/Play or Pause/5 Seconds forward/Next bookmark/Next

- (1) Playback Speed : [-] Slow/ [1X] Normal/ [+] Fast
- (2) Playback Searching Bar : Display playback section mark
- (3) Bookmark : Set or Delete bookmark
- (4) Playback Control Panel :
 - Previous : Playback the previous recording from the recording list
 - Previous bookmark : Go to previous bookmark if there is previous bookmark
 - 5 Seconds back : Go to 5 seconds back from current playback time
 - Playback/Pause : Playback video / Pause - Using "space bar" is the same function
 - 5 Seconds forward : Go to 5 seconds forward from current playback time
 - Next bookmark : Go to next bookmark if there is next bookmark
 - Next : Playback next recording from the recording list
- (5) Play / Total time : Current playback time / Total playback time
- (6) Recording Name : Name of current video file

21. Dedicated Viewer

PLAY Function



<Activate MAP>

- (1) The map appears when you click this  icon
- (2) The location is displayed on the map
- (3) Map scroll On/Off
- (4) Normal/Satellite map switching
- (5) Map screen:[+]Enlargement / [-]Reduction

The map is appeared only if there is the stable internet connection

The map service is available when you purchase optional GPS device

Product Warranty Card

- Product : JAEWONCNC IROAD IONE-900HD
- Serial No. :
- Date of Purchase :
- Customer : ()
- Dealer (Market) : ()

Thank you for purchasing IROAD IONE-900HD, Vehicle Black-box.

JAEWONCNC warrants the product to be free from defects in materials and workmanship pursuant to terms and conditions of consumer injury compensation rules as follows.

- Be advised to contact with the agent or sales representative when you find any defects of your product.
- JAEWONCNC warrants the product to be free from defects in materials and workmanship for one (1) year from the date of original purchase.
- The foregoing warranties shall not apply with respect to product subjected to misuse, over-voltage, and natural disaster such as accident or damages by circumstances beyond human control.
- Return and replacement will be made within 14 days from product delivery.
- If you want your product to be returned,
You are required to return the product to the store you purchased with original packaging without breaking a seal on your product.
- Customer will be responsible for delivery charges for shipping and handling the product to return. (Except for the product to be returned for defects)
- The foregoing warranties will be void with respect to products subjected to change of the use other than the sole use for the vehicle which is originally intended and sold for.

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Certified as suitable for using with requirement of electromagnetic wave



1. Product(Product No.): Vehicle Black-box(IONE-290V)
2. Certification No. : KCC-REM-L1R-IONE-290V
3. Name of the certified entity: JAEWONCNC Co. Inc.
4. Certified date : September 2012
5. Manufacturer/Country: JAEWONCNC Co. Inc/ Republic of Korea

A-Class Device
(Business use for broadcasting
and telecommunication Device)

Seller or user need to be noted that this device has been officially registered as passed the suitability test for the requirement of electromagnetic wave and should be used at the areas other than home.

JAEWONCNC IROAD

QUALIFIED VIDEO RECORDER OF VEHICLES

BEBUTTON.COM
ONLINE STORE

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www.navinc.co.kr / www.jaewoncnc.co.kr