



DVD-RAM/R DRIVE

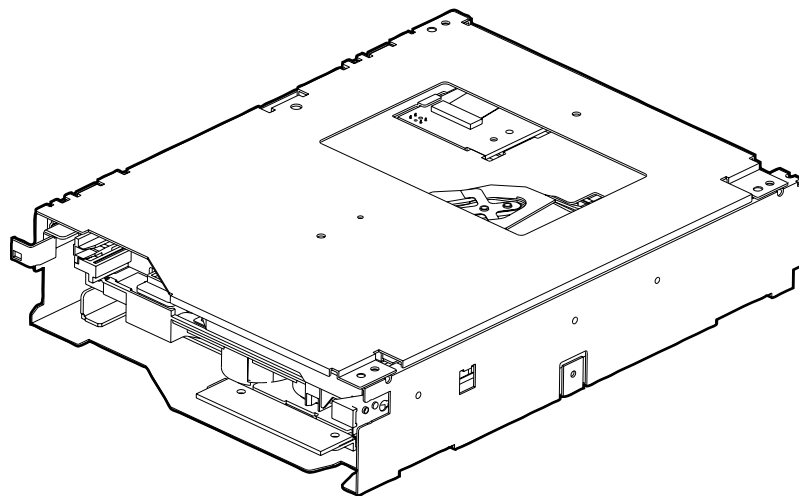
BEDIENUNGSANLEITUNG : DVD-RAM/R-LAUFWERK

MANUEL D'INSTRUCTIONS : UNITE DVD-RAM/R

使用说明书 : DVD-RAM/R 驱动器

MC-R434U

INSTRUCTIONS



Thank you for purchasing the JVC MC-R434U DVD-RAM/R DRIVE.
Before you start operating this unit, please read the instructions
carefully in order to obtain the best possible performance.

For Customer Use:

Enter below the Model No. and Serial
No. which are located at the top of the
unit. Retain this information for future
reference.

Model No. MC-R434U _____

Serial No. _____

INSTALLATION FLOW

Follow the steps below for installation.

● STEP 1 INSTALLATION

● Install the MC-R434U in the CD/DVD Library.

- Procedure for Opening the Door of the CD/DVD Library
- Procedure for Opening the Drive Storage Cover of the CD/DVD Library
- Procedure for Determining the Setup Position for the MC-R434U
- Procedure for Installing the MC-R434U in the CD/DVD Library



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● STEP 2 CONNECTION

● Connect the MC-R434U to the CD/DVD Library.

- Procedure for Connecting the Cables to the Back of the MC-R434U



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● STEP 3 SETUP

● Set the SCSI ID of the MC-R434U and close the door of the CD/DVD Library.

- Procedure for Setting the DIP Switch
- Procedure for Attaching the Drive Storage Cover of the CD/DVD Library
- Procedure for Closing the CD/DVD Library Door



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● STEP 4 EXECUTION OF AUTOMATIC DRIVE DETECTION MODE.

● Execute the automatic drive detection mode and connect the host computer.

- Procedure for Executing the Automatic Drive Detection Mode of the CD/DVD Library
- Procedure for Connecting the CD/DVD Library to the Host Computer



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PRECAUTIONS BEFORE USE

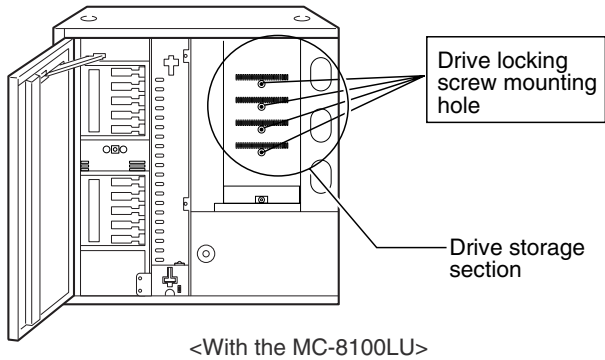
- The MC-R434U is a DVD-RAM/R drive designed for use with the JVC MC-8100LU/8200LU/8600LU "CD/DVD Library".
- When installing this unit in a Library that is being used, please read the instruction manual carefully.
- The MC-R434U cannot be operated on its own.
- This unit cannot be used in combination with the following models.
 - CD-ROM Library : MC-1000 series/2000 series
 - DVD-RAM Library: MC-7000 series
 - CD/DVD Library : MC-8000 series
- For the compatible discs, see the Specifications on page E7.
- The ambient temperature around the CD/DVD Library should be maintain at about 5°C to 30°C when a MC-R434U is connected to multiple units of the MC-8100LU or MC8200LU/8600LU the CD/DVD Library, as mentioned below.
 - MC-8100LU : 4 units
 - MC-8200LU/8600LU : 6 units

