MAG X2 Sofware Manual

arkon
flow systems

Arkon Flow Systems
Arkon Flow Systems, s.r.o., Příkop 8, 602 00 Brno, Czech Republic
Correspondence addess: Přízova 1-3, 602 00 Brno, Czech Republic
Tel. +420 543 214 822, Tel./Fax +420 543 215 249
Enquiries/Orders/General questions: office@arkon.co.uk
Marketing support/brochures: marketing@arkon.co.uk
Technical support: support@arkon.co.uk
www.arkon.co.uk

LIST OF CONTENTS

1. Introduction

1.1. System requirements

There are minimum hardware and software requirements of your computer that must be satisfied to ensure that the software functions properly. These are:
Pentium 166 MHz or better
SVGA monitor
32 MB RAM
MS Windows 98/ME/NT/2000/XP/Vista/Wndows 7 operating system
MAGX2 software program

1.2. Installation/Uninstall MAGX2 software

If you received the MAGX2 SW on a CD, place the CD-ROM with the MAGX2 software in your CD drive. Double-click on the CD-ROM symbol in the "My Computer" folder on the Windows desktop. Then run the “Setup.exe” in the "MAGX2 Software" folder. The installation package can be downloaded from Arkon website.

To uninstall MAGX2 SW in „Settings“ (Start menu), under „Add/remove programs“ you select MAGX2 and then click the „uninstall“ button.

1.3. Reference

Reference 1	**MODBUS over Serial Line** Specification & Implementation guide v. 1.0 modbus.org 12/02/02
Reference 2	**MODBUS Application Protocol Specification** v. 1.1 modbus.org 12/06/02
Reference 3	**MAGX2 manual**
Reference 4	**Bluetooth installation manual**
Reference 5	**GPRS installation manual**
Reference 6	**MAGX2 GSM SMS Module Specification**

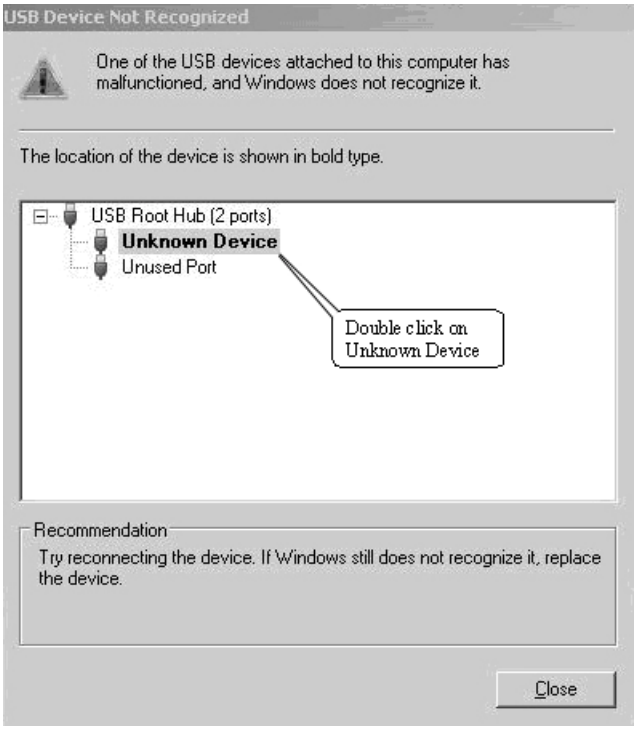
2. Install USB PC Drivers

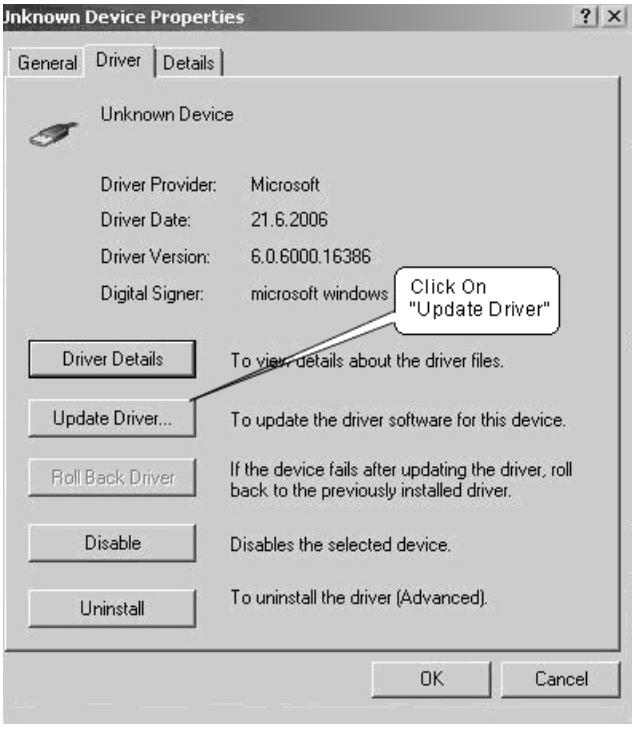
A USB PC driver for MAGX2 Transmitter is installed with MAGX2 SW. Installation is below (this procedure is for Windows Vista operation system in other operation system procedure is similar):

- When you connect the mini USB cable from the transmitter to the PC, you will see information about installing drivers. When installation is finished, it is complete.

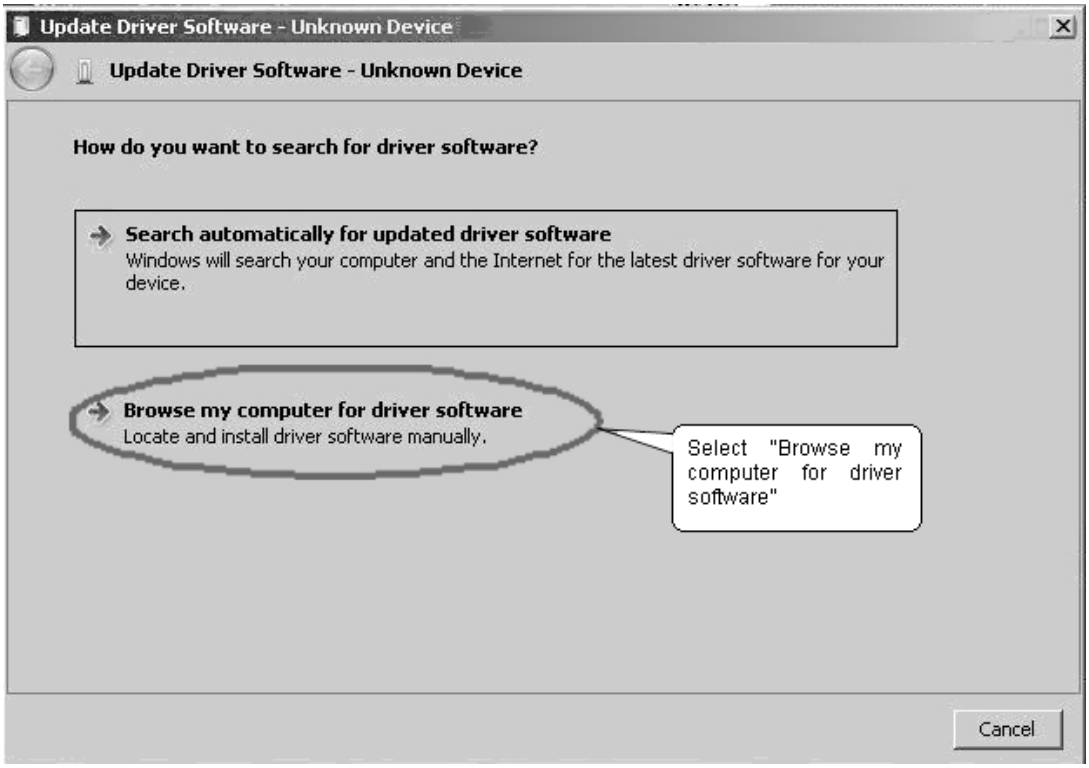
If the USB driver is not properly installed and this picture is displayed, continue bellow:

