

SHARP

MINI COMPONENT SYSTEM

MODEL

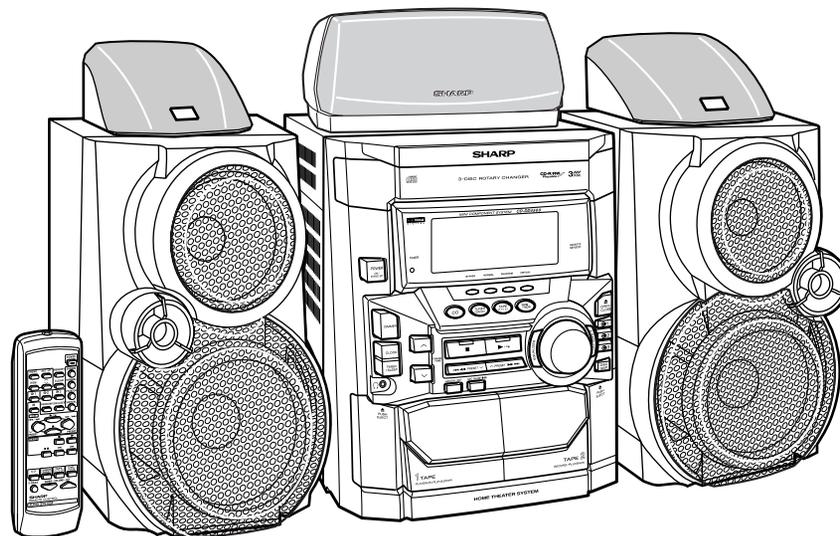
CD-DD4500

OPERATION MANUAL

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-DD4500 Mini Component System consisting of CD-DD4500 (main unit), CP-DD4500 (Front), center (GBOXS0064AWM1), surround (R) (GBOXS2008AWM1) and surround (L) (GBOXS4008AWM1) speaker system.



COMPACT
disc
DIGITAL AUDIO

DD DOLBY
DIGITAL

CD-R/RW
Playable 

3 DISC

Special Notes



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Explanation of Graphical Symbols:



The lightning flash with arrowhead symbol, within an equilateral triangle, 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.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



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NOTE

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.

WARNING

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user’s authority to operate this equipment.

NOTE

It is the intent of Sharp that this product be used in full compliance with the copyright laws of the United States and that prior permission be obtained from copyright owners whenever necessary.

FOR YOUR RECORDS

For your assistance in reporting this unit in case of loss or theft, please record below the model number and serial number which are located on the rear of the unit.

Please retain this information.

Model number

Serial number

Date of purchase

Place of purchase

Important Safeguards

CAUTION

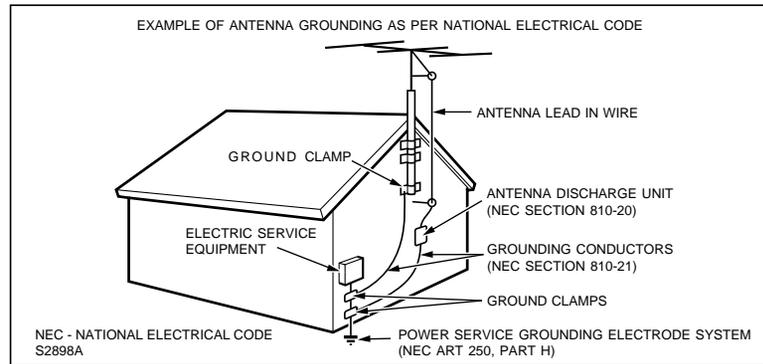
All the safety and operating instructions should be read before the appliance is operated, and should be retained for future reference.

Electrical energy can perform many useful functions. This unit has been engineered and manufactured to assure your personal safety. Improper use can result in potential electrical shock or fire hazards. In order not to defeat the safeguards, observe the following basic rules for its installation, use and servicing.

- 1 Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
- 2 Follow Instructions - All operating and use instructions should be followed.
- 3 Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
- 4 Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
 - An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
- 5 Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 6 Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- 7 Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- 8 Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- 9 Power-Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- 10 Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 11 Power Lines - An outdoor antenna should be located away from power lines.



- 12 Outdoor Antenna Grounding - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



- 13 Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- 14 Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- 15 Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
 - A The power-supply cord or the plug has been damaged; or
 - B Objects have fallen, or liquid has been spilled into the appliance; or
 - C The appliance has been exposed to rain; or
 - D The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E The appliance has been dropped, or the enclosure damaged.
- 16 Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
- 17 Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

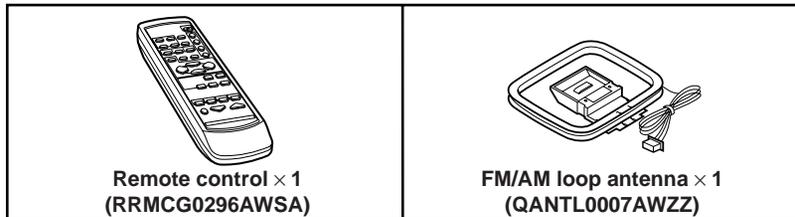
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Accessories

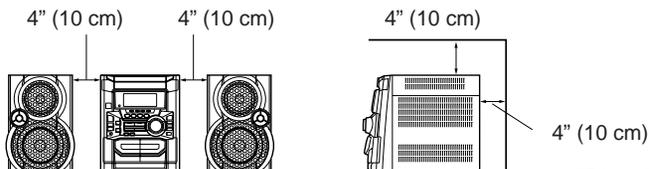
Please confirm that the following accessories are included.



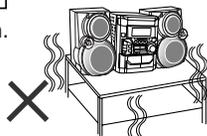
Note:
Only the above accessories are included.

■ General

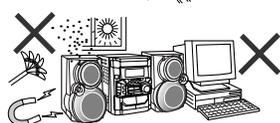
- Please ensure that the equipment is positioned in a well ventilated area and ensure that there is at least 4" (10 cm) of free space along the sides, top and back of the unit.



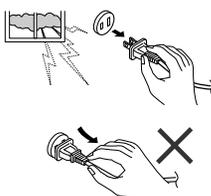
- Use the unit on a firm, level surface free from vibration.



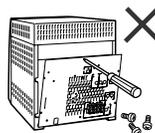
- Keep the unit away from direct sunlight, strong magnetic fields, excessive dust, humidity and electronic/electrical equipment (home computers, facsimiles, etc.) which generates electrical noise.
- Do not place anything on top of the unit.
- Do not expose the unit to moisture, to temperatures higher than 140°F (60°C) or to extreme low temperatures.
- If your system does not work properly, disconnect the AC power cord from the AC outlet. Plug the AC power cord 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 AC outlet, as pulling the cord 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.



- This unit should only be used within the range of 41°F - 95°F (5°C - 35°C).

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.

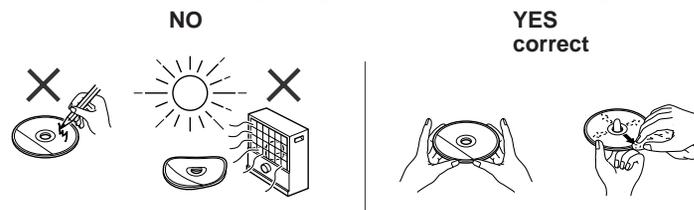
■ Volume control

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, which occur while turning the unit on with the volume control setting up high, or while continually listening at high volumes.

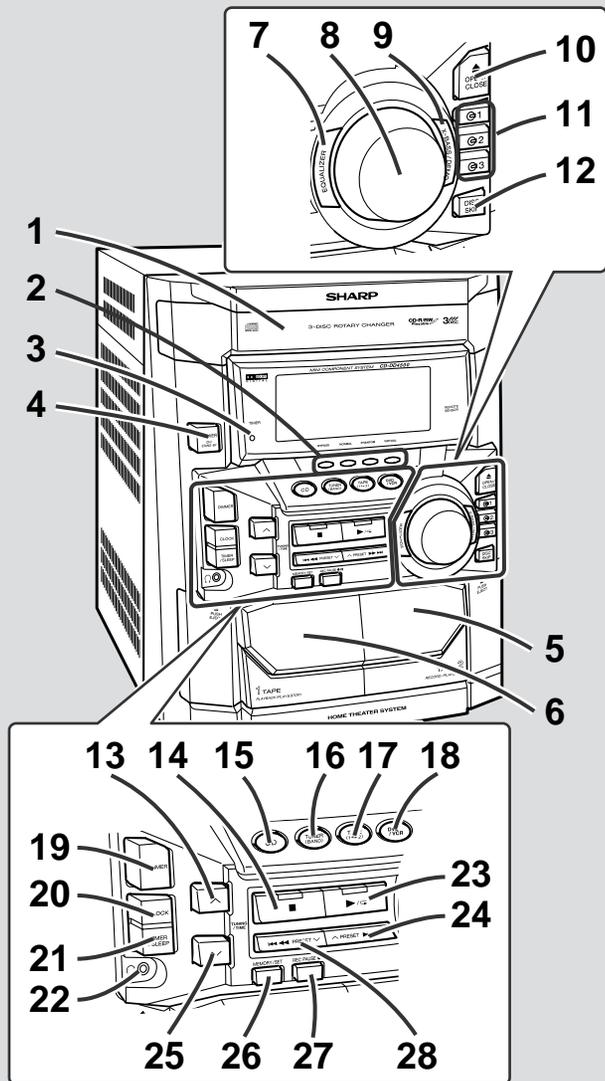
■ Care of compact discs

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 center, along the radius.



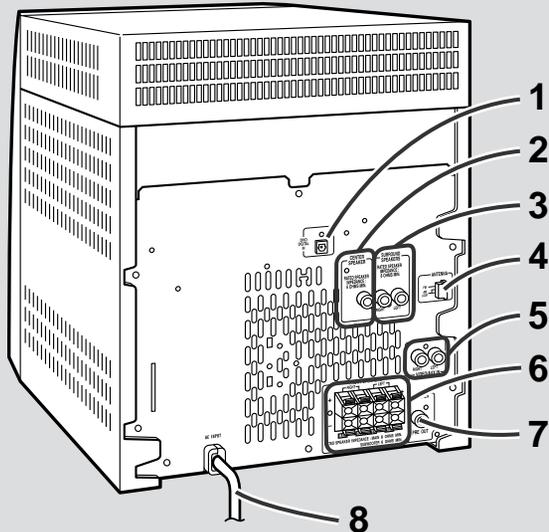
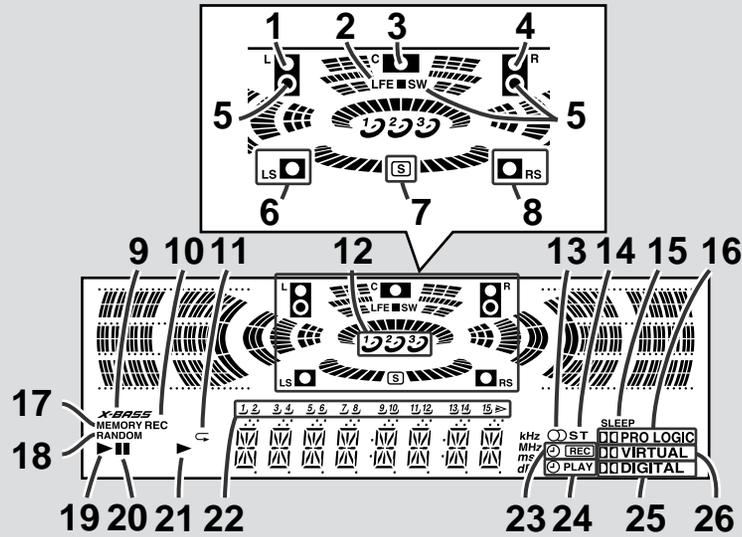
Controls and Indicators



■ Front panel

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| 28. CD Fast Reverse, Tape 2 Rewind or Tuner Preset Down Button | 19, 21 - 24 |



■ Display

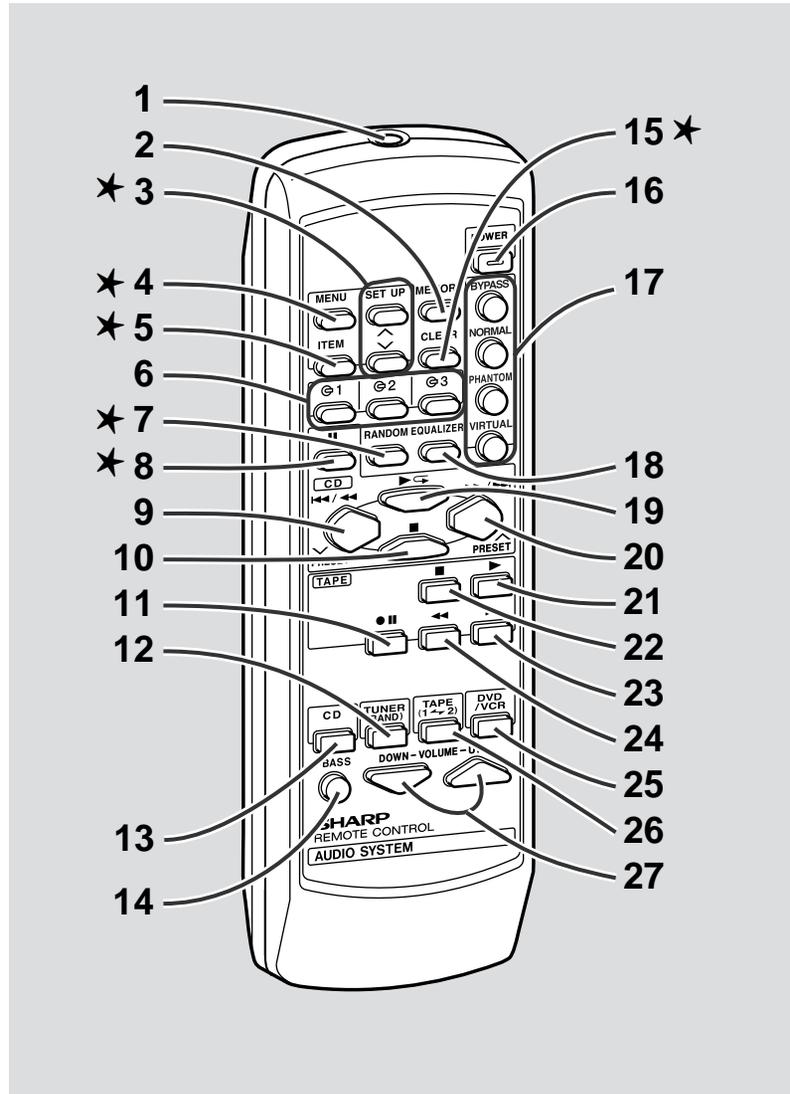
1. Left Front Speaker Indicator
2. Low Frequency Effect Indicator
3. Center Speaker Indicator
4. Right Front Speaker Indicator
5. Subwoofer Indicator
6. Left Surround Speaker Indicator
7. Surround Indicator
8. Right Surround Speaker Indicator
9. Extra Bass Indicator
10. Tape 2 Record Indicator
11. CD Repeat Indicator
12. Disc Number Indicators
13. FM Stereo Receiving Indicator
14. FM Stereo Mode Indicator
15. Sleep Indicator
16. Dolby Pro Logic Indicator
17. Memory Indicator
18. CD Random Play Indicator
19. CD Play Indicator
20. CD Pause Indicator
21. Tape Play Indicator
22. CD Music Schedule Indicators
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Controls and Indicators (continued)



■ Remote control

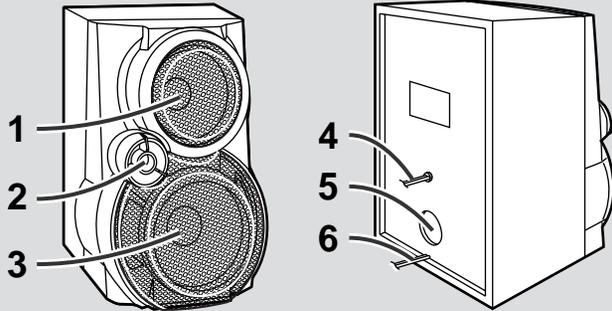
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1. Remote Control Transmitter
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6. Disc Number Select Buttons
7. **CD Random Button** 20
8. **CD Pause Button** 19
9. CD Fast Reverse/Preset Down Button
10. CD Stop Button
11. Tape 2 Record Pause Button
12. Tuner (Band) Button
13. CD Button
14. Extra Bass Button
15. **CD Clear Button** 21
16. Power Button
17. Surround Effect Buttons
18. Equalizer Mode Select Button
19. CD Play or Repeat Button
20. CD Fast Forward/Preset Up Button
21. Tape 1/Tape 2 Play Button
22. Tape 1/Tape 2 Stop Button
23. Tape 2 Fast Forward Button
24. Tape 2 Rewind Button
25. DVD/VCR Button
26. Tape (1 → 2) Button
27. Volume Up or Down Buttons

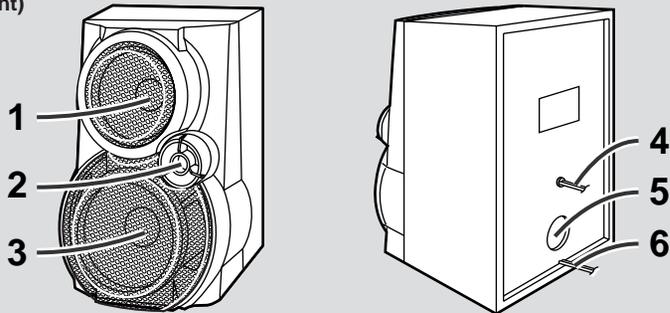
Buttons with “★” mark in the illustration can be operated with the remote control only.
Other buttons can be operated on the main unit and the remote control.

