Thank you for purchasing this SHARP product. To obtain the best performance from this product, please read this manual carefully. It will guide you in operating your SHARP product.

CD-ES222E Mini Component System consisting of CD-ES222E (main unit) and CP-ES222E (speaker system).

Accessories
Please confirm that the following accessories are included.

- Remote control × 1
- "AA" size battery (UM/SUM-3, R6, HP-7 or similar) × 2
- FM/AM loop aerial × 1
- AC power lead × 1

Note:
Only the above accessories are included.
**Important Instructions**

**Special notes**

**Warning:**
- When the ON/STAND-BY button is set at STAND-BY position, mains voltage is still present inside the unit. When the ON/STAND-BY button is set at STAND-BY position, the unit may be brought into operation by the timer mode or remote control.
- This unit contains no user serviceable parts. Never remove covers unless qualified to do so. This unit contains dangerous voltages, always remove mains plug from the socket before any service operation and when not in use for a long period.
- To prevent fire or shock hazard, do not expose this appliance to dripping or splashing. No objects filled with liquids, such as vases, should be placed on the apparatus.

**CAUTION**
- This product is classified as a CLASS 1 LASER product.
- Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

As the laser beam used in this compact disc player is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

**Laser Diode Properties**
- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output: max. 0.6 mW

**Note for users in Australia:**
Copyright may exist in material you wish to record. Copying or broadcasting such material without permission of the relevant licensees or owners of the copyright is prohibited by law. SHARP is not in a position to authorise the copying or broadcasting of copyrighted materials and nothing in this OPERATION MANUAL should be implied as giving that authority.

For other countries:
Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Please refer to the relevant laws in your country.

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Precautions

**General**
- Please ensure that the equipment is positioned in a well ventilated area and ensure that there is at least 10 cm (4") of free space along the sides, top and back of the equipment.
- Do not place anything on top of the unit.
- Do not expose the unit to moisture, to temperatures higher than 60°C (140°F) or to extremely low temperatures.
- If your system does not work properly, disconnect the AC power lead from the wall socket. Plug the AC power lead back in, and then turn on your system.
- In case of an electrical storm, unplug the unit for safety.

- Use the unit on a firm, level surface free from vibration.
- Keep the unit away from direct sunlight, strong magnetic fields, excessive dust, humidity and electronic/electrical equipment (home computers, facsimiles, etc.) which generate electrical noise.
- Do not place anything on top of the unit.
- Do not expose the unit to moisture, to temperatures higher than 60°C (140°F) or to extremely low temperatures.
- If your system does not work properly, disconnect the AC power lead from the wall socket. Plug the AC power lead back in, and then turn on your system.
- In case of an electrical storm, unplug the unit for safety.

- Hold the AC power plug by the head when removing it from the wall socket, as pulling the lead can damage internal wires.
- Do not remove the outer cover, as this may result in electric shock. Refer internal service to your local SHARP service facility.
- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths, curtains, etc.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.
- Attention should be drawn to the environmental aspects of battery disposal.
- This unit should only be used within the range of 5°C - 35°C (41°F - 95°F).

**Warning:**
The voltage used must be the same as that specified on this unit. Using this product with a higher voltage other than that which is specified is dangerous and may result in a fire or other type of accident causing damage. SHARP will not be held responsible for any damage resulting from use of this unit with a voltage other than that which is specified.

**Volume control**
The sound level at a given volume setting depends on speaker efficiency, location, and various other factors. It is advisable to avoid exposure to high volume levels. Do not turn the volume on to full at switch on and listen to music at moderate levels.
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Remote control

Battery installation

1. Remove the battery cover.
2. Insert the batteries according to the direction indicated in the battery compartment.
   When inserting or removing the batteries, push them towards the + battery terminals.
3. Replace the cover.

Precautions for battery use:

- Replace all old batteries with new ones at the same time.
- Do not mix old and new batteries.
- Remove the batteries if the unit is not to be used for long periods of time. This will prevent potential damage due to battery leakage.

Caution:

- Do not use rechargeable batteries (nickel-cadmium battery, etc.).
- Installing the batteries incorrectly may cause the unit to malfunction.

Test of the remote control

Check the remote control after checking all the connections (see pages 8 - 9). Point the remote control directly at the remote sensor on the unit.

The remote control can be used within the range shown below:

Press the ON/STAND-BY button. Does the power turn on? Now, you can enjoy music.

Notes concerning use:

- Replace the batteries if the operating distance is reduced or if the operation becomes erratic. Purchase 2 "AA" size batteries (UM/SUM-3, R6, HP-7 or similar).
- Periodically clean the transmitter on the remote control and the sensor on the unit with a soft cloth.
- Exposing the sensor on the unit to strong light may interfere with operation. Change the lighting or the direction of the unit.
- Keep the remote control away from moisture, heat, shock, and vibrations.

Remote sensor

0.2 m - 6 m (8" - 20"")
System connections

Make sure to unplug the AC power lead before any connections.

- **FM/AM loop aerial connection**
  Connect the FM/AM loop aerial to the ANTENNA socket.

  Position the FM aerial wire and rotate the AM loop aerial for optimum reception. Place the AM loop aerial on a shelf, or attach it to a stand or a wall.

