

# WATTS UP PRO

This guide covers the major features of this product - it does not cover all of the available functions. This guide is not intended to replace the original equipment manual. Please refer to the manual for more detailed operating instructions and safety information.

## EQUIPMENT DESCRIPTION

The Watts Up Pro [1] is a device that measure the voltage and current used by any standard 120V plug-in electrical device. By continuously monitoring voltage and current, the Watts Up Pro is able to calculate the amount of power used.

$$\text{Power (Watts)} = \text{Voltage (Volts)} \times \text{Current (Amps)}$$

The Watts Up Pro has an LCD screen to view the values at any particular point in time, and internal memory to be able to store these values so that you can upload and view them on a computer at a later date.

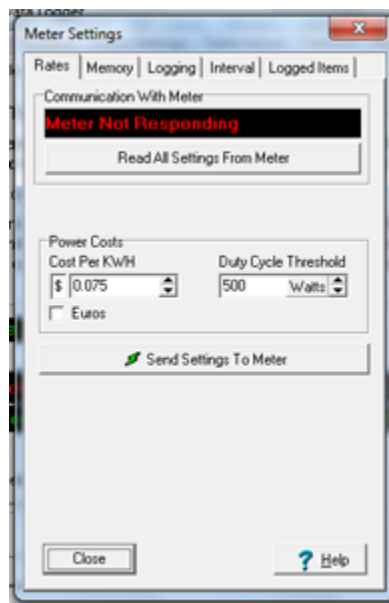


Figure 1: Watts Up Pro Meter

## SETTING UP

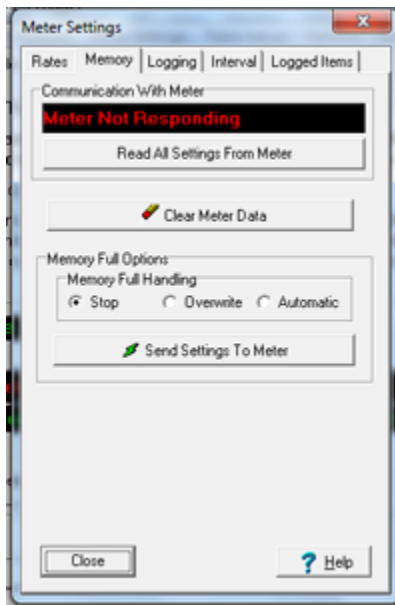
Before plugging anything into the Watts Up Pro, it is necessary to set-up the meter so that it stores the necessary information to its internal memory.

1. Connect the Watts-Up Pro meter to a computer using the included USB cable, and also into an electrical outlet using the attached plug. Ensure that the computer has WattsUpUSB Software installed. If not, you can download from <https://www.wattsupmeters.com/>
2. Open WattsUpUSB software and click **Meter Settings** at the top of the window.
3. There are five tabs, each of which have settings that need to be changed/verified before using your Watts Up Meter. Ensure that you click **Send to Meter** on each tab after changing the settings.
  - a. **Rates [2]:** Enter the cost of electrical power for the building you are in. This can be found on any electricity bill.



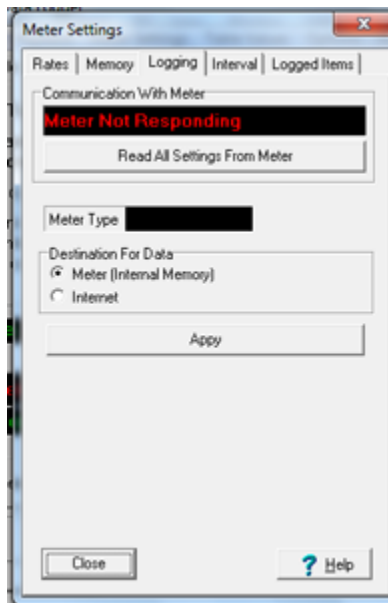
**Figure 2: Rates Settings**

- b. **Memory [3]:** Selecting **Stop** will cause the meter to stop recording values when the memory is full. **Overwrite** will start overwriting the oldest values when the memory is full. **Clear Meter Data** should be clicked to ensure that all previously collected data is erased from the meter.



