CONTENTS

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1. YOUR HERCULES WIFI EXTENDER

Hercules is proud to present the Hercules WiFi Extender, a device that will literally extend your sensation of wireless freedom. When ideally positioned in your home, it will bridge distances and get around obstacles which used to limit wireless communication between your computers, sharing your Internet access, your devices or your data.

Great care has been taken in designing your product. Both simple to operate and user-friendly, it is well suited to beginners and advanced users alike.

And now, it's time to learn about your new product and join in the Wireless Attitude™!

1.1. Recommendations

- Never open up your Hercules WiFi Extender, as you risk damaging its internal components.
- In order to avoid the risk of fire or electrical discharge, keep your WiFi Extender away from:
  - rain or humidity, as well as all fluids (water, chemical products and any other liquids),
  - sources of heat such as heaters, stoves and any other heat-producing devices (including amplifiers),
  - direct sunlight.
- Do not cover your WiFi Extender.
- Unplug the WiFi Extender's power cable if you do not plan on using it again for an extended period of time. To unplug the power cable, take hold of and pull on the plug. Never pull on the cable itself.
- Disconnect the WiFi Extender before cleaning. Use a soft cloth for cleaning and avoid using aerosol cleaners.
- The device must be powered using the included power adapter only. The power adapter must remain easily accessible when plugged in.
- This device is intended for use in a temperate environment.

1.2. Specifications

The Hercules WiFi Extender is equipped with two functionalities: (1) WiFi repeater, (2) wireless WiFi 802.11g access point.

- 802.11g wireless access point
- RF specification: frequency band = 2400-2483.5MHz
- Maximum transmission power: 100mW
- 1 adjustable external antenna
- 1 RJ-45 connector for a LAN Ethernet 10/100Mbps connection
- Security functions: WEP/WPA-PSK/WPA2-PSK/Mixed WPA-WPA2, filtering by MAC address
- External DC power, input: 120~240VAC, 50/60Hz, output: 12VDC / 0.4A

- Green LEDs on front face
- Firmware (software) update via Ethernet port

1.3. System requirements

To access configuration settings:

- Intel Pentium III, AMD Athlon/AMD-K6
- 64MB RAM
- RJ45 10/100 Ethernet network adapter
- CD-ROM drive
- Operating system: Microsoft Windows 2000, XP, Vista

To access the Internet:

- Orange Livebox with active Internet line
- Internet Explorer 6.0, Netscape Navigator 4.7 or Mozilla Firefox 1.0 or higher
- 802.11b/g wireless network device

1.4. Factory default settings (for advanced users)

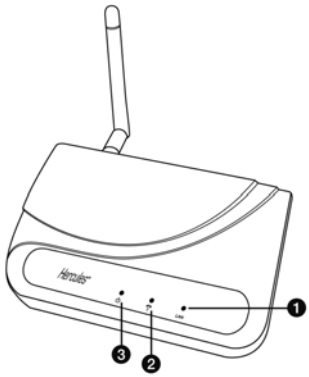
- Hercules WiFi Extender IP address: 192.168.1.254
- Password: 123456

1.5. Box contents

Please verify that all of the following elements are present in your Hercules WiFi Extender box:

- Hercules HWGEXT-54-LB WiFi Extender
- CD-ROM containing Installation Assistant and user manual in PDF format
- Ethernet cable
- Power adapter (120~240VAC – 12VDC / 0.4A)
- Wall mounting kit
- Quick Start Guide in English

1.6. Front face overview

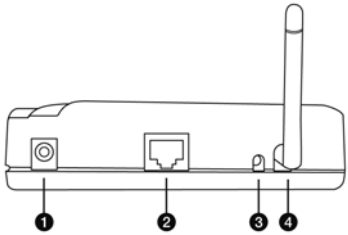


① Ethernet LED: the LED is lit up when the port is connected to a device. It flashes during data transfer.

② WiFi LED: the LED is lit up when the WiFi connection is active. It flashes regularly when searching for the Livebox and intermittently during data transfer.

③ Power LED.

1.7. Connectivity overview



① Power plug to connect power adapter

② Ethernet port allowing the Hercules WiFi Extender to be connected to a computer for the initial set-up

③ [RESET] Return to factory settings button: Switch on the Hercules WiFi Extender and wait until initialization is complete. Next, press the RESET button using an object with a pointed tip for 10 seconds. Release the button and wait for the Hercules WiFi Extender to restart.

④ Detachable external antenna (must be directed upward)

2. INSTALLING YOUR HERCULES WIFI EXTENDER

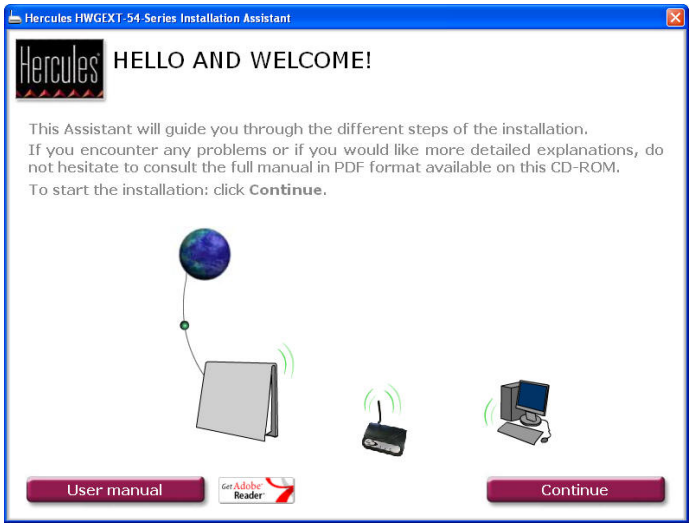
To simplify this task, Hercules proposes launching an Assistant which will verify with you, step by step, that the installation of your Hercules WiFi Extender is carried out correctly.

2.1. Launching the Hercules WiFi Extender Installation Assistant

The Assistant, available on the CD-ROM included with the Hercules WiFi Extender, will guide you through the different steps of the installation procedure. To help you with the installation, each of the steps is described below.

- Insert the included CD-ROM into your CD-ROM drive.

The Installation Assistant appears automatically.



If the installation menu does not launch automatically:

- Double-click My Computer.

- Double-click  .

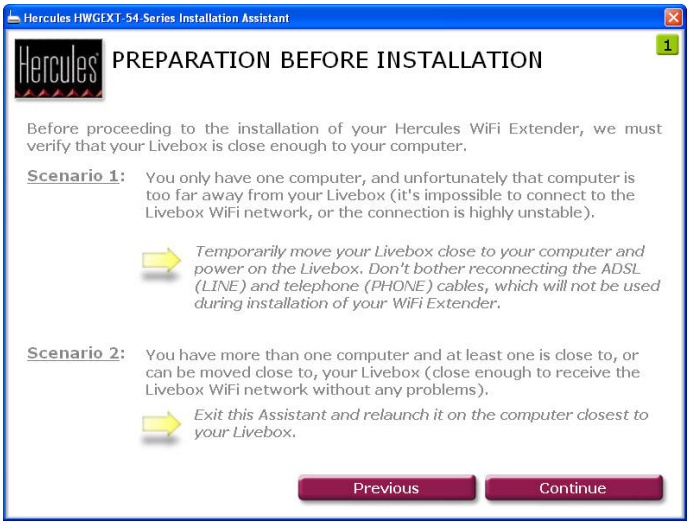
- Double-click Setup.exe, if necessary.

2.2. Installing the Hercules WiFi Extender in a few easy steps

2.2.1. Step 1: PREPARATION BEFORE INSTALLATION

Please read the on-screen instructions carefully to **prepare for the installation**. Don't forget that both your WiFi Extender and your computer must be located within your Livebox WiFi network coverage zone. Moreover, depending on the layout of your home (and the locations of electrical outlets and telephone plugs, in particular), you may have to **move your computer close to your Livebox** or **move your Livebox close to your computer** (in this case, don't bother reconnecting the ADSL (LINE) and telephone (PHONE) cables for the moment).

After the installation, you will be able to return your Livebox or your computer to its proper spot in your home. You can also position your Hercules WiFi Extender between the Livebox and the computer (for details on the best positioning, please refer to Step 7: POSITIONING THE WIFI EXTENDER).

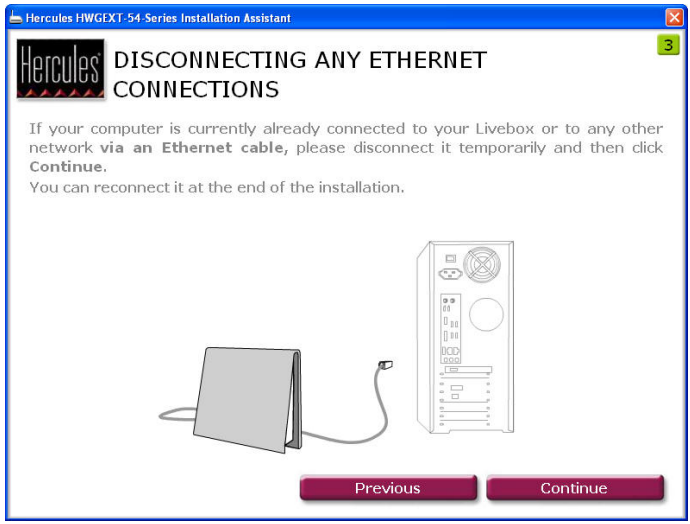


2.2.2. Step 2: VERIFYING THE LIVEBOX

- Please verify that your Livebox is powered on and that its WiFi LED is lit up.

2.2.3. Step 3: DISCONNECTING ANY ETHERNET CONNECTIONS

- Disconnect all Ethernet cables (connected to your Livebox or to another network) from your computer.



2.2.4. Step 4: DISCONNECTING ANY WIFI NETWORKS

- If your computer is connected to any WiFi network, disconnect it by clicking the **WiFi disconnection** button. Otherwise, proceed to the next step by clicking the **Continue** button.

2.2.5. Step 5: POWERING ON AND CONNECTION TO YOUR COMPUTER

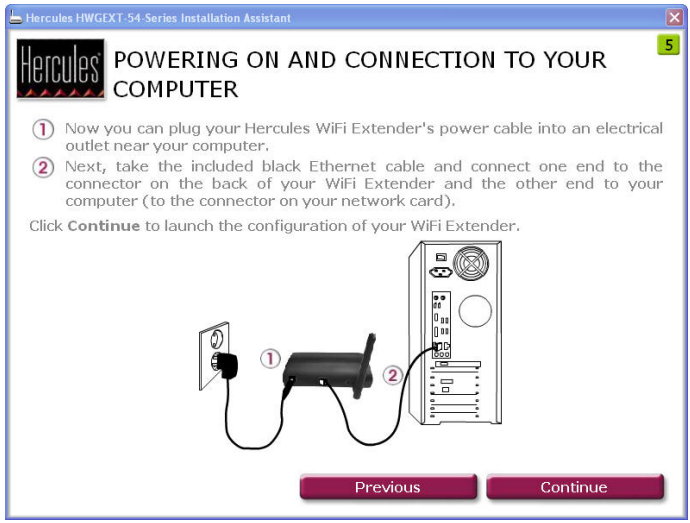
- Connect the Hercules WiFi Extender's **power cable** to the power plug ① and plug the **power adapter** into an electrical outlet located near your main computer and your Livebox.

The power LED lights up.

- Connect the included **black Ethernet cable** to the Ethernet port ② on the Hercules WiFi Extender and the Ethernet (RJ-45) port on your computer's network adapter.

The Ethernet port LED lights up.

- Click **Continue**.



2.2.6. WiFi connection of the Hercules WiFi Extender to your Livebox via QuickAccess

The Hercules QuickAccess utility is launched automatically, allowing you to configure your Hercules WiFi Extender.

If you have enabled the Access Manager in your Web browser in order to control access to certain sites which may offer contents of a violent or otherwise undesirable nature, you will not be able to immediately connect to WiFi Extender Manager.

When launching QuickAccess, the Access Manager will prompt you for authorization to visit the website http://192.168.1.254. This site corresponds to the WiFi Extender Manager interface associated with your Hercules WiFi Extender. To access it, simply accept the authorization to display this site. The WiFi Extender's address will be stored in your Web browser, and thereafter you will be able to directly access WiFi Extender Manager.

- Follow the on-screen instructions:

- Select the WiFi network transmitted by your Livebox.
- Verify that the WiFi network's SSID corresponds to the one found on the underside of your Livebox.
- Click **Next**.

- Carry out the Livebox-Hercules WiFi Extender pairing by pressing the REG button (Sagem model) or ① button (Inventel model) on your Livebox.
- Click **Next**.

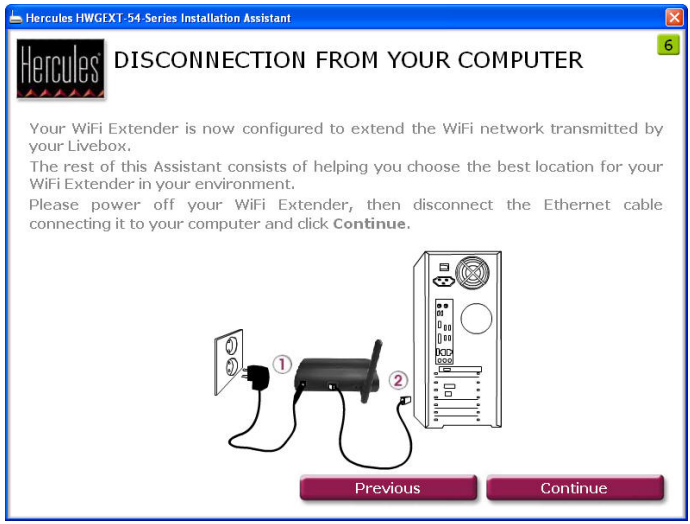
Note: **Pairing** consists of temporarily disabling the MAC address **filtering** mode on your Livebox. All devices, including your **WiFi Extender**, may then be added to the list of MAC addresses as long as you enter the WEP key for your Livebox (please see below).

- Enter the WEP security key found on the underside of your Livebox.
- Click **Connect**.

The Hercules WiFi Extender connects to your Livebox.

⚠ Configuration is now complete. If it was successful, move on to Step 6: DISCONNECTION FROM YOUR COMPUTER. If not, click **Restart** to relaunch the configuration Assistant or **Exit** to exit the Assistant.

2.2.7. Step 6: DISCONNECTION FROM YOUR COMPUTER



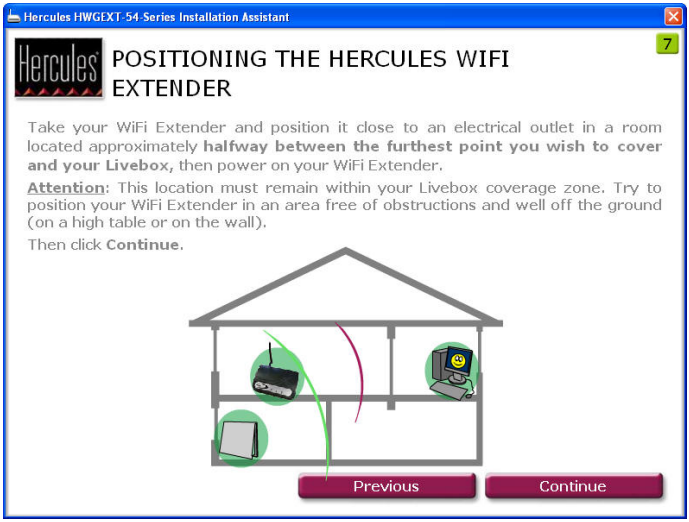
Once the Hercules WiFi Extender has been configured to extend your WiFi network throughout your home, you can disconnect it from your computer and unplug it from the electrical outlet. You should then position it in your desired location and plug it into an electrical outlet again.

- Power off your WiFi Extender.

- Disconnect the Ethernet cable connecting your WiFi Extender to your computer.

- Click Continue.

2.2.8. Step 7: POSITIONING THE WIFI EXTENDER



To help you choose the best location for your Hercules WiFi Extender, we present below several pieces of advice which you may adapt according to your environment (number of rooms, computers, storeys in your home, the presence of obstacles, the locations of electrical outlets and telephone plugs…).

- First off, verify the range of the WiFi network coverage zone transmitted by your Livebox. This will allow you to determine the maximum distance from your Livebox that you can position your Hercules WiFi Extender.

- Disconnect your WiFi Extender, then position it in a room approximately halfway between the furthest point you wish to cover and your Livebox.

- Verify that this location is within the current WiFi network coverage zone transmitted by your Livebox. Try to position your WiFi Extender in an unobstructed area and well off the ground (on a high table or on the wall).

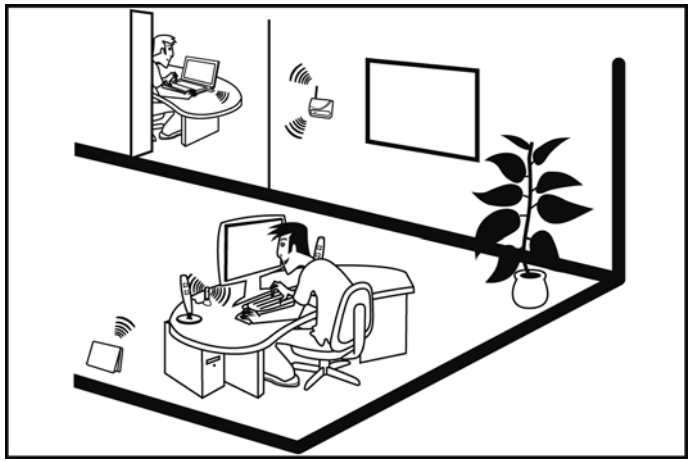
- Keep a minimum distance of 2m between your WiFi Extender and any computers or WiFi devices.

- If you have several computers or WiFi devices on different storeys of your home, on the ground floor and on the second floor for example, you should ideally position your Hercules WiFi Extender on the second floor directly above your Livebox.

⚠ The WiFi performance of your Hercules WiFi Extender may be greatly affected by certain obstacles, such as the presence of paper (a bookcase), metal, water (an aquarium), or a wall made of reinforced concrete between your WiFi Extender and any WiFi adapters.

Moreover, you should be aware that your WiFi Extender repeats only half of the signal power received from the Livebox, which is more than enough for Internet browsing, sharing files and even downloading (for example, if the Livebox transmits at 20Mbps to your WiFi Extender, the latter will transmit at half of this power, or a maximum of 10Mbps to your computer).

- Position the Hercules WiFi Extender for the best possible fit with your surroundings:



2.2.9. Step 8: VERIFYING THE WIFI CONNECTION

- Power on your WiFi Extender.

