

TOSHIBA



**TOSHIBA AMERICA INFORMATION SYSTEMS
STORAGE DEVICE DIVISION
IRVINE, CALIFORNIA**

**XM-6802B
CD-ROM DRIVE
USER MANUAL**

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INTRODUCTION – XM-6802B CD-ROM Drive

General Features

Tray Loading Mechanism

3-way Disc Eject (eject button, software, emergency eject hole)

DAE (Digital Audio Extraction) Audio Capability

MPC3 and Photo-CD Multi-session Compatibility

Headphone Output Volume Control

Supports CD-RW Play:

Drive Speed

52X

BUS Interface

ATAPI

Types of Disc Formats Supported

CD

- CD-DA (Red Book) – Standard Audio CD & CD-Text
- CD-ROM (Yellow Book Mode 1 & 2) – Standard Data
- CD-ROM-XA (Mode 2 Form 1&2) Photo CD, Multi-Session
- CD-I/FMV (Green Book, Mode 2 Form 1&2, Ready, Bridge)
- CD-Extra/CD-Plus (Blue Book) – Audio & Text/Video
- Video-CD (White Book) – MPEG1 Video

Front Panel



Figure 1. XM-6802B CD-ROM Drive Front Panel

① **CD Tray**

Insert CD Disc in tray

② **Busy Indicator**

When you install a disc into the CD-ROM drive, the BUSY light flashes slowly as it attempts to locate the disc. One of the following will occur:

- BUSY light goes out. The CD-ROM drive is ready to read data from the disc.
- BUSY light flashes slowly. The disc may be dirty.
- BUSY light remains ON. The CD-ROM is accessing data.
- BUSY light remains ON indefinitely. The CD-ROM is experiencing an error

③ **Eject Button**

The EJECT button is used to open the disc tray so you can install or remove a disc

④ **Emergency Eject Hole**

The emergency eject hole is to be used only when the CD tray will not open when EJECT button is pressed

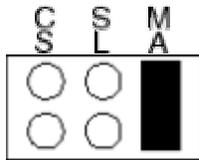
SETUP – XM-6802B CD-ROM

The following steps must be performed to properly install your drive:

- Set CD-ROM Drive Jumper Settings
- Connect Audio Cable (*optional*)
- Attach IDE BUS Cable
- Attach Power Cable
- Mount Drive

Jumper Settings

The mode select jumpers are 6 straight angle pins located on the rear of the CD-ROM drive. By placing a jumper on the pins, you can select the following functions:



- CS Drive is configured using host interface signal CSEL
- SL Configures drive as Slave
- MA Configures drive as Master (default mode)

Figure 1. Mode Select Jumper

In most installations, jumper should remain in the MA position (factory default). It is recommended that you install your CD-ROM drive only on the secondary IDE BUS. If you are installing on primary IDE BUS, your hard drive would then be the Master, and you should set your CD-ROM drive to the Slave position (SL)

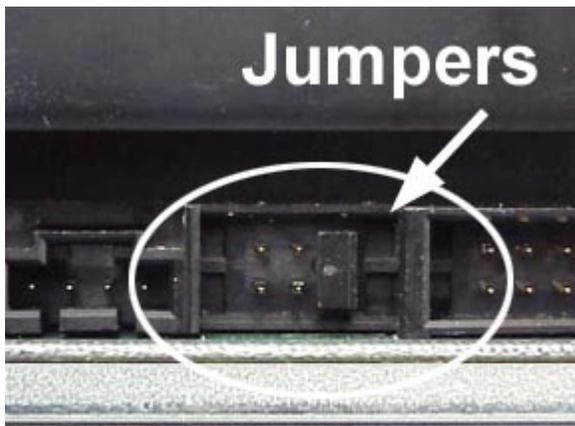


Figure 2. Jumper Locations

Placing CD-ROM Drive inside your Computer

Now that you have set the jumpers, you are ready to install your CD-ROM drive inside your computer.



Important Note: Disconnect power from your computer system before beginning installation.

Remove computer cover and faceplate if required. Refer to your computer systems manual for removal information.

Your Toshiba CD-ROM drive can be placed in any free half-height drive slot at the front of your computer. (It can be mounted horizontally or vertically.)

