

CAMOS

4CH DRIVING VIDEO RECORDER

Instruction Manual

DR-400N

**Thank you for purchasing this product.
For correct usages and application,
please read this instruction manual thoroughly.**



ver. 1.0 PRINTED IN KOREA

* Design and Specifications are subject to change without notice.



CONTENTS

SAFEGUARD INSTRUCTIONS	3
PRODUCT FEATURE	6
COMPONENTS	6
PARTS	7
INSTALL IN YOUR CAR	8
PRODUCT OPERATION	10
- Power ON/OFF	10
- FIRM WARE UPDATE	11
- Event Recording	11
- Abnormal Operation Check	11
- LED Description	12
PC VIEWER MANAGER	13
- Installation & Execution of PC VIEWER MANAGER	13
- Interface	14
- How to play video	16
- Menu	18
- Configuration	19
SPECIFICATION	21
CHECK POINT BEFORE SERVICE REQUEST	22



SAFEGUARD INSTRUCTIONS

Please read the "Safety Rules" carefully before using this product. Following the safety rules prevents users from damages related with the misuse of the product. It is very important to follow these safety rules. We state "Caution" and "Warning" to clarify any potential risk for a damage associated with the misuse of the product.



NOTICE

This information is for user's reference for better usability.



CAUTION

This information is for preventing damage or shorten the life time of the products.



WARNING

This information is for preventing bodily harm or even death and use should follow this safety rules.

NOTICE

Please be sure to comply with below instruction if it is used the purchased storage media separately. If the product is not used below instruction, the reorganization of HDD or recording can not work.



It is limited to recognize the storage media directly on PC for safety.

Please equipped the HDD/SSD on the product at first use so that they can be changed to the recognized state.



HDD/SSDs which is used for DR-400 has different specifications with each manufacturers. So, we recommend to use enclosed HDD/SSD from factory for better compatibility.

- If there are some faults as use un-recommended HDD/SSDs, we do not guarantee the fault and some repair costs will be demanded.



Please check for seamless use whether the product is working well or not at least once per month. Please send the product to manufacturer if there is some missing list even the product is working well.

- If the disk is connected to the product, the video would be overwrite. So, image restoration may not be possible.
















The format is just for the undeclared/unselected recorded video in file list unlike normal format for PC and the video before formatting is not visible but remain in the disk. So, the video file is represented on the file list but, it can be showed previous videos by using playback bar located in bottom part of PC viewer. This is not the fault but just the nature of system and it is used for restoration of the deleted file from mistake or arbitrarily deleted video file through exporting.



The time to save the recorded video can be different from used capacity of HDD/SSD, used camera quantity, FPS setting value and recording quality (High/Middle/Low).




















WARNING

-  Please do not install the product where has lots of vibration or not fixed securely. - It may cause traffic accident and injury due to an interruption from detaching the product by vibration during driving.
-  Please avoid wiring of connected codes from high fever.
- It may cause electric shock and fire from melting of covering for codes.
-  Do not place near of air bag effective range.
- It may cause malfunction of air bag or accident, injury due to hitting monitor by air bag.
-  Please confirm the caution according to a kind of vehicle if the vehicle has an air bag.
- It may cause malfunction of air bag if it installed and wired at the wrong place.
-  Keep clean dust on power socket.
- It may cause electronic shock and fire by bad connection.
-  Do not put a pin or needle on the hole or crack in the body.
- In case of inserting them, stop to operate, it may cause electronic shock, fire and malfunction.
-  Do not use in problem condition as like smoking, smell something burn.
- It may cause fire. Stop to use and make inquiries to agency.
-  Should install while power off. (After install products, connect DC jack)
- It may cause to electronic shock or malfunction.
-  Do not operate the product while driving.
- It may cause an accident. Stop in a safe place and operate.
-  Do not put the product in place where sudden temperature increasing and should use on optimum voltage, temperature and humidity. - It may cause to electronic shock or malfunction.
-  Do not pull cord with a jerk, should catch a plug and pull. Do not use damaged cord.
- It may cause cord malfunction, electronic shock and fire.
-  Do not clean exterior with alcohol, volatility or oily solvent. Neither keep touching rubber and plastic for long time.
- It may cause change of surface, fall of paint, malfunction and fire.
-  Please use the USB cable at 2 USB ports together when checking the data.
- If only one USB port is used, the power may not be supplied well and the hard disk could not be read.



