

SONY

3 750-463-21 (1)



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NATIONAL TECHNICAL DEPT.

FILE COPY
Do not remove

Photo of MDP-722GX

CD/CDV/LD Player

MDP-510/722GX

Operating Instructions

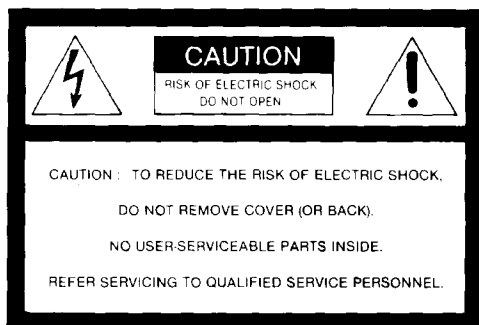
Owner's Record

The model number is located at the front and rear.
The serial number is located on the top panel.
Record the serial number in the space provided below.
Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

WARNING

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



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna

Relocate the equipment with respect to the receiver

Move the equipment away from the receiver

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

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

"How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the U.S.

Government Printing Office, Washington, DC 20402, Stock

No. 004-000-00345-4.

CAUTION

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

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

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Precautions

On Safety

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

On Installation

- Avoid placing the player in a location subject to:
 - high humidity
 - high temperature
 - excessive dust
 - mechanical vibration
 - direct sunlight
- Allow adequate air circulation to prevent internal heat build up. Do not place the unit on surfaces (rugs, blankets, etc.) or near heat materials (curtains, draperies) that may block the ventilation holes.

On Moisture Condensation

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


On the Disc Tray

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

On Cleaning

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

On Repacking

Do not throw away the carton and the packing materials. They make an ideal container in which to transport the unit in. Before transportation, remove the disc from the unit, wait 2 to 3 seconds after the  indicator in the display window stops blinking, and turn the power off.

If you have any questions or problems concerning your unit, please contact your nearest Sony dealer.

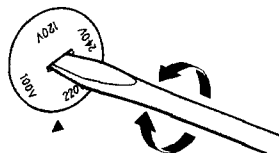
Operating Voltage

Before operating the unit, be sure that the operating voltage of your unit is identical with that of your local power supply.

MDP-510: 120 V AC, 60 Hz.

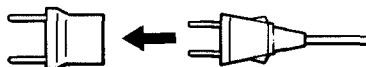
MDP-722GX: 100, 120, 220, 240 V AC, 50/60 Hz.

The MDP-722GX operates on either 100 V, 120 V, 220 V, or 240 V AC, 50/60 Hz. Before operating the unit, be sure to check that the operating voltage of your unit is identical to your local power supply. The voltage selector is located in the rear panel. To reset the selector, disconnect the AC power cord and turn the selector with a flat-headed screwdriver so that the arrow on the rear panel points to the appropriate voltage.



AC Plug Adaptor (supplied with the MDP-722GX)

If the AC plug of your unit does not fit the wall outlet, attach the supplied AC plug adaptor.



Contents

This manual covers the MDP-510 verified to the FCC rules and available in the U.S.A. and the MDP-722GX available in other countries.

Operations are the same regardless of the model name. Specifications vary only with regard to the power requirements.

The illustrations used in this manual are that of the MDP-722GX.

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Introduction

About the Unit

The MDP-510/722GX is a LD/CDV/CD player belonging to the CD Video System*1. All six types of optical discs given below, currently available for home entertainment use, can be played back on this unit.

CD single/8-cm CD



3 in/8 cm in diameter
Digital audio (max. 30 min.),
single-sided

CD



5 in/12 cm in diameter
Digital audio (max. 74 min.),
single-sided

CDV*2



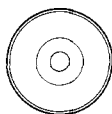
5 in/12 cm in diameter
Digital audio (max. 20 min.) and
video and audio (max. 5 min.),
single-sided

LD



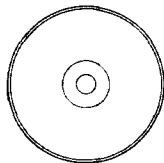
8 in/20 cm in diameter
Video and digital or analog audio
(max. 14 min. for CAV disc or 20 min.
for CLV disc. per side)

LD single



8 in/20 cm in diameter
Video and digital or analog audio
(max. 14 min. for CAV disc or 20 min.
for CLV disc), single-sided
LD single discs can be played back
without using adaptors.

LD



12 in/30 cm in diameter
Video and digital or analog audio
(max. 30 min. for CAV disc or 60 min.
for CLV disc per side)

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



- Aluminum discs cannot be played back.
- CED and VHD discs cannot be played back.
- Discs with PAL, SECAM, or video signals other than the NTSC standard cannot be played back.

Main Features

Features available for LD/CDV/CD

- **Custom index**
Up to six points can be marked on a disc to be recalled later for playback or repeat operations.
- **AV calendar**
A total of up to 20 selections used in the operation and its accumulated playing time can be viewed at a glance.
- **Intro scan**
The first eight seconds of each chapter or selection can be played back automatically for easy access to the desired playback start point.
- **Program play**
Up to 16 chapters or selections can be programmed in the desired order.
- **Shuffle play**
All or a desired selection on a disc can be played in a random order.
- **Repeat play**
Four types of repeat playback: single repeat, A→B repeat, custom index repeat, and repeat of one side of the disc is possible.
- **Disc protection system**
Any disc left in the unit, after the STOP button has been pressed, will be disengaged to protect it.

Additional features for LD

- **Digital pictures**
Four digital picture modes, Stop Motion, Flash Motion, Picture Art, and One Scene Memory are available.
- **Speed control**
Multi-speed play in 11 speed settings, step (frame-by-frame) in forward reverse and playback, and high quality still picture are available.
- **Memory stop**
Playback stopped at one scene can be resumed again from the same point.

Additional features for CDV

- **Direct access to the video portion**
The video portion is played back first. A press of the CDV button switches the playback between the audio portion and video portion.
- **Audio portion**
All of the functions available for the CD can be enjoyed.
- **Video portion**
All of the functions available for the CLV (Constant Linear Velocity) LD can be enjoyed for the video portion except for memory stop and time search.

Notes

*1 "CD VIDEO system" refers to LD and CDV discs and the players that combine the features of a CD player and an LD player in a single unit capable of playing CDV discs. The discs and players which belong to this system bear the unified mark.



*2 The Compact Disc Video (CDV) format consists of two sections. One is the 20 minutes of digital audio that is playable on any CD player. The other, 5 minutes of video and digital audio, requires a CDV player.

More Information on LD/CDV/CD

CAV discs

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

CLV discs

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

Digital sound discs

A high quality digital audio signal, as well as the conventional analog audio signal, is recorded on some LDs. This unit plays back both digital and analog signals with priority given to the digital audio signals.