  **Notes:**
  - Placing the aerial on the stereo system or near the AC power lead may cause noise pickup. Place the aerial away from the stereo system for better reception.
  - Do not connect the attached FM aerial to an external FM aerial. Otherwise, trouble may occur.

  **Installing the AM loop aerial:**
  - **Assembling**
  - **Attaching to the wall**

  ![Diagram of system connections]

  **Wall socket**
  (AC 230 - 240 V, 50 Hz)

  - **Right speaker**
  - **Left speaker**

  **AM loop aerial**
  **FM aerial**

  **Red**
  **Black**

  **Wall Screws (not supplied)**
Speaker connection
Connect the black wire to the minus (-) terminal, and the red wire to the plus (+) terminal.

Caution:
- Use speakers with an impedance of 8 ohms or more, as lower impedance speakers can damage the unit.
- Do not mistake the right and the left channels. The right speaker is the one on the right side when you face the unit.
- Do not let the bare speaker wires touch each other.
- Do not allow any objects to fall into or to be placed in the bass reflex ducts.
- Do not stand or sit on the speakers. You may be injured.

Note:
The speaker grilles are not removable.

Connecting the AC power lead
After checking all the connections have been made correctly, connect the AC power lead to the AC power input socket, then plug the AC power lead of this unit into the wall socket. If you plug in the unit first, the unit will enter the demonstration mode.

Notes:
- Unplug the AC power lead from the wall socket if the unit will not be in use for a prolonged period of time.
- Never use a power lead other than the one supplied. Otherwise, a malfunction or an accident may occur.

Demonstration mode
The first time the unit is plugged in, the unit will enter the demonstration mode. You will see words scroll.

To cancel the demonstration mode: When the unit is in the power stand-by mode (demonstration mode), press the X-BASS/DEMO button. The demonstration mode will be cancelled and the display will disappear.

To return to the demonstration mode: When the unit is in the power stand-by mode, press the X-BASS/DEMO button again.

Note: When the power is on, the X-BASS/DEMO button can be used to select the extra bass mode.

To turn the power on
Press the ON/ST AND-BY button to turn the power on.

Incorrect

After use:
Press the ON/STAND-BY button to enter the power stand-by mode.
Sound control

**Volume control**
Press the VOLUME (+ or -) button to increase or decrease the volume.

---

**Bass control**
When the power is first turned on, the unit will enter the extra bass mode which emphasises the bass frequencies, and "X-BASS" will appear. To cancel the extra bass mode, press the X-BASS/DEMO (X-BASS) button.

**Equaliser**
When the EQUALIZER (EQUALIZER MODE) button is pressed, the current mode setting will be displayed. To change to a different mode, press the EQUALIZER (EQUALIZER MODE) button repeatedly until the desired sound mode appears.

- **FLAT** The sound is not modified.
- **ROCK** Bass and treble are emphasised.
- **CLASSIC** Treble is cut a little.
- **POPS** Bass and treble are slightly emphasised.
- **VOCAL** Vocals (midrange tones) are emphasised.
- **JAZZ** Treble is slightly emphasised.
### Setting the clock

1. Press the CLOCK button and within 8 seconds, press the MEMORY/SET button.

   ![CLOCK button pressing sequence]

   - **CLOCK**
   - **MEMORY/SET**

2. Within 30 seconds, press the TUNING/TIME (↑ or ↓) button to select 24-hour or 12-hour display and then press the MEMORY/SET button.

   - **0:00** → The 24-hour display will appear.
     (0:00 - 23:59)
   - **AM 12:00** → The 12-hour display will appear.
     (AM 12:00 - PM 11:59)

   Note that this can only be set when the unit is first installed or it has been reset. [Refer to "Clearing all the memory (reset)" on page 26 for details.]

3. Within 30 seconds, press the TUNING/TIME (↑ or ↓) button to adjust the hour and then press the MEMORY/SET button.

   ![Time adjustment process]

   - Press the TUNING/TIME (↑ or ↓) button once to advance the time by 1 hour. Hold it down to advance continuously.
   - When the 12-hour display is selected, "AM" will change automatically to "PM".

4. Within 30 seconds, press the TUNING/TIME (↑ or ↓) button to adjust the minutes and then press the MEMORY/SET button.

   ![Time adjustment process]

   - Press the TUNING/TIME (↑ or ↓) button once to advance the time by 1 minute. Hold it down to advance continuously.
   - The hour will not advance even if minutes advance from "59" to "00".

   To confirm the time display:

   - Press the CLOCK button.
   - The time display will appear for about 8 seconds.

   **Note:**

   - The "CLOCK" or time will flash at the push of the CLOCK button when the AC power supply is restored after a power failure or unplugging the unit.
   - Readjust the clock as follows.

   **To readjust the clock:**

   - Perform "Setting the clock" from step 1. If the "CLOCK" is not flashing in step 1, step 2 (for selecting the 24-hour or 12-hour display) will be skipped.

   **To change the 24-hour or 12-hour display:**

   1. Clear all the programmed contents. [Refer to "Clearing all the memory (reset)" on page 26 for details.]
   2. Perform "Setting the clock" from step 1.
Listening to a CD (CDs)

This system can also play audio CD-R and CD-RW discs, but cannot record. Some audio CD-R and CD-RW discs may not be playable due to the state of disc or the device that was used for recording.

