

PROFESSIONAL

Model PMD505 User Guide

Cassette Deck

marantz®

IMPORTANT TO SAFETY

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

1. Handle the power supply cord carefully

Do not damage or deform the power supply cord. If it is damaged or deformed, it may cause electric shock or malfunction when used. When removing it from wall outlet, be sure to remove by holding the plug attachment and not by pulling the cord.

2. Do not open the top cover

In order to prevent electric shock, do not open the top cover. If problems occur, contact your **MARANTZ DEALER**.

3. Do not place anything inside

Do not place metal objects or spill liquid inside the cassette tape deck.

Electric shock or malfunction may result.

Please, record and retain the Model name and serial number of your set shown on the rating label.

Model No. PMD505 Serial No. _____

● FOR U.S.A. & CANADA MODEL ONLY

CAUTION

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

● POUR LES MODELES AMERICAINS ET CANADIENS UNIQUEMENT


ATTENTION

POUR PREVENIR LES CHOCES 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.


● PARA EL MODELO DESTINADO A LOS EE.UU. Y A CANADÁ

PRECAUCIÓN


PARA IMPEDIR LAS DESCARGAS ELÉCTRICAS NO UTILICE ESTA CLAVIJA POLARIZADA CON UN CABLE DE EXTENSIÓN, UNA TOMA DE CORRIENTE O UNA SALIDA DE CORRIENTE A MENOS QUE LAS PATILLAS PUEDAN INSERTARSE COMPLETAMENTE.




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 of 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.

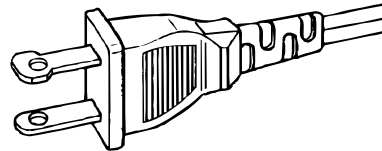
 The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

IMPORTANT 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 product is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the product and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Cleaning – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. Attachments – Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture – Do not use this product near water—for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
8. Accessories – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
9. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
10. Ventilation – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
11. Power Sources – This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
12. Grounding or Polarization – This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the 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 product.
14. Protective Attachment Plug – The product is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.
15. Outdoor Antenna Grounding – If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard 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 Figure 1.
16. Lightning – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
17. Power Lines – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
18. Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
19. Object and Liquid Entry – Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

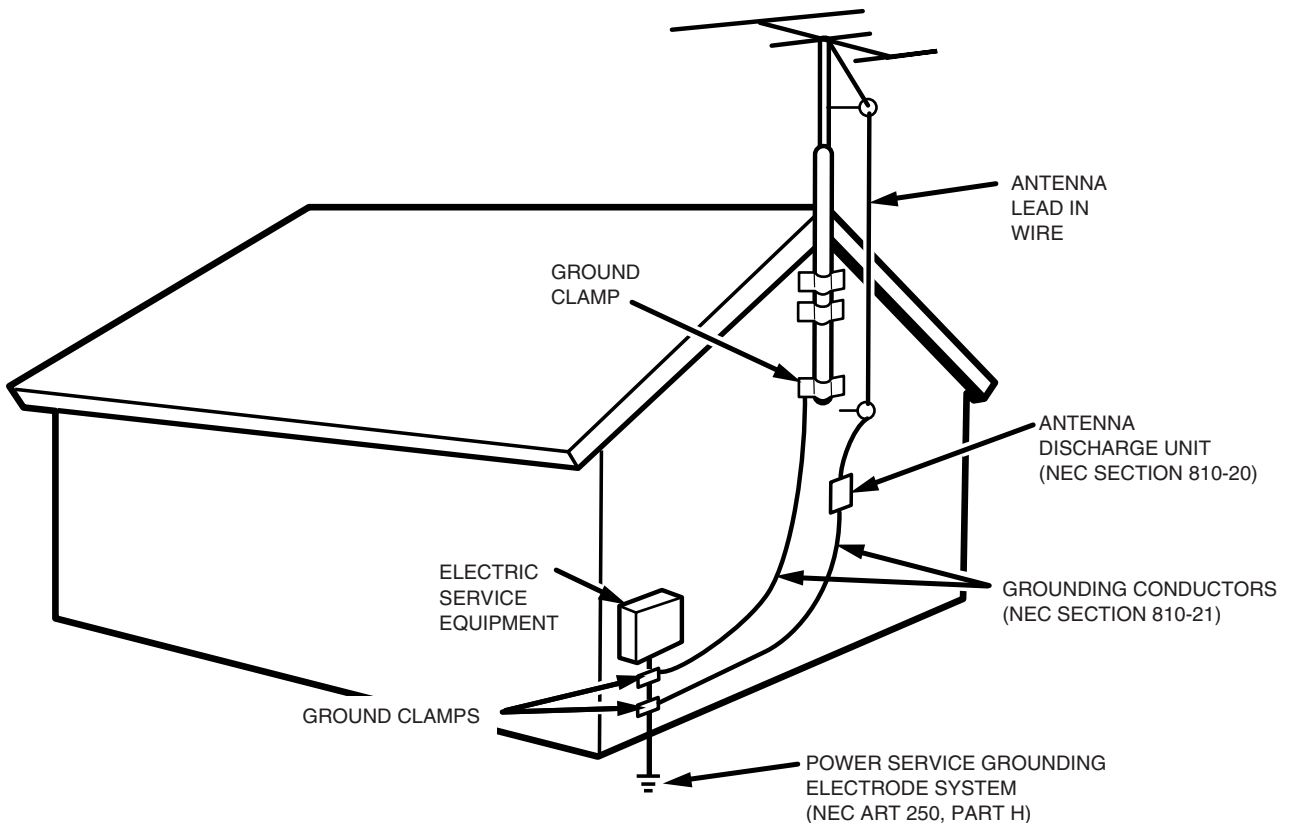


AC POLARIZED PLUG



20. Servicing – Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
21. Damage Requiring Service – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power-supply cord or plug is damaged.
 - b. If liquid has been spilled, or objects have fallen into the product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - e. If the product has been dropped or damaged in any way, and
 - f. When the product exhibits a distinct change in performance – this indicates a need for service.
22. Replacement Parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
23. Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
24. Wall or Ceiling Mounting – The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
25. Heat – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

FIGURE 1
EXAMPLE OF ANTENNA GROUNDING AS PER
NATIONAL ELECTRICAL CODE, ANSI/NFPA 70

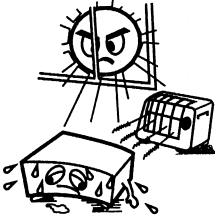

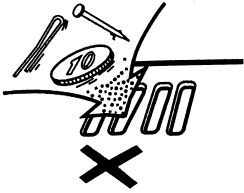
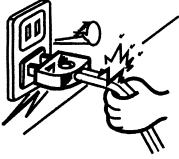
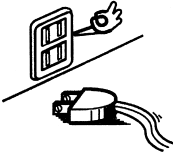