1. **DANGER:** Invisible laser radiation will occur if the unit is open due to a failed or defective interlocking device.
2. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.

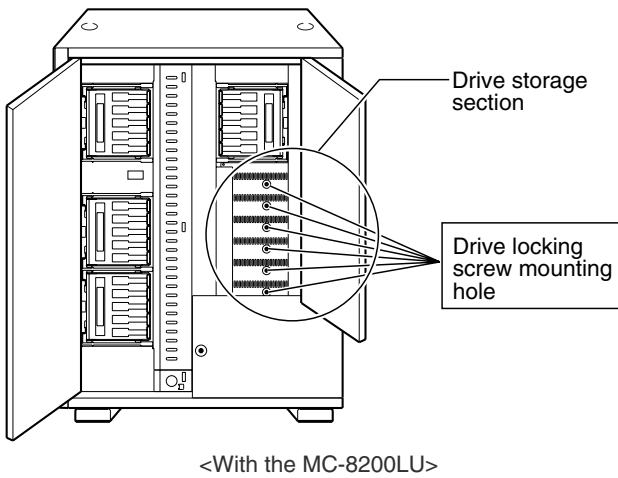
STEP 1 INSTALLATION

- Install the MC-R433U in the CD/DVD Library. Before starting installation, be sure to turn both the host computer and peripherals off. For information related to the CD/DVD Library, refer to the instruction manual for the CD/DVD Library.

Procedure for Opening the Door of the CD/DVD Library

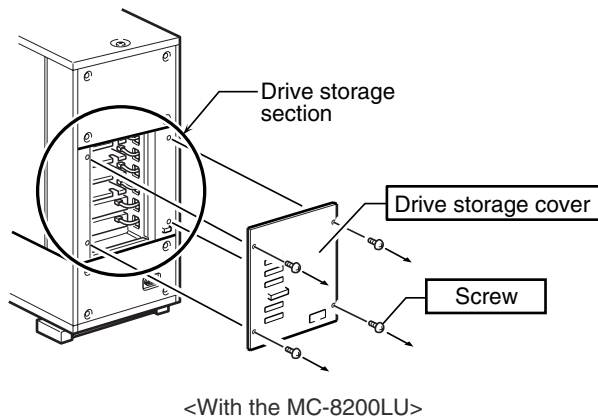
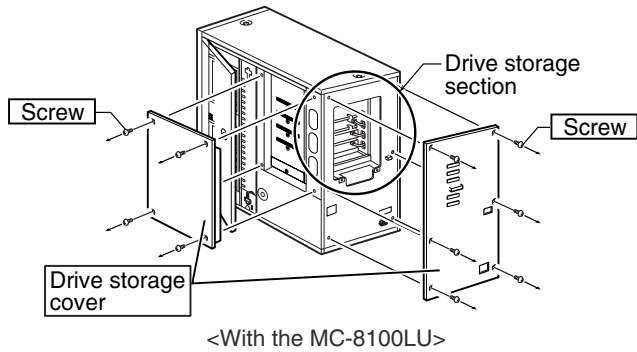


* The illustration shows the CD/DVD Library with the drive storage cover removed for ease of description.



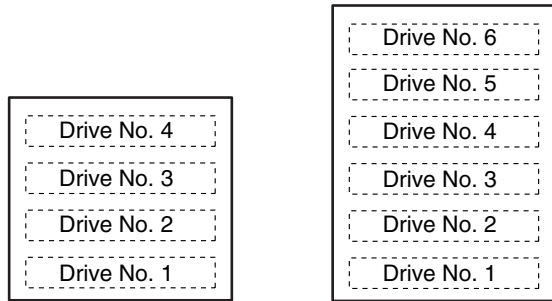
1. Select the [DOOR OPEN MODE] on the MENU screen of the CD/DVD Library's LCD.
2. Press and hold the "SELECT" switch for five seconds.
3. Turn off the power of the CD/DVD Library when [THE DOOR CAN BE OPENED] message is displayed on the LCD.
4. Insert the key in the key cylinder located at the center of the door to unlock and open the door.