1. Press the ON/STAND-BY button to turn the power on.
2. Press the CD button.
3. Press the OPEN/CLOSE button to open the disc tray.

4. Place the CD(s) on the disc tray, label side up. When loading a third disc, press the DISC SKIP button to turn the disc tray, then place the CD in the open position.
   - CDs can be placed on any open position on the disc tray.
   - Be sure to place 8 cm (3") CDs in the middle of the disc positions.

5. Press the OPEN/CLOSE button to close the disc tray.

6. To select the CD you want to listen to first, press one of the 1 - 3 buttons on the remote control.

7. Press the ▶ or ▶ button to start playback.
   - Playback will begin from track 1 on the disc you have selected to play. After that disc finishes playing, the next disc will automatically start playback.
   - When the last track on the third disc has finished playing, the CD player will automatically stop.
   - When there is no CD in one of the disc 1 - 3 positions, that position will be skipped and the next CD will begin to play.

CDs can be placed on any open position on the disc tray.
Be sure to place 8 cm (3") CDs in the middle of the disc positions.

Total number of tracks on the CD whose number is flashing
Total playing time of the CD whose number is flashing

To select the CD you want to listen to first, press one of the 1 - 3 buttons on the remote control.
To interrupt playback:
Press the \( \text{I} \) button on the remote control.
To resume playback from the same point, press the \( \text{I} \) button.

To stop playback:
Press the \( \text{I} \) button.

To remove the CDs:
Whilst in the stop mode, press the OPEN/CLOSE \( \text{O} \) button.
The disc tray will open. Remove the two discs. Then, press the DISC SKIP button to rotate the disc tray and remove the remaining disc.

Caution:
- Do not place two CDs in one disc tray.
- Do not play discs with special shapes (heart- or octagon-shaped). It may cause malfunctions.
- Do not push the disc tray whilst it is moving.
- Do not turn the disc tray by hand. This may cause malfunctions.
- If the power fails whilst the tray is open, wait until the power is restored.
- If the disc tray is stopped with force, the unit will not function. If this occurs, press the ON/STAND-BY button to enter the power stand-by mode and then turn the power on again.
- If TV or radio interference occurs during CD operation, move the unit away from the TV or radio.
- If a disc is damaged, dirty, or loaded upside down, the disc will skip or not play back.

### To locate the beginning of a track

To move to the beginning of the next track:
Press the \( \text{I} \) \( \text{I} \) button for less than 0.5 seconds during playback.

To restart the track being played:
Press the \( \text{I} \) \( \text{I} \) button for less than 0.5 seconds during playback.

Notes:
- You can locate the beginning of a track on one disc only.
- You can skip to any track by pressing the \( \text{I} \) \( \text{I} \) or \( \text{I} \) \( \text{I} \) \( \text{I} \) \( \text{I} \) button repeatedly until the desired track number appears.

### To locate the desired portion

For audible fast forward:
Press and hold down the \( \text{I} \) \( \text{I} \) button during playback.

For audible fast reverse:
Press and hold down the \( \text{I} \) \( \text{I} \) button during playback.

Notes:
- Normal playback will resume when the \( \text{I} \) \( \text{I} \) \( \text{I} \) \( \text{I} \) \( \text{I} \) \( \text{I} \) button is released.
- You can locate the desired portion on one disc only.
- When the end of the last track is reached during fast forward, “END” will appear on the display and CD operation will be paused. When the beginning of the first track is reached during fast reverse, the unit will enter the playback mode.
Advanced CD playback

Starting playback with a desired track
You can play a disc starting with the desired track.

1. Whilst in the stop mode, press one of the 1 - 3 buttons on the remote control or DISC SKIP button to select the desired disc.
2. Press the ◂ ◂ or ▶ ▶ button to select the desired track.

Selected disc number

Selected track number

3. Press the ▶ / ▶ button to start playback.
Playback of the selected track is started. When the end of the last track is reached, the next disc will automatically be started.

Notes:
- When the DISC SKIP button is pressed during playback, the next disc will begin automatically.
- When one of the 1 - 3 buttons on the remote control is pressed during playback, the selected disc will begin automatically.

Random play
The tracks on the disc(s) can be played in random order automatically.

Press the RANDOM button on the remote control to begin random play.

To cancel random play:
Press the ■ button.

Notes:
- The random play will stop automatically when all tracks are played once. (The same track will not be played back twice.)
- If you press the ▶ ▶ button during random play, you can move to the track selected next by the random operation. On the other hand, the ▶ ◂ button does not allow you to move to the previous track. The beginning of the track being played will be located.
- In random play, the CD player will select and play tracks automatically. (You cannot select the order of the tracks.)

Repeat play
All tracks on up to 3 discs, or a programmed sequence can be continuously repeated.

To repeat all tracks on up to 3 discs:
Press the ▶ / ▶ button twice.

To repeat a desired track:
Perform steps 1 - 4 in the “Programmed play” section on page 15 and then press the ▶ / ▶ button twice.

To repeat random play:
Press the ▶ / ▶ button during random play.

To cancel repeat play:
Press the ▶ / ▶ button again. “-1” will go out.

Caution:
After performing repeat play, be sure to press the ■ button. Otherwise, the disc(a) will play continuously.
Programmed play
You can choose up to 32 selections for playback in the order you like.

