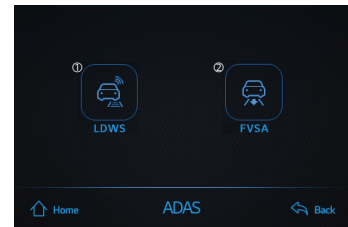


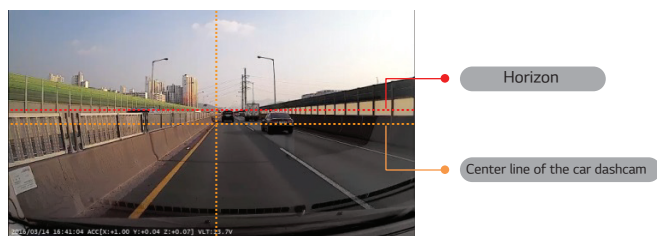
9 Advanced Driver Assistance System (ADAS) Full HD Digital Recorder System



※ The ADAS function is available only when an external GPS is connected.

NO	Function	Description
①	Lane Departure Warning System (LDWS)	This function sounds an alarm to warn the driver when the vehicle begins to move out of its lane. If you set the operation speed and the vehicle model, it can detect lane departure more precisely.
②	Front Vehicle Start Alarm (FVSA)	When the car makes a stop, this function detects the stop within 3 seconds. When the front car moves away, it informs the driver by sounding an alarm and displaying a message on the GUI.

Installation guide to use the ADAS function



- ▶ Install the car dashcam to be horizontal.
- ▶ Face the car dashcam toward the center.
- ▶ The horizon should be on the center line of the car dashcam or slightly above it.

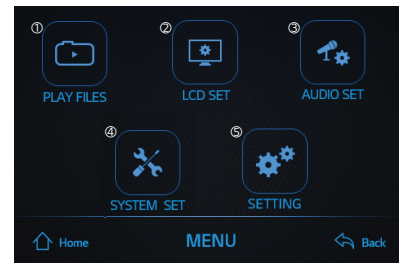
Notice

- The ADAS may not function normally under inclement weather conditions, during night driving, or in dark tunnels.
- The ADAS may not function normally when the car dashcam is installed in an improper location.
- The ADAS may not function normally if the road surface looks narrow.
- The ADAS does not function when there are no visible lanes in both sides of the driving lane.
- The FVSA may sound when the car moves backward during driving.
- The ADAS may not function normally when the car shakes excessively.
- The use of a third-party GPS may cause a malfunction of the ADAS and damage to the product.

※ The ADAS provides only reference information for safe driving. For details, refer to the User Manual.

10 Main Menu Full HD Digital Recorder System

- ▶ In the main menu, press Menu.
- * Note that no video is saved during the system reboot and when using the menu items.

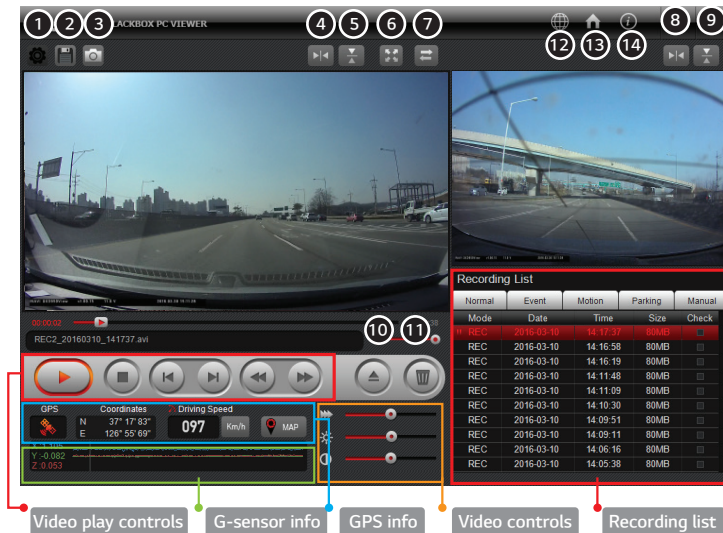


NO	Function	Description
①	Play Files	You can view recorded videos. You can play the videos recorded in Normal, Parking, Event, and Manual recording modes.
②	LCD set	You can set the LCD screen to turn off in 1, 3, or 5 minutes. Select OFF to make the screen on at all times.
③	Audio set	You can configure audio settings. (Voice recording, volume control, sound effects, audio guidance)
④	System set	You can configure system settings. (Time setting, touch sensitivity, SD card format, firmware version info)
⑤	Setting	You can configure video recording settings. (Sensitivity, low voltage cutoff, Parking mode, sharpness, contrast, reset settings)

