

CD Radio Cassette-Corder

Operating Instructions

CFD-S35CP

WARNING

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

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

WARNING



Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the appliance.

Connect the apparatus to an easily accessible AC outlet. Should you notice an abnormality in the apparatus, disconnect the main plug from the AC outlet immediately.

Notice for customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, same rating fuse approved by ASTA or BSI to BS 1362, (i.e. marked with  or  mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

NOTE

The name of the switch to turn on/off this player is indicated as below:

"OPERATE": European model

"POWER": Other models

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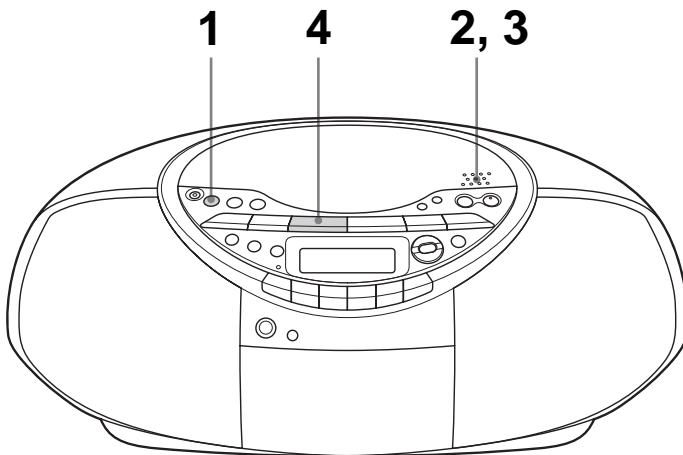
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Playing an audio CD or MP3 files



Connect the supplied mains lead (see page 23).

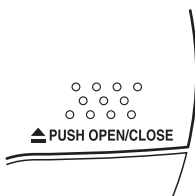
1



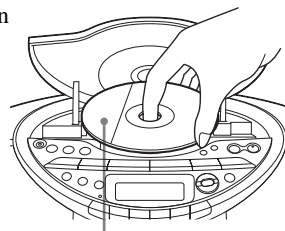
Press CD.

(On the remote, press OPERATE (POWER, see page 2) and then press FUNCTION repeatedly until "CD" appears in the display.)

2

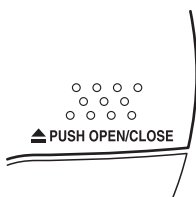


Press ▲ PUSH OPEN/CLOSE down to open the CD compartment and place the CD on the CD compartment.

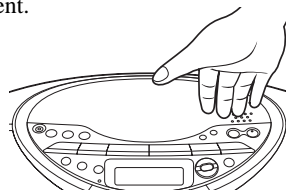


With the label side up

3



Close the lid of the CD compartment.



4

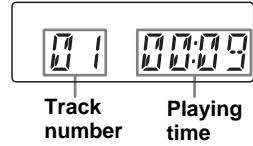


Press **▶||** (▶ on the remote).

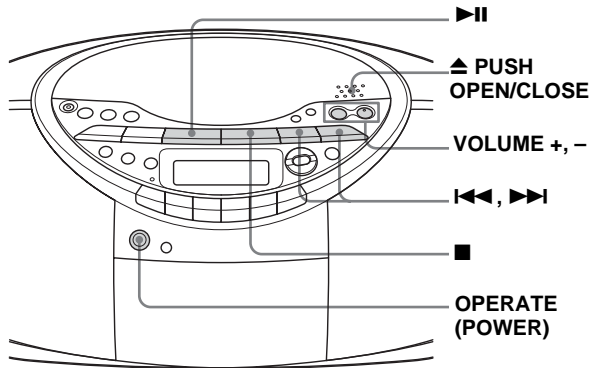
The player plays all the tracks once.

To play a CD with MP3 files, see page 6.

Display



Use these buttons for additional operations



Tip

Playback starts from the track you last stopped playing (Resume play). During stop, the track number to be played are displayed.
To cancel the resume play to start play from the beginning of the first track, press ■ in stop mode.

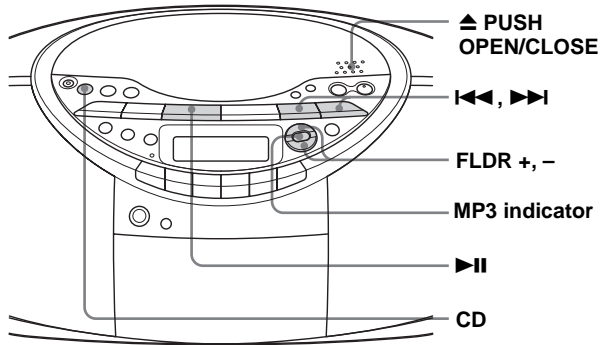
To	Press
adjust the volume	VOLUME +*, - (VOL +*, - on the remote.)
stop playback	■
pause playback	▶ * (on the remote) Press the button again to resume play after pause.
go to the next track	▶▶
go back to the previous track	◀◀
remove the CD	▲ PUSH OPEN/CLOSE**
turn on/off the player	OPERATE (or POWER, see page 2)

* The button has a tactile dot.

**Once you open the CD compartment, the track to start play will change to the beginning of the first track.

continued

Playing a CD with MP3 files



Note

Before playing a file, this player reads all file and folder information on the CD. Depending on the file structure, it may take more than a minute to read them. During this time, "READING" is displayed.

Tip

You can use the buttons mentioned in the table on page 5 for additional operations in the same way as when playing an audio CD.

1 Press CD.

2 Press **▲ PUSH OPEN/CLOSE** to open the CD compartment and place the CD on the CD compartment (see page 4) .

3 Close the lid of the CD compartment.

4 Press **▶||**.

The player plays all MP3 files on the CD.

When you play a CD with MP3 files, MP3 indicator lights up.



Track number

After the file name is displayed, the playing time will appear

To select a folder

Press **FLDR +** to go forward and **FLDR -** to go backward .
Press **FOLDER +, -** on the remote.

