

## Precautions

### On safety

- As the laser beam used in the CD player section is harmful to the eyes, do not attempt to disassemble the casing. Refer servicing to qualified personnel only.
- Should any solid object or liquid fall into the player, unplug the player, and have it checked by qualified personnel before operating it any further.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played on this player. Attempting to do so may damage the player. Do not use such discs.

### 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 benzine.

### On power sources

- For AC operation, use the supplied AC power adaptor; do not use any other type.
- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- Unplug the player from the wall outlet when it is not to be used for an extended period of time.
- For battery operation, use six size D (R20) batteries.
- When the batteries are not to be used, remove them to avoid damage that can be caused by battery leakage or corrosion.
- The nameplate indicating operating voltage, etc. is located at the bottom.

### On placement

- Do not leave the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place the player on an inclined or unstable place.
- Do not place anything within 10 mm of the side of the cabinet. The ventilation holes must be unobstructed for the player to operate properly and prolong the life of its components.
- If the player is left in a car parked in the sun, be sure to choose a location in the car where the player will not be subjected 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 player to prevent possible damage from the magnet.

### Do not immerse in water

This product is not meant to be immersed in water or come in continuous contact with water.

- Before opening or shutting the CD compartment or battery compartment lid, be sure to wipe off water, dust or sand on the outside of the player.
- Water in the headphones jack/DC IN jack may cause rusting. Cover the jacks with the attached rubber cap when the jacks are not used.
- If the player is splashed with salt water, wipe clean with a damp cloth, then dry with a soft dry cloth. Do not wash under running water; do not use soap or detergent; do not dry with an electric hair dryer.
- The supplied AC power adaptor is not water resistant. To prevent shock hazard, avoid using the player near water during AC operation.

### On operation

- If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the CD player section. Should this occur, the player will not operate properly. In this case, remove the CD and wait about an hour for the moisture to evaporate.

### Notes on CDs

- Before playing, clean the CD with a cleaning cloth. Wipe the CD from the center out.



- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the CD to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight as there can be a considerable rise in temperature inside the car.
- Do not stick paper or sticker on the CD, nor scratch the surface of the CD.
- After playing, store the CD in its case.

If there is a scratch, dirt or fingerprints on the CD, it may cause tracking error.

### About CD-Rs/CD-RWs

This player can play CD-Rs/CD-RWs recorded in the CD-DA format\*, but playback capability may vary depending on the quality of the disc and the condition of the recording device.

\* CD-DA is the abbreviation for Compact Disc Digital Audio. It is a recording standard used for Audio CDs.

### Music discs encoded with copyright protection technologies

This product is designed to play back discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

## Troubleshooting

### General

#### The power does not come on.

- Make sure the batteries are inserted correctly.
- Replace all the batteries with new ones if they are weak.

#### The power is not on, and "bAttErY" and "Error" are displayed alternately.

- Make sure the batteries are inserted correctly.
- Replace all the batteries with new ones if they are weak.

#### There is no audio.

- Adjust the volume.
- Unplug the headphones when listening through speakers.

#### Noise is heard.

- Someone is using a portable telephone or other equipment that emits radio waves near the player. →Move the portable telephone, etc., away from the player.

### CD Player

#### The CD does not play or "no DISC" lights in the display even when a CD is in place.

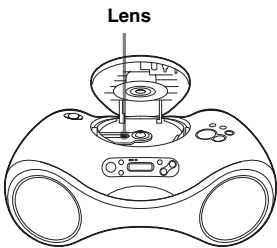
- Place the CD with the label surface up.
- Clean the CD.
- Take out the CD and leave the CD compartment open for about an hour to dry moisture condensation.
- The CD-R/CD-RW was not finalized. Finalize the CD-R/CD-RW with the recording device.
- There is a problem with the quality of the CD-R/CD-RW, recording device or application software.
- Replace all the batteries with new ones if they are weak.

#### The sound drops out.

- Reduce the volume.
- Clean the CD, or replace it if the CD is badly damaged.
- Place the player in a location free from vibration.
- Clean the lens with a commercially available blower.
- The sound may drop out or noise may be heard when using poor quality CD-Rs/CD-RWs or if there is a problem with the recording device or application software.

#### You cannot open/close the lid of the CD compartment.

- Place the player on a level surface and open/close the lid.



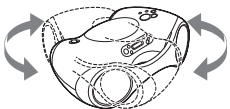
### Radio

#### Reception is poor.

- Reorient the antenna to improve FM reception.



- Reorient the player itself to improve AM reception.



