



LW150 Sweex Wireless 150N router

Introduction

Please notice! On the included CD-ROM you will find the Setup Wizard. This easy install procedure will show you how to setup the router step-by-step.

- Do not expose the Sweex Wireless Broadband Router 150 Mbps to extreme temperatures. Do not place the device in direct sunlight or in the direct vicinity of heating elements.
- Do not use the Sweex Wireless Broadband Router 150 Mbps in extremely moist or dusty surroundings.
- Protect the device against powerful shocks and falls – they may damage the internal electronics.
- Never attempt to open the device yourself, there are no serviceable parts inside. Opening the device will cause the warranty to lapse.

Package contents

In this package you will find:

- Wireless Broadband Router 150 Mbps
- UTP network cable RJ-45
- CD with setup wizard and this manual

If you find that any of the package contents are missing, please return the package to the sales point where it was bought.

Terminology list

This manual will contain a number of technical terms. It is important to know what they mean before you begin installing and configuring the router.

- **Router:** This is the product you have just bought. A router acts as a boundary between two networks, WAN and LAN.
- **UTP network cable RJ-45:** From here on: network cable. A network cable is used for connecting network devices such as computers, modems and routers. You may already have such a cable, the cable in the package contents is intended to connect the router to your modem.
- **ISP:** Internet Service Provider, this is the company that supplies you your Internet connection.

- **Broadband modem:** From here on: modem. Your modem is the device you already have or that has been supplied to you by your ISP that currently provides your internet connection. The two most common modem types are cable modems and ADSL modems, but other kinds of modems also exist.
- **LAN:** LAN stands for “Local Area Network”, in the case of this router, the LAN consists of the four yellow ports and the wireless network. With the router, all your computers will form a single LAN.
- **WAN:** WAN stands for “Wide Area Network”, in most cases this means the Internet.
- **Wireless security:** By default, the router’s wireless network is not secured. This means that anyone in range (including your neighbours) can connect to the network and use your internet connection. Wireless security protects your network so that only authorised devices can gain access. Sweex recommends all users to secure their wireless network after installation using either the WPA or WPS methods explained further on in this manual.

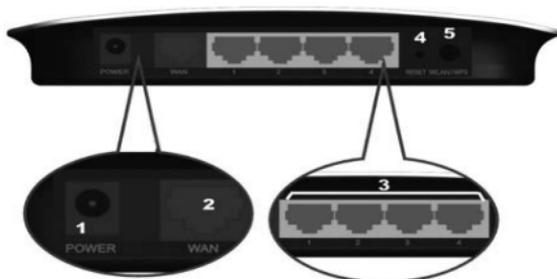
Product description

Front



1. **Power LED:** This light indicates that the router receives power.
2. **SYS LED:** A constantly blinking SYS light indicates correct functioning of the router.
3. **WPS LED:** When this light blinks, it is possible to connect to the router with a WPS enabled device. For more information, see the “Securing your wireless network” chapter.
4. **WLAN LED:** This light indicates that the wireless network is active. A flickering light indicates wireless activity.
5. **LAN Port 4 - 1 LED:** This light indicates an active connection on the corresponding LAN port. A flickering light indicates network activity.
6. **WAN Port LED:** This light indicates an active connection on the WAN port. A flickering light indicates WAN activity.

Back



- 1. AC power input:** Connect the supplied power adapter to this input. If the adapter is lost it can be replaced by a similar model with 9 V AC output and 1 A current rating
- 2. WAN port:** Connect the UTP network cable coming from your ISP modem to this port. Upon a successful WAN connection, the WAN light at the front of the router will light up. This is a prerequisite for internet access.
- 3. LAN port 1 - 4:** You can connect an UTP network cable coming from a computer to this port. When the computer is turned on the corresponding light at the front of the router will light up.
- 4. Reset button:** You need an unfolded paperclip to press the reset button. For more information on the reset procedure refer to the troubleshooting section of this manual.
- 5. WPS button:** This button activates WPS wireless security. For more information on WPS, see the "Securing your wireless network" chapter

Installing the router

There are three ways of installing the router:

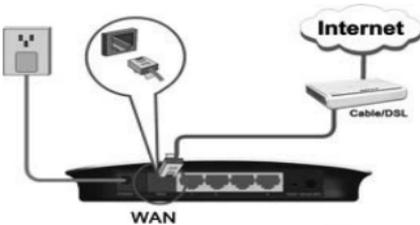
- The Setup Wizard program included on the CD
- The Simple setup described in this manual
- The Advanced setup also described in this manual.

