USB to IDE Adapter

FEDERAL COMMUNICATIONS COMMISSION AND INDUSTRY CANADA
RADIO-FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, might cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

EUROPEAN UNION DECLARATION OF CONFORMITY

This equipment complies with the requirements of the European EMC Directive 89/336/EEC.

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TRADEMARKS USED IN THIS MANUAL

BLACK BOX and the ◆ logo are registered trademarks of Black Box Corporation.

IBM is a registered trademark of International Business Machines Corporation.

Microsoft, Windows, Windows Me, and Windows NT are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Any other trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

NORMAS OFICIALES MEXICANAS (NOM)
ELECTRICAL SAFETY STATEMENT

INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.

2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.

3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.

4. Todas las instrucciones de operación y uso deben ser seguidas.

5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..

6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.

7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.

8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.

9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.

11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.

13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.

14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.

15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.

16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.

17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.

18. Servicio por personal calificado deberá ser provisto cuando:

    A: El cable de poder o el contacto ha sido dañado; u

    B: Objectos han caído o líquido ha sido derramado dentro del aparato; o

    C: El aparato ha sido expuesto a la lluvia; o

    D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o

    E: El aparato ha sido tirado o su cubierta ha sido dañada.

Contents

1. Specifications

**System
Requirements:** IBM® PC compatible computer with a CD-ROM
drive and free USB port, running
Windows 98/98 SE, Windows Me, or (with
updated firmware) Windows 2000

Compliance: CE; FCC Part 15 Subpart B Class A, IC Class/
classe A

Standard: USB 1.1

Interfaces: USB Type A, IDE/ATAPI

Data Rate: Up to 12 Mbps

User Controls: Included driver software for Windows 98 or
Windows Me;
With updated firmware: OS autodetection and
mediated control with Windows 2000

Indicators: None

USB TO IDE ADAPTER

Connectors: 40-pin Berg female;
On the end of the attached 6.6-ft. (2-m) cable:
    USB Type A female

**Temperature
Tolerance:**   32 to 131˚F (0 to 55˚C)

**Humidity
Tolerance:**   Up to 90% noncondensing

Power: For Adapter: From PC's USB interface;
For attached IDE device: From utility-power
    (mains) outlet, through included external
    power supply:
    Input: Through 5.5-ft. (1.7-m) detachable
        input cord and IEC 320 inlet: 100 to
        240 VAC, 50 or 60 Hz, autosensing;
    Output: Standard power through 3-ft. (1-m)
        nondetachable output cord and 4-pin
        Molex connector

Size: 0.6"H x 3"W x 2.5"D (1.5 x 7.6 x 6.4 cm)

Weight: 4 oz. (113 g)

2. Introduction

The USB to IDE Adapter is simple to use and light enough to take anywhere. If all of the internal IDE connections in your USB-equipped desktop or portable IBM compatible PC are occupied, you can use the Adapter to connect an external IDE storage device to the PC. Note that any device you attach needs to be ATA/ATAPI compatible, so that it can be driven natively by Windows. Devices that require extra drivers are not supported.

Some features of the Adapter itself and its hardware:

- Connects a portable storage device to any PC USB port.

- Transfers data at USB's relatively high serial data rate.

- Supports ATA/ATAPI CD-ROM, CD-RW, DVD-ROM, DVD-RW, and other types of optical storage.

- Supports IDE/EIDE hard drives with Gigabyte capacities. (Drives with capacities less than 1 GB are *not* supported.)

- Supports IDE ATAPI models of CompactFlash, Zip®, Jaz®, LS-120, and other types of removable-storage drives.

- Comes with a universal power supply for the device.

- Can be autodetected by various versions of Microsoft® Windows® (but see the next page and **Chapters 3** and **4**).

Some features of the Adapter's USB interface:

- Full compliance with version 1.1 of the USB specification.

- Supports USB suspend/resume, enable/disable, and remove/recover operation.

- The Adapter's power consumption is low enough that it can be bus-powered through the USB interface.

Some features of the Adapter's software:

- A driver is supplied for Windows 98/98 SE and Windows Me. (No driver is required for Windows 2000, though you must perform the included upgrade to firmware version 2.6.)

- Once the driver is installed on a Windows 98/98SE or Windows Me computer, it enables Plug and Play support—the Adapter's attached device is autodetected by, and can communicate with, the OS.

