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Read me first

Introduction

Thank you for purchasing the EDR(Event Data Recorder). Read the instructions thoroughly for proper operation of your EDR(Event Data Recorder)

Copyright

Disclaimer

EDR specifications and manual are subject to change without notice. Global Information technology Co., Ltd. assumes no liability for damage incurred directly or indirectly from error, omission or discrepancies between the computer, VCI and the User Manual.

Introduction to EDR

The Purpose of EDR (Event Data Recorder)

EDR is to confirm and analyze to collect the data when colliding with a vehicle.

Aim of EDR is below.

1. A detailed investigation of collision status

2. An accurate analysis of a safety device performance

(Relevant laws: part 563 of title 49, Code of Federal Regulations)

Composition of EDR

EDR(Event Data Recorder), is composed of VCI(Vehicle Communication Interface), ACU connector, EDR software.

- VCI : Module for vehicle Electronic Control Unit (ECU) communication.
- EDR software : The program for reading and analyzing Event Data which communication with airbag ECU.
- ACU connector : Module for connect between ECU and VCI.

Safety warnings and cautions before use

This section contains WARNINGS and CAUTIONS for the safe use of your EDR. Please read the following contents before use.

WARNING

This indicates items for which incorrect handling may result in a major accident involving serious injury or death.

- Set up the VCI module in a safe place in the vehicle. Avoid contact or disturbing other equipment and parts during vehicle operation.
- Do not use another High Power electrical supply device for power input on the VCI module except the car battery (7~35VDC).
- Be sure to tighten the link between the electric supply cable and the battery extension cable to prevent detachment during use.
- Install trigger module in a safe location to avoid disturbing normal vehicle operation.
- Connection between VCI equipment, DLC main cable and adapter cable connections must remain tight in order to avoid separation during normal vehicle operation.
- Do not disassemble VCI module.

CAUTION

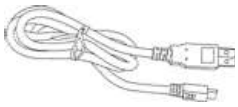
This indicates items for which incorrect handling may lead to injury or damage to property. Under certain conditions more serious consequences may result.

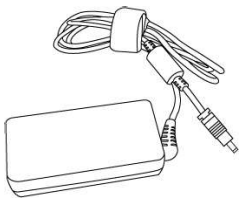
- Always use the VCI module in its rubber shield and keep inner VCI module away from liquids and other contaminants.
- Do not drop or shock the VCI module, damage may result.
- Do not leave tools or heavy objects on the VCI module.
- ALWAYS check positive and negative Battery cables before attaching the extension cable to the power supply cable.
- Beware of contacting any hot or moving engine parts or belts while using the extension cable and power cable with the equipment.
- Unplugging the DLC and USB cables from the VCI module must only be done after releasing the cable connector lock tab(s).
- USB cable must be connected to VCI module in order to upgrade VCI firmware.
- Place all parts and supplies inside the storage case when not in use.
- When plugging or unplugging any of the cable connectors on the VCI equipment, use the cable connector handle and confirm the lock tab(s) are released.

Section 2 Components of EDR

EDR Components

Components of EDR

Part name	Part number	Description	Qty.
EDR program DVD	G1ZHDDM001 : Hyundai G1ZKDDM001 : Kia G1ZGDDM001 : General G1ZLDDM001 : R&D	EDR program DVD * HDD : 200 MB * OS : Windows XP (Windows VISTA(32bit, 64bit), Windows 7(32bit, 64bit) * CPU : 2 GHz * USB : 1.1 * Memory : 1 GB RAM	1
Carrying Case 	G1GKNHA001	Carrying Case for keeping or moving the EDR products.	1
Assy.-VCI module 	G1CHDMK050	VCI module for scan-tool functions.	1
Cable-Mini USB 	G1MDDCA105	Cable for communication between VCI and Information Terminal(Laptop). Length 3.5m.	1
Cable-DLC [26pin - 16pin] 	G1CDDCA001	DLC main cable for communication between VCI module and (16pin) OBD-II diagnosis connector on vehicle. Length 2.0m.	1

Part name	Part number	Description	Qty.
AC/DC adapter 	G1CDDPA011	Adapter for supplying power to the VCI main module from AC power	1
AC power cable 	G1CDKCA001	Cable for AC/DC adapter Standard format: IEC 60320 C13	1
CFCI module 	G1DDDME001	Used to communicate with CAN-FD applied vehicles.	1
Adapter[36pin] 	G1ZDDPA002	Adapter for communication with LM, LM FCEV vehicles. Length 0.4m. Color: Yellow	1
Adapter[27pin-39pin] 	G1ZDDPA004	Adapter for communication with YF, YF HEV vehicles. Length 0.4m. Color: Yellow	1

Part name	Part number	Description	Qty.
Adapter[27pin] 	G1ZDDPA005	Adapter for communication with RB, FS vehicles. Length 0.4m. Color: Yellow	1
Adapter[27pin-39pin] 	G1ZDDPA006	Adapter for communication with GD vehicle. Length 0.4m. Color: Yellow	1
Adapter[27pin] 	G1ZDDPA007	Adapter for communication with HG, DMA(AN), NC vehicles. Length 0.4m. Color: Yellow	1
Adapter[27pin-39pin] 	G1ZDDPA008	Adapter for communication with MD, UD, JK vehicles. Length 0.4m. Color: Yellow	1
Adapter[24pin] 	G1ZDDPA009	Adapter for communication with BK, BH, VI vehicles. Length 0.4m. Color: Yellow	1

Part name	Part number	Description	Qty
Adapter[44pin] 	G1ZDDPA011	Adapter for communication with VI vehicles. Length 0.4m. Color: Yellow	1
Adapter[44pin] 	G1ZDDPA012	Adapter for communication with GD vehicles. Length 0.4m. Color: Yellow	1
Adapter[44pin-44pin] 	G1ZDDPA013	Adapter for communication with DH, TL, HI vehicles. Length 0.4m. Color: Yellow	1
Adapter[44pin-44pin] 	G1ZDDPA014	Adapter for communication with LFA, LF HEV, LF PHEV, JS vehicles. Length 0.4m. Color: Yellow	1
Adapter[27pin-39pin] 	G1ZDDPA021	Adapter for communication with AD, ADA, AE HEV, AE EV, PD, AE PHEV, IK vehicles. Length 0.4m. Color: Yellow	1

Part name	Part number	Description	Qty
Adapter[44pin-44pin] 	G1ZDDPA024	Adapter for communication with OS vehicles. Length 0.4m. Color: Yellow	1
Adapter[36pin-52pin] 	G1ZDDPA025	Adapter for communication with TMA, LX2, DN8A, DN8 HEV vehicles. Length 0.4m. Color: Yellow	1
Adapter[36pin-52pin] 	G1ZDDPA026	Adapter for communication with FE vehicles. Length 0.4m. Color: Yellow	1
Adapter[27pin-39pin] 	G1ZDDPA027	Adapter for communication with OS EV vehicles. Length 0.4m. Color: Yellow	1
Adapter[27pin-39pin] 	G1ZDDPA028	Adapter for communication with JS N vehicles. Length 0.4m. Color: Yellow	1

Part name	Part number	Description	Qty
Adapter[36pin-52pin] 	G1ZDDPA029	Adapter for communication with RG3, JX1 vehicles. Length 0.4m. Color: Yellow	1
Adapter[36pin-52pin] 	G1ZDDPA030	Adapter for communication with QX vehicles. Length 0.4m. Color: Yellow	1

Section 3 Basic Features

Specifications and features

Power On/off method and switch operation

Installation of VCI module and DLC main cable

Specification of VCI

General features

Item	Specifications
Micro Controller	ARM9 (S3C2410A) @ 208MHz
Memory	RAM 32MByte ROM 32MByte
Operating Voltage	7~35VDC
Operating Temperature	14℉~158℉ (-10℃ ~ 70℃) : USB Mode 14℉~131℉ (-10℃ ~ 55℃) : Wireless LAN Mode
Operating Mode	Diagnosis Function / Flight Record Function
Current Consumption	Typical 350mA @12V
Housing	ABS & Rubber Shroud
Dimension	170 × 105 × 33 mm
Weigh	350g

PC Interface

Item	Specifications
Wire protocol	USB 1.1
Wireless protocol	Wireless LAN IEEE 802.11b

VCI (Vehicle Communication Interface)

Item	Specifications
CAN	CAN 2.0B
K-Line/L-Line	ISO-9141, ISO-9141-CARB, KWP-2000
Commercial Veh.	SAE-J1708, RS-232C
Data/Control Line	Melco Pull-Down UART