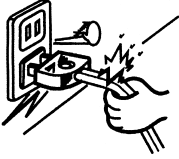
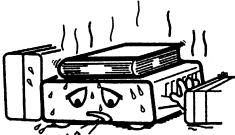



NEC - NATIONAL ELECTRICAL CODE

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

NOTE ON USE / OBSERVATIONS RELATIVES A L'UTILISATION / NOTAS SOBRE EL USO

 <ul style="list-style-type: none"> ● Avoid high temperatures Allow for sufficient heat dispersion when installed on a rack. ● Éviter des températures élevées Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère. ● Evite altas temperaturas Permite la suficiente dispersión del calor cuando está instalado en la consola. 	 <ul style="list-style-type: none"> ● Keep the set free from moisture, water, and dust. ● Protéger l'appareil contre l'humidité, l'eau et la poussière. ● Mantenga el equipo libre de humedad, agua y polvo. 	 <ul style="list-style-type: none"> ● Do not let foreign objects in the set. ● Ne pas laisser des objets étrangers dans l'appareil. ● No deje objetos extraños dentro del equipo.
 <ul style="list-style-type: none"> ● Handle the power cord carefully. Hold the plug when unplugging the cord. ● Manipuler le cordon d'alimentation avec précaution. Tenir la prise lors du débranchement du cordon. ● Maneje el cordón de energía con cuidado. Sostenga el enchufe cuando desconecte el cordón de energía. 	 <ul style="list-style-type: none"> ● Unplug the power cord when not using the set for long periods of time. ● Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes. ● Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo. 	 <ul style="list-style-type: none"> ● Do not let insecticides, benzene, and thinner come in contact with the set. ● Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil. ● No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
 <ul style="list-style-type: none"> ● Handle the power cord carefully. Hold the plug when unplugging the cord. ● Manipuler le cordon d'alimentation avec précaution. Tenir la prise lors du débranchement du cordon. ● Maneje el cordón de energía con cuidado. Sostenga el enchufe cuando desconecte el cordón de energía. 	 <p>*(For sets with ventilation holes)</p> <ul style="list-style-type: none"> ● Do not obstruct the ventilation holes. ● Ne pas obstruer les trous d'aération. ● No obstruya los orificios de ventilación. 	 <ul style="list-style-type: none"> ● Never disassemble or modify the set in any way. ● Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre. ● Nunca desarme o modifique el equipo de ninguna manera.

Thank you very much for purchasing the MARANTZ component stereo cassette tape deck.
 MARANTZ proudly presents this advanced tape deck to audiophiles and music lovers as a further proof of MARANTZ's non-compromising pursuit of the ultimate in sound quality. The high quality performance and easy operation are certain to provide you with many hours of outstanding listening pleasure.

Please check to make sure the following items are included with the main unit in the carton:

- (1) Operating Instructions (Warranty card is on the last page of this instructions.) 1
- (2) Stereo audio cable 2
- (3) Remote control unit (RC455SD) 1
- (4) AA (R6) Batteries 2
- (5) Market survey card 1

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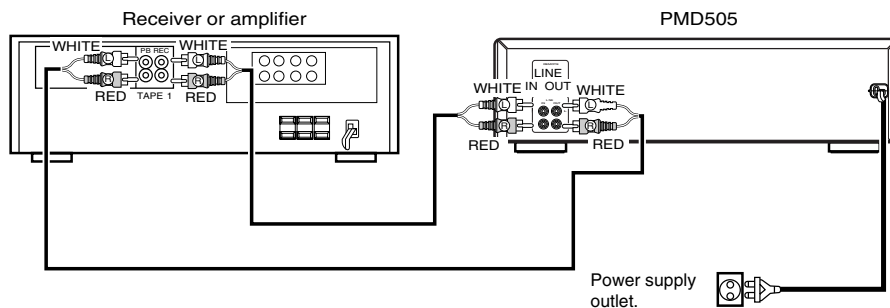
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FEATURES

- Computer Controlled Mechanism
- Dolby HX-Pro Headroom Extension System
- Dolby B & C Noise Reduction Systems
- Dual Computing Tape Counter with 4-Digit Readout
- FL Peak Level Meters
- Auto Tape Selector
- 2-Speed Dubbing
- Relay Playback
- Remote Controllable
- Pitch Control Function (DECK A)

CONNECTION

- Leave your entire system (including this cassette deck) turned off until all connections between the deck and other components have been completed.



- **Connecting the Deck to an Amplifier**
 - Before connecting the deck to your amplifier, please review your amplifier's instruction manual.
 - Use the white plugs for the left channel and red plugs for the right channel.
- **Tape Dubbing**
 - Many stereo amplifiers and receivers have tape dubbing circuitry so that tape duplication can be performed between two or more tape decks. Review your amplifier's instruction manual for a full explanation of this mode of operation.
- **Connecting Headphones**

To listen through headphones, plug your headphones into the PHONES jack.
- **REMOTE CONTROL**

For the operation of the system control.
 The following functions of this Marantz product can be remote-controlled.
 Play, FF, REW, Stop, Rec, Rec Pause, Rec Mute, Counter Reset, Direction, Deck A, Deck B.
 However, the remote-controllable functions are dependednt on the type of remote control used.
 If this Marantz product is to be remote-controlled by a Marantz Learning Remote Control, please refer to the Command Code Table of page 8.

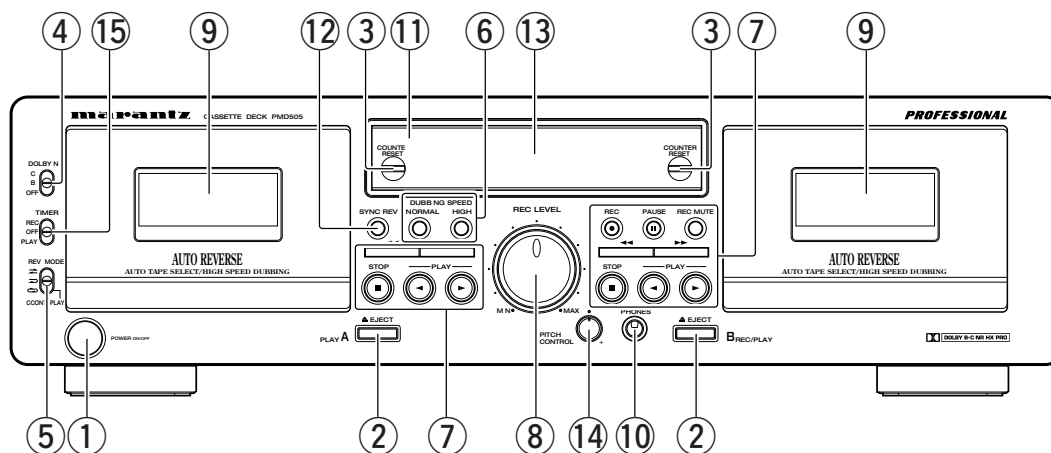
- **Installation Precautions**

If the deck is placed near an amplifier, TV or tuner, noise (induced hum) or beat interference may result, especially during FM or AM reception. If this occurs, place the deck further away from other components or reorient its position.

