

Use TYPE I (normal) tape only.

Playing a tape

1 Press **STOP/EJECT** to open the tape compartment and insert a recorded tape. Close the compartment.

With the side you want to play facing upward

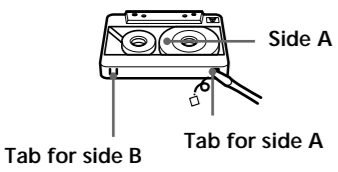
2 Set FUNCTION to TAPE•CD/RADIO OFF.

3 Press **PLAY**.

To	Do this
adjust the volume	Turn VOLUME.
stop playback	Press STOP .
fast-forward or rewind the tape	Press FF or REW .
pause playback	Press PAUSE . Press the button again to resume play after pause.
eject the cassette	Press STOP/EJECT .

Notes on cassettes

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



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

Use TYPE I (normal) tape only.

Recording

1 Press **STOP/EJECT** to open the tape compartment and insert a blank tape.

With the side you want to record on facing upward

2 Select the program source you want to record.

To record from the CD player
Set FUNCTION to CD and insert a CD (see "Playing a CD").

To record from the radio
Tune in the station you want (see "Listening to the radio").

3 Press **REC** to start recording. (▶ is depressed automatically).

To	Press
stop recording	STOP
pause recording	PAUSE Press the button again to resume recording.

Tips

- Adjusting the volume or the audio emphasis will not affect the recording level.
- **CFD-V21L/V27L/V31L/V177L only:** If the MW/LW program makes a whistling sound after you've pressed **REC** 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 for recording.
- To erase a recording, proceed as follows:
 - 1 Insert a tape with the recording you want to erase.
 - 2 Set FUNCTION to TAPE•CD/RADIO OFF.
 - 3 Press **REC**.

Troubleshooting

General

- The power does not come on.**
- Connect the AC power cord securely.
 - Make sure the batteries are inserted correctly.
 - Replace all the batteries with new ones if they are weak.
- There is no audio.**
- Make sure the FUNCTION selector is set to the function you want to operate.
 - Adjust the volume.
 - Unplug the headphones when listening through speakers.

Noise is heard.

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

Radio

- The audio is weak or has poor quality.**
- Replace all the batteries with new ones if they are weak.
 - Move the player away from the TV.
- The picture of your TV becomes unstable.**
- If you are listening to an FM program near the TV with an indoor antenna, move the player away from the TV.

CD Player

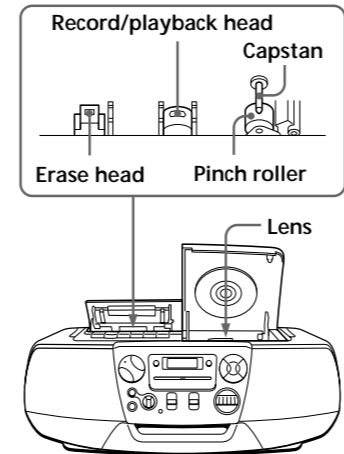
- The CD does not play or "00 -- --" lights in the display even when a CD is in place.**
- Make sure that the CD compartment is closed.
 - Place the CD with the label surface up.
 - Clean the CD.
 - Take out the CD and leave the CD compartment open for about an hour to dry moisture condensation.
 - Make sure the FUNCTION selector is set to CD.
- The sound drops out.**
- Reduce the volume.
 - Clean the CD, or replace it if the CD is badly damaged.
 - Place the player in a location free from vibration.
 - Clean the lens with a commercially available blower.
 - The sound may drop out or noise may be heard if the CD is recorded using a personal computer (CD-R, etc.).

Tape Player

- The tape does not move when you press an operation button.**
- Close the cassette compartment securely.
 - The **REC** button does not function or the tape does not play or record.
 - Make sure the safety tab on the cassette is in place.

