

AUTO CAPSULE
AN2

User Guide ver 1.0EN

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- + All rights to this program are reserved by COWON SYSTEMS Inc. and protected under copyright laws.
- + This manual is based on the specifications of the product available at the point of publishing it. Note that the sample sentences, charts, pictures given as an example, detailed functions of a product, specifications of H/W and S/W recorded in this manual are subject to change without notice.

Precautions

This device is for recording the driving image of cars. Recording may fail depending on given situations. The videos recorded with this product can only be used as a reference to examining the driving image.

- + This manual is based on the product available at the point of publishing it. It thus may contain errors or omissions in its technical editing.
- + Always back up any important video files.
- + COWON SYSTEMS, Inc. shall not be held accountable for any data loss, poor recording or recording errors.

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Before You Start

+ Product Overview

Full HD + HD front/rear recording

+ 16:9 Wide Full HD (front) and HD (rear) resolution high-quality video recording.

LDWS(Lane Departure Warning System) ¹⁾

+ LDWS(Lane Departure Warning System) assists in safe driving by giving a warning when the vehicle leaves its lane.

Format free TAT (Time Allocation Table) safe writing

+ It saves video in the SD card in real time and secures storage of video with format free TAT even when the power goes off.

Multiple recoding options and easy search

+ There are multiple options for driving-mode and parking-mode recordings, and recorded videos can easily be searched by category of event or motion file.

Built-in G sensor

+ This detects the external impact via the 3-axis acceleration sensor for auto recording.

Built-in motion sensor

+ This detects motion during parking mode recording and starts recording automatically.

Built-in backup supercapacitor

+ The last recorded file is safely saved thanks to a built-in supercapacitor, even with unexpected power outage.

1) Available under external GPS connection

Before You Start

+ Product Overview

Multiple indicators for smooth operation

+ Operational status of Auto Capsule is easy to monitor through voice messages, sound effects, and LED indicators.

PC Manager

+ With the PC Manager, you can manage and capture recorded videos and examine the intensity of an impact on the G sensor.

Automatic parking mode recording ²⁾

+ Automatically senses parking voltage and initiates parking mode recording.

Auto shutdown voltage set-up option

+ If the vehicle battery power falls below a pre-set voltage, this automatically turns off the device.

Protection from high temperature

+ It stops recording when the temperature exceeds a certain level to protect itself.

Connection with external GPS

+ When connected with an external GPS receiver, vehicle location and speed information are recorded and can be checked later via the PC Manager.

2) Available only under uninterrupted power connection

+ Safety Precautions

This section regards precautions to prevent users from compromising safety or experiencing property damage. Please read the followings carefully before use. (Company has nothing whatever to do with any accident caused by a user who failed to conform to warning and precautions.)

- + Changing the installation location of the product may result in a change in the camera angle. Adjust the camera angle after installing the product and test the recorded images. Normal recording cannot be guaranteed if the product is wrongly installed.
- + Recording video is not available when this product is being booted. Drive safely after booting is completed.
- + This product is a device that uses a camera to record video as you drive, therefore, the quality of the recorded videos may deteriorate when taken at the point of entering/exiting a tunnel, when the shadow contrast and counter light to the subject are severe in broad daylight, or when there is no light.
- + Avoid excessive car window tinting. It deteriorates the recording quality. The white balance of the video may vary depending on the degree of tinting.
- + In the event a product is damaged or disconnected from power due to a critical and impactful accident, the product may not work and fail to record the accident.
- + Do not disassemble or alter the product at your discretion. It may cause electric shock, product damage or loss of recorded data.
- + Always keep the front window clean and free from dust before recording to guarantee the most optimal recording quality.
- + Foreign matters (e.g. fingerprints) on the lens of the black box may adversely affect the recorded videos. Always keep the lens clean and free from dusts.
- + Avoid inserting metals or flammables into the microSD card slot. It may cause a fire or electric shock.
- + If liquid spills onto the product, disconnect the power immediately and contact the customer center.

