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**Model CD-73
Compact Disc
Digital Audio Player**

Handbook of Instructions

COMPACT disc DIGITAL AUDIO

marantz®

**Model CD-73
Compact Disc
Digital Audio Player**

Your Marantz CD-73 Compact Disc Digital Audio Player employs ultra-precise manufacturing techniques and sophisticated digital and servo technology to assure you an audio output which is the full equivalent of that at the studio console where the original recording was made. Your listening room will never be the same again!

Please read this instruction manual carefully before using your CD-73 Compact Disc Digital Audio Player. This player has been manufactured with the greatest of care to ensure trouble-free operation; however, should you encounter any problem, please promptly notify the store where you purchased the machine or your nearest Marantz service station.

FEATURES

Ultra-compact laser beam pickup + linear motor mechanism

Marantz has succeeded in developing a mechanism of unprecedented small size through use of its own independently-developed ultra-compact laser beam pickup and linear motor mechanism. This enables slim styling which complements that of other equipment in your audio set-up.

Easy-loading drawer type disc mechanism

The disc loading mechanism in this player represents a new concept in loading compact digital audio discs which is based on Marantz's many years of experience with cassette decks. When the motor drive drawer is pulled out, the disc clamper automatically rises and the front panel tilts. All that is necessary is to set the disc in place.

Three built-in microprocessors

The independent functions of three separate microprocessors are employed to ensure that the fullest use is made of the potential of digital audio recordings.

Ultra-precise servo mechanism ensures perfect tracking

Two high-speed 8-bit microprocessors interact with each other to assure perfect tracking by the focus servo, radial servo, and platter servo.

Convenient, 3-way programming capability for disc playback

Together with a random access program, this unit allows three different programs to be stored for playback control. Each program allows up to 15 selections to be played back in any desired order.

Fully balanced swing mechanism

Use of Marantz's own fully balanced swing mechanism ensures superb resistance to vibrations and inclination, as well as making it possible to increase the speed of random access.

Repeat function

This function makes it possible to repeat your program of playback selections any number of times.

Large, easy to read display

Large, easy to read display makes it possible to determine the status of programs or playback at a glance.

Specially developed error correction circuit

Discs are usually contaminated with a variety of foreign matter. Ordinarily, this degrades the quality of sound; however, this player includes a specially developed error correction circuit which completely eliminates the effect of foreign matter by restoring the audio data to its original condition after detection by the laser beam pickup.

Ultra-precise disc clamp system

Discs are loaded by simply setting them in place. To achieve this, an ultra-precise spring-loaded spindle and a magnetic disc clamper have been developed. Working as a pair, the spindle and disc clamper assure accurate disc positioning even if the disc is tilted when it is dropped into place.

Green disc illumination

The disc compartment is illuminated with green light during playback. This allows the disc to be viewed from the front or top during playback.

Energy-efficient solid state laser

Formely, all lasers were based on glass tubes, which required a great deal of energy to operate. In contrast, the newly developed solid state laser used in the CD-73 results in a great savings in energy.

I^2C bus system for internal communication

The I^2C bus system is employed for all communications between display, control keys and microprocessors. This insures positive, sure processing for all functions by the microprocessor "brains" of each section to deliver the ultimate in sound.

Marantz bus system

The Marantz bus system has been introduced in this unit to make it possible to develop total audio systems in which microprocessors in each of the components which are equipped with this system actively communicate to provide easy listening and remote control capability.

BEFORE USING

- **Place of installation**

  To ensure long unit life, avoid using the CD-73 in locations such as:

  - Locations which are exposed to direct sunlight or heat from radiators and the like
  - Locations which are poorly ventilated or highly humid
  - Unstable locations which are tilted or subject to excessive vibration
  - Locations near windows or other places where there is any danger of the unit being exposed to rain or water

- **Be very careful to avoid touching the pickup or lens with your fingers or other objects.**

  - This is an ultra-precise mechanism which reads information on the disc with an accuracy of 1 μm (1/1000 mm).
  - If an excessive amount of dust accumulates on the lens, carefully clean it with a camera blower brush.

