PROFESSIONAL

Model PMD320/PMD321 User Guide

Compact Disc Player

marantz®

COMPACT

disc

DIGITAL AUDIO

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, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

LASER SAFETY

This unit employs a laser, Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.

"CAUTION - USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURE OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

PMD320
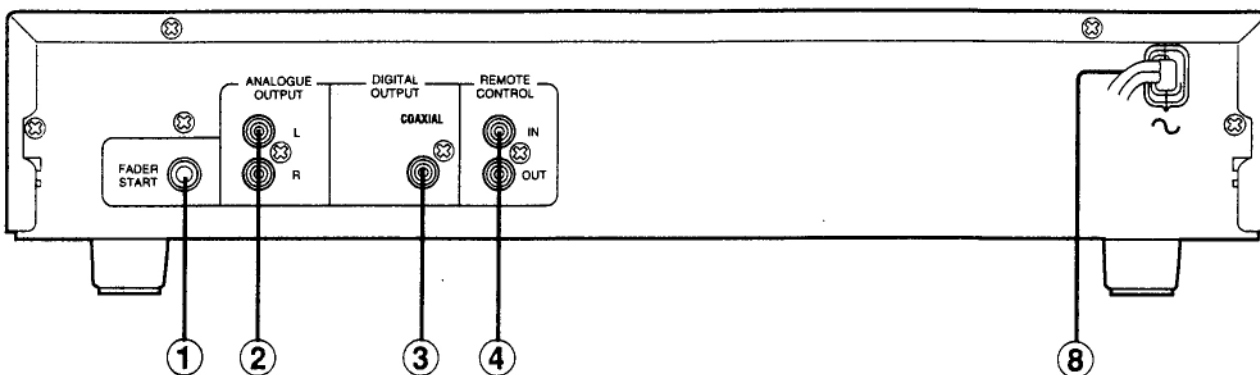
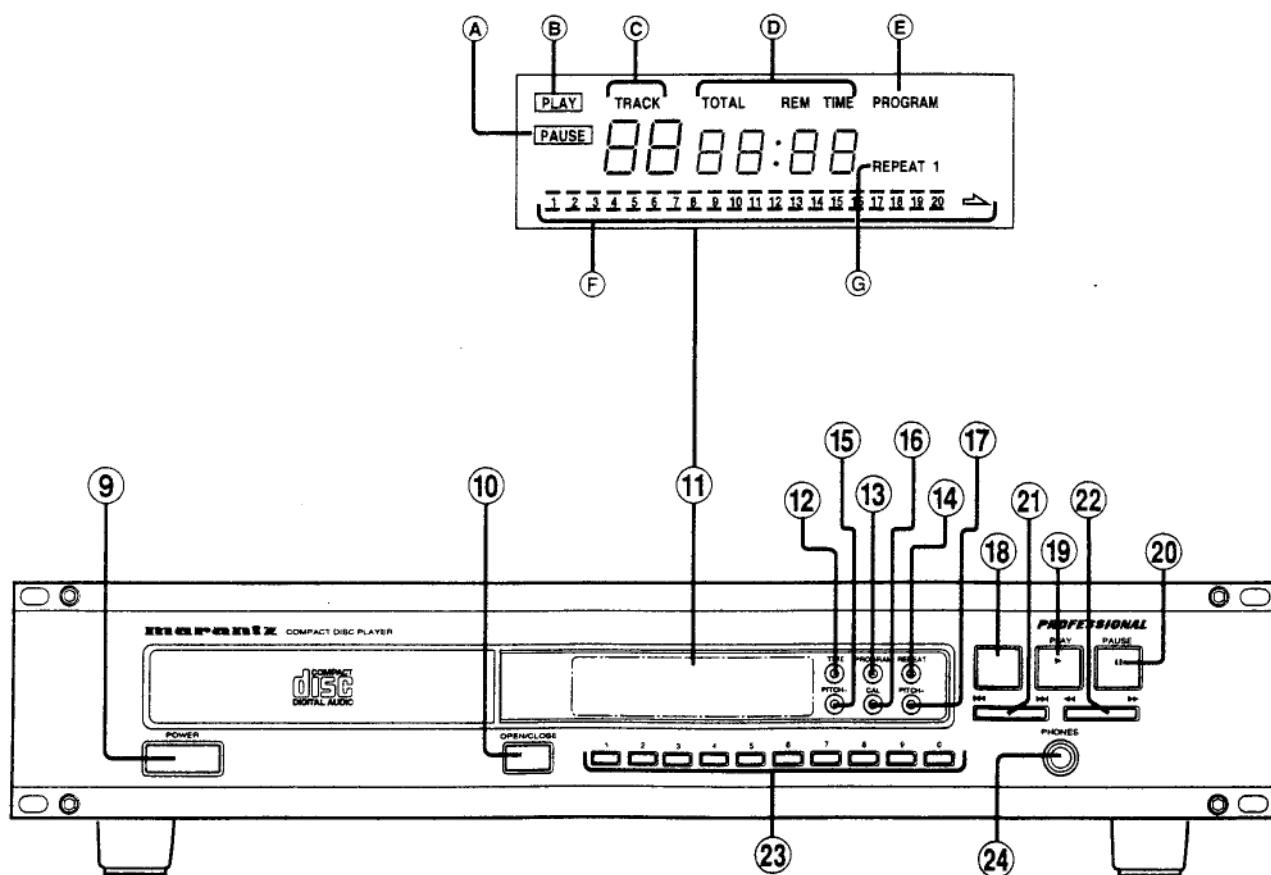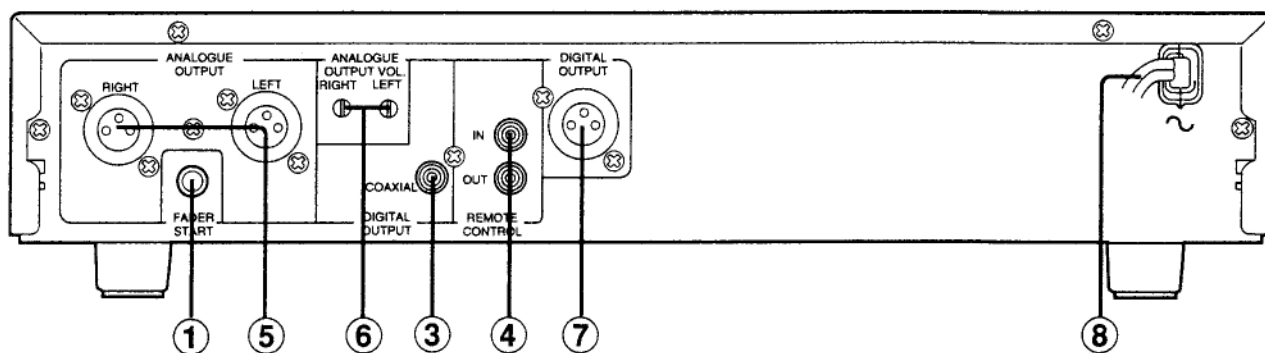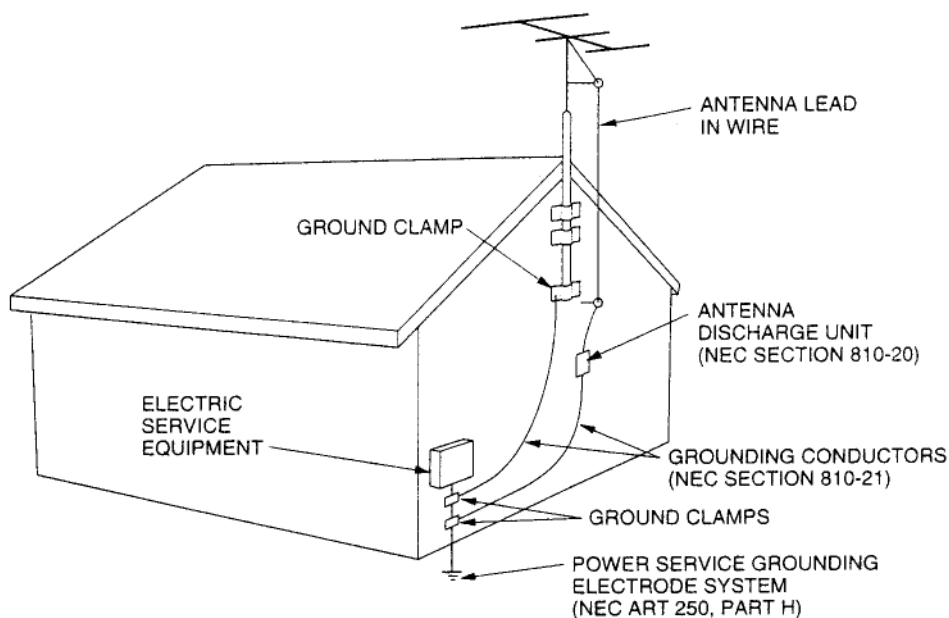## PMD321

