DENON

INTEGRATED AMPLIFIER

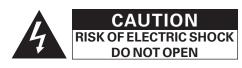
PMA-A100

Owner's Manual

Manuel de l'Utilisateur

Manual del usuario

☐ SAFETY PRECAUTIONS





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:

HOT SURFACE. DO NOT TOUCH.

The top surface over the internal heat sink may become hot when operating this product continuously.

Hot surface mark Do not touch hot areas, especially around the "Hot surface mark" and the top panel.

PRECAUTION: SURFACE CHAUDE. NE PAS TOUCHER.

La surface supérieure du dissipateur de chaleur peut devenir chaude si vous utilisez ce produit en continu.

Ne touchez pas les zones chaudes, tout particulièrement vers l'inscription "Hot surface mark" et le panneau supérieur.

PRECAUCIÓN: SUPERFICIE CALIENTE. NO TOCAR.

La superficie superior sobre el disipador de calor interno podría llegar a calentarse al operar este producto de forma continua.

Do not touch hot areas, especially around the "Hot surface mark" and the top panel.

IMPORTANT SAFETY INSTRUCTIONS

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- Follow all instructions.
- 5. Do not use this apparatus near water
- 6. Clean only with dry cloth.
- 7. Do not block any ventilation openings.

 Install in accordance with the manufacturer's instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11. Only use attachments/accessories specified by the manufacturer.
- 12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
- 13. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

CAUTION:

To completely disconnect this product from the mains, disconnect the plug from the wall socket outlet.

The mains plug is used to completely interrupt the power supply to the unit and must be within easy access by the user.

PRECAUTION:

Pour déconnecter complètement ce produit du courant secteur, débranchez la prise de la prise murale.

La prise secteur est utilisée pour couper complètement l'alimentation de l'appareil et l'utilisateur doit pouvoir y accéder facilement.

PRECAUCIÓN:

Para desconectar completamente este producto de la alimentación eléctrica, desconecte el enchufe del enchufe de la pared.

El enchufe de la alimentación eléctrica se utiliza para interrumpir por completo el suministro de alimentación eléctrica a la unidad y debe de encontrarse en un lugar al que el usuario tenga fácil acceso.

FCC INFORMATION (For US customers)

1. PRODUCT

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

2. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modification not expressly approved by DENON may void your authority, granted by the FCC, to use the product.

3. NOTE

This product 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 product 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 product does cause harmful interference to radio or television reception, which can be determined by turning the product 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 product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the local retailer authorized to distribute this type of product or an experienced radio/TV technician for help.

For Canadian customers:

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

WARNINGS Avoid high temperatures. Allow for sufficient heat dispersion when installed in a rack. Handle the power cord carefully. Hold the plug when unplugging the cord. Keep the unit free from moisture, water, and dust. Unplug the power cord when not using the unit for long periods of time. Do not obstruct the ventilation holes. Do not let foreign objects into the unit. Do not let insecticides, benzene, and thinner come in contact with the unit. Never disassemble or modify the unit in any way. Ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths or curtains. Naked flame sources such as lighted candles should not be placed on the unit. Observe and follow local regulations regarding battery disposal. Do not expose the unit to dripping or splashing fluids. Do not place objects filled with liquids, such as vases, on the unit.

Do not handle the mains cord with wet hands.

equipment is not completely switched off from

power supply so that the power supply is easily

When the switch is in the OFF position, the

• The equipment shall be installed near the

accessible.

 Eviter des températures élevées.
 Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.

AVERTISSEMENTS

- Manipuler le cordon d'alimentation avec précaution.
- Tenir la prise lors du débranchement du cordon.

