

# INSTALLATION, CONFIGURATION AND OPERATION OF FRITZ!BOX FON ATA



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## FRITZ!Box Fon ata

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AVM Audiovisuelles Marketing  
und Computersysteme  
Alt-Moabit 95  
10559 Berlin

AVM Computersysteme  
Vertriebs GmbH  
Alt-Moabit 95  
10559 Berlin

AVM in the Internet: [www.avm.de/en](http://www.avm.de/en)

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## Symbols and Highlighting

This manual uses the following symbols for warnings and tips:



*The hand indicates important instructions that must be observed to avoid malfunctions.*







*FRITZ! marks useful hints to assist you in working with the product.*

The table below explains the highlighting used in this manual.








Highlighting	Function	Example
Quotation marks	Keys, buttons, icons, tabs, menus, commands	“Start / Programs” or “Enter”
Capital letters	Path and file names in running text	SOFTWARE\INFO.PDF or README.DOC
Pointed brackets	Variables	⟨CD-ROM drive⟩
Typewriter font	Information to be typed in using the keyboard	<b>a:\setup</b>
Gray italics	Tips, instructions and warnings	<i>... for more information, see ...</i>

---

## The Telephone Keypad

	Numeric keys
	Asterisk key
	Hold or Flash key
	Pound sign key

## Instructions for Operation at the Telephone

	Dial a number.
	Pick up the handset.
	Hang up the handset.
	Talk.
	three-party conference call
	Wait for the acknowledgement tone.
	You hear the ring tone.
MSN	Enter an ISDN number (MSN). In place of the abbreviation “MSN” used here, enter the complete MSN desired, without any dialing prefix.
Ext.	Enter an extension number (Ext.). In the place of the abbreviation “Ext.” used here, enter the number “1”, “2”, or a higher number, corresponding to the extension you would like to configure.
XNo.	In the place of the abbreviation “XNo.”, enter the complete number of the external line.

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## Icons Designating the Functions and Features

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**ISDN  
analog  
VoIP**

The functions and features can be used for analog and ISDN fixed-line connections as well as for Internet telephony (VoIP).

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**ISDN  
analog**

The functions and features can be used for analog and ISDN fixed-line connections.

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**ISDN**

The functions and features can be used only for ISDN fixed-line connections.

---

**analog**

The functions and features can be used only for analog fixed-line connections.

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## Safety Instructions



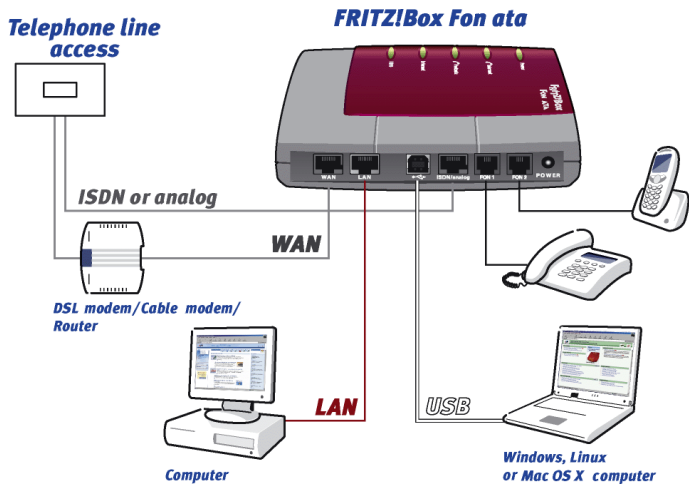
*When working with FRITZ!Box Fon ata, follow the instructions below to protect yourself and the FRITZ!Box Fon ata from injury.*

- Do not install FRITZ!Box Fon ata during an electrical storm. Disconnect FRITZ!Box Fon ata from the power supply during electrical storms.
- Never let liquids get inside the FRITZ!Box Fon ata. Otherwise, electric shocks or short circuits may result.
- FRITZ!Box Fon ata is intended for indoor use only.
- Do not open the FRITZ!Box Fon ata housing. The device contains hazardous components and should only be opened by authorized repair technicians.



# 1 This Is FRITZ!Box Fon ata

FRITZ!Box Fon ata is a Private Branch Exchange (PBX) for making telephone calls via the Internet and the fixed-line network. FRITZ!Box Fon ata is designed for operation with a DSL modem or cable modem, or with a router. You can connect one or several computers to FRITZ!Box Fon ata. Access to the Internet is possible from every connected computer.



*Possibilities for connecting FRITZ!Box Fon ata*

## Connecting to a DSL Modem or Cable Modem

FRITZ!Box Fon ata can be connected via the WAN port to a DSL modem or a cable modem. In this operation mode Internet connections are established by FRITZ!Box Fon ata. For that purpose Internet account information must be registered in FRITZ!Box Fon ata. In this operation mode, FRITZ!Box Fon ata works like a router and is configured as a DHCP server. All connected computers can then use this Internet connection at the same time.

## Connecting to a Router

FRITZ!Box Fon ata can be connected via the WAN port to a DSL modem or a cable modem. In this operating mode Internet connections are established by the router.

### **PBX for Internet and Fixed-Line Telephony**

FRITZ!Box Fon ata is a PBX for the connection of analog terminal devices. You can connect two analog telephones to FRITZ!Box Fon ata. With the connected telephones you can make telephone calls using the Internet, ISDN, or the analog fixed-line network.

### **Connecting One or More Computers**

Two computers can be connected to FRITZ!Box Fon ata at the same time using the USB port and the network port.

You can also connect a network hub or switch to the network port so that even more computers can be connected to FRITZ!Box Fon ata.

All computers connected to FRITZ!Box Fon ata are networked together and can access shared files and printers.

### **Protection by the Integrated Firewall**

When FRITZ!Box Fon ata is operated as a router, the integrated firewall protects your network from attacks from the Internet.

### **Port for Network Devices**

Network devices can be connected to the FRITZ!Box Fon ata network port along with network hubs or switches, including game consoles.

### **Operating Systems Supported**

FRITZ!Box Fon ata can be connected via USB to computers with Windows operating systems, the Linux operating system or Apple computers with the Mac OS X operating system.

FRITZ!Box Fon ata can be used with all operating systems via the network port.

## 1.1 Package Contents

The package contains:

- FRITZ!Box Fon ata
- one AC power adapter with cable for connection to the power mains
- one 4-meter ISDN/analog cable (black) for connecting FRITZ!Box Fon ata to the ISDN network terminator (NT) or the analog telephone line
- one USB cable (white) for connecting FRITZ!Box Fon ata to a computer with a USB interface
- one network cable (red) for connecting FRITZ!Box Fon ata to a computer or network hub
- one RJ45-RJ11 adapter (black) for the analog telephone line
- one FRITZ!Box Fon ata CD with
  - driver software for FRITZ!Box Fon ata
  - documentation for all enclosed AVM components
- one FRITZ!Box Fon ata installation manual



## 1.2 Operation Requirements

In order to operate FRITZ!Box Fon ata, you must have the following:

- an ISDN point-to-multipoint line in accordance with the Euro ISDN protocol DSS1, or an analog telephone line
- a DSL or cable line  
(both line types are also called “broadband line”)
  - a DSL access must be available: Standard ITU G.992.1 Annex A or Annex B
  - Cable line: support for backward channel with sockets for multimedia lines
- If you would like to operate FRITZ!Box Fon ata as a router, you will need:
  - a standard DSL modem with Ethernet portor
  - a cable modem with Ethernet port.
- If you do not want to use FRITZ!Box Fon ata as a router, you will need a suitable router such as FRITZ!Box SL.
- If you want to connect FRITZ!Box Fon ata over the computer’s network adapter, a computer with the following specifications is required:
  - Standard Ethernet 10/100 Base-T network adapter
  - To connect additional computers or a network, you also need an Ethernet hub or switch.
- If you want to connect FRITZ!Box Fon ata over the computer’s USB port, a computer with the following specifications is required:
  - USB port (USB version 1.1 or 2.0), hard drive and CD drive
  - Operating system: Microsoft Windows XP, Windows Me, Windows 2000, Windows 98, Linux (from SUSE 9.0 upwards) or Mac OS X (from version 10.3.3 upwards)

## 1.3 FRITZ!Box Fon ata LEDs

The LEDs on your FRITZ!Box Fon ata indicate the following conditions:

LED	Event Type
Power	shows the operation status of FRITZ!Box Fon ata remains lit when power current is flowing
 Internet	remains lit when a telephone connection to the Internet is active
 Fixed Line	remains lit when a telephone connection to the Internet over the fixed-line network is active
Internet	remains lit when the PBX is connected with the Internet or the local network
INFO	flashes when the system software is being updated remains lit when phone calls are conducted completely over the Internet (this feature must be supported by the Internet telephony provider)

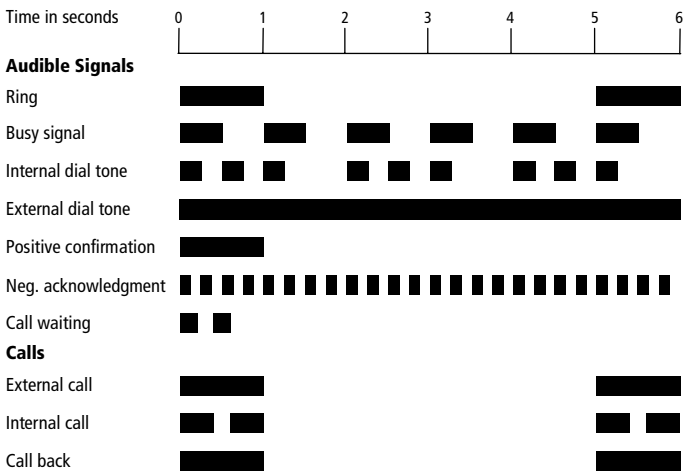
## 1.4 Technical Specifications of FRITZ!Box Fon ata

- Approximate dimensions: 160 x 122 x 31 mm
- One USB port (USB version 1.1)
- One network port (WAN) for connection to the Internet via RJ45 socket (standard Ethernet, 10/100 base-T); connection via DSL modem, cable modem or router
- One LAN port over RJ45 socket (standard Ethernet, 10/100 base-T)
- Two extensions over RJ12 sockets
- Five LEDs indicate the condition of the device
- Supply voltage: 230 V / 50 Hz
- Maximum power consumption: 9 W
- Average power consumption: 6 W
- Data transmission rate: max. 8 Mbit/s (downstream), 1 Mbit/s (upstream)

- Updatable firmware
- DHCP server and DHCP client
- Router
- Firewall and packet filter
- IP masquerading/NAT
- Conform to CE standards

## 1.5 Audible Signals

The following diagram illustrates the duration and intervals of the various handset and ring signals.



*Handset and ring patterns at FRITZ!Box Fon ata*

## 2 Starting FRITZ!Box Fon ata Operation

This chapter describes the various possibilities for connecting and installing FRITZ!Box Fon ata. These include the following steps:

- Mounting FRITZ!Box Fon ata
- Connecting FRITZ!Box Fon ata to the power supply
- Connecting FRITZ!Box Fon ata to the computer
- Connecting FRITZ!Box Fon ata to the DSL modem, cable modem or router, and to ISDN or the analog telephone line
- Connecting analog terminal devices to FRITZ!Box Fon ata



*All steps required for connecting and installing the box are described in the manual and in the Installation Help on the FRITZ!Box Fon CD. Insert the FRITZ!Box Fon CD in your CD-ROM drive so that you can follow the installation instructions on the screen. The Installation Help starts automatically. If the Installation Help is not displayed automatically, open the INTRO.HTML file on the FRITZ!Box Fon CD. Follow the instructions in the Installation Help to install FRITZ!Box Fon at your computer's USB port. As soon as you connect FRITZ!Box Fon ata to a computer, its user interface is available.*

### 2.1 Mounting FRITZ!Box Fon ata

Set or hang up FRITZ!Box Fon ata in a dry, dust-free location shaded from any direct sunlight. If you would like to connect the device using the USB or network cable supplied with the package, remember to consider the length of the cable and select a location close to your computer.

