

SONY[®]

3-859-373-12(1)

CD Radio Cassette-Corder

Operating Instructions

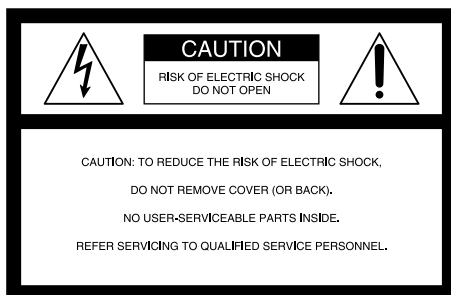
***CFD-ZW150
CFD-ZW160
CFD-ZW200***

—
©1996 by Sony Corporation

CFD-ZW150/ZW160/ZW200.E_3-859-373-1X.U2/CA2/AU6

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.

Warning

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

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 and serial numbers are located at the rear of the CD radio cassette-corder. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____

Serial No. _____

About This Manual

The instructions in this manual are for the CFD-ZW150, CFD-ZW160 and CFD-ZW200. Before you start reading, check your model number. The CFD-ZW160 is the model used for illustration purposes.

Table of contents

Basic Operations

- 4 Playing a CD
 - 6 Listening to the radio
 - 8 Playing a tape
 - 10 Recording on a tape
-

The CD Player

- 12 Using the display
- 13 Locating a specific track
- 14 Playing tracks repeatedly (Repeat Play)
- 15 Creating your own program (Program Play)

The Timer

- 16 Setting the clock
- 17 Waking up to music
- 19 Falling asleep to music

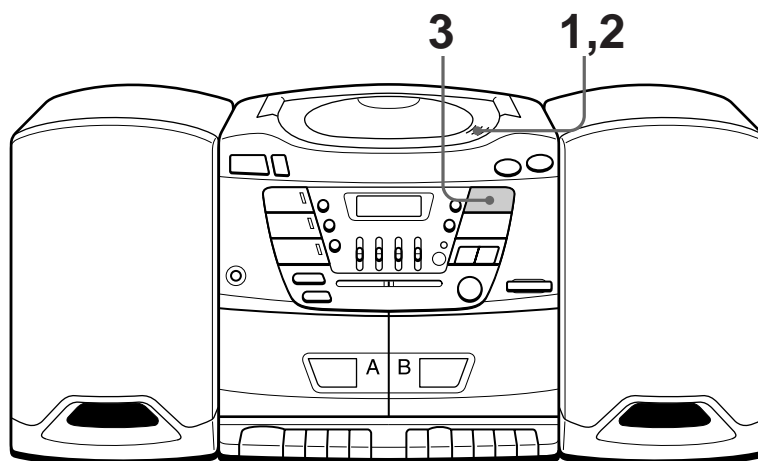
Setting Up

- 20 Hooking up the system
- 23 Adjusting the audio emphasis (MEGA BASS/4 BAND GRAPHIC EQUALIZER/SURROUND)

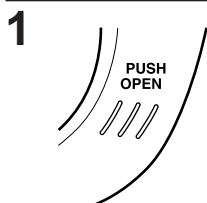
Additional Information

- 25 Precautions
- 27 Troubleshooting
- 29 Maintenance
- 30 Specifications
- 31 Index

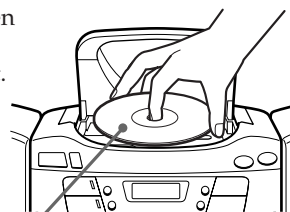
Playing a CD



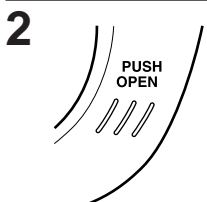
For hookup instructions, see pages 20 – 22.



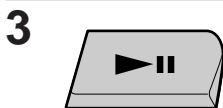
Push PUSH OPEN down to open the CD compartment and place the CD on the CD compartment.



With the label side up



Close the lid of the CD compartment.



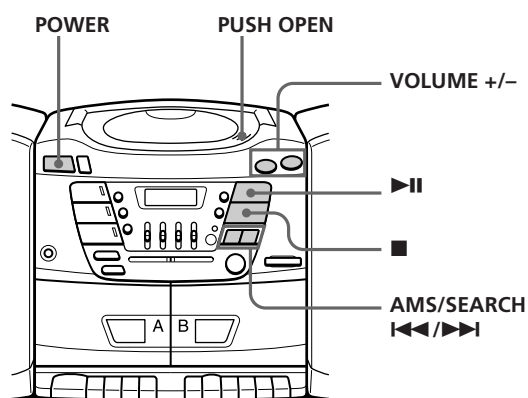
Press ▶|| (direct power-on).
The player plays all the tracks once.

