



## Instruction Manual PC-Interface

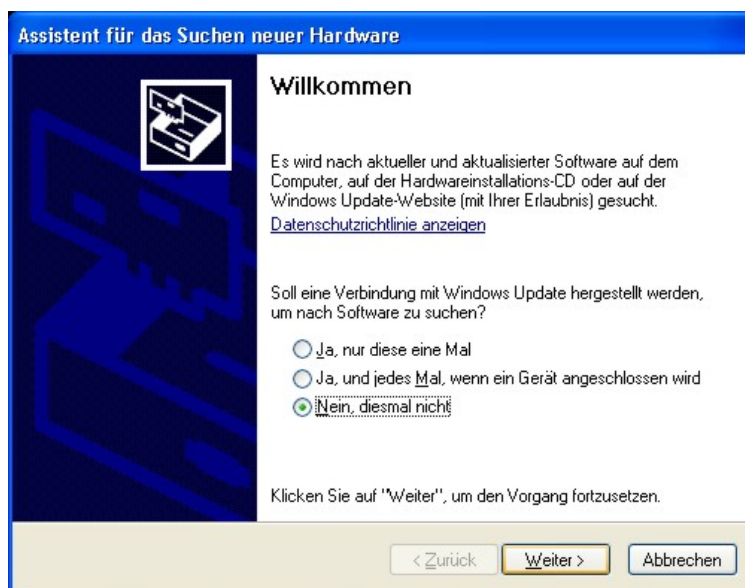
Dear Customer,  
thank you very much for your trust in our products. The PC-Interface for your iCUBE offers you new possibilities to analyse your race data.

### USB Driver Installation

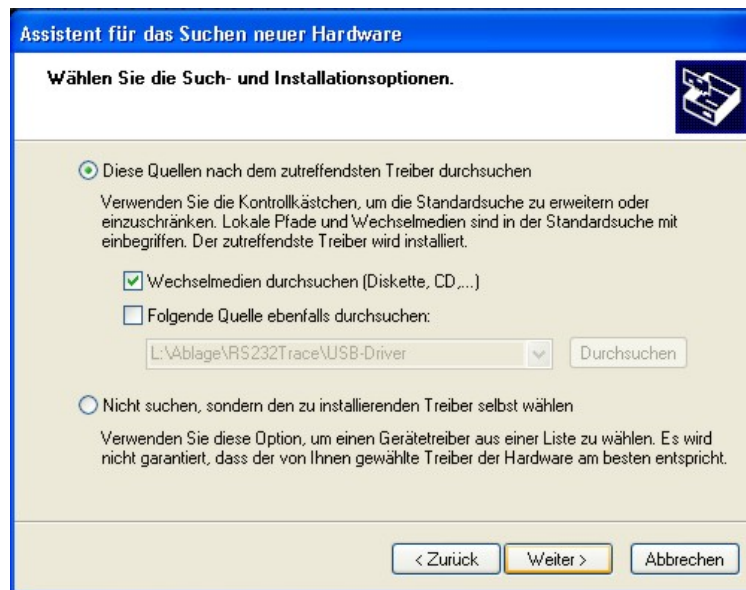
In order to be able to operate the interface, you need a free USB-port at your PC. Put the provided CD into your CD Drive and connect the interface to a free USB-port.



