

Please write the serial number of your unit here for  
easy reference: \_\_\_\_\_

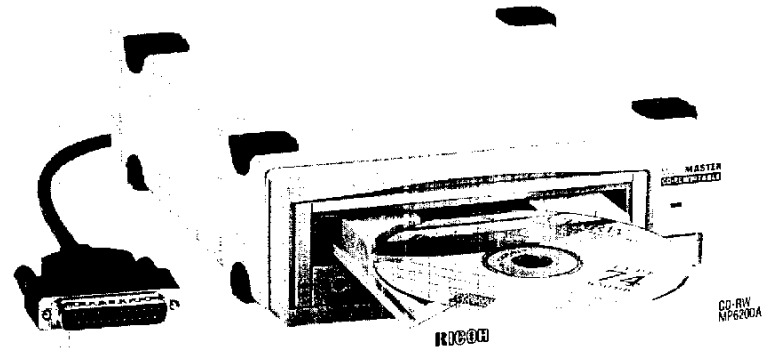
# RICOH®

## MEDIA MASTER™ CD-REWRITABLE TECHNOLOGY

### External Multifunctional Drive

- ◆ CD-ReWritable
- ◆ CD-Recordable
- ◆ CD-ROM

Ricoh Corporation  
Consumer Products Group  
475 Lillard Drive  
Sparks, NV 89434  
Tel: (702) 352-1600  
www.ricohcpg.com



**EXTERNAL MP6200A ATAPI DRIVE  
USING PARALLEL INTERFACE FOR  
WINDOWS 95 AND NT**

SKU# 332550-M

## FCC DECLARATION OF CONFORMITY

**PRODUCT NAME:** MediaMaster CD-ReWritable External ATAPI/IDE  
**MODEL NUMBER:** MEDIAMASTER  
**FCC RULES:** Tested to comply with FCC Part 15, class B  
**OPERATING ENVIRONMENT:** For home or office use

### FCC COMPLIANCE STATEMENT:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### INFORMATION TO USER:

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

1. Re-orient/relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

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

### THE PARTY RESPONSIBLE FOR PRODUCT COMPLIANCE

Ricoh Corporation, Consumer Products Group  
475 Lillard Drive  
Sparks, NV 89434  
(702) 352-1600

## CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

**DO NOT OPEN THE COVER OF THE CD-RECORDER UNIT, THERE ARE NO USER-SERVICEABLE COMPONENTS INSIDE. IF YOU SUSPECT THAT THERE ARE PROBLEMS WITH YOUR UNIT, CONTACT THE RICOH TECHNICAL SUPPORT CENTER. SHAKING OR DROPPING THE CD-RECORDER MAY CAUSE DAMAGE TO THE COMPONENTS INSIDE. PLEASE HANDLE WITH CARE.**

## STATEMENT OF COPYRIGHT INFRINGEMENT NOTICE

The Ricoh MediaMaster is designed to assist you in reproducing material in which you own the copyright or have obtained permission to copy from the copyright owner. Unless you own the copyright or have permission to copy from the copyright owner, you may be violating copyright law and be subject to payment of damages and other remedies. If you are uncertain about your rights, you should contact your legal advisor.

## OVERVIEW

The Ricoh MediaMaster allows you to create CDs in a wide variety of formats:

- Back-up your hard drive onto CD-RW or CD-R discs for easy, portable back-up.
- Copy your favorite music or other audio information onto a CD for playback.
- Convert .WAV files to Red Book (CD audio) files and save them on a CD.
- Store digital images or other files on discs readable on any standard CD-ROM drive using CD-R discs.
- Save data in a "mixed mode" format which combines audio and data on one CD.
- Read commercial or self-produced CDs at 6X speed.

## INTRODUCTION

### WELCOME

Thank you for purchasing the Ricoh MediaMaster External ATAPI CD-ReWritable drive using parallel interface, and welcome to the Ricoh family. You have purchased one of the best built, best supported CD-RW rewriters/recorders available today. Because we care about you as a customer, please take a moment to complete the enclosed registration card and mail it back to us. This will register your warranty for the MediaMaster and give you access to Ricoh's technical support personnel. Also, please take a few moments to read through this short manual before you get started installing your new MediaMaster, it's well worth your time!

