

Compact Disc Player

Operating Instructions

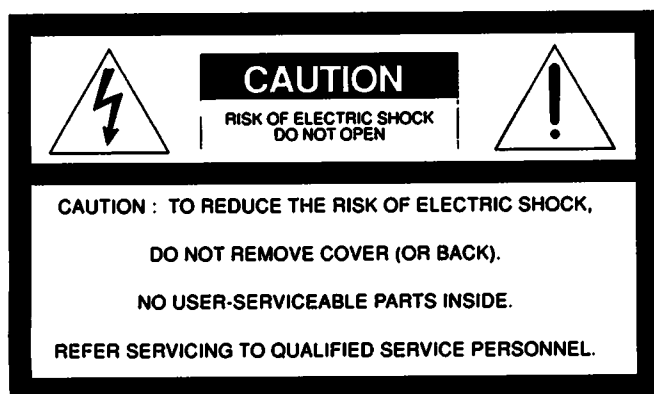


***CDP-312
CDP-212***

Warning

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

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.



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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

Owner's Record

The model and serial numbers are located at the rear of the unit. 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. _____

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Conventions



This indicates a function operated only from the remote commander.



This indicates a function operated only on the main unit.

- As CDP-212 is not supplied with a remote commander, it does not have those functions activated only by the remote commander.
- In the instructions starting from page 7, buttons on the remote commander are indicated in parenthesis, unless mentioned otherwise.

Note on the remote commander and remote control operation

- Keep the commander away from extremely hot or humid places.
- Avoid dropping any foreign objects into the commander casing, particularly when replacing the batteries.
- Avoid exposing the remote sensor to direct sunlight or lighting apparatus. Such exposure can cause a malfunction.
- To avoid damage caused by battery leakage and corrosion, remove the batteries when the commander will not be used for a long time.

Safety Precautions

Before operating the unit, please read the following precautions carefully.

Check the operating voltage of the unit before operation.
Operate the unit only on 120 V AC, 60 Hz.

Stop operation immediately if any liquid or solid object should fall into the cabinet. Unplug the unit and have it checked by qualified personnel.

Unplug the unit from the wall outlet if you do not use it for a long time. Disconnect the cord by grasping the plug. Never pull the cord itself.

The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.

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

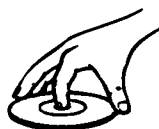
The AC power cord must be changed only at a qualified service shop.

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

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

Notes on handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape on the disc.



- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight as there may be a considerable rise in the temperature.
- After playing, store the disc in its case.

Caution on adjusting volume

Do not turn up the volume while listening to a portion with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level portion is played.

Maintenance

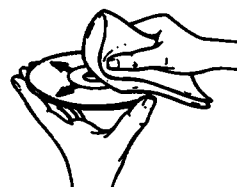
Cleaning Your Unit

Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

Cleaning Discs

When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center outwards.

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



Unpacking

Choosing a Good Location

- Place the unit in a location with adequate air circulation to prevent internal heat build up in the unit.
- Do not place the unit on a soft surface, such as a rug that might block the ventilation holes on the bottom.
- Do not install the unit:
 - near heat sources such as radiators or air ducts.
 - in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On moisture condensation

If the unit is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the unit. Should this occur, the unit will not operate. In this case, remove the disc and leave the unit turned on for about an hour until the moisture evaporates.

Checking the Supplied Accessories

Make sure that all supplied accessories are included with your unit. This manual and the following items must be included with your unit.

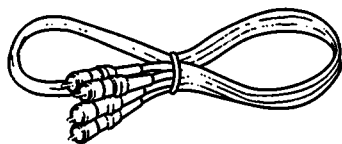
If not, contact your Sony dealer.

- a) Audio connecting cord (1)
- b) Remote commander (1)
(only for CDP-312)
- c) Sony SUM-3 (NS) batteries (2)
(only for CDP-312)

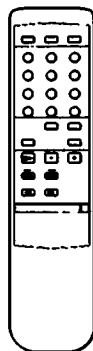
Do not throw away the carton and the packing material. They will come in handy when transporting the unit or shipping it for servicing.

A

a)



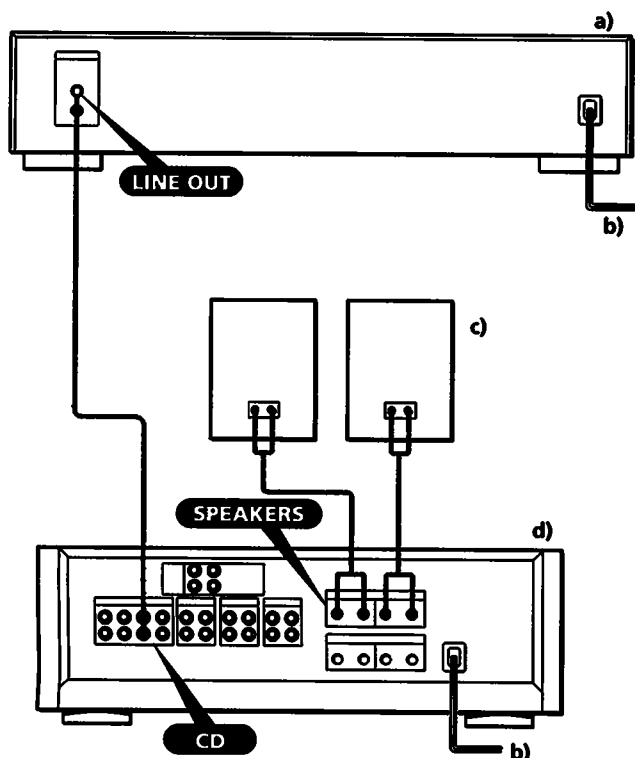
b)



c)



A



Hooking Up the System

Connect the unit to an amplifier as shown in Fig. A.

