



# Instruction manual for the PIKO Analyst - Software Version V1.00

as of 27.11.2017



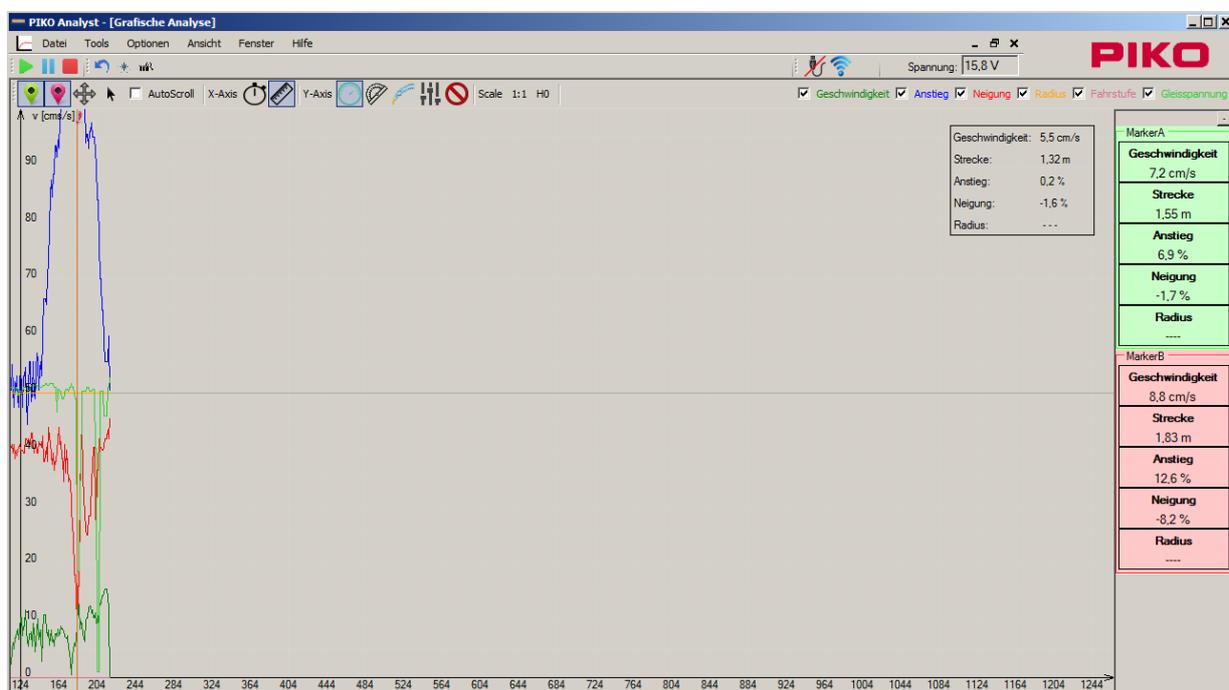
# 1 Foreword

Congratulations on your purchase of the PIKO Analyst. Now you can graphically analyse your test results with the innovative PIKO H0 Measuring Car.

This instruction manual wants to illustrate the productive use of the PIKO Analyst software and is divided into two parts.

**The first part** describes the first steps in the handling of the software and the functions of the different measuring areas.

**The second part** deals with the practical application of the software. There you can find information about the usage possibilities during test runs (e. g. the location of voltage problems on the track).