Procedure for Opening the Drive Storage Cover of the CD/DVD Library



1. Remove the screws from the drive storage cover of the CD/DVD Library.
2. Remove the drive storage cover.

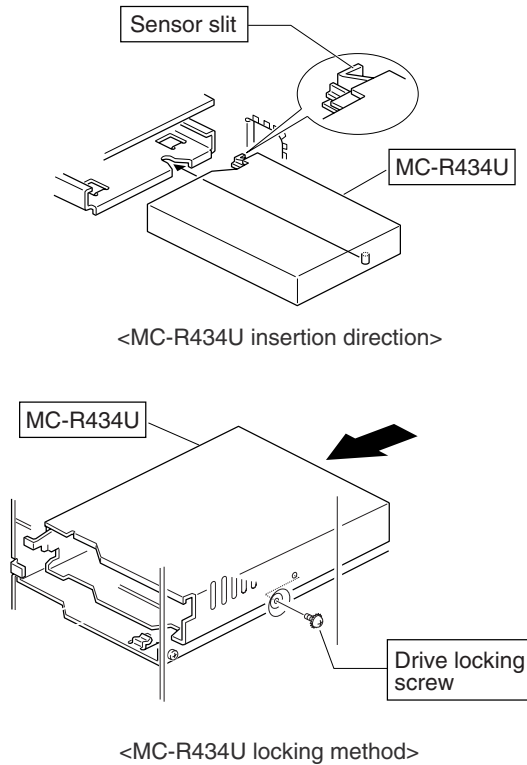
Procedure for Determining the Setup Position for MC-R434U



<MC-8100LU drive storage section> <MC-8200LU drive storage section>

1. Install the drives to the drive slots No.1 through No.6 (No. 1 through No. 4 in the case of the MC-8100LU) sequentially.
 - It makes the work easy if the drives are installed from the lowest number to the highest.

Procedure for Installing the MC-R434U in the CD/DVD Library

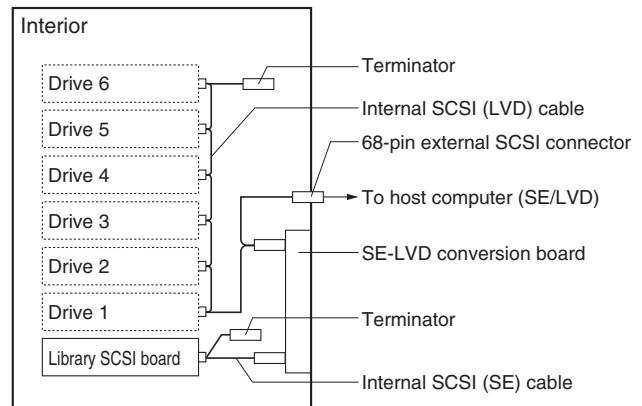


1. Insert the MC-R434U from the rear of the CD/DVD Library
 - Be sure not to damage the sensor slit.
 - Make sure that the direction of the MC-R434U is correct when inserting it.
 - Be sure that the cables connected to the rear of the CD/DVD Library are not caught or pinched when inserting the MC-R434U.
2. Insert the MC-R434U slowly until the screw installation hole located on the side of the MC-R434U and the screw installation hole located on the drive locking section are aligned.
3. Screw in the provided drive locking screw to the screw installation hole of the drive locking section.
 - Tighten the screw firmly.
 - If the drive locking screw is loose, the drive and/or Library may be damaged.

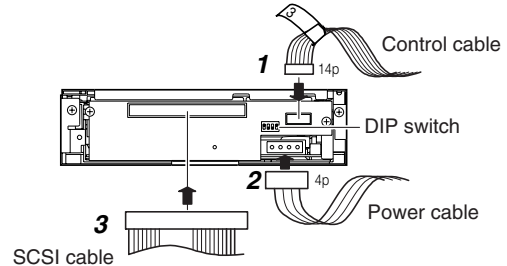
STEP 2 CONNECTION

- Connect the MC-R434U to the CD/DVD Library. Also refer to the instruction manual for the CD/DVD Library.