- a) Compact disc player
- b) to an AC outlet
- c) Speakers
- d) Amplifier

Notes on Connection

- Turn off the power of each unit before making connections. Connect the AC power cord last.
- Be sure to insert the plugs firmly into the jacks. Loose connection may cause hum and noise.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.
- The supplied audio cord plugs and jacks are color coded. Red plugs and jacks are for the right channel (R) and white ones for the left channel (L).

Inserting the Batteries into the Remote Commander (only for CDP-312)

B

You can control the unit with the supplied remote commander.

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

1 Slide the cover to remove it.

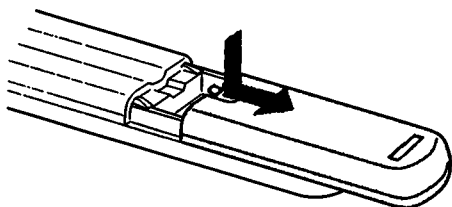
2 Insert two size AA (R6) batteries correctly so that the ⊕ and ⊖ polarities match the polarity diagrams inside the battery compartment.

On battery life

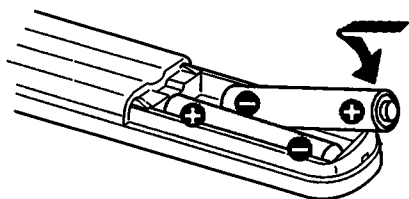
- About half a year of normal operation can be expected when using Sony SUM-3 (NS) batteries.
- When the batteries are run down, the remote commander will not operate the unit. If this happens, replace both batteries with new ones.

B

1



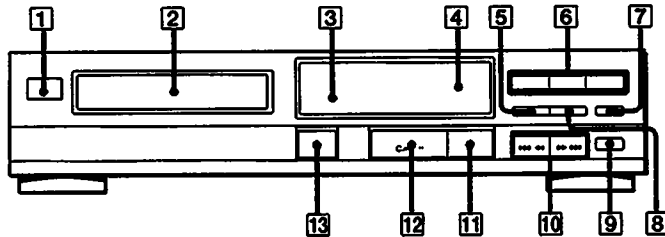
2



Identifying the Parts

CDP-312/212

Refer to the pages indicated in parenthesis for details.

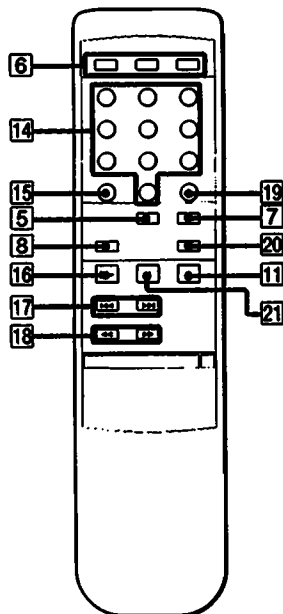


Front Panel / Remote Commander

- 1 POWER switch (7)
- 2 Disc tray (7)
- 3 Display
- 4 Remote sensor
- 5 TIME button (8)
- 6 PLAY MODE buttons
CONTINUE button (10, 12, 16)
SHUFFLE button (10, 12, 16)
PROGRAM button (11)
- 7 CHECK (program check) button (12, 13)
- 8 REPEAT button (14)
- 9 EDIT/TIME FADE button (15, 16, 17)
- 10 <<< <</>> >>> (AMS*/manual search) buttons (9, 11, 15, 17)
- 11 ■ (stop) button (7)
- 12 ▷|| (play/pause) button (7)
- 13 △ OPEN/CLOSE button (7)
- 14 Numeric buttons** (9, 11, 13, 15, 17)
- 15 ⑩ (over 10) button** (9)
- 16 ► (play) button** (7)
- 17 <<</>>> (AMS*) buttons** (9, 11)
- 18 <<</>>> (manual search) buttons** (9)
- 19 CLEAR (program clear) button** (13)
- 20 FADER button** (8)
- 21 || (pause) button** (7)

- * AMS is the abbreviation of Automatic Music Sensor.
- ** only on the remote commander

RM-D320



(only for CDP-312)

Playing a Disc

In the continuous play mode, you can play from the first selection or desired selection on your disc.

Before playing a disc, turn on the amplifier and set the input selector to the CD player position.

Playing the Entire Disc

1 Press POWER.

The display appears.