Added Interface

Item	Specifications
1. VSS	Vehicle speed simulation
2. Voltage Output	5 ~20 VDC

Main Components

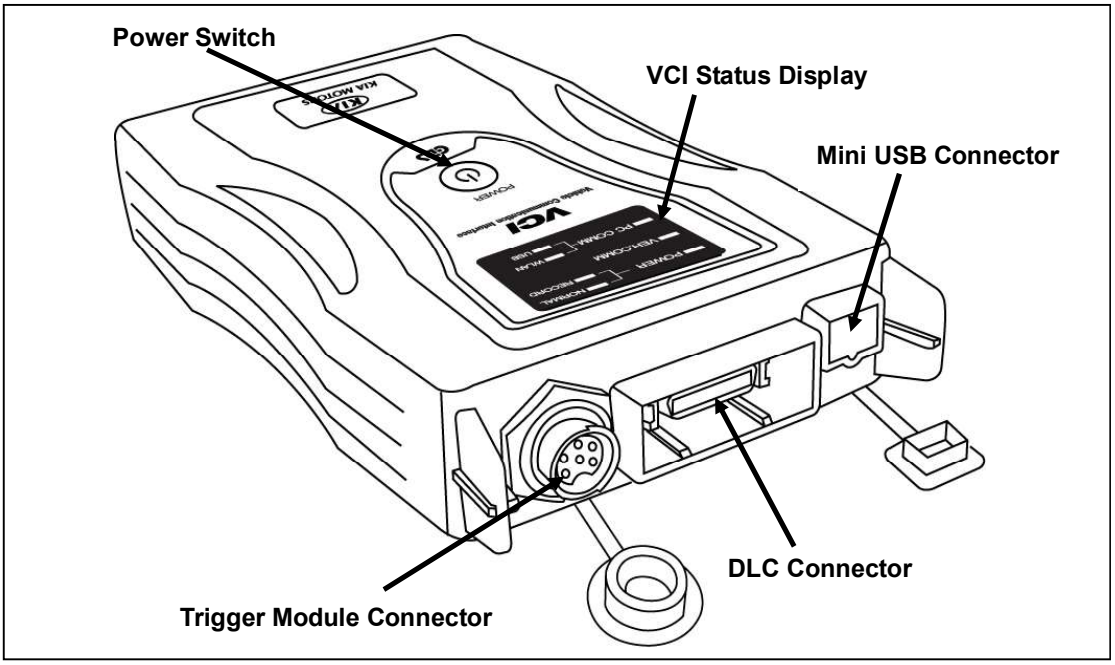


Figure 1. Main Components of VCI module

Turning on the VCI module

To turn on the VCI module, first connect the main DLC cable from the vehicle to the VCI module and depress the main power switch.

If the vehicle DLC diagnosis connector does not use a 16-pin connector, or if battery power cannot be supplied to the VCI module, the AC/DC power cable must be connected to supply battery power to the VCI module.

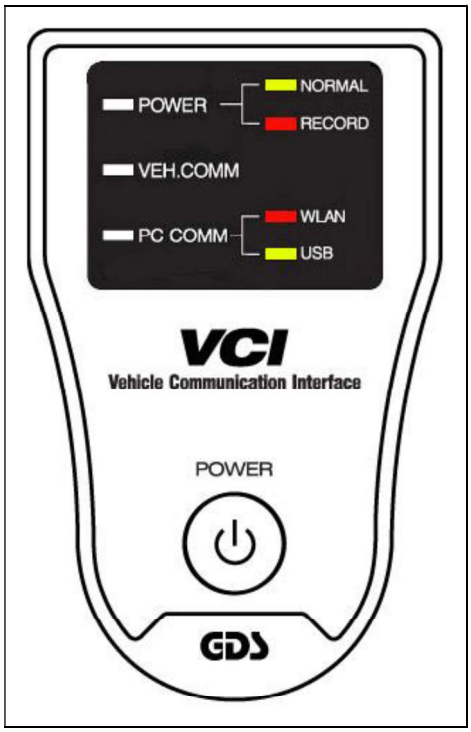


Figure 1. VCI module display

VCI Display Operation

The VCI equipment has a display for checking VCI operating conditions. This display shows the current condition of each VCI function with a colored LED.

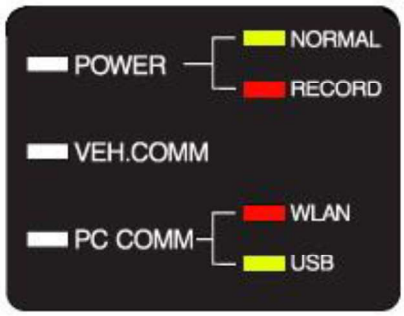


Figure 2. LED status on the VCI module display

POWER

LED will illuminate with the VCI module on. Sub LED's show which function is currently operating on the VCI module.

- Green: refers to Normal(diagnosis) mode

VEH. COMM

The current condition of Vehicle communication to the VCI module can be monitored using this LED.

- This LED is Green.

PC COMM

Displays communication mode between the VCI and PC, it also displays by LED color.

- Red color refers to wireless LAN and Green for USB cable.

Turning off the VCI module

To turn off the VCI module, depress the power switch for 2-3 seconds or disconnect the power supply cable. The VCI module automatically turns off in case of a disconnected power supply cable.

Installation of VCI module and DLC main cable

Installation of main DLC cable

First locate the Data Link Connector (DLC), to communicate between the ECU and the EDR.

The location of the Data Link Connector (DLC) may vary depending on the type of vehicle.

- Usually located on the lower instrument panel, on the driver's side.
- DLC may be installed in the engine room. Check for the proper location on each vehicle.
- Some older model vehicles, which do not use a 16-pin (OBD II diagnosis -SAE J1962) connector, must use a 16-pin suitable adapter. The SCSI connector is on the other side of this 16-pin diagnosis connector.

The SCSI connector must be connected properly at the VCI module. And the user must check the connection condition once complete.

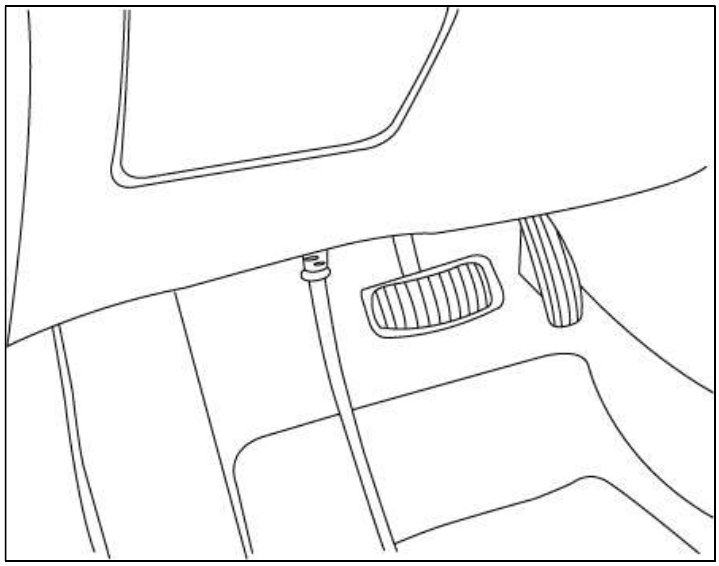


Figure 1. Connect the DLC main Cable to the OBD-II Connector

WARNING

- When installing or disconnecting the cables, always use the connector handle after confirming the connector lock tabs are released.

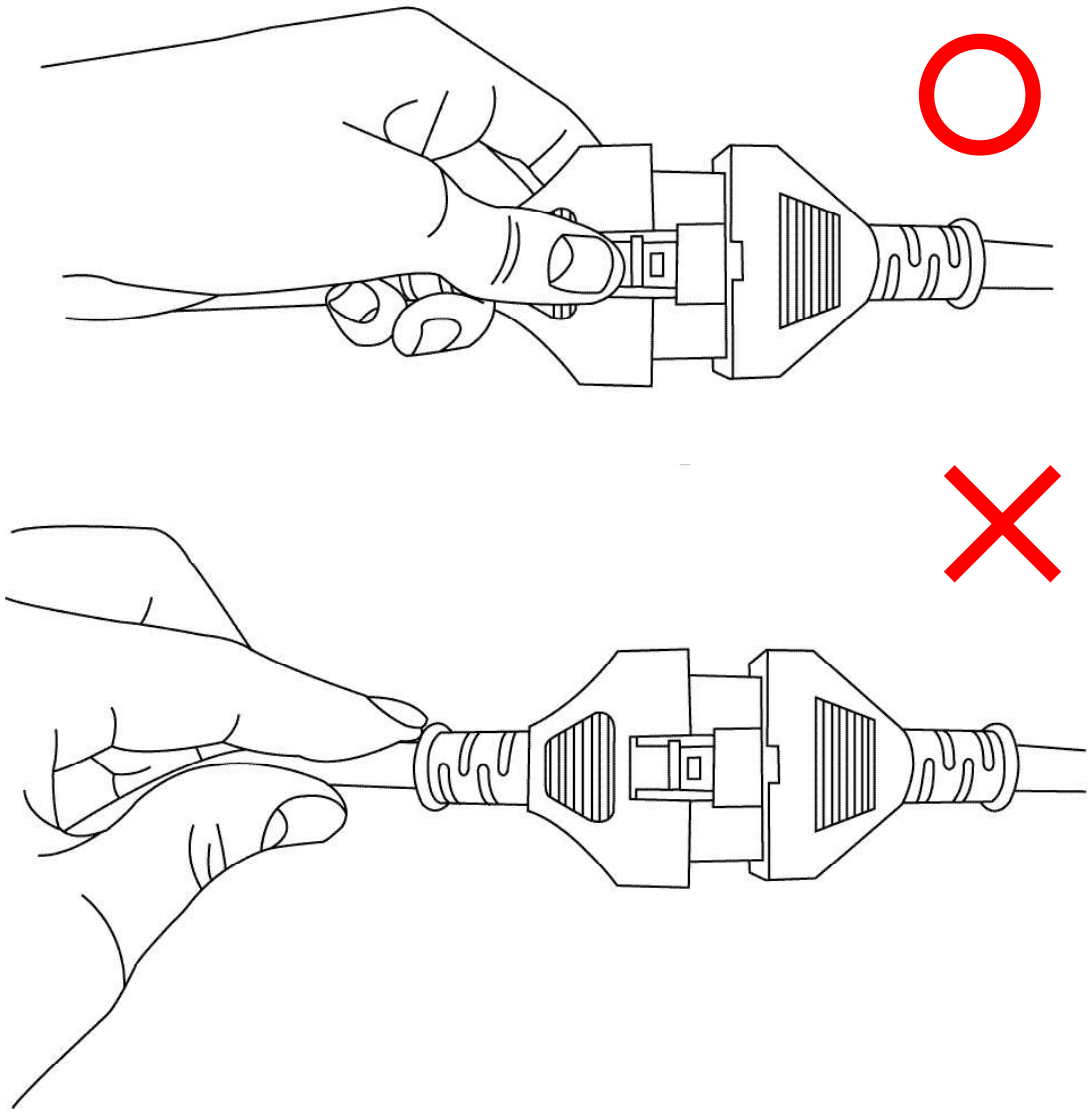


Figure 5. Correct Method of Connecting Cables

Installation of VCI module

The VCI module is designed for seamless operation that will not disturb normal vehicle operation.

