

CD Radio Cassette-Corder

CFD-31

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.



MEGA BASS

Owner's Record


The model number and serial number are located at the bottom. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. CFD-31

Serial No. _____


WARNING

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



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,

DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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.

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.

Precautions

Notes on power sources

- Operate the unit only 120 AC or 9 V DC.
For AC operation, use the supplied AC power cord; do not use any other type.
For battery operation, use six size D (R20) batteries.
- When the internal batteries will not be used, remove them to avoid damage caused by battery leakage and corrosion.
- Unplug the unit from the wall outlet when it is not to be used for an extended period of time.

Note on handling the unit

- 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.
- If the unit 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 disc and wait about an hour for the moisture to evaporate.
- Avoid exposure to temperature extremes, direct sunlight, dust, or mechanical shock.
- If the unit is left in a car parked in the sun, be sure to choose a location in the car where the unit will not be subject to the direct rays of the sun.
- Should any solid object or liquid fall into the unit, unplug the unit, remove the batteries, and have the unit checked by qualified personnel before operating it any further.
- Be careful not to lift the handle while the telescopic antenna is in a raised position.
- After long storage, set the unit in playback mode and warm it up for a few minutes before inserting a cassette.
- Do not place anything within 10 mm of the side of the cabinet. The ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its components.
- Since a strong magnet is used for the speakers, keep personal credit cards using magnetic coding or spring-wound watches away from the unit to prevent possible damage from the magnet.

Note on cassettes longer than 90 minutes

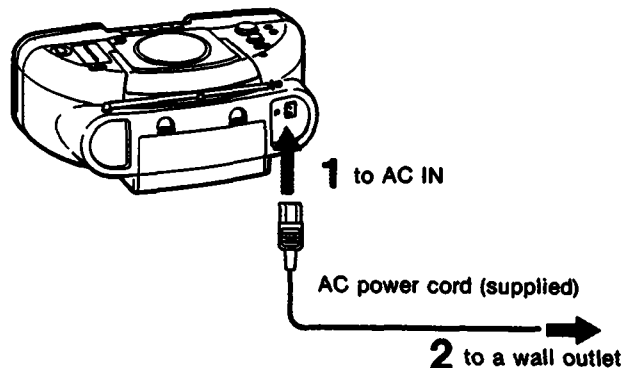
The use of those cassettes is not recommended except for long continuous recording or playback.

If you have any question or problem concerning your unit that is not covered in this manual, consult your nearest Sony dealer.

Power Sources

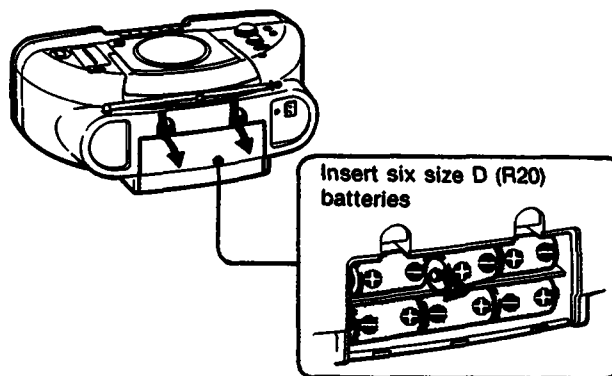
The OPR/BATT indicator lights during operation.

House Current



Batteries

The unit cannot be operated on the internal batteries when the AC power cord is connected to the unit.



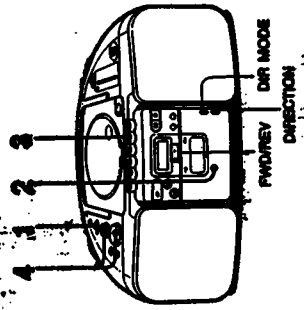
For critical recording or disc playing

Operating the unit on AC power is recommended.

When to replace the batteries

If the batteries become weak while the unit is in operation, the OPR/BATT indicator will glow faintly. In this case, replace all the batteries with new ones.

Playing a Tape



To pause: Press **II**.

To resume play, press **II** again.

