

SONY.

CD CDV LD Player

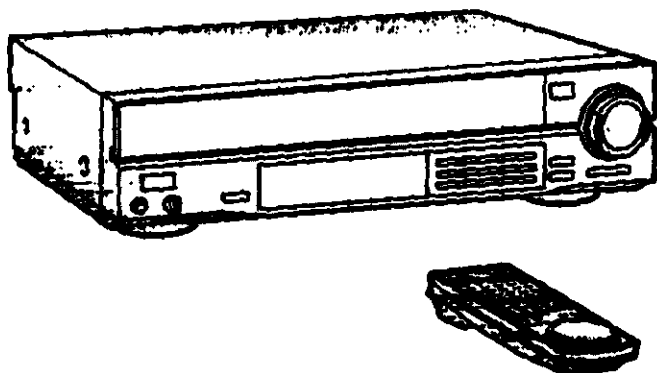
MDP-100C

Operating Instructions page 2

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Mode d'emploi page 40

Avant la mise en service de l'appareil, prière de lire attentivement ce mode d'emploi que l'on conservera pour toute référence ultérieure.



Owner's Record

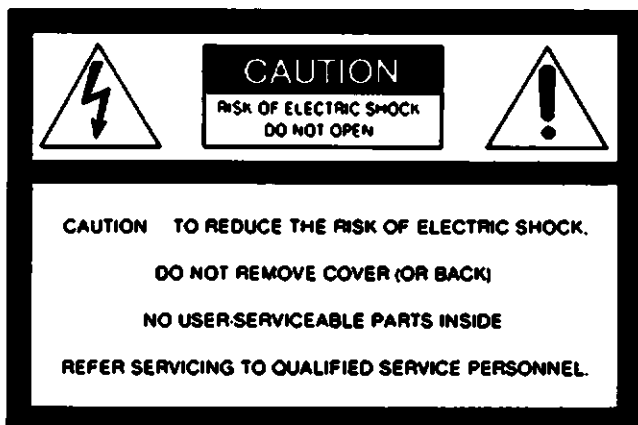
The model number is located at the rear. The serial number is located rear panel. Record the serial number in the space provided below.

Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. MDP-1000 Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol 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.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna

Relocate the equipment with respect to the receiver

Move the equipment away from the receiver

Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

CAUTION

The use of optical instruments with this product will increase eye hazard.

As the laser beam used in this videodisc player is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

CAUTION:

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

NOTICE FOR THE CUSTOMERS IN CANADA

This apparatus complies with the Class B limits for radio noise emissions set out in Radio Interference Regulations.

Contents

This manual covers the MDP-1000 verified to the FCC rules and available in the U.S.A. and Canada.

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To play frame by frame - Freeze-frame, STEP playback	●
To search for a particular scene - Dual speed clear scan	●
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To play repeatedly - Repeat playback	●
To play only certain chapters - Program playback	●

CD

To play a CD	●
To search for a particular selection - Search	●
To play repeatedly - Repeat playback	●
To play only certain selections - Program playback	●

LD/CD/CDV

To play only certain selections within a designated time	●
- Auto program playback	●
To change time display - Time counter	●
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Others

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Precautions

On safety

- Operate the unit only on 120 V AC, 60 Hz only.
- Should any solid object or liquid enter the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time.
- To disconnect a cord, pull it out by the plug. Never pull the cord itself.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.

On installation

- Avoid placing the player in a location subject to:
 - high humidity
 - high temperature
 - excessive dust
 - mechanical vibration
 - direct sunlight
- Allow adequate air circulation to prevent internal heat buildup. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- The unit will be unsteady, if it is not placed on a horizontal level surface. To avoid being unsteady, adjust the thickness of the supplied spacer to fill the gap and insert it under the unit.



Make spacer
proper thickness to
fill the gap.
(Thickness can be
adjusted between
0.1 mm and 1 mm)



On moisture condensation

- Do not operate the unit right after having transported it from a cold location to a warm location or in a room where the temperature rises suddenly, because moisture may condense in the operating section of the unit. Wait for about an hour before turning the power on in the new location or keep the rise in room temperature gradual. If the unit is operated with moisture condensation, the unit and the disc may be damaged. Therefore remove the disc immediately when there is a possibility of moisture condensation and no picture is obtained. To evaporate the moisture rapidly, leave the player turned on without a disc loaded.

On operation

- Remove the disc from the tray after playing it, if the unit will not be used for any length of time. Do not transport the set with a disc in place.
- When the disc tray is in the open position, do not press down on it strongly, or place heavy objects on it.

On cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzene, which may damage the finish.

On repacking

Do not throw away the carton and the packing material. They make an ideal container to transport the unit in.






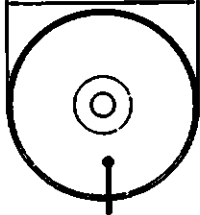
If you have any question or problem concerning your unit, please contact your nearest Sony dealer.

For the customers in the USA

For detailed safety precautions see the leaflet
"IMPORTANT SAFEGUARDS".

Features

This CD/CDV/LD Player can play all six types of optical discs currently available for home entertainment use:

CD single 8 cm/3 in	CD 12 cm/5 in	CDV* 12 cm/5 in	LD single 20 cm/8 in	LD 20 cm/8 in	LD 30 cm/12 in
					
Digital audio Max. 20 min. single-sided	Digital audio Max. 74 min. single-sided	Digital audio (Max. 20 min.) + Video and digital audio (Max. 5 min.) single-sided	Video + Digital and/or analog audio Max. 14/20 min. single-sided LD single disc can be played back without using adaptors.	Video + Digital and/or analog audio Max. 14/20 min. (CAV/CLV) per side	Video + Digital and/or analog audio Max. 30/60 min. (CAV/CLV) per side

The following functions are available with this unit.

For the CDV disc, CD functions can be used on the audio portion and LD functions can be used on the video portion.

LD/CD/CDV

- **Custom index**
Specify up to six index marks at any point on the disc, for convenient playback start at the push of a button.
- **Program play**
Play back chapters or tracks in any desired order.
- **Shuffle play**
Play all selections on a disc in a random order.
- **Auto disc protection**
Prevents damage to the disc during stop.
- **AV calendar display**
Shows the number of tracks (up to 20) on a disc and the total playing time at a glance.
- **Auto program**
Play back chapters or tracks within a designated time.
- **INTRO scan**
Play only the beginning (introduction) of the chapters or tracks on a disc in order.

LD/CDV (Video Portion)

- **Variable speed playback (LD CAV only)**
11 speed settings for normal and reverse playback, step (frame-by-frame) playback and high-quality freeze-frame.
- **Scan**
Fast scan without picture distortion even on CLV discs.

CDV

- **Video portion**
All LD (CLV) functions are available.
- **Audio portion**
All CD functions are available.

This unit plays back discs with any of the following logos on the label.



LaserDisc



- It cannot play back CED or VHD discs or discs with PAL, SECAM, or video signals other than the NTSC standard.

- The Compact Disc Video (CDV) format divides a CD into two sections. One is 20 minutes of digital audio playable on any CD player. The other, 5 minutes of video and digital audio, requires a CDV player.

Location and Function of Controls

Front panel

Disc tray ①, ②

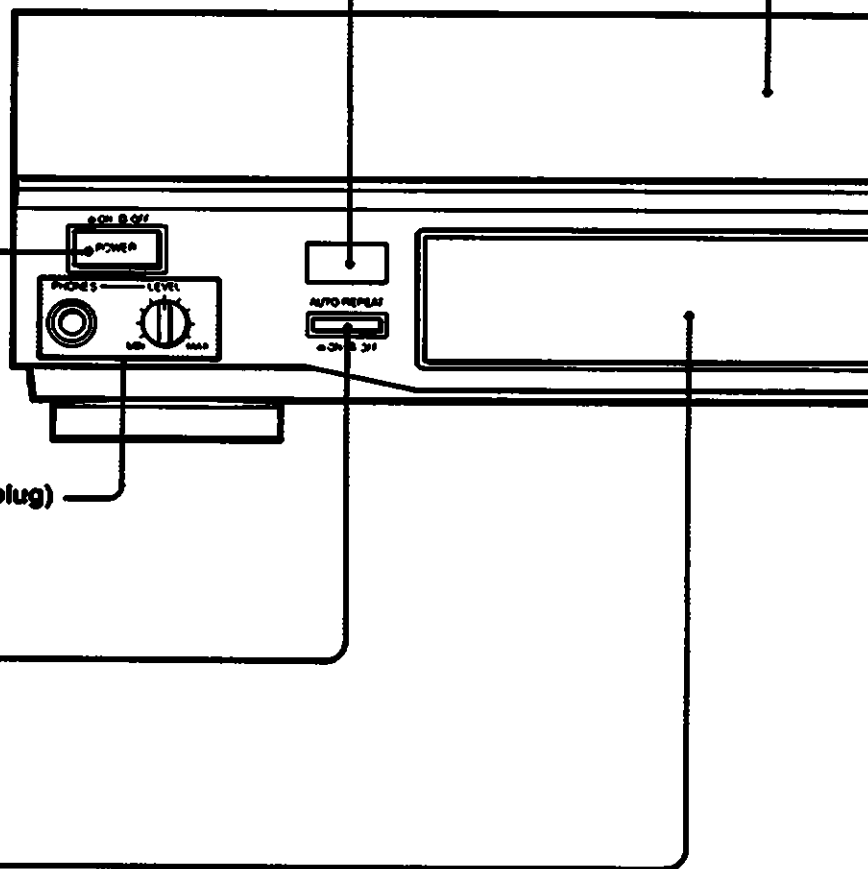
Remote control sensor

POWER switch ③, ④

PHONES (headphones) jack (stereo phone plug) and LEVEL control ⑤, ⑥

AUTO REPEAT button ⑦, ⑧
Press to repeat the entire disc side.

Display window



Accessories

The shipping box should contain the following accessories.

RMT-333A Remote Commander

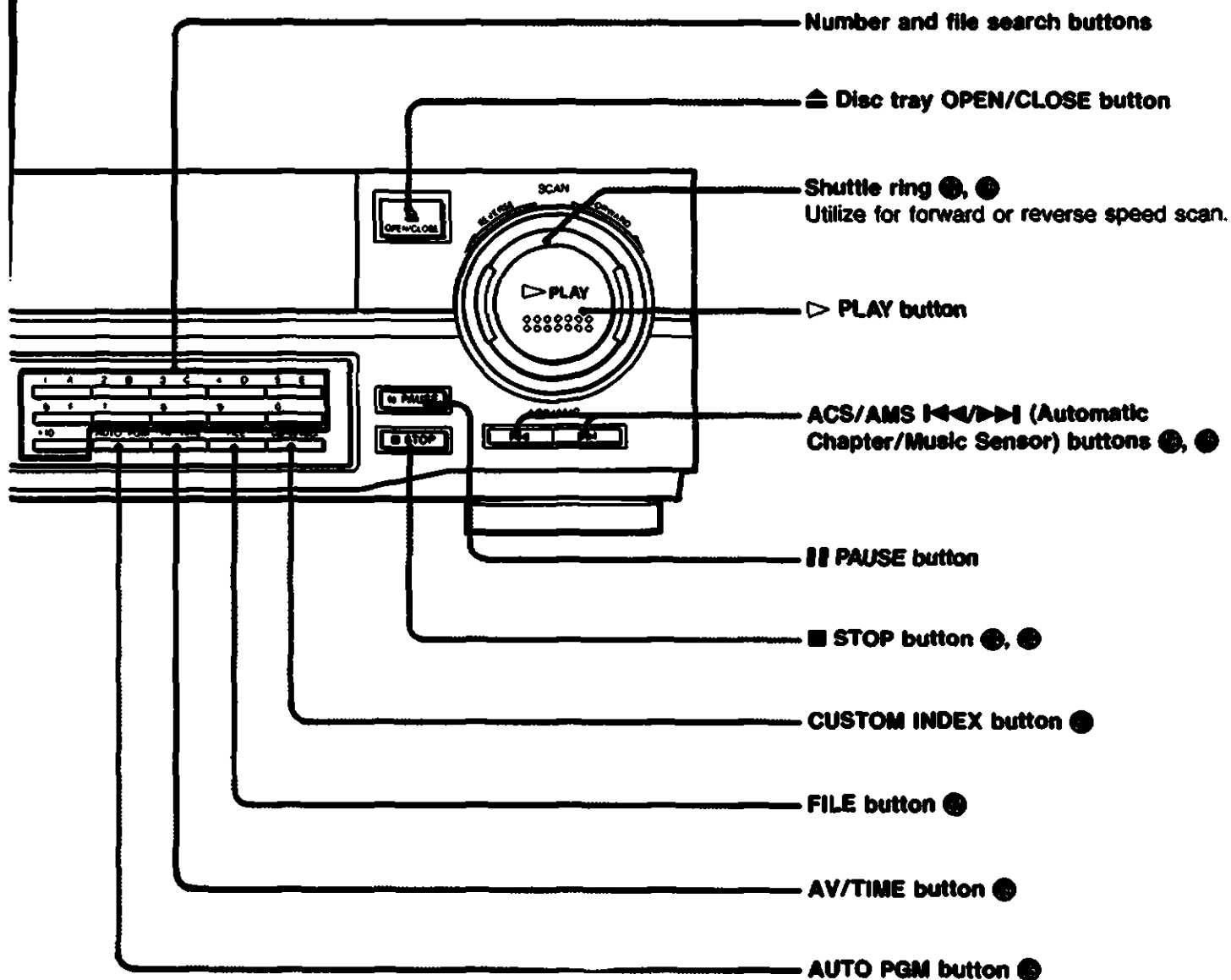
Two size AA (R6) batteries

Video connecting cord
(phono 1 ↔ phono 1)



Refer to the page indicated in the black circle for details.