Display



Track number Playing time

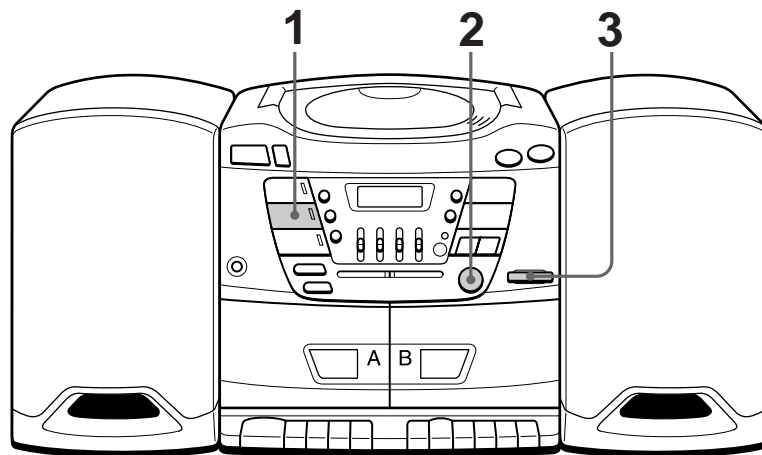
Use these buttons for additional operations

**Tip**



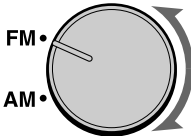


Next time you want to listen to a CD, just press ▶||. The player turns on automatically and starts playing the CD.

To	Press
Adjust the volume	VOLUME +/-
Stop playback	■
Pause playback	▶ Press again to resume play after pause.
Go to the next track	AMS/SEARCH ▶▶
Go back to the previous track	AMS/SEARCH ◀◀
Remove the CD	PUSH OPEN
Turn on/off the player	POWER

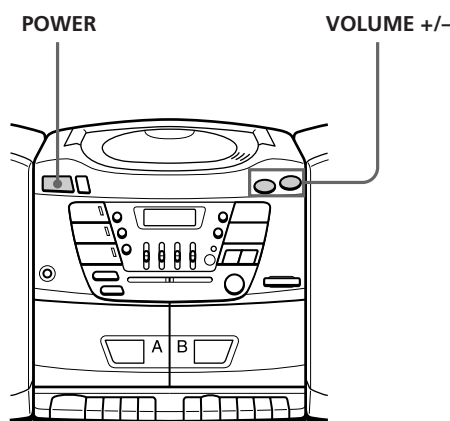
Listening to the radio



For hookup instructions, see pages 20 – 22.

- | | | | |
|----------|---|--|---|
| 1 |  | Press RADIO (direct power-on). | Display
 |
| 2 |  | Turn BAND to select the band you want. | |
| 3 |  | Turn TUNING to tune in the station you want. |  |

Use these buttons for additional operations



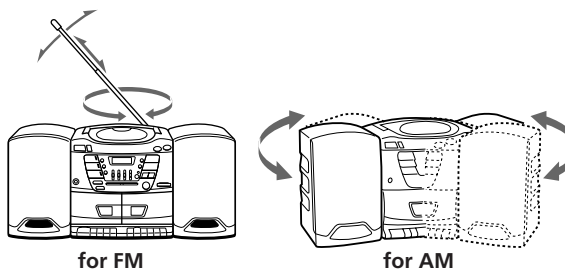
Tips

- If the FM broadcast is noisy, set FM MODE/ISS at the rear to "MONO". Radio will play in monaural.
- Next time you want to listen to the radio, just press the RADIO button. The player turns on automatically and starts playing the previous station.

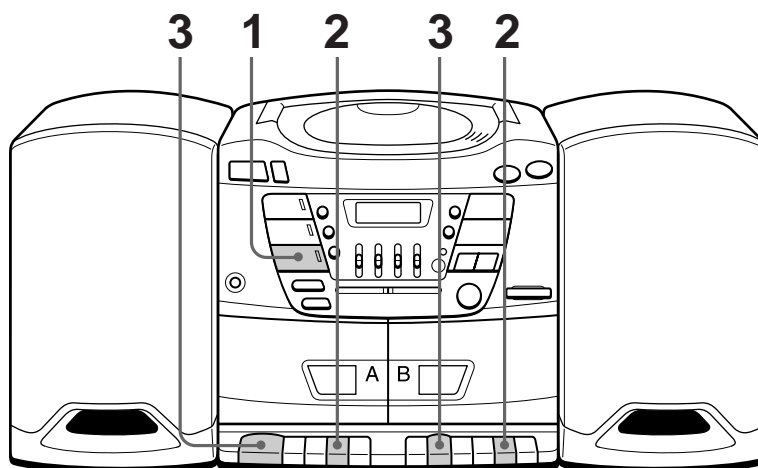
To	Press
Adjust the volume	VOLUME +/-
Turn on/off the radio	POWER

To improve broadcast reception


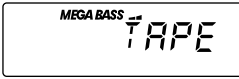
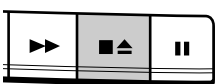

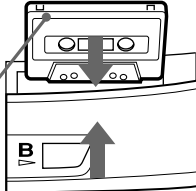
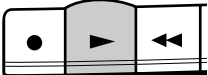

Reorient the antenna for FM. Reorient the player itself for AM.



