

BlackSys

CW-100

User's Manual



CAMMSYS

Notice

- ✓ This product helps you to use the recorded video as a reference in case of car accident. The recorded video by this product carries no legal binding force. CammSys will not be responsible for any legal conflict and damage caused by recorded or non-recorded video.
- ▶ For the safety, do not operate the product during driving or stare at the product. Such action may result a car accident.
- ▶ On an accident with the impact lower than certain degree of acceleration, please be aware that the event data may not be recorded in the product.(however it is recorded as a Normal file)
- ▶ Recording may not be executed in case the product is defect caused by car accident or other reason.
- ▶ Recording can be distorted under the condition where brightness suddenly changes like passing through a tunnel, Direct sunlight reflection during the day time or where light is not available at night time.
- ▶ All right to hardware, software and relevant data are reserved by CammSys Corp. and protected under copyright Law. In case of illegal copy and process, not only civil compensation but criminal punishment based on protection of intellectual property rights can be engaged.
- ▶ Do not use the product for other purpose rather than Car Black box. CammSys will not be held responsible for damage caused by negligence, careless and improper management of user.

Recommended System for PC Viewer

- OS: Window XP(32bit), Windows Vista(32bit), Windows7(32/64bit)
- CPU: Pentium 4/ 2,8Ghz or higher
- Memory: RAM 1G or higher
- HDD: 4GB / Directx 9.0 or higher
- Microsoft Internet Explorer 7 or higher

Caution



- ✓ Before use the product, check if operation and video recording goes well.

Installation and Management

- ▶ Keep clean the camera lens by preventing dust or foreign substance from getting in the lens part. Otherwise, it may result in video distortion. If another object is placed around, it can be reflected from the window. So do not put another object around the installed product.
- ▶ If installation location of the product is changed, it may not record properly even if it worked after initial installation. Therefore, install the product firmly and do not give an excessive shock or force to move the product.
- ▶ Long time use of product or in case of severe vibration by driving unpaved road, changed angle or location of product may cause malfunctioning. Correct the angle or location of product properly in a flat road after pull over to the side of the road.
- ▶ Do not disassemble or remodel this product as it can cause an accident due to malfunctioning and such action will Result in the product being unfit for use and void all warranty/service provisions.
- ▶ Do not use chemicals or detergents to clean the product. This can result in malfunctioning of the product.
- ▶ Never give an excessive shock to or inject a foreign substance into the product. Give an excessive force or shock or injecting a foreign substance into this product can cause a trouble.

SD Card Use

- ✓ Be sure to turn OFF the power and LED is OFF before removing or inserting the SD card. Removing the SD card while product is in use, it can cause malfunctioning.
- ▶ Use the authorized SD card which a manufacturer/distributor provided. If authorized SD card is not used, it can cause malfunctioning and loss of recorded Data.
- ▶ Do not disassemble or remodel this product. It can cause malfunctioning and service is not available.
- ▶ SD card is expendable supply. After long period of use, it may not able to record data correctly. Please change the SD card To the new one.
- ▶ Back up the important data in other storage devices such as HDD, CD, USB. Data can be lost and damaged if data is kept in SD card for a long time.
- ▶ Check the recorded data of SD card in a regular basis to make sure the recording is working well.

Power

- ▶ This product is designed to use cigar jack power. In case of using the power from the vehicle, consult it with dealer in shop and any damage caused by the user's misuse, be noted that it's user's fault and manufacturer is not responsible for any case.
- ▶ Use the authorized cigar cable contained in the product box. Avoid connection of power supply without knowledge and experience. Any damage caused by user's misuse, be noted that it's user's fault and manufacturer is not responsible for any case
- ▶ Do not remove or insert SD card while power is turned on, it can cause serious error of the product. Make sure to turn OFF the power and LED is OFF before removing or inserting the SD card. Removing the SD card while product is in use it can cause damage of video file.

How to format

PC format

- ✓ Check the virus and format the SD card on a regular basis (twice a month at least) to avoid disadvantage caused by storage error such as non-recording and abnormal recording.

How to format

1. Insert or connect SD card to PC.
2. Click [Start] → [My Computer].
3. Place mouse pointer in [Portable USB drive] SD card and click the right button of mouse. then click the [Format].
4. Once click the [Start] button, format is started.

Notice

- AT16/32 format is required if SD card recognition and record error happen.
- Change SD card if PC doesn't recognize SD card or format is not able to be completed.
- If SD card contains other data, it can cause malfunctioning. Therefore, please remove it.