#### The audio is weak or has poor quality.

- Replace all the batteries with new ones if they are weak.
- Move the player away from the TV.

#### The picture of your TV becomes unstable.

- If you are listening to an FM program near the TV with an indoor antenna, move the player away from the TV.

After trying the above remedies, if you still have problems, unplug the AC adaptor and remove all the batteries. After all the indications in the display disappear, plug the power cord and insert the batteries again. If the problem persists, please consult your nearest Sony dealer.

## Specifications

### AUDIO POWER SPECIFICATIONS POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 3.2-ohm loads, both channels driven from 150 - 10 000 Hz; rated 1.8 W per channel—minimum RMS power, with no more than 10 % total harmonic distortion in AC operation.

### Other specifications

#### CD player section

System	Compact disc digital audio system
Laser diode properties	
Material: GaAlAs	
Wave length: 780 nm	
Emission duration: Continuous	
Laser output: Less than 44.6 μW	(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Spindle speed	200 r/min (rpm) to 500 r/min (rpm) (CLV)
Number of channels	2
Frequency response	20 - 20 000 Hz +0/-1 dB
Wow and flutter	Below measurable limit

#### Radio section

Frequency range	FM: 87.5 - 108 MHz AM: 530 - 1 710 kHz
Antennas	FM: Telescopic antenna AM: Built-in ferrite bar antenna

### General

Speaker	Full range: 10 cm dia., 3.2 ohms, cone type (2)
Outputs	Headphones jack (stereo minijack) For 16 - 64 ohms impedance headphones
Power output	2.3 W + 2.3 W (at 3.2 ohms, 10% harmonic distortion)
Power requirements	DC IN 9V jack accepts: Supplied AC power adaptor for use with 120V AC, 60 Hz 9 V DC, 6 size D (R20) batteries
Battery life	For personal audio system:
<b>CD playback</b>	
Sony R20P: approx. 7.5 h	
Sony alkaline LR20: approx. 14 h	
<b>Radio play</b>	
Sony R20P: approx. 11 h	
Sony alkaline LR20: approx. 24 h	

Dimensions	Approx. 430 × 169 × 288 mm (w/h/d) (17 × 6 ¾ × 11 ¼ inches) (incl. projecting parts)
Mass	Approx. 3.5 kg (7 lb. 11 oz) (incl. batteries)
Supplied accessory	AC power adaptor(1)

Design and specifications are subject to change without notice.

### Optional accessories

Sony MDR headphone series

# SONY

# Personal Audio System

## Operating Instructions

## ZS-X1

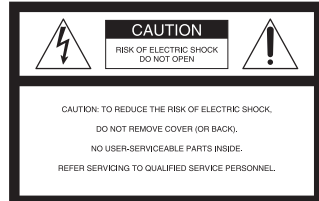
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3-251-191-11 (1)

English

## WARNING

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

### CAUTION

The use of optical instruments with this product will increase eye hazard.

### WARNING

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the appliance.

### For customers in Canada

To prevent electric shock, match wide blade of plug to wide slot, fully insert.

### Information

#### For customers in the USA

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.

This class B digital device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

### Owner's Record

The model number is located at the bottom and the serial number is located in the battery compartment.

Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. ZS-X1

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

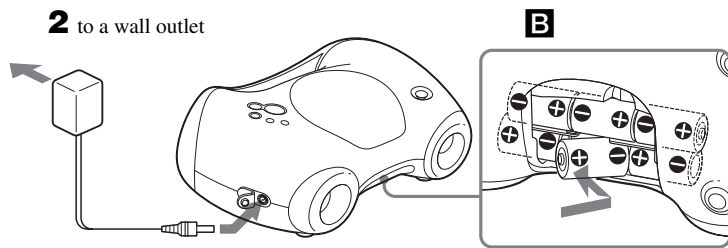
### For customers in the USA

Please register this product on line at <http://www.sony.com/productregistration>.

Proper registration will enable us to send you periodic mailings about new product, services and other important announcements. Registering your product will also allow us to contact you in the unlikely event that the product needs adjustment or modification. Thank you.

