



FEIGAO ELECTRIC MOTORS CO., LTD

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## USER MANUAL FOR FEIGAO POWER ANALYZER

- BASIC CHARACTERISTIC
- HARDWARE CONNECTION
- POWER UP&OPERATION
- PACKING LIST



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**BASIC CHARACTERISTIC:**

1. Following shows the 5 parameters for product's basic characteristic.

Voltage measuring	0-100Volts
Power measuring	0-10000Watts
Amp-hours	0-9.999AH
Watt-hours	0-999.9WH

2. Automatically adjustment, adjustment procedure unnecessary.

3. Automatically exchanged between high & low current.

4. Automatically exchanged between high & low voltage.

5. PC supported PowerView software, including monitoring & drawing function

**Attention:**

**Current measuring range:**

Power Analyzer running safely only in the range of designed 100A. Over 100A , may resulting equipment destroyed.

**Voltage measuring range:**

Power Analyzer running safely only in the range of designed 100V. Over 100V , maybe resulting equipment destroyed.



## HARDWARE CONNECTION:



**CAUTION: RED COLOR FOR POWER CABLE FROM ANALYZER ARE POSITIVE, BLACK COLOR ARE NEGATIVE. WRONG CONNECTION FOR POWER SOURCE AND/OR LOAD MAY CAUSED ANALYZER DAMAGE!!!**

### Current & Voltage:

Electricity in a wire equally like water flowing through a hose. At the end of the hose, you can see how fast the water is flowing out of the hose, this likes electric current flowing in a wire. Current is a measure of electricity stream flow in a wire. If you press your thumb over the end of the hose, you can feel the pressure of the water, this likes electric voltage in a wire. Voltage is how much pressure the electricity has at the terminals of a battery. Parameters, such as: Watts, Amp-hours and Watt-hours, are automatically calculated by Power Analyzer.

**Measuring of Power source:**  $\text{Watts} = \text{Volts} \times \text{Amps}$

**Measuring of Amp-hours:**  $\text{Amp-hours} = \text{Average Amps} \times \text{Hours}$

**Measuring of Watt-hours:**  $\text{Watt-hours} = \text{Average Watts} \times \text{Hours}$

## Connection:

Before using the Power Analyzer, it needs to attach connectors to the POWER SOURCE and LOAD leads. You need to have one a male and one female each side. Using the procedures, please see following connection instruction:

### POWER SOURCE/LOAD SIDE:

**RED WIRE** are for power positive pole Input/Output.

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**BLACK WIRE** are for power negative pole Input/Output.

## POWER UP & OPERATION:

### Power Up:

The minimum requirement to turn on the Power Analyzer is as battery that has to be at least 4.5 Volts. A NiCd or NiMH pack will need at least 5 cells, a Lithium pack will need 2 cells to do this.

**CAUTION: MAKE SURE THAT THERE IS NO SHORT CIRCUIT FROM LOAD SIDE BEFOR YOU CONNECT BATTERY FROM POWER SOURCE.**

Connect the battery pack to the POWER SOURCE. The display should show a startup screen. Power analyzer will automatically calibrate itself. After power analyzer finish startup. You may connect load from your LOAD side. This can be a battery discharger or a motor system.

### Operation:

After applying power, a welcome screen is displayed, it remains few seconds. Then the measurements appear a few seconds later as follows:

Voltage: V  
Current: A  
Watts: W  
Amp-hours: AH  
Watt-hours: WH



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Amp-hours and Watt-hours share the same space, alternating every 3 seconds.

**Volts:** The displayed voltage is the voltage at the POWER SOURCE side of the Power Analyzer.

**Current:** The Power Analyzer has two ranges for current, that is, 0-19Amps and 20-100Amps. It automatically switches between high and low range. Low current range has a resolution of 0.05A. High current range has a resolution of 0.1A.

**Watts:** The amount of power flowing from the POWER SOURCE to the LOAD, definition is:

Watts=Amps×Voltage

**Amp-hours:** The displayed amp-hours indicates how much current has flowed from the POWER SOURCE to the LOAD. Measurement refers to the definition forehead.

**Watt-hours:** The displayed watt-hours indicate how much power has flowed from the POWER SOURCE to the LOAD. Measurement refers to the definition forehead.

## Software Quick start:

Including working software, you will find more detailed instructions and perform procedures in the installation CD.

System Requirements: at least one available COM port, 8mb free hard drive space.

Operation System: Windows 95,98, ME, XP, NT, and 2000.

## Hardware Installation:

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1. Located a free COM port, this is usually located on the back of your computer and is a 9-pin male D connector.
2. Plug the Power Analyzer cable into the COM port and assure the connection is good.
3. Plug the other end of the cable into the socket of the Power Analyzer(white color for 4 pin connector face up). Drawing as follows:



**FROM PC (9 Pin connector ) TO POWER ANALYZER (4 Pin connector)**

#### **Software Installation:**

Insert the installation CD into your computer CD-ROM drive. Click the Windows Start button, then select Run, then type D:\setup.exe, where D is your CD-ROM driver letter, or you can see the Browse button and browse to the same location.

Installation procedure follows the introductions to the software installation process. A PowerView icon will be shown on your desktop after installation finish.

For software use instruction, run PowerView software and read help menu, or read file directly from installation CD at /Program files/FEIGAO/HELP/power.

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## Measuring:



To Battery

To PC

To Load.

## PACKING LIST:

- Power Analyzer: 1 pc
- Connection cable (from PC to Power Analyzer): 1 pc
- Installation CD (included user manual): 1 pc
- 4mm Golden connectors: 2 pairs

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