FIGURE 1

EXAMPLE OF ANTENNA GROUNDING ACCORDING TO
NATIONAL ELECTRICAL CODE INSTRUCYIONS
CONTAINED IN ARTICLE 810 -"RADIO AND TELEVISION EQUIPMENT"

ANTENNA LEAD
IN WIRE

GROUND CLAMP

ANTENNA
DISCHARGE UNIT
(NEC SECTION 810-20)

ELECTRIC
SERVICE
EQUIPMENT

GROUNDING CONDUCTORS
(NEC SECTION 810-21)

GROUND CLAMPS

POWER SERVICE GROUNDING
ELECTRODE SYSTEM
(NEC ART 250, PART H)

NEC - NATIONAL ELECTRICAL CODE

NOTE TO CATV SYSTEM INSTALLER:

This reminder is provided to call the CATV (Cable-TV) system installer's attention to Article 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

NOTE:

This equipment has been tested and found to comply with 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 turning 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.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

SAFETY INSTRUCTIONS

READ BEFORE OPERATING EQUIPMENT

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

1. Read Instructions — All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions — The safety and operating instructions should be retained for future reference.

3. Heed Warnings — All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions — All operating and use instructions should be followed.

5. Water and Moisture — The appliance should not be used near water-for example, near a bathtub, wash-bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

6. Carts and Stands — The appliance should be used only with a cart or stand that is recommended by the manufacturer.

7. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

8. Wall or Ceiling Mounting — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

9. Ventilation — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

10. Heat — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

11. Power Sources — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

12. Grounding or Polarization — Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
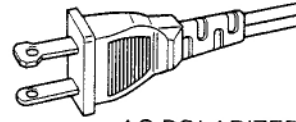
AC POLARIZED PLUG

13. 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 where they exit from the appliance.

14. Cleaning — The appliance should be cleaned only as recommended by the manufacturer.

15. Power Lines — An outdoor antenna should be located away from power lines.

16. Outdoor Antenna Grounding — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
    Section 810 of the National Electrical Code, ANSI/NFPA No. 70 — 1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. 1.

