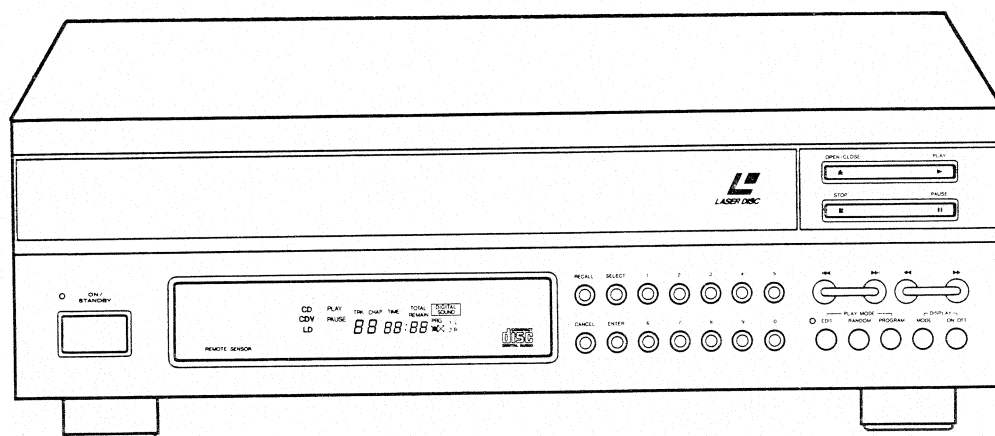




CONSUMER ELECTRONICS

PHILIPS



LDP 400

(GB)

Multi Laser Disc Player

(D)

Multi Laser Disc Spieler

(F)

Lecteur Laser Disc Video

(NL)

Multi Laser Disc speler

(I)

Lettore Multi Laser Disc

(S)

Reproductor Multi Laser Disc

Introduction

Welcome to Multi Laser Disc (MLD) the latest application of optical disc technology. Multi Laser Disc combines the digital audio of the Compact Disc with high-quality analog video, creating a new audio/video standard.

Multi Laser Disc is a logical extension of the CD Digital Audio system, which has already been accepted worldwide as the undisputed sound carrier of the future, and which, since the first Compact Disc players appeared on the market in late 1982, has achieved consumer acceptance faster than any other electronics product.

The result was the development of Multi Laser Disc players, able to play both audio and video discs.

This manual tells you everything you need to know about installing, operating and programming your Multi Laser Disc player. Study it carefully, and keep it near your player for reference when needed.

Checking the power supply

- Check that the type plate on the rear of your player indicates the correct supply voltage.
- If your mains supply voltage is different, consult your dealer or our Service Organisation.

*) Fitting a mains plug (U.K. only)

If you have to fit a mains plug, proceed as follows.

The wires in the mains lead are coloured:

Blue-Neutral Brown-Live

As these colours may not correspond with the colour markings identifying the terminals in your plug proceed as follows:

The Brown wire must be connected to the terminal which is marked with the letter L or coloured Red.

The Blue wire must be connected to the terminal which is marked with the letter N or coloured Black.

Note- This apparatus must be protected by a 3 amp fuse if a 13 amp plug is used, or, if any other type of plug is used, by a 5 amp fuse either in the plug or adapter, or at the distribution board. If in doubt consult a qualified electrician.

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TYPES OF DISC

DISC IDENTIFICATION CHART

Type of Disc	Size	Capacity	Format
CD (Silver Disc)	8 cm 12 cm	20 Min. Audio 70 Min. Audio	Audio-Digital
CDV - Single (Gold Disc)	12 cm	6 Min. Video 20 Min. Audio	Video-Analog (PAL) Audio-Digital
LD (CAV/CLV)	20 cm 30 cm	28/40 Min. Video 60/120 Min. Video	Video-Analog (PAL) Audio-Digital/Analog

If a Laser Disc is encoded with Teletext signals, it will enable viewers - provided their Television set is equipped for Teletext - to access subtitling in various languages.

To activate the Teletext subtitling, please switch your TV set to the Teletext mode and select the desired language from the index page.

Track No. (CD, CDV SINGLE) On the CD or CDV SINGLE disc, each selection is numbered as a track.

Index No. [CD, CDV SINGLE, LD (With TOC)] On some discs, index numbers are provided in the selection to divide the track into sections, such as "movements" in a symphony.

Chapter (LD) These punctuate the disc programs; corresponding to the "chapters" of a book.

* On some discs, there are no chapter numbers.

Frame [LD (CAV)] Disc programs are divided into frames, one from every picture on the disc, corresponding to the "pages" of a book.

Time [LD (CLV)] The elapsed time of the disc being played is displayed.
Some discs have the minimum unit of seconds, while others have that of minutes.

TOC (Table of Contents) Some CDV or LD discs, such as CD and CDV SINGLE discs, are provided with a TOC, and some are not.
The TOC is recorded on the innermost part of the disc, and contains information on the track numbers and their playing times.

This player will play    and also CD Video  discs.

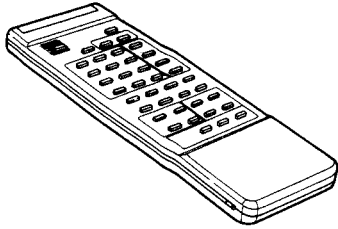
WARNING Discs recorded in NTSC format (used in USA and Japan) will not operate with this player.
Use only PAL discs.

BEFORE OPERATION

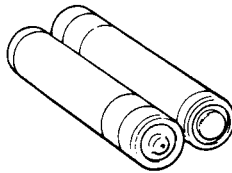
ACCESSORIES

After unpacking, check that the following accessories are included.

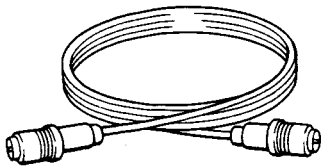
- Remote control transmitter



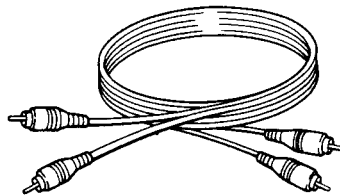
- Batteries (AA)



- Coaxial cable
(Only for /00, /02 and /05.)