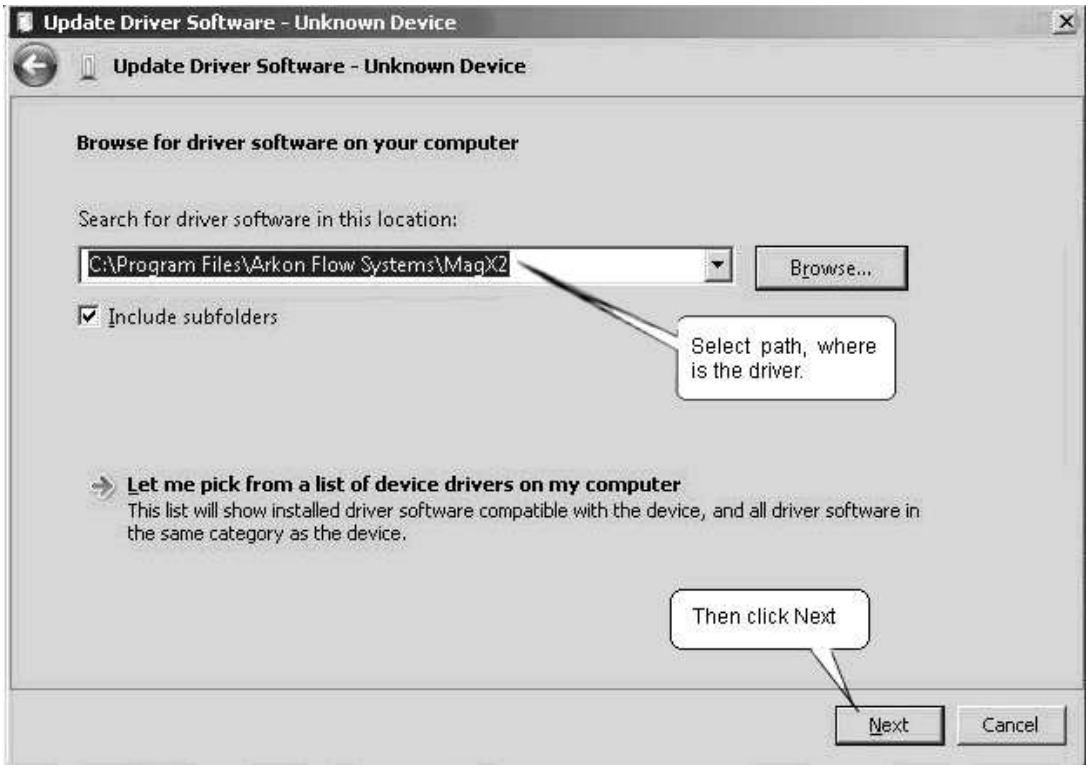
- Double-click on information “USB Device Not Recognized” , and double click on unknown device in tables. In next tables select “Update Driver..”.



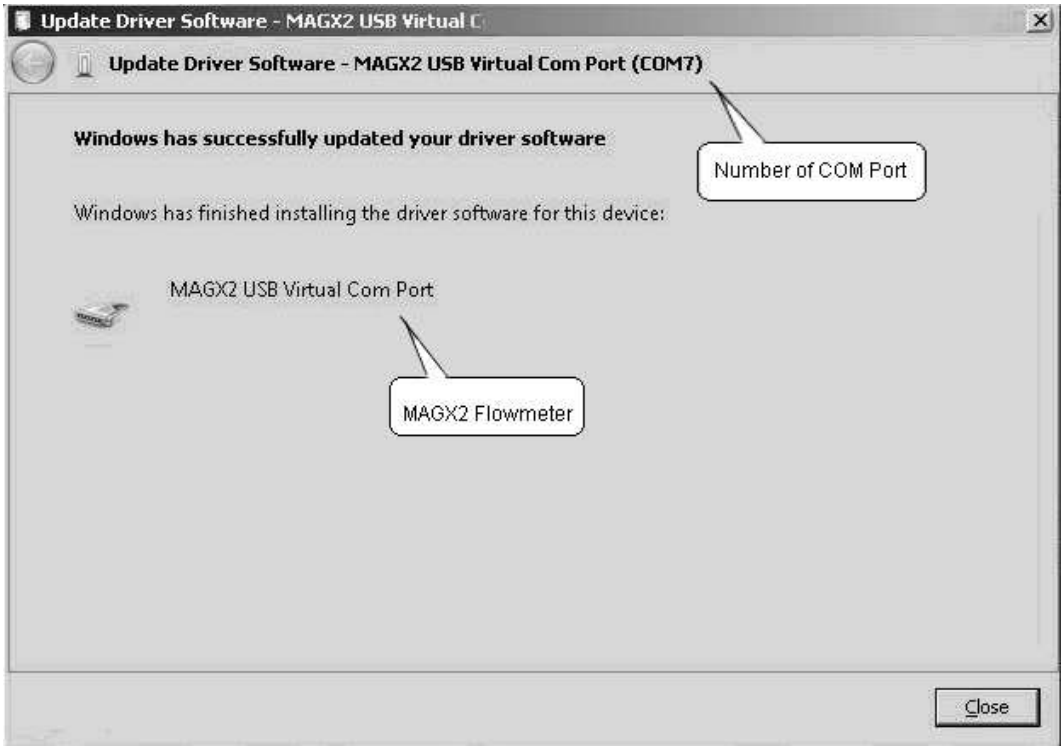


- Select “Browse my computer for driver software” and find driver, which is install into same folder as main program (if don’t change path through installation, default path is “ROOT_DISK:\Program Files\Arkon Flow Systems\MAGX2”).

