

User Manual for Robotic Lawnmowers: HRM300 – HRM500

Ver.No.	Description of Changes	Page No.	Date
1	Initial Version		December, 2012

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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.

Trademarks

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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.

A DANGER

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

AWARNING

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

ACAUTION

Caution Failure to follow these instructions may result in injury

ACAUTION

- 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.

Advice

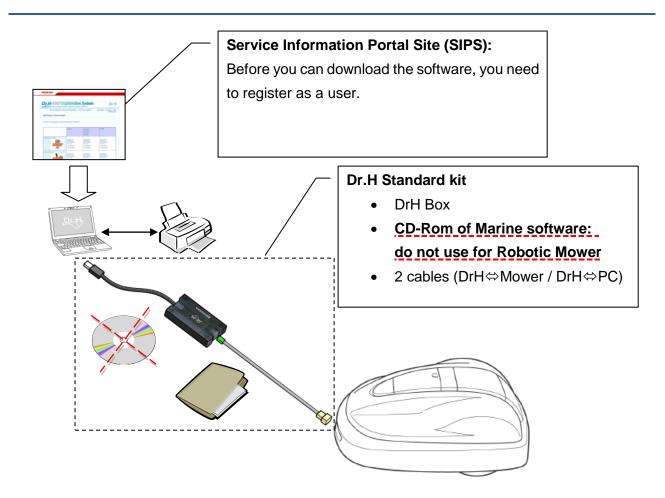
Handling this product:

- 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.

2 Outline of system



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 operations.

Specifications: Communication unit

Conditions of	Temperature range: -25°C~+40°C
use	Environment: Water-free, dirt-free etc. locations.
Input	Input voltage: 5V
specifications	Current: 100mA

Name and address of suppliers:

Honda Motor Co., Ltd.

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

Components

Dr. H standard kit 06398-YH0-	010	
нолда	and the second	CE CE
Interface unit	USB cable	DLC harness
communication unit connecting	Cable for connecting PC and	Harness for connecting
products to PC.	communication unit.	communication unit to products.
*Do not disassemble.		
4.	5.	
	Instructions	
Marine basic software is not		
required to use Dr.H for Robotic		
Lawnmower. Please do not		
install, instead download the		
software for Robotic		
Lawnmower from SIPS.		

4 Preparation before installing software

4.1 System requirements

Windows XP Service Pack 2 and above, Windows Vista, Windows7
Intel Pentium III 600MHz or AMD Athlon 10 GHz or higher
512 MB RAM or higher
ort
CD-ROM drive
1 GB free space
Microsoft .NET Framework3.5 SP1

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

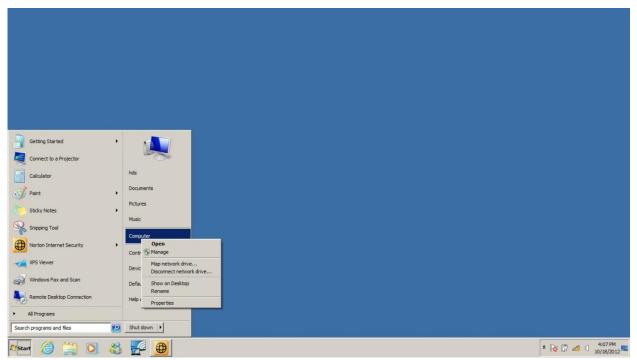
* Using models with only a small amount of free hard disk space can lead to deficient memory or similar memory problems.

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

4.2 Confirm PC environment

4.2.1 How to check OS, CPU, memory (for Windows 7)

1- Click "Start". Right-click "Computer" and click "Properties"



2- Confirm your configuration patches DrH requirements (see ch 4.1)

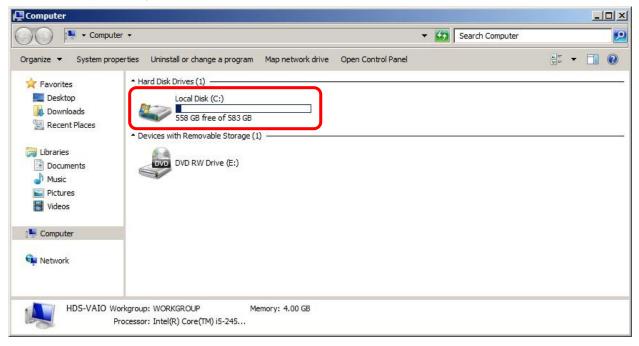
iystem				_
🔨 🔛 🕈 Control Panel 🔸 S	ystem and Security 👻 System		👻 🌠 Search Control Panel	
Control Panel Home	View basic information abo	ut your compute OS		
Device Manager	Windows edition			
Remote settings	Windows 7 Professional		\bigcirc	
System protection	Copyright © 2009 Microsoft	Corporation. All rights reserved.		
Advanced system settings	Service Pack 1 Get more features with a ne			
	System			
	Manufacturer:	Sony Electronics Inc.	SON	v
	Model:	VAIO® Computer		
	Rating:	Windows Experience Index	CPU, Memory	
	Processor:	Intel(R) Core(TM) i5-2450M CPU @ 2.50GHz	2.5 GHz	J
	Installed memory (RAM):	4.00 GB		
	System type:	64-bit Operating System		
	Pen and Touch:	No Pen or Touch Input is available for this Dis	play	
	Sony Electronics Inc. support —			
	Phone number:	1-888-4SONYPC		
	Support hours:	24 hours, 7 days support		
	Website:	Online support		
	Computer name, domain, and w	orkgroup settings		
	Computer name:	hds-VAIO	😲 Change setti	ngs
See also				
See also	Full computer name:	hds-VAIO		
Action Center	and the second second second	hds-VAIO		
Second	Full computer name:	hds-VAIO WORKGROUP		

4.2.2 How to check free space on the hard disk

1. Click "Start" and then click "Computer".

Getting Started	•			
Connect to a Projector				
Calculator	hds			
Calculator				
Sticky Notes	Documents			
	Pictures			
Snipping Tool	Pictures			
60	Music			
Paint				
NGP .	Computer			
XPS Viewer		·		
	Contro See the disk drives a	and other hardware connected to your computer.		
Windows Fax and Scan				
	Devices and Printers			
Norton Internet Security	Default Programs			
	Default Programs			
Remote Desktop Connection	Help and Support			
All Programs				
Search programs and files	😥 Shut down 🕨			
1				
Arstart 🏉 📜 💽	🚳 🚰 🚇			* 😼 🛱 🐗
🎝 Start 🤗 📜 💽	🊰 🍅			- 103 GY at

2. Check free space on your hard drive.



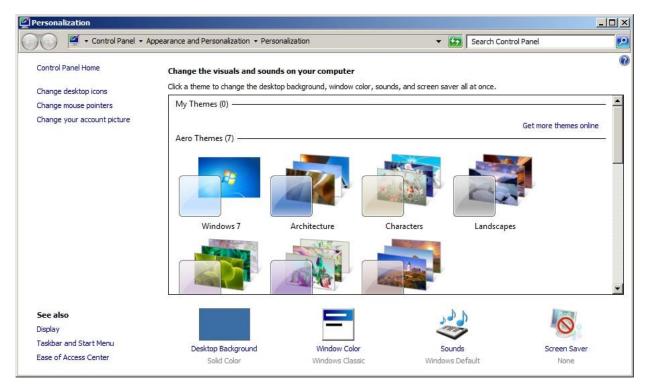
4.3 Setting up PC

4.3.1 Screen Saver

1- Right-click the desktop and select "Personalize".

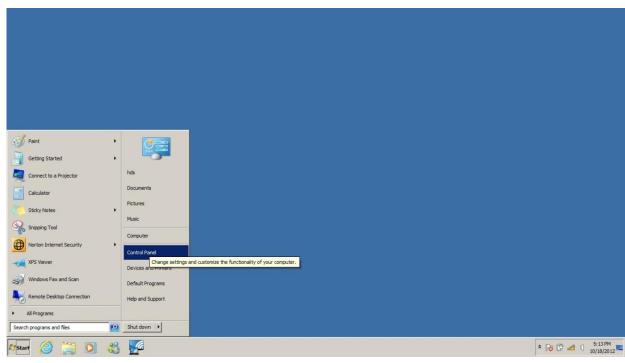
View > Sort by > Refresh Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Poste Chritz Chritz Chritz Chritz Chritz Graphics Options > New > Chritz Graphics Options > New >	
Start 🍋 🎇 🔊 🍪 🌠	* 🕞 🗊 🛋 (4:48 PM 10/18/2012 📼

2- Make sure that Screen Saver is set as None.



4.3.2 Settings for system sleep and system hibernate

1. Click "Start" button and then click "Control Panel.



2. Click "System and Security"



3. Click "Power Options".

System and Security			
🔊 🗢 🍓 🕶 Control Panel 🕶 Sy	stem and S	iecurity • • 🚱 Search Control Panel	
Control Panel Home System and Security	þ	Action Center Review your computer's status and resolve issues I PChange User Account Control settings Troubleshoot common computer problems Restore your computer to an earlier time	
Network and Internet Hardware and Sound		Windows Firewall Allow a program through Windows Firewall	
Programs User Accounts and Family Safety		System View amount of RAM and processor speed Check the Windows Experience Index 🌚 Allow remote access See the name of this computer 🌚 Device Manager	
Appearance and Personalization Clock, Language, and Region	4	Windows Update Turn automatic updating on or off Check for updates View installed updates	
Ease of Access	٦	Power Options Change battery settings Require a password when the computer wakes Change what the power buttons do Change when the computer sleeps Change when the computer sleeps Change what the power buttons do	
		Backup and Restore Back up your computer Restore files from backup	
	2	Windows Anytime Upgrade Get more features with a new edition of Windows 7	
	(7 =	Administrative Tools Free up disk space Defragment your hard drive Schedule tasks	

4. Click "Change plan settings" on "Select a power plan" page and then click "Change advanced power settings"

Edit Plan Settings				_ 🗆 ×
🗲 🗢 🖉 🔹 Control Panel 🔹 Hardware and Sound 👻 Po	wer Options 👻 Edit Plan Settings	✓ 100	Search Control Panel	<u> </u>
Change settings for the plan:	Balanced			2
Choose the sleep and display setti	ngs that you want your computer	to use.		
	On battery	Plugged in		
O Dim the display:	1 minute	5 minutes		
Turn off the display:	3 minutes	10 minutes		
Put the computer to sleep:	Never	Never		
💥 Adjust plan brightness:	◎ —∥— ※	ø∥ ¾		
Change advanced power settings				
Restore default settings for this pl	an			
		Save changes	Cancel	

5. Double-click "Sleep after" and "Hibernate after" and set "Never" for "On battery" and "Plugged in".

Power Options	?
dvanced settings	
Select the power plan that you want to o then choose settings that reflect how yo computer to manage power.	ou want your
Balanced [Active]	ble
E Sleep	
 Sleep after On battery: Never 	
Plugged in: Never	
Hibernate after	
On battery: Never	
Plugged in (Minutes): Never 🚝	
	-
🗊 USB settinas	
Restore	olan defaults
OK Can	cel Apply

5 Installing software

5.1 Downloading DrH Software for Miimo

The software for Robotic Lawnmower can be downloaded from **S**ervice Information **P**ortal **S**ite (SIPS).

The registration is required before downloading the software.

1. Pre-registrate on SIPS with link: http://cssportal.css-club.net/honda/portal/



Advice

Before going further, ensure your **e-mail Spam filter is off** to receive automatic e-mail reply from SIPS website.

2. Select "Dr.H" and fill-in the form:

Important: do not use same e-mail address for 2 different users.

User	Registration		
E-Mail	use Junk-Mail Filte I: Honda_S.I.P.S@h click [Next] after fill ed with "*" are requ	m.honda.co.	ired information.
		7	H Software Download Site Outboard/Snow Plower/Cogeneration/Others
	H.U.	S Can	ida ECU Update System Only for Recall/Product Update npaign (PUD) Outboard Hicro Cogeneration Unit
	Country*		
	Name of user ⁸		
	Your language*		English
	Login ID (email	address)	
	Input your login again.*	ID	

3. After confirmation, a code is sent to personal e-mail address to complete registration.

4. Once you received registration confirmation, login with ID and password.

Servio	e Informa	tion Portal Site
Acall	2	ID
		Password
		Login ► User Registration ►
	-	

5. Download Dr.H Miimo software and install on computer.

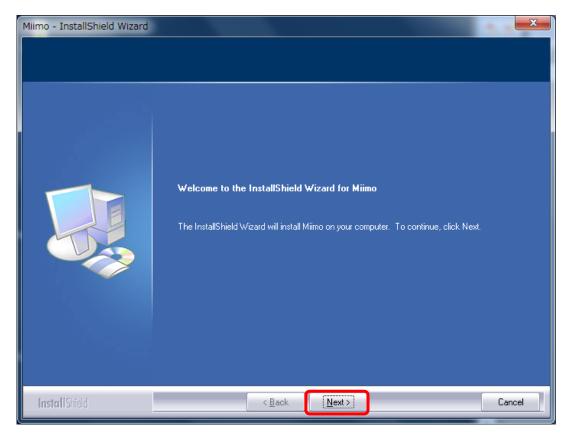


5.2 Installing the software

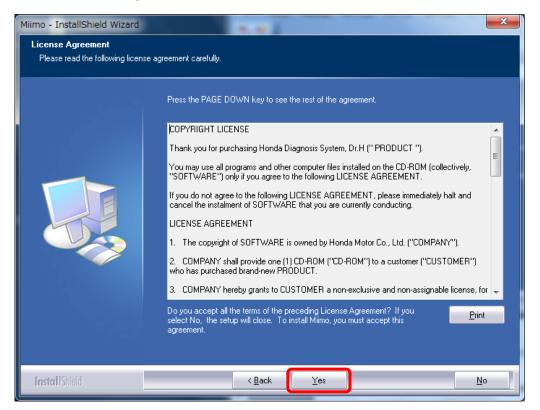
1- Double-click downloaded software.