2 Press \triangle OPEN/CLOSE.

Place a disc with the printed side up on the tray.

3 Press \triangleright II (\triangleright).

The disc tray closes and the first selection starts playing. The display shows you the following information.

- a) Selection number
- b) Elapsed playing time
- c) Music calendar

To stop play

To stop for a moment during play, press \triangleright II (II).

To resume play, press \triangleright II again (\triangleright or II again).

To stop play, press ■.

To stop play and open the tray, press \triangle OPEN/CLOSE.

To take out the disc

Press \triangle OPEN/CLOSE.

To play an 8cm (3-inch) CD

Place it on the inner circle of the tray. If the disc is provided with an adaptor, first remove it. Do not put a normal CD (12cm/5-inch) upon an 8 cm CD.

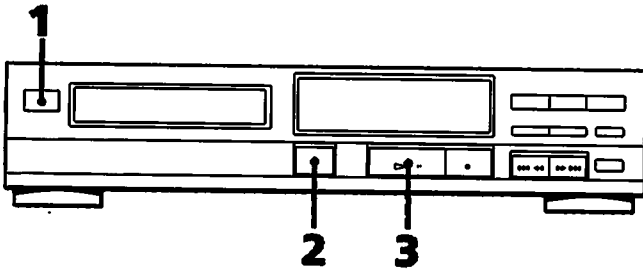
What is this indication?

no disc

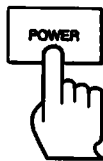
This indication appears when there is no disc on the disc tray.

If you turn on the power with a disc in the tray

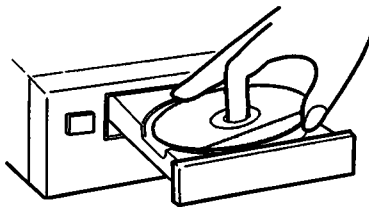
Play begins automatically from the beginning of the disc. By connecting a commercially available timer, disc play can be started at any desired time.



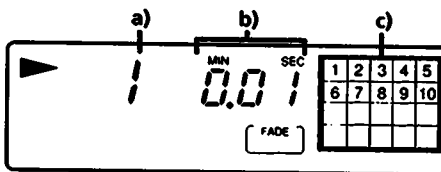
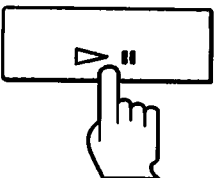
1



2

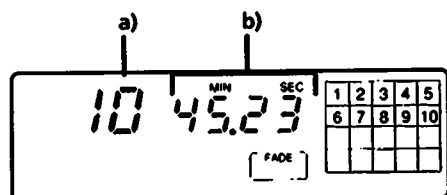


3

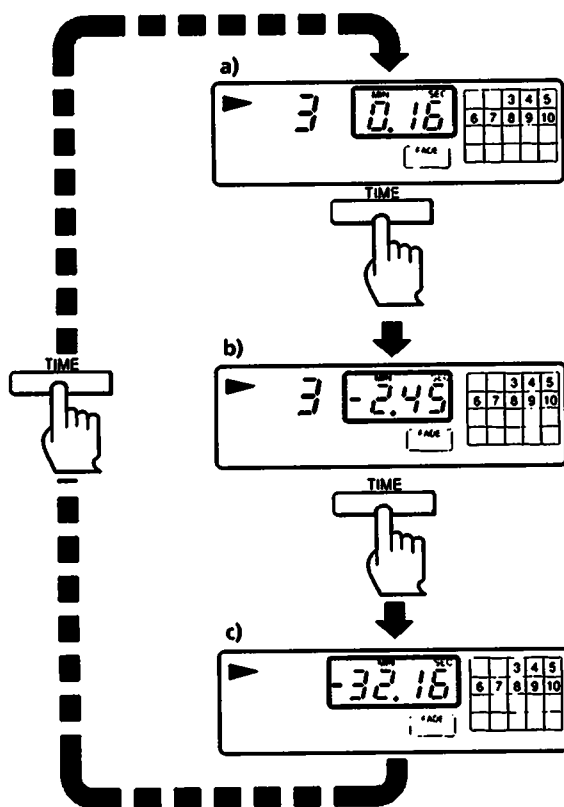


Playing a Disc

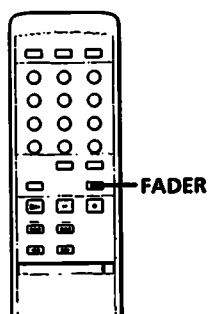
A



B



C



Information Display

Figure A

When you press **OPEN/CLOSE** to close the tray, or press **TIME** in stop mode, the display shows you the following information:

- a) Total number of selections
- b) Total playing time of the inserted disc

Figure B

Each time you press **TIME** during play, the display changes to give you the following information.

- a) Elapsed playing time
 - b) Remaining time in the current selection
 - c) Remaining time of the disc
- However, "----" appears instead of the actual time when the remaining time exceeds 100 minutes in program mode

Note

The time display mode selected with **TIME** will not change until the power is turned off.

