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Safety precautions

◆ The Gigaset USB Adapter can affect medical equipment. Therefore, you should pay attention to the technical conditions of the corresponding environment.

◆ Make sure you include the operating instructions and the CD-ROM when you pass on your Gigaset USB Adapter 54 to somebody else.

◆ Dispose of the Gigaset USB Adapter 54 and any CD-ROMs you no longer need in an environmentally-friendly manner.

◆ Do not extend the USB cable. This may result in higher EMC-radiation.

◆ Under no circumstances try to use a damaged device. If in doubt, please contact our service department, see Chapter "Service (Customer Care)" on page 53.

Notes on safe operation

When you have installed and configured the Gigaset USB Adapter 54 on your PC, you should make security settings on the wireless network:

◆ Change the SSID for all of the wireless devices within your network, see "SSID (Service Set Identifier)" on page 23.

◆ Encrypt the communication over your wireless network, see "Configuration – Security" on page 27.

Trademarks

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i	Trademarks and trade names used in these instructions are meant only to describe the operating steps and this use does not imply that they are freely available. Trademarks and trade names are the property of the corresponding holder of the rights.

The Gigaset USB Adapter 54

The Gigaset USB Adapter 54 is a 54 Mbps network adapter that is connected to your PC or Notebook via the USB (Universal Serial Bus). You can use Gigaset data products to set up a wireless local network (WLAN = Wireless Local Area Network) without having to lay cables.

Your Gigaset USB Adapter 54 can be used to connect your computer to other computers equipped with wireless network adapters (ad-hoc mode).

You can also connect your PC to a wireless router, e. g. to the Gigaset SE 505 dsl/cable, for Internet access (infrastructure mode).

Since the PCs communicate with each other via radio, it does not matter where they are located, as long as they are within range of the wireless network. Mobile PCs, such as Notebooks, can connect to the WLAN even after changing location. This enables you to use all the files and printers on the network. The Gigaset USB Adapter 54 works to the IEEE 802.11g transmission standard and is backwards compatible with the older standard IEEE 802.11b. For network security, wireless transmission can be encrypted using 64/128-bit WEP or the newer WPA standard.

These operating instructions contain important information on how to set up a WLAN and to configure your Gigaset USB Adapter 54.

Wireless LAN Basics

This section provides basic information on wireless LANs to show the role of the Gigaset USB Adapter 54 in setting up a wireless network.

Local Area Network (LAN)

A LAN is a network that exists in a limited area. A network is two or more computers which are connected together in order to share files as well as peripheral devices, e. g. a printer.

Using the Gigaset USB Adapter 54 you can communicate with other computers without having to lay network cable. Thus you can take your computer to another place and still remain connected to the network.

You can use the Gigaset USB Adapter 54 in two different ways. On the one hand, you can establish a connection to one or more PCs equipped with wireless network adapters. This is an ad-hoc network. On the other hand, you can establish a connection to an Access Point, which is used to obtain access to an already existing wired LAN (infrastructure network).

Ad-hoc network

In an ad-hoc network, PCs communicate with each other via wireless peer-to-peer connections. An ad-hoc network is set up by participants as and when required. All the PCs must have a wireless network adapter, for example a Gigaset USB Adapter 54, Gigaset PC Card 54 or Gigaset PCI Card 54. Ad-hoc networks are used wherever communication networks have to be set up quickly without any existing network infrastructure and the participants are mobile.

Infrastructure network

In an infrastructure network, connections between network participants are set up via an Access Point (or several Access Points). The Access Point provides the basis for the wireless network. It controls the connections between the participants and can also establish the connection from the mobile stations of a wireless network to a wired LAN (Ethernet) or the Internet.

Roaming

Several Access Points can be installed to extend the range of a wireless network. Participants in the wireless network can move freely between the various Access Points without losing contact to the network. As soon as there is a risk of losing contact, the PC automatically looks for another Access Point with a stronger signal. All Access Points and wireless network adapters must have the same SSID. All Access Points must be connected to the same Ethernet network.

Security in wireless networks: Encryption

Any network, be it wired or wireless, is exposed to the risk of eavesdropping.

Connecting your local network to the public network exposes your data and applications to not inconsiderable risks. As with an individual connection, you should always protect your network PCs against external attacks, e. g. via emails, with a virus scanner.

These virus scanners however do not provide any protection against unauthorised access from outside (hackers). To counter this risk, Gigaset data products offer various encryption procedures that largely rule out unauthorised access (hacking) to your wireless network.

The Gigaset USB Adapter 54

WEP encryption

WEP encryption (Wired Equivalent Privacy) encodes data for sending using a key that you have defined. Once they reach the recipient, who uses the same key, the data are restored to the state before you sent them. Recipients who do not know this key cannot read the content of this data stream or only after a great deal of effort.

There are two security levels for calculating the encryption key:

◆ 64-bit mode
◆ 128-bit mode

WPA encryption

Wireless Protected Access (WPA) is a new standard-compliant solution for greater security in wireless networks. WPA is meant to replace the existing WEP standard (Wired Equivalent Privacy) and offers more reliable encryption and authentication methods.

With your Gigaset USB Adapter 54 you can use WPA encryption regardless of the operating system used. WPA encryption is particularly recommended where the highest security is required.

Range of wireless communication via a WLAN

Outdoors, the range is up to 300 m. Indoors, the maximum range is about 30 m. The operating environment, the nature of the rooms and building may reduce the range considerably. You can boost the range of your wireless network by placing a repeater, e. g. a Gigaset WLAN Repeater, at the limit of its range.

Installing the Gigaset USB Adapter 54

System requirements

You will require:

◆ a PC with at least 466 MHz and one of the following operating systems:
Windows 98SE, Windows ME, Windows 2000 or Windows XP

◆ 64 MB RAM, more memory is recommended

◆ at least 30 MB free hard disk space

◆ a free USB port

◆ a CD-ROM drive **or** a DVD drive

Contents

The package contains the following components:

◆ a Gigaset USB Adapter 54 with USB cable and dipole antenna

◆ a CD-ROM containing installation and configuration software, detailed operating
instructions, Acrobat Reader to read the operating instructions and the document
"Practical tips and configuration examples"

◆ a Quick Installation Guide

Notes on positioning the network adapter

Choose a location with the least obstacles to the radio waves. Protect the Gigaset USB
Adapter 54 against dampness.

The Gigaset USB Adapter 54 should not be placed in the immediate vicinity of other
electronic equipment. Electrical equipment can mutually affect each other, the radio
waves may impair the functioning of other devices.

Place the Gigaset USB Adapter 54 on a smooth, non-slip surface. Protect particularly
sensitive surfaces.

For the best possible range, we recommend placing the WLAN components
(e. g. Gigaset USB Adapter 54) in a central location. Avoid placing them in niches,
under desks or behind cabinets, for example.

Status display

The Gigaset USB Adapter 54 has an LED display labelled WLAN.

LED is off	The Gigaset USB Adapter 54 does not have a connection to a wireless network, the device is not ready to use.
LED is on continuously	The Gigaset USB Adapter 54 has a connection to a wireless network and is ready to transfer data.
LED flashes	The Gigaset USB Adapter 54 is sending or receiving data.

USB port

!	Do not insert the USB cable plug into a USB port on your PC until the installation software prompts you to do so.

A USB cable can be inserted or removed while the PC is on. If the device has already been installed, Windows will recognise it automatically.

Please note:

◆ Do not extend the USB cable.

Installing the software

To use all the features of your Gigaset USB Adapter 54, you should install the supplied software.

The Gigaset WLAN Adapter Monitor is the control software for your Gigaset USB Adapter 54. This software not only includes the driver software for the USB device, it can also be used as a configuration and monitoring tool.

Only this software has been written especially for the Gigaset USB Adapter 54. There are similar drivers available in the Windows driver database. But, as a rule, such drivers do not fully cover all the features or function in a different manner.

i	**Make sure that you keep to the following order:** 1. Install the software from the CD-ROM supplied. 2. Do not connect the Gigaset USB Adapter 54 to your PC until the installation procedure prompts you to do so. 3. Install the drivers. 4. Configure the network using the Gigaset WLAN Adapter Monitor.

If you connect the Gigaset USB Adapter 54 to your PC before installing the software, Windows will automatically recognise the device and display a message prompting for the driver. Click on *Cancel* to close the dialogue. Remove the USB plug and then install the software.

i	Please note that you may require administrator rights for the installation process.

!	**Information for users with Windows 98SE/ME**:
	If you are prompted to restart your computer during installation, click on **Restart**. After this, installation continues automatically. You should now follow the instructions and steps shown below.
	Have your Windows Installation CD to hand. You may be prompted to insert it.

Running installation

➻ Close all running programs.

➻ Insert the CD-ROM supplied into the CD-ROM drive of your PC and wait until the welcome screen appears. If this screen does not appear automatically, start installation manually:

– Open Windows Explorer.

– Select the CD-ROM drive.

– Double-click **start.exe**.

The language selection screen appears

➻ Select the language.

Installing the Gigaset USB Adapter 54

You will now see a screen showing the contents of the CD-ROM.

Installation	Install the software for the Gigaset USB Adapter 54.
User_Guide	This opens the detailed operating instructions on the CD-ROM. If you cannot open the detailed operating instructions on the CD-ROM, you will have to install the free Adobe Reader.
Practical_Tips	Here you will find solutions to various problems.
Install_Acrobat	Install Adobe Reader, Version 6.
Browse_CD	If you are looking for a particular file on the CD-ROM, you can display the CD-ROM contents in an Explorer window.
Back	The program returns to the language selection screen.
Exit	This closes the program.

➡ Click on *Installation*.

i	The screens for the various operating systems differ only marginally. Installation is largely automatic, apart from a few mouse clicks and restarts.

The licence agreement screen now appears.

➡ If you accept the licence agreement, click on *Yes*.

