

INSTRUCTION  
MANUAL

**SANYO**

# MCD850F

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## PORTABLE COMPONENT SYSTEM WITH CD PLAYER



# ENGLISH

## CAUTION

The POWER button of this unit is connected to the secondary circuit and does not disconnect the unit from the AC power source even if the button is in the **■** position, as long as the AC cord is connected to the AC line.

## COPYRIGHT WARNING

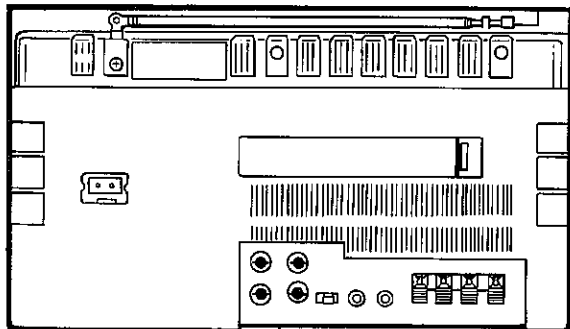
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## SAFETY CERTIFICATION

### CAUTION

– USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THIS UNIT SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT QUALIFIED SERVICE PERSONNEL.



CLASS 1 LASER PRODUCT

## PRECAUTIONS FOR THE CD (COMPACT DISC) PLAYER

- Be sure your hands are clean when handling discs. Never insert a disc which has a crack on its surface.
- Never take hold of the opened disc compartment lid to move the unit.
- To keep the pickup clean, do not forget to close the disc compartment lid.
- Do not touch the pickup with your fingers or any other object. Dirt and scratches on the pickup lens surface may lead to trouble, such as interruptions in sound, or unit malfunction.

## DEW FORMATION

Water drops appear on the windows of a warm room in cold winter days. This phenomenon is called dew formation. This unit is equipped with an optical pickup lens, and dew may appear on its surface in a similar manner under the following conditions.

- Immediately after turning room heating on.
- Rooms where steam is being produced, or with a high humidity level.
- When the unit is quickly moved from a cold room to a warm one.
- When the unit is moved indoors from a cold climate.

In these cases the unit may be unable to read the disc contents and operate normally. Remove the disc, and place the unit in a warm location. Normal operation may be resumed after about 1 hour. (If dew forms on the disc surface, wipe it off with a soft cloth.)

## INTERRUPTIONS IN PLAYBACK

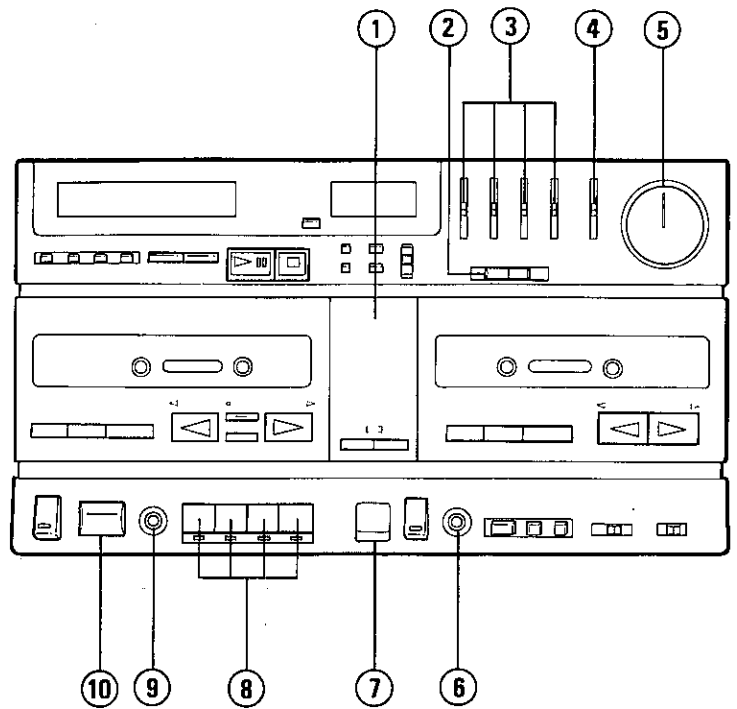
The following conditions will interrupt the sound during playback:

- Using a scratched, dirty or warped disc.
- If the unit suffers strong physical shocks, sometimes playback will stop and it will be impossible to continue normal operation. In this case, switch off the power and restart from the beginning. (Do not drop the unit.)
- Placing the unit on a thin board, or another location easily affected by vibration.
- Interruptions of playback may also be caused by the disc contents. In this case, just lower the volume level.

## CONTROLS

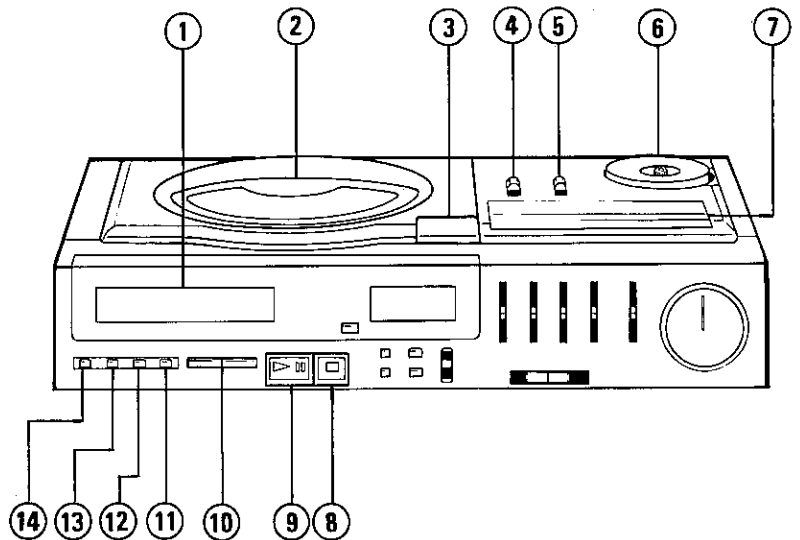
### GENERAL:

1. LEVEL Meter
2. BRSS (Bass Raised Sound System) Switch
3. GRAPHIC EQUALIZER Controls
4. BALANCE Control
5. VOLUME Control
6. MIC (External) Jack
7. REMOTE Control Window (Infrared Sensor)
8. FUNCTION Buttons and Indicators
  - LINE Button and Indicator
  - CD Button and Indicator
  - TUNER Button and Indicator
  - TAPE Button and Indicator
9. PHONES Jack
10. POWER Button



