

BlueSens



Manual for

BACVisSingle

Version

6.1

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1 System requirements

You need the following components:

- computer with min.233 MHz and 64 MB RAM
- Windows 98SE® or newer
- one free serial port
- 100 MB free disk space
- monitor with a resolution of 600x800 pixel

2 Installation of BACVisSingle

To install BACVis you have to create a new directory for example with Windows-Explorer® that called “BACVisSingle”. It is important, that the user that is working with this program has got write permissions in this folder. Then you copy the file *BACVisSingle.exe* from disk to this directory. The installation is completed.

Using the program you double click *BACVisSingle.exe* or you create a link on your desktop.

During the first measurement the measuring data are saved in the directory *...BACVis\data*.

3 Functions

3.1 **Start BACVis**

Start Windows-Explorer® and double-click on the symbol „BACVisSingle.exe“ or click on your link on the desktop and the program will start.

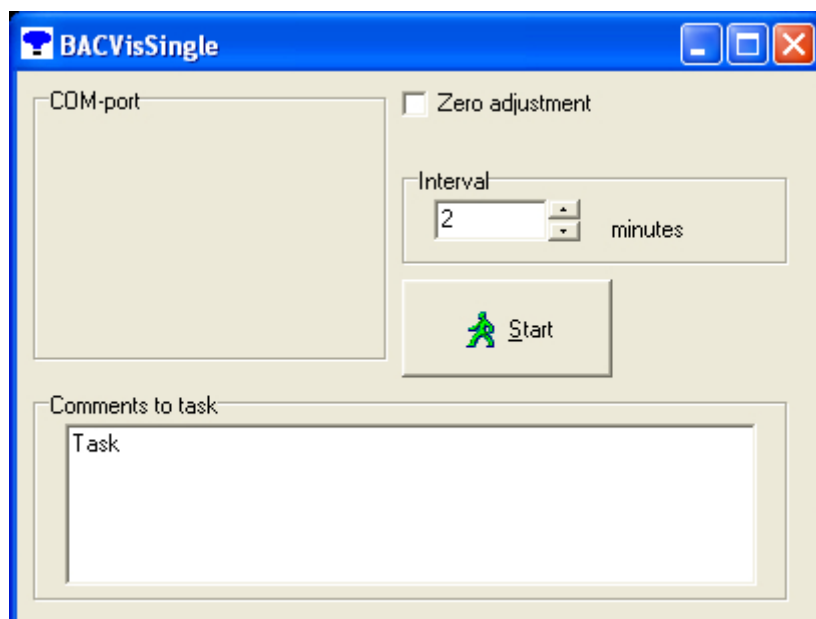


Fig. 1: Start image after activating BACVis.

3.2 *Input by user*

3.2.1 Selection of the Com-Port

At first the used **Com-Port** (Fig.) has to be chosen. Therefore all available ports are displayed. If the used Com-Port is not displayed another program uses this port. Close all windows and start BACVis again.


3.2.2 Adjust the measuring interval

The adjusted standard interval is one minute. To change these between 20 seconds and 120 minutes you could click on to arrows in the field **Interval** (Fig.).

3.2.3 Choosing the measuring method

Two different measuring method are available.

- a) You start a **new** measurement: If you want to start a one-point-calibration, check the checkbox **Zero Adjustment** (Fig.). The sensor becomes autocalibrated and has to be exposed to ambient air or nitrogen like described in the sensor manual. Uncheck this box for normal measurement.

	<p>Attention! If you check the checkbox Zero Adjustment (→Fig. 1) the sensor needs to be exposed for a certain time to the specified calibration gas as described in your data sheet. If you are not using the right gas, wrong measuring results will occur! For a normal measurement uncheck the checkbox!</p>
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- b) You would like to **continue** a measurement without zero adjustment. Therefore don't assign **Zero Adjustment** (Fig.).

3.2.4 Start the measurements

Before starting the measurement it is possible to write a text in the field **Comments to task**. The first row is the title of the measurement and in the second row additional data like conditions could be written.