## 2.2 Connecting FRITZ!Box Fon ata to the Power Supply

Perform the following steps to connect FRITZ!Box Fon ata to the power supply:

1. Position your FRITZ!Box Fon ata so that the sockets on the back panel are facing you.
2. Remove the power supply unit from the package.
3. Connect the mains adapter to the socket labeled “Power”, located at the far right of the back panel of FRITZ!Box Fon ata.
4. Plug the other end into an AC power outlet.



*Connecting FRITZ!Box Fon ata to the power supply*

5. The green “Power” LED will light up after a few seconds.



## 2.3 Connecting FRITZ!Box Fon ata to the Computer

FRITZ!Box Fon ata can be connected to a computer either via the network port (LAN port) or the USB port. A computer can be connected to FRITZ!Box Fon ata by only one of these means.

If you would like to connect several computers to FRITZ!Box Fon ata at the same time, you have the following possibilities:

- Two computers can be connected to FRITZ!Box Fon ata at the same time using the USB port and the network port.
- A network hub or network switch can be connected to the FRITZ!Box Fon ata LAN port to make all FRITZ!Box Fon ata features available to several computers or an entire network.
- Both of the above possibilities for connecting one or more computers to FRITZ!Box Fon ata can be combined at will.

For example, you may connect one computer to the USB port of FRITZ!Box Fon ata while connecting several computers to the network port via a network hub or switch.

Please note:



- If you would like to connect FRITZ!Box Fon ata to your computer by means of the LAN port, first make sure that your computer is equipped with a LAN port. A LAN port is usually designated by the icon at left or labeled “LAN”.

For more information, see the instructions in the section “Connecting FRITZ!Box Fon ata to the LAN Port” from page 18.



- If your computer is not equipped with a network port, connect FRITZ!Box Fon ata using the USB port.

When you connect FRITZ!Box Fon ata with a USB cable to a computer with the operating system Windows 98 or Windows Me, you will need the FRITZ!Box Fon ata CD for the driver installation.



*An operating system version of 10.3.3 or higher is required to connect FRITZ!Box Fon ata to the USB port of an Apple Macintosh computer. If your Apple Macintosh computer works with an older version, connect FRITZ!Box Fon ata via the LAN port of your computer.*

## 2.4 Connecting FRITZ!Box Fon ata to the LAN Port

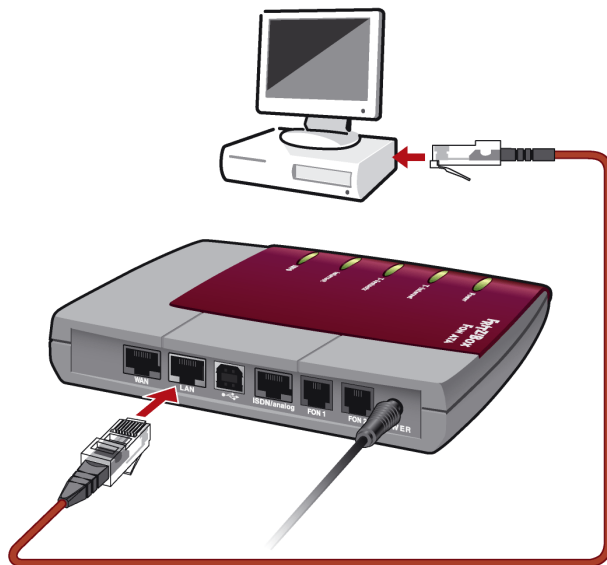
FRITZ!Box Fon ata can be connected to a computer directly via a network cable. If you would like to connect a network to FRITZ!Box Fon ata in order to connect several computers with a DSL connection, then connect FRITZ!Box Fon ata to a network hub or switch using the LAN cable.

Connection via the LAN cable is identical for all operating systems. All computers to be connected via the LAN port must be equipped with a network adapter (Ethernet card).

### Connecting FRITZ!Box Fon ata to the LAN Port of a Computer

You will need the red LAN cable for this step.

1. First connect FRITZ!Box Fon ata to the power mains as described in section “Connecting FRITZ!Box Fon ata to the Power Supply” on page 16, and then turn on your computer.
2. If you work with a Linux operating system, use YaST to configure your network card with the setting “DHCP”, if this setting is not already configured.
3. Insert one end of the red LAN cable to the computer’s network adapter.
4. Connect the other end of the LAN cable to the socket on FRITZ!Box Fon ata labeled “LAN”.



*Connecting FRITZ!Box Fon ata to a computer's network adapter*

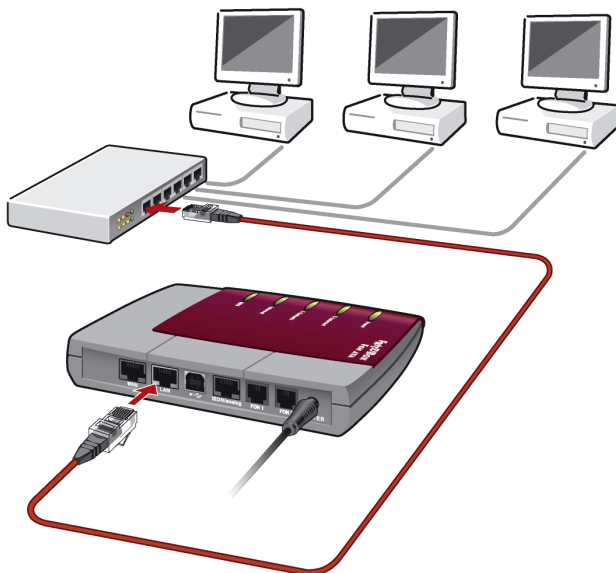
5. Please see the instructions in the section “Opening the User Interface” from page 27.



***No additional driver installation is necessary on the computer.***

### **Connecting FRITZ!Box Fon ata to a Network Hub or Network Switch**

1. First connect FRITZ!Box Fon ata to the power mains as described in section “Connecting FRITZ!Box Fon ata to the Power Supply” on page 16, and then turn on your computer.
2. Connect one end of the red LAN cable to the uplink port of the network hub or switch.
3. Connect the other end of the LAN cable to the socket on FRITZ!Box Fon ata labeled “LAN”.



Connecting FRITZ!Box Fon ata to a network hub

4. Please see the instructions in the section “Opening the User Interface” from page 27.

## 2.5 Connecting FRITZ!Box Fon ata to the USB Port

FRITZ!Box Fon ata can be connected to a computer with the USB cable in a few easy steps. First read the instructions in the next section, “Connecting the USB Cable”, and then see the section describing installation in your operating system.

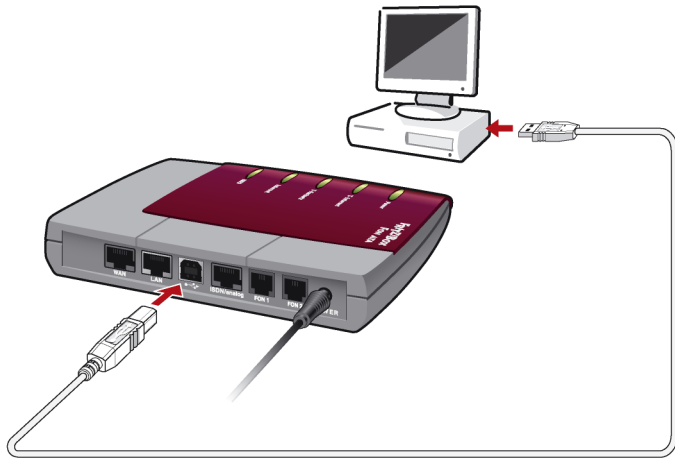


***An operating system version of 10.3.3 or higher is required to connect FRITZ!Box Fon ata to the USB port of an Apple Macintosh computer. If your Apple Macintosh computer works with an older version, connect FRITZ!Box Fon ata via the LAN port of your computer!***

## Connecting the USB Cable

You will need the white USB cable for this step. In the Windows operating systems Windows Me and Windows 98, the FRITZ!Box Fon ata CD is also required for driver installation. No driver installation is necessary in the operating systems Windows XP, Windows 2000, Mac OS X and Linux.

1. First connect FRITZ!Box Fon ata to the power mains as described in section “Connecting FRITZ!Box Fon ata to the Power Supply” on page 16, and then turn on your computer.
2. If Windows Me or Windows 98 is installed on the computer, insert the FRITZ!Box Fon ata CD.
3. Connect FRITZ!Box Fon ata to the USB port. The USB cable has two different connectors: one is flat and rectangular and the other is square.




*Connecting FRITZ!Box Fon ata to the USB port of a computer*



4. Pick up the white USB cable and insert the flat connector into a free USB port on your computer.



5. Then plug the square connector into the socket labeled “” on FRITZ!Box Fon ata.

FRITZ!Box Fon ata and your computer are now connected over the USB cable.

6. Continue with the installation as described in the following sections. Select the section that describes the next steps for the operating system installed on your computer.



*In some operating systems the display of menus and folders can be changed. The following instructions are based on the standard installation of each operating system.*

### Installing FRITZ!Box Fon ata in Windows XP



*Administrator rights are required to install the driver software in Windows XP.*

1. Once you have connected FRITZ!Box Fon ata to your computer, FRITZ!Box Fon ata will be detected automatically and the required drivers will be installed.

A progress bar is shown on your screen so that you can monitor the progress of the installation.

2. As soon as the procedure is complete, the FRITZ!Box Fon ata user interface opens and FRITZ!Box Fon ata is ready for operation.

This concludes the installation in Windows XP. Now connect FRITZ!Box Fon ata to the broadband line. Please see the instructions in the section “Connecting FRITZ!Box Fon ata to the DSL Modem, the Cable Modem or the Router” from page 28.

## Installing FRITZ!Box Fon ata in Windows Me

1. Once you have connected FRITZ!Box Fon ata to your computer, insert the FRITZ!Box Fon ata CD in the CD-ROM drive of your computer.
2. Windows Me detects a new plug-and-play device to be installed. Follow the instructions displayed on the screen.
3. When asked: “What would you like to do?”, select the option “Automatic search for a better driver (Recommended).”.

The drivers for FRITZ!Box Fon ata are installed.

4. Conclude the installation by clicking “Finish”.

This concludes the installation in Windows Me. Please see the instructions in the section “Opening the User Interface” from page 27.



## Installing FRITZ!Box Fon ata in Windows 2000

***Administrator rights are required to install the driver software in Windows 2000.***

1. Once you have connected FRITZ!Box Fon ata to your computer, FRITZ!Box Fon ata will be detected automatically and the required drivers will be installed.
2. As soon as the procedure is complete, the FRITZ!Box Fon ata user interface opens and FRITZ!Box Fon ata is ready for operation.

This concludes the installation in Windows 2000. Please see the instructions in the section “Opening the User Interface” from page 27.

## Installing FRITZ!Box Fon ata in Windows 98

Insert the FRITZ!Box Fon ata CD in your CD-ROM drive to start the Installation Help automatically. If the Installation Help does not start automatically, open the INTRO.HTM file on the FRITZ!Box Fon ata CD. Follow the instructions in the Installation Help to install FRITZ!Box Fon ata at your computer's USB port.

