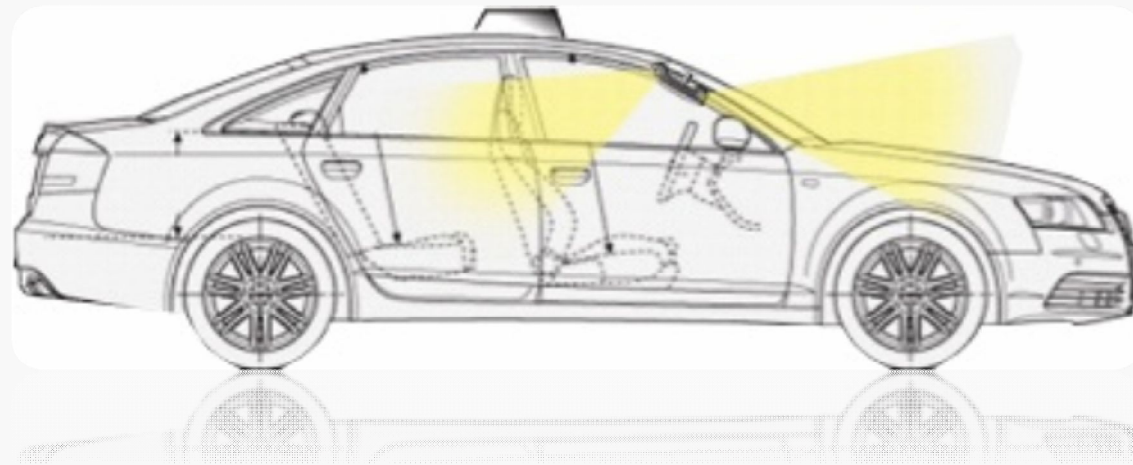


# USER'S MANUAL

## (SDR-5000F)



VER 2.0

## Overall

**SDR-5000F is the automotive black box which stores the video/audio of front/indoor/rear/parking scene of automotive and provides the supplementary evidence when car accidents/ car damages occur.**

- ◆ **Read the Instruction carefully and install the SDR-5000F as manual guide as follows.**
- ◆ **Improper usage of system may cause the system damage and is responsible for your own risk.**
- ◆ **SDR-5000F Viewer is designed working with Window XP/Vista OS environment.**
- ◆ **All the rights including the brand of Xcope is owned by MD E&T and illegal copy of product is prohibited.**

**SDR-5000F is a supplementary device for safety purpose. Driving accidents are responsible with this product.**

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# Introduction

## Introduction

- SDR-5000F records up to 2 channels of videos and audios.
- SDR-5000F rotates up to 360 degree of angles.
- SDR-5000F supports consecutive/event/parking modes.

## Main functions

- Consecutive mode: Always stores the videos and audios when the power is on.
- Event mode : Records before/after 15 seconds when collision occurs.
- Parking mode: Records before/after 15 seconds when motion detection occurs.
  - : Records before/after 15 seconds when minor impact is sensed.
  - : Records up to 5 days when battery discharged.
- Back up storage : Stores final images even with power off.
- Video output : Supports the real time display when VIDEO OUT connects with a monitor.
- Playing files : Plays with custom/regular video player programs.
- Xcope Viewer : Provides the analytic data of impacts, car speeds and driving locations.
- Driving location : Provides the tracers of driving path and distance.

# Cautions

Please do not misuse the SDR-5000F. We are not responsible for any misusages of system.