The wizard and simple setup assume default settings and will work for most users. If you are an advanced user or if you know which setup method your ISP requires, you may proceed to the advanced setup immediately.

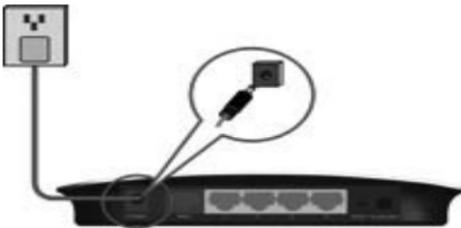
Simple setup

Simple setup is done in 7 steps:

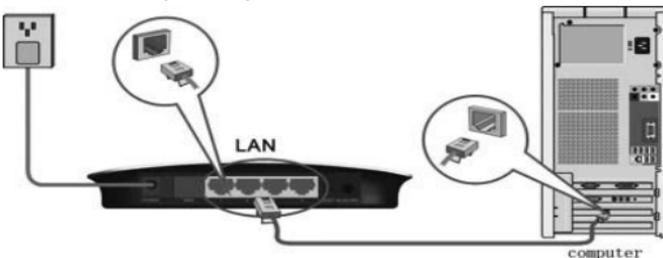
1. Disconnect the power to your modem. If one or more computers were connected to your modem using a network cable, disconnect them.
2. Use the included network cable to connect your modem to the blue WAN port of the router. Do not connect any computers yet!



3. Connect the power to your modem and wait until it's lights indicate normal operation
4. Connect the power to the router, and wait 1 minute to give the router time to start up and configure itself. This is important!



5. If you have any computers or other devices that were already connected by UTP network cable, you can now connect these cables to the yellow LAN ports of the router



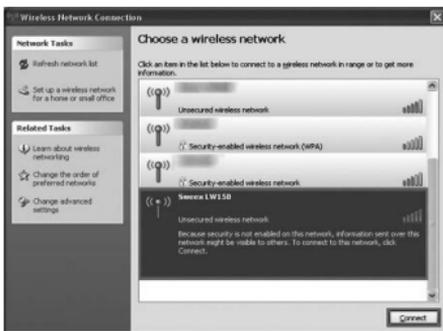
6. Wait another minute. Your router is now installed! Wired computers now have internet access, for wireless computers one additional step is required, follow the instructions below for the Windows version you have.

Connecting to a wireless network

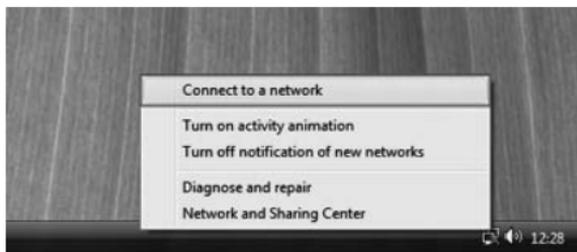
- **Windows XP:** Right click on your wireless adapter's icon at the bottom right of your screen and click "View Available Wireless Networks":



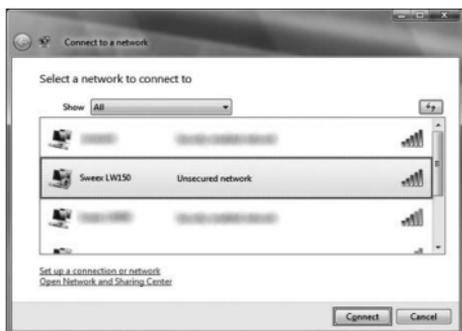
A window titled "Choose a wireless network" will appear. In this window, select the "Sweex LW150" entry, click the "Connect" button and follow the instructions on screen:



- **Windows Vista:** Right click on the Network & Sharing Center icon in the bottom right of your screen, and click “Connect to a network”:



A window titled “Connect to a network” will appear. In this window, select the “Sweex LW150” entry, click the “Connect” button and follow the instructions on screen:



Note: If you see a red cross near the network and the text: “The settings saved on this computer for the network do not match the requirements of the network”, please refer to the troubleshooting section of this manual.