 Protéger l'appareil contre l'humidité, l'eau et la poussière.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes
- Ne pas obstruer les trous d'aération.
- Ne pas laisser des objets étrangers dans l'appareil.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Ne pas recouvrir les orifi ces de ventilation avec des objets tels que des journaux, nappes ou rideaux. Cela entraverait la ventilation.
- Ne jamais placer de flamme nue sur l'appareil, notamment des bougies allumées.
- Veillez à respecter les lois en vigueur lorsque vous jetez les piles usagées.
- L'appareil ne doit pas être exposé à l'eau ou à l'humidité.
- Ne pas poser d'objet contenant du liquide, par exemple un vase, sur l'appareil.
 Ne pas manipuler le cordon d'alimentation avec
- les mains mouillées.

 Lorsque l'interrupteur est sur la position OFF, l'appareil n'est pas complètement déconnecté du
- SECTEUR (MAINS).

 L'appareil sera installé près de la source d'alimentation, de sorte que cette dernière soit facilement accessible.

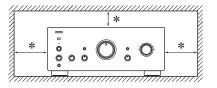
Evite altas temperaturas.

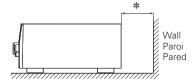
Permite la suficiente dispersión del calor cuando está instalado en la consola.

ADVERTENCIAS

- Maneje el cordón de energía con cuidado. Sostenga el enchufe cuando desconecte el cordón de energía.
- Mantenga el equipo libre de humedad, agua y polvo.
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- No obstruva los orificios de ventilación.
- No deje objetos extraños dentro del equipo.
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
- Nunca desarme o modifique el equipo de ninguna manera.
- La ventilación no debe quedar obstruida por haberse cubierto las aperturas con objetos como periódicos, manteles o cortinas.
- No deberán colocarse sobre el aparato fuentes inflamables sin protección, como velas encendidas.
- A la hora de deshacerse de las pilas, respete la normativa para el cuidado del medio ambiente.
- No exponer el aparato al goteo o salpicaduras cuando se utilice.
- No colocar sobre el aparato objetos llenos de líquido, como jarros.
- No maneje el cable de alimentación con las manos mojadas.
- Cuando el interruptor está en la posición OFF, el equipo no está completamente desconectado de la alimentación MAINS.
- El equipo se instalará cerca de la fuente de alimentación de manera que resulte fácil acceder a ella.

☐ CAUTIONS ON INSTALLATION PRÉCAUTIONS D'INSTALLATION EMPLAZAMIENTO DE LA INSTALACIÓN





- * For proper heat dispersal, do not install this unit in a confined space, such as a bookcase or similar enclosure.
 - More than 0.3 m is recommended.
 - Do not place any other equipment on this unit.
- * Pour permettre la dissipation de chaleur requise, n'installez pas cette unité dans un espace confiné tel qu'une bibliothèque ou un endroit similaire.
- Une distance de plus de 0,3 m est recommandée.
- Ne placez aucun matériel sur cet appareil.
- * Para la dispersión del calor adecuadamente, no instale este equipo en un lugar confinado tal como una librería o unidad similar.
- Se recomienda dejar más de 0,3 m alrededor.
- No coloque ningún otro equipo sobre la unidad.

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Getting Started

Thank you for purchasing this DENON product. To ensure proper operation, please read this owner's manual carefully before using the product.

After reading the manual, be sure to keep it for future reference.

Main Features

1. UHC (Ultra High Current)-MOS single push-pull circuit installed to simultaneously achieve both "subtlety" and "powerfulness"

Use of the minimum number of amplifier elements with between 3 and 10 times the normal power capacity produces a combination of both detailed expression and high power. From the pianissimo tones of a soloist emerging softly from silence to the hall-shaking power of a full orchestra, the artist's emotion is reproduced with exceptional balance.

2. Direct Mechanical Ground construction that suppresses vibration

The vibration-resistant construction has been redesigned to fully eliminate the impact of vibration on sound quality. To enhance transparency and the sound image, measures have been implemented in regard to the installation and positioning of various components, including the power transformer and radiator, so as to effectively eliminate the impact of external and internal vibration.

