

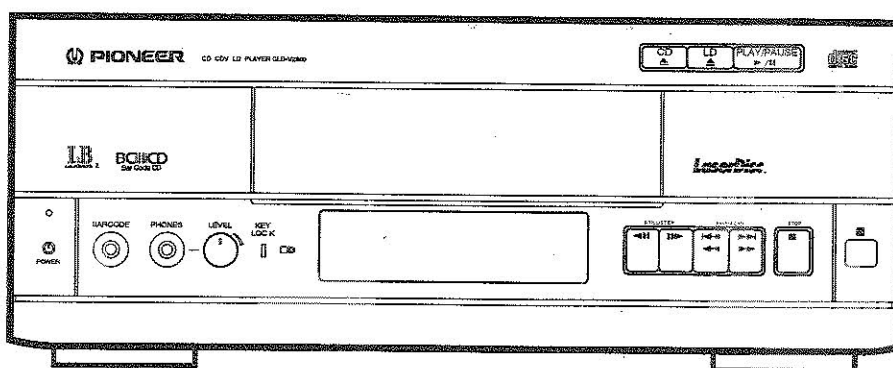
# Operating Instructions

CD CDV LD PLAYER

**LaserDisc**

## CLD-V2800

NTSC



Thank you for buying this Pioneer CD CDV LD player. Please read these operating instructions thoroughly so that you will know how to operate your player properly. After you have finished reading the instructions, put them away in a safe place for future reference.

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

[For Canadian model]

### CAUTION:

TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

### ATTENTION:

POUR PREVENIR LES CHOCs ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

### IMPORTANT NOTICE

RECORD THE MODEL NUMBER AND SERIAL NUMBER OF THIS EQUIPMENT BELOW. THE NUMBERS ARE ON THE REAR PANEL.

MODEL NO. CLD-V2800

SERIAL NO. \_\_\_\_\_

KEEP THESE NUMBERS FOR FUTURE USE.

**CAUTION:** This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections.

**PIONEER**  
The Art of Entertainment

# IMPORTANT



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

## CAUTION

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**CAUTION:**  
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

# SAFETY INSTRUCTIONS

**READ INSTRUCTIONS** – All the safety and operating instructions should be read before the appliance is operated.

**RETAIN INSTRUCTIONS** – The safety and operating instructions should be retained for future reference.

**HEED WARNINGS** – All warnings on the appliance and in the operating instructions should be adhered to.

**FOLLOW INSTRUCTIONS** – All operating and use instructions should be followed.

**CLEANING** – Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

**ATTACHMENTS** – Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

**WATER AND MOISTURE** – Do not use this video product near water – for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.

**ACCESSORIES** – Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

**CART** – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



**VENTILATION** – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. They should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

**POWER SOURCES** – This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

### POWER-CORD PROTECTION

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

**POLARIZATION** – This video product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

**LIGHTNING** – For added protection for this video product receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.

**POWER LINES** – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

**OVERLOADING** – Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

**OBJECT AND LIQUID ENTRY** – Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.

**SERVICING** – Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

### DAMAGE REQUIRING SERVICE

Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the video product.
- If the video product has been exposed to rain or water.
- If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
- If the video product has been dropped or the cabinet has been damaged.
- When the video product exhibits a distinct change in performance – this indicates a need for service.

**REPLACEMENT PARTS** – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

**SAFETY CHECK** – Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

**OUTDOOR ANTENNA GROUNDING** – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

See Fig. A.

NEC – NATIONAL ELECTRIC CODE

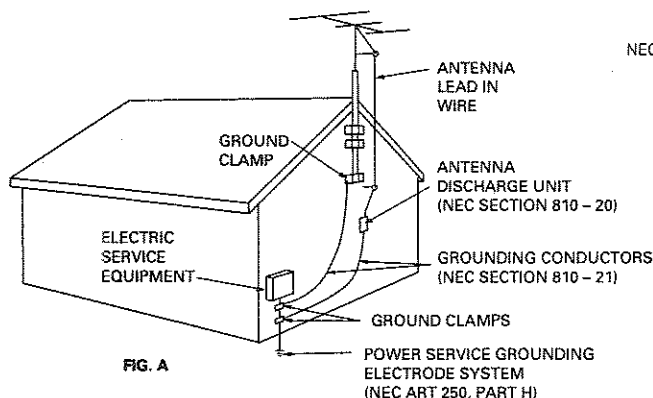


FIG. A

### CAUTION

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

### Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

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 experienced radio/TV technician for help.

### Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

### [For Canadian model]

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

**Only one disc can be loaded at any one time. Loading a LaserDisc, a Compact Disc, a 3" Compact Disc or a Compact Disc with Video on top of one another may result in a breakdown or in scratching of the discs. Please load only one disc at a time.**

**This player is to be used exclusively with the NTSC color system. Please use NTSC LaserDiscs or NTSC Compact Discs with Video only. PAL and SECAM system discs cannot be used with this player.**

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## FEATURES

### Interface Connector Installation

Can be easily connected to a personal computer that has an RS-232C port.

Also, application software can be developed by using easily understood mnemonic commands or auto status functions.

### Remote control unit supplied.

### Corresponds to LaserBarcode Reader

The LaserBarcode reader UC-V104BC, UC-V108BC or UC-V109BC for video discs is available as an option. It increases efficiency for easy use.

### User Display Function

Up to 20 alphanumeric characters can be displayed with 10 overlapping lines on the playback screen (Entered by using a controller).

### RF Modulator supplied

Can be connected to TV sets or monitors.

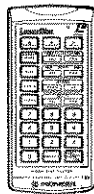
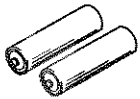
### PHONES jack

The output level at the PHONES jack can be adjusted with the PHONES LEVEL control.

## ACCESSORIES

When unpacking the player, first check to make sure that all of the accessories listed below are supplied.

- Remote control unit
- Size "AA" (IEC R6) dry cell battery x 2



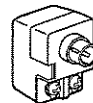
- Video cord



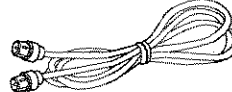
- Audio cord



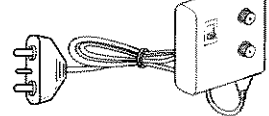
- Antenna adapter



- RF antenna cable



- RF modulator



- Operating instructions
- Barcode sheet

## PLAYER INSTALLATION PRECAUTIONS

Do not place the player on top of an amplifier or any other unit that emits heat since heat may adversely affect the player and may warp the loaded disc.

If the player is used with other audio equipment in the same rack, place it on the lowest shelf away from heat and keep the area well ventilated.

### DO NOT INSTALL THE PLAYER IN THE FOLLOWING LOCATIONS

- In a place subject to direct sunlight.
- In humid or poorly ventilated places.
- In extremely hot or cold places.
- In a place subject to vibrations.
- In a dusty place.
- In a place subject to soot, steam or heat (in a kitchen, etc.).

### Installing the player

- Choose a stable platform next to the television and stereo system with which you plan to use the player.
- When using the player with a stereo system, your speakers should be installed somewhat separated from your television (color television monitor).
- Do not place heavy items on top of the player. Also, cassette tape decks and other components easily affected by magnetism should be installed separately from the player.

## PLAYER HANDLING PRECAUTIONS

### CONDENSATION

If this player is carried into a heated room from outside during the winter, or if the temperature of the room where the player is located is rapidly increased by a heater, etc., the lens or the operation section becomes covered with dew.

When this occurs, signal read out playback cannot be performed by the laser beam.

Depending on the degree of dew condensation, leave it for 1-2 hours at room temperature to eliminate dew condensation and allow playback to be performed.

Also, increase the room temperature gradually during winter so that dew condensation does not occur, then turn the power on.

Dew condensation sometimes occurs during summer when air from an air conditioner hits this player. If this occurs, change the installation location.

### OPERATING TEMPERATURE

The player can be operated in an environment of between 5 and 35°C (41 to 95°F). Do not use the player in an extremely hot or cold environment.

### POWER SOURCES

This player is designed to operate on an AC power supply of 120 V, 50/60 Hz. Do not use it with a DC power supply or an AC power supply of a different voltage or frequency.

### THE COVER

Do not attempt to inspect or change any of the internal parts. If you open the player and touch any of the parts, you may get a strong electric shock.

### POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

### CAUTION

Even when the player is in the pause mode, the disc-drive motor is still revolving. Since leaving the player in this condition can shorten the lifetime of the motor, do not leave the player in the pause mode for long periods of time. Also, to prevent damage to the screen, do not use the unit for long periods of time under conditions in which the screen display (monitor) has displayed characters (for example, park mode, PAUSE or CD PLAY).

If playback is paused for about 40 minutes, the player will automatically enter stop mode.

### TRANSPORTATION

Do not subject this player to vibration or impact of any kind. Be particularly careful not to drop it.

Keep heat or water away from this player when it is transported.

**Also, be sure to remove the disc when this player is transported since the disc might be scratched or the player might be damaged.**

### Items With Specific Precautions

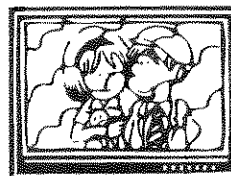
#### Do not move the player during playback.

