



# OWNER'S OPERATING MANUAL

## **LJR II**

*Super Laser Disc Player*



THE WORLD'S FINEST HOME THEATER PRODUCTS





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# INTRODUCTION AND CONTENTS

## RUNCO INTERNATIONAL - THE ULTIMATE IN VIDEO PERFORMANCE

Congratulations on your selection of the Runco LJR II, the world's finest laser disc player.

Runco's acknowledged leadership in video technology has been widely acclaimed. Continuing this leadership role Runco has developed the LJR II.

Early on, Runco recognized the significance of the Lucasfilm Ltd. THX® division and the impeccable standards they had developed for their Home THX Audio Program and THX Laser Disc Program.

The THX Home Program was designed to truly bring the excellence of the THX theater experience into the home without compromise. Working closely with THX engineers, Runco set out to create a laser disc player which would meet the exacting demands of a new set of video standards developed by Lucasfilm.

These new THX video standards represent the performance levels necessary to bring quality video imagery into the home which compliments established THX audio requirements.

Each LJR II is hand built and individually calibrated. Every unit undergoes an extensive quality control process to assure the highest performance levels and eliminate unit to unit variations.

Please read this manual carefully. Proper operation of your LJR II will result in many years of outstanding performance and enjoyment. We ask that you complete and return the enclosed warranty card so that we can keep you informed of any developments which might affect your LJR II. Thank you.

## CONTENTS

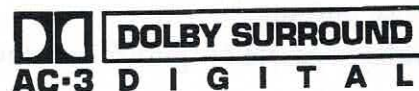
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This unit can play back discs bearing the trademarks shown:



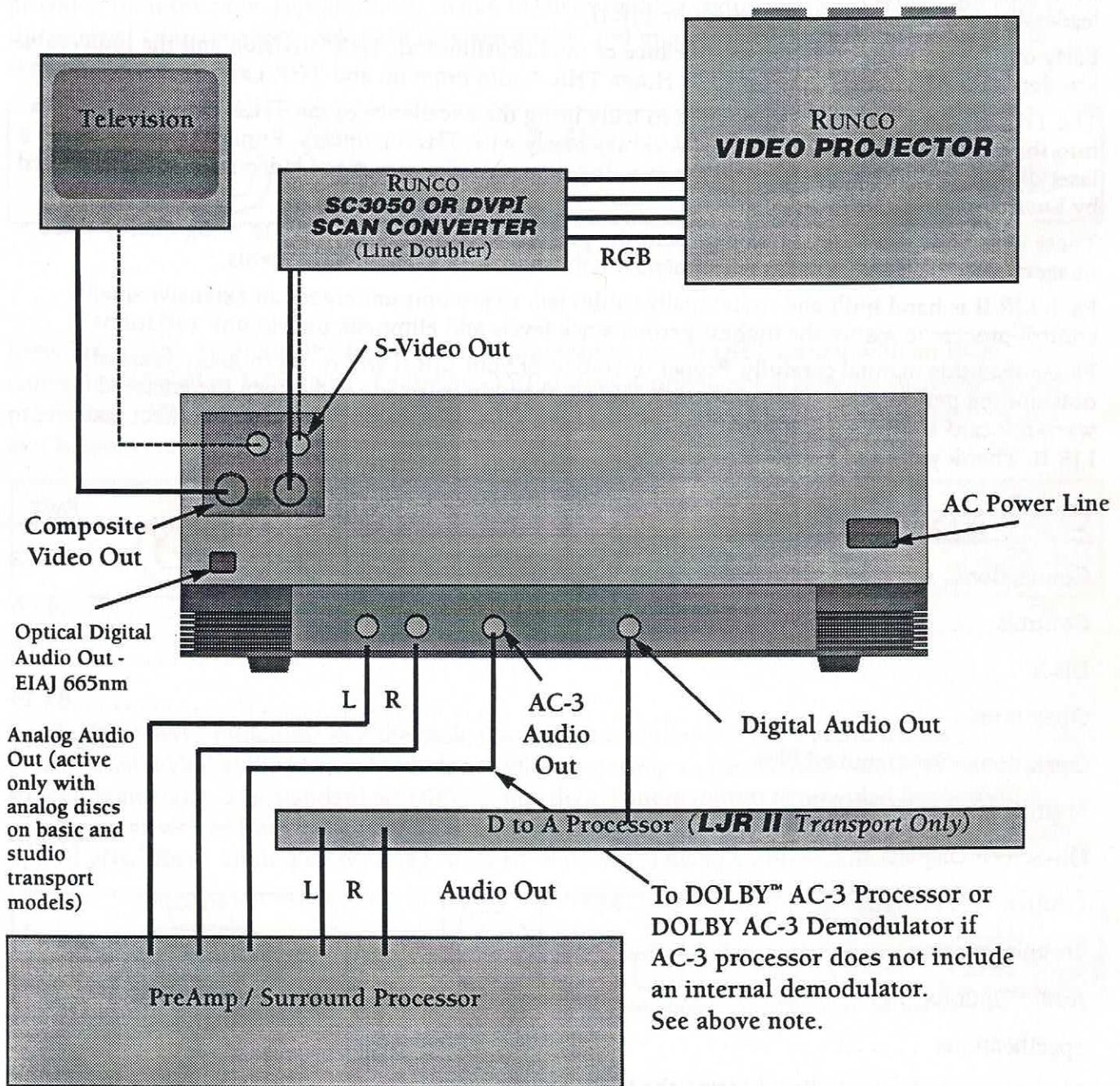
"Dolby", "AC-3", and double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.  
THX is a registered trademark of Lucasfilm Ltd. All rights reserved.





# CONNECTIONS

NOTE: This laser disc player provides an AC-3 RF Output for laser discs recorded with Dolby AC-3 digital audio soundtracks. The AC-3 RF Output requires a demodulator to convert the RF signal into the standardized digital signal needed for Dolby Surround AC-3 decoders. An outboard demodulator will be required unless your Dolby Surround AC-3 decoder provides a direct AC-3 RF Input connector.



## Note:

See page 24 for detailed discussion of audio options.

**LJR II DA** provides one pair of audio output jacks. Audio from both analog and digital discs can be heard on these outputs.

**LJR II** provides separate outputs for analog and digital discs as shown above.



## FRONT PANEL CONTROLS

### FRONT PANEL

The simplified front panel contains basic functions only, all unit features are described in conjunction with the remote. The front panel is clearly marked for easy operation in conditions with low ambient lighting.