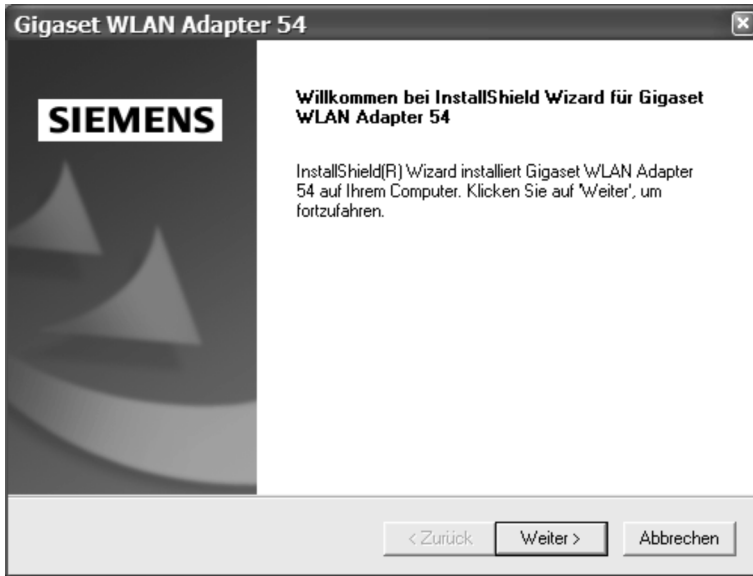In the next screen, choose the type of installation.
You should only choose **Custom** if you have very good system and network skills.
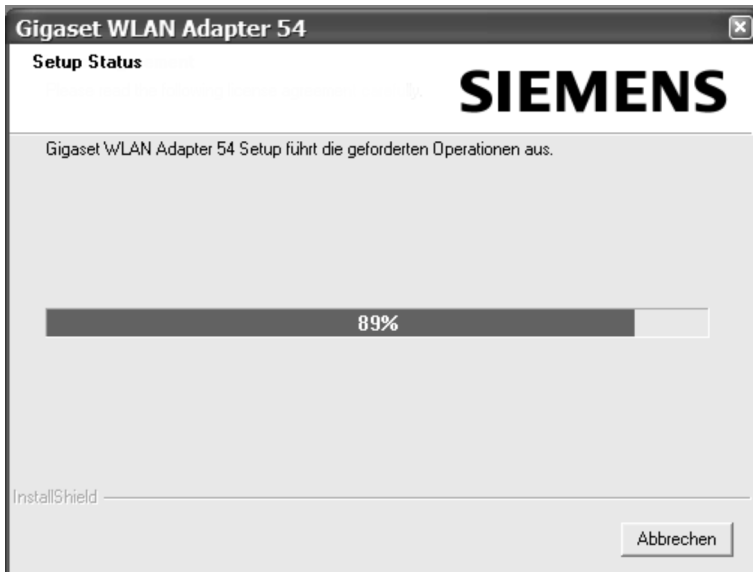
➡ Select *Typical* and click on *Next*.

The InstallShield Wizard appears.

➡ Click on **Next** to continue installation.

During installation, the InstallShield Wizard uses the **Setup_Status** screen to show which action is being carried out, and the progress is also displayed.
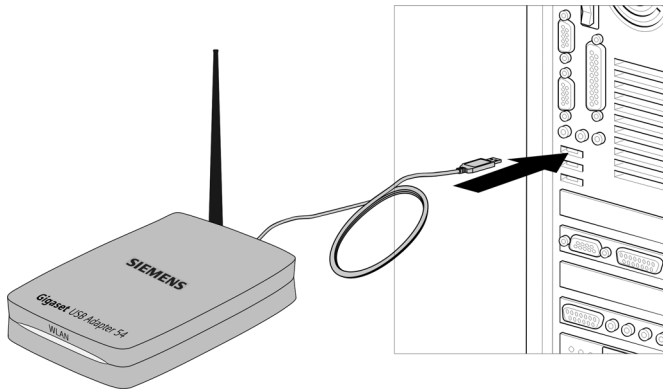
Installing the Gigaset USB Adapter 54

After completion of this installation step, a message appears prompting you to connect the Gigaset USB Adapter 54 to your PC.

Stecken Sie jetzt den Gigaset USB Adapter 54 ein ...

Abbrechen
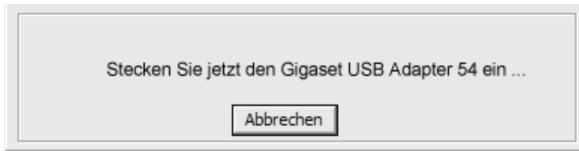
Connecting the Gigaset USB Adapter 54

➡ Now insert the plug into a spare USB port on your PC.

	The Gigaset USB Adapter 54 complies with USB Version 2.0.
i	If your PC still has the older USB Version 1.1, you may see an error message to that effect during installation. You can ignore this message. The Gigaset USB Adapter 54 also works with USB Version 1.1. However, the maximum transmission rate under USB V1.1 is lower.

Installing driver software

Once the USB cable has been plugged it, installation continues automatically.
The operating system's automatic hardware opens to install the drivers for the
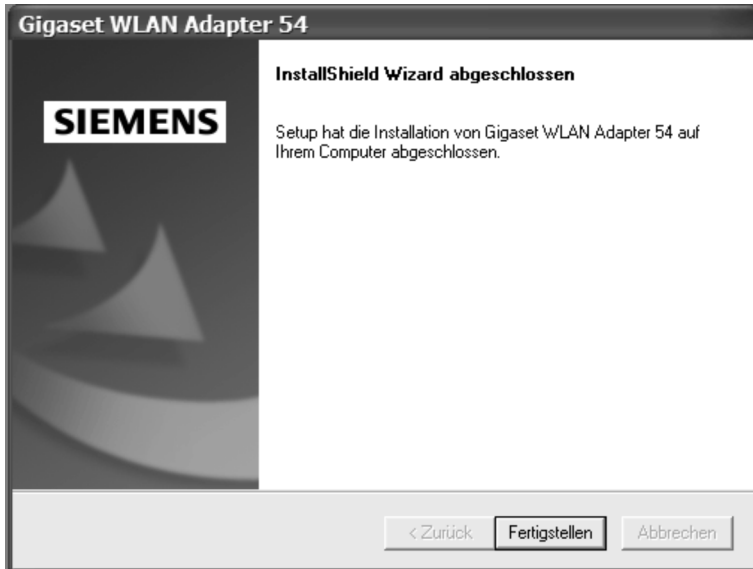Gigaset USB Adapter 54.

Depending on the other settings of your PC, this dialogue box may not appear.
The installation step described here is automatically carried out by the system.

➜ Select the **Install software automatically** option and click on **Next**.

i	◆ Under Windows 2000 / XP: If you see the warning **Digital signature not found**, click on **YES** to ignore the message and continue with installation.
	◆ Under Windows 98SE / ME: You may be prompted to insert your Windows Installation CD to continue driver installation. Therefore you should have this CD handy or enter the path name where the Windows installation files are stored on your PC.
	◆ Restart your PC if you are prompted to do so.
	◆ If your PC already contains more recent files, answer the question whether you want to keep them with **YES**.

After installation, a message will appear prompting you to complete installation.

➙ Click on **Finish**. This closes the installation program.

➙ Restart your PC if you are prompted to do so.

Checking installation

If installation was successful, you can now use the Gigaset WLAN Adapter Monitor. With the Gigaset WLAN Adapter Monitor you can configure your Gigaset USB Adapter 54 and create a connection to other network adapters or an Access Point.

The Gigaset WLAN Adapter Monitor is represented by an icon in the status area of the taskbar that also shows if there is already a connection to a connection partner.

The monitor icon in the taskbar

After installation, check in the status area of the taskbar to see if installation was successful and whether your Gigaset USB Adapter has already set up a connection. Whether an active connection has been set up to the local network depends on the network configuration (e. g. encryption).

In a wireless network using only Siemens Gigaset products, the connection to an Access Point is set up automatically during installation.

The following may be displayed in the status area of the taskbar:
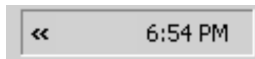
The Gigaset WLAN Adapter Monitor icon is not displayed.

➡ First try to open the Gigaset WLAN Adapter Monitor manually, see Chapter "Opening the monitor" on page 18.

If this fails, then something went wrong during installation.

➡ Deinstall the software, see Chapter "Deinstalling the software" on page 39.

➡ Then install the software again, see Chapter "Installing the software" on page 8.

The Gigaset WLAN Adapter Monitor icon is displayed in the taskbar, with a red ball above the icon:
The Gigaset WLAN Adapter Monitor is installed;
the USB cable has not been inserted or inserted wrongly.

➡ Check the USB connection.

The Gigaset WLAN Adapter Monitor icon is displayed in the taskbar, with a red cross above the icon:
The Gigaset WLAN Adapter Monitor is installed and active; there is no connection to the local network.

➡ Turn to Chapter "Configuring the Gigaset USB Adapter 54" on page 18.

The icon is displayed in the taskbar, with a green ball above the icon:
The Gigaset WLAN Adapter Monitor is installed and active; there is already a connection to the local network. The number of bars in the icon depends on the connection quality (see below).

During an active connection, the number of coloured bars in the icon indicates the connection quality:

If one of these icons appears, the connection to the Access Point has already been established. You can now start your Web browser to access the Internet.
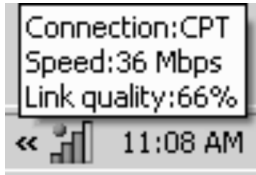
i	You are advised to read Chapter "Notes on safe operation" on page 3.

Installing the Gigaset USB Adapter 54

Displaying QuickInfo for the connection

If you point the mouse over the icon in the taskbar, you will see a small window that displays the connection properties.

The following properties are shown:

◆ SSID (Service Set Identifier) in the **Connection** line

◆ the transmission rate (in Mbps) in the **Speed** line

◆ the transmission quality (in %) in the **Link quality** line

If there is no connection, you will see a red ball above the icon:

The QuickInfo displays **Disconnected**.

Reading the connection quality from the icon

The icon changes gradually depending on the current connection quality.

Very good connection

The connection quality is very good. Communication can take place at a very high transmission rate.

Good connection

The connection quality is good. Communication can take place at a normal transmission rate.