Chapter number

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

Frame number

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

Time number

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

Track number

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

LD with TOC (Table of Contents)

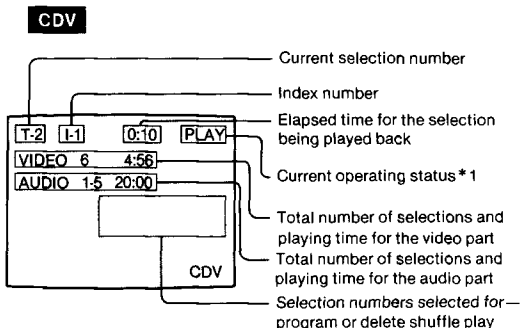
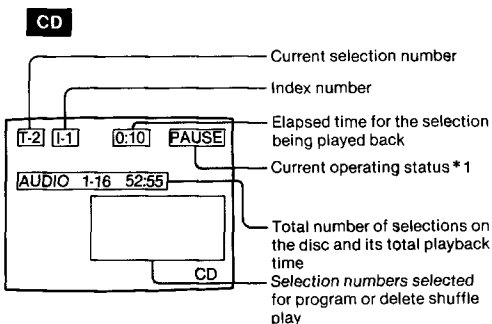
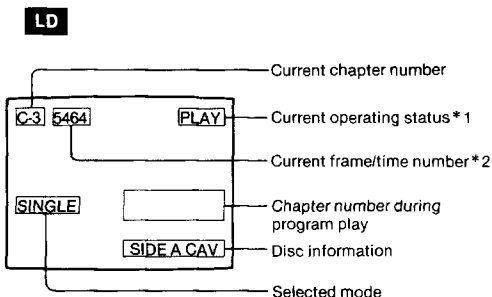
Among various LD software, there are discs with TOC (Table of Contents) signals recorded. When playing back LDs with TOC signals, the additional features given below can be enjoyed.

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

Screen Messages

Explanation of the display

Information related to the unit's operation can be superimposed on screen by pressing the DISPLAY button on the Commander. Refer to the illustration below for examples of the display for each disc. When no video image from the disc is displayed, the information will appear on a blue background (when playing back an LD or CDV), or on a green background (when playing back CD). Note that the screen message is displayed only when the TV or monitor is connected to the LINE OUT 1 jack.



*1 For details see Chart A.

*2 For discs with no time data recorded for the "seconds," time data will be shown as "0:22."

*3 For details see Chart B.

Chart A—Examples of Current Operating Status Display

| Display | Meaning |
|---------|---|
| OPEN | Disc tray open |
| CLOSE | Disc tray closed |
| PLAY | Playback |
| STOP | Playback stop |
| PAUSE | Playback pause |
| ⏮ / ⏭ | Fast forward/reverse scan |
| SEARCH | Search |
| ▶ × 1/2 | Speed play at 1/2 times forward play (slow) |

Chart B—Examples of Disc Information Display

| Display | Meaning |
|------------|-------------------------|
| SIDE A CAV | Side A of CAV disc |
| SIDE B CAV | Side B of CAV disc |
| SIDE A CLV | Side A of CLV disc |
| SIDE B CLV | Side B of CLV disc |
| 1/L | Main/left audio channel |
| 2/R | Sub/right audio channel |
| ▶ DIGITAL | Digital audio |
| ▶ ANALOG | Analog audio |

Note

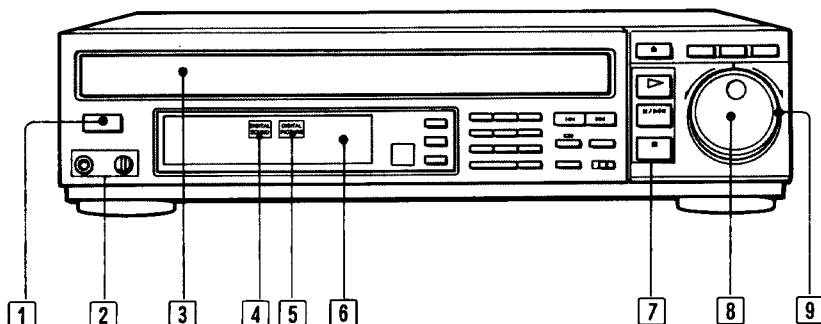
Side A and Side B are not identified on some LDs. In this case, the display will always indicate SIDE A.

Location and Function of Controls

Refer to the page indicated in the parentheses for details.

Front Panel

The buttons on the unit and those on the Remote Commander with an identical mark have the same function.



1 POWER switch

2 HEADPHONES jack (stereo phone type) and LEVEL (headphone level) control (page 21)

3 Disc tray (page 21)

4 DIGITAL SOUND indicator

Lights when CD, CDV, or the digital sound on a LD is played back.

5 DIGITAL PICTURE indicator (page 24, 29)

Lights when the digital memory is used.

6 Display window

Various indications appear in the display window during playback.

7 Basic control buttons and indicators

▶ (Play) button and indicator

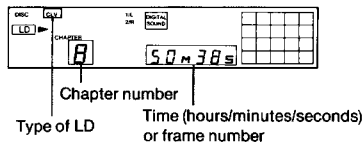
⏸ (Pause/still) button and indicator

■ (Stop) button

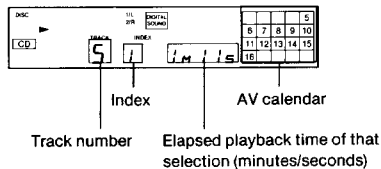
8 JOG dial (page 25)

9 SHUTTLE ring (page 25)

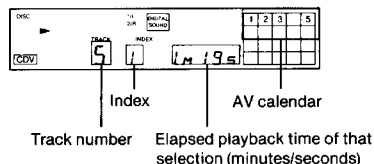
LD

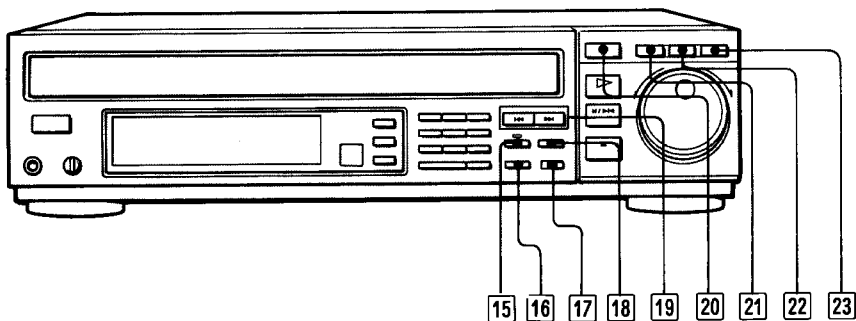
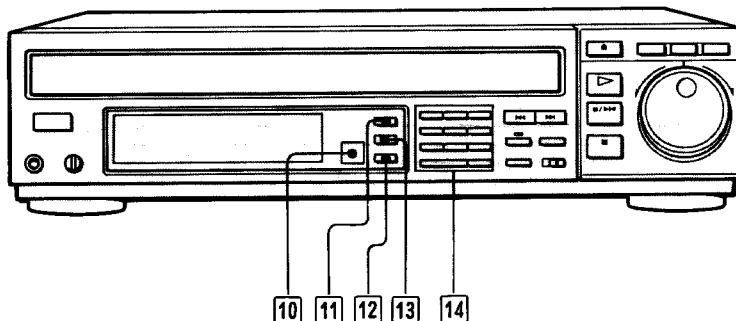


CD and Audio Portion of CDV



Video Portion of CDV





10 Remote sensor

Point the supplied Remote Commander here.

11 FILE button (page 43)

12 AUTO PGM (Auto program) button (page 41)

13 INDEX button (page 44)

14 Alphanumeric buttons

Press for direct access to a chapter/track or for custom index search operation, etc.