- Make sure the FUNCTION selector is set to CD, AM or FM. (CFD-V27/V177)
- Make sure the FUNCTION selector is set to CD or RADIO. (CFD-V21L/V27L/V31L/V177L/V77S)

- Poor or distorted playback, recording or erasing quality.**
- Clean the heads, pinch roller and capstan with a cleaning swab slightly moistened with cleaning fluid or alcohol.
 - Replace all the batteries with new ones if they are weak.
 - TYPE II (high position) or TYPE IV (metal) tape is being used. Use TYPE I (normal) tape only.
 - Demagnetize the heads using a commercially available tape head demagnetizer.



After trying the above remedies, if you still have problems, 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.

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 µW
(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 +1/-2 dB

Wow and flutter
Below measurable limit

Radio section

Frequency range

CFD-V21L/V31L	
FM Italy	87.5 - 108 MHz
Other models	87.6 - 107 MHz
MW Italy	526.5 - 1,606.5 kHz
Other models	531 - 1,602 kHz
LW Italy	148.5 - 283.5 kHz
Other models	153 - 279 kHz
CFD-V27/V177	
FM Korea	87.6 - 107 MHz
Other models	87.6 - 108 MHz or 87.6 - 107 MHz
AM Korea	531 - 1,602 kHz
Other models	530 - 1,605 kHz or 531 - 1,602 kHz
CFD-V27L/V177L	
FM Italy	87.5 - 108 MHz
Central and Eastern Europe	65 - 108 MHz
Other models	87.6 - 107 MHz
MW Italy	526.5 - 1,606.5 kHz
Other models	531 - 1,602 kHz
LW Italy	148.5 - 283.5 kHz
Other models	153 - 279 kHz
CFD-V77S	
FM Italy	87.5 - 108 MHz
Central and Eastern Europe	65 - 108 MHz
Other European models and Saudi Arabia	87.6 - 107 MHz
Other models	87.6 - 108 MHz
MW Italy	526.5 - 1,606.5 kHz
Other European models	531 - 1,602 kHz
Other models	530 - 1,605 kHz or 531 - 1,602 kHz
SW1	2.3 - 7 MHz
SW2	7 - 22 MHz

IF
FM: 10.7 MHz
AM/MW/LW/SW: 455 kHz

Aerials
FM/SW: Telescopic aerial
AM/MW/LW: Built-in ferrite bar aerial

Cassette-corder section

Recording system
4-track 2 channel stereo

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

Frequency response
TYPE I (normal): 70 - 10,000 Hz

General

Speaker
CFD-V21L/V27L/V31L/V177L/V77L:
Full range: 10 cm dia., 3.2 ohms, cone type (2)
CFD-V77S: Full range: 10 cm dia., 6 ohms, cone type (2)

Outputs
Headphones jack (stereo minijack)
For 16 - 68 ohms impedance headphones

Maximum power output (excluding Korean model)
CFD-V21L/V27L/V31L/V177L/V177L: 2.3 W + 2.3 W
CFD-V77S: 4.5 W + 4.5 W

Power output (CFD-V27 Korean model)
1.6 W + 1.6 W (at 3.2 ohm, 10 % harmonic distortion in AC operation)

Power requirements
For CD radio cassette-corder

Europe	
230 V AC, 50 Hz	
Korea	
220 V AC, 60 Hz	
Other countries	
110 - 127, 220 - 240 V AC selectable, 50/60 Hz or 230 V AC, 50 Hz	
9 V DC, 6 R20 (size D) batteries	

Power consumption
CFD-V21L/V27L/V31L/V177L/V177L: Korean model: AC 15 W
Other models: AC 20 W
CFD-V77S: AC 25 W

Battery life
For CD radio cassette-corder:

CFD-V21L/V27L/V31L/V177L/V177L	
FM recording	Sony R20P: approx. 13.5 h
Sony alkaline LR20: approx. 20 h	
Tape playback	
Sony R20P: approx. 7.5 h	
Sony alkaline LR20: approx. 15 h	
CD playback	
Sony R20P: approx. 2.5 h	
Sony alkaline LR20: approx. 7 h	

