

## FM/AM Cassette Car Stereo

# XR-6080 XR-6180 XR-6380

Do not

### 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 these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

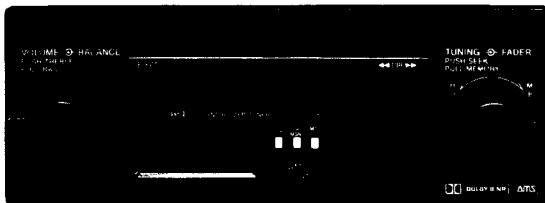


Photo: XR-6180

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

## 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. 004-000-004-5.

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This instruction manual covers the XR-6000, the XR-6180, and the XR-6380. The main differences among these models are as follows:

	XR-6000	XR-6180	XR-6380
Display window	No	Yes	Yes
Power on/off switch	No	Yes	Yes
Memory preset tuning	No	Yes	No
Auto-tuning	Yes	No	No
Auto-reverse	No	Yes	Yes
Auto-anticipate	No	No	Yes

## Tuner section

- SSR (Sony Super Interference Rejection) PLL Synthesizer tuner.
- The quartz-locked digital synthesizer system permits 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.
- Automatic Music Sensor (AMS) function locates the beginning of a selection (XR-6380/XR-6380).
- The Dolby NR system reduces tape hiss noise during playback (XR-6180/XR-6380).

## Power amplifier section

- Preampifier outputs for connecting a power amplifier for a powerful 4-speaker system (XR-6180).
- Fader control for playback with a 4-speaker system.
- Maximum power output of 7.5 watts per channel (XR-6000/XR-6180).
- 4-channel power amplifier with the maximum power output of 25 watts per channel (XR-6380).

## 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.

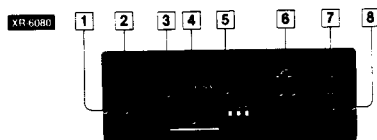
## Cassette care

- 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 heads of the player.
- Store the cassettes in their cases when not in use.

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

## Location and Function of Controls

Refer to the page in ● for details.

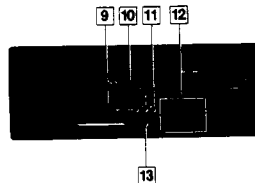


- 1 **H-FILTER (High-cut filter) control**  
Turn counterclockwise to reduce high frequency noise or high frequency distortion.
- 2 **POWER ON/OFF switch/VOLUME/PULL BAL (balance) control**

POWER ON/OFF switch	Turn clockwise to turn on the unit and then for more volume.
VOLUME control	Pull and turn to adjust volume of the left and right channel outputs.
BAL control	Pull and turn to adjust balance of the left and right channel outputs.
- 3 **EJECT button**  
Press to stop the tape and take out the cassette.
- 4 **Display window**
- 5 **Cassette insertion door**
- 6 **◀▶ (fast winding) buttons/DIR (tape transport direction) buttons**  
During playback, depress ◀ or ▶ for fast winding and press both ◀▶ and ▶◀ simultaneously to listen to the other side of the cassette.
- 7 **TUNING knob/PUSH SEEK button/PULL MEMORY knob**

TUNING knob	Turn to manually tune in the desired station.
SEEK button	Press for automatic tuning.
MEMORY knob	Pull to memorize the frequency of the station being received.

Use this knob also for clock setting. ●



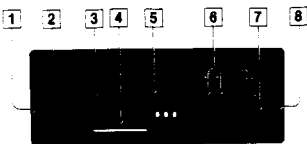
- 9 **FADER control**  
Turn clockwise to decrease the volume of the front speakers or counterclockwise to decrease the volume of the rear speakers.
- 10 **DISP. (display) button**  
Press to display the time indication during radio reception.
- 11 **MONO (monaural) button**  
Press to reduce noise during reception of a weak FM stereo program.
- 12 **MTL/LCL (metal/local) button**

Tape playback	Press when listening to CO <sub>2</sub> (TYPE B) or metal (TYPE S) tapes. When listening to normal (TYPE II) tapes, press it again.
Radio reception	Press to minimize interference from adjacent stations during reception of a comparatively strong station. To go back to the normal receiving sensitivity, press it again.
- 13 **Preset number buttons**
- 14 **FM/AM (band select) button**

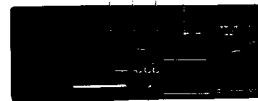
# Location and Function of Controls

Refer to the page in ● for details.

