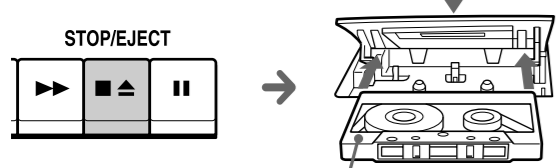


Use TYPE I (normal) tape only.

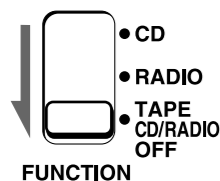
Playing a tape

- 1 Press **■▲** to open the tape compartment and insert a recorded tape. Close the compartment.

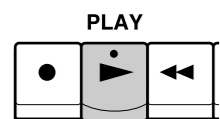


With the side you want to play facing upward

- 2 Set FUNCTION to TAPE•CD/RADIO OFF.



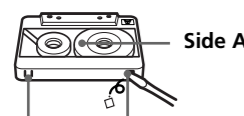
- 3 Press **▶**.



To	Do this
adjust the volume	Turn VOLUME.
stop playback	Press ■▲ .
fast-forward or rewind the tape	Press ▶▶ or ◀◀ .
pause playback	Press . Press the button again to resume play after pause.
eject the cassette	Press ■▲ .

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.



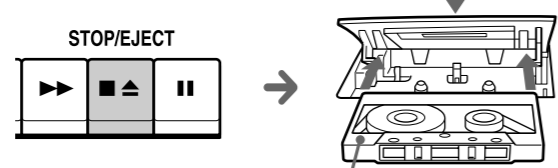
Tab for side B Tab for side A

- 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 **■▲** to open the tape compartment and insert a blank tape.

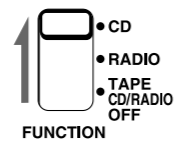


With the side you want to record on facing upward

- 2 Select the program source you want to record.

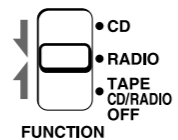
To record from the CD player

Set FUNCTION to CD and insert a CD (see "Playing a CD").

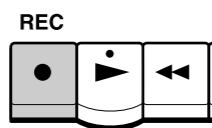


To record from the radio

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



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



To	Press
stop recording	■▲
pause recording	 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 **●** 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 **●**.

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.

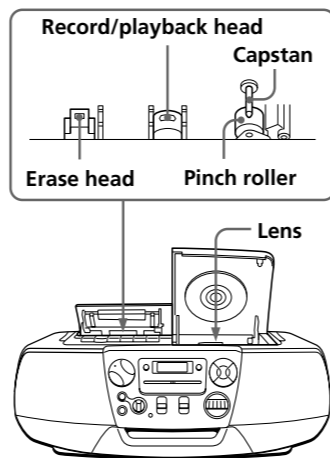
The REC ● button does not function or the tape does not play or record.

- 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/V27/V27L/V31L/V177/V177L:

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/V27/V27L/V31L/V177/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/V27/V27L/V31L/V177/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/V27/V27L/V31L/V177/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/V27/V27L/V31L/V177/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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3-868-059-32(1)

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

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This Compact Disc player is classified as a CLASS 1 LASER product.

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

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.

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.

