HD800

HD400

HD200

MULTI DISPLAY

K NO. TOTAL TIME/INDEX

$88:88$

MIN SEC

DISPLAY REPEAT PROGRAM

PLAY/PAUSE STOP/CLEAR —— SKIP —— FF – SE

Compact Disc Player Instruction Manual

harman/kardon

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRICAL
SHOCK, DO NOT REMOVE COVER. NO USER-SERVICE-
ABLE PARTS INSIDE. REFER SERVICING TO QUALI-
FIED PERSONNEL.
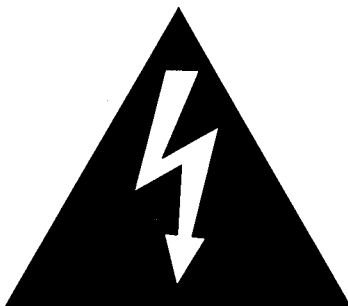
The lightning flash with arrowhead symbol, within an
equilateral triangle, is intended to alert the user to the presence
of un-insulated "dangerous voltage" within the product's
enclosure, that may be of sufficient magnitude to constitute
a risk of electrical shock to persons.

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

WARNING: TO REDUCE THE RISK OF FIRE OR
ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE
TO RAIN OR MOISTURE.
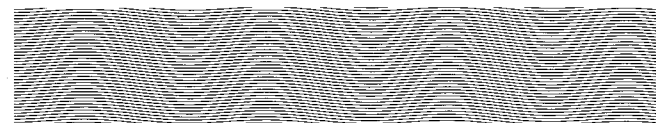
1. Read instructions — all safety and operation instructions
should be read before using the Compact Disc player .

2. Retain instructions for future reference.

3. Heed warnings — all warnings on the Compact Disc player
and in its operations instructions should be adhered to.

4. Follow all instructions.

5. Water and moisture — do not use the Compact Disc player
around water, for example near a swimming pool, sink or
in a wet basement.

6. Ventilation — The Compact Disc player should be situated
so that its location or position does not interfere with its
proper ventilation.

7. Heat — The Compact Disc player should be situated away from heat sources such as radiators, fireplaces, stoves, electric popcorn poppers or other appliances that produce heat. Also avoid prolonged contact with direct sunlight and extremely low temperatures.

8. Power sources — The Compact Disc player should be connected ONLY to a power supply of 120 volts, 60 cycles.

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 at which the cord exits from the Compact Disc player. Also never pull or stretch the cord.

10. Cleaning — Do not use volatile solvents such as alcohol, gasoline, benzine etc. to clean the Compact Disc player cabinet. Use only a clean dry cloth. If you must use a wet cloth, wet only the cloth lightly with water.

11. Object and liquid entry — Care should be taken so that objects (including excessive dust) do not fall into the unit, and that liquids are not spilled into the inside of the Compact Disc player.

12. Abnormal smells — If an abnormal smell or smoke is detected, immediately turn the Compact Disc player power OFF and pull out the power cord. Contact your dealer or nearest Harman Kardon Service station.

13. Damage requiring service — The Compact Disc player should be serviced by qualified service personnel when:

A. The power supply cord or the plug have been damaged; or
B. Objects have fallen, or liquid has been spilled into the Compact Disc player; or
C. The Compact Disc player has been exposed to rain; or
D. The Compact Disc player does not appear to operate normally in performance; or
E. The Compact Disc player has been dropped or the cabinet damaged.

14. Servicing — The user should not attempt to service the Compact Disc player beyond those means described in this manual. All other servicing should be referred to qualified service personnel.

15.

IMPORTANT SAFETY PRECAUTION FOR AC PLUG
CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT USE THE HD800/HD400/HD200's POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY IN-SERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, 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.

Thank you for choosing Harman Kardon.

You now own a superb piece of high fidelity equipment. Used properly, you are about to begin thousands of hours of digital Compact Disc enjoyment.

While you are probably no beginner when it comes to high fidelity components, we nevertheless ask you to read and carefully follow the instructions in this manual to insure a successful partnership between you and your new Harman Kardon Compact Disc Player.

Actual hook-up instructions begin on page 7.

NOTE: Additional HD800 features not found on the HD400 — and remote control features not found on the HD200 — are noted in the front panel description. For example:

17. *Headphone Output (HD800 only)*

IMPORTANT
To protect the HD800/HD400/HD200 during shipping, special *transport screws* and inserts are installed in the bottom of the player. These MUST be removed before using the CD player. Failure to remove them will result in the inability to play an entire Compact Disc from beginning to end.

