

Three-Phase Power Quality Analyzer PowerPad[®] Model 3945-B

- General Layout & Functionality
- Setup
- Operational Examples



General Layout & Functionality

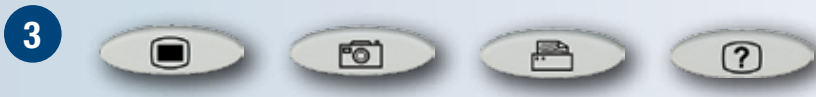




The PowerPad® **Model 3945-B** has been designed with ease of use and maximum functionality in mind. Looking at the top of the unit from left to right, the unit has **three color-coded current inputs** (A Phase, B Phase, and C Phase) and **four color-coded voltage inputs** (A Phase, B Phase, C Phase, and Neutral). One thing to note is that the Current Probes are intelligent. **The unit auto-detects and auto-configures itself according to which probes are connected to it.**



Just to the right of the display on the right-hand-side is an **optically isolated RS-232 port**. This allows the user to simultaneously connect to a power panel and the computer without the danger due to an accidental fault. Just below the RS-232 port is a **power port**. This supplies power to the unit and charges the internal NiMH battery pack. The battery pack has a 8-hour continuous operational capacity and a 35-hour record mode capacity can be charged at any level of discharge. Power to this port can be 120/240V, 50/60Hz. The **Model 3945-B** can be used while charging.



There are **four operational menu buttons** (light gray buttons) located on the lower left front panel. From top-to-bottom they are **SETUP, SNAPSHOT, PRINT, and HELP**



The blue buttons on the bottom right are the **MAIN MODE function buttons**. From left-to-right and then top-to-bottom they are: **TRANSIENT MODE, HARMONIC MODE, WAVEFORM MODE, ALARM MODE, RECORDING MODE, and POWER/ENERGY MODE.**



There are **six sub-menu buttons** just below the screen. These allow the user to choose the sub-menus available in a particular menu mode. The function for each of these buttons change according to the display function or mode in use. The sub-menus available in the waveform mode for example are




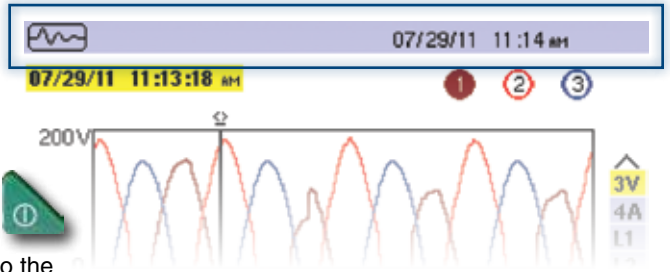
The **arrow keys** allow the user to move within the menus as seen on the **side-bar menu** on the right-side of the display



The **enter button** allows the user to choose and enter changes to the setting within the menus.

Setup


- Once the unit is turned **ON**, by pressing the green button  in the bottom-left-hand corner, the unit powers up and defaults to the **Transient Mode** showing the waveform icon and frequency.




This function is the top-right of the six blue main mode function buttons.



Date, **time** and **battery** capacity are displayed in the top-right-corner of the screen

- The user can depress the **SETUP** button , the top button on the left side, to configure the instrument. There are 11 options in the setup. One option to note is the Electrical Hookup.

Use the **down arrow** key  to scroll down to the desired function and press the **ENTER** key .

You should see a screen similar to **Figure 1**. **Figure 2** shows the example of the screen seen while configuring the instrument using the DataView® software.