CFD-V77S	
FM recording	Sony R20P: approx. 3.5 h
Sony alkaline LR20: approx. 10 h	
Tape playback	
Sony R20P: approx. 1.5 h	
Sony alkaline LR20: approx. 5 h	
CD playback	
Sony R20P: approx. 1 h	
Sony alkaline LR20: approx. 4 h	

Dimensions
Approx. 420 × 165 × 256 mm (w/h/d) (16 5/8 × 6 1/2 × 10 1/8 inches) (incl. projecting parts)

Mass (incl. batteries)
CFD-V21L/V27L/V31L/V177L/V177L: Approx. 4.1 kg (9 lb. 1 oz)
CFD-V77S: Approx. 4.2 kg (9 lb. 4 oz)

Supplied accessory
AC power cord (1)

Design and specifications are subject to change without notice.

Optional accessories

Sony MDR headphone series

SONY

CD Radio Cassette-Corder

Operating Instructions

CFD-V21L
CFD-V27
CFD-V27L
CFD-V31L
CFD-V77S
CFD-V177
CFD-V177L

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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.

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.

On power sources

- For AC operation, check that the player's operating voltage is identical with your local power supply (see "Specifications") and use the supplied AC power cord; do not use any other type. The voltage selector is located at the bottom of the player (CFD-V77S except European models).
- 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.

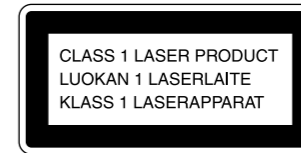
WARNING

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

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

Information

For customers in Europe



This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the bottom exterior.

WARNING

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

The FUNCTION selector is located at the front.

When you turn on the player, the OPR/BATT indicator lights up.

Notice for customers in the United Kingdom

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

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

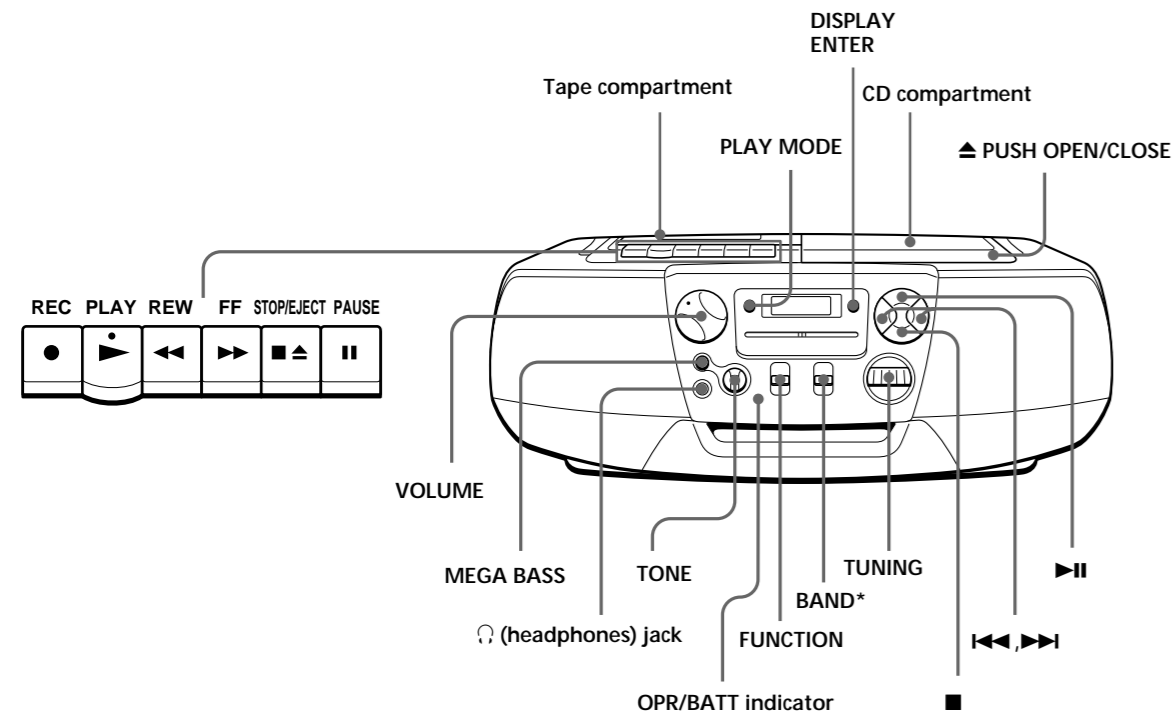
If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

