

FM/AM Cassette Car Stereo

EXR-200**Operating Instructions**

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

Owner's Record

The model and serial numbers are located on the top of the unit.

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. EXR-200 Serial No. _____

WARNING

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.

For installation and connections, see the supplied installation/connections manual.

Features

Tuner section

- **SSIR (Sony Super Interference Rejection) PLL synthesizer tuner**
- The quartz-locked digital synthesizer system enables easy and accurate tuning.
- Up to 18 stations can be preset, 12 stations on FM, 6 stations on AM.

Cassette player section

The auto-reverse function changes the tape direction automatically.

Power amplifier section

- Fader control for playback with a 4-speaker system.
- Maximum power output of 6 W over 4 channels or 20 W over 2 channels.

General

The quartz controlled digital clock.

Precautions

- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the unit to cool off before operating it.
- If no power is being supplied to the unit, check the connections first. If everything is in order, check the fuse.
- If no sound comes from the speakers of a 2-speaker system, set the fader control to the center position.

Protection circuit

The built-in power amplifier employs a protection circuit to protect the speakers if the amplifier malfunctions. When the protection circuit activates, there will be an abrupt loss of sound from the speakers. Particularly, when speakers with a low input impedance – less than 3.2 ohms – are connected to the unit, the sound will be discontinued. This, however, is not a problem. If this happens, turn the volume down a little.

Notes on Cassettes

Cassette care

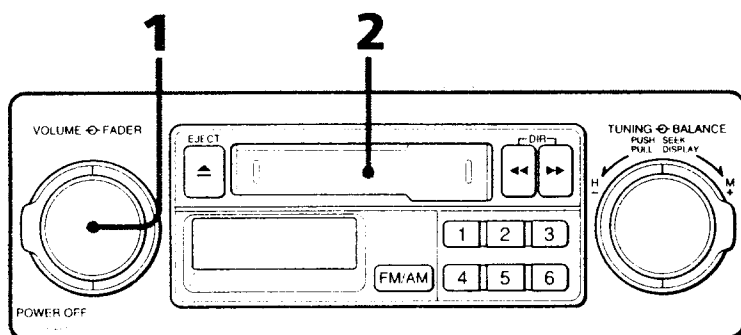
- Avoid touching the tape surface of a cassette, as any dirt or dust will contaminate the heads.
- Keep cassettes away from equipment with built-in magnets such as speakers and amplifiers, as erasure or distortion on the recorded tape could occur.
- Do not expose cassettes to direct sunlight, extremely cold temperatures or moisture.
- The cassette shell may become warm when the tape is played back for a long period of time because of the built-in power amplifier. However, this is not a sign of a malfunction.

Note on cassettes longer than 90 minutes

The use of cassettes longer than 90 minutes is not recommended except for long continuous play. The tapes used for these cassettes are very thin and tends to be stretched easily. Frequent playing and stopping operation for these tapes may cause them to be pulled into the cassette deck mechanism.

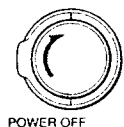
If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Listening to the Tape Playback

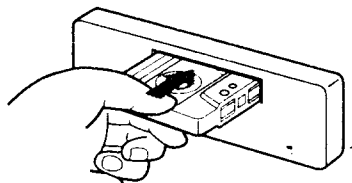


Before inserting a cassette, take up any slack in the tape with a thick pencil.

- 1** Turn clockwise to turn the power on.



- 2** Insert a cassette.
Playback starts automatically.



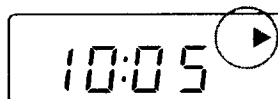
To listen to the reverse side of the cassette,

press  simultaneously.

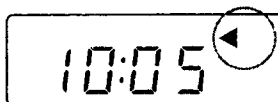
Note

Before turning off the unit, eject the tape to avoid tape damage.

Tape transport direction indication.



The side facing up is being played back.

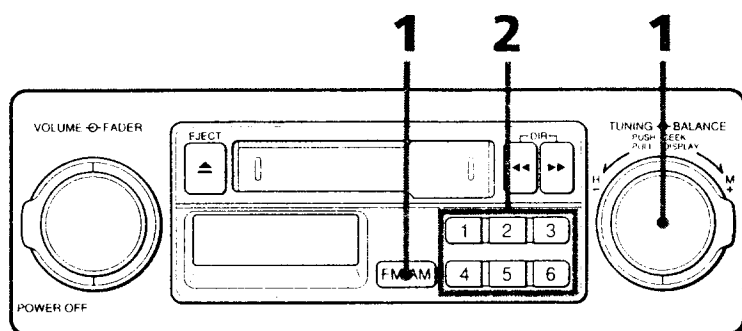


The side facing down is being played back.