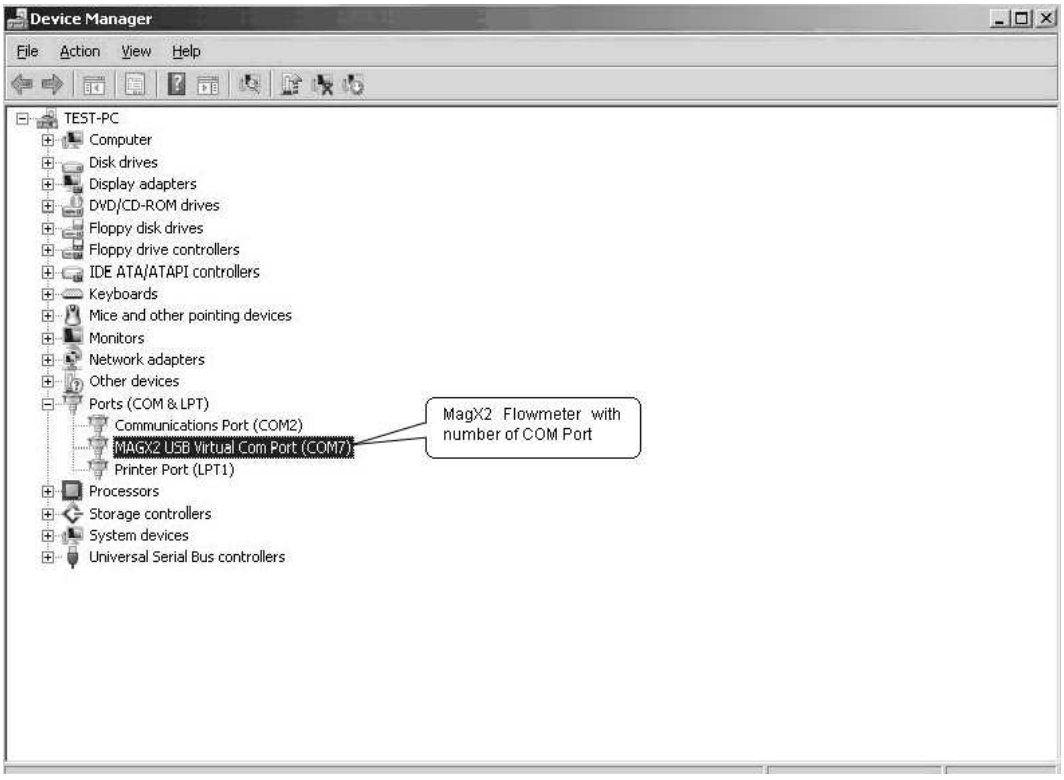

Update Driver Software - Unknown Device
Update Driver Software - Unknown Device
How do you want to search for driver software?
Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device.
Browse my computer for driver software
Locate and install driver software manually.
Select "Browse my computer for driver software"
Cancel


Update Driver Software - Unknown Device
Update Driver Software - Unknown Device
Browse for driver software on your computer
Search for driver software in this location:
C:\Program Files\Arkon Flow Systems\MagX2
Browse...
Include subfolders
Select path, where is the driver.
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Then click Next
Next
Cancel

- The installation takes a few seconds and new the hardware driver is successfully added to system.

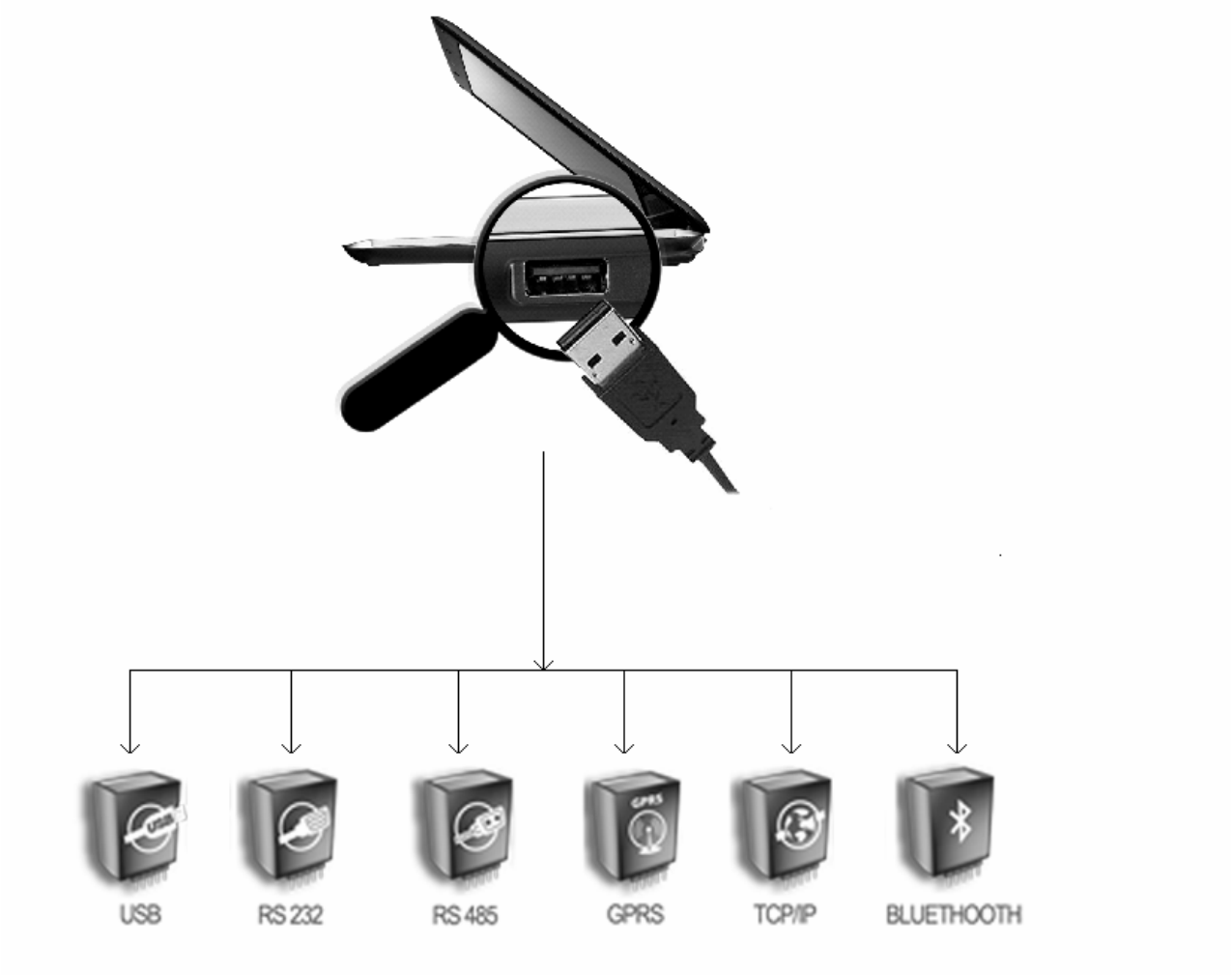


Notes: The connection with the transmitter is realized via COM Port (Virtual Serial Port), which is installed with USB driver. The number of virtual serial port is displayed on the next screen in device manager.