Caution

A mechanical sound is heard the first time the power switch is set to "ON" after the power cord is plugged into an outlet. This is the sound of the cassette mechanism being set to the proper operating state, and is normal.
 (When using an AC outlet on a receiver or amplifier, used an "UNSWITCHED" outlet.)

NAMES AND FUNCTIONS OF PARTS



① Power Switch (POWER)

Press once to turn the power to deck on, and once more to turn the power off.
The deck remains in a standby (non-operative) mode for approximately 2 seconds after it is switched on.

② Eject Button (▲ EJECT)

Press this button to open the cassette component cover. When the tape is running, press the STOP (■) button first to stop tape transport, then press the Eject button.

③ Counter Reset Button (COUNTER RESET)

Press this button to reset the tape counter to zero.

⑦ Tape Transport Buttons

▶ (PLAY)	Forward Play Button	Press to Forward playback tape.
◀ (PLAY)	Reverse Play Button	Press to Reverse playback tape.
■ (STOP)	Stop Button	Press to stop the tape in any mode.
◀◀ (REW)	Fast Rewind Button	Press for fast rewind.
▶▶ (FF)	Fast Forward Button	Press for fast forwarding
● (REC) (Deck B only)	Rec Button	Press the REC button and PLAY button simultaneously to start recording. If only the REC button is pressed, the deck enters the Recording Pause mode.
REC MUTE (Deck B only)	Rec Mute Button	Pressing this button in the Recording Pause mode will start Auto Rec Mute, and a 4-second silent space is recorded onto the tape. See page 5.
(PAUSE) (Deck B only)	Rec Pause Button	Press this button to enter the recording pause mode from the recording or recording mute mode. This button can only be used during recording. See page 5.

⑧ Rec Level Control (REC LEVEL)

This knob adjusts the recording input level. It affects the level in both channels. See page 5.

⑨ Cassette Compartment Cover

If the cover is not closed completely, the tape transport buttons will remain inoperative.

⑩ Headphone Jack (PHONES)

For private music enjoyment without disturbing others, or for monitoring a recording, a headphone set may be connected to this jack. Use a headphone with an impedance rating of 8 to 1200 ohms.

④ Dolby NR Switch (DOLBY NR)

To record or playback tapes with Dolby B or C-type noise reduction, set this switch to "B" or "C". Turn it "OFF" when not using the Dolby NR system.

⑤ Reverse Mode Switch (REV MODE)

Select the tape of tape transport. The reverse mode can be set to (one side), (both side), (continuous playback).

⑥ Dubbing Speed Buttons (DUBBING SPEED)

Pressing the NORMAL button starts regular speed dubbing from deck A to deck B. Press the HIGH button to perform dubbing at double speed. See page 6.

⑪ Remote Sensor

Each of "PLAY, FF, REW, STOP, REC, REC PAUSE, REC MUTE, DIRECTION, COUNTER RESET, DECK A and DECK B" functions can be remote controlled with wireless handset.

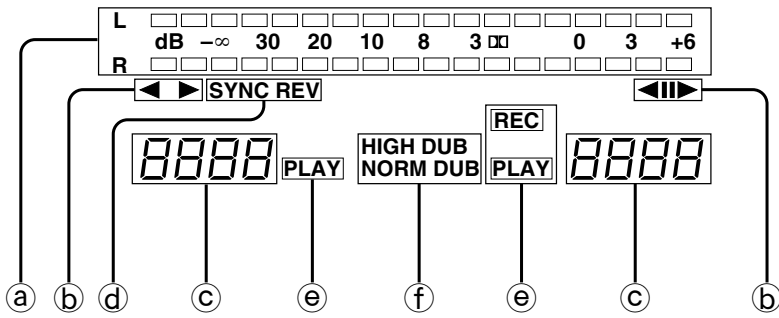
NOTE:

Note that only the A deck can be operated with remote control units which have no A/B selector button.

⑫ Syncro Reverse Button (SYNC REV)

Press this button to set the SYNC REV mode. See page 6.

- 13 Display**
Indicators with an encircled number light up when the corresponding button is pressed.



- (a) Peak Level Meter
- (b) Direction & Pause Indicators
- (c) Multi Counter
- (d) SYNC REV Indicator
- (e) Mode Indicators
- (f) Dubbing Indicators

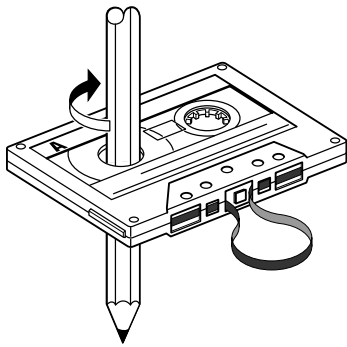
- 14 PITCH CONTROL Knob**
Used to vary the pitch (key of music) during playback of a cassette. (Only the pitch of Deck A can be varied.)
Turn the PITCH CONTROL clockwise to heighten the pitch by increasing the tape transport speed.
Turn it counterclockwise to lower the pitch by decreasing the tape transport speed.

- 15 TIMER Switch (TIMER playback/TIMER recording)**
The select switch for use in timer playback or timer recording using an audio timer.
Set this switch to the OFF position when timer playback or timer recording is not required.

CASSETTE TAPES

■ Handling Precautions

- C-120 Cassettes
C-120 cassette tapes are not recommended as they use a very thin tape base which may become tangled around the capstan or pinch roller.
- Tape Slack
Before putting a tape into the deck, take up any slack with a pencil or your finger tip. This precaution prevents the tape from becoming entangled around the capstan or pinch roller.

