

# FX-5

## User Manual



[WWW.FREecom.COM](http://WWW.FREecom.COM)

Rev. 315

The future is simple

**Freecom**  
TECHNOLOGIES



### Freecom FX-5



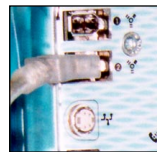
**USB 2.0**

**or**

**USB 2.0 + FireWire \***



### USB and FireWire connection to the PC:



\* Depends on model

**USERS MANUAL**

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***Dear user!***

Welcome to the **Freecom FX-5** installation. Before you install the device, we would like to ask you to carefully read the following instructions and take them into consideration, especially, when making changes to your system.

With the purchase of this device you have acquired a drive that can be connected to any PC or Mac with the appropriate interface.

***Freecom Technologies • Germany***  
***www.freecom.com***

***Warning !***

All rights reserved. The products named in this manual are only used for identification purposes and may be trademarks or registered trademarks of the respective companies. This device was designed for home or office use.

Warning! This device is equipment complying with EN55022 class A. This equipment can cause radio disturbances in a residential area. If this is the case, the user has to take appropriate measures and assume all responsibility and costs for. It may not be used near or with any life-sustaining systems.

Freecom Technologies is not liable for any damages that may occur from the use of a Freecom system. All rights reserved. We reserve the right to upgrade our products in keeping with technological advances.

## System Requirements

The following hardware and software requirements must be fulfilled to ensure trouble-free operation.

To use the Freecom drive, you will need a free:

- USB/USB-2 port\*
- FireWire / i.LINK port (IEEE 1394)
- a CD-ROM or Internet connection for driver installation

- for the FX-5 DVD:

- PC with Pentium II or higher
- at least 32 MB RAM
- Windows 98, ME, 2000 or Windows XP
- To playback DVD Movies, a DVD-Movie decoder is needed. This can be either a hardware decoder or a software decoder. Hardware decoders are available as PCI or PCMCIA card and are available from most computer shops.
- A Software DVD-Movie playback application is included with the FX-5 DVD drives. We recommend to use this software only on a Pentium II 400 Mhz with 64 MB RAM or higher.
- This drive is RPC-2 (Regional Protection Coding II) enabled. Your region will need to be set before DVD Movies can be played.

***Note: Please note that the regional code may not be changed more than five times.***

- for the FX-5 CD-RW:

a computer system with the following equipment

PC:

- Pentium I Processor or higher
- at least 32 MB RAM
- at least 40 MB of free hard disk space  
(Recommended: Pentium II Processor, 64 MB RAM, 800 MB free hard disk space)
- Windows 98, ME, 2000 or Windows XP

Mac:

- iMac, iBook, PowerMac G3/G4 or Power Book G3/G4
- MacOS 9.1 or higher \*\*

\* For maximum performance of the FX-5 your computer system must support hi-speed USB-2. The FX-5 does not include a USB-2 PCI Card necessary to achieve full speed. This has to be purchased separately (Product #17789) or comes as part of your original computer hardware.

\*\* For optimal USB 2.0 performance Mac OS X v10.1 or higher is required. To use your Freecom FX-5 on MacOS X or higher no additional drivers are needed.

- for the FX-5 Combo CD-RW / DVD:

- Pentium II Processor or higher
- at least 32 MB RAM
- at least 40 MB of free hard disk space  
(Recommended: Pentium II Processor, 64 MB RAM, 800 MB free hard disk space)
- Windows 98, ME, 2000 or Windows XP
- To play back DVD Movies, a DVD-Movie decoder is needed. This can be either a hardware decoder or a software decoder. Hardware decoders are available as PCI or PCMCIA card and are available from most computer shops.
- A Software DVD-Movie playback application is included with the FX-5 DVD drives. We recommend to use this software only on a Pentium II 400 Mhz with 64 MB RAM or higher.
- This drive is RPC-2 (Regional Protection Coding II) enabled. Your region will need to be set before DVD Movies can be played.