Fading In / Fading Out (only for CDP-312)

You can have the play fade in or out in 5 seconds.

To end play fading out

Press **FADER** on the remote commander when you want to start fading out. "|||>" in "FADE" flashes in the display, and play fades out and the unit enters pause mode.

To restart play fading in

Press **FADER** on the remote commander in pause mode. "|||<" in "FADE" flashes in the display.

Playing a Disc

Locating a Particular Selection

You can locate the beginning of a desired selection in two ways.

a) To locate sequentially

To locate the beginning of the current or preceding selection

- Press \lll (\lll) as many times as required.
- Keep \lll (\lll) pressed to skip selections in succession (Operable only in stop mode).

To locate the beginning of a succeeding selection

- Press \ggg (\ggg) as many times as required.
- Keep \ggg (\ggg) pressed to skip selections in succession (Operable only in stop mode).

b) To locate directly



Press one of the numeric buttons to enter the desired selection number.

If a selection number is greater than 10, use the $\circ 10$ and $\odot 1$ to $\odot 10$ buttons.

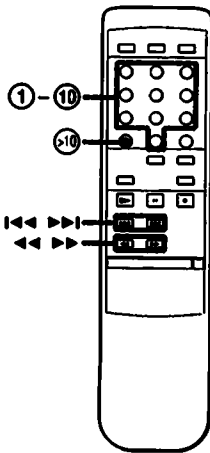
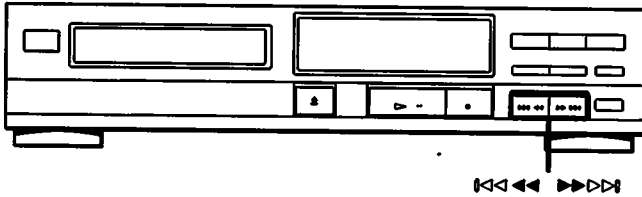
$\odot 10$ functions as the figure 0.

e.g. To play from selection No.22

Press $\circ 10$ and $\odot 2$ $\odot 2$

e.g. To play from selection No.30

Press $\circ 10$ and $\odot 3$ $\odot 10$.



(only for CDP-312)

Locating a Particular Point in a Selection

You can also locate a particular point in the disc during play in two ways.

a) To search quickly while monitoring the sound

Forward locating at high speed

Keep \ggg (\ggg) pressed during play and release it at the desired point.

Reverse locating at high speed

Keep \lll (\lll) pressed during play and release it at the desired point.

b) To search quickly by observing the display

Press $\triangleright \parallel$ (\parallel), then keep \lll (\lll) or \ggg (\ggg) pressed. The search speed will increase, but there will be no sound. Find the desired point by observing the display.

Press $\triangleright \parallel$ again (\blacktriangleright or \parallel again) at the desired point.

When "rr" is displayed

If you continuously press \ggg (\ggg) over the last selection, "rr" appears in the display. Press \lll (\lll) or \ggg (\ggg) to return to normal indication.

Playing Selections in a Random Order

You can have all the selections played in a random order.

Shuffle Play

1 Press SHUFFLE.

"SHUFFLE" appears in the display.

2 Press ▷|| (▶).

To cancel shuffle play

Press CONTINUE and the unit enters continuous play mode. "SHUFFLE" goes off from the display.

To check the remaining time

Press TIME once to see the remaining time of the selection being played, twice to see the total remaining time, and once more to return to the initial display.

To start shuffle play immediately from the current selection

Press SHUFFLE during play and shuffle play begins from the current selection.

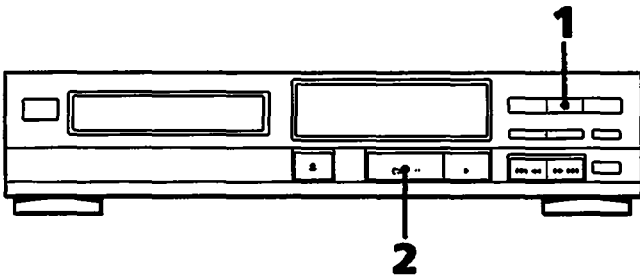
On the displayed total playing time

A one-second access time blank is added between each selection. This increase is automatically added to the displayed total playing time.

What is this indication?



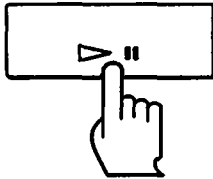
This indication appears while the unit is "shuffling" the selections.



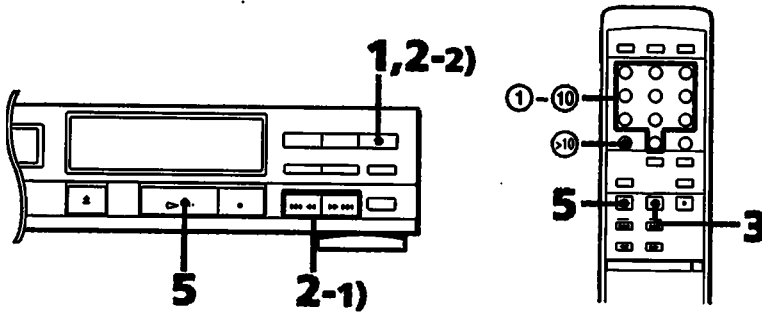
1



2



Playing in a Desired Order



You can make a program by designating up to 24 selections in a desired order. At the same time, you can adjust the total playing time of the program, so that you can make the program fit the length of a tape when recording.