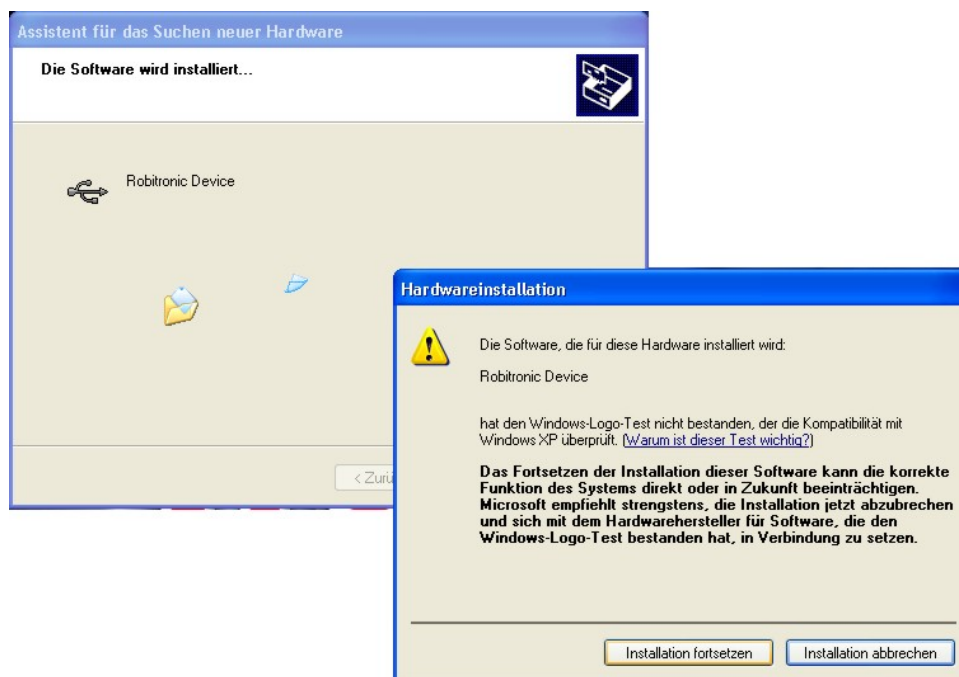
Windows should recognize the interface automatically as *Robitronic Device* and starts the driver installation.



Please choose *No, not this time* and click *Next*.



In the next screen you have to choose the source of the driver. Select *Search on Removeable Media*. Windows will choose the correct driver from the CD.



Windows now begins the driver installation. There will be a notice, that the driver don't meet the Windows-Logo test. Therefore you have to click on *Continue Installation*.



The driver installation is now finished. Press the Finish button to close the installation assistant. The red LED on you interface should now come up.

## Program Installation

To install the programs, you only have to execute setup.exe from the CD. The installation assistant will lead you through the whole installation process. After a successful installation there will be a new program group called *iCUBE Software*.

## Trace / iCUBE Race Analyser

Your iCUBE has an internal data recorder, which stores permanently the most important driving data (battery voltage, current, throttle signal) while driving. With the Trace program you can read out the data after a run and analyse it. These data helps you to make exact statements about the material and your driving style. For example you see the used capacity from the battery or it's internal resistance. If you drive on a track you can determine your lap times with using the analyse function. The program uses the throttle signal in order to calculate the lap times. It searches for points, where the throttle signal goes down from full power to neutral or brake and then sets markers there.

Since the program gets no reference points from the track and only has the throttle signal for the analysis, it could be that the analyse function don't work correctly under some conditions. For this purpose markers can be set by hand or you can help

the analyse function by setting analyse markers on the correct positions. In addition you can also adjust the sensitivity of the recognition and the minimum lap time at the options window. These values can improve the recognition strongly and avoid wrong recognitions.

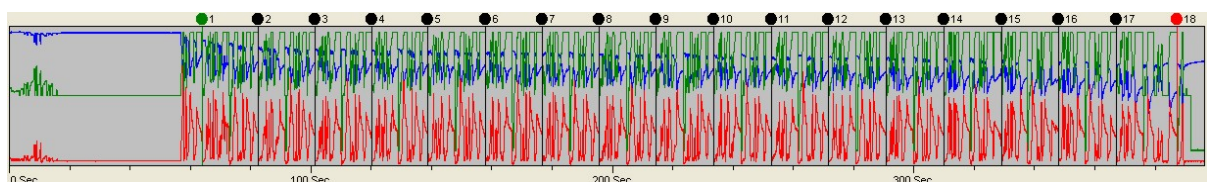
## Program description:

### **Buttonbar:**



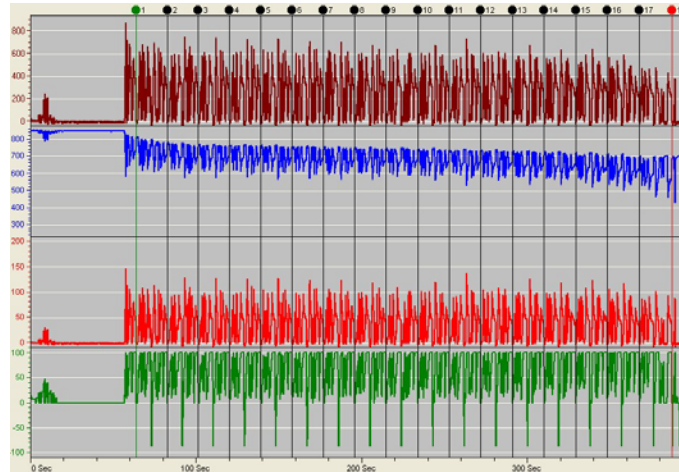
- Load: Load saved data from your harddrive
- Save: Save data to your harddrive
- Import: Import data from your speedo
- Zoom: Activate zoom in data window
- Imped.: Switch between Power and battery resistance in the first graph
- Histo: Shows a histogram with current and throttle signal
- Analyze: Analyse the data, set markers and calculate lap times
- Print: Print out data
- Options: Window to adjust important values
- Info: program info and hot key description
- Quit: Close the program

### **Data overview:**



Overview of the complete run data. If zoom is activated in the data window, the zoom area is indicated there with 2 black bars.

## Data window:



1. graph (brown): electrical Power in Watts, consumed by the motor  
(violet): Internal resistance of the battery in miliOhm
2. graph (blue): Battery voltage in miliVolts\*10 (800 = 8,00V)
3. graph (red): Motor current in Ampere
4. graph (green): Throttle position (+100 = full throttle, 0 = neutral, -100 = full brake)

The markers indicate the different laps. After import the data from the speedo there are no markers present. The markers are set by the analyse function. With the right mouse button you can set markers by hand, as well as zoom into the graphs. If zoom is activated you can move the graphs by press and hold the left mouse button and move the cursor.

## Lap overview:

If the analyse function was used and markers are set, the lap overview is shown on the right of the screen. In the different columns you can see lap time, used capacity per lap, brake, roll, throttle and full throttle. In the last line on the bottom you can find the total values from the first to the last marker.

| Lap  | Time [Sec] | Cap [mAh] | Brake [%] | Roll [%] | Throttle [%] | Full [%] |
|------|------------|-----------|-----------|----------|--------------|----------|
| 1    | 18,8       | 191       | 2,0       | 4,9      | 93,1         | 33,8     |
| 2    | 18,6       | 185       | 3,3       | 1,3      | 95,4         | 33,4     |
| 3    | 18,8       | 181       | 1,7       | 6,3      | 92,1         | 33,1     |
| 4    | 18,8       | 188       | 2,9       | 0,8      | 96,3         | 35,0     |
| 5    | 18,9       | 187       | 2,8       | 3,2      | 94,0         | 33,4     |
| 6    | 19,0       | 198       | 2,8       | 1,4      | 95,9         | 38,3     |
| 7    | 18,9       | 202       | 2,3       | 1,7      | 96,1         | 39,2     |
| 8    | 18,9       | 192       | 3,0       | 2,0      | 95,0         | 35,2     |
| 9    | 19,1       | 177       | 2,3       | 1,1      | 96,6         | 36,0     |
| 10   | 19,1       | 198       | 2,1       | 2,1      | 95,9         | 39,0     |
| 11   | 18,9       | 195       | 2,1       | 1,9      | 96,0         | 37,8     |
| 12   | 19,2       | 190       | 3,0       | 2,0      | 95,1         | 35,9     |
| 13   | 19,1       | 208       | 1,9       | 2,4      | 95,7         | 42,6     |
| 14   | 18,9       | 207       | 2,1       | 1,5      | 96,5         | 46,5     |
| 15   | 18,9       | 206       | 2,3       | 3,4      | 94,4         | 45,9     |
| 16   | 19,3       | 205       | 1,6       | 2,8      | 95,6         | 47,9     |
| 17   | 20,0       | 178       | 1,1       | 14,0     | 84,9         | 41,0     |
| Tota | 05:23      | 3.292     | 2,3       | 3,1      | 94,6         | 38,5     |

