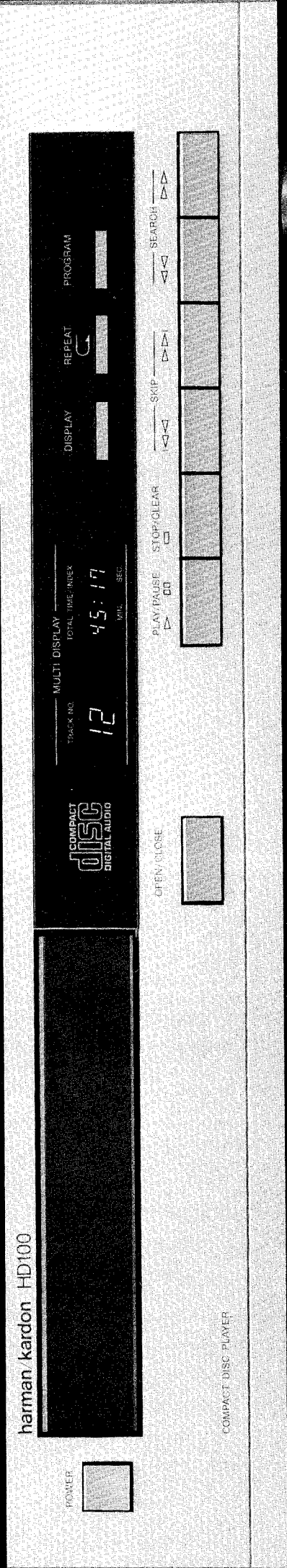


harman/kardon
COMPACT DISC PLAYER

HD100

owner's manual



FEATURES

Congratulations on your purchase of the Harman Kardon HD100 Compact Disc Player.

In order to appreciate the full performance of this sophisticated unit, please be sure to read this owner's manual and use your CD player only in accordance with its instructions. Keep it in a safe place for future reference.

Performance Features

- 3-Beam Laser
- 2 Times Over Sampling Digital Filter
- 3-Pole Analog Filter for Excellent Phase Response
- Ultrawideband, Discrete Analog Amplifiers for Low IM Distortion

Convenience Features

- 36-Track Programability
- Auto Repeat
- Bi-Directional Track Skip
- Bi-Directional Audible Cueing
- Track and Index Display



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.



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: TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UNE RALLONGE. UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

This manual applies to champagne gold and black versions with this model HD100.

Always Use at 120V AC

This unit is designed for operation with 120V AC. Connect only to domestic AC outlets. Never connect the unit to an outlet supplying a higher voltage. This may create a fire hazard.

Handle the Power Cord Gently

- To avoid the danger of electric shocks, do not touch the electric power cord with wet hands. Dry your hands thoroughly before handling the unit.
- Do not disconnect the plug from the AC outlet by pulling the cord; always pull the plug itself. Pulling the cord may break the wire.
- If you do not intend to use your unit for any considerable length of time, disconnect the plug from the AC outlet.
- Do not place furniture or other heavy objects on the cord, and avoid dropping heavy objects on it. Also do not make a knot in the power cord. Not only may the cord be damaged, it can also cause a short circuit and a consequent fire hazard.

Place of Installation

This unit uses high frequency signals and therefore accidental signal leakage can cause reception interference in tuners and TV sets. If such should be the case, move the HD100 further away from the tuner or TV set. If you are using an indoor antenna, this should be replaced with an outdoor antenna.

Place your unit on a firm and level surface. Avoid installing your unit under the following conditions:

- ▶ Subject to high temperatures (in excess of 113°F/45°C). (Be especially careful during summer time.)
- ▶ Excessively cold (under 32°F/0°C).
- ▶ Directly on top of high power amplifiers and other heat generating components.
- ▶ On top of carpets or blankets.
- ▶ Where strong magnetic fields are present.
- ▶ Moist or humid places.
- ▶ Places exposed to direct sunlight or close to heating equipment.
- ▶ Extremely cold locations such as those in the direct draft from an air conditioner.
- ▶ Places subject to excessive vibration or dust.
- ▶ Poorly ventilated places.

Moving the Unit

Before moving the unit, be sure to unplug the power cord from the AC outlet and disconnect the interconnection cords to other units.

Do Not Open the Cabinet

To prevent fire or shock hazard, do not tamper with internal components for inspection or maintenance. Harman Kardon does not guarantee against performance degradation resulting from any modification.