3. 6-Block Separated Chassis to suppress interference between circuits

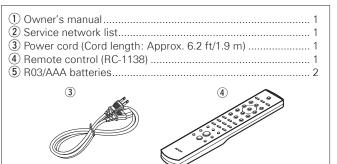
A twin monaural construction is employed, featuring independent power amp blocks for the L/R channels to obtain an excellent stereo image and eliminate noise and interference between the circuits. The amplifier is also equipped with a 6-block separated construction comprising steel plates of 1.6 mm thickness, providing thorough shielding for separation of different circuits at the signal level. In addition, by strengthening installation of the power amp blocks and incorporating a low center of gravity, the design preserves sound quality by preventing interference among the blocks, and faithfully reproduces the sonic ambience of the original recording.

4. Remote control support

The supplied remote controller can also operate DENON CD players.

Accessories

Check that the following parts are supplied with the product.



Operation

Cautions on Handling

· Before turning the power switch on

Check once again that all connections are correct and that there are no problems with the connection cables.

 Power is supplied to some of the circuitry even when the unit is set to the standby mode. When leaving home for long periods of time, be sure to unplug the power cord from the power outlet.

About condensation

If there is a major difference in temperature between the inside of the unit and its surroundings, condensation may form on parts inside the unit, causing the unit to fail to operate properly.

If this happens, let the unit sit for an hour or two with the power off and wait until there is little difference in temperature before using the unit.

Cautions on using mobile phones

Using a mobile phone near this unit may result in noise. If that occurs, move the mobile phone away from the unit when it is in use.

Moving the unit

Turn off the power and unplug the power cord from the power outlet.

Next, disconnect the cables connected to other system units before moving the unit.

• Note that for explanatory purposes the illustrations in these instructions may differ from the actual unit.

About the Remote Control

The supplied remote control unit can be used to control DENON CD players and tuners.

* The remote control may not operate some products.

Inserting the Batteries

 Remove the rear cover of the remote control.



 Place two R03/AAA batteries in the battery compartment in the indicated direction.



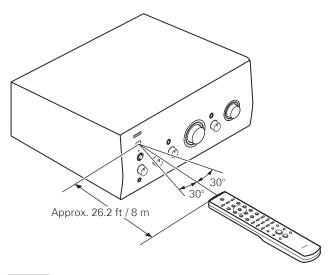
3 Put the rear cover back on.

NOTE

- Replace the batteries with new ones if the set does not operate even when the remote control is operated close to the unit.
- The supplied batteries are only for verifying operation.
- Insert the batteries in the proper direction, following the "⊕" and "⊖" marks in the battery compartment.
- To prevent damage or leakage of battery fluid:
- Do not use a new battery with an old one.
- Do not use two different types of batteries.
- Do not attempt to charge dry batteries.
- Do not short-circuit, disassemble, heat or dispose of batteries in a fire
- If the battery fluid leaks carefully wipe the fluid off the inside of the battery compartment and insert new batteries.
- Remove the batteries from the remote control if it will not be used for a long time.
- Dispose of batteries in accordance with local regulations on battery disposal.

Operating Range of the Remote Control

Operate the remote control while pointing it at the remote sensor.

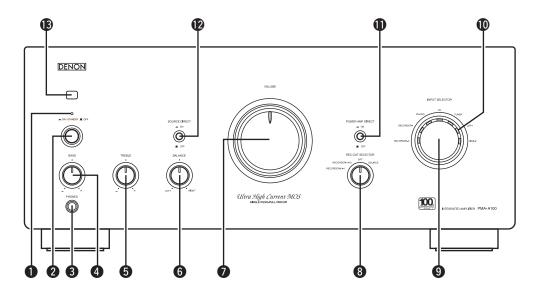


NOTE

The set may function improperly or the remote control may not operate if the remote control sensor is exposed to direct sunlight or strong artificial light from a fluorescent or infrared light.

