

# PMC-690

## Hand-Held Power Quality Analyzer

### Quick Start Guide

Version 1.0

20/11/2018



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Figure 1 Front View

### 1.1 Using the Front Panel Buttons

Buttons	Description
<▲>	Pressing <▲> moves up the cursor or increments a numeric value if a parameter is already selected.
<▼>	Pressing <▼> moves down the cursor or decrements a numeric value if a parameter is already selected.
<◀>	Pressing <◀> moves the cursor to the left.
<▶>	Pressing <▶> moves the cursor to the right.
	Pressing  starts the device. When the device is running, long press this button to force a shutdown.
	Pressing  enters to next menu, enters to a value or enter the password.
	Pressing  returns to the previous level, cancels the value or confirm to save the changes.
	Pressing  enters to monitoring page and starts or stops monitoring.
	Pressing  captures present page and saves it to the SD card.

## 1.2 Front Panel Display

The image shows the front panel display of a PMC-690 Portable Power Quality Analyzer. The display is divided into three main sections: Status Bar, Main Screen, and Function Keys.

**Status Bar:** This section at the top of the screen contains several indicators: "Training Meter A", "Inactive[00:00:00]", "SD Card Alarm" (with a "No SD Card" warning), "Date & Time" (2018/11/19 11:19), and "Battery".

**Main Screen:** The central area displays a wiring diagram for a three-phase system (A, B, C) with a neutral (N) and ground (GND) connection. Below the diagram are four voltage meters (U-) and four current meters (I). The "Wiring Mode" is set to "DEMO". To the right, the "Site Name" is "Training Meter A", and the device status is "Inactive". Log counts are shown: "SOE Log: 5" and "Device Log: 1887".

**Function Keys:** The bottom section contains six icons: "Metering", "Harmonics", "Trend", "Record", "Setup", and "Site".

Callouts and descriptions:




- Current Site Name:** Training Meter A
- Recorder Status:** Inactive[00:00:00]
- SD Card Used Space & SD Card Alarm:** No SD Card
- Date & Time:** 2018/11/19 11:19
- Battery:** Battery level indicator
- Function Keys:** Metering, Harmonics, Trend, Record, Setup, Site

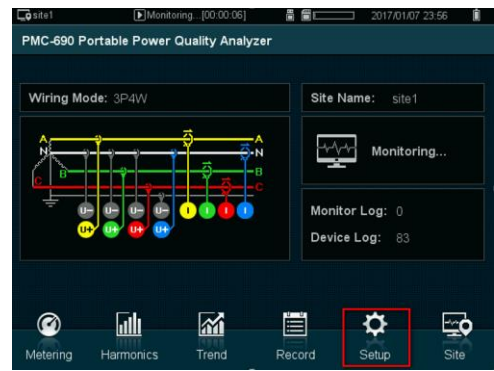
These three icons for real-time monitoring, showing real-time data when the device is in Monitoring Mode or in Demo Mode.

This icon is for viewing recorded data only. Select and load a record from SD card into the device. Only the loaded data can be viewed.

Category	Display	Measurements	
<p><b>Metering</b></p>		<p><b>Real Time</b></p>	<ul style="list-style-type: none"> <li>Fundamental</li> <li>RMS</li> <li>Symm. Comp</li> <li>Power</li> </ul>
		<p><b>PQ Insight</b></p>	<ul style="list-style-type: none"> <li>Real time waveform</li> </ul>
		<p><b>Power Quality</b></p>	<ul style="list-style-type: none"> <li>THD</li> <li>Deviation</li> <li>Flicker</li> <li>Fluctuation</li> </ul>
		<p><b>Energy</b></p>	<ul style="list-style-type: none"> <li>RMS, Fund., TH</li> <li>Harmonic Energy</li> </ul>
		<p><b>Demand</b></p>	<ul style="list-style-type: none"> <li>Real demand</li> <li>Max. demand</li> <li>Last Max. demand</li> </ul>
<p><b>Harmonics</b></p>		<p><b>Spectrum</b></p>	<ul style="list-style-type: none"> <li>U &amp; I, 1<sup>st</sup> to 63<sup>rd</sup> Harmonic Histogram</li> </ul>
		<p><b>Table</b></p>	<ul style="list-style-type: none"> <li>U &amp; I, 1<sup>st</sup> to 63<sup>rd</sup> Harmonic Table</li> </ul>
		<p><b>Power</b></p>	<ul style="list-style-type: none"> <li>Active &amp; Reactive, 1<sup>st</sup> to 63<sup>rd</sup> Harmonic Power</li> </ul>
		<p><b>IH Spectrum</b></p>	<ul style="list-style-type: none"> <li>U &amp; I, 1<sup>st</sup> to 63<sup>rd</sup> Inter-Harmonic Histogram</li> </ul>
		<p><b>IH Table</b></p>	<ul style="list-style-type: none"> <li>U &amp; I, 1<sup>st</sup> to 63<sup>rd</sup> Inter-Harmonic Table</li> </ul>
<p><b>Trend</b></p>		<p><b>Trend</b></p>	<ul style="list-style-type: none"> <li>U &amp; I, Real-time RMS tracking (No time-base, just for rough U &amp; I fluctuation monitoring)</li> </ul>
		<p><b>SD Trend</b></p>	<ul style="list-style-type: none"> <li>Displaying data in the loaded record. (Assign parameters to "Channels")</li> </ul> 
<p><b>Reminder: Load a record from SD card into device. Only the loaded data can be viewed under  function</b></p>			
<p><b>Record</b></p>		<p><b>SOE Log</b></p>	<ul style="list-style-type: none"> <li>Dip, Swell and Interruption Waveforms (WFR)</li> <li>ITIC curve &amp; SEMI curve</li> </ul>
		<p><b>Device Log</b></p>	<ul style="list-style-type: none"> <li>Logs for power on/off, sites management, time and setup changes</li> </ul>
		<p><b>Event Summary</b></p>	<ul style="list-style-type: none"> <li>Event counters for PQ events</li> </ul>
		<p><b>EN50160</b></p>	<ul style="list-style-type: none"> <li>EN50160 summary report (EN50160 standard)</li> </ul>