- Can put anywhere in the passenger compartment where it will not disturb normal driving.
- When using the VCI module while driving, keep the VCI module as far away from clutch, brake or acceleration pedals as possible.
- Always operate the vehicle in a safe manner.

Be sure that the DLC main cable is connected securely.

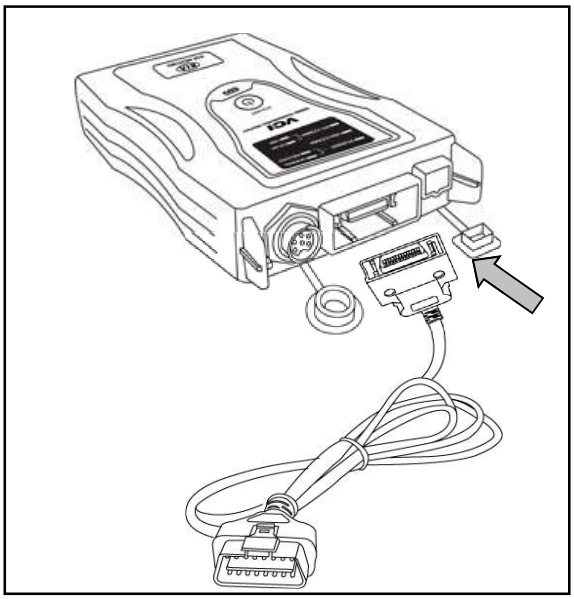


Figure 2. Connecting DLC main Cable to VCI module

Be sure the DLC cable is connected properly. Place the VCI module in a safe location, do not disturb. Also it must be secured to avoid moving the VCI module due to quick acceleration or braking

WARNING

- Install the VCI module in the position shown to avoid disturbing while driving.

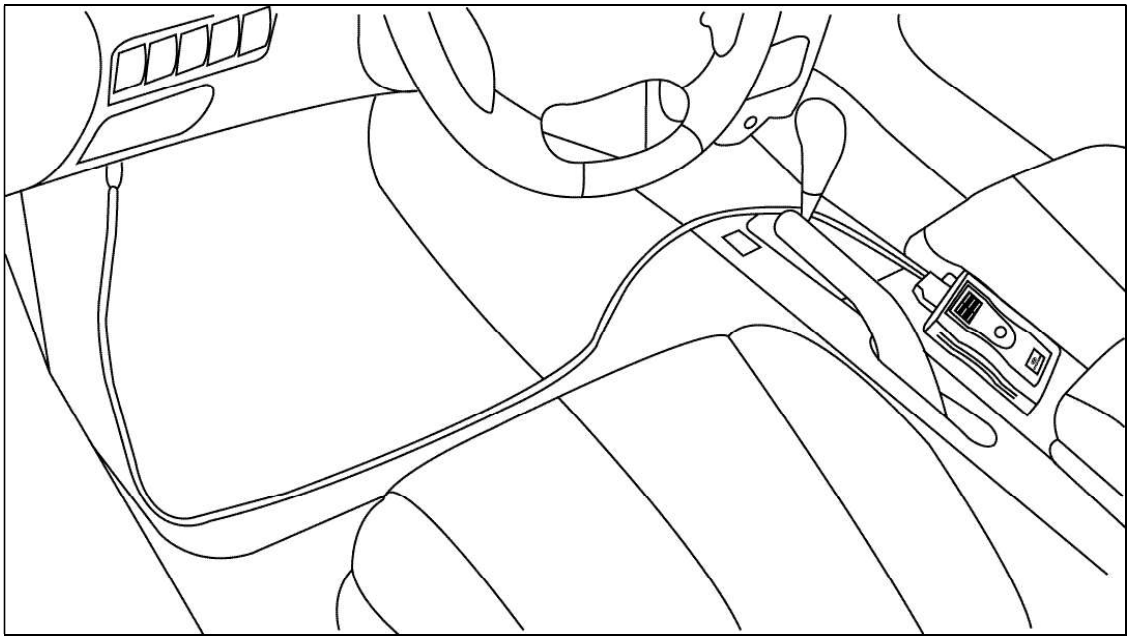


Figure 3. Example Installation of VCI module

Installation of USB cable

Some GDS features require using the USB cable instead of wireless LAN while communicating between the Information Terminal and the VCI module.

While installing the USB cable to the VCI module, the USB cable must be tightly connected in order to avoid disconnection.

When removing the USB cable, depress the connector lock tab first then disconnect the cable.

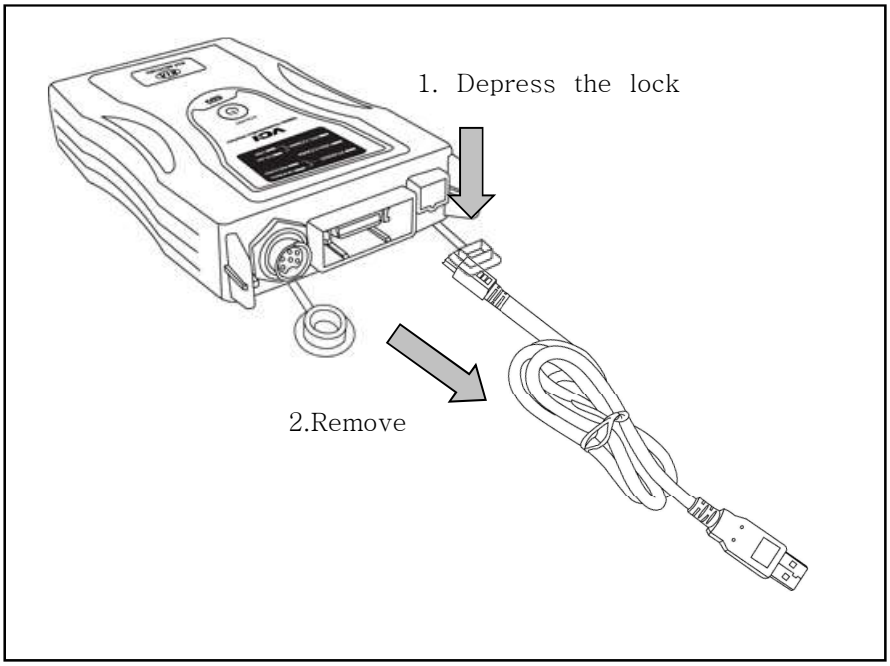


Figure 4. Disconnecting the Mini USB Cable from the VCI module

There are no lock tabs at the Information Terminal side connector on the USB cable, therefore use caution when checking the connecting condition between the USB cable and Information Terminal, especially while moving the Information Terminal with the USB cable connected.

Section 4 Default behavior

Start-up procedures

Main screen layout

Select Vehicle

Start EDR

After software installation, double-click EDR shortcut icon on the desktop as shown in [Figure 1].

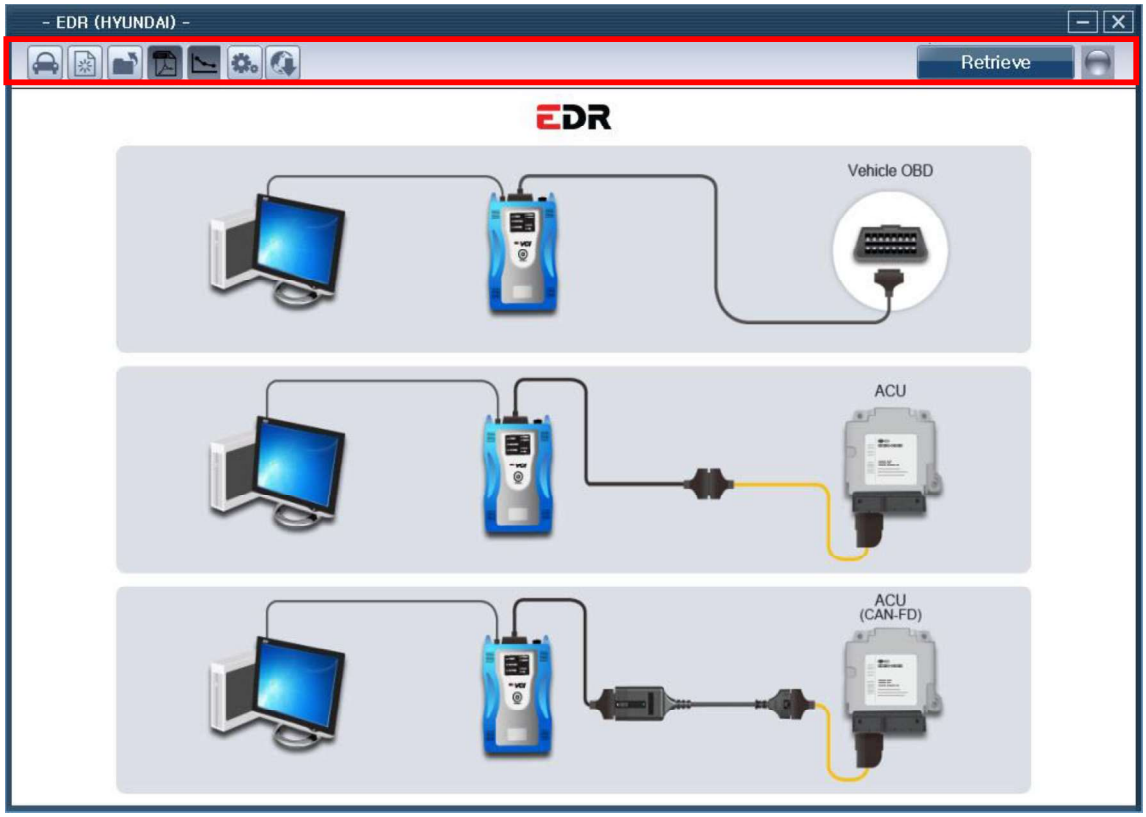
[Figure 1] EDR shortcut icon displayed on the desktop

