Autorecord

FullHD1080P

2.7"LCD

TOUCH

PANORAMA II
1920x1080pixel 30fps

USER MANUAL

Table of Contents

1. Introduction

PANORAMA II blackbox that can record and play full HD
files is developed to help you drive safely.
It has HD LCD monitor and save the files in the SDHC
memory cards. So you can play the recorded files
in accident.

1. Auto Recording
2. 2.7″ TOUCHSCREEN LCD Display
3. 1920x1080pixel 30fps FULL HD recording and playback
4. Record voice simultaneously.
5. 4~32GB SDHC memory cards
6. Record the files approximately for 6 hours by using
   a 32GB memory card.
7. G-sensor
8. Motion detect
9. It is not necessary to install any other software
   on your computer. It can play the recorded files with
   internet media players(such as GOM Palyer,
   DAUM Pot Player, KM Player).

*Important Note
The information contained in this guide is subject to
change. For more detailed information, visit our web site.
And then setup using the information to personalize your
blacbox.

2. Blackbox Main Features

2.1 Auto Recording

Start recording automatically when you start the car. Stop recording and saving the files automatically after power is turned off..

*Continuous Recording

The figures indicate the maximum continuous recording time.

4GB - approximately 45min
8GB - approximately 2hour
16GB - approximately 3hour
32GB - approximately 6hour
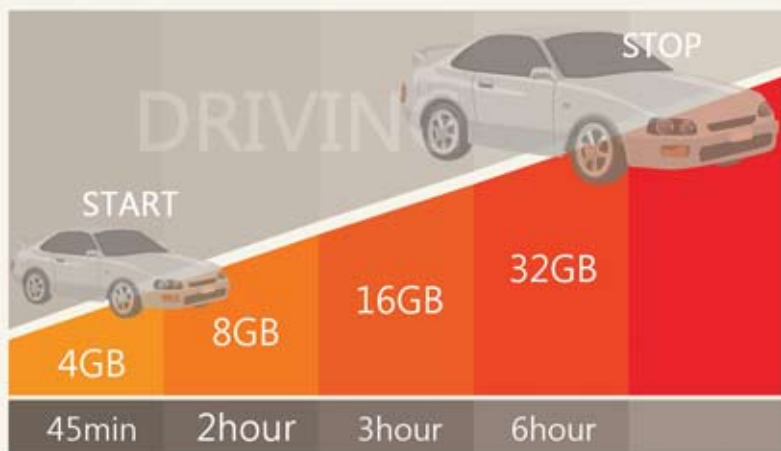
*Loop Saving

EX> **If it save 10 files, it deletes the first file that has recorded the first when the memory is full.**

2.2 <2.7">TOUCH LCD

* You can check the recording screen during driving and parking recording.

Blackbox bolt
Holder detaching

Mic
Audio ON/OFF
Power
Menu button
2.7"LCD
GPS
Protect
AV-OUT
LED

2.7"Wide LCD(Touch screen)

2.3 1920x1080pixel 30fps

*Recording the files of 1920x1080pixcel 30fps

-It can record 30 images of 1920x1080 pixcel in one second

-The loss of between the files is approximately 0.1 second.

2.4 Motion dection

*The recording system will be switched over to standby mode
when you park or stop the car.
 And start recording the files when you move the car.
 It is useful to record the files for a long time (approximately 6 hours).

2.5 Picture

* You can record a video or take a picture whenever you need.

2.6 A file type is MP4 of MPEG

-Various system operations can be performed.

2.7 4~32GB SDHC Memory cards

*FULL HD

4GB - approximately 1hour
8GB - approximately 2hour
16GB - approximately 3hour
32GB - approximately 6hour

2.8 G-sensor

-If G-sensor value changes, the file turns to protected file
that can not be overwritten.
Formatting the memory will delete the protected files,
please save the files on your computer.

3. Product Contents

Product Contents	Quantity
Blackbox	1
Power adaptor	1
Manual	1

Full HD Blackbox

USB

Power button

Memory slot

Speaker

SONY 2.0M

Power adaptor

User manual

* Important Note

The components of this manual may differ actual components.

4. Warnings

1. Do not place the blackbox near a heat source or strong sunlight.
   (If you expose the car to the sun for a long time, you should have to air the car.)

2. Do not allow metal objects (such as coins or hair pins) or flammable substances. such conditions could lead to fire.

3. Do not drop the blackbox. That could damage to the disk or LCD monitor.
   (You cannot repair for free.)

4. Do not place the blackbox in humid, fog or smoke areas.
   Such conditions could lead to damage.
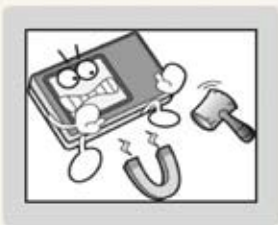
5. Do not bang the blackbox with solid objects. Never place the blackbox in close proximity to electric devices.
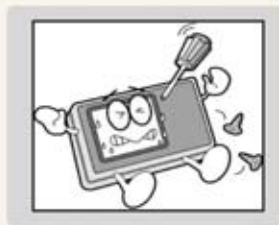
6. Do not attempt to disassemble or alter any part of the equipment. We make no warranties for damages resulting from disassembly.

7. The power adaptor is designed for exclusive use with this equipment. Do not use other products. (The damages resulting from using the other products, you need to pay for the repair.)

8. Securely connect the blackbox with the specified cable.

4.1 Notice

1. Use only included power adaptor.
(The damages resulting from using the other products, you
    need to pay for the repair.)
2. Do not allow flammable substances or electric devices.
3. In strong sunlight or bright light it will be recorded darkly.
    Select the location properly when you install the blackbox.

4.2 An interference and compatibility

- Do not place the blackbox near the electronic devices.
    It may cause the unit to distort.
(1) If the blackbox is installed near the devices that can receive
    the signal, it may cause interference with reception.
(2) Do not connect power adaptor to multi-cigar jack with other
    devices. Because it may lead to malfunction of video quality.