To select a file

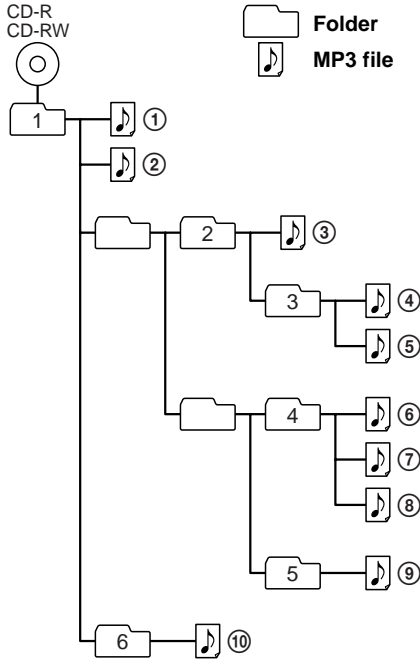
Press **▶||** to go forward and **◀◀** to go backward.

Notes

- A folder that does not include an MP3 file is skipped.
- Maximum number of folders: 255
Maximum number of files: 255
- Folder names and file names can be displayed with up to 64 characters.
- The characters A - Z, a - z, 0 - 9, and _ can be displayed on this player. Other characters are displayed as “*”.
- This player conforms to Version 1.1 of the ID3 tag format. If the file has the ID3 tag information, “song title”, “artist name” and “album name” can be displayed.

Example of folder structure and playing order

The playing order of the folders and files is as follows:

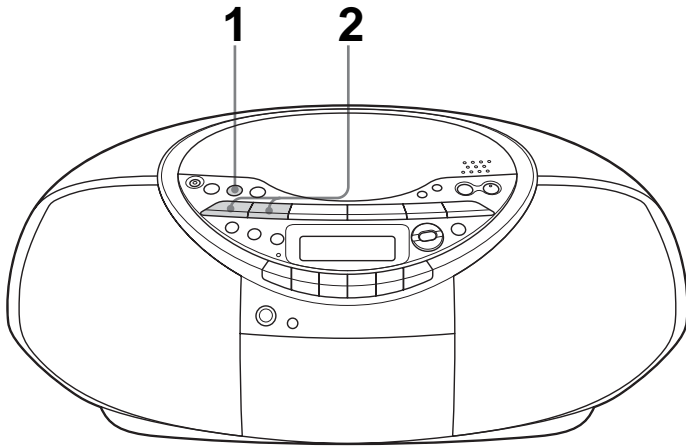


About CD-Rs/CD-RWs and MP3 files

This player can play CD-Rs/CD-RWs recorded in the CD-DA format* and MP3 files recorded in the CD-ROM format, but playback capability may vary depending on the quality of the disc and the condition of the recording device.

* CD-DA is the abbreviation for Compact Disc Digital Audio. It is a recording standard used for Audio CDs.

Listening to the radio



Connect the supplied mains lead (see page 23).

1

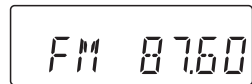


Press RADIO BAND•AUTO PRESET (BAND on the remote) until the band you want appears in the display.

European model: "FM" → "MW" → "LW"

Other models: "FM" → "AM"

Display



2



Hold down TUNE + or – until the frequency digits begin to change in the display.

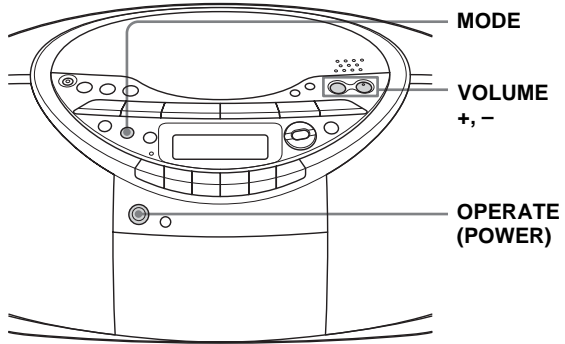
The player automatically scans the radio frequencies and stops when it finds a clear station.

If you can't tune in a station, press TUNE + or – repeatedly to change the frequency step by step.

Indicates an FM stereo broadcast



Use these buttons for additional operations



Tip

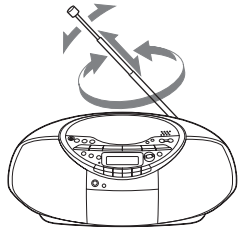
If the FM broadcast is noisy, press MODE until “Mono” appears in the display and radio will play in monaural.

To	Press
adjust the volume	VOLUME +*, -
turn on/off the radio	OPERATE (or POWER, see page 2)

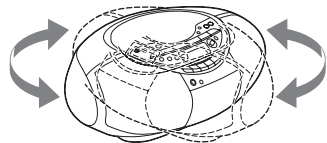
*VOLUME + (VOL + on the remote) has a tactile dot.

To improve broadcast reception

Reorient the antenna for FM. Reorient the player itself for AM or MW/LW.

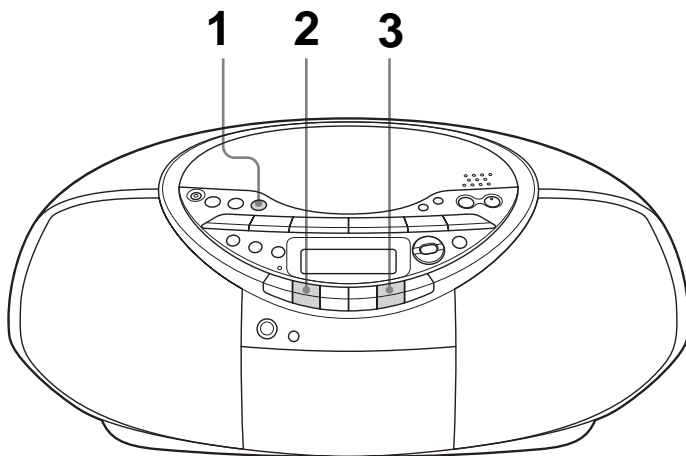


for FM



for AM/MW/LW

Playing a tape




Connect the supplied mains lead (see page 23).