Main screen layout

default behavior **Main screen layout**

Main screen layout

- EDR main page composed of menu bar to use EDR .
- tab menu is the row where the selection of vehicle type, initial screen, opening of PDF file, saving of PDF file, summary report, setting and Internet update are available.
- EDR program is support 1024 * 768 resolution.



[Figure 1] The main screen layout (1024 * 768)

Tab Menu

Icon	Explanation
	Vehicle search icon clicked in initial page, vehicle which needs to inspect year, engine size can be set. And could set whether to run the auto VIN search function.
	Return to Home screen
	Open saved PDF file
	View and save EDR Report as PDF file
	This function summarizes and shows each event in one page.
	Product name, copyright information can be found.
	Internet Update
	Initiate communication with Vehicles information selected by user.
	communication off status is displayed.
	communication on status is displayed.

Select Vehicle

default behavior	Select Vehicle

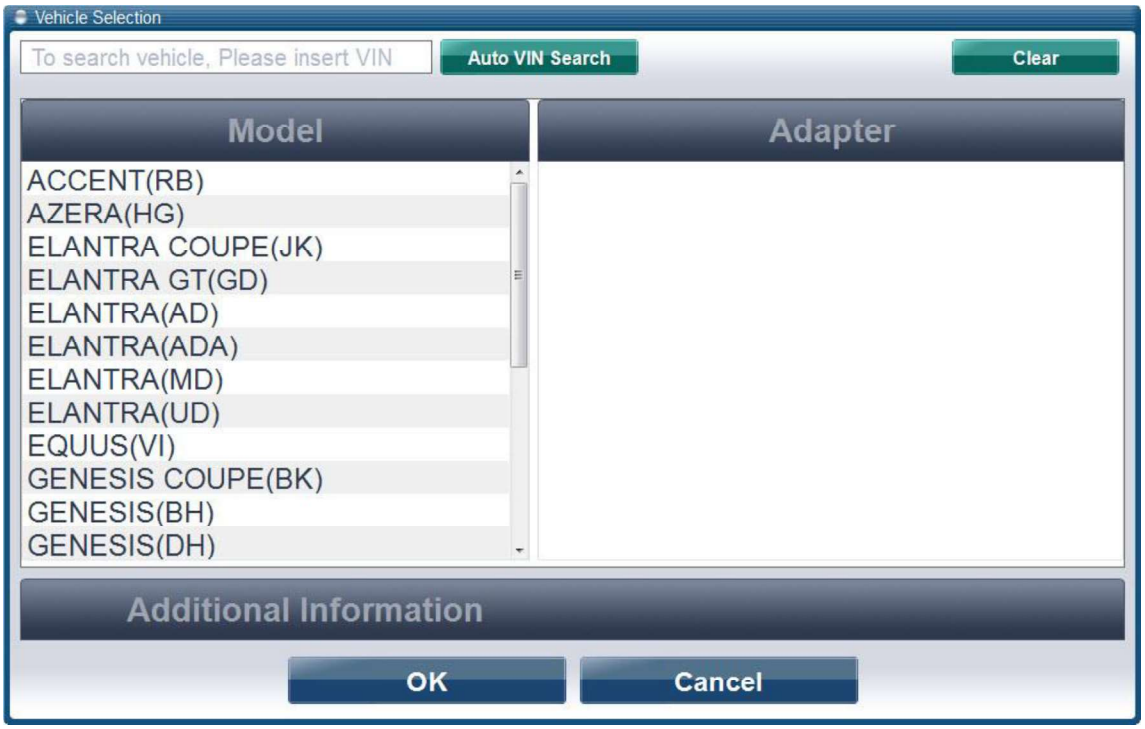
Select vehicle

Click "Select Vehicle" button as shown in [Figure 1] EDR on the main screen, vehicle selection screen will be displayed.

When vehicle search page displayed. And Vehicle can be selected in following two ways.

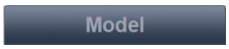
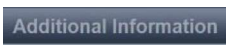
Vehicle which needs to be diagnosed can be selected in two ways.

1. Enter 17 digits VIN Number (chassis number) manually.
2. Select Vehicle and adapter manually by user



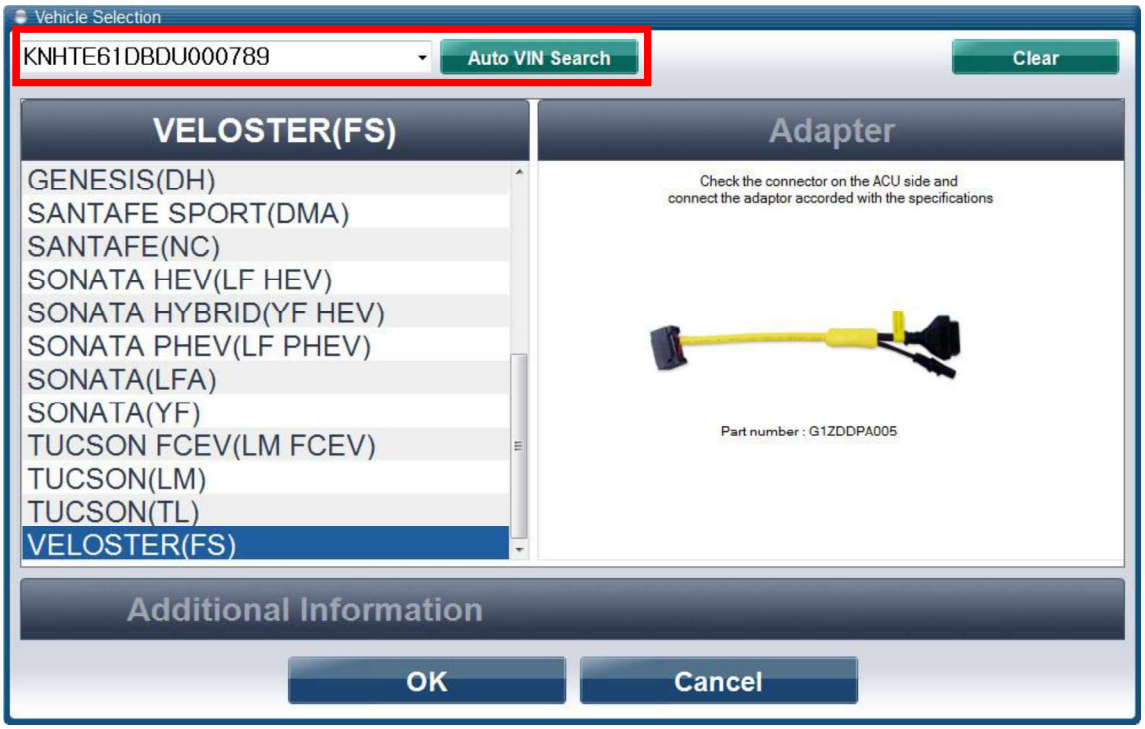
[Figure 1] Select Vehicle

vehicle search menu description

icon	description
	Chassis number (VIN) can be entered
	From entered chassis number (VIN) information in the search box can be retrieved vehicle.
	initialize the selected vehicle.
	Manufacturer's vehicle models are displayed
	The adapter of the relevant vehicle is displayed.
	Complete the Vehicles selection.
	Clear the Vehicles selection
	Additional information (User-entered VIN, User Name, Case Number, Crash Date, Tire Size(s), Memo.) can be inserted.

Choose the vehicle by VIN

Enter 17 digits VIN (chassis number) and click "Search" button. Vehicle, adapter system will be displayed automatically as [Figure 2].