To wind the tape rapidly in **<** direction:

Press **<**.

To wind the tape rapidly in **>** direction:

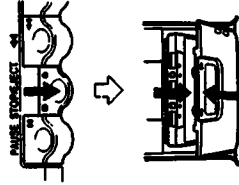
Press **>**.

To eject the tape: Press **III**.

1

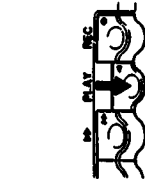


2 Insert a cassette.



Close.

3



4



To stop play



When the tape reaches the end, **II** is released automatically.

To listen to the reverse side

Push down and release the DIRECTION lever.

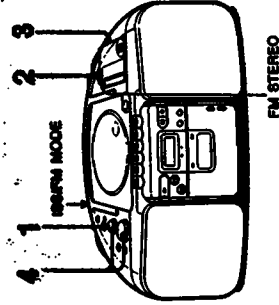
The FWD/REV (forward/reverse) indicator

indicates the side being played.

To select playback mode

| DIR (direction) MODE selector | |
|--|-----------------|
| To play both sides of a cassette repeatedly | Set to C |
| To play both sides of a cassette once* | Set to D |

Listening to the Radio



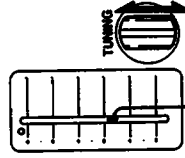
1



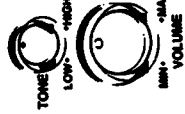
2 Select the desired band.



3 Tune in.



4



To turn off the radio



To receive an FM stereo program

Set the ISSIFM MODE switch on the rear

panel to STEREO. When an FM stereo

program is tuned in, the FM STEREO

indicator lights. If the received FM stereo

signal is too weak, the reception becomes

monaural, and the FM STEREO indicator will

go out.

When an FM stereo program is noisy
Set the switch to MONO. You can hear the
monaural program with less noise.

For improved reception

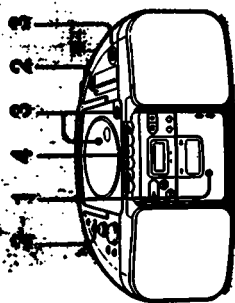
FM



AM



Recording — Use only a TYPE I (normal) cassette for recording.

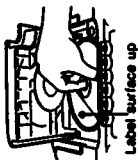


1 Insert a cassette.

2 From a disc



3



4

To stop recording
Press of the CD player
and of the cassette
deck.

When the tape reaches
the end, and are
released automatically.

To turn off the unit
Set FUNCTION to TAPE
CD/RADIO OFF.

2 From the radio



3



is depressed automatically.
When you record from a disc,
press REC after the number
of the selections in the disc
and the total playing time are
displayed.
Disc playing will automatically
start from the first selection
after about 8 seconds.

On recording level

Recording level is automatically set. Volume
and tone adjustments will not affect
recording level.

To reduce noise during AM recording

Set the ISS*/FM MODE switch on the rear
panel to 1, 2 or 3, depending on which one
best reduces the noise.

*ISS = Interference Suppress Switch

To record in PQM (program) mode

- 1 Set FUNCTION to CD.
- 2 Select PQM play. (See "Selecting Various Playing Modes".)
- 3 Press the REC button.

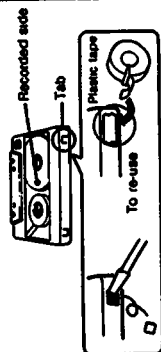
Disc playing and recording will
automatically start after about 8 seconds.

Note (CFP-30 only)

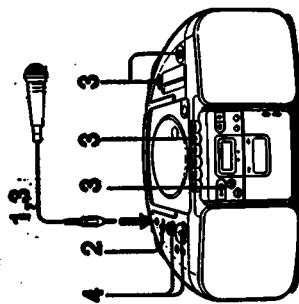
The auto-reverse function does not work for
recording. You can record only on the forward (<) side.

To prevent accidental erasure

Break off the tab corresponding to the
side which has been recorded on.
Recording on that side will be protected.



Microphone Mixing — Use a monaural microphone equipped with a miniplug (not supplied).