If water, a hairpin or wire accidentally enters the unit, immediately unplug the power cord from the AC outlet to prevent shock and consult an authorized Harman Kardon service station. If you use the unit under this condition, it may cause a fire or shock hazard.

Cleaning

When the unit gets dirty, wipe it with a soft dry cloth. If necessary, wipe it with a soft cloth dampened with mild soapy water and then wipe with a dry cloth.

Never use benzene, thinner, alcohol or other volatile agent, and avoid spraying an insecticide near the unit.

NOTICE

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B computing devices in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna of the radio or TV.
- relocate the CD player with respect to the radio or TV.
- move the CD player away from the radio or TV.
- plug the CD player into a different outlet so that the CD player and radio or TV are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

CLASS 1 LASER PRODUCT

Product complies with DHHS rules CFR subchapter J part 1040.10 at date of manufacture.

DANGER – invisible laser radiation when opened and interlock failed or defeated. Avoid direct exposure to beam.

CAUTION – use of all controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

**CLASS 1
LASER PRODUCT**

Dew Formation

Window frames inside a warm room during winter will rapidly accumulate dew on the surface. This unit features a precision lens element. This lens element is also subject to dew formation under the following circumstances:

- ▶When subject to sudden changes in temperature.
- ▶When the room in which the unit placed is subject to high humidity.
- ▶When moving the unit suddenly from a cold to a warm place.

The HD100 will not be able to correctly read the programs under these circumstances, and the player will not operate properly. In such cases, after turning the power switch on, wait for 20 to 30 minutes before operating the unit.

Do Not Remove the Cabinet

This unit uses an invisible laser pickup to detect the signals recorded on the compact disc. The HD100 has been designed so that the laser rays will not radiate outside. To avoid laser exposure in case the safety interlocks are defeated or out of action, do not remove the cabinet.

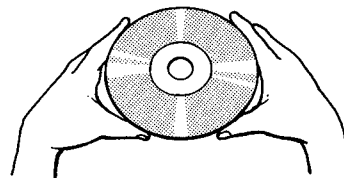
Be Careful of the Laser Pickup

Although you cannot see it from the outside, a laser pickup is located under the disc tray and a precision lens is built-in it. Since the laser pickup, including the lens element, is especially sensitive to dust, keep the disc tray closed when not in use. Also do not put your hand inside the unit.

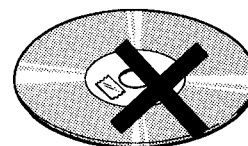
Dirt, fingerprints, scratches and warps on a compact disc can cause noise. Observe the following precautions to keep your compact discs sounding their best.

Handling Compact Discs

Do not touch the playback surface (the rainbow colored side).



Do not attach adhesive tape, stickers, etc. to the disc label.

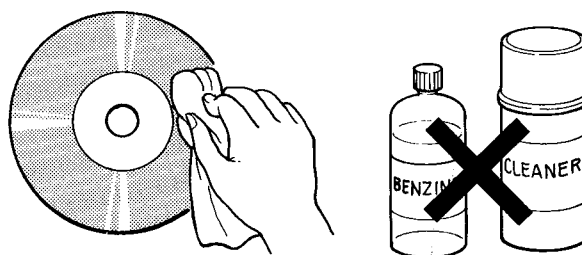


Disc Storage

Avoid storing the discs in locations subject to high temperature, high humidity and direct sunlight. Also do not keep discs inside a closed vehicle as it is often subject to extreme temperatures.

Disc Care

Before playing the disc, wipe off all dust, dirt and fingerprints on the playing surface with a soft cloth. Do not use benzine and record cleaners designed for analog records. Static prevention treatments can also damage compact discs and should therefore be avoided.



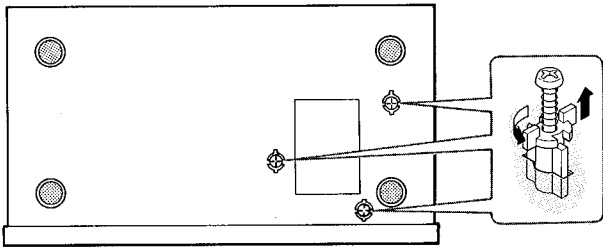
Only compact discs with the mark shown below can be used with the HD100.



IMPORTANT

Before plugging the unit in, be sure to remove the transportation screws and holders on the bottom of the unit.

