OPERATING INSTRUCTIONS
BLUEFRITZ! AP-ISDN

Operation

Configuration

Update

FRITZ!

ISDN/Bluetooth
BlueFRITZ! AP-ISDN

Power
Bluetooth
ISDN B1
ISDN B2

BLUE
FRITZ!
AP-ISDN

HIGH-PERFORMANCE COMMUNICATION BY... **AVM**

BlueFRITZ! AP-ISDN

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Contents

Safety Instructions

- Do not open the housing of BlueFRITZ! AP-ISDN. The device contains hazardous components and should only be opened by authorized repair technicians.

- Never let liquids get inside the BlueFRITZ! AP-ISDN. Otherwise, electric shocks or short circuits may result.

- Do not install BlueFRITZ! AP-ISDN during an electrical storm or connect or disconnect any cables during an electrical storm.

- BlueFRITZ! AP-ISDN is intended for indoor use only.

Symbols

The following graphic symbols used in the manual always appear in connection with text printed in gray italics:

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

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

Typographical Conventions

The following symbols and highlighting conventions are used in this manual to make reading easier and to emphasize important information.

Highlighting

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	`a:\setup`
Gray italics	Hints, instructions and warnings, always accompanied by a symbol in the margin	*... For more information, see ...*

1 This Is BlueFRITZ! AP-ISDN

Welcome to the world of wireless ISDN connections via Bluetooth. This manual is your introduction to ISDN communication with BlueFRITZ! AP-ISDN. It contains information about the scope of functions, operation and installation of your BlueFRITZ! AP-ISDN and the accompanying software.

In order to establish a wireless Bluetooth connection with ISDN, you need two Bluetooth devices: one that you connect to the ISDN line by cable and another that you install in your computer. BlueFRITZ! AP-ISDN is connected directly to the ISDN line. It is your access to ISDN and thus also designated "access point". Up to seven computers or other Bluetooth-enabled devices, for instance, a PDA (Personal Digital Assistant) or a digital camera, can be connected to ISDN via Bluetooth connections. Bluetooth devices which log into an access point are called clients.

Use the FRITZ!X configuration program to configure Blue-FRITZ! AP-ISDN. A detailed description of the configuration settings in FRITZ!X is provided in the Online Help.

1.1 What Does BlueFRITZ! AP-ISDN Include

BlueFRITZ! AP-ISDN by AVM presents a communications package which makes available the advantages of both ISDN and Bluetooth technology: high transfer rates, fast connection setup and flexibility through a wireless connection between your computer and the ISDN line.

The BlueFRITZ! AP-ISDN communications package consists of:

- the Access Point BlueFRITZ! AP-ISDN

- FRITZ!X, the configuration program which makes it easy to set up BlueFRITZ! AP-ISDN

1.2 What Was Delivered?

The box contains:

- the Access Point BlueFRITZ! AP-ISDN

- one ISDN cable, 0.1 m long

- one ISDN cable, 6 m long

- one BlueFRITZ! AP-ISDN CD-ROM containing

  – FRITZ!X configuration software

  – documentation for all enclosed AVM products

- double-sided tape for mounting BlueFRITZ! AP-ISDN on smooth surfaces

- one BlueFRITZ! AP-ISDN manual (which you're reading now)

1.3 Operation Requirements

BlueFRITZ! AP-ISDN is designed for use with point-to-multi-point ISDN lines using the Euro-ISDN signaling protocol DSS1. The product does not support other line types. For BlueFRITZ! AP-ISDN operation you require one ISDN access (NT).

To connect BlueFRITZ! AP-ISDN, the NT must be connected to the power mains, as BlueFRITZ! AP-ISDN obtains its operating power from this source.

The connection between BlueFRITZ! AP-ISDN and your computer requires a Bluetooth client that complies with the directives of the Bluetooth standard. This means that it must support either the Common ISDN Access Profile (CIP), the Personal Area Networking Profile (PAN) or the Dial-Up Networking Profile (DUN) for Bluetooth communication.

The Access Point BlueFRITZ! AP-ISDN is ready for operation upon delivery. However, you have the opportunity to change the features of BlueFRITZ! AP-ISDN as an access point using the FRITZ!X configuration software.