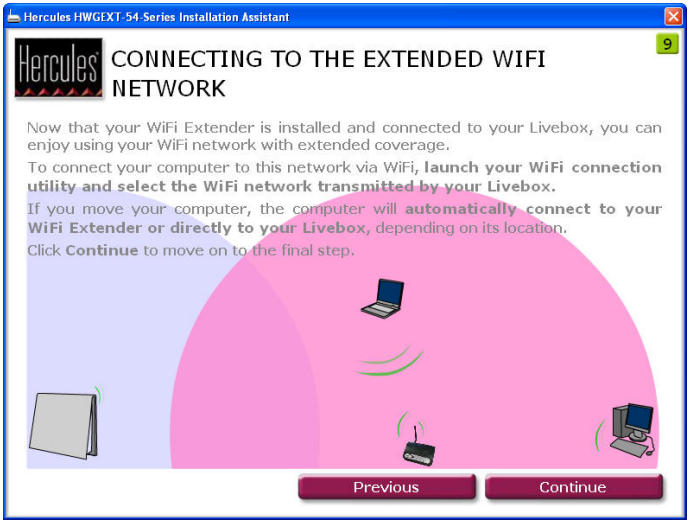
In a few moments, its WiFi LED should progress from flashing (while connecting) to always lit up (connected).

If the LED never progresses to the connected state, your WiFi Extender is too far from your Livebox. Position it closer so that the LED arrives at the connected state.

- Click Continue.

2.2.10. Step 9: CONNECTING TO THE EXTENDED WIFI NETWORK

Now that your Hercules WiFi Extender is installed and connected to your Livebox, you can enjoy using your WiFi network with extended coverage. You can now connect your computer or WiFi device (game console, telephone, PDA...) simply by selecting the name of the WiFi network transmitted by your Livebox and entering the security key used.



- Open the WiFi connection utility for your computer or WiFi device.

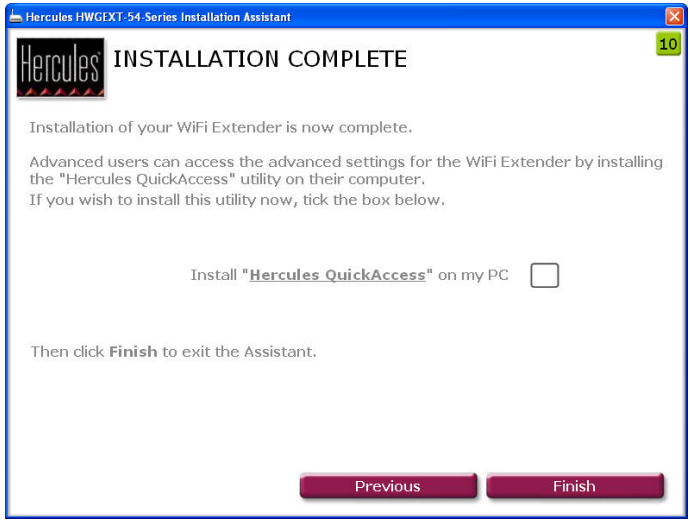
- Select your Livebox WiFi network (for example, Wanadoo_AAAA) and connect to it.

If you move your computer or WiFi device, it will connect to the closest WiFi access point, either your Livebox or your Hercules WiFi Extender.

- Click Continue to move on to the final step.

Don't forget that any new WiFi device must be paired with your Livebox by pressing the REG button (Sagem model) or ⏻ button (Inventel model) in order for it to be recognized by your Livebox.

2.2.11. Step 10: INSTALLATION COMPLETE



At the end of the installation, the Assistant prompts you to install the *Hercules QuickAccess* utility on your PC. This utility allows you to access the advanced settings for your Hercules WiFi Extender later on, as well as tools to restore factory settings. To launch the utility, simply double-click the Hercules QuickAccess icon on your computer.

- To install QuickAccess, tick the Install "Hercules QuickAccess" on my PC box.

- Click Finish.

If you do not wish to install this utility, you will only be able to access your Hercules WiFi Extender by manually entering its address (please see chapter 4.1 Opening the doors of WiFi Extender Manager).

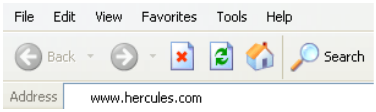
At any time, you can relaunch the installation by restarting the CD-ROM (please see chapter 2.1 Launching the Hercules WiFi Extender Installation Assistant).

2.3. Broadcasting your Internet connection via the Hercules WiFi Extender

As described in chapter 2. Installing your Hercules WiFi Extender, you can easily pair your Hercules WiFi Extender with your Livebox, thereby allowing you to use your Internet connection with your other computers and/or game consoles located in places which up until now have not been covered by your WiFi network.

2.3.1. Testing your Internet connection

After having installed your Hercules WiFi Extender, you can carry out a first connection test. For example, you should verify that you have access to your WiFi network by connecting to it with a laptop computer, located in another room in your home, within the coverage zone of your WiFi network.



- In the list of networks detected, connect to your WiFi network.

- Launch an Internet browser (Internet Explorer, Netscape Navigator or Mozilla Firefox) on your computer.

- Enter the address www.hercules.com.

The Hercules website's home page should be displayed.

If your Internet connection is working properly:

It is now time for you to learn how to master your WiFi network (please refer to chapter 4. WiFi Extender Manager for advanced users).

If your Internet connection is not working properly:

Please refer to the section below.

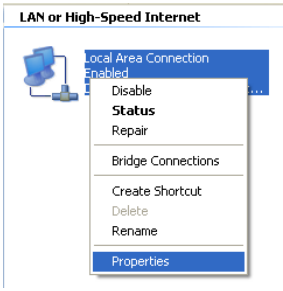
2.3.2. Resolving any difficulties in accessing WiFi Extender Manager or the Internet

If you have not managed to connect to the WiFi Extender Manager interface or to the Internet, your computer's settings may not be properly configured. The four methods described below will help you to resolve this problem.

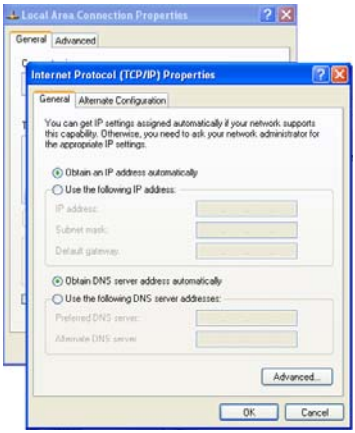
Method 1: Verify the Windows network connection settings

Note: The access paths mentioned below may vary slightly if you have modified the default display configuration in Windows XP or Vista (meaning the Start menu properties and Control Panel display).

- Windows XP or Vista



1. Click Start/Control Panel. Double-click Network Connections.
2. In the LAN or High-Speed Internet section, right-click the icon corresponding to your network adapter (or network bridge, if you have created one) and select Properties.
3. In the General tab of the Local Area Connection Properties window, scroll through the list and highlight Internet Protocol (TCP/IP).

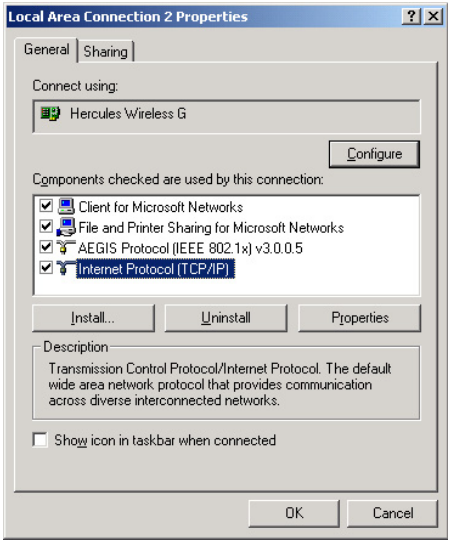


4. Click Properties, select Obtain an IP address automatically and Obtain DNS server address automatically.
5. Click OK to close the windows, then exit the Control Panel.

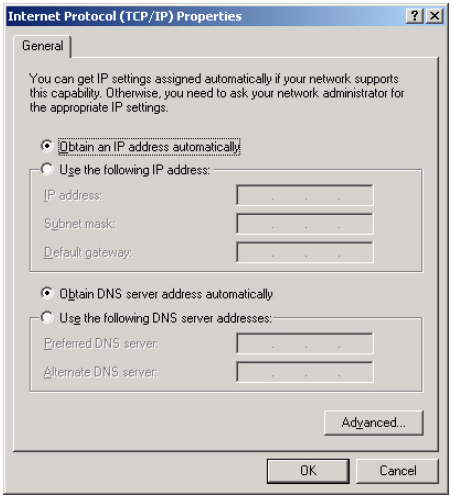
The Livebox will now be able to assign an IP address to your computer.

An IP address is a unique address assigned by the Livebox to the computer. Each computer has its own identity, via its IP address, allowing it to be identified within the network.

- Windows 2000



1. Click **Start/Settings/Control Panel**. Double-click **Network and Dial-Up Connections**.
2. Right-click the appropriate connection and select **Properties**.
3. In the **General** tab, highlight **Internet Protocol** (TCP/IP).



4. Click **Properties** and select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.
5. Click **OK** to close the windows, then exit the **Control Panel**.

The Livebox will now be able to assign an IP address to your computer.

An IP address is a unique address assigned by the Livebox to the computer. Each computer has its own identity, via its IP address, allowing it to be identified within the network.

Method 2: Relaunch the installation from the CD-ROM

- Insert the included installation CD-ROM into your drive, and follow the procedure indicated in chapter 2.1 Launching the Hercules WiFi Extender Installation Assistant.

Method 3: Restore the Hercules WiFi Extender factory settings

- Disconnect the WiFi Extender.

- Press the Reset button ③ using an object with a pointed tip for 10 seconds. Release the button and wait for your Hercules WiFi Extender to restart.

Your WiFi Extender will load its factory settings and restart. You can then relaunch the installation from the CD-ROM (see method 2, above).

Method 4: Access Technical Support

- Please visit http://ts.hercules.com and select your language. You will then be able to access different services (Frequently Asked Questions (FAQ), the latest firmware versions) which may help to resolve your problem.

3. WELCOME TO THE WIRELESS ATTITUDE™!

Now that you have mastered the main functionalities of the Hercules WiFi Extender, it is time to move on to a few practical applications. In the following chapters, we will show you how wireless computing is closely linked to user-friendliness and ease of use. Sharing your folders, your printer, or letting friends use your ADSL connection for online gaming are some examples of the things we will help you to do. Enter the world of wireless and join in the Wireless Attitude™!

3.1. A few points to bear in mind

We advise you to follow the instructions provided hereinafter for each of your computers:

- The procedures described in this chapter differ according to the various operating systems discussed. Please ensure that you refer to the chapters corresponding to your operating system.

- These procedures also apply to the computers or devices directly connected to your Livebox via an Ethernet cable.

- You can access all setup possibilities via the proprietary software furnished by the manufacturer of your WiFi device (example: *Hercules WiFi Station*, bundled with Hercules WiFi adapters) or using the Windows configuration utility, accessible via the taskbar.

- To share an Internet connection, your Livebox and your Hercules WiFi Extender must be connected and powered on and your Internet line must be active.

Reminder: the WiFi network you have just finished setting up is an Infrastructure type network (as opposed to Ad hoc mode), as it is composed of an access point and one or more computers.

3.2. Computers running Windows Vista: Connecting to a wireless network

The procedure described hereafter is deliberately intuitive and non-exhaustive. If you have mastered Windows Vista, you will note that there are other ways to achieve the same results. You will find our procedure set out in the pages that follow, although you are free to choose your own preferred method.

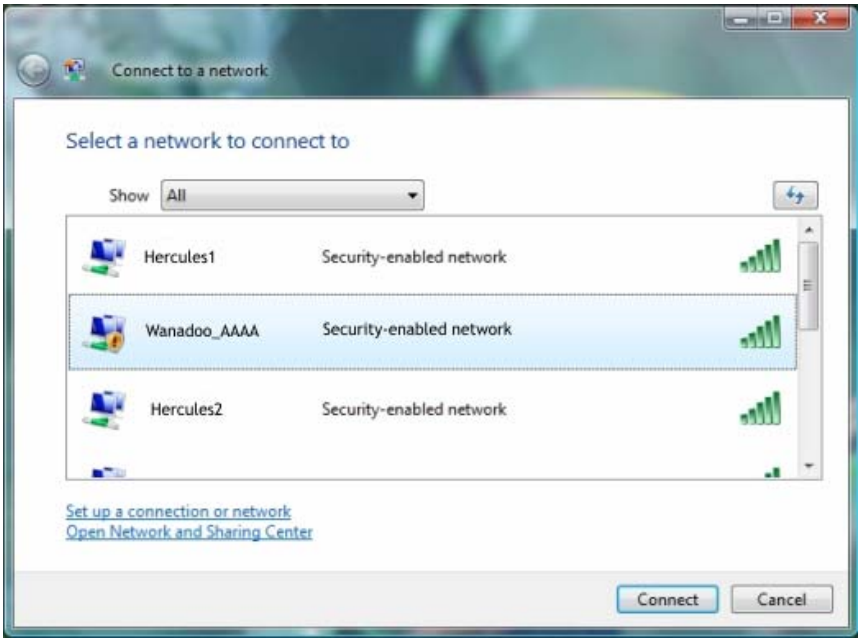
Alternative: Some manufacturers of WiFi adapters supply their own connection software (example: *Hercules WiFi Station*, bundled with Hercules WiFi adapters). We recommend that you refer to their user manual for help on establishing your connection.

Once your computer is up and running, your WiFi adapter automatically detects the available wireless networks and displays them in a specific window.

To view the detected wireless networks:

The message Wireless networks are available is displayed once your WiFi adapter has detected wireless networks.

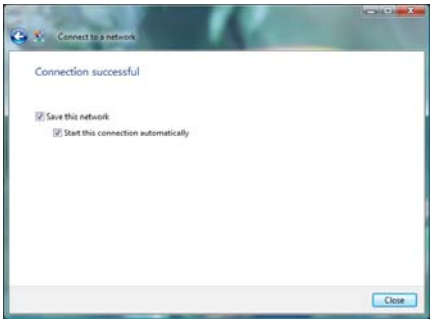
- Click this message to display the list of networks. The Connect to a network window appears.



- Browse through the list and select your wireless network (here, the Wanadoo_AAAA network). You will note that this network is secure.

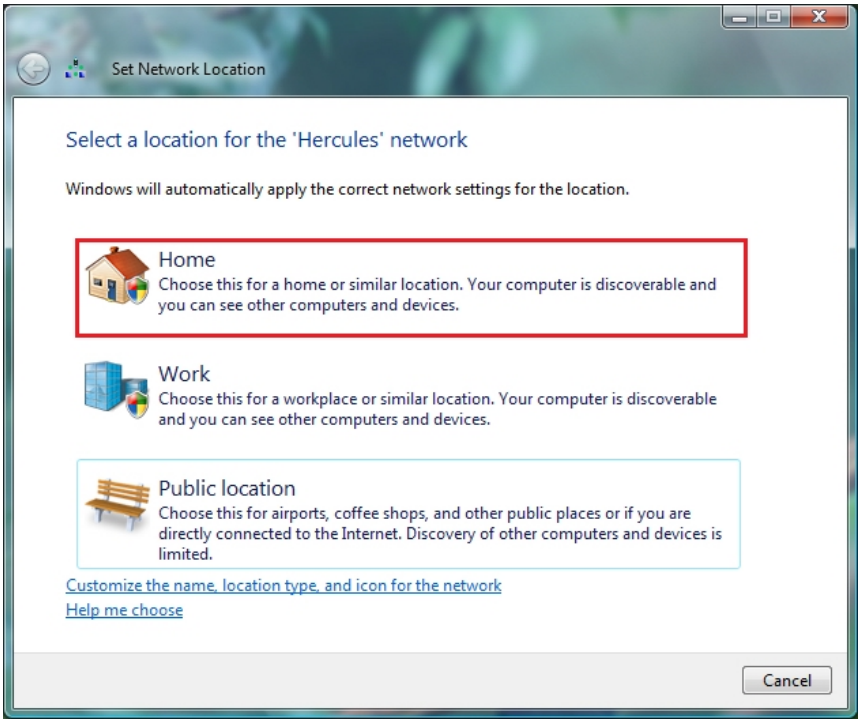
Note: If you select a security-enabled network, you must enter the key in the window. To do so, you must know the key defined when setting up your wireless network (the Livebox security key is indicated on the underside of the device).

- Click the Connect button.



Please wait a few moments. Once the connection to the Wanadoo_AAAA network has been established, you can save this network in your favorites by ticking the Save this network *box and* Start this connection automatically*, if you wish. In that case, your computer will always attempt to connect to this network at the start of each new session.*

- Select your network location: Home, Work, Public location.



For our purposes, we will consider that you will be using your network at home, which will allow you as well as other network users to view the computers present on the network (the “See and be seen” principle, indispensable to be able to share folders, a printer and an ADSL connection).

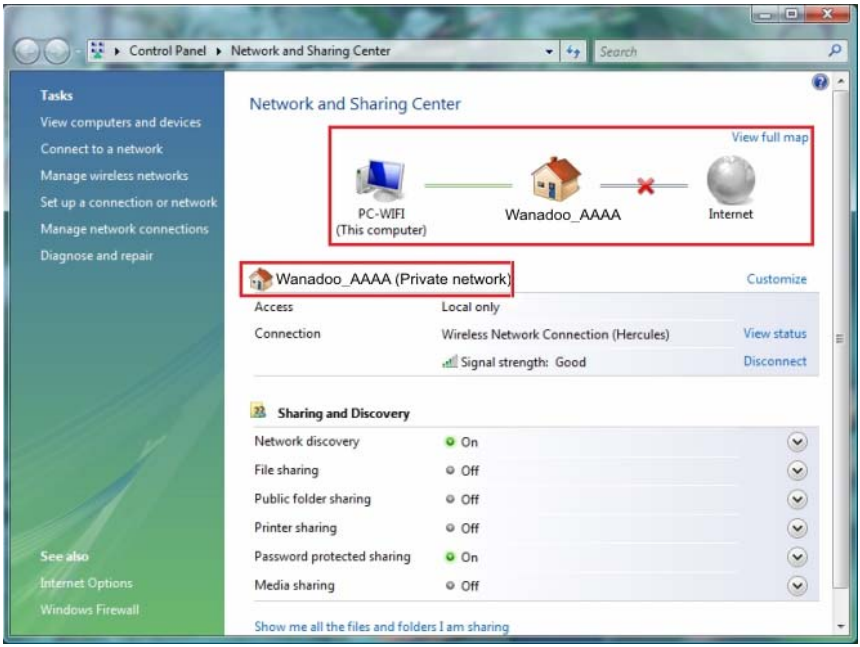
Note: If you prefer to connect to a public hotspot, while you are in a railway station, for example, please refer to the explanations provided by Windows Vista.

