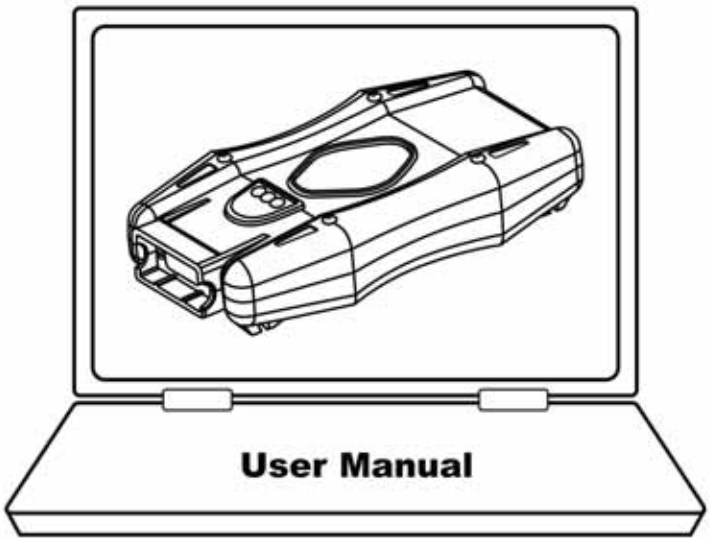
PC Based Automotive Diagnostic Module

HANASCAN 70



User Manual

Automotive Diagnostic Solutions
Hanatech Co.,Ltd.

Chapter 1 Safety and Warranty

Safety and Warranty

About this Manual

The contents of this manual are the result of contributions by dozens of individuals all who have added their vital expertise and experience to the evolution of the contents of this manual. The information contained in this manual may contain printing errors and is subject to change without obligation to notify any person or organization according to product upgrade or modification. Hanatech shall not be liable for errors contained herein or for incidental or consequential damage in connection with the furnishing, performance, or use of this material.

Using this Manual

It is recommended that the user become familiar with the operating procedures, terminologies and information contained within this user's manual. This will help to increase the user's effectiveness with this equipment.

Vehicle system familiarity

While this equipment provides very powerful functions with extensive vehicle coverage, it cannot replace knowledge and skill. To get the most out of this equipment, a full understanding of vehicle systems is required. It is recommended that the equipment be used in conjunction with the original service manual for the vehicle being tested.

The equipment is designed for use by trained service personnel and this manual assumes that the service technician who is going to use this equipment has a familiarity with vehicle electronic control systems, however, the latest service manuals and bulletins should always be referenced before using this equipment.

1. SAFETY INSTRUCITONS

Thank you for purchasing HANASCAN 70 scanners. To get the maximum performance of the equipment, please carefully read this manual first, and keep it at hand.

On delivery inspection

When the equipment is delivered, a check should be made for any damaged or missing components. If the unit is damaged or fails to operate according to the specifications, contact your local distributor or the manufacturer, Hanatech Co., Ltd., Hana bldg., 80-1 Songjung-dong, Gumi-shi, Kyung-buk Republic of Korea 730-913. In the unlikely event the equipment requires shipping back to the manufacturer, please use the original packing material.

Safety symbols

The following symbols are used throughout this manual:

⚠ DANGER	This mark means that dangerous consequences may arise, with the possibility of death or serious injury to the user, if the machine is handled incorrectly.
⚠ WARNING	This mark means dangerous consequences may arise, with the possibility of somewhat serious injury to the user and or damage to the machine and facilities, if the equipment is handheld incorrectly.

SYMBOL	Description
	This symbol is affixed to locations on the equipment where the operator should consult corresponding topics in this manual (which are also marked with the ⚠ symbol) before using relevant functions of the equipment. In the manual, this symbol indicates explanations that are particularly important that the user is expected to read the manual before using the equipment.
	This symbol represents DC (Direct Current)

Safety guideline

In order to ensure proper operation and satisfactory performance, observe the cautions listed below.

⚠ DANGER
This equipment is designed to comply with IEC61010-1 safety standards, and has been tested for safety prior to shipment. Excessive high voltage measurement or improper operation could result in personal injury, as well as damage to the equipment or the vehicle. Please read this manual carefully and be sure that you understand its contents before using the equipment. The manufacturer disclaims all responsibility for any accident except for that resulting due to defect in its product.

⚠ WARNING	
	For safety reasons, this equipment should not be used to measure circuits carrying more than 30Vrms or 42.4V peak. To avoid electrical accident that could result in injury or death, do not measure voltage in excess of these limitations. Maximum rated measurable voltage is 30Vrms or 42.4V peak.

2. SAFETY PRECAUTIONS

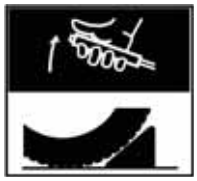
DANGER

When an engine is running, keep the workshop area WELL VENTILATED or attach a building exhaust removal system to the engine exhaust system. Engines produce carbon monoxide, an odorless and poisonous gas that causes slower reaction time and may lead to serious injury or death.

WARNING

Brakes and wheel blocks

Apply the hand brake and block the wheels before using the test equipment. It is highly recommended to block the wheels on front-

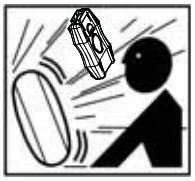


wheel drive vehicles because the hand brake does not hold the driving wheels.

Drive Test

Do not drive the vehicle and operate the test equipment at the same time. Any distraction may cause an accident. Have one person operate the test equipment while the other person drives the vehicle. Never place the test equipment in front of you when driving the vehicle because the test equipment may hit your body and cause serious injury when the air bag inflates.

Do not try to test the SRS air bag system while driving the vehicle as unintended airbag inflation may result.



Engine Compartment

Maintain sufficient clearance between moving components or belts while using the test equipment in the engine compartment. Moving components and belts may catch loose clothing, test cables or a part of your body and cause damage or personal injury.

Electrical Components

Always turn the ignition key OFF when connecting or disconnecting electrical components unless otherwise instructed.

Vehicle Battery

equipments are designed to prevent damage from reverse polarity battery cable connection, however, it is always highly recommended to always ensure correct polarity terminal connection.

Never lay the test equipment on vehicle battery. You may short the terminals and may cause damage to your body, the test equipment or the battery.

To avoid damaging the test equipment or displaying false data, make sure the vehicle

battery is fully charged and the connections to the electronic control module are clean and tight.
The warning messages above and the safety messages contained hereinafter cover situations Hanatech is aware of. Hanatech cannot know, evaluate or advise you as to all of the possible hazards. You must make sure that any conditions or service procedures encountered do not jeopardize your personal safety.

3. WARRANTY SERVICE

Warranty Period

In principle, HANASCAN 70 products are warranted to the consumer to be free of defects in material and workmanship for the period of 3 years after the date of purchase.
If the product is found defective during this period, the product can be returned to Hanatech and will be repaired or replaced free of charge.

Freight and repair Cost

For the repair of head unit, Hanatech covers the freight cost for the service during one year from the date of purchase, and you can send the troubled unit to your local distributor without having to pay the freight cost. You should consult with your local distributor about the validity of remaining warranty period before sending the unit.
For the remaining two years, you are liable for any international cost incurred. Repair or replacement will be provided free of charge.
When the warranty period is expired after three years, the customer must pay the round trip freight and the repair or replacement cost.

Upon delivery

Hanatech inspects all the ordered product parts and components are included in the package before shipment, and includes the original copy of pre-shipment inspection report in the box. As soon as the product is delivered to you, please ensure everything you ordered is properly checked and included referring to the pre-shipment inspection report.
If there is anything missing or damaged, you must notify the local distributor immediately within 3 working days from the delivery date for free of charge replacement of the parts.

In case of trouble

If you encounter any malfunction or trouble with the equipment, please refer to the Trouble Shooting chapter in this manual. If the problem cannot be solved, please contact your local distributor for assistance. For early identification of a fault or error, your local distributor will require the following details:

1. Symptom of problem you are experiencing
2. Serial number of the head unit
3. Vehicle information: Which specific car were you testing when the problem occurred – Model name, Model year and system ID number if available (for Mitsubishi, Subaru and Suzuki only: Refer to Japanese car chapter for details)

Warranty Void

Even in the effective warranty period, if the problem is found to be caused by any of the followings, Hanatech charges the cost for round trip freight and actual cost for the service to the customer, and the shipment back to the customer will be suspended until the customer's payment is duly made

1. Evidence of improper use or application of the product ignoring the cautions and warnings stipulated in the user's manual

2. Intentional damage or modifications to the product or user's attempt to repair without proper authorization

3. Any damage caused by Force Majeure including war and natural disaster

4. Loss of time, inconvenience and other consequential damage or loss

Warranty void seal

In addition to the above mentioned warranty void conditions, warranty service is not provided in case the warranty void seal is broken or removed.

If you remove the head unit safety boot, you will see a yellow round sticker covering one of the screw holes in the back. Please be careful not to break this seal and never try to open the head unit without direct authorization from the manufacturer.

Bought in other countries

Only the products properly supplied by the contracted authorized local distributors are

recognizable for free of charge warranty service. Any equipment bought outside the contracted national territory of your local distributor will be charged for service.

FCC RF INTERFERENCE STATEMENT

Note

FCC Compliance Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of FCC Rules. Operation is subject to the following twoconditions:

(1) the device may not cause interference, and

(2) the device must accept anyinterference, including interference that may cause undesired operation of this device.

Caution

Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS; (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE. AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Chapter 2 Specification and Parts

Specification and Parts

1. Specification

1) Hardware & Protocol

Item	Specification		ETC
Main Controller	uPD70F3368	NEC, 32Bit RISC	
Interface	USB 2.0	1EA	PC Interface
	Wireless	Bluetooth 2.1 + EDR	
	Indicator	Status LED x 3EA	
Power	Standard	12VDC, 0.15A	
	Min-Max range	7~32VDC	
Protocol	OBD-I	Supported	
	OBD-II	ISO 9141-2	
		ISO14230(KWP)	
		J1850(PWM & VPW)	
		CAN 2.0A/2.0B (High Speed, Middle Speed, Single Wire)	

2) Environmental

Operating Temperature : 0 ~ 85℃

Max Relative Humidity : 85% and less

3) Dimension & Weight

Length 197mm

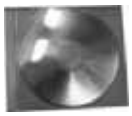
Width 107mm

Thickness..... 43mm

Weight 320g

All specifications are subject to change without notice for the purpose of product and quality improvement

2. Part List

Section	Name	Quantity	Image	Part Number	Note
Diagnostic Module	Head Unit	1			Impact Resistance ABS Resin
	Protector	1			Soft PVC Resin
Carrying Case	Carrying Case	1		3003-0003	Provides convenient transportation and the protection of the head unit and other components from outer physical impact during the transportation and storage
Software	Program CD	1			F/W Install
Power Cable & Adaptor	Cigarette Lighter Cable	1		3000-0004	Supplies power to the head unit from the cigarette lighter socket. LED lights on both ends turn ON when power is properly supplied
	Extra fuses & Contact Plug	1		3008-0003	For the replacement of the fuse located inside the cigarette lighter power cable. You can also replace it with a fuse of which rated current is 2 Ampere or less.