1. Place a cloth under the unit in order to prevent it from being scratched.
2. Turn the unit upside down.
3. Remove the three transportation screws with a screw driver. Then, turn each of the three holders clockwise or counterclockwise, match the catch portion of the holder to the hole of the bottom plate and extract it, as shown in the illustration below.



NOTE: Be sure to tighten screws by the reverse procedure before transporting the unit.

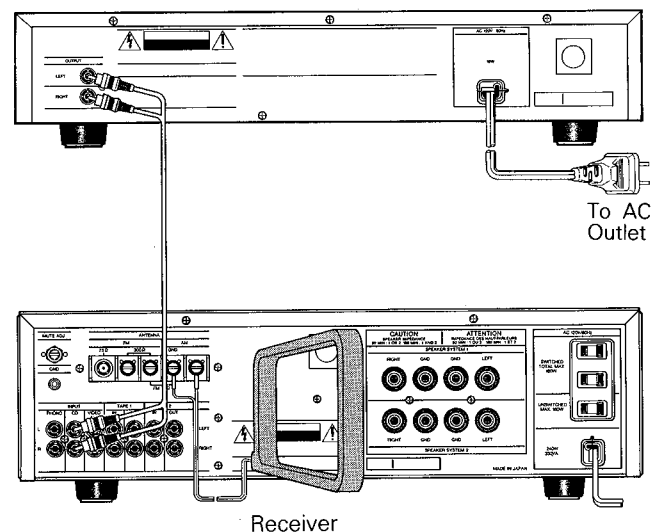
Connecting to a Receiver

Connect the "OUTPUT" jacks of this unit to the CD or AUX input jacks of the receiver by using the enclosed connection wire. Do not connect the output of the CD player to the PHONO input jacks of the receiver.

Carefully connect the plugs to the left and right channel jacks. Push the plugs in all the way. Poor seating of the plugs tends to cause hum or intermittent sound and may damage the speakers.

NOTE: While you are connecting this unit to the rest of your high fidelity system, please unplug the power cord, disconnecting not only this unit but all the components from the AC outlet.

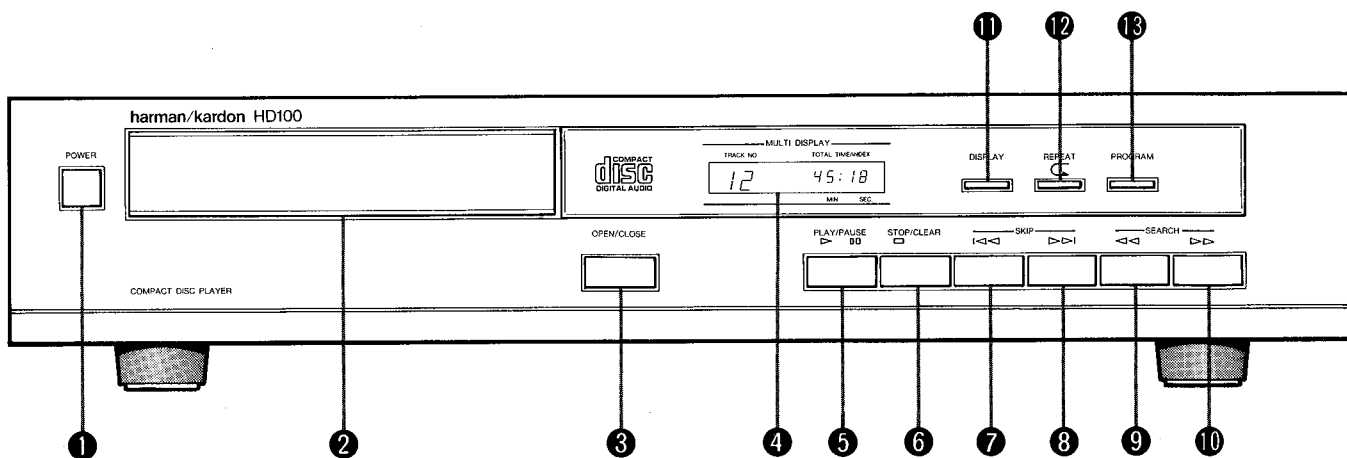
Do not interwind the connection wires with the power cord. If interwound, the sound quality may be degraded.