17. Nonuse Periods — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

18. Object and Liquid Entry — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

19. Damage Requiring Service — The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the enclosure damaged.

20. Servicing — The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

INTRODUCTION

Thank you for selecting the Marantz PMD320/PMD321 Compact Disc Player for your A/V system.

Please read these operating instructions carefully. We recommend that you read the entire user guide before you attempt to connect or operate the player.

After you have reviewed the contents of this manual, we suggest that you make all system connections before you attempt to operate the unit.

Refer to the figures on the pages at the front of this user's guide. The callout numbers on the figures correspond to those found in the text.

INSTALLATION

Remember the following important points when installing the player:
• Do not expose the player to rain or moisture, as this may cause damage to the player.
• All players produce some heat during operation and this heat must be allowed to disperse freely. Do not close any ventilation openings and insure that there is adequate ventilation space behind, beside and above the player.
• Prevent extra heat from reaching the unit. Never put the player in the full glare of the sun or near a heat source.

PRECAUTIONS

The following precautions should be taken when operating the equipment.

GENERAL PRECAUTIONS

When installing the equipment ensure that:

- the ventilation holes are not covered.
- air is allowed to circulate freely around the equipment.
- it is placed on a vibration-free surface.
- it will not be exposed to excessive heat, cold, moisture or dust.
- it will not be exposed to direct sunlight.
- it will not be exposed to electrostatic discharges.

In addition, never place heavy objects on the equipment.

If a foreign object or water does enter the equipment, contact your nearest dealer or service center.

Do not pull out the plug by pulling on the mains lead; grasp the plug.

It is advisable when leaving the house for an extended period, or during a thunderstorm, to disconnect the equipment from the mains supply.

COMPACT DISCS

Handle discs carefully so as not to damage or scratch the front side.

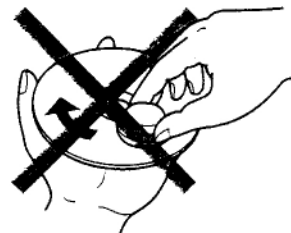**To protect the disc, avoid placing it in the following locations:**
- In direct sunlight or near a source of heat like a heater.
- In a place which is damp or dirty.
- In a place which could be exposed to rain, such as near a window.

Always keep the disc surface clean.
Up to six billion data units are recorded on the bottom side of the disc. When cleaning the disc surface, always be sure to use a special compact disc cleaner and wipe as shown below.
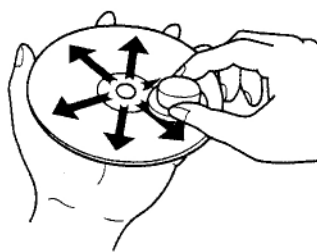
Wipe in a radial direction.   Do not wipe in circumferential direction.

• Do not use conventional record cleaner for analog records, as this will adversely affect the disc surface.

Store discs properly by placing them in their disc cases.

CONTROLS, CONNECTIONS AND INDICATORS

① FADER START jack
Stop and play back tracks by connecting this jack with an external Fader start Switch.

② ANALOG OUTPUT jacks (PMD320 only)
Connect to the CD or AUX input jacks of a preamplifier or mixer.

③ DIGITAL OUTPUT COAXIAL output jack
By connecting this jack to a digital audio component (DAT, CD-R etc.), digital signals from compact discs can be transmitted directly from the player without first being converted to analog.
Uses IEC-958-II Data Format.

④ REMOTE CONTROL IN/OUT jacks
By connecting this CD player to another Marantz audio component using an RC-5 control cable, you can operate the components remotely as a single system.
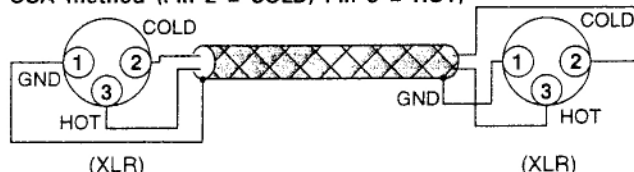
⑤ ANALOG OUTPUT jacks -BALANCED- (PMD321 only)
Connects to balanced line level inputo.

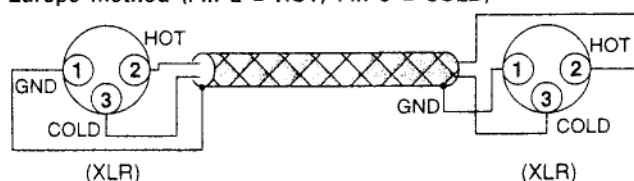### Notes on BALANCED output jacks
1) The BALANCED output jacks uses XLR connectors.
2) There are two types of professional-type internal wiring methods for XLR connectors.

1. USA method (Pin 2 = COLD, Pin 3 = HOT)

(XLR)   (XLR)

2. Europe method (Pin 2 = HOT, Pin 3 = COLD)

(XLR)   (XLR)

3) The PMD321 use the Europe method described.

When XLR balanced cables are used and if your preamplifier or main amplifier uses the USA method, the reproduced signal may be out of phase. In this case, change the connections of pin 2 and pin 3 of one of the XLR connectors of the cable to the Europe method.

⑥ ANALOG OUTPUT VOL. adjustment hole (PMD321 only)
Adjust the ANALOG OUTPUT with a screw driver.

⑦ DIGITAL OUTPUT jacks -BALANCED- (PMD321 only)
Connect with a unit which equips the balanced digital input.
Notes on Balanced output jacks.(Uses IEC-958-II Data Format):

1) The balanced output jacks use the XLR connectors.
2) Balanced connection
    Pin 1 = GND
    Pin 2 = signal
    Pin 3 = signal

⑧ AC POWER SOURCE CONNECTION
With the POWER switch set to the OFF position, plug the mains lead into a mains outlet providing the right voltage.