15 ON/OFF (Single side repeat) button (page 34, 38)

Press to repeat the one side of the disc.

16 PICTURE MODE (image processing select) button (page 24)

17 STOP MODE/MEMORY switch (page 22)

18 CDV button (page 21)

**19 <|> ACS/AMS buttons (reverse/forward)
Automatic Chapter Select/Automatic Music Sensor**

20 OPEN/CLOSE button

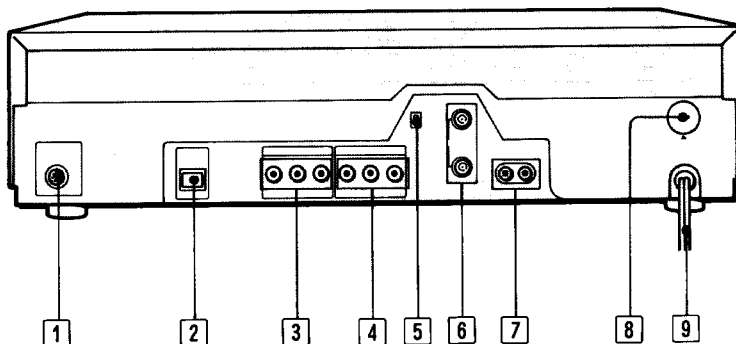
21 PICTURE ART button (page 28)

22 STOP MOTION button (page 28)

23 FLASH MOTION button (page 27)

Location and Function of Controls

Rear Panel



1 S video output jack (4-pin mini DIN type)

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

2 OPTICAL DIGITAL OUT

Connect to the amplifier with an optical input or D/A converter. Use the optional connecting cable POC-15 for connection.

3 LINE OUT 1 jacks (phono type)

Connect to the video/audio input jacks of equipment such as a TV or a VCR.

4 LINE OUT 2 jacks (phono type)

Connect to the video/audio input jacks of equipment such as a TV or a VCR. Note that the screen messages are not displayed when connecting this jack connected to a TV.

5 3CH/4CH CHANNEL switch

Set to 3CH or 4CH, whichever is not active in your area when connecting the unit and the TV via antenna terminals. Refer to page 18.

6 VHF/UHF IN/OUT connectors (F-type)

Connect the unit and the TV via these connectors when your TV is not equipped with video/audio input connectors. Refer to page 19 and 20.

7 CONTROL S IN (input)/OUT (output) jacks (mini type)

IN: Connect to the CONTROL S output jack of a TV.

This unit can be remotely controlled by pointing the Remote Commander at the TV.

OUT: Connect to the CONTROL S input jack of a VTR.

If the CONTROL S IN jack of the unit is connected to the CONTROL S output of a TV, both the VCR and this unit can be remotely controlled by pointing the Remote Commander at the TV.

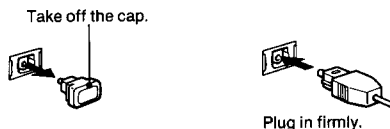
Use the optional RK-G69 connecting cord for the above connections.

8 Voltage selector (MDP-722GX only)

Set to the voltage of your local power supply. Refer to page 3 for details.

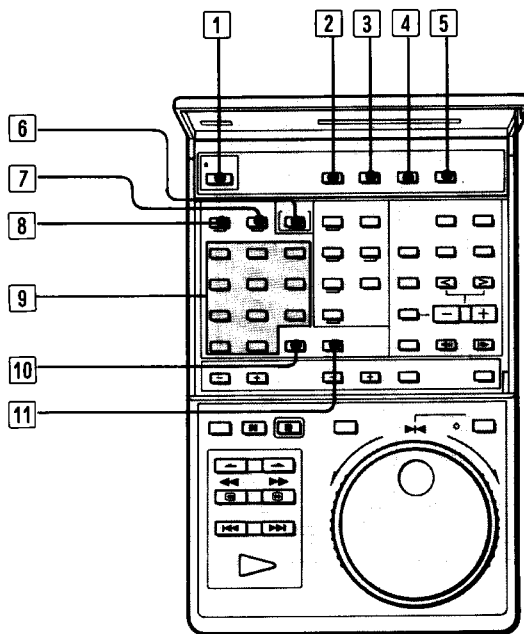
9 AC power cord

How to connect the OPTICAL DIGITAL OUT connector



Remote Commander

The buttons on the Remote Commander and those on the unit with an identical mark have the same function.



1 OPEN/CLOSE button (page 21)

Press to open or close the disc tray.

2 DISPLAY button (page 7)

Press to display disc informations. Press it again to clear the display.

3 AV TIME (page 40)

4 AUDIO MONITOR button (page 23)

5 DISC/TV button (page 18)

6 CLEAR button

Press to clear the numbers entered or to cancel the search, program, or other functions. This button affects the functions of the buttons underlined in yellow on the Remote Commander.

7 FRAME/TIME button (page 32, 33)

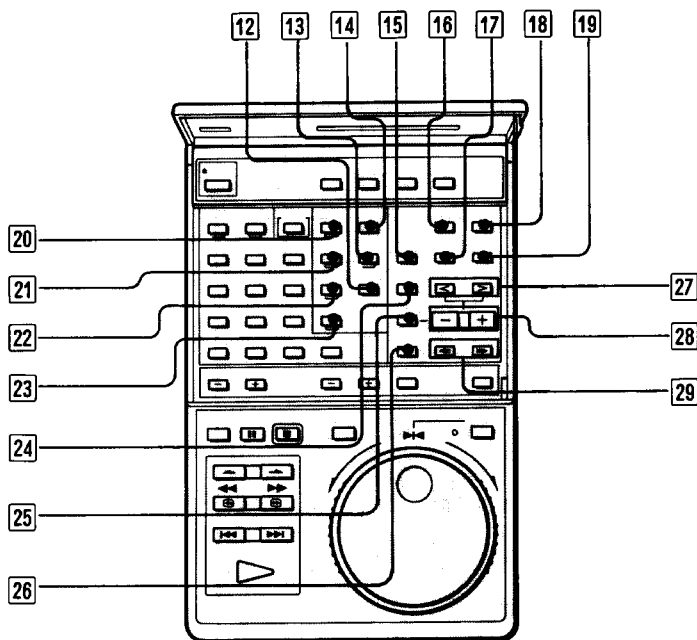
8 PGM (Program) button (page 35, 39)

9 Alphanumeric buttons

10 SEARCH/NEXT button (page 32, 33, 36, 39, 43)

11 BACK button (page 36, 39, 43)

Location and Function of Controls



12 INDEX MODE button (page 44)

13 INDEX FILE button (page 43)

14 AUTO PGM button (page 41)

15 ONE SCENE MEMORY button (page 29)

16 **CX** button (page 23)

17 RECALL button (page 29)

18 ANALOG button (page 23)

19 A.PAUSE/A.SPACE button (page 42)

20 REPEAT button (page 34, 38)

21 1/ALL button (page 34, 38)

22 SHUFFLE button (page 45)

23 REPEAT A ↔ B button (page 34, 38)

24 PICTURE ART button (page 28)

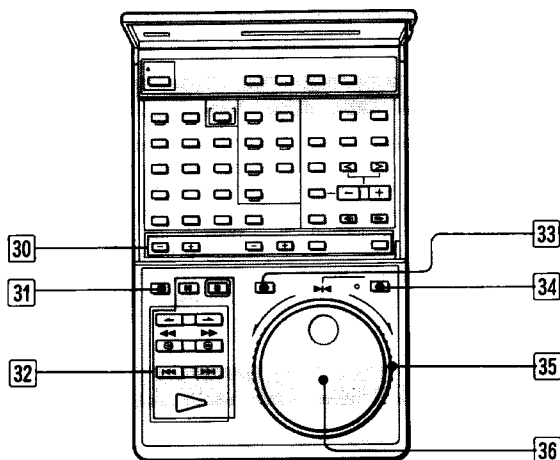
25 FLASH MOTION button (page 27)

26 STOP MOTION button (page 28)

27 MULTI SPEED buttons (page 24)

28 +/- (effect control) buttons (page 24, 27)

29 STILL/STEP buttons (page 26)



30 TV control buttons

Effective for Sony TVs with the mark.

