

# 861


## power amplifier

M O O N

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## Important Safety Instructions

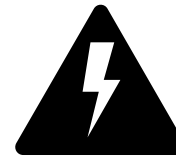
1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near heat sources such as radiators, heat registers, stoves or another apparatus that generate 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 is provided for safety. If the provided plug does not fit into the outlet, consult an electrician to replace 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. Unplug mains cord during transportation.
11. Only use attachments and accessories specified by the manufacturer.
12. The apparatus is heavy and requires two people to lift it. Exercise caution when maneuvering.
13. 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. 
14. Unplug this apparatus during lightning storms or when unused for long periods of time.
15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way such as when the power cord has been damaged; liquid has been spilled or objects have fallen into the apparatus; or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
16. No naked flame sources, such as candles, should be placed on the apparatus.

### WARNING:

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



**CAUTION**  
*RISK OF ELECTRIC SHOCK*  
*DO NOT OPEN*



**CAUTION:** TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



The lightning flash with the 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.



Marking by the "CE" symbol (shown right) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community.



Waste from Electrical and Electronic Equipment (WEEE): This equipment must be sent to a separate collection facility for the recovery and recycling of electrical and electronic waste wherever dedicated facilities exist. WEEE regulations aim to contribute to sustainable production and consumption, addressing environmental and other issues caused by the growing number of discarded electronics. The symbol for the separate collection of electrical and electronic equipment indicates that this product should not be discarded as unsorted waste.



#### Hot Surface

The side panels are heat sinks, which could become dangerously hot while the device is in operation.

Caution: Do not touch

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component. To completely disconnect this apparatus from the AC mains, use the rocker switch on the rear panel or disconnect the power supply cable from the AC receptacle.
2. The unit must be terminated with a three-conductor AC mains power cord, which includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used. Connect the unit only to an AC source of the proper voltage; both the shipping box and rear panel serial number label will indicate the correct voltage. Use of any other voltage will likely damage the unit and void the warranty.
3. **ALWAYS** connect the unit only to an AC source of the appropriate voltage. Both the shipping box and rear panel serial number label indicate the correct voltage. Incorrect voltage could damage the unit and void the warranty.
4. AC extensions cords are **NOT** recommended for use with this product. The mains plug of the power supply cord shall remain readily accessible.
5. **NEVER** use flammable or combustible chemicals for cleaning audio components.
6. **NEVER** operate the unit with any covers removed. There are no user-serviceable parts inside. An open unit, especially if it is still connected to an AC source, presents a potentially lethal shock hazard. Refer all questions to authorized service personnel only.
7. **NEVER** wet the inside of the unit with any liquid. If a liquid substance does enter your unit, immediately disconnect it from the AC mains and take it to your MOON Partner for a complete check-up.
8. **NEVER** spill or pour liquids directly onto the unit.
9. **NEVER** block air flow through ventilation slots or heatsinks.
10. **NEVER** bypass any fuse.
11. **NEVER** replace a fuse with a value or type other than those specified.
12. **NEVER** attempt to repair the unit. If a problem occurs, contact a MOON Partner.
13. **NEVER** expose the unit to extremely high or low temperatures.
14. **NEVER** operate the unit in an explosive atmosphere.
15. **ALWAYS** keep electrical equipment out of reach of children.
16. **ALWAYS** unplug sensitive electronic equipment during lightning storms.
17. **WARNING:** Do not expose batteries or battery pack to excessive heat such as sunshine, or fire or the like.

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## Explore new frontiers

The landmark North Collection represents the culmination of years of research and development in the fields of audio, electronics, materials, and manufacturing processes. Its exciting new look is surpassed only by improvements in performance made possible by the passionate team of Simaudio engineers and technicians dedicated to delivering an uncompromised music listening experience. With the purchase of this MOON product, you join an elite group of music lovers around the world who expect the absolute best performance and build quality from products in any class.

Get ready for the performance of a lifetime.

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## Before getting started

Carefully remove the unit from its packaging. Visually inspect it, and in the case of damage, report it to your MOON Retailer immediately.