					A set of spare parts for replacement when the original parts are lost
	Battery Cable	1		3000-0005	Power cable 2 - Vehicle Battery
	AC-DC Power Adaptor(12V)	1			Bad Condition such as non-available of electricity to be supplied Using of External Power during on F/W Upgrading or Product Registration through PC
Diagnose Cable & Adaptor	Main Data Link	1		3001-0001	Connects vehicle side DLC and HANASCAN 70 head unit for data transmission
	OBD2 Standard	1		3001-0010	Used for all OBD generation 2 and EOBD compatible vehicles.
	Mitsubishi and Hyundai 12Pin	1		3001-0001	Used for the communication with Mitsubishi and Hyundai cars of OBD generation 1
	Mitsubishi 12+16pin dual headed	1		3001-0030	Used for the communication with Mitsubishi cars with both of 12-pin OBD1 and 16-pin OBD2 adapters on-board.
	GM Daewoo 12Pin	1		3001-0002	Used for the communication with Daewoo cars of OBD generation 1.

	KIA (Old Model) 6Pin	1		3001-0003	Used for the communication with old Kia cars of OBD generation 1.
	KIA 20Pin	1		3001-0004	Used for the communication with Kia cars of OBD generation 1. DTC read & erase and data stream functions are available for the cars with this type of adapter. Refer to the following warning message.
	Toyota / Lexus 17Pin Rectangular	1		3001-0011	Used for the diagnosis of Toyota and Lexus of OBD generation 1.
	Mazda 17Pin Adapter	1		3001-0013	Used for the communication with Mazda cars of OBD generation 1.
	Toyota/Lexus 17Pin Semi-circular	1		3001-0012	Also used for the diagnosis of Toyota and Lexus of OBD generation 1.
	Nissan/ Samsung 14Pin	1		3001-0006	Used for the Communication with Nissan cars of OBD generation 1 and all Samsung passenger cars.
	Ssangyong 14Pin	1		3001-0007	Used for old Ssangyong cars of OBD generation 1. Vehicle side DLC is located in the engine room

	Ssangyong 20Pin	1		3001-0005	Used for Ssangyong cars of OBD generation 1. Vehicle side DLC is located in the engine compartment. Refer to the warning above.
	Honda 3 Pin Adapter and 2 Pin Jump Wire	1X1		3-pin: 3001-0014, 2-pin wire: 3001-0023	3-pin adapter is used for the diagnosis of Honda cars of OBD generation 1 that support DTC read and erase as well as data stream. Older Honda cars have 2-pin DLC that supports DTC read only. The jump wire is used for these older cars to bridge the 2-pin DLC terminals. The vehicle side DLC is generally located under the dashboard or the glove box.
	Subaru 9Pin	1		3001-0022	Used for the communication with Subaru cars of OBD generation 1.
	Holden 6 Pin	1		3001-0023	Used for Australian Holden of OBD generation 1.
	GM Opel 10Pin	1		3001-0019	Used for the communication with Opel cars of OBD generation 1.

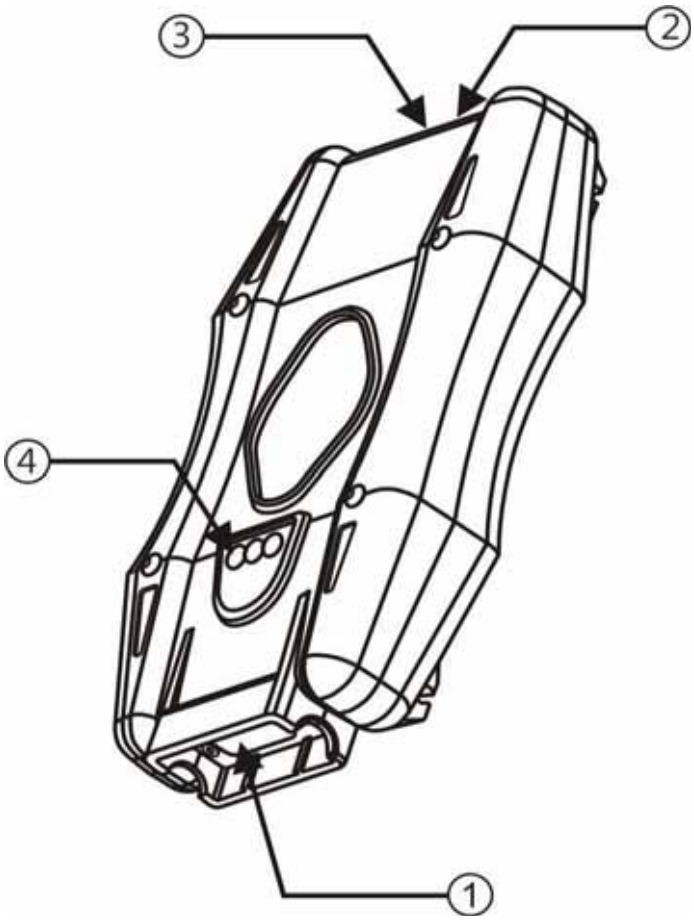
	Ford 20 Pin	1		3001-0020	Used for the communication with Ford cars of OBD generation 1, including Australian and British Fords.
	Ford EEC-IV	1		3001-0017	Used for the communication with Australian Ford cars of OBD generation 1,
	BMW 20Pin **(Optional)**	1		3001-0016	Used for the communication with BMW cars. (Can be supplied as an optional part)
	VAG 2X2Pin **(Optional)**	1		3001-0029	Used for the communication with the OBD1 generation cars of Volkswagen / Audi Group including SEAT and Skoda. (Can be supplied as an optional part)
	Mercedes Benz 38Pin **(Optional)**	1		3001-0015	Used for the communication with OBD1 generation Mercedes Benz cars . Applied with the models e.g) C202, CLK208, E210, E124, S140, SL129, SLK170, G463, G461. (Can be supplied as an optional part)

	Mercedes Benz 4Pin (Optional)	1		3001-0009	Used for the communication with early 1990's or earlier model year Mercedes Benz cars e.g) C201, E124, S126, SL107, G463 (Red: Battery +, Gray: K Line,, Yellow : Ignition check, Black: Ground) (Can be supplied as an optional part)

Chapter 3 Getting Started

Getting Started

1. Head Unit



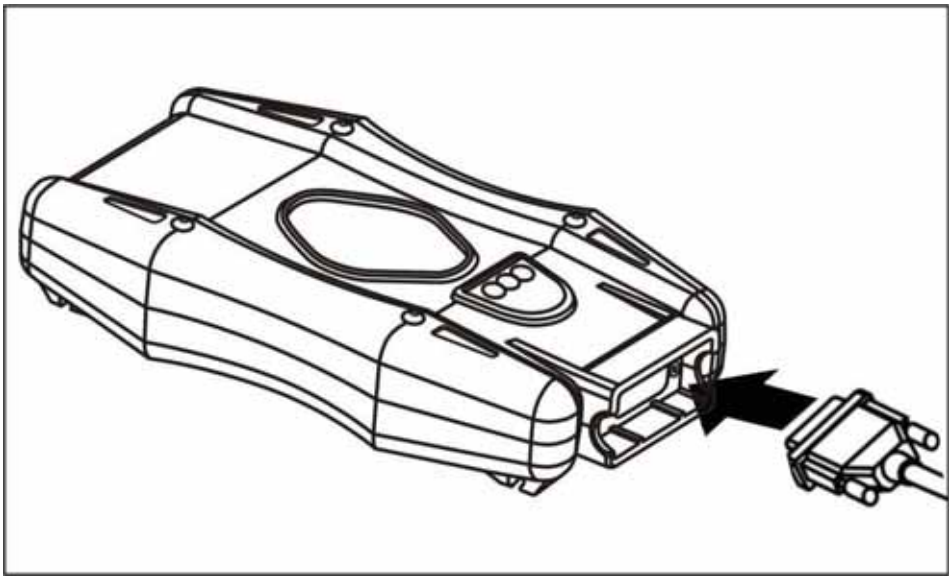
①. 15Pin DLC Cable
②. USB Connector
③. 12V Power Supply Connector
④. LED Indicator

2. 15Pin DLC Cable

1) Connecting to Desktop

Both side ends of 15pins DLC Diagnostic Cable Connector is same configuration, So any direction to be connected toward Desktop

Connector of DLC Diagnostic Cable shall be inserted into 15pins Connector of Desktop and fixed by Double Side Sets Screw



2) Connecting to DLC Adaptor of Vehicle

The opposite site of DLC Diagnostic Cable shall be connected after placing in DLC Adaptor of Vehicle.

Caution

DLC Diagnostic Cable shall be always kept by Setscrew after connecting to equipment. Repetitive Connection and Removal shall be caused DLC Diagnostic Cable to be lose or Pins to be bent

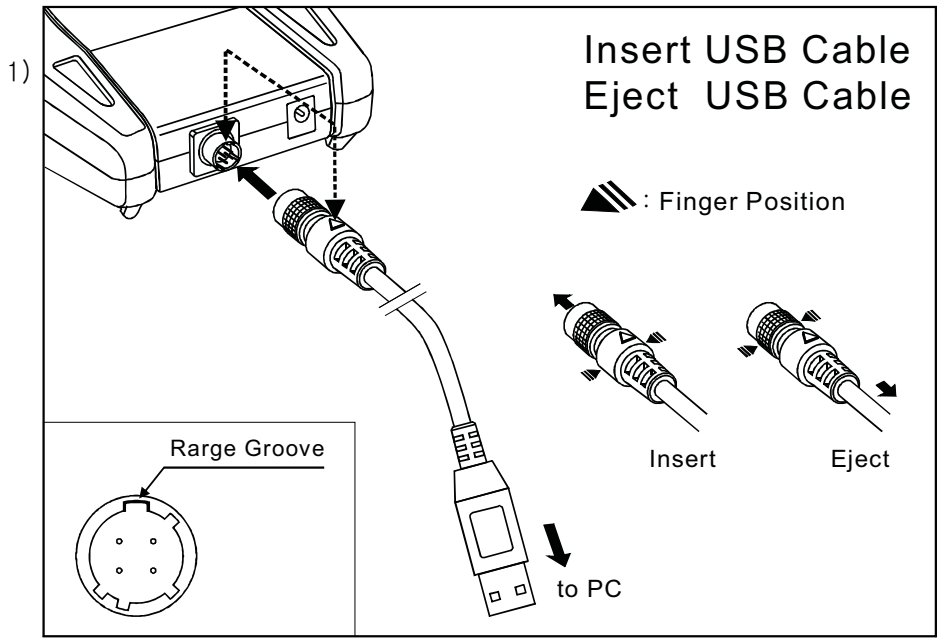
3. PC Communication

1) USB Cable

USB Communication Cable shall be connected in USB Port of Desktop and opposite side to USB Port of PC.

<Insertion of Connector>
Triangle mark of USB cable Plug and Circular Connector of Rarge Groove in Desktop shall be pushed after grip a plastic handle on forming into straight line

<Separation of Connector>
Separation shall be performed after holding of Ring part treated by Metallic Knurling at the Front side of Plug.



2) Wireless (Bluetooth)

Desktop is included in Bluetooth Module so, shall be communicated with Bluetooth in PC and Bluetooth Dongle shall be installed if PC has no Bluetooth.