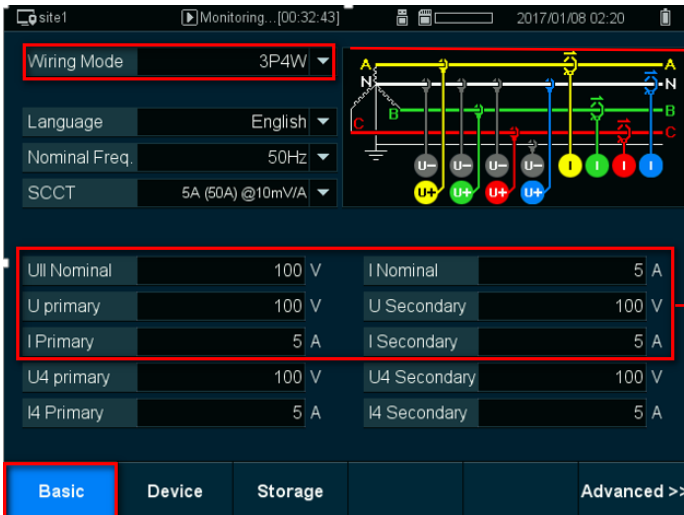
## Chapter 3 Setup Parameters

- Press  to switch to **Setup page**.
- Press , input password to enter Setup mode. (The default password is 000000)
- Press  to save changes after editing.



### 3.1 Critical Settings

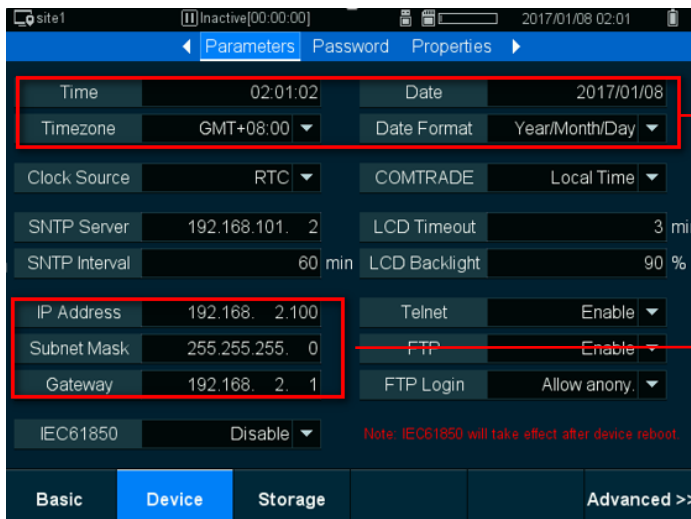
#### Basic Setup Page



**Wiring Mode** – Set the **Wiring Mode** for the circuit under monitoring

**ULL Nominal** – Nominal voltage on Secondary  
**I Nominal** - Nominal current on Secondary  
 (**ULL Nominal, I Nominal** are critical for Dip/Swell and Harmonic evaluation)  
**U Primary, U Secondary** – PT ratio  
**I Primary, I Secondary** – CT ratio