Part Names and Functions

Front Panel



Power indicator

Indicates the status of the PMA-A100's as follows:

- For several seconds after the power is turned on·····Red (blinking)
- Power "ON"Green Muting Red (blinking)
- Standby ·····Red
- Power "OFF"..... Off

2 Power switch

(_ON/STANDBY _OFF)

When set to "-ON/STANDBY", the power turns on, and when set to "AOFF", the power turns off.

Headphone jack (PHONES)

- Plug headphones into this jack. (The speaker output turns off when the headphones are plugged in.)
- To prevent hearing loss, do not raise the volume level excessively when using headphones.

- BASS control knob
- **6** TREBLE control knob
- 6 BALANCE control knob
- **7** VOLUME control knob
- **8** REC OUT SELECTOR knob
- INPUT SELECTOR knob

Use this knob to select the desired source.

1 Input indicator

An orange light indicates the selected input.

1 POWER AMP DIRECT switch

Switching this "-ON", allows the device connected to the Power Amp Direct connector on the rear panel to be played. When ON, the input indicator turns off.

Switching it "AOFF", allows the program source selected using the INPUT SELECTOR knob to be played. When OFF, the input indicator lights up.

® SOURCE DIRECT switch

When switched "-ON", the signal does not pass through the tone adjustment circuitry (bass, treble and balance), resulting in playback of a higher sound quality.

When set to "-OFF", the sound can be adjusted to suit your taste.

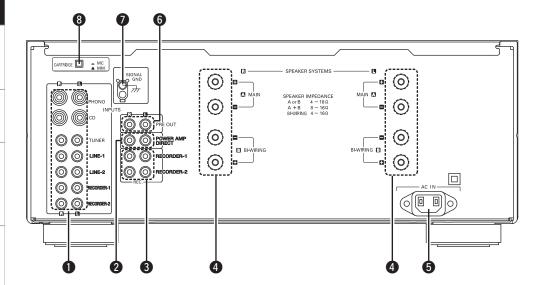
® Remote control sensor

NOTE

- Functions **4**, **5** and **6** are only available when the **SOURCE DIRECT** switch is "**L**OFF".
- When the **VOLUME** control knob is turned just past the "12 o'clock" position (over halfway), the effect of BASS and TREBLE adjustments decreases.
- When the VOLUME control knob is turned to maximum or all the way clockwise, the bases and treble can no longer be adjusted.
- When the **POWER AMP DIRECT** switch is "**—**ON", adjustment of the volume, balance and tone on the main unit has no effect. Adjust the volume on the input device.
- When the **POWER AMP DIRECT** switch is "-ON". the main unit outputs at maximum volume. Check the output level on the input device before playing it and adjust the volume accordingly.

Part Names and Functions

Rear Panel



• Input terminals (INPUTS)

Connect your source equipment here.

2 Power amplifier direct terminals (POWER AMP DIRECT)

When a component is connected to these terminals, it feeds directly to the power amp at the source's volume level.

3 Recording output terminals (RECORDER-1 and RECORDER-2)

Connect your recording equipment here.

4 Speaker system terminals (SPEAKER SYSTEMS)

Connect your speakers here.

6 AC inlet (AC IN)

Connect the supplied power cord here.

Do not use any cord other than the provided power cord.

6 PRE OUT connectors

Use this to add equipment such as a power amplifier or subwoofer.

SIGNAL GND (ground) terminal

Connect the ground wire from your turntable here.

NOTE

This terminal is not a safety ground.

CARTRIDGE selection switch

Set this switch to the type of record player cartridge to be used MM (\blacksquare) or MC (\blacksquare) .

NOTE

NEVER insert the short-circuiting pin plug into the recording output or PRE OUT connectors. Doing so could result in damage.