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### 3 License terms

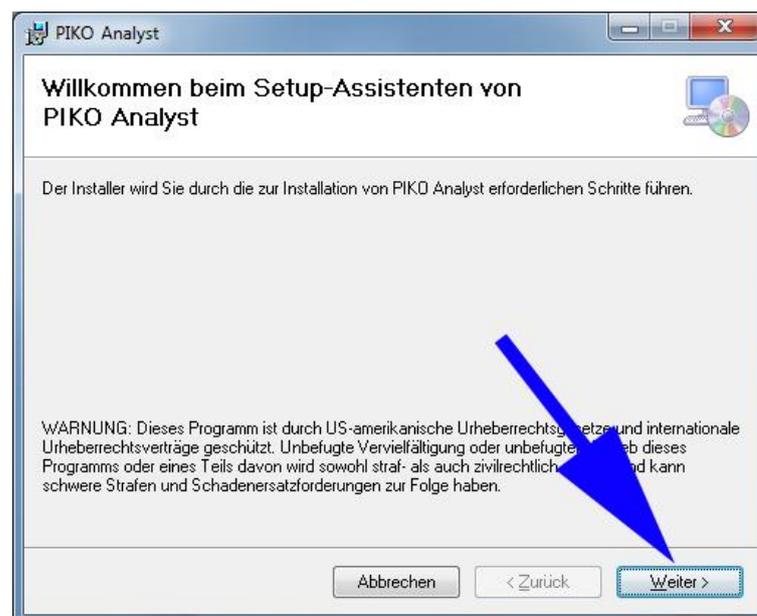
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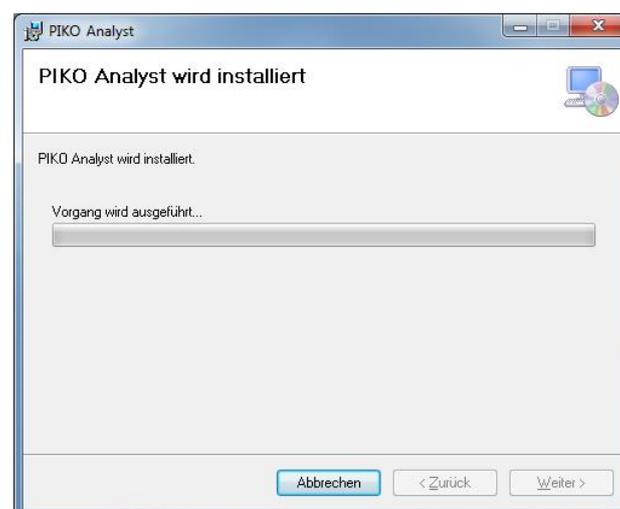
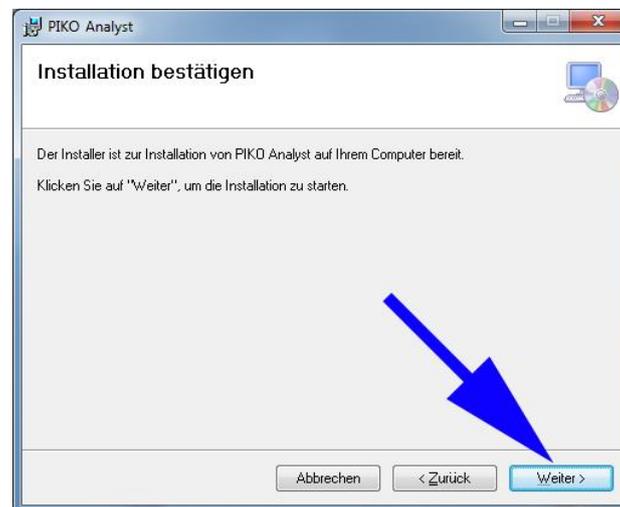
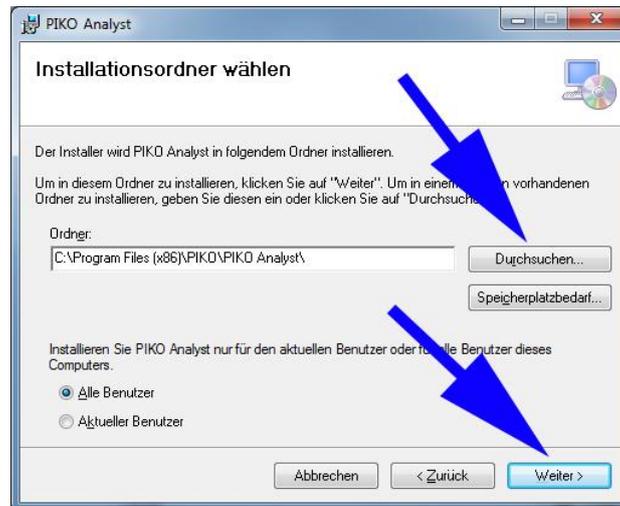
## 4 First steps

### 4.1 Installation

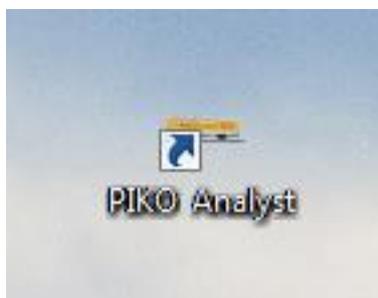
Put the product CD into your CD/DVD drive. After a few seconds the setup screen will appear.

1. Execute „setup.exe“  
If the automatic playback does not start, please open the CD drive in the explorer and double-click “setup.exe”.
2. Follow the on-screen instructions
3. If .Net-Framework 4.0 is not installed on your computer or you are not able to connect to the internet you will get an error message. In this case please execute the data „dotNetFx40\_Full\_x86\_x64.exe“ on your CD before installing the PIKO Analyst. Afterwards execute “setup.exe“ again.
4. As soon as .Net-Framework is installed on your computer the installation of the PIKO Analyst will start automatically.