2- Click "Next".



3- Read License Agreement and click "Yes".



4- Select language(s) to be installed, then click "Next".

Miimo - InstallShield Wizard		-	and a	and and	×
Setup Type Select the setup type that best	suits your needs.				
	Please select the Option	onal languages	used by the D	r.H	
	🗹 English 🗹 French 🥅 German				
	📕 Italian 📕 Spanish 📕 Dutch				
	─ Swedish □ Danish				
InstallShield		< <u>B</u> ack	<u>N</u> ext >	J	Cancel

5- Enter Dealer name and Dealer No., then click "Next".

Dr.H - InstallShield Wizard				200	x
Edit Data Enter requested data.					
	Please enter your D	ealer information			
	Dealer Name	HONDA			
	Dealer Number	12345			
InstallShield		< <u>B</u> ack	<u>N</u> ext >		Cancel

6- The software is being installed.

Miimo - InstallShield Wizard		Sec.14		×
Setup Status	Miimo is configuring y	our new software installation.		
	C:\\Honda\VP7A\I	mages\SWE\Communicationf	ailed.png	
Install Shield				Cancel

7- Click "Finish" to complete the installation.

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

8- Installing USB driver

The following message is displayed when the software installation completes.

Click "Install" to start the USB driver installation.

😽 Silico	n Laboratories CP210x US	B to UART Bridge	Driver Installer	×
8	Silicon Laboratories Silicon Laboratories CP210x U	SB to UART Bridge		
Install	ation Location:		Driver Version 6.3	
C:¥	Program Files¥Silabs¥MCU¥CP2	10x¥		
Ch	ange Install Location	Install	Cancel	

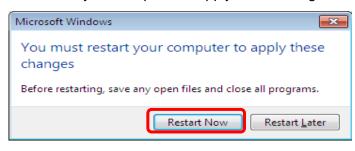
9- Microsoft .NET Framework3.5 SP1 should be installed on your PC to run Dr.H application. If Microsoft .NET Framework3.5 SP1 is not installed on your PC, the following message should appear when software installation completes.

Miimo	\mathbf{X}
Microsoft .NET Framework 3.5 Service Pack 1 is not installed in the PC. Do you want to install .NET Framework 3.5 SP1	now??
<u>Y</u> es <u>N</u> o	

10- Click "Yes" to be redirected to Microsoft Download Center.

Go to "Categories" and select "Developer resources", then download **Microsoft** .NET Framework **3.5 Service Pack 1**.

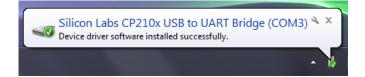
11- Restart your computer to apply these changes.



6 Communication unit settings

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

The software will be installed automatically.

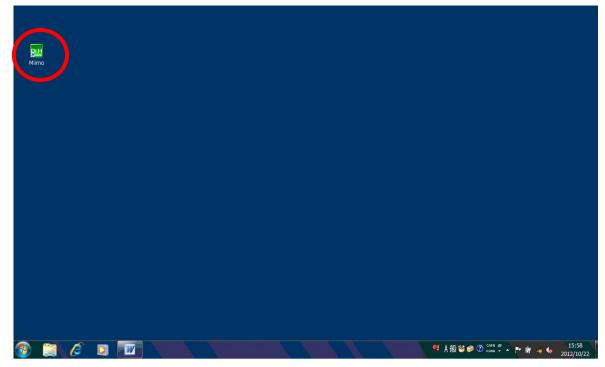


7 Connecting to the product

1. Connect the communication unit DLC cable to the product's connector (blue).



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



4. The Dr. H window opens up, Click "Start ".



5. Enter the required items in the following window.

K Honda Diagnostic System - OffLine		
File Communication Window Language Help		2012/11/22 9:49:45
Please input Model which is described	Name, Serial Number and C on your product.	ustomer Name
	Model Name(*):	(*) is necessary data.
	(1) HRM300 -	
	Serial Number(*):	
(2)	MAWF • 12345 • (3)	
	Customer Name:	
	•	
(4)	Customer Address:	
Pleas	e confirm input code, and click OK.	
	(5) ок	
Software Version: 1.0.0.17 Main ECU Version: D	isplay ECU Version:	
1) Enter name of model.	(4) Enter name and addr	ress of your customer.

(2) Enter PIN prefix.

(3) Enter serial number.

(5) Click "OK".

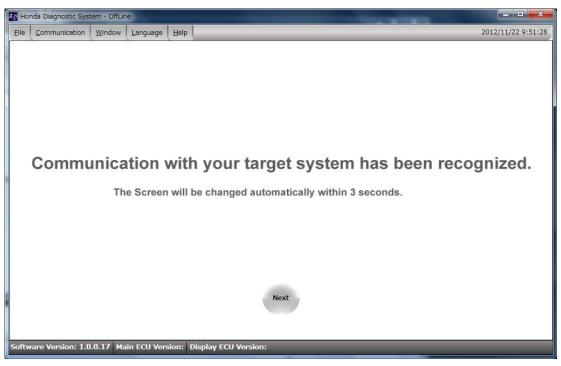
This information is saved in a file to be used in printouts.

(*) Mandatory fields

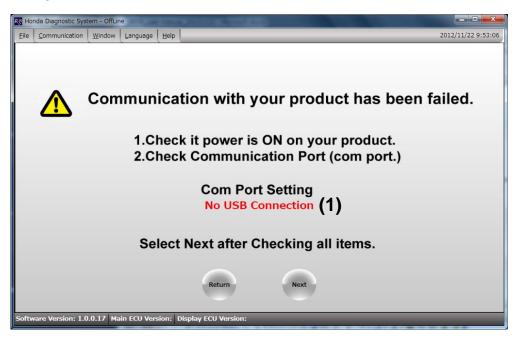
6. Check that there are no problems with the confirm items window that follows, and click "OK".



7. When the communication is successful, the below screen appears.



8. If the USB communication fails, the following window is displayed. The communication port setting shows "No USB Connection" (1).



9. Check the communication port by following these steps. Select communication setting and click "Com port setting" (2).



10. 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".

Com Port Setting	
Com Port Number	СОМЗ
	COM3
OK	Cancel

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

೮ Com Port Setting		
Com Port Number	COM4	•
	COM3	
OK	COM4	

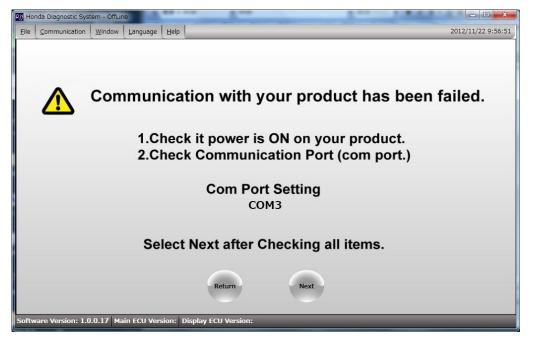
12. In the next window, check that the COM number has increased.



13. When the product is not turned on, the red LED light on the communication unit flashes and the following message is displayed.

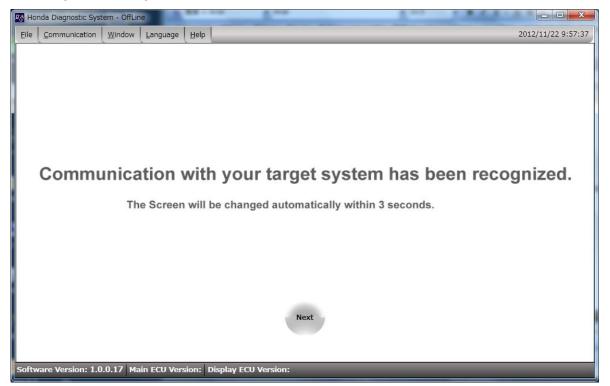


14. The following window appears. The 🧥 mark flashes.



- 15. Check if the ignition switch on the product is on.
- 16. Check that the communication unit is properly connected.
- 17. Make sure that the cable connection has not come out and that the connector is fully attached.

18. When the Communication is successful, the red LED light on the communication unit goes off and the green LED light comes on. Click "Next".



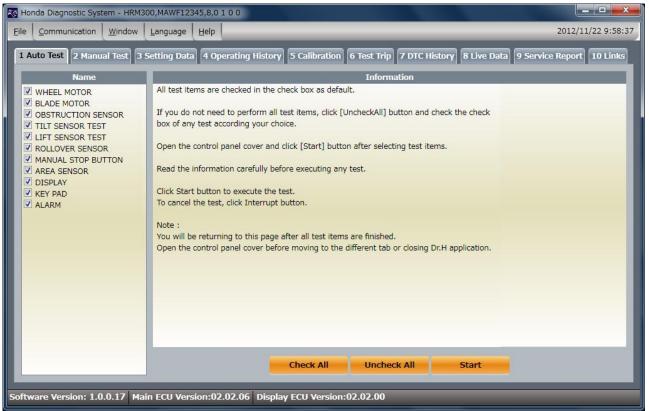
8 **Operation**

8.1 Auto Test

All test items are checked in the check box as default.

If you do not need to perform all test items, click [UncheckAll] button and check the check box for required test items.

Open the control panel cover and click [Start] button after selecting test items.



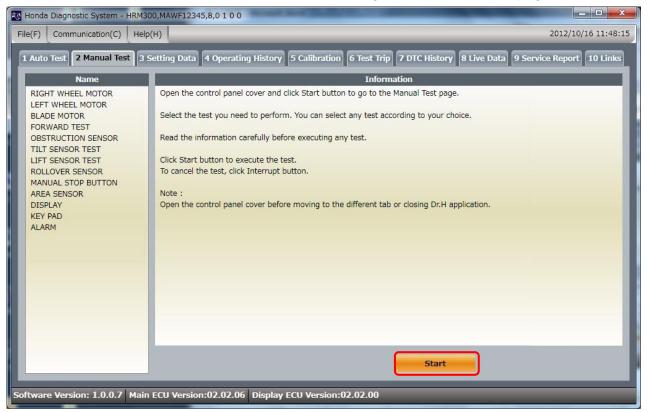
Name				Information			
	the mower off the ground to allow w						
	CE:Wheels rotate during the wheel r	notor test.					
	e the control panel cover. ([Start] button.						
	n the control panel cover.						
ROLLOVER SENSOR							
MANUAL STOP BUTTON			(5				
AREA SENSOR			(5	,			
DISPLAY							
KEY PAD							
ALARM (1)							
				-			
Name		Value		Thres	Max	Unit	
OWER RELAY WHEEL MOTOR		OFF		-	-		
		0	(-)	0	60	v	
ATTERY VOLTAGE			(6)		00		
		0	(6)	-15	15	A	
ATTERY CURRENT			(6)	-15	15	A	
ATTERY CURRENT WHEEL MOTOR ROTATION RIGHT		0	(6)			A	
ATTERY VOLTAGE ATTERY CURRENT VHEEL MOTOR ROTATION RIGHT VHEEL MOTOR ROTATION LEFT VHEEL MOTOR SPEED RIGHT		0 STOP	(6)	-	-	A	
ATTERY CURRENT /HEEL MOTOR ROTATION RIGHT /HEEL MOTOR ROTATION LEFT /HEEL MOTOR SPEED RIGHT		0 STOP STOP	(0)	•	•		
ATTERY CURRENT VHEEL MOTOR ROTATION RIGHT VHEEL MOTOR ROTATION LEFT		0 STOP STOP 0	(0)		- 20000	RPM	(4)

Buttons and Windows

- (1) Test Name : Available Test items are listed. Highlighted line shows the test which is performed.
- (2) Start : Clicking this button will start the highlighted test.
- (3) Go to Home Page : Clicking this button will return to Auto Test Home Page.
- (4) Interrupt : Clicking this button will cancel the current test.
- (5) Information : Information describes steps for the test. Read the information carefully before executing any test.
- (6) Parameters : It lists all associated signals with their signal description, signal value and unit of measure for the signal.

8.2 Manual Test

1- Open the control panel cover and click Start button to go to the Manual Test page.