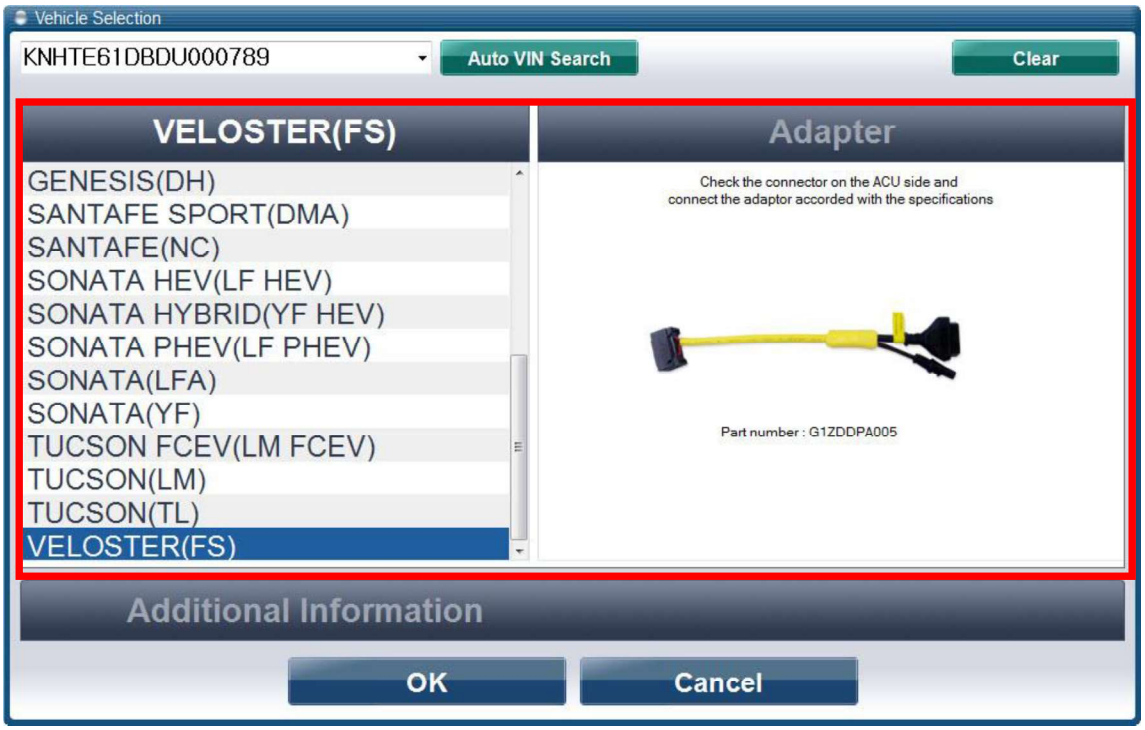
[Figure 2] VIN input - full VIN

Method to choose vehicle and adapter

When 'EDR vehicle search' clicked, EDR vehicle search page will be displayed as [Figure 3].

Select vehicle, adapter type in order.

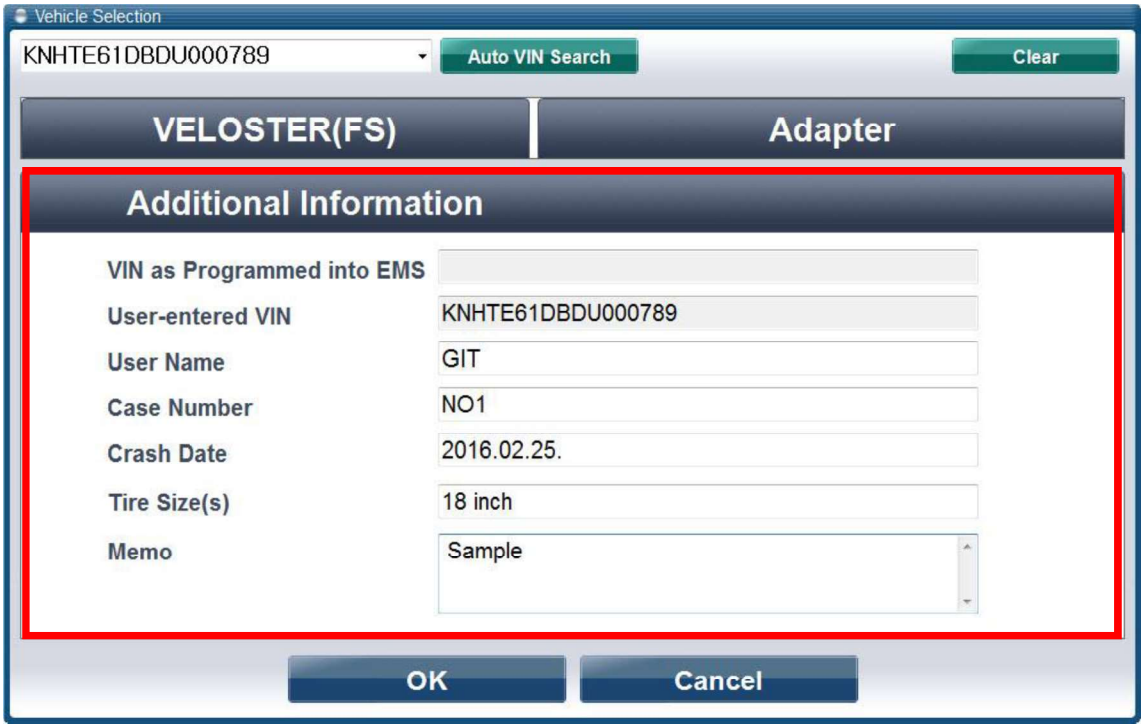
If this method used, VIN search will not functioning. Vehicle can be diagnose. But vehicle information cannot be confirmed automatically.



[Figure 3] Select vehicle, adapter manually

Enter Additional information

When vehicle selected, additional information(User-entered VIN, User Name, Case Number, Crash Date, Tire Size(s), Memo.) can be inserted as [Figure 4]



[Figure 4] Enter Additional information

Check connector part number

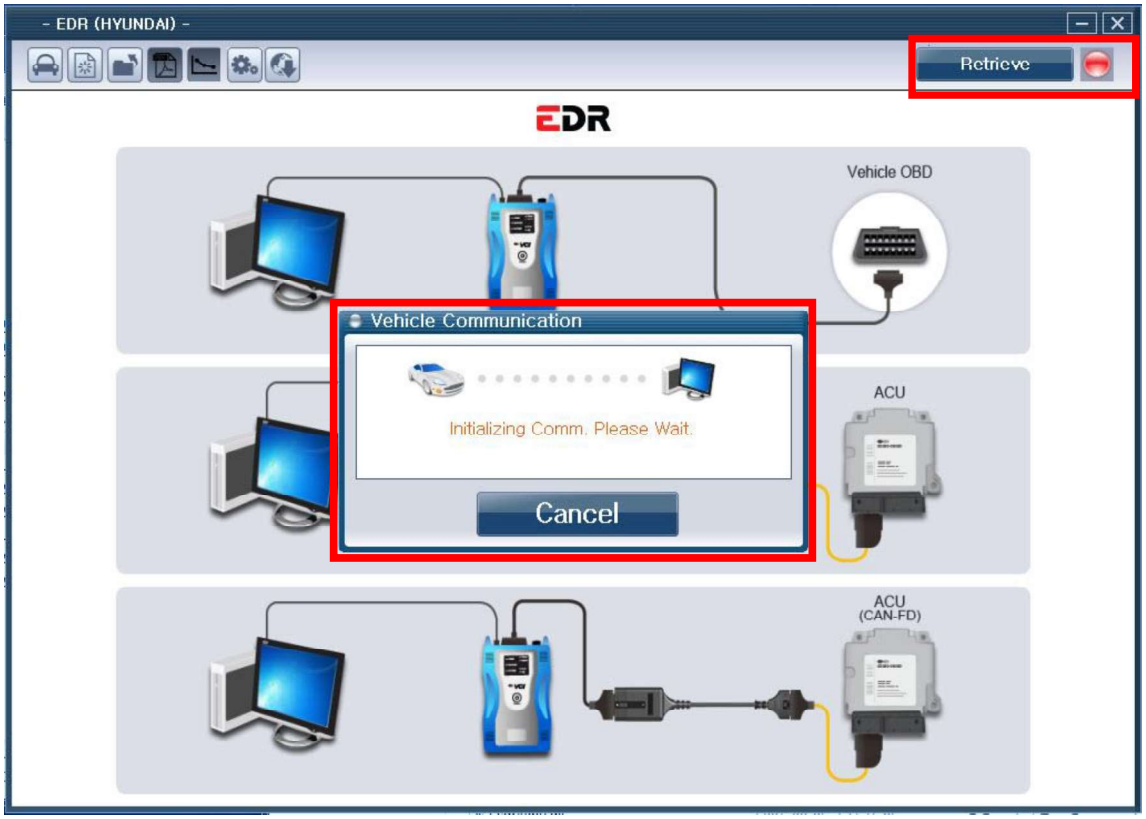
After vehicle selecting and inserting additional information, please check connector part number as [Figure 5]. And connect VCI connector with ECU unit.

- When communicating directly with vehicle, connector part numbers are not require. And it could be ignore.

