

## Radio Cassette-Corder

# CFS-730

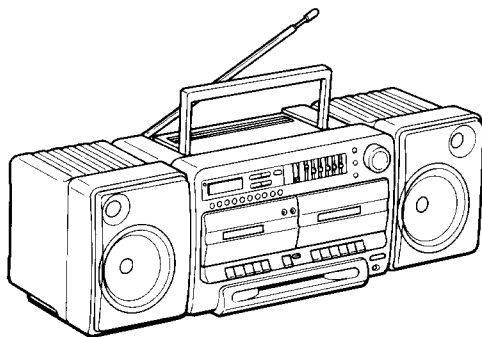
## Operating Instructions

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

## Owner's Record

The model number is located on the bottom and the serial number is located in the battery compartment. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

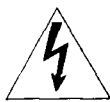
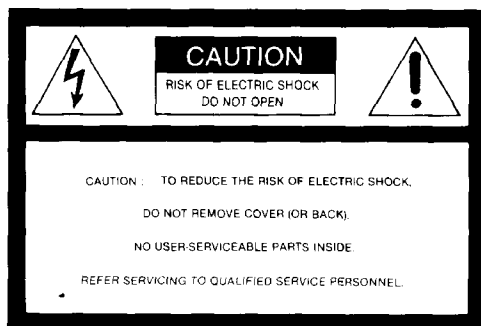
Model No. CFS-730      Serial No. \_\_\_\_\_



**MEGA BASS**

# WARNING

**To prevent fire or shock hazard, do not expose the unit 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.

## Information

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna
- Relocate the equipment with respect to the receiver
- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

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## Features

### Memory preset tuning

A total of 20 stations can be stored.

### High quality sound

- The Sony MEGA BASS system produces a powerful bass.
- By pressing the SPACE SOUND button, depth and spaciousness can be added to the original sound.

### Double cassette deck

- The auto-reverse function on deck A enables playback on both sides of a cassette without having to turn over the cassette.
- The normal/high speed dubbing with the synchronized starting system.
- Playback and recording with the DOLBY B Noise Reduction system.

### Others

- During radio operation, the back light lights up in the display window.

## On safety

- Operate the unit only on 120V AC or 15V DC.  
For AC operation, use the supplied AC power cord; do not use any other type.  
For battery operation, use ten size D (R20) batteries.
- Unplug the unit from the wall outlet when it is not to be used for an extended period of time.
- When the internal batteries are not to be used, remove them to avoid damage caused by battery leakage and corrosion.
- Should any solid object or liquid fall into the unit, unplug the unit, and have it checked by qualified personnel before operating it any further.

## On installation


- Do not leave the unit in a location near heat sources, or in a place subject to direct sunlight, excessive 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.
- 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.
- Be careful not to lift the handle while the telescopic antenna is in raised position.

## On operation

- If the unit has not been used for a long time, set in the playback mode to warm it up for a few minutes before inserting a cassette.
- The use of a cassette tape longer than 90 minutes is not recommended except for long continuous recording or playback.

If you have any question or problem concerning your unit please consult the nearest Sony dealer.

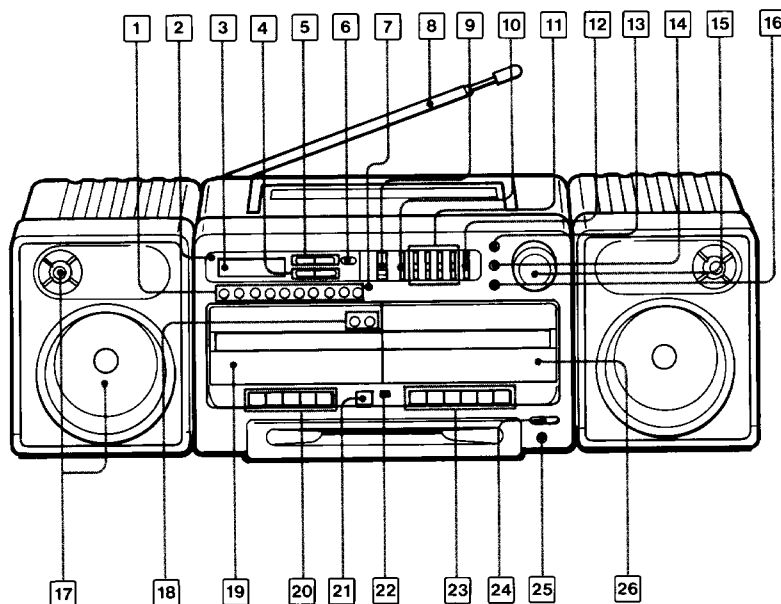
### • If the cassette holder cannot be closed firmly

Press  to remove the cassette and reinsert it into the holder. Do not attempt to play back or record when the cassette holder is not firmly closed. Otherwise, the cassette may be damaged.

