SONY

3-754-396-21(1)

Compact Disc Compact Player



D-311

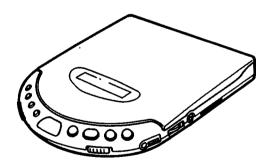
Operating Instructions

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

Owner's Record

The model and serial numbers are located at the bottom. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. D-311 Serial No.



Discman

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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.

INFORMATION (For the Customers in U.S.A.)

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 quarantee 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/felevision 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.

For the Customers in the United Kingdom

CLASS 1 LASER PRODUCT LUOKAN 1 LASERLAITE KLASS 1 LASERAPPARAT This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the bottom exterior.

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For the Customers in the United Kingdom

Important

D------

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is

marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol or coloured green or greenyellow.

Precautions

On safety

- As the laser beam used in this compact disc player is harmful to the eyes, do not attempt to disassemble the casing. Refer servicing to qualified personnel only.
- Do not put any foreign objects in the safety slot inside the disc compartment.
 If you do so, the laser beam may come out when the lid is opened.
- Do not put any foreign objects in the DC IN 6 V (external power input) jack.
- Should any solid objects or liquid fall into the unit, disconnect the power supply and have the unit checked by qualified personnel before operating it any further.

On power sources

- Use the supplied rechargeable battery pack, batteries (not supplied), house current or a car battery.
- For AC operation: Use the AC power adaptor supplied with this player. Do not use any other AC power adaptor as it may cause malfunction.
- For car battery operation: Use the car mount arm CPM-203PK or mount plate CPM-203P (not supplied) and car connecting pack CPA-2/CPA-3 (not supplied).
- If the unit is not going to be used for a long period of time, be sure to disconnect the power supply (AC power adaptor, batteries, rechargeable battery pack, or mount plate) from the unit. To remove the AC power adaptor from the wall outlet, grasp the adaptor itself; never pull it by the cord.

On operation

- Since the CD system offers a wide dynamic range, the peaks of the high level inputs are recorded with high fidelity, and the noise level is very low.
 Do not turn up the volume while listening to a part of disc with no audio signals or very low level inputs. If you do so, the speakers may be damaged when the peak level of the sound is played.
- The lens on the disc table should be kept clean. Do not touch the lens or poke at it. If you do so, the lens may be damaged and the unit will not operate properly.

On installation

- Never install the unit where it would be subjected to:
 - heat sources such as radiators or airducts.
 - direct sunlight.
 - excessive dust.
 - moisture or rain.
 - mechanical vibration or shock.
 - unleveled surface.
- When the unit is used with the AC power adaptor, do not wrap the unit in a cloth, blanket, etc. If you do so, the temperature inside and outside the unit may rise considerably, resulting in malfunctioning of the unit or serious accidents.
- 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 in a warm place for several hours until the moisture evaporates.
- For the unit to operate at its best, it should not be subjected to temperatures below 5°C (41°F) or above 35°C (95°F).

Notes on headphones

Road safety

Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in many areas. It can also be potentially dangerous to play your headsets at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situations.

Preventing hearing damage
 Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce volume or discontinue use.

Caring for others

Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate to the people around you.

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

Location and Function of Controls

See the pages in for more details.

The laser beam is emitted from this point to pick-up signals from the disc.

DSP* MODE button

Cline OUT (output) jack (stereo mini jack) (stereo mini jack) (for listening through headphones)

REMOTE (headphones with remote commander) jack (for listening list)

He - PH (AMS**/SEARCH) buttons

STOP/CHG (charge) button 🚯

- 🔰 (play/pause) button 🚯

HOLD switch 🐠

RESUME ON/OFF switch

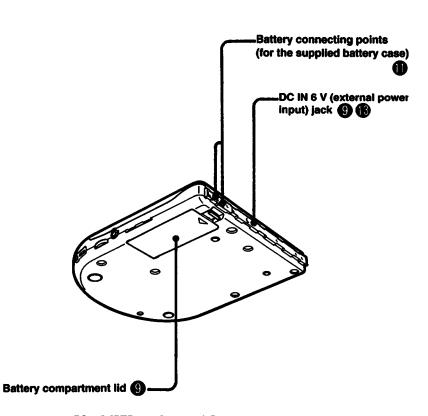
PLAY MODEbutton (2) (2)

REPEAT/ENTER-

OPEN button

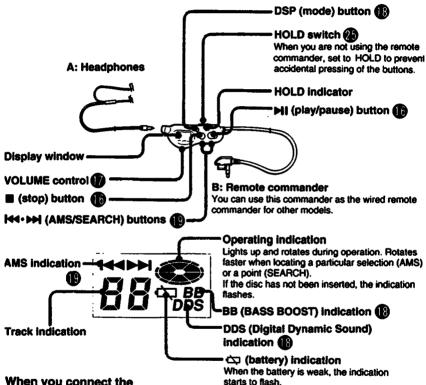
Digital Signal Processing

^{**} Automatic Music Sensor



Location and Function of Controls

Headphones with Remote Commander



When you connect the headphones with remote commander to the unit Make sure that the unit is in the stop mode.

