

SONY

3-754-604-21 (1)

FM/AM Cassette Car Stereo

EXR-12

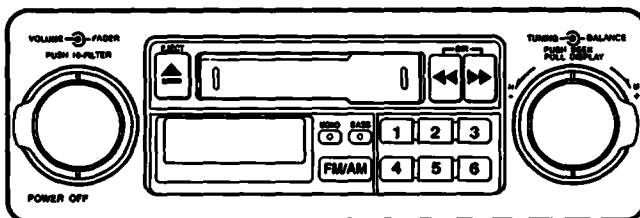
Operating Instructions

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 them whenever you call upon your Sony dealer regarding this product.

Model No. EXR-12 Serial No. _____



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

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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

Tuner section

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

Cassette deck 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 7.5 watts per channel.
- The HI-FILTER (high-cut filter) eliminates the frequency noise and delivers clear sound.

General

The quartz controlled digital clock.

Precautions

- If your car was parked in direct sunlight and there was a considerable rise in temperature inside the car, allow the unit to cool off before operating.
- 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 a protection circuit activates, there will be an abrupt loss of sound from the speakers. Particularly, when a speaker with a low input impedance (less than 4 ohms) is connected to the unit, the sound will be discontinued. This, however, is not a problem. If this happens, turn the volume down a little.

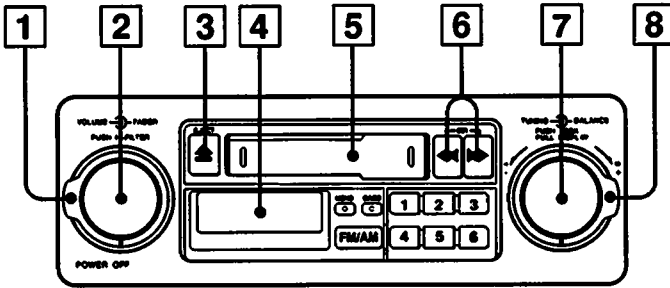
Cassette care

- This unit will automatically reverse the direction of the tape when it senses an entangled tape. If during playback the player should reverse the direction a number of times, the tape should be considerably damaged. In this case, remove the cassette.
- The use of cassettes longer than 90 minutes is not recommended.
- Be sure not to leave cassettes inside your car with the windows closed. Direct sunlight or extremely high temperature will warp cassette shells and cause the tape to stretch.
- Avoid touching the tape surface, as any dirt or dust on the tape will contaminate the playback heads of the player.
- Store the cassettes in their cases when not in use.

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

Location and Function of Controls

Refer to the page in ● for details.



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/PUSH HI-FILTER (high-cut filter) control

POWER OFF switch	Turn clockwise to turn on the unit and counterclockwise to turn off the unit.
VOLUME control	Turn clockwise to increase volume and counterclockwise to decrease volume.
HI-FILTER control	Press and turn counterclockwise to reduce the high frequency noise or high frequency distortion.

3 EJECT button

Press to stop the tape playback and take out the cassette.

4 Display window

5 Cassette insertion door

6 ◀▶ (fast winding)/DIR (tape transport direction change) buttons 7

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

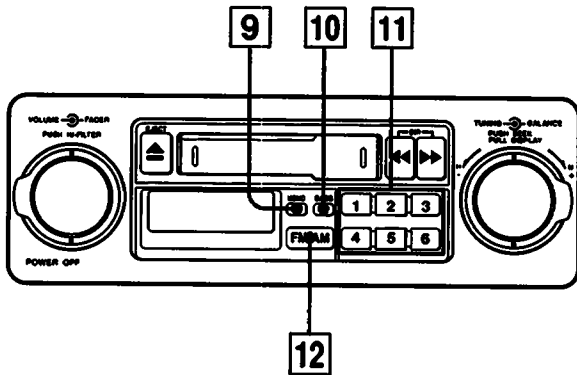
7 TUNING/PUSH SEEK/PULL DISPLAY knob

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

Use this knob also for clock setting. 12

8 BALANCE control

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



9 MONO (monaural) button 

Press to reduce noise during reception of a weak FM stereo program.
To restore to stereo, press it again.