About this manual

The instructions in this manual are for the CFD-V21L, CFD-V27, CFD-V27L, CFD-V31L, CFD-V77S, CFD-V177 and CFD-V177L. Before you start reading, check your model number. The CFD-V27L is the model used for illustration purposes. Any differences in operation are clearly indicated in the text, for example, "CFD-V77S only," and also in the chart below.

Model number	Band
CFD-V27/V177	FM, AM
CFD-V21L/V27L/V31L/V177L	FM, MW, LW
CFD-V77S	FM, SW1, SW2, MW

Location of controls

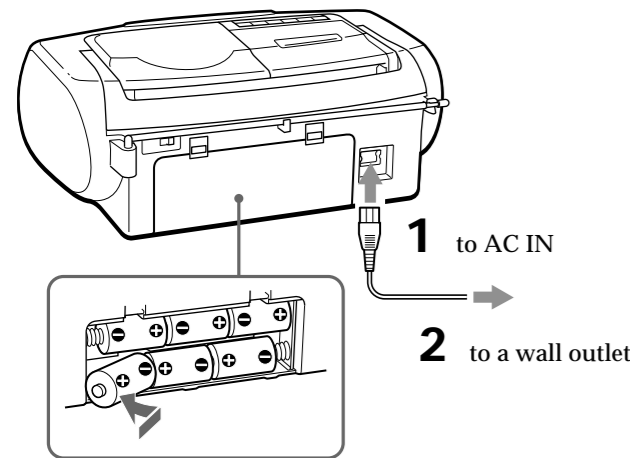


* CFD-V21L/V27L/V31L/V177L/V77S only

Choosing Power Sources

Connecting the AC power cord

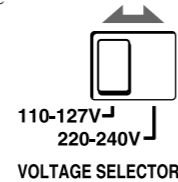
Insert one end of the supplied AC power cord to the AC IN socket located at the rear of the player, and the other end to the wall outlet.



- 1 to AC IN
- 2 to a wall outlet

CFD-V77S except European models: Adjusting the voltage

Be sure to set the VOLTAGE SELECTOR (at the bottom) to your local power supply.



Tip

Only for the customers supplied with an AC plug adaptor: Use the supplied AC plug adaptor if the plug of the AC power cord does not match your outlet.

Using the player on batteries

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

Notes

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

Adjusting the sound emphasis (TONE/MEGA BASS)

Adjusting the tone

Turn TONE.

Turn the control toward HIGH to enhance the high tone and toward LOW to enhance the low tone.

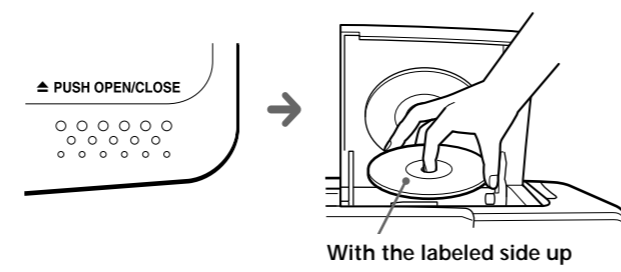
Reinforcing the bass sound

Press MEGA BASS to ON.