CHANNEL +/-: To change the channel.

VOLUME +/-: To change the volume.

TV/VIDEO: To switch the output signal. (Not effective for some TVs.)

TV POWER: To turn on the power of the TV.

(Index search) buttons (page 37)

(Scan reverse/forward) buttons

ACS/AMS (Automatic chapter select/automatic music sensor) buttons

31 INTRO SCAN button (page 31, 37)

32 Basic operation buttons

PLAY

PAUSE

STOP

33 CDV (playback portion switching) button (page 21)

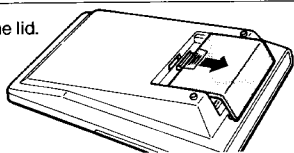
34 JOG/SHUTTLE mode select button and indicator (page 25)

35 SHUTTLE ring (page 25, 30, 37)

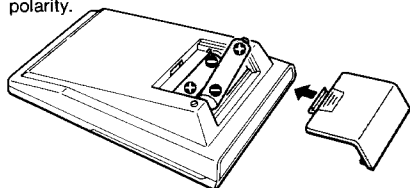
36 JOG dial (page 25, 30)

Installing Batteries

1 Open the lid.



2 Insert two R6 (size AA) batteries with correct polarity.



Battery life

Batteries will last for about six months under normal operating conditions.

Notes on the Remote Commander

- Do not let sunlight or light from a powerful artificial light source fall directly on the remote control sensor on the front panel as it may interfere with operation or damage the sensor.
- If a TV set with a CONTROL S output is connected to this unit's CONTROL S IN jack, you can control this unit by pointing the unit's Remote Commander towards the TV. Under this connection, however, the unit cannot be operated by pointing the Remote Commander at the unit since the control signal is only fed from the TV.

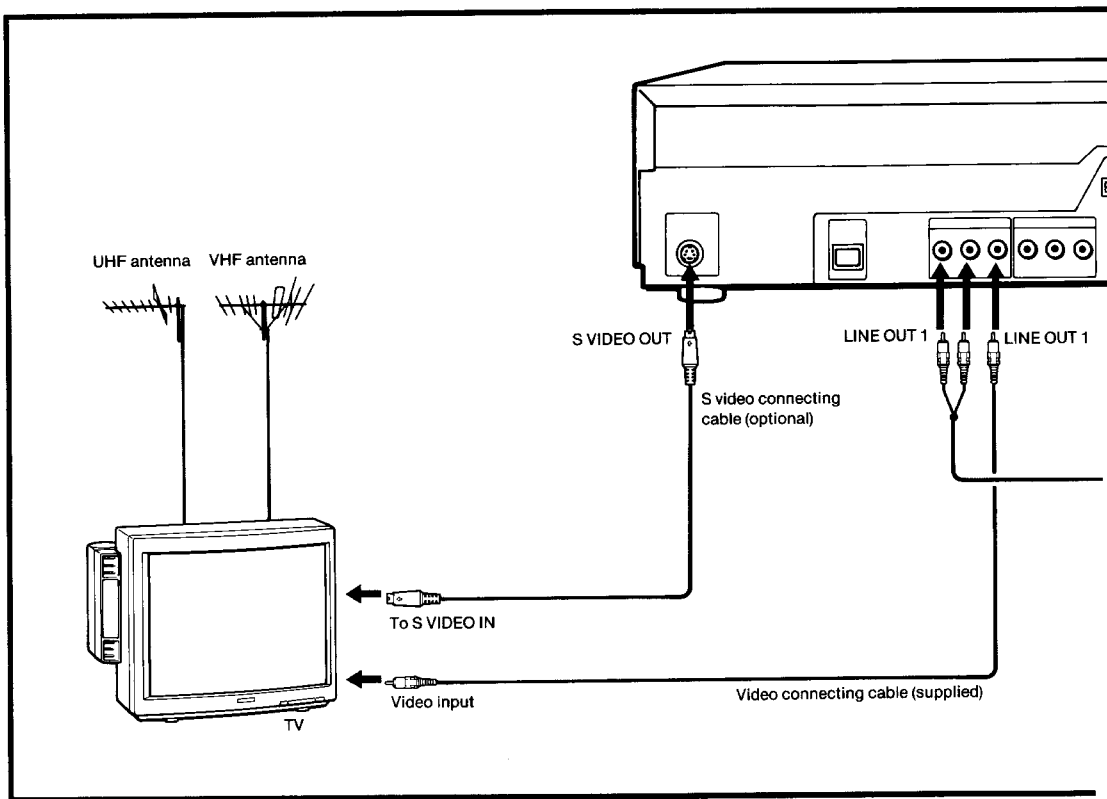
Connections

Various system connections can be considered depending upon the equipment you have. The following are some examples of how you can enjoy the features of the unit.

Before You Begin

- Make sure that all equipment is turned off before connecting or disconnecting any cables.
- Check the color of the plugs: yellow for video; white for left audio channel; and red for right audio channel.
- Firmly insert the plugs into the jacks. A loose connection may cause noise.
- When unplugging, hold the plug itself. Never pull by the cable.
- To prevent interference, turn off all equipment that is connected, but is not currently used.
- If noise or hum should occur in the screen or sound, or in the equipment connected to the unit, put more distance between the units.
- Refer to the instruction manuals of the other equipment since connections may vary depending upon the equipment used.