- **Electrical precautions**

  - Avoid touching the unit when your hands are wet.
  - When pulling the power cord out of its wall socket, be sure to pull on the plug and not on the cord. Failure to handle the power cord properly can result in a shock or fire hazard.
  - Make a habit of pulling the plug out of the wall socket when you go out for an extended period of time (holidays for example).

- **Maintenance**

  - Do not attempt to service or repair the pickup element or any other internal component. All repairs must be made by a competent, authorized technician.

- **Caring for discs**

  Be sure to handle discs properly as described in the "DISCS" section of this booklet.

SET-UP UPON UNPACKING

When the CD-73 is shipped, two screws are inserted in its bottom to prevent the drawer from moving during shipment. Remove these screws before using the unit. Also, be sure to remove the protective paper from the disc clamper.

NOTE:
The unit will not work properly if taken from very cold conditions to warm conditions because of condensation on lens, etc... Let the unit warm up before using it.

DISCS

Note how the surface of discs gleam with all the colors of the rainbow. This is because of light diffraction caused by the discs' micronsize tracks. The CD-73 Compact Disc Player uses a beam of laser light to read audio information from these tracks; thus, the discs are never subjected to stylus wear as is the case with conventional record players.

- **Handle discs carefully to avoid scratching their surface.**

- **Keep the surface of discs clean.**

  This is important, because there may be as many as 15 billion bits of information recorded on their surface and excessive dust can result in intermittent interruption of sound. Remove ordinary dust and fingerprints by breathing on the disc and wiping it gently with a clean cotton handkerchief or gauze.
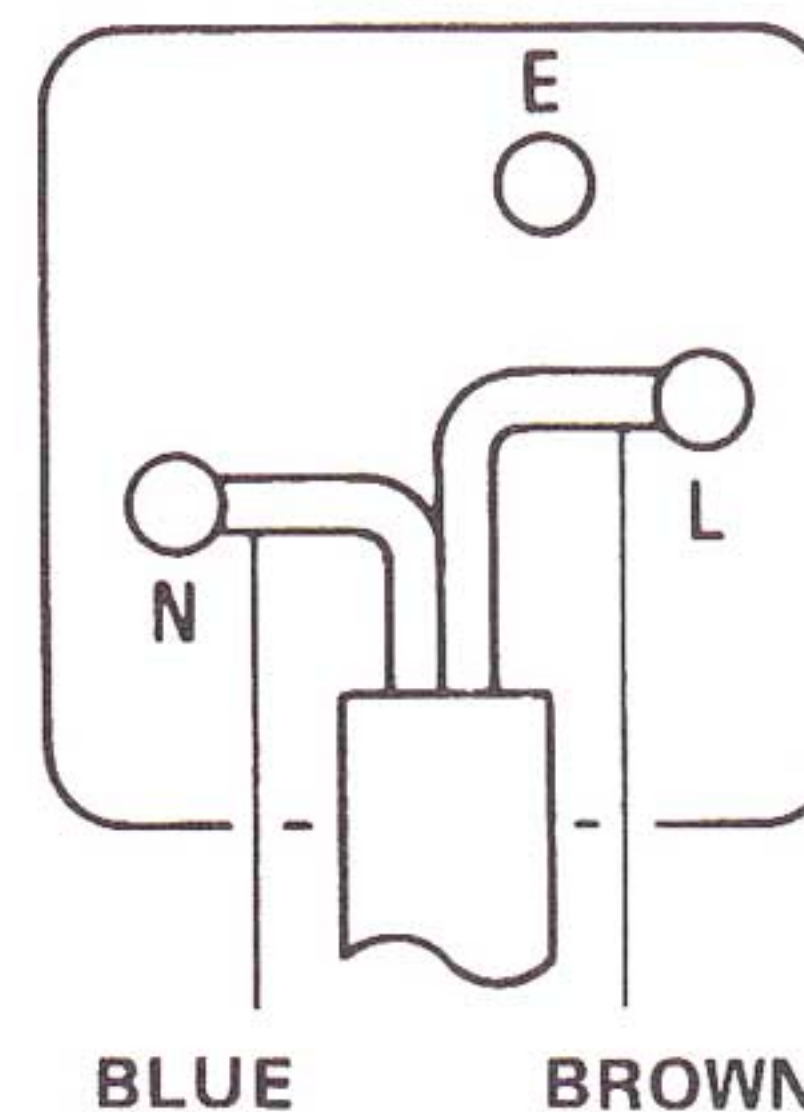
- **To maintain the quality of your discs, avoid placing them in locations such as the following.**