Also, if your unit is CDP-312, the total playing time of program selection for side A and B can be adjusted, so that you can make two different programs for both sides of the tape when recording.

Programming and Recording

1 Press PROGRAM.

PROGRAM appears in the display.

2-1) Press <<< (I<<<) or >>> (I>>>) to change a selection and check the time. - Program edit

If satisfactory, go to the next step. If not, choose another selection.

The display shows you:

- a) Last programmed selection
- b) The total playing time (The total playing time will not appear when it exceeds 100 minutes.)
- c) Programmed selection numbers

2) Press PROGRAM to store the selection.

Step number (d) appears in the display for a while. Repeat steps 1) and 2) to program other selections.

To select your desired selection directly

Press the numeric buttons of the desired selections in your desired order.

3 Press II to make a program for side B.

B appears in the tape indicator and "P" appears in the display, and the total playing time is reset to 0. A pause is also counted as a selection.

4 Program selections for side B by repeating step 2.

5 Press >>II (I>>).

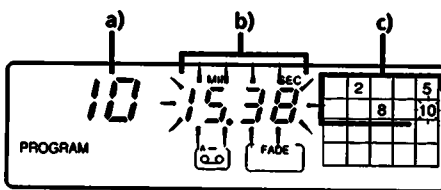
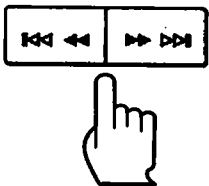
Program play starts.

When recording, you had better start recording on the cassette deck first to transport the leader tape before starting program play on this unit.

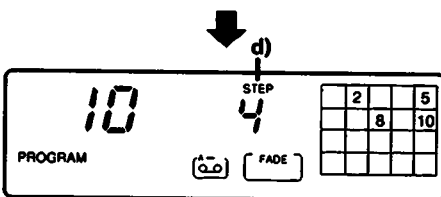
1



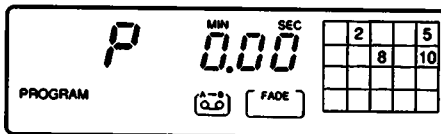
2-1)



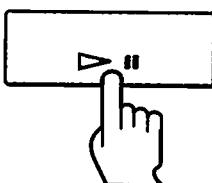
2)



3



5



Playing in a Desired Order

To play the selections for side B (only for CDP-312)

When the selections for side A are played, the unit enters pause mode. Reverse the tape, then press **▷||** (▶ or ||).

To stop playing

Press **■**.

When you press **▷||** (▶), you can play the same program repeatedly.

To cancel program play

Press CONTINUE or SHUFFLE and the unit enters continuous or shuffle play mode respectively. The program will be erased.

To check your program

Press CHECK. The first selection in the program will appear.

Each time you press CHECK, the next selection in the program will appear. After the last selection, "End" will be indicated and the display will soon return to the initial status.

While checking the program for side A, **1A** appears and also for side B, **1B** appears.

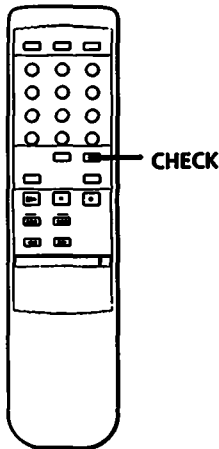
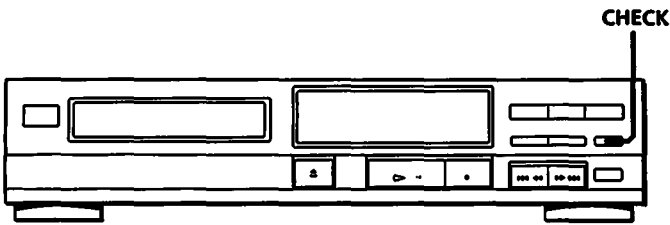
On the displayed total playing time

Selections programmed consecutively but which are not numerically consecutive (i.e. 1, 3, 5, etc.) have a one-second access time blank added between each one. This increase is automatically added to the displayed total playing time.

What is this indication?

FULL

This indication appears when you try to add a selection to the program which already has 24 selections.



(only for CDP-312)

Playing in a Desired Order

Changing Your Program

You can make the following changes before starting play.

To erase the last selection, press CLEAR. Each time you press CLEAR, the last selection in the program will be erased.



To erase the entire program, press ■ once in stop mode; twice during play. The program is also erased when you turn off the unit or you press △ OPEN/CLOSE.

To add a selection to the end of the program, simply press the numeric button.



To delete a selection, press CHECK repeatedly until the unwanted selection appears. Then press CLEAR.

