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GREEN ENERGY FOR OUR PLANET

USER MANUAL
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РУКОВОДСТВО ПОЛЬЗОВАТЕЛЯ
КЕРІВНИЦТВО КОРИСТУВАЧА

EGM-PWM-LAN
ENERGY METER WITH LAN INTERFACE
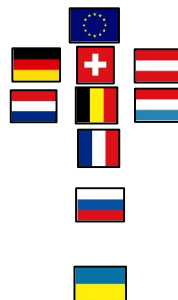
Energy meter with LAN interface
Energiemessgerät
Energiemeter met LAN interface
Compteur d'énergie avec interface LAN
Измеритель мощности и энергии с сетевым интерфейсом
Вимірювач потужності та енергії з мережевим інтерфейсом

1.1. Features

- LAN Energy Meter, accessible from anywhere within your LAN, creates insight in your energy consumption (voltage/current/power)
- Get your power consumption curves via Internet - no permanent computer connection required
- No external IP-address at home? No problem. Your own user account on EnerGenie.com will let you view and analyze the energy costs via Internet with any PC or even mobile phone.
- Power Meter software provides basic power consumption readings (home use) and advanced readings (business/scientific use)

1.2. Specifications

- Input: 220-240 V AC 50-60 Hz
- Load max: 10 A
- Power consumption max: 1.4 W
- Computer measurements: voltage and current measuring (RMS values), true power measuring, real energy consumed during a time period (kWh)
- Measurements range: up to 250 V AC, 10 A (RMS), 2500 W, 22 MW a year
- Measurements accuracy: ± 2% (within 50 W – 2500 W power range)
- Working conditions: (+10 to 40) °C, below 90% humidity
- Resistance to short-circuits: 1.5 kV
- Dimensions: 135 mm x 92 mm x 78 mm
- Net weight: 0.35 kg
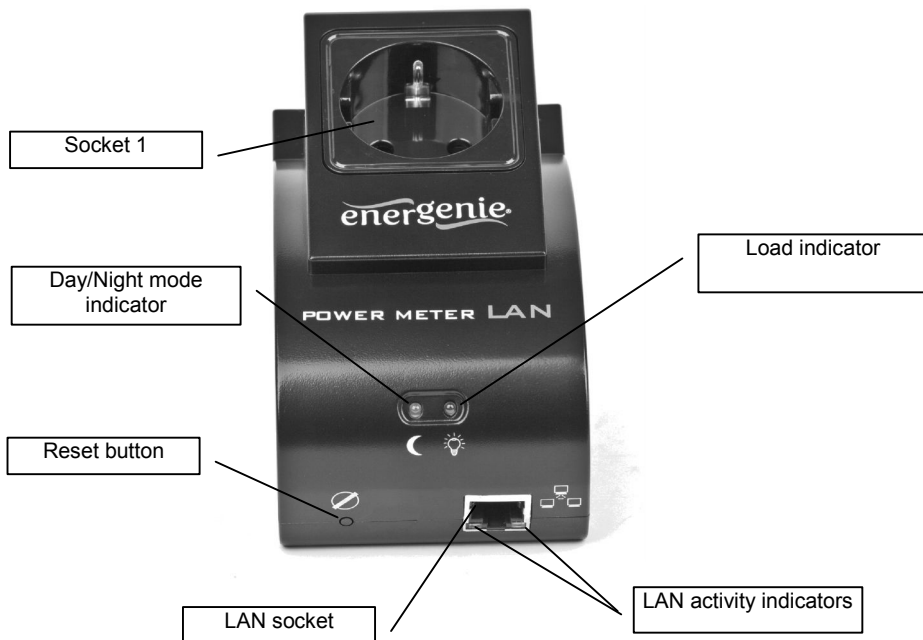
1.3. System requirements

- LAN socket
- Internet connection is required for uploading the information to EnerGenie.com server

1.4. Package contents

- EGM-PWM-LAN
- Software CD
- User manual
- LAN crossover patch cord
- LAN patch cord

2. Indicators and controls of the EGM-PWM-LAN

Figure #1

Socket 1

Day/Night mode indicator

Load indicator

Reset button

LAN socket

LAN activity indicators

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3. Installation of EGM-PWM-LAN

To use EGM-PWM-LAN please follow next steps:

- Connect EGM-PWM-LAN to the wall socket first and then to the LAN socket (or your computer LAN card) with the provided patch cord or vice-versa.

- It is strongly recommended to avoid damp or wet places for installation.

- EGM-PWM-LAN should be connected to the European AC wall socket of the standard DIN 49 440;

- It is possible to connect the EGM-PWM-LAN to the power source via other multi-plugs, surge protectors, voltage regulators or UPS.

3.1. Preparing LAN configuration of EGM-PWM-LAN

Before configuring EGM-PWM-LAN hardware settings, please, let it obtain its IP address. Follow the steps below:
- Make sure EGM-PWM-LAN is connected to the local network with the provided RJ-45 cable (*option A* - recommended)

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NOTE: by default the factory setting of EGM-PWM-LAN is DHCP enabled. If your LAN has a router with built-in DHCP server (which is very common) then EGM-PWM-LAN will automatically get an IP address from the DHCP server. Proceed to section 3.2 below in this case.

NOTE: you may prefer to connect EGM-PWM-LAN directly to the managing computer LAN adapter (network card) using the supplied *crossover* RJ-45 cable (*option B*). You might need to use this option if your LAN does not have DHCP server.

