USB-WLAN-Adapter

➲ **Note:** Install the WLAN Router in accordance with it's associated Operating Instructions first, if you have bought this WLAN USB Adapter in a bundle with a WLAN Router.

Table of Contents:

SAFETY AND SERVICE

SAFETY NOTES

Please read through this section carefully. Following all the instructions will guarantee reliable operation and years of enjoyment from your new WLAN-USB-Adapter.
Keep these instructions and packaging safe. Use the original packaging in the event that you need to ship or transport your WLAN-USB-Adapter.

- **Never open the housing** of the WLAN-USB-Adapter! This could lead to an electrical short-circuit, damage to your appliance or fire.
- Follow the instructions of your computer.
- Keep your WLAN-USB-Adapter and all connected equipment away from **moisture, dust**, **heat** and **direct sunlight** in order to **avoid** malfunctions.
- **Do not allow children to play unattended with any electrical appliances.** Children may not always correctly recognise possible safety hazards.
- After **transporting** your WLAN-USB-Adapter wait until it has reached the ambient temperature before putting it into operation. In the event of major variations in the **temperature or humidity**. Condensation can form on the inside of the WLAN-USB-Adapter which can cause an **electrical short-circuit**.

ELECTRO-MAGNETIC COMPATIBILITY

- Maintain a **distance of** at least 3 feet **from sources of high frequency and magnetic interference** (television sets, loudspeakers, mobile telephones, etc.), in order to avoid malfunctions and data loss.

CLEANING

- **Caution!** There are **no parts which can be serviced** or cleaned inside of the appliance housing.
- Do not use any type of solvents, caustic or gaseous cleaning agents . Clean the WLAN-USB-Adapter with a moist cloth.

IMPORTANT ADDITIONAL SAFETY INSTRUCTIONS

CE DECLARATION OF CONFORMITY

This appliance meets the following requirements:

EN 300 328 V1.4.1 (2003), EN 301 489-01 V1.4.1 (2002), EN 301 489-17 V1.2.1 (2002), EN 55022:1998, Class B, EN 61000-3-2+A14:2000, EN 61000-3-3+A1:2001, EN 60950:2000.

This device has been tested and approved according R&TTE 1999/5/EC.

The complete declaration of conformity of this device is available under **www.medion.com/conformity**.

FCC RF Radiation Exposure Statement:

1. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment, under 47 CFR 2.1093 paragraph (d)(2).
2. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The IEEE 802.11g WLAN-USB-Adapter has been tested to the FCC exposure requirements (Specific Absorption Rate).

> ➲ **ATTENTION**: Make sure the Wireless LAN option is switched OFF in any environment where it might interfere with critical and sensitive devices, e.g., on aircraft, in hospitals and other medical centres, etc.

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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 or more 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 technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Shielded interface cables, if any, must be used in order to comply with the emission limits.

> ➲ **Warning:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment. Tested to comply with FCC standard. FOR HOME OR OFFICE USE.

CHANNEL / USAGE LIMITATIONS

FRANCE:

Only channels 10 to 13 (2457 MHz and 2472 MHz respectively) may be used on French territory. It is not permitted to operate the device on any other channel supported by the device. Outdoor use is prohibited.

SPAIN:

Only channels 10 to 13 (2457 MHz and 2462 MHz respectively) may be used on French territory. It is not permitted to operate the device on any other channel supported by the device. Outdoor use is prohibited.

GREECE:

For private indoor applications.

OTHER COUNTRIES:

No limitations are known when this manual was released. However, please check the local regulation authorities.

NOTES ON THESE INSTRUCTIONS

We have arranged these instructions so that you can quickly find the subject related information in the table of contents. The purpose of these instructions is to help you operate your product safely, quickly and easily. In addition, many software application programs include extensive help functions. As a general rule, you can access help functions by pressing F1 on the keyboard. These help functions are available to you when you use the Microsoft Windows® operating system or the various software application programs.

AUDIENCE

These instructions are intended for both the novice and advanced user. Regardless of the possible professional utilisation, this product is designed for day-to-day household use.

QUALITY

Medion has selected the components in this appliance for their high level of functionality, ease of use, safety and reliability. Through balanced hardware and software design we are able to provide you with an innovative appliance useful for applications relating to both work and leisure. We are pleased to welcome you as our newest customer. Thank you for choosing Medion.

SERVICE

Service and support is available any time you use your WLAN-USB-Adapter. Contact us, we will be glad to help you. This manual contains a separate chapter on the subject of service beginning on page 23.