Caution

- × As SD card is expendable supply, manufacturer is not responsible for any data loss and damage. Also, **manufacturer cannot guarantee the recorded Normal/EVENT data on SD card.**

Manual format

- ✓ Manual format is available without PC.

How to format

1. Turn off the power.
2. Press Event [▲] button deeply and turn on the power simultaneously.
3. Format is started after 5 sec. with buzzer sound and LED off.
4. Once format is completed, it starts rebooting automatically.

Caution

- × Keep press the event button until format is started.

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Details on Video Record



Normal Recording

Video Record starts when vehicle power is turned on and recorded data are stored in SD card (“**REC**” folder).

Parking Mode Recording

- ▶ 10 minutes after parking or stopping the car, if no motion is detected, it converts to Parking mode recording automatically. (In case of product is connected with a car battery or extra power supply)
- ▶ If motion is detected consistently and driving is resuming, it converts Normal recording again.
- ▶ When it detects impact during Parking mode, the video file is stored in “**EVENT**” folder. (Long period of parking may cause discharge of a car battery.)

Caution

※ If power is disconnected within 2 min. after power is on, recorded file can be broken.

Last Scene Recording

Though power supply is disconnected caused by accident or manually, last scene is recorded and stored in **EVENT** folder by using built-in super capacity battery.

EVENT Recording









If Acceleration sensor (G-Sensor) detects impact, sudden unintended acceleration and quick braking or manually pressing the event button during the car runs, it records 20 sec. of video to the “**EVENT**” folder (10 sec. before and after the **EVENT**).

Notice

- The less G-Sensor figure, the less shock sensitivity. (Initial settings come with 3 level. 1 is insensitive, 3 is medium, 6 is sensitive)

Main features

Icon	Features
	The feature providing clear images under back light circumstances
	Wide angle of view(120°) makes seamless recording(30fps)
	Event recording starts when impact happen and records 10 sec. before and after impact
	Built-in Super Capacitor keeps recording for 5 sec. even when power supply is disconnected
	Normal recording(720 x 480 resolution, D1) continues Max 30fps
	Playback the video files through PC viewer(for Windows)
	Clear voice recording
	Buzzer indicates operation status and alarms an Error

Icon	Features
	Parking mode recording (In case of being powered)
	LED Indicator for surveillance
	Video review by connecting to navigation system
	Emergency Recording
	Zoom in through PC viewer
	Manual Format
	GPS(option) module
	Video out(option) cable