If you choose for *option B* then the following procedure is required to let EGM-PWM-LAN obtain a fixed IP address:

- Power EGM-PWM-LAN on
- Press *Reset* button on the side control panel (see Figure #2 above) with the tip of a pen
- Holding it pressed for about 3 seconds

The above-mentioned procedure forces EGM-PWM-LAN to reset itself to the default settings (see below) ...

- IP: 192.168.0.254

- Subnet mask: 255.255.255.0

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- Gateway: 192.168.0.1
- DNS:0.0.0.0
- DHCP: enabled
- IP filtering: disabled
- Power Manager client port: 5000

... EGM-PWM-LAN then searches for an IP address from your eventual DHCP server. If no DHCP server is found within 1 minute, EGM-PWM-LAN will then automatically revert to the default settings (see above, with IP: 192.168.0.254).

3.2. Power Manager installation

It is now time to identify which IP address has been obtained by EGM-PWM-LAN. We need to carry out the following:
- Insert the Power Manager CD into a PC CD-ROM drive. This PC can be connected either to the same LAN where the device is (if you chose *option A* section 3.1) or directly to the device with the crossover RJ-45 cable (if you chose *option B* section 3.1)
- If for any reason the automatic setup does not work, then open CD-ROM drive in the *My Computer* window and launch SETUP.EXE from the CD
- Follow instructions of the installation software

NOTE: Antivirus or firewall software may block connection to EGM-PWM-LAN. Please, configure antivirus/firewall to permit connection to the IP address and port of your EGM-PWM-LAN

3.3. IP configuration

The utility *LAN Find* (see Figure #4 below) will run automatically during the software installation but it can also be started from *Start/All Programs/Gembird/Power Manager*. The IP range where you would like to search for EGM-PWM-LAN will be set automatically according to the IP settings of your LAN adapter but can be changed manually in the *Adapter subnet* fields. Now press the *Search* button.

NOTE: only EGM-PWM-LAN within a local subnet can be found. If your computer LAN adapter is not in the (default) subnet of EGM-PWM-LAN (as might probably be the case if you chose *option B* section 3.1) you will have to change its IP address manually to be able to find EGM-PWM-LAN. For example if you wish to find EGM-PWM-LAN (with the default IP 192.168.0.254), the IP address of your computer should be set as 192.168.0.*XXX* (where *XXX* stands for any digit, for example 1) and the subnet mask should be 255.255.255.0.

After the searching the IP addresses of the found EGM-PWM-LAN devices will appear in the list box. Select EGM-PWM-LAN which you want to access, and press the *Open* button (see Figure #4 below).

Figure #4
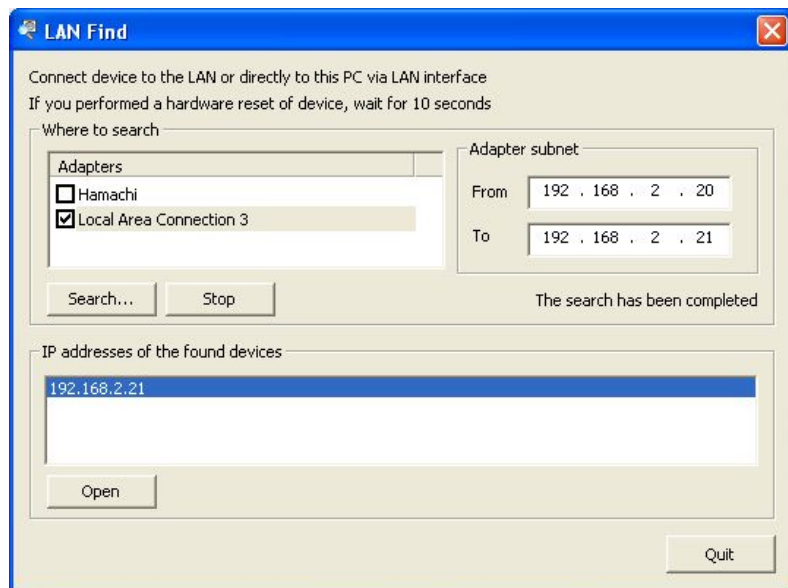
The window of your default internet browser will be then opened to give you access to the built-in web-server. See section 4 below for the further details.

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4. The web server

Your EGM-PWM-LAN is equipped with a web-server which allows managing the device using any web browser such as Internet Explorer etc.

4.1. Web-server login page

To access the web server of EGM-PWM-LAN, just open Internet Explorer (or other browser) and input the IP address of EGM-PWM-LAN (for example *http://192.168.1.241*). If you have used *LAN Find* utility to locate EGM-PWM-LAN then you will be taken to this webpage automatically. *Login* page will then be displayed (see Figure #5 below).

NOTE: Java script must be enabled in your Internet Explorer (or another browser) settings. Otherwise, you get an error message: *WARNING! JAVASCRIPT IS DISABLED!*

Figure #5

EnerGenie Web: Server 1
Password: [   ] Enter

The default password is *1*. It is recommended to change the password on the *Device settings* page (see section 4.3 below) after the first login.

After a successful login you will face the *Energenie* page (see section 4.2 below).

NOTE: There is a possibility that you might then need to open the *LAN settings* page (see section 4.3 below) to complete the IP configuration.

4.2. EnerGenie page

With the help of EnerGenie page (see Figure #6 below) you will be able to see the current power consumption of the load connected, Irms, Vrms and Energy.

The EnerGenie page also allows you to setup access of your EGM-PWM-LAN from anywhere via Internet even if it does not have an external IP address. To setup this free service you should follow two simple steps:

- Register the device. To restrict access to the device via the Internet to the rightful owner only, the device should be registered – e.g. assigned to your account. To register the device, simply push the button *Register* on this page (see Figure #6 below). You will then be redirected to Login page of EnerGenie.com. If you already own an account at EnerGenie.com then just enter your login and password on this page and you are done. Otherwise, use the *Registration*

13

button on the Login page to create a new account. After your successful login (regardless whether you created a new or used an existing account) your EGM-PWM-LAN is automatically registered.