The following minimum PC configuration is required for installation of the FRITZ!X configuration software:

- computer with hard disk, USB port, CD-ROM drive and at least 32 MB of RAM

- Bluetooth client that supports the ISDN profile CIP; the AVM BlueFRITZ! USB is particularly suited

- Pentium CPU at 166 MHz or comparable processor

- Microsoft Windows XP, Me, 2000 Professional or 98

1.4 BlueFRITZ! AP-ISDN LEDs

The LEDs on your BlueFRITZ! AP-ISDN indicate the following conditions:

LED	Meaning
Power	... shows the operation status of BlueFRITZ! AP-ISDN
	... indicates that the device is connected to ISDN
Bluetooth	indicates an active connection between BlueFRITZ! AP-ISDN and another Bluetooth device
ISDN B1	indicates an active connection on the first B channel
ISDN B2	indicates an active connection on the second B channel

1.5 Technical Specifications

- approximate dimensions: 103 x 39 x 21 mm

- Bluetooth interface for up to seven Bluetooth clients

- one Euro-ISDN interface (RJ45 jack)

- four LED status indicators

- power consumption during operation approx. 1.3 Watt

- Bluetooth Class 1, transmitter power up to 20 dBm (100 mW)

- transmission range of up to 100 meters (dependent on environment)

- frequency range 2.402 GHz ~ 2.480 GHz
- transmission rate of up to 1 Mbit/s
- Access point software (firmware) can be updated
- individual Bluetooth passkey preset at factory (16 characters, can be changed)
- conforms to CE standard

2 Hardware Installation

This chapter describes the installation of the hardware, that is, how to connect BlueFRITZ! AP-ISDN to ISDN and thus also to the power mains.

2.1 Preparing for Installation

BlueFRITZ! AP-ISDN can be installed on any suitable horizontal or vertical surface. The unit should be installed in a dry, dust-free location out of direct sunlight. Two cables with different lengths are supplied to connect BlueFRITZ! AP-ISDN. These allow you to select the optimum location to set up BlueFRITZ! AP-ISDN for Bluetooth connection, no matter where the NT is located. If you would like to mount BlueFRITZ! AP-ISDN at an elevated position on a smooth surface, use the double-sided adhesive tape included in the package.

2.2 Connecting BlueFRITZ! AP-ISDN to ISDN

Proceed as follows:

1. Connect BlueFRITZ! AP-ISDN to a socket of your ISDN line.

2. If you do not want to connect BlueFRITZ! AP-ISDN directly to the NT, use the 6-meter ISDN cable.

3. Make sure that the ISDN terminal (NT) is connected to the power supply. The NT supplies BlueFRITZ! AP-ISDN with power via the ISDN cable.

4. The "Power" LED on BlueFRITZ! AP-ISDN lights up and the device is ready for operation.

BlueFRITZ! AP-ISDN does not have an on/off switch. The "Power" LED remains on continuously.

BlueFRITZ! AP-ISDN is now connected. No further installation steps are necessary.

2.3 Working with BlueFRITZ! AP-ISDN

To establish a Bluetooth connection from the computer to ISDN, two Bluetooth devices are needed: BlueFRITZ! AP-ISDN, the ISDN access point which you connect to the ISDN line, and another Bluetooth device, the Bluetooth client. The wireless connection is established between the two devices via Bluetooth.

For connection to BlueFRITZ! AP-ISDN, your access point, the Bluetooth client requires a unique address and a passkey to control access to BlueFRITZ! AP-ISDN. The address and passkey are printed on the label on the bottom of BlueFRITZ! AP-ISDN's housing. As soon as a connection between both devices is established, the computer is connected to ISDN and the client is added to a list of accepted clients in BlueFRITZ! AP-ISDN. As soon as a client logs into BlueFRITZ! AP-ISDN successfully, that client's name is included in the list of clients known to the access point who can log in as often as they wish.

For instructions about connecting a Bluetooth client to a Bluetooth device, for instance, the BlueFRITZ! AP-ISDN, see the documentation of the Bluetooth client.
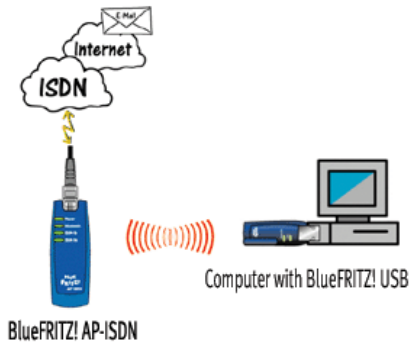
2.4 Using Different Bluetooth Profiles

In Bluetooth technology, suitable devices can offer the user multiple services, known as profiles. Besides the ISDN profile "CIP", BlueFRITZ! AP-ISDN offers additional profiles for the use of ISDN and CAPI. Currently these include the modem profile "DUN", the serial profile "SPP" and the network profile "PAN". All Bluetooth devices that support these profiles can be used with BlueFRITZ! AP-ISDN.