- Audio cable

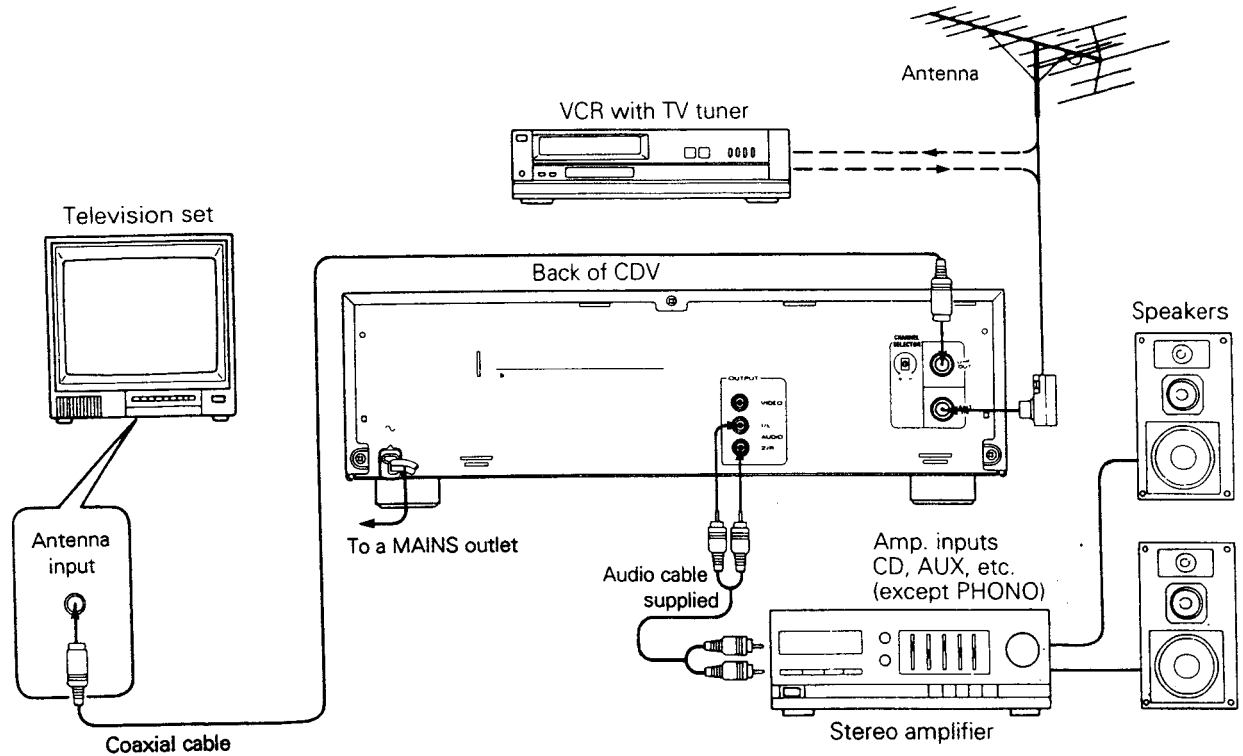


CONNECTIONS

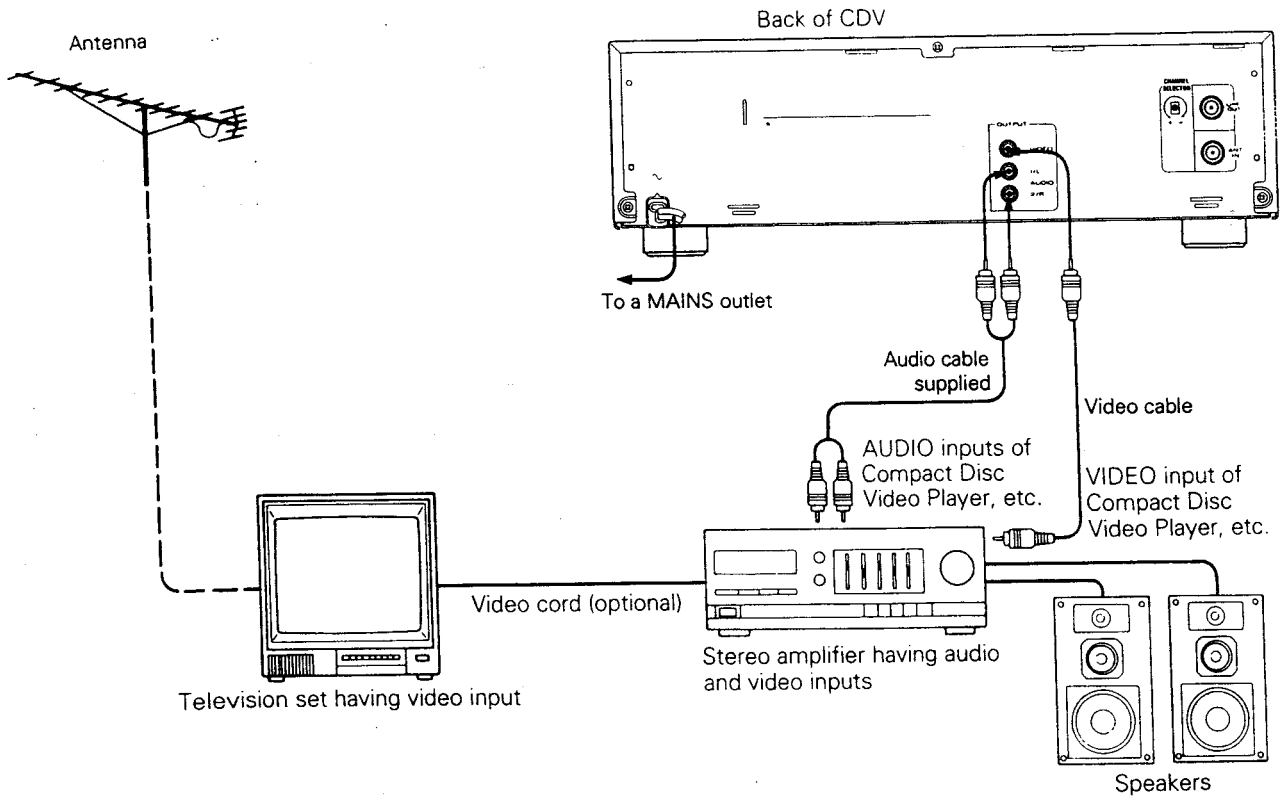
Before connecting always remove the plug of the TV from the wall socket. If you change a setting later on, then you should also remove the plug of the player from the wall socket.
Only when all connections have been made should you re-insert the plug(s).

CONNECTION EXAMPLES

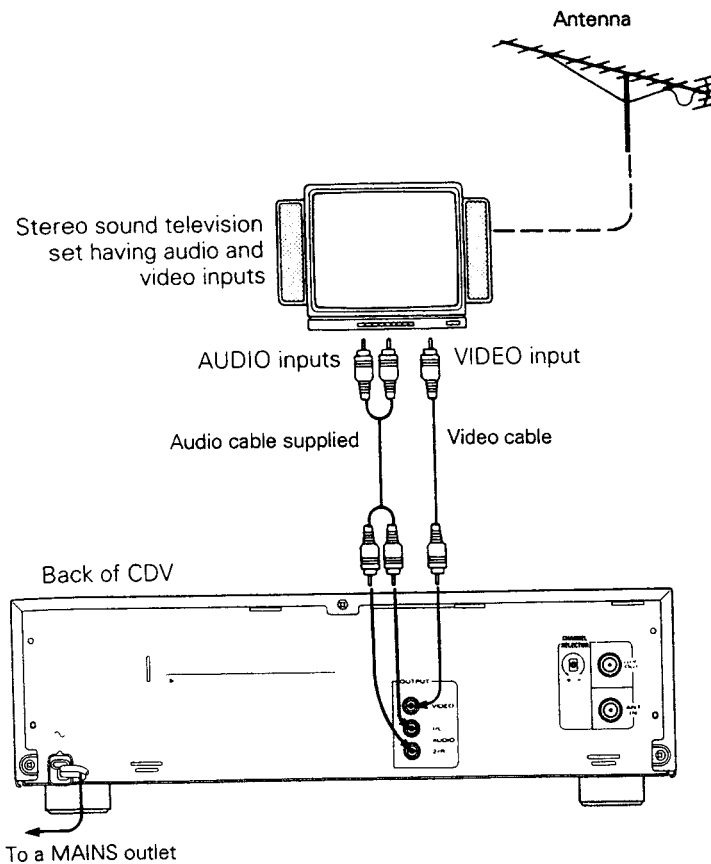
- With a television set and audio system
- Antenna socket (Only for /00, /02 and /05.)



- With a stereo amplifier having audio and video inputs and television set having a video input

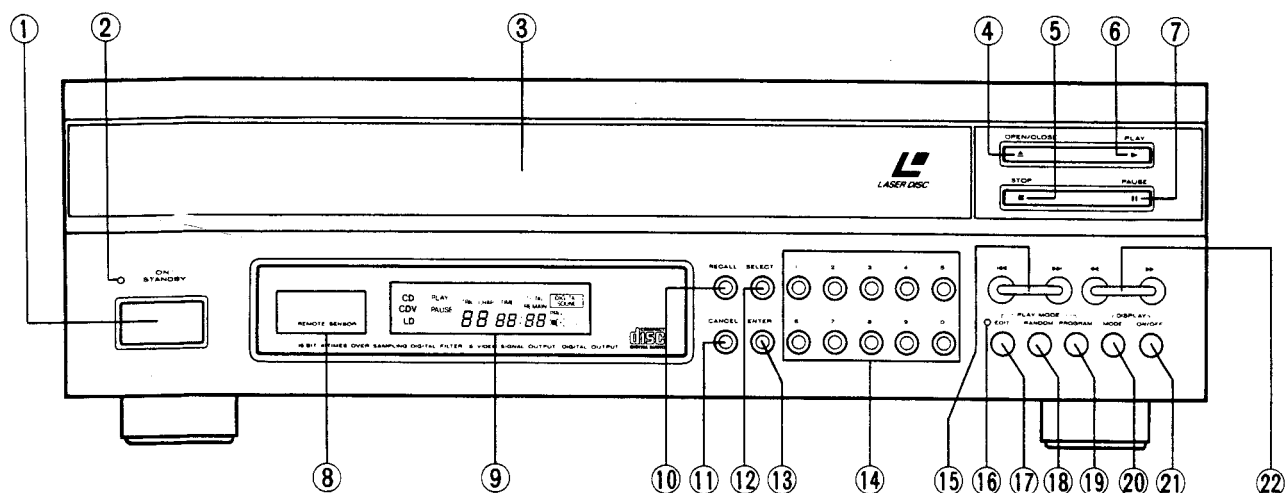


- With a television set having audio and video inputs



LOCATION AND FUNCTION OF PARTS AND CONTROLS

FRONT PANEL



① ON/STANDBY BUTTON

When this button is pressed, the player enters the Standby mode and the STANDBY indicator lights up. (All the data stored in the memory are then erased.) Pressing this button and any of the OPEN/CLOSE (▲), PLAY (▶), STOP (■), PAUSE (||), SKIP (◀▶) buttons turns the power on.

Note: In the standby mode, no operations other than the above are possible. When this player is plugged in, the power will come on automatically. If a disc is already inside, playback will start automatically. If there is no disc inside, the player will default to standby mode automatically after approximately 10 minutes.

② STANDBY INDICATOR

When the STANDBY button is pressed, the indicator lights up to show that the unit is in the standby mode. It will go out when the power is turned ON.

③ DISC TRAY

Place a disc on the tray.

The tray slides out by pressing the OPEN/CLOSE (▲) button on the player or by pressing the OPEN/CLOSE on the remote control transmitter.

④ OPEN/CLOSE (▲) BUTTON

Press this button to open and close the disc tray.

When this button is pressed with the disc placed on the tray, the disc tray closes, and the TOTAL TRACK/CHAP. and TOTAL TIME appear on the display of the player while the TOTAL TRACK/CHAP. TOTAL TIME and music calendar are displayed on the monitor screen, then the player enters the play mode.

When this button is pressed during play, disc rotation stops and the disc tray will open.

When this button is pressed with the disc tray open, the disc tray closes.

While the disc tray is closing the CD (Compact Disc), CDV (Compact Disc Video) and LD (Laser Disc) indicator flashes.

⑤ STOP (■) BUTTON

When this button is pressed during play, the disc rotation stops.

In the Stop mode, when more than 10 minutes have elapsed, the player enters the Standby mode automatically.

⑥ PLAY (▶) BUTTON

When this button is pressed after placing a disc on the disc tray, the disc slides into the player and play starts.

- Pressing this button in Stop mode starts play.
- Pressing this button during play moves the play position to the beginning of the chapter or track being played, and re-starts play from there.
- Pressing this button can also start program play.
- Pressing this button during playback in a mode other than normal Play mode causes normal Play mode to resume.

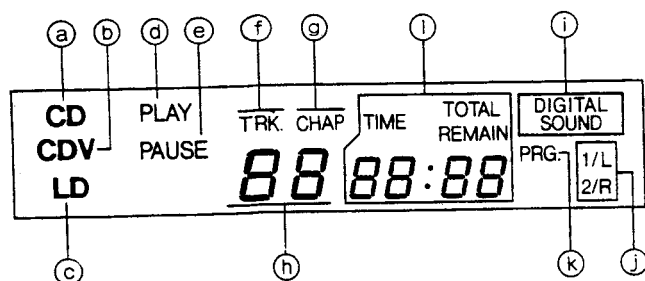
⑦ PAUSE (||) BUTTON

When this button is pressed during Play mode, play is stopped temporarily. To resume play, press the PLAY button, or the PAUSE button again.

⑧ REMOTE SENSOR

This is the receiver for the signal transmitted from the remote control transmitter.

⑨ MULTI-FUNCTION DISPLAY



⑨ a CD (Compact Disc) indicator

Lights up during play back of a CD.

⑨ b CDV (Compact Disc Video) indicator

Lights up during playback of a CDV SINGLE disc.

⑨ c LD (Laser Disc) indicator

Lights up during playback of an LD disc.

⑨ d PLAY indicator

Lights up during play. It blinks when the player is started up.

⑨ e PAUSE indicator

Lights up in the pause mode.

⑨ f TRK (Track) indicator

Lights up to indicate the track display mode of a CD or CDV SINGLE disc.

⑨ g CHAP(TER) indicator

Lights up to indicate the chapter display mode of an LD disc.

⑨ h NUMBER display

Displays the chapter or track number being played. When entering a program, this displays the chapter or track number to be programmed.

⑨ i DIGITAL SOUND indicator

Lights up when a disc with digital audio is played. The digital audio signal is output from the AUDIO OUTPUT socket on the rear panel.

⑨ j 1/L and 2/R indicators

Indicate the audio output channel. 1/L indicates audio channel No. 1, or Left channel, while 2/R indicates audio channel No. 2 or Right channel. Both of the indicators light up when the power is switched on (indicating stereo mode).

⑨ k PRG. (Program) indicator

Lights up to indicate programmed play, program repeat play or Edit Play operation.

⑨ l TIME/TOTAL time/TOTAL REMAINing time display

- TIME: With a CD or CDV SINGLE disc, shows the elapsed time of the track being played. With a LD disc with extended time, shows the time number.
- TOTAL time: With a CD or CDV-SINGLE disc, shows the total elapsed time from the beginning of the disc until the track being played.
- TOTAL REMAINing time: With a CD or CDV SINGLE disc, shows the time remaining on the disc being played.