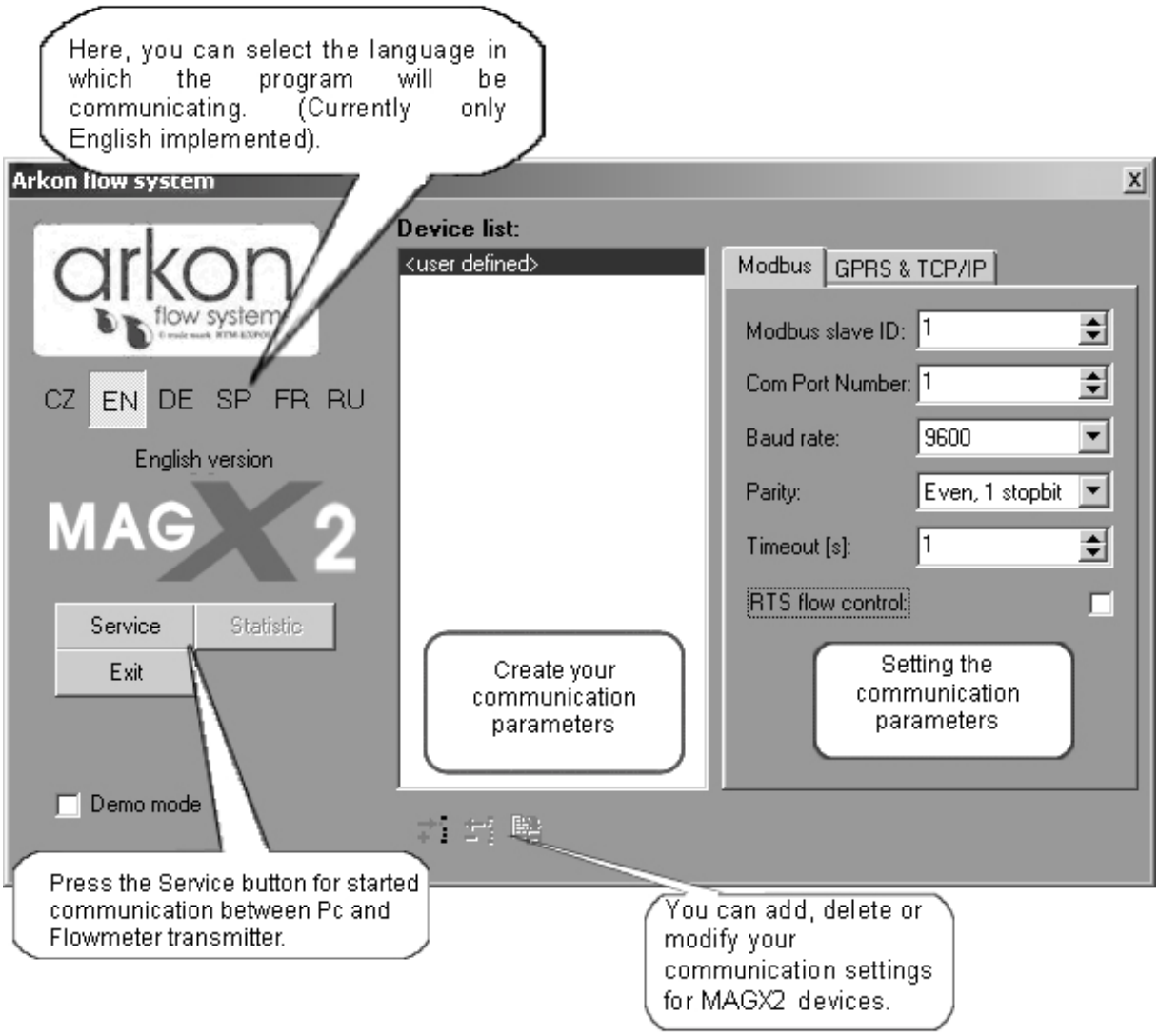
3. Physical connections

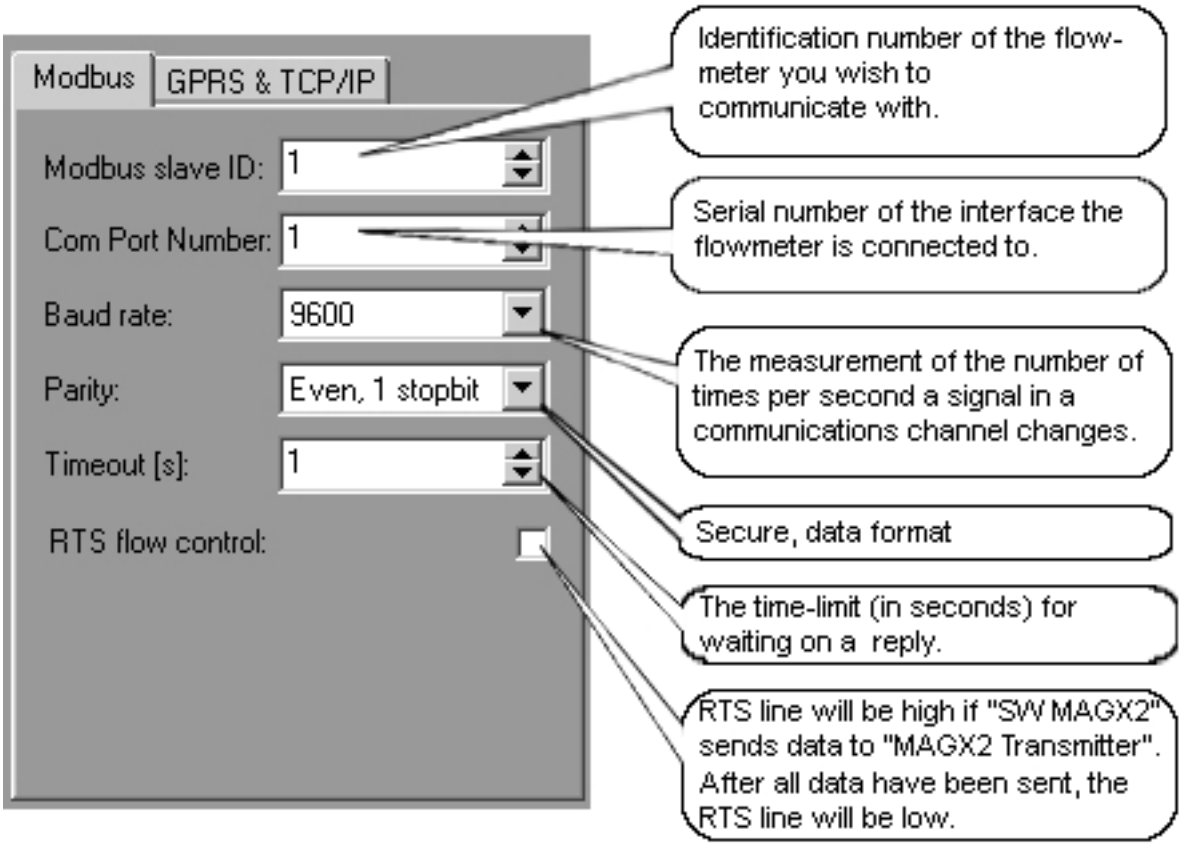
After properly install of the MAGX2 SW to your drive, you need to connect the flowmeter to your pc/notebook. First, you need to connect the appropriate cable to the flowmeter, depending on the type of communication chosen. Then you connect the cable to the appropriate communication slot of your computer. For more information about communication modules see MAGX2 manual (Reference 3).