SET INCLUDES

Please check the contents of the box. Notify us within 14 days of purchase if your WLAN-USB-Adapter is not complete. Your product includes:

WLAN-USB-Adapter
USB extension cable (optional)
Software and documentation CD
This user manual

FEATURES AND BENEFITS

High Speed wireless LAN connections

- Up to 54 Mbps data rate with IEEE 802.11g standard.

Also compatible with IEEE 802.11b

- Supports networks on IEEE 802.11b standard.

Auto fallback

- 54, 48, 36, 24, 12, 9, 6 & 11, 5.5, 2, 1 Mbps data rate with automatic choice of the highest possible data rate.

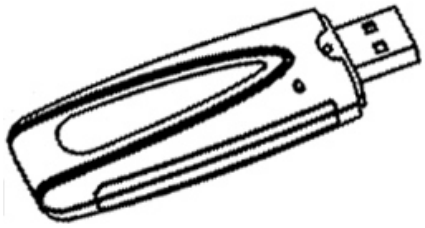
SYSTEM REQUIREMENTS

Before installing the 802.11g WLAN USB Adapter ensure that your computer meets the following minimum requirements:

- a free USB port (1.1/2.0).
- Operating system: Windows® 98SE/ME/2000/XP.
- CD-ROM drive for installation.
- Minimum 5 Mbps free disk space for installing driver and utility program.

LED INDICATOR

The LED will show the status of the wireless connection of the Adapter to another wireless node or to the allocated access point.



LED Activity	Meaning of the LED Activity
Solid green	Connecting to the Access Point or Ad-Hoc wireless workstation and transmitting data.
Blinking green	Before connecting to the Access Point or Ad-Hoc wireless workstation.

INSTALLATION OF THE ADAPTER

➲ **Note**: Install the required software before connecting the WLAN USB Adapter to your computer!

SOFTWARE INSTALLATION FOR WINDOWS®

WARNING! During software installation your important files could be changed or deleted. To avoid problems in using older files after installation, make sure you backup your hard disk.

Note: You may need administrator rights under Windows XP/2000, if appropriate, to carry out the installation. Register with an account that has these rights.

1. Switch on your computer and wait for Windows to boot.
2. Insert the CD ROM supplied to automatically start the installation.

   Note: If installation does not start automatically, probably, the "***Autorun***" feature, is deactivated. Activate this feature if required in your Device Manager by selecting the entry **"CD-ROM"** and then marking the feature "***Automatic notification on change***".

   Manual installation without Autorun feature:

   1) Open the "***Start***" menu and select "***Run***".
   2) Then enter the letter for the CD-ROM drive followed by a colon and the name of the program name: "***Setup***"

   Confirm by clicking "***OK***".

3. Follow the further instructions as they are displayed.

CONNECTING THE ADAPTER

1. If the computer has not yet started wait until the operating system has started completely before connecting the adapter.
2. Connect the Adapter to a free USB connection port on your computer.

> ➲ You can use a USB extension cable (optional) between the USB port and the USB Adapter, if necessary. This is sensible if the Adapter does not fit into the USB port properly or if it is required to improve the wireless transmission by way of Adapter alignment.

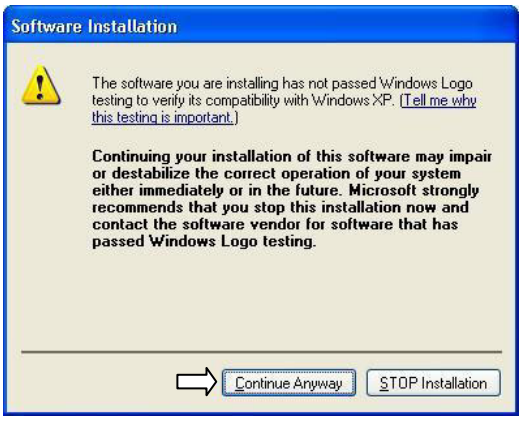
RECOGNITION OF THE ADAPTER

The operating system will try to install the appropriate driver when the Adapter is connected to a computer for the first time. This can also happen if the Adapter is connected to a different USB port on the same computer.
The driver installation will proceed as follows:

> ➲ Different images may be displayed, depending on the operating system.