### FRONT PANEL FUNCTIONS

- Multi-Function Display
- LASER NOISE REDUCTION Button and Lamp
- SKIP Buttons
- SIDE A Lamp
- SIDE B Lamp
- PROGRAM Lamp
- RANDOM Lamp

### FRONT PANEL / REMOTE BUTTONS

- OPEN/CLOSE (Play) Button
- STOP Button
- PAUSE Button
- PLAY Button
- POWER Button

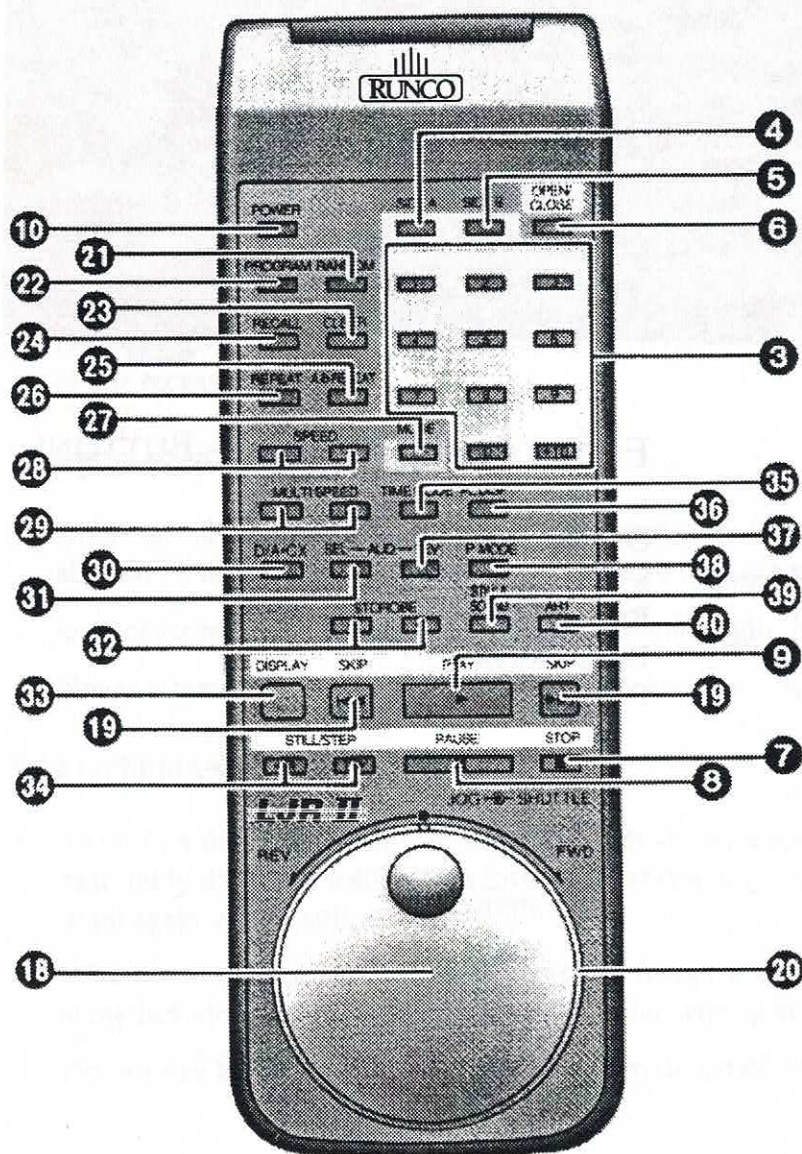


# REMOTE CONTROL

## INFRARED REMOTE CONTROLLER

Point the Remote Controller at the Remote Sensor (Remote Control Receiver) within about 25 feet and within about 30° from the front of the Player. (The operating distance varies with the room brightness.)

- Do not expose the Remote Sensor to strong light.
- Do not place any obstacles between the Remote Controller and the Remote Sensor.
- Do not use the Remote Controller simultaneously with another electric appliance's infrared remote controller.



### REMOTE FUNCTIONS

- Numeric Buttons
- SIDE A Button
- SIDE B Button
- PROGRAM Button
- RANDOM Button
- RECALL Button
- CLEAR Button
- REPEAT Button
- A-B REPEAT Button
- SPEED Buttons
- MODE Button
- MULTI SPEED Buttons
- TIME MODE Button
- FL DISPLAY Button
- D/A Button
- AUD-MODE Button
- AUD-DISPLAY Button
- P. MODE Button
- STROBE Buttons
- STILL & SOUND Button
- ART Button
- DISPLAY (On-Screen Indication) Button
- STILL/STEP (Advance and Reverse) Buttons
- JOG Dial
- SHUTTLE Ring

- FRONT PANEL/  
REMOTE BUTTONS
- OPEN/CLOSE (PLAY) Button
- STOP Button
- PAUSE Button
- PLAY Button
- POWER Button
- SKIP Buttons

FRONT PANEL ONLY  
LASER NOISE REDUCTION

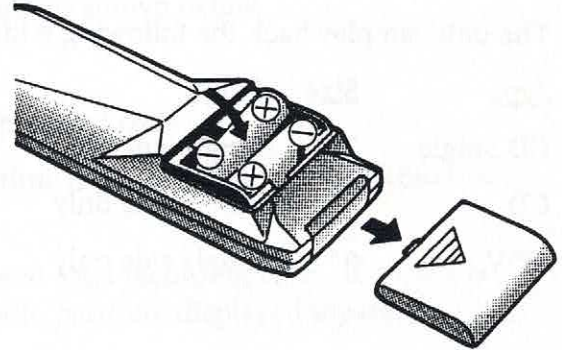




# CONTROLS

## BATTERY LOADING

Remove the Battery Case Cover by pushing it in the direction of the arrow as shown above and load the batteries with their polarities (+ and -) aligned correctly.



- Do not use rechargeable batteries (i.e. nickel cadmium—NiCad batteries).
- Do not mix new and old batteries, or different brands of batteries.
- Do not try to recharge or short-circuit the batteries.
- Do not break batteries open, heat them or incinerate them .
- Remove batteries when this unit is not in use for long periods of time.
- Should the battery electrolyte leak, clean and wipe the Battery Case and load new batteries.

## BATTERY LIFE (WHEN TO EXCHANGE BATTERIES)

Exchange the batteries with new ones about every 6 months. However, battery life depends on the frequency of use or the selected operation mode.

- Use two ANSI "AA" size batteries.

## DISCS THAT CAN BE PLAYED BACK

The unit can play back the following 6 kinds of laser discs without having to use any adapter.

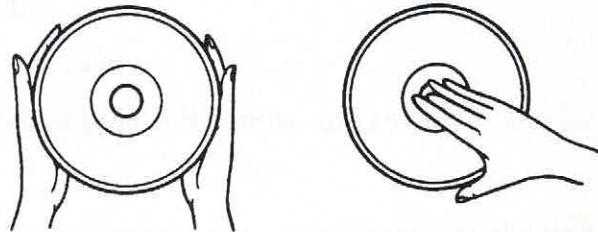
Type	Size	Sides	Sound	Length
CD Single	3"	Single side only	Digital Sound	(20 minutes max.)
CD	5"	Single side only	Digital Sound	(74 minutes max.)
CDV	5"	Single side only	Digital Sound	(20 minutes max.)
			Digital Sound+Picture	(5 minutes max.)
LD Single	8"	Single side only	Digital/Analog Sound+Picture	(CAV: 14 minutes max )
				(CLV: 20 minutes max )
LD	8"	Both sides	Digital/Analog Sound+Picture	(CAV: maximum 14 min. for single side)
				(CLV: maximum 20 min. for single side)
LD	12"	Both or single side	Digital/Analog Sound+Picture	(CAV: maximum 30 min for single side)
				(CLV: maximum 60 min. for single side)

## HANDLING THE DISC

Hold the disc so that the disc's surface is not touched.

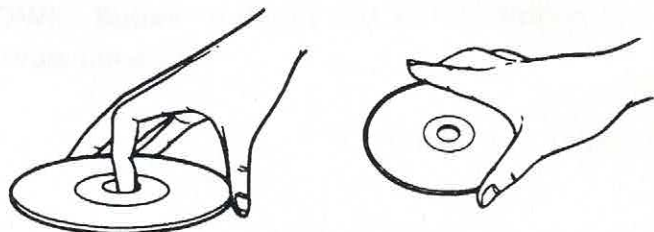
Place the disc in the proper recession according to its size.