  - Locations which are exposed to direct sunlight or heat (such as radiators)
  - Locations with high concentrations of dust or humidity
  - Places which may be exposed to water, such as near windows

- **Place your discs in their protective cases when they are not in use.**

FOREWORD

Your Marantz product has been specially prepared to comply with the household power and safety requirements that exist in your region. This product has a 4-position voltage selector (110/120/220/240 V) on the rear panel (A, N and T versions). Since the voltage has been adjusted as shown below upon shipment from the factory, please check the third alphabetical letter of the serial number and refer to the following table to note the characteristics of the model in your possession:

SUFFIX	VOLTAGE
A	240 V AC, 50/60 Hz
C	120 V AC, 60 Hz
U	120 V AC, 60 Hz
N	220 V AC, 50/60 Hz
T	240 V AC, 50/60 Hz

FOR UNITS SOLD IN THE UNITED KINGDOM

BLUE   BROWN

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

Blue	Neutral
Brown	Live

As the colours of the wires may not correspond with the terminal identification in your plug, proceed as follows:

— Connect the brown wire to the terminal marked "L" or coloured brown or red.
— Connect the blue wire to the terminal marked "N" or coloured blue or black.

For 13A plugs, conforming to BS 1363, use a 3A fuse.

For other plugs, use a 5A or lower fuse in the plug or adaptor or at the distribution board.

NOTE FOR U.K.

Recording and playback of any material may require consent.

For information, please refer to the —
  Copyright Act 1956
  Dramatic & Musical Performers Act 1958
  Performers Protection Acts 1963 & 1972
and to any subsequent statutory enactments and orders.

ABOUT THIS MANUAL

Refer to the figures given on page 2.

The callout numbers correspond to those found in this manual. All references to the connections and controls are printed in **BOLDFACE**, bold type as they appear on the unit.

REAR PANEL CONNECTIONS

All connections to the rear panel should be made with the power to the entire system turned off.

To avoid confusion, connect one cable at a time between the different components of your system.