Continued overleaf →



Audio connecting cord
(phono 2 ↔ phono 2)



RFU adaptor RFU-90UC (1)

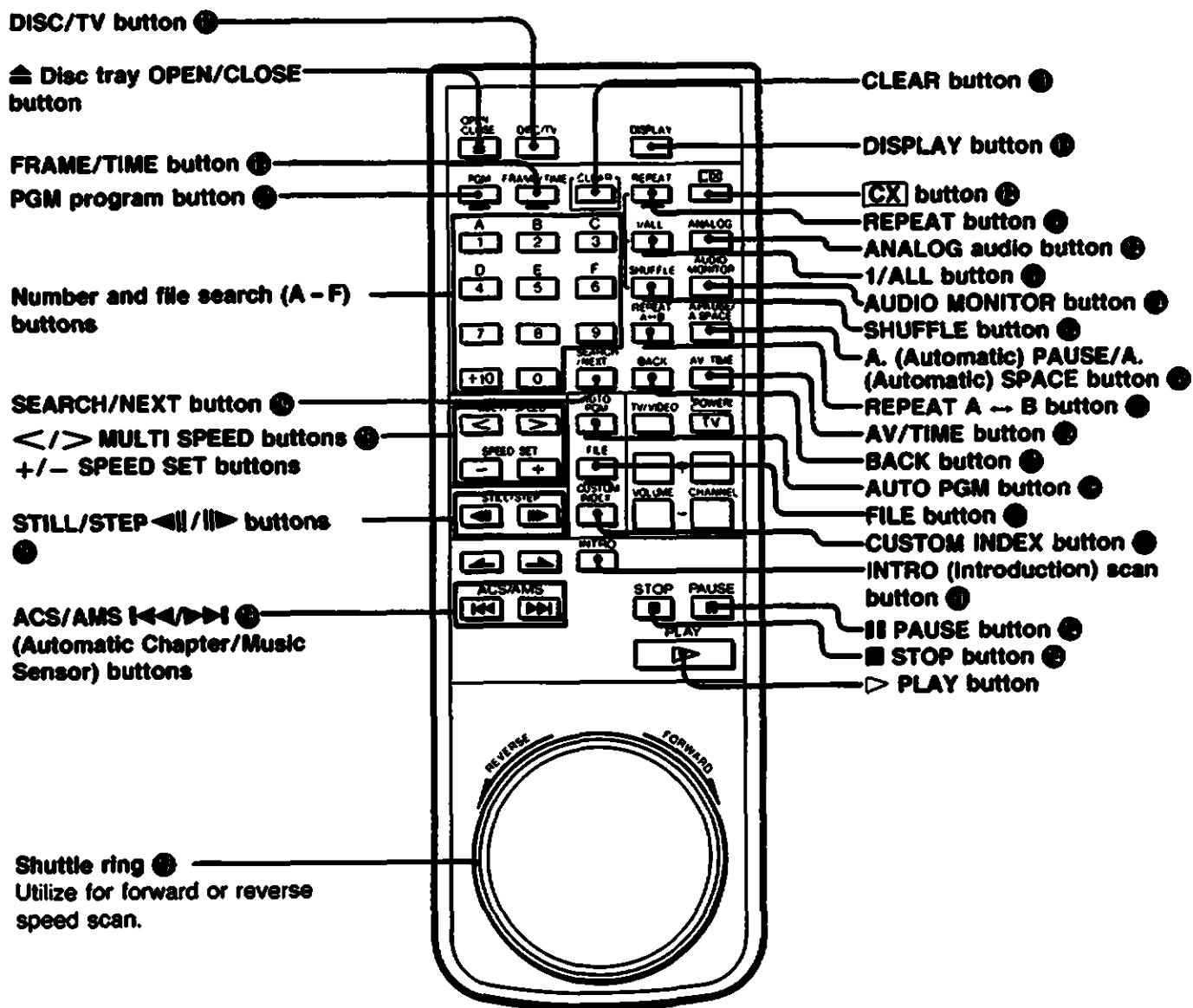


Spacer



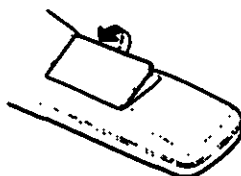
Remote Commander

LD Operation



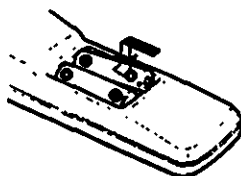
Battery Insertion

1



2

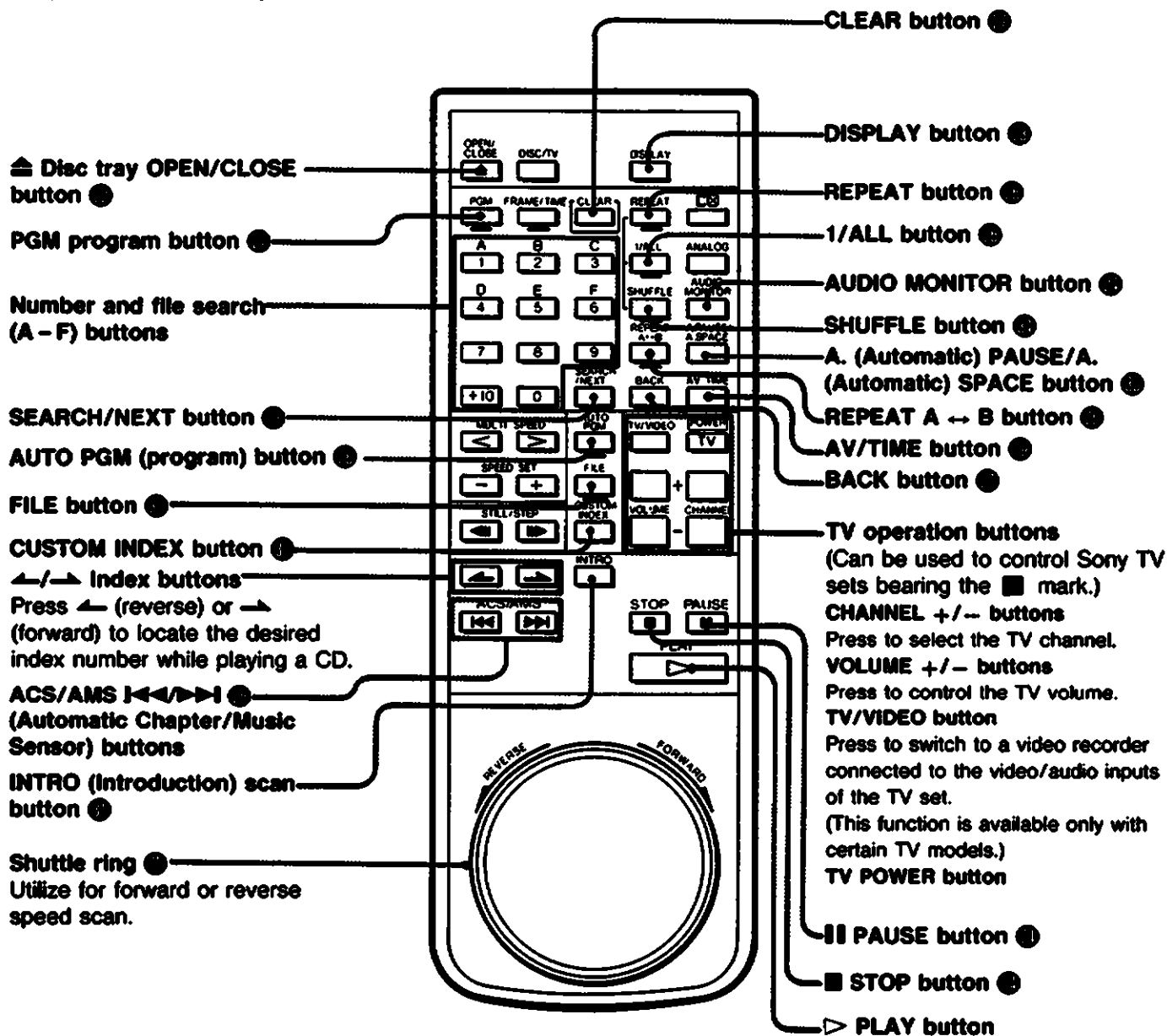
Insert the two size AA batteries as shown, being careful to match + / - polarities.



Note on remote control operation
To remote control this unit, please use the supplied Remote Commander. Commanders with following mark, such as the RM-2001, cannot be used to control the MDP-1000.



CD, CDV, Others Operation



Battery Life

Under normal operations, the batteries will last for approximately six months. If the operating range of the Remote Commander becomes noticeably short, replace all the batteries with new ones. If the Remote Commander is not to be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

Remote Commander Precautions

Do not let sunlight or light from a powerful artificial light source fall directly on the Remote Commander sensor on the front panel as it may interfere with operation or damage the sensor.

The yellow bar under a button indicates that the function of that button can be released by pressing the CLEAR button.

Connections

Video and audio connection cord plug colors are indicated as yellow, white, and red. Make sure that the jacks of the equipment are properly connected to its corresponding colors.

To Connect to Audio System and to TV with Video Inputs

AUDIO OUT jacks (phono jacks)

Connect to the audio input jacks of a TV set or the AUX input jacks of an amplifier. The output signal will be the same – that is, digital or analog – depending on the signal recorded on the disc.

DIGITAL OUTPUT CONNECTOR (optical)

This jack permits optical fiber connection to an amplifier or D/A converter unit with optical input. For connection, use the optional audio fiber cable POC-15.

Digital sound is output from the DIGITAL OUTPUT CONNECTOR except in the following cases:

- If you play discs which are not recorded digitally.
- If you press the ANALOG button on the Remote Commander to switch to analog sound.

Supplied audio connecting cord* (Red/White)

VIDEO OUT jack (phono jack)

Connect to the video input jack of a TV set or VCR.

RFU DC OUT jack (mini mini jack)

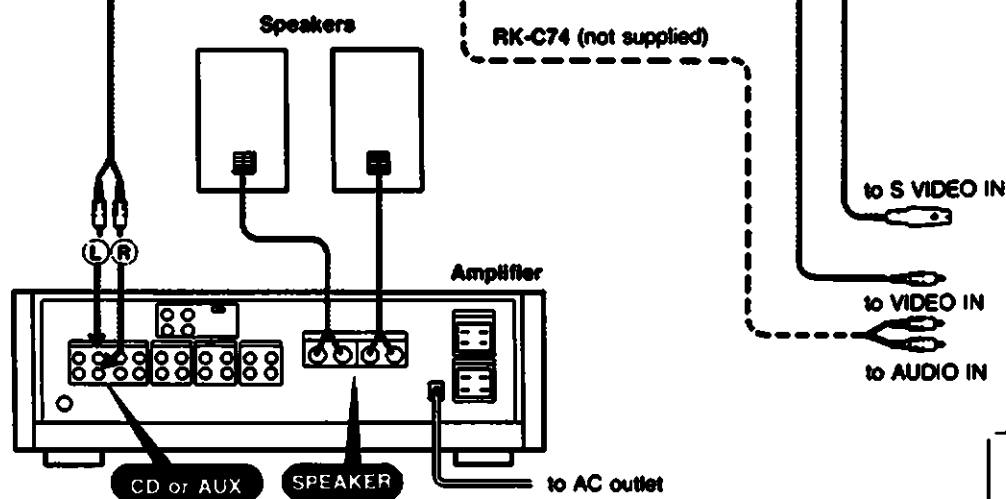
This jack supplies power to the (optional) RFU adaptor for TV sets without audio/video inputs.

AUDIO OUT monaural jack (phono jack)

Connect to the audio input jack of the TV set or the (optional) RFU adaptor.

S VIDEO OUT jack

Connect to the S video input jack of a TV set or VCR.



- * You can connect the player's audio output to the TV instead of an audio system. If the TV set has only a monaural phono jack for audio, use the VMC-720M/730M connecting cord (not supplied).

Precautions on connecting

- Make sure that all equipment is turned off before connecting or disconnecting any cables.
- Firmly insert the plugs into the jacks. A loose connection can lead to noise.
- When unplugging a cable, grasp the plug. Never pull the cable itself.
- To prevent interference, turn off all equipment connected, but not currently in use.
- If noise is emitted from the audio or video input, try moving the equipment further apart.

- Connection methods differ. When in doubt, consult the manufacturer's manual.

Connection of optical fiber cable

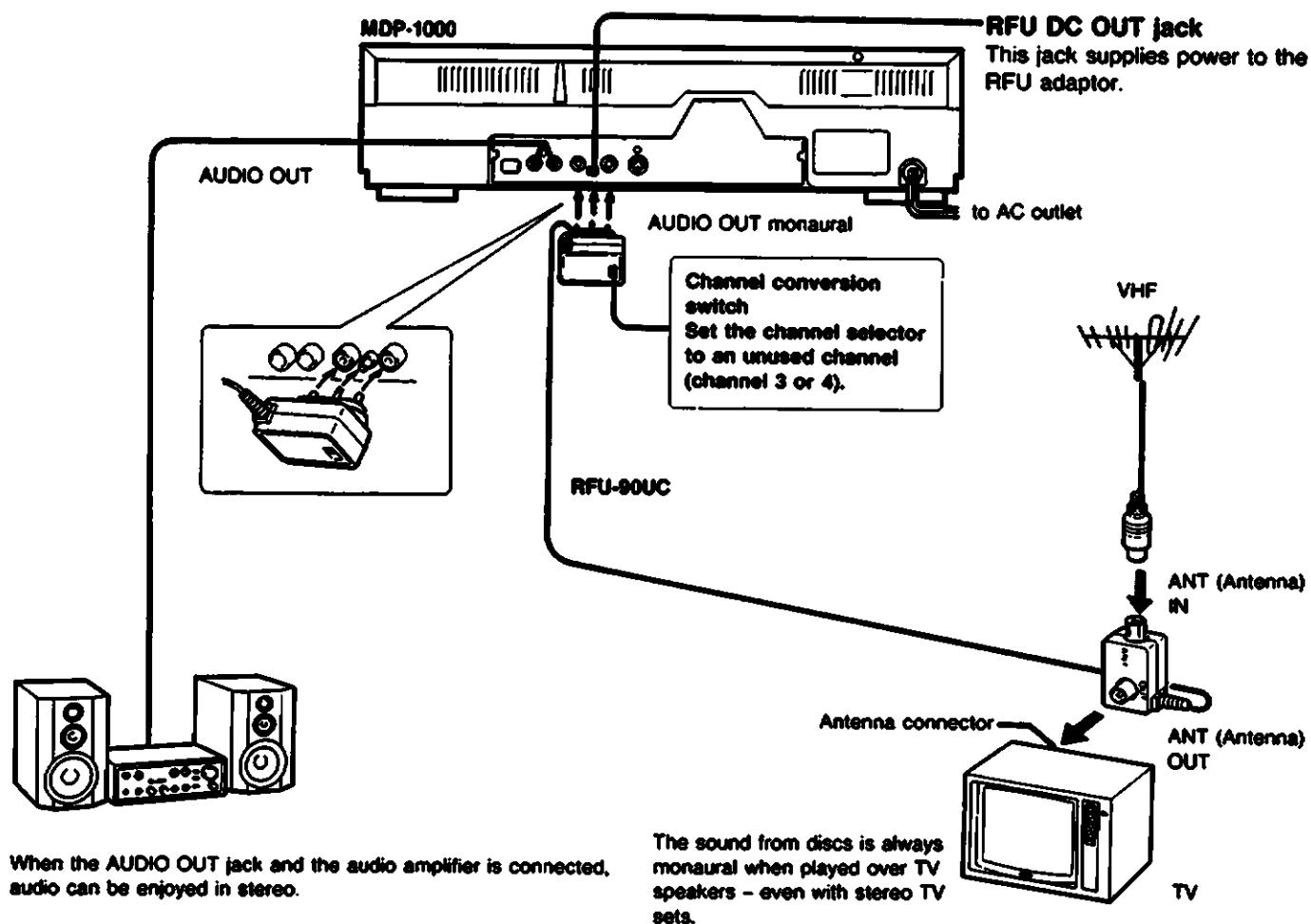
Remove protective cover.