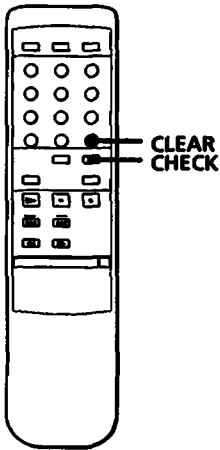
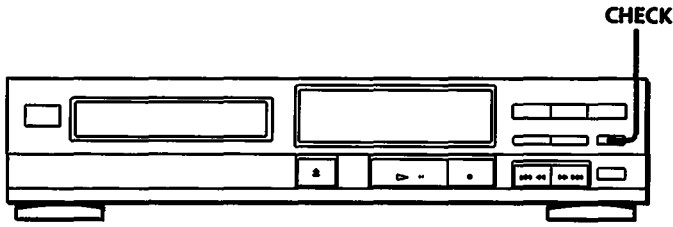


To change the order, press ■ in stop mode to erase the program. Then repeat the programming procedure from the beginning.

To check the remaining time

Press TIME once to see the remaining time of the selection being played; twice to see the total remaining time of the programmed selections; once more to return to the initial display.

If you have inserted a pause, the display shows the remaining time until the pause.



(only for CDP-312)

Playing Repeatedly

You can choose between two different repeat play modes. One repeats all the selections in the current play mode, the other repeats any given selection.

Repeat Play

To repeat all selections a)

Press REPEAT once.

"REPEAT" appears in the display.

The unit will repeat in the current play mode.

Play mode	Selections to be repeated
Continuous play	All the selections
Shuffle play	All the selections that the unit reshuffles
Program play	All the programmed selections in the same order

To repeat the current playing selection b)

(only during continuous play)

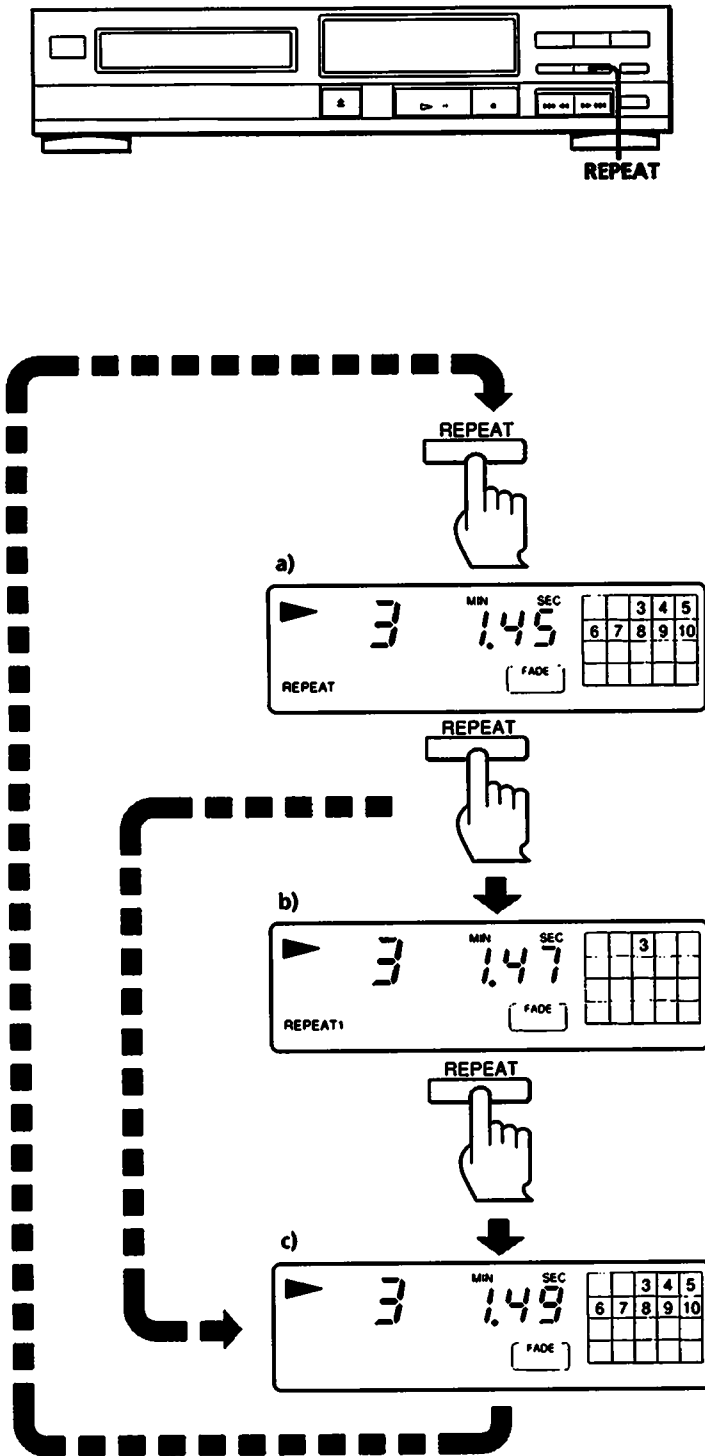
Press REPEAT again during repeat play, "REPEAT 1" appears.