Windows Vista may not prompt you to select your network location at this point and select a **public** location for you by default (this will typically be the case if you are already connected to a network). To select another location, you must click the **Customize** link located opposite the name of your network in the **Wanadoo_AAAA (public network)** zone of the **Network and Sharing Center**.

- In the taskbar, click the network connection icon to verify that you are connected to the **Wanadoo_AAAA** network (the message **Currently connected to: Wanadoo_AAAA** should be displayed).

- Click your **Wanadoo_AAAA** network to access its properties.

*The **Network and Sharing Center** appears. In the top part of the window, you will see that your computer called **PC-WIFI** is connected to the **Wanadoo_AAAA** network, which is itself connected to the **Internet**.*



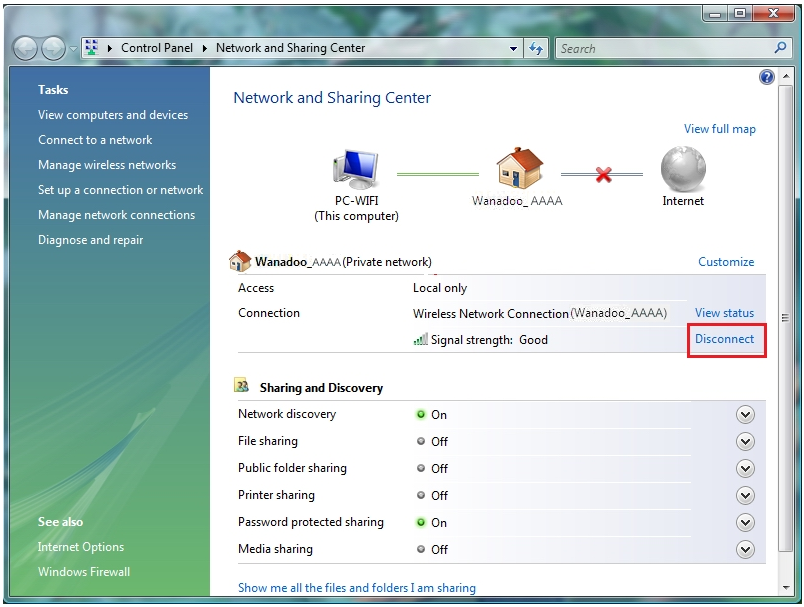
By default, your computer is part of a **private network** (as opposed to a **public network**). For information on the differences between **private and public networks**, please refer to the **Computers running Windows Vista: Sharing folders, a printer or an ADSL connection** section.

3.3. Computers running Windows Vista: Disconnecting from a wireless network

Once you are connected to a network, you can disconnect via the **Network and Sharing Center**, for example.

Via the **Network and Sharing Center**:

- Click the **Disconnect** link.

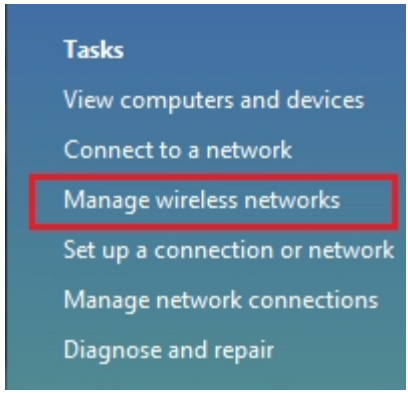


Windows Vista disconnects your network.

3.4. Computers running Windows Vista: Managing your favorite networks

A favorite is a group of settings for connecting to a known Infrastructure or Ad hoc network (your own, a neighbor's, a friend's). The Windows Vista **Network and Sharing Center** allows you to save the settings for a network, or add or remove favorites.

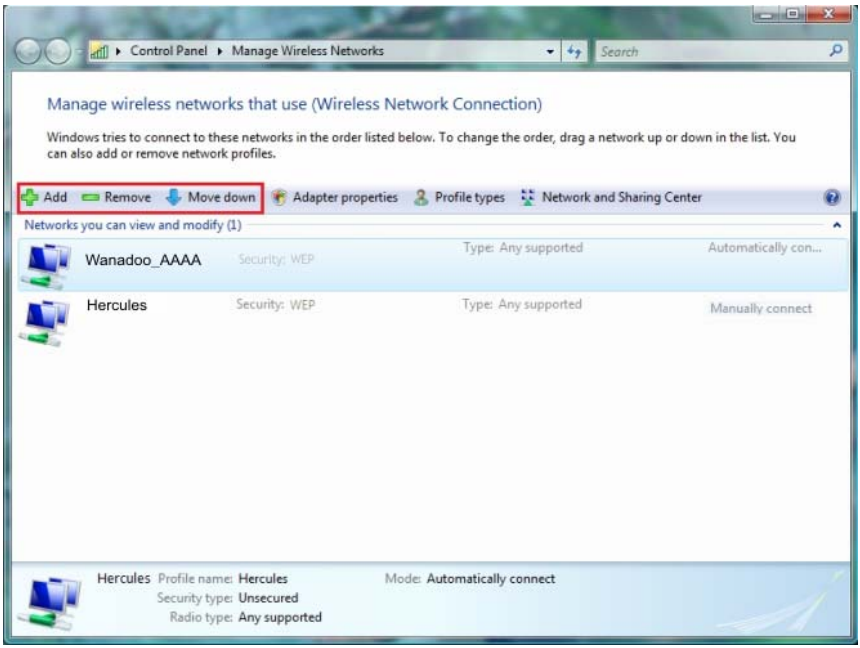
To display your favorite networks, or add or remove a network, click the **Manage wireless networks** link in the **Tasks** zone.



For example, to remove the Wanadoo_AAAA network to which you have just connected, select it in the list (it is then highlighted in blue), then click the Remove button.

To add a network, click the Add button. Windows Vista launches the manual connection to a wireless network assistant. Follow the on-screen instructions.

Finally, you can change the connection priority by clicking the Move down or Move up buttons.



3.5. Computers running Windows Vista: Sharing folders, a printer or an ADSL connection

To create a network of computers, share data, a printer or an ADSL connection between computers running Windows Vista, it is not imperative that the computers belong to the same workgroup. However, if you wish to share between Windows Vista and an earlier operating system, make sure to define the same workgroup on all computers. For information on how to create a workgroup, please refer to the manual of your Hercules product.

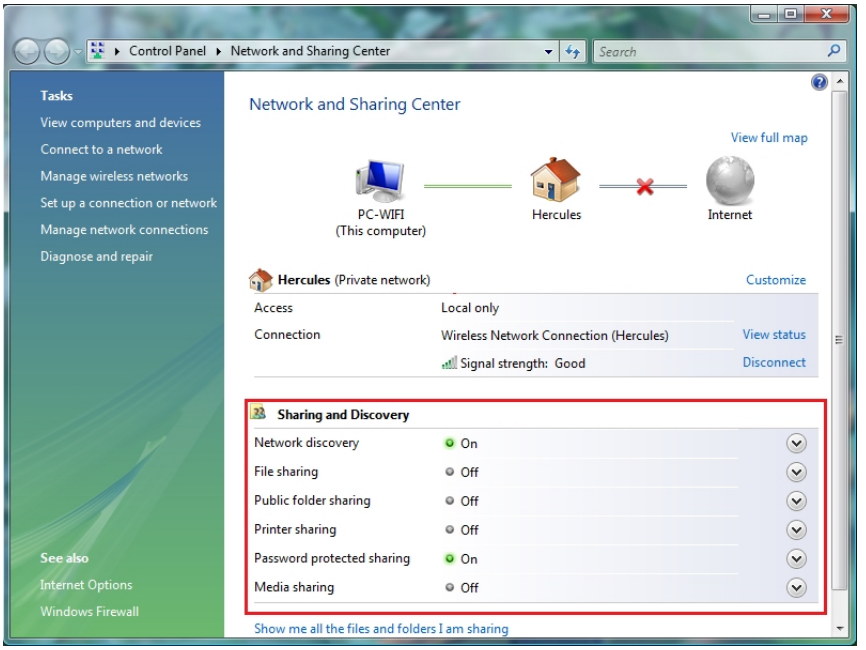
Note: The access paths described hereafter may vary slightly if you have modified the default display in Windows Vista (that is to say, the Start menu properties and the Control Panel display).

You have connected your computer to a private network (as opposed to a public network). Therefore, the discovery options (namely, the ability to view outside devices and computers and to be seen by other networks) are enabled, but sharing options are not. You must therefore enable them manually before you can share your folders, your Internet connection or your printer.

3.5.1. Enabling sharing

Before setting up sharing for your folders, your printer or your Internet connection, you must enable sharing in the Network and Sharing Center.

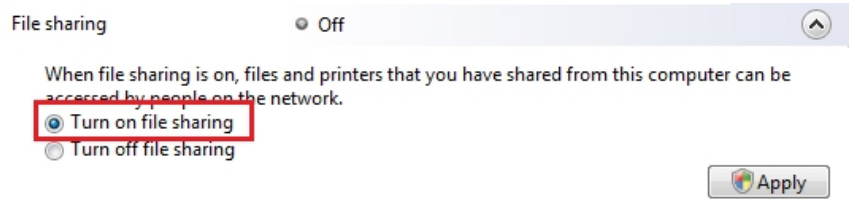
Note: To open the Network and Sharing Center, click the network icon in the Windows taskbar, then the Network and Sharing Center link.



Enabling file sharing

- In the Sharing and Discovery zone, click the Off link or the button located opposite File sharing.

- Select the Turn on file sharing radio button.



- Click Apply. In the Windows Vista confirmation window, click Continue.

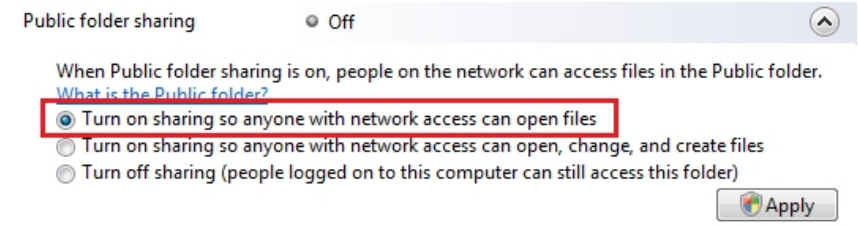
Enabling public folder sharing

Note: A public folder is a folder which can be shared by other users of the same computer or of the same network.

- In the Sharing and Discovery zone, click the Off link or the button located opposite Public folder sharing.

- Select the Turn on sharing so anyone with network access can open files radio button (they will only be able to consult files) or select Turn on sharing so anyone with network access can open, change, and

create files (there will be no limitations on the contents of these folders in terms of viewing, making changes and additions or other actions).



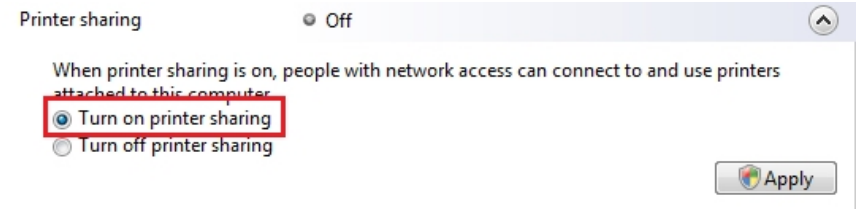
- Click Apply. In the Windows Vista confirmation window, click Continue.

Enabling printer sharing

Note: To enable printer sharing, you must first have installed a printer.

- In the Sharing and Discovery zone, click the Off link or the button located opposite Printer sharing.

- Select the Turn on printer sharing radio button.



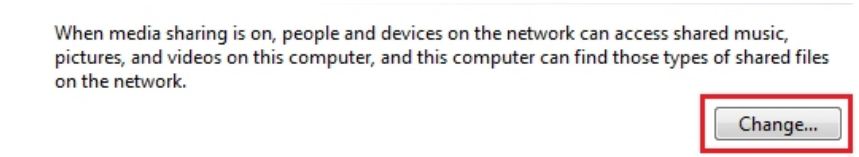
- Click Apply. In the Windows Vista confirmation window, click Continue.

Enabling media file sharing

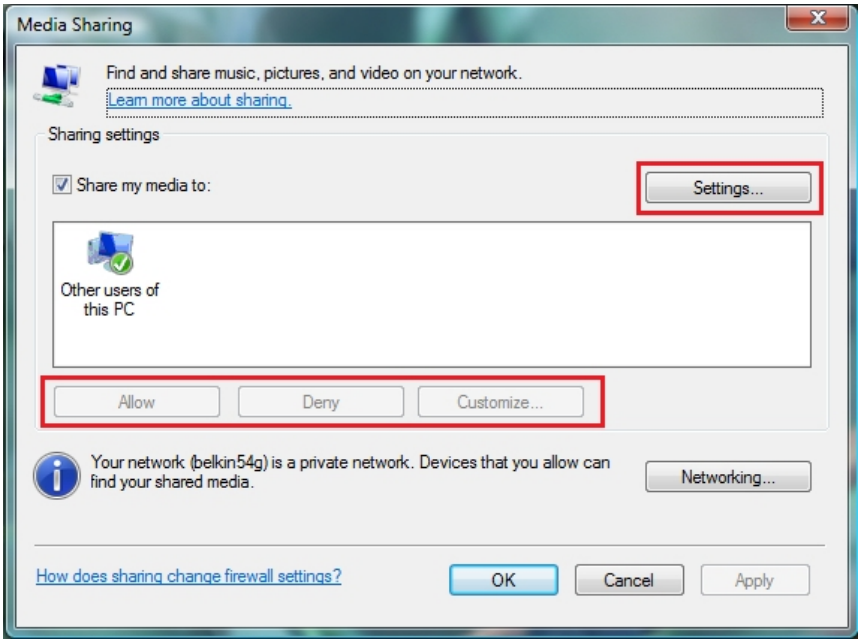
Note: This option allows you to enable sharing of your music, videos and images.

- In the Sharing and Discovery zone, click the Off link or the button located opposite Media sharing.

- Click Change...



- In the Media Sharing window that appears, tick the Share my media box.



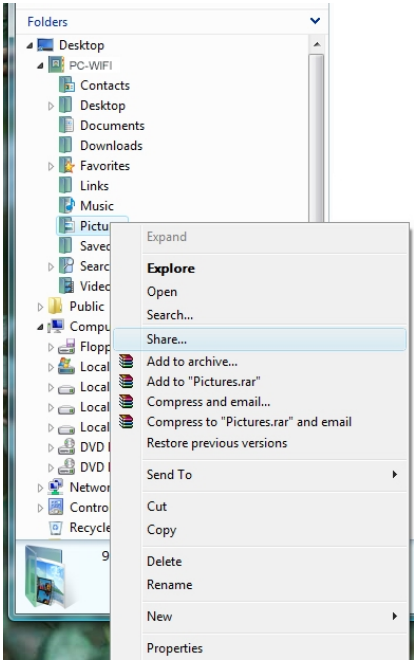
- Click Apply. In the Windows Vista confirmation window, click Continue.

- In the following window, you can define the different settings, such as: authorize or refuse groups of users, set parental controls, select media types to be shared, and so on.

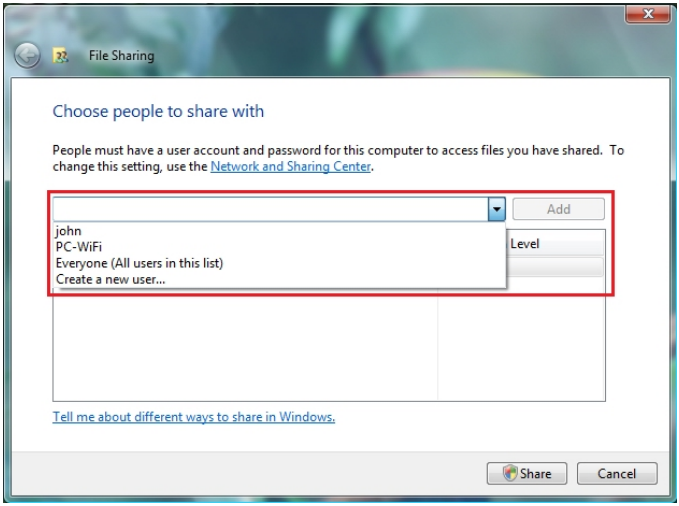
- When you're done, click Apply, then OK.

3.5.2. Windows Vista: Sharing public or personal folders

Reminder: In Windows Vista, there are two types of folders: personal or local folders and public folders. A personal folder is a folder belonging to a specific user created on the computer, whereas a public folder is a folder that can be shared by any other user of the same computer or the same network. In essence, a public folder is shared, and therefore available to everyone for viewing (minimum authorization level). For sharing personal folders (your folder of your own images, for example), you must select the users who will be able to access their contents and set the authorization level, as indicated in the following procedure.



1. Select the folder that you wish to share, without opening it. Here, your **Pictures** folder.
2. Right-click the folder. Select **Share**.



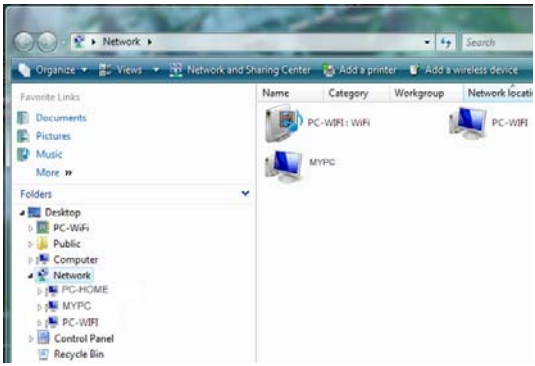
3. In the **File Sharing** window, select the user(s) who will be able to access this folder, then click **Add**.

Note: You can provide access to all users with no restrictions (**Everyone** option) or select specific users previously created on your PC. You can also create new users by clicking **Create a new user**... in the drop-down list.

4. Select the Permission Level you wish to assign by clicking on the line for that user: Reader (authorization to view only), Contributor (authorization to view, add and delete) or Co-owner (authorization to view, modify, add and delete).
5. Click Share. Be sure to note the path indicated, which will allow for access to the shared folder on the network from another computer. For example: \\PC-WIFI\Users\My documents\Shared Pictures Folders.
6. Click Done.

The folder is now shared. You can now display all shared folders and files on the computer or the shared files on the network by clicking the links in the Network and Sharing Center.

3.5.3. Computers running Windows Vista: Accessing shared folders



1. In the file explorer, accessible via Start/Computer, double-click Network.

You access the list of the computers on the same network. Use the path indicated by Windows when setting up sharing (for example : \\PC-WIFI\Users\My documents\Shared Pictures Folders).