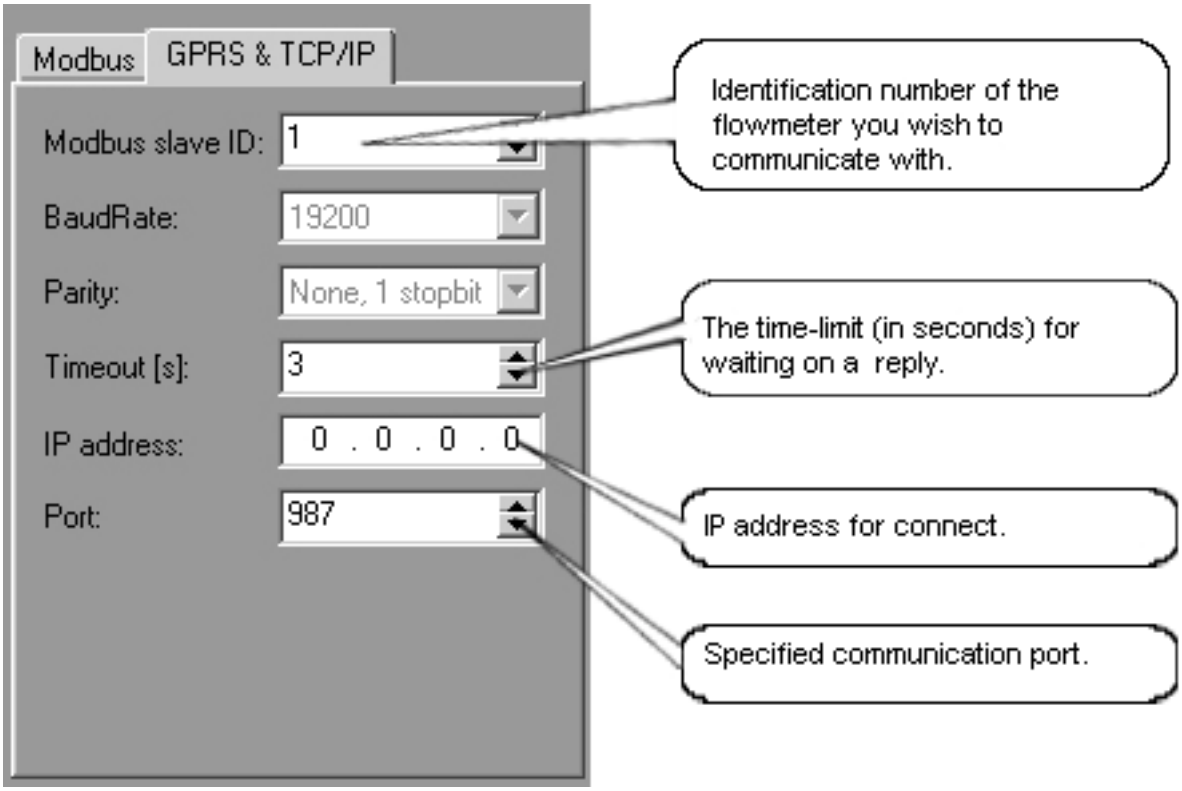


**pictures are only illustration.*

4. MAGX2 SW functions

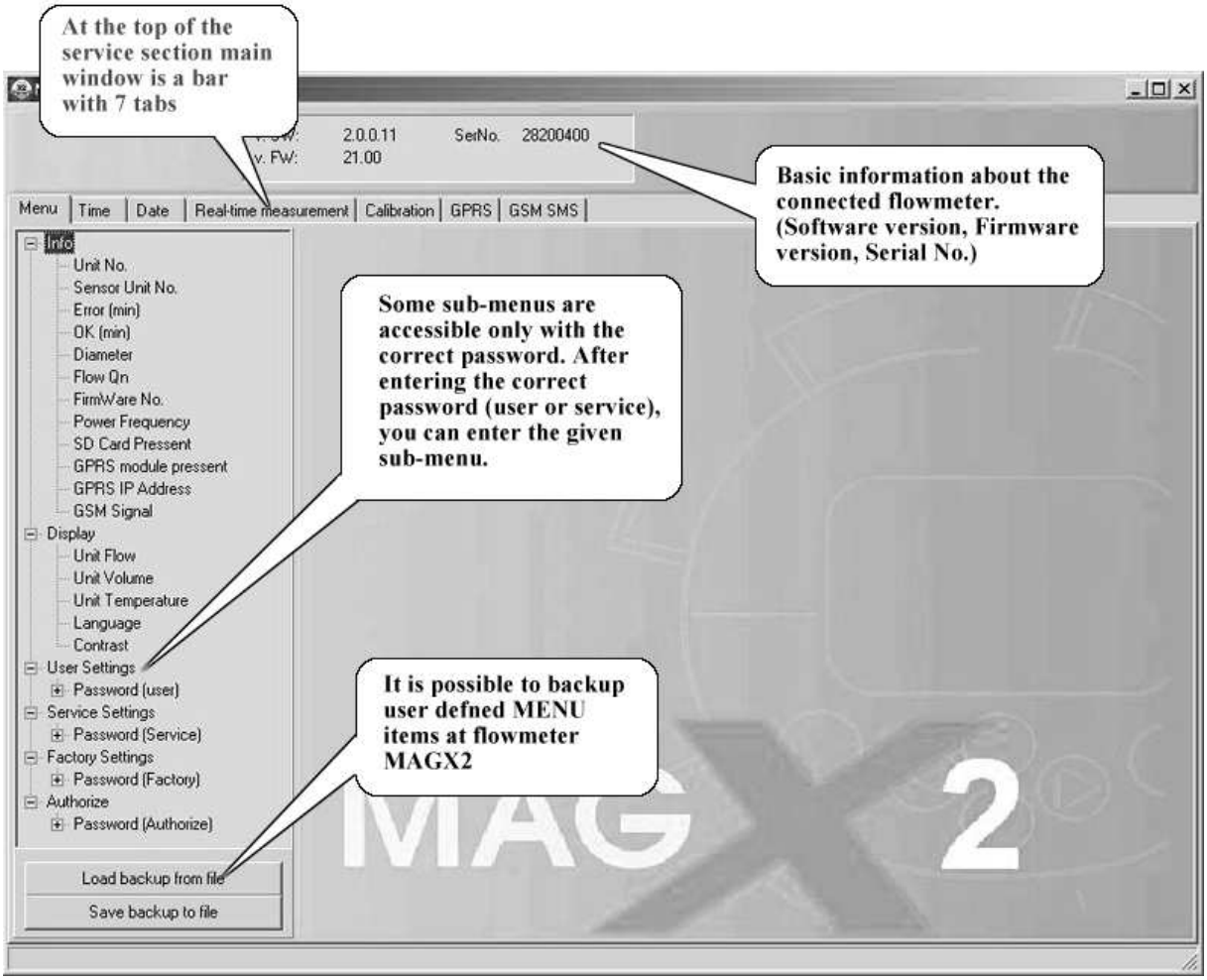



Modbus
GPRS & TCP/IP
Modbus slave ID:
1
Com Port Number:
1
Baud rate:
9600
Parity:
Even, 1 stopbit
Timeout [s]:
1
RTS flow control:
Identification number of the flow-meter you wish to communicate with.
Serial number of the interface the flowmeter is connected to.
The measurement of the number of times per second a signal in a communications channel changes.
Secure, data format
The time-limit (in seconds) for waiting on a reply.
RTS line will be high if "SW MAGX2" sends data to "MAGX2 Transmitter". After all data have been sent, the RTS line will be low.


Modbus
GPRS & TCP/IP
Modbus slave ID:
1
BaudRate:
19200
Parity:
None, 1 stopbit
Timeout [s]:
3
IP address:
0 . 0 . 0 . 0
Port:
987