- LD -- Place the LD disc with the label of the side to be played facing upward
- LD single, CDV, CD -- Place the disc with the label facing upward.



LD (12" )/LD, LD Single (8" ) Discs

CDV, CD (5" )/CD Single (3" ) Discs





## OPERATION

### TO PLAY

Turn on **POWER**, load disc and press **PLAY**

**STOP** causes playback to stop. **PAUSE** causes temporary interruption of playback while maintaining location.

### TO CHANGE SIDE OF THE DISC [LD]

The title label side is called **SIDE A** and the opposite side is **SIDE B**. The explanations in this manual are based on a disc being placed in the disc tray with the title label side (**SIDE A**) upwards.

During Playback, to playback **SIDE B** Press **SIDE B** Button.

To select **SIDE A** during **SIDE B** playback Press **SIDE A** Button.

Indicators on the front panel and on-screen display identify disc side.

### LAST MEMORY FUNCTION [LD]

When you press **STOP** Button during the playback of an LD, the unit memorizes the point where the playback was stopped. If you press **PLAY** Button in the stop mode, playback starts a little before the stop point of the previous playback. If any operation other than playback is performed in the stop mode, the Last Memory Function is cancelled. Removing the LD from the unit also cancels this function .

- This function does not work during Program Playback and Repeat Playback.

### SKIP FUNCTION

During playback, Press **SKIP** (Forward or Backward) Button.

- Note that pressing **SKIP** Backward Button once skips backward to the beginning of the chapter (track) now being played back (not to the previous chapter or track). Pressing the button more than once will skip forward or backward more than one track.
- These functions do not work with discs on which no chapters have been recorded.
- If the chapter number beyond the number of chapters recorded on an LD disc without a TOC signal is designated for Skip or Search playback, the segment a little before the end of the disc is played back.
- If no chapter number is designated by the Numeric Button after displaying the indication "CHAPTER" on the TV screen, the indication remains displayed until the **CLEAR** Button is pressed.



## OPERATION

### CHAPTER/TRACK SEARCH FUNCTION

Example: To playback at the beginning of chapter (track) number 3;

- Press Numeric Button "3". Chapter (track) 3 will be played back.
- If the display "CHAPTER" does not appear on the TV screen when an LD disc is loaded, press MODE Button on the Remote Controller to display "CHAPTER".
- If a wrong chapter (track) number is selected, press the correct Numeric Button again.
- The Direct Selection Buttons on the unit can select up to 20 chapters (tracks).

To playback a Chapter or Track Number of 10 or above, use the "+ 10" Button. Example:

- To access chapter 14; Press "+ 10" "4".
- To access chapter 20; Press "+ 10" "+ 10" "0"

To playback the beginning of the desired Chapter on B Side, Press SIDE B Button and then Numeric Button.

If a chapter (track) number is designated which is not present on the disc, the message "ERROR" flashes on and off on the TV screen, and the indication "E" on the unit's Multi-Function Display. The Track Search function does nothing.

### FRAME SEARCH FUNCTION LD [LD (CAV)]

Example: To start playback from frame number 15000

1. Press MODE Button during playback. until the display "FRAME" appears on the TV screen.

- This step is not necessary for a disc on which no chapters have been recorded.

2. Press Numeric Buttons

" 1" " 5" " 0" " 0" " 0" .

- If you press a wrong Numeric Button, press CLEAR Button and then the correct Numeric Button.

3. Press PLAY Button.

- playback starts from the designated frame.
- If you perform Frame Search during Still playback, the designated frame will also be played back in the still picture.



# OPERATION

## TIME SEARCH FUNCTION [LD (CLV)]

Example: To start playback at the position "15 minutes 00 seconds" from the beginning of the disc

1. Press **MODE** Button during playback. until the display "TIME" appears on the TV screen.

- This step is not necessary for a disc on which no chapters have been recorded.

2. Press Numeric Buttons

"1" "5" "0" "0" .

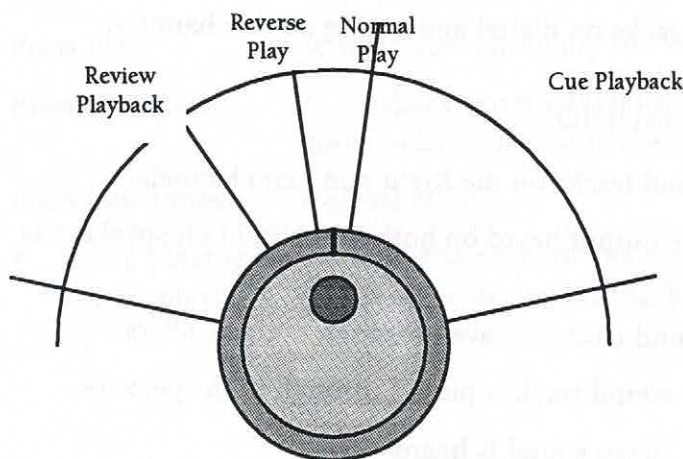
- If you press a wrong Numeric Button, press **CLEAR** Button and then the correct Numeric Button.

3. Press **PLAY** Button.

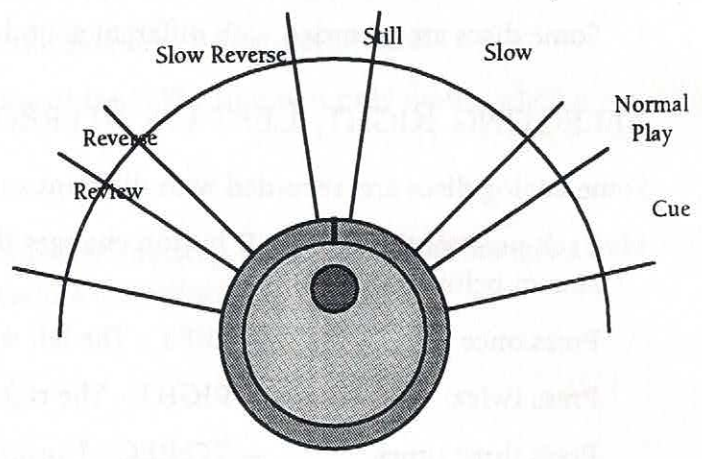
- playback starts from the designated time number.

If a disc has time numbers recorded only in minutes, playback starts from the beginning of the designated minute even if the seconds are designated. If a double-faced LD is used, you can designate the desired time number on the reverse side by pressing the disc **SIDE A** or **B** Button to start playback of the reverse side and designate the time number. If an unrecorded time number is designated, the segment a little before the end of the disc is played back.

## PLAYBACK USING THE SHUTTLE RING [LD][CDV (VIDEO PART)]



SHUTTLE Ring operation from Playback



SHUTTLE Ring operation from Pause / Still Playback

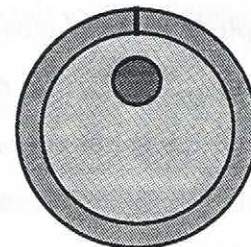
- The SHUTTLE Ring cause Review and Cue of CD and CDV audio discs.



## OPERATION

### PLAYBACK USING THE JOG DIAL

Rotating JOG Dial one click during playback starts the still picture playback (if an audio part of CDV or a CD is played back, the unit changes to the pause mode).