This is the safest way to avoid cross-connecting channels or confusing signal inputs with outputs.
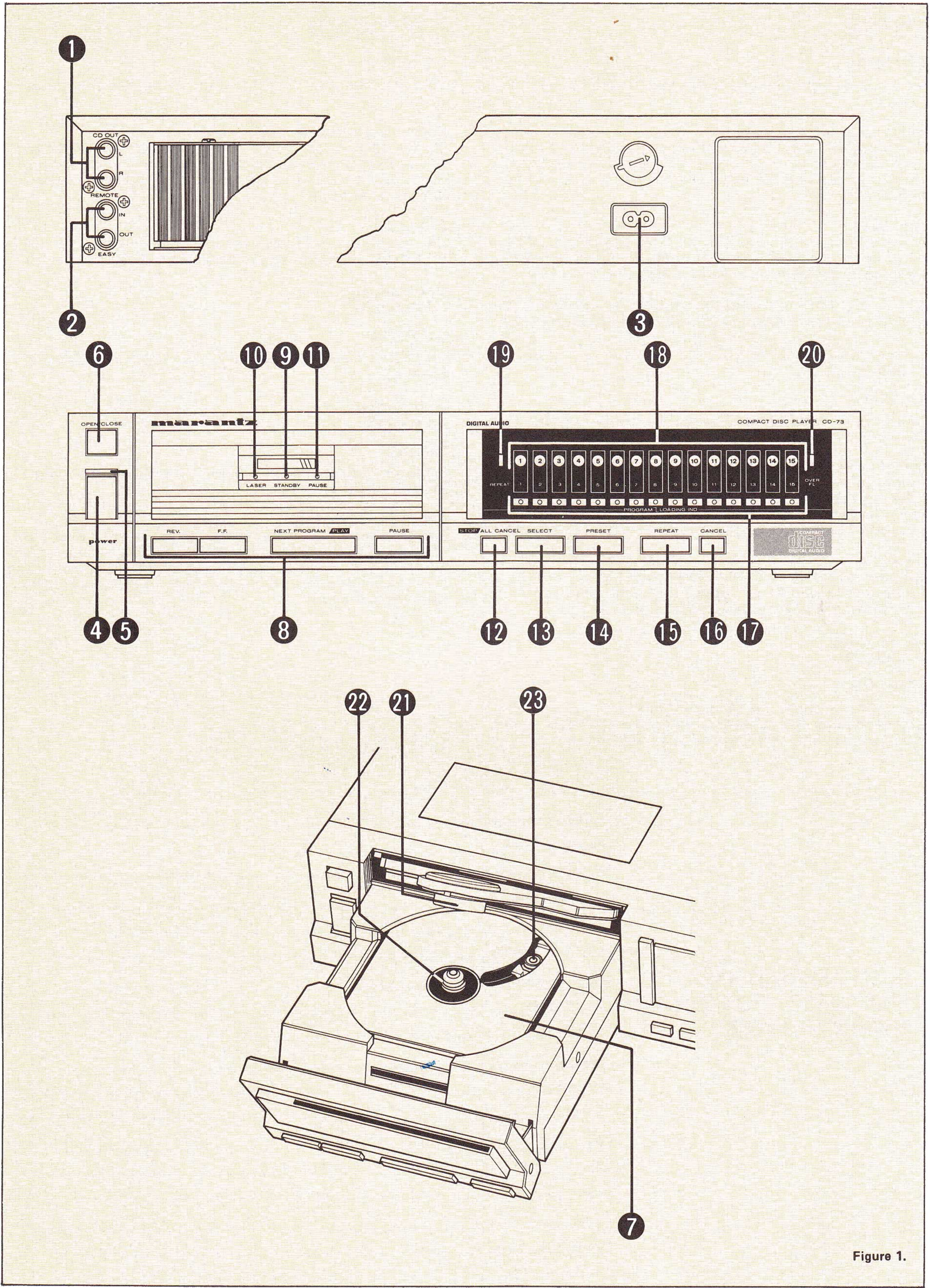
Figure 1.

1 CD OUT JACK

Use the accessory RCA pin cord to conenct this jack to the CD or AUX jack on your preamplifier or pre-main amplifier.

2 REMOTE JACK

Connecting this jack to the optional infrared remote control kit enables remote control. For details, see the instruction booklet of the infrared remote control kit.

3 AC POWER CONNECTION

The correct voltage for operating your unit is written on the rear panel. Be sure the POWER push-switch is out before plugging the AC line cord into an electrical outlet.

4 POWER SWITCH

Pushing this switch turns on the unit's power, and pushing it again turns the power off.

5 POWER INDICATOR

Lights red when the power is on.

6 OPEN/CLOSE SWITCH

Pushing this switch (so that it is out) causes the drawer containing the platter to open automatically; pushing it again (so that it is in) causes the drawer to automatically close.

Discs can be loaded when the drawer is open.

7 DRAWER

This is where discs are loaded for playing. This drawer pulls out (to conserve space), and opening and closing is driven by a motor.

8 OPERATION BUTTONS

Reverse button (REV):
Pressing this button during playback causes the laser pickup to move toward the beginning of the disc from the selection which is currently being played.

Fast forward button (FF):
Pressing this button during playback causes the laser pickup to move toward the end of the disc from the selection which is currently being played.

Play button (NEXT PROGRAM/PLAY):
Press this button to start playback. When this button is pressed while playback is in progress, the laser pickup moves to the next selection on the disc.

Pause button (PAUSE):
When this button is pressed during playback, the player stops at the point at which the button is pressed. Pressing the button again causes playback to resume at the point at which it was interrupted.

9 STANDBY INDICATOR

Lights to indicate that the drawer is properly closed. Playback is not possible except when this indicator is lit.