Since the disc rotates at high speed during playback, the disc will be scratched if the player is lifted or moved during playback. When the player is moved, stop playback and remove the disc first.

To avoid possible damage to the player during shipping, be sure to first remove the disc (if present), return the disc table to its closed position, and turn off the POWER switch if "NO DISC" is displayed in the display window, unplug the power cord.

### STRIPE PATTERNS APPEARING ON A TV PROGRAM

Stripe patterns may appear during a TV program if the player unit is turned on, depending on the quality of reception of the TV station. This is neither a malfunction of the television nor the player. If stripes appear while watching the TV, or when watching the TV for long periods of time, turn the player off.



When FM or AM stations are being received, signal noise may be generated if the player is turned on. Turn off the player when not in use. Also, if there is signal noise when receiving radio stations with an indoor antenna, adjust the position or direction of the antenna.

### CLEANING CARE








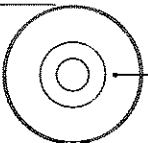

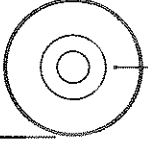

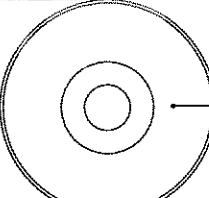

Use a soft, dry cloth for cleaning. For stubborn dirt, soak the cloth in a weak detergent solution; wring well first and wipe. Use a dry cloth to wipe it dry. Do not use any volatile agents such as benzine or paint thinner, as they may damage the surface of the player.



# TYPES OF DISCS THAT CAN BE PLAYED WITH THIS UNIT


This unit is a CD VIDEO SYSTEM compatible player which can play CDs, CDV discs, and LDs.

\* The marks shown in the right column are printed on the labels and jackets of the corresponding discs.

This player can play the following seven types of discs without using an adapter.

<b>CD Single (one-side recording)</b>  8 cm (3 in.) Digital audio (max. 20 min.)	
<b>CD (one-side recording)</b>  12 cm (5 in.) Digital audio (max. 74 min.)	
<b>CDV (one-side recording)</b>  12 cm (5 in.) Digital audio (max. 20 min.) (Audio part) Digital audio + Video (max. 5 min.) (Video part)	
<b>VSD (Video Single Disc) (one-side recording)</b>  12 cm (5 in.) Digital audio + Video (max. 5 min.)	
<b>LD Single (one-side recording)</b>  20 cm (8 in.) Digital/analog audio + Video (CAV: Max. 14 min. CLV: Max. 20 min.)	
<b>LD (two-side or one-side recording)</b>  20 cm (8 in.) Digital/analog audio + Video (CAV: Max. 14 min. per side CLV: Max. 20 min. per side)	
<b>LD (two-side or one-side recording)</b>  30 cm (12 in.) Digital/analog audio + Video (CAV: Max. 30 min. per side CLV: Max. 60 min. per side)	

• There are some discs marked with the  mark instead of the  mark.

• There are some discs without the  mark.

## Caution

VIDEO CD  or  cannot be played with this player.

The Video CD is a disc holding up to 74 minutes of digital video and audio signals, when recorded in the MPEG format.

## LD GLOSSARY

### Chapter number

Chapter numbers are used to indicate the boundaries of the sections on a disc. If chapter numbers are recorded on a disc, it is so indicated on the jacket of the disc, etc.

### Frame number

Frame numbers are the numbers assigned to each picture frame on a CAV disc.

### Time number

Time numbers indicate the time elapsed from the beginning of a CLV disc.

## CDV/CD GLOSSARY

### Track number

Track numbers indicate the boundaries of the sections, or "tracks", on a disc. Track numbers are assigned consistently throughout the audio part and video part of a CDV disc.

### TOC

The TOC (Table of Contents) section is just like the table of contents of a book, and contains information on the contents (number of tracks, playing time, etc.) of the disc.

• Some LD discs are not provided with a TOC section.

\* This is the unified symbol mark of LASERDISC (LaserVision videodisc).

LaserDisc players and discs which bear this symbol and use the same television system, are mutually compatible.

\*\* A Digital Sound with Multi Audio Disc (CD VIDEO LD) and a CDV (CD Video CDV) are referred to as CD Video discs. CD Videodiscs are recorded with subcodes, which are the non-audio recordings of TOC (Table of Contents) data such as track numbers, index numbers, etc. However, there are some discs without these marks.

## CD VIDEO SYSTEM

The CD VIDEO SYSTEM is the standard name for the "optical video disc with digital audio" system that encompasses both LDs and CDV discs.

The following mark is the standard mark for the CD VIDEO SYSTEM and is found on all players and discs which conform to the CD VIDEO SYSTEM format.

The following systems are included in the CD VIDEO SYSTEM:



- CDV (CD VIDEO CDV) discs
- LaserVision Discs (CD VIDEO LDs) containing digital sound with sub codes
- Compatible players which can play CDs and CDV discs
- Compatible players which can play CDs, CDV discs, and LDs

### CD VIDEO LDs

A CD VIDEO LD is an LD with digital audio which is encoded with sub codes (data such as TOC and track number data, excluding audio and video signals).

## TYPES OF DISCS THAT CAN BE PLAYED WITH THIS UNIT

### LDs (LASERDISCS)

Two types of standard LaserDiscs are available — standard play (CAV) discs and extended play (CLV) discs — which differ with respect to their signal recording systems.

#### CAV DISCS

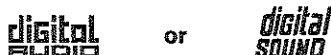
The jackets and labels of these discs are marked with a "Standard Play Disc CAV" or "Standard Play" indication.

#### CLV DISCS

The jackets and labels of these discs are marked with a "Extended Play Disc CLV" or "Extended Play" indication.

#### LASERVISION DISCS WITH DIGITAL AUDIO

The jackets and labels of these discs bear the following mark.



These are LaserDiscs which contain digital audio signals in addition to conventional analog audio signals. This feature allows the high image quality of LaserDiscs to be enjoyed together with the superior quality of digital sound.

#### LASERVISION MULTI AUDIO DISCS WITH DIGITAL AUDIO

The jackets and labels of these discs bear the following mark.



These are LaserDiscs in which the recorded digital and analog audio signals differ in content. This allows the user to enjoy two different audio soundtracks by switching between the digital and analog sound.

### CDV (COMPACT DISC WITH VIDEO) DISCS

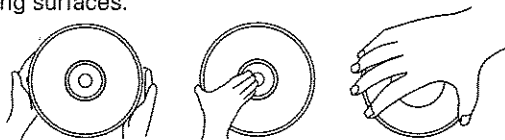
These are compact discs which also contain video signals. Of the total 25-minute playback time of a CDV disc, 20 minutes is encoded with conventional CD digital audio signals (the "audio part"). The remaining 5 minutes is encoded with both video and digital audio signals (the "video part").

In normal playback mode, the unit plays the audio part after the video part is played back.

## CARE OF DISCS

#### How to hold discs

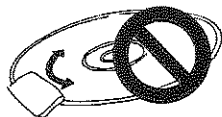
When loading or removing discs, try not to touch their playing surfaces.



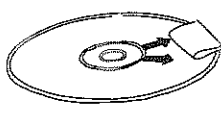
#### Cleaning

Fingerprints or other dirt on the disc may affect sound and picture quality.

To clean your discs, use a soft clean cloth to wipe them. If necessary, moisten a soft cloth with diluted neutral detergent to remove heavy dirt or fingerprints.



Do not wipe in a circular direction  
(Concentric scratches in the  
disc groove tend to cause  
noise.)

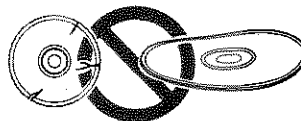


Gently wipe from the inside  
toward the outer edge.

Discs must not be cleaned with record cleaning sprays, or static prevention sprays, etc. Also do not use volatile liquids such as benzene, or thinner, etc.

#### NEVER PLAY CRACKED OR WARPED DISCS.

- The disc revolves in the player at high speed when it is played. Never play a cracked, scratched or warped disc. This may damage the player or cause it to malfunction.



#### After using discs, store them upright

After playing a disc, always remove it from the player and return it to its jacket. Then store it standing upright away from heat and humidity.

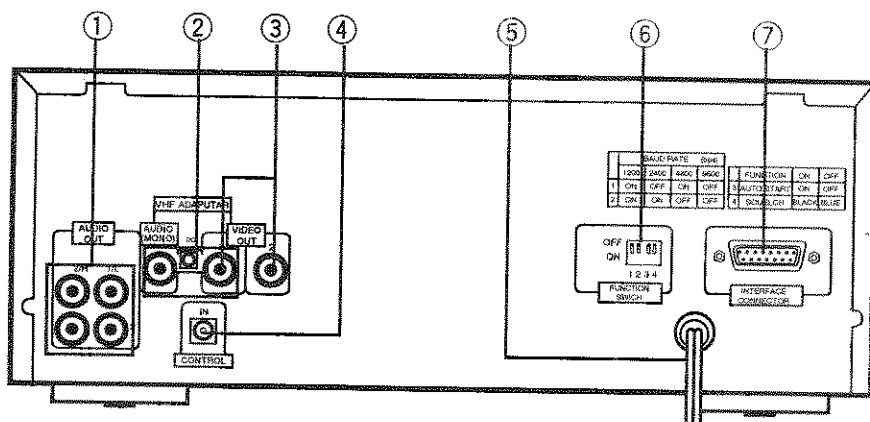
- Store discs carefully. If you store discs at an angle, or stacked on top of each other, discs may become warped even when in their jackets.
- Do not leave discs in locations such as on the seat of a car, which may become excessively hot.

