The purpose of this document is to explain how to establish a phone connection from your eWON to your PC using the callback feature of the eWON.
# Table of Contents

1. Hardware and software requirements................................................................. 3  
   Hardware requirements.................................................................................... 3  
   Software requirements.................................................................................... 3  
   eWON Firmware Version.............................................................................. 3  

2. Introduction....................................................................................................... 4  

3. PC Configuration.............................................................................................. 5  

4. eWON Configuration ....................................................................................... 10  
   Modem Configuration...................................................................................... 10  
   PSTN Modem Configuration.......................................................................... 10  
   ISDN Modem Configuration......................................................................... 10  
   GSM data Modem Configuration................................................................... 11  
   Callback Configuration................................................................................... 12  
   On ring........................................................................................................... 12  
   On user's request......................................................................................... 15  

5. Callback Request............................................................................................. 17  
   On ring.......................................................................................................... 17  
   On user's request......................................................................................... 17  

6. Connection Establishment................................................................................ 19  
   eWON – PC Connection............................................................................... 19  
   Closing Connection...................................................................................... 19  
   PC – PLC Connection.................................................................................... 20  

7. Troubleshooting............................................................................................... 21  
   The eWON cannot establish a PPP connection to the PC.......................... 21  
   The PC cannot connect to the devices behind the eWON......................... 21  

Revisions.............................................................................................................. 22
Hardware and software requirements

Hardware requirements

In order to follow this guide you will need:

- 1 eWON with integrated modem (for example: eWON 2001 PSTN)

Software requirements

**eWON configuration software:**

The eWON is configured through its web server. So all you need is a standard Web Browser software like Internet Explorer or Firefox.

Additionally we suggest you to download the eBuddy utility on our website: [http://support.ewon.biz](http://support.ewon.biz).

This utility allows to list all the eWONs on your network and to change the default IP address of an eWON to match your LAN IP address range. With eBuddy you can also easily upgrade the firmware of your eWON (if required).

**Other programming software:**

N/A

**eWON Firmware Version**

To be able to follow this guide your eWON needs a firmware version 5.0 or higher. A simple way to realize the eWON firmware upgrade is to use eBuddy, the eWON software companion.
Your eWON has a callback feature. If this feature is enabled, then the eWON can be triggered by an external event in order to call a given phone number and establish a PPP link.

This gives the opportunity to let the eWON’s phone line pay for the call, with a budget maintained by the eWON itself. This also ensures more security if you are calling back a private server.

In this document we will see how to reach your eWON and device(s) from your PC through a standard telephone line.

**Here are the steps to make a remote connection work:**

- Configure your PC to accept incoming calls
- Configure your eWON for callback
- Configure the outgoing PPP connection on the eWON

**If you want to reach a device connected to the Ethernet port of your eWON:**

- Create a route on your PC in order to reach the device(s) behind the eWON
- Set the eWON LAN address as default gateway on the devices
PC Configuration

For your eWON to reach your PC, you will have to configure the incoming connection settings of your PC. If not, the connection will be impossible.

Click on **Start / Settings / Network Connections / New Connection Wizard** (or open your PC’s **Control Panel** and click on **Network Connections**). The following window will open:

![New Connection Wizard](image_url)

**Welcome to the New Connection Wizard**

This wizard helps you:

- Connect to the Internet.
- Connect to a private network, such as your workplace network.

To connect to a wireless network, view [wireless networks in range](image_url). To continue, click Next.

Click on **Next** and select **Set up an advanced connection**.
3. PC Configuration

New Connection Wizard

Network Connection Type
What do you want to do?

- Connect to the Internet
  Connect to the Internet so you can browse the Web and read email.

- Connect to the network at my workplace
  Connect to a business network (using dial-up or VPN) so you can work from home, a field office, or another location.

- Set up an advanced connection
  Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it.

Click on Next and check Accept incoming connections.

New Connection Wizard

Advanced Connection Options
Which type of connection do you want to set up?

Select the connection type you want:

- Accept incoming connections
  Allow other computers to connect to this computer through the Internet, a phone line, or a direct cable connection.

- Connect directly to another computer
  Connect to another computer using your serial, parallel, or infrared port.

Click on Next and select the modem that you want to use for incoming connections.
3. PC Configuration

Click on **Next** and select **Do not allow virtual private connections**.

Click on **Next**.
3. PC Configuration

You will have to select the PC user having the right to make a PPP connection on the PC. The user and password of this account must then be used for the eWON PPP connection. Click on Next.

**NOTE**
Be aware that some factors, such as insufficient user's rights, may affect a user's ability to connect. So, it is better to choose a user with administrator rights on your PC.
3. PC Configuration

The following box is displayed:

Select the Internet Protocol (TCP/IP) and click on Properties:

Select the Internet Protocol (TCP/IP) and click on Properties:

Here, select Specify TCP/IP addresses and insert them. Use 202.0.0.1 and 202.0.0.2. There is no need to change them. The most important thing is that they must be incompatible with the other IP addresses (PC, eWON, etc.). Besides, specifying the IP address manually, it will be easier to add the adequate route later on your PC.