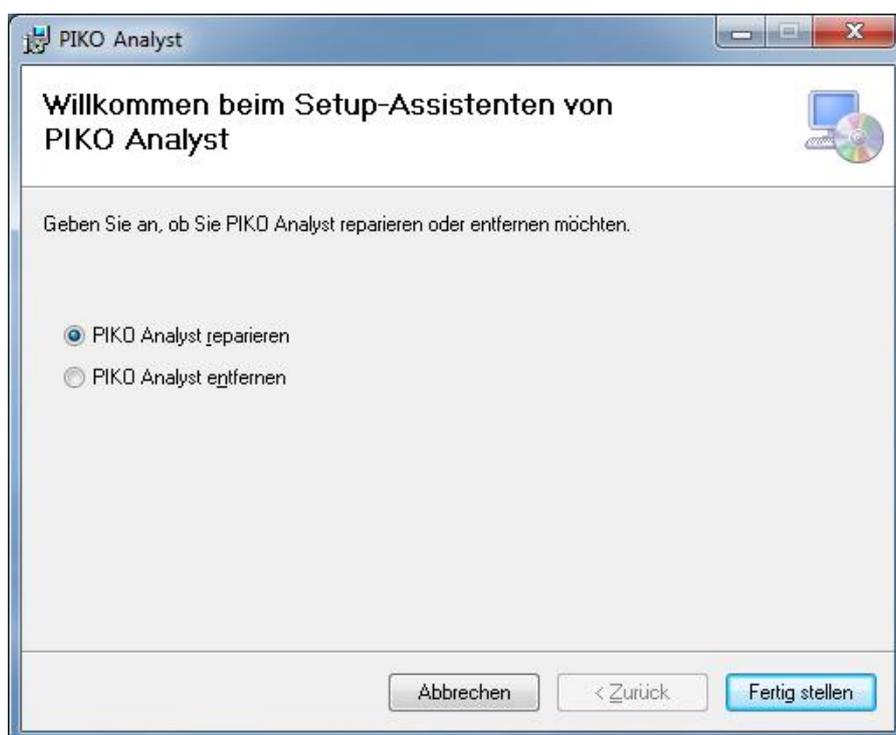




After the successful installation the program icon will appear on your desktop.



If the PIKO Analyst is already installed on your computer and you execute „setup.exe“, the following window will appear:

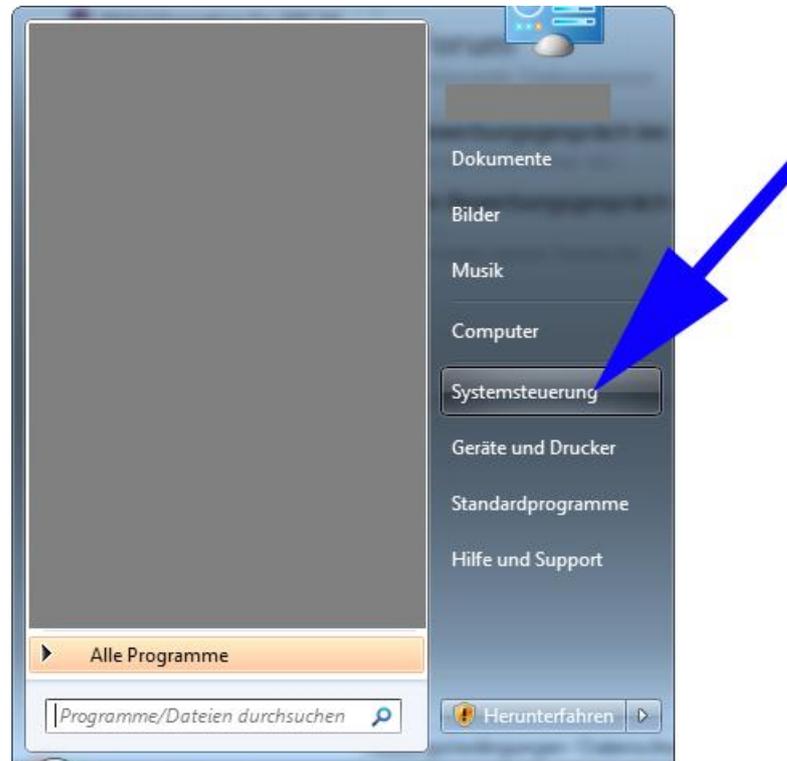


“Repair PIKO Analyst “ overwrites the current software version on your computer and the program will be repaired. The former configuration and licensing remains.

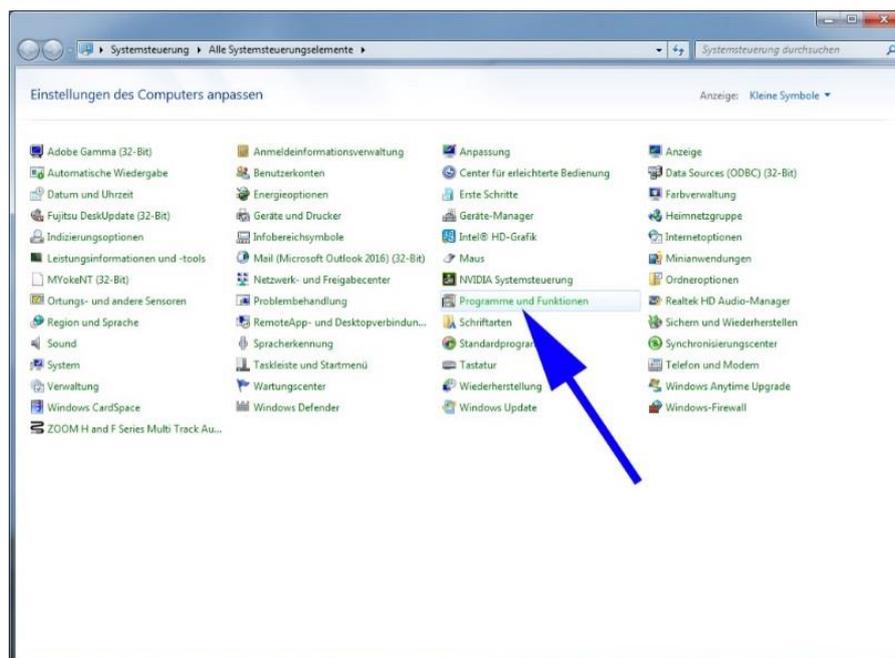
“Remove PIKO Analyst “ deletes all data associated with the PIKO Analyst from your computer.

