

Personal Audio System

Operating Instructions



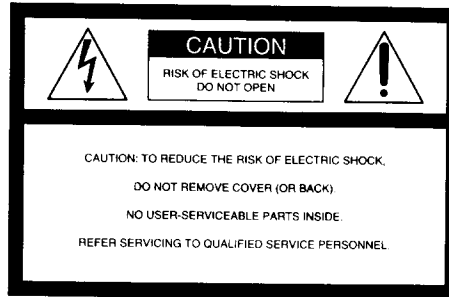
MD Link Plus

ZS-D7

©1998 by Sony Corporation

Warning

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



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



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

CAUTION

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

For customers in Canada

To prevent electric shock, match wide blade of plug to wide slot, fully insert.

Information

For customers in the United States

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.

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

Owner's Record

The model number is located at the rear and the serial number is located in the battery compartment.

Record serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. ZS-D7

Serial No. _____

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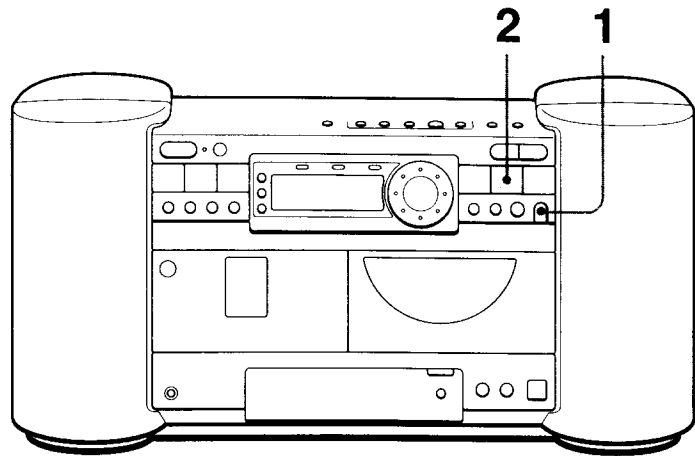
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Playing a CD

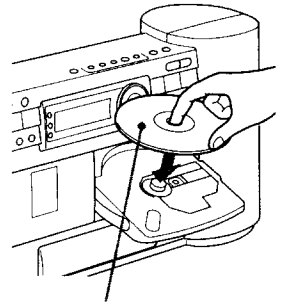


Connect the supplied AC power cord (see page 39.)

1 OPEN/CLOSE



Press ▲ OPEN/CLOSE (direct power-on) and place the CD on the CD tray until it clicks into place.



With the label side up

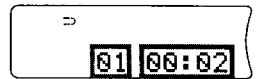
2



Press ►.

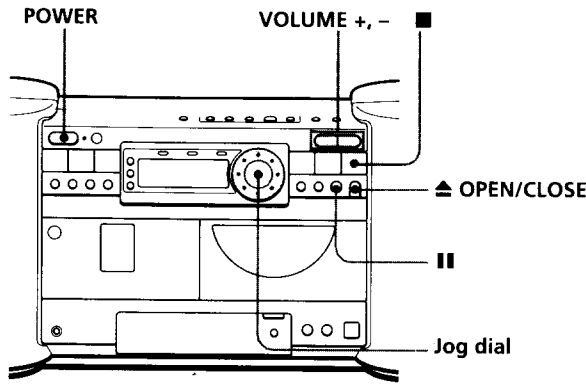
The CD tray closes and the player plays all the tracks once.

Display



Track number Playing time

Use these buttons for additional operations

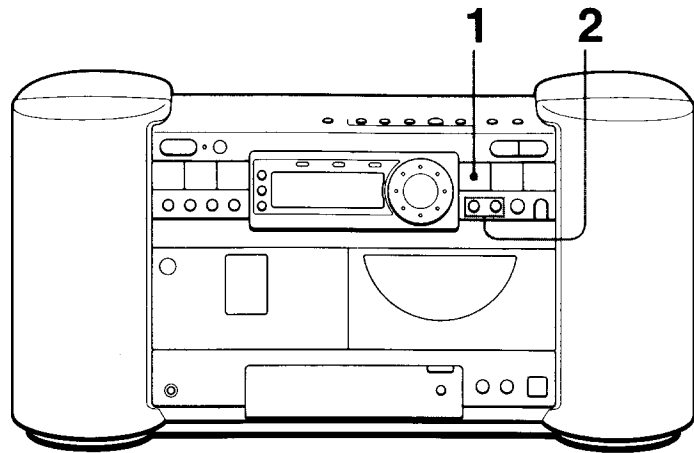


Tips

- After inserting the CD, "TOC READING..." appears in the display and the player starts to read the total number of tracks on the CD and the time information on the CD.
- Next time you want to listen to a CD, just press ►. The player turns on automatically and starts playing the CD.

To	Do this
Adjust the volume	Press VOLUME +, - (VOL +, - on the remote).
Stop playback	Press ■.
Pause playback	Press . Press again to resume play after pause.
Go to the next track	Turn the jog dial clockwise. (On the remote, press ►►.)
Go back to the previous track	Turn the jog dial counterclockwise. (On the remote, press ◀◀.)
Remove the CD	Press ▲ OPEN/CLOSE.
Turn on/off the player	Press POWER.

Listening to the radio



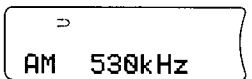
Connect the supplied AC power cord (see page 39.)

1

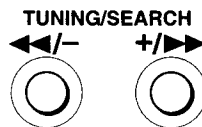


Press **BAND** until the band you want appears in the display (direct power-on).

Display

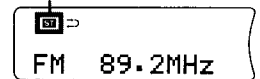


2



Hold down **TUNING/SEARCH** **+ / >>** or **<< / -** (TUNE + or - on the remote) until the frequency digits begin to change in the display.

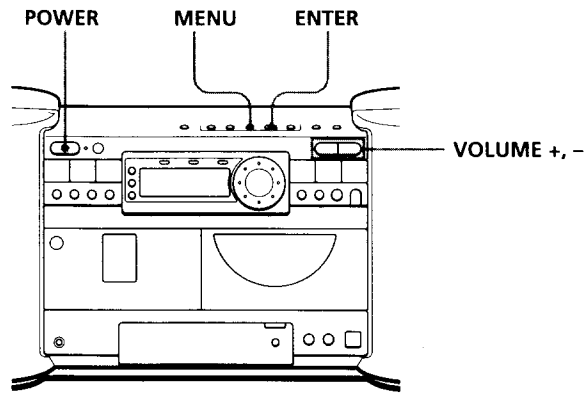
Indicates an FM stereo broadcast.



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

If you can't tune in a station, press **TUNING/SEARCH** **+ / >>** or **<< / -** (TUNE + or - on the remote) repeatedly until you tune in the station you want.

Use these buttons for additional operations

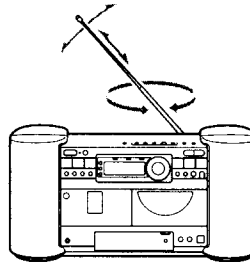


To	Press
Adjust the volume	VOLUME +, - (VOL +, - on the remote)
Turn on / off the radio	POWER

To improve broadcast reception

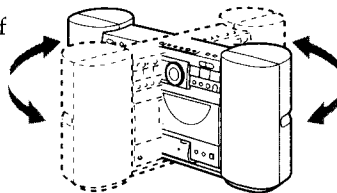
FM:

Reorient the antenna for FM.




AM:

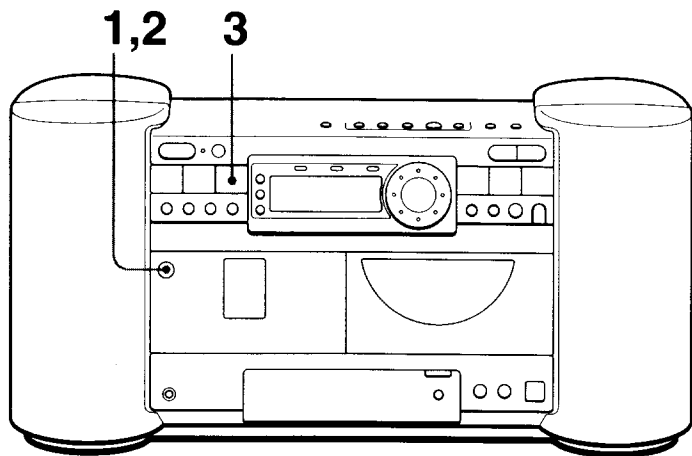
Reorient the player itself for AM.



Tips

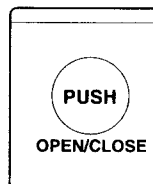
- If the FM broadcast is noisy:
On the remote:
Press MODE until "MONO" appears in the display and the radio will play in monaural.
On the player:
1 Press MENU.

2 Turn the jog dial until "MONO" flashes in the display and press ENTER.
The radio will play in monaural.
- Next time you want to listen to the radio, just press the BAND button. The player turns on automatically and starts playing the previous station.

