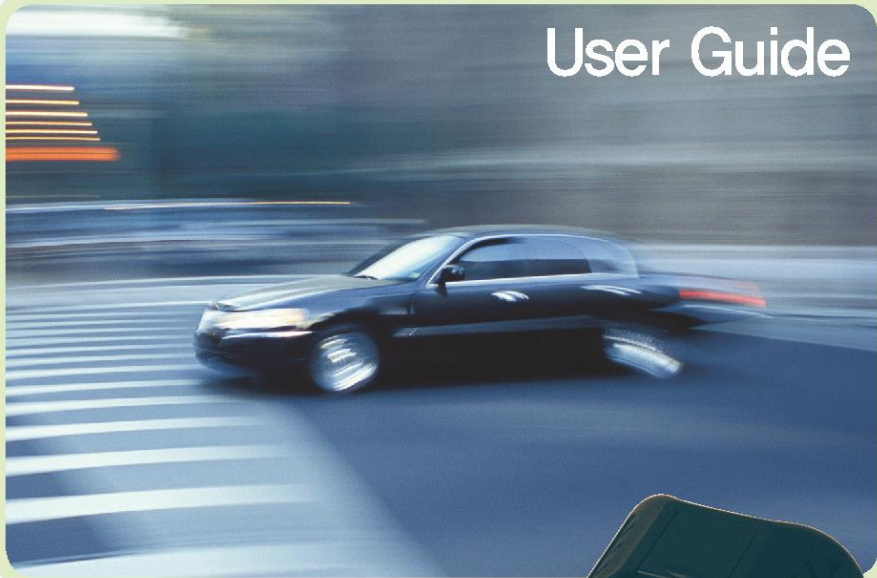
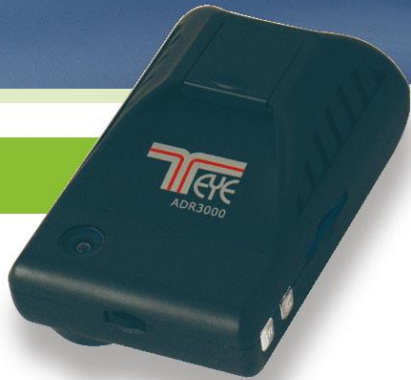


Drive Recorder for Front/Rear View

User Guide



T-eye ADR-3000



For safe and correct use of the T-eye product, be sure to read through this user guide before using the product.

T-eye
Automated Drive Recorder

Main Features

Unlike other in-car recording systems, the T-eye Drive Recorder is used to record both video and audio data in a continuous loop fashion. If the vehicle is involved in an accident such as a collision, impact, and sudden acceleration-related incident, this data is marked and stored. One may thereafter analyze the data to find its root cause by playing back the scenes of interest and where acceleration, vehicle speed, direction, and location are available for review.

Continuous recording

The video and audio data from the front and rear views is continuously recorded while driving. When the capacity of the SD Card has been reached, the older files are overwritten by the latest ones in a “round-robin”, first in, first out fashion.

Pre and post event recording

When impact or unusual acceleration or deceleration is detected by the built-in G-Sensor and has exceeded the preset limit or one activates the emergency record button, the recorded video data is locked-in and is erased only by an authorized party. Event data records 1 minute before and 1 minute after. (User may set pre-event time 1 minute, 2 minutes or 3 minutes). Stored event recording data in SD card will not be erased unless user cancels.

Playback of video/audio data

The recorded data can be played back using the provided software. Record resolution is 640 x 480.

Data analysis













The recorded data can be easily analyzed for car speed, vehicle location and direction of travel including impact by using the T-eye Player that is found on conveniently on the supplied SD card.

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Safety Instructions

Take note of the information below and be sure to read the following for correct use and care of the product.