---

1. Power

Depress the **POWER (1)** switch to turn ON the HD800/HD400/HD200 .

2. Compact Disc Tray

Compact Discs (CD's) are set onto the drawer with the lettering side up. (See instructions for handling CD's on page 9). The tray should be closed by pressing the OPEN/CLOSE button.

It will also close when the **>** key is pressed.
Optionally, it can also be closed by pressing it gently back towards the chassis of the CD player.

3. Open/Close

Once a CD is loaded into the Compact Disc Tray, pressing the **OPEN/CLOSE (3)** button shuts the drawer and activates the **MULTI DISPLAY (4)**.

Pressing the OPEN/CLOSE button when the tray is shut, 1) stops playback, 2) opens the tray, 3) cancels all memorized programs.

4-7. Multi Display

The HD800/HD400/HD200's fluorescent **MULTI DISPLAY (4)** provides information about track numbers (songs on the CD), time and programming.

When a CD is loaded into the player, **TRACK NO. (5)** displays the total number of songs on the Compact Disc. During playback, TRACK NO. indicates the number of the track currently being played. It is also used to display tracks selected for programming (see page 9) and for displaying special *index* numbers found on some CD's.

The **OPERATION DISPLAY (6)** indicates play/pause status and whether programming or repeat functions are in use.

DISPLAY   FUNCTION WHEN LIT

| > | PLAY — normal playback |

| I I | PAUSE — playback temporarily stopped |

| PROG. | PROGRAM— memory playback of a programmed sequence. |

| REPEAT | REPEAT — Disc will repeat playback from the beginning. |

| PROG. / REPEAT | PROGRAM REPEAT — Program or individual selection will repeat when both indicators are lit. |

The digital **TOTAL TIME/INDEX (7)** display has four different functions: 1) When the CD player's loading tray is closed, the *total recording time* in minutes and seconds is displayed. This is particularly useful information when making recordings from a CD. 2) When a CD is playing, the display will "count" the *individual track elapsed time*. 3) During programming, the time display disappears and the same space is used to display program sequence numbers. 4) When searching for an index number, the time display also disappears and index numbers are displayed.

8. Display

This button allows you to switch from one display mode to another during play.

While a CD is playing, the digital display normally shows *individual track elapsed time*. Press **DISPLAY (8)** once to show track number and index number. Press DISPLAY again to return to *individual track elapsed time*.
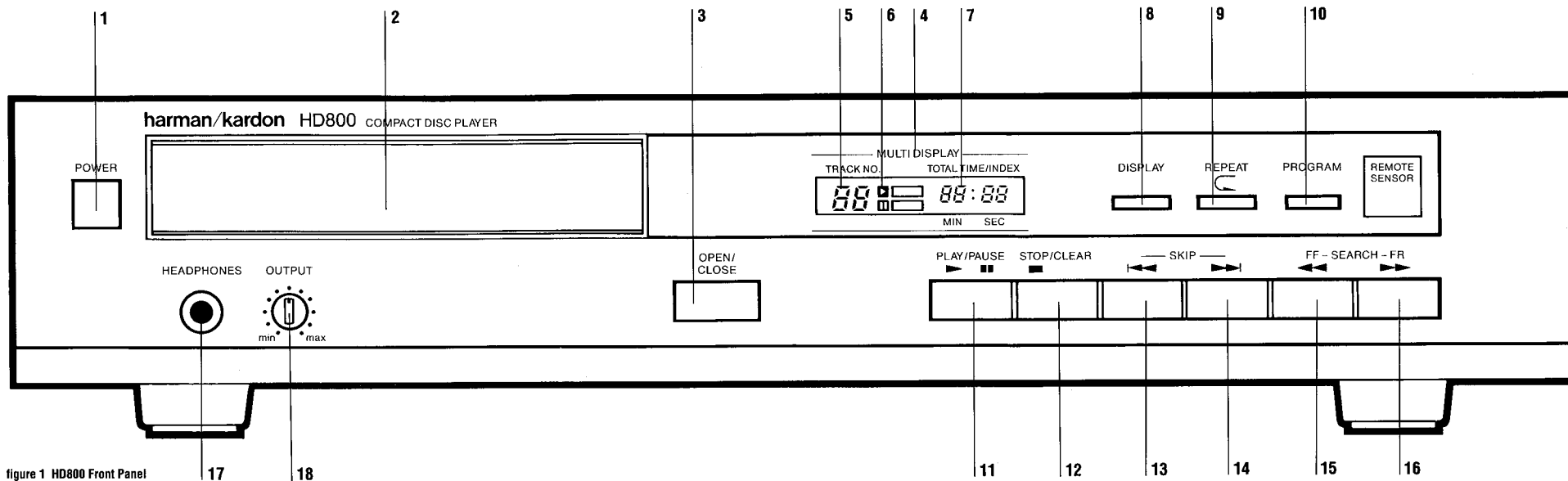
figure 1 HD800 Front Panel