Example (1)—Connecting to a TV with Video/Audio Inputs



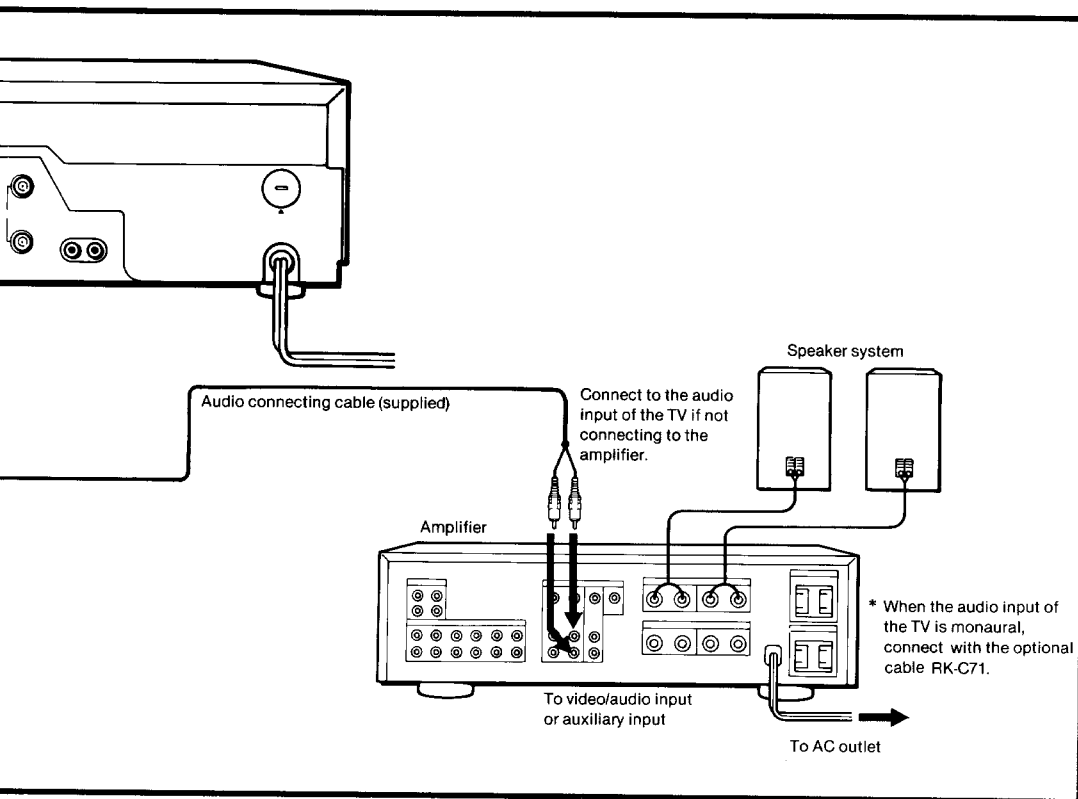
First Check Your TV

If your TV is equipped with video/audio inputs

Connect the player and the TV using the LINE OUT jacks.
Refer to "Connecting Examples (1), (2), and (3)."

If your TV is not equipped with video/audio inputs

Connect the player and the TV using the VHF/UHF OUT antenna terminal. Refer to "Connecting Example (4)."

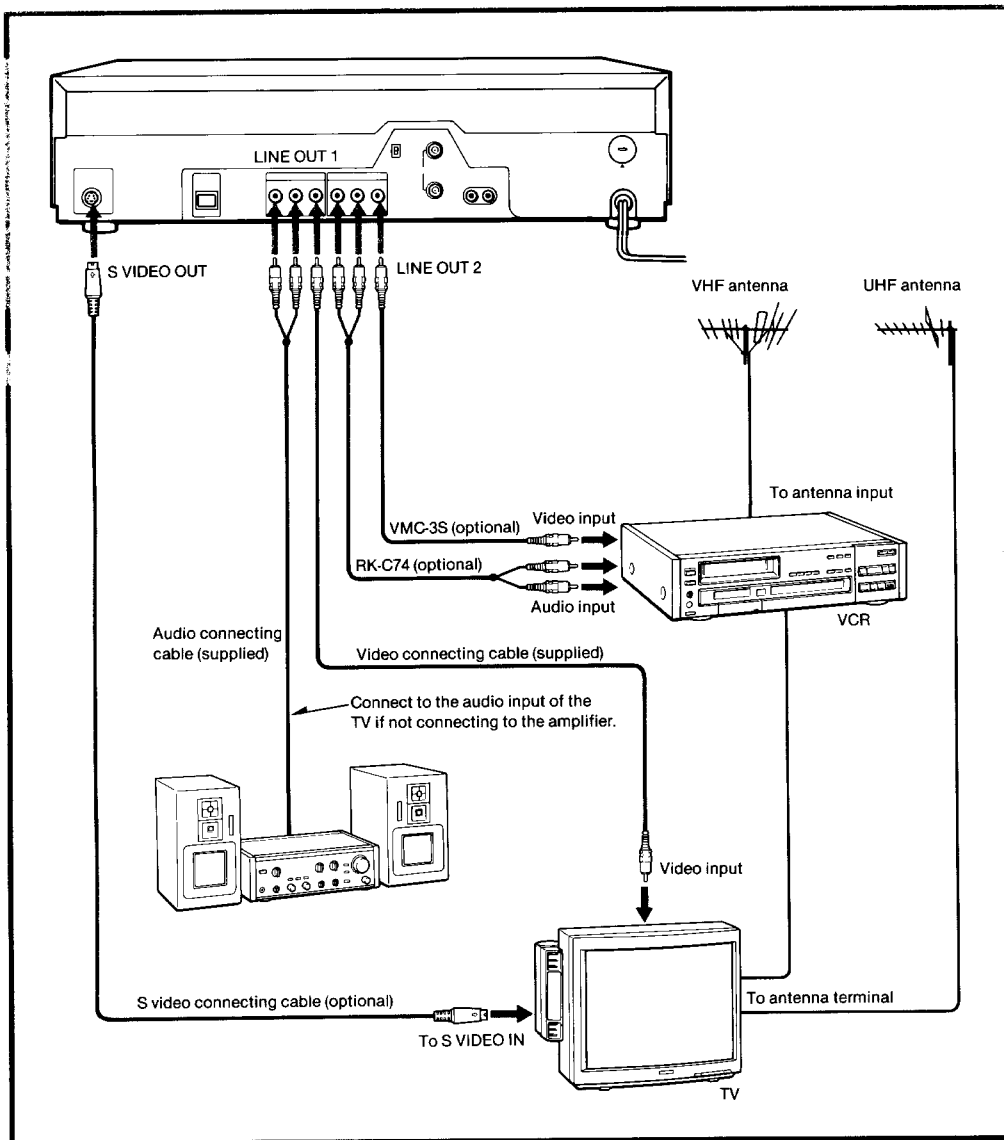


To view clearer TV broadcasts
Turn off the power of the unit.

When viewing picture from the player
Set the input selector of the TV to VIDEO.

When receiving FM/AM programs
Turn off the power of the player to avoid signal interference.

Example (2)—Connecting to a TV and a VCR with Video/Audio Inputs



When viewing the picture from the disc player
Set the input selector of the TV to VIDEO.