2-Following screen appears:

Communication Window Language Help	,00 01 00 00 erating History 5 Calibration 6 Test Trip 7 DTC I	History 8 Live Data 9 Ser	vice Report 10 Links	2012/12/20 15:21:0
Name		Information		
LEFT WHEEL MOTOR BLADE MOTOR ORTWARD TEST ORTWARD TEST ORTWARD TEST ORTWARD TEST TILT SENSOR TEST ROLLOVER SENSOR MANUAL STOP BUTTON AREA SENSOR DISPLAY KEY PAD ALARM			Ś	
Name	Value	Three	shold	Unit
		Min	Max	Unit
LIFT SENSOR STATE RIGHT LIFT SENSOR STATE LEFT	OFF	-	•	
LIFT SENSOR STATE LEFT	Urr		•	

I communication Lingsigned Continue Execution Calibration Continue Execution I Auto Test 2 Manual Test 3 Setting Data 4 Operating History 5 Calibration 6 Test Trip 7 DTC History 8 Live Data 10 Links I Auto Test X Anno Test Name Information Information I Lift Sensors Test Display Continue Execution (6) Information Name Value Threshold Unit Lift Sensors State Right Off 7 . . (2) (3) (4) (5) State Continue Execution 	Honda Diagnostic System - HRM300,MBAF1000180,08,0 File Communication Window Language Help	0 01 00 00			2012/12/20 15:21:09
LEFT WHEEL MOTOR 1. Click [Start] button. 1. Uf up the rear of the mower. 2. Uf up the rear of the mower. PORWARD REST Check LIFT SENSOR is DN, then put down the mower. (6) (6) Name Value Name Value Name Value Min Max LIFT SENSOR STATE RIGHT OFF (7) . (2) (3) (2) (3) (4) (5)		ating History 5 Calibration 6 Test Trip 7 DTC Histor	8 Live Data 9 Ser	vice Report 10 Links	2012/12/20 13:21:09
Name Value Threshold LIFT SENSOR STATE RIGHT OFF 0FF - LIFT SENSOR STATE LEFT OFF (7) - - (2) (3) (4) (5)	LEFT WHEEL MOTOR BLADE MOTOR FORWARD TEST OBSTRUCTION SENSOR TILT SENSOR TEST ROLLOVER SENSOR MANUAL STOP BUTTON AREA SENSOR DISPLAY KEY PAD ALARM	the mower.		6)	
Min Max LIFT SENSOR STATE RIGHT OFF OFF (7) . (2) (3) (4) (5)			Thre	shold	
LIFT SENSOR STATE LEFT OFF (7) . (2) (3) (4) (5)			Min	Max	Onic
(2) (3) (4) (5)		OFF (7)	-		
	Continue Execution				

Buttons and Windows:

- Test Name : Available Test items are listed. Select the test you wish to perform in this list.
- (2) Start : Clicking this button will start the test.
- (3) Continue Execution : Set "Continue Execution" ON will disable the timer and allows you to continue the test as long as you require.
- (4) Go to Home Page : Clicking this button will return to Auto Test Home Page.

- (5) Interrupt : Clicking this button will cancel the current test.
- (6) Information : Information describes steps for the test. Read the information carefully before executing any test.
- (7) Parameters : It lists all associated signals with their signal description, signal value and unit of measure for the signal.

8.3 Setting Data

8.3.1 SYSTEM SETUP

R Honda Diagnostic System - HRM	300,MAWF12345,8,0 1 0 0					_ D <mark>_ X</mark>
File Communication Window	Language Help					2012/11/22 10:10:51
1 Auto Test 2 Manual Test 3	Setting Data 4 Operating History 5 Calibrat	tion 6 Test Trin 7 DI	C History 8 Live Data	9 Service Report 10 Links		
		Valu			Three	shold
SYSTEM SETUP	Name	Current	Setup	Unit	Min	Max
STATION SETUP	STATION ENTRANCE LOOP DIRECTION		CW 👻	(0)	-	-
MANUAL MODE SETUP	STATION ENTRANCE PASSAGE WIDTH RETURN		0	(2)	0	10
▶ LANGUAGE	STATION AREA SIGNAL TYPE		1 -		-	
DATE AND TIME						
▶ SECURITY	This function sets the entry direction when	the memory returns to I	Inform		traces the wire	
sound (1)	This function sets the entry direction when	the mower returns to	the docking station and	I the onset from the wire when the nowe	r traces the wire.	
	1. Click [Reading] button to display the cur	rent value in the [Curr	ent] column.			
QUICK MODE SETUP	 Enter new values in [Setup] column. Click [Setup] button to set new values in 	to the moure				
▶ TIMER, ZONE	5. Click [Secup] button to set new values in	ito the mower.				
CUSTOM MODE SETUP	STATION ENTRANCE LOOP DIRECTION					
▶ TIMER	Set the direction for the mower to move in CW : Clockwise	relation to the docking	station.			
▶ ZONE	ACW : Anticlockwise			(3	1	
V ZONE				(5)	
	STATION ENTRANCE PASSAGE WIDTH RETU					
	Set where the mower moves in relation to t	ne boundary wire as it	goes back to the dock	ing station.		
	STATION AREA SIGNAL TYPE					
	Set the signal pattern of the wired area inst Set the different signal pattern of the wired					
	This is useful for avoiding signal interference					
	, , , , , , , , , , , , , , , , , , ,			Copy All Settings	_	
				To PC To Product	Reading	Setup
				(4)	(5)	(6)
				(.)	(•)	(3)
Software Version: 1.0.0.17 Ma	ain ECU Version:02.02.06 Display ECU Vers	sion:02.02.00				

Buttons and Windows

- 1. Setting systems : Available systems for setting are listed.
- 2. Setting window : Enter new values in Setup column for settings.
- 3. Information : Information describes steps for the setting.
- 4. Copy All Settings

To PC : Clicking this button will save all the setting data values except SECURITY and DATE AND TIME from connected product to a file on your computer.

To Product : Clicking this button will read all values from a file created by [To PC], and then update connected product with those saved values.

- 5. Reading : Clicking this button will display the current values in the [Current] column.
- 6. Setup : Clicking this button will set new values into the mower.

SYSTEM SETUP Basic operation

- 1. Select a system to check the current setting or to set new values.
- 2. Click [Reading] button to display the current setting value.
- 3. Enter new values in Setup column.
- 4. Click [Setup] button.
- 5. Click [Reading] to check if new values are displayed in Current column.

Copy All Settings

[Copy All Settings] will allow you to update all setting data values except DATE AND TIME and SECURITY in the mower with already saved values.

Saving Setting Data values from the lawnmower

- 1. Click [To PC] button in [Copy All Settings].
- 2. Click [Save] (change the file name if required).

Add log files					? 🛛
Save jn:	SETTING D	ATA	•	+ 🗈 💣 📰	-
My Recent Documents Desktop					
My Documents					
My Computer					
My Network Places	File <u>n</u> ame:	3_LOG_Setting D	ata_08_HRM300	MAWF000	<u>S</u> ave
, 1003	Save as type:	CSV files (*.csv)		•	Cancel

3. Click [OK]

M300_BAPJ000.csv
-
ОК

Transmit Setting Data values to the lawnmower

- 1. Click [To Product] button.
- 2. Select a saved data file and click [Open].
- 3. Then all setting data values will be transmitted to the lawnmower. *Note:* this process can take more than 1 minute.

Open					? 🛛
Look jn:	SETTING D	ATA	•	= 🗈 📩 📰 -	
My Recent Documents Desktop My Documents My Computer	121022_1639	23_LOG_5etting Data_08_t	IRM300_M	AWF000	
My Network Places	File <u>n</u> ame: Files of <u>type</u> :	6_LOG_Setting Data_08 CSV Files (*.csv)	_HRM300	MAWF000 -	<u>O</u> pen Cancel

8.3.2 QUICK MODE SETUP

- Honda Diagnostic System - HRM					
Eile Communication Window	Language Help				2012/11/22 10:12:09
1 Auto Test 2 Manual Test 3	Setting Data 4 Operating History 5 Calibration 6	Test Trip 7 DTC History 8 Live E	Data 9 Service Report 10 Li	nks	
SYSTEM SETUP		Week D	ay Setup		_
▶ STATION SETUP		Wed Thu	Fri	Sat Sun	All
MANUAL MODE SETUP	○ (') ○	0	O	0	O
▶ LANGUAGE					
DATE AND TIME		Time	r Setup	(0)	
▶ SECURITY	Start End 0:00		12:00	(2)	23:59
▶ SOUND	Timer1 00:00 00:00				
	Timer2 00:00 00:00				
TIMER, ZONE					
CUSTOM MODE SETUP			one		
	Name	Current	Setup	Unit	
▷ TIMER	ZONE2 WIRE EXIT LOCATION DISTANCE	Current	0	m	
D ZONE	ZONE2 WIRE EXIT LOCATION DISTRICT	(2)	CW 🔻		
	ZONE2 PROPORTION	(3)	0	%	
	MOWING PATTERN		RANDOM -		
	WIRE OVERLAP		20	cm	
		Infor	mation		
	 Click [Reading] button to display the current va 2. Select Week Day for timers. Enter Start and End time for Timer 1 (and Timer The threshold for timers is 00:00 - 23:59. For Timer 2, do not set earlier time than Timer 1. 		nt] column		
					_
Software Version: 1.0.0.17 Ma	ain ECU Version:02.02.06 Display ECU Version:02	.02.00			

Buttons and Windows

- (1) Week Day Setup : Select Week Day for settings
- (2) Timer Setup : Enter Start/End time for Timer 1 (and Timer 2 if required) *Note:*
 - Overnight timer setting is not allowed. Incorrect setting example: 23:00 - 00:30
 - Use 24-hour time format
 - For Timer 2, do not set earlier time than Timer 1.
 Incorrect setting example:
 Timer 1 17:00 18:30

Timer 2 10:00 - 11:00

- Ensure to set different time for Timer 1 and Timer 2. Incorrect setting example: Timer 1 10:00 – 12:00
 - Timer 2 11:00 13:00
- (3) Zone : Enter new values in Setup column for Zone2 settings.

STATION SETUP Name MANUAL MODE SETUP Name LANGUAGE ZONE2 WIRE EXIT LOCATION DISTANCE DATE AND TIME ZONE2 WIRE EXIT LOCATION DIRECTION SECURITY ZONE2 PROPORTION SOUND MOWING PATTERN DUICK MODE SETUP WIRE OVERLAP	Zone Value Current Informa IER/ZONE in the {Current]	Setup 0	Unit m % cm	
NANUAL MODE SETUP Name LANGUAGE ZONE2 WIRE EXIT LOCATION DISTANCE ZONE2 WIRE EXIT LOCATION DISTANCE DATE AND TIME ZONE2 WIRE EXIT LOCATION DIRECTION ZONE2 WIRE EXIT LOCATION DIRECTION SECURITY ZONE2 WIRE EXIT LOCATION DIRECTION ZONE2 WIRE EXIT LOCATION DIRECTION SOUND MOWING PATTERN ZONE2 WIRE OVERLAP CUSTOM MODE SETUP 1. Click [Reading] button to display the current value for TIME S. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if require ZONE The threshold for timers is 00:00 - 23:59.	Value Current	Setup 0 CW * 0 RANDOM * 20	m %	
LANGUAGE ZONE2 WIRE EXIT LOCATION DISTANCE ZONE2 WIRE EXIT LOCATION DISTANCE ZONE2 WIRE EXIT LOCATION DISTANCE ZONE2 WIRE EXIT LOCATION DIRECTION ZONE2 WIRE EXIT LOCATION DIRECTION ZONE2 WIRE EXIT LOCATION DIRECTION ZONE ZONE ZONE ZONE ZONE ZONE The threshold for timers is 00:00 - 23:59.	Value Current	Setup 0 CW * 0 RANDOM * 20	m %	_
LANGUAGE ZONE2 WIRE EXT LOCATION DISTANCE ZONE2 WIRE EXT LOCATION DISTANCE DATE AND TIME ZONE2 WIRE EXT LOCATION DISTANCE ZONE2 WIRE EXT LOCATION DISTANCE SECURITY ZONE2 WIRE EXT LOCATION DISTANCE ZONE2 WIRE EXT LOCATION DISTANCE SOUND MOWING PATTERN ZONE2 WIRE OVERLAP ZUICK MODE SETUP 1. Click [Reading] button to display the current value for TIME S. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if require ZONE The threshold for timers is 00:00 - 23:59.	Current	Setup 0 CW * 0 RANDOM * 20	m %	
LANGUAGE ZONE2 WIRE EXIT LOCATION DISTANCE DATE AND TIME ZONE2 WIRE EXIT LOCATION DISTANCE SECURITY ZONE2 WIRE EXIT LOCATION DIRECTION SOUND MOWING PATTERN WIRE OVERLAP WIRE OVERLAP TIMER, ZONE 1. Click [Reading] button to display the current value for TIM S. Select Week Day for timers. TIMER 3. Enter Start and End time for Timer 1 (and Timer 2 if require The threshold for timers is 00:00 - 23:59.	Informa IER/ZONE in the {Current]	0 CW V 0 RANDOM V 20 tion	m %	_
ZONEZ WIRE EXT LOCATION DISTANCE ZONEZ WIRE EXT LOCATION DISTANCE ZONEZ WIRE EXT LOCATION DIRECTION ZONEZ WIRE OPTORTION SOUND MOWING PATTERN ZUICK MODE SETUP TIMER, ZONE 1. Click [Reading] button to display the current value for TIMER. 2. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if require ZONE ZONE	IER/ZONE in the {Current]	CW O RANDOM CU CU CU CU CU CU CU CU CU C	%	
SECURITY ZONE2 WIRE EXIT LOCATION DIRECTION SOUND ZONE2 PROPORTION MOWING PATTERN MWIRE VERLAP TIMER, ZONE I. Click [Reading] button to display the current value for TIM 2. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if require ZONE The threshold for timers is 00:00 - 23:59.	IER/ZONE in the {Current]	0 RANDOM + 20		
SOUND MOWING PATTERN QUICK MODE SETUP WIRE OVERLAP TIMER, ZONE I. Click [Reading] button to display the current value for TIM 2. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if require ZONE The threshold for timers is 00:00 - 23:59.	IER/ZONE in the {Current]	RANDOM Contract of the second		
QUICK MODE SETUP WIRE OVERLAP TIMER, ZONE I. Click [Reading] button to display the current value for TIM 2. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if require ZONE The threshold for timers is 00:00 - 23:59.	IER/ZONE in the {Current]	20	cm	
TIMER, ZONE I. Click [Reading] button to display the current value for TIM CUSTOM MODE SETUP I. Click [Reading] button to display the current value for TIM TIMER Select Week Day for timers. ZONE The threshold for timers is 00:00 - 23:59.	IER/ZONE in the {Current]	tion	cm	
1. Click [Reading] button to display the current value for TIM 2. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if required) ZONE	IER/ZONE in the {Current]			
1. Click [Reading] button to display the current value for TIM 2. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if required) ZONE		column		
2. Select Week Day for timers. 3. Enter Start and End time for Timer 1 (and Timer 2 if required) ZONE The threshold for timers is 00:00 - 23:59.	red).			
ZONE The threshold for timers is 00:00 - 23:59.	red).			
The threshold for timers is 00:00 - 23:59.				
For Timer 2, do not set earlier time than Timer 1.				
Example for an incorrect setting :				
Timer 1 17:00 - 18:30		(4)		
Timer 2 10:00 - 11:00		(')		
4. For Zone, enter new values in [Setup] column.				
 For Zone, enter new values in [Setup] column. Click [Setup] button to set new values into the mower. 				
				(-)
Clicking [Reset] button will reset all values in QUICK MODE SE	ETUP. /C	1 (6	(7)	(8)
	()			
	Copy All Settings	5) (6	Reset Reading	Setup

Buttons and Windows

- (4) Information : Information describes steps for the setting.
- (5) Copy All Settings

To PC : Clicking this button will save all the setting data values except SECURITY and DATE AND TIME from connected product to a file on your computer.