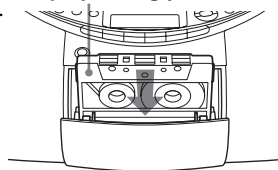



Press TAPE.



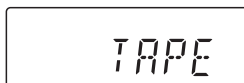
Press  to open the tape compartment and insert a recorded tape. Use TYPE I (normal) tape only. Close the compartment.

With the side you want to play facing you

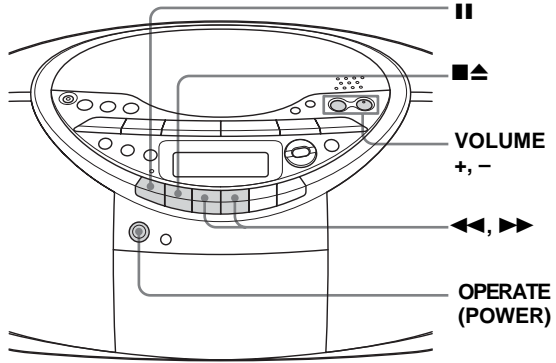


Press *.
The player starts playing.

Display



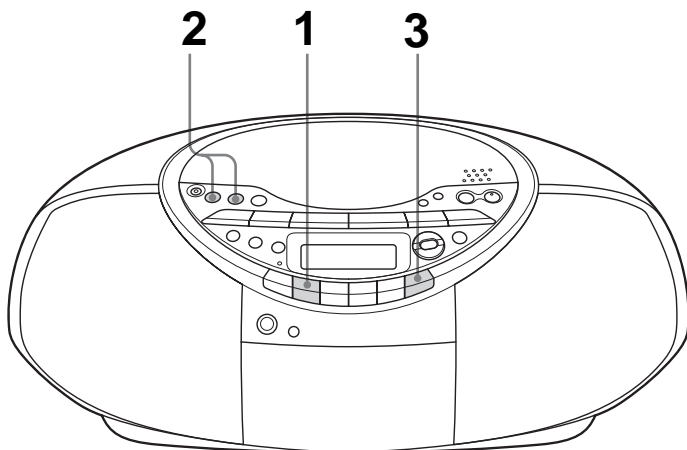
Use these buttons for additional operations



To	Press
adjust the volume	VOLUME +*, -
stop playback	■▲
fast-forward or rewind	◀◀ or ▶▶
pause playback	 Press the button again to resume play after pause.
eject the cassette	■▲
turn on/off the player	OPERATE (or POWER, see page 2)

*VOLUME + (VOL + on the remote) and ◀ have a tactile dot.



Recording on a tape



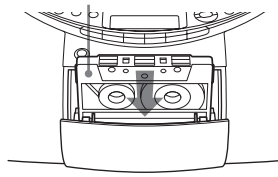
Connect the supplied mains lead (see page 23).

1



Press   to open the tape compartment and insert a blank tape. Use TYPE I (normal) tape only. Close the compartment.

With the side you want to record on facing you



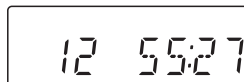
2



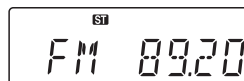
Select the programme source you want to record.

To record from the CD player, insert a CD (see page 4) and press CD.

Display



To record from the radio, tune in the station you want (see page 8).

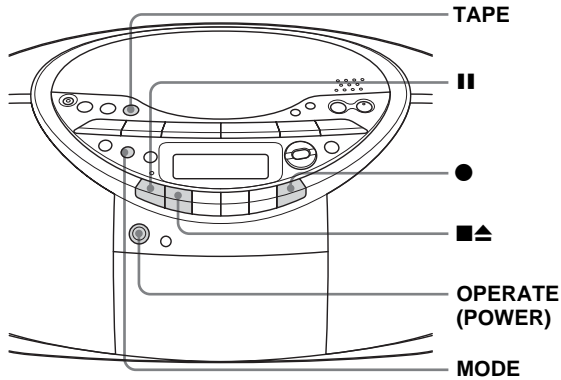


3



Press ● to start recording
(◀ is depressed automatically).

Use these buttons for additional operations



Tips

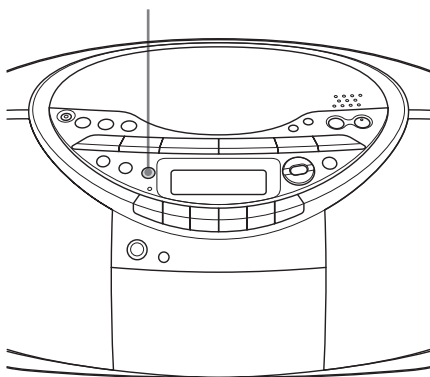
- Adjusting the volume or the audio emphasis (see page 21) will not affect the recording level.
- If the AM/MW/LW programme makes a whistling sound after you've pressed ● in step 3, press MODE to select the position of ISS (Interference Suppress Switch) that most decreases the noise.
- For the best results, use the mains as a power source for recording.
- To erase a recording, proceed as follows:
 - 1 Insert the tape whose recording you want to erase.
 - 2 Press TAPE.
 - 3 Press ●.

To	Press
stop recording	■▲
pause recording	II Press the button again to resume recording.
turn on/off the player	OPERATE (or POWER, see page 2)

Using the display

You can check information about the CD using the display.

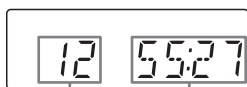
DISP/ENT/MEMORY



Checking the information of an audio CD

To check the total track number and playing time of the CD

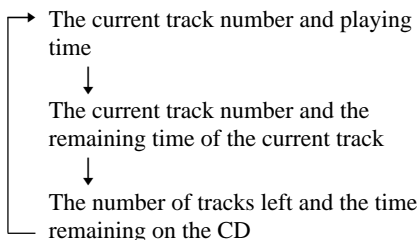
While the CD is stopped, you can check them in the display.