Reasonable connection

The connection quality is not good; communication can take place at a low transmission rate.

Poor connection

The connection quality is poor; communication can take place with at a very low transmission rate.

No connection

The USB connection to the PC is interrupted, or the Gigaset USB Adapter 54 wireless mode has been deactivated.

No WLAN available (red cross over bar)

There is no WLAN within range of your Gigaset USB Adapter 54 that you could connect to.

➨ Check the configuration of the Access Point and adjust the Gigaset USB Adapter 54 settings accordingly.

OR

➨ Change your location to reduce the distance to a connection partner.

With reasonable to poor connection:

➨ If possible, move your PC closer to the connection partner for greater field strength.

➨ Increase the transmission power, see Chapter "Transmission Power" on page 26.

Configuring the Gigaset USB Adapter 54

The Gigaset WLAN Adapter Monitor

You can use the Gigaset WLAN Adapter Monitor to configure and monitor your Gigaset USB Adapter 54.

Opening the monitor

In the standard setting, the Gigaset WLAN Adapter Monitor is opened automatically in the background when you launch your PC. The Gigaset WLAN Adapter Monitor icon is then displayed in the status area of the taskbar.

➜ Double-click on Gigaset WLAN Adapter Monitor icon in the status area of the taskbar to open the monitor user interface.

OR

➜ Right-click on the Gigaset WLAN Adapter Monitor icon in the status area of the taskbar.
In the pop-up menu, you will see the available tabs and the option **Finish**.

➜ In the pop-up menu, click on the appropriate tab to open the monitor user interface and display this tab directly.
Use the option **Finish** to close the Gigaset WLAN Adapter Monitor.

If you do not see the Gigaset WLAN Adapter Monitor icon in the status area of the taskbar, you will have to run the program first:

➜ In the start menu, click on **Start** > **Programs** > **Gigaset WLAN Monitor** > **Gigaset WLAN Adapter Monitor**.
This launches the program. The Gigaset WLAN Adapter Monitor icon is then displayed in the status area of the taskbar.

Deactivating Autostart

The Gigaset WLAN Adapter Monitor is opened automatically in the background when you launch your PC. If you do not need the monitor all the time, you can deactivate Autostart.

➜ Select **Start** > **Programs** > **Autostart**.

➜ Right-click on the entry **Gigaset WLAN Adapter Monitor**.

➜ Select **Delete** to remove the link to Gigaset WLAN Adapter Monitor from Autostart.

Now that the monitor is no longer opened automatically when you launch your PC, you will have to open it manually when you need it.

Using Gigaset WLAN Adapter Monitor

In the Gigaset WLAN Adapter Monitor user interface, you will find various settings and status displays for your network adapter in various tabs.
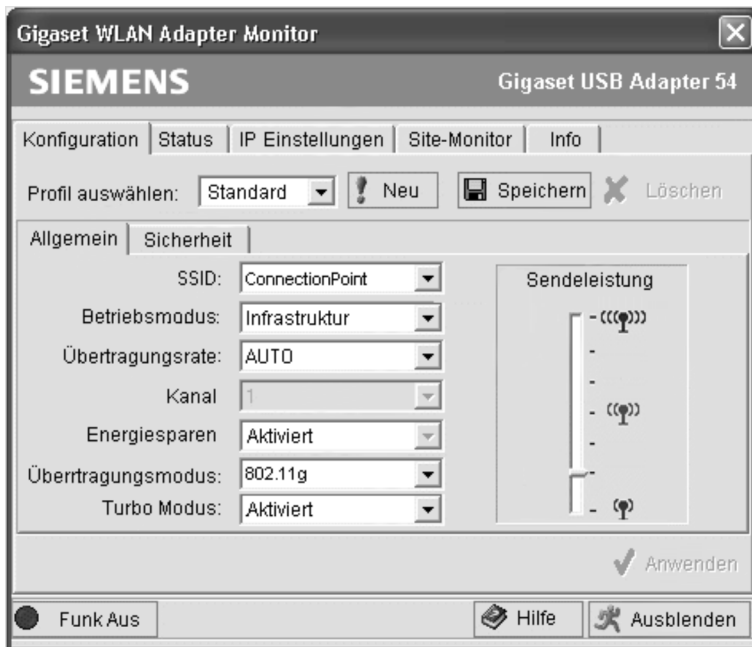
Configuring the Gigaset USB Adapter 54

Tabs

You can use the following Gigaset USB Adapter 54 tabs to configure the monitored network adapter:

◆ *Configuration*: Select profile, General Settings and Change security options
(see "Configuration" on page 22)

◆ *Status*: Current operating data and Check signal strength
(see "Status" on page 33)

◆ *IP Settings*: Check network addresses, Register and deregister PC
(see "IP addresses on the network" on page 34)

◆ *Site Monitor*: Find available connection partners
(see "Site Monitor" on page 36)

◆ *About*: Check software versions
(see "About" on page 38)

Buttons

With the buttons under each tab you can use one of the following options:

Use the *Radio On* and *Radio Off* buttons to switch the wireless operation of your network adapter on and off. The current status of the wireless operation is shown by a green or red icon in the button.
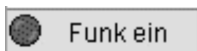
The wireless operation of the network adapter is activated (green icon). The PC is available on the network.

➠ Click on *Radio On* to deactivate the wireless operation of the network adapter.
Radio Off is now displayed. The PC is no longer available on the network.
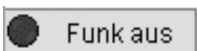
The wireless operation of the network adapter is deactivated (red icon). The PC is not available on the network.

➠ Click on *Radio Off* to activate the wireless operation of the network adapter.
Radio On is now displayed. The PC is available on the network.

Use the *Help* button to open the Gigaset WLAN Adapter Monitor help file.
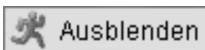
Use the *Hide* button to close the Gigaset WLAN Adapter Monitor user interface.
The icon in the status area of the task bar shows that the monitor is still active in the background.

➠ Double-click this icon if you want to open the Gigaset WLAN Adapter Monitor user interface again.

Closing the monitor

Hiding the monitor

➡ Click on *Hide* in the monitor user interface.
This closes the user interface. The icon in the status area of the task bar shows that the Gigaset WLAN Adapter Monitor is still active in the background.

Closing the program

➡ Right-click on the Gigaset WLAN Adapter Monitor icon in the status area of the taskbar.
This opens the pop-up menu.

➡ Select *Finish* to close the program.
This exits the Gigaset WLAN Adapter Monitor. The icon disappears from the status area in the taskbar.

Configuration

In the **Configuration** tab, you can choose the general basic settings and the security options for operating the Gigaset USB Adapter 54. The **Configuration** tab is divided into:

◆ **General**: Define general basic settings and transmission power
(see "Configuration – General" on page 23)

◆ **Security**: Configure security settings
(see "Configuration – Security" on page 27)

◆ **Select Profile**: Create and manage various configuration profiles
(see "Selecting profiles" on page 31)
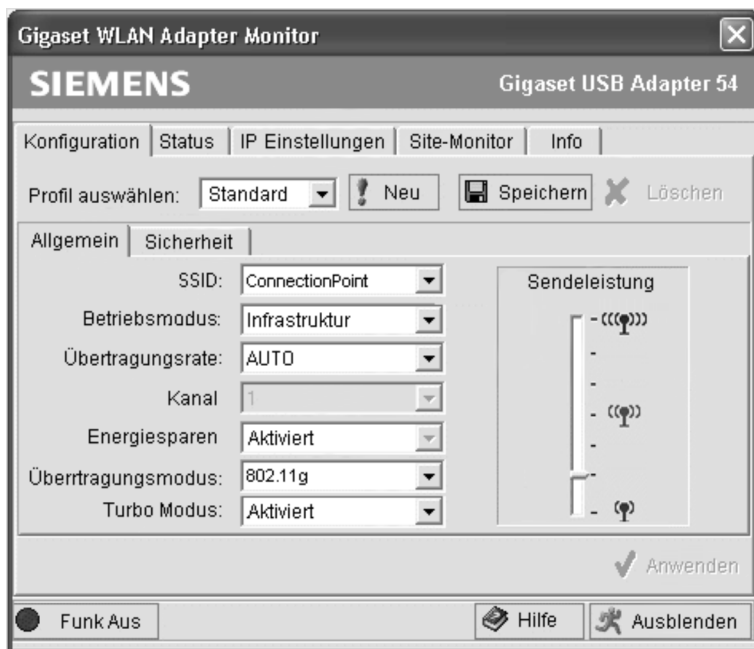
Configuration – General

Successful communication in a WLAN depends on all the PCs using the same ID (SSID) and the same radio channel. In addition, the connected PCs must coordinate their transmission rate for successful data transfer.

You can choose the basic settings for each profile in **General** of the **Configuration** tab.

!	For security reasons, installation should be followed by changing the **SSID** of your WLAN, as the default **SSID** may also be known to unauthorised persons.
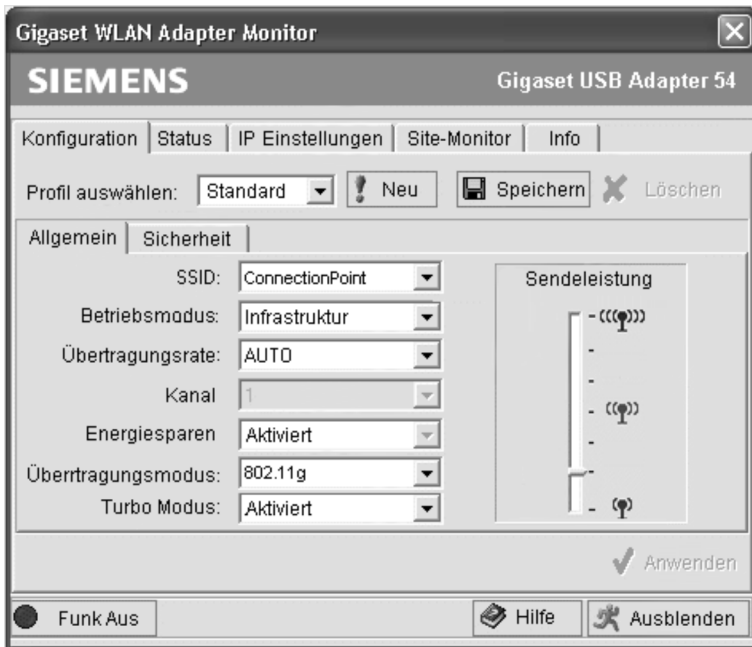
SSID (Service Set Identifier)

The SSID is the ID used for the unique identification of a wireless network (WLAN) so that this network can be distinguished from a parallel network. Within a WLAN, all the network adapters must have the same SSID.

