



Honda Diagnostic System

User Manual

Version 8

Change History

Ver.No.	Category	Description of Changes	Page No.	Date
8	Outboard Motor	Updated Compatible models list	8	June, 2013
7	Outboard Motor	Added Review HDS stored files in Dr.H application	99~104	December,2011
7	All	USB driver update after the model software installation (it needs to support 64bit PC).	46~47	December,2011
6	Outboard Motor Snow Blower	Updated Compatible models list	8	December,2011
5	Engine	Added ECU Data Restoration	92~98	July, 2011
4	All	Windows 7 support. New Dr.H registration and verification screens on New Service Information Portal Site. Replaced DTC screen capture. Added a note in Graph Display Function section.	12,34-40,48 63,68	June, 2010
3	Outboard Motor	Added Onboard Snapshot	91	June, 2009
2	Outboard Motor	Added Device Configuration	87~90	May, 2009
1	All	Initial Version		April, 2008

HONDA

Contents

1. Precautions when using	4
2. Outline of system.....	6
3. Compatible models.....	8
4. Components	9
5. Preparation before installing software.....	12
5 - 1. Confirm PC environment	13
5 - 1 - 1. How to check OS, CPU, memory.....	13
5 - 1 - 2. How to check free space on the hard disk	14
5 - 1 - 3. How to check display resolution.....	16
5 - 2. Setting up PC.....	18
5 - 2 - 1. Stopping the screen saver.....	18
1) In the case of Windows 2000	18
2) In the case of Windows XP	20
5 - 2 - 2. Settings for system standby, system hibernate.....	22
6. Installing Base Software.....	24
7. Installing the USB drive	32
8. Installing Model Software	33
9. Communication unit settings	48
9 - 1. Communication unit settings: Installation of device driver.....	48
9 - 2. Communication unit settings: Installation of serial port driver	51
10. Connecting to products	55
11. Failure diagnosis	63
11 - 1. DTC.....	63
11 - 2. All history	64
11 - 3. Data list.....	65
Data list Procedures	66
Data list Sub-windows function	67
Graph display function.....	68
Snapshot function.....	73
ECU reset function	79
11 - 4. Simple diagnosis.....	80
11 - 5. Function test	85
11 - 6. Initial setting.....	86
11 - 7. Device Configuration	87
11 - 8. Onboard Snapshot.....	91
11 - 9. ECU Data Restoration	92
11 - 10. Review HDS stored files in Dr.H application	99
12. iGX - Engine with ECU Installed: Caution when replacing/repairing ECU on an iGX engine.....	105
13. FAQs	105

14. Terminology..... 106

Introduction

Thank you for purchasing Dr. H. Please read these instructions carefully and take care to use Dr. H properly.

1. It is prohibited to reproduce this user manual in whole or in part without prior consent.
2. The contents and illustrations in this user manual may change without notification.

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1. Precautions when using.

Please read the following before using Dr. H

Adequate consideration for safety has been taken in regard to this product. However, please make sure that you only use this product after reading what is written in sections with the mark displayed below, and in the Warning and Caution sections.

The mark displayed below is to ensure the proper usage of this product to prevent the (unlikely) occurrence of faults or damage.

⚠ DANGER

Danger
Failure to follow these instructions may result in death or serious injury

⚠ WARNING

Warning
There is a possibility of death or serious injury should these instructions not be followed

⚠ CAUTION

Caution
Failure to follow these instructions may result in injury

⚠ CAUTION

- Do not disassemble or modify
 - Do not disassemble or modify the Dr. H unit (communication unit), or the attachments or any of the optional items. This can cause overheating, burns, electric shock, injury and malfunction. The warranty shall be invalid if disassembled even just once.
- Handling AC adapter (optional item)
 - Do not touch the socket plug with wet hands. This may result in electric shock.

Handling this product

■ Do not expose to water

- The Dr. H unit (communication unit) and USB cables do not conform to waterproof specifications.
- Do not expose to high temperatures or sea (salty) breeze for extended periods. Condensation may form inside the unit due to sudden changes in the surrounding temperature. This may occur, for example, when bringing the product suddenly from a cold place into a warm room.

Use the optional waterproof box when exposed to splashing water or snowfall. (Refer to P- Components)

- Do not drop the Dr. H unit (communication unit) or place anything on top of it. This could damage it or cause it to malfunction.
- Do not use the Dr. H unit, attachments or optional goods if dented, cracked, damaged etc.
- Connect the end of the cable securely after checking for corrosion or damage to the connectors on the Dr. H unit. Do not use force to connect or disconnect. This may damage it or cause it to malfunction.

Handling the optional items

■ Handling the waterproof box (optional item)

- Do not drop the waterproof box.
- If the unit is dirty, wipe it with a soft, dry cloth. If the dirt does not come off, wipe it with a soft cleaning cloth that has been dipped in diluted mild detergent and has been firmly wrung. Do not use organic solvents such as alcohol. This may cause warping or discoloration.
- The case satisfies IP65 regulations. However, it is not guaranteed to be waterproof.

■ Handling the AC adapter (optional item)

- Using an AC adapter outside the voltage range of 100-240V could result in fire or electric shock.
- Connect the plug securely and fully into the socket. When removing the plug from the socket, do not pull it forcefully.
- Do not use if the main unit or cord is corroded, damaged, or dented etc., as this can result in fire or electric shock.
- The AC cable may be different according to the plug being used. Make sure to use the right AC cable with the right plug.

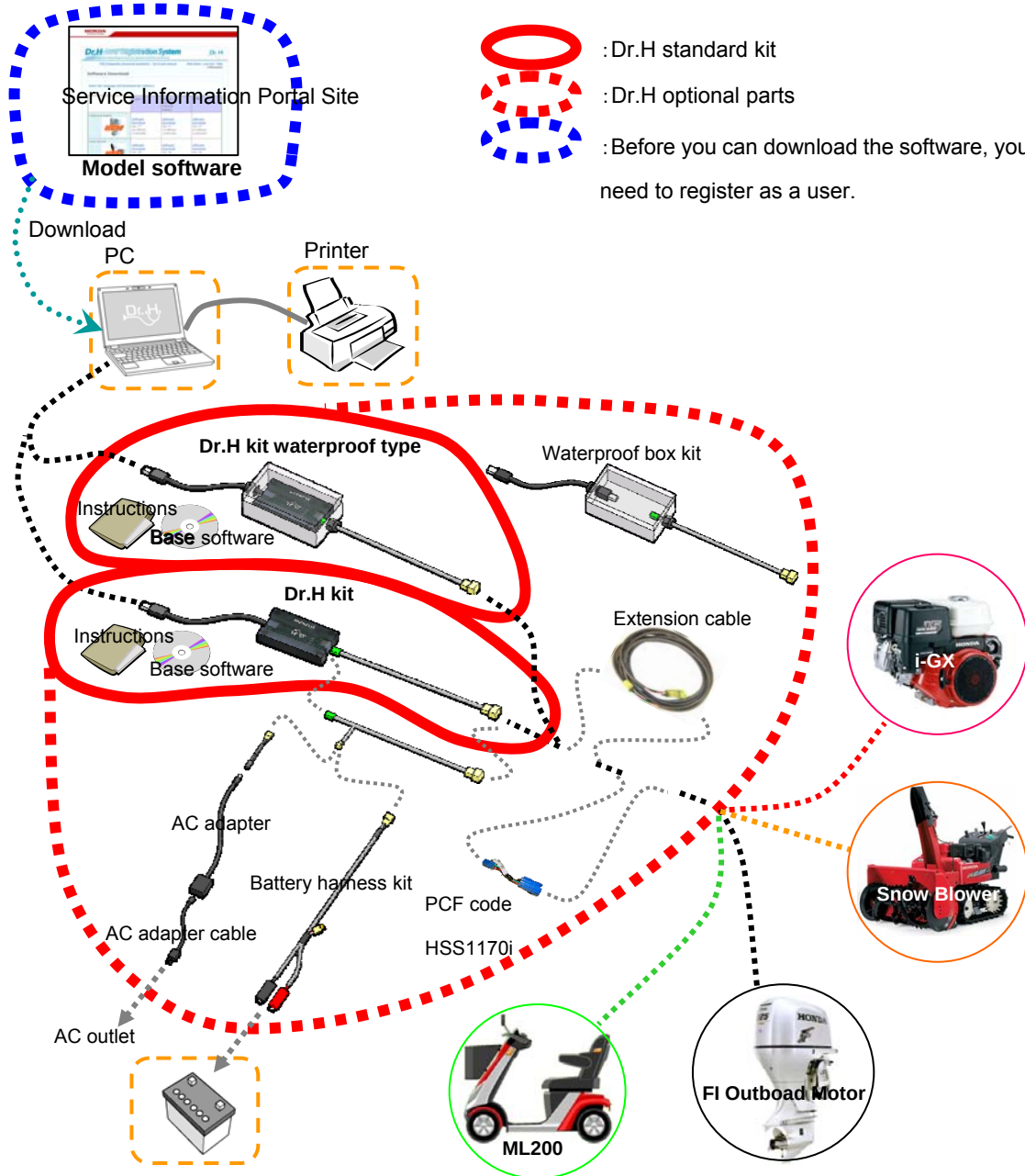
■ Handling the battery harness (optional item)

- Misuse can cause accidents so handle with care.
- Always connect to a 12V battery. Connecting to a battery other than a 12V battery can result in a flammable explosion, fire, or electric shock.
- When connecting the battery harness, always make sure not to short-circuit the + and - terminals.
- Connect battery harness in such a way that a loose gap is left, in order to prevent it from becoming detached when in use.
- Do not use if the harness is corroded, damaged, or dented etc., as this can result in fire or electric shock.
- Fix the red clip to the battery's plus terminal and the black clip to the battery's minus terminal.
- When connected in reverse, the damaged equipment or battery may explode.

2. Outline of system

Outline:

The Dr. H diagnostic system consists of basic software, model software, and a communication unit.



Function:

Main function	Explanation
DTC	This is the DTC (Diagnostic Trouble code) mode contained in the ECU.
All DTC History	Displays data when the DTC contained in the ECU appears.
Data list	Displays sensor, actuator, ECU internal data in real time.
Graph mode	A function for making line graphs.
Snapshot	Possible to record the existent values for items on the data list.
Simple diagnosis	A mode that enables a simple diagnosis
Function test	Automatically runs each device to enable its condition to be tested.

***The Dr. H system complies with the USA FCC Standard.**

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.

Specifications: Communication unit

Conditions of use	Temperature range: $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$ Environment: Water-free, dirt-free etc. locations.
Input specifications	Input voltage: 5V Current: 100mA

Name and address of suppliers

Honda Motor Co., Ltd.

Minami Aoyama 2-1-1, Minato-ku, Tokyo, 107-8556, Japan

3. Compatible models

Outboard motor	Snow Blower	Engine	Others
* BF225	* HSM1590i	* GX440I	* ML200
* BF200	* HSM1390i	* GX440IU	* ML200 K1
* BF175	* HSM1390iH		
* BF150	* HSM1336i		
* BF135	* HSM1180i		
* BF130	* HSM980i		
* BF115	* HSM980iH		
* BF90D	* HSS1170i		
* BF75D	* HSS1170iH		
* BF50D	* HSS1380i		
* BF40D	* HSS1332i		
* BF60A BFP60A	* HSS970i		
* BF175A	* HSS970iH		
* BF200A	* HSM1336iK1		
* BF225A	* HS1336i		
* BF115D	* HSM1380i		
* BF135A4,BF135AK0	* HSM1390iK1		
* BF150A4,BF150AK0	* HSM1380i		
* BF250A	* HSM1390iK1		
* BF175AK3			
* BF200AK3			
* BF225AK3			

*As of June, 2013

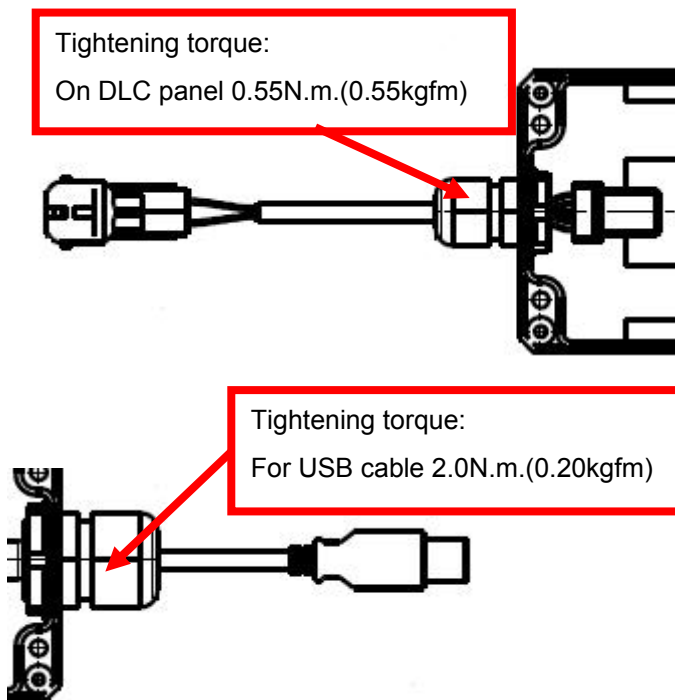
*Some models may not be sold depending on the region.

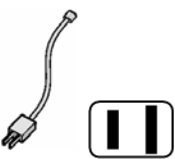
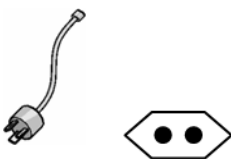
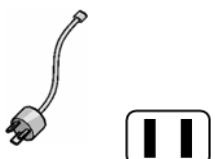
4. Components

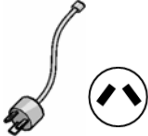
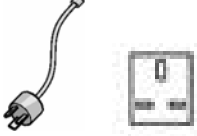
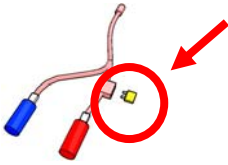
Dr. H standard kit 06398-YH0-000		
1.  Interface unit communication unit connecting products to PC. *Do not disassemble.	2.  USB cable Cable for connecting PC and communication unit.	3.  DLC harness Sold as separate units Component no.39861-YH0-003 Harness for connecting communication unit to products.
4.  Base software Dr. H basic software including operating manual	5.  Instructions	

Dr. H standard kit waterproof type 06395-YH0-000		
1.  Caution *Sometimes the waterproofing may be lost due to excessive water exposure. *Do not disassemble	2.  Base software Dr. H basic software including operating manual	3.  Instructions

* Should the position of the marking for the waterproof case connector become misaligned, realign using the specified torque value. Failure to do so can result in water or dirt getting inside.



Dr. H Optional parts		
1.  Battery harness kit Component no.06397-YH0-000 * Only for iGX engine	2.  AC adapter kit Component no.06396-YH0-000 * Only for iGX engine	3.  Waterproof box kit Component no.06399-YH0-000 * Sometimes the waterproofing may be lost due to excessive water exposure. * Do not disassemble * Battery harness kit and AC adapter kit cannot be used together
4.  AC adapter cable (A-US) Component no.39871-YH0-003 * Only for iGX engine	5.  AC adapter cable (C-EU) Component no.39872-YH0-003 * Only for iGX engine	6.  AC adapter cable (A-JPN) Component no.39873-YH0-003 * Only for iGX engine

7.  AC adapter cable (O-AUS) Component no.39874-YH0-003 * Only for iGX engine	8.  AC adapter cable (SE-KOR) Component no.39875-YH0-003 * Only for iGX engine	9.  AC adapter cable (BF-UK) Component no.39876-YH0-003 * Only for iGX engine
10.  Extension cable Component no.39863-YH0-003 Used to extend DLC cable. Can be used for up to two cables.	11.  PCF code Component no.32135-V21-010 DLC conversion code for snow plow Model used : HS1170i HS970i	12.  DLC cable Component no.39861-YH0-003 Components for maintenance and repair
13.  Main fuse Component no. 98200 – 40500 Inside battery harness kit Components for maintenance and repair		

5. Preparation before installing software

Main points:

The Dr. H software consists of two types of software; base software and model software

Diagram 1 shows the 6 steps to be followed in sequence, including installation.

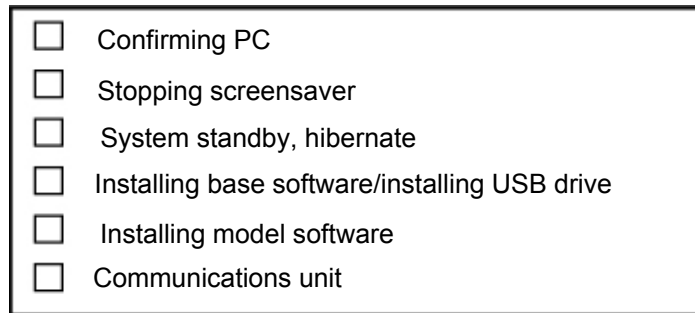


Diagram 1

*Use equipment that conforms to the following:

OS	Windows 2000, Windows XP, Windows Vista or Windows 7
CPU	Intel Pentium III 600MHz or AMD Athlon 1.0 GHz or higher
Memory	512 MB RAM or higher
Port	USB port
Disk device	CD-ROM drive
Free space in hard disk	1 GB free space
Display	1024 x 768 or 1280 x 1024 resolution

* The memory capacity and free space on the hard disk will vary between PCs.

* Using models with only a small amount of free hard disk space can lead to deficient memory or similar memory problems.

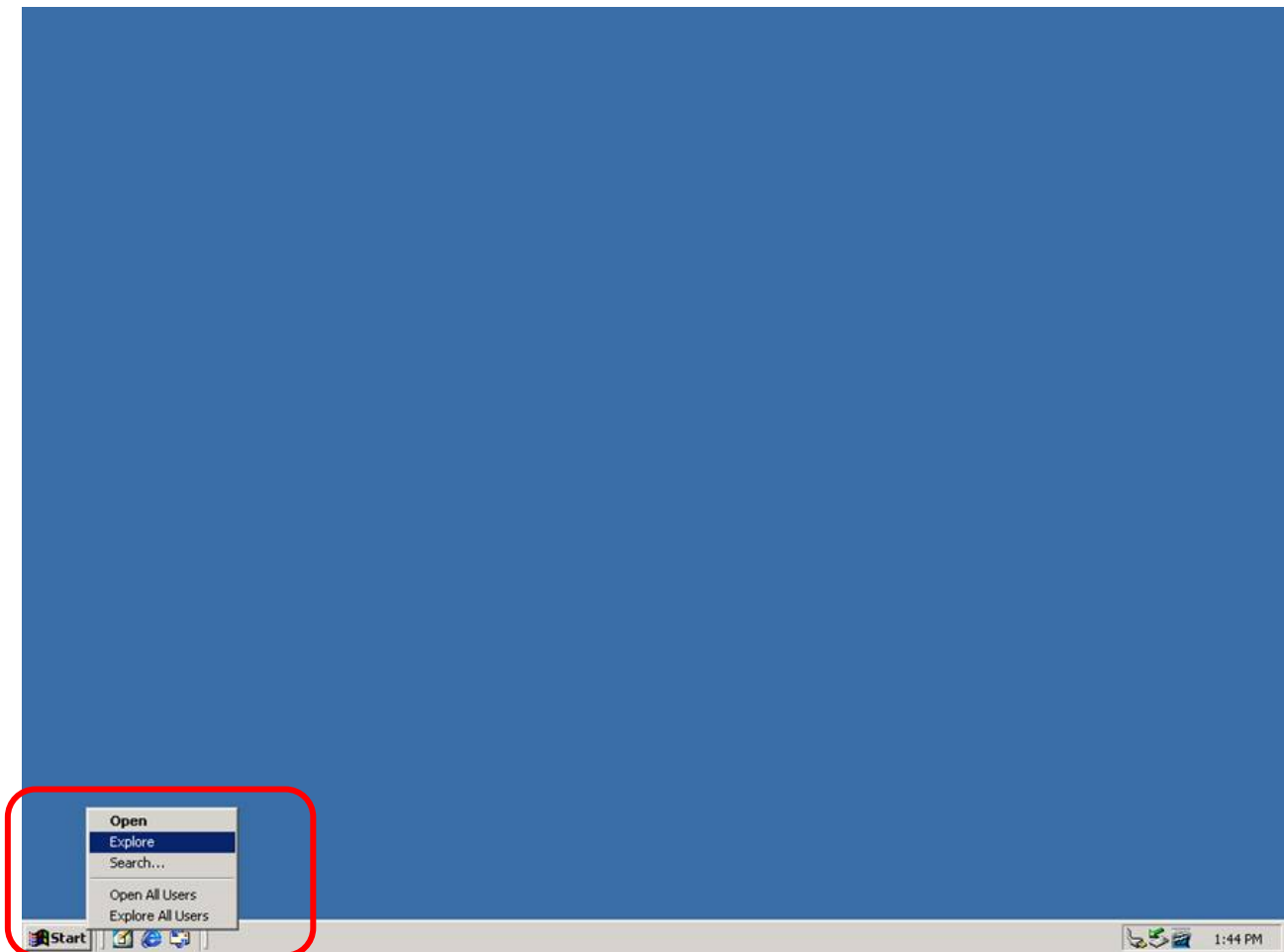
* Operations may be different depending on the model of PC used.

5 - 1. Confirm PC environment

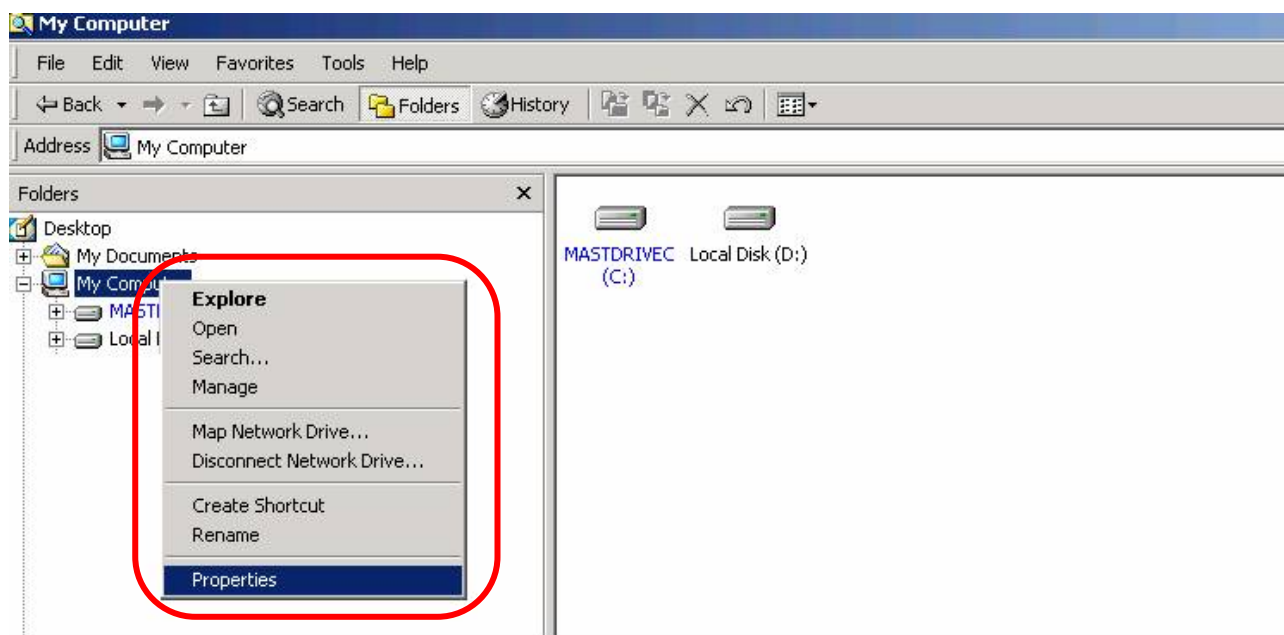
5 - 1 - 1. How to check OS, CPU, memory

1. Right-click on the "start" button and select "Explore"

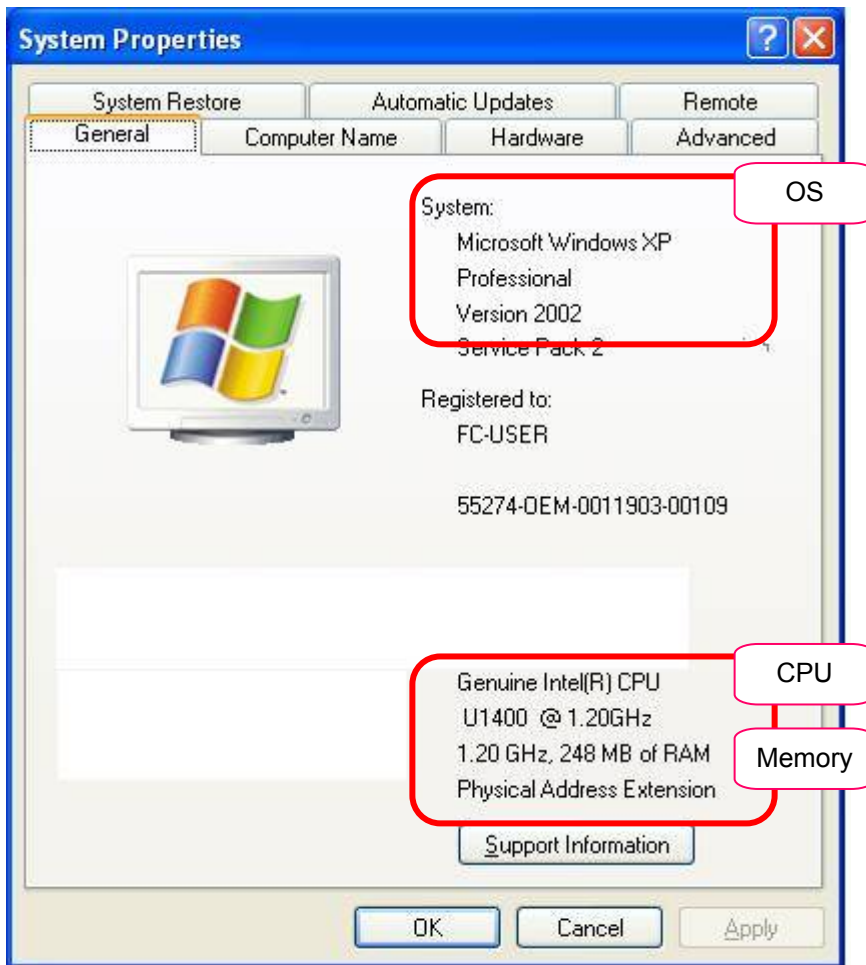
(If the My Computer icon is already on the desktop, click this.)



2. Right-click "My Computer" and select "Properties" in the menu that appears.



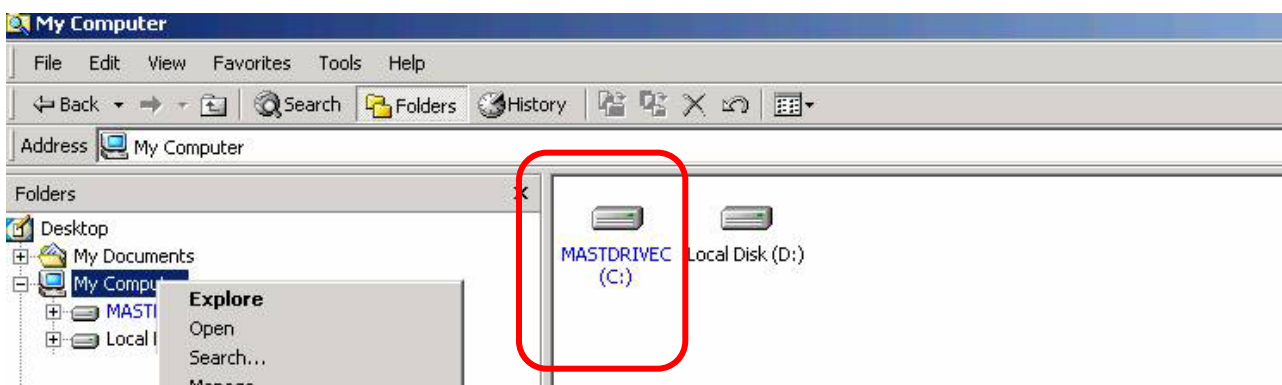
3. Confirm the PC's operating environment in the Systems Properties window.



* This is an explanation for Windows XP Professional SP1.

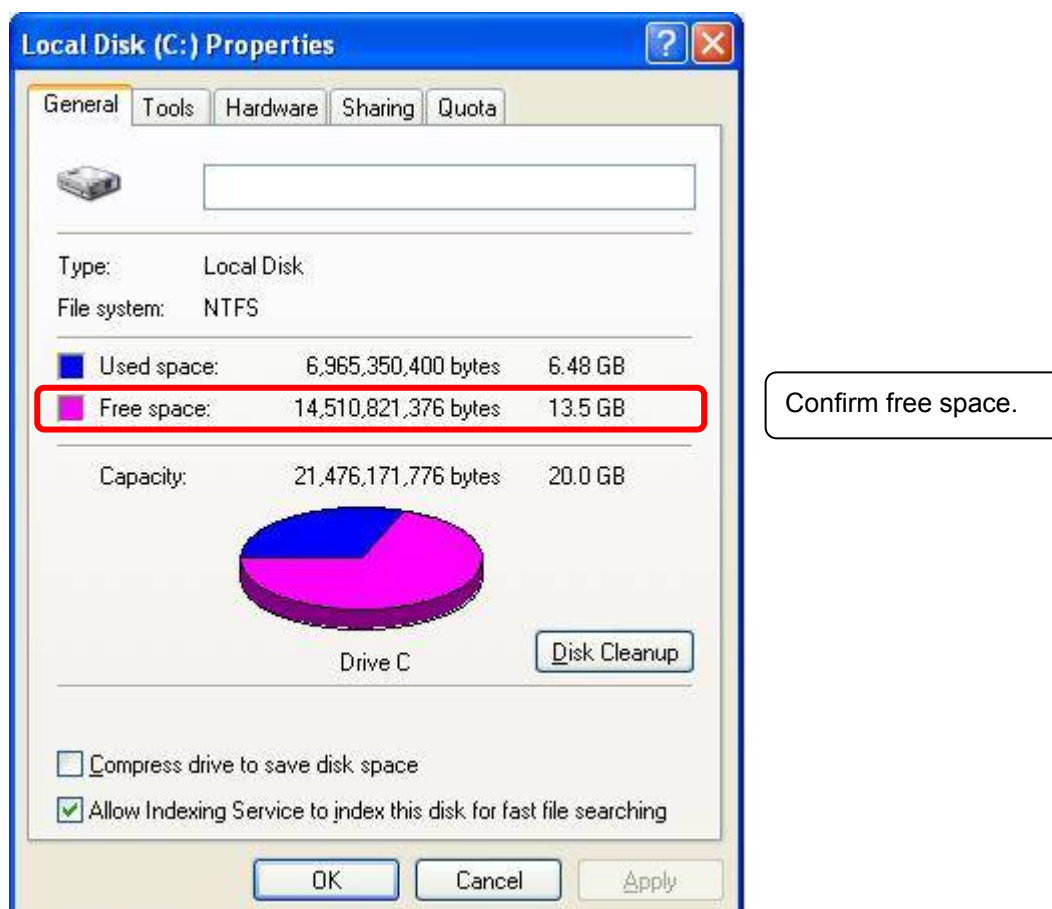
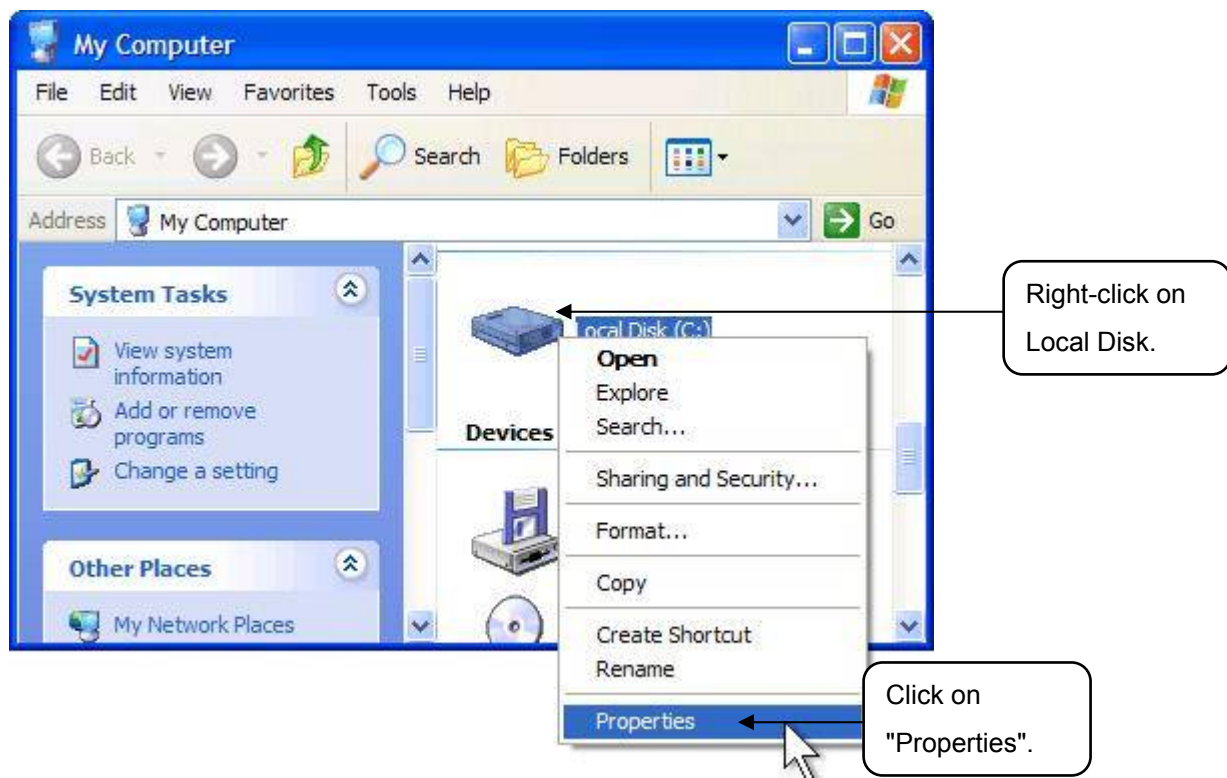
5 - 1 - 2 . How to check free space on the hard disk

1. Select Local Disk (C).



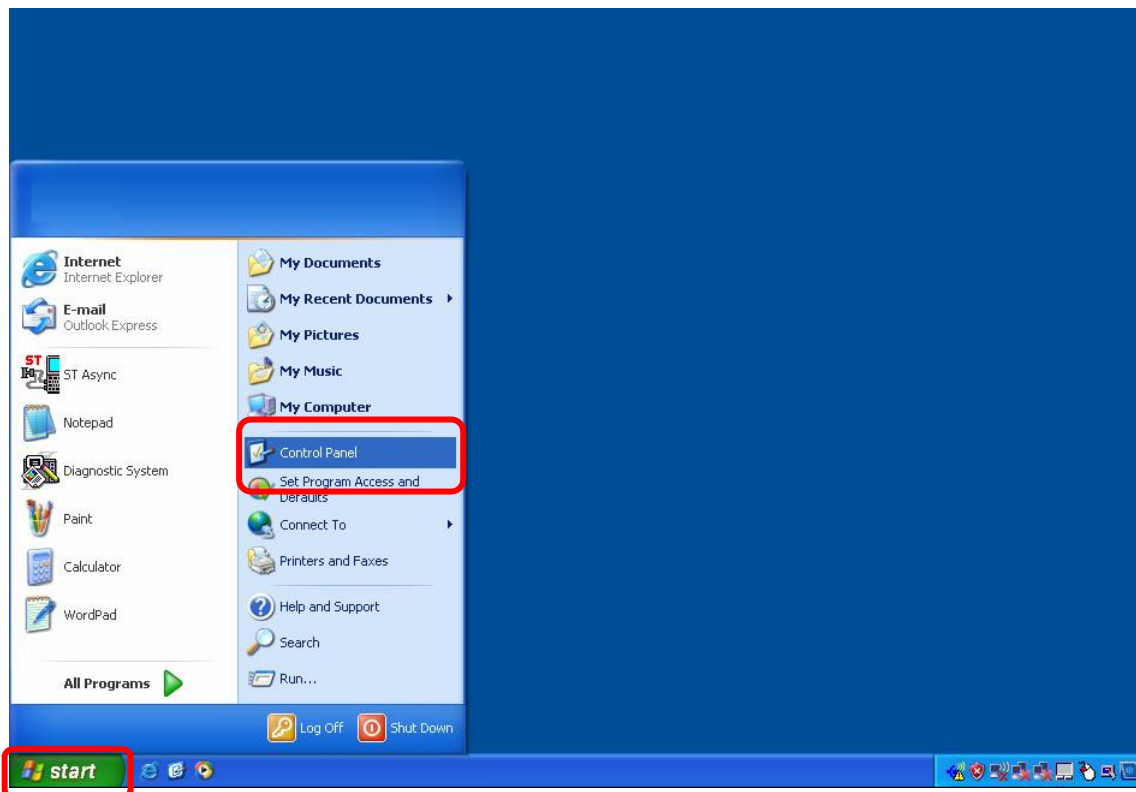
2. Select the Local Disk (C) icon and click on "Properties".

This displays the Properties window where the free space can be checked.

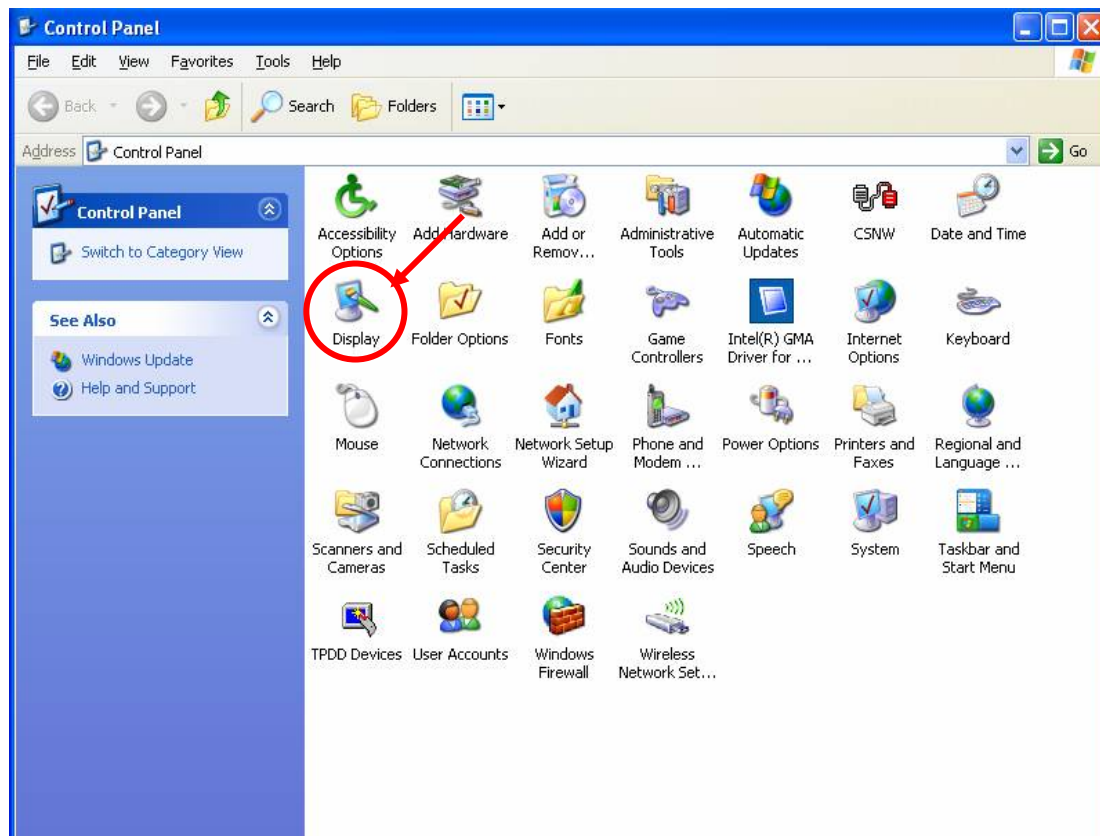


5 - 1 - 3 . How to check display resolution

1. Select "Start"→"Control Panel".

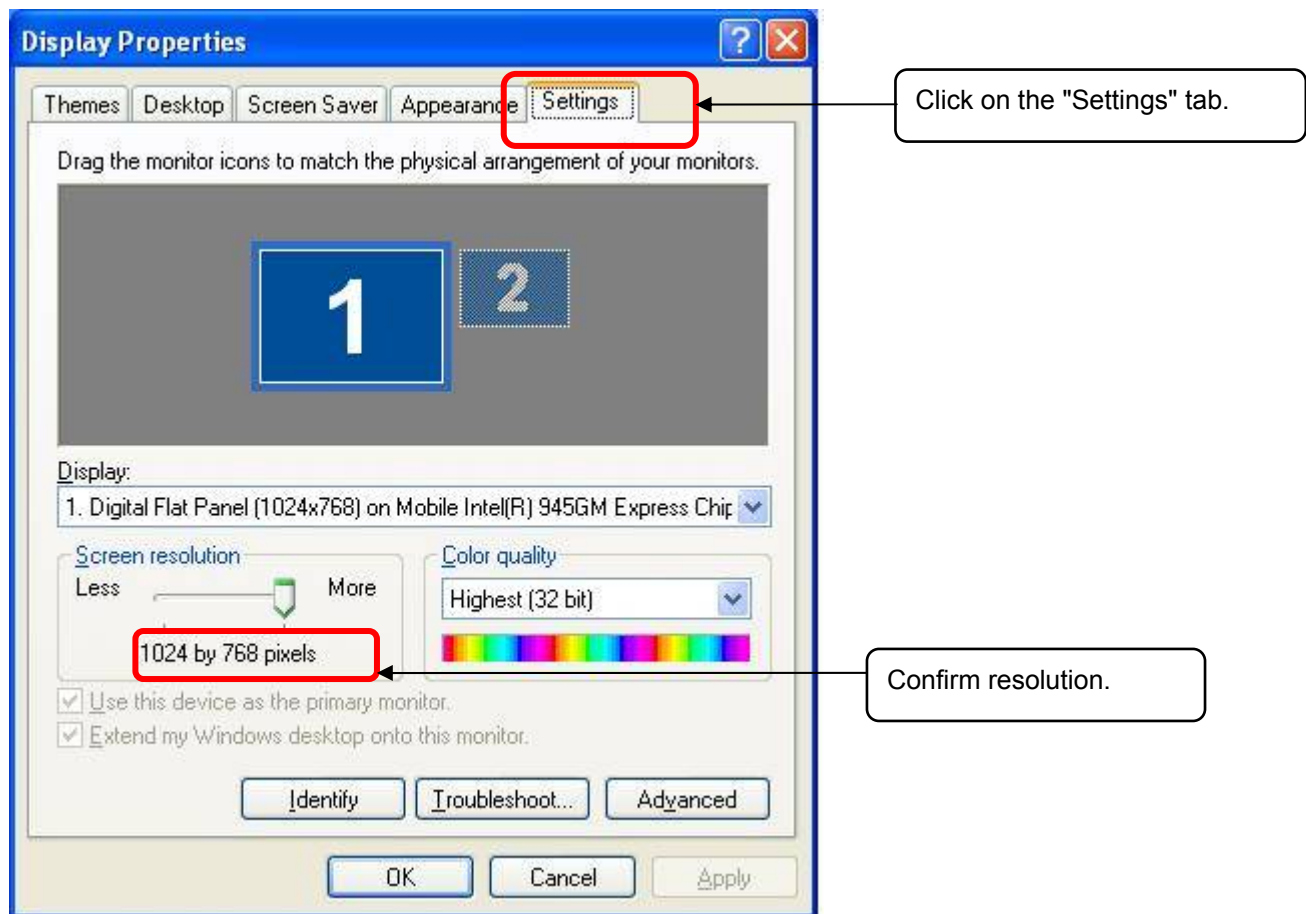


2. Select the "Display" icon on the Control Panel.



3. Click to the "Display Properties" window and then click on the "Settings" tab.

The resolution can be confirmed here.



