



# CD-ROM DRIVE

MODEL : CRD-8481B

**OWNER'S MANUAL  
BEDIENUNGSHANDBUCH  
MODE D'EMPLOI  
MANUALE D'USO  
MANUAL DE USUARIO**

To enjoy fully all the features and functions of your CD-ROM Drive,  
Please read this Owner's Manual carefully and completely.

Questo manuale include il tagliando  
di garanzia. (pagina n.1-8)

website : <http://www.LGService.com>  
e-mail : <http://www.LGService.com/techsup.html>

CAUTION : The laser used in the CD-ROM drive can damage your eyes.  
Do not attempt to open the cover.  
To reduce the risk of electric shock, do not remove cover (or back).  
No user-serviceable parts inside.  
Refer servicing to qualified service personnel.

This unit uses CD-ROM discs  
marked with this symbol :



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



PRODUCT COMPLIES WITH DHHS  
RULES 21 C.F.R. SUB-CHAPTER J,  
IN EFFECT AT THE DATE OF MANUFACTURE.

WARNING : To reduce the risk of fire or electric shock,  
do not expose this appliance to rain or moisture.

#### Industry Canada requirement

This class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

#### FCC COMPLIANCE STATEMENT

Note : This equipment has been tested and found to comply with the limits for 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 to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an Authorized Service Center for help.

#### FCC WARNING

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

This CD-ROM Drive is for use only with UL listed personal computers that have installation instructions detailing user installation of card cage accessory.

This product is manufactured to comply with the radio interference requirements of EEC DIRECTIVE 89/336/EEC, 93/68/EEC and 73/23/EEC.

## DECLARATION OF CONFORMITY

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.


Trade Name/Model :  LG or Goldstar/CRD-8481B

Responsible Party : LG Electronics U.S.A. Inc.  
Address : 6133 N. River Road, Suite 1100  
(Riverway Plaza) Rosemont, IL 60018

Contact Person: Mr. K.S.kim, Manager  
Tel. No. (847) 692-4500

Equipment Classification : FCC Class B Peripheral Device(JBP)

Type of Product (EUT) : CD-ROM Drive

Manufacturer :  LG

Address : 19-1, Cheongho-Ri, Jinmy-Myon  
Pyungtaek-Shi, kyunggi-Do, 451-713 Korea

Attention : Mr.T.K.Lee - General Manager  
Multimedia Standards Team

We hereby declare that the equipment bearing the trade and model number specified above was tested conforming to the applicable FCC Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the Commission's requirements.



## Features

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### Features

- E-IDE interface
- 48X-speed Max 7200KB/sec data transfer rate
- 75ms random access time
- Intelligent 128KB data buffering system
- Small CPU bandwidth (MPC spec.)
- Motorized tray loading system
- Horizontal/Vertical mounting support
- Designed for internal mounting
- Emergency eject support
- Easy audio CD control button support
- Supports Windows 95 & 98 Plug-and-Play ATAPI protocol
- Multimedia PC MPC compliant
- Photo CD multisession support

### System Requirement\*

- IBM PC AT or compatible, 486 SX 25 processor or higher (Pentium 133 Processor or higher recommended).
- 640 Kb memory (16Mb or higher recommended).
- A suitable free standard 5<sup>1</sup>/<sub>4</sub> internal drive bay.
- MS-DOS version 3.1 or higher. (Windows 95 and above recommended).
- 3<sup>1</sup>/<sub>2</sub> 1.44 Mb Floppy Drive.
- An existing IDE controller with an available cable connector or a new IDE controller (recommended with IDE PIO Mode 4 capability) that you will need to install.

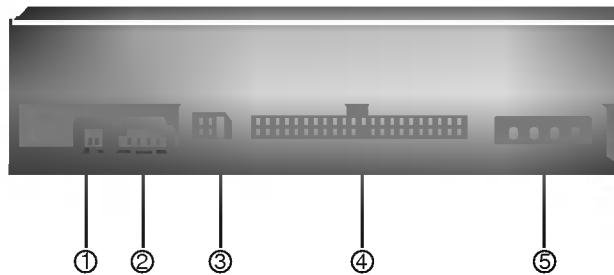
\* Please note: certain software (i.e. particularly those including Video playback) may require an considerably increased specification PC to give acceptable results.