➜ In the **SSID** field, select the ID of the partner you want to connect your PC to.
  The default setting is **ConnectionPoint**.

Configuring the Gigaset USB Adapter 54

The order for defining the SSID depends on the WLAN's *operating mode*:

◆ *Infrastructure*:
  The **SSID** must be defined on the Access Point first. This **SSID** is then assigned automatically to every network adapter registering with it.

◆ *ad hoc*:
  It is important that all the network adapters use the same **SSID**. The order of entry is irrelevant.

Network Mode

➠ Enter the *operating mode* for the network environment:

  – *Infrastructure*:
    There are wireless (WLAN) and wired (LAN) PCs in the network environment. The connection between WLAN and LAN is set up via an Access Point.

  – *ad hoc*:
    The network environment does not have a fixed structure, but is set up between the available wireless network adapters as and when required. No Access Point is required.

  The default operating mode is *Infrastructure*.

You will find a detailed description of the operating modes in Chapter "Wireless LAN Basics" on page 4.

Transmission Rate

Transmission rate is the term used to describe the data volume sent between two PCs per second. The *Transmission rate* is measured in Mbps (Megabits per second).

➠ Select the *Transmission rate*:

Auto	During every transmission, the network adapter checks the connection quality and automatically chooses the most suitable *Transmission rate*.
54 / *48* / *36* / *24* / *18* / *12* / *11* / *9* / *6* / *5.5* / *2* / *1*	Use one of these Mbps values to set the maximum value for the *Transmission rate*.
	If you select 24 Mbps for example, the network adapter tries to use this value for every transmission. The setting prevents a faster *Transmission rate*. As the connection quality falls, the network adapter will select the next lower *Transmission rate*:

The default *Transmission rate* setting is *Auto*.

i	In wireless networks, the maximum *Transmission rate* achievable depends on the *Transmission power* of the connected network adapters. The *Transmission power* in turn depends on other factors; for example it falls rapidly as the distance between the network adapters increases.
	The *Auto* setting for the *Transmission rate* is particularly recommended where the operating conditions fluctuate.

Channel

The *Channel* field shows the radio channel used to set up communication with the connection partners. You can choose from radio channels 1-11.

In *Infrastructure* mode, the radio channel is set by the Access Point for all WLAN participants and can only be changed there. In this case, the *Channel* field shows the channel being used.

For *ad hoc* mode, you set the network adapter *Channel* manually.

➜ Select the *Channel* used by the desired connection partners in the ad-hoc network.

Power Saving

The Gigaset USB Adapter 54 can be used in power saving mode. Your PC remains reachable on the network, but the network adapter's energy consumption is reduced to a minimum.

➜ Select *Enabled* to use the network adapter in power saving mode.

Transmission Mode

The Gigaset USB Adapter 54 is designed to operate as per various WLAN standards:

➜ Select *802.11g* if the network environment uses this WLAN standard.
The maximum transmission rate possible is 54 Mbps.

OR

➜ Select *802.11g* if the network environment uses this WLAN standard.
The maximum transmission rate possible is limited to 11 Mbps.

OR

➜ Select *Mixed Mode* if the network environment uses both modes. Some of the network adapters use Standard 802.11g, others Standard 802.11b.
The maximum transmission rate possible depends on the WLAN standard of the connection partner in question.

Turbo Mode

Turbo mode allows you to accelerate the transmission rate of your network adapter by setting up a connection with exclusive rights. For the duration of the data transmission, the two network adapters connected in *Turbo mode* remain unreachable for other connection partners. This prevents a reduction of the transmission rate by simultaneous communication with other connection partners.

� Select *Enabled* to activate *Turbo mode*.

i	Your network adapter can only use *Turbo mode* if the settings of the WLAN and the connection partner permit it.

	Two network adapters connected in Turbo mode cannot be reached by a third connection partner.
!	If you operate your PC in a WLAN with several connection partners, you should activate *Turbo mode* only when you need it, e. g. to transfer larger data volumes.
	If your PC frequently has trouble reaching a particular connection partner, you should check its settings:
	➤ If necessary, deactivate the *Turbo Mode* option in the configuration profile of the connection partner.

If you no longer need the exclusive connection:

➤ Select *Disabled* to deactivate *Turbo mode*.

Transmission Power

The network adapter's energy consumption rises with increasing transmission power. Especially when using a laptop in battery mode, you should adjust the *Transmission power* to your actual requirements.

You can adjust the *Transmission power* of the Gigaset USB Adapter 54 with a slider.

◆ Low *Transmission power* is normally sufficient when the connection partners are not too far apart.
◆ Higher *Transmission power* is required when the radio transmission has to cover longer distances or is impeded by obstacles such as walls or metal shelves.

➤ Move the slider to the required position:
Move the slider up to increase the *Transmission power* or down to reduce the *Transmission power*.
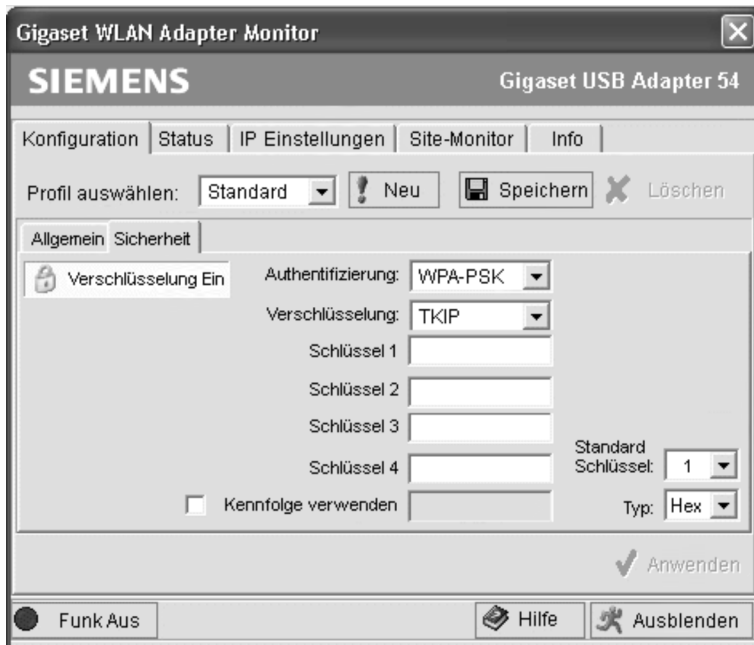
Configuration – Security

The range of a wireless network cannot be restricted to an enclosed area. The advantage of a location-independent connection set-up brings with it the risk of unauthorised persons eavesdropping on your wireless communications. To avoid misuse of your data, it is especially important to encrypt transmission over your WLAN.

With Gigaset data products, you can adjust the security settings for each configuration profile to suit your needs. The following encryption methods are available:

◆ 64-bit encryption
◆ 128-bit encryption
◆ WPA encryption (recommended)

!	Successful communication depends on all the connection partners in a WLAN using the same security settings (type of encryption and the appropriate keys).

You can find the security settings in *Security* of the *Configuration* tab.

Activating security options

In the **Configuration – Security** tab, the default security mode is **Encryption off**, i. e. all the entry fields have been deactivated.

➡ In the **Authentication** field, select the authentication standard to activate the entry fields.
The registration of your network adapters is then checked against the chosen authentication standard. The **Encryption on** security mode is displayed in the upper left corner of the **Configuration – Security** tab.

➡ Then adjust the security settings of your network adapter to the requirements of the network environment.

Deactivating security options

➡ In the **Authentication** field, select the entry **none** to deactivate the entry fields.
The registration of your network adapters is then no longer checked. The **Encryption off** security mode is displayed in the upper left corner of the **Configuration – Security** tab.

Authentication

➡ In the **Authentication** field, select the required network registration:

– **none**
No checking of registration; anybody can register to the network. The security options are deactivated.

OR

– **802.1x**
The registration is checked as per Standard 802.1x.
The security options are activated. In the **Encryption** field, you can choose encryption methods **none**, **WEP 64** or **WEP 128**.

OR

– **WPA-PSK**
The registration is checked as per Standard WPA-PSK.
The security options are activated. The **Encryption** field contains **TKIP**.

Encryption

➜ In the *Encryption* field, select the required encryption method. The setting in *Authentication* determines the available encryption methods:

– *none*
No encryption activated.

– *WEP 64* (only available for *802.1x*)
The wireless transmissions of your Gigaset USB Adapter 54 are coded with 64-bit encryption as per the WEP Standard (Wired Equivalent Privacy).

– *WEP 128* (only available for *802.1x*)
The wireless transmissions of your Gigaset USB Adapter 54 are coded with 128-bit encryption as per the WEP Standard (Wired Equivalent Privacy).

– *TKIP* (only available for *WPA-PSK*)
The wireless transmissions of your Gigaset USB Adapter 54 are coded with TKIP encryption.

➜ Then generate the *Keys* required for encryption:

– Generate the keys automatically with the option *Use Passphrase*.
OR

– Create the required *Keys* manually.

Generating keys with a passphrase

For encryption, you can use a passphrase from which the required keys are generated automatically.

!	Remember that all the connection partners must use the same passphrase for encryption.

➜ Activate the option *Use Passphrase*.
This activates the appropriate entry field.

➜ In the *Use Passphrase* field, enter any sequence of characters as the passphrase. You can enter up to 30 characters.

!	As the passphrase is shown in plain text during entry, you should heed the following: ◆ For security reasons, unauthorised persons should not know the passphrase and so they should not be able to observe you entering it. ◆ As the passphrase is shown in masked form after acceptance, you should make a note of your passphrase and store it in a secure place.