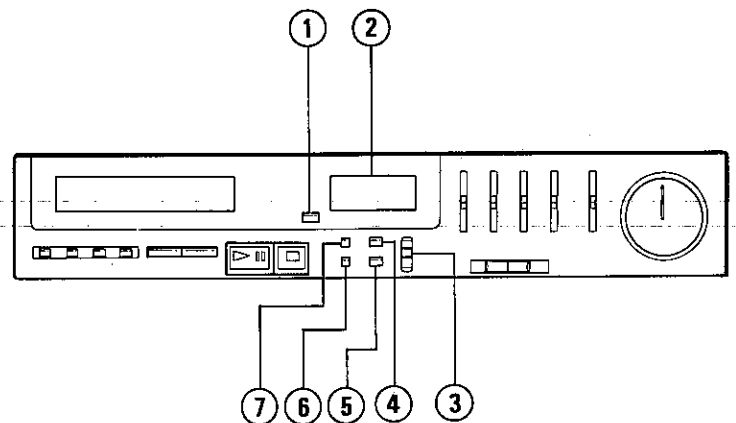
### COMPACT DISC (CD) AND TUNER:

1. COMPACT DISC DISPLAY
2. Compact Disc Compartment
3. OPEN Button
4. BAND Switch
5. MODE Switch
6. TUNING Control
7. STEREO Indicator
8. STOP/CLEAR Button
9. PLAY/PAUSE Button
10. FBACK/FFWD (SKIP/SEARCH) Button
11. SPACE Button
12. MODE/EDIT Button
13. REPEAT Button
14. REMAIN/PROGRAM Button



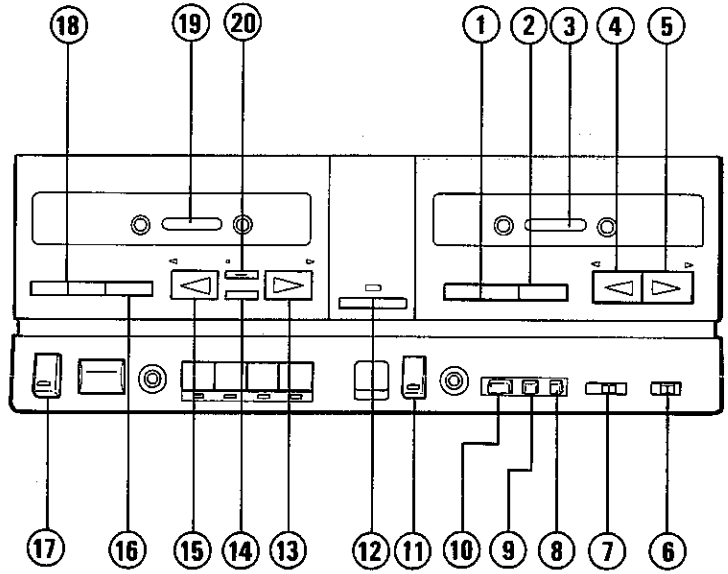
### TIMER:

1. SLEEP START Button
2. TIMER DISPLAY
3. Timer Mode Switch
4. H (Hour) Button
5. M (Minute) Button
6. CLOCK Button
7. TIMER Button



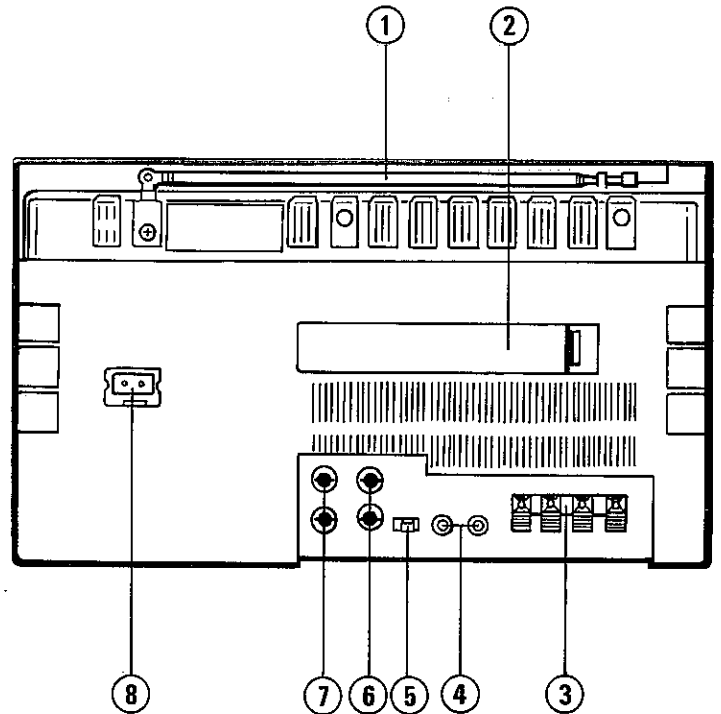
**TAPE DECK "A" AND "B":**

1. Tape "A" REW/FWD (Rewind/Fast Forward) Buttons
2. Tape "A" STOP Button
3. Tape "A" Cassette Compartment
4. Tape "A" FWD (Forward) Button and Indicator
5. Tape "A" REV (Reverse) Button and Indicator
6. TIMER Switch
7. REVERSE Switch
8. Tape "A" TAPE Select Button
9. Tape "B" TAPE Select Button
10. DOLBY NR (Noise Reduction) Button
11. Tape "A" EJECT Button
12. DUBBING SPEED Buttons and Indicator
  - NORMAL SPEED Button
  - HIGH SPEED Button
13. Tape "B" FWD (Forward) Button
14. Tape "B" PAUSE Button
15. Tape "B" REV (Reverse) Button
16. Tape "B" STOP Button
17. Tape "B" EJECT Button
18. Tape "B" REW/FWD (Rewind/Fast Forward) Buttons
19. Tape "B" Cassette Compartment
20. Tape "B" REC (Record) Button and Indicator



**REAR PANEL:**

1. Telescoping Antenna
2. COMPUTER/CLOCK Battery Compartment
3. SPEAKER Jacks (Left/Right)
4. SURROUND Speaker Jacks (Left/Right)
5. BEAT CANCEL Switch
6. CD OUT Jacks (Left/Right)
7. LINE IN Jacks (Left/Right)
8. AC INPUT Jack



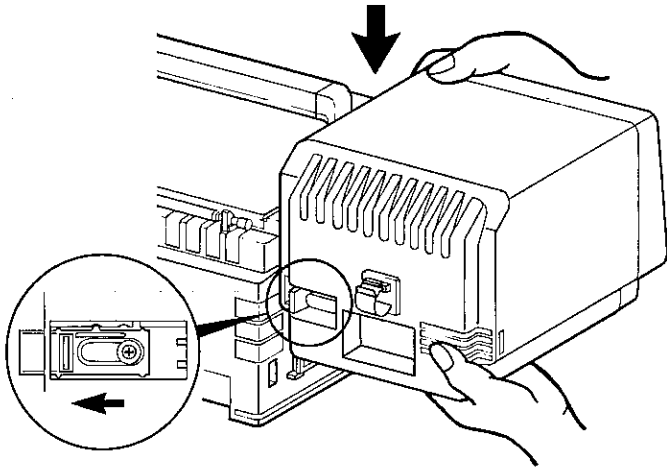
**DOLBY NR (NR):**

1. The Dolby Noise Reduction System reduces unwanted noise during recording or playback.
2. Dolby and the double-D symbol are trademarks of the Dolby Licensing Corporation.
3. The Dolby Noise Reduction System is manufactured under license from the Dolby Laboratories Licensing Corporation.