⑨ POWER switch
Press to switch the power ON, and press again to switch it OFF.

⑩ OPEN/CLOSE button
Pressing the OPEN/CLOSE button opens the disc tray. Place a compact disc on the tray with the label side facing up. Lightly press the front of the disc tray to close or press OPEN/CLOSE button again to close.

⑪ Display
Shows information such as the power ON/OFF state, track number, playing time and current operation mode.

Ⓐ PAUSE indicator
Lights up in the pause mode.

Ⓑ PLAY indicator
Lights up during CD playback.

Ⓒ TRACK indicator
Shows the track number of the track being played or programmed.

Ⓓ Elapsed playing time of the current track
TOTAL: Indicates the total playing time of the disc. In program mode, this indicator shows the total playing time of the programmed tracks.

REMAIN: Indicates the remaining playing time of the current track.

TOTAL REMAIN: Indicates the remaining playing time of the entire disc. In program mode, this indicator shows the remaining playing of the current program.

Ⓔ PROGRAM indicator
Lights up when the CD player is in program mode.

Ⓕ Track number indicators
When a disc is placed on the tray and the tray is closed, the TOC* is read and the numbers of all the tracks on the disc are displayed. " ⇨ " lights up if there are more than 20 tracks on the disc. In program mode only the track numbers of the programmed tracks light up.

The track numbers go out in turn as each track finishes playing.

* TOC is the disc's "Table Of Contents" and contains non-audio data such as the track numbers and playing times of all the tracks on the disc.

Ⓖ REPEAT indicators
REPEAT 1: Lights up during 1-track repeat mode, which will repeat a single track repeatedly.
REPEAT: Lights up during all-track repeat mode, which plays all the tracks on the disc repeatedly. Also lights up during program repeat mode, which plays all the programmed tracks repeatedly.

⑫ TIME button
Switches the time shown on the display to the remaining time of the current track (REMAIN) or the remaining time of the entire disc (TOTAL REMAIN).

⑬ PROGRAM button
Press to activate program play, so that only the selected tracks from the disc loaded on the disc tray will be played.

⑭ REPEAT button
Press to select 1-track repeat, all-track repeat or program repeat playback mode.

⑮ PITCH – button
Press to decrease the CD playback speed, lowering the pitch.

⑯ CAL. button
Press to calibrate and return to normal playback speed.

⑰ PITCH + button
Press to increase the CD playback speed, increasing the pitch.

⑱ STOP/CM button (PMD320 only)
Press to stop playback. This button is also used for deleting a program.

⑱ CUE button (PMD321 only)

Start the AUDIO CUE mode by pressing the `CUE` button.
(The AUDIO CUE mode is the function that skips to the nonsound part
t the beginning of a track and pauses just before the start of audio within
the track.)
Release the AUDIO CUE mode by pressing the `CUE` button again.

⑲ PLAY (►) button

Press to start playback.
When pressed during playback, the CD player returns to the beginning
of the current track and plays the track again. The indicator lights up during
playback.

⑳ PAUSE (II) button

Press to stop playback temporarily. The indicator lights up during pause.
When pressed again, the indicator goes out and playback resumes from
the same position.

㉑ I◄◄ , ►►I (Track Previous/Next) buttons

When the I◄◄ button is pressed during playback, play re-starts at the beginning
of the previous or a preceding track. When the ►►I button is pressed, play
re-starts at the beginning of the next or a subsequent track.
Multiple tracks can be skipped by pressing the buttons multiple times.

The selected track number is shown on the display.
These buttons can also be used to select a desired track from which
to start playback from stop mode.
These buttons are also used in program mode to select tracks for
programming.

㉒ ◄◄ , ►► (Search Reverse/Forward) buttons

◄◄ : When pressed and held during playback, this button fast-reverses
the play position.
►► : When pressed and held during playback, this button fast-forwards
the play position.

㉓ Numeric buttons (0 to 9)

When used during playback, these buttons allow you to specify the
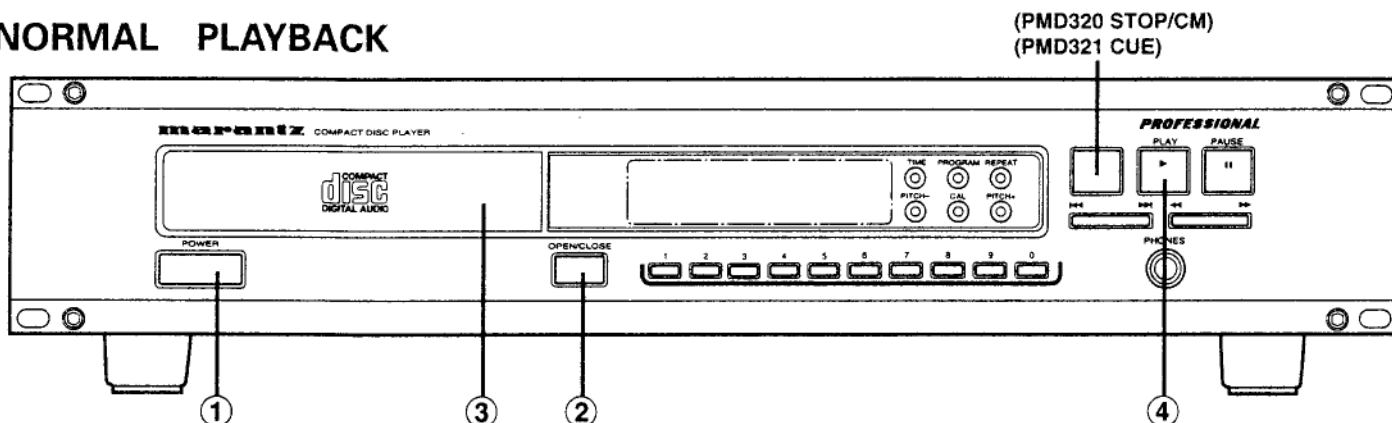number of another track you want to play.
When used during stop mode, these buttons allow you to specify the
number of a track from which to start playback.
These buttons are also used to select tracks for programming.
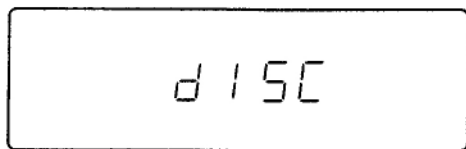
㉔ PHONES jack