- To resume the normal playback press **PLAY** Button.

Display on the TV screen

- Since no frame number is recorded on the LD (CLV) or the video part of the CDV [unlike the LD (CAV)], the unit divides one second into 30 frames so as to perform Still or Still Advance/Reverse playback on the LD (CLV) or the video part of the CDV. Therefore, a figure between "00" and "29" is displayed beside the "minute and second" indications on the TV screen if **DISPLAY** Button was pressed.
- These figures are not displayed during playback of the video part of the CDV.

### SELECTING DIGITAL OR ANALOG AUDIO

Press the **D/A•CX** button to select between digital and analog audio. This button has no effect on the **LJR II** transport model. Digital audio is always present on the digital output jacks, and Analog, if present on the disc, is always present on the analog output jack.

- The **LJR II DA** model has one set of audio output jacks. The **D/A•CX** button selects between analog and digital audio.
- Some discs are recorded with different sound tracks on digital and analog audio channels.

### SELECTING RIGHT, LEFT OR STEREO AUDIO

Some analog discs are recorded with different sound tracks on the Right and Left channels.

- Each press of the **SEL-AUD** button changes the output heard on both Right and Left speakers as shown below.

Press once                      -- LEFT - The left sound track is played through both speakers.

Press twice                     -- RIGHT - The right sound track is played through both speakers.

Press three times             -- STEREO - Normal stereo sound is heard.

### VIEWING THE AUDIO LEVEL ON THE SCREEN

Press the **AUD-LEV** button to view the audio level meter display on-screen when listening to CDs.



## OPERATION

### RANDOM PLAYBACK

You can playback a disc in a random order. During playback or in the stop mode, Press the **RANDOM** Button.

- The **RANDOM** Lamp on the unit lights up.
- After all music is played back, the unit stops.
- To resume Normal Playback Press **RANDOM** Button again.
- Random Playback cannot be performed on an LD disc on which no TOC signal is recorded.

### STILL PLAYBACK [LD] [CDV (VIDEO PART)]

During normal playback, Press **STILL/STEP** (Advance or Reverse) Button.

- To resume Normal Playback Press **PLAY** Button again.
- If a disc on which a special signal "Picture Stop Code" has been recorded is played back, still playback is automatically performed at the frame designated by the code. If a series of still pictures are recorded on that disc following the point marked with the Picture Stop Code, these still pictures can be advanced or reversed frame by frame with **STILL/STEP** Advance or Reverse Button. Press **PLAY** Button to resume the normal playback.

### STILL ADVANCE/REVERSE PLAYBACK [LD] [CDV (VIDEO PART)]

During the still playback, Press **STILL/STEP** (Advance or Reverse) Button.

- Each time pressing advances or reverses the still picture.
- If the button is kept depressed the still picture advances or reverses one frame per second. (The indication "1/30" appears.)
- To resume the Normal Playback Press **PLAY** Button.

### MULTI-SPEED PLAYBACK [LD] [CDV (VIDEO PART)]

To change the playback Speed during playback, press **SPEED - or +** Button. Each time it is pressed, the playback speed changes.

x3	3 times normal playback speed	1/8	Playback of about 4 frames/sec.
x2	2 times normal playback speed	1/16	Playback of about 2 frames/sec.
x1	Normal playback speed	1/30	Playback of 1 frame/sec.
1/2	Playback of 15 frames/sec.	1/60	Playback of 1 frame every 2 seconds
1/4	Playback of about 8 frames/sec.	1/90	Playback of 1 frame every 3 seconds

To change the playback Direction:

Press **MULTI SPEED <** (backward direction) or **>** (forward direction) Button to change the direction of playback whose speed is adjusted with **SPEED - or +** Button, i.e. from forward direction to backward direction and vice versa in one of the ten playback modes described above.

- To resume the Normal Playback Press **PLAY** Button.



# OPERATION

## CUSTOM INDEX PLAYBACK

You can memorize a desired segment into the unit during playback by pressing **A-B REPEAT** Button and **PLAY**. The playback starts from the point where **A-B REPEAT** Button was pressed.

- The Custom Index Playback is released when the operation buttons except **PLAY**, **PAUSE**, **JOG Dial** or **SHUTTLE Ring** are pressed.
- This playback cannot be performed during Random Playback and Program Playback.
- To resume the normal playback Press **A-B REPEAT** Button twice.

## STILL & SOUND PLAYBACK [LD] [CDV (VIDEO PART)]

Audio is normally not heard during still frame. The playback audio can be heard during the Still playback by pressing the **STILL & SOUND** Button.

- To resume the Normal Playback press **STILL & SOUND** Button again.
- If an LD is used, the Still & Sound playback can be performed only on the side now being played back. If a CDV is used, this playback can be performed only on the video part.

## ART PLAYBACK

This function causes a digitally processed pictorial effect on the screen. During playback, Press the **ART** Button. The playback picture is superimposed with a special pictorial effect.

- Each pressing changes the degree of the effect as shown below.  
Press once                      -- Light Effect  
Press twice                      -- Medium Effect  
Press three times              -- Heavy Effect
- The Art Playback can also be performed during the following playbacks: Multi-Speed, Still, STILL/STEP (Advance or Reverse), Still & Sound and Strobe playbacks.

## STROBE PLAYBACK [LD] [CDV (VIDEO PART)]

This function enables you to obtain a stroboscopic effect, i.e. to view still pictures intermittently while the playback audio is heard. During playback, press the **STROBE - or +** Button.

x1	Normal playback speed	1/16	Playback of about 2 frames/sec.
1/2	Playback of 15 frames/sec.	1/30	Playback of 1 frame/sec.
1/4	Playback of about 8 frames/sec.	1/60	Playback of 1 frame every 2 seconds
1/8	Playback of about 4 frames/sec.	1/90	Playback of 1 frame every 3 seconds

- To resume the normal playback press **PLAY** Button.





## OPERATION

### PICTURE MODE [LD] [CDV (VIDEO PART)]

This function darkens the TV screen or allows the picture to be viewed in black and-white. During playback, Press P. MODE Button.

- Each press of the Button changes the Picture mode.
  - Press once -- Night Mode (Low Contrast, Low Brightness)
  - Press twice -- Retro Mode (Black and White)
  - Press three times -- Normal Mode
- The Picture mode can be selected during the following playbacks in addition to the normal playback: Still, Still/Step (Advance or Reverse), Still & Sound, Art and Strobe playbacks.
- When the "NIGHT" mode is selected during CD playback, the screen becomes darker than in the "NORMAL" mode, and when the "RETRO" mode is selected, the grey background changes to black.

### LASER NOISE REDUCTION SYSTEM [LD] [CDV (VIDEO PART)]

During playback of a disc with inferior picture quality, each press of the LASER NOISE REDUCTION Button changes the noise reduction as shown below.

- Press once -- Mode 1
- Press twice -- Mode 2
- Press three times -- Normal Mode

If LASER NOISE REDUCTION Button is pressed during a movie or live recording disc with inferior picture quality, noise interference or irregular color is minimized or improved. The "STANDARD" mode is initially selected after POWER is on. Press the LASER NOISE REDUCTION Button to select "MODE 1 " or "MODE 2". In these modes, the LASER NOISE REDUCTION Lamp is lit.

### TO TURN OFF THE MULTI-FUNCTION DISPLAY

Press FL DISPLAY Button. The Multi-Function Display is turned off.