### INTRODUCING CD-REWRITABLE

What is CD-ReWritable? Simply put, CD-ReWritable (or CD-RW) allows you to record and re-record computer data or music on the same CD-RW disc, up to 1,000 times! The MediaMaster is a multi-functional CD recorder, which means that it is capable of recording onto the rewritable (CD-RW) discs, and the write-once CD-Recordable (CD-R) discs. The MediaMaster can also read and play regular stamped discs, CD-R discs and CD-RW discs at up to 6X

### CAUTION

CD-RW discs are not compatible with regular CD-ROM drives and CD players. Recorded CD-RW discs are fully compatible with Multi-Read CD-ROM and DVD-ROM drives or CD-ROM drives stating compatibility with CD-RW discs. If you need to create a CD that can be read/played by standard CD-ROM drives, please use a CD-R disc in the MediaMaster for that application. Recorded CD-R discs are fully compatible with regular CD-ROM drives and CD players. If you need to interchange CD-RW discs, please ensure that the destination CD-ROM drive is Multi-Read compatible.

The Ricoh MediaMaster is easy to install and use. The following sections will guide you through the installation step-by-step, and also include some tips for first time CD creation.

### KIT CONTENTS

This kit contains everything required to create your own CD:

- Ricoh MediaMaster External ATAPI drive using parallel interface CD-Recorder/ReWriter unit with 1MB buffer
- 6' AC power cord
- 1 blank Ricoh 650MB/74min. CD-R disc
- 1 blank Ricoh 650MB/74min. CD-RW disc
- External DB25 to DB44 cable (parallel interface connect)
- Power supply
- MediaMaster Software Suite containing:
  - Adaptec Easy-CD Creator Standard Edition
  - Adaptec DirectCD drive letter access, packet writing software
  - Seagate Backup Exec back-up software for Windows 95 and NT Workstation v4.0
- MediaMaster parallel port driver diskette
- Virtual Tour CD

## MINIMUM REQUIREMENTS

System requirements for the Ricoh MediaMaster vary depending upon platform used.

## PC REQUIREMENTS

- Windows 95 or NT Workstation v4.0
- IBM compatible Pentium/75 Mhz processor
- 16MB RAM
- 16MB of free disk space
- Hard drive with disk access less than 20ms, and sustained transfer of 800 kb/sec
- High speed (EPP or ECP) parallel port

## RECOMMENDED MEDIA

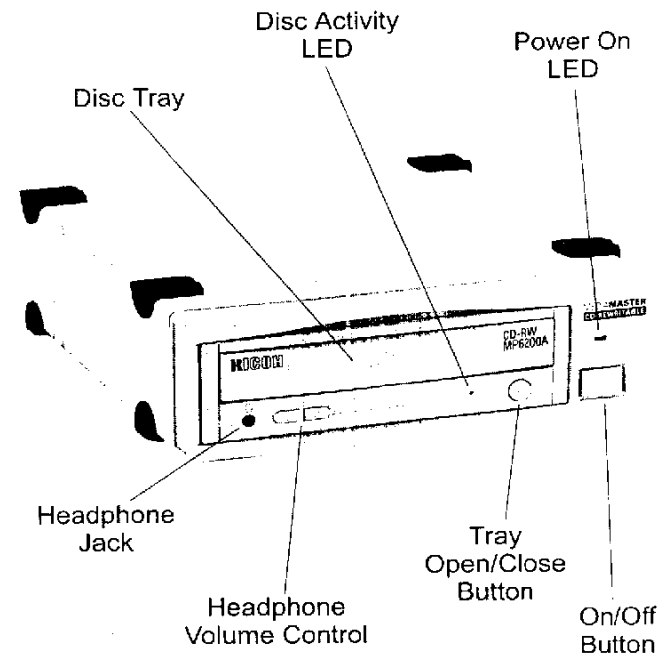
Ricoh offers a complete line of recordable CD media to use with your MediaMaster drive:

**CD-R Gold:** An economical solution for sending data in large quantities, to send family photos to friends, or to send copies of your business catalog to your customers.

