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1. YOUR HERCULES WIRELESS N ROUTER

Your Hercules N Router opens up the doors to a new world of **WiFi** for you: one of high-speed wireless communications and extended coverage. In keeping with the trend of Web 2.0, your Hercules N Router takes interactivity with users even further and allows you to share your Internet access to watch high-definition videos or transfer large files without any worries. It also allows you to share your devices and your data between several computers, while at the same time doing away with the need for kilometers worth of cables.

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 Wireless N Router, as you risk damaging its internal components.

- In order to avoid the risk of fire or electrical discharge, keep your Router 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 Router.

- Unplug the Router'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 Router before cleaning. Use a soft cloth for cleaning and avoid using aerosol cleaners.

1.2. Specifications

Your **Hercules Wireless N Router** is equipped with several functionalities: (1) **802.11n** wireless WiFi **router**, (2) 10/100 LAN switch and (3) Internet firewall.

- Compatible with the following WiFi protocols:
    - 802.11b: 1, 2, 5.5 and 11Mbits/s data rates in the 2.4GHz band
    - 802.11g: 6, 9, 12, 18, 24, 36, 48 and 54Mbits/s data rates in the 2.4GHz band
    - 802.11n draft 1.0 and 2.0: data rates in the 2.4GHz band, varying depending on the bandwidth of the channel used (20 or 40MHz). Values are classified from MCS0 to MCS15 and vary from 7.2 to 144.44Mbits/s for 20MHz and from 15 to 300Mbits/s for 40MHz
- **DSSS**/**CCK** frequency range and **OFDM** modulation from 2.412GHz to 2.484GHz (13 channels)
- Compatible with the following security protocols:
    - **WEP** with 64 and 128-bit key length
    - **WPA-PSK** with TKIP or AES encryption (802.11i security protocol)
    - **WPA2** with TKIP and AES encryption (802.11i security protocol)
- Filtering by **MAC address**/IP address, URL blocking
- SPI **firewall**
- **WMM** mode support (Wi-Fi MultiMedia™)
- **WPS** (Wi-Fi Protected Setup™)
- WAN mode support (PPPoE, automatic DHCP, static IP)
- LAN mode support

- Router mode support
- **802.11n** wireless **access point**
- RF specification: frequency band = 2.4GHz – 2.484GHz
- Maximum transmission power: 100mW
- 3 removable, adjustable 3dBi antennas
- 4 RJ-45 connectors for a Fast Ethernet 10/100Mbps connection
- Auto-MDIX support (automatic detection of crossed cabling)
- Conforms to the IEEE 802.3u specification
- IEEE 802.3x flow control support in Full Duplex mode
- External DC power supply. Input: 200~240V, 50/60 Hz; output: 9V DC/1 A

- Blue LEDs on front face
- Software update via Ethernet port

1.3. Minimum system requirements

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

To access the Internet:
- Active Internet line
- Internet Explorer 6.0, Netscape Navigator 4.7 or Mozilla Firefox 1.0 or higher
- ADSL Ethernet modem, cable modem, Internet "Box" (Livebox®, Freebox®, Neufbox®…)

1.4. Box contents

Please verify that the following elements are present in your Hercules Router box:
- Hercules Wireless N Router
- CD-ROM containing the installation Assistant and User Manual in PDF format
- Quick Start Guide in English
- Ethernet cable
- Power adapter
- Hercules Wireless N USB Key (optional)

1.5. Front face overview

⏻ : Power LED

📶 : WiFi LED: lit up when the WiFi connection is active. Flashes during data transfer.

1💻 : 4 LEDs corresponding to the 4 Ethernet ports: the LED is lit up when a device is connected to the corresponding port. The LEDs flash during data transfer.

🕹 : Internet LED: lit up when the Ethernet cable is connected to the ⚓ WAN connector. Flashes during data transfer.

1.6. Connectivity overview
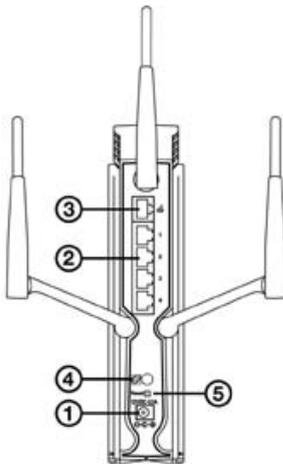
① Power plug to connect the power adapter.

② Four **Ethernet ports** allowing your Hercules Router to be connected to 4 desktop computers and/or laptop computers and/or game consoles equipped with Ethernet (RJ-45) ports and/or devices (webcam...) in order to create a network.

③ RJ-45 WAN port allowing you to connect an ADSL modem, cable modem or Internet "Box" to your Hercules Router.

④ **WPS** button (Wi-Fi Protected Setup™).

⑤ Return to factory default settings button.

2. INSTALLING YOUR HERCULES WIRELESS N ROUTER

Your Hercules Wireless N Router has been designed to be simple to use and install. If you are new to working with wireless products, we invite you to first follow the advice presented in chapters **2.1 to 2.3**. Otherwise, you can proceed directly to chapter **2.4. Launching the Hercules Wireless N Router installation Assistant**, which explains how to install your Hercules Wireless N Router step by step.

2.1. How to position your Hercules Wireless N Router
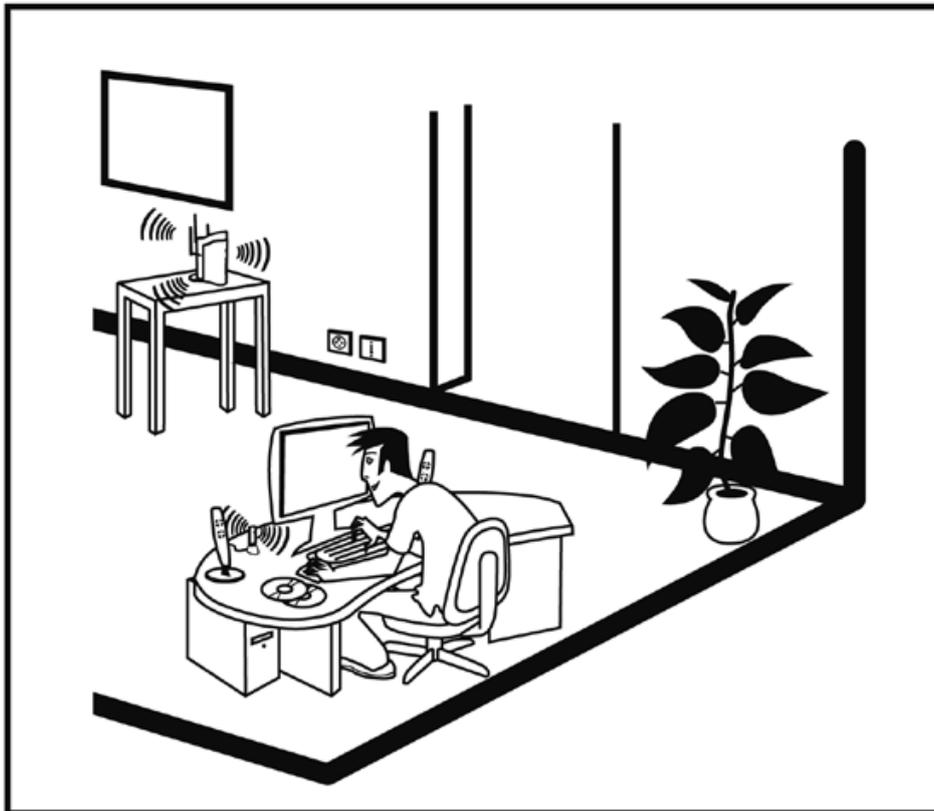
Remove the Router and the power adapter from the box.
To help you select the best spot to position your Hercules Router, we are pleased to offer you the following tips, which you may adapt according to your environment (the number of rooms, computers, floors in your home, the presence of any obstacles, the locations of power and telephone plugs…).

- Position the Router near your modem (ADSL, cable or Internet "Box") and a power outlet.

- Try to place your Router in a room centrally located in relation to your other computers and WiFi devices.

- Keep a minimum distance of 2m between the Router and any computers and WiFi devices.

- If you have several computers or WiFi devices on different floors in your home (on the ground floor and the second floor, for example), you should ideally try to place your Hercules Router on the ground floor.

⚠️ Your Router's WiFi performance 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 the Hercules Router and any WiFi adapters.

Moreover, do not hesitate to adjust each of the 3 antennas to different positions in order to achieve optimum reception of the WiFi signal.

2.2. Uninstalling your modem or disabling the automatic connection to your modem

If you already have an Internet "Box" or Ethernet modem connected to your computer, we recommend that you **uninstall** it or **disable the automatic connection** to this modem. The objective in doing so is to establish the Internet connection via the TCP/IP local area network created by the Hercules Router, and no longer directly via your ADSL modem.

⚠️ This procedure only applies if you connect to the Internet via an Ethernet modem. If you have a USB modem, you cannot connect the USB modem to your Hercules Router and access the Internet.

If you decide to uninstall the modem's drivers:
- Switch off and then disconnect your modem from your computer's Ethernet port.
- Uninstall the software supplied by your service provider, as well as the modem's drivers. For more information, please refer to your modem's user manual.
- Now connect your modem to the Internet port on your Hercules Router.

If you decide to disable the automatic connection to the modem:

In order to avoid software conflicts, please follow the procedure described below:

- Open your Internet Explorer browser.

- Click **Tools/Internet Options**.

The Internet Options window is displayed.

- Select the **Connections** tab.

Scenario 1: your ISP appears in the Internet Options window.

- Disable the automatic connection to your modem by selecting the **Never dial a connection** option.

- Click **OK**.

Scenario 2: your ISP does not appear in the Internet Options window.

The automatic connection is managed directly by the software furnished by your ISP.

- Refer to the user manual for your ADSL modem or for the software furnished by your ISP for details on how to disable the automatic connection and/or for the Internet connection to be established via a **local area network** (TCP/IP).

Reminder: it is the Hercules Router that will create a local area network through which the computers will access the Internet.

⚠ You can also find information on our website (FAQs etc.): **www.hercules.com**.

2.3. Getting past the Content Advisor (parental control)

If you have enabled the **Content Advisor** in your Internet browser in order to control access to certain sites which may include contents of a violent or otherwise undesirable nature, you will not be able to immediately connect to **WiFi Manager N** to configure and view the settings for your Hercules Wireless N Router.

After launching QuickAccess, the quick connection utility to **WiFi Manager N**, the Content Advisor will ask you for authorization to view the site **http://192.168.2.1**. This site corresponds to the WiFi Manager N interface on your Router. To access the site, simply give your authorization to **Always allow this Web site to be viewed**. Once you have done so, the Router's address will be stored in your Internet browser and you will then be able to access WiFi Manager N directly.

2.4. Launching the Hercules Wireless N Router installation Assistant

The Assistant, available on the CD-ROM included with the Router, will guide you through the different steps of the installation. 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 is not launched automatically:

- Double-click **My Computer** (Windows 2000/XP) or **Computer** (Windows Vista).

- Double-click ░ .

*- Double-click **Setup.exe**, if necessary.*

*The Welcome page appears. Click **Next** (the arrow symbol).*
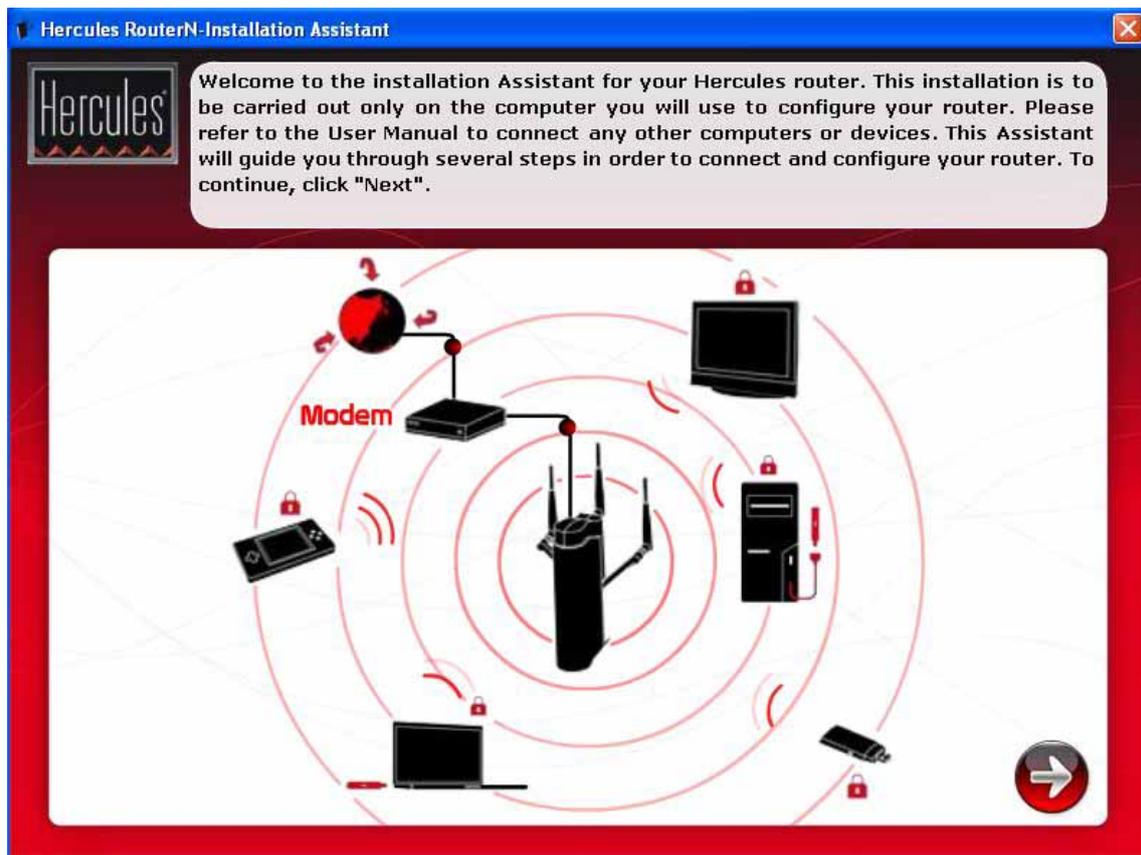
The following page prompts you to install the product of your choice.

*You can choose to install the **Hercules pack** (composed of the Hercules Wireless N Router and the Wireless N USB Key), the **Hercules Wireless N Router only** or the **WiFi Station N** software only, which is required for using your Hercules Wireless N Key.*

2.5. Installing Hercules Wireless N Router only

Step 1

- Click the **Hercules Router** button.

⚠ The Assistant will launch the installation procedure for your Router, along with the associated software, **WiFi Manager N**, specifically developed by Hercules to set, verify and configure all connection and security settings for Hercules Wireless N series devices.

For more information on **WiFi Manager N**, please refer to section **3. WiFi Manager N, the versatile utility**.

Step 2

- Connect the Hercules Router's power adapter to the power plug and plug the power adapter into an electrical outlet.

- Click Next (the arrow symbol).

Step 3

- Disconnect the cable connecting your modem to your computer, and connect it to the WAN port on your Hercules Wireless N Router.

The power LED lights up and the **WiFi** *LED flashes. The* **Internet** *(WAN) LED lights up and flashes during data transfer.*

- Click Next (the arrow symbol).

Step 4

- Connect one end of the included Ethernet cable to one of the four Ethernet ports on your Hercules Wireless N Router, and the other end to your computer's Ethernet port.

The LED corresponding to the number of the Ethernet port you have selected lights up.

- Click Next (the arrow symbol).

Step 5

The Assistant prompts you to install **Hercules QuickAccess***, the quick connection utility to* **WiFi Manager N***. Click the* **Install QuickAccess** *button if you wish to install this utility.*

⚠️ If you do not wish to install this utility, you will only be able to access your Router by manually entering its address (please see section **3.1 Opening the doors of WiFi Manager N**).

Step 6

Once QuickAccess has been installed, the WiFi Manager N **installation Assistant** *is launched, allowing you to automatically configure your Hercules Wireless N Router.*

> ⚠ For more information on the WiFi Manager N installation Assistant, please refer to section **3.4. Easy customization of your Hercules Wireless N Router**.

Step 7

- Disconnect the Ethernet cable from your computer, if you have already enabled WiFi in the WiFi Manager N installation Assistant.