#### CAUTION WHEN USING THE DISC

All rights reserved.

Unauthorized public performance, broadcasting or copying is a violation of applicable laws.

## REAR PANEL FACILITIES



### ① AUDIO OUT jacks (RCA jacks)

These jacks output the audio signal of LaserDiscs or Compact Discs. Connect them to the LD or AUX input jacks of your stereo amplifier.

Do not connect these jacks to your amplifier's PHONO input jacks.

### ② VHF ADAPTER jacks

Connect to the supplied RF modulator when using a normal TV. Note that TV audio will be monophonic when using the RF modulator.

The RF modulator uses DC 5 V power supplied from the player. The RF modulator will automatically be set to the player side when the power supply to the player is ON, and to the antenna side when the power supply to the player is OFF.

#### NOTE:

The VHF ADAPTER jacks are shared with the VIDEO OUT jack. Therefore, either a monitor or a TV can be connected.

### ③ VIDEO OUT jacks (RCA jacks)

These jacks are only for connection to a TV monitor (one which has a video input terminal). They provide an NTSC video signal.

### ④ CONTROL IN jack (miniature phone jack)

System control can be performed when the player is combined with an optional AV amplifier, which can provide centralized control of Pioneer products with the mark.

Connect the VIDEO OUT jack of the player to the video input jack of the AV amplifier or the projection monitor, and connect the AUDIO OUT jacks of the player to the audio input jacks of the AV amplifier or the projection monitor.

Connect the CONTROL IN jack of the player to the CONTROL OUT jack of the AV amplifier or the projection monitor using a commercially available cord with mini-plugs (without load).

• For details concerning the connection and operation methods, please refer to the operating instructions for the AV amplifier or the projection monitor.

#### NOTE:

When a connecting cord has been connected to the CONTROL IN jack, direct control of the player with the remote control unit is not possible. Operate the player with the remote control unit by aiming it at the AV amplifier or the projection monitor.

### ⑤ Power cord

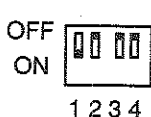
Plug into a wall outlet (120 V, 50/60 Hz) with ground terminal.

#### NOTE:

For safety reasons, this product uses a 3-line power cord and a 3-pin power plug. Make sure to insert the power plug into a wall outlet with ground terminal.

### ⑥ FUNCTION SWITCH

For setting the default functions of the player.



* BAUD RATE	SW1	SW2
9600 bps	OFF	OFF
4800 bps	ON	OFF
2400 bps	OFF	ON
1200 bps	ON	ON

SW	Function	ON	OFF
1	BAUD RATE: For setting baud rate of the serial interface.	*	*
2			
3	AUTO START: Automatic playback starts when a disc is inserted and the switching power is ON.	Auto start	No start
4	SQUELCH: For setting the background color.	Black	Blue

• SW2, SW3 and SW4 have been factory set to the OFF Position.

#### NOTE:

Set the FUNCTION SWITCHes when the power of this unit is OFF. When the power is turned ON, the setting of the functions will be read.

### ⑦ INTERFACE CONNECTOR (D-SUB 15 pin)

Used for serial interface connection to a computer or controller. See page 11 for details.

## CX SYSTEM

A built-in CX system decoder is provided.

The audio S/N can be improved and the dynamic range extended by using a disc with a mark (analog audio only). When a disc on which the CX system on/off code has been recorded is played back, the code is read and CX system decoder is automatically turned on/off.

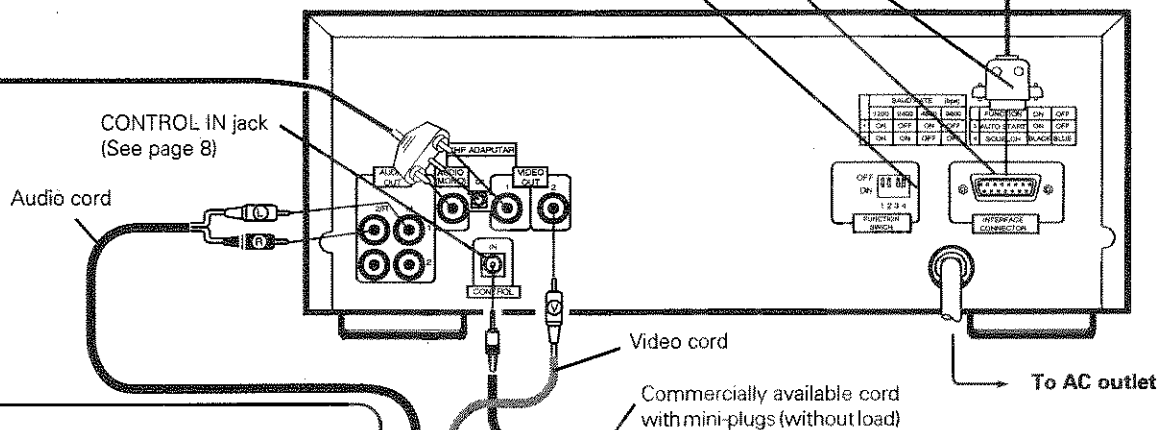
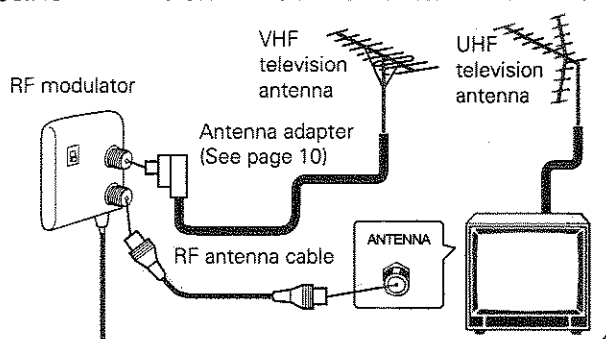
\* is a trademark of CBS Inc.

This player meets the CX EXPANDING SPECIFICATION.

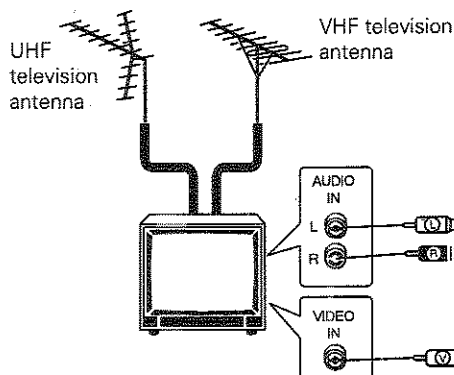


# CONNECTIONS

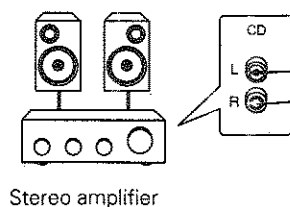
## USING A TELEVISION WITHOUT AUDIO AND VIDEO JACKS



## USING A TELEVISION WITH AUDIO AND VIDEO JACKS

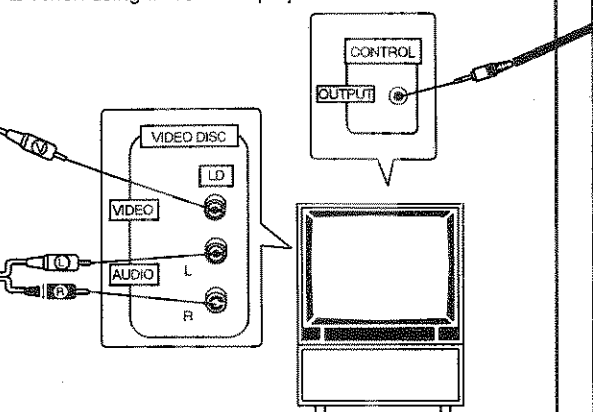


## USING A STEREO AUDIO SYSTEM

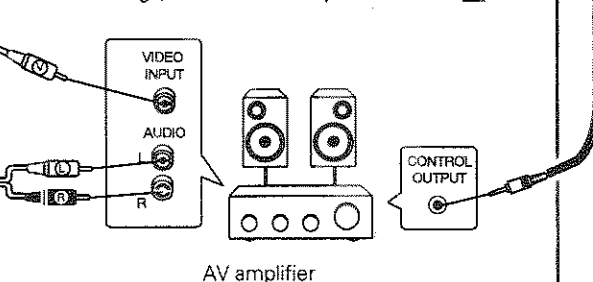


## SYSTEM REMOTE CONTROL CONNECTION

■ When using a PIONEER projection monitor



■ When using a PIONEER AV amplifier with the  mark



## To Use the RF Modulator

1. Detach the VHF antenna cable from the VHF antenna terminal of your TV set, and connect the cable to the VHF IN terminal of the RF modulator.
2. Connect the VHF OUT terminal of the RF Modulator to the VHF antenna terminal of your TV set with the supplied RF antenna cable.
3. Connect the socket (3-pin) of the RF modulator to the VHF ADAPTER jacks of the LaserDisc player.
4. Attach the accessory antenna adapter, and plug the adapter into the VHF IN terminal referring to the figures below.
5. Set the RF modulator's CHANNEL selector switch to the channel not used for broadcasting in your area (channel 3 or 4).
6. Set your television tuner to the channel of the RF modulator.
  - The television will not be automatically set to the picture transmitted through your player.
  - If the power to your player is turned OFF, your television will revert to its normal reception mode.

