Simple and Easy
DRS1100 Installation and Operation Manual

Leader in Automotive Driving Recording Solution Provider

XDRIVEN

Main Functions

Accident Image Storage

When an accident occurs, this device automatically detects it through an impact sensor and records and saves images before and after accidents.

Manual Image Storage

Even without physical impact to a vehicle from an accident, the device records and saves images by a Driver's manually pushing the Emergency Button.

Location Information Storage

The device records and stores detailed GPS information including the location, time, and speed of the time of accident.

Vehicle Operation Information Storage

The device records and stores certain vehicle motions including sudden acceleration, braking and sharp turns, as well as back and forth, right and left and up and down vibrations.

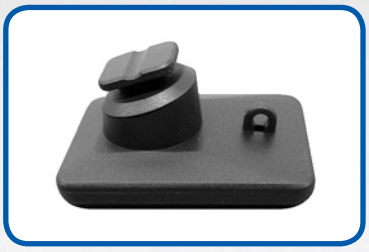
Accident Data Replay

In addition to accident data replay on PCs, it also simultaneously plays the GPS information and vehicle operation information. A software program is also provided that is simple and easy to use in setting various functions including user-oriented separate storage, printing, and screen shots.

Components

Please check if the followings components are included in your package. If any item is missing or an incorrect item is included, please contact the store where you purchased the product.

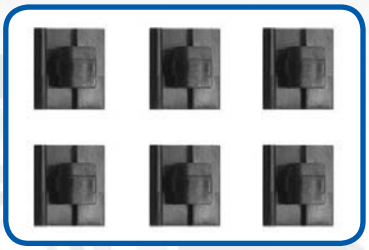
DRS1100



Camera Rack
(Glass Attaching Type)

Power Cable

SD Memory Card



Cable Holder

Suction Cup (Option)

Specification

DRS 1100 Specification

Camera	1.3 Mega Pixel CMOS
Video Resolution	320X240(QVGA) upto 30fps, 640X480(VGA) upto 30fps, 1280X960(Mega) upto 5fps
Audio Recording	Internal Microphone
GPS	Internal (SiRF III) GPS Module
G-Sensor	Internal 3D G-sensor (Collision ,Q-break, Q-accel detection)
Data Storage	SD Card (Min 512MB, Max 2GB)
Power Supply	DC 12V~24V

*The contents of this manual may change without prior warning as new features or improvements are added.

Name of the Parts

Camera lens
Please clean the camera lens before use to avoid foreign matters blocking the lens.

SD Memory Card Slot
After inserting a SD memory card into the slot, connect the power cable.

Power Terminal
When power terminal is connected, the power is automatically turned on.

Recording LED(Red)
The Record LED will turn on during recording and will blink if an event occurs or the Emergency button is pressed.

GPS LED(Blue)
When GPS normally receives the satellite data, GPS LED is lighted on.

Emergency Button
Emergency Button is for manual image recording, and when the button is pressed, it records images.

Installation Instructions

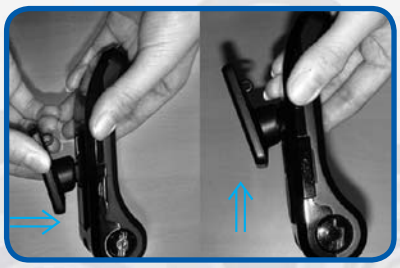
Installing the device to the windshield of a vehicle

Before attaching the camera to the rack, insert a SD memory card into the appropriate slot and close the cover as shown in the pictures on the left. When inserting or removing the SD card, first turn off the device to prevent product damage or data loss. The REC and GPS LEDs blink in turn without alarm sound if the device is turned on without inserting the SD card.

In order to eject the SD memory card open the SD memory card cover and press the card with a finger and the SD memory card will be promptly ejected.

* Note

Please use only the SD memory card enclosed with the product. Using other SD memory cards may cause malfunctions.
Please do not pull out the SD memory card with fingernails or tweezers. It may cause damage to the product.
Upon the occurrence of a malfunction, formatting the SD memory card may allow normal operation.

