

ONKYO®

Power Amplifier
M-5000R

Instruction Manual



WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

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.



WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN

AVIS
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR




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.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. 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.
10. 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.



PORTABLE CART WARNING
S3125A

require extensive work by a qualified technician to restore the apparatus to its normal operation,

E. If the apparatus has been dropped or damaged in any way, and

F. When the apparatus exhibits a distinct change in performance this indicates a need for service.
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.
15. Damage Requiring Service

Unplug the apparatus 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 apparatus,
 - C.** If the apparatus has been exposed to rain or water,
 - D.** If the apparatus 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
16. Object and Liquid Entry

Never push objects of any kind into the apparatus through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus.

Don't put candles or other burning objects on top of this unit.
17. Batteries

Always consider the environmental issues and follow local regulations when disposing of batteries.
18. If you install the apparatus in a built-in installation, such as a bookcase or rack, ensure that there is adequate ventilation.

Leave 30 cm (12") of free space at the top and sides and 10 cm (4") at the rear. The rear edge of the shelf or board above the apparatus shall be set 10 cm (4") away from the rear panel or wall, creating a flue-like gap for warm air to escape.

Precautions

- 1. Recording Copyright**—Unless it's for personal use only, recording copyrighted material is illegal without the permission of the copyright holder.
- 2. AC Fuse**—The AC fuse inside the unit is not user-serviceable. If you cannot turn on the unit, contact your Onkyo dealer.
- 3. Care**—Occasionally you should dust the unit all over with a soft cloth. For stubborn stains, use a soft cloth dampened with a weak solution of mild detergent and water. Dry the unit immediately afterwards with a clean cloth. Don't use abrasive cloths, thinners, alcohol, or other chemical solvents, because they may damage the finish or remove the panel lettering.
- 4. Power**
WARNING
BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.
AC outlet voltages vary from country to country. Make sure that the voltage in your area meets the voltage requirements printed on the unit's rear panel (e.g., AC 230 V, 50 Hz or AC 120 V, 60 Hz).
The power cord plug is used to disconnect this unit from the AC power source. Make sure that the plug is readily operable (easily accessible) at all times.
Pressing the [**POWER**] button to select OFF mode does not fully disconnect from the mains. If you do not intend to use the unit for an extended period, remove the power cord from the AC outlet.
- 5. Preventing Hearing Loss**
Caution
Excessive sound pressure from earphones and headphones can cause hearing loss.
- 6. Batteries and Heat Exposure**
Warning
Batteries (battery pack or batteries installed) shall not be exposed to excessive heat as sunshine, fire or the like.
- 7. Never Touch this Unit with Wet Hands**—Never handle this unit or its power cord while your hands are wet or damp. If water or any other liquid gets inside this unit, have it checked by your Onkyo dealer.

8. Handling Notes

- If you need to transport this unit, use the original packaging to pack it how it was when you originally bought it.
- Do not leave rubber or plastic items on this unit for a long time, because they may leave marks on the case.
- This unit's top and rear panels may get warm after prolonged use. This is normal.
- If you do not use this unit for a long time, it may not work properly the next time you turn it on, so be sure to use it occasionally.

For U.S. models

FCC Information for User

CAUTION:

The user changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

For Canadian Models

NOTE:

THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

For models having a power cord with a polarized plug:

CAUTION:

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

Modèle pour les Canadien

REMARQUE:

CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.

Sur les modèles dont la fiche est polarisée:

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.

For British models

Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.

IMPORTANT

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

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IMPORTANT

The plug is fitted with an appropriate fuse. If the fuse needs to be replaced, the replacement fuse must be approved by ASTA or BSI to BS1362 and have the same ampere rating as that indicated on the plug. Check for the ASTA mark or the BSI mark on the body of the fuse.

If the power cord's plug is not suitable for your socket outlets, cut it off and fit a suitable plug. Fit a suitable fuse in the plug.

For European Models

Declaration of Conformity	
We, ONKYO EUROPE ELECTRONICS GmbH LIEGNITZERSTRASSE 6, 82194 GROEBENZELL, GERMANY	
declare in own responsibility, that the ONKYO product described in this instruction manual is in compliance with the corresponding technical standards such as EN60065, EN55013, EN55020 and EN61000-3-2, -3-3.	
GROEBENZELL, GERMANY	 K. MIYAGI
ONKYO EUROPE ELECTRONICS GmbH	

Amplifier Precautions

Before using the power amplifier M-5000R, be sure to read the page above entitled Important Safety Instructions and this page of Amplifier Precautions.

Ventilation

While using the M-5000R, the internal temperature will fairly rise. Excessive temperature rise may affect the amplifier performance. To prevent damage from occurring due to high internal temperatures, it is vital to have proper ventilation and passage of air to carry out the heat and keep the internal temperature within acceptable ranges.

Caution

- Do not place the M-5000R inside cabinets or closets where there is poor passage of air and ventilation.
- Do not place the M-5000R near external heat sources such as heaters or hot air ducts.
- Do not place other components or object on top of or under the M-5000R.
- The cover of the M-5000R contains ventilation holes to allow the passage of air. Do not cover or block these holes in any way.

If you are planning to place it within a cabinet, either open holes in the rear panel of the cabinet to improve ventilation or use a fan to force air circulation.

As a general rule, if during idling the cover is too hot to touch, then ventilation needs to be improved.

Installation location and space

Make sure that the floor or cabinet or rack where it will be located is strong enough to support its weight.

You will also need to leave enough space behind the M-5000R to allow room for the power cord and other cables for connecting system components. A minimum of 10 cm (4") is required behind the M-5000R to allow room for the cables and cords without excessively bending them.

Do not place the M-5000R near TV or radio. This may cause noise or instable video on radio or TV respectively.

Power cord

Do not use a power cord other than the one supplied with the M-5000R. The power cord supplied is designed for use with the M-5000R and should not be used with any other device.

Be sure to only use wall sockets that properly fit the plug of the power cord. If the socket does not match the plug of the power cord, you will need to prepare an adapter. Always use an adapter that is properly certified for this application.

Speakers

Connected speakers should have an impedance of 4 ohms or greater.

If speakers with an impedance of less than 4 ohms are connected to RCA jacks, it may damage the M-5000R.

If a speaker with an impedance of less than 6 ohms are connected to an XLR jack, it may damage the M-5000R.

Read the instructions supplied with your speakers.

Pay close attention to speaker wiring polarity. In other words, connect positive (+) terminals only to positive (+) terminals, and negative (–) terminals only to negative (–) terminals. If you get them the wrong way around, the sound will be out of phase and will sound unnatural.

Unnecessarily long, or very thin speaker cables may affect the sound quality and should be avoided.

Be careful not to short the positive and negative wires. Doing so may damage the amplifier.

Make sure the metal core of the wire does not have contact with the power amplifier's rear panel. Doing so may damage the power amplifier.

Don't connect more than one cable to each speaker terminal. Doing so may damage the power amplifier.

Don't connect one speaker to several terminals.

(North American models)

If you are using banana plugs, tighten the speaker terminal before inserting the banana plug.

Do not insert the speaker code directly into the center hole of the speaker terminal.

Care

From time to time you should wipe the front and rear panels and the cabinet with a soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water, wring it out dry, and wipe off the dirt.

Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other Chemical solvents or cloths since these could damage the finish or remove the panel lettering.

Whenever performing maintenance on the M-5000R, any of its supplied accessories, or any device connected to it, do not use solvents or cleaners of any kind that are inflammable or combustible.

When you clean the input/output terminals on the rear panel, do not use contact restorer. Doing so may cause resin deterioration.

By factory default, the meters are treated with antistatic coating. Do not strongly wipe the surface with a cloth to avoid static electricity from building up, as this may cause an oscillation of the needle.

Other

Below is a list of actions that you should never perform.

- **Do not** use the M-5000R as a broadcast system or musical instrument amplifier.
- **Never** use a generator, DC/AC converter, AC/AC converter, or transformer to supply power for the M-5000R.
- **Never** perform a “thumb test” (checking whether current is reaching the lead wire on the hot end of the input by touching it with your fingers) on the ends of the input jacks or input cables.
Doing so may damage the speakers.
- **Do not** short across the output terminals or across the output terminals and rear panel.
- **Never** remove the cover of the M-5000R.
- **Do not** install the M-5000R in a location within the reach of small children.

Lightning storms

During lightning storm, never touch the power cord, plug or cover of the M-5000R, and any devices connected to the M-5000R.

Power

WARNING:

BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.

AC outlet voltages vary from country to country. Make sure that the voltage in your area meets the voltage requirements printed on the unit’s rear panel (e.g., AC 230 V, 50 Hz or AC 120 V, 60 Hz).

Features

- 150 W/Ch (4 ohm, 20 Hz - 20 kHz, 0.05%, 2 Channels Driven, IEC)
- A WRAT (Advanced Wide Range Amplifier Technology)
- DIDRC (Dynamic Intermodulation Distortion Reduction Circuitry)
- Quad Push-Pull Amplification Design with Three-Stage Inverted Darlington Circuitry
- Symmetrical Layout of L/R Channels
- Two Massive Toroidal Transformers with Sub Transformer
- Four Large 27,000 μ F Capacitors
- Separate Anti-Vibration Aluminum Panels for Top, Front, and Sides
- Side-mounted Circuit Board Construction to Reduce Vibration
- Bi-Amping and BTL (MONO) Capability
- XLR Input for Monaural Amplification with BTL Mode
- Gold-Plated, Machined Solid Brass RCA Inputs
- Gold-Plated Large Speaker Posts
- 12 V Trigger Input and Output
- Extra-Large Fast-Response Peak Watt Meters

Technology

A WRAT (Advanced Wide Range Amplifier Technology)

The M-5000R employs a host of proprietary Onkyo technologies to ensure optimal audio performance.

1. DIDRC (Dynamic Intermodulation Distortion Reduction Circuitry)

Since the advent of digital audio, the values of S/N (signal-to-noise) ratio have risen significantly. However, it is also recognized that in terms of perceived S/N, analog audio sources are not inferior to digital sources.

Generally, S/N measures the ratio when sound is and not produced, but takes no account of the noise generated during sound reproduction.

For a long time, Onkyo has focused and made extensive research on the S/N when sound is produced (dynamic S/N). Using a mechanism that captures the noise beyond audible range, it has been possible to determine that both dynamic S/N and perceived S/N aggravate during music reproduction.

Although frequencies above 20 kHz are beyond human hearing, it is well known that a beat can be perceived if different signals are overlapped at such frequencies.

During the analog audio era, no significant signals were entering beyond the audible range. However, the digital era has made recording beyond the audible range possible and the generated beat is now perceivable.

With Onkyo's DIDRC technology, a new approach is introduced which prevents such beat from penetrating the audible range.

2. Low Negative-Feedback Design

Conventional amplifiers make extensive use of negative feedback (NFB), whereby part of the output signal is re-input in order to improve the S/N ratio across a wide frequency range.

However, too much NFB makes a system susceptible to counter-electromotive force from the speakers, resulting in a drop in perceived sound quality. To avoid this, Onkyo focuses on improving the frequency response and reducing distortion, without relying so much on NFB. We use a low negative-feedback design incorporating audiophile-grade, close-tolerance components, to achieve a frequency response, out to 100 kHz.

3. Closed Ground-Loop Circuits

If an amplifier's ground potential (voltage) fluctuates during playback, noise is likely to result. In an open-loop circuit design, where all circuits (ire connected to the power supply via a single loop (as on many amplifiers), the noise is compounded. To avoid this, the M-5000R employs a sophisticated closed-circuit design in which each circuit has a separate link to the power supply. This helps to cancel individual circuit noise and keep the ground potential free of distortion.

4. HICC (High Instantaneous-Current Capability)

When an amplifier outputs an audio signal, the connected speakers accumulate energy, reflex, and send energy back to the amplifier. The amplifier must then immediately cancel the speakers' reflex energy and instantaneously send out the next signal. The same high current required to achieve this is also necessary to

handle speaker impedance, fluctuations, which can force an amplifier to provide four to six times its usual current load. The M-5000R's instantaneous current capability ensures that audio output is not affected by power limitations.

Quad Push-Pull Amplification Design with Three-Stage Inverted Darlington Circuitry

Three-Stage Inverted Darlington Circuitry brings greater efficiency to the M-5000R power amp by employing a low-NFB design to maintain voltage stability and enhance transient response. Extremely sensitive to oscillations, this circuitry requires very advanced control technology in order to be incorporated into the amplifier. Breaking further new ground, the M-5000R employs two extra transistors for each channel in a "quad push-pull" design that significantly enhances amplification power.