Advanced setup

Advanced setup can be done when you know exactly which settings your ISP requires or when the simple setup fails.

There are 5 possible configurations. We have listed them with instructions on how to configure them. To know which setting matches the settings required by your ISP, look at the list of providers further on in this manual. The list is made out of ISP’s and their corresponding services. Behind each service is listed the required setting.

Note: If any of the settings below do not work immediately, it is recommended to power down your modem, wait a few minutes and then connect the power to your modem again.

Logging in to the router:

For advanced setup, it is required that you login to the router to manually configure it correctly for your internet connection. To log in to the router, start Internet Explorer, empty the address bar and enter: `http://192.168.15.1/`, then press Enter. The following window should appear:



Enter “sweex” as user name and “mysweex” as password, then click OK. If you are unable to login, please refer to the troubleshooting section of this manual.

The following screen should appear. Click next to start the advanced setup. If you see a different screen, click “Internet Configuration” in the menu on the left:



You should see the Internet Configuration Wizard screen:



You can now proceed with the advanced setup using one of the configurations described further on.

Checking if the router is successfully connected to the internet

For configurations 1 – 4, it is possible to check if you have a working internet connection. After applying the configuration, the router will process the changes and take you to the “System Status” page. If this does not happen, you can click “System Status” in the menu on the left. The status page looks as follows:



When the router has successfully connected to the internet, it will display “Internet Connection: Connected”

Configuration 1: DHCP with MAC address clone

Certain ISP's require a specific MAC address to be connected to their modem. If this is the case for your ISP, it is possible to clone the MAC address from your computer to the router's WAN port, so that your ISP will accept the router on their network.

Note: Cloning your MAC address must be done from the computer that was originally connected to your modem, and this computer must be connected to your router by network cable. MAC address cloning normally does not work over wireless connections.

Click the “Dynamic IP / DHCP” button, you will see the following screen:

Click the “Clone MAC Address” button. You should see the MAC Address change. Then click the “Next” button and then “Apply”

Configuration 2: PPPoE

If your ISP requires the PPPoE connection type, click the “PPPoE” button. You will see the following screen:

Enter your account name (user name) that has been provided to you by your ISP in the “Account” field and the corresponding password in the “Password” field. Clone your MAC address only if this is required by your ISP.

Note: Cloning your MAC address must be done from the computer that was originally connected to your modem, and this computer must be connected to your router by network cable. MAC address cloning normally does not work over wireless connections.

When finished, click the “Next” button and then “Apply”.

Configuration 3: PPTP

If your ISP requires the PPTP connection type, click the “PPTP” button. You will see the following screen:

SWEET LW150 SWEEX WIRELESS BROADBAND ROUTER 150 MBPS

- System Status
- Internet Configuration
- Advanced Settings
- Wireless Network
- DHCP Server
- Virtual Server
- Traffic Control
- URL Monitor
- Security Settings
- Routing Settings
- System Tools
- Logout

Internet Configuration Wizard - PPTP

PPTP Server IP: 0.0.0.0
 Address: 0.0.0.0
 User Name: user@net.wir
 Password: user
 Address Mode: Static
 IP Address: 0.0.0.0
 Subnet Mask: 255.255.255.0
 Default Gateway: 0.0.0.0

Help

There are two configuration options to set up your Internet connection: Setup Wizard or manual configuration in the menu. You may wish to contact your Internet service provider for your connectivity information.

www.sweet.com

Fill out all fields as required by your ISP, click the “Next” button and then “Apply”.

Configuration 4: L2TP

L2TP is very similar to PPTP. If your ISP requires the L2TP connection type, click the “L2TP” button. You will see the following screen:

SWEET LW150 SWEEX WIRELESS BROADBAND ROUTER 150 MBPS

- System Status
- Internet Configuration
- Advanced Settings
- Wireless Network
- DHCP Server
- Virtual Server
- Traffic Control
- URL Monitor
- Security Settings
- Routing Settings
- System Tools
- Logout

Internet Configuration Wizard - L2TP

L2TP Server IP: 0.0.0.0
 Address: 0.0.0.0
 User Name: user
 Password: *****
 Address Mode: Static
 IP Address: 0.0.0.0
 Subnet Mask: 255.255.255.0
 Default Gateway: 0.0.0.0

Help

There are two configuration options to set up your Internet connection: Setup Wizard or manual configuration in the menu. You may wish to contact your Internet service provider for your connectivity information.