## Location and Function of Controls

### Front View



### Back View

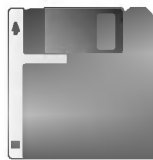


### Supplied Accessories

Owner's Manual

Device Driver (MS-DOS)

Audio Cable



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## **Front View**

1. Disc Drawer  
Accepts a CD-ROM disc on its tray.
2. Busy Indicator  
The Busy Indicator lights during initialization and data-read operations.
3. Emergency Eject Hole  
Insert a paper clip here to eject the drawer manually or when there is no power.
4. Open/Close/Stop Button  
This button is pressed to open or close the CD tray.  
If an audio CD is playing, pressing this button will stop it, and pressing it again will open the tray.

## **Back View**

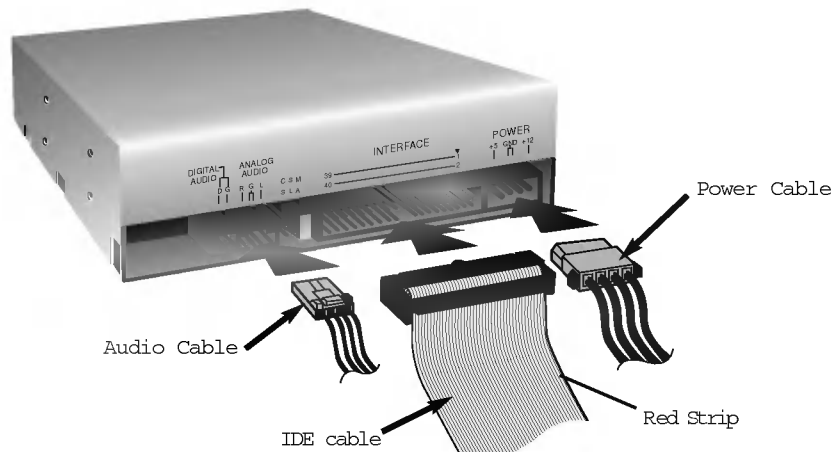
1. Digital Audio Output Connector  
This is a digital audio output or Video CD output connector.  
You can connect this to a digital audio system or a Video CD Board.
2. Analog Audio Output Connector  
The Audio Output Connector connects to a sound card.
3. Master/Slave/CSEL Jumper  
These three jumpers are used to set the CD-ROM Drive to either a Master, Slave, or CSEL device.
4. Interface Connector  
This 40-pin connector is used to transfer data and control signals between the CD-ROM Drive and your PC.
5. Power-in Connector  
Attach a power cable from the computer to this connector.

## Installing the Drive

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Before installing the drive, turn off the system power. Follow the steps below to install the CD-ROM drive:

1. Remove the cover from your computer system. Refer to manual for the computer for details about removing the cover.
2. Insert the CD-ROM drive unit into a free 5.25-inch drive bay. Secure the CD-ROM drive to the drive bay rails with the mounting screws (supplied).
3. Connect the 4-pin power cable and 40-pin IDE interface cable to the back of the CD-ROM drive.



Notes: If there is no spare power cable available in the computer, you will have to purchase a splitter cable of a suitable type.

The red edge of the IDE cable corresponds to pin 1 of the IDE interface on the CD-ROM drive.

