

FM/AM Cassette Car Stereo

XR-7077

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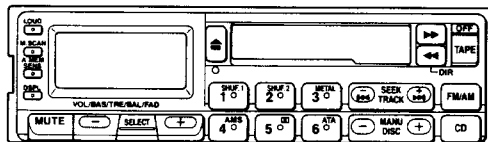
Operating Instructions

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

Owner's Record

The model and the serial numbers are located on the top. 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. XR-7077 Serial No. _____



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

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Features

Tuner section

- SSR (Sony Super Interference Rejection) PLL Synthesizer tuner
- Automatic memory function stores a total of 24 stations in memory quickly and easily.
- Memory scan function scans preset stations each for five seconds in order.
- The extended range in AM band (530–1,710 kHz)


Cassette deck section

- The auto-reverse function changes tape directions automatically.
- The B-type Dolby NR* system is incorporated.
- The ATA (Automatic Tuner Activation) function automatically turns on the tuner while fast-winding a tape.

CD section (when the optional Sony CD

- changer is connected)
- The shuffle play function plays selections in random order.
- The ATA function automatically turns on the tuner while changing discs.
- Manual search allows you to search for a desired point in a selection.

General

- Slide-out security bracket allows you to take the unit away with you when you leave your car.
- With the built-in amplifier, you can enjoy 4-speaker system.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

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.

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

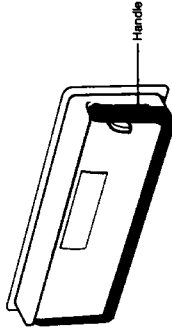
Cassette care

- Avoid touching the tape surface of a cassette, as any dirt or dust will contaminate the heads.
- Keep cassettes away from equipment with 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.

Note on cassettes longer than 90 minutes

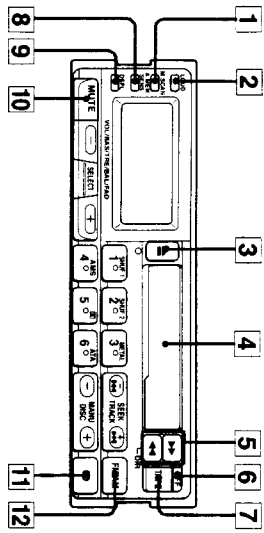
The use of cassettes longer than 90 minutes is not recommended except for long continuous playback.

When the unit is secured into the bracket, make sure that the handle is completely retracted as shown below. Otherwise, the unit will not be turned on.



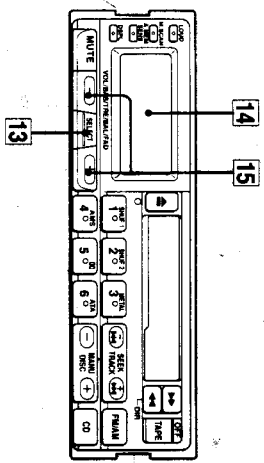
Before removing the unit from the bracket, be sure to turn the power off. If you raise up the handle to remove the unit while the unit is turned on, however, the power will be automatically turned off. This will protect speakers from being damaged.

Location and Function of Controls



Refer to the page in ● for details:

- 1 **M/SCAN** (memory scan)/A/MEM (automatic memory) button ●
- 2 **LOUD** (loudness) button
- Press to reinforce bass and treble especially when listening at low volume. To deengage the button, press it again.
- 3 **▲** (eject) button
- 4 **Cassette insertion door**
- 5 **◀/▶** (fast-winding) buttons/DIR (tape transport direction change) buttons ●
- 6 **OFF** button
- 7 **TAPE** (tape playback) button ●
- 8 **SENS** (sensitivity) button ●
- 9 **DISPL** (display) button ●
- 10 **MUTE** button
- Press to momentarily mute the sound. Press again to restore the same level as before. This button will be canceled also when you press the **CD**, **FM/AM** or **TAPE** button to change the operation mode.
- 11 **CD** (disc play) button ●
- 12 **FM/AM** (radio on/board select) button ●

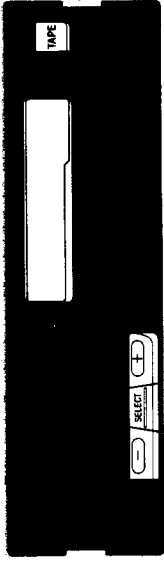


- 13 **SELECT** (control mode select) button
- Press to select the desired mode, **BAS** (bass), **TRE** (treble), **BAL** (balance), **FAD** (fader), or **VOL** (volume).