2. Double-click the computer sharing the folders you wish to access.
3. If a password has been defined, enter your user name and your password.

All shared folders appear. Depending on your authorization level, you can display, modify, add and/or delete shared folders and files.

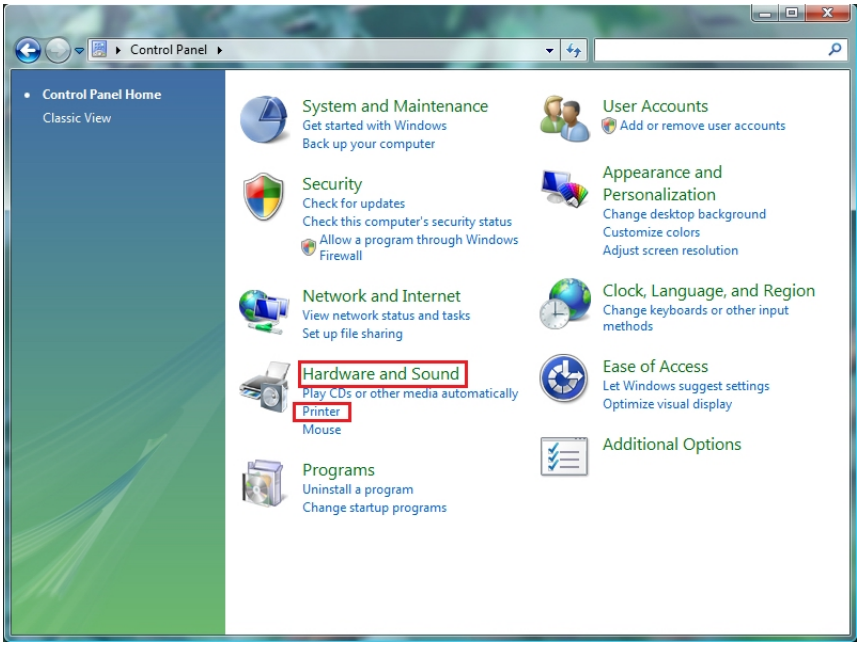
3.5.4. Windows Vista: Sharing a printer

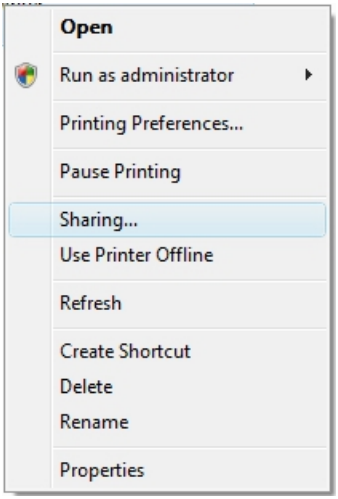
You can put a printer on the network and thereby share it with all computers in your home equipped with a WiFi adapter.

⚠ To access a printer on the network, sharing for the printer must first be set up in the Network and Sharing Center (please refer to chapter 3.5.1 Enabling sharing). The printer must then be set up for sharing on the computer to which is connected and on which it is installed.

On the computer connected to the printer:

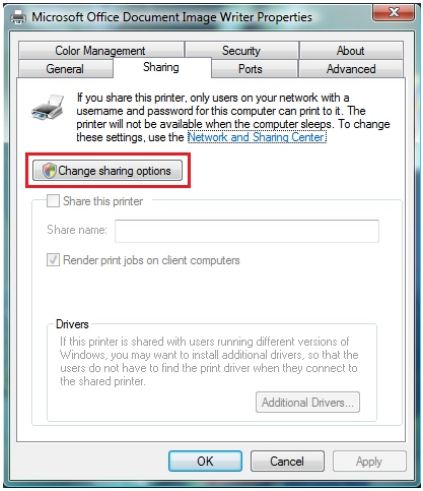
1. Click Start/Control Panel.
2. Under the Hardware and Sound heading, click the Printer link.



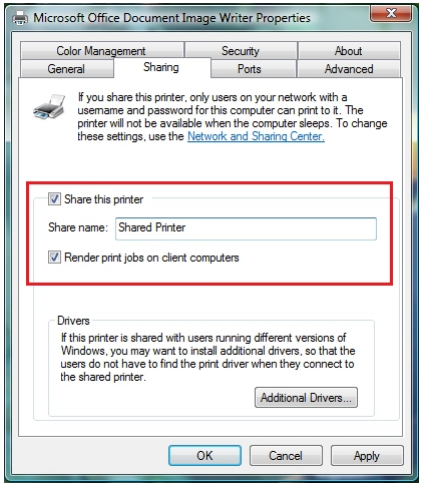


The list of installed printers is displayed.

3. Right-click the printer and select the Sharing... option.



4. In the **Printer Properties** window, click the **Change sharing options** button.
5. In the Windows Vista confirmation window, click **Continue**.

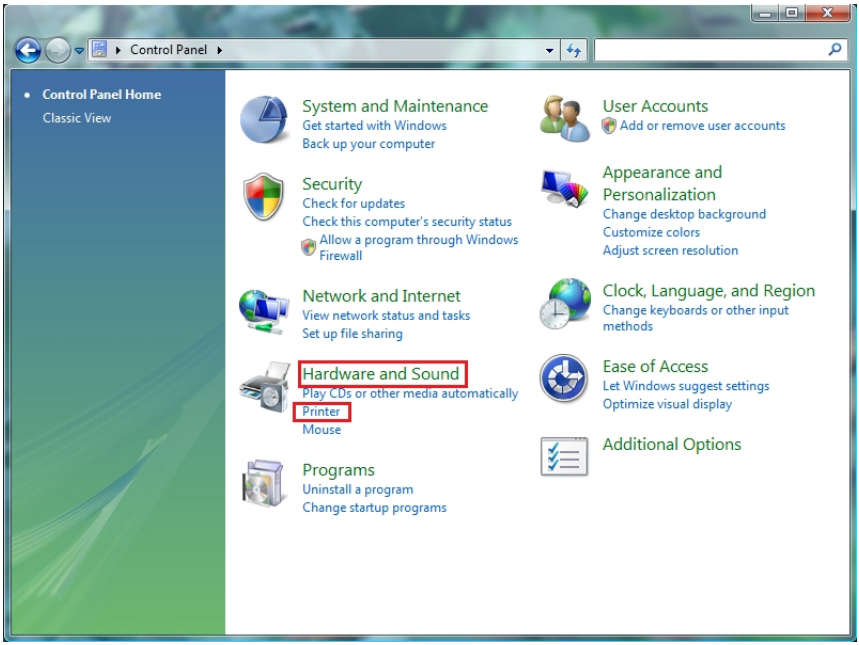


6. Tick the **Share this printer** box.
7. Select the name of the printer which will be displayed on the network under **Share name**.
8. Click **Apply**, then **OK**.

3.5.5. Computers running Windows Vista : Accessing the shared printer

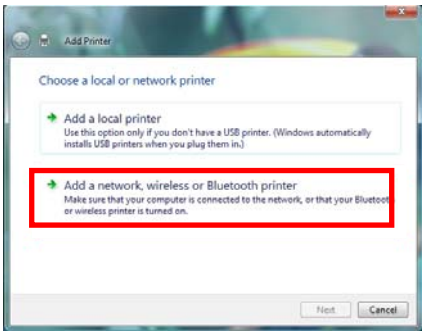
On the computers that will use the shared printer:

1. Click **Start/Control Panel**.
2. Under the **Hardware and Sound** heading, click the **Printer** link.

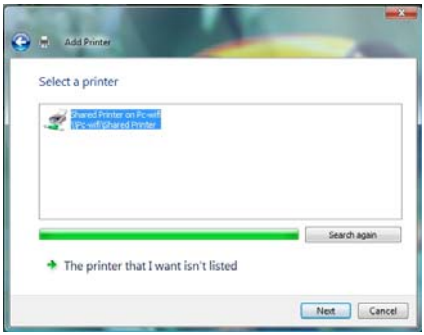


3. Click the **Add a printer** button.

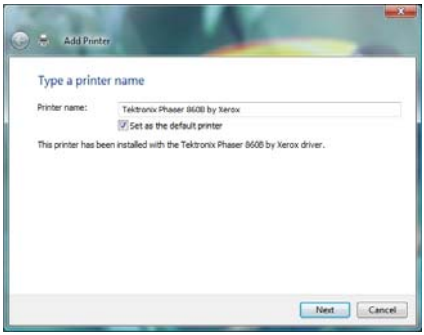
The Add Printer assistant appears.



4. Click **Add a network, wireless or Bluetooth printer**.



5. Windows searches for the shared printers on your network. Select the shared printer.
6. Click **Next**.
7. If required, accept installation of the printer's drivers when prompted by Windows.

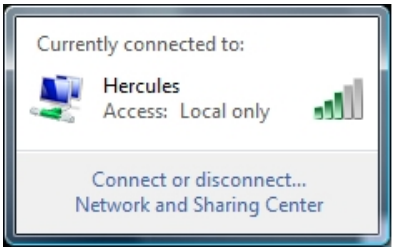


8. Validate the name of your printer, then click **Next**.
9. Click **Finish** to close the assistant.

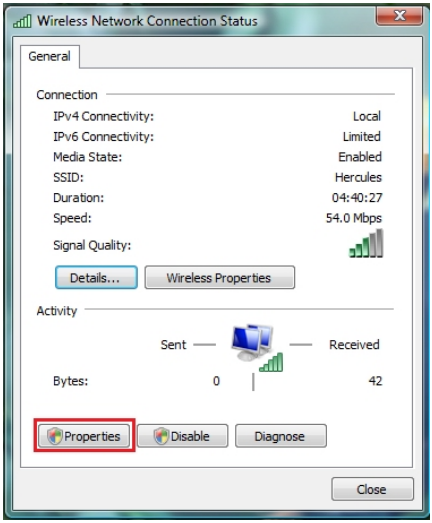
3.5.6. Windows Vista: Sharing an ADSL connection in an Infrastructure type network

Reminder: If you have a Livebox, a modem router or a router connected to a modem and one or more computers, your network will be in Infrastructure mode by default. In this mode, the WiFi adapters are connected to your access point, which might be your Livebox, your Hercules Modem Router or your Hercules Router connected to a modem. Infrastructure mode is ideal for exchanging data, playing online, and also for sharing an Internet connection and/or printer among several computers. Follow the instructions below to finally free yourself from the cable that connects you to your modem… without cutting the links to your ADSL connection. Viva the Wireless Attitude!

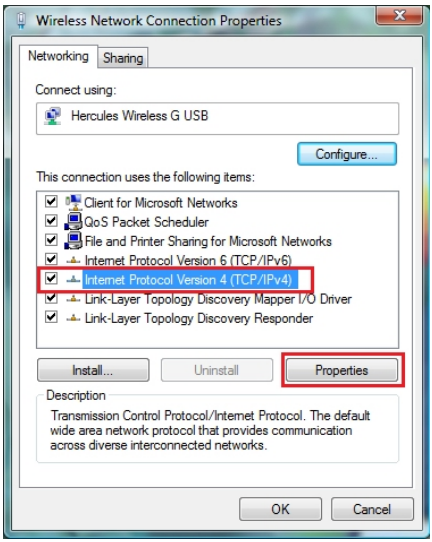
Proceed as follows for each computer that will use the shared Internet connection:



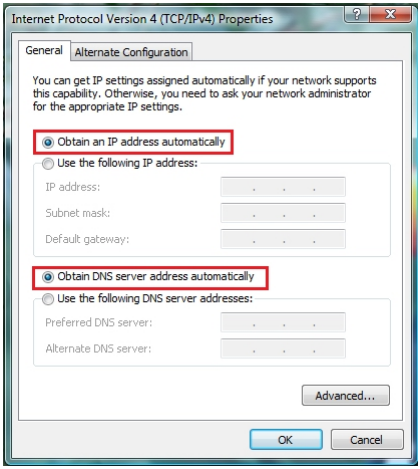
1. Connect to your wireless network (Hercules or Livebox_AAAA, for example).
2. Access the **Network and Sharing Center**. To do so, click the network icon on the Windows taskbar, then click the **Network and Sharing Center** link.
3. Click the **View status link**.



4. In the Wireless Network Connection Status window, click Properties.
5. In the Windows Vista confirmation window, click Continue.



6. In the Wireless Network Connection Properties tab, select Internet Protocol version 4 (TCP/IPv4).
7. Click Properties.



8. In the Internet Protocol version 4 (TCP/IPv4) window, select Obtain an IP address automatically and Obtain DNS server address automatically.
9. Click OK to validate.
10. Do the same for Internet Protocol version 6 (TCP/IPv6).

To access the Internet, simply launch your Internet browser.

3.6. Computers running Windows XP: Connecting to a wireless network

The procedure described hereafter is deliberately intuitive and non-exhaustive. If you have mastered Windows XP, you will note that there are other ways to achieve the same results. You will find our procedure set out in the pages that follow, although you are free to choose your own preferred method.

Alternative: Some manufacturers of WiFi adapters supply their own connection software (example: *Hercules WiFi Station*, bundled with Hercules WiFi adapters). We recommend that you refer to their user manual for help on establishing your connection.

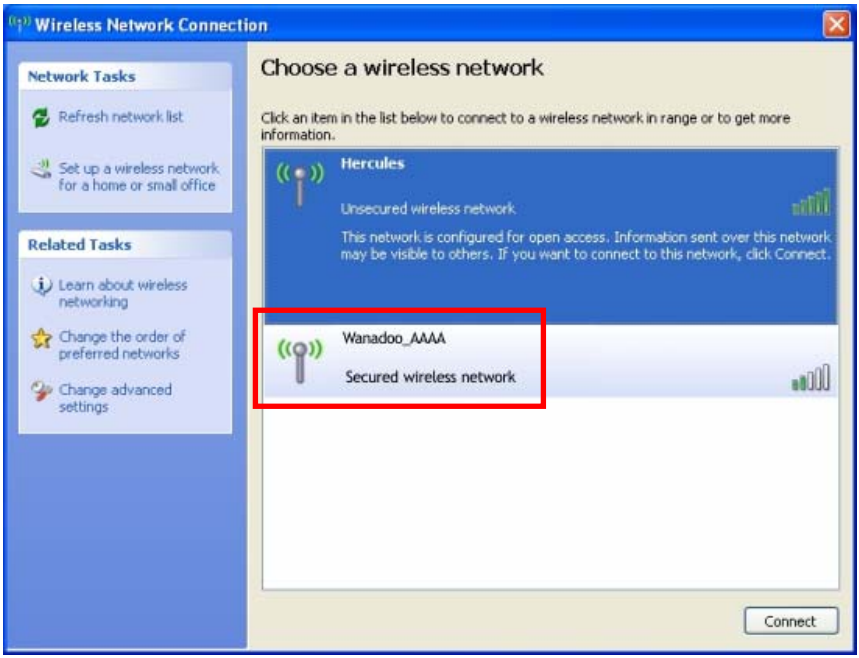
Once your computer is switched on, your WiFi adapter automatically detects the wireless networks available and displays them in a specific window.

To view the detected wireless networks:

- In the Windows XP taskbar, click the wireless network icon, which includes both wireless and wired networks.

*The message **Wireless networks detected** is displayed when your WiFi adapter has detected wireless networks.*

- Click this message to display the list of networks. The Wireless Network Connection window appears.



- Browse through the list and select your wireless network (here, the Wanadoo_AAAA network). You will note that this network is secure.

Note: If you select a security-enabled network, you must enter the key in the window. To do so, you must know the key defined when setting up your wireless network (the Livebox security key is indicated on the underside of the device).

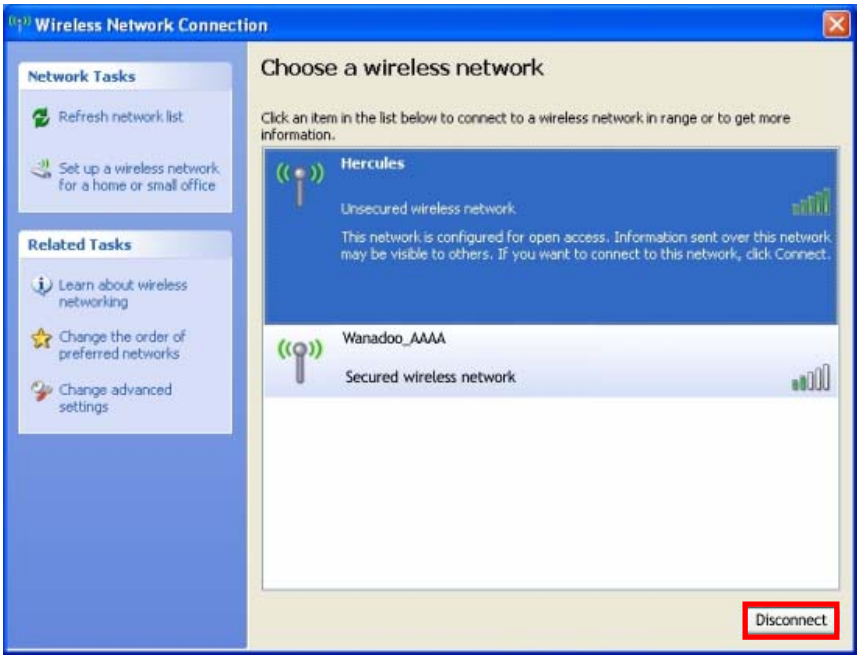
- Click the Connect button in the lower right-hand corner.

3.7. Computers running Windows XP: Disconnecting from a wireless network

Once you are connected to a network, you can disconnect via the **Wireless Network Connection** window, for example.

Via the **Wireless Network Connection** window:

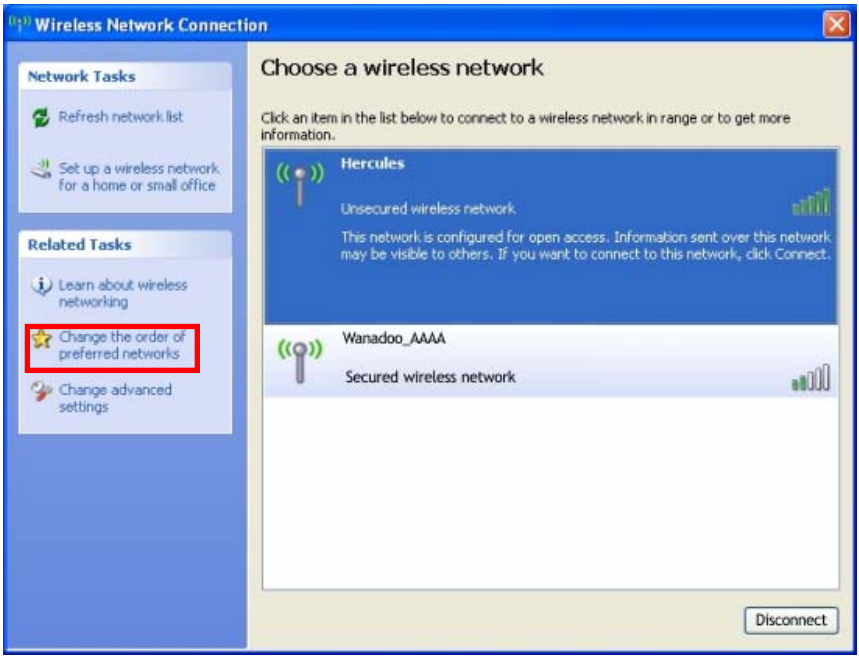
- Select your network, then click the **Disconnect** button in the lower right-hand corner.