Afterwards you push the **Start** button. The measuring data would be saved in the directory ... /data.

After activating the **Start** button BACVis is looking for a sensor at the selected Com-port.

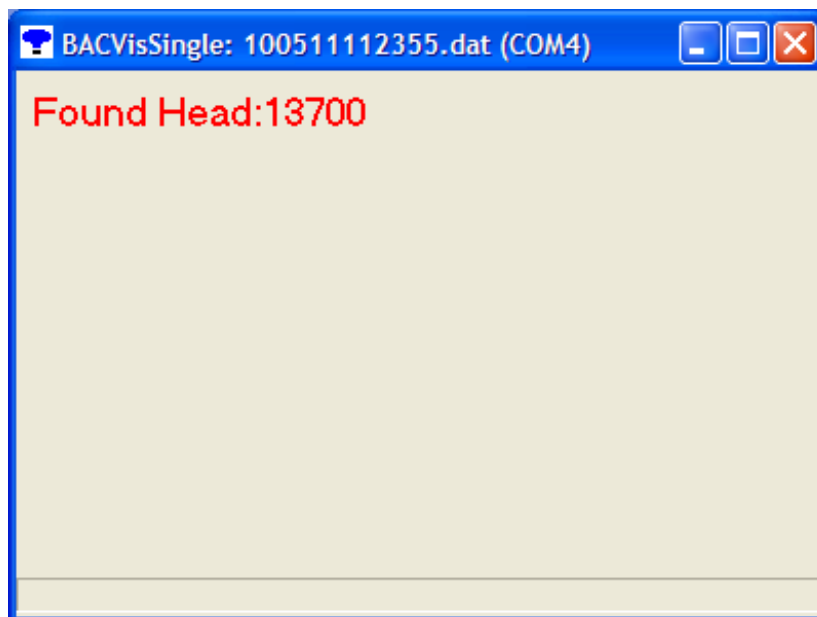


Fig. 2: Display when a sensor head was found.

If no sensor is connected to the selected Com-port the following window appears.

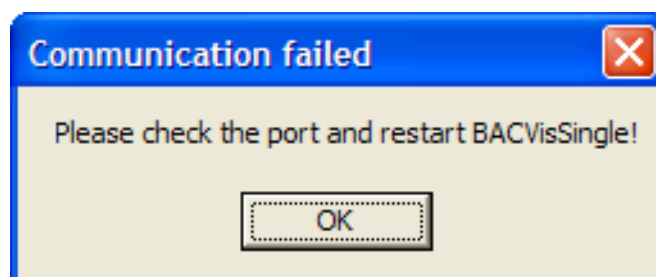


Fig. 3: No sensor connected.

3.2.5 Zero Adjustment

The Zero Adjustment is to minimize the sensor drift and have to be done once a month.

The sensors have to be calibrated at conditions described in the sensor manual (mostly normal air with 20.97 Vol.% O₂; 0.04 Vol.% CO₂). Therefore it is very important that you do not breathe into the measuring adapter or in the sample vessel because the result will be high concentrations of CO₂ and you will receive false measuring results.

If possible the autocalibration should be done in a well ventilated room.

During the autocalibration the measuring window appears.

