

# *Pioneer*

**DVR-A05 / DVR-105**<sub>(OEM)</sub>

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

ATAPI Tray-load Drive

## **OPERATING INSTRUCTIONS**

Version 1.00

November 2002

**Pioneer Corporation  
Pioneer Electronics (USA), Inc.  
Business Solutions Division**

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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

### FEDERAL COMMUNICATIONS COMMISSION 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.

Product Name: DVD-R/RW CD-R/RW Writer

Model Name: DVR-A05 (or DVR-105)

Responsible Party Name: Pioneer Electronics (USA), Inc.

Customer Support Division

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## 1.0 GENERAL INFORMATION

Thank you for buying this Pioneer 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.

**IMPORTANT:** Record the model number and serial number below.

**Model Number:** DVR-A05

**Serial Number:**

**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 containers or medicine bottles.

**CAUTION:** The drive is labeled as a *Class 1 Laser Product* on the top of the cover. 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.

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 uniquely shaped media such as heart, diamond, etc.

### **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 / 421-1613 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.

**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.



When working with DVD (or CD) recordable media, follow the guidelines below:

- Avoid touching or scratching the signal side (shinier side) of the disc.
- Hold the disc by the edges or by the center hole.
- Do not affix paper labels to the media.
- Avoid using non-standard disc shapes such as hearts, polygons, etc.
- Remove dust or lint from the disc with a soft dry cloth by wiping from the inside to the outside edge rather than in a circular motion.
- Do not apply record cleaning fluids, anti-static solutions or chemicals to clean a disc.
- Store discs vertically and in a dust-free case whenever possible.

## 3.0 FEATURES

The Pioneer DVR-A05/DVR-105 drive supports many current and upcoming formats.

### 3.1 Accessories

The following items are included in the box with the Pioneer DVR-A05 drive.

- Short-circuit socket (1)
- Audio cable (1)
- Mounting screws (4)
- Operating Instructions (1)
- DVR-A05 bundled software CD-ROM disc
- DVR-A05 Software Installation Guide

Pioneer DVR-105 drive ships without the bundled software and the Software Installation Guide.

### 3.2 Specific Features

- Write Speed:
  - DVD-R – CLV 1X and 2X
  - DVD-R (high speed) – CLV 1X, 2X and 4X
  - DVD-RW – CLV 1X
  - DVD-RW (high speed) – CLV 1X and 2X
  - CD-R – CLV 4X, 8X, 12X and 16X
  - CD-RW – CLV 4X
  - CD-RW (high-speed) – CLV 4X and 8X
- Maximum Read Speed:
  - DVD-ROM (single) – CAV 12X
  - DVD-ROM (dual) – CAV 8X
  - DVD-R/RW – CAV 6X
  - CD-ROM/R/RW – CAV 32X

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

- Buffer Memory Size:
  - Read – 2 Mbytes
  - Write – 2 Mbytes
- IDE Data Transfer Mode:
  - PIO Mode 4
  - Multi Word DMA Mode 2
  - Ultra DMA Mode2
- Supports Video CD
- 5.25" Half-height built in (internal) drive
- Stereo Audio Output
- Headphone Output & Volume
- LCD Tilt Servo Mechanism
- Horizontal and Vertical orientation available
- Low vibration mechanism by DRA system
- Supports CD text format
- Disc Format Read/Write:
 

– DVD-ROM (single layer/dual layer) 12cm & 8cm	– CD-ROM Mode 1
– DVD-R General (also reads Authoring media)	– CD-ROM XA Mode 2 (Form 1, Form 2)
– DVD-R 4X high speed General (revision 1.0)	– CD-R
– DVD-RW	– CD-RW (standard & high speed)
– DVD-RW 2X high speed (revision 1.0)	– CD-Extra (CD PLUS)
– Photo CD (single & multiple sessions)	– CD-DA

*Note: To burn a disc, install the appropriate application.*



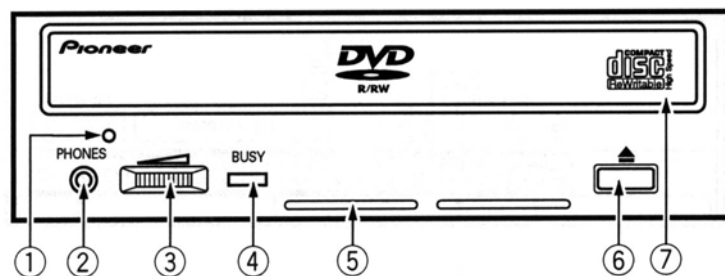
### 3.3 Precautions When Playing 8cm (3.15") Discs

Although the DVR-A05/105 drive provides a built-in ring to play an 8cm (3.15") disc, it is best to work with 8cm media only when the drive is mounted horizontally.

## 4.0 INTERFACE

### 4.1 Front View and Vertical installation

DVR-A05/105 Front View



- 1) 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.

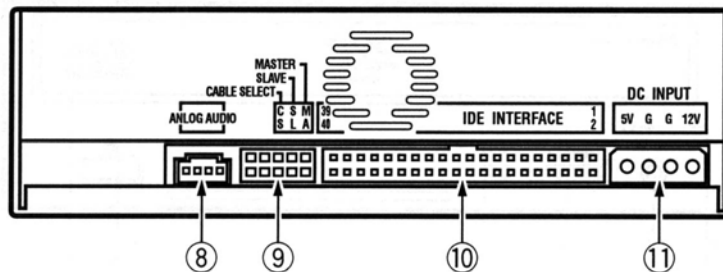
**WARNING:** Before forcing an ejection, verify that the computer power is OFF and that the disc has stopped spinning in the drive. The approximate time for a disc to stop spinning once the power is OFF is 60 seconds.

