

Auto Capsule



COWON AK1
User Guide ver. 1.0w

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- + 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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Product Specification

+ Product Overview

HD-quality video recording

+ MEGA pixels image sensor is used to record a video in HD / 30fps / 16:9 wide.

Intelligent image sensor algorithm optimized for car black box

+ Operation is optimised by swift and stable adjustment to different conditions (daytime, night-time, entering and leaving a tunnel, etc.)

Multiple recording 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.

+ Product Overview

Video-out

+ A video-out feature is available for checking the video being recorded from an external device in real time.

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 ¹⁾

+ Automatically senses parking voltage and initiates parking mode recording.

Auto shutdown timer available during parking mode recording

+ According to pre-set time, this automatically turns off the recording to protect the vehicle battery.

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.

1) Available only when uninterrupted power connected.

+ Safety Precautions

This section regards precautions to prevent users from compromising safety or experiencing property damage. Please read the followings carefully before use. (COWON SYSTEMS has nothing whatever to do with any accident caused by a user who failed to conform to warnings 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. Proper normal recording cannot be guaranteed if the product is wrongly installed.
- + 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.

+ Safety Precautions

- + 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.
- + 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.
- + Be cautious 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 be cautious 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.

+ Safety Precautions

- + 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.
- + 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 to a separate storage device for safe-keeping.
- + 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.
- + 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.
- + Do not remove the MicroSD card when the product is in use. It may cause mechanical malfunction.
- + Plug 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

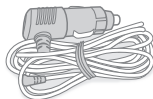
+ Package Components



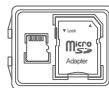
Auto Capsule AK1



Product Holder



Cigar Jack Cable



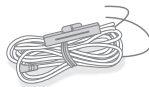
Memory Card & Card Adapter



Manual & PC viewer CD,
Quick Guide



Video-out Cable
(Optional)



Uninterruptible
Power Equipment
(Optional)

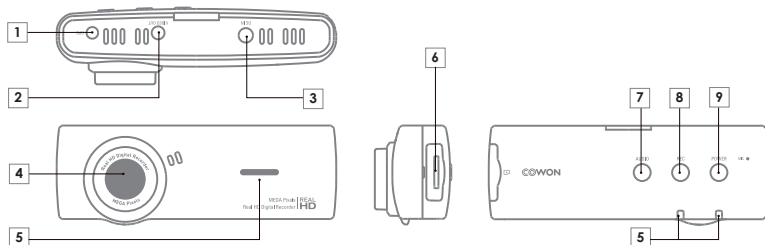


External GPS
Receiver (Optional)

- Note that the included items may vary according to the product specifications and may look different from the images provided in the manual.
- If you connect the Video-out cable to an AV-in terminal of the navigation, you can view real-time video.

Before You Start

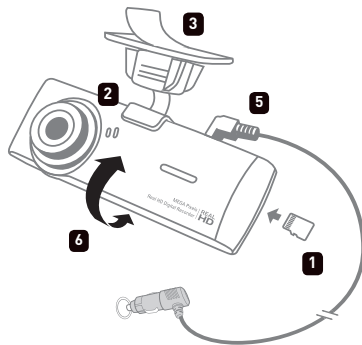
+ Name of Part and Functions



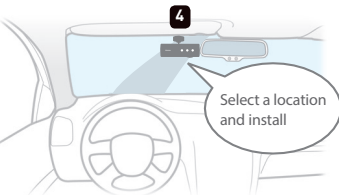
No.	Names	Functions	No.	Names	Functions
1	GPS	External GPS terminal	6	Memory card slot	Slot for inserting the memory card.
2	VIDEO OUT	Video-out terminal	7	AUDIO button	Press once - Audio recording On/Off Press and hold - Video out function On (3seconds)
3	Power terminal	Cigar jack cable / Uninterrupted power cable terminal	8	REC button	Press once - Occurrence of event (manual recording) Press and hold - Format the memory card (7seconds)
4	Camera lens	Records the front direction of a vehicle.	9	POWER button	Press and hold - Power On/Off (3seconds)
5	LED Status Indicator	Displays the operational status of the device.			

Before You Start

+ Installation



1. Insert the memory card into the device.
2. Place the AK1 in the device holder.
3. Remove the release paper on the tape.



4. 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.
5. Connect cigar jack cable.
6. Adjust the direction of the camera lens.
7. Tighten the nut of bracket to fix the AK1.