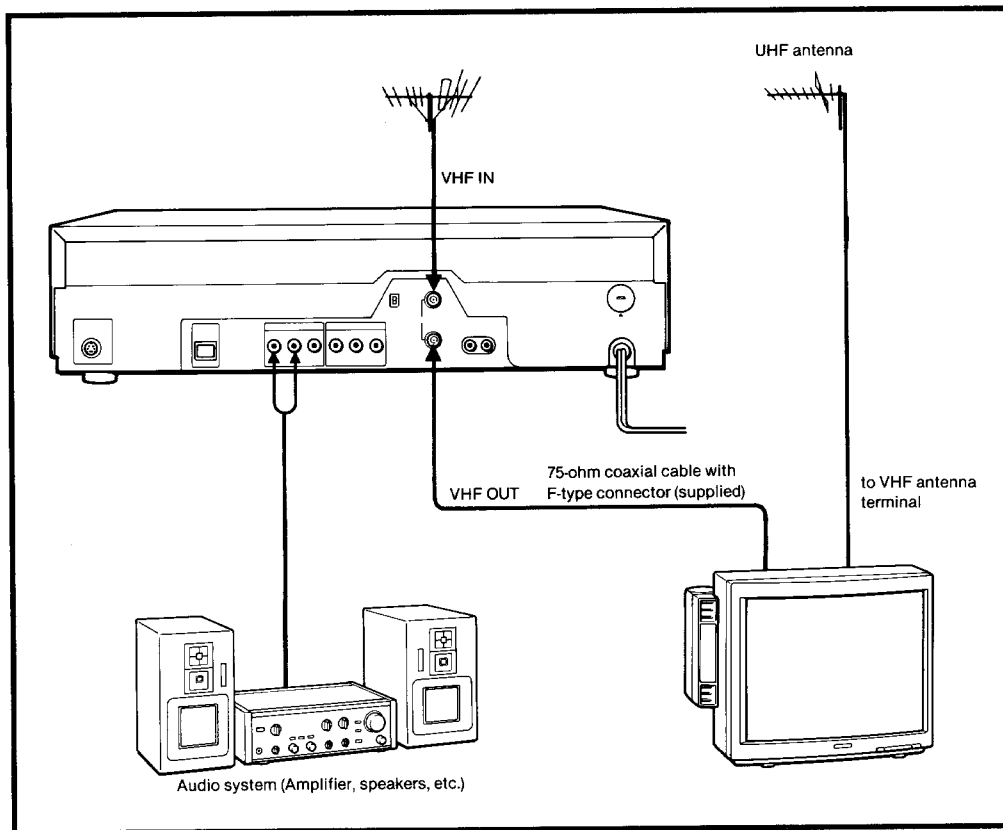
To view clearer TV broadcasts
Turn off the power of the unit.

When receiving FM/AM programs
Turn off the power of the player to avoid signal interference.

Example (3)—Connecting to a TV without Video/Audio Inputs

Step 1—Connect the VHF antenna and the TV to the player

Refer to "How to connect the antenna, player, and the TV" section on page 19 for details.



To enjoy stereo sound

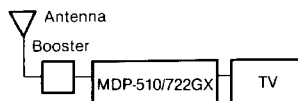
The audio signal of the disc is reproduced in monaural when connected to the TV via the VHF/UHF OUT connector. In order to enjoy the audio signals from the disc in stereo, connect to an audio system as given in the connecting example above.

To view clearer TV broadcasts

Turn off the power of the player.

Using a booster

If the TV signal is weak in your area, the connection above which inserts the video disc player between the antenna and the TV set may weaken it further, thus significantly degrading the picture quality. Under such circumstances, use of a booster is highly recommended. Consult your dealer for the most suitable booster that matches your local signal situation.



Example (3)—Connecting to a TV without Video/Audio Inputs

Step 2—Select the channel for video disc playback

Step 2—Select the channel for video disc playback

The video disc player sends its output to the TV as a VHF broadcast signal. By selecting the unused channel as the video disc output channel, it avoids interference to the disc's playback picture by regular broadcast signals.

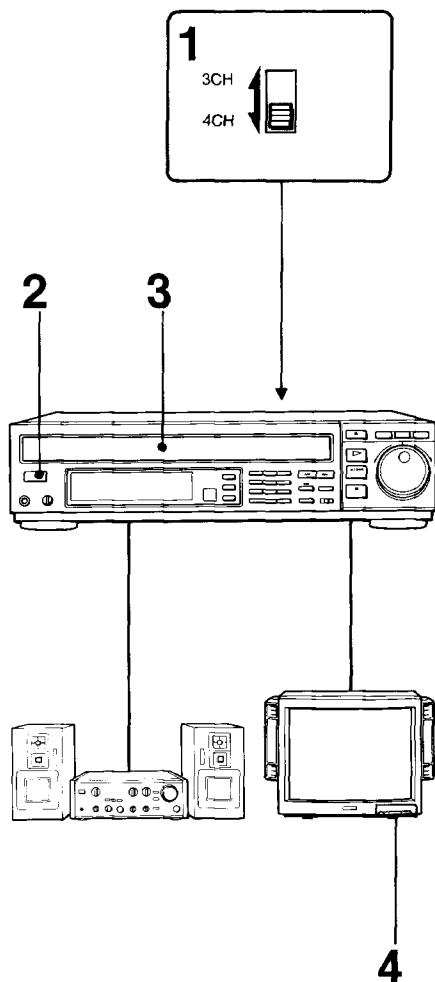
- 1 Set the 3CH/4CH CHANNEL switch on the rear panel to an unused channel.**

The playback picture of the video disc is received on the selected channel.

- 2 Turn on the power to the unit.**
- 3 Open the disc tray and insert the disc and playback.**
Refer to Playing a Disc section on page 21.
- 4 Turn on the TV and switch to the channel set in step 1.**

When watching regular TV programs

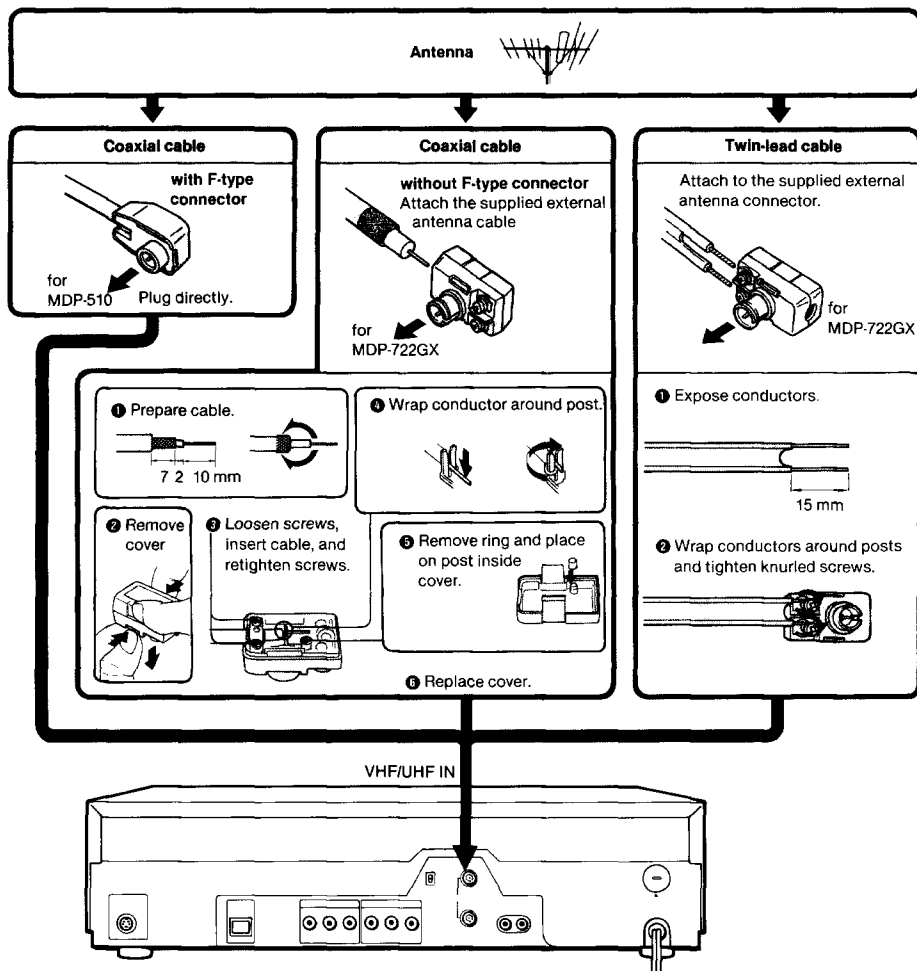
Turn the player off or press the DISC/TV button on the Remote Commander so that the "DISC" indication in the player's display window disappears. Then select the desired channel on the TV. If the TV's picture and sound quality is not satisfactory, refer to the instruction manual of the TV and adjust the channels.