To Product : Clicking this button will read all values from a file created by [To PC], and then update connected product with those saved values.

- (6) Reset : Clicking this button will reset all values to factory settings in QUICK MODE SETUP.
- (7) Reading : Clicking this button will display the current values in the [Current] column.
- (8) Setup : Clicking this button will set new values into the mower.

8.3.3 QUICK MODE SETUP Basic operation

- 1. Click [Reading] button to display the current setting value.
- 2. Select Week day for timers.
- 3. Enter Start/End time for Timer 1 (and Timer 2 if required)
- 4. Enter new values for Zone2 in Setup column
- 5. Click [Setup] button.
- 6. Click [Reading] to check if Week day and Timers are set correctly and Zone2 new values are displayed in Current column.

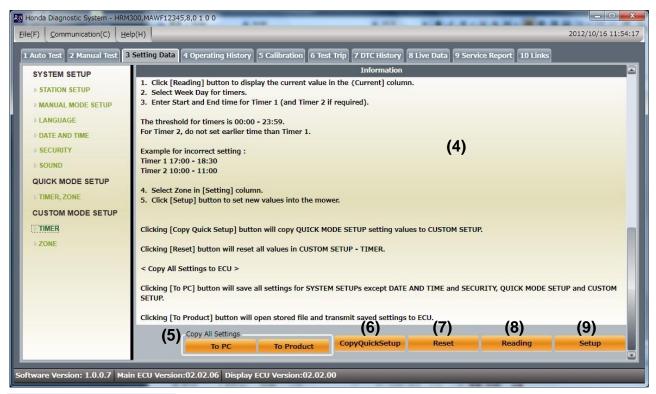
8.3.4 CUSTOM MODE SETUP

8.3.4.1 TIMER

F) Communication(C) He	elp(H)	4.14			2	012/10/16 11:
	ap(n)			2/15		012/10/20 11
uto Test 2 Manual Test 3	Setting Data 4 Operating Histo	tory 5 Calibration 6 Test Trip 7	7 DTC History 8 Li	ive Data 9 Service	Report 10 Links	
SYSTEM SETUP		Y	Week Day Setup			
STATION SETUP	Mon Tue	Wed Thu	u Fri	Sat	Sun	All
MANUAL MODE SETUP	○ (1) ○	0 0	0	0	O	O
LANGUAGE						
DATE AND TIME	MONDAY TUESDAY WEDNES	SDAY THRUSDAY FRIDAY SATU	RDAY SUNDAY			
			Timer Setup			
SECURITY	Start	End 0:00	(2)	12:00		23:59
SOUND	Timer1 00:00	00:00	(-)			
	THILET 00.00	00100				
	Timer2 00:00	00:00				
TIMER, ZONE						
TIMER, ZONE			Zone	=		
DITIMER, ZONE CUSTOM MODE SETUP	Timer2 00:00		Zone	Deading	Value	
DITIMER, ZONE CUSTOM MODE SETUP	Timer2 00:00	00:00 ZoneSelect	Zone	Reading	Setup	
DITIMER, ZONE CUSTOM MODE SETUP	Timer2 00:00	00:00 ZoneSelect Timer1	Zone	Zone1	Setup Zone1	
D TIMER, ZONE CUSTOM MODE SETUP D TIMER	Timer2 00:00 MONDAY	00:00 ZoneSelect	Zone	3	Setup	
QUICK MODE SETUP TIMER, ZONE USTOM MODE SETUP TIMER ZONE	Timer2 00:00	20::00 ZoneSelect Timer1 Timer2 Timer1		Zone1 Zone1	Setup Zone1 Zone1	
D TIMER, ZONE CUSTOM MODE SETUP D TIMER	Timer2 00:00 MONDAY TUESDAY	20::00 ZoneSelect Timer1 Timer2 Timer1	Zone 3)	Zone1 Zone1 Zone1	Setup Zone1 Zone1 Zone1 Zone1	
D TIMER, ZONE CUSTOM MODE SETUP D TIMER	Timer2 00:00 MONDAY	200:00 ZoneSelect Timer1 Timer2 Timer1 Timer2 Timer2		Zone1 Zone1 Zone1 Zone1	Setup Zone1 Zone1 Zone1 Zone1 Zone1	•
D TIMER, ZONE CUSTOM MODE SETUP D TIMER	Timer2 00:00 MONDAY TUESDAY WEDNESDAY	20:00 ZoneSelect Timer1 Timer2 Timer1 Timer2 Timer1 (*		Zone1 Zone1 Zone1 Zone1 Zone1 Zone1	Setup Zone1 Zone1 Zone1 Zone1 Zone1 Zone1	•
D TIMER, ZONE CUSTOM MODE SETUP D TIMER	Timer2 00:00 MONDAY TUESDAY	20:00 ZoneSelect Timer1 Timer2 Timer1 Timer2 Timer1 Timer2 Timer1 Timer2		Zone1 Zone1 Zone1 Zone1 Zone1 Zone1 Zone1	Setup Zone1 Zone1 Zone1 Zone1 Zone1 Zone1 Zone1	•

Buttons and Windows

- (1) Week Day Setup : Select Week Day for settings
- (2) Timer Setup : Enter Start/End time for Timer 1 (and Timer 2 if required) for each selected Week Day.
- (3) Zone : Select Zone for each selected Week Day and Timer 1 (and Timer 2)



Buttons and Windows

- (4) Information: Information describes steps for the setting.
- (5) Copy All Settings

To PC: Clicking this button will save all the setting data values except SECURITY and DATE AND TIME from connected product to a file on your computer.

To Product : Clicking this button will read all values from a file created by [To PC], and then update connected product with those saved values.

- (6) CopyQuickSetup : Clicking this button will copy QUICK MODE SETUP setting values to CUSTOM SETUP.
- (7) Reset: Clicking this button will reset all values to factory settings in CUSTOM SETUP TIMER.
- (8) Reading: Clicking this button will display the current values in the [Current] column.
- (9) Setup: Clicking this button will set new values into the mower.

CUSTOM MODE SETUP – TIMER Basic operation

- 1. Click [Reading] button to display the current setting value.
- 2. Select Week day.
- 3. Select Weekday tab to set Timer.
- 4. Enter Start/End time for Timer 1 (and Timer 2 if required)
- 5. Select Zone for each selected Week Day and Timer 1 (and Timer 2)
- 6. Click [Setup] button.
- 7. Click [Reading] to check if Week day and Timers are set correctly and Zone new values are displayed in Current column.

8.3.4.2 ZONE

Communication Windo	w Language Help						2012/11/22 10:
uto Test 2 Manual Test	3 Setting Data 4 Operating History 5 Calit	bration 6 Test Trip 7 I	OTC History 8 Live Data	9 Service Report 10	Links		
SYSTEM SETUP	Zone1 Zone2 Zone3 Zone4 Zone5						
STATION SETUP	(1) Name	Va	lue	Unit		Thres	hold
MANUAL MODE SETUP	(·) Name	Current	Setup	onic		Min	Max
LANGUAGE	WIRE EXIT LOCATION DIRECTION		CW 💌			-	-
	WIRE EXIT LOCATION DISTANCE		0	m		0	250
DATE AND TIME	WIRE EXIT ANGLE START		10	deg		10	170
SECURITY	WIRE EXIT ANGLE END		10	deg		10	170
SOUND	MOWING PATTERN		RANDOM -			-	-
QUICK MODE SETUP	WIRE OVERLAP		20	cm		20	45
TIMER, ZONE	PASSAGE WIDTH		0	cm		0	10
			Informa	ition			
CUSTOM MODE SETUP	1. Click [Reading] button to display the o	current values in the [Cu					
▷ TIMER	2. Enter new values in [Setup] column for	or each zone.					
D ZONE	3. Click [Setup] button to set new values	s into the mower.					
	Clicking [RESET ACTION] button will res	et all settings in ZONE 1	,2,3,4 and 5.	(2)			
	Clicking [All Reset] button will reset all s			• •			
		Copy All Settings		RESET ACTION	Reset All	Reading	Setup
		To PC	To Product			iteating	Joctop
			(2)	(4)	(E)	(6)	(7)
			(3)	(4)	(5)	(6)	(1)
			\				

Buttons and Windows

- (1) Tabs, Zone 1 to Zone 5 : Enter new values for Zone 1,2,3,4 and 5.
- (2) Information : Information describes steps for the setting.
- (3) Copy All Settings

To PC : Clicking this button will save all the setting data values except SECURITY and DATE AND TIME from connected product to a file on your computer.

To Product : Clicking this button will read all values from a file created by [To PC], and then update connected product with those saved values.

- (4) RESET ACTION : Clicking this button will reset all settings in ZONE 1,2,3,4, and 5.
- (5) Reset All : Clicking this button will reset all settings in TIMER and ZONE
- (6) Reading : Clicking this button will display the current values in the [Current] column.
- (7) Setup : Clicking this button will set new values into the mower.

CUSTOM MODE SETUP – ZONE Basic operation

- 1. Click [Reading] button to display the current setting value.
- 2. Enter new values in Setup column for each zone.
- 3. Click [Setup] button to set new values into the lawnmower.
- 4. Click [Reading] to check if new values are displayed in Current column.

8.4 Operating History

OPERATING TIME

Clicking [Reading] button will display the total operating time of the mower.

uto Test 2 Manual Test 3	Setting Data 4 Operating History 5 Calibration	6 Test Trip 7 DTC History 8 Live Data 9 Service Report	10 Links
OPERATING TIME	OPERATING TIME ACTIVATION COUNT		
WORK HISTORY	Name	Value	Unit
	TOTAL OPERATING TIME	15:27	h.min
RETURN HISTORY	TOTAL BATTERY CHARGING TIME	02:14	h.min
	TOTAL RETURN TIME	00:12	h.min
	TOTAL MOTOR RUNNING TIME	00:30	h.min
	TOTAL MOTOR CUTTING TIME	00:16	h.min
	TOTAL CUTTING TIME QUICK MODE	00:15	h.min
	TOTAL CUTTING TIME CUSTOM MODE	00:00	h.min
	TOTAL CUTTING TIME MANUAL MODE	00:00	h.min
	TOTAL CUTTING TIME RANDOM	00:14	h.min
	TOTAL CUTTING TIME DIRECTIONAL	00:00	h.min
	TOTAL CUTTING TIME MIXED	00:00	h.min
			Reading

ACTIVATION COUNT :

Clicking [Reading] button will display how many times each sensor is ON.

