

TurboWin+ installation notes

General

TurboWin+ can be run in the stand-alone mode and in the web (web-invoked) mode. Both modes have the option for serial communication with a (connection-ready) barometer and GPS or an EUCOS AWS (European Meteorological Services Network - Automatic Weather Station) or an OMC-140 AWS. A few of these instruments can also be connected via LAN

- text in black: TurboWin+ default (for stand-alone and web mode)
- text in red: TurboWin+ additional for a connected instrument
- text in green: TurboWin+(TurboWeb) additional web (internet) mode notes

Installing Java and TurboWin+

- Java 7 (JRE 7, 32bit or 64bit) or higher must be installed on the target computer. The java version can e.g. be checked on Windows 7: Start -> type "cmd" in the search box, Enter. Windows 8.1 and 10: right-click on the screen at bottom-left corner (Windows logo) and choose the Command Prompt from the pop-up. (XP: Start -> run -> type "cmd" in the run box, Enter) In the invoked Windows console screen type "java -version". For the latest java downloads see: <http://www.oracle.com/technetwork/java/javase/downloads/index.html>

Tip for PMOs: you can download the latest Java offline version at your office and put it on an USB disk. So onboard you can install the latest Java version without the necessity of an internet connection.

- Note1: On a 32bit Windows system only a 32bit JRE (Java Runtime Environment) can be installed. On a 64bit Windows system a 32bit or 64bit JRE can be installed (64bit recommended)
- Note2: A 64bit JRE will be explicitly mentioned by "java -version"
- Note3: On Windows XP only JRE 7 can be installed

- If available run the installer (setup_turbowin+.exe). If no installer available copy the complete folder turbowin+ to an arbitrary place on the hard disk. TurboWin+ as web(internet) application: TurboWin+ can be deployed with a single click over the network. For the web site address send an email to pmo.office@knmi.nl

- If installed without installer make a shortcut on the desktop to turbowin_jws.jar (located in the folder turbowin+). TurboWin+ as web(internet) application: make a shortcut to the appropriate URL

Installing an instrument

- Installing AWS: If the computer has a serial port the AWS can be connected to the computer via a serial, not twisted, cable. If the computer has no serial port than via an USB <-> RS232 (serial) cable, in this case the driver of the cable manufacturer must be installed also. Once the drivers and USB <-> RS232 cable are installed a virtual com port will be created automatically. If Windows can find and install the device driver automatically, you'll be notified that the device is ready to use. Otherwise, you'll be prompted to insert a disc containing the driver. On most Linux systems it is also not necessary to install an additional USB <-> RS232 (serial) cable driver. The OMC-140 can also be connected with a LAN ethernet cable

- Installing Vaisala PTB220 or PTB330 barometer: can be connected in the same way as an AWS (see above)
- Installing Mintaka Duo or Mintaka Star (optional with StarX) barometer direct via a USB cable: When you connect the Mintaka Duo or Mintaka Star barometer to a computer via a USB cable a serial port is created on the computer. You must, however, install drivers on your computer so the Mintaka Duo or Mintaka Star is properly recognized. If you are running a pc with Win 7 or newer that is connected to the Internet, then usually the Windows OS will recognize that you need drivers when you first connect the Duo or Star to the pc, and it will go online, find them, and install them. If it does not find them, or you are running a Mac, you need to install the drivers manually, by downloading the driver from the web page <http://www.ftdichip.com/Drivers/VCP.htm>. On most Linux systems it is not necessary to install an additional driver
- Installing Mintaka Star (optional with StarX) barometer via WiFi: see the specific manufacturer (<http://mintakainnovations.com/product-manual>) or PMO instructions.
- Installing a GPS (NMEA 0183 compatible): if Windows can find and install the device driver automatically, you'll be notified that the device is ready to use. Otherwise, you'll be prompted to insert a disc containing the driver. On most Linux systems it is not necessary to install an additional driver

Operating

1. After the first time starting of TurboWin+ select "Maintenance -> Station data"
2. After the first time starting of TurboWin+ select "Maintenance -> Obs format settings"
3. If appropriate: "Maintenance -> E-mail settings"
4. If appropriate: After the first time starting of TurboWin+ select "Maintenance -> Serial/USB/LAN connection settings" and if linked via a serial or USB connection set the "instrument connected" and "GPS connected" port. In case of a connected AWS all port settings are set by TurboWin+ automatically. For the appropriate port settings or WiFi settings of a connected barometer check the info menu display of the barometer itself (Vaisala) or read the barometer user's guide (MintakaDuo or Mintaka Star and/or StarX). Restart TurboWin+.

- After sending an obs, it is not necessary to close TurboWin+ (The inserted meteo parameters will be automatically reset). If you exit TurboWin+ then the sensor data are no longer collected and monitored.

- When TurboWin+ was minimized see the TurboWin+ system tray icon (). Right click on icon to maximize or exit TurboWin+ and to select the graph(s) or Dashboard and left click icon to pop-up the sensor data values (note: check the appropriate Microsoft Windows settings if the pop-up messages are suppressed)

Energy saving

- Tip especially for laptops: Set all the energy saving settings to "never" otherwise TurboWin+ will stop with collecting and monitoring of sensor data after the energy saving function has started

Troubleshooting

- If the connected AWS is not recognized by TurboWin+ ("no AWS found") you can try to insert the appropriate port number manually ("Maintenance -> Serial/USB connection settings") and restart TurboWin+. Note 1: the

measured sensor values on the main screen and dashboard are updated every minute but the graphs are updated every 5 minutes. Note 2: for a proper use after a pc restart the port number set to "Automatically" is recommended

- If the connected barometer (or GPS) is not recognized by TurboWin+ ("no barometer found") make sure that the selected port settings are ok and check with the device manager that there is no com port naming conflict (eg "USB Serial Port COM3" and "Prolific USB-to-Serial Com Port COM3"). If still "no barometer found" stop TurboWin+, disconnect the barometer from the power source for a few seconds, plug-unplug the communication cable and wait for a few seconds, start TurboWin+. Note: the air pressure graph is updated every 5 minutes, the Dashboard is updated every minute
- If TurboWin+ has stopped with collecting and displaying of the sensor data after the AWS or barometer <-> PC communication cable was disconnected or due to a power failure, quit TurboWin+, plug-unplug the communication cable and wait for a few seconds, start TurboWin+. Note: the graphs are updated every 5 minutes, the Dashboard is updated every minute
- For troubleshooting you can monitor the Windows output console, start TurboWin+ with `turbowin_plus_offline.cmd` (located in the turbowin+ root folder) or monitor the Java output console, start TurboWin+ with `turbowin_jws_offline.jnlp` (located in the turbowin+ root folder) (note: in the latter case if no Java console is visible turn the Java console on: "Java Control Panel -> Advanced -> show console" and restart TurboWin+). In the web(internet) mode the java console monitoring is automatically present (if no Java console is visible turn the Java console on: "Java Control Panel -> Advanced -> show console" and restart TurboWeb)
- Check the TurboWin+ system log. In TurboWin+ select: Info -> System log. The logs can be also be sent (Info -> send System logs)