## NOTES:

- Push the plug in firmly. If the plug is not properly inserted, it may result in snow on the screen or noise.
- When the sound from a LaserDisc or Compact Disc is output from a television speaker it becomes monaural sound. (This is the same with a stereo television.)
- Stripe patterns may appear when a LaserDisc is played on a television. Move the antenna cable away from the power cord of the player to avoid this.
- Be sure to turn off the power of the player when you watch a TV broadcast.

## Stereo amplifier connections

Connect the AUDIO OUT jacks of the player to the AUX, CD or LD input jacks of your stereo amplifier.

## NOTE:

Do not connect these terminals to your amplifier's PHONO Input jacks.

## Monitor television connections

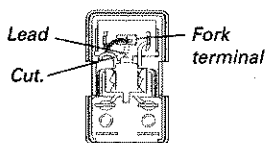
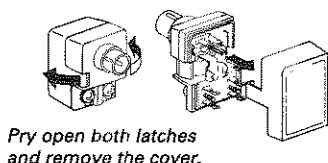
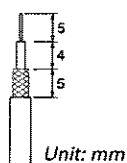
Connect the VIDEO OUT jack of the player to the video input jack of the monitor television.

- The television speakers can be used by connecting the television's audio input jacks to the player AUDIO OUT jacks. However, connection to a stereo amplifier is recommended to obtain superior audio playback quality for Compact Discs and LaserDiscs. Do not change the television antenna and VCR connections.

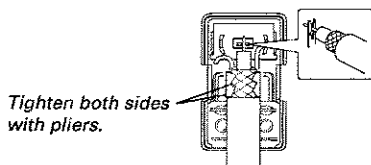
## Attach the antenna adapter

### <For 75Ω coaxial cable>

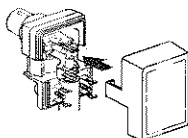
- ① Strip off the end of the cable as shown below.
- ② Remove the cover.
- ③ Remove the lead from the slit of the fork terminal and cut the tip of the lead.



- ④ Connect the cable.

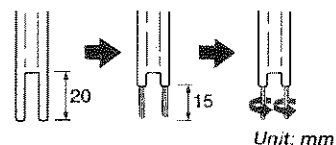


- ⑤ Put the cover back on.

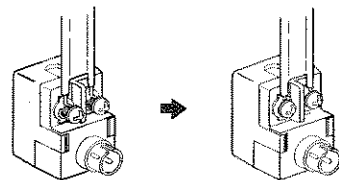


### <For 300Ω parallel feeder>

- ① Strip off the insulation of the feeder wire as shown.



- ② Connect the wire to the 300Ω terminal.



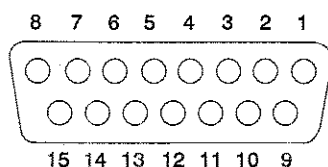
Loosen the screws, twist the wire around and tighten the screws.

# INTERFACE CONNECTOR TERMINALS

Used when external control is performed by using a controller or computer.

## [Shape]

15 pin D-SUB connector

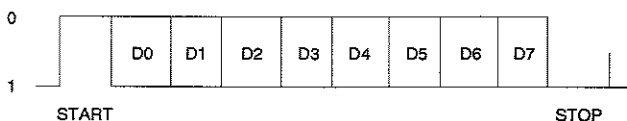


## [Terminal names]

Pin No.	Terminal	I/O	Level
1	GND	—	—
2	TxD	Output	RS-232C
3	RxD	Input	RS-232C
4	DTR	Output	RS-232C
5	Not used	—	—
6	Not used	—	—
7	Not used	—	—
8	Not used	—	—
9	Not used	—	—
10	Not used	—	—
11	GND	—	—
12	Not used	—	—
13	Not used	—	—
14	Not used	—	—
15	GND	—	—

- The following is the data format:

1 START + 8 DATA + 1 STOP



- By setting the FUNCTION switch, the baud rate can be set to 9600 bits/sec, 4800 bits/sec, 2400 bits/sec or 1200 bits/sec.

## [Function]

- 1. GND : Ground (TxD, RxD use)
- 2. TxD : Transmitted Data (RS-232C)
- 3. RxD : Received Data (RS-232C)
- 4. DTR : Data Terminal Ready (RS-232C)
- 11. GND : Ground
- 15. GND : Ground (for synchronizing signal output use.)

## NOTES:

- Do not connect terminals from 5 to 8 to ground; make sure they are free.
- Be sure to perform plugging and unplugging when the power is turned off.

## CONNECTIONS TO COMPUTER RS-232C PORTS

Here are the connections for a DB-15 male to DB-25 female interface cable. The DB-15 male connector goes to the RS-232C port on the player and the DB-25 female goes to the 25 pin comm port on IBM and IBM-compatible computers.

Pioneer Interface Cables are sold separately.

CC-12 DB-15 male to DB-25 female				
LD Player		Computer		
GND	1	7	GND	
TxD	2	3	RxD	
RxD	3	2	TxD	
DTR	4	5	CTS	
		6	DSR	

The baud rate can be selected with a Function Switch on the player. (See page 8.)

The data format is 1 start bit, 8 data bits, 1 stop bit.

For information about pin-outs for cables to interface Pioneer Players with other computers request document #11006 on the Pioneer LaserFacts System by dialing 201-327-9273. Cable pin outs are also described in the User's Manual / Programmer's Reference Guide for each player.

## Separately sold cable CC-12

It is designed so that only the D-SUB connector pins necessary for player control can be connected.



D-SUB 15 pins male type  
(to this player)

D-SUB 25 pins female type  
(to the controller)

## INTERFACE CONNECTOR TERMINALS

### CONTROL COMMANDS

RxD Terminal Control Command Input

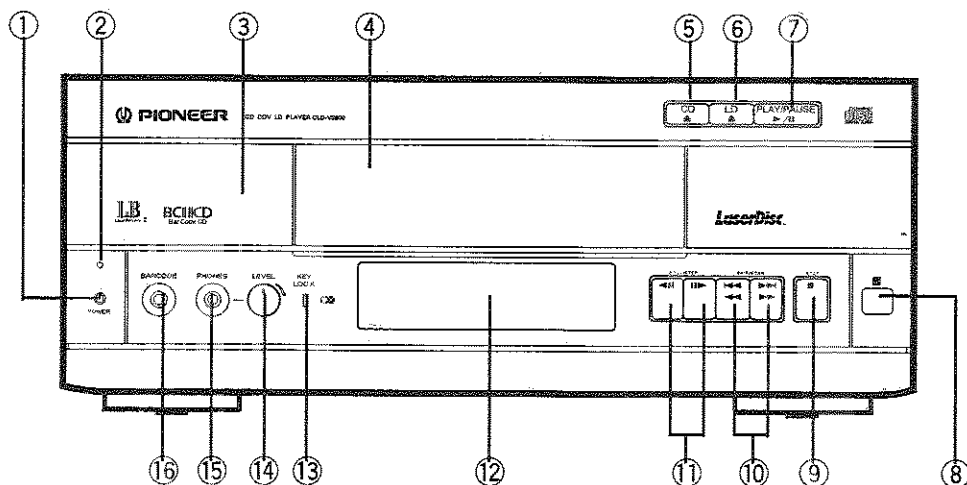
	Command	Mnemonic	LD	CD CDV
01	Open	(argument) OP	○	○
02	Close	CO	○	○
03	Reject	RJ	○	○
04	Start	SA	○	○
05	Play	(address) PL	○	○
06	Pause	PA	○	○
07	Still	ST	CAV	
08	Step Forward	SF	CAV	
09	Step Reverse	SR	CAV	
10	Scan Forward	NF	○	○
11	Scan Reverse	NR	○	○
12	Multi-Speed Forward	(address) MF	CAV	
13	Multi-Speed Reverse	(address) MR	CAV	
14	Speed	argument SP	CAV	
15	Search	address SE	○	○
16	Stop Marker	address SM	○	○
17	Frame	FR	○	
18	Block	BK		○
19	Time	TM	CLV	○
20	Chapter	CH	○*	
21	Track	TR		○
22	Index	IX		○
23	Audio Control	argument AD	○	○
24	Video Control	argument VD	○	○
25	Display Control	argument DS	○	○
26	Clear	CL	○	○
27	Frame Number Request	?F	○	
28	Time Code Request	?T	CLV	○
29	Block Number Request	?B		○
30	P-Block Number Request	?A		○

	Command	Mnemonic	LD	CD CDV
31	Chapter Number Request	?C	○*	
32	Track Number Request	?R		○
33	Index Number Request	?I		○
34	TOC Information	?Q		○
35	Player Active Mode Request	?P	○	○
36	Disc Status Request (LD)	?D	○	
37	Disc Status Request (CD, CDV)	?K		○
38	Communication Mode	argument CM	○	○
39	CCR Mode Request	?M	○	○
40	LVP Model Name Request	?X	○	○
41	Input Unit Request	#I	○	○
42	Input Number Wait	?N	○	○
43	Key Lock	argument KL	○	○
44	Register A set (Display)	argument RA	○	○
45	Register B set (Squelch)	argument RB	○	○
46	Register C set	argument RC	○	○
47	Clear Screen	CS	○	○
48	Print	argument PR	○	○
49	Lead Out Symbol	LO	○	○
50	Register A Request	\$A	○	○
51	Register B Request	\$B	○	○
52	Register C Request	\$C	○	○

\* Valid only with discs containing chapter(s).

