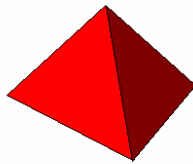


WinAcq USB

USER MANUAL



Absolute Aliens Oy

Revision 1.1

20.03.2011

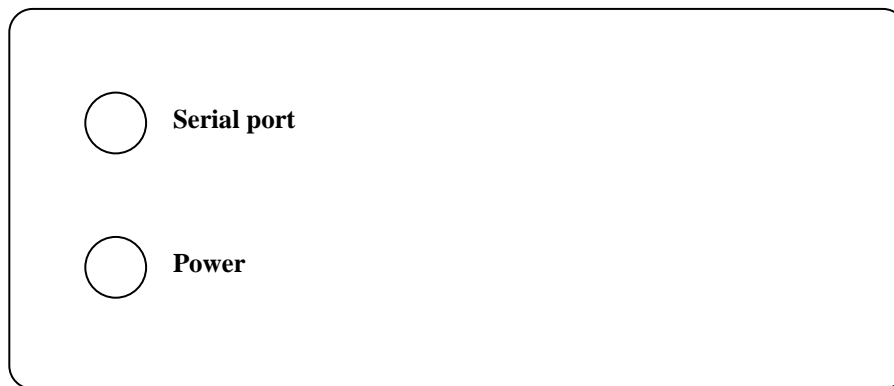
WinAcq User Manual

1. Components and connectors

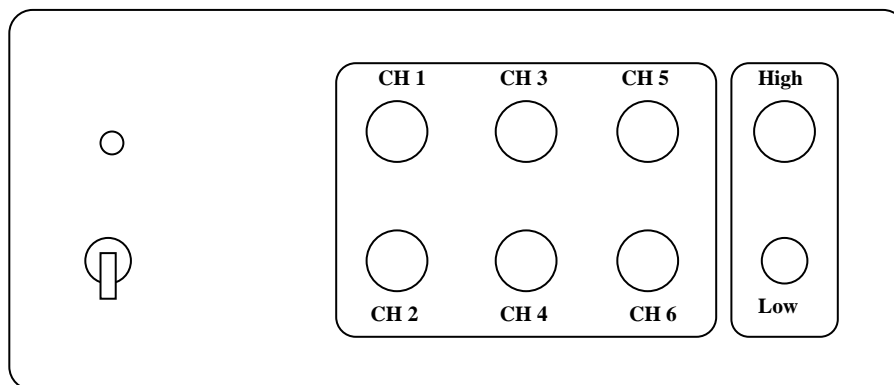
System consists of the following parts:

1. WinAcq data-acquisition device
2. Power supply unit
3. Power cord for the power supply unit
4. Connecting cable for the USB port

In the delivery there can be customized connecting cables for external devices, and mouthpiece and tubing used for Valsalva test and handgrip balloons and tubing used for handgrip test.



Back panel



Front panel

In the back panel of the device there are two connectors: the upper one for the USB port (marked as *Serial port*) and the lower one for the power supply (marked as *Power*). The USB port cable has the round connector of four pins and the power supply cable the round connector of two pins. Before connecting any cables to the device check that you are using the correct cable. In the other end of the USB port cable there is a standard USB connector. **The microcomputer and its accessories (monitor, printer etc.) which are in the patient examination room should be connected to the main line through the approved medical isolation transformer.** WinAcq device has the medical approved power supply unit and therefore it is not needed to use any auxiliary isolation transformer when connecting the device in the main line.

In the front panel of the device there are the power switch, signal lamp, 6 general-purpose analog inputs and 2 pressure inlets.

The general-purpose analog inputs (marked with **CH 1**, ..., **CH 6**) can be used to connect external devices like ECG amplifier, blood pressure monitor, spirometer and other similar measurement devices. We recommend that the connecting cables are provided by the supplier of WinAcq device.

The maximal input voltage of the analog inputs is ± 6 volts and this voltage must not be exceeded even momentarily.