■ Speaker system

Front speaker
(left)

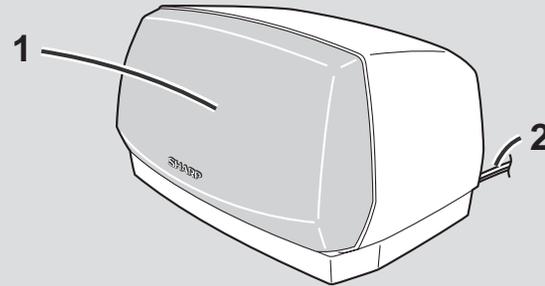


Front speaker
(right)



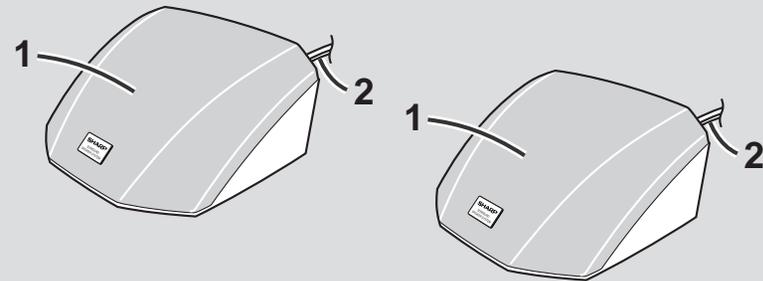
1. Woofer
2. Tweeter
3. Subwoofer
4. Speaker Wire for SUBWOOFER Terminals
5. Bass Reflex Duct
6. Speaker Wire for MAIN Terminals

Center speaker



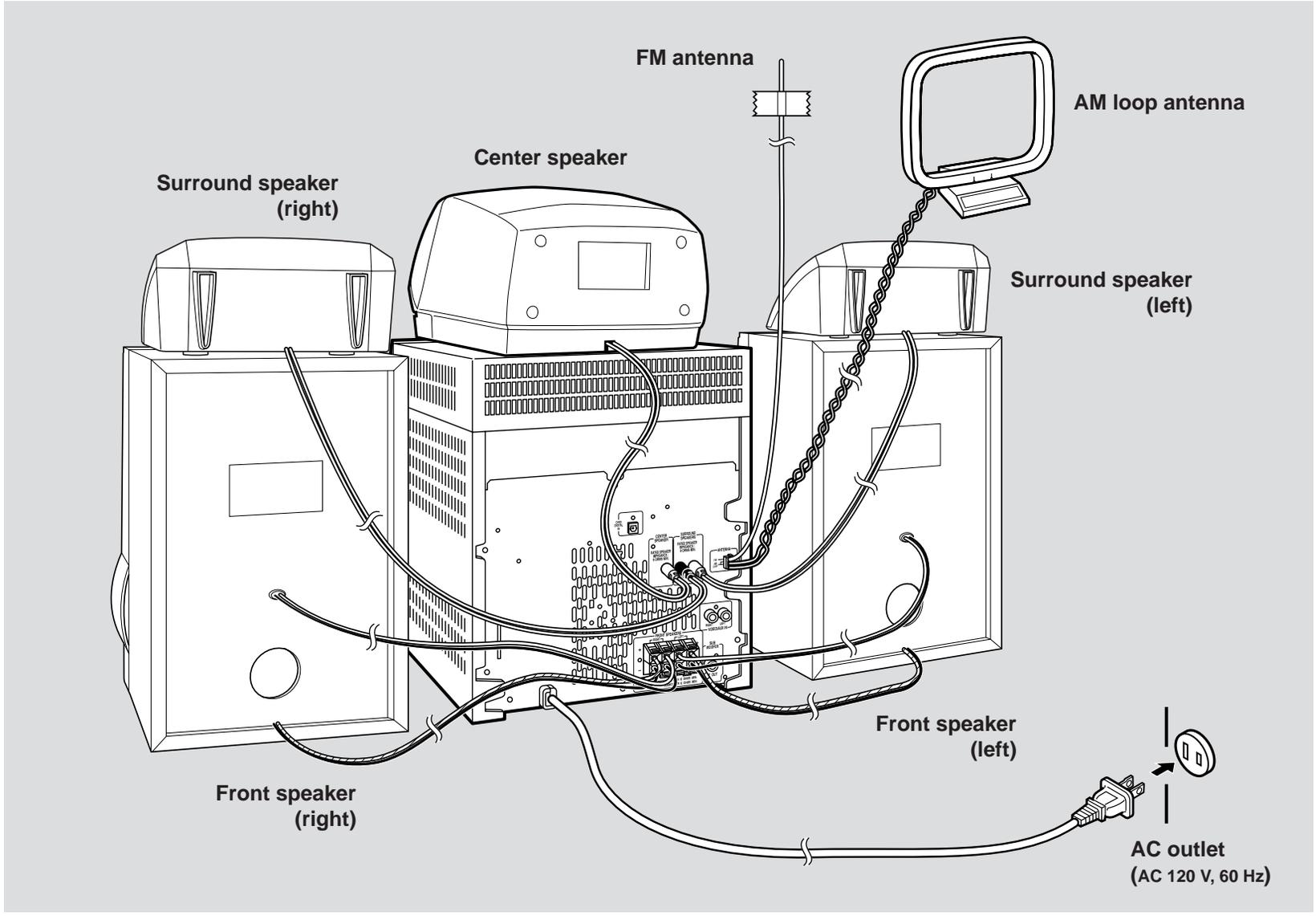
1. Full-Range Speaker
2. Speaker Wire

Surround speaker



1. Full-Range Speaker
2. Speaker Wire

System Connections



■ Speaker connection

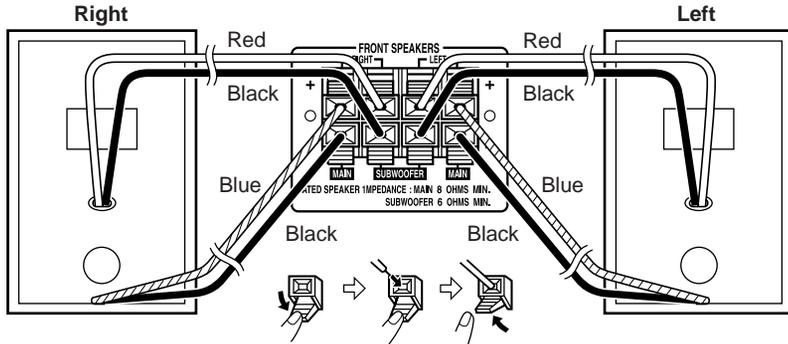
Front speakers

Main terminals:

Connect the black wire to MAIN(-) terminal and the blue wire to the MAIN(+) terminal.

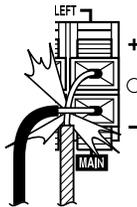
Subwoofer terminals:

Connect the black wire to the SUBWOOFER(-) terminal and the red wire to the SUBWOOFER(+) terminal.



Caution:

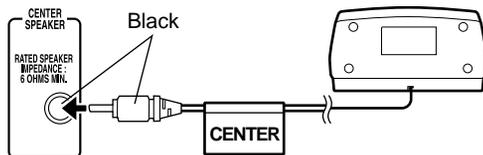
- Never mistake the MAIN and the SUBWOOFER terminals. The unit or the speakers may be damaged.
- Only the included speakers should be used with this product. Do not use other speakers with this unit or use the supplied speakers with other units.
- Do not mistake the right and the left channels. The right 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 stand or sit on the speakers. You may be injured.
- Do not mistake the connection of center and surround speakers.



Center speaker

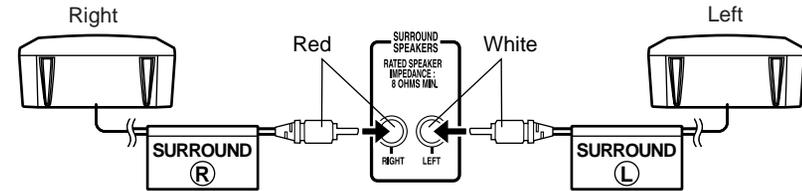
Connect the center speaker wire to the CENTER SPEAKER jack as shown.

Use speakers with an impedance of 6 ohms or more, as lower impedance speakers can damage the unit.



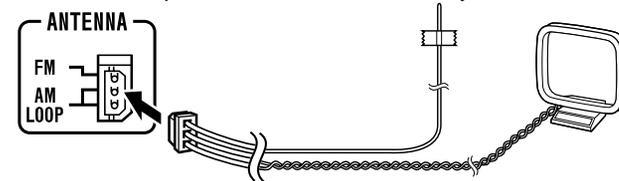
Surround speakers

Connect each surround speaker wire to the SURROUND SPEAKER jack as shown. Use speakers with an impedance of 8 ohms or more, as lower impedance speakers can damage the unit.



■ FM/AM loop antenna connection

Connect the FM/AM loop antenna to the ANTENNA jack.



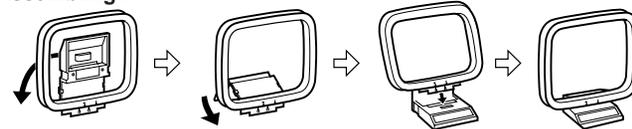
Position the FM antenna wire and rotate the AM loop antenna for optimum reception. Place the AM loop antenna on a shelf, or attach it to a stand or a wall.

Notes:

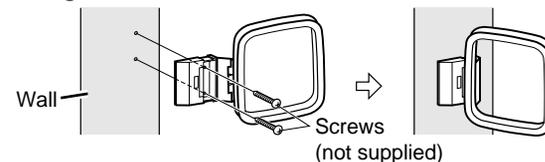
- Placing the antenna on the unit or near the AC power cord may cause noise pickup. Place the antenna away from the unit for better reception.
- Do not connect the attached FM antenna to an external FM antenna. Otherwise, trouble may occur.

Installing the AM loop antenna:

< Assembling >



< Attaching to the wall >

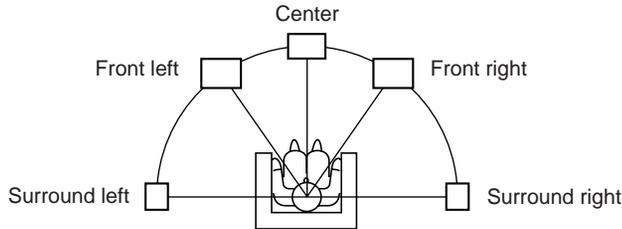


Speakers

■ Placing the speakers

When you connect this unit to a DVD player playing a disc with the  trademark, you can enjoy realistic, powerful sound by playing the soundtrack through 5 channels; the front left, front right, center, surround left and surround right speakers.

The best sound will be achieved by placing each speaker the same distance from the listener. Arrange the speakers so that the layout is as close as possible to the diagram shown in this illustration.

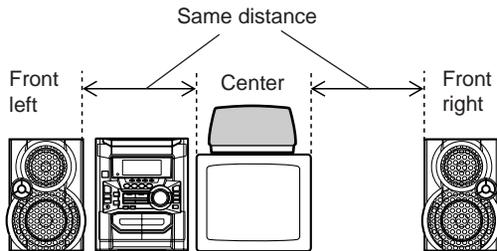


Front speakers:

The front left and right speakers have individual shapes. For best performance, place the speakers as shown in the diagram to the below. Place a TV halfway between the front left and front right speakers.

Center speaker:

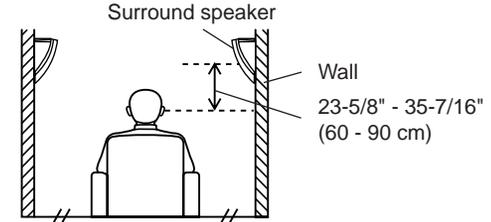
It is recommended that the center speaker be placed on top of a television.



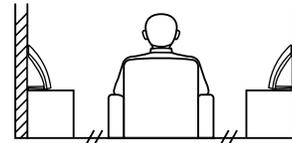
Surround speakers:

The surround speakers should be installed on the wall. Install them 23-5/8" - 35-7/16" (60 - 90 cm) above the height of your ears when seated, if possible (see page 13).

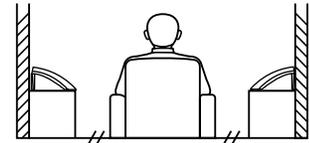
Example: When installed on the wall



Example: When installed vertically



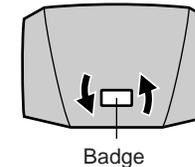
Example: When installed horizontally



When the surround speakers are installed vertically, the speaker badge will be upside down.

In this case, you can adjust the badge to face the proper direction.

Just turn it by hand.



Note:

The front speakers and center speaker are magnetically shielded. Therefore, they may be placed alongside a TV.

However color variations may occur, depending on the type of TV used.

If color variations occur

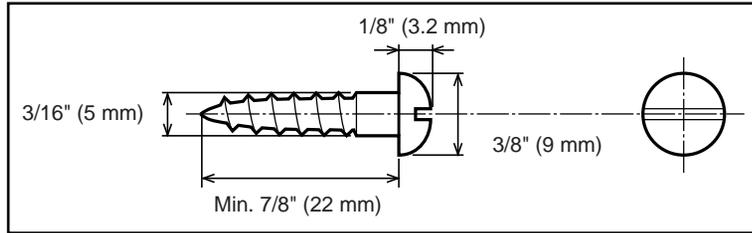
turn off the TV (using the power switch). After 15 - 30 minutes, turn the TV on again.

If the color variation is still present ...

move the speakers further away from the TV.

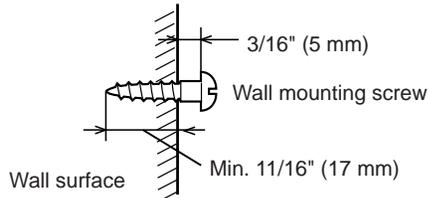
■ To install the surround speakers on the wall

Sharp designed the surround speakers so you may hang them on the wall. Be sure to use the correct type and size of screw, as shown below.