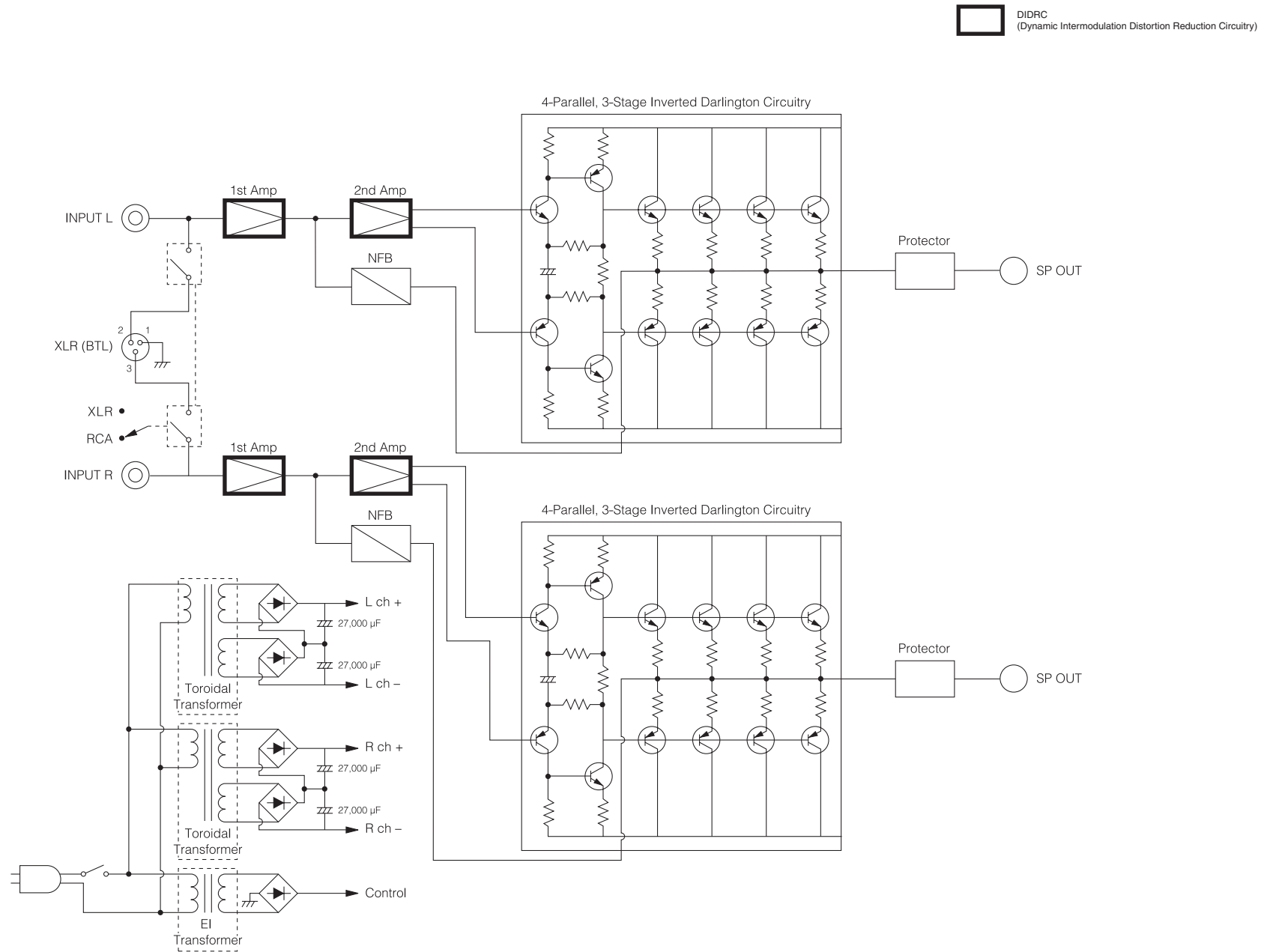
Symmetrical Twin-Monaural Construction

Power devices for the left and right channels of the M-5000R are aligned symmetrically. Each channel has the same electrical and structural design, and signal pathways are uniform in length. This helps to minimize errors in stereophonic playback.

Side-mounted Circuit Board Construction

Rather than being directly connected to the chassis base, the circuit boards inside the M-5000R are cushioned by internal struts and affixed to the front, side, and rear panels. This method of construction prevents vibrations from the chassis from adversely affecting the circuit boards.

Block Diagram

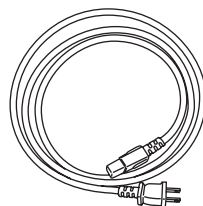


Supplied Accessories

Make sure you have the following accessories:

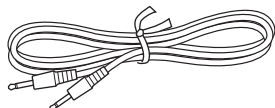
Power cord

Power cord (1.8 m/5.9 ft) (1)
(Plug type varies from country to country.)



Mono mini-plug cable

Mono mini-plug cable (1.8 m/5.9 ft) (1)
This is used to connect the 12V trigger jacks.



* In catalogs and on packaging, the letter at the end of the product name indicates the color.
Specifications and operations are the same regardless of color.

Thank you for purchasing an Onkyo Power Amplifier. Please read this manual thoroughly before making connections and plugging in the unit. Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new Power Amplifier. Please retain this manual for future reference.

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Turning On & Basic Operations

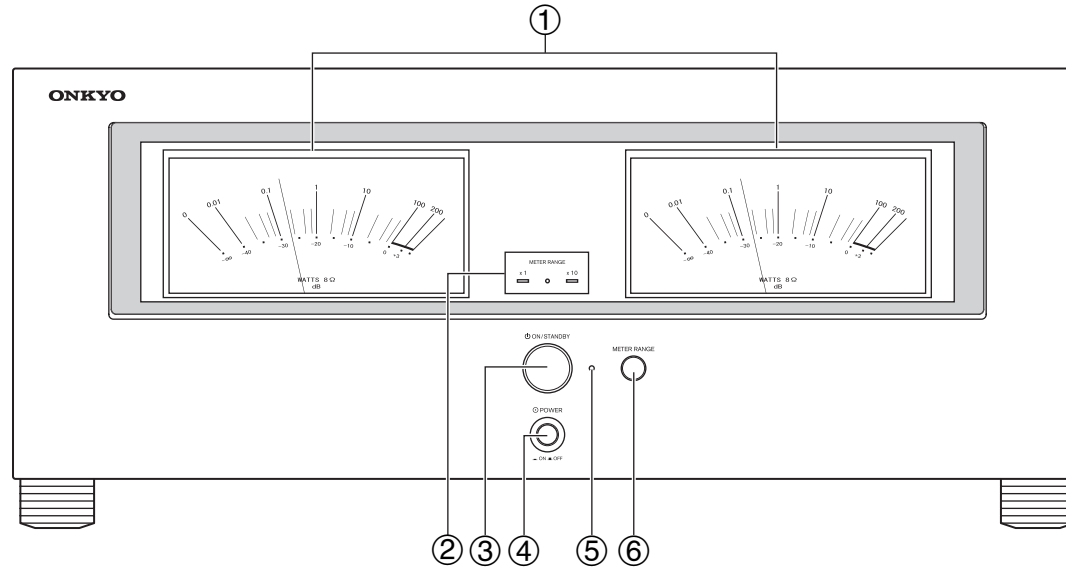
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Getting to Know the Power Amplifier

Front Panel



The page numbers in parentheses show where you can find the main explanation for each item.

① **Power meter** (→ 21)

The power meter shows the output power level.

The large power meters have been designed so that the indicator needles move up to the peak level quickly and then return more slowly. This makes it easier to read transient power levels which last for only a fraction of a second.

② **METER RANGE LEDs** (→ 21)

x1 or **x10** lights when the power meter range is x1 or x10. The Off LED in the middle lights when the power meter are turned off.

Before entering standby mode with the Asb function, the Off LED flashes 30 seconds before the ASb function starts running.

③ **ON/STANDBY button** (→ 20)

This button is used to set the power amplifier to On or Standby.