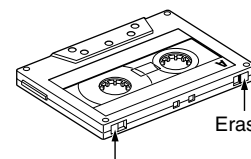


■ Storage Precautions

- Do not store cassette tapes in a place where they will be subject to:
 - Extremely high temperature or excessive moisture
 - Excessive dust
 - Direct sunlight
 - Magnetic fields (near TV sets or speakers)
- To eliminate tape slack, store your cassettes in cassette cases with hub stops

■ Accidental Erasure Prevention

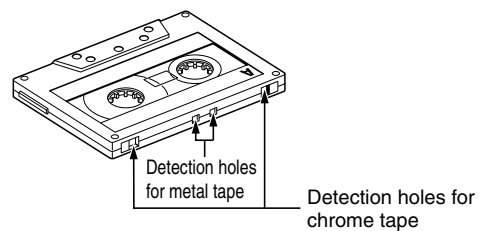
- All cassettes have erasure prevention tabs for each side. To protect valuable recordings from accidental or inadvertent erasure, remove the tab for the appropriate side with a screwdriver or another tool.
- To record on a tape whose erasure prevention tabs have been removed, cover the tab holes with adhesive tape.



AUTOMATIC TAPE SELECTION

This Stereo Cassette Deck contains an automatic tape selector which automatically selects the optimum bias and equalization for the tape in use. This is accomplished by detection of the tape type detection holes in the cassette housing.

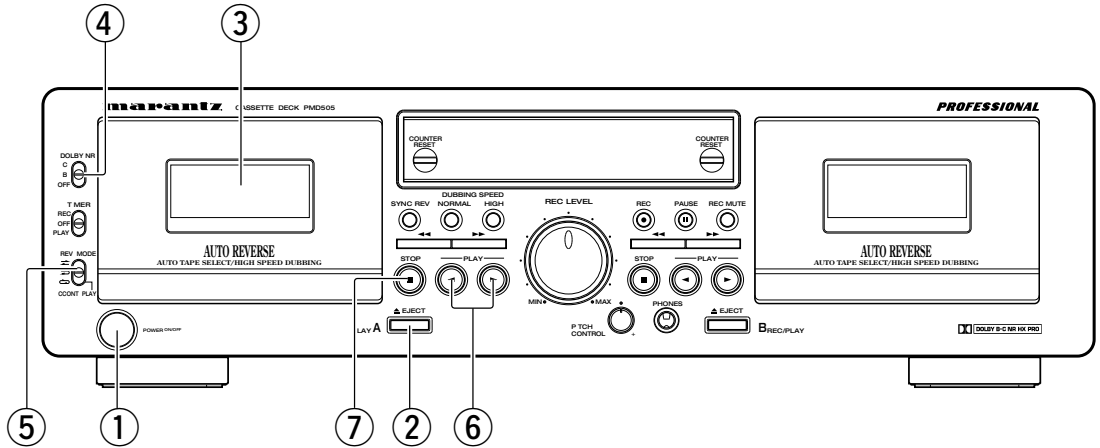
- If a tape without tape type detection holes is used, the deck will be set for normal tapes.




PLAYBACK

ENGLISH

- The operations described below apply to deck A and deck B alike.
- Switch on your amplifier or receiver.
- Set the Function Selector or Tape Monitor switch on your amplifier or receiver to TAPE or Tape monitor position.
- The numbers in the illustration below depict the order in which operation steps are carried out.






1. Press the **POWER** switch ① to the ON () position.
2. Press the **EJECT** button ② to open the cassette compartment cover ③.
3. Load the cassette tape and close the cassette compartment cover ③.
4. When listening to a tape that has been recorded with Dolby noise reduction, set the **DOLBY NR** switch ④ to match the system used at the time of recording.








5. Select the type of tape transport with the **REV. MODE** switch ⑤.



6. Press the **PLAY** ( or ) button ⑥ to begin playback.

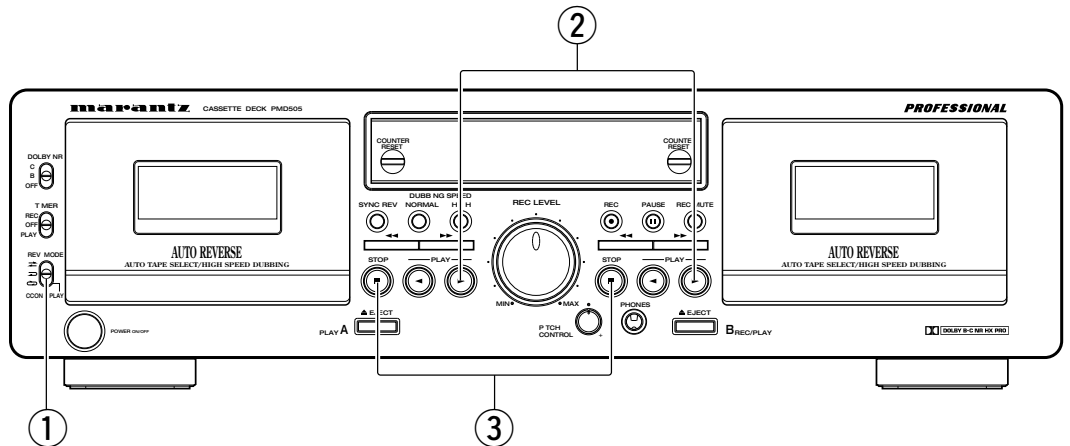
Transport Direction	Indicator
Forward	
Reverse	




7. Press the **STOP** () button ⑦ to stop the playback.
 - In the continuous playback mode (REV MODE set to ), playback of both tape sides will be repeated 5 times and then stop automatically.
 - If different types of Dolby noise reduction are used for record and playback, playback response will be adversely effected.
 - When power is turned off during tape transport, it may not be possible to remove the cassette by pressing the **EJECT** button. In this case, turn on power again before you press the **EJECT** button.

Mode	Switch position
To listen to one side only	
To listen to playback of both sides	
To listen to continuous playback of both sides and both decks.	