Total track number

Total playing time

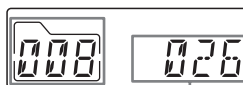
To check the remaining time
Press DISP/ENT/MEMORY while playing a CD. The display changes as follows:



Checking the information of a CD with MP3 files

To check the total folder number and total track number on the CD

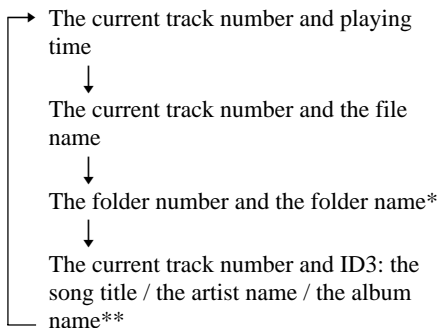
While the CD is stopped, you can check them in the display.



Total folder number

Total track number

To check file information
Press DISP/ENT/MEMORY while playing an MP3 file. The display changes as follows:

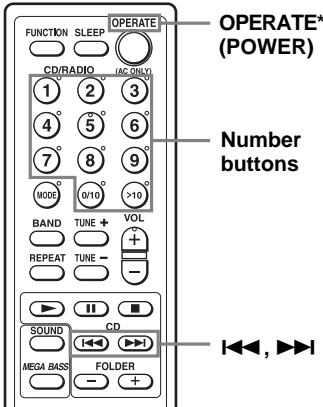


* If the folder does not have a folder name, "ROOT" appears instead of a folder name.

** If the file does not have ID3 information, "NO TITLE", "NO ARTIST" or "NO ALBUM" appears in the display.

Locating a specific track

You can quickly locate any track on a CD using the number buttons on the remote. You can also find a specific point in a track while playing a CD.



* "OPERATE": European model
 "POWER": Other models

Tips

- When you locate a track numbered over 10, press >10 first, then the corresponding number buttons.
 Example: To play track number 23, press >10 first, then 2 and 3.
- To select a track numbered 100 or more, press >10 twice, then the corresponding number buttons.

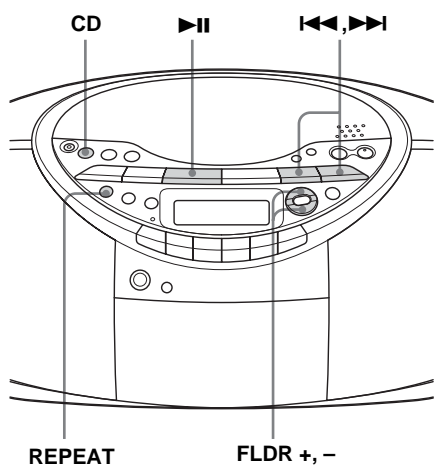
To locate	Press
a specific track directly	the number button of the track on the remote
a point while listening to the sound	▶▶ (forward) or ◀◀ (backward) while playing and hold it until you find the point (On the player, use ▶▶ or ◀◀.)
a point while observing the display	▶▶ (forward) or ◀◀ (backward) in pause and hold it until you find the point (On the player, use ▶▶ or ◀◀.)

Notes

- Locating a specific track using the number buttons is only available for the tracks in the selected folder.
- You cannot locate a specific track if "SHUF" or "PGM" is lit in the display. Turn off the indication by pressing ■.

Playing tracks repeatedly (Repeat Play)

You can play tracks repeatedly in normal, shuffle or programme play modes.



To repeat	Do this
programmed tracks	1 Programme tracks (see page 17).
	2 Press REPEAT until "REP PGM" appears.
	3 Press ▶▶ .
programmed folders (MP3 CD only)	1 Programme folders (see page 17).
	2 Press REPEAT until "REP PGM FLDR" appears.
	3 Press ▶▶ .

To cancel Repeat Play
Press REPEAT until "REP" disappears from the display.

When playing MP3 files
When you select "REP ALL", the player plays all files (up to 255 files) of a CD repeatedly.

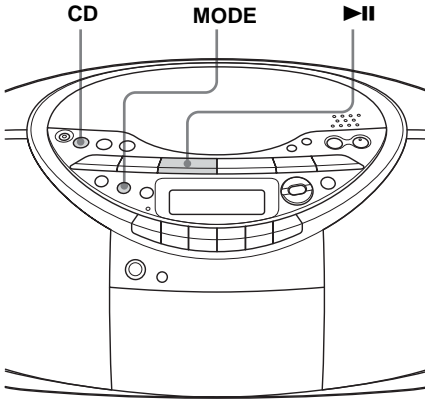
1 Press CD.
"CD" appears in the display.

2 Proceed as follows.

To repeat	Do this
a single track	1 Press REPEAT until "REP I" appears. 2 Press ◀◀ or ▶▶ to select the track that you want to repeat. 3 Press ▶▶ .
all tracks on the CD	1 Press REPEAT until "REP ALL" appears. 2 Press ▶▶ .
a selected folder (MP3 CD only)	1 Press REPEAT until "REP FLDR" appears. 2 Select the folder by pressing FLDR + or FLDR -. 3 Press ▶▶ .
tracks in random order	1 Start Shuffle Play (see page 17). 2 Press REPEAT until "SHUF REP" appears. 3 Press ▶▶ .

Playing tracks in random order (Shuffle Play)

You can play tracks in random order.



- 1** Press CD.
“CD” appears in the display.
- 2** Press MODE until “SHUF” appears in the display.
- 3** Press ►|| to start Shuffle Play.

To cancel Shuffle Play
Stop playing first. Then press MODE until
“SHUF” disappears from the display.