BAS	Bass control	For less bass	For more bass
TRE	Treble control	For less treble	For more treble
BAL	Balance control	To decrease the right-speaker volume	To decrease the left-speaker volume
FAD	Fader control	To decrease the rear-speaker volume	To decrease the front-speaker volume
VOL	Volume control	For less volume	For more volume

- 14 **Display window**
- 15 **Volume/bass/treble/balance/fader control** button
- Press **▲** or **▼** buttons normally/function as the volume control. Adjust the level within three seconds after selecting the desired control mode. Otherwise, the mode goes back to the volume control mode.

Tape Playback



1

Insert a cassette to start playback.

Press TAPE when a cassette is already inserted.

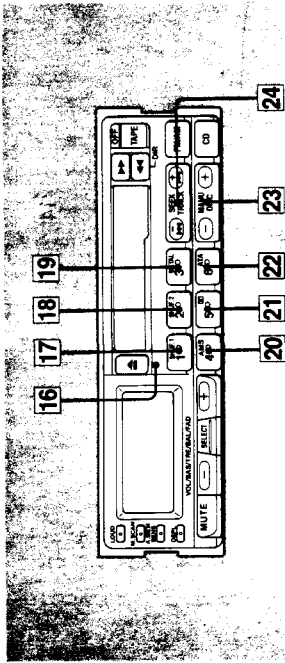
2

Press to adjust the volume.



Side of the cassette being played back
This unit plays back both sides of the cassette repeatedly. The indicator in the display window shows which side of the cassette is being played back.

Location and Function of Controls



	During tape playback	During disc play	During radio reception
17	—	SHUF. 1 (shuffle 1) button ●	—
18	—	SHUF. 2 (shuffle 2) button ●	—
19	METAL (metal/CrO ₂) button ●	—	Preset number buttons ●
20	AMS (Automatic music sensor) button ●	—	MANU (manual tuning) button ●
21	DC (Dolby NR) button ●	—	SEEK (automatic tuning) button ●
22	ATA (Automatic tuner activation) button ●	—	—
23	—	DISC (disc change) ●/MANU (manual search) button ●	—
24	—	TRACK (disc track change) button ●	—

16 Reset button

Press this button when you use this unit for the first time and when you have changed the car battery, or when other buttons do not function. The reset button is effective only when the unit is mounted in the bracket.

To mute the beep sound

Press [e] while pressing SELECT. To obtain the beep sound again, press buttons again.

Tape Playback

To return to the other side of the cassette



To wind the tape rapidly

Direction Indicator	To advance	To rewind
	Depress  Depress 	Depress  Depress 
	Depress 	Depress 

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

To take out the cassette



To stop the tape and listen to the radio



To play back the tape again



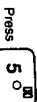
To stop the tape and turn off the unit





To stop the tape and listen to a disc



MTR appears in the display window. To listen to the normal (TYPE I) tapes, press it again.







Press to activate the B-type Dolby NR system. Select the same Dolby NR system used for the recorded cassette. The Dolby NR (Noise Reduction) system reduces tape hiss noise in low-level, high-frequency signals.

1 Press  or , referring to the following table.

Indicator	Cassette side being played	Desired selection	Current selection
▶	Side facing upwards	Next selection	Depress  Depress 
◀	Side facing downwards	Depress  Depress 	Depress 



The desired selection may not be located if ...

- there is a noise in the space between selections
- the space is less than 4 seconds long
- the  or  button is pressed more frequently than once every 4 seconds
- the  or  button is pressed more than once within the blank space.

Playback may begin in the middle of the selected section when AMS is activated, as the followings are treated as hints:

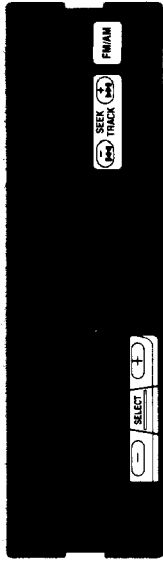
- a long pause in the selection
- a passage of low frequencies or very low volume
- gradual increase or decrease of volume, as in some classical music.