Carefully start sliding the CD-ROM drive into the opening with the disc tray facing the front of the computer. Before you push the drive all the way in you will need to connect the IDE BUS cable, Audio cable and the Power cable on the back of the drive.

Connecting Cables

IDE BUS Cable (not supplied with drive) - Your computer system should have a primary and secondary IDE BUS, cable with your Hard Drive most likely being the Master on the primary BUS. Connect BUS cable as follows, assuring that pin 1 of cable (side with red stripe) is connected to pin 1 of the CD-ROM drive's interface connector:

If you are replacing your CD-ROM :
connect CD-ROM drive to the BUS Cable connector that the CD-ROM was connected to.

If CD-ROM drive is not replacing a CD-ROM or is an addition to a CD-ROM:
connect CD-ROM drive to an open connector on the secondary IDE BUS cable (not supplied with drive).

If CD-ROM drive is to be slave on Primary BUS:
connect CD-ROM drive to open connector on the primary IDE BUS cable (not supplied with drive).



Figure 3. Installing BUS Cable

Power Cable - Connect an internal computer power supply cable to the power socket at the back of the CD-ROM drive. One side of the plug has chamfered edges, so the power connector fits only one way. Push plug completely into the socket making sure the plug fits correctly.

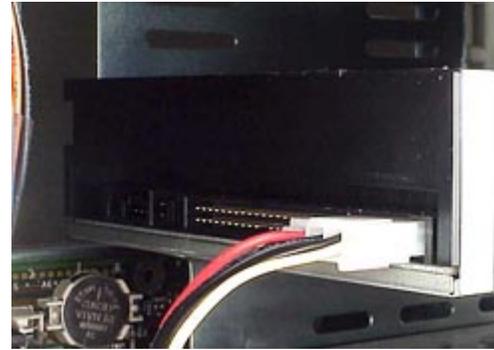


Figure 4. Installing Power Cable

Audio Cable (optional) - If you have a sound card and speakers, and would like to play audio CDs on your computer, you will need to install a CD audio cable. Toshiba's CD-ROM drives use a standard 4-pin audio cable that can be purchased from most local computer suppliers. The sound cable connects to your sound card at one end and the other end connects to the digital audio connector at the left rear of the CD-ROM drive (see CD-ROM drive Back Panel photo for location). Refer to the instructions that came with your sound card for details on any sound-driver software required.

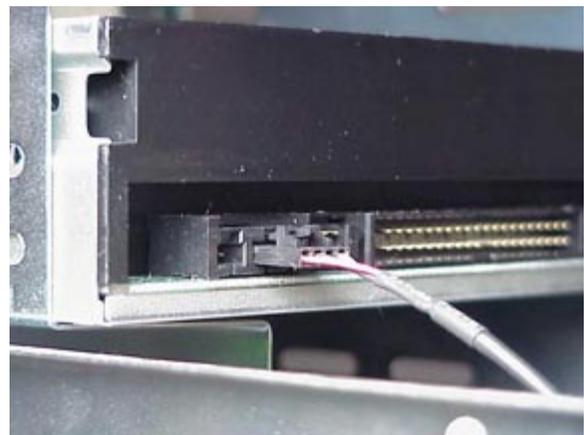


Figure 5. Installing Audio Cable

Completing Installation

After you have connected all the necessary cables, push the CD-ROM drive completely into the computers drive slot. Mount drive per your computers instructions. The screw length should not exceed 30.5mm (measured from outside surface of side or bottom of drive to tip of screw). Replace computer cover and all outer screws.

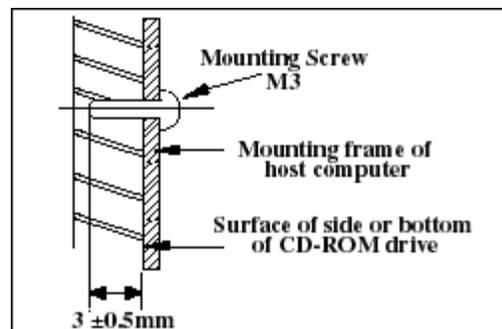


Figure 6. Mounting Illustration

Software Driver - Toshiba's optical drives do not require any unique device drivers for Windows '95/'98/2000/Me/XP/NT. After installing your drive and re-booting, your system should recognize your drive. Windows '95/'98/2000/Me/XP/NT Operating Systems support all Toshiba optical drives natively. If you prefer using DOS, download the DOS ATAPI driver from our web site.