9. Repeat

The HD800/HD400/HD200 can continuously repeat an entire Compact Disc, or a sequence of from 1 to 36 programmed selections. Instructions for using **REPEAT (9)** are on page 10.

10. Program

This button is used to program from 1 to 36 selections, in any order. Instructions for using **PROGRAM (10)** are on page 9.

11-16. Transport Controls

These logic-controlled push buttons are similar to those on a cassette deck. They include **PLAY/PAUSE (11)** > ‖ , **STOP/ CLEAR (12)** ■ , **SKIP BACKWARD** to the beginning of a song

(13) |<< , **SKIP FORWARD** to the next song **(14)** >>| , **MANUAL HIGH SPEED REVERSE SEARCH (15)** << and **MANUAL FAST FORWARD SEARCH (16)** >> .

Their functions are explained further in the **HD800/HD400/HD200 Operation** section of this manual.

17. Headphone Output (HD800 only)

If you wish to listen to a Compact Disc without playing it through your stereo system, simply plug a pair of stereo headphones into the **HEADPHONES (17)** jack on the front of the HD800.

18. Output Level Control (HD800 only)

The **OUTPUT (18)** volume control not only controls the volume of the HEADPHONES output, but also controls the overall output from the HD800 to your stereo system. Thus it may be used in conjunction with "CD direct" inputs which bypass preamplifier tone, volume and balance controls.

Remote Sensor

Operable Range

7 meters (23 feet)

30° 30°

Figure 2

Figure 3

harman/kardon

REPEAT   DISPLAY

1	2	3
4	5	6
7	8	9

0   PROGRAM

◄◄   ►►
SEARCH

I◄◄   ►►I
SKIP

PLAY/PAUSE   STOP/CLEAR
►   ■

COMPACT DISC REMOTE CONTROL

The HD800/HD400 remote control duplicates all functions found on the front panel *except* POWER, OPEN/CLOSE and OUTPUT level (HD800 only).

In addition, the remote includes a **10-KEY INPUT PAD (1)** to facilitate programming and track access.

The remote control operates within a 30-degree angle of the HD800 / HD400.

Two batteries (included) must be loaded into the remote before it will operate. See instructions and further information on remote operation on page 10 of this manual.
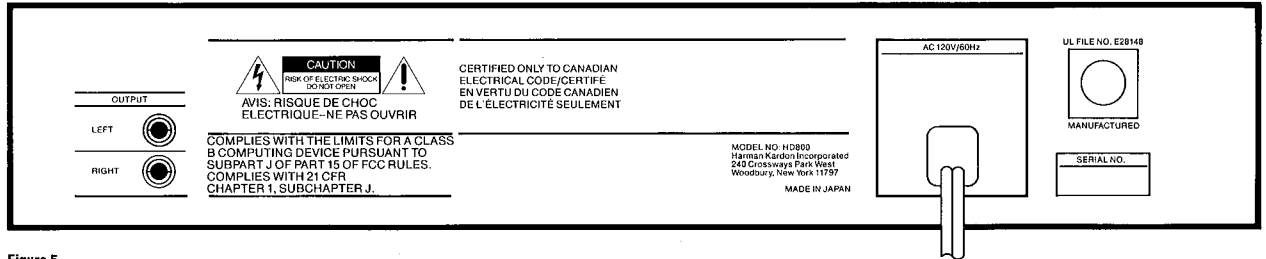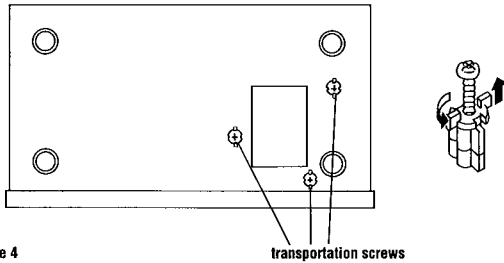
OUTPUT

LEFT

RIGHT

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

AVIS: RISQUE DE CHOC
ELECTRIQUE–NE PAS OUVRIR

COMPLIES WITH THE LIMITS FOR A CLASS
B COMPUTING DEVICE PURSUANT TO
SUBPART J OF PART 15 OF FCC RULES.
COMPLIES WITH 21 CFR
CHAPTER 1, SUBCHAPTER J.