- To resume the normal state Press FL DISPLAY Button again.



## OPERATION – PROGRAMMED PLAY

### TO PLAYBACK CHAPTERS OR TRACKS IN A USER-SPECIFIED ORDER:

Example: Playback the disc in the order chapter (or track) 3, 1, 4.

1. During playback or in the stop mode, Press the **PROGRAM** Button.
2. Press Numeric Buttons "3", "1" and "4". (The disc side indication "A" and the chapter number are displayed automatically when an LD is used.)
3. Press **PLAY** Button.

The **PROGRAM** Lamp lights up and the program playback starts. After all programmed chapters (or tracks) are played back, the unit is put into the stop mode and the programming display appears on the TV screen.

- To stop the Program Playback Press **STOP** Button.
- To resume the normal playback Press **PROGRAM** Button during the Program playback.

To perform the Program playback on both sides [LD] for Example to playback in the order of

SIDE A Chapter 3

SIDE B Chapter 1

SIDE A Chapter 4

1. Press **PROGRAM** Button during playback or in the stop mode.
2. Press **SIDE A** (or **SIDE B**) Button and then Numeric Button.

SIDE A "3"

SIDE B "1"

SIDE A "4"

3. Press **PLAY** Button.

If the number of programmed chapters (or tracks) is beyond 20, the indication "-F" blinks on Multi-Function Display and the indication "FULL" on the TV screen. No further programming is possible.

- The chapter or track number on **SIDE A** or **B** being played back is displayed on the Chapter/Track Number Indicators section of the Multi-Function Display.
- If you press a wrong Numeric Button, press **CLEAR** Button and then the correct Numeric Button.
- When a chapter on Disc A is selected, the corresponding bar above the Chapter Number Indicators on the Multi-Function Display lights up. The bars below the Chapter Number Indicators are for selected chapters on Disc B.



## OPERATION – PROGRAMMED PLAY

To delete the Programmed Chapters/Tracks (Programmed chapters/tracks can be deleted individually.)

1. Press **RECALL** Button until the chapter or track number to be deleted blinks.
2. Press **CLEAR** Button.

To add Programmed Chapters or Tracks (New programmed chapters or tracks are added to the last one.) Select the desired chapter or track number with Numeric Button.

To cancel the Program Playback (all programmed chapters or tracks). Press **STOP** Button.

### PROGRAM SKIP FUNCTION

To skip chapters or tracks during program Playback Press **SKIP** (Forward or Backward) Button.

- Note that pressing **SKIP Backward** Button once skips backward to the beginning of the chapter (track) now being played back (not to the previous one).
- Program Skip cannot be performed if the indication "A---B" or "B---A" is displayed on the Multi-Function Display during Program Playback on both sides of an LD.

### REPEAT PLAYBACK -- CHAPTER (TRACK)/SIDE/ALL SIDE REPEAT:

During playback, press **REPEAT** Button. Each time this button is pressed, the display on the TV screen changes in the order as follows:

- |                   |   |
|-------------------|---|
| Press once        | To playback repeatedly the Chapter (track) now being played back.                                     |
| Press twice       | To playback repeatedly the Whole Side now being played back.  |
| Press three times | To playback repeatedly both Disc Sides. (The function only works when a double-faced LD disc is used) |
| Press four times  | Normal Mode   |

- When playing back an LD disc without chapter number, pressing the **REPEAT** Button starts Side Repeat playback. The Chapter Repeat playback cannot be performed.



## OPERATION – PROGRAMMED PLAY

### REPEAT PLAYBACK BETWEEN TWO DESIGNATED POINTS (A-B REPEAT)

1. During playback, Press the A-B REPEAT Button at the point where you wish to start Repeat playback.
  2. At the desired end point of the Repeat playback, Press A-B REPEAT Button again. Repeat playback between A and B starts.
- To cancel the A-B REPEAT Playback, Press A-B REPEAT Button to display the message "A-B OFF" on the TV screen.
  - A-B REPEAT playback across both sides cannot be performed on an LD disc.
  - Repeat playback on a CLV disc (long-play LD) is performed according to the time number recorded on the disc. Therefore, if a CLV disc with time numbers recorded in minutes is used for Repeat playback, the designated start and end points (A and B) may not exactly match the actual Repeat playback start and end points. However, this is not a malfunction.
  - On a CDV disc. A-B REPEAT playback across both video and audio parts cannot be performed.
  - Repeat playback cannot be performed during Random playback .

### PROGRAM REPEAT PLAYBACK

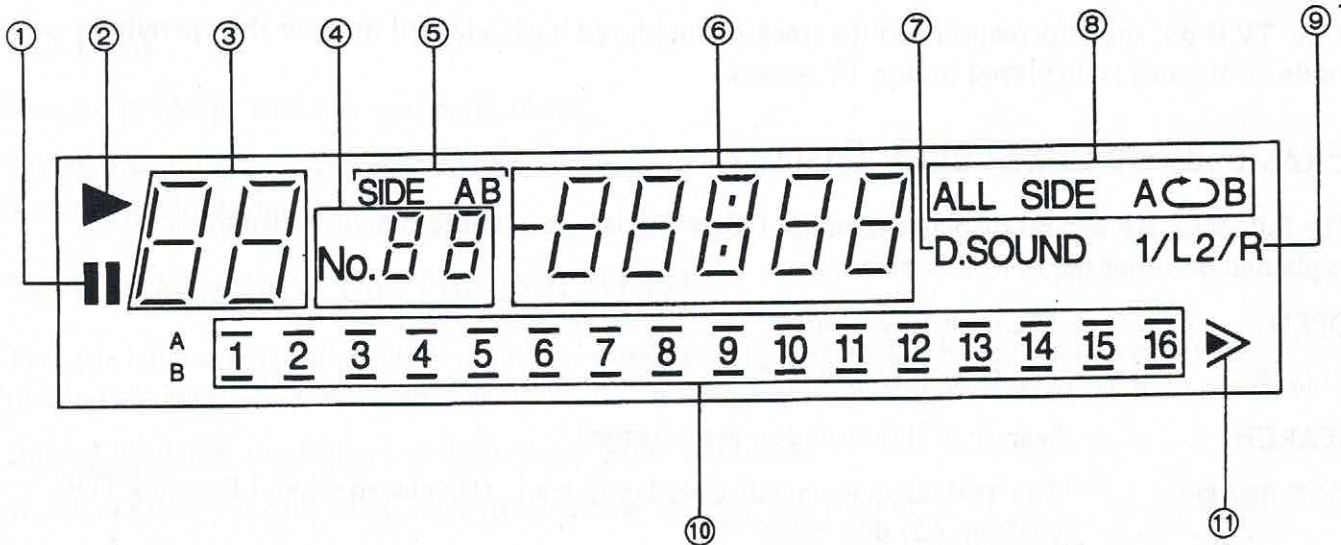
During Program playback, Press REPEAT Button. To cancel Program Repeat Playback, Press PROGRAM Button.

### RANDOM REPEAT PLAYBACK

1. Press RANDOM Button.
  2. Press REPEAT Button.
- To cancel Random Repeat Playback press RANDOM Button.
  - Random Repeat playback cannot be performed on an LD disc without a TOC signal.



# MULTI-FUNCTION DISPLAY



The Multi-Function Display indicator lights up or blinks corresponding to the operation mode. The illustration above shows all possible indicators.