- Return back to the EnerGenie page of your EGM-PWM-LAN (see Figure #6 below). Push *Activate* button to let the device initiate communication with EnerGenie.com server. The EnerGenie page will then start updating itself until the *Status* becomes *Registered Activated Connected* (see Figure #6 below).

Figure # 6
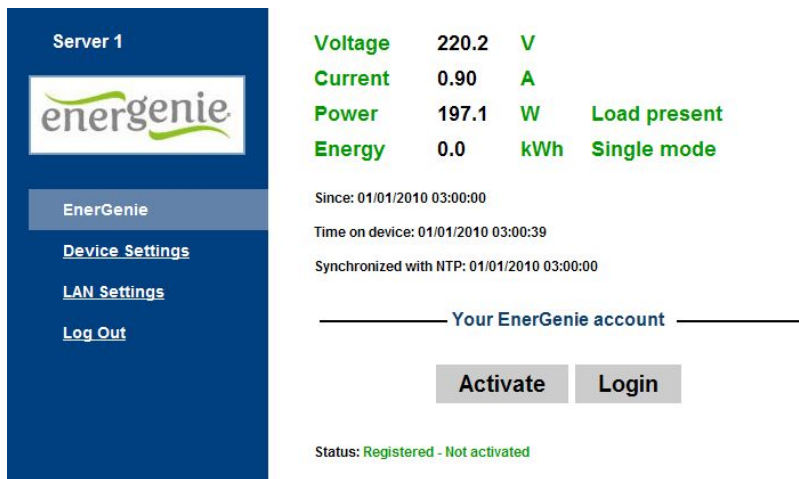
After a successful registration and activation the button *Register* will be renamed to *Login* (and will then open the Login page of EnerGenie.com) and the button *Activate* will turn into *Deactivate*. If by any reason you would eventually decide to stop managing your

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EGM-PWM-LAN from Internet use then *Deactivate* button to stop communication of the device with EnerGenie.com server.

If you eventually decide to change registration of your EGM-PWM-LAN and assign it to another account, it will be possible via EnerGenie.com website (see section 5 below).

See section 5 below for further details on managing your EGM-PWM-LAN via EnerGenie.com website.

Below the page you can see the current time of the web-server and eventual information about the last successful timer synchronization. Automatic timer synchronization is used if *Use NTP for timer correction* option is enabled (see section 4.4 below).

4.3. LAN settings page

Figure #7

On the *LAN settings* page (see Figure #7 above) you can set up DHCP, IP address, Subnet mask, Gateway, DNS server and IP filter (up to 3 IP addresses can then be enabled for remote access).

The new settings will be applied immediately after you press the *Apply* button.

17

IP address, Subnet mask, Gateway, DNS server will be used only if the *DHCP* option is disabled.

If you set *DHCP* option it is recommended for your own convenience to set up your DHCP server so that it always provides the same IP address to EGM-PWM-LAN. To do that you will need to know the MAC address of EGM-PWM-LAN. It can be found on this page or on the bottom sticker of the device. The MAC address is fixed and cannot be changed.

DNS server address is important to be properly set up in case you wish to enable the NTP timer correction option (see section 4.4 below).

IP filter option is needed to prevent unauthorized access to the server. It restricts the web server access from any computer with IP address different from IP1, IP2 and IP3. Make sure that you input IP1, IP2, and IP3 correctly before enabling this option.

Power Manager client port is used for connecting with the Power Manager software, normally it is not needed to change this setting.

4.4. Device settings page

On the device settings page you can setup name, password and internal time of EGM-PWM-LAN (see Figure #8 below).

Figure #8

To be able to setup the schedule of EGM-PWM-LAN you have to first setup its internal clock correctly. Enter the current local time and date.

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Alternatively if the option *Use NTP for timer correction* is enabled (by default) then the time will be taken from NTP server. The device will try to connect with the server every 18 hours. The first synchronization would take place in 15 seconds after you press the *Apply* button.

NTP server field should have a valid name of NTP server (by default "pool.ntp.org"). If for any reason the NTP time correction doesn't work you can choose the best NTP server for your country via the website www.pool.ntp.org.

NOTE: for NTP time correction to work properly the device should have access to the Internet and have a proper DNS server setting (see section 4.3 above).

Server name can be convenient to identify the web server if you have more than one EGM-PWM-LAN. It is "Server 1" by default.

The password is necessary to access EGM-PWM-LAN both from your web browser and the *Power Manager* software (see section 6 below). This password is case-sensitive and can be up to 32 characters long. Alphanumeric characters and spaces are allowed to be entered. Only the first eight characters of the password are used to access the device with the *Power Manager* software. You will need to enter this password in the *Add LAN device* window (see section 7 below).

The *Power Manager* software accesses EGM-PWM-LAN via a certain client port (by default 5000). You can change this port to any other except port 80 which is always occupied by the web server.

Don't forget to push the *Apply* button to save your settings.

4.5. Web-server logout

Having finished working with EGM-PWM-LAN, choose *Log Out* in the main menu. If you don't do this, you will be logged automatically after 10 minutes of inactivity. While you are logged to the web server, it can't be accessed from any other computer. If another user tries to access the web server which is running an active session the error message will be shown on the login page: *Somebody with another IP has already logged in. Try again later.* In the meantime the *Power Manager* software (see section 6) can still access the EGM-PWM-LAN.