4. 12V Power Supply

1) Power Supply through DLC Diagnostic Cable

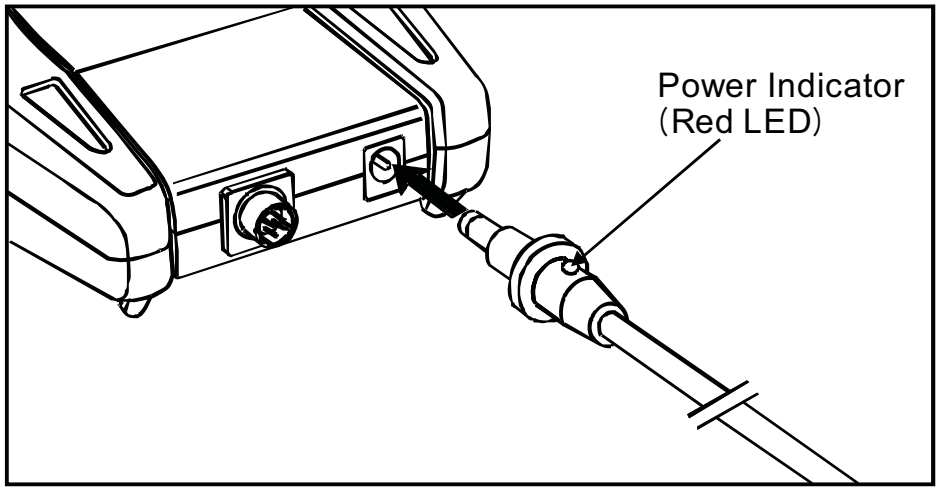
12V Battery Power shall be supplied through majority of DLC Diagnostic Cable except

some vehicle

2) Power Supply through Cigar Jack

If Power Supply is not be supplied through DLC Diagnostic Cable, shall be used by Cigar Jack and then both side of Cable shall be identified RED LED “ON” or not after insertion of Cigar Cable.

Power Supply Jack shall be inserted into Power Socket of Equipment.

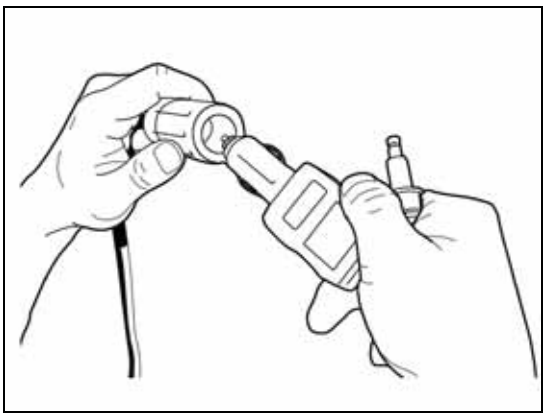


3) Power Supply through Vehicle Battery

If Diagnostic Adaptor such as KIA, SSANGYONG etc. during on scanning for Vehicle of OBD1 Generation around Engine, Equipment needs to be placed in Engine Room.

If Power Supply is not be supplied through DLC Diagnostic Cable or Cigar Socket, Clip of DLC Diagnostic Cable shall be connected right position of Battery Socket and identified RED LED “ON” or not

Cable of Cigar Cable Power Cable shall be connected into Power Cable Socket.



5. LED Indicator

1) Power : RED LED

If Power normally to be realized, LED is “ON”

2) USB : YELLOW LED

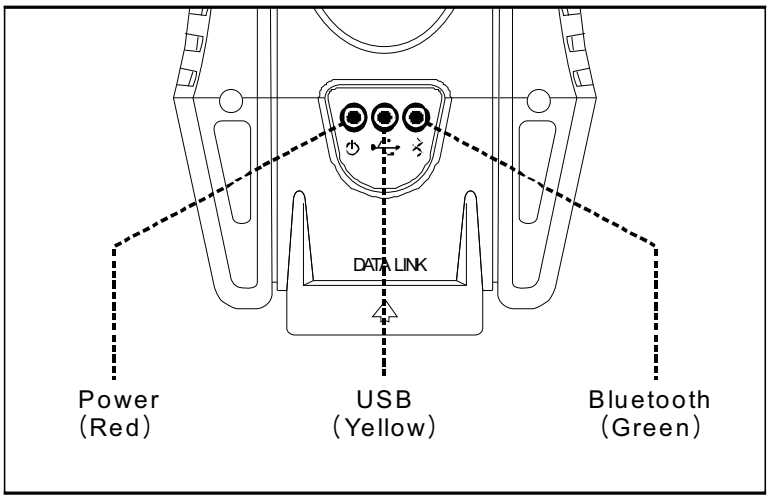
Desktop and PC to be connected by USB Cable, LED is “ON”

Desktop and PC during on Communication, LED is Blinked

3) Wireless (Bluetooth) : Green LED

Desktop and PC to be connected by USB Cable, LED is “ON”

Desktop and PC during on Communication, LED is Blinked



Chapter 4 PC Program Guide

Installation and Registration of Program

1. Installation of Program

- Basic Specification

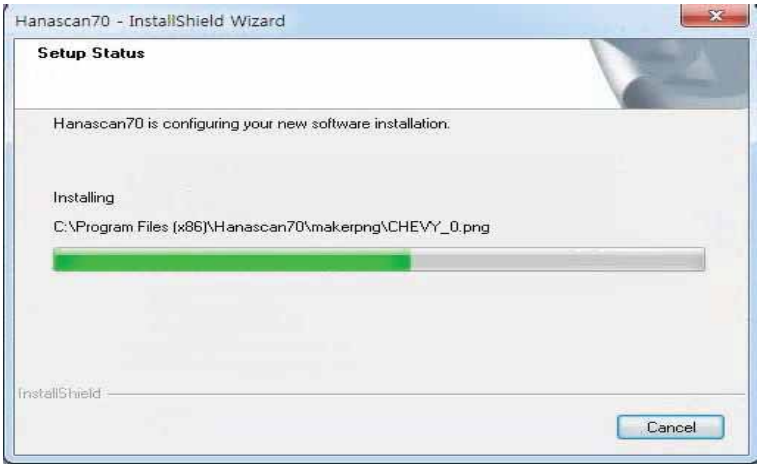
- Operating System
  - Excessive than XP(+SP3) 32Bit Operating System recommended

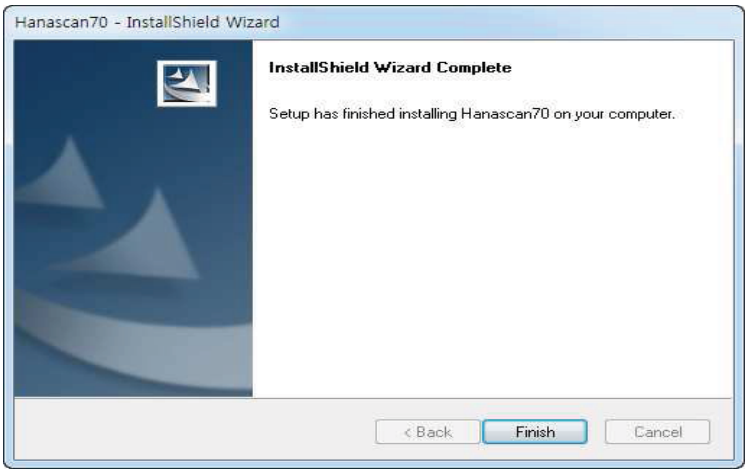
- Installation and Back-Up
  - HDD shall be recommended with unoccupied spaces by over 10GB except Operating System

2) Program Installation and Product Registration

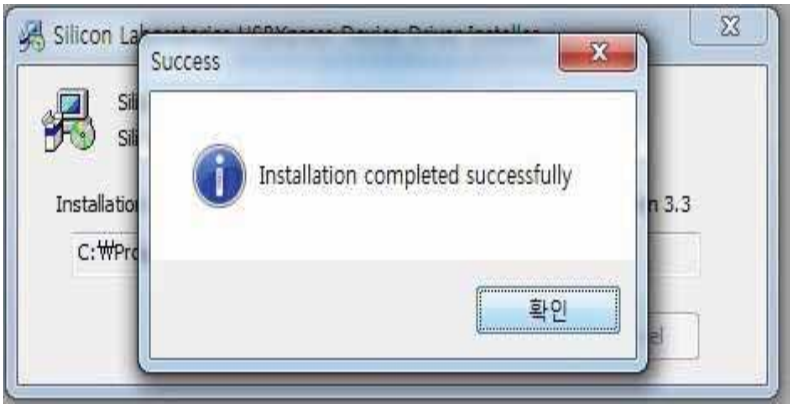
① Installation of Program

- Using provided file or installation CD, Program shall be installed
  - Installation shall be completed after referring of Image file.




Hanascan70 - InstallShield Wizard
InstallShield Wizard Complete
Setup has finished installing Hanascan70 on your computer.
< Back
Finish
Cancel


Silicon Laboratories USBXpress Device Driver Installer
Silicon Laboratories
Silicon Laboratories USBXpress Device
Installation Location:
Driver Version 3.3
C:₩Program Files₩Hanascan70₩driver₩setup.ini install
Install
Cancel

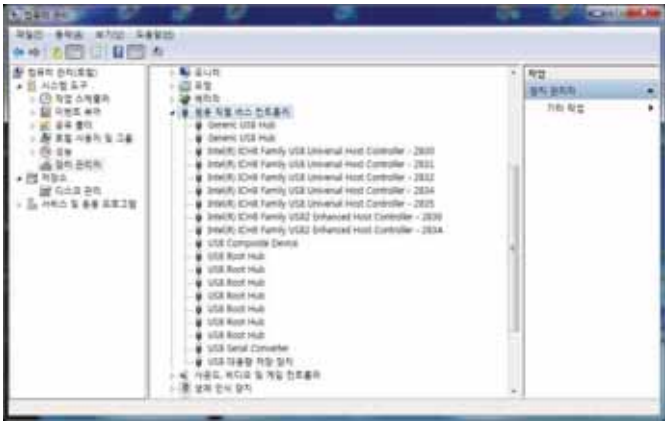

Success
Installation completed successfully
확인

② Identification of USB Driver

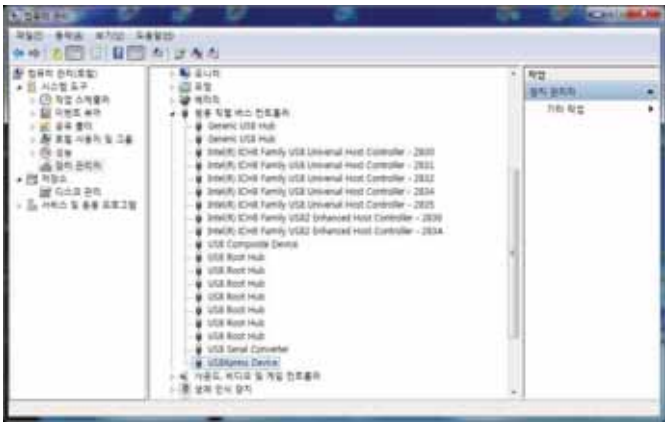
- Mostly to be automatically recognized, depends on installed OS shall be taken by several seconds or minutes
- If not be recognized well or delay, installed PC to be re-booted and then identified again
- Identification of Driver Installation normally or not, if the relevant USB controller to be expressed as below picture at currently installed window equipment operator.(Power Supply/Identification after connection to Diagnosis Module)

  (64Bit OS operation shall be installed extra exclusive driver only)

  - If Desktop Power is OFF condition or USB is not be properly connected between PC and Desktop



  - If the driver normally to be recognized, USB Xpress Device shall be identified.