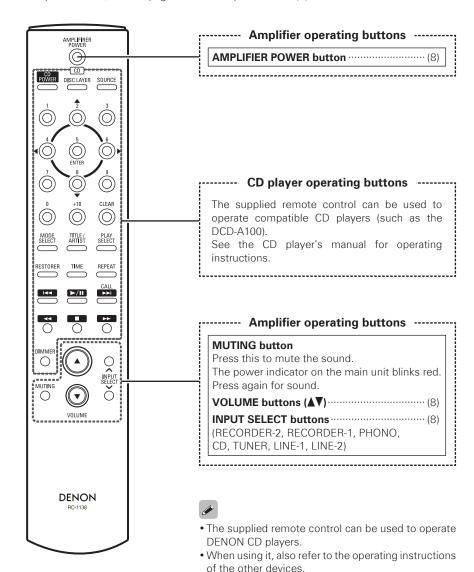
 The PHONO input terminals are equipped with a short pin-plug. Remove this plug to connect a record player.

After removing the short pin-plug, keep it in a safe place so you don't lose it.

• Signals are output from the PRE OUT connectors even when using headphones.

Remote Control

For buttons not explained here, see the page indicated in parentheses ().



products.

• The remote control may not operate some

Connections

Connections for all compatible audio signal format is described in this operating instructions. Please select the type of connections corresponding to the equipment you are connecting.

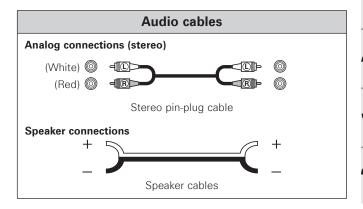
NOTE

- Do not plug in the power cord until all connections have been completed.
- When making connections, also refer to the operating instructions of the other components.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Do not bundle power cords with connection cables. Doing so can result in humming or noise.
- Do not turn up the volume without a turntable connected to the PHONO input terminals. Doing so will cause humming or noise.

Preparations

Connecting Cables

Select the cables according to the equipment being connected.



Connecting the Audio Equipment

Cautions on playing SA sources:

When regular speakers not compatible with SA sources (DVD Audio discs, Super Audio CDs and other sources, including treble components above the audible range), set the properties of the player (DVD Audio player, Super Audio CD player, etc.) for use with regular speakers (or amplifiers).

The speakers may be damaged if the volume is set too high when playing SA sources. For instructions on player settings, refer to the operating instructions included with the player.

Connecting the Speakers

Connecting the Speaker Cables

Carefully check the left (L) and right (R) channels and + (red) and – (black) polarities on the speakers being connected to the PMA-A100, and be sure to connect the channels and polarities correctly.

Peel off about 10 mm of sheathing from the tip of the speaker cable, then either twist the core wire tightly or apply solder to it.



2 Turn the speaker terminal counterclockwise to loosen it.



3 Insert the speaker cable's core wire to all the way into the speaker terminal.



4 Turn the speaker terminal clockwise to tighten it.



Speaker terminal dimensions



NOTE

- Connect the speaker cables so they do not stick out of the speaker terminals. The protection circuit may be activated if the wires touch the rear panel or if the + and sides touch each other (F) "Protection circuit").
- Never touch the speaker terminals while the power supply is connected. Doing so could result in electric shock.

☐ Speaker impedance

Use speakers with impedances within the ranges shown below to suit how they are used.

Speakers used	Impedance
A or B	4 ~ 16 Ω/ohms
A and B	8 ~ 16 Ω/ohms

Protection circuit

The protection circuit is activated in the following situations:

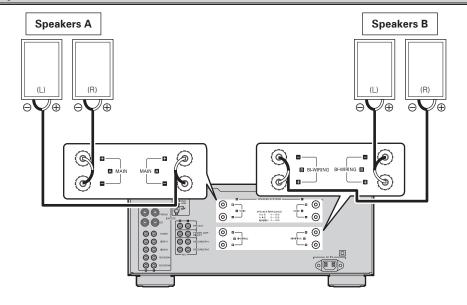
- If the speaker cable wire touches the rear panel or screws or if the speaker cable's + and – sides are touching
- If the surrounding temperature is extremely high
- If the inside of the amplifier gets hot to extended use at a high output

If this happens, unplug the power cord, then check the connections of the speaker cables and input cables. If the becomes very hot, wait for it to cool off and improve the ventilation around it. After doing this, plug the power cord back in.