Is it possible to operate other compact disc compact player with the supplied remote commander? Basically yes. However, some model is not operative.

When you do not use the headphones with remote commander

battery is used up.

Detach the remote commander from the \(\int \) /REMOTE jack to avoid unnecessary battery comsumption caused by accidental operation of the commander.

It will light up for approx, 30 seconds when the

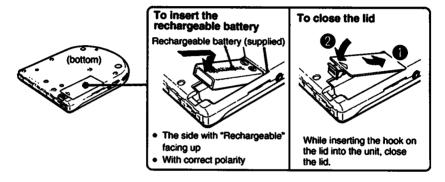
Power Sources

Using with Rechargeable Battery

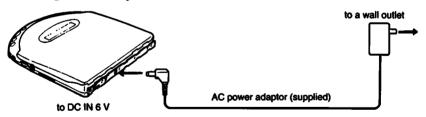
When using the rechargeable battery for the first time, make sure to charge it for 4 hours.

Installing rechargeable battery

Open the lid, and insert the rechargeable battery, the side with "Rechargeable" facing up, according to the \oplus and \ominus indication in the battery compartment.



To charge the battery



- Connect the supplied AC power adaptor when the unit is in the stop mode.
- 2 Press the STOP/CHG button to start charging the battery.

 The (CDD) indication and "CHARGE" appear in the display window, and the (CDD) indicator drifts while moving.

 They disappear when charging ends.
- 3 Disconnect the AC power adaptor.

Power Sources

Rechargeable battery life

Charging time	Playing time	
4 hours (full charge)	approx. 2 hours	

(When the unit is used on a flat and stable place)

When to replace the rechargeable battery

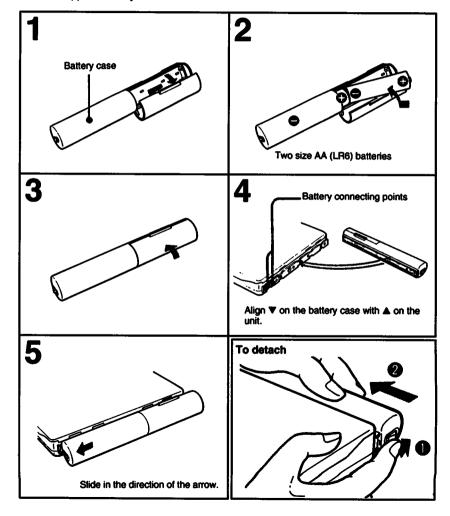
If the operating time of the CD player reduces about by half even if you charge it fully, replace it with a new one (BP-5, optional).

Notes on the rechargeable battery (Nickel-zinc battery)

- Be sure to use the supplied AC power adaptor or the optional AC-E4M when charging the battery.
- Do not charge the battery for over 24 hours. After charging is completed, be sure to disconnect the AC power adaptor from the unit.
- Store the battery in a temperature between 5°C (41°F) and 35°C (95°F) to make it work at its best.
- . Never throw the battery into fire.
- Never short-circuit the battery terminal.
- Do not disassemble the battery. If the electrolyte inside the battery should come into contact with cloth or skin, wash the contaminated objects with water immediately.

Using with Batteries

Use the supplied battery case.



Power Sources

To Play for a Long Time

Insert a fully charged rechargeable battery and attach the battery case containing alkaline batteries.

This enables continuous play for approx. 6.5 hours. (When the unit is used on a flat and stable place)

Alkaline battery life

When two size AA (LR6) alkaline batteries are used, approx. 4 hours of playback is possible.
(When the unit is used on a flat and stable place)

Notes on batteries

- Insert batteries with correct polarity.
- Do not use old batteries with new ones or different types of batteries together.
- If the electrolyte inside the battery should leak, wipe the contaminated area of the battery case with a cloth and replace the old batteries with new ones.

- Do not attempt to charge the batteries.
- When the unit is not to be used for a long period of time, remove the hatteries.