③ Simple Registration of Bluetooth

- Bluetooth Function shall be added and searched New devices at the PC
- Selected MOVON_SPP_3.0.4 device by double click(from time to time, shall not be searched by only once)
- If asking for authorization code during on registration, input numeral "0000"
- Selected SPP DEV at the attention service and then click " Next "
- The Registration is completed, identified normally connected or not after double click of MOVON_SPP_3.0.4
- If normally to be connected, connected COM port(Serial Port) shall be identified, selected relevant COM port at the Setup function on the Host Program and to be stored and then able to be used Bluetooth function at the Host.

④ Connection of PC

- PC and provided Module to be connected in provided USB Cable
- Power to be connected in Vehicle or Miscellaneous part such as Adaptor Power after identification of USB Cable normally connected or not
- Power is supplied by OBD Cable during on scanning of Vehicle, but the case of some model(Oldest ones) shall be recognized through extra Vehicle Adaptor

⑤ Registration of User

- The purchaser of first product is able to use normally after registration of product through below process.
  - Module and Internet to be connected simultaneously and then process of Registration shall be executed.
  - If Registration of Product is not be normally done, shall be restricted to be used

Procedure of registration is able to be completed as under the same

as picture, if registration is not be normally done, shall be contacted to supplier or producer by mail or phone

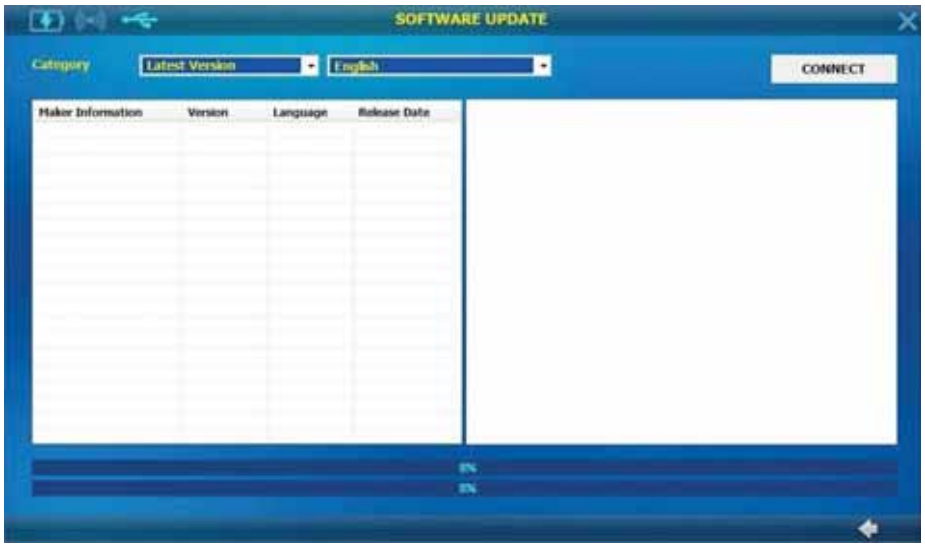
Explanation of Function Button

1) Main Screen

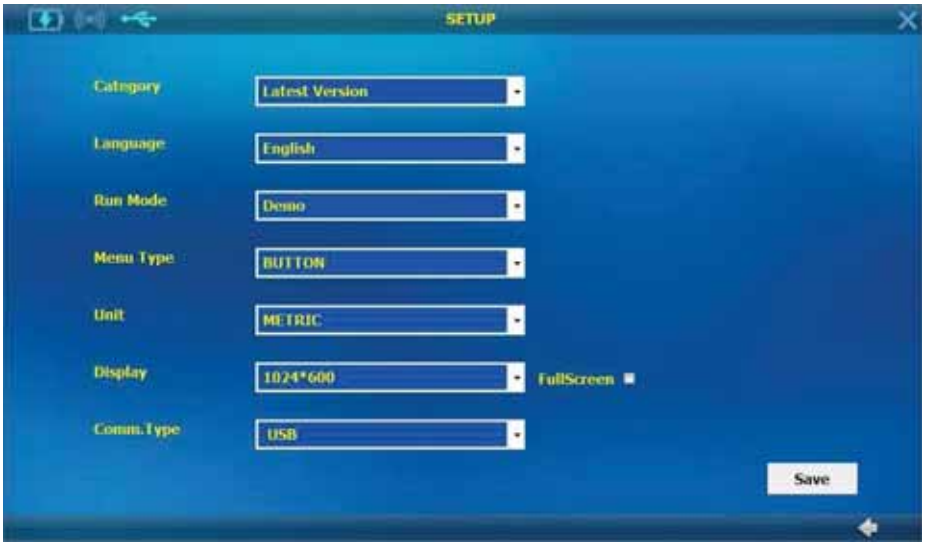
- ① Diagnostic/ ② ODB-II
  - Go into Diagnostic / Go into General OBD Diagnostic OBD

- ③ Guide
  - Go into User manual

- ④ Update.
  - Go into Upgrade



- ⑤ Setup.
  - Go into User Environment Set-up



- ⑥ System Info.
  - Go into System Information

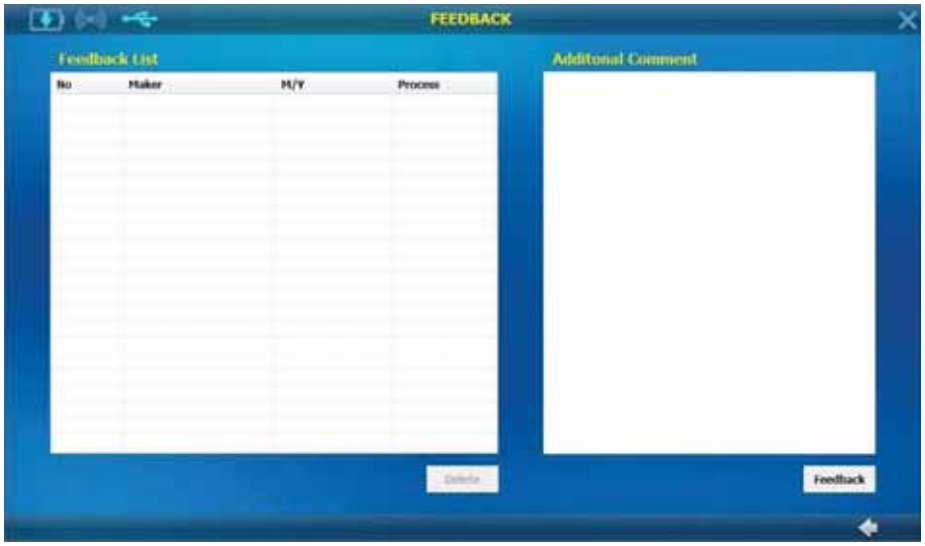
- ⑦ Registration.
  - Go into User Registration

- ⑧ Remote Control.

  - Remote Control means the function of solution to be solved program for the customer located in long distance by remote

- ⑨ Feedback.

  - Go into Feedback



- ⑩ Monitoring.
  - Monitoring is exclusive function for dealer to be applied such as New or Undeveloped Vehicle and information of collection for development of Devices.

- ⑪ Self Test.
  - Function of Self test is itself available for diagnosis of several articles if

not to be operated after connection with Hanascan by User

- ⑫ Top Icon
  - Declaration for condition of Battery, USB and Bluetooth



- ⑬ Completion
  - Completion of Executive Program
    (Sometimes, Main Screen may not able to be provided against purpose of Use)

2) Diagnosis Menu

- Indication of Equipment Information
  - Indication of Battery Residual

  - Indication for connection of Communication Device[USB]

  - Indication for connection of Communication Device[Bluetooth]

  - Arrayal Function(The Icon of Diagnosis Maker shall be formed into the line such as Name, Latest Execution, Frequency Execution against Maker)

  - Indication of Program Category to be executed(Executed by Setup)

- Function of History(Shown as Diagnosed Equipment List)
  - List shall be generated and added then after Diagnosis is executed successfully even only once
  - If desired item to be selected, transferred to Menu before execution of Diagnosis at once.

- Completion of Program
  - Completion of Program

- Menu Transfer
  - Transferred to Selection for maker

  - Transferred to Uppermost Menu for Maker of Diagnosis.

  - Transferred to Previous Step

  - Transferred to Next Step(First Entry shall not be applicable, able to be applied during on re-entry)

- Function of Record Data Road (Saved real-time Data Road)

- Output of Graph (available for function of Live Data)

- Screen Capture (Programmed Screen shall be captured during on Icon click)

- Record of Log Data (Saved the information for Feedback to be transferred)

- Printer (D.T.C. available to be shown for real time data and printed Contents)

- Saved real time Data (during on real time data diagnosis) / Read (on completion of Diagnosis Mode)

- Data Position Transfer on the Output Screen
  - Transferred 1 Line to the Bottom

  - Transferred 1 Line to the Top

  - Transferred 1 Page to the Bottom

  - Transferred 1 Page to the Top

3) Manual

- Browsing of Manual Information for Equipment Use
  - Provision of Product Relevant Information
  - Provision of Usage

4) Upgrading

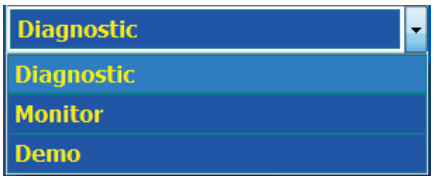
- Upgrading of Diagnosis Program
  - Selection of Category(Selection of Diagnosis Program Version to be upgraded)
  - Indication of Upgraded Items
  - Indication of Upgraded Contents

5) Configuration

- Selection of Category
  - Selection of Diagnosis Program Version to be executed

- Creation of Language
  - Supported 15 languages
  - Revised language of Host by selected language
  - Diagnosis Program to be selected against Upgrade by selected language (The case of supporting for relevant language on the Diagnosis Program)

- Execution Mode
  - Execution of Diagnosis Function
  - Execution of Demo Mode Function
  - Execution of Development Monitoring Function



- Type of Menu
  - Form Selection of Diagnosis Menu

- Setup of Unit
  - Selection of Unit such as METRIC, ENGLISH

- Setup of Resolution
  - Available to setup for 2 kinds of Resolution as 1024*600, 1024*768
  - Supported Full Screen mode(Checked by Checkbox)

- Setup for Communication Method
  - Setup of Communication Method with Diagnosis Module
  - To setup Communication of Bluetooth, Registered MOVON_SPP_3.0.4 Device shall be double clicked and identified COM port (Serial Port) Then after selected exactly COM port as under

- Setup Preservation Button
  - Saved established Information

- Established Information to be applied, Program shall be executed again

6) Information of System

- Software
  - Indication of Host Program Version Information
  - Indication of Equipment F/W Information (Application, Boot)
- Product
  - Indication of Equipment Model Information
  - Indication of Equipment Serial Number
- Language
  - Indication of selected Language Information from Setup
- OS Information
  - Indication of OS Version Information for Computer
  - Indication of HDD Usable Space Information
  - Indication of Memory Condition Information
  - Indication of Battery Information
- Communication
  - Indication of Communication Interface Information between Diagnosis Program and Module
  - Indication of Internet Connection Information
- Maker Information

- Indication of Installed Diagnosis Program Information List

7) Registration of User

- The Purchaser of the Diagnosis Equipment shall be formally registered and if not formal registered, able to be restricted during on use

8) Remote Control

● Support of Remote A/S

- The function is available for solution of Program trouble during Customer located in long distance on use

9) Feedback

● Transfer of Feedback

- The function is available for quick relevant trouble after provision of feedback to Scanner Manufacturer in case of problem during on scanning.