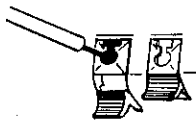
## SPEAKERS

### CONNECTING THE SPEAKERS

1. Raise the handle and align the grooves in the speakers with the rails on the base unit.
2. Lower the speakers straight down onto the rails.
3. Slide the Lock/Release lever on the back of each speaker all the way toward the base unit as shown to lock the speakers in place.



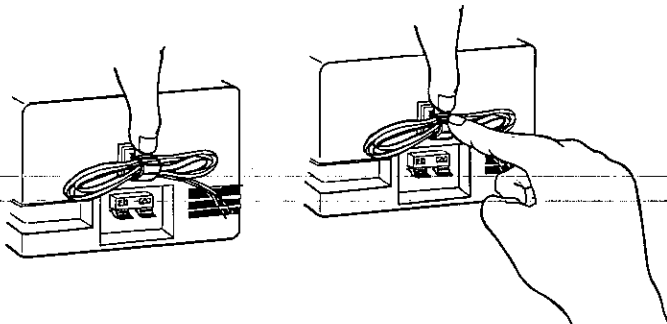
4. Be sure to match the color of the speaker wire to the color of the speaker terminals on both the speaker box and the base unit. Press and hold down the tab on a speaker terminal as shown below. Insert a speaker wire into the terminal and release the tab.



5. Speaker cord band: Press the tab and pull on the band as shown to open it. Wind up the extra speaker cord and fasten it inside the band.

### REMOVING THE SPEAKERS

1. Disconnect the speaker wires from the terminals on the base unit.
2. Slide the Lock/Release lever on the back of each speaker away from the base unit to unlock the speakers.
3. Raise the handle and lift each speaker straight up.



### SETTING THE SURROUND SPEAKERS (OPTIONAL)

Connect a pair of surround speakers (not supplied) to the left and right SURROUND SPKR jacks on the back of the unit. For the best results, place the surround speakers away from the main unit (Figure 1), on either side of the listener (Figure 2), or on either side behind the listener (Figure 3).

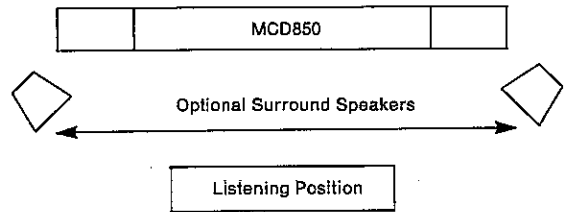


Figure 1

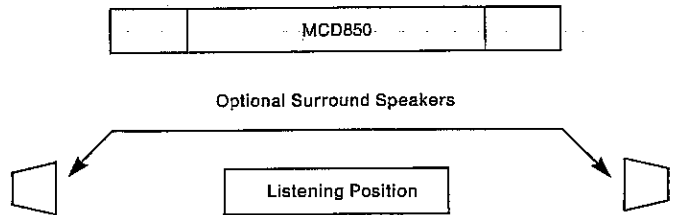


Figure 2

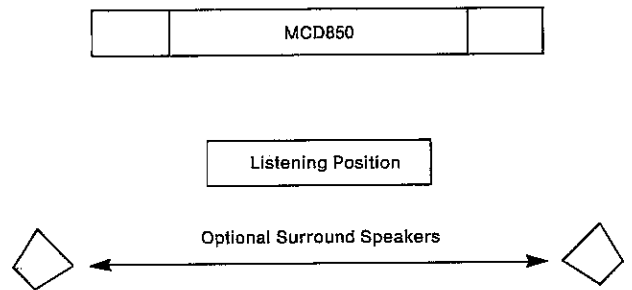


Figure 3

## POWER SUPPLY

### VOLTAGE ADJUSTMENT FOR AC OPERATION

This unit is factory-adjusted to "230V" but may be reset to 115V. Before operating the unit, set the VOLTAGE SELECTOR located on the back of the unit using a slotted screwdriver to correspond as closely as possible to your local voltage.

115V .....	110V ~ 127V
230V .....	220V ~ 240V

### AC OPERATION

Plug one end of the AC power cord into the AC INPUT jack on the back of the unit and then plug the other end into an AC wall outlet.

**NOTE:** If the rechargeable battery pack is attached to the bottom of the unit with the AC power cord connected to an AC wall outlet;

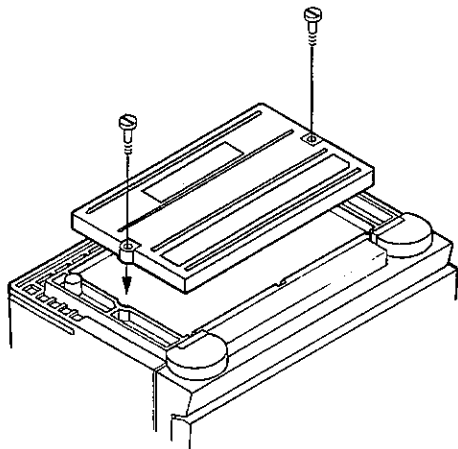
- a) POWER button ON – No recharged.
- b) POWER button OFF – Recharged.

## RECHARGEABLE BATTERY PACK OPERATION – LBT-12 (Optional)

To recharge the LBT-12 battery pack:

1. Set the unit's POWER button to OFF (■).
2. Attach the battery pack to the bottom of the unit using both provided screws as shown.
  - a) Make sure that the contacts on the battery line up with the contacts on the unit.
  - b) Tighten the screws gently until snug.

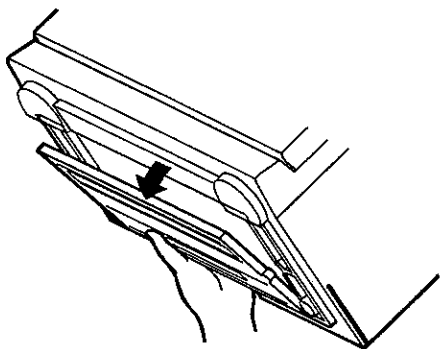
**IMPORTANT: DO NOT OVERTIGHTEN THE SCREWS.**



3. Connect one end of the AC power cord to the unit, then connect the other end to an AC wall outlet. Charging will begin.

**NOTE:** The unit's POWER button must be set to OFF. Charging is not possible while the unit is being used.
4. Charge the battery pack for about 5 hours.
5. Unplug the AC power cord from the AC outlet and remove it from the unit.

**NOTE:** A fully-charged battery pack will operate the CD player for about 3 hours.
6. To remove the battery pack: Remove both mounting screws and tilt the unit to drop the battery pack into your hand.