1. Whilst in the stop mode, press one of the ◇ 1 - ◇ 3 buttons on the remote control to select the desired disc.

2. Press the ▼ or ▲ button to select the desired track.

3. Press the MEMORY/SET (MEMORY) button to save the track number.

4. Repeat steps 1 - 3 for other tracks. Up to 32 tracks can be programmed.

5. Press the ▶/ﬁ button to start playback.

To clear the programmed selections:
Whilst the “MEMORY” indicator is lit, set the CD to the stop mode and then press the CLEAR button. Each time the button is pressed, one track will be cleared, beginning with the last track programmed. When all the tracks are cleared, “MEMORY” will disappear.

Adding tracks to the programme:
If a programme has been previously stored, the “MEMORY” indicator will be displayed. Then follow steps 1 - 3 to add tracks. The new tracks will be stored after the last track of the original programme.

Notes:
- Opening the disc tray automatically cancels the programmed sequence.
- Even if you press the ON/STAND-BY button to enter the stand-by mode or change the function from CD to another, the programmed selections will not be cleared.
- During programme operation, random play is not possible.

Care of compact discs
Compact discs are fairly resistant to damage, however mistracking can occur due to an accumulation of dirt on the disc surface. Follow the guidelines below for maximum enjoyment from your CD collection and player.

- Do not write on either side of the disc, particularly the non-label side from which signals are read. Do not mark this surface.
- Keep your discs away from direct sunlight, heat, and excessive moisture.
- Always hold the CDs by the edges. Fingerprints, dirt, or water on the CDs can cause noise or mistracking. If a CD is dirty or does not play properly, clean it with a soft, dry cloth, wiping straight out from the centre, along the radius.
Listening to the radio

Tuning

1. Press the ON/STAND-BY button to turn the power on.

2. Press the TUNER (BAND) button repeatedly to select the desired frequency band (FM or AM).

3. Press the TUNING/TIME ( 或 ) button to tune in to the desired station.
   - Manual tuning: Press the TUNING/TIME button as many times as required to tune in to the desired station.
   - Auto tuning: When the TUNING/TIME button is pressed for more than 0.5 seconds, scanning will start automatically and the tuner will stop at the first receivable broadcast station.

   Notes:
   - This can be operated by pressing the TUN. ( 或 ) button on the remote control.
   - When radio interference occurs, auto scan tuning may stop automatically at that point.
   - Auto scan tuning will skip weak signal stations.
   - To stop the auto tuning, press the TUNING/TIME button again.

To receive an FM stereo transmission:
Press the TUNER (BAND) button to display the “ST” indicator.
- “ST” will appear when an FM broadcast is in stereo.

FM stereo mode indicator

- If the FM reception is weak, press the TUNER (BAND) button to extinguish the ‘ST’ indicator. The reception changes to monaural, and the sound becomes clearer.

Note:
- This product can receive FM stereo/FM monaural and AM monaural broadcasts. AM stereo broadcasts will not be played in stereo.
Memorising a station
You can store 40 AM and FM stations in memory and recall them at
the push of a button. (Preset tuning)

1. Perform steps 1 - 3 in “Tuning” on page 16.
2. Press the MEMORY/SET button to enter the preset tuning
   saving mode.
3. Within 30 seconds, press the PRESET (✓ or ◀) button to
   select the preset channel number.
   Store the stations in memory, in order, starting with preset
   channel 1.
4. Within 30 seconds, press the MEMORY/SET button to store
   that station in memory.
   If the "MEMORY" and preset number indicators go out before
   the station is memorised, repeat the operation from step 2.
5. Repeat steps 1 - 4 to set other stations, or to change a pre-
   set station.
   When a new station is stored in memory, the station previously
   memorised will be erased.

Note:
The backup function protects the memorised stations for a few hour
should there be a power failure or if the AC lead is disconnected.

To recall a memorised station
Press the PRESET (✓ or ◀) button for less than 0.5 seconds to se-
lect the desired station.

To scan the preset stations
The stations saved in memory can be scanned automatically. (Preset
memory scan)
1. Press and hold down the PRESET (✓ or ◀) button.
   The preset number will flash and the programmed stations will
   be tuned in sequentially, for 5 seconds each.
2. When the desired station is located, release the PRESET (✓ or
   ◀) button.

To erase entire preset memory
1. Press the ON/STAND-BY button to enter the stand-by mode.
2. Whilst pressing down the TUNER (BAND) button and the DISC
   SKIP button, press the ON/STAND-BY button until "TUNER CL"
   appears.
Listening to a cassette tape (TAPE 1 or TAPE 2)

Before playback:
- For playback, use normal or low-noise tapes for the best sound. (Metal or CrO₂ tapes are not recommended.)
- Do not use C-120 tapes or poor-quality tapes, as they may cause malfunctions.
- Before loading a tape into the cassette compartment, tighten the slack with a pen or a pencil.

To stop playback:
Press the \[ \text{STOP} \] button.

Fast forward/rewind: (TAPE 2 only)

Caution:
- To remove the cassette, press the \[ \text{STOP} \] button, and then open the compartment.
- Before changing from one tape operation to another, press the \[ \text{STOP} \] button.
- If a power failure occurs during tape operation, the tape head will remain engaged with the tape and the cassette door will not open. In this case, wait until the power is restored.
- Even if the \[ \text{STOP} \] button on the remote control is pressed during tape playback, the unit will not enter the pause mode.