1. Select **"Install from a list or specific (Advanced)"** to install the driver:

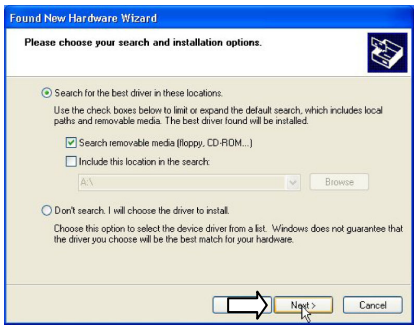
2. **Note only forWindows® XP/2000/ME**:
   If your operating system is configured that the installation procedure accepts only signed drivers and software (the default) this information screen will appear:



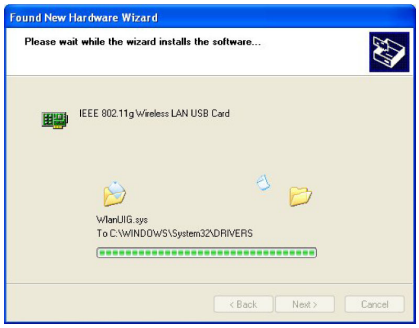
   Although the software lacks the digital signature it will work properly. Click on "Tell me why this testing is important" to get detailed information.

   Confirm by clicking on "**Continue Anyway**".

3. Insert the Product CD-ROM into the CD-ROM drive. Check the **"Search removable media (floppy, CD-ROM...)"** check box and click on **Next** to install the driver.



4. Windows will find **"IEEE 802.11g WLAN-USB-Adapter"** and start copying the corresponding files to the system. Click on **Next** to continue.

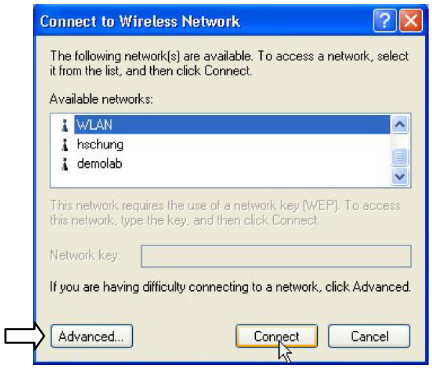


5. Click **Finish** to complete the installation:

CREATING A NETWORK CONNECTION

After installing the IEEE 802.11g WLAN-USB-Adapter, Windows XP will display a "Wireless Network Connection" message:

Click on this message and the "*Automatic Wireless Network Configuration* will appear automatically. You can click on the **Connect** button to allow users to connect to an available wireless infrastructure network (Access Point). You can also click the **Advanced** button to make changes to the advanced configuration of the WLAN Adapter, as shown below:



Disconnecting a Network Connection

All connections will be ended if the Adapter is removed from the USB port.

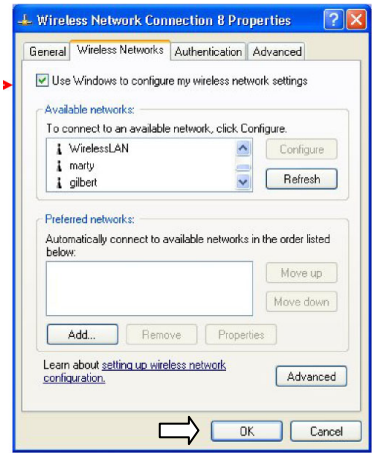
Removing the Adapter

It may be necessary to cancel the registration of the Adapter first, depending on the operating system and settings used:

1. Click on the relevant symbol in the taskbar, in order to be able to remove the Adapter safely.

Ending a Connection to a Network

1. Display the available wireless networks and click on **Advanced**. Then, select the connection that should be removed in the **Preferred Networks** Window and click on **Remove**. Finally, click on **OK**, to end the network connection:

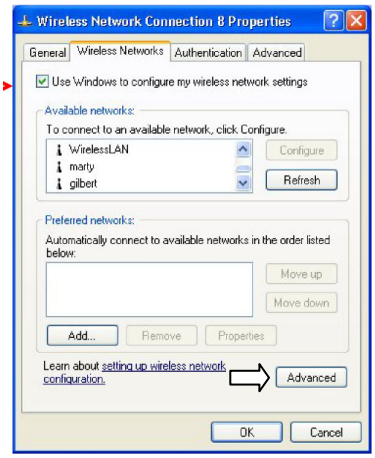


ADHOC MODE

Wireless stations in wireless computer-to-computer networks create connections to each other directly, instead of across wireless access points. For example, one wireless device can create a connection with another wireless device, so a 2 device, temporary network will be created. This would be useful, for example, if you needed to create a link between two notebook computers during a business meeting.