The packaging materials were designed to protect this product while in transit. Store these materials in a dry location for the duration of the warranty period.

The information contained in this Manual is subject to change without notice. The most recent version is available at [simaudio.com/guides-downloads](http://simaudio.com/guides-downloads).

### **The MOON 861 includes:**

- Quick Start Guide
- Power Cable
- Ethernet Cable
- Warranty Registration Card (Canada & USA only)

*Note the serial number of your MOON 861 for future reference.*

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## Install your MOON 861

Consider the location and environment of the device carefully. Set it upon an open, stable, and flat surface. The device requires sufficient space above and around it to adequately disperse the heat it generates. Maintain a minimum gap of 10 cm (4") around the sides and 20 cm (8") above of the unit to enable airflow.

The performance of this device will continue to improve during the first 100 hours of listening.

# Get to know your MOON 861

## Front Panel

### Standby

toggles the device between active and inactive modes when the device is powered on

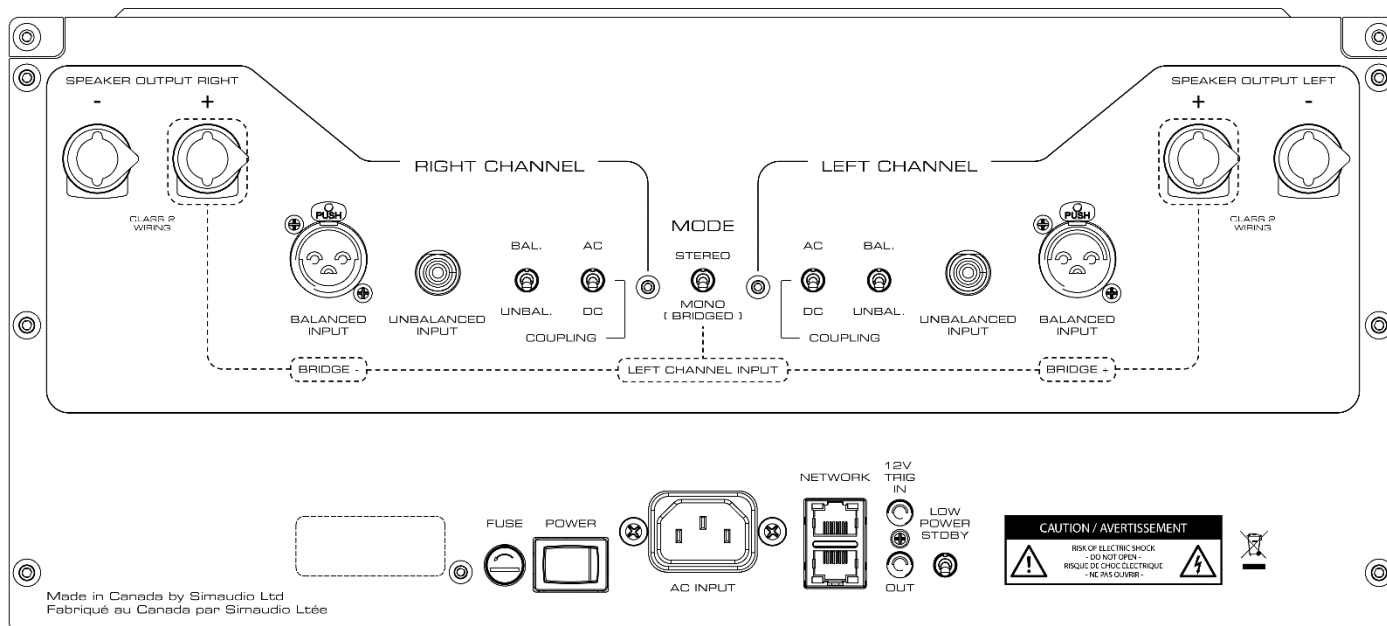
### Status Indicator

indicates the status of the device with colour-coded notifications

white	solid	normal operation
white	pulsating	powering up
violet	pulsating	firmware update

See [Troubleshooting](#) section for more information.