④ **POWER switch** (→ 20)

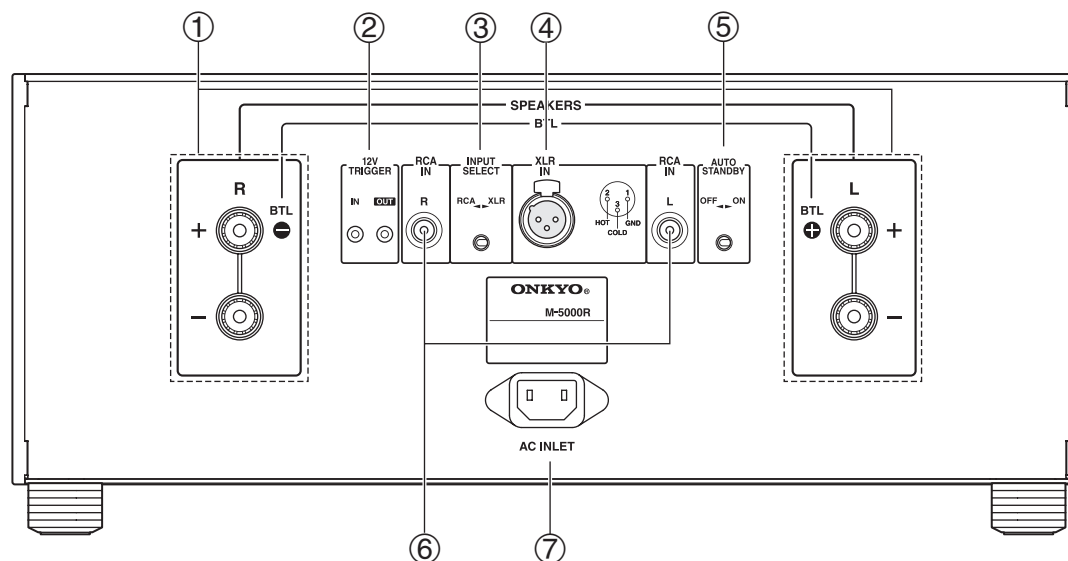
This is the main power switch. When set to **OFF**, the power amplifier is completely shutdown. It must be set to **ON** to set the power amplifier to On or Standby.

⑤ **Standby LED** (→ 20)

Lights when the power amplifier is in Standby mode. Flashes if the protection circuitry has been activated.

⑥ **METER RANGE button** (→ 21)

This button is used to switch the power meter range: x1, x10 or off.



① **SPEAKERS L/R terminals**

② **12V TRIGGER IN/OUT jacks**

Connects to the 12V trigger input and output jacks on the other component to control the power amplifier. This enables the amplifier to turn on or go into standby state based on the standby status of the connected component.

③ **INPUT SELECT switch**

This switch is located between the **XLR IN** and **RCA IN**. Use this switch to select the input type for its channel. When setting the switch to the left side, the RCA audio input is selected. When setting the switch to the right side, the XLR input is selected.

④ **XLR IN jack**

Connect preamplifier with XLR outputs for high-quality sound.

Do not connect XLR and RCA at the same time. It may damage the power amplifier.

⑤ **AUTO STANDBY switch**

You can use the Auto Standby (ASb) function. If the power amplifier receives no signal for 3 hours, it will automatically enter standby mode. Once the ASb function has been activated, the power amplifier will not automatically turn on even if it receives the signal. To turn on the power amplifier, press **ON/STANDBY** manually. You can also disable the function by setting this switch to **OFF** side.

⑥ **RCA IN L/R jacks**

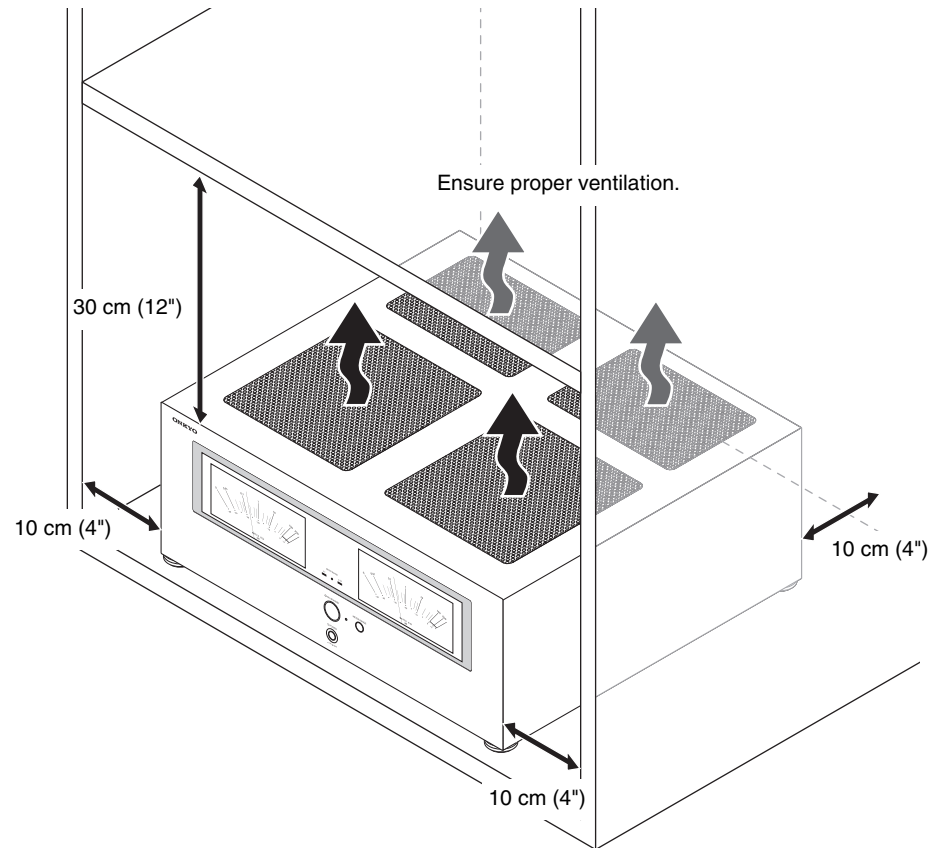
Connect preamplifier with single-ended outputs.

⑦ **AC INLET**

The supplied power cord is connected here. The other end of the power cord should be connected to a suitable wall outlet.

See “Connections” for connection information (→ 15 to 19).




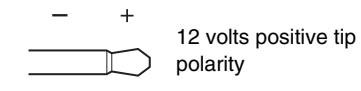
Installing the Power Amplifier



Install the power amplifier on a sturdy rack or shelf. Position it so that its weight is evenly dispersed on its four legs. Do not install the power amplifier in a place with vibration or an unstable location. The power amplifier is designed to have high conversion efficiency, however, its temperature will become much higher than other audio equipment. Therefore, make sure not to hamper heat dissipation by ensuring proper ventilation.

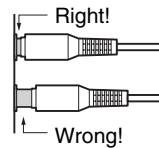
Connections

Cable and Jacks

XLR		<p>This cable carries analog audio. XLR cables are used for better noise immunity and longer cable runs.</p> <p>Do not connect XLR and RCA at the same time. It may damage the power amplifier.</p>
Analog audio (RCA)		<p>Analog audio connections (RCA) carry analog audio.</p>
Mono mini-plug		<p>Use the supplied or commercially available mono mini-plug cable to connect to the 12V trigger jacks on the other device for linked operation. The tip polarity of the connectors are as shown in the right.</p> <div style="text-align: right;">  <p>12 volts positive tip polarity</p> </div>

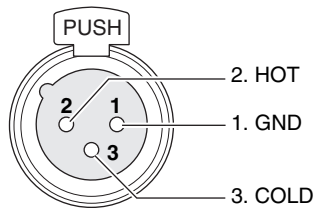
Note

- Push plugs in all the way to make good connections (loose connections can cause noise or malfunctions).
- To prevent interference, keep audio cables away from power cords and speaker cables.



About XLR Input

Connect an AV controller or control amplifier with XLR outputs for high-quality sound.