ISDN Profile CIP

For an ISDN connection with all ISDN features, a client that supports the ISDN profile "Common ISDN Access Profile" (CIP) must be used. BlueFRITZ! USB is such a device. This Bluetooth connection provides you with all ISDN features, such as channel bundling, ISDN data compression and short-hold mode.

For installation instructions and additional information, see the BlueFRITZ! USB manual.

Bluetooth connection between BlueFRITZ! USB and BlueFRITZ! AP-ISDN with the CIP profile
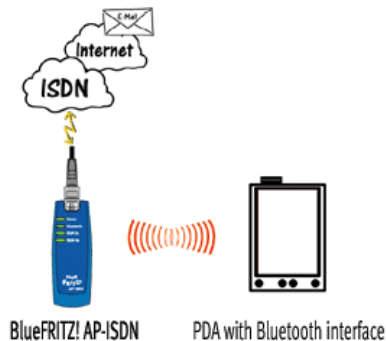
Modem Profile DUN

Bluetooth devices, for instance, some of the PDAs which are equipped with the modem profile "Dial-Up Networking" (DUN), can access BlueFRITZ! AP-ISDN as an ISDN modem.

As a DUN Access Point, BlueFRITZ! AP-ISDN is equipped with only a data modem: this means that 64 kbit/s are available for data transfer on one B channel. Features like channel bundling, ISDN data compression and short-hold mode are not supported in the DUN profile. The login of a DUN device always takes place in a similar sequence, regardless of the device type you are logging into BlueFRITZ! AP-ISDN. The login of a PDA to the Access Point is described here as an example:

1. Before you log in your Bluetooth-enabled PDA at the Access Point, set up the access to an Internet Service Provider (ISP) on the device. In Microsoft Windows operating systems, one way to do this is via Dial-Up Networking. See your PDA manual for more information.

2. Then use the software generally supplied with your PDA to start a search for other Bluetooth devices in its vicinity.

3. Once the PDA recognizes BlueFRITZ! AP-ISDN as an access point, the login is restricted by means of the 16-character passkey printed on the underside of Blue-FRITZ! AP-ISDN.

4. If login is successful, a Bluetooth connection is established and displayed by means of the Bluetooth LED on BlueFRITZ! AP-ISDN.

5. Start by accessing a preconfigured ISP and then an Internet browser. The connection to the Internet is dialed automatically.

For more information, see the manual of your PDA or other Bluetooth device.

BlueFRITZ! AP-ISDN   PDA with Bluetooth interface

Bluetooth connection between a PDA and BlueFRITZ! AP-ISDN with the DUN profile

Network Profile PAN

A Bluetooth connection with the network profile Personal Area Networking (PAN) allows the uncomplicated wireless networking of up to eight devices.
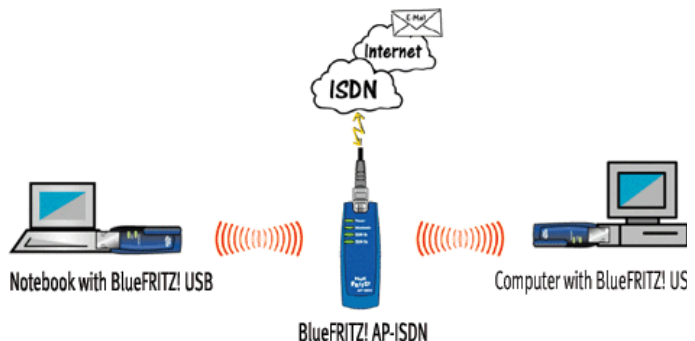
With the BlueFRITZ! products up to eight devices can be networked wirelessly in one PAN. Every computer that is to access this wireless network requires a BlueFRITZ! USB. Please note that the PAN profile requires the English BlueFRITZ! USB device driver available for download from the AVM website "www.avm.de/en" from July 2003 onwards. Each client logs in centrally at BlueFRITZ! AP-ISDN. Thus BlueFRITZ! AP-ISDN takes over the routing function between the individual clients in the

network. If BlueFRITZ! AP-ISDN is installed at a central location, the range between the clients can be nearly doubled. All settings for a network connection with the PAN profile are made automatically during the installation of BlueFRITZ! USB at the client PC. Before establishing a Bluetooth connection, simply select PAN in the client software before connecting to use a network connection with this profile. For more information on this topic, see the BlueFRITZ! USB manual.

A wide variety of options are available in a PAN network:

- folders and files on one computer can be released for users on the other computers

- remote control of the computer possible

- joint use of a printer or scanner connected to one of the computers

- wireless network games

- peer-to-peer communication, chat, Microsoft NetMeeting, etc.