- ☒ Confirming PC environment
- ☐ Stopping screensaver
- ☐ System standby, hibernate
- ☐ Installing base software/installing USB drive
- ☐ Installing model software
- ☐ Communications unit

This completes the explanation on how to check the operating environment. Proceed to the remaining steps.

5 - 2. Setting up PC

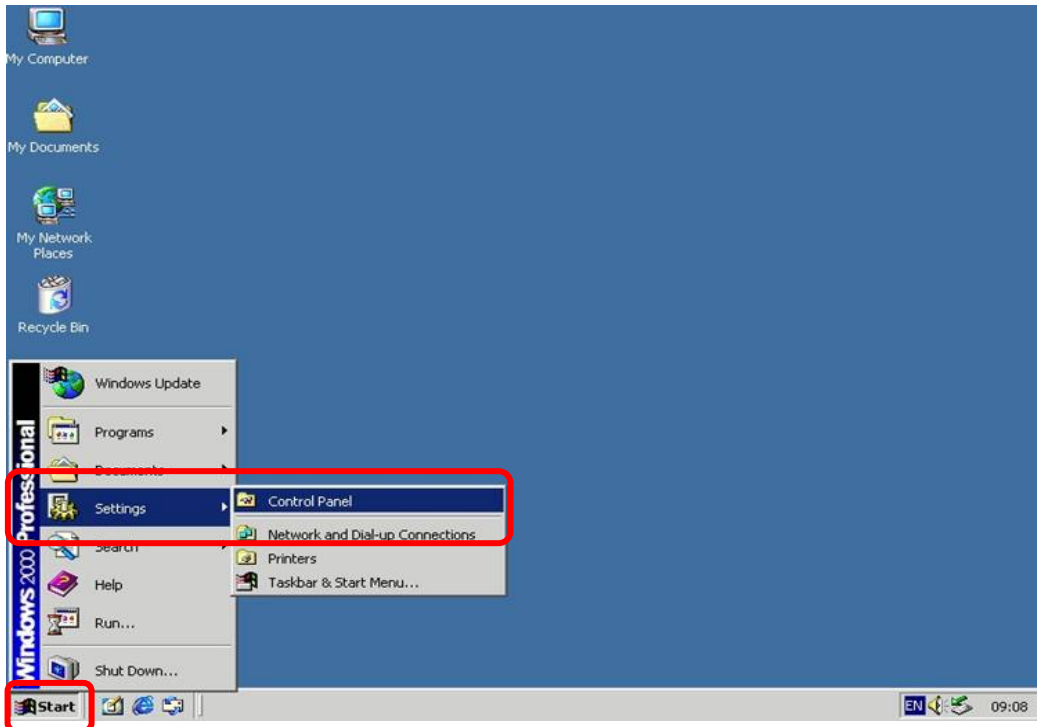
Close all other programs when installing.

If the PC's screen saver is activated or other applications are operating during the software installation, the installation may fail and defects may appear when Dr. H is run.

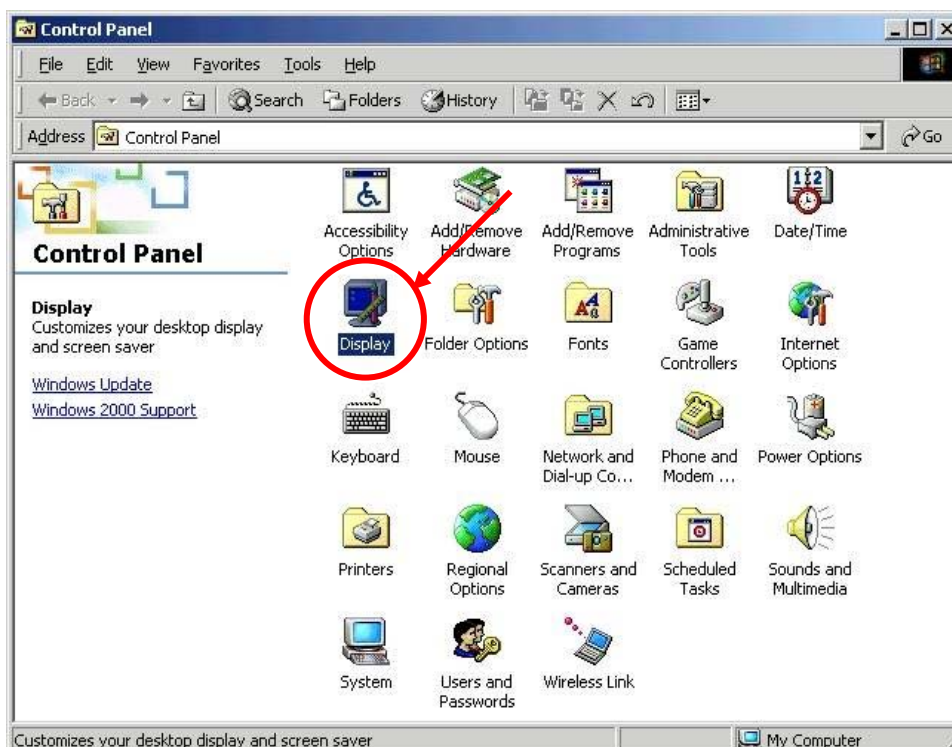
5 - 2 - 1. Stopping the screen saver

1) In the case of Windows 2000

1. Select "Start"→"Settings"→"Control Panel"



2. Select the "Display" icon on the Control Panel.

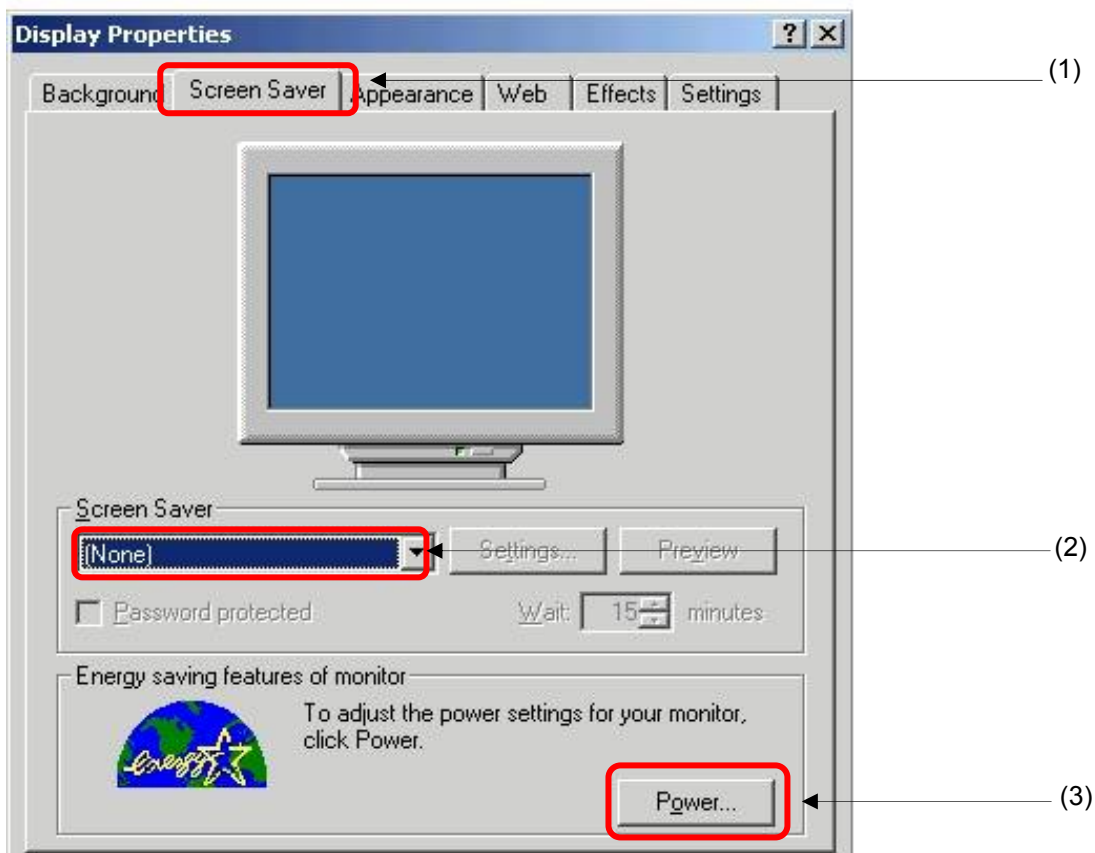


3. "Display Properties" is displayed.

(1) Click on the "Screen Saver" tab.

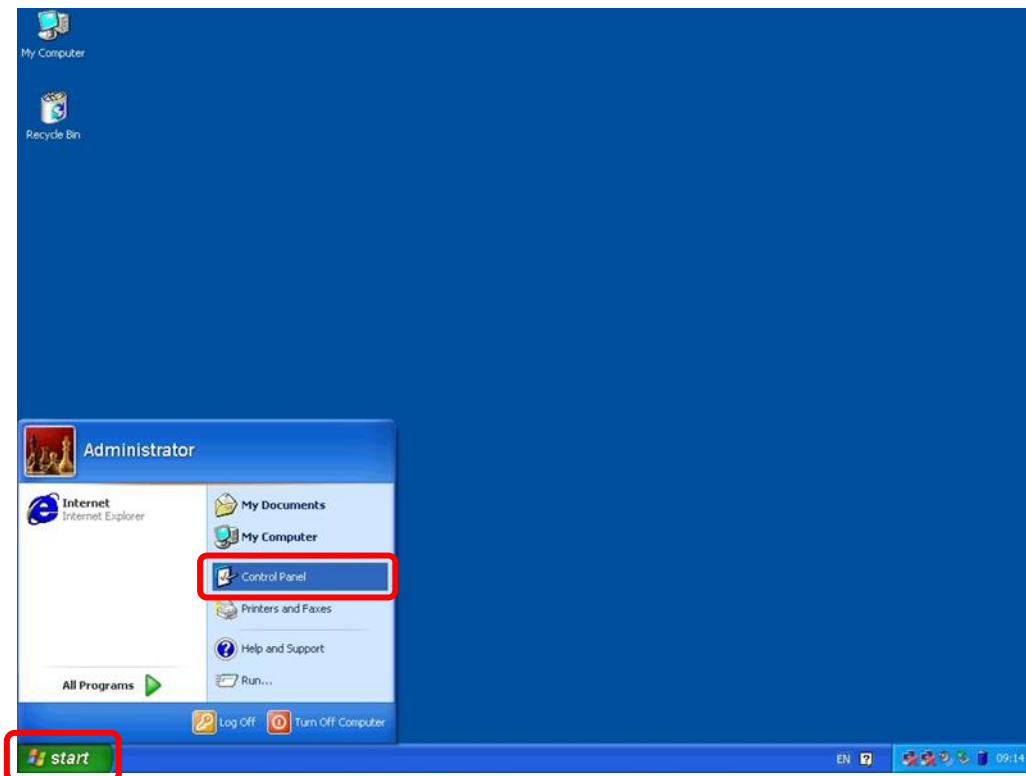
(2) Click "▼", and select "none" from the list.

(3) Click "OK".

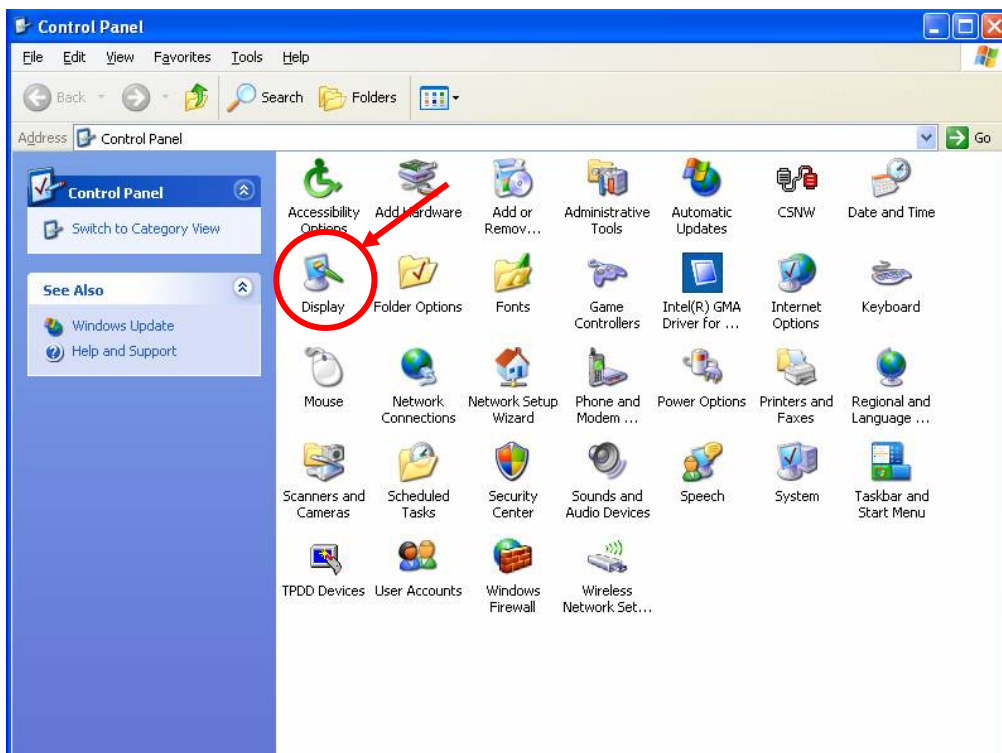


2) In the case of Windows XP

1. Select "Start"→"Control Panel".



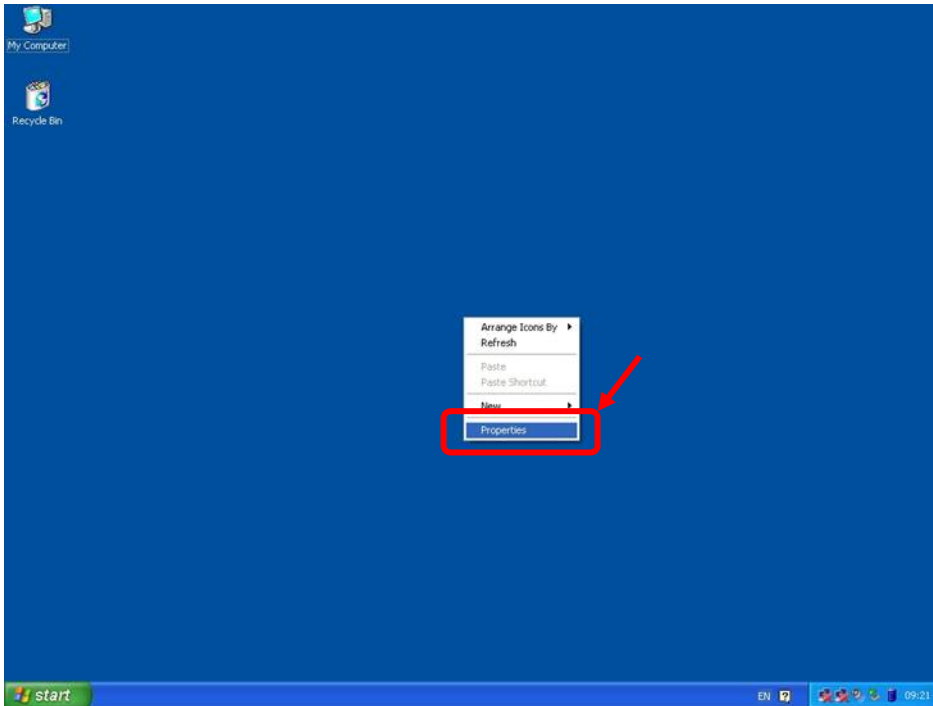
2. Select the "Display" icon.



3. Refer to the previous section 1) Windows 2000 "Display Properties" and stop the screen saver.
(Note: There may be slight variations in the screen but the tabs and list to be selected are the same.)
*Reference: "Display Properties" display (for Windows 2000 and Windows XP)

Right-click on the desktop and select "Properties".

"Display Properties" is referred to in the previous section 1) Windows 2000 "Screen Properties" — please refer to this example for details on how to stop the screen saver.



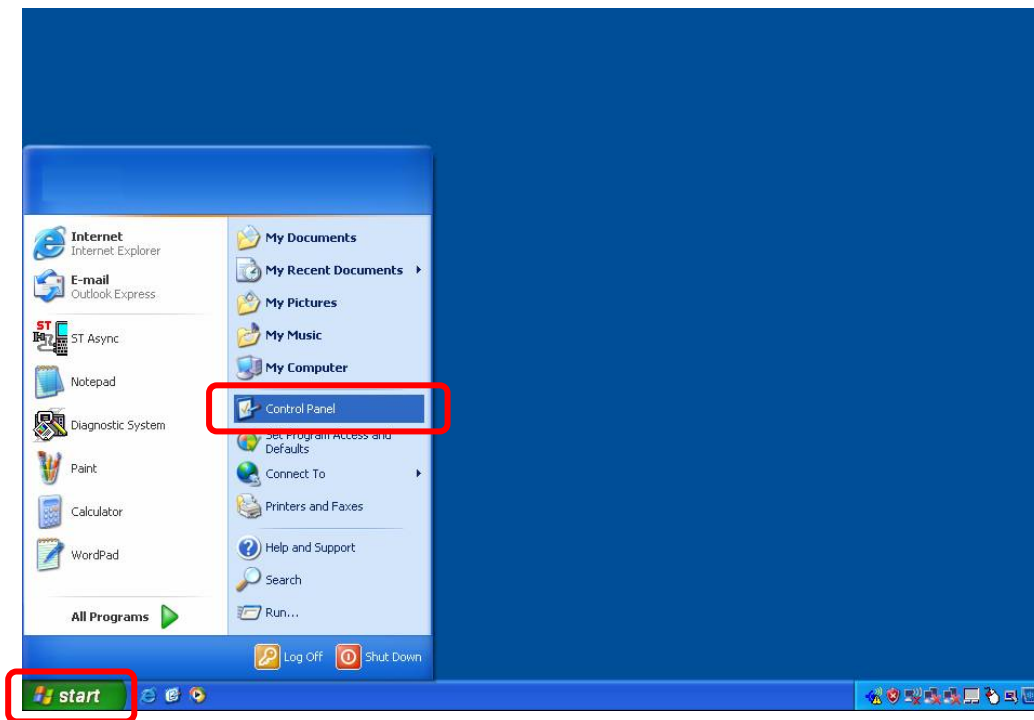
- | | |
|-------------------------------------|---|
| ☒ | Confirming PC |
| ☒ | Stopping screensaver |
| ☐ | System standby, hibernate |
| ☐ | Installing base software/installing USB drive |
| ☐ | Installing model software |
| ☐ | Communications unit |

This completes the explanation for stopping the screen saver. Proceed to the remaining steps.

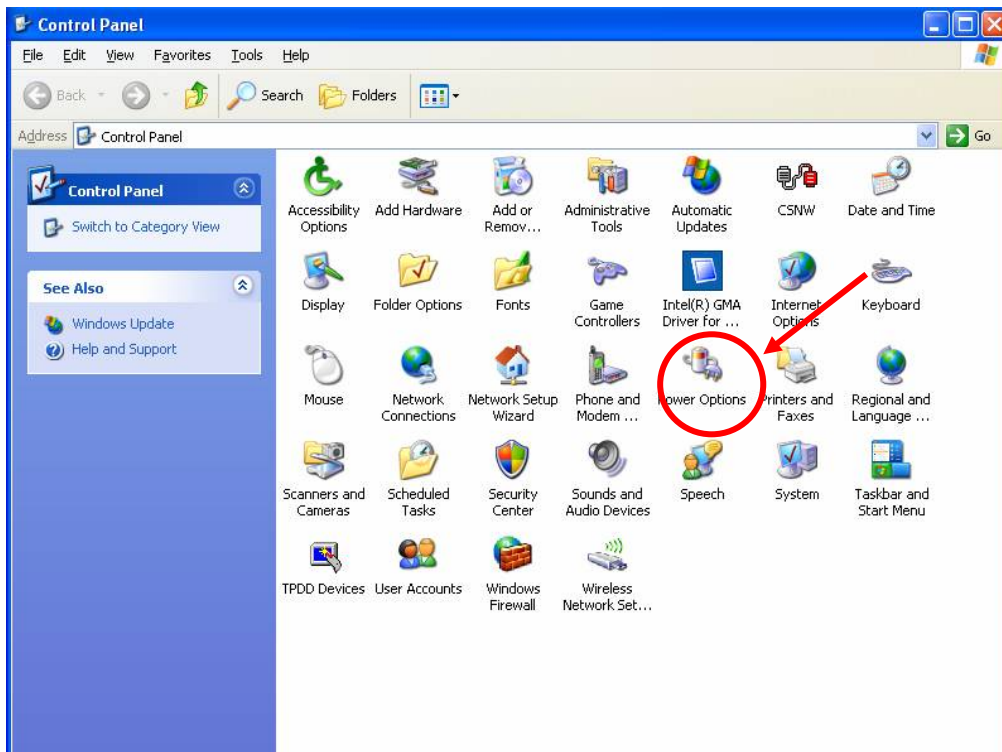
5 - 2 - 2. Settings for system standby, system hibernate

Set the PC so that the PC does not go into standby or hibernate mode when the Dr. H application software is starting up.

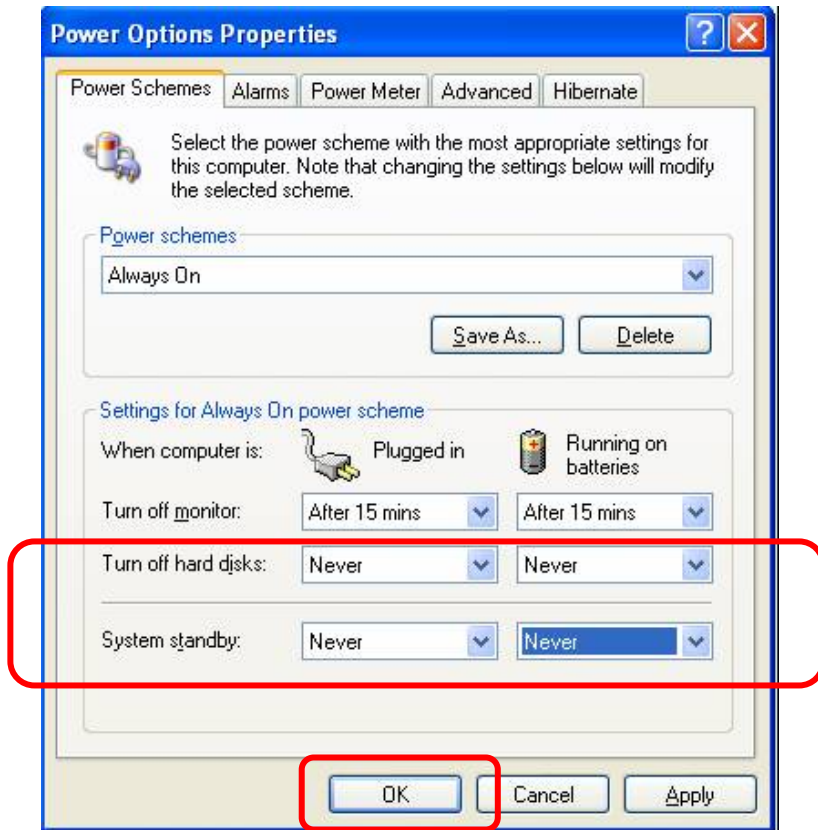
1. Select "Start"→"Control Panel".



2. Double click on "Power Options Properties"



3. Set "System standby" and "System hibernates" to "Never" in the "Power Schemes" tab and click "OK".

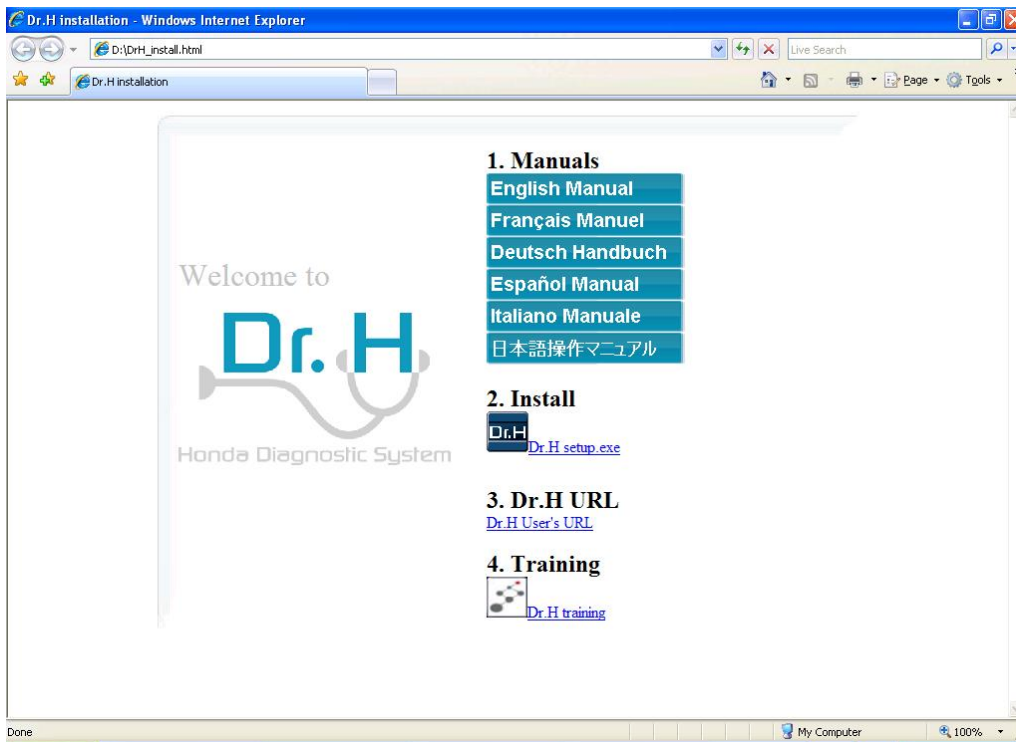


☒	Confirming PC
☒	Stopping screensaver
☒	System standby, hibernate
☐	Installing base software/installing USB drive
☐	Installing model software
☐	Communications unit

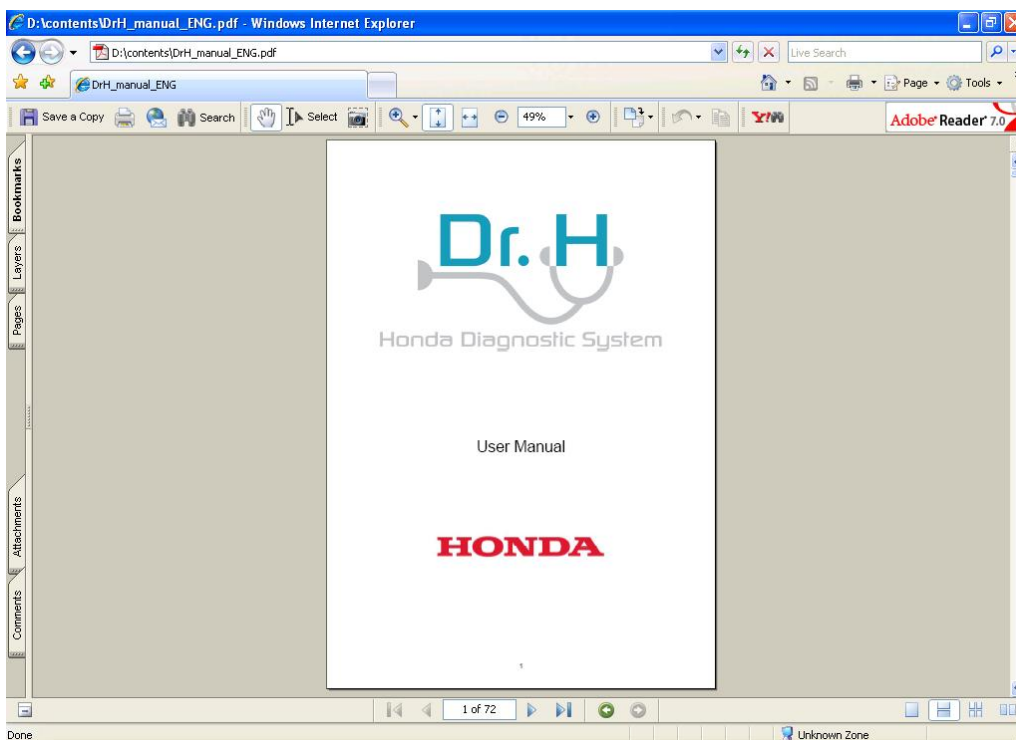
This completes the explanation for the settings for system standby and hibernate. Proceed to the remaining steps.

6. Installing Base Software

1. When you insert the base software CD into your computer, the software will start automatically and the screen shown below will appear.

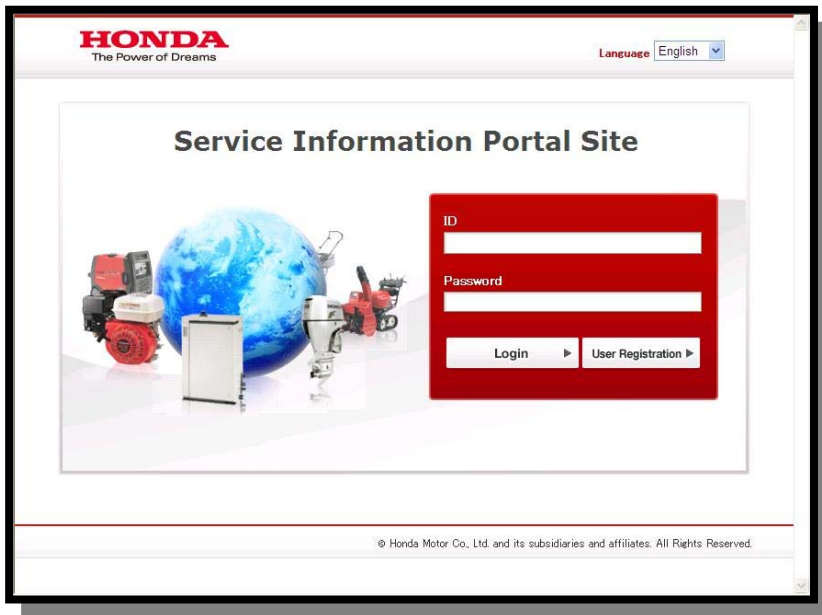


Use No.1, "Manuals", to view the manual for Dr. H. Please read the manual carefully before using the software. When you click "Manuals", the manual is displayed, as shown below.



Use No.2, "Install", to install the base software onto your computer.

No.3, "Dr. H URL", shows the URL of the website where the model software can be downloaded.



Use No.4, "Training", to view animations demonstrating the controls for Dr. H.



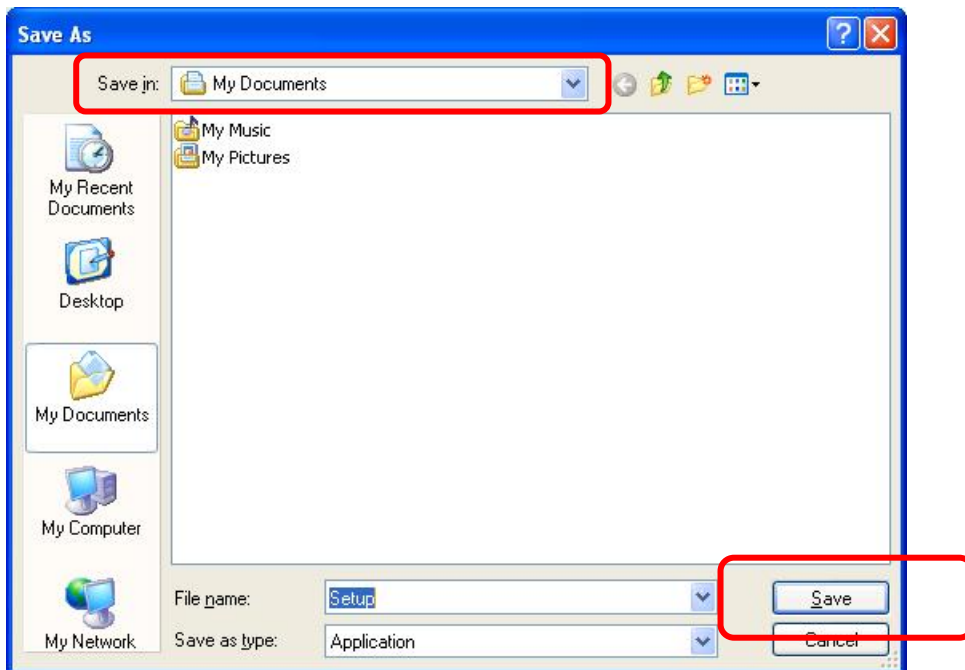
2. Procedure for Installing Base Software

Click  Dr.H setup.exe

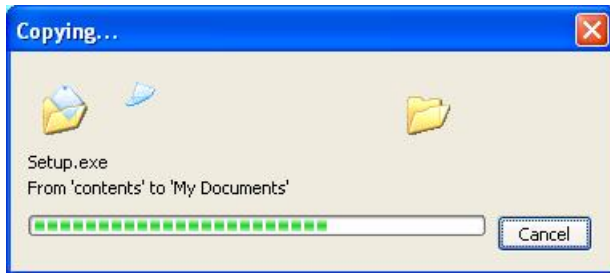
2-1. When the message shown below is displayed, click "Save (S)".



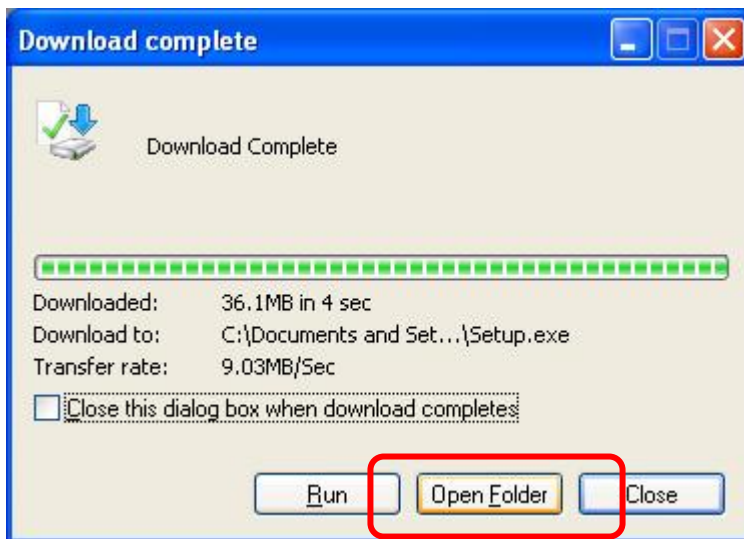
2-2. When the screen shown below is displayed, specify where you want to save to, and then click "Save (S)".



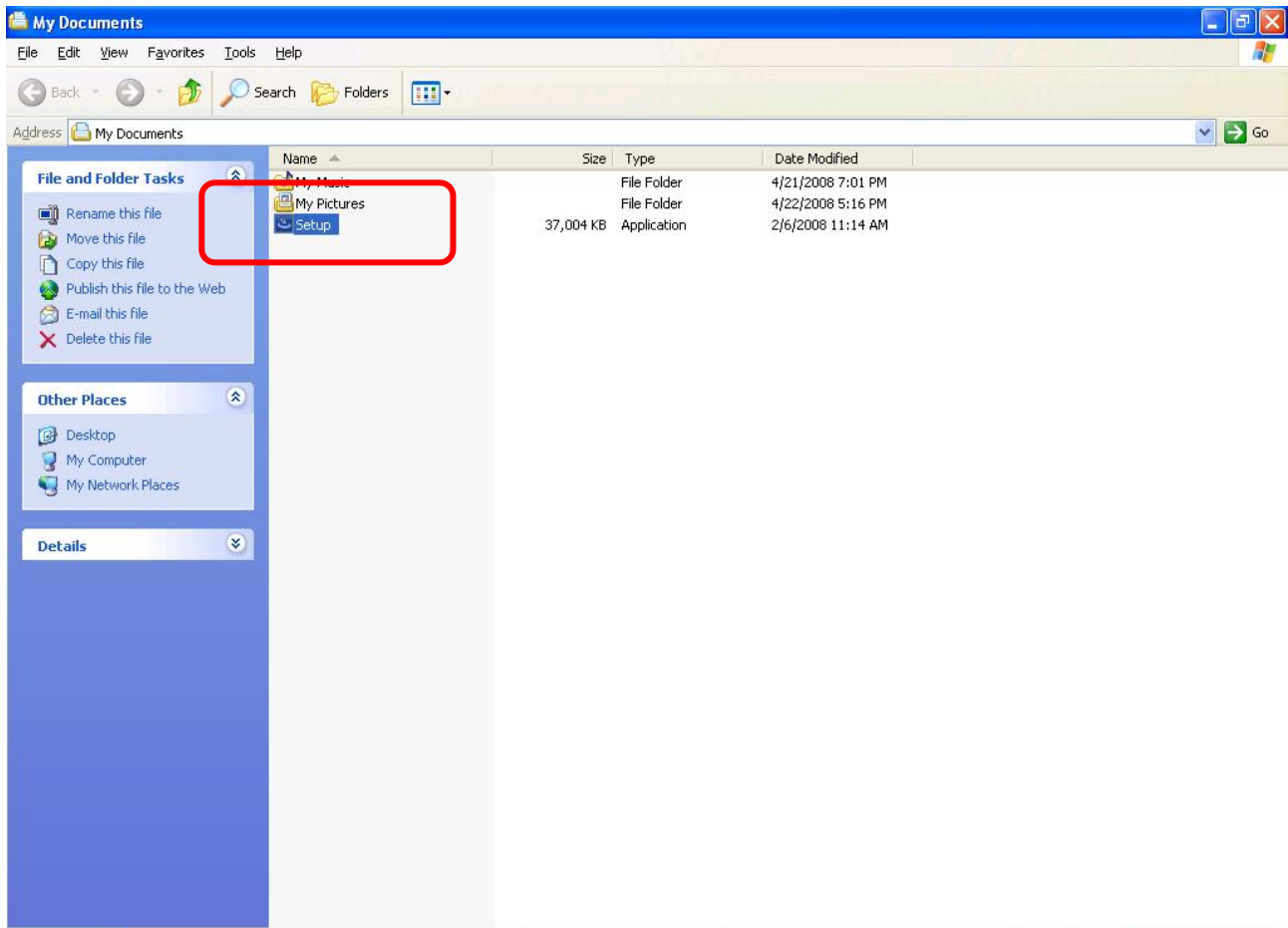
2-3. When the following message is displayed, wait for a few moments.



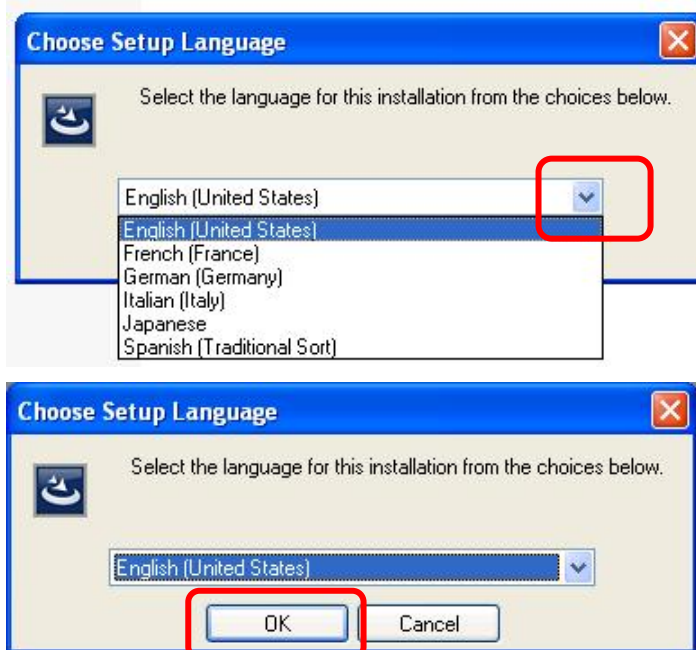
2-4. When the save has been completed and the following message is displayed, click "Open Folder (F)".