You can set the ADHoc Mode in this way:

1. Have the available wireless networks displayed and click on **Advanced**.



2. In the next window activate the '**Only Computer-to-Computer Networks (AdHoc)**' control button, if you are configuring a network connection to a computer-to-computer network (a AdHoc network).

CONFIGURATION OF THE ADAPTER

The Configuration Program (**IEEE 802.11g Wireless LAN Utility**) will have been installed on your computer during the software installation and will be automatically loaded at every Restart of the operating system. This program will provide information about the quality of the signal and the connection conditions and will enable you to change different configurable wireless parameters.

DISPLAYING THE CONFIGURATION PROGRAM

The configuration program will display the following statuses in the taskbar as denoted by the colour of the symbol:

Colour	AdHoc Mode	Infrastructure Mode
Red	The Adapter has not initiated any communication with a different wireless node.	The Adapter is either unable to create a connection to an Access Point or the connection between the wireless Adapter and the access point has been lost.
Yellow	Not relevant.	The quality of the connection between the wireless PC card and the associated access point is poor.
Blue	The Adapter has communicated successfully with another wireless node.	The wireless Adapter has made a stable, successful connection to an access point and the signal is strong.

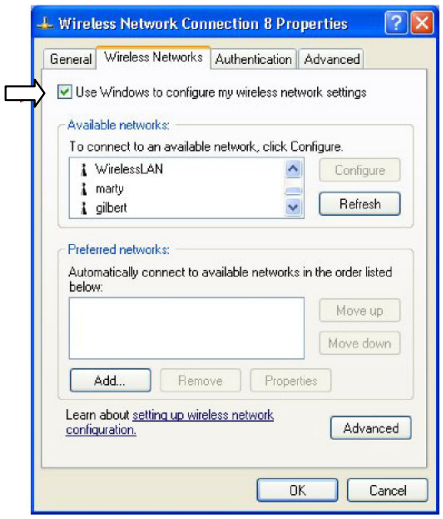
How to start the configuration program

1. Double click this symbol in the Windows task bar:

2. Now you will be able to configure your Adapter according to your specific needs. You will also receive additional status information, such as the strength of the signal and a list of the available wireless remote terminals.

Configuration in Windows® XP

Windows® XP uses it's own program/system for the configuration of wireless network settings. To use this program make sure that this option is activated:



BASICS OF WIRELESS NETWORK OPERATION

There are 2 network types for the IEEE 802.11g WLAN-USB-Adpater to operate — AdHoc and Infrastructure.

ADHOC MODE (PEER-TO-PEER WORKGROUP)

If you need to access company network or Internet via an Access Point, select **"Infrastructure"**.

INFRASTRUCTURE MODE

To set up a group of wireless stations for file and printer sharing, select " **AdHoc"** (without Access Point).

SERVICE SET IDENTIFICATION (ESSID)

The ESS ID is the unique ID used by Access Points and stations to identify a wireless LAN. Wireless clients associating with any Access Point must have the same ESSID. The default setting is ANY, which allows your IEEE 802.11g Wireless LAN USB card to automatically associate to any Access Point (Infrastructure mode) in the vicinity of your wireless Adapter. Alternatively, you may check the **ESS ID** check box to specify the ESS ID. It will then attempt to associate with Access Points or stations with the same ESS ID. The ESS ID can be set up to *32 characters* and is case sensitive.

WEP

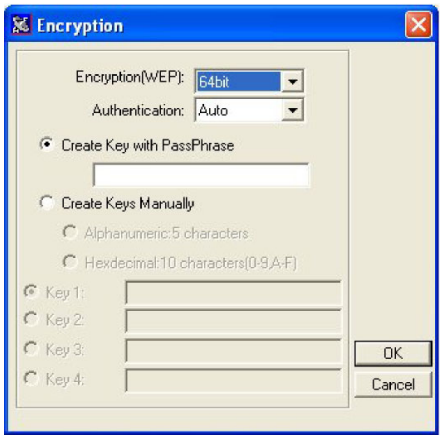
To prevent unauthorised wireless stations from accessing data transmitted over the network, the WLAN Utility offers highly secure data encryption, known as WEP, making your data transmission 'over air' more secure. To activate the WEP Encryption, check the **WEP Enabled** check box. An Encryption window will then appear. The stup instructions are as follows:

- Pull down the **Encryption (WEP)** menu and select either **64bit** or **128bit** encryption method.
- Specify the encryption keys. There are two methods to set the WEP keys, as described below:

Create Encryption Keys by Using a Passphrase

To create encryption keys by using a passphrase, click the 'Create Key with Passphrase' check box and type a character string in the 'Passphrase' field. As you type, the utility uses an algorithm to generate 4 keys automatically. Select either the 64bit or 128bit encryption first, and type a string in the 'Create Key with Passphrase' field. Select one key from the 4 WEP keys and click OK. Then click the Apply button on the Configuration tab to make the setting take effect.