End of installation: WPS connection
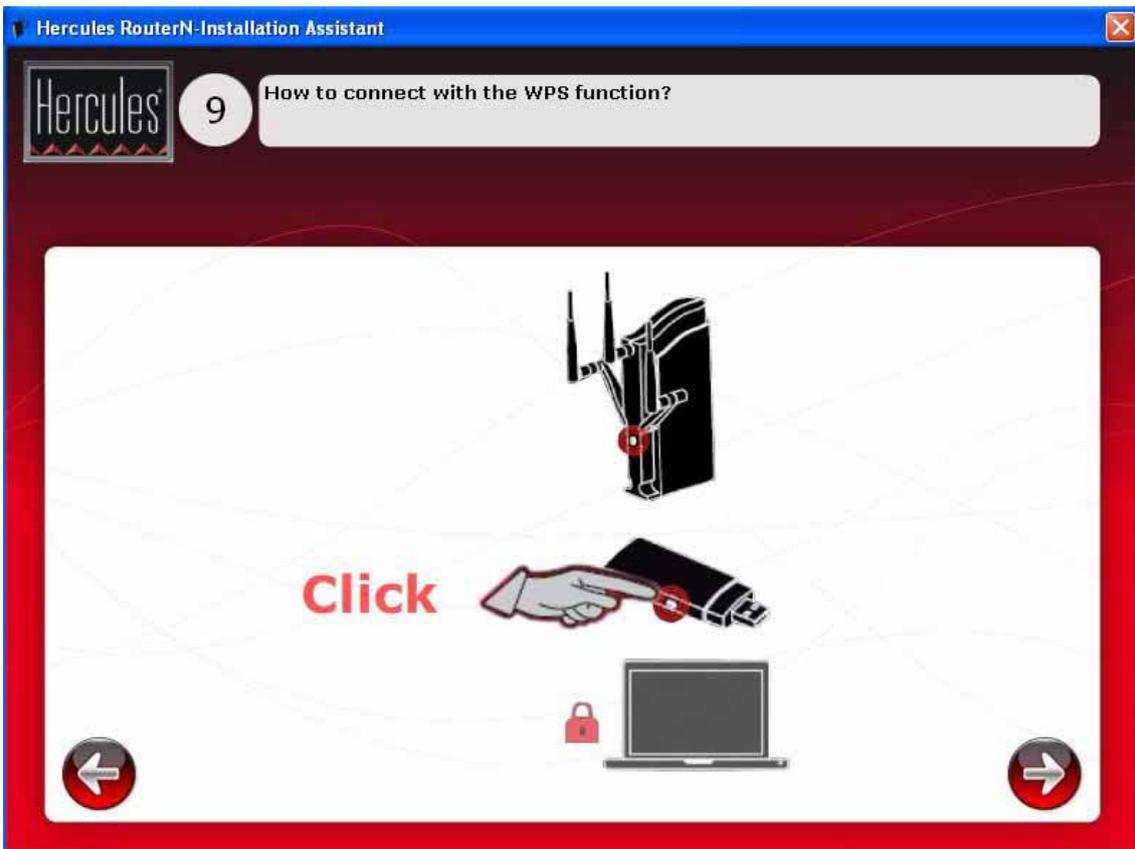
Installation of your **Hercules Wireless N Router** is now complete. Before learning about advanced functionalities and moving on to practical applications, the screen shown above demonstrates how you can connect very easily using **WPS**. Click **Close** to exit this screen, then click **Close** again to exit the installation Assistant.

For more information on connecting using WPS, please refer to section **2.9. Connecting to a network with Wi-Fi Protected Setup™**.

To learn about all of your product's advanced functionalities, please refer to section **3. WiFi Manager N, the versatile utility**.

To learn about practical applications for your WiFi devices, please refer to section **4. Welcome to the Wireless Attitude™**.

2.6. Installing the Hercules pack (Hercules Wireless N Router + Wireless N USB Key)

Step 1

- Click the ![Hercules Router and USB WiFi key pack] button.

⚠️ The Assistant will successively launch installation of your Router and your Key, as well as of the associated software (**WiFi Manager N** for the Hercules Wireless N Router and **WiFi Station N** the Hercules Wireless N USB Key), specifically developed by Hercules to set, verify and configure all connection and security settings for Hercules Wireless N series devices.

For more information regarding **WiFi Manager N**, please refer to section **3. WiFi Manager N, the versatile utility**.

For more information regarding **WiFi Station N**, please refer to the PDF manual for your **Hercules Wireless N USB Key**.

Step 2

- Connect the Hercules Router's power adapter to the power plug and plug the power adapter into an electrical outlet.

- Click Next (the arrow symbol).

Step 3

- Disconnect the cable connecting your modem to your computer, and connect it to the WAN port on your Hercules Wireless N Router.

*The power LED lights up and the **WiFi** LED flashes. The **Internet** (WAN) LED lights up and flashes during data transfer.*

- Click Next (the arrow symbol).

Step 4

- Connect one end of the included Ethernet cable to one of the four Ethernet ports on your Hercules Wireless N Router, and the other end to your computer's Ethernet port.

The LED corresponding to the number of the Ethernet port you have selected lights up.

- Click Next (the arrow symbol).

Step 5

*The Assistant prompts you to install **Hercules QuickAccess**, the quick connection utility to **WiFi Manager N**. Click the **Install QuickAccess** button if you wish to install this utility.*

⚠️. If you do not wish to install this utility, you will only be able to access your Router by manually entering its address (please see section **3.1 Opening the doors of WiFi Manager N**).

Step 6

*Once QuickAccess has been installed, the WiFi Manager N **installation Assistant** is launched, allowing you to automatically configure your Hercules Wireless N Router.*

⚠️ For more information on the WiFi Manager N **installation Assistant**, please refer to section **3.4. Easy customization of your Hercules Wireless N Router**.

Step 7

The WiFi Station N installation Assistant then starts up to launch installation of your Hercules Wireless N USB Key. Follow the on-screen instructions.

⚠️. For more information on installing **WiFi Station N**, please refer to the PDF manual for your **Hercules Wireless N USB Key**.

Step 8
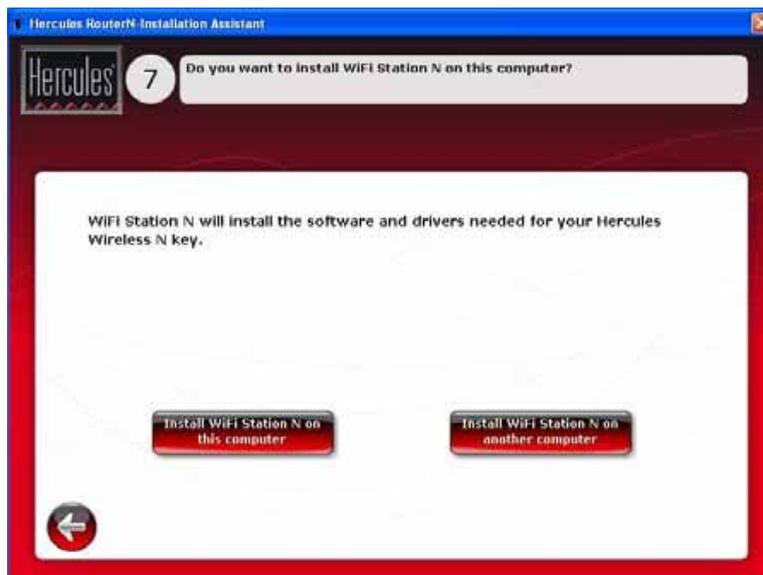
- If you wish to install WiFi Station N on another computer, click **Install WiFi Station N on another computer**. In that case, remove the CD-ROM from the computer and insert it into the CD-ROM drive of the computer on

which you wish to install WiFi Station N. You should then launch installation of **WiFi Station N** on that computer. Once installation is complete, remove the CD-ROM to complete installation of your Router.

- Otherwise, click **Install WiFi Station N on this computer** to launch installation of WiFi Station N.

End of installation: WPS connection

Installation of your **Hercules Wireless N Router/Hercules Wireless N USB Key** is now complete. Before learning about advanced functionalities and moving on to practical applications, the screen shown above demonstrates how you can connect very easily using **WPS**.

For more information on connecting using WPS, please refer to section **2.9. Connecting to a network with Wi-Fi Protected Setup™**.

To learn about all of your product's advanced functionalities, please refer to section **3. WiFi Manager N, the versatile utility** or section **4. The WiFi Station N utility** in the PDF manual for your Hercules Wireless N Key.

To learn about practical applications for your WiFi devices, please refer to section **4. Welcome to the Wireless Attitude™**.

2.7. Installing the Wireless N USB key only

To install the Wireless N USB Key:

- Click the [WiFi Station N] button.

The WiFi Station N installation Assistant is launched. Follow the on-screen instructions

> ⚠ For more information on installing **WiFi Station N**, please refer to the PDF manual for your **Hercules Wireless N USB Key**.

2.8. Exploring the CD-ROM

- Click the 🔍 button.

The CD-ROM's tree structure is displayed in the new window. You can browse through the contents of the different folders.

2.9. Connecting to a network with Wi-Fi Protected Setup™

If connecting to a WiFi network and configuring it seems like too much trouble to you, you can use the integrated **WPS (Wi-Fi Protected Setup™)** functionality, indicated on the product or packaging by one of the following logos:

or

What is WPS (Wi-Fi Protected Setup™) ?

WPS is a technology which simplifies the connection procedure to a wireless network between a WPS-compatible device (your **Hercules Wireless N Key**, for example) and your **Hercules Wireless N Router**. Different connection methods are available to you: simply click a button located on the router or in WiFi Manager N, or enter the PIN code of the device to be connected (your **Hercules Wireless N Router** or your **Hercules Wireless N Key**, for example) in the WiFi Manager N interface.

About master and client modes

To get a better understanding of the two connection modes via WPS, it is important to grasp the concepts of **master** and **client**. In **master** mode, the WPS device (your **Hercules Wireless N Router**, for example) is the access point to which other WPS devices will connect (your **Hercules Wireless N Key** or another WPS device). In **client** mode, it is the WPS device (your **Hercules Wireless N Key** or another WPS device) which connects to the master (your **Hercules Wireless N Router**).

Note: The procedure detailed hereafter describes **connecting your Hercules Wireless N Router with the Hercules Wireless N USB Key**; however, you can also connect other WPS devices. Should you wish to do so, please refer to your WPS device's user manual

> ⚠ In order to enjoy using a simplified connection thanks to the **WPS (Wi-Fi Protected Setup™)** functionality, devices which will be connecting to your Router must be WPS-compatible and certified.

2.9.1. Connecting to a network in master mode

Note: by default, your **Hercules Wireless N Router** is configured to **master mode**, meaning that it will serve as the access point to which other WPS devices will be able to connect.

1ˢᵗ option: use the WPS button located on the Router
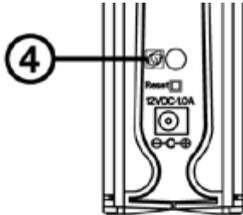
- On your WiFi Router: press the **WPS** button ④ located on the back of the Router.

You now have two minutes to connect your Hercules Wireless N USB Key to the Router. You will not have to repeat this step the next time you connect.
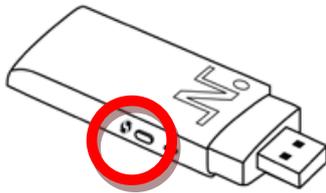
- Press the **WPS** button located on the side of the Hercules Wireless N Key or the **WPS** button on a **WPS-compatible** device.

2ⁿᵈ option: use the WPS button accessible in WiFi Manager N

- On the WiFi Manager N home page, press the **Automatic WiFi client connection (WPS)** button.

Push-Button Configuration method (PBC) is selected by default.

- Click the ⟳ connection button.

Alternatively:

- Select **Personal Identification Number method (PIN code)**.

- Enter the **PIN** code of the WPS device you wish to connect.

- Click the ⟳ connection button.

*To find out the PIN code for your WPS device, please refer to section **4.3.3. Connecting to a network with a PIN code** in the user manual of your **Hercules Wireless N USB Key**, or refer to the manual supplied by the manufacturer of your WPS device.*

You now have two minutes to connect your Hercules Wireless N USB Key or your device via WPS.

*If the connection is not secure, a **WPA** or **WPA2** type security key (depending on the client's capabilities) is generated automatically.*

*For more information on connecting your device via WPS, please refer to the PDF user manual of your **Hercules Wireless N USB Key** or to the manual supplied by the manufacturer of your WPS device.*

2.9.2. Connecting to a network in client mode

Note: by default, your **Hercules Wireless N Router** is configured to **master mode**, meaning that it will serve as the access point to which other WPS devices will be able to connect. By switching to **client mode**, your Router will connect to a master WPS device which will become the access point. You should be aware, however, that your **Hercules Wireless N Router**, with its router function, is not meant to connect to other WPS devices.

- On the WiFi Manager N home page, press the **Automatic WiFi client connection (WPS)** button.

- Click the **Advanced settings** button.

*Two options are available to you: **Master mode** or **Client mode**.*

- Select **Client mode**.

WiFi Manager N displays the PIN code for your Hercules Wireless N Router. Make a note of this code, as you will have to enter it in the client's interface in order to connect your Router to other devices.

3. WIFI MANAGER N, THE VERSATILE UTILITY

With WiFi Manager N, nothing could be easier than combining your high-speed Internet modem with the Hercules Router, thereby sharing your Internet access with all of the computers in your home or small business, or simply creating a wireless network.

WiFi Manager N is the interface which allows you to communicate with your Hercules Router and configure your wireless network or Internet firewall.

3.1. Opening the doors of WiFi Manager N

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 Manager N.

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

The connection window to the Router 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://192.168.2.1**.

You are now at the door to enter WiFi Manager N, 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 **3.2. Changing the WiFi Manager N password!**).

- Click **Connection**.

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

3.2. Changing the WiFi Manager N password!

When opening the door to WiFi Manager N for the first time, we strongly recommend that you change the default password, **123456**, during your first use directly via the **Connect to Router** window.

- Click the **Change password** button.
- Enter the **old** password (**123456**, if you are doing this for the first time), the **new** password, which you will select, and then **confirm** the new password.
- Click **Confirm and Connect** to store your new password and connect.

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

3.3. Navigating within the WiFi Manager N interface

The **WiFi Manager N** interface has been designed to simplify navigation through the different menus. Nevertheless, should you ever feel a bit lost, you can always click the **General settings** button at any time to return to the Home page, the starting point for all of your Hercules Router's functionalities.

3.4. Easy customization of your Hercules Wireless N Router

Thanks to the Installation Assistant available in WiFi Manager N (launched automatically during the Flash installation), you can very easily configure all of your settings (password, Internet connection, WiFi network, security...) in a few easy steps.

To launch the Installation Assistant

- Click the **Installation Assistant** button.
- Click **Next** to move on to **step 1: Change the password for accessing the interface**.

3.4.1. Step 1: Change the password for accessing the interface

- Enter the **new** password, and then **confirm** it.
- Click **Next** to move on to **step 2 : Internet (WAN) connection**.

3.4.2. Step 2: Internet (WAN) connection

- Indicate how you connect to the Internet: **Internet "Box" or cable modem**, **ADSL Ethernet (PPPoE) modem**, or **Other connection**.

If you connect to the Internet via a "Box", cable modem or Router:

- Select the **Assign IP** type: **Static IP** or **Automatic DHCP**.
- If you select **Automatic DHCP**, the DHCP server will be responsible for assigning the IP address.
- Select **Static IP** if you have subscribed to an Internet line with a fixed IP address.

This information can be found in the membership details sent to you by your ISP.

- Enter the **IP address**, **subnet mask** and **default gateway**.

- Click **Next** to move on to **step 3: Enabling your WiFi network**.

If you connect to the Internet via an ADSL Ethernet modem:

- Select the **PPPoE** connection type.

- Enter your **connection username (login)** and **password**.

This information can be found in the membership details sent to you by your ISP.

- Also enter a valid **MTU** value.

The MTU value corresponds to the maximum value, in bytes, of transmitted data packets (for example, 1500 bytes on an ADSL WiFi network).

- If you wish, you can **always stay connected**, thereby leaving your Internet connection enabled all the time; you can also choose to **disconnect automatically** after a certain length of time.

- Click **Next** to move on to **step 3: Enabling your WiFi network**.

If you use another connection mode (PPTP or L2TP)

- For information on your connection mode, please verify your connection information found in the membership details sent to you by your ISP.

- If you select the **PPTP** connection type:

- Select **PPTP** in the drop-down list.

- Enter the **host name** supplied when subscribing to the service.

- If necessary, click the **Clone** button to clone your PC's MAC address.

- Enter your **connection username (login)** and **password**.

- Also enter the **PPTP gateway** and, if you wish, a connection ID for this gateway.

This information can be found in the membership details sent to you by your ISP.

- Enter a valid **MTU** value.

The MTU value corresponds to the maximum value, in bytes, of transmitted data packets (for example, 1500 bytes on an ADSL WiFi network).

- Click **Next** to move on to **step 3: Enabling your WiFi network**.

- If you select the **L2TP** connection type:

- Select **L2TP** in the drop-down list.

- Enter the **host name** supplied when subscribing to the service.
- If necessary, click the **Clone** button to clone your PC's MAC address.
- Enter your **connection username (login)** and **password**.
- Also enter the **L2TP gateway** and, if you wish, a connection ID for this gateway.

This information can be found in the membership details sent to you by your ISP.

- Enter a valid **MTU** value.

*The **MTU** value corresponds to the maximum value, in bytes, of transmitted data packets (for example, 1500 bytes on an ADSL WiFi network).*

- Click **Next** to move on to **step 3: Enabling your WiFi network**.

3.4.3. Step 3: Enabling your WiFi network

If you do not wish to enable your WiFi network:

- Deselect the **Enable the WiFi network** box.

If you wish to enable your WiFi network:

- Leave the **Enable the WiFi network** box selected.
- Enter the network **name**.

Once your network has been enabled, it will be visible to other WiFi devices. We therefore recommend that you define a security key (please see the following screen).

- Click **Next**.

3.4.4. Step 4: Selecting security for your WiFi network

- Choose whether to select **Automatic** or **Manual** security for your WiFi network.

