

Pioneer

DVR-A03 / DVR-103_(OEM)

**DVD-R/RW and CD-R/RW Writer
DVD-ROM and CD-ROM Reader**

ATAPI Tray-load Drive

OPERATING INSTRUCTIONS

Version 1.00

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Pioneer Corporation
Pioneer New Media Technologies, Inc.

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IMPORTANT

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. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications; there are no guarantees that interference will not occur in a particular installation. If this drive 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 which is different from the receiver's circuit
- Consult the dealer or an experienced radio/TV technician for help

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1.0 GENERAL INFORMATION

Thank you for buying this Pioneer DVD-ROM drive. Please read through these operating instructions to understand your unit properly. After you have finished reading the instructions, put them away in a safe place for future reference.

DANGER: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN – AVOID DIRECT EXPOSURE TO THE BEAM!

WARNING: This unit is not waterproof. To prevent fire or shock hazard, do not expose drive to rain or moisture. Also, avoid placing near an item that may leak or lose water such as a flowerpot, vase, cosmetics container or medicine bottles.

CAUTION: This product contains a laser diode of a higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel. For *pluggable* equipment, install near a wall outlet for easy access. The drive is labeled as a *Class 1 Laser Product* on the top of the cover.

Do not remove the cover. Alterations or modifications carried out without appropriate authorization invalidates the warranty.

Using controllers, making adjustments or performing procedures other than those specified herein may result in hazardous radiation exposure.

The use of optical instruments with this product increases eye hazard.

This product complies with the EMC Directives (89/336/EEC amended by 92/31/EEC and 93/68/EEC).

The Generation of Acoustical Noise is less than 70dB (ISO7779/DIN45635).

(For Canadian model: This Class B digital apparatus complies with Canadian ICES-003.)

Play only round discs rather than unique shapes such as a heart or diamond.

AFTER-SALES SERVICE FOR PIONEER PRODUCTS:

Contact your dealer or distributor for after-sales and warranty service. Please provide any necessary warranty documents or other pertinent information with the return shipment. If the documents are unavailable, please contact the Pioneer regional service headquarters listed below.

Please contact Pioneer Service 800 / 872-4159 for additional information.

2.0 SAFETY INSTRUCTIONS

To ensure your personal safety and to maximize the full operating potential of your drive, read and follow the precautions listed below.

2.1 Drive Precautions

This section discusses installation concerns and drive maintenance.

Arrangement – This drive may only be installed horizontally. Do not install the drive vertically.

Environment – Avoid installing this drive in a location with exposure to large quantities of dust, high temperatures, high humidity, or subject to excessive vibrations or shocks.

Power – Turn OFF the system before installing this or any other hardware device.

Read & Retain Instructions – Read all operating and user information provided with this drive.

Cleaning – Use a damp cloth to clean the exterior housing. Avoid using any fluids including liquid, aerosol or alcohol-based cleaning products.

Water or Moisture – Avoid operating or locating this drive near water or other sources of fluid.

Power Sources – Operate this drive only from the recommended power sources. If you are unsure of the power source, consult an authorized Pioneer representative.

Overloading – Avoid connecting too many devices to a single wall socket or power source as this can cause fires or short circuits.

Object & Liquid Entry – Never push inappropriate objects in to the device. Avoid spilling any liquids in to or on the outside of the drive.

Condensation – Moisture can form in the operating section of the product if the drive is taken from cool surroundings to a room with a warmer temperature. Let the drive stand for one to two hours in the new location before turning it ON.

Servicing – Opening or removing the cover exposes you to possible electrical shock or other danger. Contact a Pioneer authorized service representative for repairing this drive (refer to the enclosed Service & Support Card).

2.2 Disc Precautions

Cracked or warped discs may damage the drive. If a disc breaks inside of the unit, pieces are likely to strike the optics.



Non-standard disc shapes are unusable on this drive. These non-standard shapes include hearts, diamonds, polygons, etc.

3.0 FEATURES

The Pioneer DVR-A03/DVR-103 drive supports many current and upcoming formats.

3.1 Specific Features

- Write Speed:
 - DVD-R – CLV 1X and 2X
 - DVD-RW – CLV 1X
 - CD-R – CLV 4X and 8X
 - CD-RW – CLV 4X
- Maximum Read Speed:
 - DVD-ROM – CAV 4X
 - CD-ROM – CAV 24X
 - DVD-R/RW – CLV 2X
 - CD-R/RW – CAV 16X
 - (10.3 – 24X CAV Mode over 16 block transfer)

Note: The data transfer rate may fail to be output if the disc is scratched or damaged in any way.

