A New Harmonics Option for PQSim200

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Outline

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- What's the PQSim200?
- Using EP1 to monitor harmonics
- Generating Harmonics with a standard board
- Generating Harmonics with an optional board
- Comparison between a standard board and an optional board
- Summary

Purpose of an optional board

- To provide a new available option for users who want to generate a low harmonics.
- To decrease total harmonics distortion(THD) on a new board when harmonics off.

What’s the PQSim200?

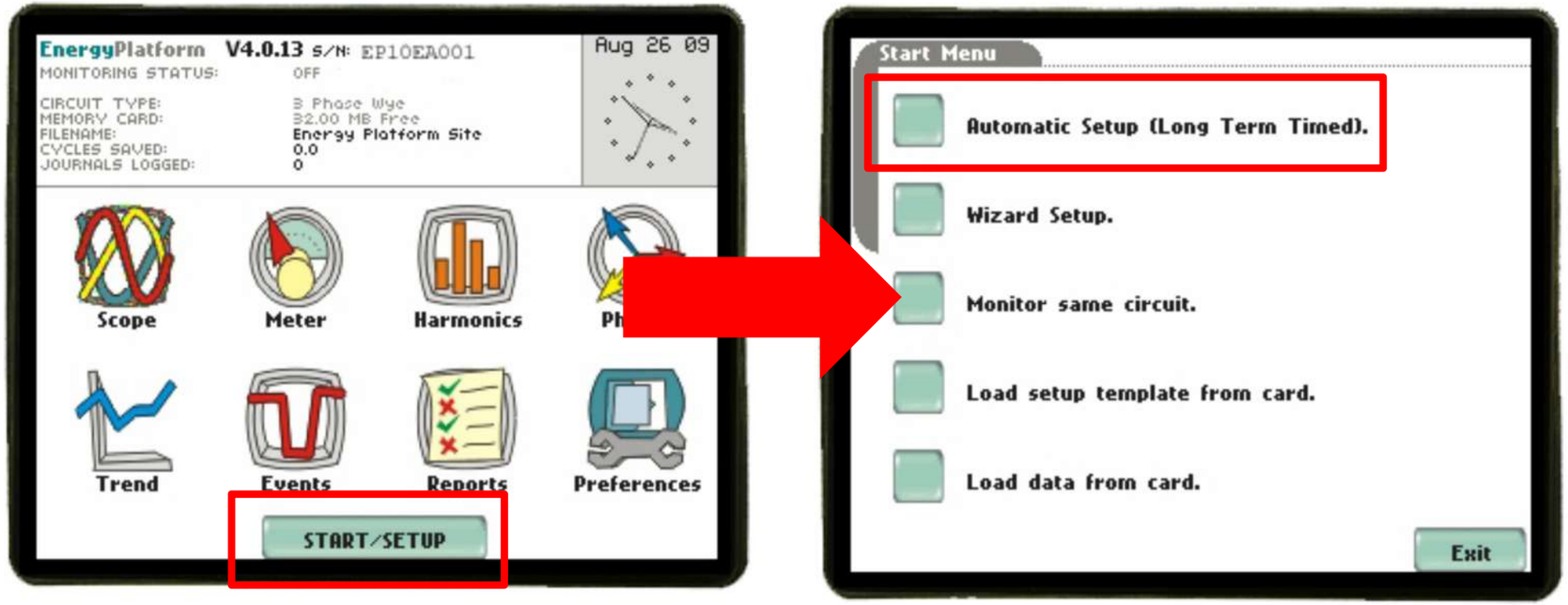
- PQSim™ is an application specific 3 channel AC function generator that produces voltage waveforms of 230Vac 50hz, 1.5vrms representing current waveforms of the most common Power Quality disturbances.

Using EP1 to monitor harmonics

- Firstly, connect PQSim to Power Quality Meter and then configure it for capturing harmonics.

