

**FULL** HD 2CH Blackbox

**PANORAMA X2**



## PANORAMA X2

The PANORAMA X2 Blackbox will record and play Full-HD video files. We want you to get the most out of your new premium dual-channel solution. You can use the built-in HD LCD to monitor and play back files stored in the SDHC memory card slots. This allows for quick access to view videos as needed.

### Features Include

1. Automatic recording
2. 3.5" Capacitive TOUCHSCREEN LCD Display
3. 1920x1080pixel 30fps FULL HD recording and playback  
Dual Channel Front & Rear (2CH Blackbox!)
4. Records audio from within the car
5. 16-128GB Micro-SD memory cards (>32GB if formatted as FAT32 in PC)
6. Record up to 6 hours if using a 32GB memory card  
(Larger than 32GB also supported, see page 27)
7. Built-in G-Sensor
8. Motion detection (pre-buffered events are captured moments before)
9. Parking mode (Low voltage cut-off, power control).
10. For Playback (maps with Optional GPS logger) use the following software

<http://RegistratorViewer.com>

<http://DashCamViewer.com>

<http://VideoLan.org>

#### **\*Important Note**

The information contained in this guide is subject to change. For more detailed information, visit our web site at <http://www.powerucc.com>



# Table of Contents

Product Contents	6
------------------	---

Blackbox Main Features	1. Auto Recording	7
	2. Loop Recording	7
	3. 3.5" TOUCH LCD	7
	4. 2CH F/R FULL HD 1080p	7
	5. Motion Detection	8
	6. Playback	8
	7. G-Sensor	8
	8. Parking mode Power control	8

Warnings	Notification	9
	Interference	11
	Compatibility	11
	Service & Repair	11
	Blackbox Features	11

Main Features	1. Main Features	12
	Front View (Lens)	12
	Back View (LCD)	12
	Left (AV-out)	12
	Right (Memory)	12
	Top (Power, Rear camera, GPS)	12
	2. Power	13
	3. Line (3-wire) cable	13

Operation	1. Preparations	14
	2. Turning the Power On, Off	14
	3. Power saving	14

Menu	1. Preview	15
------	------------	----



Main page .....	16
Parking mode	1. Parking G-Sensor ..... 18
	2. Parking time ..... 18
	3. Motion detection ..... 18
	4. Power control ..... 18
Beep	On/Off ..... 18
Format	Front memory / Rear memory ..... 18
File playback	File List/play ..... 19
Recording Menu .....	20
Rec minute	1, 2, 3, 5min ..... 21
Driving G-sensor	High, Middle, Low, Off ..... 21
Movie size	Front/Rear 1080p, 720p, 720p60fps ..... 21
Setup	Date & Time ..... 23
	Language ..... 23
	GPS Zone ..... 23
	LCD Standby ..... 23
	AV-out (NTSC/PAL) ..... 23
	Speaker ..... 23
	Rear View Camera About, ..... 24
	Firmware Upgrade ..... 24
GPS	External receiver Options ..... 25
Playing recorded files	26
Self-Diagnosis&Precautions	27
Specifications	30
Warranty	33



# Main Features

## Main Features

Q'

•Blackbox (Front FULL HD)	1
•Rear camera (FULL HD)	1
•SD Card	2
•Power	1
•Manual	1

Full HD Blackbox



Rear Camera



SD Card



Power



Rear Camera cable



Manual



### \*Important note

The components shown are subject to change



## 1. Automatic Recording

Starts recording automatically when you start the car.  
Stops recording and auto-saves after power is turned off.

- Continuous Recording (not recommended)
- The following chart shows the maximum continuous recording time. Micro-SD MEMORY Card

4GB - approximately 45 minutes  
8GB - approximately 2 hours  
16GB - approximately 3 hours  
32GB - approximately 6 hours

## 2. Loop Saving (recommended)

Once the card capacity is reached, the oldest MP4 file segment will be deleted and over-written with the newest one

## 3. 3.5" Touch LCD

- You can check the recording screen while driving\* and parking recording. (\*where local laws allow for video up front)

## 4. Front/Rear Full-HD 1920 x 1080 pixels 30fps (frames per second)

- -Records 30 frames per second at 1920 x 1080 (Full-HD)
- -Recording gap between file segments is approximately 0.1 second.