#### Device Setup Page

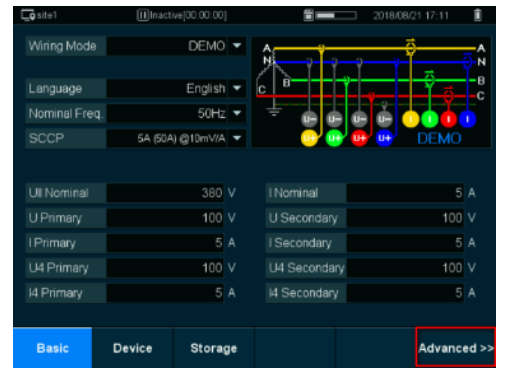


**Time and Date**  
**Time Zone**  
**Date Format**

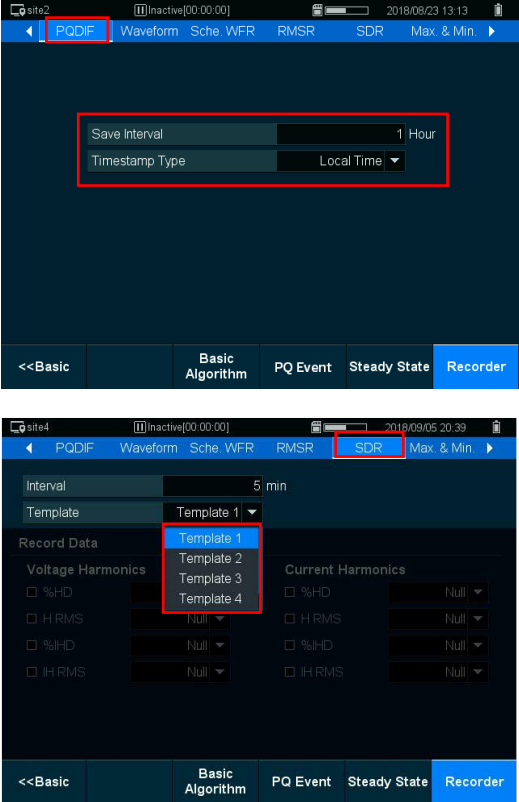
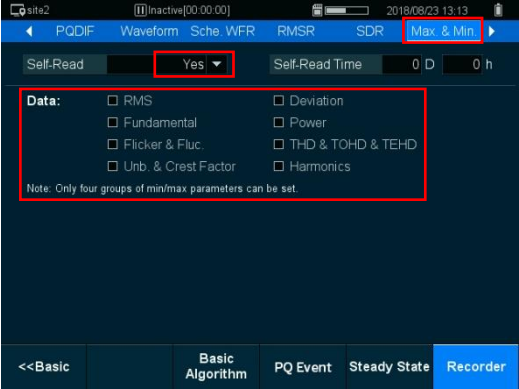
**IP address**  
**Subnet Mask**  
**Gateway**  
 Critical settings for connecting computer through On-Line mode

### 3.2 Advanced Setup

For PQ measurement, PMC-690 provides a comprehensive evaluation feature to measure the performance of a circuit with respect to user’s pre-defined PQ settings. Two PQ reports (PQ Report and EN50160) are available and the evaluation method and limits can be set under **Advanced >>** set up page.



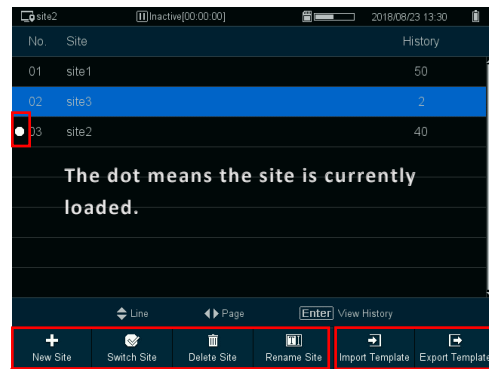
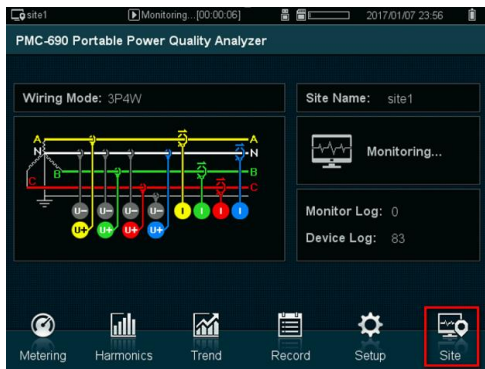
Category	Display	Measurements	
Basic Algorithm	<p><i>Note: Screen shot is showing the recommended settings. Change the settings in according to your requirements.</i></p>	<ul style="list-style-type: none"> <li>Flicker Curve</li> <li>Harmonic, HD, THD Calculation</li> <li>PF Convention</li> <li>KVA Calculation</li> </ul>	
		<ul style="list-style-type: none"> <li>Keep/Remove PQ events from the following statistical evaluation</li> <li>Max. &amp; Min.</li> <li>SDR</li> <li>EN50160</li> </ul>	
PQ Event	<p><i>Note: The highlighted settings are critical for PQ event monitoring.</i></p>	<ul style="list-style-type: none"> <li><b>Enable</b> - “Yes” to turn on this feature</li> <li><b>Trigger</b> – Select the trigger output(s)  <b>WFR</b> – Waveform Recorder (Cycle-by-cycle waveform recording)  <b>DWR</b> - Disturbance Waveform Recording (Long duration waveform recording, Cycle-by-cycle + RMS recording)  <b>RMSR</b> – RMS Recorder (RMS value recording)</li> <li><b>Threshold settings</b> – Set the triggering threshold for Dip, Swell, Interruption</li> </ul>	
		<ul style="list-style-type: none"> <li><b>RVC</b></li> </ul>	<ul style="list-style-type: none"> <li>Settings for Rapid Voltage Changes</li> </ul>
		<ul style="list-style-type: none"> <li><b>Mains Signal</b></li> </ul>	<ul style="list-style-type: none"> <li>Settings for signal superimposed on the supply voltage</li> </ul>
		<ul style="list-style-type: none"> <li><b>Others</b></li> </ul>	<ul style="list-style-type: none"> <li>Transient / RMS Changes / Inrush Current</li> <li>Set “Yes” to turn on the features</li> </ul>