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5. EnerGenie.com device interface

With your free personal account at EnerGenie.com website you will be able to access your EGM-PWM-LAN from anywhere in the world using any Internet-enabled device (desktop PC, laptop, smartphone etc). See section 4.2 above on how to register your EGM-PWM-LAN on the server and setup the connection.

5.1. Logging in

To login into your EnerGenie account just open the webpage www.energenie.com/user in your Internet browser and enter your login and password in the login window (see Figure #9 below). If you are a new user – click "New account" button then fill user profile form.

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Figure #9

Check *Remember me* checkbox for automatic login in the future (the website will then save a cookie on your computer). If you lost your password, click *Forgot password* button.

5.2. Device management page

After a successful login you will see the list of your registered devices (see Figure # 10 below).

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Figure #10

Message: Device with MAC address 88-B6-27-01-00-05 registered successfully
Return to device web-interface and press Activate button.

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| User: | **qq** | **Log out** |

Device2

Last seen online: 05-May-2011 13:47:57
IP: 80.252.18.146
MAC: 88-B6-27-01-00-05 Device web-interface:
192.168.2.20

Power, W	0
Energy (Day), WH	21
Energy (Night), WH	0

This page will automatically update itself and will keep showing you the time when your device was last seen online (the latest time when the device communicated with the server), external IP, MAC address, link to device web-interface (this link works in case that your computer is in the same local network with the device).

Values of Real Power (Watts) and Day and Night Energy (Watt-Hours) will be shown. In single-tariff mode the whole energy is shown as Energy (Day) parameter.

To open real-time chart window click on the Power or Energy value.

To change your account settings click your user name.

Click the device name to change its name and/or transfer it to another account.

The *Last seen online* status information lets you check if the device keeps communicating with the server.

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Figure #11

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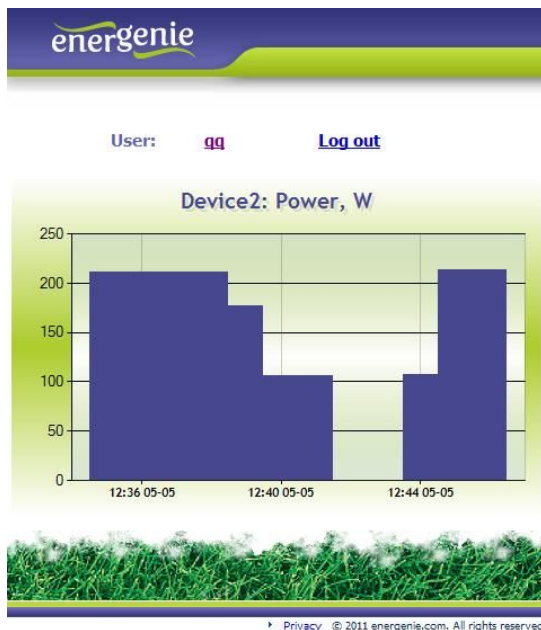
6. Adding the EGM-PWM-LAN

To be able to manage installed EGM-PWM-LANs, please, do the following:
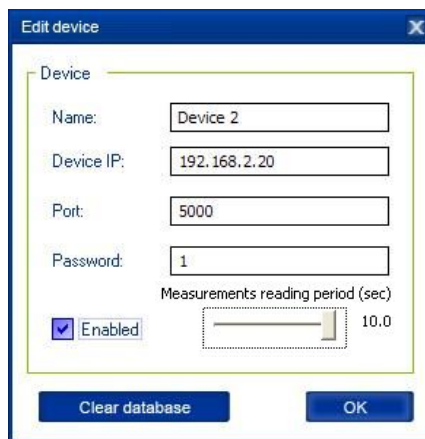
- Install *Power Manager* software on a PC connected to your local network. A socket icon will then appear in your system tray
- Choose *Add device* from the right upper corner (see Figure #12 below)

Figure #12

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In the *Add LAN device* window (see figure #13 below) please, enter correct IP address, port number (5000 by default) and password (1 by default) as configured on the *Device settings* page (see section 4.6 above) of the web server. To disconnect from the device uncheck the option *Enable*, set this option again to regain the access. Click *OK* button to return to the *LAN devices* window.

Figure #13

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- To edit the LAN device, select it and click the *Device settings* button, or just double click on the LAN device
- To remove the LAN device, select it and click the Del button in the keyboard

If the status of EGM-PWM-LAN shows the device is not *Connected* - it could be due to the following reasons:
- Incorrect IP/Port/Password specified in the *Add LAN device* window
- PC is not connected to the local network
- You are trying to access EGM-PWM-LAN from the PC which is not allowed to do so. Change PC IP address or change *IP filter* list in EGM-PWM-LAN hardware settings (see section 4.5 above)
- EGM-PWM-LAN is not connected to local network. To check if EGM-PWM-LAN is on your local network you can do so-called ping test:
    - Go to *Start->Run*
    - Type *cmd*
    - Type *ping <EGM-PWM-LAN IP Address specified in utility>* in the window which would appear

Suppose *EGM-PWM-LAN* with IP address 192.168.2.189 is connected to the local network. Then the *cmd* window will look as shown on the Figure #14 below:

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Figure #14

- EGM-PWM-LAN is connected to local network (ping test is ok) but not responding. Reset EGM-PWM-LAN by pressing the *Reset button (A)* on the side control panel (see Figure #2 above) or switch it off and then on again (see Figure #1 above)

NOTE: The *Reset button A* (see Figure #2 above) can sometimes help if EGM-PWM-LAN can't be accessed or works abnormally. The device will then be restarted. All the IP settings and device settings will remain the same as before, but the server time will be reset and all schedules will become outdated.