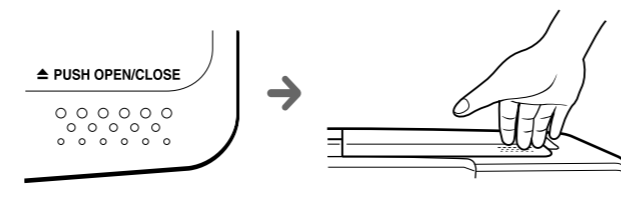
To return to normal sound, press the button to OFF.

Playing a CD

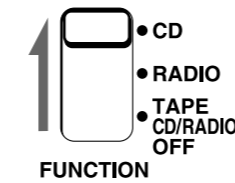
- 1 Press \blacktriangle PUSH OPEN/CLOSE down to open the CD compartment and place a CD in the CD compartment.



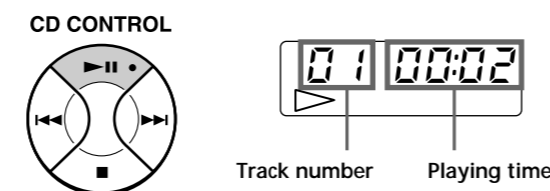
- 2 Close the CD compartment.



- 3 Set FUNCTION to CD.



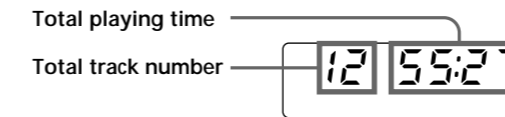
- 4 Press $\blacktriangleright\blacksquare$. The player plays all the tracks once.



To	Do this
adjust the volume	Turn VOLUME.
stop playback	Press \blacksquare .
pause playback	Press $\blacktriangleright\blacksquare$. Press again to resume play after pause.
go to the next track	Press $\blacktriangleright\blacktriangleright$.
go back to the previous track	Press $\blacktriangleleft\blacktriangleleft$.
remove the CD	Press \blacktriangle PUSH OPEN/CLOSE.
turn off the player	Set FUNCTION to TAPE•CD/RADIO OFF.
locate a point while listening to the sound	Hold down $\blacktriangleright\blacktriangleright$ (forward) or $\blacktriangleleft\blacktriangleleft$ (backward) while playing until you find the point.
locate a point while observing the display	Hold down $\blacktriangleright\blacktriangleright$ (forward) or $\blacktriangleleft\blacktriangleleft$ (backward) in pause until you find the point.

Using the display

Checking the total track number and playing time
Check the display in stop mode.



Checking the remaining time

Press DISPLAY•ENTER while playing a CD.

To display	Press DISPLAY•ENTER
remaining time on the current track*	once
remaining time on the CD and the number of tracks left	twice
playing time and the current track number	three times

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

Repeat Play

- 1 Set FUNCTION to CD.
- 2 Proceed as follows:

To repeat	Do this
a single track	1 Press PLAY MODE until "REP 1" appears. 2 Select the track by pressing the $\blacktriangleleft\blacktriangleleft$ or $\blacktriangleright\blacktriangleright$ and press $\blacktriangleright\blacksquare$.
all the tracks	1 Press PLAY MODE until "REP ALL" appears. 2 Press $\blacktriangleright\blacksquare$.
tracks in random order	1 Press PLAY MODE until "SHUF REP" appears. 2 Press $\blacktriangleright\blacksquare$.
programmed tracks	1 Press PLAY MODE until "PGM REP" appears. 2 Program tracks (see step 3 on Program Play). 3 Press $\blacktriangleright\blacksquare$.

To cancel Repeat Play

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

Shuffle Play

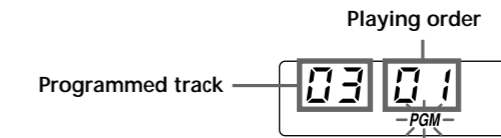
- 1 Set FUNCTION to CD.
- 2 Press PLAY MODE until "SHUF" appears in the display.
- 3 Press $\blacktriangleright\blacksquare$ to start Shuffle Play.