⑩ RECALL BUTTON

Press this button to check the programmed contents.

⑪ CANCEL BUTTON

Use this button in the following cases.

- To cancel repeat play.
- To correct an entry made using the numeric buttons (only during programming). When this button is pressed again, the Program mode will be cancelled.
- To cancel programmed play.
- To cancel random play.

⑫ SELECT BUTTON (LD)

Press this button to recall the specific position you want to view and/or listen to (search operation).

With a LD (CAV) disc, pressing this button activates frame number search mode. With a LD (CLV) extended play disc, pressing this button activates time number search mode.

⑬ ENTER BUTTON

Press this button to enter a program for programmed play.

⑭ NUMBERED BUTTONS

Use these buttons when searching or programming chapters or tracks.

⑮ SKIP (◀▶) BUTTONS

Press one of these buttons to skip to the beginning of a chapter or track.

▶▶: When this button is pressed during Play mode, the beginning of the next chapter or track is detected. When it is kept pressed, the chapter or track number is advanced continuously.

◀◀: When this button is pressed during Play mode, the beginning of the previous chapter or track is detected. When it is kept pressed, the chapter or track number is reversed continuously.

⑯ EDIT INDICATOR

Lights up when the EDIT button is pressed. It lights up during EDIT play.

⑰ EDIT BUTTON

With this function, an interval of four seconds will be left between tracks during play. It is convenient when recording from a disc to tape.

Press this button when entering the edit program. (Please see page 27).

⑱ RANDOM BUTTON

Press this button to start random play. (Effective only for CD, CDV-Single, and LD disc with TOC.)

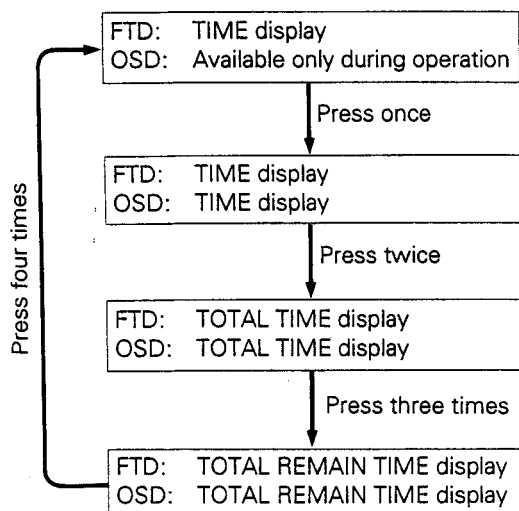
⑲ PROGRAM BUTTON

This button is used to program the desired chapters or tracks in a desired order (programmed play).

②⑩ DISPLAY MODE BUTTON

This button is used to change the contents of the Fluorescent Tube Display (FTD) on the player and On-Screen Display (OSD) on the monitor screen.

Note: This function is effective only when Display ON/OFF is ON (and both FTD and OSD are activated).

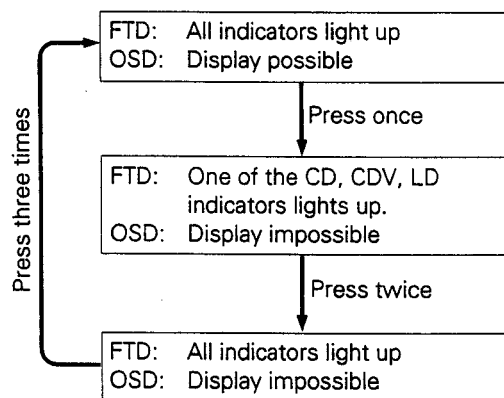


Displayed contents differ depending on the disc being played.
(Please see page 18.)

②⑪ DISPLAY ON/OFF BUTTON

This button is used to switch off the Fluorescent Tube Display on the player or the On-Screen Display (OSD) on the TV.

Display status which depends on the setting of the display ON/OFF button is shown below. (Please see page 18.)



②⑫ SEARCH BUTTON

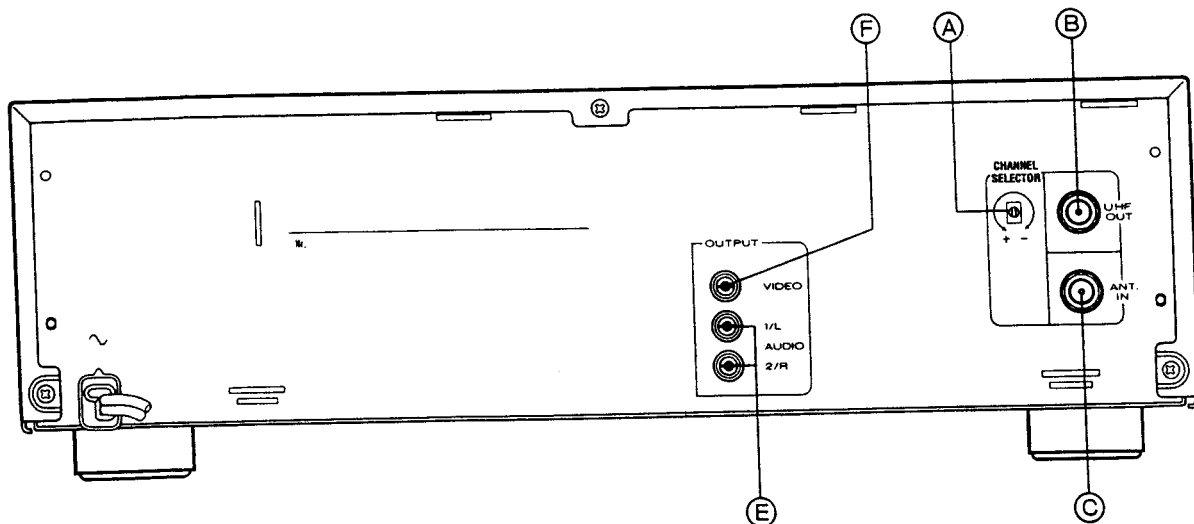
When one of these buttons is pressed and held down during Play mode, the player searches forward or backward.

▶▶: Forward search.

◀◀: Backward search.

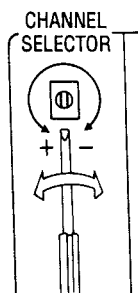
The search speed varies in two steps. It is low for the first two seconds after the button is pressed, and then becomes high.

REAR PANEL



Ⓐ FINE TUNING OF TV CHANNEL

Note - If you are using a VCR tuned to channel 36, the player must be retuned by means of the small 'CHANNEL' screw. Using a small screwdriver, turn this screw just a few degrees to retune to channel 38, or until a good picture is obtained from another chosen channel of the TV.



Ⓑ UHF (CDV) OUTPUT TERMINAL

(75-ohm, socket)

Connect this to the RF (Radio Frequency) antenna terminal of your TV set.

This terminal outputs either the TV broadcast signal or the CDV video and audio signals converted into a UHF signal by the built-in RF converter.

Ⓒ ANTENNA INPUT TERMINAL

(75-ohm, socket)

Connect this to the cable from your TV antenna.

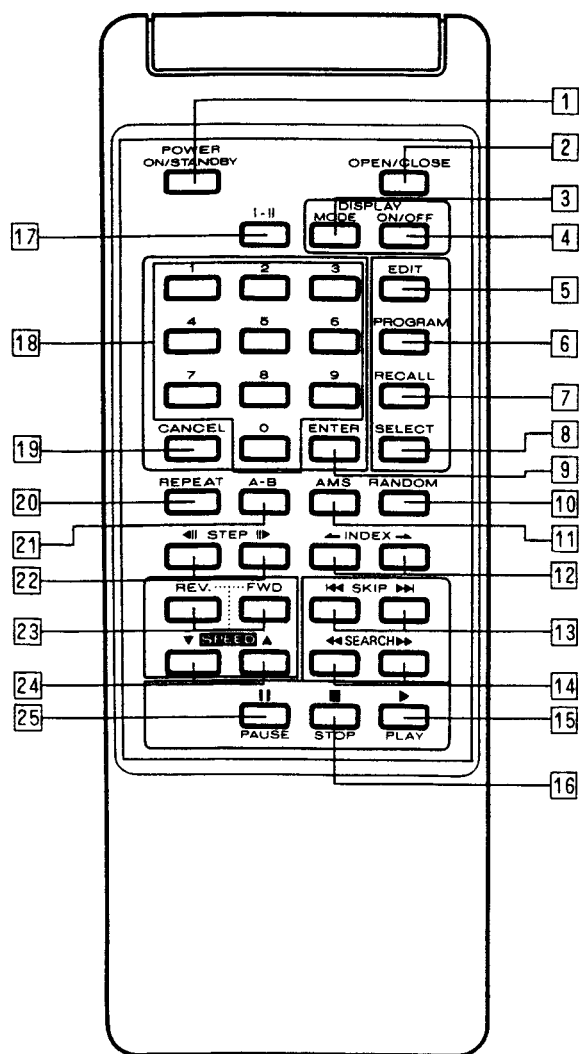
Ⓔ AUDIO OUTPUT SOCKETS

These sockets output the digital audio signal of a CD or CDV SINGLE or the analog or digital audio signal of a LD. Connect to the input sockets, marked CD, CDV, AUX, etc., of your stereo amplifier. Do not connect to the PHONO input sockets of an amplifier.

Ⓕ VIDEO OUTPUT SOCKET

Connect this socket to a color video monitor or to a TV equipped with a video input socket.

REMOTE CONTROL TRANSMITTER



1 POWER ON/STANDBY BUTTON

When this button is pressed, the player enters the Standby mode and the Standby indicator lights.

2 OPEN/CLOSE BUTTON

Press this button to open and close the disc tray. Place a disc on the tray and press this button to close the tray. When this button is pressed during the Play mode, disc rotation stops and the disc tray opens. When this button is pressed with the disc tray open, the disc tray closes. While the disc tray is opening or closing, the CD (Compact Disc), CDV (Compact Disc Video), or LD (Laser Disc) DISC indicator flashes.

3 DISPLAY MODE BUTTON

Use this button to change the contents of the Fluorescent Tube Display (FTD) on the player and On-Screen Display (OSD) on the monitor screen. (Please see page 18.)

4 DISPLAY ON/OFF BUTTON

Use this button to cancel the Fluorescent Tube Display on the player or the On-Screen Display on the monitor screen. (Please see page 17.)

5 EDIT BUTTON

Press this button when entering the edit program. With this function an interval of four seconds will be left between tracks during play. It is convenient when recording from a disc to a tape. (Please see page 27.)