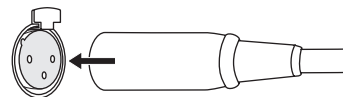
Connector ground jack: Chassis grounded

The pin assignments for this jack are given above. This pin assignment conforms to the standard adopted by the Audio Engineering Society. Refer to the instruction manual supplied with the control amplifier and verify that its output jack is compatible with the pin assignments for this jack. The output jack of the AV controller PR-SC5508 is compatible with the pin assignments for the jack of the amplifier.

The power amplifier uses the European type XLR jack. Phase is reversed when an XLR cable is connected to the control amplifier that uses the USA type XLR jack. In this case, reverse the polarity of the speaker connection.

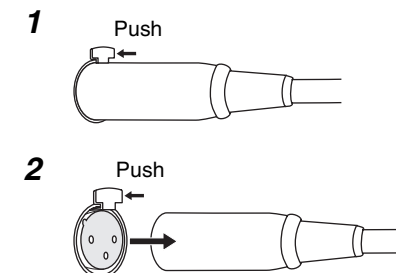
Plugging the XLR cable

Match the pins and insert the jack until you hear a “click.” Make sure that the jack is locked by lightly pulling the connection cable.



Unplugging the XLR cable

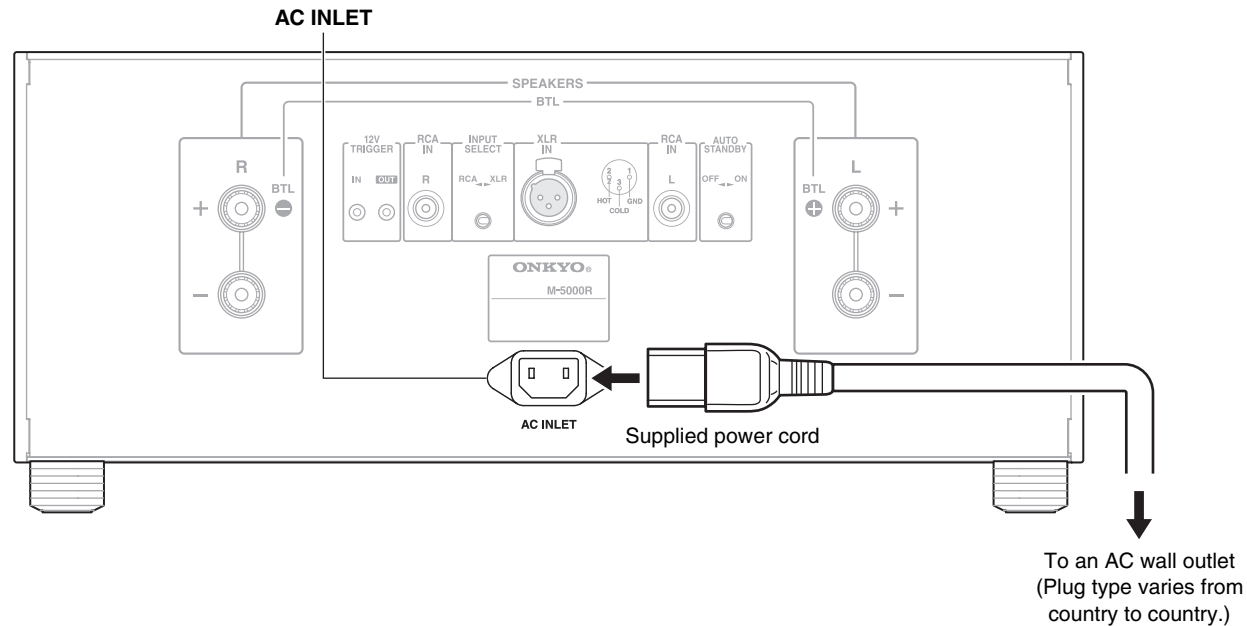
Pull out the connection cable while holding down the lever.



Note

- When using this XLR connection between the control amplifier and the amplifier, set the **INPUT SELECT** switch to the right side (the XLR input side) to select XLR input.
- Do not connect anything to the RCA-type audio input jack.

Connecting the Power Cord



- 1** Make sure that the main power of the power amplifier is turned off.
- 2** Connect all of your components.
- 3** Connect the supplied power cord to the amplifier's AC INLET.
- 4** Plug the power cord into an AC wall outlet.

Tip

- To reduce noise, do not tie the signal cable and power cable together. Wire them so that they are away from each other.

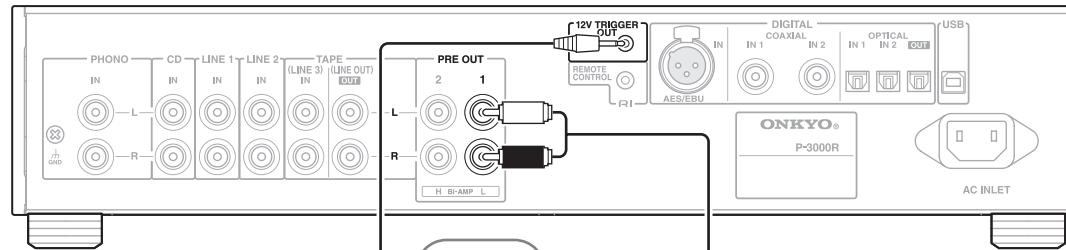
Note

- **Never disconnect the power cord from the power amplifier while the other end is still plugged into a wall outlet.** Doing so may cause an electric shock. Always disconnect the power cord from the wall outlet first, and then the power amplifier.
- Turning on the power amplifier may cause a momentary power surge that might interfere with other electrical equipment on the same circuit. If this is a problem, plug the power amplifier into a different branch circuit.
- Do not use a power cord other than the one supplied with the power amplifier. The supplied power cord is designed exclusively for use with the power amplifier and should not be used with any other equipment.