<p><b>Steady State</b></p>		<p><b>EN50160</b></p> <ul style="list-style-type: none"> <li>EN50160 is turned on by default</li> <li>PQ steady state evaluation settings for Frequency, Voltage, Flicker, Voltage Unb. and Voltage Harmonics (Default settings are set for EN50160 evaluation)</li> </ul>
<p><b>Recorder</b></p>		<p><b>Setpoint</b></p> <ul style="list-style-type: none"> <li>24 Setpoints</li> <li>Select the source parameter, triggering threshold and action to be taken</li> </ul> <p><b>HSSP (High Speed Setpoint)</b></p> <ul style="list-style-type: none"> <li>16 HSSPs</li> <li>Select the source parameter, triggering threshold and action to be taken</li> </ul> <p><b>Demand</b></p> <ul style="list-style-type: none"> <li>Set the Demand Period, # of Sliding windows, Self-Read On/Off and Self-Read Time</li> </ul>
		<p><b>PQDIF</b></p> <ul style="list-style-type: none"> <li>A standard PQ data format; Set the reporting interval and timestamp type</li> </ul> <p><b>Waveform</b></p> <p><b>WFR</b></p> <ul style="list-style-type: none"> <li>Set the WFR Format (Samples/Cycle)</li> <li>Pre-fault cycles</li> <li>Burst Recording</li> </ul> <p><b>DWR</b></p> <ul style="list-style-type: none"> <li>Pre-fault cycles</li> </ul> <p><b>Sche. WFR</b></p> <ul style="list-style-type: none"> <li>Set the Start Date and Time for Scheduled waveform recording</li> <li>Recording interval</li> <li>Depth (# of cycle for recording)</li> </ul> <p><b>RMSR (RMS Recorder)</b></p> <ul style="list-style-type: none"> <li>One RMS sample for every 1/2 cycle</li> <li>A maximum of 1000 Samples in one RMSR</li> <li>Set the # of Pre-fault Samples for RMSR</li> </ul> <p><b>SDR (Statistical Data Recorders)</b></p> <ul style="list-style-type: none"> <li>4 default templates (Please refer to Appendix 1)            Template 1 - Basic Measurements,            Template 2 - Basic + HD 1-31 V&amp;I,            Template 3 - Basic + HD 1-63 V only,            Template 4 - Basic + HD 1-63 I only,</li> <li>Or select 2 groups under V Harmonics &amp; I Harmonics</li> </ul> <p><b>Max. &amp; Min.</b></p> <ul style="list-style-type: none"> <li>“Yes” to turn on this feature and determine the Self-Read Time.</li> <li>Allow to select 4 out of 8 groups from the parameters as shown on screen shot</li> <li>If Harmonics is selected, determine the Channel Type and Data Type and Harmonic order</li> </ul>

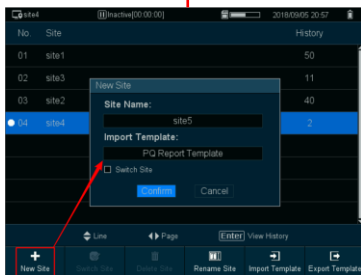
For SDR – A set of parameters is turned on by default to simplify the setup process for performing general measurement tasks. You may pick another SDR parameters according to your measurement needs. Such as both V & I individual harmonics measurement up to 31st order at the same time, V or I individual harmonics measurement up to 63rd order and etc.