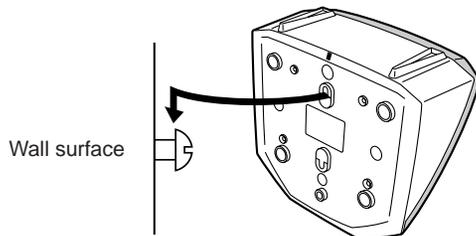


1. Drive one screw into the wall for each speaker, as shown in the illustration.

- Make sure that both the screw and the wall can support a load of 45 lbs. (20 kg).
- Drive the screws, so the screw head extends about 3/16" (5 mm) out from the wall.

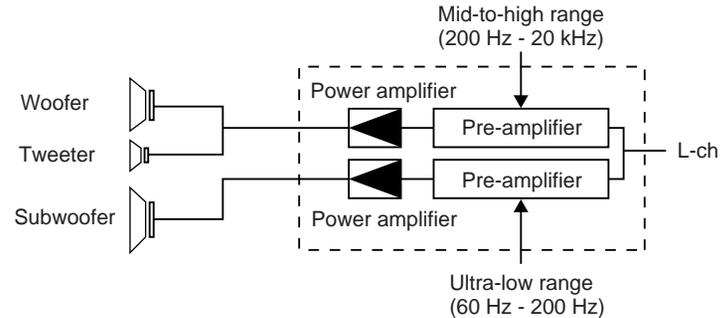


2. Install the surround speakers on the wall by inserting the screw heads into the slots on the back of the speakers.



Bi-amp system:

Each speaker unit has a built-in subwoofer (low frequency range) which is driven separately from the woofer and tweeter (mid-to-high frequency range). Two independent amplifiers which have individual frequency characteristics are used. By amplifying separately the two frequency bands, clearer sound is achieved.



■ Connecting the AC power cord

After checking all the connections have been made correctly, plug the AC power cord of this unit into the AC outlet. If you plug in the unit first, the unit will enter the demonstration mode (see page 15).

Note:

Unplug the unit if it will not be used for a prolonged period of time.

Remote Control

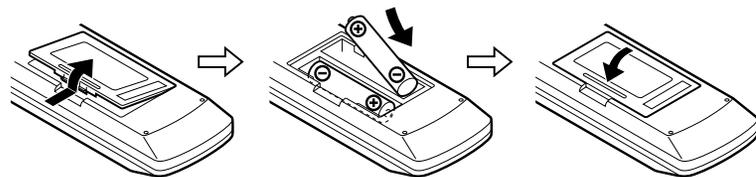
■ Battery installation

Use 2 “AA” size batteries (UM/SUM-3, R6, HP-7 or similar).
Batteries are not included.

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 toward 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 will not 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.

Notes concerning use:

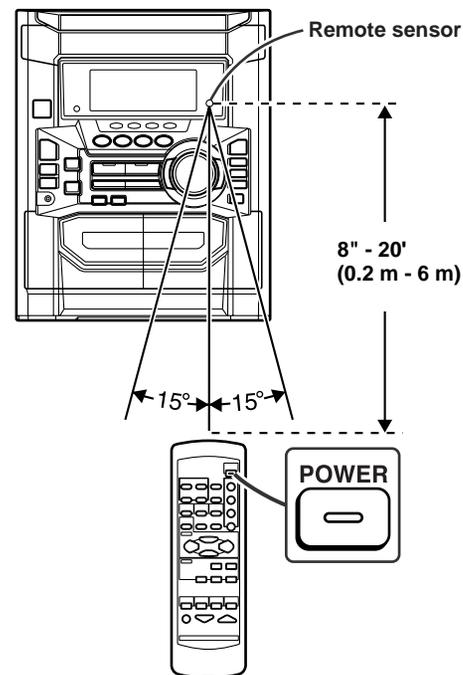
- Replace the batteries if the operating distance is reduced or if the operation becomes erratic.
- Periodically clean the transmitter on the remote control and the sensor on the unit with a soft cloth.
- Exposing the sensor on the unit to strong light may interfere with operation. Change the lighting or the direction of the unit.
- Keep the remote control away from moisture, heat, shock, and vibrations.

■ Test of the remote control

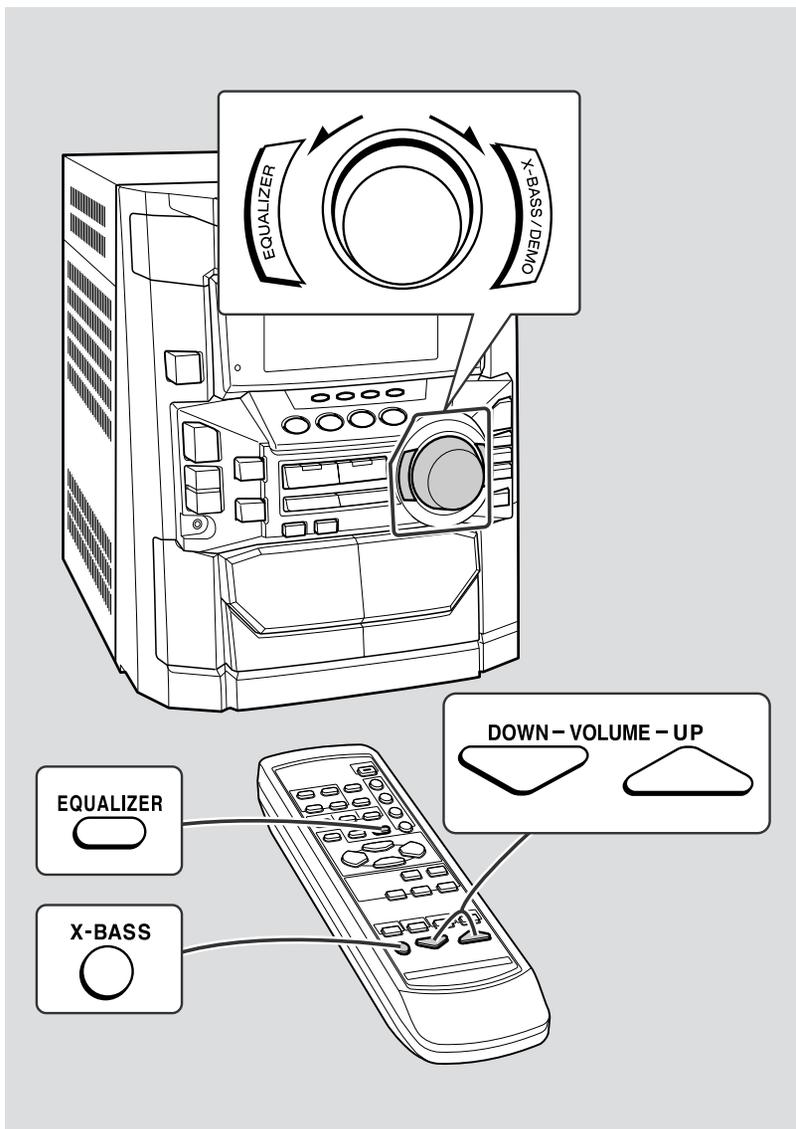
Face the remote control directly to the remote sensor on the unit.

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

Press the POWER button. Does the power turn on? Now, you can enjoy the music.



Sound Control



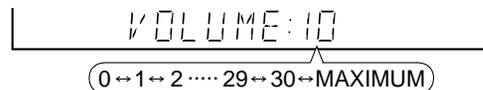
■ Volume control

Main unit operation:

When the VOLUME control is turned clockwise, the volume will increase. When it is turned counterclockwise, the volume will decrease.

Remote control operation:

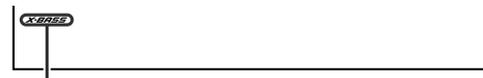
Press the VOLUME UP button to increase the volume and the VOLUME DOWN button for decreasing.



■ Bass control

When the power is first turned on, the unit will enter the extra bass mode which emphasizes the bass frequencies, and "X-BASS" will appear.

To cancel the extra bass mode, press the X-BASS/DEMO (X-BASS) button.



X-BASS indicator

■ Equalizer

When the EQUALIZER button is pressed, the current mode setting will be displayed.

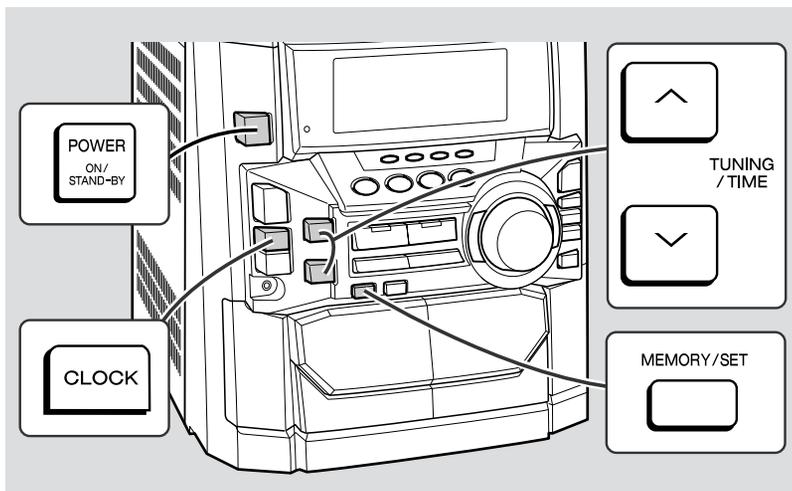
To change to a different mode, press the EQUALIZER button repeatedly until the desired sound mode appears.

| | |
|---------|--|
| FLAT | The sound is not modified. |
| ROCK | Bass and treble are emphasized. |
| POPS | Bass and treble are slightly emphasized. |
| JAZZ | Treble is cut a little. |
| CLASSIC | Treble is reduced a lot. |
| VOCAL | Vocals (midrange tones) are emphasized. |

Note:

- If the EQUALIZER button is pressed in the Normal/Phantom/Virtual mode, the unit is switched to the Bypass mode automatically.

Setting the Clock



In this example, the clock is set for the 12-hour (AM 12:00) display.

1 Press the **POWER** button to turn the power on.

2 Press the **CLOCK** button and within 5 seconds, press the **MEMORY/SET** button.



3 Press the **TUNING/TIME** (∨ or ∧) button to select the 12-hour or 24-hour display and then press the **MEMORY/SET** button.



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

Note that this can only be set when the unit is first installed or it has been reset (see page 42).

4 Press the **TUNING/TIME** (∨ or ∧) button to adjust the hour and then press the **MEMORY/SET** button.



- 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".

5 Press the **TUNING/TIME** (∨ or ∧) button to adjust the minutes and then press the **MEMORY/SET** button.

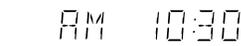


- Press the **TUNING/TIME** (∨ or ∧) button once to advance the time by 1 minute. Hold it down to change the time in 5-minute intervals.
- The hour will not advance even if minutes advance from "59" to "00".
- The clock begins counting from "0" seconds. (Seconds are not displayed.) The time display will disappear after a few seconds.

To confirm the time display:

Press the **CLOCK** button.

The time display will appear for about 5 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 after unplugging the unit.

Readjust the clock as follows.

To readjust the clock:

Perform "Setting the Clock" from the beginning.

If the time display is flashing, step 3 (for selecting the 12-hour or 24-hour display) will be skipped.

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

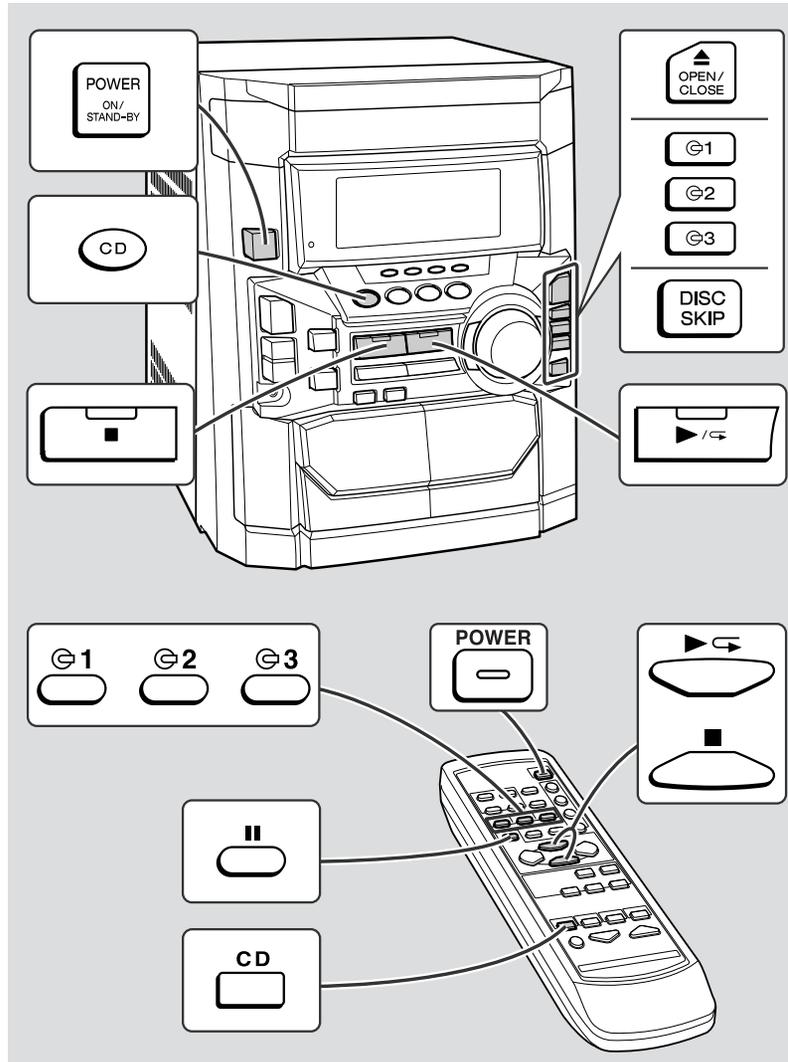
1. Clear all the programmed contents.

[Refer to "Clearing all the memory (reset)" on page 42 for details.]

2. Perform "Setting the Clock" from the beginning.

Listening to a CD (CDs)

This system can play audio CD-R and CD-RW discs just as CD discs, but cannot perform recording.



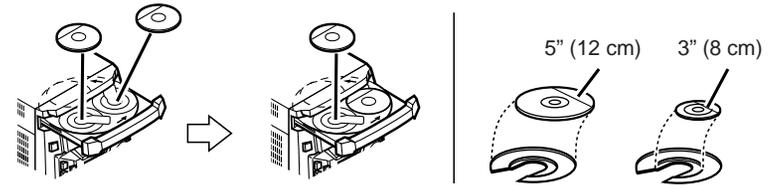
1 Press the **POWER** button to turn the power on.

2 Press the **CD** button.

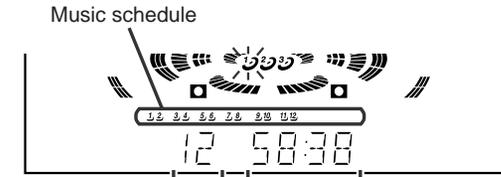
3 Press the **▲ OPEN/CLOSE** button to open the disc tray.

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 3" (8 cm) CD(s) in the middle of the disc positions.



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



Total number of tracks on the CD whose number is flashing

Total playing time of the CD whose number is flashing

The music schedule will display only the number of tracks on the disc. If the CD contains more than 15 tracks, "▶" will appear.

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

7 Press the ►/◄ (► ◄) 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 play.
- When the last track on the third disc has finished playing, the CD player will stop automatically.
- When there is no CD in one of the disc 1 - 3 positions, that position will be skipped and the next CD will be played.

To interrupt playback:

Press the CD button on the remote control.

To resume playback from the same point, press the ► ◄ button.

To stop playback:

Press the (CD) button.

To remove the CDs:

While in the stop mode, press the OPEN/CLOSE 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.

After use:

Press the POWER button to enter the power stand-by mode.