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Fill out all fields as required by your ISP, click the “Next” button and then “Apply”.

Configuration 5: Static IP

To configure the router’s WAN port for a static IP address, click the “Static IP” button. You will see the following screen:

The screenshot shows the 'Internet Configuration Wizard (Static IP)' interface. On the left is a navigation menu with options like 'System Status', 'Internet Configuration', 'Advanced Settings', 'Wireless Network', 'LAN IP Address', 'Internet Access', 'Static Content', 'LAN Monitor', 'Security Settings', 'Routing Settings', 'System Tools', and 'Logout'. The main area contains the following fields and instructions:

- IP Address:** 192.168.1.1
- Subnet Mask:** 255.255.255.0
- Gateway:** 192.168.1.1
- Primary DNS Server:** 192.168.1.1
- Secondary DNS Server:** (optional)
- WAN MAC Address Clone:** YES (selected)
- MAC Address:** 08:00:2B:01:00:00
- Buttons:** [Clone Default MAC] [Clone MAC Address]
- Help text:** 'There are two configuration options to set up your internet connection: Internet Wizard or manual configuration in the menu. You may wish to contact your Internet service provider for your connectivity information.'
- Footer:** 'Allowable: If your Internet Provider requests you to clone your MAC Address, click the "Clone MAC Address" button. If you are not sure, don't change the setting.' [Back] [Next]

Fill out all fields as required by your ISP, clone your MAC address only if this is required by your ISP.

Note: Cloning your MAC address must be done from the computer that was originally connected to your modem, and this computer must be connected to your router by network cable. MAC address cloning normally does not work over wireless connections.

When finished, click the “Next” button and then “Apply”.

Wireless network configuration

It is recommended to only adjust wireless settings from a computer connected to the router by network cable, especially when changing wireless security settings. This will prevent the connection from being lost if you accidentally apply incorrect settings.

To adjust the wireless network configuration, first login to the router as described in the “Advanced Setup” chapter, then click “Wireless Network” in the menu on the left side. You will see the following screen:



SSID

The most important setting in this screen is the SSID, this is the name of your wireless network, used for identification purposes. When SSID broadcast is enabled, you and everyone else in range of your network can see the name in the list of available wireless networks.

It is recommended that you change the SSID, the default SSID “Sweet LW150” can cause conflicts if multiple routers of this model are in range of each other. When changing the SSID, you will need to connect to your wireless network again as described in the chapter “Connecting to a wireless network”.

Channel

The Channel setting controls the frequency on which the router transmits its wireless signal. With the default option, “AutoSelect”, the router will scan all channels when powered up and automatically select the channel with the best signal conditions. Changing the channel is only recommended when you experience poor wireless performance of the router.

Other settings

These settings are for experts only and normally do not need to be changed. The default settings provide an optimal mix between performance and compatibility. This also applies to the advanced settings page accessible in the menu on the left.

After changing any of the settings, click the “Apply” button to apply the changes.

Securing your wireless network

Wireless security protects your wireless network so that only authorised devices can gain access. Sweex recommends all users to secure their wireless network. Securing your network should only be done after internet access through the router has successfully been set up.

There are three methods for securing your wireless network:

- **WPA** is a manual method of securing your network. You configure a network key and only devices with this key can access the network. You have to manually enter the key in each device that you want to grant access. WPA is supported by most devices and is the recommended method for securing your wireless network.
- **WPS** is built on top of WPA and enables automatic configuration and exchange of WPA keys through a PIN code or the simple push of a button. WPS is new and not widely supported yet.
- Some older devices, from 2005 or before and in some cases Windows 98, ME, 2000 and older Windows XP versions may not support **WPA**, in this case you will have to fall back to the older **WEP** method for wireless security. **WEP** is not recommended for normal operation since it is no longer considered fully secure by today's standards.

The Security Settings page can be accessed by clicking “Wireless Network” – “Security Settings” in the menu on the left side.