## Chapter 4 Site and Data Management

The PMC-690 can manage all created sites and monitor logs in non-volatile memory. To view the measurement record, the user has to load the monitoring log into the device memory, then all the set up parameters and recorded data can be shown accordingly.



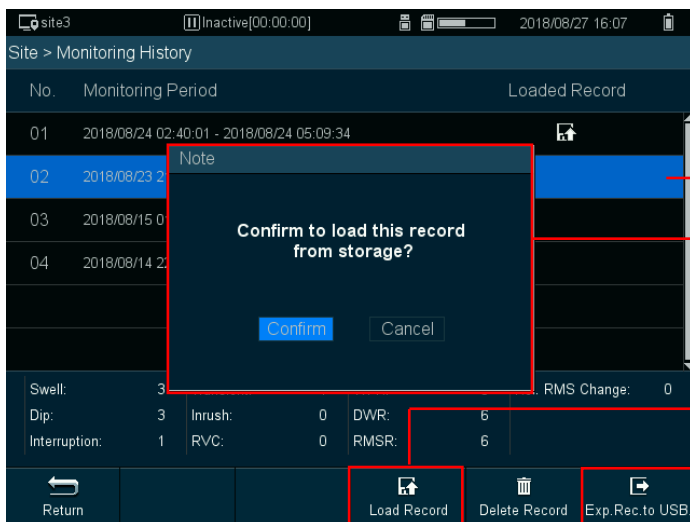
- Press  to Enter Site Management.



- Add a site** – Press <+ New Site> icon → Enter a site name → **Select a Template** → “Confirm”.
- Switch a site** – Select a site → Press <Switch Site> icon → “Confirm”.
- Delete a site** – Select a site → Press <Delete Site> icon → “Confirm”.
- Rename a site** – Select a site → Press <Rename Site> icon → Enter a site name → “Confirm”.

- Import Template** – Import a saved template to setup another similar measurement. The “Default” and “PQ Report Template” are available for selection by default. (User may require to alter the device settings to suit the measurement needs. Please refer to Appendix 2 for the PQ Report Template)
- Export Template** – Save current settings from a selected site to SD card for later use.

- How to load a record?



The site must be selected before loading a record (  site2). Site marked with a white dot).

- Select the site and press “Enter” to view the Monitoring History.
- Select the historical record then press <Load Record> icon. Select ‘Confirm’

- Load Record** - This icon is for loading a historical record into device.

- How to export a PQDIF record through USB?

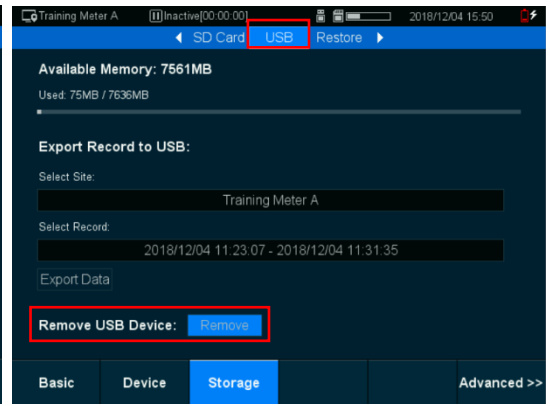
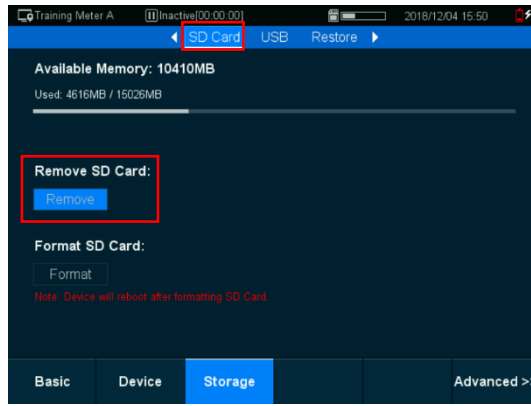
- This selection will only be enabled when USB drive is inserted.
- Exp. Rec. to USB** - This icon is to export the selected record in PQDIF format through the USB port.



How to safely remove SD card and USB from PMC-690

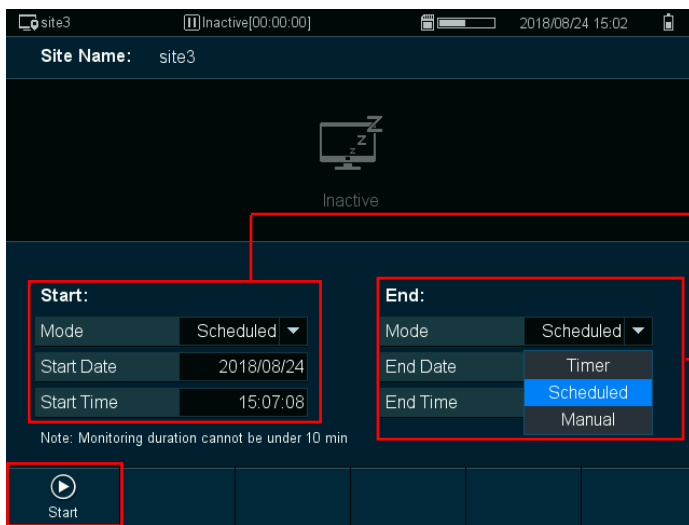
**Under Setup/Storage**

Click **Remove** before physically remove the SD card or USB from device.