Tape Playback


The tuner turns on automatically when you press the  or  during tape playback. When you resume the tape playback, the tuner turns off automatically.




Press 

Automatic Tuning



- 

Press to select the desired band, FM I, FM II, FM III or AM.
The tuner turns on at the same time.
- 

Press to start scanning.
 for lower frequencies
 for higher frequencies
The scanning automatically stops when a station is tuned in.
Repeat this step until the desired station is tuned in.
- 

Press to adjust the volume.

To display the frequency indication while the ATA is operating

The display window shows the frequency which is selected in real time. In this case, all the tuner operation buttons function in the same way as when you turn on the tuner (except for the FM/AM button).

Note


While locating the beginning of a selection by using the AMIS function, the ATA function does not operate.

FM has three bands (FM I, FM II, FM III). Three bands cover the same frequency range. To change the band, press .


Automatic Tuning

To stop the radio and start tape playback


When the cassette is inserted




When a cassette is already inserted




To stop the radio and turn off the unit



To stop the radio and listen to a CD

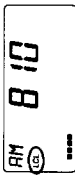


When there are too many stations and the auto-tuning stops too frequently during automatic tuning

SENS 

Press

Only the stations with relatively strong signals can be tuned in.



When the FM stereo program is too weak and noisy

SENS 

Press

The noise will be reduced. The sound will be monaural instead.

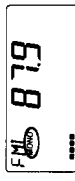
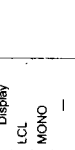


Table below shows the modes of the SENS button

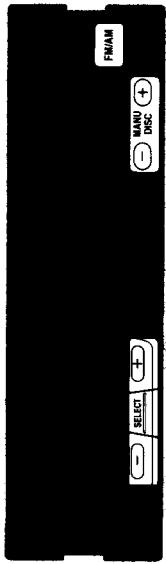
Button press	Mode	Display
First press	Local seek mode	LCL
Second press	Monaural mode	MONO
Third press	Canceled	—

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



The program is automatically received in stereo.


Manual Tuning




- 1**


Press to select the desired band, FM I, FM II, FM III or AM.

The tuner turns on at the same time.



- 2**

Press to tune in the desired station.


 For lower frequencies

 For higher frequencies

To change the frequency rapidly, keep the button pressed.


- 3**

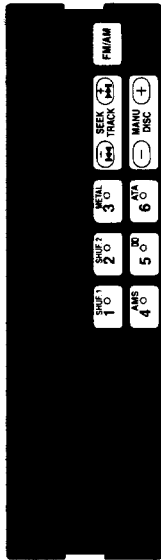
Press to adjust the volume.



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

Memory Preset Tuning

You can memorize a total of 24 stations (6 stations for each band), one on each preset number.



1



Press to select the desired band, FM I, FM II, FM III or AM. The tuner turns on at the same time.

2



Press for more than two seconds. The unit starts scanning the selected band and memorizes the tuned stations on the preset number button 1 through 6 automatically.

M.SCAN
Press  lightly.
A.MEM

Each memorized station will be scanned for five seconds in order. (When the broadcast of the memorized station is too weak, it cannot be received.)

Example: To memorize on the preset number 1

1



Press to select the desired band.

2



or



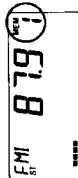
Press to tune in the desired station.

3



Press for more than two seconds.

The number of the pressed preset number button will be displayed. MEM indicator appears to show that the station has been memorized. (MEM indicator will disappear in a few seconds.)



In what way are stations scanned and memorized?

The unit scans the selected band twice. The scanning starts from the displayed frequency. During the first scan, the unit scans stations automatically. During the second scan, the unit scans all stations that can be received, including weak ones. And for memorizing, if any preset number is

Repeat these steps for each preset button.

Important

Every preset number button has only one memory for a band. The previously memorized station will be erased when you enter a new station of the same band on the same preset number button.

Memory Preset Tuning

1

FM/AM

Press to select the desired band.

2

SHUF.
10

~

ATA
60

Press lightly to receive the desired station.