* Please be careful when you install the blackbox.

4.3 Repair

Only authorized service centers should perform system
maintenance and repairs. We are not responsible for data loss
resulting from malfunction of SD memory cards.

4.4 Dispose

If you ever dispose of your blackbox, discard properly
according to the recycling system of your country.

5. Function & Named

5.1 Named

5.1.a. Front view

- USB
- Power button
- Memory slot
- Speaker
- SONY 2.0M

5.1.b. Back view

- Blackbox bolt Holder detaching
- Mic
- Audio ON/OFF
- Power
- Menu button
- GPS
- Protect
- AV-out
- LED
- 2.7"Wide LCD(Touch screen)

5.1.c. Side

*Right(Memory slot)

SD Memory

*Left (Power)

Power
GPS
AV-out

>> INDEX 1
   A. SONY 2.0M
   B. Speaker
   C. USB
   D. Power button
   E. Memory slot

>> INDEX 2
   a. Blackbox bolt Holder detaching
   b. Mic
   c. Power : DC IN 12V
   d. GPS
   e. TV-Out
   f. GPS
   g. Audio ON/OFF
   h. Menu button
   i. Protect
   j. LED

5.2. Named

5.2.a. Function buttons

Blackbox bolt
Holder detaching

Mic
Audio ON/OFF
Menu button
Protect
LED

Power
GPS
AV-out

2.7"Wide LCD(Touch screen)

* The function button after stopping recording the files.
- Touch the LCD screen during the recording, Stop or start
  recording the files.
- In standby mode,
  if you touch the menu
  button on above image,
  the right side of the
  menu appears.
- You can set the user
  environment with these settings..

① Power
- Power ON/OFF
- Exit the menu

② Menu button
- Enter the menu/
  Exit the menu
- Enter the play menu

③ Audio
- Audio ON/OFF
- Date/Time UP

④ Protect
- Enter viewing photos/
  Exit viewing photos
- Date/Time Down

5.2.b. Function button

*LCD touch screen and on the right side button

1. LCD touch screen button
   - Start recording automatically when you start the car.
   - Stop recording : Touch the screen, Press the power button one time.
2. Enter the setting menu
   - On the right side menu button
   - If you press the menu button, the menu appears.
3. Select the menu
   - Touch the menu on the LCD screen to select the item.
   - You can select the forced recording button at the bottom right corner of the image below.
   - If you press the menu button on the screen, the menu which you can set appears.
4. ex) Enter the setting menu
   - Press the setting menu on the LCD screen.
   - You can select the menu button by using the forced recording button.
5. If you press the power button one time, return to previous menu.

*Power button

*LCD Button

*Menu
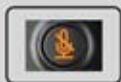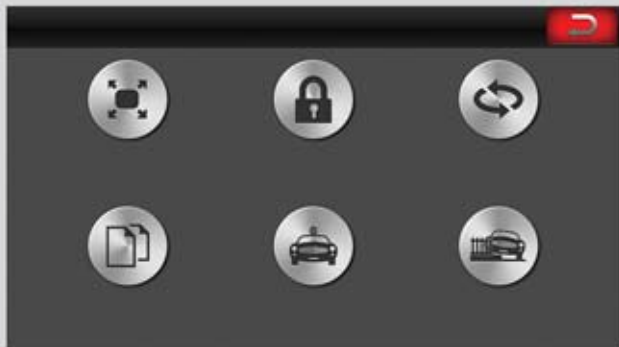
6. Installation

6.1 Front / Back

*Front view

USB

Power

Memory Slot

Speaker

SONY 2.0M

SAFE DRIVING BLACK BOX

*Back view

Blackbox bolt
Holder detaching

Mic

Audio ON/OFF

Power

Menu

GPS

Protect

AV-out

LED

2.7"Wide LCD(Touch screen)

6.2 Left/Right

*Left(Power)

Lens

Power : DC12V

GPS

AV-out

*Right(Memory slot)

Memory slot

Audio ON/OFF

Menu button

Protect
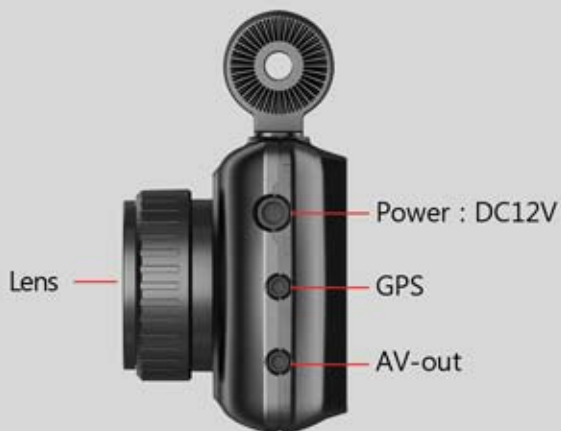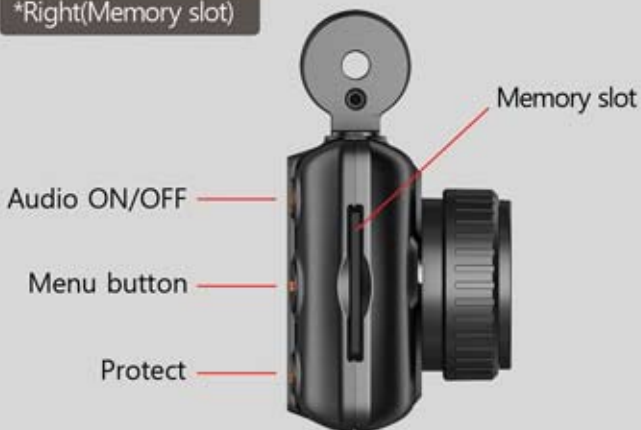
6.3 Up side

USB   Power button

1. Power button : Power ON/OFF
2. USB

6.4 Install the car mount

1) Open the cover and then insert a memory card.
2) Operate the blackbox before installing the car mount.
3) Set the position of your blackbox through the LCD monitor.
4) Attach the double-sided tape where you want.
5) Connect the car mount to blackbox by using a bolt.
6) Control the angle before tightening a bolt.