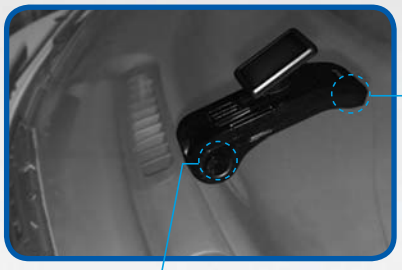


As shown in the pictures on the left, after completely inserting the toggle into a hole in the middle of the body of the camera, tightly fasten it by pushing it upward.

On a spot that does not block a driver's vision, attach the base of the toggle with double-sided tape to the windshield. While the body is fixed into the toggle, it should be able to be turned left and right. Adjust the camera angle to have the camera lens face forward.

Installation Instructions

Installing the device to the windshield of a vehicle



When GPS receiver is in the horizontal position, reception rate is better.

* Note

When a radio antenna is a glass-attaching type, it should be attached with a distance from the GPS part as an antenna can affect the GPS reception.

While pressing both left and right buttons on the side of the body, rotate the camera lens to adjust its angle. The line on the button should be set to a horizontal position and be parallel to the road surface so that the camera lens faces the front center of the windshield.

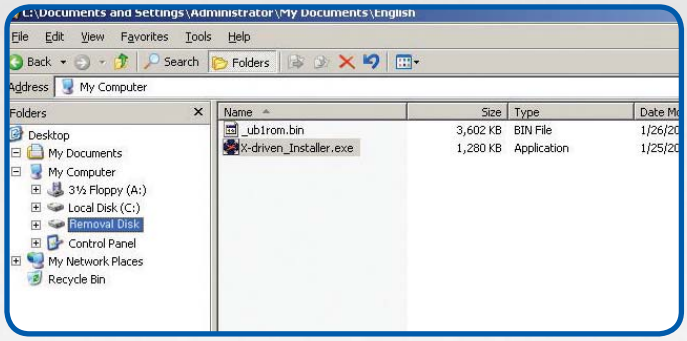
Insert the power cable into the power terminal on the camera body, and ensure you use the power cable enclosed in the product package.

After connecting the power cable into the cigarette lighter jack of the vehicle, turn the ignition, and the device will also turn on. Please check if the REC LED are lighted on.

* Note

After the initial operation begins, do not turn off the power for 30 seconds until a continuous beeping sound is heard. This indicates that the SD card is formatted and the PC installation program is being copied. If the power is turned off during this operation, it may cause a malfunction. In this case, please contact the manufacturer or the store where you purchased the product.
Initial GPS reception time may vary depending on location.

Program Installation



Double-click X-driven_Installer.exe in the folder of SD memory card

- For a PC that does not support SD memory cards, a separate SD card reader is required.

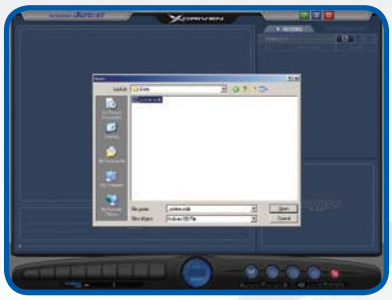
Select a folder to inatall the program and click the middle button.

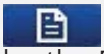
Click OK after the installation is completed

Click on the X-Driven icon under “All Programs” or on Desktop to start the program.

How to Use the Program

When you start the program, you will see this initial screen.

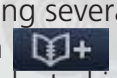


After connecting the memory card to PC, click on  to select the file named "_System.mdb" under the Data folder of SD memory card and bring out the data.

When the file is opened, the screen shows a list of files (with date, time, and event information) on the right-hand upper pane. (Please note that when an image is recorded inside a moving vehicle with poor GPS reception, the recorded time may be inaccurate.)

Click on a selected file from the file list and the image of the file is shown in the preview window in the right-hand lower pane.

Double-click the selected file, and the image is shown in the main window.

After selecting several files while pressing the Shift key, click on  on the right-hand upper side to see the selected images as a slide show.

How to Use the Program

As shown in the image on the left, the Map is shown in a small window to display the location of the vehicle.
(PC users should have access to the Internet to use this Map function. Also, while recording image in a moving vehicle and GPS reception is poor, this Map may not be shown.)