6 PROGRAM BUTTON

Press this button to play the chapters or tracks in a different order (programmed play).

7 RECALL BUTTON

Press this button to check the programmed contents.

8 SELECT BUTTON

Press this button to recall the specific position you want to view and/or listen to (search operation).

9 ENTER BUTTON

Press this button to enter a Program for programmed Play.

10 RANDOM BUTTON

Press this button to start random play. (Effective only for the CD, CDV-Single, and LD with TOC.)

11 AMS (Auto Music Scan) BUTTON

Press this button to start AMS play, or when entering the program for AMS play. (Please see page 26.)

13 SKIP (◀◀, ▶▶) BUTTONS

Press one of these buttons to skip to the beginning of a subsequent or previous chapter or track.

14 SEARCH (◀◀, ▶▶) BUTTONS

When one of these buttons is pressed and held down during playback, the player searches forward or backward.

15 PLAY (▶) BUTTON

Place a disc on the disc tray.
Press the Play button. The disc tray slides into the player and play starts.

16 STOP (■) BUTTON

When this button is pressed during play, the disc rotation stops. In the Stop mode, when more than 30 minutes have elapsed, the player enters the Standby mode.

17 I-II BUTTON (LD)

If you wish to listen to only one audio channel, as in the case of a bilingual disc, press the I-II button to select the desired channel. Each press switches the selected channels as follows: 1/L → 2/R → 1/L and 2/R (stereo) → 1/L → (Please see page 16.)

18 NUMBERED BUTTONS

Use these buttons when searching for programming chapters or tracks.

19 CANCEL BUTTON

- Use this button
- to cancel repeat play.
 - to correct an entry made using numbered buttons (only during programming). When this button is pressed again, the program mode will be cancelled.
 - to cancel programmed play.
 - to cancel random play.
 - to cancel A-B repeat.

20 REPEAT BUTTON

Use this button for repeat play.

22 STEP (◀▶) BUTTONS (CAV - Constant Angular Velocity)

Press one of these buttons to freeze the picture. After this, each press of a button moves the still frame step by step in either direction.

- ▶: Forward
◀: Backward

To cancel the still picture, press the PLAY (▶) button.

23 SPEED PLAY (REV./FWD) BUTTONS [CAV]

With these buttons you can determine the direction of play. You must then press one of the (REV./FWD) keys to raise or lower the default speed of 1/4. This ranges from three times the normal speed to one frame per three seconds. (Please see page 25.)

24 SPEED (▲/▼) SET BUTTONS [CAV]

When the power is switched ON the initial speed is 1/4 the normal speed.

With these buttons the speed can be raised or lowered in eight steps after first pressing one of the SPEED REV/FWD buttons.
(Please see page 25.)

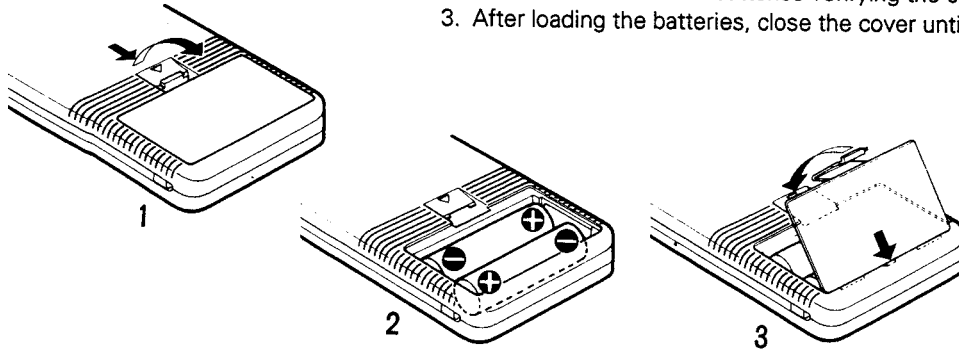
25 PAUSE (||) BUTTON

Press this button during Play mode to stop play temporarily. To resume play, press the Play button or the Pause button again.

BEFORE OPERATING THE REMOTE CONTROL TRANSMITTER

INSERTING THE BATTERIES

1. Remove the battery compartment cover. By pulling in the direction of the arrow while pressing it.
2. Insert two "AA or R6" batteries verifying the correct (+/-) polarity.
3. After loading the batteries, close the cover until it clicks.



REPLACING THE BATTERIES

If the remote control no longer functions effectively, the batteries are weak and should be replaced.

Rechargeable batteries...

Remote control transmitter operation...

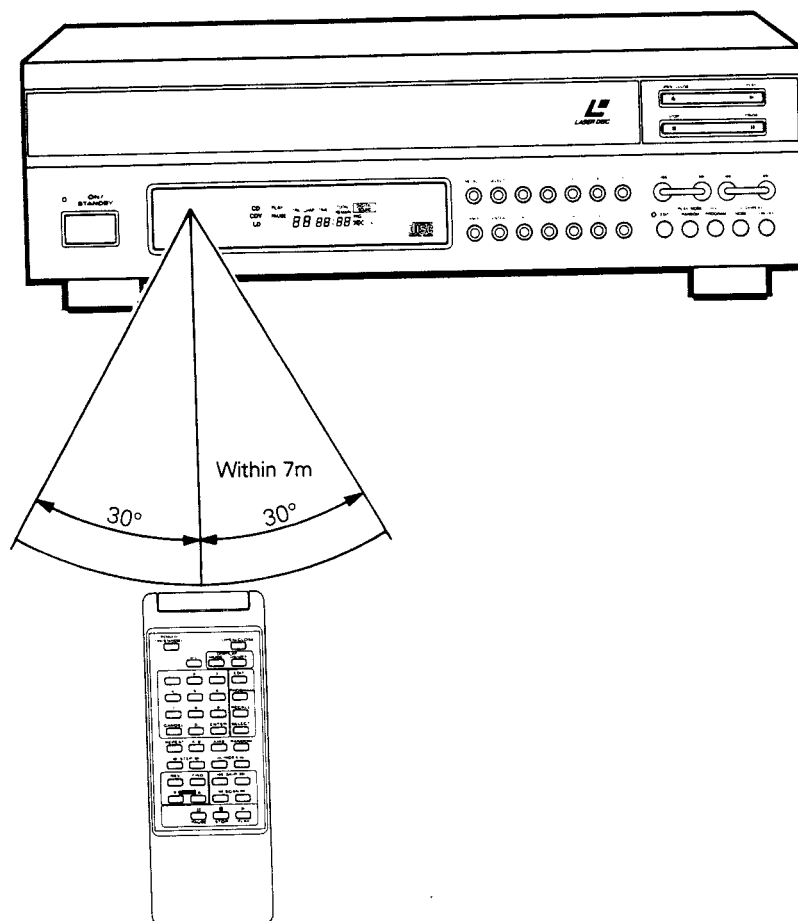
To prevent a serious accident...

When there is a leak...

- Always insert batteries into the battery compartment properly, matching the positive (+) and negative (-) polarities as shown on the display inside the compartment.
- Never mix new and used batteries.
- Batteries of the same size may have different voltages. Do not mix different types of batteries.
- Both rechargeable and non-rechargeable batteries are available. Be sure to use the batteries in accordance with the caution labels affixed to them.
- When the remote control transmitter is not to be used for a long period of time, remove the batteries to avoid damage from possible battery leakage.
- When the batteries are exhausted, replace them with new ones.
- Never disassemble or heat up the batteries or throw them into a fire. When discarding the batteries, dispose of them with noncombustible material.
- Never short-circuit the battery by connecting the positive and negative polarities directly with a piece of metal, etc.
- Wipe off and completely remove the battery fluid that has leaked inside the battery compartment. Then load new batteries.

NOTES ON REMOTE CONTROL TRANSMITTER

Range of the remote control transmitter



When the remote control transmitter does not function...

Make sure the player is plugged in.
The batteries may be exhausted. Replace them with new ones.

Provided remote control transmitter is...

Exclusively for use with this player. If it is used with any other equipment, it may not function.

Careful operation is required...

Do not spill liquids on the remote control transmitter, and do not subject it to excessive shock or drop it.

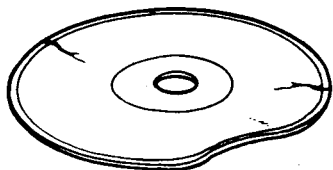
Take care not to leave the remote control transmitter in an excessively hot or highly humid place, such as near a heater or in the bathroom.

Be careful not to expose the transmitter sensor to intense light or direct sunlight.

When the remote control sensor is exposed to intense light, the remote control transmitter may not function or may become difficult to operate.

DISC HANDLING PRECAUTIONS

DO NOT USE DAMAGED DISCS

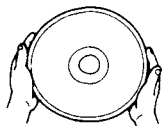


Discs rotate inside the player at high speeds. Do not use damaged (warped, cracked, etc.) discs as this may damage the player.

NOTE:

Warped discs may not play or picture quality may be degraded.

DISC HOLDING



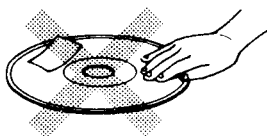
Holding with both hands...

Hold the disc by its edges with both hands, as shown below.



Holding with one hand...

Hold the disc by its center hole and rim, as shown below.

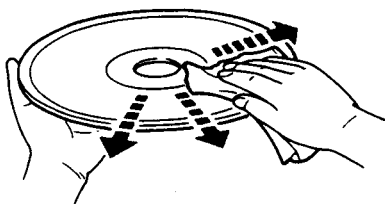


Do not stick labels, etc. on the disc surface.

Do not touch the disc surface.

Do not write on the disc or on any labels on the disc.

DISC MAINTENANCE

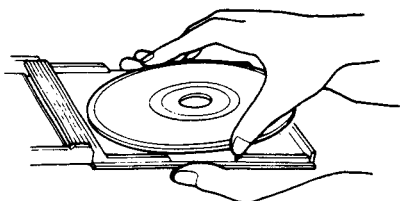


In order to obtain the highest quality picture and sound from your discs, wipe off dust, dirt or finger-prints on the surface of the disc using a soft cloth, etc. before use.

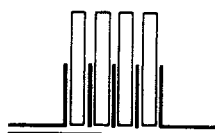
When the disc is extremely dirty, dip a soft cloth into water and wring it out before using it to wipe the disc. Then use a soft dry cloth and wipe it again. Scratched discs may not play or may cause abnormal noise in the player.

Avoid playing such discs, since they may overload the player's mechanism. Do not use record cleaner sprays, benzene or static prevention sprays, etc. on discs.

DISC STORAGE



To prevent discs from warping, remove a disc from the player after playing. Then return it to its jacket and store it vertically in a location not subject to high temperature or humidity. Read all instructions printed on discs and their jackets.



Store discs vertically.