## 5. Motion Detection

- The X2 automatically switches to standby mode when you park or stop the car. The X2 starts recording when motion is detected.

## 6. MPEG MP4

- The X2 records video in the MPEG H.264 MP4 format.

## 7. G-sensor

- If the G-sensor is triggered, the current file will be moved into a protected folder and will no longer be overwritten until the card is formatted.

IMPORTANT NOTE: Formatting the memory card WILL DELETE ALL FILES including protected files. Save and back-up all files prior to formatting the memory card.

## 8. Parking Mode Power Control (Low Voltage Cut-Off)

- Select a constant voltage that matches the battery of your vehicle. The battery discharge prevention system is meant to prevent a complete discharge of the vehicle battery. When the vehicle battery voltage is below the X2 set voltage, the X2 will power off. This way you can be sure you always have plenty of power remaining to start your vehicle

## 9. Dual Slot System

- The X2 contains two separate memory card slots. A Micro-SD card must be inserted in each of 2 slots to record both front and rear cameras. The top slot is for the rear camera, and is marked with the letter "R". The bottom slot is for the front camera and is marked with the letter "F".





Avoid placement AND use of the X2 in excessive heat or in direct sunlight. If subjected to these conditions, allow the unit to cool down before operating.



Do not insert foreign objects into unit or use near flammable substances. Doing so can lead to damage and void the warranty.



Handle the X2 with care, do not toss or drop the Blackbox. This can cause damage to the circuits and/or screen. Accidental damage is not covered by warranty.



Do not place the Blackbox in a humid, foggy, or smoke-filled area. These conditions may damage the X2.



## Warnings!

5



Do not hit the Blackbox with solid objects.  
Never place the Blackbox in close proximity to other electronic devices or magnetic sources.

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.  
(Damage resulting from using other than the supplied accessories will void your warranty)

8



Securely connect the Blackbox with the supplied cable.



### Notice

1. Use only supplied power adaptor.

(Damages resulting from the use of other power sources will void your warranty)

2. Do not allow flammable substances near device.

3. Strong sunlight or direct bright lights may result in dark recordings. Select a proper location when you install the Blackbox cameras (40% sky - 60% road).

### Interference and compatibility

- Do not place the Blackbox near other electronic devices  
It may cause the image to be distorted.

(1) If the Blackbox is installed near other GPS devices,  
it may cause interference with X2 GPS reception.

(2) Do not connect the power adaptor to multi-cigar jacks or other  
shared devices, because it may lead to malfunction of video quality.

• **Please be careful when you install the Blackbox.**

### Repair

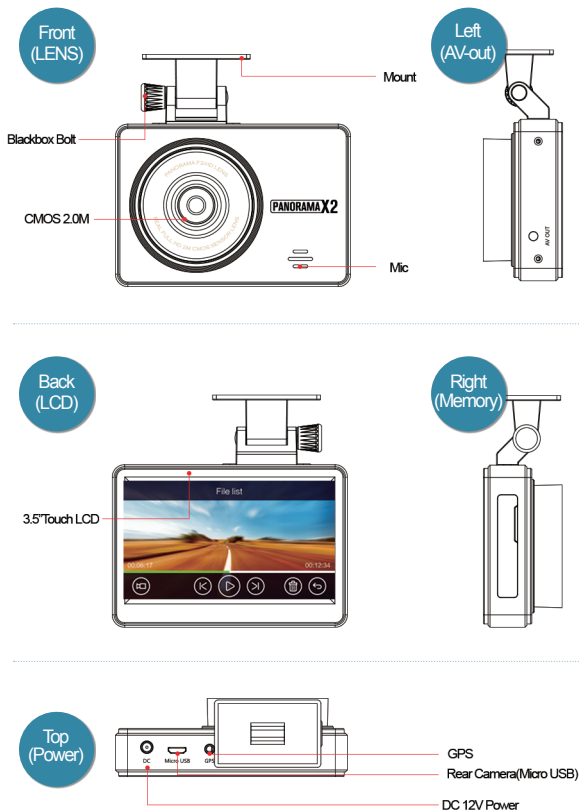
Only authorized service centers should perform system maintenance and repairs. We are not responsible for data loss resulting from malfunction of defective micro-SD memory cards.