+ Safety Precautions

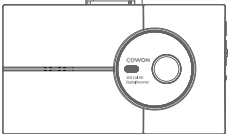









- + Refrain from operating the product while driving. It may cause a car accident.
- + Do not use voltage other than the rated voltage specified by the product. It may cause an explosion, fire or mechanical failure.
- + Do not use the product in a place where there is flammable or explosive gas. Otherwise, ignition or explosion may ensue.
- + Keep the product away from the reach of babies, children, or pets.
- + Avoid high temperatures such as inside the closed car under hot weather or a place with direct sunlight. It may adversely affect the exterior or internal parts of the product, causing a fire.
- + Use caution not to apply too much strength to the lens and the exterior of the black box, or a mechanical failure may ensue.
- + Install the product in an area that doesn't disrupt a driver's visibility. Otherwise, it may cause an accident.
- + If you use the product for a long time, it heats up inside. So use caution not to get burned by touching it. Avoid touching the metal area when removing the microSD card after using the product for long hours.
- + Do not cover the black box with a cloth or other type of cover. It may contain the heat inside the product, resulting in an exterior deformation or a fire.
- + Do not spray water or wax directly onto the product when cleaning the inside of a car. It may cause mechanical failure or electric shock.
- + Always use the genuine products and parts from COWON SYSTEMS Inc. COWON SYSTEMS Inc. shall not be held accountable whatsoever for failures or accidents caused by using the product and parts from other sources.
- + In accordance with the Personal Information Protection Act and other relevant regulations, users are held liable for data stored using the product's video/audio recording features. You are advised to take due precaution in storing recorded data.
- + Memory card is an expendable item which needs to be periodically examined and changed. Use a COWON-authorized memory card.

+ Safety Precautions

- + If storage space on the memory card is insufficient, previously-recorded files can be deleted in a pre-set order. You can also transfer important recorded files can be transferred for safe-keeping on a separate storage device.
- + The backup supercapacitor is an expendable item, and its lifespan can be affected by the environment around it. Replace it with a new one when operation becomes unstable.
- + Do not wipe the product with chemical substances or detergent. Wipe the product gently with a soft cloth.
- + If you don't intend to use the product for a long while, unplug the power cable of the product. Otherwise, it may cause electric discharge of a car battery or fire. A user shall be held accountable for the product damage or car breakdown.
- + Do not use wet hands when plugging/unplugging the cigar jack cable. It may cause an electric shock.
- + Plug in the power cord completely with no looseness. Otherwise, it may cause a fire.
- + Do not use the damaged cigar jack cable. It may cause a fire or an electric shock.

Before You Start

+ Package Components

				
Auto Capsule AN2		Rear View Camera	Product Holder (Front)	
				
CD (Manual & PC Manager), Quick Guide				
	Double-Coated Tape	Cigar Jack Cable*	Uninterruptible Power Cable (Optional)	External GPS Receiver (Optional)

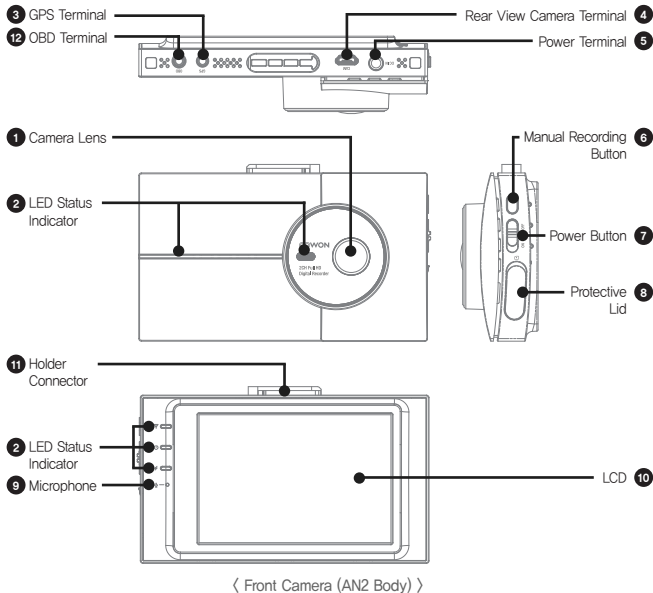
+ Note that the included items may vary according to the product specifications and may look different from the images provided in the manual.

+ Always use the genuine cables from COWON SYSTEMS, Inc.

