INSIGNIA

COMPACT DISC PLAYER
WITH FM DIGITAL TUNER
AND SKIP FREE PROTECTION

IS-PA040719
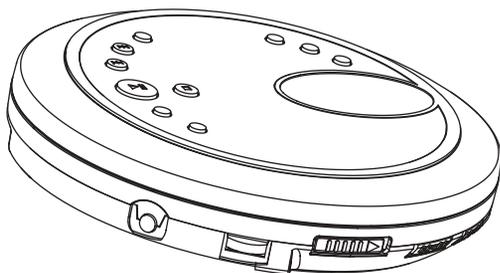
INSTRUCTION MANUAL

PLEASE READ THE INSTRUCTIONS CAREFULLY BEFORE OPERATING THIS UNIT.

WARNING
To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

IMPORTANT
Since the CD circuitry may cause interference to other radio tuners nearby, switch this unit off when not in use or move away from the affected radio tuner.

This device complies with Part 15 of the FCC Rules, operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

NOTE : This equipment has been tested and found to comply within the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turnng the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

SAFETY CERTIFICATION
This Compact Disc Player is made and tested to meet safety standards of the FCC, requirements and compliance with safety performance of the U.S. Department of Health and Human Services, and also with FDA Radiation Performance Standards 21 CFR Subchapter J.

LASER SAFETY
This unit employs an optical laser beam system in the CD mechanism, designed with built-in safeguards. Do not attempt to disassemble; refer to qualified service personnel. Exposure to this invisible laser light beam may be harmful to the human eye.

INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO LASER BEAM.

THIS IS A CLASS-1 LASER PRODUCT. USE OF CONTROLS, OR ADJUSTMENTS OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN, MAY RESULT IN HAZARDOUS LASER LIGHT BEAM EXPOSURE.

SAFETY PRECAUTIONS
1. Do not open the cabinet. Refer servicing to qualified personnel only.
2. Do not expose to excessive heat, direct sunlight, dust, moisture, vibration or shock.
3. Use ONLY the AC adaptor required; others may damage your unit. Disconnect from the wall outlet when the set is not to be used for an extended period of time.
4. When cleaning your unit, use a soft dry cloth, do not use solvents or commercially available cleaners as they may damage or discolor the finish.
5. Do not wear headphones while operating a motor vehicle, this could create a traffic hazard and is illegal in many areas.
6. The headphones supplied with your unit provide superior stereo listening while allowing you to hear outside sounds when listening at normally low volume levels. Listening at extremely high volume levels minimizes the intrusion of outside noise/sounds.
7. If you notice that the sound has become weak or distorted, this is an indication that your batteries are low. Replace with new or recharged batteries. (see "BATTERY OPERATION ")

LOCATION OF CONTROLS
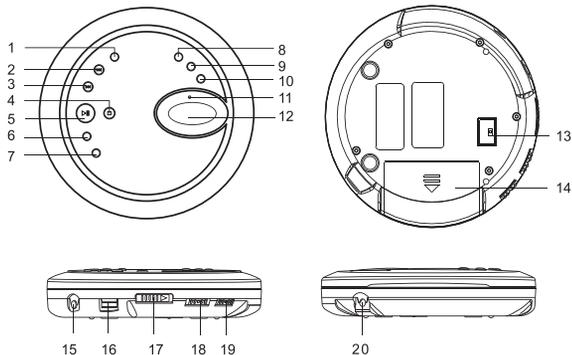
1. Program Button
2. CD: Skip + Button
   Tuner: Tuning + Button
3. CD: Skip - Button
   Tuner: Tuning - Button
4. Stop/Power Off Button
5. Play/Pause/Power On Button
6. Preset + Button
7. Preset - Button
8. CD: Mode Button
   Tuner: ST/Mono Button
9. ESP Button

10. Radio Button
11. Battery Charge Indicator
12. LCD Display
13. Charge On/Off Switch
14. Battery Door
15. Phones Jack
16. Volume Control
17. CD Door Open Switch
18. Bass Boost Switch
19. Hold Switch
20. DC In Jack

Wire Remote Control
1. Volume Control
2. CD: Skip + Button
   Tuner: Tuning + Button
3. CD: Skip - Button
   Tuner: Tuning - Button
4. Radio Button
5. Stop/Power Off Button
6. Play/Pause/Power On Button

Note:
- Use only the supplied remote control unit with the player.
- You can also set the volume control of main unit to the proper sound level to the earphone.
- Operation is same as main unit.