When you install a rechargeable battery or alkaline batteries (use in conjunction with the supplied battery case)

Make sure that the unit is in the stop mode. If not, the **COURCE** indication may not indicate the power remaining in the battery correctly.

Using on House Current

Connect the supplied AC power adaptor in the same way as for charging the rechargeable battery.

When the unit is not to be used, be sure to disconnect the AC power adaptor.

Note on the AC power adaptor
Use only the supplied AC power adaptor
or the AC-E4M AC power adaptor (not
supplied).



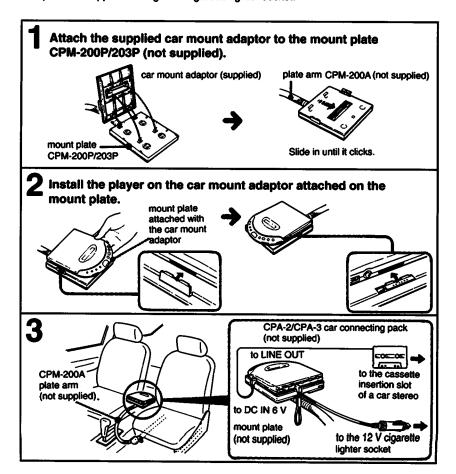
Never use any other adaptors manufactured by Sony because the polarity of the supplied adaptor is opposite of conventional adaptors. Do not use the supplied AC power adaptor for other "Discman" CD compact players with DC IN 9 V jack, nor the optional AC power adaptor such as the AC-D6M.

Various Ways of Using

Listening in a Car

You can listen to the CD player through a car cassette deck by using the following equipment. Be sure to attach the supplied car mount adaptor to the unit before connection.

The power is supplied through the cigarette lighter socket.



Various Ways of Using

Accessories for listening in a car (not supplied)

CPM-200A: Plate arm

CPM-200P/CPM-203P: Mount plate

CPM-200PK/CPM-203PK: Car mount arm (Plate arm and mount plate)

To remove the unit

Do not treat too forcibly.



When you turn off the engine

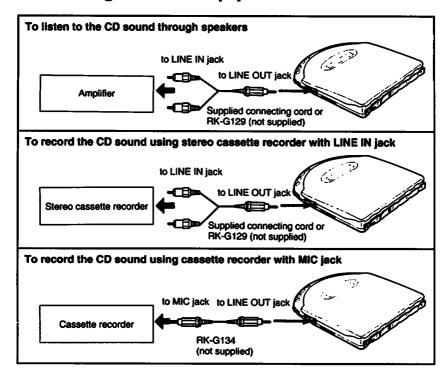
Even when the rechargeable battery is inserted in the unit, the unit stops operation when you turn off the engine of the car. (Switched ignition function)

This function is not available with every model of the car. If not, press STOP/
CHG button to stop operation.

Notes

- Unplug the unit from the cigarette lighter socket when it is not being used. Otherwise, it may drain the car battery.
- Do not put the unit on a dashboard nor leave it in a car parked in sunlight since the temperature may rise excessively.
- Any connection other than the CPA-2/CPA-3 may cause noise.
- CPA-2/CPA-3 may not be used with some car cassette decks.

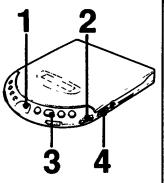
Connecting with Other Equipment

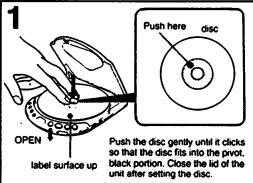


Notes on connection

- Turn off each piece of equipment before making connections.
- Plug in the white plug to the L (left channel) jack, and the red plug to the R (right channel) jack.
- Do not connect the output from LINE OUT with the PHONO jacks of the amplifier.
- Be sure to insert the cable connected firmly into the jacks. Loose connection may cause hum and noise.
- If the CD player causes interference to the radio and television reception, turn off the player or move the player away from the receiver.

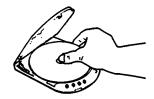
Disc Playing





To remove the disc

Pick up the disc, holding the edge, while pressing the pivot gently as illustrated.



Note

If the >10 button is pressed with the disc inserted upside down, "00" indication and then " no d 155" indication appears, and goes off after a few seconds.

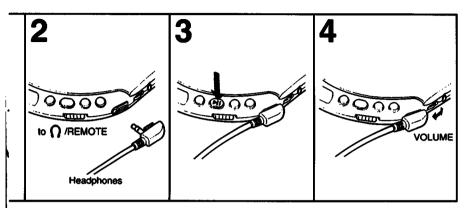
Press the OPEN button to open the lid, and insert the disc with the label side up.