⚠ In WiFi Manager N, you must not select a higher level of security than that supported by your computers or other WiFi devices. For example, if your computers or other devices only support the **MEDIUM** level **(WEP 128)**, you should not select the **HIGH (WPA-PSK)** or **VERY HIGH (WPA2)** levels.

If you wish to automatically define security for your WiFi network:

- Click the **Automatic** button.

*Your network will be automatically protected via a **WPA2-WPA2** key (TKIP and AES).*

- Click **Next**.

On the page displayed, you can view a summary of your WiFi connection. Make a note of the network name, security type and key used.

- Click **Close** to exit the Assistant and return to the home page.

Your settings are immediately saved and applied.

If you wish to manually define security for your WiFi network:

- Click the **Manual** button.
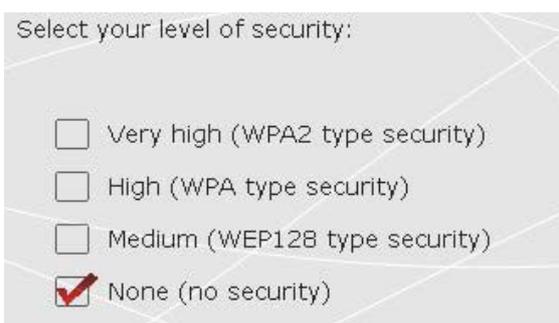
- Read the text explaining the concept of security.

- Select your level of security: **MEDIUM** (WEP 128), **HIGH** (WPA), **VERY HIGH** (WPA2) or **None (no security)**.

- Click **Next**.

*For more information on security levels, please refer to section **3.6.2. Securing your WiFi network**.*

On the page displayed, you can view a summary of your WiFi connection. Make a note of the network name, security type and key used.

- Click **Close** to exit the Assistant and return to the home page.

Your settings are immediately saved and applied.

If you select the "HIGH (WPA)" or "VERY HIGH (WPA2)" security type:

- Enter the **password** of your choice (8 alphanumeric characters minimum).

An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).

- Click **Next**.

On the page displayed, you can view a summary of your WiFi connection. Make a note of the network name, security type and key used.

- Click **Close** to exit the Assistant and return to the home page.

Your settings are immediately saved and applied.

If you select the "MEDIUM (WEP 128)" security type:

- Enter a **WEP key** composed of 26 hexadecimal or 13 alphanumeric characters.

A hexadecimal key is composed of numbers from 0 to 9 and letters from A to F (example: 123456789ABCD for a 128-bit key).

An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).

- Click **Next**.

On the page displayed, you can view a summary of your WiFi connection. Make a note of the network name, security type and key used.

- Click **Close** to exit the Assistant and return to the home page.

Your settings are immediately saved and applied.

If you select NO SECURITY (not recommended):
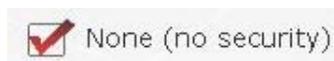
⚠️ If you do not apply any security, your network will not be protected. Any user, whether with bad intentions or not, will be able to connect.

- Click **Next**.

On the page displayed, you can view a summary of your WiFi connection. Make a note of the network name, security type and key used.

- Click **Close** to exit the Assistant and return to the home page.

Your settings are immediately saved and applied.

⚠️ If you have mastered the concept of WiFi security, you can use the (less user-friendly) method of directly entering your security criteria. This method is accessible via the home page, by clicking the **Your WiFi connection settings** button.

3.5. Sharing your Internet connection via the Router

You can easily pair your Hercules Router with your modem, thereby sharing your Internet connection with your other computers and/or game consoles.

Once installation of your Router is complete, your WiFi connection and firewall are enabled. However, you must still select your type of Internet connection (via Ethernet modem, "Box" or other method) and enter the required information. To do so, simply consult the items of information supplied by your ISP, typically found in the membership details sent to you (connection username (login), connection password...).

3.5.1. Selecting your Internet connection

With WiFi Manager N, you don't have to be a computer expert to share your Internet connection via WiFi with your Router: just get together the information sent to you by your service provider.

- On the home page, click **WAN settings (Internet connection)**.

- Select the Internet connection mode: **ADSL Ethernet modem** or **Internet "Box", Cable Modem or Router**.

If you select the ADSL Ethernet modem mode:
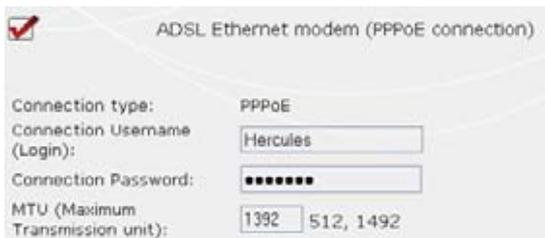
- Select the **PPPoE** connection type.

- Enter your **connection username (login)** and **password**.

This information can be found in the membership details sent to you by your ISP.

- Also enter a valid **MTU** value.

*The **MTU** value corresponds to the maximum value, in bytes, of transmitted data packets (for example, 1500 bytes on an ADSL WiFi network).*

- If you wish, you can **always stay connected**, thereby leaving your Internet connection enabled all the time; you can also choose to **disconnect automatically** after a certain length of time.
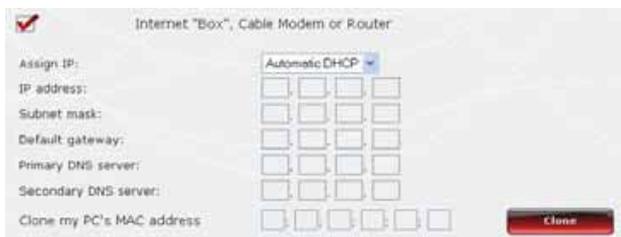
If you select the Internet "Box", Cable Modem or Router mode

- Select the **Assign IP** type: **Static IP** or **Automatic DHCP**.

- If you select **Automatic DHCP**, the DHCP server will be responsible for assigning the IP address.

- Select **Static IP** if you have subscribed to an Internet line with a fixed IP address.

This information can be found in the membership details sent to you by your ISP.
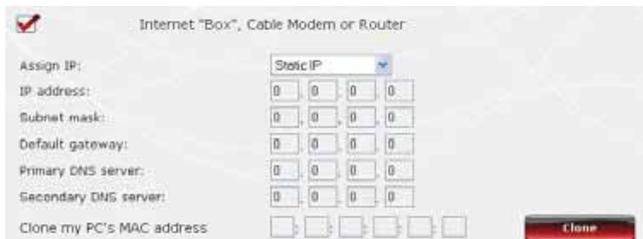
- Enter the **IP address**, **subnet mask**, and **default gateway**.

If you select another connection type:

- If you select the **PPTP** connection type:

- Select **PPTP** in the drop-down list.
- Enter the **host name** supplied when subscribing to the service.

- If necessary, click the **Clone** button to clone your PC's MAC address.
- Enter your **connection username (login)** and **password**.
- Also enter the **PPTP gateway** and, if you wish, a connection ID for this gateway.

This information can be found in the membership details sent to you by your ISP.

- Enter a valid **MTU** value.

*The **MTU** value corresponds to the maximum value, in bytes, of transmitted data packets (for example, 1500 bytes on an ADSL WiFi network).*

- If you select the **L2TP** connection type:

- Select **L2TP** in the drop-down list.
- Enter the **host name** supplied when subscribing to the service.
- If necessary, click the **Clone** button to clone your PC's MAC address.
- Enter your **connection username (login)** and **password**.
- Also enter the **L2TP gateway** and, if you wish, a connection ID for this gateway.

This information can be found in the membership details sent to you by your ISP.

- Enter a valid **MTU** value.

*The **MTU** value corresponds to the maximum value, in bytes, of transmitted data packets (for example, 1500 bytes on an ADSL WiFi network).*

⚠ Once you have selected your connection mode, don't forget to click the **Apply and Save** button to save your settings.

3.5.2. Testing your Internet connection

Once you have selected your Internet connection mode for your Hercules Router, you can carry out a first test and verify that you are able to access the Internet.

On the **General settings** page, you can also view the Earth icon 🌍 to see your status: green (Router connected), or red (Router not connected).

⚠ During this test, leave the Ethernet cable connected to your Hercules Router.
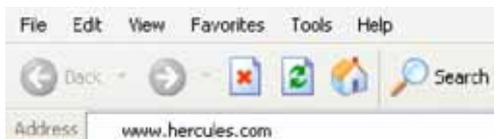
- Launch an Internet browser (Internet Explorer, Netscape Navigator or Mozilla Firefox) on your computer.

- Enter the address **www.hercules.com**.

The Hercules website homepage should appear.

If your Internet connection is working properly:

It is now time for you to learn how to master your WiFi network (please see section **3.6. Mastering your WiFi network at your fingertips**).

⚠ Do not disconnect your Ethernet cable just yet, so long as your WiFi network has not been created; you will need it in order to communicate with your Router.

3.5.3. Resolving any difficulties accessing WiFi Manager N or the Internet

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

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
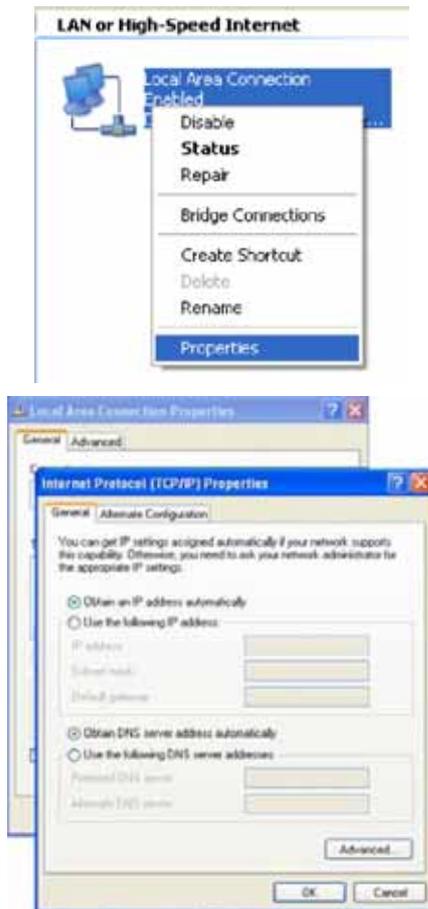
1. Click **Start/Control Panel**. Double-click **Network Connections**.

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 Hercules Router will now be able to assign an IP address to your computer.

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

Windows 2000
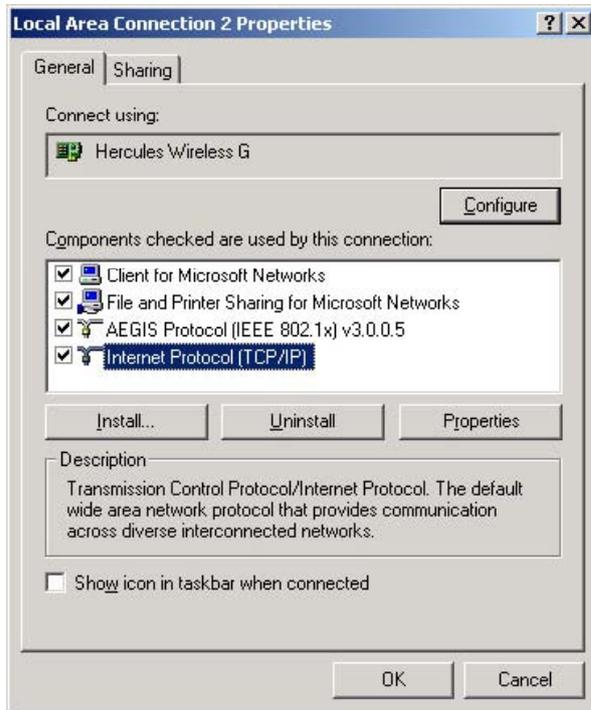
1. Click **Start/Settings/Control Panel**. Double-click **Network and Dial-Up Connections**.
2. Right-click the appropriate connection and select **Properties**.
3. In the **General** tab, highlight **Internet Protocol (TCP/IP)**.
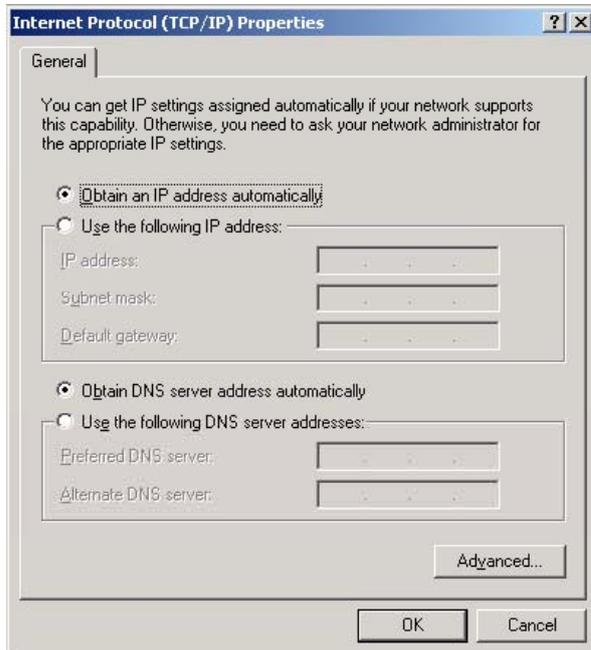
4. Click **Properties** and select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.
5. Click **OK** to close the windows, then exit the **Control Panel**.

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

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

Windows 98 SE/Me
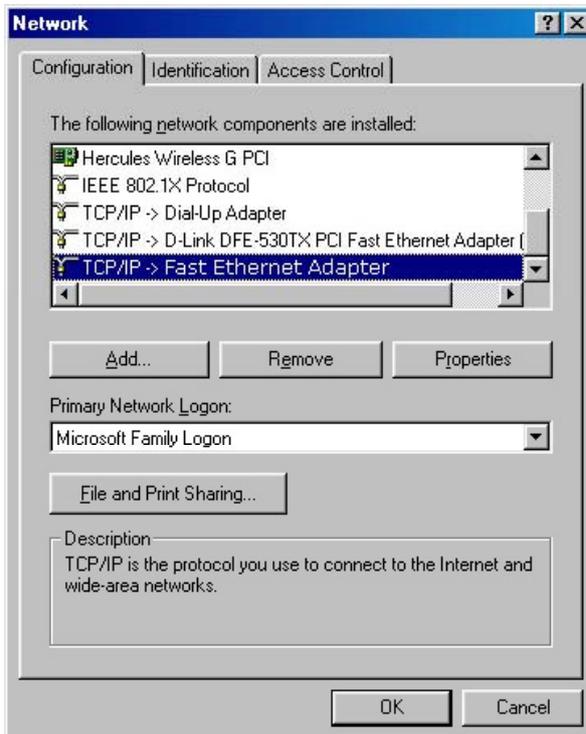
1. Click **Start/Settings/Control Panel**. Double-click **Network**.
2. In the **Configuration** tab of the **Network** window, highlight the name of your network adapter.
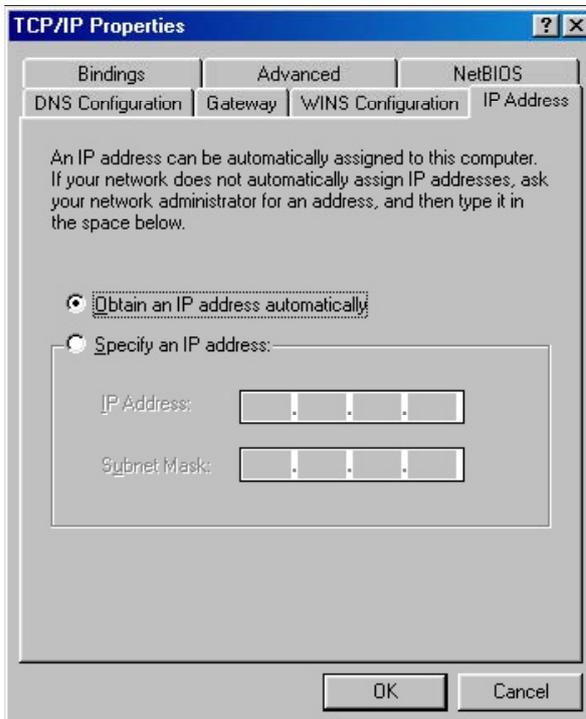
3. Click **Properties** and select **Obtain an IP address automatically** in the **IP Address** tab.
4. Click **OK** to close the windows, then exit the **Control Panel**.

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

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

3.6. Mastering your WiFi network at your fingertips

In this chapter, you will learn how to personalize your WiFi network and secure it against unwelcome intrusion attempts.

⚠️ Configuration of your network is carried out via the Ethernet cable connecting your Router to your computer. Once you have finished, you can disconnect this cable and explore all the subtleties of WiFi, described in chapter **4. Welcome to the Wireless Attitude™**!

3.6.1. Personalizing your WiFi network

When the wireless access point (your Hercules Router's WiFi function) is enabled, WiFi Manager N displays the name of your network, the Radio Frequency (RF) channel and security type used. These settings may be modified, subject to certain conditions.

⚠️ Should you decide to modify certain settings, we recommend that you take care to follow the recommendations below.

To personalize your WiFi network:

- On the Home page, select **Your WiFi connection settings**.

Various items of information are displayed, such as the name of your network and the RF channel used.

- Before personalizing your WiFi network, verify that the **WiFi network enabled** box is ticked.