30

7. Power Manager

Your EGM-PWM-LAN has an *offline* and an *online* working mode.

It is "offline" whenever it is not connected to a PC, or when the PC is turned off. The device will come "online" automatically when it is connected to a PC with the Power Manager software running. In this mode the software keeps downloading the power readings from the EGM-PWM-LAN into a database. In the *offline* mode the EGM-PWM-LAN will only save Energy consumption data (kWh), which will be logged into the database when the device comes online again. The measured data can be viewed and analysed with the Power Manager software. The software shows different energy characteristics changing over time – including the money spent and the power consumption (kWh). When the software is started, the main power manager window will appear, which shows a list of all connected devices (see Figure #12 above).

Push the *Device settings* button (bottom right here) to set the device-specific options (see Figure #13 above)

In the settings screen you are able to change the name of your device (in the *Name* field) and the data downloading frequency (in the *Measurement reading period* field) - from 2 to 10 seconds.

To delete all previous recorded data, just push the *Clear database* button.

Note: *Device IP*, *Port* and *Enabled* fields will be grey – these functions are only available on the LAN version of the EGM-PWM-LAN

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To open the Power Meter window, select your EGM-PWM-LAN device from the list (see Figure #12 above) and then click the *Power meter* button (see the chapter 8 below).

8. Power Meter

The Power Meter window can be opened in either a minimized or maximized mode. The minimized Power Meter window is shown in Figure #15 below. This window is useful for monitoring selected measured values. It displays:

- A single measured value (e.g. money spent)

Note: Click with the right mouse button over this field to choose a different measured value to display

- Two warning indicators. These indicators by default would show you when the voltage is beyond its limits (too high or too low)
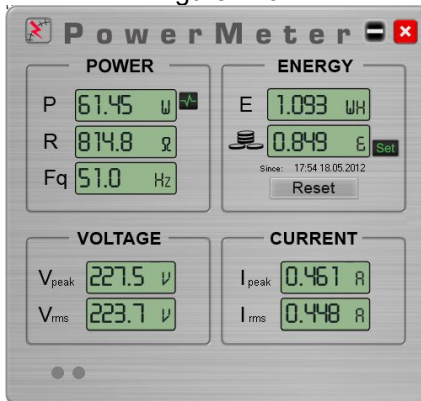
Note: Read Chapter #10 below if you wish to customize these indicators

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Figure #15

Push Maximize button in this window to open the full-size Power Meter window – see Figure #16 below.

Figure #16

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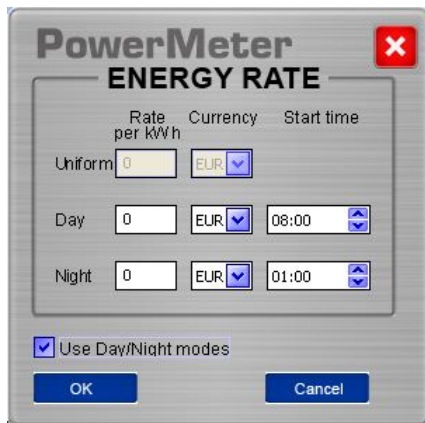
This window displays all the measured values:

- Real power (P)
- Active impedance (R)
- Frequency of current (Fq)
- Energy consumed (E)
- The cost of energy consumed (money sign)
- RMS voltage (V rms)
- Peak voltage (V peak)
- RMS current (I rms)
- Peak current (I peak)

It is beyond the scope of this manual to explain the physical meaning of these values. For most consumers the energy and its cost are the most interesting.

The *Energy (E)* value shows the accumulated energy consumption (in watt-hours) since a certain date (the last time when *Reset* button was pressed). This date is shown below the *Cost* display. The *Cost* value is based on the amount of energy consumed and the energy costs. Push the *Set* button (near the *Cost* value) to specify the energy costs for your home or office situation– see Figure # 17 below.

By Pushing the *Reset* button both Energy and Cost counters will be reset to zero.

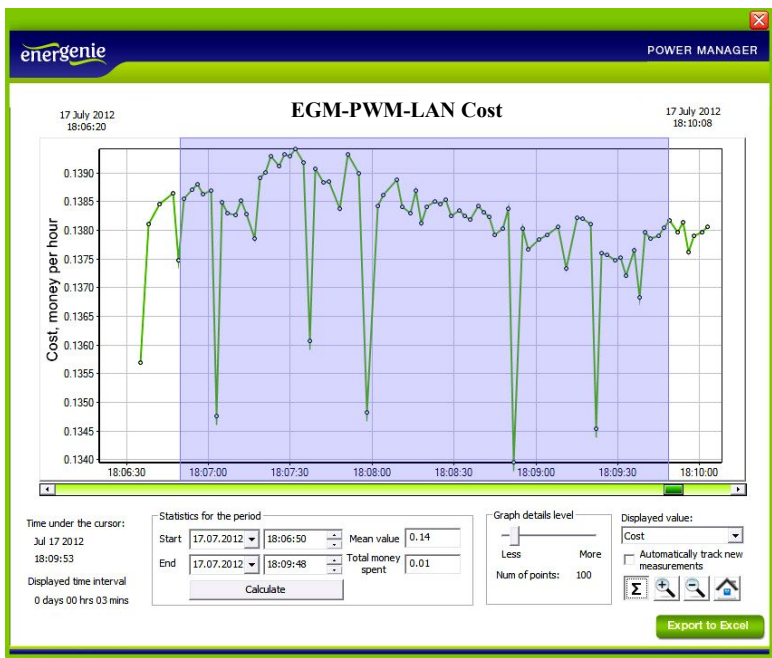*All brands and logos are registered trademarks of their respective owners*

Figure #17

Choose the rate (per kWh) and currency. If you have different rates for peak hours and off-peak hours, just check the box *Use Day/Night modes*. You will then be able to enter the dual rates and the start/finish times for these modes.