To cancel repeat play c)

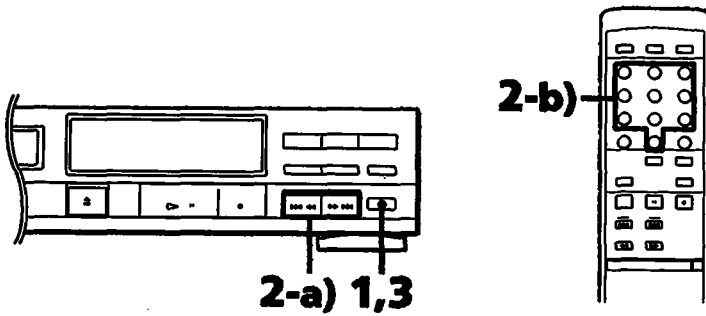
Press REPEAT again.

In continuous mode, "REPEAT 1" goes off.

In shuffle and program play modes, "REPEAT" goes off.



Designating the Total Playing Time

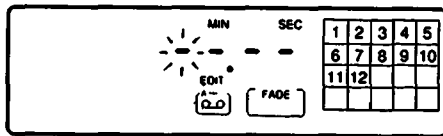


You can designate a playing time and the unit will make 2 different programs of selections each fitting within that period. These programs can contain up to a total of 24 selections.

Use this function, by designating the length of your tape, for editing both sides of a tape. This function, called time edit, sets the playing time of each program within the designated time automatically, by choosing selections in numerical order which changes as little as possible.

You can also program desired selections by priority. In this case, you can designate desired selections beforehand and the remaining selections will be programmed to fit in the remaining time.

1

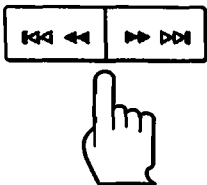


Operating Time Edit

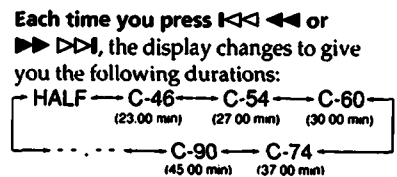
1 Press EDIT/TIME FADE and display "EDIT".

2 Designate the length of one side of your tape.

2-a)



a) When you specify a commercially available tape length:



When you select HALF, you can divide all the selections of the disc into two programs without changing their order.

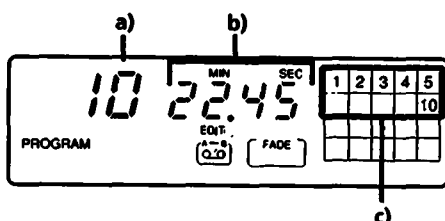
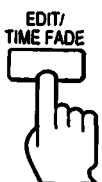
b) When setting your desired time:

Use the numeric buttons. Press ⑩ for "0". It is generally not necessary to press numeric buttons for seconds.

HALF cannot be set in the following case:

- a disc with more than 24 selections.
- when you have programmed desired selections beforehand.

3



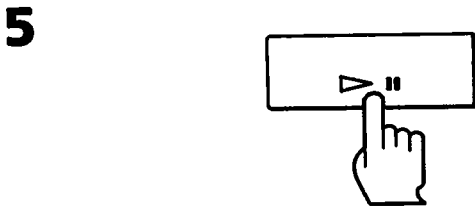
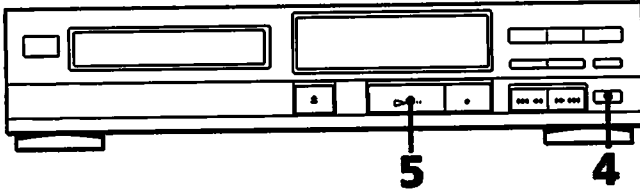
3 Press EDIT/TIME FADE.

The selections for side A are determined automatically.

- a) The last selection to be recorded,
- b) Total playing time and
- c) Selections to be recorded on side A appear.

(to be continued)

Designating the Total Playing Time



4 Press EDIT/TIME FADE once more while "B" in the tape indicator is flashing.

Another program for the other side is completed.

5 Press >II (>II).

The selections for side A will be played and then the unit will pause. Reverse the tape, then press >II again (> again or II). The selections for side B will be played.

To cancel the edit

Press CONTINUE or SHUFFLE and the unit enters continuous or shuffle play mode respectively.

The program will be erased.

To check the program

See page 12.

To designate a different time for each side

Execute steps 1 to 3 on page 15, then press II. Then execute steps 2 to 3 for the other side.

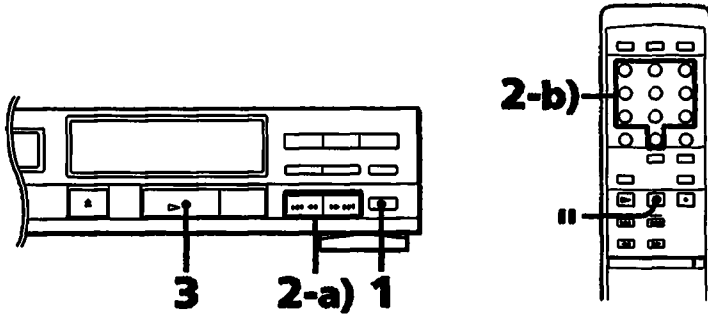
On the displayed total playing time

Selections programmed consecutively but which are not numerically consecutive (i.e. 1, 3, 5, etc.) have a one-second access time blank added between each one. This increase is automatically added to the displayed total playing time.