- If you wish, you may personalize the **Network name (SSID)** (Hercules, by default).

The SSID (Service Set Identifier) is the unique name shared by the WiFi adapters and the access point in a wireless network. **Make sure that you do not lose or forget this name**, *as you will need it to connect your WiFi devices.*

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

- If necessary, change the **Radio Frequency (RF) 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 may result in a drop in your Router's WiFi performance.*
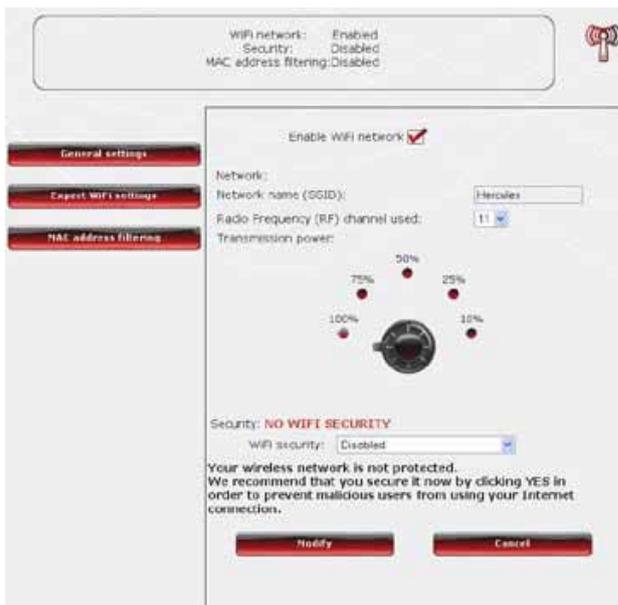
⚠ Don't forget to protect your network by selecting a security key; otherwise, any user, whether with bad intentions or not, will be able to connect to it.

For details on how to protect your network, please refer to section **3.6.2. Securing your WiFi network**.

- Click the **Modify** button to validate your settings.

The access point restarts. All computers or devices connected via WiFi are disconnected. The ADSL connection, however, remains active.

3.6.2. 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 the WiFi Manager N, you can define your own security choices. 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 by WiFi Manager N.

Type	Level of security	Key used	Authentication
WEAK (WEP 64)	The lowest level of security, whereby simple encryption is carried out on exchanged data. Each wireless client in the network must use the same key to decode the transmission.	**64-bit** key in hexadecimal format (10 characters), or in alphanumeric format with 5 ASCII characters (e.g.: *hello*). *A **hexadecimal key** is composed of numbers 0 to 9 and letters A to F (example: A123BCD45E for a 64-bit key).* *An **alphanumeric character** corresponds either to a number (0-9), or to a letter (a-z or A-Z).*	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** key in hexadecimal format (26 characters), or in alphanumeric format with 13 ASCII characters. *A **hexadecimal key** is composed of numbers 0 to 9 and letters A to F.* *An **alphanumeric character** corresponds either to a number (0-9), or to a letter (a-z or A-Z).*	Open (no authentication), Shared (authentication method via shared key) or Auto (authentication when requested by the device).

Type	Level of security	Key used	Authentication
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
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 ou 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

⚠ You must not select a level of security in WiFi Manager N more advanced 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 should not select the **HIGH (WPA-PSK)** or **VERY HIGH (WPA2)** level.

⚠ If you have used the **WPS** function to connect, a **WPA** or **WPA2** type security key has automatically been generated.

To secure your WiFi network:

- Before enabling security for your WiFi network, verify that the **Enable WiFi network** box is ticked.

- Select your level of security: **MEDIUM** (WEP 128), **HIGH** (WPA) or **VERY HIGH** (WPA2).
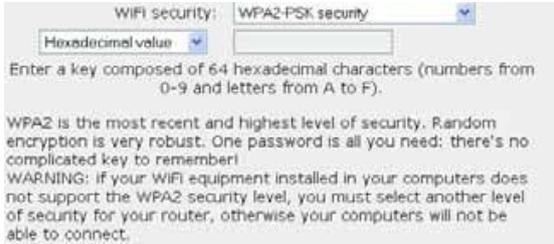
Security: NO WIFI SECURITY
WiFi security: Disabled
Your wireless network is not protected.
We recommend that you secure it now by clicking YES in order to prevent malicious users from using your Internet connection.

If you select the "VERY HIGH (WPA2)" security type:

- Select the level of security: **WPA2 (AES)**.

- Enter a **password** (8 alphanumeric characters minimum) or a **key** with 64 hexadecimal characters.

An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).

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

In the status zone, you can consult the overview of your WiFi settings. Make a note of the network name, security type and key used.

- Click **Modify** to validate the new settings.

If you select the "VERY HIGH (WPA-WPA2)" security type:
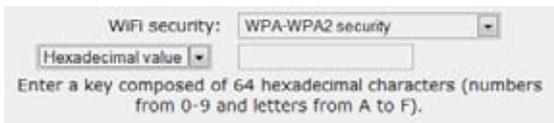
- Select the level of security: **WPA-WPA2**.

- Enter a **password** (8 alphanumeric characters minimum) or a **key** with 64 hexadecimal characters.

An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).

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

In the status zone, you can consult the overview of your WiFi settings. Make a note of the network name, security type and key used.

- Click **Modify** to validate the new settings.

If you select the "HIGH (WPA)" security type:
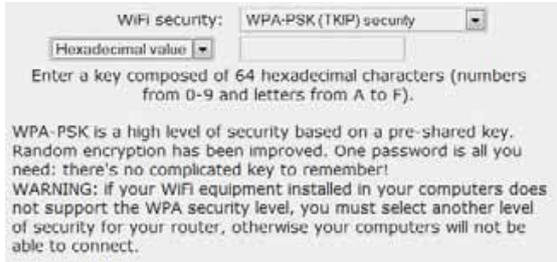
- Enter a **password** with 8 alphanumeric characters minimum, or a **key** with 64 hexadecimal characters of your choice.

An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).

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

In the status zone, you can consult the overview of your WiFi settings. Make a note of the network name, security type and key used.

- Click **Modify** to validate the new settings.

If you select the "MEDIUM (WEP 64-WEP 128)" security type:
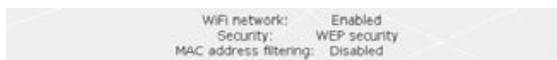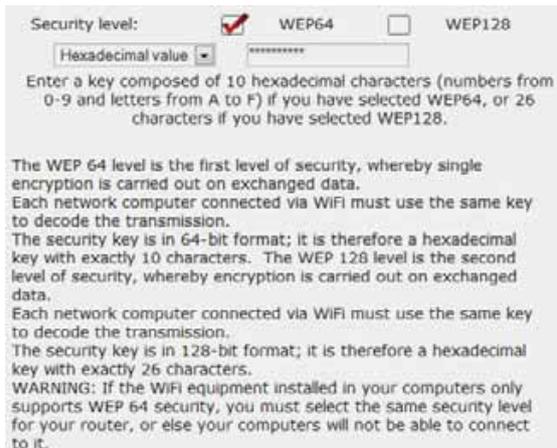
- Enter a **key** with 10 hexadecimal characters or a **password** with 5 alphanumeric characters for **WEP 64** security, or a key with 26 hexadecimal characters or a password with 13 alphanumeric characters for **WEP 128** security.

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

An alphanumeric character corresponds either to a number (0-9), or to a letter (a-z or A-Z).

In the status zone, you can consult the overview of your WiFi settings. Make a note of the network name, security type and key used.

- Click **Modify** to validate the new settings.

If you select NO (Disabled) security (not recommended):
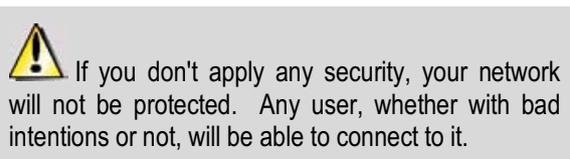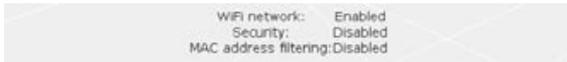
⚠ If you don't apply any security, your network will not be protected. Any user, whether with bad intentions or not, will be able to connect to it.

In the status zone, you can consult the overview of your WiFi settings. Make a note of the network name, security type and key used.

- Click **Modify** to validate the new settings.

3.6.3. Limiting access to your WiFi network to certain WiFi computers or devices

Filtering by **MAC address** is a complement to your security settings, 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.*

⚠ Before enabling filtering, we recommend that you connect via WiFi all computers you wish to authorize.

To enable filtering by MAC address:

- Before you can enable filtering by MAC address, verify that the **Enable WiFi network** box is ticked.

- Click the **Enable MAC address filtering** button.

- Tick the **Enable MAC address filtering** box.

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

If you are using this function for the first time:

Any new computer or device must be added manually.

- Manually enter its MAC address (in AAAAAAAAAAAA format, without separators).

- Click the **Add** button.

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

- If you wish, add a comment in the corresponding zone.

- Click the **Modify** button to validate your settings, or **Cancel** to cancel the settings you have entered.

⚠️ 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 Router.

⚠️ If your friends visit you with their WiFi computer or device, or if you wish to connect new WiFi devices, don't forget to **add their MAC address** to the filtering list, or else 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 🗙 next to the computers or devices you wish to remove from the filtering list.

- Confirm the removal in the dialog box which appears.

- Click the **Modify** button to validate your settings, or **Cancel** to cancel the settings you have entered.

3.6.4. Disabling your WiFi network

If you wish to use your Hercules Router as a wired router only (that is to say, connected to the computer via the Ethernet port and not by WiFi), simply disable your WiFi network by clicking the 　 button. The WiFi LED 　 on the router switches off.

3.6.5. Re-enabling your WiFi network

If you wish to re-enable your WiFi network, click the 　 button again or proceed as follows:
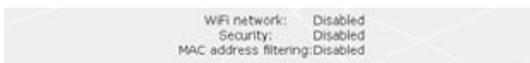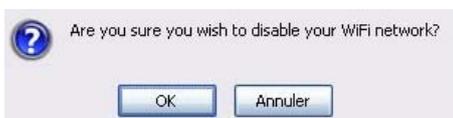
- Click the **Your WiFi connection settings** button.

You will note that your WiFi network, your WiFi security settings and filtering by MAC address are disabled.

- Tick the **Enable WiFi network** box if you wish to re-enable your WiFi network.

- Confirm that you wish to re-enable your WiFi network.

3.7. The firewall: your ultimate protection against Internet attacks

Like a secure fortress, your network is protected by a drawbridge and ramparts that are impossible to scale. On top of this, all of your defenses are in a state of alert to repel any intrusion attempts. It is possible, however, to lower these defenses from time to time, in order to authorize your computers to access specific Internet services (P2P, web/FTP servers, IP or WiFi camera…), to simply limit access on a specific computer to certain Internet services, or to redirect all Internet requests to a designated computer. For more information, please refer to chapters **5.2.1. Opening doors in your firewall to put your camera online or authorize access for a computer to certain Internet services**, **5.2.2. Limiting access of one of your network computers to Internet services** and **5.2.3. Redirecting Internet requests to a specific computer**.

If your computer is equipped with a **software firewall** (Norton Personal Firewall, Windows Service Pack 2 Firewall, McAfee Personal Firewall…), **disable it** when you connect to the Router, as your Router's firewall is sufficiently strong on its own, or adopt the same configuration settings as those established for your Router in order to avoid any possible conflicts. If you go somewhere else with your computer, however, and have to connect to other networks, you can **re-enable** your software firewall.

Be careful not to confuse a firewall with an antivirus program!

An **antivirus program** analyzes the contents of your computer, your emails, files you have downloaded from the Internet, etc., and detects, blocks and/or removes any viruses, worms and Trojans in order to ensure that your computer functions properly.

Your **firewall** hides your computer on the network, monitors the Internet data arriving at your computer and blocks intrusion attempts to stop computer hackers from stealing your personal information.

4. WELCOME TO THE WIRELESS ATTITUDE™!

Now that you have mastered the main functionalities of WiFi Manager N, 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™!**

4.1. A few important points to bear in mind before getting started

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 Router via an Ethernet cable.

- To share an ADSL connection, your Hercules Router and your modem (ADSL Ethernet, cable or Internet "Box") must be switched on and your ADSL 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.

4.2. 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.

4.2.1. 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.
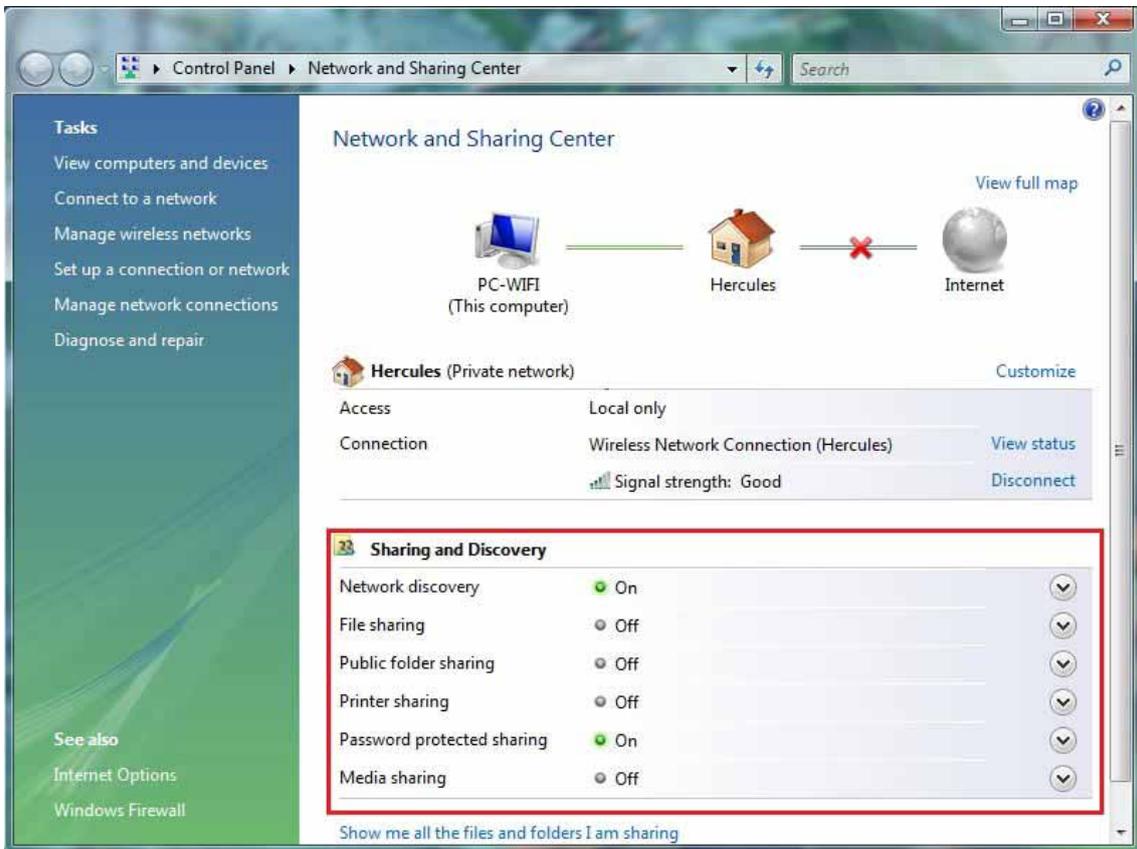
Enabling file sharing

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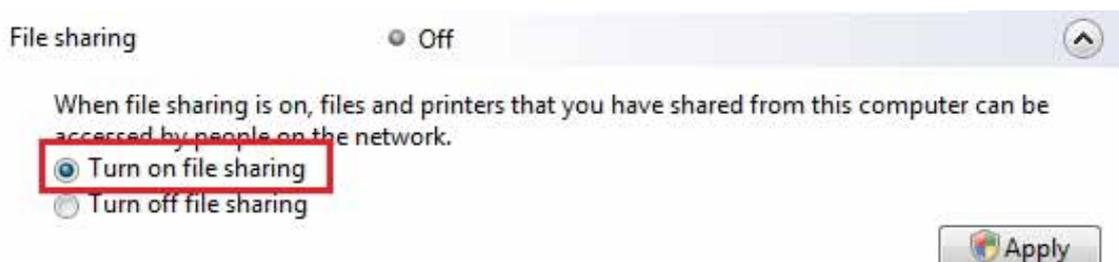
- Click **Apply**. In the Windows Vista confirmation window, click **Continue**.

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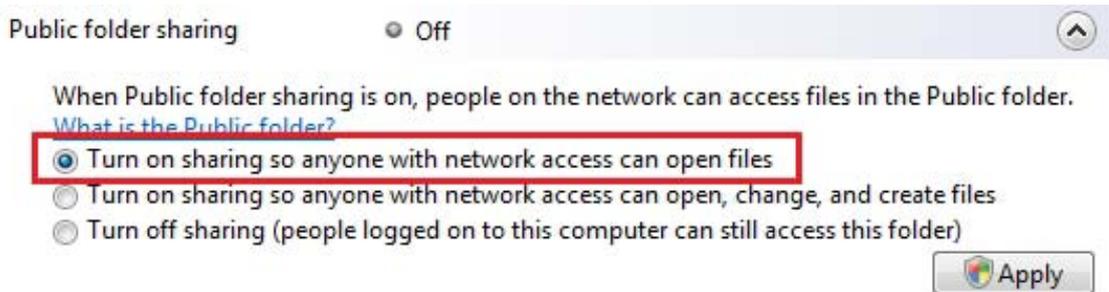
- Click **Apply**. In the Windows Vista confirmation window, click **Continue**.