Playing a tape

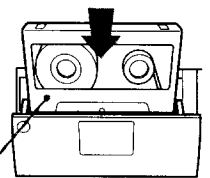


Connect the supplied AC power cord (see page 39.)

1

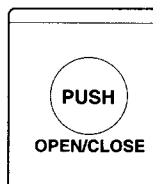


Press PUSH OPEN/CLOSE to open the tape compartment and insert a recorded tape. Use TYPE I (normal), TYPE II (high position) and TYPE IV (metal) tapes.



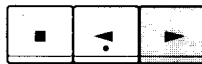
With the side you want to play facing you

2



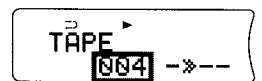
Press PUSH OPEN/CLOSE to close the compartment.

3



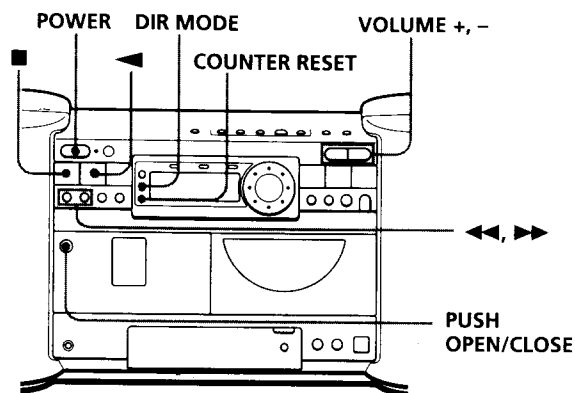
Press ►.
(On the remote, press TAPE ►.)
The player turns on (direct power-on) and starts playing.

Display



Tape counter

Use these buttons for additional operations

**Tips**

- Press COUNTER RESET to reset the counter to "000."
- Next time you want to listen to a tape, just press ► or ◀. The player turns on automatically and starts playing the tape.

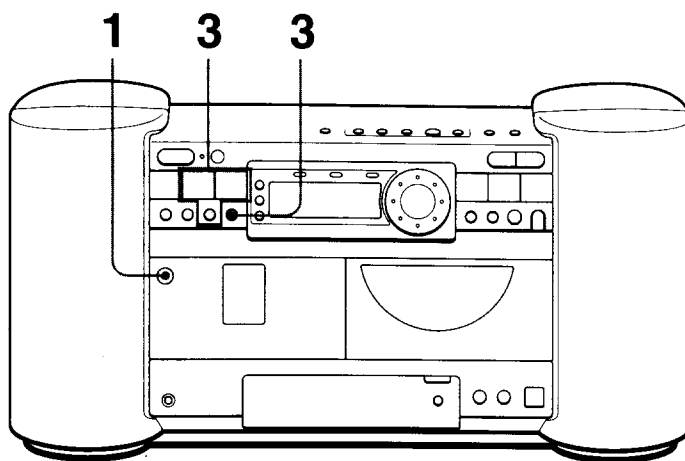
To	Press
Adjust the volume	VOLUME +, - (VOL +, - on the remote)
Stop playback	■
Play the reverse side	◀
Fast-forward or rewind the tape	▶▶ or ◀◀
Eject the cassette	PUSH OPEN / CLOSE
Turn on / off the player	POWER

To select the direction of the tape

Press DIR MODE repeatedly.

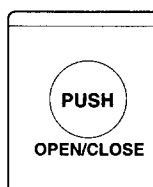
To play	Display shows
One side of the tape	⇒
Both sides of the tape from the front side to reverse side only	⇒⇐
Both sides of the tape repeatedly	⇐⇒

Recording on a tape

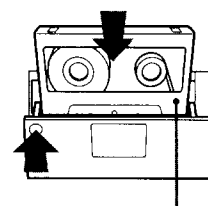


Connect the supplied AC power cord (see page 39.)
To record on a MiniDisc or DAT recorder, connect the components (see pages 41 and 45.)

1



Press PUSH OPEN / CLOSE to open the tape compartment, and insert a blank tape. Use TYPE I (normal) tape only. Press PUSH OPEN / CLOSE again to close the compartment.



With the side you want to record on facing you

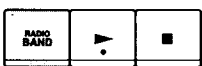
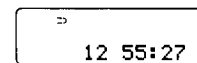
2



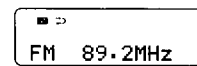
Select the program source you want to record.

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

Display



To record from the radio, press BAND and tune in the station you want (see page 6.)



3


**DUB START
CD→TAPE**



Start recording.

To record the whole CD

Press DUB START CD → TAPE.


When  is displayed:




If the tape is reversed with the recording of the track unfinished, the player will record the track again from its beginning on the reverse side.

To record the radio



(You can also record the CD according to the following procedure. Play the CD after the tape starts recording.)

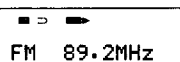
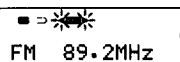
Press  and then .

To record on the reverse side, press .

(On the remote, while keeping  pressed, press TAPE  or .)

Note

On the player, press  within 8 seconds after  is pressed.






Basic Operations

continued

Recording on a tape (continued)

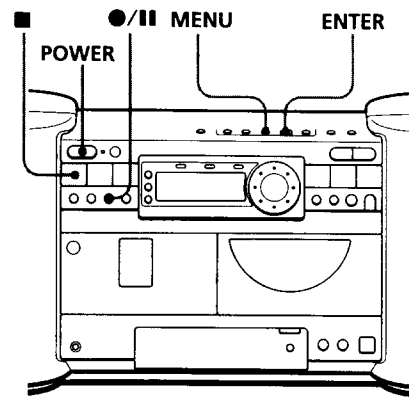
Tips



- Adjusting the volume or the audio emphasis (see page 48) will not affect the recording level.
- When  is displayed, recording will be made on both sides of the tape. To record on one side, press DIR MODE to display .
- If the AM radio makes a whistling sound after you've pressed  in step 3, press MODE on the remote repeatedly to select the position that most decreases the noise. On the player, use MENU to select "ISS".

Note






When you start recording using DUB START CD → TAPE, you cannot set the player in pause.

Use these buttons for additional operations



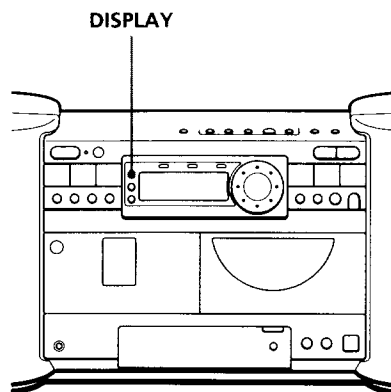
To	Press
Stop recording	
Pause recording	 Press the button again to resume recording.
Turn on/off the player	POWER

To erase a recording

- 1 Insert a tape you want to erase its recording into tape compartment and press .
- 2 On the player: press  and then .
On the remote: While keeping  pressed, press  on the tape section.

Using the display

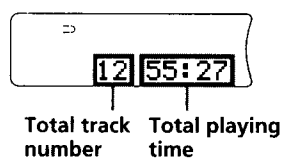
You can check information about the CD using the display.



The CD Player

Checking the total track number and playing time

Press DISPLAY in stop mode.



Checking the remaining time

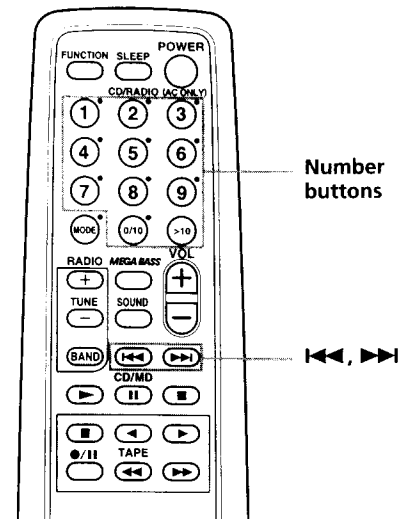
Press DISPLAY while playing a CD.

To display	Press DISPLAY
The current track number and the remaining time on the current track*	Once
Remaining time on the CD and the number of tracks left	Twice
The current track number and playing time	Three times

* For a track whose number is more than 20 the remaining time appears as "--:--".

Locating a specific track

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



Note

You cannot locate a specific track if "SHUFFLE", "REP SHUF" or "PROGRAM"* is lit in the display. Turn off the indication by pressing ■ on the CD/MD section.

Tip

When you locate a track numbered over 10, press >10 first, then the corresponding number buttons.