 <p>Do not disassemble, repair or modify the product. This voids the warranty and where we take no responsibility for product damage or problems caused by the user.</p>	 <p>Do not clean the product with water or volatile solvents. This may damage the product, cause a fire or electric shock.</p>
 <p>Any excessive window tinting may cause an unclear or distorted image on playback. First record and then playback the video to see if the recorded video is acceptable.</p>	 <p>Do not apply excessive shock or never insert foreign materials into the product. It may cause product damage, a fire or electric shock.</p>
 <p>Use only the provided cables and specified power input. Failure to do so may cause product damage, a fire or electric shock.</p>	 <p>Do not cover the camera lens with any materials or objects. This may affect recording quality.</p>
 <p>Once installed, do not manipulate the product or keep staring at it. This may cause a traffic accident.</p>	 <p>Do not obstruct the view of the product through the front windshield. The GPS receiver may not work properly.</p>
 <p>Only use factory approved parts. Use the approved power cable. Contact your authorized Reseller for assistance.</p>	 <p>Video quality is affected by lighting conditions. GPS is affected by signal receipt. Nighttime or use in tunnels affects system operation.</p>
 <p>Do not arbitrarily change the product location. It may cause a GPS communication error.</p>	 <p>Ensure that the capacity of the SD Card is not exceeded. A full SD card will not allow one to record manual alarms or G-sensor based triggers.</p>

Components



Body



Cigarette Lighter Plug for Power Supply



Fixed-type Holder



Mirror Mount



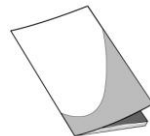
External Alarm Button



IR Light Module



SD Card



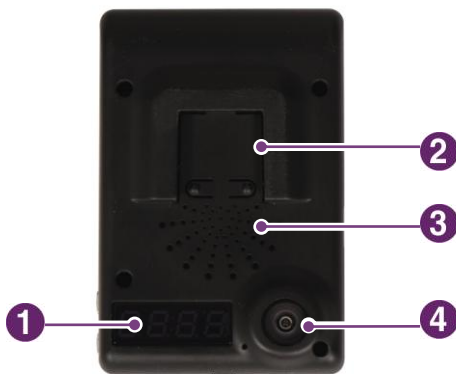
**User's Guide
or CD**

Part Nomenclature



No.	Name	Description
1	Power Connection Port	Used to connect the power cord with the unit.
2	Front Mounting connection	Used to mate with the selected mount.
3	Forward Facing Camera	Used to record scenes through the windshield.
4	SD Memory Slot	Used to insert the SD Card into unit.
5	Cancel Emergency Record	Used to cancel an emergency recording
6	Emergency Record	Used to perform an emergency recording.
7	Volume Control	Used to adjust the audio volume for information.

Rear panel



No.	Name	Description
1	Status Display	Used to display the status of T-eye or traffic information by using English text or symbols.
2	Rear Mount Connection	Used to mate with the selected mount.
3	Built-in Speaker	Provides audio output for chime and any information.
4	Rear Facing Camera	Records the scenes inside your vehicle.

IR (Infra-red) light module



No.	Name	Description
1	Infrared LED light adjustment	Used to adjust the output level of the IR auxiliary light to assist in recording nighttime views from the rear facing camera.
2	Power Connection	Used to connect the power cord to the IR light module.

*The effective range of the IR light covers the first row of back seats.

Technical Specifications

Item	Specification	
Camera Type	CMOS sensor	
Video Resolution	VGA (640 x 480) up to 20 frames per second, 2 channels	
Audio	Built-in microphone	
GPS	Built-in GPS module	
Automatic Event Sensor, Alarm input	G-sensor (3-axis), Manual external alarm trigger	
Memory	SD Card (512M to 8GB)	
Power Input	T-eye Body	DC 5V to recording unit
	Cigarette Lighter Plug	DC 12V to 24V input

* Depending on the model ordered, typically a 2GB SD Card is provided with the unit.

Memory specifications

Size of SD Memory	Maximum Storage Time	Event Recording Time	Number of Event Generated Recordings according to the Preset Recording Time		
			1min	2min	3min
512MB	23 minutes	16 minutes	6	5	4
1GB	45	32	12	10	8
2GB	90	64	25	20	16
4GB	180	120	50	40	30
8GB	370	280	90	80	70

* Time varies depending on the amount of motion seen by the camera & lighting conditions

Installation: Three steps: 1) Mounting the unit, 2) Programming the SD card for first use, 3) Power up



Caution

- Be sure to stop the engine before installing the product.
- Install the product in a location where the satellite signals are received.
- Before permanently mounting the unit, ensure that the camera views meet your requirements: ex. where rear view camera is not hidden by the mirror inside your car
- Mount the unit so that the angles of the body are both horizontal and vertical.

1. Mounting the Unit

You may install the product using any of the following 3 mounting methods:

Method 1) Installation with the mirror mount

- 1.** Align the mirror mount with the guide on the rear of the body.