Procedure for Connecting the Cables to the Back of the MC-R434U



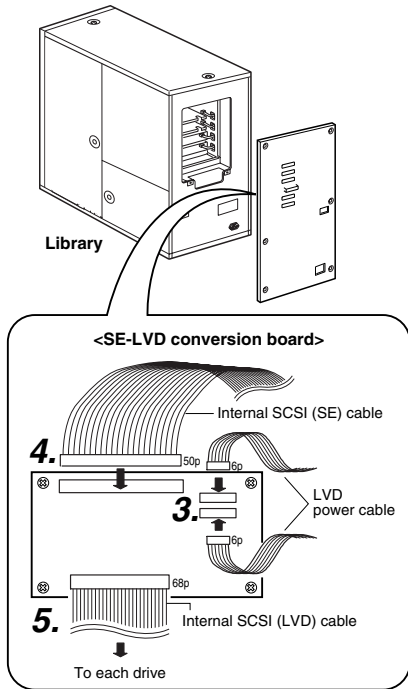
<MC-R434U connection example>



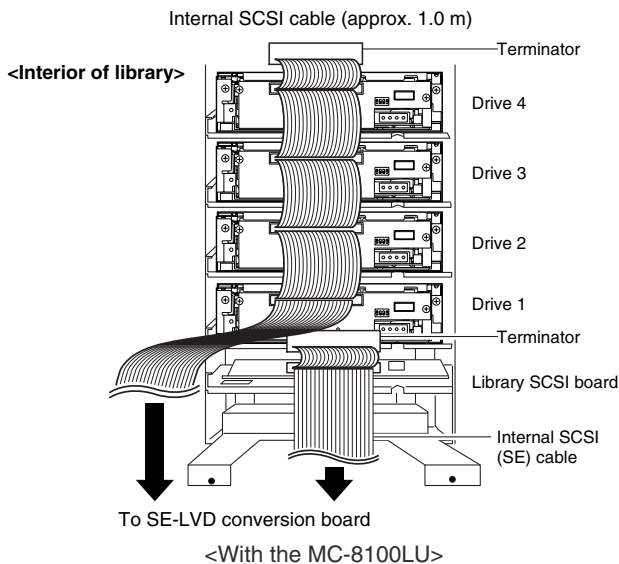
<MC-R434U rear panel>

1. Connect the power supply cable, control cable and SCSI cable to the connectors at the rear of the MC-R434U.
 - When using the MC-8100LU, the No. of the cable must always correspond to the No. of the drive bay to which it is being connected. If a cable with the wrong number is connected, it will lead to the equipment malfunctioning.
 - When using an MC8200LU/8600LU, connect the control cables which lead from the side of the drive bay where the MC-R434 is to be inserted.
 - Insert all connectors firmly.
 - SCSI cables are connected as a daisy chain connection. Each connector should be connected to the drive positions as illustrated in the diagram.
 - The SCSI cable, which is built into the MC-8100LU/8200LU/8600LU standard models, terminates at the location where the connection is physically terminated.

Connecting the cables



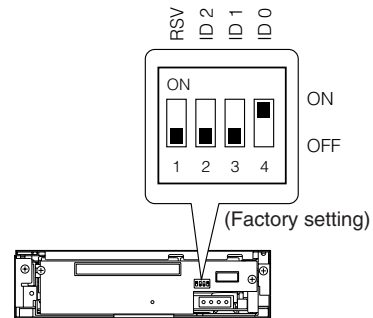
2. Connect the two LVD power cables (6P) to the SE-LVD conversion board.
 - Both cables have identical connector types, so that either cable can be connected to either connector on the SE-LVD conversion board.
3. Connect the internal SCSI (SE) cable (50P) to the SE-LVD conversion board.
 - The other end of the internal SCSI (SE) cable is connected to the library SCSI board in the library.
4. Connect the internal SCSI (LVD) cable (68P) to the drives.
 - The other end of the internal SCSI (LVD) cable is connected to the SE-LVD conversion board.