10) Monitoring

● Function of Necessity Information Provision to be developed

- The function is exclusive for Dealer and using for collection of necessity Information for the New or Undeveloped Vehicle and Device to be developed.

11) Self Diagnosis

● Self Diagnosis of H/W

- The Function is available for self diagnosis by each parts for several list itself if operation shall not be executed after connection of Hanascan by User.

2. Registration of User

1) Registration

- Equipment shall be registered through below process(Beginning after connection of Diagnosis Equipment and PC)
  - First Step : Execution of Registration Icon on Host Main Screen

  - Second Step : Input User Personnel Information

  - Third Step : Execution of Registration Button After completion of insertion for Personnel Information


REGISTRATION
User Registration Information
Name
Spencer
Workshop
Hanatech
Phone
82 54 454 9009
Email
webmaster@hanatech.net
Address
Country
KR
Edit
Product Information
Product Name
Hanascan 70
Serial No
Registerd Date
2012-07-26
Expand Date
2014-07-26
730 days left
Request subscription
User Information has been successfully registered.
Distributor Information
Company
R&D
Phone
+82 54 454 9009
Email
hanatech@hanatech.net
Address
Hana Bldg., 1032-39 Won Pyeong-Dong, Gumi-shi Gyeongsangbuk-do
Hanatech

3. Usage

1) Diagnosis Program

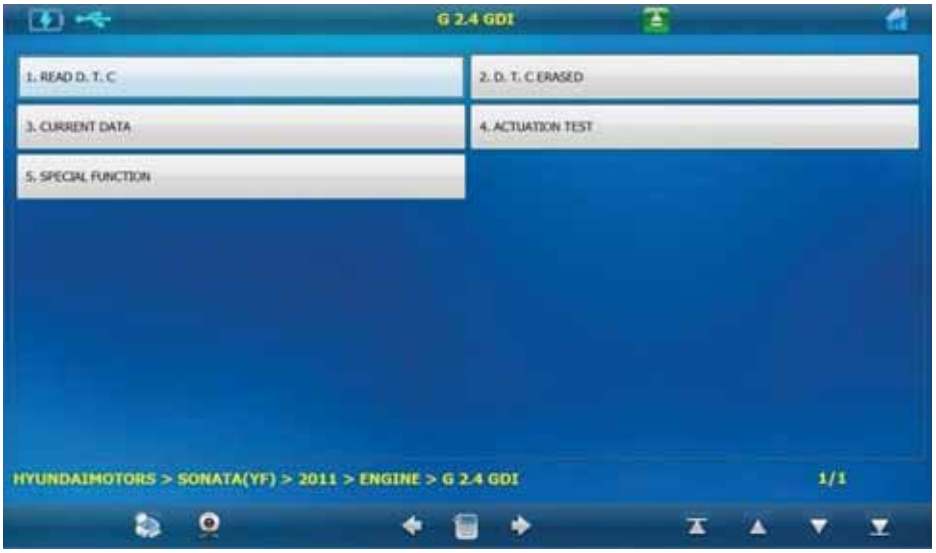
- Entry into Diagnosis Mode: Manufacturer -> Model -> Equipment (Ex. Hyundai)

– Entry into Maker Selection Screen

– Entry into Maker Bottom Menu

– Entry into Model Selection Menu

- List of Diagnosis

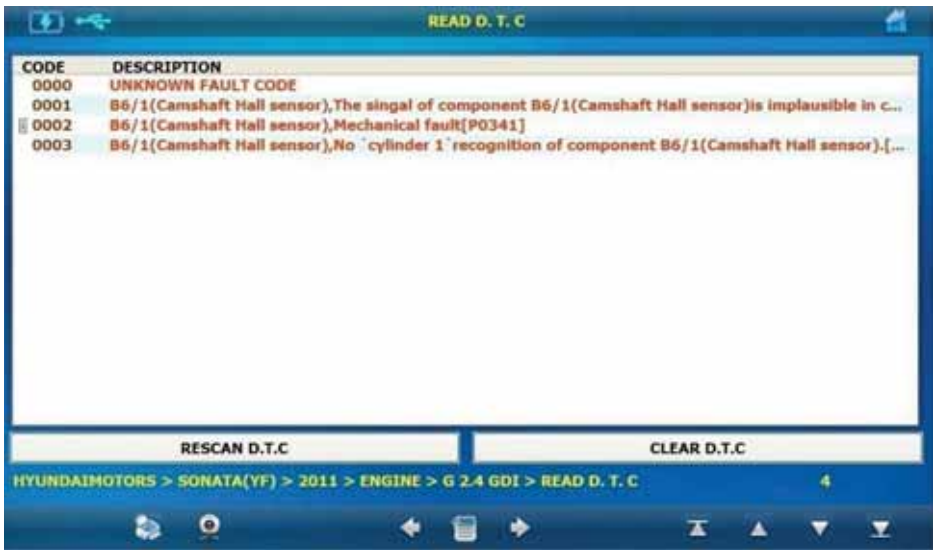


① Self Diagnosis

- Read/Removal of Trouble Code

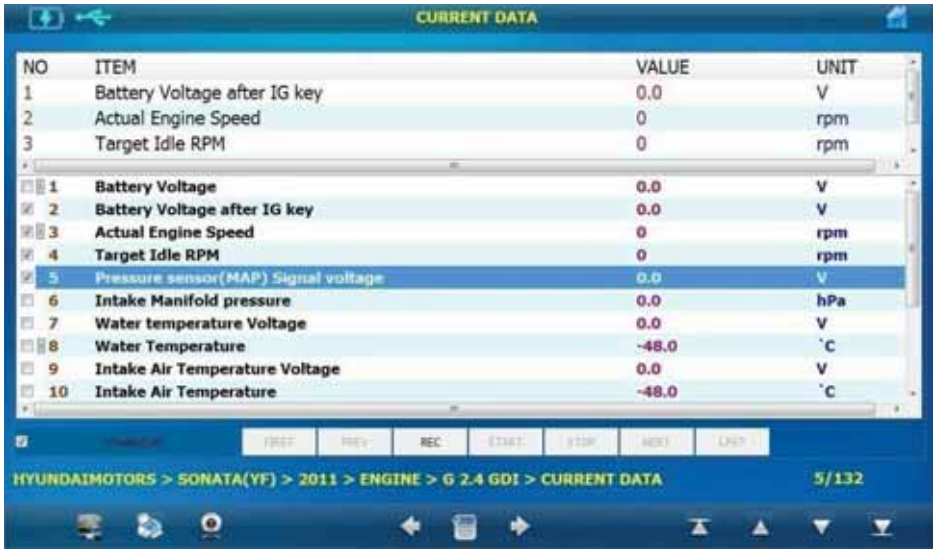
- In case of [i]mark is showing at the front of CODE, For the relevant

Trouble Code Sensor shall be support by " Help" through double click



② Service Data

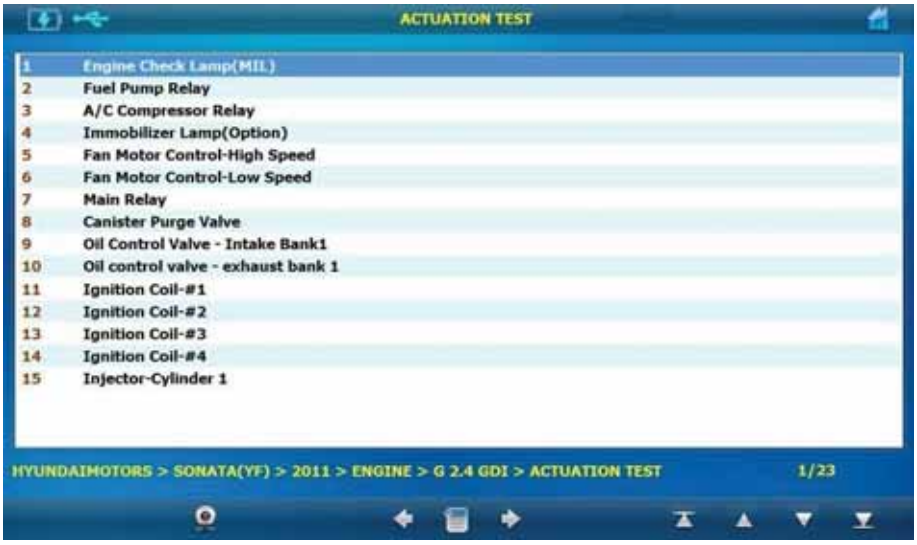
- Indication of Real time Data/Graph for the Sensor
- Graph Indication Button and Recording Button shall be activated, Selected List is able to be executed the function of indication for Recording and Graph.

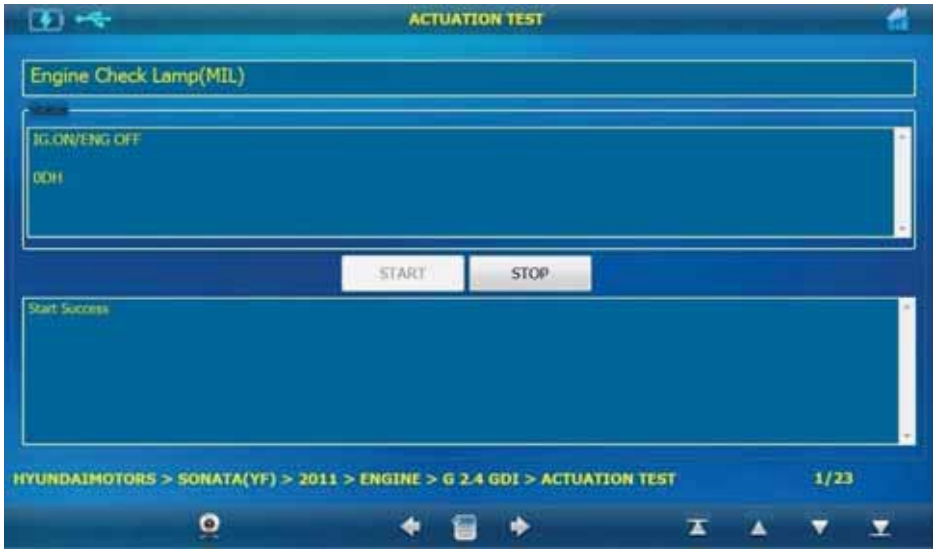


- In case of [i]mark is showing at the front of CODE, For the relevant Trouble Code Sensor shall be support by " Help" through double click

③ Random Operation(Compulsion Drive/Special Function)