* Cigar jack cable provided does not support Battery Discharge (by time and voltage setting) as well as Parking Recording. Uninterruptible power cable may be purchased for Parking Recording. Connection of the cigar jack cable to an uninterrupted cigar jack power supply will drain battery. Ensure that the cigar jack power is off when the ignition is turned off.

Before You Start

+ Names of Parts and Functions



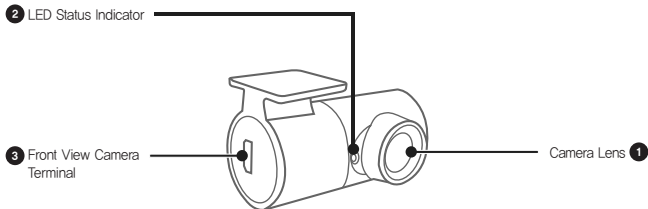
+ Names of Parts and Functions

① Camera Lens	Records the front direction of a vehicle.
② LED Status Indicator	Displays the operational status of the device.
③ GPS Terminal	Connects with external GPS.
④ Rear View Camera Terminal	Connects with rear view camera. ¹⁾
⑤ Power Terminal	Connects with cigar jack cable or with uninterruptible power cable.
⑥ Manual Recording Button	Press this button to manually record a total of 20 seconds. (10 seconds before and 10 seconds after pressing the button)
⑦ Power Button	Power On/Off and starts recording.
⑧ Protective Lid	Protects memory card inside the memory card slot.
⑨ Microphone	Record voice using a built-in microphone.
⑩ LCD	LCD shows video being recorded or menu with which users can operate the black box.
⑪ Holder Connector	Connects with the product holder.
⑫ OBD Terminal	This feature(OBD2) is not supported due to a country-specific structural difference in vehicle production.

1) This terminal is designed to fit the rear view camera only; it is not compatible with other devices.

Before You Start

+ Names of Parts and Functions



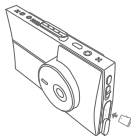
< Rear View Camera >

① Camera Lens	Records the rear direction of a vehicle.
② LED Status Indicator	Displays the operational status of the device.
③ Front View Camera Terminal	Connects with Front View Camera.

Before You Start

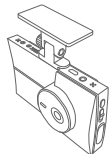
+ Installation

STEP 1



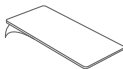
Insert the memory card into the device.

STEP 2



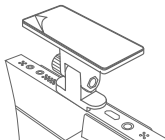
Place the AN2 in the device holder.

STEP 3



Remove the release paper from one side of the double-coated tape.

STEP 4



Attach the side that removes release paper onto the holder and remove the release paper on the other side.

STEP 5



Choose the location where you want to attach the device to the vehicle. Wipe any foreign matter or moisture completely from the location before installing the device.

STEP 6



Adjust the direction of the camera lens.

TIP

Use a coin to fasten the bolt on the hold to fix the product in place

+ A space behind the rearview mirror is recommended for installation.

+ Select a location carefully as repositioning the device after removing may weaken adhesiveness significantly. Double-check the chosen location before fixing the device.

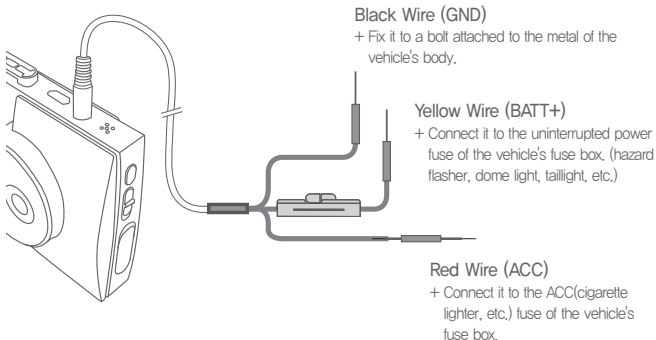
+ Adjust the camera lens so that about 10–20% of your vehicle's hood appears on the recording screen.

Before You Start

+ Connecting Uninterruptible Power Cable

When connected with uninterruptible power cable, recording continues even when the vehicle is parked and the engine is turned off.

- + Make sure you fully understand how to set up uninterruptible power connection before connecting the device.
- + Each wire must be fixed to a specific dedicated location, otherwise inverse voltage can occur, seriously damaging the device.