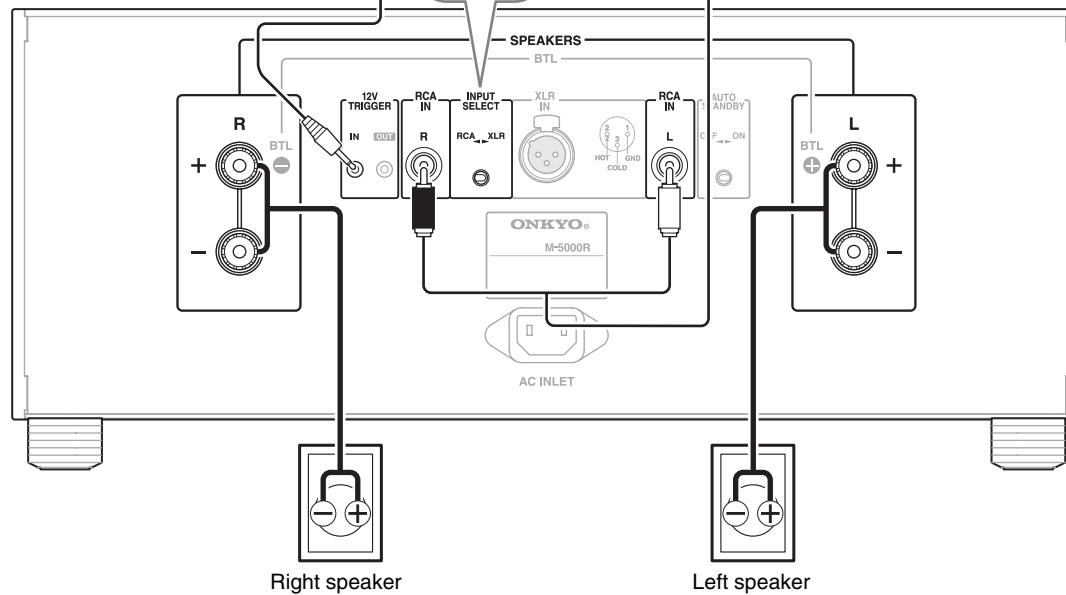
Connecting a Preamplifier

Stereo Connection

Preamplifier P-3000R



Power Amplifier M-5000R

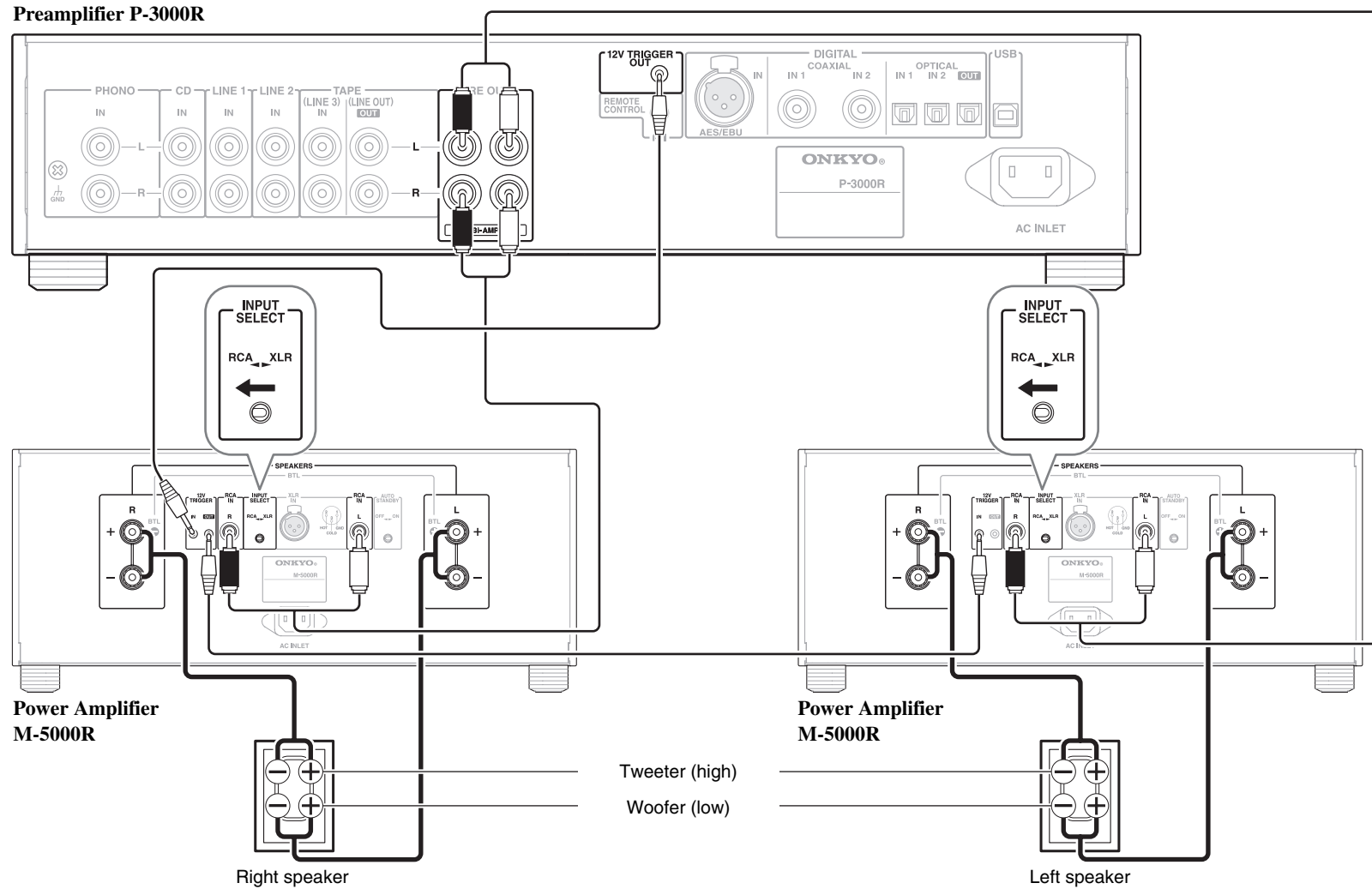


This is an example of the stereo connection using the preamplifier P-3000R.

Note

- Set the **INPUT SELECT** switch to **RCA** side.

Bi-amping Connection



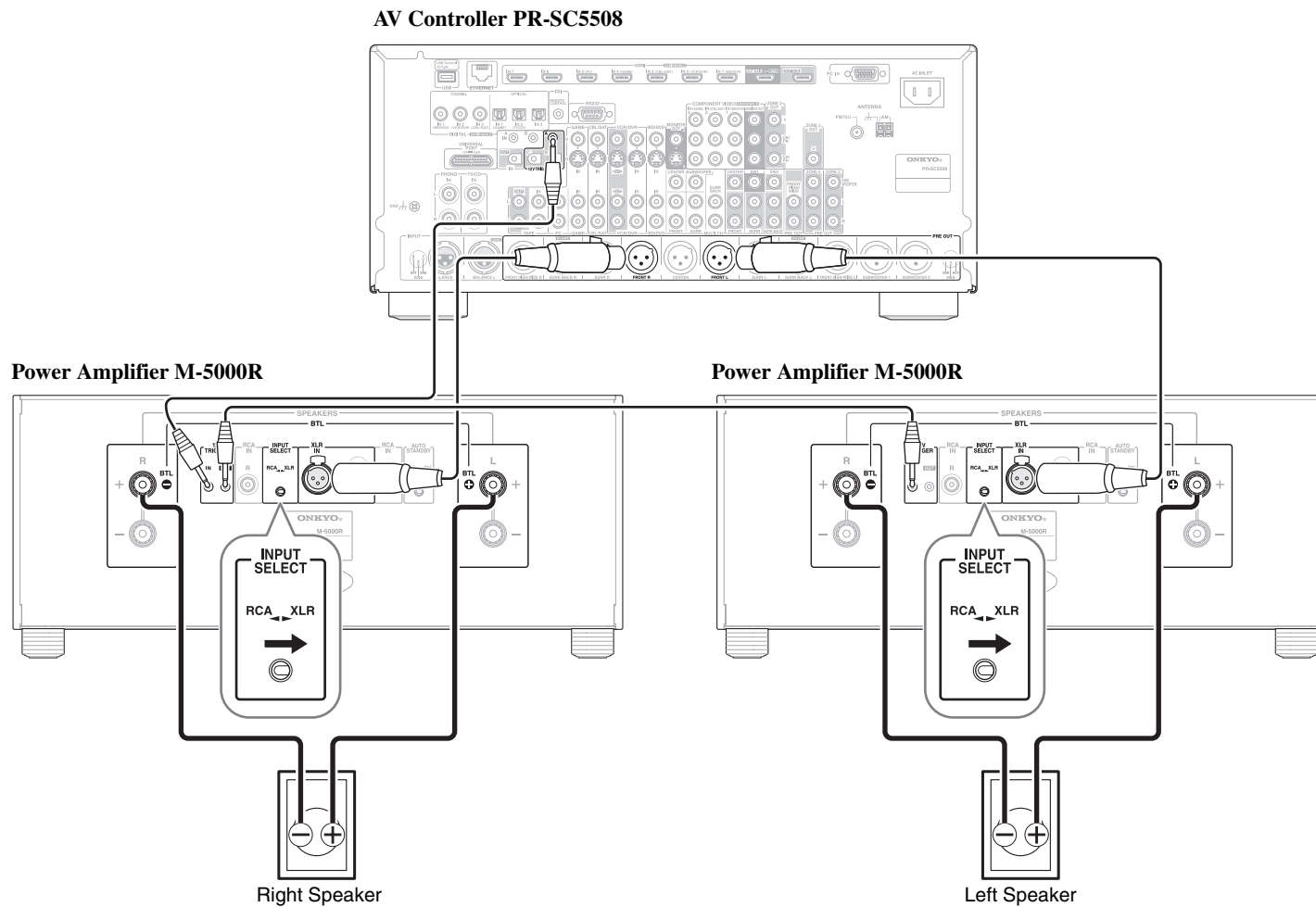
This is an example of the bi-amping connection using the preamplifier P-3000R.