RELAY PLAY (continuous playback of the tapes in deck A and deck B)

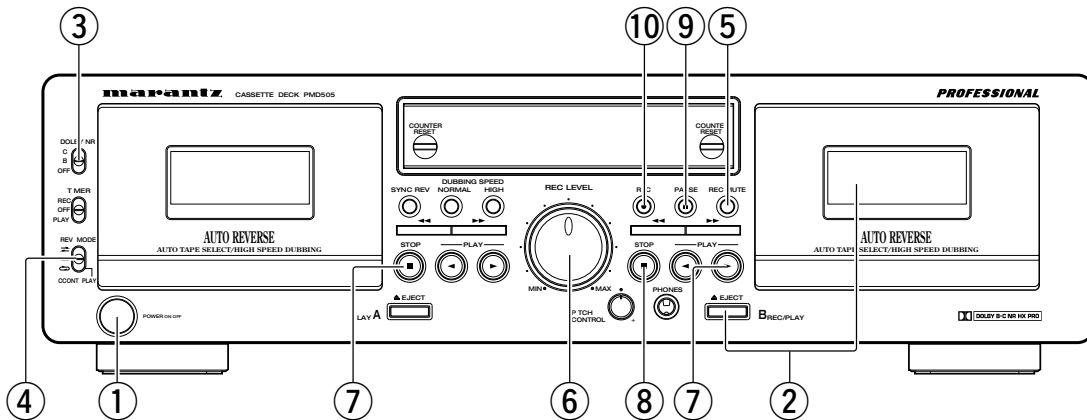
- Load a cassette tape into deck A and B, and set the Dolby NR button correctly.



1. REV MODE set to  ①.
 2. Press the **PLAY** () button ② of the deck you first wish to listen to.
 3. To stop relay play, press the **STOP** () button ③ of the deck currently playing the tape.
- Relay play will play deck A and B in succession for 5 times, upon which playback stops (Deck A → Deck B → Deck A → Deck B → Deck A) or (Deck B → Deck A → Deck B → Deck A → Deck B).

RECORDING (DECK B only)

- Switch on your amplifier or receiver and the source component.
- Set the Function Selector and the REC Selector on your amplifier or receiver to the source to record, with Tape Monitor switch (if available) set to monitor



1. Press the **POWER** switch ① to the ON () position.
2. Load the cassette tape ②.
(Check that the erasure prevention tabs of the cassette housing have not been broken off.)
3. Move the **DOLBY NR** switch ③ and select the Dolby NR type that suits the recording.



4. Select the type of tape transport with the **REV MODE** switch ④.

Mode	Switch position
To record on only one side	
To continuously record on both sides	or

5. Press the **REC** () button ⑩ to set the recording pause mode. The **REC** and indicator will light up.
6. Adjust the recording level with the **REC LEVEL** control ⑥ while watching the Peak Level Meter.
7. Press the **PLAY** () button ⑦ to start the recording. The **PLAY** and the **REC** Indicator will light during recording.
8. To pause the recording, press the **PAUSE** () button ⑨. Press the **PLAY** () button ⑦ or **PAUSE** () button ⑨ to resume recording.
9. To stop recording, press the **STOP** () button ⑧.

Caution:

- Be careful not to erase important recordings by mistake. Inadvertent start of recording will happen in the following cases:
 1. If the **PLAY** button is pressed while the **REC** indicator lights, recording starts.
 2. If the **PLAY** and **REC** () button are pressed at the same time, recording starts.
 The best way to avoid accidental erasure is to break off the two erasure prevention tabs on the cassette housing.

PROPER RECORDING LEVEL

A too high recording level can saturate the tape and cause distortion. On the other hand, if the recording level is set too low, soft passages will be marked by residual noise. A proper recording level is the single most important factor for making well balanced recordings.

Guideline for maximum recording level

TYPE I (Normal)	0 dB level on peaks
TYPE II (High position)	+1 dB level on peaks
TYPE IV (Metal)	+3 dB level on peaks

Note:

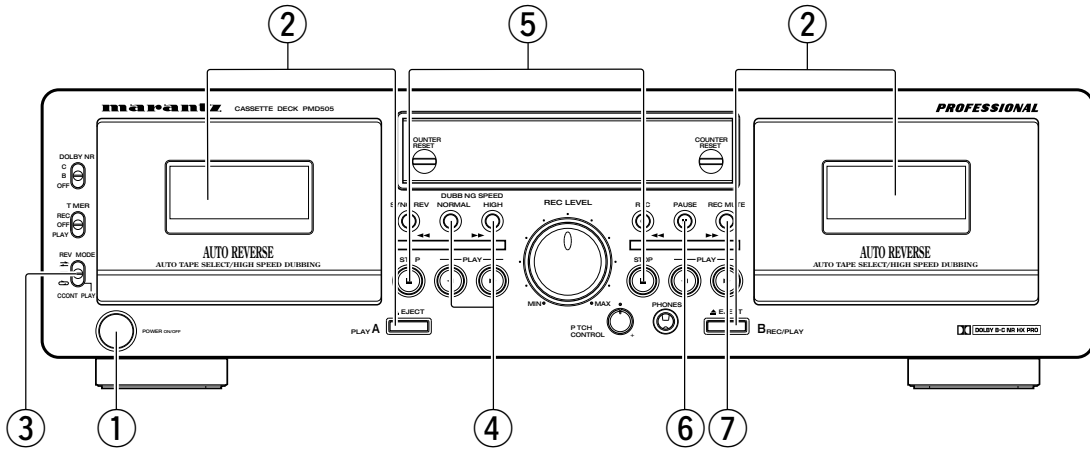
The optimum recording level differs depending on the program source and the type of tape used.


REC MUTE AND REC PAUSE BUTTON

1. To record a 4-second blank section during recording:
Press the **REC MUTE** button ⑤. A 4-second blank will be recorded and the deck will enter the recording Pause mode.
2. To record a 4-second blank section during the recording Pause mode:
Press the **REC MUTE** button ⑤ from the recording Pause mode. A 4 second blank will be recorded and the deck will enter the recording Pause mode again.
3. To cancel recording of blank space:
Press the **PAUSE** () button ⑨. Blank space recording will be canceled and the deck enters the recording Pause mode.
4. To extend the blank section with another 4 seconds or more:
Simply press the **REC MUTE** button ⑤ and the blank section will be increased with another 4 seconds.




DUBBING (from deck A to deck B)



- Switch on the amplifier or receiver.
- Set the Function Selector or Tape Monitor switch on your amplifier or receiver to TAPE or Tape monitor position.