**CD-R Platinum®:** A premium recordable CD with a lifetime guarantee offering 100% compatibility with all recorders, a patented protective layer for extra protection against data loss, and a new recording layer optimized for high speed audio recording.

**CD-RW:** A rewritable CD allowing you to write, erase and rewrite to the same piece of media for over 1000 times! With a shelf life of 30 years, this is the ideal solution for developing presentations, software programs, scheduled backups without taking up precious hard drive space.

## MediaMaster External Nomenclature



### **Disc Tray**

This is the tray for holding the disc. Open tray by pressing eject button. Place media in tray, then press eject button again to close. Do not use force to pull out or push in the disc tray. This might cause damage to the loading section of the drive.

### **Tray Open/Close Button**

This is the button used to open or close the disc tray.

### **Disc Activity LED**

This indicator light shines green when the drive power is on. When the disc tray or disc is being accessed, the light shines or flashes red. The light shines green even when a disc is loaded or a disc is not being accessed. When a damaged disc is loaded or some hardware trouble occurs, the indicator light blinks.

### **Headphone Jack**

This jack is for connecting headphones or mini-speakers.

### **Volume Control**

This is used to adjust the output volume of the headphone jack. This control cannot be used to adjust the output volume for the audio output connectors on the rear panel.

### **Power Input**

This is used to connect the power supply to the drive.

### **Audio Output**

These stereo RCA-type jacks are used to connect the MediaMaster to a stereo system or a sound card.

### **To Computer Port**

Use a DB44 to DB25 cable to connect from this port to the computer.

### **To Printer Port**

Use a standard DB25 parallel cable to connect from this port to a printer.

## **Connecting the MediaMaster External Parallel Drive**

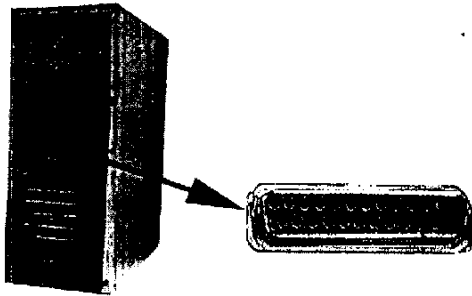
NOTE: The MediaMaster External Parallel Drive can be used with laptops, desktops, and towers that meet the minimum system requirements (see page 6).

***Be sure to write down the serial number of your drive on the back of this manual for future reference.***

1. Turn OFF your computer.
2. Connect the power supply to the power connector on the back of the drive.
3. Connect one end of the power cord to the power supply and the other end to a power outlet or power strip. Check that the drive is receiving power by pressing the power button on the front of the drive. The green LED should light up.

NOTE: The power supply to the MediaMaster drive will automatically switch to power saving mode when not in use so it can be safely plugged in at all times. However, the drive can be unplugged at any time without causing damage to the drive.

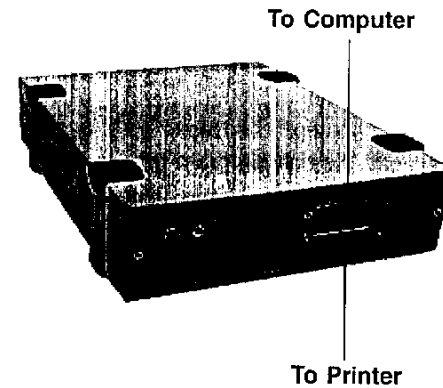
4. Find the parallel port on the back of your computer. The parallel port can be shared by both your printer and the MediaMaster drive. Your printer may already be connected to this port. If so, go to the next step. If you have a free parallel port, go to step 6.



5. If your printer is already connected to the parallel port on the back of your computer, unplug the printer cable and plug it into the connector labeled "To Printer" on the back of the MediaMaster drive.