Example:

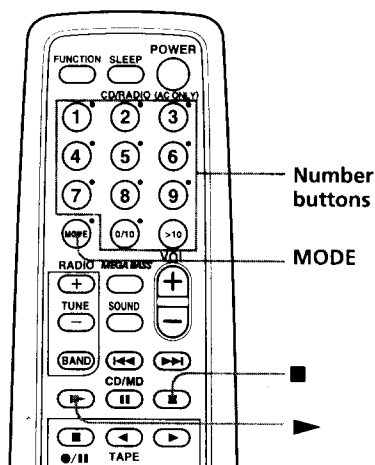
To play track number 23, press >10 first, then 2 and 3.

* When no track has been programmed, "PROGRAM SET" or "REP PGM SET" appears in the display.

To locate	Press
a specific track directly	number button of the track.
a point while listening to the sound	⏮ or ⏭ while playing and hold down until you find the point. (On the player, use TUNING/SEARCH ◀◀/- or +/▶▶.)
a point while observing the display	⏮ or ⏭ in pause and hold down until you find the point. (On the player, use TUNING/SEARCH ◀◀/- or +/▶▶.)

(Repeat Play)

You can play tracks repeatedly in normal, shuffle or program play modes (see pages 17 - 19).






The CD Player

Note

When you repeat a single track or all the tracks, make sure neither "SHUFFLE", "REP SHUF", "PROGRAM"* nor "REP PGM"* is lit in the display.

- 1 Press **■**.
"CD" appears in the display.
- 2 Proceed as follows.

To repeat	Do this
a single track	<ol style="list-style-type: none"> 1 Press MODE until "REPEAT 1" appears. 2 Press the number buttons to select the track that you want to repeat.
all the tracks	<ol style="list-style-type: none"> 1 Press MODE until "REPEAT ALL" appears. 2 Press .
tracks in random order	<ol style="list-style-type: none"> 1 Press MODE until "REP SHUF" (REPEAT SHUFFLE) appears. 2 Press .
programmed tracks	<ol style="list-style-type: none"> 1 Start program play. (See page 19.) 2 Press MODE until "REP PGM"* (REPEAT PROGRAM) appears. 3 Press .

* When no track has been programmed, "PROGRAM SET" or "REP PGM SET" appears in the display.

continued

On the player

- 1 Press ■ on the CD section.
- 2 Press MENU.
- 3 Turn the jog dial until "MODE" flashes in the display and press ENTER.
- 4 Turn the jog dial until the repeat function you want appears in the display and press ENTER.
- 5 Press ► on the CD section.

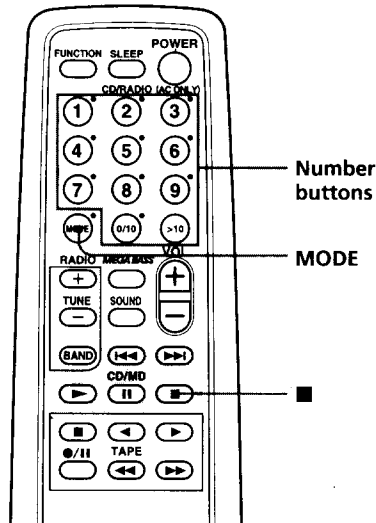
To cancel Repeat Play

Press MODE until "REPEAT" or "REP" disappears from the display.

Playing a single track

(Single Track Play)

You can play a single track once, and stop the player automatically.



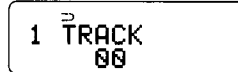
On the player

- 1 Press ■ on the CD section.
- 2 Press MENU.
- 3 Turn the jog dial until "MODE" flashes in the display and press ENTER.
- 4 Turn the jog dial until "1 TRACK" flashes in the display and press ENTER.
- 5 Turn the jog dial to select the track you want to play, and press ► on the CD section.

- 1 Press ■.

"CD" appears in the display.

- 2 Press MODE until "1 TRACK" appears in the display.



- 3 Press the number buttons to select the track you want to play.

The player starts to play the track you have selected.

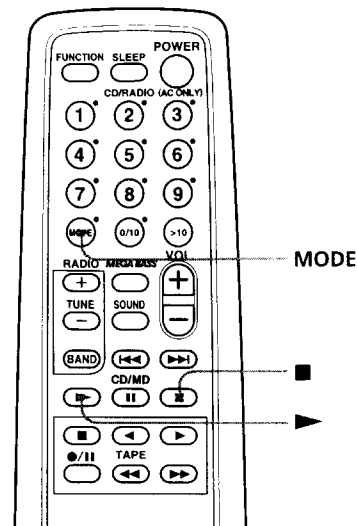
To cancel Single Track Play

Press MODE until "1 TRACK" disappears from the display.

Playing tracks in random order

(Shuffle Play)

You can play tracks in random order.



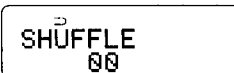
On the player

- 1 Press ■ on the CD section.
- 2 Press MENU.
- 3 Turn the jog dial until "MODE" flashes in the display and press ENTER.
- 4 Turn the jog dial until "SHUFFLE" flashes in the display and press ENTER.
- 5 Press ► on the CD section.

- 1 Press ■.

"CD" appears in the display.

- 2 Press MODE until "SHUFFLE" appears in the display.



- 3 Press ► to start shuffle play.

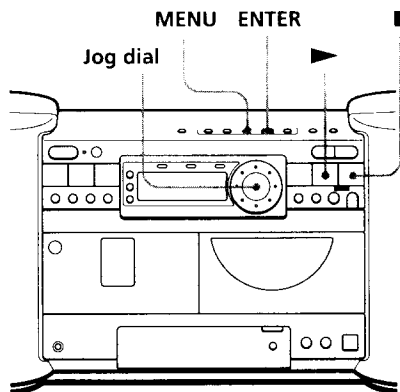
To cancel Shuffle Play

Press MODE until "SHUFFLE" disappears from the display.

Creating your own program

(Program Play)

You can arrange the playing order of up to 20 tracks on a CD.

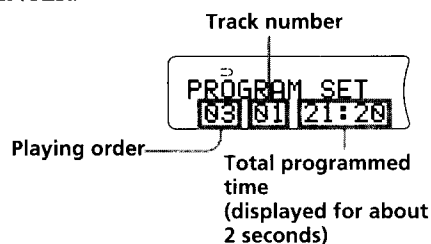


The CD Player

- 1 Press ► to start play.
- 2 Press MENU.



- 3 Turn the jog dial until "PROGRAM SET" appears in the display and press ENTER.
- 4 Turn the jog dial (press the number buttons on the remote) to select the track you want to program, and press ENTER.



- 5 Press ■.
- 6 Press ► to start program play.

continued

Tips

- If you made a mistake, press CANCEL and re-enter the track number by turning the jog dial and press ENTER.
- You can also create a program in stop mode.

Note

When you program a track from the CD having more than 20 tracks:
If you program a track whose track number is more than 20, "----" is displayed instead of the total programmed time.

Tips

- If the program play is finished, the program is saved. You can play the same program again by pressing ►.
- If you open the CD tray, the program is erased.
- You can record your own program.
Press DUB START CD → TAPE after step 5 of the programming procedure.

To cancel Program Play

Press MODE on the remote until "PROGRAM" disappears from the display.

To check the order of tracks before play

As you turn the jog dial in stop mode, the track number appears in the programmed order.

To change the current program

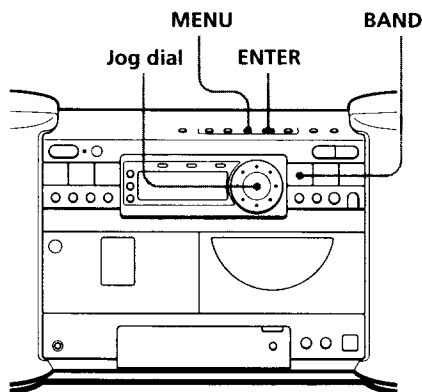
Change before starting the program play.

To	Do this
Erase the last track in the program	<ol style="list-style-type: none">1 Press CANCEL. Every time you press the button, the last track in the program is cleared.2 Re-enter the track numbers by turning the jog dial and pressing ENTER.
Change the whole program completely	<ol style="list-style-type: none">1 Press ■ to erase the whole program.2 Create a new program following the programming procedure.

Presetting radio stations

You can store radio stations into the player's memory. You can preset up to 20 radio stations, 10 for each band in any order.

You can also name the preset radio stations.



The Radio

- 1 Press BAND until the band you want appears in the display.
- 2 Press MENU.
- 3 Turn the jog dial until "MEMORY" flashes in the display and press ENTER.



- 4 Turn the jog dial until "AUTO" flashes in the display and press ENTER.

The stations are stored in memory from the lower frequencies unless a station has a weak signal.

On the player:

- 1 Press BAND to select the band.
- 2 Press MENU.
- 3 Turn the jog dial until "MEMORY" flashes and press ENTER.
- 4 Turn the jog dial until "MANUAL" flashes and press ENTER.
- 5 Turn the jog dial to select the preset number and tune in the station you want using TUNING/SEARCH ◀◀/- or +/▶▶.
- 6 Press ENTER.