Security Settings

SSID: Wireless LAN1(2)

Security Mode: Mixed WPA/WPA2 - Personal

WPA Algorithms: TKIP AES TKIP/AES

Pass Phrase: 12345678

Key Renewal Interval: 300 second

Help

Select SSID: If the dual SSID is enabled in the basic wireless setting, select the corresponding SSID to configure the wireless security.

WEP Key: either ASCII (5-13 ASCII characters except , and other illegal characters.) or hex legal characters (16-26 hex characters.)

WPA/WPA2: you can enable personal or mix mode, but you must make sure that the wireless client also supports the selected encryption method.

To connect a non-WPS device to a WPS secured router, click “Wireless Network” - “WPS Settings” in the menu on the left side, the “WPS Key (ASCII)” is the WPA key you can use for connecting non-WPS enabled devices.

Method 3: WEP

Securing your network with WEP is done in 2 steps:

1. Select the following settings:

Security Mode: “Mixed WEP”

Default Key: “Key 1”

WEP Key 1: Here you have to set the network key (password) for your wireless network. This should be a difficult to guess 5 letter combination, or, if you change the key mode from “ASCII” to “HEX”, a 10 digit code. We also recommend you to write the WEP key down and store it near the router. If the key is lost you please refer to the troubleshooting section of this manual.

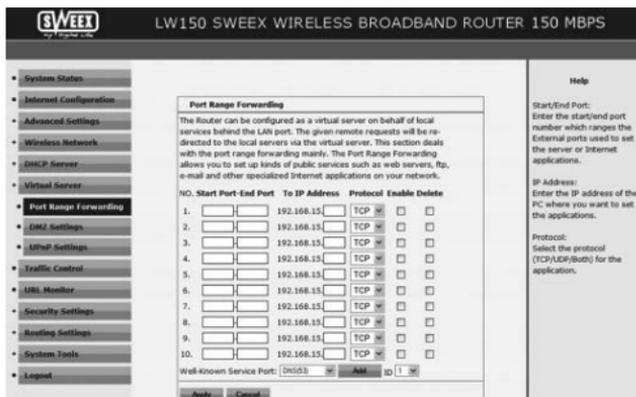
2. When finished, click the “Apply” button. If you were connected wirelessly, you will now observe that your connection is lost. Follow the steps described in the “Connecting to a wireless network” section of the manual to regain the (now secure) connection.

Advanced features

In this chapter we will describe some of the advanced features in the router. The following sections assume basic knowledge of computer networking technology and terminology.

Static DHCP

By default, the router dynamically assigns IP addresses to all connected devices through the DHCP protocol. This is the most user-friendly method of network configuration but it can also lead to IP addresses that change over time or when a device reconnects. In certain cases this is undesirable behaviour, for example when you use port forwarding it is



To setup port forwarding, login to the router as described in the “Advanced setup” chapter and click “Virtual Server” – “Port Range Forwarding” in the menu on the left. You will see the following screen:

To forward a single port, enter the desired port number twice in the first empty rule, enter the IP address that the port should be forwarded to and select the desired protocol, check the “Enable” checkbox and click the “Apply” button. To forward multiple adjacent ports at once, just enter the first port in the “Start Port” field and the last port in the “End Port field”.

It is not possible to forward more than 10 port ranges.

For a DMZ, click “DMZ” in the menu on the left, enter the IP address of the device, check the “Enable” checkbox and click the “Apply” button.

Troubleshooting

This chapter of the manual will explain a number of common issues that you may run into and possible solutions.

- **The CD Wizard cannot connect to the router and I cannot access the router at <http://192.168.15.1/>. Windows indicates that I have a working network connection.**
- > This issue may arise from incorrect IP settings on your computer. You can check and adjust your settings as follows:

Windows Vista

1. Click the start button at the bottom right of your screen and click “Control Panel”

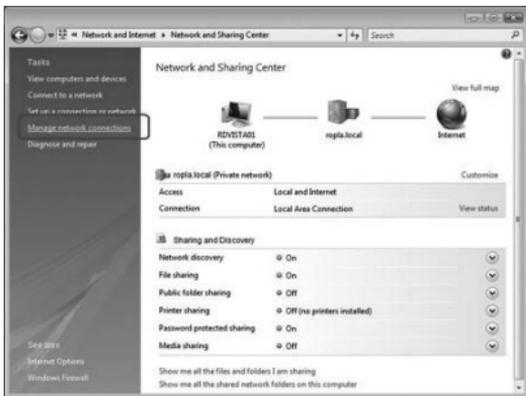


2. In the Control Panel, click “View network status and tasks”. If your Control Panel is in classic view, open the “Network and Sharing Center” icon:

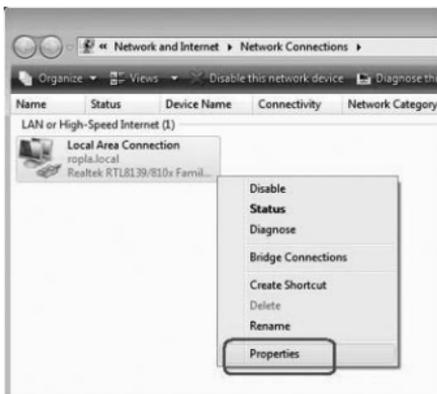


3. The Network and Sharing Center window should now open.

In the Network and Sharing Center, click "Manage network connections" in the bar on the left side:



4. Right click the first connected LAN or High-Speed Internet Connection, in this example the "Local Area Connection", and click "Properties" from the context menu. If you have multiple connected connections, repeat steps 4 to 7 for each connection:



5. The connection's property window appears. In this windows, select the "Internet Protocol Version 4" from the list of items and click the "Properties" Button:



6. The Internet Protocol Version 4's property window appears. In this window, ensure that both settings are set to "Obtain automatically":



7. Confirm the settings by clicking "OK". The network settings for Vista are now properly configured for your router.

Windows XP

1. Click the start button at the bottom right of your screen and click “Control Panel”



2. In the control panel, click “Network and Internet Connections and open the “Network Connections” icon. If your control panel is in Classic View, you may open the “Network Connections” icon straightaway.



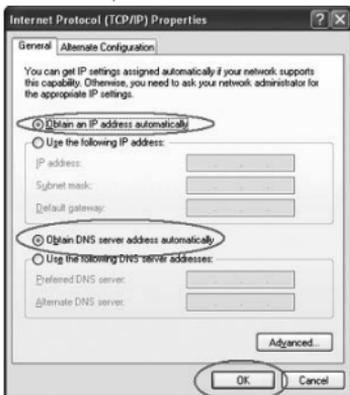
3. Right click the first connected LAN or High-Speed Internet Connection, in this example the “Local Area Connection”, and click “Properties” from the context menu. If you have multiple connected connections, repeat steps 3 to 6 for each connection.



4. The connection’s property window appears. In this windows, select the “Internet Protocol” from the list of items and click the “Properties” Button:



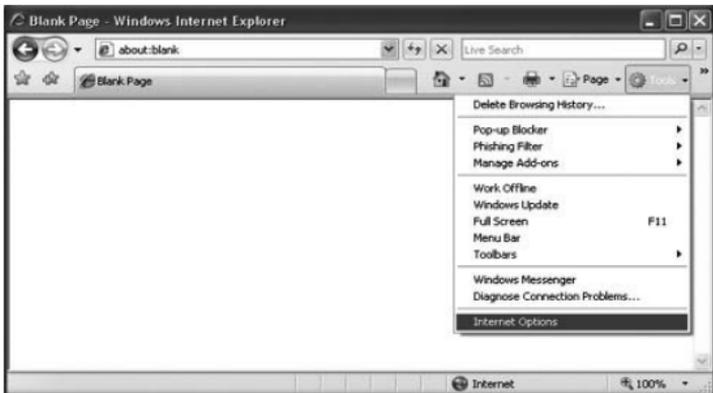
5. The Internet Protocol's property window appears. In this window, ensure that both settings are set to "Obtain automatically":



6. Confirm the settings by clicking "OK". The network settings for XP are now properly configured for your router.

- I appear to be connected but Internet Explorer still displays an error message "Internet Explorer cannot display the webpage" or similar.
- > This problem may arise from incorrect proxy server settings. You can adjust these settings as follows:

1. In Internet Explorer, click the "Tools" menu or icon and chose "Internet Options".



2. The “Internet Options” window will now open.



3. In this window, click the “Connections” tab and in this tab, the “LAN Settings” button.



4. The “LAN Settings” window will now open. Ensure that all checkboxes are unchecked and confirm the settings by clicking “OK”