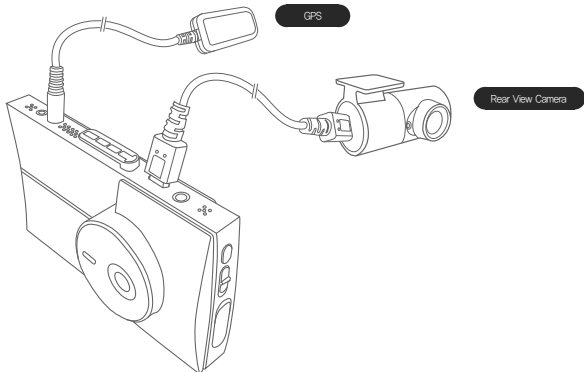


+ Uninterruptible power cable must be installed using wires from the fuse box inside the car.

* Uninterruptible power cable may be purchased separately.

Before You Start

+ Connecting Rear View Camera and External GPS Module



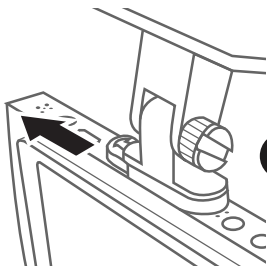
Connecting Rear View Camera and External GPS Module

- + When connected the rear view camera, LED turns on, indicating that the camera is ready for simultaneous 2-channel recording of both the front and rear areas.
- + Connecting an external GPS module allows PC Manager to show recorded places on the map.
- + External GPS may be purchased separately.

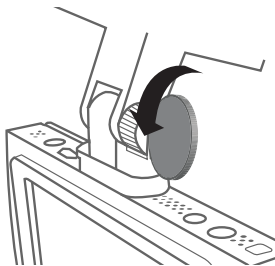
Before You Start

+ **Attaching to/Detaching from A Product Holder**

Attach/detach the product as shown below:



OR



Push the product to attach to/detach from the holder.

Use a coin to fasten/unfasten the bolt on the holder to attach/detach the product.

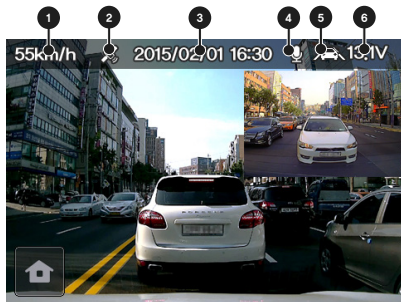
+ Start



- ① Booting When the car is started and power is turned on, As soon as booting is completed, the product automatically switches into driving mode recording. The LCD screen will display live video footage of the driving mode. Both front and rear views are available when the rear view camera is connected.
-
- ② Switch View Touch the rear view screen (PIP: Picture in Picture) on the front/rear view to see the rear view in full screen. Touch the top right corner on the rear view screen to see the front/rear view.
-
- ③ Screen Off Touch the area other than the top right corner on the LCD screen to turn off the screen.
-
- ④ Home (Main Menu) Main Menu appears when the Home button on the bottom left corner is touched.

Basic Functions

+ Live View



① Vehicle Speed Display Vehicle speed is displayed in real time when GPS is connected.

② GPS Connection GPS connection is indicated by the GPS Connection Icon, which disappears when disconnected.

③ Time Indicator Displays current recording time.

④ Sound Recording Indicator  Sound recording is deactivated.
 Sound recording is activated.

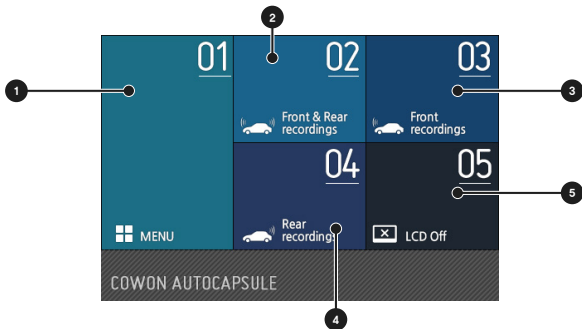
⑤ LDWS Display LDWS is activated at a certain speed. ¹⁾

⑥ Vehicle Voltage Indicator Displays the vehicle battery's current voltage.