Finally click on Next and Finish.
Modem Configuration

**PSTN Modem Configuration**

Let the *Modem Init String* unchanged. You might need to adapt it only to fit your local telephone requirements on some special situations.

**ISDN Modem Configuration**

Let the *Modem Init String* unchanged. If needed, you may insert the identification number of your line in the *MSN* field.
4. eWON Configuration

GSM data Modem Configuration

Let the Modem Init String to its default value. Insert the PIN Code of your SIM card.

NOTE
Reboot your eWON for your PIN code to be applied.

In the Operator selection field, you can choose if your mobile phone operator should be allocated automatically or forced.

The other fields (upper part) cannot be modified, they only give you status information:

- The Modem Detected field displays the textual description of the eWON internal modem detected.
- The Signal Level field shows the current signal level for your GSM/GPRS communication. The signal level must be between 20 and 31 (signal levels below 18 could work, but the communication could be slower or even interrupted). If you get 0 or 99, check your local environment and your antenna isolation/power.
- The Network field indicates if you are able to connect to the GSM/GPRS network. You should read «Home Network» (when you are in your country) and «Roaming» (when you are abroad) to communicate safely.
- The Operator field displays the current GSM provider that you are using.
4. eWON Configuration

Callback Configuration

Thanks to the **Callback** feature, you can ask the eWON to call you back.

To configure your eWON, you will have to follow several steps. First of all, go to the **Callback** configuration page:

Check the **Callback enabled** box, the following page opens:

Select a **Callback mode**. You have two options: **On Ring** and **On user's request**. Make your choice and click on the **Update** button.

**On ring**: call your eWON, let ring a certain number of times and it will call you back.

**On user's request**: Make a dial-up connection on the eWON and trigger the callback manually.

**On ring**

If you select **On Ring** as callback mode, you will have to set the **Number of Rings** (the number of rings before the eWON callback function is triggered).
4. eWON Configuration

In this case, when you call the eWON, let ring a certain number of times (in our example min. 5 rings and max. 15 rings) and hang up. The eWON will call you back. Be aware that if you do not hang up before 15 rings, the eWON will pick up the line.

Set the **Callback delay** i.e. the seconds that the eWON will wait before calling back once the callback is triggered. The **Wait for user login for** corresponds to the seconds that the eWON will maintain the PPP connection for the user to log in. If the user does not log in within this time, the eWON will drop the outgoing connection. The **Dialup account** list box allows to choose the server used for the callback: **Primary dialup server, Secondary dialup server**. The **User's request account** cannot be used for the callback mode **On Ring**.

Go now to the **PPP outgoing Connection** page:

```
Configuration → System Setup → Communication → Network connections → Modem → Outgoing → Global
```

Enable the **PPP outgoing Connection**. This action will open the **Global outgoing connections** parameters.
As you can see the default *Idle time before hanging up* is 120 seconds (so, once you are logged, the eWON hangs up after 120 seconds of inactivity). On the other hand, the *Max outgoing call duration* is 60 minutes, i.e. the eWON hangs up after 60 minutes, even if you are working on it. Select *Use only server 1* in the *Select next server in case of error* field. Of course, you can adapt those parameters according to your needs.

Simply click on the *Update* button.

To configure the Primary Dialup Server (*Sever 1*), open the following page:

**Configuration → System Setup → Communication → Network connections → Modem → Outgoing → Server 1**
4. eWON Configuration

In the **Server phone number**, insert the phone number of your PC, the **User name and Password** of the incoming connection on your PC created earlier.

Do not check the **CHAP** box.

**On user’s request**

If instead of callback **On ring**, you choose the **On user’s request** as callback mode, the eWON will wait until the user logs in and triggers manually the callback request.

**Configuration → System Setup → Communication → Networking Config Callback**

Set the **Callback delay** i.e. the seconds that the eWON will wait before calling back once the callback is triggered. The **Wait for user login for** corresponds to the seconds that the eWON will maintain the PPP connection for the user to log in. If the user does not log in within this time, the eWON will cut the outgoing connection.

The **Dialup account** list box allows to choose the server used for the callback:

**Primary dialup server, Secondary dialup server**: those options allow the user to trigger a callback towards the phone number of Server 1 or Sever 2 and **User’s request account**: this option allows the user to call number defined by the user himself.

We need now to specify if the User who connects to the eWON may trigger the callback or not. Go to the **User Setup** page:

**Configuration → User Setup**

<table>
<thead>
<tr>
<th>Delete Selected Users</th>
<th>Create New User</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Login</td>
<td>First Name</td>
</tr>
<tr>
<td>Adm</td>
<td></td>
</tr>
</tbody>
</table>
Once you have clicked on the User, check the **Callback Enabled** check box, indicate if the **Callback phone number value** will be **Mandatory** or **User Defined**. If the phone number value is **User Defined**, the user will be able to modify the **Callback phone number** (see p.17). If you choose **Mandatory**, the user will not be able to change the phone number. Besides, specify the phone number that your eWON should call.