Plug in connector firmly.



To Connect to TV without Audio/Video Inputs

For connection, use the RFU adaptor RFU-90UC.



Why is it necessary to select 3 or 4?

The videodisc player sends its output to the TV as a VHF broadcast signal. Selecting an unused channel avoids interfering with regular broadcasts.

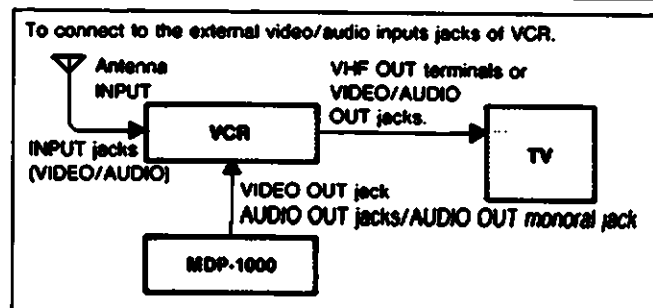
When watching regular TV programs, turn the player off or press the TV/DISC button on the Remote Commander so that you can obtain a better picture. If TV picture quality is not satisfactory, refer to the manufacturer's manual and adjust the reception.

To obtain a better picture

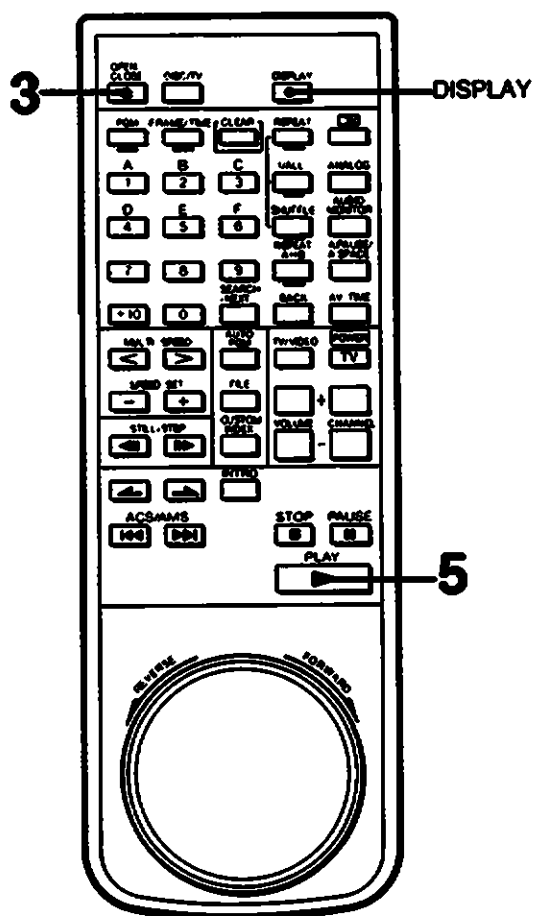
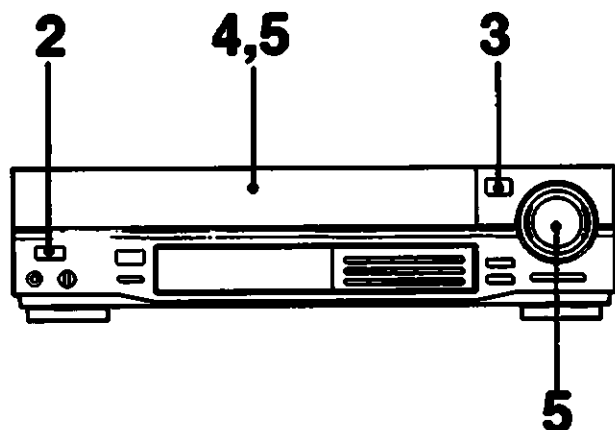
Always switch off the player when watching a TV program.

During FM or AM reception

Turn off the power of the player to prevent the possibility of noise interference.



To Play an LD



Notes on disc tray

Do not insert a hand or finger in the player while it is operating. Although the player will stop automatically if an object is inserted while in play, serious injury may result. Be sure to place the unit out of the reach of your child. Insert only one disc at a time. Incorrect placement of two or more discs may lead to malfunction.

Identical buttons on the main unit can also be used.

1 Turn on the TV and stereo system.

TV: Select the channel used for videodisc playback or the video input (channel 3 or 4). (See p. ●, ●)

Stereo system:

Turn on the amplifier or receiver and select the proper audio input [CD] or [AUX].

2 Turn on the player.

Main Unit

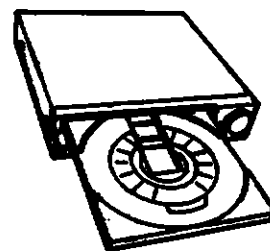


3 Open the disc tray.

Remote Commander

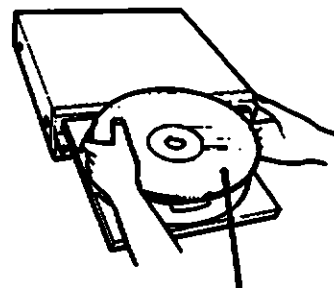


Main Unit



4 Place the disc on the tray.

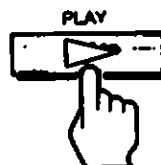
Place the disc on the center of the tray. If the disc is not placed correctly, playback may not start.



Desired side faces up

5 Start playback.

Remote Commander



Main Unit




Or push the disc tray compartment, then playback will also begin.

Using an optional timer

To start playback with an optional timer automatically, leave the POWER switch of the disc player in the depressed position. When the timer supplies power at the preset time, the unit turns on and playback begins.

To pause at the beginning of a disc

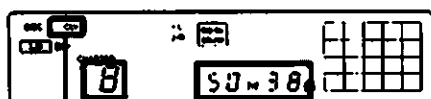
Press the  button on the player or the Remote Commander instead of conducting step 5. The tray closes, and the player pauses at the beginning of the disc.

AV calendar

When playing an LD containing TOC (Table of Contents) data, the AV calendar shows information on the total number of selections. A selection is played, its corresponding number on the display disappears.

To listen with headphones

Plug stereo headphones into the PHONES jack and adjust the listening volume with the LEVEL control.

Displays on playback messages

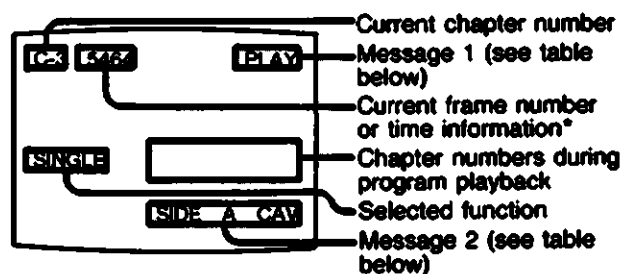
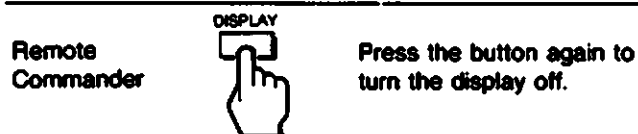
Time (hr/min/sec) or frame number

Chapter number

Type of LD

Screen Messages



Information on the operating condition of the unit and chapter numbers can be superimposed on the TV or monitor screen. While no image is displayed, such as during search, information for LD is shown on a blue background.

To show the on-screen display

* Discs without time data to the second will be indicated as "0:22:".

Message 1

(Examples)

Display	Explanation
OPEN	Disc tray open
CLOSE	Disc tray closed
PLAY	Playback
STOP	Stop
PAUSE	Pause
 / 	Manual search (Forward/reverse speed scan)
SEARCH	Search
▶ x1/2	1/2 speed display in forward direction

Message 2

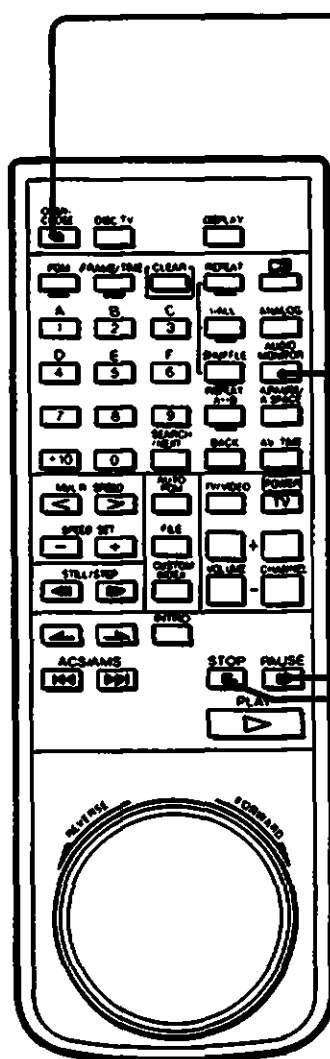
(Examples)

Display	Explanation
SIDE A CAV	Standard-play disc side A
SIDE B CAV	Standard-play disc side B
SIDE A CLV	Long-play disc side A
SIDE B CLV	Long-play disc side B
1/L	Main soundtrack/left channel
2/L	Second soundtrack/right channel
♪ DIGITAL	Digital sound
♪ ANALOG	Analog sound

Precaution on LD discs

Some discs do not contain the side A or B identification code. In this case, the disc side indication may not be correct.

To Play an LD



Identical buttons on the main unit can also be used.

To switch between digital and analog sound on an LD

If the LD contains a digital stereo sound signal, the player automatically sends that to the output jacks. Pressing the ANALOG button on the Remote Commander switches to the analog audio signal and turns the DIGITAL SOUND indicator off. Press the ANALOG button again to return to digital sound output.

With certain discs, there may be a difference in volume between the digital and the analog sound.

Discs with [CX] Label

Discs bearing the [CX] label are recorded with the [CX] noise reduction system, which gives lower noise levels and higher dynamic range. The [CX] indicator lights up automatically.

Some [CX] discs do not include the code necessary to automatically activate the player's [CX] noise reduction system. If the [CX] indicator does not light, press the [CX] button on the Remote Commander to manually activate the system.

To stop playback and remove disc

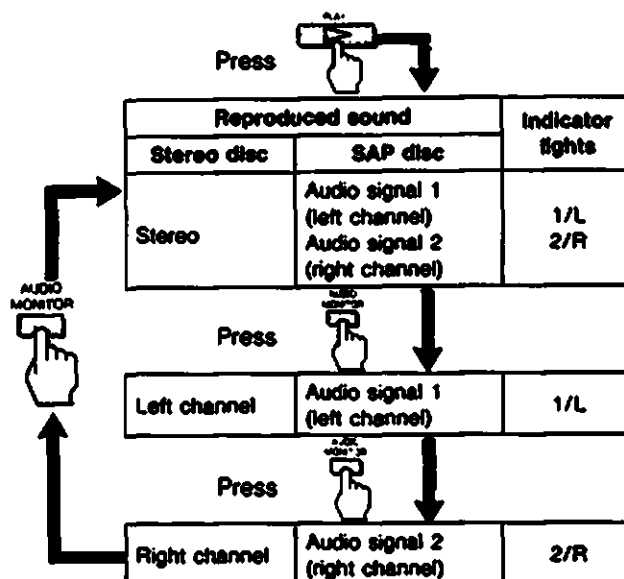
OPEN/
CLOSE



Remove the disc and press the OPEN/CLOSE button to close the empty tray.

To play a stereo LD or a second audio program (SAP) LD

Press the playback (>) button, then continue to press the AUDIO MONITOR button to display the following information.



To temporarily interrupt playback

PAUSE



When playing CAV discs, the sound is cut off and a still picture is shown. When playing other discs, the unit enters the pause mode. To resume playback from the same point, press the ||| or > button.

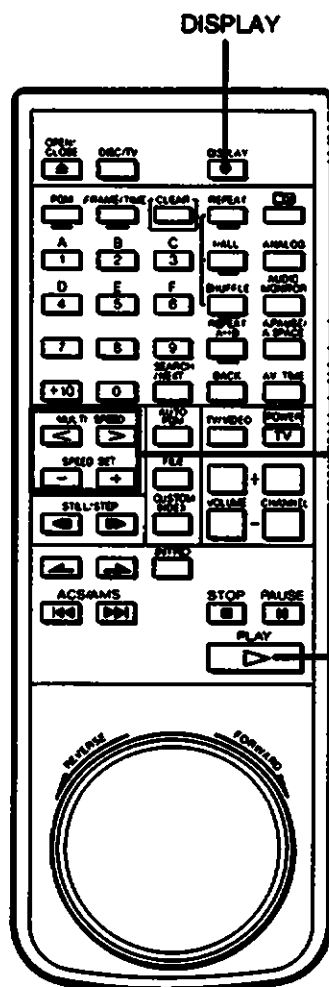
To stop playback

STOP



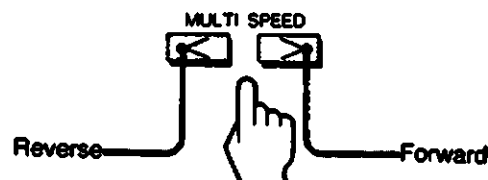
Press the > button to restart playback from the beginning of the disc.

To Change Playback Speed and Direction – Speed Play (CAV standard-play)



Speed and Direction

- To select the playback direction

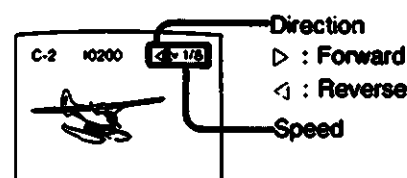


The direction can be changed regardless of playback speed.