- |  |   |
|--|---|
| (1) Pause Indicator                                  | (9) Audio Channel Indicators  |
| (2) Playback Indicator (for all playback)            | (10) Chapter/Track Number Indicators --<br>When an LD without a TOC Signal is used, one of the bars above and below the numbers is lit. However, no indicator is lit if a disc without chapter numbers is used. When a CDV, a CD or an LD with a TOC signal is used, first all bars are lit and the bars go out one by one as the corresponding playback is finished. During the Program playback of a double-faced LD, the bars beyond the Chapter Number indicators indicate the programmed chapters on Disc A. The bars below indicate the programmed chapters on Disc B. If an LD with the chapter number "0" is used, this number cannot be displayed. |
| (3) Chapter/Track Number                             |   |
| (4) Program Number                                   |   |
| (5) Disc Side Indicator (for LD only)                |   |
| (6) Frame/Time Number and Display of Messages        |   |
| [OPEN] The Disc Tray is open.                        |   |
| [CLOSE] The Disc Tray is closed.                     |   |
| [OFF] The power is off.                              |   |
| [PLAY] The playback starts (only for LD)             |   |
| [A---B] SIDE A is changed with SIDE B (only for LD)  |   |
| [B---A] SIDE B is changed with SIDE A (only for LD). |   |
| (7) Digital Sound Output Indicator                   | (11) Over Mark -- If a disc is used which chapters or tracks above 17 have been recorded, the indication ">" is lit. If the 17th or the subsequent chapter or track is played back, the ">" is lit.   |
| (8) Playback Mode Indicator                          |   |
| A Custom Index Playback                              |   |
| SIDE Side Repeat Playback                            |   |
| A B A-B Repeat Playback                              |   |
| Chapter/Track Repeat Playback                        |   |
| ALL SIDE All Side Repeat Playback                    |   |



## ON SCREEN DISPLAY

If the TV is on, the information about a track being played back, elapsed time, or the operation mode of the unit is displayed on the TV screen.

### EXAMPLES OF ON SCREEN DISPLAY

The following are several display examples. Other displays, e.g. audio function displays, are explained on other pages in this manual.

OPEN	The Disc Tray is open.
CLOSE	The Disc Tray is closed.
SEARCH	Search or Skip function is performed.
TOC READ	The TOC signals on a disc are being read. (Displayed when LD with a TOC, CDV or CD disc is loaded).

The TV screen color becomes grey during an LD disc pause, or during playback of CDV audio part or CD.

### DISPLAY WHEN THE UNIT IS STOPPED

A different display appears on the TV screen depending on the type of disc loaded. If CDV or CD disc is loaded, the information about the total number of recorded tracks and their duration are displayed.

- The displayed information may be a bit different from that listed in the explanations supplied with the disc.

### HOW TO DISPLAY THE ON SCREEN DISPLAY DURING PLAYBACK

Press **DISPLAY** (On Screen Indication) Button, and one of the following displays appears on the TV screen.

LD [CAV]	Chapter Number, Frame Number
LD [CLV]	Chapter Number, Time Number
CDV, CD	The song number being played back now flashes on and off. (The "CD" is displayed during playback of a CD disc.)

Press **DISPLAY** Button one more time and; Track Number, Index Number, and Elapsed Time of Track are displayed.

- When playing back a CLV disc with no seconds recorded, only the minutes are displayed
- When playing back a disc on which no chapter numbers have been recorded, no chapter number is displayed.



## ON SCREEN DISPLAY

### TO REVIEW THE TIME DISPLAY [CDV] [CD]

Each time TIME MODE Button is pressed, the display changes as shown below.

1. TOTAL REMAIN Remaining time of the disc
  2. TRACK REMAIN Remaining time of the track now being played back
  3. TOTAL TIME Total elapsed playback time. Elapsed time if playback was started from the beginning of the disc.
  4. AUDIO Recorded content: Number of tracks and total recording time. If a CDV is used, the contents of the video and audio parts are displayed separately.
  5. TRACK TIME Elapsed time of the track now being played back
- During playback of an LD with TOC, the time display is displayed alternately in the order of (4) (5).
  - Each time TIME MODE Button is pressed during Random playback, the time display is changed in the order to (2) (4) (5) (2). (CDV. CD)
  - The time information displayed on Multi-Function Display may differ a bit from the list in the explanations supplied with the disc. This is because the explanations list only the actual playing time of each track, while this unit displays the playing time including the time of the intervals between 25 tracks.



## CAUTIONS

### FORMATION OF CONDENSATION INSIDE THE UNIT

Condensation (dew) forms when warm air comes in contact with a cold object, for example on a window in a heated room in winter. Condensation may form in the unit if:

- The unit is in a room where the heater has just been turned on.
- The unit is in a room with steam or high humidity.
- The unit is brought from cold surroundings into a well-heated room, especially in winter.
- The unit is suddenly brought from cool surroundings such as an air-conditioned room or car, to a place which is hot and humid.

When condensation has formed inside the unit, the unit may not operate correctly.

Normally, as condensation forms gradually, it may take about 10 -15 minutes before the unit functions incorrectly due to condensation. Wait about 20 minutes before trying to use the unit if the unit was in one of the conditions described above and confirm that no condensation has formed in the unit.

### CAUTIONS FOR USE

Follow these cautions to avoid or serious malfunction damage to the unit.

- Disconnect the Power Cord from the AC outlet by pulling the plug, not the cord.
- Keep the Power Cord away from heating appliances.
- Do not put any heavy object on the Power Cord.
- Do not attempt to repair or reconstruct the Power Cord.
- Keep the unit away from sources of liquids, such as basins, bathtubs, and so on.
- Do not remove the outer panel.
- Touching internal parts of the unit is dangerous, and may cause serious damage to the unit.
- Do not use the unit if there is lightning.
- Unplug the Power Cord from the AC outlet as soon as possible .

Exterior influences such as lightning and static electricity can affect normal operation of this unit. If this occurs, turn the unit off and on again with POWER Button, or disconnect and then reconnect the Power Cord to the AC outlet. The unit will operate normally.





## CAUTIONS

### NOTES FOR INSTALLATION

- Place the unit on a even and stable place that is well ventilated. (The rear panel becomes hot during operation)
- If the unit is placed near the TV: The picture and audio may be adversely affected during playback of the unit. If this occurs, place the unit farther away from the TV.
- Do not place the unit in the following places:
  - In a room exposed to direct sunlight for long periods of time.
  - Near a strong light source or a heater.
  - Where there is steam or soot.
  - Where there is dust or humidity or a strongly magnetized object.

### MAINTENANCE

- Wipe the body and operation panel of the unit with a soft, clean cloth.
- If you use a chemically treated cloth for cleaning, refer to its notes on use.
- For persistent stains, use a soft cloth moistened with mild detergent and water, and then wipe with a dry cloth.

### HANDLING CAUTIONS

- Do not place anything heavy on the unit such as a TV.
- When the unit is moved:
  - Be careful not to drop the unit or subject it to other strong shocks.
  - Make sure that the unit is disconnected from all connection cords.
  - For a distant transport, wrap it in a blanket or rug to prevent its being scratched.
- Keep the unit away from insecticides or volatile substances. Do not keep the unit touching rubber or vinyl material for long periods of time. These materials may cause discoloration and surface damage to the unit.