**Chapter 5 Start/Stop Recording**

After setting up a monitoring site, the user may start the monitoring function by pressing the **Start/Stop** button on front panel. A setup page will pop-up for setting the Start and End time.



- **Scheduled** - the monitor will start at a specific time.
- **Manual** - the monitor will start after 10s when "Start/Stop" button is pressed.

- **Scheduled** - the monitor will be ended at a specific time.
- **Manual** - the monitor will stop when "Start/Stop" button is pressed.
- **Timer** - the monitor will run for a specific period, then stop.

- The monitor will start recording when the "Start" key is pressed.

Check Before Starting Recorder	
<b>Basic Setup</b>	<input type="checkbox"/> Wiring Mode <input type="checkbox"/> ULL Nominal, I Nominal <input type="checkbox"/> U/I Primary, U/I Secondary
<b>Device Setup</b>	<input type="checkbox"/> Time and Date
<b>Advanced Setup</b>	<b>PQ Event Setup</b> <input type="checkbox"/> Dip, Swell, Interruption <input type="checkbox"/> Transient limits
	<b>Recorder Setup</b> <input type="checkbox"/> Waveform resolution? <input type="checkbox"/> Sche. WFR? <input type="checkbox"/> PQDIF? <input type="checkbox"/> RMSR? <input type="checkbox"/> SDR? <input type="checkbox"/> Max.&Min.?
<b>Site Setup</b>	<input type="checkbox"/> Correct site?
<b>Start/Stop Recording</b>	<input type="checkbox"/> Correct recording time and mode?

## Appendix 1 SDR Template

Group1	Group2	Group3	Group4	Group5
Freq.	Qa Fund.	Uab Fund.	Reserved	Reserved
Ua	Qb Fund.	Ubc Fund.	Reserved	Reserved
Ub	Qc Fund.	Uca Fund.	Reserved	Reserved
Uc	Q Total Fund.	Ua/ab TIHD	Reserved	Reserved
U4	Sa Fund.	Ub/bc TIHD	Reserved	Reserved
UIn Avg.	Sb Fund.	Uc/ca TIHD	Reserved	Reserved
Uab	Sc Fund.	U4 TIHD	Reserved	Reserved
Ubc	S Total Fund.	Ia TIHD	Reserved	Reserved
Uca	dPFa	Ib TIHD	Reserved	Reserved
UIn Avg.	dPFb	Ic TIHD	Reserved	Reserved
Ia	dPFc	I4 TIHD	Reserved	Reserved
Ib	dPF	Ua/ab TOIHD	Reserved	Reserved
Ic	Pa TH	Ub/bc TOIHD	Reserved	Reserved
I4	Pb TH	Uc/ca TOIHD	Reserved	Reserved
I Avg.	Pc TH	U4 TOIHD	Reserved	Reserved
kWa	P Total TH	Ia TOIHD	Reserved	Reserved
kWb	Qa TH	Ib TOIHD	Reserved	Reserved
kWc	Qb TH	Ic TOIHD	Reserved	Reserved
kW Total	Qc TH	I4 TOIHD	Reserved	Reserved
kvara	Q Total TH	Ua/ab TEIHD	Reserved	Reserved
kvarb	Sa TH	Ub/bc TEIHD	Reserved	Reserved
kvarc	Sb TH	Uc/ca TEIHD	Reserved	Reserved
kvar Total	Sc TH	U4 TEIHD	Reserved	Reserved
kVAa	S Total TH	Ia TEIHD	Reserved	Reserved
kVAb	PFa TH	Ib TEIHD	Reserved	Reserved
kVAc	PFb TH	Ic TEIHD	Reserved	Reserved
kVA Total	PFc TH	I4 TEIHD	Reserved	Reserved
PFa	PF Total TH	Ia THD DMD	Reserved	Reserved
PFb	Ua Dev.	Ib THD DMD	Reserved	Reserved
PFc	Ub Dev.	Ic THD DMD	Reserved	Reserved
PF Total	Uc Dev.	I4 THD DMD	Reserved	Reserved
Ua Fund.	Uab Dev.	P Total Imp. DMD	Reserved	Reserved
Ub Fund.	Ubc Dev.	P Total Imp. Max. DMD	Reserved	Reserved
Uc Fund.	Uca Dev.	Ua Pst	Reserved	Reserved
U4 Fund.	Ua Over Dev.	Ub Pst	Reserved	Reserved
Ia TH RMS	Ub Over Dev.	Uc Pst	Reserved	Reserved
Ib TH RMS	Uc Over Dev.	Ua Plt	Reserved	Reserved
Ic TH RMS	Uab Over Dev.	Ub Plt	Reserved	Reserved
I4 TH RMS	Ubc Over Dev.	Uc Plt	Reserved	Reserved
Ua THD	Uca Over Dev.	Reserved	Reserved	Reserved
Ub THD	Ua Under Dev.	Reserved	Reserved	Reserved
Uc THD	Ub Under Dev.	Reserved	Reserved	Reserved
U4 THD	Uc Under Dev.	Reserved	Reserved	Reserved
Ia THD	Uab Under Dev.	Reserved	Reserved	Reserved
Ib THD	Ubc Under Dev.	Reserved	Reserved	Reserved
Ic THD	Uca Under Dev.	Reserved	Reserved	Reserved
I4 THD	Freq. Dev.	Reserved	Reserved	Reserved
Ua Fluctuation	Ua TOHD	Reserved	Reserved	Reserved
Ub Fluctuation	Ub TOHD	Reserved	Reserved	Reserved
Uc Fluctuation	Uc TOHD	Reserved	Reserved	Reserved
U0 Unb.	U4 TOHD	Reserved	Reserved	Reserved
U2 Unb.	Ia TOHD	Reserved	Reserved	Reserved
I0 Unb.	Ib TOHD	Reserved	Reserved	Reserved
I2 Unb.	Ic TOHD	Reserved	Reserved	Reserved
U0	I4 TOHD	Reserved	Reserved	Reserved
U2	Ua TEHD	Reserved	Reserved	Reserved
U1	Ub TEHD	Reserved	Reserved	Reserved
I0	Uc TEHD	Reserved	Reserved	Reserved
I2	U4 TEHD	Reserved	Reserved	Reserved
I1	Ia TEHD	Reserved	Reserved	Reserved
Pa Fund.	Ib TEHD	Reserved	Reserved	Reserved
Pb Fund.	Ic TEHD	Reserved	Reserved	Reserved
Pc Fund.	I4 TEHD	Reserved	Reserved	Reserved
P Total Fund.	Reserved	Reserved	Reserved	Reserved