### Disposal

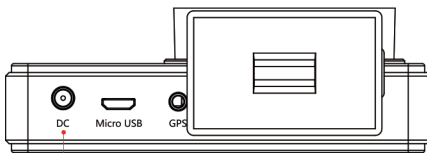
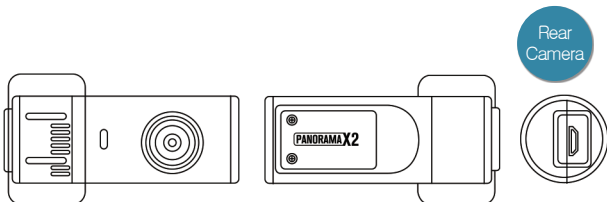
If you ever dispose of your Blackbox, discard properly according to the recycling laws of your country, state, and local governments.



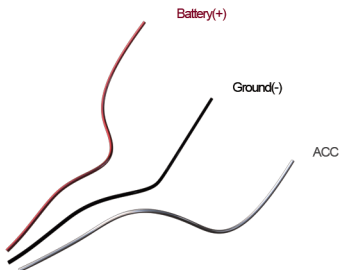
## Main Features



## Main Features(Power connect)



DC 12V Power



3 Wire Cable



## 1. Providing Power

### 1. Connecting to the Power

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

\*Use a 12V power adaptor.

The Blackbox uses 12V-24V DC as a power source.

(2) Please use a qualified automobile electrician to connect the unit to the vehicle power and to ensure that the wires and connections allow safe driving with no obstructions.

## 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.

Recording starts in approximately in 5~15sec.

The indicator light (LED) on the upper-right side is off when the Blackbox is turned off.

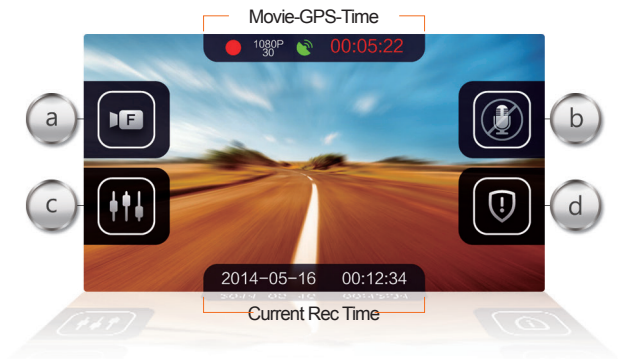
### (2) Turning the Power Off

To turn the Blackbox off, you must stop the car & turn your ignition off, or remove the Power cable.

## 3. Power Saving Function

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

Preview screen



**a** Front/Rear Camera Select



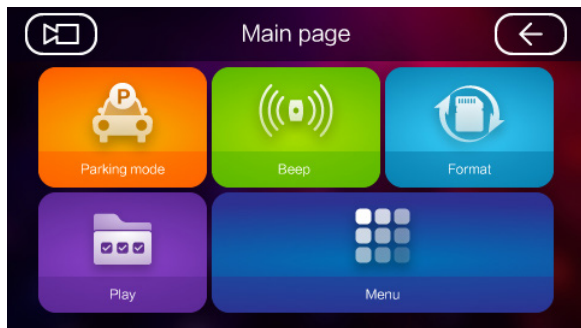
**b** Mic/Mute



**c** Main page



**d** Event



## □ Parking Mode

P G-sensor sensitivity, Motion detection, Parking time, Power control, Rearview camera