➡ Click on *Apply* to confirm your entry.
This activates the passphrase. Fields *Key 1-4* are filled automatically (with encryption using *WEP 128* only *Key 1*).
The plain text display of the passphrase is replaced by a row of stars.

➡ **With WEP 64**: In the *Default Key* field, enter one of these four keys with which data transmission on your PC is to be encrypted.

Creating keys manually

i	This function is only available if the option *Use Passphrase* has been deactivated.

You can enter up to four keys in fields *Key 1* to *Key 4*. These keys are used to decrypt the data your PC receives from the WLAN. The maximum length of the keys entered is determined by the settings in the fields *Encryption* and *Key Type*.

!	Remember that all the connection partners must use the same key for encryption.

➡ In the *Key Type* field, enter the character format for creating *Keys 1-4*:

– *Hex*
The keys are entered as hexadecimal numbers. You can choose from hexadecimal digits 0 to 9 and A to F. The maximum length is 10 characters for *WEP 64* and 26 characters for *WEP 128*.

– *ASCII*
You can use any ASCII characters for the key. The maximum key length is 5 characters for *WEP 64* and 13 characters for *WEP 128*.

➡ Enter the character sequences in fields *Key 1* to *Key 4*.

➡ In the *Default Key* field, enter one of these four keys with which data transmission on your PC is to be encrypted.

!	As keys 1-4 are shown in plain text during entry, you should heed the following: ◆ For security reasons, unauthorised persons should not know the keys and so they should not be able to observe you entering them. ◆ As the keys are shown in masked form after acceptance, you should make a note of your keys 1-4 and store them in a secure place.

➡ Click on *Apply* to confirm your entries.
The keys are activated. The plain text display of the keys is replaced by a row of stars.

Configuration – Profiles

Selecting profiles

The Gigaset WLAN Adapter Monitor can manage several configuration profiles for your Gigaset USB Adapter 54. If you want to use your PC in different wireless networks, for example, you can create several profiles and adjust them to the requirements of the corresponding networks. When changing networks, you only have to choose the appropriate profile for registering your PC in the new network.

The Gigaset USB Adapter 54 always uses the settings for the profile displayed in the **Select Profile** field.

i	After installation, the **Default** profile contains common settings.

Creating a profile

➜ Click on **New** next to the field **Select Profile**.
   This opens a dialogue for entering a profile name.
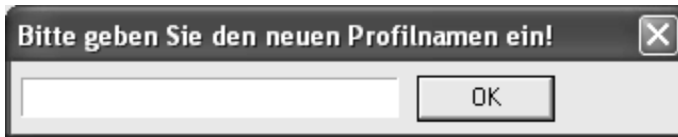
➜ Enter a name for the new profile and confirm your entry with **OK**. The maximum length of the profile name is 29 characters.

i	To make it easier to recognise them again, it is advisable to use an "illustrative" name for the profiles. A suitable name for a profile could be the location of the wireless network.

The valid settings are still shown.

➜ Adjust the settings to the requirements of the network environment.

➜ Click on **Save**.
   This saves your configuration as a new profile. The selection in the **Select Profile** field is expanded to include the new profile name.

Selecting a profile

➜ Open the selection in the *Select Profile* field.

➜ Click on the profile name you want.
This activates the selected profile and displays it in the *Select Profile* field.

➜ Click on *Apply* to activate the selected profile.

Editing a profile

➜ In the *Select Profile* field, select the required profile.

➜ Make the required changes to the settings.

➜ Click on *Save*.
This saves your changes in the selected profile.

!	*Save* updates the selected profile. The old settings are overwritten and are no longer available.

Deleting a profile

➜ In the *Select Profile* field, select the profile you want to delete.

➜ Click on *Delete*.
The name of the selected profile is removed from the selection in the *Select Profile* field. The settings in this profile are now lost.

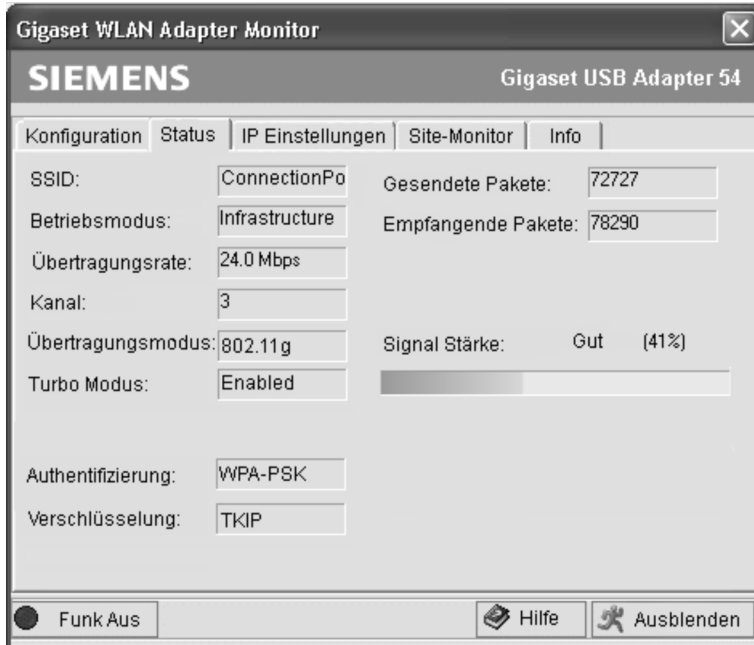|	
i	The **Default** profile cannot be deleted.

Status

The *Status* tab provides information about the status of the wireless network your PC is connected to via the network adapter:

◆ The left-hand pane shows the valid settings for the active configuration profile.

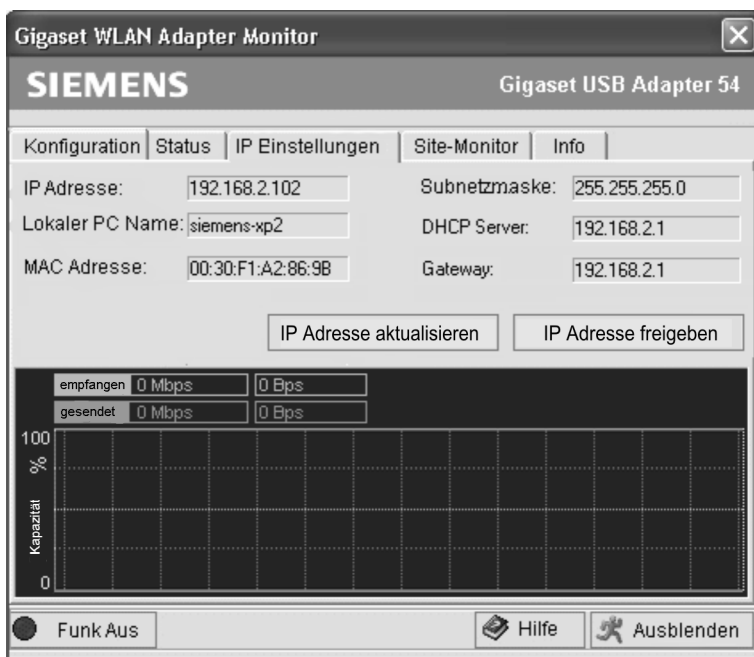◆ The right-hand pane shows the statistics for the past data transfer.

SSID	Shows the ID for the network environment. (see "SSID (Service Set Identifier)" on page 23)
Network Mode	Shows the structure of the network environment (see "Network Mode" on page 24)
Transmission Rate	Shows the current transmission rate in Mbps (see "Transmission Rate" on page 24)
Channel	Shows the channel used for radio transmission (see "Channel" on page 25)
Transmission Mode	Shows the WLAN standard used for data transmission (see "Transmission Mode" on page 25)
Turbo Mode	Shows whether Turbo mode has been activated (see "Turbo Mode" on page 26)
Authentication	Shows the encryption standard (see "Authentication" on page 28)

Encryption	Shows the encryption method (see "Encryption" on page 29)
Sent Packages	Shows how many data packets have been sent on the current WLAN since the connection was set up between your PC and your connection partner.
Received Packages	Shows how many data packets have been received from connection partners on the current WLAN since the connection was set up.
Signal Strength	Shows the quality of the wireless connection. The graphic display of the ***Signal strength*** is supported with a percentage figure and an evaluation of the signal (***excellent***, ***good***, ***average*** or ***bad***).

IP addresses on the network

The ***IP Settings*** tab provides you will all the information relevant for using your PCs in the network (LAN and WLAN). There are two buttons for updating and releasing your PC's WLAN address. A graphic display in the lower section of the tab shows the process of data traffic over the WLAN.

IP Address Shows the Internet Protocol address with which your PC is registered to the WLAN. As a rule the IP address is assigned to your PC by the DHCP server coordinating the PC's access to a network, in a WLAN for example the Access Point's DHCP server.

Local PC Name Computer name entered for your PC during installation of the operating system.

MAC Address Shows the physical address of your network adapter.

Subnetmask Shows the value of the subnet mask that defines the address block of the IP address.
For example, the value 255.255.255.0 shows that the network address is formed by the first three blocks of the IP address. The last block is for the PC address in this network. How many blocks of the IP address are used for PC addressing depends on the size of the network and hence the number of connected PCs.

DHCP Server Shows the IP address of the system which provides the DHCP server for the automatic addressing and coordination of the connected PCs.

Gateway Shows the IP address of the system that enables access to a superior network, for example a connection to the Internet.

Renew IP Adress

➡ Click on *Renew IP Adress* to connect your PC to a WLAN network.
The network adapter checks whether there is a DHCP server available within its radio range whose settings are compatible with those of the active configuration profile. If this is the case, the DHCP server responds to the query by assigning an IP address that your PC can use to exchange data over the new network.

Release IP Adress

➡ Click on *Release IP Adress* to deregister your PC from the current WLAN.
Your PC is deregistered at the DHCP server and is no longer available to the WLAN connection partners. The DHCP server can assign the IP address allocated to your PC to a new connection partner.