Please prevent the loss of power during update.
If the power is lost during update, the product may not be working.

CAUTION

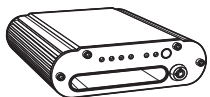
-  Do not shock to the product.
- It may cause damage or malfunction for product.
-  Do not place near magnet.
- It may cause malfunction and trouble.
-  Keep the internal GPS without any obstacle near of it like high pass, navigation.
- It may cause problem on GPS signal receipt rate.
-  GPS function needs loading time when it power on.
- It needs from few seconds to minutes depending on signal receipt environment.
-  The vehicle which has metallic tinting on front window could be caused poor GPS reception.
-  Please careful do not interfere with electric wiring when product is installed in the upper part of dash-board.
- It may cause ignition from a bundle of electric wiring and it makes product damaged.
-  Please use only the specified components.
- If it is used with non-specified components, it'll be caused an accident or breakdown of the product because it damaged the components inside of product or is not fixed properly.
-  After wiring for the codes, please move it to the location where is not interrupted of driving and coil the codes with friction tape and fix it by clamp.
- It may cause electric shock or fire as the codes are contacted with the part of car frame.
- It may cause traffic accident if the steering or selector or brake pedal is twined.
-  Please wire the codes without the contact with moving parts such as seat rail, screw parts and car frame.
- It may cause electric shock and fire by disconnection of short circuit.
-  After installation and wiring, please make sure that Brake, Light, Horn, Etc. are operated properly.
- It may cause electric shock and fire, if the product used as above functions are not operated properly.
-  In case of suddenly changing of brightness such as tunnel enter/exit or extremely dark place, the recording quality may be low.
-  When you drive dark place, recommend you to turn on the headlight (fog light) to record with high quality.
-  When install ordinary power cable, should contact to a specialty store. (The place of fuse box is varying depending on each car manufacturer. Please check the car manual before installation)
-  To safe usage on battery, please disassemble ordinary power cable when you do not drive for a long time (over 3 days). We recommend disassemble to safe driving even though this cable contains a function for preventing battery dead.
-  Do not disassemble, repair and remodeling.
- It may cause malfunction and injury, can not get warranty. Make inquiries to agent for repair and checkup.
-  Please install the product at a level with HDD.
- If the product installed as standing, HDD cannot be read and be recorded.
-  When the HDD is used for product, please install the product horizontally. It could not be recorded the video if the product is installed to upright or tiled considering of the nature of Hard disk.
-  Please use Hard disk for only DVR recording. - If the HDD/SSD is used as normal exterior hard disk to state of NTFS or FAT32 format, there can be serious problem on hard disk or recorded video is broken
-  The viewer does not run properly when the sound driver is not installed on user's PC or forced to off the sound device. (Sound GUI disabled state). - Please re-run the viewer after confirming that the sound device is working properly when there is the message "Sound device open error" twice.

1 PRODUCT FEATURE

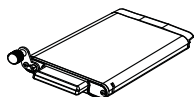
- AUTO RECORDING (DIRIVING, ACCIDENT, ETC..)
- H.264
- PC VIEWER MANAGER
- 4 TRIGGERS
- UP TO 1TB HDD OR SSD SUPPORT
- LOCK SYSTEM FOR HDD OR SSD (2.5" HDD OR SSD)
- EXTERNAL MIC.
- BEEP SOUND (EVENT RECORDING, FIRM WARE UPDATE & ETC.)
- Integrated 3G-Sensor
- Trace of trajectory interlocked with map
- Emergency battery equipped (with Super capacitor)
- FREE VOLTAGE (DC 12 ~ 24V, Max 32V)

2 COMPONENTS

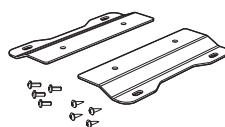
* If the body and parts mentioned below are not included when you purchase this product, contact the shop where you purchased the product.