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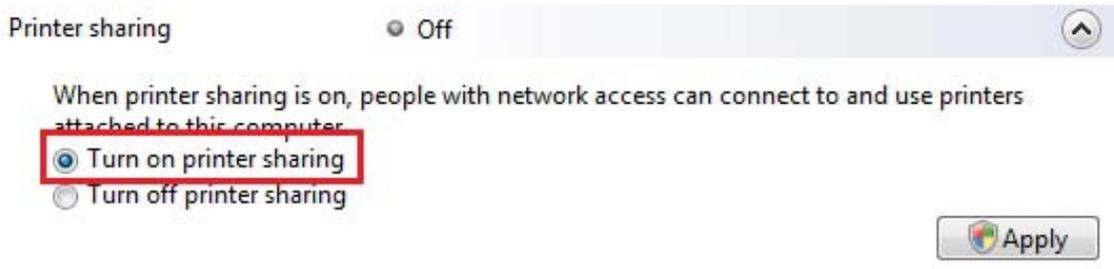
- Click **Apply**. In the Windows Vista confirmation window, click **Continue**.

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…**

When media sharing is on, people and devices on the network can access shared music, pictures, and videos on this computer, and this computer can find those types of shared files on the network.

Change...

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

Media Sharing

Find and share music, pictures, and video on your network.
Learn more about sharing.

Sharing settings

☑ Share my media to: Settings...

Other users of this PC

Allow   Deny   Customize...

Your network (belkin54g) is a private network. Devices that you allow can find your shared media.   Networking...

How does sharing change firewall settings?   OK   Cancel   Apply
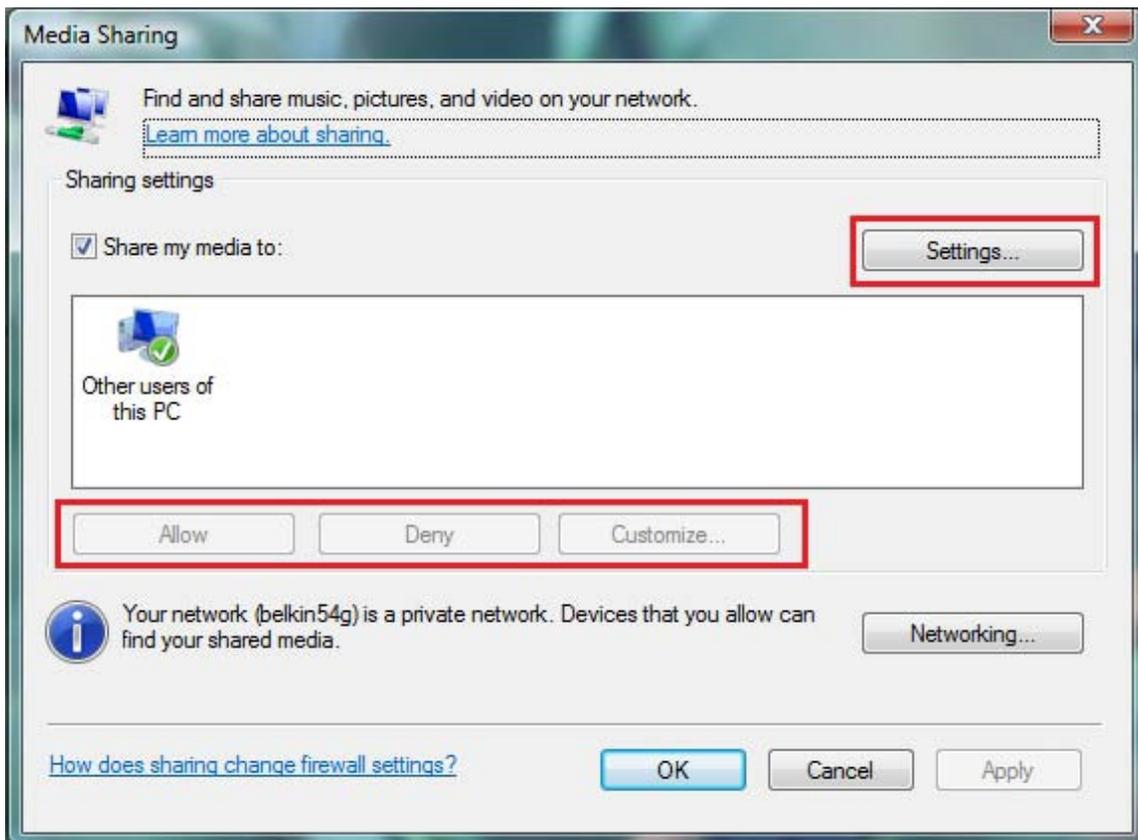
- Click **OK**. In the Windows Vista confirmation window, click **Continue**.

- 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**.

4.2.2.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.
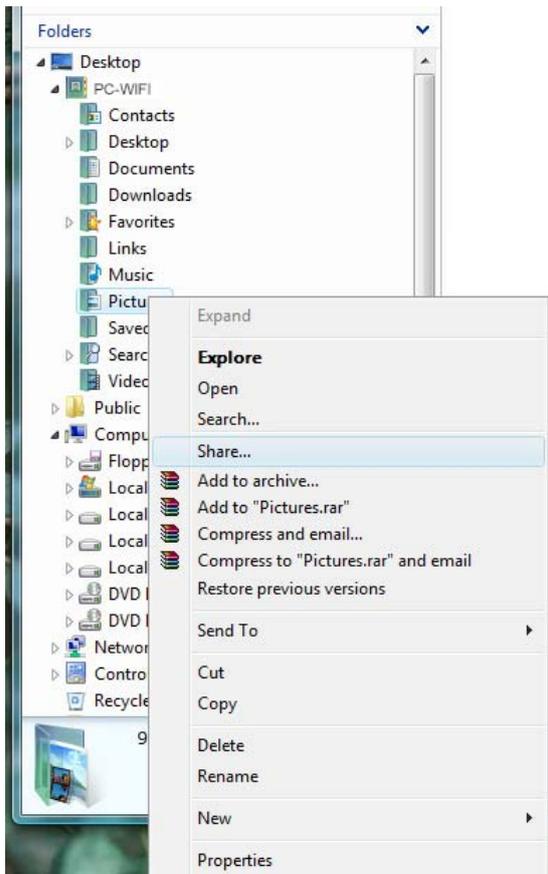
1. Select the folder that you wish to share, without opening it. Here, your **Pictures** folder.

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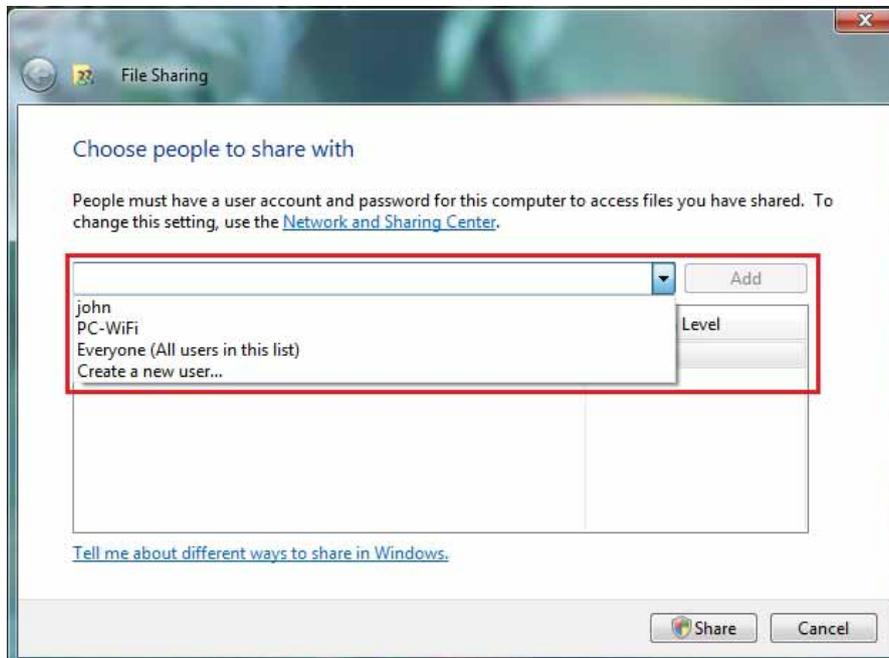
3. In the **File Sharing** window, select the user(s) who will be able to access this folder, then click **Add**.

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**.*

4.2.3. Computers running Windows Vista: Accessing shared folders
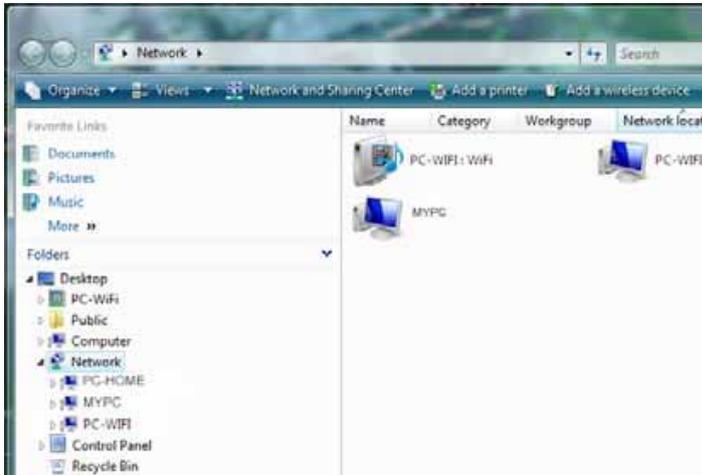
1. In the file explorer, accessible via **Start**/**Computer**, double-click **Network**.

*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.

4.2.4. 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 **4.2.1 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.
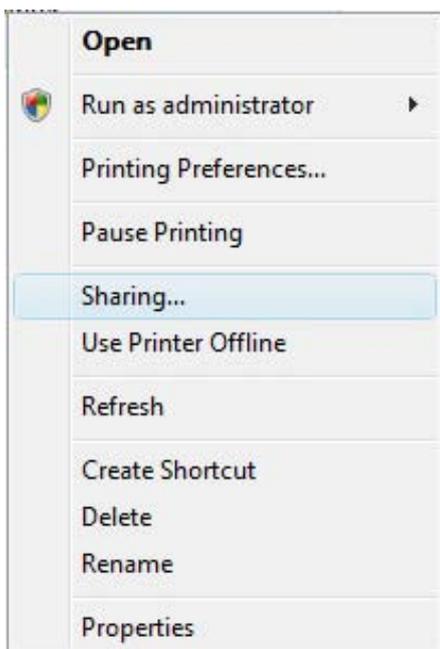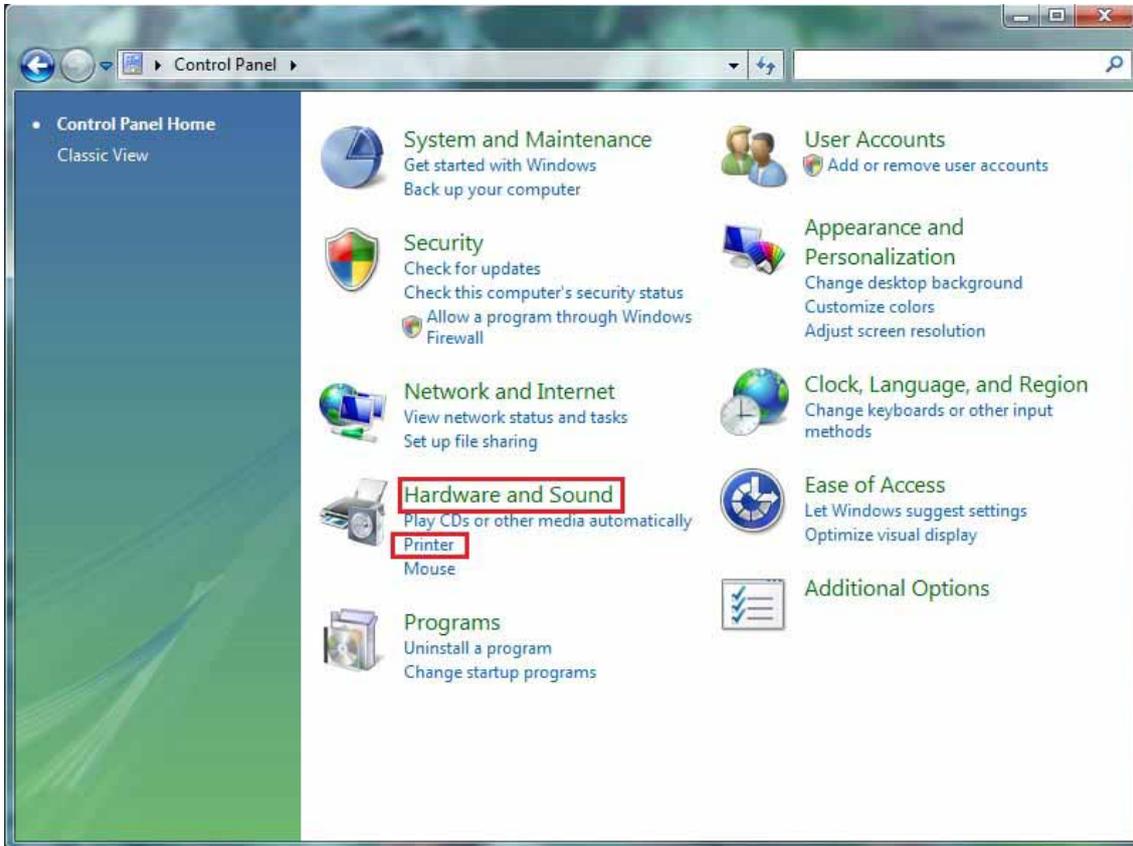
The list of installed printers is displayed.

3. Right-click the printer and select the **Sharing…** option.
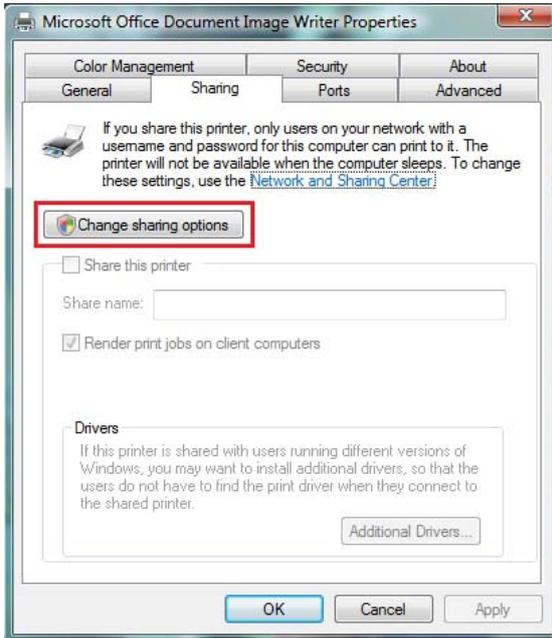
4. In the **Printer Properties** window, click the **Change sharing options** button.
5. In the Windows Vista confirmation window, click **Continue**.
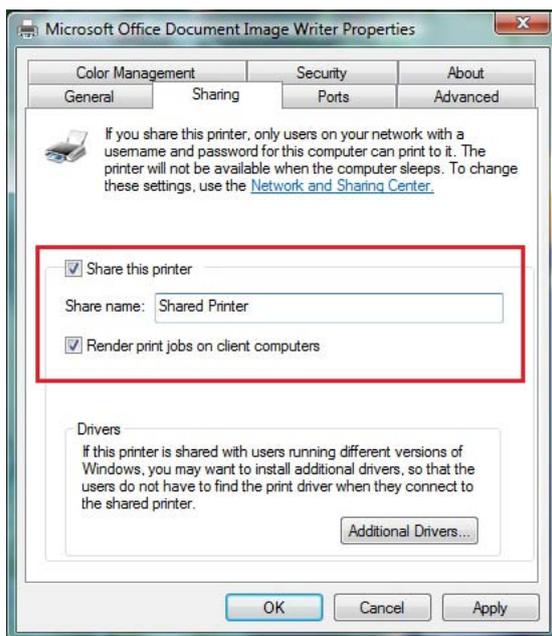
6. Tick the **Share this printer** box.
7. Select the name of the printer which will be displayed on the network under **Share name**.
8. Click **Apply**, then **OK**.

