

New features in PQ-Box 100/150/200 Software “WinPQ mobil” V2.3.1

12/11/2015

This document details the main changes made in WinPQ mobil release V2.3.1 compared to V2.2.8.

Software V2.3.1 should be used with PQ-Box 100 firmware:

File	PQ-Box 100	PQ-Box 150	PQ-Box 200
Boot	1.202	0.197	0.197
DSP	1.280	3.020	2.070
MCU	2.010	2.108	2.108
FPGA	N/A	N/A	0.012

To access some new features, the firmware in the PQ-Box must also be updated. Refer to the latest User Manual for instructions on how to update firmware.

As a precaution, please back-up user recording & data files on your PC & PQ-Box before updating WinPQ mobil, and PQ-Box 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 to above, you should only use WinPQ mobil V2.3.1 (or later) to download data from the PQ-Box. 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) RMS recorder time

The maximum recording time of the 10ms RMS recorder can be extended to 600 seconds (was 120 seconds).

This is intended for special applications - do not use this length of recording time for standard monitoring, as file size at 600 seconds is approx. 4 MB per event.

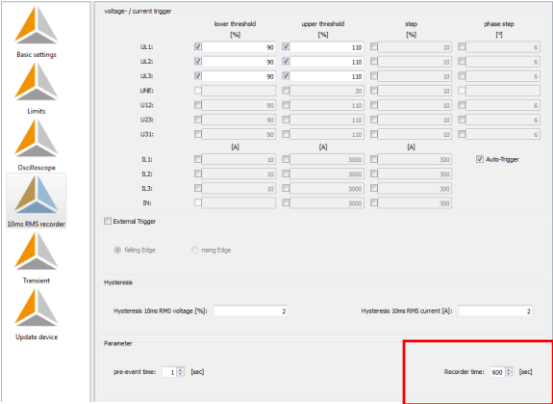


Figure 1. 10 ms RMS recorder time setting.

When using the PQ-Box with very long RMS recorder lengths, keep in mind that the PQ-Box does not indicate the capture of an event in its LCD Recorder count screen, till the end of the event. Therefore if using a 600 second RMS recorder – it will take 10 minutes before the count increments. It will also take some further time (approx 5 minutes) for the record to be copied to permanent memory before the PQ-Box can be shut down (LCD display changing from 0/1 to 1/1 records displayed).

2) Online Harmonic angle and power information – PQ-Box 150 & 200 only

The PQ-Box 150 & 200 have an addition online screen showing:

- Phase angle of the voltage harmonic (relative to voltage fundamental)
- Phase angle of the current harmonic (relative to voltage fundamental)
- Real power for each harmonic
- Reactive power for each harmonic
- Apparent power for each harmonic
- 2-40th harmonics only

	Oscilloscope	Spectrum	Harmonics	Inter-Harmonics	2 - 9 kHz U-Harmonics	2 - 9 kHz I-Harmonics	Harmonic angle & power	Direction	Timing chart	Details	U/I/Phase	Power	Pf																					
Voltage phase angle (UH1) [°]																																		
L1	0	0	0	0	0	0	0	0	0	0	0	0	0																					
L2	0	0	0	0	0	0	0	0	0	0	0	0	0																					
L3	0	0	0	0	0	0	0	0	0	0	0	0	0																					
Current phase angle (UH1) [°]																																		
L1	-48	0	0	0	0	0	0	0	0	0	0	0	0																					
L2	-176	0	0	0	0	0	0	0	0	0	0	0	0																					
L3	0	7	0	0	0	-4	0	0	0	0	0	0	0																					
Harmonic phase angle (UHn / IHn) [°]																																		
L1	48	0	0	0	0	0	0	0	0	0	0	0	0																					
L2	176	0	0	0	0	0	0	0	0	0	0	0	0																					
L3	0	-7	0	0	0	4	0	0	0	0	0	0	0																					
Harmonic real power [W]																																		
L1	0	0	0	0	0	0	0	0	0	0	0	0	0																					
L2	-0	0	0	0	0	0	0	0	0	0	0	0	0																					
L3	0	0	0	0	0	0	0	0	0	0	0	0	0																					
Harmonic reactive power [Var]																																		
L1	0	0	0	0	0	0	0	0	0	0	0	0	0																					
L2	0	0	0	0	0	0	0	0	0	0	0	0	0																					
L3	0	-0	0	0	0	0	0	0	0	0	0	0	0																					
Harmonic apparent power [VA]																																		
L1	0	0	0	0	0	0	0	0	0	0	0	0	0																					
L2	0	0	0	0	0	0	0	0	0	0	0	0	0																					
L3	0	0	0	0	0	0	0	0	0	0	0	0	0																					
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

Figure 2. PQ-Box 150 & 200 Online Display

3) **Memory limit setting - PQ-Box 150 & 200 only**

To assist users with computers with 32 bit operating systems, a new setting is possible. Via the front panel keys a 680 MB memory limit can be set. If enabled, when a recording file reaches 680 MB, the PQ-Box (150/200) closes the recording and another is started. This avoids creating larger files than can be opened by older PCs.

4) **New first time start up wizard**

With a clean install of WinPQ mobil software a wizard will start on the first opening, guiding the setting up of language, default data directory and country specific reports etc. If the software is installed as an update to an existing version- this wizard will not start.