New features in PQ-Box 100/200 Software "WinPQ mobil" V2.2.4

2/03/2014

This document details the main changes made in WinPQ mobil release V2.2.4 compared to V2.1.3

Software V2.2.4 should be used with PQ-Box 100 firmware:
- *Boot 1.202*
- *DSP 1.267*
- *MCU 2.007*

To access some new features, the firmware in the PQ-Box 100/200 must also be updated. Refer to Section 6.5 (page 89) of the latest User Manual (04/02/2015) for instructions on how to update firmware.

As a precaution, please back-up user recording & data files on your PC & PQ-Box 100/200 before updating WinPQ mobil, and PQ-Box 100/200 firmware.

Compatibility:
- *This latest version of software is able to open data files downloaded with earlier versions.*
- *After updating the firmware of the PQ-Box 100/200 to above, you should use WinPQ mobil V2.2.4 (or later) to download data from the PQ-Box 100/200. While earlier version of WinPQ mobil may appear to permit downloading of data and uploading of new settings, the **use of earlier versions of WinPQ mobil will not be supported** as these do not use/set the full parameters of the latest PQ-Box firmware.*

New Features:

1) Permanent Recorded Graphs – Stacked view

To improve the ability to scale and identify graphs with multiple values, the Permanent Recorded Graph view has been changed. Data is no longer overlaid onto the same graph area, but rather different measurement units are stacked into separate regions.
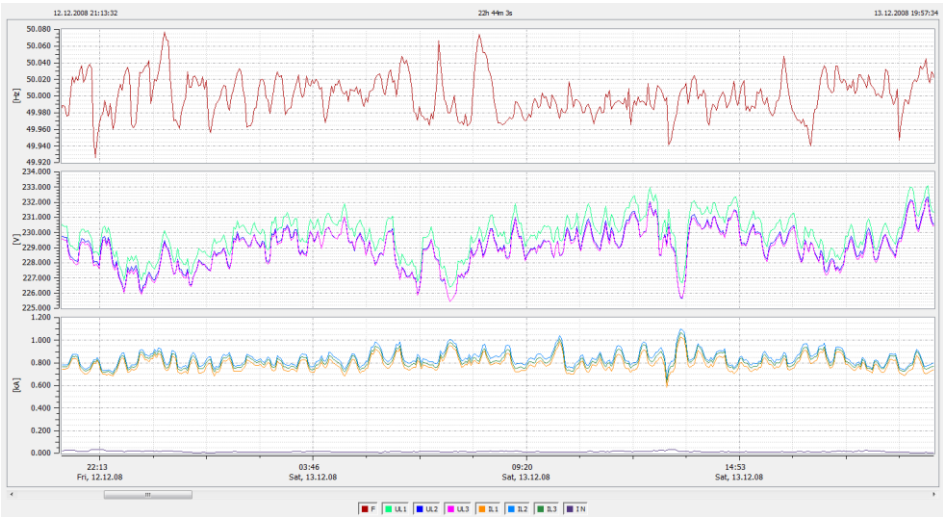
Figure 1. Stacked Traces.

Auto/Manual Scaling of each region can be controlled individually, as well as the placement of Limit Lines.

This change also occurs to the 10ms RMS recorder displays and the Online-Measurement "Timing Chart" display. The Oscilloscope recorder and other graph displays remain unchanged.

2) Window control – Tab display

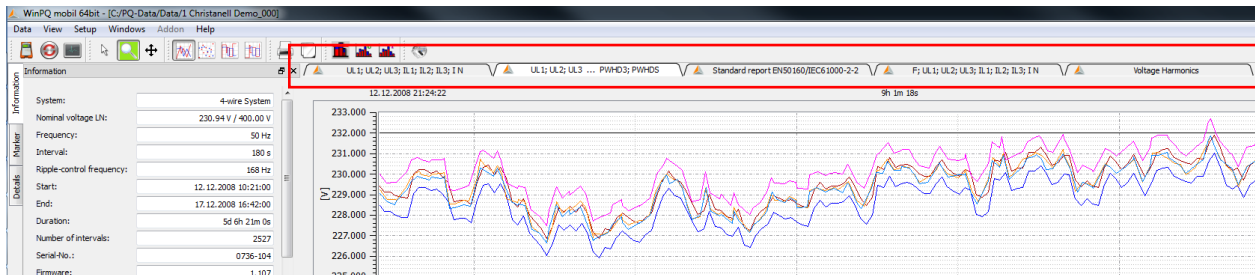A tab has been introduced to show the different windows of information currently open.

Figure 2. Tab display.

Keys 'Ctrl + Tab' can be used to advance through the different windows and 'Ctrl+Shift+Tab' to move back through the different windows. A specific window may be closed by using the menu accessible from a right mouse click to the tab.