Identification number of the flowmeter you wish to communicate with.
The time-limit (in seconds) for waiting on a reply.
IP address for connect.
Specified communication port.

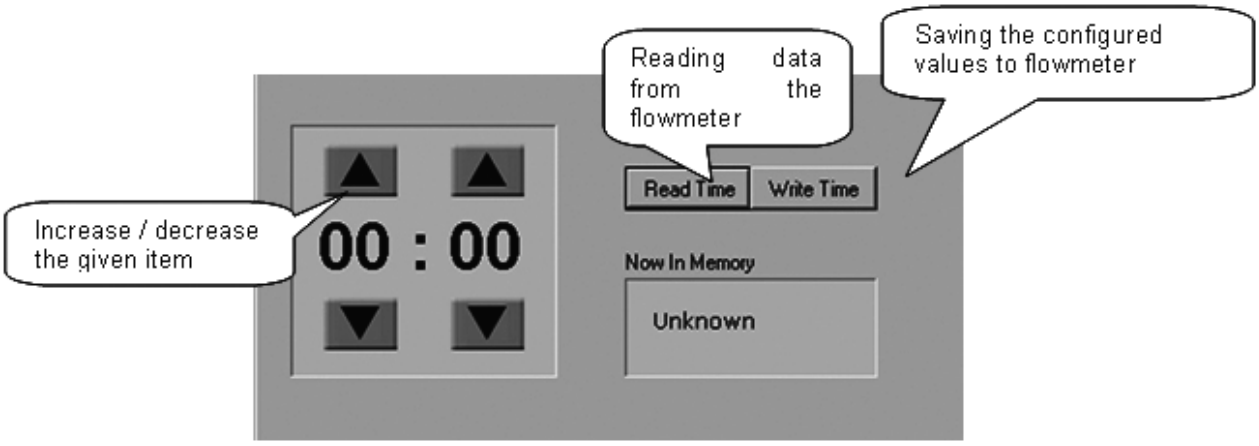
5. Service Section

The MAGX2 software has one section:
• **The SERVICE section ("Service")** – This section serves for overall remote configuration of the flowmeter. You enter this section by clicking on "Service" in the above window.



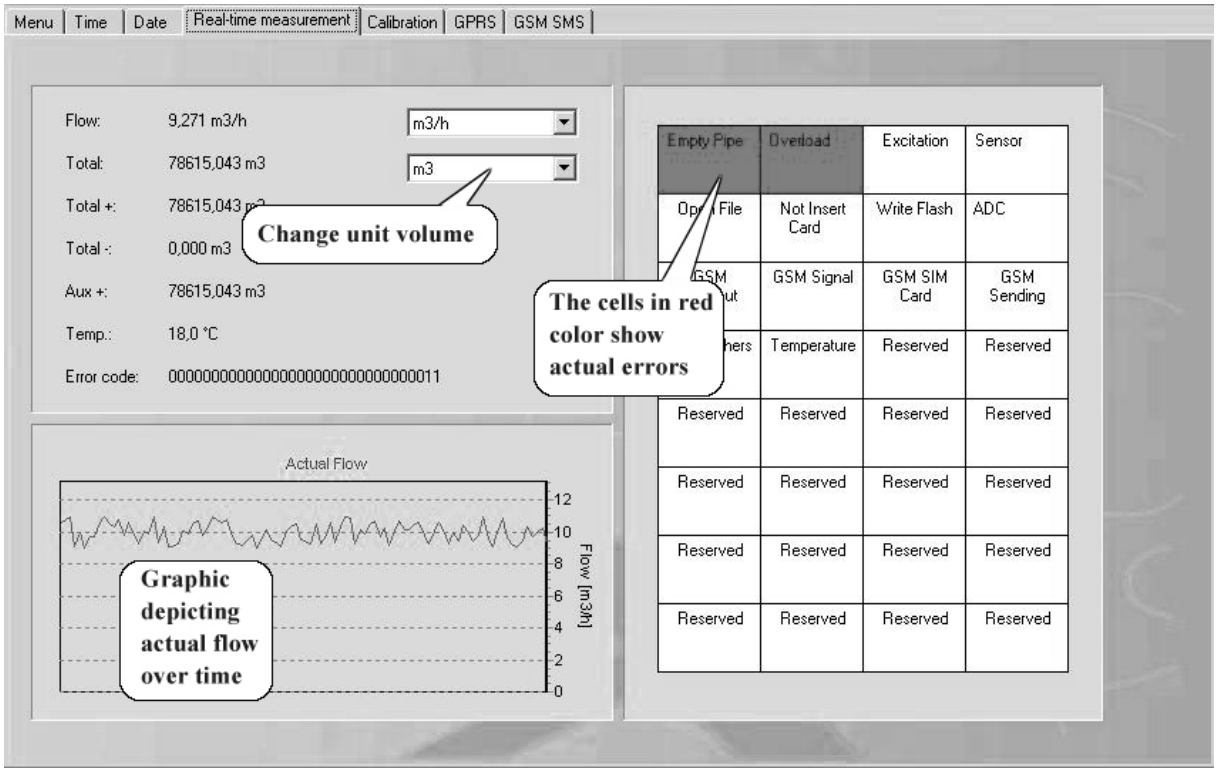
MENU - The left-most tab is the "menu" tab, which will display the item selected in the menu-tree on the left hand side of the main window. Some items are only accessible after entering the correct password. When asked for a password, simply enter the correct password for the given section (User, Service, Factory or Authorize password) and click OK.