## SETTING THE GRAPHIC EQUALIZER CONTROLS

Move the GRAPHIC EQUALIZER controls up or down from "0" to boost (increase) or cut (decrease) the power for the corresponding frequency band. Move the controls slowly until the desired sound is heard.

### Power Boost

- Lower Frequencies: To emphasize low bass notes
- Center Frequencies: To emphasize vocalists and add clarity to instrumental sounds
- Upper Frequencies: To emphasize high frequency sounds

### Power Cut

- Lower Frequencies: To reduce unwanted bass from poor recordings
- Center Frequencies: To move the sound farther away from the listener and soften instrumental sounds
- Upper Frequencies: To reduce unwanted high frequency noise

## BRSS (Bass Raised Sound System) SWITCH

Use this switch to select the frequency band that you want to adjust with the left-hand GRAPHIC EQUALIZER control: 70 Hz, 100 Hz, or 150 Hz.

## BATTERY INSTALLATION

Remove the rear cover of the remote control by sliding it in the direction of the arrow. Install two AAA size batteries (included), while observing the correct polarity [match the (+) and (-) signs]. If the batteries are installed incorrectly, the remote control will not operate and damage may result. Replace the rear cover.

### CAUTION:

- Remove the batteries from the remote control if it will not be used for a long time. Worn out batteries may leak and damage the remote control.
- Replace worn out batteries with new batteries of the same type when the remote control does not operate properly.

## REMOTE CONTROL OPERATION

The wireless infrared remote control can operate this unit from a distance of up to 5 to 7 meters.

The remote control emits an invisible infrared beam, which carries the control signals to the sensor window on the front panel of the unit. Because the infrared beam travels in a straight line, the transmitter window on the remote control must be pointed toward the infrared sensor window on the unit. Make sure that there are no objects between the remote control and this unit that might block the beam.

The buttons on the remote control operate the same way as the corresponding buttons on the unit, except for the MUTE, VOLUME UP/DOWN, and TAPE A, B buttons which are on the remote control only.

### MUTE Button...

Press this button to cut off the sound from the speakers. Press this button again, or press the VOLUME UP button to hear sound from the speakers.

### VOLUME UP/DOWN Buttons...

Press these buttons to raise or lower the volume.

### F FWD/F BACK Buttons...

- Press one of these buttons repeatedly to select track numbers.
- Press and hold one of these buttons during disc play to quickly scan the disc.

**Note:** See "SELECTING TRACK NUMBERS".

### STOP Button...

- Press this button once to stop all operations of the CD player. Press this button a second time to clear the unit's program memory.
- Press this button to end either RANDOM PLAY mode.

### PLAY/PAUSE Button...

- Press this button once to select the CD mode and begin disc play. Press this button again to temporarily stop disc play. Press this button once more to resume disc play.
- Press this button during disc play to end either INTRO-SCAN PLAY mode.

### MODE Button...

Press this button during the Stop mode to select one of the following modes: INTRO-SCAN PLAY, RANDOM PLAY, or RANDOM INTRO-SCAN PLAY.

### TAPE DECK A/B Buttons...

Press one of these buttons to select a tape deck, then press the other TAPE DECK buttons to operate the selected deck.

### REW/FFWD Buttons...

Press one of these buttons to quickly advance or rewind a tape.

### FWD/REV PLAY Buttons...

Press these buttons to play a tape in the forward or reverse direction.

### PAUSE Button...

- Press this button to temporarily stop the tape. Press this button again to continue playback or recording.
- This button is used with other buttons to start recording (see RECORDING RADIO PROGRAMS).

### REC Button...

This button is used with other buttons to start recording (see RECORDING).

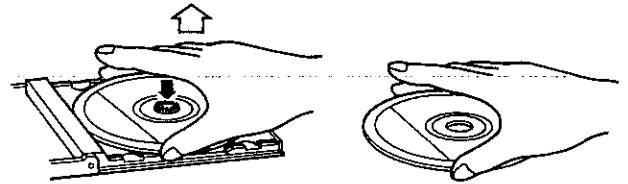
## CD (COMPACT DISC) OPERATION

### HANDLING COMPACT DISCS

This unit has been designed to play compact discs bearing the identification logo shown below. No other discs can be played.



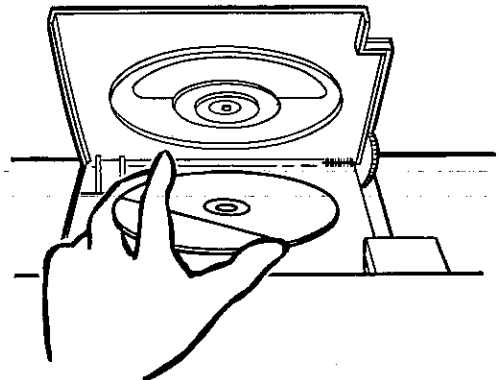
- To remove a disc from its storage case, press down on the center of the case and lift the disc out, holding it carefully by the edges.



- Fingerprints and dust should be carefully wiped off the disc's recorded surface with a soft cloth. Unlike conventional records, compact discs have no grooves to collect dust and microscopic debris so gently wiping with a soft cloth should remove most particles. Wipe in a straight motion from the inside to the outside of the disc. Small dust particles and light stains will have absolutely no effect on reproduction quality.
- Never use such chemicals as record sprays, antistatic sprays or benzine or thinner to clean compact discs. Such chemicals would irreparably damage the disc's plastic surface.
- Discs should be returned to their cases after use to avoid serious scratches that could cause the laser pickup to skip.
- Do not expose discs to direct sunlight, high humidity, or high temperatures for extended periods. Long exposure to high temperatures can warp the disc.
- Do not stick paper or write anything with a ballpoint pen on the surface of the label side.

### LOADING A DISC

- Press the OPEN button. The compact disc compartment lid will open.
- Hold the disc by the edges and place it carefully in the disc compartment with the **label side facing upward**. Then close the lid.



## CD PLAY

### NORMAL PLAY

1. Press the POWER button to ON (■).
2. Press the CD button. The CD indicator will light. If more than 16 tracks are present on the disc, ► will be shown in the CD DISPLAY.
3. Press the PLAY/PAUSE button. The CD DISPLAY will show "PLAY" and the track number and elapsed playing time for the track that is playing.  
**NOTE:** If you wish to start disc play from any track other than track 1, press the FFWD button to locate the desired track.
4. Set the VOLUME control to a comfortable listening level. Adjust the BRSS switch and the GRAPHIC EQUALIZER controls as desired.
5. To review the numbers of the remaining tracks and the remaining disc play time, press the REMAIN/PROGRAM button.  
**NOTE:** During the Programming, Intro-scan, Random play, or Repeat play mode, pressing the REMAIN/PROGRAM button will not display the remaining track numbers and disc play time.
6. To stop disc play temporarily, press the PLAY/PAUSE button. The PLAY indicator will blink. To resume disc play, press the PLAY/PAUSE button again.
7. To stop disc play completely, press the STOP/CLEAR button.
8. After the whole disc has been played, the disc will stop and the unit will enter the standby mode.
9. Release the POWER button to switch off the power (■).