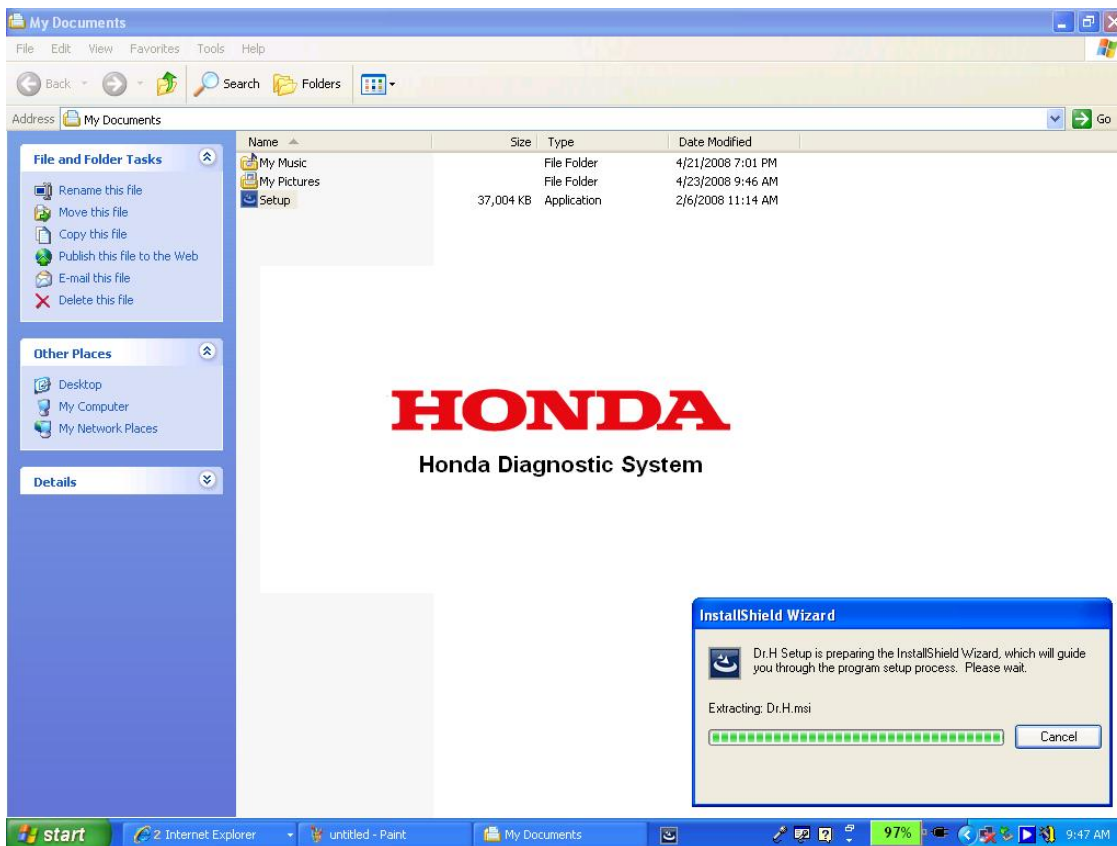
2-5. The "Setup.exe" icon will appear in the location to which you have saved. Double-click "Setup.exe".



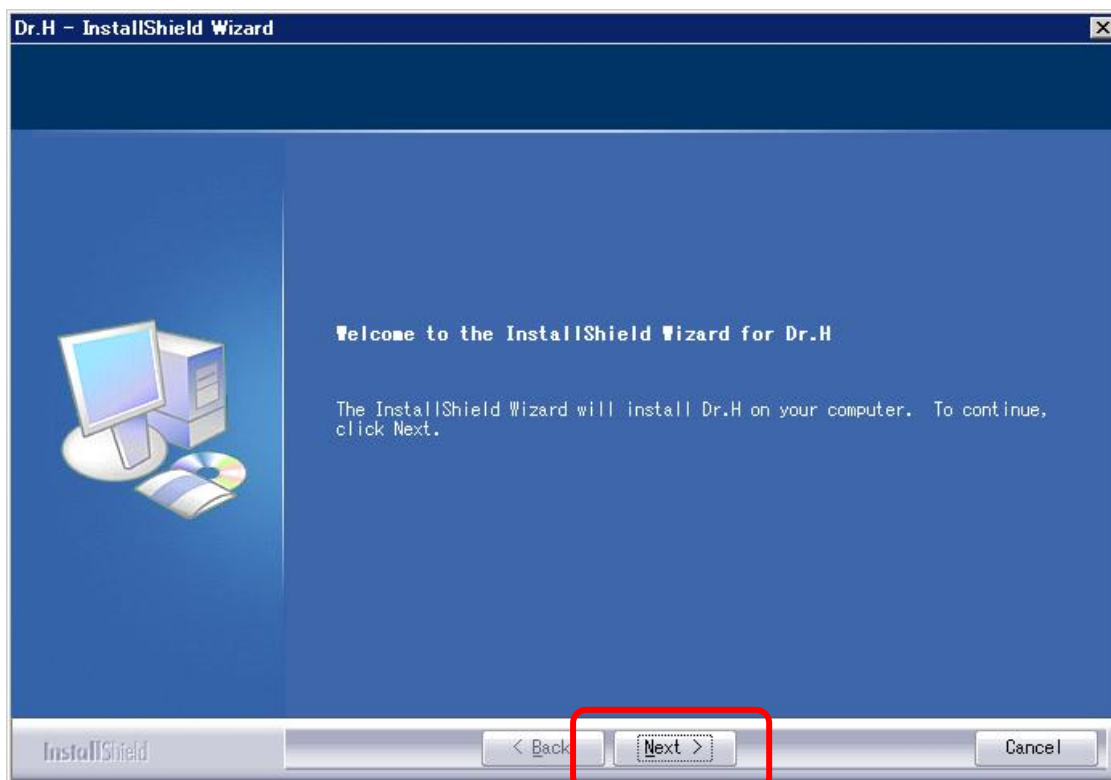
2-6. When the following message appears, select your preferred language from the pull-down menu, then click "OK".



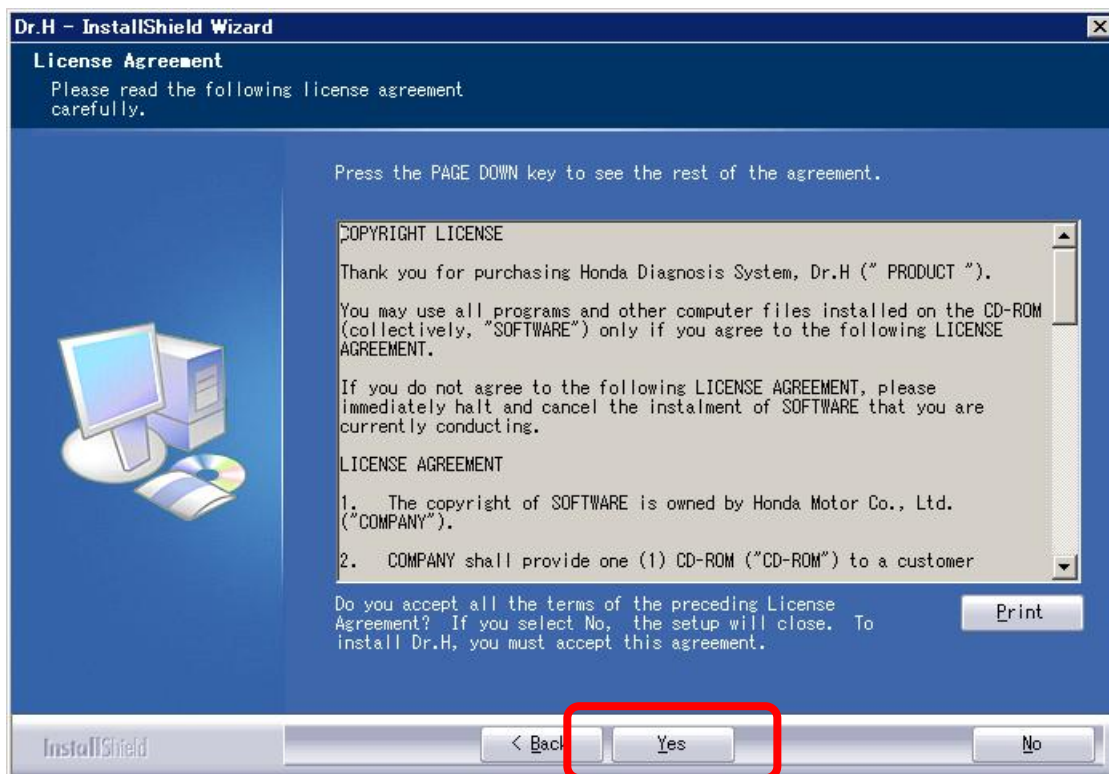
2-7. A message is displayed telling you that the system is preparing to begin installation. Wait for a few moments.



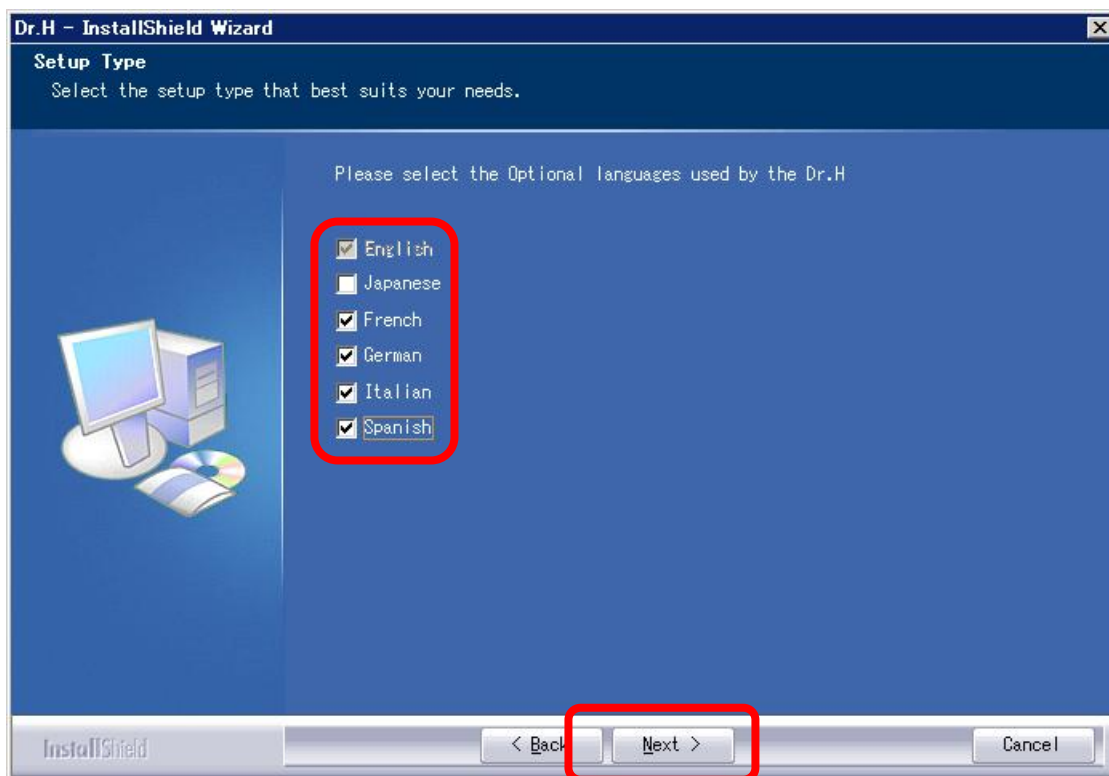
2-8. Click "Next (N)" on the screen telling you that installation is about to start.



2-9. The user License Agreement window is displayed. Read the contents carefully. Click "Yes".



2-10. Click the checkbox for the language option you will be using, then click "Next (N)".
(Language options: It is possible to choose languages other than the main language.)



2-11. Input the store name and store code, then click "Next (N)".

The store information you have put in will be printed on the diagnostic results.

Dr.H - InstallShield Wizard

Edit Data
Enter requested data.

Please enter your Dealer information

Dealer: Honda

Dealer No: 123

< Back Next > Cancel

2-12. Wait for a few moments until installation is complete.

Dr.H - InstallShield Wizard

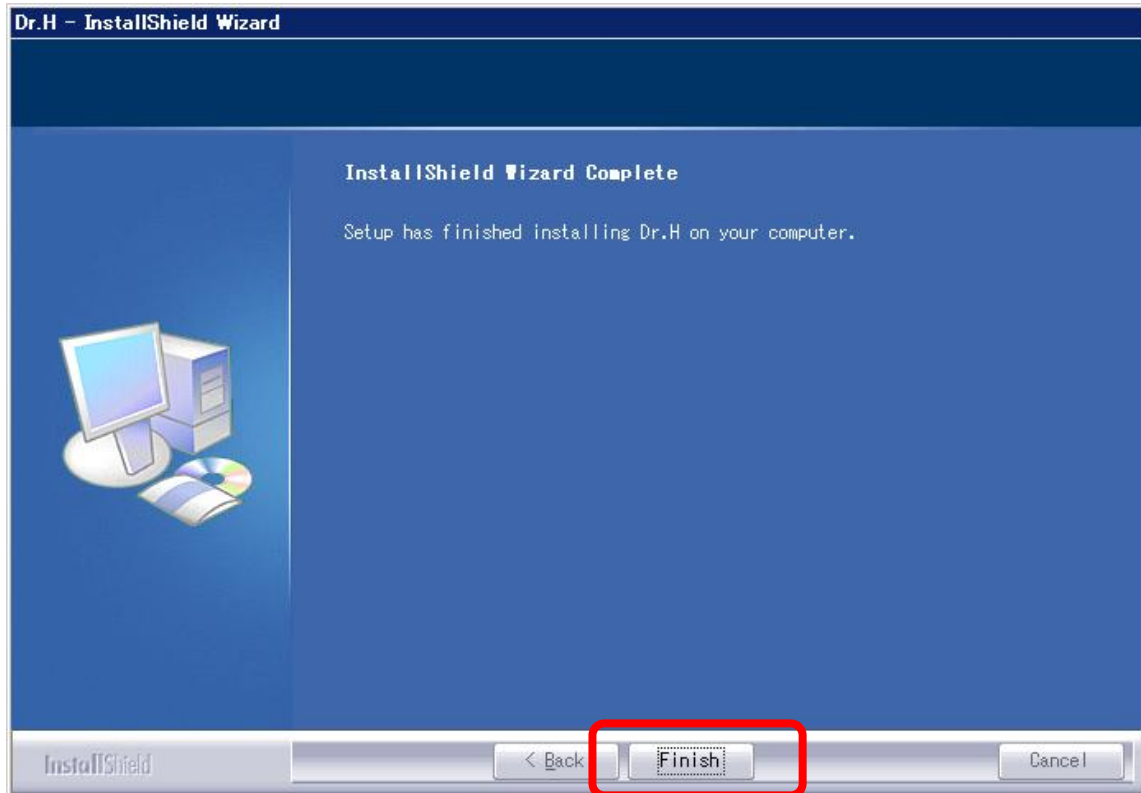
Setup Status

Dr.H is configuring your new software installation.

C:\Program Files\Dr.H\Dr H.exe

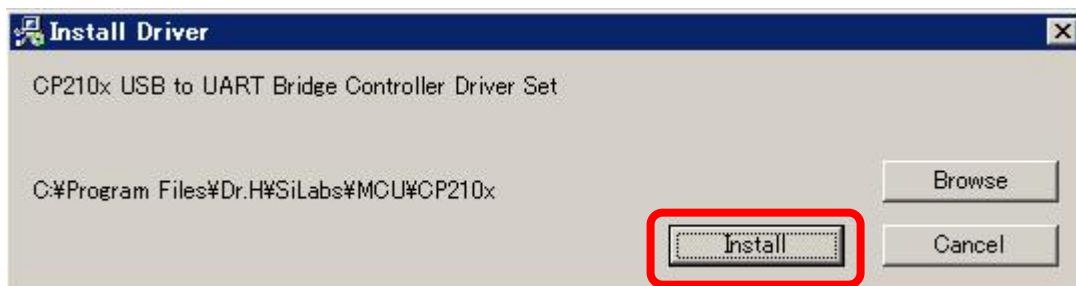
Cancel

2-13. When installation is complete, click "Finish".



7. Installing the USB drive

1. When the base software has been installed, it continues on to commence installation of the USB drive. When this message is displayed click "Install".



2. When installation is complete, the following message is displayed. Click "OK".



- ☒ Confirming PC
- ☒ Stopping screensaver
- ☒ System standby, hibernate
- ☒ Installing base software/installing USB drive
- ☐ Installing model software
- ☐ Communications unit

This completes the explanation for installing base software/installing USB drive.

8. Installing Model Software

The model software needs to be installed on your computer after you have downloaded it from the online Dr. H user registration system. Before you can download the software, you need to register as a user.

The procedure for this is shown below.

1. Insert the base software CD into the disk drive.

(1) Click Dr.H User's URL.



2. Perform User Pre-Registration Application

Login Screen

The screenshot shows the Honda Service Information Portal Site. At the top left is the Honda logo with the tagline "The Power of Dreams". At the top right is a language selection dropdown menu set to "English". The main content area features a large image of a globe with various Honda engines and tools around it. To the right of this image is a red login box with fields for "ID" and "Password", and buttons for "Login" and "User Registration". The "User Registration" button is highlighted with a red box. At the bottom, there is a copyright notice: "© Honda Motor Co., Ltd. and its subsidiaries and affiliates. All Rights Reserved."

(2) Select a language from the list.

(3) Click on the "User Registration Application" button.

The screenshot shows the Honda User Registration form. At the top left is the Honda logo with the tagline "The Power of Dreams". At the top right are links for "Top Page" and "Help". The main heading is "User Registration". Below this, there is a note: "Please click [Next] after filling in all required information. Marked with "*" are required information." The form contains several fields: a checkbox for "Dr.H Software Download Site" (checked), a "Country" dropdown menu, "Name of user" text input, "Your language" dropdown menu (set to "English"), "Login ID (email address)" text input, and "Input your login ID again" text input. The "Next" button is highlighted with a red box. At the bottom, there is a copyright notice: "© Honda Motor Co., Ltd. and its subsidiaries and affiliates. All Rights Reserved."

(4) Select a site.

(5) Select a country from the list.

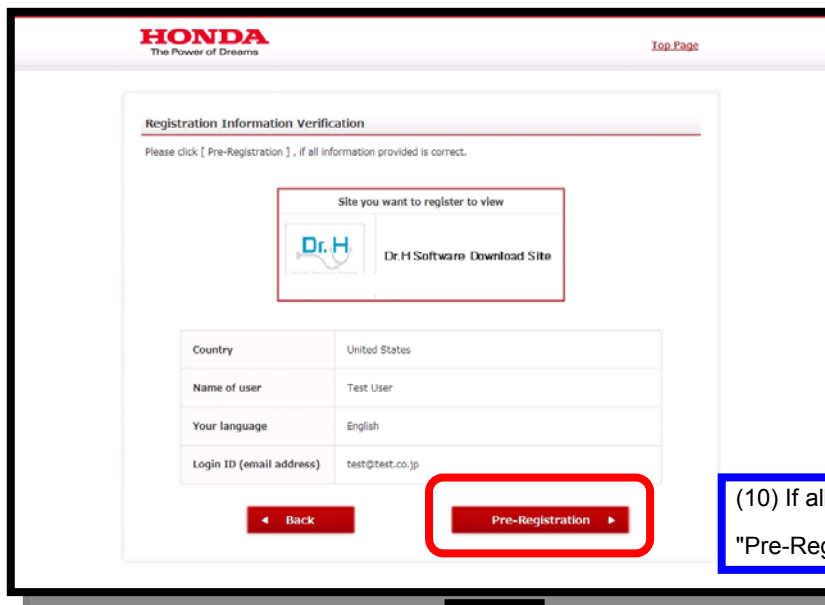
(6) Input the user's name.

(7) Select a your language from the list.

(8) Input the user's email address.

(9) Click on the "Next" button.

Registration Information Verification Screen



HONDA
The Power of Dreams

Top Page

Registration Information Verification

Please click [Pre-Registration], if all information provided is correct.

Site you want to register to view

Dr.H Software Download Site

Country	United States
Name of user	Test User
Your language	English
Login ID (email address)	test@test.co.jp

Back Pre-Registration

(10) If all the data is correct, click on the "Pre-Registration" button.



Confirmation e-mail will be sent from website.

Click the URL on its e-mail and be sure to do official Registration.

*Pre-Registration is needed to confirm whether e-mail address(ID) is correct.

Honda S.I.P.S Pre-Registration Confirmation

We have accepted your pre-registration request from Honda S.I.P.S.(Honda Service Information Portal Site)
If you feel that you have received this mail in error, please disregard this e-mail.

Please continue the registration process from URL provided below.

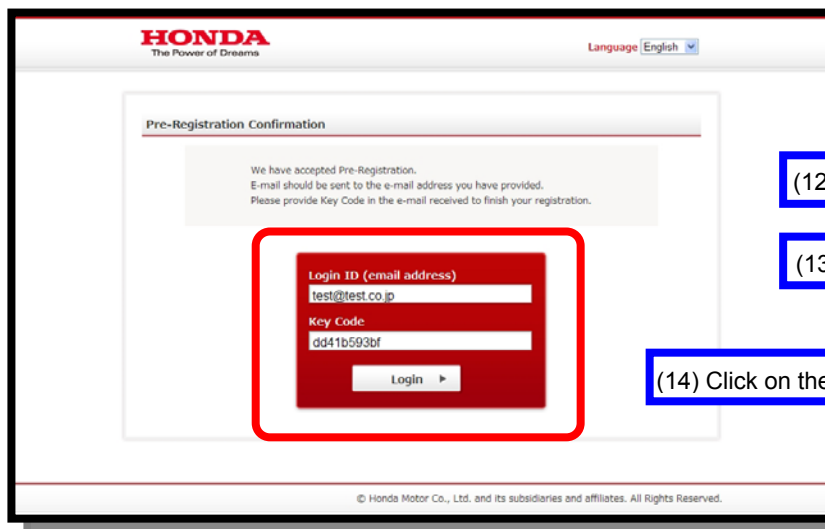
URL: <http://cssportal.css-club.net/honda/Portal>

If you are continuing registration without clicking on the URL, please provide Key Code when prompted.

Key Code: dd41b593bf

(11) Click on the "URL".

Pre-Registration Confirmation Screen



HONDA
The Power of Dreams

Language English

Pre-Registration Confirmation

We have accepted Pre-Registration.
E-mail should be sent to the e-mail address you have provided.
Please provide Key Code in the e-mail received to finish your registration.

Login ID (email address)
test@test.co.jp

Key Code
dd41b593bf

Log In

(12) Input the user's email address. (Automatic input)

(13) Input the Key Code. (Automatic input)

(14) Click on the "Log In" button.

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3. Perform User Registration Application

Registration Information Screen

HONDA
The Power of Dreams

Top Page

Registration Information Input Item

Please click [Next] after filling in all required information.
Marked with "*" are required information.

Site you want to register to view

Dr. H Software Download Site

Please provide us your information.

Country*

Name of user*

Your language*

Login ID (email address)*

Telephone number*

Please provide us your Location.

Affiliation type*

Name of department*

Please provide us your Dealer information.

Name of affiliated dealer*

Dealer code*

Please provide us your Gas Company Name.

Gas Company

Name of Division

Please provide us your password. (between 4 and 10 single-byte characters)

Password*

Input your password again.*

Input the product serial number(displayed on the interface back side).
A line cannot be added if a product serial number is not input.

[Add a line](#)

No.	Product serial number*	Confirm*
1	1234567	☒

Please choose the category to use in Honda ECU Update System.

Category*

☒ Outboard

☐ Gas and Engine Power Unit

[Next](#)

Bottom of Dr. H Interface Unit

Confirm the Serial Number



(15) Input the Telephone number.

(16) Select an affiliation type from the list.

(17) Input the user's department.

(18) Input the name of the user's affiliated dealer.

(19) Input the dealer code.

(20) Gas Company only.

(21) Input the password.

(22) Input a seven-digit serial number.

(23) Input a category to use in H.U.S.

(24) Click on the "Next" button.

Registration Information Input Confirmation Screen

HONDA
The Power of Dreams

Top Page

Registration Information Input Confirmation

Please click [Registration], if all information provided is correct.

Site you want to register to view

Dr.H Software Download Site

Country	United States
Name of user	Test User
Your language	English
Login ID (email address)	test@test.co.jp
Telephone number	0123456789
Affiliation type	AMERICAN HONDA MOTOR CO.,INC.
Name of department	TEST
Name of affiliated dealer	TEST
Dealer code	12345
Gas Company	
Name of Division	
Password	test
Product serial number	1234567
Category	Outboard

Terms of use

Please note:
If you desire to use this website, please confirm your acceptance of the Terms and Conditions. You may proceed by agreeing to all of the Terms and Conditions and by clicking the "Agree" button. In particular, as described in the Terms and Conditions, please note that this website was made public only for the convenience of our customers and dealer technicians: HONDA MOTOR CO., LTD. and its affiliates do not guarantee the accuracy of the contents of this website and shall not be liable to customers or dealer technicians for any possible damage resulting from the use of this website.
HONDA MOTOR CO., LTD.

Terms and Conditions
These terms and conditions of use ("Terms and Conditions") are the rules and regulations for use of this website applicable to you and HONDA MOTOR CO., LTD. ("Honda") and its affiliates.
Please read these Terms and Conditions before using this website. You

☐ Agree

Back

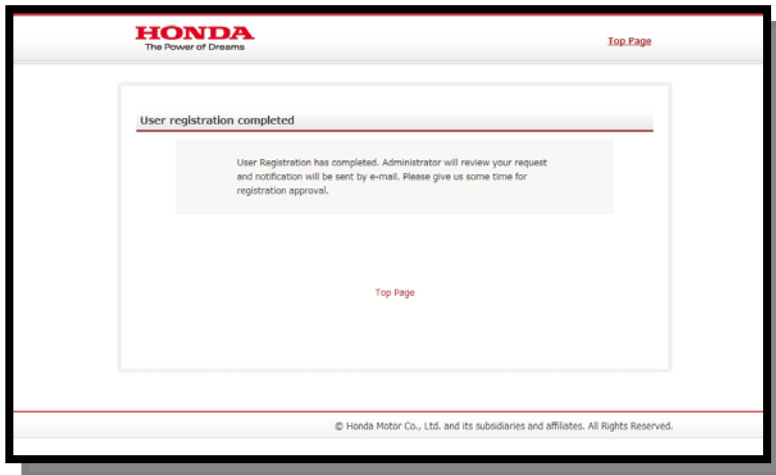
Registration

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LICENSE AGREEMENT

(25) If all the data is correct, click on the "Registration" button.

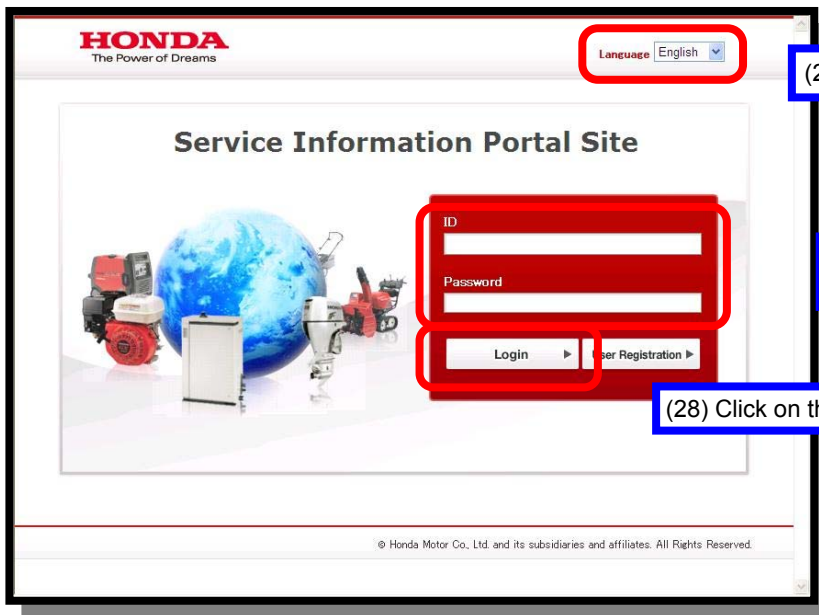
User registration completed Screen



The approver will send the applicant an email.

4. Download the Software

Service Information Portal Site Login Screen



The screenshot shows the login interface of the Service Information Portal Site. At the top left is the Honda logo with the tagline "The Power of Dreams". At the top right, there is a language selection dropdown menu currently set to "English". The main heading is "Service Information Portal Site". Below this, there is a graphic of a globe and various Honda products. To the right of the graphic is a login form with fields for "ID" and "Password", and buttons for "Login" and "User Registration".

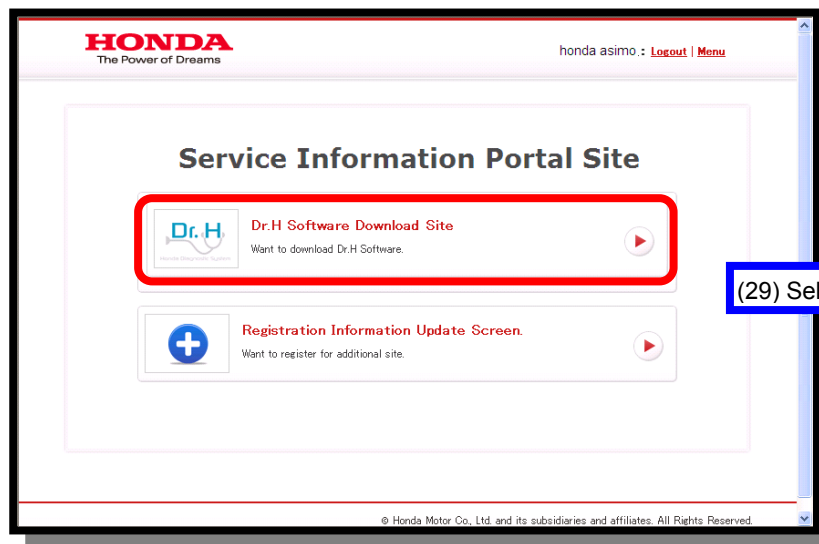
(26) Select a language from the list.

(27) Input the ID and password contained in the approval email.

(28) Click on the "Log In" button.

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Service Information Portal Site Menu Screen

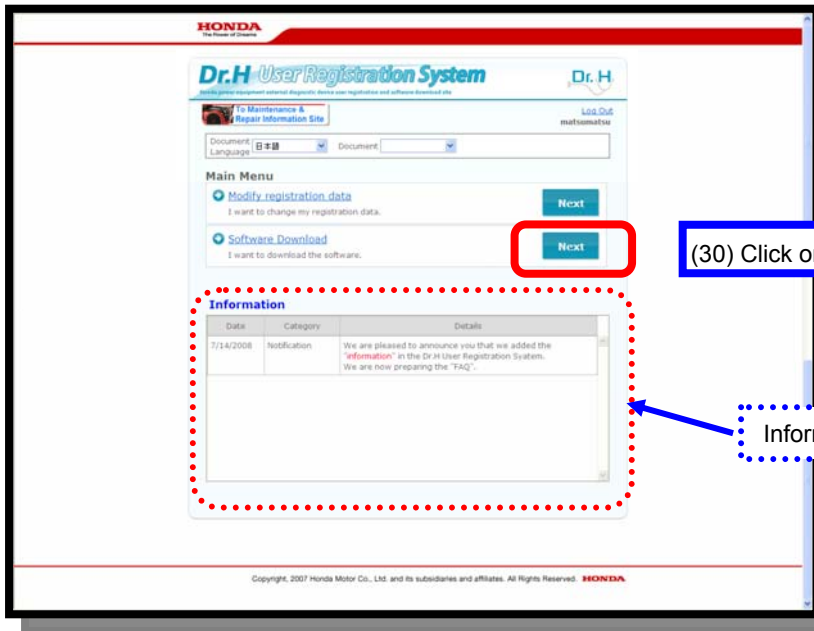


The screenshot shows the menu interface of the Service Information Portal Site. At the top left is the Honda logo with the tagline "The Power of Dreams". At the top right, there is a user profile section labeled "honda asimo" with links for "Logout" and "Menu". The main heading is "Service Information Portal Site". Below this, there are two menu items: "Dr.H Software Download Site" with a play button icon and the text "Want to download Dr.H Software.", and "Registration Information Update Screen" with a plus icon and the text "Want to register for additional site.".

(29) Select a Site

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Menu Screen



Dr.H User Registration System

Dr. H
matsumatsu

Document: 日本語 Document:

Main Menu

- [Modify registration data](#)
I want to change my registration data. **Next**
- [Software Download](#)
I want to download the software. **Next**

Information

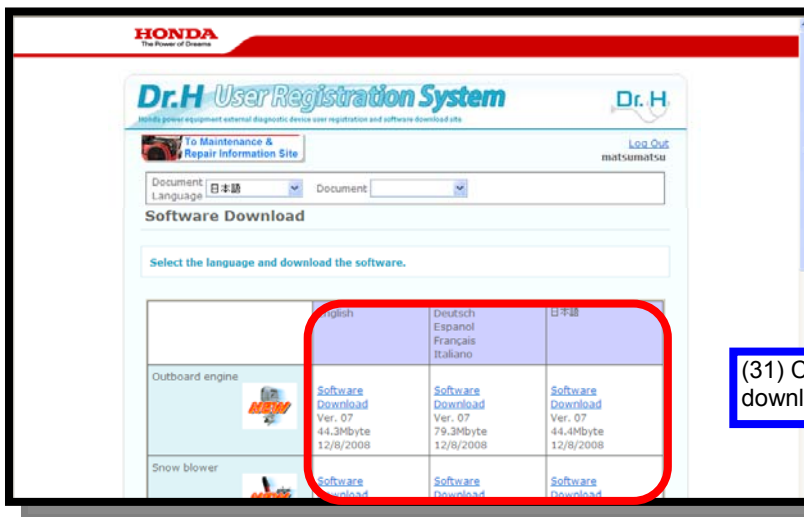
Date	Category	Details
7/14/2008	Notification	We are pleased to announce you that we added the "information" in the Dr.H User Registration System. We are now preparing the "FAQ".

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(30) Click on the "Next" button.

Information

Software Download Screen



Dr.H User Registration System

Dr. H
matsumatsu

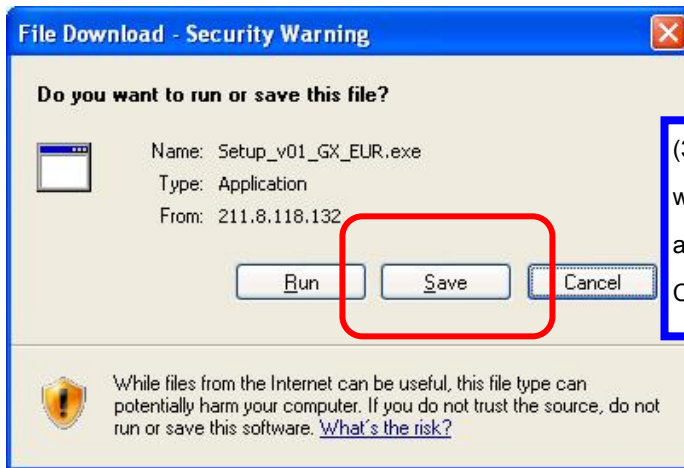
Document: 日本語 Document:

Software Download

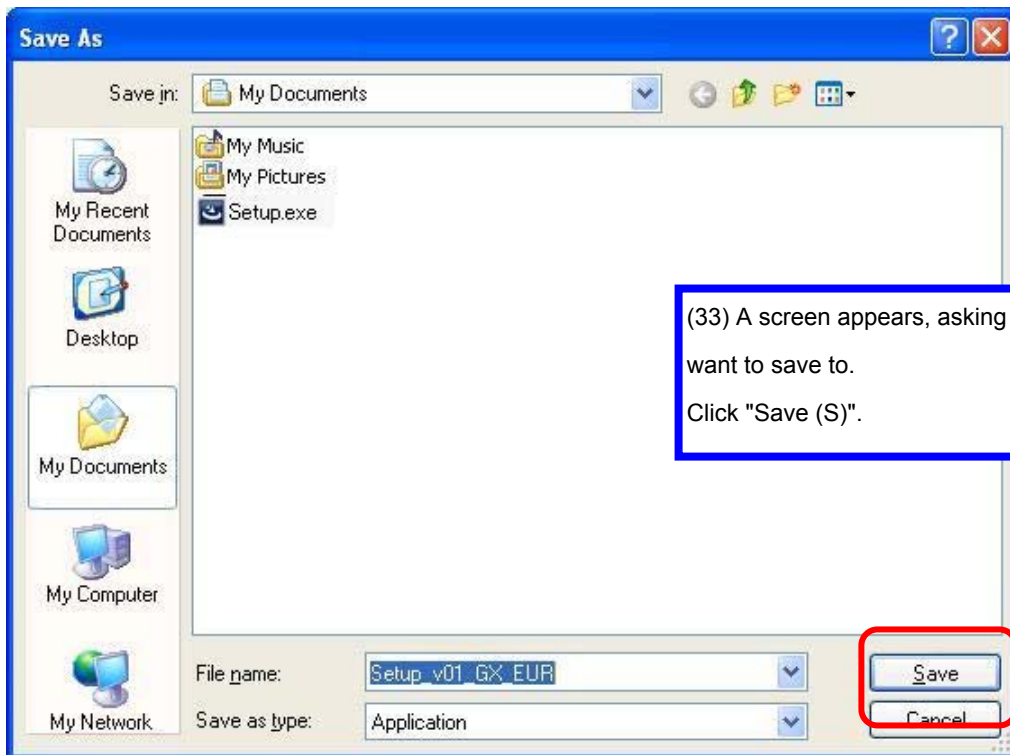
Select the language and download the software.

	English	Deutsch	Espanol	Francais	Italiano	日本語
Outboard engine	Software Download Ver. 07 44.3Mbyte 12/8/2008	Software Download Ver. 07 79.3Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008
Snow blower	Software Download Ver. 07 44.3Mbyte 12/8/2008	Software Download Ver. 07 79.3Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008	Software Download Ver. 07 44.4Mbyte 12/8/2008

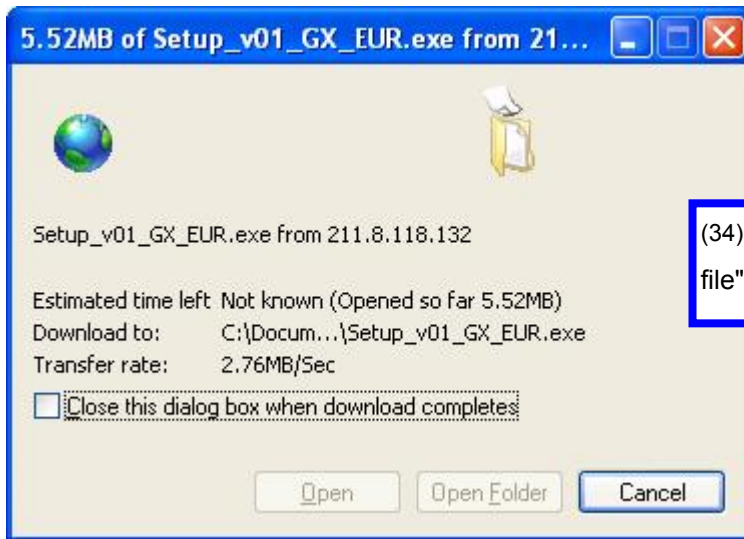
(31) Click on the language of the software you want to download.



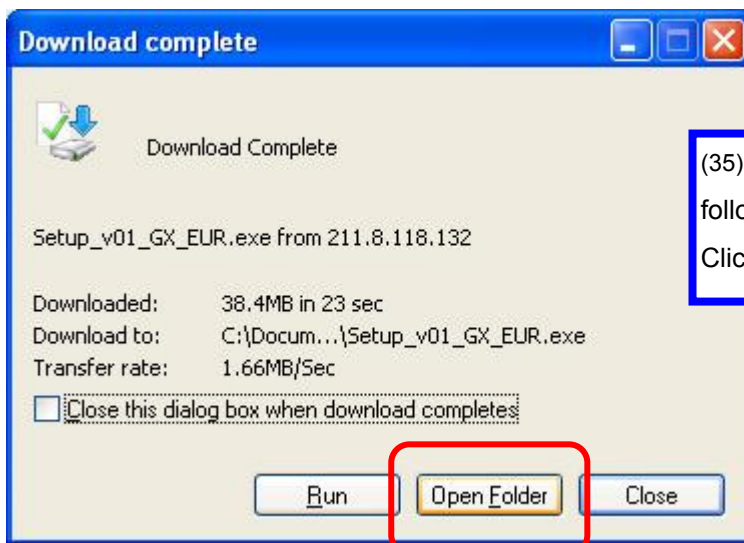
(32) When you click on the model software you want to download, the following message appears:
Click "Save (S)".



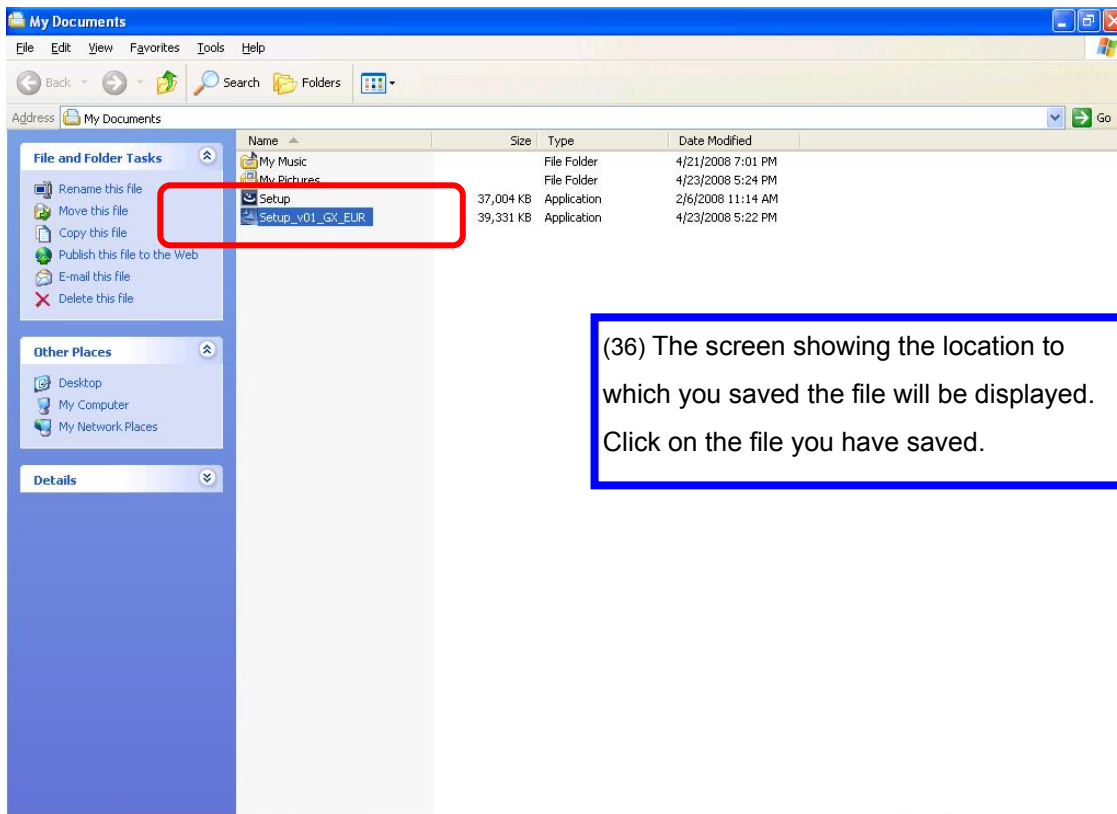
(33) A screen appears, asking you where you want to save to.
Click "Save (S)".