Jack for connecting headphones.

NORMAL PLAYBACK

(PMD320 STOP/CM)
(PMD321 CUE)

① **Press the `POWER` switch to turn on the power.**

Display indications

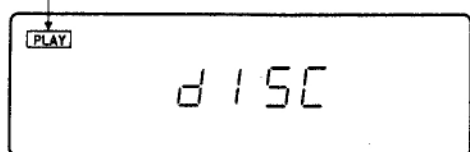$$d \, I \, 5 \, C$$

② **Press the `OPEN/CLOSE` button.**
When the disc tray opens, place a disc on the tray with the label side up.

③ **Gently press the front of the disc tray or press the `OPEN/CLOSE` button to close the tray.**

④ **Press the `PLAY` button.**
When the button is pressed, the `PLAY` indicator lights up.

Lights up.

PLAY

$$d \, I \, 5 \, C$$

The disc starts playing.

While the disc is playing, the display shows the track number and elapsed
playing time of the track currently playing, along with the numbers of
the tracks still to be played or playing.

Display example during playback 2 minutes 50 seconds after the beginning
of track No. 5 on a 9-track disc:

Number of current track

PLAY TRACK   TIME

$$5 \quad 2:20$$

5 6 7 8 9

Remaining track numbers

— Seconds
— Minutes
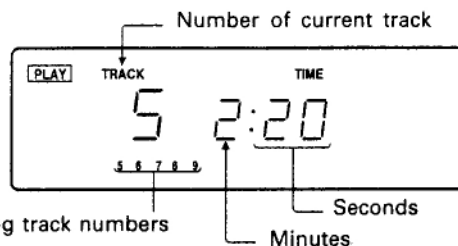
When the last track has finished playing, the CD player stops automatically.

To start playback again from the first track:
Press the `PLAY` button.
To stop playback:
Press the `STOP` button. (PMD320 only)

The PMD321 does not have the `STOP` button. To stop playback on the PMD321, press the `OPEN/CLOSE` button so that the disc tray opens.

To remove the disc:
Open the disc tray by pressing the [OPEN/CLOSE] button, remove the disc, then close the tray by lightly pressing its front edge or by presing the [OPEN/CLOSE] button again. Always keep the disc tray closed even when the CD player is not being used.

To pause playback:
Press the [PAUSE] button.
The PAUSE indicator lights up and playback pauses at the position where the button was pressed. To resume playback from the pause position, press the [PAUSE] button again.
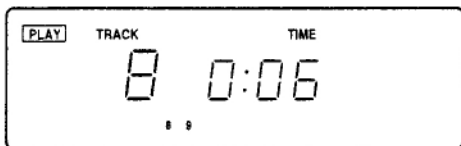
To switch the time display:
Press the [TIME] button.
Each time the [TIME] button is pressed, the time display changes in the following order: elapsed playing time of current track → REMAIN →TOTAL REMAIN → elapsed playing time of current track.
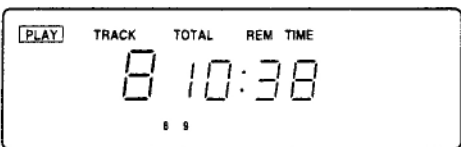
Display examples

• Elapsed playing time of the current track

```
[PLAY]  TRACK            TIME
          8   0:06
             8  9
```

• REMAIN (remaining playing time of the current track)

```
[PLAY]  TRACK         REM TIME
          8   6:10
             8  9
```
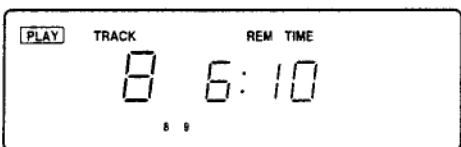
• TOTAL REMAIN
(total remaining playing time of the entire disc)

```
[PLAY]  TRACK   TOTAL   REM TIME
          8    10:38
             8  9
```

Scanning (locating a desired passage)

To find a passage located after the current position:
Press the [►►] button.

To find a passage located before the current position:
Press the [◄◄] button.
Normal playback resumes from the position where the button is released.
• When one of these buttons is pressed, scanning is first carried out at slow speed and sound is heard for about 3 seconds. After that, scanning is carried out at high speed.

SEARCHING/SKIPPING

Direct search (specifying a desired track number)

Specify the track number using numeric buttons 0 to 9.
For track number 3, press [3].
For track number 12, press [1], then, within 1.5 seconds, press [2].
If the first of two digits pressed is not one of the digits on the CD, it is interpreted as 1 digit and the search will start after about 0.5 second.