Whether you are going to operate the unit on AC power or on batteries, make sure to insert two size AA (R6) batteries for the tuner memory functions.

# Parts Identification

## Front Panel



Refer to the pages indicated in ● for details.

**1 FM/AM preset tuning buttons ●**

**2 FM STEREO indicator ●**

**3 Display window ●**

**4 Tuning +/— buttons ●**

**5 FM/AM band selecting buttons ●**

**6 MEMORY button ●**

**7 OPR/BATT (operation/battery) indicator ●**

**8 Telescopic antenna ●**

**9 FUNCTION selector**

CD/LINE IN: for listening to or recording an external source connected to the CD/LINE IN jacks

RADIO: for listening to or recording a radio program

DUBBING: for dubbing

TAPE (RADIO OFF): for playing back a tape or for recording from a mixing microphone

**10 MEGA BASS CONTROL ●**


**11 GRAPHIC EQUALIZER controls ●**

**12 BALANCE control ●**

**13 TAPE selecting (PB) button (for playback only) ●**

**14 DOLBY\* B NR (noise reduction) button ●**

\*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

**15 VOLUME control**

**16 DUBBING SPEED selecting button ●**

**17 Speaker (tweeter, full-range)**

**18 REV/FWD (reverse/forward) tape transport direction indicators**

**19 Cassette holder (deck A)**

**20 Tape operation buttons of deck A**

■▲ STOP/EJECT

▶ PLAY

◀◀ (leftward fast winding)

▶▶ (rightward fast winding)

|| PAUSE

**21 DIR (direction) selector (◀|▶)**

**22 DIR (direction) MODE selecting button (◀◀/▶▶)**

**23 Tape operation buttons of deck B**

■▲ STOP/EJECT

● REC (recording)

▶ PLAY

◀◀ REW (rewind)

▶▶ FF (fast forward)

|| PAUSE

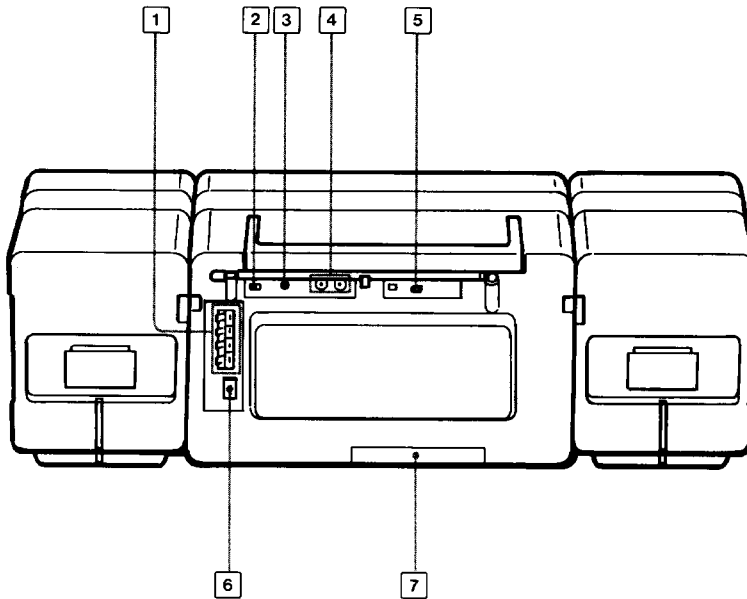
**24 SPACE SOUND button (◀ ON/OFF ▶) ●**

**25 PHONES (headphones) jack (stereo minijack)**

When the headphones are connected to the jack, the sound from the speakers does not come out.