Operation	Press	The following sound is heard.
To pause	₩i	Very short beep sound is repeated until the pause is released.
To release pause	MI	Very short beep sound.
To stop	•	Long beep sound. The disc stops turning and the power turns off.

To eliminate the beep sound

Do not connect any power sources. While keeping the button pressed, connect the power source (the rechargeable battery pack, alkaline

batteries, or external power sources). The beep sound setting remains as long as the power source is connected.



What is this indication? no d 150 This indicates that the disc has not been inserted, or has been inserted the wrong way.

What is this indication?

This indicates the power remaining in the battery. When the battery becomes weak, the segments will go out one by one beginning with the left segment. Use this indication as the criterion to tell when to charge the rechargeable battery pack or to change the alkaline batteries.

What is this indication? Lo batt

This indicates the power has been exhausted. Do not repeat pressing >11 when this indication is on, as the unit may operate incorrectly. Charge the rechargeable battery or change the alkaline batteries.

To play an 8 cm (3-inch) disc

You can play it without an adaptor.

Controlling the volume with the remote commander

- 1 Set the VOLUME control of the remote commander to MAX.
- 2 Using the VOLUME control on the unit, adjust the volume to the level that you want to be the maximum when adjusting with the VOLUME control on the remote commander.
- 3 Adjust the volume with the remote commander.

Headphones with stereo miniplug

You can use the optional headphones with stereo miniplug with this unit.

Note

When the 12 cm CD which contains many selections is replaced with a disc with a few selections (such as CD single or CDV, etc.), it may take more than 10 sec. before play starts.

Disc Playing

Emphasizing the bass sound*

Press the DSP MODE button to get the "BASS BOOST" indication on the display window. Then adjust the bass sound with the EFFECT button. The bass sound will be boosted more powerfully. (If you set the volume too high with the VOLUME control of the unit, the sound may be cracked or distorted. If this happens, turn down the VOLUME control.)

BASS BM2

Emphasizing the small and inaudible sound**

Press the DSP MODE button to get the "DDS" indication on the display window when listening to small sound. Then adjust the level of DDS with the EFFECT button. The sound will be boosted for better audibility.



Total playing time

- The bass boost effect may be decreased according to the output level of the recorded sound.
- While playing back selections with a fast tempo and narrow dynamic range, the DDS may not give efficient effect.

Note: The level of "BASS BOOST" and "DDS" cannot be adjusted with the remote commander.

On display window

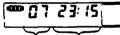
When you press ▶I

(Make sure that the RESUME ON/OFF switch is set to OFF.)

The number of the selections in the disc and the total playing time appear for 2 seconds.

Example

Number of the selections



During the play

The track number and the elapsed playing time of the current selection appear.

5 0 : 17

1 min. 17 sec. has elapsed from the beginning of the fifth selection.

During the pause

The elapsed playing time of the current point flashes.

~05-0)

Pause mode at the point 1min. 17 sec. from the beginning of the fifth selection

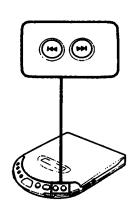
Between the selections

The time to the beginning of the next selection appears.

™ 03-00:02

2 sec. to the beginning of the 3rd selection

Locating a Particular Selection or Point



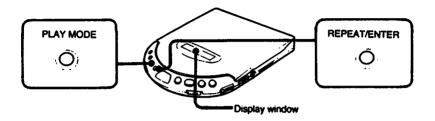
Locating a Particular Selection — AMS	
To locate the beginning of the current or a preceding selection	Press I≪ lightly and repeatedly.*
To locate the beginning of a succeeding selection	Press ▶►I lightly and repeatedly.**
Locating a Partic Selection — SEA	
To go back at high speed	Keep ◄ depressed.
To go ahead at high speed	Keep ▶ depressed.

- Each time you press the 144 button, you will hear three beeps.
- ** Each time you press the be button, you will hear two beeps.

On AMS function

- Each time you press [◄], the player locates the current and previous selections. Each time you press ▶☐, the player locates the next selections and stops at the last selection.
- If you press |
 or >> | during the pause, the unit pauses at the beginning of your desired selection.

Various Playing Modes



	REPEAT/ENTER button is	not pressed
	Display window	Play mode
		Playing the whole disc— Normal play
During the play	-ernó:	Playing the first ten seconds of all the selections—INTRO play
		To start INTRO play Press ►II . "INTRO" stops flashing and playing starts.
During the play PLAY MODE	,	Playing a single selection Plays one selection and stops at the end of the selection.