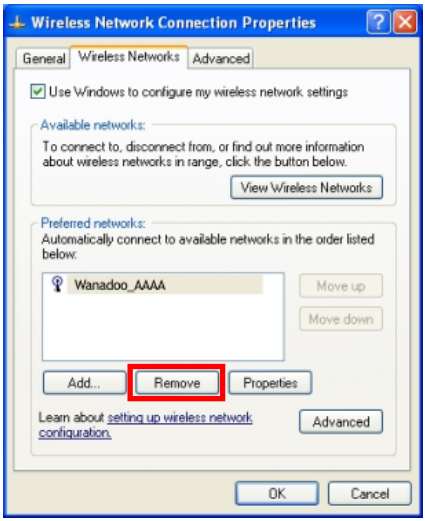
Windows XP disconnects your network.

3.8. Computers running Windows XP: Managing your favorite networks

A favorite is a group of settings for connecting to a known Infrastructure or Ad hoc network (your own, a neighbor's, a friend's). To display your favorite networks, or add or remove a network, click the **Change the order of preferred networks** link in the **Wireless Network Connection** window.



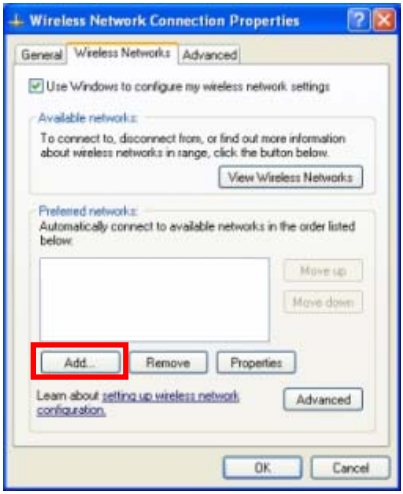
To remove a preferred network:



- Select it in the list (it will then be highlighted in blue).
- Click the **Remove** button.

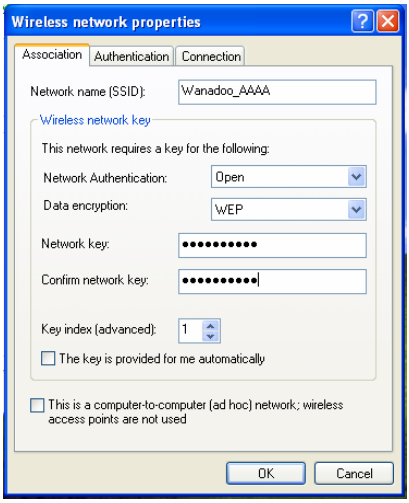
The network is removed from the list of your preferred networks.

To add a network to your favorites:



- Click the **Add** button.

Windows XP opens up a new window in which you can enter the information.



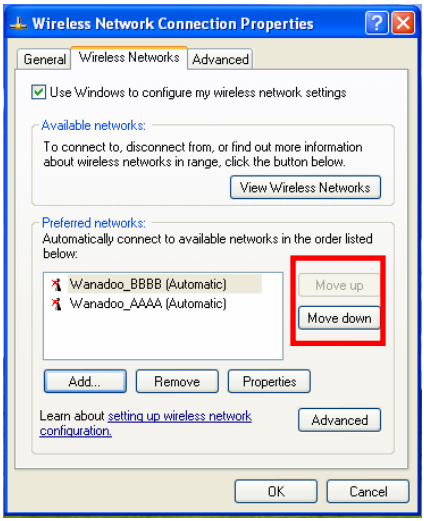
- Enter the network's SSID.
- Select the security information: Network Authentication and Data Encryption.

*Remember to untick the **The key is provided for me automatically** box to be able to enter at the network key (in the case of a WEP key).*

- Enter the network key (the security key found on the underside of your Livebox).
- Click OK.

The new network is added to your list of preferred networks.

To change the order of connection to a network:



- Click the Move up or Move down buttons to change the connection priority.
- Click OK.

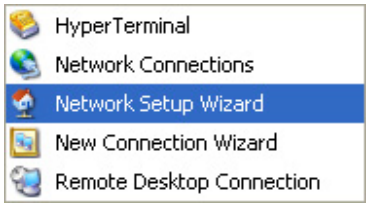
3.9. Computers running Windows XP: Sharing folders, a printer or an ADSL connection

A simple solution for sharing folders, a printer or an ADSL connection in Windows XP is to use the **Network Setup Wizard**. This Wizard will help you create a real home network.

Note: the access paths mentioned below may vary slightly if you have modified the default display configuration in Windows XP (meaning the Start menu properties and Control Panel display).

3.9.1. Windows XP: Using the Network Setup Wizard in an Infrastructure network

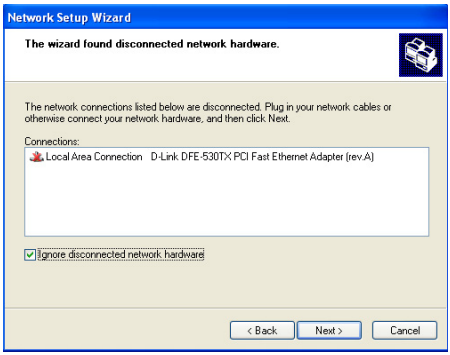
Proceed as follows for each computer:



1. Click **Start/All Programs/Accessories/ Communications/ Network Setup Wizard**.

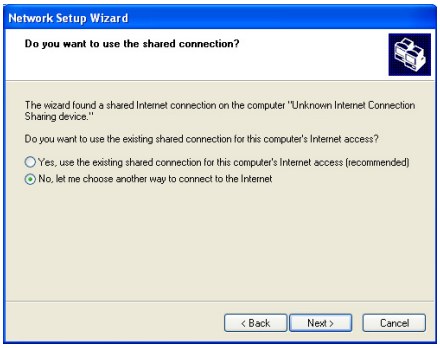
The Network Setup Wizard is launched.

2. Click **Next** twice.



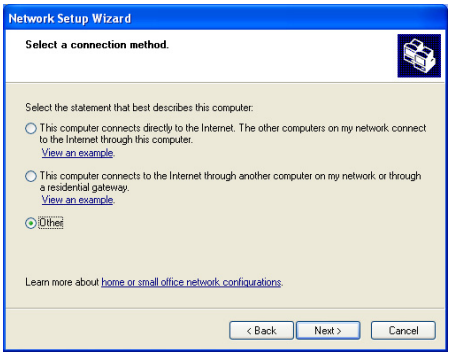
*The window opposite may appear if **The Wizard found disconnected network hardware**.*

3. If your Hercules Wireless Adapter wireless network connection is not displayed in the list, tick the **Ignore disconnected network hardware** box, then click **Next**. Otherwise, exit the Wizard by clicking **Cancel** and establish the connection from your network device to your Livebox (if you use a Hercules Wireless G PCI, USB or PCMCIA adapter, please refer to the "The WiFi Station utility" chapter of your User Manual).



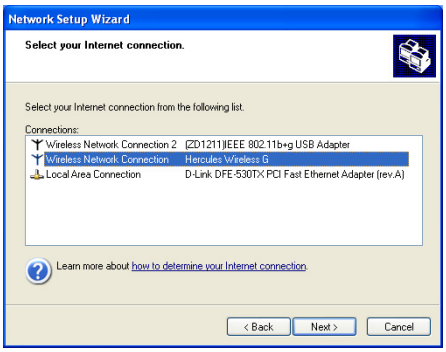
The window opposite may appear if The Wizard found a shared Internet connection on the computer.

4. Select No, let me choose another way to connect to the Internet, then click Next.



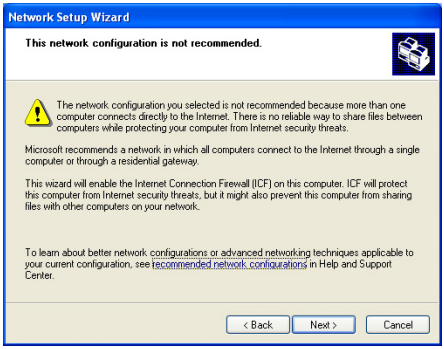
5. In the Select a connection method window, select the Other option.

6. In the following window, select This computer connects to the Internet directly or through a network hub, then click Next.



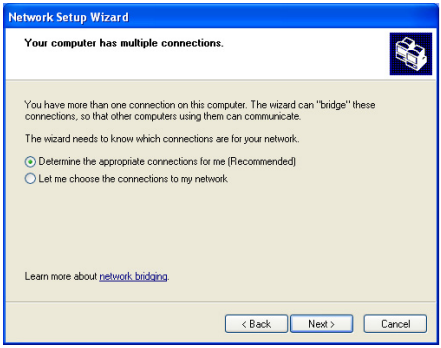
7. If the window opposite appears, select the Hercules Wireless G wireless network connection, then click Next.

ENGLISH
FRANÇAIS
ESPAÑOL

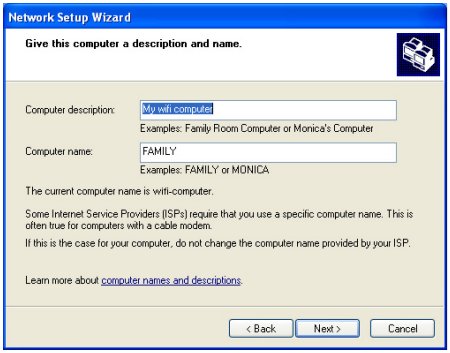


8. When this warning screen appears, ignore it by clicking **Next**.

If you are using the Livebox, your computers are already protected by the integrated firewall.



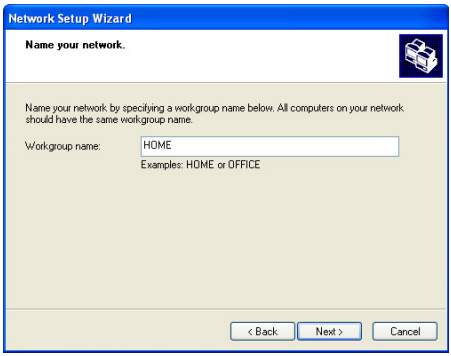
9. If your computer has at least three connections (or network devices), the window opposite appears. In this case, let the Wizard determine the appropriate connections.
10. Click **Next**.



11. Enter the computer name and a description, if required.

Give the computer a name that is unique and sufficiently distinctive, making it easy to recognize on your network (my-computer, wifi-computer or julie, for example).

12. Click **Next**.

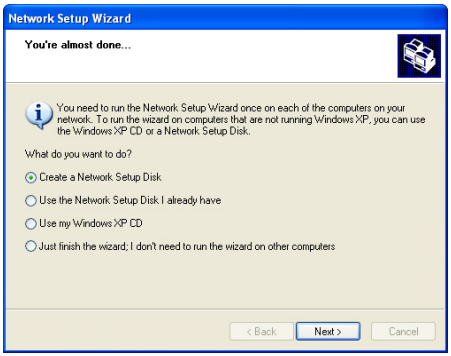


13. Enter the workgroup name (HOME, OFFICE or HERCULES, for example) and a description, if required.

The workgroup name must be identical (be sure to respect the case of letters) for all computers you wish to link together in a network.

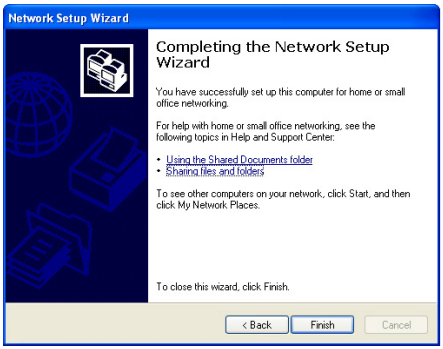
14. Click Next.
15. Verify the configuration settings you have entered in the window that appears, then click Next.

The Wizard configures the computer for the home network. This may take a few minutes.



16. Before completing the procedure, you may select the Create a Network Setup Disk option. This consists of copying this Wizard onto a storage medium (your choice of floppy disk or USB key) so that it can be launched on computers equipped with operating systems other than Windows XP.

This operation is carried out automatically, once you have selected a medium for saving the Wizard.



17. Click Finish to exit the Wizard.

Once the procedure is finished, Windows XP may prompt you to restart your computer.

The procedures described in this chapter are specific to Windows XP. For all other questions related to sharing folders, a printer or an Internet connection, or on using Windows, please refer to the Windows online help utility.

ENGLISH
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ESPAÑOL

3.9.2. Windows XP: Sharing folders

After having configured all of your computers using the Network Setup Wizard, you can now share data located on different disk drives, as long as the user has authorized access.

1. Select the folder you wish to share, without opening it.

2. Right-click the folder. Select **Sharing and Security**.
3. In the **Network sharing and security** section of the **Sharing** tab, tick the **Share this folder on the network** box.
4. On the **Share name** line, enter the folder name as it will be displayed on the network (12 characters maximum to ensure compatibility with other operating systems).

*You can also tick the **Allow network users to change my files** box. In this case, the user will be able to read files and save any changes. If this box is not ticked, the shared files can only be read, and not changed.*

The **[Shared folder name] Properties** window is divided into two sections. **Local sharing and security** only allows for the sharing of files among several users on the same PC. The files are then placed in a **Shared Documents** folder. **Network sharing and security**, however, allows for the sharing of files among more than one computer.

5. Click **Apply** to validate your choices, then click **OK** to close the window.

An icon representing a hand beneath the folder indicates that the folder is now shared.

You can only share the contents of a folder, and not an individual file. We therefore recommend that you create a folder specifically for this purpose where you will put files to be shared.

3.9.3. Windows XP: Accessing shared folders

To easily access folders set up for sharing by several computers, it is preferable that the computers belong to the same workgroup. In Windows XP, the workgroup name has been defined using the Network Setup Wizard.

1. Click Start/My Computer.
2. Click My Network Places, then click View workgroup computers.

You directly access the list of computers in your workgroup.

3. Double-click the computer that is sharing the folders you wish to access.

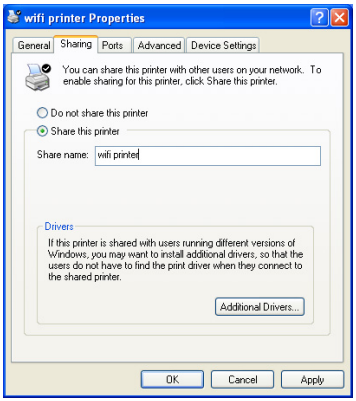
All shared folders appear.

3.9.4. Windows XP: Sharing a printer

It is possible to put a printer on the network and share it with all computers in the house equipped with a WiFi adapter.

To access a printer on the network, the printer must be set up for sharing on the computer where it is connected and installed.

On the computer connected to the printer:



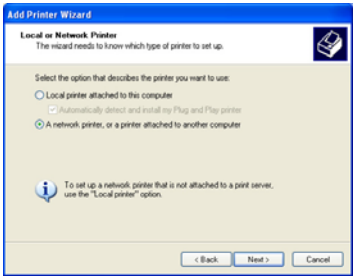
1. Click Start/Control Panel/Printers and Other Hardware/ Printers and Faxes.
2. Right-click the printer and select Sharing.
3. In the Sharing tab, select the Share this printer radio button and enter a name for your printer.

Give the printer a name that is unique and sufficiently distinctive, making it easy to recognize (my-printer or home laser printer, for example). If one of your computers is running Windows 98 SE, we recommend that the sharing name not exceed 12 characters (without spaces) in order to ensure its compatibility with this operating system.

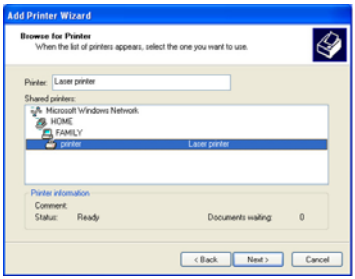
4. Click Apply, then OK.

On the computers that will use the shared printer:

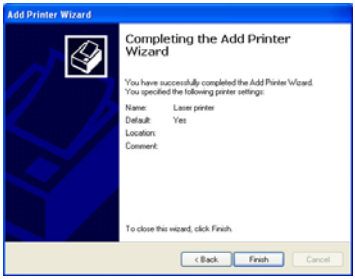
1. Click Start/Control Panel/Printers and Other Hardware/ Printers and Faxes. In the Printer Tasks section, select Add a printer.
2. The Add Printer Wizard is launched. Click Next.



3. Select the A network printer, or a printer attached to another computer option, then click Next.
4. In the window that appears, click Next to launch the search for shared printers.



5. In the list displayed, double-click the computer connected to the printer.
6. Select the shared printer, then click Next.
7. If you wish, set the shared printer as the default printer, then click Next.

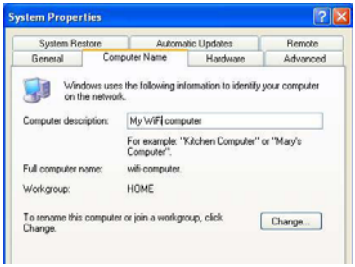


8. Click Finish to exit the Wizard.

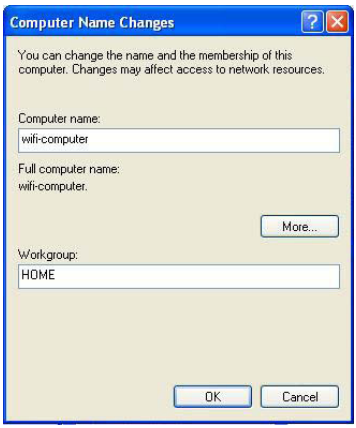
You can now use the network printer thanks to your WiFi connection. For more information on sharing a printer, please refer to your printer's manual.

3.9.5. Windows XP: Modifying a workgroup name

It may happen that you need to change the name of your workgroup (advanced users only). To do so, proceed as follows:



1. Click Start/Control Panel/Performance and Maintenance/System.
2. In the System Properties window, select the Computer Name tab.
3. Click the Change… button.