**26 Cassette holder (deck B)**

## Rear Panel

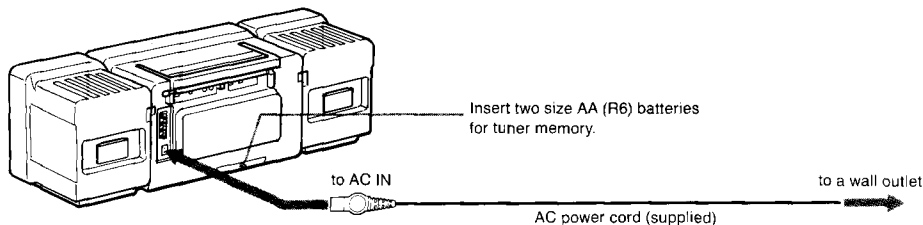


- 1 SPEAKER terminals
- 2 ISS (interference suppress switch) ⑬
- 3 MIX MIC (mixing microphone) jack (minijack) ⑭
- 4 CD/LINE IN (line input) jacks ⑮
- 5 FM SENS (sensitivity) selector (LOCAL/DX) ⑯
- 6 AC IN (AC power input) socket
- 7 Battery compartment

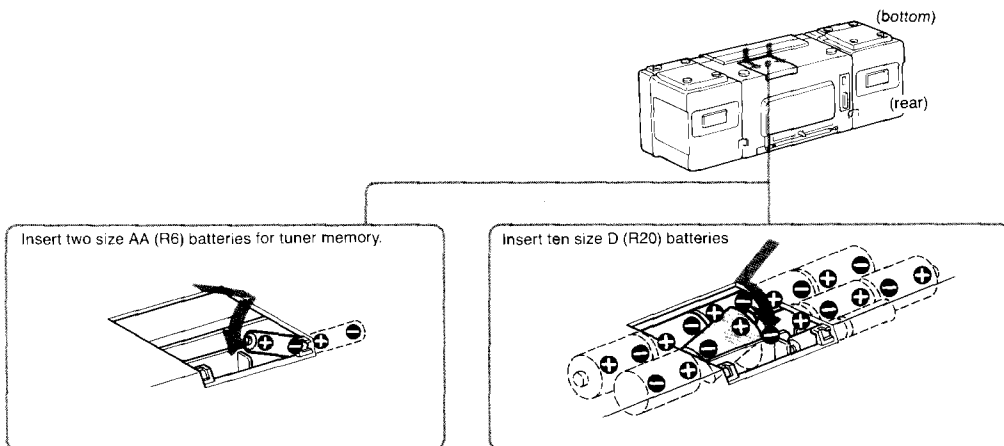
# Power Sources

Two separate power sources are needed to operate this unit: one for the unit itself and one for the tuner memory. You can use the unit either with house current, or batteries. In either case, **be sure to insert batteries for the tuner memory.**

## House Current



## Batteries



### Notes

- The unit cannot be operated on the internal batteries when the AC power cord is connected to the unit.
- For critical recording, operating the unit on AC power source is recommended.

### Polarity of the batteries

Insert the batteries with correct polarity and in the order indicated on the bottom of the unit.

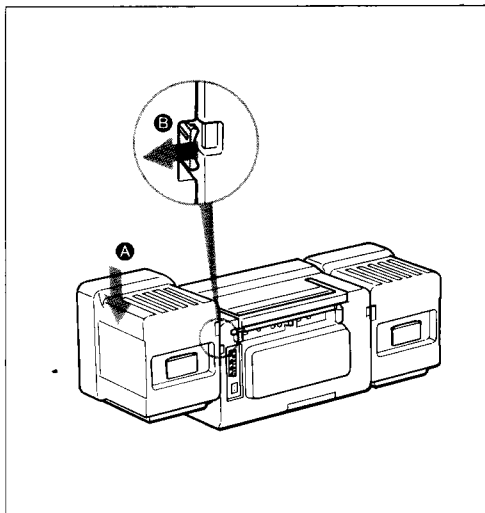
## Battery replacement

### Batteries for tuner memory

- In normal operation, battery life is up to approx. one year. Replace the batteries with new ones before the batteries become weak. When the batteries become weak, a malfunction will occur in the tuner memory section.
- When you replace the batteries for tuner memory, be sure to connect the AC power cord to the unit and to the wall outlet before you remove the batteries. The FUNCTION selector should be set to TAPE (RADIO OFF).

### Batteries for operation of the radio cassette-corder

- When the batteries become weak, the OPR/BATT (operation/battery) indicator will glow faintly. In this case, replace all batteries with new ones.

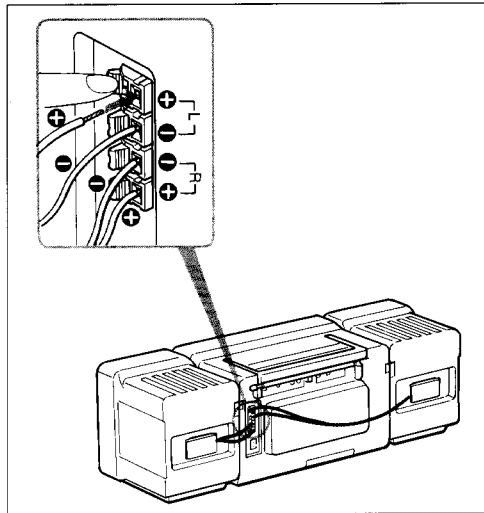


## To attach speakers **A**

Align the grooves and slide the speaker box down.