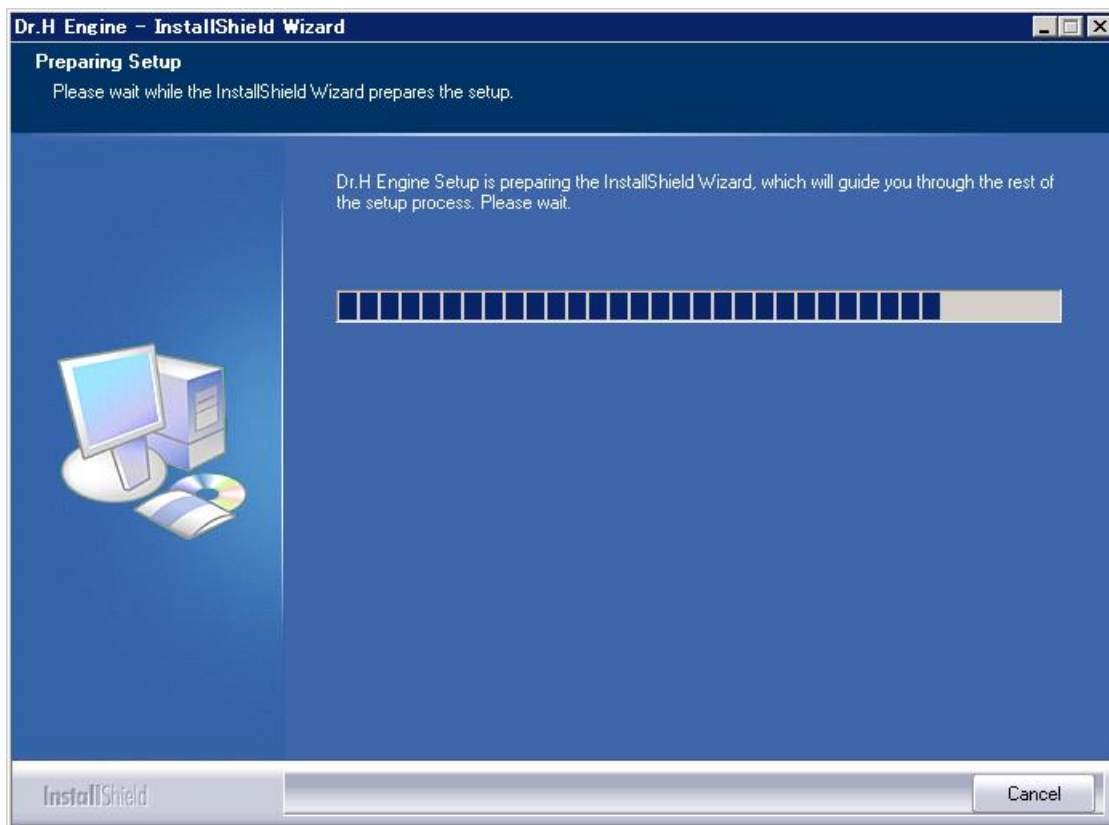
(34) Wait a few moments while the "saving file" message is displayed.



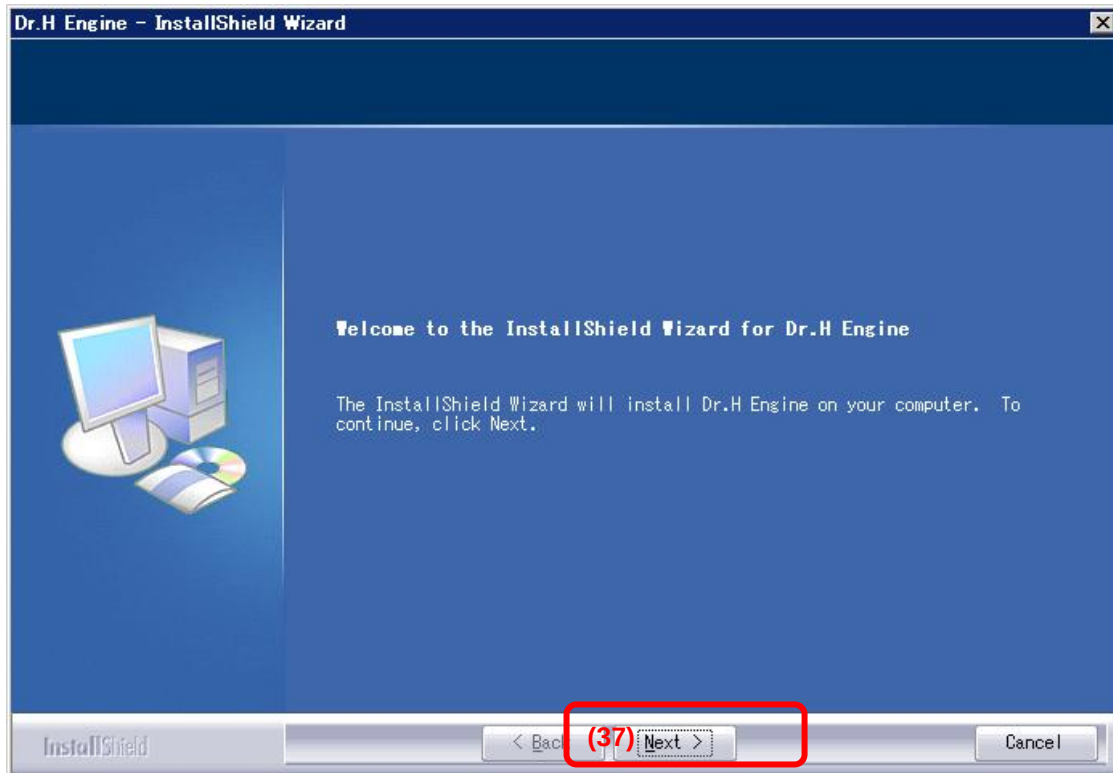
(35) When the download is complete, the following message is displayed:
Click "Open Folder (F)".



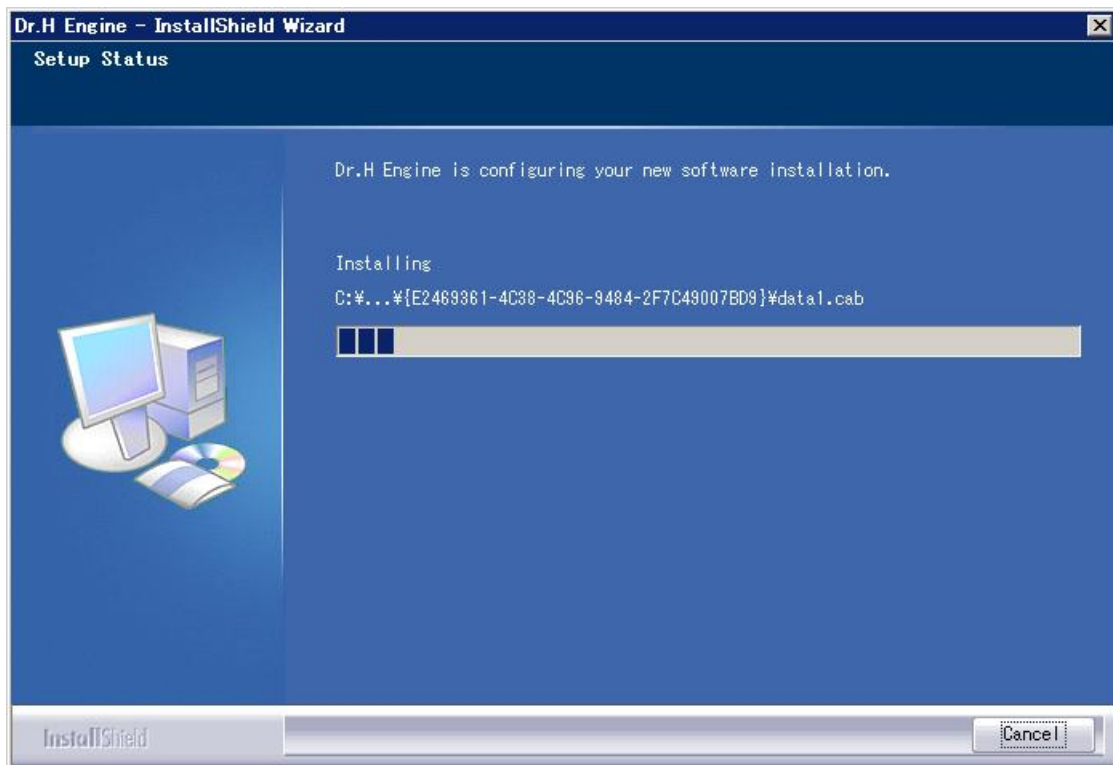
5. When the following message is displayed, wait a few moments.



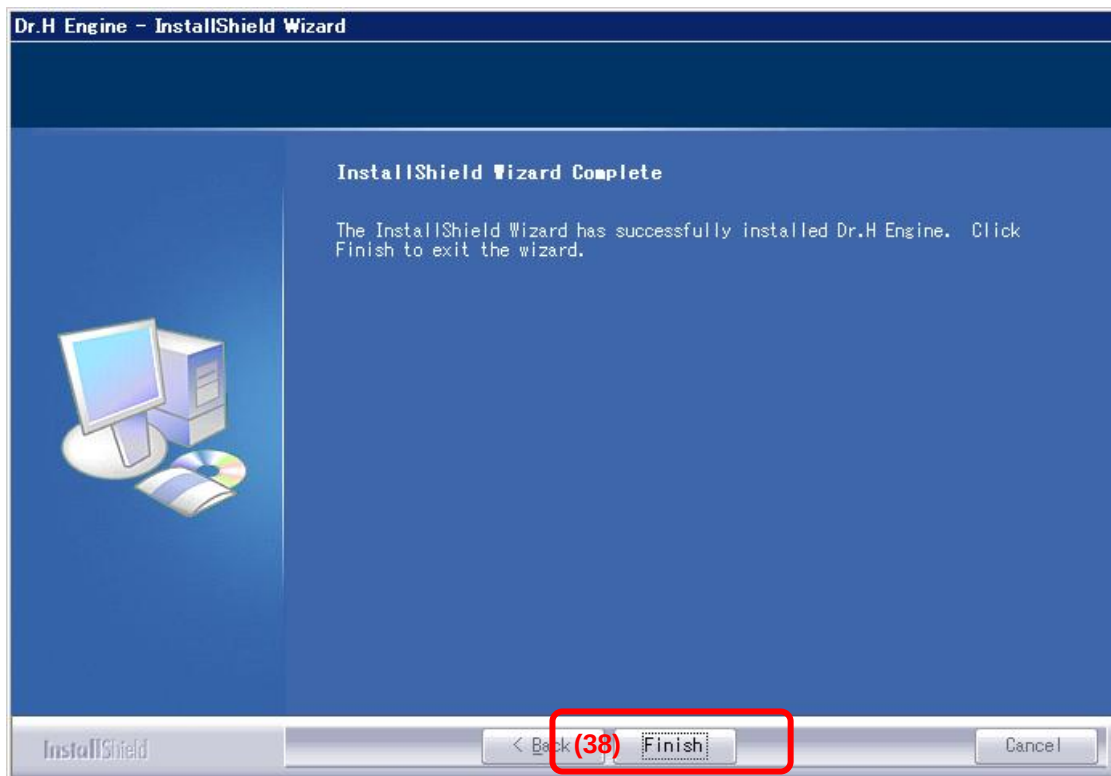
6. (37). Click "Next (N)".



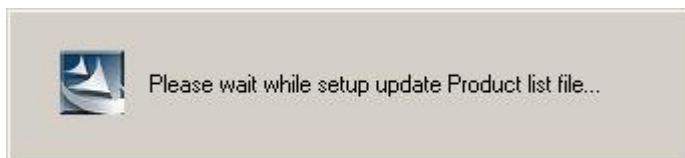
7. When the following message is displayed, wait a few moments.



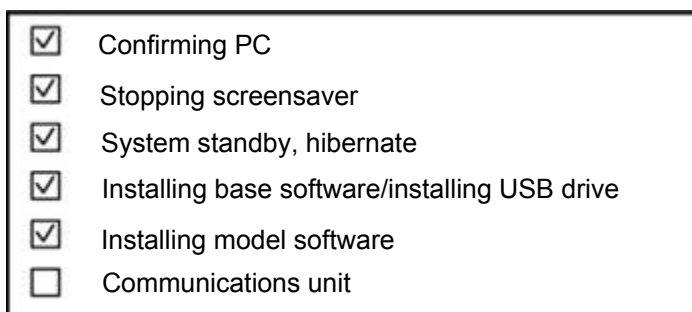
8. (38). Click "Finish (F)".



9. A message is displayed, telling you that the model software setup is in progress. When the setup is complete, the message will disappear automatically.



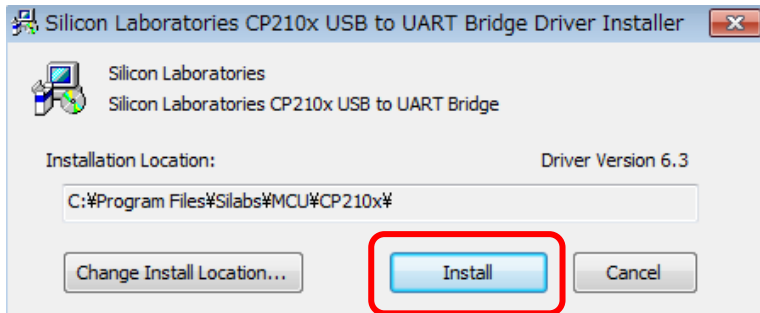
10. This completes the instructions for installing model software.



11. USB driver update after the model software installation

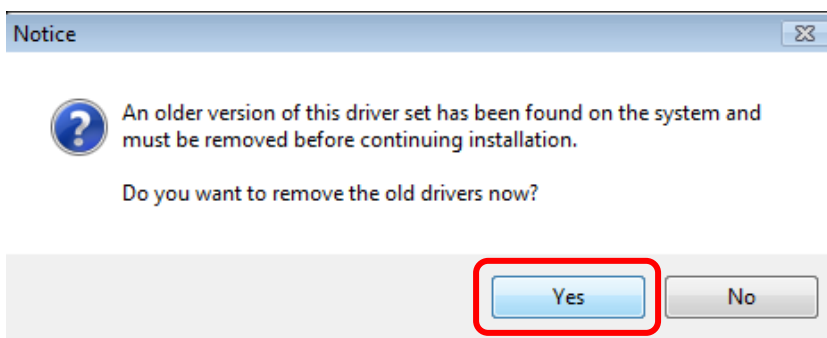
When USB driver update is required, the following message is displayed when the model software installation completes.

Click “Install” to start the USB driver installation.

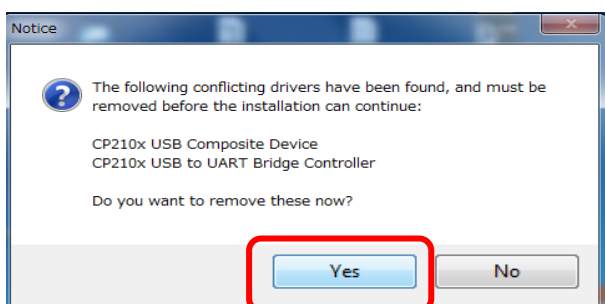


The following message ((1) or (2)) is displayed. Click “Yes” if the older version of the driver set can be removed.

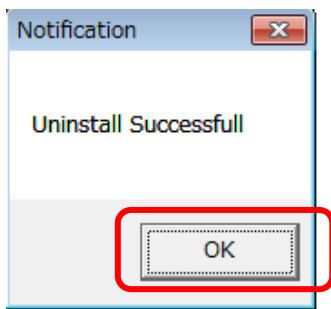
(1)



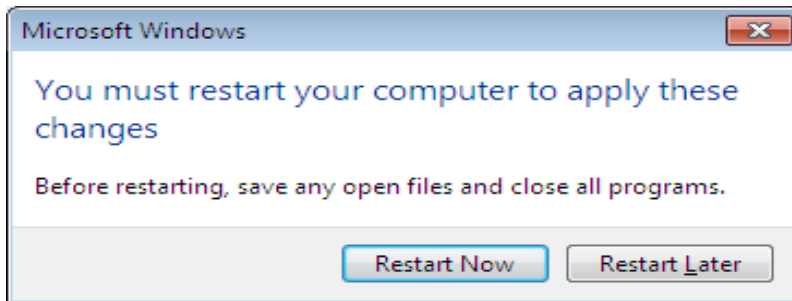
(2)



Click "OK" to go to next step.



Restart your computer to apply these changes.



9. Communication unit settings

Windows 2000, Windows XP

Connect the USB cable and the communication unit to the PC.

The communication unit setup involves preparations 1 and 2 below; both steps must be performed.

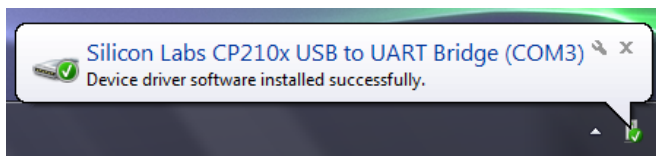
In Preparation 1, the PC is made aware of the communication unit.

In Preparation 2, the COM port is automatically allocated.

Windows Vista, Windows 7

Connect the USB cable and the communication unit to the PC.

The software will be installed automatically.



The following steps are unnecessary.

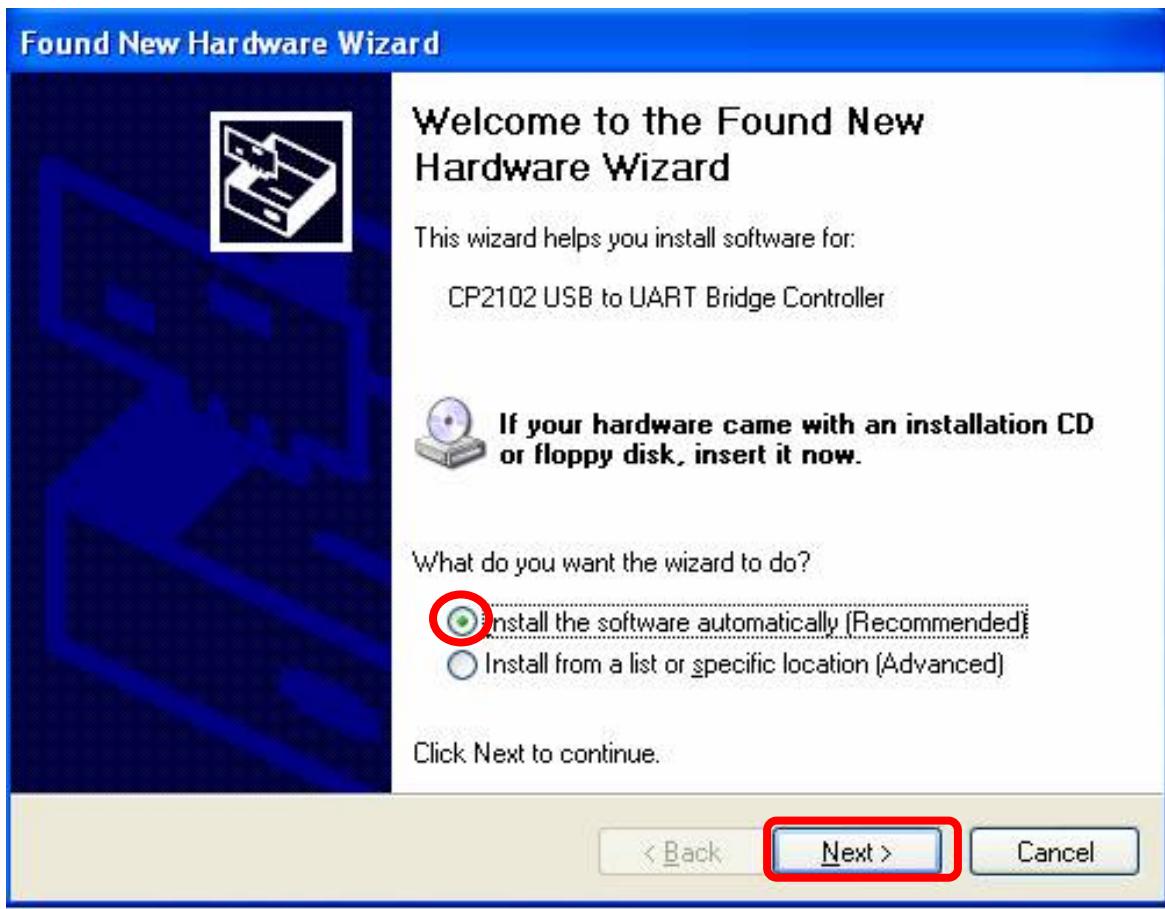
9 - 1. Communication unit settings: Installation of device driver

1. Start up the PC and connect the communication unit. The following window is displayed.

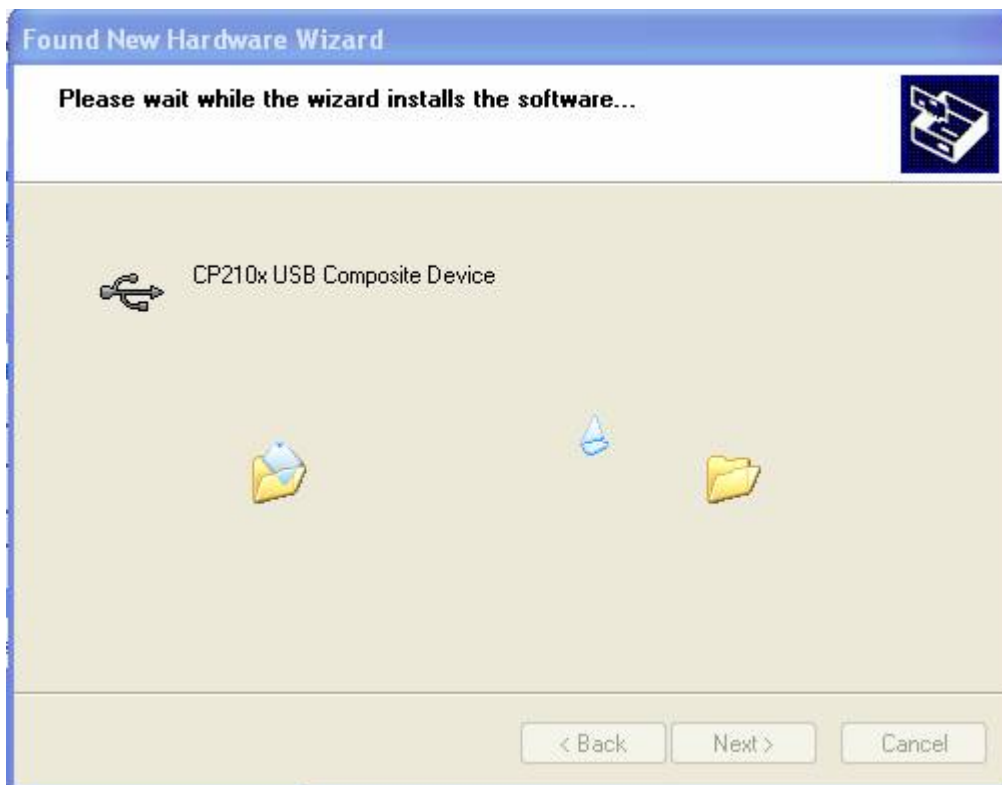
- Select "No, not this time" and click "Next".



2. Check that "Install the software automatically (Recommended)" is selected and click "Next".



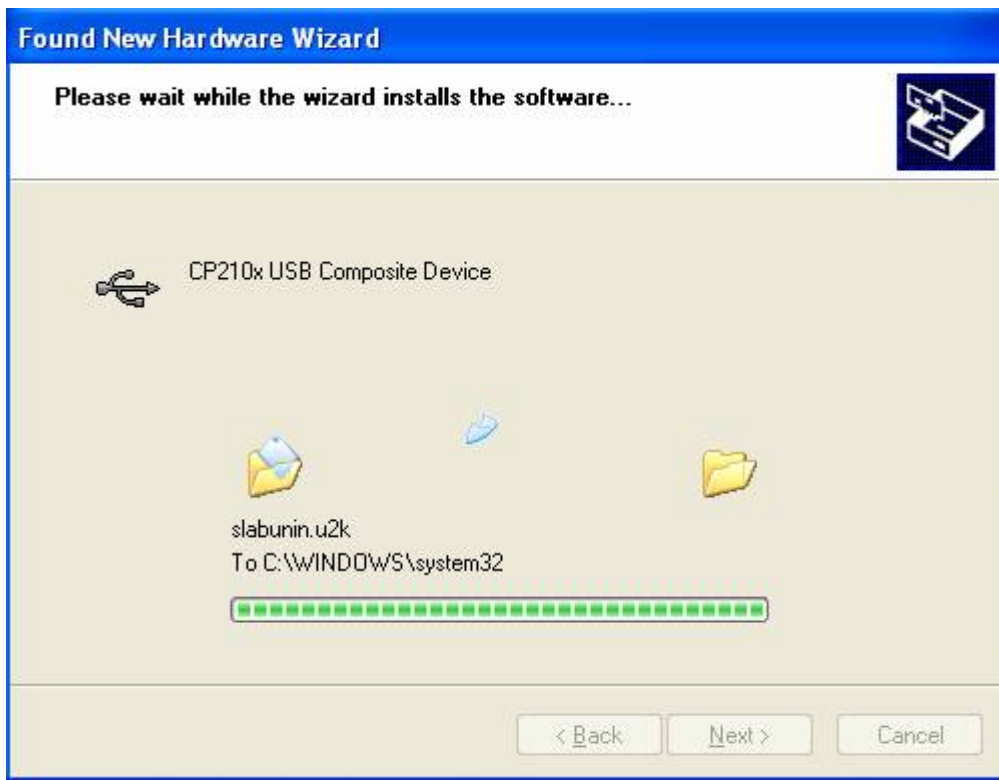
3. The following window is displayed. Wait until installation is complete.



4. The following window is displayed. Click on "Continue Anyway".



5. The following window is displayed. Wait until installation is complete.



6. The following window is displayed. Click on "Finish".

Communication unit settings - installation of device driver is complete.



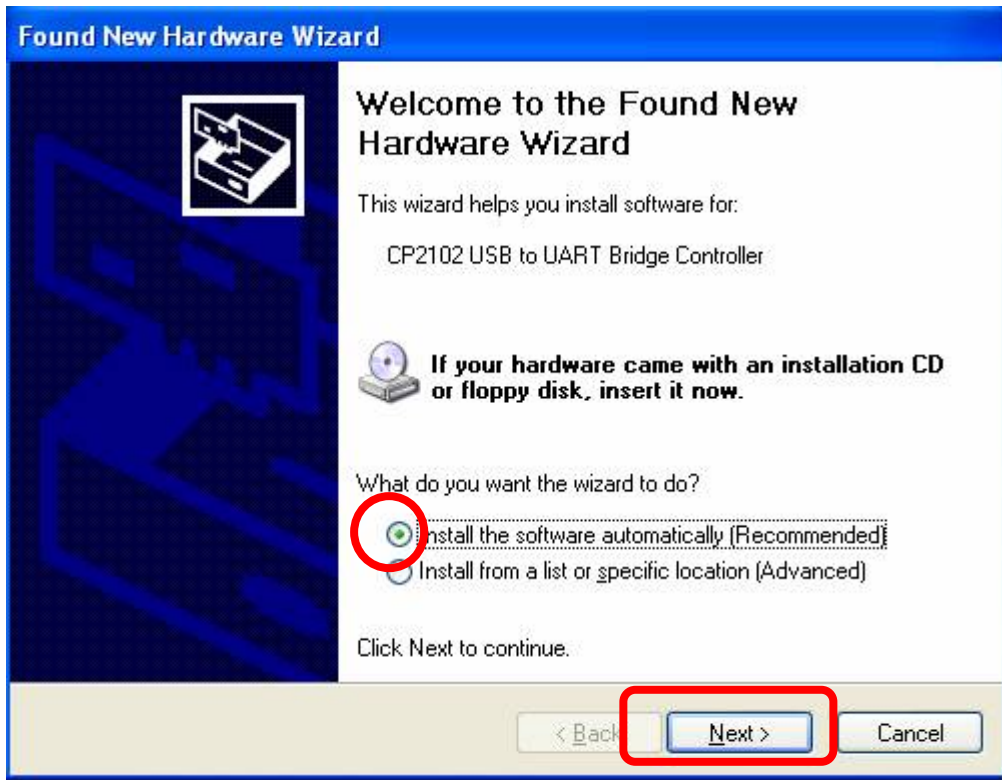
9 - 2. Communication unit settings: Installation of serial port driver

1. When "Finish" has been clicked in the previous window, the following window is displayed.

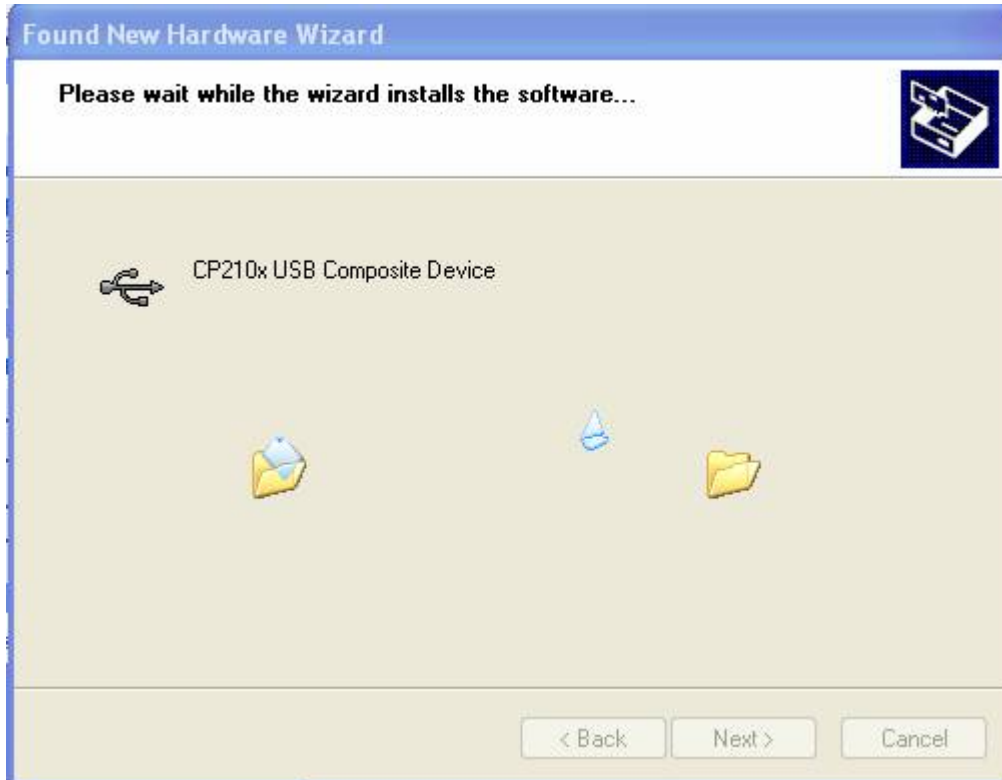
The communication unit can be set up by performing the operations for Preparation 1 again; ensure these operations are carried out. Select "No, not this time" and click "Next".



2. Check that "Install the software automatically (Recommended)" is selected and click "Next".



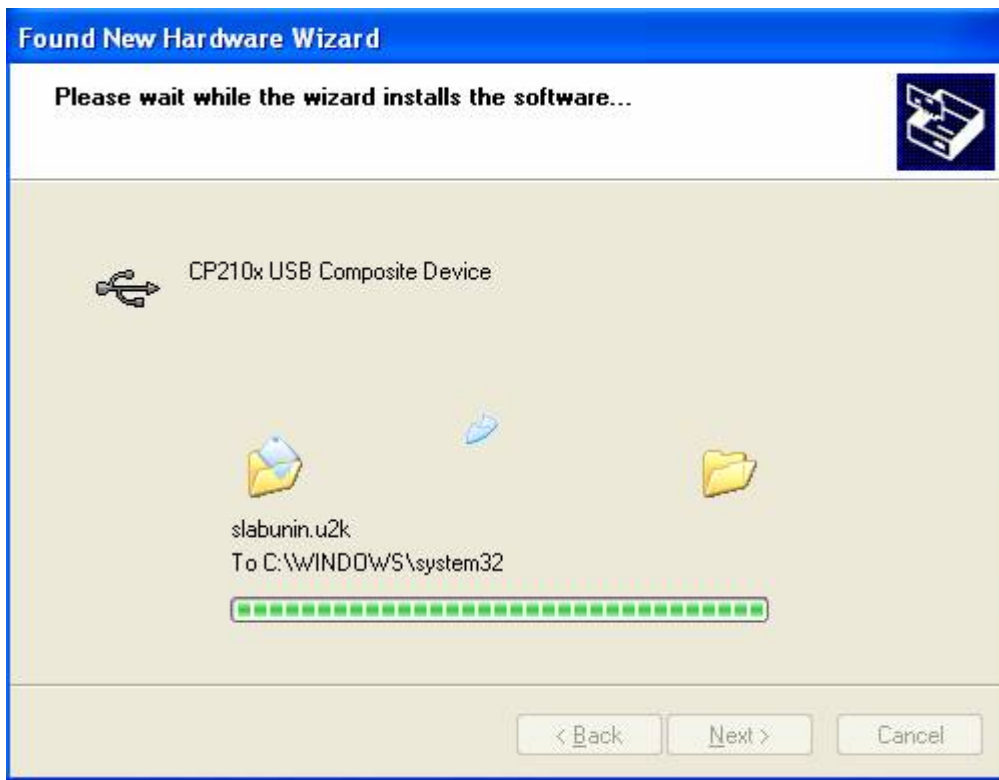
3. The following window is displayed. Wait until installation is complete.



4. The following window is displayed. Click on "Continue Anyway".

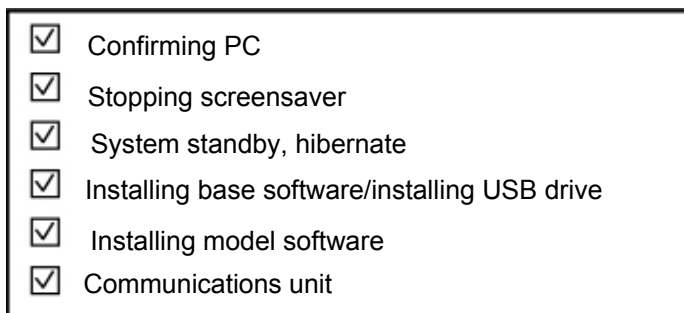


5. The following window is displayed. Wait until installation is complete.



6. The following window is displayed. Click on "Finish".

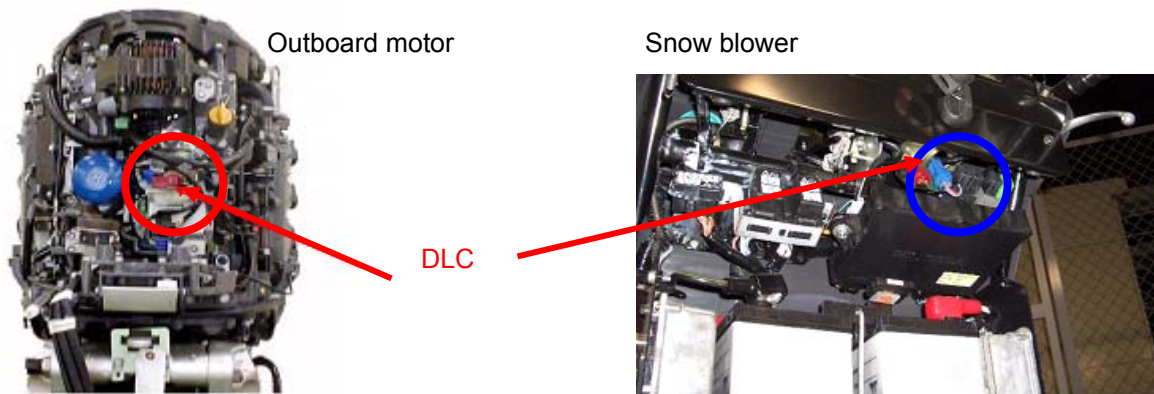
Communication unit settings - installation of serial port driver is complete.



Dr. H start up can be prepared in this way.

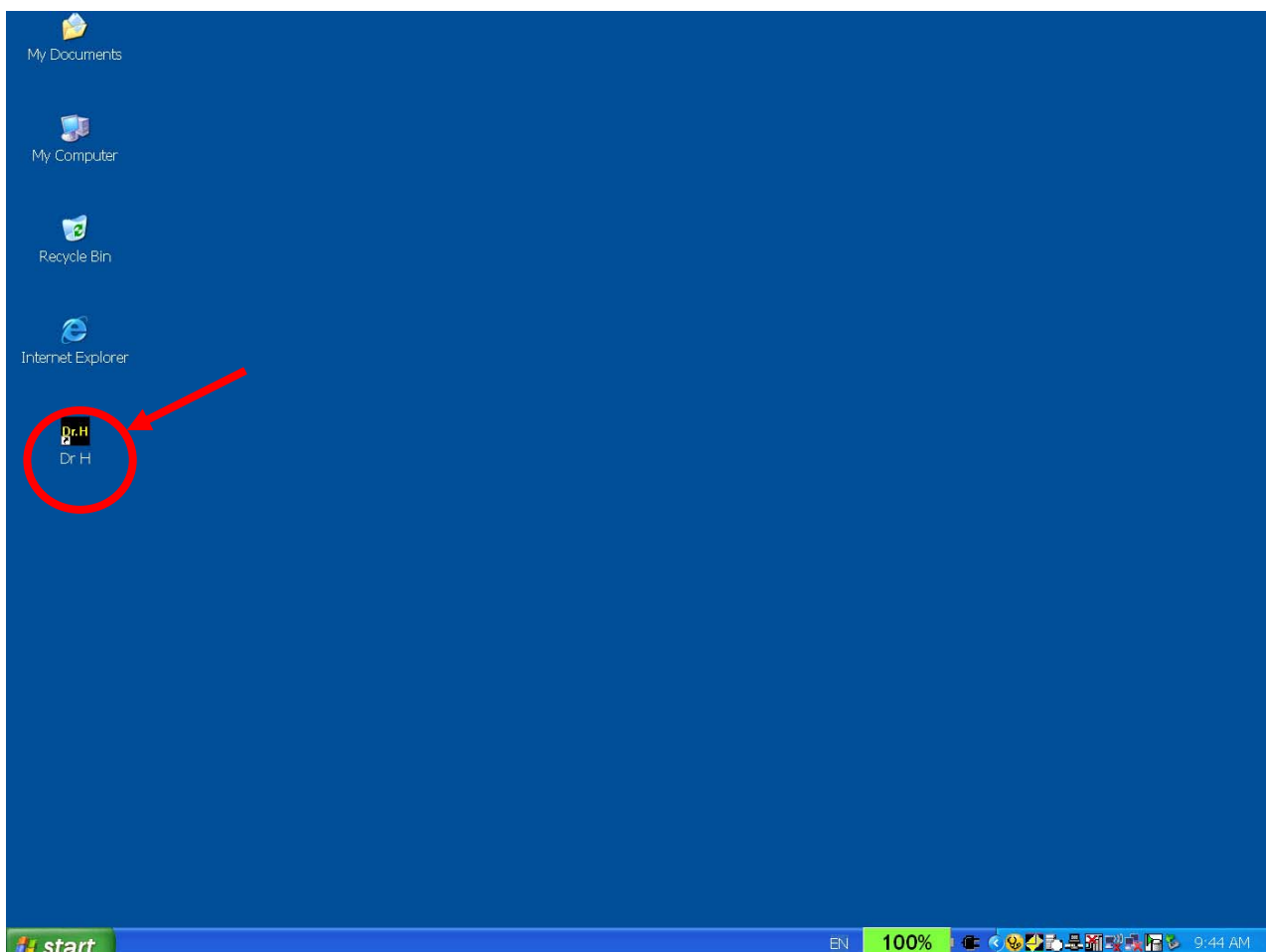
10. Connecting to products

1. Connect the communication unit DLC cable to the product's DLC.



The outboard motor DLC has a red connector. DLCs other than for outboard motors have a blue connector.

2. Turn on the ignition switch on the products.
3. Double-click the Dr. H icon on the desktop and start up Dr. H.



4. The Dr. H window opens up.

When the cursor is placed over the picture of the model it is possible to see which models have the Dr. H model software installed.