If you would like to install FRITZ!Box Fon ata without this Installation Help, first follow the instructions in the section "Connecting the USB Cable" from page 21 and then perform the following steps:

1. Windows 98 detects a new plug-and-play device to be installed. Follow the instructions displayed on the screen.

Keep your Windows CD ready.

2. When asked: "What do you want Windows to do?", select the option "Search for the best driver for your device. (Recommended)."
3. Insert the FRITZ!Box Fon ata CD in your CD-ROM drive.
4. When the program asks where the driver is located, activate **only** the option "CD-ROM drive".



*Specifying the driver location in Windows 98*

5. Click "Next" in the window illustrated below.





### *Confirm driver selection*

6. If you are asked which driver you want to install, choose the option “The updated driver (Recommended) FRITZ!Box Fon ata” and click “Next” twice.

The drivers for FRITZ!Box Fon ata are installed.

7. Conclude the installation by selecting “Finish” and re-start the computer.

This concludes the installation in Windows 98. Please see the instructions in the section “Opening the User Interface” from page 27.

## **Installing FRITZ!Box Fon ata in Mac OS X**

1. Select “System Preferences / Network”. You receive the message that a new port, “Ethernet port en<No.>”, was found. Confirm the message by clicking “OK”.
2. Under “Show”, select the new port found, “Ethernet port en<No.>”.
3. Confirm your entries with “Activate Now”.

Please see the instructions in the section “Opening the User Interface” from page 27.

## Installing FRITZ!Box Fon ata in a Linux Operating System



*You have to be logged in as root to make the necessary settings.*

The example of SUSE Linux 9.1 is used here to describe how to install FRITZ!Box Fon ata to the USB port in Linux.

1. Open the YaST Control Center.
2. Select the option “Network Devices” and click “Network Card”.
3. The “Network cards configuration” dialog appears.
4. Select “Other (not detected)” and the “Configure...” button.
5. The device type of the network in the “Manual network card configuration” window should be set to “Ethernet”. Select the “USB” check box as well and click “Next”.
6. In the next dialog, “Network address setup”, select the “Automatic address setup (via DHCP)” option. Click “Next”.
7. For “Network cards to configure” select “Other (not detected)”. Then click “Configure...”.
8. Changes to the configuration take effect when the “Finish” button is clicked.



*In SUSE Linux 9.0, only one Ethernet adapter at a time can be set to DHCP. If you have an additional network adapter, assign it a fixed IP address. Otherwise problems may arise with name resolution (cf. /etc/resolv.conf).*

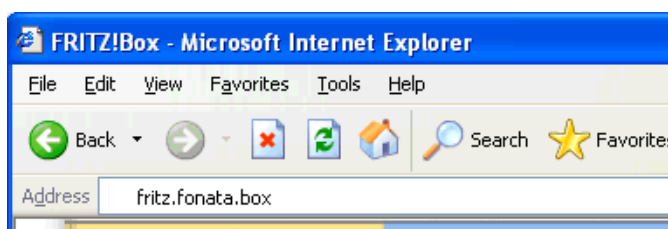
For comprehensive information and tips on the topic of network configuration in Linux, see:

<http://www.linux.org/docs/ldp/howto/NET3-4-HOWTO-5.html>

## 2.6 Opening the User Interface

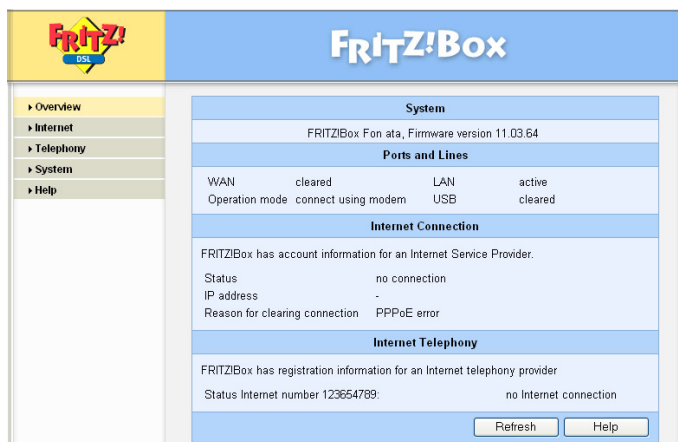
Once you have connected FRITZ!Box Fon ata with one or more computers, or with a network hub or switch, you can access the FRITZ!Box Fon ata user interface. This interface can be accessed from any of the computers connected with FRITZ!Box Fon ata. Configure all of the settings for operation with FRITZ!Box Fon ata in the user interface. The settings are saved in FRITZ!Box Fon ata.

Open your Internet browser on the computer and enter “fritz.fonata.box”.



*The “fritz.fonata.box” address entry in the address field of the Internet browser*

When the FRITZ!Box Fon ata user interface is started, FRITZ!Box Fon ata is ready for operation.



*The FRITZ!Box Fon ata user interface*

The FRITZ!Box Fon ata user interface has several pages, each of which can be accessed directly by clicking the menu command on the left edge.



*If the user interface does not open, see the instructions in the section “Errors Opening the User Interface” from page 48.*

## 2.7 Connecting FRITZ!Box Fon ata to the DSL Modem, the Cable Modem or the Router

If you use a DSL modem or cable modem for Internet access, connect FRITZ!Box Fon ata to the DSL modem or cable modem.

If you use a router for Internet access, connect FRITZ!Box Fon ata to the router.

FRITZ!Box Fon ata is not designed for direct connection to the DSL splitter or cable jack.

### Connecting FRITZ!Box Fon ata to the DSL or Cable Modem

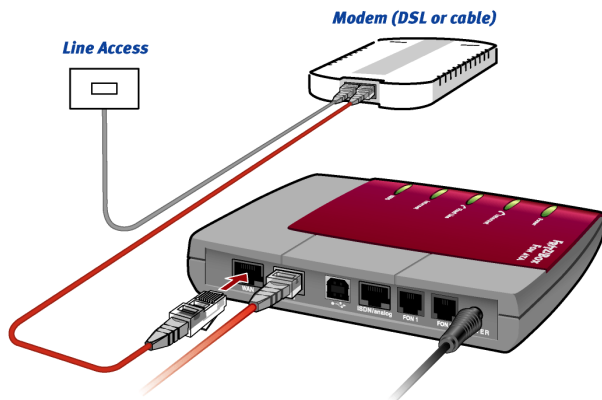
Once FRITZ!Box Fon ata has been connected to the DSL modem or cable modem, you must select the setting “Connect directly using a DSL or cable Modem” from the “Internet / Account Information” menu of the FRITZ!Box Fon ata user interface. The Internet account information must be entered in this dialog as well.

In this kind of operation, FRITZ!Box Fon ata works like a router and is configured as a DHCP server.

Perform the following steps to connect FRITZ!Box Fon ata to the DSL modem or cable modem:

1. Pick up the network cable included in the DSL modem or cable modem package.
2. Connect one end of the cable to the socket labeled “WAN”, located at the far left of the back panel of FRITZ!Box Fon ata.

3. Insert the other end of the cable into a network jack on the DSL or cable modem.



*Connecting FRITZ!Box Fon ata to the DSL or cable modem*

4. The green “Internet” LED lights up to signalize that FRITZ!Box Fon ata is ready for Internet connections over the broadband line.

### Connecting FRITZ!Box Fon ata to the Router

After connection to the router, you must select “Connect using a router” operation in the “Internet / Account Information” menu of the FRITZ!Box Fon ata user interface. In this menu you must also specify how FRITZ!Box Fon ata is integrated into the local network.

In this kind of operation, FRITZ!Box Fon ata works like a computer in the local network and obtains its local IP address from the router to which it is connected.

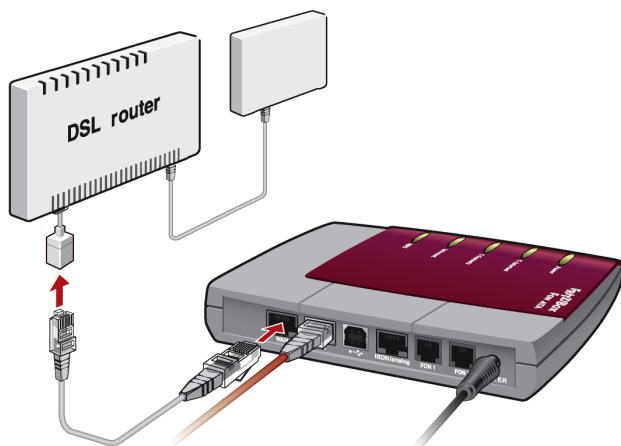
There are two possibilities for connecting FRITZ!Box Fon ata to a router:

- connecting directly to the router
- connecting to a network hub or network switch, to which the router is also connected

### Connecting FRITZ!Box Fon ata Directly to the Router

Perform the following steps to connect FRITZ!Box Fon ata to the router:

1. Pick up the network cable included in the router package.
2. Connect one end of the cable to the socket labeled “WAN”, located at the far left of the back panel of FRITZ!Box Fon ata.
3. Insert the other end of the cable into a network socket on the router.



*Connecting FRITZ!Box Fon ata to the router*

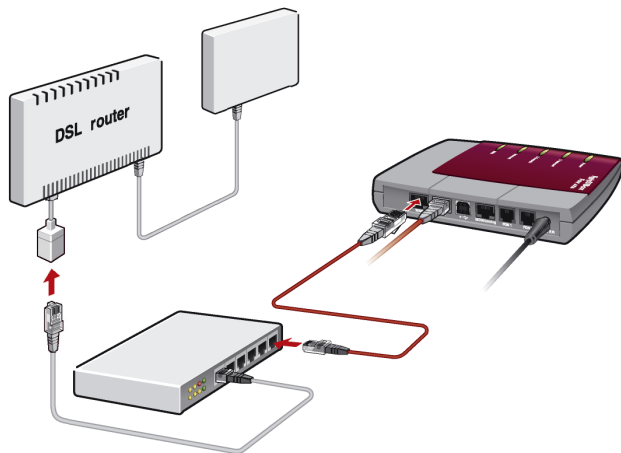
4. The green “Internet” LED stops flashing after a short time and remains lit to signalize that FRITZ!Box Fon ata is ready for Internet connections over a broadband line.

### Connecting FRITZ!Box Fon ata to the Router via a Network Hub or Network Switch

To connect to a router via a network hub or network switch, you will need a standard network cable.

Perform the following steps to connect FRITZ!Box Fon ata to the router via a network hub or network switch:

1. Remove the network cable from the package.
2. Connect one end of the cable to a free port on the network hub or switch.
3. Connect the other end of the cable to the socket labeled “WAN”, located at the far left of the back panel of FRITZ!Box Fon ata.



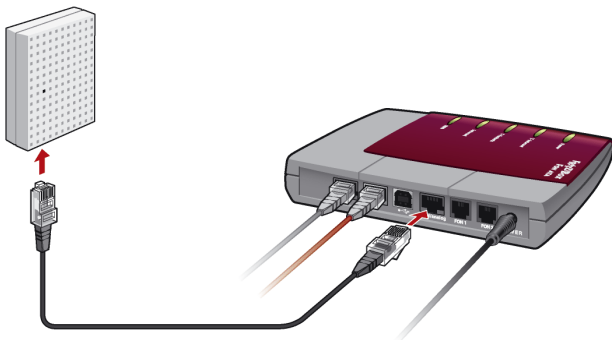
*Connecting FRITZ!Box Fon ata to a router via a network hub*

4. The green “Internet” LED lights up to signalize that FRITZ!Box Fon ata is ready for Internet connections over a broadband line.