- Buffer Memory Size:
 - Read – 512 Kbytes
 - Write – 2 Mbytes
- IDE Data Transfer Mode:
 - PIO Mode 4
 - Multi Word DMA Mode 2
- Supports Video CD
- 5.25" Half-height built in (internal) drive
- Stereo Audio Output
- Headphone Output & Volume
- High Accuracy Tilt Servo Mechanism
- Supports CD text format

- Read Only
 - DVD-ROM (single layer/dual layer)
 - DVD-R (General and Authoring media)
 - Photo CD (single & multiple sessions)
 - CD-Extra (CD PLUS)
 - CD-ROM XA Mode 2 (Form 1, Form 2)
 - CD-ROM Mode 1
 - CD-DA
- Read/Write:
 - DVD-R (writes to General media only)
 - DVD-RW
 - CD-R
 - CD-RW

Note: High-speed CD-RW writing is not supported.

3.2 Precautions When Playing 8cm (3.15”) Discs

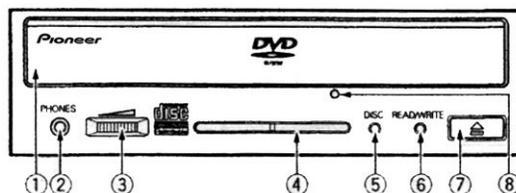
Although the DVR-A03/103 drive provides a built-in ring to play an 8cm (3.15”) disc, it is recommended to read/write to 12cm discs.

4.0 INTERFACE

Before connecting the drive, confirm that the drive bay allows horizontal installations. The DVR-A03/103 drive may only be installed horizontally. The next section provides information for mounting this drive.

4.1 Front View and Vertical installation

DVR-A03/103 Front View



- 1) Disc Tray - Auto-loading using the Eject button
place a disc on the tray with the label facing up then press again to close the tray
- 2) Phones – Headphone jack
stereo mini-jack for using headphones
- 3) Volume Control – Headphone Level
used to adjust the volume for the headphones
- 4) Ventilation Holes – do not block

5) DISC Indicator

Disc / Status	Indicator Activity
Tray is Open / Closed	blinking green
Read Only disc	steady green
Recordable disc	steady orange
Unsupported disc	blinking orange

6) Read/Write Indicator

Disc / Status	Indicator Activity
Reading a disc	steady green
Writing a disc	steady orange
When an error occurs	blinking orange
* abnormal rise of internal temperature	blinks once, pauses then repeats
* lens or disc is dirty	blinks twice, pauses then repeats
* other error	blinks 3 times, pauses then repeats

7) Eject button

press to open and close the tray

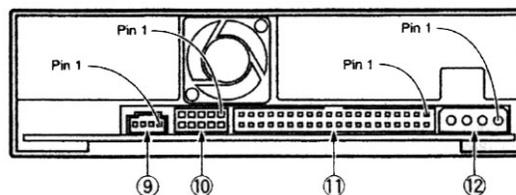
8) Forced Ejection hole

if the eject button fails to function, insert a stiff rod into the hole and push gently and steadily until the disc ejects.

WARNING: Before forcing an ejection, verify that the computer power is OFF and that the disc has stopped spinning in the drive. The approximate time, for a disc to stop spinning once the power is OFF, is 60 seconds.

4.2 Back View and Ports

DVR-A03/103 Back View



- 9) Audio Output
connector for analog audio output, uses a Modex 70553 connector
Select the appropriate cable from the following chart:

Pin	Name	Function
1	L	Left channel audio output
2	G	Ground
3	G	Ground
4	R	Right channel audio output

- 10) Device Configuration Jumper
turn OFF the unit then set this jumper switch to select the drive use mode supporting the computer (*jumpered* = ON; *no jumper* = OFF)

Pin	Name	Function
1	MA*	on Drive set to Master mode
2	SL	on Drive set to Slave mode
3	CS	on Drive set to Cable Select mode
4		Reserved
5		Reserved

* Pin #1 is active upon initial shipment.