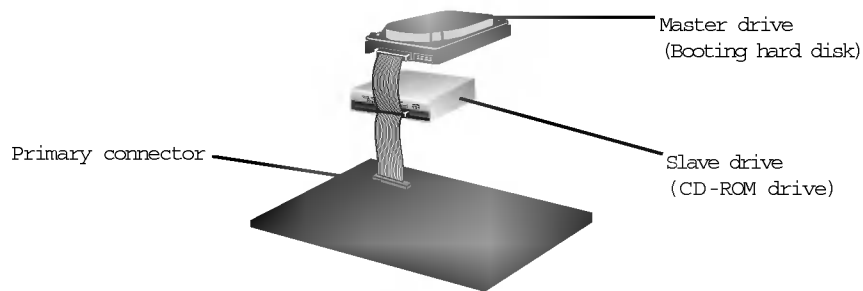
Please Note: an IDE cable is not supplied and may be required to be purchased separately.

If the computer is using a sound card, the drive is connected to the sound card with an audio cable. This CD-ROM drive is supplied with a Creative Labs SoundBlaster compatible audio lead, if this is not suitable for your sound card, it may be necessary for you to purchase a suitable lead from your retailer. Refer to the manual for the sound card for detailed information regarding connection.

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4. Adjust the Master/Slave jumpers on the back of the CD-ROM drive as necessary.
- Connect the CD-ROM drive to the IDE ports of your motherboard. In general, the hard drive will be in Primary IDE port and Master device for booting the operating system. There are two possible alternate connection for CD-ROM drive installation.

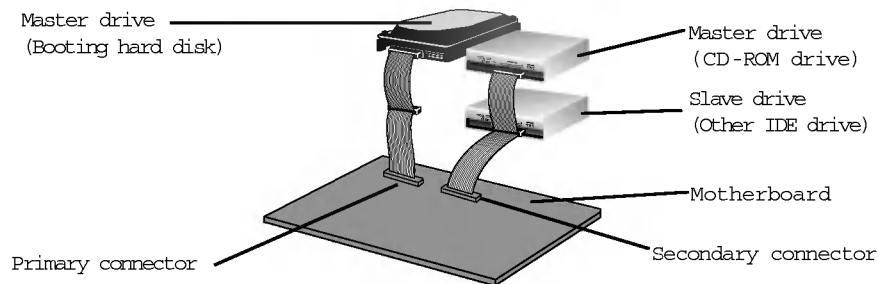
A) When using a Primary IDE port

If you need to connect your CD-ROM drive to the same Primary IDE port, the CD-ROM drive should be set to Slave position.



B) When using a Secondary IDE port

You can also connect CD-ROM drive to the Secondary IDE port and set to Master position.



5. When the installation of the drive unit is complete, replace the computer cover.
6. Reconnect the computer power cord and turn on the computer.



## Device Drivers

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When using Windows 98/95 or Windows NT Workstation Ver. 4.0, the installation of any software driver or special device is not required.

This CD-ROM drive is supplied with MS-DOS drivers on a 3<sup>1</sup>/<sub>2</sub>-inch floppy disk. These drivers are required to use the CD-ROM drive in DOS and Windows 3.1.


Drivers for other Operating Systems are not normally required or available as they usually have a generic IDE, E-IDE/ATAPI CD-ROM driver built in; Windows 95, 98, NT 3.51 and higher and OS/2 Warp 3.0 are such examples.

If it is necessary to edit any file manually, first make a backup copy on a floppy disk, then edit the original file, save it to your hard drive, exit, and re-boot the PC to ensure the change will be implemented.

### Running the Install Program (MS-DOS Installation)


1. Insert the diskette into the appropriate drive with DOS booting.
2. Go to the floppy drive by typing A: or B: at the DOS prompt, as appropriate.
3. Type the word INSTALL and press [ENTER].
4. The INSTALL program will begin loading. When loading is complete, the INSTALL program identification will appear on screen.
5. Follow the instructions on screen.
6. When installation is complete, remove the diskette and reboot your PC.

### For Windows 98/95 Users

- In order to ensure normal drive operation, please check the following:
  - ¥ The drive is displayed in  
[control panels] - [system] - [device manager] - [CD-ROM]
  - ¥ 32-bit is displayed in  
[control panels] - [system] - [performance]
- If the drive is not recognized by your computer, please check the following items.
  - ¥ If a  indicator is displayed on the IDE controller in [control panels] - [system] - [device manager] - [harddisk controller], you will need to contact your PC's manufacturer or the motherboard's manufacturer and get the appropriate IDE controller driver.
- Run ADD NEW HARDWARE in Control Panel to let PC search again for new device.