STEP3 SETUP

- Set the SCSI ID of the MC-R434U and close the door of the CD/DVD Library. Always turn the power of the CD/DVD Library off when the dip switches are moved. For the details of the default factory settings, please refer to the section "SCSI ID No. SETTING" of the instructions from the CD/DVD Library.

Procedure for Setting the DIP Switch



<MC-R434U DIP switch settings on the rear panel>

1. ID2, ID1, ID0: Setting of the SCSI ID No. of each drive.
 - When setting the SCSI ID No., use a number that is not being used by other SCSI devices on the same bus.
 - The MC-R434 should be used with one of the SCSI ID No. 0 to 7. It cannot be used with No. 8 to 15.
 - RSV: Not available

<SCSI ID No. and DIP switch settings>

SCSI ID No.	Switch		
	ID2	ID1	ID0
0	OFF	OFF	OFF
1★	OFF	OFF	ON
2	OFF	ON	OFF
3	OFF	ON	ON
4	ON	OFF	OFF
5	ON	OFF	ON
6	ON	ON	OFF
7	ON	ON	ON

★: Factory setting.

Procedure for Attaching the Drive Storage Cover of the CD/DVD Library

1. Secure the cover with the screws that were removed.
 - ☞ "Procedure for Opening the Drive Storage Cover of the CD/DVD Library" on page 3.

Procedure for Closing the CD/DVD Library Door

1. Close the door and lock the key cylinder.

STEP 4 EXECUTION OF AUTOMATIC DRIVE DETECTION MODE.

- Execute the automatic drive detection mode of the CD/DVD Library.
For the automatic drive detection mode, refer to the instruction manual for the CD/DVD Library.

CAUTION

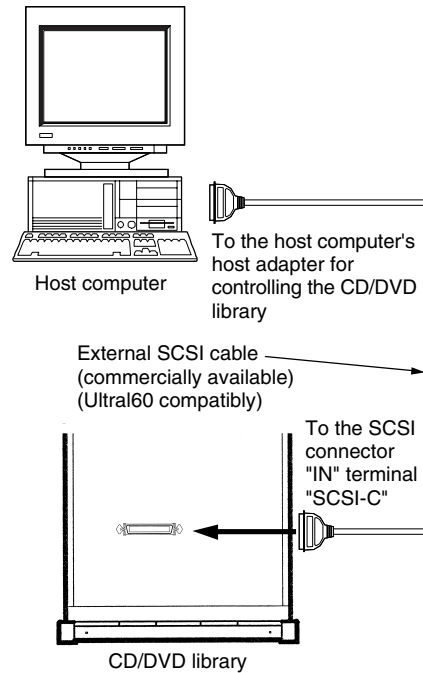
- Be sure to close the drive storage cover and door of the CD/DVD Library before turning it on.
- After installing, adding, replacing or removing the drives, be sure to execute the automatic drive detection mode. Otherwise, a malfunction may result.
- After installing, adding, removing or replacing the drives, or changing the SCSI ID No., be sure to turn the host computer off and then turn it on again.

Procedure for Executing the Automatic Drive Detection Mode of the CD/DVD

1. While holding the "8" key on the control panel, turn the power of the CD/DVD Library on.
2. When the LCD shows "DRIVE DETECTION COMPLETED," turn the power of the CD/DVD Library off.
3. Turn the power on again and check the indication for the drive type (DRIVE DISPLAY).
 - "DVD-RAM" will be displayed at the DRIVE DISPLAY on the CD/DVD Library. If "UNKNOWN" is displayed, a cable connection may not have been performed correctly. In such a case, first turn off the power, then check the installation and connection again.

Procedure for Connecting the CD/DVD Library to the Host Computer

- Use an Ultra160-compatible cable as the external SCSI cable.



- The length of the SCSI cable built into the CD/DVD library is 1.0 meters.
- When the built-in SCSI cable is used by connecting it to an external SCSI cable, check the total length of the SCSI cable. If it should exceed the length described below it might be the cause of a malfunction.
 - 1) Used for an LVD: The maximum external cable length should be 10 meters.
 - 2) Used for an SE (Narrow) unit: The maximum external cable length should be as follows.
 - SCSI-2, 10 Mbyte/s, SYNC : 1.5 meters (Up to a maximum of 2 drives)
 - SCSI-2, 10 Mbyte/s, SYNC : 1.5 meters
 - SCSI-2, ASYNC : 4.5 meters
- Optimum performance may not be achieved depending on the settings of the transmission rate, operation conditions, etc., and could be the cause of a failure when writing on the DVD-R or CD-R with high-speed.
- Use an Ultra160-compatible cable as the external SCSI cable. A malfunction may occur if any another type of cable is used.
- Be sure to fasten the SCSI connector with suitable screws after making a connection with an external SCSI cable.