* Important Note
- Ensure that a memory card is correctly oriented before inserting
  it in the blackbox. Front is the gold chip side.
- Be careful strong mount adherend side.
- The position of installation may differ depending on each driver's
  build or car type.

6.5 Install the car interior wiring

* The car interior wiring may differ depending on the car type or other devices.

1) Please install the car interior wiring without restricting driver's movement.
2) Do not connect a power adaptor to the cigar jack with other devices. It may cause the units to distort.
3) When you install the blackbox leave a little space between it and other devices.
4) Please leave a little space between the blackbox and the devices (such as DMB, GPS antenna).
5) Do not cut the cigar jack. And use only included power adaptor.
6) If you cannot install it by yourself, please contact the professional.

6.6 Insert a memory card

6.6.1 Inserting a memory card

1. SD memory card

   Insert a memory card.

(1) Ensure that turn off the blackbox before inserting a memory card.

(2) Ensure that a memory card is correctly oriented before inserting it.
    If it is installed correctly,

    it start recording after start the car or turn on.

* Back View (LCD monitor side)

* Important Note

- Please format a new memory card in your blackbox.

- You can use the SD memory cards.

- You can use 4~32GB memory cards stably.

- You are recommended to use a memory card that has been
  formatted in your blackbox to record.

* The blackbox may not recognize the SDHC memory cards.
  If it occurs, Please consult your distributor.

* Please format a memory card on a regular basis.
  (once a week or at least once a month)

6.6.2 Recording and Safety Precautions

1. It cannot record the files as follows
- When the blackbox does not work.
- When the blackbox does not have a memory card.
- When the blackbox or a memory card is broken because of accident
- When a memory card comes out during recording
- When the power adaptor does not connect or the power cable is cut
- When a memory card has other data or a is infected with a virus
- When the blackbox is not fixed on the front window of the car
- When a memory card is not recognized or faulty
- If the blackbox cannot record the files stably in accident,
  do not format a memory but consult the data recovery center.

2. Safety Precautions
* Be sure to read, understand and follow the safety precautions.

1) Dangerous
- Keep this equipment out of the reach of children. Children may
  damage to the equipment. Placement of the wire around the
  child's neck could result in asphyxiation.
- Use only included power adaptor. Use of power adator not
  expressly included resulting in fire and electric shock.
- The blackbox or power adaptor should not be immersed in water.
  This equipment is not waterproof. If it occurs,
  please turn off and keep the equipment dry completely.
- Please install the blackbox properly. The fallen blackbox could
  interrupt driving.
- Avoid dropping or subjecting the blackbox to severe impacts.
  It may result in fire or malfunction.
- Be careful dead battery in winter if you connect the blackbox to
  the car battery directly.

2) Warnings

- Do not attempt to disassemble or alter any part of the equipment.
  It may result in electric shock.
- Please consult your blackbox distributor or authorized service
  center to repair.
- Stop operating the equipment immediately if it emits smoke or
  noxious fumes. Continued use of the equipment may result in fire
  or electric shock.
  In this case turn the blackbox power off and consult distributor or
  authorized service center.
- Do not use substances containing alcohol, benzine, thinners or
  other flammable substances to clean.It may result in fire.
- Do not cut or damage the wire.
  Please do not install the car interior wiring too tightly.
- Do not handle the power cord if your hands are wet.
  It may result in electric shock.
- Do not bring the metallic objects(such as key rings) into contact
  with the wire. It may result in fire, electric shock or overheating.
- Do not operate the blackbox while driving.
- Watching the LCD monitor or press the malfunction buttons causes
  traffic accidents.
- Install the blackbox securely so that the blackbox does not fall off.
- Please use a spare memory card.
- Be careful dead battery in winter if you connect the blackbox to
  the car battery directly.
- Do not remove a memory card in accidents.
  The last file may be corrupted.

*** If the blackbox cannot save the files stably, do not
format a memory card but consult the data recovery
center.**

3) Caution

- The blackbox or wire may differ the function of other devices.
- Please install the blackbox and wire without restricting driver's movement.
- Do not use the blackbox for a long time with turning the car battery on after stop the car. It may run down the battery.
- Do not put the something into the blackbox. It may result in fire or defective products.
- Avoid placing the blackbox in places subject to high or low temperatures. Strong sunlight or excessive low temperatures may cause deformation of the casing or malfunction.
- Do not use SD memory cards with dirt. Using the SD memory cards covered with sand, dust, water or coffee may cause malfunction.
- Ensure that turn the blackbox off after removing the memory cards or blackbox. If you remove the memory cards turned on, it may result in malfunction.
- When you play the recorded files on your computer it is possible to slow down. If it occurs, please play the recorded files after copying files to the computer or using a higher computer.

- Please use Window Media Player, GOM Player or KM Player to play the recorded files.

7. Operation

7.1 Preparations

1. Connecting to the Power

(1) Connect the blackbox to the power by using included power
   adaptor.

   *Use a 12V power adaptor. The blackbox uses 12V 1A as a power
   source.

(2) Please arrange the wire without disturbing driving.

7.2 Turning the Power On, Off and Power Saving Function

1. Turning the Power On

When you start a car, the blackbox is turned on automatically.

And then it records the files approximately in 5~15sec.

You can turn on or off by using cigar jack switch.

The indicator light on the upper-right side is off when the blackbox
is turned off.

*** You are recommended to use a memory card that has been
  formatted in your blackbox to record.**

2. Turning the Power Off

To turn the blackbox off, you must stop the car or turn the
cigar jack switch off.

* Important Note

- Ensure that the indicator light on the under-right side is off after
  stopping the car or turning the power switch off.

- To restart the blackbox when the power is off, you must turn
the power on after the electric power of the cigar jack is out.

3. Power Saving Function

- You can turn the LCD monitor off during recording.