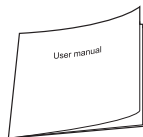
Name of the components

BlackSys
CW-100

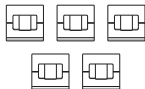
Main components



Main unit



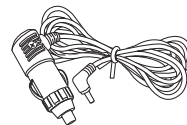
User's manual



Cable holder



Micro SD Card

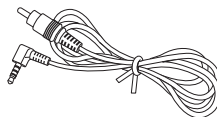


Cigar jack cable

Optional components

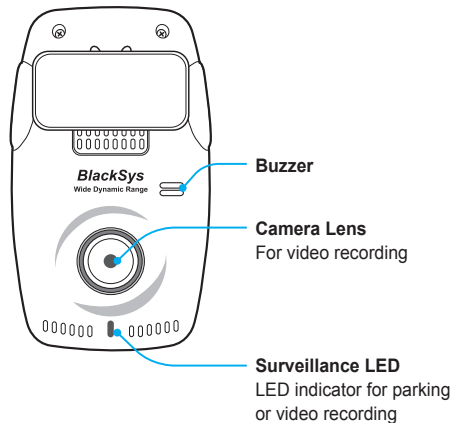


External GPS module

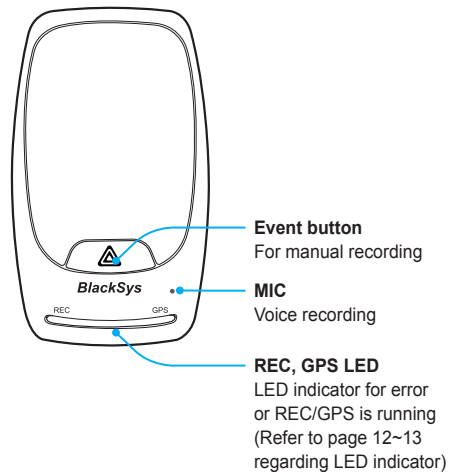


A/V Out cable

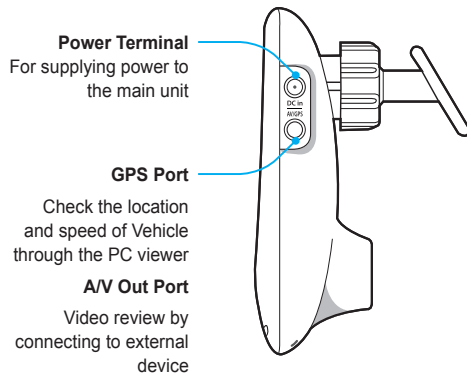
Front



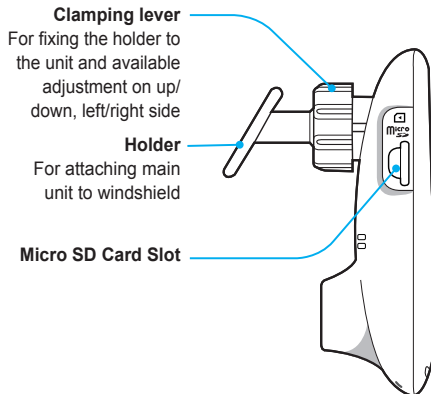
Rear



Left Side

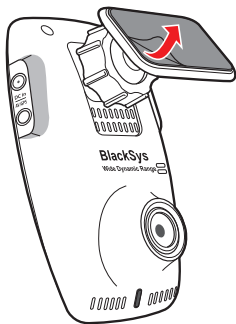


Right Side



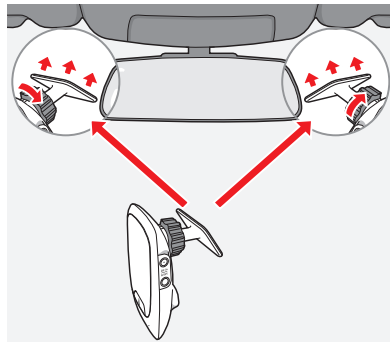
Installation

1. Attaching double-sided adhesive tape



Wipe up the foreign matters or moisture completely from the location of installation. Remove the release paper in double sided tape and attach it to the holder and remove the red adhesive protector.

2. Installing unit

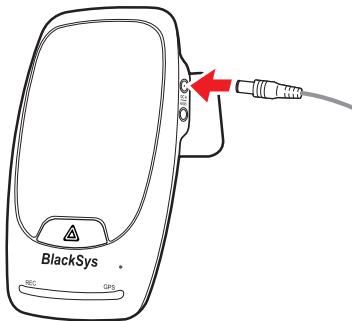


Installation is recommended on the left/right of room mirror. Tightly fasten the adhesive of holder to the windshield by pushing it. Adjust the angle of camera to record forward and unit to be vertically installed. Finally, tighten the clamping lever.

Caution

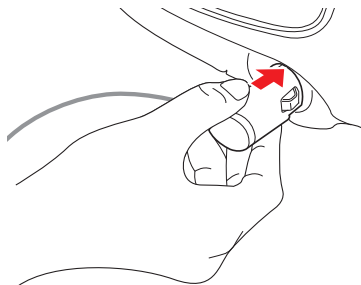
× If a video from navigation system or dashboard reflect in windshield, it can affect video quality. so avoid it.

3. Power cable arrangement and connection



By using the cable holders, arrange the Cigar jack cable and connect it to the DC IN port(upper hole). If car navigation system is installed on the car, it is recommended to connect video out cable(option) to navigation system to adjust by checking the current view of the camera.














4. Power cable connection and check the LED status












After inserting the Cigar jack cable(Power cable) into cigar jack, turn on the car ignition. If all LEDs of power status are on, installation is completed.

LED and Buzzer

Function

Mode	LED			Buzzer	Description
	REC	GPS	Parking		
Initial Booting				Beep x 2	1 time beep sound R EC LED ON, Parking LED ON * With GPS Module GPS LED ON, without GPS Module GPS LED OFF
Event Rec.		-		Beep	1 time per a sec. beep sound Rear left/right LED 10 times flickers per a sec. (until end of Event)
Parking Mode		-		X	(10 min. after parking) Front LED flickers per 2 sec.
Update				Beep x 2	ALL LED ON when it upgrade, after upgrade completed, 2 times beep sound and front and rear LED flickers per a sec. and rebooting
GPS ON				X	GPS LED ON

Error

Mode	LED			Buzzer	Description
	REC	GPS	Parking		
No SD Card or Recognition error				Beep x 3	Beep sound per 3 sec. Rear left/right LED OFF
Camera Error				Beep	Beep sound per a sec. Rear left/right LED OFF
Manual Format				Beep x 2	Press Event button and then turn on the unit. Keep pressing Event for 5 sec. then formatting get started automatically.