- 2.** Attach the mirror mount to the mirror with the front of the unit facing forward. (LED display towards the back as shown)



- 3.** Fasten the screw on the rear of the mount after tightly pressing the body of the unit in place so that it may not be easily removed.



Method 2) Installation using the fixed-type holder

- 1.** Remove the fixed plastic cover of the front of the unit.



- 2.** In order not to lose the plastic piece, attach it to the rear of the body.



- 3.** Insert the fixed-type holder into the guide.



- 4.** Determine the location to attach the mount to the windshield or other surface area.



- 5.** Use isopropyl alcohol to clean the mounting surface, (windshield), let dry, then remove the red adhesive tape from the mount, tightly press in place the mount to the windshield..



2. Installing the IR light Module

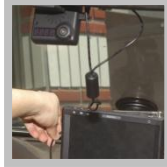
1. Connect the “Y” power cable adapter to both the IR module and the recorder. Then connect the cigarette lighter power cab.



2. Insert the IR light after aligning it with the top of the mirror holder.



3. Arrange the power cord neatly alongside of the windshield and door pillar trim.



Caution

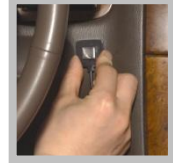
- Connect power to the unit once the IR light module has been connected.
- Aim the IR module towards the driver and passenger area.

3. Installing the external button

1. Insert the external input cable into the external input connection port on the upper part of the cigar jack.



2. After removing the adhesive tape attached on the external button, attach the button to the desired position.

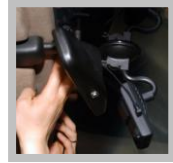


4. Connecting the power cord

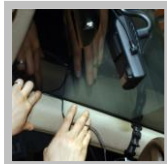
1. Connect the power cord to the cable on the right of the body.



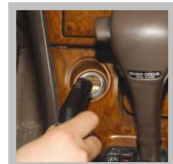
2. Pull the cable up toward the upper part of the body.



3. Arrange the power cord neatly after inserting it in the chink of the door near the driver or passenger seat.



4. Insert the power cord into the cigar jack.



Tips before Using the Product

Unit Preparation for video recording

1. Connect the unit to a switched source of power (example, cigarette lighter jack). Install the SD card off. (Engine off). When you connect the unit to a source of power or the engine is turned on, “dR Init” appears on the LED display window and the video recorder is now initializing. The display will show a sequence of numbers, this indicates that GPS satellites are being acquired.
2. In about 25 seconds after power-up, the unit completes initializing and a chime sound (“ding dong”) is heard through the unit’s speaker. The unit may still show a series of numbers followed by “GPS FINE” that appears, this adjusts the unit further for increased accuracy.
3. After hearing the chime, T-eye starts recording.

Continuous recording while driving

1. T-eye informs you of your car speed, speed trap, and other miscellaneous information. When the vehicle is stopped, it displays the time. Traffic or red light, radar traps etc may be announced, depending on the country of operation and what data has been installed on the SD card. Consult your Distributor or Reseller for details.
2. When the capacity of the SD Card has been reached, the oldest files are overwritten for continuous recording. The files recorded (events) recorded by either the unit’s internal G-Sensor, or external manual record button are not overwritten. (and must be erased by the user using a PC, erasing the data in the DATA event folder)
3. When you stop the engine or remove the cigarette lighter plug, T-eye stops recording.
4. By removing the SD card and inserting it into an SD card reader of a PC or laptop, one may playback the recorded data using the T-eye exclusive viewer that is found on the SD card. (T-Eye player .exe.)

SD Card related information

Use only the provided SD Card with the unit to ensure proper operation. Use only recommended brands of SD Cards. Consult your Reseller or the Company website for SD Card compatibility. In case of PC’s and notebooks that do not support the SD SDHC2.0 memory card standard, use a separate SDHC2.0 USB reader. Periodically format the SD Card to prevent SD card errors over a long period of time. (Recommended).



Caution

- After formatting the SD Card, set the time zone in T-eye configuration (see page 16).
- If you do not configure the settings, system initialization may take up to 10 minutes and where the time and time zone may not match.
- In case of formatting the SD Card, the existing recorded video files are all deleted so be sure to perform a backup for any important video files.