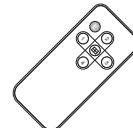
DVR body
(including the Key)



MEMORY case



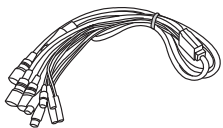
Bracket set



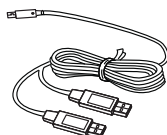
Remote controller
(optional)



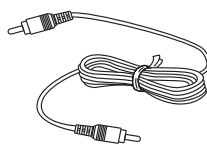
Remote Controller
Receiver



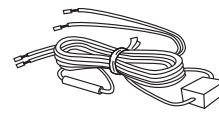
Cable
(Water proof type)



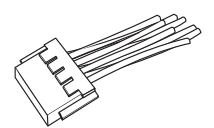
USB
download cable



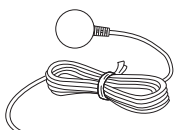
Video output cable
(optional)



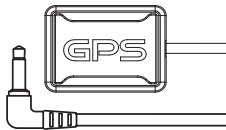
Ordinary power cable
(optional)



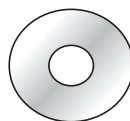
Ext. sensor cable
(optional)



MIC. (optional)



GPS antenna
(optional)



PCVIEWER
install CD



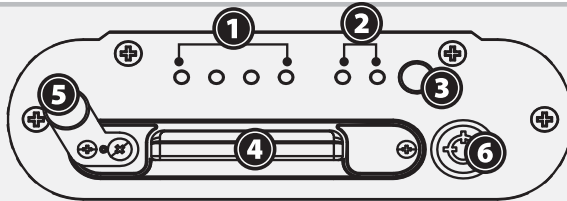
Instruction
Manual

* The shape of each component may be changed without notice for the better quality.

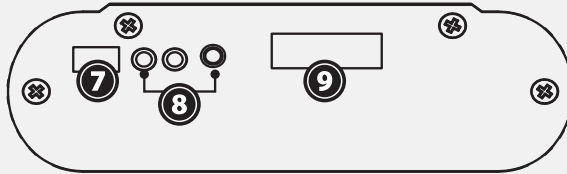
3 PARTS

DR-400N

Front of DVR body

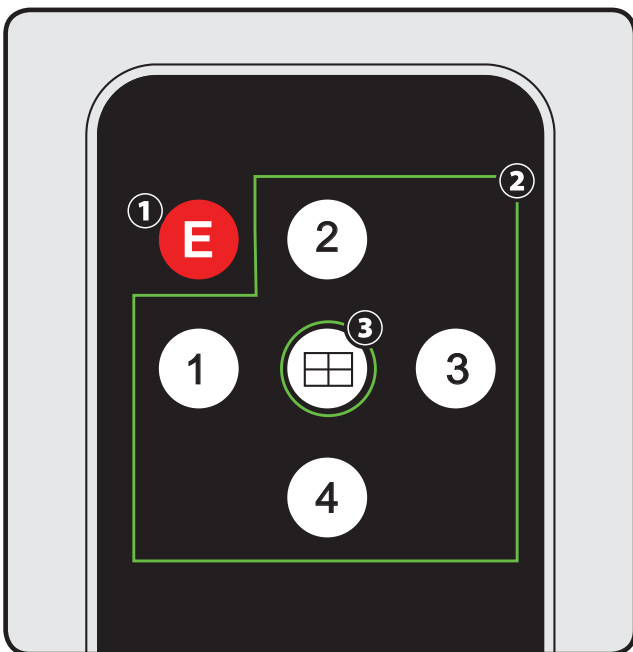


Back of DVR body



- 1. Camera Operation LED
- 2. Recording LED
- 3. Remote Controller Sensor
- 4. Hard Case
- 5. CASE LOCK
- 6. MEMORY LOCK
- 7. TRIGGER
- 8. MIC / GPS / REMOTE CONTROLLER
- 9. POWER CABLE

REMOTE CONTROLLER



- 1. EMERGENCY RECORDING
- About 30seconds Recording
- 2. Video Switch of Cam 1, 2, 3, 4 (Single Screen)
- 3. Split Screen Mode

“Event recording file saves in MANUAL Folder from recording of remote controller.”