## Manuel deinstallation

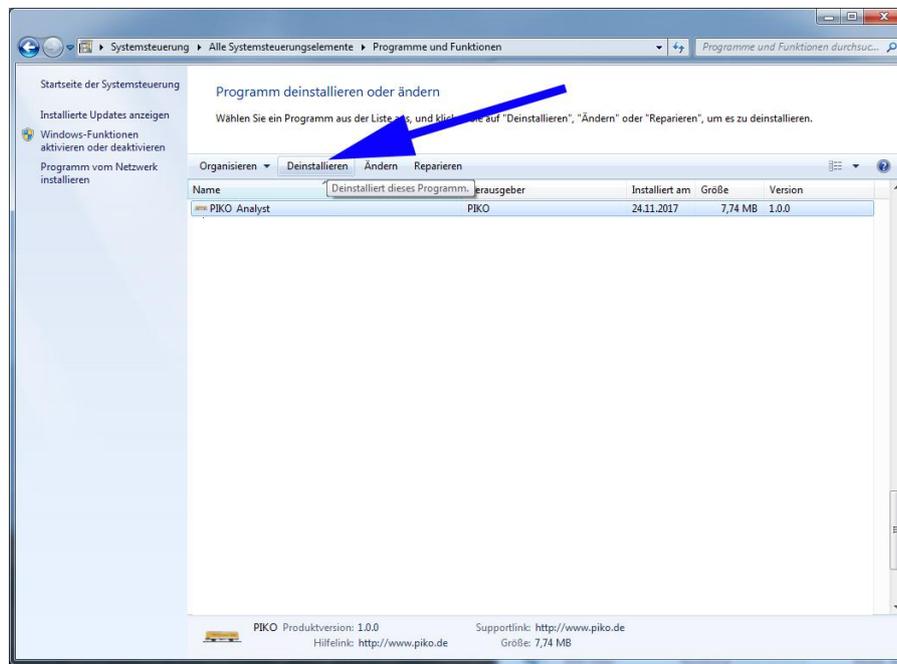
1. Open Windows Control Panel



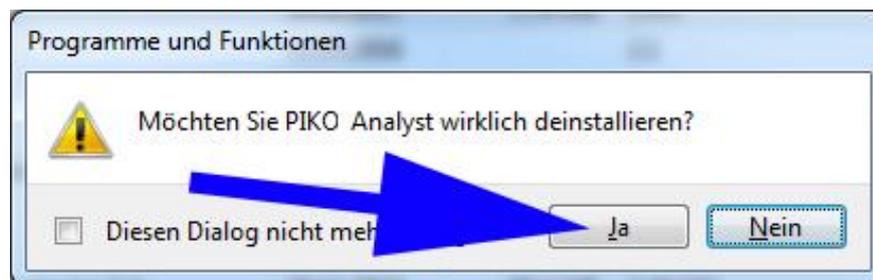
2. Click on Programs and Features



3. Choose the PIKO Analyst from the list and click on deinstallation

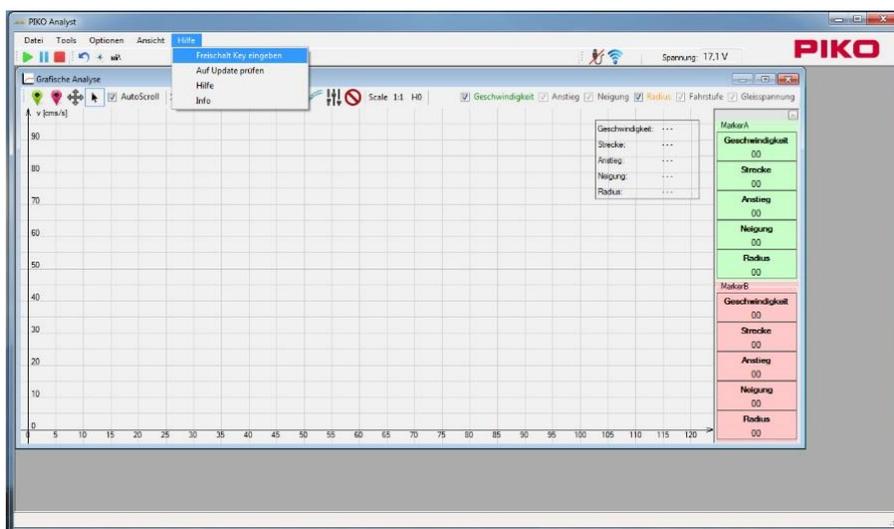


4. Confirm deinstallation



## 4.2 Licensing

Without a valid activation key some of the programs functions are limited (demo version). To upgrade the demo to the full version you need a valid activation key. To do that, please open “Help” in the PIKO Analyst and choose “enter activation key”.