## To detach speakers **B**

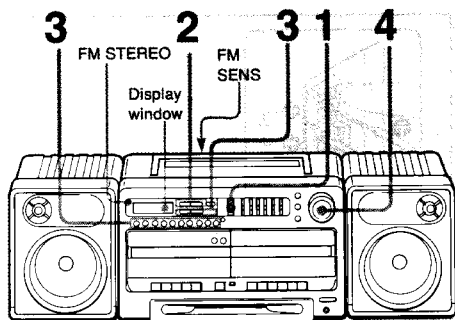
Pressing the speaker lock to unlock it, slide the speaker box all the way up and away from the main unit.



## To connect the speaker wire

- Turn off the power before connecting or disconnecting the speaker cords.
- Connect the speaker cord of the right speaker to the R connectors and left speaker to the L connectors.
- Connect black slash wire to — terminals and red wires to + terminals.

# Listening to Radio Programs



## FM SENS (sensitivity) selector

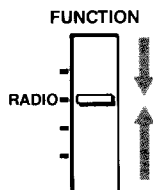
While listening to FM programs, normally, set the selector to DX.

However, if you cannot hear the program clearly, set it to LOCAL.

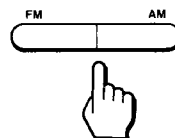
When an FM stereo program is tuned in

FM STEREO indicator lights up.

- 1 Set FUNCTION to "RADIO".



- 2 Select the band desired, FM or AM.



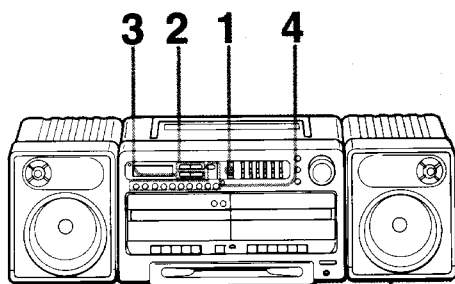
## If the received FM stereo is too weak

The reception becomes monaural, and the FM STEREO indicator will go off.

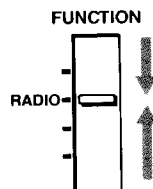
For private listening, connect stereo headphones to PHONES jack.

## Memory Preset Tuning

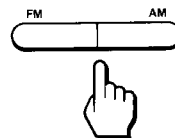
Ex. To memorize 89.2 MHz FM at preset 2



- 1 Set FUNCTION to "RADIO".



- 2 Select the desired band, FM or A M



## To tune in a preset station

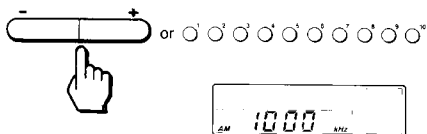
After memorizing in the example above: press FM, then preset tuning button 2. Memorized station FM 89.2 MHz will be tuned.

## How many stations can be stored in memory?

UP to 10 stations can be stored in any order for each band, AM and FM. 20 stations can be stored in total.



- 3** Tune in a station desired, or press the FM/AM preset tuning button if the stations are preset.



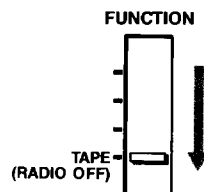
The frequency increases (or decreases) by 10 kHz for AM and by 0.1 MHz for FM each time you press + (or -) of the tuning buttons.

- 4** Adjust VOLUME.



Adjust GRAPHIC EQUALIZER, if necessary. (See page 11).

To Turn off the radio



#### Antenna adjustment

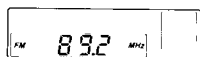
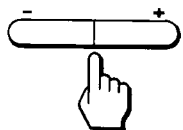
FM



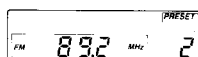
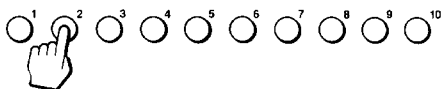
AM



- 3** Tune in a desired station.