Notice

- If abnormal status rather than above happen, reconnect power cable to the unit.
- Format the SD card if recognition error or recording error occurred.
- If PC doesn't recognize SD card or formatting is not running correctly, change the SD card.

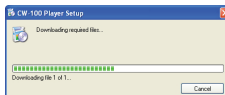
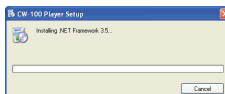
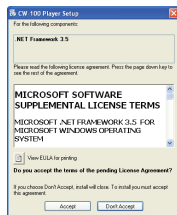
Caution

× Do not turn on the power while inserting SD card to the unit. (Inserting SD card while power is connected, it can cause an error or fault)

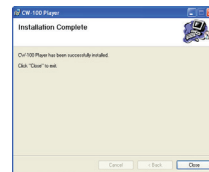
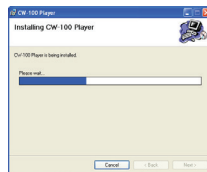
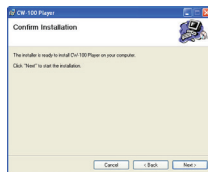
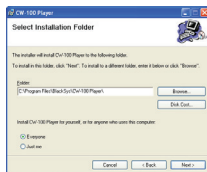
PC Viewer Installation

How to install PC Viewer

1. Download and execute Setup.exe
2. Click "Agree" of the contract for Viewer installation
3. Prepare component for installation
4. Start installation wizard



5. Select folder to install and execute
6. Installation ready
7. Start installation
8. Installation completion

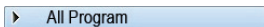


How to uninstall PC Viewer

1. Click the "Start" button.



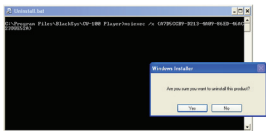
2. Click the All program and search CW-100Player.



3. Select Uninstall in CW-100Player folder.



4. Select [Yes] when window installer ask Uninstall.



5. Uninstallation is in progress.











× How to uninstall the PC Viewer














Execute C:\Program files (x86)\BlackSys\CW-100 Player\Uninstall.bat

PC Viewer Layout



18 PC Viewer Installation

No.	Icon	Function
1		File List Update
2		Normal Recording File List
3		Event Recording File List
4		All Recording File List
5		Screen Minimization
6		Full Screen
7		End
8		Version Information
9		GPS Speed (Km/h ↔ mph)
10		Large Screen Map
11		Volume Control
12		Image Brightness Control
13		Configuration

No.	Icon	Function
14		G-Sensor Data Review
15		Enlargement of a part of Screen
16		Video Screen Capture
17		Select Drive of SD card
18		Stop Video Playback
19		Move to Previous File in the List
20		Move to 1sec. Before
21		Playback the Video
22		Move to 1sec. After
23		Move to Next File in the List
24		Move to Next Frame
25		Screen Horizontal
26		Screen Vertical

PC Viewer Configuration

The screenshot shows a 'Configuration' window with the following settings and annotations:

- Voice Recording:** A checkbox labeled 'Audio Recording' is checked.
- Parking Mode Time Setting:** Three radio buttons are present: '10 Min' (selected), '20 Min', and 'Off'.
- G-Sensor Sensitivity Setting:** A slider is positioned at level 3 on a scale from 1 to 5. The scale is labeled 'Insensitive' at 1 and 'Sensitive' at 5.
- Buzzer:** Two radio buttons are present: 'ON' (selected) and 'OFF'.
- In case of Time Setting:** A checkbox is unchecked. Below it, a date and time field shows '2013 y 2 M 22 D 17 h 0 m 40 s'.
- Configuration Save:** A 'Save' button is located in the top right corner.
- Configuration Cancel:** A 'Cancel' button is located in the top right corner, below the 'Save' button.