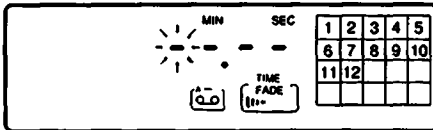
If your disc has more than 24 selections

Selections over number 24 cannot be programmed with the time edit function.

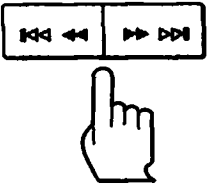
Fading Out at the Desired Time – Time Fade



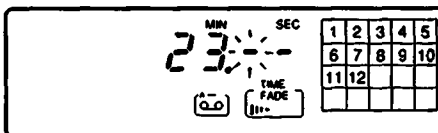
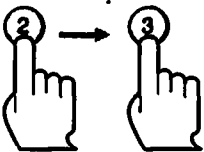
1



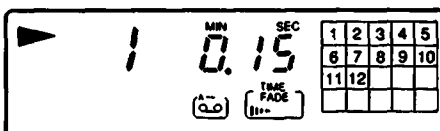
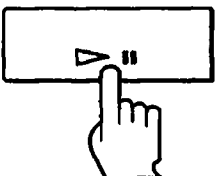
2-a)



b)



3



You can end the play fading out by designating the play duration. Once the time fade is set, it functions twice for editing both sides of a tape. You can change discs without cancelling this function and use it in any play mode.

1 Press EDIT/TIME FADE twice in stop mode (or press it once in pause mode).

"TIME FADE" and "A" in the tape indicator displayed in the display.

2 Set the desired play duration.

a) When you specify a commercially available tape length:

See step 2-a) on page 15.

When you select HALF

The playing time of each program is set to a half of the total playing time of the disc.

b) When setting the time for one side of the tape as you want:

See step 2-b) on page 15.

3 Press >II (>) to start playing.

Before the unit enters pause mode at the set time with "B" lit in the tape indicator, play starts fading out.

To start play for the other side of the tape

Press >II (>) or II.

The unit enters pause mode at the set time by fading out.

When this play ends, time fade is cancelled.

To cancel time fade

Press EDIT/TIME FADE again.

Time fade is also cancelled when

I<< << or >> >>I is kept pressed.

To display the time remaining until the set time

Press TIME twice.

When play ends within the designated period

Time fade function is kept active. Change discs and start play. When the total playing time of the discs reaches the designated period, the unit pauses by fading out.

Specifications

Compact disc player

Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio	More than 97 dB
Dynamic range	More than 95 dB
Harmonic distortion	Less than 0.0050 %
Channel separation	More than 93 dB

Outputs

LINE OUT (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms
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General

Power requirements	120 V AC, 60 Hz
Power consumption	10 W
Dimensions (approx., including projections)	430 x 100 x 295 mm (w/h/d) (17 x 4 x 11 $\frac{1}{4}$ inches)
Mass (approx.)	3.0 kg (6 lbs 10 oz)

Remote commander (only for CDP-312)

Remote control system	Infrared control
Power requirements	3 V DC with two size AA (R6) batteries
Dimensions (approx., including projections)	44 x 21 x 185 mm (w/h/d) (1 $\frac{1}{4}$ x $\frac{7}{8}$ x 7 $\frac{1}{4}$ inches)
Mass (approx.)	100 g (4 oz)

Supplied accessories

Audio cord	(1) (2 phono plugs – 2 phono plugs)
Remote commander (only for CDP-312)	(1)
Sony SUM-3 (NS) batteries (only for CDP-312)	(2)

Design and specifications are subject to change without notice.

Troubleshooting Guide

Before going through the check list below, first refer back to the connections and operating procedures. Should any problem persist after you have made these checks, consult your nearest Sony service facility.

Symptom	Cause	Remedy
The disc tray does not close.	The disc is not placed correctly.	Place the disc correctly on the disc tray.
Play does not start.	Dirty disc.	Clean the disc.
	The disc is inserted upside down.	Insert the disc with the printed side up.
	A pause is engaged.	Press ▷ (▶ or) again to release it.
	Moisture condensation.	Leave the unit turned on for approximately one hour.
Sound is not heard.	Loose connection.	Insert the plug firmly.
	Connection is incorrect.	Check the connection referring to "Hooking Up the System".
Play does not begin from the first selection.	The unit is in the program or shuffle mode.	Press CONTINUE.
The remote commander does not operate the unit. (only for CDP-312)	The batteries are run down.	Replace both batteries.
	The remote commander is not pointed at the remote sensor.	Point the remote commander at the sensor.
	There is an obstacle between the remote commander and the unit.	Remove the obstacle.
	The remote commander is too far from the unit.	Move closer.