XR 6180  
XR 6380



9 10 11 12



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## 1 BALANCE control

Turn to adjust balance of the left and right channel outputs.

## 2 POWER ON/OFF switch/VOLUME/PUSH TREBLE/PULL BASS control

POWER ON/OFF switch	Turn clockwise to turn on the unit and then, for more volume.
VOLUME control	Turn clockwise to increase volume.
TREBLE control	Press and turn to adjust treble.
BASS control	Pull and turn to adjust bass.

## 3 EJECT button

Press to stop the tape and take out the cassette.

## 4 Display window

## 5 Cassette insertion door

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

## 7 TUNING knob/PUSH SEEK button/PULL MEMORY knob

TUNING knob	Turn to manually tune in the desired station.
SEEK button	Press for automatic tuning.
MEMORY knob	Pull to memorize the frequency of the station being received.

Use this knob also for clock setting. ●

## 8 FADER control

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

## 9 DSPL. (display) button

Press to display the time indication during radio reception.

## 10 NR/MONO (Dolby noise reduction/monaural) button

Tape playback	Press to activate Dolby NR system. To deactivate, press it again.
Radio reception	Press to reduce noise during reception of a weak FM stereo program. The sound will be monaural instead. To listen in stereo, press it again.

## 11 MTL/LCL (metal/local) button

Tape playback	Press when listening to CrOs (TYPE II) or metal (TYPE II) tapes. When listening to normal (TYPE I) tapes, press it again.
Radio reception	Press to eliminate interference from adjacent stations during reception of a comparatively strong station. To go back to the normal receiving sensitivity, press it again.

## 12 Preset number buttons

## 13 AMS (Automatic Music Sensor/FM/AM (band select) button

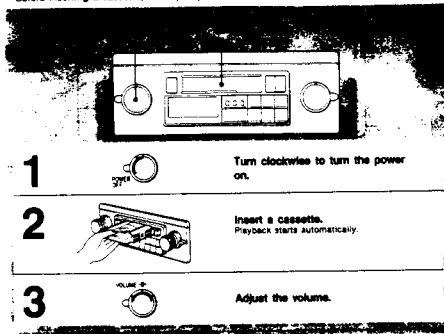
Tape playback	Press to locate the beginning of the next selection or the selection being played.
Radio reception	Press to select the desired band.

● Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
● "DOLBY" and the double-D symbol (D) are trademarks of Dolby Laboratories Licensing Corporation.

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## Tape Playback

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



## Direction indicator



The side facing up is being played back.



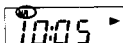
The side facing down is being played back.

To listen to CrOs (TYPE II) or metal (TYPE II) tapes, press MTL/LCL.



Press again to disengage.

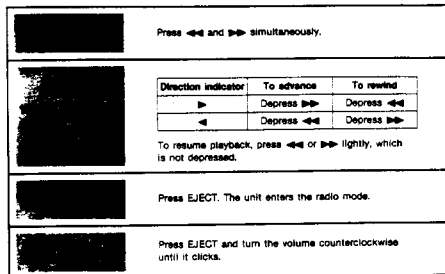
To listen to Dolby NR-processed tapes (XR 6180/XR 6380), press NR/MONO.



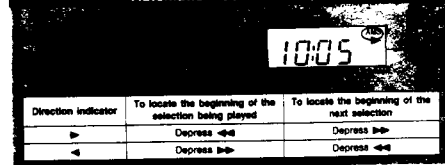
Press again to disengage.

Dolby NR system reduces tape hiss noise in low-level, high-frequency signals. The system boosts these signals in recording and lowers them in playback. Therefore, the Dolby NR system must be engaged when you listen to tapes recorded with this system.

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## To Locate the Beginning of a Selection —Automatic Music Sensor (XR 6180 XR 6380)



The desired selection cannot be located if...

- there is noise in the space between selections.
- the space is less than 4 seconds long.
- the ▶▶ or ◀◀ button is pressed immediately before the beginning of the desired selection or after the beginning of the desired selection, or within the blank space.

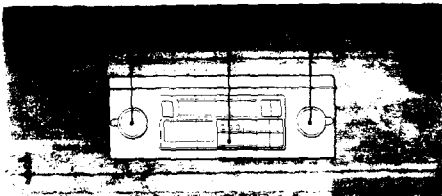
Playback or fast winding may begin in the middle of the selection when AMS is activated, as the following are treated as blanks:





- 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.