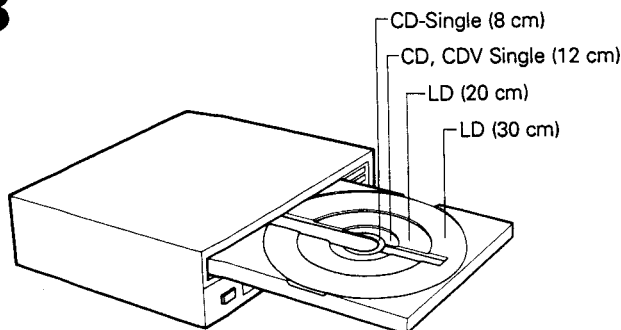
STORE VERTICALLY

DISC PLAY

1 Insert the plug of your player in wall socket.

2 Press the OPEN/CLOSE (▲) button on the player, or the OPEN/CLOSE button on the remote control transmitter. The door opens and the disc tray slides out.

3 Place a disc on the disc tray.



CD SINGLE (3-inch): With the labeled side facing upward, place the disc by aligning the disc edge with the innermost guide on the tray.

CD, CDV SINGLE (5-inch): Place the disc by aligning the disc edge with the second innermost guide.

LD (8-inch): Place the disc by aligning the disc edge with the third innermost guide.

LD (12-inch): Place the disc with the label of the desired side facing upward, and by aligning the disc edge with the outermost guide.

4 Close the disc tray. The disc tray can be closed by any of the following methods:

- 1) Push the disc tray gently.
- 2) Press the OPEN/CLOSE (▲) button on the player.
- 3) Press the OPEN/CLOSE button on the remote control transmitter.
- 4) Press the PLAY (▶) button on the player or remote control transmitter.
- 5) Press the numbered buttons.

If the disc tray is closed, play starts automatically (auto-start).

Play of a CD starts from the first track.

Play of a CDV SINGLE starts from the video part. After the video part has played, the audio part is played automatically.

5 Play of an LD starts from the beginning of the disc. To stop play temporarily, press the PAUSE (⏏) button once. To resume play from pause mode, press the PAUSE (⏏) button again or press the PLAY (▶) button.

6 To take a disc out of the player, press the OPEN/CLOSE button on the remote control transmitter, or press the OPEN/CLOSE (▲) button once on the player. The player enters stop mode and the disc stops rotating. When the disc rotation has stopped completely, the disc tray slides out. When the disc tray slides out, take out the disc from the disc tray, return it to its' jacket or case, and store it in a vertical position.

Caution

- Do not lift or move the player during play. The disc is rotating at a very high speed during playback, and a sudden shock may damage it.
- Do not leave the disc tray open. If a strong force is applied to the open tray, damage or malfunction could result. Also, depending on its installation position, the player could topple over. Always close the tray, except when loading or removing discs.

Caution on transport

When the player is to be transported, remove the disc from the disc tray and press the STANDBY button.

When the STANDBY indicator has lit up remove the plug from the AC socket for transportation.

CD	=	Compact Disc
CDV	=	Compact Disc Video
LD	=	Laser Disc
TOC	=	Table of Contents

- Playback of bilingual Laser Discs

The player is in stereo mode when the power is switched ON. Before playing a bilingual or Laser Disc disc, press the I-II button on the remote control transmitter to select the desired channel.

Every press of the I-II button switches the audio channel mode in the sequence 1/L → 2/R → stereo → 1/L →

The channel mode is shown on the multi-function display as well as on the on-screen display.

Audio Channel Switching with the I-II Button

- Multi-function display - On-screen display	UHF OUT output	AUDIO OUTPUTS	
		L	R
STEREO	1/L and 2/R mixed (mono)	1/L	2/R
1/L-CH	1/L	1/L	1/L
2/R-CH	2/R	2/R	2/R

Note: When the disc tray is opened and then closed again, the set channel mode is canceled and the player enters stereo mode automatically.

SWITCHING THE ON-SCREEN AND MULTI-FUNCTION DISPLAYS ON AND OFF

DISPLAY ON/OFF

The multi-function display on the front panel of the player can be cleared or the on-screen display appearing on the TV screen each time a command is given via the remote control can be turned on and off.

1 Press the DISPLAY ON/OFF button.

When pressed once:

Both multi-function display and on-screen display are turned off.

When pressed again:

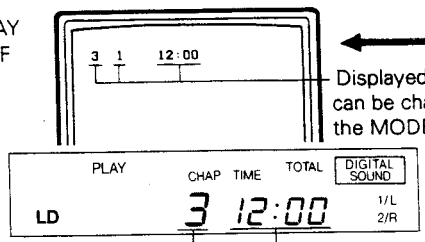
The multi-function display reappears on the player and the on-screen display remains off.

When pressed once more:

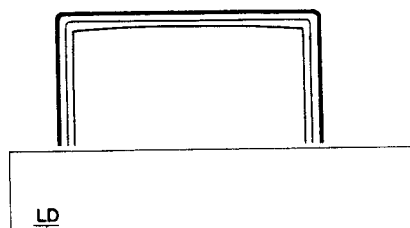
The on-screen display reappears on the monitor TV screen. Select the required status by pressing the DISPLAY ON/OFF button.

- If the display status has been set to OFF with the DISPLAY ON/OFF button, there will be no on-screen display. Press the DISPLAY ON/OFF button to release the display-off status.

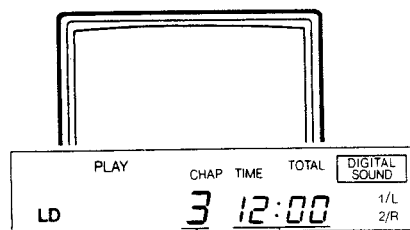
DISPLAY
ON/OFF
button



Displayed contents
can be changed with
the MODE button.



One of CD, CDV and LD indicators is lit
continuously depending on the disc loaded.



Displayed contents can be
changed with the MODE button.

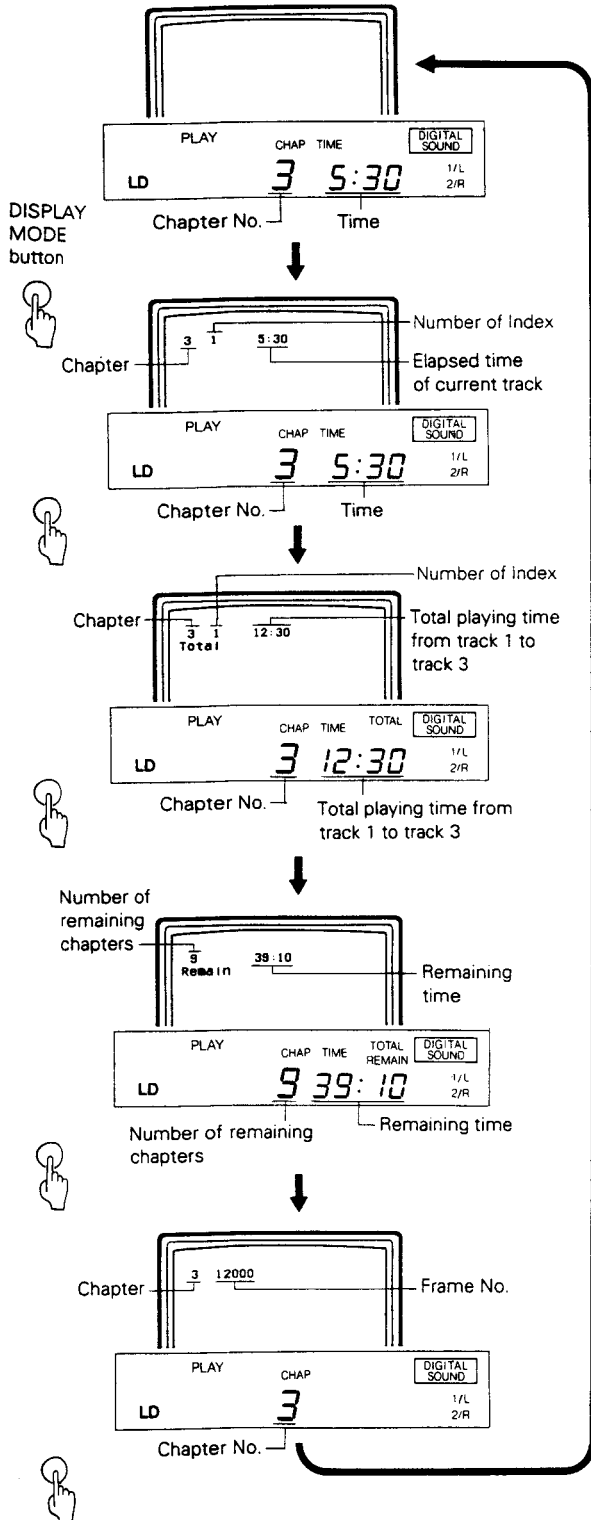
Note: The CHAPTER No. is displayed on the TV screen when playing a disc with TOC.
For the LD (CAV) discs, the frame No. is displayed.

DISPLAY MODE

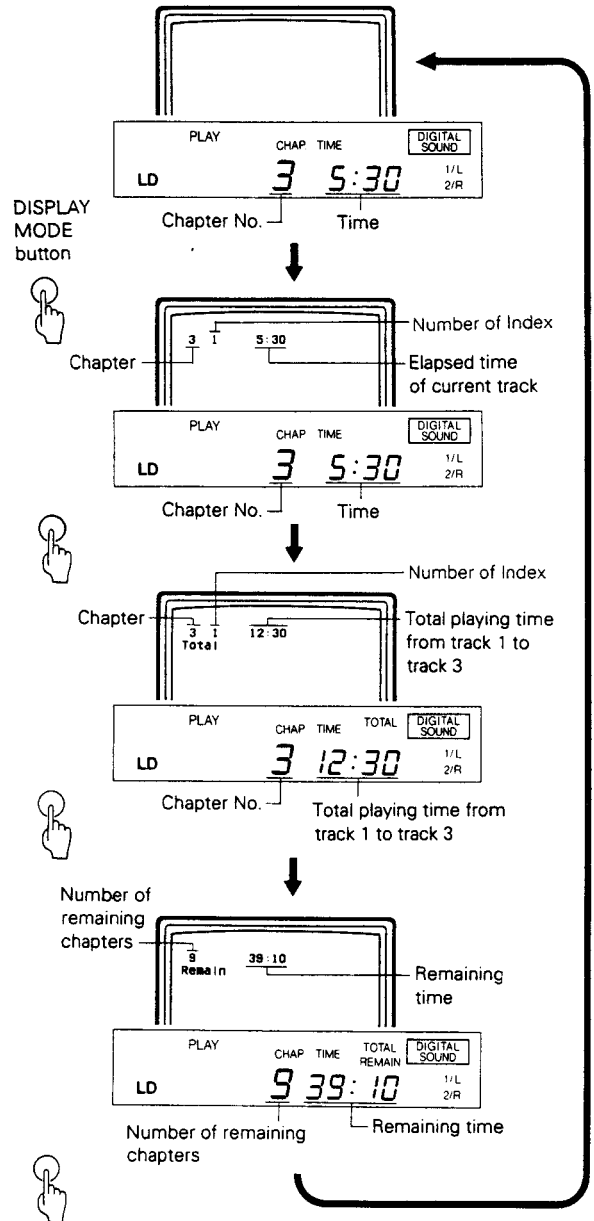
The displayed contents of the multi-function display and on-screen display differ depending on the disc being loaded. The displayed contents are as shown below.