## **Warning** Following misuse may cause the serious damages.

**Do not dry with heater or microwave oven .**  
It may cause the explosion

**Do not impact or disassemble.**  
It may cause the damage of system.

**Do not clean with chemical liquids.**  
It may cause the fire.

**Do not operate while you are driving.**  
It may cause the car accidents.

## **Cautions** Following misuse may cause the minor damages.

**Do not use parking mode for long time periods.**  
It may cause the battery discharge.

**Clean the lens of SDR-5000F /wind shield.**  
It may cause the video degrade.

**Do not install with other lighting car accessories.**  
It may cause the video degrade .

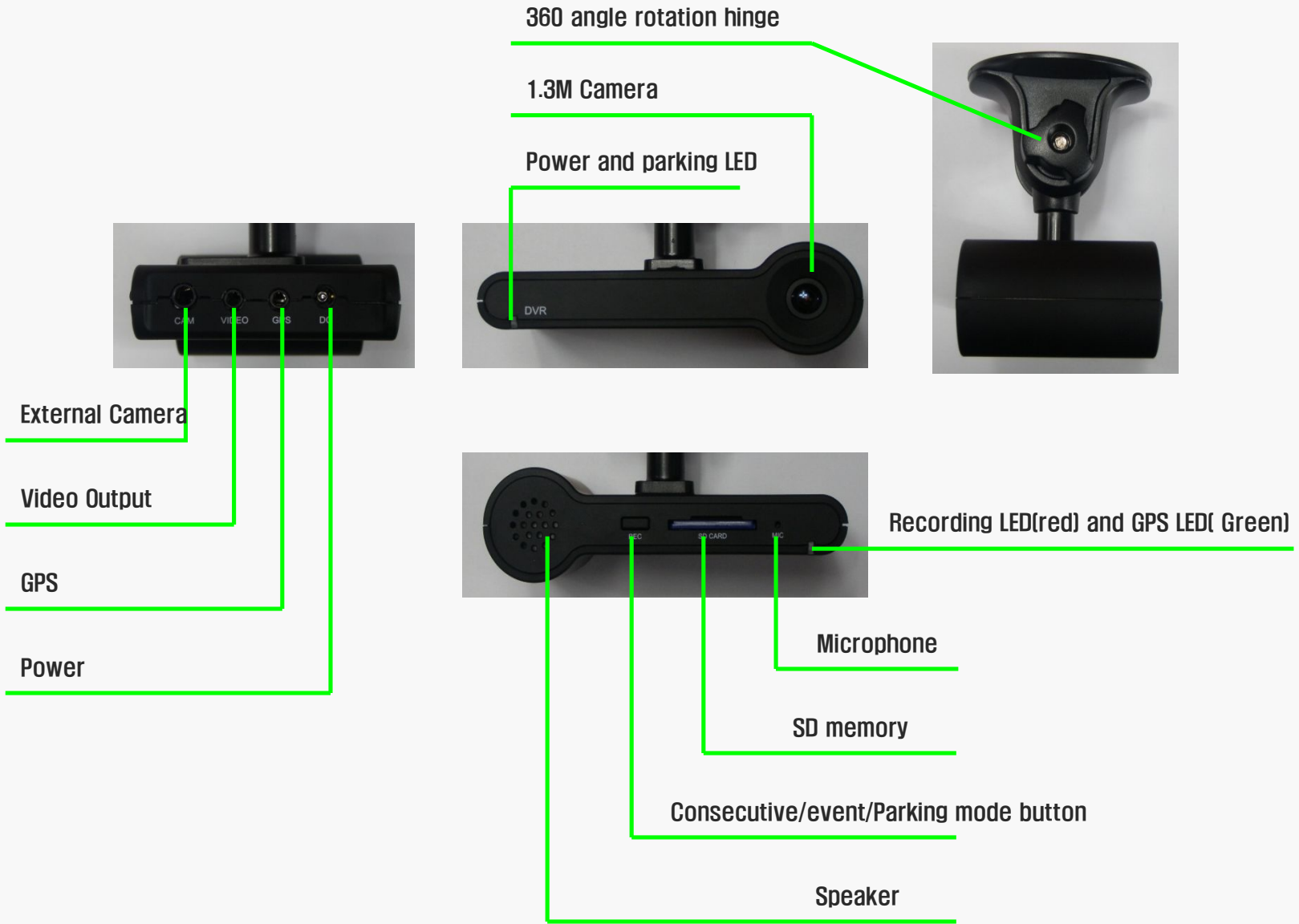
**Do not unplug the SD cards when record is on.**  
It may cause the SD card damage.

**Attach SDR-5000F on wind shield firmly .**  
It may cause impact damages by falling

**Back up the SD card data periodically**  
It may overwrite the files.

**Carefully install the external camera.**  
It may cause the video degrade.

# Parts and functions



# Parts and functions

Button	Operation	Working	Sounds	LED
-	Power on	booting	Long beeper sound	BLUE / RED LED lights for 2 seconds
Records Button	Push the button once shortly	Consecutive mode	Recording start : Short beeper sound. Recording end: Short beeper sound	Fast RED LED lights
	-	Movements were gone 30 minutes into parking mode	-	BLUE LED on RED LED off
	-	Gamjihaeteuttae move into Consecutive mode	-	BLUE LED off RED LED on
	Push the button 3 time (within 2 seconds)	Changes the video out port (internal camera <-> external camera)	Short beeper sound	-
-	Push REC button	Updating SW	Updating starts: short beeper sound Updating ends: short beeper sound.	BLUE LED/ RED LED on
-	Power off	Saves the last images and off the system	-	-

- Caution 1. After updating SW, you must either push the REC button or unplug/plug the power. Otherwise, updating SW procedure will not end completely.**
- 2. GREEN LED/on when GPS is working.**

## Updating SW

1. Copy the update SW into SD memory.

File name is app.bin, and copy the file to top folder in SD memory.

