

- English -



Preface:

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On the following pages you will find the basic settings for your 2D-Software.

In order to work with the 2D-Software the best way possible, you should read the instructions carefully and follow them step by step.

Please note:

The settings described in *First Steps* are only the basic settings. For further information please consult the Handbook or the Help.

Symbols used in the text



In the paragraphs highlighted with this symbol, you will find tips and practical advice to work with the 2D-Software.



In the paragraphs highlighted with this symbol, you will find additional information and it is very important that you follow the instructions given.

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1 Getting started

1.1 How to install the software

1. Insert the 2D-CD.

The CD starts automatically.

If this is not the case, start the "AUTORUN.EXE" on the CD manually.

2. Select the button **<Installation>**

3. A setup wizard guides you through the installation.

All you have to do now is follow the instructions and confirm your actions (in most cases with **<Apply>**). If necessary, also enter the setup directory.

4. Anything else will be done for you by the setup wizard.

It installs all required files including demo data. You find these on the same drive your operating system is installed on, under "*..\Racedata\Demodata*". I. e. if your operating system is installed on drive C:, then you will find your demo files under "*C:\Racedata\Demodata*".

5. Close the upcoming import wizard by clicking **<Cancel>**.

6. After having installed the software successfully, register the software in order to be able to work unrestrictedly.

2 How to register the software

The software must be registered **within 2 weeks time**. During this time a dialog will remind you of the registering every time you start the program.

1. Start *WinARace* and click on **<Register>**

2. Enter the name of the person or company on whom the software is to be registered in the edit box **Licence name**.
3. Enter all other required fields.
4. Click the button **<Email>** to send the information to 2D.
5. Shortly after you will receive a registry email with **Licence key** and **Serial number**.
6. Enter these into the corresponding edit boxes.



The data must be entered within 1 week, otherwise the code will be invalid. The date on the registry email and the date of the actual registering must not differ for more than seven days (1 week).



The software must be registered only once at our company. You can get updates via Internet, Email or on CD-ROM. Please pay attention to the fact that the license is assigned to the computer, on which the software is installed. You can't copy the software on another computer. In this case you need a new license.

3 The program WinARace

3.1 The Event administration



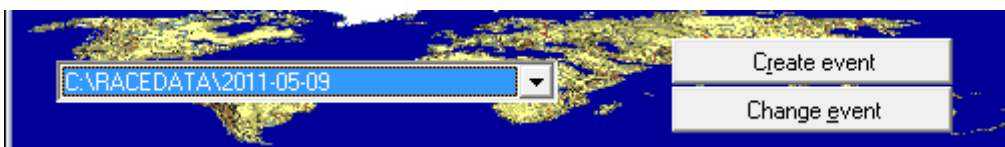
Events are used to sort the data in useful manner for storage and further analysis. An event can contain several measurements of the same type.

By clicking on **<Create Event>**, an event with the current date will be created.



Always start off with this step, so that you always know where your data is saved.

By clicking on **<Change Event>**, other directories can be chosen to save your data. Furthermore data can be copied renamed, zipped,... You will find the current directory on the left hand side.



3.2 How to set the Logger

In this dialog box communication with the 2D-measuring-system is established to download the data or change the logger configuration..

On the left hand side you find the so called Mastername. The Mastername is the name as which the individual measurement are saved as a combination of Mastername and current Logger name.



Examples for master names and how to modify them you will read in the chapter **How to prepare the measurement**

3.3 How to make an analysis

You can start the analysis module by clicking the button **<Analysis>**. With this module you can analyse your measured data.