4. In the Computer Name zone, enter a name sufficiently distinctive that it can easily be recognized in the list of computers for the workgroup (my-computer, wifi-computer or julie, for example).
5. In the Workgroup zone, enter a name for the group (HOME, OFFICE or HERCULES, for example).

The workgroup name must be identical (be sure to respect the case of letters) for all computers you wish to link together in a network.

6. A Windows message indicates that the task has been carried out successfully and that you must restart the computer.
7. Repeat this procedure for each computer.

3.9.6. Windows XP: Manually enabling or disabling your adapter's WiFi connection (advanced users)

You can manually enable or disable your adapter's WiFi connection for a variety of reasons: to temporarily avoid connecting to networks, save battery power, etc.

- Click Start/Connections/Show All Connections.

Verify that your network connection is listed.

- If its status is Disabled, right-click your Wireless Network Connection and select Enable.

- If its status is Enabled, right-click your Wireless Network Connection and select Disable.

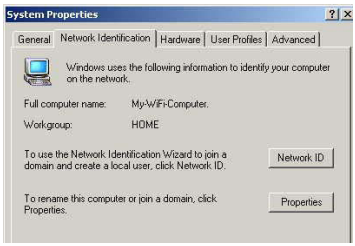
3.10. Computers running Windows 2000: Connecting to a wireless network, disconnecting from a wireless network, managing your favorite networks

Windows 2000 does not include any Assistant allowing you to access these functions. You must therefore use the proprietary software furnished with your WiFi device to carry out all of these operations (example: *Hercules WiFi Station*, bundled with Hercules WiFi adapters).

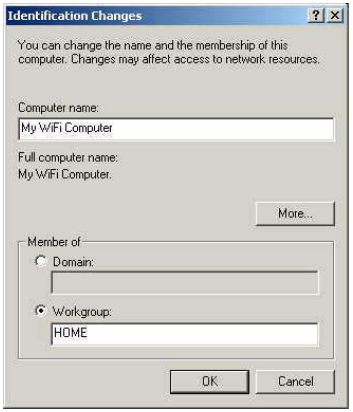
3.11. Computers running Windows 2000: Sharing folders, a printer or an ADSL connection

To create a network of computers, share data, a printer or an ADSL connection in Windows 2000, it is preferable that the computers belong to the same workgroup.

3.11.1. Creating a workgroup in Windows 2000



1. Click Start/Settings/Control Panel. Double-click System.
2. In the System Properties window, select the Network Identification tab.
3. Click the Properties button.

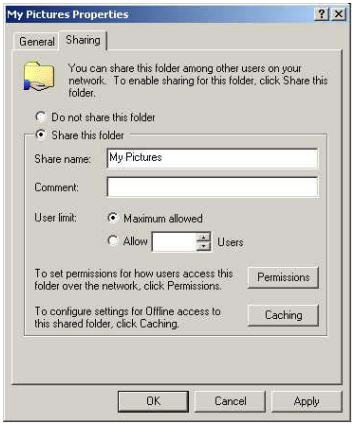


4. In the Computer name zone, enter a name sufficiently distinctive that it can easily be recognized in the list of computers for the workgroup (my-computer, wifi-computer or julie, for example).
5. In the Workgroup zone, enter a name for the group (HOME, OFFICE or HERCULES, for example).

The workgroup name must be identical (be sure to respect the case of letters) for all computers you wish to link together in a network.

6. Click OK. A Windows message indicates that the task has been carried out successfully and that you must restart the computer.
7. Click OK once more.

3.11.2. Windows 2000: Sharing folders



1. Select the folder you wish to share, without opening it.
2. Right-click the folder. Select **Sharing**.
3. In the **Sharing** tab, select **Share this folder**.
4. On the **Share name** line, enter the folder name as it will be displayed on the network (12 characters maximum to ensure compatibility with other operating systems).

*You can also limit access to the folder by selecting a limited number of users and the type of access by clicking the **Permissions** button.*

5. Click **Apply**, then **OK**.

3.11.3. Windows 2000: Accessing shared folders

1. Click **Start/Programs/Accessories/Windows Explorer**.
2. Double-click **My Network Places**, **Entire Network**, then **Microsoft Windows Network**.
3. Double-click your workgroup.

You access the list of the computers in your workgroup.

4. Double-click the computer that is sharing the folders you wish to access.

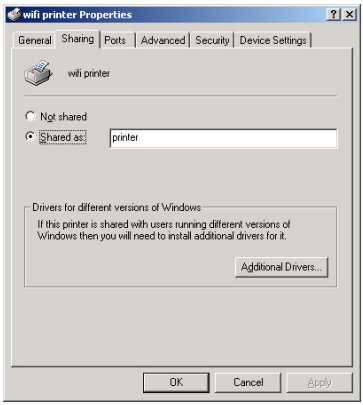
All shared folders appear.

3.11.4. Windows 2000: Sharing a printer

It is possible to put a printer on the network and share it with all computers in the house equipped with a WiFi adapter.

To access a printer on the network, the printer must be set up for sharing on the computer where it is connected and installed.

On the computer connected to the printer:

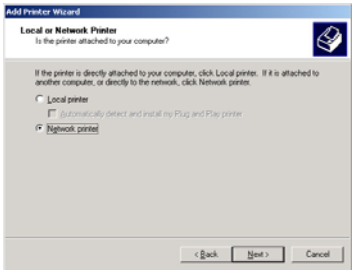


1. Click Start/Settings/Printers.
2. Right-click the printer and select Sharing….
3. In the Sharing tab, select the Shared as: radio button and enter a name for your printer.

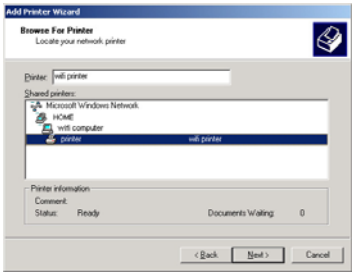
Give the printer a name that is unique and sufficiently distinctive, making it easy to recognize (my-printer or home laser printer, for example). If one of your computers is running Windows 98 SE, we recommend that the sharing name not exceed 12 characters (without spaces) in order to ensure its compatibility with this operating system.

4. Click Apply, then OK.

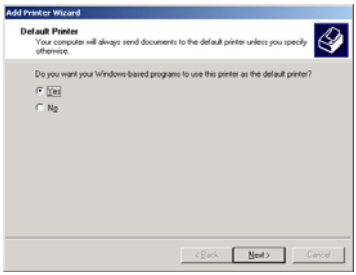
On the computers that will use the shared printer:



1. Click Start/Settings/Printers. Double-click the Add Printer icon.
2. The Add Printer Wizard is launched. Click Next.
3. Select the Network printer option, then click Next.
4. Click Next to locate the shared printer.



5. In the list displayed, double-click the computer connected to the printer.
6. Select the shared printer, then click Next.

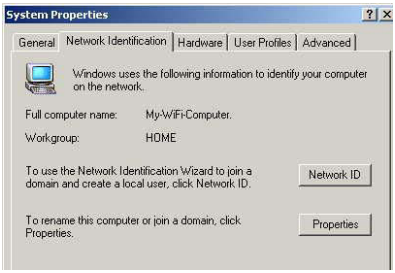


7. If you wish, set the shared printer as the default printer, then click Next.
8. Click Finish to close the Wizard.

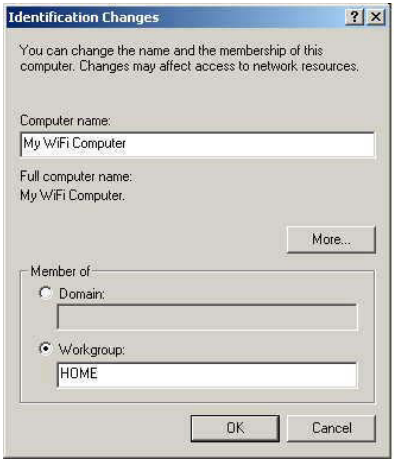
You can now use the network printer thanks to your WiFi connection. For more information on sharing a printer, please refer to your printer's manual.

3.11.5. Windows 2000: Modifying a workgroup name

It may happen that you need to change the name of your workgroup (advanced users only). To do so, proceed as follows:



1. Click Start/Settings/Control Panel. Double-click System.
2. In the System Properties window, select the Network Identification tab.
3. Click the Properties button.



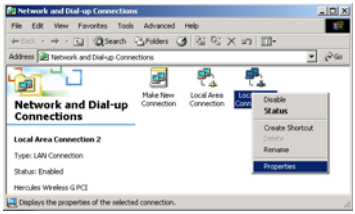
4. In the Computer name zone, enter a name sufficiently distinctive that it can easily be recognized in the list of computers for the workgroup (my-computer, wifi-computer or julie, for example).
5. In the Workgroup zone, enter a name for the group (HOME, OFFICE or HERCULES, for example).

The workgroup name must be identical (be sure to respect the case of letters) for all computers you wish to link together in a network.

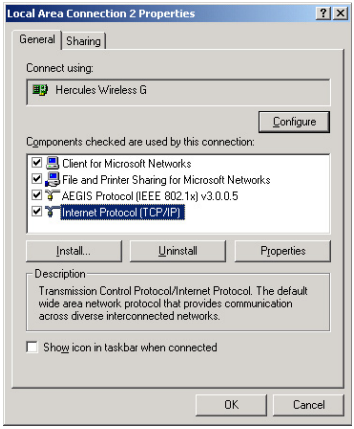
6. Click OK. A Windows message indicates that the task has been carried out successfully and that you must restart the computer.
7. Repeat this procedure for each computer.

3.11.6. Windows 2000: Sharing an ADSL connection in an Infrastructure network

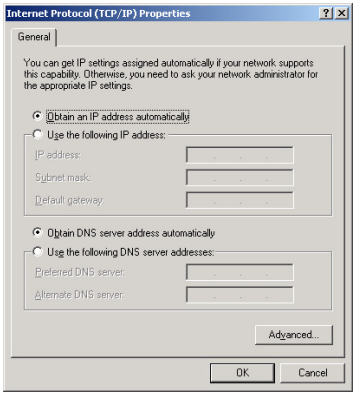
Proceed as follows for each computer that will use the shared Internet connection:



1. Click Start/Settings/Network and Dial-up Connections.
2. Select the connection to the local area network corresponding to your Hercules Wireless G device.
3. Right-click the connection and select Properties.



4. In the Local Area Connection Properties window, select Internet Protocol (TCP/IP).
5. Click Properties.



6. In the Internet Protocol (TCP/IP) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically.
7. Click OK to close the windows.

Windows may prompt you to restart your computer.

To access the Internet, you can now simply launch your Internet browser.

3.11.7. Windows 2000: Manually enabling or disabling your adapter's WiFi connection (advanced users)

You can manually enable or disable your adapter's WiFi connection for a variety of reasons: to temporarily avoid connecting to networks, save battery power, etc.

To manually enable or disable your Hercules Wireless G adapter's WiFi connection in Windows 2000:

- Access the Device Manager.
- Select your wireless adapter in the list of network adapters.
- Right-click your adapter and select Properties.
- To enable your adapter, select Enable. To disable it, select the Disable option.

For more information on manually enabling or disabling the adapter in Windows 2000, please refer to the Windows online help utility.

4. WIFI EXTENDER MANAGER FOR ADVANCED USERS

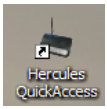
WiFi Extender Manager has been designed to respond to the needs of the widest cross-section of the public. This chapter is dedicated to users who wish to learn the subtleties of WiFi, and explore the more advanced functionalities offered by WiFi Extender Manager to get the most out of their Hercules WiFi Extender. **But be careful!** Changing certain settings may affect the proper functioning of your network. You should bear in mind, however, that nothing is irreversible, and that you can always return to the original configuration or reload a personalized configuration.

Modification of settings for your network is carried out via the WiFi Extender Manager interface, with your computer connected via Ethernet or by WiFi. If you are connected by WiFi, **selecting a different network than that of your Livebox or entering a wrong key will result in disconnection of WiFi Extender Manager**.

Once you're done, you will be able to explore all the subtleties of WiFi described in chapter 3. Welcome to the Wireless AttitudeTM!

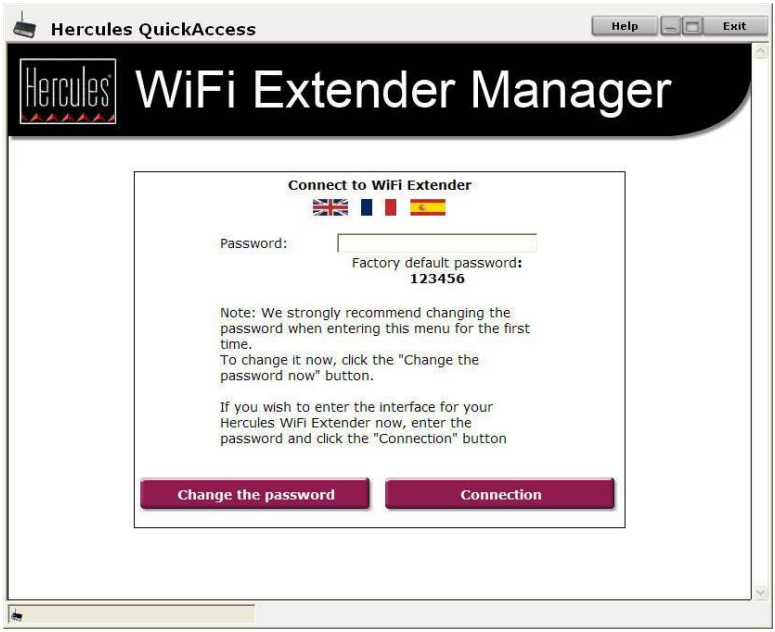
4.1. Opening the doors of WiFi Extender Manager

The Installation Assistant you have launched from the CD-ROM has installed a connection utility on your Desktop, called "**Hercules QuickAccess**". This utility will bring you straight to the door (locked with a key, for the moment) to WiFi Extender Manager.



- To access the door to enter WiFi Extender Manager, simply double-click the **Hercules QuickAccess** icon on your Desktop.

The connection window to the Hercules WiFi Extender appears.



Or, if you have chosen not to install the QuickAccess icon:

- Open up the browser of your choice (Internet Explorer, Mozilla Firefox or Netscape Navigator) and enter the address http://192.168.1.254.

You are now at the door to enter WiFi Extender Manager, which you must open using a password.

- To open the door, enter the default password or enter your own password if you have already defined one (for information on how to define your own password, please refer to chapter 4.2. Protecting access to WiFi Extender Manager).

- Click Connection.

The password ensures that you are the only one who can access your WiFi Extender Manager, and therefore your Hercules WiFi Extender's settings. For this reason, it is important that you change the password when using WiFi Extender Manager for the first time (see below).

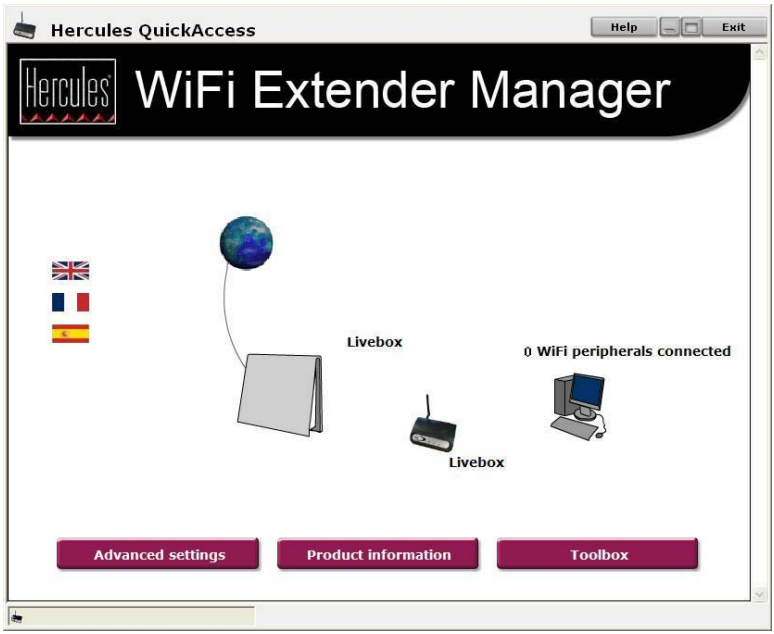
4.2. Protecting access to WiFi Extender Manager

When opening the door to WiFi Extender Manager for the first time, we recommend that you change the default password, 123456, directly in the connection panel to the Hercules WiFi Extender.

- Click the Change the password button.

- Enter the old password (123456, if this is the first time), the new password, which you will select, then confirm the new password.
- Click Confirm and Connect to save the password and connect.

The door to WiFi Extender Manager opens to the Home page depicted below. You can now explore all of your Hercules WiFi Extender's functionalities.

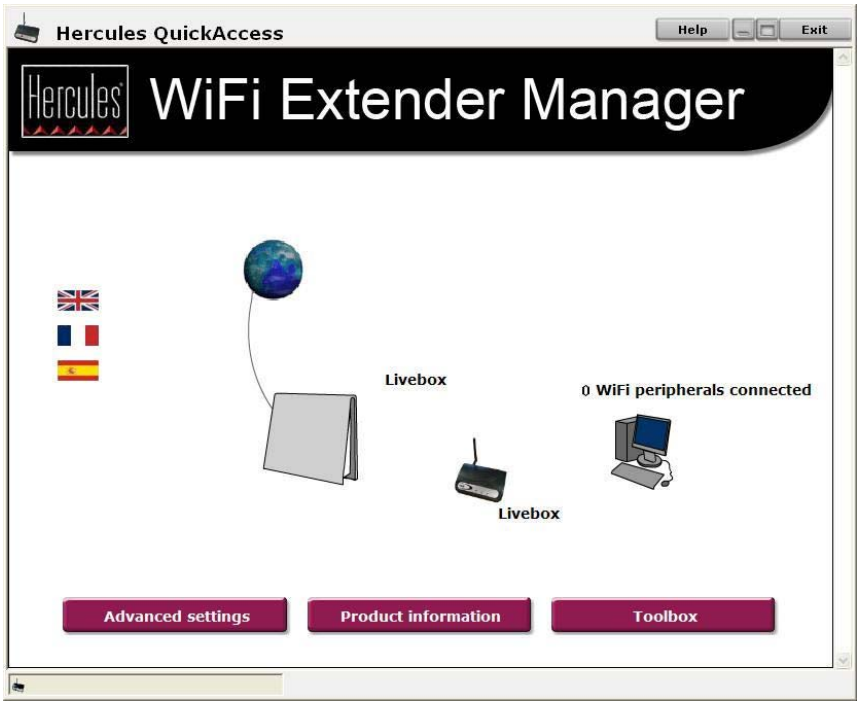


4.3. Navigating within the WiFi Extender Manager interface

The WiFi Extender Manager has been designed to simplify navigation through the different menus. Nevertheless, should you ever feel a bit lost, you can always click the Return to home page link at any time to return to the starting point for all of your Hercules WiFi Extender's functionalities.