If a station cannot be preset automatically

You need to preset a station with a weak signal manually. Also, when you want to replace a preset station with a new one, proceed as follows:

Use the remote.

- 1 Press BAND to select the band.
- 2 Press TUNE + or - until you tune in a station you want.
- 3 Hold down the number button that you want to preset the new station for about 2 seconds.

The new station replaces the old one.

continued

The characters you can input

- Alphabet: A - Z or a - z
- Figures: 0 - 9
- Symbols: ! " # \$ % & () * ; < = > ? @ _ ' + - , / : _ (space)

Tip

If you made a mistake, press CANCEL and re-enter the character by turning the jog dial and press ENTER.

Naming the preset radio stations

- 1 Press the number buttons on the remote to display the preset number of the station you want.
- 2 Press ENTER for about 2 seconds.



- 3 Turn the jog dial to select the character and press ENTER.
- 4 Repeat step 3 to name the preset radio station (up to 10 characters).
- 5 Press ENTER for about 2 seconds.



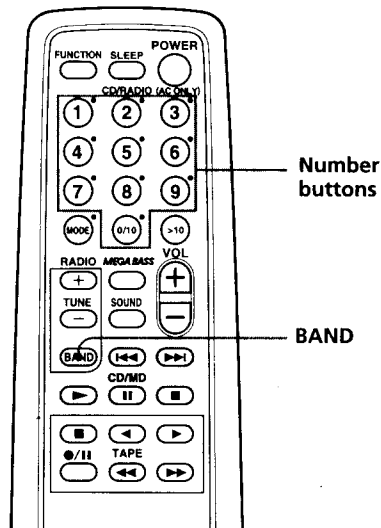
To change the display

Press DISPLAY.

Every time you press DISPLAY, the frequency and the name of the radio station appear alternately in the display.

Playing preset radio stations

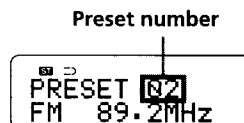
Once you've preset the stations, use the number buttons on the remote or the jog dial on the player to tune in your favorite stations.



On the player

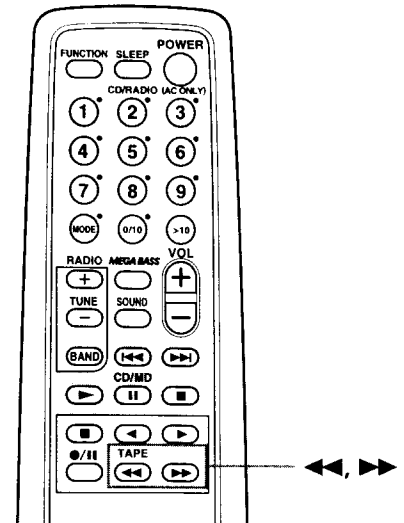
To display the preset number you want on the player, use the jog dial.

- 1 Press BAND to tune in the band you want.
- 2 Press the number buttons to display the preset number of the station you want.



Finding the beginning of a track

The player detects the blank between the tracks to locate the beginning of the next/previous track.



Notes

- If a soft sound like pianissimo continues for some seconds in a track, the player may start to play as the next track.
- If you press the ►► or ◀◀ when there is no sound in the track, this function does not operate correctly.
- To find the beginning of a track correctly, a blank of approx. 4 seconds is necessary.

While playing a tape, press ►► or ◀◀.

Playing side	The beginning of the next track	The beginning of the current track
Front side (►►)	►►	◀◀
Reverse side (◀◀)	◀◀	►►

The tape is wound or rewound to the beginning of the next or current track, and play will start automatically.

Recording the CD tracks by specifying the tape length

There are three options in editorial recording:

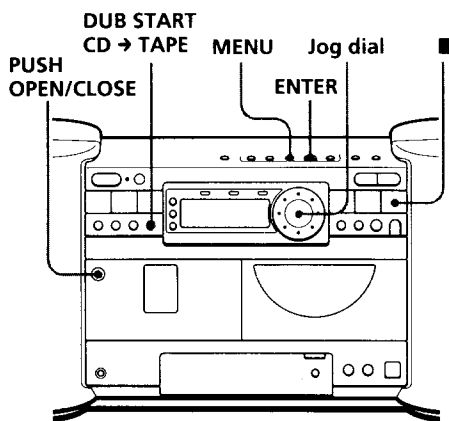
- Recording all the tracks in the original CD order (EDIT ALL)
- Recording programed tracks (EDIT PGM)
- Recording a single track you have selected (EDIT 1 TRACK)

Tips

- You can edit a CD having 20 tracks or fewer.
The tape length needed to record the whole CD, appears in the display (unit: 2 minutes, up to 98 minutes).
- We recommend that you use AC power as the power source for optimum recording quality.

Note

Do not open the CD tray while editing; the settings for recording will be erased. If you do, start from step 1 again.



The Tape Player

Recording all the tracks of the CD (EDIT ALL)

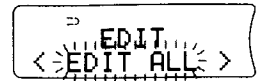
Approximately the first half of the CD will be recorded on one side of the tape, and the second half will be recorded on the other side, without reversing the tape in the middle of a track. According to the tape you use, you can set the total recording time.

- 1 Press ■ until "CD" appears in the display.
- 2 Press MENU.
- 3 Turn the jog dial until "EDIT" flashes and press ENTER.

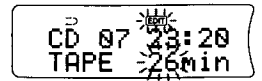


continued

- 4** Turn the jog dial until "EDIT ALL" flashes and press ENTER.



Example: The total tape length needed to record the entire CD is "26" minutes. The maximum recording time for each side is 13 minutes.



Track Nos.:	1	2	3	4	5	6	7
Length:	01:20	02:30	03:40	04:50	05:10	04:20	01:30
(minutes)	Side A (12:20)				Side B (11:00)		

- 5** To change the recording time, turn the jog dial to input the tape length (minutes).

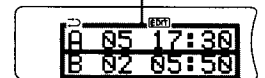
If you do not change the recording time, skip to step 6.

Example: If you input "40" minutes for the recording time, the maximum recording time for each side is 20 minutes.

Track Nos.:	1	2	3	4	5	6	7
Length:	01:20	02:30	03:40	04:50	05:10	04:20	01:30
(minutes)	Side A (17:30)				Side B (5:50)		

- 6** Press ENTER.

Total track number and playing time on the front side



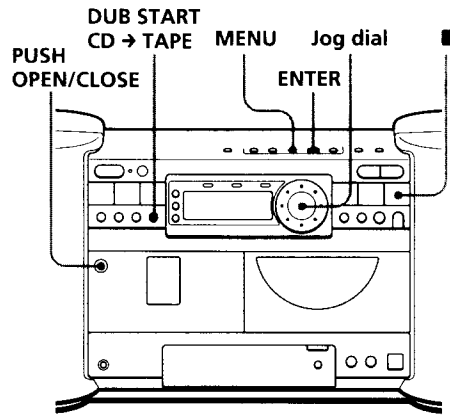
Total track number and playing time on the reverse side

- 7** Insert a blank tape into the tape compartment.

- 8** Press DUB START CD → TAPE.

Recording will start from the front side automatically.





The Tape Player

Tip

The tape length needed to record the whole CD, appears in the display (unit: 2 minutes, up to 98 minutes).

Note

Do not open the CD compartment while editing; the settings for recording will be erased. If you do, start from step 1 again.

Recording programed tracks (EDIT PGM)

The first half of the programed tracks will be recorded on one side of the tape, and the second half will be recorded on the other side. According to the tape you use, you can set the total recording time.

- 1 Press ■ until "CD" appears in the display.
- 2 Press MENU.
- 3 Turn the jog dial until "EDIT" flashes and press ENTER.
- 4 Turn the jog dial until "EDIT PGM" flashes and press ENTER.



continued

Tip

If you made a mistake, press CANCEL. The track programed last will be cleared. Reprogram it.

Tip

To check the order of the programed tracks:
Press ENTER after step 8 and turn the jog dial. The track number will be displayed in the programed order.

- 5 Turn the jog dial (press the number buttons on the remote) to select the track you want to program and press ENTER.

Repeat this step.

STEP 05
08 19:05

- 6 Press ENTER.

The minimum tape length you need to record the programed tracks flashes in the display.

CD 05 19:05
TAPE 20min

- 7 To change the recording time, turn the jog dial and input the time again.
If you do not change the recording time, skip to step 8.

- 8 Press ENTER.

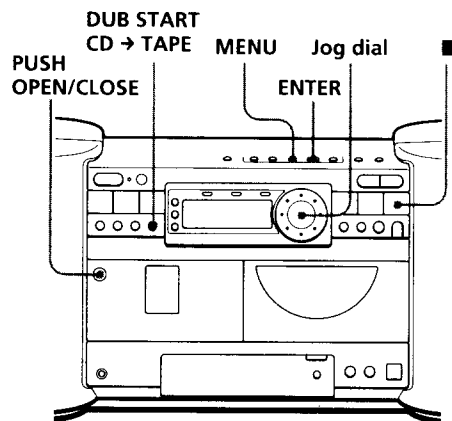
A 04 15:22
B 01 03:43

- 9 Insert a blank tape into the tape compartment.