4.2.5. 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.
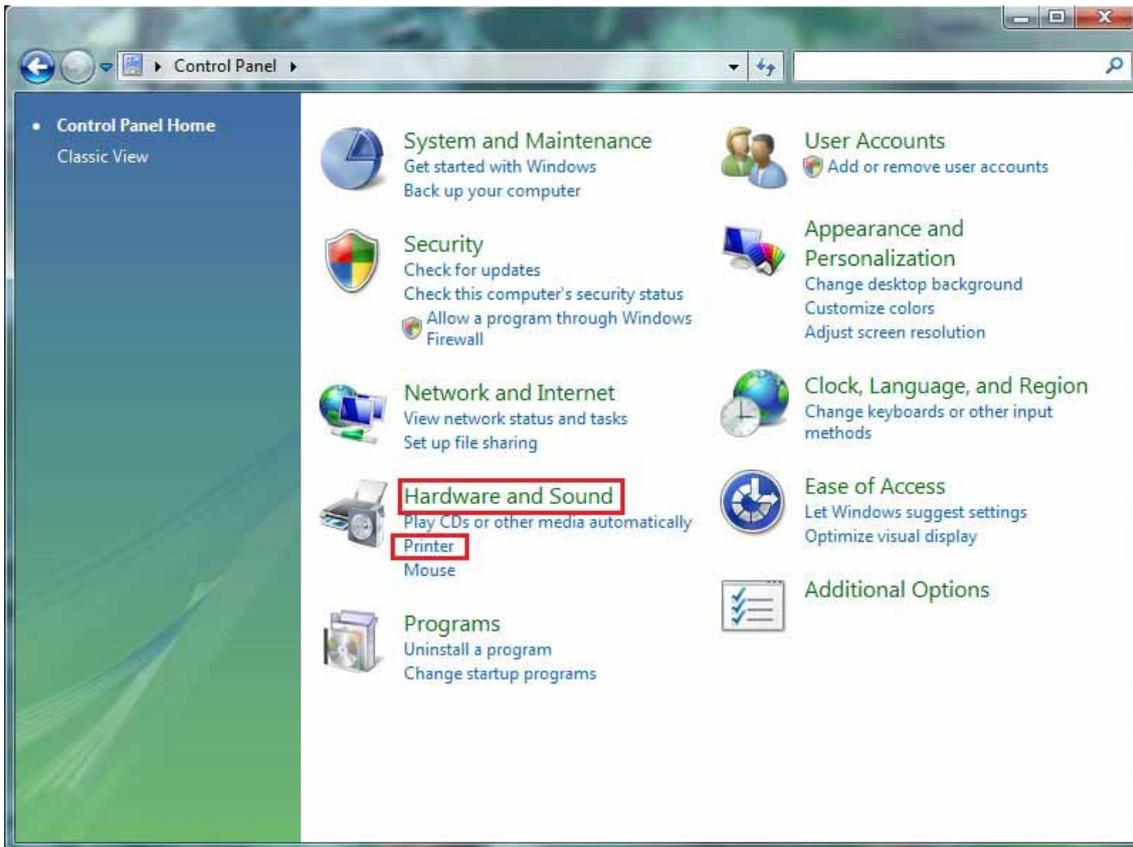
3. Click the **Add a printer** button.

    The Add a printer assistant appears.
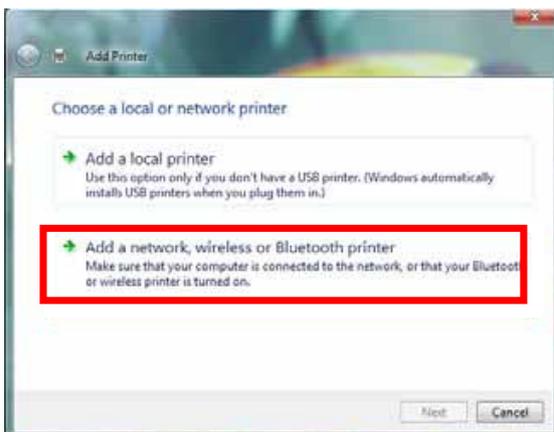
4. Click **Add a network, wireless or Bluetooth printer**.
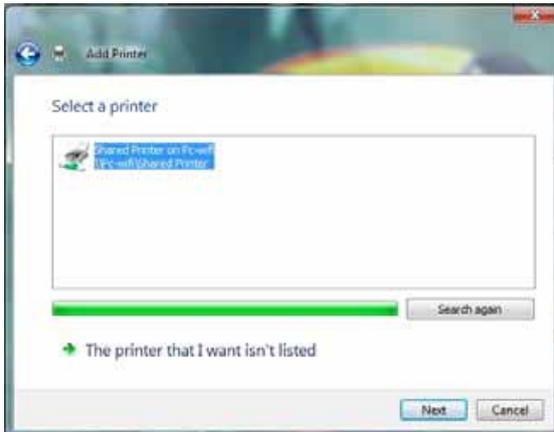
5. Windows searches for the shared printers on your network. Select the shared printer.

6. Click **Next**.

7. If necessary, accept installation of the printer's drivers when you are being prompted by Windows.

8. Validate the name of your printer, then click **Next**.

9. Click **Finish** to close the assistant.

4.2.6. 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, online gaming, 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**.
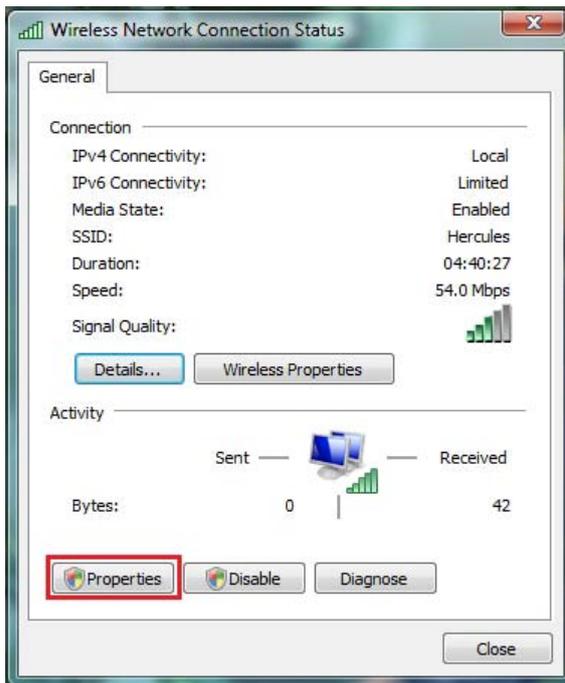
4. In the **Wireless Network Connection Status** window, click **Properties**.

5. In the Windows Vista confirmation window, click **Continue**.
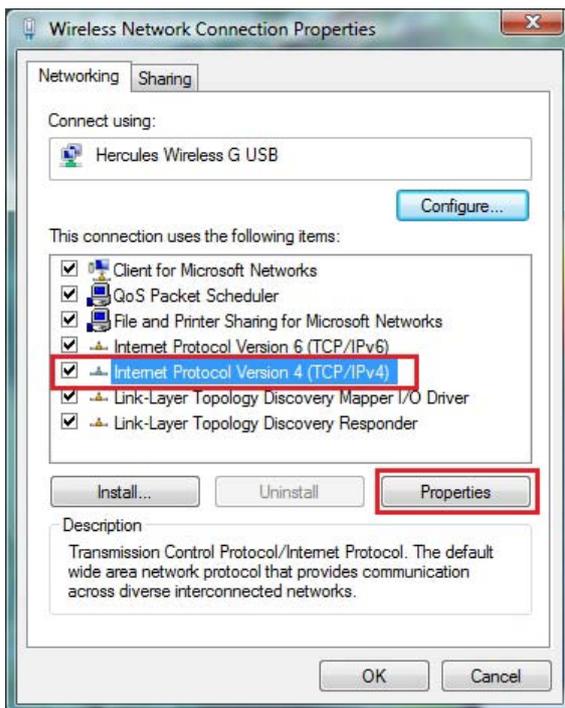
6. In the **Wireless Network Connection Properties** tab, select **Internet Protocol version 4 (TCP/IPv4)**.

7. Click **Properties**.
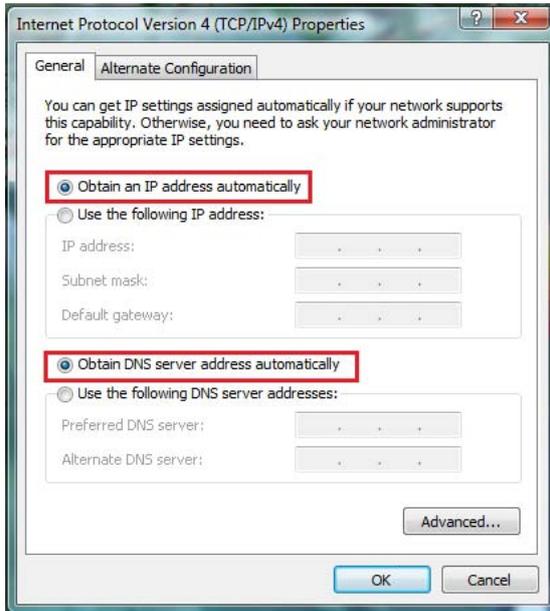
8. In the **Internet Protocol version 4 (TCP/IPv4)** window, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.

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.

4.3. 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).

4.3.1. Windows XP: Using the Network Setup Wizard in an <u>Infrastructure</u> 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.
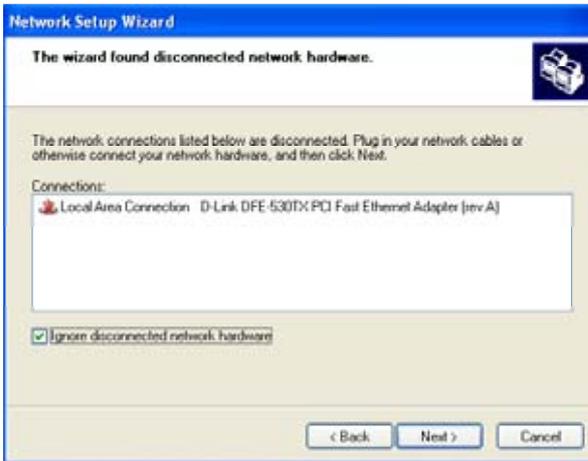
*The window opposite may appear if **The Wizard found disconnected network hardware**.*

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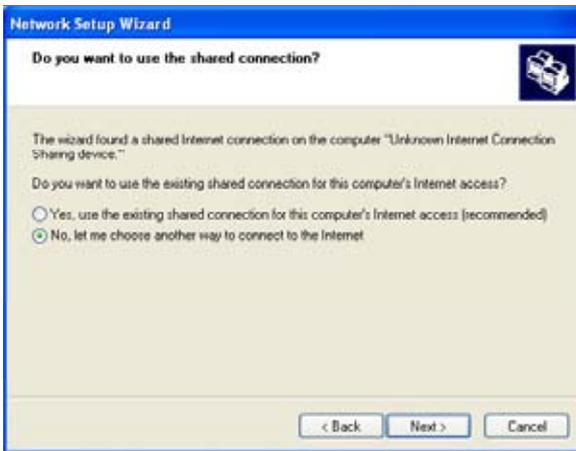
*The window opposite may appear if **The Wizard found a shared Internet connection on the computer**.*

4. Select **No, let me choose another way to connect to the Internet**, then click **Next**.
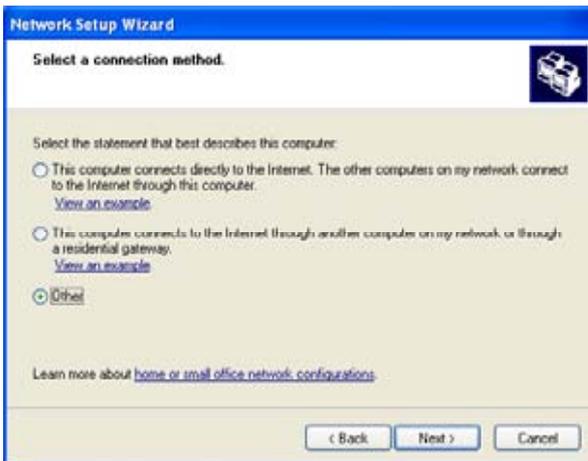
5. In the **Select a connection method** window, select the **Other** option.

6. In the following window, select **This computer connects to the Internet directly or through a network hub**, then click **Next**.
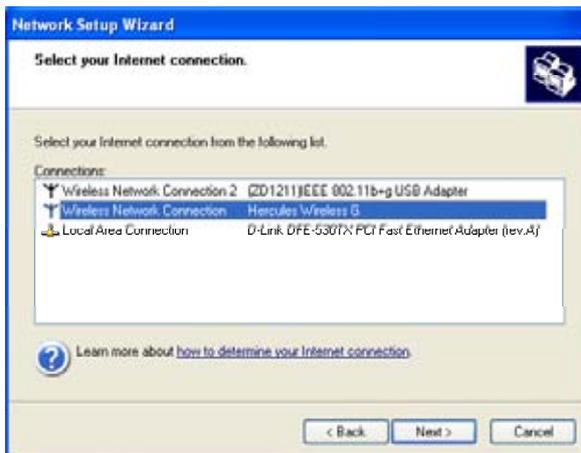
7. If the window opposite appears, select the Hercules Wireless network connection, then click **Next**.

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

   If you are using the Hercules Router, your computers are already protected by the integrated firewall.
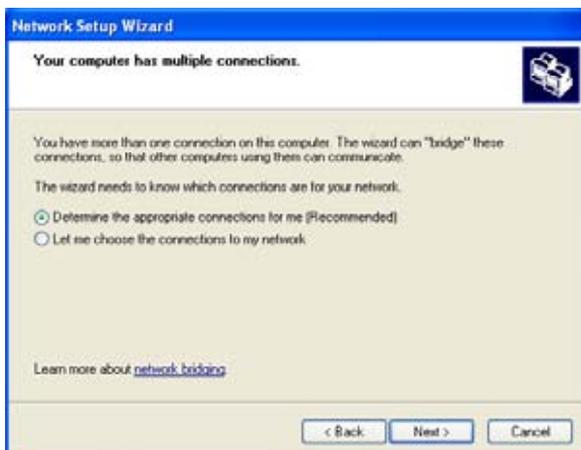
9. If your computer has at least three connections (or network devices), the window opposite appears. In this case, let the Wizard determine the appropriate connections.

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.

4.3.2.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.
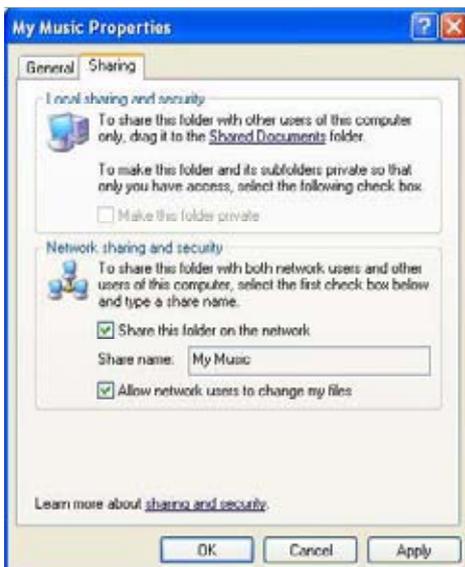
1. Select the folder you wish to share, without opening it.

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.

4.3.3. 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.
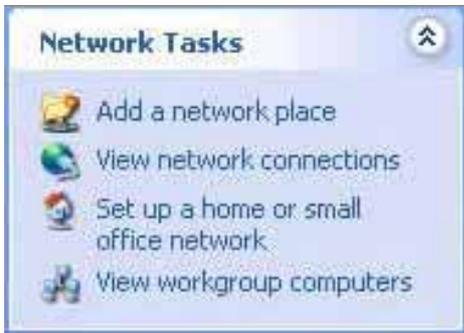
1. Click **Start/My Computer**.
2. Click **My Network Places**, then click **View workgroup computers**.

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.

4.3.4. 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:
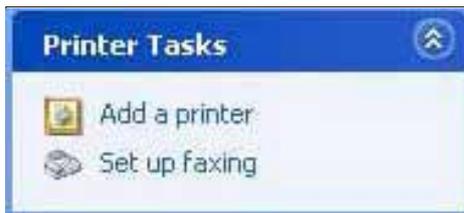
1. Click **Start/Control Panel/Printers and Other Hardware/ Printers and Faxes**. In the **Printer Tasks** section, select **Add a printer**.

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.

4.3.5. 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.

4.3.6. 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.
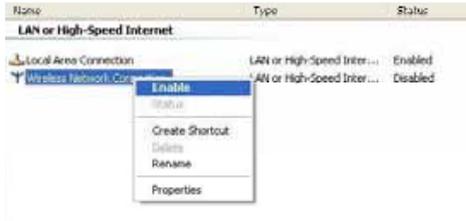
- Click **Start/Connections/Show All Connections**.

Verify that your Hercules Wireless 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**.

4.4. 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**.

4.4.1. 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.

4.4.2. 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**.

4.4.3. 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.

4.4.4. 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.
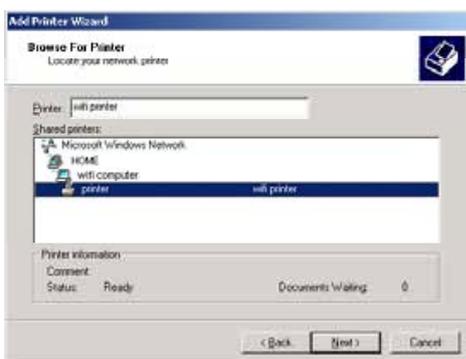
5. In the list displayed, double-click the computer connected to the printer.

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.

4.4.5. 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.