Multi-function display and on-screen display with LD disc

STANDARD DISC (CAV, with TOC)



LONG-PLAY DISC (CLV, with TOC)

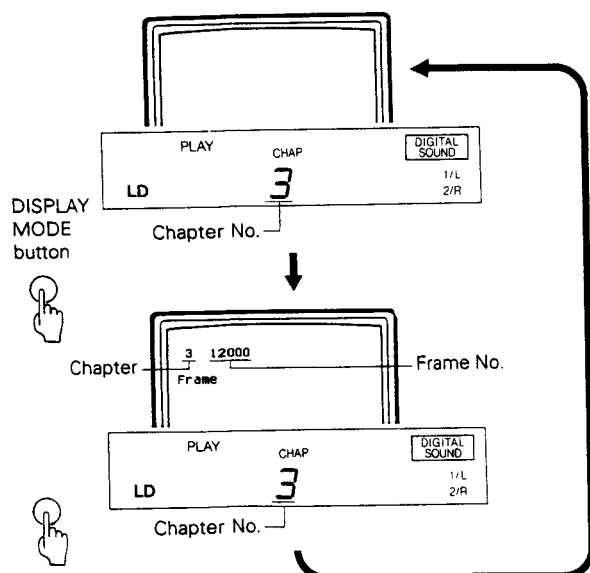


CAV = Constant Angular Velocity
CLV = Constant Linear Velocity
TOC = Table of Contents

Multi-function display and on-screen display with CDV Single and CD discs

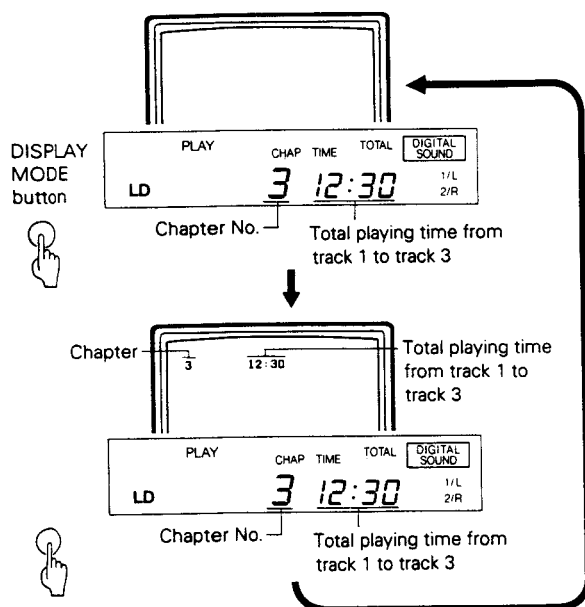
CDV = Compact Disc Video
CD = Compact Disc

STANDARD DISC (CAV, without TOC)

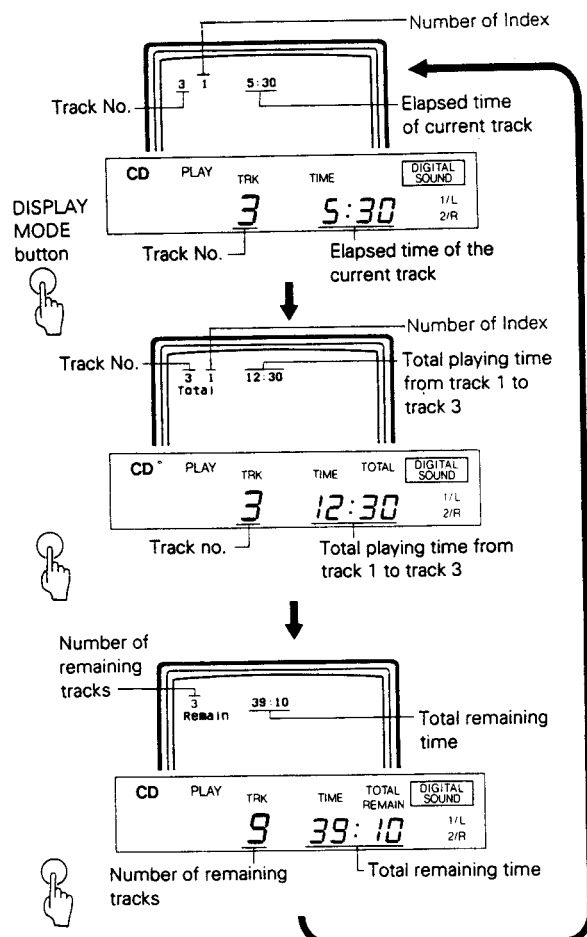


Note: Chapter number is not indicated on a disc without chapters.

LONG-PLAY DISC (CLV, without TOC)



Note: Chapter number is not indicated on a disc without chapters.



The "CDV" indicator light up when the Video part of CDV single disc is being played.

SEARCH OPERATIONS

SEARCH (CD, CDV SINGLE, LD)

This operation is activated after starting play. Press and hold down one of the search buttons on the remote control transmitter or on the player.

- ▶▶ button: Forward searching while the button is held down.
- ◀◀ button: Backward searching while the button is held down.

With the video portion of CDV SINGLE discs, the speed remains low even when the button is held down.

With a CD, or in the audio portion of CDV SINGLE discs, a small fast-forward sound is heard when forward scanning is started from play mode. If the ▶▶ button is pressed in pause mode, the play position is fast-forwarded without producing any sound, and the player enters play mode again as soon as the button is released.

If forward scanning is continued until the end of a disc, "END" is displayed and the player enters stop mode. In this case, the play position can be moved back ward by pressing the ◀◀ button. The player also enters stop mode if the play position is moved backward to the beginning of the disc.

NOTE:

With a LD (CLV) or in the video part of a CDV SINGLE disc, the picture also varies in scan mode.

CHAPTER SKIP (LD: Chapter numbers, CD, CDV SINGLE: Track numbers)

This operation is used with LD discs on which chapter numbers are recorded, or with CD and CDV SINGLE discs. The operation is activated by pressing one of the SKIP buttons on the player or on the remote control transmitter.

- ▶▶ When it is pressed during Play mode, the beginning of the next chapter of track is detected. Pressing it repeatedly advances the chapter or track number one by one.
 - ◀◀ When it is pressed during play, the beginning of the previous chapter or track is detected. Pressing it repeatedly decreases the chapter or track number one by one
- These buttons are also used to skip between programs during program play.
 - When skip search is activated during repeat play, repeat mode is cleared.
 - This function cannot be activated with discs on which chapter numbers have not been recorded.

CHAPTER/TRACK SEARCH (LD: Chapter numbers, CD, CDV SINGLE: Track numbers)

This operation is used with LD discs on which chapter numbers are recorded, or with CD and CDV SINGLE discs. It allows you to search for the beginning of the designated chapter or track.

For example, to search for the beginning of chapter or track No.3:

1 Press digit button "3".

- When chapter search is performed beyond the last chapter number on a LD disc without a TOC, play re-starts at the end of the disc, and pauses. If chapter search is activated beyond the recorded number, the player searches to the last chapter and then pauses.
- Starting play with a Chapter/Track Search (Direct Chapter/Track Start)
By performing a chapter/track search operation after placing a disc on the disc tray, the designated chapter or track can be played from the beginning.
It is also possible to start play by means of a chapter/track search once disc rotation has stopped after ending play. In these cases, it is normal play that is started after the search, even with a LD (CAV) standard disc. (Note that, with standard discs, a still picture is displayed after the search.)

LD	=	Laser Disc
CD	=	Compact Disc
CDV	=	Compact Disc Video

FRAME NUMBER SEARCH [LD (CAV)]

This operation allows you to search for a picture with the designated frame number.

For example, to search for frame numbered 360:

- 1** Press the SELECT button on the remote control transmitter so that the frame number is displayed on the screen.
- 2** Press numbered buttons "3", "6" then "0".
- 3** Press the PLAY (▶) or PAUSE (⏏) button. Frame number 360 is searched for and then the picture plays normally from the designated frame number point.

Note: When PAUSE (⏏) button is pushed the player enters the pause mode at frame number 360.

TIME NUMBER SEARCH [LD (CLV)]

This operation allows you to search for a picture (scene) according to its playing time position, counting from the beginning of the disc.

The time elapsed from the beginning of the disc is recorded in either units of "seconds" or "minutes", depending on the disc. The time to be searched for can also be entered in "seconds" or "minutes" according to the type of each disc. For example, to search for the picture at 18 minutes 20 seconds after the beginning of a disc in which the elapsed time is recorded in "seconds":

- 1** Press the SELECT button once on the remote control transmitter so that the TIME number is displayed.
- 2** Press digit buttons "1", "8", "2" then "0".
- 3** Press the PLAY (▶) or PAUSE (⏏) button. Playback starts with the scene at 18 minutes 20 seconds after the beginning of the disc.

Note: When PAUSE (⏏) button is pushed the Player enters the Pause mode at the 18 minutes 20 seconds position.

Picture is not shown when using the Pause mode on CLV discs.

To search for the picture at 18 minutes after the beginning of a disc in which the elapsed time is recorded in "minutes":

- 1** Press the SELECT button once so that the TIME number is displayed.
- 2** Press digit buttons "1" then "8".
- 3** Press the PLAY (▶) or PAUSE (⏏) button. Playback starts with the scene at 18 minutes after the beginning of the disc.

Note: When the PAUSE (⏏) button is pressed the player enters the Pause mode 18 minutes position.

REPLAY

This operation allows you to play the chapter/track being played from the beginning.

To activate replay, press the PLAY (▶) button during play.

PROGRAMMED PLAY (LD, CDV SINGLE, CD)

Any chapters of a LD or any tracks of a CDV SINGLE or CD can be played in a programmed order, regardless of their order on the disc.

PROGRAMMING

Programming can be started in Play, Pause or Stop mode. However, if programming is performed in Stop mode and the disc is an LD (with TOC), CDV SINGLE or CD, you can program tracks while observing the total playing time of the programmed tracks on the multi-function display and on the on-screen display. The total TIME and TOTAL REMAINING time of the programmed tracks can be displayed during programmed play by just pressing the MODE button.