- You can turn the LCD monitor on to watch recording or turn
  the LCD monitor   off during recording.

7.3 Recording

7.3.1 Preview

Start recording upon turning the blackbox on and stop recording by pressing the Enter button.
The time of recording files is displayed in the upper-right-hand corner of the monitor. When you stop recording, front view and present time are displayed.

* The time available on the memory to save the files

Preview mode   06:23:02

2012 / 10 / 15 17 : 10 : 45

현재 시간

* Starting Recording

1. Turn the blackbox on (Starting recording)
2. Start recording by pressing the Enter Screen in the preview mode.
3. The time displayed in the upper-right-hand corner of the monitor.
- The time shows remaining memory capacities to save the files.
- It shows decreasing time in proportion to remaining memory
  capacities to save the files when the files are overwritten.

Ver.1　　　　　　　　　　　　　　06:03:02

Please insert card

2012 / 10 / 15 17 : 10 : 45

* Important Note

The blackbox can record with a memory card.

"Please insert card" message will be displayed when the blackbox

does not recognize or without a memory card.

- A new memory card has been formatted in Windows.

  "Please insert card" message may be displayed when you

  format the memory cards in your computer.

- It is not faulty products but different operating system.

  Please format the memory cards in the blackbox to record.

*The time available on the memory to save the files

06:06:50

* The following examples may differ depending on formatted memory cards.

- As the blackbox records the files the time available on the memory to save the files is decreased.
- When the free space on the memory to save the files is decreased the files are overwritten. And then the time available on the memory to save the files will be displayed in 10 minutes regardless of the memory capacities.

*Memory	*Time
04GB	00 : 32 : 30
08GB	01 : 20 : 07
16GB	03 : 10 : 42
32GB	06 : 00 : 30

4GB   8GB   16GB   32GB

* Actual memory capacity will be displayed when you format a memory card in your blackbox.

7.3.2 Recording

Start recording when you press A button in the preview mode
or start the car.
Recording date and time are displayed in the lower of the monitor.
The recorded file format type : CLIP0001.MP4

Button:
1. Stop : LCD screen touch (Push the Power button 1time)
2. Play : LCD screen touch (Push the Power button 1time)


* Saving type of the recorded files

1. Save the files in folder MEDIA100 in folder DCIM when it starts
   recording.
2. File type : CLIP0001.MP4
3. Present time - yy/mm/dd 00:00:00 (h:m:s)
   The time of recording file - 00:00:00 (h:m:s)

7.3.3 Play the files

Enter the setting menu by pressing the menu button in preview mode.

* Press the play button on the LCD screen.
- Check the recorded files from the list and select the file that you need.

Selected file / Total number of recorded files

0049/0050
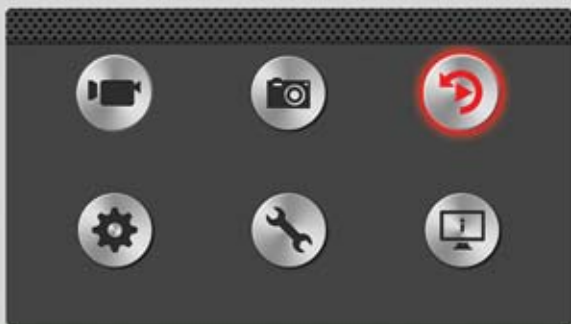
* Enables you to delete and preview the saved files.

7.3.4 Delete the recorded files

* Delete the saved files

- Stop recording(Preview mode)
- Press one time screen
- Menu(Setup)
  Select Play button

- Menu button

🗑 - Delete file : Delete the selected file

🔒 - Protect : Protect the selected file in order to avoid overwriting.

🔓 - Unprotect : The file will be deleted by overwriting it.

Selected file / Total number of recorded files

0049/0049

*Important Note

① You must set protected files that are important.
② The protected file is not overwritten except for formatting the memory.
③ You must save the important files on your computer or another memory although you set the protected files.

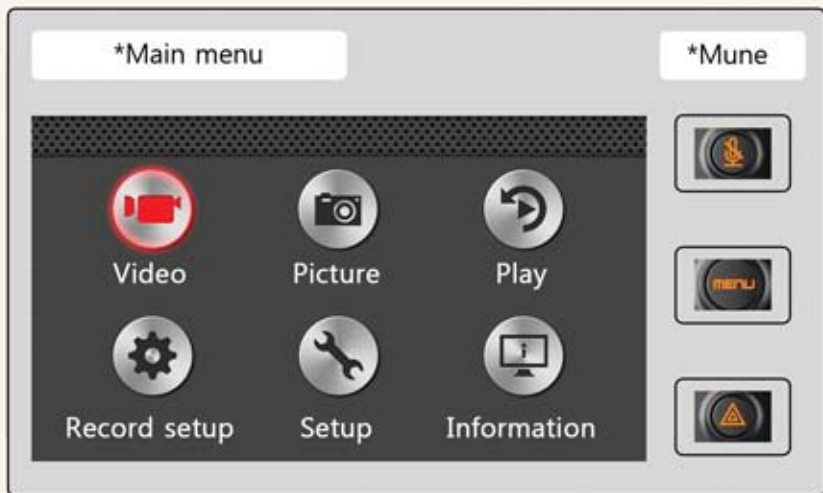*You can delete, protect, unprotect the files on the left side menu.

8. MENU

8.1 Main interface

If you select the menu for the first time, the initial video menu appears.

*Main menu		*Mune
Video	Picture	Play
Record setup	Setup	Information

*Select the menu

Select the menu after stop recording the file.

1. Video - Preview mode
2. Photo - You can take the photo.
3. Play - You can check and play the recorded files.
4. Recording setup - Set a variety of functions including resolution, shock sensitivity and motion sensitivity during the recording.
5. Setting - You can set the date, language and format.
6. Information - You can check the operating system information.

*Important Note

Please consult the service center or distributor about firmware information and upgrade.

8.2 Picture

*Select the second menu button of photo.