1) When only GPS receiver is connected : 50km/h

+ Main Menu

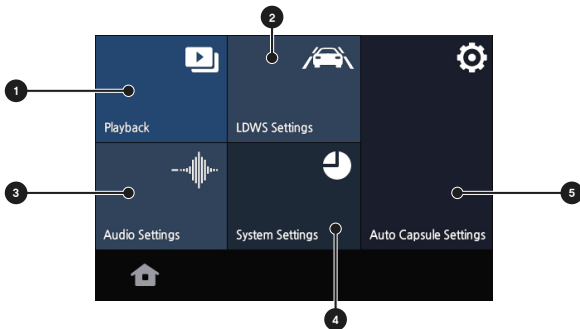
Touch 'Home' in the live view screen to see the main menu page.



- | | |
|---------------------------|-------------------------------------------------|
| ① Menu | Go to menu to replay video and change settings. |
| ② Front & Rear Recordings | Live front/rear view appears on the screen. |
| ③ Front Recordings | Live front view appears on the screen. |
| ④ Rear Recordings | Live rear view appears on the screen. |
| ⑤ LCD Off | Touch to turn off the LCD screen. |

+ Settings

Touch 'Menu' in the main menu to see the settings page.

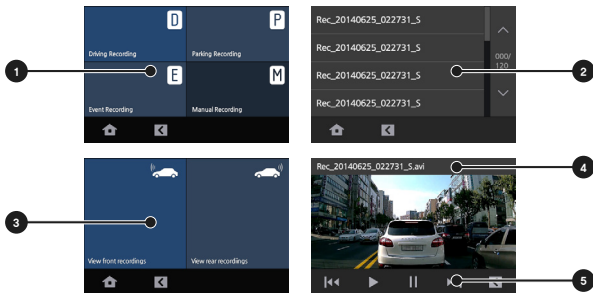


- | | |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| ① Playback | Check videos stored. |
| ② LDWS Settings | Set lane departure warning, hood line and sensitivity. |
| ③ Audio Settings | Set sound recording, volume, haptic feedback sound and voice guide. |
| ④ System Settings | Set current time, coordinates, auto switch to parking mode, memory card format, Auto Capsule information and default settings. |
| ⑤ Auto Capsule Settings | Set impact sensitivity, motion detection sensitivity, battery discharge settings, LCD off, recording settings. |

Basic Functions

+ File Playback

Touch 'Playback' in the menu to see the file playback page.

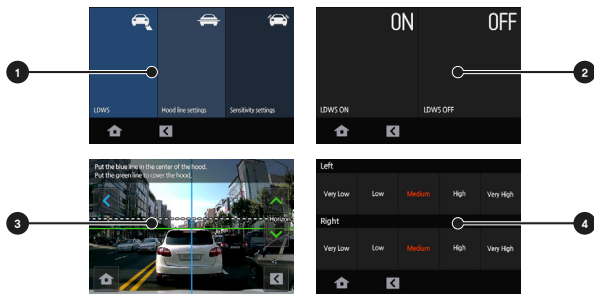


- | | |
|----------------------------|-------------------------------------------------------------------------------------------------------------------|
| ① File Selection (buttons) | Select and play all videos of driving recording, parking recording, event recording and manual recording. |
| ② Playlist | The list shows recorded files in consecutive order. |
| ③ Select Front/Rear View | If the recording has both front and rear views, touch one of the buttons to play the video in front or rear view. |
| ④ File Name | Displays the file name of the currently playing video. |
| ⑤ Playback (buttons) | Play/pause the playing video or play the previous/next video. |

Basic Functions

+ Lane Departure Warning System

Touch 'LDWS Settings' in the menu to see the LDWS setting page.¹⁾



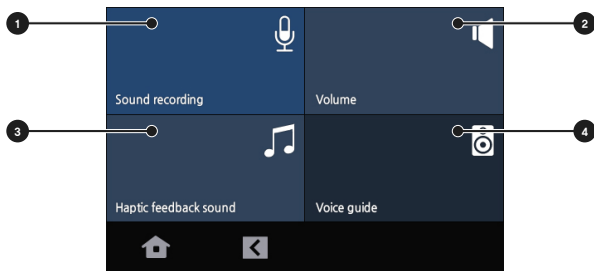
- | | |
|------------------------------------|----------------------------------------------------------------------------------|
| ① LDWS Setting | Change LDWS setting. |
| ② LDWS | Activate/deactivate LDWS (Lane Departure Warning System). |
| ③ Hood Line Settings ²⁾ | Calibrate the line of the vehicle's hood. |
| ④ Sensitivity Settings | Set the sensitivity to lanes right and left to the vehicle on a scale of 1 to 5. |

1) LDWS is activated when external GPS receiver is connected.