2

POWER SOURCES - NORMAL BATTERIES / AC ADAPTOR (not included)

Battery Operation
1. Open the battery compartment cover and insert two "AA"alkaline batteries inside the battery compartment. Follow the polarity as indicated in the battery compartment.
2. Close the battery compartment cover.

Battery Type	Average Playing Time (Continuous Play)	
	Normal Play Mode	Anti-Skip PlayMode
Alkaline "AA"	Approx. 9 hrs.	Approx. 8 hrs.
Rechargeable (min specification recommended 1 . 2 V - 650mA)	Approx. 3.5 hrs.	Approx. 2.5 hrs.

Note: Zinc / Carbon, or Zinc Chloride type batteries are not recommended for this unit as their use will result in extremely short playing times.
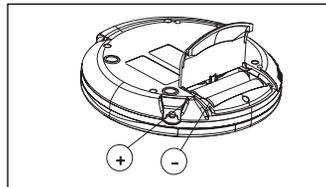
AC Operation
1. Insert the DC plug, at the end of the AC adaptor (not included) cord into the DC input jack.
2. Plug the AC adaptor (not included) into AC power outlet socket. Use only with the recommended 6V AC adaptor (not included) and make sure the local voltage corresponds to the adaptors (not included) required AC input voltage.

Note:
1. While using power from AC adaptor (not included), normal batteries must be taken out of battery compartment.
2. If the AC plug of this unit does not fit in your AC outlet, a plug adaptor should be used. Consult your local dealer on the type of plug adaptor required.

LOW BATTERY ALERT
When the batteries are losing their charge the battery low indicator will flash. In this case the CD player will not function properly and the batteries must be replaced.
In case the rechargeable batteries are being used, follow the intructions on how to recharge the batteries detailed in the owners manual.


3

CHARGING AND USE OF RECHARGEABLE BATTERIES

Rechargeable Battery Operation
This unit can fully recharge the specified rechargeable battery in approximately 15 hours. The rechargeable batteries (NOT supplied) should be recharged before they are used for the first time, if they are low in power or they have not been used for a long period (over 60 days).

1. Open the battery compartment cover and insert two of the recommended rechargeable batteries, matching polarity. (1.2V 650mA) *BOTH BATTERIES MUST BE RE-CHARGEABLE*.
2. Plug in the AC adaptor (not included). Set the Fuction Switch to CD mode and the Charge Switch to the ON position to start charging. *USE ONLY THE AC ADAPTOR (NOT INLCUDED) RECOMMENDED WITH THE UNIT FOR CHARGING.* Note: Charge indicator will illuminate.
3. After 15 hours, unplug the AC adaptor (not included) and switch the Charge Switch to the OFF position. *DO NOT CHARGE CONTINUOUSLY FOR 24 HOURS OR MORE. DOING SO CAN CAUSE THE PERFORMANCE OF THE RECHARGEABLE BATTERY TO DETERIORATE.*
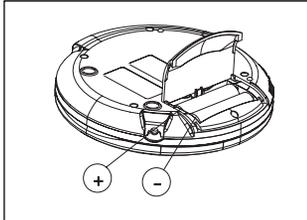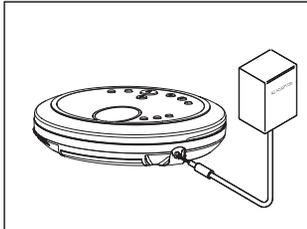
4. If the operating time decreases drastically even when the rechargeable nickel-cadmium batteries are properly recharged, purchase a new set of rechargeable nickel-cadmium batteries. Dispose of nickel cadmium according to local environmental laws.
5. When charging new batteries or if the batteries have not been charged for a long time, playing time may be reduced. In this case, charge and discharge the batteries several times.
   NOTE:
   - Do not attempt to recharge, short-circuit, disassemble, heat or throw the batteries into fire.
   - Do not mix battery types. e.g. alkaline with zinc carbonate.
   - When inserting new batteries, replace all at the same time. Do not mix old and new batteries.
   - Weak batteries can leak and severely damage the unit.

LISTENING WITH EARPHONES

Connect the plug of the stereo earphones into the PHONES (GREEN) socket.
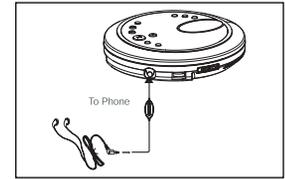
Caution: Avoid excessive volume level and listening to sound for a long period of time when using earphones.
■ Adjust volume to the desired level.