4

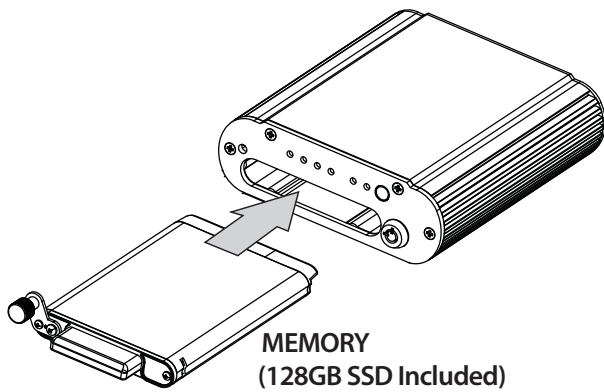
INSTALL IN YOUR VEHICLE



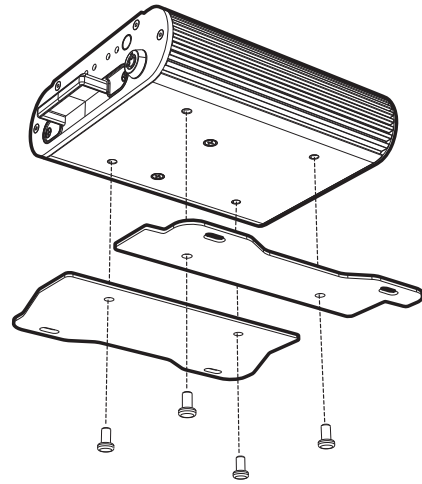
Please check the following points prior to installation:

- Turn off the product before installation, and install the product with the ignition key removed.
- Do not use any other cables; only use the supplied cables.
- If the vehicle has a tinted or heated screen the GPS receiver rate may be 'poor' & an external GPS antenna may be required (initially try mounting the antenna near a side window etc)

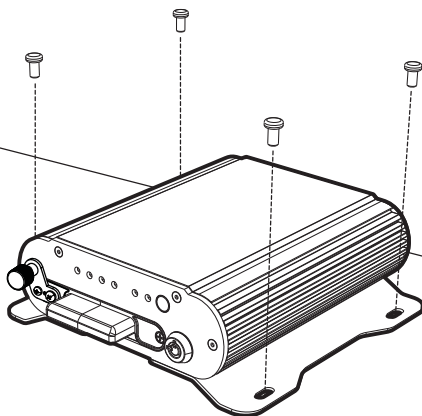
1 Insert and installation of memory to the MEMORY case