## 2.8 Connecting FRITZ!Box Fon ata to ISDN or the Analog Telephone Line

FRITZ!Box Fon ata can be connected to an ISDN or an analog telephone line. To connect FRITZ!Box Fon ata, perform the following steps:

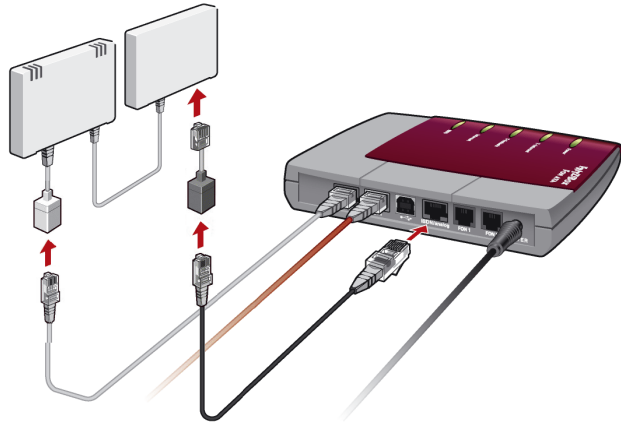
1. Remove the enclosed ISDN/analog cable (black) from the package.
2. Connect one end of the cable to the socket on FRITZ!Box Fon ata labeled “ISDN/analog”.
3. If you have an ISDN access, connect the other end of the cable to the socket of your ISDN network terminator (NT).



*Connecting FRITZ!Box Fon ata to the ISDN NT*

If you have an analog telephone line as well as DSL, connect the other end of the cable to an RJ45 adapter first. Then use the adapter to connect FRITZ!Box Fon ata to the socket of your DSL splitter.



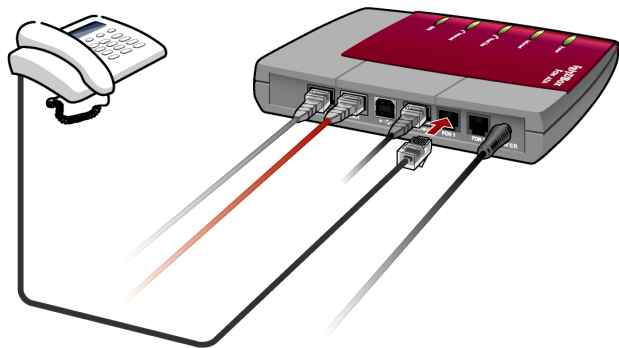


*FRITZ!Box Fon ata connected to the DSL and the analog telephone line via the DSL splitter*

## 2.9 Connecting Analog Terminal Devices to FRITZ!Box Fon ata

FRITZ!Box Fon ata has been tested and CE-certified in accordance with European Union directives. All analog telecommunication devices with CE certification can be connected to its extensions.

To connect analog terminal devices like a telephone, fax device or answering machine, insert the plugs of your analog devices into the “FON1” or “FON2” socket on FRITZ!Box Fon ata.



*Connecting an analog telephone to FRITZ!Box Fon ata*

### 3 Configuring FRITZ!Box Fon ata for Internet Connections

All computers connected to FRITZ!Box Fon ata access the Internet through FRITZ!Box Fon ata. The way Internet access is enabled depends on the kind of operation for which FRITZ!Box Fon ata is configured.

- FRITZ!Box Fon ata is connected to a DSL modem or a cable modem.

In the FRITZ!Box Fon ata user interface you must select “Connect directly using a DSL or cable Modem” operation in the “Internet / Account Information” menu. The Internet account information must be entered in this dialog as well.

In this type of operation the Internet connections are established by FRITZ!Box Fon ata. All computers connected to FRITZ!Box Fon ata can use the Internet connection simultaneously. In this mode FRITZ!Box Fon ata functions as a router. The FRITZ!Box Fon ata firewall and DHCP server are enabled. All connected computers receive their IP address from the DHCP server of the FRITZ!Box Fon ata.

It is not necessary to install any additional Internet access software on the other connected computers.

- FRITZ!Box Fon ata is connected to a router.

In the FRITZ!Box Fon ata user interface you must select “Connect using a router” operation in the “Internet / Account Information” menu. In this dialog you must also specify how FRITZ!Box Fon ata is integrated into the local network.

In this type of operation the Internet connections are established by the router. In this case it does not matter whether FRITZ!Box Fon ata is connected to the router directly or by means of a network hub or switch.

FRITZ!Box Fon ata functions here as a DHCP client and obtains its IP address from the DHCP server of the local network. All of the computers connected to FRITZ!Box Fon ata also obtain their IP addresses from this DHCP server. If one of the connected computers requests an Internet connection, FRITZ!Box Fon ata is responsible for forwarding the data.

## 3.1 Dialing an Internet Connection

- If FRITZ!Box Fon ata is connected to a DSL or cable modem, the Internet account information must be registered in FRITZ!Box Fon ata.
- If FRITZ!Box Fon ata is connected to a router, an Internet account must be configured at the router.

No further steps are necessary to establish an Internet connection. Simply start an Internet browser on any of the computers connected to FRITZ!Box Fon ata and start surfing the Net.



***Make sure that all computers connected to FRITZ!Box Fon ata automatically obtain their IP addresses from the active DHCP server. For instructions, see the section “Setting the IP Address” from page 43.***

## 4 Making Calls with FRITZ!Box Fon ata

This chapter describes how to set up FRITZ!Box Fon ata for fixed-line and Internet telephony. The following steps are necessary:

- Entering account information and Internet number for Internet telephony
- Entering numbers for calls over fixed lines
- Configuring connected analog terminal devices, ISDN telephones or ISDN PBXs at FRITZ!Box Fon ata

Information on the following topics is also presented here:

- Dialing rules for Internet and fixed-line telephony
- How does Internet telephony work with FRITZ!Box Fon ata?



*The settings described in the sections of this chapter apply to both FRITZ!Box Fon ata connection types: connection to a DSL modem and connection to a router.*

### 4.1 Entering Account Information and Internet Numbers for Internet Telephony

You can set up multiple Internet numbers in FRITZ!Box Fon ata. To do this you will need the corresponding account information from your Internet telephony provider.

Perform the following steps:

1. Open the FRITZ!Box Fon ata user interface.
2. Open the “Telephony” menu.
3. Select the “Internet Telephony” menu.
4. Click the “New Internet Number” button.
5. Enter the account information you received from your Internet telephony provider in the appropriate fields.
6. Click the “Apply” button.

The new number is added to the list of Internet numbers.

## 4.2 Entering Numbers for Calls over Fixed Lines

If you have an analog telephone line, you do not need to set up any numbers for fixed-line telephony.

If you have connected FRITZ!Box Fon ata to an ISDN telephone line, you must configure numbers for fixed-line telephony. Proceed as follows:

1. Start a web browser.
2. Enter “fritz.fonata.box” as the URL.
3. Open the “Telephony / Extensions” menu.
4. Click the “ISDN Numbers” button.
5. On the “ISDN Numbers” page, enter in the appropriate fields all of the telephone numbers (MSNs) you received from your telephony carrier.
6. Click the “Apply” button.

## 4.3 Configuring Analog Terminal Devices at FRITZ!Box Fon ata

FRITZ!Box Fon ata is configured so that you can make calls to the analog network immediately after connecting analog terminal devices, without any additional settings required.

The following settings are configured at the analog lines “FON1” and “FON2”:

- calls can be accepted on both lines: connected terminal devices will ring at the same time
- outgoing calls can be conducted on both lines

If the connected terminal devices are to react only to certain numbers, numbers must be assigned to the extensions. The number defined as “Number of the extension” also defines whether calls from this extension will be conducted using the fixed-line network or the Internet.

Perform the following steps:

1. In the “Telephony” menu, select the “Extensions” command.
2. Select a number from the “Number of the extension” drop-down menu in the “Extension FON 1” area.

The terminal device connected to the “FON1” extension reacts to incoming calls placed to this number and uses the kind of connection specified for outgoing connections with this number.

3. If you would like to assign additional numbers to the extension, select from the “Additional numbers” drop-down menu any other numbers the terminal device at the “FON 1” line should react to for incoming calls.
4. To ensure that the terminal device at the “FON 1” extension reacts only to incoming calls to the specified numbers, disable the option “react to all numbers”.
5. Configure the “Extension FON 2” if required.
6. Click the “Apply” button.

## 4.4 Defining Dialing Rules for Internet Telephony and Calls on Fixed Lines

With the dialing rules you can determine the type of connection for telephone connections with FRITZ!Box Fon ata. Perform the following steps:

1. In the “Telephony” menu, select the “Dialing Rules” command.
2. In the “Carrier Prefix for Fixed-line Network Calls” area you can specify a telephone provider prefix to be dialed automatically before numbers for calls to the fixed-line network.

3. In the “Dialing Rules” area you can define the kind of connection for ranges of numbers.

Connections to ranges of numbers for which a dialing rule has been established are always established in keeping with the kind of connection specified.

4. Click the “New Dialing Rule” button to define as many dialing rules as desired.
5. Click the “Apply” button.

This concludes the configuration of FRITZ!Box Fon ata for Internet and fixed-line telephony.

## 4.5 Selecting the Type of Connection Manually

If you would like to use a certain kind of connection (Internet or fixed-line) for a call, dial the following keys on the telephone keypad **before the number**:

### Fixed-line Connections

---

<b>*11#</b>	establishes a fixed-line connection
-------------	-------------------------------------

---

### Internet Connections

---

<b>*12#</b>	establishes an Internet connection. The Internet number used is the Internet number set for line 1.
-------------	---

---

<b>*12 P #</b>	establishes an Internet connection for a selected Internet number. For “P”, enter the position of the Internet number in the “List of Internet Numbers”.
----------------	--

---

## 4.6 How Does Internet Telephony Work with FRITZ!Box Fon ata?

### Important for Every Configuration

- If FRITZ!Box Fon ata is connected to a DSL modem and account information is required for Internet access, note the following:



*Disable the “Clear Internet connection automatically” option in the “Internet / Account Information” menu to prevent a connection from being cleared during a conversation over the Internet.*

For more information about the “Clear Internet connection automatically” function, see the Online Help of the FRITZ!Box Fon ata user interface.

- If FRITZ!Box Fon ata is connected to a router and you would like to use the PBX for Internet telephony, note the following:



*Make sure that no function in the router is enabled which clears Internet connections automatically.*

### Making Telephone Calls via the Internet

All kinds of data transmission in the Internet use the Internet Protocol (IP). IP is packet-oriented. This means that the data are broken down into data packets for transmission and IP takes care of the transport of the individual data packets through the Internet. Language is also transmitted in the Internet in this manner.

In opposition to this, fixed-line telephony transmits data in a line-oriented manner. In this case data are transmitted in a coherent data stream.

For packet-oriented transmission in the Internet, the loss of packets cannot be ruled out completely. Under unfavorable conditions this can lead to speech quality in Internet telephony that is inferior to that in fixed-line telephony.



### Telephony Scenarios

If you have configured both a fixed-line number and an Internet number in FRITZ!Box Fon ata, you can make calls in all directions:

- from the fixed-line network into the fixed-line network
- from the Internet into the fixed-line network
- from the Internet into the Internet

and receive calls from all directions as well.

### Bandwidth Management with FRITZ!Box Fon ata

For connection to a DSL or cable modem, FRITZ!Box Fon ata is equipped with integrated bandwidth management.