10 LASER INDICATOR

Lights to indicate that the laser is operating and that playback is in progress.

11 PAUSE INDICATOR

Lights during pause.

12 STOP/ALL CANCEL BUTTON

This button is used to stop playback or to clear the program.

13 SELECT BUTTON

This button is used to specify the desired selection number.

14 PRESET BUTTON

This button is used to store the desired selection number in memory.

15 REPEAT BUTTON

Pressing this button causes all selections programmed to be repeated; pressing it again stops repetition.

16 CANCEL BUTTON

This button is used to delete from memory the selection number specified by the SELECT button.

17 LOADING INDICATORS

The indicator corresponding to the selection which is being played lights. The applicable indicator flashes during programming, and moves one-step to the right each time the SELECT button is pressed; the selection number corresponding to the indicator flashing is stored in memory when the PRESET button is pressed.

18 PROGRAM INDICATORS

Indicators correspond to selections to be played light and those corresponding to the selections which have been played go out. All indicators remain when the repeat function is on.

19 REPEAT INDICATOR

Lights when the repeat function is activated by the REPEAT button.

20 OVER FL INDICATOR

Lights momentarily when an attempt is made to store a selection number in memory when the memory is already full. (The maximum number of selections which can be stored in memory is 15.)

21 DISC CLAMPER

The disc clamper is automatically raised when the drawer is opened for loading; it is automatically lowered to hold the disc in place when the drawer is closed for playback.
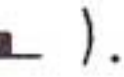
22 PLATTER

The platter uses a high-precision, automatic centering mechanism to correctly position the disc.

23 LASER PICKUP

Reads music data recorded on the disc.

Note: Never touch the lens or pickup.

PLAYING BACK DISCS

1. Set the **POWER** switch to **ON** (▬).
2. Set the **OPEN/CLOSE** button to the **OUT** (▬) position to open the drawer.
3. Place a disc on the platter with the label side up. The disc may be slightly tilted.
4. Set the **OPEN/CLOSE** button to the **IN** (▬) position to close the drawer. As the drawer closes, the disc clamper moves the disc to its correct position.
5. Check that the **STANDBY** indicator is lit.

   NOTES:
   1. **The drawer automatically stops closing if it encounters any obstacles (such as fingers).**
   2. **When the OPEN/CLOSE button is in the out (▬) position, the drawer can be pushed into the play position manually. In this case, however, the STANDBY indicator does not light and disc playback cannot be started. To start playback, set the OPEN/CLOSE button to the IN (▬) position.**

6. Press the **NEXT PROGRAM/PLAY** button; this causes all selections on the disc to be played from the beginning. For programming, see the "PROGRAMMING" section hereunder.
7. The **LASER** indicator lights and the platter starts rotating.
8. The program indicators light to indicate the numbers of selections stored in memory.
9. To skip to the next selection, press the **NEXT PROGRAM/PLAY** button.
10. Set the **OPEN/CLOSE** switch to the **OUT** position to open the drawer and remove the disc after playback has been completed.

PROGRAMMING

The CD-73 has two built-in, 8 bit microprocessors which control the focus servo, radial servo and platter speed servo and programming features. These features provide a range of functions which you will find more than adequate.

General description of the programmable compact disc player

This excellent programmable system provides the following functions.

1. A standard playback function for playing all selections on the disc, from the beginning to the end.
2. A random access function for playing selected selections in the order specified in the playback program.
3. A playback delete function for skipping specific selections. A repeat function is also provided which can be used in conjunction with any of the above.

Standard playback

See Section "**PLAYING BACK DISCS**".

Random access programming function

1. Load a disc as described in Section "**PLAYING BACK DISCS**". Check that the **STANDBY** indicator lights.
2. Press the **SELECT** button repeatedly until the loading indicator corresponding to the desired selection flickers.
3. Press the **PRESET** button; this stores the selection number in memory.
   When the **RESET** button is pressed, all **PROGRAM** indicators other than that corresponding to the selected number go out. Repeat steps 2. and 3. to store other selection numbers in memory.
4. After programming has been completed, press the **PLAY** button. Selections are played back in the order programmed.