How to connect the VHF antenna or CATV cable, TV, and the player

- 1 Unplug the antenna lead from your TV and plug it into the VHF/UHF IN connector.

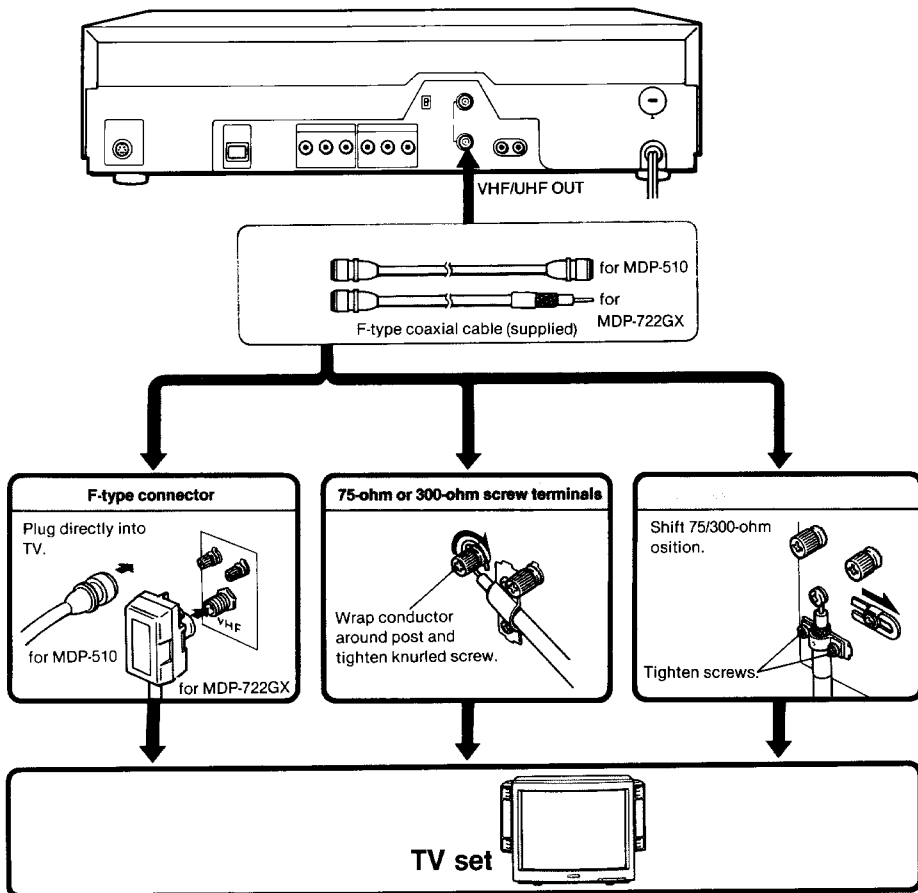
- If your television is not connected with a VHF antenna lead, skip this step.
- If your antenna lead does not belong the example below, consult your Sony dealer or a qualified electrician.



Connections

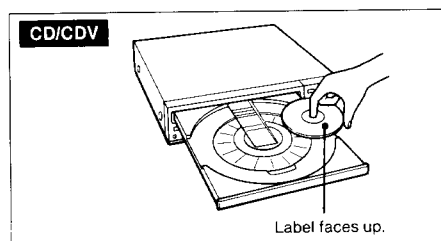
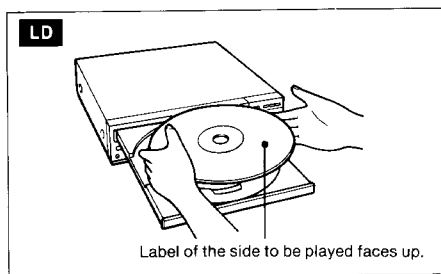
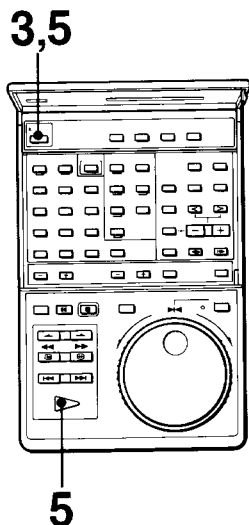
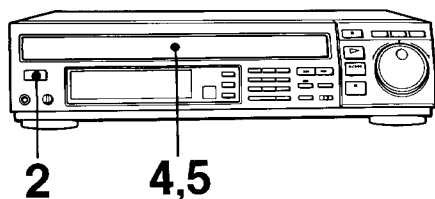
- 2** Plug the supplied coaxial cable with F-type connector to the VHF/UHF OUT connector of the player. Then connect the other end of the cable to the antenna terminal of your TV.

- This connection is necessary even if your TV is not connected to a VHF antenna lead.
- If your TV's antenna terminal does not belong to the example above, consult your Sony dealer or a qualified electrician.



Playing a Disc

LD
CDV
CD



The buttons on the Remote Commander and those on the unit with identical marks have the same function.

Operation

1 Turn on the TV.

Select VIDEO INPUT or channel 3 or 4 (selected in page 18) to receive the disc's playback picture.

If you've connected the player's audio output to a stereo system, turn on the amplifier and select the audio input for disc playback.

2 Turn on the unit.

3 Press to open the disc tray.

4 Place the disc on the tray.

Be sure to place the disc in the proper position.

5 Close the disc tray by pushing the disc tray or by pressing or .




Playback starts. On a CDV disc, playback starts from the video portion.

To switch the CDV's playback portion

Press CDV on the Remote Commander.

If it is pressed while playing back the video portion, playback starts from the beginning of the audio portion. If it is pressed while playing back the audio portion or while the disc is in the pause mode, playback starts from the video portion.

To have the player stand by at the beginning of the disc

Press  on the Remote Commander or  on the unit instead of step 5. The disc tray closes and the unit will pause at the beginning of the disc. Press  to start playback.

To listen to the sound from the player only

Connect headphones to the unit. Adjust the volume with the LEVEL control.

Notes on disc tray

- Do not push down the tray or place a heavy object on it.
- Be careful not to pinch your fingers between the tray and the unit.
- Insert only one disc at a time. Otherwise the player may be damaged.
- An LD single disc can be played back without attaching an adaptor.
- Make sure that the disc is placed properly in the tray. Incorrect positioning may damage the disc.
- If the disc tray fails to close properly and slides out again, reinsert the disc.
- Always keep the tray closed when not using the player to keep dust and dirt from entering the optical system.