This function ensures that the speech quality during telephone calls over the Internet is not reduced by surfing activity. FRITZ!Box Fon ata adjusts all uploads and downloads to the currently available bandwidth. Because FRITZ!Box Fon ata also places a higher priority on Internet telephony connections over Internet data connections, unwelcome interference is largely avoided. However, this is also true for Internet telephony: once the conversation capacity has been reached, the remote site will receive a busy signal.

In order to use bandwidth management, you must provide information about your broadband connection in the “Internet / Account Information” menu of the user interface.

## 5 Removing the FRITZ!Box Fon ata

Follow the instructions below to remove FRITZ!Box Fon ata:

- If FRITZ!Box Fon ata is connected to the computer's LAN port or to a network hub, all you need to do is remove the network cable.
- If FRITZ!Box Fon ata was installed at the USB port of the computer, uninstallation must be performed in the Windows operating systems.

No uninstallation is necessary in the operating systems Mac OS X and Linux.

In the Windows operating systems, proceed as follows for uninstallation

1. Insert the FRITZ!Box Fon ata CD in your CD-ROM drive. The installation Help is started.
2. Click the button "FRITZ!Box Fon ata".
3. Click the "View CD Contents" button.
4. Click the "USB Driver" button.
5. Click the "Install Now" button.
6. In the "File Download" window, click "Open". The "set-up.exe" program is started for FRITZ!Box Fon ata.
7. Click "Continue" in the Welcome window and then select "Removal" from the following window.

FRITZ!Box Fon ata will be removed.

## 6 Guidebook

The guidebook contains detailed instructions on the following subjects:

- Linking up the cable network
- Setting the IP address
- Errors opening the user interface
- DHCP server

### 6.1 Linking Up the Cable Network

Extending the length of the FRITZ!Box Fon ata cables is no problem. Cables of the desired length can be purchased at any computer store. Be sure to note the type of cable, and remember that the quality of the line may decrease as the distance from the hub increases.

Follow the instructions below when purchasing extension cables:

	Maximum Length	Cable Properties
Network cable	100 m	10bT network cable, 1.1 wired, STP
USB cable	3 m	

### 6.2 Setting the IP Address

All of the computers connected to FRITZ!Box Fon ata obtain their IP addresses from the active DHCP server in the local network. The connected computers must be configured such that they can receive their IP addresses automatically. The steps for checking and adjusting this option differ among the operating systems. See the relevant section for your operating system.

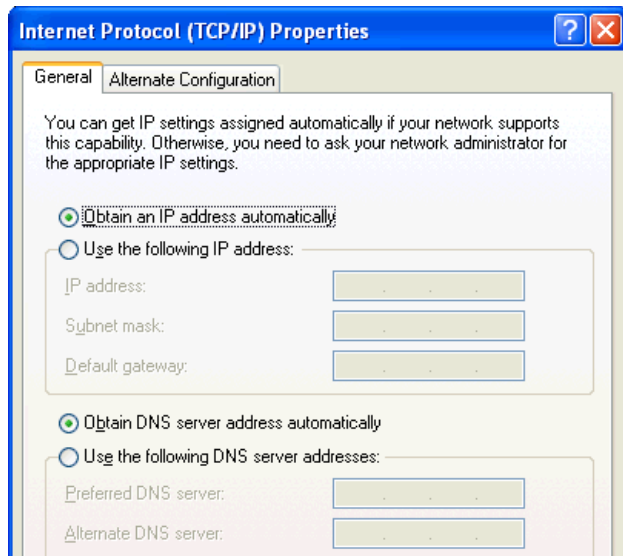


*Only one DHCP server may be active in a network.*

### Obtaining an IP Address Automatically in Windows XP

Proceed as follows in Windows XP:

1. Go to “start / Control Panel / Network and Internet Connections / Network Connections” and double-click the LAN connection icon of the network adapter connected to FRITZ!Box Fon ata in order to open the “Local Area Connection Status” window.
2. Click the “Properties” button.
3. Select “Internet Protocol (TCP/IP)” in the list of items used in this network connection and click “Properties”.
4. Activate the options “Obtain an IP address automatically” and “Obtain DNS server address automatically”.



*Properties of the Internet protocol (TCP/IP)*

5. Confirm your selection by clicking “OK”.

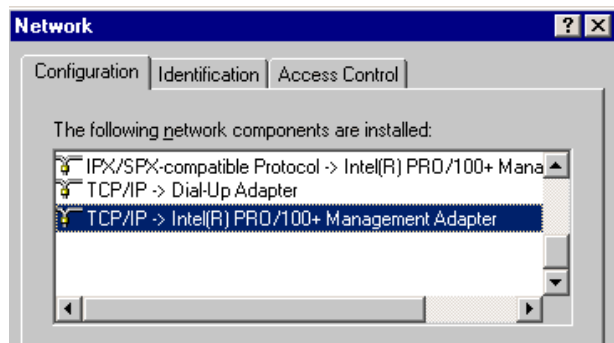
The computer now obtains an IP address from the active DHCP server.

## Obtaining an IP Address Automatically in Windows Me/98

Proceed as follows in Windows Me/98:

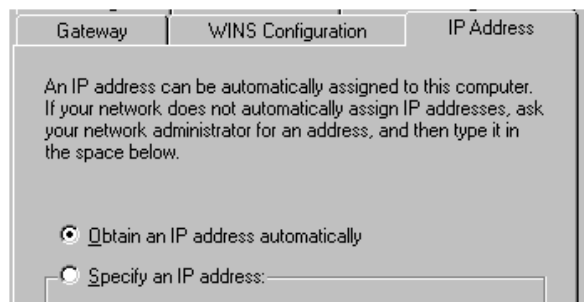
Keep your Windows CD handy, as this may be required for changes to your network settings.

1. Select “Start / Settings / Control Panel”.
2. Double-click the “Network” entry to open it.
3. In the list, double-click to select the binding designated with an arrow, “TCP/IP -> <network adapter bound to FRITZ!Box Fon ata>”.



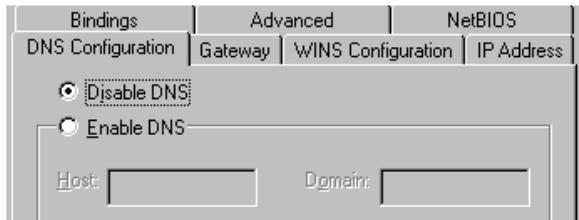
*TCP/IP binding to a network adapter*

4. Activate the option “Obtain an IP address automatically”.



*The “Obtain an IP address automatically” option*

5. On the “DNS Configuration” settings page, activate the “Disable DNS” option.



*The “Disable DNS” option*

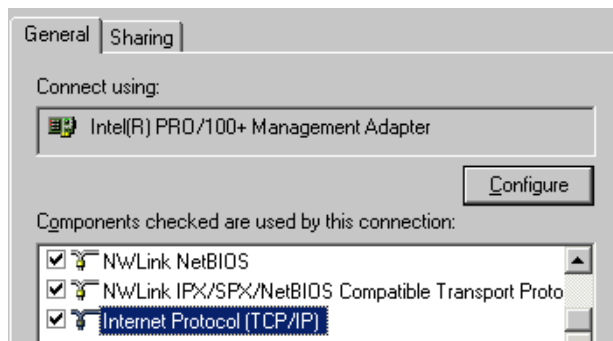
6. Confirm your selection by clicking “OK”.

The computer now obtains an IP address from the active DHCP server.

### **Obtaining an IP Address Automatically in Windows 2000**

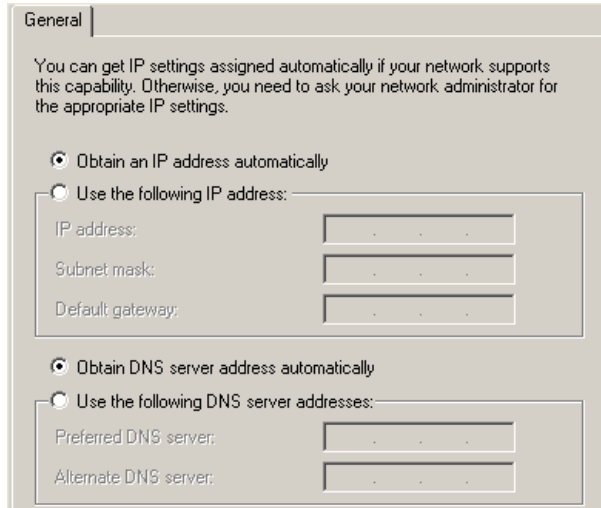
Proceed as follows in Windows 2000:

1. Select “Start / Settings / Control Panel / Network and Dial-Up Connections”.
2. Double-click to select the Local Area Network connection with the network adapter bound to FRITZ!Box Fon ata.
3. Click the “Properties” button.
4. Double-click to select “Internet Protocol (TCP/IP)” in the list of network components.



*Properties of the LAN connection of a network adapter*

5. Activate the options “Obtain an IP address automatically” and “Obtain DNS server address automatically”.



*The “Obtain an IP address automatically” option*

6. Confirm your selection by clicking “OK”.

The computer now obtains an IP address from the active DHCP server.

### **Obtaining an IP Address Automatically in Mac OS X**

In the Mac OS X operating system, proceed as follows to set the TCP/IP properties:

1. Select the “System Preferences” in the Apple menu.
2. In the “System Preferences” window, click the “Network” icon.
3. In the “Network” window, select the “Built-in Ethernet” entry from the “Show:” drop-down menu.
4. Switch to the “TCP/IP” settings page and select the “Using DHCP:” option from the “Configure” drop-down menu.
5. Click “Apply Now”.

## Linux

For comprehensive information and tips on the topic of network configuration in Linux, see:

<http://www.linux.org/docs/ldp/howto/NET3-4-HOWTO-5.html>

## 6.3 Errors Opening the User Interface

If an error message is returned when you open the user interface, please work through the following checklist:

- Make sure that all cable connections are plugged in securely.
- Check the IP settings on the computers connected to FRITZ!Box Fon ata. The computers must obtain their IP address from FRITZ!Box Fon ata automatically (see “Setting the IP Address” from page 43).
- If FRITZ!Box Fon ata is connected to a DSL or cable modem, enter one of the following addresses rather than “fritz.fonata.box” in the Internet browser:
  - 192.168.178.1
  - 192.168.179.1
- If FRITZ!Box Fon ata is connected to a router, FRITZ!Box Fon ata obtains its IP address from the router. Proceed as follows:
  - See the user interface of the router to find out FRITZ!Box Fon ata’s IP address.
  - Enter this IP address in the Internet browser on the computer you would like to use to open the FRITZ!Box Fon ata user interface.



## How to Open the User Interface at Any Time via a LAN Connection

FRITZ!Box Fon ata is equipped with a fixed IP address that cannot be changed. The FRITZ!Box Fon ata user interface can be opened at any time using this IP address. This fixed IP address is:

192.168.178.254

Proceed as follows to open the FRITZ!Box Fon ata user interface at this address:

1. Clear the connection between FRITZ!Box Fon ata and the DSL modem, cable modem or router.
2. If FRITZ!Box Fon ata is connected to the computer via a USB port, remove the USB cable.
3. Connect FRITZ!Box Fon ata and the computer using the red network cable (see the section “Connecting FRITZ!Box Fon ata to the LAN Port” from page 18).
4. Take note of the computer’s current IP settings.
5. Change the IP settings by entering the following fixed IP address:

192.168.178.150

6. Start your Internet browser and enter FRITZ!Box Fon ata’s fixed IP address:

192.168.178.254

The FRITZ!Box Fon ata user interface opens.