10 BASS (bass boost) button

Press to reinforce bass especially when listening at low volume.
To disengage the button, press it again.

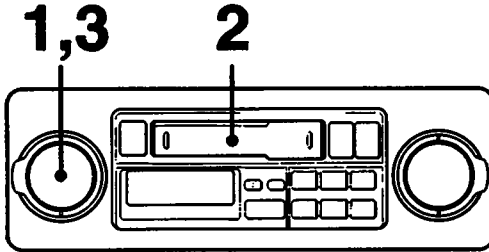
11 Preset number buttons


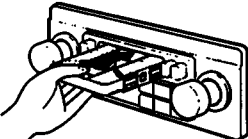

12 FM/AM (band select) button 

Press to select a desired band. FM1. FM2 or AM.

Tape Playback

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

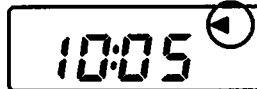


- | | | |
|----------|--|--|
| 1 |  | Turn clockwise to turn the power on. |
| 2 |  | Insert a cassette.
Playback starts automatically. |
| 3 |  | Adjust the volume. |

Direction indicator



The side facing up is being played back.



The side facing down is being played back.

To listen to the other side of the cassette

Press ◀◀ and ▶▶ simultaneously.

To wind the tape rapidly

Direction indicator	To advance	To rewind
▶	Depress ▶▶	Depress ◀◀
◀	Depress ◀◀	Depress ▶▶

To resume playback, press ◀◀ or ▶▶ lightly, which is not depressed.

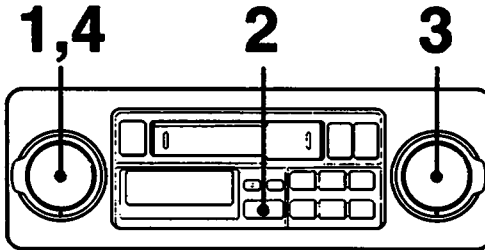
To stop playback and listen to the radio





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

To stop playback and turn off the unit

Press the EJECT button and then turn the POWER OFF switch counterclockwise until it clicks.

Automatic Tuning



1		Turn clockwise to turn the power on.
2		Press to select the desired band, FM (1 or 2) or AM. Each time the button is pressed, the corresponding indicator appears in the display window.
3		Press the PUSH SEEK knob. Stations will be scanned automatically and scanning will stop when a station is tuned in. Repeat pressing the PUSH SEEK knob until the desired station is tuned in.
4		Adjust the volume.

When an FM stereo program of sufficient signal strength is tuned in



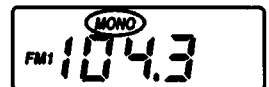
The ST indicator appears.

To play back the tape during radio reception

Insert a cassette. The radio is turned off and playback will begin automatically.

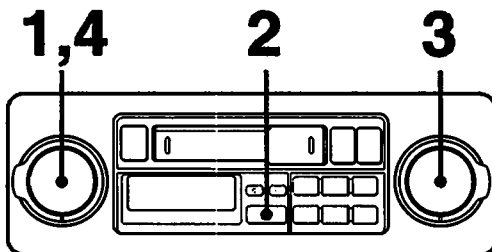
For improved reception
To receive a weak FM stereo program, press MONO.

The FM stereo program is received in monaural, but the noise will be reduced.



In this case, the ST indicator disappears.

Manual Tuning



1



Turn clockwise to turn the power on.

2



Press to select the desired band, FM (1 or 2) or AM.

Each time the button is pressed, the corresponding indicator appears in the display window.

3



Turn to tune in the desired station.

4



Adjust the volume.

Warning
While driving, keep your eyes on the road and use the automatic tuning or the memory preset tuning!

To display the time indication during radio reception
Pull the PULL DISPLAY knob.