11 Installing PC Viewer Full HD Digital Recorder System

- You can download the PC Viewer from <http://www.lginnotek.com> (Support > Product). (Ensure to download and install the PC Viewer file specified for your product model.)
- Install the downloaded file. Following installation guidance messages, press "Next >", "Install", and "Finish."
- When the installation is complete, the car dashcam PC viewer icon will be created on the Desktop.

12 Viewing Video on PC Viewer Full HD Digital Recorder System



NO	Icon	Description	NO	Icon	Description
①		Settings	⑧		Flip the rear video horizontally
②		Back up the recorded video	⑨		Flip the rear video vertically
③		Snapshot	⑩		Open the drive
④		Flip the front video horizontally	⑪		Delete files
⑤		Flip the front video vertically	⑫		Select language
⑥		Full screen	⑬		Go to Home
⑦		Switch between front and rear videos	⑭		PC Viewer version info

- ▶ GPS information is displayed only when the recorded video contains GPS information provided by an external GPS.
- ▶ Map information is displayed only when the recorded video contains GPS information provided by an external GPS and the PC is connected to the network.
- ▶ The front/rear video is displayed only when the rear camera is installed and the recorded video contains the rear camera footage.
- ▶ Double-click the front/rear video screen to resize it. Double-click it again to return to the original size.

13 Saving Video Full HD Digital Recorder System

- ▶ Saving by directory

Mode	Nomal recording	Event (Drive/Parking)	Manual recording
File size	80Mbyte		40Mbyte

- ▶ Video File Naming

File name	REC2_20160302_161506.avi			
	REC	2	20160302	161506
Description	Recording type	Camera channel 1: Front 2: Front + Rear	Recording date	Recording time

- ▶ Recording types

File name	Description
REC	Normal recording in Drive mode
EVT	Event recording in Drive mode
MOT	Motion event recording in Parking mode
IMP	Event recording in Parking mode
MAN	Manual recording

14 Format and Firmware Update Full HD Digital Recorder System

- ▶ SD Card Format

- Formatting in the car dashcam
To format the SD card in the car dashcam, select Menu → System Settings → SD Card Format.
- Formatting in PC
To format the SD card in a PC, insert the SD card into the PC, select and right-click the SD card driver, and select the Format menu.

- ⓘ This product saves recorded videos in sequence. When the storage is full, recording files are automatically deleted in succession from the oldest. Therefore, it is unnecessary for the user to format the storage regularly. Please make sure that you back up important videos on other storage devices before they are automatically deleted.

- ▶ Firmware Update

- Download the latest firmware for your model to the PC.
- You can download the firmware file under the 'Support' menu from <http://www.lginnotek.com>.
- Insert the SD card into the PC. Save the latest firmware file in the SD card and remove the card from the PC.
- Turn off the car dashcam and insert the SD card. Turn on the car dashcam.
- The notice message "Upgrading firmware..." will be displayed on the LCD screen.
- When the upgrade is complete, you will hear the audio message, "The system will restart."

※ Do not turn off the power of the car dashcam or remove the SD card during the firmware upgrade.

15 Warranty and Customer Service Full HD Digital Recorder System

Warranty and Customer Service Information

- Canada Service Center : AutoMobility Distribution Inc.
- Contact : 1-888-557-8278 | www.automobilitycanada.com
- Service Hours : Mon - Fri 8:30am - 5pm EST
- Only the service agents authorized by LG Innotek can provide after-sales service.