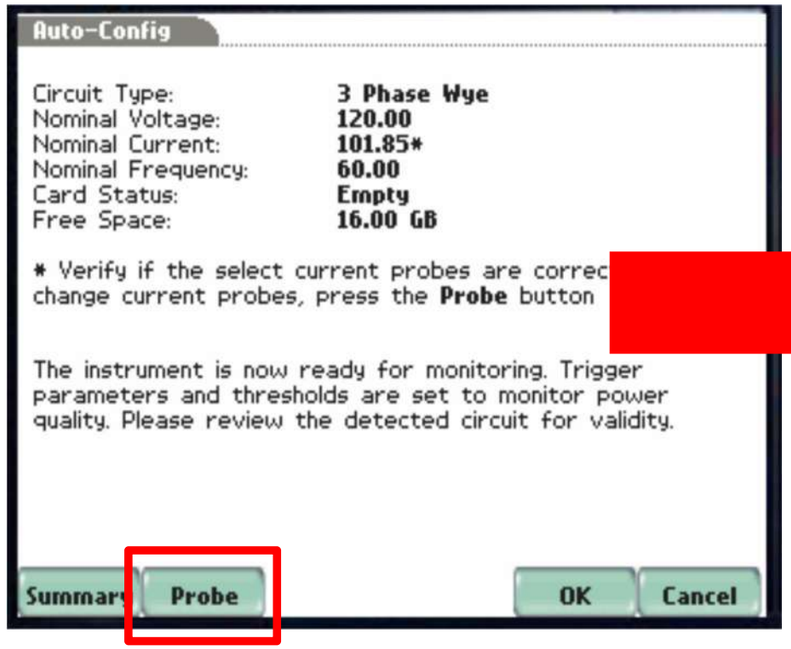
Using EP1 to monitor harmonics

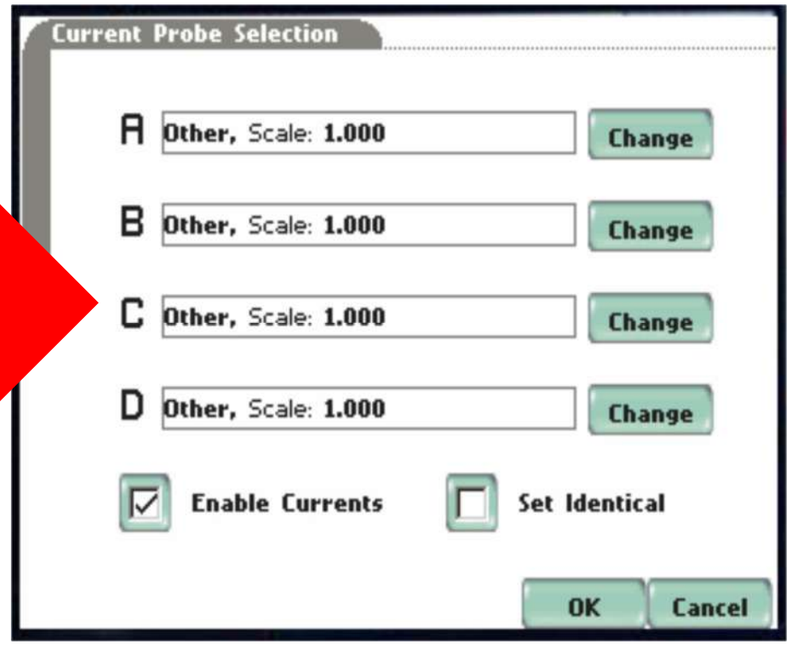
- There are 4 steps setup to capture harmonics on EP1
  1. Select “Start Monitoring” and then select “Automatic Setup”