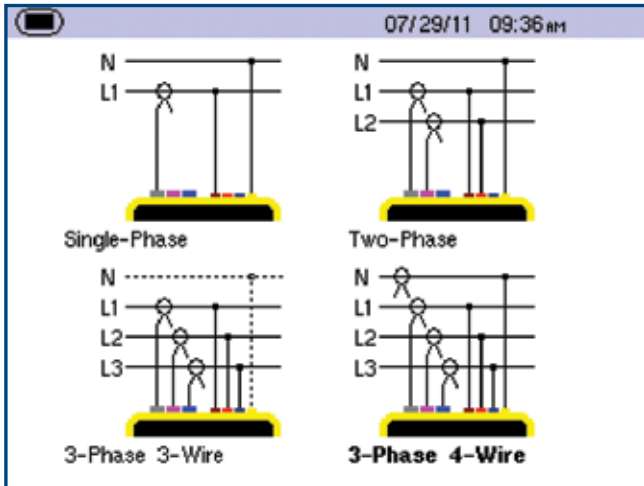


Figure 1. PowerPad® Model 3945-B setup screen

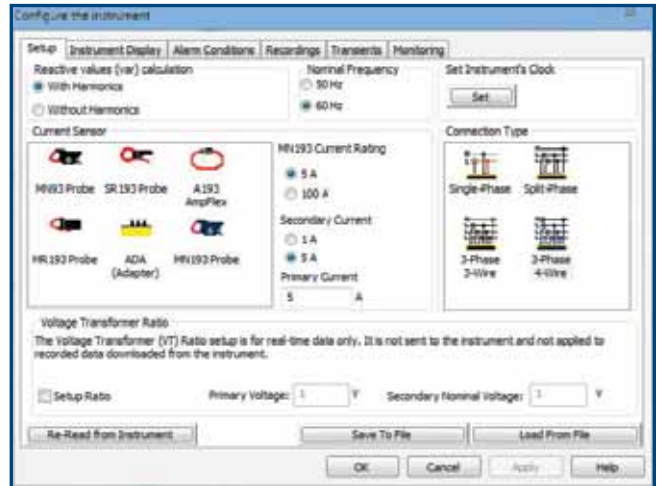




Figure 2. DataView® setup screen

To change the setup using the panel, simply scroll through the options using the **arrow** keys  and pressing the **ENTER** key  when the desired function is highlighted.



Operational Examples

Assuming that the unit was connected using a 4-wire WYE setup to a three-phase circuit, scrolling through the

OPERATIONAL menu buttons (from left to right) would result in the following screens examples.

Note: Alarms example is not shown.