[Figure 5] Check connector part number

Retrieve

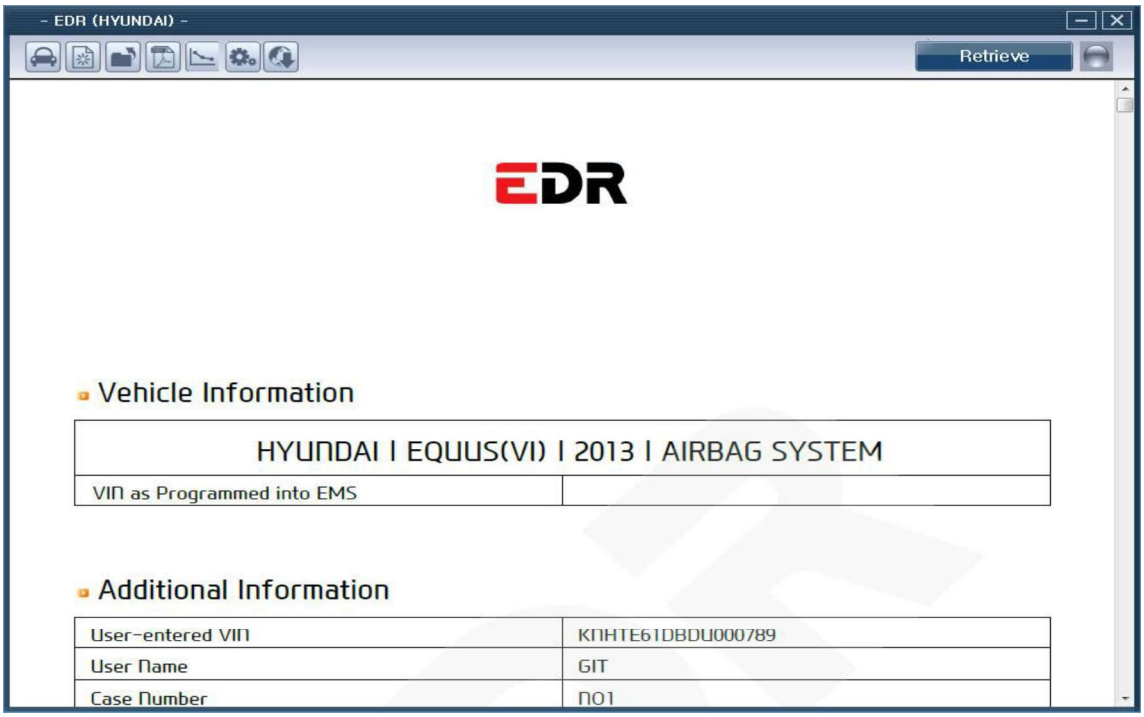
When VCI and connector has connected, click 'Retrieve' button. Communication indicator color will be changed to red. Pop-up window will be appear and retrieve will be in progress

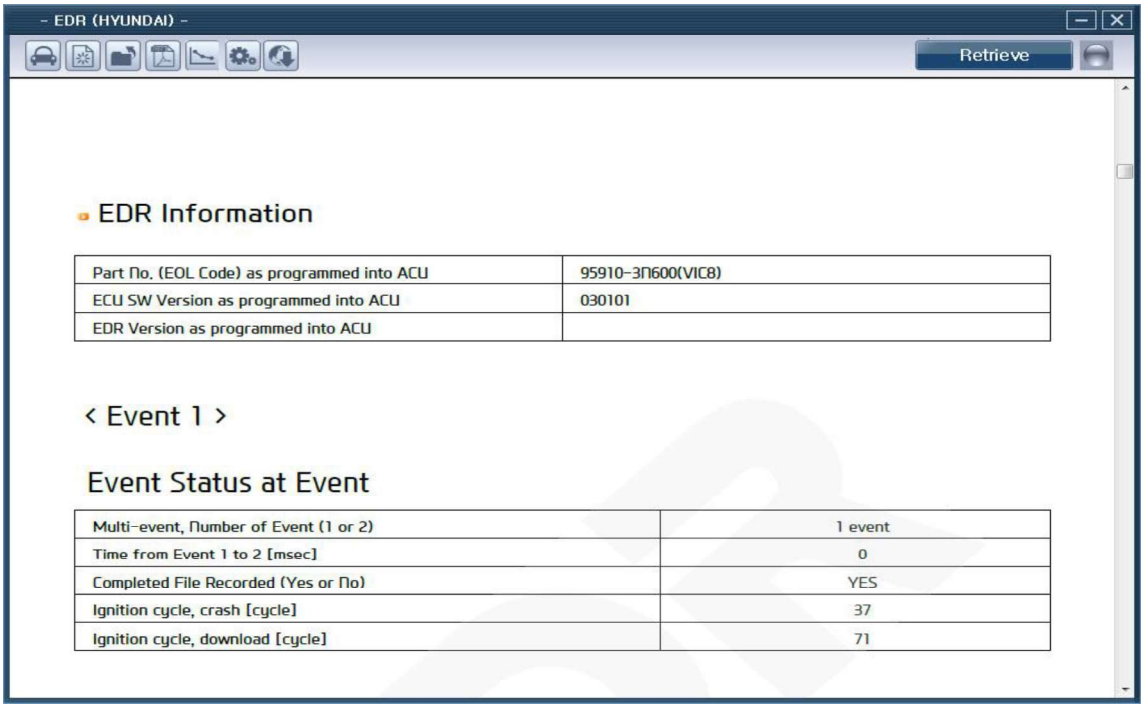


[Figure 6] Retrieve in progress

Retrieve completed

When the scan is complete, search results are expressed PDF file format as [Figure 7]

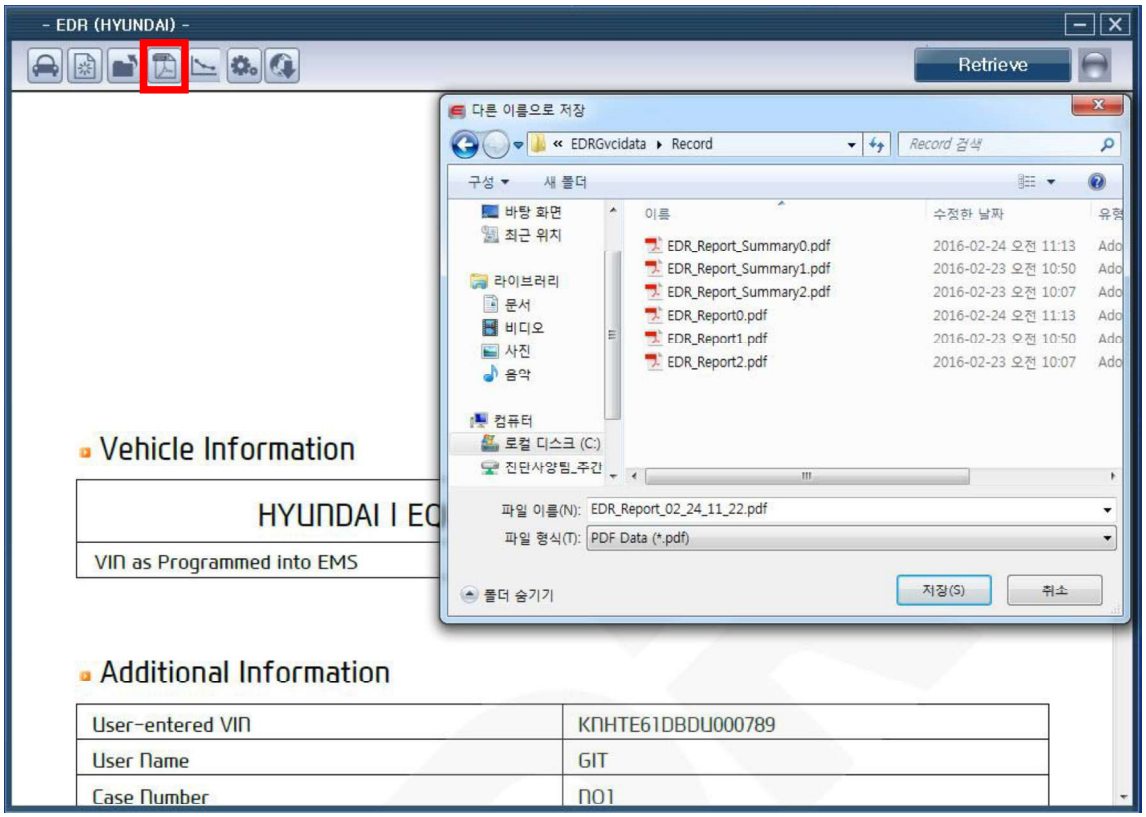




[Figure 7] Retrievecompleted

PDF file save

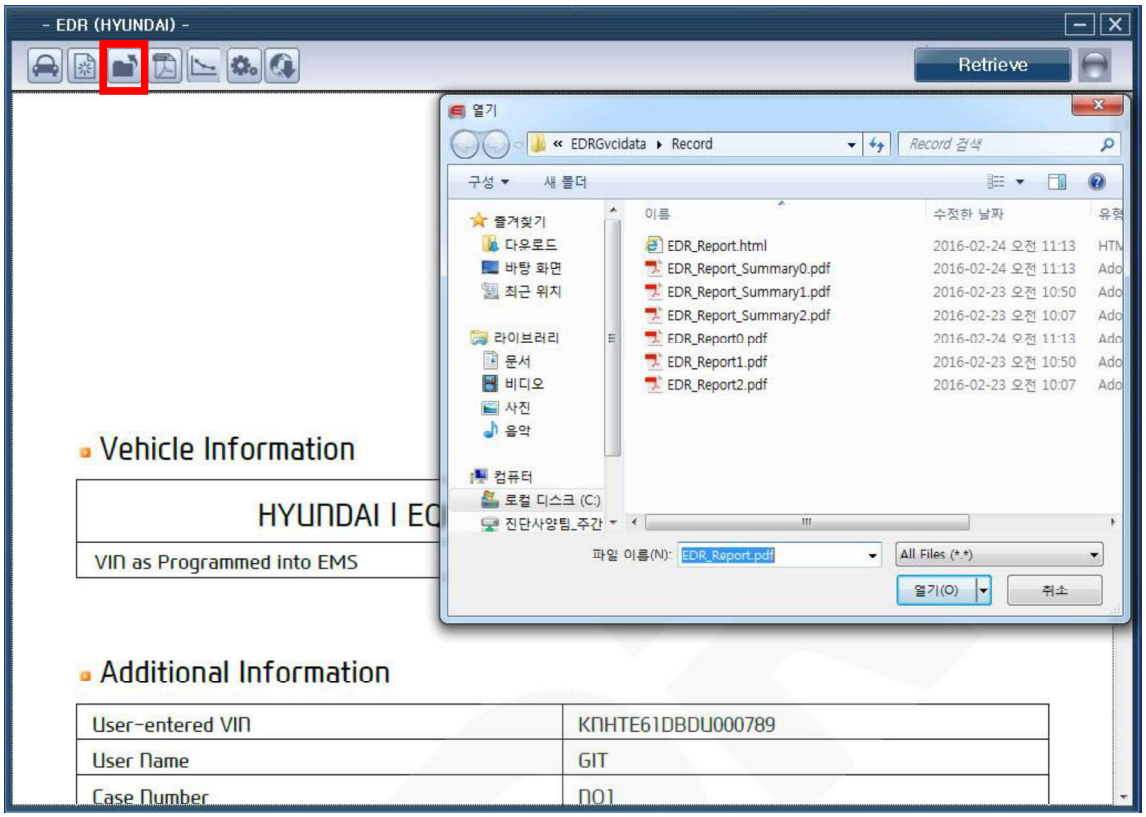
When the scan is complete, click the Save button as [Figure 8] to save PDF file.