Using EP1 to monitor harmonics

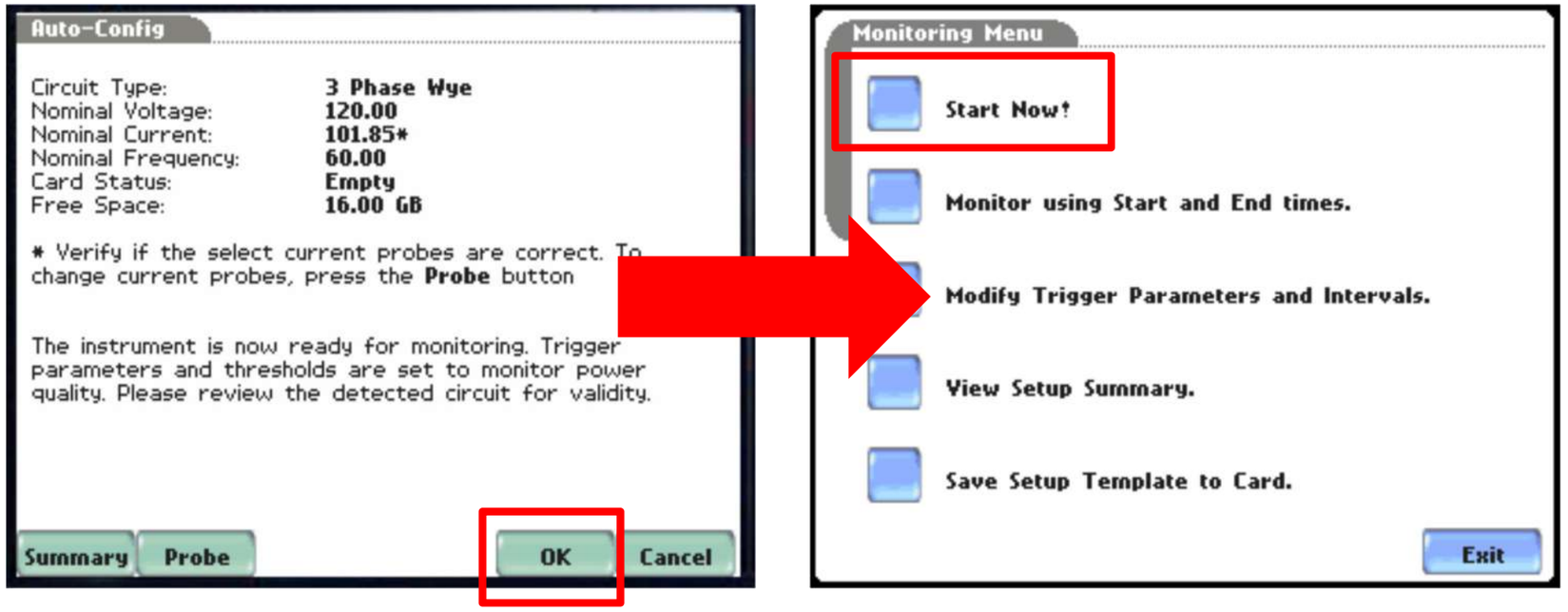
2. Select “Probes” tab and then on Current Probes for channel A. Under Model, select and choose “Other.”