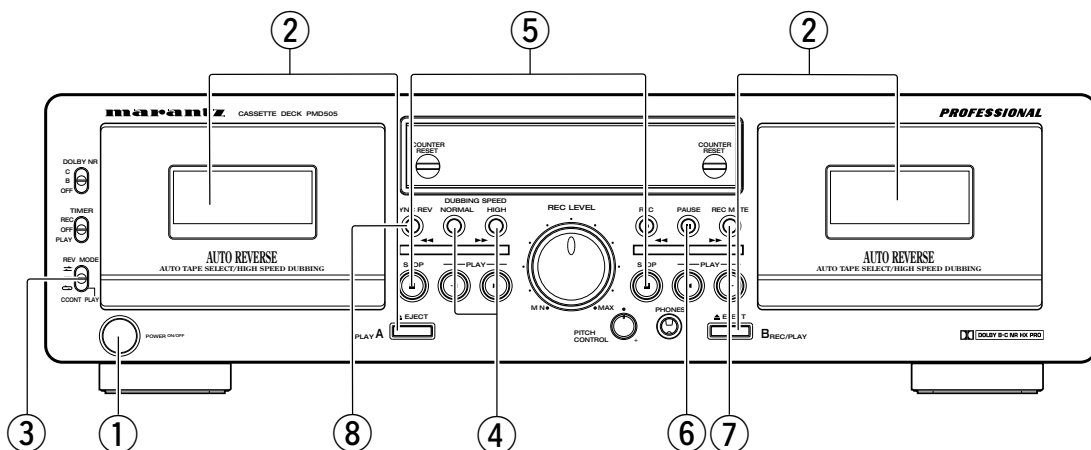
1. Press the **POWER** switch ① to the ON () position.
2. Load the cassette tape to be played on deck A and the one to be recorded in deck B ②.
3. Select the type of tape transport with the **REV MODE** switch ③.





Reverse mode	Operation
	Dubbing is performed only for one side. The decks stop when either deck A or B reaches the end of the tape.
 or 	The tape direction is reversed on each deck when they reach the end of the tape. (This is convenient for dubbing to a tape with a different length.)

4. To begin normal speed dubbing, press the **DUBBING SPEED NORMAL** button ④. The NORM DUB indicator will light at this time. To high speed dubbing, press the **DUBBING SPEED HIGH** button ④. The HIGH DUB indicator will light at this time.
5. To stop dubbing, press the **STOP** () button ⑤ of deck A or deck B.
 - When dubbing, the recording level and the Dolby NR recording will be the same as those of the playback tape, regardless of the positions of the **REC LEVEL** control and the **DOLBY NR** switch.
 - When listening to the playback sound during normal speed dubbing, the **DOLBY NR** switch remains off even if it is pressed.
 - Operation using the **REC MUTE** ⑦ and **PAUSE** () ⑥ buttons of deck B is permitted during normal speed dubbing.

SYNCHRO REVERSE DUBBING



During dubbing of the side facing you, the deck that first reaches the end of the tape will stand by until the other deck reaches the end of the tape, direction together. (Depending on the manufacturer, the length of tapes having the same recording time may differ somewhat. Setting this mode permits the arrangement of the beginning portion of the opposite side of the tape.)

1. Press the **POWER** switch ① to the ON () position.
2. Load the cassette tape to be played on deck A and the one to be recorded in deck B ②.
3. Select the  position of the **REV MODE** switch ③.

4. Press the **SYNC REV** button ⑧ to set the SYNC REV Mode. The SYNC REV Indicator will light up. To release SYNC REV mode, press the **SYNC REV** button again. When direction of Deck A and Deck B is only Forward (▶), the SYNC REV mode can be set.
5. To begin normal speed dubbing, press the **DUBBING SPEED NORMAL** button ④. The NORM DUB indicator will light at this time. To high speed dubbing, press the **DUBBING SPEED HIGH** button ④. The HIGH DUB indicator will light at this time.
6. To stop dubbing, press the **STOP** (■) button ⑤ of deck A or deck B.
 - When dubbing, the recording level and the Dolby NR recording will be the same as those of the playback tape, regardless of the positions of the **REC LEVEL** control and the **DOLBY NR** switch.
 - When listening to the playback sound during normal speed dubbing, the **DOLBY NR** switch remains off even if it is pressed.
 - Operation using the **REC MUTE** ⑦ and **PAUSE** (||) ⑥ buttons of deck B is permitted during normal speed dubbing.

SYNCHRO RECORDING PROCEDURE (Deck B)

- The following operation is available only when a MARANTZ CD player with the synchro recording capability is connected to the cassette deck.
 - To use synchro recording, connect the remote control cord terminals on the CD player and cassette deck.
1. Load a cassette tape in Deck B.
 2. If Dolby NR recording is required, select type B or C.
 3. Press the **RECORD/O** button to put the cassette deck in record-pause mode.
 4. Adjust the recording level with the **REC LEVEL** control.
 5. Start edit playback of the CD player. (The operation procedure may be variable between CD players with edit function. Refer to the instruction manual of your CD player.)
 - When the MARANTZ PMD371 CD changer is used, it is possible to set the **REV. MODE** switch to "↔". (This enables to record both A and B sides continuously.)
 - When other MARANTZ CD player than the above mentioned models is used, set the **REV. MODE** switch to "→". (This causes only tape side A or B to be recorded.)

TAPE COUNTER

1) Operation of the Tape Counter

- (1) Press the **COUNTER RESET** button to reset the counter to "0000".
 - (2) By using the **PLAY**, **FF**, or **REW** functions, the reading of the counter will change to indicate index position.
- During recording and playback operations, the counter is useful for noting the location of existing programs or positions where recording is to be started.
 - The reading of this counter does not correspond with that of any other deck.

DOLBY B AND C NOISE REDUCTION SYSTEM

- The Dolby noise reduction system substantially reduces the tape background noise (hiss) inherent in the cassette medium.
- Tape background noise consists primarily of high frequency information, which is particularly annoying during soft passages. The Dolby NR system increases the level of low volume mid and high frequency signals during recording and reduces the level of these signals by an identical amount during playback. As a result, the playback signal is identical to the original source, but the level of background noise generated by the tape is greatly reduced.
- The operating principle of Dolby C NR is similar to that of Dolby B NR except for the encoding/decoding response curves. The noise reduction effect obtained with Dolby C NR is up to 20 dB, compared to 10 dB with Dolby B NR. In addition, Dolby C NR uses an anti-saturation network and spectral skewing circuitry for a significant improvement in the dynamic range of the mid-to-high-frequencies.

DOLBY HX PRO HEADROOM EXTENSION SYSTEM

This deck is equipped with the Dolby HX PRO headroom extension system. Since the system functions automatically during recording, no switching operation or adjustment is required. The system is effective with any type of Normal, High and Metal tape. The Dolby HX PRO headroom extension system functions during recording to raise the saturation level in the high frequency range. Therefore, most of the high frequency range distorted or lost during recording on conventional cassette decks are more faithfully recorded on the new MARANTZ cassette deck.