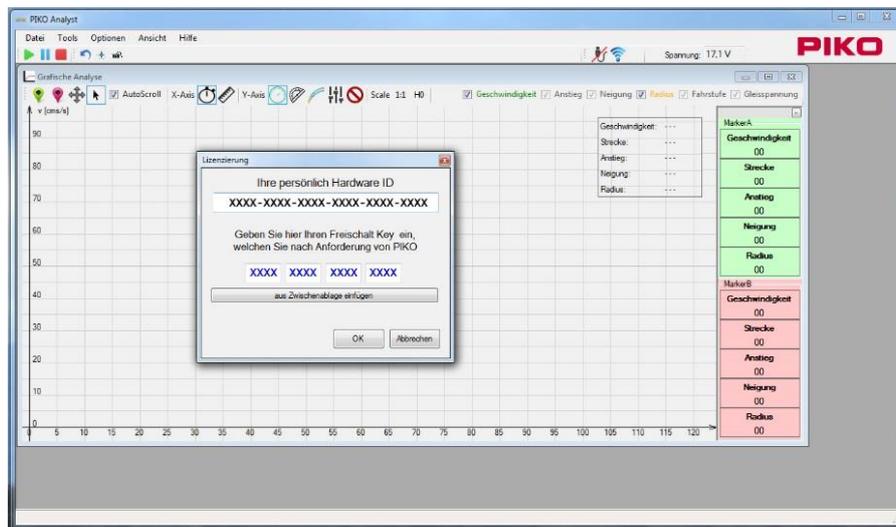


A form will open up where you can see six groups of numbers. Now you have to send an e-mail with the subject line “**Freischaltung**”, your „**Hardware ID**“, which you can find on the inside of the CD cover, and your purchased “**Registration number**” to [Hotline@piko.de](mailto:Hotline@piko.de).

After that you will receive your 16-digit activation key.

Please note that you will not receive an automatic answer from our servers because we have to deal with the activation of your software personally. Please also be aware that activations are only possible during our normal office hours from Monday to Friday.

After you entered your activation key into the provided field, please click on “OK”. If your activation key is accepted and a licensing data is created please restart the PIKO Analyst software. Now all functions should be available (full version).



**Congratulations!** You are now the owner of the full version of the PIKO Analyst software!  
You can now start the first measuring runs in combination with graphic analysis!

For that we want to make you familiar with the basic functions of the software.

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## 4.3 Basic functions of the PIKO Analyst

### 4.3.1 Menu control

The interface of the PIKO Analyst allows a nearly intuitive operation and is oriented towards other well-known user interfaces.

In the first line you can find the „data“, „tools“, „options“, „view“, „window“ and „help“.



Datei Tools Optionen Ansicht Fenster Hilfe

By clicking the folder „**Data**“ and the relevant subfolder you can easily save and later reload data from your measuring runs as .csv files. You can also exit the PIKO Analyst through this folder.

By clicking the folder „**Tools**“ => „**ConfigTool**“ you can change the display on your Measuring Car to look the way you want.

Under „**Import measured data (USB)**“ you can import measured data from your PIKO H0 measuring car via USB-cable. This can be useful if you collect data without a PC or laptop connection and you want to analyse this data later.

Under „**Options**“ you can change the appearance of your measurement graphs. This way you can change the colour, line width and interpolation of the different graphs.

Under „**Connect measuring car**“ you can manually establish a connection to your PIKO H0 Measuring Car.

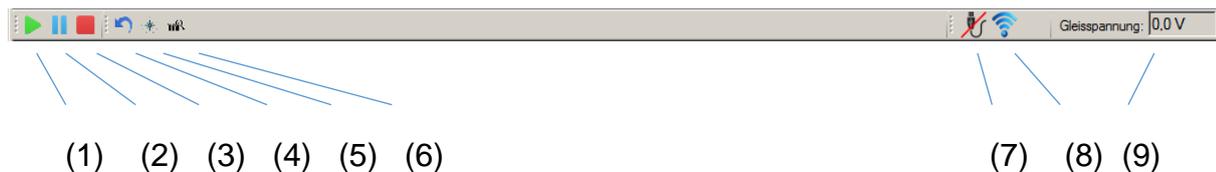
By clicking on „**View**“ and the subfolder „**Real time display**“ a smartphone display will be simulated on your screen. Under „**Measuring Car display**“ you can turn the display of your measuring car on and off and switch back and forth.

By clicking on „**Window**“ you can change the arrangement of buttons and functions on the user interface of the PIKO Analyst.

Finally you have the „**Help**“ folder where you can enter the activation key to activate the full version, find the instruction manual and information about the software. By clicking on the

subfolder „**Look for Update**“ you can install the latest update of the software. We recommend to regularly check your software for updates to make sure not to miss any further developments of the PIKO Analyst.

In the next command line you find the menu options „Start“(1), „Pause“(2), „Stop“(3), „Reset distance meter“(4), „Calibration“(5) und „Section analysis“(6).



Here you can also find the current connection status between measuring car and PC/laptop via USB (7) or WIFI (8) and the currently applied voltage in Volt (9) angezeigt (only available for DC systems).

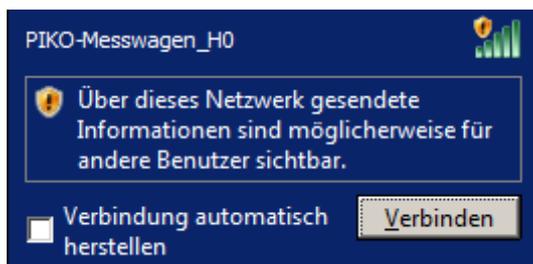
In some circumstances (especially when used on different systems) it is necessary to recalibrate the measuring car. By clicking on the “Calibration” button (5) the basic settings of the measuring car are adjusted to the particular system. Try to find a section of your system that is as flat possible and put the measuring car on that section. Now you can calibrate the wagon so all further measurement results can follow these results.