<http://www.sony.net/>

## Power Sources



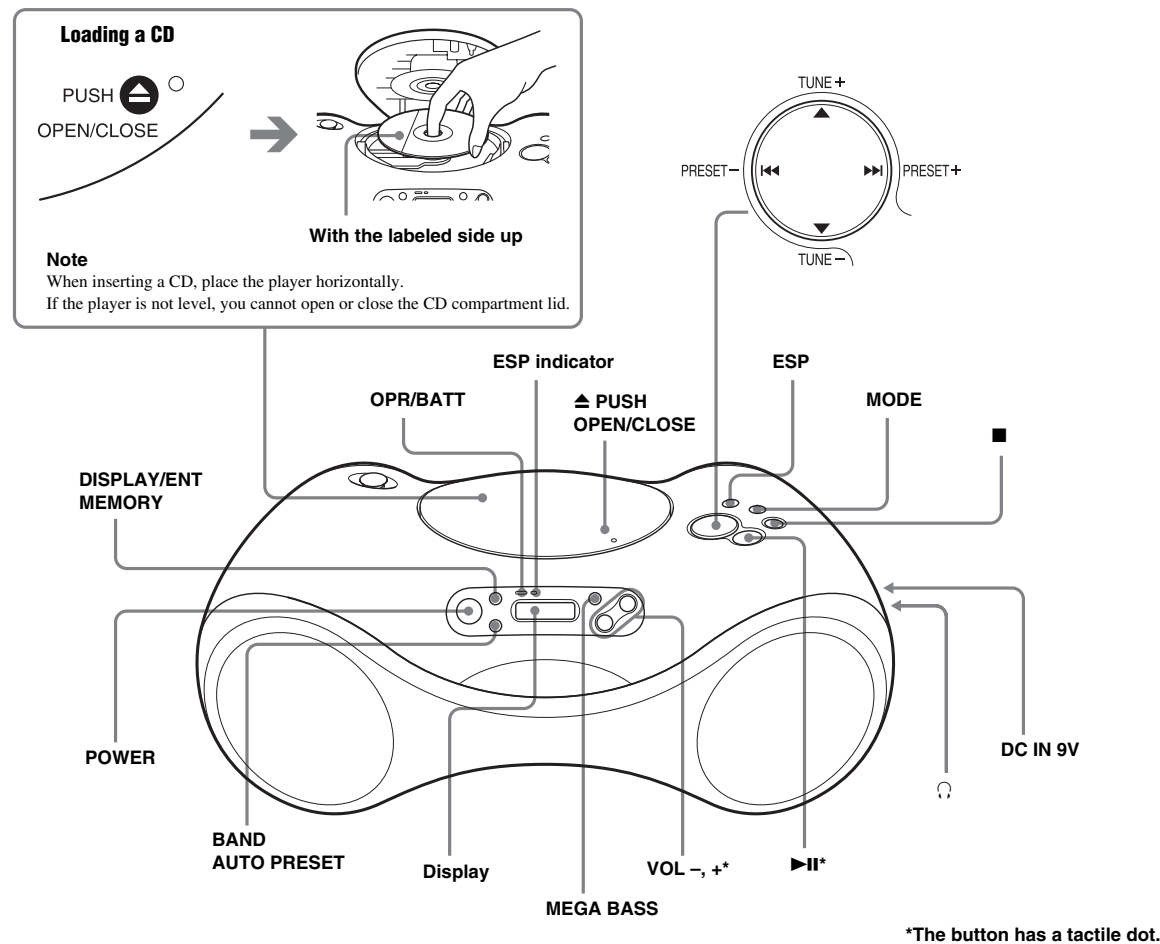
**A 1** to DC IN 9V

Connect the AC power adaptor **A** or insert six size D (R20) batteries (not supplied) into the battery compartment **B**.

### Notes

- Replace the batteries when the OPR/BATT indicator dims or when the player stops operating. Replace all the batteries with new ones.
- To use the player on batteries, disconnect the AC power adaptor from the player.

## Location of controls



**To turn on/off the power**  
Press POWER.

**To adjust the volume**  
Press VOL +, -.

**To listen through headphones**  
Connect the headphones to the (headphones) jack.

## Adjusting the sound emphasis

**To reinforce the bass sound**  
Press MEGA BASS.  
“MEGA BASS” appears in the display.  
To return to normal sound, press the button again.

## Playing a CD

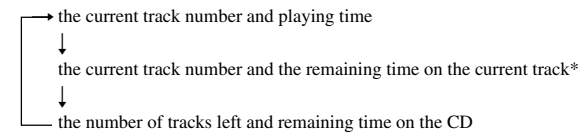
- 1 Press POWER to turn on the player.
- 2 Load a CD in the CD compartment.
- 3 Press PUSH OPEN/CLOSE to close the CD compartment.
- 4 Press **▶||**.  
The player plays all the tracks once.