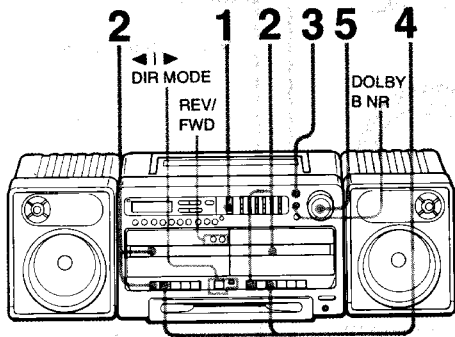
- 4** While keeping MEMORY pressed, press a desired preset number.



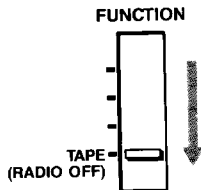
#### Can a previously memorized station be erased?

No, erasing only is not possible, but storing a new station on a preset station number erases the previously memorized one.

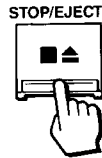
# Playing Back Tapes (on either deck)



**1** Set FUNCTION to "TAPE (RADIO OFF)".



**2** Insert a cassette into deck A or B.



## Tape operating buttons

If you want to	Press
play	▶
wind rapidly in ▶ direction	▶▶
wind rapidly in ◀ direction	◀◀
stop play	■▲
pause for a moment	
resume play after pause	
remove a cassette	■▲ (twice)

After winding with ◀◀ or ▶▶, press ■▲ to release ◀◀ or ▶▶.

**For private listening,** connect stereo headphones to PHONES jack.

## To Select the Playback Mode (Deck A)

Press the DIR MODE button to select the desired position.

To play back both sides of a cassette continuously	◀(▶)
To play back both sides of a cassette once starting from the front side to the reverse side of a cassette	▶(◀)

**\* To listen to the both sides of a cassette**  
Both-side-playback should be started from the front side. Be sure to set the tape transport direction indicators to FWD. If not, playback will stop when the playback of the reverse side is finished even though the DIR MODE selecting button is released (▶(◀)).

## Tape Transport Direction (Deck A)

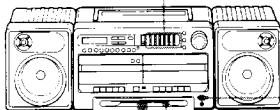
- When you press PLAY, playback of the tape always starts from the front side.
- If you want to listen to the reverse side, press ◀▶ during playback to change the tape transport direction.

## Adjusting Sound

### To obtain powerful bass sound

The "MEGA BASS" system produces powerful bass through the super woofer added to a normal speaker system. To increase the bass, slide MEGA BASS CONTROL toward MAX.

MEGA BASS CONTROL, GRAPHIC EQUALIZER, BALANCE



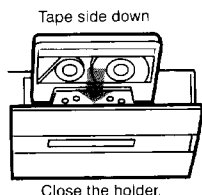
SPACE SOUND

Powerful bass  
Do not block the outlet or insert anything into the outlet.

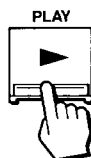
### Note on setting the MEGA BASS CONTROL

The super woofer's output is so powerful that the sound may be cracked or distorted if you set the volume too high with the MEGA BASS CONTROL set at its maximum (MAX). If this happens, turn down the VOLUME control, or slide down the MEGA BASS CONTROL so that a better sound quality can be obtained.

### 3 Select the tape type.

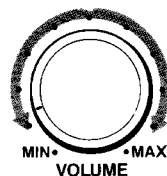


### 4 Press PLAY.



On the deck with the tape inside

### 5 Adjust VOLUME.



Adjust GRAPHIC EQUALIZER, if necessary.

#### To set the TAPE SELECT (PB) button

Recorded tape is normal tape	<input type="checkbox"/> (NORMAL)
Recorded tape is chrome or metal tape	<input type="checkbox"/> (CrO <sub>2</sub> /METAL)

#### Usable cassette

Type of cassette	Playback	Recording
TYPE I (normal)	Yes	Yes
TYPE II (chrome)	Yes	No
TYPE IV (metal)	Yes	No

#### When both decks A and B are in playback mode

- The tape transport direction indicators show the tape transport direction of deck A.
- When both decks are in playback mode, only playback from deck B will be audible.

#### When you play back the cassette recorded using the Dolby B Noise Reduction system

Press the DOLBY B NR button (☐ ON).

When you play back the cassette recorded without using the Dolby B Noise Reduction system, press the button again (☐ OFF).

#### To equalize the reproduced sound

Slide each GRAPHIC EQUALIZER toward +10 or -10. When the equalizer is not used, set the controls to 0 (center position).