Caution:

- Do not place two CDs in one disc tray.
- Do not push the disc tray while it is moving.
- Do not turn the disc tray by hand. This may cause malfunctions.
- If the power fails while the tray is open, wait until the power is restored.
- If the disc tray is stopped forcibly, "ER-CD10" will appear in the display and the unit will not function.
If this occurs, press the POWER button to enter the 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 be skipped.

■ To locate the beginning of a track

To move to the beginning of the next track:

Press the PRESET button for less than 0.5 seconds during playback.



- You can skip to any track by pressing the PRESET button repeatedly until the desired track number appears.

To restart the track being played:

Press the PRESET button for less than 0.5 seconds during playback.



- You can skip to any track by pressing the PRESET button repeatedly until the desired track number appears.

Notes:

- You can locate the beginning of a track on a single disc only.
- The PRESET or PRESET button on the remote control allows you to locate the beginning of a track.

■ To locate the desired portion

For audible fast forward:

Press and hold down the PRESET button during playback.



For audible fast reverse:

Press and hold down the PRESET button during playback.



Notes:

- Normal playback will resume when the PRESET or PRESET button is released.
- You can locate the desired portion on a single disc only.
- When the end of the last track is reached during fast forward, "END" will appear in 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.
- The PRESET or PRESET button on the remote control allows you to locate the desired portion.

Listening to a CD (CDs) (Continued)

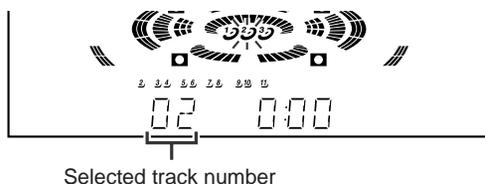
■ Starting playback with a desired track

You can play a disc starting with the desired track.

- 1 While in the stop mode, press one of the $\odot 1$ - $\odot 3$ buttons or DISC SKIP button to select the desired disc.



- 2 Press the \lll PRESET \vee or \wedge PRESET \ggg button to select the desired track.



- 3 Press the \triangleright/\llcorner ($\triangleright \llcorner$) button to start playback.

The playback of the selected track is started.

When the last track of the disc with the selected track is played, the next disc will be automatically started.

To stop playback:

Press the \blacksquare (CD \blacksquare) button.

Notes:

- When the DISC SKIP button is pressed during playback, playback will begin automatically from the next disc.
- When one of the $\odot 1$ - $\odot 3$ buttons is pressed during playback, playback of the selected disc will begin automatically.

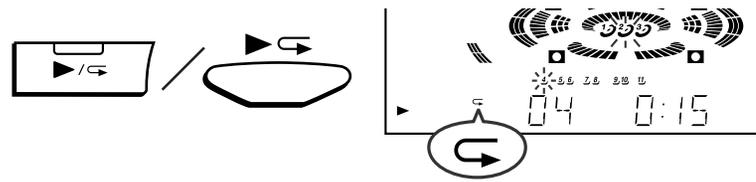
Repeat or Random Play

■ 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 \triangleright/\llcorner ($\triangleright \llcorner$) button twice.



To repeat a desired track:

Perform steps 1 - 4 in the "Programmed Play" section and then press the \triangleright/\llcorner ($\triangleright \llcorner$) button twice.

To cancel repeat play:

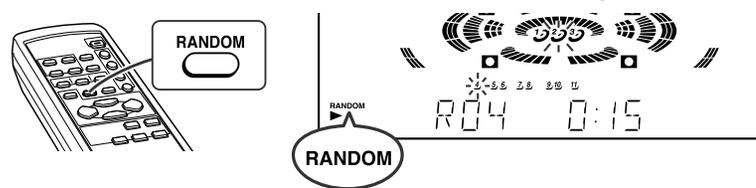
Press the \triangleright/\llcorner ($\triangleright \llcorner$) button again.

" \llcorner " will go out.

■ 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 $\triangleright \llcorner$ button.

Notes:

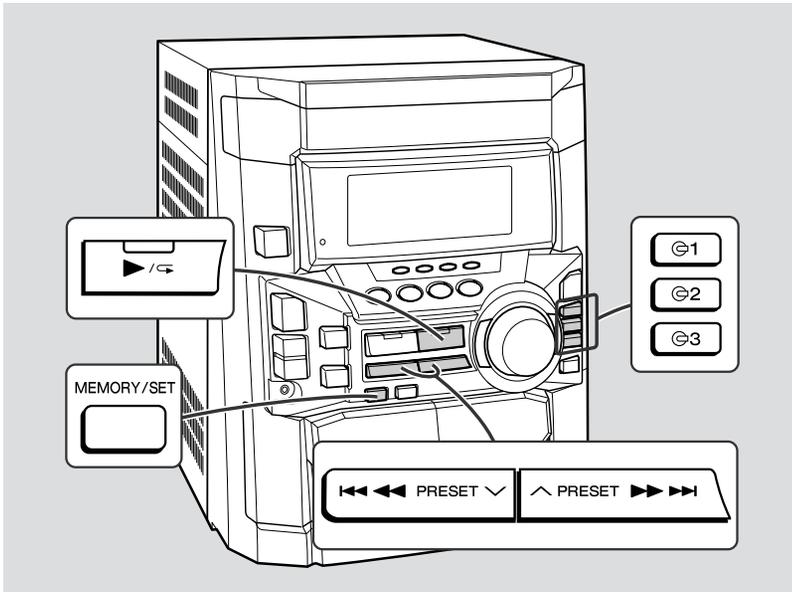
- If you press the \wedge PRESET \ggg button during random play, you can move to the track selected next by the random operation. On the other hand, the \lll PRESET \vee button does not allow you to move to the previous track. The beginning of the track being played will be located.
- In random play, the CD player will select and play tracks automatically. (You cannot select the order of the tracks.)

Caution:

After using repeat or random play, be sure to press the \blacksquare (CD \blacksquare) button. Otherwise, the disc(s) will play continuously.

Programmed Play

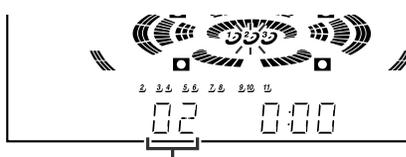
By specifying discs from 1 to 3, and tracks from 1 to 99, you can choose up to 32 selections for playback in the order you like.



1 While in the stop mode, press one of the 1 - 3 buttons to select the desired disc.

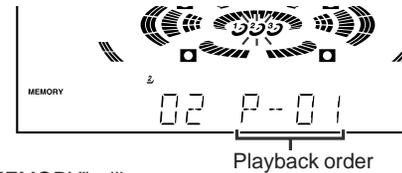


2 Press the PRESET buttons to select the desired track.



You can also select a track by pressing the PRESET buttons on the remote control.

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



When the track is memorized, "MEMORY" will appear.

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

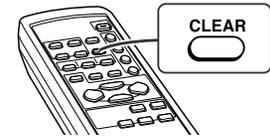
If you make a mistake, the programmed tracks can be cleared by pressing the CLEAR button.

5 Press the play/pause button to start playback.

To clear the programmed selections:

While in the stop mode, press the CLEAR button on the remote control.

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.



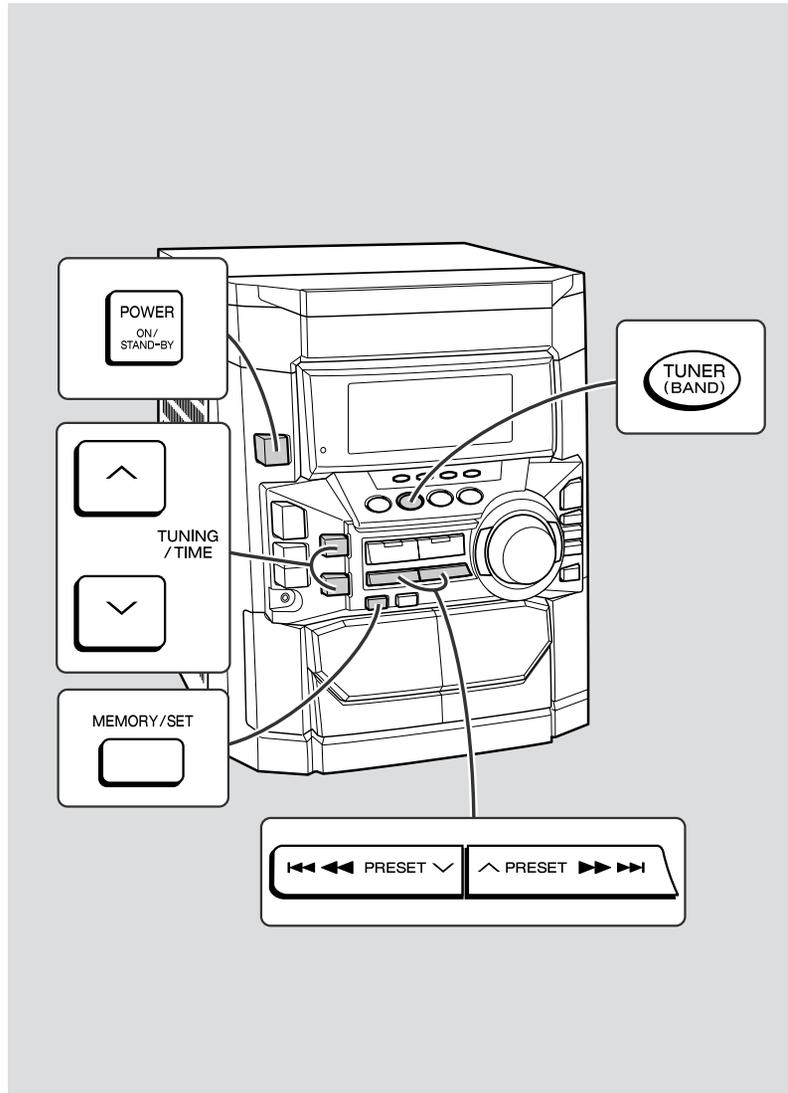
Adding tracks to the program:

If a program 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 program.

Notes:

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

Listening to the Radio



- 1** Press the **POWER** 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** (∇ or \wedge) 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.

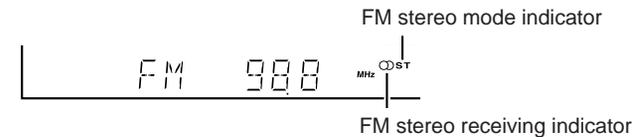
Notes:

- 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 so that the “ST” indicator lights up.

- “∞” will appear when an FM broadcast is in stereo.



- If the FM reception is weak, press the TUNER (BAND) button so that the “ST” indicator goes out. The reception changes to monaural, and the sound becomes clearer.

After use:

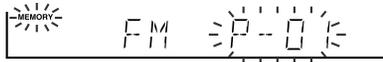
Press the POWER button to enter the power stand-by mode.

■ Memorizing a station

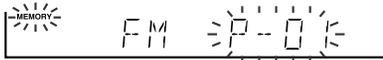
You can store 40 AM and FM stations in memory and recall them at the push of a button. (Preset tuning)

1 Perform the steps 1 - 3 in “Listening to the Radio” on page 22.

2 Press the MEMORY/SET button to enter the preset tuning saving mode.



3 Within 30 seconds, press the PRESET \vee or \wedge PRESET $\triangleright\triangleright\triangleright$ 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 memorized, repeat the operation from step 2.

5 Repeat steps 1 - 4 to set other stations, or to change a preset station.

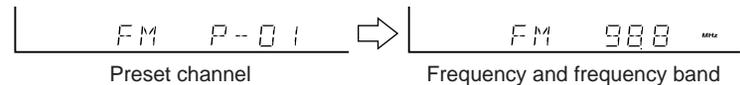
When a new station is stored in memory, the station previously memorized will be erased.

Note:

The backup function protects the memorized stations for a few hours should there be a power failure or the AC power cord disconnection.

■ To recall a memorized station

Press the PRESET \vee or \wedge PRESET $\triangleright\triangleright\triangleright$ button for less than 0.5 seconds to select the desired station.



■ To scan the preset stations

The stations saved in memory can be scanned automatically. (Preset memory scan)

1 Press the PRESET \vee or \wedge PRESET $\triangleright\triangleright\triangleright$ button for more than 0.5 seconds.

The preset number will flash and the programmed stations will be tuned in sequentially, for 5 seconds each.

2 Press the PRESET \vee or \wedge PRESET $\triangleright\triangleright\triangleright$ button again when the desired station is located.

■ To erase entire preset memory

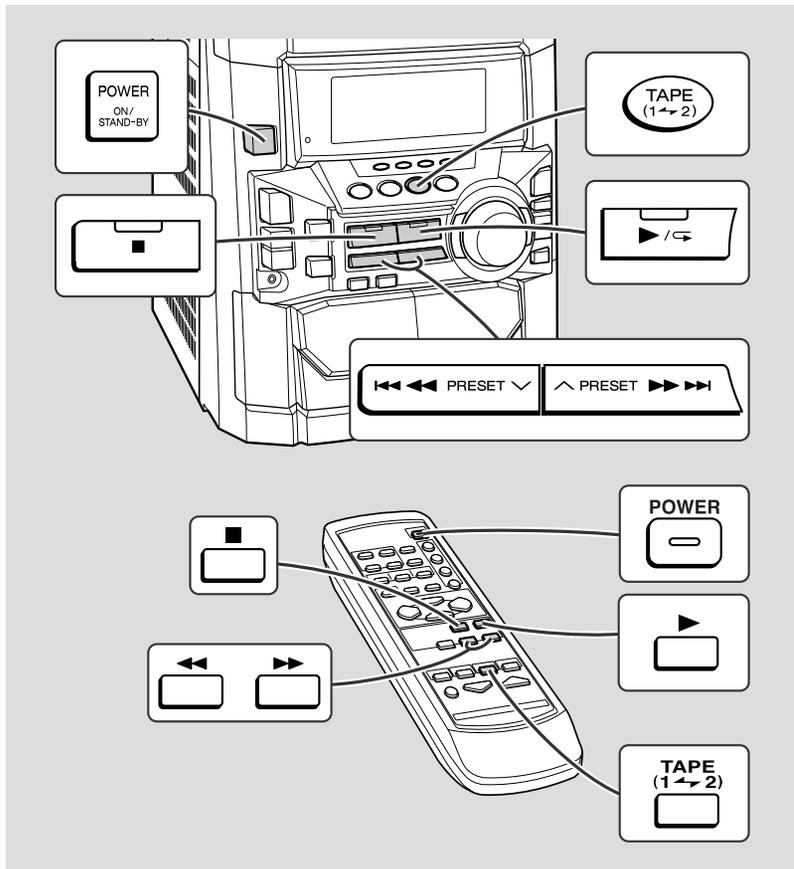
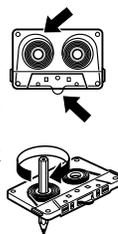
1. Press the POWER button to enter the stand-by mode.
2. Press the POWER button while holding down the TUNER (BAND) button and X-BASS/DEMO button until “TUNER CL” appears.



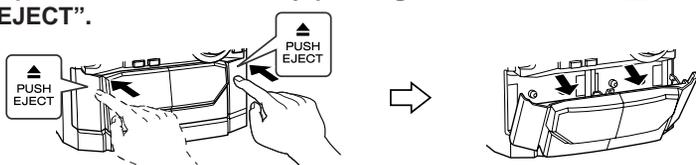
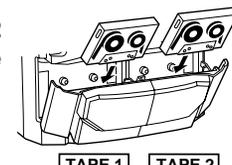
Listening to a Cassette Tape (TAPE 1 or TAPE 2)

Before playback:

- For playback, use normal or low-noise tape for the best sound. (Metal or CrO₂ tape is 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 pencil.



Playback is possible in TAPE 1 compartment as well as in TAPE 2.

- 1 Press the POWER button to turn the power on.**
- 2 Open the cassette door by pushing the area marked “▲ PUSH EJECT”.**

- 3 Load the cassette into the TAPE 1 or TAPE 2 cassette 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 ▶/C (▶) button to start playback.**

To stop playback:

Press the ■ (TAPE ■) button.