3) PQ-Box 100/200 Status

A new online measurement screen is available, which is very useful when connecting to a remote PQ-Box 100/200.
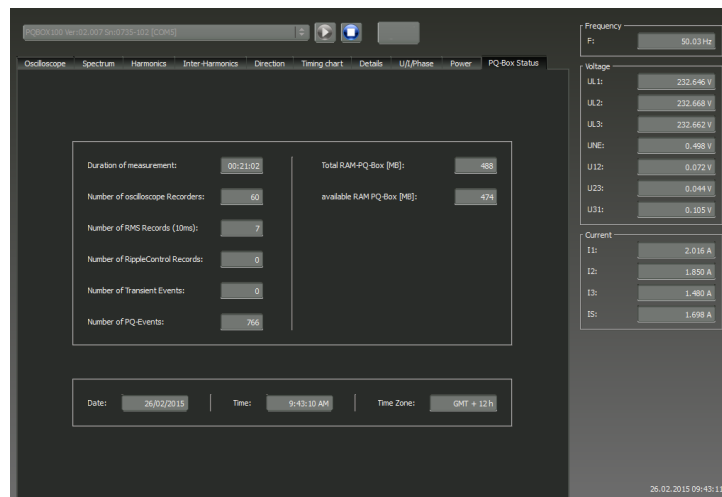

Figure 3. PQ-Box 100/200 Status.

For the PQ-Box 200 a battery capacity indication (percentage remaining) is also provided, which is useful given this PQ-Box's six hour battery capacity.

4) CSV Export

The ability to control the resolution of the data time stamp in CSV Exports is now improved, with millisecond time stamps option being added to minute and second resolution output.

"Flagging" adds a new column to allow the identification/filtering of flagged intervals.

Performance improvements have been made, which will be evident with large data files. Several metrics have been added/extended. The method of Max/Min data structure has not changed.
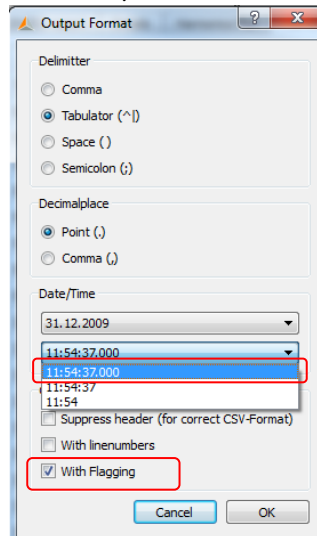

Figure 4. PQ-Box 100 Status.

5) Display of power interruptions

The identification of power interruption is made easier, with these being highlighted by vertical markings. The data point for interruption and return of power are no longer joined by a straight line. Note this improved display will only be visible for measurements made with the new firmware.
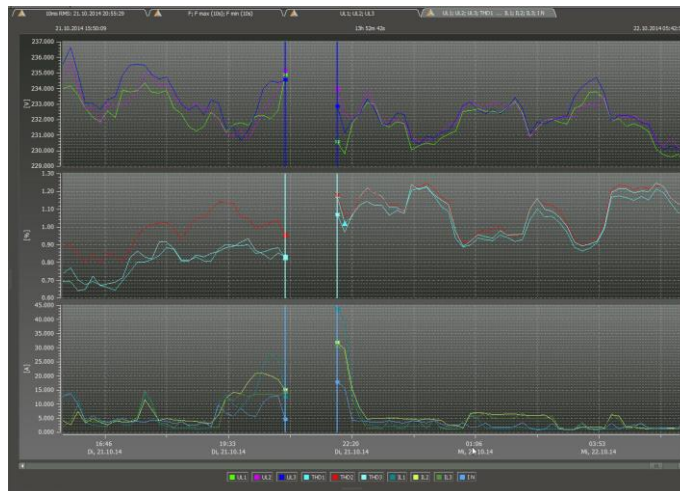

Figure 5. Power interruption.

6) Recorder count display improved

The LCD display showing the number of Recorder/PQ events has been expanded to show not only the number of Records, but also the number currently stored to the SD card.
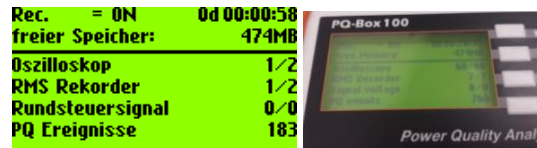

Figure 6. Number of records/Number of records stored to SD card.

Oscilloscope, RMS and Ripple recorder events are initially held in the microprocessor memory, and as a background program, moved to the non-volatile memory (the SD card). In situations such as short term tests where multiple events are triggered, these may not have all copied to the SD card when the PQ-Box 100 recording is stopped. Where it is critical to get any of these 'last minute' events, this screen can be used to hold off stopping measurement recording, till the desired events are copied to SD card. The LCD message 'closing recording' mainly applies to permanent recording data (interval data).

Note that this information is not shown on the Online view Status Screen **Figure 4**.

7) Energy Consumption Display

A new LCD page shows total energy consumption since the start of the recording.

Figure 7. Energy Consumption.

8) Interval trigger

Interval trigger is added to PQ-Box 200 Transient Recorder.