To stop the tape playback and listen to the radio

Press the EJECT button. The unit enters the radio mode.

Using the Memory Preset Tuning



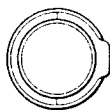
You can memorize a total of 18 stations (6 stations for each band), one on each preset number button in any order.

Memorizing Only the Desired Stations

For example, store a station on the preset number button 1.

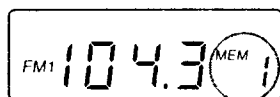
- 1** Tune in a desired station using automatic or manual tuning.

FM/AM



- 2** Keep the preset number button pressed for about two seconds until the "MEM" indication comes on in the display window.

1 — 6



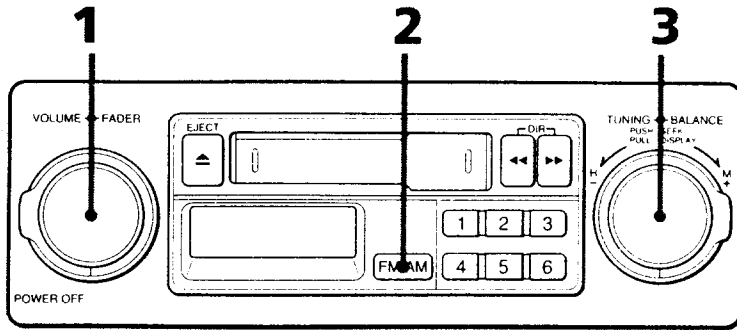
Repeat the same procedure to store other stations.

Only one station per band (FM1, FM2, and AM) can be stored in the memory on each preset number button.

If you try to store another station on the same preset number button, the previously stored station will be erased.

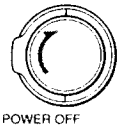
When the "MEM" indication comes on, the station is stored in the memory and the operation is completed. The "MEM" indication goes off after a while.

Automatic Tuning



Searching for the Stations Automatically

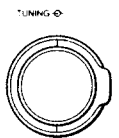
- 1** Turn clockwise to turn the power on.



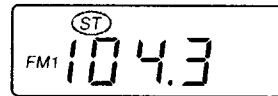
- 2** Press to select the desired band, FM1, FM2, or AM.

FM/AM

- 3** Press the **PUSH SEEK** button.
Stations will be scanned automatically and scanning will stop when a station is tuned in. Repeat pressing the PUSH SEEK button until the desired station is tuned in.



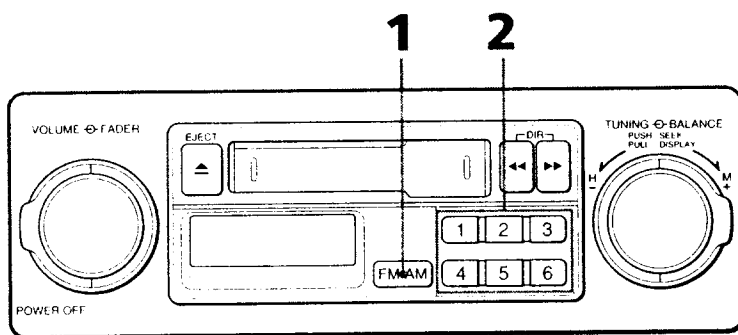
When an FM stereo program with a sufficient signal strength is tuned in



The "ST" indication appears.

To play back a cassette during radio reception

Insert a cassette. The radio will be turned off and playback will start automatically.



Receiving the Memorized Stations

- 1 Select the desired band.

FM/AM

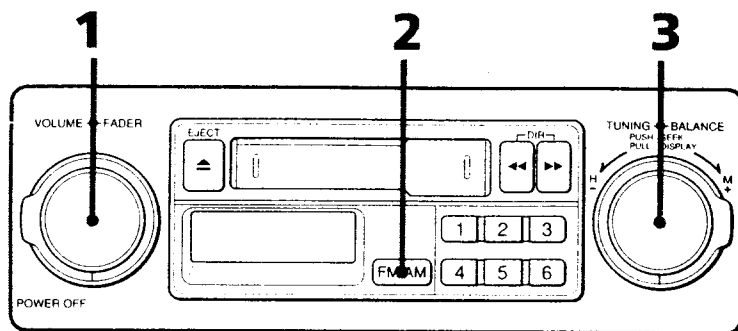
- 2 Press the desired preset number button lightly.