4 How to set up the logger



The logger comes pre programmed and only needs to be zeroed after installation

4.1 How to establish communication with the Logger

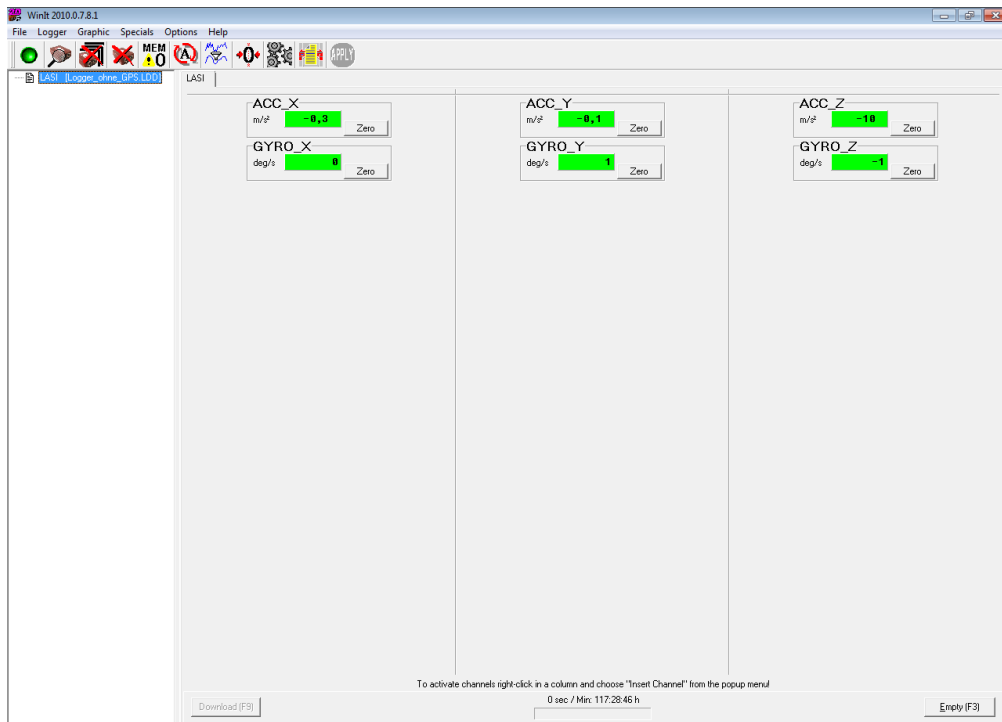
1. Connect the USB cable between PC and logger
2. Start *WinARace*.
3. Click on **<LOGGER>** to start the communication tool *WinIt*.

WinIt automatically begins searching for 2D-Hardware. If no 2D-Hardware was found, the following error message pop ups:



Make sure that the USB cable is plugged in correctly(logger LED is blinking). Now Activate the checkbox "Scan all COM-ports for logging devices" and click **<OK>**

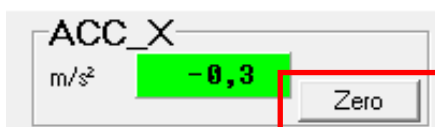
After the logger is read in the software following screen will appear. In this screen all sensors can be set to zero or switched off by clicking on the green field of each sensor.



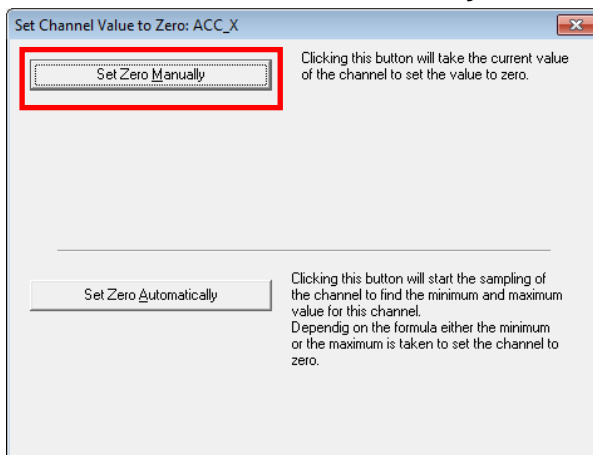
4.2 How to set a channel into Zero position

Heat or other factors can cause some sensors to show offset values. In this case it the offset has to be set to show 0 value in its mounting position. This step should be done after the logger is warmed up for 2 minutes and after every change of location.

- Click on **<Zero>** on the desired channel



- Click on **<Set Zero Manually>**



4.3 How to prepare the measurement



Before downloading the mastername should be selected so that measurements can be distinguished afterwards.

1. Start *WinARace* .
2. On the left side of the Logger-zone select an abbreviation from the Drop-Down-List. This is the so-called mastername. You can also create a new name.