[Figure 8] PDF file save

Open saved file

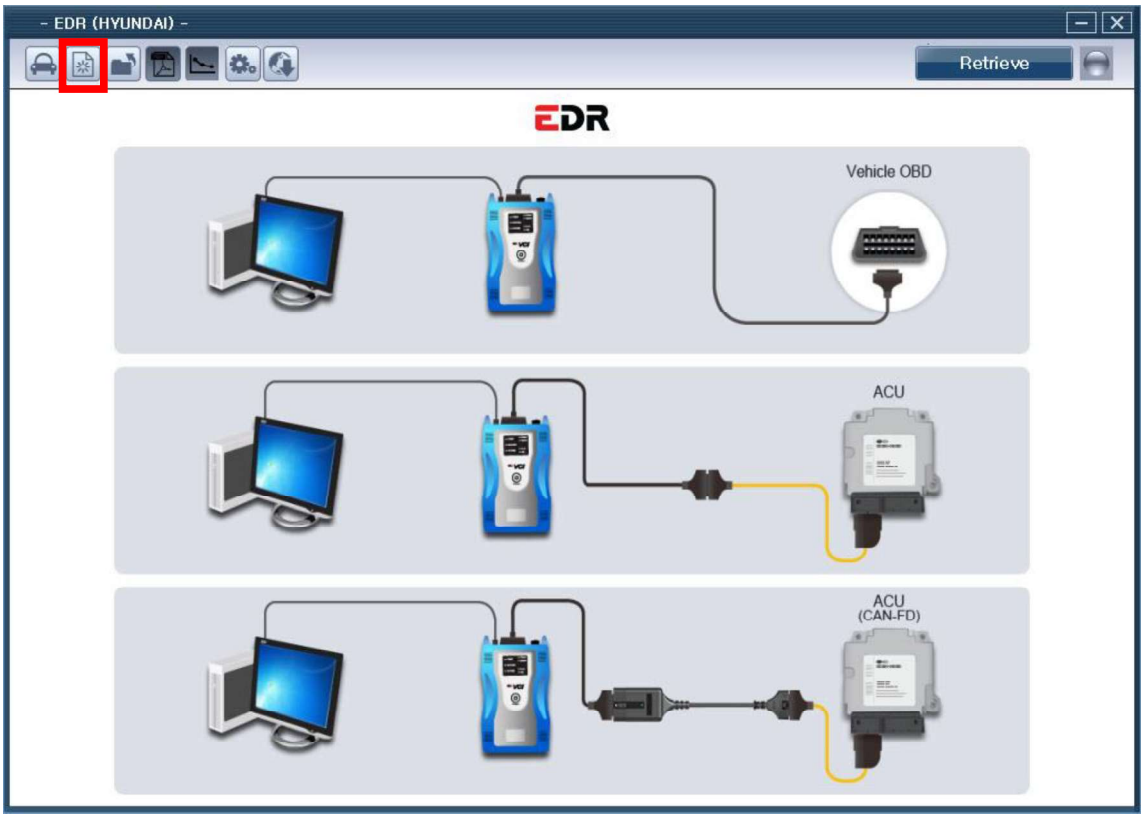
After click button as [Figure 9],saved PDF file can be open



[Figure 9] Saved file open

Initial screen

After click button as [Figure 10], Initial screen will be displayed.

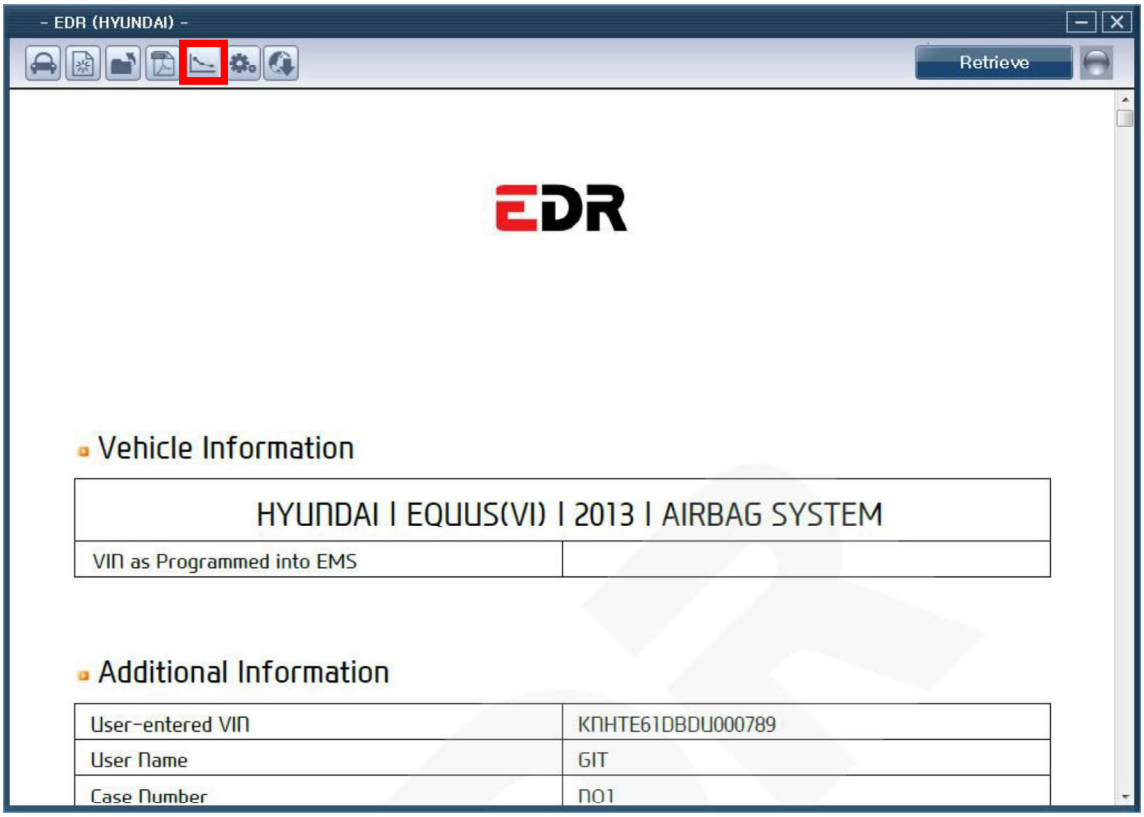


[Figure 10] Initial screen

Summary of each event in one page

This function displays a PDF file showing the summary of each event in one page when the summary report print button is clicked as shown in [Figure 11].
The number of summary items may vary according to the vehicle type, and the summary items will not be displayed if there is no event.

The summary items including vehicle speed, engine throttle, operation of brake pedal, engine RPM, operation of ABS, angle of steering wheel and accelerator pedal are displayed in a graph as shown in [Figure 12].



[Figure 11] **Summary of each event in one page**

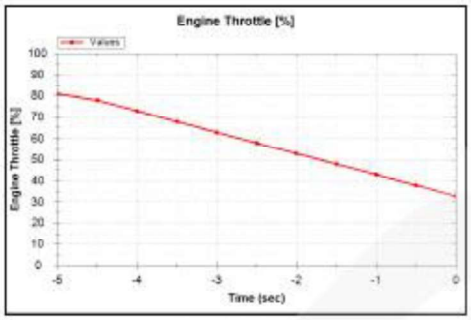
<Event 1>

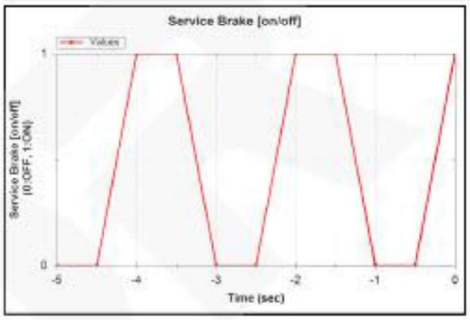
Vehicle Information

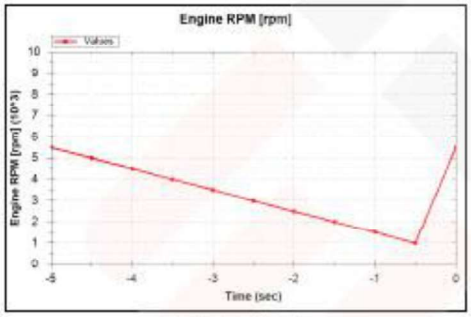
HYUNDAI | EQUUS(VI) | 2016 | AIRBAG SYSTEM	
VIN as Programmed into EMS	