- *TIME* - The next tab is "Time". Here, you can enter the actual time.

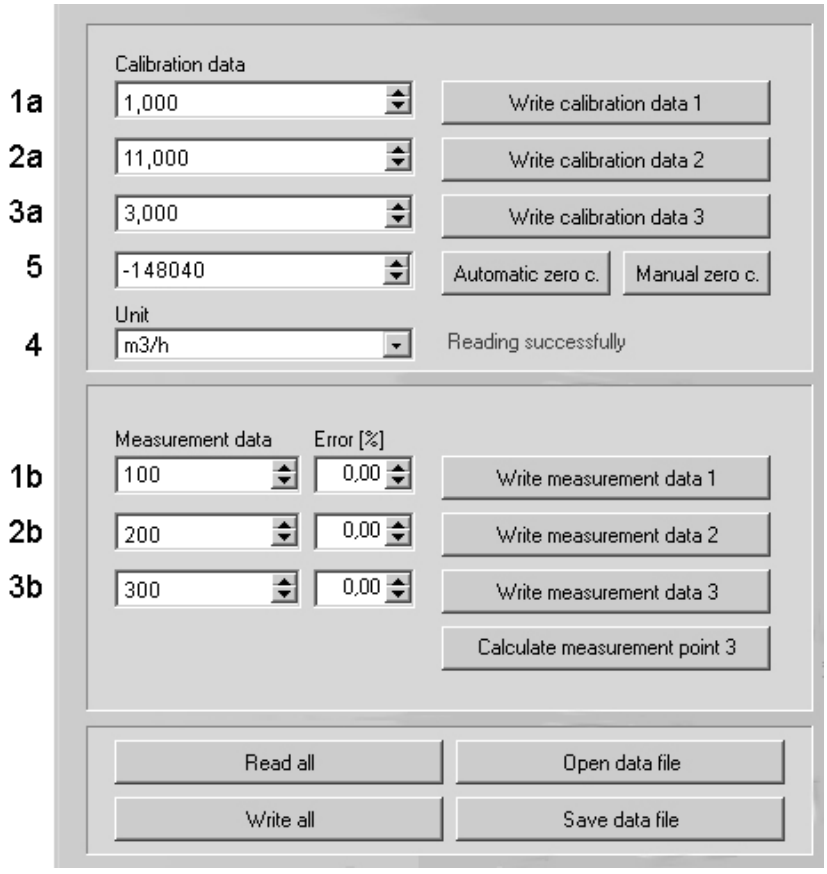


- *DATE* - The third tab from the left is "Date". Here, you can enter the correct current date. (Settings are the same as *TIME* - Tabs)

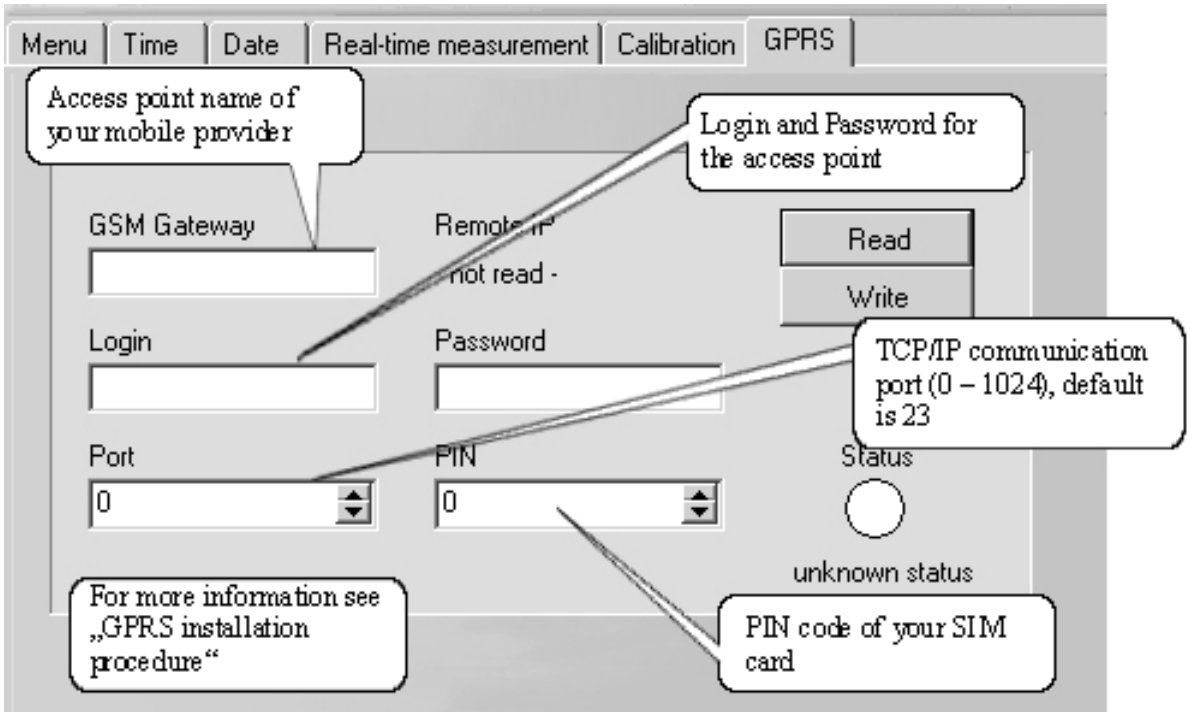
- *REAL – TIME MEASUREMENT* - The 4th tab is "Real-time measurement" and it serves to view actual current flow. The current flow is shown as the first item on top of this window, but it is also depicted in the form of a graph at the bottom. This graph shows current flow data for the last 100 seconds of measurement. On right side are all errors, when active errors are in red.