7. Once you have reached the FRITZ!Box Fon ata user interface again, you should check the FRITZ!Box Fon ata settings and correct them if necessary.
8. Enter the settings you noted in the computer’s IP settings dialog. If the computer was originally connected to FRITZ!Box Fon ata via the USB cable, reconnect FRITZ!Box Fon ata to the computer by means of USB.
9. Reconnect FRITZ!Box Fon ata to the DSL modem, cable modem or the router.

## 6.4 DHCP Server

All of the computers connected to FRITZ!Box Fon ata obtain their IP addresses from the DHCP server active in the local network. Even if only one computer is connected to FRITZ!Box Fon ata, this computer will receive its IP address from the active DHCP server.

The computer's IP settings must be configured to obtain IP addresses automatically. How to check the IP settings and make any necessary changes is discussed in the section "Setting the IP Address" from page 43.

### Which DHCP Server Is Active?

Which DHCP server is active depends on how FRITZ!Box Fon ata is connected to the broadband line.

- FRITZ!Box Fon ata is connected to a DSL or cable modem  
FRITZ!Box Fon ata is equipped with its own DHCP server. This server must be enabled if FRITZ!Box Fon ata is connected to a DSL modem for operation as a router.
- FRITZ!Box Fon ata is connected to a router

When FRITZ!Box Fon ata is connected to a router, it will not be operated as a router and is configured as a DHCP client. This means that the DHCP server of FRITZ!Box Fon ata is disabled. In this case the DHCP server of the router must be enabled.

*A network may have only one active DHCP server.*



### Fixed IP Addresses

If you would like to assign fixed IP addresses to computers connected to FRITZ!Box Fon ata, note that you may not use any IP addresses from the IP address ranges of the active DHCP server.

When the DHCP server of FRITZ!Box Fon ata is enabled, this means that IP addresses from the following IP address ranges may not be used:

192.168.179.20 - 200

192.168.178.20 - 200

## 7 Configuration and Operation by Telephone

Many of the FRITZ!Box Fon ata functions and features can be configured and used over a telephone connected to a FRITZ!Box Fon ata extension. Only tone-dialing (dual-tone multifrequency = DTMF) telephones can be used in configuration and operation. Pulse dialing telephones are not suitable.



***The telephone network features can be used only if they are supported by your telephone network carrier and enabled on your telephone line.***

Entries input on the telephone are confirmed with an acknowledgement tone. Entries made correctly are confirmed with a positive acknowledgement tone (a single tone of one second in length). An error, such as an incorrect key sequence, is indicated by a failure tone, an intermittent tone at intervals of about 0.25 seconds.

For more information, see the section “Audible Signals” on page 14

### **Designation of the Functions and Features**

Functions and features whose application has direct effects on the connection are marked with icons. The icons indicate the connection types with which the function or feature can be used or applied.

Functions and features that have no effect on the connection are not marked.

An overview of all of the icons used in this manual is presented in the section “The Telephone Keypad” from page 6 of this manual.

## 7.1 Operating FRITZ!Box Fon ata by Phone

This section describes how you can use the FRITZ!Box Fon ata features via your telephone keypad.

### Shortening the Dialing Procedure

FRITZ!Box Fon ata automatically recognizes when a number has been entered, but not until a few seconds after the final digits are entered.

To shorten the dialing procedure, enter the “#” character after the last digit of a number.

---

<number> #	indicates to FRITZ!Box Fon that a number has been dialed (can shorten the dialing procedure)
------------	--

---



### Selecting the Outgoing Number and the Type of Connection

For outgoing connections you can specify the kind of connection that should be used. For this entry you can use settings already made in FRITZ!Box Fon ata or circumvent the settings currently configured in FRITZ!Box Fon ata.

#### Defining the Type of Connection Using Existing Settings in FRITZ!Box Fon ata

Up to ten different numbers can be assigned to each FRITZ!Box Fon ata extension. The numbers assigned also determine what kind of connection will be established for outgoing calls.

If you would like to establish outgoing connections using a certain type of connection, you can use a keypad code to specify the connection type to be used for outgoing calls to a configured number.

<b>*1#</b> <number>	establishes outgoing calls using the type of connection specified for the first entry of the extension connected to the telephone
<b>*2#</b> <number>	establishes outgoing calls using the type of connection specified for the second entry of the extension connected to the telephone
<b>*3#</b> <number>	establishes outgoing calls using the type of connection specified for the third entry of the extension connected to the telephone






### Defining the Type of Connection Independent of the Settings in FRITZ!Box Fon ata

You have the option of specifying the type of outgoing connection independent of the settings configured on the system. In this case the dialing rules are suspended for the given dialing procedure. To do this, enter one of the following keypad codes before dialing a number on your telephone:



<b>*11#</b> <number>	dials up this connection using the fixed-line
<b>*12#</b> <number>	dials up this connection over the Internet, using the Internet number 1
<b>*12⌚#</b> <number>	establishes an Internet connection for a selected Internet number. For “P”, enter the position of the Internet number in the “List of Internet Numbers”.

## Dialing Internal Calls

### Dialing Internal Calls with Automatic Outside Dialing



	Pick up the handset. You hear the external dial tone immediately, since the extension is set for automatic outside dialing.
 or  	Press the Hold button, or press the asterisk key twice. You now hear the internal dial tone.
	Dial the desired extension number.

### Dialing Internal Calls Without Automatic Outside Dialing

	Pick up the handset. You hear the internal dial tone.
	Dial the desired extension number.

## Group Call

The “Group Call” feature of FRITZ!Box Fon ata allows you to ring all other extensions at the same time. To do so, you must first configure the extension for internal dialing. Your call is connected with whichever extension answers first.

	Pick up the handset.
	Instead of an extension number, dial “9”. All extensions that are not busy ring.



## Alternating Between Calls

Whenever you have one active connection and one caller on hold, you can switch from one call to the other as often as you want using the Hold button.

To alternate between two connections, proceed as follows:

Call No. 1 	You are talking to Caller No. 1.
	Press the Hold button. Call No. 1 is now on hold.
	To dial a second call, simply dial either the desired extension number or the outside line access “o” followed by the desired external number.
Call No. 2 	If the call is answered, you can consult on this line. The original caller is still on hold.
	To switch back from Call No. 2 to Call No. 1, dial the sequence shown at left.
Call No. 1 	Call No. 1 is now active again and Call No. 2 is on hold.
	To switch back again from Call No. 2 to Call No. 1, dial the same sequence. In this way you can alternate between the two connections.

The alternating connections can be ended in a number of ways:






	The caller on hold hangs up. You can continue talking on the active connection.
	You end the active connection by dialing the sequence shown at left. The call that was on hold is now active again, and there is no call left on hold.
 	You can also return to the call on hold by hanging up the handset: this ends the currently active connection. In this case the phone rings as soon as you hang up. Pick up the handset again to return to the last call that was on hold.

### Picking Up Calls from Another Extension

The pickup function allows you to respond to a call ringing on another extension at your own phone. Calls can be picked up from known and unknown extension numbers.





This function can also be used to pick up incoming calls that have already been accepted by an answering machine at another extension. A call that has already been answered can only be picked up if the “Group call” function has been disabled and the “Disabled call waiting” option has been enabled for the given extension.

To pick up a call from another extension, proceed as follows:

	Pick up the handset.
  	Dial the sequence shown at left.
	The call is now connected to your extension, and you can talk to the caller.

### Picking up a Call from a Known Extension

To pick up a call from a known extension (1, 2, ...), proceed as follows:






	Pick up the handset.
  Ext.	Dial the sequence shown at left. Enter the number of the extension for “Ext.”.
	The call is now connected to your extension, and you can talk to the caller. You are now connected to the caller.





## Transferring Calls

The “Call Transfer” function allows you to transfer a connection from one of FRITZ!Box Fon ata’s extensions to the other. To do so, proceed as follows:




Call No. 1	You are talking to Caller No. 1.
	
	Press the Hold button. Caller No. 1 is now on hold.
	To announce the call to another internal user, dial her or his extension number.
Call No. 2	You can now talk with the other internal user.
	
	To transfer the original call to the other internal extension, simply hang up the handset.






## Consultation / Hold

The “Consultation/Hold” feature allows you to place an existing call on hold. You then may consult with someone else at your workplace or dial a second call. The party on hold does not hear the second conversation. Once you have finished the consultation, you can return to the original connection.



To place a call on hold and then reactivate it, proceed as follows:

Call No. 1	You are talking to Caller No. 1.
	
	Press the Hold button. Caller No. 1 is now on hold and you can consult someone else.
	To dial a second call, simply dial either the desired extension number or the outside line access “o” followed by the desired external number.

Call No. 2 	If the call is answered, you can consult on this line. The original caller is still on hold.
	If the number you dialed is busy or the call is not answered, press the Hold button again to return to Call No. 1.
 1	To switch back to Call No. 1 after talking on the second connection, dial the sequence shown at left. Call No. 1 is now active again.



*If you return to Caller No. 1 by pressing the Hold button, the connection to Caller No. 2 is not cleared down until Caller No. 2 hangs up. Connection charges continue to accrue.*




Call No. 1 	You can also return to Call No. 1 by hanging up the handset: this ends the connection to Call No. 2. In this case, your phone rings as soon as you hang up. Pick up the handset to return to Call No. 1 again.
	Hang up the handset to end the connection.

## 7.2 Configuring FRITZ!Box Fon ata by Phone

### Saving New Settings

In this section, saving refers to all current settings. It is not necessary to save the configuration after each setting is made. You may first configure all of your FRITZ!Box Fon ata's settings as desired, and then save them permanently.

### Saving Permanently

	Pick up the handset.
	Save all settings made to your FRITZ!Box Fon ata permanently dialing the sequence shown at left.
	Hang up the handset.





*Permanent saving cannot be reversed. However, you can reset the PBX to its factory settings or program it with different settings.*



## Specifying the Outside Dialing Mode

Automatic outside dialing can be enabled or disabled for each extension. When automatic outside dialing is set, the dial tone sounds as soon as you lift the handset. If the extension is set to internal dialing, the dial tone will not sound until after you dial “0”.

### Enabling Automatic Outside Dialing

	Pick up the handset.
#1 Ext. *1*	Dial the sequence shown at left.
#91**	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

### Disabling Automatic Outside Dialing

	Pick up the handset.
#1 Ext. *0*	Dial the sequence shown at left.
#91**	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

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## Disabling Call Waiting



Call waiting can be switched on or off for each extension. Some older terminal equipment connected to extensions may misinterpret the call waiting signal. This is especially true of fax machines and modems. If communication errors occur, you should disable call waiting for fax and modem extensions.

See section “Call Waiting” on page 73 for information about how to accept a call while another connection is active.





***When “Call Waiting” is enabled, modem and fax connections may be interrupted.***

### Disabling Call Waiting

	Pick up the handset.
<b>#2</b> Ext. <b>*1*</b>	Dial the sequence shown at left.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

### Enabling Call Waiting



	Pick up the handset.
<b>#2</b> Ext. <b>*0*</b>	Dial the sequence shown at left.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

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### Call Rejection on Busy (Busy on Busy)

Calls for an extension can be rejected using the “Busy on Busy” feature. This means that the user receives a busy signal whenever the extension is busy.

### Enabling the Busy on Busy Function

	Pick up the handset.
<b>#52</b> Ext. <b>*1*</b>	Dial the sequence shown at left. Type in the number of the extension in the “Ext.” field.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

## Disabling the Busy on Busy Function

	Pick up the handset.
<b>#52</b> Ext. <b>*0*</b>	Dial the sequence shown at left. Type in the number of the extension in the "Ext." field.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



## Baby Monitoring Phone Function

The baby monitoring phone function allows you to use your PBX to monitor sounds in the room. A PBX extension must be located in the room to be monitored. Enter a code to activate the room monitoring. Lay the handset is next to the phone or activate the speaker phone. The volume level of the phone can be set to any of eight levels.