If you make a mistake when pressing the numeric buttons:
Press the right buttons to enter the correct track number.
• If you specify a track number which does not exist on the disc, "Error" will appear on the display. Enter the correct number.

```
     Error
```
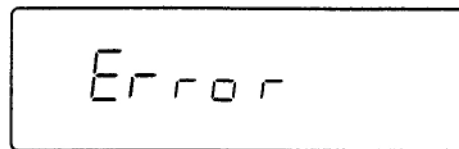
Skip (skipping to a desired track located after the track currently playing)

Press the [►►|] button the necessary number of times to skip to the desired track.

Skip (skipping to a desired track located before the track currently playing)

Press the [|◄◄] button the necessary number of times to skip to the desired track.
• Pressing the [|◄◄] button in the middle of the first track in the disc skips to the last track, and pressing the [►►|] button in the middle of the last track skips to the first track.

REPEAT PLAY
1-track repeat
(repeated playback of one track only)

While the track you want to repeat is playing, press the [REPEAT] button twice.
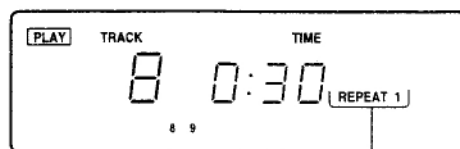
```
[PLAY]  TRACK            TIME
          8   0:30 [REPEAT 1]
             8  9
                      Lights up.
```

The "REPEAT" and "1" indicators light up and the current track will be played repeatedly.

To cancel 1-track repeat play:
Press the [REPEAT] button once.

All-track repeat
(repeated playback of all tracks on the disc)

During playback, press the [REPEAT] button once.
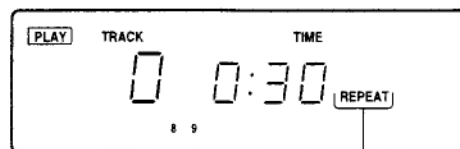
```
[PLAY]  TRACK            TIME
          0   0:30 [REPEAT]
             8  9
                      Lights up.
```

The "REPEAT" indicator lights up and all the tracks on the disc are played repeatedly.
Even if the [REPEAT] button is pressed in stop mode, playback will start and repeat playback will be carried out.
To resume normal playback:
Press the [REPEAT] button twice. The "REPEAT" indicator goes out, repeat mode is cancelled and normal playback resumes.

PROGRAM PLAY

To play the desired tracks in a certain order programming)

(Example: To program track number 6 first, then track number 14 on a 14-track disc)

1. Press the PROGRAM button in stop mode. The PROGRAM indicator flashes.

Flashes.

TRACK	TOTAL	TIME	PROGRAM

0:00
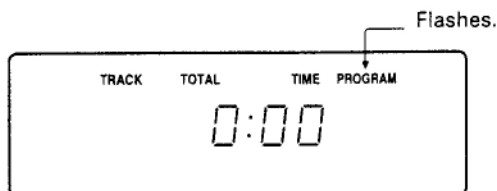
2. Specify the first track to be programmed using the numeric buttons or the ►►I or I◄◄ button.
(Display example: The first programmed track is track number 6 with a playing time of 9 minutes 5 seconds)

Flashes.

TRACK	TOTAL	TIME	PROGRAM

1   9:05
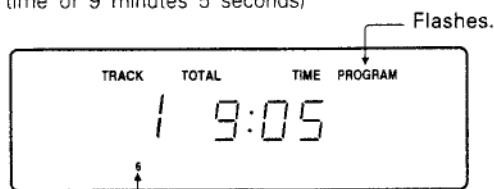
Only the numbers of programmed tracks light up.

3. Then program another track by repeating the procedure in step 2 above. (Display example: The second programmed track is track number 14 and the total playing time of track numbers 6 and 14 is 13 minutes 27 seconds)

Flashes.

TRACK	TOTAL	TIME	PROGRAM

2   13:27
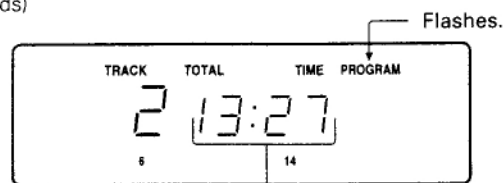
Total playing time of programmed tracks

4. After having programmed all the desired tracks, press the PROGRAM button or STOP button.(PMD320 only)

The PROGRAM indicator status changes from flashing to continuously lit, indicating that the program is completed.

Lights up continuously.

TRACK	TOTAL	TIME	PROGRAM

2   13:27
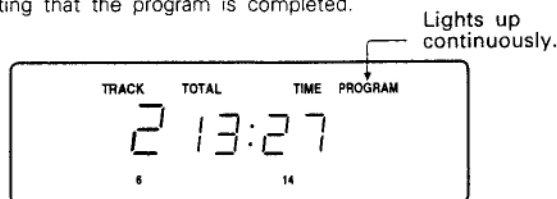
5. Press the PLAY button, The programmed tracks will be played in the programmed order.

* When the tracks have been programmed, it is also possible to begin program playback immediately by pressing the PLAY button. (No need to press STOP or PROGRAM).
* Take note of the following points when programming tracks.

* When selecting track numbers 1 to 9 using numeric buttons from a disc containing 10 or more tracks (when selecting track number 3 after track number 2, for example), press 3 more than 1.5 seconds after pressing 2.
* When using numeric buttons to select track number 10 or higher on a disc containing 10 or more tracks (for example when selecting track number 13), press 3 within 1.5 seconds of pressing 1.

* When using numeric buttons to select track numbers on a disc containing no more than 9 tracks (when selecting track number 5 after track number 4, for example), press 5 more than about 0.5 second after pressing 4.
* When programming track numbers using the ►►I and I◄◄ buttons, press buttons with intervals of less than 1 second.