To	Press
stop playback	
pause playback	<b>▶  </b> Press the button again to resume play after pause.
go to the next track	<b>▶▶</b>
go back to the previous track	<b>◀◀</b>
remove the CD	PUSH  OPEN/CLOSE
locate a point while listening to the sound	<b>▶▶▶</b> (forward) or <b>◀◀◀</b> (backward) while playing until you find the point
locate a point while observing the display	<b>▶▶▶</b> (forward) or <b>◀◀◀</b> (backward) in pause until you find the point

## Using the display

**To check the total track number and playing time**  
Press DISPLAY/ENT/MEMORY in stop mode (see fig. **C**).

**To check the remaining time**  
Press DISPLAY/ENT/MEMORY repeatedly while playing a CD. The display changes as follows:



\* For a track whose number is more than 20, the remaining time appears as “- -: - -” in the display.

## Selecting the play mode

Press MODE until “REP 1” “REP ALL” “SHUF” “SHUF REP” “PGM” “PGM REP” appears in the display. Then proceed as follows:

To	Select	Then do this
repeat a single track	“REP 1”	Press <b>▶▶</b> or <b>◀◀</b> to select the track you want to repeat then press <b>▶  </b> .
repeat all tracks	“REP ALL”	Press <b>▶  </b> .
shuffle play	“SHUF”	Press <b>▶  </b> .
repeat tracks in random order	“SHUF REP”	Press <b>▶  </b> .
program play	“PGM”	Press <b>▶▶</b> or <b>◀◀</b> then press DISPLAY/ENT/MEMORY for the tracks you want to programme in the order you want up to 20 tracks (see fig. <b>D</b> ). Then press <b>▶  </b> .
repeat programmed tracks	“PGM REP”	Press <b>▶▶</b> or <b>◀◀</b> then press DISPLAY/ENT/MEMORY for the tracks you want to programme in the order you want up to 20 tracks. Then Press <b>▶  </b> .

**To cancel selected play mode**  
Press MODE until the selected mode disappears from the display.

**To check the programmed track and playing order in the display**  
To check the order of tracks before play, press DISPLAY/ENT/MEMORY.  
Every time you press the button, the track number appears in the programmed order.

**To change the current programme**  
Press once if the CD is stopped and twice if the CD is playing. The current program will be erased. Then create a new program following the programming procedure.

## Preventing sound from skipping

The ESP (Electronic Shock Protection) function prevents the sound from skipping by using a buffer memory that stores music data for about 10 seconds.

Press ESP in stop mode.  
The ESP indicator lights up.

**To cancel the ESP function**  
Press ESP again.

### Notes

- Playing may stop when the player gets a strong shock even with the ESP function on.
- You may hear a noise or sound skip:
  - when you listen to a dirty or scratched CD.
  - when you listen to an audio test CD.
  - when the player receives continuous shock.
- Sound may drop for a while if you press ESP during play.

### Tip

To enjoy the high quality sound of an audio CD, we recommend that you cancel the ESP function.

## Listening to the radio

- 1 Press POWER to turn on the player.
- 2 Press BAND•AUTO PRESET until the band you want appears in the display. Each time you press the button, the indication changes as follows: “FM” → “AM”.
- 3 Hold down TUNE + or TUNE - until the frequency digits begin to change in the display.  
The player automatically scans the radio frequencies and stops when it finds a clear station.  
If you can't tune in a station, press TUNE + or TUNE - repeatedly to change the frequency step by step.

### Tip

If the FM broadcast is noisy, press MODE until "Mono" appears in the display and the radio will play in monaural.

## Presetting radio stations

You can store radio stations into the player's memory. You can preset up to 30 radio stations, 20 for FM and 10 for AM in any order.

- 1 Press POWER to turn on the player.
- 2 Press BAND•AUTO PRESET to select the band.
- 3 Hold down BAND•AUTO PRESET for 2 seconds until “AUTO” flashes in the display.
- 4 Press DISPLAY/ENT/MEMORY.  
The stations are stored in memory from the lower frequencies to the higher ones.

### If a station cannot be preset automatically

You need to preset a station with a weak signal manually.

- 1 Press POWER.
- 2 Press BAND•AUTO PRESET to select the band.
- 3 Tune in a station you want.
- 4 Hold down DISPLAY/ENT/MEMORY for 2 seconds until the preset number flashes in the display.
- 5 Press PRESET + or PRESET - until the preset number you want for the station on flashes in the display.
- 6 Press DISPLAY/ENT/MEMORY.  
The new station replaces the old one.

### Tip

The preset radio stations remain in memory even if you unplug the AC power adaptor or remove the batteries.

## Playing preset radio stations

- 1 Press POWER to turn on the player.
- 2 Press BAND•AUTO PRESET to select the band.
- 3 Press PRESET + or PRESET - to tune in the stored station.

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