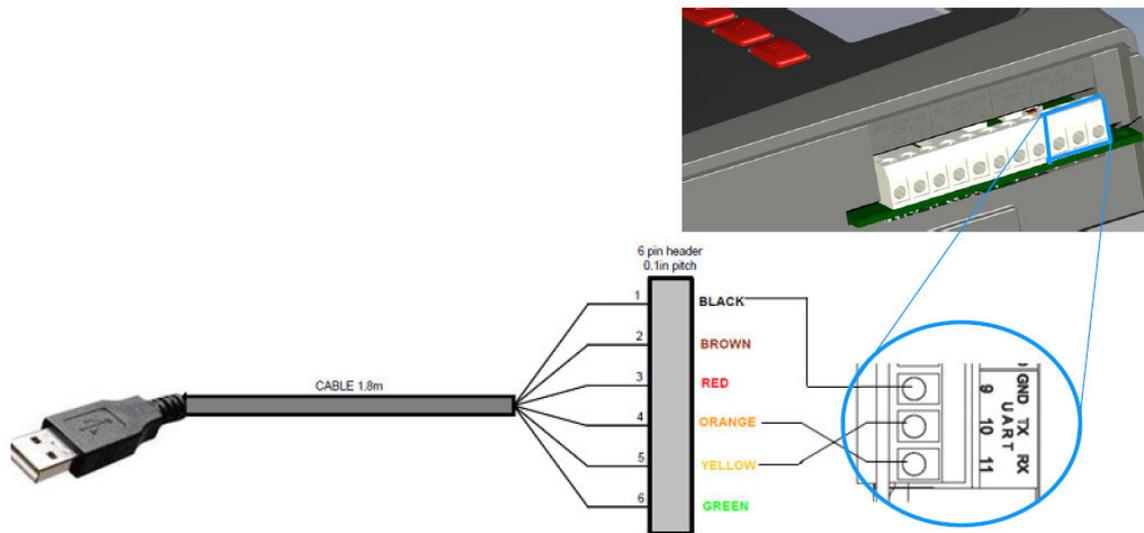


Instructions for connecting the Tarom 4545 and Tarom 4545-48 to a serial interface on a computer or microcontroller

1. Use the PA CAB2 data cable to connect your Tarom to the USB port on your PC.

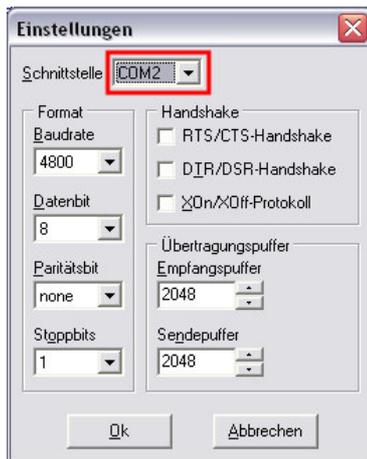
If you are using a microcontroller instead of a PC: The PA CAB2 is probably not required. The UART output signal of the Tarom is between 0V and 3.3V and can, depending on your microcontroller, be connected directly to the UART on the controller. Please note that the UART output from the Tarom is not galvanically isolated.

Cut the 6 pin header from the PA CAB2, remove about 5mm of insulation from the end of the black, yellow and orange cables and connect them to the Tarom as follows:



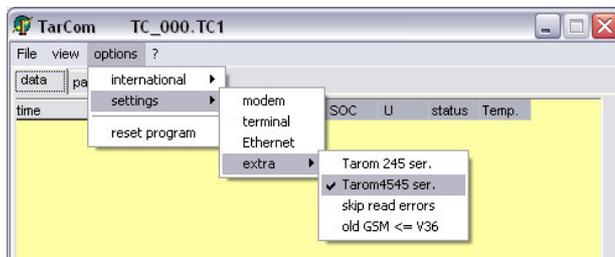
- Transmit of CAB2 (4 orange) to receiver of the Tarom (11 RX)
 - Receiver of CAB2 (5 yellow) to transmit of the Tarom (10 TX)
 - GND of CAB2 (1 black) to GND of the Tarom (9 GND)
2. Install the FTDI driver software from here if you are using Windows or Mac OS X (for most Linux distributions the drivers are included from kernel version 3.0.0-19):
<http://www.ftdichip.com/Drivers/VCP.htm>
 3. Plug the USB end of the PA CAB2 into a USB port on your computer. Now, under Windows, find out the COM port number in your device manager. The CAB2 should show up as "USB Serial Port (COM XX)" under the "Ports (COM & LPT)" device category. Please note this COM port number. We will use COM2 as an example.
 4. Please download the Tarcom software from the Steca website:
<http://www.steca.com/index.php?Streca-PA-CAB1-Tarcom-PA-CAB2-Tarcom-en>
 5. If you have not yet installed the Tarcom software please do so now by launching the SETUP file for Windows.

- Switch the serial/UART interface of your Tarom under "System settings → Open UART/RS232" to "On". Make sure that the date and time of the Tarom are set.
- You can now launch the Tarcom software from your start menu on your PC.
- In the Tarcom program select the COM port you have noted before in step 3 under "File → interface → user defined". In our example this was COM2:

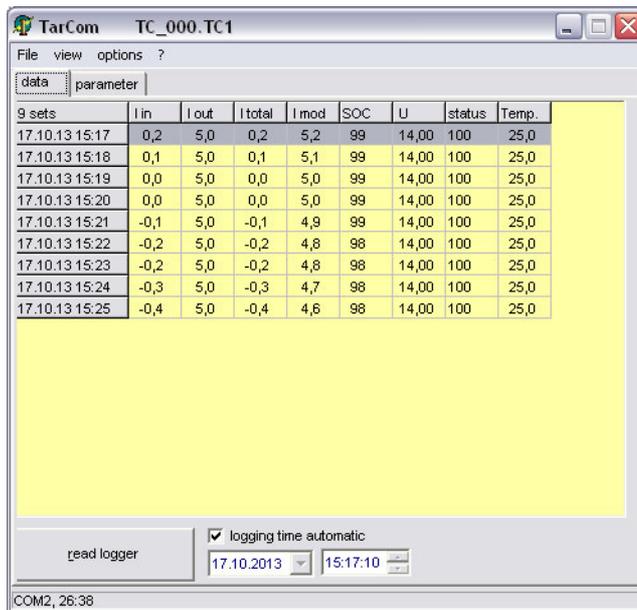


Leave the remaining fields as they are by default.