Disc Playing

(When the optional Sony CD changer is connected)



Before operating, insert a disc magazine with discs into the CD changer.

1

CD

Press to start the disc play.

2

SELECT

Press to adjust the volume.

Other operations

To listen to another disc in the disc magazine

MANU DISC
- +

If you press it for more than 0.5 second, it operates as the manual search.

To stop disc play and start tape playback



When no cassette is inserted

TAPE

When a cassette is already inserted

To stop disc play and ...

FM/AM





To listen to the radio

OFF



To turn off the unit

To display the elapsed time during the disc play
Press DSP. The elapsed time of the selection is indicated in the display window. To cancel the elapsed time indication, press it again.




Disc Playing

<p>To locate the beginning of the selection being played</p>	 <p>Press</p>
<p>To locate a previous selection</p>	 <p>Keep pressed. Release the button at the desired selection.</p>
<p>To locate the next selection</p>	 <p>Press</p>
<p>To locate a selection ahead</p>	 <p>Keep pressed. Release the button at the desired selection.</p>

When the first selection or the last selection of the disc is located, the play begins from the selection.

<p>To go ahead at high speed</p>	 <p>Keep pressed. Release the button at the desired point.</p>
<p>To go back at high speed</p>	 <p>Keep pressed. Release the button at the desired point.</p>

The elapsed time of the selection is displayed during the manual search.

<p>To play the selection on the disc in random order (Shuffle play 1)</p> <p>Press</p>  <p>All selections on the disc being played will be played in random order. After playing all selections on the disc, the unit goes to the next disc.</p>
<p>To play the selection on all discs in random order (Shuffle play 2)</p> <p>Press</p>  <p>All selections on all discs in the disc magazine will be played in random order.</p>
<p>To turn on the radio automatically while changing discs (ATA function)</p> <p>Press</p>  <p>The radio is heard automatically while changing discs. Press DSP/L to display the frequency indication while the ATA is operating. In this case, all the tuner operation buttons function in the same way as when you turn on the tuner (except for FM/AM button).</p>

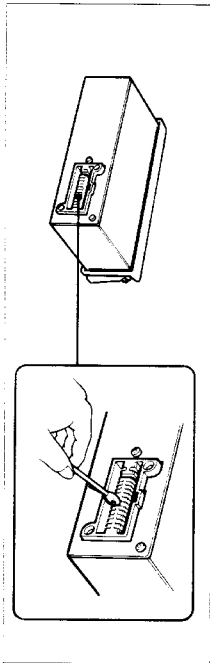
To resume normal playback
Press each button again.

Maintenance

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In this case, consult your nearest Sony dealer.

Warning
Use the specified ampere fuse. Use of a higher ampere fuse may cause serious damage.

To keep the best possible sound quality, clean the metallic part of the connector at the rear of the unit periodically using a commercially available head cleaning fluid or rubbing alcohol and a cotton swab.



Prolonged use may contaminate the tape head and the tape path. Contamination causes sound drop-outs in playback. Clean the tape head and the tape path every two weeks to enjoy optimum hi-fi stereo sound. Use a commercially available cleaning cassette.

Specifications

POWER OUTPUT AND TOTAL HARMONIC DISTORTION 10 watts per channel minimum continuous average power into 4 ohms, both channels driven, from 30–20,000 Hz with no more than 1% total harmonic distortion.

Power amplifier section

Output Speaker outputs
(sure seal connectors)
Speaker impedances 12, 8 ohms
Maximum power output* 20 W × 4 (at 4 ohms)*

*Measured at 14.4 V

Cassette player section

Tape track 4-track 2-channel stereo
Frequency response 30–18,000 Hz
Signal-to-noise ratio

Cassette Type	Dolby B	Dolby off
TYPE II, IV	66 dB	58 dB
TYPE I	63 dB	55 dB

Wow and flutter 0.13% (W/RMS)

Tuner section

FM
Tuning range 87.9–107.9 MHz
Antenna terminal External antenna connector

Intermediate-frequency 10.7 MHz
Usable sensitivity 12 dBμ (75 ohms)

Selectivity 75 dB at 400 KHz
Signal-to-noise ratio 65 dB (stereo), 70 dB (mono)

Harmonic distortion at 1 KHz 0.5% (stereo), 0.3% (mono)