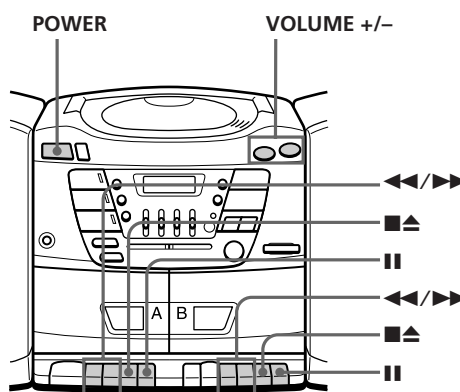
Playing a tape



For hookup instructions, see pages 20 – 22.

-  **1** Press TAPE (direct power-on). 
-  **2** Press  to open tape compartment and insert a recorded tape. Close the compartment. 
With the side you want to play facing forward
-  **3** Press .
The player starts playing.

Use these buttons for additional operations



Note

During playback, do not press buttons on the other deck. Otherwise the playback speed may change.

Tip

For the best results, use TYPE I (normal) tape.

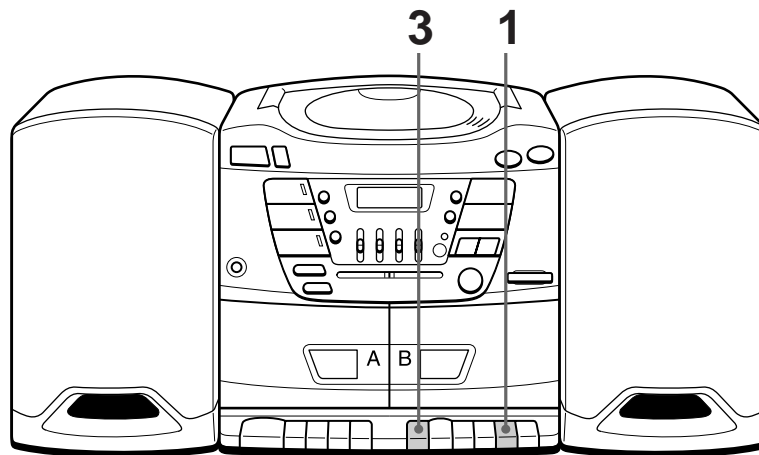
To	Press or slide
Adjust the volume	VOLUME +/-
Stop playback	■▲
Fast-forward or rewind the tape	▶▶ or ◀◀
Pause playback	
	Press the button again to resume play after pause.
Play the opposite side of the tape (CFD-ZW200 deck A only)	DIR in the direction of the arrow. The ▶ or ◀ in the display indicates the tape direction of deck A.
Eject the cassette	■▲
Turn on/off the player	POWER

To select the direction of the tape (CFD-ZW200 deck A only)

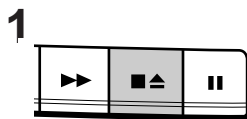
To play	Switch DIRECTION MODE to
Both sides of the tape repeatedly	↔
Both sides of the tape from the front side to reverse side only*	↔

* If play begins from the reverse side, the tape stops at the end of that side.

Recording on a tape

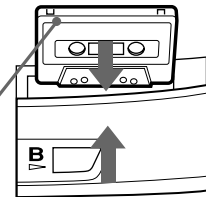


For hookup instructions, see pages 20 – 22.



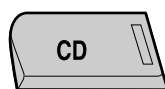
Press to open the tape compartment on deck B and insert a blank tape.

With the side you want to record on facing forward



2

Select the program source you want to record.



CD

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



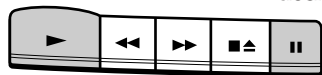
RADIO

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

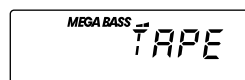
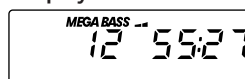


TAPE

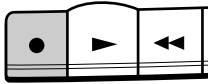
To record from a tape, press TAPE, insert a recorded tape into deck A and press and on deck A.



Display



3 Deck B



**HI-SPEED
DUBBING**



Start recording.

To record, press ● on deck B (▶ is depressed automatically).

For high speed dubbing, after depressing HI-SPEED DUBBING, press ● on deck B (▶ is depressed automatically). (CFD-ZW200 only).

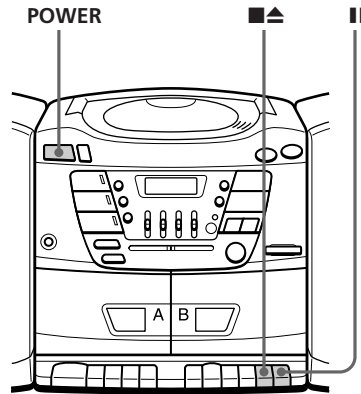
Note

When recording a CD, press ● after the total track number and the total playing number of the CD have been displayed.

Tips

- Adjusting the volume or the audio emphasis (see page 23) will not affect the recording level.
- If the AM program makes a whistling sound after you've pressed ● in step 3, set the FM MODE/ISS (Interference Suppress Switch) at the rear to the position that most decreases the noise.
- For the best results, use the AC power as a power source and use TYPE I(normal) tape for recording.
- To erase a recording, proceed as follows:
1 Press TAPE until "TAPE" appears in the display window.
2 Press ● on deck B.