If the protection circuit is activated even though there are no problems with the ventilation around the set or in its connections, the set may be damaged. Turn off the power and then contact a DENON service center.

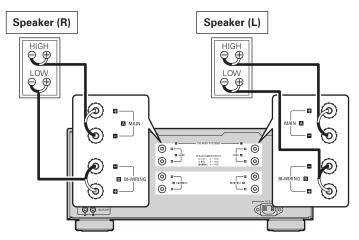
Connecting the Speakers

Speaker Connections



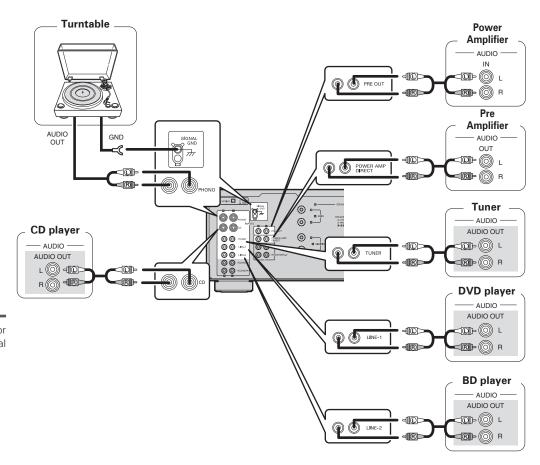
Bi-wiring Connection

When bi-wiring with bi-wireable speakers, connect the mid and high range terminals to SYSTEM (A) (or SYSTEM (B)), the low range terminals to SYSTEM (B) (or SYSTEM (A)). This enables playback with minimal interference between the high-range speaker unit and the low-range speaker unit.

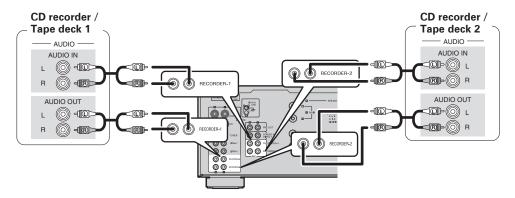


Connecting Players

If humming or other noise is generated when the ground wire is connected, disconnect it.

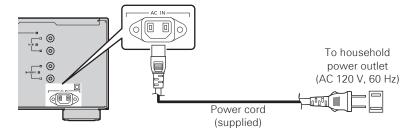


Connecting Recorders



Connecting the Power Cord

Wait until all connections have been completed before connecting the power cord.



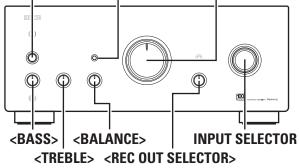
NOTE

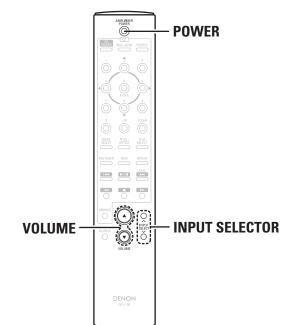
Insert the plugs securely. Loose connections will result in the generation of noise.