***Note: Please note that the regional code may not be changed more than five times.***

## **Media Formats**

### - for the Freecom FX-5 DVD:

The Freecom FX-5 reads the following formats:

- MS-DOS data CDs (High Sierra, Mode 1 & Mode 2 complying with ISO 9660)
- Data – CDs (Joliet)
- CD ROM XA
- Mixed Mode CDs
- Kodak Photo CDs (single and multisession)
- UDF (Universal Disc Format)
- Audio CDs
- DVD ROM
- DVD Video (see hardware requirements)
- DVD-R, CDI, CD-Midi, CD-R, CD-RW
- DVD Media

### - for the FX-5 CD-RW:

The Freecom FX-5 reads and writes according to the following standards:

- MS-DOS data CDs (High Sierra, Mode 1 & Mode 2 complying with ISO 9660)
- Data – CDs (Joliet)
- CD ROM XA
- Mixed Mode CDs
- Kodak Photo CDs (single and multisession)
- UDF (Universal Disc Format)
- Audio CDs
- Mac: Volume, Files & Folders, Mac/ISO Hybrid

The drive can read CD-RW discs, write and rewrite them, as well as saving data to CD-R media. The capacity of the CD-RW is 650/700 MB. CD-RW disks are only read-compatible with multiread-capable CD-ROMs, DVD-ROMs as well as CD-RW drives.

### - for the FX-5 Combo CD-RW / DVD:

- See Freecom FX-5 DVD and FX-5 CD-RW

## Precautionary Measures and General Notes

- After transport, particularly at low outside temperatures, condensation can form which can lead to a malfunction. For that reason, you should not begin operation until the drive and CDs have reached room temperature.
- Operate the Freecom drive only in a horizontal position, to prevent damage to the media or the mechanical parts.
- Operate the device only at temperatures ranging from 5 - 50 °C.
- Do not use the device in a dusty and humid environment.
- Protect the drive from shocks and other mechanical effects!
- The device should not be operated in the vicinity of strong electromagnetic radiation sources (loudspeakers, mobile telephones etc.).
- Due to the high data transfer rates, the cable length should not exceed 1 m. Error-free transmission cannot be guaranteed with longer cables.



## CHAPTER 1: Initial Operation - Brief Description

1. Plug in the connection cable to the FX-5.
2. Connect the power cable supplied to the designated power connector on the Freecom drive.
3. Plug the power supply of the Freecom drive into the power outlet.
4. Connect the other end of the connection cable to the USB port/FireWire port on the PC.
5. To complete the rest of the installation procedure:

*(only Windows 98:)* After you have connected the FX-5, please start with the driver installation, as described in chapter 2 on page 11.

*(only MacOS 9.x:)* Please install the Toast software, before connecting the FX-5 to your computer. For further instructions see chapter 3.1 (Installing the Toast Software for Mac). Since MacOS 9.x supports only USB 1.1 your FX-5 will be recognised as a USB 1.1 device.

Under Windows ME / 2000 / XP and MacOS X a separate Freecom driver is not required. The drivers for Windows ME, Windows 2000 and Windows XP will be installed automatically by the operating system after plugging in the Freecom FX-5 into the USB or FireWire port of the computer.



(USB/FireWire version)

### 1.1 Assigning the drive letter

After successfully completing the installation of the Freecom FX-5, a new drive letter is assigned automatically (the first available letter after the internal hard drives). This can shift the drive letter of an internal CD-ROM drive (for example, 'D' to 'E'). If this leads to problems, it is possible to change the drive letter assignment as follows:

#### - under Windows 98 and ME:

1. Click on *"Start"* - *"Settings"* - *"Control Panel"*.
2. Click on *"System"*.
3. Select *"Device Manager"* and click on *"CD-ROM"* or *"Drive"*.
4. Click on the Freecom FX-5, then on *"Properties"* - *"Settings"*. (The currently assigned drive letter as well as the reserved drive letters will then be displayed.)
5. Under *"Reserved Drive Letter"* enter a drive letter, for example "F" for the Freecom FX-5 as the *"First drive letter"* and "F" again as the *"Last drive letter"*.
6. Confirm your selection with *"OK"*. When you restart your computer, the Freecom FX-5 will be assigned the letter F in *"My Computer"*.