- Command mnemonics use ASCII alpha characters and the ?, #, \$ symbols. There is no distinction between capitals and small letters.
- The argument and address are decimal and use ASCII numerals.
- An address indicated by ( ) can be omitted.
- A command line can have up to 20 characters and is terminated with CR code (0DH).
- Refer to the "Users Manual" for the control protocol and command explanation.

# FRONT PANEL FACILITIES



■ A detailed description is provided on the indicated page(s).

① **POWER switch**

Press to turn the power on and off.

② **STANDBY/ON indicator**

The indicator lights in green when the power is ON.

③ **LD disc table ... p.16**

④ **CD disc table ... p.16**

⑤ **CD open/close (▲) button ... p.16**

⑥ **LD open/close (▲) button ... p.16**

⑦ **PLAY/PAUSE (▶/⏸) button ... p.16**

⑧ **Remote sensor** ... p.14

When using the remote control unit or LaserBarcode reader in the wireless format, the infrared commands from the unit are received here.

⑨ **STOP (■) button ... p.16**

⑩ **SKIP/SCAN (◀◀◀, ▶▶▶) buttons ... p.17**

⑪ **STILL/STEP (◀◀, ▶▶) buttons ... p.18**

⑫ **Display window**

⑬ **KEY LOCK indicator**

Lights when the KEY LOCK command is entered from the external control unit.

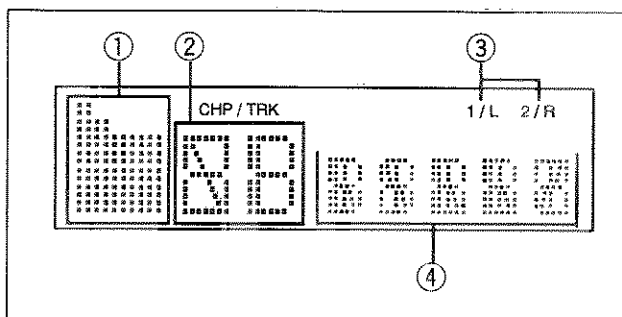
When this indicator is lit, entries are not accepted from operation buttons other than the power switch. Also, entries are not accepted from the operation button of the remote control unit or optional LaserBarcode reader.

⑭ **PHONES LEVEL control**

⑮ **PHONES jack**

⑯ **BARCODE jack ... p.19**

## Display window



① : Open of a disc table

: Play

: Pause

② Track number or chapter number is displayed.

③ Audio output channel lights.

④ Frame number or elapsed playback time is displayed.

● **Currently activated function, etc. is displayed.**

OPEN : The disc table is opened or being opened.

CLOSE : The disc table is being closed.

PLAY : Start of disc playback

LD : LaserDisc

CD : Compact disc

CDV : Compact disc with video

NO DISC : No disc loaded

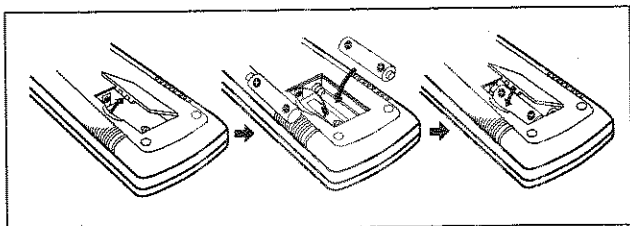
# REMOTE CONTROL OPERATIONS

## INSERTING BATTERIES INTO THE REMOTE CONTROL UNIT

Open the battery compartment cover on the back of the remote control unit.

Insert size AA (IEC R6) dry cell batteries into the battery compartment in accordance with the indications (⊕, ⊖) inside the compartment.

Close the cover of the battery compartment.



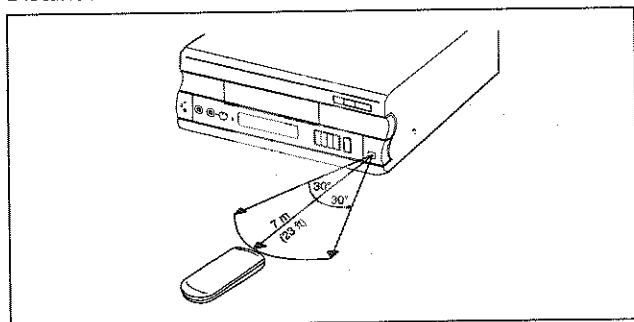
Incorrect use of batteries may cause leakage or rupture. Always be sure to follow these guidelines:

- A. Always insert batteries into the battery compartment correctly matching the positive ⊕ and negative ⊖ polarities, as shown by the display inside the compartment.
- B. Never mix new and used batteries.
- C. Batteries of the same size may have different voltages, depending on the brand. Do not mix different brands of batteries.

When the unit is not to be used for a long period of time (more than one month), remove the batteries to prevent them from leaking inside the compartment. If leakage occurs, wipe up the liquid inside the compartment and replace the batteries with new ones.

## Remote controllable range

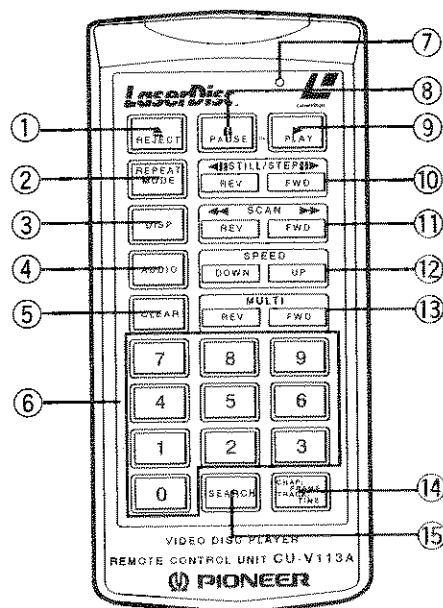
Angle: Within 30 degrees to the left and right of the center line  
Distance: Less than 7 m (23 ft)



## NOTES FOR USING THE REMOTE CONTROL UNIT:

- If a plug is connected to the CONTROL IN terminal at the rear of the player, remote control operations cannot be done with the remote control unit aimed at the player's remote sensor. Aim the remote control unit at the control component display's sensor instead.
- If the player is used simultaneously with another appliance using infrared rays, the player may operate improperly. Should this happen, change the place of installation so that improper operation does not occur.
- If the range of operation of the remote control unit becomes too short, replace the batteries.
- If the remote sensor is in a position where it receives strong light such as sunlight or fluorescent light, control may not be possible.

Remote control buttons with the same names or marks as buttons on the front panel of the player control.

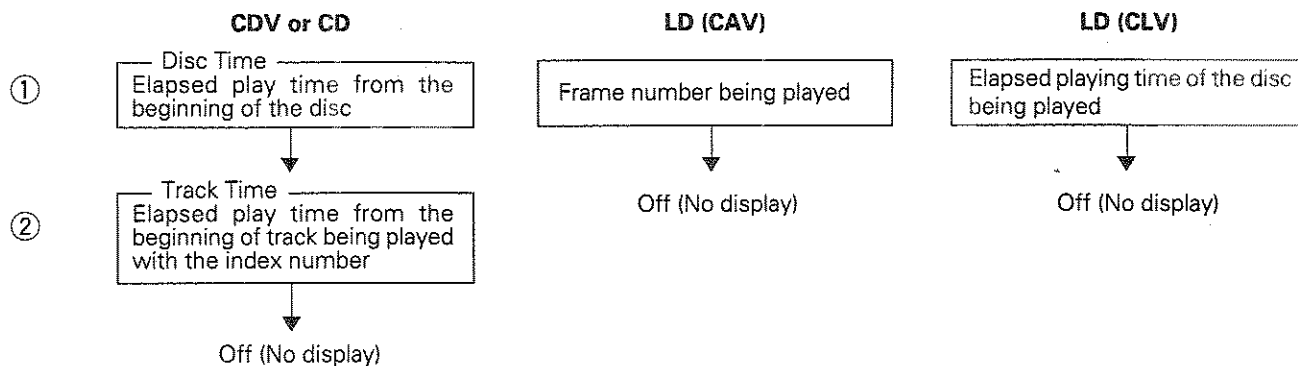


- ① REJECT (▲) button ... p.16
- ② REPEAT MODE button ... p.19
- ③ DISP (Display) button ... p.15
- ④ AUDIO button ... p.15
- ⑤ CLEAR button ... p.17, 18
- ⑥ Digit buttons ... p.17, 18
- ⑦ Transmission indicator  
Indicates that the remote control signal is being transmitted.
- ⑧ PAUSE (||) button ... p.16
- ⑨ PLAY (▶) button ... p.16
- ⑩ STILL/STEP (◀||, ||▶) buttons ... p.18
- ⑪ SCAN (◀◀, ▶▶) buttons ... p.17
- ⑫ SPEED (DOWN, UP) buttons ... p.18
- ⑬ MULTI (REV, FWD) buttons ... p.18
- ⑭ CHAP/FRAME-TRACK/TIME button ... p.17, 18
- ⑮ SEARCH button ... p.17, 18

■ A detailed description is provided on the indicated page(s)

## DISPLAY SWITCHING

DISP on the remote control unit allows you to display information including the play mode and disc playing time on the screen. Each press of DISP switches the screen display as shown below.