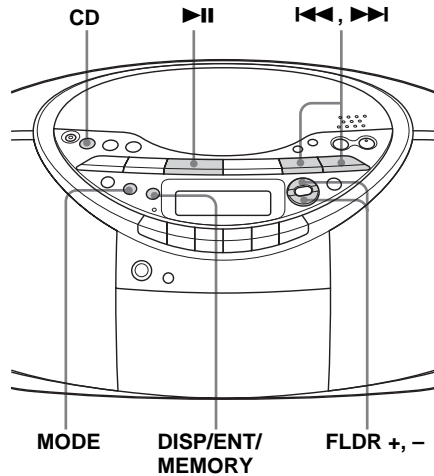
When playing MP3 files
The player plays all files (up to 255 files) on
a CD in random order.

Tips

- During Shuffle Play, you cannot select the previous track by pressing ◀◀.
- The resume function doesn't work during Shuffle Play.

Creating your own programme (Programme Play)

You can arrange the playing order of up to 20 tracks or files on a CD. When playing an MP3 files, you can also programme up to 20 folders (Programme Folder Play).



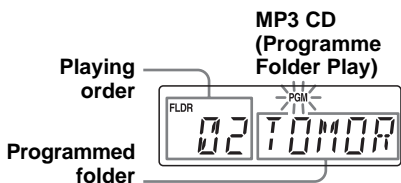
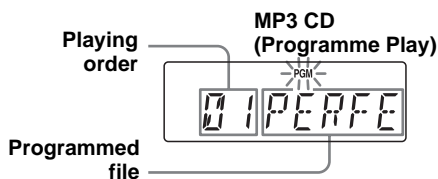
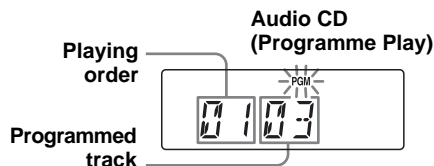
- 1** Press CD.
“CD” appears in the display.
- 2** Press MODE until “PGM” appears in the display.
When you select Programme Folder Play (MP3 CD only), press MODE until “PGM FLDR” appears in the display.

continued

Creating your own programme (Programme Play) (continued)

- 3** Press **◀◀** or **▶▶**, **FLDR** + or – then press **DISP/ENT/MEMORY** for the tracks or files* you want to programme in the order you want.

*Folders for Programme Folder Play.



- 4** Press **▶||** to start Programme Play.

To cancel Programme Play
Stop playing first. Then press **MODE** until
“PGM” disappears from the display.

To check the order of tracks
before play

Press **DISP/ENT/MEMORY**.

Every time you press the button, the track or
folder number appears in the programmed
order.

To change the current
programme

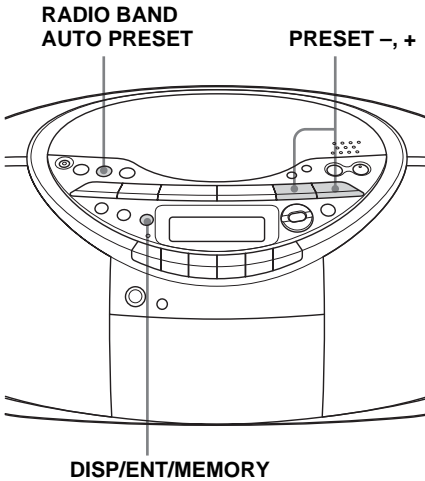
Press **■** once if the CD is stopped and twice
if the CD is playing. The current programme
will be erased. Then create a new
programme following the programming
procedure.

Tips

- You can play the same program again, since the programme is saved until you open the CD compartment.
- You can record your own programme. After you've created the programme, insert a blank tape and press **●** to start recording.
- The resume function doesn't work during Programme Play.

Presetting radio stations

You can store radio stations into the player's memory. You can preset up to 40 radio stations (European model), 20 for FM and 10 for MW and LW in any order or 30 radio stations (other models), 20 for FM and 10 for AM in any order.



- 1** Press RADIO BAND•AUTO PRESET to select the band.
- 2** Hold down RADIO BAND•AUTO PRESET for 2 seconds until “AUTO” flashes in the display.
- 3** Press DISP/ENT/MEMORY. The stations are stored in memory from the lower frequencies to the higher ones.

If a station cannot be preset automatically

You need to preset a station with a weak signal manually.

- 1** Press RADIO BAND•AUTO PRESET to select the band.
- 2** Tune in a station you want.
- 3** Hold down DISP/ENT/MEMORY for 2 seconds until the preset number flashes in the display.
- 4** Press PRESET + or – until the preset number you want for the station flashes in the display.
- 5** Press DISP/ENT/MEMORY. The new station replaces the old one.

On the remote

- 1** Press BAND until the band you want appears in the display.
- 2** Tune in a station you want.
- 3** Hold down the number buttons that you want to preset the new station on for about 2 seconds.

To select the preset number over 10, press >10 first, then the corresponding number buttons.

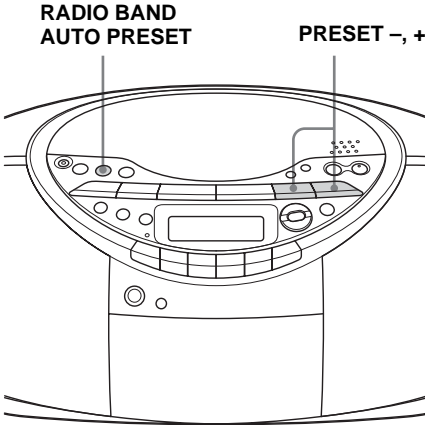
You need to hold down the last number button to enter for about 2 seconds. (Example: To select 12, press >10 and 1 first, then hold down 2 for about 2 seconds.)

Tip

The preset radio stations remain in memory even if you unplug the mains lead or remove the batteries.

Playing preset radio stations

Once you've preset the stations, use the number buttons to tune in your favorite stations.