#### - under Windows 2000 and XP:

1. Click *"Start"* - *"Settings"* - *"Control Panel"* - *"Administration"* - *"Computer Administration"*.
2. Click *"Disk Maintenance"* and then select the Freecom drive.
3. In the *"Operation"* menu (*"Action"* in Windows XP), select All Tasks and then click Change drive letter and path.
4. In the next window, click *"Change"* and select a drive letter in Assign the following drive letters.
5. Click *"Yes"* to confirm your change.

### 1.2 Operating Freecom drives

Freecom drives are just as easy to use as an internal device.

One big advantage of Freecom devices is their portability. By connecting to the cable interface, it is very easy to use the drive with various computer systems.

To insert and remove media (CDs, DVDs, CD-Rs, CD-RWs), press the eject button. (This is only active when the drive is ready for operation.)

When inserting a media, please make sure that the printed side is facing up. Do not touch the underside of the media. Fingerprints can lead to read errors or even make your media unusable.

## CHAPTER 2: Driver Installation

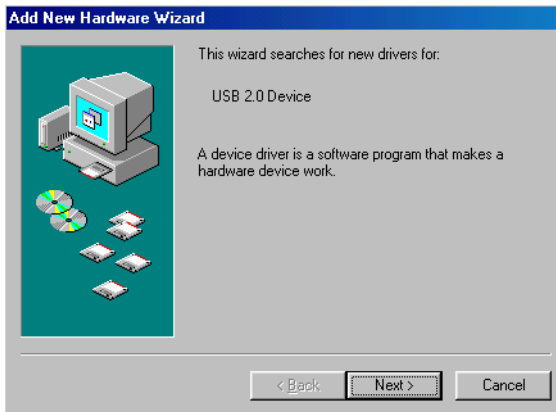
Under Windows ME / 2000 / XP a separate Freecom driver is not required. The drivers for Windows ME, Windows 2000 and Windows XP will be installed automatically by the operating system after plugging the Freecom FX-5 into the USB or FireWire port of the computer.

### 2.1 USB version

#### **Driver installation under Windows 98 SE**

Your FX-5 is fully backwards compatible with USB 1.1. The installation for USB 1.1 is the same as described below for USB-2.

1. Insert the Freecom "Manual and Driver" CD into the CD-ROM drive.
2. Connect your Freecom FX-5 to the USB connector of your notebook or computer.
3. The "Add New Hardware Wizard" opens and a "USB 2.0 Device" (USB-2 Host Controller) or a "USB2-IDE Controller" (USB 1.1 connector) is found.



Click on "Next".

4. In the next window select "Search for the best driver for your device. (Recommended)".  
Click on "Next".
5. Make sure that the checkbox "CD-ROM drives" is activated in the next window. Continue by clicking on "Next".

6. The Hardware Wizard finds a "Freecom FX-5".



By clicking on "Next" the necessary files will be installed. Afterwards click on "Finish". The "Add New Hardware" Wizard opens again saying a new "USB Mass Storage" Device is found.

Please repeat the steps described above to finish the installation.

## 2.2 FireWire version

### Installation under Windows 98 SE

**Note: FireWire (IEEE 1394) is only supported by Windows 98 SE (and above). If you are using an older version, you must first update Windows.**

1. The driver database is loaded automatically after you have connected the FireWire cable to the PC.
2. Now place the "Windows 98 Installation CD" in your internal CD-ROM drive.
3. The "Hardware assistant" window appears on the screen. Click on "Next".
4. Select the item "Search for the best driver for the device" (Recommended) and confirm with "Next".
5. Make sure that the checkbox "CD-ROM drives" is activated in the next window. Continue by clicking on "Next".
6. The next window shows the driver file found on the CD-ROM. Confirm with "Next".
7. Click on "Finish" in the next window.
8. In order for the changes to take effect, you must restart your computer.