#### Frequency coverage of each equalizer control

- 400 Hz: Adjusts the middle frequency range such as a human voice and the middle frequencies of instrumental music.
- 1 kHz: Provides more presence of vocals.
- 4 kHz: Adjusts the brightness of sound.
- 10 kHz: Effects general treble.

#### BALANCE control

Use to adjust stereo imaging, especially when speakers are not symmetrically placed.

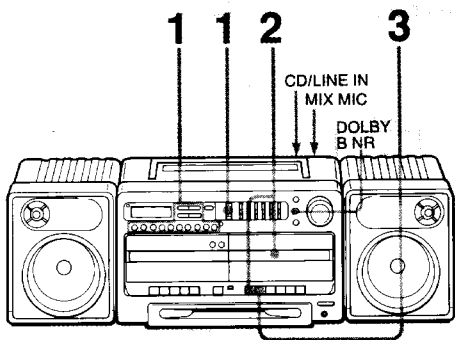
#### To Enjoy Surround Effect

Press SPACE SOUND, for a rich and spacious effect added to the original sound.

The SPACE SOUND button is useful when the stereo image is diminished because your speakers are too close together or your listening room is small.

The effect differs depending on the selection. In monaural this effect does not operate.

# Recording (on deck B)



To stop recording  
Press ■▲.

After recording,  
set FUNCTION to TAPE (RADIO OFF).

### 1 From radio

Select the band. Tune in a station desired.

The diagram shows the FUNCTION button being pressed, then the FM/AM band selector being moved to FM, and finally the tuning dial being turned to a station. Below this, a row of 11 small circles represents a radio frequency scale.

### From mixing microphone

A diagram showing a microphone connected to the MIX MIC input. The FUNCTION button is shown being pressed, and the TAPE (RADIO OFF) indicator is shown.

### From other stereo equipment

RK-C74 (not supplied)

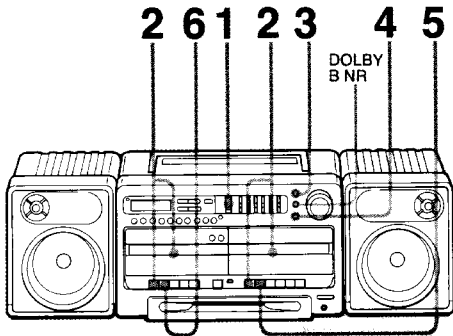
A diagram showing a stereo system connected to the CD/LINE IN input. The FUNCTION button is shown being pressed, and the CD/LINE IN input is shown. Below the diagram, it says "to line outputs".

When the tape reaches the end, depressed ● and ► will automatically be released (Auto Shut-off function).

The recording level is automatically adjusted.  
Settings of VOLUME, MEGA BASS CONTROL and GRAPHIC EQUALIZER controls will not affect recording level.

# Tape Dubbing (from deck A to deck B)

Playback on deck A will be recorded on deck B.



To stop dubbing  
Press ■▲ of deck A and then deck B.

After dubbing,  
set FUNCTION to TAPE (RADIO OFF).

### 1 Set FUNCTION to "DUBBING".

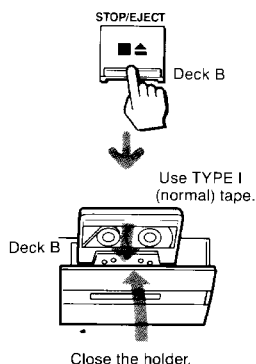
A diagram showing the FUNCTION button being pressed, and the DUBBING indicator being lit. Below the diagram, it says "DUBBING".

### 2 Insert a recorded cassette into deck A.

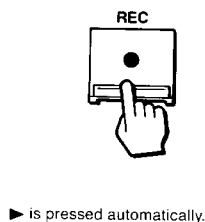
A diagram showing a cassette being inserted into deck A. Below the diagram, it says "Deck A".

To record on both sides of a cassette  
When deck B's tape finishes, press ■ of deck A. Remove deck B's cassette and turn it over. Close the holder and press ■ of deck A. Dubbing will be resumed.

## 2 Insert a blank cassette into deck B.

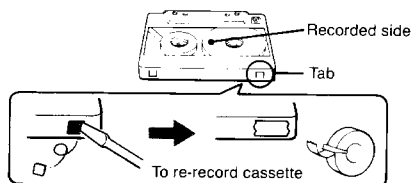


## 3 Press REC.



### To prevent accidental erasure

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



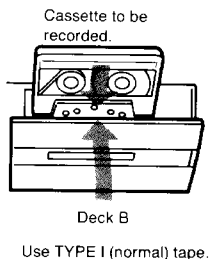
### When you record using the DOLBY B Noise Reduction system.