Ronda Diagnostic System - HRM3	300,MBAF1000180,08,00 01 00 00		
File Communication Window	Language Help		2012/12/06 10:46:31
1 Auto Test 2 Manual Test 3	Setting Data 4 Operating History 5 Calibration 6 Test Tr	in 7 DTC History 8 Live Data 9 Service Report 10 Links	
	OPERATING TIME ACTIVATION COUNT	o service report to the	
OPERATING TIME	Name	Value	154
WORK HISTORY			Unit
RETURN HISTORY	TOTAL BATTERY CYCLE COUNT	77	cycle
	LIFT STATE COUNT	145	time(s)
	OBSTRUCTION STATE COUNT TILT STATE COUNT	154	time(s)
	ROLLOVER STATE COUNT	14	time(s)
	MANUAL STOP SWITCH COUNT	222	time(s)
	MANUAL STOP SWITCH COUNT	222	ume(s)
Software Version: 1.0.0.19 Ma	in ECU Version:01.00.00 Display ECU Version:01.01.00		

WORK HISTORY

Clicking [Reading] button will display the last ten histories for the cut, the return and the charge.

onda Diagnostic System - HF	Help(H)			2012/10/16 11:56:
Auto Test 2 Manual Test			on 6 Test Trip 7 DTC History 8 Live Data	
OPERATING TIME	No	CUTTING HISTORY	RETURN HISTORY	CHARGING HISTORY
WORK HISTORY	1 1m		0 min	1 min
RETURN HISTORY		min	0 min	2 min
RETORN HISTORT		min	0 min	24 min
		min	0 min	1 min
	5 1 m		0 min	1 min
	6 1 m		0 min	1 min
	7 3 п		0 min	1 min
	8 2 m		0 min	1 min
	9 1 m		0 min	1 min
	10 8 m	in	0 min	1 min
				Reading
ware Version: 1 0 0 7 M	ain EC11 Versi	on:02.02.06 Display ECU Versio	n-02 02 00	

RETURN HISTORY

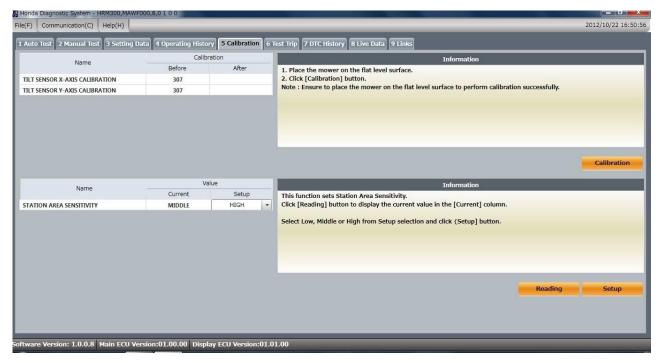
Clicking [Reading] button will display the last ten return histories for each zone.

uto Test 2 Manual Test	3 Setting	Data 4 Operating Hist	ory 5 Calibration 6 Test	Trip 7 DTC History 8 Live	Data 9 Service Report 1	0 Links
PERATING TIME	No	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5
VORK HISTORY	1	0 min	0 min	0 min	0 min	0 min
	2	0 min	0 min	0 min	0 min	0 min
ETURN HISTORY	3	0 min	0 min	0 min	0 min	0 min
	4	0 min	0 min	0 min	0 min	0 min
	5	0 min	0 min	0 min	0 min	0 min
	6	0 min	0 min	0 min	0 min	0 min
	7	0 min	0 min	0 min	0 min	0 min
	8	0 min	0 min	0 min	0 min	0 min
	9	0 min	0 min	0 min	0 min	0 min
	10	0 min	0 min	0 min	0 min	0 min
						Reading

8.5 Calibration

Calibration:

Clicking [Calibration] button will calibrate Tilt Sensor (X and Y axis).



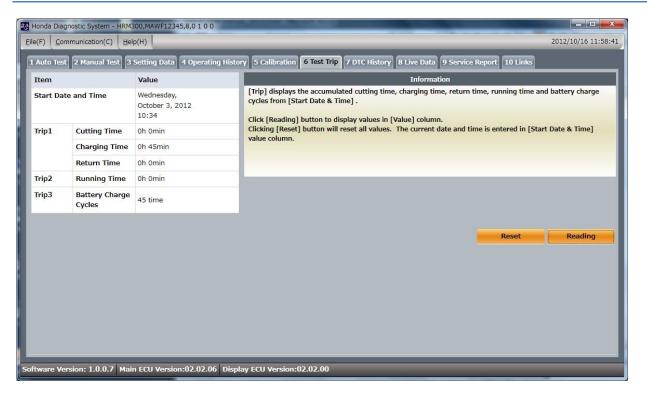
STATION AREA SENSITIVITY

Honda Diagnostic System - HRM300,MAWF0	00,8,0 1 0 0		
File(F) Communication(C) Help(H)			2012/10/22 16:50:50
1 Auto Tost 2 Manual Tost 2 Cotting Do	to 4 Occupating Wistor	5 Calibration	Test Trip 7 DTC History 8 Live Data 9 Links
I Auto Test 2 Manual Test 3 Setting Da			
Name	Calibra		Information
	Before	After	1. Place the mower on the flat level surface.
TILT SENSOR X-AXIS CALIBRATION	307		2. Click [Calibration] button. Note : Ensure to place the mower on the flat level surface to perform calibration successfully.
TILT SENSOR Y-AXIS CALIBRATION	307		
			Calibration
Name	Val	Je	Information
	Current	Setup	This function sets Station Area Sensitivity.
STATION AREA SENSITIVITY	MIDDLE	HIGH 💌	Click [Reading] button to display the current value in the [Current] column.
			Select Low, Middle or High from Setup selection and click {Setup] button.
			Reading Setup
oftware Version: 1.0.0.8 Main ECU Ver	sion:01.00.00 Displa	y ECU Version:01.0	01.00
Concernent and an and a second second second second		and the second second second	

Clicking [Reading] button will display the current values in the [Current] column.

- 1. Select Low, Middle or High from [Setup] selection
- 2. Click [Setup] button to apply changes to the mower
- 3. Click [Reading] to check if the new value is displayed in Current column.

8.6 Test Trip



[Trip] displays the accumulated cutting time, charging time, return time, running time and battery charge cycles from [Start Date & Time] since last reset.

- Clicking [Reading] button will display values in [Value] column.
- Clicking [Reset] button will reset all values and will set current date and time in [Start Date & Time] value column.

8.7 DTC History

Auto Test (1 Readi	2 Manual	Vindow Language Help Test 3 Setting Data 4 Operating History 5 Calibration 6 Test Trip 7 TroubleShoot(PDF)	DTC His	tory 8 Live Data 9 Service	e Report 10 Links	-	-	2012	/11/22 10:1
Warn	ing/Failure	Operational Error Name DTC			Failure Mo	de Descrip	tion	_	_
No loop si	gnal	3a036				ignal - 3a0			
Number	Code	(3) Name	•	Select	ed Warninq/Failure/C	(4) Operationa	I Error Detail H	listory	
1	3a036	No loop signal	_		No loop si	iqnal - 3a0	36		
2	3a011	Lifted	_	Signal	Value		Unit	Three	
3	3a036	No loop signal		-				Min	Max
-	3a037 3a036	OUTSIDE WARNING No loop signal (5)	- 11	YEAR	2012		year	2000	2099
4	54030	No loop signal (5)	- 1	MONTH WEEK		(6)	month	1	12
4 5	3a036			DAY	Thu 22		day	- 1	- 31
4	3a036 3a011	Lifted		DA1			day	0	23
4 5 6				HOUR					59
4 5 6 7	3a011	Lifted No loop signal No loop signal		HOUR	10		min	0	
4 5 6 7 8	3a011 3a036	No loop signal		HOUR MINUTE STATION AREA SENSITI	15 MIDDLE		min	-	
4 5 6 7 8 9	3a011 3a036 3a036	No loop signal No loop signal		MINUTE	15		min	-	

(*) DTC: Diagnostic Trouble Code

Buttons and Windows

- (1) Reading : Clicking this button will display DTCs.
- (2) Troubleshoot(PDF) : Clicking this button will open TROUBLESHOOTING in Service Manual.
- (3) DTC window : It lists DTCs.
- (4) DTC information window : Information describes detailed information of selected DTC.
- (5) DTC history saved in the ECU : It lists most recent 20 DTCs stored in the ECU.
- (6) DTC details window : It displays detailed information of selected DTC.

8.8 Live Data

Live Data displays real-time information for the lawnmower regarding the sensors, switches etc. inspected by the ECU.

The data can be displayed in a graph. Also it has a snapshot function (records preselected data at a predefined frequency during a predefined duration, by default 30sec).

e Communication Window Language Help				2012/11/22 10:
Auto Mat 2 Manual Test Shing Data 4 Ope	erating History 5 Calibration 6 Test Trip 7 DTC H	listory 8 Live Data 9 Service Report 10 Li	nks	
Settings Start Snap Shot Graph Communication Stop	1 /2 🦊			Sampling Frequency 50 Sampling Duration Page 1/2
(3) (4)	Sensor In	formation		
Signal	Value	Unit	Thre	eshold
Signal	Volue	onic	Min	Max
MANUAL STOP SWITCH RIGHT	ON		-	-
MANUAL STOP SWITCH LEFT	ON		-	-
DBSTRUCTION SENSOR FRONT	OFF		-	-
DBSTRUCTION SENSOR REAR	OFF		-	-
ROLLOVER SENSOR	OFF		-	-
IFT SENSOR STATE RIGHT	OFF			-
IFT SENSOR STATE LEFT	OFF (5)	-	-
AREA SENSOR FRONT LEFT	NONE	5)		-
AREA SENSOR FRONT RIGHT	NONE		-	-
REA SENSOR BACK	NONE		-	-
TATION SIGNAL	OFF			-
REA STRENGTH REAR	0	Lv	0	10
ILT ANGLE	0	deg	0	180
AW TEMPERATURE DATA	40	degC	-40	215
AW ANGLE DATA	353.7	deg	0	360
	Mowing Ir	Iformation		
Signal	Value	Unit	Thre	eshold
Signal	Volue	Unic	Min	Max
NOWING PATTERN	RANDOM		-	-
TITOUPUTS INCOLOGR BIRECTRON	1.00			

Buttons and Windows

- (1) Settings : Clicking this button adjust snapshot, and graph display settings.
- (2) Start snapshot : Clicking this button will record and save the data.
- (3) Graph : Clicking this button will display the data as graphs.
- (4) Communication Start : Clicking this button will start the communication with the ECU and display the data. Communication starts automatically when Live Data tab is selected.
- (5) Parameter window : It lists all associated signal information for sensors and switches.

8.8.1.1 Live Data Procedures

(1) The communication starts automatically when Live Data tab is selected.

*When the communication starts, "Communication Start" button switches to "Communication Stop". The parameter window shows separate signals for sensors, switches, time information etc.

Irregular signals are highlighted in yellow.

e Communication Window Language Help				2012/11/22 10:1
Auto Test 2 Manual Test 3 Setting Data 4 Operati	ng History 5 Calibration 6 Test Trip 7 DTC	History 8 Live Data 9 Service Report 10 Links		
Settings Start Snap Shot Graph Communication Stop	1 /2 🔶			Sampling Frequency 500 Sampling Duration Page 1/2
	Sensor I	Information		
Signal	Value	Unit		hreshold
3			Min	Max
ANUAL STOP SWITCH RIGHT	ON		-	-
IANUAL STOP SWITCH LEFT	ON		-	-
DISTRUCTION SENSOR FRONT	OFF		-	-
BSTRUCTION SENSOR REAR	OFF		-	-
OLLOVER SENSOR	OFF		-	-
IFT SENSOR STATE RIGHT	OFF		-	-
IFT SENSOR STATE LEFT	OFF		-	-
REA SENSOR FRONT LEFT	NONE			-
REA SENSOR FRONT RIGHT	NONE		-	-
REA SENSOR BACK	NONE		-	-
TATION SIGNAL	OFF			-
REA STRENGTH REAR	0	Lv	0	10
ILT ANGLE	0	deg	0	180
AW TEMPERATURE DATA	40	degC	-40	215
AW ANGLE DATA	353.7	deg	0	360
	Mowing	Information		
Signal	Value	Unit	Tł	hreshold
orginar	Volue	one	Min	Max
IOWING PATTERN	RANDOM		-	-

8.8.1.2 Live Data Sub Window

This function allows you to see Live Data simultaneously in a separate window.

1. Select "Sub Window" – "Live Data" from the Window menu.

Rð Ho	onda Diagno	ostic Syste	em - HRM3	300,MAWF10	00180,0	08,00 01 00 00							- • ×
File	Commun	ication	Window	Language	Help							2012	/12/14 9:57:33
1 /	uto Test	2 Manua	Auto T Manua		Op	perating History	5 Calibr	ation	6 Test Trip 7 DTC His	tory 8 Live Dat	a 9 Se	rvice Repo	rt 10 Links
	Readi	ng	Setting	g Data									
ľ	Warning/Failure/Ope Operating History DTC DTC Item Not Fou Calibration Test Trip							Fai	lure Mode Descr	iption	-		
			Test Tr	rip									
			DTC H	istory									
			Live D	ata									
			Service	e Report									
L L			Links										
I	lumber	Code 3a036	Sub W	/indow 🕨		Lve Data			Selected Warning/F	ailure/Operation	nal Error	Detail His	tory
	2	3a036		op signal					Signal	Value	Unit	Three	shold
	3	3a011	Lifted						originar	Value	orne	Min	Max
	4 5	3a036 3a031		op signal nunication E									
	6	3a031		op signal	TOF								
	7	3a037		IDE WARNIN	IG								
L	_			_	_		_				_	_	
Soft	ware Vers	ion: 1.0.	.0.20 Ma	ain ECU Vers	sion:0	1.00.00 Displa	y ECU Ve	rsion:(01.01.00				

2. Live Data and DTC History are displayed in two separated windows as the picture below.

onda Diagno	ostic Syster	m - HRM300,MAWF	F12345,8,0 1 0 0				_ 0 <mark>_</mark> ×
Commur	nication	Window Langua	ge Help				2012/11/22 10:17:57
Auto Test	2 Manual	Test 3 Setting [Data 4 Operating History 5 Calibration 6 Tes	st Trin 7 DTC History 8 Live Data	Service Report 10 Li	nks	
		Test of Second e					
Readi	ing	TroubleShoot	(PDF)				
Warr	ing/Failure	/Operational Error	Name DTC		r.d.	re Mode Description	
No loop si		, operational error	3a036			loop signal - 3a036	
	,				NO	100p Siqilai - 38030	
		-					
		P	Honda Diagnostic System - HRM300,	MAWF1000180,08,00 01 00 00			
			Settings Start Snap	Shot			Sampling Frequ
					/2 🤟		Sampling Dur
			Graph Communicati	on Stop 📕 📕 🖊			
Number	Code						
1	3a036	No loop signa		Sen	sor Information		
2	3a011	Lifted	Signal	Value	Unit —		reshold
3	3a036	No loop signa				Min	Max
4	3a037	OUTSIDE WAF	MANUAL STOP SWITCH RIGHT	ON		-	-
5	3a036 3a036	No loop signa No loop signa	MANUAL STOP SWITCH LEFT	ON		-	-
7	3a030	Lifted	OBSTRUCTION SENSOR FRONT	OFF		-	-
8	3a036	No loop signa	OBSTRUCTION SENSOR REAR	OFF		_	-
9	3a036	No loop signa	ROLLOVER SENSOR	OFF			_
10	3a036	No loop signa				-	_
	2-026	No loop signs	LIFT SENSOR STATE RIGHT	OFF		-	-
			LIFT SENSOR STATE LEFT	OFF		-	-
	ion: 1.0.0	0.17 Main ECL	AREA SENSOR FRONT LEFT	INSIDE		-	-
ware Vers							
ware Vers			AREA SENSOR FRONT RIGHT	OUTSIDE		-	-

8.8.1.3 Graph display function

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

This function draws on a graph all changes detected by preselected sensors (Maximum 6 sensors can be shown on same graph).