**Note: You can plug the drive in and unplug it at the FireWire port while the PC is running. The drive will be recognized automatically under "My Computer" when it is reconnected ("hot plug & play").**

## ONLY FX-5 CD-RW AND FX-5 COMBO CD-RW / DVD VERSION

### CHAPTER 3: The CD Recording Software

#### Installing the CD Recording Software

After installing the driver software, your Freecom FX-5 is now able to read CD-ROMs. To record a blank CD, you must first install the writing software (for the mastering or the packet writing procedure). We recommend using the software which has been provided with your drive.

The installation guide for the software is supplied on the same CD as the software. After installing the recording software, the drive is fully operational.

**Note: If you wish to use other software, please find out from the supplier whether his products support the Freecom FX-5 CD-RW / Combo CD-RW / DVD.**

#### 3.1 Installing the Toast Software for Mac

To install the "Toast" software application:

1. Insert the "Toast Installer CD" in your CD-ROM drive.
2. Double-click the "Toast" Installer.
4. Follow the on-screen instructions to install "Toast" on your hard disk.
5. (OS 9.x:) You will need to restart your Mac.

#### 3.2 Special Instructions before Writing a CD

- Please note that writing CDs is principally a compact data transmission procedure which can be disrupted by even the smallest mechanical disturbance.
- Never clean the CD-R/CD-RW drive with a commercially available CD or a CD-ROM cleaning set. This can damage the drive.
- Recordable CDs (blanks) are more sensitive than commercially available CDs. Use only a solvent-free, non-abrasive marker when writing on a CD.
- Do not stick any conventional labels on the CD-Rs, since the adhesive can attack the media. Special labels for CD-R media are available in retail computer stores. Never remove a label from a CD-R media otherwise you will damage the protective layer and make the CD-R unusable.
- The drive recognizes the media as soon as it is placed into the drive. CD-R media is compatible with the vast majority of CD-ROM drives and CD audio players and work in most DVD-ROM drives.

**Note: For optimal results use high quality CD-R(W)s like Freecom CD-R(W)s 80 min / 700 MB only.**

### 3.3 Preparing to write a CD (PC only)

Before creating a CD:

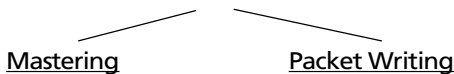
1. By clicking "Start" - "Programs" - "Accessories" - "System Tools" - "ScanDisk" check your hard disk with the ScanDisk program.
2. By clicking "Start" - "Programs" - "Accessories" - "System Tools" - "Disk Defragmenter" defragment your hard disk.

other preparations:

- No sleep mode setting / no multitasking
- Close all open windows and other running programs (Anti Virus)
- Deactivate automatic recognition of CDs (in the Device Manager under Windows 98/ME/2000/XP)
- Deactivate the screen saver
- Log out of the network before starting the writing procedure (if applicable)
- Deactivate your modem

### 3.4 Procedure for writing CDs

There are two procedures for creating and writing your CDs.



#### 3.4.1 The Mastering procedure

is a process for creating data CDs and Audio CDs. Data is compiled onto a "Master CD" in one (single session) or several (multisession) writing procedures. During these procedures, the data is made compatible according to various industry standards, allowing for example audio CDs to be read by any CD player. The standards for new technology (for CD, video etc.) are prepared for data storage in special readable formats. Special programs such as "Easy CD Creator", "WinOnCD", "CEQuadrat ToGo!", "Nero Burning ROM" are necessary to convert data into these specified formats. These types of programs are necessary for writing data CDs in ISO 9660 and Joliet formats as well as for writing audio CDs, Mixed Mode CDs and Photo CDs.