1



Turn on the power if it has a
switch.

2

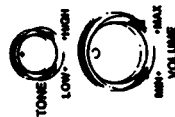
Choose the desired sound
source with the FUNCTION
selector.

| Sound source | FUNCTION selector |
|------------------|----------------------|
| CD sound | CD |
| Radio program | RADIO |
| Tape sound | TAPE |
| | CD/RADIO OFF |

3

Play the sound source and
speak or sing into the
microphone.

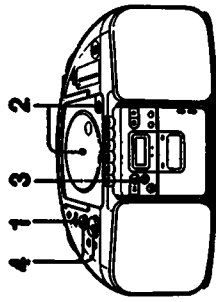
4



To record the mixed sound
Insert a cassette and only press . You can
record the sound of the microphone mixed
with a CD or radio program.

Note
If a howling (acoustic feedback) occurs, move the
microphone away from the speakers or turn down
the volume.

Playing a Disc—An 8 cm (3 inch) CD can be played without an adaptor.

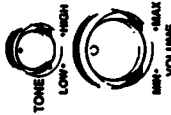


2 Place a disc.



Press completely. Label surface up
The number of selections in the disc and the total playing time will appear in the display window.

4



To turn off the unit
Set FUNCTION to TAPE
CD/RADIO OFF.

Notes on compact discs
This way



Handle the disc by its edge
Not this way



Do not touch the surface
Not this way

Do not stick paper or tape
nor write anything on the
surface.

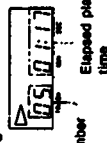
To pause: Press 00. To resume play, press 00 again.
To eject a disc: Press CD OPEN.

Note on MEGA BASS
MEGA BASS is most effective around the third position from MIN of the volume range. Even if you raise the volume more, the MEGA BASS effect will be negligible.

Note on MEGA BASS
MEGA BASS is most effective around the third position from MIN of the volume range. Even if you raise the volume more, the MEGA BASS effect will be negligible.

Information Display

During playing



Selection number being played
While CD player is set in pause
Pause indication appears



Pause indication appears

Between selections
Remaining time until the next selection is displayed.



To display the remaining time in the disc being played
Press REMAIN/ENTER



Remaining number of selections
Total remaining time in disc
To return to the normal display, press REMAIN/ENTER again.

Note
During shuffle or program play, the remaining time in the disc is not displayed even if REMAIN/ENTER is pressed.

Locating a Particular Portion

Locating a particular selection (AMTS*)



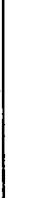
To locate the beginning of the current selection



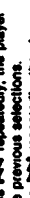
To locate the next selection



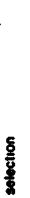
Press once



To go back at high speed



Press once.



To go ahead at high speed



Selecting Various Playing Modes

Each time PLAY MODE is pressed, play mode changes as follows. To stop the disc, press 0.
Operate while listening to the disc. However, select INTRO scan play when disc is not being played.

| Play mode | Button to be pressed | Front display window |
|--|---|----------------------|
| Scanning all the selections —INTRO scan play | Press PLAY MODE once when disc is not being played. | 16 55:32 |
| Beginnings of selections are played for 10 seconds successively. | Press Δ | 01 00:01 |
| Repeating one selection —REPEAT 1 | Press PLAY MODE once more while listening to the desired selection. | 05 01:17 |
| Repeating all the selections —REPEAT ALL | Press Δ or \square for another selection. | 05 01:17 |
| Playing repeatedly in a random order —REPEAT SHUFFLE | Press PLAY MODE once more. | 05 01:17 |

| | |
|---|-------------------------|
| Press PLAY MODE once more. | PLAY MODE |
| Choose the desired selection with Δ or \square . | 8th Selection Program 1 |
| Press REMAIN/ENTER | Program 2 |
| The selection is stored. | |
| Repeat steps Δ and \square (Up to 16 selections) | |
| Press Δ . | |
| MEGA disappears and play starts. | |
| Press PLAY MODE once more. | |
| Repeat steps Δ to \square above. | |

When you open the disc holder or you press 0
All the programmed selections are cleared
If another selection is stored after 16 selections have been stored
The first selection will be cleared and the new one will be stored in its place

Troubleshooting Guide—Check the following possible causes.