Notice

- All images and pictures in this Quick Manual are provided to help the user's understanding. They may be different from the actual product and be changed without prior notice.
- The specifications and functions of this product are subject to change without notice to improve its performance. All contents of this Quick Manual are subject to change without prior notice.
- All data saved in the SD card may be deleted for repair service.
Please make sure that you back up important data before you request a service. LG Innotek and its service agents take no responsibility for any data loss or problems resulting from such loss.

Service Guide

- ▶ You can download the User Manual and the Installation Manual from <http://www.lginnotek.com> (Support > Product).
- ▶ If any defect is found within the warranty period, the product will be repaired without charge. However, such free service will not apply and the product will be repaired with charges for parts or labor in the following cases:
 - The warranty period of one year has expired.
 - The warranty period has not expired but any of the following cases applies:
 - The failure results from any disassembly, repair or modification made by an unauthorized service provider, a user, or any third party.
 - The failure results from the use of the product in conjunction with components not provided by LG Innotek.
 - The failure results from the misuse of components provided by LG Innotek.
 - The damage results from an external shock.
 - The corrosion results from water damage or pollution.
 - The damage results from the user's negligence after installation, including moving, dropping, shocking, or forcefully operating the product.
 - The damage results from the fall of the mount during the drive.
 - The failure results from natural disasters, including lightning, earthquake, and flood.
 - The failure results from abnormal use, storage, and handling of the product.
 - The failure results from the error of power source or connecting devices.
 - The failure results from the user's mistake or negligence.
 - The product number is so seriously damaged that it is impossible to identify.
 - After the warranty period expires, the product or its parts will be repaired or replaced with a fee within the parts replenishment period of the product specified by LG Innotek (one year after the warranty period).

16 Product Warranty Full HD Digital Recorder System

The warranty period of this product is 1 year from the original date of purchase.

- Warranty period : One year from the purchase date of the product.
- In the event of defects within 1 month from the date of purchase : Free replacement or repair.
- Exception : For Micro SD card, it is 3months from the date of manufacture) details, see the table below.
- Paid service period : For 1 year after the expiration of the warranty period (see the table below)
- This product records and saves videos of vehicle accidents, but it is not guaranteed to record all accidents. Accidents with light impact that is not enough to activate the impact detection sensor may not be recorded.
- In accordance with Personal Information Security Law & related legislation, LG Innotek Co., Ltd. will not be held responsible for any problem due to illegal use of this product.
- The recorded video produced by this product constitutes the secondary data that may help to determine the circumstances of an accident. LG Innotek Co., Ltd. will not be held responsible for any loss or damage caused by any accident.

	Type	Compensation	
		Within warranty period	Within paid service period
A significant repair due to performance or functional defects that occur during the normal use of the product	Defects within 10 days from the date of purchase	Free replacement	N/A
	Defects within 1 month from the date of purchase	Free replacement or free repairs	N/A
	Repairable defects	Repairable defects Free repairs	Paid repair
	Irreparable defects	Free replacement	Paid replacement
	Defects found 3 times in the same part	Free replacement	Paid repair/replacement
The product sent in for repair was lost by the repair service center	Defects found 5 times in different parts.	Free replacement	Paid repair/replacement
		Free replacement	Free replacement
Damage caused by mishandling while the seller delivers the product to the consumer		Free replacement	N/A
Damage caused from mishandling while the seller installs the product		Free replacement	N/A

Model name	Purchase date
Dealer	Address
Name	Contact number

Quick Manual

BBDB-FF02E Full HD CAR DASHCAM



For the proper use of the car dashcam and the safety of the driver, please read this manual carefully before using the product.

1 Safety Precautions Full HD Digital Recorder System

To ensure your safety and prevent damages, read and understand the following safety precautions in their entirety before installing or using the product.

- Warning** Breaching the following precautions may result in serious personal injury or even death or property damage.
 - Use only the authentic products, accessories, and parts provided by LG Innotek.
 - The recommended operating temperature of the product is from -20°C to +70°C. Excessive heat in the summer or excessive cold in the winter may cause product failure. Ensure that the product operates within the recommended temperature range.
 - Do not leave the product in direct sunlight or expose it to high heat. In particular, do not use or store the product inside the car in the hot summer.
 - Do not disassemble, repair or modify the product at your own discretion. Please contact an authorized service center for product repairs. Arbitrary disassembly, repair, or modification may cause product damage and failure. You are solely responsible for any defects or problems arising from such damage and failure.
 - Do not allow metal or foreign substances to get into the product. They may cause electric shock, fire, and short circuit, which may result in product damage or failure.
 - Do not expose the product to rainwater or use it near water or in a humid place.
 - If any liquid or foreign substance gets into the product, it may result in electric shock, fire, or short circuit. In this case, turn off the power, remove the power cable, and contact an authorized service center for inspection.
 - Do not use any chemical or detergent to clean the product.