## □ Beep On/Off

This is for the alarm caused by the G-sensor

## □ Format

Formats the micro-SD card(s)

## □ Play

Real-time playback of recorded files

## □ Menu

Record minute (Unit:min), D G-sensor sensitivity, Movie size, Setup



Go to the outside camera image

Select, Go to the previous screen





## □ P G-Sensor sensitivity

High, Middle, Low, Off

## □ Parking time

6 hours, 12 hours, 18 hours, 24 hours, Off (Off = Continuous, no time-out)

## □ Motion detection

High, Middle, Low, Off

## □ Power control

11.8V, 12.1V, 12.4V, 13.5V, Off, Drive Only

Off = Continuous, no voltage cut-off      Drive Only = Never Record while ignition is off, X2 will power off until engine is started

## □ Rearview camera

Camera On/Off



Screen

Go to the camera image



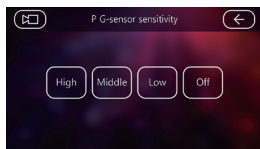
Enter

Select, Go to the previous screen

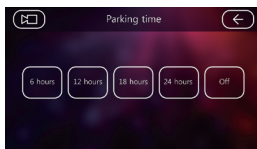


# Parking mode

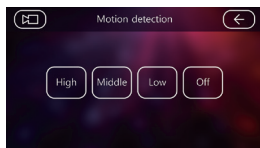
## 1. P G-Sensor sensitivity



## 2. Parking time



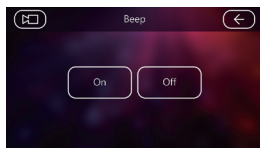
## 3. Motion detect



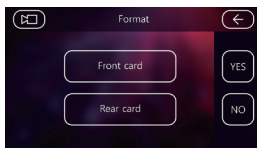
## 4. Power control



## B. Beep

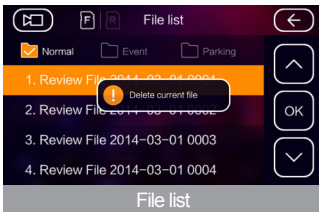


## C. Format

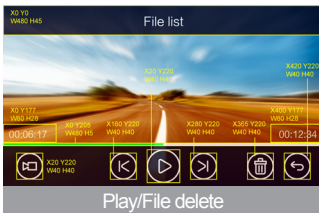




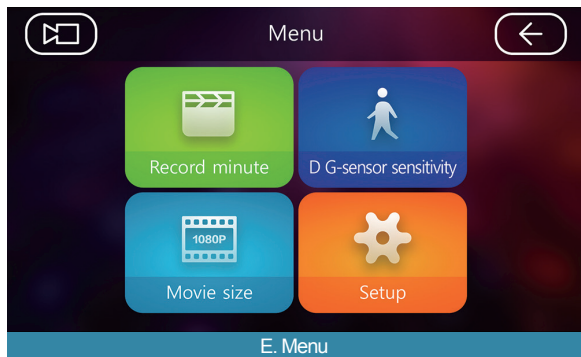
- The recorded files are stored separately in front / rear memory cards
- Files are stored in three different folders, depending on the nature of the file, for each Micro-SD memory card.



- N (Nomal file folder)  
(Regular location of the file to be saved when driving)
- E (Impact Detection folder)  
(Location of the G-Sensor, motion detection triggered files, or manual event button)
- P (Parking watched folder)  
(Location of the file is store in parking surveillance)



- Play the files in each folder, search
  - File can include views, quick flip, delete again, and then must retrieve important files,
- Download files to a separate computer periodically, clean up the memory by deleting files or formatting.