### SELECTING TRACK NUMBERS (FFWD/FBACK buttons)

1. STOP mode: Press the FFWD or FBACK button repeatedly to select a track number.  
**NOTE:** If the FFWD button is pressed when the last track on the disc has been selected, or if the FBACK button is pressed when the first track has been selected, the track number will not change.
2. PLAY mode:
  - a) 1. Press and release the FFWD button to skip to the beginning of the next track.  
2. Press and release the FBACK button once to return to the beginning of the track that is playing.  
3. Quickly press and release the FBACK button twice to return to the beginning of the previous track.
  - b) Press and hold down one of these buttons to scan the disc at high speed. The volume will be lowered to about 1/4 of the current disc play volume.

### INTRO-SCAN PLAY

1. Press the CD button. The CD indicator will light.
2. Press the MODE/EDIT button. The CD DISPLAY will show "INTRO".
3. Press the PLAY/PAUSE button. The beginning of each track on the disc will be played for 10 seconds.
4. a) Press the PLAY/PAUSE button again to change to the Normal play mode.  
b) Press the STOP/CLEAR button to enter the Stop mode.

### RANDOM PLAY

1. Press the CD button. The CD indicator will light.
2. Press the MODE/EDIT button twice. The CD DISPLAY will show "RAND".
3. Press the PLAY/PAUSE button. The CD player will select and play all of the tracks on a disc at random (up to a total of 25).
4. Press the STOP/CLEAR button to end the Random mode.

### RANDOM INTRO-SCAN PLAY

1. Press the CD button. The CD indicator will light.
2. Press the MODE/EDIT button three times. The CD DISPLAY will show "INTRO RAND".
3. Press the PLAY/PAUSE button. Tracks will be selected at random (up to a total of 25). The beginning of each track will be played for 10 seconds.
4. a) Press the PLAY/PAUSE button to change to the Random play mode.  
b) Press the STOP/CLEAR button to enter the Stop mode.

### PROGRAMED PLAY

Up to 25 tracks can be programed for disc play in any order, or the same track can be repeated up to 25 times.

1. Press the CD button. The CD indicator will light.
2. Press the STOP/CLEAR button.
3. Press the FFWD or FBACK button repeatedly to select a track number. The track number will appear in the CD DISPLAY.
4. When the number of the desired track is displayed, press the REMAIN/PROGRAM button.
5. Repeat steps 3 and 4 to program more track numbers (up to a total of 25).
6. If the FFWD or FBACK button is pressed after 25 tracks have been programed, the track number in the CD DISPLAY will not change.
7. When all the desired track numbers have been programed, press the REMAIN/PROGRAM button again to see the program's contents.

**NOTES:** The program memory will be cleared in the following cases:

- When the STOP/CLEAR button is pressed before disc play begins.
- When the STOP/CLEAR button is pressed twice during disc play.
- When the OPEN button is pressed.
- When the LINE, TUNER, or TAPE button is pressed.
- When the rechargeable battery becomes weak.
- When the POWER button is set to OFF.

### REPEAT PLAY

Press the REPEAT button for the following types of repeat disc play:

1. one track segment (a part of one track)
2. one entire track
3. all tracks on a disc
4. all programed tracks on a disc

#### For repeat disc play of one track segment

1. Press the STOP/CLEAR button.
2. Press the FFWD or FBACK button to select a track number (see SELECTING TRACK NUMBERS).
3. Press the PLAY/PAUSE button.
4. Press the REPEAT button once where you want repeat disc play to begin. "ONE" will appear in the CD DISPLAY.
5. Press the REPEAT button again where you want repeat disc play to end. "A→B" will appear in the CD DISPLAY.
6. The track segment between the places selected in steps 4 and 5 will be repeated until the STOP/CLEAR button is pressed.



### For repeat disc play of one track

1. Press the STOP/CLEAR button.
2. Press FFWD or FBACK button to select a track number (see SELECTING TRACK NUMBERS).
3. Press the REPEAT button once. "ONE" will appear in the CD DISPLAY.
4. Press the PLAY/PAUSE button. The selected track will be played repeatedly until the STOP/CLEAR button is pressed.

### For repeat disc play of all the tracks on a disc

1. Press the STOP/CLEAR button.
2. Press the REPEAT button twice. "ALL" will appear in the CD DISPLAY.
3. Press the PLAY/PAUSE button. All of the tracks on the disc will be repeated until the STOP/CLEAR button is pressed.

### For repeat disc play of all programmed tracks

1. Press the STOP/CLEAR button.
2. Enter a program (see PROGRAMED PLAY).
3. Press and release the REPEAT button until "ALL" appears in the CD DISPLAY.
4. Press the PLAY/PAUSE button. All of the programmed tracks will be played until the STOP/CLEAR button is pressed.

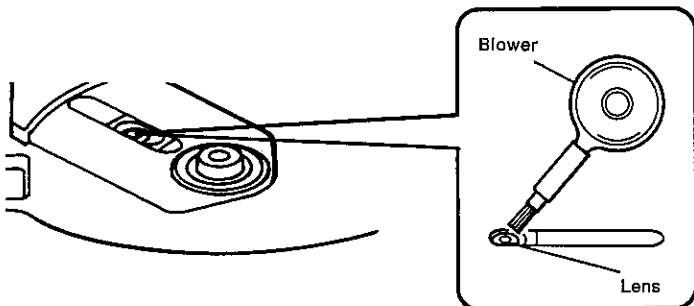
#### NOTES:

- If the REPEAT button is pressed repeatedly during disc play until the REPEAT indicator in the CD DISPLAY goes OFF, the unit will change from repeat disc play to normal disc play.
- Repeat disc play modes can be selected during normal disc play, or any type of repeat disc play.
- For repeat disc play of one segment, the entire segment must be inside of one track.
- Repeat disc play will also work in the Intro-scan, Random play, or Random intro-scan mode.

### CLEANING THE PICKUP LENS

Dirt on the pickup lens may lead to interruptions during disc play, or other trouble preventing normal disc play.

Open the disc compartment lid and remove any dirt with a commercially available blower (sold in camera stores). Be careful not to scratch the surface of the lens.



## RADIO OPERATION

### MODE SWITCH

- a) **STEREO (DX)**: For recording noisy FM stereo broadcasts.
- b) **STEREO**: Normal position for listening to FM broadcasts in stereo.
- c) **MONO**: For better reception of distant or noisy FM stereo broadcasts. Reception may be improved, but the program will not be heard in stereo.

### RADIO RECEPTION

1. Press the POWER button to ON (■).
2. Press the TUNER button. The TUNER indicator will light.
3. Set the BAND switch to MW (AM) or FM.
4. Turn up the VOLUME slightly (from 0) to make tuning easier.
5. Tune in a station by rotating the TUNING control, until you get a clear, strong signal.
  - FM band: Extend the antenna to its full length and adjust its position to obtain the best reception possible.
  - MW (AM) band: Rotate the unit to obtain the best reception possible.
6. Adjust the VOLUME, GRAPHIC EQUALIZER and BRSS controls as desired.
7. To switch off the radio, press the POWER button to OFF (■).