Fast forward/rewind: (TAPE 2 only)

1. Press the ■ (TAPE ■) button, then press the TAPE (1 → 2) button to select TAPE 2.
2. To advance the tape, press the ^ PRESET ►►►► (►►) button.
To rewind it, press the ◀◀◀◀ PRESET ∨ (◀◀) button.

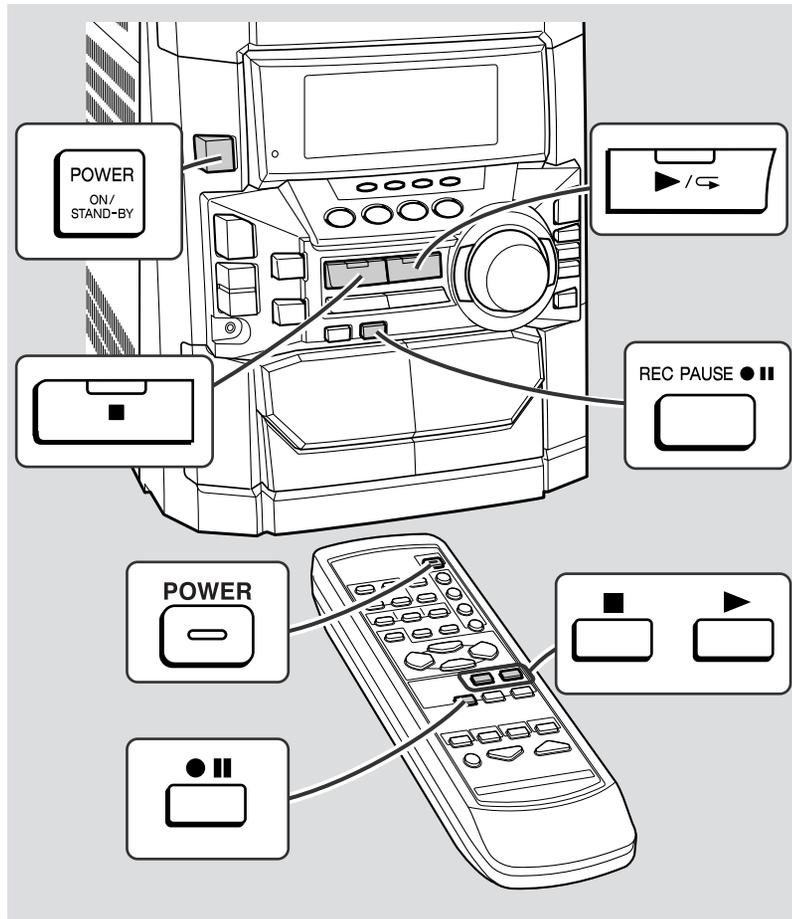
Caution:

- To remove the cassette, press the ■ (TAPE ■) button, and then open the compartment.
- Before changing from one tape operation to another, press the ■ (TAPE ■) 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. Wait until the power is restored.

Recording from the Radio

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 and CrO₂ tapes.**

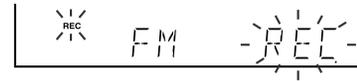


Recording can be operated in the TAPE 2 compartment. The TAPE 1 is for playback only.

- 1 Tune in to the desired station (see page 22).**
- 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  (●||) button.**



Recording will be paused.

- 4 Press the  (▶/◀) button to start recording.**



To interrupt recording:

Press the REC PAUSE  (●||) button.

To resume recording, press  (▶/◀) button.

To stop recording:

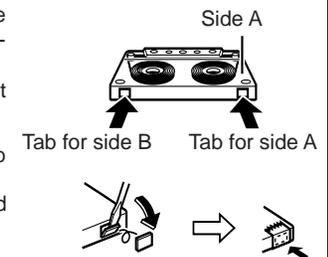
Press the  (TAPE ) button.

Note:

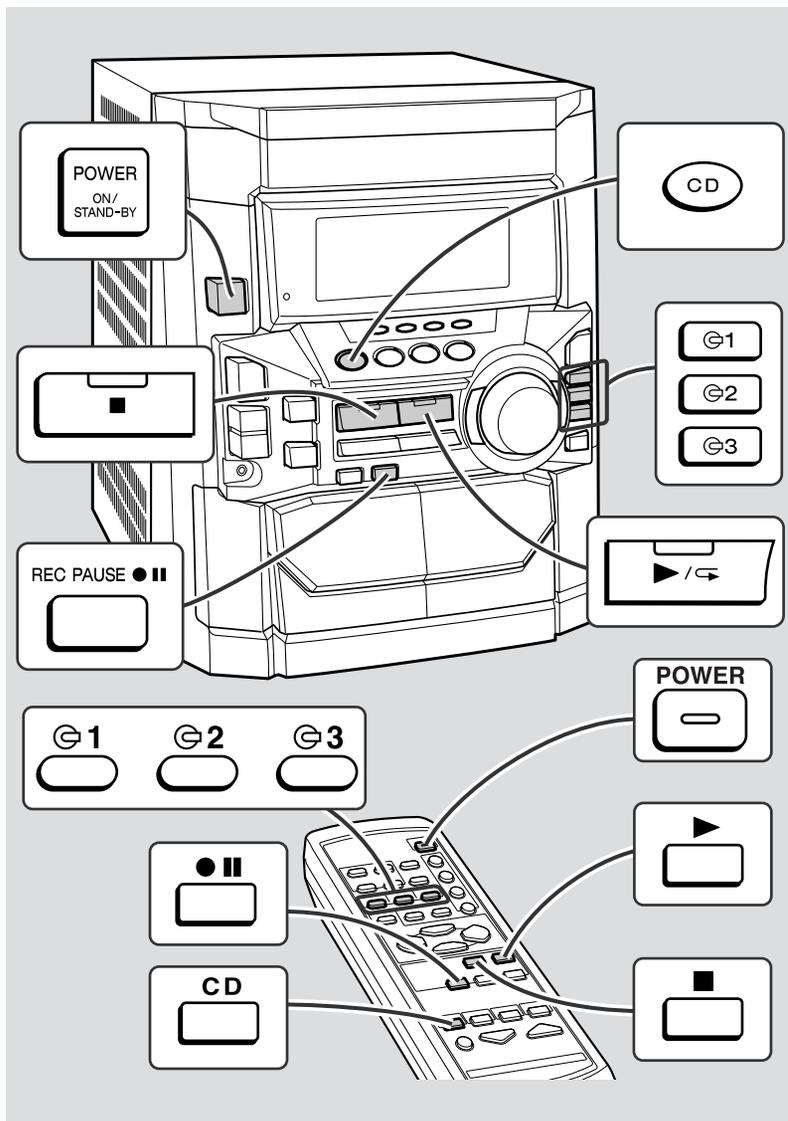
If you hear a whistling noise while recording an AM station, move the AM loop antenna.

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.



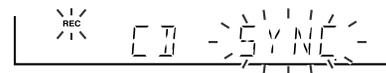
Recording from a CD (CDs)



You can record 3 CDs continuously.

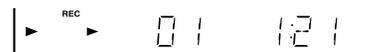
- 1** Press the **POWER** button to turn the power on.
- 2** Load a cassette into the **TAPE 2** cassette compartment with the side to be recorded on facing you.
Wind past the leader of the tape, on which recording cannot be performed.
- 3** Press the **CD** button and load the desired disc.
- 4** Press one of the **G1 - G3** buttons to select the disc to be recorded first.

- 5** Press the **REC PAUSE** **●|| (●||)** 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.

To perform programmed recording:

1. Program discs and tracks (page 21).
2. Press the **REC PAUSE** **●|| (●||)** button.
3. Press the **▶/◀ (▶)** button.

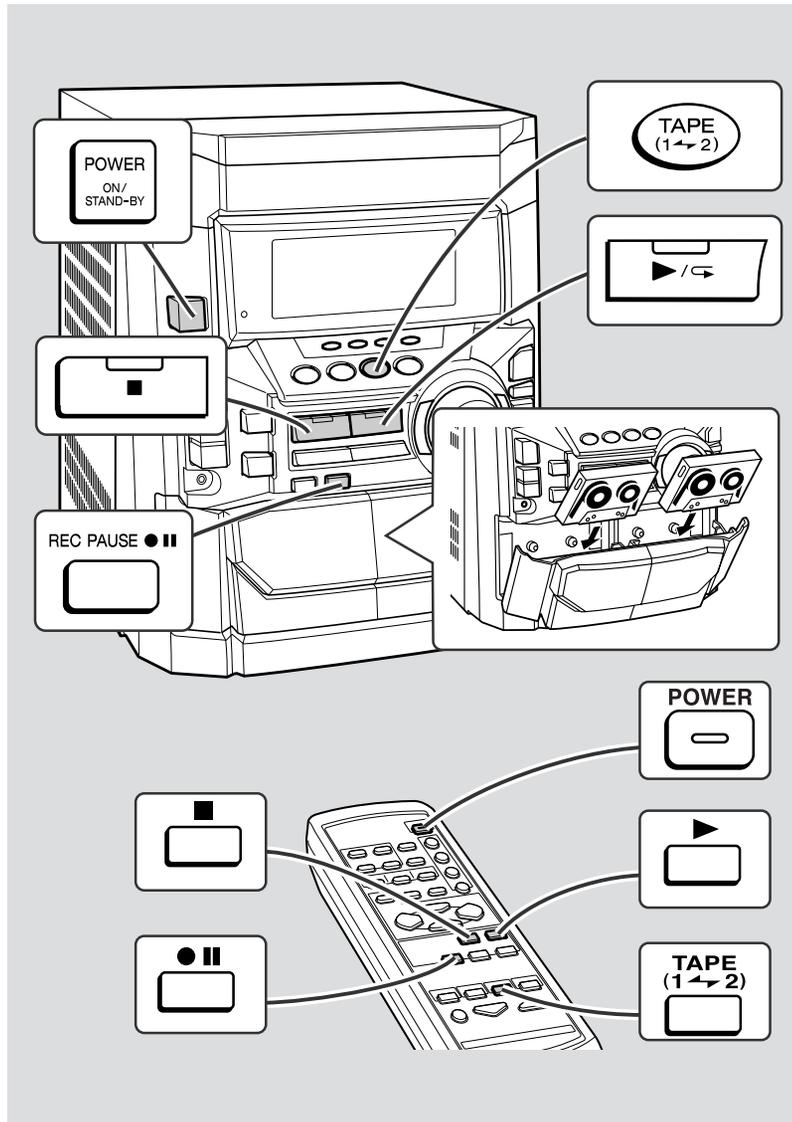
To stop recording:

Press the **■ (CD ■ or TAPE ■)** button.
The CD and tape will stop.

Note:

When the end of the tape is reached while recording, the CD player will display the track number which was being played at that time, and stop automatically.
If you want to restart recording from the interrupted track, turn over the tape, press the **REC PAUSE** **●|| (●||)** button and then the **▶/◀ (▶)** button.
(If tracks have been stored in memory using the programmed recording, recording will restart from the first track stored in memory.)

Dubbing from Tape to Tape



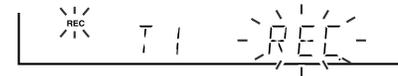
You can record from TAPE 1 to TAPE 2.

For recording, use only normal tapes. Do not use metal and CrO₂ tapes.

- 1 Press the POWER 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 be the same length as the master tape.
- 3 Press the TAPE (1 → 2) button until "TAPE 1" appears in the display.

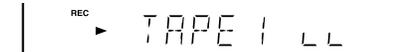


- 4 Press the REC PAUSE button.



Recording will be paused.

- 5 Press the ▶ / ◀ (▶) button to start dubbing.



To stop dubbing:

Press the ■ (TAPE ■) button.

TAPE 1 and TAPE 2 will simultaneously stop.

■ Erasing recorded tapes

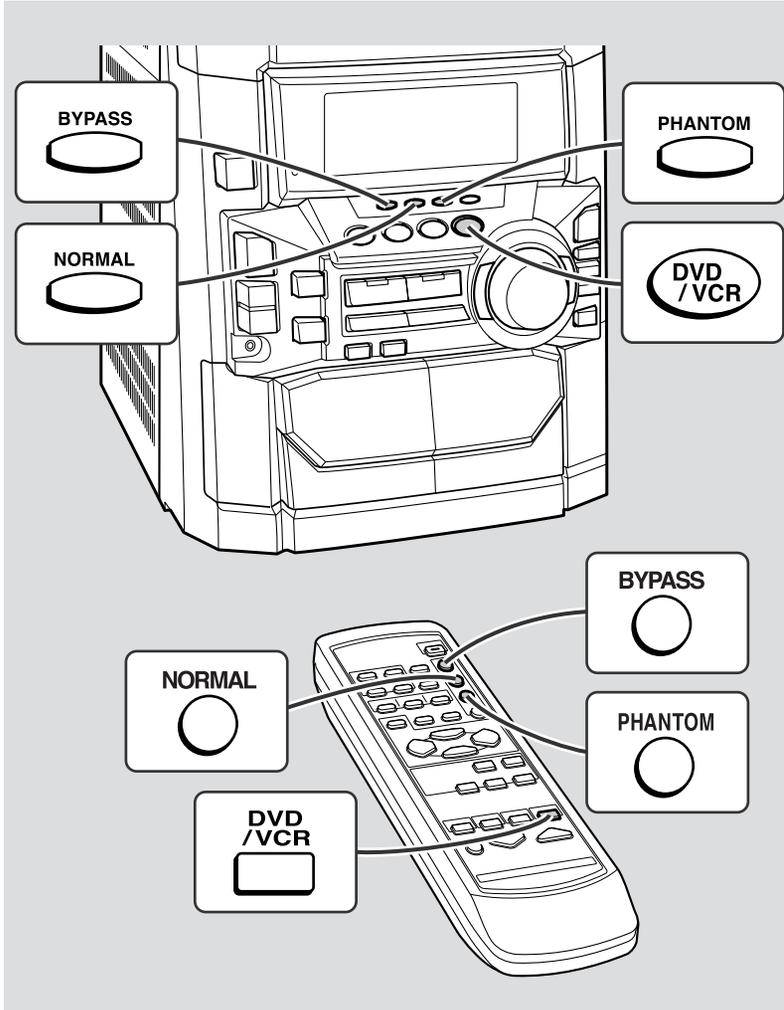
1. Load the tape to be erased into the TAPE 2 cassette compartment.
2. Press the TAPE (1 → 2) button until "TAPE 2" appears in the display.
3. Press the REC PAUSE button. ("ERASE" will appear.)
4. Press the ▶ / ◀ (▶) button to start erasing.

Note:

Make sure that the TAPE 1 is not in use.

Dolby Digital

When you connect this unit to a DVD player which is playing a disc with the  trademark, you can enjoy realistic, powerful sound by playing back the recorded signal through 5 speakers with the sound coming from the front left, front right, center, surround left and surround right speakers.



■ To listen to a disc using the Dolby Digital mode

- 1 Connect a DVD player (see page 38).
- 2 Press the DVD/VCR button to select “DVD”.
- 3 Start the DVD player.

Note:

When in the Dolby Digital surround mode, the equalizer will be set to FLAT.

■ Type of Dolby digital signal

There are different types of Dolby digital signals. The type of Dolby digital signal being input into this unit can be checked in the display.

| | |
|---|--|
|  PCM | Normal PCM playback |
|  1/0 | Center only (monaural) |
|  2/0 | Front (L, R) (When the surround mode is set to Normal or Phantom, sound will also be heard from the surround speakers.) |
|  2/1 | Front (L, R) + surround (monaural) |
|  2/2 | Front (L, R) + surround (L, R) |
|  3/0 | Front (L, R) + center |
|  3/1 | Front (L, R) + center + surround (monaural) |
|  3/2 | Front (L, R) + center + surround (L, R) |

If a low frequency sound effect (Low Frequency Effect) contains a Dolby digital signal, “LFE” will light in the display.