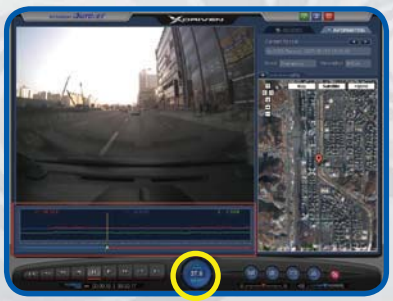
Click on  above the GPS map to know the exact location information. You can also move within the map and zoom in or zoom out of the screen.

Move up
Move left or right
Move down
Zoom in
Zoom out

Click on  to close the GPS-related information window.

The graph below the main window shows the degree of front and back, left and right, and up and down impacts when an event occurs.

Front-Back movement: X-axis
Left-Right movement: Y-axis
Up-Down movement: Z-axis



The driving speed is displayed. Click this area with the mouse to change the speed unit.
It is possible to switch between km/h ↔ mph.

How to Use the Program

* Note
When the speed of play is not set as a default, the audio is not played.

Button	Function	Button	Function
	End the Program		Volume Control Play Speed Control
	Hide the Window		Print
	Go to the First Image		Go to the Last Page
	Pause after Reverse-Playing One Image		Pause after playing one image
	Fast Reverse Play		Fast Play
	Reverse Play		Play

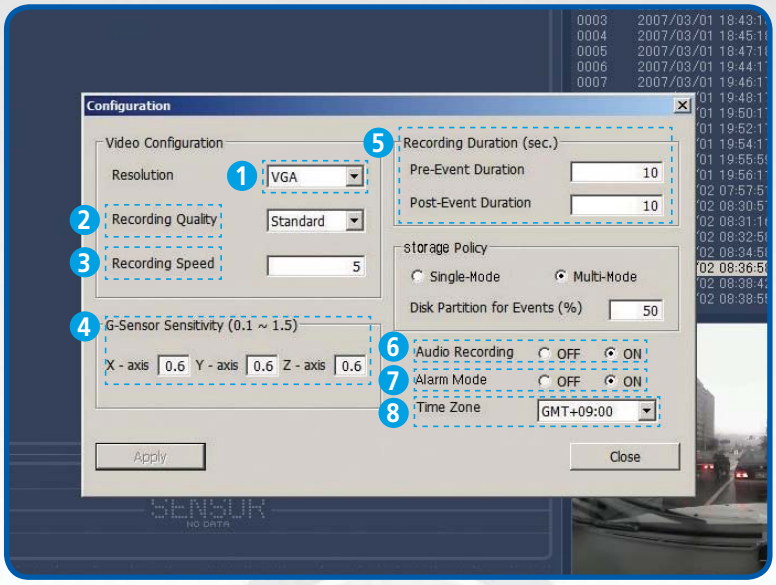
The blue section in the slider bar indicates the recorded image before the occurrence of an event, while the red section indicates the recorded image after the occurrence of an event.

How to Change the Setting

A user can change the default values of the X-Driven Viewer.
(When SD memory card is formatted, the settings are changed to default.)

Press the Setting icon to open the file named "_systems.cfg" under the folder of SD memory card.

How to Change the Setting



1 This is a part to set resolution. Default: VGA

*Resolution

Low — High

QVGA (320X240)	VGA (640x480)	MEGA (1280X960)

2 Recording quality is set. Default : Standard (Rough, Low, Standard, High, Fine)

3 Recording Speed (Recorded frames per second) is set. Default: 5

4 Threshold of Impact Sensor is set.
Default : 0.6G(0.1~1.5G)
If the threshold value is too high, the sensor is too dull to sense an occurrence of an event, when the threshold is too low, it becomes too sensitive so it will detect even slight shocks that do not need to be detected. Thus, an appropriate value should be set in consideration of a user's vehicle and the condition of road while driving.
X-axis : Front-Back movement
Y-axis : Left-Right movement
Z-axis : Up-Down movement

5 The recording time interval between pre-event and post-event is set to the unit of seconds.
Default – Pre-accident : 10 (0~10)
Post-accident : 10 (5~30)

6 Audio recording function is set.
Default: On

7 Alarm function is set.
Default : On

8 Set the time (zone) (in which the device) is used.

* Note
As resolution, recording quality, and recording speed is set higher, it takes more of the SD memory card storage.