Network utilisation

The diagram in the lower section of the *IP Settings* tab shows the network utilisation achieved between the connection partner and your PC.

Divided into data received and data sent, the actual transmission rates are shown and compared with the theoretical transmission rate available on this WLAN. The percentage values are updated continuously in the diagram.

Site Monitor

The *Site Monitor* tab provides a comprehensive overview of the connection partners available via the visible SSID. One click reads in a list with all the relevant information on the potential connection partners. If you want, you can set up a connection to one of the connection partners shown directly from the list.
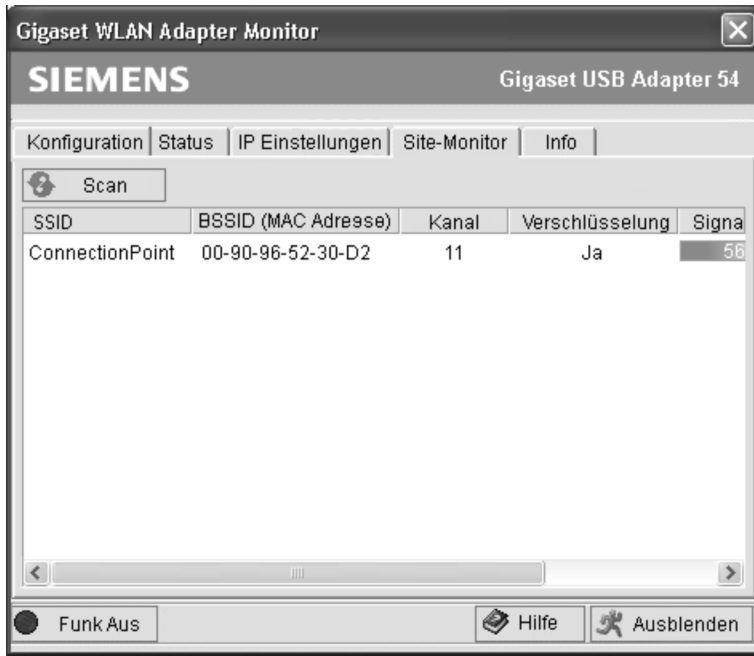
Reading in the list

➜ Click on *Scan* to search the network environment for potential connection partners. This creates a list of the currently available connection partners.

➜ Click on *Scan* again to update the displayed list.

i	Depending on the reaction time of the various connection partners, updating the list may take 1-2 minutes.

The list shows the following parameters for each connection partner:

SSID Shows the connection partner's ID (see "SSID (Service Set Identifier)" on page 23).

BSSID Shows the connection partner's physical address (Basic Service Set Identifier).
In networks with **Infrastructure mode**, the **BSSID** corresponds to the **MAC address** of the Access Point.

Channel Shows the radio channel the connection partner uses to transmit data (see "Channel" on page 25).

Encryption Shows whether radio traffic to the connection partner is encrypted (see "Encryption" on page 29).
If this is the case, you will see a key icon.

Signal Shows the signal strength of the radio traffic between your PC and the connection partner as a percentage (see "Status" on page 33).

Turbo Mode Shows whether the connection partner's **Turbo mode** has been activated (see "Turbo Mode" on page 26).

Transmission Mode Shows the connection partner's current **Transmission mode** (see "Transmission Mode" on page 25).

Network Mode Shows the connection partner's current **Network mode** (see "Network Mode" on page 24).

Establishing a connection

➜ Double-click in the list on the connection partner with which you want to set up a connection.
This connects your PC to the connection partner.

i	If your network adapter's active configuration profile is not compatible with the connection partner's settings, you will first see the **Configuration** – **General** tab. ➜ Change the settings required for the connection. **OR** ➜ Select a saved profile. Then the connection will be set up automatically.

About

The *About* tab provides information about the software company and the version number of the software installed on your PC. The Internet address takes you directly to the company's product page containing the latest information and software updates for your network adapter.

Deinstalling the Gigaset USB Adapter 54

You may have to deinstall the Gigaset USB Adapter 54:

◆ If an error occurred during installation.

◆ The Gigaset USB Adapter 54 is not working properly and the problem cannot be rectified (see Chapter "Fault tracing" on page 49).

◆ You have acquired a newer version of Gigaset USB Adapter 54, and the operating instructions of the new device recommends deinstalling the older version.

◆ You no longer need the Gigaset USB Adapter 54 and want to free up space on the hard disk and working memory.

Deinstallation involves the following steps:

1. First deinstall the software for the Gigaset USB Adapter 54.

2. Then deinstall the hardware.
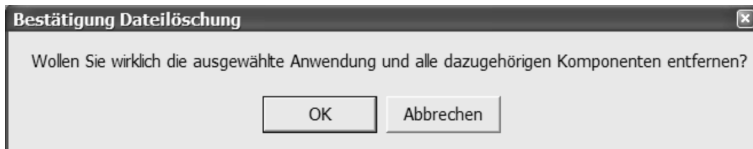
3. Complete deinstallation.

Deinstalling the software

To deinstall the software for the Gigaset USB Adapter 54 from your PC:

➟ Close all running programs.

➟ Select **Start** > **Programs** > **Gigaset WLAN Monitor** > **Gigaset WLAN Adapter Monitor** > **Deinstall**.

➟ This opens the InstallShield Wizard screen.

➟ Select **Remove** and click on **Next**.

You will see a warning message.

➜ Confirm deinstallation with **OK**.

The software and all the drivers will now be removed from your PC.

➜ Do not restart your PC until you have also removed the hardware.

i	If you restart the PC before removing the Gigaset USB Adapter 54 USB cable, Windows will automatically start its hardware recognition program. If this happens, close automatic hardware recognition by clicking on **Cancel**.

Completing deinstallation

➜ Remove the USB cable from the PC's USB socket.

➜ Follow the remaining instructions and then restart your PC.

Updating device drivers

You should update the driver for the Gigaset USB Adapter 54 when a new version is available. You can find information about the latest driver updates on our website, www.siemens-mobile.com/gigasetusbadapter54.

➜ Download the latest driver.

Then follow the following steps to update the device driver:

➜ Deinstall the software for the Gigaset USB Adapter 54 as described in Chapter "Deinstalling the Gigaset USB Adapter 54" on page 39.

➜ After restarting your PC, open the directory where you downloaded the new drivers to.

➜ Start the update and follow the instructions given.

You will find further information about installation in Chapter "Installing the Gigaset USB Adapter 54" on page 7.

Glossary

Access Point

An Access Point, such as the Gigaset SE 505 dsl/cable, is the centre of a wireless local network (WLAN). It handles the connection of the wireless linked network components and regulates the data traffic in the wireless network. The Access Point also serves as an interface to other networks, e.g. an already existing Ethernet LAN or via modem to the Internet. The operating mode of wireless networks with an Access Point is called Infrastructure mode.

Ad-hoc mode

Ad-hoc modus describes wireless local networks (WLAN) in which the network components set up a spontaneous network without an Access Point, e.g. several notebooks in a conference. All the network components are peers. They must have a wireless network adapter.

Authentication

Authentication checks the true identity of a PC against a particular property.

Bridge

A Bridge connects several network segments to form a joint network, e.g. to make a TCP/IP network. The segments can have different physical characteristics, e.g. different linking such as Ethernet and wireless LANs. Linking individual segments via Bridges allows local networks of practically unlimited size.

See also Gateway, Hub, Router, Switch

Broadcast

A Broadcast is a data packet not directed to a particular recipient but to all the network components on the network. The Gigaset SE 505 dsl/cable does not pass broadcast packets on; they always remain within the local network (LAN) it administers.

DHCP

Dynamic Host Configuration Protocol

DHCP handles the automatic assignment of IP addresses to network components. It was developed because in large networks – especially the Internet – the defining of IP addresses is very complex as participants frequently move, drop out or new ones join. A DHCP Server automatically assigns the connected network components (DHCP clients) dynamic addresses from a defined IP pool range thus saving a great deal of configuration work. It also allows address pools to be used more effectively: Since not all participants are on the network at the same time, the same IP address can be assigned to different network components in succession as and when required.

The Gigaset SE 505 dsl/cable includes a DHCP Server and so it can automatically assign IP addresses for the PCs on its local network. For certain PCs you can specify that their IP addresses are never changed.

DHCP Server

See DHCP

DNS

Domain Name System

DNS permits the assignment of IP addresses to computer or domain names that are easier to remember. A DNS server has to administer this information for each LAN with an Internet connection. As soon as a page on the Internet is called up, the browser obtains the corresponding IP address from the DNS Server so that it can establish the connection.

On the Internet the assignment of domain names to IP addresses follows a hierarchical system. A local PC only knows the address of the local DNS Server. This in turn knows all the addresses of the PCs in the local network and the next higher DNS Server, which again knows addresses in its network and that of the next Name Server.

DNS Server

See DNS

Domain name

The domain name is the reference to one or more web servers on the Internet (e. g. siemens.com). The domain name is mapped via the DNS service to the corresponding IP address.

DSL

Digital Subscriber Line

DSL is a data transmission technology in which a connection to the Internet can be run at up to 1.5 Mbps over normal telephone lines. A DSL connection is provided by an Internet provider. It requires a DSL modem.

Dynamic IP address

A dynamic IP address is assigned to a network component automatically via DHCP. This means that the IP address of a network component can change with every login or at certain intervals.

See also Static IP address

Encryption

Encryption protects confidential information against unauthorised access. With an encryption system data packets can be sent securely over a network.

Ethernet

Ethernet is the most widely-distributed network technology for local networks (LAN). It was defined by IEEE as standard 802.3. Ethernet uses a base band cable for data transmission with a transmission rate of 10 or 100 Mbps.

Gateway

A Gateway is the system component that connects networks with completely different architectures (addressing, protocols, application interfaces etc.). Although it is not totally correct, the term is also used as a synonym for router.

See also Bridge, Hub, Router, Switch

Glossary

Hub

A Hub connects several network components in a star-topology network by sending all the data it receives from one network component to all the other network components.