To Phone

To Emphasize the bass sound
Set the BASS BOOST switch to the ON position.
Note: The bass boost performance will depend on the VOLUME control setting.

BASS BOOST
OFF   ON

HOLD Switch
This switch prevents accidental selection of an unwanted function during playback, stop mode or tuner mode. ("icon" will show on the display.) In the HOLD "ON" position, no function button on the unit can be operated (except OPEN). Moving the switch to the "OFF" position will allow the unit to return to normal operation.

HOLD

HANDLING COMPACT DISCS

This unit is designed to play only compact discs bearing the identification logo below.

Other discs may not conform to the CD standard and may not play properly.

COMPACT disc DIGITAL AUDIO

- Dirty, scratched or warped discs may cause skipping or noise.
- Handle the disc only by the edges. To keep clean, do not touch its surface.
- Discs should be stored in their cases after use to avoid serious scratches.
- Do not expose discs to direct sunlight, high humidity, high temperature, dust, etc.
- Prolonged exposure to extreme temperatures can warp the disc.

Remove the disc

Hold the edge and gently press the center pivot as illustrated, then pick up the disc.
**CAUTION:**
Wait for the disc to stop rotating before pressing the OPEN button.

Note: This unit can play 3" (8cm) single CDs without an adaptor. Do not use a CD single adaptor for these discs.

Cleaning Discs

- Fingerprints should be carefully wiped off from the surface of disc with a soft cloth. Unlike conventional records, compact discs have no grooves to collect dust and microscopic debris so gently wiping them with a soft cloth should remove most particles. Wipe in a straight motion from the center to the edge.
- Never use thinner, benzene, record cleaner or anti-static spray on a compact disc. Such chemicals can damage its plastic surface.

INSERT WITH THE LABEL FACING UP.
PRESS THE CLAWS AT THE CENTER OF THE DISC CASE.
PRESS THE DISC GENTLY TO INSERT IT.
LIFT OUT WITHOUT TOUCHING THE RECORDED SURFACE
INCORRECT
CORRECT   INCORRECT
FROM THE CENTER TO THE EDGE
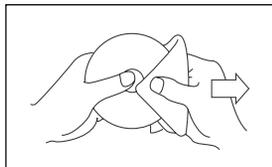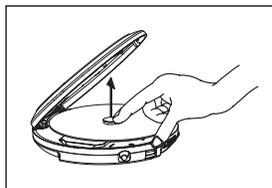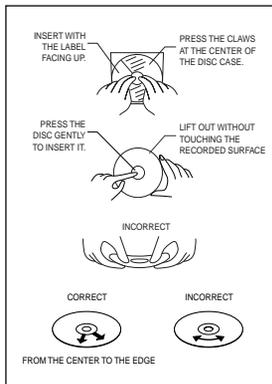
MAINTENANCE

Cleaning the Cabinet

Wipe with a soft cloth. If the cabinet is very dirty, dampen the cloth with a weak solution of neutral detergent and water, and then wipe clean.

Cleaning the Lens

A dirty lens will cause sound skipping and if the lens is very dirty, the Cd may not work. Open the disc cover and clean the lens as follows:

- Dust or Dry Particles Using a camera lens brush/blower, blow on the lens a couple of times, then wipe it lightly with the brush to remove dust. Blow on the lens one more time.
- Fingerprints If the lens cannot be cleaned by use a brush/blower, use a dry cotton swab starting from the middle and working to the outside edge.
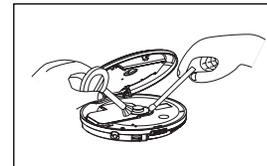
BASIC DISC PLAY

This CD player can play audio discs such as CDRs and CD-R/RWs. Do not try to play a CD-ROM, CDi, VCD or computer CD.
1. Push the OPEN Button to open the CD compartment lid.
2. Adjust the VOLUME Control to minimum.
3. Insert the disc with the label side facing up.
4. Close the lid securely until a click is heard.
5. Press the PLAY/PAUSE Button to start playing. Adjust volume to desired level.
6. Press the STOP Button once to stop playing.
7. Press the STOP Button twice to turn off the power immediately.

Auto Power-Off function

When the unit has stopped (standby mode) for approximately 30 seconds, the power will turn off automatically.