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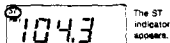
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## Automatic Tuning



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

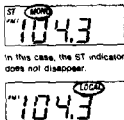
When an FM stereo program of sufficient signal strength is tuned in



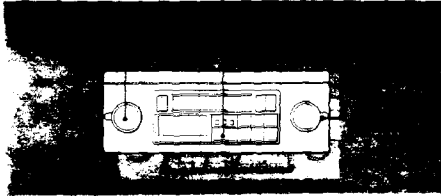
The **ST** indicator appears. To play back the during radio reception when a cassette. The radio is turned off and playback will begin automatically.





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.
- To receive very strong FM/AM station or to receive an AM station, at night, press **MTR/LCL**.



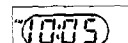
## Manual Tuning



- 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.
- 3  Turn to tune in the desired station. For lower frequency (left) For higher frequency (right)
- 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: Press **DISPL**.



To restore the frequency indication, press it again.


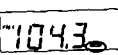

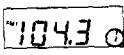
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## Memory Preset Tuning

### To Memorize Station Frequency






- 1 Tune in a desired station using automatic or manual tuning.
- 2  Pull out **PULL MEMORY**. 
- 3  Press the desired preset number button while the **MEM** indicator is displayed.   
The displayed frequency is memorized.

Repeat steps 1 to 3 to preset all the desired stations.

### To Tune in the Preset Station



- 1  Press to select the desired band.
- 2  Press the desired preset number button.
- 3  Adjust the volume.

Notes on memorizing

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





- The **MEM** indicator appears for about 5 seconds. If it disappears before you press the preset number button, pull out **PULL MEMORY** again.

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## How to Set the Clock



- 1**  Turn clockwise to turn the power on.
- 2**  Press to display the time digits.
- 3**  Turn to **H** while pulling out **TUNING**.  
Set the hour digits.
- 4**  Turn to **M** while pulling out **TUNING**.  
Set the minute digits.

The digits are advanced in sequence. To advance them rapidly, keep **TUNING** turned while pulling it out.

When you set minute digits "00" comes after "99". The hour digits do not change then.

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## Specifications

### AUDIO POWER SPECIFICATIONS

#### POWER OUTPUT AND TOTAL HARMONIC DISTORTION

##### XR-6080/XR-6180

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% total harmonic distortion.

##### XR-6380

12 watts per channel minimum continuous average power into 4 ohms, 4 channels driven, from 20 to 20,000 Hz with no more than 1% total harmonic distortion.

### Other Specifications

#### Power amplifier section

	XR-6080*	XR-6180	XR-6380
Outputs	Speaker outputs (four seal connectors)		
Speaker impedance	4-8 ohms		
Maximum power output	7.5 W x 7.5 W (at 4 ohms)*	25 W x 4 (at 4 ohms)*	

\* Measured at 14.4 V

#### Cassette player section

	XR-6080	XR-6180	XR-6380
Tape deck	4-track 2-channel stereo		
Frequency response	40-14,000 Hz		
Signal-to-noise ratio (Dist. 10% at 1%)	53 dB with TYPE I cassettes 57 dB with TYPE II, IV cassettes		
Wow and flutter	0.15% (WRMS)		

## Specifications

### Tuner section

FM	87.9-107.9 MHz
Antenna	External antenna connector/Power antenna relay control lead
Linearity	+2.5 dB (75 ohms)
Sensitivity	More than 75 dB at 400 kHz
Selectivity	32 dB (stereo), 87 dB (monaural)
Modulation	0.8% (stereo), 0.5% (monaural)
Power	32 dB at 1 kHz
Frequency range	30-15,000 Hz (+3 dB)
Distortion	2.5 dB

### AM

FM	530-1710 kHz
Antenna	External antenna connector/Power antenna relay control lead
Power	32 $\mu$ V

### General

		Bass $\pm$ 8 dB at 100 Hz Tone $\pm$ 5 dB at 10 kHz
Ground wire terminal	Preamplifier output jacks (OUTPUT)	Graphic equalizer input/output cords (LINE IN, LINE OUT)
	Ground wire terminal	
12 V DC car battery (negative ground)	178 x 50 x 145 mm (w, h, d) (7 1/8 x 2 x 5 7/8 inches)	178 x 50 x 145 mm (w, h, d) (7 1/8 x 2 x 5 7/8 inches)
1.1 kg (2 lb 7 oz)	1.3 kg (2 lb 14 oz)	1.5 kg (3 lb 5 oz)
Mounting hardware (1 set)		

Design and specifications subject to change without notice.