- 10 Press DUB START CD → TAPE.

Recording will start on the front side automatically.

CD → TAPE
01 05 00:02

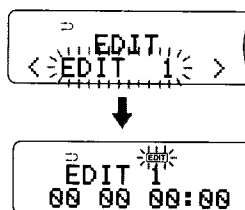


The Tape Player

Recording a single track (EDIT 1 TRACK)

EDIT 1 TRACK is useful to record the first track of a single CD, and to record a track from a number of different CDs. In EDIT 1 TRACK mode, "↔" is automatically selected.

- 1 Insert a blank tape into the tape compartment.
- 2 Press ■ until "CD" appears in the display.
- 3 Press MENU.
- 4 Turn the jog dial until "EDIT" flashes in the display and press ENTER.
- 5 Turn the jog dial until "EDIT 1" flashes in the display and press ENTER.



continued

- 6** Turn the jog dial (press the number buttons on the remote) to select the track you want to program.



- 7** Press DUB START CD → TAPE.

Recording of the selected track will start from the front side.

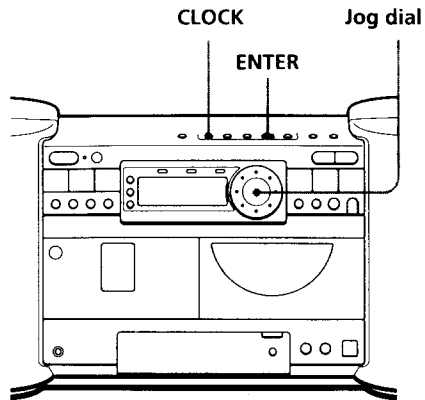


When recording of the track is finished, the CD player and the cassette deck stop. The total number of tracks recorded and the total recording time appear in the display.

When you record another track, repeat steps 6 and 7, or change the source CD and repeat steps 6 and 7.

Setting the clock

"AM 12:00" indication appears in the display until you set the clock.



The Timer

Note

When using the player on batteries, set the clock when the power is on.

Tips

- The time display system of this player is the 12-hour system.
- When you use an AC power cord, ":" flashes as long as the clock goes.

Before you begin, connect to the power source (see page 39.)

- 1 Press and hold CLOCK until the hour digit flashes.

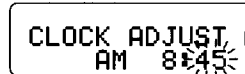


- 2 Set the clock.

- ① Turn the jog dial to set the hour and press ENTER.



- ② Turn the jog dial to set the minutes.



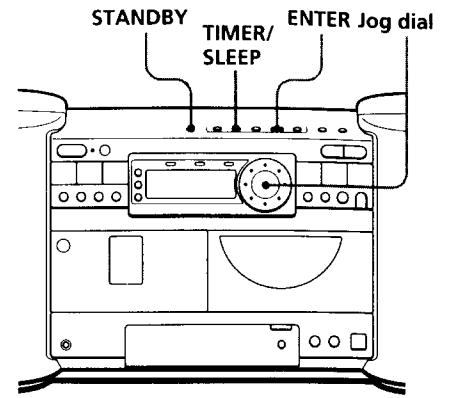
- 3 Press ENTER.

The clock starts from 00 seconds.

Waking up to music

You can wake up to music or a radio program at a preset time.

Make sure you have set the clock ("Setting the clock" on page 31).



Notes

- When using the player on batteries, set the timer when the power is on.
- You cannot preset waking up timer and recording timer (page 36) at the same time.

Before you begin, make sure the ⌚ (clock) indication is not lit in the display. If it is lit, press STANDBY.

- 1 Prepare the music source you want to play.

Source	Do this
CD	Insert a CD.
RADIO	Tune in a station.
TAPE	Insert a tape.
LINE	Turn on the equipment connected to LINE IN.

- 2 Press TIMER/SLEEP.



- 3 Turn the jog dial until "TIMER SET" flashes in the display and press ENTER.



- 4 Turn the jog dial until "TIMER PLAY" flashes in the display and press ENTER.
- 5 Turn the jog dial until the music source you want to play ("CD", "TAPE", "RADIO" or "LINE") appears in the display, and press ENTER.

Tip

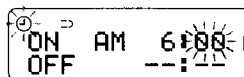
If you made a mistake, press CANCEL. The setting entered last will be cleared. Re-enter it.

Tips

- To exit the standby mode, press STANDBY to make the ☺ indication disappear.
- The preset settings remain until you reset them.
- The display window does not light while the waking up timer is on.

- 6** Set the timer to the hour and the minutes you want the music to go on.

- ① Turn the jog dial to set the hour and press ENTER.



- ② Turn the jog dial to set the minutes and press ENTER.

- 7** Set the timer to the hour and the minutes you want the music to go off (Do as step 6.).

- 8** Turn the jog dial to set the volume you want, and press ENTER.



- 9** Press STANDBY.

The ☺ indication lights up and the power goes off; the player enters the standby mode.

At the preset time, the power will go on and music will play. Then the power will go off at the preset time, and the player will enter the standby mode again.

The Timer

continued

To check/change the waking up timer settings

Press TIMER/SLEEP, then turn the jog dial to select "TIMER SET" and press ENTER. Each time you press ENTER, a stored setting is displayed in the set order. To change the setting, display the setting you want to change and re-enter it.

To use the player before a timer playback starts

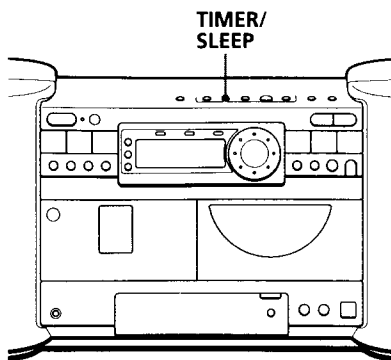
If you turn on the player, you can use it as usual (in case of the radio, if you listen to the station which is different from the one you tuned in step 1 on page 32, you will hear that station at the preset time.) Turn off the player before the preset time.

To stop play

Turn off the power.

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.



The Timer

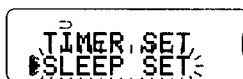
On the remote

Press SLEEP repeatedly to select the minutes for the sleeping timer.

Tips

- The display window does not light while the sleeping timer is on.
- You can combine the waking up timer with the sleeping timer. Set the waking up timer first (see page 32), turn on the power, and then set the sleeping timer.
- You can prepare the different music for the waking up timer and the sleeping timer. However, you cannot store different radio stations.
- You can set different volume for the waking up timer and the sleeping timer. For instance, you can sleep at lower volume and wake up at higher volume.

- 1 Play the music source you want.
- 2 Press TIMER/SLEEP.
- 3 Turn the jog dial until "SLEEP SET" flashes in the display and press ENTER.



- 4 Turn the jog dial to select the minutes when the player goes off automatically.

Each time you press the button, the indication changes as follows: "10" → "20" → "30" → "60" → "90" → "120" → "OFF".



If 4 seconds have passed after you stopped turning the jog dial, the minutes in the display are entered.

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

To cancel the sleep function

Start from step 2 and select "OFF" in step 4.

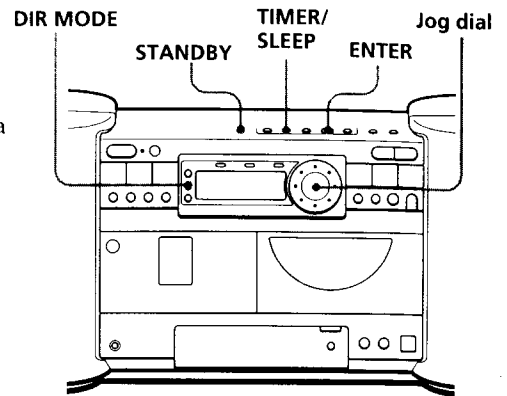
To change the preset time

Do the steps 2 - 4 again.

Timer-recording radio programs

You can set timer to record the radio at a certain time.

Make sure you have set the clock (see "Setting the clock" on page 31.)




Notes

- When using the player on batteries, set the timer when the power is on.
- You cannot preset recording timer and waking up timer (page 32) at the same time.



Tips

- We recommend that you use the AC power cord as a power source for optimum recording quality.
 - When you receive the AM program in step 1, press **●/II** to check if the noise is heard. If so, press **MODE** to select the position that most decreases the noise.
- On the player, use **MENU** to select "ISS".

Before you begin, make sure the  (clock) indication is not lit in the display. If it is lit, press **STANDBY**.

- 1 Tune in the radio station and insert a blank tape into the tape compartment with the side you want to record on facing you.

- 2 Press **DIR MODE** to select recording direction of the tape.

	display
One side	
Both sides	

- 3 Press **TIMER/SLEEP**.