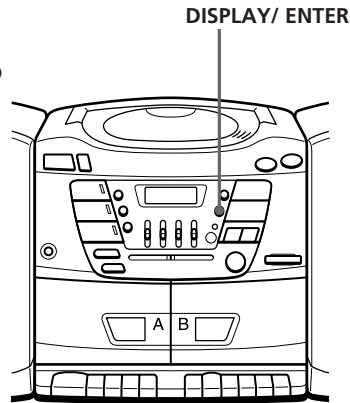
Use these buttons for additional operations



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

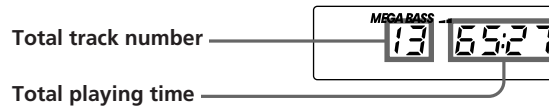
Using the display

You can check information about the CD using the display.



Checking the total track numbers and playing time

Press DISPLAY/ENTER in stop mode.



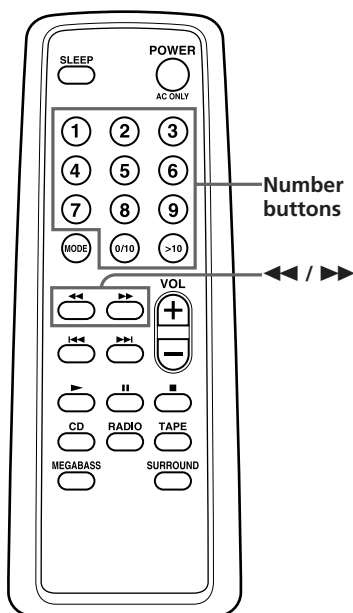
Checking the remaining time

Press DISPLAY/ENTER while playing a CD.

To display	Press DISPLAY/ENTER
Remaining time on the CD and the number of tracks left	Once
The current track number and playing time	Twice

Locating a specific track

You can quickly locate any track using the number buttons (CFD-ZW160/ZW200 only). You can also find a specific point in a track while playing a CD.



(CFD-ZW160/ZW200)

Note

(CFD-ZW160/ZW200 only)

You cannot locate a specific track if "SHUF REP" or "PGM" is lit in the display. Turn off the indication by pressing ■.

Tip

(CFD-ZW160/ZW200 only)

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

Example:

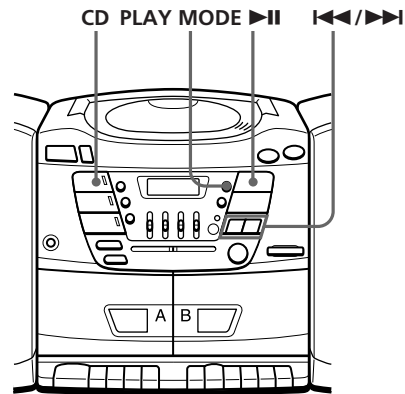
To play track number 23, press >10 first, then 2 and 3.

To locate	Press
a specific track directly (CFD-ZW160/ZW200 only)	number button of the track.
a point while listening to the sound	▶▶ (forward) or ◀◀ (backward) while playing and hold down until you find the point (CFD-ZW160/ZW200 only). When you use the buttons on the player, use AMS/SEARCH ◀◀/▶▶.
a point while observing the display	▶▶ (forward) or ◀◀ (backward) in pause and hold down until you find the point (CFD-ZW160/ZW200 only). When you use the buttons on the player, use AMS/SEARCH ◀◀/▶▶.

Playing tracks repeatedly

(Repeat Play)

You can play tracks repeatedly in normal, shuffle or program play modes (see page 15).



- 1 Press CD.
"Cd" appears in the display.
- 2 Press PLAY MODE until the repeat mode you want appears in the display.

To repeat	Select
a single track	REP 1
all the tracks	REP ALL
tracks in random order	SHUF REP
programed tracks	PGM REP and then program tracks (see step 3 on page 15).

- 3 Do either of the following to start repeat play:
 - **When you've selected REP1**, select the track by pressing AMS/SEARCH **◀◀** or **▶▶** and press **▶||**.
 - **When you've selected REP ALL, SHUF REP or PGM REP**, press **▶||**.

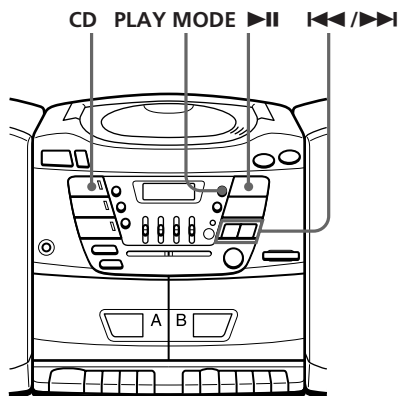
To cancel Repeat Play

Press PLAY MODE until "REP" disappears from the display.