Volume Setting

The digital recording format of compact discs enable them to accurately reproduce all peaks contained in the music signals without noise. Therefore, if attempting to adjust the volume setting as you would for analog record players and cassette tape recorders, by listening to the noise level, the sudden unexpected surge in the receiver power may harm your speakers. Avoid excessively high volume setting.

CONTROLS AND FUNCTIONS



❶ POWER SWITCH

Pressing this switch will turn on the power. Press the switch again to turn the power off.

❷ DISC TRAY

By pressing the "OPEN/CLOSE" button, the tray onto which the discs are loaded will slide out. (See page 6 for details of Loading Compact Discs.)

❸ OPEN/CLOSE BUTTON

Press this button to open or close the DISC TRAY. Press it once to make the DISC TRAY slide out, and again to make the DISC TRAY slide in.

❹ MULTI NUMBER DISPLAY

Displays the track number during playback, and displays elapsed playback time from the beginning of the program being played or the index number during stop mode.

❺ PLAY/PAUSE BUTTON

Press this button to start playback. Pressing this button during playback activates the pause mode. Playback continues when this button is pressed again.

❻ STOP/CLEAR BUTTON

Press this button to stop playing a disc or to cancel the pause mode. Press the button once again to erase the memory program.

❼ ⏮⏮ BUTTON (SKIP)

Pressing this button once skips playback backward to the beginning of the present program. Pressing it once more skips it to the beginning of the previous program, pressing it twice skips it to the beginning of the program before that, and so on.

❽ ⏭⏭ BUTTON (SKIP)

Pressing this button once skips playback forward to the beginning of the next program. Pressing it twice skips it to the beginning of the program after that, and so on.

❾ ⏪⏪ BUTTON (REVERSE SEARCH)

Pressing this button starts low speed reverse. Holding the button down longer than two seconds changes the reverse mode to high speed. Sound can be heard at a reduced level in this mode. Also, when this button is pressed in the stop mode, the index number is decreased.

❿ ⏩⏩ BUTTON (FAST-FORWARD SEARCH)

Pressing this button starts low speed fast-forwarding. Holding the button down longer than two seconds changes the fast-forward mode to high speed. Sound can be heard at a reduced level in this mode. Also, when this button is pressed in the stop mode, the index number is increased.

⓫ DISPLAY BUTTON

Press to change the display. When pressed, display is switched between the elapsed playback time of a track and the time remaining before the end of the last selection. The display is also switched to the remaining number of programs during program playback.

⓬ REPEAT BUTTON

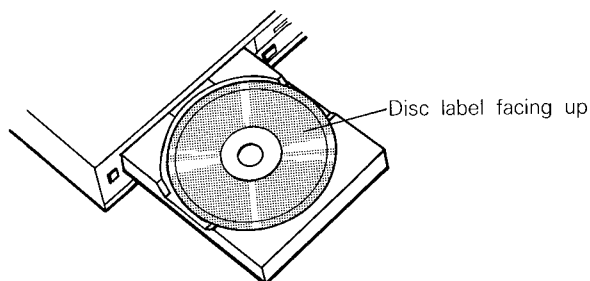
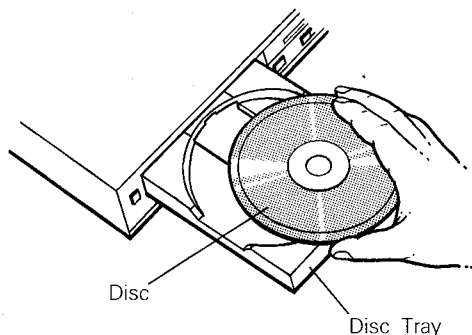
Pressing this button enables continuous repeat playback of the disc. Pressing this button again disables the repeat playback mode. Pressing this button while in memory playback repeats the programs stored in the memory.

⓭ PROGRAM BUTTON

Used to program the memory for non-sequential playback of disc tracks. Up to 36 program selections can be stored in the memory.