Press the DOLBY B NR button (ON).

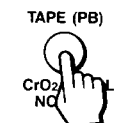
### To reduce noise during AM recording

If a whistling noise is heard, which was inaudible before the REC button is pressed, set the ISS switch on the rear panel to 1, 2 or 3, depending on which one best reduces the noise.

## Insert a blank cassette into deck B.



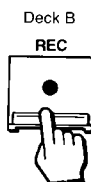
## 3 Select the tape type for deck A.



## 4 Select the dubbing speed.



## 5 Press REC.



## 6 Press ▶ on deck A.



### No volume adjustment is necessary during dubbing

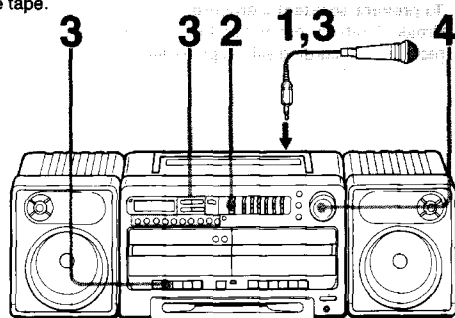
Recording level is automatically set. So turn down the volume if you do not want to hear the high speed sound during high speed dubbing.

### During dubbing, if the DOLBY B NR button is pressed (ON)

The DOLBY B Noise Reduction system operates on the sound played back, but not on the sound to be recorded. The cassette recorded with the DOLBY B Noise Reduction system can be recorded on the blank cassette with the DOLBY B Noise Reduction system.

# Microphone Mixing

Microphone sounds can be mixed with CD, radio or the tape.



## 1

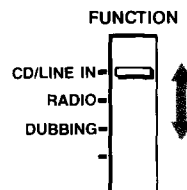
Connect a microphone (not supplied) to MIX MIC.

If the microphone has a power switch, set it to on.

Use a monaural microphone.

## 2

Select the sound source desired.



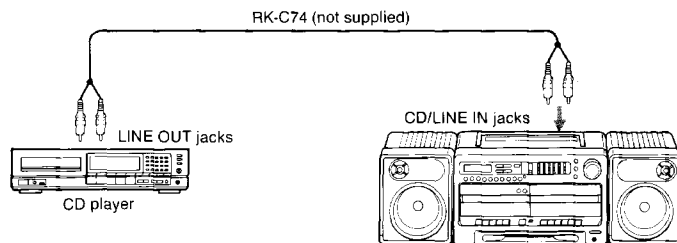
### To record mixed sounds

Insert a cassette into deck B and press the REC button.

### Notes

- If a **howling (acoustic feedback)** occurs, move the microphone away from the speakers or turn down the VOLUME.
- DOLBY B Noise Reduction system does not operate while recording the microphone sound mixed with the tape sound.

# Listening to or Recording from Various Sources



- 1 Connect as illustrated.
- 2 Set FUNCTION to CD/LINE IN.
- 3 Play the connected source.
- 4 To listen to the source, adjust the volume.  
To record, start recording on deck B.

### Notes on connection

- Set the FUNCTION selector to TAPE (RADIO OFF) before making connection.
- The connection cords should be fully inserted into the jacks.
- Note that the red plug of the connecting cord is for the R (right) channel and the white plug for the L (left) channel.

3

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

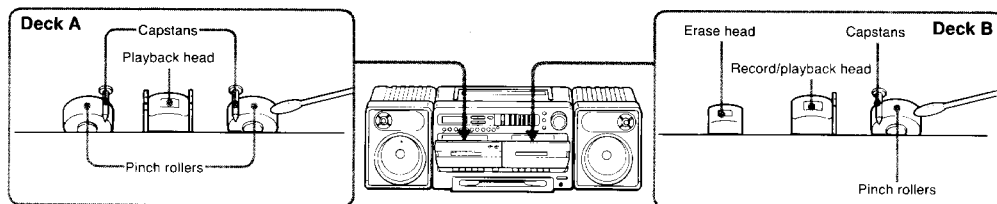
4

Adjust VOLUME.

Sound source	FUNCTION selector
The sound of the equipment connected to the CD/LINE IN jacks	CD/LINE IN
Radio programs	RADIO
Tape sound*	DUBBING

\*Insert the recorded cassette into deck A, and select the tape type with the TAPE (PB) button.