(Continue to the next page.)

This unit has 10 playing modes.

To change the mode, press the PLAY MODE button during play. The current mode appears in the display window.

To play repeatedly, press REPEAT/ ENTER button.

"REPEAT" appears in the display window.

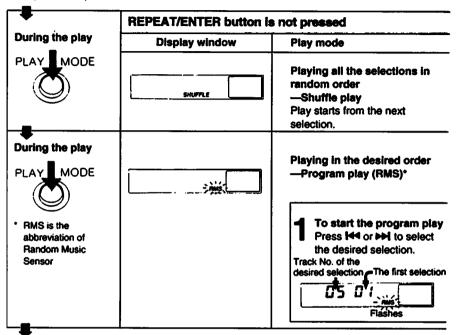
Press again to cancel the repeat play.

To stop the disc, press **m** button.

_	REPEAT/ENTER button is pressed		
	Display window	Play mode	
	REPEAT	Repeats the whole disc.	
	REPEAT INTRÓ-	Plays the first ten seconds of all the selections again and again.	
	When you locate the desired selection during INTRO play Press ► again to listen to the selection to end. (When "REPEAT" is displayed, the whole disc will be repeated.)		
	REPEAT 1	Plays a single selection repeatedly.	

Various Playing Modes

(Continuea)



Press PLAY MODE button again to return to normal play mode.

To stop the playback, press the button.

While the REPEAT/ENTER button is kept pressed, total time of the programed selections will appear on the display window. If a disc contains more than 32 tracks and you wish to program the 32nd selection or a selection after the 32nd one, the total playing time of the program will not be displayed.

(" - -: - - " indication will appear instead.)

However it is possible to program such selections.

 REPEAT/ENTER button is	pressed
Display window	Play mode
REPEAT SHUFFLE	After the every selection has been played in random order, they will be reshuffled and played repeatedly in a different order each time.
REPEAT - PAIS	Plays the selections in the desired order repeatedly.
2 Press REPEAT/ENTER**. The second (next) selection	Repeat the steps 1 and 2 (up to 22 selections). Press > I of the unit. "RMS" indication stops flashing and play starts.
00 02 NAMES	Indications for the program play do not appear in the display window of the remote commander.

adan da barangan arangan arangan kanangan kanangan da barangan da barangan arangan kanangan kanangan da barang

During shuffle play

To locate the beginning of the selection being played: Press ⁴◀ .

To locate the next selection: Press ► 1. You cannot locate a previous selection even if you keep 144 depressed.

If another selection is memorized after 22 selections have been memorized.

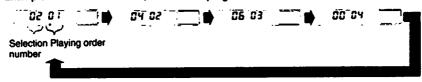
The first selection will be cleared and the new one will be memorized in its place.

To Check the Contents of the Program during Programming

To check the programed order of playback

Press the REPEAT/ENTER button lightly during programing (before pressing the button.)

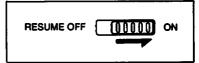
Example: Selection number 2, 4 and 6 are programed in order.



Using the Resume Play Function

When the DECLIME ewitch is in the OFF nosition

When you press the >1 button with the RESUME ON/OFF switch in the ON position, you can resume the disc play in the same playing mode and from the point where you pressed the button last time.



Indication on the display window

When you start the playback again, the indication on the display window will change as follows:

	Press ▶II	Number of the selections and total playing time	Playback starts
_ 	S C C C C C C C C C C	₩ 10 4753	010000
When t	he RESUME switch is in the	ne ON position	
Example:	When you stop the playback a selection. The selection number played last time		4 sec. of the 4th
· -		₩	

Notes

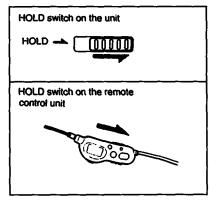
- You cannot use this function if the lid has been opened when the unit is connected to the power supply.
- BASS BOOST and DDS functions are always memorized regardless of the position of the RESUME ON/OFF switch unless the power supply is disconnected.
- The resume play may start about 30 seconds behind or ahead of the stopped point if the AC power adaptor or car battery cord is disconnected or batteries are removed.
- It may take more than 10 seconds until the resume play starts, but this is not caused by any malfunction.

Locking the Buttons

Slide the HOLD switch in the direction of arrow to avoid accidental pressing of buttons on the unit and the remote control unit.