1. Press the \[ \text{ON/STAND-BY} \] button to turn the power on.
2. Open the cassette door by pushing the area marked "PUSH EJECT".
3. Load a cassette into the TAPE 1 compartment or TAPE 2 compartment with the side to be played facing toward you.
4. Press the TAPE (1 ~ 2) button to select the cassette you want to listen to.
5. Press the \[ \text{PLAY/Pause} \] button to start playback.

To stop playback:
Press the \[ \text{STOP} \] button.

Fast forward/rewind: (TAPE 2 only)
1. Press the \[ \text{STOP} \] button, then press the TAPE (1 ~ 2) button to select TAPE 2.
2. To advance the tape, press the \[ \text{FF/RW} \] button. To rewind it, press the \[ \text{REW/FF} \] button.

Caution:
- To remove the cassette, press the \[ \text{STOP} \] button, and then open the compartment.
Recording to a cassette tape

Before recording:
- When recording important selections, make a preliminary test to ensure that the desired material is properly recorded.
- SHARP is not liable for damage or loss of your recording arising from malfunction of this unit.
- The volume and sound controls can be adjusted with no effect on the recorded signal (Variable Sound Monitor).
- For recording, use only normal tapes. Do not use metal or CrO₂ tapes.
- Recording can be operated in the TAPE 2 compartment only. The TAPE 1 compartment is for playback only.

Erase-prevention tab of cassette tapes:
- When recording on a cassette tape, make sure that the erase-prevention tabs are not removed. Cassettes have removable tabs that prevent accidental recording or erasing.
- To protect the recorded sound, remove the tab after recording. Cover the tab hole with adhesive tape to record on the tape without the tab.

Recording from a CD (CDs)
You can record 3 CDs continuously.

1. Press the ON/STAND-BY button to turn the power on.
2. Load a cassette into the TAPE 2 cassette compartment with the side to be recorded on facing you. Wind past the leader of the tape, on which recording cannot be performed.
3. Press the CD button and load the desired disc.
4. Press one of the 1 - 3 buttons on the remote control to select the disc to be recorded first.
5. Press the REC PAUSE (TAPE-2) button. Recording will be paused.
6. Press the ▶/ button to start recording.
   - CD playback will start approximately 5 seconds after the tape starts.
   - Recording is started from the selected CD. When the playback of the last disc is finished or the end of the tape is reached, the CD and the cassette will stop automatically.
Recording to a cassette tape (continued)

To perform programmed recording:
1. Programme discs and tracks. (See page 15.)
2. Press the REC PAUSE (TAPE-2) button.
3. Press the REC PAUSE (TAPE-2) button.

To interrupt recording:
Press the REC PAUSE (TAPE-2) button.
Recording is paused, but CD playback will continue.
To resume recording, press the REC PAUSE (TAPE-2) button.

To stop recording:
Press the REC button.
The CD and tape will stop.

Note:
Whilst recording, OPEN/CLOSE button is deactivated. It is recommended to perform CD recording after closing the disc tray.

Dubbing from tape to tape
You can record from TAPE 1 to TAPE 2.
1. Press the ON/STAND-BY button to turn the power on.
2. Load a prerecorded cassette into the TAPE 1 cassette compartment. Insert a blank tape into the TAPE 2 cassette compartment.

It is recommended that the recording tape is the same length as the master tape.
3. Press the TAPE (1 -- 2) button until "TAPE 1" appears on the display.
4. Press the REC PAUSE (TAPE-2) button.
Recording will be paused.
5. Press the REC button to start dubbing.

To stop dubbing:
Press the REC button.
TAPE 1 and TAPE 2 will simultaneously stop.

Erasing recorded tapes
1. Load the tape to be erased into the TAPE 2 cassette compartment with the side to be erased facing toward you.
2. Press the TAPE (1 -- 2) button until "TAPE 2" appears on the display.
3. Press the REC PAUSE (TAPE-2) button.
4. Press the REC (TAPE-2) button to start erasing.

Note:
Make sure that the TAPE 1 is not in use.

Recording from the radio
1. Tune in to the desired station. (See page 16.)
2. Load a cassette into the TAPE 2 cassette compartment with the side to be recorded on facing you.
Wind past the leader of the tape, on which recording cannot be performed.
3. Press the REC PAUSE (TAPE-2) button.
Recording will be paused.
4. Press the REC button to start recording.

To interrupt recording:
Press the REC PAUSE (TAPE-2) button.

To stop recording:
Press the REC button.

Note:
If you hear a whistling noise whilst recording an AM station, move the AM loop aerial.

Dubbing from tape to tape
You can record from TAPE 1 to TAPE 2.
Timer and sleep operation

Timer playback:
The unit turns on and plays the desired source (CD, tuner, tape) at the preset time.

Timer recording:
The unit turns on and starts recording from the tuner at the preset time.

Sleep operation:
The radio, compact disc and cassette tape can all be turned off automatically.

Timer playback or timer recording

Before setting timer:

1. Press the CLOCK button to check that the clock is set to the correct time. (Refer to page 11.)
2. For timer playback: Load a cassette or discs to be played.
   For timer recording: Load a cassette for recording in the TAPE 2 cassette compartment.