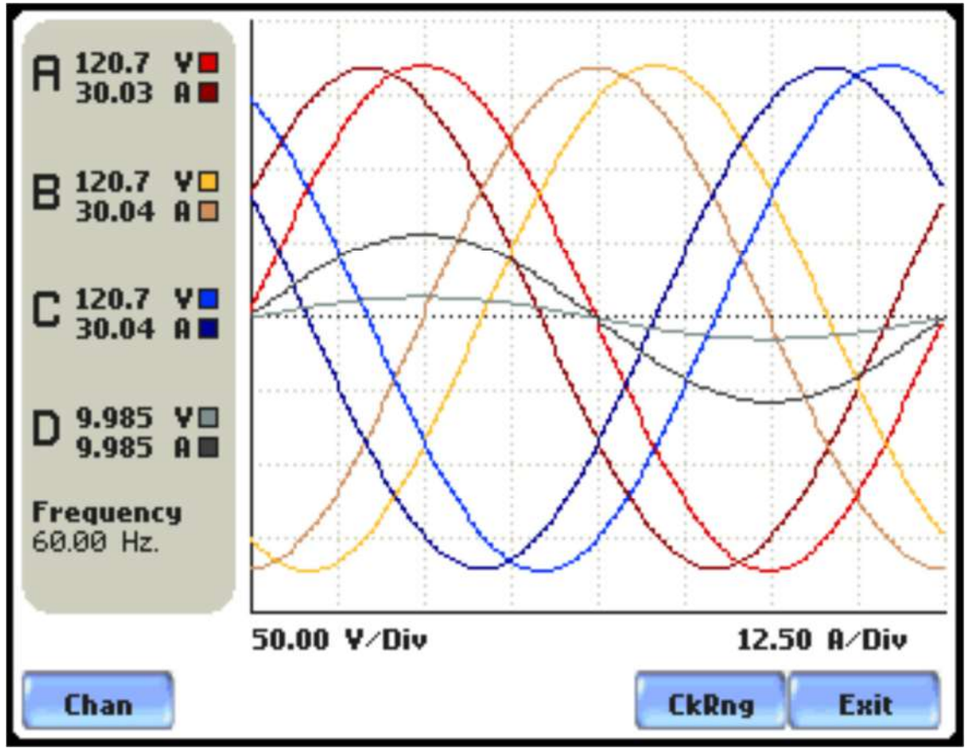
Using EP1 to monitor harmonics

3. Select “Accept” tab to start monitoring.



Using EP1 to monitor harmonics

4. Proceed through “Real Time Data” and then select “Scope mode” to review the occurred events

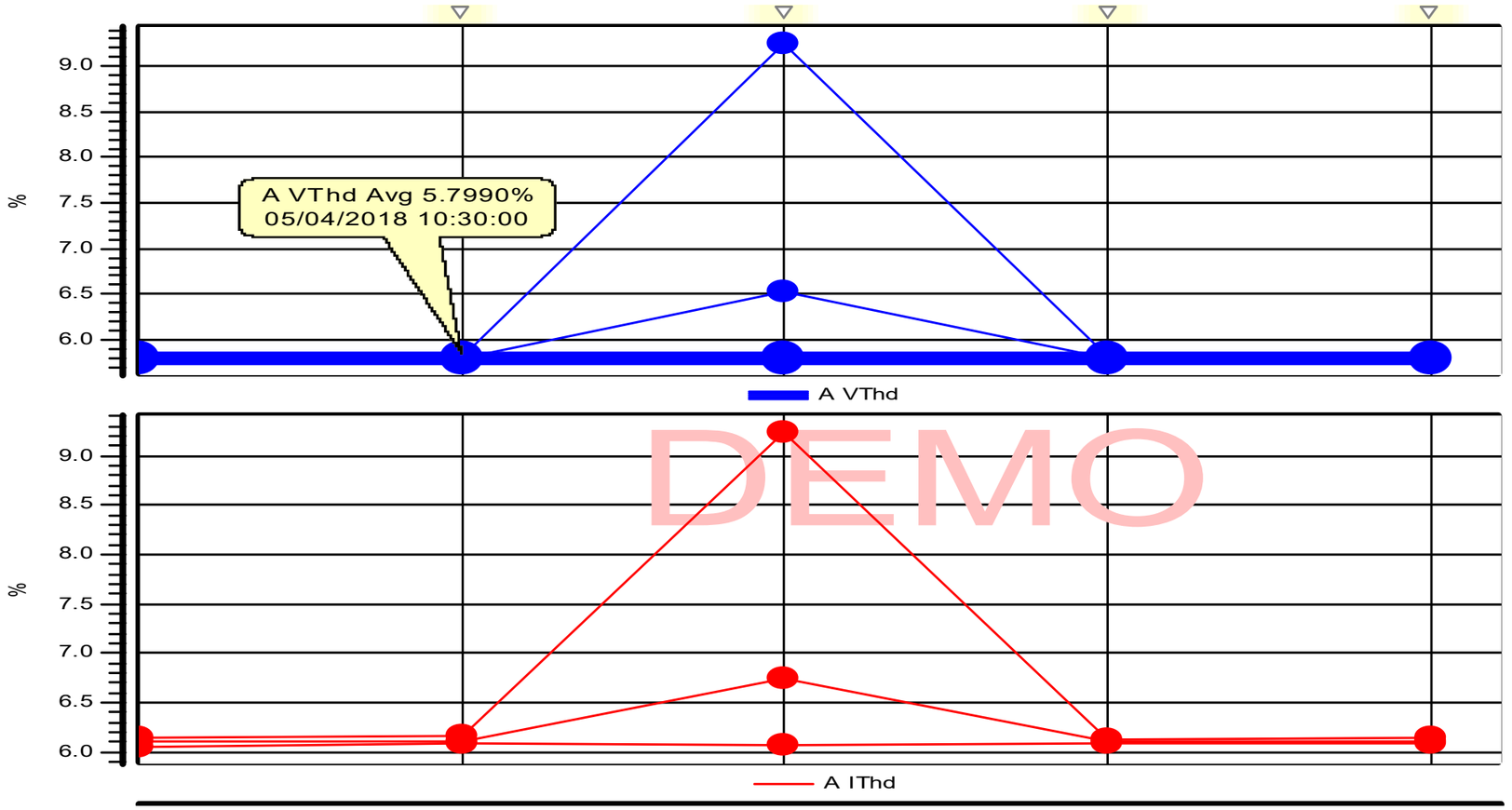