- *CALIBRATION* - The next tab is “Calibration", which serves to calibrate the sensor. To enter this sub-menu, you will need the factory password, which in practice means you will never need this section of the manual. You can upload the current sensor calibrations settings, by clicking “Read all”.
  With the “Write all” button, you can save all currently set calibration values. This button has the same effect as pressing "Write Measurement Data 1", "Write Measurement Data 2", "Write Measurement Data 3" separately.
  Using the "Save data file" button, you can save all loaded values. It will not start new data-reading, just the saving of currently loaded data. With the “Open data file" function, you can load calibration values that were saved previously. No values are saved; it will just load/read values for a previously saved file.
  During calibration, it is necessary to allocate real flows to the individual values of the measuring sensor (“measurement data”). With the "Write Calibration Data X" button, you allocate the real current flow entered in field 1a (2a, 3a) (above picture) to the current value in the sensor. It is therefore necessary to do any such calibration on an official accredited calibration rig. You can select the flow measurement unit at field number 4 in the above picture.
  With the "Write Measurement Data X" button (1b, 2b, 3b) (above picture) you can allocate the flow value under Xa to the sensor value entered in Xb. This option has any use only when correcting an already calibrated sensor. If there is a constant flow error found out in the calibration points while control measuring, it is possible to eliminate this error by edit windows 1c, 2c, 3c. The writing of calibration data must be done by buttons "Write Measurement Data X" in this case.
  Calibration point 1 is at the start of the calibration curve, point 2 at the end of the curve, and point 3 in the middle.
  Automatic Zero C. – Set zero flow constant automatically from actual ADC (measurement data).
  Manual Zero C. – Set zero flow constant manually from ZC constant window (“5.”).

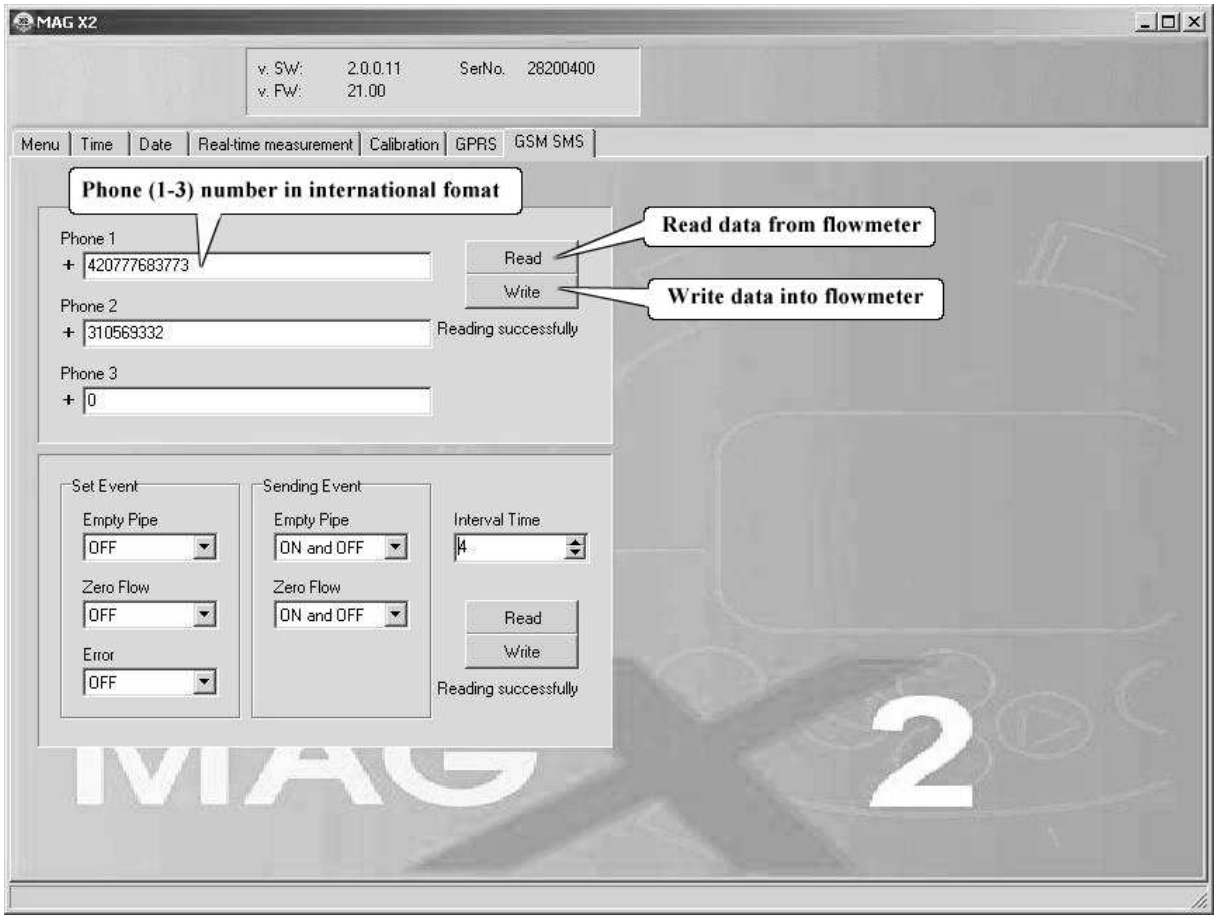


- *GPRS* - GPRS parameters you get from your GSM (mobile) service provider.



- *GSM SMS* – Settings some parameters for SMS sending. These are bellow:

    - Phone (1-3) - set 3 phone numbers for sending Event and data in setting interval
    - Set Event – set active event (for more information see MAGX2 GSM SMS Specification)
    - Set Sending Event – set, when will be send information about event (for more information see MAGX2 GSM SMS Specification)
    - Interval Time – Set interval time for sending data (for more information see MAGX2 GSM SMS Specification)


MAG X2
v. SW: 2.0.0.11
v. FW: 21.00
SerNo. 28200400
Menu
Time
Date
Real-time measurement
Calibration
GPRS
GSM SMS
Phone (1-3) number in international fomat
Phone 1
+ 420777683773
Phone 2
+ 310569332
Phone 3
+ 0
Read
Write
Read data from flowmeter
Write data into flowmeter
Reading successfully
Set Event
Empty Pipe
OFF
Zero Flow
OFF
Error
OFF
Sending Event
Empty Pipe
ON and OFF
Zero Flow
ON and OFF
Interval Time
4
Read
Write
Reading successfully