- 4 Turn the jog dial until "TIMER SET" flashes in the display and press **ENTER**.



- 5 Turn the jog dial until "TIMER REC" flashes in the display and press **ENTER**.

Tip

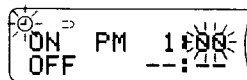
If you made a mistake, press CANCEL. The setting entered last will be cleared. Re-enter it.

Tips

- To exit the standby mode, press STANDBY twice to make the ☹ indication disappear.
- The preset settings remain until you reset them.
- When you select both sides recording, the recording will stop after the both sides recording finishes so that accidental recording will not be made.
- The display window does not light while the recording timer is on.

- 6** Set the timer to the hour and the minutes you want to start recording.

- ① Turn the jog dial to set the hour and press ENTER.



- ② Turn the jog dial to set the minutes, and press ENTER.

- 7** Set the timer to the hour and the minutes you want to stop recording. (Do as step 6.)

- 8** Turn the jog dial to set the volume you want, and press ENTER.



- 9** Press STANDBY.

The power goes off and the player enters the standby mode. The ☹ indication and the recording side of the tape (front side ► or reverse side ◄) appear in the display. To change the recording side, press STANDBY again.

At the preset time, the power will go on and the recording will start. Then the power will go off at the preset time, and the player will enter the standby mode again.

continued

The Timer

To check/change the recording timer settings

Press TIMER/SLEEP, then turn the jog dial to select "TIMER SET" and press ENTER. Each time you press ENTER, a stored setting is displayed in the set order. To change the setting, display the setting you want to change and re-enter it.

To use the player before a timer-recording starts

If you turn on the player, you can use it as usual. Before the preset time, tune in the station you want to record and turn off the power.

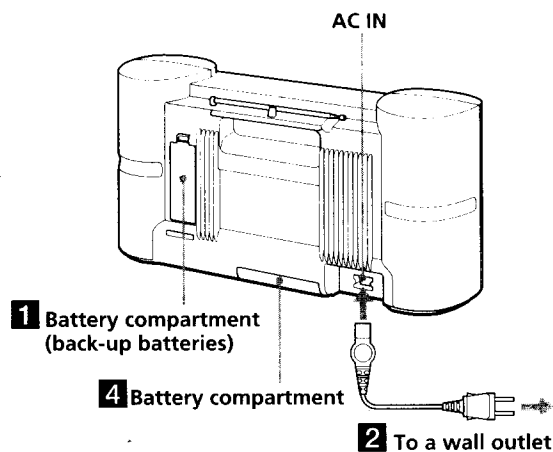
To stop timer-recording

Turn off the power.

Choosing the power sources

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

Use the AC power source whenever you record since recording consumes much power.



Setting Up

Note

Be sure to turn off the power of the player before connecting / disconnecting the AC power cord or removing / inserting batteries.

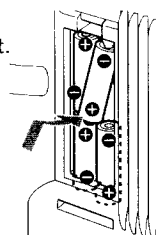
Tips

- With normal use, the back-up batteries should last for about six months when the player is operated on batteries. When the time display dims or when the timer function is disabled, replace all the batteries with new ones. To save the preset settings, replace the batteries with the AC power cord connected.
- The sound quality may be changed depending on the polarity of the plug. Change the direction of inserting the plug and check the sound quality.

1 Inserting the back-up batteries

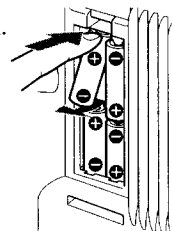
Insert four R6 (size AA) batteries (not supplied) into the battery compartment. These batteries work to save the memory data.

Insert four size AA (R6) batteries (not supplied)



Replacing batteries

To take out the batteries as illustrated.



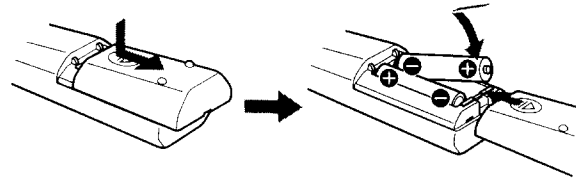
2 Connecting the AC power cord

Insert one end of the supplied AC power cord to the AC IN socket located at the rear of the player, and the other end to the wall outlet.

Notes

- When you insert or remove the batteries, remove the CD from the CD tray.
- When you insert or remove the batteries, disconnect the connecting cords and cables to prevent damaging them.
- When you operate the player on batteries, the backlight in the display does not light.
- When you operate the player on batteries, you can't turn on the player using the remote.

3 Inserting batteries into the remote



Insert two size AA (R6) batteries (not supplied)

Replacing batteries

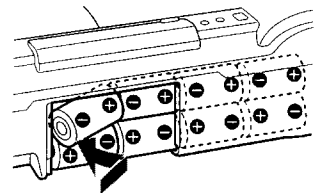
With normal use, the batteries should last for about six months. When the remote no longer operates the player, replace all the batteries with new ones.

4 Using the player on batteries

Insert eight size D (R20) batteries (not supplied) into the battery compartment.

To use the player on batteries, disconnect the AC power cord from the player.

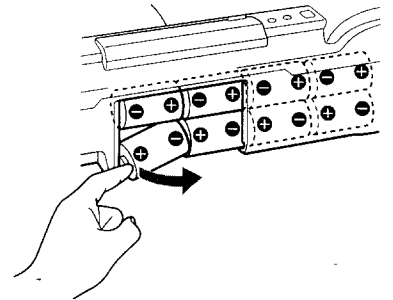
Insert eight size D (R20) batteries (not supplied)



Replacing batteries

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

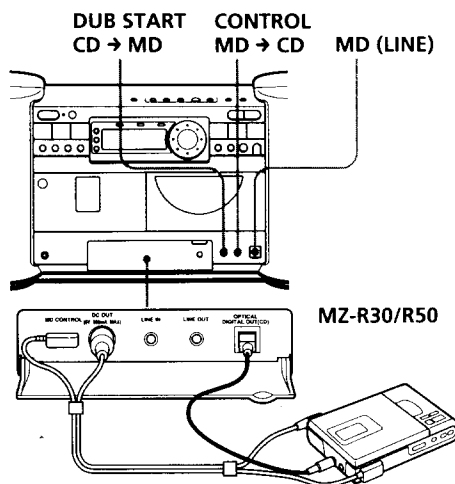
Take out the batteries as illustrated.



Connecting a portable MiniDisc recorder

If you connect the Sony portable MiniDisc recorder MZ-R30/R50 of Sony to this player using the supplied MD connecting cord, you can operate the recorder with the buttons on the player. You can also record a CD on the portable MD recorder using the specific button on the player.

For details, refer to the instruction manual of the portable MiniDisc recorder.



Setting Up

Note

When you operate a portable MD recorder, use this player on AC power. If you use the player on batteries, the power will not be supplied to the recorder.

Tips

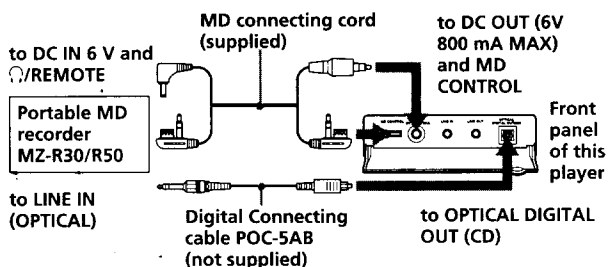
- When this player supplies the power to the portable MD recorder, the rechargeable lithium-ion battery LIP-8/12 in the recorder will be charged at the same time.
- To enjoy better sound, connect the optional audio connecting cord (RK-G136, etc.) to the LINE IN jack of this player and the LINE OUT jack of the recorder.

Connecting a portable MD recorder MZ-R30/R50

Make the following three types of connections:

- Connection for supplying the power from this player to the portable MD recorder
- Connection for listening to the sound of the MD on this player
- Connection for digital recording of a CD on the MD

Be sure to turn off the power of the player before connecting/disconnecting the AC power cord.



continued

Tip

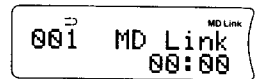
When you will not record a CD on the MD, you need not make a connection shown in step 3.

- 1 Connect the supplied MD connecting cord to the DC IN 6 V jack and the \square /REMOTE jack of the portable MD recorder, and the DC OUT (6 V 800 mA MAX) jack and the MD CONTROL jack of the player. The power will be supplied to the portable MD recorder from the player.
- 2 Maximize the volume of the portable MD recorder and cancel its DIGITAL MEGA BASS function.
- 3 Connect the optional digital connecting cord to the LINE IN (OPTICAL) jack and the OPTICAL DIGITAL OUT (CD) jack.

Listening to an MD

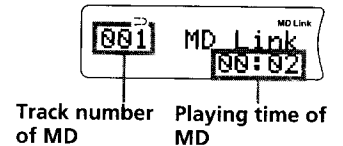
You can operate the portable MD recorder using the buttons on the main unit and the remote of this player.