## Data field:

|        | Voltage | Current | Power  | Impedance | Throttle | Time  |  | Name           | Track         |
|--------|---------|---------|--------|-----------|----------|-------|--|----------------|---------------|
| Cursor | 705     | -1      | -7,05  | 0,0       | -86      | 392   |  | Data000050     | Bernau        |
| Min    | 460     | -6      | -47,94 | 0,00      | -87      | 64    |  | Data000050.lmt | Car Tamiya    |
| Max    | 813     | 137     | 741,68 | 25,86     | 100      | 387   |  | Date           | 27.08.2005    |
| Mean   | 682     | 37      | 235,86 | 14,7      | 65       |       |  | Time           | 19:13:12      |
| Total  |         |         |        |           | 95       | 05:23 |  | Duration       | 06:36         |
|        |         |         |        |           |          |       |  | Driver         | Toni Rheinard |
|        |         |         |        |           |          |       |  | Motor          | 12x1 MR       |
|        |         |         |        |           |          |       |  | Accu           | GP3700        |
|        |         |         |        |           |          |       |  | Comment        | n/a           |

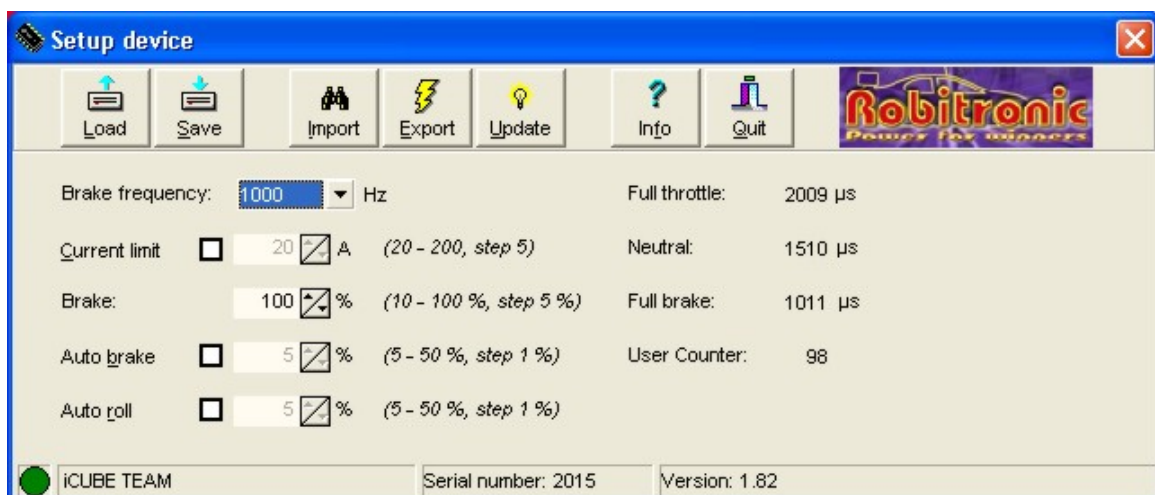
In the data field on the bottom of the screen you also find different values over the complete run or from the first to the last marker. On the right side you find statistic data which can be set when saving data to your harddrive.

## Setup Device

With the program Setup Device you can adjust settings inside the speedo via the PC-Interface. Different values like current limit or auto roll can be adjusted.

**CAUTION:** The settings which you make with the Setup Device program are stored in program 4 of the speedo. If you make changes and click Export to write this changes to the speedo, program 4 is automatically activated and your settings take effect. Other settings which you maybe made on the speedo (excluded menu point 6), remain stored, but are independent of program 4 and are only active in all other programs.

## Program window:



Load: Load settings from harddisk  
Save: Save settings to harddisk  
Import: Import settings from the speedo  
Export: Export settings to the speedo and activate it  
Update: Firmware-Update  
Info: Program informations and hot keys  
Quit: Quit program

## System requirements

CPU: Pentium 300 or higher  
Memory: min. 128MB RAM  
Harddrive: min. 10MB free space  
Resolution: 1024x768 or higher  
Peripherals: CD-ROM drive, USB port  
OS: Windows 98SE, Windows 2000/XP



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