1 — 6

Note

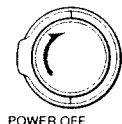
If you keep pressing the preset number button for more than two seconds, the currently received station will be memorized again. To receive the previously memorized station, make sure that the preset number button is pressed only lightly.

Manual Tuning

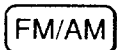


Tuning in by Adjusting the Frequency

- 1** Turn clockwise to turn the power on.



- 2** Press to select the desired band, FM1, FM2, or AM.



- 3** Turn to tune in the desired station.

For lower
frequency



For higher
frequency

PREVENTING ACCIDENTS!

While you are driving, the use of Automatic Tuning and the Memory Preset Tuning is recommended instead of the Manual Tuning.

Troubleshooting Guide

The following checks will assist in the correction of most problems which you may encounter with your unit.

Before going through the check list below, refer back to the connection and operating procedures.

Radio reception

Trouble	Cause/Solution
Preset tuning is not possible.	• Memorize the correct frequency. • The broadcast is too weak.
Automatic tuning is not possible.	The broadcast is too weak. → Use manual tuning.
The "ST" indication flashes.	• Tune in precisely. • The broadcast is too weak.

Tape playback

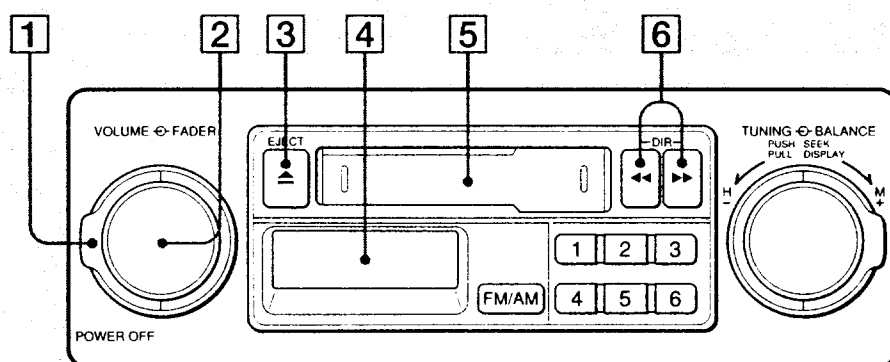
Trouble	Cause/Solution
Playback sound is distorted.	The tape head is contaminated. → Clean the head.

General

Trouble	Cause/Solution
No sound.	Control the volume.

If the above mentioned remedies do not help to improve the situation, consult your nearest Sony dealer.

Location and Function of Controls



1 FADER control

Turn clockwise to decrease the volume of the rear speakers or counterclockwise to decrease the volume of the front speakers.

2 POWER OFF (power on/off) switch/VOLUME

POWER OFF switch	Turn clockwise to turn on the unit and counterclockwise to turn off.
VOLUME control	Turn clockwise to increase volume and counterclockwise to decrease.

3 EJECT button

Press to stop the tape and take out the cassette.

4 Display window

5 Cassette insertion door

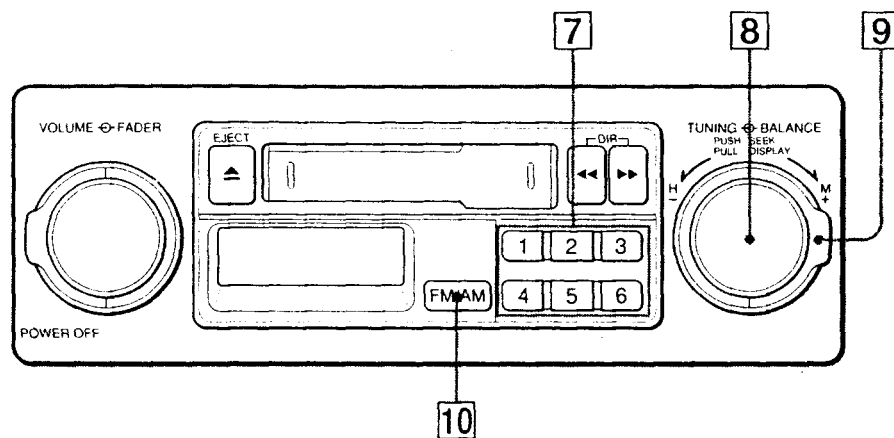
6 ◀◀/▶▶ (fast winding)/DIR (tape transport direction change) buttons

During playback, press ◀◀ or ▶▶ for fast winding, or press both ◀◀ and ▶▶ simultaneously to listen to the other side of the cassette.