How to update firmware

✓ Please follow the below process in case of updating firmware

1. Remove SD card from the unit.
 - Turn off the ignition first and remove cigar jack cable from the unit.
2. Access Download of our webpage(www.blacksys.co.kr/en) and download the latest update file.
3. Connect SD card to PC and paste downloaded latest update file(UPDATE.BIN) to the UPDATE folder of removable disk.
4. Insert SD card which contains latest update file to the unit.
 - Turn on the ignition and connect cigar jack cable to the unit.
5. All LEDs are on and upgrade gets started and once upgrade is completed, buzzer beeps twice and rebooting goes on automatically.
 - Do not disconnect power cable while update is in process. It can cause malfunctioning.

How to download Software

1. Access Download of our webpage(www.blacksys.co.kr/en) and download the latest software file.
2. Install the software to the PC.

Technical Specification

Model Name		CW-100
Camera	Lens	350K pixels (WDR CMOS Image)
	Angle of View	120°
	Sensitivity	1.0 LUX
Function	Video Encoding	MPEG4
	Resolution	720x480 pixel
	Recording Mode	NORMAL (80% of memory space, 1min./ file, 30 frame/s)
	Option	EVENT (20% of memory space, 20sec./ file, 30 frame/s)
		Auto Parking Mode (1min./ file, 30 frame/s)
	Rec. Method	In case SD Card is full, it deletes old files in order
	Voice Recording	Built-in microphone records voice and surround sound
	Format	Micro SD Card Format
	External GPS	Option
	Shock Sensor	Tri-axial shock detection G-Sensor
Memory Storage	Micro SD Card (4G ~ 32G)	
Display	Rec. Frame	Normal/Event/Parking Mode : 30 Frame/sec (1min.)
	External Video Output	Composite Output
	External Playback	PC Media player & PC Viewer Pro
	Video Analysis	PC Viewer Program
Dimension(mm)		58(W) x 100(L) x 29(H)
Weight		76g
Temperature	Operation	-20°C ~ 70°C
	Storage	-30°C ~ 80°C
Power	Operation	DC 12V~24V (±0.3V) / CIGA CODE

※ Technical Specification can be changed without prior notice for product improvement.

Customer Service

Type of Damage	Type of Service Inquiry	Within Warranty Period	After Warranty Period
Trouble caused in a normal use condition	Claim a service for a main part within 10 days after purchase	Replacement	Not applicable
	Claim a service for a main part within 1 month after purchase	Replacement or Free repair	
	Claim a service for a main part within 1 month after unit exchange		Free repair
	Claim a service for faulty unit	Replacement or refund	Not applicable
	Same defect over 3 times		Applicable by bylaw
	Lost by service center during repair service		Not applicable
	Damaged unit from distribution and installation	Replacement	Not applicable
Customer's negligence or fault, Functional defect	Repair is available	Repair at cost	Repair at cost
	Repair is not available	Replacement at cost	Applicable by bylaw
* Defect caused by Natural disasters (Fire, Salt, Gas, Earthquake, Flood) * Defect caused by unauthorized technician other than by personnel of repair or service center * Replacement of fair tear and wear components * Others not product fault itself but customer's fault		Repair at cost	Repair at cost

※ Warranty period is 12 months after purchase.

※ We provide product repair and replacement services within the warranty period in accordance with the consumer protection regulations(the Korea Fair Trade Commission Directive 2008-3)

Before applying for Service

We don't take any responsibility for the data loss during the service. Please back up the data before applying for service.

CammSys Customer Service

6F Daeil B/D, 681-17, Yeoksam-dong, Gangnam-gu, Seoul, 135-081 Korea

Customer Service

Tel : **+82 70 4680 2599**

Email : **service@cammsys.net**

If you come to customer service center, service personnel will care for the service timely and properly.

For further information regarding customer service, please refer to **www.blacksys.co.kr/en**

Product Warranty



Trade Name or Applicant	CammSys		
Equipment Name	Car Black Box		
Basic Model Number	CW-100		
Certification No.	KCC-REM-SYV-CW-100		
Manufacturer/Country of Origin	CammSys Corp.		
Data of Manufacturing	2012. 12. 17		
Serial Number			
Date of Purchasing			
Warranty Period	12 months from the purchase date (But, if purchase date is not clear, it can be applying 3 months after manufacturing date)		
Customer Information	Name		Tel.
	Address		
Retail Shop	Name		Tel.

- * The warranty for the product is benefited by the details on the warranty card.
- * Warranty period is counted from the purchase date. So get the purchase date.
- * This warranty card is not reproduced.

CAMMSYS

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