Functions of each part



Front/rear view camera

The camera must be horizontal and vertical. When the lens of the camera is obstructed or is dirty, clear images may not be captured. Periodic cleaning is required. To clean the lens, use a soft camera lens cloth to prevent damage.



Emergency record button (Video image removal protection)

In order to record diver detected scenes of interest, press the emergency record (E) button to record scenes for previous 1/2/3 and post (next) 1 minute event recording. (A remote button is also provided for this function for covert recording)

The recording time is determined in PRE RECORDING TIME.



SD Card slot

Before inserting or removing the SD Card, turn off the power to the unit.

To replace the SD Card with a new one, format the new memory card as FAT32, then use the software application and with your PC, set the time zone in T-eye configuration



Cancel Emergency Record

Press the button for about 3 seconds until a chime “ding dong” sound is heard through the unit’s speaker. Then the emergency record protection is cancelled so the overwriting of the alarm event is enabled.



Volume control

One may adjust the audio volume level for driver’s convenience.

When you turn it left (<<), it increases the volume while a right (>>) turn decreases the volume.



Power connection port

Connect one end of the cigarette lighter plug cable into the matching connector of the power port of the unit. Plug the other end of this cable to the cigarette lighter jack of the vehicle. {Power may be hard wired (permanently wired) into the ACC (accessory) switched power of the vehicle for a more secure installation. REFER THIS TO TRAINED PERSONEL ONLY.} Do not lose the supplied power cord or use other cables. If damaged or lost, contact your Reseller for a replacement.




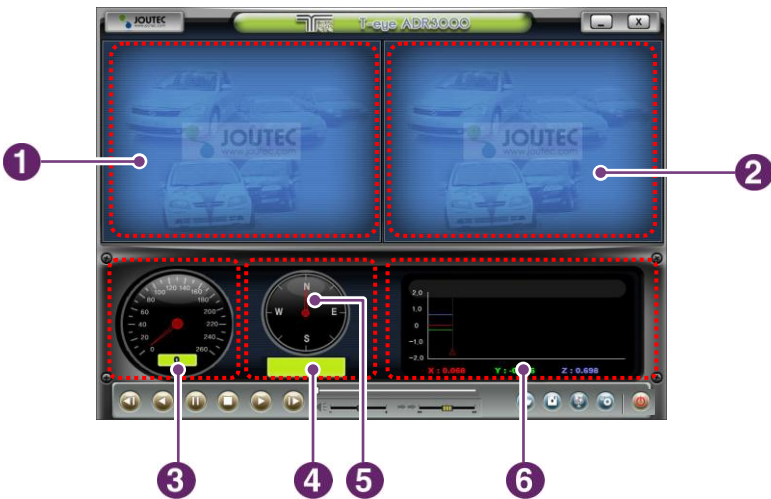
Display window

The current T-eye status and traffic guidance messages appear on it.

Using T-eye Player: Playback, SD Card and Initial System Set-Up













Insert the SD Card into the SD Card reader and connect it to a PC or laptop. Double-click TeyePlayer.exe in the PLAYER folder of the memory reader. The following window appears.

 **Note** When it runs on Windows Vista PC for the first time, run the T-eye Player in administrator mode.



Name	Description
Front View Display	Displays the video images recorded by the forward facing camera.
Rear View Display	Displays the video images recorded by the rear facing camera.
Speedometer	Displays the speed of your vehicle.
Coordinate	Displays the coordinates (latitude and longitude) of the vehicle. (requires GPS signal lock)
Compass	Displays the vehicle's direction of travel.
Analyzer	Displays impact detected by the G-Sensor sensor with a graph.

Buttons

Button	Function	Button	Function
	Moves to the previous window		Opens a file
	Reverse Playback		Converts the file into an AVI format
	Pauses the Playback		Links the recorded data with map
	Stops Playback		Accesses System Set Up Menu
	Playback		Exits, closes the program
	Moves to the next window		Hides/closes the window