- According to Use Environment, Relevant Menu is not able to be supported

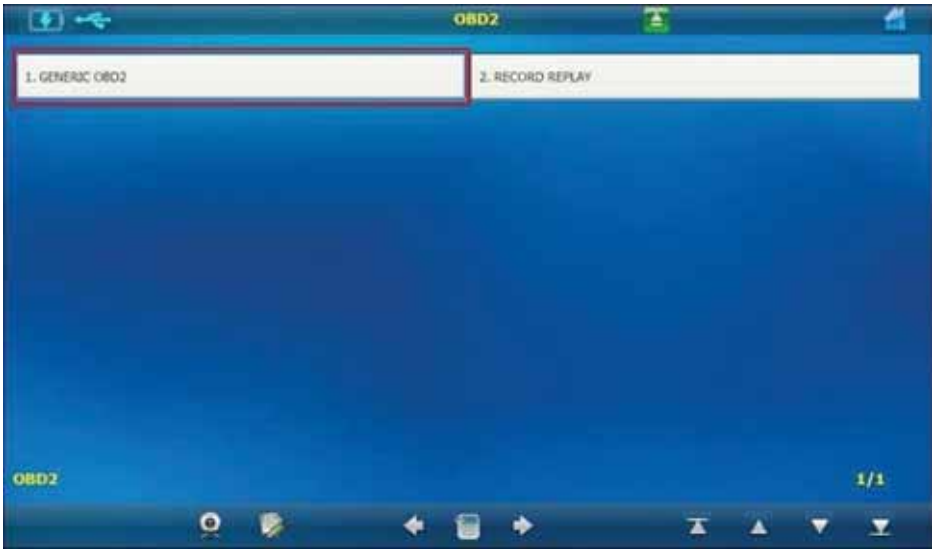

ACTUATION TEST
1 Engine Check Lamp(MIL)
2 Fuel Pump Relay
3 A/C Compressor Relay
4 Immobilizer Lamp(Option)
5 Fan Motor Control-High Speed
6 Fan Motor Control-Low Speed
7 Main Relay
8 Canister Purge Valve
9 Oil Control Valve - Intake Bank1
10 Oil control valve - exhaust bank 1
11 Ignition Coil-#1
12 Ignition Coil-#2
13 Ignition Coil-#3
14 Ignition Coil-#4
15 Injector-Cylinder 1
HYUNDAIMOTORS > SONATA(YF) > 2011 > ENGINE > G 2.4 GDI > ACTUATION TEST 1/23


ACTUATION TEST
Engine Check Lamp(MIL)
IG.ON/ENG OFF
00H
START
STOP
Start Success
HYUNDAIMOTORS > SONATA(YF) > 2011 > ENGINE > G 2.4 GDI > ACTUATION TEST 1/23

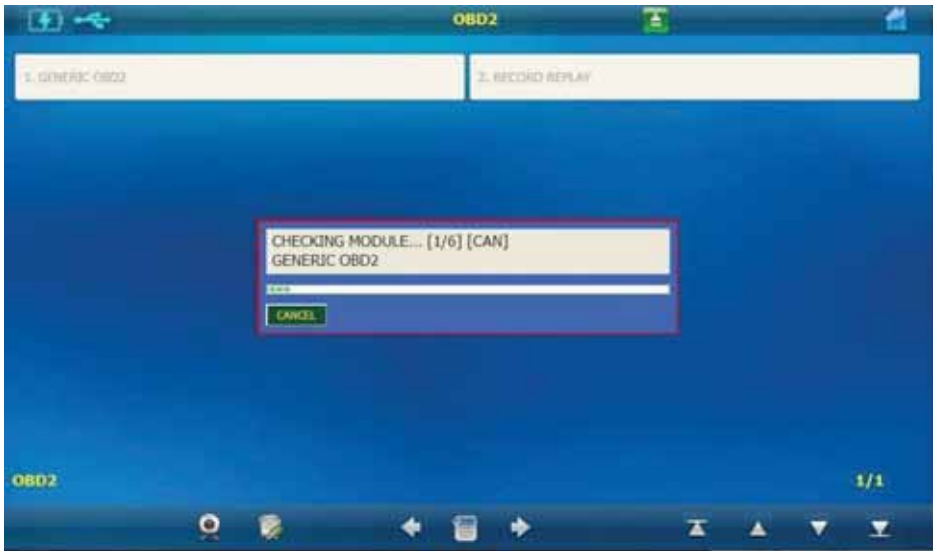
2) Program of OBD-II

- Entry into OBD-II Mode after selection of OBD-II

- Entry into OBD-II Communication Menu



- Entry after selection of " GENERIC OBD2 " Menu



- If executed, Communication of vehicle to be diagnosed shall be scanned automatically

- If communication is successfully done with Vehicle, A Button with Relevant ECU Address Information shall be generated
- Entry after selection of Relevant Button

- Diagnosis Button shall be shown if entry after selection of Relevant Button
- 01. OBD REQUIREMENTS – Required type of OBD to be shown
- 02. CURRENT DATA – Diagnosis Data of Vehicle to be shown on Real time.
- 03.READINESS TEST – Stand by Condition of Vehicle to be shown
- 04. FREEZE FRAME DATA – Fixation Frame Data of Vehicle to be shown
- 05. D.T.C – Trouble Code of Vehicle to be identified
- 06. CLEAR DIAG INFORMATION – Trouble Code of Vehicle to be removed
- 07. O2 SENSOR TEST RESULT – Oxygen Sensor Monitoring Test of Vehicle to be shown by result
- 08. ON-BOAD MONITORING TEST – ON-BOARD Monitoring Result for Specified Monitoring System of Vehicle to be identified
- 09. READ PENDING DTC – The Data to be revised as trouble code of Vehicle to be shown
- 10. CONTROL OF ON-BOARD SYSTEM – ON BOARD System of Vehicle To be tested and Requirement of Component to be controlled
- 11. VEHICLE INFORMATION – Information of Vehicle to be identified

- Indication of Menu for each Protocol : " ON-BOARD MONITORING TEST " shall be differed visible menu according to protocol of vehicle

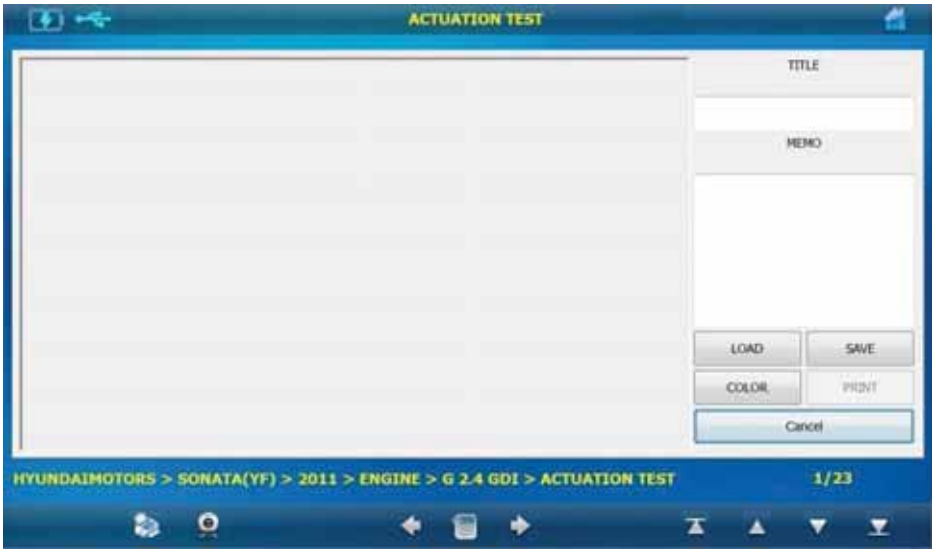
- In case of Vehicle to be used CAN Protocol

- In case of Vehicle not to be used CAN Protocol

3) Optional Function of Diagnosis Program

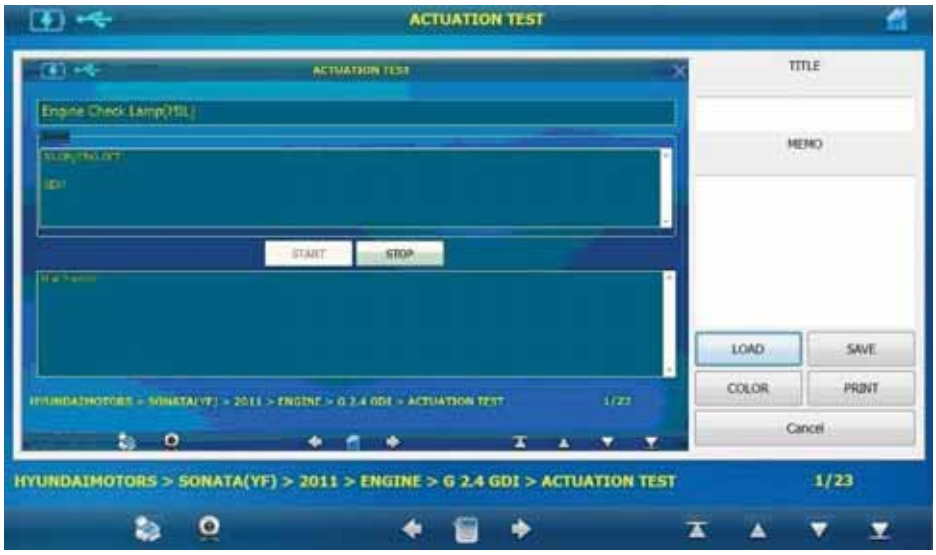
① Screen Capture(Capturing for Screen of Diagnosis Program)

- Click the Icon of Screen Capture, Entry into Captured Screen(Screen of Program shall be saved automatically during click on Icon – ex, Screen of Random Operation)



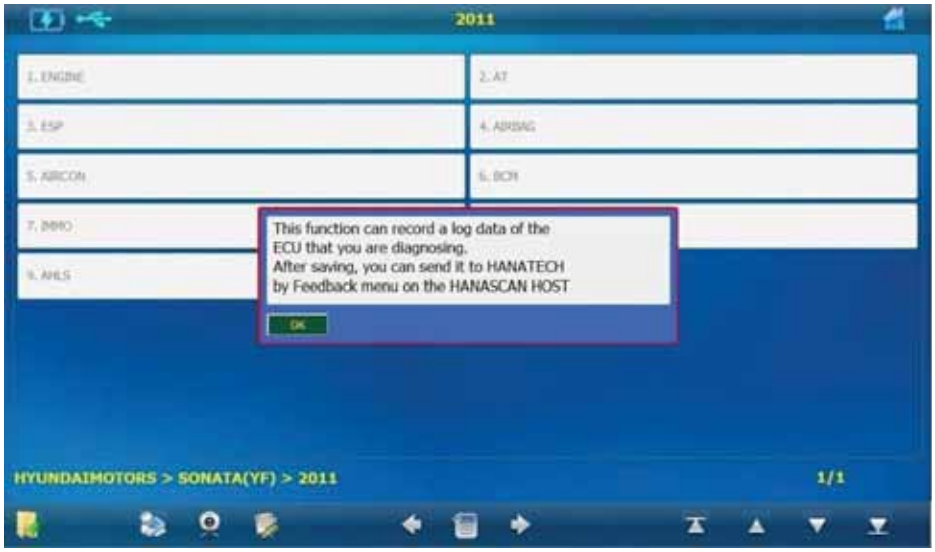
- Click the Icon of COLOR, Color of Brush Pen to be selected (Supporting for drawing of picture on Captured Screen by Mouse)
- Click the Icon of SAVE, Revised Captured File and information of TITLE/MEMO to be saved