- 11) Host IDE Interface
40-pin I/O connector in accordance with ATA specifications

- 12) DC Input
power supply input for DC +5 V and +12 V

Pin	Name	Function
1	+12	Power supply input for DC +12 V
2	G	Ground
3	G	Ground
4	+5	Power supply input for DC +5 V

4.3 Region Code Information

The maximum number of times the Region Code may be changed is five (5), including the initial setting. The fifth change becomes PERMANENT.

Note: Region Codes are part of the DVD Standard, however, Region Codes on DVD discs are optional. DVD discs with no specified Region Code may be played on any player.

5.0 INSTALLATION

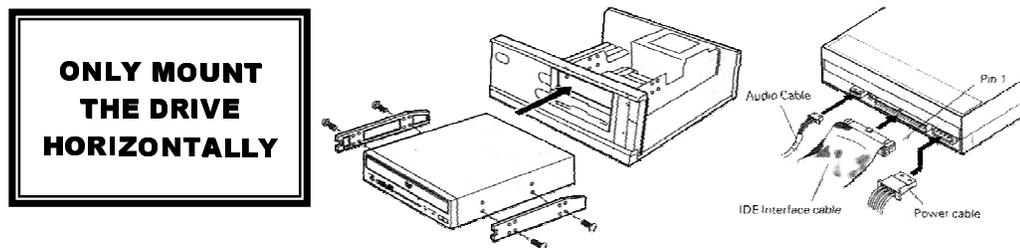
The following information provides step-by-step instructions to install the drive.

5.1 Positioning the Drive

Install this unit horizontally ONLY. Review all instructions prior to installing the drive.

1. Turn OFF the computer and remove the cover or front panel.
2. Remove the blank drive-bay cover from the front panel.
3. Attach the slide rails to the drive.
slide rails may be purchased from a computer retailer
4. Insert the drive in to the open bay/slot.
5. Place the screws in the appropriate holes and tighten.
Screws must be shorter than 5mm (3/16") in length, longer screws may damage the drive.

Note: When the mounting screws are loose, vibrations from a spinning disc may cause a ripping sound.



5.2 Connections

The computer provides power for the drive rather than an external power source. Do not use any other power supply for this drive.

Connect the cables in the following order:

1. Connect the power cable from the computer.
pay close attention to the polarity on the cable
2. Connect the IDE interface cable.
confirm that Pin 1 on the drive corresponds to Pin 1 on the cable
3. Connect the drive's audio output to the sound card, if applicable

6.0 SPECIFICATIONS

6.1 General Functions

Installation Position	Horizontal installations only	
Disc Diameter	12 cm (4.72")	8 cm (3.15") *
Transfer Rate		
Data Read (sustained)	DVD-ROM	Maximum 5400 kBytes/sec *
	DVD-R/RW	Maximum 2700 kBytes/sec *
	CD-R/RW	Maximum 2400 kBytes/sec *
	CD	Maximum 3,600 kBytes/sec * (10.3 – 24X CAV Mode over 16 block transfer)
	* data transfer rate may not be output if disc is damaged or dirty	
Data Write (sustained)	DVD	Average 2,859 Kbytes/sec. (2X DVD-R)
	DVD-R	1x and 2x CLV
	DVD-RW	1x CLV
	CD	Average 1,200 Kbytes/sec. (8X CD-R)
Access Time (Random Average)	DVD-ROM	200 ms
	CD-ROM	180 ms
Seek Time (Random Average)	DVD-ROM	150 ms
	CD-ROM	130 ms

6.2 Specific Functions

Audio Output	
Line Out	0.7 Vrms ± 0.1 Vrms (at 10 k Ω load)
Headphone Out	0.6 Vrms ± 0.5 Vrms (at 32 Ω load)
Power Supply	DC + 12 V, 0.9 A ; DC + 5 V, 1.6 A
External Dimensions (includes front panel)	5 27/32" (W) x 1 11/16" (H) x 8 7/32" (D) 148mm (W) x 42.3mm (H) x 208.5mm (D)
Weight	2.2 lbs (1.1 kg)
Temperature Range	41° F to 113° F (+5° C to +45° C)
Humidity Range	5% to 85%
Storage Temperature	- 40° F to 140° F (- 40° C to +60° C)
Storage Humidity	5% to 90% (no condensation)

Note: Specifications, due to improvements, subject to modification without notice.

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DVR-A03/DVR-103

DVD-R/RW Drive

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