4.4.6.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**.
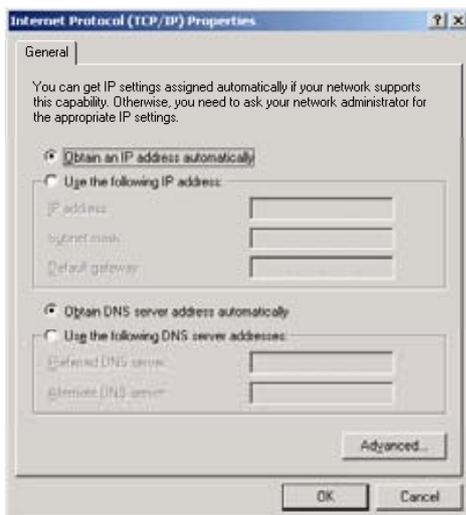
6. In the **Internet Protocol (TCP/IP) Properties** window, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.
7. Click **OK** to close the windows.

Windows may prompt you to restart your computer.

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

4.4.7. 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 adapter's WiFi connection in Windows 2000:

- Access the **Device Manager**.

- Select your WiFi 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.

4.5. Computers running Windows Me: Sharing folders, a printer or an ADSL connection

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

4.5.1. Windows Me: Using the Home Networking Wizard in an <u>Infrastructure</u> network

1. Click   **Start/Programs/Accessories/Communications/ Home Networking Wizard**.

The Wizard is launched.

2. Click **Next**.

⚠ If you have already used this Wizard on this computer, the **Setup Options** panel appears. Select **I want to edit my Home Networking settings on this computer**, then click **Next**.

3. In the **Internet Connection** window, select the **A direct connection to my ISP using the following device:** option.

4. Select your Hercules Wireless G adapter in the drop-down list, then click **Next**.

5. If the **Internet Connection Sharing** window appears, select **No, I do not want to share my Internet connection**.

6. Click **Next**.

7. Enter the computer name.

    Give the computer a name that is unique and sufficiently distinctive, making it easy to recognize in the list of workgroup computers (my-computer, wifi-computer or julie, for example).

8. Select the **Use this workgroup name** option and enter the **workgroup** name (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.

9. Click **Next**.

10. If you wish, you can enable sharing for the My Documents folder by ticking the **My Documents folder and folders in it** box. In this case, the Wizard will prompt you to enter a password.

11. If you wish, you can enable sharing of your printer by selecting it in the list.

12. Click **Next**.

13. Before completing the procedure, you may copy this Wizard onto a setup disk so that it can be launched on computers equipped with operating systems other than Windows Me. In this case, select the **Yes, create a Home Networking Setup disk** option.

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

14. Click **Finish** to exit the Wizard.

Once the procedure is finished, Windows Me prompts you to restart your computer. Once your computer has restarted, a message invites you to configure your other computers.

4.5.2. Windows Me: Sharing folders

After having configured all of your computers using the Home Networking 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**.

3. In the **Sharing** tab, select **Shared As**.

4. On the **Share Name** line, enter the folder name as it will be displayed on the network (12 characters maximum).

You can also limit access to the folder by selecting the type of access and a password.

⚠️ If the **Sharing** tab does not appear, you must enable file sharing.

1. Click **Start/Settings/Control Panel**. Double-click **Network**.
2. In the **Network** window, click the **File and Print Sharing…** button.
3. Tick the **I want to be able to give others access to my files** box.

Windows may prompt you to insert the installation CD-ROM.

4.5.3. Windows Me: 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 Me, the workgroup name has been defined using the Home Networking Wizard.

1. Click **Start/Programs/Windows Explorer**.
2. Double-click **Network Neighborhood** and expand it.

You access the list of the computers in your workgroup.

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

All shared folders appear.

4.5.4.Windows Me: 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 (printer or wifi printer, for example).

4. Click **Apply**, then **OK**.

⚠️ If the **Sharing** tab does not appear, you must enable file sharing.

1. Click **Start/Settings/Control Panel**.   Double-click **Network**.

2. In the **Network** window, click the **File and Print Sharing…** button.

3. Tick the **I want to be able to allow others to print to my printer(s)** box.

Windows may prompt you to restart your computer.

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 **Browse…** 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 **OK**.

7. Click **Next**.

8. If you wish, set the shared printer as the default printer, then click **Next**.

9. 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.

4.5.5. Windows Me: 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 **Network**.

2. Select the **Identification** tab.

3. 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).

4. 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.

5. Click **OK**. A Windows message indicates that the task has been carried out successfully and that you must restart the computer.

6. Repeat this procedure for each computer.

4.5.6. Windows Me: 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 adapter's WiFi connection in Windows Me:

- Access the **Device Manager**.

- Select your WiFi 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 Me, please refer to the Windows online help utility.

4.6. Computers running Windows 98 SE: Sharing folders, a printer or an ADSL connection

To create a network of computers, share data, a printer or an **ADSL** connection in Windows 98 SE, it is preferable that the computers belong to the same **workgroup**.

4.6.1. Windows 98 SE: Creating a workgroup
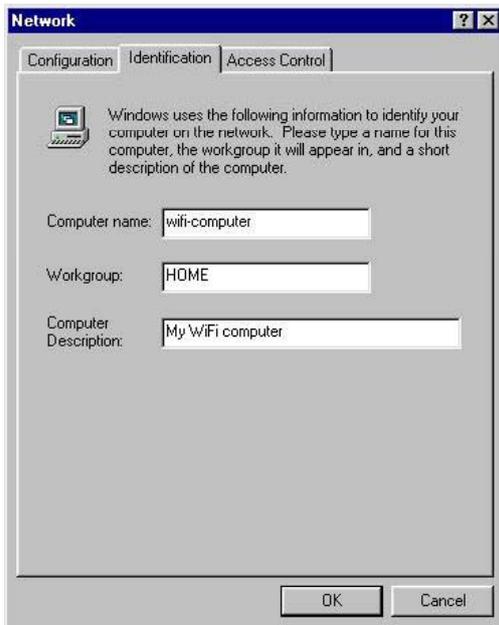
1. Click **Start/Settings/Control Panel**. Double-click **Network**.

2. Select the **Identification** tab.

3. 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).

4. 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.

5. Click **OK**. Windows prompts you to restart your computer.

6. Repeat this procedure for each computer.

Note: to modify the name of a workgroup, follow the same procedure.

4.6.2. Windows 98 SE: Sharing folders
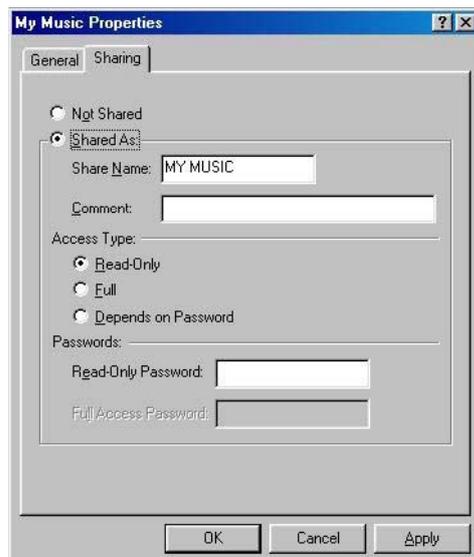
1. Select the folder you wish to share, without opening it.

2. Right-click the folder. Select **Sharing**.

3. In the **Sharing** tab, select **Shared As**.

4. On the **Share Name** line, enter the folder name as it will be displayed on the network (12 characters maximum).

You can also limit access to the folder by selecting the type of access and a password.

If the sharing tab does not appear, you must enable file sharing.

1. Click **Start/Settings/Control Panel**. Double-click **Network**.

2. In the **Network** window, click the **File and Print Sharing…** button.

3. Tick the **I want to be able to give others access to my files** box, then click **OK**.

4. Click **OK** to close the window.

Windows may prompt you to insert the installation CD-ROM and restart the computer.

4.6.3. Windows 98 SE: Accessing shared folders

1. Click **Start/Programs/Windows Explorer**.

2. Double-click **Network Neighborhood** and expand it.

You access the list of the computers in your workgroup.

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

All shared folders appear.

4.6.4. Windows 98 SE: 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:
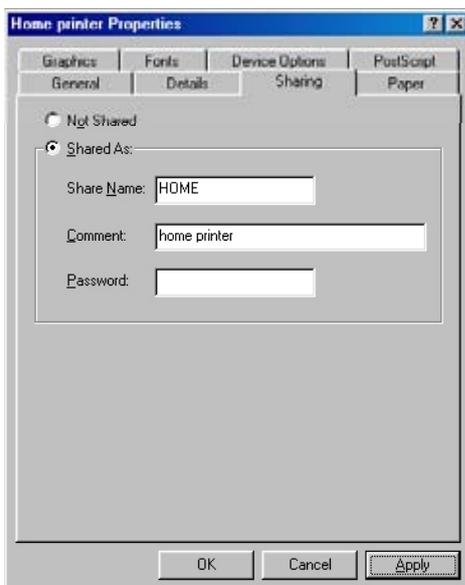
1. Click **Start/Settings/Printers**.

2. Right-click the printer and select **Sharing**.

3. In the **Sharing** tab, select **Shared As** and enter a name for your printer.

Give the printer a name that is unique and sufficiently distinctive, making it easy to recognize (printer or wifi printer, for example).

4. Click **Apply**, then **OK**.

⚠ If the **Sharing** tab does not appear, you must enable file sharing.

1. Click **Start/Settings/Control Panel**.   Double-click **Network**.
2. In the **Network** window, click the **File and Print Sharing…** button.
3. Tick the **I want to be able to allow others to print to my printer(s)** box.

Windows prompts you to restart your computer.

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 **Browse…** 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 **OK**.
7. Click **Next**.

8. If you wish, set the shared printer as the default printer, then click **Next**.
9. 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.

4.6.5.Windows 98 SE: Sharing an ADSL connection in an <u>Infrastructure</u> network

Proceed as follows for each computer that will use the shared Internet connection:
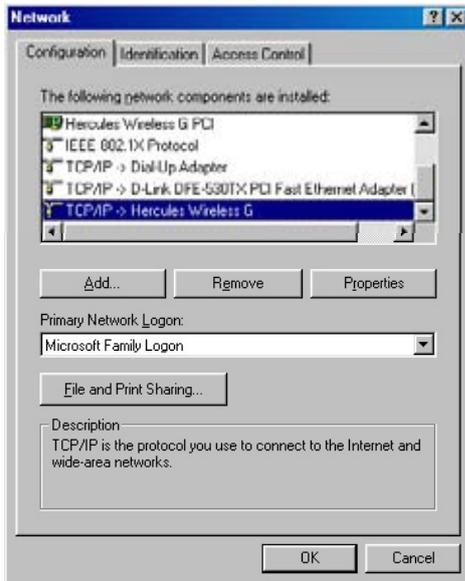
1. Click **Start/Settings/Control Panel**.   Double-click **Network**.

2. In the **Configuration** tab of the **Network** window, select the **TCP/IP -> Hercules Wireless G** component.

3. Click **Properties**.
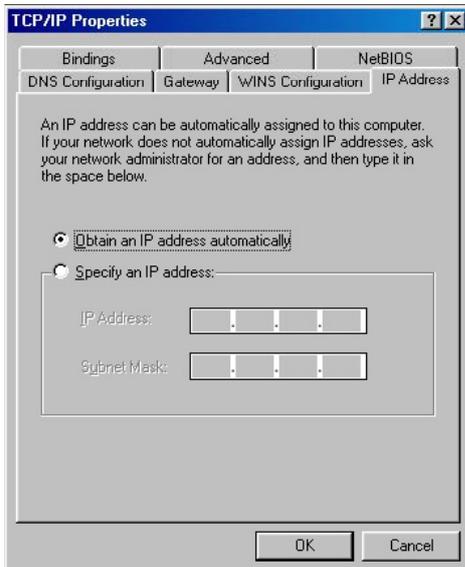
4. In the **IP Address** tab, select **Obtain an IP address automatically**.
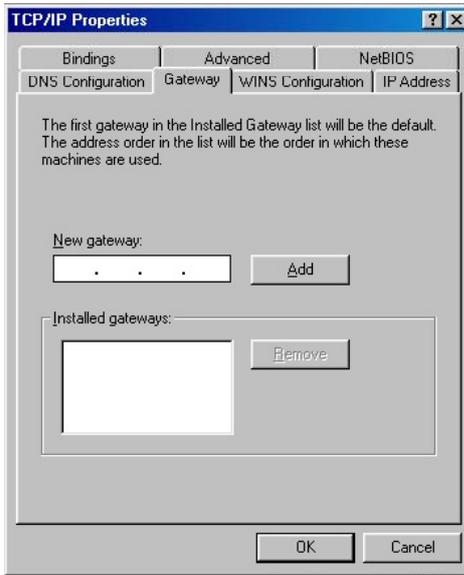
5. In the **Gateway** tab, if there are gateways installed, select them and click **Remove**.

6. 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.

4.6.6.Windows 98 SE: 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 adapter's WiFi connection in Windows 98 SE:

- Access the **Device Manager**.

- Select your WiFi 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 98 SE, please refer to the Windows online help utility.

5. WIFI MANAGER N FOR ADVANCED USERS

WiFi Manager N has been designed to respond to the needs of the widest cross-section of the public. Thus, after having explained the most useful functionalities in the previous chapters, we dedicate this chapter to users who wish to take advantage of the subtleties of WiFi, and explore their Router's more advanced functionalities. **But be careful!** Modifying certain settings may have a negative impact on the proper functioning of your network, and therefore on your Router. 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.

⚠ In certain cases, your settings will only be taken into account after WiFi Manager N has restarted.

5.1. Configuring your WiFi network's advanced options

⚠ This window contains the settings which affect the functioning of your Hercules Router. If you do not know their functions, we recommend that you keep the default settings.

- In the **General settings** window, click the **Your WiFi connection settings** button.

- In the **Your WiFi connection settings** window, click the **Expert WiFi settings** button.

- The **Fragmentation threshold** consists of defining the size at which data packets are fragmented. If the size is less than the predefined amount, the packet is not fragmented. By contrast, if the size is greater, the packet is fragmented before being transmitted, then reconstituted at the access point.

Fragmentation lets you improve the success of transmissions.

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

Modifying the RTS threshold may affect your Router's performance.

- The Beacon Period allows you to define the wireless network detection interval.

- The **DTIM** interval corresponds to the interval between two synchronous frames containing information on the transmission messages.

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

- The **N Data Rate** is specific to the transfer of data in the 802.11n standard. The values vary from **MCS0** to **MCS15**.

- Select the **channel bandwidth**.

*Select bandwidth of **20MHz** (on one channel) to limit interference, or define a higher bandwidth, **40MHz** (two channels), for transmission of your data in total comfort.*
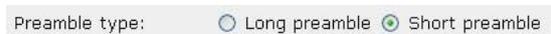
- The **Preamble type** defines the size of WiFi packets. A **Short** preamble optimizes transfer rates at the expense of WiFi coverage. A **Long** preamble (selected by default) favors WiFi coverage by way of longer latency times.

- If you do not wish for your network to broadcast its name, select the **Disabled** radio button.

If the SSID is hidden, the name of the network will not be displayed during detection by a WiFi client (the Network name (SSID) is empty in Hercules WiFi Station N, for example).

Be sure to remember this name, as you will need it to connect your WiFi devices.

- **CTS** (Clear-To-Send) protection guarantees the connection of wireless B, G and N devices to the Hercules Wireless N Router when using wireless B, G and N devices at the same time on the network.

Enabling this function may reduce the speed of your Hercules Wireless N Router.

5.2. Configuring your Internet firewall

In this chapter, you will learn how to lower certain defenses in order to authorize access to your computers or your IP or WiFi camera for specific Internet services (P2P, web/FTP servers, viewing your camera on the Internet…), or shore up other defenses to limit access on a specific computer to certain remote or Internet services. Finally, you also have the possibility of redirecting all Internet requests to a computer whose address you have specified.

5.2.1. Opening doors in your firewall to put your camera online or authorize access for a computer to certain Internet services

If you wish to put a camera online, or if you would like for your computers to be able to either provide specific Internet services (P2P, web/FTP servers…), or access specific services, you will have to open up mini-drawbridges (referred to as ports) in your firewall using **port forwarding**.

To put your camera online or authorize access to one or more of your computers for specific Internet services (automatic mode):
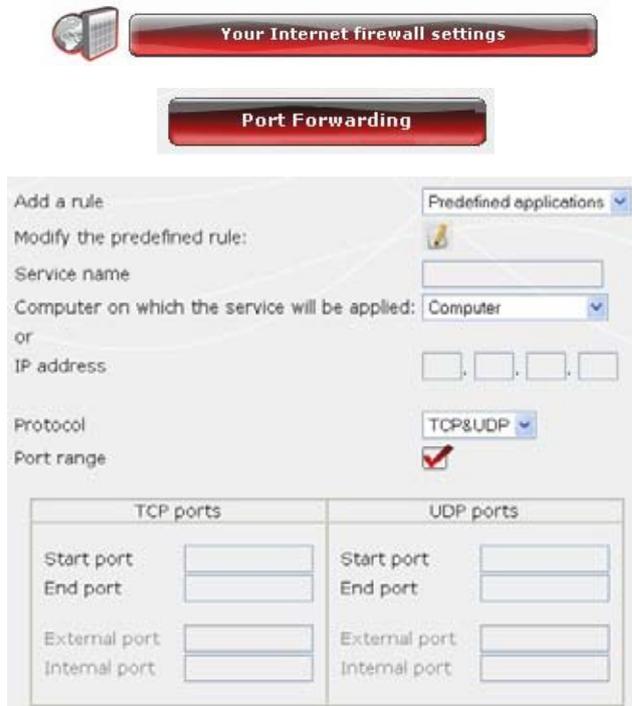
- On the home page, select **Your Internet firewall settings**.