4.4. Consulting information about your WiFi network

You have just opened the door to enter WiFi Extender Manager. It is now time to explore all of its possibilities. Start off by having a look at the various items of information displayed on your screen: public IP address, SSID of the access point and of the WiFi Extender and the number of WiFi devices connected.



4.5. Connecting to a WiFi network

If there are several WiFi networks in your area (yours, your neighbor's, public hotspots…), WiFi Extender Manager allows you to connect to your own network. We will now take the example of the WiFi network corresponding to your Livebox network. If you have another box or another WiFi modem router, however, you can also select the corresponding network.

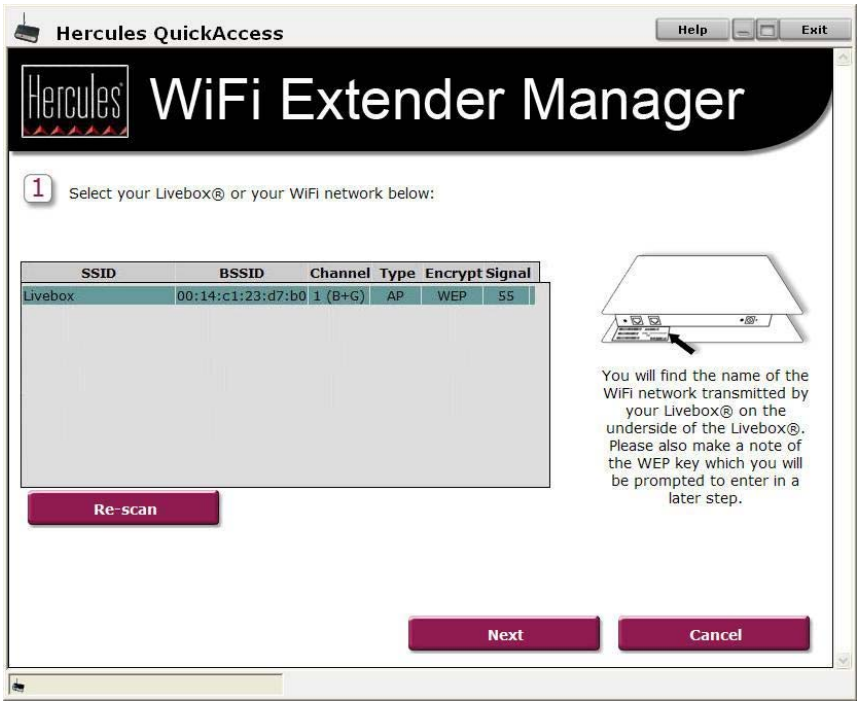
Make sure to select the network corresponding to your actual box or modem router, or else you risk being disconnected.

- On the home page, click the Advanced Settings button to access the advanced settings for your WiFi network.

- Select Advanced WiFi settings, then Configuration Assistant.

- On the page displayed, click the WiFi configuration button.

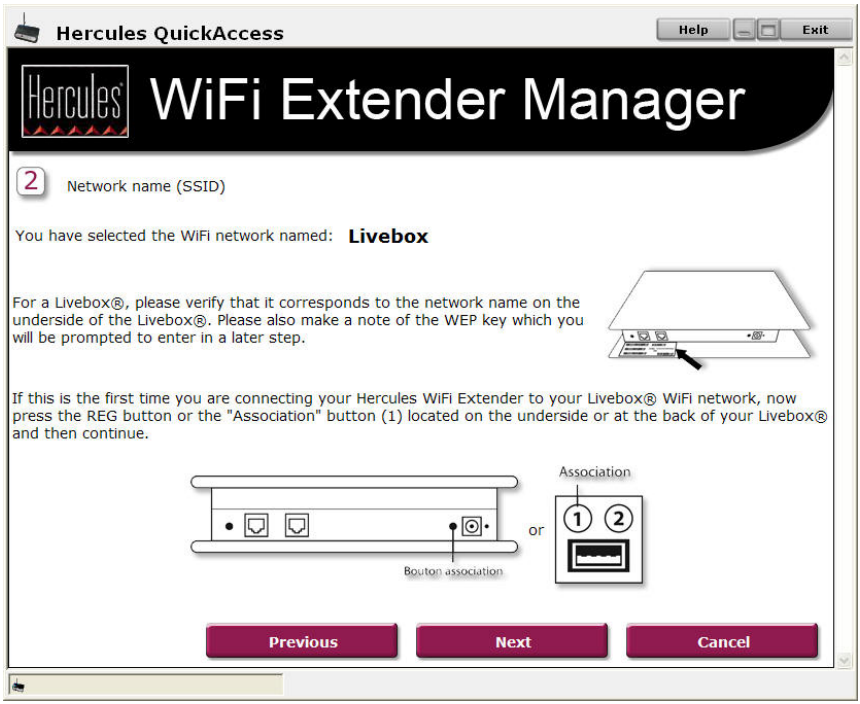
The WiFi Extender Manager Configuration Assistant launches detection of existing networks. The detected WiFi networks (that of your Livebox and the other networks) are displayed in a dedicated page.



If your Livebox WiFi network does not appear in the list, launch network detection again by clicking the Re-scan button.

- To select your Livebox network, compare the SSID of the detected network with the one on the underside of your Livebox.

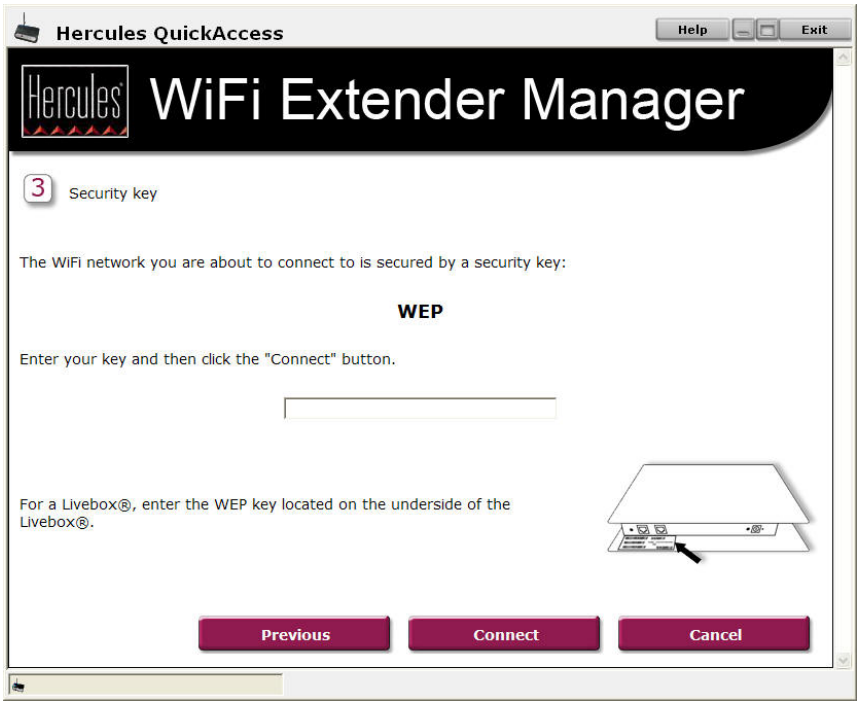
- Click Next.



The SSID is displayed. You should also make a note of the WEP key for your Livebox, which you will be prompted to enter in the following step.

- If necessary, pair your Livebox with your Hercules WiFi Extender as indicated on-screen.

- Click Next.



- Enter the WEP security key for your Livebox.

- Click Connect.

WiFi Extender Manager connects your WiFi Extender to the Livebox. Should the connection fail, you can restart the procedure, taking care to select the correct network and enter the correct security settings.

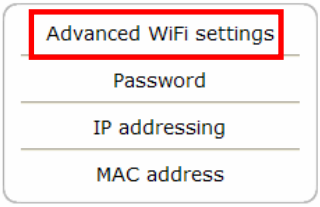
4.6. Limiting access to your WiFi network to certain WiFi computers and devices

Filtering by MAC address is a complement to your security parameters, allowing you to select the wireless computers and devices authorized to connect to your local area WiFi network.

A MAC address is a unique address created by the builder of the network device (WiFi or Ethernet), serving to identify this element within a network.

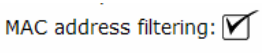
To enable filtering by MAC address:

- On the home page, click the Advanced Settings button to access the advanced settings for your WiFi network.



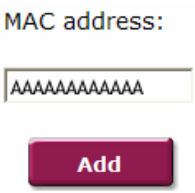
- On the page displayed, Click the **Advanced WiFi settings** button to display the available configuration options.

- On the **Advanced WiFi settings** page, click the **MAC address filtering** button.



- Tick the **MAC address filtering:** box.
- Click **Apply**.

To add a WiFi computer or device (webcam, game console or other) to the list:



- Manually enter the WiFi device's MAC address (in AAAAAAAAAAAA format, without separators) in the **MAC address:** field.
- Click the **Add** button.

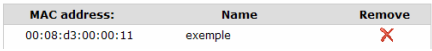
This address has been added to the list of computers and WiFi devices authorized to connect.

- Click **Apply**.

⚠ Once you have enabled the filtering by MAC address function, **only** the computers and devices appearing in this list will be authorized to connect to your Hercules WiFi Extender.

⚠ If friends visit with their WiFi computers or devices, or if you wish to connect new WiFi devices, don't forget to **add their MAC addresses** to the filtering list and pair them with the Livebox, otherwise they will never be able to connect.

To remove a WiFi computer or device (webcam, game console or other) from the list:



- In the Remove column, click the ✕ next to the computers and devices you wish to remove from the filtering list.
- Click Apply.

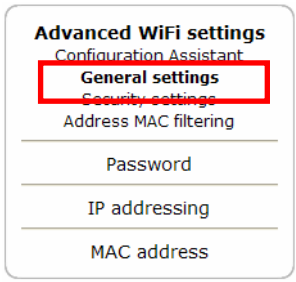
4.7. Personalizing the general settings for your WiFi network

⚠ The following elements of information, preceded by a ⚠ warning symbol, draw your attention to the fact that the proper functioning of your network may be affected if you modify these settings in WiFi Extender Manager before you have modified them on your Livebox. If you do not know the function of these settings, we recommend that you keep the default settings.

To access the settings for your WiFi network:

- On the home page, click the Advanced Settings button to access the advanced settings for your WiFi network.
- On the page displayed, Click the Advanced WiFi settings button to display the available configuration options.

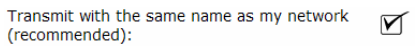
To personalize general settings:



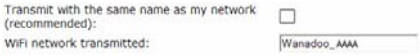
- On the Advanced WiFi settings page, click the General settings button.

The WiFi network to extend: field indicates the name of the WiFi network selected during network detection.

⚠ Enter another name, if you wish (32 alphanumeric characters maximum).



- If you want the Hercules WiFi Extender to transmit the same network name as the Livebox, tick the **Transmit with the same name as my network (recommended)** box.



- If you want the Hercules WiFi Extender to transmit a different WiFi network name than that of the Livebox, untick the **Transmit with the same name as my network (recommended)** box.

- Enter the network name to be broadcast by the Hercules WiFi Extender.

⚠ If necessary, change the **radio channel** used by the local area WiFi network to communicate (from 1 to 13).

*Change this setting **only if** another transmitter is using the same channel, which could result in slower WiFi performance for your Livebox.*

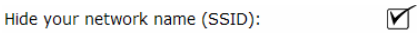
- Select the transmission power (100 % by default).

- Select the WiFi mode to be used by your router: **Mixed**, **802.11b** or **802.11g**.

*If you select **802.11b**, 802.11g devices will **not** be able to connect.*

*If you select **802.11g**, 802.11b devices will **not** be able to connect.*

*If you select **Mixed**, 802.11b and g devices will be able to connect.*



- If you do not want the network to broadcast its name, tick the **Hide your network name (SSID)** box.

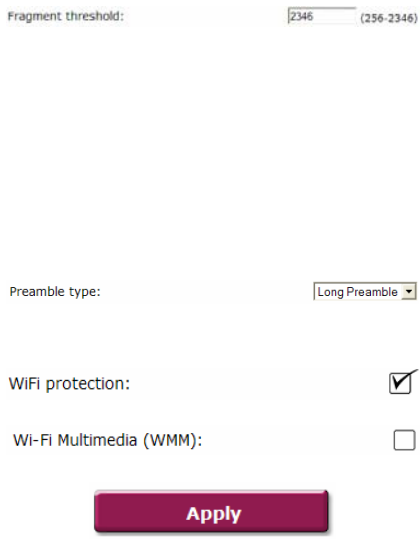
The SSID is hidden, and the network name is not displayed during detection by a WiFi client (the Network name (SSID) field is blank in Hercules WiFi Station, for example).
Make sure that you do not lose or forget this name, as you will need it to connect your WiFi devices.

- The **transmission rate** is the speed at which data packets are transferred (sent and received). It is set to **Auto** by default, but can be adjusted from **1Mbps** (min) to **54Mbps** (max).

- The **Beacon Period** lets you set the wireless network detection interval.

- When an **RTS threshold** is defined, the wireless device asks the access point for authorization to transmit data, thereby avoiding the simultaneous arrival of data (risk of collision).

Changing the RTS threshold may affect the performance of your Livebox.



- The **fragment threshold** consists of defining the size at which data packets are fragmented. If the packet size is less than the predefined size, the packet is not fragmented. If the packet size is greater, however, the packet is fragmented before being sent, then reconstituted at the access point level.

Fragmentation allows you to improve the success of transmissions.

- The **Preamble** defines the size of WiFi packets. A **Short** preamble optimizes the rate at the expense of your WiFi coverage. A **Long** preamble (value selected by default) gives priority to WiFi coverage by using a longer latency time.

- Leave this box ticked to keep the WiFi protection for your network.

- Tick this box if you wish to assign priority to voice type data in relation to other data.

- Click **Apply** to validate the selected settings.

4.8. Securing your WiFi network

Creating a WiFi network is very useful if you have several wireless computers or devices, but how can you avoid having someone on the outside connect to your network without permission or intercept your unencrypted data exchanges? Thanks to WiFi Extender Manager, you can define your own security choices step by step. To help you select the best level of security for your network, we invite you to consult the table below, which sums up the **5 types of security** supported.

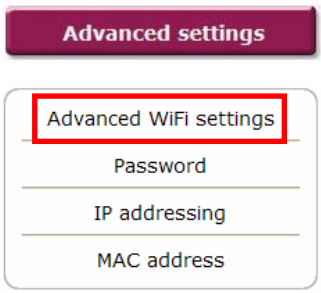
Type	Level of security	Key used	Authentication
WEAK (WEP 64)	The lowest level of security, whereby single encryption is carried out on exchanged data. Each wireless client in the network must use the same key to decode the transmission.	**64-bit** (10 character) key in hexadecimal format. *A **hexadecimal key** is composed of numbers 0 to 9 and letters A to F (example: A123BCD45E for a 64-bit key).*	Open (no authentication), Shared (authentication method via shared key) or Auto (authentication when requested by the device).
MEDIUM (WEP 128)	Level of security identical to that of WEP 64. Only the key length is different.	**128-bit** (26 character) key in hexadecimal format. *A **hexadecimal key** is composed of numbers 0 to 9 and letters A to F.*	Open (no authentication), Shared (authentication method via shared key) or Auto (authentication when requested by the device).
HIGH (WPA-PSK)	Latest-generation heightened level of security, specially designed for environments such as a small office or the home, based on a pre-shared key.	Password with a minimum of 8 **alphanumeric characters**. *An **alphanumeric character** corresponds either to a number (0-9), or to a letter (a-z or A-Z).*	TKIP

Type	Level of security	Key used	Encryption type
VERY HIGH (WPA2)	Latest-generation very heightened level of security, specially designed for environments such as a small office or the home, based on a pre-shared key.	Password with a minimum of 8 alphanumeric characters. *An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).*	AES
WPA or WPA2	Level of security selected by the router depending on the maximum level of security supported by the devices on the network.	Password with a minimum of 8 alphanumeric characters. *An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).*	TKIP or AES

⚠ The following elements of information, preceded by a ⚠ warning symbol, draw your attention to the fact that the proper functioning of your network may be affected if you modify these security settings in WiFi Extender Manager **before you have modified them on your Livebox**. In effect, **you cannot select a security level different than that of your Livebox**. To find out how to change the security level on your Livebox, please refer to the manufacturer's user manual.

Moreover, **you must not select a security level in WiFi Extender Manager greater** than that supported by your computers or other WiFi devices. For example, if your computers or other devices only support the WEAK (WEP 64) or MEDIUM (WEP 128) levels, you must not select the HIGH (WPA-PSK) or VERY HIGH (WPA2) levels.

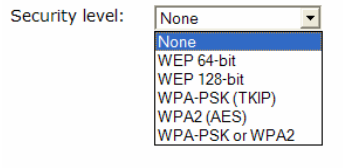
To access your WiFi network's security settings:



- On the home page, click the **Advanced Settings** button to access the advanced settings for your WiFi network.

- On the page displayed, click the **Advanced WiFi settings** button to display the available configuration options.

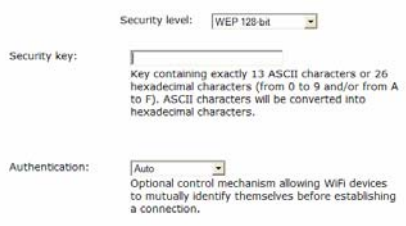
- On the Advanced WiFi settings page, click the Security settings button.



The Security level: field indicates the type of security currently selected for your WiFi network (normally, the WEP or WPA security level of your Livebox).

⚠ You can select another security level by clicking the drop-down menu: WEP 64-bit, WEP 128-bit, WPA-PSK (TKIP), WPA2 (AES), WPA-PSK or WPA2.

If you select the WEAK (WEP 64) or MEDIUM (WEP 128) security level:



⚠ Enter a WEP key of your choice, depending on the security level selected: 10 hexadecimal characters or 5 ASCII characters for a WEP 64-bit key, 26 hexadecimal characters or 13 ASCII characters for a WEP 128-bit key.

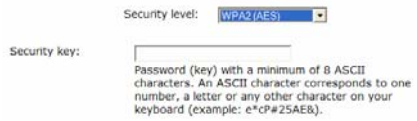
A hexadecimal key is composed of numbers from 0 to 9 and letters from A to F (example: A123BCD45E for a 64-bit key).