## Rear Panel





## Audio

### RIGHT/LEFT CHANNEL

#### SPEAKER OUTPUT

+/-

*binding posts for connecting loudspeakers*

*Insert banana pins through the holes in the extremities of the barrels or unscrew the barrels to expose a gap underneath for spades and bare wire contacts.*

#### BALANCED INPUT

*differential (XLR) connection for a balanced preamplifier*

#### UNBALANCED INPUT

*single-ended (RCA) connection for a preamplifier without balanced outputs*

#### BAL./UNBAL.

*switch for activating either the balanced or the unbalanced inputs*

#### AC/DC COUPLING

*switch to enable the input to block DC signals*

*AC coupling is useful with preamps suspected of outputting DC (due to age or design) or if the amplifier frequently enters DC protection mode.*

### MODE

#### STEREO/MONO

*switch for bridging the two channels together as a monoblock*

- For *stereo* operation, connect the **positive (+)** **SPEAKER OUTPUT** to the **positive** loudspeaker terminals and the **negative (-)** **SPEAKER OUTPUTS** to the **negative** loudspeaker terminals.
- For *mono* operation, use the **LEFT CHANNEL INPUT**.  
Connect the **positive (+)** binding post on the **LEFT CHANNEL** to the **positive** loudspeaker terminal.  
Connect the **positive (+)** terminal on the **RIGHT CHANNEL** to the **negative** loudspeaker terminal.

## Functional

### FUSE

*magazine containing a power supply fuse*

Please appreciate that while some users may report improvements in the performance of their audio equipment when original parts are replaced with after market parts, MOON cannot guarantee the proper functioning of its products under such conditions. Our engineers have ensured that the original fuse should protect your device from catching fire due to electrical calamities. All security, quality, and performance testing, as well as standards certification, is performed with specific components, and any modification from the original design may void its warranty.

### POWER

*switch for toggling the device on [I] and off [O]*

With the power switch on, the unit may be toggled in and out of Standby using the button on the front panel, a remote control, the MiND Controller, or by MOONLink. The unit may require up to a minute to connect to the network. For best performance, the device should remain powered up and may be toggled into Standby when not in use. It should be powered down during extended absences by disconnecting the power cable.

*Always power on the preamplifier before the power amplifier.*

*Always power off the power amplifier before the preamplifier.*

### AC INPUT

*for connecting the power cable*

### NETWORK

*network (RJ-45) connections for Ethernet cables*

- for MOONLink functionality with compatible MOON products
- for extending the network to an additional device (eg, another 861, a NAS device, or a TV)
- for connecting the device to a network router

### 12V TRIGGER

*mini-jack (TS) connection for synchronizing Standby behaviours across multiple devices*

- Use **12V TRIGGER IN** to connect a preamplifier.
- Use **12V TRIGGER OUT** to daisy-chain this unit to the **12V TRIGGER IN** on an additional power amplifier (eg, when using two units as monoblocks).

### STDBY MODE

*switch for powering down some of the electronics while in Standby*

- Select **REG** (recommended) to reduce the amount of time necessary to reach optimal playing conditions.
- Select **LOW** to reduce energy consumption when not in use.

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## Personalize your MOON 861

### MOONLink

MOONLink technology makes MOON products more intelligent.

A single button press can trigger automated behaviours and simultaneously operate multiple devices over a network in a symbiotic MOONLink Group. MOONLink simultaneously toggles Standby and can adjust display brightness for all devices in the Group, while enabling volume control and automatic input selection of specific devices in the Group.

Use the [Setup](#) menu on any complementary model from the North Collection to add this unit to a MOONLink Group.

- **MOONLink Group** permits the customization of a Group.
  - **Name** identifies a device within the Group.
  - **Group ID** assigns a Group number to a Device. Assigning the same ID to other devices joins them together as a Group.
  - **Status** lists information about the device.
  - **Firmware** verifies the firmware of the device and updates it when necessary.
- **Available Devices** lists devices on the network that could be added to a Group.