Generating Harmonics with a standard board

- Generate harmonics by pressing “Odd harmonics” button on the PQSim

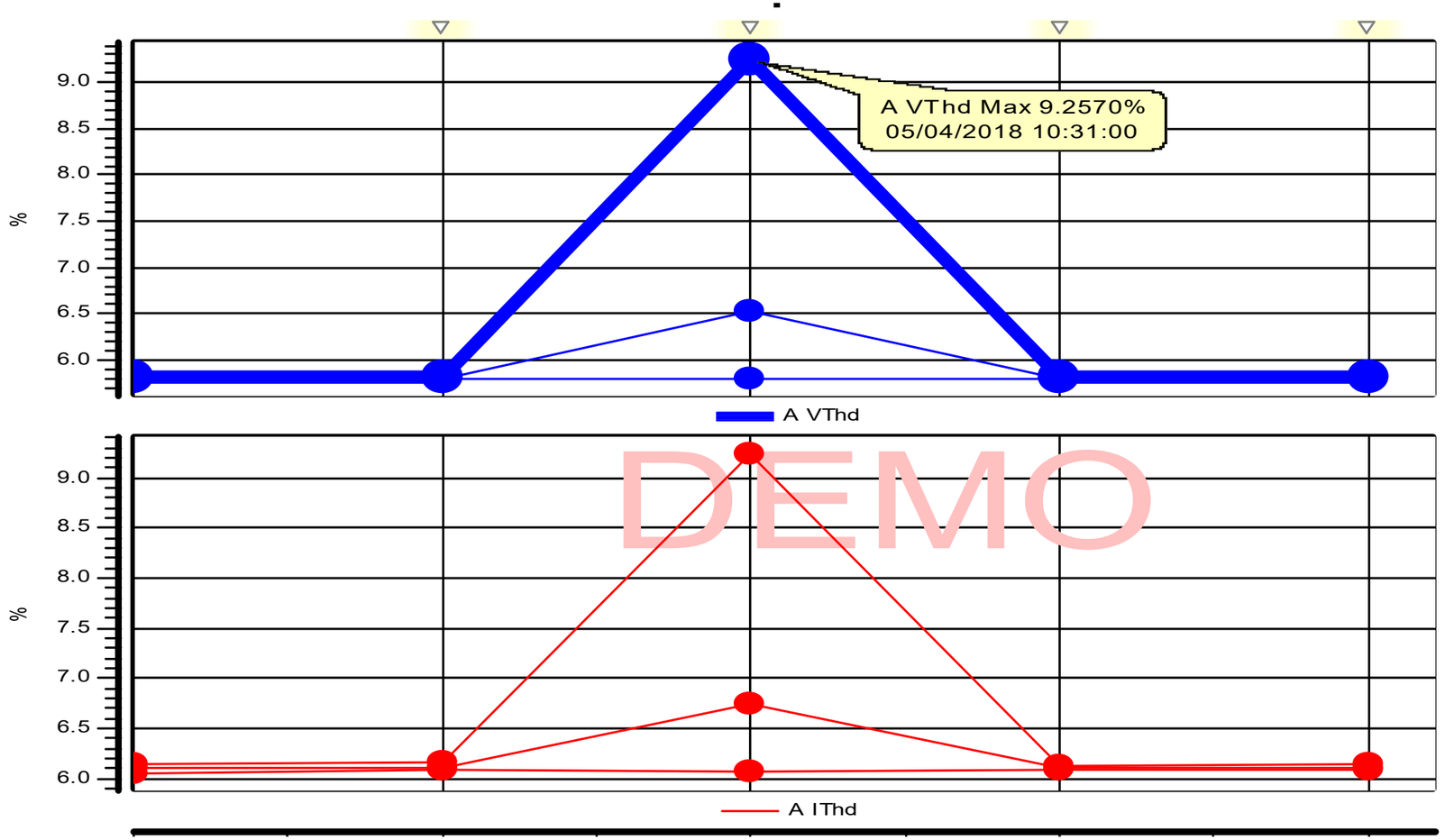
Generating Harmonics with a standard board

- Reviewing harmonics with a standard board is off.