## 1. Record minute

1 min, 2 min, 3 min, 5 min

## 2. Driving G-Sensor sensitivity

High, Middle, Low, Off

## 3. Movie size

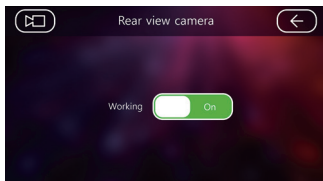
Front camera : 1080p 30fps, 720p 30fps, 720p 60fps

Rear camera : 1080p 30fps, 720p 30fps, 720p 60fps

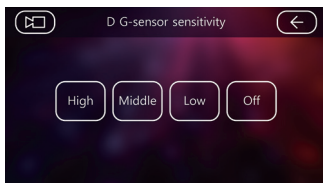
## 4. Setup

Date & time, Language, GPS Zone, LCD Standby, AV-out, Speaker, Rear Camera, About (Firmware Upgrade).

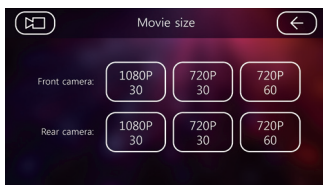
## 1. Record minute

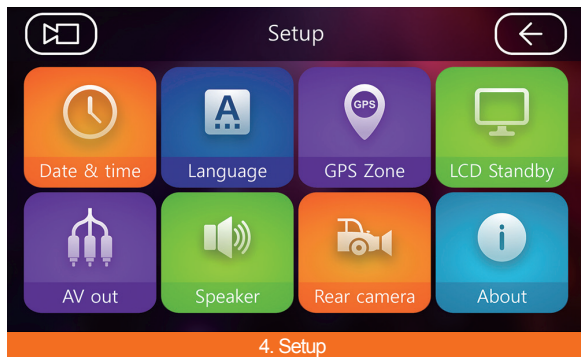


## 2. Driving G-Sensor sensitivity



## 3. Movie size





#### - Date & time

Set date & time

#### - Language

English, 日本語, 한국어, Русский, 繁体中文

#### - GPS Zone

Set the local time zone (Add Summer Time / Daylight Savings Time)

#### - LCD Standby

LCD standby time set

#### - AV-out (NTSC & PAL)

TV type. NTSC (USA), PAL (EU)

#### - Speaker

Volume Set

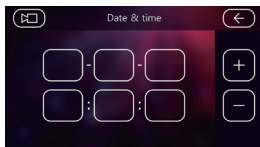
#### - Rear view camera

Rear camera (Parking) On/Off

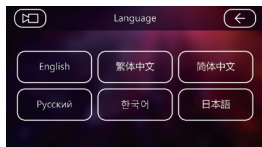
#### - About(Information)

Information, Firmware version, Firmware Upgrade

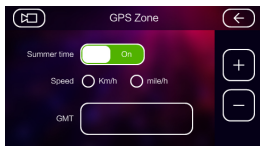
## 1. Date&time



## 2. Language



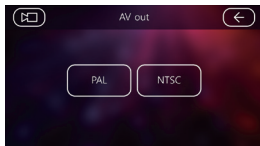
## 3. GPS Zone



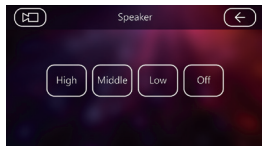
## 4. LCD Standby

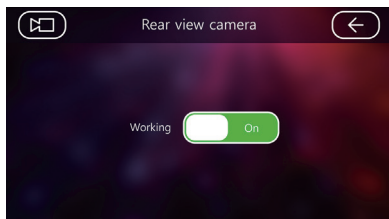


## 5. AV-out(NTSC&PAL)



## 6. Speaker

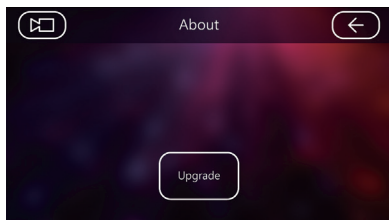




### Rear view camera

Working On = Parking Mode Enabled for Rear Camera

Working Off = Parking Mode Disabled for Rear Camera



### About

Firmware Upgrade

- Copy the update file to the root directory in each of the memory front / rear cards, press the About menu "Upgrade" button to perform firmware upgrade.