2 Safety Precautions Full HD Digital Recorder System

- Caution** Breaching the following precautions may result in personal injury or property damage.
 - Do not watch the video screen or operate it while driving. It may result in an accident. Stop your car before operating the product.
 - Do not store the product near any magnetic objects, including magnets, TVs, or speakers.
 - Do not drop the product or expose it to excessive shock.
 - Do not let any children use the product. Store the product in a place where your children or pets cannot access.
 - The rated voltage of the product is DC 12 V/24 V. The use of any power cable other than the specified one may result in product malfunction or failure.
 - Do not use any damaged power cable.
 - Do not connect or disconnect the power cable with wet hands.
 - When you sense any smoke or smell, turn off the engine and remove the power cable.

3 Specifications Full HD Digital Recorder System

Item	Specifications	
Camera	Front (main body)	1/2.8" 2.0MP CMOS Sensor
	Rear	1/2.7" 2.0MP CMOS Sensor
	Angle of view	Front: Diagonal 136°/Rear: Diagonal 120°
Resolution /Frames	Front/Rear(2CH)	Front camera: 1,920 x 1,080 (up to 30 frames) Rear camera: 1,920 x 1,080 (up to 30 frames)
	Video/Audio codec	Video: H.264 / Audio: ADPCM
Recording	Normal recording	Records video by the unit of 80 MB (80s for 1CH, 40s for 2CH) in driving mode.
	Event recording (G-sensor, shock)	Records video by the unit of 40 MB (40s for 1CH, 20s for 2CH) after shock.
	Parking event recording	Records video by the unit of 40 MB (40s for 1CH, 20s for 2CH) after shock or motion detection in parking mode.
	Continuous recording method	FIFO by mode when the storage for each mode is exceeded
	Audio recording	Audio recording supported (ON/OFF)
	Storage device	32 GB micro SD card (upgradeable to 64 GB)
Display	Internal playback	3.5 inch HVGA LCD
	External playback	Specified PC Viewer
Dimensions /Weight	112 x 68 x 31 (mm) / 110g (The main body except the mount)	
Environment	Operating temperature: -20°C ~ +70°C	
Rated voltage	Operating voltage	DC 12 V/24 V
	Power consumption	4W (for 2 CH)

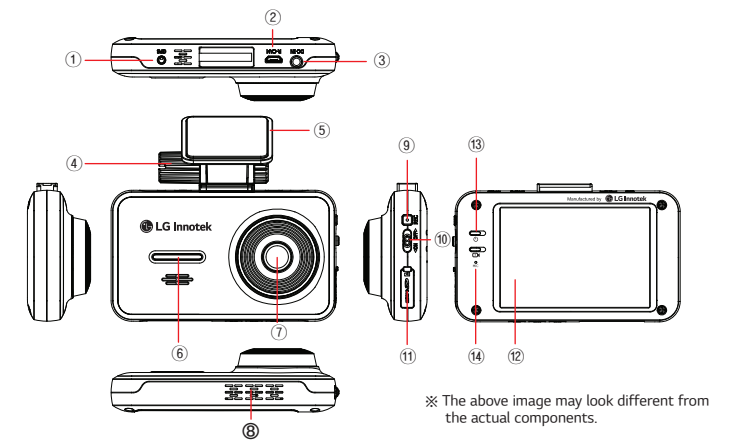
- ▶ Manufacturer : LG Innotek CO., LTD/Korea
- ▶ Device name : Car Dashcam
- ▶ Model name : BBDB-FF02E
- ▶ Date of manufacture : Declared on the label

4 Components Full HD Digital Recorder System

The following components are provided with the product upon purchase.