Playing a Disc

The buttons on the Remote Commander and those on the unit with identical marks have the same function.

To Stop Playback Momentarily

Press **II**.

The **II** indicator on the unit lights.

When playing back a LD or a CDV (video portion), a still picture appears on the screen and no sound is heard.

When playing back a CD or a CDV (audio portion), "PAUSE" appears on a green (for CD) or blue (for CDV) background and the unit will pause.

To resume playback

Press **II** or **>**.

Playback will start from the point where the button was pressed.

To Stop and Resume at the Same Point Later—Memory Stop (available for LD only)

Set the **STOP MODE/MEMORY** switch on the unit to the right.

The M. STOP indicator in the display window lights.

Start playback and stop at the desired point by pressing **■**.

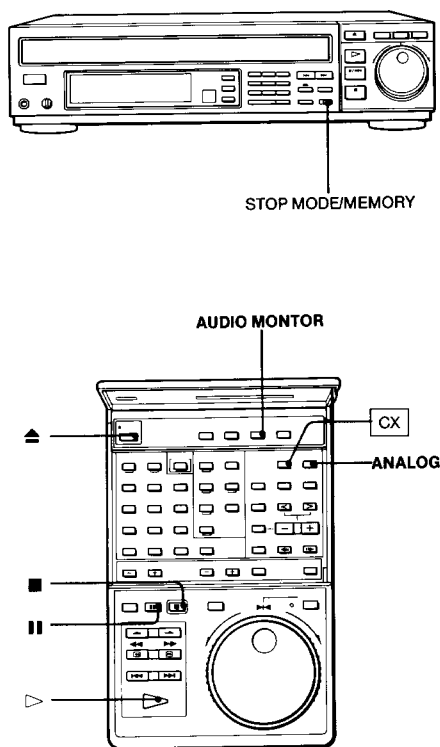
To resume playback

Press **>**.

Playback starts from the point where **■** was pressed, instead of starting from the beginning of the disc.

Notes during memory stop

- The memory stop function is cleared when the power is turned off, when search buttons are pressed, or when the disc compartment is opened.
- There may be a slight difference between the stop and the start position.
- Shuffle, program play, single selection repeat, and A↔B repeat, cannot be performed.



To Stop Playback

Press ■.

To resume playback

Press ▷.

Playback starts from the beginning of the disc.

To Remove the Disc

Press ▲.

Remove the disc and press ▲ to close the tray.

To Play a Stereo or a Second Audio Program (SAP) LD

| | | | | |
|------------------|-------------|---|---------------------|-----------------------|
| | | During playback. → Press AUDIO MONITOR. → Press AUDIO MONITOR. → Press AUDIO MONITOR. | | |
| Reproduced sound | Stereo disc | Stereo | → Left channel | → Right channel |
| | SAP disc | Main sound/1 on left channel Second sound/2 on right channel | → Main sound/1 only | → Second sound/2 only |
| Indicators lit | | 1/L, 2/R | → 1/L | → 2/R |

To switch digital/analog audio sound on an LD

When a digital sound LD is played back, the digital sound is automatically output from the AUDIO OUT jacks. To listen to the analog sound, press ANALOG to turn off the DIGITAL SOUND indicator. Press ANALOG again to return to digital sound output. Note that on some discs, there is difference in the recording level between the analog and digital sound.

To activate the [CX] noise reduction system

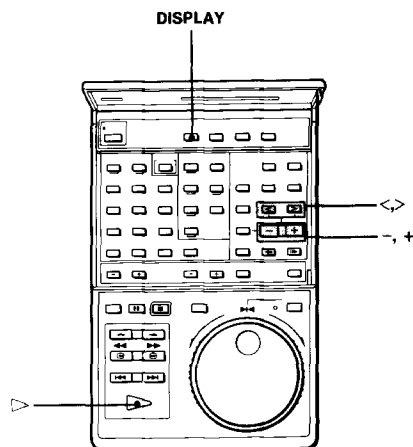
Discs with the [CX] label are recorded with the [CX] noise reduction system, which gives lower noise levels and higher dynamic range. The [CX] indicator on the unit lights when the unit detects a disc recorded with the [CX] noise reduction system. Some discs do not have the codes which automatically activate the player's the [CX] noise reduction system. When playing back discs with the [CX] label, check the [CX] indicator. If the indicator is not turned on, press the [CX] button to turn it on.

To Display a Desired Video Picture on the Screen during CD/CDV (audio portion) Playback

A desired still video picture can be displayed on the screen instead of the blue or green display when playing back discs with audio signals only.

- 1 Before playing back the CD or CDV (audio portion), install a disc with video images.
- 2 Store a desired video picture referring to the "To Store and Recall a Desired Scene—One Scene Memory/Recall" section (page 29).
- 3 Press RECALL to call up that video picture.
- 4 Playback the CD or CDV (audio portion).

Changing Speed and Direction—Speed Play



The buttons on the Remote Commander and those on the unit with identical marks have the same function.

To Change the Speed —Using MULTI SPEED

- 1 Press **<** or **>** to designate the playback direction.
Press **<** for reverse and **>** for forward direction.
- 2 Press **+** or **-** to set the playback speed.
Press **+** to increase and **-** to reduce the playback speed.

The playback speed can be set in eleven steps in both the forward and reverse directions.

| Speed Indication | Approximate Speed |
|------------------|-----------------------|
| x 10 | 10 times normal speed |
| x 5 | 5 times normal speed |
| x 3 | 3 times normal speed |
| x 2 | 2 times normal speed |
| x 1 | normal speed |
| x 1/2 | 1/2 normal speed |
| x 1/4 | 1/4 normal speed |
| x 1/8 | 1/8 normal speed |
| x 1/16 | 1/16 normal speed |
| x 1/30 | 1/30 normal speed |
| x 1/90 | 1/90 normal speed |

Fast



Slow

Sound during speed play

The sound is muted in all playback speeds except x 1 forward.

When a still picture is displayed suddenly

Automatic picture stop code is recorded on some discs. When the player detects this code, while playing back in the following speeds: x 1, x 1/2, x 1/4, x 1/8, x 1/16, 1/30, and 1/90, playback stops at the point displaying a still frame. Operate the JOG/SHUTTLE or press **>**, **⏮**, **⏭**, **⏪**, **⏩**, **<** / **>** to resume normal playback.

How to use the PICTURE MODE button for maximum picture quality

For better picture quality in the following situations, press the PICTURE MODE button so the DIGITAL PICTURE indicator lights.

1. When the still picture is distorted while playing back a CAV disc. Picture blur could be observed especially for pictures with high speed movement.
2. When the transition between normal speed and speed play is not smooth.

In this mode, however, the video signal is played back via the digital memory and the picture may not be smooth for scenes with high speed movement. Therefore, press it again to turn off the DIGITAL PICTURE indicator for normal operation.

To resume normal playback

Press **>**.

To Change the Direction

Press **<** for reverse or **>** for forward direction.

The direction can be changed from any playback speed.

To resume normal playback

Press **>**.

To Display Playback Speed and Direction

Press **DISPLAY**.

The selected direction (< or >) and speed is displayed on the screen.