For example, to program chapter/track Nos. 3, 5 and 1.

- 1** Press the PROGRAM button.
The On-Screen Display will show "Program", and the PRG indicator on the multi-function display will light up.
- 2** Press digit button "3".
STEP 1 of the on-screen display will show chapter/track No. 3, and the TRK/CHAP number display on the multi-function display will also show chapter/track No. 3.
(Press the CANCEL button to correct the PROGRAM.)
- 3** Press the ENTER button.
- 4** Enter chapter/track numbers 5 and 1 by repeating steps 2 and 3 above.
- 5** Press the PLAY (▶) button.
The program will be played back in the order of programming.

To program chapters/tracks in play or pause mode:

Perform steps 2 to 5 above.

- Up to 20 chapters or tracks can be programmed.
The 21st or later chapters/tracks are not accepted, even when the above programming operation is performed.
- With LD (without TOC) discs, chapter numbers that do not exist on the disc can also be programmed. However, when programmed play starts, such chapters are ignored and skipped.
- With LD (with TOC), CDV SINGLE and CD discs, chapter/track numbers that do not exist on the disc cannot be programmed. However, chapter number 0 of a LD (with TOC) disc can be programmed even when it does not exist on the disc.

VERIFICATION OF PROGRAMMED CONTENTS

The programmed contents can be verified during programmed play.

- To verify programmed contents.

- 1** Press the RECALL button.
The first chapter/track number in the program will be displayed.
The one screen display can be changed by the DISPLAY MODE button.

CANCELLATION OF PROGRAMMING

When all chapters/tracks in the program have been played, the disc stops rotating automatically.

Should you wish to cancel programming during play, press the CANCEL button.

- Also, if you open the disc tray, the program is cancelled.

STILL/STEP PLAY [LD (CAV)]

STILL PLAY [LD (CAV)]

The picture can be frozen by pressing one of the STILL buttons (◀, ▶) on the remote control transmitter. When the MODE button is pressed, the frame Nos. of still or step play are displayed on the on-screen display.

- Forward and backward scanning in still mode.
When the SCAN (▶▶) button is pressed and held in still mode, the picture is scanned in the forward direction, and a still picture is displayed again when the button is released. Similarly, pressing and holding the SCAN (◀◀) button activates backward scanning until the button is released.

NOTE: The picture in still mode is not always perfectly still, especially in the case of a scene containing quick movements. Note that this is not a disc defect or a player malfunction.

STEP PLAY [LD (CAV)]

Once still mode has been activated, each press of one of the Still buttons moves the still frame step by step in either direction.

- ▶▶ button: Forward direction.
- ◀◀ button: Backward direction.

CANCELLATION OF STILL/STEP PLAY

To return to normal play from still mode, press the PLAY (▶) button.

AUTOMATIC PICTURE STOP

Some discs contain a recording of special signals called picture stop codes. When such a disc is played at normal speed or in a multi-speed mode other than dual-speed, the player automatically enters still mode on reaching the specific frame designated by the picture stop code.

LD	=	Laser Disc
CD	=	Compact Disc
CDV	=	Compact Disc Video
CAV	=	Compact Angular Velocity
TOC	=	Table of Contents

REPEAT PLAY

CHAPTER/TRACK REPEAT

Press the REPEAT button while the chapter or track to be repeated is being played. "Repeat" will appear on the on-screen display.

After the chapter or track has been played, the beginning of the chapter or track is searched for and is replayed.

- With a LD on which chapter numbers have not been recorded, pressing the REPEAT button activates Entire Side Repeat.

ENTIRE SIDE REPEAT

Press the REPEAT button during Chapter/Track Repeat. (To activate Entire Side Repeat from normal play, press the REPEAT button twice.)

"Repeat-1 side" will appear on the on-screen display.

After the side has been played, the beginning of the side is searched for and is replayed.

PROGRAM REPEAT

Program Repeat can be activated during programming or programmed play.

To activate Program Repeat during programming:

Press the REPEAT button after entering a program.

"Repeat" will be displayed. Then press the PLAY (▶) button

to execute the programmed play. The program will be played repeatedly, with "Program Repeat" displayed on the on-screen display.

To activate Program Repeat during programmed play:

Press the REPEAT button during programmed play.

The program will be played repeatedly, with "Program Repeat" displayed on the on-screen display.

CANCELLATION OF REPEAT PLAY

To cancel repeat play, press the CANCEL button.

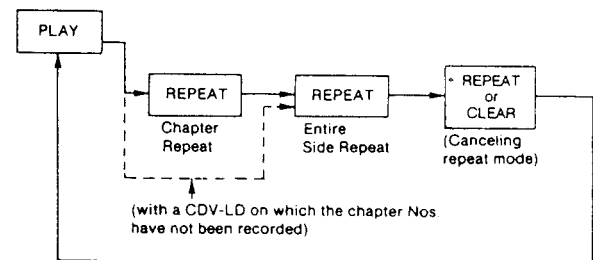
Repeat play can also be canceled in other ways.

It is also canceled in the following cases:

- Chapter skip.
- Search operation (entry using a numeric button).
- Backward multi-speed play (this however does not repeat Entire Side Repeat).

REPEAT MODE SWITCHING WITH THE REPEAT BUTTON

Repeat mode can be switched with the REPEAT button as shown below. Refer to the diagram below when designating or switching the repeat modes.



PLAYING SPEED OF AN LD (CAV)

In addition to the normal playing speed in PLAY mode, there are 8 other settings for playing speed, varying from 3 times the normal playing speed to 1 frame per 3 seconds.

- First press REV or REW. The player then plays at default speed.
- Then press ▲ or ▼ to change the default speed.
- By pressing PLAY you return to the normal speed. The speed can then be varied over 8 settings by pressing the "▲" and "▼" buttons.

When these buttons are pressed, the selected speed is displayed on the screen.

▲ button: To increase the speed.

▼ button: To decrease the speed.

Button ▼	On-Screen Display	Speed	Button ▲
↓	X3	3 times faster than PLAY mode	↑
	X2	2 times faster than PLAY mode	
	X1	Same speed as in PLAY mode	
	1/2	1/2 of the speed in PLAY mode	
	1/4	1/4 of the speed in PLAY mode	
	1/8	1/8 of the speed in PLAY mode	
	1/16	1/16 of the speed in PLAY mode	
	STEP 1	1 frame per second	
	STEP 3	1 frame per 3 seconds	

- The selected speed is maintained even in the event of switching to a mode other than PLAY. However, it is reset to "1/4" (default speed) when the disc is removed from the drawer after playback has ended.
- If one of the REV or FWD buttons is pressed while the elapsed playing time of a chapter or frame is being displayed, the selected speed will be displayed.
- The sound is muted.

HIGH-SPEED PLAY

The maximum speed is 3 times the normal playing speed.

- 1 Press the SPEED FWD button on the remote control to increase the playing speed.
Playback begins at default speed (1/4 of the speed in PLAY mode), and the sound is muted.
- 2 Press the SPEED (▲) button on the remote control until the desired speed is displayed on the TV screen.

LOW-SPEED PLAY

The minimum speed is STEP 3 or one frame every 3 seconds.

- 1 Press the SPEED REV button on the remote control in order to lower the playing speed.
Playback begins at default speed (1/4 of the speed in PLAY mode), and the sound is muted.
- 2 Press the SPEED (▼) button on the remote control until the desired speed is displayed on the TV screen.

TO RESUME NORMAL PLAY

Press the PLAY (►) button.

RANDOM PLAY

With random play, the player selects a track at random from the tracks recorded on the disc until all tracks have been played once. When all tracks in the disc have been played, random play is re-started from the beginning.

- 1 During play, press the RANDOM button.
"Random" appears on the screen.
- If the RANDOM button is pressed again in the middle of random play, random track selection is re-started from the beginning.
 - To cancel random play, press the CANCEL button or select a desired track.
 - If the SKIP button is pressed in the middle of random play, random play can be continued from the beginning of a randomly-selected chapter or track.

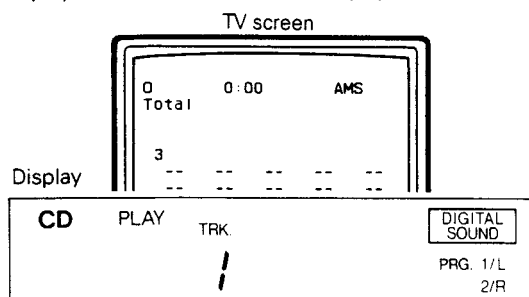
AMS (AUTO MUSIC SCAN)

With this function, programming is possible while listening the beginning portion (15 seconds) of each track. This is convenient if the disc contents are unknown. However, it is not possible to change the track order.

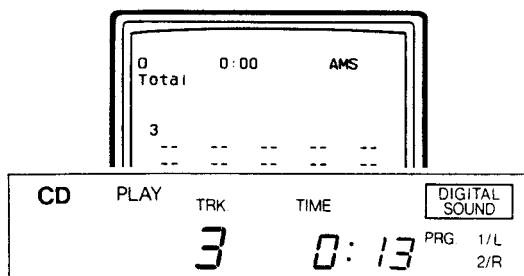
TO PROGRAM WITH AMS SEARCH [EXAMPLE... CD]

- 1 Press the AMS button.
The AMS indicator appears on the display and AMS search operation starts.

Display on the TV screen and on the player

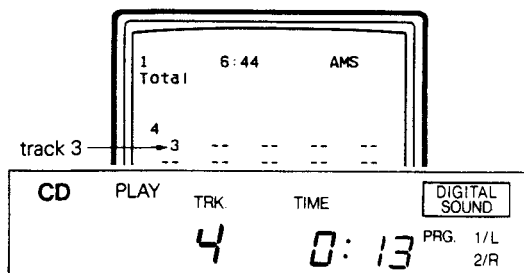


- 2 The first 15 seconds of each track will be played sequentially.
When the track to be programmed is heard, press the ENTER button.
The track number now entered appears on the TV screen.



When the ENTER button is pressed, playback stops and the player skips to the beginning of the next track to be played.

Example: When the track 3 is entered for the programmed play, "3" appears on the TV screen, and the beginning of track 4 is played back.



- 3 Repeat the procedure in step 2 to continue programming.

- 4 When programming is completed, the AMS search play starts automatically.

- * The CDV or LD indicator lights up when the CDV or LD disc is played.

Time is not displayed on the TV screen or display when a disc without TOC is used.

TO CHECK THE PROGRAMMED CONTENTS

Press the RECALL button. The TRACK number of the programmed tracks will be displayed in the programmed order (STEP No).

- * During the programmed play, or before starting programmed play, the programmed contents can be checked.