Controls




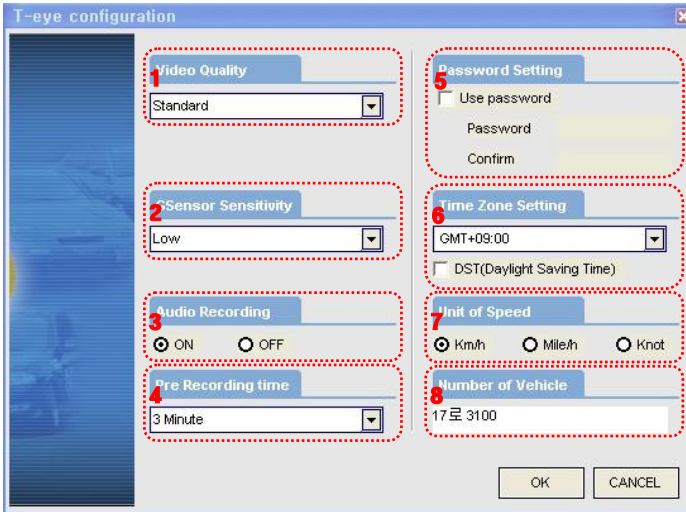
Volume control

Playback speed control

- Volume control: It adjusts the volume level while playing back the recorded data.
- Playback speed control: It adjusts the video playback speed.


System configuration

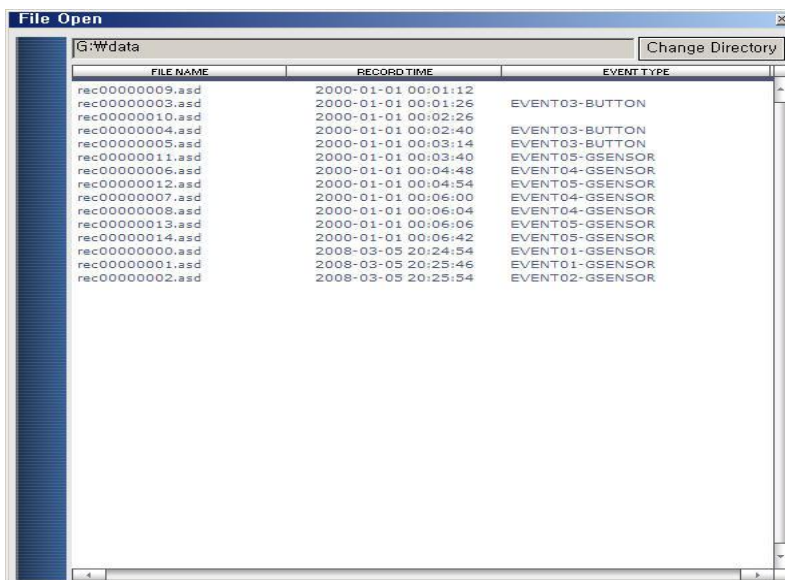
Insert the SD Card into the SD Card reader and connect it to PC. When the player's main screen appears, click on the System Setup configuration icon () located at the lower right corner. The following window will then appear.



No.	Name	Description
1	Video Quality	Sets the video recording quality. (Default: Standard)
2	G-Sensor Sensitivity	Sets the sensitivity of G-Sensor. (Default: Low)
3	Audio Recording	Enables or Disables the audio record function.
4	Pre Event Recording Time	Sets the time to record the previous scenes before the event. (e.g. in case of 3 minutes, T-eye records scenes for previous 3 minutes and next 1 minute.)
5	Password Setting	Sets the password for the recorded data.
6	Time Zone Setting	Sets the time zone for the user. (e.g. Korea — GMT+09:00)
7	Unit for Speed	Sets the unit of the car speed (MPH or KPH).
8	Vehicle ID Number	Sets the license plate number or fleet vehicle ID associated with the vehicle where the SD card is installed in.

Playback

1. After clicking the folder icon  on the lower right corner of the viewer, click **Change Directory** to select the location for the recorded videos. Typically the first time you do this, the files are located on the SD card. If saved elsewhere, use this utility to explore your PC to locate the file for playback.
2. When the file list appears, double-click the desired file to play back.