1. Click "Graph".(1)

e(F) Communication(C) Help(H)		2012/10/16 12:05
Auto Test 2 Manual Test 3 Setting Data 4 Operating Histo	ory 5 Calibration 6 Test Trip 7 DTC History 8 Live	Data 9 Service Report 10 Links
Settings Start Snapshot Graph Communication Start		Sampling Frequency500m Sampling Duration : Page 1/2
(1)	Sensor Information	
Signal	Value	Unit
IFT SENSOR STATE RIGHT	OFF	
IFT SENSOR STATE LEFT	OFF	
REA SENSOR FRONT LEFT	NONE	
REA SENSOR FRONT RIGHT	NONE	
REA SENSOR BACK	NONE	
TATION SIGNAL	OFF	
AREA STRENGTH REAR	0	Lv
ILT ANGLE	0	deg
AW TEMPERATURE DATA	0	degC
AW ANGLE DATA	0	deg
ci al	Mowing Information Value	Unit
Signal		Unit
NOWING PATTERN	RANDOM	
TATION ENTRANCE LOOP DIRECTTION	CW	
VIRE EXIT LOCATION DIRECTION	CW	
TATION ENTRANCE PASSAGE WIDTH RETURN	0	
ASSAGE WIDTH OUTWARD	0	-
VIRE EXIT LOCATION DISTANCE	0	m

Communic	ation Start	Start Snap	oshot	(2) Settings		Screen Capt	ure B	ack To Data	List		
1	.00		1			1		Î		_ 1.00	
IGHT o	.80									_ 0.80	
STATE R	.60									_ 0.60	I SIGNAL
LIFT SENSOR STATE RIGHT	.40									0.40	STATION SIGNAL
o LIFT	.20									_ 0.20	
⁰	.00 _		6.						(0.00	_
	0.00		20.00			40.00		60.00		80.00	
					Seco	nds					
Parameter	Value	Unit	Line Color	Axis		Parameter	Value	Unit	Line Color	Axis	e
LIFT SENSO.	OFF			Y1		STATION SI	OFF			¥2	
LIFT SENSO.	OFF			Y1							
AREA SENS.	. NONE		-	Y1							
AREA SENS.	. NONE			¥1	-						6

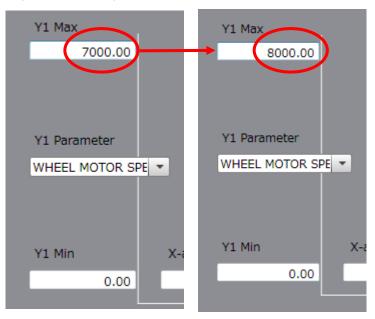
2. The graph window is displayed. Click "Settings" (2)

3. The following settings window is displayed. Set the selected signals, maximum value, minimum value, color, weight etc. that you want for the graph.

LIFT SENSOR STATE RL V LIFT SENSOR STATE LEFT V AREA SENSOR FRONT AREA SENSOR	Parameter	Display Param	Log	Graph	Line Color	Axis Set	ttings 📥		(4)	
LIFT SENSOR STATE LEFT V V V V V V V V V V V V V V V V V V V	Check All		1						(4)	
AREA SENSOR FRONT V V VI	IFT SENSOR STATE RI		V			Y1	-			
AREA SENSOR FRONT V V V V V V V V V V V V V V V V V	IFT SENSOR STATE LEFT	V	1	~		Y1	•	Y1 Max		Y2 Max
NREA SENSOR FRONT V V Y1 V NREA SENSOR BACK V V Y1 V TATION SIGNAL V V Y2 V IREA STRENGTH REAR V V Y2 V ILT ANGLE V V V Y2 AW TEMPERATURE D V V V V AW ANGLE DATA V V V V VIRE EXIT LOCATION V V V V VIRE EXIT LOCATION V V V V Store Time Before Total Total V V V Tigger -15 V V V V V	REA SENSOR FRONT	V	V	1		Y1	•	1.00	←(4-1)→	1.00
TATION SIGNAL V V V2 V1 Parameter V2 Parameter IREA STRENGTH REAR V V V1 Parameter V2 Parameter ILT ANGLE V V Graph: Put in a tick for each parameter you wish to display (6 sensors maximum on same graph). V1 Min V2 Min V2 Min Store Time Before Trigger Total T Total T Total T Total T V0 V VIEW	REA SENSOR FRONT		1			Y1	-			
REA STRENGTH REAR Image: Construction of the second state of	REA SENSOR BACK					Y1	-			
ILT ANGLE Image: Constraint of the sector of the secto	TATION SIGNAL					Y2	-			
AW TEMPERATURE D V V Orteprint of which AW ANGLE DATA V V Interview of the formation of	REA STRENGTH REAR		1	Λ.				The second s	<i>(</i> , , ,)	
AW TEMPERATURE D V V V V V V V V V V V V V V V V V	ILT ANGLE		1		Grap	h: P	utina	LIFT SENSOR STA	т - (4-2) sт	ATION SIGNAL
NOWING PATTERN Image: Constraint of the second	AW TEMPERATURE D	V	1		-					
TATION ENTRANCE L V V Imparameter you ARE EXIT LOCATION V V Imparameter you wish to display (6 sensors maximum on same graph). Store Time Before Trigger -15 Total T Total T Total T Total T Total T Total T Total T Total T Total T	AW ANGLE DATA		V		tick fo	or ea	ch			
ARE EXIT LOCATION V V Wish to display (6 ASSAGE WIDTH OUT V V O ARE EXIT LOCATION V O IRE EXIT LOCATION V O Store Time Before Trigger -15 -15 -15 -15 -15 -0.00 80 0.00 80 0.00 -0.00 80 0.00 -0.00	IOWING PATTERN		V						(4-3)	
TATION ENTRANCE P V Wish to display (6 ASSAGE WIDTH OUT V V M IRRE EXIT LOCATION V M Store Time Before Trigger -15 -15 Total T 15 Wish to display (6 sensors maximum on same graph). Total T 15 N N O N O O O O O O O O O O O O O	TATION ENTRANCE L	V	1		paran	nete	r you	Y1 Min	X-axis Range	Y2 Min
Assage WIDTH OUT Assage WIDTH OUT WRE EXIT LOCATION Sensors maximum (4-1) on same graph). Trigger -15 ON © OFF	VIRE EXIT LOCATION	V	1				1 (0	0.00	80	0.00
VIRE EXIT LOCATION Image: Sensors maximum (4-1) Store Time Before Trigger Total T on same graph). ore Time on same graph). -15 -15 15 ON © OFF	TATION ENTRANCE P				wish t	0 01	splay (6	K		
VIRE EXIT LOCATION VIEW (4-1) Store Time Before Trigger -15 -15 -15 -15 -15 -15 -15 -15	ASSAGE WIDTH OUT		V		00000		- avimum		\searrow	
Trigger 30 Auter Trigger IS ON OFF	VIRE EXIT LOCATION		1		sense	nsn	laximum		(4-1)	
Trigger 30 Arter Trigger IS ON OFF		11 10			on sa	me d	araph).		、 /	
-15 15 0 ON @ OFF				Total T			•••	CANCEL AND CONTRACT OF	High Speed S	ampling
				30	_		,		O ON	• OFF
	-15 -							15		
	rigger r		_					10		
					Trigger Value	2	Cond	dition	Save Setting	Js Load Settings

- 4. You can customize axis of the graph (4)
 - (4-1) maximum value and minimum value for each Y1 and Y2 axis
 - (4-2) select sensor unit for each Y1 & Y2 axis
 - (4-3) X axis scale setup (in seconds)

5. Key-in 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.

- 1. click on the line you wish to change
- 2. New window pops up to adjust settings

Parameter	Display Param	Log	Graph	Line Color	Axis Settings 📥		
Check All							
IFT SENSOR STATE RI	v	1	1		Y1 -		
IFT SENSOR STATE LEFT		1	1		Y1 • Y	1 Max	Y2 Max
REA SENSOR FRONT		V	V		Y1 •	1.00	1.00
REA SENSOR FRONT		1	V		Y1 •		
REA SENSOR BACK		1		_	1		
TATION SIGNAL		V	V		Y2 -		
REA STRE <mark>N</mark> GTH REAR					Y.	1 Parameter	Y2 Parameter
ILT ANGLE					LI	FT SENSOR STAT	STATION SIGNAL
AW TEMPERATURE D		J					
AW ANGLE DATA		J					
OWING PATTERN		V			DULL OUT		
TATION ENTRANCE L		J			💐 Line Settings		×
VIRE EXIT LOCATION					Line	Marker	
TATION ENTRANCE P		V			• <u>A</u> utomatic	• Auto <u>m</u> atic	
ASSAGE WIDTH OUT		V			○ None	⊂ No <u>n</u> e	
VIRE EXIT LOCATION					⊂ C <u>u</u> stom	⊂ Cust <u>o</u> m	
			-0	101	<u>S</u> tyle:	Style:	None 🔻
Store Time Before			Total Ti	me	0-l		
Trigger			30	- 10	Color:	Eoreground:	
-15 -					Weight:	<u>B</u> ackground:	
rigger						Size:	4
Manual	Select Watch			Trigger Value	Sample		<u> </u>
Parameter	Parameter	-		anger raid			
DTC							
	_	-				111	

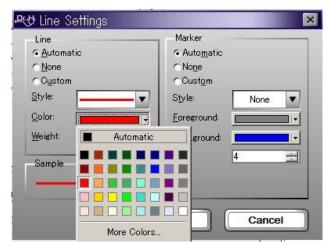
Line types window_Changing style

Select the line style from the dropdown menu.

Line	Marker
• <u>A</u> utomatic	 Automatic
⊂ <u>N</u> one	○ None
⊂C <u>u</u> stom	⊂ Cust <u>o</u> m
<u>S</u> tyle:	Style: None 🔻
<u>D</u> olor:	- A Eoreground:
<u>N</u> eight:	Background:
Sample	Size: 4
	-
	OK Cancel

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	Marker
• <u>A</u> utomatic	• Auto <u>m</u> atic
⊂ <u>N</u> one	○ None
⊂C <u>u</u> stom	⊂ Cust <u>o</u> m
Style:	▼ Style: None ▼
<u>C</u> olor:	Eoreground:
Weight:	Background:
Sample	Size: 4 🕂

Line types window_Setting marker

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

Line		_	
• <u>A</u> utomatic	 Automatic 		
∩ <u>N</u> one	⊂ No <u>n</u> e		
C <u>u</u> stom	⊂ Cust <u>o</u> m		
<u>S</u> tyle:	Style:	None	
<u>D</u> olor:	Eoreground:	None	
Veight:	<u>B</u> ackground:		
	Size:	4	-
Sample		-	-
	<u> </u>		
			_

8.8.1.4 Snapshot function

Signal for starting the data recording is called the "trigger". It is possible to change the trigger method in the settings (3) from manual trigger to DTC trigger or parameter trigger.

Manual Trigger:

Default DrH setting is 30 second recording and manual trigger.

- 1. Click "Communication Start" (1).
- 2. Click "Start Snapshot" (2).

When the "Start Snapshot" button is clicked, the button's name changes to "End Snapshot" and data are recorded automatically in a file on your computer. This file can later be opened via "File / Open" menu.