Notes

Even if the HOLD switch is slid in the direction of arrow on the unit, you can operate the unit with the remote control unit, and even if the switch is slid in the direction of arrow on the remote control unit, you can operate the unit with the buttons on the unit.

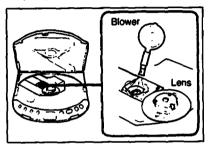


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Maintenance

Cleaning the Lens

If you have accidentally touched the lens with dirty fingers or if dust on the lens prevents the unit from operating properly, open the disc compartment lid and clean the lens with lens cleaning kit (KK-9, not supplied).



Cleaning the Headphone Plug

Keep the plug of your headphones clean to obtain optimum sound. Wipe it with a dry, soft cloth.

Cleaning the Casing

Clean the casing with a soft cloth slightly moisten with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine as they may mar the finish of the casing.

Notes on Compact Discs

- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for analog discs.
- 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 can be a considerable rise in the temperature inside the car.
- After playing, store the disc in its case.

If there is a scratch, dirt or fingerprints on the disc, it may cause tracking error.



Handling the Disc



Specifications

System Compact disc digital audio system

Laser diode properties Material: GaAlAs Wavelength: λ =780 nm

Emission duration: Continuous Laser output: Less than 44.6 µW

(This output is the value measured at a distance of 200 mm from the

objective lens surface on the Optical Pick-up Block).

Sony Super Strategy Cross Interleave Reed Solomon Code Error correction

1 bit quartz time-axis control D-A conversion 20-20,000 Hz ±1 dB Frequency response

(measured by EIAJ CP-307)

Output (at 6 V input level) Line output (stereo minitack)

Output level 0.55 V rms at 50 kilohms Load impedance over 10 kilohms Headphones (stereo minijack) 9 mW + 9 mW at 16Ω

General

Weight

Power requirements Supplied: DC 3.2 V rechargeable battery pack BP-5

. DC IN 6 V jack accepts the Sony AC power adaptor for use on:

—120 V AC, 60 Hz in USA.

-240 V AC, 50 Hz in United Kingdom/Australia

Not supplied:

 DC IN 6 V accepts the Sony CPM-203P/CPM-200P mount plate and CPM-200PK/CPM-203PK Car mount

arm for use on 12 V car battery.

DC 3 V two size AA (LR6) alkaline batteries

Approx. $128.3 \times 21.6 \times 147.8 \text{ mm} (51/8 \times 7/8 \times 57/8 \text{ in.})$ Dimensions

(w/h/d) incl. projecting parts and controls

Approx. 325 g (11.5 oz.) incl. rechargeable battery

AC power adaptor (1) Supplied accessories

Rechargeable battery (1) Connecting cord (phono plug X 2 · · stereo miniplug (1)

Headphones with remote commander (1)

Car mount adaptor (1)

Battery case (1)

Design and specifications subject to change without notice.

Optional accessories Plate arm CPM-200A Mount plate CPM-203P/CPM-200P Car mount arm CPM-200PK/CPM-203PK Car connecting pack CPA-2, CPA-3 Car battery cord DCC-60/DCC-E160L

Active speaker system SRS-77G

Rechargeable battery BP-5

Your dealer may not handle some of the above listed accessories. Please ask the dealer for detailed information about the accessories in your country.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Troubleshooting Guide

Should any problem persist after you have made the following checks, consult your nearest Sony service facility.

Symptom	Cause and/or solution
Disc play does not start.	 The disc is inserted upside down or incorrectly. → Insert the disc correctly with the label surface up. Dusty or defective disc. (See page 26.) Dirty or dusty lens. (See page 26.) The disc compartment lid is not closed. Moisture condensation. → Leave the player in a warm place until the moisture evaporates. The AC power adaptor is not plugged into the wall outlet. The mount plate is not firmly connected to a cigarette lighter socket. The unit is not placed on a level surface. The HOLD switch is slid in the direction of the arrow. Weak rechargeable battery (See page 9.) The rechargeable battery is inserted incorrectly. → Insert the battery with the side "Rechargeable" facing up.
No sound from the headphones.	 The headphones plug is not firmly connected to the \(\bigcap /\text{REMOTE jack.} \) Adjust the VOLUME control. Dirty plug.
No sound from the connected speakers.	Check the connections. The amplifier is not turned on.
Skipping of sound	Dirty or defective disc. Dirty lens. Strong vibration.
Charging not possible	The rechargeable battery is inserted incorrectly. → Insert the battery with the side "Rechargeable" facing up.