Holding the [Standby](#) button on the front panel for two seconds automatically toggles all the devices in the MOONLink Group into Standby.

## Troubleshooting

### Status Indicator

If typical operation is disrupted, the status indicator may blink to signal a problem. A preamplifier in the MOONLink group will simultaneously display the corresponding message on its LED display.

<b>violet</b>	<b>blinking</b>	firmware update error
<b>red</b>	<b>blinking</b>	temperature protection
<b>orange</b>	<b>blinking</b>	voltage protection
<b>orange / green</b>	<b>alternating</b>	blown fuse
<b>yellow</b>	<b>blinking</b>	DC protection

#### firmware update error

Normally, the device recovers automatically from a firmware update error. If the problem persists...

1. Verify that the device is connected to the network and that the network is accessing the Internet.
2. Wait 30 minutes.
3. If the device continues to indicate a firmware update error, contact [support@simaudio.com](mailto:support@simaudio.com).

#### temperature protection

If a device overheats, it could return to normal operation after a period of cooling down.

1. Power down the device using the rear rocker switch.
2. Wait 10 minutes.
3. Consider the location and environment of the device carefully. Make adjustments to decrease the temperature and increase airflow around the device.
4. Power up the device and resume normal operation.
5. If the device continues to indicate temperature protection, contact [support@simaudio.com](mailto:support@simaudio.com).

#### voltage protection

If a device has a voltage issue, it will most likely require service.

1. Power down the device using the rear rocker switch.
2. Wait 60 seconds.
3. Power up the device and resume normal operation.
4. If the device continues to indicate voltage protection, contact [support@simaudio.com](mailto:support@simaudio.com).

#### DC protection

The device will shut down if it detects DC at its input, internally, or at its output. To determine the source of the issue...

1. Power down the device using the rear rocker switch.
2. Disconnect all cables from the device.
3. Wait 60 seconds.
4. Reconnect only the power cable.
5. Power up the device.
  - a. If the device continues to indicate DC protection, contact [support@simaudio.com](mailto:support@simaudio.com).
  - b. If not...
6. Reconnect one loudspeaker.
  - a. If the device indicates DC protection, there is an issue with that loudspeaker or its cable.
  - b. If not, connect the other loudspeaker.
  - c. If the device indicates DC protection, there is an issue with that loudspeaker or its cable.
  - d. If not...
7. Reconnect one source device.
  - a. If the device indicates DC protection, there is an issue with that device or its cable.
  - b. If not, continue this process of elimination.

## Specifications

### Technical

<b>Output Power (Stereo 8 <math>\Omega</math>)</b>	300 W
<b>Output Power (Stereo 4 <math>\Omega</math>)</b>	600 W
<b>Output Power (Mono 8 <math>\Omega</math>)</b>	800 W
<b>Input Sensitivity</b>	1.4 V
<b>Input Impedance</b>	47 k $\Omega$
<b>Gain</b>	31 dB
<b>Frequency Response</b>	2 Hz – 100 kHz (+0 dB / –3 dB)
<b>Crosstalk</b>	–119 dB
<b>Total Harmonic Distortion @ 1 W</b>	0.002%
<b>Total Harmonic Distortion @ 200 W</b>	0.001%
<b>Intermodulation Distortion</b>	0.006%
<b>Signal-to-Noise Ratio</b>	119 dB
<b>Damping Factor</b>	900
<b>Power Consumption (Idle)</b>	85 W
<b>Power Consumption (Full Power Standby)</b>	75 W
<b>Power Consumption (Low Power Standby)</b>	1.25 W
<b>Shipping Weight</b>	57 kg / 125 lbs
<b>Dimensions (L x H x D)</b>	48.1 cm x 21.0 cm x 60.9 cm / 18.95" x 8.26" x 24.0"
<b>Fuse (120 V / 240 V)</b>	F 15A H 250V 3AG / F 8A H 250V 3AG