## Maintenance



### Cleaning the heads and tape path

Contaminated heads cause insufficient recording or sound drop-out in playback.

We recommend cleaning after every 10 hours of operation. To make the best possible recordings, however, you should clean all surfaces over which tape travels before making each recording.

Wipe the heads, the pinch rollers and the capstans with a cleaning tip slightly moistened with cleaning fluid or alcohol.

After cleaning the heads, rollers and tape path, insert a cassette when the areas cleaned are completely dry.

### Demagnetizing heads

After 20 to 30 hours of use, enough residual magnetism will have built up on the heads to begin to cause loss of high frequencies and hiss. At this time you should demagnetize the heads and all metal parts in the tape path with a commercially available head demagnetizer. Be sure that the cassette-corder is turned off while you demagnetize.

### Cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene.

# Specifications

## AUDIO POWER SPECIFICATIONS

### POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 4 ohms loads, both channels driven from 200 – 10,000 Hz; rated 4.5 watts per channel minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

Super woofer with 4-ohm loads, driven from 50 – 200 Hz: rated 12 W minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

### OTHER SPECIFICATIONS

Frequency range	FM 87.6 – 108 MHz (100 kHz increment) AM 530 – 1710 kHz (10 kHz increment)
Antennas	FM: Telescopic antenna AM: Built-in ferrite bar
Recording system	4-track, 2-channel stereo
Frequency response	<ul style="list-style-type: none"> <li>• Total with TYPE I (NORMAL) cassette: 40 – 12,500 Hz</li> <li>• Playback with TYPE I (NORMAL) cassette: 40 – 14,000 Hz</li> <li>• Playback with TYPE II (CrO<sub>2</sub>) or TYPE IV (METAL) cassette: 40 – 14,000 Hz</li> </ul>
Speakers	Full-range: 12cm (4 inches) dia. x 2 Tweeter: 5cm (2 inches) dia. x 2 Woofer: 10cm (4 inches) dia. x 1
Power outputs (Canada model)	Full-range speakers: 6W + 6W (at 10% harmonic distortion) in DC operation Woofer: 13W
Inputs	MIX MIC input jack (mono minijack) (1) sensitivity 2.5mV for low impedance microphone CD/LINE IN jack (stereo phono) (2) input impedance 47 kilohms, sensitivity 0.44V
Outputs	Headphones jack (stereo minijack) for 16 – 68 ohm impedance headphones

Power requirements	120V AC, 60 Hz 15V DC, ten size D (R20) batteries memory: 3V DC, two size AA (R6) batteries
Power consumption	USA model: 42W in AC operation Canada model: 52W in AC operation

#### Battery life

Batteries	FM recording
Sony New Super SUM-1 (NS)	Approx. 2 hours
Sony AM1 alkaline	Approx. 5 hours

#### Dimensions

For tuner memory: Approx. 1 year  
Approx. 691 × 224 × 252 mm (w/h/d)  
(27 1/4 × 8 7/8 × 10 inches)

#### Weight

not incl. projecting parts and controls  
Approx. 9.8 kg (21 lb 10 oz) incl. batteries

#### Accessory supplied

AC power cord (1)

#### Optional accessory

Stereo headphones Sony "MDR" headphone series  
Cassette eraser BE-A200, BE-9H  
Head demagnetizer HE-5C  
Head cleaning stick CLH-5  
Cleaning kit KK-4  
Sony "Dynamic Microphone" series  
Discman D-11

Design and specifications subject to change without notice.

## Troubleshooting Guide

### The unit does not operate.

- The AC power cord is not connected.
- No batteries in battery compartment.
- Batteries installed incorrectly.

### Cassette cannot be inserted.

- Improper tape insertion. (Insert with exposed tape side down)
- ► PLAY is depressed.

### ● REC cannot be depressed.

- No cassette in deck B.
- The cassette inserted has tab removed. If so, cover with plastic tape.
- ◀◀ or ▶▶ has been depressed.

### Tape does not move.

- II PAUSE is depressed.

### No sound from speakers.

- Headphones are plugged in.
- The VOLUME control is turned down completely.
- The FUNCTION selector setting is incorrect.
- Speaker cords are not connected.

### A preset station cannot be tuned in.

- The batteries for tuner memory become weak. Replace them with new ones.

### FM program cannot be heard clearly though the station signal is strong enough

- The FM SENS selector is set to DX.

### Poor playback, recording or erase quality.

- Dirty heads. Clean the heads and tape path with cotton swab lightly moistened with cleaning fluid or denatured alcohol.