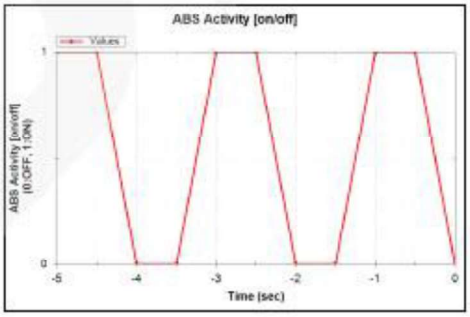
Additional Information

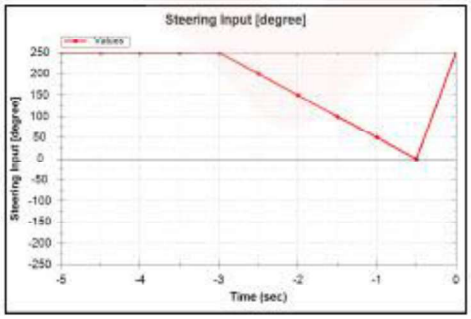
User-entered VIN	KMHD841FBGU000456
User Name	GIT
Case Number	001
Crash Date	2016.02.23.
Saved-on Date	2016-02-29 10:50
EDR Tool Version	E-D-H-01-00-0014
EDR Report Version	EDR001-R01
Tire Size(s)	18 Inch
Memo	sample











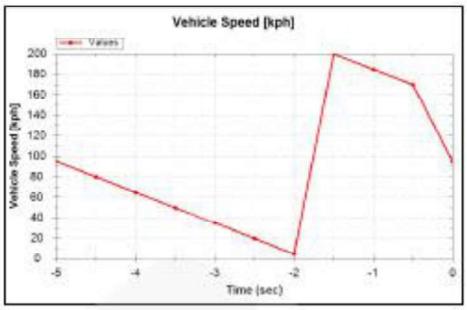
<Event 2>

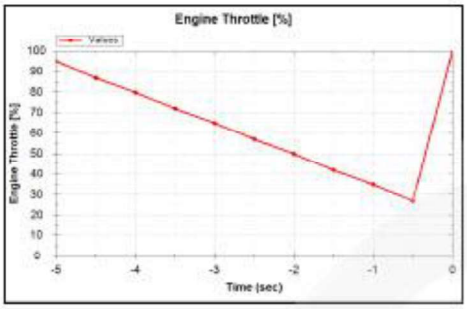
Vehicle Information

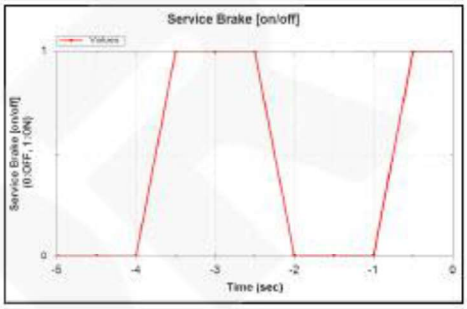
HYUNDAI | EQUUS(VI) | 2016 | AIRBAG SYSTEM	
VIN as Programmed into EMS	

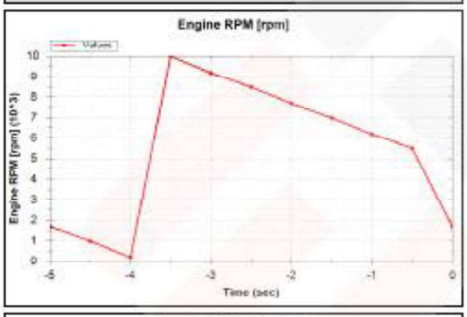
Additional Information

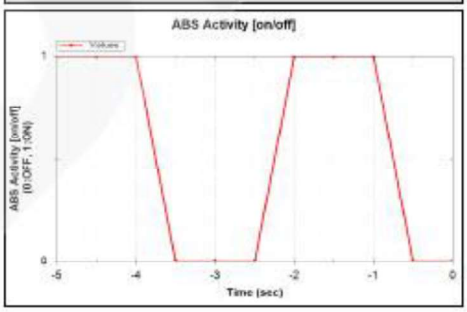
User-entered VIN	KMHD84LFBGU000456
User Name	GIT
Case Number	001
Crash Date	2016.02.23.
Saved-on Date	2016-02-23 10:50
EDR Tool Version	E-D-H-01-00-0014
EDR Report Version	EDR001-R01
Tire Size(s)	18 Inch
Memo	sample

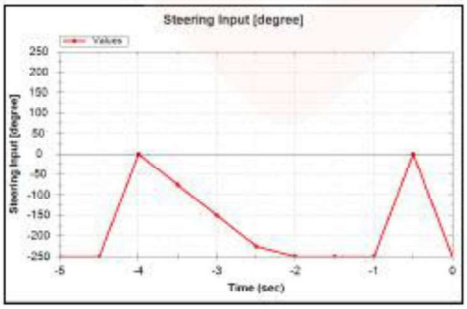








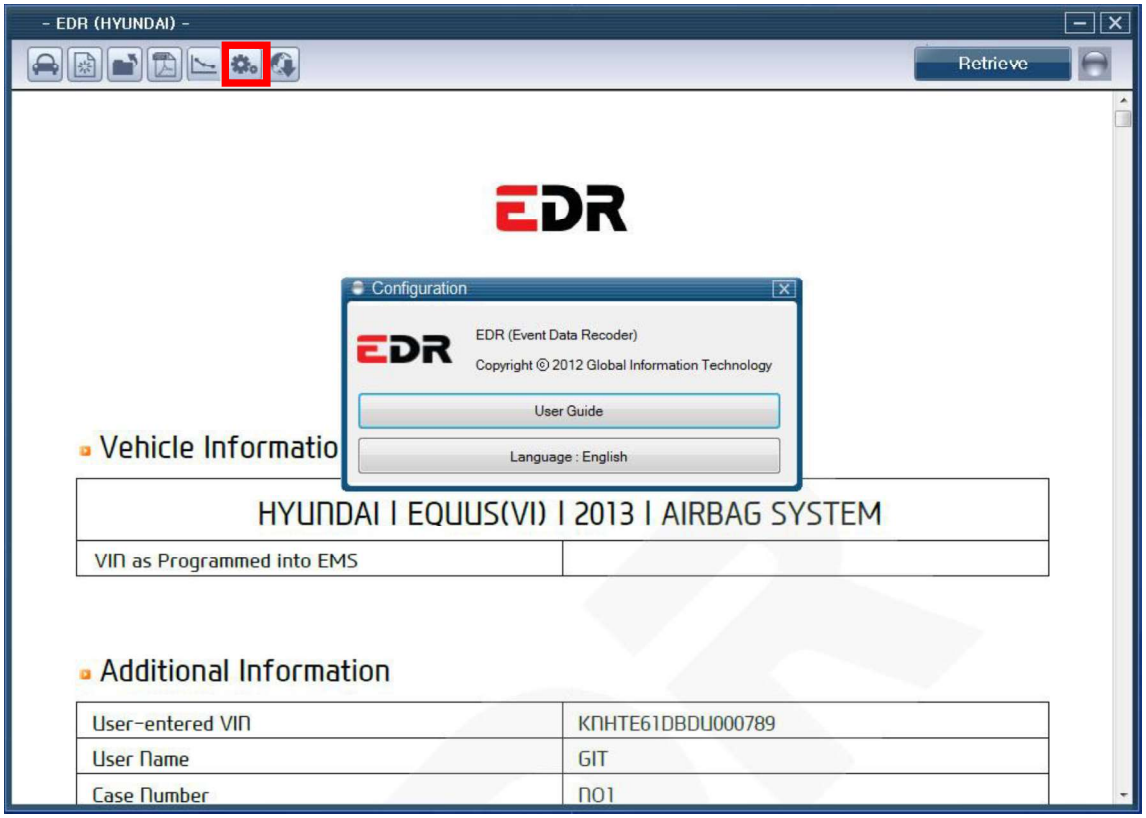




[Figure 12] Summary items for each event

Configuration

The user guide manual and language change are the functions shown when the setting button is clicked as shown in [Figure 13].



[Figure 13] Configuration

Internet Update

This function can update software and VCI firmware when the Internet update button is clicked as shown in [Figure 14].

[Figure 14] Internet Update

Section 5 Appendix

Disposal of old electrical and electronic equipment

Disposal of old electrical and electronic equipment

WEEE(Waste Electrical and Electronic Equipment) symbol shown in [Figure 1] is indicated on the back of the VCI main module, VMI main module, and Trigger module.

Please follow the regulation guide for disposal of Waste Electrical and Electronic Equipment. Use caution disposing of the Trigger module, it contains a lithium battery. Users must follow the regulations when replacing or disposing of this battery.

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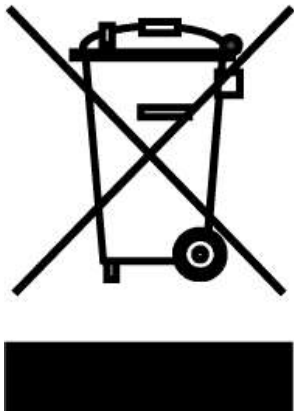

Fig. 1. WEEE Symbol

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.