- 1 Press MD (LINE) so that this player can operate the MD recorder connected.



- 2 Press \blacktriangleright on the player.

Playing of an MD starts and you can hear its sound through the speakers of the player.



Notes on operating a portable MD recorder using this player

- If you turn the jog dial during stop, playing of an MD starts.
- If you press ► during playback of an MD, the recorder will locate the next track.
- You cannot find a specific point on an MD using ◀◀, ▶▶.
- You cannot use the number buttons on the remote supplied with this player.

Other operations on this player

To	Do this
Stop playback	Press ■ on the CD section
Pause during playback	Press . Press again to resume play after pause.
Go back to the previous track or go to the next track	Turn the jog dial. (Press ◀◀, ▶▶ on the remote)
Play the track or tracks repeatedly	Press MODE on the remote repeatedly to select "REPEAT ALL", "REPEAT 1" or "REP SHUF".
Check the track name*, playing time, etc.	Press DISPLAY. Every time you press the button, the display changes.

*The track name will be displayed only if the MD has been labeled.

To operate the CD section of this player

Press CONTROL MD → CD on the player.

continued

Tip

To record a track from a number of different CDs, EDIT 1 TRACK is useful (page 29).

1 Do steps 2 through 6 on pages 29 and 30.

2 Press DUB START CD → MD.

When recording of a certain track has finished, the CD and MD enter stop mode.

To record on an MD using the analog connections:

1 Connect the optional audio connecting cord (RK-G136, etc.) to the LINE OUT jack on this player and the LINE IN (OPTICAL) jack on a portable MD recorder.

2 Turn on the power.

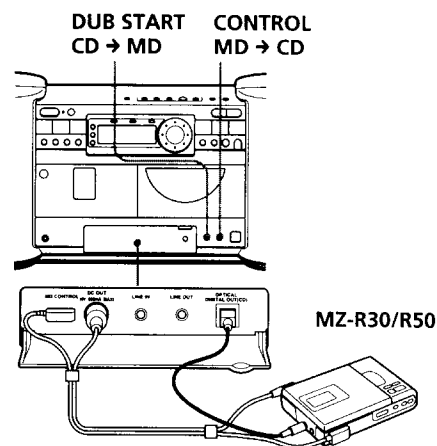
3 Start recording on the component connected.

4 Start playing a CD on this player.

When recording a radio program or tape, tune in a station or play the tape after step 3 above. (If noise is heard while recording a radio program on an MD, keep the portable MD recorder as far away as possible from this player and reorient the portable MD recorder.)

Recording a CD on a portable MD recorder

You can record the whole CD on an MD using a specific button on the player.



1 Place a CD on the player.

2 Press CONTROL MD → CD so that you can operate the CD section on the player.

3 Insert a blank MD into the MD recorder, and locate the point you want to start recording. For details, refer to the instruction manual of the portable MD recorder.

4 Set the SYNCHRO REC switch on the portable MD recorder to "ON".

5 Check the indications appearing in the display on the MD recorder, then press DUB START CD → MD.

Recording starts.

To stop recording

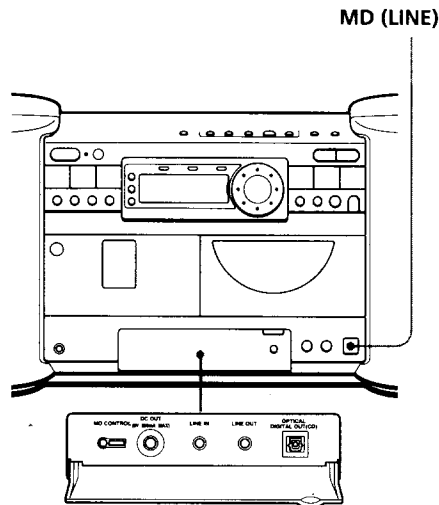
Press ■ on the CD section.

Connecting optional components

You can record a CD on a DAT or enjoy the sound from a VCR or TV through the speakers of this player.

Be sure to turn off the power of each component before making connections.

For details, refer to the instruction manual of the component to be connected.



Setting Up

Notes

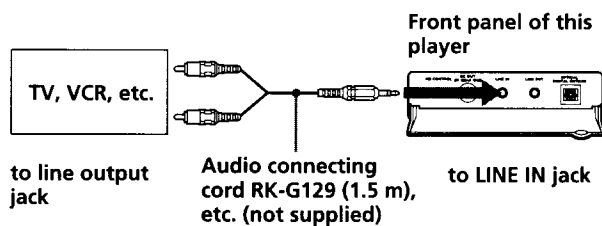
- Connect the cables firmly to avoid any malfunction.
- When connecting the other component to the LINE IN jack of this player, unplug the MD connecting cord from the MD CONTROL jack.

Tip

To record the sound of the component connected, insert a blank cassette into the tape compartment after step 2.

Press **●/■**, then press **▶** on the tape section.

Listening to TV and VCR



- 1 Connect the audio connecting cord (not supplied) to the line output jack of the component and the LINE IN jack of this player.

- 2 Turn on the power, and press MD (LINE) to display "LINE".

The sound from the connected component is output from the speakers.

continued

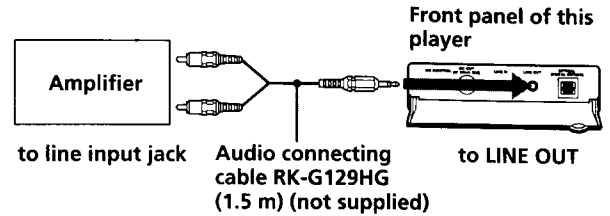
Tip

You can record the sound of the connected component. Insert a blank tape into the tape compartment, and press ●/|| then ► on the tape section.

Notes

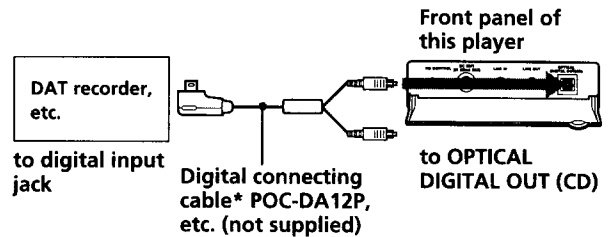
- As long as "CD" appears in the display, the optical digital output jack is in operation and the jack lights even if the CD is in stop mode.
- If you play a CD that is not for audio use, such as a CD-ROM, noise may be heard.

Listening through the speakers of other audio equipment



- 1 Connect the LINE OUT jack of this player with the analog line input jack of the amplifier, etc., using the audio connecting cable (not supplied).
- 2 Turn on the power of this player.

Recording a CD on a DAT recorder



- 1 Connect the digital connecting cable (not supplied) to the digital input jack the DAT recorder and the OPTICAL DIGITAL OUT jack of this player.
- 2 Turn on the power of this player and the connected component.
- 3 Start recording on the connected component.
- 4 Start playing a CD on this player.

* Select the connecting cable depending on the type of the digital input jack of the recorder to be connected. For details, refer to the instruction manual of the component to be connected. The OPTICAL DIGITAL OUT (CD) jack of this player is square-shaped jack.

Tip

To record a track from a number of different CDs, EDIT 1 TRACK is useful (page 29).

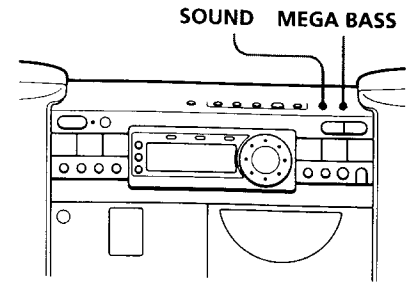
- 1 Make connections.
- 2 Turn on this player and the connected component.
- 3 Do steps 2 through 5 on page 29.
- 4 Start recording on the connected component.
- 5 Start playing a CD on this player.

The type of jack component to be connected	Model number of the connecting cable
L-type 7-pin connector (portable DAT recorder, etc.)	POC-DA12P
Square-shaped optical connector (MiniDisc deck, DAT deck, etc.)	POC-10A

Selecting the audio emphasis

(Sound Mode/MEGA BASS)

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



Selecting the sound characteristic

Press SOUND to select the audio emphasis you want. Each time the button is pressed, the display changes.

Choose	To get
SOUND MODE ■■■■■■■■■■	For rock'n'roll music: powerful, clean sounds, emphasizing low and high range audio.
SOUND MODE -■■■■■■■■■■	For popular music: light, bright sounds emphasizing high and middle range audio
SOUND MODE ■■■■■■■■■■-	For jazz: percussive sounds, emphasizing bass audio.
SOUND MODE -■■■■■■■■-	For vocals: the presence of vocals, stressing middle range audio
SOUND MODE -■■■■■■■■-	For classical music: the whole dynamic range for music

Reinforcing the bass sound

Press MEGA BASS to make "MEGA BASS ON" appear in the display.