5. Click "Start Communication".



6. Enter the necessary items in the following windows.

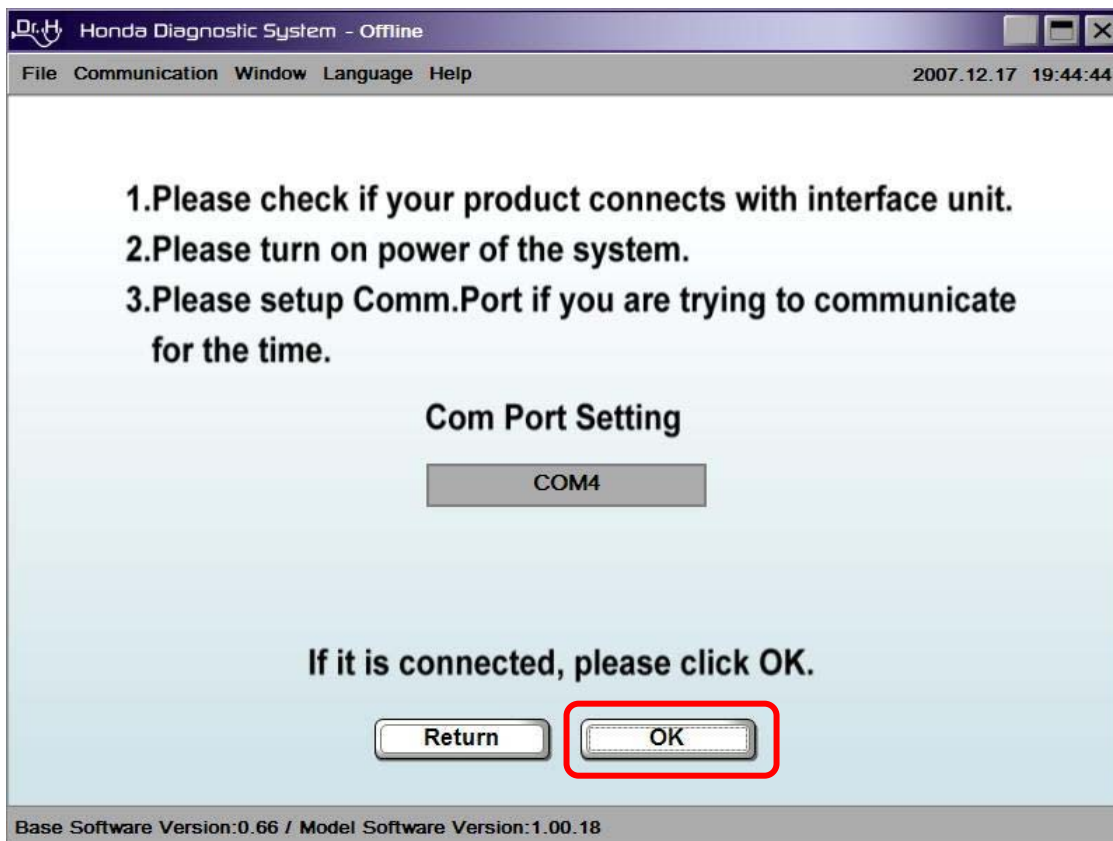
The screenshot shows the 'Honda Diagnostic System - Offline' window. At the top, a blue banner reads: 'Please input Model Name, Serial Number and Customer Name which is described on your product.' Below this, the form has the following elements:

- Model Name(*):** A dropdown menu with 'BF225' selected. A red box (1) highlights this field.
- Serial Number(*):** Two dropdown menus. The first has 'BAGJ' selected (red box 2), and the second has '123' selected (red box 3).
- Customer Name:** A dropdown menu with 'Honda Ichiro' selected. A red box (4) highlights this field.
- Customer Address:** A text area with 'wako-shi shiorko 00-110' entered. A red box (4) also highlights this field.
- OK Button:** A button labeled 'OK' at the bottom, highlighted by a red box (5).

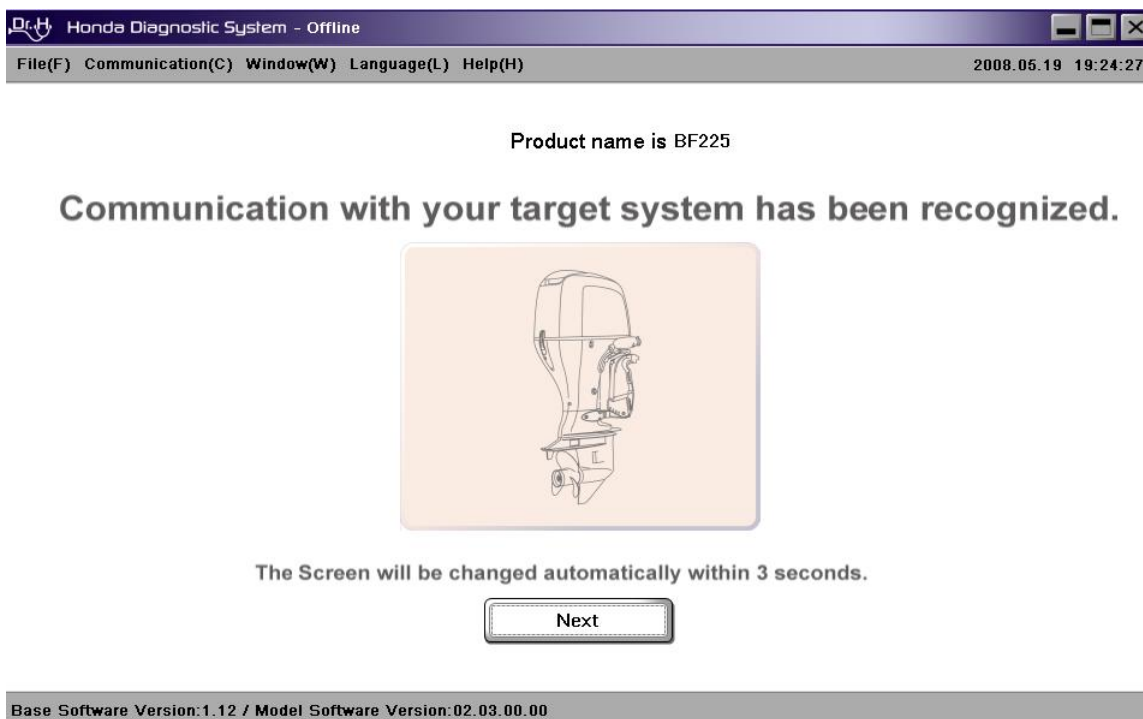
Additional text in the window includes: '(*) is necessary data.' and 'Please confirm input code, and click OK.' The status bar at the bottom reads: 'Base Software Version:0.66 / Model Software Version:1.00.18'.

- (1) Enter name of model.
 - (2) Enter type.
 - (3) Enter serial number.(Frame number or engine number).
 - (4) Enter name and address of client.
 - (5) Click "OK".
- * This information is saved in a file and is used in printouts.
- (*) indicates an obligatory item.

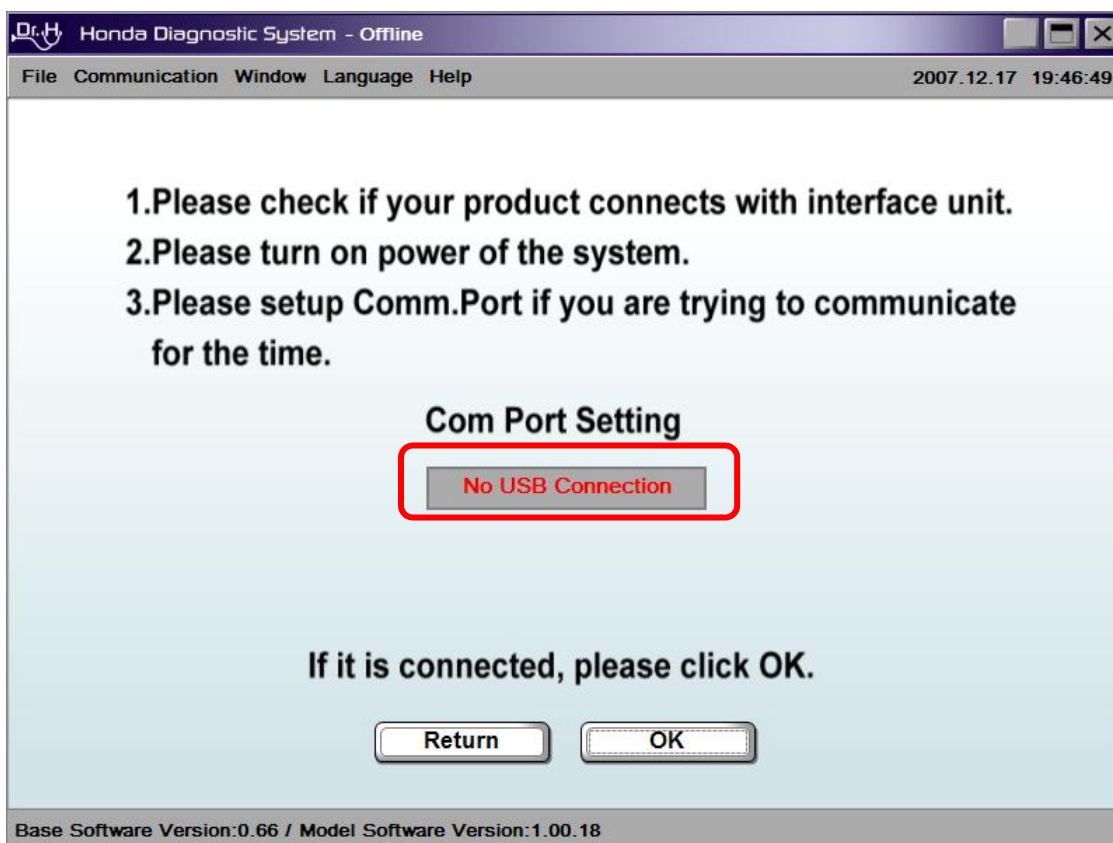
7. Check that there are no problems with the confirm items window that follows, and click "OK".



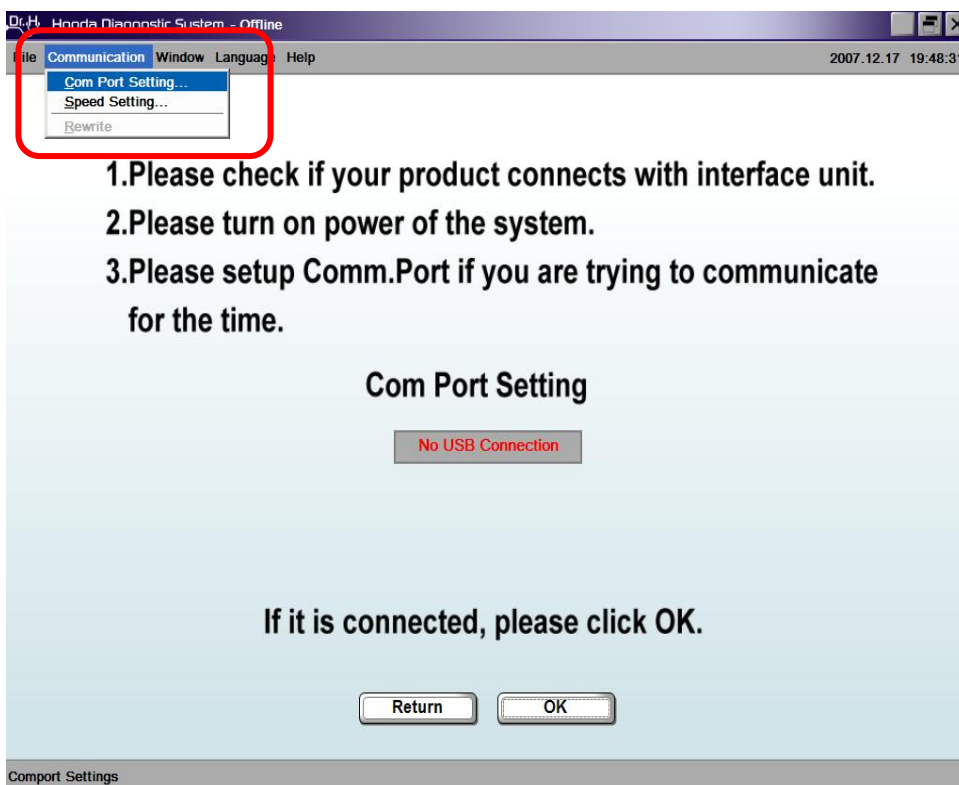
8. When the communication is successful, an image of the product appears.



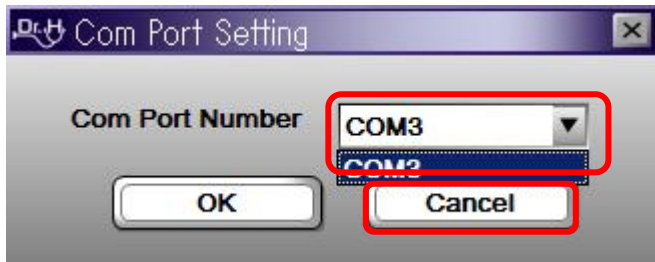
9. If the USB communication fails, the following window is displayed. The communication port setting shows "No USB Connection".



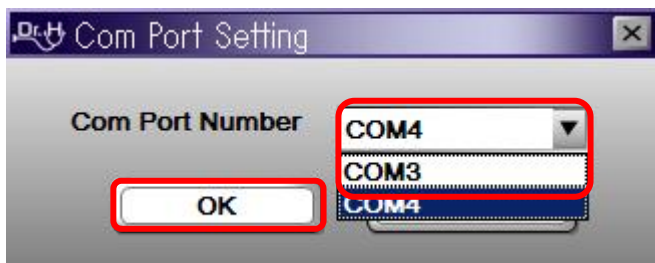
10. Check the communication port by following these steps. Select communication setting and click "Com port setting".



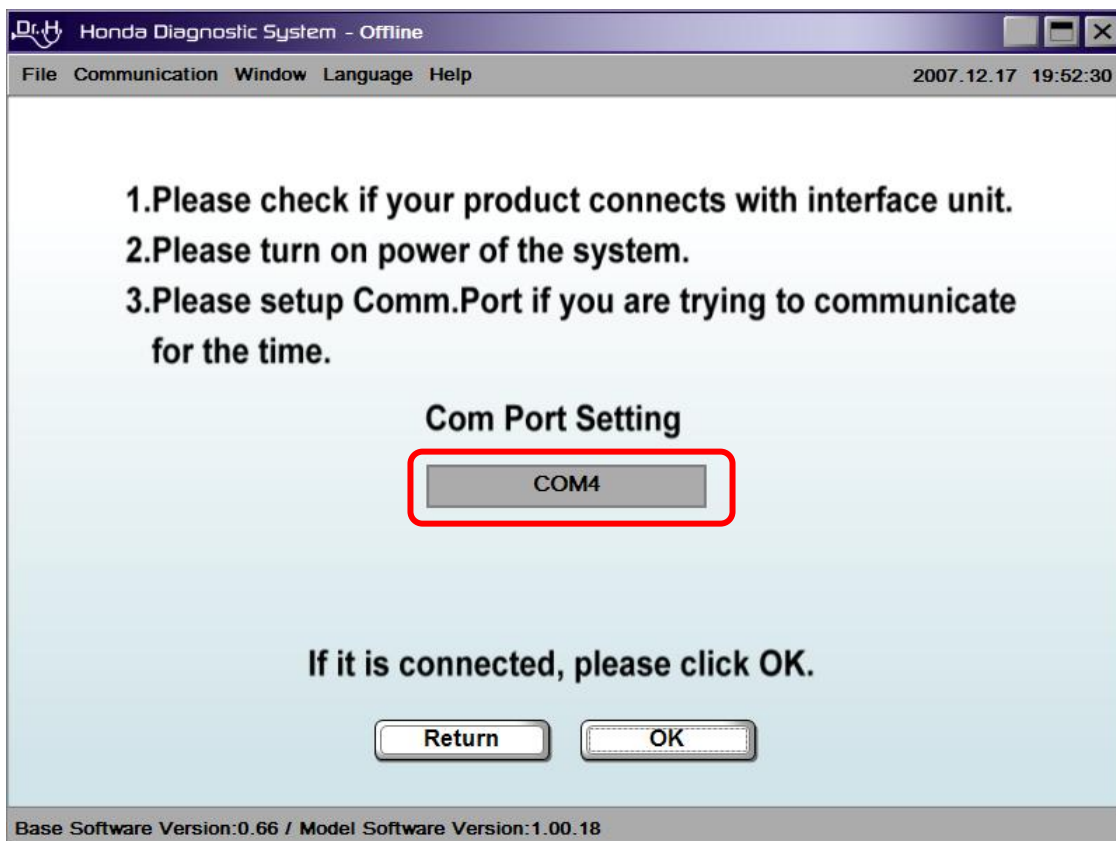
11. Click on the Communication port setting. The following message appears.
Check the COM Number on the pull down menu.
In the example, the COM number is only COM3 so it has not increased.
Click "Cancel".



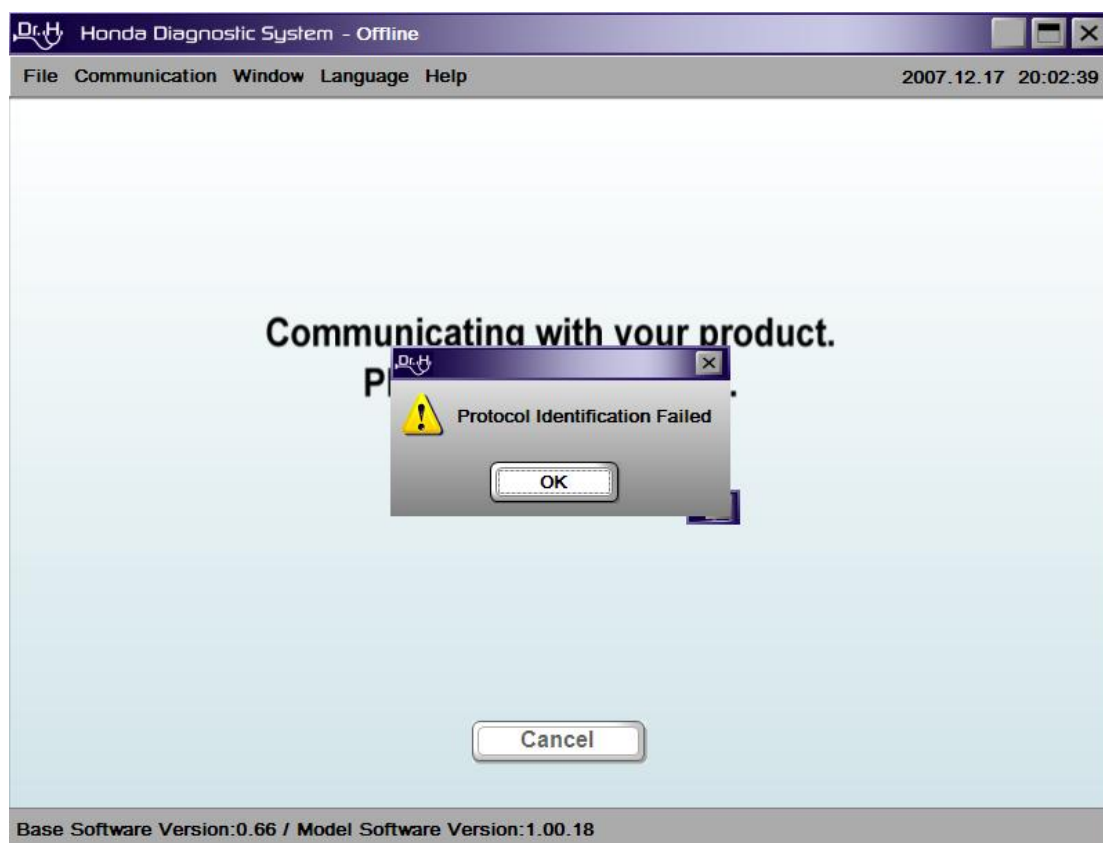
12. After canceling, check the COM number with the USB cable inserted into the PC
In the example, it has increased to COM4.
Click "OK".



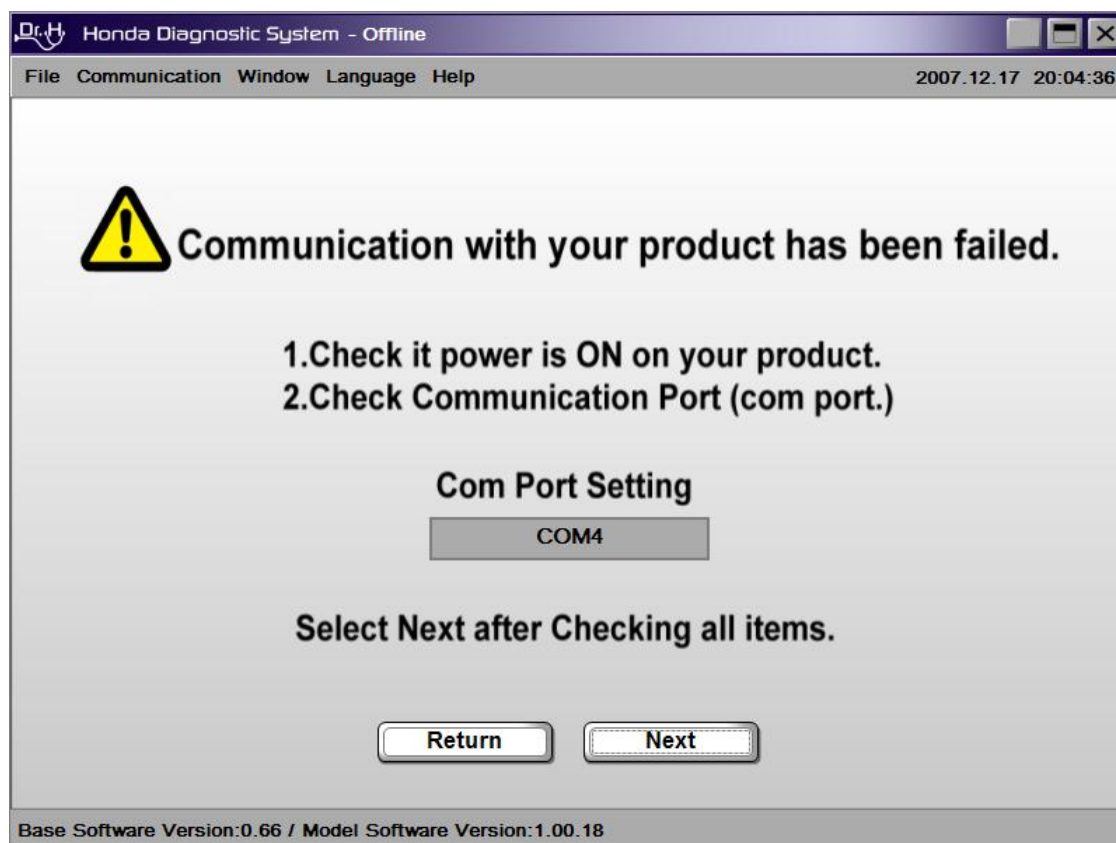
13. In the next window, check that the COM number has increased.



14. When the product is not turned on, the red LED light on the communication unit flashes and the following message is displayed. Click "OK".



The following window appears. The  mark flashes.



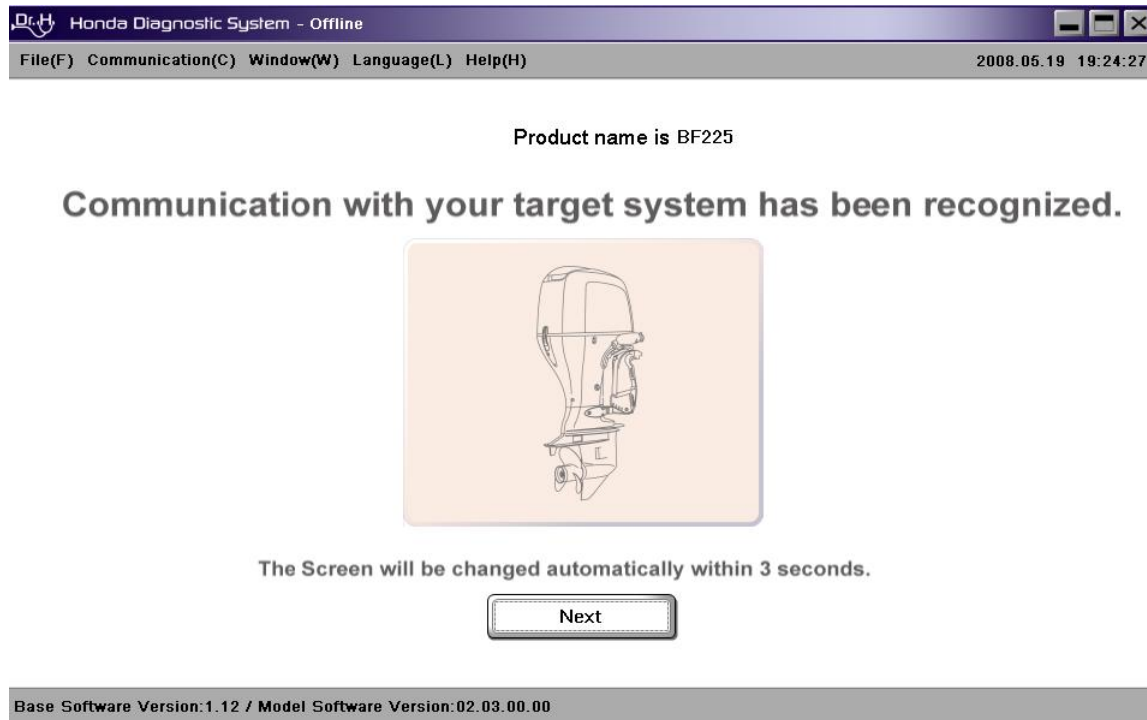
Check if the ignition switch on the product is on.

Check that the communication unit is properly connected.

Make sure that the cable connection has not come out and that the connector is fully attached.

15. When the Communication is successful, the red LED light on the communication unit goes off and the green LED light comes on.

When a picture of the products is shown, click "Next".

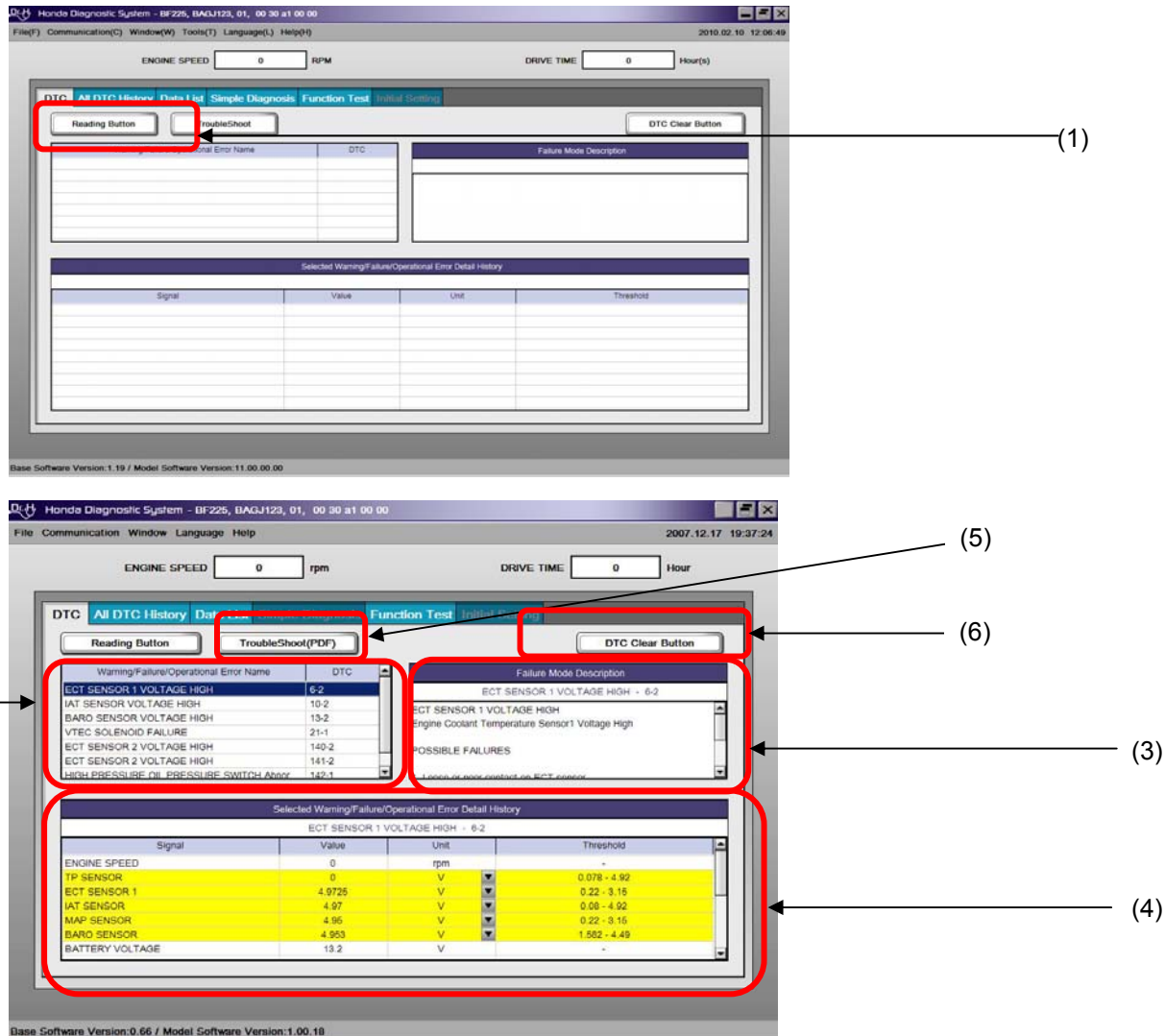


11. Failure diagnosis

11 - 1. DTC

The DTC generated in response to irregularities in the system after an inspection is carried out for system irregularities is saved in the ECU. The DTC tool is used to display DTC information saved in the ECU.

Click "Reading Button" to start diagnosis.



Explanation of buttons:

- (1) Reading button: Displays and renews DTC from ECU inspection.
- (2) DTC window: Displays DTC from ECU inspection.
- (3) Information window: Displays the presumed cause of failure in the DTC selected in the DTC window.
- (4) DTC details window: Displays detailed information for DTC selected in DTC window.

Irregular signals are highlighted in yellow. (Sometimes there is no detailed information depending on the DTC).

- (5) This is a link for troubleshooting. Refer to troubleshooting in the service manual.
- (6) DTC Clear Button: Clears DTC from ECU inspection. *Only BF series corresponds.

11 - 2. All history

Displays DTC history saved in the ECU.

It is possible to display up to five histories — except for the outboard motor ECU.

Displays most recent history from the left.

(1) Reading button: Displays and renews entire DTC histories saved in the ECU.

(2) DTC history window: Displays DTC history starting with the most recent.

Highlights selected DTC histories.

(3) DTC details window: Displays detailed information for the DTC selected in the DTC window.

Irregular signals are highlighted in yellow.

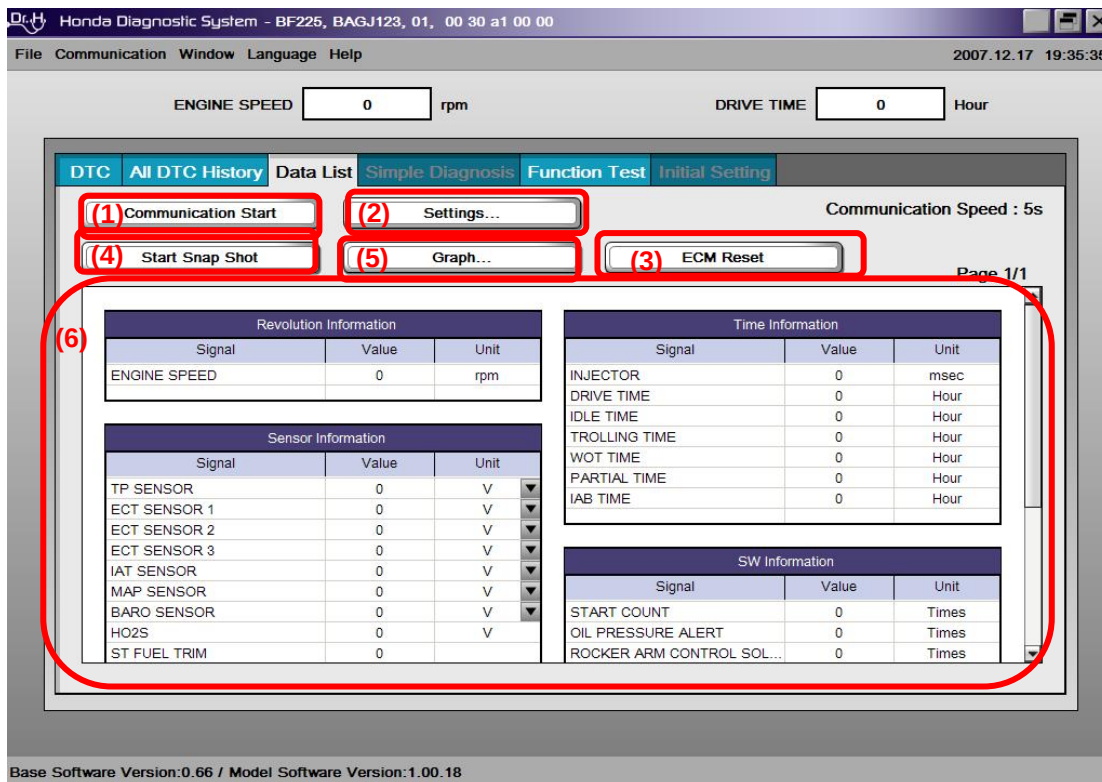
The screenshot shows the Honda Diagnostic System (HDS) interface. At the top, there's a menu bar with 'File', 'Communication', 'Window', 'Language', and 'Help'. Below the menu bar, there's a status bar showing 'ENGINE SPEED 0 rpm' and 'DRIVE TIME 0 Hour'. The main window is divided into several sections. The top section contains tabs: 'DTC', 'All DTC History', 'Data List', 'Simple Diagnosis', 'Function Test', and 'Initial Setting'. The 'DTC' tab is selected and highlighted with a red box, with an arrow pointing to it labeled (1). Below the tabs, there are buttons: 'Reading Button', 'TroubleShoot(PDF)', and 'DTC Clear Button'. The middle section is titled 'Latest History' and shows a list of DTCs. The first entry is 'ECT SENSOR 1 VOLTAGE HIGH', which is highlighted with a red box and an arrow labeled (2). The bottom section is titled 'Selected Warning/Failure/Operational Error Detail History' and shows a detailed view of the selected DTC. The table below shows various signals and their values, with some rows highlighted in yellow. An arrow labeled (3) points to this section.

Signal	Value	Unit	Threshold
ENGINE SPEED	0	rpm	-
TP SENSOR	0	V	0.078 - 4.92
ECT SENSOR 1	4.9725	V	0.22 - 3.15
IAT SENSOR	4.97	V	0.08 - 4.92
MAP SENSOR	4.95	V	0.22 - 3.15
BARO SENSOR	4.953	V	1.582 - 4.49
BATTERY VOLTAGE	13.2	V	-
INJECTOR	0	msec	-
ECT SENSOR 2	4.9725	V	0.078 - 4.992
ECT SENSOR 3	4.9725	V	0.078 - 4.992

Base Software Version:0.66 / Model Software Version:1.00.18

11 - 3. Data list

Displays real-time information for each device regarding the sensors, switches etc. inspected by the ECU.
Can be displayed in a graph. Also has a snapshot function.



- (1) Start Communication: Start Communication, display data.
- (2) Settings: Set up snapshot, graph display.
- (3) ECM reset: Delete ECU's ECM value and DTC.
- (4) Start snapshot: Record and save data list's Communication data.
- (5) Graph: Display Communication data graph.
- (6) Parameter window: Display signal information for sensors, switches etc.

Data list Procedures

(1) Click "Start Communication".

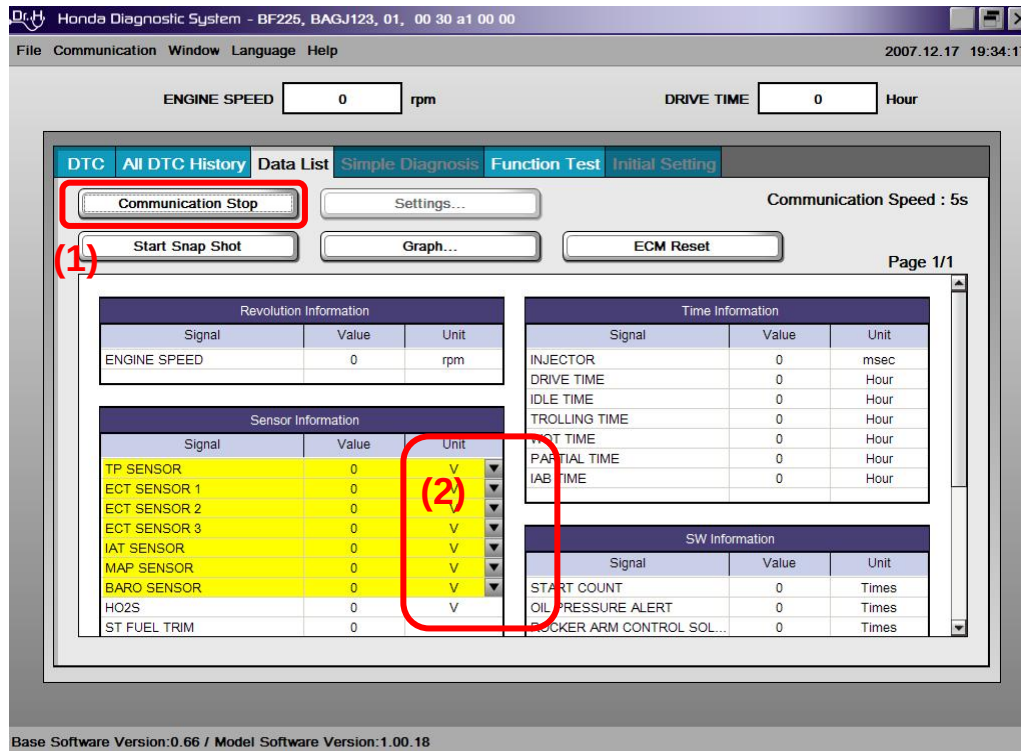
*When the Communication starts, the "Start Communication" button switches to "Stop Communication".

Click the button again to stop the Communication.

The parameter window shows separate signals for sensors, switches, time information etc.

Irregular signals are highlighted in yellow.

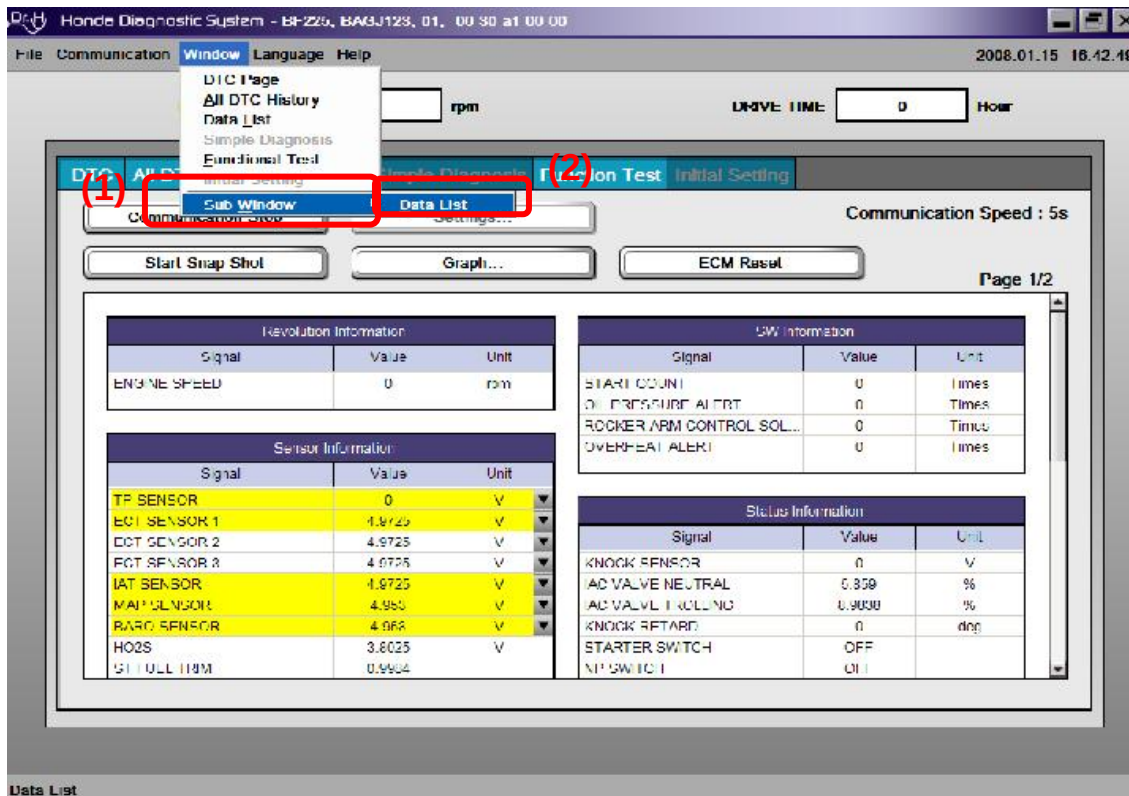
(2) The units for the signals can be changed using the signal dropdown box.



Data list Sub-windows function

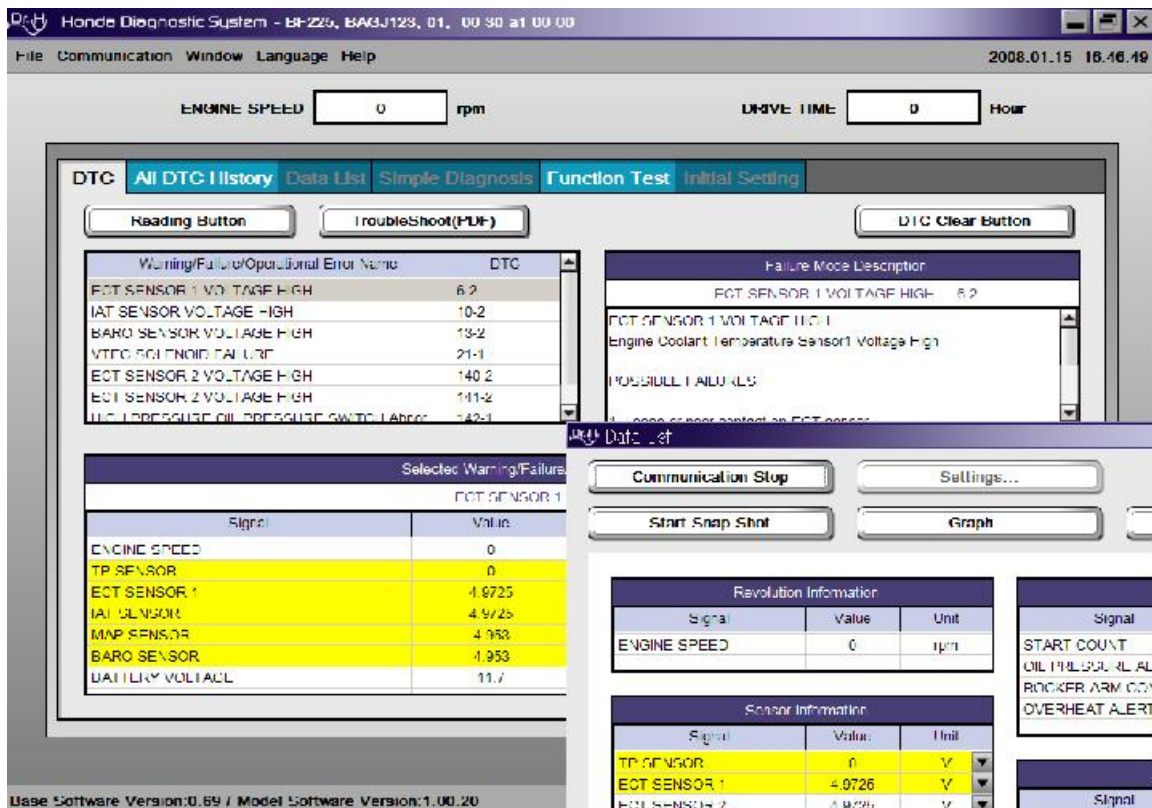
This function makes it possible to see the data list simultaneously in a separate window.