At the time of this writing, the Adapter ships from the factory with a power supply for the attached device, a software CD-ROM, and this manual. (The package contents are, however, subject to change without notice.) Please contact Black Box if anything arrived damaged.

3. Software Installation

The USB to IDE Adapter comes with a CD-ROM that contains an installer application (named "USB2IDEFW26.EXE" or something similar) and one or more documents. You can run the installer to unpack and install a couple pieces of software for use with the Adapter. One is a driver and one is a firmware-upgrade program.

If you'd like to connect the Adapter to a computer running Windows 98/98 SE or Windows Me, you need to install the driver that's part of the Adapter's included software on that computer.

If you'd like to connect the Adapter to a computer running Windows 2000, the Adapter has to be upgraded to firmware version 2.6. However, because the firmware-upgrade program that's part of the Adapter's included software is only compatible with Windows 98/98SE, you need to install the included software on a Windows 98 machine with a USB port, as described in the rest of this chapter. Then attach the Adapter to the Windows 98 machine and update the Adapter's firmware as described in **Chapter 4**. (The software doesn't need to be installed on the Windows 2000 machine, because Windows 2000 doesn't require the driver.)

To install the software, place the CD-ROM in the computer's CD or DVD drive. Select this drive in "My Computer." Double-click on the installer application; it will run, and you'll see the installation screens in Figures 3-1 through 3-3 below and on the following pages (keep clicking "Next" to proceed with the installation, then "Finish" to complete it).

Figure 3-1. The first installation screen.

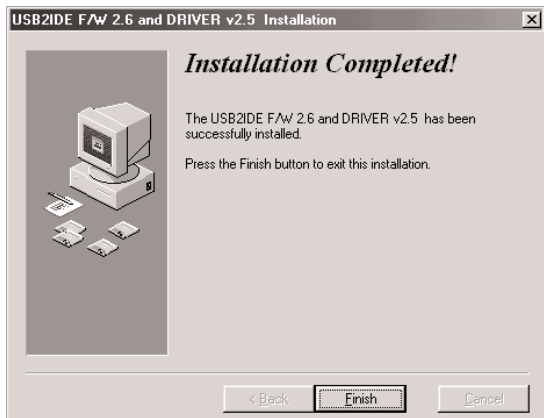**Figure 3-2. The second installation screen.**

Figure 3-3. The final installation screen.

Once the software is installed, you need to select Shut Down from the Start menu and restart the computer:
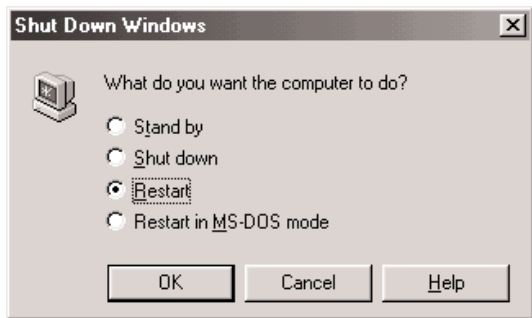

Figure 3-4. Restarting the computer.

The driver is now installed and active. At any time after this, when you connect the Adapter and an attached storage device to this computer (see **Chapter 5**), an entry named "USB2IDE Bulk Storage" will appear in the USB-controller list in the Windows Device Manager, as shown in Figure 3-5 on the next page. (If you connect the Adapter without a device attached, an Xed-out entry named "Unknown device" will appear instead.)
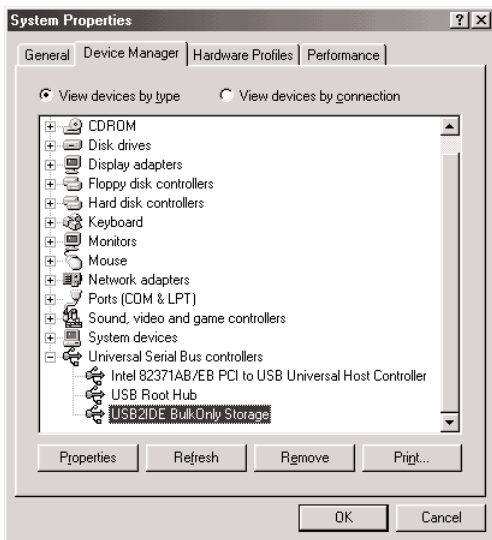
Figure 3-5. The Adapter's Device Manager entry.