General

No sound from the speakers

- Improper polarity of the batteries
- Weak batteries → Replace all the batteries with new ones.
- Improper FUNCTION selector setting
- The headphones are plugged in.

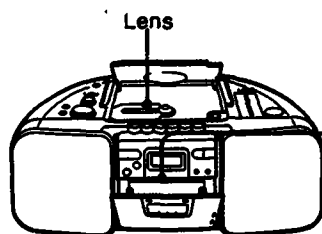
CD Operation

The unit does not operate

- The disc is inserted with the labeled surface down.
- The disc compartment lid is not closed.
- Dusty or defective disc → Clean the disc with an optical cleaning cloth. Wipe the disc from the center out.
- Moisture condensation → See "Precautions".
- Improper FUNCTION selector setting
- When the CD operation buttons cannot be activated, turn off the unit and turn it on again.

Skipping of sound in CD operation

- Dusty or defective disc → Clean the disc.
- Dirty lens → Clean the lens with a commercially available blower.
- Strong vibrations



Tape Operation

No tape operation

- ■ PAUSE button is depressed. → Press again to release it.
- ● REC button cannot be depressed.
- The cassette inserted has the tabs removed. → Cover the slots.

Sound drop-outs, loss of high frequencies, or excessive noise

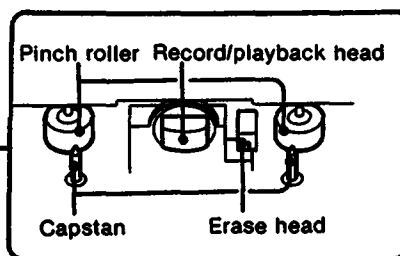
- Dirty heads → Clean the portions illustrated below with a cleaning tip slightly moistened with cleaning fluid or alcohol.

Recording or playback cannot be made or there is a decrease in sound level.

- Dirty heads → Clean the heads.
- Improper FUNCTION selector setting

Unsatisfactory erasing

- Dirty erase head → Clean the head.



Specifications

Audio Power Specifications

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 3.0-ohm loads, both channels driven from 150-15,000 Hz: rated 2.3 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 Wavelength 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. |
| Frequency response | 20-20,000 Hz \pm 2 dB |
| Wow and flutter | Below measurable limit |

Radio section

| | |
|-----------------|--|
| Frequency range | FM: 87.6-108 MHz AM: 530-1,710 kHz |
| Antennas | FM: Telescopic antenna AM: Built-in ferrite bar antenna |

Tape recorder section and general

| | |
|--------------------|---|
| Recording system | 4-track 2-channel stereo |
| Frequency response | 70-10,000 Hz (with TYPE I (NORMAL) cassette) |
| Speaker | Full-range speakers: 10 cm dia., cone type |
| Input | Mixing microphone input jack (minijack) Sensitivity 2.5 mV For low impedance microphone |

| | |
|--------------------|--|
| Output | Headphones jack (stereo minijack) For 16-68 ohms impedance headphones |
| Power requirements | 120V AC, 60 Hz DC 9 V, 6 size D (R20) batteries |
| Power consumption | 25 W |
| Battery life | (hours) |

| | FM recording | Tape playing | CD playing |
|------------------------|--------------|--------------|-------------|
| Sony SUM-1 (NS) | approx. 9 | approx. 6 | approx. 2.5 |
| Sony Alkaline AM 1 (N) | approx. 16.5 | approx. 11 | approx. 4.5 |

| | |
|--------------------|--|
| Dimensions | Approx. 410 x 170 x 235 mm (w/h/d) (Approx. 16 1/4 x 6 3/4 x 9 3/8 inches) incl. projecting parts and controls |
| Weight | Approx. 4.2 kg, incl. batteries (Approx. 9 lb 5 oz) |
| Supplied accessory | AC power cord (1) |

Design and specifications subject to change without notice.

Optional Accessories

Sony "MDR" headphone series
Sony "Dynamic microphone" series