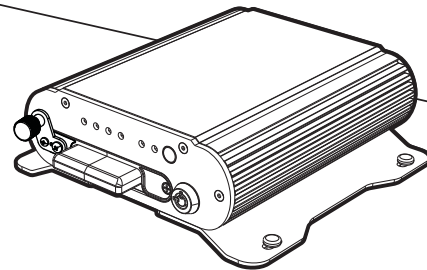
2



3

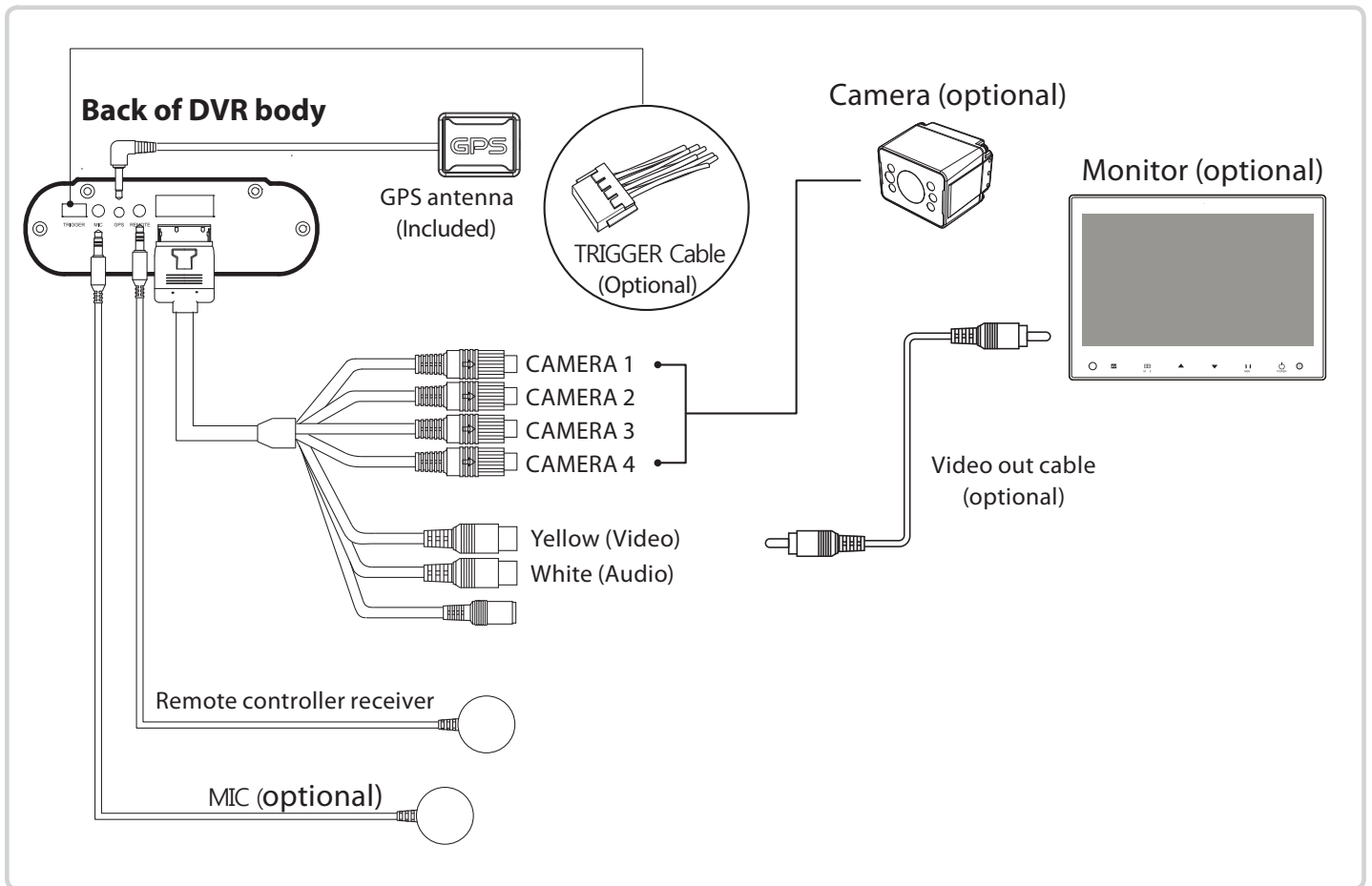


4



- Please install the product horizontally.

CABLE CONNECTION



Connection with GPS antenna (optional)

When connected to the GPS antenna driving route, speed, time, direction and location information is also recorded.

* Recommended position of Installation



Position GPS antenna does not overlap the tinting section.



Install with the "GPS" logo facing upwards.



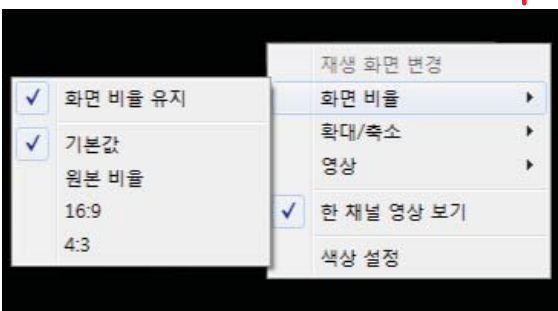
The GPS signal receipt could be reduced by tinting or windscreen coating material or heating elements. It is not a product fault and is caused by the metal components. In this case the antenna should be installed outside or on a side window etc.

3. ③ Please double click the file for playing video.