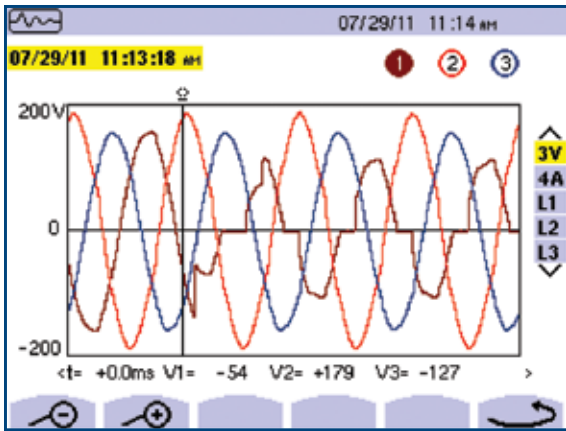


Figure 3. A captured transient example

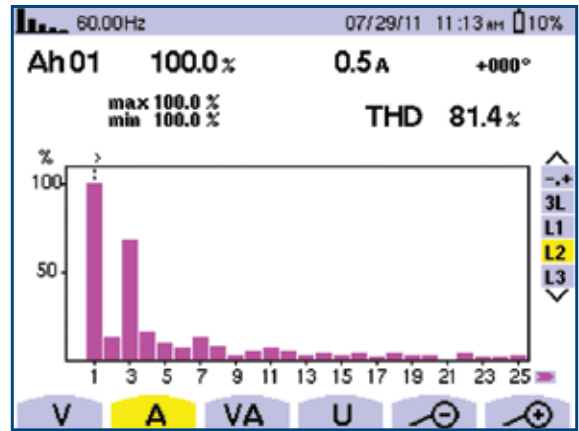


Figure 4. Current harmonics in real-time

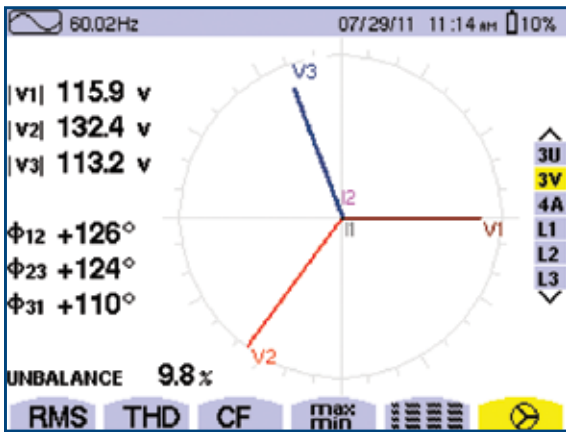


Figure 5. Real-time vector diagram of current

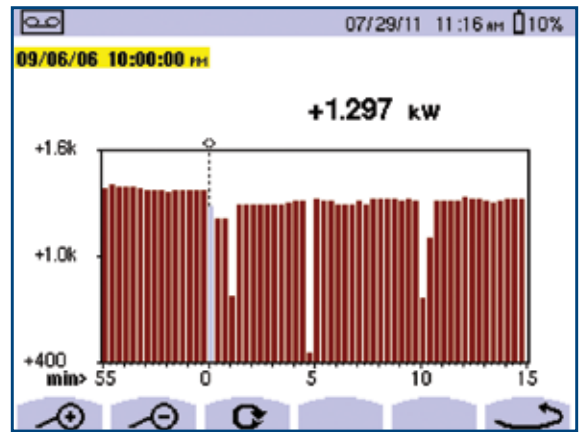


Figure 6. Trend data of wattage consumed

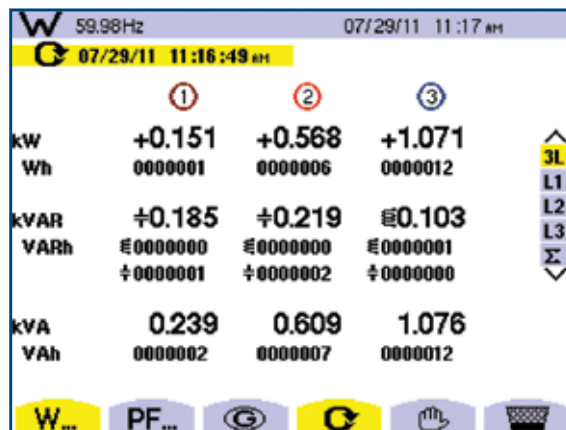


Figure 7. Accumulated data for W, VA, Vars

We have a solution! Contact us with any technical or product application questions...



United States & Canada

**Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments**
200 Foxborough Blvd.
Foxborough, MA 02035 USA
(508) 698-2115 • Fax (508) 698-2118

Customer Support
for placing an order,
obtaining price & delivery
customerservice@aemc.com

Sales & Marketing Department
for general sales and marketing
information
sales@aemc.com
marketing@aemc.com

Repair & Calibration Service
for information on repair & calibration,
obtaining a user manual
repair@aemc.com

United States & Canada (continued)

**Technical & Product
Application Support**
for technical and application support
techinfo@aemc.com

Webmaster
for information regarding
www.aemc.com
webmaster@aemc.com

South America, Central America, Mexico & the Caribbean

**Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments**
15 Faraday Drive
Dover, NH 03820 USA
export@aemc.com

Australia & New Zealand

**Chauvin Arnoux®, Inc.
d.b.a. AEMC® Instruments**
15 Faraday Drive
Dover, NH 03820 USA
international@aemc.com

All other countries

Chauvin Arnoux® SCA
190, rue Championnet
75876 Paris Cedex 18, France
Tel 33 1 44 85 45 28
Fax 33 1 46 27 73 89
info@chauvin-arnoux.com
www.chauvin-arnoux.com



AEMC ONE SOURCE®
For All Your Electrical Test & Measurement Instruments

Call the AEMC® Instruments Technical Assistance Hotline for immediate consultation with an applications engineer: **(800) 343-1391**
Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments • 200 Foxborough Blvd. • Foxborough, MA 02035 USA • (800) 343-1391 • (508) 698-2115 • Fax (508) 698-2118
Export Department: (978) 526-7667 • Fax (978) 526-7605 • E-mail: export@aemc.com

APP_Power_3945-B_Functions_0811Rev03 Printed in the USA