➲ **Warning:** When 'Create Key with Passphrase' is enabled, the wireless device's Key with PassPhrase must match the Key with PassPharse used by the access point with which wireless device is intending to communicate.



Create Encryption Keys Using a Passphrase (128bit).

CREATE ENCRYPTION KEYS MANUALLY

You can also create encryption keys manually by clicking the '**Create Keys Manually'** check box.
For 64bit encryption you may choose:

- **Alphanumeric: *5 characters*** (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey)
- **Hexadecimal:** 10 hexadecimal digits in the range of "A-F", "a-f" and "0-9" (e.g. 11AA22BB33)

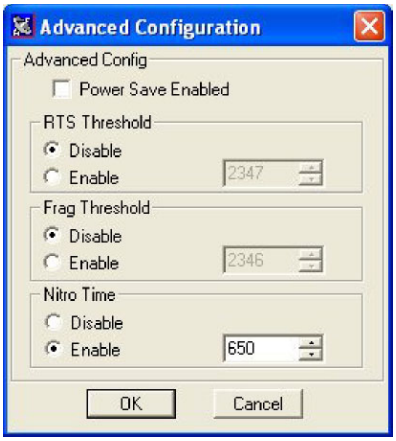
For 128bit encryption you may choose:

- **Alphanumeric:** 13 characters (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey12345678)
- **Hexadecimal:** 26 hexadecimal digits in the range of "A-F", "a-f" and "0-9"
  (e.g. 00112233445566778899AABBCC).

After entering the WEP keys in the key field, select one key as active key, click the **OK** button and then click the **Apply** button on the **Configuration** tab to make the setting take effect.

ADVANCE

The WLAN Utility also offers an advanced configuration for you to setup the IEEE 802.11g Wireless LAN USB Adapter under certain network environments. These advanced options include Power Management, RTS/CTS and Fragmentation Threshold. To enable the advanced configuration, go to the **Configuration** tab and click the **Advance** button.



BASIC INFORMATION ABOUT NETWORK OPERATION

You will find additional explanations about network operation under **Windows® Help** in the Start Menu.

WHAT IS A NETWORK?

A network means connecting your computer to one or several other computers. Users can transfer data between computers and share resources such as printers, modems and hard disk drives.

Here are some practical examples:

- You can exchange E-mail and manage appointments in an office.
- Users can share a printer in a network and save their data on a central server.
- Users can share one modem among computers for Internet access.
- Two or more computers can be connected to play network games or share data.

WHAT DO YOU NEED FOR NETWORKING?

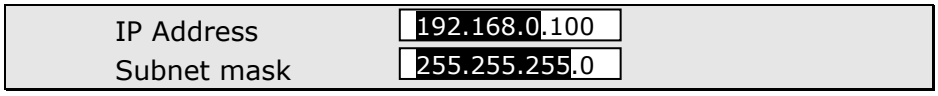
Some requirements have to be fulfilled to successfully network computers:

1. The computer must have a network card that supports the same network technology as the other computers on the network. Unless otherwise quoted, your computer should at least support the current **Fast Ethernet** (10/100Mbit) standard.
2. The network cards must be connected. You need a Shielded Twisted Pair-cable (CAT5) that has an **RJ-45**-connector.
   - If you want to directly connect two PCs you need a **Cross-Over** cable.
   - If more PCs need to be connected you need a supplementary distributor (**Hub** or **Switch**) and Patch cables.
3. All connected PCs need a network **operating system**. Windows® can act as a network operating system.
4. All networked PCs must speak the same "language" to understand one another. They use network protocols for this purpose. The setting of the network protocol, therefore, must be the same for all the networked PCs.

TCP/IP ADDRESSES AND SUBNET MASK

Each computer in the network will need a unique TCP/IP address, in order to be identified correctly. A TCP/IP address consists of four numbers separated by three dots. An enormous number of TCP/IP addresses can be created, because each of these four numbers can lie between 0 and 235.
For this reason, these addresses are divided up into small ranges (sub-networks), in order to simplify and structure the data traffic. The **Subnet Mask**, which reports the part of the address, beginning from the left, that determines the **Network Area**, and which part determines the **Device Address**, is operated for this division. The Network Area is indicated with **255** and the Device Area is indicated with **0** in principle.