**CAUTION:** Do not plug anything other than a printer cable into the MediaMaster drive's printer connector.

**NOTE:** If your printer is connected to your MediaMaster drive and you use both devices at the same time (printing while reading a CD in the drive), unpredictable results may occur because both devices are using the same data cable. This is not a supported function.



6. Attach one end of the data cable to the drive and the other to your computer's parallel port.

7. Turn ON your computer.

8. Install the parallel port drivers and application software.

## INSTALLING THE PARALLEL PORT DRIVER

Insert the disk labeled "Parallel Port Driver" into drive A:

1. Click Start from the task bar
2. Select Run
3. Type A:\Setup
4. Click OK
5. Follow the on screen installation instructions

## CD RECORDING TIPS

- Do not touch the data side of the disc when handling the media.
- Avoid swapping media. We recommend leaving the media in the caddy until the creation session is complete.
- To check your settings, try running a *simulated write session* before creating your CD.
- Avoid data stream interruptions: Make sure that Adaptec's CD Creator software is the only program running on your system while creating your CD.
- Defragment your hard drive before recording; this will ensure a steady stream of data going to the CD-Recordable/ReWritable unit.

## TROUBLESHOOTING

If you have problems with your drive, try the following:

- Make sure all devices and your computer are plugged in and turned on.
- Check your system configuration against the minimum system requirements to make sure they are all met (see page 6).
- Turn off your computer, wait 20 seconds and turn it back on. Unplug your MediaMaster drive and plug it back in.
- Disconnect all the cables and reconnect them again. This may fix any faulty connections.
- Make sure there are no switch boxes located in the cabling configuration to the MediaMaster drive.
- If you connected a printer to the drive, check to see if the computer can still detect the drive when the printer is disconnected.
- Make sure that your parallel port is configured as EPP or ECP. Refer to the computer's manual for instructions on how to verify the configuration.

Check to see if there is a conflict with the parallel port. This will happen when there is another device using the same IRQ or I/O as the parallel port.

Windows 95:

- Right-click on My Computer
- Go to Properties
- Go to Device Manager

If there is a yellow exclamation mark next to this line, you have a conflict with your parallel port. Find out which device is configured with the same settings as your parallel port and change it to resolve the conflict.

**Windows 95:**

- Right-click on My Computer on your screen
- Go to Properties
- Go to Device Manager
- Double-click on the computer icon to see a list of devices on the computer and what resources each are using

**Windows NT (sign on as the Administrator):**

- From Start, go to Programs/Administrative Tools (Common)/Windows NT diagnostics
- Go to Resources to see a list of devices on the computer and what resources each is using

If an error message occurs when you click on the MediaMaster drive icon ...

- If there is no CD in the drive, insert a CD and try again (you will need to wait a moment while the drive is reading from the CD you have just inserted).
- Make sure the CD is inserted with the label side up.
- If the CD is blank, try copying some data onto it and try again.

If you cannot see the CD label or all the sessions/files on the CD in Windows Explorer, refresh the screen by selecting My Computer in Windows Explorer and pressing F5.

If the printer no longer works after you connected it to the MediaMaster drive...

- Check to make sure that there are no conflicts with the parallel port (see page 13).
- Make sure that you are not using the MediaMaster drive while trying to print.

If the system does not recognize the MediaMaster drive...

**Windows 95:**

- Click on Connect or Disconnect external drive icon on the desktop.
- Select Shuttle EPAT External ATAPI Adapter and click on disconnect.
- Restart the computer.
- Make sure the cables to the drive are connected properly.
- Make sure there are no conflicts with the parallel port (see page 13).
- Check to see if the power supply has a steady green light when connected at both ends. If it is flashing then try a different power outlet. If the problem persists, you may have a bad power supply.



## APPENDIX

### I. BASIC SPECIFICATION

Type: Desktop model, Multi-Function recorder

Rotation System: CLV (Constant Linear Velocity)

Supported Function:	Read	Write	Play*1
CD-DA	*	*	*
CD-ROM	*	*	*
CD-Extra	*	*	*
CD-ROM XA	*	*	*
PhotoCD*2	*	*	*
CD-i*2	*	*	*
CD-G	*	*	*

\*1) Play means audio playback. Read means data transfer.