USING THE CD-ROM Drive – XM-6802B

Drive Operation

Inserting a Disc - Horizontally

To insert a disc into a drive that is mounted horizontally, perform the following steps:

Figure 1. Inserting Disc



1. Open the drive's Loading tray by pressing the Eject Button.
2. Place disc into drive's Loading tray
3. Press Eject button again or gently push on the open disc tray. Tray will automatically close.

Inserting a Disc - Vertically

To insert a disc in a drive that is mounted vertically, perform the following steps:

1. Locate sliding disc holders (4 locations) on drive's Loading Tray.
2. Position the disc behind the disc holders
3. Close the drive by gently pushing in the tray or pressing the eject button.

Figure 2. Inserting Disc Vertically



Removing a Disc

To remove a disc from the CD-ROM drive, perform the following steps:

1. Open the Loading Tray by pressing the Eject Button.
2. Grasp disc by edges, and lift out of loading tray.
3. Press Eject Button again to close Loading Tray.

Usage Guidelines

- Keep the disc tray closed when not using the CD-ROM Drive.
- Do not press down on the disc tray when opening or closing it.
- Do not place objects on the disc tray.
- Never use a damaged, broken, or deformed disc.
- Do not press the Open/Close button while the computer is accessing a disc.



NOTE: High-speed drives spin the disc at a high rotational speed. If a disc has printing on only half of the disc, or if there is a slight imbalance in the disc, the imbalance is greatly magnified by the high speed, causing the drive to vibrate or produce a fan-like noise. These effects are inherent in the high-speed technology and do not indicate a problem with the drive.

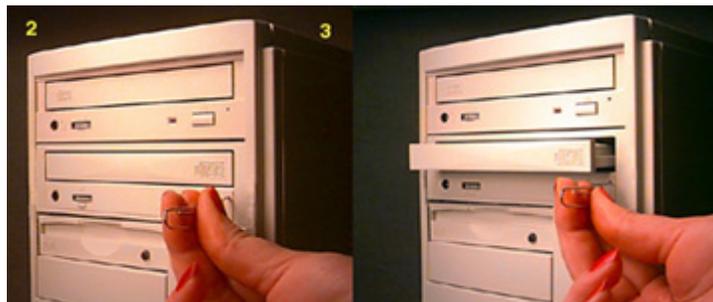
Emergency Ejection



CAUTION: The following procedure is intended only as a last resort when pressing the eject button fails to open the Loading Tray

1. Turn computer power OFF by properly shutting down system.
2. Insert a solid bar (i.e. large paper clip) into Emergency Eject hole and push as shown in the picture below
3. CD tray will open/eject.

Figure 3.Using Emergency Eject



This procedure cannot be repeated without cycling the CD-ROMs (computer's) power. After the media is removed and the loading tray is closed, the tray will not reopen without first turning the power ON/OFF.



NOTE: Use a bar that is less than 1.5 mm in diameter. Do not insert more than 50mm in depth. Inserting more than 50mm may damage the CD-ROM drive.

Cleaning Media

Try to avoid touching the read area (underside) of the disc as dirt and smears will degrade the disc accessing speed.

If the disc becomes dirty wipe it with a damp soft cloth. Avoid cleaning in a circular motion, but rather from the inner side outward.