CERTIFIED ONLY TO CANADIAN
ELECTRICAL CODE/CERTIFÉ
EN VERTU DU CODE CANADIEN
DE L'ÉLECTRICITÉ SEULEMENT

MODEL NO. HD800
Harman Kardon Incorporated
240 Crossways Park West
Woodbury, New York 11797

MADE IN JAPAN

AC 120V/60Hz

UL FILE NO. E28148

MANUFACTURED

SERIAL NO.

Figure 5

Figure 4   **transportation screws**

Packing and Paperwork

Save all packing material from your new Harman Kardon
Compact Disc player. While the box is quite large and may be
a nuisance to store, it is essential for shipping if you move or
should the unit ever need repair.

Also be sure to fill out the customer profile card and save your
sales receipt in a safe place. It is necessary to establish the date
on which your warranty begins, and as proof of ownership in
the event of something drastic such as fire or theft.

IMPORTANT: Removing Transport Locking Screws

1. Make sure the player is unplugged.

2. Place the HD800/HD400/HD200 upside down on a soft
   cloth to prevent scratches.

3. Locate the 3 transport locking screws and inserts located on
   the bottom of the player.

4. Using a Phillips-head screwdriver, remove each of them.

The transport locking screws and inserts should be saved. If
the HD800/HD400/HD200 is ever packed for moving or
service, replace all 3 screws and inserts.

Placement

The HD800/HD400/HD200 is fully shielded and may be
placed on top of or under other stereo components, provided
that its 3/8-inch "feet" provide sufficient clearance for the
cooling needs of the component below.

While it is designed to be vibration resistant, excessive shocks
or placement too close to large speakers can cause "stuttering"
or "skipping". When choosing a place for your new CD
player, take the same precautions you would with a turntable.

Hook-Up

The HD800/HD400/HD200's left and right outputs are con-
nected to the CD PLAYER inputs of your preamplifier,
integrated amplifier or receiver using the hook-up cables
provided.

If your preamplifier/receiver/etc. does not have inputs
specifically marked CD, use the set of input sockets marked
AUX, or any other line level inputs which are not currently
being used for another component. NEVER connect your new
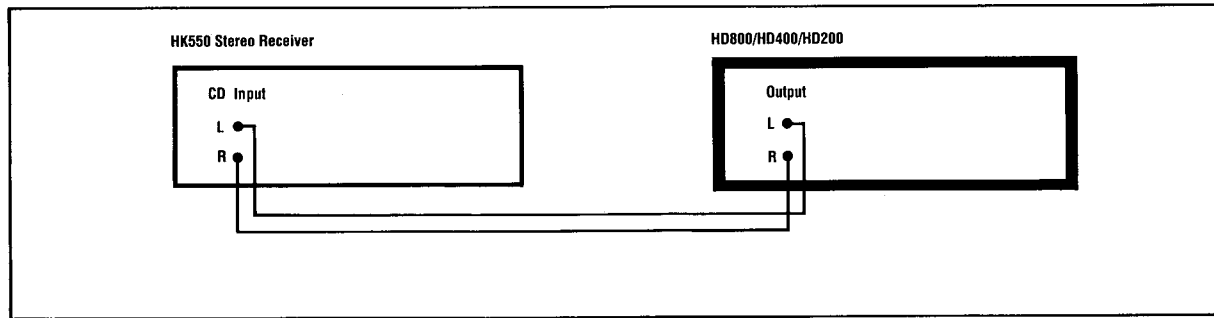CD player to PHONO inputs.

Figure 6

Disc

Disc Tray

1. Make sure that power to both the HD800/HD400/HD200 and your pre-amp/integrated amp/receiver is turned OFF.

2. Connect the hook-up cables provided from the HD800/ HD400/HD200's OUTPUT sockets to the appropriate INPUT on your pre-amp/receiver/etc.