Generating Harmonics with a standard board

- Reviewing harmonics with a standard board is on.



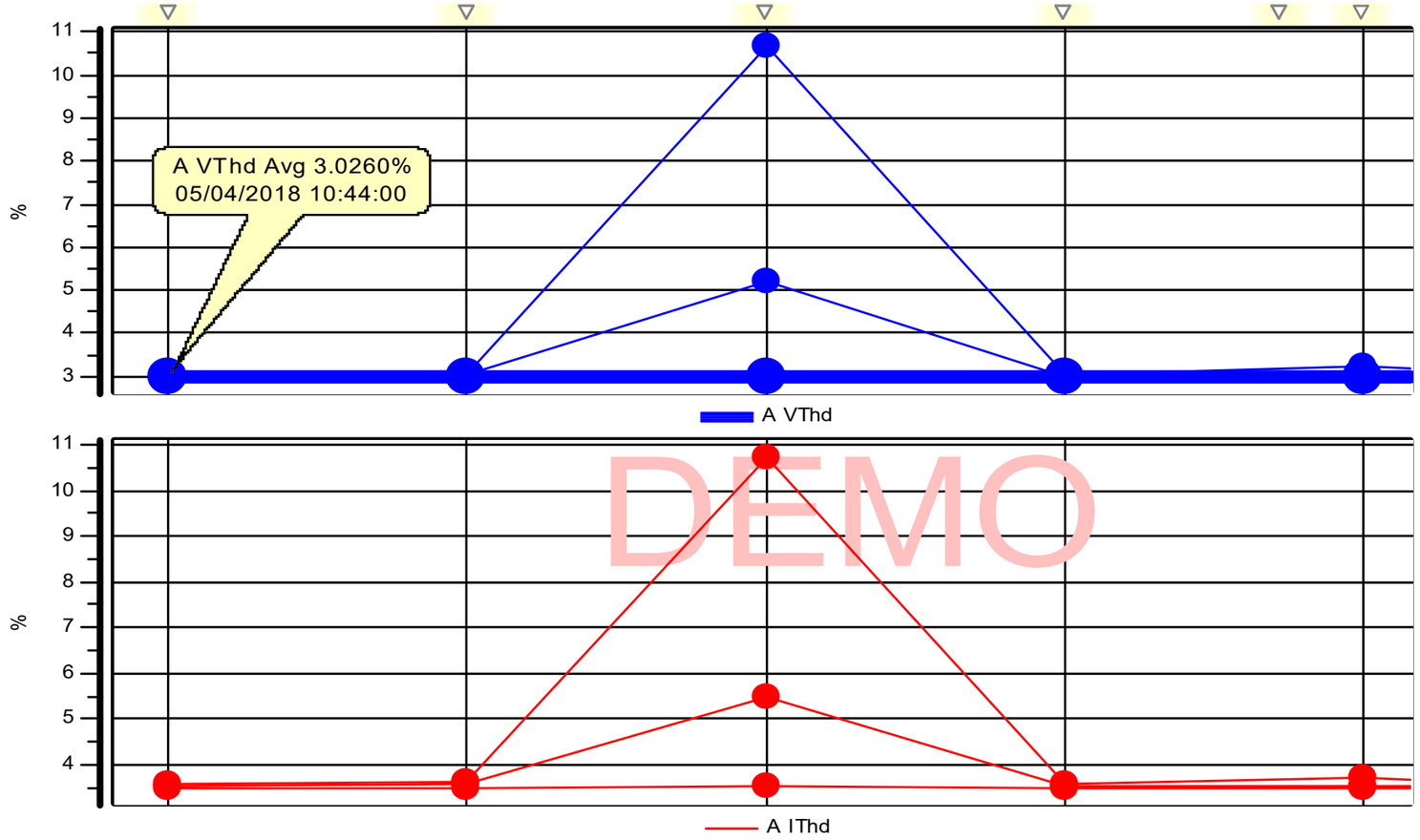
Generating Harmonics with an optional board