*Main menu   *Menu

- Video
- Picture
- Play
- Record setup
- Setup
- Information
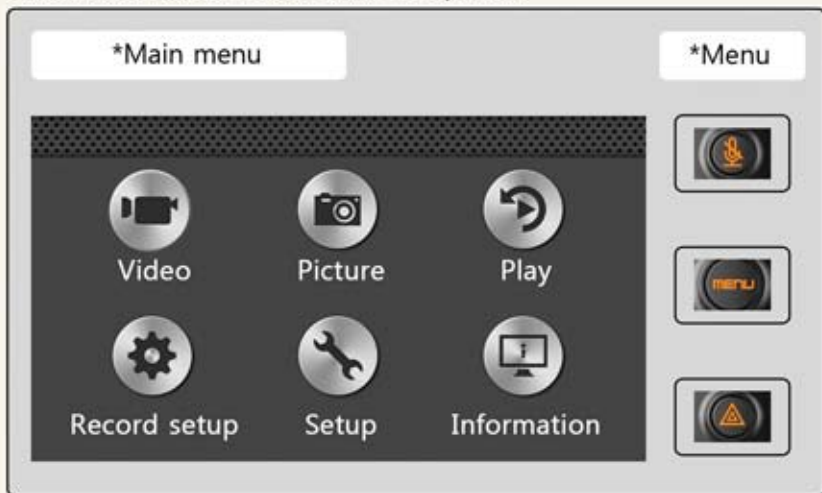
*Photo menu

- Align you subject in the LCD screen and touch the screen to capture the photo.
- You can play back captured files that are placed in sequence.
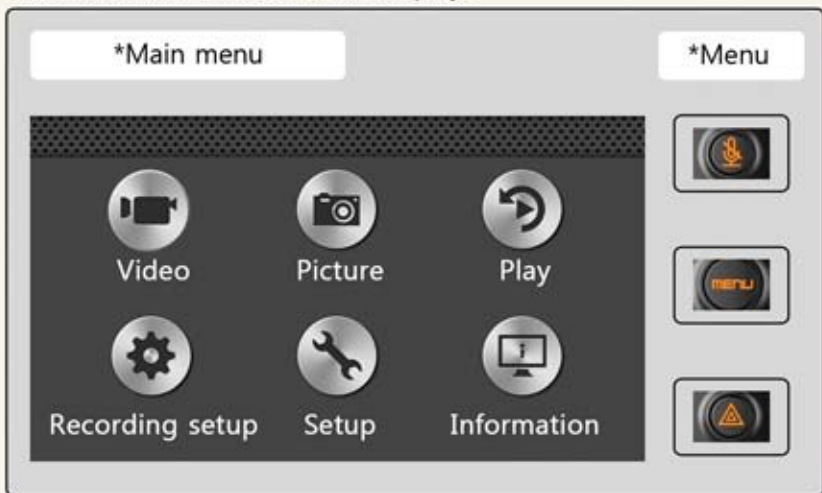
- Viewing photos

- File menu

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*The file menu functions are the same as video viewing menu. Press the viewing photo button one more, return to the preview menu.

8.3 Play

*Select the third menu button of play.

*Main menu   *Menu

Video	Picture	Play
Recording setup	Setup	Information

*Play menu

- Press the play button.
- Select the file by using left/right button.
- Press the file menu button, the below menu appears.

🗑 : Delete   🔒 : Protect   🔓 : Unprotect

- Exit the play menu

- File menu button

0049/0050

*The file menu functions are the same as the viewing video menu functions.
And press the view photo button one more, return to the preview menu.

8.4 Record setup

*Select the set up mode of video.

*Record setup menu   *Menu

Resolution   Protect   Length

Video overlap   Motion detect   Gsensor

- As shown above the six menus appears.
  You can set the user environment with
  these settings.

1. Resolution

① 1920x1080 30FPS : Full HD(1080p)
② 1280x720 30FPS : HD(720p)
③ 1280x720 60FPS : HD(720p) - It can take 60 pictures per second.
   *Please personalize your blackbox.

* Important Note

The file size and definition may differ depending on resolution.
Please adjust quality settings.
- 1080p is higher resolution than 720p. Higher resolution uses more
  memory space. So it can save fewer files of 1080p than 720p.
- 720p is lower resolution than 1080p. Lower resolution uses less
  memory space. So it can save more files of 720p than 1080p.

2. Poretct
- The all recorded files can not be overwritten.

*Record setup menu   *Menu

Relolution   Portect   Lenght

Video overlap   Motion detect   Gsensor

3. Length
- You can adjust the storage time of the recorded files.
- ①min, ②min, ③min, ⑤min, Off

4. Video overlap
- If you want to save the file long tie, adjust the storage time.
- EX) If you set one minute of the storage time and zero second of overlap,
    the first file will be recorded for one minute.
    If you set one minute of the storage time and one second of overlap,
    the first file will be recorded for one minute and one second.

5. Motion Detect
- If a car is parked or stopped, the mode is automatically
  switch to the standby mode.
  The recording starts again if the movements(color changes)occur
  on the screen.
- ex) If you stop or park the car, it is automatically switch to
    the standby mode after saving the file for one minute.
   If the movement occur, start recording the file.

6. 6. G-sensor

- If G-sensor value changes because any shock is detected during the driving, the file will be saved with locked icon that can not be overwritten.