2A. (HD800 only) If your preamplifier has separate CD DIRECT inputs, you may connect the HD800 to them instead. The OUTPUT level control on the front panel of the HD800 will then be used to adjust volume when you play Compact Discs through your system.

During hook-up, take care to match left and right component plugs with the left and right input jacks on the CD player. Common practice is to treat the *red* plug as *right* and the *grey/black/white* plug as *left*.

Power Connection

The HD800/HD400/HD200 does not draw much power and may be connected to a switched or un-switched AC convenience outlet on most other components.

If you are plugging the player directly into a wall socket, or using an extension cord, make sure that it has polarized sockets.
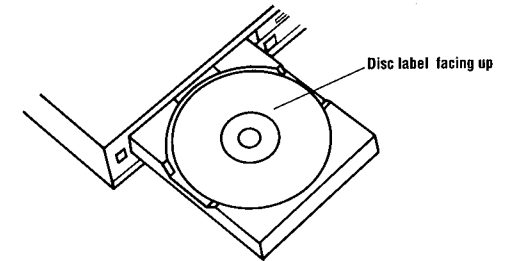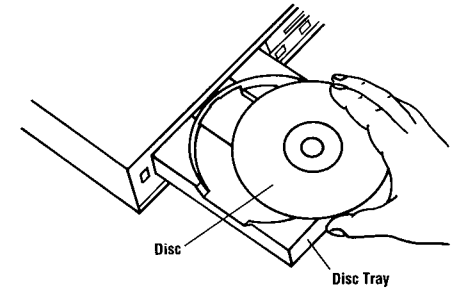

Disc label facing up

Figure 7   Loading Compact Discs

Care and Handling of Compact Discs

With care, a CD will last forever. However, dust, scratches or warps on the Compact Disc may lead to noise or playback problems.

Hold the Compact Disc only by the outer edge, supporting it at the center hole with your index finger if necessary. Be careful not to touch the unprinted side of the disc. Never glue any labels or stickers to either side of the disc.

If a CD does become dirty, clean it with a silicone cloth such as those used for cleaning camera lenses, or with a commercially available Compact Disc cleaning kit. NEVER use volatile chemical substances such as denatured alcohol, record cleaners intended for analog phonograph discs or antistatic fluids.

Always return a CD to its plastic case after it is played and avoid storing the case in a location which is subject to direct sunlight, high humidity or high temperatures.

Playing a Compact Disc

Because of the extreme dynamic range made possible by digital recording, a sudden high volume may result if you attempt to adjust your volume control by "background noise level", the way you might with records or cassette tapes. To avoid damage to speakers or headphones, maintain a conservative volume level until you are familiar with the sonic performance of Compact Discs.

1. Turn on the HD800/HD400/HD200 with the POWER switch.
2. Press the OPEN/CLOSE button and load the Compact Disc with the printed surface facing up.
3. Press the OPEN/CLOSE button again or gently press the front of the disc tray.

The final program number and total playback time will be displayed.

4. Press > II (PLAY/PAUSE) on either the remote control or the HD800/HD400/HD200 front panel.

- To stop play, press the ■ button.
- To momentarily pause during play, press the > II button. The I I indicator will light. Pressing > II again will resume play.
- You can also stop play by pressing the OPEN/CLOSE button.
- Actually, it is not necessary to close the CD disk tray before play. When > II is pressed (Step 4), the tray automatically retracts and play begins.

Skipping Back and Forth Quickly During Play

1. While a CD is playing, press the >>I or I<< (SKIP) buttons repeatedly until the desired track number appears in the TRACK No. display. Pressing the I<< (SKIP) once returns to the beginning of the track currently playing.

- The player will instantly skip to the beginning of the displayed track and playback will start within a few seconds.

Manually Searching with Audible Cueing

1. While a CD is playing, press the >> or << (SEARCH) buttons until you locate the musical passage you wish to hear.

- The sound will remain audible though speeded up, and the volume is automatically reduced.
- To switch to rapid, inaudible search while in Manual Search, first press > II , then << or >> .

Beginning Play Part Way Through A Disc

If you wish, you may begin play at the start of any track on a CD.

1. After a CD has been loaded, press the >>I (SKIP FORWARD) button repeatedly until the TRACK NO. display shows the track desired.
2. Press > II to begin play from that track onward to the end of the CD.