9. Using the charts

In the *online* mode the values of P, R, Fq, Irms, Vrms and Cost are continuously logged into the database. These readings can be used to build time charts. To display the charts just click on the desired value in the Main Power Meter window (see Figure #16 above) or push the *Chart* button in the Power Manager window (see Figure #12 above). This will open the Chart window as displayed in Figure # 18 below.

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Figure #18

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The horizontal axis represents the date/time and the vertical axis represents the values of the chosen parameter.

Note: The scale of the vertical axis changes automatically once you browse or zoom the chart. The scale will be chosen in such a way that all the values within the displayed time period fit onto the screen.

Some extra tools are placed under the chart:

- From the *Displayed value* list box you can choose the value which you wish to display in the graph area...

- The displayed chart normally shows the average values of the chosen parameter. You can determine the data point density with the *Graph details level* slider. With this slider you actually change the number of points within the chosen time interval for the averaging. Fewer points mean less details and a smoother chart. More points mean more details and a more precise chart.

- $\boxed{\Sigma}$ - The Sum tool is used to calculate energy statistics within a selected time period. Push the Σ- button to activate this feature and then select a time period on the chart area by dragging and dropping with the left mouse button. Doing so you will select the period as shown on the Figure # 8 below. The chosen period will be selected on the chart and the start and finish values of the interval will be shown in the corresponding fields inside *Statistics for the period* box. The calculated average value will be shown in the *Mean value* field.

Note: you can also adjust the *Start* and *Finish* fields manually.

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Tip: You can calculate the total energy consumption within a certain period pushing the *Calculate* button - see Figure #19 below

Figure #19

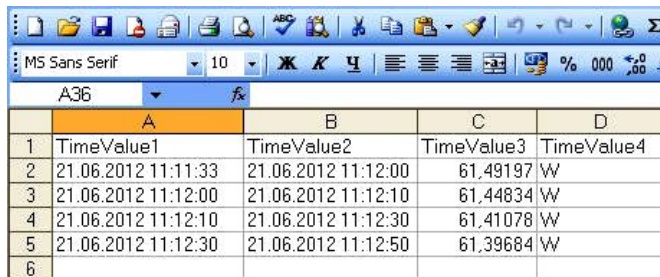*All brands and logos are registered trademarks of their respective owners*
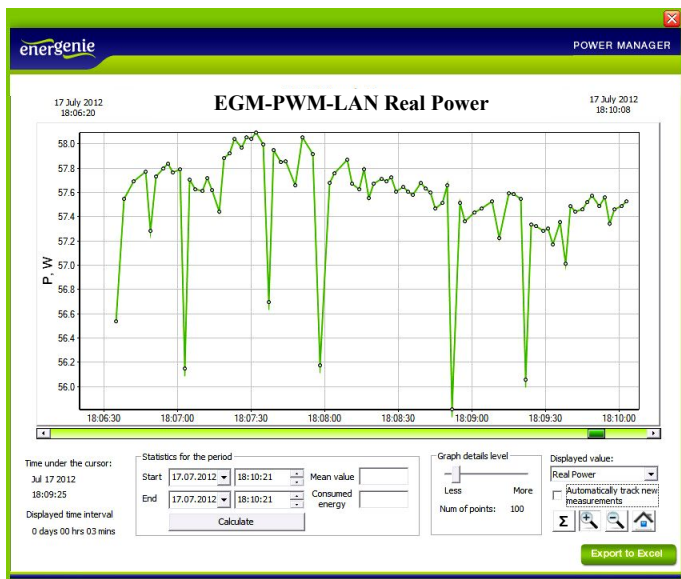
- 🔍🔍 - The zooming tool allows changing the time scale of the chart. Push the zooming tool button and then click with the left mouse button to adjust the scale to the desired level

- 🏠 - When you select the home tool, the chart displays every record from the whole period where the selected parameter has any records in the database

- Export to Excel - The Excel tool exports the average values of the selected period into an Excel file for further analysis or archiving – see Figure #20 below.

Figure #20

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10. Advanced features

The Power Manager software also allows you to define a number of user-defined events. Possible events are: Lighting up the indicators in the Power Meter window (see Chapter 8 above), or run a user-specified application. To set the parameters for such events (see Figure #21 below), just push the *Events* button in the Power Manager window (see Figure #12 above)

Figure #21

To define your event, first choose the parameter of your interest from the *Value* list box. If you wish the event to be triggered when the value of

41

this parameter exceeds a certain maximum – fill in the *Max* field then. If you wish the event to be triggered when the value of this parameter drops below a certain minimum – fill in the *Min* field. Secondly you select the desired action from the *Action* list box. If you choose to execute a specific application or program, you can select the path to this application in the *Path* field. It is possible to give the event a practical name in the *Name* field.

Select the *Use growth* checkbox if you are interested in the difference between the current value of the parameter and its previous value, rather than in its absolute value.

Tip: *Use growth* checkbox might be particularly useful if you wish to do something whenever a certain device gets switched on or off.