*Record setup menu		*Menu
Resolution	Protect	Length
Video overlap	Motion detect	Gsensor
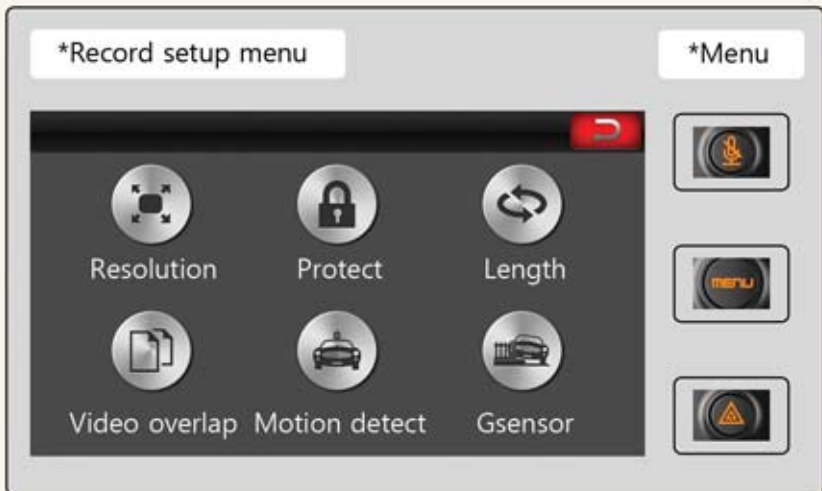
- Gsensor : Low, Nomal, High, Off
- EX) If the shock is less than the G-sensor value,
   the file doesn't turn to protected file due to the different G-sensor value. Please check the car before driving and after parking.
   If you have any problem with your car, stop recording and check the files.
- The files that are created as a shock detection have locked icon. It is easy to check the files.
- If the files that are created as a less G-sensor value are not protected, check all saved files during the parking.
- If any shock is detected, shock image appears and the file turns to protected file for 20 seconds. After 20 seconds, the protected file turns to normal file.

8.5 Setup

*Select the setting menu

*Menu

Date/Time	Language	Audio
Format	TV	LCD
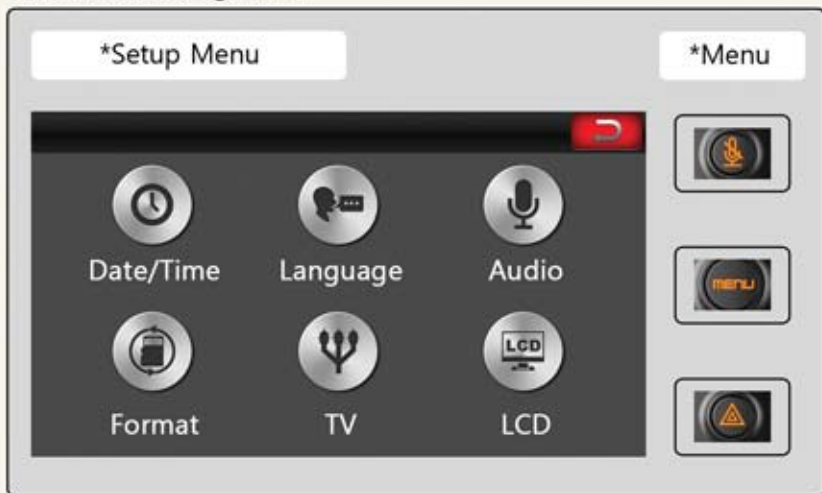
- As shown above, the six menus appear. You can set the user environment with these settings.

1. Date/Time

It is displayed year/month/date.

* When the battery for saving time is dead because of stopping the car for a long time, setting time may differ present time. If that happens, please set the date and time.
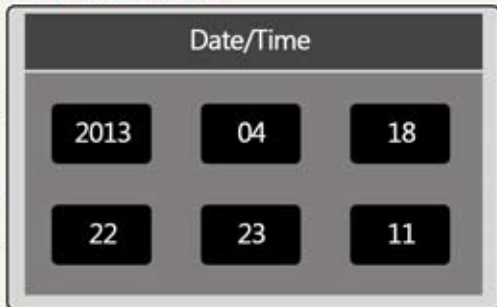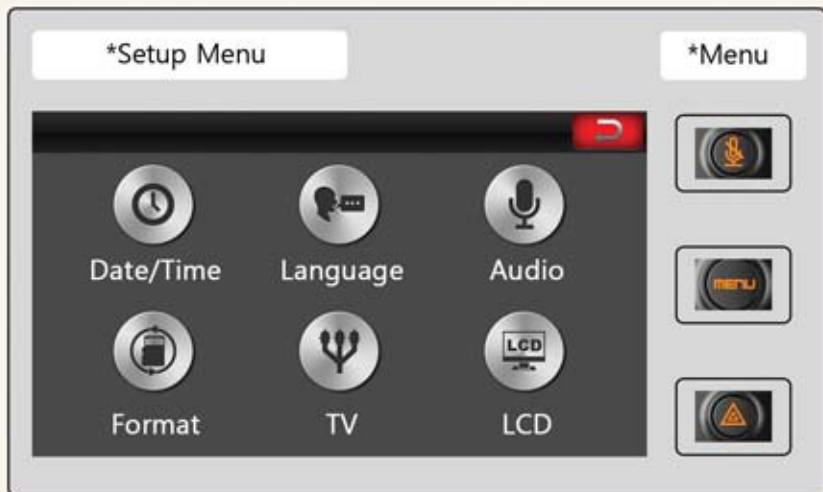
- UP

- Return

- Down

Date/Time		
2013	04	18
22	23	11

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2. Language
- Set a language. The blackbox shows on the display.
 (English, Russian, Japanese and Korean)

3. Audio
- Select whether or not to use voice recording during the recording.
 (ON/OFF)

4. Memory format

- Delete All files
1. Please note that formatting an memory card erases all data in
   an accident.
2. If an error occurred during recording at the time of the accident,
   please contact data recovery center.
   Do not format a memory card.
3. Save the important files on your computer.
   Use a memory card after formatting.
4. Please format a memory card on a regular basis.
   (Once a week or at least once a month)
   It can decrease the malfunction of blackbox and memory cards.

5. TV transmission system
- NTSC, PAL

*TV transmission system

- NTSC is used throughout the world, including the South Korea, Japan, U.S. and Canada.
- PAL is used throughout Europe and China as well as in various Africa, South American and Middle Eastern countries.