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## **For Windows NT Workstation Ver. 4.0 Users**

- In order to ensure normal drive operation, please check the following:
  - ¥ The drive is displayed on the IDE controller in [control panels] - [SCSI adapter] - [devices]
- If the drive is not recognized by your computer, please check the following items.
  - ¥ If a  indicator is displayed on the IDE controller in [control panels]-[SCSI adapter]-[devices], you will need to contact your PC's manufacturer or the motherboard's manufacturer and get the appropriate IDE controller driver.

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## **Emergency Eject**

This drive has a function that allows the CD to be ejected manually if this becomes necessary in an emergency, such as failure of the drive or a power outage. Follow this procedure in such a case.

NOTE: Don't use this feature except in an emergency.

- 1) Turn the power to OFF.
- 2) Poke a fine-tipped object (such as a straightened heavy duty paper clip) into the small hole at the front. The front door will pop open and the disk tray will come partway out.



- 3) Pull the front door to open it all the way, then grip the disc tray between thumb and forefinger and gently pull it straight out.

NOTE: This feature is a last measure to be used only in an emergency. Using it excessively will cause malfunction.

## Installation, Usage and Handling Precautions

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### ■ Installation

Avoid placing the drive in a location subject to :

- high humidity
- high temperature
- mechanical vibration
- direct sunlight

### ■ Operation

- During operation, excessive vibration or a sudden jolt to the drive may cause a malfunction.
- Avoid exposing the drive to sudden changes in temperature. This may cause condensation to collect inside the drive.
- Do not use damaged, cracked, or warped discs.

### ■ Transportation

- Always remove the disc before moving the drive.

## Troubleshooting

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\* When the CD-ROM drive does not work with the hard disk drive in primary IDE channel.

(SOLUTION)

1. Check the CD-ROM drive Master/Slave Jumper setting.  
The CD-ROM drive must be set to the Slave mode.
2. Check to be sure your hard disk Interface type is IDE type.
3. Check your hard disk Master/Slave Jumper setting.  
Some old-version IDE type hard disks were set to Master Only mode.  
In that case, contact your hard disk company and change your hard disk jumper setting to master mode.
4. If the CD-ROM drive does not work with above methods, you may need a secondary IDE card. If you use the secondary IDE card, you should set the CD-ROM drive jumper to the master mode if the CD-ROM drive is the first device you are connecting to the secondary IDE card.

\* When the CD-ROM drive does not install in OS/2 warp.

(SOLUTION)

1. Select NON-LISTED IDE CD.

\* CD-ROM drive is not present in Windows 3.1 or 3.11 or DOSSHELL.

(SOLUTION)

1. When the WIN or DOSSHELL command lines are present in your AUTOEXEC.BAT, make sure that the MSCDEX.EXE command line appears before the WIN or the DOSSHELL command lines.

NOTE: For more information, consult the README.TXT file of the supplied Setup Diskette.

# Specifications

## General

Data Capacity	553 Mbytes (mode 1), 635 Mbytes (mode 2)
Disc Diameter	12 cm/8 cm
Rotational Speed	Approx. 10,500 rpm

## Performance

Interface	E-IDE
Supported System	IBM PC-AT or Compatible
Transfer rate	Sustained Data Transfer Rate=Max 7200Kbytes/sec
Access Time	Random 75 ms Typical
MTBF	125,000 Power On Hours (Duty Cycle 10%)
Buffer size	128 Kbytes
Error Rate	
ECC on	1 block/10 <sup>15</sup> bits (48x)
ECC off	1 block/10 <sup>12</sup> bits (48x)
User Data/Block	2,048 bytes/block (Mode1 & Mode2 Form1) 2,340, 2,336 bytes/block (Mode2) 2,324 bytes/block (Mode2 Form2) 2,352 bytes/block (CD-DA)
Supported Disc	CD-DA, CD-ROM, CD-ROM XA-READY, Photo-CD CD-Plus/CD-Extra, Mixed CD, CD-RW