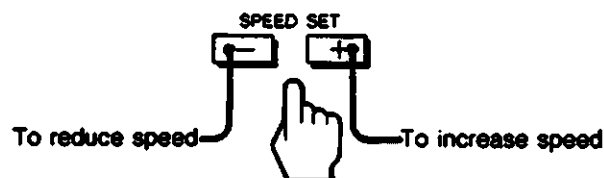
- To display the speed and direction



The playback speed and direction appear.



- To select the playback speed



Speed Indication	Speed (approx.)	Speed Indication	Speed (approx.)
⊕		x1/2	1/2 normal speed
Faster		x1/4	1/4 normal speed
↑		x1/8	1/8 normal speed
x10	10 times normal speed	x1/16	1/16 normal speed
x5	5 times normal speed	x1/30	1/30 normal speed
x3	3 times normal speed	x1/90	1/90 normal speed
x2	2 times normal speed	⊖	
x1	Normal speed	Slower	

• Sound during speed play

Audio output occurs only during $\times 1$ (normal) speed play in the forward direction. There is no sound for other speed and direction combinations.

• Extended-play discs (CLV) (See p. 6)

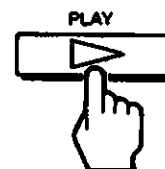
Speed play, freeze frame and step playback are not possible with CLV discs.

When a multi speed button is pressed, the indication "SIDE A CLV" (or "SIDE B CLV") is shown for 3 seconds. When the button is pressed, the screen becomes blue and the indication "SIDE A CLV" (or "SIDE B CLV") is shown.

Disc with automatic picture stop code

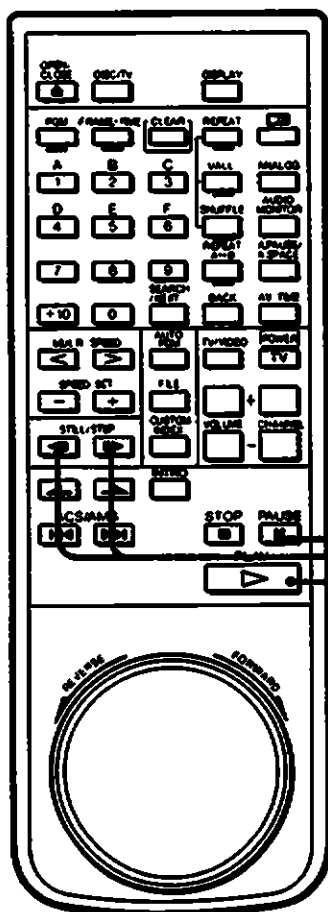
When an automatic picture stop code is encountered during speed playback (at $\times 1$, $1/2$, $1/4$, $1/8$, $1/16$, $1/30$, $1/90$), the unit automatically stops at that frame. To resume playback, press the button, button, \langle / \rangle button, or the shuttle ring.

To resume normal playback



To Play an LD

To Play Frame by Frame – Freeze-frame, STEP playback (CAV standard play)



To view a still picture – Freeze-frame



The screen stops at the current frame.

To view a frame one by one – STEP playback

1.



Press once for freeze-frame.

2.



Each press shifts one frame backward.

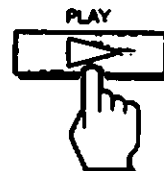
Each press shifts one frame forward.


Hold the button down for continuous step playback. It is available to press STILL/STEP buttons during playback operation.

To resume normal playback

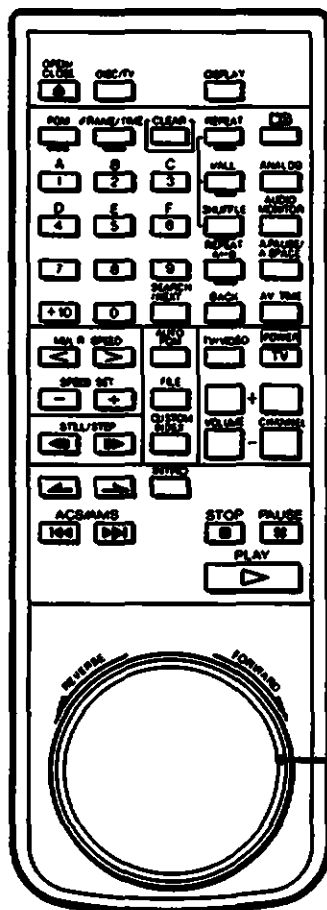


or



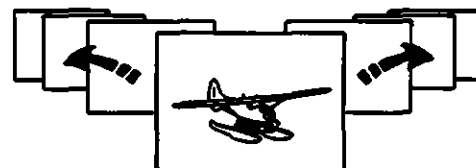
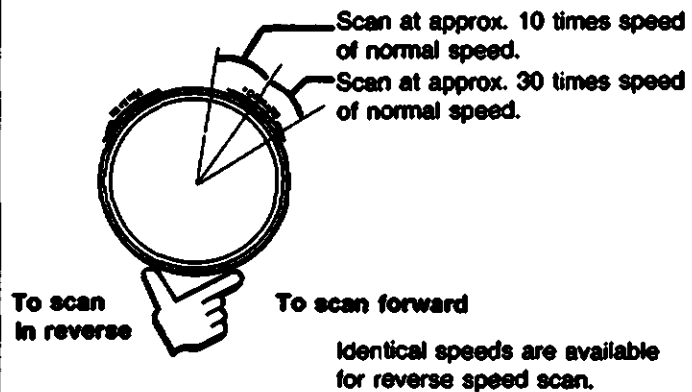
- During freeze-frame or step playback operation
There is no sound.
- Extended-play (CLV) discs
Speed play, freeze frame and step playback are not possible with CLV discs.
When the  button is pressed, the screen becomes blue and the indication "SIDE A CLV" (or "SIDE B CLV") is shown.

To Search for a Particular Scene - Dual Speed Clear Scan



To forward or reverse speed clear scan

The playback speed can be changed depending on the degree of the shuttle ring.



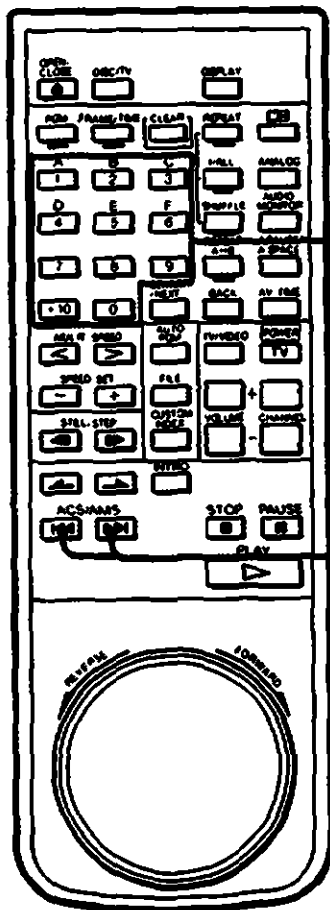
Scanning continues until the shuttle ring is released.

While scanning in either direction

- There is no sound.
- Scanning speed varies as the laser beam moves away from the center of the CLV disc. In addition, the image during scanning with a CLV disc will contain some instability.
- A certain amount of noise is inevitable with all scanning operations.

Searching by Chapter Number – Chapter Search

Chapters are contained in a disc. LDs are divided into sections called chapters. Such discs usually have a list of chapters on the jacket or label.



To check the current chapter and frame/time numbers
These numbers appear in the display window on the player.
Or to display them on the screen, press the **DiSPLAY** button
on the Remote Commander.

To enter a number greater than 10
Use the **+10** and **0** buttons.

Examples: 10: **+10** → **0**
14: **+10** → **4**
20: **+10** → **+10** → **0**

If the **+10** button is pressed by mistake
Press the **CLEAR** button, then press **+10** and other buttons
for desired number.

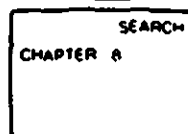
Notes

- The chapter search feature will not function if the disc does not include chapter numbers. In this case, the screen message will give only frame or time numbers.
 - As for a disc with TOC (see p. 18), if a chapter number not included in the disc is entered, the entry will be ignored.
 - As for a disc without TOC, if a chapter number not included in the disc is entered, the last picture will be displayed and the player will stop.
- If the **REPEAT** function is pressed (see p. 18), playback will resume from the beginning of the disc.
If the **REPEAT** function is not on, press **▷** to resume playback.

Direct chapter search

Example: Locate the beginning of chapter 8.

Press the "8" button.



Searching for chapter 8

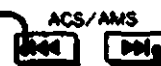


Finds Chapter 8,
and playback starts.

- If you have pressed the wrong number, simply press the correct one.
- Search can be conducted while in freeze-frame, speed play, and pause condition as well as normal playback. When the desired chapter appears after search, playback will continue in the same mode.

Skip chapter search

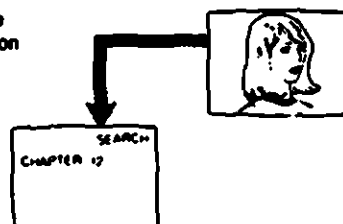
Press the **◀◀** button once to return to the beginning of the current chapter.
Press the **◀◀** button twice – before the picture reappears – to return to the beginning of the previous chapter.



Press the **▶▶** button to advance to the beginning of the next chapter.

Example: Current chapter = 12

Press the **◀◀** button once.



Press the **▶▶** button once.



Searching by Frame Number/Time – Frame/Time Search

For CAV (standard-play) discs only (Frame search)

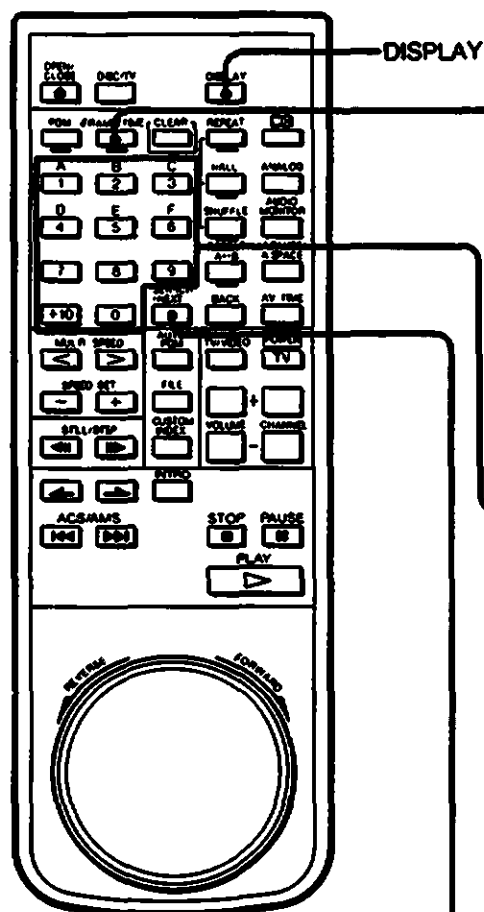
Enter the frame number to search for a particular scene.

- Each picture on a standard-play disc is called as a frame.

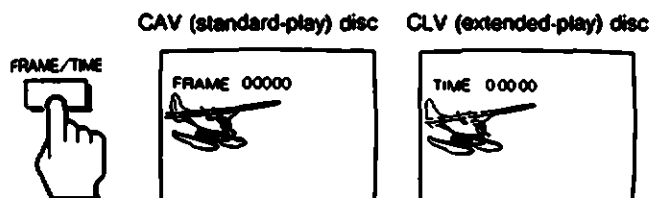
For CLV (extended-play) discs only (Time search)

Enter the time to search for a particular scene.

- Extended-play discs keep track of positions as elapsed time from the beginning of the disc.



1 Press the FRAME/TIME button.



2 Enter the desired frame or time numerals.

- CAV (standard-play) disc

Example: Locate frame number 12340.

Press the number buttons in the following order.

1 → **2** → **3** → **4** → **0**

- CLV (extended-play) disc

Example: Locate the 12 min 05 sec point.

Press the number buttons in the following order.

1 → **2** → **0** → **5**

If you make a mistake

Press the FRAME/TIME button once more to return the display indication to zero, and then enter the correct numbers as follows.

For CAV – five digits

For CLV with seconds – four digits

For CLV without seconds – two digits

3 Press the SEARCH/NEXT button.



Playback starts at the specified number in step 2.

Search can be conducted while in freeze-frame, speed play, and pause condition as well as normal playback. When the desired frame or time appears after search, playback will continue in the same mode.

To cancel frame/time search

Before pressing the SEARCH/NEXT button, press the CLEAR button.

After pressing the SEARCH/NEXT button, press the button.

To check the current frame/time numbers

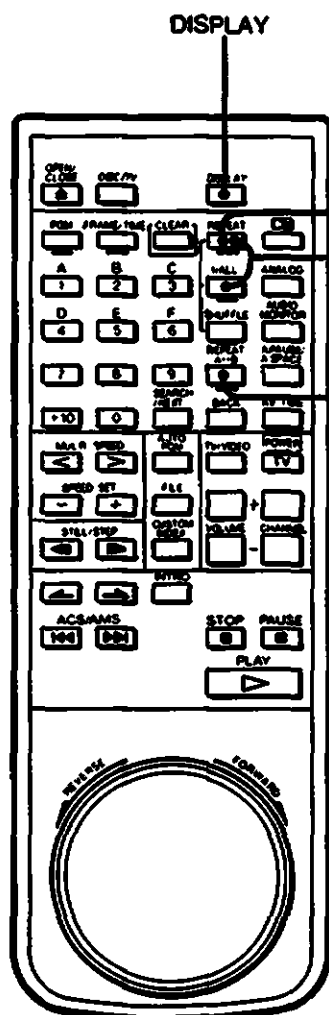
These numbers appear in the display window on the player. Or to display them on the screen, press the DISPLAY button on the Remote Commander.