Note

- Set the **INPUT SELECT** switch to **RCA** side.

Important:

- When making the bi-amping connections, be sure to remove the jumper bars that link the speakers' tweeter (high) and woofer (low) jacks.
- Bi-amping can be used only with speakers that support bi-amping. Refer to your speaker manual.



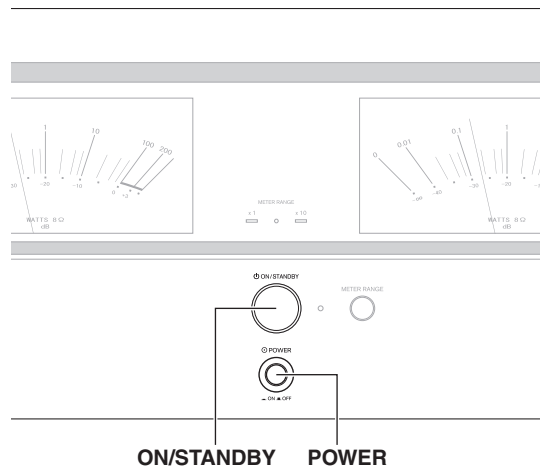
This is an example of the bridge connection with the AV controller PR-SC5508.

 Note

- When using the XLR inputs, do not connect anything to the RCA inputs. It may damage the power amplifier.
- Make sure that the XLR cable is not split. The split XLR cable may be the cause of noise.
- The power amplifier uses the European type XLR jack (pin 2 hot). If the AV controller/preamplifier with the USA type jack (pin 3 hot) is connected, the phase will be reversed. In this case, reverse the polarity of the speaker connection.
- Set the **INPUT SELECT** switch to **XLR** side.

Basic Operations

Turning On the Power Amplifier



- 1 Set POWER to the ON position (▲) on the front panel.**
- 2 Press ON/STANDBY to turn on the power amplifier.**

The power amplifier comes on, the display lights, and the Standby LED goes off.

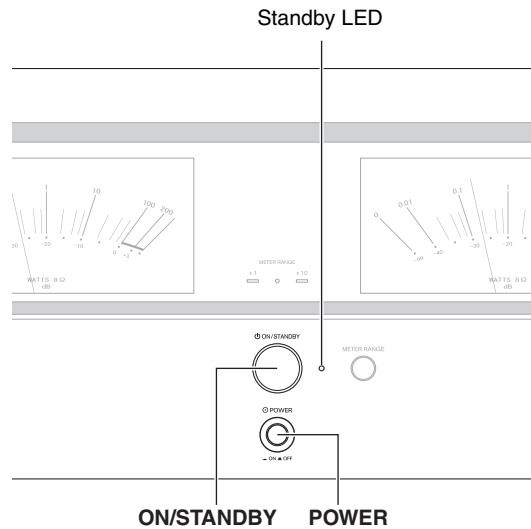
Tip

- After a certain period of warming up, the temperature of the power amplifier's components and internal temperature are stabilized, and the sound will soften.

Note

- The power amplifier remembers the state when power was previously turned off, and returns to the state.

Turning Off the Power Amplifier



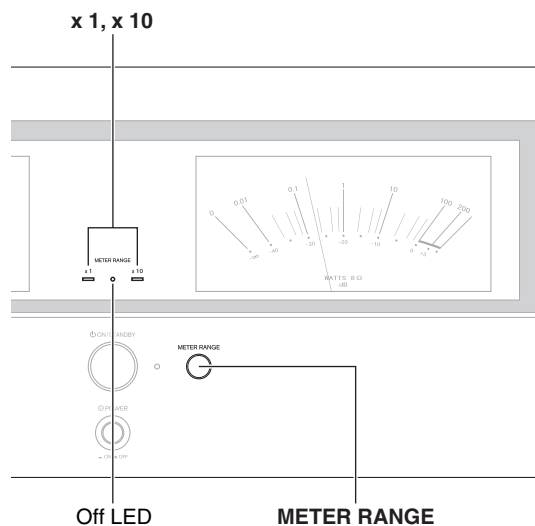
- 1 Press ON/STANDBY to set the power amplifier to Standby.**

The power amplifier will enter Standby mode, and the Standby LED lights.
- 2 To completely shut down the power amplifier, set POWER to the OFF position (■).**

Note

- See "Setting Auto Standby (ASb)" for the auto standby function (→ 21).

Switching the Power Meter Range



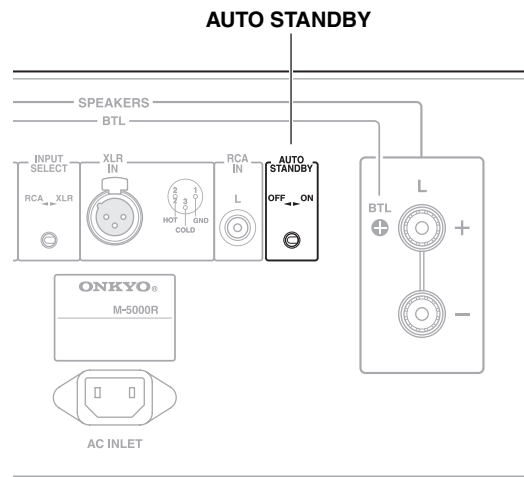
You can switch the power output of speaker terminals between **x1** (default) and **x10** (10 times).

- 1 Press **METER RANGE** repeatedly to switch **METER RANGE** in the following order: **x1** (default), **x10**, **Off**

The **x 1**, **x 10** LEDs and the Off LED will light according to the set status of **METER RANGE**.

The number of watts indicated on the meters corresponds to the actual output level when driving speakers rated at 8 ohms. When driving speakers rated at 4 ohms, the output is actually twice that shown on the power meters.