SPECIFICATIONS

■ Interface

Ultra 2 SCSI (80 Mbytes/s)

■ Data transmission rate

Sustained (when the maximum sync transfer rate of the host adapter is set to 80 Mbytes/s)

DVD-RAM	4.15 Mbytes/s (3X max.)
(Single-sided 4.7 GB or double-sided 9.4 GB)	
DVD-RAM	1.38 Mbytes/s (1X)
(Single side 2.6 GB, read only)	
DVD-R	5.44 Mbytes/s (4X max.) (write)
(Single-sided 4.7 GB or double-sided 9.4 GB)	
DVD-R	8.31 Mbytes/s (6X max.) (read)
(Single-sided 4.7 GB or double-sided 9.4 GB)	
DVD-ROM	16 Mbytes/s
(Single Layer, 12X max.: CAV)	
CD-ROM	1.5 Mbytes/s to 4.8 Mbytes/s
(32X max.: CAV)	
CD-R	Max. 1.8 Mbytes/s (write)
(12X max.)	
CD-RW	Max. 1.2 Mbytes/s (write)
(8X max.)	

Burst (when the maximum sync transfer rate of the host adapter is set to 80 Mbytes/s)

Max. 80 Mbytes/s (sync transfer)

■ Average access time (1/3 stroke)

DVD-R (4.7 GB for General)	: 145 ms
DVD-ROM (Single Layer)	: 130 ms
DVD-RAM (4.7 GB)	: 185 ms
DVD-RAM (2.6 GB)	: 195 ms
CD-ROM	: 150 ms

*The above values were measured using JVC's measure methods.

■ Buffer capacity

2 Mbytes

■ Additional write count (DVD-R for General, 4.7 GB)

500 times typical (when a disc and a drive are combined)

15 times typical (when a disc and multiple drives are combined)

■ Dimensions

171 mm(W) x 47.5 mm(H) x 240 mm(D)

■ Weight

1.5 kg

■ Accessories

Drive locking screw x 2

■ Applicable discs

DVD-R 4.7 GB (Ver. 2.0 for General Use)

Recommended discs: Single-sided 4.7 GB

Matsushita Electric Corp.

Mitsubishi Kagaku Media Corp.

Hitachi Maxell Ltd.

TDK Corp.

Taiyo Yuden Co., Ltd.

Recommended discs: Double-sided 9.4 GB

Mitsubishi Kagaku Media Corp.

Hitachi Maxell Ltd.

DVD-R 3.95 GB (Ver. 1.0, Disc-at-once, read only)

DVD-ROM

DVD-RAM (Ver. 2.1, single-sided 4.7 GB, double-sided 9.4 GB)

Matsushita Electric Corp.

Hitachi Maxell Ltd.

DVD-RAM (Ver. 1.0, single-sided 2.6 GB, read only)

CD-ROM (Mode-1, Mode-2, etc.)

CD-R

Ricoh Company Ltd.

Mitsubishi Kagaku Media Corp.

Hitachi Maxell Ltd.

TDK Corp.

Taiyo Yuden Co., Ltd.

Mitsui Chemicals, Inc.

CD-RW

Ricoh Company Ltd.

Mitsubishi Kagaku Media Corp.

* **Note 1:** It is recommended to write and read the DVD-R, DVD-RAM, CD-R and CD-RW discs using the drives of the same model. If drives of different models are used in write and read, discs of certain manufacturers or production lots may not manifest the full performance.

* **Note 2:** Only discs with a diameter of 120 mm are applicable.

* **Note 3:** Use DVD-R, CD-R and CD-RW discs that match the optimal writing speed. However, even if the appropriate discs are used, an adequate performance may not be achieved depending on the disc manufacturer or production lot compatibility.

■ Design and specifications are subject to change without notice.



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