**Note: Data CDs in Joliet format are only readable under Windows 95, 98, ME, NT 4.0, 2000 and XP.**

### 3.4.2 The Packet Writing procedure

can be used to create CDs without starting a special mastering program. The Packet Writing procedure allows you to use blank CDs in combination with the Universal Disc Format (UDF), similar to an additional hard disk or floppy disk. You can write files directly from any Windows application to the CD using the same procedure as when writing to the hard disk. You can also copy files to the CD using Windows explorer.

**Note: We recommend using the software which has been provided with your drive. If you wish to use other software, please find out from the supplier whether his products support the Freecom FX-5 CD-RW / Combo CD-RW / DVD.**

Following the installation of the software, you can start the writing procedure by simply dragging the file to be written in the Explorer/File Manager (Drag&Drop Principle), assuming there is a UDF-formatted blank disk in your CD-RW drive.

A CD-R disk can only be written once with the CD-R drive and previously written files can be deleted but not overwritten. The great advantage of the CD-RW drive in conjunction with CD-RW media is that it allows you to rewrite to the media.

**Note: Please note that the mastering procedure and the packet writing procedure can only be used separately, therefore a mixing of these procedures on one CD-RW is not possible.**

### 3.5 Peculiarities when writing audio CDs

Please note that some older CD player models cannot read self-written CDs.

**Note: Audio files must have the proper format (stereo, 16 bit and 44.1 kHz sampling frequency) and must be supported by the CD recording software, for example, \*.wav. Some programs offer conversion functions. Soundcards and the software that come with them can also be used.**



## CHAPTER 4: Troubleshooting

### ***General problems (depending on the type of connection)***

If you still have problems getting your Freecom drive to function properly despite having installed it correctly, then please check whether

- the cable is properly connected to your Freecom drive
- the drive is being supplied with power
- the tray can be opened and closed
- your system meets the hardware requirements (see pages 5/6)

If audio playback does not work, please check if

- the loudspeaker is properly connected
- the cables are firmly connected
- the loudspeaker control on the amplifier or on the active loudspeakers is correctly set
- the audio software is correctly installed.

***Note: Please note that CD-RW drives (Freecom FX-5) must never be cleaned with a lens cleaning set!***

**Freecom Internet Service**

Freecom Technologies have the following service available on the Internet at **www.freecom.com**

- Online information about technical problems
- current product information
- Drivers, driver updates and software information
- Forum

**Support Hotline**

The following hotlines are available if you still are unable to get your Freecom device to work properly after reading the manual and the suggestions for correcting errors:

	<b>Hotline</b>	<b>Email</b>
<b>België (NL)*</b>	<b>0 78 25 00 00</b>	<b>supportnl@freecom.com</b>
<b>Belgique (F)*</b>	<b>0 78 25 00 01</b>	<b>supportfr@freecom.com</b>
<b>Belgien (D)*</b>	<b>0 78 25 00 02</b>	<b>supportde@freecom.com</b>
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<b>Suomessa</b>	<b>03 - 6 10 13 82</b>	<b>supportint@freecom.com</b>
<b>Sverige</b>	<b>08 - 29 66 00</b>	<b>supportint@freecom.com</b>
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<b>USA</b>	<b>510 548 48 49</b>	<b>supportusa@freecom.com</b>
<b>other countries</b>	<b>+31 (0) 1 58 88 01 10</b>	<b>supportint@freecom.com</b>

\* (alléén in België/seulement pour la Belgique/nur in Belgien)

If possible, try to call from a phone near your computer.

Please have the following information on hand for your call:

- the serial number on the rear of your Freecom drive
- the revision no. of the "Freecom Manual and Driver" CD
- information on the power supply
- the version number of your operating system and the software you are having problems with
- the precise error description or error message displayed
- the name and the model of your computer and, in case it is needed, the installed hardware
- Is the problem reproduced every time?
- Has this problem occurred before? If it is a new one, have you recently

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