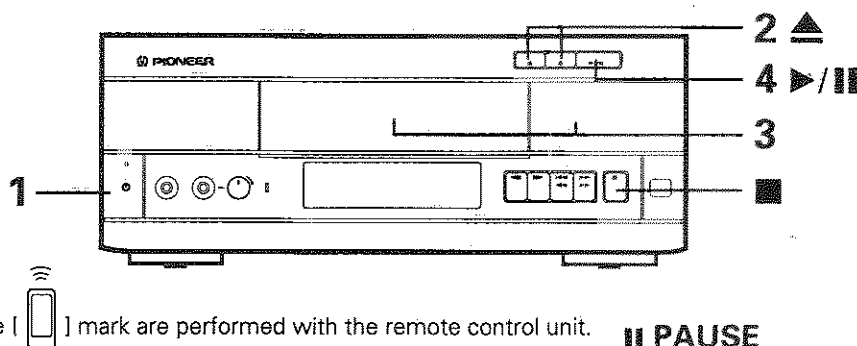
## AUDIO SWITCHING

Each press of the AUDIO button on the remote control unit switches the audio output as shown below.

	Screen display	Contents
(1)	Digital Stereo	Stereo playback of digital audio
(2)	Digital 1/L	First channel or left channel of digital audio
(3)	Digital 2/R	Second channel or right channel of digital audio
(4)	Audio Off	No audio output
(5)	Analog Stereo	Stereo playback of analog audio
(6)	Analog 1/L	First channel or left channel of analog audio
(7)	Analog 2/R	Second channel or right channel of analog audio
(8)	Audio Off	No audio output

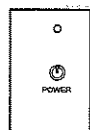
- For CD and CDV, use only (1) through (4)
- For LDs only with analog audio, use only (5) through (8)

# TO PLAY AN LD, CDV OR CD



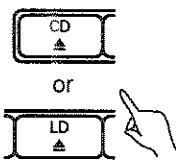
Operations indicated by the [ ] mark are performed with the remote control unit.

## 1 Turn on the power to this unit.



By setting SW 3 of the FUNCTION SWITCH on the rear panel to ON, playback can be started automatically when the power is switched ON with a disc loaded in the unit (refer to page 8).

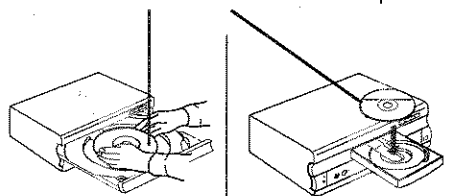
## 2 Open the disc table.



It will not open if you press the REJECT button on the remote control unit.

## 3 Place a disc along the proper disc guide groove.

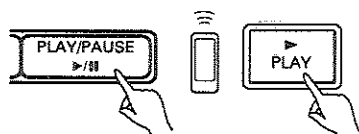
CD/CDV: With the labeled side up  
LD: With the desired side's label up



When loading an LD

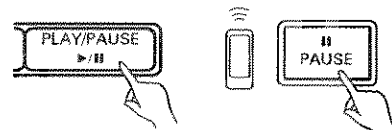
When loading a CD/CDV

## 4 Start playback.



## II PAUSE

### To pause playback temporarily



Press >|| again or PLAY > to resume playback.

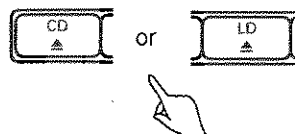
## ■ STOP

### To stop playback



## ▲ EJECT

### To stop playback Open the disc table and take out the disc

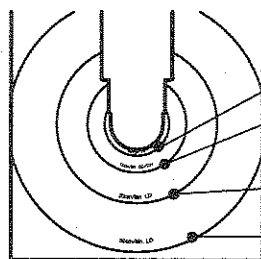


After removing the disc from the disc table, press CD ▲, LD ▲, >|| or PLAY > to close the table.

## HOW TO PLACE A DISC

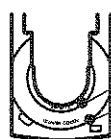
Place the disc in the correct position by using the appropriate disc guide groove.

LD disc table:



CD single: 8 cm (3 in.)  
CD, CDV: 12 cm (5 in.)  
LD, LD single: 20 cm (8 in.)  
LD: 30 cm (12 in.)

CD disc table:



CD single: 8 cm (3 in.)  
CD, CDV: 12 cm (5 in.)

### \* Precautions concerning disc loading

- Do not place more than one disc on the disc table. If two discs are placed one on top of the other on the disc table, discs may be scratched and/or a malfunction may occur.
- Playback is not possible unless the disc is placed properly.

### To avoid malfunctions, be especially careful about the following points.

- Do not place any object other than a disc on the disc table.
- Do not move the player while a disc is playing. This will cause the disc to be scratched.
- Be careful not to catch your finger in the disc table section while the disc table is being retracted into the unit. Also, be careful that children do not put their hands into the inside of the unit while the disc table is open. This may cause an injury.



## TO PLAY AN LD, CDV OR CD

### To play from the desired chapter or track

LD/CDV/CD

1. Press CHAP/FRAME•TRACK/TIME on the remote control unit so that "Chapter Mode" or "Track Mode" is displayed on the TV screen.
2. Enter the required chapter or track number with digit buttons (0 - 9) on the remote control unit.
3. Press SEARCH on the remote control unit.

#### <Example> To search chapter/track No.17

CHAP/FRAME•TRACK/TIME → 1 → 7 → SEARCH

#### If you make a mistake in pressing the digit buttons during normal search operation:

Press CLEAR, and then press the correct button.

#### To identify the present chapter number and frame (or time) number:

The numbers are displayed in the front panel display window. The information can also be displayed on the monitor TV screen by pressing DISP.

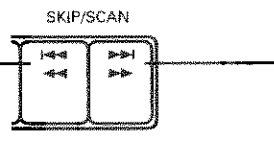
#### CAV discs :

When Chapter Search is started by pressing SEARCH on the remote control unit, the beginning of the designated chapter is displayed with a still frame.

### Chapter (Track) Skip – To search for the beginning of a chapter/track

LD/CD/CDV

Press once to return the playback position to the beginning of the chapter/track being played. If the button is pressed more than once before the picture reappears, the beginning of a chapter/track located before the chapter/track being played is searched for and played. The position of the located track corresponds to the number of times the button is pressed.

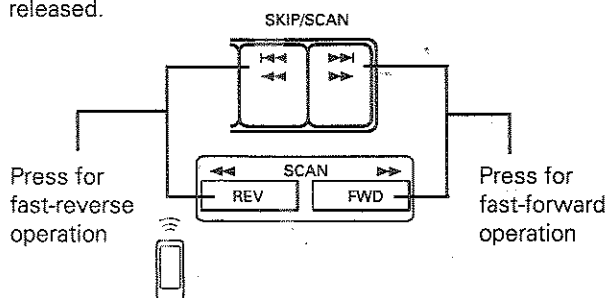


If this button is pressed once or a number of times, playback is advanced to the beginning of a chapter/track located after the chapter/track being played. The position of the located track corresponds to the number of times the button is pressed.

### Scan (Manual Search) – Search using fast forward or fast reverse

LD/CD/CDV

When the SCAN is kept pressed in playback mode, playback advances or reverses at high speed. There are two scan modes. The player enters original mode where the button is released.



Normally Low Scan and then High Scan is performed. For about two seconds after the button is pressed Low Scan is performed, after that the unit enters High Scan.

**Low Scan mode:** Scan speed becomes about x10 the normal playback speed.

**High Scan mode:** Scan speed becomes about x20 the normal playback speed.

- With the video part of a CDV, High Scan mode cannot be carried out.
- With CDs or audio part of CDVs, sound is heard at a low volume level while scanning. Others: Sound is muted.
- The screen image may be disturbed during scanning, but this is not a malfunction.

#### Note on CAV:

- While scanning, noise may occur on the screen. This is not a malfunction.

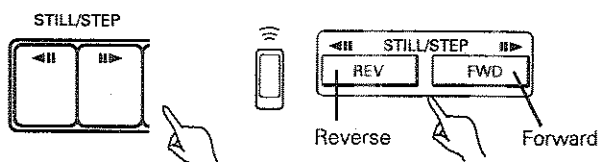
#### Notes on CLV:

- While scanning, the color of the image may fade out or the image sometimes fluctuates.
- The scan speed is different between inner tracks and outer tracks.