2) Set top-bottom reference lines based on the horizon if your car has a short hood, like an SUV.

+ Audio Settings

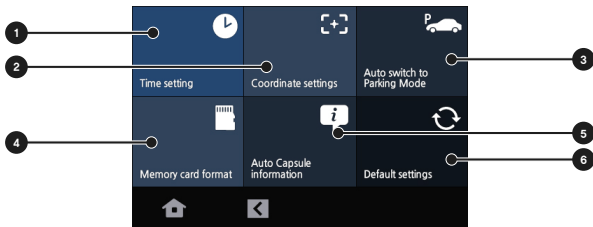
Touch 'Audio Settings' in the menu to set audio options of AN2.



- | | |
|-------------------------|------------------------------------------------------------------------------------------------------------------|
| ① Sound Recording | Activate/deactivate sound recording option, which allows you to record your voice using the built-in microphone. |
| ② Volume | Control the AN2 speaker's volume on a scale of 1 to 3. |
| ③ Haptic Feedback Sound | Turn on/off touch sound when the LCD screen is touched. |
| ④ Voice Guide | Activate/deactivate AN2 voice guide. |

+ System Settings

Touch 'System Settings' in the menu to change system settings including time setting, Auto Capsule information and default settings.



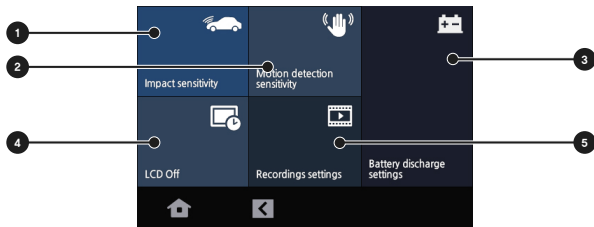
- ① Time Setting ¹⁾ Set current time of AN2.
- ② Coordinate Settings This feature allows you to correct the position of the LCD screen touch area.
- ③ Auto Switch to Parking Mode The mode automatically switches to Auto Parking Mode when the engine is turned off if this option is activated. AN2 shuts down when the engine is turned off if this option is deactivated.
- ④ Memory Card Format ²⁾ Format the memory card, AN2 automatically reboots after the format is completed.
- ⑤ Auto Capsule Information Check information about AN2 firmware.
- ⑥ Default Settings Initialize all settings of AN2, AN2 automatically reboots after initialization is completed.

1) Time setting is automatically updated when GPS cable is connected.

2) AN2 is recommended that you format the memory card from AN2 because it uses the FAT file format.

+ Auto Capsule Settings

Touch 'Auto Capsule Settings' in the menu to change settings related to Auto Capsule, including impact sensitivity, motion detection sensitivity and battery discharge settings.



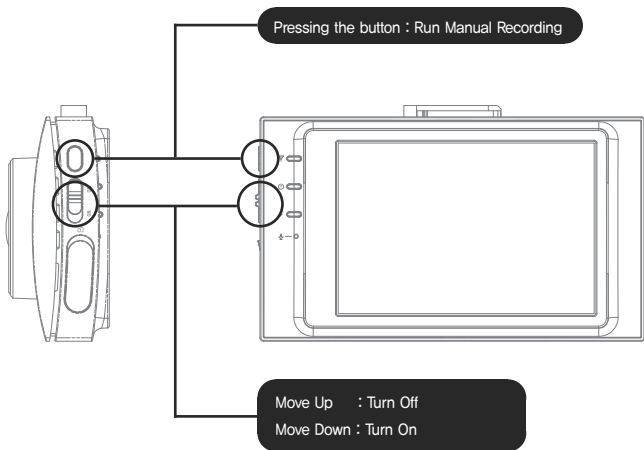
- | | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① Impact Sensitivity | The shock detection sensor can be set at 3 sensitivity levels, and Bike Mode is also available. |
| ② Motion Detection Sensitivity | Set the sensitivity to motion detection that AN2 detects while parking on a scale of 1 to 3. |
| ③ Battery Discharge Settings | Set the voltage at which the battery should be shut down. If the voltage is lower than the defined voltage, AN2 automatically shuts down. |
| ④ LCD Off | Set when the LCD screen should be turned off. If there is no touch input to the LCD screen for the set time span, the screen automatically turns off. |
| ⑤ Recordings Settings | Set sharpness and brightness of video on a scale of 1 to 3. |