*It is preferable to use the speaker phone function.*

To activate the baby monitoring phone function, proceed as follows:

	Pick up the handset or activate the speaker phone function of your telephone.
<b>*4</b> Level <b>*Number*</b>	Dial the sequence shown at left. For "Level", enter a number between 1 (the most sensitive sound level) and "8". For "Number", enter the number to be called. This may be the number of another internal extension, a "9" for an internal group call, or any external number desired.
	Wait for the acknowledgement tone. Baby monitoring is now activated.
Do <b>not</b> hang up the handset!	

Dial the number of the extension to listen in at an extension with room monitoring activated.

After initiating a baby monitoring phone call, the PBX cannot generate a new call until at least one minute has lapsed.

## 7.3 Advanced Features of FRITZ!Box Fon ata



### Call Diversion over FRITZ!Box Fon ata

Incoming calls to the FRITZ!Box Fon ata telephones can be diverted to a different extension or to an external number. In contrast to call diversion over FRITZ!Box Fon ata, there is also call forwarding (call diversion via the central exchange). How to use call forwarding by phone is described in the section “Call Forwarding (Call Diversion via the Central Exchange)” from page 65.



***Do not activate both call forwarding and call diversion at the same time.***



Call diversion over FRITZ!Box Fon ata allows you to forward calls to an external line or to another extension. This kind of diversion is organized inside FRITZ!Box Fon ata so that diversions to another extension are free of charge. Calls are diverted to an external number over your ISDN line's second B channel and is subject to normal transmission charges. If the FRITZ!Box Fon ata is operated on an analog telephone line, incoming calls can only be diverted to a different extension or to numerical Internet numbers.

You can specify the conditions under which an incoming call will be diverted over FRITZ!Box Fon ata. You can select one of six different options. Different settings may be saved for each extension.





***Note that only numerical Internet numbers can be entered for diversion to an Internet number.***



### Call Diversion Immediately (Without Ringing)

	Pick up the handset.
<b>#41</b> Ext. * XNo./Ext. * Dial the sequence shown at left.	
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



### Call Diversion After the Third Ring

	Pick up the handset.
<b>#42</b> Ext. * XNo./Ext. * Dial the sequence shown at left.	
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



### Call Diversion When Busy

	Pick up the handset.
<b>#43</b> Ext. * XNo./Ext. * Dial the sequence shown at left.	
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



### Call Diversion After the Third Ring or When Busy

	Pick up the handset.
<b>#44</b> Ext. * XNo./Ext. * Dial the sequence shown at left.	
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

### Call Diversion Immediately by Ringing

	Pick up the handset.
<b>#45</b> Ext. * XNo./Ext. * Dial the sequence shown at left.	
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

Disabling Call Diversion







	Pick up the handset.
<b>#40</b> Ext. <b>**</b>	Dial the sequence shown at left.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



Three-Party Conference Call

FRITZ!Box Fon ata allows you to hold telephone conferences with two other people at once. Two external and one internal party, or two internal and one external party can conduct a conference call with each other.

You can set up a three-party conference as follows:



	Pick up the handset.
	Dial the external number of the first party. Talk.
	Press the Hold button.
	To dial a second call, simply dial either the desired extension number or the outside line access “o” followed by the desired external number. You can now talk to the second subscriber while your first call is on hold.
<b>R3</b>	Dial the sequence shown at left to begin a three-party conference call.
	Now all three participants can confer together. If either of the other two parties hangs up, your connection with the remaining participant remains active.
	You can end the three-party call by hanging up the handset.
<b>R2</b>	You can also switch from the three-party call back to the original two-party connection. Dial the sequence shown at left. This ends the three-party conference. The connection that was active last before your initiated the three party conference is now active again. The other call is on hold. You can alternate between the two connections by dialing the same sequence again.



analog

## Using FRITZ!Box Fon ata Features on the Analog Line

When FRITZ!Box Fon ata is connected to an analog line, a feature can be activated directly at the switching station only if the line is set for this kind of configuration.

	Pick up the handset.
 <feature>	Dial the sequence shown at left.  Next enter the keyboard shortcut your network provider has defined for the desired feature. The given keyboard shortcut must be obtained from your network provider.

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## Call Forwarding (Call Diversion via the Central Exchange)

Call forwarding is performed by the ISDN operator's switching station. To use call forwarding, FRITZ!Box Fon ata must be connected to an ISDN line. Then this feature can be used to forward calls to an external line. Call forwarding is subject to charges by the network provider and cannot be used for forwarding to an Internet number.

In addition to call forwarding, there is also call diversion via FRITZ!Box Fon ata. Use this kind of call diversion to divert calls to internal and external lines. See the section "Call Diversion over FRITZ!Box Fon ata" from page 62 for more information.








***Do not activate both call forwarding and call diversion at the same time.***

For call forwarding you may specify whether you want incoming calls to be forwarded unconditionally, after the fifth ring, or when busy. Different settings may be configured separately for each number.







**Call Forwarding Immediately**

Incoming calls for the given MSN are always diverted immediately to the specified number. Call forwarding can only be used to forward incoming calls to an external line. Call forwarding is subject to charges by the network provider and cannot be used for forwarding to Internet numbers.







**Call Forwarding Immediately for Your Extension's Outgoing Caller ID**

	Pick up the handset.
 <b>*21*</b> XNo.  <b>#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.





**Call Forwarding Immediately for Any MSN**

	Pick up the handset.
 <b>*21*</b> XNo.  <b>MSN</b>  <b>#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




**Call Forwarding Immediately for All MSNs**

	Pick up the handset.
 <b>*21*</b> XNo.  <b>*</b>  <b>#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




**Disable Call Forwarding Immediately for Your Extension's Outgoing Caller ID**

	Pick up the handset.
 <b>*21*#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.

### Disable Call Forwarding Immediately for Any MSN

	Pick up the handset.
<b>*21** MSN #</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




### Disable Call Forwarding Immediately for All MSNs

	Pick up the handset.
<b>*21** #</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




### Call Forwarding When Busy

Incoming calls are only forwarded to the specified number if the extension dialed is busy. You can define call diversion for the local outgoing call number. The local outgoing call number is the first number you assigned to an extension. You can also define call diversion for any other number, e.g. a telephone at the other extension of FRITZ!Box Fon ata, or for all numbers. All settings can be deactivated at any time.










### Call Forwarding When Busy for Your Extension's Outgoing Caller ID

	Pick up the handset.
<b>*67* XNo. #</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.









### Call Forwarding When Busy for Any MSN

	Pick up the handset.
<b>*67* XNo. * MSN #</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.










**Call Forwarding When Busy for All MSNs**

	Pick up the handset.
 <b>6</b>  <b>7</b>   XNo.   #	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.










**Disable Call Forwarding When Busy for Your Extension's Outgoing Caller ID**

	Pick up the handset.
 <b>6</b>  <b>7</b>    #	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.

**Call Forwarding When Busy for Any MSN**

	Pick up the handset.
 <b>6</b>  <b>7</b>    MSN  #	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




**Disable Call Forwarding When Busy for All MSNs**

	Pick up the handset.
 <b>6</b>  <b>7</b>     #	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




## Call Forwarding Delayed

Incoming calls are forwarded to the specified number if not answered at the number originally dialed within 20 seconds (about five rings). Call forwarding can be configured for your extension's outgoing caller ID (the first number assigned to an extension), for any number (for instance, a telephone at the other FRITZ!Box Fon ata extension), or for all numbers. All settings can be deactivated at any time.




### Call Forwarding Delayed for Your Extension's Outgoing Caller ID

	Pick up the handset.
<b>*61*</b> XNo. <b>#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




### Call Forwarding Delayed for Any MSN

	Pick up the handset.
<b>*61*</b> XNo. <b>*</b> MSN <b>#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




### Call Forwarding Delayed for All MSNs

	Pick up the handset.
<b>*61*</b> XNo. <b>*#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.




### Disable Call Forwarding Delayed for Your Extension's Outgoing Caller ID

	Pick up the handset.
<b>*61*#</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.

**Disable Call Forwarding Delayed for Any MSN**

	Pick up the handset.
<b>*61** MSN #</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.

**Disable Call Forwarding Delayed for All MSNs**

	Pick up the handset.
<b>*61** #</b>	Dial the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.





**Caller ID Suppression for Outgoing Calls (CLIR)**



The CLIR (Calling Line Identification Restriction) function prevents your telephone number being displayed on the other party’s phone during outgoing calls.

The CLIR function is disabled in the factory settings. You have the option of enabling this function permanently and then disabling it again. CLIR can also be used for individual connections.

**Enabling CLIR Permanently**

	Pick up the handset.
<b>#51 Ext. *1*</b>	Dial the sequence shown at left. Type in the number of the extension in the “Ext.” field.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

## Disabling CLIR Permanently

	Pick up the handset.
<b>#51</b> Ext. <b>*0*</b>	Dial the sequence shown at left. Type in the number of the extension in the “Ext.” field.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

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## Displaying the Incoming Caller ID (CLIP)

The CLIP (Calling Line Identification Presentation) function makes the number of callers – external and internal – visible on your telephone display.



*This feature is only effective if your telephone supports CLIP.*

The CLIP function is enabled in the factory settings. This function can be permanently disabled and enabled again.

## Enabling CLIP

	Pick up the handset.
<b>#50</b> Ext. <b>*1*</b>	Dial the sequence shown at left. Type in the number of the extension in the “Ext.” field.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.

## Disabling CLIP

	Pick up the handset.
<b>#50</b> Ext. <b>*0*</b>	Dial the sequence shown at left. Type in the number of the extension in the “Ext.” field.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



## Connected Line Identification Restriction and Presentation (COLR / COLP)

By default, a caller’s display always shows the Multiple Subscriber Number (MSN) of the extension she or he dialed. If you accept the call at another extension, the MSN of this extension will be displayed, as long as the caller is using an ISDN phone with the COLP feature enabled. If you do not want the caller to know that the call has been picked up at another extension (see page 56) and thus do not wish this number to be displayed, you have the option of suppressing transmission of the connected line. The caller’s display will continue to show the number he or she called.

Transmission of the connected line’s number can be switched on and off for each extension individually. Transmission of the connected line’s number is permanently enabled in the PBX factory settings.

### Disabling Connected Line Identification Presentation Permanently



To permanently disable transmission of the connected line’s number (COLR), proceed as follows:

	Pick up the handset.
#53 Ext.*1*	Dial the sequence shown at left to disable transmission of the connected line number. Type in the number of the extension in the “Ext.” field.
#91**	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



## Enabling Connected Line Identification Presentation Permanently

To permanently enable transmission of the connected line's number (COLP), proceed as follows:

	Pick up the handset.
<b>#53</b> Ext. <b>*0*</b>	Dial the sequence shown at left to enable transmission of the connected line number. Type in the number of the extension in the "Ext." field.
<b>#91**</b>	Save your settings if desired by dialing the sequence shown at left.
	Hang up the handset.



## Call Waiting

Activate the "Call Waiting" feature to be notified during a call if a second caller is dialing your line. An acoustic signal in your telephone handset notifies you that a second call is waiting. You can accept the connection with the new caller within 30 seconds. If you ignore the signal, the waiting call is rejected after 30 seconds.

For instructions on how to turn the "Call Waiting" function on and off, see the section "Disabling Call Waiting" on page 59.