From the window menu, select (1) "sub-window" and then (2) "data list".



In Example, the data list and DTC are displayed in two windows.

In this example, it is possible to check for irregular data by checking the data list as the DTC appear.

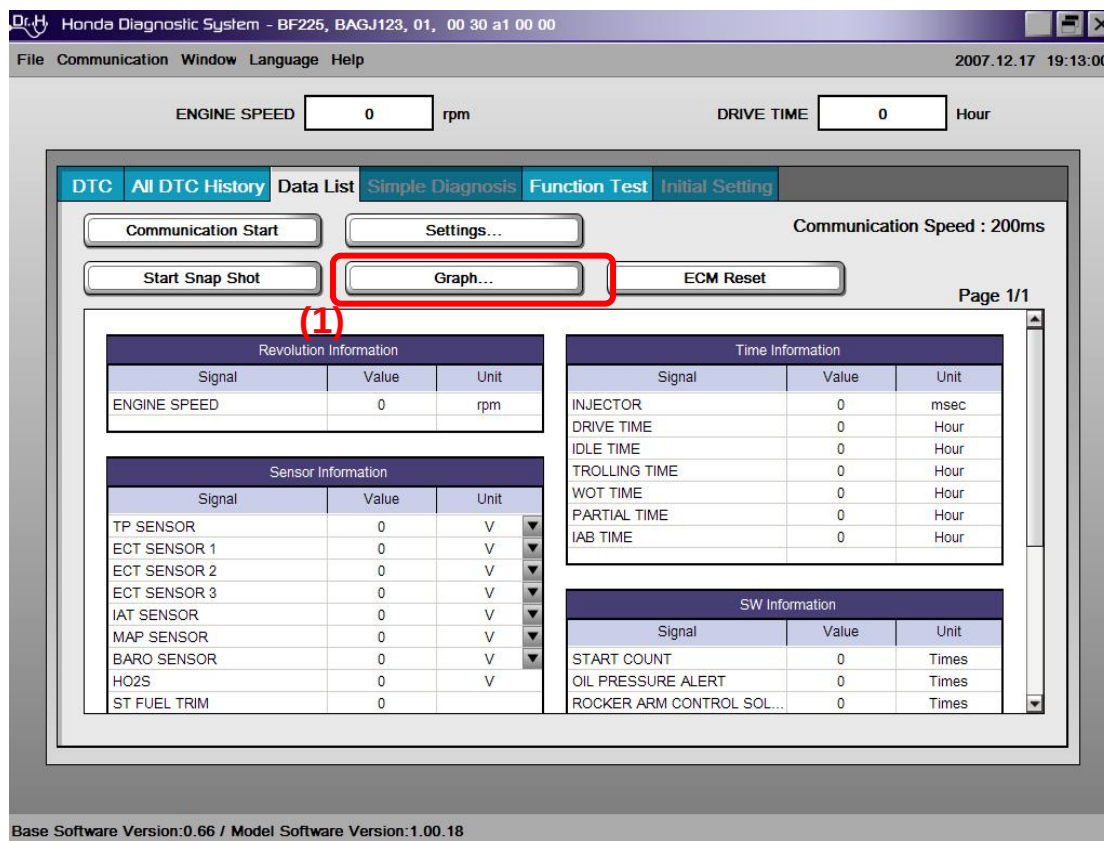


Graph display function

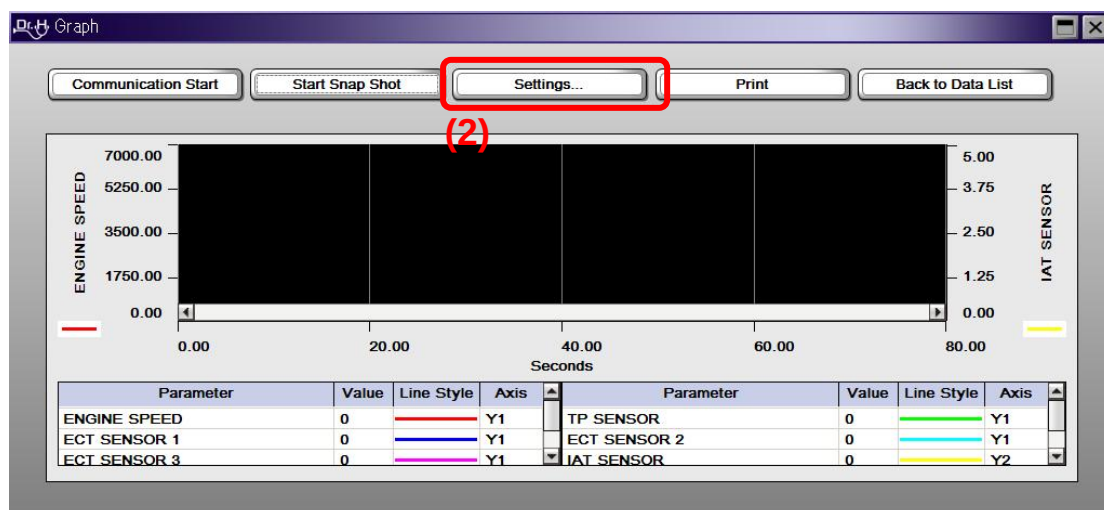
Note : You must stop Communication before making changes to the Graph settings then click "Communication Start" button again.

Using this function, time can be seen in conjunction with the changing value of variable data.

(1) Click on "Graph".



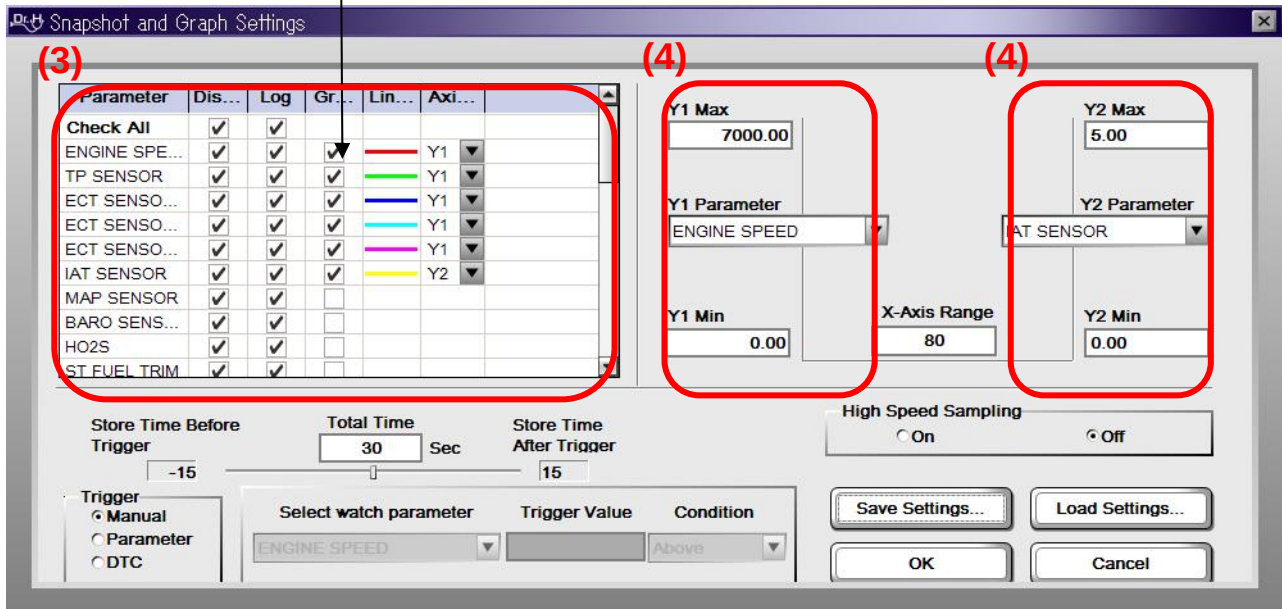
(2) The graph window is displayed. Click on "Settings".



(3) The following settings window is displayed.

Set the selected signals, maximum value, minimum value, color, weight etc. that you want for the graph.

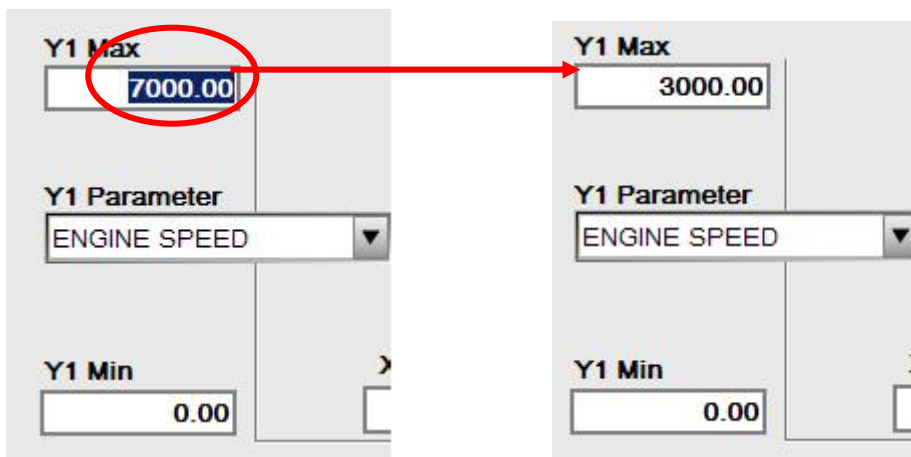
Graph: Put in a tick for each parameter you wish to display.
(It is possible to display 6 parameters.)



(4) You can change the scale of the graph.

You can change the maximum value and minimum value. Click on the variable box to highlight it.

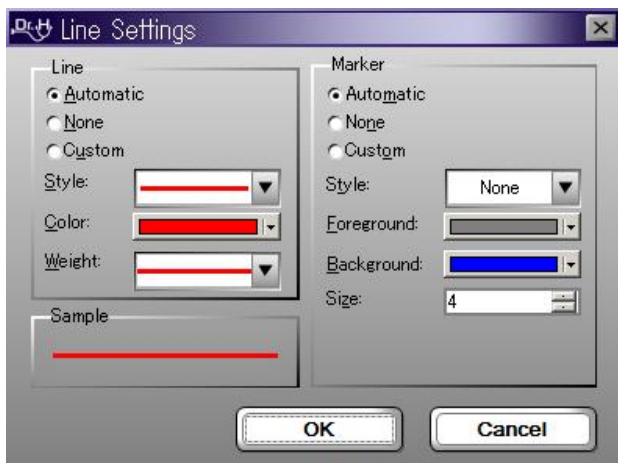
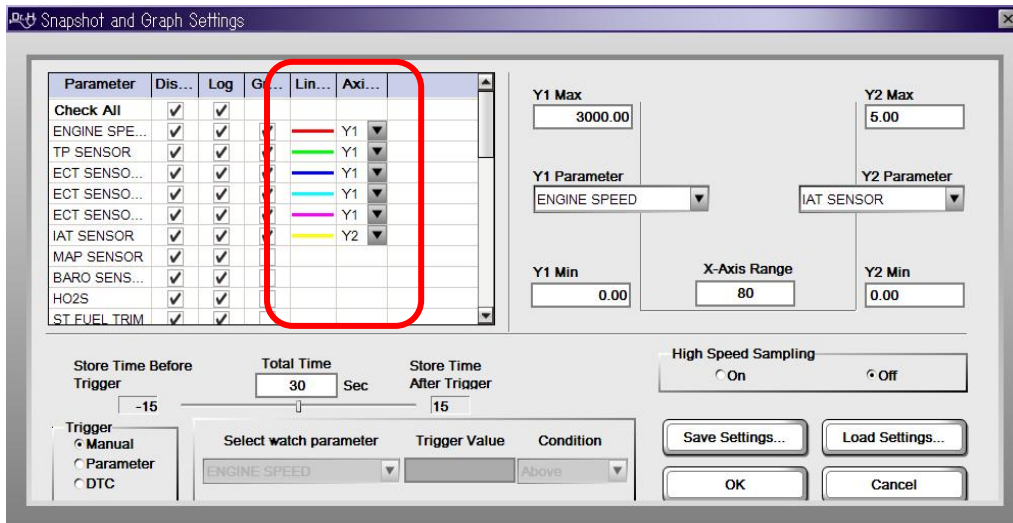
Enter the value you wish to set.



Changing graph type

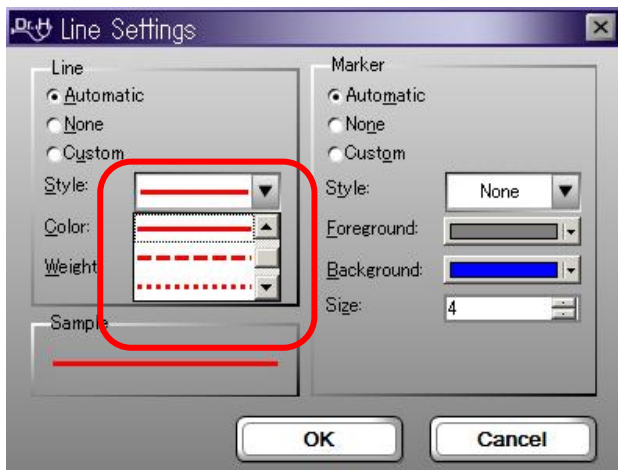
It is possible to change the graph color, style and width, and place a marker in the graph.

When you click on the line, the window for choosing line types is displayed.



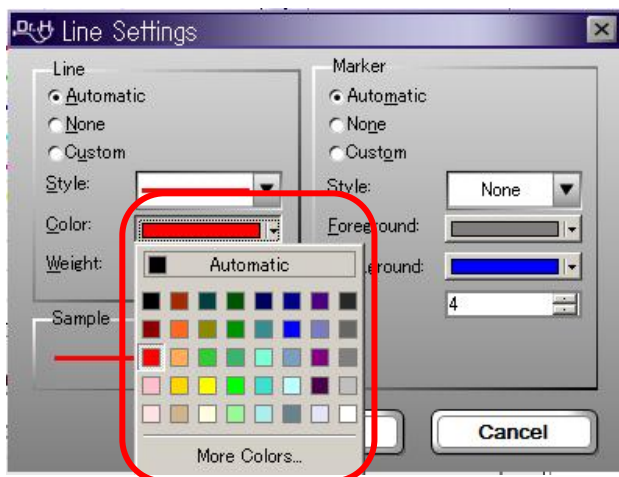
Line types window_Changing style

Select the line style from the dropdown menu.



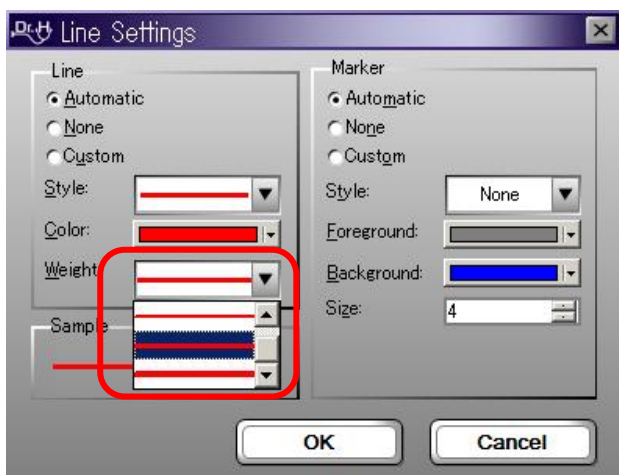
Line types window_Changing color

Select the line color from the checkbox.



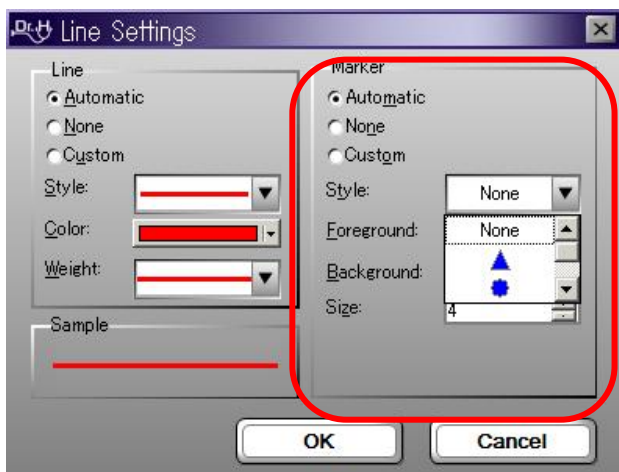
Line types window_Changing weight

Select the line weight from the dropdown menu.



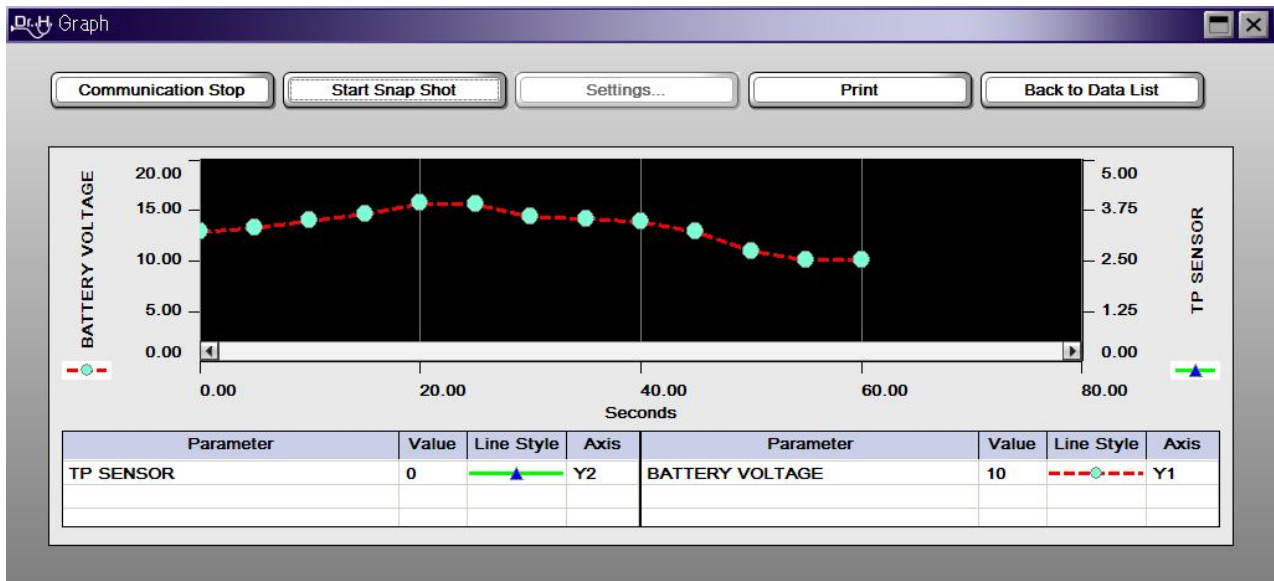
Line types window_Setting marker

It is possible to choose whether to have markers or not, and to set the style.



Example:

The set parameters are in the lower section of the window. It is possible to confirm the line type and marker settings in the graph legend.



Snapshot function

The valid parameters for the diagnosis can be selected, recorded and saved.

The signal for starting the data recording is called the "trigger". It is possible to select the trigger method as manual trigger, DTC trigger or parameter trigger.

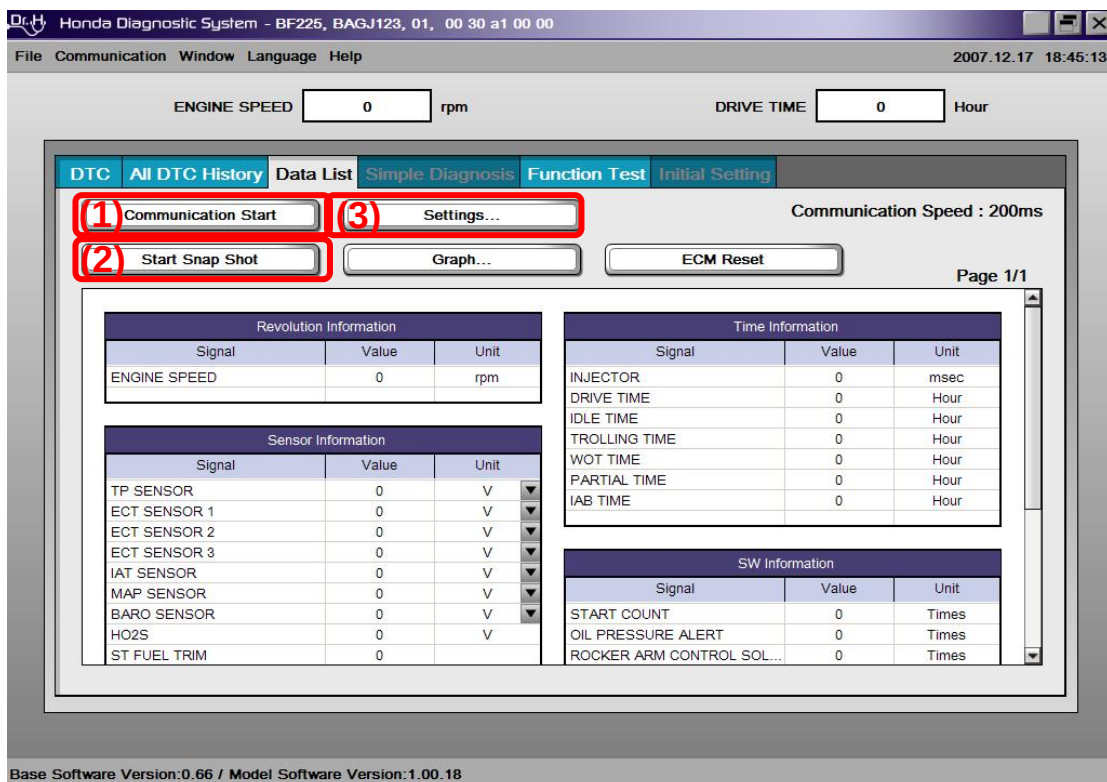
The initial setting is for a 30 second recording after the manual trigger.

(1) Click "Communication Start".

(2) Click "Start Snapshot".

*When the "Start Snapshot" button is clicked, the button's name changes to "End Snapshot".

If the button is clicked twice the snapshot will be stopped, so make sure to wait until the snapshot has ended.



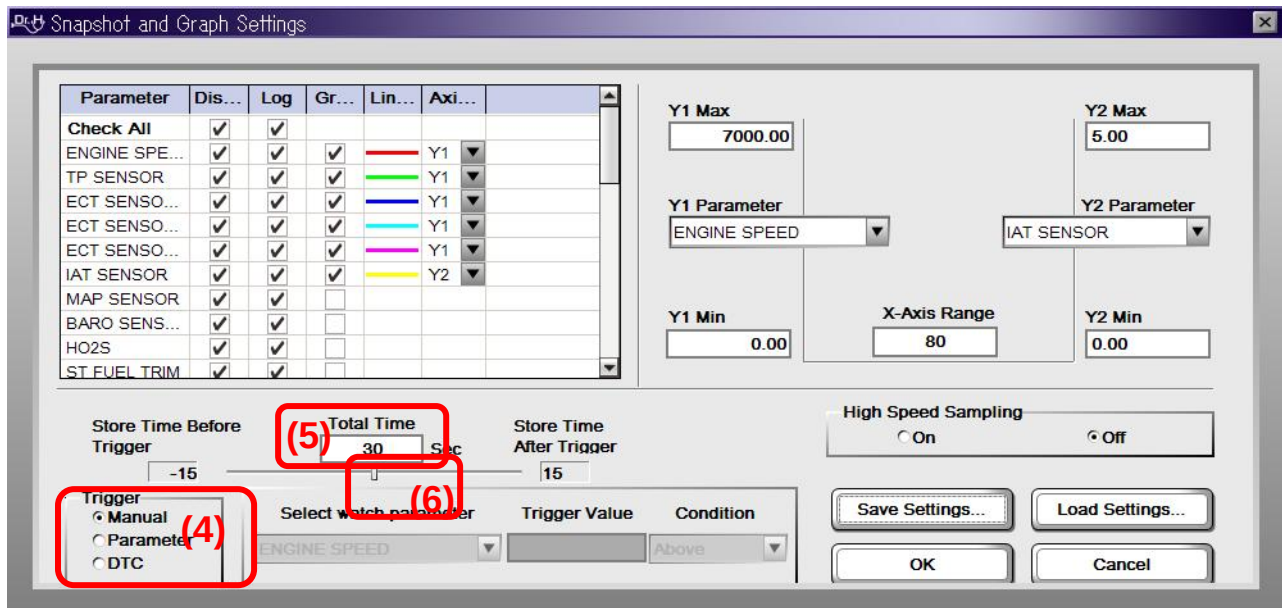
When the snapshot is finished, the following message appears.

Click the "OK" button to end the snapshot.



(3) Click "Settings" in the upper part of the window in order to make snapshots using settings other than the initial settings.

The following window appears.

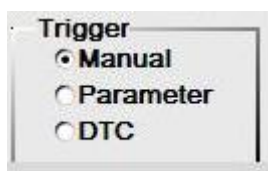


1. Trigger settings: Select trigger.

*The initial setting is for manual trigger.

Type	Explanation
Manual	When the user clicks "Start Snapshot", the recording starts.
Parameters	When the value for the parameters set for the standard trigger value are exceeded, the recording starts.
DTC	When a DTC appears, the recording starts.

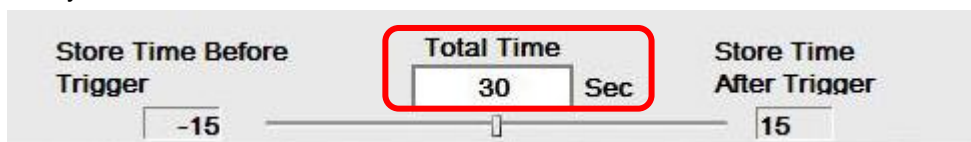
(4) Click on a trigger type box to select the trigger type.



(5) Total time: Set data recording time. Initial setting is for 30 seconds.

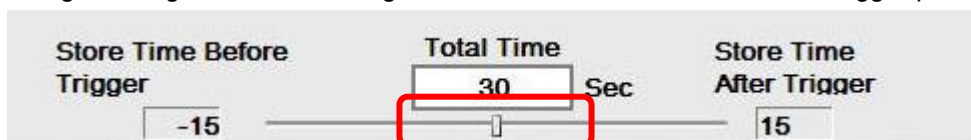
Enter desired value. Enter seconds units.

*For the BF225, when all parameters are selected and 30 seconds recorded, it amounts to around 100 Kilobytes.



(6) Settings to allocate time before and after trigger:

Using a sliding bar, the recording time can be set before and after the trigger point.



2. Parameters settings

Parameter trigger

Set the trigger type to parameter and select the watch parameter from the dropdown menu.

"Engine Speed" has been selected in this sample window.

Snapshot and Graph Settings

Parameter	Dis...	Log	Gr...	Lin...	Axi...
Check All	☒	☒			
ENGINE SPE...	☒	☒	☒		Y1
TP SENSOR	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
IAT SENSOR	☒	☒	☒		Y2
MAP SENSOR	☒	☒	☒		
BARO SENS...	☒	☒	☒		
HO2S	☒	☒	☒		
ST FUEL TRIM	☒	☒	☒		

Y1 Max: 7000.00 Y2 Max: 5.00

Y1 Parameter: ENGINE SPEED Y2 Parameter: IAT SENSOR

Y1 Min: 0.00 X-Axis Range: 80 Y2 Min: 0.00

Store Time Before Trigger: -15 Total Time: 30 Sec Store Time After Trigger: 15

High Speed Sampling: ☐ On ☒ Off

Trigger: ☐ Manual ☒ Parameter ☐ DTC

Select watch parameter: ENGINE SPEED (highlighted)

Trigger Value: Condition: Above

Save Settings... Load Settings... OK Cancel

Next, decide the trigger value for the watch parameter.

Enter the desired value into the "Trigger value" box using the PC keyboard.

3000 (rpm) has been entered in the sample window. 3000 (rpm) is now the standard trigger value.

Next, set the "trigger conditions" box to a value above or below the standard value.

Snapshot and Graph Settings

Parameter	Dis...	Log	Gr...	Lin...	Axi...
Check All	☒	☒			
ENGINE SPE...	☒	☒	☒		Y1
TP SENSOR	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
IAT SENSOR	☒	☒	☒		Y2
MAP SENSOR	☒	☒	☒		
BARO SENS...	☒	☒	☒		
HO2S	☒	☒	☒		
ST FUEL TRIM	☒	☒	☒		

Y1 Max: 7000.00 Y2 Max: 5.00

Y1 Parameter: ENGINE SPEED Y2 Parameter: IAT SENSOR

Y1 Min: 0.00 X-Axis Range: 80 Y2 Min: 0.00

Store Time Before Trigger: -15 Total Time: 30 Sec Store Time After Trigger: 15

High Speed Sampling: ☐ On ☒ Off

Trigger: ☐ Manual ☒ Parameter ☐ DTC

Select watch parameter: ENGINE SPEED

Trigger Value: 3000 Condition: Above (highlighted)

Save Settings... Load Settings... OK Cancel

3. The snapshot offers a high-speed sampling function.

This function makes it possible to shorten the sampling time by reducing the amount of data to be read.

Click the checkbox for "Log" in "Check All" in the next screen.

Snapshot and Graph Settings

Parameter	Dis	Log	Gr	Lin...	Axi...
Check All	☒	☒			
ENGINE SPE...	☒	☒	☒		Y1
TP SENSOR	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
IAT SENSOR	☒	☒	☒		Y2
MAP SENSOR	☒	☒	☒		
BARO SENS...	☒	☒	☒		
HO2S	☒	☒	☒		
ST FUEL TRIM	☒	☒	☒		

Y1 Max: 7000.00 Y2 Max: 5.00

Y1 Parameter: ENGINE SPEED Y2 Parameter: IAT SENSOR

Y1 Min: 0.00 X-Axis Range: 80 Y2 Min: 0.00

Store Time Before Trigger: -15 Total Time: 30 Sec Store Time After Trigger: 15

Trigger: ☒ Manual ☐ Parameter ☐ DTC

Select watch parameter: ENGINE SPEED Trigger Value: Condition: Above

High Speed Sampling: ☒ On ☐ Off

Save Settings... Load Settings... OK Cancel

When the "Log" checkbox is clicked, the ticks disappear from the parameters.

Snapshot and Graph Settings

Parameter	Dis	Log	Gr	Lin...	Axi...
Check All	☒	☒			
ENGINE SPE...	☒	☒	☒		Y1
TP SENSOR	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
ECT SENSO...	☒	☒	☒		Y1
IAT SENSOR	☒	☒	☒		Y2
MAP SENSOR	☒	☒	☒		
BARO SENS...	☒	☒	☒		
HO2S	☒	☒	☒		
ST FUEL TRIM	☒	☒	☒		

Y1 Max: 7000.00 Y2 Max: 5.00

Y1 Parameter: ENGINE SPEED Y2 Parameter: IAT SENSOR

Y1 Min: 0.00 X-Axis Range: 80 Y2 Min: 0.00

Store Time Before Trigger: -15 Total Time: 30 Sec Store Time After Trigger: 15

Trigger: ☒ Manual ☐ Parameter ☐ DTC

Select watch parameter: Trigger Value: Condition: Above

High Speed Sampling: ☒ On ☐ Off

Save Settings... Load Settings... OK Cancel

When "ON" is clicked for the high-speed sampling, the following appears.

The initial setting is for the two upper parameters.

Snapshot and Graph Settings

Parameter	Dis...	Log	Gr...	Lin...	Axi...
Check All	☒	☐	☐	☐	☐
ENGINE SPE...	☒	☒	☒	Y1	
TP SENSOR	☒	☒	☒	Y2	
ECT SENSO...	☐	☐	☐		
ECT SENSO...	☐	☐	☐		
ECT SENSO...	☐	☐	☐		
IAT SENSOR	☐	☐	☐		
MAP SENSOR	☐	☐	☐		
BARO SENS...	☐	☐	☐		
HO2S	☐	☐	☐		
ST FUEL TRIM	☐	☐	☐		

Y1 Max: 7000.00 Y2 Max: 5.00

Y1 Parameter: ENGINE SPEED Y2 Parameter: TP SENSOR

Y1 Min: 0.00 X-Axis Range: 80 Y2 Min: 0.00

High Speed Sampling: ☒ On ☐ Off

Store Time Before Trigger: -15 Total Time: 30 Sec Store Time After Trigger: 15

Trigger: ☒ Manual ☐ Parameter ☐ DTC

Select watch parameter: ENGINE SPEED Trigger Value: Condition: Above

Save Settings... Load Settings... OK Cancel

When you want to save a parameter, click on the "Log" checkbox.

Snapshot and Graph Settings

Parameter	Dis...	Log	Gr...	Lin...	Axi...
Check All	☒	☐	☐	☐	☐
ENGINE SPE...	☒	☒	☒	Y1	
TP SENSOR	☒	☒	☒	Y2	
ECT SENSO...	☐	☐	☐		
ECT SENSO...	☐	☐	☐		
ECT SENSO...	☐	☐	☐		
IAT SENSOR	☐	☐	☐		
MAP SENSOR	☐	☐	☐		
BARO SENS...	☐	☐	☐		
HO2S	☐	☐	☐		
ST FUEL TRIM	☐	☐	☐		

Y1 Max: 7000.00 Y2 Max: 5.00

Y1 Parameter: ENGINE SPEED Y2 Parameter: TP SENSOR

Y1 Min: 0.00 X-Axis Range: 80 Y2 Min: 0.00

High Speed Sampling: ☒ On ☐ Off

Store Time Before Trigger: -15 Total Time: 30 Sec Store Time After Trigger: 15

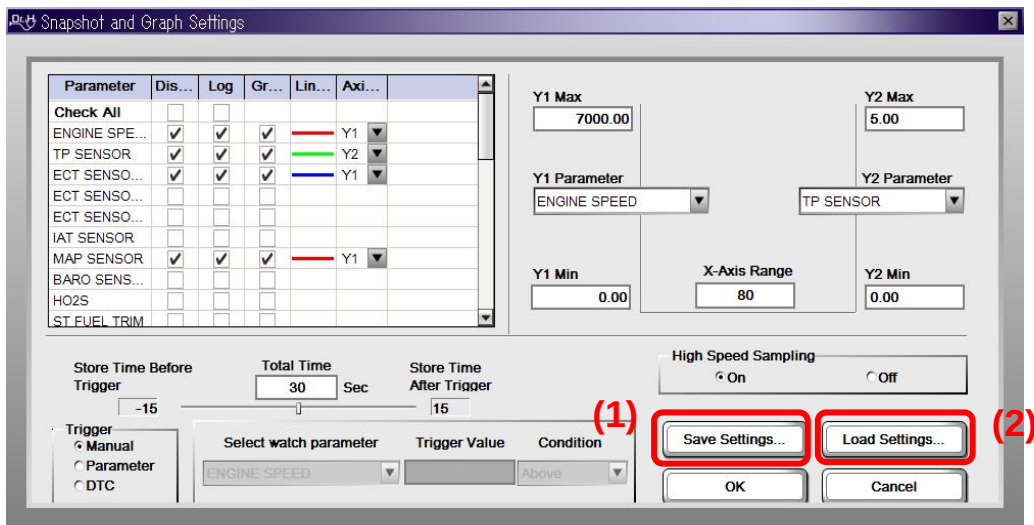
Trigger: ☒ Manual ☐ Parameter ☐ DTC

Select watch parameter: ENGINE SPEED Trigger Value: Condition: Above

Save Settings... Load Settings... OK Cancel

5. Each item set for each type of snapshot can be saved and read.

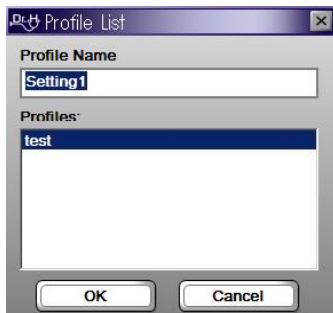
It is possible to record data for the same conditions by (1) saving the settings, (2) reading this setting.



When "Save Settings" is clicked, the following window is displayed.

Enter the required name in the name box.

The initial setting is to display Setting 1.



When "Load settings" is clicked, the following message appears.

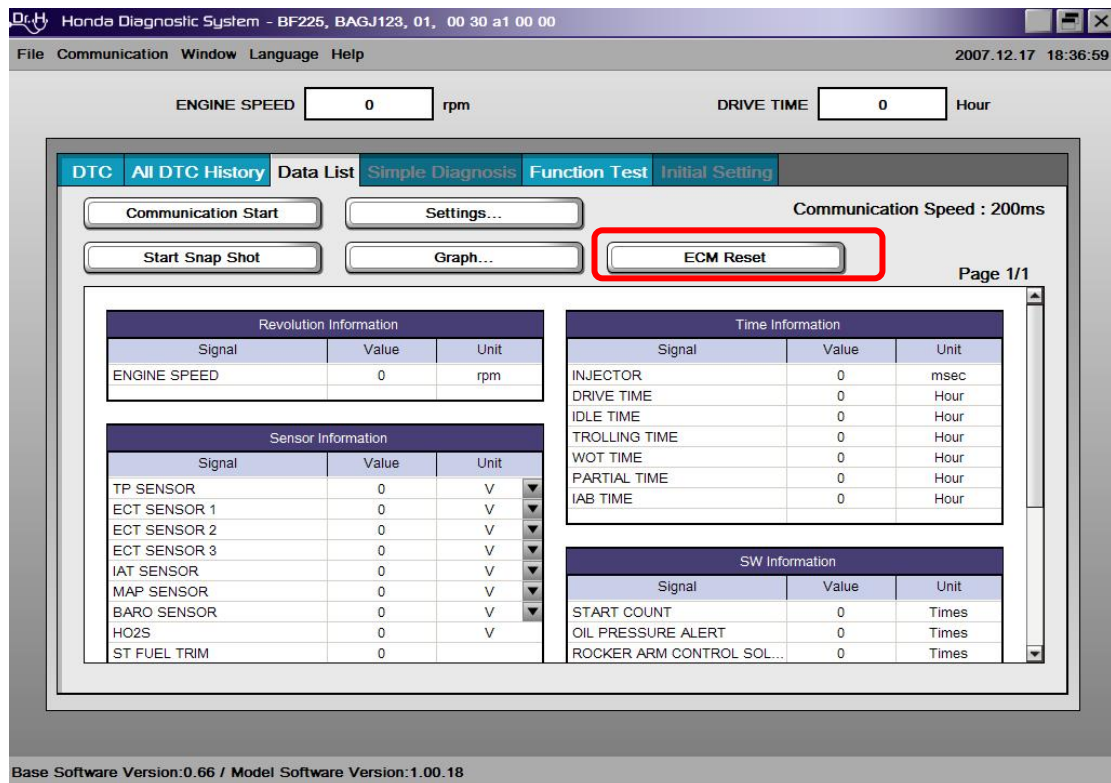
The saved name is shown in the profile list.

When the name shown in the profile list is selected, it is possible to record the snapshot under the same conditions that were used with this name.



ECU reset function

Click "ECM Reset" Delete ECM value.



When the following message appears, click "Yes" to execute it.



11 - 4. Simple diagnosis

This function enables you to make a print out showing the condition of the product during periodic inspections, and to provide information to clients in the form of reports.

1. When the "Read button" is clicked, the data is displayed to the right of the screen.

ENG PULSE rpm Total hour for maintenance hour

(1) Read Button Make Service Report

Date: 2008.01.09
Customer: CSED
Purchase Date: 2008.01.09
Type: HSM1590I
Serial Number: SALJ1000013

Name: HST
Dealer Information: 023

DTC: 0
All DTC History

Page 1/1

Signal	Value	Unit
24V-V	23.93	V
12V-V	11.96	V

Signal	Value	Unit
Total hour for maintenance	12	hour
Motor Operation Hours	254	min.

Signal	Value	Unit
AUG CL Number	752	times
AUG HEIGHT SW Number	6740	times

Base Software Version:0.69 / Model Software Version:1.00.20

2. You can enter the purchase date.

The initial setting is for the current date (2). Change this to the purchase date using the calendar function.