6.. LCD
- The LCD limit time is set. If it is set to 30 seconds, LCD will be turned off after 30 seconds. If it is set to 60 seconds, LCD will be turned off after 60 seconds. If it is set to OFF, LCD will be turned off all the time.
- If you set the LCD limit time, the LCD will be turned off only. (Record the files or capture the photo will not stop.)

8.6 Information

*Select the information

*Menu

Video Picture Play

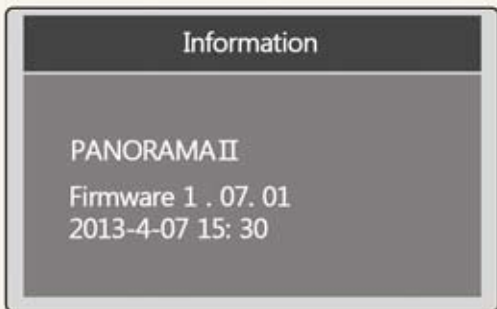Record setup Setup Information
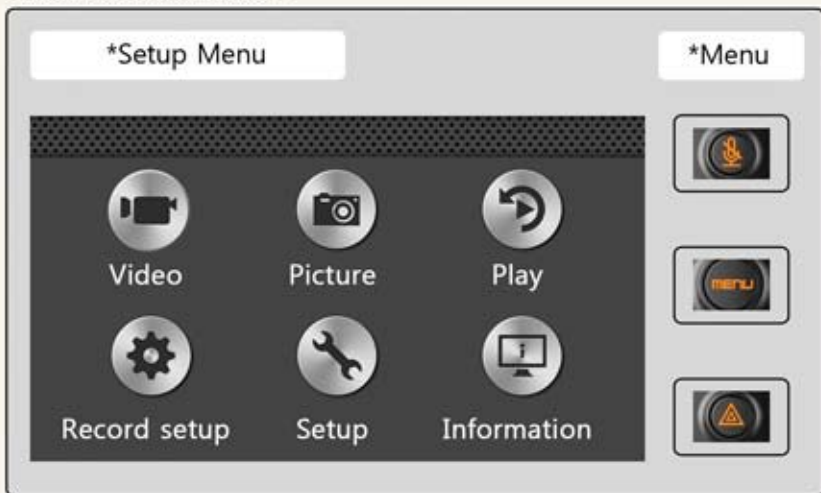
- You can check the main system information.
  Each version function may differ.

*For more detailed information about firmware or
 product, visit our web site or authorized service center.
 Please contact service center, if you need to upgrade.

Information
PANORAMAII Firmware 1 . 07. 01 2013-4-07 15: 30

8.7 GPS (External receiver Option)

1. You can check information about speed and location by receiving the signals from satellite.
2. Information differences may occur due to signal delay.
3. You can check the information on the left bottom of the screen.
4. GPS receiver is purchased separately.

H : 37.317492
E : 126.569746
61.75km/h

8.8 Gsensor, GPS

Gsensor
X-axis : 0.000   Y-axis : 0.000   Z-axis : 0.000

GPS
H : 37.317492   E : 126.569746   61.75km/h

8.9 Memory Card

1. Select a memory card.

a. The speed and capacity of memory card
* SDHC can record the data very quickly. Memory cards with more capacity can record more data for a long time.

b. Memory compatibility
* An compatibility between a memory card and the blackbox may differ depending on producers. Please consult a distributor or authorized service center.

2. Explaining the words of memory

a. SDHC
* The speed of SD memory cards may differ depending on high speed mode class.

b. Class (Various ways depending on producers)
* Various speed marking styles depending on producers. (4~10 class)
- Check recording speed and reading speed.

3. Memory type

a. SD/SDHC
* The compatibility between SD and SDHC may differ. Please check to enable you to connect your memory cards to computer or USB reader.

b. Speed
* The reading and recording speed of SDHC memory cards is very fast. When you play the recording files on your computer, it is possible to slow. If it occurs, please play the recording files after save the files to the computer or use higher computer.
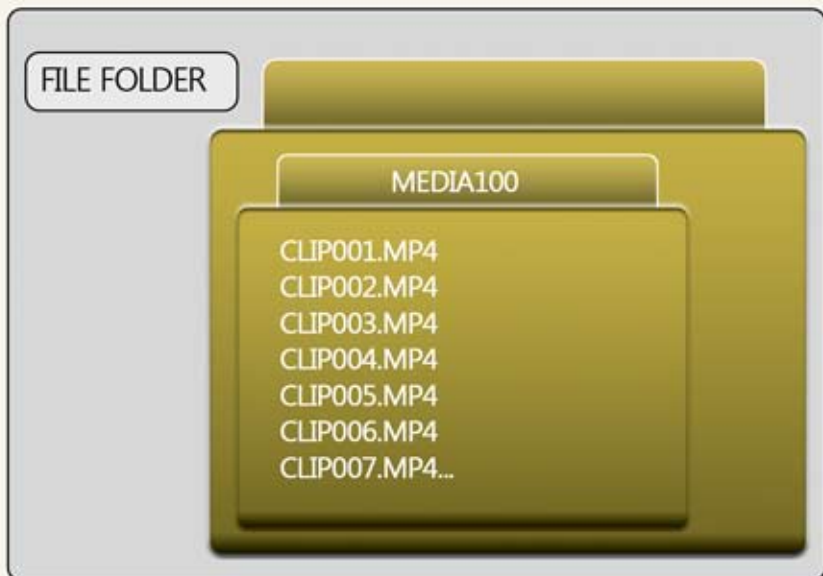
*Notation

9. **Playing the recorded files**

* The recorded files can be played in your black and computer.

1. The file type is MP4 codec that is an MPEG.
2. Window Media Player, Gom Player, Daum Pot Player, KM Player are the suitable programs that can be downloaded easily.
3. Enables you to adjust the monitor such as the brightness, chroma, removing after images, removing block and removing noise when playing a file on above programs.
4. The files can be played on every player program that has codec.

* This will appear when you connect a memory card to computer.