You can choose one of the following names: 1F__ stands for free training, 1Q__ qualification

Possible master names

- DATE-___- (current date information, see detailed information)
- Test-___- (Test)
- F1-___- (Free Practice)
- F2-___- (Free Practice)
- Q1-___- (Qualifying)
- Q2-___- (Qualifying)
- WU-___- (WarmUp)
- R1-___- (Race)
- R2-___- (Race)

Your measurements will be saved like this:

1F2D01.MES, 1F2D02.MES, 1F2D03.MES, 1F2D04.MES,

The name of your measurements consists of the following components:

- **1F**: the mastername you chose from the list
- **2D**: the last two characters of your Loggername (for example LOG_2D). The program automatically replaces the two underlines (__) by the corresponding characters.
- **01**: the number of the first measurement in free training of LOG_2D

DATE-__-" is a special mastername. It is used to create measurement names containing information about the date, the measurement was downloaded. The software replaces the part "Date" of the mastername by the month and day at which the measurement was created. The format is MMDD, that means the first two characters are replaced by the month and the next two by the day.

Examples:

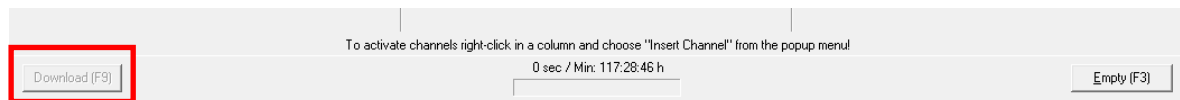
- If the master name "Test-__-" is selected and the logger has the name "22a" (Starting number 22 and "a" for the first vehicle of two drivers with the same number), the the first measurement name will be "Test-22a-01".
 - The mastername "DATE-__-" is selected and the name of the logger is "MH". Today is the 14.04. The resulting measurement name for the first download is "0414-MH-01".

4.4 Starting conditions

All Logger starting conditions which are necessary for the beginning of the recording, are pre-set. The recording starts automatically after 20 seconds.