11. Troubleshooting

Problem	Solution
The status of EGM-PWM-LAN in Power Manager does not become *Connected*	Try to ping the device (see section 6.1 above)
EGM-PWM-LAN is connected to local network (ping test is ok) but not responding.	Reset EGM-PWM-LAN by pressing the *Reset button* on the side control panel (see Figure #2 above) or switch it off and then on again using the *Main rocker switch Z* (see Figure #1 above).
Connection to EGM-PWM-LAN is lost. It seems something is wrong with its IP address.	Make sure EGM-PWM-LAN is connected to LAN and switched on. Launch *LAN Find* utility. You can also try to use *Reset* button to let the device renew its IP address (see section 3.2 above)

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EC Declaration of Conformity

We hereby certify that the following product complies with all the relevant
Safety Requirements of § 4 EMVG and of the Directives 2006/95/EC; 93/68/EEC and 2004/108/EC.

Applicant	:	**Gembird Europe BV**
		Wittevrouwen 56,
		1358CD, Almere, The Netherlands
Equipment	:	**Computer parts**
Model Nos.	:	**EGM-PWM-LAN**
Product description	:	**EGM-PWM-LAN Energy Meter**

European standards:

EN55022:2006; EN55024:1998+A1:2001+A2:2003; EN61000-3-2:2006;
EN61000-3-3:2008; EN60335:2002+A13:2008; EN55014:2006;
EN55014-2:1997+A2:2008

The following manufacturer/WITHIN Europe is responsible for this declaration:

Gembird Europe BV
Wittevrouwen 56, 1358CD, Almere, The Netherlands
Tel: +31-(0)36-5211588. Fax: +31-(0)36-5347835

Director

The Netherlands / Dec. 6, 2010
Place and Date

Authorized signature

44

Waste disposal:	**Entsorgungshinweise:**
Do not deposit this equipment with the household waste. Improper disposal can harm both the environment and human health. For Information about waste collection facilities for used electrical and electronic devices, please contact your city council or an authorized company for the disposal of electrical and electronic equipment.	Werfen Sie dieses Gerät nicht in den Hausmüll. Unsachgemäße Entsorgung kann sowohl der Umwelt als auch der menschlichen Gesundheit schaden. Informationen zu Sammelstellen für Altgeräte erhalten Sie bei Ihrer Stadtverwaltung oder einer autorisierten Stelle für die Entsorgung von Elektro-und Elektronikgeräten.
Richtlijnen m.b.t. afvalverwerking	**Traitement des déchets:**
Batterijen en accu's dienen als klein-chemisch afval afgeleverd te worden bij toegewezen afvalverzamelpunten (zie www.afvalgids.nl). U dient ervoor te zorgen dat de batterijen/accu's leeg zijn en dus geen stroom meer kunnen leveren. Let op, de batterijen/accu's dienen onbeschadigd ingeleverd te worden. Gooi dit product niet weg in uw vuilnisbak. Dit kan zowel het milieu als de menselijke gezondheid schade toebrengen. Informatie over het inleveren van dit product kunt u inwinnen bij uw gemeentelijke vuilnisdienst of andere geautoriseerde instelling in uw buurt.	Ne jetez pas cet appareil dans les déchets domestiques. Un traitement inapproprié peut être dommageable à l'environnement et à la santé humain. Vous trouvez des informations sur les centres de rassemblement des appareils vieux chez l'administration municipale ou chez un centre autorisé pour le traitement des appareils électriques ou électroniques.

WARRANTY CONDITIONS	**GARANTIE BEDINGUNGEN**
The warranty period is 24 months and begins with the sale to the end user. The receipt must clearly list the date of purchase and the part number, in addition it should be printed. Keep the receipt for the entire warranty period since it is required for all warranty claims. During the warranty period the defective items will be credited, repaired or replaced at the manufacturer's expense. Work carried out under the warranty neither extends the warranty period nor starts a new warranty period. The manufacturer reserves the right to void any warranty claim for damages or defects due to misuse, abuse or external impact (falling down, impact, ingress of water, dust, contamination or break). Wearing parts (e.g. rechargeable batteries) are excluded from the warranty. Upon receipt of the RMA goods, Gembird Europe B.V. reserves the right to choose between replacement of defective goods or issuing a credit note. The credit note amount will always be calculated on the basis of the current market value of the defective products	Die Garantie beträgt 24 Monate ab Verkaufsdatum an den Endverbraucher. Das Kaufdatum und der Gerätetyp sind durch eine maschinell erstellte Kaufquittung zu belegen. Bitte bewahren Sie Ihren Kaufbeleg daher für die Dauer der Garantie auf, da er Voraussetzung für eine eventuelle Reklamation ist. Innerhalb der Garantiezeit werden alle Mängel, wahlweise durch den Hersteller entweder durch Instandsetzung, Austausch mangelhafter Teile oder im Austausch, behoben. Die Ausführung der Garantieleistung bewirkt weder eine Verlängerung noch einen Neubeginn der Garantiezeit. Eine Garantieleistung entfällt für Schäden oder Mängel die durch unsachgemäße Handhabung oder durch äußere Einwirkung (Sturz, Schlag, Wasser, Staub, Verschmutzung oder Bruch) herbeigeführt wurden. Verschleißteile (z.B. Akkus) sind von der Garantie ausgenommen.
Gembird Europe B.V. Wittevrouwen 56, 1358CD Almere The Netherlands www.gembird.nl/support support@gmb.nl Tel. +31-36-5211588	GEMBIRD Deutschland GmbH Coesterweg 45, 59494 Soest Deutschland www.gembird.de/support support@gembird.de Tel. +49-180 5-436247 0,14 € pro Minute aus dem deutschen Festnetz. Mobilfunkpreise können abweichen