Notes

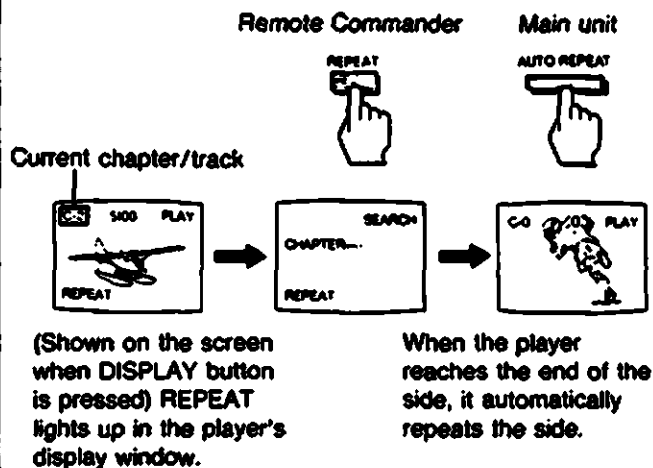
- If a frame/time number not contained on a disc is entered, the playback stops. If the REPEAT button is pressed and REPEAT is shown in the display window (see p. 10), playback will resume from the beginning of the disc.
- If the disc does not include seconds-unit time data, enter the time in minutes only.

To Play an LD

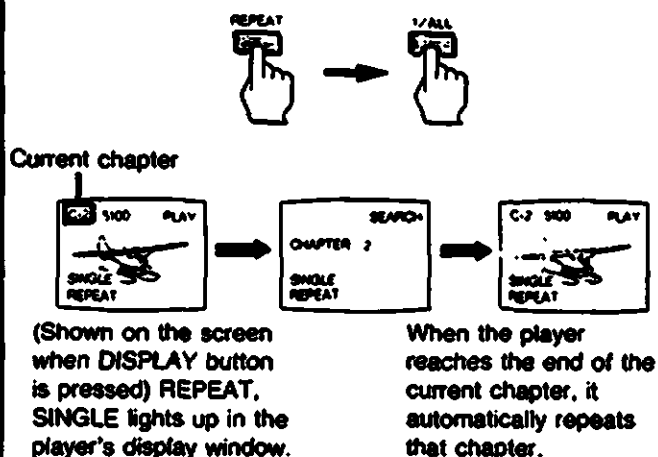
To Play Repeatedly – Repeat Playback



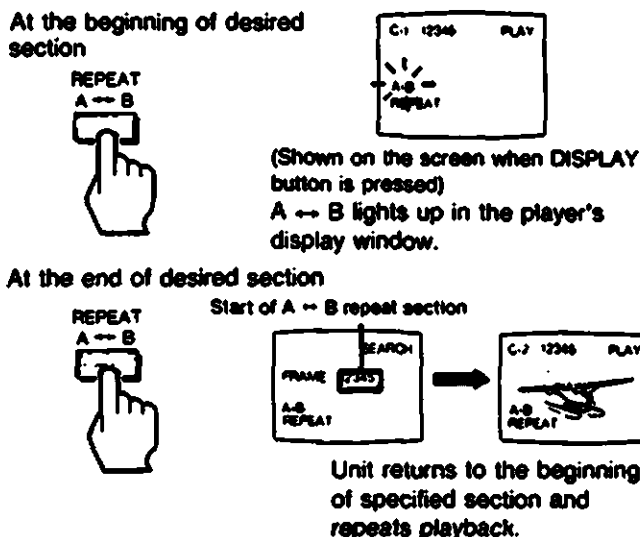
To repeat the entire side of the disc



To repeat the current chapter



To repeat a specific section of a disc



To cancel A → B repeat
Press the CLEAR button.

To cancel repeat functions other than A → B
Press the REPEAT button again to cancel the REPEAT indication in the display window. (The same button that was used to activate repeat AUTO REPEAT either from the main unit or the Remote Commander — must be pressed to cancel the repeat function.)

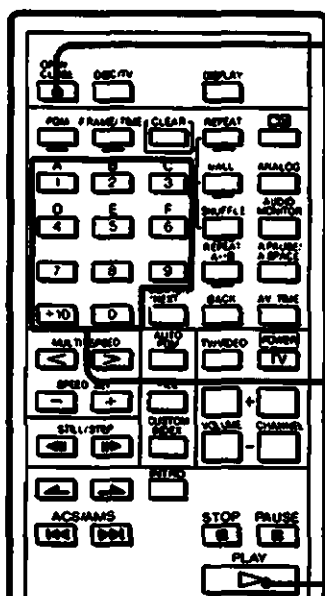
To check the current status
Check the indicators in the display window on the player. Or to display them on the screen, press the DISPLAY button on the Remote Commander.

To use custom repeat
To repeat playback between two predefined points on the disc, refer to page 2.

AUTO REPEAT button on the unit
Press to repeat the entire disc side.

To Play Only Certain Chapters – Program Playback

Example Play LD chapters 5, 4, 2, 6 – in that order.



To release or cancel program playback
Press the CLEAR button or the 1/ALL button. The unit resumes normal playback.

To repeat program playback

Press the REPEAT button, then the REPEAT is displayed.

To move to a preceding or following programmed chapter
Press the F or B button.

To check the program contents during program playback
Press the PGM button. The program is displayed for about 3 seconds. The currently playing program number will flash.

Caution

- When the shuttle ring is kept turned to the forward direction during program playback and the playback comes to the end of the current selection, the next programmed chapter will be played back. When the shuttle ring is kept turned to the reverse direction, the unit will not go back to previous chapters. If you want to move a preceding programmed chapter, keep F or B button pressed until the desired programmed number comes up.
- If not-existing chapter numbers on a disc are entered, the program cannot be conducted.
- Programmed contents are stored until the disc is removed or the power is switched off.

LD with TOC Data

When you program for an LD with TOC data, the following display is shown.

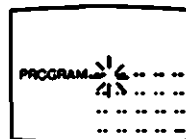
Example: 5, 4, 2, 6 are entered.



Order in which the currently playing chapter is programmed

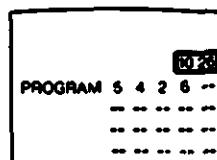
If the chapter number 0 or chapter numbers higher than 21 are entered, or if the total playback time exceeds 100 minutes, the total playback time will not be shown.

1 Press the PGM button.



PGM indication lights in the player's display window.

2 Press the Number buttons 5 4 2 6.



For LDs containing TOC (Table of Contents) data, the total playback time of programmed chapters is shown.

If you make a mistake

To start over	To change a number
Press the CLEAR and PGM button and enter the correct number.	Press the SEARCH/NEXT (to advance) or BACK (to back up) buttons until the incorrect number on the screen flashes.
	Then enter a new number.

To enter chapter numbers over 10

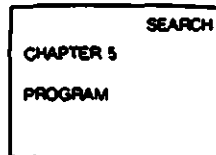
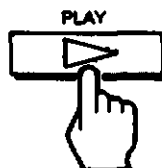
Use the +10 and 0 buttons.

Examples: To enter 10: +10 → 0
To enter 14: +10 → 4
To enter 20: +10 → +10 → 0

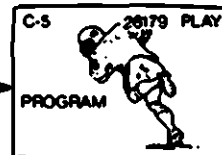
If the +10 button is pressed by mistake

Press the CLEAR button, then press +10 and other buttons for desired number.

3 Press the ▷ button.



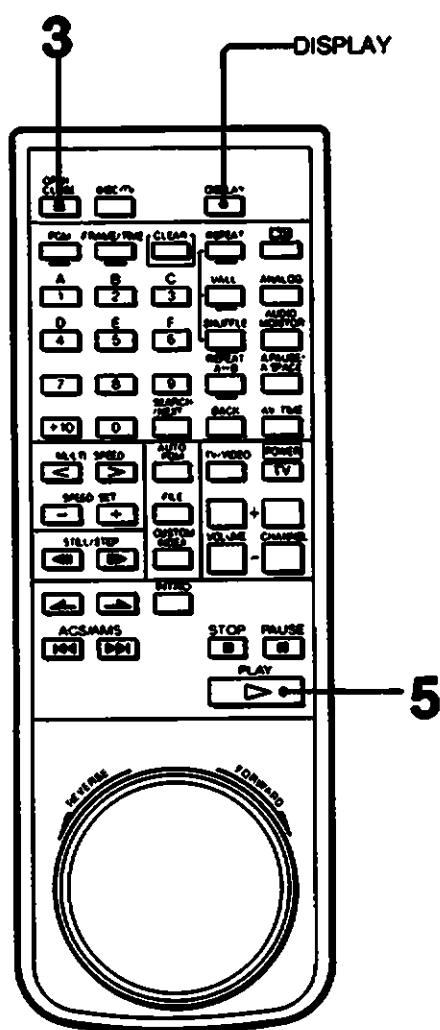
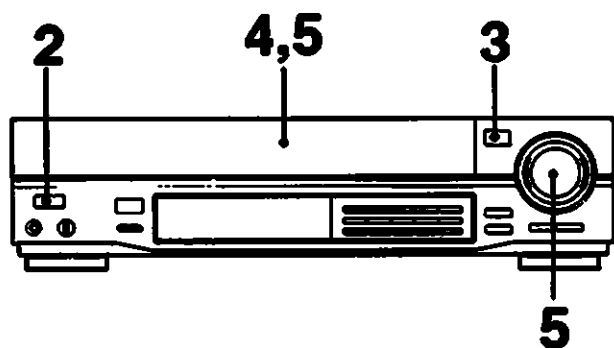
Searching for the first programmed chapter



Playback starts from the beginning of chapter 5.

After playing all programmed chapters 5, 4, 2, 6, in order, playback stops.

To Play a CD



Notes on disc tray

Do not insert a hand or finger in the player while it is operating. The player will stop automatically. If an object is inserted while in play, serious injury may result. Be sure to place the unit out of the reach of your child. Insert only one disc at a time. Incorrect placement of two or more discs may lead to malfunction.

Identical buttons on the main unit can also be used.

1 Turn on the stereo system.

Turn on the amplifier or receiver and select [CD] or the desired audio input.

2 Turn on the player.

Main Unit

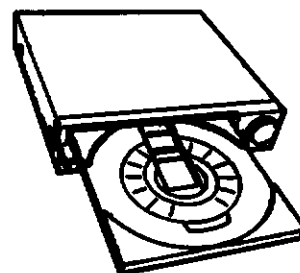


3 Open the disc tray.

Remote Commander

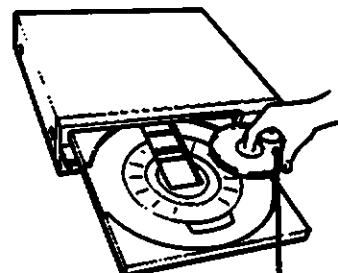


Main Unit



4 Place the disc on the tray.

Place the disc on the center of the tray. If the disc is not placed correctly, playback may not start.



Label faces up.

5 Start playback.

Remote Commander



Main Unit




Or push the disc tray compartment, then playback will also begin.

Using an optional timer

To start playback with an optional timer automatically, leave the POWER switch of the disc player in the depressed position. When the timer supplies power at the preset time, the unit turns on and playback begins.

To pause at the beginning of a disc

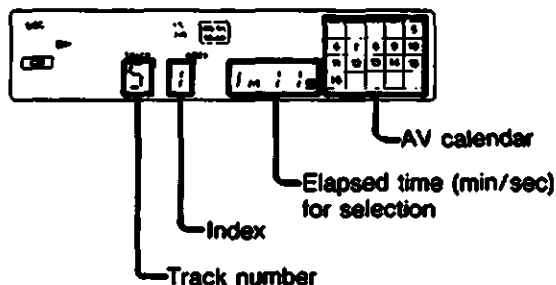
Press the  button on the player or the Remote Commander. The tray closes, and the player pauses at the beginning of the disc.

AV calendar

When playing a CD, the AV calendar shows information on the total number of selections. As selections are played, the corresponding numbers on the display disappear.

When listening with headphones

Plug stereo headphones into the PHONES jack and adjust the listening volume with the LEVEL control.

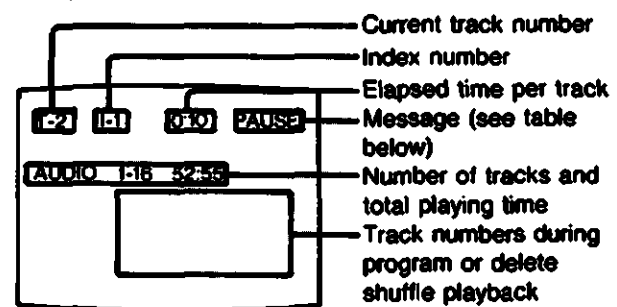
Playback display**Screen Messages**

Information on the operating condition of the unit and track numbers can be superimposed on the TV or monitor screen. Information for CD is shown on a green background.



To call up the on-screen display

Remote Commander

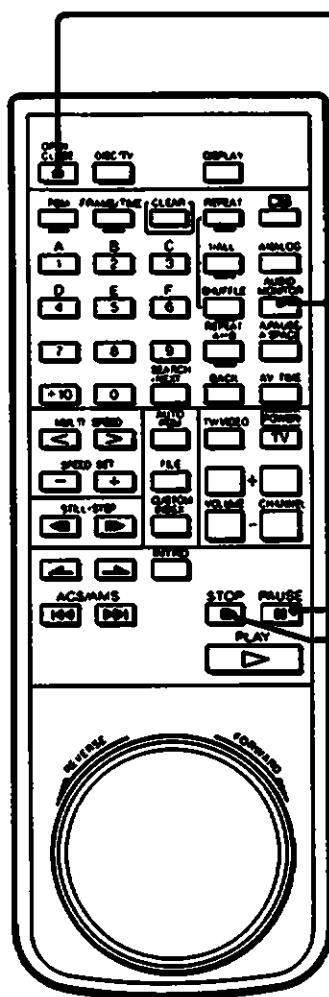
Press the button again to turn the display off.

**Message**

(Examples)

Display	Explanation
OPEN	Disc tray open
CLOSE	Disc tray closed
PLAY	Playback
STOP	Stop
PAUSE	Pause
 / 	Manual search (Forward/reverse speed scan)
SEARCH	Search

To Play a CD



To stop playback and remove disc

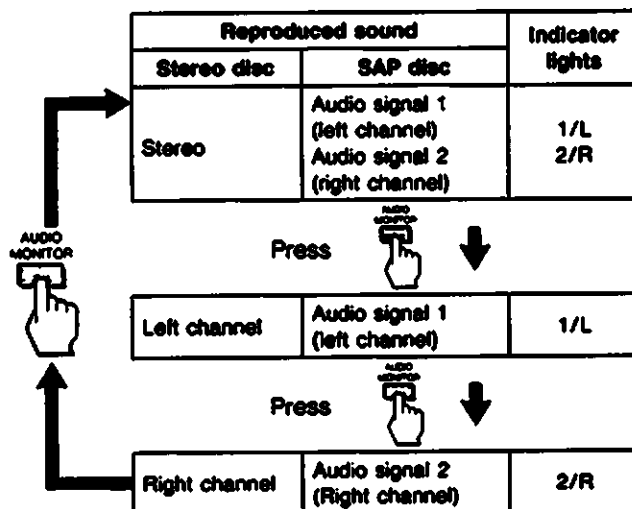


Remove the disc and press the OPEN/CLOSE button again to close the tray.