Creating your own program

(Program Play)

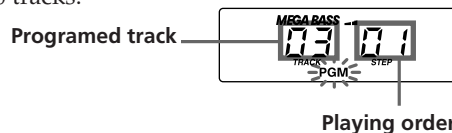
You can make a program of up to 20 tracks in the order you want them to be played.



Tips

- When using the remote (CFD-ZW160/ZW200 only), you can select the track by pressing the number buttons instead of AMS/SEARCH ◀◀/▶▶ and DISPLAY/ENTER.
- You can play the same program again, since the program is saved until you open the disc compartment.
- You can record your own program. After you've created the program, insert a blank tape into deck B and press ● on deck B to start recording.

- 1 Press CD.
"Cd" appears in the display.
- 2 Press PLAY MODE until "PGM" appears in the display.
- 3 Press AMS/SEARCH ◀◀ or ▶▶ then press DISPLAY/ENTER for the tracks you want to program in the order you want. You can program up to 20 tracks.



- 4 Press ▶▶ to start program play.

To cancel Program Play

Press PLAY MODE until "PGM" disappears from the display.

To check the order of tracks before play

Press DISPLAY/ENTER.

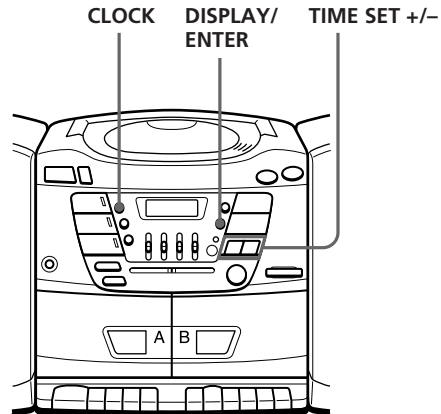
Every time you press the button, the track number appears in the programmed order.

To change the current program

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

Setting the clock

Before you set the clock, insert three size AA (R6) batteries and connect the AC power cord (see page 20 and 21.)
As long as the clock goes, ":" flashes.



Tip

The time display system of this player is the 12-hour system:
AM12:00 = midnight
PM12:00 = noon

- 1 Press and hold **CLOCK** for about 2 seconds until "AM" or "PM" and the hour digit flash.
- 2 Press **TIME SET +/-** until you set the current hour. Then press **DISPLAY/ENTER**.

The minute digits flash. Set the minutes by pressing **TIME SET +/-** until the current minute is displayed.

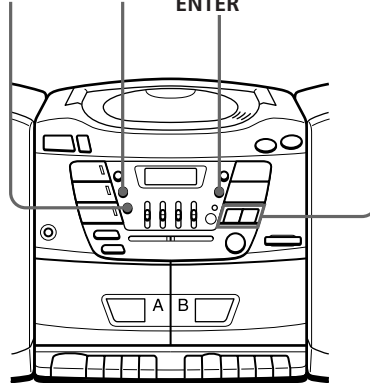


- 3 Press **DISPLAY/ENTER**.
The clock starts from 00 seconds.

Waking up to music

You can wake up to music at a preset time. Make sure you have set the clock ("Setting the clock" on page 16).

STANDBY TIMER DISPLAY/
ENTER TIME SET+/-

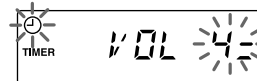


The Timer

- 1 Prepare the music source you want to play.

To play	Do this
the radio	Tune in a station
a CD	Insert a CD.

- 2 Press TIMER for about 2 seconds.
The ☹ (clock) and the music source ("Cd" or "RADIO") flash.
- 3 Select the music source ("Cd" or "RADIO") by pressing TIME SET +/-, then DISPLAY/ENTER.
- 4 Set the timer to the hour you want the music to start by pressing TIME SET +/- then DISPLAY/ENTER. Set the minutes, then press DISPLAY/ENTER.
- 5 Press TIME SET +/- to set the volume, then DISPLAY/ENTER.



continued

Waking up to music (continued)

Tips

- The display window dims while the waking up timer is on.
- You can have the player go on the next day at the same time. Just press STANDBY until the ☹ indication appears in the display. The preset settings remain until you reset them.

Note

During the timer mode, you cannot change the tape player to the tape function. To operate the tape player, press STANDBY until the ☹ indication disappears from the display first, then operate the tape player.

6 Press STANDBY.

The ☹ indication appears in the display and the power goes off.

At the preset time, the power will go on and music will play for 2 hours.

To check/change when the playback will start

Press TIMER for about 2 seconds, then DISPLAY/ENTER. Each time you press DISPLAY/ENTER, a stored setting lights up. Change the setting if you need to when the setting lights up. When you finish checking the setting of volume, press TIMER again.

To use the player before a timer playback starts

Just turn on the player, and then you can use it.

If you turn off the player before the preset time, timer playback will start at the preset time.

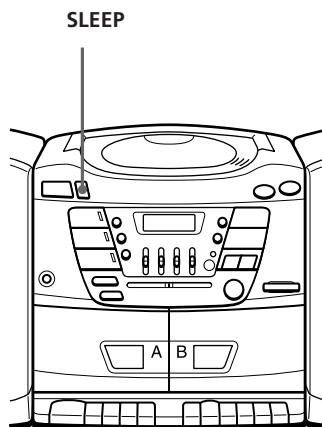
In case of the radio, however, if you listen to the station which is different from the one you tuned in in step 1 on page 17, you will hear that station at the preset time. Make sure to tune in the station you want to listen to before you turn off the player.