Separation 35 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
Intermediate frequency 450 KHz

Sensitivity 35μV

General

Output lead Power antenna relay control lead
Tone controls Power amplifier control lead
Loudness Bass ±10 dB at 100 Hz
Trebles ±10 dB at 10 KHz
Power requirements 12 V DC car battery (negative ground)





Dimensions (without bracket) Approx. 178 × 50 × 167 mm (W/H/D)
not incl. protruding parts and controls

Mourning dimensions Approx. 182 × 53 × 165 mm (W/H/D)
not incl. protruding parts and controls

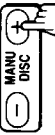
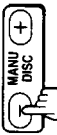
Weight Approx. 2 kg (4 lb, 7 oz.)
Accessories supplied Mounting hardware (1 set)

Design and specifications subject to change without notice.




Disc Playing

<p>To locate the beginning of the selection being played</p>	 <p>Press</p>
<p>To locate a previous selection</p>	 <p>Keep pressed.</p> <p>Release the button at the desired selection.</p>
<p>To locate the next selection</p>	 <p>Press</p>
<p>To locate a selection ahead</p>	 <p>Keep pressed.</p> <p>Release the button at the desired selection.</p>

When the first selection or the last selection of the disc is located, the play begins from the selection.

<p>To go ahead at high speed</p>	 <p>Keep pressed.</p> <p>Release the button at the desired point.</p>
<p>To go back at high speed</p>	 <p>Keep pressed.</p> <p>Release the button at the desired point.</p>

The elapsed time of the selection is displayed during the manual search.

<p>To play the selection on the disc in random order (Shuffle play 1)</p>  <p>Press</p> <p>All selections on the disc being played will be played in random order. After playing all selections on the disc, the unit goes to the next disc.</p>
<p>To play the selection on all discs in random order (Shuffle play 2)</p>  <p>Press</p> <p>All selections on all discs in the disc magazine will be played in random order.</p>
<p>To turn on the radio automatically while changing discs (ATA function)</p>  <p>Press</p> <p>The radio is heard automatically while changing discs. Press DISPL to display the frequency indicator while the ATA is operating. In this case, all the tuner operation buttons function in the same way as when you turn on the tuner (except for FM/AM button).</p>

To resume normal playback
Press each button again.

Troubleshooting Guide

The following check will assist in the correction of most problems which you may encounter with your unit. Before going through the check list below, first refer back to the connection and operating procedures.

Radio reception	Cause/Remedy
Preset tuning is not possible.	<ul style="list-style-type: none"> • Memorize the correct frequency. • The broadcast is weak. → Use manual tuning.
Automatic tuning is not possible.	<ul style="list-style-type: none"> • The broadcast is weak. → Use manual tuning.
The ST indicator flickers.	<ul style="list-style-type: none"> • Tune in precisely. • The broadcast is weak. → Press the SENS button to enter the MONO (monaural) mode.

Tape playback

Playback sound is distorted.	<ul style="list-style-type: none"> • Contamination of the tape head → Clean the head. • There is a noise in the space between selections. • A blank space is too short (less than 4 seconds). • The ◀ or ▶ button is pressed immediately before or after the desired selection, or within the blank space. • A long pause, or a passage of low frequencies or very low sound level is treated as a blank.
The AMS does not operate correctly.	

Disc Play

Playback sound is skipped.	<ul style="list-style-type: none"> • Dusty or defective disc
General	
No sound	<ul style="list-style-type: none"> • Control the volume with the (◀) (+) button. • Set the fader control to the center position on the 2-speaker system.

About the error displays (when the optional Sony CD changer is connected)
 The following indicator flickers for about five seconds and alarm sound is heard.

Display	Cause	Remedy
E-01	The disc magazine is not inserted in the CD changer.	Insert the disc magazine with discs into the CD changer.
E-02	No disc is inserted in the disc magazine.	Take out the magazine and insert the discs.
E-04	The disc is dirty.	Clean the discs.
E-99	The disc is inserted upside down. The CD changer cannot be operated because of some trouble.	Insert the disc correctly. Press the reset button of the XR-7077.
TEMP	The temperature of the CD changer is too high and the protection circuit has been activated.	Wait till the unit cools off.