4.5 How to download data

1. Start *WinIt* by clicking onto **<Logger>**.

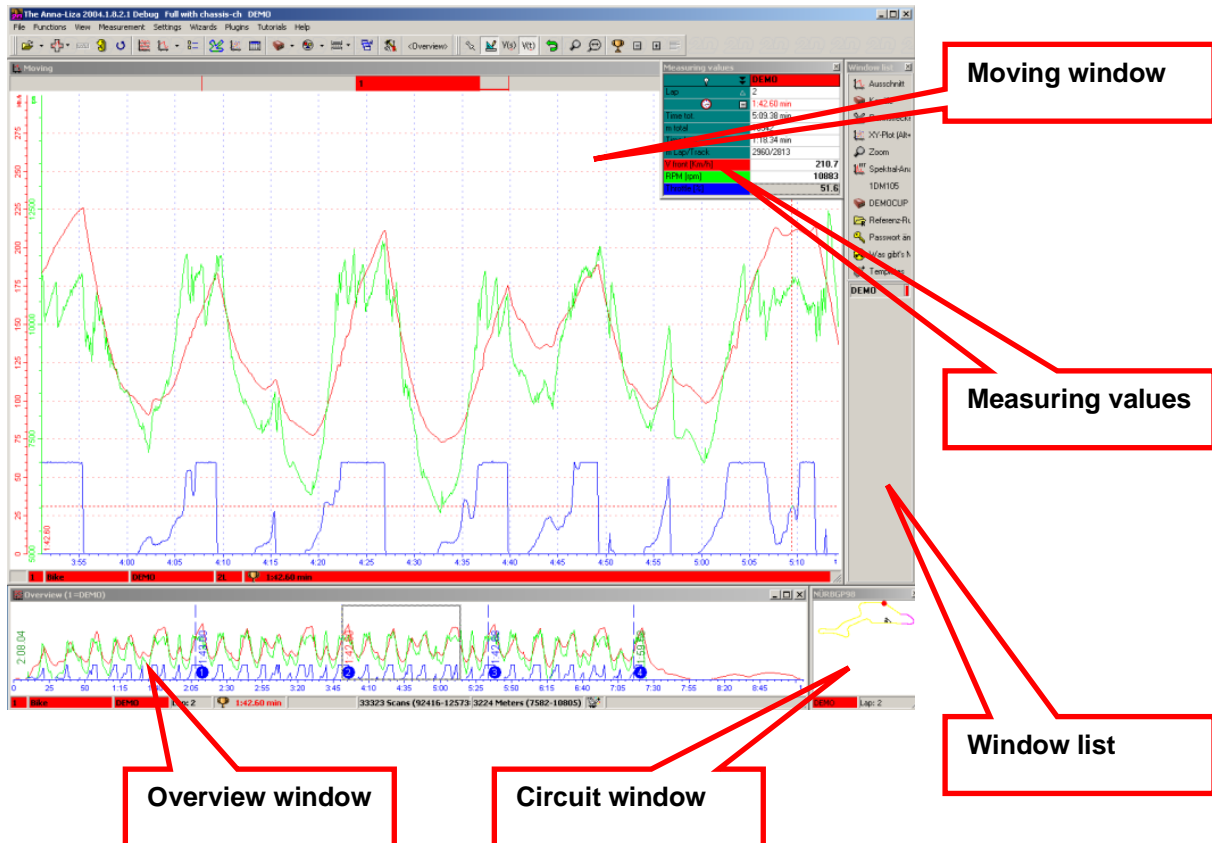


The blue bar in the bottom indicates how data the logger has recorded and how much storage is left.

2. Click **<Download>** to download the data on your computer.
3. As soon as the message "**Ready to drive**" pops up, the logger can be disconnected.

5 Analyzer

5.1 Structure of the analysing tool



Overview window

The Overview window is located at the bottom of the screen. There the curves of certain channels (which have been selected earlier) are shown.

The rectangle in the Overview window marks the the position of the selection that can be seen in the Moving window. You can move the rectangle by pressing the left mouse button and moving the mouse. If you press the **<Ctrl>** key simultaneously you can change the size of the rectangle.

Moving window

The Moving window is the big window in the middle. It is the main analysing window where the channel curves of the selected part of the measurement is shown. The section of the measurement can be moved by pressing the left mouse button and moving the mouse.

By double clicking on the Moving window you change into the Measuring mode ([see Measuring Mode](#)).

Circuit window

The Circuit window is the small window in the right bottom corner of your screen. The window shows the track map with the current section of the active measurement highlighted. The Circuit window can be turned off and on by clicking on the track symbol in the Window list.

Measuring mode

You can change into the Measuring mode by double clicking in the Moving window. A measuring cross and another window (Measuring values) appear.

In the Measurement window the physical values of the curves are shown, dependent on the current position of the mouse.

Window list

The Window list at the right of the screen is helpful for fast access to common functions. These functions are user defined as any main menu item may be selected to be shown here. This window may be closed to gain space on the screen.



For further information check the online help (F1) or the user manual "Introduction to the analysis tool ANALYZER".

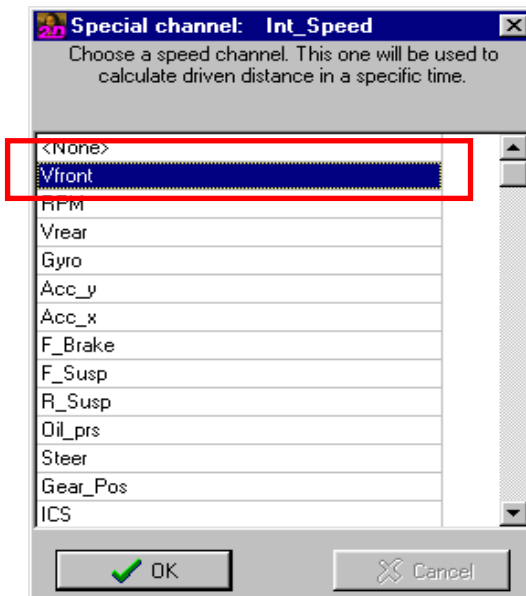
5.2 How to select special channels



If GPS data are received the GPS speed can be used to show the data in distance plot.:

When the download of the first measurement is completed, it is automatically checked if there is a channel on the special channel "Int_Speed".