FILE FOLDER

MEDIA100

CLIP001.MP4
CLIP002.MP4
CLIP003.MP4
CLIP004.MP4
CLIP005.MP4
CLIP006.MP4
CLIP007.MP4...

* When you play the recorded files on your computer it is possible to slow. If it occurs, please play the recorded files after save the files to your computer or use higher computer.

10. Self-Diagnosis and Safety Precaution

Q1 : How can I check the firmware?

A1 : The firmware is the latest version when you buy it.

You can check the firmware serial number at our web.

And for more update information, visit our web.

Q2 : Can I reinstall the blackbox in another car and use it?

A2 : Please install car mount you have or a new car mount in
another car.

Q3 : How can I format the SD memory cards?

A3 : You can format the SD memory cards in setup mode in your
blackbox.

Please format the SD memory cards in your blackbox

even if format the SD memory cards on your computer.

* We will send a formatted memory card.

  The more memory capacity may take time to recognize.

* You can format a memory card in setup mode.

* You are recommended that SD memory cards must be formatted
 in the blackbox.

Q4 : I install the blackbox. Is it possible to control the angle?

A4 : Its joint can move 90 degrees. Ajdustment is limited.

Please note that install it after consideration.

Please note that using adsorption car mount during driving may
result in bad quality.

Q5 : Where is the suitable location to install the blackbox?

A5 : Please install it without blocking the driver's view.

   The blackbox is for the car and you can use it for home or store.

(You are recommended that install the blackbox by watching the
 LCD monitor.)

Q6 : How can I check the blackbox that works properly?
A6 : You can see the recording screen after start the car.
The blackbox starts recording the files automatically
after start the car.
Also you can check red indicator in the
upper-left-hand corner of the monitor.

Q7 : It's not enough wire length.
A7 : The wire is 3.5M. If it's too short, please move the
location of installation.

Q8 : SD memory cards do not work.
A8: Please contact the distributor or authorized service
center.
If you buy the SD memory cards by yourself, contact
the store.

Q9 : Power is not turned off when stop the car.
A9 : Please unplug cigar jack.

Use only included power adaptor when you install it at
the car center or by yourself.
If you connect it to different voltage, result in broken
blackbox or dead battery of the car.
* In this case, you must pay for the repair.
* Do not cut the cigar jack.
* Use only included cigar jack.

Q10 : Traffic lights blink or fade in recorded files.
A10 : This is a common occurrence in devices containing
lens.

Q11 : When the blackbox body is broken in accident, can I repair it?

A11 : In this case, We cannot repair it because of malfunction of the component.

< Safety Precaution >

* When you place the blackbox connect to cigar jack in a hot location, please turn power off.

* Be careful dead battery in winter if you connect the blackbox to the car battery directly.

* If you connect the blackbox to the car battery directly, please turn power off before start the car and then turn power on after start the car.

* If the temperature in the car exceeds 75℃, you have to air the car.

* Please format the memory cards on a regular basis (once a week) after save important files to a computer.

* When it cannot record because it does not recognize the memory card, you should format the memory card in setup mode. (The red indicator is on during recording.)

*Notice

a. In case blackbox stop recording
- Memory recognition instability
- Power instability during recording when the blackbox restarts.
  (When the recorded file is not completed.)
  (When the power goes out for more 1~3 sec.)
- Removing the memory card during recording.
- Voltage instability.

* How to handle the problems.

- Format the memory cards on a regular basis in the blackbox.
  (once a week or twice a month)
- When the blackbox do not recognize the memory card, format
  the memory card on your computer. (We recommend you select
  low level format.)
- If you cannot format the memory card in the blackbox or computer,
  consult the distributor.

* Important Note

- If the files due to the recording malfunction is in the memory card,
  do not format the memory card. Please consult data recovery center.
- Format the memory cards after save important files to the computer.
- When you format the memory cards on your computer,
  please check the error in property page.

11. Additional information

11.1 Specifications

Memory type	SDHC card, 4GB~ 32GB
Display	Display 2.7" TOUCH LCD
Cigarjak	12V~24V
AC Adaptor Input:	12~24V 50/60HZ
Output:	DC 12V
Mic	Built-in microphone
A/V Interface	TV-Out
Impact sensor	G-Sensor Bosh 3G Sensor
Camera Support	SONY CMOS 2.0M
Operation Temperature	-10℃~75℃
Angle	140°

*File System	FAT32
*File Format:	MP4
Codec:	H.264 MPEG-4
Component Video Signal:	NTSC
Resolution:	1920x1080@30fps (NTSC)
* Recording Format:	MP4
*Special Features One Button Recording	
*Time Stamp	
*GPS(External receiver Option)	

*Special function

1. File protected

   If the 3G-sensor value was changed very sharply,

   that file is protected.

2. Parking Mode.

   If the scene is not changed any value within 1 minute,

   it will skip the recording.

   It can be chosen on the setup menu.

3. This manual is subject to change depending on the function of the

   additions or changes.

   For more detailed information about firmware or product,

   visit our web site. Set the function appropriate for the environment.

12. Warranty

Our warrant this product is limited to the rule of consumer compensation for damage.

1. Please attach this warranty when you need to repair.
2. This warranty is invalid if the data of purchase or store you buy has been removed.
3. If you do not have this warranty, please attach the proof of purchase in the form of a bill of sale or receipted invoice.

Model Name	Panorama2
The date of purchase	
Warranty	One year
Store you purchase	
Customer information	
Name	
Address	
Phone number	

* This warranty does not cover for free as follows.

1. Damage due to act of God, fire, earthquake
2. Damage due to disassemble or to alter any part of the product
3. Modifications
   - Damaged cigar jack adaptor
   - Damage due to connection to improper power adaptor
4. Damage due to drop during moving
5. Without this warranty
6. Consumables
7. Damage due to putting the something into the blackbox or cleaning with toxic substance
8. Component combustion due to using for a long time
* We recommend that use it in 12hours.

- A/S Center
- A/S Center Tel : 070-8230-3469
- HOMEPAGE : www.powerucc.com