2. Power off and insert the SD memory into SDR-5000F.

3. Power on and updating will start automatically.

Update alarms with short beeper sound, and RED/BLUE LED lights during update.

4. After updating the SW, you must either push REC button or unplug/plug the power. Otherwise , updating procedure will not end completely.



# Parts

SDR-5000F Package consists with BASIC components. Please check the parts .

## BASIC



SDR-5000F



Power cable



Sticker



Quick Manual

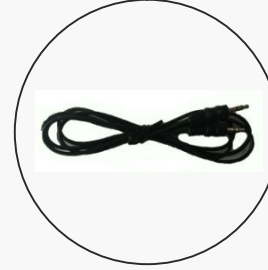
## Options



External Camera



GPS



VIDEO Cable



Rear camera cable



SD reader

It maybe different from real package when the specification changes.  
(Image only helps you to understanding the product and may differ from the actual package.)

## Installation guide

### Caution

- ◆ Install SDR-5000F with flat road condition with engine off.
- ◆ Please read the instruction carefully and install as installation guides.
- ◆ Inset the SD memory and connect the power cable.
- ◆ Do not place SDR-5000F disturbing drivers sight.
- ◆ Arrange the cables for safety.
- ◆ Clean the lens of SDR-5000F with lens cleaner.
- ◆ Place the SDR-5000F on safe place.
- ◆ Direct connection with battery needs careful attention.
- ◆ Improper placing of external camera cause the video degrade.

# Installation guide

1



Clean the front wind shield where Xcope will be placed.

2



Detach the cover of sticker.

3



Attach the Xcope firmly on wind shield.

4



Connect optional GPS/ external camera.

5



Connect the power cable.

6



Connect the cigar jack and arrange the cables.

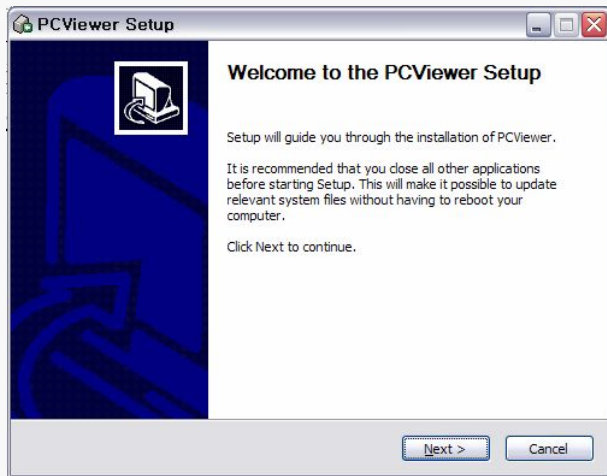
7



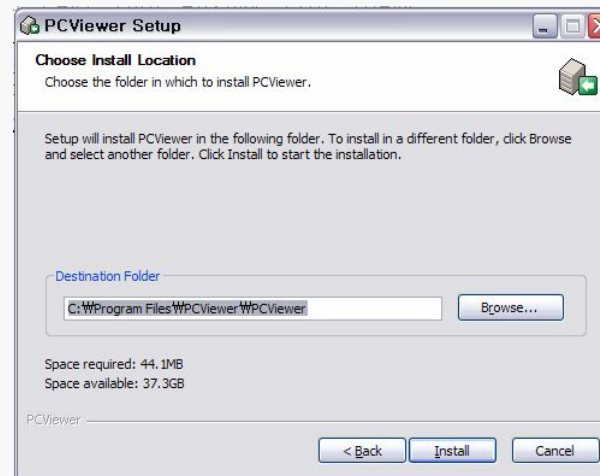
Check LED on and beeper sounds.