-
- 1** Press RADIO BAND•AUTO PRESET to select the band.
 - 2** Press PRESET + or – to tune in the stored station.
-

On the remote

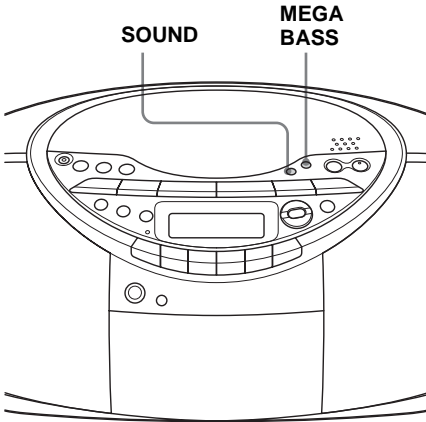
- 1** Press BAND.
- 2** Press the number buttons to tune in the stored station.

To tune in a preset station over 10, press >10 first, then corresponding number buttons.

(Example: To tune in a preset station 12, press >10 and 1 first, and then press 2.)

Selecting the audio emphasis

You can adjust the audio emphasis of the sound you are listening to.



Selecting the sound characteristic

Press SOUND repeatedly to select the audio emphasis you want.

Choose	To get
☺	powerful, clean sounds,
☺ ☺ ☺ ☺	emphasizing low and high range audio
☺ ☺ ☺ ☺ ☺ ☺	light, bright sounds emphasizing high and middle range audio
☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺	percussive sounds, emphasizing bass audio
☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺	the presence of vocals, stressing middle range audio
☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺	the whole dynamic range for music such as classical music

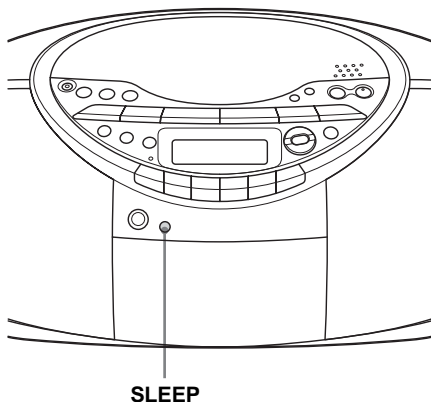
Reinforcing the bass sound

Press MEGA BASS to display “MEGA BASS”.

To return to normal sound, press the button again.

Falling asleep to music

You can set the player to turn off automatically after 10, 20, 30, 60, 90 and 120 minutes, allowing you to fall asleep while listening to music.



- 1 Play the music source you want.
- 2 Press SLEEP to display "SLEEP."
- 3 Press SLEEP to select the minutes until the player goes off automatically. Each time you press the button, the indication changes as follows:
"60" → "90" → "120" → "OFF" →
"10" → "20" → "30".



If 4 seconds have passed after you pressed SLEEP, the minutes in the display are entered.

When the preset time has passed, the player goes off automatically.

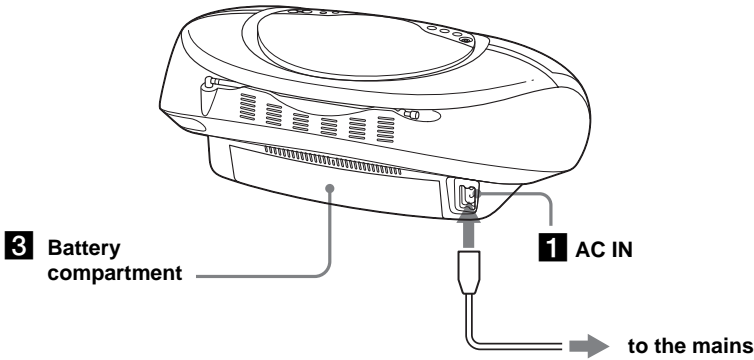
To cancel the sleep function
Press OPERATE (or POWER) to turn off the power.

Note

When you are playing a tape using this function:
If the tape length of one side is longer than the set time, the player will not go off until the tape reaches the end.

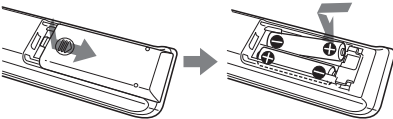
Choosing the power sources

You can use the mains or batteries as a power source.



1 Connecting the mains lead
Insert one end of the supplied mains lead to the AC IN socket located at the rear of the player, and the other end to the mains.

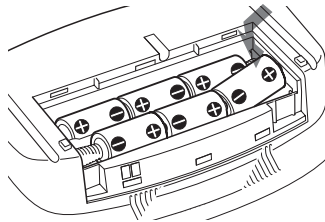
2 Preparing the remote
Insert two R03 (size AAA) batteries (not supplied).



Replacing batteries

With normal use, the batteries should last for about six months. When the remote no longer operates the player, replace all the batteries with new ones.

3 Using the player on batteries
Insert six R20 (size D) batteries (not supplied) into the battery compartment. To use the player on batteries, disconnect the mains lead from the player.



Replacing batteries

Replace the batteries when the OPR/BATT indicator dims or when the player stops operating. Replace all the batteries with new ones.

Notes

- Before you replace the batteries, be sure to take out the CD from the player.
- When you operate the player with the batteries, you cannot turn on the player with the remote.

continued

Choosing the power sources (continued)

Changing the AM/MW tuning interval

If you need to change the AM/MW tuning interval, do the following:

- 1** Press RADIO BAND•AUTO PRESET until “AM” or “MW” is displayed.
- 2** Press DISP/ENT/MEMORY for 2 seconds.
- 3** Press RADIO BAND•AUTO PRESET for 2 seconds.
“AM 9” “MW 9” or “AM 10” “MW 10” flashes.
- 4** Press PRESET + or – to select “AM 9” “MW 9” for 9 kHz interval or “AM 10” “MW 10” for 10 kHz interval.
- 5** Press DISP/ENT/MEMORY.

After changing the tuning interval, you need to reset your preset AM/MW radio stations.

Precautions

On safety

- As the laser beam used in the CD player section is harmful to the eyes, do not attempt to disassemble the casing. Refer servicing to qualified personnel only.
- Should any solid object or liquid fall into the player, unplug the player, and have it checked by qualified personnel before operating it any further.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played on this player. Attempting to do so may damage the player. Do not use such discs.