**Figure 3: Memory Settings**

- c. **Logging [4]: Meter** should be selected as the destination for the data



**Figure 4: Logging Settings**

- d. **Logged Items [5]:** This is where you choose which parameters you want the meter to store. Selecting more items will reduce the amount of time the meter is able to run before filling up its memory. Generally, all you will need to log is **Watts** (power) and **Watt Hours** (energy). You can calculate cost manually.

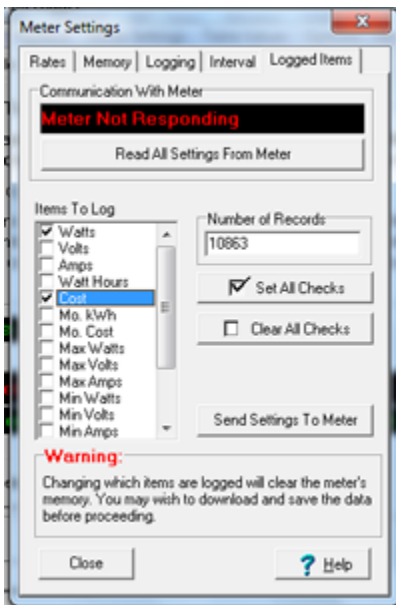


Figure 5: Logged Items

- e. **Interval [6]:** It is important to have completed the **Logged Items** tab prior to completing this tab. Here you select your desired **Logging Interval** – this is the frequency at which the meter stores values to its memory. A shorter interval will enable you to see rapid changes in the power consumption of the device, and give you more accurate energy readings but will fill up the memory quickly. As you change the interval, the **Duration** box will automatically update to indicate how long the meter can be left in place before the memory is full

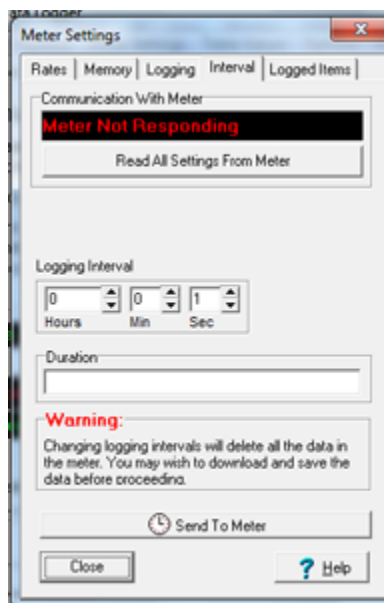


Figure 6: Interval

4. Close WattsUpUSB software

## COLLECTING DATA

After setting up the Watts Up Pro meter using the above steps, the meter is ready to collect data.

Plug the device to be measured into the outlet on the Watts Up Pro meter [7]. Then plug the Watts Up Pro meter into a wall outlet. Where possible, the Watts Up Pro meter should be plugged into the same outlet that the device to be measured was originally plugged into. This will ensure that the circuit will not be overloaded.

Keep in mind that the Watts Up Pro has a maximum capacity of 1800W, so devices that may exceed this power rating should not be plugged into the meter. This is especially important when plugging in a power bar that is powering multiple devices into the Watts Up Pro meter.