## TAPE PLAYBACK




### INSERTING THE CASSETTE(S)

1. Press one of the EJECT buttons. Press it again if any of the other buttons have been pressed.
2. Insert a cassette correctly with the full reel on the left (as seen through window), the side to be played or recorded facing you, and the exposed tape facing down.



**NOTE:** Do not use endless cassette or C-120 cassette tapes.

TAPE DECK "A" ..... Playback  
TAPE DECK "B" ..... Record/Playback

### REVERSE SWITCH

-  (One-way mode):  
During playback, when the end of the tape is reached (forward or reverse side), the tape will stop.
-  (One-cycle mode):  
During playback, starting with the tape's forward side, each side of the tape is played back once. When the end of the reverse side is reached, the tape will stop.
-  (Continuous-play mode):  
Playback will continue (forward and reverse sides) until the STOP button is pressed.

### AUTO REVERSE TAPE PLAYBACK

1. Press the POWER button to ON (■).
2. Insert a prerecorded cassette into the cassette compartment.
3. DOLBY NR button:
  - ON (■): To play back tapes recorded with DOLBY Noise Reduction.
  - OFF (■): To play back tapes recorded without DOLBY Noise Reduction.
4. Set the TAPE "A" or TAPE "B" button to the type of tape being used.
5. Set the REVERSE switch to the  (One-cycle) or  (Continuous-play) position.
6. Press either the FWD or REV button.  
When the FWD button is pressed, tape play begins on the forward side of the tape.  
When the REV button is pressed, tape play begins on the reverse side of the tape.
7. Adjust the VOLUME, GRAPHIC EQUALIZER and BRSS controls as desired.
8. To stop playback, press the STOP button. Release the POWER button to switch off the power (■).

### MANUAL REVERSE TAPE PLAYBACK

During playback, to change the tape direction at any time, press the FWD or REV button.

### USING FAST-FORWARD AND REWIND

First press the STOP button to stop playback. Press the REW or FWD button. The tape will rapidly advance in the forward or the reverse direction. When the tape reaches its end, the button will be released automatically.

### AUTOMATIC MUSIC SELECT SYSTEM (AMSS)

The AMSS automatically locates program selections, on a tape that is playing back in deck "A", by detecting the silent spaces (unrecorded portions) between the selections. The silent spaces must be at least four seconds long to activate the AMSS. The AMSS may not operate properly in the following cases:

- When the silent spaces between selections are too short.
- When a high level noise has been recorded between selections.
- When music with extremely quiet passages is being played.
- When a tape of conversations with long pauses is being played.

### AMSS OPERATION

How the AMSS works depends on the tape's playback direction (forward or reverse).

- A) FORWARD Tape Direction
  1. To rapidly advance the tape to the next recorded section during playback:
    - a) Press the FWD button.
    - b) Press the F FWD (▶▶) button.
  2. To listen to the same recorded section again during playback:
    - a) Press the FWD button.
    - b) Press the REW (◀◀) button.
- B) REVERSE Tape Direction
  1. To rapidly advance the tape to the next recorded section during playback:
    - a) Press the REV button.
    - b) Press the REW (◀◀) button.
  2. To listen to the same recorded section again during playback:
    - a) Press the REV button.
    - b) Press the F FWD (▶▶) button.

### FULL AUTOMATIC STOP SYSTEM



When one end of the tape is reached during playback, recording, fast forward or rewind, the tape will automatically stop.

## RECORDING

### IMPORTANT NOTES ON RECORDING

- Programs are recorded at the factory-set level. The units' controls will not affect the recordings.
- The CrO<sub>2</sub>/METAL position of the TAPE "B" tape selector button operates during playback only. Recording with metal tape is not recommended.
- The DOLBY NR button will not affect the recording during dubbing.
- When a dubbing button is pressed, recording will start in the forward direction.

### RECORDING RADIO PROGRAMS

1. Press the POWER button to ON (■).
2. Press the TUNER button and insert a cassette into cassette compartment B.
3. DOLBY NR button:
  - ON (■): To record with DOLBY Noise Reduction.
  - OFF (□): To record without DOLBY Noise Reduction.
4. Set the TAPE Selector "B" button to the type of tape being used.
  - CrO<sub>2</sub>/METAL (■): Only for use in deck "A"
  - NORMAL (□): Use in deck "A" and "B"
5. Set the REVERSE switch to the  (One-way) or  (One-cycle) position.
6. Select the MW (AM) or FM and tune in a radio program.
7. Press the PAUSE button first.
8. Press the REC button and while holding it in, press the FWD or REV button. The REC indicator will light. When recording both sides of the tape, press the FWD button.
9. Press the PAUSE button again. Now you are recording.

### BEAT CANCEL SWITCH

When recording MW (AM) radio programs, an irritating whistling sound can sometimes be heard. If this happens, set the BEAT CANCEL switch (located on the back of the unit) to another position.

### PAUSE CONTROL


Press the PAUSE button to temporarily stop recording or playback. Press it again to continue.

## RECORDING COMPACT DISC PROGRAMS

### Before recording a compact disc

1. Press the CD button.
2. Press the SPACE button (SPACE indicator lit) to automatically create a 4-second silent space between each recorded selection (See AMSS).


### IMPORTANT NOTES:

- When the tape is reversed during recording, the selection that is playing will be recorded again from the beginning onto the reverse side of the tape (auto-edit recording system).
- If the playing time of a track is longer than that of the tape, set the REVERSE switch to  (one-way).

### Normal recording

1. Press and hold down the REC button. Press the FWD or REV button. Release both buttons.
2. Press the deck "B" STOP button to stop recording. Press the CD STOP/CLEAR button to stop the CD player.

### Manual edit recording

1. Set the REVERSE switch to  (one-cycle).
2. a) Press the FFWD button repeatedly to select tracks to be recorded onto the forward side of the tape.  
b) Each time a track is selected, the total playing time for the selected tracks will be shown in the CD DISPLAY.  
c) Select enough tracks to fill the forward side of the tape. For example, select almost 30 minutes of CD playing time if you are using a C-60 (60-minute) cassette.
3. Press the MODE/EDIT button. "EDIT" will blink in the CD DISPLAY.
4. Repeat step 2 to select tracks for the reverse side of the tape.
5. Press the MODE/EDIT button again. "EDIT" will remain ON in the CD DISPLAY.
6. Press and hold down the REC button. Press the FWD button. Release both buttons. Recording and edit disc play will begin.
7. If the end of the tape's forward side is reached while a track is playing, the entire track will be played again and recorded on the reverse side of the tape.
8. a) To stop recording, press the TAPE "B" STOP button.  
b) Press the STOP/CLEAR button to stop disc play.  
c) Press the STOP/CLEAR button once more to clear the edit disc play program.