### NOISE INTERFERENCE ON THE TV WHILE RECEIVING A TV BROADCAST

Depending on the reception condition of the TV broadcast, noise interference may appear on the TV screen while you watch a TV broadcast and the unit is left on. This is not a malfunction of the unit or the TV. If this occurs, turn off the unit.



## CAUTIONS

### DISCS

- TOC (Table of Contents) Signal - The TOC signals are recorded onto the beginning of all CD and CDV discs. This signal is similar to a table of contents and includes information about the music and their playing times. Some LD discs also contain this signal. The Random playback and the Preset function of this unit do not work on discs without a TOC signal.
- CED and VHD system video discs cannot be played back with this unit.
- Since this Unit complies with the NTSC color TV system, discs with other color TV systems (PAL or SECAM) cannot be played back.
- This unit does not correspond to CD Graphics and CD-ROM specifications.
- Do not use a CD stabilizer.
- Never use Cracked or Warped Discs. Since the disc rotates at a high speed, use of a cracked or deformed (warped) disc is quite dangerous. Never attempt to repair a broken disc with adhesive tape or glue and then use it. This will damage the unit.
- Should a strange noise or vibration be heard or occur after starting playback, i.g. the disc does not rotate smoothly, immediately press the OPEN/CLOSE Button to stop the disc rotation.
- Place one disc in the Disc Tray according to the proper recession guide for play back. Never place two or more discs in the Disc Tray and never attempt play back with a disc that has slipped out of the recession.

### NOTES FOR STORAGE

- After use, always put the disc into its case and store it in a vertical position. Storing discs in a slanted position or stacked may cause them to become warped.
- Do not store discs in places exposed to direct sunlight, high temperature or high humidity.
- Never attempt to stick a label on a disc. Be careful not to scratch the disc surface.

### MAINTENANCE

- To clean a disc soiled with fingerprints or dust, use a soft and dry cloth. If the surface is extremely dirty, dip a soft cloth into water and wring the cloth well before wiping the disc. Then wipe again with a soft and dry cloth.
- When wiping discs, always move the cloth from the center hole toward the outer edge. (Circular scratches along a line of pits made by circular wiping are more likely to cause noise.)
- Do not use benzene, thinner, record cleaner, or antistatic agents. This may damage the disc.



## BEFORE REQUESTING SERVICE

Symptom	Check Points
No power	<ul style="list-style-type: none"><li>• The Power Cord is not connected to an AC outlet.</li></ul>
The Disc Tray cannot be opened.	<ul style="list-style-type: none"><li>• The unit is not turned on.</li></ul>
Playback does not start. Playback stops immediately after PLAY Button is pressed.	<ul style="list-style-type: none"><li>• The disc is not loaded correctly.</li><li>• Unrecorded side of the disc is selected.</li><li>• Condensation has formed in the unit.</li><li>• The disc is dirty. (Wipe it with a soft, clean cloth.)</li></ul>
No picture is played back. Picture is obscure or unstable.	<ul style="list-style-type: none"><li>• The TV (monitor) is not on.</li><li>• The connection is not correct.</li><li>• The speakers have been placed close to the TV.</li><li>• The disc is dirty or scratched.</li><li>• Condensation has formed in the unit.</li></ul>
Still, Still Advance (Reverse) or Multi-Speed playback cannot be performed.	<ul style="list-style-type: none"><li>• The disc being played back is the CLV or the video part of CDV which cannot be played back in Still, Still Advance (Reverse) or Multi-Speed playback.</li></ul>
Picture is distorted/unstable during Scan Forward/Backward playback.	<ul style="list-style-type: none"><li>• This is not a malfunction.</li></ul>
No sound is reproduced. The sound can hardly be heard.	<ul style="list-style-type: none"><li>• The audio input selection is not correct on the TV (monitor) or the stereo system (amplifier or AV selector).</li><li>• The connection is not correct.</li><li>• The volume adjustment is not correct on the TV (monitor) and the stereo system.</li><li>• If an amplifier is set to the "optical digital input" position during analog audio playback, the audio cannot be heard.</li><li>• The pause or still playback is performed.</li><li>• The Multi-Speed playback is performed.</li><li>• The disc is dirty or scratched.</li><li>• Condensation has formed in the unit.</li></ul>
Remote Controller does not work.	<ul style="list-style-type: none"><li>• Batteries have not been loaded correctly.</li><li>• Batteries are exhausted.</li><li>• The Remote Controller is not pointed at the Remote Sensor of the unit.</li><li>• Distance is too far (beyond 25 feet from the unit).</li><li>• There is an obstacle between the Remote Controller and the Remote Sensor.</li></ul>
Searching time is too long.	<ul style="list-style-type: none"><li>• The disc is dirty or scratched.</li></ul>

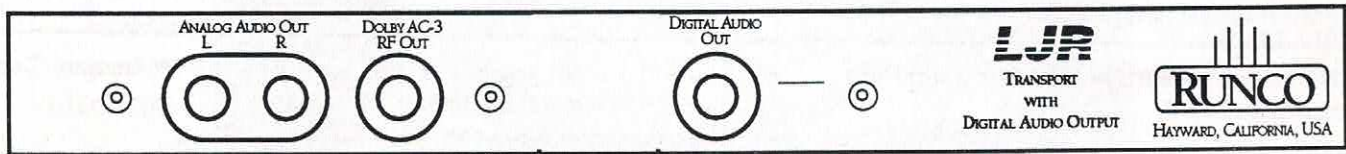


# AUDIO OUTPUT OPTIONS

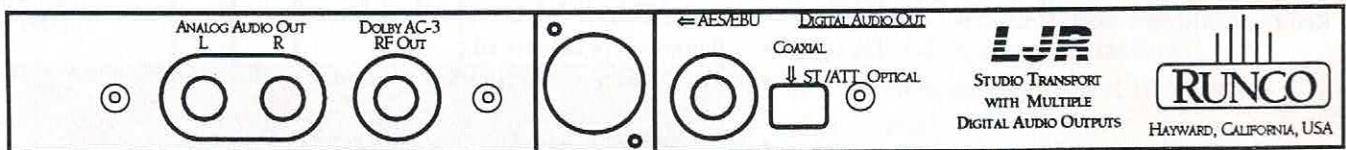
D/A Converter - No digital output is provided except TOSLINK and Dolby AC-3 RF. Analog audio is provided from the same jacks for both analog LD discs and for digital audio LD tracks and CDs via the internal D/A converter. Selection between analog and digital audio is accomplished from the remote control.



Basic Transport - High quality digital audio is provided in the S/PDIF format with an RCA connector, as well as TOSLINK. Dolby AC-3 RF output is provided for external surround sound processing. An external D/A must be used. Analog audio from analog LDs is always present on L and R connectors.



Studio Transport - Functions like the basic transport but with many extra audio features. AES/EBU professional digital audio output, with data reclocking using a phase locked loop is provided from an XLR connector. The standard S/PDIF format digital audio output is provided from an RCA connector, as well as from an optical ST connector, using an ATT transmitter, for use with 850 nm optical glass fiber. High quality Dolby AC-3 RF is provided using an RCA connector.





# FEATURES & SPECIFICATIONS

**AUTO REVERSE** - Equipped with the RUNCO auto reverse system, the **LJR II** automatically plays both sides of a laser disc. Reversing time is a quick 11 seconds.