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

Art 2 Manual Test 2 ng Data 4 Operating History 5 Calibration 6 Test Trip 7 DTC History 8 Live Data 9 Service Report 10 Links Settings Start Snap Shot I / 2 I / 2 Image: Start Snap Shot Sampling Prequency Sampling Prequency Sampling Duration Page Image: Start Snap Sampling Prequency Sampling Duration Page Image: Start Snap Sampling Prequency Sampling Duration Page Image: Start Snap Sampling Prequency	e Communication Window Language Help				2012/11/22 10:
Settings Start Snap Shot Snap Ing Frequency Sampling Frequency <th></th> <th></th> <th></th> <th>_</th> <th></th>				_	
Start Shap Shart Sampling Duration Sampling Duration Graph Communication Start I / 2 Sampling Duration Graph Communication Start Secon Information Sampling Duration Page 1 Signal Value Unit Threshold ANNUAL STOP SWITCH RIGHT ON - - ANNUAL STOP SWITCH LIEFT ON - - Distribution Start Onff - - Distribution Start Onff - - Distribution Start Lieft Onff - - Starts Starts Right Offf - - - Starts Starts Right Offf I - - Start Lieft Offf I	Aut (13t) 2 Manual Test 3 2thing Data 4 Operal	ing History 5 Calibration 6 Test Trip 7 DTC H	listory 8 Live Data 9 Service Report 10 Li	nks	
Graph Communication Start Page 1 All of the start Sensor Information Threshold Signal Value Unit Min Max MANUAL STOP SWITCH RIGHT ON - - - MANUAL STOP SWITCH RIGHT ON - - - - MANUAL STOP SWITCH LIEFT ON -	Settings Start Snap Shot				Sampling Frequency 500
Communication sum Sensor Information Signal Value Unit Tireshol AANUAL STOP SWITCH RIGHT ON -		1 /2 🔶			Sampling Duration
Signal Value Init Threshold AAANUAL STOP SWITCH RIGHT ON -<	Graph Communication Start				Page 1/2
Signal Value Unit Min Max AANUAL STOP SWITCH RIGHT ON -	(1)	Sensor In	formation		
Min Max NANUAL STOP SWITCH LIEFT ON -	Signal	Value	linit	Thre	shold
ANAVAL STOP SWITCH LEFT ON - - ABSTRUCTION SENSOR FRONT OFF - <td< td=""><td>Signal</td><td>Value</td><td>Unic</td><td>Min</td><td>Max</td></td<>	Signal	Value	Unic	Min	Max
BSTRUCTION SENSOR FRANT OFF - BSTRUCTION SENSOR REAR OFF - - OLLOYES SENSOR OFF - - OLLOYES SENSOR OFF - - FIT SENSOR STATE RIGHT OFF - - IF SENSOR STATE LIFF OFF - - REA SENSOR FRONT RIGHT OFF - - REA SENSOR REANT RIGHT MONE - - REA SENSOR REANT RIGHT MONE - - REA SENSOR REANT RIGHT ONONE - - REA STENGTIN REAR O I.V 0 10 REA STENGTIN REAR O I.V 0 180 REA STENGTIN REAR O.1 O 0 150 RAT SENGERIT REAR O.1 O.1 O 0 ANT MEMERATURE DATA 33.7 deg 0 150 Signal Val	IANUAL STOP SWITCH RIGHT	ON		-	-
BSTRUCTION SENSOR REAR OFF - OLLOVER SENSOR OFF - - OLLOVER SENSOR STATE RIGHT OFF - - - IFT SENSOR STATE RIGHT OFF - - - - IFT SENSOR STATE RIGHT OFF -	IANUAL STOP SWITCH LEFT	ON		-	-
OLI OVER SENSOR OFF - IFT SENSOR STATE RIGHT OFF - - IFT SENSOR STATE LEFT OFF - - REA SENSOR FRONT LEFT MONE - - REA SENSOR RONT RIGHT NONE - - REA SENSOR RANK RIGHT MONE - - REA SENSOR RANK RIGHT MONE - - REA SENSOR RACK MONE - - REA SENSOR RACK OFF - - REA SENSOR RACK OFF - - REA SENSOR RACK OfF - - REA SENSOR RACK O 10 10 REA SENSOR RACK 0 10 10 REA SENSOR RACK 0 10 10 REA SENSOR RACK 0 0 10 RAW ANGLE DATA 303.7 0 30 Signa	BSTRUCTION SENSOR FRONT	OFF		-	-
FT SENSOR STATE RIGHT OFF - FT SENSOR STATE LEFT OFF - REA SENSOR FRONT LEFT MONE - REA SENSOR RONT RIGHT NONE - REA SENSOR RONT RIGHT NONE - REA SENSOR RONT RIGHT NONE - REA SENSOR RONT RIGHT O 10 REA SENSOR ROAL O 10 REA STRENGTH REAR O 10 NUT EMPERATURE DATA Ado deg WANGLE DATA 35.7 deg AWANGLE DATA 35.7 deg Signal Yalue Interview	BSTRUCTION SENSOR REAR	OFF		-	-
FT SENSOR STATE LEFT OFF - REA SENSOR FRONT LEFT NONE - REA SENSOR FRONT RIGHT MONE - REA SENSOR RACK NONE - REA SENSOR BACK NONE - REA SENSOR BACK NONE - REA SENSOR BACK 0 0 REA SENSOR BACK 0 0 REA SENSOR BACK 0 10 REA STENGRITHERAR 0 0 NU TEMPERATURE DATA 0 10 WA NGLE DATA 353.7 deg Wowing Interview Signal Yalue	OLLOVER SENSOR	OFF		-	-
REA SENSOR FRONT LEFT NONE - REA SENSOR FRONT RIGHT NONE - - REA SENSOR BACK MONE - - - REA SENSOR BACK MONE - <td>FT SENSOR STATE RIGHT</td> <td>OFF</td> <td></td> <td>-</td> <td>-</td>	FT SENSOR STATE RIGHT	OFF		-	-
REA SENSOR RAONT RIGHT NONE - REA SENSOR BACK NONE - - TATION SIGNAL OFF -	FT SENSOR STATE LEFT	OFF		-	-
REA SENSOR BACK NONE - TATION SIGNAL OFF - - REA STRENGTH REAR 0 Lv 0 10 ILT ANGLE 0 degd 0 180 AW TAMPERATURE DATA 40 degd 0 180 AW ANGLE DATA 353.7 degd 0 215 Signal Value Max	REA SENSOR FRONT LEFT	NONE		-	-
TATION SIGNAL OFF - - REA STRENGTH REAR 0 10 10 LIT ANGLE 0 0 180 AW TEMPERATURE DATA 40 0 215 AW ANGLE DATA 353.7 0 30 Signal Value 10	REA SENSOR FRONT RIGHT	NONE		-	-
REA STRENGTH REAR 0 10 LT ANGLE 0 0 180 NW TEMPERATURE DATA 0 0 215 AWA NGLE DATA 353.7 0 0 215 Kowing Internation Signal Yalue Threshold	REA SENSOR BACK	NONE		-	-
ItT ANGLE 0 180 AW TEMPERATURE DATA 40 degC -40 215 AW ANGLE DATA 353.7 degC 0 360 Notify the provide state	TATION SIGNAL	OFF		-	-
AW TEMPERATURE DATA 40 degC -40 215 AW ANGLE DATA 353.7 deg 0 360 Bound Information Signal Office Information Value Unit Information	REA STRENGTH REAR	0	Lv	0	10
AW ANGLE DATA 353.7 deg 0 360 Moving Information Signal Value Unit Threshold Min Max	ILT ANGLE	0	deg	0	180
Mowing Information Threshold Signal Value Unit Min Max	AW TEMPERATURE DATA	40	degC	-40	215
Signal Value Unit Threshold Min Max	AW ANGLE DATA	353.7	deg	0	360
Signal Value Unit Min Max		Mowing Ir	nformation		
- Min Max	Signal	Value	Unit		
IOWING PATTERN	2/			Min	Max
	OWING PATTERN	RANDOM			-

When the snapshot is finished, the following message appears.

Click the "OK" button to end the snapshot.

Rt DrH	×
i	SnapShot Stopped
	ок

Changing snapshot settings:

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.

Parameter	Display Param	Log	Graph	Line Color	Axis Se	ttings 🖢			
Check All									
IFT SENSOR STATE RI	V	1	1		Y1	-			
JFT SENSOR STATE LEFT		1	1		Y1	-	Y1 Max		Y2 Max
AREA SENSOR FRONT			1		Y1	-	1.00		1.00
AREA SENSOR FRONT		1	V		Y1	-			
AREA SENSOR BACK			V		Y1	-			
TATION SIGNAL			1		Y2	-			
AREA STRENGTH REAR	V						Y1 Parameter		Y2 Parameter
TILT ANGLE	V	-					LIFT SENSOR STAT	T STA	TION SIGNAL
AW TEMPERATURE D	V	1	100						
AW ANGLE DATA	V	1							
MOWING PATTERN	V	1							
TATION ENTRANCE L		1	1				Y1 Min	X-axis Range	Y2 Min
WIRE EXIT LOCATION	V						0.00	80	0.00
TATION ENTRANCE P									
PASSAGE WIDTH OUT	V								
WIRE EXIT LOCATION						5	(6)		

Trigger settings (4):

*DrH default setting is Manual trigger.

Туре	Explanation
Manual	When the user clicks "Start Snapshot", the recording starts.
Parameters	When the trigger value is detected and exceeded, recording starts automatically.
DTC	When a DTC appears, recording starts automatically.

Click on a trigger type box to select the trigger type.

Trigger
Manual
Parameter
ODTC

Trigger Parameters (5):

Set the trigger type to "Parameter" and select the "Watch Parameter" from the dropdown menu.

Key-in the "Trigger Value" related to the "Watch Parameter".

Set the trigger "Condition" box to a value above or below the standard value.

Recording time (6):

Default DrH setting is 30 seconds.

1. Enter desired value as shown below (in seconds).

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

2. Allocate time before and after trigger:

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

Store Time Before	Total Time		Store Time After Trigger	
Trigger	30	Sec		
-15	1		15	

High-speed sampling function.

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

1. Uncheck "Check All" box of "Log" in the next screen.

Parameter	Display Param	Log	Graph	Line Color	Axis Set	tings									
Check All															
LIFT SENSOR STATE RI		1	1		Y1	-									
JFT SENSOR STATE LEFT	V	1	1		Y1	-		YI	1 Max				Y2	Max	
AREA SENSOR FRONT		V	1		Y1	•				1.00			1.0	0	
AREA SENSOR FRONT		1	V		Y1	•									
AREA SENSOR BACK			1		Y1	-									
STATION SIGNAL		1	1		Y2	-									
AREA STRE <mark>N</mark> GTH REAR								Y	1 Parame	ter			Y2	Paramet	er
TILT ANGLE		1						LI	FT SENS	OR STAT	-	S	TATION	SIGNAL	-
YAW TEMPERATURE D	V	1	100												
YAW ANGLE DATA	1	1													
MOWING PATTERN	V	V													
STATION ENTRANCE L		1						Y	1 Min		X-axis	Range	Y2	Min	
WIRE EXIT LOCATION										0.00		30	0.0	0	
STATION ENTRANCE P															
PASSAGE WIDTH OUT															
WIRE EXIT LOCATION							-								
Store Time Before			Total Ti	me				Store	e Time		115-		C arana Ita		
Trigger			30					After	Trigger		Hig	h Speed :		-	
-15 -								15				0 ON		•	OFF
Trigger	Select Watch										_			-	
o Manual Parameter	Parameter			Trigger Valu	e			Condition			Sav	e Settin	gs	Load	Settin

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

👯 Snapshot a	nd Graph Settin	gs			_	_	-	_	_	X
Parameter	Display Param	Log	Graph	Line Color	Axis Settir	ng				
Check All										
MANUAL S			V		Y1	*				
MANUAL S			V		Y1	*		Y1 Max		Y2 Max
OBSTRUCT	V				Y1			1.00		1.00
OBSTRUCT	V		V		Y1	*				
ROLLOVER			V		Y1	*	-1			
LIFT SENS	v		v		Y2	*				
LIFT SENS								Y1 Parameter		Y2 Parameter
AREA SEN								MANUAL STOP SWI	LIFT S	SENSOR STAT
AREA SEN	V									
AREA SEN	V									
STATION S	v									
AREA STRE	V							Y1 Min	X-axis range	Y2 Min
TILT ANGLE								0.00	80	0.00
YAW TEM										
YAW ANG										
MOWING										
				Total Tir 30	ne			Store Time After Trigger 15	High Speed Samp	o OFF
 Trigger Manual Parameter DTC 		elect Wat Paramete			rigger Value		Ľ	Condition 🗸	Save Settings OK	Load Settings Cancel

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

conapsnot and drap	h Settings						
Parameter	Display Parameter	Log	Graph	Line Color	Axis Setting		
Check All							
MANUAL STOP S	v	2	2		- Y1 +		
MANUAL STOP S	2	2			- Y1 -		
OBSTRUCTION S	v	5			- Y1 ·		
OBSTRUCTION S	2	5			Y1 *	Y1 Max	Y2 Max
ROLLOVER SENS	v	5			- Y1 -	1.00	
LIFT SENSOR STA	V	5	2		Y2 -	1.00	1.00
LIFT SENSOR STA							
AREA SENSOR FR							
AREA SENSOR FR					-	Y1 Parameter	Y2 Parameter
AREA SENSOR B							
STATION SIGNAL						MANUAL STOP SWITC	LIFT SENSOR STATE
AREA STRENGTH							
TILT ANGLE							
YAW TEMPERAT						Y1 Min X-axis range	Y2 Min
YAW ANGLE DATA						0.00 80	0.00
MOWING PATTE						0.00 0.00	10.00
STATION ENTRA							
WIRE EXIT LOCA							
STATION ENTRA							
PASSAGE WIDTH							
WIRE EXIT LOCA							

Save and load your settings:

It is possible to save your settings (1) and open (2) them when needed.

	Display Param	Log	Graph	Line Color	Axis Setting				
heck All									
NUAL S		1			Y2	-			
NUAL S			V		Y1	-	Y1 Max		Y2 Max
STRUCT						_	1.00		1.00
STRUCT									
LOVER									
SENS									
SENS							Y1 Parameter		Y2 Parameter
EA SEN							MANUAL STOP SWI	- MAN	NUAL STOP SWI
EA SEN									
EA SEN									
TION S									
EA STRE							Y1 Min	X-axis range	Y2 Min
T ANGLE							0.00	80	0.00
N TEM									
N ANG									
WING						-			

Saving your settings:

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

Enter the required name in the name box.