- Click the **Port Forwarding** button.

- In the **Add a rule** list, select a predefined application: **Webcam or IP camera, Peer to Peer, Online gaming...**

- Select the name of the **computer**, connected to the Router, on which the service will be applied, or enter its **IP address**.

- The other settings are filled in automatically.

⚠ If you wish to modify the default number of ports and save the rule with different values than those predefined, click the ✎ icon.

Next, enter the new port numbers.

This procedure does not modify the default values entered in the Router, but rather creates a new rule.

If you subsequently remove this rule, then add it again, the modifications you have made will be lost and the default values will apply.

- Click the **Add** button.

*The computer is added to the list. You can then **modify**, **remove** or **view** the contents of the list.*

To put your camera online or authorize access to one or more of your computers for specific Internet services (manual mode):

- On the home page, select **Your Internet firewall settings**.

- Click the **Port Forwarding** button.

- In the **Add a rule** list, select **Other rules**.

- Enter the service name in the dedicated zone (for example, peer to peer).

- Select the name of the **computer**, connected to the Router, on which the service will be applied, or enter its **IP address**.

- Select the **protocol** (TCP, UDP or TCP and UDP).

Scenario 1: you enable the range of ports

- Enter a value in the **Start port** and **End port** fields (between 1 and 65535).

You can specify a single port by entering the same start and end port.

The fields for external and internal ports will be inaccessible and will take on the same value.

Scenario 2: you disable the range of ports

The fields for start and end ports will be inaccessible.

- Enter a value in the **External port** and **Internal port** fields.

The external port corresponds to the port on the Router at which the request arrives (connection to the Internet, for example). It is supplied by your ISP. The internal port corresponds to the port to which the request is redirected.

You can specify a single port by entering the same external and internal ports.

- Click the **Add** button.

*The computer is added to the list. You can then **modify**, **remove** or **view** the contents of the list.*

- Click the **Modify** button to validate your settings and return to the home page.

5.2.2.Limiting access of one of your network computers to Internet services

By default, the computers are able to access all Internet services. If you wish to limit access on one specific computer to certain Internet services, however (Internet access, Peer to Peer sites…), you can use the **IP address filtering and website blocking** system.

To limit access on a specific computer to an Internet service (filtering method by IP address):

- On the home page, select **Your Internet firewall settings**.

- Click the **IP Filtering** button.

- Enter the **service name** (for example, FTP server).

- Enter the IP address or the range of **IP addresses** of the computers in question.

- In the drop-down list, select the **service type** that will be blocked.

- Select the **protocol** (TCP, UDP or TCP and UDP).

- Enter a value in the **Start port** and **End port** fields.

*If you only open one port, the **Start port** and **End port** (external port) will have the same value.*

- Click the **Add** button.

*The service is added to the list. You can then **modify**, **remove** or **view** the contents of the list.*

- Click the **Modify** button to validate your settings and return to the home page.

To limit access on a specific computer to an Internet service (website blocking method):

- On the home page, select **Your Internet firewall settings**.

- Click the **IP Filtering** button.

- Enter the **website** you wish to block by entering its URL (www.example.com).

Or:

- Enter a **keyword** (for example, violence), which will block access to any site containing this word.

Website address or keyword:	Remove
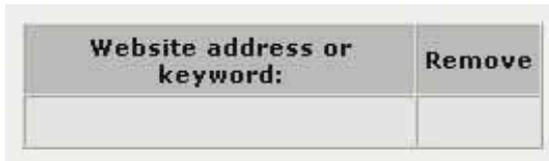
- Click the **Add** button.

*The website or keyword is added to the list. You can then **remove** contents from the list .*

- Click the **Modify** button to validate your settings and return to the home page.

5.2.3. Redirecting Internet requests to a specific computer

To protect the computers on your network from any unwelcome Internet requests, you can create a demilitarized zone (or DMZ) which will redirect these requests, on whatever port, to a specific computer. This computer will process the requests according to the type (game server, FTP server…).

⚠ Although this operation allows you to protect the computers on the network, the computer to which the requests are directed itself becomes vulnerable to attacks.

Your Internet firewall settings

- On the home page, select **Your Internet firewall settings**.

DMZ

- Select **DMZ**.

Computer's IP address: ▢ . ▢ . ▢ . ▢
or
Computer ▾

- Enter the **IP address** of the computer to which Internet requests will be directed or select its **name** in the drop-down list.

- Deselect the applications you do not wish to include.

Add

- Click the **Add** button.

Computer's IP address:	Remove

The table displays the rules applied to the Router.

- Click the **Close** button to validate your settings and return to the home page.

5.2.4. Protecting yourself from Internet attacks with the DOS (Denial Of Service) function

The **DOS** (Denial of Service) function protects you from external attacks. When this function is enabled, your firewall is able to send large volumes of requests in order to saturate the hacker's bandwidth and prevent the hacker from continuing to send or receive data.

Advanced settings

- On the home page, click the **Advanced settings** button.

Denial Of Service

- Select **Denial Of Service**.

- **Ping of Death** consists of sending ping packets of more than 65535 bytes.

- **Block WAN ping** allows you to disable the WAN ping.

- **Scan ports** consists of detecting possible vulnerabilities on the ports.

- **Sync Flood** sends a flood of TCP/SYN packets, often accompanied by a false issuing address, with each of these packets being treated as a connection request.

- Click the **Modify** button to validate your choices.

To customize the DOS function:
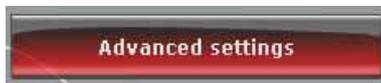
- On the home page, click the **Advanced settings** button.

- Click the **Advanced DOS settings** button.

- Select the number of ping packets sent per hour/minute/second.

*By default, all entries under **Scan ports** are enabled, although you can disable those you do not wish to use.*

- Select the number of ping packets sent per hour/minute/second.

- Click the **Modify** button to validate your choices.

5.3. A toolbox with multiple facets

WiFi Manager N functions as a toolbox which can help you to correct any mistakes you might make.

5.3.1. Restarting your Hercules Router

The **Restart the Router** function cuts off all of the Hercules Router's functions (WiFi and ADSL connections, firewall, router) and restarts WiFi Manager N.

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

To restart the Router:

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

- Select **Restart the Router**.

An explanatory text explains the function of this button.

- Click **YES** to confirm the restart.

⚠ The Router restarts with the last settings saved. No data is lost.

5.3.2. 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 (Internet connection mode, WiFi security key, filtering by MAC address…) will be lost!

To restore the original settings:

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

- Select **Restore original settings**.
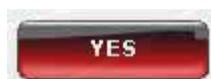
- Click **YES** to confirm restoration of the original settings.
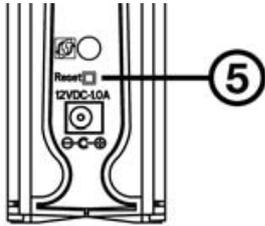
You can also use the Reset button located on the Router:

- Disconnect the Router.

- Press the **Reset button** ⑤ for 5 seconds using an object with a pointed tip, while at the same time reconnecting the Router.

- Release the button, then wait.

Your Router will load its original settings and then restart.

5.3.3. Updating firmware

If you wish to take advantage of new functionalities or improved functionalities for your Hercules Router, we recommend that you regularly visit the **www.hercules.com** website to check whether any firmware updates are available.

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

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

If a firmware update is available:

- On the **www.hercules.com** website, click the **Support/FAQ** link.
- Follow the on-screen instructions provided. Then:

- On the WiFi Manager N homepage, click the **Toolbox** button.

- Select **Update firmware**.

- Click the **Browse** button.
- Select your firmware file, then click **Open**.
- Click **Update** to import the data.

Your Hercules Router will now use this new firmware version.

5.4. Other advanced options

5.4.1. Assigning priority to a type of data in the event of an overloaded network

WiFi Manager N, using the **QOS** (Quality of Service) function, allows you to ensure the continuity of data streams, even on an overloaded network, by giving priority to a specific stream in relation to other data streams. To access the **QOS** function:

- On the home page, click the **Advanced settings** button.

- Select **QOS**.

- Enable the **QOS** function.

- If you wish, add a priority rule by clicking the **Add a rule** button.

- In the window which opens, enter the **name of the rule**.

- Select the transfer type, **upstream** or **downstream**.

- Enter the **speed** you wish to use.

- Select a **priority**: **guaranteed** or **maximum**.

Maximum priority corresponds to the highest level of priority. The principle consists of using the required bandwidth for the immediate transfer of data.

Guaranteed priority guarantees data traffic according to the availability of bandwidth.

*Your network serves as a bridge between two networks, the **local network** (the computers and devices connected at your home) and the **Internet network**.*

- If you wish, enter a **local IP address** and a **local port**.

*The **local IP address** and **local port** correspond to the local network. The QOS rules only apply to the computers communicating within this network.*

- If you wish, enter a **remote IP address** and a **remote port**.

*The **remote IP address** and **remote port** correspond to the computers which communicate with the Internet. In this case, the QOS rules only apply to data streams coming from the Internet to a computer in the local network.*

- Select a **traffic type**: FTP, HTTP (websites), SMTP and POP3 (email management).

- Select the **protocol**: TCP, UDP or both.

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

Priority	Rule name	Upstream bandwidth	Downstream bandwidth	Modify	Remove

Rules applied to the Router are displayed in the table.

- Click **Modify** to apply the rule.

5.4.2. Configuring the DHCP server

This chapter will explain how to configure the internal DHCP server which manages the IP addresses of your computers.
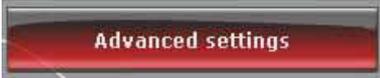
- On the home page, click the **Advanced settings** button.

- Select **Router's IP configuration**.

- You can modify the **Router's IP address** (192.168.2.1, by default) and its **subnet mask** (255.255.255.0, by default).

⚠ Be sure to make a note of this IP address. Without it, you will not be able to reconnect to your Router.

- If you **enable DHCP**, you can modify the **start IP address** (192.168.2.2, by default), the **end IP address** (192.168.2.128, by default) and the **lease time** for these addresses (**Forever** is the default value).

- If you **do not enable DHCP**, you decide to set the IP address for each computer yourself.

- You can assign a **domain name** to this server and a specific **IP address** according to the computer's **MAC address**.

The table displays the list of IP and MAC addresses added.

- Click the **Modify** button to validate your settings.

5.4.3. Facilitating connection of devices with the UPnP protocol

WiFi Manager N's **UPnP** protocol has the objective of facilitating the connection of devices on the network for the sharing of files or of the Internet connection, for example, by carrying out an automatic identification of the computer's components.

To enable the UPnP protocol:

- On the home page, click the **Advanced settings** button.

- Select **Universal Plug and Play.**

- Tick the **Enable the UPNP function on the router** box.

- Click the **Modify** button to validate your choice.

5.4.4. Selecting a primary and secondary domain name server

In order for you to access the Internet, your ISP may sometimes require you to enter an IP address corresponding to a primary and/or secondary DNS server.

- On the home page, click the **Advanced settings** button.

- Select **DNS.**

- Enter the primary **DNS server address**, **along with that of the secondary DNS server**, which takes over from the primary DNS server if it should fail.

This information is included in the membership details sent to you by your ISP.

- Click the **Modify** button to validate your choice.

5.4.5. Linking an IP address to a dynamic domain name server

Thanks to the **Dynamic DNS** (or DDNS) function in WiFi Manager N, your IP address is always known to your domain name server. Simply enter the supplied password and username and the Dynamic DNS service takes care of regularly sending your Router's public IP address (that assigned to your Router's Internet connection by your service provider).

Note: You must have subscribed to a Dynamic DNS service.
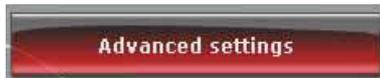
- On the home page, click the **Advanced settings** button.

- Select **DDNS**.

- Tick the **Enable DDNS** box.

- Select the **DDNS** server to which you have subscribed, then enter the required information (username and password).

These items of information were supplied when you subscribed to the service.

- Click the **Modify** button to validate your choice.

5.4.6. Configuring your Router remotely

Thanks to a computer connected to the Internet, WiFi Manager N allows you to remotely control the Router.
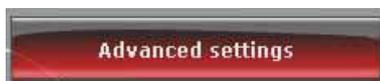
- On the home page, click the **Advanced settings** button.

- Select **Remote management**.

- Enter the **IP address** and **communication port** of the computer which can remotely configure the Router.

- Click the **Modify** button to validate your choice.

5.4.7. Setting priorities for types of data according to available bandwidth

WMM allows you to assign priority in relation to the types of data circulating on the network. If this option is ticked, the priorities are assigned as follows:

Priority	Type
1	Voice over IP (telephone calls via the Internet)
2	Video data
3	Other applications frequently using the network (Web browser...)
4	Background task applications (printing jobs, downloads, email/messaging...)

For example, if bandwidth is insufficient to allow for the simultaneous transit of a phone call via the Internet, watching a video, surfing the Internet and a download, the WMM function will hold off on the download, surfing the Internet, and the video. The objective is to guarantee optimal comfort of use for the main task at hand.

You can freely enable or disable this option. Be aware, however, that if you disable this option, bandwidth will be split up between all current tasks, without order of priority, which can be detrimental to your comfort of use (for example, untimely disruptions in your phone calls via the Internet or your videos, or a slowdown in terms of your downloads).

⚠ The WMM function is only compatible with other WMM devices.

- On the home page, click the **Advanced settings** button.

- Select **WMM.**

By default, the WMM function is enabled. Un-tick this box to disable the function.

5.5. Product information

WiFi Manager N allows you to view all of the information relating to the functioning of your Hercules Router.

To consult product information:

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

The following items of information are displayed: MAC address of your Hercules Router, status of the ADSL connection, of the local area network and wireless network, as well as the firmware and hardware versions.

6. 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 adapter is compatible with this standard.

802.11n

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 300Mbits/s in the 2.4GHz frequency band with a physical range of up to 300m in an environment free from obstructions. The 802.11n standard offers backwards compatibility with the 802.11b and g standards, which means that equipment compliant with the 802.11n standard will also work with 802.11b and/or g.

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.

MIMO technology (Multiple In, Multiple Out)
Technology used in the 802.11n standard, allowing for the WiFi signal to be shared over several antennas with a corresponding increase in terms of signal range and transfer speeds. Transmission can take place on one channel in the 20MHz frequency band (for theoretical maximum transfer speeds of 144.44Mbits/s) or two channels simultaneously (for theoretical maximum transfer speeds of 300Mbits/s) with 40MHz bandwidth. In both cases, the WiFi signal's coverage and range are the same. The choice of one mode or the other (20 or 40MHz) depends solely on the transmitter used. The Hercules Wireless N key will automatically adapt to the signal received.

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 access 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 Manager N
Utility developed by Hercules to configure and view settings for the Hercules Wireless N Router.

WMM (Wi-Fi Multimedia)
Functionality certified by the Wi-Fi Alliance, whose goal is to define levels of priority according to available bandwidth. Thus voice over IP (priority 1) will take precedence over transmission of video data (priority 2), which will itself take precedence over applications making use of the network, such as Internet browsing (priority 3), and then lastly come background applications, such as printing jobs or downloads (priority 4).

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 N
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, g or n standards.

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.

WPA2 (WiFi Protected Access 2)
Security standard for wireless networks based on the WPA standard, which adds support for the TKIP or AES encryption algorithm, for heightened 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.

WPS (Wi-Fi Protected Setup™)
Technology standardized by the Wi-Fi Alliance, which aims to simplify the connection and configuration of a wireless network while at the same time maintaining a high level of security. This technology allows the user to enable protection of a WiFi network via a single button located on the WiFi client, or via entry of a PIN code in the software supplied with the router.

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.

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7. 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

8. WARRANTY

Worldwide, Guillemot Corporation S.A. ("Guillemot") warrants to the consumer that this Hercules product will be free from material defects and manufacturing flaws for a period of two (2) years from the original date of purchase. Should the product appear to be defective during the warranty period, immediately contact Technical Support, who will indicate the procedure to follow. If the defect is confirmed, the product must be returned to its place of purchase (or any other location indicated by Technical Support).

Within the context of this warranty, the consumer's defective product will, at Technical Support's option, be either repaired or replaced. Where authorized by applicable law, the full liability of Guillemot and its subsidiaries (including for indirect damages) is limited to the repair or replacement of the Hercules product. The consumer's legal rights with respect to legislation applicable to the sale of consumer goods are not affected by this warranty.

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.

9. ENVIRONMENTAL PROTECTION RECOMMENDATION

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.

This is confirmed by the symbol found on the product, user manual or packaging.

Depending on their characteristics, the materials may be recycled. Through recycling and other forms of processing Waste Electrical and Electronic Equipment, you can make a significant contribution towards helping to protect the environment.

Please contact your local authorities for information on the collection point nearest you.

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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 HWNR 300** 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/HWNR-300/DoC-eng_Hercules_HWNR-300.pdf

CE 0470 ①

Hercules is a division of Guillemot Corporation.

EUROPEAN USERS:
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:
FRANCE:
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.

FC

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter. FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:
FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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End-user software license Agreement