A volume named "Removable Disk" will also appear in your "My Computer" window:

Figure 3-6. The "Removable Disk" volume.

If at some later time you don't want to use the Adapter with this computer, you can uninstall the software by first double-clicking "My Computer," then "Control Panel," then "Add/Remove Programs." Select the Adapter's driver in the window that appears.
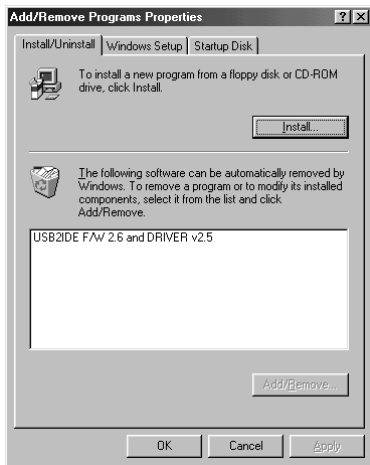

Figure 3-7. Uninstalling the driver software.

4. Upgrading the Adapter's Firmware (Windows 2000 Only)

As described at the start of **Chapter 3**, if you want to use the USB to IDE Adapter with a Windows 2000 computer, you need to install the Adapter's software (including its firmware-upgrade program) on a Windows 98 computer with a USB port. Then attach the Adapter to that USB port and take these steps:

1. Click on the Windows Start button, then drag the pointer to Programs, then ScanLogic, then "cide26.bat" (the upgrade program). Select this program.

2. The program will run in a DOS window. Follow the on-screen instructions to update the Adapter's firmware.

3. When the program is finished, close the DOS window.

4. Disconnect the Adapter and (if you won't be using it with the Windows 98 computer) uninstall its software.

Attach a storage device to your Adapter, plug it into the USB port of your Windows 2000 computer, and reboot the computer, as described in **Chapter 5**. The Adapter should be autodetected and operate normally. If not, call Black Box Technical Support for assistance.

5. Hardware Installation

First attach the ATA/ATAPI compliant IDE or EIDE storage device you want to use to the USB to IDE Adapter's 40-pin Berg connector. Plug the included power supply's 4-pin Molex® output connector into the device, then plug the power supply's input cord into a working AC outlet.

NOTE

If the computer you want to connect the storage device to is running Windows 98/98 SE or Windows Me, make sure that you've already installed the driver software as described in **Chapter 3** before proceeding.

Now plug the Adapter's USB connector into any free USB port on your PC, either directly or through a USB hub.

If the computer is a Windows 98/98 SE or Windows Me machine, you should have already rebooted it after installing the driver; if you didn't, do so now. If the computer is a Windows 2000 machine, you'll need to reboot it now (you only have to do this once).

Once the computer has been rebooted, it should autodetect the Adapter's attached storage device and should be able to communicate with it normally. A "USB2IDE Bulk Storage" entry should be generated in the Windows Device Manager and a "Removable Storage" volume should be generated in "My Computer," as described in **Chapter 3**. If you see "Unknown Device" in the Device Manager instead, check the storage device's connections to the Adapter and AC power and make sure the device is actually operating.

6. Operation and Troubleshooting

Once you've fully installed the USB to IDE Adapter, its attached device, and (if necessary) its software or revised firmware, as described in **Chapters 3** through **5**, the Adapter should operate automatically and transparently without requiring any further action on your part. It should provide data communication between the PC and the attached storage device for as long as you keep the Adapter connected to the PC, and should be regularly autodetected by the PC whenever it is disconnected and reconnected. If not, contact Black Box as described in **Section 6.1**.

6.1 Calling Black Box

If your USB to IDE Adapter seems to be malfunctioning, *do not attempt to alter or repair it.* It contains no user-serviceable parts. Call Black Box Technical Support at 724-746-5500; the problem might be solvable over the phone.

Before you call, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem;

- when the problem occurs;

- the components involved in the problem;

- any particular application that, when used, appears to create the problem or make it worse; and

- the results of any testing you might have already done.

6.2 Shipping and Packaging

If you need to transport or ship your USB to IDE Adapter:

- Package it carefully. We recommend that you use the original container.

- If the shipping is return- or repair-related, include everything you received with the Adapter when you pack it. Contact Black Box to get a Return Authorization (RA) number.

NOTES