LCD DISPLAY INFORMATION

STOP mode

The total number of tracks and time on the disc are displayed.
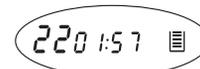
During PLAY mode

The track number and elapsed time is displayed.

During PAUSE mode

The elapsed time flashes in the display and the sound output is muted.

PLAY MODES

Every time the MODE Button is pressed, the corresponding mode appears in the display window.
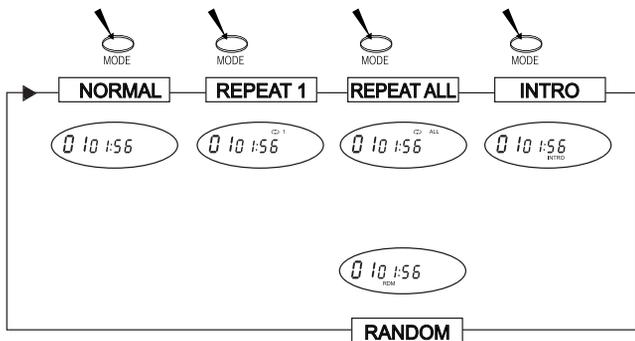
REPEAT MODE
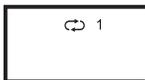
⊂⊃ 1	Shown on the LCD display. The current track on the disc will be repeated.	During Playback x 1
⊂⊃ ALL	Shown on the LCD display. All tracks on the disc will be repeated.	During Playback x 2
	Return to normal play. In normal mode, none of the above symbols are shown in the display.	
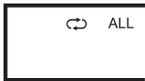
NORMAL PLAYBACK

Play the whole disc.

0 10 1:57
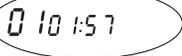
INTRO SCAN AND PROGRAMMED TRACK PLAY

INTRO

Plays the first 10 seconds of each track on the disc.

1. Press the MODE/ST/MONO button until "INTRO" text appears and flashes on the display.
2. Press the PLAY/PAUSE button. The "INTRO" text will stop flashing and start playing "INTRO" scan from first track to the last track on the disc.

020 7:57 INTRO

During Playback

x 3

PROGRAM

This allows selected tracks on the disc to be played in any desired order.

To set the programmed play

Programming can be set in the STOP mode or normal play mode.

1. Press the PROGRAM button twice when the unit is in the stop mode or normal play mode. PROGRAM shows in the display. The track number indicator appears in the display.
2. Press the SKIP DOWN botton or SKIP UP button to select the desired track.
3. Press the PROGRAM button to enter the track in the memory.
4. Repeat step 2 and 3 to program the order of additional tracks. Up to 20 tracks can be programmed into the memory.
5. Press the PLAY/PAUSE button to start the programmed play.
6. To erase the programming, simply press the STOP button twice. (Programmed tracks can also be erased by power off or opening the lid)
7. To repeat program playback, select REPEAT ALL (for full program) or REPEAT 1 (for desired track)by pressing the PROGRAM button while playing the program.

00 01 PGM

06 02 PGM

060 1:57 PGM
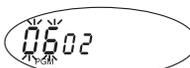
RANDOM PLAY

Enables all of the tracks on a disc to be played in a random sequence.

1. Press the MODE/ST/MONO button until "RDM" text appears and flashes on the display while playing tracks on the disc.
2. The "RDM" text will stop flashing and the random function will begin once the PLAY button is pressed.

Press the MODE/ST/MONO button until RDM disappears from the display.

$02\ 07{:}57$
RDM

During Playback

MODE x 4

SEARCH FUNCTION

Locating a Particular track

To go back to the beginning of the current or a previous track	Press the SKIP DOWN button lightly and repeatedly.
To go to beginning of any following track	Press the SKIP UP button lightly once for next track or repeated for desired track.

Locating a Particular Point in a track

To search backward at high speed	Press and hold the SKIP DOWN button
To search forward at high speed	Press and hold the SKIP UP button

Low level audio will still be heard during the search process to assist in locating the correct point in the track.

USING ANTI-SHOCK AND SKIP FREE PROTECTION FEATURE

Note the " ▯ " indicator appears on display as being empty when the player is first activated. it immediately begins to store sound data in memory bank, The indicator appears to be " ▦ " when the data buffer is full.

When the laser loses tracking due to mechanical shock, the data stream into the memory is interrupted but the data output from the memory buffer continues. The sound is not interrupted. As the data is read from the memory, the indicator changes from " ▦ " to " ▭ ".