In the third command line you find elements for the practical analysis. Here you can further adjust the scales and display options and graphically analyse recorded data. You find further information about this in the next part of this manual.

### 4.3.2 Measuring ranges and scales

Please connect your measuring car to a PC or laptop! To do that please turn on your wagon (this happens automatically when you put it on a track section with active power input). You will now see a welcome screen on the wagon’s display. After that the measuring range “Speed” will appear on the display! Please make sure that the WIFI symbol  is activated on the screen of the PIKO measuring car. If the symbol does not appear on the screen, you can manually activate WIFI by pressing the button on the back of the wagon.

The PIKO H0 Measuring Car will now appear on your desktop as a possible connection ( symbol). By clicking on “connect” you can now establish a connection between your Measuring Car and your PC/Laptop. If you are using the PIKO H0 Measuring Car on a regular basis, we advise you to choose “automatically establish a connection”.



The connection will then be confirmed:



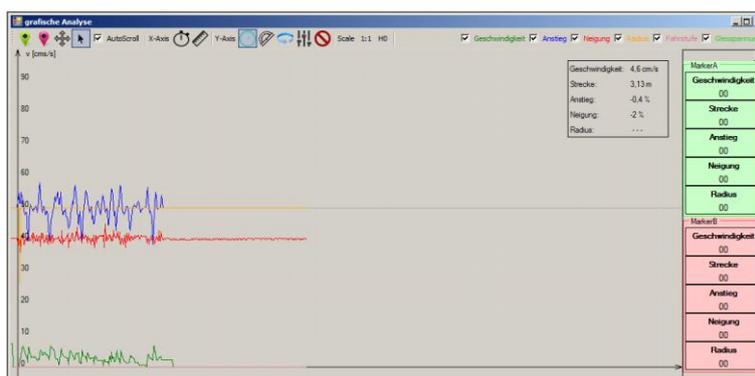
Now you just have to connect your Measuring Car to the PIKO Analyst program under the folder „options“:



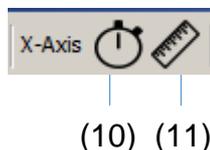
If you have done everything as described above (car is placed on the track, switched on and a connection to your PC/laptop is established ) you are ready for your first measuring run!

## 4.4 The first measuring run

Now please click on the play-symbol (1). If the car moves and the AutoScroll function is activated  AutoScroll the x-axis will start recording. You should now see the first graphical representations of your measurement results:



Because time (10) is standardly set as the basic unit, the x-axis will continue to move, no matter if the Measuring Car is moving or not.



By clicking on the ruler symbol (11) you can use the x-axis to measure your model system accurate to within a centimetre.

By clicking on the check boxes on the right side of the screen you can deactivate and reactivate specific graphs. This allows you to focus on a specific measuring range!

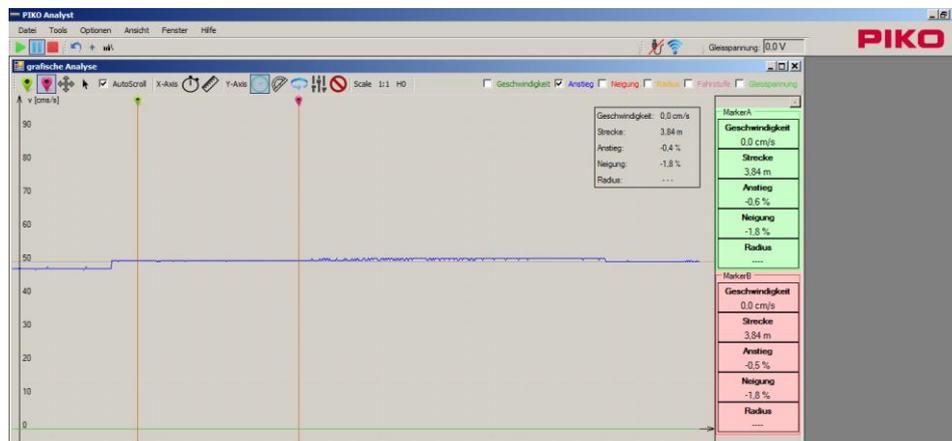


Picture shows check boxes.