On power sources

- For AC operation, check that the player's operating voltage is identical with your local power supply (see "Specifications") and use the supplied mains lead; do not use any other type.
- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- For battery operation, use six R20 (size D) batteries.
- When the batteries are not to be used, remove them to avoid damage that can be caused by battery leakage or corrosion.
- The nameplate indicating operating voltage, power consumption, etc. is located at the bottom.

On placement

- Do not leave the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place the player on an inclined or unstable place.

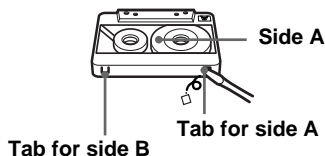
- Do not place anything within 10 mm of the side of the cabinet. The ventilation holes must be unobstructed for the player to operate properly and prolong the life of its components.
- If the player is left in a car parked in the sun, be sure to choose a location in the car where the player will not be subjected to the direct rays of the sun.
- Since a strong magnet is used for the speakers, keep personal credit cards using magnetic coding or spring-wound watches away from the player to prevent possible damage from the magnet.

On operation

- If the player 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 CD player section. Should this occur, the player will not operate properly. In this case, remove the CD and wait about an hour for the moisture to evaporate.
- If the player has not been used for a long time, set it in the playback mode to warm it up for a few minutes before inserting a cassette.

Notes on cassettes

- Break off the cassette tab from side A or B to prevent accidental recording. If you want to reuse the tape for recording, cover the broken tab with adhesive tape.



- The use of a cassette with more than 90 minutes of play time is not recommended except for long, continuous recording or playback.

continued

Precautions (continued)

Notes on CDs

- Before playing, clean the CD with a cleaning cloth. Wipe the CD from the center out.



- Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the CD 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 temperature inside the car.
- Do not stick paper or sticker on the CD, nor scratch the surface of the CD.
- After playing, store the CD in its case.

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

Music discs encoded with copyright protection technologies

This product is designed to play back discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

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

Troubleshooting

General

The power is not on.

- Connect the mains lead to the mains securely.
- Make sure the batteries are inserted correctly.
- Replace all the batteries with new ones if they are weak.
- You cannot turn on the player with the remote when you operate the player on batteries.

The power is not on, and "BATT" and "ERROR" are displayed alternately.

- Make sure the batteries are inserted correctly.
- Replace all the batteries with new ones if they are weak.

There is no audio.

- Adjust the volume.
- Unplug the headphones when listening through speakers.

Noise is heard.

- Someone is using a portable telephone or other equipment that emits radio waves near the player. → Move the portable telephone, etc., away from the player.

CD Player

"no DISC" is displayed even when a CD is in place.

- Insert the CD with the label surface up.
- The CD-R/CD-RW is blank.
- The CD-R/CD-RW was not finalized. Finalize the CD-R/CD-RW with the recording device.
- There is a problem with the quality of the CD-R/CD-RW, recording device or application software.

The CD does not play.

- Make sure that the CD compartment is closed.
- Place the CD with the label surface up.
- Clean the CD.
- Take out the CD and leave the CD compartment open for about an hour to dry moisture condensation.
- Make sure "CD" appears in the display.
- Replace all the batteries with new ones if they are weak.

The sound drops out.

- Reduce the volume.
- Clean the CD, or replace it if the CD is badly damaged.
- Place the player in a location free from vibration.
- Clean the lens with a commercially available blower.
- The sound may drop out or noise may be heard when using poor quality CD-Rs/CD-RWs or if there is a problem with the recording device or application software.

"NOT MP3" is displayed.

- You are trying to play a file that is not an MP3 file but has extension "mp3". (page 31)

"NOT MP3" and "LAYER 1", or "NOT MP3" and "LAYER 2" are displayed alternately.

- You are trying to play an MPEG1 Audio Layer-1 or 2 file. You can only play MP3 (MPEG 1 Audio Layer-3) files on this player. (page 31)

"no MP3" is displayed.

- There are no MP3 files on the disc.

Radio

The audio is weak or has poor quality.

- Replace all the batteries with new ones if they are weak.
- Move the player away from the TV.
- If you are using the remote while listening to AM or MW/LW radio, noise may be heard.

The picture of your TV becomes unstable.

- If you are listening to an FM programme near the TV with an indoor antenna, move the player away from the TV.

continued

Tape Player

The tape does not move when you press an operation button.

- Close the cassette compartment securely.

The ● button does not function or the tape does not play or record.

- Make sure the safety tab on the cassette is in place.

The tape does not erase completely.

- Clean the erasing head (see page 29).
- Replace all the batteries with new ones if they are weak.
- The source which was recorded on TYPE II (high position) or TYPE IV (metal) tape using this unit is being played. Record on TYPE I (normal) tape and play.

The tape does not record.

- Make sure the tape is inserted properly.
- Make sure the safety tab of the cassette is in place.

The audio is weak/The audio quality is poor.

- Clean the heads, pinch roller and capstan (see page 29).
- Demagnetize the heads using a demagnetizer (see page 29).

The sound is distorted.

- The TYPE II (high position) or TYPE IV (metal) tape is being used. Use TYPE I (normal) tape only.
-

Remote

The remote does not function.

- Replace all the batteries in the remote with new ones if they are weak.
 - Make sure that you are pointing the remote at the remote sensor on the player.
 - Remove any obstacles in the path of the remote and the player.
 - Make sure the remote sensor is not exposed to strong light such as direct sunlight or fluorescent lamp light.
 - Move closer to the player when using the remote.
-

After trying the above remedies, if you still have problems, unplug the mains lead and remove all the batteries. After all the indications in the display disappear, plug the mains lead and insert the batteries again. If the problem persists, please consult your nearest Sony dealer.

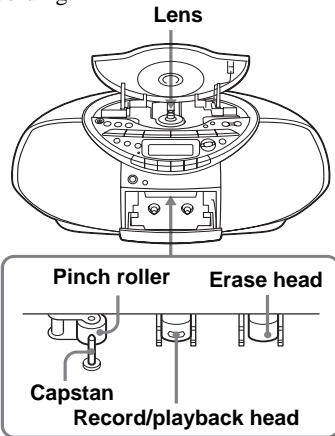
Maintenance

Cleaning the lens

If the lens becomes dirty, it may cause a skipping of sound during CD operation. Clean with a commercially available blower.