Once the laser locks again on the CD track, the data stream is fed to the memory and joined to the previous data (see indicator changes) at higher speed.

CAUTION

If the unit is subject to excessive and continuous repeated shocks, it will cause the sound to skip. Also note the " ▯ " indicator will appear empty.

NOTES

- When the "ANTI-SHOCK" is operating, the battery consumption is higher because the disc rotates faster than normal and also the memory circuitry is activated.
- When the digital anti-shock function is switched "ON" or "OFF", the sound will be interrupted. This is normal.
- Remember that conditions such as dirty, scratched or warped discs may cause skipping or noise thereby affecting performance of the "ANTI-SHOCK" system.
- Skip Free Anti-Shock protection greatly reduces or eliminates skipping during many active uses.

LISTENING TO THE RADIO

1. Press the RADIO button to the "RADIO" position.
2. Press the TUNING Button " **>>I** " or " **I<<** " momentarily (less than 0.5 sec.) to step up or step down the receiving frequency in order to select the 3. For auto tuning, press and hold the TUNING Button " **>>I** " or " **I<<** " (more than 0.5 sec.) until the displayed frequency starts to change, then re-lease the button. Tuning will stop automatically when a station is received. Note: To fine tune the selected station, follow step 3 procedures to step up or down to achieve best reception.
3. To turn the unit OFF, simply press the STOP button.

TO IMPROVE BROADCAST RECEPTION

- For FM, extend the earphone cord.
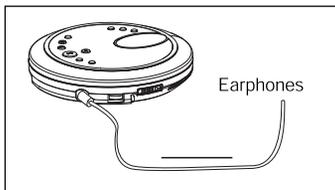
Earphones

Note: Keep the earphones connected to PHONES jack of the player. The earphones cord works as the FM antenna.

TROUBLE SHOOTING FOR RADIO RECEPTION

When auto scanning does not stop at any station, or the reception is poor, it may be due to weakness of signal at the location you are standing, or external interference. Please check as follows:

- Change the location where you are standing.
- Fine tune the station by step up (Tuning Button Up) or down (Tuning Button Down). See location of controls on page 2.
- Use manual tuning to get the desired station if above suggestions are not providing satisfactory results.

STEREO ICON (in FM band only)

When the FM stereo signal is strong enough, the "((ST))" icon will appear.

PRESET STATIONS

1. Press the TUNING DOWN or UP button to the desired statio (refer operation to step 2 and step 3 under "LISTENING TO THE RADIO").
2. When a desired station is tuned , press the PROGRAM button. ("PGM" symbol will flash on the display) To select the memory location for storing this station Press the PROGRAM button once after memory location is chosen. You may select any memory program number for the desired station.
3. Repeat steps 2 and 3 to enter remaining preset stations and memory program numbers.

Notes: The preset memory capacity can store a maximum of 20 FM stations.

RECALLING PRESET STATION

To recall any preset station within the selected band. simply press the PRESET button until the preset memory program number selected appears on the display.

BATTERY REPLACEMENT

When the information on the display becomes dim, it is a "LOW BATTERY"indication. Replace with a new set of normal batteries or charge the rechargeable batteries (refer to the operation of "CHARGING AND USE OF RECHAGEBLE BATTERIES") to get the unit back to normal performance. Dispose of batteries according to local environmental laws.

PRODUCT SPECIFICATIONS

PICK UP

System	Compact disc digital audio system
Laser diode	Material: GaAIAs
Properties	Wavelengh: λ=780mm
	Emission duration: continuous
	Laser output: $<$ 44.6 μW
Error correction	Cross-interleave Reed-solomon code

AUDIO

D/A conversion	DAC 1 Bit
Over sampling	Eight times
Frequency response	20-20,000Hz
Wow and flutter	Below measurable limits
No. of Channel	2 Channels (Stereo)
Output level	Phone: 15mW (32Ω)
Bass boost effect (100Hz) +6 dB	

RADIO SECTION

Frequency Range	FM: 87.5~108 MHz

GENERAL

Power requirements	-2x "AA" alkaline battery
	-DC in 6V jack accepts AC power adaptor (not included)
	(center positive)
Power consumption	0.8W (DC 3V) under normal condition
Dimension	Approx. 144 (W) x 28.5 (H) x 140 (D) mm
Weight	Approx. 230g not including battery