1. Press the ON/STAND-BY button to turn the power on.
2. Press the CD, TUNER (BAND) or TAPE (1 → 2) button to select the desired function.
   To select the timer playback source: CD, TUNER (BAND) or TAPE.
   To select the timer recording source: TUNER (BAND).
   When you select the TUNER (BAND), tune into the desired station.
3. Adjust the volume using the VOLUME buttons.
   Do not turn the volume up too high.
4. Press the TIMER/SLEEP button repeatedly to select timer playback or timer recording and within 8 seconds, press the MEMORY/SET button.
   Display the white “○” for timer playback and the red “○” for timer recording.

White Red

Continued to the next page
Timer and sleep operation (continued)

5. Within 30 seconds, press the TUNING/TIME (  or ) button to specify the hour to start, then press the MEMORY/SET button.

The illustrations show the timer playback setting.

6. Within 30 seconds, press the TUNING/TIME (  or ) button to specify the minute to start, then press the MEMORY/SET button.

- Settings are displayed in order and the unit will enter the timer stand-by mode.
- Timer set indicator will light up.

To cancel the timer playback/timer recording:
Press the ON/STAND-BY button to turn the power on.

7. When the preset time is reached, playback or recording will start.
The volume will increase gradually until it reaches the volume you were listening to before your system entered the timer stand-by mode.

8. The unit will enter the stand-by mode one hour after the timer playback or recording starts.

To reset or change the timer setting:
Perform "Timer playback or timer recording" from the beginning.

Note:
When performing timer playback or recording using another unit connected to the VIDEO/AUX IN sockets, select "VIDEO/AUX" in step 2 (page 21). At this time, only this unit will be turned on or enter the power stand-by mode automatically. It will enter the power stand-by mode 1 hour after the playback or recording starts. However, the other unit will not be turned on or off.
## Sleep operation

1. Play back the desired sound source.
2. Press the TIMER/SLEEP button repeatedly until "SLEEP" is displayed and then within 8 seconds, press the MEMORY/SET button.

```
SLEEP300S ⇒ SLEEP050S
```

To change the sleep time:
Whilst the sleep time is displayed, press the TUNING/TIME ( or ) button.
(Maximum: 3 hours - Minimum: 5 minutes)

```
3:00 → 2:00 → 1:30 → 1:00 → 30S → 5S → (cancel)
```

3. Within 30 seconds, press the MEMORY/SET button.

4. Your system will enter the power stand-by mode automatically after the preset time has elapsed.
The volume will turn down 30 seconds before the sleep operation finishes.

### To cancel the sleep operation:
Press the ON/STAND-BY button whilst the sleep timer is set.

### To confirm the remaining sleep time:
Press the TIMER/SLEEP button whilst the sleep timer is set.
The remaining sleep time is displayed for about 8 seconds.

## To use timer and sleep operation together
Example: To fall asleep and wake up to the same radio station
You can play back the same source only (the function cannot be switched).

1. Set the sleep time (see left, steps 1 - 3).
2. Whilst the sleep timer is set, set the desired playback time (steps 4 - 6, pages 21 - 22).

<table>
<thead>
<tr>
<th>Sleep timer setting</th>
<th>Timer playback setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 minutes - 3 hours</td>
<td>Timer playback start time</td>
</tr>
</tbody>
</table>

### Caution:
When using the cassette deck, be sure the tape length is long enough to perform both functions. If you want to sleep and wake up listening to a tape, and the length of the tape is shorter than the sleep timer setting, timer playback will not be possible.
Enhancing your system

The connection lead is not included. Purchase a commercially available lead as shown below.

- Listening to the playback sounds from VCR, DVD, etc.
  1. Use a connection lead to connect the VCR, DVD, etc. to the VIDEO/AUX IN sockets.
  When using video equipment, connect the audio output to this unit and the video output to a television.
  2. Press the ON/STAND-BY button to turn the power on.
  3. Press the VIDEO/AUX button.
  4. Play the connected equipment.

Note:
To prevent noise interference, place the unit away from the television.

- To record on a tape
  1. Insert a cassette in the TAPE 2 cassette compartment.
  2. Press the VIDEO/AUX button.
  3. Press the REC PAUSE (TAPE-2 ●II) button.
  4. Press the ◄ / ◄ button.
  5. Play the VCR, DVD, etc.

- Headphones
  - Before plugging in or unplugging the headphones, reduce the volume.
  - Be sure your headphones have a 3.5 mm (1/8") diameter plug and are between 16 ohms and 50 ohms impedance. The recommended impedance is 32 ohms.
  - Plugging in the headphones disconnects the speakers automatically. Adjust the volume using the VOLUME buttons.
Troubleshooting chart

Many potential problems can be resolved by the owner without calling a service technician. If something is wrong with this product, check the following before calling your authorised SHARP dealer or service centre.