When this “LFE” is lit, low frequency signals will be output from the subwoofer.

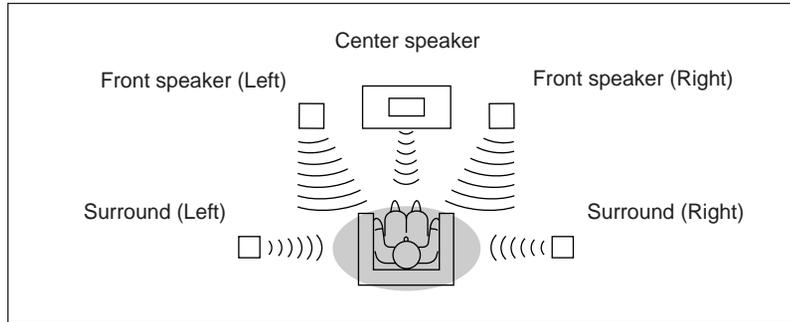
Enjoy the Surround Sound

■ Normal/Phantom/Bypass mode

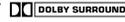
When you connect this unit to other equipment (DVD player, VCR, etc.) which is playing sound sources that have the  or  trademarks, you can enjoy Dolby surround sound.

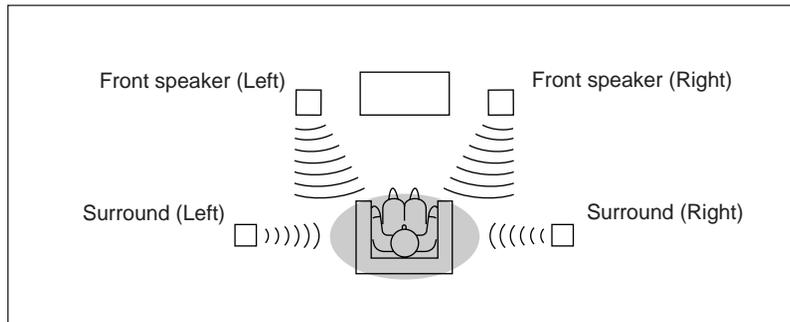
Normal mode:

When you play a sound source that has the  (5.1 channels) or  trademarks, you can enjoy surround sound using all 5 speakers.



Phantom mode:

When you play a sound source that has the  or  trademarks, you can enjoy surround sound using 4 speakers, but not the center speaker.



To listen to Normal/Phantom/Bypass mode:

- 1 Connect the unit you want to play (see page 38).
- 2 Press the DVD/VCR button to select the input (DVD or VCR) from the jack you connected in step 1.

- 3 Press the NORMAL, PHANTOM or BYPASS button to select the surround mode.

NORMAL:

- For a stereo 2 channel input or a Dolby digital 2/0 input, sound will be output from the front left, front right, center and surround speakers. The same monaural channel will be output from the left and right surround speakers.
- For a Dolby digital 5.1 channel input, sound will be output from the front left, front right, center, surround left and surround right speakers. If the surround signal only contains 1 channel, the same monaural channel will be output from the left and right surround speakers.
- For a Dolby digital 1/0 input, sound will only be output from the center speaker.

PHANTOM:

The difference between this mode and the normal mode is that no sound is output from the center speaker. The center speaker signal is split equally and added to the sound for the front left and front right speakers.

BYPASS:

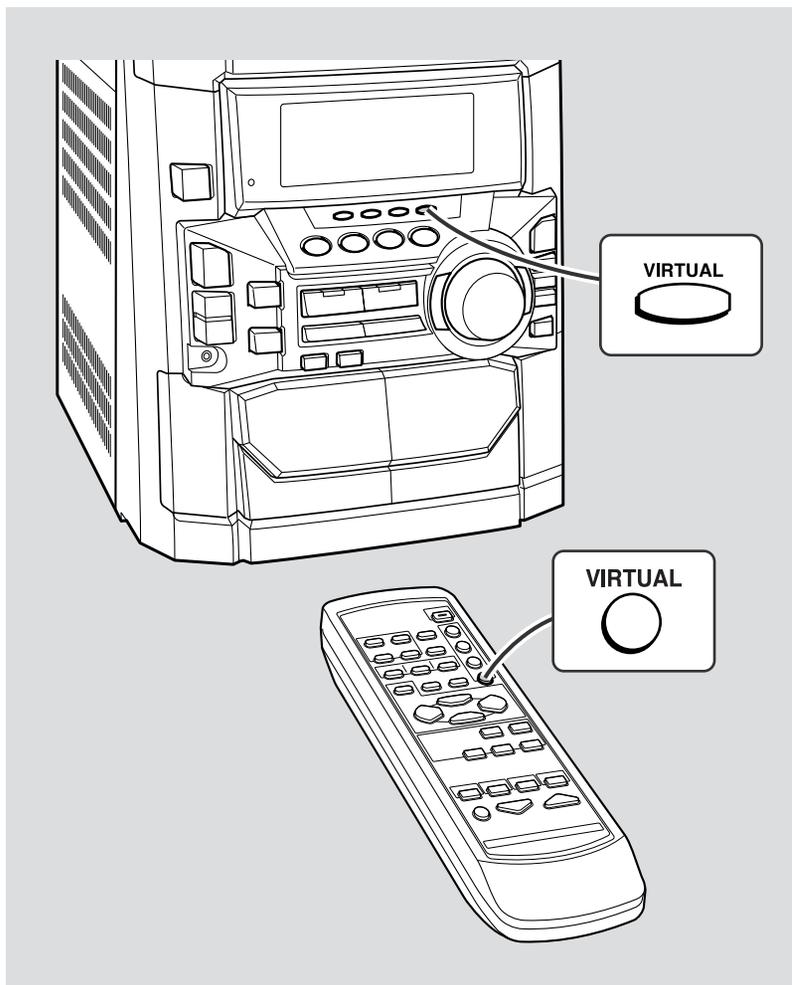
- Sound will only be output from the front left and front right speakers.
- For a Dolby digital multichannel input, any center or rear signals will be mixed and output from the front speakers.
- For a Dolby digital 1/0 input, monaural sound will be output from the front speakers.

- 4 Start playing the sound source.

Notes:

- If the EQUALIZER button is pressed in the Normal/Phantom/Virtual mode, the unit is switched to the Bypass mode automatically.
- When in the Normal/Phantom mode, the equalizer will be set to FLAT.
- You cannot use the Normal/Phantom and Dolby Digital surround features with headphones.
- When headphones are connected to the headphone jack, the Normal/Phantom and Dolby Digital surround modes will be canceled. (The NORMAL or PHANTOM button will not work.)
When the headphones are disconnected, the Normal/Phantom mode will still be canceled. In order to activate the Normal/Phantom modes, you must press the NORMAL or PHANTOM button.
- Pressing the REC PAUSE  button cancels the Normal/Phantom/Virtual mode and the unit enters the Bypass mode.

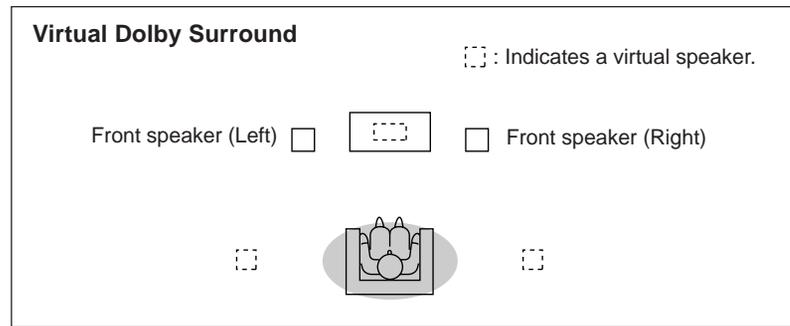
Enjoy the Surround Sound (Continued)



■ Virtual Dolby Surround

Three-dimensional stereo image processing modifies the sound for the 2 front speakers to make it seem as if surround speakers were being sent signals, even though they are not actually used.

You can enjoy a three-dimensional surround stereo image using just the 2 front speakers.



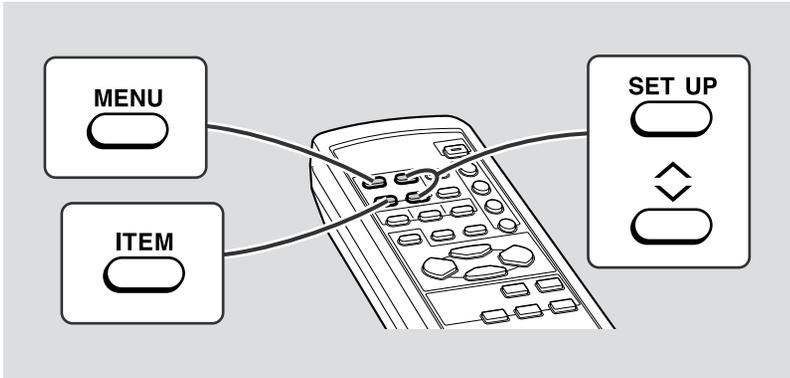
To listen to Virtual Dolby Surround sound:

- 1** Select the desired audio source and begin playback.

- 2** Press the **VIRTUAL** button to select “VIRTUAL”.
When a Dolby digital signal is being input, “**DOLBY VIRTUAL**” and “**DOLBY DIGITAL**” will appear.

Changing the Speaker Setting

You can change the setting as you like.
The initial set up was made when shipped from the factory.
The unit can be used as it is, straight out of the box.



■ Speaker size setting

1 Press the MENU button repeatedly to select “SP SIZE”.

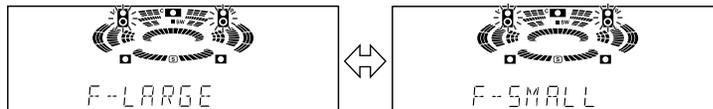


2 Within 8 seconds, press the ITEM button to select “FRONT”.



The front speaker indicators will light up.

3 Within 8 seconds, use the SET UP (^ or v) button on the remote control to select “LARGE” or “SMALL”.



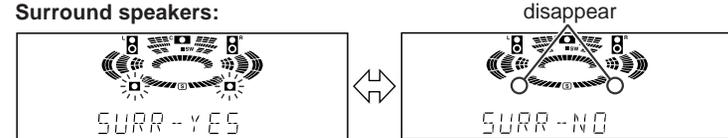
LARGE: When the front speakers can reproduce low frequencies (speakers which can reproduce sounds lower than 60 Hz)

SMALL: When the front speakers cannot reproduce extremely low frequencies

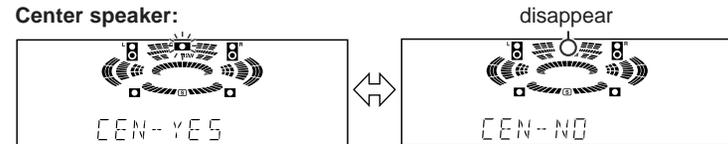
4 Repeat the operation in steps 2 and 3 above to select “SURROUND”, “CENTER” and “S-WOOFER”.

Each of these items can be set separately.

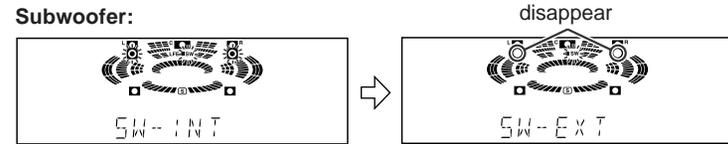
Surround speakers:



Center speaker:



Subwoofer:

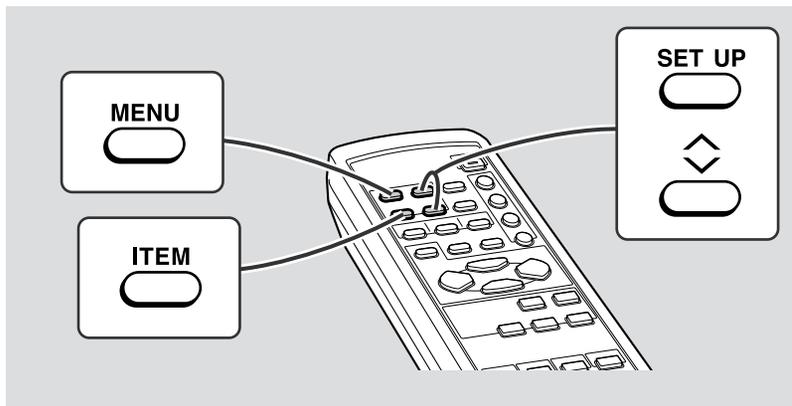


- YES:** When the speakers are connected
NO: When no speaker is connected (When NO is selected, the indicator for that speaker position will go out.)
INT: Setting of the internal subwoofer
EXT: Setting of the external subwoofer (see page 39.)

Note:

- When all 5 speakers have been connected, set each of the items to “YES” and the subwoofer to “SW-INT”.
- The sound is output from the subwoofer when in the Bypass/Virtual mode, even if the setting of subwoofer is changed.

Changing the Speaker Setting (Continued)



■ Speaker delay setting

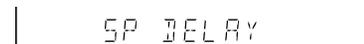
The best sound will be achieved by placing the front speakers, center speaker and surround speakers at the same distance from the listener.

When some of the speakers are at a different distance from the listener, you can select a speaker delay to make it seem as though the speaker distances are the same.

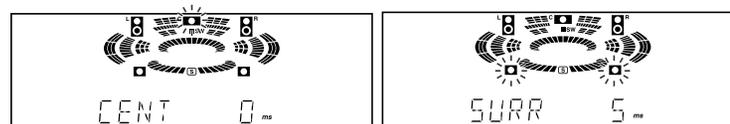
(Factory-shipped settings: CENTER → 0 ms, SURROUND → 5 ms)

If the settings need to be changed due to the type of sound source being played or the conditions in the room, change them as follows.

- 1 Press the MENU button repeatedly to select “SP DELAY”.



- 2 Within 8 seconds, press the ITEM button to select “CENT” or “SURR”.



CENT: To delay the sound from the center speaker

SURR: To delay the sound from the surround speakers

- 3 Within 8 seconds, use the SET UP (^ or v) button on the remote control to select a value.

Adjustable range

CENTER: 0 ms - 5 ms

SURROUND: 0 ms - 15 ms

(Can be changed in 1 ms steps.)

Notes:

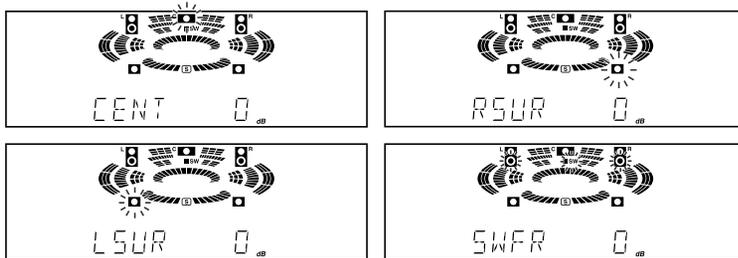
- As a guide for setting the correct delay time, 1 ms is equal to approximately 12" (30 cm) from where the selected speakers are placed further away from the listener than the typical location.
- If the delay time for the surround speakers is set to a large value, a large sound space will be created. If it is set to a small value, the sound space will be small and intimate.

■ Speaker level setting

The output level of each speaker can be adjusted.

- 1 Press the MENU button repeatedly to select "SP LEVEL".

- 2 Within 8 seconds, press the ITEM button repeatedly to select the speaker (CENT, RSUR, LSUR or SWFR) you want to adjust.



- 3 Within 8 seconds, use the SET UP (^ or v) button on the remote control to adjust the level.

You can change the level within a range of +10dB to -10dB, in 1dB steps.

■ Front speaker balance setting

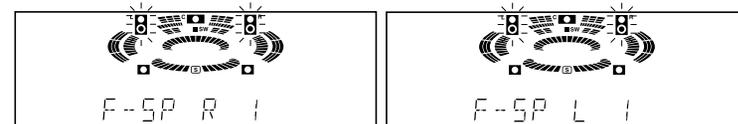
You can adjust the balance between the left and right channels of the front speakers.