Example:



Thus, the black area is the Network Area and the white area is the Device Area.

That is, the Device **100** will be located at Network **192.168.0**. The device will only be able to communicate with devices that are located in the **same 192.168.0 Network**.

For example, if a different device has the address 192.168.**1**.100 (Subnet Mask: 255.255.255.0), the device will be located in a different Network Area (**192.168.1**). That is, it will be **unable to communicate directly** with the device from the Network 192.168.0.

RESERVED IP ADDRESSES

Three address areas, which are intended for building up internal network structures (Intranet), have been reserved. These addresses have not been given in the Internet (x = figure from 0-255):

10.x.x.x / Subnet mask 255.0.0.0 (class A)
172.16.x.x / Subnet mask 255.255.0.0 (class B)
192.168.x.x / Subnet mask 255.255.255.0 (class C)

SERVICE

LOCALISE THE CAUSE

Errors can have simple causes, but sometimes they are caused by faulty equipment. We will give you some tips to help solve common problems. Should these instructions not lead to success, please contact us for technical support.

CHECK CABLES AND CONNECTIONS

Visibly check all cables and connections. Should all lights be off, check whether all equipment is supplied with power.

> ➲ Switch off the product and check all cable connections. Check the connections to any peripherals. Do not exchange cables, even though they may look similar. The polarity in the cables may be different. When it is confirmed that the prodcut has power and all connections are correct, turn the product on again.

ERRORS AND POSSIBLE CAUSES

If the Adapter is indicated with an exclamation point or a red X in the Device Manager.

- Remove and re-insert the Adapter into the USB port.
- Insert the CD ROM and install the driver again.

The Adapter will be recognised again, although it was already installed.

- Use the same USB connection as at installation.

The Adapter is connected but it is impossible to communicate.

- Check the channel settings.
- Check the strength of the signal.
- Check the security settings.
- Check the configuration of TCP/IP.
- Click the option "Auto" in Windows XP.
- Only connect yourself to a network where you want to exchange data.

ADDITIONAL SUPPORT

If the suggestions in the above section have not solved your problem, please contact our customer service centre and we will attempt to help you solve the problem. Before you call, however, please have the following information available:

- How is your computer configured?
- What additional peripherals do you use?
- What messages, if any, appear on your screen?
- What software were you using when the error occurred?
- What steps have you already undertaken to solve the problem?
- If you have been given a customer number previously, please have this available.

GUARANTEE

The sales receipt serves as proof of first purchase and should be kept in a safe place. It is required should you need to make use of the guarantee.
If the product is passed onto another person, then they shall be entitled to guarantee services for the remaining period of the guarantee. The receipt of purchase as well as this declaration should be passed on to the new owner.
We guarantee that this equipment is in perfect working order and from a technical point of view it complies with the description in the enclosed documentation. Upon production of the receipt, the remaining period of guarantee shall pass on from the original parts to the respective replacement parts. If you hand in this equipment to make use of the guarantee, you must remove any programs, data and removable storage media. Products which are sent with accessories will be replaced without accessories. The warranty obligation does not apply in the case of the problem being caused by an accident, a catastrophe, vandalism, misuse, incorrect use, ignoring the safety and maintenance regulations, changes by software, viruses or another piece of equipment or accessory or by other modifications not approved by the manufacturer. This limited guarantee declaration replaces all other guarantees of express or implied nature. This includes the guarantee of saleability or the suitability for a certain purpose but is not limited to this. In some countries the exclusion of implied guarantees is not permissible upon principle. In this case the validity of all express and implied guarantees is limited to the guarantee period. Once this period has expired, all guarantees become invalid. In some countries limiting the period of validity for implied guarantees is not permitted, so that the above limitation does not come into force. If you have any questions with regard to these guarantee conditions, please contact us.

LIABILITY LIMITATIONS

The contents of this manual are subject to unannounced changes caused by technical progress. Manufacturer and sales shall not be responsible for any damages which have been caused as a result of omissions or errors in the information provided in this manual.

Under no circumstances shall we be liable for any of the following:

1. Claims made against you by third parties based on loss or damage.
2. Loss or damage to your media, recordings or data.
3. Economic follow-on damage (including lost profit or savings) or associated damage even in the case that we have been informed of the possibilities of this type of damage.

In some countries the exclusion or limitation of accompanying or follow-on damage is not legally accepted so the above limitations do not come into force.

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