+ LED Status Indicator

Category	Operating Mode	Front LED		Rear LED		
		Center 	Security Set 	GPS (Blue) 	Power (Green) 	Event (Red) 
Recording	Driving Mode	Flickering	Flickering from left to right, in order	ON (When GPS is connected)	ON	OFF
	Event During Driving Mode	Flickering	Set Flickering	ON (When GPS is connected)	ON	Flickering
	Event During Parking Mode	ON	Set Flickering	OFF	OFF	OFF
	Motion Detecting During Parking Mode	ON	Set Flickering	OFF	OFF	OFF
	Standby During Parking Mode	ON	Flickering from left to right, in order	OFF	OFF	OFF
System	Booting	Flickering Once	Flickering Twice	Flickering Once	Flickering Once	Flickering Once
	Firmware Upgrade	ON	ON	ON (When GPS is connected)	ON	Flickering
	Memory Card Format	Flickering	Flickering from left to right, in order	ON (When GPS is connected)	ON	OFF
	No Memory Card/Error	ON	OFF	ON (When GPS is connected)	OFF	Flickering

Basic Functions

+ Button Operation



Other Functions













+ PC Manager

The PC Manager can be downloaded from the bundle CD.



Other Functions

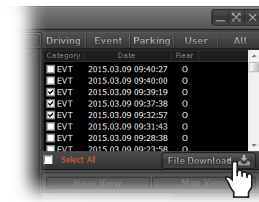
+ PC Manager

	Open recorded video files.
	Plays a selected file.
	Stop the video playback.
	Seek the video in 10 seconds.
	Plays the previous/next file.
	Enlarge selected portion of the screen.
	Captures the screen during playback.
	Users can set their preferences. (Press the Save (button) to apply new settings.)
	Mirroring feature shows the rear view with left and right sides reversed like in a mirror.
	Adjust the volume.
	Control the video brightness.
	Store the selected video in a PC.

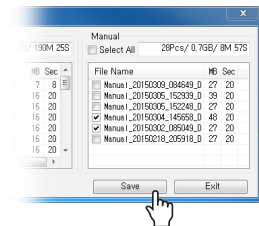
Other Functions

+ File Download

+ Check files in PC Manager and click 'File Download' to save files in a PC.



+ Run TAT_Viewer in the memory card provided to save and play files in a PC without PC Manager.



Additional Description

+ Product Specification

Item	Specification	Note
Lens	Front : Full HD Wide Angle Lens / Rear : HD Wide Angle Lens	
Image Sensor	Front : 5M Pixel CMOS Sensor / Rear : 1M Pixel CMOS Sensor	
LCD	3.5 inch Full Touch LCD	480 X 320
Recording Resolution	1 Channel – Front : Full HD (1920 X 1080p), Max. 24fps 2 Channel – Front : Full HD (1920 X 1080p), Max. 24fps Rear : HD (1280 X 720p), Max. 15fps	Record front/rear view at 12fps during parking recording.
Recording Angle	Front – Diagonal : Approx. 120° / Rear – Diagonal : Approx. 120°	From the diagonal angle
Video Encoding	H.264 (AVI)	
Recording Type	Normal / Manual / Event(Impact) / Parking(Motion)	
Audio Recording	PCM	Mic
Software	PC Manager (for Windows PC)	File Playback, Screen Capture, Save Recordings, Driving Speed, View on Map
Dimension & Weight	AN2 Body : 110.5 X 67.6 X 22.1 mm / 96g	
Storage Memory	Support up to 32GB memory card	
Operating Temperature	-20°C ~ 60°C	
Power	DC 12V ~ 24V	
Others	G Sensor, Speaker(Voice Guide), LED Status Indicator, Rear View Camera, External GPS Terminal	

DIGITAL PRIDE.

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