5. A maximum number of 15 selection numbers can be stored in memory. To clear a number which has been stored in memory, press the **SELECT** button repeatedly until the **LOADING** indicator corresponding to that number flickers, then press the **CANCEL** button. The corresponding **PROGRAM** indicator then goes out and that selection number is cleared from memory.
6. If an attempt is made to store a selection number in memory when 15 selection numbers have already been stored, the **OVER FL** indicator lights momentarily when the **PRESET** button is pressed to indicate that the selection number cannot be stored in memory.
7. The random access function can be used during playback by means of the **SELECT, PRESET,** and **CANCEL** buttons as described above. This allows the contents of memory to be either partially or completely replaced during playback.

Playback Delete function

1. Load a disc as described in Section "**PLAYING BACK DISCS**". Check that the **STANDBY** indicator lights.
2. Press the **SELECT** button repeatedly until the **LOADING** indicator corresponding to the selection number to be skipped flickers.
3. Press the **CANCEL** button when the **LOADING** indicator flickers; the corresponding **PROGRAM** indicator goes out and that selection number is cleared from memory.
4. Repeat steps 2. and 3. to clear other selection numbers.
5. This Playback Delete function can be used during playback.

Clearing the entire memory

The entire memory is cleared when the **STOP/ALL CANCEL** button is pressed or the **OPEN/CLOSE** button is set to the **OUT** position to open the drawer. Therefore, when a disc is replaced, the program stored in memory is automatically canceled.

NOTE:
The program is also cleared if the drawer is pulled out during playback by hand. In this case, set the OPEN/CLOSE switch to the OUT position, then set it to the IN position again. Reprogram desired selections after confirming that the STANDBY indicator is lit.

Repeat function

All programmed selections can be repeated any number of times by pressing the **REPEAT** button. The **REPEAT** indicator lights when this function is operating. Press the **REPEAT** button again to reset this function.

LOADING indicators

The **LOADING** indicators light to indicate the number of the selection which is being played. Applicable **LOADING** indicators flicker while the selection to be played next is being selected by the program, when the **SELECT** button is pressed or when the fast forward (**FF**) or reverse (**REV**) button is pressed. **LOADING** indicators which flicker after the **SELECT** button has been pressed will go out after a few seconds.

IN CASE OF DIFFICULTY

If you experience any difficulty, check the following before contacting your dealer or the nearest Marantz service station.

● **Disc does not rotate.**
   1. Make sure that the power cord is properly connected.
   2. Confirm that the **POWER** switch is on.
   3. Confirm that the drawer is in the correct position and that the **STANDBY** indicator is lit.
   4. Confirm that the **OPEN/CLOSE** switch is in the **IN** (▬) position.
   5. Confirm that the disc has been loaded with the label side up.

- **Disc rotates but no sound is heard.**

  1. Check connections between the disc player, amplifier and speakers.
  2. Confirm that the amplifier **POWER** switch is **ON**.
  3. Check the volume control setting of the amplifier.
  4. Confirm that the source selector of the amplifier is set to CD or to the position to which the CD-73 is connected.

- **Sound is interrupted intermittently.**

  1. Check for dirt on the disc.
  2. Check the disc for large scratches.
  3. Check the disc for warp.

MAINTENANCE

Only the most competent and qualified technicians should be allowed to service your system. The Marantz company and its factory trained technicians have the knowledge and special equipment needed for repair and calibration of this precision instrument.

In the event of difficulty refer to your dealer or write directly to one of the locations listed at the end of this manual for the name and address of the Marantz service station nearest your home. Please include the model and serial number of your unit together with a description of what you feel is abnormal in its behaviour.

REPACKING FOR SHIPMENT

Should it become necessary to repack your Compact Disc Digital Audio Player for shipment to the factory, to an authorized service station, or elsewhere, please observe the following precautions:

a. Pack the unit carefully, using the original material as shown in Figure 3 and put the transport screw back in.
b. Ship via a reputable carrier (do not use Parcel Post) and obtain a shipping receipt from the carrier.
c. Insure the unit for its full value.
d. Be sure to include your return address on the shipping label.

Figure 2.

Figure 3.