Finally, click on **Add/Update**.
Callback Request

On ring

If you have previously configured the eWON Callback mode to use the On ring (which is more convenient), all you have to do is call your eWON by phone. Depending on the Number of RINGS and Plus number of RINGS then On Hook, hang up after a certain number of rings for your eWON to call your PC back.

In the below example, you will have to wait 2-7 rings before hanging up for the eWON to call back. If you do not hang up before 7 rings, the eWON will pick up.

![Callback mode: On Ring](image)

On user's request

If you have configured the eWON Callback mode to use the On user's request, you must first connect to the eWON through the PPP connection (for more information on the dial-up connection, please refer to our document AUG-013 on [http://support.ewob.biz](http://support.ewob.biz)).

According to the Dialup account you chose in the Callback mode: Primary, Secondary or User's request the eWON homepage will vary.

If you have selected Primary server, the following window will open:

![Transaction page](image)
5. Callback Request

From this page, you can only modify the *Delay* parameters (the number of seconds that the eWON will wait before calling once the callback has been triggered). To trigger a callback from your eWON simply click on the *Callback* button. The eWON will call the phone number defined for the *Primary Server*.

If you have selected *User's request*, the following page will be displayed.

![User's request page](image)

In this case, you can see the phone number that your eWON will call and you can still modify it before triggering the call.

If the logged user has selected *Mandatory* instead of *User defined*, the following page will be displayed.

![Mandatory page](image)

In this case, you can see the phone number that the eWON will use for the callback, but you cannot change it.
Connection Establishment

Connection between your eWON and the PC

Once the eWON has established a PPP connection to your PC, click on the small icon in the task bar to make the connection properties appear. The Server IP address is your PC address and the Client IP address is the address of your eWON.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server type</td>
<td>PPP</td>
</tr>
<tr>
<td>Transports</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Authentication</td>
<td>PAP</td>
</tr>
<tr>
<td>Server IP address</td>
<td>202.0.0.1</td>
</tr>
<tr>
<td>Client IP address</td>
<td>202.0.0.2</td>
</tr>
</tbody>
</table>

So the eWON is reachable at address 202.0.0.2.

Closing Connection

When you want to close the PPP connection, do it through the eWON Homepage. If you close the connection from the PC side, the eWON will try to call back again as it will consider the closing as an interruption of the line.
6. Connection Establishment

**Connection between the PC and the devices**

For your PC to communicate with the devices behind the eWON, you will have to tell your PC that to connect to the devices, it has to pass through the phone line. To do so, you need to add a route on your PC. Bear in mind that for devices plugged in the serial port, you do not need to add a route if you use the PPP address 202.0.0.2.

To open the DOS window on your PC, click on **Start** / **Run**, the following box opens:

Type «cmd» and then **OK**.

Make a «route print» to get the interface used by the phone connection:

```
route print
```

*If we follow our example, the route to add would be:*

route add 192.168.1.0 MASK 255.255.255.0 202.0.0.2 IF 0x1000
Troubleshooting

The eWON cannot establish a PPP connection to the PC

- Check the user name and password for the PPP connection. They must be a PC's valid user name and password.
- Make sure that the Require secure authentication (CHAP) has not been enabled in the Server 1 settings.

The PC cannot connect to the devices behind the eWON

- The devices linked to the eWON must have the LAN IP address of the eWON they are connected to as default gateway.
- The PC and devices behind the eWON must be on a different network range, otherwise the routing is not possible. To avoid routing problems, disconnect the local network cable of your PC before adding the route on your PC.
- Make sure that you have added a route on your PC.
<table>
<thead>
<tr>
<th>Revision Level</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>2008-12-16</td>
<td>First release.</td>
</tr>
</tbody>
</table>

Note concerning the warranty and the rights of ownership:

The information contained in this document is subject to modification without notice. The vendor and the authors of this manual are not liable for the errors it may contain, nor for their eventual consequences.

No liability or warranty, explicit or implicit, is made concerning quality, the accuracy and the correctness of the information contained in this document. In no case the manufacturer’s responsibility could be called for direct, indirect, accidental or other damage occurring from any defect of the product or errors coming from this document.

The product names are mentioned in this manual for information purposes only. The trade marks and the product names or marks contained in this document are the property of their respective owners.

This document contains materials protected by the International Copyright Laws. All reproduction rights are reserved. No part of this handbook can be reproduced, transmitted or copied in any way without written consent from the manufacturer and/or the authors of this handbook.

Microsoft, Internet Explorer, Windows and Windows XP are either registered trademarks or trademarks of Microsoft Corporation

Firefox is a trademark of the Mozilla Foundation