- 2) Phones – Headphone jack  
stereo mini-jack for using headphones  
Using the headphones jack does not affect audio output. The audio output on the rear panel remains active at all times.
- 3) Volume Control Knob – Headphone Level  
Turning the knob to the right increases the volume to the headphones.
- 4) Busy Indicator – lights during disc reading or writing
- 5) Ventilation Holes – do not block
- 6) Eject button  
press to open and close the tray
- 7) 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

**WARNING:** Do not attempt to pull the tray out by using force.

## 4.2 Back View and Ports

DVR-A05/105 Back View



- 8) 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

- 9) 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 when shipped from the factory.

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

- 11) 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 sections provide step-by-step instructions to install the drive.

### **5.1 Positioning the Drive**

The DVR-A05/105 tray is designed with disc-clamps so that the drive can be installed horizontally or vertically. Review all instructions prior to installing the drive.

1. Turn OFF the computer and disconnect the power cord.
2. Remove the bezel or front cover from the computer.
3. Remove the drive-bay cover (5.25" slot shield) from the PC's front panel.
4. Attach the slide rails to the drive.  
*(slide rails may be purchased from a computer retailer)*
5. Insert the drive in to the open bay/slot.

If the computer requires that the drive be fixed in to place, refer to the PC's operating instructions. When using screws, select screws shorter than 5mm (3/16") in length. Longer screws may damage the drive.

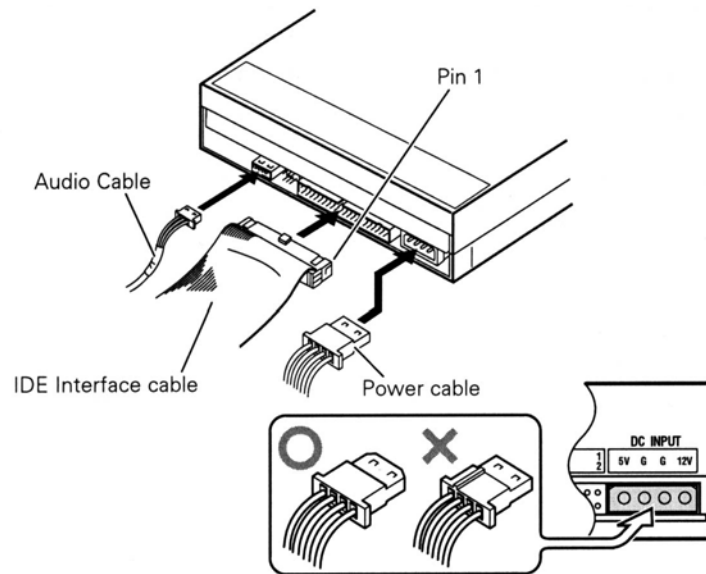
*Note: When the mounting screws are loose, vibrations from a spinning disc may cause a ripping sound.*

### **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. The computer needs to be turned OFF during this procedure.

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

<b>Installation Position</b>	Horizontal or Vertical installations	
<b>Disc Diameter</b>	12 cm (4.72")	8 cm (3.15") * (not available when drive is mounted vertically)
<b>Transfer Rate</b>		
Data Read (sustained)	DVD	Maximum 16.62 MBytes/sec *
	CD	Maximum 4.92 MBytes/sec * (13.7 – 32X CAV Mode over 16 block transfer)
* data transfer rate may not be output if disc is damaged or dirty		
Data Write (sustained)	DVD	Average 5.54 MBytes/sec. (4X DVD-R)
	CD	Average 2.46 MBytes/sec. (16X CD-R)
<b>Access Time</b> (Random Average)	DVD-ROM	140 ms
	CD-ROM	130 ms
<b>Seek Time</b> (Random Average)	DVD-ROM	120 ms
	CD-ROM	100 ms
<b>HOST Interface Specifications</b>		
	PIO Mode 4, Multi word DMA Mode 2	16.6 Mbytes/sec
	Ultra DMA mode 2	33.3 Mbytes/sec

### 6.2 Specific Functions

<b>Audio Output</b>		
Line Out	0.7 Vrms ± 0.1 Vrms (at 10 k Ω load)	
Headphone Out	0.7 Vrms ± 0.2 Vrms (at 32 Ω load)	
<b>Power Supply</b>	DC + 12 V, 0.6 A ; DC + 5 V, 1.1 A	
<b>External Dimensions</b> (includes front panel)	5 27/32" (W) x 1 11/16" (H) x 7 25/32" (D) 148mm (W) x 42.3mm (H) x 197.7mm (D)	
<b>Weight</b>	2.43 lbs (1.1 kg)	
<b>Operation Temperature</b>	41° F to 113° F (+5° C to +45° C)	
<b>Humidity Range</b>	5% to 85%	
<b>Storage Temperature</b>	- 40° F to 140° F (- 40° C to +60° C)	
<b>Storage Humidity</b>	5% to 90% (no condensation)	

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

# DVR-A05/DVR-105

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DVD-R/RW & CD-R/RW Writer

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