To play a stereo CD or a second audio program (SAP) CD

After playback has started

Each time the AUDIO MONITOR button is pressed, the mode changes in the following order.



To temporarily interrupt playback



To resume play from the same point, press the ||| or ▷ button.

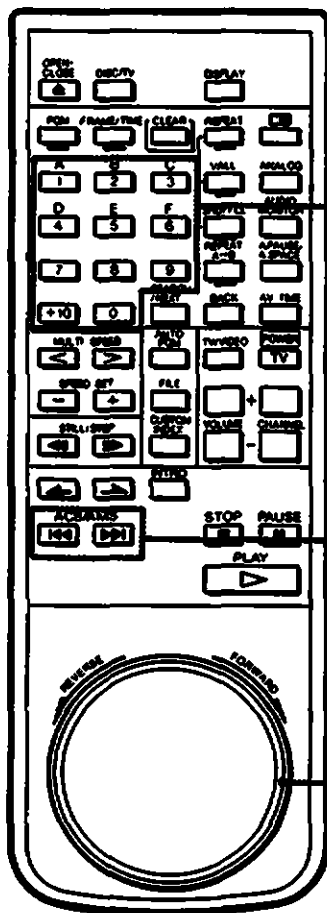
To stop playback



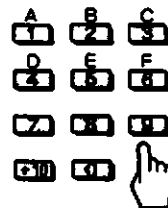
To restart playback from the beginning of the disc, press the ▷ button.

Identical buttons on the main unit can also be used.

To Search for a Particular Selection – Search



To search by track number



Enter the track number.

To play a single track once

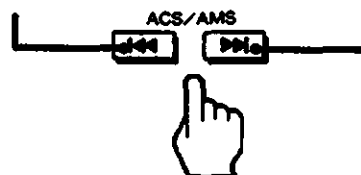
1. Press the 1/ALL button on the remote commander to display the SINGLE display.
2. Then select the track with the number buttons. When the track has been played, the unit enters the stop mode. To release the setting, press the 1/ALL button again.

If you press the wrong numbers, simply press the correct ones.

To skip selections

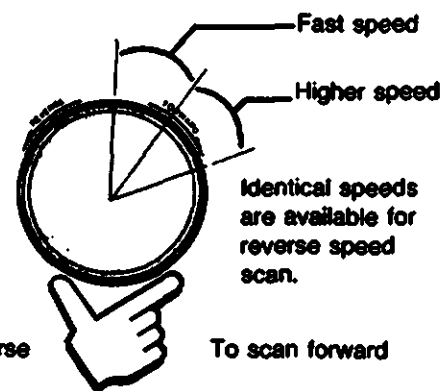
Press once to return to the beginning of the current selection. Press again to return to the previous selection.

Press to advance to the next selection.



To search for a particular point – Dual Speed Scan

The playback speed can be changed depending on the degree of the shuttle ring.



To scan in reverse

To scan forward

Scanning continues until the shuttle ring is released.

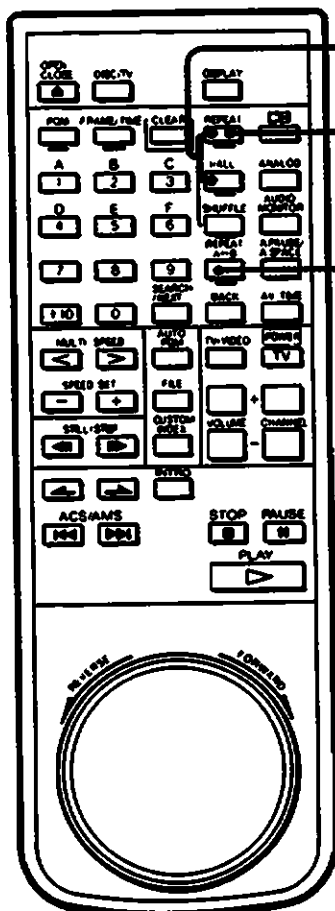
To enter track numbers over 10
Use the +10 and 0 buttons.

Examples: To enter 10: **+10** → **0**
To enter 14: **+10** → **4**
To enter 20: **+10** → **+10** → **0**

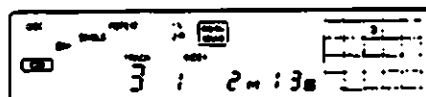
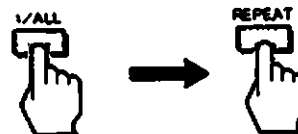
If the +10 button is pressed by mistake
Press the CLEAR button, then press +10 and other buttons for desired number.

To Play a CD

To Play Repeatedly – Repeat Playback

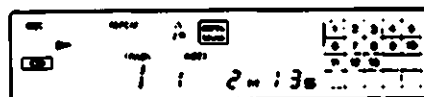
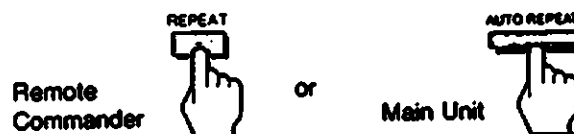


To repeat the current selection – SINGLE Repeat



Current selection (track) is continuously repeated.
Deactivate REPEAT display to playback a selection only once.

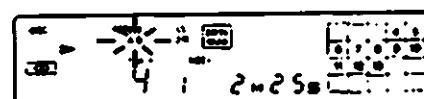
To repeat all selections – ALL Repeat



The entire disc is continuously repeated.

To repeat a specific section of a disc – A ↔ B Repeat

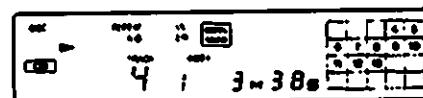
At the beginning of desired section



At the end of desired section



Flashing of A ↔ B indicator stops and the specified section is continuously repeated.



To cancel A ↔ B Repeat, press the CLEAR button.

To cancel ALL or SINGLE Repeat

Press the REPEAT button that was used to activate repeat either from the main unit or the remote commander – again.

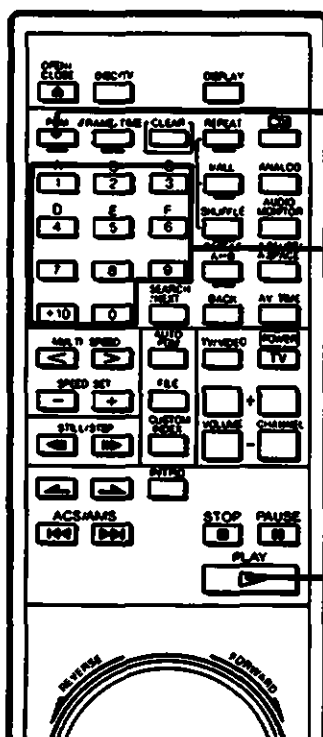
AUTO REPEAT button on the unit

Press to repeat the entire disc side.

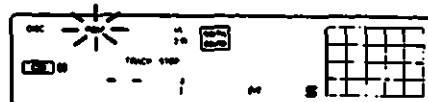
To Play Only Certain Selections – Program Playback

You can program up to 20 tracks playback in a specified order.

Example: Play CD tracks 5, 4, 2, 6 – in that order.

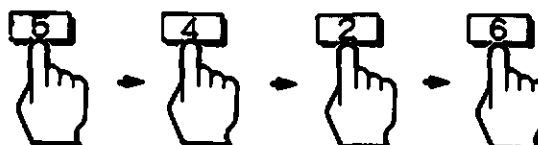


1 Press the PGM button.



PGM indication lights in the player's display window.

2 Press the Number buttons **5** **4** **2** **6**.



If you make a mistake

To start over	To change a number
Press the CLEAR and PGM button and enter the correct number.	Press the SEARCH/NEXT (to advance) or BACK (to back up) buttons until the incorrect number on the screen flashes.
	Then enter a new number.

To enter track numbers over 10

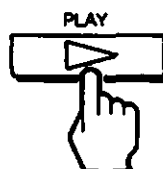
Use the +10 and 0 buttons.

Examples: To enter 10: **+10** → **0**
 To enter 14: **+10** → **4**
 To enter 20: **+10** → **+10** → **0**

If the +10 button is pressed by mistake

Press CLEAR button, then press +10 and other buttons for desired number.

3 Press the **▷** button.



After searching and playing all programmed selections 5, 4, 2, 6, in order, playback stops.

Notes

- When the shuttle ring is kept turned to the forward direction during program playback and the playback comes to the end of the current selection the next programmed track will be played back. When the shuttle ring is kept turned to the reverse direction, the unit will not go back to previous tracks.
- If not existing track numbers on a disc are entered, the program may not be conducted.

To release or cancel program playback

Press the CLEAR button or the 1/ALL button. The unit resumes normal playback.

To check track and time information on the screen

Turn on the power of the TV or monitor. Time and track for the CD/CDV will be turn on the screen.

To repeat program playback

Use the REPEAT button to turn the REPEAT display on.

AUTO REPEAT repeat button on the unit

Press to repeat the entire disc side.

During program playback

The numbers on the AV calendar display disappears as selections are played. The contents of a program are stored until the disc is removed or the player is turned off.

To move to a preceding programmed track

Press the **◀** button.

To move to a following programmed track

Press the **▶** button.

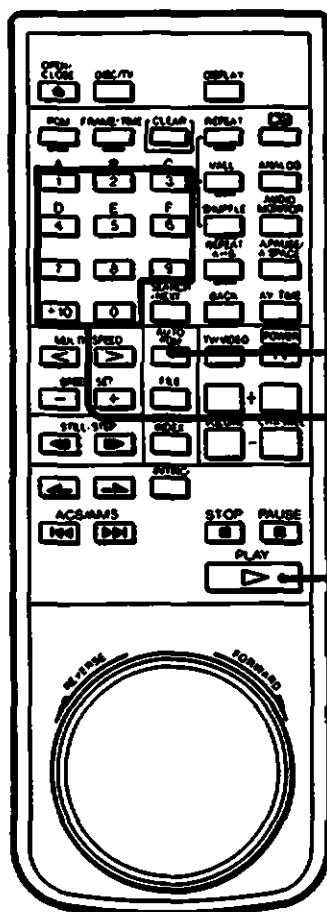
Program playing time

The total playing time of the program is displayed only when tracks with numbers under 20 are programmed.

LD/CD/CDV

To Play Only Certain Selections Within a Designated Time – Auto Program Playback

You can designate a length of time and make 2 different programs of selections fitting within that period. When there is only minimal time left within the designated length of time, a selection with the longest playing time shorter than the left time will be entered. This section explains how to conduct Auto Program Playback on a CD, but the function can also be used for LDs with TOC, and CDVs.



1 Press the AUTO PGM button.

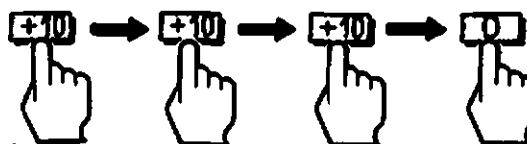
AUTO PGM



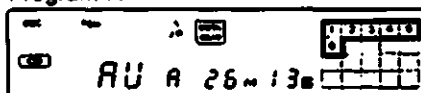
PGM blinks in the player display window.

2 Designate the time length for a single side of your tape.

Example: For 30 minutes of playback

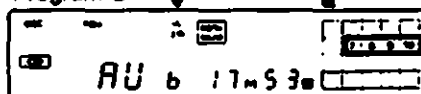


Program A



Program A
(corresponding to
Side A of tape)
Program A and B
appears alternately.

Program B



Program B
(corresponding to
Side B of tape)

If you press the wrong number,
simply press the correct one.

3 Press the ▷ button.

PLAY



The selections for Program A
will be played and then the unit
will pause.
The number of the selection
that finishes its play disappears
from the AV calendar display.

AV calendar on the screen

The AV calendar shows information on the contents
of two different programs: program A and program
B, separated with a pause.

Auto Program contents

Program contents are stored until the disc is
removed or the power is turned off.

If your disc contains more than 20 selections

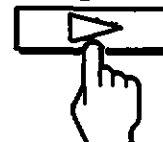
Selection with numbers over 20 may not be
programmed with the Auto Program function.

Note

Auto Program will not be run if your selection is
larger than the designated playing time.

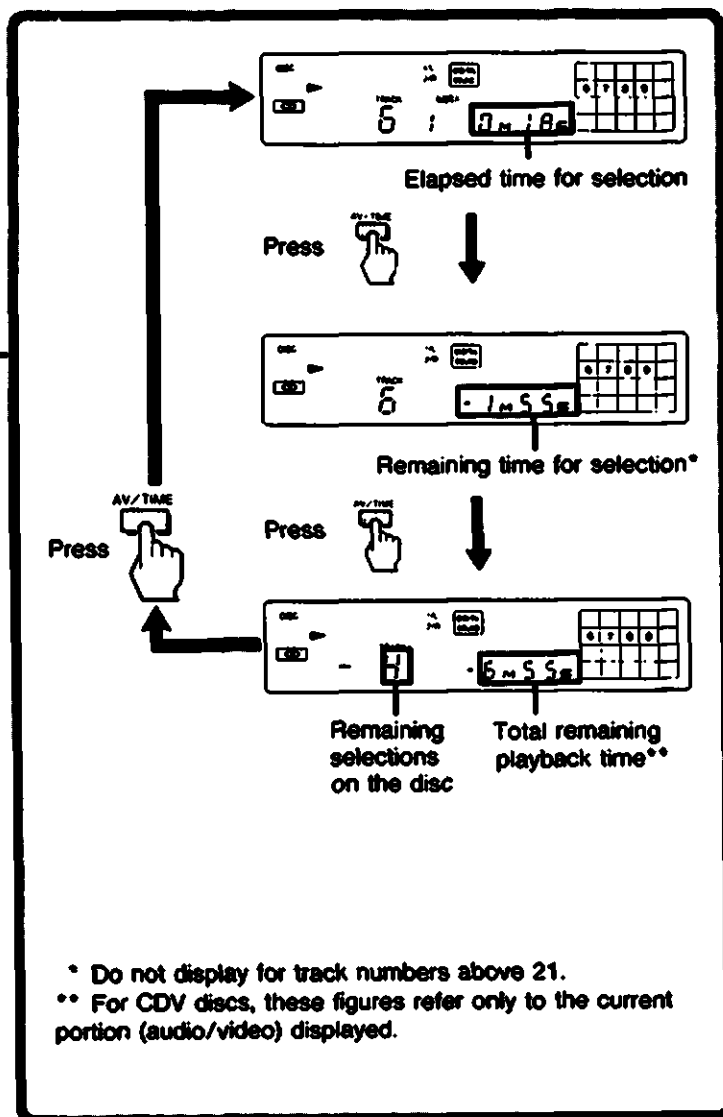
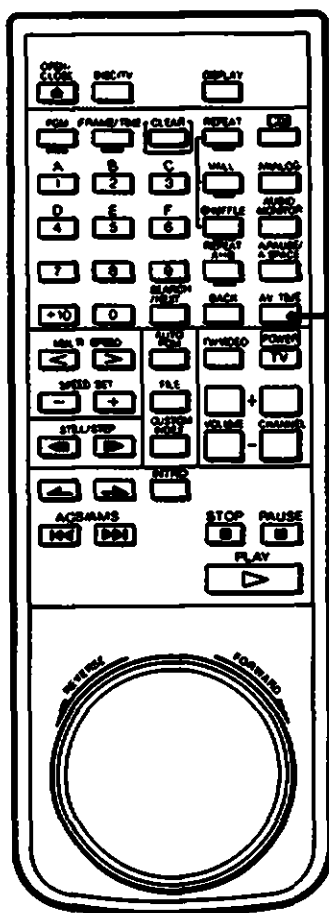
4 Press the ▷ button to play back Program B.