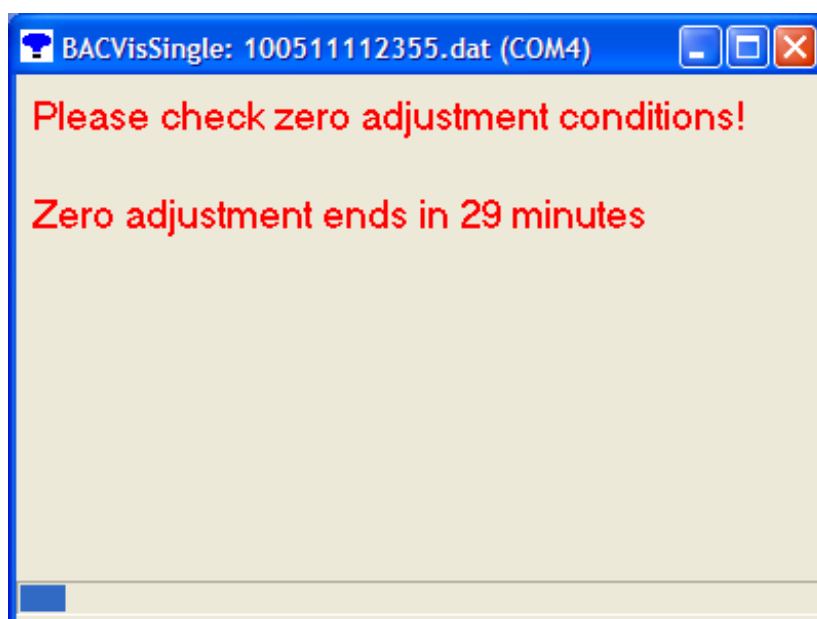



Fig. 4: Window during the autocalibration.

	Attention! If you check the checkbox Zero Adjustment (→Fig. 1) and you are not using the right gas, false measuring results will be obtained!
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If **Zero Adjustment** is not selected, the sensors contentions with the measurement like in the last measurement.

3.2.6 Stop the measurement

To stop the active measurement close the window (cross at the right top of the **active** window)

The measuring data will be saved in the directory C:\BACVis\Data in the following format:

Measurement begin 01.01.2002 at 12:00:01:

File format: **020101120001.dat**



You can copy the file to work with the data while the measurement is running. The measurement does not have to be stopped.

3.2.7 Display

After the measurement is started the data are visualized like shown in the figure below.

The window will be labelled like you do in the box for comments (Chap.3.2.4) and is showing the COM Port as well. The Graph is labelled like the input in the **comments to task** box (fig.1). The Sensor-ID of the sensors is also shown.