#### \*Important Note

Please consult your service center or distributor about firmware information and upgrades.

\*Ensure the vehicle is started and do not disconnect or turn the power off during the firmware upgrade process!!!!"



## GPS (External receiver Option)



1. You can capture speed and location information by the signals received from GPS satellites.
2. Information differences may occur due to signal delay.
3. You can check the GPS information on the left bottom of the screen.
4. GPS receiver is an optional accessory purchased separately.



### GPS

N : 37.317492

Y : 126.569746

61.75km/h

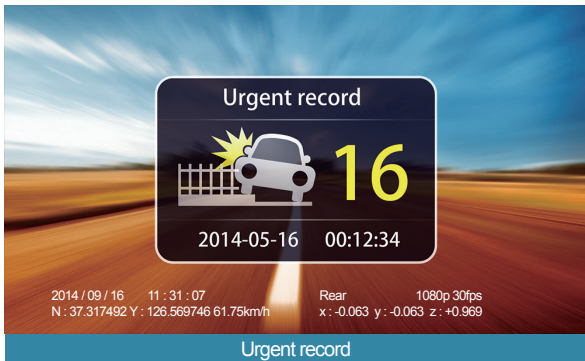
Rear

x :

1080p 30fps

y :

z :





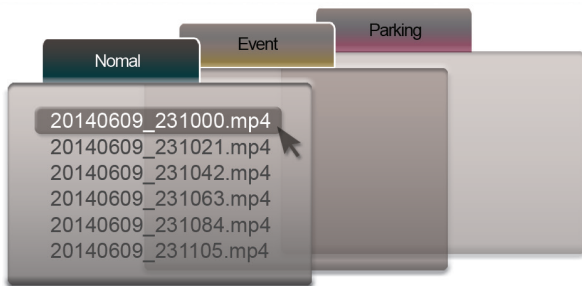
## Playing the recorded file

\* The recorded files can be played back on your computer.

1. The MP4 file type is H.264 codec
2. Recommended players are available at:  
VideoLan.org, RegistratorViewer.com, DashCamViewer.com, & GoPro Studio  
<http://shop.gopro.com/softwareandapp/gopro-studio/GoPro-Studio.html>
3. GoPro Studio will allow adjustments such as brightness level, chroma, removing after images, removing block and removing noise when playing video.
4. The files can also be viewed on other programs where the H.264 codec is supported.

\*This will appear when you connect a memory card

### FILE FOLDER



\* For smooth viewing of recorded files, save files directly to computer or use of USB 3.0 ports and SDXC card reader is recommended.



**Q1: How can I check the firmware?**

**A1:** Check the About section on the main home screen

You can check the available firmware version number(s) on our website, where you will find continuing support.

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

**A2:** Yes, the X2 Blackbox may be moved between vehicles, use existing mount or new mount as needed.

**Q3: How can I format the micro-SD memory cards?**

**A3:** You can format the micro-SD memory cards in setup mode in your Blackbox.

Please format the micro-SD memory cards in your Blackbox

\* The X2 will recognize pre-formatted memory cards.

\* You can format a memory card in setup mode.

\* It is recommended that < 32GB micro-SD memory cards be formatted in the blackbox. > 32GB micro-SD memory cards should be pre-formatted FAT32 in your PC for optimal results.

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

**A4:** The joint can move 90 degrees. Adjustments are limited.

**Q5: Where is a suitable location to install the Blackbox?**

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

The Blackbox was designed for a car, but you can also use it at home or in a store or in a business location. (It is recommended to install the blackbox in a location you can watch the LCD monitor.)