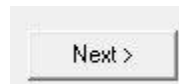


**Figure 7: Device plugged into Watts Up Pro Meter**

## UPLOADING DATA

After having a device plugged into the Watts Up Pro for a period of time, you can upload the collected data to a computer for viewing. To do so:

1. Connect the Watts-Up Pro meter to a computer using the included USB cable and also into an electrical outlet using the attached plug. Ensure that the computer has WattsUpUSB Software installed. If not, you can download the software from <https://www.wattsupmeters.com/>
2. Open WattsUpUSB software
3. Click **Next** [8]

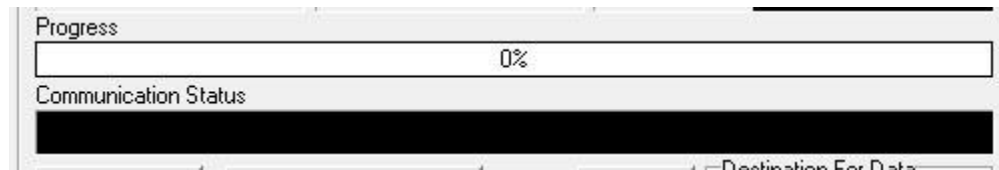


**Figure 8: Next Button**

4. Click **Next** [8] again
5. Click **Request Data** [9]. The progress bar [10] will update as the data is uploaded from the device to the computer.



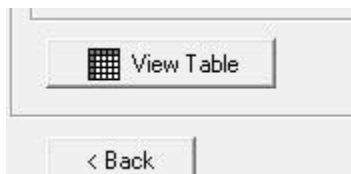
**Figure 9: Request Data Button**



**Figure 10: Progress Bar**

## TABLE

1. Click **View Table** [11] on the **Receive Data** tab, or click the **Table** tab at the top of the screen. The collected data will be viewed in table format. Each data point is recorded with a timestamp, shown in Column 1.



**Figure 11: View Table Button**

2. The Watts Up Meter does not have an internal clock, so all times will be displayed starting at 1/1/1899. To change this:

- a. Click **Table Values** from the menu at the top of the screen. The **Table Values** menu [12] will open up.



**Figure 12: Table Values**

- b. Here we either enter the time and date for the first data point, or the last data point. The one you choose will depend on how you setup the meter initially. If the **Memory** was set to **Stop**, then you'll need to enter the date and time that you commenced collecting data. If the **Memory** was set to **Overwrite**, then you'll need to enter the date and time that you finished collecting data.
  - c. Select Reference To First Record to set the date and time you commenced recording data. Select Reference To Last Record to set the date and time you finished recording data.
  - d. Enter Reference Time and Reference Date
  - e. Click Apply
3. Many columns in the table may show zero values if they were not selected during initial setup.
  4. You can save the table in \*.txt format to import to Excel at a later date by clicking **File->Save Table As**

## GRAPH

1. Click **View Graph** [13] on the **Receive Data** tab, or click the **Graph** tab at the top of the screen. The collected data will be viewed in graph format. You can choose which parameter to graph on the Y-axis (vertical axis), using the checklist on the left of the screen. The X-axis displays time.

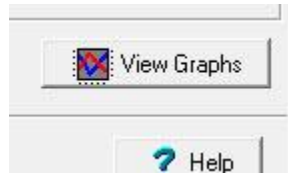


Figure 13: View Graph Button

2. The Watts Up Meter does not have an internal clock, so all times will be displayed starting at 1/1/1899. To change this:
  - a. Click **Table Values** from the menu at the top of the screen. The **Table Values** menu [12] will open up.
  - b. Here we either enter the time and date for the first data point, or the last data point. The one you choose will depend on how you setup the meter initially. If the **Memory** was set to **Stop**, then you'll need to enter the date and time that you commenced collecting data. If the **Memory** was set to **Overwrite**, then you'll need to enter the date and time that you finished collecting data.
  - c. Select **Reference To First Record** to set the date and time you commenced recording data. Select **Reference To Last Record** to set the date and time you finished recording data.
  - d. Enter **Reference Time** and **Reference Date**
  - e. Click **Apply**
3. Many parameters may show graphs full of zero values if they were not selected during initial setup.
4. You can save the graph in \*.bmp format to import to include in other documents at a later date by clicking **File->Save Graph As**