Loading Compact Discs

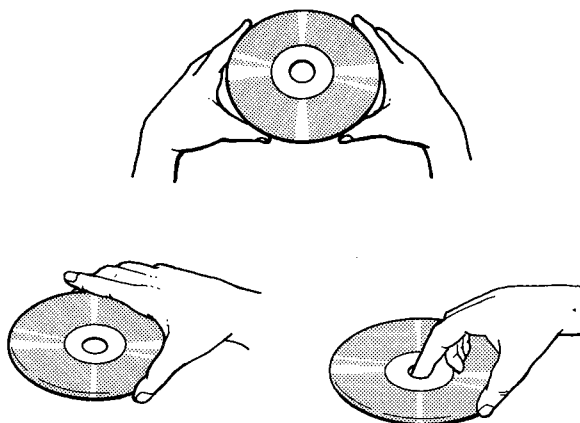
1. Press the "POWER" switch to turn on the power.
2. Press the "OPEN/CLOSE" button to slide out the DISC TRAY.
3. Place the disc label facing up and center the disc on the DISC TRAY.



4. Press the "OPEN/CLOSE" button to close the DISC TRAY. Pressing the "PLAY/PAUSE" button even when the DISC TRAY is open, closes the tray and begins playback from the first program.

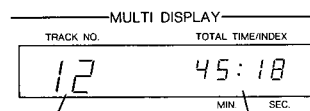
CAUTION: Wait until the disc holder is completely open before loading the compact disc. Failure to observe this precaution can result in damage to the disc.

To prevent fingerprints from getting on the disc, handle it only by the edges or center, as shown in the illustration below.



Playing a Disc

1. Press the "POWER" switch.
2. Press the "OPEN/CLOSE" button to open the DISC TRAY.
3. Carefully insert the disc in the DISC TRAY. Check to be sure that label on the disc is facing up.
4. Press the "OPEN/CLOSE" button.



Final program number is displayed.

Total playback time is displayed.

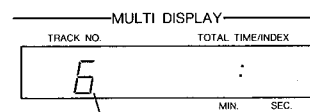
5. Press the "PLAY/PAUSE" button and the disc will begin playing. The "▶" indicator will light.

Note: The DISC TRAY will also close if step 5, pressing the "PLAY/PAUSE" button, is carried out instead of step 4. In this case, the unit will directly commence playback from the beginning of the first program.
6. To temporarily halt the playback, pressing the "PLAY/PAUSE" button causes the unit to enter the pause mode. The "⏸" indicator will light. Pressing the "PLAY/PAUSE" button again defeats the pause mode and re-enters the play mode.
7. To stop the playback, press the "STOP/CLEAR" button, the disc stops turning and the unit enters the ready mode. Also, disc playback automatically stops when the end of the disc is reached.
8. To remove the disc, press the "OPEN/CLOSE" button to open the DISC TRAY.

Desired Program Playback

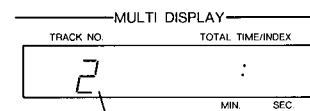
This feature allows you to move forward or backward directly to a desired program, skipping the rest. This function can be activated from any mode (disc set, play, pause).

1. To skip forward, press the "▶▶SKIP" button until the desired track number appears in the "TRACK NO." display.



Moves up

2. To skip backward, press the "◀◀SKIP" button until the desired track number appears in the "TRACK NO." display.



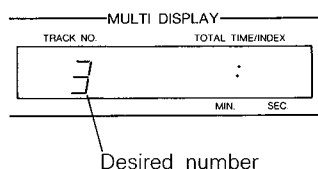
Moves down

NOTE: When the DISC TRAY is open, the track number is set using the "▶▶SKIP" or "◀◀SKIP" buttons, and the operation will be carried out when the DISC TRAY is closed using the "PLAY/PAUSE" button.

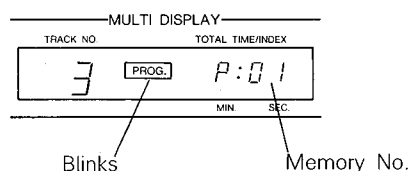
Programming the Memory

This feature allows you to select certain desirable programs, in any order, for playback, automatically skipping the rest. A maximum of 36 programs can be entered into the memory.

1. Your player must first be put into the stop mode or programming cannot be carried out. Therefore, if in the playback mode, press the "STOP/CLEAR" button.
2. Press the "▷▷SKIP" button or the "◀◀SKIP" button until the desired track is displayed. The track number is displayed on the "TRACK NO." display when either of these buttons has been pressed once.



3. Press the "PROGRAM" button. The "PROG." indicator will blink. This enters one track into the memory.



4. Repeat steps 2 and 3.
5. A maximum of 36 tracks can be entered into the memory. The "PROG." indicator stops blinking when a 36th entry is made.
6. Press the "PLAY/PAUSE" button to begin memory playback.
7. When clearing the memory, press the "STOP/CLEAR" button twice if in playback mode, or once if in the stop mode.