1. The following window turns up:

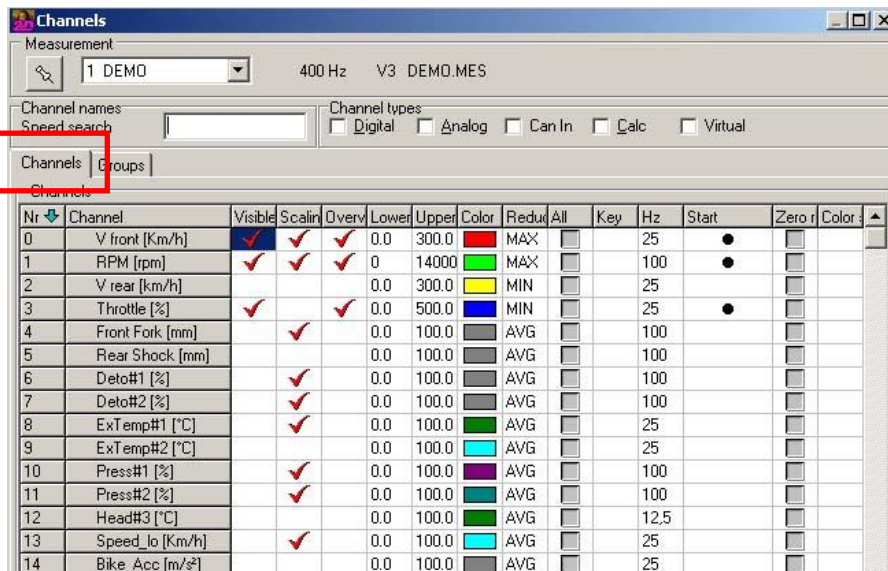


Assign V_GPS channel to the special channel.

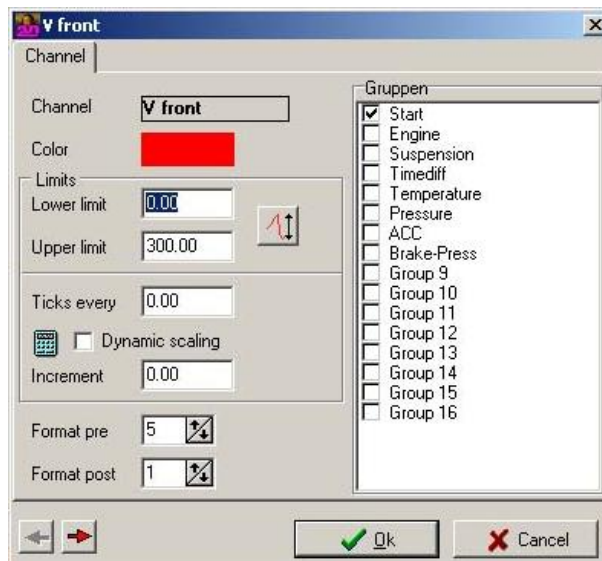
5.3 How to set the channel properties

1. Click on **<Analysis>** at the start page *WinARace* in order to open the Analyse-tool.
2. In the moving-window click right and choose the option **Channels**.

Among other things the dialog box shows you the channel color, whether the channels are displayed at the moment or not, the limits and so on.



3. Click on the corresponding fields to display or delete additional curves in the moving-window (red ticks).
 4. Click on the **Upper** or **Lower limits** (number) of the first channel.
- Another dialog box appears.



5. All modifications for the selected channel can be made in the window shown above:

- Color changes:

Click on the color window and choose a different color from the dialog box **"Color"**.

- Set upper and lower limit

Overwrite the number in the box and enter the values that apply for your vehicle.

- Set Format post /digits after dot

Use the arrow keys to change the number of the format post/digits after dot. This is advisable for those channels of which you want to have exact details (f. ex. speed).

- Grouping of channels

On the right side you can group the individual channels.

For further information please check the online help.

6. Confirm your modifications with **<OK>**.

6 How to get Help

Our software offers you different help modes:

- Online-Help (included in the software)
- PDF-help-files (on the 2D-CD ROM)