- Click the Icon of PRINT, Loaded Captured File to be printed
- Click the Icon of LOAD, Saved Screen to be loaded

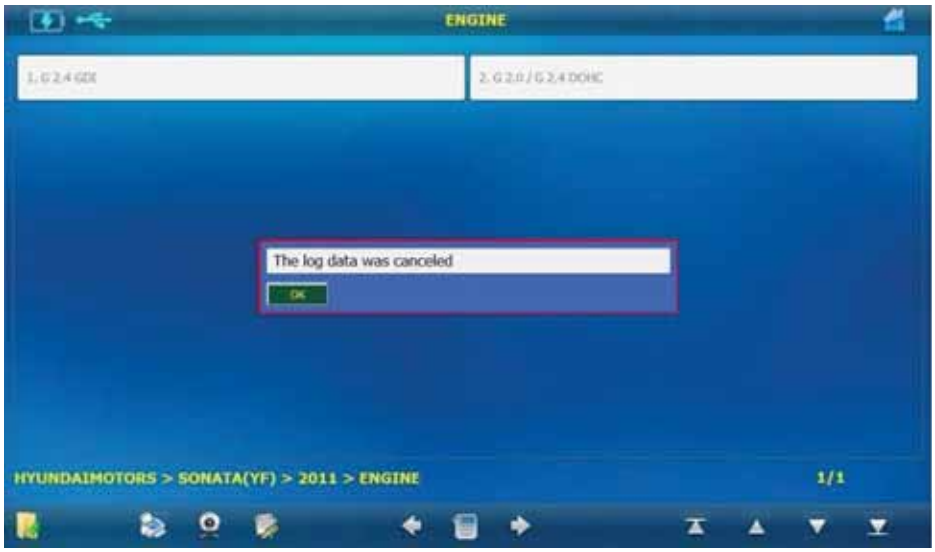


② Record of Log Data

- The function is saved the information to be sent Feedback if Trouble caused during on scanning
- The Icon to be activated only for the case of Diagnostic if Scanner on mode of execution
- Click the Icon of Record Log Data from Equipment Selection Menu (Log Data Record mode ON – shall be identified Log Data saved or not during on moment of escape from Equipment Selection Menu at the Diagnosis List menu after scanned from later on)



- If Log Data Record Mode to be “OFF”, Icon shall be Clicked once again.



- Entry into Log Data Record Screen(Entry the moment of escape to Equipment Menu from Diagnosis List)

- Selection and Composition for Relevant Details Information of Error
- Saved after click on SAVE Icon

4. Transfer of Feedback

1) Preparation for Feedback Information

- Preparation Procedure of Feedback Progress (Feedback Transfer is function to be transferred saved log data during on scanning)
  - No.1 : Log Data Record Mode ON at the Diagnosis Program(Clicked the Icon)
  - No.2 : Escaped to Equipment Selection Menu after scanned of troubled Equipment.(Log Data Record - Available for input of Optional Information)
  - No.3 : Repeated No.2 against Troubled Equipment
  - No.4 : Log Data Record Mode OFF(Click the Icon)
    (If Log Data Record Mode to be OFF, General Diagnosis to be used continuously due to not be entered into Log Record Screen after scanned.)
- Transfer available by one-time during on internet after recording of Log Data for several maker.

2) Procedure of Feedback

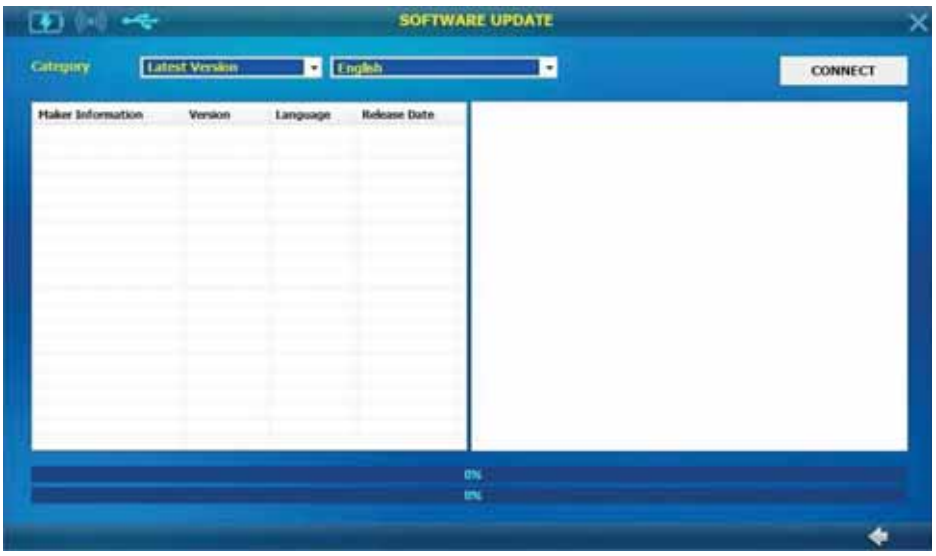
- Entry into Feedback Screen(Using after connection through Internet)
  - (Screen shall not to be shown due to not transferred Feedback during on First Entry)

- Feedback Transfer(Click the Feedback Button)
  - Indicated the information for feedback of Maker, Date, Situation of Disposal on the left side of Screen
  - Indicated the information for Selected Feedback Information and Response for feedback by Engineer on the right side of Screen.
  - If Button of Delete to be clicked, Selected Feedback List from right side of Screen View to be removed.

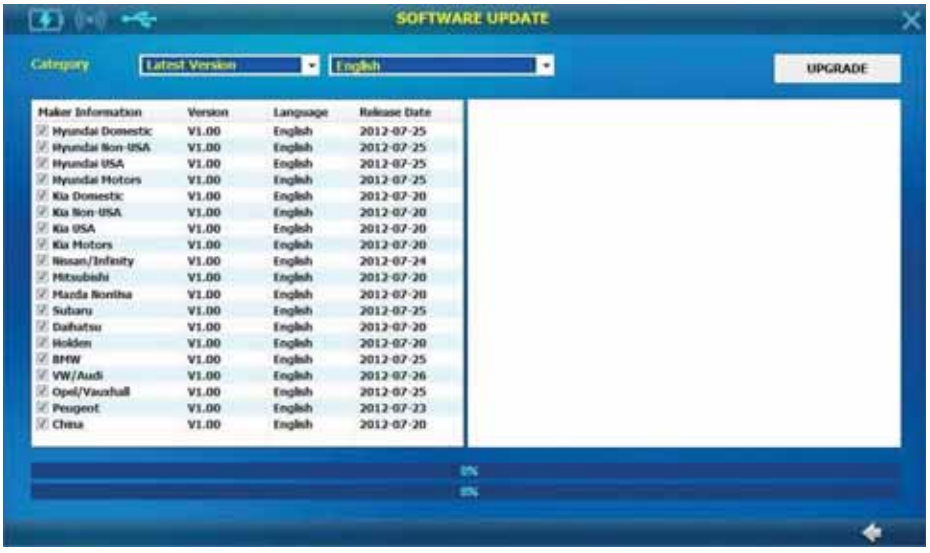
5. Upgrading of Diagnosis Program and Host Program

1) Diagnosis Program

- Selection of Upgrade Maker(available for Individual and Whole Selection)
  Individual Selection shall be recommended If Internet Environment is too slow or non-stable



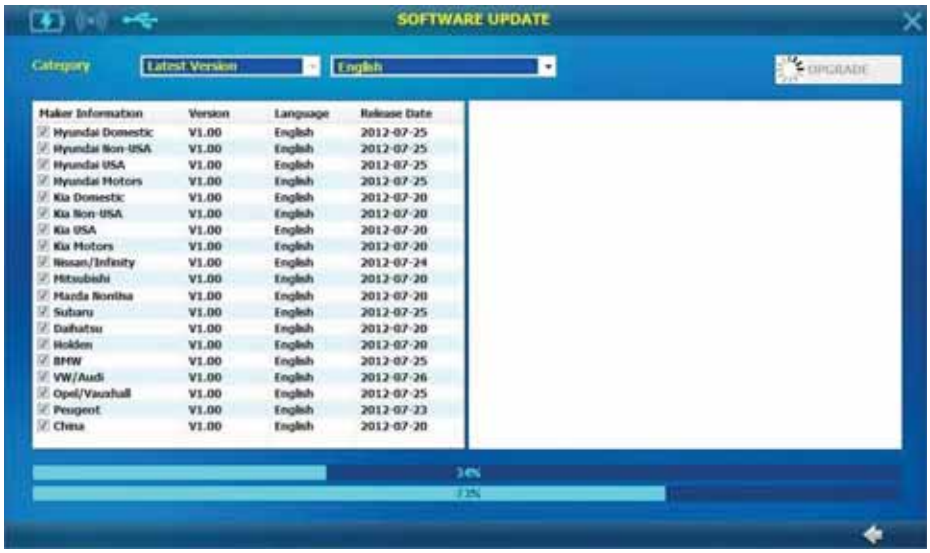
- Click the CONNECT Button after selection of Category



- Whole Program List shall be printed including in purchased Program Kit from Left View of Screen

- If upgrading to be needed by each Maker, Selection Box shall be checked automatically.
- Upgrade Maker to be selected by manual after revision of Checked List.

- Click the Button
  - In case of Internet access to be collapsed during on processing of Upgrade, Non-completed Program of Upgrade to be restored and to be checked automatically if Process of Upgrade to be executed again.



- Identification of Upgrade Information shall be referred to list of system Info.

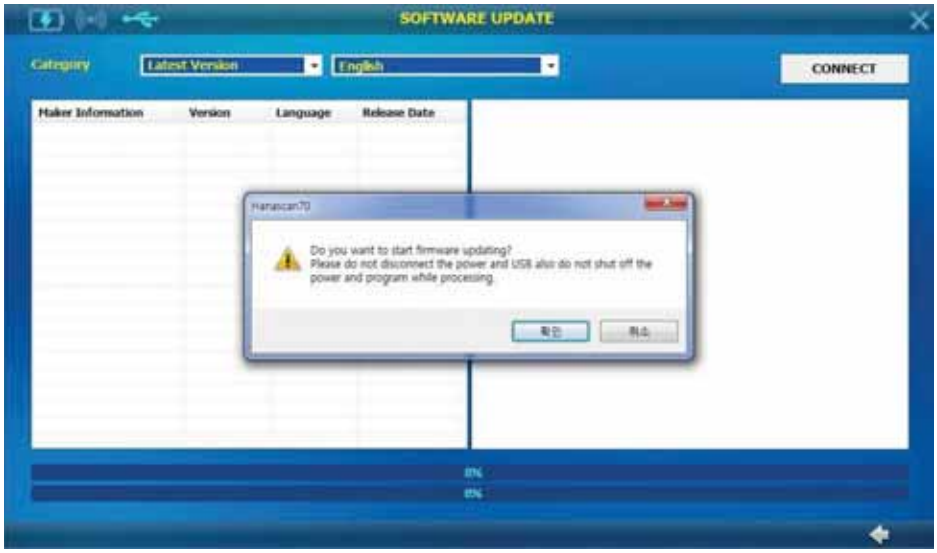
2) Host program/Module F/W program

- Upgrade of Host Program :

  - Upgrade automatically to be processed after identification of Upgrade of Host Program to be completed or not during on click the Icon of Upgrade.