FILE NAME	RECORD TIME	EVENT TYPE
rec00000009.asd	2000-01-01 00:01:12	
rec00000003.asd	2000-01-01 00:01:26	EVENT03-BUTTON
rec00000010.asd	2000-01-01 00:02:26	
rec00000004.asd	2000-01-01 00:02:40	EVENT03-BUTTON
rec00000005.asd	2000-01-01 00:03:14	EVENT03-BUTTON
rec00000011.asd	2000-01-01 00:03:40	EVENT05-GSENSOR
rec00000006.asd	2000-01-01 00:04:48	EVENT04-GSENSOR
rec00000012.asd	2000-01-01 00:04:54	EVENT05-GSENSOR
rec00000007.asd	2000-01-01 00:06:00	EVENT04-GSENSOR
rec00000008.asd	2000-01-01 00:06:04	EVENT04-GSENSOR
rec00000013.asd	2000-01-01 00:06:06	EVENT05-GSENSOR
rec00000014.asd	2000-01-01 00:06:42	EVENT05-GSENSOR
rec00000000.asd	2008-03-05 20:24:54	EVENT01-GSENSOR
rec00000001.asd	2008-03-05 20:25:46	EVENT01-GSENSOR
rec00000002.asd	2008-03-05 20:25:54	EVENT02-GSENSOR

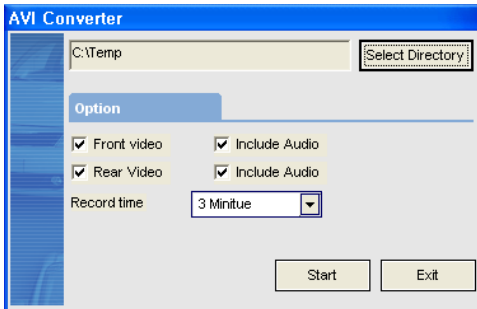
- ◆ FILENAME: File name of the recorded video images.
- ◆ RECORD TIME: Date and time when the images have been recorded.
- ◆ EVENT TYPE: Displays the recording type (Continuous recording/event button recording/remote event button recording).
 - Continuous recording: No nomenclature applied. Clicking on this shows the recorded file when driving.
 - Manual Event Recording: Annotated with the word BUTTON. This allows you to locate files that were marked by the driver using the push button on the recorder or the remote event pushbutton.
 - G Sensor (shock sensor) automatic recording: Annotated with G-SENSOR. This data is recorded when any impact, sudden acceleration, or accident is detected.

Converting into AVI file format

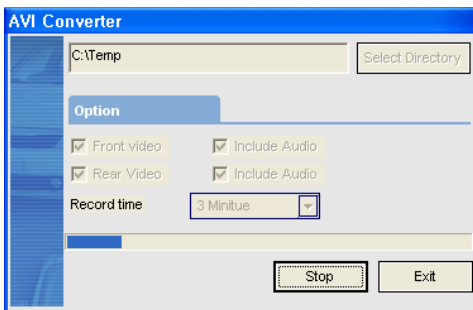
One may convert a portion of the recorded data into an AVI file format when one wants to share the recorded data with someone else, or email a file.

1. Click the AVI conversion button () at the start of video clip position where you want to convert the images into the AVI file format.

The video playback stops and the AVI conversion window appears.



2. Set the following options from the window and click **Start**.
 - 1) AVI storage directory
 - 2) Selection of previous/next videos and whether or not to include audio data
 - 3) AVI recording time
3. The conversion progress appears as follows:



* The AVI files cannot be created on a portable disk such as SD Card and USB memory stick but only on a hard disk.

Interfacing with a GIS/City map

T-eye simultaneously records the GPS data while driving so you can check the driver's route on the map.

Click the GIS/MAP icon () on the lower right corner. The map window appears for the user to see the vehicle location and travel onto a city map.

(To use this function, the system must access the Internet)