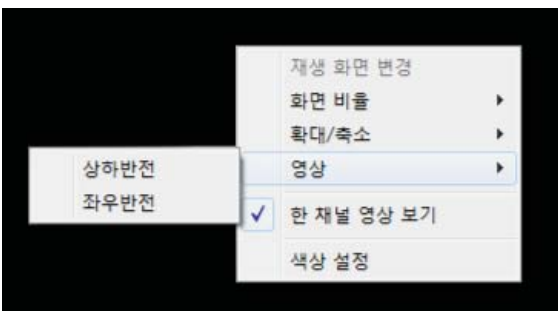


Menu

1. Click the right button of mouse at screen, following menu will be shown.



Changing the playback screen : Playback screen changes as left and right.
Screen ratio : Control recording data screen's ratio.



Video : It turns around upside and downside
/ I turns around left and right
1CH video : Video is displayed as full size.

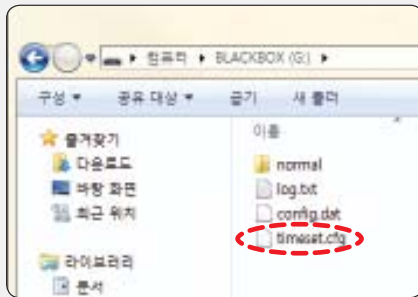
Configuration



- | | |
|-----------------------------------|--|
| 1. Speed Indicator Unit | Selects the speed indicator unit of GPS information. (km/h, MPH) |
| 2. Recording Quality | Sets the recording quality. (High-Definition / Standard) |
| 3. G-sensor Sensitivity | Set G-sensor Sensitivity (5steps : 1(Low) - 5(High)) |
| 4. Overspeed | If speed goes beyond the setting speed, the file saves as event file. |
| 5. Time setting | Set present time. (If press sync button, set the present time from PC.) |
| 6. Time zone | Select time zone of the country is being used. |
| 7. Summer Time Apply | Applies summer time. |
| 8. User's password setting | Input User's password. |
| 9. User Car Number Setting | Set the user car number, and it is viewed in the screen at recording |
| 10. Version | Show viewer and firmware's version. |
| 11. Memory format | Format all recording list in memory. |
| 12. Initialize | Initializes the whole setting. (factory defaults) |
| 13. Setting Saving | Saves the changed set value. (Without connection of memory, save as user's setting value at PC.) |



The time information which is saved by checking "time adjustment" could be differ with rear time because it adjust the time since device operates with memory which has setting value from viewer. And RTC time could be delayed than standard time depending on time out.



“Timeset.cfg” file will be created after checking time setting and saving the value. This means time setting is correctly set. Please check this status before device operation.

7 SPECIFICATION

DR-400N

Video signal	Input	4 Channel input
	Output	1 Output
Audio signal		1 Input
Recording	Resolution	Full HD 1920 x 1080 or 960H (960 x 480)
	Frame	30fps
	Mode	normal / Event (G-sensor)
Compression		H.264/AVI
Memory		SSD (Min.128GB ~ max.1TB)
Power supply		DC 12~24V (with super cap) @max.32V
Operating temperature		-10°C ~ 60°C
Storage temperature		-30°C ~ 70°C
Dimension (W/D/H)		151 x 130 x 23.1 mm
Weight		586g



CHECK POINT BEFORE SERVICE REQUEST

* You can solve some problems as below with simple check. If you still have a problem though you try as below instruction, please contact to service center or store that you purchased.

Q Recording LED is not operating even power is on.

**A - The key should be locked after inserting hard case with memory.
- If recording LED is not operating even case and others are all correct, please check or replace power cable.**

Q Device is rebooting continuously.

A - Please check memory is connecting with device correctly. Hard case should be inserted at the end of device and lock the case correctly.

Q Power is gone during updating. After this, device is not working.

**A - Please send the device to purchasing office. There is no way to solve the problem at user's side.
-Device must keep the power during updating.**

Q Can memory which was used for PC be connected with device?

A - Yes. But, please use the memory after formatting. If there are other remaining data on memory, it may cause of some faults.

Q Recording data is not showing on viewer.

A -There is operating recognized LED at the right of USB terminal on disk. The red LED should be flickering if memory is recognized correctly. Please connect and use 2 USB cables with PC.

Q Forget file or viewer's password.

A - Please delete "config.dat" file on memory

Q Event recording by vibration is strange.

A - Please check and re-set 3G sensor value. The higher the value, the event recording will occur even small vibration.