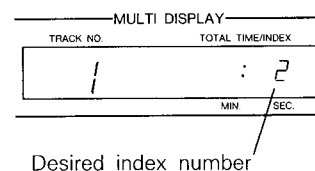
NOTE: If the "▷▷SKIP" or "◀◀SKIP" button is pressed during memory playback, only those tracks registered in the memory will be skipped.

Even in the program playback, the "▷▷SEARCH" and "◀◀SEARCH" buttons allow you to search the desired track forward or backward regardless of the order the program is memorized.

Index Search Playback

This feature allow you to search a desired index number in a desired track number.

1. Press the "▷▷SKIP" or "◀◀SKIP" button so that the desired track number appears in the "TRACK NO." display.
2. Press the "◀◀SEARCH" or "▷▷SEARCH" button so that the desired index number appears in the "TOTAL TIME/INDEX" display.



3. Press the "PLAY/PAUSE" button.

Audible Search

This feature can allows you to search either forward or backward to find a desired location. In addition, low volume audio can be heard. To search forward, press and hold the "▷▷SEARCH" button. To search backward, press and hold the "◀◀SEARCH" button.

Rapid, non-audible search, both fast-forward and backward, can be activated from pause mode.

Repeat Playback

This feature allows you to repeat all tracks on the disc, or the programs selected in memory. To activate, press the "REPEAT" button. The "REPEAT" indicator will light.

To release repeat function, press the "REPEAT" button again.

A Single Music Repeat Playback

The combination of both features programming the memory and repeat playback allows you to repeat a single music.

1. Press the "PROGRAM" button when the desired track number appears on the display during stop or playback mode.
2. Press the "REPEAT" button.
3. Press the "PLAY/PAUSE" button if the unit is in the stop mode.

Troubleshooting

Most of the problems consumers have with their high fidelity system are due to incorrect operation. If this unit does not operate as you intended, first check the items in the following checklist. Also check other related components such as the

receiver, speakers and other electrical equipment you use with this CD player. If a problem persists even though you have done as suggested in the checklist, consult your authorized Harman Kardon service station.

Problem	Cause	Remedy
The unit will not play although the disc has been loaded.	<ul style="list-style-type: none"> • The disc has been loaded upside down. • The disc is dirty. • The disc is scratched. • The disc is excessively warped. • Condensation has formed on the disc or optical head. • The disc does not conform to the appropriate standards. 	<ul style="list-style-type: none"> • Reinsert the disc. • Clean the disc. • Replace the disc with a new one. • Replace the disc with a new one. • Wait for 20–30 minutes before operating the unit. • Use a different disc.
Certain portions of the disc do not play.	<ul style="list-style-type: none"> • The disc is dirty. • The disc is scratched. 	<ul style="list-style-type: none"> • Clean the disc. • Skip over the scratched portion during playback.
The sound is distorted.	<ul style="list-style-type: none"> • Check the receiver and CD player connections. 	<ul style="list-style-type: none"> • Connect the receiver and player together correctly.
Nothing happens when function keys are pressed. The display has characters that are neither numbers or letters.		<ul style="list-style-type: none"> • Turn the power off and then back on again.
Certain portions of the disc do not play.	<ul style="list-style-type: none"> • Transport locking screws were not removed from the bottom panel. 	<ul style="list-style-type: none"> • Remove transport locking screws and holders.

Specifications

System : Compact Disc Digital Audio
 Signal Detection : 3-Beam Semiconductor Laser
 Error Correction : CIRC System
 D/A Conversion Frequency : 88.2kHz
 Channels : 2 Channel Stereo
 Frequency Response : 4Hz—20kHz \pm 0.8dB
 Total Harmonic Distortion : 0.03% (1kHz)
 Dynamic Range : 96dB
 Signal-to-Noise Ratio : 96dB
 Channel Separation : 83dB (1kHz)
 Wow & Flutter : Immeasurable
 Line Output Level/ Load Impedance : 2.0V/10k Ohms

Power Supply : AC 120V, 60Hz
 Power Consumption : 15 Watts
 Dimensions (W x H x D) : 17-3/8" x 3-3/4" x 10-1/8"
 (443 x 93 x 260 mm)
 Weight : 8.5lbs. (3.9kg)

All specifications and features subject to change without notice.