※ The above image may look different from the actual components. The components of the product mentioned in this Quick Manual are subject to change without prior notice to improve its performance.

5 Name and Function of Each Part Full HD Digital Recorder System



① External GPS connection terminal	⑥ Security LED	⑪ Micro SD card slot
② Power cable connection terminal	⑦ Lens	⑫ LCD display
③ Power cable connection terminal	⑧ Speaker	⑬ LED indicator
④ Mount fixing screw	⑨ Manual recording button	⑭ Embedded microphone
⑤ Mount	⑩ Power button	

6 Installing the car dashcam Full HD Digital Recorder System

- Installation Procedure**
Before installing the product, read the manual thoroughly, select an installation location on the front windshield, and clean the area.
 - ① Remove the double-sided tape from the mount and select a location to attach the mount on.
 - ② After attaching the mount, adjust the shooting angle by turning the up/down and left/right adjustment screws. (Turn on the main body to check angles and positions.)
 - ③ After confirming the shooting angle and position, tighten the screws to fix the mount.
- Installation Location**

7 Basic Functions and LED Operation Full HD Digital Recorder System

▶ Basic Functions

Operation	Condition	LED		Description
		Red	Green	
Booting	Booting	Flash	Flash	Each LED flashes once and immediately turns off
	Failure to find SD card	Blink	OFF	The red LED blinks.
	Failure to find camera	OFF	Blink	The green LED blinks.
Normal mode	Normal	OFF	Flash	Records video by the unit of 80 MB in driving mode.
	Event	Blink	Flash	Records video by the unit of 40 MB after shock.
Manual recording	Button	Blink	Flash	Records video by the unit of 40 MB when the Manual recording button is pressed.
Parking recording	Event (Motion/Shock)	OFF	OFF	Records video by the unit of 40 MB after shock or motion detection in parking mode.
Rear camera	Flip horizontal	-		The user can flip the video horizontally by pressing the rear camera's left/right button.

- ※ The LCD screen automatically turns off in the Parking Recording mode.
- ※ Select the flip horizontal button of the rear camera without turning on the power.
- ▶ High Temperature Prevention Function
When the temperature inside the car rises, the High Temperature Prevention function is activated in order to prevent malfunctions and protect the product.
If the High Temperature Prevention function shuts down the system, rebooting is required to restart the product.

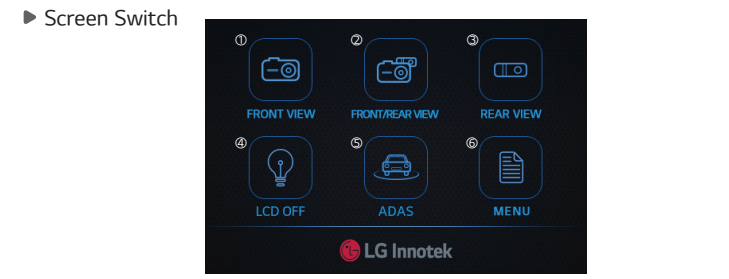
▶ Security LED status

Mode	Security LED	Description
Normal mode	Normal	Front white LED blinking The left and right LEDs blink alternately.
	Event	Front white LED OFF -
Parking recording	Recording	Front white LED blinking The left and right LEDs blink alternately.
	Event	All front white LEDs blinking At 1-second intervals

8 Screen Configuration and Screen Switch Full HD Digital Recorder System



NO	Function	Description
①	Menu	Main menu used to play videos or edit settings.
②	GPS	Displays GPS connection. (Activated when GPS is connected)
③	Time/Date	Displays the date and time of the product.
④	Vehicle speed	Displays the vehicle speed. (Activated when GPS is connected)
⑤	Voltage	Displays the supplied voltage.



NO	Function	Description
①	Front View	Displays only the front camera footage on the screen.
②	Front/Rear View	Displays both the front and rear camera footages on the screen.
③	Rear View	Displays the rear camera footage on the screen.
④	LCD OFF	Turns off the LCD screen.
⑤	ADAS	Allows you to turn on/off the ADAS function and edit its settings.
⑥	Menu	Allows you to view recorded videos and edit various settings