To stop play

Press POWER.

Falling asleep to music

You can set the player to turn off automatically after about 2 hours, allowing you to fall asleep while listening to music.



Tip

- The display window dims while the sleep timer is on.
- When you are playing radio or CD, make sure that ► of the tape player is not depressed.
- You can fall asleep and wake up to different music. First, set the wake up timer by following steps in "Waking up to music" on page 17 . Then, turn the power on and follow the steps on this page to set the sleep timer. When you are listening to the radio, make sure to tune in the station you want to wake up to.

- 1** Play the music source you want.
- 2** Press SLEEP.

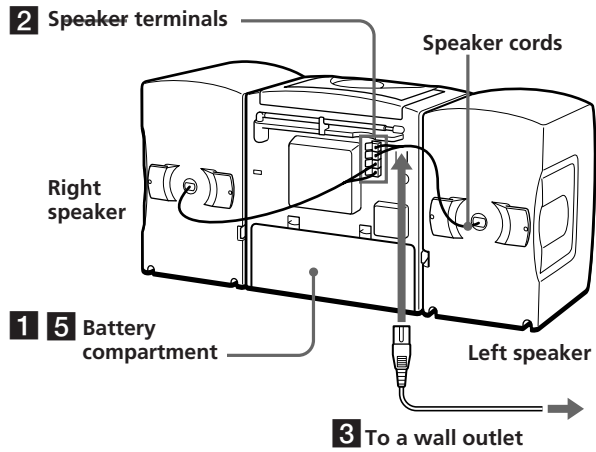
"SLEEP" appears in the display. The player shuts off automatically after about 2 hours.

To cancel the sleep function

Press SLEEP again.

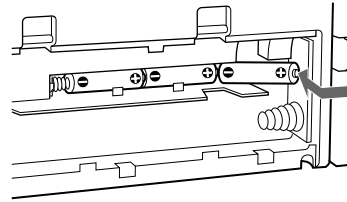
Hooking up the system

Make sure you turn off the power before making any connections.



1 Inserting the back-up batteries

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

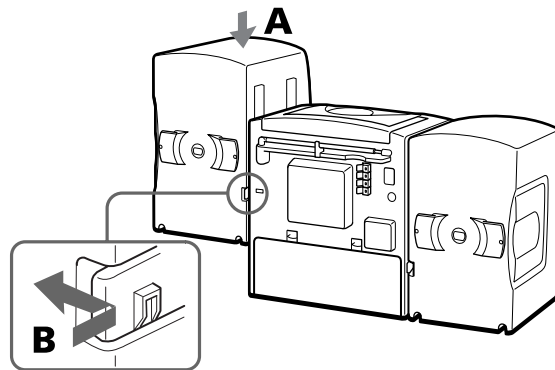


Tips

- To detach the speakers, unlock speaker (see B on the diagram) and slide the speaker box all the way up and away from the player.
- Connect the speakers for this unit only to the speaker terminals of this unit. If you connect any other speakers or equipment, malfunction may occur.

2 Hooking up the speakers

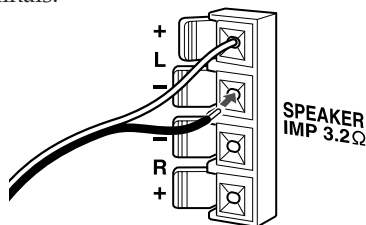
- 1 Align the grooves and slide the speaker box down until it snaps into place A.



- 2** Twist the speaker cable coating and strip it from the end of the cable.



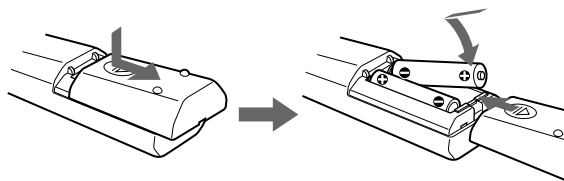
- 3** Connect the black wires to (-) minus and the red wires to (+) plus terminals; the right speaker wires to the R and the left speaker wires to the L terminals.



3 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.

4 Inserting batteries into the remote (CFD-ZW160/ZW200 only)



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.

continued

Note

When you operate the player with the batteries, you cannot turn on the player using the remote (CFD-ZW160/ZW200 only).

Hooking up the system (continued)

Note

When you operate the player with batteries, the backlight does not work even if the player is on.

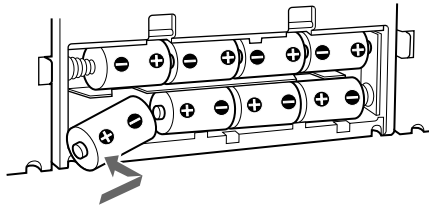
Tip

Replace the batteries when the OPR/BATT indicator dims or when the player stops operating. Replace all the batteries with new ones. Before you replace the batteries, be sure to take out the CD from the player.