See also Bridge, Gateway, Router, Switch

IEEE

Institute of Electrical and Electronics Engineers

IEEE is an international body for defining network standards, especially for standardising LAN technologies, transmission protocols and speeds, and wiring.

IEEE 802.11

IEEE 802.11 is a standard for wireless 2.4-GHz band LANs. In Infrastructure mode, end devices can be connected to a base station (Access Point) or connect with each other spontaneously (Ad-hoc mode).

Infrastructure mode

Infrastructure mode is a way of operating wireless local networks (WLAN), in which an Access Point handles the data traffic. Network components cannot establish a direct connection with each other as is the case in Ad-hoc mode.

Internet

The Internet is a so-called wide-area network (WAN) linking several million users around the world. A number of protocols have been defined for exchanging data known by the name TCP/IP. All participants on the Internet are identifiable by IP addresses. Servers are addressed by a domain name (e.g. siemens.com). Domain Name Service (DNS) is used to assign domain names to IP addresses.

Among the most important Internet services are:

◆ electronic mail (email)
◆ the World Wide Web (WWW)
◆ file transfer (FTP)
◆ discussion forums (Usenet / Newsgroups)

Internet Service Provider

An Internet Service Provider offers access to the Internet for a fee.

IP

Internet Protocol

The IP protocol is one of the TCP/IP protocols. It is responsible for the addressing of participants in a network using IP addresses and routes data from the sender to the recipient. It decides the paths along which the data packets travel from the sender to the recipient in a complex network (routing).

IP address

An IP address is a network-wide unique address of a network component in a network based on the TCP/IP protocol (e. g. in a local network (LAN) or on the Internet). The IP address has four parts (values from 0 to 255) separated by periods (e. g. 192.168.2.1). The IP address comprises the network address and the PC address. Depending on the subnet mask one, two or three parts form the network address, the remainder the computer address. You can find out the IP address of your PC by entering `ipconfig` in the command prompt.

IP addresses can be assigned manually (see static IP address) or automatically (see dynamic IP address).

On the Internet domain names are normally used instead of the IP addresses. DNS is used to assign domain names to IP addresses.

ISP

Internet Service Provider

LAN

Local Area Network

A local network links network components so that they can exchange data and share resources. The physical range is restricted to a particular area (e. g. a company site). As a rule the users and operators are identical. A local network can be connected to other local networks or a wide-area network (WAN) such as the Internet.

MAC address

Media Access Control Address

The MAC address is used for the globally unique identification of a network adapter. It comprises six parts (hexadecimal numbers), e. g. 00-90-96-34-00-1A. The MAC address is assigned by the network adapter manufacturer and cannot be changed. You can find out the MAC address of your PC by entering `ipconfig/all` in the "physical address" entry in the command prompt.

Mbps

Megabits per second / Millions of bits per second (MBit/s)

Mbps is a unit which can be used to describe the speed when transmitting data in a network.

Network

A network is a group of devices connected in wired or wireless mode so that they can share resources such as data and peripherals. A general distinction is made between local networks (LAN) and wide-area networks (WAN).

Glossary

Network adapter

The network adapter is the hardware device that implements the connection of a network component to a local network. The connection can be wired or wireless. An Ethernet network card is an example of a wired network adapter. Wireless network adapters are for example the Gigaset USB Adapter 54, Gigaset PC Card 54 and Gigaset PCI Card 54.

A network adapter has a unique address, the MAC address.

Protocol

A protocol describes the agreements for communicating on a network. It contains rules for opening, administering and closing a connection, about data formats, time frames and error handling. Communications between two applications require different protocols at various levels, e.g. the TCP/IP protocols for the Internet.

RC4

RC4 is an encryption algorithm on which WEP and TKIP encryption is based. Particular features of this algorithm are a secret key and variable key length.

Roaming

In order to extend the range of a wireless local network, roaming involves several Access Points with the same SSID and radio channel that are connected via Ethernet. The PCs on the network can switch dynamically between the various Access Points without interrupting an open network connection.

Router

A router directs data packets from one local network (LAN) to another via the fastest route. A router makes it possible to connect networks that have different network technologies. For example, it connects a WLAN to the Internet.

See also Bridge, Gateway, Hub, Switch

SSID

Service Set Identifier

The SSID is used to identify the stations of a wireless network (WLAN). All wireless network components with the same SSID form a common network. The SSID can be assigned by the network operator.

Static IP address

A static IP address is assigned to a network component manually during network configuration. Unlike a dynamic address, a static IP address never changes.

See also dynamic IP address

Subnet

A subnetwork divides a network into smaller units.

Subnet mask

The subnet mask determines how many parts of the IP addresses of a network represent the network address and how many parts represent the computer address.

The subnet mask administered by the Gigaset SE 505 dsl/cable is always 255.255.255.0. That means the first three parts of the IP address form the network address and the final part is used for assigning computer addresses. The first three parts of the IP address of all network components are in this case always the same.

Switch

A Switch, like a Hub, is an element for linking different network segments or components. Unlike a Hub however, the Switch has its own intelligence that enables it to forward packets to only that subnet or network component they are meant for.

See also Bridge, Gateway, Hub, Router

TKIP

Temporal Key Integrity Protocol

TKIP is a further development of WEP encryption. Like WEP, TKIP encryption is based on the RC4 encryption algorithm. TKIP however generates new keys after every 10-Kbyte packet, thus meeting higher security requirements.

UDP

User Datagram Protocol

UDP is a protocol of the TCP/IP protocol family that handles data transport between two communication partners (applications). Unlike TCP, UDP is a non-session based protocol. It does not establish a fixed connection. The data packets, called datagrams, are sent as a broadcast. The recipient is responsible for making sure the data is received. The sender is not notified about whether it is received or not.

WAN

Wide Area Network

A WAN is a network that is not restricted to one particular area, such as the LAN. The Internet is the most frequently used WAN. A WAN is run by one or more public providers to enable private access. You access the Internet via an Internet provider.

WEP

Wired Equivalent Privacy

WEP is a security protocol defined in the IEEE 802.11 standard. In a WLAN, WEP encryption protects data against unauthorised access. WEP encryption uses the RC4 encryption algorithm.

Wireless network

See WLAN

Glossary

WLAN

Wireless LAN

Wireless LANs enable network components to communicate with a network using radio waves as the transport medium. A wireless LAN can be connected as an extension to a wired LAN or it can form the basis for a new network. The basic element of a wireless network is the cell. This is the area where the wireless communication takes place. A WLAN can be operated in Ad-hoc mode or Infrastructure mode.

WLAN is currently specified in Standard IEEE 802.11. The Gigaset USB Adapter 54 complies with Standard 802.11g.

WPA

Wireless Protected Access

WPA is a standard-conformant solution for greater security in wireless networks. Intended to supersede the current WEP Standard (Wired Equivalent Privacy), WPA offers more reliable encryption and authentication methods.

WPA-PSK

Wireless Protected Access – Pre-Shared Key

WPA-PSK is a form of authentication in wireless network that allows users to define their own key. This key must then be used by all connection partners for WPA authentication.

Appendix

Fault tracing

Problem	Causes and remedies
Drivers not found	A WLAN or LAN adapter was perhaps installed on your PC. It is possible that the drivers are being looked for in the wrong installation path. ➦ Enter the path name for the drivers manually. The drivers are stored in **CD-ROM:\Installation\Utility&Driver\Driver\...**
Gigaset WLAN Adapter Monitor icon does not appear in the taskbar	The Gigaset WLAN Adapter Monitor software or the device drivers were not installed properly or the device has been deactivated in the device manager. ➦ First check in the device manager of the control panel whether the device exists and has been activated. If not, activate it. If it is not there, deinstall the software and install it again as described in Chapter "Installing the Gigaset USB Adapter 54" on page 7.
The PC does not recognise the Gigaset USB Adapter 54	The USB cable jack is not properly in the socket. ➦ Check to see if it is loose and push it in properly. ➦ Check in the device manager of the Windows operating system whether the USB socket has been activated or not. If not, activate it.
The connection quality is poor, or there is interference	➦ Increase the distance between your Gigaset USB Adapter 54 and the device causing the interference. ➦ Make sure that the PC in which the Gigaset USB Adapter 54 is installed and the device causing the interference are connected to the power supply via different sockets. ➦ Do not place your PC with the Gigaset USB Adapter 54 near microwave devices or devices with wireless video-audio transmission, e. g. room monitors as baby alarms, or near large metal objects. Ask your dealer or an experienced radio technician for advice.

Appendix

Problem	Causes and remedies
The connection is not set up at all or not properly	If you cannot set up a connection between your PC with the Gigaset USB Adapter 54 and another wireless network adapter, this may be due to a number of causes:
	The PC you want to connect to has not been powered up.
	➜ Power up the PC.
	One of the PCs in the wireless network is using turbo mode. This PC has set up an exclusive connection to the PC you want to access.
	➜ Check whether any of the PCs is using turbo mode. If this is the case, deactivate turbo mode.
	The transmission speed set does not match that of the partners in the network.
	➜ Check whether you have set a particular transmission speed. If this is the case, change to "Auto" (infrastructure mode).
	You are working in an ad-hoc network and a different radio channel is being used.
	➜ Select the correct radio channel.
	The wrong mode has been set (infrastructure or ad-hoc mode).
	➜ Select the correct mode.
	The SSIDs of the devices that are to communicate with each other are different.
	➜ Make sure that the same SSID is used for all connection partners with network adapters for wireless operation.
	Different encryption is being used.
	➜ Select the same encryption on all devices.
	Changes in the configuration are not applied by your PC
	➜ Restart your PC.
	The IP address or the subnet mask is wrongly configured.
	➜ Make sure that the IP address and the subnet mask are correctly configured in the *IP Settings* tab. As a rule, it is necessary to assign static IP addresses when operating a network in ad-hoc mode.
It takes a long time to set up a connection	Depending on the environment and the devices, setting up a connection may take a while.
	➜ In *Site Monitor*, click on *Scan* or double-click on the network in question.