### General

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>The clock is not set to the correct time.</td>
<td>Did a power failure occur? Reset the clock. (Refer to page 11.)</td>
</tr>
<tr>
<td>When a button is pressed, the unit does not respond.</td>
<td>Set the unit to the power standby mode and then turn it back on.</td>
</tr>
<tr>
<td></td>
<td>If the unit still malfunctions, reset it. (Refer to page 26.)</td>
</tr>
<tr>
<td>No sound is heard.</td>
<td>Is the volume level set to “0”?</td>
</tr>
<tr>
<td></td>
<td>Are the headphones connected?</td>
</tr>
<tr>
<td></td>
<td>Are the speaker wires disconnected?</td>
</tr>
</tbody>
</table>

### CD player

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playback does not start.</td>
<td>Is the disc loaded upside down?</td>
</tr>
<tr>
<td>Playback stops in the middle or is not performed properly.</td>
<td>Does the disc satisfy the standards?</td>
</tr>
<tr>
<td></td>
<td>Is the disc distorted or scratched?</td>
</tr>
<tr>
<td>Playback sounds are skipped, or stopped in the middle of a track.</td>
<td>Is the unit located near excessive vibrations?</td>
</tr>
<tr>
<td></td>
<td>Is the disc very dirty?</td>
</tr>
<tr>
<td></td>
<td>Has condensation formed inside the unit?</td>
</tr>
</tbody>
</table>

### Tuner

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>The radio makes unusual noises continuously.</td>
<td>Is the unit placed near the TV or computer?</td>
</tr>
<tr>
<td></td>
<td>Is the FM/AM loop aerial placed properly? Move the aerial away from the AC power lead if it's located nearby.</td>
</tr>
</tbody>
</table>

### Cassette deck

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot record.</td>
<td>Is the erase-prevention tab removed?</td>
</tr>
<tr>
<td>Cannot record tracks with proper sound quality.</td>
<td>Is it a normal tape? (You cannot record on a metal or CrO, tape.)</td>
</tr>
<tr>
<td>Cannot erase completely.</td>
<td></td>
</tr>
<tr>
<td>Sound skipping.</td>
<td>Is there slack in the tape?</td>
</tr>
<tr>
<td>Cannot hear treble.</td>
<td>Is the tape stretched?</td>
</tr>
<tr>
<td>Sound fluctuation.</td>
<td>Are the capstans, pinch rollers, or heads dirty?</td>
</tr>
<tr>
<td>Cannot remove the tape.</td>
<td>If a power failure occurs during playback, the heads remain engaged with the tape. Do not open the compartment with great force.</td>
</tr>
</tbody>
</table>
Troubleshooting chart (continued)

Remote control

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>The remote control does not operate.</td>
<td>Is the AC power lead of the unit plugged in?</td>
</tr>
<tr>
<td></td>
<td>Is the battery polarity correct?</td>
</tr>
<tr>
<td></td>
<td>Are the batteries dead?</td>
</tr>
<tr>
<td></td>
<td>Is the distance or angle incorrect?</td>
</tr>
<tr>
<td></td>
<td>Does the remote control sensor receive strong light?</td>
</tr>
</tbody>
</table>

If trouble occurs

When this product is subjected to strong external interference (mechanical shock, excessive static electricity, abnormal supply voltage due to lightning, etc.) or if it is operated incorrectly, it may malfunction.

If such a problem occurs, do the following:
1. Set the unit to the stand-by mode and turn the power on again.
2. If the unit is not restored in the previous operation, unplug and plug in the unit, and then turn the power on.

Note:
If neither operation above restores the unit, clear all the memory by resetting it.

Clearing all the memory (reset)

1. Press the ON/STAND-BY button to enter the power stand-by mode.
2. Whilst pressing down the CLOCK button and the DISC SKIP button, press the ON/STAND-BY button until "CLEAR" appears.

Caution:
This operation will erase all data stored in memory including clock, timer settings, tuner preset, and CD programme.

Condensation

Sudden temperature changes, storage or operation in an extremely humid environment may cause condensation inside the cabinet (CD pickup, tape heads, etc.) or on the transmitter on the remote control. Condensation can cause the unit to malfunction. If this happens, leave the power on with no disc (or cassette) in the unit until normal playback is possible (about 1 hour). Wipe off any condensation on the transmitter with a soft cloth before operating the unit.

Before transporting the unit

1. Press the ON/STAND-BY button to turn the power on.
2. Press the CD button.
3. Press the OPEN/CLOSE button to open the disc tray. Remove all CDs inserted in the unit.
4. Press the OPEN/CLOSE button to close the disc tray. Make sure that "NO DISC" is displayed.
5. Press the ON/STAND-BY button to enter the stand-by mode, and then unplug the AC power lead from the wall socket.
**Maintenance**

- **Cleaning the tape-handling parts**
  - Dirty heads, capstans or pinch rollers can cause poor sound and tape jams. Clean these parts with a cotton swab moistened with commercial head/pinch roller cleaner or isopropyl alcohol.
  - When cleaning the heads, pinch rollers, etc., unplug the unit which contains high voltages.

- **Cleaning the cabinet**
  - After long use, the deck’s heads and capstans may become magnetised, causing poor sound. Demagnetise these parts once every 30 hours of playing/recording time by using a commercial tape head demagnetiser. Read the demagnetiser’s instructions carefully before use.

- **Cleaning the cabinet**
  - Periodically wipe the cabinet with a soft cloth and a diluted soap solution, then with a dry cloth.