Movement, scale up/down on the map

Map

View normal map

Satellite

View satellite map

Hybrid

View both normal and satellite maps

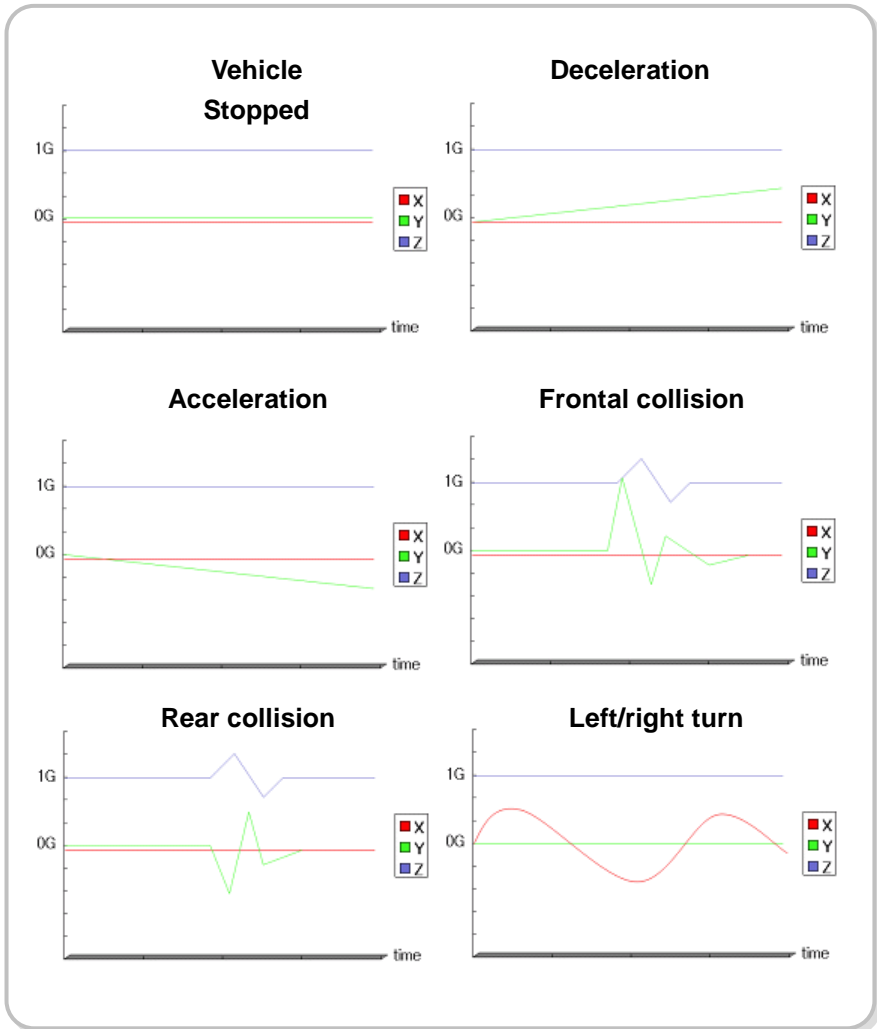
Viewing the pop-up display window

When you double-click the display window, the recorded images are played back at the original size.



Analyzing G-SENSOR data

The gravity sensor (G-sensor) records the changes in the impact to the car to a graph. Depending on the car, the impact can vary so you can guess the driving conditions by using this graph.



Displaying T-eye status using the built-in Display

Status	Event	Sound or Status	Display
System Initialization after application of power to the unit	Initialization after power applied	No sound.	[dr][Init]
	When SD Card is not inserted	Chime is heard ("Ding dong") from the speaker. (Turn off the power, re-insert the SD Card, supply power again.)	[Err][Sd]
	GPS update Error	Resolution: remove power, wait 10 seconds, re-apply power.	[Err0]
	While GPS is updating	GPS data is now being received and is being downloaded	[dbUP]
G-sensor automatic activation, or User driven Event Button or Or Remote Event Button activation	Event recording	One chime	_ _
	Number of events recorded (5) by the system and available	Two chimes	[FULL][---5] ~ [---1]
	Event recording is not available as not enough memory is available	Three chimes	[FULL][----]
	Event captured	Chime	

Information and Status Display

You can see information or the corresponding status is displayed.

Status	Event	Sound or Status	Display
DR initialization is completed	Greeting	Chime	HELLO
	Satellite information (Satellite reception quality)	No sound	5-45
	GPS loading	No sound	GPS FINE

Firmware and Playback S/W Update

1. After removing the SD Card from the unit, install it to the SD card slot on the PC
2. If your PC have no SD card slot, connect the memory reader to the USB port on your computer.
3. After accessing the site (<http://www.joutec.com>) and download the related firmware or playback software
3. After downloading the update file, copy it to the update directory on the SD Card. (If no update directory exists in the SD Card, create a new folder and try copying it again.)
4. After downloading the Playback S/W file, copy it to the player directory on the SD Card
5. After installing the SD Card on the body and connecting the cigar jack, update automatically starts.



Caution

Do not remove the cigarette lighter plug or interrupt power to the unit or stop the engine during update.



Note

For further more information, access the website (<http://www.joute.com>) or contact your retailer



Automated Drive Recorder



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