How to Change the Setting

1. Event Recording is set as either Single-Mode or Multi-Mode.

   Single Mode : Recording does not begin even if the power is turned on and will only start when an impact occurs or if the user presses the manual (emergency) button.

   Multi Mode : Recording will begin when the power is turned on (ordinary recording function). Recording will also begin if an impact occurs or if the user presses the manual (emergency) button.

   *Disk Partition for Events [Applies only to multi mode]
   Within a limited space of SD memory card, it can assign a certain capacity to store event files. Default : 50 (20~50)

   If there is a shortage in the capacity of the SD memory card, files will be automatically deleted starting with the first created file in order for the new file to be stored. (Please download the necessary video files from the user PC in advance.)

2. Open a file to see (the) image stored in a certain location.
3. Save the opened image as another name.
4. Capture an image and save it as a BMP file. It also includes a function to save the title and memo when saving it as a picture file.
5. Print the current screen.

Warnings

Please read the following carefully to use the product properly and protect the user's safety.

1. Do not disassemble, repair, or alter the product. When malfunctions, errors, or other accidents are found to be attributable to a user, a user may not be eligible for after/sale service.
2. When cleaning the inside of a vehicle, do not spray water directly on to the product. It may cause damage to the product, fire or electric shock.
3. Keep away from chemicals or detergents as they may change the surface of the product or spoil the interior of the device.
4. Avoid excessive impact and do not insert any foreign objects into the device. Severe impact or shock or other foreign matters including soda may cause damage to the product.
5. When a foreign matter or sticker blocks the lens, a normal operation is impossible so always clean the lens before use. Also, when other objects are placed around the camera, they may be reflected on the window and included in the image, so please do not leave unnecessary objects around the device.
6. Even though the product operates normally when it is first installed, it may not continue to do so as its position changes. Make sure the product is installed tightly and do not expose the device to excessive shock or move the device after installation.
7. When a vehicle is parked in an underground parking lot for a long time or when a vehicle is exposed to severe vibrations on an unpaved road, malfunctions may occur as the position of the device changes. If the device is positioned differently from the initial setting after traveling on an even road, correct its position.
8. Staring at or operating the product whilst driving is dangerous and may cause an accident.
9. Keep the product away from excessive impact, humidity, or salt. Pressure or shock after installing the product may change the position of a device and cause malfunction.
10. This product is a device using a camera. Thus, in extreme cases like when a vehicle enters or exits a tunnel with a sudden change of light, when the light is too strong e.g during the day, or when there is no source of light e.g at night; images are recorded poorly.
11. Be aware that the data of an accident under a certain impact of acceleration may not be recorded in this product. In this case, it is possible to record images manually with Emergency Button.
12. In the case of vehicles with excessively tinted windshields, images recorded by this product may be poorly defined or distorted.
13. Only use the enclosed cable to connect the product to the power source, and only as directed in the manual. This product should be connected only to the power inside a vehicle. When using a cable other than the one provided or connecting the cable to other power sources, it may cause malfunction or fire.
14. When power is turned off due to a big accident, image data may not be recorded.
15. For smooth GPS reception, make sure to keep GPS receiver horizontal when installing the product and do not put any objects such as electronic products that could interfere the reception.

Understanding GPS

GPS which is used for commercial purposes inherently has the average range error of more than 15 meters. Near buildings, underground, underpasses, or roadside trees, the range error may be more than 100 meters.

Satellite reception may take a long time. A certain amount of time is needed from when an engine of a vehicle is started until GPS satellite reception begins, and this time may vary depending on weather and environmental conditions.

Do not use GPS with other products that send electromagnetic waves or that use GPS. This may reduce the performance of the GPS reception in this product.

Depending on GPS satellite accuracy, it may not always show the shape of roads or a current location correctly. Especially in the following cases, an indicator of a current location may not operate normally due to the shape of a road.

- When roads are closely parallel
- When an angle between split roads is slight
- When, after turning, a close road runs parallel
- When a vehicle meets a course of ferry
- When a road bends sharply
- When a road is very curvy
- When a road inside a mountain is very curvy
- When a car rotates by signs in parking the car
- When driving a car in rain or snow
- When entering a large road after driving a road that is not on the Map Data
- When driving among high buildings