ENG PULSE rpm Total hour for maintenance hour

(2) Purchase Date Make Service Report

Date: 2008.01.10
Purchase Date: 2007.07.10
Serial Number: SALJ1000013

Name: HST
Dealer Information: 023

DTC: 0
All DTC History

Page 1/1

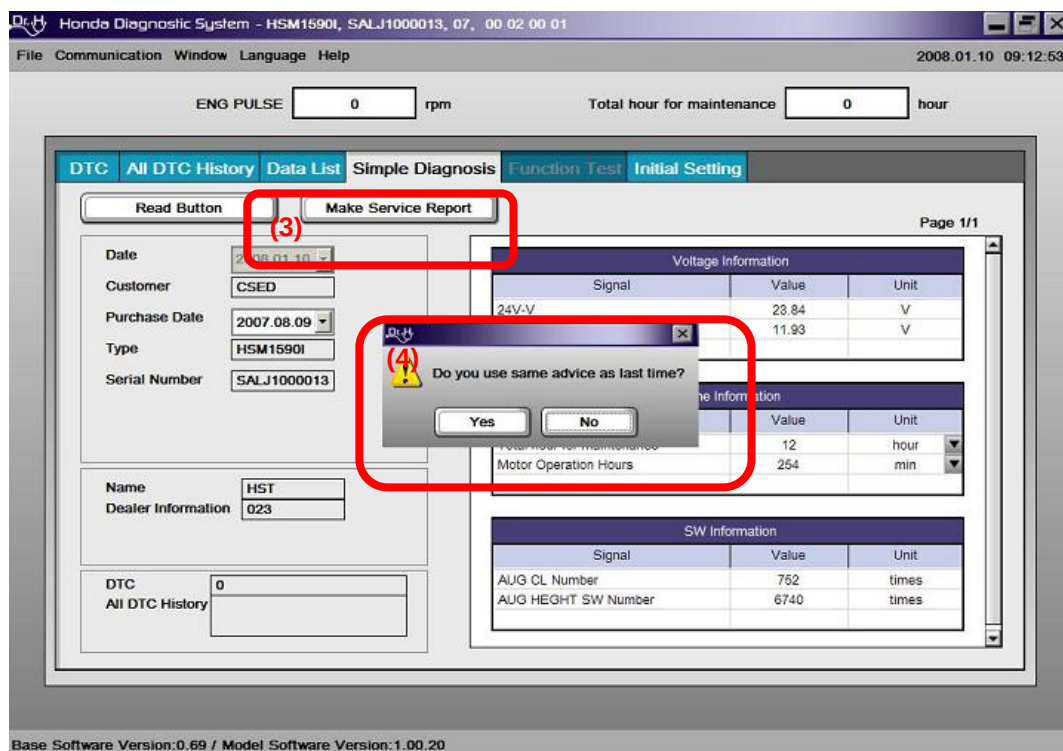
Signal	Value	Unit
24V-V	23.76	v
12V-V	11.84	v

Signal	Value	Unit
Total hour for maintenance	12	hour
Motor Operation Hours	256	min.

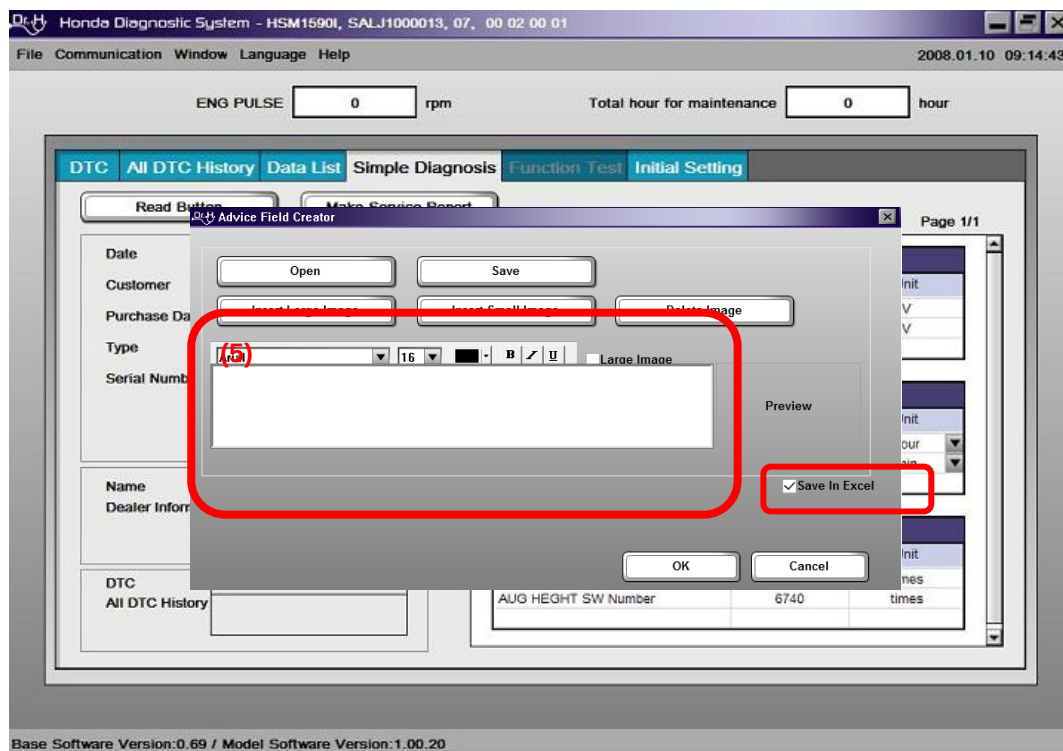
Signal	Value	Unit
AUG CL Number	752	times
AUG HEIGHT SW Number	6745	times

Base Software Version:0.69 / Model Software Version:1.00.21

- In the service report it is possible to add comments for the customer and insert images. Click on the "Make Service Report" button (3) to compile the service report. The following "Service Report" message appears. Select "No" when using for first time.

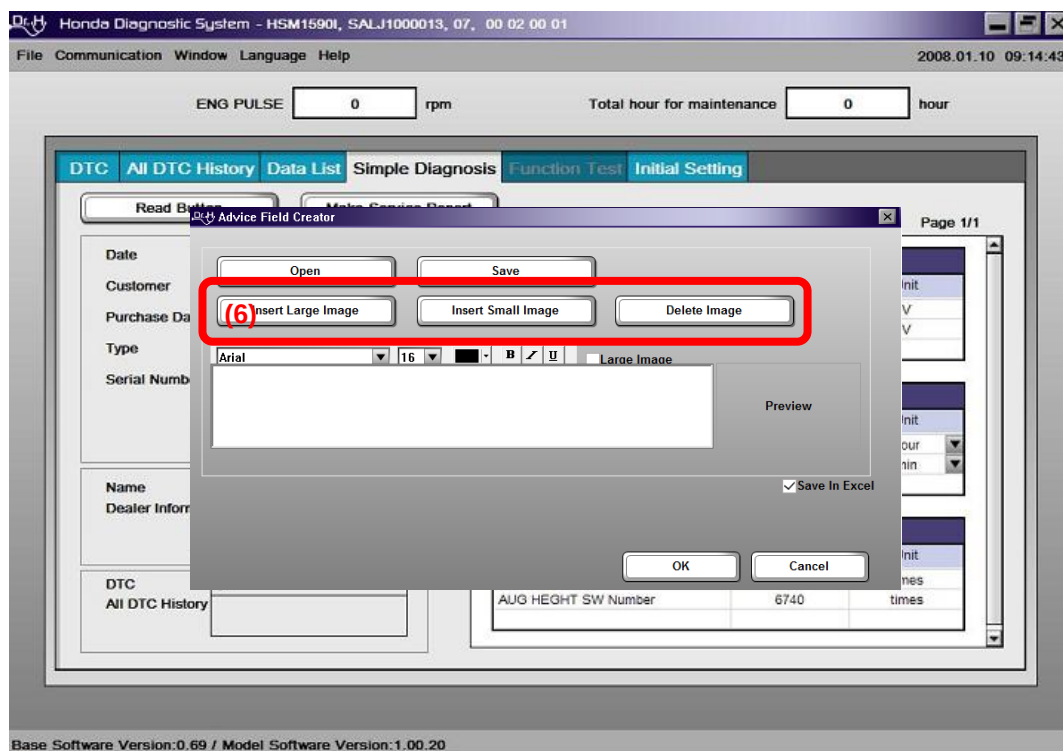


- You can choose the fonts and letter sizes to be used when writing the comments. Check "Save In Excel" check box if you want to save Service Report in excel file.



5. Inserting image

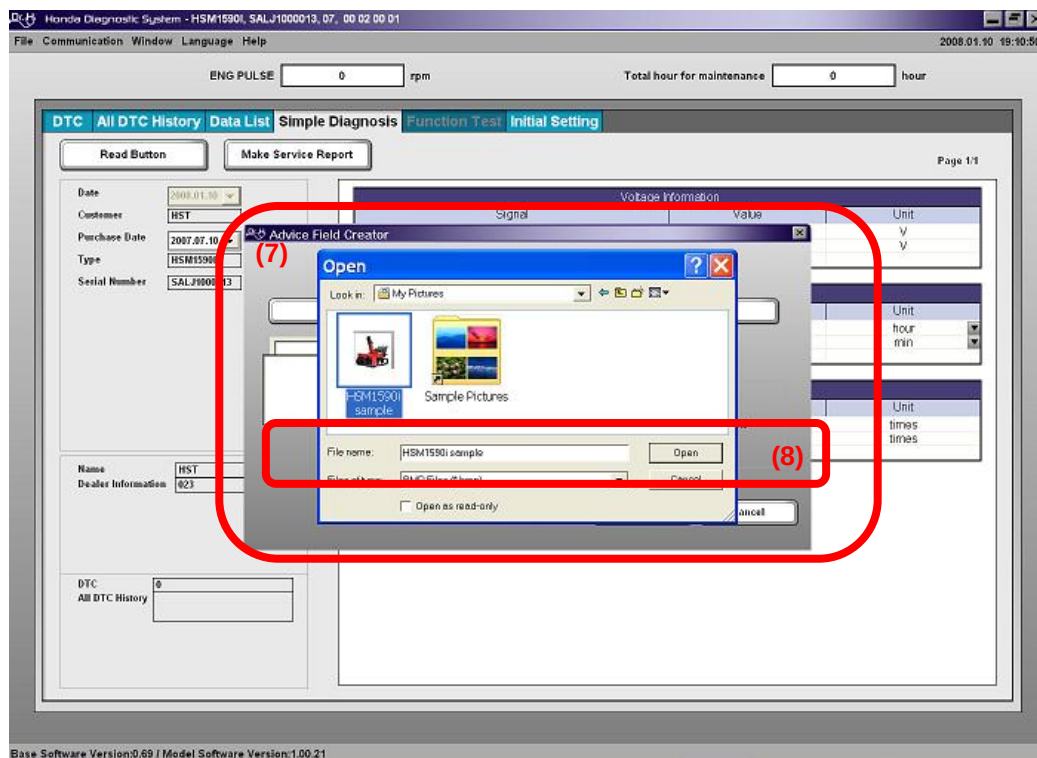
- 1. To insert an image into the report click the "Insert Image" button (6).



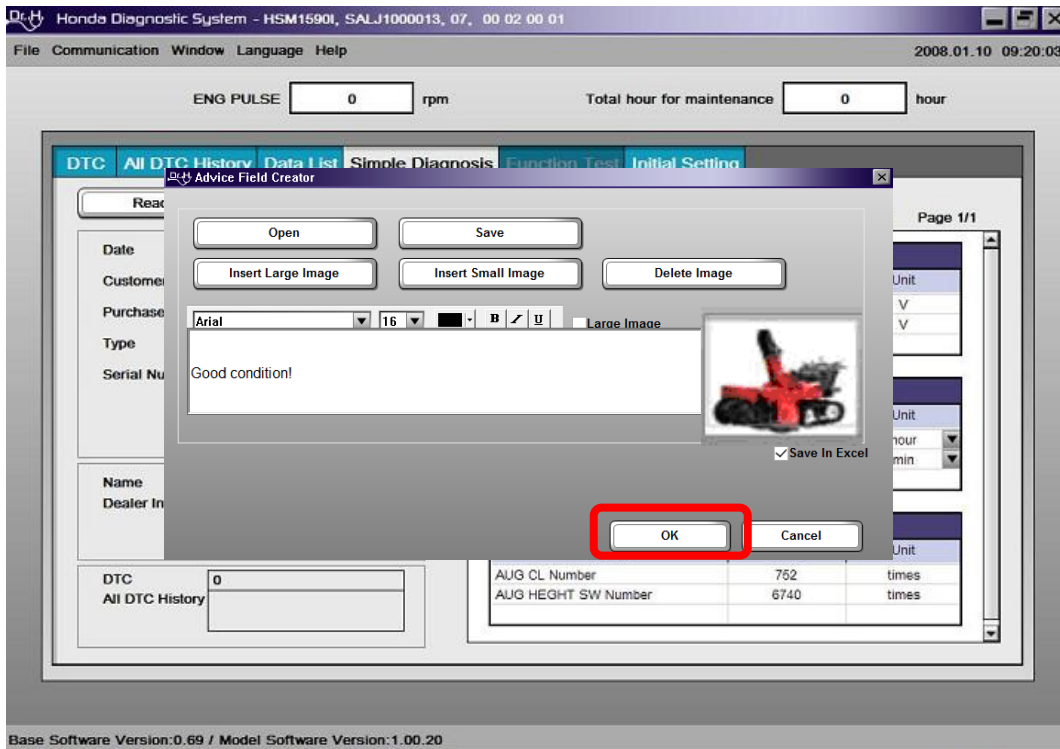
- 2. The image file is read when the "Insert Image" button is clicked.

(7) The "Open File" screen is displayed. When the image is selected, click "Open".

(Make sure you have already prepared the image)



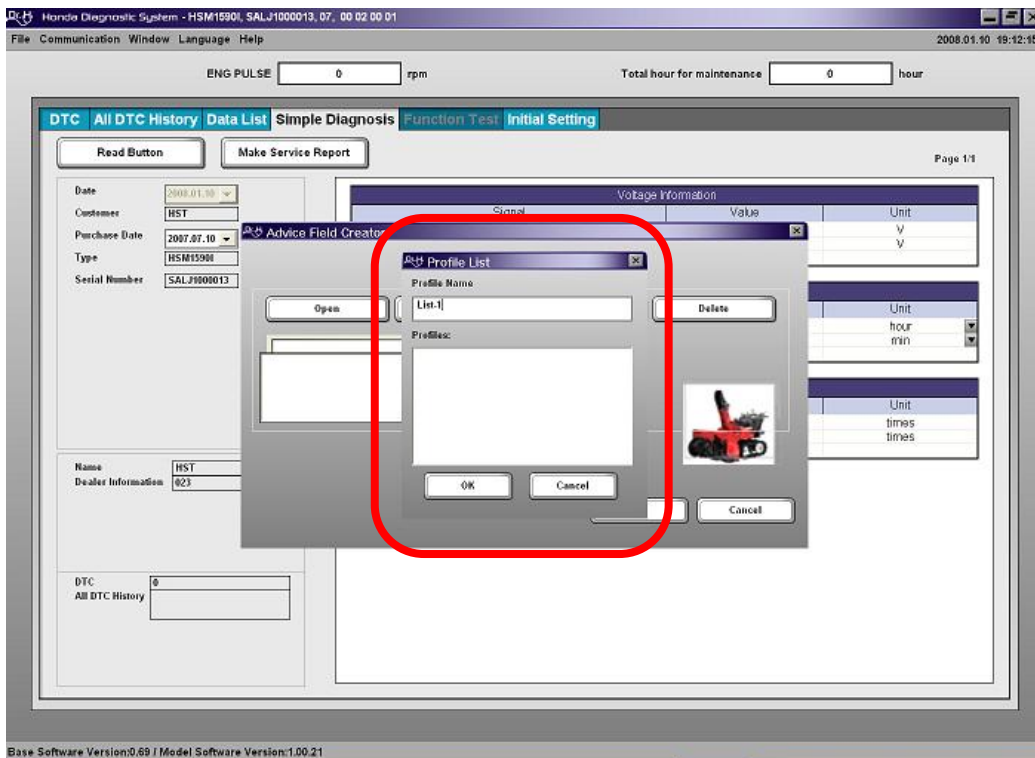
6. When finished entering comments and inserting images, click "OK".



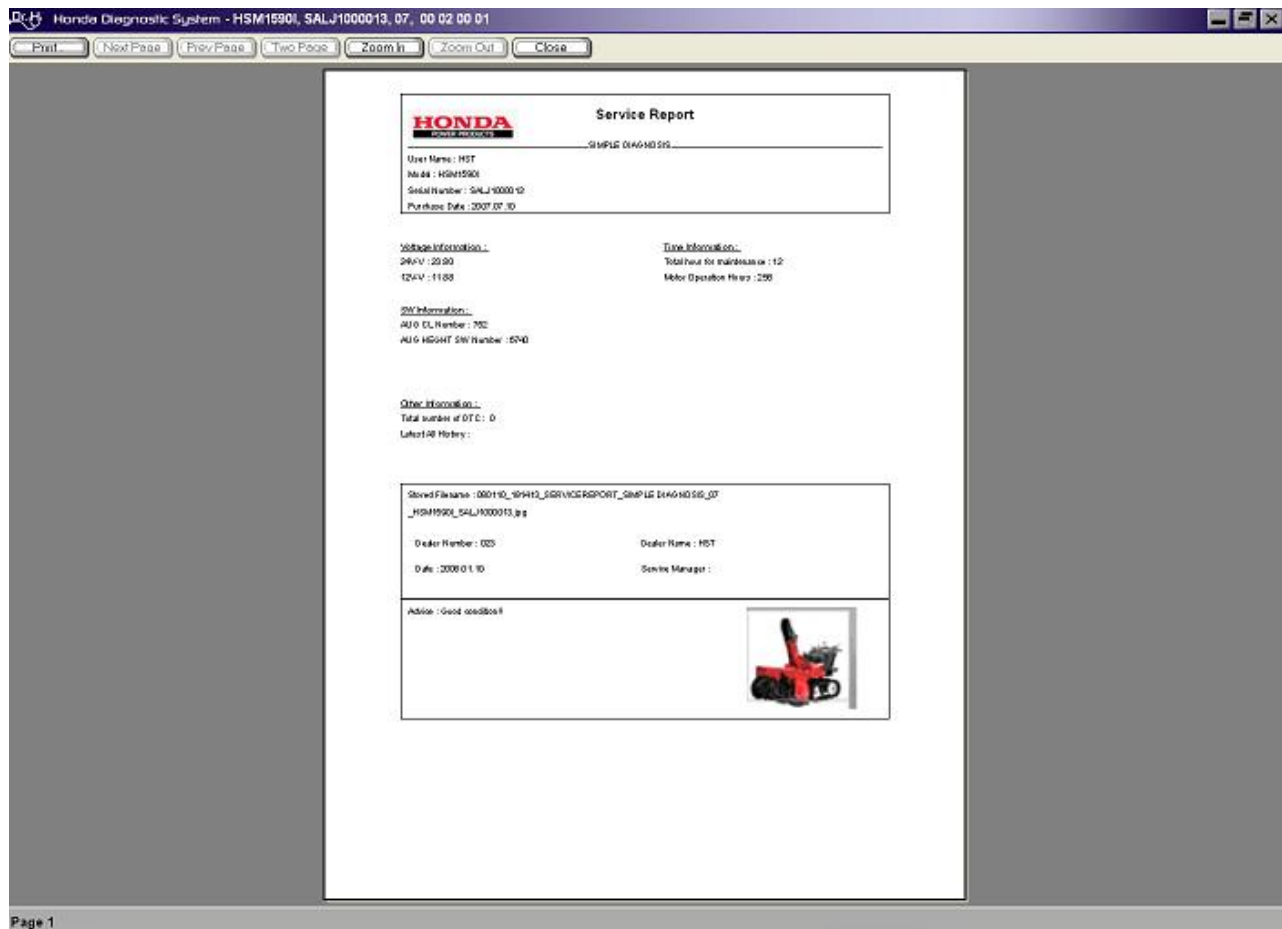
7. The following profile list is displayed. Enter name if desired.

It is possible to save the setting for the image and the comments that were entered.

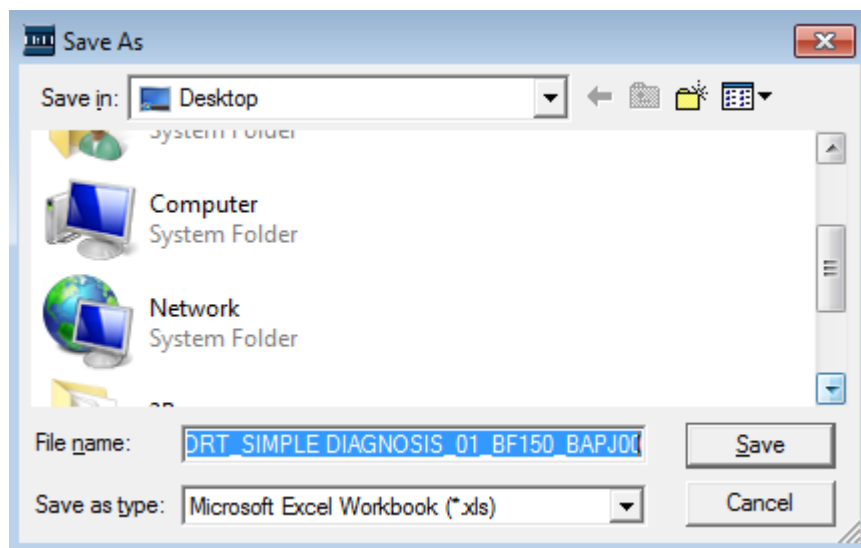
Click "OK". Print image window comes up.



8. This is the print preview window.



9. "Save As" window opens when you check "Save In Excel" check box.



11 - 5. Function test

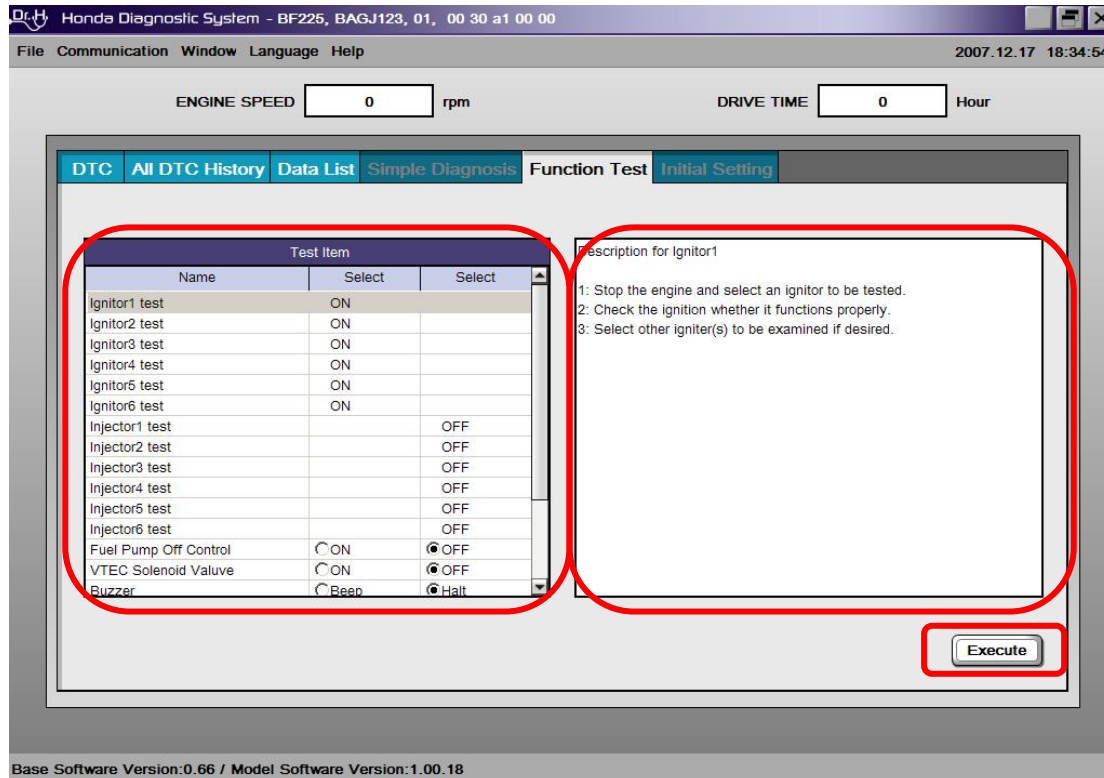
The function test window displays each type of test that can be performed.

The test items are shown in the left area of the screen. The test items are different for each model.

There is an explanation of each selected test item in the right area of the screen.

To perform the test items, click the "Execute" button in the lower right-hand corner of the screen.

A function test is performed to check the operation for each product device.



11 - 6. Initial setting

This displays the initially set value recorded in the ECU installed in the iGX engine.

*The sample window is for a snow plow.

Click "Read".

The screenshot shows the 'Initial Setting' window with the 'Reading Button' highlighted. The window displays initial values for various parameters, all of which are 0.00.

Accel Information	
Signal	Value
INT-ACCMAX	0.00
INT-ACCWMAX	0.00
INT-ACCWMIN	0.00
INT-ACCMIN	0.00
INT-ACCN	0.00

Break Information	
Signal	Value
INT-BRMAX	0.00
INT-BRMIN	0.00
INT-BLMAX	0.00
INT-BLMIN	0.00

Auger Height Information	
Signal	Value
INT-AUGHMAX	0.00
INT-AUGHMIN	0.00
INT-AUGHCTR	0.00

Auger Roll Information	
Signal	Value
INT-AUGRMAX	0.00
INT-AUGRMIN	0.00
INT-AUGRCTR	0.00

NE Information	
Signal	Value
INT-NeMAX	0.00
INT-NeMIN	0.00

The initial values are displayed. It is possible to use this for diagnostic examinations by making comparisons with current values in the data list.

The screenshot shows the 'Initial Setting' window after clicking the 'Reading Button'. The values are updated to reflect the current state of the engine. A red oval highlights the data tables.

Accel Information	
Signal	Value
INT-ACCMAX	4.61
INT-ACCWMAX	3.71
INT-ACCWMIN	0.74
INT-ACCMIN	1.44
INT-ACCN	2.07

Break Information	
Signal	Value
INT-BRMAX	4.72
INT-BRMIN	2.06
INT-BLMAX	4.36
INT-BLMIN	1.73

Auger Height Information	
Signal	Value
INT-AUGHMAX	4.85
INT-AUGHMIN	1.11
INT-AUGHCTR	2.00

Auger Roll Information	
Signal	Value
INT-AUGRMAX	0.72
INT-AUGRMIN	4.60
INT-AUGRCTR	2.35

NE Information	
Signal	Value
INT-NeMAX	5.03
INT-NeMIN	1.00

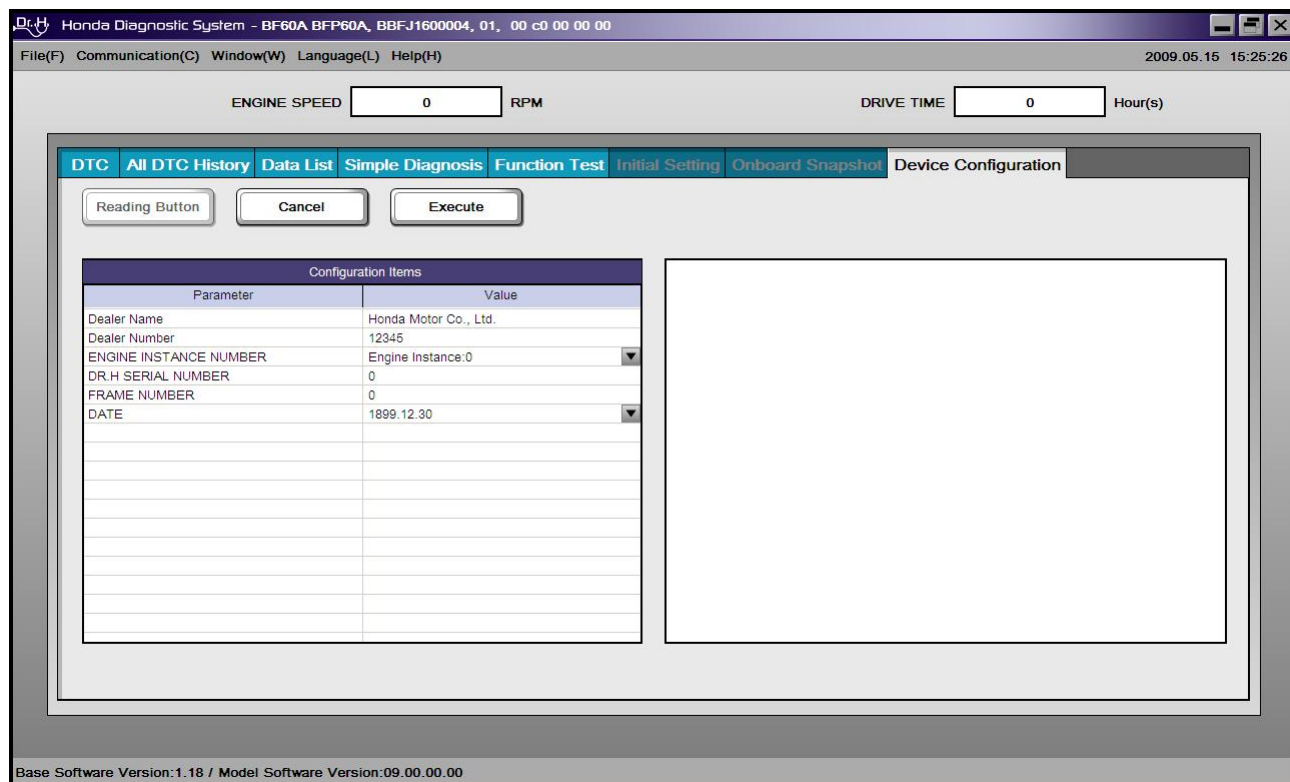
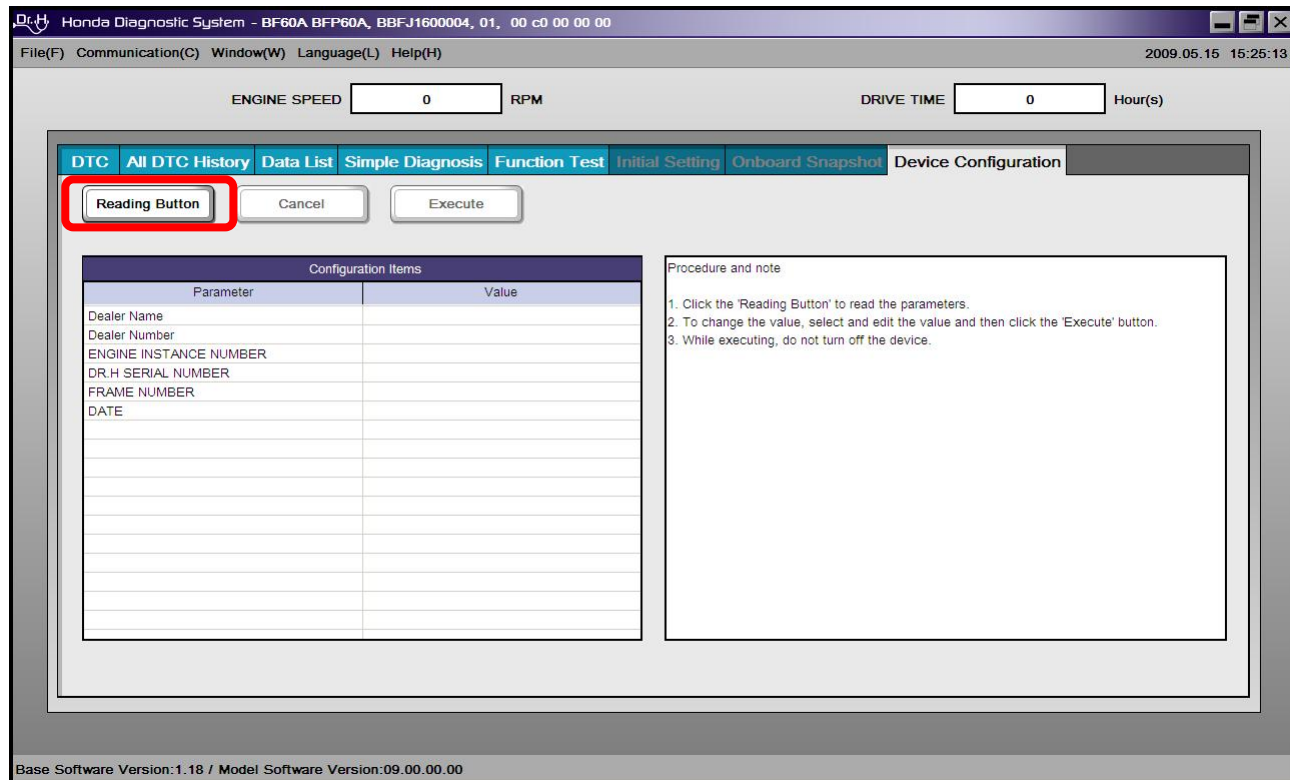
11 - 7. Device Configuration

This mode will allow you to configure Engine Instance for multiple engines. .

The configuration is not required for a single engine.

“Device Configuration” tab is deactivated when ECM does not support this mode.

Clicking “Reading Button” will display the stored signal value.



Select signals to be changed and change the value according to the procedures

Device Configuration Procedures:

Dealer Name and Dealer Code are the values entered by the user while installing the Dr.H application.

Select signals to be changed and change the value if needed.

The screenshot shows the 'Device Configuration' window in the Honda Diagnostic System. The window has a menu bar with 'File(F)', 'Communication(C)', 'Window(W)', 'Language(L)', and 'Help(H)'. The title bar reads 'Honda Diagnostic System - BF60A BFP60A, BBFJ1600004, 01, 00 c0 00 00 00'. The status bar at the bottom indicates 'Base Software Version:1.18 / Model Software Version:09.00.00.00'.

At the top, there are two input fields: 'ENGINE SPEED' with a value of '0' and 'RPM', and 'DRIVE TIME' with a value of '0' and 'Hour(s)'. Below these are three buttons: 'Reading Button', 'Cancel', and 'Execute'.

The main area contains a table titled 'Configuration Items' with two columns: 'Parameter' and 'Value'. The table lists the following parameters and values:

Parameter	Value
Dealer Name	Honda Motor Co., Ltd.
Dealer Number	ABCDE
ENGINE INSTANCE NUMBER	Engine Instance:0
DR.H SERIAL NUMBER	0
FRAME NUMBER	0
DATE	1899.12.30

To the right of the table is a large text area labeled 'Dealer Number'.

Select Engine Instance Number to be changed in drop-down selection boxes

This screenshot is similar to the previous one, but the 'ENGINE INSTANCE NUMBER' dropdown menu is open, showing a list of engine instances. The list includes 'Engine Instance:0', 'Engine Instance:1', 'Engine Instance:2', 'Engine Instance:3', and 'Engine Instance:4'. The 'Engine Instance:1' option is currently selected.

The rest of the window, including the menu bar, title bar, status bar, and other configuration items, remains the same as in the previous screenshot.

Enter your 7 digit Dr.H Serial Number.

Enter 7 digit Frame Number.

Set the date using the calendar.

Once all selections have been made, an Execute button will be available.

Click Execute button to change the device configuration.

Honda Diagnostic System - BF60A BFP60A, B8FJ1600004, 01, 00 c0 00 00 00

File(F) Communication(C) Window(W) Language(L) Help(H) 2009.05.15 15:30:41

ENGINE SPEED RPM DRIVE TIME Hour(s)

DTC All DTC History Data List Simple Diagnosis **Function Test** Initial Setting Onboard Snapshot Device Configuration

Reading Button Cancel **Execute**

Parameter	Value
Dealer Name	Honda Motor Co., Ltd.
Dealer Number	ABCDE
ENGINE INSTANCE NUMBER	Engine Instance:1
DR.H SERIAL NUMBER	1100630
FRAME NUMBER	1600004
DATE	2009.05.15

May, 2009

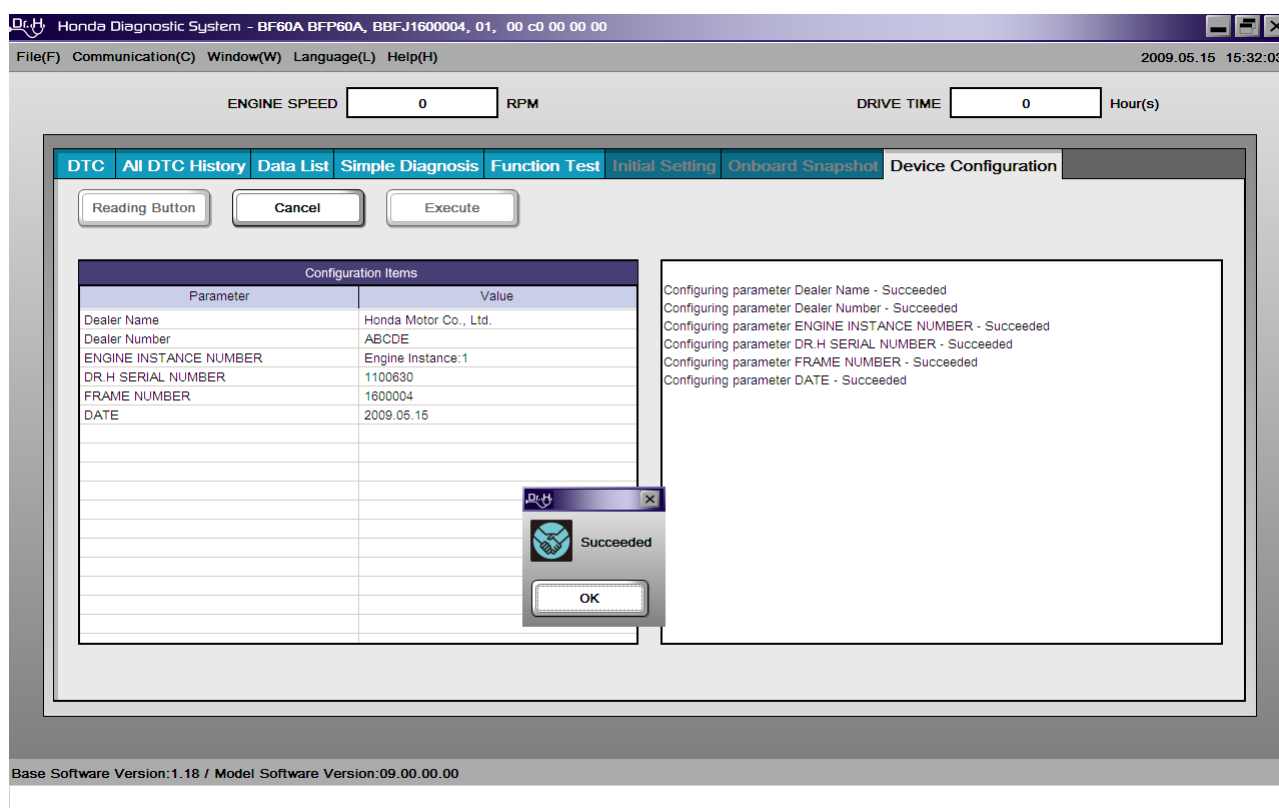
Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

Today: 5/25/2009

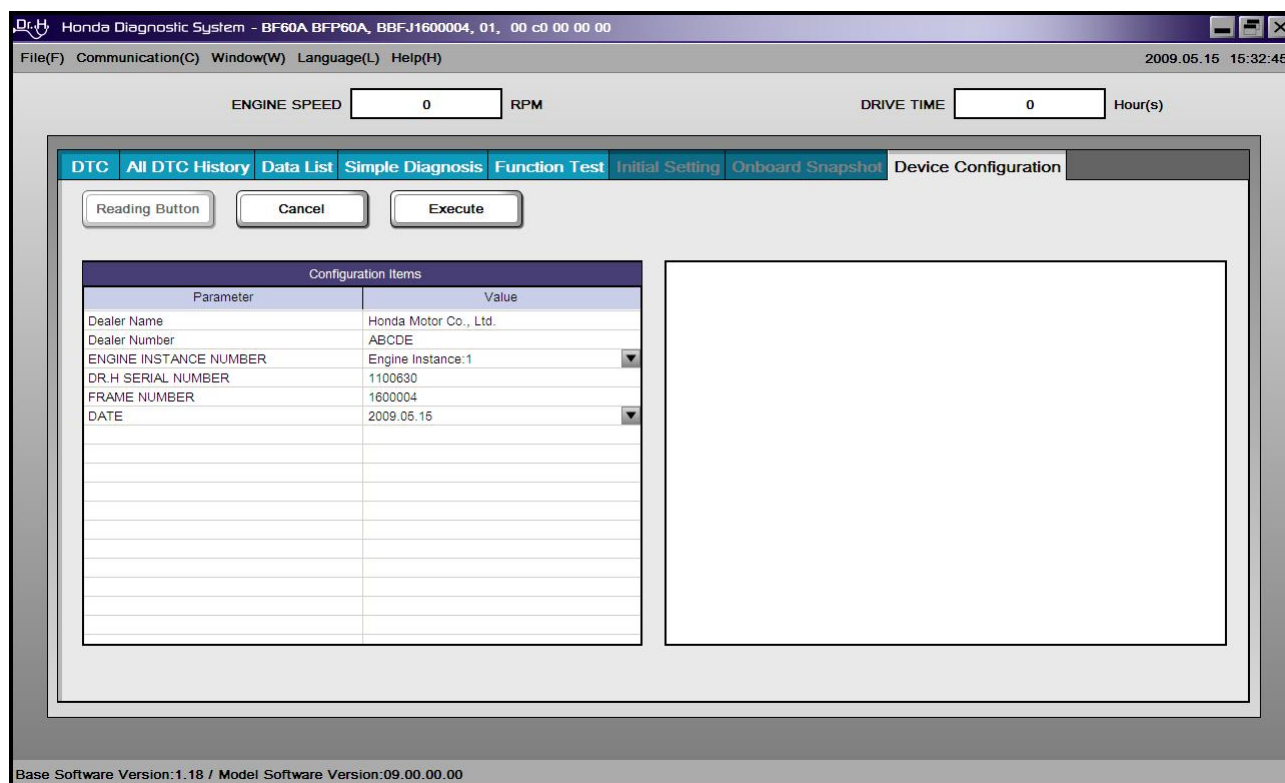
DATE

Base Software Version:1.18 / Model Software Version:09.00.00.00

Please do not turn off the combination switch (Ignition Switch) during configuration.



Clicking "Reading Button" will display the changed signal value.



11 - 8. Onboard Snapshot

When data is stored in the ECM memory, the data is retrieved from the ECM.

Onboard Snapshot triggers when DTC occurs and stores the data in the ECM memory for 3 seconds before and for 1 second after the trigger occurs.

“Onboard Snapshot” tab is deactivated when ECM does not support this mode.

Onboard Snapshot data is cleared when DTC is cleared.

Clicking “Reading Button” will display the stored data.

Irregular signals are highlighted in yellow.

The link for troubleshooting and the graph display function are also available.