5 Using the player on batteries

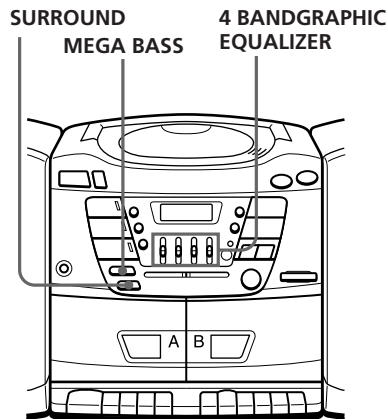
Insert eight size D (R20) batteries (not supplied) into the battery compartment.

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



Adjusting the audio emphasis (MEGA BASS/4 BAND GRAPHIC EQUALIZER/SURROUND)

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



Setting Up

Selecting the sound characteristic

Slide 4 BAND GRAPHIC EQUALIZER to select the audio emphasis you want.

Frequency coverage	Slide the control up (to +10)	Slide the control down (to -10)
400 Hz	to emphasize speaking voice, middle frequencies of instrumental music	to de-emphasize speaking voice, middle frequencies of instrumental music
1 kHz	to provide more presence of vocals	to provide less presence of vocals
4 kHz	to heighten overall brightness of sound	to lessen overall brightness of sound
10 kHz	to increase high treble sounds	to decrease high treble sounds or reduce high frequency noise/tape hiss

Reinforcing the bass sound

Press MEGA BASS.

“MEGA BASS” appears in the display. You can reinforce the bass sound in two steps. To return to normal sound, press the button until “MEGA BASS” disappears from the display.

continued

Setting Up | 23

Adjusting the audio emphasis (MEGA BASS/4 BAND GRAPHIC EQUALIZER/SURROUND) (continued)

**Getting the surround effect (CFD-ZW160/
ZW200 only)**

Press SURROUND.

The "SURROUND" indication appears in the display.

You can get the surround effect without connecting surround speakers.

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.
- Unplug the player from the wall outlet when it is not to be used for an extended period of time.
- 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.
- The nameplate indicating operating voltage, power consumption, etc. is located at the rear.

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.

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

continued

Precautions (continued)

Notes on CDs

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

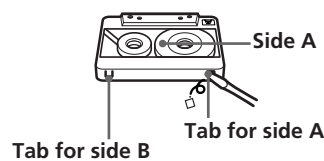


- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the CD to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight as there can be a considerable rise in temperature 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.
- 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	The power is not on.	<ul style="list-style-type: none"> • Connect the AC power cord to a wall outlet securely. • Make sure the batteries are inserted correctly. • You cannot turn on the player with the remote when you operate the player on batteries.
	There is no audio.	<ul style="list-style-type: none"> • Make sure the function you want to use appears in the display window. • Adjust the volume. • Unplug the headphones when listening through speakers.
	"no disc" lights in the display even when a CD is in place.	<ul style="list-style-type: none"> • Insert the CD with the label surface up.
CD Player	The CD does not play.	<ul style="list-style-type: none"> • 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.
	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.
	The audio is weak or has poor quality.	<ul style="list-style-type: none"> • 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 (CFD-ZW160/ZW200 only).
Radio	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.

continued

Troubleshooting (continued)

	Symptom	Remedy
Tape Player	The tape does not move when you press an operation button.	<ul style="list-style-type: none"> • Close the cassette compartment securely.
	The REC ● button does not function/The tape does not play.	<ul style="list-style-type: none"> • Make sure the safety tab on the cassette is in place. • Make sure "TAPE" appears in the display.
	The tape does not erase completely.	<ul style="list-style-type: none"> • Clean the erasing head (see page 29.) • Replace all the batteries with new ones if they are weak.
	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 cassette 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 29). • Demagnetize the heads using a demagnetizer (see page 29).
	The sound is distorted.	<ul style="list-style-type: none"> • The TYPE II (high position) or TYPE IV (metal) tape is being used. Use TYPE I (normal) tape only.
Timer	The timer does not operate.	<ul style="list-style-type: none"> • Make sure the time on the clock is correct. • Check to see if the AC power had been cut off. • Make sure the ⌚ (clock) indication is displayed.
Remote (CFD-ZW160/ZW200 only)	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.

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 the 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

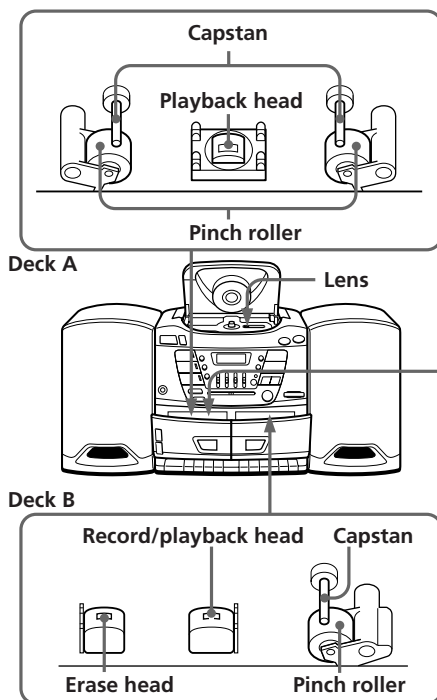
Cleaning the lens

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 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.