**INCREDIBLE VIDEO** - The **LJR II** uses proprietary video circuits to produce THX approved video. Each unit is calibrated by hand to provide precise differential gain control, frequency response, and output levels.

**5-DISC COMPATIBILITY** - Play any of five different types of discs without an adapter. 5-disc compatibility brings you movies, music, or whatever you like - all with the same excellent performance, advanced functions and easy operation.

- 12-inch Laser Disc
- 8-inch Laser Disc
- 5-inch Compact Disc Video
- 5-inch Compact Disc
- 3-inch Compact Disc

**AC-3 Ready** - The LJR II provides a high quality AC-3 RF output for decoding of the Dolby 5.1, digital audio format.

Feature	CD3	CD	CDV	LD8	LD12
Art Function			•	•	•
20 Track Programming				•	•
Still			•	•	•
Cue & Review	•	•	•	•	•
Chapter Skip ##				•	•
Chapter Search ##				•	•
Track Skip	•	•	•		
Track Search	•	•	•		
Programmed Playback	•	•	•	•	•
Random Playback	•	•	•	•	•
Frame Search				•	•
Time Search				•	•
Custom Index				•	•
Chapter/Track Repeat ##	•	•	•	•	•
Side Repeat	•	•	•	•	•
All Side Repeat #				•	•
A-B Repeat	•	•	•	•	•
Random Repeat	•	•	•		
Still with Sound			•	•	•
Stroboscopic Motion			•	•	•

# Operative only if discs are recorded on both sides.  
## Operative only if discs have prerecorded chapter numbers.

**HIGH QUALITY AUDIO** - The **LJR II** offers high quality DIGITAL audio which rivals the finest audio transports in the world. The **LJR II DA** offers superior sonics as a stand-alone audio component, and vastly better sonics than any other Laser Disc Player.

**PICTURE EFFECT MODES** - Select from Normal, Retro (black-and-white), and Night (reduced brightness) modes to create the home viewing conditions that best fit your needs.

## SPECIFICATIONS

Power Source: AC, 120V, 50 - 60 Hz/240V, 50-60 Hz (export only)

Format: Laser Vision Video Disc System, Compact Disc with Video and Compact Disc Digital Audio System

Operating Temperature: +5°C to +35°C / +40°F to +95°F

Operating Humidity: 5% to 90%

Video Signal Output Level: 1.0 Vp-p (at 75 ohm, synchronizing load)

Video Signal to Noise Ratio: 54 dB

Video Horizontal Resolution: >435 lines

S-Video Output Level: (Y/C Separate Signal Output):  
Y output: 1.0 Vp-p (when loading 75 ohm, synchronizing load). C Output: 0.286 Vp-p (when loading 75 ohm, synchronizing load)

Digital Audio Signal Output (LJR II DA model only):

Frequency Response: 4Hz-20kHz±0.3dB

Signal to Noise Ratio: >115 dB

Dynamic Range: >100 dB

Total Harmonic Distortion: <0.0023%, 20Hz-20kHz

Jitter Rate: <80Picoseconds

Slew rate: 2,000 V/Microsecond

Settling Time: <100 Nanoseconds

Digital/Analog Converter: High Speed single-bit, 64X oversampling

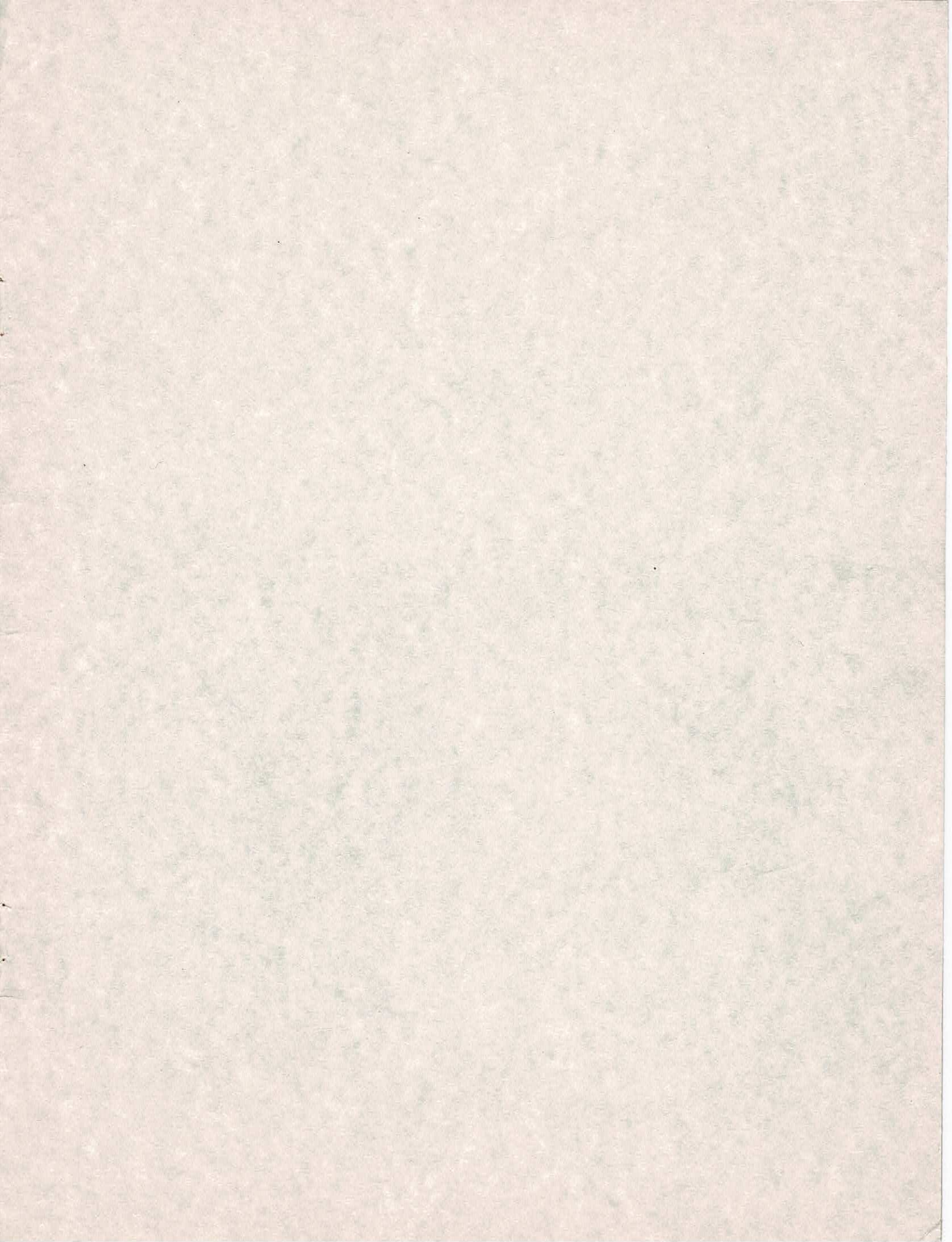
Power Supplies: Multiple Isolated

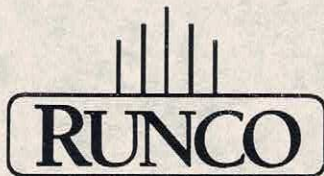
Dimensions: Height 6.25" (15.9 cm)  
Width 17.0" (43.2 cm)  
Depth 16.25" (41.3 cm)

Weight: 40lbs (18 kg)



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