To erase the entire program:
During program playback, press the STOP button twice. In stop mode, press the STOP button once. (PMD320 only)

● The program is also erased by pressing the OPEN/CLOSE button to open the disc tray.

The PMD321 does not have the STOP button. To clear program in the PMD321, press the OPEN/CLOSE button so that the disc tray opens.

To add tracks to the program:
In stop mode with the program stored in the memory (that is, with the PROGRAM indicator lit up), press the PROGRAM button. The PROGRAM indicator starts flashing and more tracks can be added to the program.

Q&A

* **How many tracks is it possible to program?**
  Up to 30 tracks can be included in the program.

* **How do you play programmed tracks repeatedly?**
  Press the REPEAT button once. The REPEAT indicator lights up and the program playback will be repeated.

* **How do you program 1 track only and then stop?**
 Press the PROGRAM button,then the selection number, and then PLAY.

Pitch Control

The CD playback speed and pitch can be varied by +/- 12%.

Caution:
When the CD playback speed is varied with the PMD320/PMD321 pitch control, the sample rate is varied and digtal recording may not be possible.

Incresing up the CD playback speed.

1. Press the PITCH + button. Display the current playback speed. (eg. the playback speed is +0.1%.)

0:1
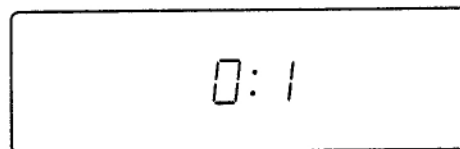
2. Every time pressing the PITCH + button, the playback speed is 0.1% up.
3. After 1.5 seconds pressing the PITCH + button, the display returns to normal.

Decresing the CD playback speed.

1. Press the PITCH - button. Display the current playback speed. (eg. the playback speed is -1.5%.)

- 1:5
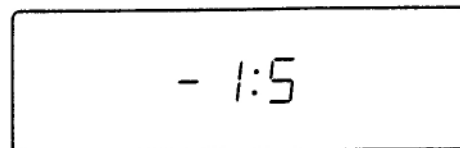
2. Every time pressing the PITCH - button, the playback speed is 0.1% down.
3. After 1.5 seconds pressing the PITCH - button, the display returns to normal.

Returning to the normal speed

There are 2 ways to return the normal speed.

a. Press the `CAL.` button.
b. Change the `PITCH +` or `PITCH -` button to set the playback speed to 0.0%.

* When the CD playback speed is varied (including the 0.0% speed), the indicator " : " on the display blinks.

We recommend using the `CAL.` button to return to normal playback for higher clock accuracy.

Digital audio equipment, such as a D/A converter, digital sound processor, etc., may not lock to the digital output signal, when you connect the digital output terminal to the digital audio equipment and change the pitch. Press the `CAL.` button to set the pitch to 0.0%.

AUDIO CUE (only PMD321)

This function skips the silent pessage at the beginning of a track and start playback just before the audio begins.

Press the `CUE` button.
The "PLAY" indicator will blink, indicating the AUDIO CUE mode.

Blinking

You can now select a track with the PLAY and numeric (0-9) `I◄◄` or `►►I` buttons. The PMD321 will cue to the beginning of the audio of the selected track.

Starting tracks
- Press the `PAUSE` button.

Releasing the AUDIO CUE mode
- Press the `CUE` button.

* The sound detecting level is approx. -42.1 dB. Tracks which are not recorded over this level do not work correctly.
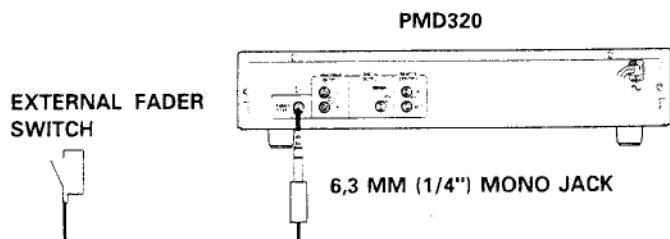* The beginning of fade-in tracks may not be played back.

FADER START REMOTE CONNECTION

The fader start connection will enable you to start and stop playback of a selected track by means of an external switch.
This can be the fader start switch, Built into a mixing desk.

PMD320

EXTERNAL FADER SWITCH

6,3 MM (1/4") MONO JACK

OPERATION

MODE	OPEN	CLOSE
PLAY	NO ACTION	GO TO PAUSE
PAUSE	START PLAYBACK	NO ACTION

Playback is started when opening the fader switch.
When the fader switch is closed, the CD-Player goes to pause mode.

TROUBLESHOOTING

If you think a malfunction has occurred, first check the points listed below, The problem is likely to have been caused by a simple operational error or a connection problem. If the problem cannot be corrected even after carrying out the following checks, consult your dealer or nearest Marantz sales office or service center.

• **The disc fails to rotate.**
1. Is the mains lead plugged in properly?
2. Is the POWER switch ON?
3. Is the disc placed in the correct position on the disc tray?
4. Is the disc placed properly with the label side facing up?
5. Is the disc dirty?
6. Is the disc scratched?
7. Is the disc warped?

• **The disc is rotating but no sound is heard.**
1. Are the amplifier and speakers connected properly?
2. Is the amplifier switch ON?
3. Is the amplifier's volume control set at the minimum level?
4. Is the amplifier's selector switch set to the correct input ("CD" or "AUX", whichever corresponds to the input jacks the CD player is connected to)?