<b>R2</b>	To accept a waiting call, dial the sequence shown at left. Your original call is now on hold.
<b>R1</b>	To return to your original connection, dial the sequence shown at left. You can also accept the waiting call by hanging up your existing connection, i.e., by hanging up the handset. In this case the phone rings as soon as you have hung up. Pick up the handset again to accept the waiting call.
<b>R0</b>	To reject a waiting call, dial the sequence shown at left.












## Explicit Call Transfer (ECT)

With this feature you can connect two external parties with each other, when one connection has been active and the other has been on hold. Then you can end your own connection while the other two parties continue their conversation.

### Explicit Transfer of One Active and One Held Connection

	Pick up the handset.
	Dial the external number of the first party. Talk.
	Press the Hold button.
	To dial a second call, simply dial either the desired extension number or the outside line access "o" followed by the desired external number. You can now talk to the second subscriber while your first call is on hold.
	To clear your connections while allowing the external parties to continue the call, connect the parties with each other.
	Dial the sequence shown at left. The connection on hold and the active connection are connected with each other. The external parties continue the call while you clear the connection.
	Hang up the handset.

### Explicit Transfer from a Three-party Conference Call

	Pick up the handset.
	Dial the external number of the first party. Talk.
	Press the Hold button.
	To dial a second call, simply dial either the desired extension number or the outside line access "o" followed by the desired external number. You can now talk to the second subscriber while your first call is on hold.
	Dial the sequence shown at left to begin a three-party conference call.
	Now all three participants can confer together. If either of the other two parties hangs up, your connection with the remaining participant remains active.
	To clear your connections while allowing the external parties to continue the call, connect the parties with each other.  You can also switch from the three-party call back to the original two-party connection. Dial the sequence shown at left. This ends the three-party conference. The connection that was active last before your initiated the three party conference is now active again. The second external call is on hold. You can alternate between the two connections by dialing the same sequence again.
	Dial the sequence shown at left. The connection on hold and the active connection are connected with each other. The external parties continue the call while you clear the connection.
	Hang up the handset.



### One-time Explicit (External) Call Transfer

Explicit Call Transfer (ECT) is an ISDN feature that must be enabled by your ISDN provider and thus usually is subject to extra charges. If ECT has not been enabled on your line, you can program the PBX to initiate a one-time explicit call transfer before connecting to two parties. When you end the connection, the other two parties will be connected to each other. Proceed as follows:

	Pick up the handset.
	Dial the sequence shown at left. You hear the external dial tone.
	Dial the external number of the first party. Talk.
	Press the Hold button.
	To dial a second call, simply dial either the desired extension number or the outside line access "o" followed by the desired external number. You can now talk to the second subscriber while your first call is on hold.
	To clear your connections while allowing the external parties to continue the call, connect the parties with each other.
	Dial the sequence shown at left. The connection on hold and the active connection are connected with each other. The external parties continue the call while you clear the connection.
	Hang up the handset.



*With this type of external transfer, both parties are connected to each other over your PBX. This means that both B channels on your ISDN line remain busy with this connection as long as the parties are connected to each other.*

## ISDN








**Call-back on Busy (CCBS)**

When you dial a number and it is busy, enable this feature. As soon as the line is free, your telephone rings for 20 seconds, as it would for an external call. When you pick up your handset, the number of desired party will be dialed automatically.

This feature is supported for both external and internal connections.

A maximum of five call-back requests can be enabled for each extension at any given time.

To enable this feature, proceed as follows:

	You have just dialed a number and now you hear the busy signal.
	If the call is not answered, within twenty seconds, either dial the number "5"
	or
	the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset.
	As soon as the subscriber you dialed hangs up, your telephone will ring.
	Pick up the handset. The subscriber's number is dialed again automatically.



## Call-back on No Response (CCNR)

This function can be used when you dial a number and the party does not respond. Once the party can be reached again and conducts a call from her or his phone, this function recognizes when this conversation is ended. When the subscriber you dialed hangs up, your telephone rings for 20 seconds, as it would for an incoming call. When you pick up your handset, the number of the desired party is automatically dialed again.

This feature is supported for both external and internal connections.

This command can be activated five times for each port.

To enable this feature, proceed as follows:

	You have just dialed a number and hear a ring tone.
	If the call is not answered, within twenty seconds, either dial the number “5” or the sequence shown at left.
	Wait for the acknowledgement tone.
	Hang up the handset. As soon as the party you dialed conducts a conversation from her or his phone and this call is ended, your phone rings.
	Pick up the handset. The number of the remote party is dialed automatically.

Callback requests can also be deleted manually, with the oldest callback request being deleted first.






	Pick up the handset.
	Dial the sequence shown at left.
	Hang up the handset.

## ISDN


## Suspend/Resume

The “Suspend/Resume” feature, also known technically as “Terminal Portability”, allows you to suspend an existing connection and resume it at another point on the S<sub>0</sub> bus. The connection can be resumed at a different ISDN terminal device (such as an ISDN telephone) that is connected to your BRI line along with FRITZ!Box Fon ata.





To suspend a call, proceed as follows:

	You are talking to Caller No. 1.
	Press the Hold button. Call No 1 is now suspended.
  PC 	Dial the sequence shown at left. Type in the parked-call ID as “PC”. The parked-call ID can be any number between 0 and 99. You will need to enter this ID again when you resume the call.

You will hear an acknowledgement tone to indicate that the call has been successfully suspended. If you hear the failure tone, this may indicate that you made a mistake, or that the Suspend/Resume feature is not enabled on your line. It is also possible that the parked-call ID you chose is already in use.

	After the acknowledgement tone, the connection is suspended. You can hang up the handset. The call remains suspended at the ISDN provider’s local switch for two minutes.
---	---

To resume the connection, proceed as follows:

	Pick up the handset again. (You may not have a call on hold. Otherwise, FRITZ!Box Fon ata will attempt to suspend it.)
  PC 	Dial the sequence shown at left. Type in the parked-call ID as “PC”. The parked-call ID is the number you entered when you suspended the call.



### Call Tracing (MCID)

During a call or after the caller hangs up, dial the following sequence:

---

**R\*39#** Dial the sequence shown at left.

---

For more information about this feature, contact your ISDN provider.



### Using Keypad Messages

FRITZ!Box Fon ata offers the “keypad” function. This function allows ISDN services and features to be controlled by entering characters and strings on the telephone keypad. These keyboard entries are called keypad messages. Keypad sequences allow you to use ISDN services and features that may not be supported by your ISDN terminal device.

Ask your ISDN provider for the specific keypad messages to access ISDN features.

#### Entering Keypad Messages on an Extension with Automatic Outside Dialing

---

	Pick up the handset.
<b>*#</b> Seq	Dial the sequence shown at left. “Seq” stands for the keypad sequence you received from your ISDN Service Provider.

---

#### Entering Keypad Messages on an Extension without Automatic Outside Dialing

---

	Pick up the handset.
<b>0*#</b> Seq	Dial the sequence shown at left. “Seq” stands for the keypad sequence you received from your ISDN Service Provider.

---



## 8 Information, Updates and Support

AVM provides numerous sources of information to assist you should any questions or problems arise. Here you will find the important information you need, in the form of manuals, updates and support.



*In many cases problems which arise during operation can be resolved by installing the current Microsoft Service Pack for your operating system. The current service pack can be obtained directly from Microsoft.*

### 8.1 Sources of Information

To take advantage of all commands and features of your FRITZ!Box Fon ata, consult the following information resources:

#### Documentation

FRITZ!Box Fon ata includes comprehensive documentation in a variety of formats:



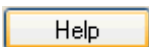
- The Installation Manual for FRITZ!Box Fon ata  
The installation manual for FRITZ!Box Fon ata is included with delivery. It contains information about installation and starting operation of FRITZ!Box Fon ata.



*You need the Acrobat Reader in order to read the PDF file. You can install Acrobat Reader from the INFO folder on the CD.*



- The Readme on FRITZ!Box Fon ata  
The Readme contains the latest information which was not yet available at the time the manual was printed. The Readme file is included on the FRITZ!Box Fon ata CD and in the “FRITZ!Box Fon ata” in the start menu.



- Help for FRITZ!Box Fon ata  
In the FRITZ!Box Fon ata window you can open the detailed Online Help by clicking the “Help” buttons.

### Internet

AVM provides comprehensive information on the AVM home page. Enter the following address:

[www.avm.de/en](http://www.avm.de/en)

- Click “Products” for the latest information about all AVM products as well as announcements of new products and product versions.
- The “Service” category contains the support form as well as various manuals of AVM products.

## 8.2 Updates

AVM makes new drivers for FRITZ!Box Fon ata and updates for the PBX software available free of charge over the Internet.

To download updates from the Internet, please enter the following URL:

[www.avm.de/en/download](http://www.avm.de/en/download)

Driver software for FRITZ!Box Fon ata can be downloaded from this location.

The AVM FTP server can also be used to download current driver software. Click the “FTP Server” link in the download area, or enter the following address:

[www.avm.de/ftp](http://www.avm.de/ftp)

## 8.3 Assistance from AVM Support



*Please take advantage of the information sources described above before contacting AVM support.*

AVM's Support team is at your service with direct assistance should problems arise during installation, the initial configuration and your first steps in operating the FRITZ!Box Fon ata.

The support desk can be reached by e-mail or by fax. AVM Support then will contact you to assist in solving your problem. You will receive an e-mail or a fax.

### Support by E-mail

Support requests can be sent to AVM by e-mail. Please use the AVM Support request form at:

[www.avm.de/en/support](http://www.avm.de/en/support)

Select the product for which you require technical support. Fill out the form and send it to AVM support by clicking the "Send" button.

### Support by Fax

If necessary, you can reach AVM Support at the fax number:

**+49 (0) 30 / 39 97 62 66**

The serial number of the product. This number is printed on the sticker on the base of the device. Support staff will always check this number to ensure that you are a registered user.

Prepare the following information for your Support consultant:

- Your name and address.
- An e-mail address or fax number at which you can be reached.
- Which operating system are you using (e.g., Windows XP or Windows 98?)
- Is FRITZ!Box Fon ata connected using the USB cable or the network cable?

- At what step of the installation or in which application does an error message appear? What is the exact wording of the message?
- With which USB driver version is FRITZ!Box Fon ata installed? See the Device Manager for the version number.
- Which firmware does FRITZ!Box Fon ata use? The firmware version is displayed on the “DSL Info” page of the FRITZ!Box Fon ata user interface.

Once you have gathered this information, please fax it to AVM Support. The Support team will assist you in resolving your problem.

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# Declaration of CE Conformity

**The manufacturer** AVM GmbH  
**Address** Alt-Moabit 95  
D-10559 Berlin

**herewith declares that the product**

**Product** FRITZ!Box Fon ata  
**Type** VoIP PBX

**complies with the following directives:**

- 1999/5/EEC R&TTE Directive:  
Radio Equipment and Telecommunica-  
tions Terminal Equipment
- 89/336/EEC EMC Directive:  
Electromagnetic Compatibility
- 73/23/EEC Low Voltage Directive:  
Electrical equipment designed for use  
within certain voltage limits

The following norms were consulted to assess conformity:

- CTR 3/1998.06.17
- EN 55022/9.98 + A1/10.00 + A2/01.03 Class B  
EN 55024/9.98 + A1/10.01 + A2/01.03
- EN 60950/2001



The CE symbol confirms that this product conforms with the above mentioned norms and regulations.

A handwritten signature in blue ink, reading "P. Fixel".

Berlin, 19/04/2005

Peter Fixel, Technical Director