Features of the Dolby HX PRO Headroom Extension System

- (1) Performance of Normal and High Position tapes can be improved to very close of that offered by Metal tape.
- (2) The dynamics in the high frequency range are improved significantly.
- (3) Since no decoding is necessary during playback, the improved sound can be enjoyed on any type of tape deck, including portable players and car audio systems.
- (4) The system functions whether the Dolby B/C NR system is engaged or not.

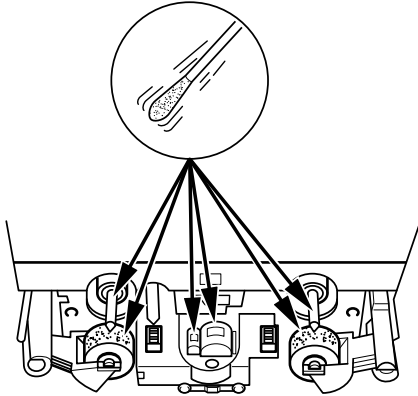
MAINTENANCE

■ Head cleaning

After long usage, tape coating or dust may adhere to the heads, causing deterioration of sound. Therefore, the parts depicted in the illustration should be cleaned regularly. Use a cotton swab moistened with a tape head cleaning solution (such as alcohol).

Note:

1. Some cleaning cassettes on the market have strong abrasive effects and may scratch the heads. Always use cotton swabs instead of cleaning cassettes.
2. Since the use of metal tape is apt to collect more dust on the heads, the heads should be cleaned more often to enjoy the best possible sound.



■ Cleaning the Pinch Rollers and Capstans

If the pinch roller or capstans accumulate dust, tape transport may become unstable, as a result from slippage, during recording or playback. The tape can also be damaged if it gets entangled in the capstan.

Clean these parts with a cotton swab or a soft cloth moistened with a tape head cleaning solution (such as alcohol).

■ Demagnetizing the Heads

The heads may become magnetized after long usage or if strongly magnetized objects are brought near them. The result is a generation of noise, loss of the high frequency range, and in extreme cases erasure of trable components on pre-recorded tapes in combination with added noise.

Thus, the heads should be demagnetized at regular intervals. (Head demagnetizers are sparately available from your dealer.)

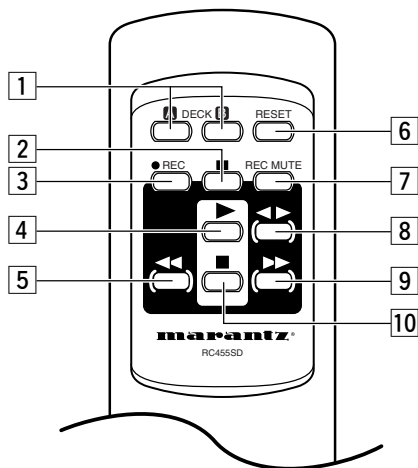
■ How to Demagnetize the Tape Heads

1. Turn off the power.
2. Turn on the demagnetizer while it is at least 30 cm away from the heads. Bring the demagnetizer near the heads and slowly move it in small circles four or five times in front of each head, making sure you do not touch them.
3. Slowly move the demagnetizer away and turn it off when it is at least 30 cm away from the heads.
4. For more details, please read the User Guide provided with the demagnetizer (optional).

■ CAPABILITY OF REMOTE CONTROL

	RC-5 CODE
PLAY (▶)	1853
FF (▶▶)	1852
REW (◀◀)	1850
PAUSE ()	1848
STOP (■)	1854
REC	1855
REC MUTE	1842
COUNTER RESET	1849
DECK A	1844
DECK B	1846
DIRECTION (◀▶)	1847

REMOTE CONTROL



1 A/B button Mechanism select buttons (DECK A/B):

Press to select the deck mechanism, Deck A or Deck B, to be controlled.

2 ■ (REC PAUSE) button:

Press this button to enter the recording pause mode from the recording or recording mute mode. This button can only be used during recording. See page 5.

3 ● (REC) button:

Press the REC button, the deck enters the Recording Pause mode. See page 5.

4 ► (Play button):

Press to playback tape.

5 ◀◀ (Fast rewind button):

Press for fast rewind.

6 RESET button:

Press to tape counter reset.

7 REC MUTE button:

Press the REC MUTE button, the Recording Pause mode will start Auto Rec Mute, and a 4-second silent space is recorded onto the tape. See page 5.

8 ◀▶ (DIRECTION) button:

After starting playback, press the forward (►) or reverse (◀) to select the top playback direction.

9 ►► (Fast forward button):

Press for fast forwarding.

10 ■ (STOP) button:

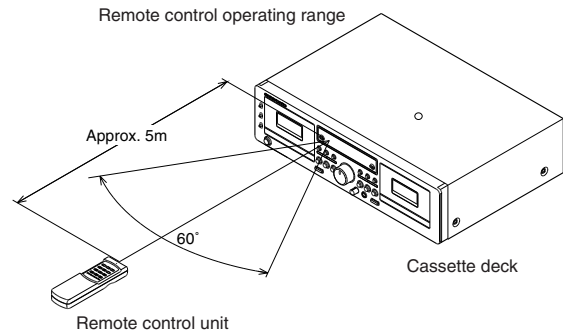
Press to cancel any operation modes and stop the tape travel of the deck.

USING THE REMOTE CONTROL UNIT

1. Remote control

Operate the remote control unit (RC455SD) within a distance of approx. 5 m from the infrared signal reception window (remote sensor) on the front of the CASSETTE DECK.

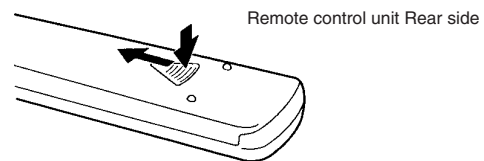
Remote control operation may not be possible if the remote control unit's transmitter is not pointing in the direction of the remote sensor or if there is an obstruction between the transmitter and the remote sensor.



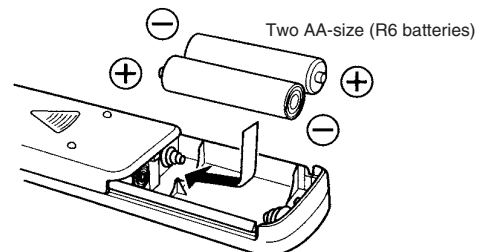
2. Loading batteries

Batteries in this remote control unit have a life of approximately 1 year under normal operating conditions. When the remote control unit is not to be used for an extended period of time, remove the batteries. Also, when you notice that the batteries are starting to run down, replace them as soon as possible.