PLAY



To resume normal playback
Press the CLEAR button or the 1/ALL button.

To Change Time Display – Time Counter



Display on TV screen

If the TV set or monitor connected to the player is on and the DISPLAY button is pressed, the track number, time, and other information recorded on the CD/CDV will appear on a green background on the monitor.

Note on LD discs

The time display function is available only with LDs containing TOC data.

First, the elapsed time or the number of frames is displayed. Pressing the AV TIME button then changes the time display as shown above.

AV TIME button

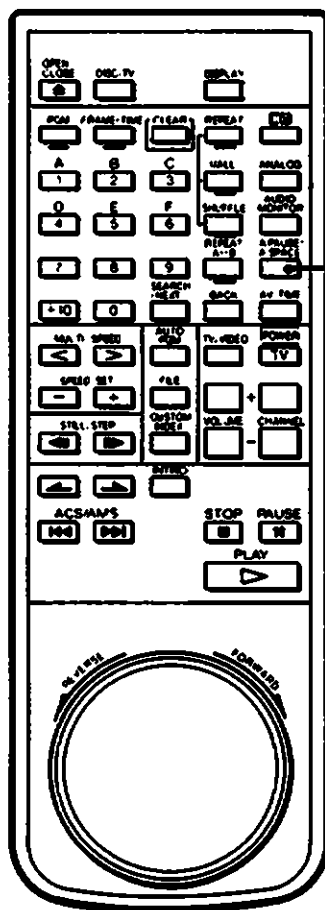
Pressing the AV TIME button during the stop mode will display the total number of tracks and total playing time for CDs and LDs with TOC data.

For CDVs, the total number of tracks and total playing time for both audio portion and video portion are displayed alternately in the display window on the player.

To Pause After a Each Selection – Auto Pause To Insert a Blank Space Between Selections – Auto Space

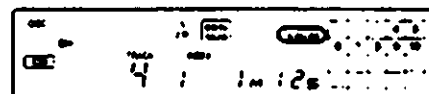
Auto Pause – After a selection is played, the player enters the pause mode.

Auto Space – A blank interval of 3 seconds or more is inserted between the playback of each selection.



Auto Pause

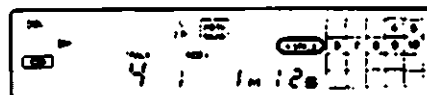
Press the A.PAUSE/A.SPACE button once.



To start playback of the next selection
Press the ▷ button.

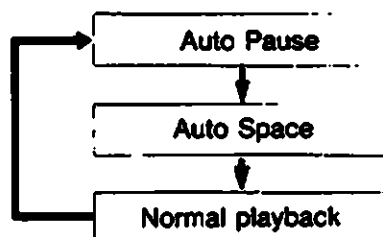
Auto Space

Press the A.PAUSE/A.SPACE button twice.



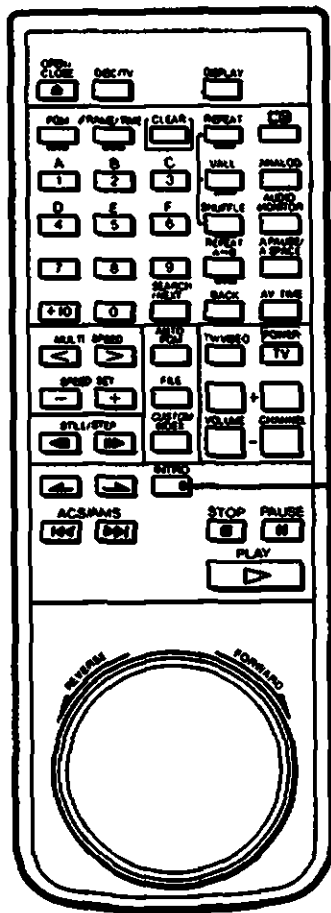
To resume normal playback

Each time the A.PAUSE/A.SPACE button is pressed, the mode changes to give you in the following order.

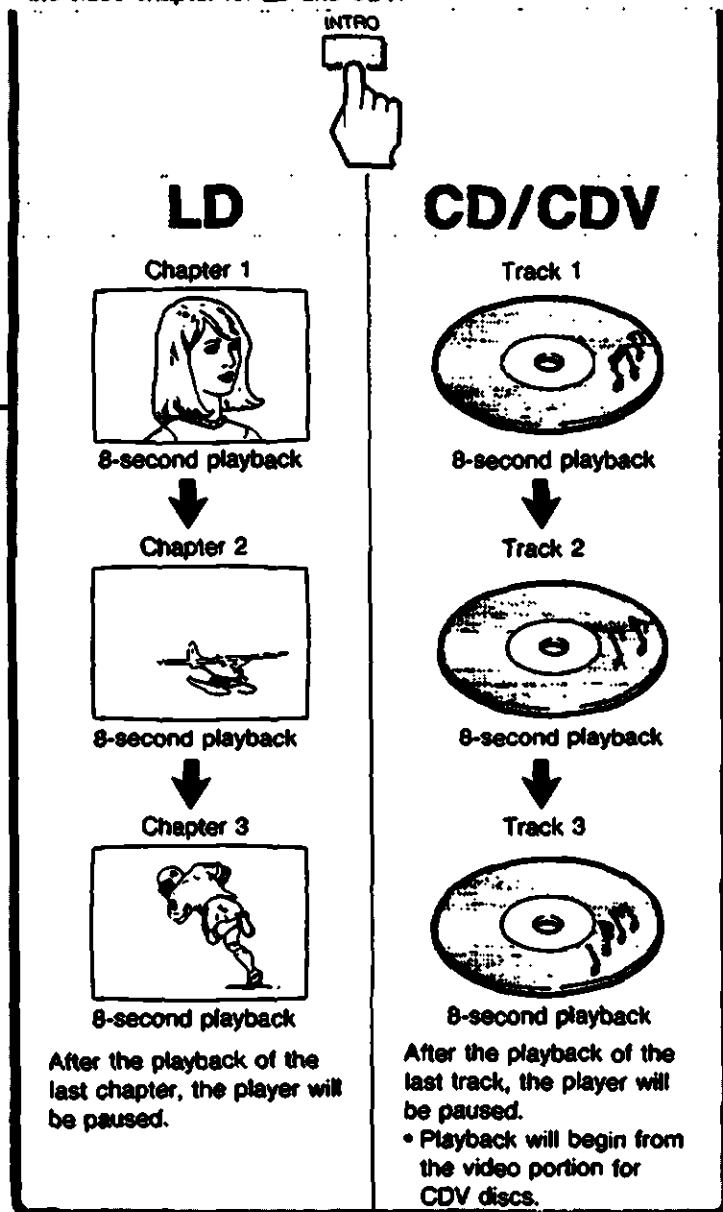


For the button of Auto Pause and Auto Space should use the same one.

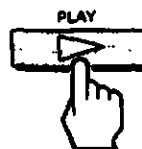
To Playback an Introduction of Each Chapter/Track - INTRO Scan



The INTRO scan plays back only the beginning (introduction) of each chapter/track on a disc for approximately 8 seconds. The INTRO scan will also play back the scenes of the video chapter for LD and CDV.



To resume normal playback



or



To resume normal playback, press the ▷ button. During search functions, normal playback will resume from the selection to be searched when the ▷ button is pressed.

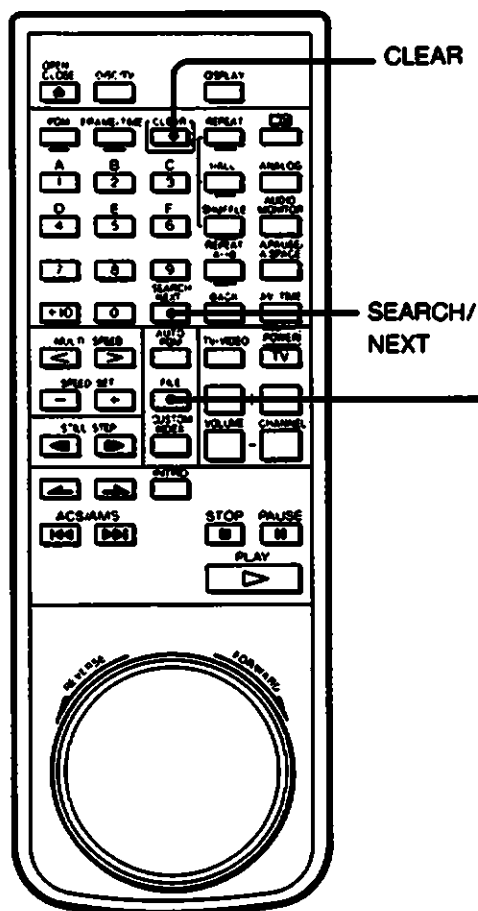
Press the ■ button to stop.

To Set an Index at a Desired Point – Custom Index

What is the Custom Index?

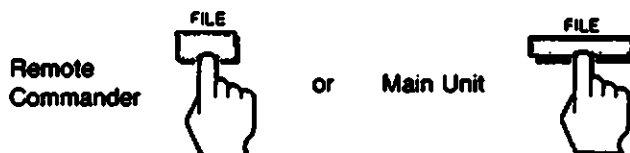
The Custom Index function lets you set up to six index marks at any point on the disc. Playback can then be started from an index point at the push of a button, and repeat playback between index points is also possible.

This section explains how to set custom index marks on an LDs, and the function can also be used for CDs and CDVs.

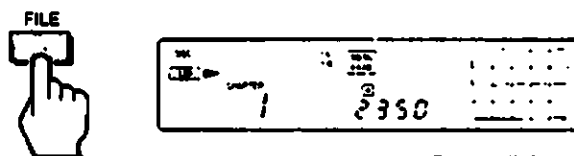


To set a custom index mark

Press the FILE button during playback.



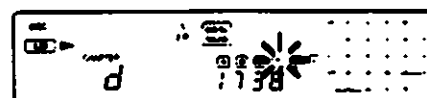
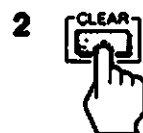
Up to six locations anywhere on the disc can be marked.



Indicators A, B, C, etc. light up for each custom index mark.

If you make a mistake

- 1 Use the SEARCH/NEXT button to cause the file indicator to flash.

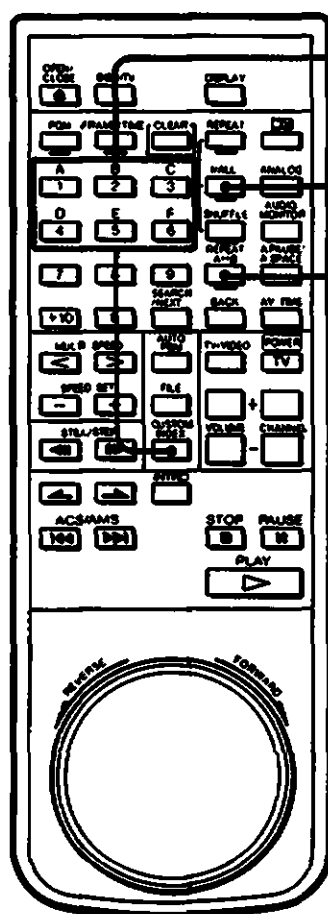


Press the CLEAR button and then press the FILE button at the correct location.

Note

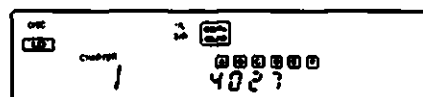
When the disc is removed or the player is turned off, the contents of the custom index are lost.

While custom index search is performed, the A, B, C, ... file search indicators disappear one by one, but the indicator for the last index point remains.



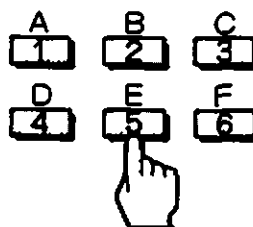
Custom Index Search

1 Press the CUSTOM INDEX button.



The AV calendar disappears and the number buttons 1 - 6 function as file search buttons A - F

2 Press the file search button for the desired location.



Playback starts from the specified index point and continues until the end of the disc.

To skip to another index point
Press the corresponding file search button.

To resume normal playback
Press the CUSTOM INDEX button or the CLEAR button.

To play a section between custom index points once

Press the 1/ALL button, so that the indication SINGLE is shown on the display window. Then perform custom index search to the desired index start point.
The section between this point and the next custom index point is played once.

To play a section between custom index points repeatedly

Press the 1/ALL button, so that the indication SINGLE is shown on the display window and press the REPEAT button to activate the REPEAT display. Then perform custom index search to the desired index start point.
The section between this point and the next custom index point is continuously repeated.

Index point rearrangement

The custom index points are arranged on the disc not by the order in which they were input but by their relative location from the start of the disc. If a new index mark is set before an old one, the A, B, C, ... order is rearranged.