  **Caution:**
  - Do not use chemicals for cleaning (petrol, paint thinner, etc.). It may damage the cabinet finish.
  - Do not apply oil to the inside of the unit. It may cause malfunctions.

---

**Specifications**

As part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

### General

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power source</td>
<td>AC 230 - 240 V, 50 Hz</td>
</tr>
<tr>
<td>Power consumption</td>
<td>50 W</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Width: 270 mm (10-5/8&quot;)</td>
</tr>
<tr>
<td></td>
<td>Height: 305 mm (12&quot;)</td>
</tr>
<tr>
<td></td>
<td>Depth: 342 mm (13-1/2&quot;)</td>
</tr>
<tr>
<td>Weight</td>
<td>5.8 kg (12.8 lbs.)</td>
</tr>
</tbody>
</table>

### Amplifier

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output power</td>
<td>RMS: 40 W (20 W + 20 W) (10 % T.H.D.)</td>
</tr>
<tr>
<td></td>
<td>RMS: 30 W (15 W + 15 W) (0.9 % T.H.D.)</td>
</tr>
<tr>
<td>Output terminals</td>
<td>Speakers: 8 ohms</td>
</tr>
<tr>
<td></td>
<td>Headphones: 16 - 50 ohms (recommended: 32 ohms)</td>
</tr>
<tr>
<td>Input terminals</td>
<td>Video/Auxiliary [audio signal]: 500 mV/47 k ohms</td>
</tr>
</tbody>
</table>
### Specifications (continued)

#### CD player

<table>
<thead>
<tr>
<th>Type</th>
<th>3-disc multi-play compact disc player</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal readout</td>
<td>Non-contact, 3-beam semiconductor laser pickup</td>
</tr>
<tr>
<td>D/A converter</td>
<td>1-bit D/A converter</td>
</tr>
<tr>
<td>Frequency response</td>
<td>20 - 20,000 Hz</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>90 dB (1 kHz)</td>
</tr>
</tbody>
</table>

#### Tuner

<table>
<thead>
<tr>
<th>Frequency range</th>
<th>FM: 87.5 - 108 MHz \ AM: 522 - 1,620 kHz</th>
</tr>
</thead>
</table>

#### Cassette deck

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>125 - 8,000 Hz (normal tape)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal/noise ratio</td>
<td>50 dB (TAPE 1, playback)</td>
</tr>
<tr>
<td></td>
<td>50 dB (TAPE 2, recording/playback)</td>
</tr>
<tr>
<td>Wow and flutter</td>
<td>0.3 % (WRMS)</td>
</tr>
</tbody>
</table>

#### Speaker

<table>
<thead>
<tr>
<th>Type</th>
<th>2-way type speaker system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tweeter</td>
<td>10 cm (4&quot;) woofer</td>
</tr>
<tr>
<td>Maximum input power</td>
<td>40 W</td>
</tr>
<tr>
<td>Rated input power</td>
<td>20 W</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 ohms</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Width: 200 mm (7-7/8&quot;)</td>
</tr>
<tr>
<td></td>
<td>Height: 305 mm (12&quot;)</td>
</tr>
<tr>
<td></td>
<td>Depth: 175 mm (6-7/8&quot;)</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5 kg (5.5 lbs.)/each</td>
</tr>
</tbody>
</table>
Congratulations on Your Purchase!

This Sharp product is warranted against faults in materials and manufacture for a period of twelve (12) months from the date of original purchase.

If service is required during the warranty period, please contact your nearest Sharp Approved Service Centre. These repairs would be carried out at no charge to the owner, subject to the conditions specified herein.

The owner is responsible for any transportation and insurance costs if the product has to be returned for repair.

This warranty does not extend to accessories, defects or injuries caused by or resulting from causes not attributable to faulty parts or the manufacture of the product, including but not limited to, defect or injury caused by or resulting from misuse, abuse, neglect, accidental damage, improper voltage, liquid spillage, vermin infestation, software, or any alterations made to the product which are not authorised by Sharp.

Please retain your sales documentation, as this should be produced to validate a warranty claim.

This warranty is in addition to and in no way limits, varies or excludes any express and implied rights and remedies under any relevant legislation in the country of sale.
For your reference, please enter the particulars of your purchase below and retain, with your purchase documentation.

Model No. ____________________________
Serial No. ____________________________
Date of Purchase ______________________
Retailer _____________________________

FOR LOCATION ENQUIRIES WITHIN AUSTRALIA REGARDING YOUR LOCAL SHARP APPROVED SERVICE CENTRE VISIT OUR WEBSITE AT www.sharp.net.au OR CALL SHARP LOCAL CALL 1 300 135 022

SHARP CORPORATION OF AUSTRALIA PTY. LIMITED A.B.N. 40 003 039 405
1 Huntingwood Drive Blacktown NSW 2148

FOR PRODUCTS PURCHASED IN NEW ZEALAND CONTACT YOUR SELLING DEALER/RETAILER OR CALL SHARP CUSTOMER SERVICES TELEPHONE: 09 - 573 0111 FACSIMILE: 09 - 573 0113 WEB: www.sharpnz.co.nz

SHARP CORPORATION OF NEW ZEALAND LIMITED 59 Hugo Johnston Drive, Penrose Auckland

IMPORTANT NOTICE: This warranty applies only to products sold in Australia & New Zealand