The following diagram shows a possible scenario for using PAN: Via PAN, a notebook equipped with a BlueFRITZ! USB enjoys wireless access to released folders on another computer. It is also possible to access equipment connected there, like printers or scanners.

Bluetooth connection with the PAN profile between two computers via BlueFRITZ! AP-ISDN

3 Software Installation

The BlueFRITZ! AP-ISDN package includes configuration software with which you can change the settings of BlueFRITZ! AP-ISDN as an access point. This chapter describes how to install this FRITZ!X configuration software.

3.1 Installing the FRITZ!X Configuration Software

Proceed as follows to install FRITZ!X:

1. Insert the installation CD and run the program SETUP.EXE in the SOFTWARE\CONFIG folder.

2. Specify the folder in which the configuration software is to be installed on your computer.

3. Next, specify the program group in which the configuration program is to appear in the Start menu.

4. In the next dialog, enter the area code of your location and confirm by clicking "Continue". The program files are now copied to your hard disk.

5. Click "Exit" to close the installation program.

This completes the installation of the FRITZ!X configuration software.

3.2 Errors During Installation: What to Do

If errors occurred during installation and the FRITZ!X configuration software has not been installed correctly, proceed as follows:

1. Remove all of the installed software by following the instructions in the section "Removing the Software" on page 16.

2. Reboot your computer and perform the entire installation again.

3.3 Program Folder Setup

The Windows "Start" menu now includes a program group "AVM" under "Programs". This group contains one item:

● "FRITZ!X"

   This entry starts the FRITZ!X configuration program. For instructions on using the configuration program, please see the chapter "Configuring BlueFRITZ! AP-ISDN" on page 17.

3.4 Removing the Software

To remove the FRITZ!X configuration program, proceed as follows:

1. Depending on your operating system, click the "Add/Remove Programs" icon by selecting "start / Control Panel" (Windows XP) or "Start / Settings / Control Panel".

2. The "FRITZ!X" configuration program appears in the list of installed programs.

   In the operating systems Windows XP and Windows 2000, make sure that the "Change or Remove Programs" button is pressed.

3. Select the entry "FRITZ!X".

4. Click the "Change/Remove" button. All files and entries of the program will be deleted.

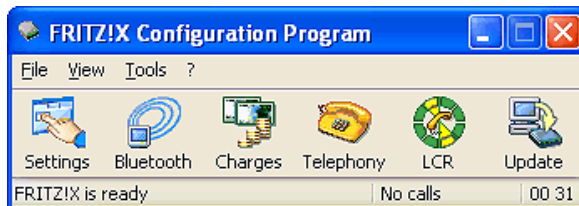This completes uninstallation of the FRITZ!X configuration software.

4 Configuring BlueFRITZ! AP-ISDN

The FRITZ!X configuration software is provided to set up your BlueFRITZ! AP-ISDN access point. This program can be used to change the features of BlueFRITZ! AP-ISDN as an access point. The complete range of functions in the configuration program are available only with a CIP connection between a client and BlueFRITZ! AP-ISDN. This is easiest with the Bluetooth client BlueFRITZ! USB.

4.1 The FRITZ!X Commands

Start the configuration program FRITZ!X by selecting "Start / Programs / AVM". The "FRITZ!X Configuration Program" dialog appears.

Use the "Bluetooth" and "Update" buttons to access the most important configuration program commands. For more information, see the Online Help.

Main window of the "FRITZ!X" configuration software

Bluetooth

On the settings pages of the "Bluetooth" menu command you have the option of changing the features of BlueFRITZ! AP-ISDN as an access point. The settings made here affect primarily the administration and control of the Bluetooth client. If no changes are made to these settings, any Bluetooth client can connect to the access point. The only requirement

is that the user must know the passkey of the ISDN access point, which is printed on the label on the base of the housing.

Access Point

Here the access point currently in use is displayed, complete with device name, Bluetooth address and features. The device name can be changed here.

Settings

The settings options on this page allow you to control the Bluetooth client's use of the access point.

- Here you can specify under what conditions the device should continue to allow unknown clients to log in to the access point: unrestricted, for the next 15 minutes, or not at all.

- The clients accepted by the access point can be displayed in a list and entries from this list may be deleted. Accepted clients are those who have connected to the access point successfully at least once and have not been deleted from the list of accepted clients.

- The passkey for connecting to the access point can be changed here.

- ISDN use can be enabled or disabled for the Bluetooth clients.

Connections

This list registers all clients currently connected to the access point. The clients are shown with their Bluetooth address. The list displays the parameters of the Bluetooth connection: duration, transmitter power, field intensity, link quality, error rate, number of packets sent and amount of bytes sent.

Click the "Update" button to update the list.