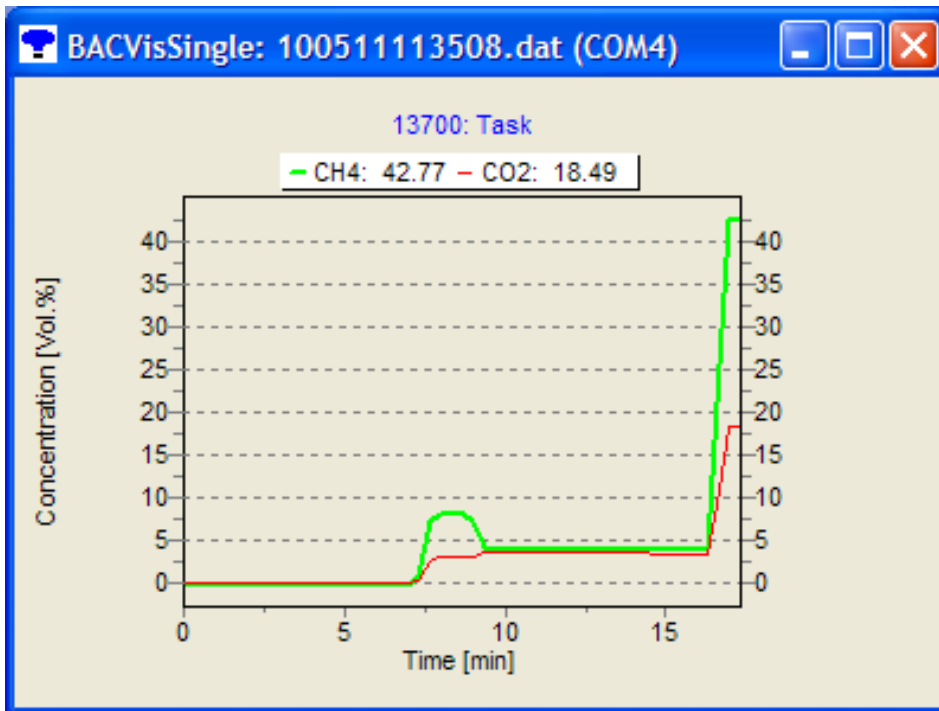


Fig. 5: Display of an example measurement with a combined analyser

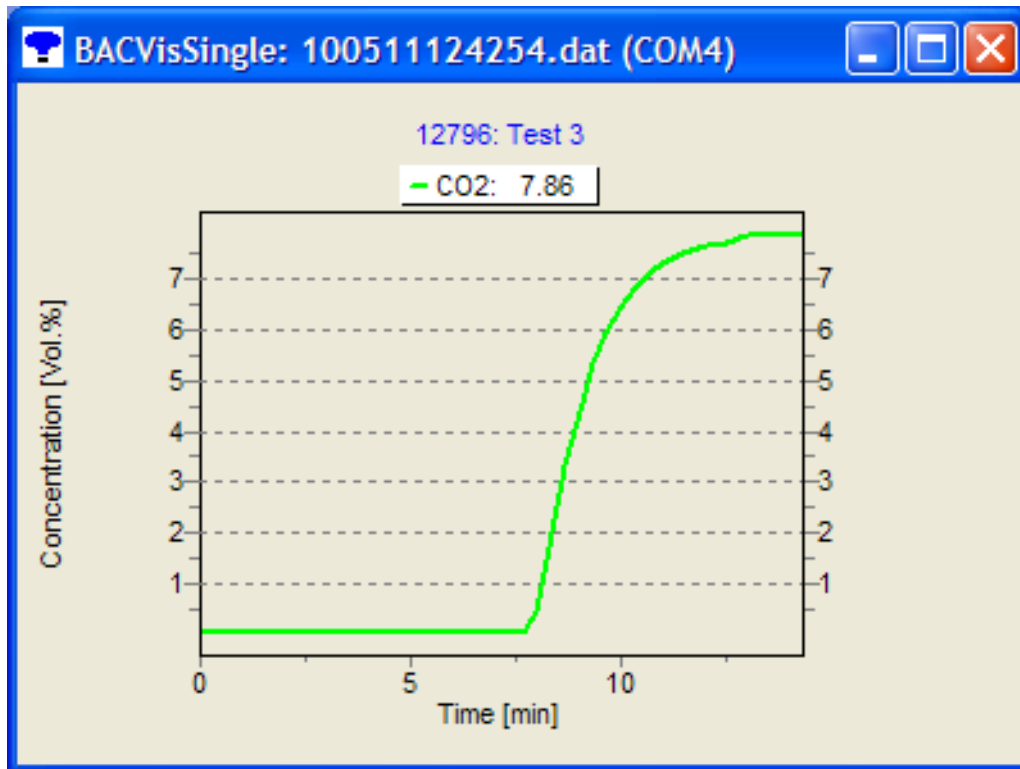


Fig. 6: Example of a CO₂-measurement

At the left side the concentration (Vol.%) is shown. The bottom axes shows the time in minutes.

3.2.8 Zoom

Inside the measuring window it is possible to enlarge the desired area of the curve by pressing the left mouse button and simultaneous movement of the mouse from the **right to the left** side of the window.

To undo this selection you have to move the mouse under simultaneous pressing of the left button from the **left to the right side** of the window.

4 Troubleshooting

Error	What to do?	Help
Sensor can not be found	Select interface <i>Options</i>	See chap. 3.2.1
	Check connections	
Wrong Output		
Wrong 1-point calibration	Repeat 1-point calibration	See chap. 3.2.5
Are the gas concentrations in the measuring range of the sensor?	See data sheet	If not, contact service
Is the sensor older than one year?	We suggest a factory recalibration at BlueSens for highest precision.	Contact service
Did humidity broke into the sensor?	Send to service	Contact service
The data cant be read by Excel	Wrong separator. The separator might be a period.	Change period to comma

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