Problem	Causes and remedies
The Gigaset USB Adapter 54 does not work properly	You have checked all of the causes specified above, and still no communication is possible.
	⇥ Deinstall the software and install it again as described in Chapter "Installing the Gigaset USB Adapter 54" on page 7.
You cannot establish a connection to the Access Point	If you cannot set up a connection between your Gigaset USB Adapter 54 and an Access Point, try one or more of the following:
	⇥ Make sure that the physical connection of the Access Point operates reliably.
	⇥ Make sure that the same SSID is used for the Gigaset USB Adapter 54 and the Access Point.
	⇥ Check whether the security settings configured for the Gigaset USB Adapter 54 match those for the Access Point, e. g. the same key for WEP encryption.
	⇥ Check whether your access to the Access Point is blocked by other security measures, e. g. by a MAC filter or filter for IP addresses.
	⇥ Make sure that the IP address and the subnet mask are correctly configured in the *IP Settings* tab. As a rule, it is necessary to assign dynamic IP addresses when operating a network in infrastructure mode.
Installation cancelled under Windows 2000	If the following error message appears when installing the Gigaset USB Adapter 54 under Windows 2000: "1608: Unable to create InstallDriver instance" and the installation is cancelled, the cause is that the Microsoft Network Client component is missing.
	To install the Microsoft Network Client:
	⇥ Select *Start* > *Settings* > *Control Panel* > *Network and Dial-up Connections*.
	⇥ Right-click on *LAN Connection*, and select *Properties*.
	⇥ Then click on the following *Install* > *Client* > *Add* > *Client for Microsoft Networks* > *OK*. The Microsoft Network Client component is now installed.
	⇥ Restart your PC to apply the change.
	⇥ Install the software, see Chapter "Installing the Gigaset USB Adapter 54" on page 7.

Appendix

Specifications

The specifications are subject to change.

Software

Compliance with standards	IEEE 802.11b/802.11g
Operating modes	Ad-hoc mode Infrastructure mode
Security properties	Support of SSID network identification for security Support of data encryption using the WEP algorithm (64 bit/128 bit) WPA-PSK encryption Further security settings for routers (filter for MAC addresses, Firewall, etc.)
Configuration and monitoring	Monitor for configuration and monitoring Dynamic configuration 1 LED display for operation, connection and transmission status
Supported operating systems	Windows 98SE, Windows ME, Windows 2000 and Windows XP

Hardware

Interface	USB V2.0, backward compatible with USB V1.1

Wireless properties

Frequency range	2.400 to 2.4835 GHz
Spreading	Direct Sequence Spread Spectrum (DSSS)
Modulation	CCK, OFDM
Number of channels	IEEE 802.11b: 11 IEEE 802.11g: 11
Transmission rate	IEEE 802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE 802.11g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps
Antenna	1 external antenna 1 internal antenna
Antenna output power	< 100 mW

Requirements for the power mains and the operating environment

Temperature	Operating temperature: 0 °C to +50 °C Storage temperature: -10 °C to +70 °C
Humidity	5 % to 80 % (non condensing)
Power consumption	Operating mode: 475 mA Standby mode: 330 mA
Compliance with security conditions and regulations	CE, EN 6095

Authorisation

Your Gigaset WLAN adapter is intended for operation in your country, as shown on the underside of the device.

The device complies with the R&TTE guideline, as shown by the CE mark.

Excerpt from the original declaration

"We, Siemens AG, declare, that the above mentioned product is manufactured according to our Full Quality Assurance System certified by CETECOM ICT Services GmbH in compliance with ANNEX V of the R&TTE-Directive 99/05/EC. The presumption of conformity with the essential requirements regarding Council Directive 99/05/EC is ensured."

The Declaration of Conformity (DoC) has been signed. If necessary, you can obtain a copy of the original DoC using the company hotline.

CE 0682①

Service (Customer Care)

You have access to straightforward support concerning technical aspects of your device and how to operate it through our Online Support on the Internet:

www.siemens-mobile.com/customercare

or you can refer to the section "Fault tracing" on page 49.

If you have any trouble with the equipment, please contact the **Siemens telephone service**:

United Kingdom	0 87 05 33 44 11
Ireland	18 50 77 72 77

Siemens Service is only available for device faults. Your specialist dealer will be able to help you with any questions about operating your device.

Please address any questions about the DSL or cable connection to your network provider.

Appendix

Guarantee certificate (United Kingdom)

Without prejudice to any claim the user (customer) may have in relation to the dealer or retailer, the customer shall be granted a manufacturer's Guarantee under the conditions set out below:

◆ In the case of new devices and their components exhibiting defects resulting from manufacturing and/or material faults within 24 months of purchase, Siemens shall, at its own option and free of charge, either replace the device with another device reflecting the current state of the art, or repair the said device. In respect of parts subject to wear and tear (including but not limited to, batteries, keypads, casing), this warranty shall be valid for six months from the date of purchase.

◆ This Guarantee shall be invalid if the device defect is attributable to improper treatment and/or failure to comply with information contained in the user manuals.

◆ This Guarantee shall not apply to or extend to services performed by the authorised dealer or the customer themselves (e.g. installation, configuration, software downloads). User manuals and any software supplied on a separate data medium shall be excluded from the Guarantee.

◆ The purchase receipt, together with the date of purchase, shall be required as evidence for invoking the Guarantee. Claims under the Guarantee must be submitted within two months of the Guarantee default becoming evident.

◆ Ownership of devices or components replaced by and returned to Siemens shall vest in Siemens.

◆ This Guarantee shall apply to new devices purchased in the European Union. The Guarantee is issued by Siemens plc, Siemens House, Oldbury, Bracknell, Berkshire, RG12 8FZ.

◆ Any other claims resulting out of or in connection with the device shall be excluded from this Guarantee. Nothing in this Guarantee shall attempt to limit or exclude a Customers Statutory Rights, nor the manufacturer's liability for death or personal injury resulting from its negligence.

◆ The duration of the Guarantee shall not be extended by services rendered under the terms of the Guarantee.

◆ Insofar as no Guarantee default exists, Siemens reserves the right to charge the customer for replacement or repair.

◆ The above provisions do not imply a change in the burden of proof to the detriment of the customer.

To invoke this Guarantee, please contact the Siemens telephone service. The relevant number is to be found in the accompanying user guide.

Guarantee certificate (Ireland)

Without prejudice to any claim the user (customer) may have in relation to the dealer or retailer, the customer shall be granted a manufacturer's Guarantee under the conditions set out below:

◆ In the case of new devices and their components exhibiting defects resulting from manufacturing and/or material faults within 24 months of purchase, Siemens shall,

at its own option and free of charge, either replace the device with another device reflecting the current state of the art, or repair the said device. In respect of parts subject to wear and tear (including but not limited to, batteries, keypads, casing), this warranty shall be valid for six months from the date of purchase.

◆ This Guarantee shall be invalid if the device defect is attributable to improper care or use and/or failure to comply with information contained in the user manuals. In particular claims under the Guarantee cannot be made if:

– he device is opened (this is classed as third party intervention)

– Repairs or other work is done by persons not authorised by Siemens.

– Components on the printed circuit board are manipulated

– The software is manipulated

– Defects or damage caused by dropping, breaking, lightning or ingress of moisture. This also applies if defects or damage was caused by mechanical, chemical, radio interference or thermal factors (e.g.: microwave, sauna etc.)

– Devices fitted with accessories not authorised by Siemens

◆ This Guarantee shall not apply to or extend to services performed by the authorised dealer or the customer themselves (e.g. installation, configuration, software downloads). User manuals and any software supplied on a separate data medium shall be excluded from the Guarantee.

◆ The purchase receipt, together with the date of purchase, shall be required as evidence for invoking the Guarantee. Claims under the Guarantee must be submitted within two months of the Guarantee default becoming evident.

◆ Ownership of devices or components replaced by and returned to Siemens shall vest in Siemens.

◆ This Guarantee shall apply to new devices purchased in the European Union. For Products sold in the Republic of Ireland the Guarantee is issued by Siemens Ireland Limited, Ballymoss Road, Sandyford Industrial Estate, Dublin 18 – The Republic of Ireland.

◆ Any other claims resulting out of or in connection with the device shall be excluded from this Guarantee. Nothing in this Guarantee shall attempt to limit or exclude a Customers Statutory Rights, nor the manufacturer's liability for death or personal injury resulting from its negligence.

◆ The duration of the Guarantee shall not be extended by services rendered under the terms of the Guarantee.

◆ Insofar as no Guarantee default exists, Siemens reserves the right to charge the customer for replacement or repair.

◆ The above provisions do not imply a change in the burden of proof to the detriment of the customer.

◆ To make a claim under this Guarantee, please contact the Siemens helpdesk on 1850 777 277. This number is also to be found in the accompanying user guide.

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FCC Information

Warning: Changes or modifications to this unit not expressly approved by Siemens Cordless Products could void the FCC authority to operate the equipment. This includes the addition of any external antenna device.

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to 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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Some wireless devices operate at frequencies that may cause interference to nearby TV's and VCR's; to minimize or prevent such interference, the device should not be placed near or on top of a TV or VCR; and, if interference is experienced, moving the device farther away from the TV or VCR will often reduce or eliminate the interference.
However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1. Increase the separation between the device and receiver.
2. If connectable to a power outlet, connect the device into an outlet on a circuit different from that to which the receiver is connected.
3. Consult the dealer or an experienced radio TV technician for help.

Power Outage: In the event of a power outage, your device will not operate. The device requires electricity for operation.

Industry Canada - Class B

This digital apparatus meets the applicable Industry Canada technical specifications.
It does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

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Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie.

Operation is subject to the following two conditions
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network, protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

CAUTION:
1. To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.
2. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter

Safety precautions

Before using your equipment, basic safety instructions should always be followed to reduce the risk of fire, electric shock and injury to persons.
1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Do not use liquid cleaners or aerosol cleaners. Use damp cloth for cleaning.
4. Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement or near a swimming pool.
5. This product should never be placed near or over a radiator or heat register, or in a place where proper ventilation is not provided.
6. Never spill liquid of any kind on this product.
7. Take this product to a qualified service center when service is required.