An ASCII character corresponds to a number, a letter or any other character on your keyboard.

- Select the authentication type: Auto (authentication carried out if requested by the device), Open (no authentication) or Shared (authentication via shared key).

- Click Apply.

If you select the HIGH (WPA-PSK), VERY HIGH (WPA2) or WPA or WPA2 security level:



⚠ Enter the password of your choice (8 ASCII characters minimum).

An ASCII character corresponds to a number, a letter or any other character on your keyboard.

- Click Apply.

4.9. A toolbox with multiple facets

WiFi Extender Manager functions as a toolbox which can help you, in particular, to correct any mistakes you might make.

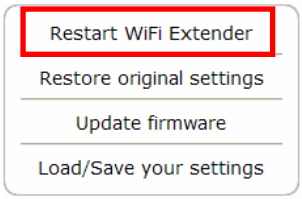
4.9.1. Restarting the Hercules WiFi Extender

The Restart WiFi Extender function cuts the Hercules WiFi Extender's WiFi connection and restarts WiFi Extender Manager.

⚠ All computers or devices connected via WiFi will be disconnected.

To restart the Hercules WiFi Extender:

- On the home page, click the Toolbox button.



- Select Restart WiFi Extender.

An explanatory text outlines the function of this button.

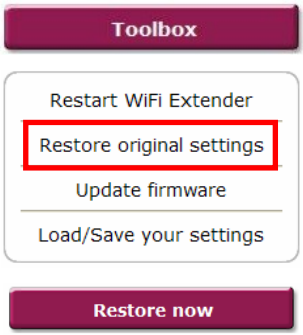
- Click the Restart now button.

⚠ WiFi Extender restarts with the last settings saved. No data is lost.

4.9.2. Restoring your original settings

If you have modified certain settings – whether intentionally or not – and wish to restore the original settings, follow the instructions below.

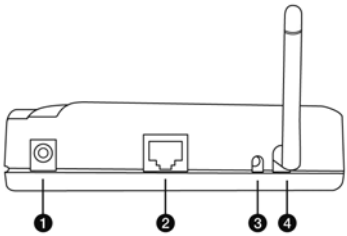
⚠ During the restoration, all settings that you have previously modified (WiFi network name, WiFi security key, filtering by MAC address…) will be lost!



- On the home page, click the **Toolbox** button.

- Select **Restore original settings**.

- Click the **Restore now** button.



You can also use the Reset button located on the WiFi Extender:

- Disconnect the WiFi Extender.

- Press the **Reset button** ❸ using an object with a pointed tip for 10 seconds. Release the button and wait for your Hercules WiFi Extender to restart.

Your WiFi Extender will load its original settings and restart.

4.9.3. Updating the firmware

If you wish to take advantage of new functionalities or improved functionalities for your Hercules WiFi Extender, we recommend that you regularly visit the http://ts.hercules.com/eng website (**Updates and Downloads** link) to check whether any firmware updates are available.

⚠ We strongly recommend that you carry out firmware updates while connected by the black Ethernet cable (and not via WiFi).

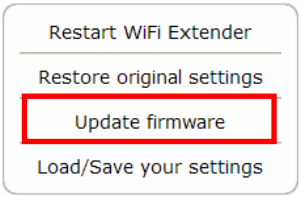
During the update, all settings that you have previously modified (WiFi network name, WiFi security key…) will be lost!

If a firmware update is available:

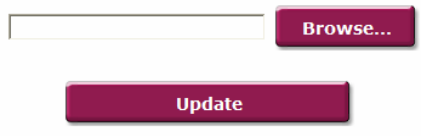
- Visit the http://ts.hercules.com/eng website (Updates and Downloads link) and download the new firmware for your Hercules WiFi Extender.

- In WiFi Extender Manager :

- On the home page, click the Toolbox button.



- Select Update firmware.



- Click the Browse... button.

- Select your firmware file downloaded from the http://ts.hercules.com/eng website (Updates and Downloads link), then click Open.

- Click Update to import the data.

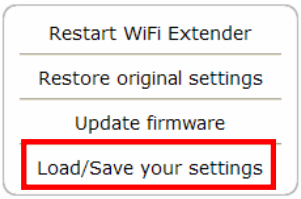
Your Hercules WiFi Extender will now use this new firmware version.

4.9.4. Loading and saving your configuration settings

If you create several configurations adapted to different uses, you can easily save and load the configuration of your choice on your Hercules WiFi Extender.

To save a configuration:

- On the home page, click the Toolbox button.

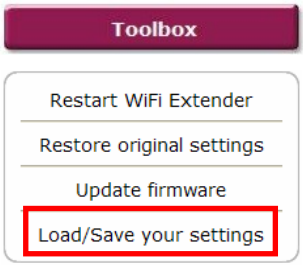


- Select Load/Save your settings.

- Click the Save your settings in... button.

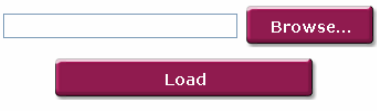
- In the window that opens, select the location of your file and save it.

To load a configuration:



- On the home page, click the Toolbox button.

- Select Load/Save your settings.



- Click the Browse... button.
- Select your file (Config.bin type), then click Open.
- Click Load to import the file.

This settings file will replace the existing configuration.

4.10. Other advanced options

4.10.1. Configuring the internal DHCP server

This chapter will explain how to change your WiFi Extender's IP address and configure the internal DHCP server, which manages the IP addresses of your computers.

To access the DHCP server configuration page:

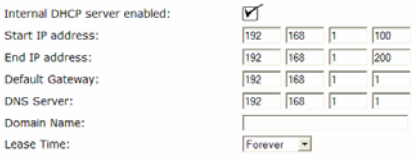
- On the home page, click the Advanced Settings button to access the advanced settings for your WiFi network.
- On the page displayed, click the IP addressing button.

To configure the DHCP server:

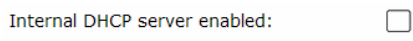
- You can modify the IP Address of your Hercules WiFi Extender (192.168.1.254, by default), its Subnet mask (255.255.255.0, by default), and designate the gateway.

⚠ Be sure to make a note of the IP address.

Without it, you will not be able to reconnect to your Hercules WiFi Extender.



- If you leave the **Internal DHCP server enabled** box ticked, the Hercules WiFi Extender will allocate the range of **start and end IP addresses** you have defined and will use the **Default Gateway**, **DNS Server** address, **Domain Name** and **Lease Time** specified.



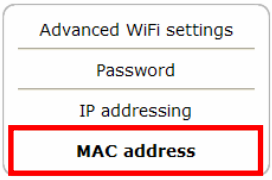
- If you untick the **Internal DHCP server enabled** box, the Hercules WiFi Extender can serve as a DHCP relay and distribute the IP addresses that you have set via the Livebox.

4.10.2. Cloning your PC's MAC address

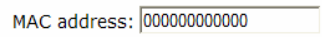
Thanks to WiFi Extender Manager, you can assign the same MAC address to your Hercules WiFi Extender as that of your PC. This principle is called cloning, and is particularly useful when an Internet Service Provider locks a connection to a specific MAC address (that of your computer, for example), thereby prohibiting any connection from another MAC address (that of your Hercules WiFi Extender, in particular).

To clone a MAC address:

- On the home page, click the **Advanced Settings** button to access the advanced settings for your WiFi network.



- On the page displayed, click the **MAC address** button.



- Enter the MAC address you wish to use.

- Click the **Clone my PC's MAC address** button.
- Click **Apply**.

ENGLISH
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ESPAÑOL

4.10.3. Changing the Hercules WiFi Extender password

For reasons of confidentiality or security, you may wish to change the password. WiFi Extender Manager allows you to select a new password when you first connect (please see chapter 4.2. Protecting access to WiFi Extender Manager) or via the Advanced Settings window (see below).

To access the password modification page:

- On the home page, click the Advanced Settings button to access the advanced settings for your WiFi network.
- On the page displayed, click the Password button.

To change the password:

- Enter your new password, and confirm it.
- Click the Apply button to validate the new password.

4.10.4. Product information

WiFi Extender Manager lets you consult all items of information relating to the functioning of your Hercules WiFi Extender.

To consult product information:

- On the home page, click the Product information button.

Various items of information are displayed, regarding the local area network (LAN), WiFi, firmware and hardware elements, respectively.

5. GLOSSARY

802.11
Standard established in 1997 by the IEEE (Institute of Electrical and Electronics Engineers, an American organization), defining wireless networks in the 2.4 – 2.48GHz frequency range and offering transfer speeds of between 1 and 2Mbits/s. Revisions have been made to the original standard in order to optimize transfers (this is the case for the 802.11a, 802.11b and 802.11g standards, referred to as physical 802.11 standards) or to ensure better security or improved interoperability of equipment.

802.11b
Standard established by the IEEE (Institute of Electrical and Electronics Engineers, an American organization) in the 802.11 family, allowing for theoretical transfer rates of 11Mbits/s in the 2.4GHz frequency range with a physical range of up to 300m in an environment free from obstructions. The frequency range used is the 2.4GHz band, with 3 radio channels available.

802.11g
Standard established by the IEEE (Institute of Electrical and Electronics Engineers, an American organization) in the 802.11 family, allowing for theoretical transfer rates of 54Mbits/s in the 2.4GHz frequency range with a physical range of up to 300m in an environment free from obstructions. The 802.11g standard offers backwards compatibility with the 802.11b standard, which means that equipment compliant with the 802.11g standard will also work with 802.11b.

802.11i
Standard established by the IEEE (Institute of Electrical and Electronics Engineers, an American organization) in the 802.11 family, whose goal is to improve security by integrating WPA-PSK authentication into AES encryption. This Hercules client is compatible with this standard.

Access point

The access point is the heart of your local WiFi network. The system access point is a wireless router whose function is to bring several clients together, which is to say link together all computers equipped with WiFi adapters, thanks to its radio antenna.

Ad hoc mode
Mode allowing several computers equipped with WiFi to communicate directly with one another. This mode is also referred to as Peer to Peer.

ADSL (Asymmetric Digital Subscriber Line)
This equipment, connected to a standard telephone line, offers great speed in terms of sending and receiving data.

AES (Advanced Encryption Standard)
A symmetrical block-based encryption standard supporting different key lengths, this is a powerful, quick and efficient encryption method.

ATM (Asynchronous Transfer Mode)
High-speed transfer mode for fixed-size data.

CCK (Complementary Code Keying)
Advanced encoding scheme for radio waves in wireless networks allowing for high transfer speeds.

Client
Computer equipped with a PCI, USB or PCMCIA WiFi adapter.

DHCP (Dynamic Host Configuration Protocol)
Protocol managing the allocation of IP addresses to computers.

DSSS (Direct Sequence Spread Spectrum)
Technique for using radio frequencies in broad-spectrum wireless networks meant to increase the range of transmissions.

ESSID (Service Set Identifier)
8 to 32-character identifier, often abbreviated as SSID, serving as the unique name for a network shared by clients and the access point.

Ethernet port (or RJ-45)
Port allowing for the connection of two devices via a cable, such as a PC and a router, in order to exchange data packets without collision.

Filter
Device placed between the telephone plug and the modem to improve the quality of telephone communications, which are often degraded by ADSL signals.

Firewall
Combination of software and security devices protecting a network connected to the Internet.

Infrastructure mode
Communication mode consisting of grouping together several computers equipped with WiFi in a network via a wireless access point such as the Hercules ADSL router.

IP address
Unique computer address assigned by the router. Each computer has its own IP address, allowing it to be identified within the network.

LEAP (Lightweight Extensible Authentication Protocol)
Security protocol developed by the company Cisco for the world of Windows. The format used is identifier/password.

MAC address (Message Authentication Code)
Unique address created by the builder of the client adapter or router, serving to identify this element within a network.

NAT (Network Address Translation)
Technique allowing for the masking of IP addresses of local area network computers with respect to the Internet.

OFDM (Orthogonal Frequency Division Multiplexing)
Radio transmission technique providing very high transfer speeds widespread within DSL technology, in the wireless terrestrial distribution of television signals and adopted for the high-speed 802.11 wireless communication standard.

PPPoA (Point-to-Point Protocol over ATM)
Protocol allowing for connection to the Internet of computers linked over an ATM network, while still identifying the user.

PPPoE (Point-to-Point Protocol over Ethernet)
Protocol allowing for connection to the Internet of computers linked over an Ethernet network via a high-speed modem.

Static IP
Permanent IP address assigned to a computer by the service provider.

Subnet mask
Part of an IP address indicating the class of the network used (class C, type 255.255.255.0 for a local area network).

TKIP (Temporal Key Integrity Protocol)
The WPA standard uses the TKIP protocol, which consists of regenerating new keys for each data packet, whereas WEP uses a system based on a fixed key.

UPnP (Universal Plug n' Play)
Protocol allowing for the connection to one another of many computers and peripherals available on a network.

WEP (Wired Equivalent Privacy)
Security protocol for wireless networks using encryption based on a 64-bit, 128-bit or 256-bit fixed key used only once, at the start of the decryption phase. To decode a transmission, each wireless network client must use the same 64, 128 or 256-bit key. WEP is part of the 802.11 standard with a view to ensuring authentication (access is only authorized for those who know the WEP key) and confidentiality (encryption). An encryption key is composed of numbers 0 to 9 and letters A to F (example: A123BCD45E).

WiFi (Wireless Fidelity)
An abbreviation of Wireless Fidelity, WiFi is the commercial name adopted by the WECA (Wireless Ethernet Compatibility Alliance), an organization responsible for maintaining the interoperability of equipment in a wireless local area network (WLAN) compliant with the IEEE 802.11 standard. Thus, a WiFi network is actually a 802.11 network. In practice, WiFi allows for the connection of laptop computers, desktop computers or Personal Digital Assistants (PDAs) many tens of meters distant from one another via an access point, allowing them to communicate with one another without any cables and exchange data at high speeds.

WiFi Extender Manager
Utility developed by Hercules to configure and view settings for the Hercules WiFi Extender.

WiFi Router
Device installed at the heart of a WiFi network, allowing for the connection of several computers equipped with WiFi adapters for the exchange of data.

WiFi Station
Utility developed by Hercules to define, verify and configure all connection and security settings regarding your WiFi installation.

WLAN (Wireless Local Area Network)
Wireless local area network, generally employing the 802.11b or g standard.

Workgroup
Group of computers with which you wish to communicate or share resources such as folders, a printer or an Internet connection. To be part of a workgroup, computers must have the same group name.

WPA (WiFi Protected Access)
Wireless network security standard put in place by manufacturers, employing a data encryption algorithm relying on dynamic key management, which was lacking in WEP, the difference being that once communication is established, the key changes randomly for enhanced security.

WPA-PSK (WiFi Protected Access-Pre-Shared Key)
Latest-generation heightened security protocol specially designed for use in environments such as a small office or the home, based on a pre-shared key (a single password). This key is also used for TKIP or AES data encryption.

Log on now to our website (www.hercules.com) to download the latest driver and software versions, consult the list of Frequently Asked Questions (FAQs) relating to your product and access User Manual updates. You can also discover the entire Hercules range and get information on upcoming products.

6. TECHNICAL SUPPORT

If you encounter a problem with your product, please go to http://ts.hercules.com and select your language. From there you will be able to access various utilities (Frequently Asked Questions (FAQ), the latest versions of drivers and software) that may help to resolve your problem. If the problem persists, you can contact the Hercules products technical support service ("Technical Support"):

By email:
In order to take advantage of technical support by email, you must first register online. The information you provide will help the agents to resolve your problem more quickly.
Click Registration on the left-hand side of the Technical Support page and follow the on-screen instructions.
If you have already registered, fill in the Username and Password fields and then click Login.

By telephone:

United Kingdom	08450800942 Charges at local rate	Monday to Friday from Noon to 4pm and 5pm to 10pm Saturday from 9am to Noon and 1pm to 7pm Sunday from 9am to Noon and 1pm to 4pm
Denmark	80887690 Free	Monday to Friday from 1pm to 5pm and 6pm to 11pm (English) Saturday from 9am to 1pm and 2pm to 8pm Sunday from 10am to 1pm and 2pm to 5pm
Sweden	0200884567 Free	Monday to Friday from 1pm to 5pm and 6pm to 11pm (English) Saturday from 9am to 1pm and 2pm to 8pm Sunday from 10am to 1pm and 2pm to 5pm
Finland	0800 913060 Free	Monday to Friday from 2pm to 6pm and 7pm to Midnight (English) Saturday from 10am to 2pm and 3pm to 9pm Sunday from 11am to 2pm and 3pm to 6pm

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This warranty shall not apply: (1) if the product has been modified, opened, altered, or has suffered damage as a result of inappropriate or abusive use, negligence, an accident, normal wear, or any other cause not related to a material defect or manufacturing flaw; (2) in the event of failure to comply with the instructions provided by Technical Support; (3) to software not published by Guillemot, said software being subject to a specific warranty provided by its publisher.

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At the end of its working life, this product should not be disposed of with standard household waste, but rather dropped off at a collection point for the disposal of Waste Electrical and Electronic Equipment (WEEE) for recycling.

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Declaration of conformity with EU directives

This device can be used in: AT, BE, FR, DE, IE, IT, LU, NL, PL, ES, SE, GB, FI, CH.

Hereby, GUILLEMOT CORPORATION, Carentoir France, declares that this *Hercules HWGADSL2P-54V2* is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The Declaration of Conformity can be consulted at this website address:

ftp://ftp.hercules.com/wifi/DoC/HWGADSL2P-54V2/DoC-eng_Hercules_HWGEXT-54-LB.pdf

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This equipment has been tested and found to comply with Directive 1999/5/EC of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity. After assessment, the equipment has been found to comply with the following standards: EN 300.328 (radio), EN 301 489-1, EN 301 489-17 (electromagnetic compatibility) and EN 60950 (safety). This equipment may be used in all European Union countries and in all countries applying Directive 1999/5/EC, without restriction, with the exception of the following countries:
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When this equipment is used outdoors, output power is limited to within the frequency bands listed below. For more information, consult the ART website: www.art-telecom.fr.

Location	Frequency band (MHz)	Power (EIRP)
Indoor (no restrictions)	2400 – 2483.5	100mW (20dBm)
Outdoor	2400 – 2454 2454 – 2483.5	100mW (20dBm) 10mW (10dBm)

Operation of this equipment in a residential environment may give rise to radio interference; if so, it is incumbent upon the user to rectify the situation.
ITALY:
This device complies with the National Radio Interface and the requirements of the Frequency Allocation Table. Use of this wireless product outside of the boundaries of the owner's property requires a general authorization. For more information, consult the website www.comunicazioni.it.

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