### Edit recording a CD program

1. Select the first track number for the edit program.
2. Press the REMAIN/PROGRAM button. "PROG" will appear in the CD DISPLAY.
3. Press the MODE/EDIT button. "EDIT" will blink in the CD DISPLAY.
4. Select another track number and press the REMAIN/PROGRAM button to enter it into the edit program. The total disc play time for the selected tracks will be shown each time the REMAIN/PROGRAM button is pressed.
5. Select enough tracks to fill the forward side of the tape. For example, select almost 30 minutes of CD playing time if you are using a C-60 (60-minute) cassette.
6. Press the MODE/EDIT button again. "EDIT" will remain ON in the CD DISPLAY.
7. Press and hold down the REC button. Press the FWD button. Release both buttons. Programed edit disc play will begin. Only programed tracks will be recorded.
8. a) To stop recording, press the TAPE "B" STOP button.  
b) Press the STOP/CLEAR button to stop disc play.  
c) Press the STOP/CLEAR button once more to clear the programed edit disc play program.

### DUAL CASSETTE OPERATION

#### Before dubbing

1. Insert a prerecorded cassette into deck "A", and the cassette to be recorded into deck "B".
2. Press the TAPE button.

#### Normal speed dubbing

1. Press the NORMAL DUBBING button.
2. To stop dubbing, press both STOP buttons at the same time.

#### High speed dubbing

1. Press the HIGH SPEED DUBBING button.
2. To stop dubbing, press both STOP buttons at the same time.

**NOTE:** If high speed dubbing is performed near a TV which is tuned to a station, a "beep" sound may be recorded onto the tape. If this happens, use normal speed dubbing.

## CLOCK TIMER

### CLOCK BATTERY OPERATION

1. Open the COMPUTER/CLOCK battery compartment lid located on the back of the unit by pressing the latch.
2. Install one "AA" size battery (supplied) as illustrated inside the battery compartment.

**NOTE:** If the TIMER DISPLAY does not show the clock time, or becomes dim, the battery is worn out and needs to be replaced. If a worn out battery is not replaced, it may leak and damage the unit.

### SETTING THE CLOCK TIME

1. Press the CLOCK button and while holding it in, press the H button to adjust the hour.
2. Press the CLOCK button and while holding it in, press the M button to adjust the minute.
3. Release the CLOCK button.

### TIMER RADIO RECORDING (UP TO 126 MIN.)

Note — The clock time must be set before the timer recording feature can be used.

1. Press the POWER button to ON (■).
2. Press the TUNER button and tune in the desired radio station.
3. Insert a blank cassette into deck "B".

#### Setting the start time for recording

4. Press the TIMER button and while holding it in, press the H button to set the start-time hour.
5. Press the TIMER button and while holding it in, press the M button to set the start-time minute.
6. Release the TIMER button.
7. Set the Timer Mode switch to SLEEP/TIMER.
8. Set the TIMER switch to REC.
9. Release the POWER button OFF (■).
10. The radio will be switched on, and recording will begin, at the preset start time.
11. To switch off the unit, set the Timer Mode switch to OFF.

### WAKE-UP TIMER (UP TO 126 MIN.)

Note — The clock time must be set before the timer recording feature can be used.

1. Press the POWER button to ON (■).
2. Choose the desired timer source by pressing the CD, TUNER or TAPE button.
3. For timer tape playback, insert a pre-recorded cassette into deck "B".

#### Setting the start time for timer radio or timer tape playback

4. Press the TIMER button and while holding it in, press the H button to set the start-time hour.
5. Press the TIMER button and while holding it in, press the M button to set the start-time minute.
6. Release the TIMER button.
7. Set the Timer Mode switch to SLEEP/TIMER.
8. Set the TIMER switch to OFF or PLAY.
  - OFF: For radio or CD play
  - PLAY: For tape play (DECK "B")
9. Release the POWER button OFF (■).
10. The radio, CD or tape source will be switched on, and operation will begin at the preset start time.
11. To switch off the unit, set the Timer Mode switch to OFF.

## SLEEP TIMER

1. Press the POWER button to ON (I).
2. Set the TIMER switch to OFF or PLAY.
  - OFF: For radio or CD play
  - PLAY: For tape play (deck "B")
3. Select a program source (radio, tape, CD).
4. Set the Timer Mode switch to SLEEP.
5. Press the SLEEP START button. The power will be switched off in 60 minutes.
  - a) Press the SLEEP START button again to check the remaining time.
  - b) When the sleep timer switches off the power, if the SLEEP START switch is pressed again, the unit will operate for another 60 minutes.

## CONNECTING OPTIONAL ACCESSORIES

### LISTENING THROUGH HEADPHONES

Plug the headphones cord into the PHONES jack on the front panel. When the headphones are in use, no sound will be heard through the speakers.

### RECORDING WITH A MICROPHONE

1. Plug a microphone into the MIC jack on the front panel.
2. Set the unit to the recording mode.

**NOTE:** While recording, the sound can be monitored through the unit's speakers.

### RECORDING OR LISTENING TO A COMPACT DISC USING AN EXTERNAL UNIT

1. Connect the CD OUT jacks on the back of this unit to the Line In jacks of the external unit.
2. Press the CD button.
3. Set the external unit to the recording or playback mode as specified in its owner's manual.
4. Set this unit to the desired CD PLAY mode (see "CD PLAY").

### LISTENING TO AN EXTERNAL UNIT

1. Connect the external unit to the LINE IN jacks on the back panel.
2. Press the LINE button on the front panel.
3. Operate both units.

### RECORDING FROM AN EXTERNAL UNIT

1. Connect the external unit to the LINE IN jacks on the back panel.
2. Press the LINE button on the front panel.
3. Set this unit to the recording mode.
4. Operate the external unit.

### ERASING A TAPE

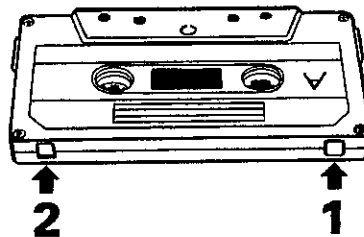
There are two ways to erase tapes:

- A. Record over an unwanted recording.
- B. Erase the tape without recording new material.
  1. Make sure that nothing is plugged into the LINE IN jacks.
  2. Press the LINE button.
  3. Set the unit to the recording mode. Make sure the REVERSE switch is set to the proper position.

## ACCIDENTAL ERASURE PREVENTION

To prevent accidental recording or erasing, and to preserve previous recordings, remove the two tabs on the back of the cassette. Once a tab has been removed you won't be able to press the REC button. If side "A" is facing upward then Tab No.1 must be broken off to prevent accidental erasure. If the opposite surface (Side B) is facing upward, Tab No.2 must be broken off.

Once a tab has been removed, place cellophane tape over the tab opening to erase or record again. Normally prerecorded tapes are sold with these protective tabs already broken off.