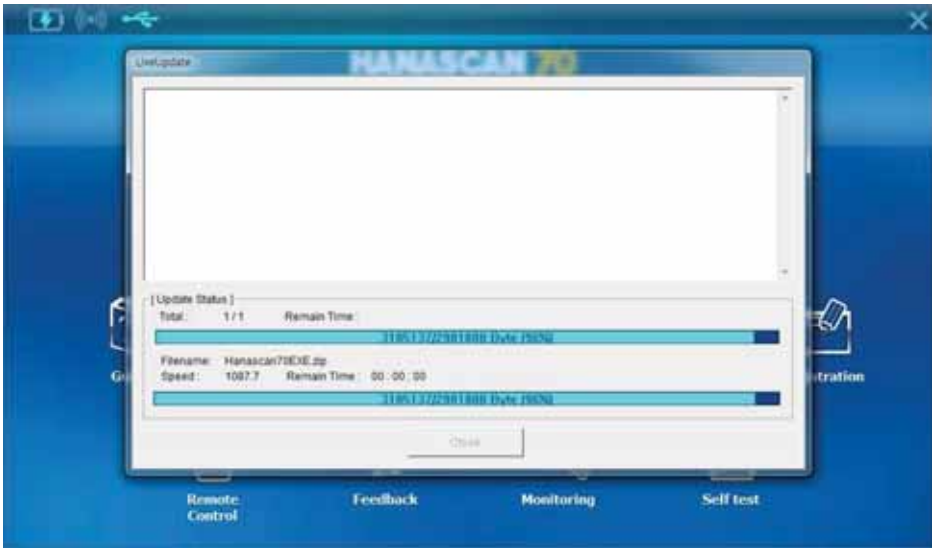
- Upgrade of Module F/W Program :

  - Identified Module F/W Upgrade to be completed or not automatically during on click the CONNECT.



- Screen of Upgrade Process

  - Power of Module shall not be separated during on process of Upgrade


[Update Status]
Total : 1 / 1
Remain Time :
Filename : Hanascan70EXE.zip
Speed : 1087.7
Remain Time : 00 : 00 : 00
Close
Remote Control
Feedback
Monitoring
Self test

PC Based Automotive Diagnostic Module

HANASCAN 70

Made in Korea

Automotive Diagnostic Solutions
Hanatech Co.,Ltd.

730-924, Hana Bldg, 1032-39, Wonpyung-Dong
Gumi-Shi, Kyungbuk-Do, Korea
Tel +82 54 454 9009, Fax +82 54 454 8554
www.hanatech.net

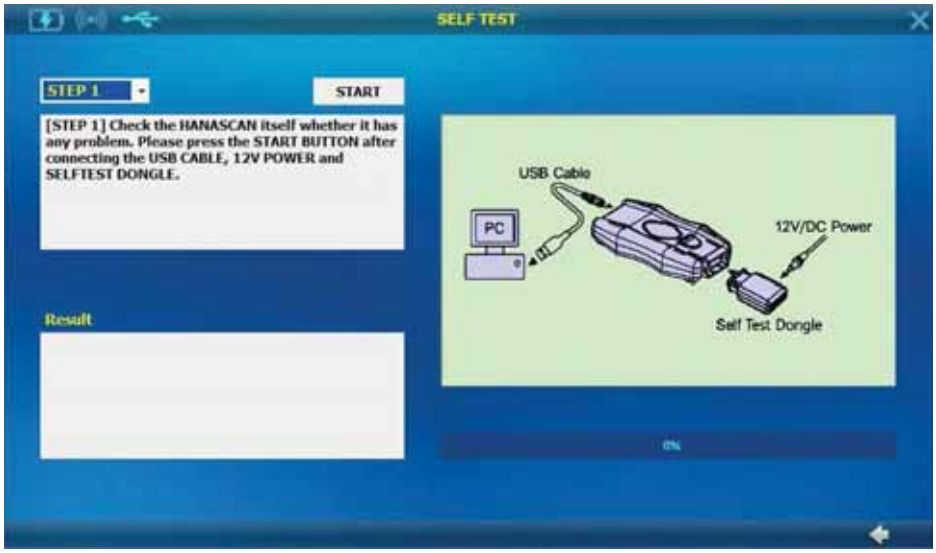
6. Self Test

- The Function of Self Test is available for self diagnosis by each parts for several list itself if operation shall not be executed after connection of Hanascan by User.
- If the list related each STEP to be caused trouble, shall be required A/S for troubled cable or equipment.

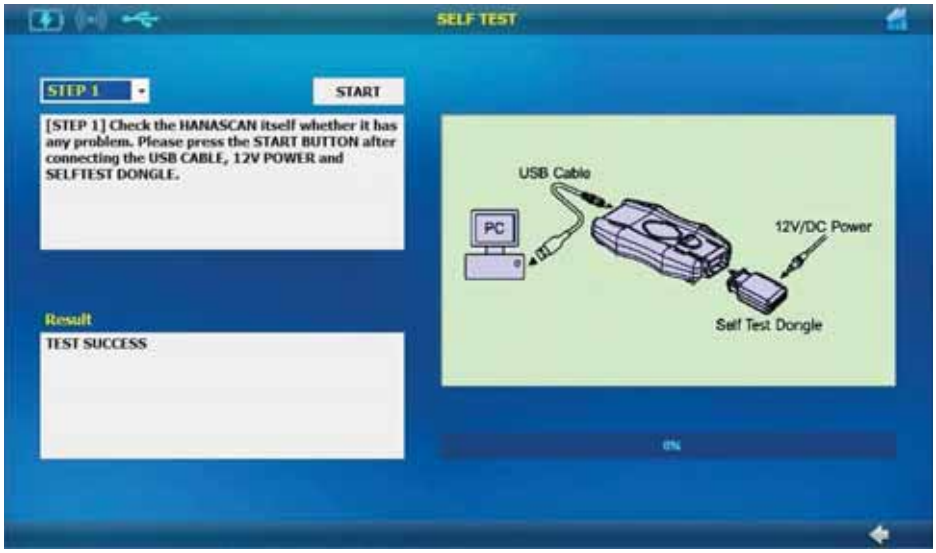
* [Caution]
- Make sure to read Explanation and Test to be started after taking a action of Pro-active

1) STEP 1

- STEP 1 shall be checked Connection of USB Cable normally or not between Computer and Hanascan
- Test shall be executed after connection of USB cable and 12V adaptor.
- Test shall be executed Progress Bar over processing if START Button to Be pushed.
- If no trouble after completion of test, SUCCESS shall be indicated and if trouble, FAIL shall be indicated.



<Screen of STEP1>

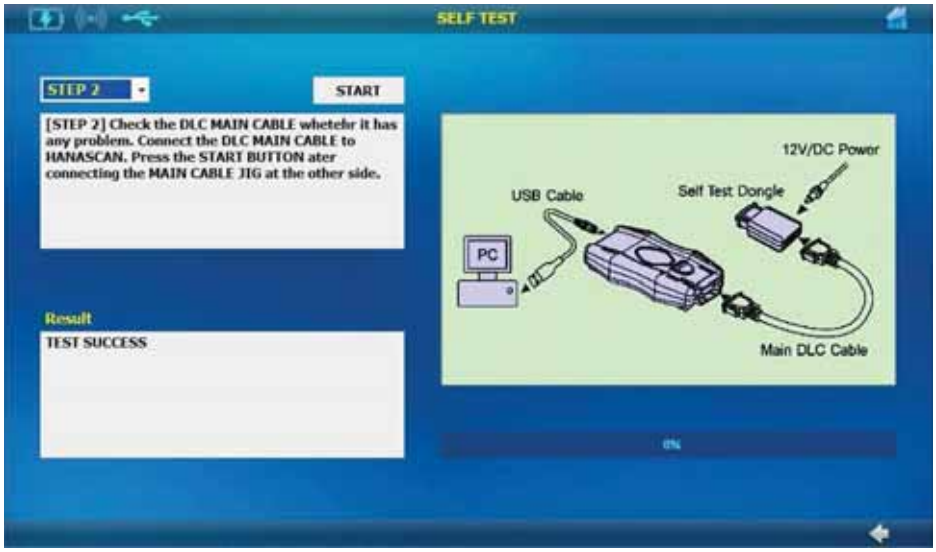


<Successful Screen of STEP1 Test>

2) STEP 2

- STEP2 shall be checked the operation of Hanascan normally.

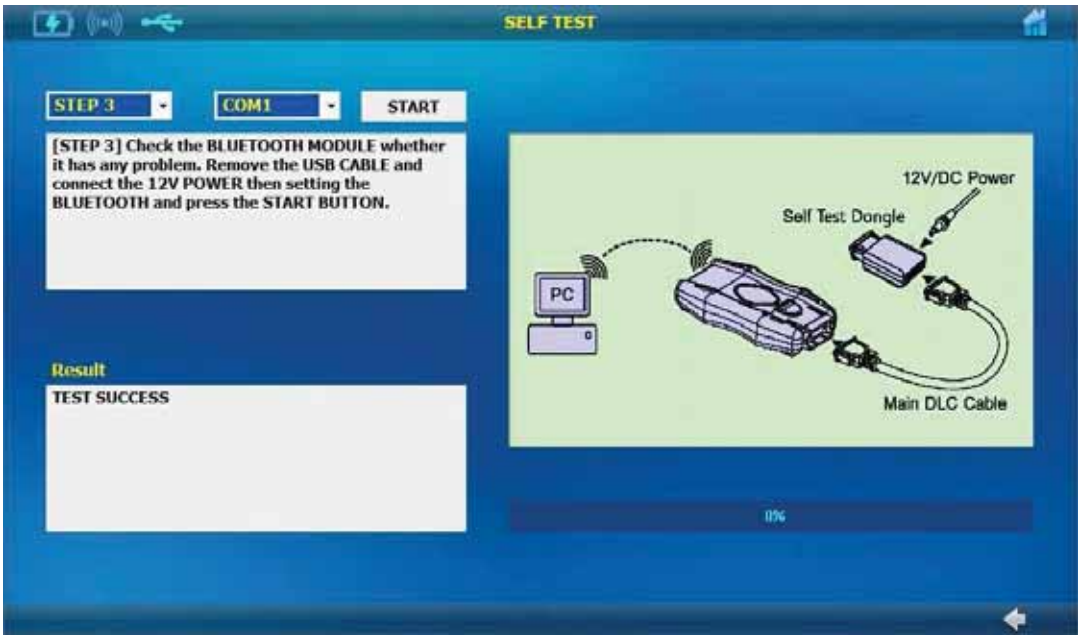
- Test available only if USB Cable, DLC Cable, Dongle of Self test, 12V Adaptor shall be connected
- If no trouble, SUCCESS shall be indicated and if trouble, FAIL shall be indicated.



<Successful Screen of STEP2 Test>

3) STEP 3

- STEP3 shall be checked the communication between Bluetooth Chip including of Hanascan Module and PC with Bluetooth normally or not
- USB Cable certainly to be cleared and Test shall be executed after establishing of Bluetooth with 12V Adaptor
- If Bluetooth Chip not be included at the PC, Test shall be executed after purchasing of Bluetooth Dongle.
- If no trouble, SUCCESS shall be indicated and if trouble, FAIL shall be indicated.



<Successful Screen of STEP3 Test>