**Q6: How do I manually start and stop the X2 recording?**

**A6:** You will see a red box with a dotted outline at the bottom of the screen. Engine running - Touching anywhere in this area will toggle start/stop recording. It is important to stop the recording before ejecting the microSD cards. BAT(parking mode) This area will power off the X2



## Self-Diagnosis and Safety Precaution

**Q6: How can I check that the Blackbox is working properly?**

**A6:** You will see the recording screen after the car is started.

The Blackbox starts recording automatically after your vehicle starts. You can also check the red indicator in the upper left hand corner on the screen.

**Q7: The power or external camera wire is not long enough!**

**A7:** The power wire is 3.5 meter (11.5 feet), the external camera wire is 6 meter (19.5 feet) please choose a better routing & mounting location for optimal installation.

**Q8: micro-SD memory cards do not work.**

**A8:** Please contact the distributor or authorized service center.

If you bought the SD memory cards yourself, contact the store.

**Q9: Blackbox does not turn off when car is off**

**A9:** Please unplug from the socket, which may continue supplying power. Only use the included power adaptor when you install it in your vehicle by yourself. If you connect it to a different voltage source, the result may be a broken unit or dead car battery.

**\* In this case, you must pay for the repair.**

**\*Do not cut off the cigar jack.**

**\* Use only included cigar jack.**

**Q10: Traffic lights blink or fade in recorded file**

**A10:** This is a common occurrence in devices containing lens.



**Q11:** When the Blackbox housing is broken in an accident, can it be repaired?

**A11:** In this case, we cannot repair the Blackbox because of damage to the other components.

### Safety Precaution

- \* When the X2 is connected to cigar jack in extreme hot conditions, please be sure to power off when not in use.
- \* If the X2 is connected directly to the car battery, ensure the car has the ability to start after extended time. To do this, raise the voltage in power control settings.
- \* If the X2 is connected directly to car battery, for safety, turn off unit before starting and power on after the car has started.
- \* If the temperature in the car exceeds 75 C (167 F), allow the unit to cool down before operating to avoid damage.
- \* Formatting of memory cards on a regular basis (weekly) offers best performance. Remember to save important files and back up to a computer prior to formatting!
- \* In the case where the X2 Blackbox cannot record because the memory card is not recognized, format the memory card in the Setup Menu. (During recording, the RED indicator is on)



## Specification

Named	Specification
Memory type	Front/Rear Micro-SD card, 4~128GB
Display	Display 3.5" TOUCH LCD
Power cable	DC 12V
DC Adaptor Input: Output:	DC 12~24V DC 12V
Mic	Built-in microphone
A/V interface	TV-Out
Impact sensor	G-sensor Bosch 3G Sensor
Camera Support Temperature	SONY CMOS 2.0M -10 C ~ 75 C (14 F to 167 F)
Camera angle	Front 120°, Rear 120°
File System	FAT32
File format	MP4
Codec	H.264 MPEG-4
Component Video Signal	NTSC/PAL
Resolution	Front/Rear 1920x1080@30fps (NTSC)
Record Format	
Recording Format	MP4
Special Features	One Button Recording(Power On)
Time Stamp	Timer saving
GPS	External receiver Option

### \*Special function

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.

---

---

# Warranty

---

---

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

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

Customer	Contents	Remarks
Model Name		
The date		
Warranty	One Year	
Store		
Name		
Phone		
Address		

This warranty does not cover for free as follows.

- ☐ Damage due to act of God, fire, earthquake
  - ☐ Damage due to disassemble or to alter any part of the product
  - ☐ Modifications
    - Damaged cigar jack adaptor
    - Damage due to connection to improper power adaptor
  - ☐ Damage due to drop during moving
  - ☐ Without this warranty
  - ☐ Consumables
  - ☐ Damage due to putting the something into the blackbox or cleaning with toxic substance
  - ☐ Component combustion due to using for a long time
- \*Recommend daily use is 12hours.  
\*Warranty of memory is 3 months

**FULL HD 2CH Blackbox**  
**PANORAMA X2**



MSIP-RES-KHZ-PANORAMAX2



A/S Center Tel : 070-8230-3469  
COMPANY : POWERUCC