- 1 Press the MENU button repeatedly to select "SP LEVEL".

- 2 Within 8 seconds, press the ITEM button.



- 3 Within 8 seconds, press the SET UP ^ button to increase the right speaker level (the left speaker level to decrease), or press the SET UP v button to increase the left speaker level (the right speaker level will decrease).



The speaker balance, as shown in the display, can be changed within the range of "1" to "10".

Note:

The surround speaker balance will not be changed.

To make the balance flat:

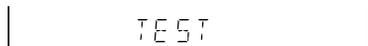
In step 3, use the SET UP (^ or v) button on the remote control to select "F-SP CEN".

Changing the Speaker Setting (Continued)

■ Test tone

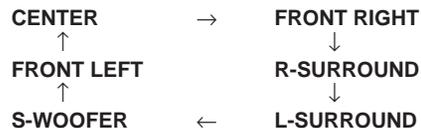
You can check (and adjust) the speaker level by listening to the sound output from each speaker individually, while standing at the actual listening position in the room. The speaker level can be adjusted using the remote control.

- 1 Press the **MENU** button repeatedly to select “TEST”.



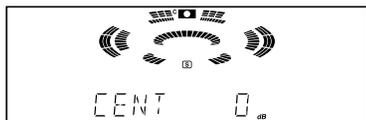
- 2 Within 8 seconds, press the **ITEM** button.

- The test tone will be heard from each speaker, in order, at about 5 second intervals.



- When the test tone is being output, the indicator for that speaker will flash.
- The test tone will be heard until the current menu selection is changed by pressing the **MENU** button again, or by selecting some other function.

- 3 To adjust the speaker level while the test tone is being output from a particular speaker, press the **SET UP** (^ or v) button.



The speaker level can be adjusted within a range of +10dB to -10dB, in 1dB steps.

Notes:

- If “NO” is selected for any individual speaker’s size setting (page 31), the test tone will not be heard from that speaker.
- Note that the front left and front right speaker levels cannot be adjusted using this method.
- If the subwoofer, equipped with a front speaker, is set to “EXT” in the speaker size setting procedure, no sound is emitted from it.

■ Dynamic range setting

DVD discs have a wider dynamic range (sound volume range) than existing VHS videotapes or CD discs. If they are played in home systems, there may be too much difference between the loud and quiet sounds. Therefore, if the volume is set so that the quiet sounds can be heard clearly, the loud sounds may be far too loud.

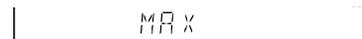
On the other hand, if the volume is set so that the loud sounds are not too loud, you may not be able to hear the quiet sounds. Three settings are available to control the dynamic range easily.

- 1 Press the **MENU** button repeatedly to select “D-RANGE”.



- 2 Within 8 seconds, press the **ITEM** button.

- 3 Within 8 seconds, press the **SET UP** (^ or v) button to select “MAX”, “STD” or “MIN”.



MAX: This setting does not compress the dynamic range of the Dolby digital signal, allowing you to enjoy the full, powerful sound of Dolby encoded digital signals.



STD: This setting compresses the dynamic range, and may produce a more appropriate volume range for home use.



MIN: This setting compresses the dynamic range, allowing you to enjoy movies at a lower volume.

Description of Terminology

| | | | |
|-----------------------------------|--|---|--|
| | | | |
| Dolby Pro Logic | | Dolby Digital | |
| 2 | Number of recording channels | 6 | |
| 4 | Number of playback channels | 6 | |
| Front (L, R) + Center + Rear | Playback configuration of channels | Front (L, R) + Center + Rear (L, R) + Low frequency effects | |
| Matrix processing, Dolby Surround | Sound processing | Discrete processing, Dolby digital encoding/decoding | |
| 16 bits | Number of signal processing bits | 20 bits | |
| 7 kHz | Surround Sound high-frequency playback limit | 20 kHz | |

Dolby Pro Logic Surround:

This refers to the Dolby Surround sound decoder system which is used for movies. Using 4 channels, the sound effects, dialog, sound direction, music, etc. are all reproduced more realistically. Dolby Pro Logic Surround makes the location and movement of sounds much more natural than the original Dolby Surround system. You can enjoy a realistic, powerful feeling like being at a live performance or as if you were at a movie theater or in a concert hall. In order to enjoy this effect, you need at least one pair of surround speakers.

Dolby Digital:

This is the new digital surround system that was created to reproduce theater quality stereophonic Dolby Surround sound at home. Films are now recorded using the 5.1 channel system. Dolby Digital can handle the original soundtrack without modification, allowing you to enjoy the sound field created by the film maker at home.

Dolby Surround:

This is the encoding/decoding system for general-purpose Dolby Surround. When the sound from films recorded in Dolby Surround are reproduced, you will have the feeling of being at a live performance, as if the action is taking place right in front of you.

LFE (Low Frequency Effect):

This refers to the special low-frequency sound effects used in Dolby Digital recordings. When a signal containing LFE encoding is played by this unit, "LFE" will appear in the display.

PCM (Pulse Code Modulation)

This is a recording/transmission system used for digital audio signals. This unit can handle sampling frequencies of 32 kHz, 44.1 kHz and 48 kHz.

Subwoofer:

The subwoofer is a special speaker used to emphasize bass sounds.

In Dolby Digital, this speaker reproduces the LFE signals as well as the low-frequency signals being sent to the front, center and surround speakers.

In Dolby Pro Logic, this speaker reproduces the low-frequency signals sent to the front and center speakers.

It also reproduces low frequency sounds from ordinary stereo recordings.

Timer and Sleep Operation

Timer playback:

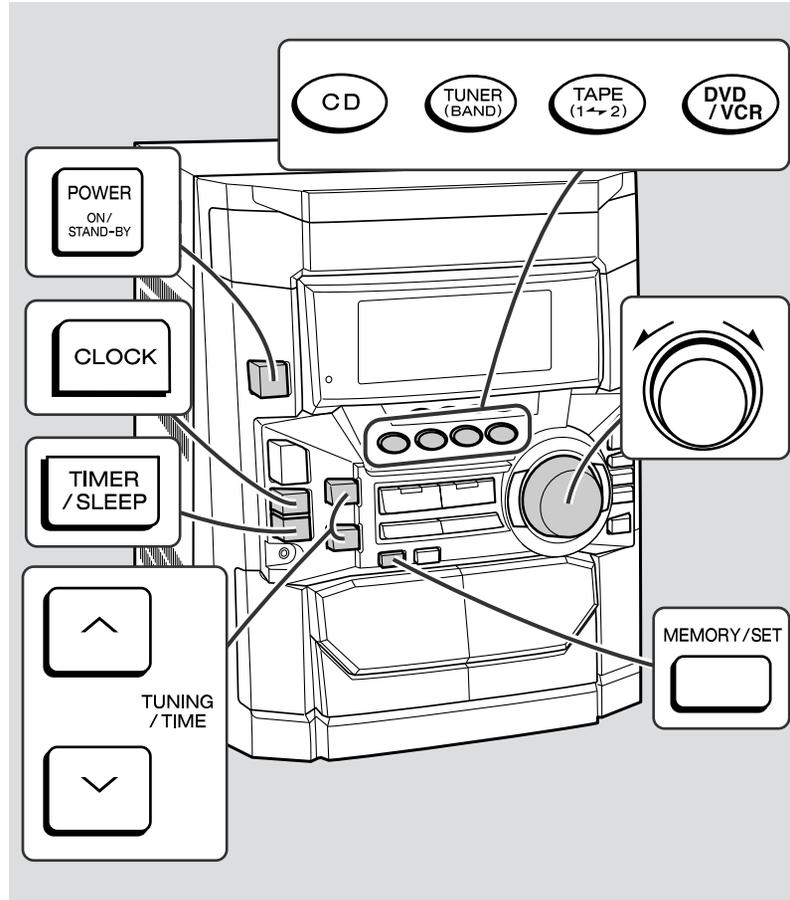
The unit turns on and plays the desired source (CD, tuner, tape) at the preset time.

Timer recording:

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

Sleep operation:

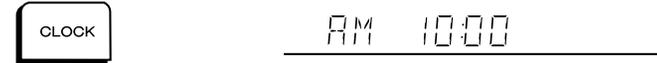
The radio, compact disc and cassette tape can all be turned off automatically.



■ Timer playback or Timer recording

Before setting timer:

1. Press the CLOCK button to check that the clock is on time.



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 POWER 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 (1 → 2).

To select the timer recording source: TUNER (BAND).

When you selected the TUNER (BAND), tune in to the desired station.

- 3 Adjust the volume using the VOLUME control.

Do not turn the volume up too high.

- 4 Press the TIMER/SLEEP button repeatedly until "⊙ PLAY" or "⊙ REC" is displayed.



- 5 Press the TUNING/TIME (∨ or ∧) button to specify the hour to start, then press the MEMORY/SET button.

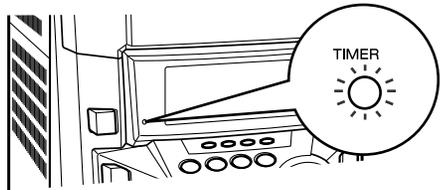


The illustrations show the timer playback setting.

- 6** Press the TUNING/TIME (∧ or ∨) button to specify the minute, then press the MEMORY/SET button.



- 7** The unit will enter the timer stand-by mode automatically.



To cancel the timer playback/timer recording:

Press the POWER button to turn the power on.

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

- 9** In timer playback:

If you select CD or TAPE, the unit will enter the stand-by mode after the playback. If you select TUNER or DVD/VCR, it will enter the stand-by mode one hour after the timer playback starts.

In timer recording:

When recording tape reaches its end, the timer recording will end, and the unit will enter the stand-by mode.

The timer playback/timer recording setting will be canceled if any other operation than volume control is performed during its operation.

■ Sleep operation

- 1** Play back the desired sound source.

- 2** Press the TIMER/SLEEP button repeatedly until “SLEEP” is displayed.



To change the sleep time:

While the sleep time is displayed, press the TUNING/TIME (∨ or ∧) button. (Maximum: 3 hours - Minimum: 1 minute)

- 3 hours - 5 minutes → 5-minute intervals
- 5 minutes - 1 minute → 1-minute intervals

- 3** 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 be turned down 1 minute before the sleep operation finishes.

To cancel the sleep operation:

Press the POWER button while sleep operation is performed.

To confirm the remaining sleep time:

Press the TIMER/SLEEP button while sleep operation is performed. The remaining sleep time is displayed for about 5 seconds.

Note:

Once the sleep time is set, it will remain unchanged until the setting is changed.

To reset or change the timer setting:

Perform “Timer playback or Timer recording” from the beginning.

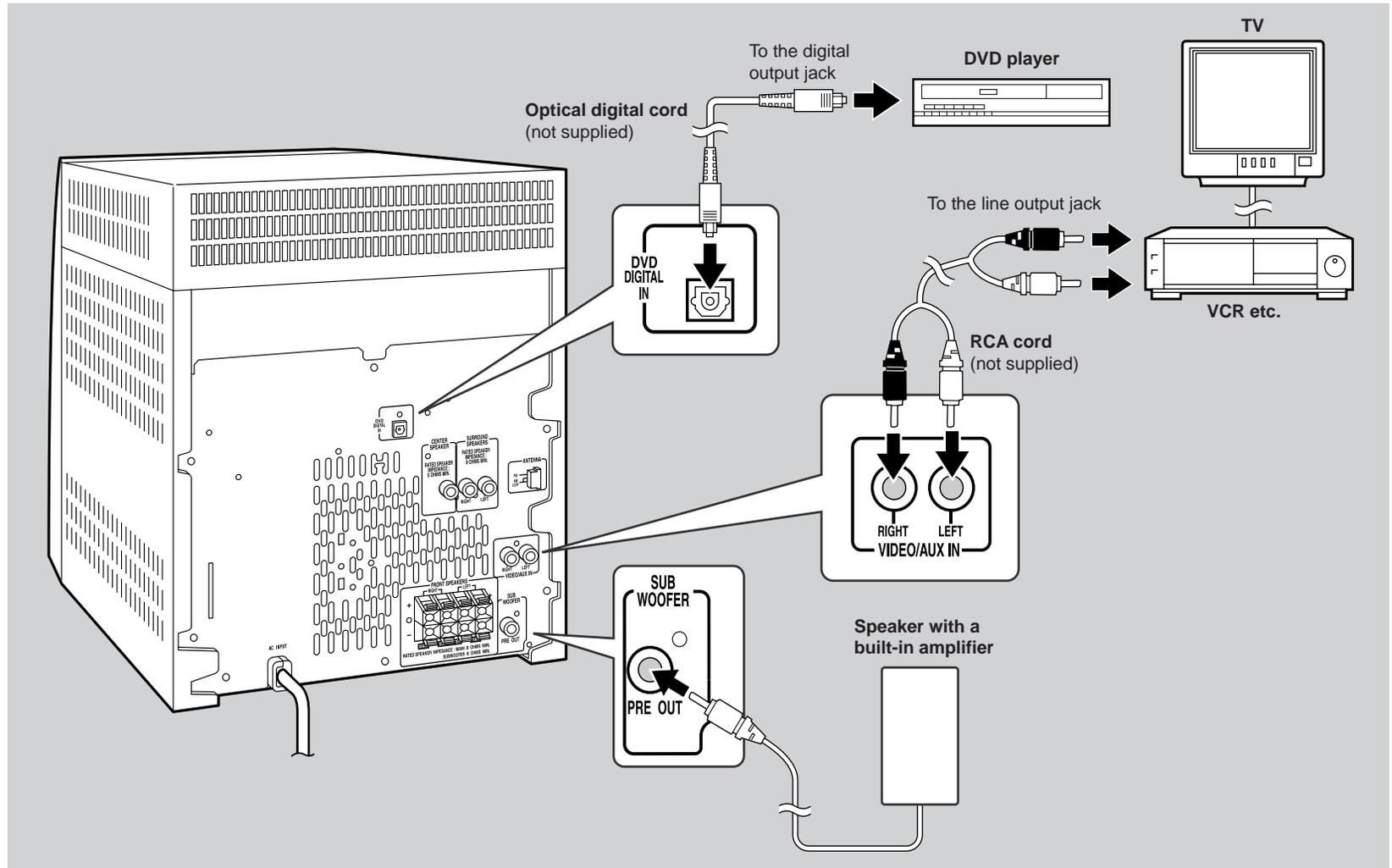
Notes:

- Once the time is set, the setting will be retained until a new time is entered.
- When performing timer playback or recording using another unit connected to the VIDEO/AUX IN or DIGITAL IN jacks, select “DVD/VCR” in step 2. At this time, only this unit will be turned on or enter the power stand-by mode automatically. (Another unit will not be turned on or turned off.)

Enhancing Your System

■ Cords required to connect an external unit

When external units are connected, commercially available cords are needed.



■ To record on a tape from DVD or VCR etc.

1 Load a cassette in the TAPE 2 cassette compartment.

2 Press the DVD/VCR button.

To select the unit connected to the DVD jack

Press the DVD/VCR button repeatedly to select "DVD".

To select the unit connected to the VIDEO/AUX IN jack

Press the DVD/VCR button repeatedly to select "VCR".



3 Press the REC PAUSE  (●||) button.

4 Press the  /  (▶) button.

5 Play the DVD, VCR etc.

Note:

A DVD player allows you to select the "PCM" or "DOLBY DIGITAL" audio output mode. Before playing a Dolby digital sound disc, be sure to set the unit in the "DOLBY DIGITAL" mode. For more details, see the operation manual for your DVD player.

■ Using subwoofer speakers of other equipment

When a commercially available speaker with a built-in amplifier is connected to this unit, you can enjoy sound with emphasized bass.