TO CANCEL ALL THE PROGRAMMED CONTENTS

During programmed play, press the CANCEL button.

- * The programmed contents are also cleared when the disc tray is opened by pressing the OPEN/CLOSE (▲) button.

Q & A

HOW MANY TRACKS CAN BE PROGRAMMED?

Up to 20 tracks can be programmed.

HOW TO REPEAT PROGRAMMED PLAY?

Press the REPEAT button. The "Program Repeat" appears on the screen and the programmed tracks will be played back repeatedly.

WHICH BUTTONS ARE EFFECTIVE DURING PROGRAMMED PLAY?

All the buttons are effective. However, if the SKIP (◀▶) button is pressed, the player skips to the next programmed track.

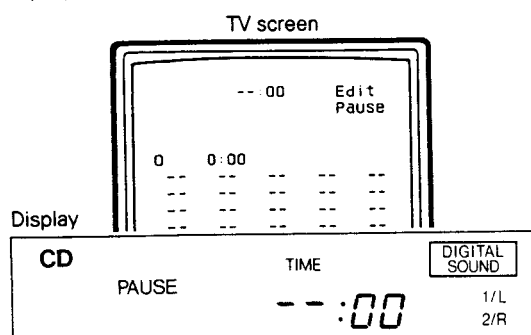
EDIT [AVAILABLE ONLY WITH DISCS HAVING TOC (TABLE OF CONTENTS)]

When recording the contents of the disc onto a tape, an interval of four seconds will be left between tracks uniformly for convenient playback of the recorded tape.

SIMPLE EDIT

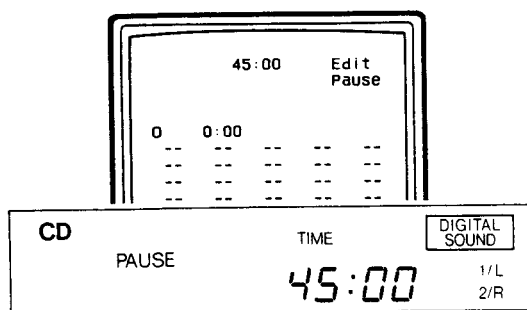
According to the tape length (recording time of the tape), the tracks on the disc are played in the recorded order.

- 1 Press the EDIT button.
The EDIT indicator lights up on the player.
Display on the TV screen and on the player.



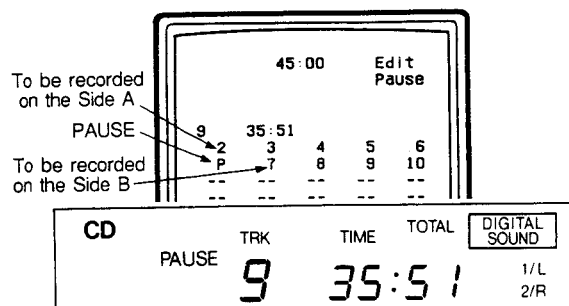
- 2 Using the digit buttons (0 – 9), specify the recording time of the tape (tape length).
(Example: When using C-45 tape, press [4], then [5].)

- 3 Press the ENTER button to store the recording time (tape length) in the memory.

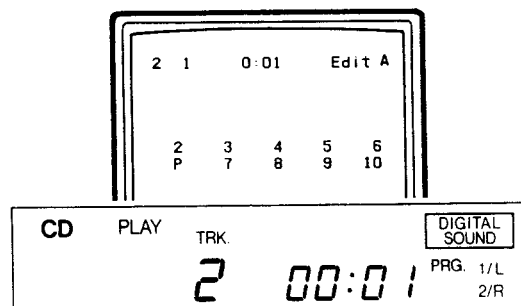


- 4 When the first program to be recorded is entered with the digit buttons (0–9), the display will show the edit information automatically.

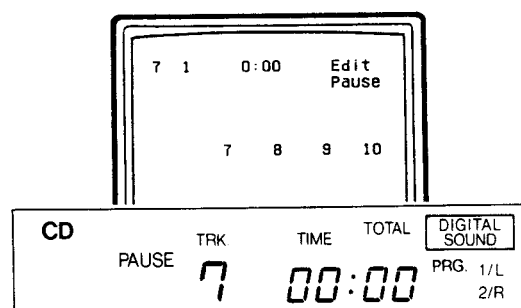
The track numbers of the tracks to be recorded on the side A and B of the tape will be displayed.



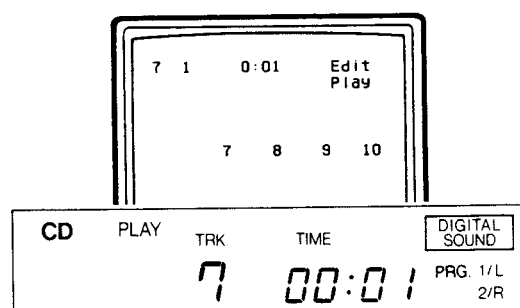
- 5 Press the PLAY (▶) button or PAUSE (⏏) button.
Edit Play starts.
(Now start recording side A of the tape.)



When the tracks for side A are finished, the player enters the Pause mode automatically.



- 6 To start playing the tracks for side B, press the PLAY (▶) or PAUSE (⏏) button.
(Now, start recording side B of the tape.)



- * To start play from the middle of the disc (from the 3rd track, for example), proceed as follows in step 4.

Press digit button [3].
Press the PLAY (▶) or PAUSE (⏏) button.

Note:
During Simple Edit play, no buttons other than the STOP (■), Display MODE, Display ON/OFF buttons are effective.
This is to prevent incorrect recording due to operating errors.
No more than 20 tracks can be edited from a disc to a tape.

TROUBLESHOOTING

If this unit functions abnormally during operation, first check the following. If the unit continues to function abnormally, or in the case of a malfunction other than those listed below, switch the player off and remove the plug from the socket. Then consult your dealer or service organisation.

■ Video

SYMPTOM	POSSIBLE CAUSE	REMEDY
The disc is turning, but the picture is not displayed.	The TV (color monitor) power is OFF.	If it is OFF, turn the power of the TV (color monitor) ON.
	Connections are incorrect.	Connect equipment properly again. (Please see page 4.)
	A single sided disc may be placed upside down.	Place the disc with the label side facing up.
TV programs [UHF (Ultra High Frequency) broadcast] cannot be seen.	The UHF antenna is connected to the ANT IN terminal of this unit.	Connect the UHF antenna directly to the UHF input terminal of the player. (Please see page 4.)
High-speed play, still/frame-advance play and frame search are not possible.	The disc being played is a LD (CLV) or CDV single disc.	The LD (CLV) and CDV single discs do not allow high-speed play, still/frame-advance playback and frame search.
Chapter skip and chapter search are not possible.	The chapter number has not been recorded on the disc being played.	Press the MODE button and see if any chapter number is displayed.
The scene played by time number search is not the required scene.	Press the OSD button on the remote control unit, and check whether the disc's time numbers have been recorded in "minutes" or in "seconds".	Refer to the description of time number search. (Please see page 21.)
TV program reception is poor, or the picture is distorted.	The TV reception in your area is weak.	When viewing TV programs, turn the unit OFF.
The picture quality is poor, or it is distorted.	The disc is very dirty.	Clean the disc. (Please see page 14.)

■ Audio

SYMPTOM	POSSIBLE CAUSE	REMEDY
Playback does not start although a disc has been set in place.	The disc is placed upside down.	Place the disc with the label side facing up.
	The disc is very dirty.	Clean the disc. (Please see page 14.)
No sound.	Connections are incorrect.	Connect equipment properly again. (Please see page 4, 5.)
	LD (CAV) disc is being played at high speed.	Press the PLAY button to enter the standard play mode.
	The volume control of the TV or amplifier connected is set at the minimum position.	Adjust the volume control of the TV or amplifier as required.
	<ul style="list-style-type: none"> The TV is equipped with audio input sockets. Audio cable connected wrongly. 	Connect the audio cables properly. (Please see page 5.)

■ General

SYMPTOM	POSSIBLE CAUSE	REMEDY
Power cannot be turned on.	The plug has come out to the socket.	Insert it firmly.
Playback cannot be started.	No disc has been loaded.	Load a disc.
The disc table comes out involuntarily.	The disc is very dirty.	Clean the disc. (Please see page 14.)
The remote control unit cannot be operated.	The batteries inside the remote control unit are exhausted.	Replace batteries. (Please see page 12.)
	The remote control unit is operated from an incorrect distance or angle.	Operate it from a distance of less than 23 feet and more or less directly in front of the player. (Please see page 13.)
The TV operates erroneously when the remote control unit of this unit is operated.	<ul style="list-style-type: none"> The TV used is equipped with wireless remote control. The TV is placed near the player. 	Place the TV and the player, or cover the remote control receiver of the TV.
A humming noise is heard.	The output cable plug is connected improperly.	Insert the output cable plug securely again.
Noise interference on tuner.	The tuner is placed near the player..	Place the player a way from the tuner, or turn the power of this unit OFF.

SPECIFICATIONS

■ FORMAT

System (or Type):	Optical videodisc system complies with MCA/Philips specifications
Usable disc:	8 cm CD" 20 Min.
(PAL Only)	12 cm CD: 70 Min. CDV single: Video 6 Min. Audio 20 Min. 30 cm LD (CLV) disc: 60 Min./side 30 cm LD (CAV) disc: 30 Min./side 20 cm LD (CLV) disc: 20 Min./side 20 cm LD (CAV) disc:

■ CONNECTIONS:

Video:	
ANT IN:	UHF input (75 ohms)
UHF Output	For PAL TV receiver co-axial (75 ohms, unbalanced)
Video Output:	1 Vp-p (75-ohms load, sync. negative) RCA socket

Audio:	
Analog output:	200 mVeff (1 kHz, 40%),
Digital output:	300 mVeff (1 kHz, -20 dB)

Digital signal characteristics

Frequency response:	3 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio:	97 dB
Dynamic range:	94 dB
Distortion rate:	0.003% (1 kHz, -20 dB)

■ GENERAL

Power requirements:	220 V/240 V AC, 50 Hz
Power consumption:	39 W
Weight:	12 kg
Dimensions (W x H x D):	420 x 130 x 425 mm
Operational temperature:	+5° to 35°C.
Humidity range:	5 to 90% (No condensation)
Safety requirements	IEC 65 (BS 415 for U.K.)

■ ACCESSORIES

Remote control Transmitter
Size "AA" battery x 2
Coaxial cable with connector
Audio cable x 1

■ OTHERS

Auto audio digital output:	When playing discs having a digitally-recorded audio signal, audio reproduction circuit is automatically changed to the audio digital circuit.
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Specifications and design subject to change without notice.

The right is reserved to change data if necessary

This CD Video player complies with radio interference requirements as laid down in EC regulations.