## Audio Specifications

Frequency Response	20 Hz - 20 KHz +/-3 dB
S / N Ratio	85 dB
THD	0.05 % at 1 KHz
Channel Separation	80 dB at 1 KHz
Headphone Level	0.70 Vrms (33%)
Line Output Level	0.70 Vrms - 20% (47k $\Omega$ )
Line Output Jack	4-Pin terminal (Rear)
Headphone Jack	$\phi$ 3.5 mm (Front)

## Environment

Temperature	5 - 45 $^{\circ}$ C
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## Power Requirements

12 V - 10% Ripple < 100m Vpp	1.5A (Maximum)
5 V - 5% Ripple < 100m Vpp	0.9A (Maximum)

NOTE: Specifications are subject to change without notice for improvement.

Internet Address :  
[http:// www.LGService.com](http://www.LGService.com)

### CD-ROM LIMITED WARRANTY

LG Electronics U.S.A., Inc. will repair or at its option replace, without charge, your product which proves to be defective in material or workmanship under normal use, during the warranty period listed below from the date of original purchase. **This warranty is good only to the original purchaser of the product during the warranty period as long as it is in the U.S. including Alaska, Hawaii, and U.S.Territories.**

#### WARRANTY PERIOD

<u>MODEL#</u>	<u>LABOR</u>	<u>PARTS</u>	<u>HOW SERVICE IS HANDLED</u>
CRD-8481B	1 Year	1 Year	If the unit is defective, a replacement* will be sent by 2-day air for the first year. After one year, repair or a 2-day swap at a fixed labor charge. For service, please call 1-800-243-0000 (Mon.-Fri. 7AM~7PM CST)

No other express warranty is applicable to this product. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN. LG ELECTRONICS U.S.A., INC. SHALL NOT BE LIABLE FOR THE LOSS OF THE USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE, THIS PRODUCT OR FOR ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY APPLICABLE TO THIS PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts; so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

#### THE ABOVE WARRANTY DOES NOT APPLY:

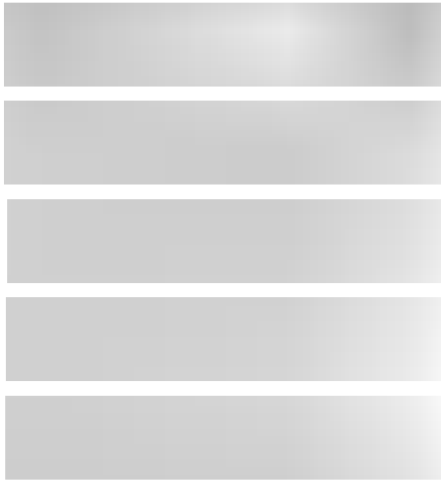
1. To damages or problems which result from delivery or improper installation.
2. To damages or problems which result from misuse, abuse, accident, alteration, or incorrect electrical current or voltage.
3. To service calls which do not involve defective workmanship or material and explaining the operation of the unit.

**Therefore these costs are paid by the consumer.**

#### CUSTOMER ASSISTANCE NUMBERS:

- To Prove Warranty Coverage:  Retain your Sales Receipt to prove date of purchase.  
 Copy of your Sales Receipt must be submitted at the time warranty service is provided.
- To Obtain Product, Customer, or Service Assistance:  Call 1-800-243-0000 24 hrs/7 days  
Push appropriate menu code,  
or <http://www.LGService.com/techsup.html> for support by E-mail.
- For Exchange Service:  Call 1-800-243-0000 (Mon~Fir 8am~5pm CST)  
Push appropriate menu code.

\* Replacement is a factory-reconditioned unit. Free replacement applies only within the initial one-year period. Factory-reconditioned units are available at a low, fixed cost after the one-year warranty expires.



CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

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