6.1 Online-Help

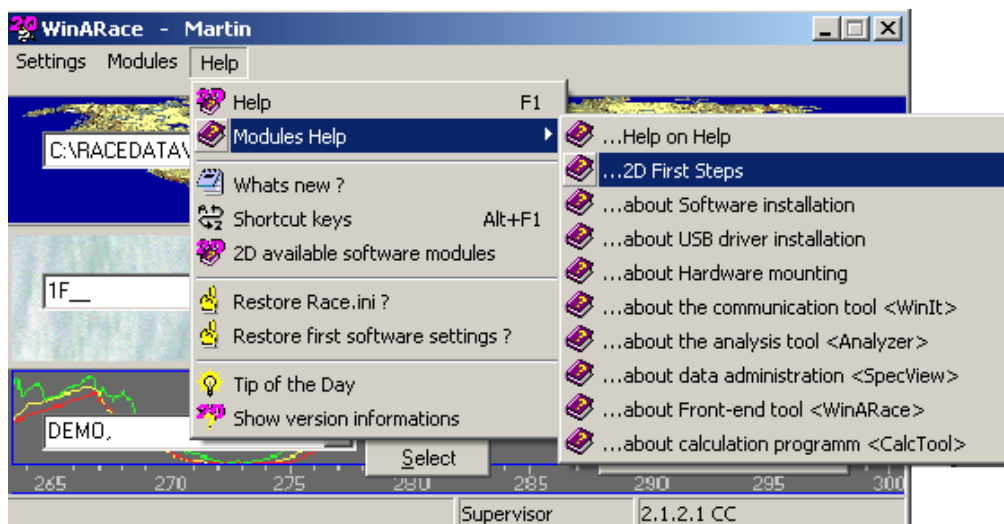


The help system is based on HTML-standard and thus requires a version of the Microsoft Internet Explorer 4.0 or later.

The existing help modules cover the four most important software modules. These are:

- WinARace
- WinIt
- Analyzer
- SpecView

There are more help files. You find them via start page *WinARace*, menu **Help**, option **Modules Help**.



At present the help files are only available in two languages – German and English. If you choose one of the other languages, the help files will be displayed in English.

6.1.1 How to start the Help

There are different ways of starting the help:

- Start the help module directly by using the **<F1> key**.
- In the menu **Help** choose the option **Help**.

Help files for the corresponding software module will be displayed.

6.1.2 How to work with the help

After starting the online help with the **<F1> key**, the start page of the corresponding program will be displayed. This page is displayed on the right side.

There are three tabs in the left window:

- Content
- Index
- Search

Content

The tab **Content** is the same as the table of contents in a book. The small books can be compared with the chapters.

1. Select the tab "Content / Inhalt".
 7. Choose a chapter. Open it by clicking the plus in front of the book symbol.
Further under chapters appear.
 8. Select the topic you are interested in.

Index

With this function you can search for keywords.

1. Select the tab "Index".
 9. In the field "zu suchendes Schlüsselwort" (keyword) enter the term you want to search or choose a keyword from the list below.
 10. Click on the button **<Anzeigen>** (display).
The selected topic occurs in the window on the right.

Search

With this function you can search for a certain terms.

1. Select the tab "Suchen" (Search).
 11. In the field "zu suchendes Schlüsselwort" enter the term you want to search.
The field below shows you all those topics in which the entered term appears.
 12. Select one of the listed topics.
The selected topic occurs in the window on the right. The term you were looking for is marked blue.

6.1.3 How to print help chapters

To print individual chapters, click on the corresponding button in the toolbar.

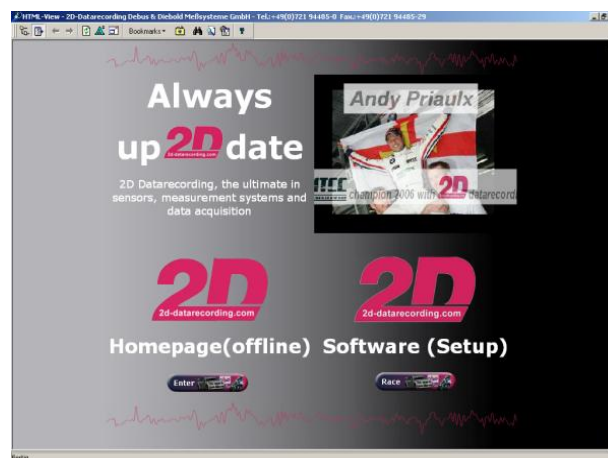


6.2 PDF-Help-files

6.2.1 Open the several help files from the 2D CD-ROM

On the 2D-CD you find further help files in PDF-Format.

1. Insert the CD and select at the bottom "Enter" - below "Homepage (offline)".



2. Select from the menu the entry <Support><Download><2D manuals>. All manuals are "clearly arranged" according to software and hardware.