- Generate harmonics by pressing “Odd harmonics” button on the PQSim

Optional Board

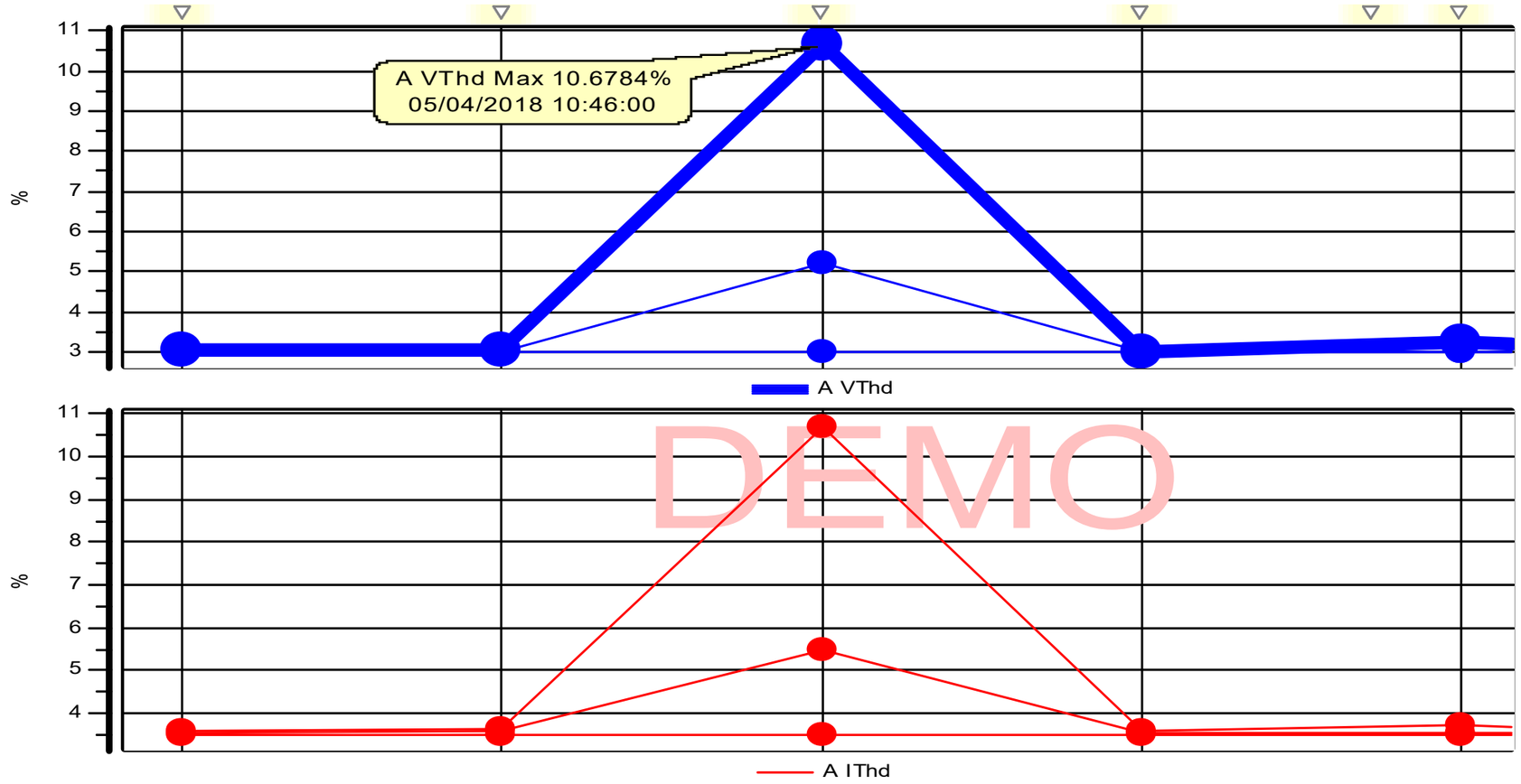
Generating Harmonics with an optional board

- When harmonic is off



Generating Harmonics with an optional board

- When harmonic is on.



Comparison between a standard board and an optional board

	% THD	
	Off	On
Standard board	5.79	9.22
Optional board	3.02	10.67

Summary

- The result of testing an optional board is as expected.
- Total Harmonics Distortion(THD) of an optional board decreased about 3 percents when harmonics off.
- The THD result was around 10 percents when harmonics on.

Any Questions?

The end

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