1 Connect an RCA cord from a commercially available speaker with a built-in amplifier to the SUBWOOFER OUT jack.

2 Set the unit to "SW-EXT" in "Speaker size setting" (see page 31).

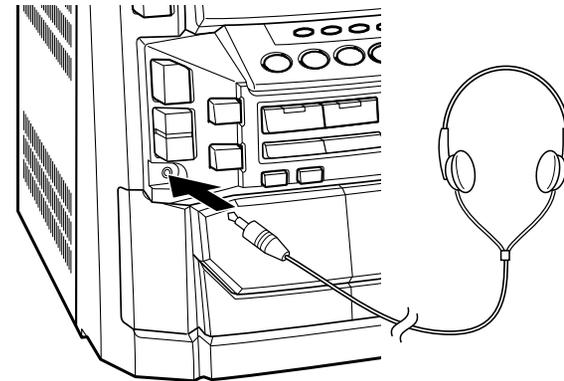


Note:

No sound is heard from the external subwoofer when in the Bypass/Virtual mode.

■ Headphones

- Before plugging in or unplugging the headphones, reduce the volume.
- Be sure your headphones have a 1/8" (3.5 mm) 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 control.



Note:

It is not possible to use the Normal/Phantom or Dolby Digital surround modes when using your headphones.

When headphones are connected to the headphones jack, the Normal/Phantom mode will be canceled. (The unit will be set to the Bypass mode automatically.)

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 authorized SHARP dealer or service center.

■ General

| Symptom | Possible cause |
|---|--|
| <ul style="list-style-type: none"> ● The clock is not on time. | <ul style="list-style-type: none"> ● Did a power failure occur? Reset the clock. (Refer to page 17.) |
| <ul style="list-style-type: none"> ● When a button is pressed, the unit does not respond. | <ul style="list-style-type: none"> ● Set this unit to the power stand-by mode and then turn it back on. ● If the unit still malfunctions, reset it. (Refer to page 42.) |
| <ul style="list-style-type: none"> ● No sound is heard. | <ul style="list-style-type: none"> ● Is the volume level set to “0”? ● Are the headphones connected? ● Are the speaker wires disconnected? |
| <ul style="list-style-type: none"> ● The balance between the left and right channels is bad. | <ul style="list-style-type: none"> ● Are the front and surround speakers connected to the correct left and right channels? ● If an external unit is connected, are the left and right channels connected properly? |
| <ul style="list-style-type: none"> ● Hum or excessive noise. | <ul style="list-style-type: none"> ● Is the speaker cord plugged in correctly? ● Does the speaker cord run past other electronic equipment? ● Are the plugs or terminals dirty? |
| <ul style="list-style-type: none"> ● No sound is heard, or the sound is too low, from the center or surround speakers. | <ul style="list-style-type: none"> ● Is the “SP SIZE” item set to “NO” in the “SET UP” operation (page 31)? ● Is the volume too low? |
| <ul style="list-style-type: none"> ● The TIMER indicator is flashing. | <ul style="list-style-type: none"> ● Is the speaker wire shorted? ● Was the unit used at high volume for many hours? |

■ CD player

| Symptom | Possible cause |
|--|---|
| <ul style="list-style-type: none"> ● Playback does not start. ● Playback stops in the middle or is not performed properly. | <ul style="list-style-type: none"> ● Is the disc loaded upside down? ● Does the disc satisfy the standards? ● Is the disc distorted or scratched? |
| <ul style="list-style-type: none"> ● Playback sounds are skipped, or stopped in the middle of a track. | <ul style="list-style-type: none"> ● Is the unit located near excessive vibrations? ● Is the disc very dirty? ● Has condensation formed inside the unit? |

■ Tuner

| Symptom | Possible cause |
|--|---|
| <ul style="list-style-type: none"> ● Radio makes unusual noise consecutively. | <ul style="list-style-type: none"> ● Is the unit placed near the TV or computer? ● Is the FM/AM loop antenna placed properly? Move the AC power cord away from the antenna if located near. |

■ Cassette deck

| Symptom | Possible cause |
|---|--|
| <ul style="list-style-type: none"> ● Cannot record. | <ul style="list-style-type: none"> ● Is the erase-protection tab removed? |
| <ul style="list-style-type: none"> ● Cannot record tracks with proper sound quality. ● Cannot erase completely. | <ul style="list-style-type: none"> ● Is it a normal tape? ● (You cannot record on a metal or CrO₂ tape.) |
| <ul style="list-style-type: none"> ● Sound skipping. | <ul style="list-style-type: none"> ● Is there any slack? ● Is the tape stretched? ● Are the capstans, pinch rollers, or heads dirty? |
| <ul style="list-style-type: none"> ● Cannot hear treble. ● Sound fluctuation. | |
| <ul style="list-style-type: none"> ● Cannot remove the tape. | <ul style="list-style-type: none"> ● If a power failure occurs during playback, the heads remain engaged with the tape. Do not open the compartment forcibly. Wait until electricity resumes. |

■ Remote control

| Symptom | Possible cause |
|--|--|
| <ul style="list-style-type: none"> ● The remote control does not operate. | <ul style="list-style-type: none"> ● Is the AC power cord of the unit plugged in? ● Is the battery polarity respected? ● Are the batteries dead? ● Is the distance or angle incorrect? ● Does the remote control sensor receive strong light? |

■ Connecting DVD player

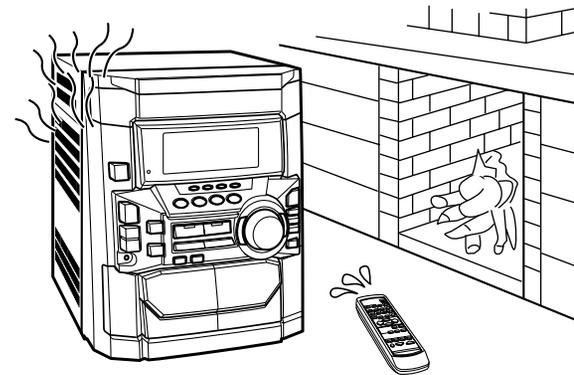
| Symptom | Possible cause |
|--|--|
| <ul style="list-style-type: none"> ● Although a DVD player is connected, no sound is heard. | <ul style="list-style-type: none"> ● Is the power to the DVD player connected properly? ● Is a digital signal being output from the DVD player? ● Is "DVD NO" being displayed? ● Does the type of DVD digital signal appear in the display? ● Since "DVD---" is not output from the Dolby digital source, it cannot be decoded. (Refer to page 28.) ● Is a Dolby digital 2/0 (monaural) signal being played with the surround mode set to NORMAL and without a center speaker connected? |

■ 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.



■ 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.

Troubleshooting Chart (continued)

■ Clearing all the memory (reset)

1. Press the **POWER** button to enter the power stand-by mode.
2. While pressing down the **▶ / ◀** button and **X-BASS/DEMO** button, press the **POWER** button until “CLEAR AL” appears.

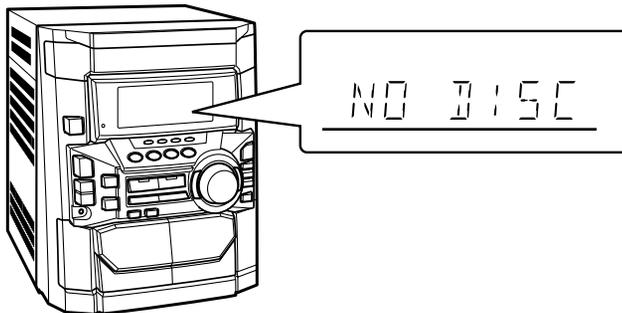


Caution:

This operation will erase all data stored in memory including clock, timer settings, tuner preset, CD program, and other set-up details.

■ Before transporting the unit

1. Press the **POWER** 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 the unit.
4. Press the **▲ OPEN/CLOSE** button to close the disc tray.
Make sure that “NO DISC” is displayed.
5. Press the **POWER** button to enter the stand-by mode, and then unplug the **AC power cord** from the AC outlet.



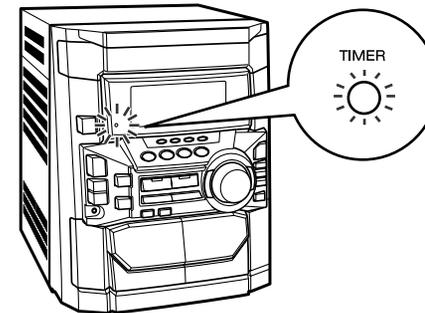
■ When TIMER indicator is flashing

The unit will be overheated when **TIMER** indicator is flashing.

Due to a problem in the speaker circuit, the unit will enter the stand-by mode automatically.

In this case, take the following corrective actions.

1. **Unplug the AC power plug from the AC outlet.**
2. **Make sure that the unit vent is not blocked.**
3. **Make sure that the speaker wires have been correctly connected to the speaker terminals.**
4. **After checking items 2 and 3 above, wait for 2 or 3 hours before trying to use the unit.**
5. **Reconnect the AC power cord.**

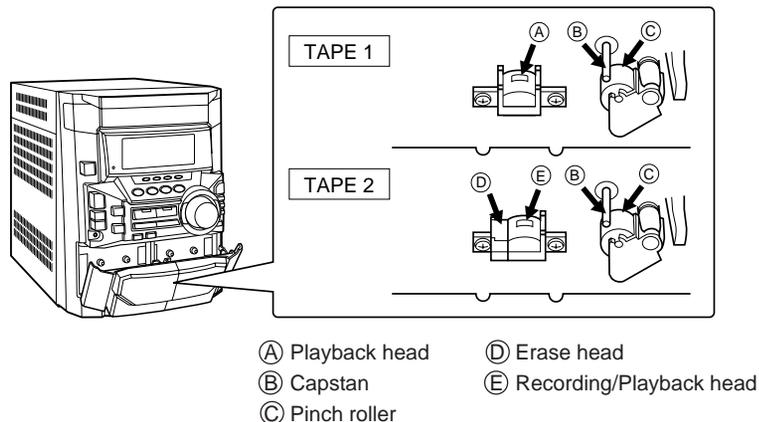


Note:

If the **TIMER** indicator flashes again during use, please unplug the AC power plug, and contact a SHARP authorized service center.

■ 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.



- After long use, the deck's heads and capstans may become magnetized, causing poor sound. Demagnetize these parts once every 30 hours of playing/recording time by using a commercial tape head demagnetizer. Read the demagnetizer's instructions carefully before use.
- In order to ensure proper operation of the CD player, preventative maintenance (cleaning of the laser pickup lens) should be performed periodically. Lens cleaners are commercially available. Contact your local CD software dealer for options.

■ 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 oil, solvents, gasoline, paint thinners or insecticides on the unit.



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

| | |
|--------------------------|--|
| Power source | AC 120 V, 60 Hz |
| Power consumption | 230 W |
| Dimensions | Width: 10-11/16" (270 mm) Height: 13" (330 mm) Depth: 14-11/16" (372 mm) |
| Weight | 19.4 lbs (8.8 kg) |

■ Amplifier

| | |
|-------------------------|--|
| Output power | Front speakers (Main) : 30 W minimum RMS per channel into 8 ohms. Front speakers (Subwoofer) : 40 W per channel : 6 ohms (100 Hz, 10 % T.H.D.) Center speaker : 30W : 6 ohms (1 kHz, 10 % T.H.D.) Surround speakers : 20W per channel : 8 ohms (1 kHz, 10 % T.H.D.) |
| Output terminals | Front speakers (Main) : 8 ohms Front speakers (Subwoofer) : 6 ohms Center speaker : 6 ohms Surround speakers : 8 ohms Subwoofer(Pre-out) : 10 kohms Headphones : 16-50 ohms (recommended; 32 ohms) |
| Input terminals | DVD (Digital) : Optical VCR/Auxiliary : 500 mV/47 kohms |

■ CD player

| | |
|---------------------------|--|
| Type | 3-disc multi-play compact disc player |
| Signal readout | Non-contact, 3-beam semiconductor laser pickup |
| D/A converter | 1-bit D/A converter |
| Frequency response | 20 - 20,000 Hz |
| Dynamic range | 100 dB (1 kHz) |

■ Tuner

| | |
|------------------------|---------------------------------------|
| Frequency range | FM: 87.5-108 MHz AM: 530-1,720 kHz |
|------------------------|---------------------------------------|

■ Cassette deck

| | |
|---------------------------|--|
| Frequency response | 50 -14,000 Hz (Normal tape) |
| Signal/noise ratio | 55 dB (TAPE 1, playback) 50 dB (TAPE 2, recording/playback) |
| Wow and flutter | 0.25 % (WRMS) |

■ Front speaker with subwoofer

| | |
|---------------------|---|
| Type | 3 - way, 5-1/8" (130 mm) subwoofer, 4" (100 mm) woofer and 2" (50 mm) tweeter |
| Maximum input power | Subwoofer: 80 W Main: 60 W |
| Impedance | Subwoofer: 6 ohms/ Main: 8 ohms |
| Dimensions | Width: 8- 5/8" (220 mm) Height: 13" (330 mm) Depth: 9- 5/8" (245 mm) |
| Weight | 9.0 lbs. (4.1 kg)/each |

■ Center speaker

| | |
|---------------------|---|
| Type | Full range, 4" (100 mm) |
| Maximum input power | 60 W |
| Impedance | 6 ohms |
| Dimensions | Width: 10- 1/4" (260 mm) Height: 5- 5/8" (142 mm) Depth: 6- 11/16" (170 mm) |
| Weight | 2.2 lbs. (1.0 kg)/each |

■ Surround speaker

| | |
|---------------------|---|
| Type | Full range, 4" (100 mm) |
| Maximum input power | 40 W |
| Impedance | 8 ohms |
| Dimensions | Width: 7- 7/8" (200 mm) Height: 6- 3/4" (172 mm) Depth: 3- 3/4" (95 mm) |
| Weight | 1.3 lbs. (0.6 kg)/each |

MEMO

MEMO

CONSUMER LIMITED WARRANTY

SHARP ELECTRONICS CORPORATION warrants to the first consumer purchaser that this Sharp brand product (the "Product"), when shipped in its original container, will be free from defective workmanship and materials, and agrees that it will, at its option, either repair the defect or replace the defective Product or part thereof with a new or remanufactured equivalent at no charge to the purchaser for parts or labor for the period(s) set forth below.

This warranty does not apply to any appearance items of the Product nor to the additional excluded item(s) set forth below nor to any Product the exterior of which has been damaged or defaced, which has been subjected to improper voltage or other misuse, abnormal service or handling, or which has been altered or modified in design or construction.

In order to enforce the rights under this limited warranty, the purchaser should follow the steps set forth below and provide proof of purchase to the servicer.

The limited warranty described herein is in addition to whatever implied warranties may be granted to purchasers by law. ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE PERIOD(S) FROM THE DATE OF PURCHASE SET FORTH BELOW. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described herein, or to extend the duration of any warranties beyond the time period described herein on behalf of Sharp.

The warranties described herein shall be the sole and exclusive warranties granted by Sharp and shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of Sharp to the purchaser with respect to the Product, and shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall Sharp be liable, or in any way responsible, for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than an authorized servicer. Nor shall Sharp be liable or in any way responsible for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

Model Specific Section

Your Product Model Number & Description:

CD-DD4500 Mini Component System

(Be sure to have this information available when you need service for your Product.)

Warranty Period for this Product:

One (1) year parts and labor from the date of purchase.

Additional Item(s) Excluded from Warranty Coverage (if any):

Non-functional accessories, supplies, and consumable items.

Where to Obtain Service:

At a Sharp Authorized Servicer located in the United States.
To find a location of the nearest Sharp Authorized Servicer, call Sharp toll free at 1-800-BE-SHARP.

What to do to Obtain Service:

Ship prepaid or carry in your Product to a Sharp Authorized Servicer.
Be sure to have **Proof of Purchase** available. If you ship the Product, be sure it is insured and packaged securely.

TO OBTAIN SUPPLY, ACCESSORY OR PRODUCT INFORMATION, CALL **1-800-BE-SHARP**.

SHARP

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