**Template 1:** The above SDR assignment is for Template 1

**Template 2:** Group 2 & 3 are replaced with Voltage H00-31 (Ua/Ub/Uc/U4) Harmonic Distortion and Group 4 & 5 are replaced with Current H00-31 (Ia/Ib/Ic/I4) Harmonic Distortion

**Template 3:** Group 2 to 5 are replaced with Voltage H00-63 (Ua/Ub/Uc/U4) Harmonic Distortion

**Template 4:** Group 2 to 5 are replaced with Current H00-63 (Ia/Ib/Ic/I4) Harmonic Distortion

## Appendix 2 PQ Report Template

Group1	Group2	Group3	Group4	Group5
Freq.	Ua HD01	Ub HD01	Uc HD01	U4 HD01
Ua	Ua HD02	Ub HD02	Uc HD02	U4 HD02
Ub	Ua HD03	Ub HD03	Uc HD03	U4 HD03
Uc	Ua HD04	Ub HD04	Uc HD04	U4 HD04
U4	Ua HD05	Ub HD05	Uc HD05	U4 HD05
UIn Avg.	Ua HD06	Ub HD06	Uc HD06	U4 HD06
Uab	Ua HD07	Ub HD07	Uc HD07	U4 HD07
Ubc	Ua HD08	Ub HD08	Uc HD08	U4 HD08
Uca	Ua HD09	Ub HD09	Uc HD09	U4 HD09
UIn Avg.	Ua HD10	Ub HD10	Uc HD10	U4 HD10
Ia	Ua HD11	Ub HD11	Uc HD11	U4 HD11
Ib	Ua HD12	Ub HD12	Uc HD12	U4 HD12
Ic	Ua HD13	Ub HD13	Uc HD13	U4 HD13
I4	Ua HD14	Ub HD14	Uc HD14	U4 HD14
I Avg.	Ua HD15	Ub HD15	Uc HD15	U4 HD15
kWa	Ua HD16	Ub HD16	Uc HD16	U4 HD16
kWb	Ua HD17	Ub HD17	Uc HD17	U4 HD17
kWc	Ua HD18	Ub HD18	Uc HD18	U4 HD18
kW Total	Ua HD19	Ub HD19	Uc HD19	U4 HD19
kvara	Ua HD20	Ub HD20	Uc HD20	U4 HD20
kvarb	Ua HD21	Ub HD21	Uc HD21	U4 HD21
kvarc	Ua HD22	Ub HD22	Uc HD22	U4 HD22
kvar Total	Ua HD23	Ub HD23	Uc HD23	U4 HD23
kVAa	Ua HD24	Ub HD24	Uc HD24	U4 HD24
kVAb	Ua HD25	Ub HD25	Uc HD25	U4 HD25
kVAc	Ua HD26	Ub HD26	Uc HD26	U4 HD26
kVA Total	Ua HD27	Ub HD27	Uc HD27	U4 HD27
PFa	Ua HD28	Ub HD28	Uc HD28	U4 HD28
PFb	Ua HD29	Ub HD29	Uc HD29	U4 HD29
PFc	Ua HD30	Ub HD30	Uc HD30	U4 HD30
PF Total	Ua HD31	Ub HD31	Uc HD31	U4 HD31
Ua Fund.	Ua Pst	Ub Pst	Uc Pst	Reserved