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

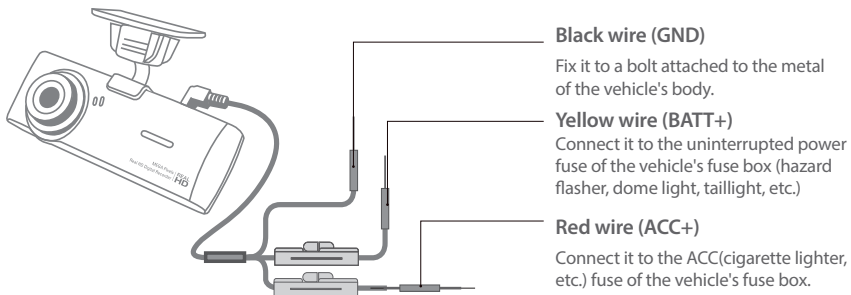
* Select a location carefully as repositioning the device after removing may weaken adhesiveness significantly. Double-check the chosen location before fixing the device.

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

+ Installation

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

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



- Connect it to the ACC(cigarette lighter, etc.) fuse of the vehicle's fuse box
- ※ Uninterrupted power cable may be purchased separately.

+ Start Recording

When power is turned on, the voice message announces the start-up of the Auto Capsule. The voice message also announces the start of driving mode recording; recording begins.

+ Driving Mode Recording

When power is connected, the voice message announces driving mode recording, and recording begins. Driving mode recording files are stored as normal files or event files.

+ Parking Mode Recording ¹⁾

When the car engine is turned off and battery voltage drops to parking mode, the device's driving mode recording stops and switches into a standby mode. It automatically starts recording for a certain period of time only when external impact or motion is detected.

+ End Recording

When the car engine is turned off or the power cable is unplugged during the operation, the last recording file is stored using the backup supercapacitor and then the device is powered off. ²⁾

1) Uninterrupted power connection is needed for parking mode recording.

2) The last recorded file may not be stored if backup supercapacitor is low.

+ Occurrence of Event

When one of the events described below takes place, it records for a total of 30~90 seconds and stores it as an event file.

1. When an impact is detected during driving/parking mode recording.
2. When the REC button is pressed once briefly during driving/parking mode recording.

※ If you press the button during event recording the voice guidance comes after the event recording ends.

+ Motion Detection

When a motion is detected during parking mode recording, it records a total of 30 seconds and stores it as a parking file.

+ LED Status Indicator

Category	Status	Front LED	Rear LED (Blue)	Rear LED (Red)
Recording	Driving mode recording	Blinking	On	Off
	Standby during parking mode	Slow Blinking	Blinking	Off
	Motion detecting during parking mode	Fast blinking	Off	On
	Occurrence of event	Fast blinking	Off	On
System	Booting / No memory card	Blinking	On	Off
	Firmware Upgrade	Fast blinking	Fast blinking	Off
	Format	Off	On	On

+ Button Operation

AUDIO button

Press once	Press and hold (over 3 seconds)
Turns audio recording On/Off	Turns video-out On.

REC button

Press once	Press and hold (over 7 seconds)
Records manually and stores it as an event file.	Format the memory card.

* It is recommended to periodically format the memory card for proper recording.

* Formatting memory card will delete all recorded files. Please backup(save) the necessary files to other devices.

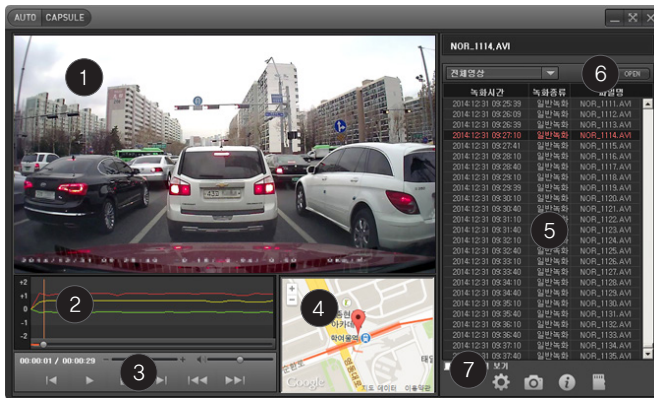
POWER button

Press and hold (Off : over 3 seconds, On : briefly)
Turns Auto Capsule On/Off.

Other Functions

+ PC Manager












The PC Manager can be downloaded from the bundle CD.



1. Video playback screen
2. G sensor information.
3. Playback buttons
4. GPS location map
5. Video list
6. Open video files
7. Setting buttons

Other Functions

+ PC Manager

	Open recorded video files.
	Plays a selected file.
	Stop the video playback.
	Plays the previous/next file.
	Seek the video in 1-second.
	Adjust the brightness of the video during playback.
	Adjusts the volume.
	Users can set their preferences.
	Capture the current image.
	Shows informations of firmware and PC manager.
	Format the memory card.

Other Functions

+ Auto Shutdown Timer

After parking mode recording commences, the device operates for a pre-set time, after which the power is turned off automatically.

+ Setting Auto Shutdown Voltage

When battery voltage falls below the pre-set voltage value after going into parking mode recording, power is turned off automatically to protect the battery.