Programming a Sequence of Track Selections

The HD800/HD400/HD200 will memorize a sequence of up to 36 track selections and then play them back in the order they were programmed. This may be 36 different songs, or a combination with individual songs repeated several times as part of the sequence.

1. After you have loaded a Compact Disc into the HD800/HD400/HD200, press the OPEN/CLOSE button but do NOT press any transport control buttons (such as > , >> , etc.). Select the first track to be programmed by entering its number on the remote control 10-key pad (HD800 / HD400 only), or by repeatedly pressing >>I on the front panel.

   The track number will appear in the TRACK NO. display.

2. Press PROGRAM once. The MEMORY indicator will light and "P:01" will appear on the TRACK NO. Display. The track number selected is now entered as Program 1.
3. Select the next track to be programmed using the remote 10-key pad (HD800 / HD400 only) or I<< >>I (SKIP) keys on the front panel.
4. Press PROGRAM AGAIN. "P:02" will appear on the TRACK NO. Display. This track is entered as Program 2.
5. Repeat steps 3 & 4 until up to 36 tracks have been programmed.

6. Press > ı ı . Playback will begin.

- If you change your mind during programming, or enter the wrong track(s), you can clear the programming sequence by pressing either ▬ (STOP/CLEAR) or the OPEN/CLOSE button.
- During playback of a programmed sequence, you can use the SKIP and SEARCH functions without cancelling the program. However, SKIP will only skip over tracks registered in the memory.
- To stop playback of a programmed sequence during play, press OPEN/CLOSE once or ▬ (STOP/CLEAR) twice. Playback will stop and all memorized track numbers will be cancelled. The MEMORY light will turn off.
- After the sequence has been played, the HD800/HD400/HD200 will stop.

Selecting a Single Track for Playback

1. After you have loaded a Compact Disc into the HD800/HD400/HD200, select the track to be programmed by entering its number on the remote control 10-key pad (HD800 / HD400 only), or by repeatedly pressing >>ı on the front panel.

2. Press PROGRAM once. "P:01" will appear on the TRACK NO. Display.

3. Press > ı ı .

- After the song has been played, the HD800/HD400/HD200 will stop.

Repeating an Entire CD or Programming Sequence

1. During play, press the REPEAT button.

- The REPEAT indicator will light and the CD or programming sequence will be continuously repeated.
- To cancel REPEAT, press the REPEAT button again. The REPEAT indicator will turn off and play will continue normally to the end of the disc or programming sequence.
- Both SKIP and SEARCH functions *can* be used during this type of repeat mode.

Repeating a Single Song

1. When the desired track number appears in the TRACK NO. display, (either during play or while stopped) press the PROGRAM button.

2. Press REPEAT.

2A. Press > ı ı if the HD800/HD400/HD200 was stopped during steps 1 and 2.

- The REPEAT and MEMORY indicators will light and the track will be continuously repeated.
- To cancel REPEAT, press the REPEAT button again. The REPEAT indicator will turn off and play will continue normally to the end of the disc.
- While SEARCH functions will function in this mode, SKIP functions *will NOT* during individual track repeat mode.

Cleaning

When cleaning your HD800/HD400/HD200 avoid the direct use of dusting sprays, abrasive cleaners or caustics (such as dilute ammonia window cleaning solutions). Use only a mild soap and water solution, applied to a soft cloth, rather than sprayed directly onto the component.

Remote Control (HD800 / HD400 only)

When the strength of the remote control's batteries becomes weak, the operating range of the remote control is shortened.

To change the batteries (or initially load the batteries provided with your new player):

1. Slide the battery compartment cover on the back of the remote in the direction of the embossed arrow and remove it.

2. Insert two AA (1.5V/R6/UM3) cells according to the + and - polarity symbols at the bottom of the battery well. Always replace both batteries at the same time.

3. Replace the cover.

Make sure that both the remote's front infrared projection "lens" and REMOTE SENSOR on the HD800/HD400 front panel are kept free from dirt to insure proper optical transmission and reception.

Do not use the remote control near fluorescent lamps which may shorten the operating range of the remote.

If you do not intend to use the remote regularly, but have loaded it with batteries, remove them to prevent damage from corrosion.

Once again, thank you for choosing Harman Kardon. We wish you many happy years of Compact Disc listening enjoyment.