Custom Index with a CDV disc

Although playback begins from the video portion, files will be arranged from the audio portion in A, B, C ... order.

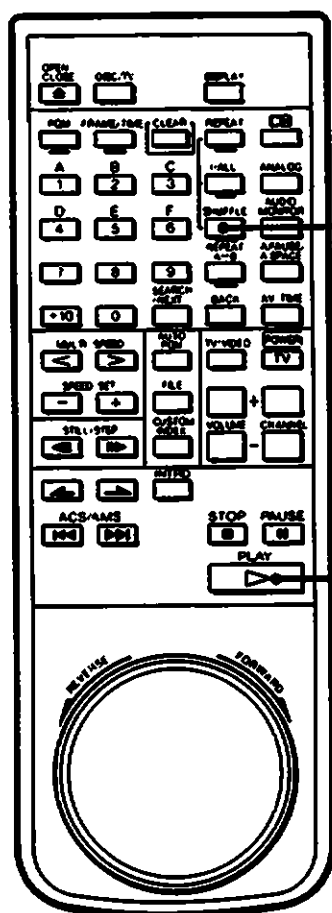
How is the custom index stored?

The custom index data are not actually recorded on the disc but stored in the memory of the player. Therefore, the custom index points set with one player cannot be used when the disc is played on another unit.

To clear a custom index mark

Information on index marks is retained also when the player is switched to normal playback. To cancel a stored index mark, use the SEARCH/NEXT button to cause the corresponding file search indicator to flash, and then press the CLEAR button.

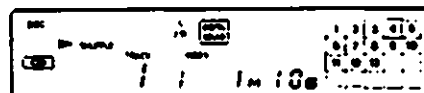
Playing in a Random Order – Shuffle Playback



To play all tracks or chapters on a disc

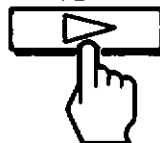
1 Press the SHUFFLE button.

SHUFFLE



2 Press the > button.

PLAY



All selections on the disc are played once in a random order. After all selections have been played, the unit enters the stop mode.

To cancel shuffle playback

Press the CLEAR button or the 1/ALL button. Normal playback resumes from the next selection.

When a LD without TOC data, the indication "NO TOC" appears on the display window, and shuffle playback cannot be conducted.

To skip to the next selection during shuffle playback
Press the >>> button. Returning to a previous selection with the <<< button is not possible.

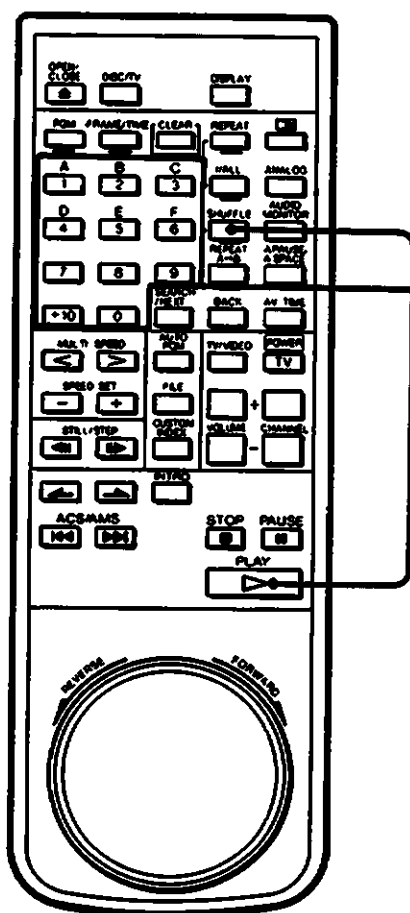
Shuffle playback with CDV discs

Selections from the audio portion and video portion are played in random order.

SHUFFLE button timing

To ensure correct operation, do not press the SHUFFLE button immediately after the disc tray has closed. Instead, press the SHUFFLE button only after the ► (play) indication in the display has stopped flashing.

The selections on the disc can be played back in a random order.

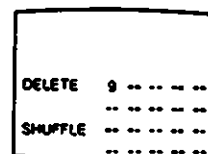


To play only certain selections - Delete Shuffle

1 Press the SHUFFLE button.



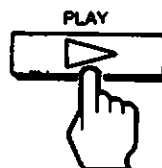
2 Enter the chapter number or track number of the selection you do not wish to play.



If you make a mistake

To start over	To change a number
Press the CLEAR button and then press the SHUFFLE button again and enter the correct number.	Press the SEARCH/NEXT (to advance) or BACK (to back up) buttons until the incorrect number on the screen flashes.
	Then enter a new number.

3 Press the ▷ button.



The player automatically selects a random program without the deleted selections.

To resume normal playback

Press the CLEAR button or the 1/ALL button.

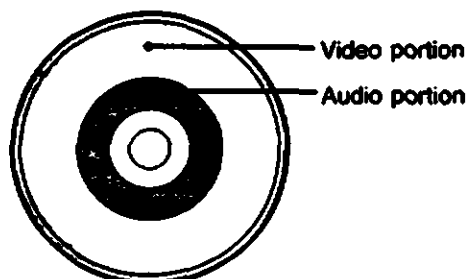
Delete shuffle

This function lets you exclude specific chapters or tracks from shuffle playback. When the function is used, DELETE SHUFFLE appears on the screen.

To repeat shuffle or delete shuffle playback

Press the REPEAT button on the Remote Commander to activate the REPEAT indication on the display window. When the unit is turned off or the disc is removed, shuffle functions are cancelled.

To Play a CDV



The Compact Disc Video (CDV) format divides a CD into two sections. One section consists of 20 minutes of digital audio playable on any CD player. The other section which consists of 5 minutes of video and digital audio, requires a CDV player. Please note the following when playing a CDV.

- Time search is not applicable for CDV.
- To display the remaining time, simply press the AV TIME button.
- CDVs are divided into track numbers which are assigned to each selection for the audio and video portion. The track of the video portion corresponds to the chapter of the LD.

To play

Press the PLAY button. Playback will begin from the video portion. After the completion of the video portion, the audio portion will be played back.

To play back from the audio portion, search by entering the desired track number (see p. 15).

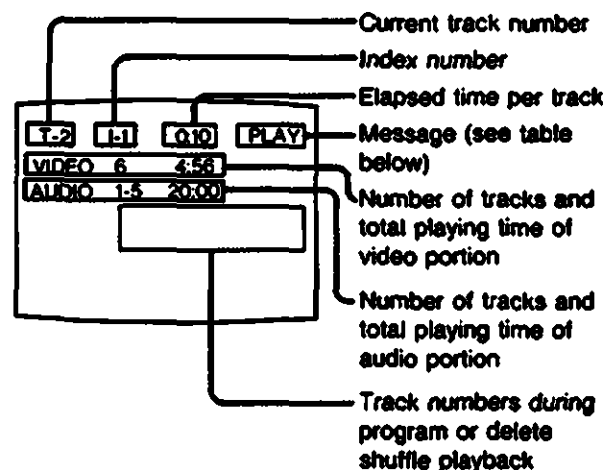
Screen Messages

Information on the operating condition of the unit and chapter or track numbers can be superimposed on the screen. During audio portion playback, information for CDV is shown on a blue background.

To call up the on-screen display



CDV



Message

(Examples)

Display	Explanation
OPEN	Disc tray open
CLOSE	Disc tray closed
PLAY	Playback
STOP	Stop
PAUSE	Pause
⏮ / ⏭	Manual search (Forward/reverse speed scan)
SEARCH	Search

Specifications

Type
Signal readout
Signal format

CD/CDV/LD Player
Optical (Laser beam reflection)
EIA standard, NTSC color
system (minutes)

Playing time

LD	CAV	30 cm (12 in) double-sided	60
		20 cm (8 in) double-sided	28
		20 cm (8 in) single-sided	14
	CLV	30 cm (12 in) double-sided	120
		20 cm (8 in) double-sided	40
		20 cm (8 in) single-sided	20
CD		12 cm (5 in) single-sided	74
		8 cm (3 in) single-sided	20
CDV		Audio portion	20
		Video portion	5

Digital audio specifications

Frequency response 4 Hz to 20kHz (± 0.2 dB)
Signal-to-noise ratio More than 112 dB (EIAJ)*
Dynamic range More than 99 dB (EIAJ)
Total harmonic distortion 0.002% or less (at 1kHz, EIAJ)
Channel separation More than 110 dB (EIAJ)
Wow and flutter Below measurement limit ($\pm 0.001\%$ W.PEAK) (EIAJ)

Video specifications

Horizontal video resolution 425 lines
Signal-to-noise ratio More than 48 dB

Input/output specifications

Video output 1.0 Vp-p, 75 ohms, unbalanced
Audio output Stereo L, R
Analog: 200 mVrms (1 kHz, 40% modulation)
Digital: 200 mVrms (1 kHz, -20 dB)
Monaural (only for RFU adaptor)
MIX output: 77.5 mVrms (1 kHz, -20 dB)
Audio digital output (optical) -18 dBm, wavelength 660 nm
Headphone output 28 mW (32 ohms) impedance = 8 ohms
RFU DC output Mini mini jack DC 5V

Power requirements

Power requirements 120 V AC, 60 Hz
Power consumption 40 W
Weight 8 kg (16 lb 12 oz)
Dimensions Approx. 430 \times 115 \times 420 mm (w/h/d)

Operating temperature +5°C to +35°C
Ambient humidity 5 to 90%

* Measured according to EIAJ (Electronic Industries Association of Japan) standards.

Remote Commander RMT-333A

Principle of operation Infrared pulse
Power requirements 3 V DC (2 size AA batteries)
Dimensions Approx. 62 \times 44.5 \times 185 mm (w/h/d)
(27 $\frac{7}{16}$ \times 1 $\frac{13}{16}$ \times 7 $\frac{3}{8}$ inches)
Weight Approx. 170 g (including batteries), (6 oz)

Supplied accessories

Remote Commander RMT-333A (1)
Size AA (R6) batteries (2)
RFU adaptor RFU-90 UC (1)
Video connecting cord (phono plug 1 \leftrightarrow phono plug 1) (1)
Audio connecting cord (phono plug 2 \leftrightarrow phono plug 2) (1)
Operating Instructions
Spacer (1)

Design and specifications are subject to change without notice.

Notes on Handling Discs

Handle the disc by its edge, and to keep the disc clean, do not touch the rainbow colored surface.

CD

CDV



Correct

LD



Correct

Do not stick paper or tape on the labeled surface.



Wrong

Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight where there can be a considerable rise in the temperature.

Before playing, clean the disc with the cleaning cloth. Wipe the disc from the center out.



Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for analog record discs.

After playing, remove the disc and store it in its case.

Do not use the discs with being cracked, severe damaged on the disc repaired with adhesives.

Glossary

CAV disc

The Constant Angular Velocity (CAV) or standard-play disc rotates at a constant 1800 rpm. Each track, or the path traced by the laser for a single rotation of the disc, produces a single frame. Each side of the disc holds up to 54,000 frames, the equivalent of 30 minutes of playback. Each frame has a number that is stored with the data on the disc.

CLV disc

The Constant Linear Velocity (CLV) or extended-play disc doubles the maximum playing time to 60 minutes by varying the rotational speed from a maximum of 1800 rpm to a minimum of 600 rpm as the laser beam moves away from the center of the disc. The disc surface therefore moves past the laser head at a constant rate, and each track is longer than its predecessor.

Digital sound disc

Some LDs include a high-quality digital audio signal as well as a more conventional analog signal. This unit reproduces both signals with priority placed on the digital audio signal.

Chapter number

Some discs are divided into sections, called chapters. Such discs usually have a list of chapters on the jacket or label. Each chapter is numbered for easy location with the chapter search function, or for use with the repeat and program functions.

Frame number

The frames on standard-play (CAV) discs are sequentially numbered for rapid access with the frame search function.

Time number

Extended-play (CLV) discs calculate position in terms of playing time from the start of the disc. The time search function provides rapid access to desired scenes.

Track number

CD and CDV discs assign track numbers to each selection. Rapid access to desired tracks is possible with the track search function. Track numbers are also used with repeat and program functions.

LD with TOC (Table of Contents)

Among various LD software, there are discs with TOC (Table of Contents) signals recorded. When playing back LDs with TOC signals, the additional features given below can be enjoyed.

- Playback time display for one chapter (CAV, CLV)
- Remaining playback time (CAV, CLV)
- Time display for CAV disc
- AV calendar display
- Shuffle, delete shuffle

Troubleshooting

Check the following before requesting service

Symptom	Point to check
No power	<ul style="list-style-type: none"> • Power cord properly plugged into AC outlet?
Playback ▷ button does not produce playback.	<ul style="list-style-type: none"> • Unit correctly plugged in? • Disc inserted? • Disc properly seated? • Recorded side facing upward?
▷ indicator lights, but there is no picture or sound.	<ul style="list-style-type: none"> • TV or monitor switched out? • TV properly connected to player? • Input selector of TV, TV tuner, or monitor set to required position? <p>TV without audio/video inputs</p> <ul style="list-style-type: none"> • Channel selectors on RFU adaptor and TV set to the same number? • TV channel properly adjusted? • TV/DISC selector on the remote commander set to DISC? (Is the DISC indicator lit?)
Poor picture or sound quality	<ul style="list-style-type: none"> • TV properly connected? • Any source of noise nearby? • Disc dirty or scratched? • Any condensation on player objective lens? <p>TV without audio/video inputs</p> <ul style="list-style-type: none"> • Channel selectors on RFU adaptor and TV set to the same number?
No sound	<ul style="list-style-type: none"> • TV properly connected to player? • Volume control on TV, monitor, TV tuner or amplifier high enough? • Playback at normal speed? (The videodisc player produces sound only during normal playback and speed play at normal speed in the forward direction.)
No TV programs	<ul style="list-style-type: none"> • TV properly connected RFU adaptor? • TV/DISC selector on the remote commander set to TV? (Is the DISC indication out?)
Remote Commander does not operate.	<ul style="list-style-type: none"> • Player switched on? • Batteries correctly inserted? • Batteries exhausted? • Any obstacles between the Remote Commander and the player sensor? • The remote commander is pointed at the player sensor?
Picture distorted during scan.	<ul style="list-style-type: none"> • Some distortion in the lower part of the picture is normal - even for CAV discs.
Unit does not operate and LD/CD indication in display window flashes.	<ul style="list-style-type: none"> • Turn power off and then on again.