- When standby operation time becomes shorter in parking mode recording, set the range of auto shutdown voltage lower.
- The lower the pre-set voltage value, the longer the standby time in parking mode recording, and the higher the pre-set voltage value, the shorter the standby time in parking mode recording.
- If voltage falls below the pre-set auto shutdown voltage value during operation while auto shutdown timer is set, power is turned off regardless of the auto shutdown timer.

* Parking mode recording, auto parking mode voltage, and auto shutdown voltage settings are accessible only during uninterrupted power connection.

* The lower the pre-set auto shutdown voltage value, the greater the risk of battery discharge; the higher the pre-set auto shutdown voltage value, the more effective it is for preventing battery discharge. Set the voltage value to suit your vehicle battery condition before use.

Other Functions

+ **Sensitivity of G Sensor**

Sensitivity of the G sensor which detects external impacts when driving or parked can be adjusted.

+ **Motion Sensor**

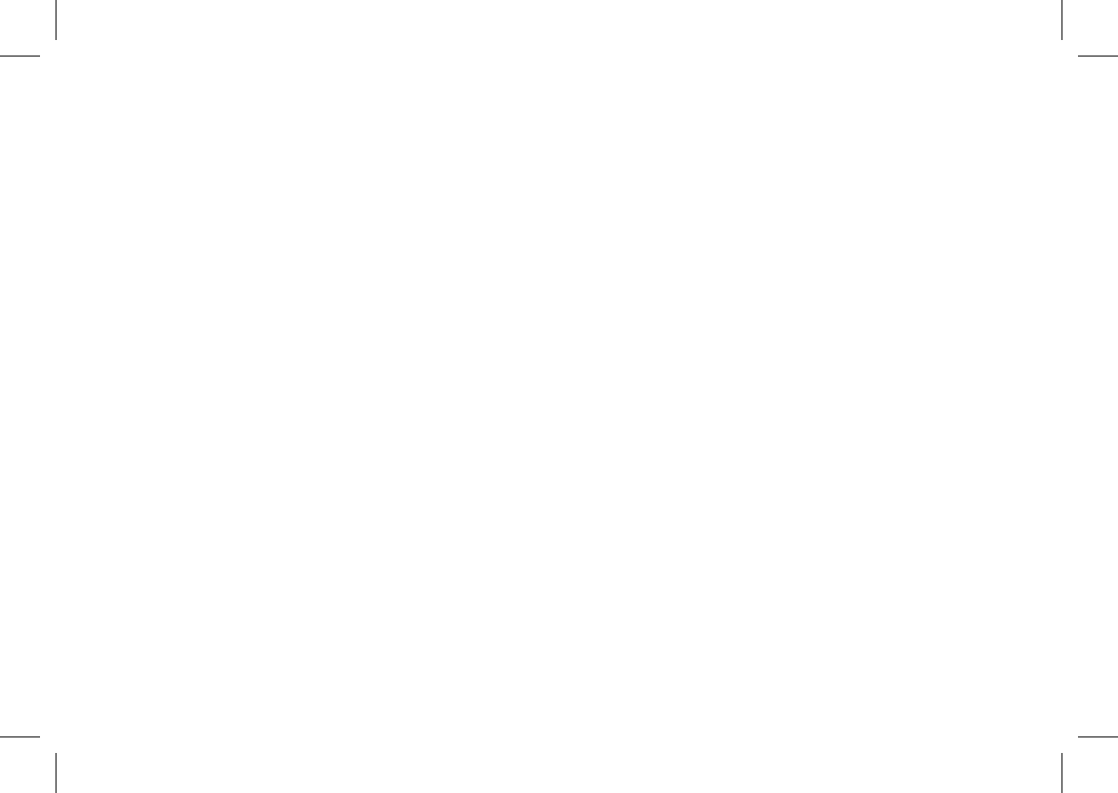
Sensitivity of motion detection made by the device while parked can be adjusted.

Additional Description

+ Product Specification

Item	Specification
Dimension and weight	102mm(W) X 34mm(H) X 21mm(T) / 45g
Image sensor	1M pixels CMOS image sensor
Recording resolution	720p HD (1280X720), 30fps
Recording angle	Diagonal angles of 110°/ Horizontal angles of 92.1°/ Vertical angles of 48.4°
Recording type	Normal / Manual / Event (Impact) / Parking (Motion)
Audio recording	Built-in microphone
Video-out	AV-Out output terminal supporting
Video encoding	H.264
Audio encoding	PCM
Channel	1 Ch
Status indicator	LED, Voice guide
Button	3 buttons
Storage memory	8GB / 16GB microSD Card (Max. 32GB memory card supporting)
Power	DC 12V ~ 24V
Others	Speaker, microphone, microSD card slot, external GPS terminal







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