# 6. Installation of Viewer

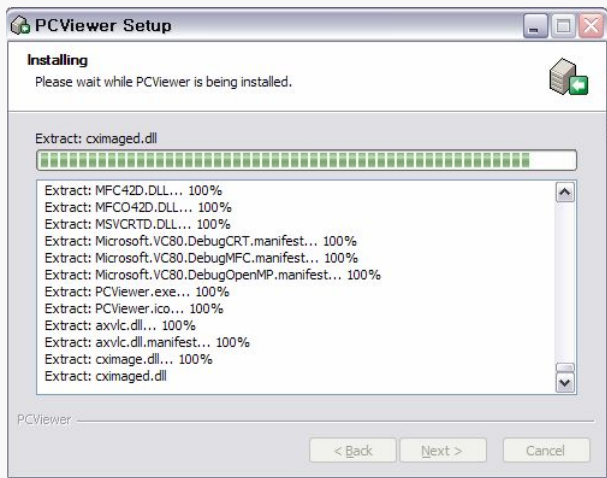
If it push as below, the installing finish after play the Black Box viewer (PCViewer.exe)



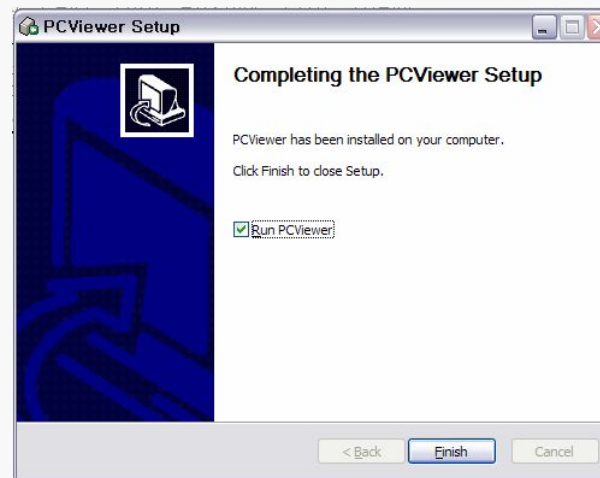
1



3



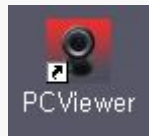
2



4

## 7. Execution and Removal of Viewer

1. Select of basic monitor of window or start menu for window ,  
Confirm with installed the “PCViewer” as below;
1. Practice of “PCViewer”
2. If the “Remove PCViewer” push and then viewer remove



[Basic monitor  
Contracted Icon]



[Viewing of start program  
reserved ]

# 8. Description of Viewer Main Screen

## 1. Description for viewer parts

The screenshot shows a software interface for a vehicle viewer. It features two main video feeds at the top: 'Front Viewer' on the left and 'Rear Viewer' on the right. Below these is a 'Play Control' section with a progress bar and playback buttons. To the right of the play controls is a 'File Time/Max.Impulse /Latitude/Longitude' section displaying date, time, and coordinates. Below the play controls is a 'Speed/Acceleration Graph' showing a line graph with X, Y, and Z axis data. In the center is a 'Speedometer' with a needle and 'KM/H' label. To the right of the speedometer is a 'File List' table with columns for NO., DATE, TIME, TYPE, and FILE NAME. At the bottom, there are two rows of icons: 'Preferences' (left) and 'File Control' (right). A yellow dashed box highlights the speedometer and file list area, and a blue dashed box highlights the bottom navigation icons.

NO.	DATE	TIME	TYPE	FILE NAME
001	2009-12-03	08:47:42	Always	C:\W\Documer

Front Viewer

Rear Viewer

Play Control

Speed/Acceleration Graph

File Time/Max.Impulse /Latitude/Longitude







File List

Preferences

Speedometer

File Control

## 9. Description of viewer button 1

1. Program version information   
It displays program version information and copyright information
2. Minimizing button   
It minimizes viewer with taskbar
3. End of viewer   
It ends viewer
4. Pause of play   
It pause files in playing
5. Play   
It starts to play the file selected in the list
6. Stop to play   
It stops the file under playing



## 9-1. Description of viewer button 2

7. Map screen capture



It stores map screen domain into bmp file

8. Image capture



It stores specific screen of front and rear images in playing into jpg file

9. Print of image screen



It prints out specific screen of front and rear images in playing on printer

10. Moving at multiple speeds



It can adjust playing speed in 1/8, 1/4, 1/2, 1, 2, 4, 8 times speed

11. Volume control



It controls volume ranging 0~10

12. Acceleration and speed graph

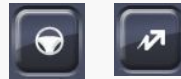


It shows acceleration and speed graph respectively with toggled button



## 9-2. Description of viewer button 3

13. Video mode/driving record mode



With toggling button, it shows image or information for driving records respectively

14. Setting file password



It sets password of recording file. It can set after connecting SD card to computer

15. Store after removing password of file



Store it after removing password of file which was set

Password shall be remembered then the password can be removed

16. Setting viewer environment



Set environment of viewer and then store

17. Setting environment of black box



Set environment of black box and then store in SD. It can set after connecting SD card to computer

18. Viewing map screen



It shows on map the location of image being presently played

## 9-3. Description of viewer button 4

19. Opening file



Select image file. Multiple files can be selected with mouse with shift key or control key pressed

20. Search in details



It is used to select certain files of specific date

21. Download of SD data



It downloads data stored in SD to computer

22. Delete list items



Delete selected items in the list. However, actual data is not deleted from store unit

23. Delete all list items



It deletes all items in the list. Actual data is not deleted from store unit

## 10. Setting file password

- ◆ Purpose of encoding file : Recoded images are encoded in order for other persons not to watch the images, if images once encoded then those encoded images can not be seen with general image players, however, it can be replayed with exclusive player.