Honda Diagnostic System - BF225A, BAGJ1600004, 01, 00 30 c0 00 00

File(F) Communication(C) Window(W) Language(L) Help(H) 2009.05.19 15:33:10

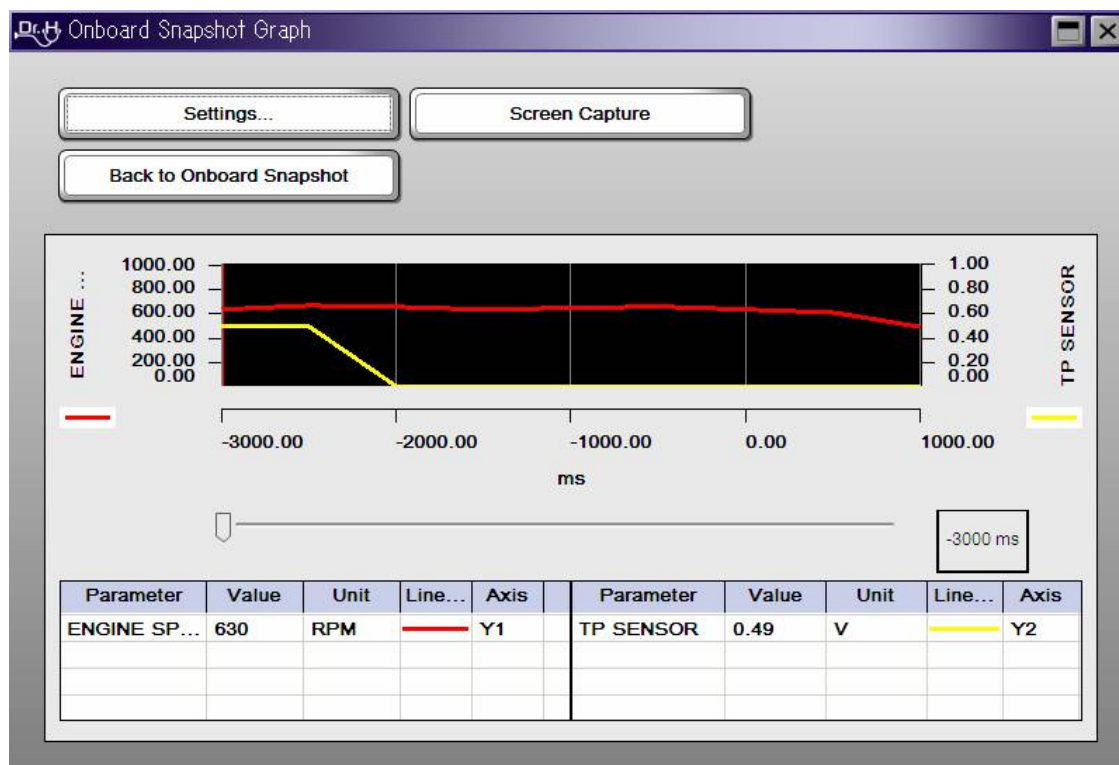
DTC All DTC History Data List Simple Diagnosis Function Test Initial Setting **Onboard Snapshot** Device Configuration

Reading Button Troubleshoot Graph... Save To Desktop

TP SENSOR VOLTAGE LOW - 7-1

Signal	Unit	-3000 ms	-2500 ms	-2000 ms	-1500 ms	-1000 ms	-500 ms	0 ms	500 ms	1000 ms
DRIVE TIME	Hour(s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ENGINE SPEED	RPM	630	663	662	630	643	664	630	604	486
EBT SENSOR	V	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
MAP SENSOR	V	1.42	1.40	1.42	1.42	1.42	1.42	1.42	1.40	1.37
BARO SENSOR	V	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87
HO2S	V	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.86
ALERT STATE	0=NORMAL/1=...	2	2	2	2	2	2	2	2	2
TP SENSOR	V	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IGLOG	deg	70.0	61.0	64.0	70.0	66.0	64.0	70.0	64.0	64.0
TARGET INJECTION TIME	ms	994.00	1000.00	1005.00	994.00	1000.00	1006.00	1003.00	972.00	889.00
INJECTION TIME COLLECTION VALUE	-	32768	32768	32768	32768	32768	32768	32768	32768	32768

Base Software Version:1.18 / Model Software Version:09.00.00.00



11 - 9. ECU Data Restoration

ECU Data Restoration will allow you to restore ECU Service parts to the initial ECU character.

ECU Data Management System stores ECU character. When you need to restore ECU character, download the file for the engine from the URL below.

ECU Data Management System URL: <https://biz.honda.co.jp/fnk10/index.jsp>

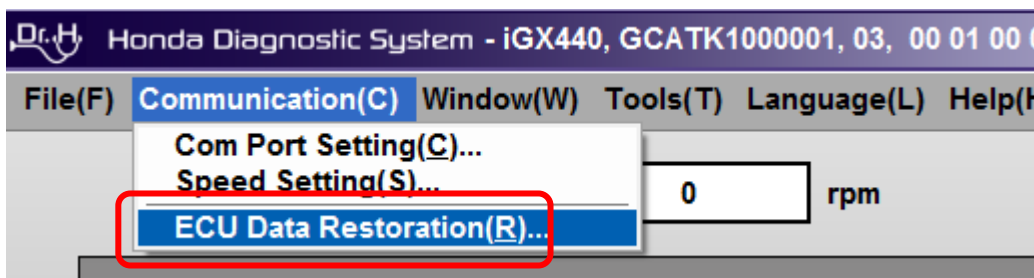
Enter the URL in IE and login into the system with your Web-ID and Password.

Download ECU character (data)

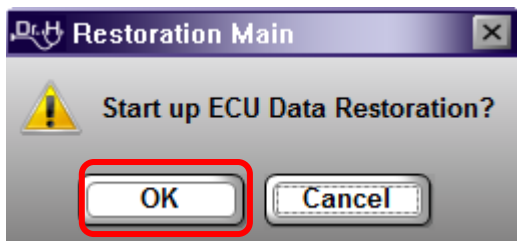
1. Connect iGX Engine and PC (Internet accessible) by Dr.H Unit and start communication.

Select “ECU Data Restoration(R)” from “Communication(C)” on the tool bar.

Note : Perform ECU Data Restoration with the engine off.

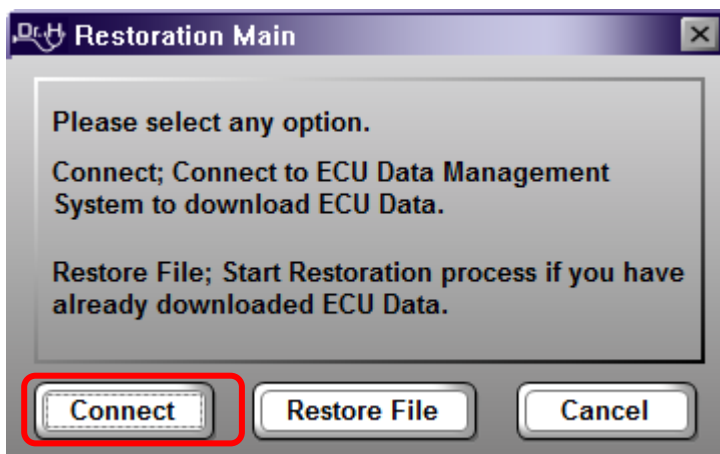


2. Click “OK”.

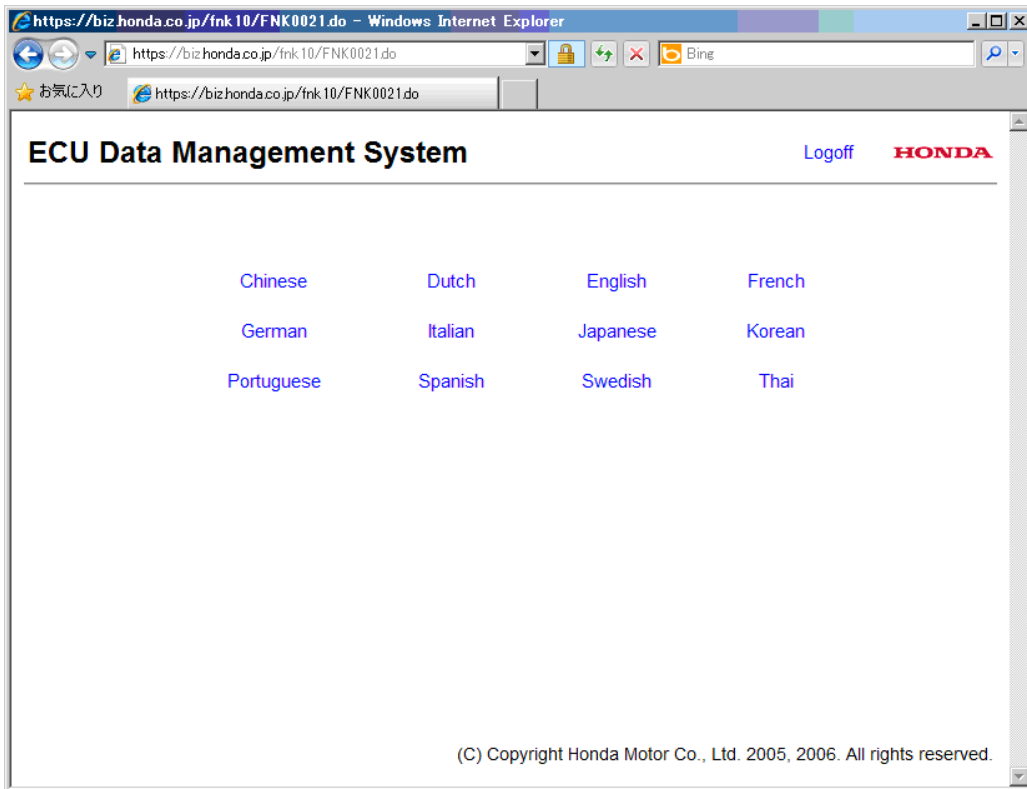


3. Click “Connect” to access to ECU Data Management System.

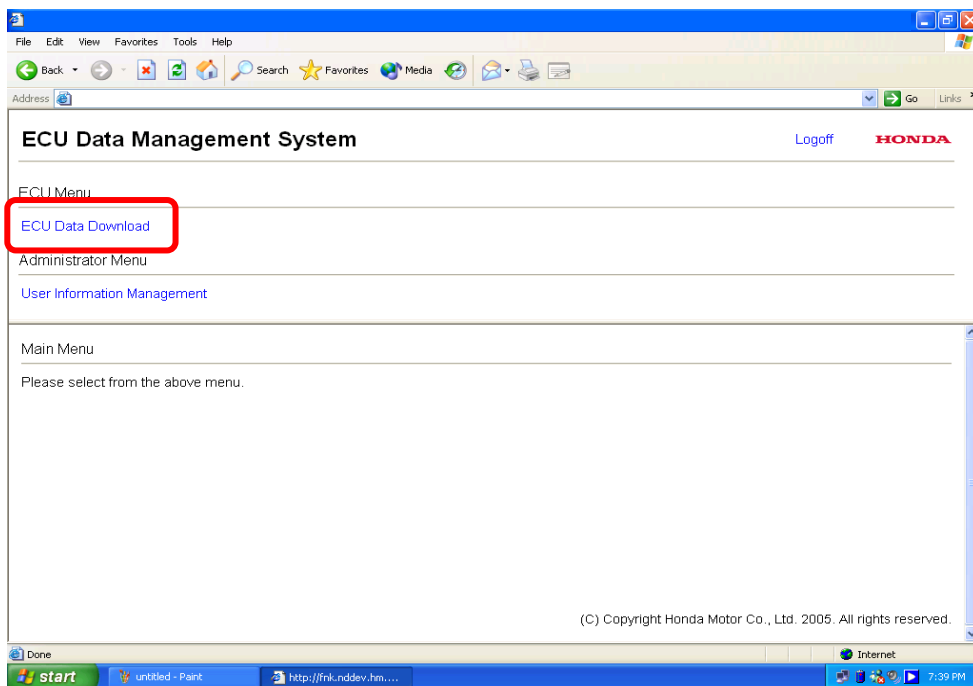
(If you have already downloaded ECU Data, click “Restore File” to go to the restoration process.)



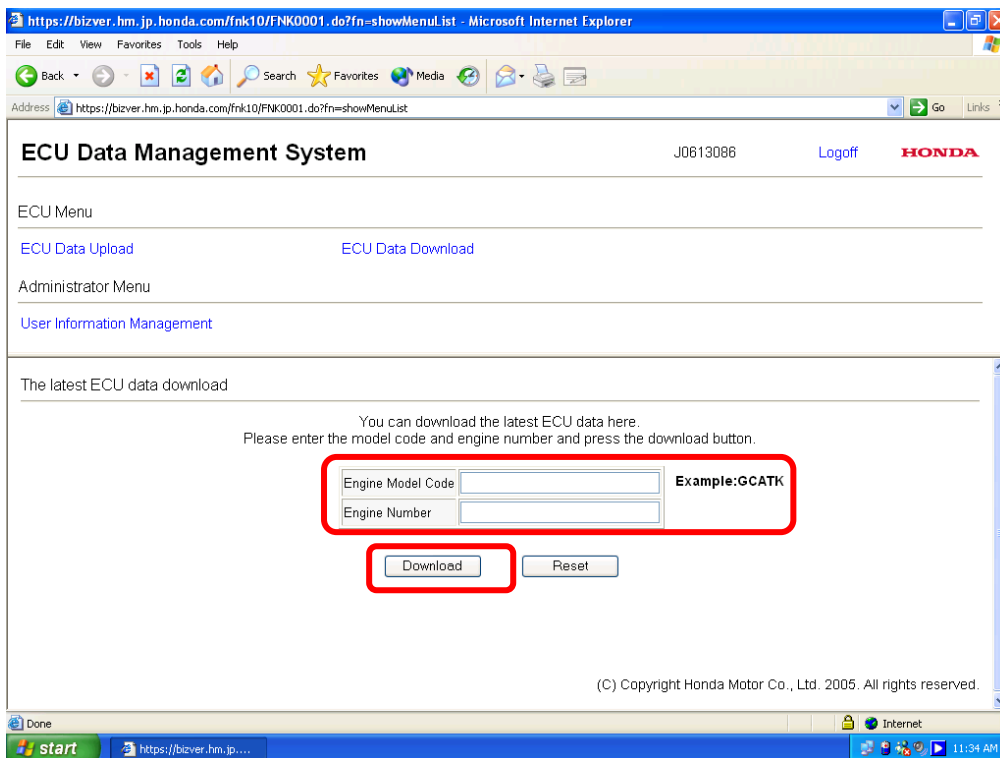
4. Select your language.



5. Click "ECU Data Download".



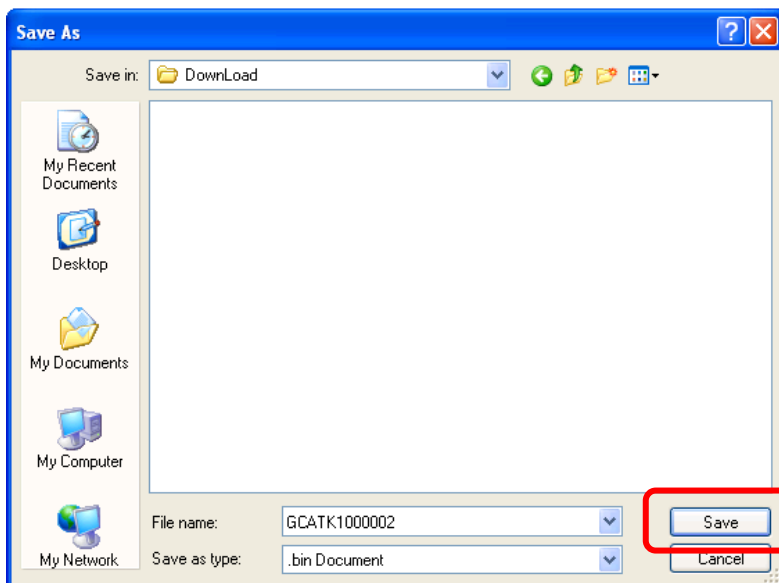
6. Enter Engine Model Code and Engine Number and click “Download”.



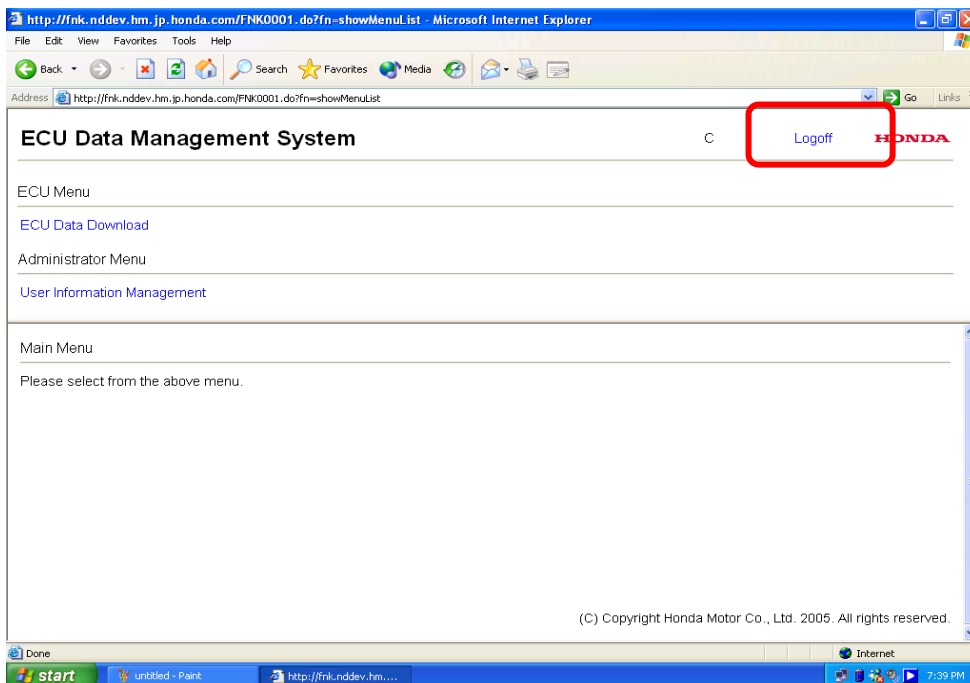
7. Confirm the Engine Serial Number and click “OK” to start downloading.



8. Select the destination for downloaded file and click “Save”.

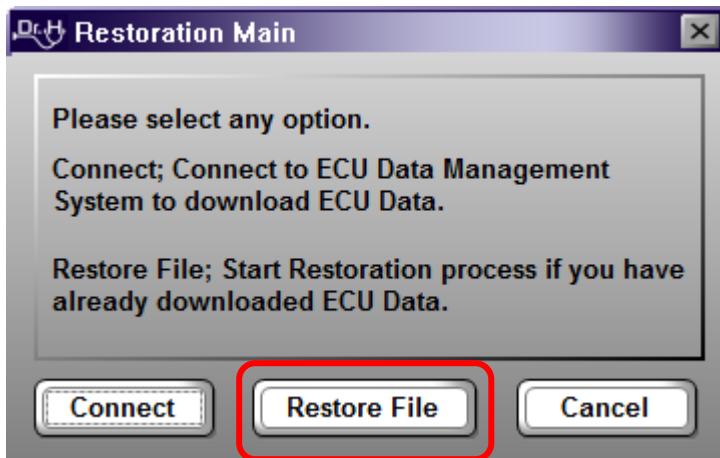


9. Logoff from ECU Data Management System.

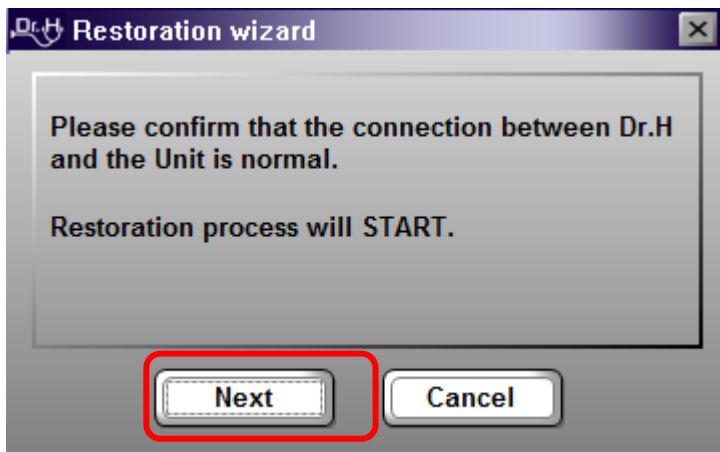


Restore ECU character (data)

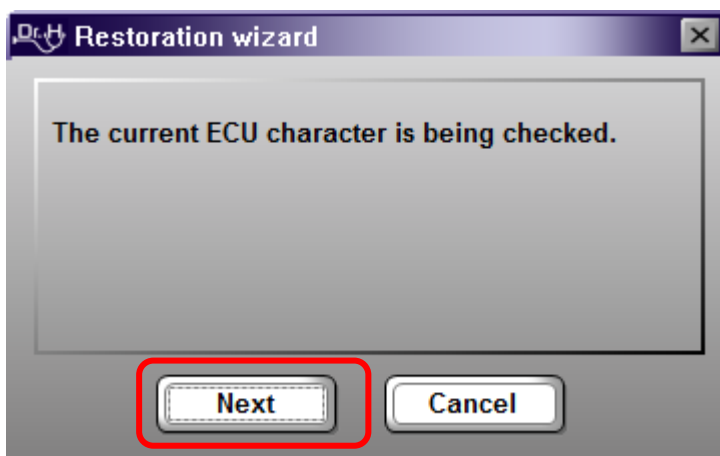
10. Click "Restore File".



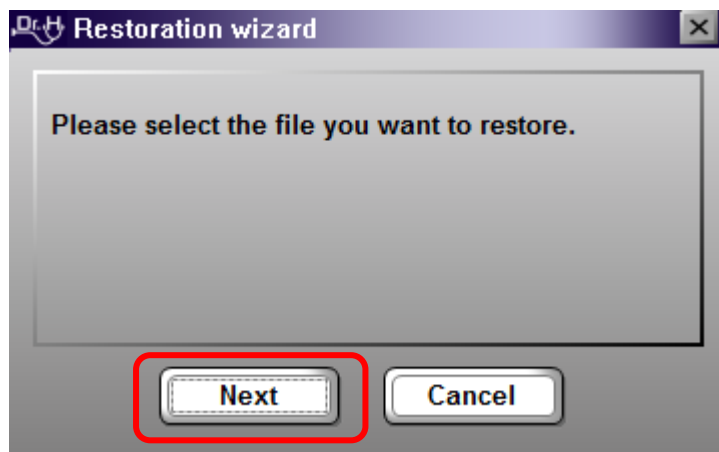
11. Check the connection between Dr.H and the unit, then click "Next".



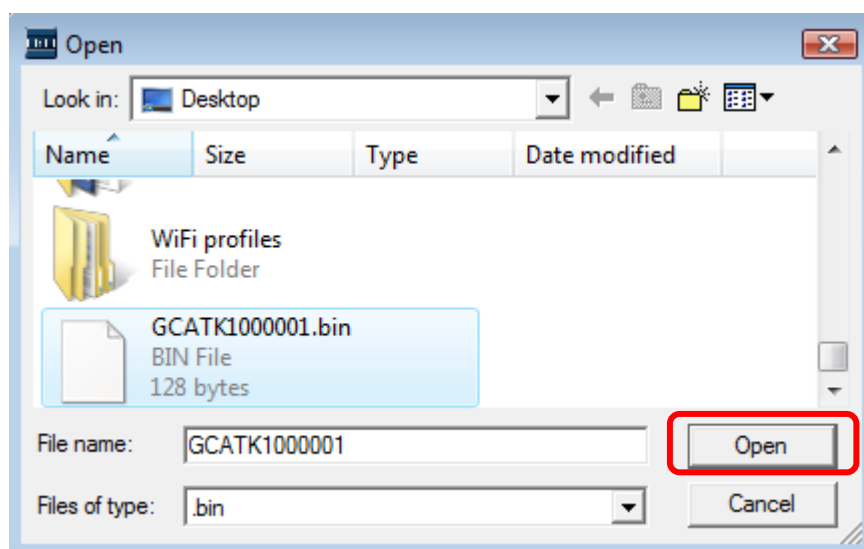
12. Click "Next".



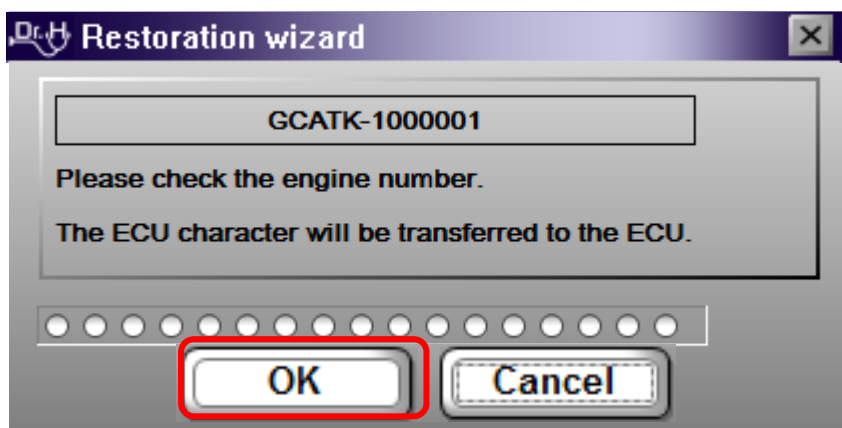
13. Click “Next” to go to the file selection screen.



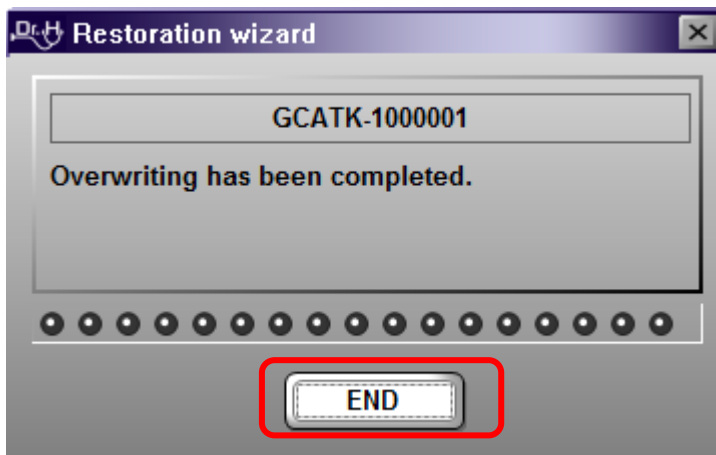
14. Select ECU Data file and click “Open”.



15. Check the Engine Serial Number. Click “OK” to start transferring the ECU character to the ECU.



16. Click “END” to exit ECU Data Restoration.



11 - 10. Review HDS stored files in Dr.H application

This function allows you to review HDS stored files in Dr.H application.

Note: HDS should be installed on the same PC.

1. Select “Tools – Convert HDS (stored files) to Dr.H” to invoke HDS “DataToTextConverter”.

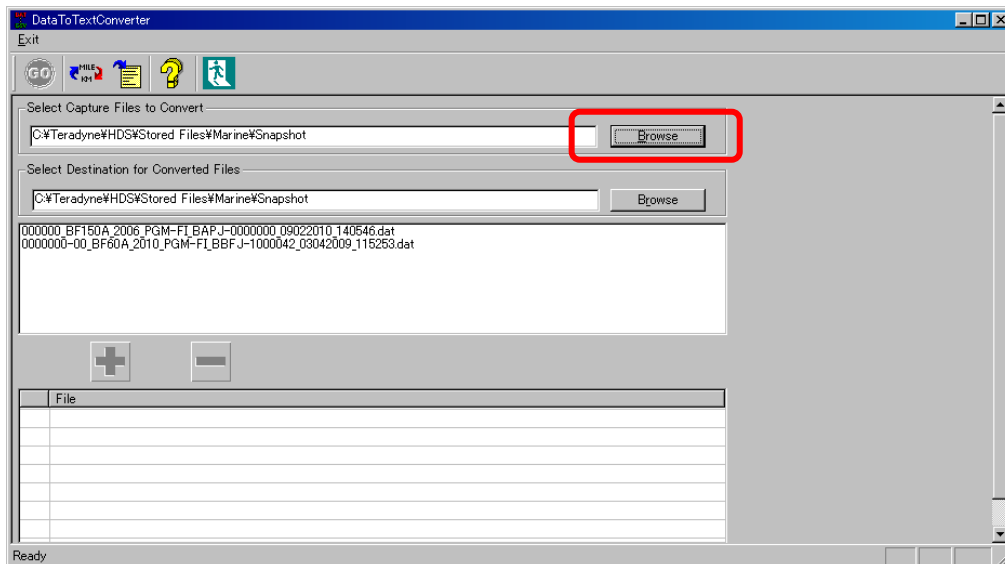


2. Select the directory holding the stored files to convert.

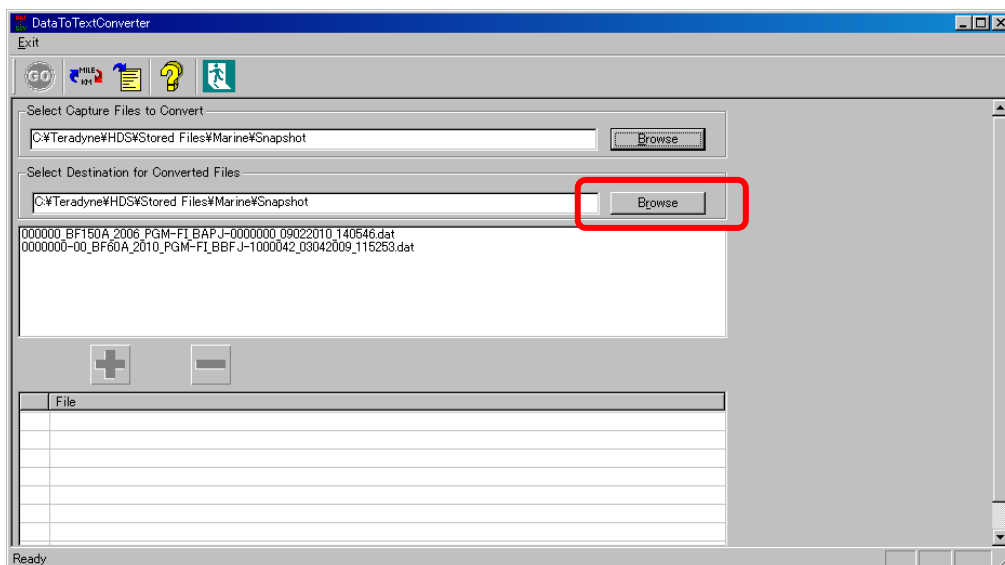
C:\Teradyne\HDS\Stored Files\Marine\Snapshot

C:\Teradyne\HDS\Stored Files\Marine\DTG

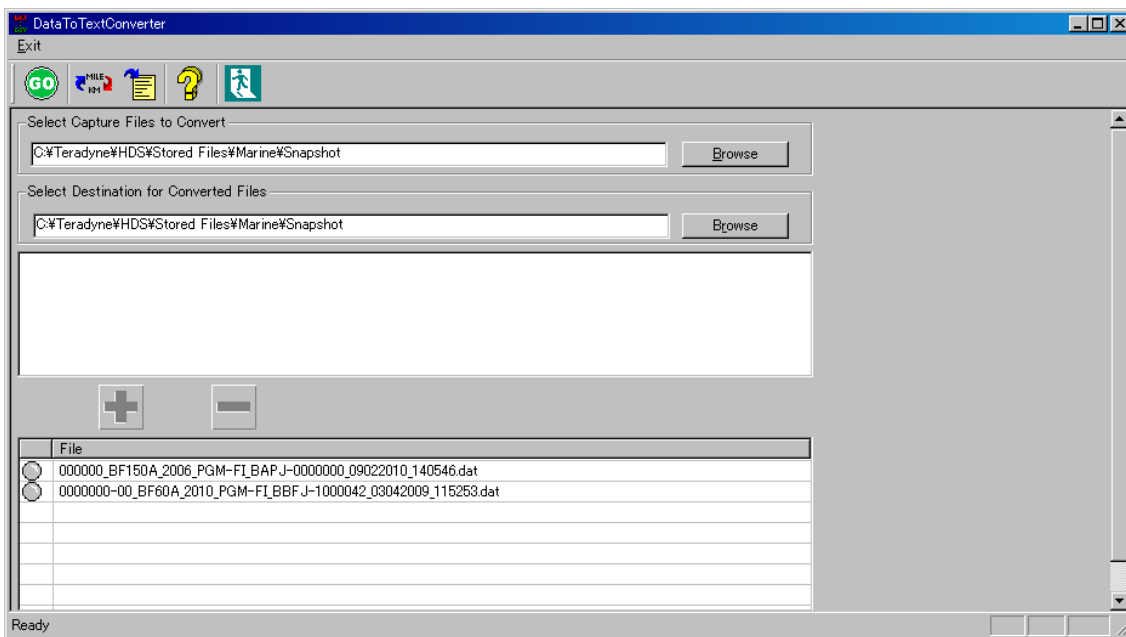
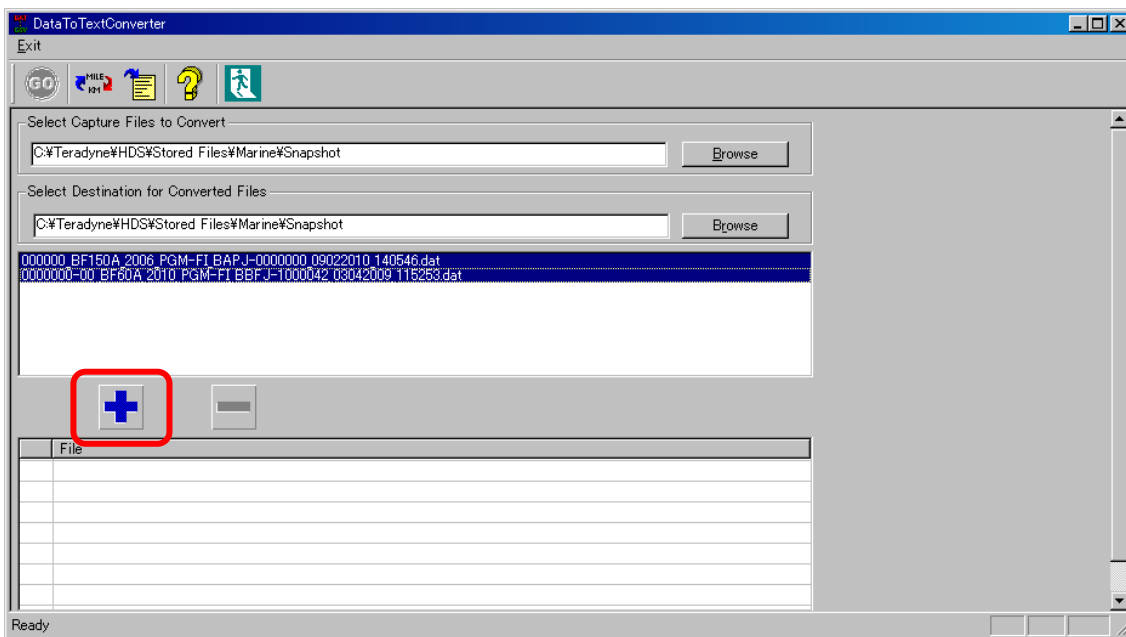
This is done by selecting the top Browse button. This will display a file selection dialog allowing the selection of 1 or more capture files to convert. By selecting any number of files and pressing OPEN button to confirm selection, the selected file will be listed within the list view window above the Add & Remove buttons.



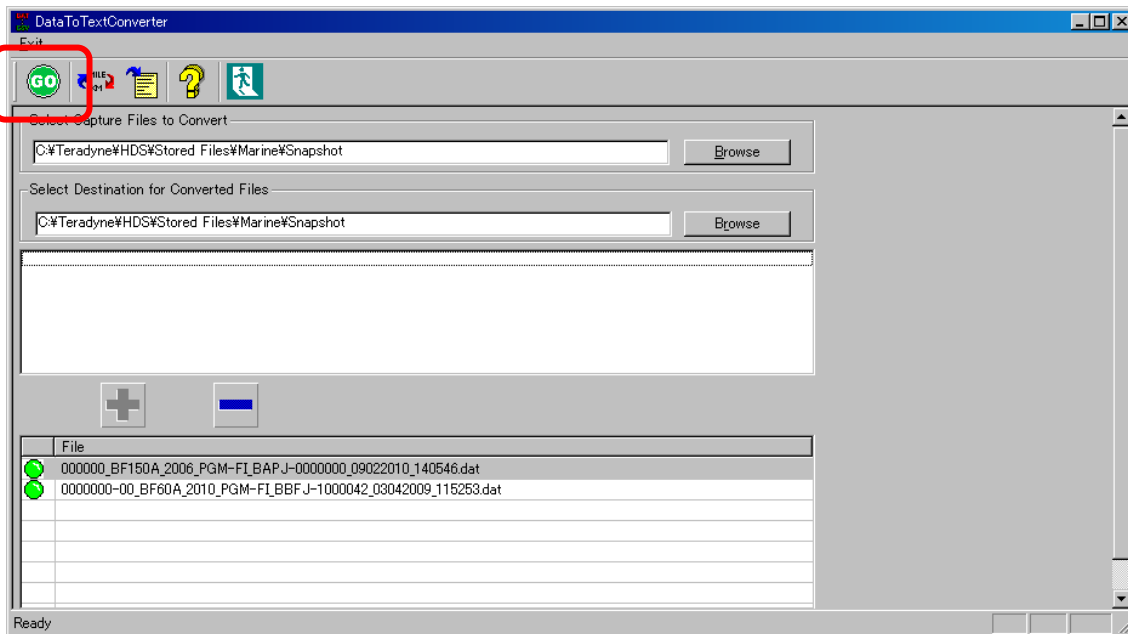
3. Specify the target directory to where the converted files are to be written to. This can be done by selecting the second Browse button which provides a dialog to select and define the directory to store the new data files



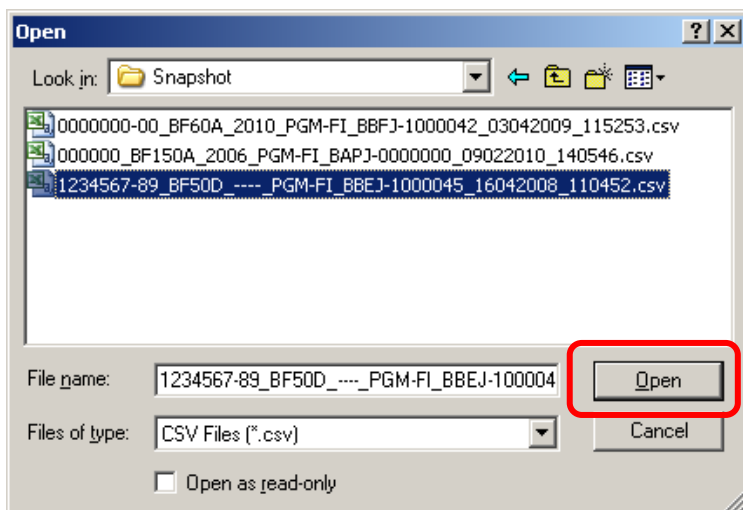
4. From the list of files to be converted, select 1 or more files that do require to be converted. This will enable the Add button to move the selected files to the capture file list.



5. Once complete, the Start button (GO button) can be selected. This will begin the process of converting the capture files one by one and writing them to the selected target directory.



6. Select “File – Open HDS File” to select and open HDS file in Dr.H application



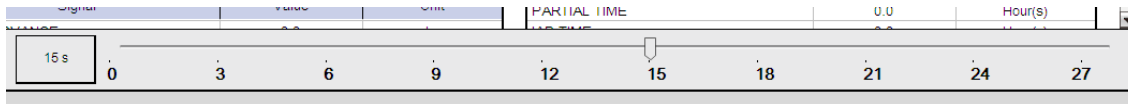
HDS Snapshot file will open in Dr.H Data List tab and HDS DTC file will open in Dr.H DTC tab.

Note:

* Snap Shot – trigger point

HDS trigger point will be the middle of the Dr.H total record time.

When you open HDS Snapshot data which was set 30 sec recording time, 15 sec is the trigger point on Dr.H Data List window.



* DTC files for multiple freeze frame

Dr.H will not support opening HDS DTC file for multiple freeze frame data.

12. iGX - Engine with ECU Installed: Caution when replacing/repairing ECU on an iGX engine

- * Contact your Honda Distributor for details of the procedure to overwrite the ECU data.
- * For using Dr.H to change iGX mode/parameter data in OEM applications, please contact Honda engine supplier in your region.

13. FAQs

< Computer >

Q. Can I use a desktop computer?

A. Yes.

< Setup >

Q. How can I uninstall Dr. H?

A. Generally, there is no need to uninstall Dr. H, but if you wish to do so, it is possible using the "Add and delete Applications" function in Windows.

< Connection >

Q. How is Dr. H connected to a PC?

A. It is connected to the USB port on the PC using a specific USB cable.

< Operations/functions-related >

Q. Which models are compatible with Dr. H?

A. When Dr. H is started up, the names of the installed models for each category are displayed in the start window.

Q. How can the software version be checked?

A. When Dr. H is started up, this can be seen at the bottom of the start screen.

Q. Cannot communicate with the product

A. Setup the COM port.

A. Check to see that the DLC/USB cables are properly connected.

A. Check to see that the product's ignition key is on.

14. Terminology

Term	Explanation
COM port	Communication number allocated when connecting the communication unit to a PC. Dr. H and the device manager Com port (Communication number) must be consistent.
DLC	Abbreviation of "Data Link Connector". Motor outboards have a red connector to connect to Dr. H. All other products compatible with Dr. H have a blue connector.
DLC cable	Cable to connect communication unit and products' DLC.
DTC	Abbreviation of "Diagnostic Trouble Code" Fault diagnosis code. In Dr. H, the product DTC code and failure information are shown.
ECU	Abbreviation of "Electronic Control Unit". Electronic control unit. Equipment that calculates electric signals input from each sensor in a microcomputer and outputs those electric signals to each type of actuator through an output processing circuit.
Function test	Operates each device automatically in order to conduct tests. (Outboard motor only)
Installation	Installing/setting up software in a PC for actual use.
Interface unit	A linking component connecting PC and products.
Simple diagnosis	Performs simple diagnosis.
Snapshot	Mode that saves and then plays back communication data.
Uninstalling	Deleting application software installed in a PC and returning the PC to its previous condition.
USB	Abbreviation of "Universal Serial Bus". A regulation for the transmission route of data connecting PCs to peripheral equipment such as a keyboard, mouse, modem etc.
USB cable	Cable for connecting PC and communication unit.