CFD-ZW200



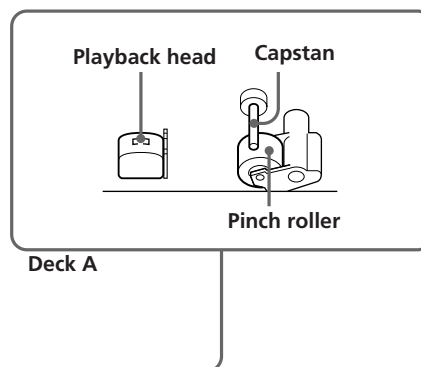
Demagnetizing the tape heads

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 benzene.

CFD-ZW150/ZW160



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

Specifications

AUDIO POWER SPECIFICATIONS

CFD-ZW150/ZW160:

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 3.2-ohm loads, both channel driven from 250 - 6,300 Hz; rated 3.8 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 +3/-3 dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

FM: 87.6 - 108 MHz

AM: 531 - 1,602 kHz (Australian model)

530 - 1,710 kHz (Other models)

Aerials

FM: Telescopic aerial

AM: Built-in ferrite bar aerial

Cassette-corder section

Recording system

4-track 2 channel stereo

Fast winding time

Approx. 110 s (sec.) with Sony cassette C-60

Frequency response

TYPE I (normal): 80 - 10,000 Hz

General

Speaker

Full range: 10 cm (4 in.) dia.,
3.2 ohms, cone type (2)

Outputs

Headphones jack (stereo minijack)

For 16 - 68 ohms impedance headphones

Power output (excluding US model)

CFD-ZW150/ZW160:

4 W + 4 W (at 3.2 ohm, 10 % harmonic distortion in DC operation)

4.5 W + 4.5 W (at 3.2 ohm, 10 % harmonic distortion in AC operation)

CFD-ZW200:

9 W + 9 W (at 3.2 ohm, 10 % harmonic distortion in DC operation)

11 W + 11 W (at 3.2 ohm, 10 % harmonic distortion in AC operation)

Power requirements

For CD radio cassette-corder:

230 V AC, 50 Hz (Australian model)

120 V AC, 60 Hz (Other models)

12 V DC, 8 size D (R20) batteries

For memory back-up:

4.5 V DC, 3 size AA (R6) batteries

For remote (CFD-ZW160/ZW200 only):

3 V DC, 2 size AA (R6) batteries

Power consumption

CFD-ZW150/ZW160:

AC 40 W (US and Canadian models)

AC 30 W (Other models)

CFD-ZW200:

AC 45 W

Battery life

For CD radio cassette-corder:
CFD-ZW150/ZW160

FM recording

Sony R20P: approx. 6.5 h

Sony alkaline LR20: approx. 12 h

Tape playback

Sony R20P: approx. 3 h

Sony alkaline LR20: approx. 6 h

CD playback

Sony R20P: approx. 1.5 h

Sony alkaline LR20: approx. 3 h

CFD-ZW200

FM recording

Sony R20P: approx. 2.5 h

Sony alkaline LR20: approx. 8 h

Tape playback

Sony R20P: approx. 1 h

Sony alkaline LR20: approx. 1.5 h

CD playback

Sony R20P: approx. 0.5 h

Sony alkaline LR20: approx. 2 h

For memory back-up: approx. 1 year

Dimensions

Approx. 648 × 218 × 277 mm (w/h/d)
(25 5/8 × 8 5/8 × 11 inches) (incl. projecting parts)

Mass

Approx. 8.7 kg (19 lb. 3 oz) (incl. batteries)

Supplied accessory

AC power cord (1)

Remote controller (1) (CFD-ZW160/ZW200 only)

Design and specifications are subject to change without notice.

Optional accessories

Sony MDR headphone series

Index

A

Audio emphasis 23

B

Batteries

for player 22

for memory back-up 20

for remote 21

C

CD player 12

Cleaning

cabinet 29

tape heads and tape
path 29

Connecting

AC power cord 21

Creating your own
program 15

D, E, F, G, H

Demagnetizing the tape
heads 29

Display 12

GRAPHIC EQUALIZER
23

I, J, K

Improving broadcast
reception 7

L

Listening to the radio 6

Locating a specific track
13

M, N, O

MEGA BASS 23

P, Q

Playing

a CD 4

a tape 8

tracks repeatedly 14

Program Play 15

R

Recording

on a tape 10

Repeat Play 14

S

Selecting

audio emphasis 23

tracks 13

Setting the clock 16

Setting up 20

SURROUND 24

T

Timer

Falling asleep to music
19

Waking up to music 17

Troubleshooting 27

U, V, W, X, Y, Z

Using

the display 12

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