- Under "options → settings → extra" select "Tarom4545 ser.". This will activate the checkmark beside the "Tarom4545 ser." entry as shown below:



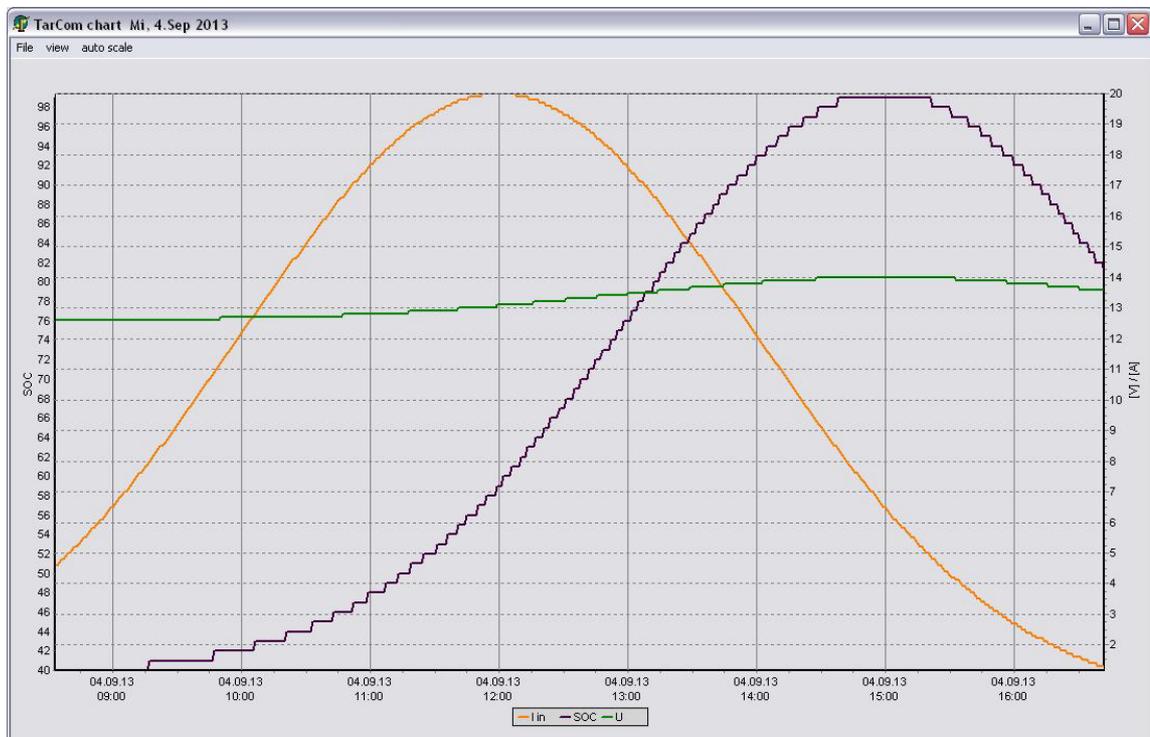
- If you wait a few minutes you should start seeing a new data entry about once every minute in the Tarcom program:



9 sets	I in	I out	I total	I mod	SOC	U	status	Temp.
17.10.13 15:17	0,2	5,0	0,2	5,2	99	14,00	100	25,0
17.10.13 15:18	0,1	5,0	0,1	5,1	99	14,00	100	25,0
17.10.13 15:19	0,0	5,0	0,0	5,0	99	14,00	100	25,0
17.10.13 15:20	0,0	5,0	0,0	5,0	99	14,00	100	25,0
17.10.13 15:21	-0,1	5,0	-0,1	4,9	99	14,00	100	25,0
17.10.13 15:22	-0,2	5,0	-0,2	4,8	98	14,00	100	25,0
17.10.13 15:23	-0,2	5,0	-0,2	4,8	98	14,00	100	25,0
17.10.13 15:24	-0,3	5,0	-0,3	4,7	98	14,00	100	25,0
17.10.13 15:25	-0,4	5,0	-0,4	4,6	98	14,00	100	25,0

11. Under "view → system analysis" you will find a graphical display of the energy flows in your PV system.

12. Once data has been collected for a few hours you can find that data in a chart under "view → Chart":



13. As long as you wish to collect data the PC must be on with the Tarcom software running.

14. If you are using a Mac or Linux PC (or on Windows as well if you do not wish to use the Tarcom software) you can still read the data through a serial console/terminal. The relevant settings for the terminal program are:
 - 4800 baud
 - 8 data bits
 - No parity
 - 1 stop bit
 - No flow control
15. These settings will allow you to collect the data through your serial port. You can then save that data with your serial program. As mentioned a new data set is sent every 60 seconds +/- 1s.
16. For more information on the meanings of the data string please download the full operating instructions from our website, this also has a complete protocol description:
<http://www.steca.com/index.php?Steca-Tarom-en>