Default setting is 'Setting 1'.



Loading saved settings:

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

Settings you saved previously are listed in the profiles list.

Select the one you wish to open,

Press OK, you are ready to start snapshot.

Profile List Profile Name	
Profiles:	
test	
Setting1	

8.9 Service Report

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

1. Click "Read button" (1) to update information on the right side of the screen (2).

Communication				2012/11/22 10:5
Auto Test 2 Manual	Test 3 Setting Dat	a 4 Operating History 5 Calibration	6 Test Trip 7 DTC History 8 Live Data 9 Service Report 10 Links	
Read Ma	ake Service Report	t in the second s		
(1)				
Date 🕻 - 🖊	2012/11/22	·	Battery Information	
Customer		Signal	Value	Unit
		BATTERY VOLTAGE	24.14	v
Purchase Date	11/22/2012	BATTERY CURRENT BATTERY LEVEL	(2) ^{0.15}	A %
Turne	HRM300	BATTERY LEVEL	OPERATING HISTORY	%
Туре	Thursdo	Signal	Value	Unit
Serial Number	MAWF12345	TOTAL OPERATING TIME	208	h
Select AUTO TEST file		TOTAL OPERATING TIME	25	min
Select AOTO TEST file	e Browse	TOTAL MOTOR CUTTING TIME	1	h
		TOTAL MOTOR CUTTING TIME	19	min
Name	HONDA	Efficiency	0.632	%
Dealer Information	00000-00			
DTC	1			
ALL DTC HISTORY	Communication E			
	•			

2. Enter product purchase date.

Default setting is set to today's date. Change this to the purchase date using the calendar function (3).

Auto Test 2 Manual Test 3 Setting Data 4 Operating History 5 Calibration 6 Test Trip 7 DTC History 8 Live Data 9 Service Report 10 Links Read Make Service Report Date 2012/11/22 Customer Purchase Date 3 11/22/012 Type Serial Number Serial Number Signal Value Unit Signal Value Unit Signal Value Unit TOTAL OPERATING HISTORY Unit Signal Value Unit TOTAL OPERATING TIME 1 2 1 4 5 5 7 1 5 6 7 H 9 8 7 12 2 7 14 5 7 7 14 2 7 14 5 7	mmunication Wind	dow Language Help			2012/11/22	10:54
Read Make Service Report Date 2012/11/22 Bignal Volue Unit Customer Signal Volue Unit Purchase Date (3) 11/22/2012 Signal Volue Unit Serial Number Signal Volue Unit OPERATING TIME 208 h Volution Curring TIME 1 Nate Minor TiMe DIC 1						
Date 2012/11/22 Battery Information Customer Signal Value Unit Purchase Date () 11/22/2012 BatTERY VolTAGE 24.14 Y Sector To Wey Unit in Fig BatTERY VolTAGE 0.15 A Signal Value Unit BatTERY VolTAGE BatTERY VolTAGE Signal Value Unit BatTERY VolTAGE A Signal Value Unit BatTERY VolTAGE BatTERY VolTAGE Signal Value Unit OPERATING TIME Colder Voltage BatTERY VolTAGE Signal Value 1 Intal OPERATING TIME 1 Intal OPERATING TIME Intal Motore CutTING TIME	Test 2 Manual Test	t 3 Setting Data 4 0	perating History 5 Calibration 6 Test Trip 7 DTC	History 8 Live Data 9 Service Report 10 Links		
Date 2012/11/22 Battery Information Customer Signal Value Unit Purchase Date () 11/22/2012 BatTERY VolTAGE 24.14 Y Sector To Wey Unit in Fig BatTERY VolTAGE 0.15 A Signal Value Unit BatTERY VolTAGE BatTERY VolTAGE Signal Value Unit BatTERY VolTAGE A Signal Value Unit BatTERY VolTAGE BatTERY VolTAGE Signal Value Unit OPERATING TIME Colder Voltage BatTERY VolTAGE Signal Value 1 Intal OPERATING TIME 1 Intal OPERATING TIME Intal Motore CutTING TIME	Read Make	Service Report				
Signal Value Unit Purchase Date (3) 11/22/2012 Image: Signal (1/22/2012) BATTERY URENT (1/22/2012) A Type Image: Signal (1/22/2012) Image: Signal (1/22/2012) A A Serial Number Image: Signal (1/22/2012) Image: Signal (1/22/2012) A A Serial Number Image: Signal (1/22/2012) Image: Signal (1/22/2012) OPERATING HISTORY Image: Signal (1/22/2012) Image: Sig						
Customer Purchase Date (3) 11/22/2012 RatTery VoltAGE 24.14 V Fype Image: Customer BatTery VoltAGE 0.15 A Serial Number Image: Customer Image: Cust	2	012/11/22 💌		Battery Information		
Purchase Date (3) 11/22/2012 01/22/			Signal	Value	Unit	
Muchase Date (1) 11/22/2012 Image: Constraint of the fill of the	omer		BATTERY VOLTAGE	24.14	v	
Signal OPERATING HISTORY O Signal Value Unit Signal Value District Signal Value District Signal Value Signal Value District Signal Value Signal Value Signal Value Signal Signal Signal Signal Signal <	hase Date / 2 1	1/22/2012	BATTERY CURRENT	0.15	A	
Signal Value Unit Signal Value Unit Serial Number Signal Value Unit Signal Value Distance Signal Value Signal Signal Value Signal Signal Signal Signal Value Signal	ີ (ວ)	1/22/2012	BATTERY LEVEL	100	%	
Serial Number View Ref low Wei Unit Pit S 20 (add pit P		4 July 2007 🕨		OPERATING HISTORY		
Select AUTO TEST File 208 b b 1 2 3 4 5 6 1 5 6 1 2 3 4 5 6 1 5 6 1 1 25 min 1 15 6 1 10 1 1 1 12 2 1 2 1 1 1 1 15 6 1 1 1 1 1 1 12 2 1 2 1 1 1 1 1 12 2 1 2 1 <		Sun Man Tue Wed Thu Fel Sat	Signal	Value	Unit	
1 0 1 1 h 1 5 6 1 1 h 12 12 12 12 12 14 19 min 2 10 1 19 min 19 min 2 12 12 12 14 19 min 2 0 1 2 16 10 10 2 0 1 2 14 19 min 2 0 1 2 14 15 16 16 2 0 1 10 10 10 10 10 10 Mame 00000-00 0 0.632 5 5 5 10	al Number	24 25 26 27 28 29 30	TOTAL OPERATING TIME	208	h	
S 6 T 9 20 21 24 25 27 24 25 27 24 25 27 24 25 27 24 25 27 24 25 27 24 25 27 24 25 27 27 23 31 2 34 25 27 34 35 27 35 35 36	t AUTO TEST file		TOTAL OPERATING TIME	25	min	
22 22 24 25 24 77 24 27 70 31 1 2 1 4 Dealer Information 19 min Name 00000-00 Efficiency 0.632 % DTC 1 Image: State of the stat			TOTAL MOTOR CUTTING TIME	1	h	
Name 2 No 21 + 2 3 + 10 + 10 + 2000 Name 2 To Today: 1/10/2000 bealer Information 00000-00 Trc 1 LL DTC HISTORY Communication Error -			TOTAL MOTOR CUTTING TIME	19	min	
Dealer Information 00000-00 DTC 1 ALL DTC HISTORY Communication Error -						
DTC 1 NLL DTC HISTORY Communication Error -	e	CToday: 1/10/2008	Efficiency	0.632	%	_
DTC 1 ALL DTC HISTORY Communication Error -	-	-				
ALL DTC HISTORY Communication Error -	er Information 0	0000-00				
ALL DTC HISTORY Communication Error -						
LL DTC HISTORY Communication Error -						
LL DTC HISTORY Communication Error -						
	1					
2 · · · · · · · · · · · · · · · · · · ·						
	1	00				

3. Add AUTO TEST results in Service Report:

Click "Browse" button (4) and select AUTO TEST file to be included in Service Report.

Communication \	Window Language	Help					2012/11/22 11:
uto Tort 2 Manual	Tact 2 Satting Dat	a 4 Operat	ing History 5 Calibration 6 Test Trip 7 DTC F	lictory 8 Live Data 9 S	ervice Report		
	resc 5 setting bat		ing history is calibration to test mp 7 Dic r				_
Read Ma	ake Service Report						
Date	2012/11/22			Dottom: Tr	Iformation		_
Jate	2012/11/22		Signal		lue	Unit	_
Customer		RA	TTERY VOLTAGE	24		V	
		BA	TTERY CURRENT	0.		A	
Purchase Date	11/22/2012	T	TTERY LEVEL		9	%	
Type	HRM300				G HISTORY	,,	
	_	- 6	Signal Vi		alue		
Serial Number	MAWF12345	то	TAL OPERATING TIME	2	08	h	
elect AUTO TEST file	Browse	<u> (</u> 4)	TAL OPERATING TIME	4	15	min	
	browse		TAL MOTOR CUTTING TIME		1	h	
		то	TAL MOTOR CUTTING TIME	1	9	min	
Name	HONDA	Eff	iciency	0.0	531	%	
	_	- 18		AUTO TEST			
Dealer Information	00000-00		Name		Status		
			ADE MOTOR		Finished		
			STRUCTION SENSOR		Finished		
			LT SENSOR TEST		Finished		
DTC	0		T SENSOR TEST		Finished		
ALL DTC HISTORY			SPLAY		Finished		
ALL DIC HISTORY	Communication E						

- Click on the "Make Service Report" (5) button to compile the service report.
 Optional: If required, it is possible to add comments for the customer and insert images. To add comments, proceed as follows in a., otherwise click "Yes" to print Service Report.
 - a. Select "No" (6) when using for first time.

🖁 Honda Dia	gnostic System	- HRM300,MAWF123	345,8,0	100		
File Comn	nunication W	indow Language	Help			2012/11/22 10:55:25
1 Auto Tes Rea		est 3 Setting Data	10	erating History 5 Calibration 6 Test Trip 7 DTC H	listory 8 Live Data 9 Service Report 10 Links	
Date		2012/11/22	-		Battery Information	
				Signal	Value	Unit
Custom	er			BATTERY VOLTAGE	24.14	v
Purchas	e Date	11/22/2012	-	BATTERY CURRENT	0.15	A
			-	BATTERY LEVEL	100	%
Туре		HRM300			OPERATING HISTORY	
Serial N	umber	MAWF12345			×	Unit
Select A	UTO TEST file	Browse		TOTAL OPERATING TIME		min
		Browse		TOTAL MOTOR CUTTING TIL	same advice as last time?	h
				TOTAL MOTOR CUTTING TH	<u> (6) </u>	min
				Yes	<u> </u>	
Name		HONDA		Efficiency	0.052	%
	nformation		_			
Dealer 1	ntormation	00000-00	_			
DTC		1				
	HISTORY	Communication E	-			
	moron		101 -			
	_					
Software Ve	ersion: 1.0.0.	17 Main ECU Ver	sion:02	2.02.06 Display ECU Version:02.02.00		

b. You can choose the fonts and letter sizes to be used when writing the comments.

Advice Field Creator		-	X
Open	Save		
Insert Large Image	Insert Small Image	Delete Ima	ge
Arial Unicode MS	 ▼ 16 ▼ 	BIU	Large Image
		_	
		- 1	Preview
			Save In Excel
		Ok	Cancel

c. Inserting image

To insert an image into the report click the "Insert Image" button.

R Ø	Advice Field Creator	_	Real of a	×
	Open	Save		
	Insert Large Image	Insert Small Image	Delete Im	age
	Arial Unicode MS	• 16 • • •	BIU	🗌 Large Image
	Robotic Lawnmowe	d		۲ ک
				Save In Excel
			Ok	Cancel

d. Press "OK" to print Service Report.

[
	Robotic Lawnmower	Service Report	
		Service Report	
	User Name : Model : HRM300 Serial Number : MAWF12345 Purchase Date: 2012/11/22	- Service Report	
	Battery Information BATTERY VOLTAGE BATTERY CURRENT BATTERY LEVEL	24.07 0.15 99	
	OPERATING HISTORY		
	TOTAL OPERATING TIME	208	
	TOTAL OPERATING TIME TOTAL MOTOR CUTTING TIME	45	
	TOTAL MOTOR CUTTING TIME	19	
	Other Information	0.001	
	Total number of DTC	0	
	Latest All History	Communication Error - 3a031	
	AUTO TEST		
	BLADE MOTOR	Finished	
	OBSTRUCTION SENSOR THE SENSOR TEST	Finished	
	LIFT SENSOR TEST DISPLAY	Finished Finished	
	Stored Filename : 121122_111507_Se Dealer Number: 00000-00 Date : 2012.11.22	erviceReport_Service Report_8_HRM300_MAWF1234 Dealer Name : HONDA Service Manager :	5.jp
	Advice: Robotic Lawnmower		

8.10 Links

Links to PANEX and SIPS are available here.

🔣 Honda Diagnostic System - HRM300,MBAF1000180,08,00 01 00 00							
File Communication Window Language Help	2012/12/06 10:40:06						
	PANEX https://www.ecom.honda-eu.com SIPS http://cssportal.css-club.net/honda/portal/						
Software Version: 1.0.0.19 Main ECU Version:01.00.00 Display ECU Version:01.01.00							