Ub Fund.	Ia Fund.	Ib Fund.	Ic Fund.	I4 Fund.
Uc Fund.	Ia H02 RMS	Ib H02 RMS	Ic H02 RMS	I4 H02 RMS
U4 Fund.	Ia H03 RMS	Ib H03 RMS	Ic H03 RMS	I4 H03 RMS
Ia TH RMS	Ia H04 RMS	Ib H04 RMS	Ic H04 RMS	I4 H04 RMS
Ib TH RMS	Ia H05 RMS	Ib H05 RMS	Ic H05 RMS	I4 H05 RMS
Ic TH RMS	Ia H06 RMS	Ib H06 RMS	Ic H06 RMS	I4 H06 RMS
I4 TH RMS	Ia H07 RMS	Ib H07 RMS	Ic H07 RMS	I4 H07 RMS
Ua THD	Ia H08 RMS	Ib H08 RMS	Ic H08 RMS	I4 H08 RMS
Ub THD	Ia H09 RMS	Ib H09 RMS	Ic H09 RMS	I4 H09 RMS
Uc THD	Ia H10 RMS	Ib H10 RMS	Ic H10 RMS	I4 H10 RMS
U4 THD	Ia H11 RMS	Ib H11 RMS	Ic H11 RMS	I4 H11 RMS
Ia THD	Ia H12 RMS	Ib H12 RMS	Ic H12 RMS	I4 H12 RMS
Ib THD	Ia H13 RMS	Ib H13 RMS	Ic H13 RMS	I4 H13 RMS
Ic THD	Ia H14 RMS	Ib H14 RMS	Ic H14 RMS	I4 H14 RMS
I4 THD	Ia H15 RMS	Ib H15 RMS	Ic H15 RMS	I4 H15 RMS
Ua Fluctuation	Ia H16 RMS	Ib H16 RMS	Ic H16 RMS	I4 H16 RMS
Ub Fluctuation	Ia H17 RMS	Ib H17 RMS	Ic H17 RMS	I4 H17 RMS
Uc Fluctuation	Ia H18 RMS	Ib H18 RMS	Ic H18 RMS	I4 H18 RMS
U0 Unb.	Ia H19 RMS	Ib H19 RMS	Ic H19 RMS	I4 H19 RMS
U2 Unb.	Ia H20 RMS	Ib H20 RMS	Ic H20 RMS	I4 H20 RMS
I0 Unb.	Ia H21 RMS	Ib H21 RMS	Ic H21 RMS	I4 H21 RMS
I2 Unb.	Ia H22 RMS	Ib H22 RMS	Ic H22 RMS	I4 H22 RMS
U0	Ia H23 RMS	Ib H23 RMS	Ic H23 RMS	I4 H23 RMS
U2	Ia H24 RMS	Ib H24 RMS	Ic H24 RMS	I4 H24 RMS
U1	Ia H25 RMS	Ib H25 RMS	Ic H25 RMS	I4 H25 RMS
I0	Ia H26 RMS	Ib H26 RMS	Ic H26 RMS	I4 H26 RMS
I2	Ia H27 RMS	Ib H27 RMS	Ic H27 RMS	I4 H27 RMS
I1	Ia H28 RMS	Ib H28 RMS	Ic H28 RMS	I4 H28 RMS
Pa Fund.	Ia H29 RMS	Ib H29 RMS	Ic H29 RMS	I4 H29 RMS
Pb Fund.	Ia H30 RMS	Ib H30 RMS	Ic H30 RMS	I4 H30 RMS
Pc Fund.	Ia H31 RMS	Ib H31 RMS	Ic H31 RMS	I4 H31 RMS
P Total Fund.	Ua Plt	Ub Plt	Uc Plt	Reserved

This template contains all parameters for generating PQ Report and EN Report