Setting Auto Standby (ASb)



When **AUTO STANDBY** is turned **ON** side, the power amplifier will automatically enter Standby mode if the power amplifier receives no signal for 3 hours.

- 1 Set **ON/OFF** by switching the **AUTO STANDBY** switch.

- ▶ **ON:**
ASb enabled.
- ▶ **OFF:**
ASb disabled.

Default setting: **ON** (European models), **OFF** (North American models)

Once the ASb function has been activated, the power amplifier will not automatically turn on even if it receives the signal. To turn on the power amplifier, press **ON/STANDBY** manually. You can also disable the function by setting this switch to **OFF** side.

Note

- Before entering standby mode with the ASb function, the Off LED flashes 30 seconds before the ASb function starts running.

Troubleshooting

Power

Can't turn on the Power Amplifier.

- Make sure that the power cord is properly plugged into the wall outlet (→ 16).
- Unplug the power cord from the wall outlet, wait 5 seconds or more, then plug it in again.

The Power Amplifier turns off unexpectedly.

- When the set ASb starts running, the power amplifier will automatically go standby (→ 21).
- If the power amplifier cannot start with the Standby LED blinking, then it may be problem with the power amplifier. If speaker cables touch the chassis, this may cause the power amplifier to short out and make sure the plus terminals of speaker cables do not touch the chassis or the minus terminals.
Please try the method below:
–Set the **POWER** switch to OFF and disconnect all speaker cables. Check that the top of the set (cooling vent) is not blocked. When the power amplifier has cooled down, reconnect all speaker cables and set the **POWER** switch to ON. Then Press **ON/STANDBY**.

Audio

There's no sound.

- Make sure the speakers are connected correctly (→ 15).
- Check all connections and correct as necessary (→ 15).
- When making **XLR IN** input, make sure that the **INPUT SELECT** switch is switched to the **XLR** side.
- Make sure the correct input source is selected.
- Make sure the analog audio cable is connected correctly.
- Make sure that all audio connecting plugs are pushed in all the way.

The sound quality is not good.

- Make sure the speaker cables are connected with the correct polarity (→ 15).
- Make sure all audio connecting plugs are pushed in all the way (→ 15).
- The sound quality can be affected by strong magnetic fields, such as that from a TV. Try moving any such devices away from the power amplifier.
- If you have any devices that emit high-intensity radio waves near the power amplifier, such as a cellular phone that's being used to make a call, the power amplifier may output noise.
- When making **RCA IN** input, make sure that the **INPUT SELECT** switch is switched to the **RCA** side.
- Check the connection in case of bi-amping connection.

Audio performance

- Audio performance will be at its best about 10 to 30 minutes after the power amplifier has been turned on and had time to warm up.
- Using cable ties to bundle audio cables with speaker or power cables may degrade the sound quality. So don't do it.

External Components

The 12V trigger does not work.

- Make sure the cables are connected to the jacks firmly.

The power amplifier contains a microcomputer for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely event that this should happen, unplug the power cord, wait at least 5 seconds, and then plug it again.

Before disconnecting the power cord from the wall outlet, set the main power switch to OFF.

If during idling the cover is too hot to touch, then ventilation needs to be improved.

Specifications

M-5000R

Amplifier Section

Rated Output Power

North American:
(Stereo)

80 watts minimum continuous power per channel, 8 ohm loads, 2 channels driven from 20 Hz to 20 kHz, with a maximum total harmonic distortion of 0.05% (FTC)
100 watts minimum continuous power per channel, 8 ohm loads, 2 channels driven at 1 kHz, with a maximum total harmonic distortion of 1% (FTC)
150 watts minimum continuous power per channel, 4 ohm loads, 2 channels driven from 20 Hz to 20 kHz, with a maximum total harmonic distortion of 0.05% (FTC)
170 watts minimum continuous power per channel, 4 ohm loads, 2 channels driven at 1 kHz, with a maximum total harmonic distortion of 1% (FTC)

(BTL mono)

180 watts minimum continuous power per channel, 8 ohm loads, 1 channel driven from 20 Hz to 20 kHz, with a maximum total harmonic distortion of 0.05% (FTC)
200 watts minimum continuous power per channel, 8 ohm loads, 1 channel driven at 1 kHz, with a maximum total harmonic distortion of 1% (FTC)
220 watts minimum continuous power per channel, 6 ohm loads, 1 channel driven from 20 Hz to 20 kHz, with a maximum total harmonic distortion of 0.05% (FTC)
250 watts minimum continuous power per channel, 6 ohm loads, 1 channel driven at 1 kHz, with a maximum total harmonic distortion of 1% (FTC)

European:
(Stereo)

2 ch × 80 W at 8 ohms, 20 Hz - 20 kHz, 0.05 %, 2 ch driven (IEC)
2 ch × 150 W at 4 ohms, 20 Hz - 20 kHz, 0.05 %, 2 ch driven (IEC)
2 ch × 100 W at 8 ohms, 1 kHz, 1 %, 2 ch driven (IEC)
2 ch × 170 W at 4 ohms, 1 kHz, 1 %, 2 ch driven (IEC)

(BTL mono)

1 ch × 180 W at 8 ohms, 20 Hz - 20 kHz, 0.05 %, 1 ch driven (IEC)
1 ch × 220 W at 6 ohms, 20 Hz - 20 kHz, 0.05 %, 1 ch driven (IEC)
1 ch × 200 W at 8 ohms, 1 kHz, 1 %, 1 ch driven (IEC)
1 ch × 250 W at 6 ohms, 1 kHz, 1 %, 1 ch driven (IEC)

Dynamic Power*

* IEC60268-Short-term maximum output power

460 W (1 Ω)
320 W (2 Ω)
245 W (3 Ω)
196 W (4 Ω)
142 W (6 Ω)
110 W (8 Ω)

THD+N (Total Harmonic Distortion+Noise)

0.02 % (20 Hz - 20 kHz, half power)
0.005 % (1 kHz, half power)

Damping Factor

130 (1 kHz, 8 Ω)

Input Sensitivity and Impedance (Unbalance)

700 mV/10 kΩ (RCA)

Input Sensitivity and Impedance (Balance)

1.4 V/10 kΩ (BTL)

Frequency Response

10 Hz - 100 kHz/+0 dB, -1 dB 1 W/8 Ω
1 Hz - 250 kHz/+0 dB, -3 dB 1 W/8 Ω

Signal to Noise Ratio

110 dB (RCA, IHF-A)

Speaker Impedance

RCA Stereo: 4 Ω - 16 Ω
XLR MONO: BTL 6 Ω - 16 Ω

HICC

150 A

General Section

Power Supply

North American: AC 120 V, 60 Hz
European: AC 230 V, 50 Hz

Power Consumption

North American: 8.4 A
European: 280 W

Standby Power Consumption

North American: 0.15 W
European: 0.2 W

Dimensions (W × H × D)

435 W × 187.5 H × 432.5 D mm
(17-1/8 W × 7-3/8 H × 17 D inches)

Weight

23.5 kg (51.8 lbs.)

■ Audio Inputs

Analog Stereo Inputs

RCA IN-L, RCA IN-R

Balance Inputs

XLR IN

■ Audio Outputs

Speaker Outputs

Lch, Rch

■ Others

12V Trigger

In 1/Out 1

Specifications and features are subject to change without notice.

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