\*2) CD-I and PhotoCD requires special reader/player. PhotoCD writing requires Kodak license.

Some applications may require additional hardware or software not included in this kit.

Writing Mode: Track-at-once  
Disc-at-once  
Multisession  
Packet Writing (fixed & variable lengths)

Read Error Rate:  $10^{-12}$  bits or less

Write Error Rate:  $10^{-10}$  bits or less

Recording Capacity: CD-R disc 650/550Mb (Type 74/Type 63)  
CD-RW disc 650Mb (Type 74)

Read/Write Transfer Speed: 300Kb/sec. (Mode 1, Mode 2 form 1)  
342Kb/sec. (Mode 2 form 2)

Buffer Memory: 1 megabyte

Loading System: Tray mechanism

Interface: Parallel port (EPP or ECP)

### II. AUDIO SPECIFICATION

Audio Output: Line output level 0.6V +/- 0.1V rms  
Headphone output level 0.6V +/- 0.1V rms

### III. PERFORMANCE SPECIFICATIONS

Rotation Speed: Write\*3 1X, 2X  
Read 1X, 2X, 6X

\*3) CD-RW discs must be recorded at 2X speed, 1X or 2X is suitable for recording CD-R discs

Write/Read Speed (Ave.): 6X: 900Kb/sec. (Mode 1, Mode 2 form 1)  
6X: 1,026Kb/sec. (Mode 2 form 2)  
2X: 300Kb/sec. (Mode 1, Mode 2 form 1)  
2X: 342Kb/sec. (Mode 2 form 2)  
1X: 150Kb/sec. (Mode 1, Mode 2 form 1)  
1X: 171Kb/sec. (Mode 2 form 2)  
1X: 172Kb/sec. (CD-DA)

Access Time: 350ms. or less  
465ms. or less

Power Consumption: 25W (Max)

Acoustic Noise: Idle 40dB or less (Sound Power Level)  
Operating 55dB or less (Sound Power Level)

### IV. CONDITION FOR USE AND SAFETY STANDARD

Power Supply: AC, 100-240V 50/60Hz input

Power OFF-ON Sequence: More than 1 second

## V. ENVIRONMENTAL CONDITIONS

Temperature:	
Operating	5 ~ 50 degrees Celsius
Non-operating	-30 ~ 65 degrees Celsius
Humidity:	
Operating	5 ~ 90% (no condensation)
Non-operating	5 ~ 95% (no condensation)
Temperature Gradient:	20 degrees Celsius per hour (Max)
Humidity Gradient:	10% per hour (Max)
Altitude:	
Operating	-305 ~ 3,048 Meters

## VI. RELIABILITY AND USABLE LIFE

MTBF:	100,000 POH (Power On Hours)
MTTR:	30 minutes or less
Equipment Life:	5 Years
MSBF:	20,000 times or more
Error Rate (Unrecoverable errors)	Once per $10^{12}$ bits or less

## VII. SAFETY STANDARD

Application Standard:	UL, cUL
Radio Interference:	FCC-Class B

## VIII. APPEARANCE

Dimensions:	W=7.8" x H=2.56" x D=10.16"
Weight:	4.6lbs

## CUSTOMER SUPPORT FOR RICOH MEDIAMASTER

If you have any questions or problems about the installation of the Ricoh MediaMaster, contact Ricoh Corporation's Technical Support as follows:

Phone: (702) 352-1694  
(Monday - Friday, 7AM-5PM PST)

Faxback: (800) 442-8796

Website: [www.ricohcpg.com](http://www.ricohcpg.com)

*To receive technical support, you must be a registered user.*

## SUPPORT CALL CHECKLIST

Please have the following information ready when contacting Ricoh Corporation's Technical Support:

- Type of CPU.
- Version of operating system (system software) used.
- Any other software or adapter cards presently installed in your system.
- Note any error messages or steps taken which lead up to the problem.
- Please be at your computer when you call.
- Please have your serial number ready (located on the bottom of the unit).
- Parallel port type.