Setup File Password

Password Folder: H:\Setup\passwd.bin

Input Password(English or Numeric, 4~6)

Password:

Confirm Password:

Save Cancel

### ◆ Password setting sequence of black box file

1. Take out SD card from black box device and connect it to computer

2. Select button on  main screen of viewer

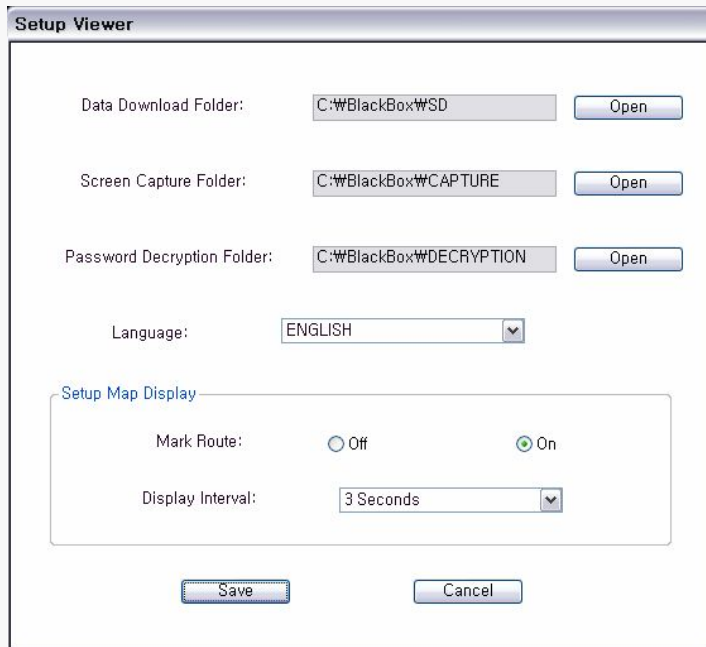
It takes from a few seconds to about 1 minute to search SD card according to computer. The screen shown as in the side indicates to recognize SD card normally


3. Password setting store folder is a folder to set automatically, input the same password at password blank and password confirmation blank. Password shall be inputted 4~6 digits with combination of English alphabet and figures

# 11. Setting viewer condition

- ◆ **Setting viewer environment:** If environment of viewer itself is set and stored, then it can be replayed to meet personal requirements

Each item of following viewer environment setting diagram is described



1. Select --button on  viewer main screen
2. **Folder to be downloaded SD data :** It designates in which folder in the computer shall be stored the data in SD card
3. **Screen capture folder :** It designates folder to store image screen or map screen
4. **Store folder after decoding password :** Folder to store is designated after decoding the encoded file
5. **Selections of language :** Select language to use among multi-languages (Korean, English, Japanese)
6. **Display moving route :** Select to display driving route on the map by marking
7. **Interval to display route :** Designate interval to display driving route on the map

## 12. Setting black box condition

- ◆ **Setting black box environment** : Set and manage in viewer those which are difficult to set in black box itself

**Setup BlackBox**

Driver:

License Number:

**Setup Impact**

Fast Setup  Manual Setup

X:  Y:  Z:

Recording Frame Rate:



File Encryption:  Off  On

Mute Function:  Off  On

Buzzer Sound:  Off  On

Set BlackBox Time:

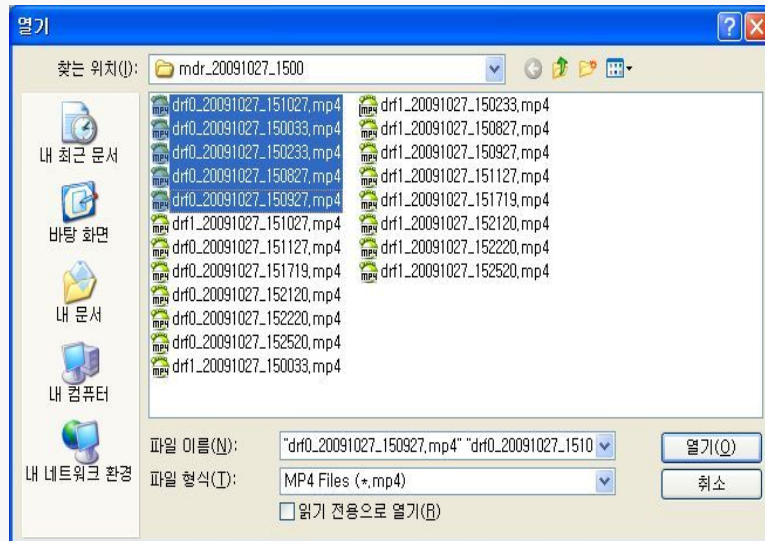
**Time Zone:**

1. Take out SD card in the black box device and connect it to computer
2. Select button on  main screen of viewer
3. **Driver/car number** :  y useful function in management when using separate SD card for each driver
4. **Setting amount of impact** : Designate the strength to record event when impact occurred
  - 4.1 **Quick setting** : Select among normal/dull/sensitive
  - 4.2 **Manual setting** : Select X, Y, Z values between 0.0~2.0

The value is the bigger the duller, and is the smaller the less sensitive
5. **Recording frame** : It designates to store how many frames per second. The bigger of the size of frame is the better picture quality, however, the capacity is big therefore number of files to be stored in SD becomes smaller
6. **Setting file password** : Select whether to use password for the file. The value set by password setting button becomes password, and if you forget the password then you can not play the file
5. **Use of mute** : Select mute (Switch off sound) function

## 13. Open and play of file

- ◆ **Open and play files:** If black box files are opened in specific folder, they go automatically into file list and start automatically to play. If you want to play specific file, select file in file list and then select play button



1. Take out SD card in the black box device and connect it to computer


2. Select --button on  main screen of viewer

3. SD After selection of “drive” in SD card, select one of following folders, and then select a file as shown on left picture. If you want to select multiple files, select them with mouse with control key or shift key pressed

3.1 Black Box Folder : The folder containing files stored at all times

3.2 Event Folder : The folder to be stored when impact occurred



3.3 Parking Folder : The folder to be stored when parked

4. Select spec  file in the list and then select ---- button

## 14. Search and play according to dates

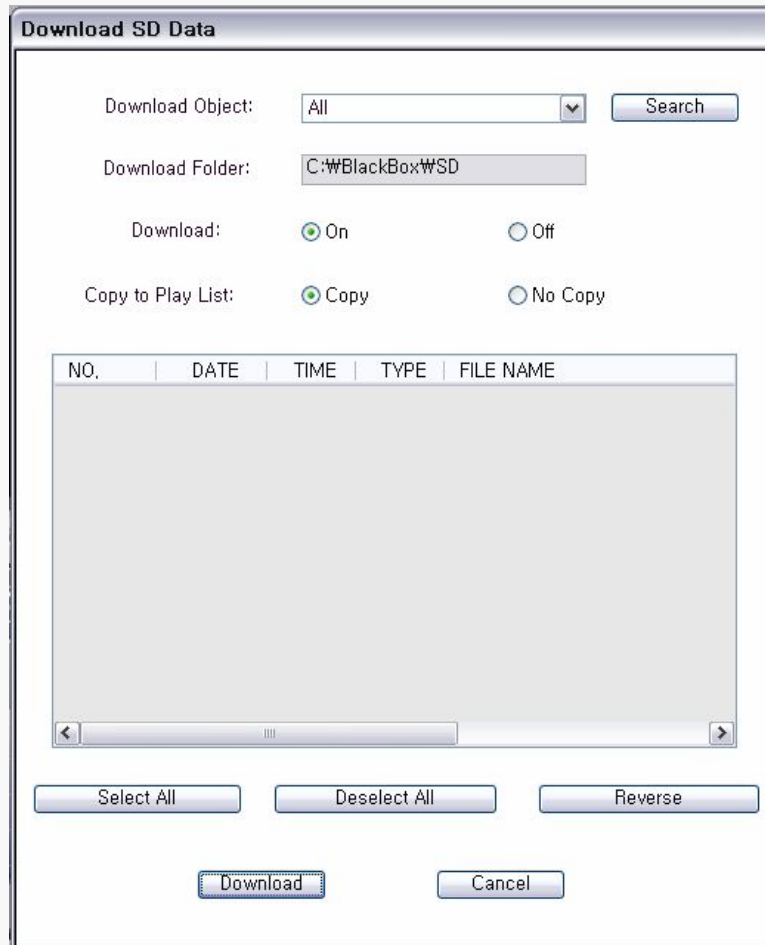
- ◆ **Search per date and play :** If specific date is designated, files in the designated date are searched and inputted into file list and are started to play