Version

This settings page contains the version number of the application started when you click the "Bluetooth" button.

Update

Use this menu to update the PBX software (firmware) to keep your access point up with new technology.

For a PBX software update, proceed as follows:

1. Establish a CIP connection to your access point using BlueFRITZ! USB.

2. Start "FRITZ!X" and select the "Update" menu command from the main window.

3. In the text field, enter the path to the update file.

    Alternatively, click the "Find Firmware Update File…" button to search for the file. The file must have the ".dat" file-extension and must be a valid BlueFRITZ! AP-ISDN update file. The version number of the update file is displayed. If the version of the update file is more current than the one already installed, the update is recommended.

4. Start the update by clicking the "Update" button.

5. A safety prompt appears. If you are sure you want to perform the firmware update, confirm the message. If the update version is the same or older than the currently active version, you are prompted again to confirm that you want to install it nonetheless.

    Never abort an update in progress!

6. A message appears announcing that the update has been successfully completed.

This completes the update operation. The "Firmware version" panel now shows the new version number.

4.2 Communication with BlueFRITZ! AP-ISDN

The section illustrated below appears on both settings pages of FRITZ!X. Use the "Apply" button to save the settings made here and load them in BlueFRITZ! AP-ISDN.

Buttons for BlueFRITZ! AP-ISDN Settings

5 Information, Updates and Support

AVM provides numerous sources of information to assist you if any questions or problems arise. Whether manuals, FAQs, updates or support – here you will find the important information you need.

5.1 Information Sources

Information about all components of BlueFRITZ! AP-ISDN is available here:

Documentation

Help for FRITZ!X: In all FRITZ!X modules you can open the detailed Online Help by pressing "F1" or clicking the Help button.

Internet

AVM provides comprehensive information in the Internet:

See also the AVM home page. The URL of the AVM home page is:

www.avm.de/en/

The "Products" category provides detailed information about all AVM products as well as announcements of new products and product versions.

5.2 Updates

New drivers and software updates for your access point and software applications are available for downloading free of charge from AVM's Internet site or the AVM Data Call Center (ADC).

Internet

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

www.avm.de/en/download

The AVM FTP server can also be used to download current software drivers. The download area of the FTP server can be accessed by clicking the "FTP Server" link or entering the following address:

www.avm.de/ftp

AVM Data Call Center (ADC)

All programs and drivers available from the Internet site can also be obtained from the AVM Data Call Center (ADC).

Dial the AVM Data Call Center using FRITZ!data (IDtrans protocol) at:

+49 (0)30 / 39 98 43 00

For faster file transfer, enable the options "2-channel transfer" and "Data compression".

5.3 Assistance from AVM Support

Please use the information sources described above before contacting the support.

For direct assistance, AVM Support is available to provide help when problems arise during installation and your first steps in operating BlueFRITZ! AP-ISDN.

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

Should problems establishing connections arise, please try to establish a test connection to the AVM Data Call Center (ADC) before contacting Support. See the instructions in the FRITZ! manual ("FRITZ!data" chapter), which is included in the INFO folder on the installation CD. Since the ADC receives a great number of calls, please try several times if the line is busy. In the case of an error, write down the exact wording of the error message. Support requires this information to rectify the error.

Update the software at any time by using the FRITZ!X application to connect via Bluetooth to the CIP ISDN profile. If no appropriate Bluetooth client is available for a connection from BlueFRITZ! AP-ISDN to your computer, you can order a special cable from AVM to connect BlueFRITZ! AP-ISDN to your computer's USB. The update is then performed with the FRITZ!X configuration program. See also the section "Update" on page 19.

Support by E-mail

Support requests can be sent to AVM by e-mail. Please use the support request form available at the AVM Internet home page. Fill out the form and send it to AVM support by clicking the "Send" button. This form is available at:

http://www.avm.de/en/service/support/

Support by Fax

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

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+49 (0)30 / 39 00 44 25
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Have your Product Identification Code ready when you call. This code is printed on the FRITZ! CD case. Support staff will always check this number to ensure that you are a registered user.

Index

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Declaration of CE Conformity

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

herewith declares that the product

Type	ISDN Access Point
Product	BlueFRITZ! AP-ISDN

complies with the following directives:

- 1999/5/EEC   R&TTE Directive:
  Radio Equipment and Telecommunications 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 Class B
  EN 55024/9.98
  ETS 300 826
- EN 60950/1992+A1+A2+A3+A4+A11
  EN 41003/1998

C€ 0681 ⚠ The CE symbol confirms that this product conforms with the above mentioned norms and regulations.

Berlin, 01-02-2001   Peter Faxel, Technical Director