- **My computer indicates that it is not connected to a network.**

> This problem is usually resolved by carefully checking all connections and indicator lights. For a wired computer, follow the network cable to the router’s backside. It must be plugged in to one of the yellow LAN ports. The yellow ports are also numbered and corresponding to each LAN port there is an indicator light at the front of the router. This light must be lit to indicate a working connection. If the light is off, fiddle the cable or try a different cable. For a wireless computer, check the wireless connection status icon at the bottom right of your screen, there should not be a red cross. If you see a red cross, follow the steps described in the “Connecting to a wireless network” section of the manual.

- I have Windows Vista and I get the error message “the settings saved on this computer for the network do not match the requirements of the network” when I try to connect wirelessly.
- > This problem can be solved as follows:

1. In the Control Panel, click “View network status and tasks”. If your Control Panel is in classic view, open the “Network and Sharing Center” icon:



2. The Network and Sharing Center window should now open.

In the Network and Sharing Center, click “Manage wireless networks” in the bar on the left side:



3. The Manage Wireless Networks window now opens. In this window, select the conflicting network and click "Delete". After the network has been deleted, you can close the window and follow the steps described in the "Connecting to a wireless network" section of the manual.

- **I have lost the WPA or WEP key required to access my wireless network.**

> There are two possible solutions for this issue:

1. Access the router from a computer that is connected by network cable as described in the "Advanced setup" section of this manual. Click "Wireless Network" – "Security Settings", you can view the key there.
2. Reset the router to its factory default settings, which is an unsecured network. The reset procedure is described in the following item.

- **My router no longer responds, or I want to start with a clean sheet.**

> This can be solved by resetting the router to its factory default settings. After the reset, your router will be as you unpacked it and you have to install it again according to this manual. To reset the router, unfold a paperclip and use it to press the reset button at the backside of the router for 15 seconds.

- **I want to connect more than 4 wired devices to the router. How can I expand the number of ports?**

> This can be done by connecting an Ethernet network switch to one of the LAN ports.

Specifications

- Supports IEEE 803.3 10BASE-T and 803.3u 100BASE-TX
- 1 x WAN, 4 x LAN UTP ports RJ-45 10/100 Mbps
- Built-in Firewall, NAT, UPnP and Port Forwarding
- Supports IEEE 802.11b/g, IEEE 802.11n draft 4.0 (draft 2.0 compatible)
- Supports WEP/WPA/WPA2 wireless security with TKIP / AES encryption
- Supports WPS for easy wireless security (PBC & PIN)
- Wizard & Web-based configuration
- Wireless datarate 150 Mbps
- Operating Frequency 2.4 GHz

Additional specifications

- Supports DHCP (dynamic IP), PPTP, Static IP, PPPoE, L2TP
- Supports VPN pass through, DDNS
- Supports Wi-Fi Multimedia (WMM), Wireless Distribution System (WDS)
- Supports Auto MDI / MDIX
- Ralink Chipset

- Non-detachable 2 dBi internal antenna
- Transmission power: 20 dBm @ 15 Mbps, 15 dBm @ 150 Mbps, 100 mW max
- Receive sensitivity: 150M: -71 dBm @ 10% PER; -54M: -78 dBm @ 10% PER; 11M: -91 dBm @ 8% PER; 6M: -94 dBm @ 10% PER; 1M: -95 dBm @ 8% PER

Power adapter specifications:

- Output: 9 V AC, 1 A

Router defaults

- IP Address: 192.168.15.1
- Username: **sweex**
- Password: **mysweex**
- SSID: Sweex LW150
- Connection type: DHCP

Warranty

- For this Sweex product a three year warranty period applies, beginning from of the date of purchase.
- In case of defect, return the product to your reseller with failure description, proof of purchase and all accessories.
- Warranty will be void in case of opened products, physical damage, misuse, modification, repair by unauthorised persons and using the product for other purposes than its intended use.
- We do not give support or warranty on supplied software, rechargeable batteries and batteries. Transaction of warranty only takes place at the sales point where the product is bought.

All brand names and associated rights mentioned in this manual are and stay property of the rightful owner.