Checking these possibilities first may save you time and effort getting your unit serviced. Your Harman Kardon dealer will also be able to answer questions and help you discover the problem.

No light from any CD player indicators.

1. Player is not plugged into wall socket.
2. Wall socket or extension cord is faulty. Check for poor connections and/or blown fuse.

Play indicator will not light and CD does not play.

1. CD may be inserted upside down.
2. Improper disc sequence has been programmed. If you program a track number that is not on the disc, it will not play.
3. Moisture may have formed on the HD800/HD400/HD200 laser/receptor. This sometimes occurs in damp climates, or when the player is moved from a cool to a warm spot. Leave the CD player turned on at room temperature for 30 minutes to evaporate the dew deposit.

Play indicator lights, but no sound when PLAY is pressed.

1. Wrong SOURCE has been selected on your receiver, pre-amplifier or integrated amp.

Certain portions of any CD will not play.

1. The transportation locking screws were not removed from the bottom of the HD800/HD400/HD200.

Sound "skips" or "stutters" during playback.

1. Check the CD for scratches or fingerprints.
2. Isolate the HD800/HD400/HD200 from excessive vibration by placing it on a firmer surface and or farther away from your speakers.

Programming does not function correctly.

1. Make sure that you press PROGRAM after each track selection is made, including after the last track.
2. Check that all tracks programmed actually exist on the CD. If it only has 12 tracks, programming track 16 will cause obvious problems.
3. Take care not to press the STOP/CLEAR button while during programmed play.

The sound is continuously distorted.

1. HD800/HD400/HD200 has not been plugged into the correct input on you pre-amp/receiver/integrated amplifier. Check the connections.

Nothing happens when function keys are pressed.

1. Turn the HD800/HD400/HD200 POWER off and then back on again.

The display shows broken characters that are neither numbers or letters.

1. Turn the HD800/HD400/HD200 POWER off and then back on again.

Remote does not function correctly (HD800 / HD400 only).

1. Make sure the distance and operating angle do not exceed those described in this manual.
2. Check that the remote transmitter lens and front panel REMOTE SENSOR window are clean.
3. Make sure that strong fluorescent lights are being used in your listening room.
4. Check that the batteries inside the remote are fresh.

If you have followed the suggestions in this manual and are reasonably sure that your compact disc player requires service, call the Harman Kardon dealer from which you purchased your HD800, HD400 or HD200. It is important that service be carried out only by a designated Harman Kardon Service agent to insure both proper service and to comply with the terms of the HD800, HD400, and HD200 Limited Warranty.

Remember to keep your sales slip or receipt in a safe place since you will be required to show it for service during the duration of the Limited Warranty.

HD800 Specifications

System:	Compact Disc Digital Audio
Signal Detection:	3-Beam Semiconductor Laser
Error Correction:	CIRC System
Sampling Frequency:	176.4kHz
Quantization:	Dual 16-bit Linear
Channels:	2 Channel Stereo
Frequency Response:	4-20,000Hz ± 0.5dB
THD (Total Harmonic Distortion):	0.02 % (1kHz)
Dynamic Range:	90 dB
Signal-to-Noise Ratio:	96 dB
Channel Separation:	83dB (1kHz)
Wow-and-Flutter:	Immeasurable
Line Output Level/Load Impedance:	2.0V/10k Ohms
Power Consumption:	15 Watts
Dimensions (w x h x d):	17⅜" x 3¾" x 10⅛" 443mm x 95mm x 257mm
Weight:	8.5 lbs/3.9 kg

Feature and specification subject to change without notice.

HD400/HD200 Specifications

System:	Compact Disc Digital Audio
Signal Detection:	3-Beam Semiconductor Laser
Error Correction:	CIRC System
Sampling Frequency:	88.2kHz
Quantization:	16-bit
Channels:	2 Channel Stereo
Frequency Response:	4-20,000Hz ± 0.5dB
THD (Total Harmonic Distortion):	0.03% (1kHz)
Dynamic Range:	96dB
Signal-to-Noise Ratio:	103dB
Channel Separation:	83dB (1kHz)
Wow-and-Flutter:	Immeasurable
Line Output Level/Load Impedance:	2.0V/10k Ohms
Power Consumption:	15 Watts
Dimensions (w x h x d):	17⅜" x 3¾" x 10⅛" 443mm x 95mm x 257mm
Weight:	8.5 lbs/3.9 kg