To cancel Shuffle Play

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

Program Play

- 1 Set FUNCTION to CD.
- 2 Press PLAY MODE until "PGM" appears in the display.
- 3 Press $\blacktriangleleft\blacktriangleleft$ or $\blacktriangleright\blacktriangleright$ then press DISPLAY•ENTER for the tracks you want to program in the order you want.



- 4 Press $\blacktriangleright\blacksquare$ to start Program Play.

To cancel Program Play

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

To change the current program

Press \blacksquare 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.

Tips

- You can play the same program again, since the program is saved until you open the CD compartment or switch FUNCTION.
- You can record your own program. After you've created the program, insert a blank tape and press \bullet to start recording.

Notes on CDs

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

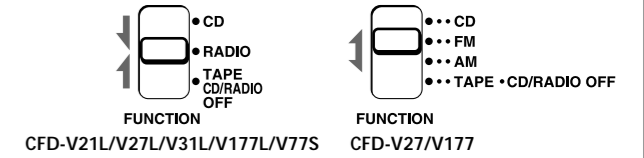


- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the CD to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight as there can be a considerable rise in temperature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

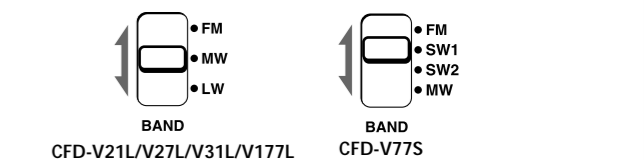
If there is a scratch, dirt or fingerprints on the CD, it may cause tracking error.

Listening to the radio

- 1 **CFD-V21L/V27L/V31L/V177L/V77S:** Set FUNCTION to RADIO.
CFD-V27/V177: Set FUNCTION to FM or AM and proceed to step 3.

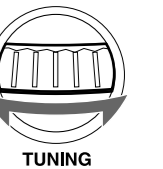


- 2 **CFD-V21L/V27L/V31L/V177L/V77S:** Select the band.



- 3 Turn TUNING to tune in a radio station.

If the received FM stereo is too weak, the reception becomes monaural.



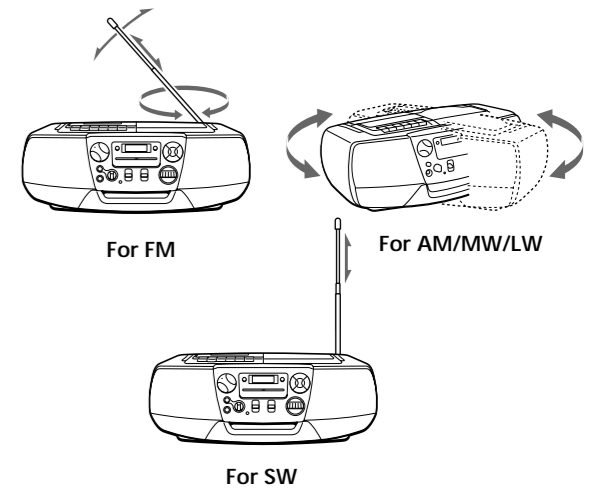
CFD-V77S only: For better SW reception, use FINE TUNE.



To	Do this
adjust the volume	Turn VOLUME.
turn off the radio	Set FUNCTION to TAPE•CD/RADIO OFF.

To improve broadcast reception

Reorient the antenna for FM. Reorient the player itself for AM, MW or LW. For SW, extend the antenna vertically.



Tips

- To listen through headphones, connect the headphones to the (headphones) jack.
- For best results, place the player away from a TV.
- **CFD-V21L/V27L/V31L/V177L/V77S only**
To receive FM stereo program: Set the FM MODE selector at the rear to STEREO. If the FM broadcast is noisy, set the selector to MONO and the radio will play in monaural.