When connecting external devices to WinAcq device using the connecting cables the power must be first switched off both in WinAcq and the external devices. WinAcq device must be always switched on first and after that the external devices. When finishing using devices the power must be switched off first in external devices and after that in WinAcq device.



The user of WinAcq device should be take care that patient equipment or devices of other manufacturers connected to the WinAcq device, like ECG amplifiers, including all electrical parts and components fulfill all currently valid local and international regulations and instructions of patient safety and electrical safety.



The pressure channels are designed for the handgrip test balloons (the upper inlet of 4 mm, marked with **High**) and Valsalva test mouthpiece (the lower inlet of 3 mm, marked with **Low**). If these channels are used for other purposes it should be checked that the maximal pressure of 3 bars is not be exceeded

When the power supply unit is connected to the main line, the green light is seen. It is not necessary to disconnect the power supply when the device is not in use. When the power has been switched on to the WinAcq device by its own power switch, its signal lamp is green. In the measurement mode this lamp is yellow.

2. Installation of USB drivers

Before connecting WinAcq device to the computer the USB drivers must be installed. From WinCPRS installation package you can find the directory *WinAcq-F USB installation*. In this directory there are two subdirectories, one for 32-bit Windows systems and another for 64-bit Windows systems. Choose the correct one according to your Windows system. In the subdirectory there is a program named *DPInst.exe*. Run this program and follow the instructions. After this step connect WinAcq device to the computer. You will get a message that new hardware has been found. Follow the instruction and use the recommended settings. After this WinAcq device is ready for use.

Note: the last step must be done for each USB connector of your computer if you want connect WinAcq to several USB ports of your computer.

Note: the installation package for WinAcq USB drivers can be also found from the www-pages of Absolute Aliens Oy.

3. The use of WinAcq with WinCPRS

The use of WinAcq with WinCPRS has been described in details in the Help pages of WinCPRS, see *Data acquisition USB*. If the signal recording is done manually without any automatic measurement protocol, first select item *Measure* from the main menu, and from the submenu select the item *WinAcq-F USB*. This sets automatically the pressure channels and their parameters. The user should set the total number of the channels used in recording. For each channel, except for pressure channels, the user should select the proper signal type. It is also possible to set scaling of the signal. When all settings have been done, they can be saved for future use by opening the *Options* dialog from the main menu, selecting the *Setup* tabsheet, selecting the desired initialization file from the drop-down list and pressing the *Write* button.

To start signal recording first establish data communication to the WinAcq device by pressing the *Connect* button, then the signal lamp is turned to green color. The signals are monitored when the *Monitor* button is pressed, and then green color of signal lamp is turned to yellow as a sign that data transfer is running. Signals can be saved to memory by pressing the *Save* button. Both monitoring and saving phase can be terminated by pressing the *Stop* button. After data recording the data communication link must be disconnected by pressing the *Disconnect* button.

4. The use of Valsalva mouthpiece

The Valsalva mouthpiece is connected to the **Low** pressure channel of WinAcq device. The mouthpiece has been designed to use with disposable card tubes. Suitable tubes are Vitalograph or compatible whose outer diameter is 30 mm. The plastic mouthpiece can be washed by mild soap solution and disinfected with normal alcohol based disinfectant. The mouthpiece is not allowed to boil or warm up. The tubing can be washed using similar methods. **When the mouthpiece or the tubing has been washed they must be dried thoroughly before they are connected to WinAcq device. Water and moisture can damage the pressure sensor permanently.**



During the Valsalva test it is important that the small drift hole in the mouthpiece is not blocked by the patient.



5. The use of handgrip balloons

The handgrip balloons are connected to the **High** pressure channel of WinAcq device. The handgrip balloons and the tubing can be washed by mild soap solution. **When the balloons or the tubing has been washed they must be dried thoroughly before they are connected to WinAcq device. Water and moisture can damage the pressure sensor permanently.**



Absolute Aliens Oy

**Korjasmäenkatu 15
20360 Turku, Finland**

www.absolutealiens.com
support@absolutealiens.com