## TO PLAY AN LD, CDV OR CD

### Still frame and Frame-by-Frame advance function (CAV disc only)

LD

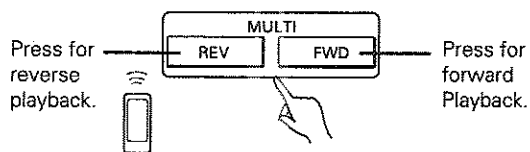


Press repeatedly for frame-by-frame advance.

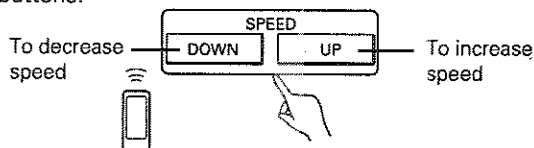
- Press PLAY ► to return to normal playback.
- Sound cannot be heard during still or frame-by-frame playback.

### MULTI SPEED To vary the playback direction or speed (CAV disc only)

LD



- With CLV discs; Still Frame, Frame-by-Frame or Multi-Speed operation is not possible. If STEP is pressed during playback of a CLV disc, the warning message "CLV" will be displayed for about 2 seconds on the screen. The playback speed can be selected as shown in the table to the right using the SPEED UP and DOWN buttons.



- The normal playback speed is set initially when the power is turned on.
- The set speed does not reset, even if you stop the disc or open the disc table.

"DOWN" Button	Screen Display	Speed	"UP" Button
↓	x3	3-times play mode speed	↑
	x2	2-times play mode speed	
	x1	Same as play mode speed	
	1/2	1/2 play mode speed	
	1/4	1/4 play mode speed	
	1/8	1/8 play mode speed	
	1/16	1/16 play mode speed	
	STEP 1	Plays one frame every second	
	STEP 3	Plays one frame every three seconds	

LD/CDV/CD

## TO SEARCH FOR A PARTICULAR TIME/FRAME

### Frame Number Search/Time Number Search

#### Frame Number Search (CAV discs only) - To search by designating the frame number

Any desired frame can be searched for by specifying its frame number.

1. Press **CHAP/FRAME-TRACK/TIME** on the remote control unit during playback.  
Press this button repeatedly until "Frame Mode" is displayed.
2. Enter the required frame number with the digit buttons (0 - 9).
3. Press **SEARCH** on the remote control unit.

When **SEARCH** on the remote control unit is pressed to start search operation:

A still frame is displayed (CAV). To start normal playback, press **PLAY** ►.

#### Time Number Search (CLV LD/CD/CDV)

- Example: To search for the scene located at 12 min. 34 sec

1. Press **CHAP/FRAME-TRACK/TIME** on the remote control unit during playback.  
Press this button repeatedly until "Time Mode" is displayed.
2. Enter [1], [2], [3] and [4] with the digit buttons.
3. Press **SEARCH** on the remote control unit.

#### CAUTION:

If an LD does not contain information in seconds, specify the time number in the hour and minutes.

#### Note on searching for a frame/time:

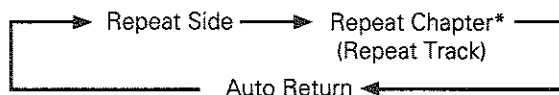
- If you make a mistake in pressing the digit buttons, press **CLEAR** and press the correct digit buttons.

#### To exit search mode:

Press **CLEAR**. Normal playback starts.

## TO REPEATEDLY PLAY A DESIRED PASSAGE – Repeat playback

- 1 Pressing the REPEAT MODE button on the remote control unit displays the current repeat mode.
- 2 Pressing the REPEAT MODE button when the repeat mode is displayed changes the repeat mode in the following order:



Screen Display	OPERATION
Repeat Side	When the end of the disc is reached, the player will search to the beginning of the side and play it again.
Repeat Chapter* (Track)	When this mode is selected while a specific chapter (or track) is playing, the player will play to the end of the chapter or track, then automatically search to the beginning of the chapter or track and play it again. The player will continue to repeat the chapter or track until a SEARCH command is sent or until the repeat mode is changed.
Auto Return	When this mode is selected, the player will play the entire disc side and then spin down the disc and enter stop mode.

\* CHAPTER REPEAT is not available when LDs with no Chapter Numbers are played.

### NOTES:

1. The Repeat MODE button functions only during playback. The default setting at Power ON is SIDE REPEAT.
2. If a picture stop is encoded on a CAV disc, the player will play to that frame, stop and hold a still frame until it receives the next motion command. SIDE REPEAT and CHAPTER REPEAT commands do not override picture stops. Picture Stops cannot be encoded on CLV discs.
3. When MULTI-SPEED REVERSE playback (CAV ONLY) is selected while the player is in REPEAT CHAPTER MODE, the player will play in reverse at the speed indicated, to the beginning of the chapter and then hold a still frame. When MULTI-SPEED FORWARD playback (CAV only) is selected in REPEAT CHAPTER MODE, the player plays to the end of the chapter at the speed indicated, returns to the beginning of the chapter and immediately replays the chapter in the speed indicated.
4. REPEAT CHAPTER (or REPEAT TRACK) is cancelled when a SEARCH command is sent from the RCU to the player and executed. The player automatically switches to REPEAT SIDE MODE. Other commands from the RCU such as SCAN, PAUSE, PLAY, STILL can be used and if REPEAT CHAPTER has been set, it remains.
5. Using SIDE REPEAT with CDV repeats within each audio part or video part respectively.
6. When using RS-232C control, the REPEAT MODE button may not function, depending on the status of player operation.
7. When the Player is in REPEAT CHAPTER MODE and the user sends commands under RS-232C control, the player automatically changes to REPEAT SIDE MODE. The RC command may be used to set Register C to AUTO RETURN by setting SIDE REPEAT to OFF.

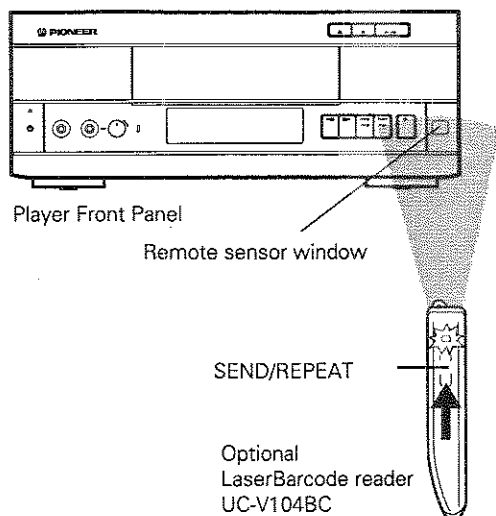
## OPERATION WITH THE OPTIONAL LASERBARCODE READER

Optional LaserBarcode reader UC-V104BC can be used. In this case, establish signal reception from the LaserBarcode reader by either wireless (infrared ray) format or wired format. Whichever format is selected, always insert a battery in the bar-code reader.

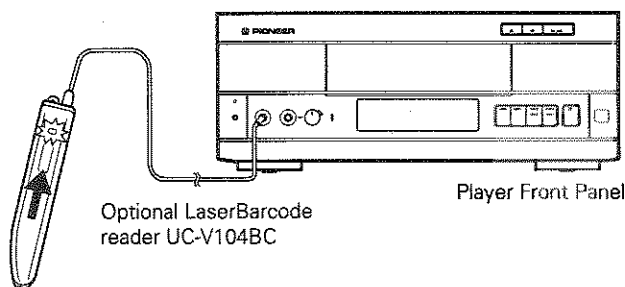
For method of using the LaserBarcode reader, refer to the UC-V104BC operating instructions.

- The LaserBarcode reader, UC-V108BC and UC-V109BC can be used with this unit.

### Wireless reception



### Wired reception







### NOTES:

- Set the slide switch in the LaserBarcode reader to (2) before using the UC-V104BC.
- Operating the remote control unit or main keys or giving serial commands simultaneously with wireless bar-code commands may cause a malfunction. To prevent improper operation, the LaserBarcode reader should be used in wired mode, as this will automatically invalidate input from the remote control unit.
- The display will be cleared if the player is operated using the bar codes.
- If a CD or CDV disc is used, the LaserBarcode instructions will be ignored.
- If an LD is used, the Bar Code CD instructions will be ignored.

## TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.

If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

SYMPTOM	CAUSE	REMEDY
1. When CD  or LD  button is pressed, disc table does not come out.	<ul style="list-style-type: none"> <li>● Power is not on.</li> <li>● KEY LOCK indicator is lit (during KEY LOCK, operation buttons other than the POWER switch are not accepted).</li> </ul>	<ul style="list-style-type: none"> <li>● Press the POWER switch to turn the power on, then press the CD  or LD  button.</li> </ul>
2. Although the disc rotates, it stops soon and the disc table comes out.	<ul style="list-style-type: none"> <li>● Disc is very dirty.</li> <li>● Disc is warped.</li> <li>● Player dew condensation.</li> </ul>	<ul style="list-style-type: none"> <li>● Clean the disc.</li> <li>● Change the disc.</li> <li>● Take the disc out for 1-2 hours, then use it after the dew disappears.</li> </ul>
3. ► indicator is lit but no video appears. (Even if video appears, the image quality is bad, and noise appears.)	<ul style="list-style-type: none"> <li>● TV monitor power is not on.</li> <li>● The plug of the connecting cable for the TV monitor came out of its terminal or was improperly plugged in.</li> </ul>	<ul style="list-style-type: none"> <li>● Turn the TV monitor on.</li> <li>● Connect it properly (plug it in completely).</li> </ul>
4. No sound is heard (noise occurs).	<ul style="list-style-type: none"> <li>● Incorrect operation of amplifier.</li> <li>● Amplifier's connecting cable plug came out of its terminal or was improperly plugged in.</li> <li>● Multi-speed playback occurs (no audio output during multi-speed)</li> <li>● Audio is off during remote control operation.</li> </ul>	<ul style="list-style-type: none"> <li>● See amplifier's operating instructions.</li> <li>● Connect it properly (plug it in completely).</li> <li>● Select ordinary playback (press the PLAY button).</li> <li>● Turn the audio on.</li> </ul>
5. Bad image and disoriented video on a specific disc. The disc stops and the disc table comes out.	<ul style="list-style-type: none"> <li>● Disc is very dirty.</li> <li>● Disc is warped.</li> </ul>	<ul style="list-style-type: none"> <li>● Clean the disc.</li> <li>● Change the disc.</li> </ul>
6. Part of a still screen moves.	<ul style="list-style-type: none"> <li>● When there is frequent activity on the screen, part of a still screen sometimes moves. This is not a malfunction.</li> </ul>	_____

### CAUTION:

Abnormal functioning of the unit may be caused by static electricity, or other external interference. To restore normal operation, unplug the AC power cord and then plug it in again.

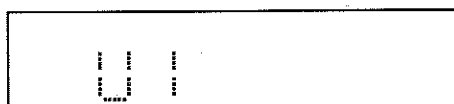
## TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
7. Player, remote control unit or optional LaserBarcode reader operation buttons do not function.	<ul style="list-style-type: none"> <li>● KEY LOCK indicator is lit. (During KEY LOCK, operation buttons other than the power switch are not accepted.)</li> </ul>	_____
8. Start time and search time are extremely long.	<ul style="list-style-type: none"> <li>● For some discs, it takes a long time to read signals; this is not a trouble indication.</li> </ul>	<ul style="list-style-type: none"> <li>● When the CLEAR button on the optional remote control unit is pressed, video appears. However, please understand that it may deviate slightly from a subject search screen.</li> </ul>
9. Remote control unit or optional LaserBarcode reader does not operate.	<ul style="list-style-type: none"> <li>● Batteries have worn down.</li> <li>[During wireless operation]</li> <li>● Distance is too long or there is an obstruction.</li> <li>● Strong light from a fluorescent lamp strikes the remote sensor.</li> <li>[During wired operation: LaserBarcode reader]</li> <li>● Connection cord plug is removed or not inserted fully into the socket.</li> </ul>	<ul style="list-style-type: none"> <li>● Replace with new batteries.</li> <li>● Use within several meters of the player front panel with no obstructions present.</li> <li>● Arrange so that strong fluorescent light does not strike the remote sensor.</li> <li>● Insert the plug securely.</li> </ul>
10. During multi-speed playback, stripes appear on the screen.	<ul style="list-style-type: none"> <li>● When playback is performed with a speed that exceeds a 3-time reverse speed, stripes appear on the screen. However, this is not a malfunction.</li> </ul>	_____

### When trouble occurs:

When some trouble occurs during use of the player, the following display (service number) appears on the display of the player. If this trouble occurs, follow the "Remedy" below.

### Display window of the player



Displayed number	Condition of the player	Remedy
U 1	A disc is not loaded correctly on the disc table. Or, a disc is dirty.	Reload the disc corresponding to the disc guide on the disc table. Wipe the disc with a soft cloth.
U 2		Open the disc table and press ► again.
F 5	Two discs are loaded on the disc table. Or, a disc is dirty.	Load only one disc on the disc table. Wipe the disc with a soft cloth.
P 2 L 3 E 4	(The displayed number after P, F, L, E differs depending on the condition of the player.)	Open the disc table and press ► again. If the same service number is displayed, the player is in abnormal condition. When requesting service, please mention the displayed number on the display of the player (for example, 'service number E 4').
H 0 H 1 H 2	The player is in abnormal condition.	When requesting service, please mention the displayed number on the display of the player (for example, 'service number H 1').

# SPECIFICATIONS

## 1. General

System ..... LaserVision Disc system and  
Compact Disc digital audio system  
Laser ..... Semiconductor laser wavelength 780 nm  
Power requirements ..... AC 120 V, 50/60 Hz  
Power consumption ..... 30 W  
Weight ..... 5.7 kg (12 lb 9 oz)  
Dimensions ..... 320 (W) x 399 (D) x 128 (H) mm  
12-5/8 (W) x 15-11/16 (D) x 5-1/16 (H) in.  
Operating temperature ..... +5°C ~ +35°C  
(41°F ~ 95°F)  
Operating humidity ..... 5% ~ 85%  
(There should be no condensation of moisture.)

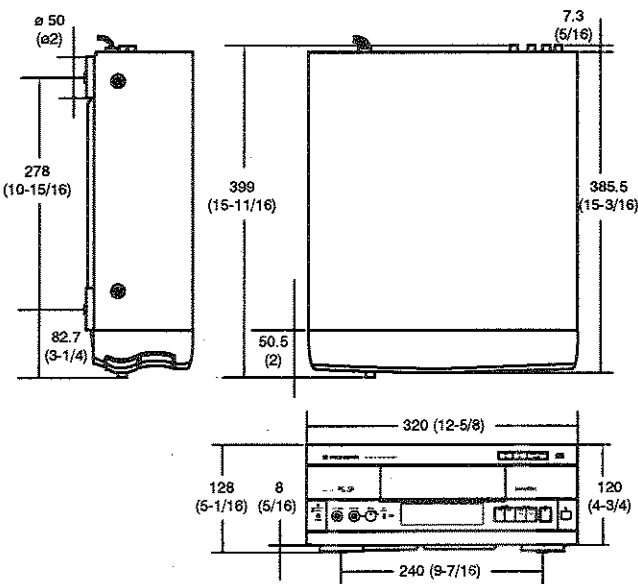
## 2. Video characteristics (2 pairs)

Format ..... NTSC color system  
Video output  
Level ..... 1 Vp-p nominal sync. negative, terminated  
Impedance ..... 75  $\Omega$  unbalanced  
Terminal ..... RCA jack  
• This unit is provided with two separate Video jacks, one is for a VIDEO jack and the other is for a VHF adapter.

## 3. Audio characteristics (2 pairs)

Audio output  
Level ..... 200 mVrms, -20 dB (DA),  
200 mV, 40 % modulation (FM)  
Terminal ..... Both RCA-jacks  
Number of channels ..... 2 (Stereo)  
Digital Audio Characteristics

Frequency response	4 Hz - 20 kHz ( $\pm 2$ dB EIAJ)
SN ratio	98 dB (EIAJ)
Dynamic range	94 dB (EIAJ)
Total harmonic distortion	0.0045 % (EIAJ)
Wow and flutter	Limit of measurement (EIAJ)



Unit: mm (inch)

## 4. Functions

[Operations provided by player front panel function buttons]

Function	CAV disc	CLV disc
PLAY	YES	YES
STOP OPEN/CLOSE	YES	YES
PAUSE	YES	YES
SCAN FWD, REV	YES	YES
SKIP FWD, REV	- YES*	YES*
STEP FWD, REV	YES	NO

[Operations by the supplied remote control unit]

Function	CAV disc	CLV disc
PLAY	YES	YES
PAUSE	YES	YES
REJECT	YES	YES
REPEAT MODE	YES	YES
STILL/STEP FWD.REV, STILL	YES	NO
MULTI-SPEED FWD.REV	YES	NO
SCAN FWD.REV	YES	YES
AUDIO SELECT	YES	YES
DISPLAY ON/OFF	YES	YES
CLEAR	YES	YES
FRAME NUMBER SEARCH	YES	NO
TIME NUMBER SEARCH	NO	YES
CHAPTER NUMBER SEARCH	YES*	YES*

\* Enabled when a disc with recorded chapter numbers is played back.

## [Other Functions]

• CX system ..... Auto selection operation when a disc with recorded CX auto selection codes is played back.

## 5. Other Terminals

• BARCODE jack ..... Miniature phone jack  
• PHONES jack ..... Stereo miniature phone jack  
• INTERFACE CONNECTOR ..... 15 pin, D-SUB connector  
• CONTROL IN jack ..... miniature phone jack  
• VHF ADAPTER OUTPUT jacks ..... Both RCA jacks with DC jack

## 6. Accessories

• Operating instructions ..... 1  
• Audio cord ..... 1  
• Video cord ..... 1  
• RF antenna cable with F type plug ..... 1  
• RF modulator ..... 1  
• Antenna adapter ..... 1  
• Remote control unit ..... 1  
• Size "AA" (IEC R6) dry cell batteries ..... 2  
• Barcode sheet ..... 1

## NOTE:

Specifications and design subject to possible modifications without notice, due to improvements.



This equipment accepts software with the LaserBarcode mark or the LaserBarcode 2 mark.



This mark expresses compatibility with Bar Code CD systems. Please use only bar codes displaying this mark.



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