1. Take out SD card in the black box device and connect it to computer
2. Select ---button on  main screen of viewer
3. On the left picture, drive inputted in the SD card is automatically selected. If you want to designate other folder, select it by pressing “Search” button
4. Set search period
5. If OK button is pressed then files within the set period are searched and inputted automatically into file list and then started to play
6. After selection of desired items in the file list, select ---  button

## 15. Download SD data

- ◆ **Download SD data:** Download data stored in SD inserted in black box device into specific folder of computer and then keep it

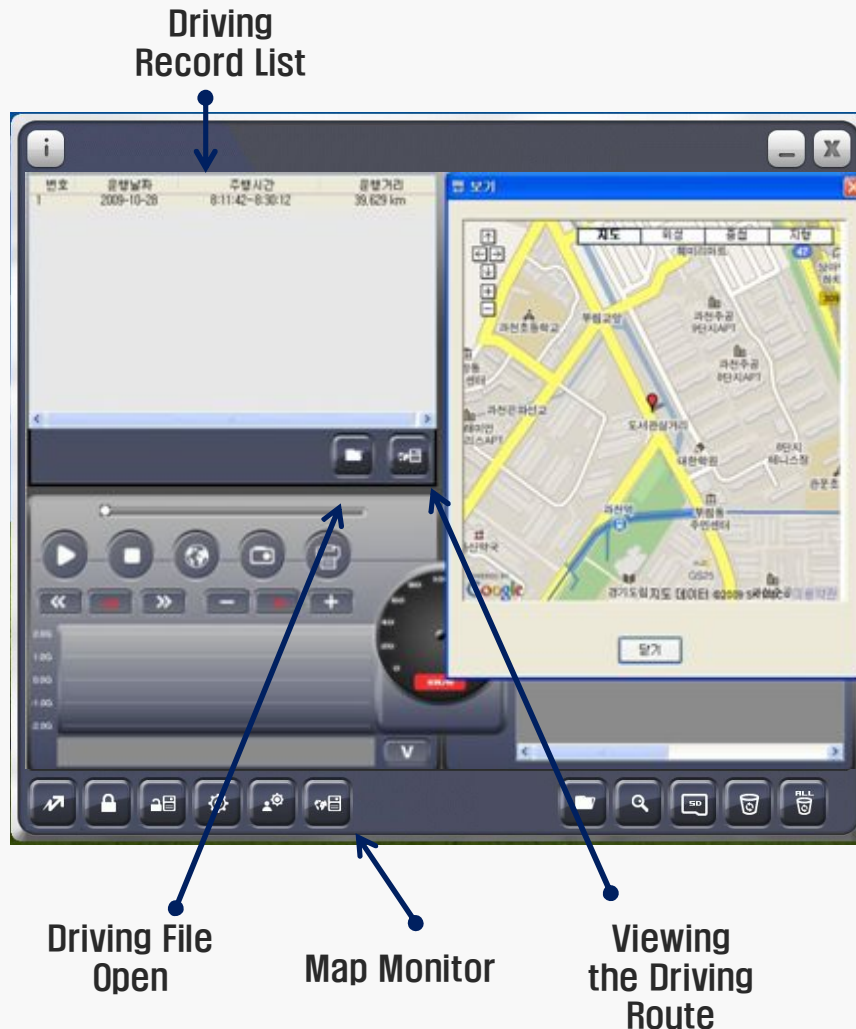




1. Take out SD card in the black box device and then connect it to computer
2. If ---  button is selected on main screen of viewer, all black box data stored in SD are searched and shown as shown in left picture
3. **Download target :** Select target to download and then press “Search” button then it searches the target and input it into list
4. **Download location :** it stores in “SD data download location” designated in “Setting viewer environment” .
5. **Move to play list:** After download files presently searched, select whether to input into play list of main screen
6. **Download :** It starts to copy data in the file list into designated folder.