To return to normal sound, press the button to make "MEGA BASS OFF" appear in the display.

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.

On power sources

- For AC operation use the supplied AC power cord; 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 eight size D (R20) batteries.
- When the batteries are not to be used, remove them to avoid damage that can be caused by battery leakage or corrosion.
- Unplug the player from the wall outlet when it is not to be used for an extended period of time.
- The nameplate indicating operating voltage, power consumption, etc. is located at the rear.

On placement

- Do not block the ventilation holes on the back of the player by placing the player close to a wall or furniture.
- 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 lenses 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.

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

Notes on CDs

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

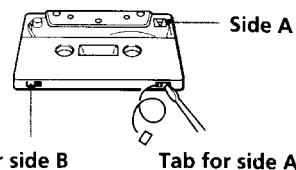


- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the CD to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight as there can be a considerable rise in temperature 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.

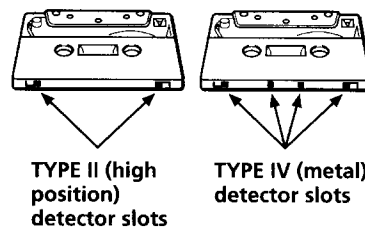
Notes on cassettes

- 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.



- To record on a tape with its tab broken off, cover the respective tab hole for side A or B with adhesive tape.

Take care not to cover the detector slots on TYPE II (high position) or TYPE IV (metal) cassettes. If the slots are covered, the automatic tape selection system will not operate correctly.



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

Troubleshooting

	Symptom	Remedy
General	There is no audio.	<ul style="list-style-type: none"> • Press POWER to turn on the player. • Connect the AC power cord to the AC IN socket and a wall outlet securely. • Make sure the batteries are inserted correctly. • Replace all the batteries with new ones if they are weak. • Adjust the volume. • Unplug the headphones when listening through speakers.
	"ERROR" appears in the display.	<ul style="list-style-type: none"> • You have done a wrong operation. / Your operation was not accepted by the player. → Operate again according to the Operating Instructions.
	The power is turned off automatically.	<ul style="list-style-type: none"> • Replace all the batteries with new ones.
	Unusual sound is heard. The sound is noisy, weak or has poor quality.	<ul style="list-style-type: none"> • Replace all the batteries with new ones if they are weak.
CD Player	The CD does not play.	<ul style="list-style-type: none"> • Make sure that the CD tray is closed.
	"NO DISC" lights in the display even when a CD is in place.	<ul style="list-style-type: none"> • Place the CD with the label surface up. • Clean the CD. • Take out the CD and leave the CD tray open for about an hour to dry moisture condensation. • Press ■ on the CD section to switch the function of the player to "CD".
	The sound drops out.	<ul style="list-style-type: none"> • Reduce the volume. • Clean the CD, or replace it if the CD is badly damaged • Place the player in a location free from vibration.
	When listening to the CD, the TV or radio becomes noisy.	<ul style="list-style-type: none"> • Move the player away from the TV or radio.
	You cannot operate the CD section of the player.	<ul style="list-style-type: none"> • The player is set to operate a MD recorder. → Press CONTROL MD → CD so that you can operate the CD section of the player.

continued

Troubleshooting (continued)

	Symptom	Remedy
Radio	The audio is not stereo.	<ul style="list-style-type: none"> Press MENU to make "STEREO" appear in the display and press ENTER.
	The audio is weak or has poor quality.	<ul style="list-style-type: none"> Depending on the FM reception conditions, noise may be heard. 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 radio, noise may be heard. This is unavoidable.
	The picture of your TV becomes unstable.	<ul style="list-style-type: none"> If you are listening to an FM program near the TV with an indoor antenna, move the player away from the TV.
Tape Player	The tape does not move when you press an operation button.	<ul style="list-style-type: none"> Insert the tape properly and close the tape compartment securely. Replace all the batteries with new ones.
	The buttons for recording do not function/The tape does not play.	<ul style="list-style-type: none"> Make sure the safety tab of the tape in the tape compartment is in place. Press ■ on the tape section to switch the function of the player to "TAPE".
	The tape does not erase completely.	<ul style="list-style-type: none"> Clean the erasing heads (see page 54.)
	The tape does not record.	<ul style="list-style-type: none"> Make sure the tape is inserted properly. Make sure the safety tab of the tape in the tape compartment is in place.
	The audio is weak/The audio quality is poor.	<ul style="list-style-type: none"> Clean the heads, pinch rollers and capstans (See page 54). Demagnetize the heads using a demagnetizer (see page 54).
	The tape player cannot be paused during playback.	<ul style="list-style-type: none"> The tape player can be paused during recording only.

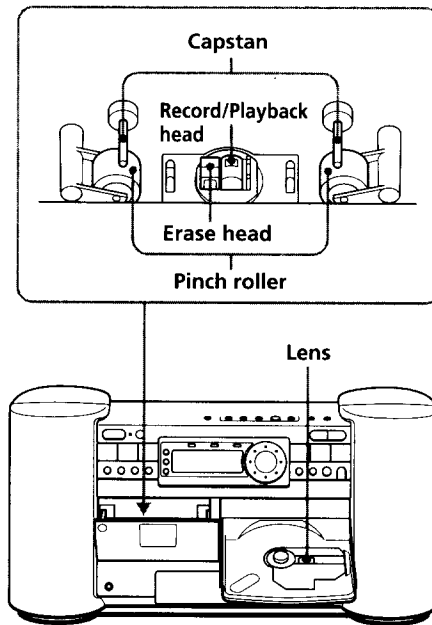
	Symptom	Remedy
Timer	The timer does not operate.	<ul style="list-style-type: none"> • Make sure the time on the clock is correct. • Replace all the batteries in the player including the back-up batteries with new ones if they are weak. • Check to see if the AC power had been cut off. • Make sure the tape has not wound to the end. • Make sure the ⌚ (clock) indication is displayed.
	The remote does not function.	<ul style="list-style-type: none"> • 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.
Connecting optional components	No sound from the portable MD recorder connected to the MD CONTROL jack of this player.	<ul style="list-style-type: none"> • If you have connected any component to the LINE IN jack of this player, disconnect the component.

The player uses a built-in micro computer for its various operations. Due to change in power supply conditions, etc., operation may sometimes become unstable. After trying the above remedies, if the player still does not function properly, unplug the AC power cord and remove all the batteries. After all indications in the display disappear, plug the power cord and insert the batteries again. If the problem persists, please consult your nearest Sony dealer.

Maintenance

Cleaning the tape heads and tape path

Wipe the heads, the pinch rollers and the capstans 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 lens

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

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 benzene.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 4-ohm loads, both channels driven from 100 - 10,000 Hz; rated 7 W per channel - minimum RMS power, with no more than 10 % total harmonic distortion in AC operation.

Other 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 +0.5/-2 dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

FM: 87.6 - 108 Hz

AM: 530 - 1,710 kHz

Aerials

FM: Telescopic aerial

AM: Built-in ferrite bar aerial

Cassette-corder section

Recording system

4-track 2 channel stereo

Fast winding time

Approx. 130s (sec.) with Sony cassette C-60

Frequency response

TYPE I (normal): 100 - 10,000 Hz

General

Speaker

Full range: 5 cm (2 in.) dia., 8 ohms, cone type x 4

Control

MD CONTROL jack

Input

LINE IN jack (stereo minijack)

Minimum input level 250 mV

Outputs

Headphones jack (stereo minijack)

For 16 - 68 ohms impedance headphones

DC OUT (6 V 800 mA MAX) jack

LINE OUT jack (stereo minijack)

Rated output level 250 mV at load impedance

47 kilohms

OPTICAL DIGITAL OUT (CD) jack (optical output connector)

Wavelength: 630 - 690 nm

Power output (excluding US model)

10 W + 10 W (at 4 ohms, 10 % harmonic distortion)

Power requirements

For personal audio system:

120V AC, 60 Hz

12 V DC, 8 size D (R20) batteries

For memory back-up:

6 V DC, 4 size AA (R6) batteries

For remote commander:

3 V DC, 2 size AA (R6) batteries

Power consumption

AC 38 W

Battery life

For personal audio system

FM recording

Sony R20P: approx. 3.5 h

Sony alkaline LR20: approx. 10 h

Tape playback

Sony R20P: approx. 1 h

Sony alkaline LR20: approx. 2.5 h

CD playback

Sony R20P: approx. 1 h

Sony alkaline LR20: approx. 2 h

Dimensions (incl. projecting parts)

Approx. 482 x 238 x 125 mm (w/h/d)

(19 x 9 1/2 x 5 inches)

Mass (incl. batteries)

Approx. 5.2 kg (11 lb. 7 oz)

Supplied accessories

AC power cord (1)

MD connecting cord (1)

Remote commander (1)

Design and specifications are subject to change without notice.

Optional accessories

Sony MDR headphone series

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