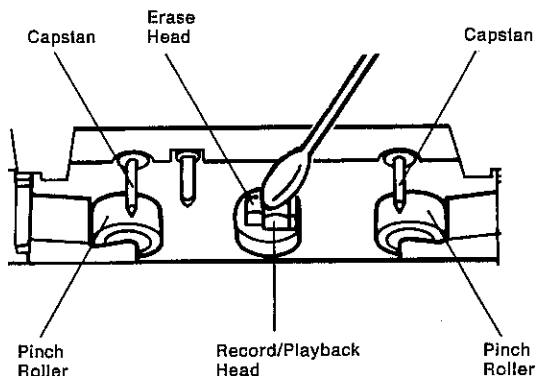


## CLEANING THE HEADS

Cleaning the heads, pinch roller and capstans:

For continued high performance from your double cassette deck, periodically clean the heads, pinch rollers and capstans, whenever an accumulation of dust and red-brown oxide particles is noticed. These particles may be removed with a cotton swab moistened with isopropyl alcohol or special head-cleaning fluid.

To do this properly, press both EJECT buttons to open cassette compartments. Remove any cassettes still in the compartments and switch off the power. Carefully rub the face of each head with alcohol. Also clean the capstans and pinch rollers.



## CLEANING THE CABINET

Use a clean soft cloth moistened with plain lukewarm water and wrung dry. Never use benzol, benzine, alcohol or other strong chemical cleaners since these could damage the finish of the unit. It is important that no liquid reaches the inside of the unit.

## CAUTION

Do not place this unit in direct contact with magnetic iron, water, or a source of heat. Also, avoid leaving your set in the direct sunlight for a prolonged period of time.

## VORSICHT

Die Betriebstaste dieses Gerätes ist an einen Sekundärstromkreis angeschlossen und trennt das Gerät nicht von der Wechselstromquelle, so lange das Netzkabel bei der Steckdose angeschlossen ist, selbst wenn sich die Taste in der Position ■ befindet.

## URHEBERRECHTSSCHUTZ

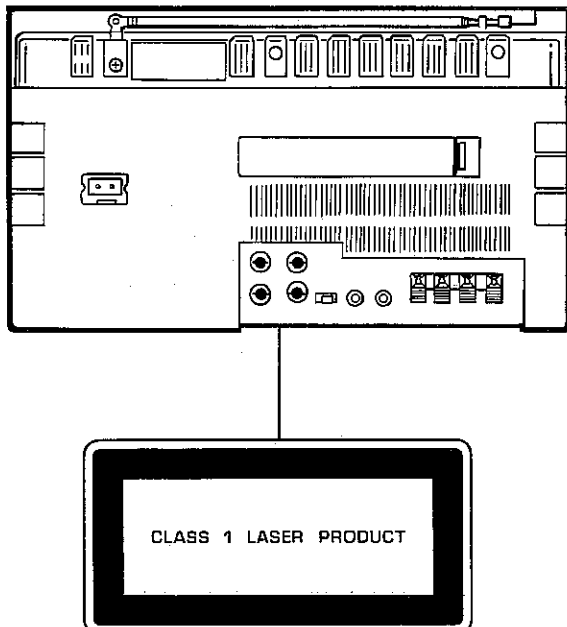
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## CHERHEITSBESCHEINIGUNG

### VORSICHT

– DIE VERWENDUNG VON REGLERN ODER DIE VORNAHME VON EINSTELLUNGEN ODER VORGÄNGEN, DIE HIER NICHT ANGEZEIGT WERDEN, KÖNNEN ZU GEFÄHRLICHER STRAHLUNG FÜHREN.

DIESES GERÄT SOLLTE AUSSCHLIESSLICH VON QUALIFIZIERTEM KUNDENDIENSTPERSONAL JUSTIERT ODER REPARIERT WERDEN.



## VORSICHTSMASSNAHMEN BEI BETÄTIGEN DES CD-SPIELERS

- Sehen Sie zu, daß Sie die CD-Platten nur mit sauberen Händen hantieren. Platten mit Sprüngen auf der Oberfläche dürfen niemals in das Gerät gelegt werden.
- Ergreifen Sie das Gerät niemals beim dem offenen Plattenfachdeckel, um das Gerät zu bewegen.
- Vergessen Sie nicht, den Plattenfachdeckel zu schließen, um den Tonabnehmer sauber zu halten.
- Der Tonabnehmer darf weder mit den Fingern noch mit irgendwelchen anderen Gegenständen berührt werden. Schmutz und Kratzer auf der Oberfläche der Abtastlinse können Störungen wie Unterbrechungen der Tonwiedergabe oder Fehlfunktionen des Gerätes hervorrufen.

## FEUCHTIGKEITSNIEDERSCHLAG

Im Winter entstehen an kalten Tagen auf der Fensterscheibe von warmen Zimmern kleine Wassertröpfchen. Diese Erscheinung wird als Feuchtigkeitsniederschlag bezeichnet. Dieses Gerät ist mit einer optischen Abtastlinse ausgestattet, auf dessen Oberfläche unter den folgenden Umständen Feuchtigkeitsniederschlag auf ähnliche Weise entstehen kann.

- Sofort nachdem die Heizung im Zimmer eingeschaltet wurde.
- In Zimmern, in denen Dampf gebildet wird oder in denen eine hohe Luftfeuchtigkeit herrscht.
- Wenn das Gerät schnell von einem kalten Zimmer in ein warmes Zimmer gebracht wird.
- Wenn das Gerät bei kaltem Wetter von draußen ins Haus geholt wird.

Unter diesen Umständen kann es vorkommen, daß das Gerät nicht normal funktionieren und den Platteninhalt nicht ablesen kann. Entfernen Sie in diesem Fall die Platte und stellen Sie das Gerät an einem warmen Ort auf. Nach etwa einer Stunden kann das Gerät erneut in Betrieb genommen werden. (Falls sich Feuchtigkeit auf der Plattenoberfläche niedergeschlagen hat, wischen Sie sie mit einem weichen Tuch ab.)

## STÖRUNGEN BEI DER WIEDERGABE

Unter den folgenden Umständen wird die Tonwiedergabe während des Abspielens abgebrochen:

- Wenn eine verkratzte, verschmutzte oder verzogene Platte abgespielt wird.
- Wenn das Gerät starken Erschütterungen ausgesetzt wird, kann die Wiedergabe manchmal unterbrochen werden und ein weiterer normaler Betrieb des Gerätes nicht möglich sein. Schalten Sie das Gerät in diesem Falle ab, und beginnen den Betrieb wieder von vorne. (Das Gerät darf nicht fallen gelassen werden.)
- Wenn das Gerät auf einem dünnen Brett oder an einer anderen Stelle aufgestellt wird, wo es leicht Erschütterungen ausgesetzt werden kann.
- Unterbrechungen der Tonwiedergabe können auch durch den Platteninhalt verursacht werden. In diesem Falle brauchen Sie lediglich die Lautstärke zu senken.