## 16. Viewing driving records

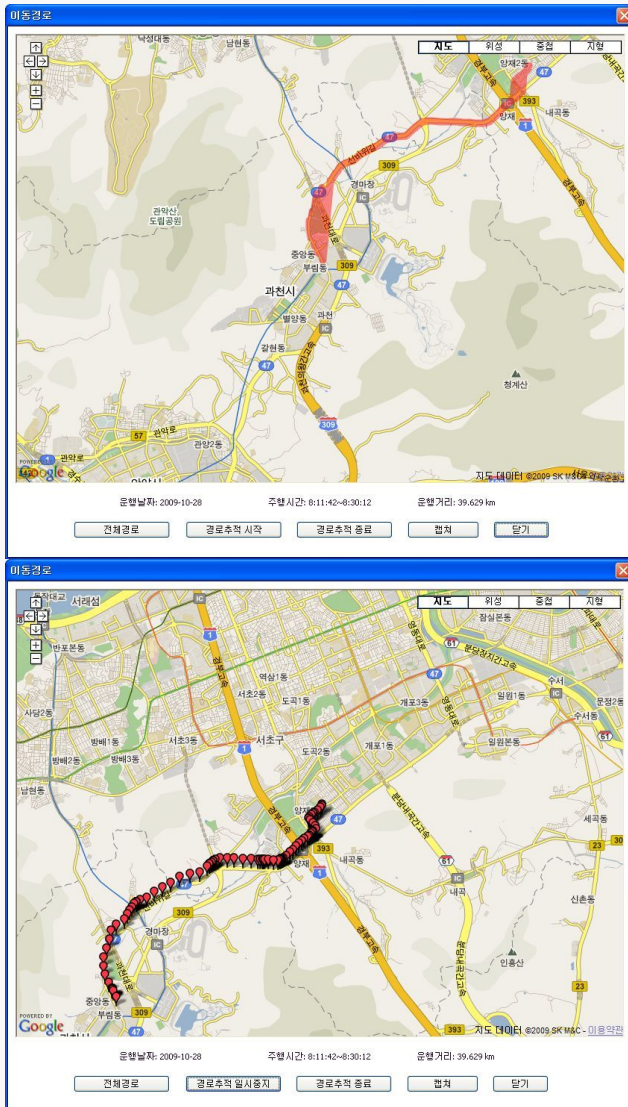
- ◆ **Viewing driving record** : You can see information of driven records for maximum one month, and they are arranged according to dates and inputted automatically into drive record list



1. Take out SD card in the black box device and then connect it to computer
2. Select ---  button in the main screen of viewer, then it is changed into drive record mode, button is toggled with ---  button
3. As shown in left picture: Press “Drive record file open” button, select extension “dat” files in setup folder of SD card, they are arranged by dates and inputted into drive record list
4. After selection of “View map screen” button, if specific item in “Drive record list” is selected, location of drive start point is indicated on the map as shown on left picture. However, if GPS is not received then the location cannot be normally indicated.
5. Select “View of drive move route” button. This function will be described in next page

## 17. Viewing driving route

- ◆ Viewing driven moved route: Driven moved route can be shown on map per each date. Overall route can be displayed with line at a time, moved route can be shown tracing route



1. **Overall route:** If “Driven moved route view” button is selected on this screen, as shown on left upper picture, overall route moved during the day is shown on the map with a line
2. **Start to trace route:** If this button is tapped, as shown on left lower picture, it continuously moves marking driven route
3. **Pause to trace route:** If this button is tapped during tracing route, tracing is paused for a short time
4. **End to trace route:** It ends to trace route.
5. **Capture:** The map shown at present time is stored on computer
6. **Close:** Close moved route screen and moves to main screen.

## 18. Specification

- ◆ Power : DC12V ~ DC24V
- ◆ Power Consumption : Max. 4W
- ◆ Camera : Color C-MOS Camera, 110 Degree
- ◆ Recording Frame : 10,16,24,30/Sec
- ◆ Memory Pixel : 640 x 480 Pixel
- ◆ Audio : Included Mic
- ◆ Rec. Memory Card : From SDHC 2 GB to 32GB
- ◆ Size : 102 x 53 x 29 mm
- ◆ Operating Temperature : -20°C ~ 70°C
- ◆ Custody Temperature : -40°C ~ 85°C
- ◆ Viewer OS : Windows XP / Windows Vista
- ◆ Viewer Monitor : More than 960 x 820

※ product external appearance and specification etc. can be changed without previous notice for product improvement.

# Maintenance

1. 1 year free warranty from purchasing date.
2. Following maintenance will be charged by your expenses.
  - Improper usage.
  - Improper power on.
  - Disassemble parts.

One year warranty		
<b>Model</b>	<b>SDR-5000F</b>	
<b>Serial Number</b>		
<b>Purchasing Date</b>	<b>year</b>	<b>month      date</b>
<b>Customer</b>	<b>name</b>	<b>phone</b>
	<b>address</b>	
<b>Shop</b>	<b>name</b>	<b>phone</b>
	<b>address</b>	