GARANTIE VOORWAARDEN	CONDITIONS DE GARANTIE
De garantietermijn bedraagt 24 maanden en gaat in op de aankoopdatum van het product door de eindgebruiker. Op de aankoopbon moeten de aankoopdatum en productomschrijving duidelijk vermeld staan. Gelieve de aankoopbon de gehele garantieperiode te bewaren, deze is ten alle tijden benodigd voor alle garantie aanspraken. Tijdens de garantieperiode zullen alle gebreken verholpen of vervangen worden door de fabrikant d.m.v. reparatie, omruiling van het defecte onderdeel of het gehele apparaat. Aanspraken tijdens de garantieperiode leiden niet tot verlenging hiervan. Garantieaanspraak vervalt bij schade of gebreken die ontstaan zijn door oneigenlijk gebruik, misbruik of invloeden van buitenaf (vallen, stoten, water, stof, vuil of breken). Slijtagegevoelige onderdelen (b.v. batterijen) zijn uitgesloten van garantie. Bij ontvangst van de RMA goederen behoudt Gembird zich het recht om te kiezen tussen vervanging van de defecte waren of het uitgeven van een kreditnota. Het bedrag van de kreditnota zal altijd gecalculeerd zijn op basis van de huidige marktprijs voor het defecte produkt.	Garantie est de 24 mois à partir de la date d'achat de l'utilisateur final. Le talon de garantie doit énumérer clairement la date d'achat et le type d'appareil. Conservez le reçu d'achat pendant toute la durée de la garantie car elle est nécessaire pour toute réclamation. Au cours de la période de garantie tous les défauts doivent être remplacé aux frais du fabricant, soit par la réparation ou le remplacement de la pièce défectueuse ou l'ensemble du produit. Les travaux effectués sous garantie ne prolongent pas la période de garantie ni ne commencent pas une nouvelle période de garantie. Le fabricant se réserve le droit d'annuler toute demande de garantie pour les dommages ou défauts dus à une mauvaise utilisation, abus ou les effets externes (chute, choc, pénétration de l'eau, la poussière, etc..). Les pièces d'usure (par exemple les piles rechargeables) sont exclus de la garantie. Dès réception de la marchandise sous garantie, le SAV de Gembird Europe BV se réserve le droit de choisir entre le remplacement des produits défectueux ou de délivrer un avoir. Le montant d'avoir sera toujours calculée sur la base de la valeur actuelle du marché des produits défectueux.
Gembird Europe B.V. Wittevrouwen 56, 1358CD Almere The Netherlands www.gembird.nl/support support@gmb.nl Tel. 0900-4362473 € 0,15 p/m binnen Nederland Exclusief mobiele telefoonkosten	Gembird Europe B.V. Wittevrouwen 56 1358CD Almere, The Netherlands www.gembird.nl/support support@gmb.nl +33(0) 251 404849 Prix d'appel depuis telephone fixe Pays-Bas : 0.15 euro / min Prix d'appel depuis telephone mobile / autre pays - selon operateur

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ГАРАНТИЙНЫЙ ТАЛОН	УМОВИ ГАРАНТІЙНОГО ОБСЛУГОВУВАННЯ
1. Гарантийное обслуживание предоставляется в течение срока гарантии, при наличии правильно и четко заполненного гарантийного талона, и изделия в полной комплектации. Серийный номер и модель изделия должны соответствовать указанным в гарантийном талоне.	1. Гарантійне обслуговування надається протягом терміну гарантії, при наявності Гарантійного талону, заповненого належним чином, та виробу в повній комплектації.
2. Гарантийное обслуживание представляет собой бесплатное устранение всех неполадок (ремонт), или замену изделия на новое (аналогичное).	2. Гарантійне обслуговування не підтримується в разі порушення правил експлуатації, зберігання або перевезення виробу, що зазначені в інструкції по експлуатації виробу.
3. Гарантия не распространяется на неисправности, вызванные следующими причинами:	3. Гарантійне обслуговування скасовується у випадках:
• использование изделия не по назначению.	- наявності механічних пошкоджень або слідів стороннього втручання;
• нарушение условий эксплуатации, хранения или перевозки изделия, которые указаны в настоящей инструкции.	- пошкодження викликані стихійним лихом або нещасним випадком, включаючи й блискавку, потраплянням у виріб сторонніх предметів, рідин, комах, тощо;
• подключение нестандартных или неисправных периферийных устройств, аксессуаров.	- пошкодження викликані застосуванням або підключенням нестандартних або несправних периферійних пристроїв, аксесуарів;
• механические повреждения, попадание внутрь изделия посторонних предметов, веществ, жидкостей, насекомых.	4. Гарантія не поширюється на витратні матеріали та додаткові аксесуари;
• ремонт изделия не уполномоченными на то лицами.	З гарантійними умовами згоден.
4. Комплектность и внешний вид изделия проверяются Покупателем при получении товара в присутствии персонала фирмы.	
Послепродажные претензии по укомплектованности и внешнему виду не принимаются.	Підпис покупця: _____
	ГАРАНТІЙНИЙ ТАЛОН № _____
Наименование изделия: _____	Товар/модель _____
Модель _____	Серійний номер _____
Серийный номер _____	Термін гаранії _____
Срок гарантии _____	Дата продажу _____
Дата продажи «____» _____ 20____ года	Продавець (назва, телефон)
Фирма-продавец: _____	_____
Адрес и телефон фирмы-продавца:	
_____	Печатка та підпис продавця
М.П. С условиями гарантии ознакомлен и согласен:	_____
Продавец: _____ Покупатель: _____	З гарантійних питань звертайтесь до сервісних центрів Gembird. Про адреси та контакти Ви можете дізнатись на сайті www.gembird.ua або по телефону 044-4510213.