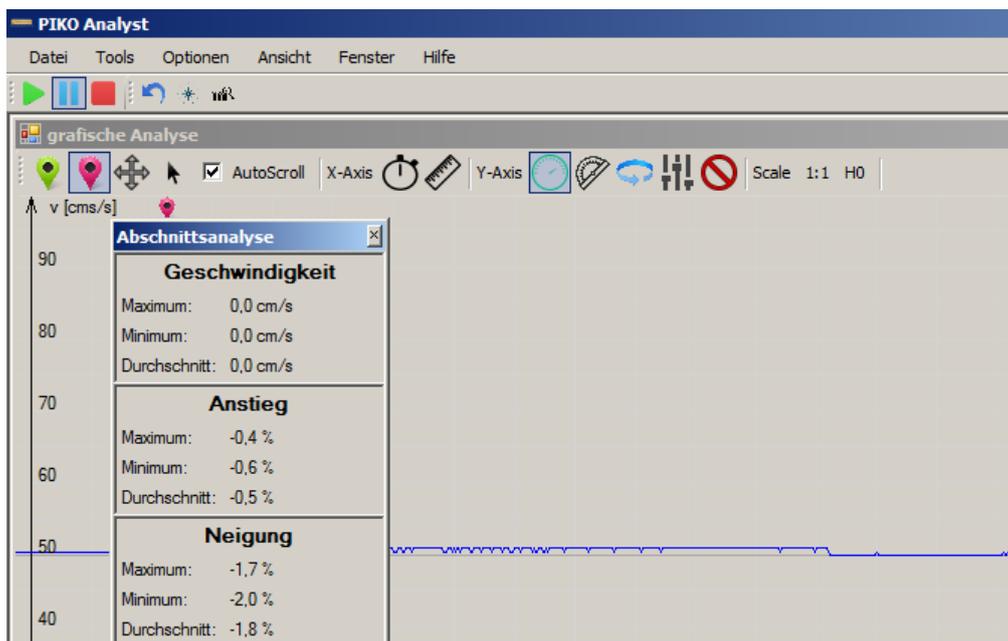


The picture above exemplarily shows the exclusive display of the slope

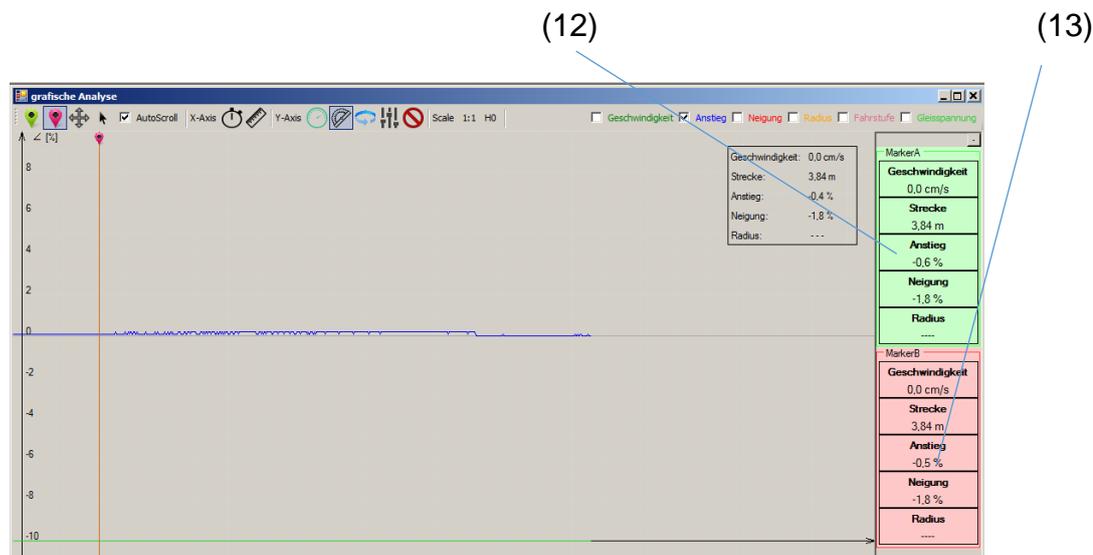
Of course, you can mark and separately analyse specific sections. For that you have to mark the beginning (green mark) and the end (red mark) of the section you want to analyse with your mouse.



Then you can analyse the chosen section in detail by clicking on “section analysis”.

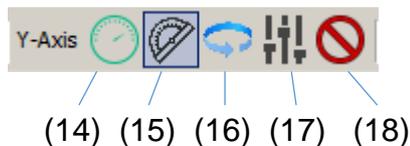


Marker A (12) and marker B (13) will show you very precise information about the measured values.



Furthermore, you can change the scale on the y-axis.

By clicking on the symbols „speed“ (14), „angle“ (15), „radius“ (16), „driving mode“ (17) you can switch between the different units. By clicking on „no label“ you can remove all scheduled lines.



In this case we chose “angle” and a single-digit scale to display the slope in percent (in the context of model railways, slopes with double-digit percentages are seldom relevant).

By clicking on „1:1“ (19) or „H0“ (20) the measured values can be displayed at a ratio of 1:1 or 1:87.



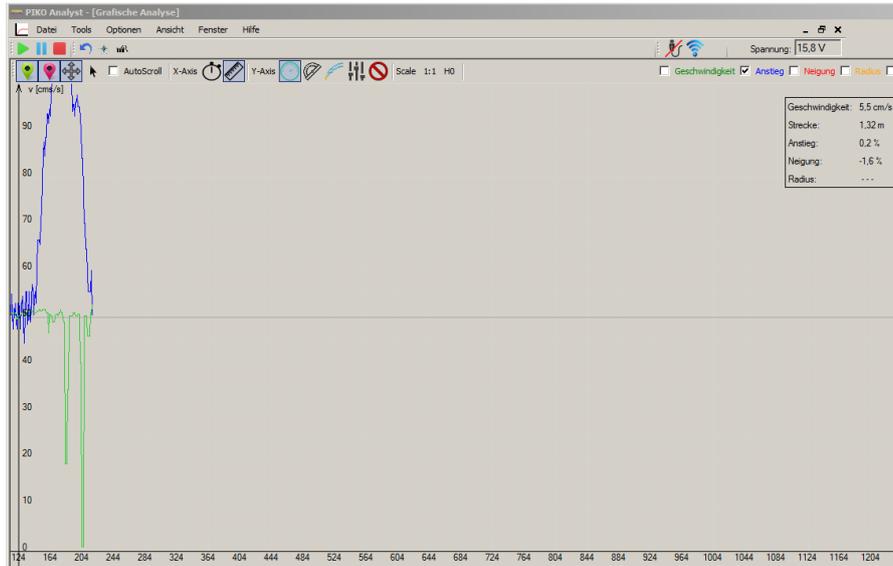
Finally, to show an example we want to analyse a measuring run with you a little bit closer:

For that we activated the measurement graphs “speed”, “slope” and “d.c. voltage” on the PIKO Analyst.

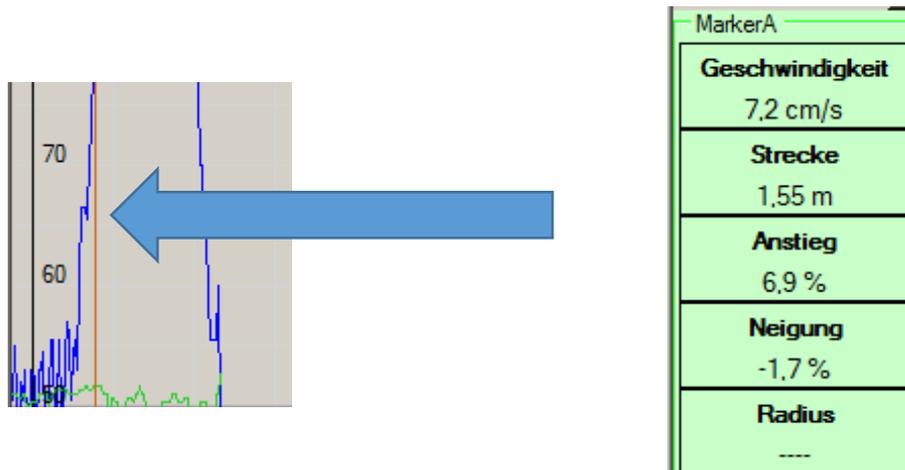
By clicking on the ruler symbol, we set the x-axis to measure the distance while the y-axis displays the angle. The measured values should be displayed at a ratio of 1:1:

To analyse a certain section of the track, we first have to set and mark zero point on the system and set the distance counter on the measuring car to zero as well.

The PIKO H0 Measuring Car collected the following data and has sent it to the PIKO Analyst:



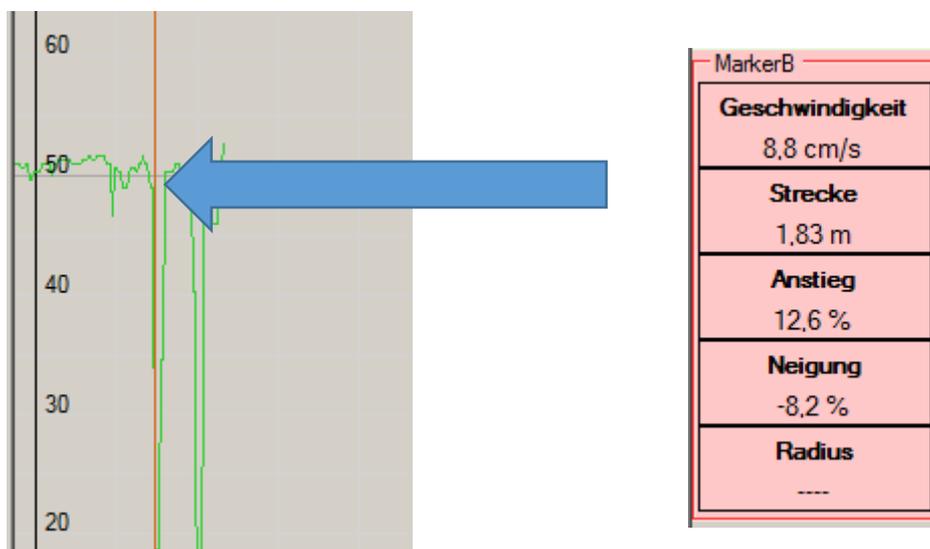
This way the practical benefits of the PIKO Analyst can be shown most diversely. The graphs show severe irregularities considering the slope and two voltage drops.



We set our marker A at the point where the irregularities occurred so we can read off the measured values:

After 1,55 meters we could measure an unintentional slope of 6,9 % !

Furthermore, we could notice two voltage drops (if the slope graph is hidden):



With marker B you can mark the concerning area on this graph as well!

Around the concerning point at 1,83 meters we can locate the first voltage drop!

Now you can start adjusting your system by levelling the slope and fix the construction errors by building in two more power inputs!



**Have fun and enjoy measuring your track!**

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## 5 Hotline

For further questions please send us an e-mail to [hotline@piko.de](mailto:hotline@piko.de)

or call our technical hotline under +49 3675 / 8972-42.

You can reach us from Tuesday to Thursday between 4 P.M. and 6 P.M..

## 6 Notice

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