To Wind the Tape Rapidly

Direction indicator	To advance	To rewind
▶	Press ▶▶.	Press ◀◀.
◀	Press ◀◀.	Press ▶▶.

To resume playback, press ◀◀ or ▶▶ (that one which is not depressed) lightly.



7 Preset number buttons

8 TUNING/PUSH SEEK/PULL DISPLAY knob Use this knob also for clock setting.

TUNING knob	Turn to normally tune in the desired station.
PUSH SEEK knob	Press for automatic tuning.
PULL DISPLAY knob	Pull to display the time indication during radio reception.

9 BALANCE control

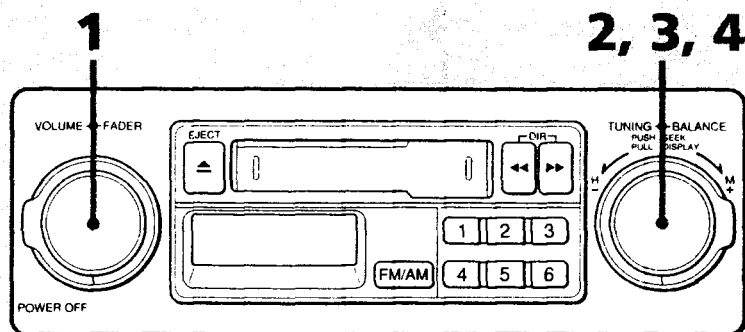
Turn to adjust the balance of the left and right speakers.

10 FM/AM (band select) button

Each time you press the button, the band changes as follows:

→ FM1 → FM2 → AM →

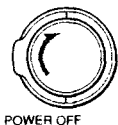
Setting the Clock



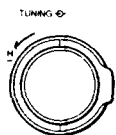
The clock has a 12-hour digital indication.

For example, to set it to 10:08.

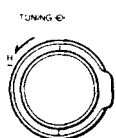
- 1** Turn clockwise to turn the power on.



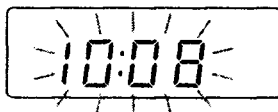
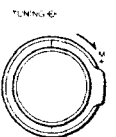
- 2** Pull out the DISPLAY knob to display the time digits.



- 3** Turn to "H" while pulling out the TUNING knob.
Set the hour digits.



- 4** Turn to "M" while pulling out the TUNING knob.
Set the minute digits.



When you set minute digits "00" comes after "59". Setting the hour digits will not affect the minute digits.

The digits will advance in sequence. To advance them rapidly, keep the TUNING knob turned while pulling it out.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

10 watts per channel minimum continuous average power into 4 ohms, both channels driven from 30 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other Specifications

Cassette player section

Tape track	4-track 2-channel stereo
Frequency response	40 – 15,000 Hz
Signal-to-noise ratio	55 dB with TYPE I cassettes
Wow and flutter	0.13 % (WRMS)

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector/ Power antenna relay control lead
Intermediate frequency	10.7 MHz
Usable sensitivity	13 dBf (75 ohms)
Selectivity	70 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.9% (stereo), 0.5% (mono)
Separation	33 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector/ Power antenna relay control lead
Intermediate frequency	450 kHz
Sensitivity	32 μ V

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	3.2 – 8 ohms
Maximum power output	20 W $\times$ 2 (at 4 ohms) 6 W $\times$ 4 (at 4 ohms)

General

Power requirements	12 V DC car battery (negative ground)
Mounting dimensions	Approx. 178 $\times$ 50 $\times$ 135 mm (w/h/d) (7 ¹ / ₈ $\times$ 2 $\times$ 5 ³ / ₈ in.)
Mass	Approx. 1.2 kg (2 lb. 10 oz.)
Accessories supplied	Mounting hardware (1 set) Power connecting cord (1)

Design and specifications subject to change without notice.