Operation

Button located on both the main unit and the remote control Button only on the main unit Symbols used to indicate buttons in this manual Button located on both the main unit and the remote control Button only on the main unit SUTTON

POWER <SOURCE DIRECT> VOLUME





Preparations Prior to Playing

- **◀** Turn VOLUME all the way down.
- **9** Set **<SOURCE DIRECT>** to "OFF".
- 3 Set <BASS>, <TREBLE> and <BALANCE> to the center positions.
- **4** Turn POWER on.
 The power indicator blinks red for several seconds and then

Starting Playback

1 Use INPUT SELECTOR to select the source.
The input indicator for the selected source lights.
[Selectable sources]

RECORDER-2 RECORDER-1 PHONO CD TUNER
LINE-1 LINE-2

- **?** Play the selected source.
- 3 Adjust VOLUME to the desired level.
- **4** Adjust the tone with **SASS**, **TREBLE** and **SALANCE**.

* If there is no need to adjust the tone, press < SOURCE DIRECT>.

Starting Recording

- Set <REC OUT SELECTOR> to "SOURCE".
- 2 Use INPUT SELECTOR to select the source to be recorded.

[Selectable sources]

RECORDER-2 RECORDER-1 PHONO CD TUNER
LINE-1 LINE-2

- **2** Set the recorder to the record mode.
- 4 Start playing the source to be recorded.

NOTE

The recording source switches if **INPUT SELECTOR** is operated during recording.

Starting Recording

Copying Recorders

1 Turn <REC OUT SELECTOR> and select "RECORDER-1 ▶ 2" (or "RECORDER-2 ▶ 1").

[Selectable sources]

RECORDER-1 ► 2 RECORDER-2 ► 1

- When copying from a device connected to the "RECORDER-1" terminal to a device connected to the "RECORDER-2" terminal, select "RECORDER-1 ► 2".
- When copying from a device connected to the "RECORDER-2" terminal to a device connected to the "RECORDER-1" terminal, select "RECORDER-2 ► 1".
- **2** Set the device connected to the RECORDER-1 (or RECORDER-2) terminal to the record mode.
- **3** Start playback on the device connected to the RECORDER-2 (or RECORDER-1) terminal.



- The sound to be recorded can be heard by selecting the playback source with INPUT SELECTOR, while the recorded sound can be heard by selecting the recorder.
- When performing these operations, also refer to the operating instructions of the other devices.

NOTE

The sound may be interrupted or noise may be recorded if **INPUT SELECTOR** is operated during recording.

Troubleshooting

If a problem occurs first check the following:

- 1. Are the connections correct?
- 2. Is the set being operated as described in the owner's manual?
- 3. Are the other components operating properly?

If this unit does not operate properly, check the items listed in the table below. If the problem persist there may be a malfunction. In this case, disconnect the power immediately and contact your retail outlet.

Symptom	Cause	Countermeasure	Page
When the power is turned on, the power indicator does not light and no sound is produced.	• The power cord's plug is not fully plugged in.	Check that the cord is securely inserted into the PMA-A100's AC inlet and the wall power outlet.	7
The power indicator flashes, and no sound is produced.	A short circuit has occurred, either due to contact between the speaker cable wires or because a wire has come loose from a terminal and is contacting the rear panel of the PMA-A100.	Unplug the power cord, twist the wires together tightly again, or apply solder and then reconnect them again.	5
	The device's internal temperature has increased because not enough space has not been provided around the device.	 Turn off the power and ensure sufficient space around the device. Turn on the power again after the amplifier has cooled down sufficiently. 	1, 5
The power indicator lights	The speaker cables are not fully connected.	Connect securely.	6
but no sound is produced.	• The device you want to listen to has not been selected.	Insure the correct input is selected.	8
	• The volume control is set to minimum.	Set to an appropriate level.	8
	The input cable is not fully connected.	Connect securely.	6
Sound is only produced	• The speaker cables are not fully connected.	Connect securely.	6
from the left or right	• The input cable is not fully connected.	Connect securely.	6
speaker (s).	The left/right balance is off.	• Adjust to a proper balance with the balance control knob.	8
The left and right of stereo sound is reversed.	• The connections of the speakers or input cables are reversed.	Check the connections to be sure that left is connected to left, right to right.	6
Humming sound is heard	The player's ground wire is not connected.	Connect securely.	6
in the music when playing records.	• The cables are not fully connected to the PHONO terminals.	Connect securely.	6
	Influence from a TV or VCR near the player.	• Try changing the positions in which the devices are installed.	_
Howling is produced along with the music if the	• The player and speakers are too close together.	• Install the player and speakers as far from each other as possible.	-
volume is too high when playing records.	• The vibrations from the speakers are being transmitted to the player through the floor.	• Use cushions, etc., to absorb the speakers' vibrations.	-
When playing a record, the	The needle pressure is incorrect.	Adjust to a proper needle pressure.	_
sound is distorted.	• There is dirt on the tip of the needle.	• Check the tip of the needle.	_
	The cartridge is defective.	Replace the cartridge.	_