Cleaning the tape heads and tape path

Wipe the heads, the pinch roller and the capstan with a cleaning swab slightly moistened with cleaning fluid or alcohol after every 10 hours of operation for optimum playback and recording quality. To make the best possible recording, however, we recommend that you clean all surfaces over which tape travels before each recording.



After cleaning, insert a tape when the areas cleaned are completely dry.

Demagnetizing the tape heads

After 20 to 30 hours of use, enough residual magnetism will have built up on the tape heads to begin to cause loss of high frequency sound and hiss. At this time, you should demagnetize the heads and all metal parts in the tape path with a commercially available tape head demagnetizer.

Cleaning the cabinet

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

Specifications

CD player section

System

Compact disc digital audio system

Laser diode properties

Material: GaAlAs

Wave length: 780 nm

Emission duration: Continuous

Laser output: Less than 44.6 μ W

(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

Spindle speed

200 r/min (rpm) to 500 r/min (rpm) (CLV)

Number of channels

2

Frequency response

20 - 20 000 Hz $\pm 1/-2$ dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

European model

FM: 87.5 - 108 MHz

MW: 531 - 1 611 kHz (9kHz step)
530 - 1 610 kHz (10kHz step)

LW: 153 - 279 kHz

Other models

FM: 87.5 - 108 MHz

AM: 531 - 1 611 kHz (9 kHz step)
530 - 1 610 kHz (10 kHz step)

IF

FM: 10.7 MHz

AM/MW/LW: 450 kHz

Antennas

FM: Telescopic antenna

AM/MW/LW: Built-in ferrite bar antenna

Cassette-corder section

Recording system

4-track 2 channel stereo

Fast winding time

Approx. 120 s (sec.) with Sony cassette C-60

Frequency response

TYPE I (normal): 80 - 10 000 Hz

General

Speaker

Full range: 10 cm dia., 3.2 Ω , cone type (2)

Outputs

Headphones jack (stereo minijack)

For 16 - 68 Ω impedance headphones

Maximum power output

5.2 W

Power requirements

For CD radio cassette-corder:

Malaysia, Singapore and Thailand models: 230 - 240 V AC, 50Hz

Korean Model:

220 V AC, 60Hz

Saudi Arabian model:

220 - 240 V AC, 50/60 Hz

Other models:

230 V AC, 50Hz

9 V DC, 6 R20 (size D) batteries

For remote control:

3 V DC, 2 R03 (size AAA) batteries

Power consumption

AC 14 W

Battery life

For CD radio cassette-corder:

FM recording

Sony R20P: approx. 13.5 h

Sony alkaline LR20: approx. 20 h

Tape playback

Sony R20P: approx. 7.5 h

Sony alkaline LR20: approx. 15 h

CD playback

Sony R20P: approx. 2.5 h

Sony alkaline LR20: approx. 7 h

Dimensions

Approx. 420 \times 155 \times 260 mm (w/h/d)

(16 $\frac{5}{8}$ \times 6 $\frac{1}{8}$ \times 10 $\frac{1}{4}$ inches) (incl. projecting parts)

Mass

Approx. 3.7 kg (8 lb. 3 oz) (incl. batteries)

Supplied accessories

Mains lead (1)

Remote control (1)

Design and specifications are subject to change without notice.

Optional accessories

Sony MDR headphones series

About “MP3”

What is the MP3?

MP3 (MPEG 1 Audio Layer-3) is a standard technology and format for compressing a sound sequence. The file is compressed to about 1/10 of its original size. Sounds outside the range of human hearing are compressed while the sounds we can hear are not compressed.

Playable “MP3” files on this player

You can only play MP3 files recorded by following requirements.

USABLE MEDIA
CD-Rs and CD-RWs

USABLE DISC FORMAT

You can use ISO 9660 Level 1, Level 2 and Joliet extension format discs. In some cases, MP3 files that are recorded in a format other than these formats may not play normally or the file and folder names may not be displayed correctly.

The major specifications of the usable disc format are as follows:

- Maximum directory steps: 8
- Usable characters for a file/folder name: A - Z, a - z, 0 - 9, _ (underscore)
- Maximum number of characters for a file name: 64 including quotation marks and a 3-character extension code

Notes

- When naming, be sure to add the file extension “mp3” to the file name.
- If you put the extension “mp3” to a file other than an MP3 file, the player cannot recognize the file properly and will generate random noise that could damage your speakers.
- The file name does not correspond to the ID3 tag.

THE USABLE NUMBER OF FOLDERS/FILES

- Maximum folder number: 255
- Maximum file number: 255

SETTINGS FOR COMPRESSION SOFTWARE AND WRITING SOFTWARE

- To compress a source for an MP3 file, we recommend setting the transfer bit rate of the compression software to “44.1 kHz”, “128kbps”, and “Constant Bit Rate”.
- To record up to the maximum capacity, set to the “halting of writing”.
- To record at one time up to the maximum capacity on media that has nothing recorded it, set to “Disc at Once”.

NOTES FOR SAVING FILES ON THE MEDIA

When the disc is inserted, the player reads all the files on that disc. If there are many folders or non-MP3 files on the disc, it may take a long time for play to begin or for the next MP3 file to start play.

Do not save unnecessary folders or files other than MP3 ones in the disc to be used for MP3 listening.

We recommend that you do not save other types files or unnecessary folders on a disc that has MP3 files.

About “ID3 tag”

ID3 tag is a format for adding certain information (song title, artist name, album name, etc.) to MP3 files.

This player conforms to Version 1.1 of the ID3 tag format. If the file has the ID3 tag information, “song title”, “artist name” and “album name” can be displayed.

Note

If you use a version other than 1.1, ID3 tag information will not be displayed correctly.

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