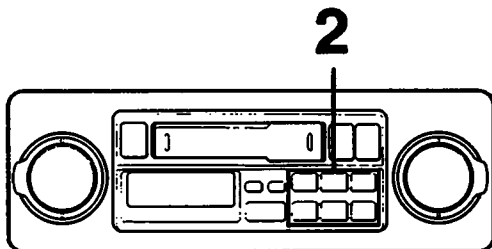


To restore the frequency indication, pull it again.

Memory Preset Tuning

To Memorize Station Frequency

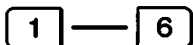
You can memorize a total of 18 stations (6 stations for each band), one on each preset number button in any order.



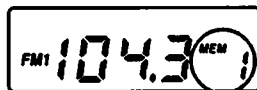
1

Tune in a desired station
using automatic or manual tuning.

2



Keep the desired preset number button pressed for more than two seconds
until the "MEM" indication will come on.



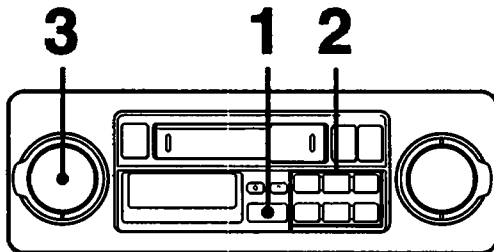
The station is now memorized.

Repeat these steps for each preset number button.

Note on memorizing stations

The previously memorized station will be erased when you enter a new station of the same band on the same preset number button.

To Tune in the Preset Station



1

FM/AM

Press to select the desired band.

2



Press the desired preset number button.

Note

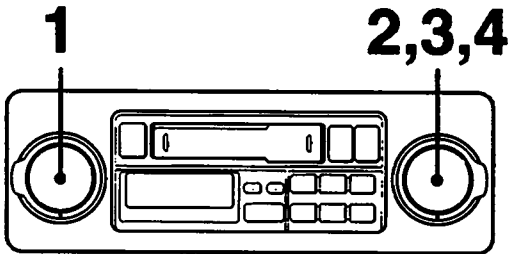
If you keep pressing the preset number button for more than two seconds, the currently received station will be memorized. To receive the previously memorized station, press the preset number button lightly.





3



Adjust the volume.

How to Set the Clock



1		Turn clockwise to turn the power on.
2		Pull out the PULL DISPLAY knob to display the time digits.
3		Turn to 12 while pulling out the TUNING knob. Set the hour digits.
4		Turn to 15 while pulling out the TUNING knob. Set the minute digits.

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

When you set minute digits
"00" comes after "59". The hour digits do not change then.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

4 watts per channel minimum continuous average power into 4 ohms, both channels driven, from 150 to 20,000 Hz with no more than 1.5% total harmonic distortion.

Other Specifications

Tuner section

FM

Tuning range	87.9 – 107.9 MHz
Antenna terminal	External antenna connector
Usable sensitivity	13 dBf (75 ohms)
Selectivity	More than 70 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (monaural)
Harmonic distortion at 1 kHz	0.9% (stereo), 0.5% (monaural)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz (± 3 dB)
Capture ratio	2.0 dB

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Sensitivity	32 μ V

Cassette player section

Tape track	4-track 2-channel stereo
Frequency response	40 – 15,000 Hz
Signal-to-noise ratio	55 dB
Wow and flutter	0.13%

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	7.5 W + 7.5 W (at 4 ohms)* *Measured at 14.4 V

General

High-cut filter	- 15 dB at 10 kHz
Bass boost	+ 10 dB at 100 Hz
Power requirements	12 V DC car battery (negative ground)
Mounting dimensions	178 x 50 x 134 mm (w/h/d) (7 ¹ / ₈ x 2 x 5 ³ / ₈ inches)
Weight	1.3 kg (2 lb 14 oz)
Accessories supplied	Mounting hardware (1 set) Power connecting cord (1)
Output lead	Power antenna relay control lead