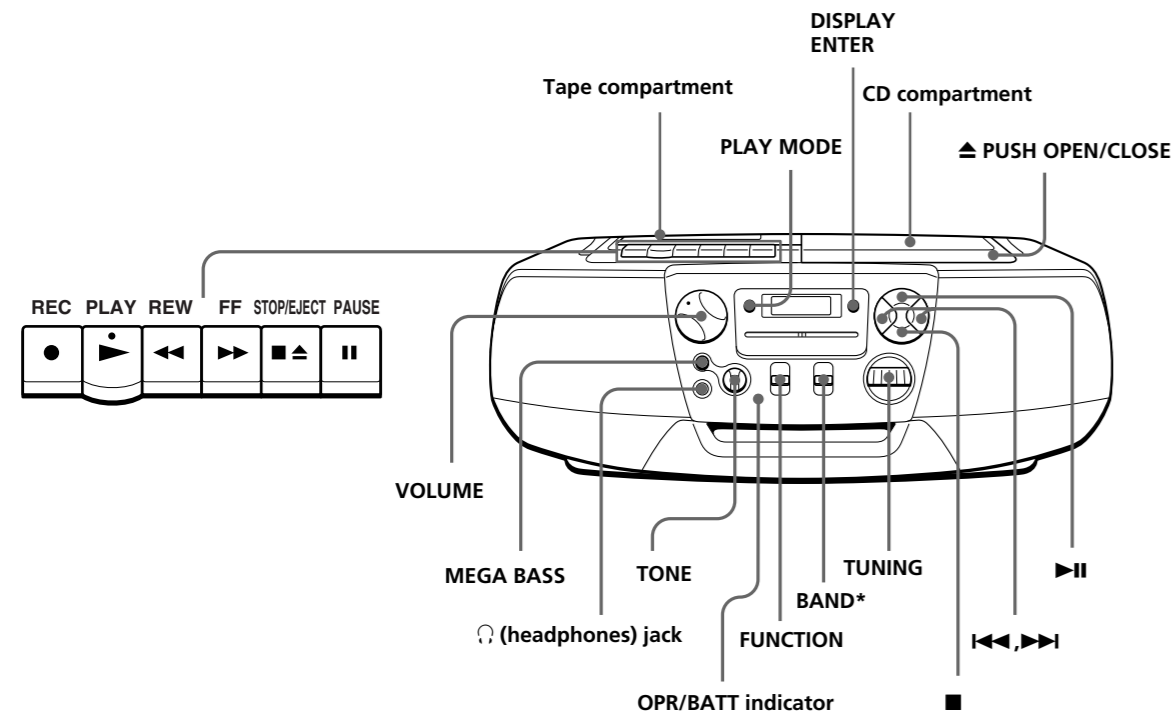
About this manual

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

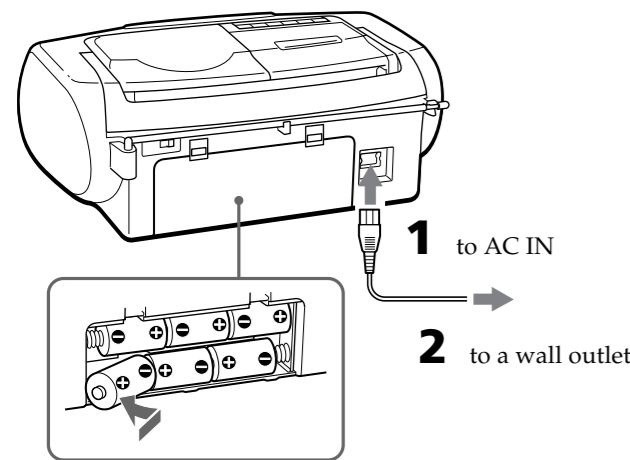


*CFD-V21L/V27L/V31L/V177L/V77S only

Choosing Power Sources

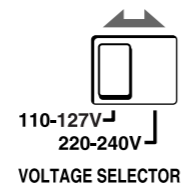
Connecting the AC power cord

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.



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

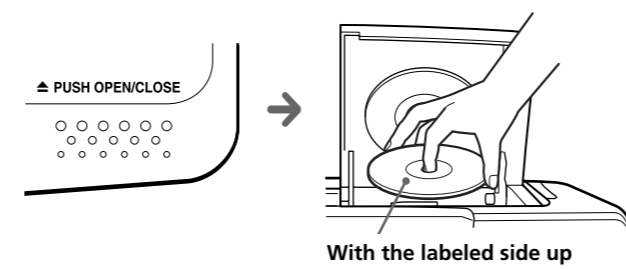
Turn TONE. Turn the control toward HIGH to enhance the high tone and toward LOW to enhance the low tone.

Reinforcing the bass sound

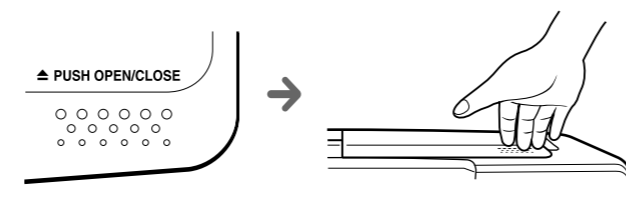
Press MEGA BASS to ON. To return to normal sound, press the button to OFF.

Playing a CD

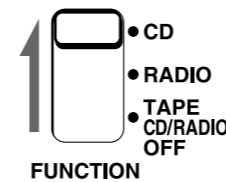
- Press \blacktriangle PUSH OPEN/CLOSE down to open the CD compartment and place a CD in the CD compartment.