• **The disc stops in mid-operation.**
1. Is the disc dirty?
2. Is the disc scratched?
3. Is the disc warped?

• **The sound drops out or noise is heard.**
1. Is the disc dirty?
2. Is the disc scratched?
3. Is the disc warped?

OPERATING PRECAUTIONS

• In the winter you may notice that condensation forms on the window of a well-heated room.

   Condensation may also occur inside the CD player in the following situations:
   – When the listening room is first heated.
   – When the humidity in the room is high.
   – When the unit is moved from a cold environment to a warm room.

• If condensation occurs, the number of tracks cannot be read and the CD player may not function properly. If this happens, leave the power ON and wait for about 30 minutes before operating the unit.
• The CD player may interfere with the reception of your tuner or TV set. If this occurs, place the CD player farther away from the tuner or TV.
• The CD player features very little noise compared to analog records, and the noise before actual playback begins is almost inaudible. Therefore, be careful not to set the volume control of the amplifier too high, otherwise other audio components such as the speakers may be damaged when actual playback starts.

CLEANING OF EXTERIOR SURFACES

With proper care and cleaning, the exterior finish of your equipment will
~~~t indefinitely. Never use scouring pads, steel wool, scouring powders
~~ harsh chemical agents (e.g. lye solution, alcohol, thinners,benzine,
insecticide or other volatile substances), as these will mar the finish of
the cabinet. Likewise, never use cloths containing chemical substances.
If the equipment becomes dirty, wipe the external surfaces with a soft,
lint-free cloth.

If the cabinet becomes heavily soiled:

– dilute some liquid soap in water, in a ratio of one part detergent to
  six parts water;
– dip a soft, lint-free cloth in the solution and wring the cloth out until
  it is damp;
– wipe the equipment with the damp cloth;
– dry the equipment by wiping it with a dry cloth.

REPAIRS

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

In the event of difficulty, call the toll-free telephone number listed on the
face of the warranty to obtain the name and address of the Marantz
Authorized Service Center nearest you. In many cases, the dealer where
you purchased your Marantz unit may be equipped to provide service.
Please include the model, serial number of your unit together with a copy
of your purchase receipt and a full description of what you feel is abnormal
in it behavior.

TECHNICAL SPECIFICATIONS

Model PMD320

Audio Charcteristics
Cannels .... 2 channels
Sampling frequency .... 44.1 kHz
Quantization .... 16-bit Linear
Error correction .... Cross-interleave read solomon code (CIRC)
D/A conversion .... 1-bit linear/channel
Wow & flutter .... Precision of quartz
                                              (Below measurable limits)

Optical Readout System
Laser .... GaALAs semiconductor
Wavelength .... 780 nm

Frequency Characteristics
Frequency range .... 5-20 kHz
Dynamic range .... > 96 dB
S/N ration .... > 104 dB
Channel separation (1kHz) .... > 96 dB
THD (1kHz) .... 0.004 %
Analogue output jack
    Output level .... 2 V RMS
    Output impedance .... 200 ohms
Digital output
    Pin jack(IEC958-II) .... 0.5 Vp-p/75 ohms

Power Supply
Power Requirements .... 120 V AC 60 Hz
Power Consumption .... 13 W

Cabinet,etc
Dimension (MAX)
Witdth .... 19 inches (482.6 mm)
Height .... 4-1/16 inches (103.1 mm)
Depth .... 12-1/4 inches (312.0 mm)
Net weight .... 8.6lbs (3.9 kg)

Operating temperatures .... +5°C ~ +35°C
Operating humidity .... 5% ~ 90% (without dew)

Accessories
Stereo audio cable with RCA pins .... 1 set

Model PMD321

Audio Charcteristics
Cannels .... 2 channels
Sampling frequency .... 44.1 kHz
Quantization .... 16-bit Linear
Error correction .... Cross-interleave read solomon code (CIRC)
D/A conversion .... 1-bit linear/channel
Wow & flutter .... Precision of quartz
                                              (Below measurable limits)

Optical Readout System
Laser .... GaALAs semiconductor
Wavelength .... 780 nm

Frequency Characteristics
Frequency range .... 5-20 kHz
Dynamic range .... > 96 dB
S/N ration .... > 104 dB
Channel separation (1kHz) .... > 96 dB
THD (1kHz) .... 0.004 %
Analogue output jack (XLR)
    Output level .... 1.2 V RMS at -12 dB unloaded
    Output impedance .... 100 ohms
Digital output
    Pin jack(IEC958-II) .... 0.5 Vp-p/75 ohms
    XLR jack (IEC958-II) .... 3.5 Vp-p/110 ohms

Power Supply
Power Requirements .... 120 V AC 60 Hz
Power Consumption .... 13 W

Cabinet,etc
Dimension (MAX)
Witdth .... 19 inches (482.6 mm)
Height .... 4-1/16 inches (103.1 mm)
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Net weight .... 8.6lbs (3.9 kg)

Operating temperatures .... +5°C ~ +35°C
Operating humidity .... 5% ~ 90% (without dew)

Specifications subject to change without prior notice.

CONNECTIONS

PMD320

AMPLIFIER

to other unit

CD-R(DCC/DAT)

OPT

DIGITAL IN

COAX

CD

R L

ANALOGUE

DIGITAL

COAXIAL   OPTICAL

IN   OUT   IN   OUT

marantz

ANALOGUE
OUTPUT

DIGITAL
OUTPUT

COAXIAL

REMOTE
CONTROL

IN

OUT

L

R

FADER
START

CONNECTIONS

PMD321

to other unit

AMPLIFIER

CD-R(DAT)

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