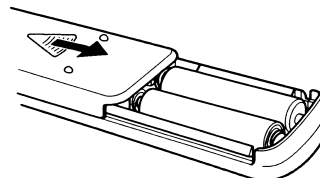
(1) Remove the battery cover.



(2) Insert the batteries with correct +/- orientation.



(3) Close the battery cover until it clicks shut.



TROUBLESHOOTING

Check the following before you draw the conclusion that your Stereo Cassette Deck is malfunctions.

1. Are all the connections correct?
2. Are all system components being operated correctly in accordance with the operating instructions?
3. Are the speakers and amplifier/receiver functioning correctly?

If the tape deck still does not function properly, check the symptom against the list below. If the symptom does not correspond to the check list, please contact your MARANTZ dealer.

Problem	Cause	Remedy
Tape does not run.	<ul style="list-style-type: none"> ● Power cord is disconnected. ● Tape is loose. ● Cassette is not loaded properly. ● Defective cassette. 	<ul style="list-style-type: none"> ● Check power cord. ● Tighten tape with a pencil, etc. ● Load cassette properly. ● Replace cassette.
Tape is not recorded when REC button is pressed.	<ul style="list-style-type: none"> ● No cassette is loaded. ● Erase prevention tabs are broken off. 	<ul style="list-style-type: none"> ● Load cassette. ● Cover hole with plastic tape.
Sound is warbled or distorted.	<ul style="list-style-type: none"> ● Heads, capstan or pinch roller are dirty. ● Tape is wound too tight. ● Recording input level is too high. ● Tape is worn out and has "dropouts". 	<ul style="list-style-type: none"> ● Clean them. ● Fast forward or rewind to loosen tape winding. ● Adjust recording input level. ● Replace tape.
Excessive noise.	<ul style="list-style-type: none"> ● Tape is worn. ● Heads, capstan or pinch roller are dirty. ● Heads are magnetized. ● Recording input level is too low. 	<ul style="list-style-type: none"> ● Replace tape. ● Clean them. ● Demagnetize heads. ● Adjust recording input level.
High frequency range (treble) is emphasized.	<ul style="list-style-type: none"> ● Dolby NR switch is set improperly. 	<ul style="list-style-type: none"> ● Set Dolby NR switch properly.
High frequency range (treble) is lost.	<ul style="list-style-type: none"> ● Heads are dirty. ● Tape is worn. 	<ul style="list-style-type: none"> ● Clean them. ● Replace tape.
The cassette tape cannot be removed.	<ul style="list-style-type: none"> ● If the POWER switch is turned off in either during recording or playback and the unit is stopped, there may be case when the cassette cannot be removed, even if the (▲ EJECT) button is pressed. 	<ul style="list-style-type: none"> ● Turn the POWER switch ON (■) again, and then press the STOP (■) button. ● Now, press the (▲ EJECT) button to remove the cassette tape.

SPECIFICATIONS

Type	Vertical tape loading; 4-track 2-channel stereo double cassette deck
Heads	Playback head ×1 recording/playback head ×1 Erase head (Double-gap ferrite) ×1
Motors	DC servo motor ×2
Tape Speed	4.8 cm/sec. 9.5 cm/sec. (When high speed dubbing)
Fast Forward, Rewind Time	Approx. 110 sec. with a C-60 cassette
Recording Bias	Approx. 100 kHz
Overall S/N Ratio (at 3% THD level)	Dolby C NR on: more than 74 dB (CCIR/ARM)
Overall Frequency Response	25 ~ 18,000 Hz ±3 dB (at -20 dB, Metal tape)
Channel Separation	More than 40 dB (at 1 kHz)
Wow & Flutter	0.09 % WRMS, ±0.1 % w. peak

Inputs LINE	100 mV input level at maximum Input impedance: 50 kohms unbalanced
Output LINE	460 mV (0 dB) output level at maximum (with 47 kohms load, recorded level of 200 nWb/mm)
PHONES	0.95 mW output level at maximum (optimum load impedance 8 ohms ~ 1.2 kohms)
Power Consumption	0.13 A
Dimensions	17-7/16 (W) × 5-5/16 (H) × 12-9/16 (D) inches 440 (W) × 124 (H) × 286 (D) mm
Weight	8.58 lbs oz (4.0 kg)

* Above specifications and design are subject to change without prior notes.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Limited Warranty

Your Marantz Professional product is warranted against manufacturer defect for period of one year parts and labor.

Except as specified below this warranty covers defects in material and workmanship. The following are not covered under warranty.

1. a) Damage, deterioration, malfunction or failure to meet performance specification resulting from:
 - b) Accidents, acts of nature, misuse, abuse, neglect or unauthorized product modification.
 - c) Improper installation, removal or maintenance, or failure to follow supplied instruction.
 - d) Repair or attempted repair by a non Marantz authorized agent.
 - e) Any shipment of the product (claims must be presented to the carrier).
 - f) Any cause other than a defect in manufacturing.
2. Cleaning, check-ups with no fault found, or changes incurred for installation, removal or reinstallation of the product.
3. Any serialized product on which the serial number has been defaced, modified or removed.
4. Batteries and battery chargers.
5. Accessories, including but not limited to, cables, mounting hardware and brackets, cleaning accessories, power cords and adapters, and carry cases.
6. Product purchased outside the United States, its possessions or territories.

Non-Transferable Warranty

This warranty may be enforced only by the original purchaser.

What We Will Pay For

We will pay for all labor and material expense for items covered by the warranty.

How You Can Get Service

1. If your unit needs service, contact our service referral at the appropriate telephone number indicated below. We will advise you of the name and location of one or more warranty authorized service centers from which service may be obtained. Please do not return your unit directly to us.
2. You must pay any shipping charges if it is necessary to ship the product for service. If the necessary repairs are covered by the warranty, we will pay the return shipping charges to your location anywhere in the United States or its territories.
3. Whenever warranty service is required, you must present the original dated sales receipt or other proof of date purchased.

Limitation of Implied Warranties

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

Exclusion of Damages

Liability for any defective product is limited to repair or replacement of the product at manufacturer's option. Manufacturer shall not be liable for damage to other products caused by any defects in Marantz products, damages based upon inconvenience or loss of use of the product, or any other damages, whether incidental, consequential, or otherwise.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

How State Law Relates to the Warranty

This warranty gives you specific legal rights, and you may have other rights which may vary from state to state.

Marantz Professional Service Number:

Marantz Professional Factory Service (630) 820-4800

This warranty is enforceable only in the United States and its possessions or territories.

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