TROUBLESHOOTING – XM-6802B

Problem	Solution
Disc tray cannot be opened	<ul style="list-style-type: none"> • Check that there is power to drive. • Use Emergency Eject instructions to open tray.
Drive is not recognized by system	<ul style="list-style-type: none"> • Is the drive connected properly? Are all cables plugged in properly (e.g. Power Cable, Interface Cable and Audio Cables). • Are the drive configuration jumpers on the CD-ROM drive set properly? • Is the software driver loaded? On a step-by-step (F8) Boot of the system is the CD-ROM drive recognized? (BIOS / DOS reports "device driver not found" or "no valid drivers selected."). If not, Contact Technical Support. • Has the CD-ROM drive software driver been corrupted by a virus. Run a Virus Scan program and repair if possible. Contact Technical Support if the Virus renders the CD-ROM drive software drivers not useable.
Drive is not recognized by system during Boot process, but is recognized by the Operating System (i.e. XP, Win2000, Win98, Win NT, etc.)	<ul style="list-style-type: none"> • Is the CD-ROM drive software driver loaded? On a step-by-step (F8) Boot of the system is the CD-ROM drive recognized? (BIOS / DOS reports "device driver not found or no valid drivers selected."). If not, Contact Technical Support. • Has the Windows CD-ROM drive software driver program been corrupted by a virus. Run a Virus Scan program and repair if possible. Contact Technical Support if the Virus renders the software drivers not useable.
BUSY Indicator LED flashes slowly	<ul style="list-style-type: none"> • The disc may be dirty Clean it with a soft damp cloth. Avoid cleaning the disc using a circular motion. The disc should be wiped in a radial direction. That is, from the inner side outward. • The laser lens may have become cloudy or blocked by particulate matter. Please contact Technical Support.
BUSY Indicator LED is constantly ON	<ul style="list-style-type: none"> • Possible Hardware Problem. Please contact Technical Support.
CD-ROM can not play a CD in the drive or certain types of CD media (i.e. CD-plus, etc.)	<ul style="list-style-type: none"> • Is the CD-ROM drive driver loaded • Is the CD disc the correct format for the type of system that you are using? (i.e. on a PC an ISO9660 IBM compatible PC format as opposed to Apple/Mac HFS disc or UNIX disc formats which will not function). • Do you have the correct software applications program/drivers installed to run a CD disc? • Has the Windows CD-ROM drive software driver program been corrupted by a virus. Run a Virus Scan program and repair if possible. Contact Technical Support if the Virus renders the software drivers not useable.

SPECIFICATIONS –XM-6802B

General

Interface ATAPI

Compatible CD-ROM Standards

CD-DA (Red-Book) - Standard Audio CD & CD-Text
CD-ROM (Yellow-Book Mode 1 & 2) - Standard Data
CD-ROM XA (Mode2 Form 1&2) - Photo CD, Multi-Session
CD-I/FMV (Green Book, Mode 2 Form1&2, Ready, Bridge)
CD-Extra/CD-Plus (Blue Book) - Audio & Text/Video
Video-CD (White Book) - MPEG1 Video

Performance

Data Transfer Rate CD-ROM/R Read (mode 1): 7,800 Kbytes/s
CD-RW Read Mode 1) 6,000 Kbytes/s

Transfer Rate
Sustained PIO Host 16.7 Mbyte/s (PIO Mode 4)
Multiple Word DMA 16.7 Mbyte/s (multiple word DMA transfer mode 2)
Ultra DMA 33.3 MByte/s (Ultra DMA)

Access Time 90ms

Memory Buffer 128Kbytes

Audio

Frequency Response 20Hz to 20,000 Hz

Signal-to-noise Ratio 80 dB

Total Harmonic Distortion 0.15% Max

Output Levels 0.725V 0.10%Vrms

Acoustical Noise <54dB

Environmental

Operating 5° to 50° C (41° to 122° F)
Storage -40° to 65° C (-40° to 149° F)

Relative Humidity
Operating 20% to 80%
Storage 5% to 95%

Power

DC Voltage and Current Requirements 5V 5%, 12V 10%

Physical

Height 5.83" (148.2mm)
Width 1.65" (42mm)
Depth 7.24" (184mm)
Weight 1.66lbs (740g)

Connectors

DC input AMP 1-480424-0 or equivalent, 2m max
ATAPI Interface Connector 40 Pin ATAPI Standard, 0.46m max length
Analog Audio Line Output Connector 4 Pin ATAPI Standard, 3m max)

Regulatory

The XM-6802B CD-ROM drive has been certified by the following regulatory agencies:

UL 1950

E225119

CAN/CSA C22.2 No. 950

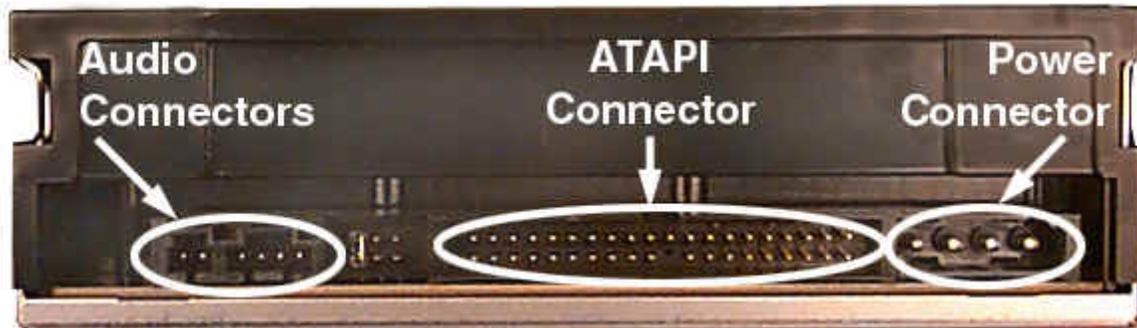
TUV

CE standard

DHHS 21 CFR Sub-Chapter J

DRIVE CONNECTORS –XM-6802B

Figure 1.XM-6802B CD-ROM Drive Rear Panel - Connectors



Power Connector Power is supplied to your CD-ROM drive by the connection with your computer's +5V/+12V power cable to the power socket at the back of drive. One side of the plug has chamfered edges, so the power connector fits only one way



CAUTION: Severe damage to the Drive circuits may occur if power cable is plugged in upside-down with power ON.

Audio Connectors Supplies Analog sound to your system

ATAPI Connector The XM-6802B CD-ROM drive is connected to your computer system through the ATAPI connector.

Table 1.Interface Pin Assignments

INTERFACE PIN ASSIGNMENT							
PIN NO.	I/O	SIGNAL NAME	HOST SIGNAL NAME	PIN NO.	I/O	SIGNAL NAME	HOST SIGNAL NAME
1	I	Reset	Host Reset	21	O	HDRQ	DMA Request
2	-	GND		22	-	GND	
3	I/O	HD7	Host Data Bus BIT 7	23	I	HWR-,STOP	Host I/O Write
4	I/O	HD8	Host Data Bus BIT 8	24	-	GND	
5	I/O	HD6	Host Data Bus BIT 6	25	I	HRD-, HDMARDY, - HSTROBE	Host I/O Read
6	I/O	HD9	Host Data Bus BIT 9	26	-	GND	
7	I/O	HD5	Host Data Bus BIT 5	27	O	IORDY, DDMARDY,- DSTROBE	I/O Channel Ready
8	I/O	HD10	Host Data Bus Bit 10	28	-	CSEL	Cable Select
9	I/O	HD4	Host Data Bus BIT 4	29	I	HDAK-	DMA Acknowledge
10	I/O	HD11	Host Data Bus BIT 11	30	-	GND	
11	I/O	HD3	Host Data Bus BIT 3	31	O	INTRQ	Host Interrupt Request
12	I/O	HD12	Host Data Bus BIT 12	32	O	IOCS16-	Host 16 BIT I/O
13	I/O	HD2	Host Data Bus BIT 2	33	I	HA1	Host Address Bus BIT 1
14	I/O	HD13	Host Data Bus BIT 13	34	I/O	PDIAG-	Passed Diagnostics
15	I/O	HD1	Host Data Bus BIT 1	35	I	HA0	Host Address Bus BIT 0
16	I/O	HD14	Host Data Bus BIT 14	36	I	HA2	Host Address Bus BIT 2
17	I/O	HD0	Host Data Bus BIT 0	37	I	HCS1	Host CHIP Select 0
18	I/O	HD15	Host Data Bus BIT 15	38	I	HCS3	Host CHIP Select 1
19	-	GND		39	I/O	DASP-	Drive Active/Drive 1 Present
20	-	(KEYPIN)		40	-	GND	