Specifications

☐ Power amplifier section

Rated Output Power: 2-channel driving (CD \rightarrow SP OUT)

 $80 \text{ W} + 80 \text{ W} (8 \ \Omega/\text{ohms}, 20 \text{ Hz} \sim 20 \text{ kHz}, \text{T.H.D. } 0.07 \ \%)$ **Dynamic power:** $160 \text{ W} + 160 \text{ W} (4 \ \Omega/\text{ohms}, \text{DIN}, 1 \text{ kHz}, \text{T.H.D. } 0.7 \ \%)$

High frequency distortion:0.01 % (Rated output: -3 dB), 8 Ω /ohms, 1 kHzOutput terminals:Speaker A or B: $4 \sim 16 \Omega$ /ohms

Speaker A or B: $4 \sim 16 \Omega/\text{ohms}$ A + B: $8 \sim 16 \Omega/\text{ohms}$

Suited for headphones/stereo headphones Input Sensitivity / Input Impedance: P. DIRECT: $0.9 \text{ V} / 47 \text{ k}\Omega/\text{kohms}$

Amplification factor: 29 dB

☐ Pre amplifier section

Equalizer amplifier output: 150 mV

(REC OUT terminals)

Input Sensitivity/Input Impedance: PHONO (MM): 2.5 mV/47 kΩ/kohms

PHONO (MC): 200 μ V/100 Ω /ohms

CD, TUNER, LINE-1, LINE-2, RECORDER-1, RECORDER-2: 135 mV/47 kΩ/kohms (SOURCE DIRECT OFF)

135 mV/23 k Ω /kohms (SOURCE DIRECT ON)

 RIAA Deviation:
 PHONO: 20 Hz ~ 20 kHz ±0.5 dB

 Maximum Input:
 PHONO (MM): 130 mV/1 kHz

 PHONO (MC): 10 mV/1 kHz
 PRE OUT: 0.9 V (Input CD 135 mV)

☐ Overall performance

SN Ratio (A network): PHONO (MM): 89 dB

(With input terminals short-circuited, 5 mV input signal)

PHONO (MC): 74 dB

(With input terminals short-circuited, 0.5 mV input signal) CD, TUNER, LINE-1, LINE-2, RECORDER-1, RECORDER-2:

108 dB (input terminals short-circuited)

Tone control (bass):BASS: 100 Hz ±8 dB

TREBLE: 10 kHz ±8 dB

☐ General

Power supply: AC 120 V, 60 Hz **Power consumption:** 310 W

0.2 W (Standby)

Maximum external dimensions: 17 3/32 (W) x 7 1/8 (H) x 17 29/32 (D) inch (434 (W) x 181 (H) x 455 (D) mm)

Weight: 56 lbs 14.07oz (25.8 kg)

☐ Remote control (RC-1138)

Batteries: R03/AAA Type (two batteries)

Maximum external dimensions: 1 47/64 (W) x 9 9/64 (H) x 55/64 (D) inch (44 (W) x 233 (H) x 22 (D) mm)

Weight: 5.01oz (142 g) (including batteries)

*: For the purpose of improvement, the specifications and design of the amplifier are subject to change without notice.

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