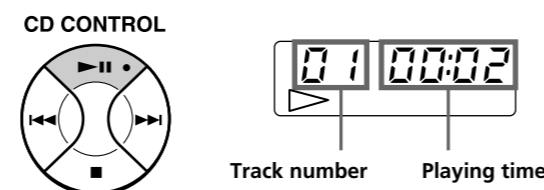
- Close the CD compartment.



- Set FUNCTION to CD.



- Press \blacktriangleright II. The player plays all the tracks once.

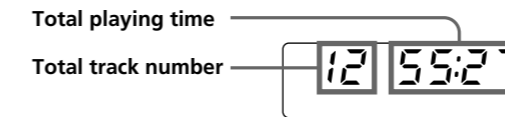


To	Do this
adjust the volume	Turn VOLUME.
stop playback	Press \blacksquare .
pause playback	Press \blacktriangleright II. Press again to resume play after pause.
go to the next track	Press \blacktriangleright II.
go back to the previous track	Press \blacktriangleleft .
remove the CD	Press \blacktriangle 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 II (forward) or \blacktriangleleft (backward) while playing until you find the point.
locate a point while observing the display	Hold down \blacktriangleright II (forward) or \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

- Set FUNCTION to CD.
- 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 or \blacktriangleright and press \blacktriangleright II.
all the tracks	1 Press PLAY MODE until “REP ALL” appears. 2 Press \blacktriangleright II.
tracks in random order	1 Press PLAY MODE until “SHUF REP” appears. 2 Press \blacktriangleright II.
programmed tracks	1 Press PLAY MODE until “PGM REP” appears. 2 Program tracks (see step 3 on Program Play). 3 Press \blacktriangleright II.

To cancel Repeat Play

Press PLAY MODE until “REP” disappears from the display.

Shuffle Play

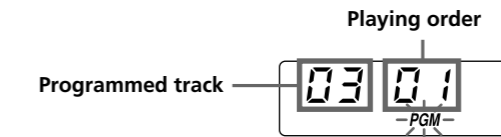
- Set FUNCTION to CD.
- Press PLAY MODE until “SHUF” appears in the display.
- Press \blacktriangleright II to start Shuffle Play.

To cancel Shuffle Play

Press PLAY MODE until “SHUF” disappears from the display.

Program Play

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



- Press \blacktriangleright II 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.

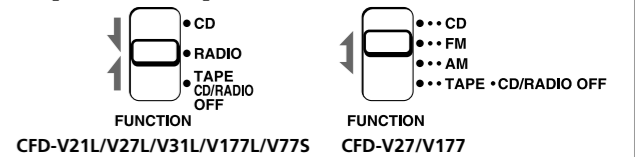


- Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the CD to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight as there can be a considerable rise in temperature inside the car.
- Do not stick paper or sticker on the CD, nor scratch the surface of the CD.
- After playing, store the CD in its case.

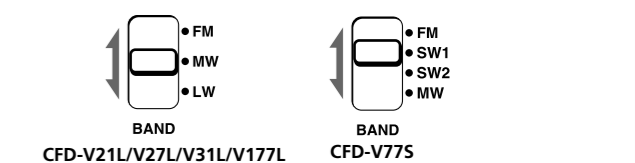
If there is a scratch, dirt or fingerprints on the CD, it may cause tracking error.

Listening to the radio

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



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



- Turn TUNING to tune in a radio station.

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



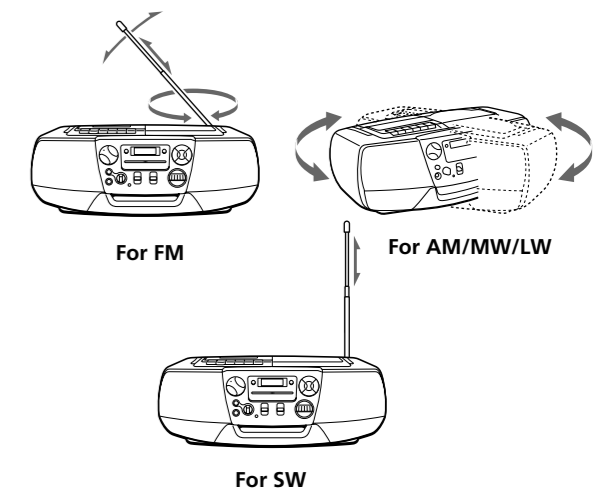
CFD-V77S only: For better SW reception, use FINE TUNE.



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 H (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.