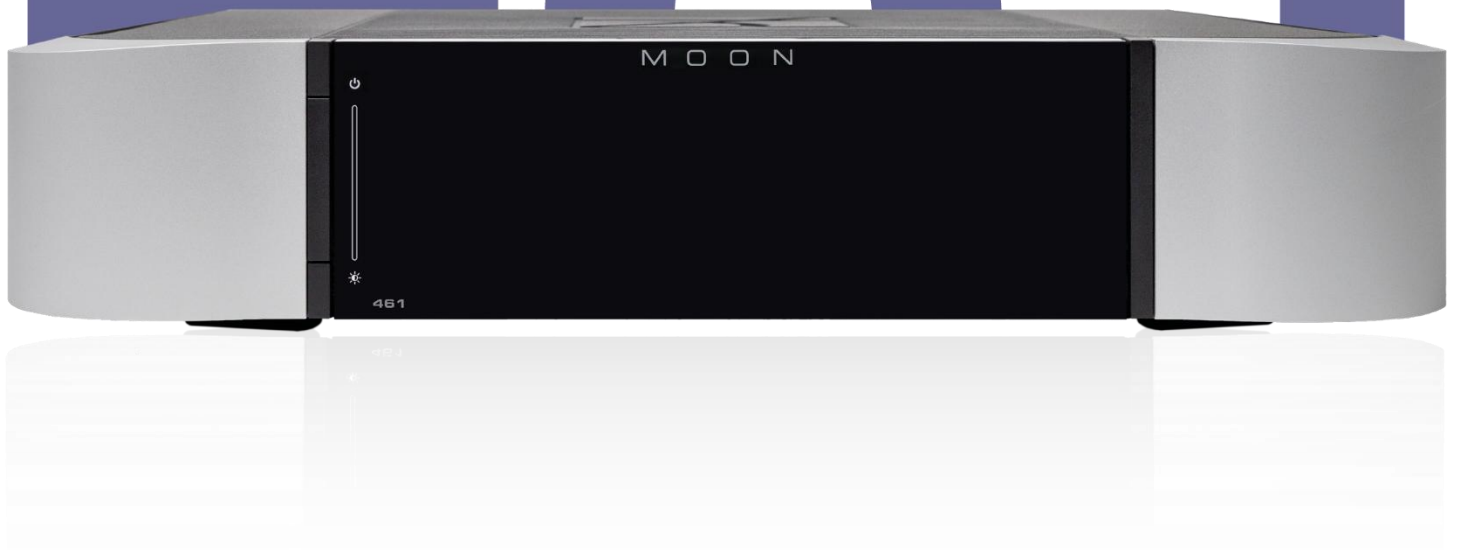


461 Power Amplifier



MOON

by SIMAUDIO

Contents

safety guide	3
Let the music guide you.....	5
Before setting out... ..	6
inspect your MOON 461.....	6
install your MOON 461	6
Explore the MOON 461.....	7
front panel	7
rear panel.....	7
Begin your journey.....	11
Troubleshooting	12
Status Indicator	12
Technical	14
specifications	14

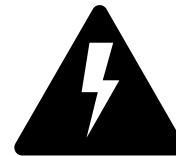
safety guide

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. This product is intended for indoor use only.
10. 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.
11. 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.
12. Only use attachments and accessories specified by the manufacturer.
13. The apparatus is heavy and requires two people to lift it. Exercise caution when maneuvering.
14. 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. 
15. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. 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.
17. 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.

MOON

by SIMAUDIO



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.

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 extension 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.

M O O N

by SIMAUDIO

Let the music guide you

The Compass Collection from MOON is more than a mere line of products. It's not even just a promise of exceptional quality and style. The Compass Collection is an excuse to dream; a conceptual offering to ambitious individuals who deserve the finest home listening experience imaginable.

Envisioned for the music lovers of tomorrow and crafted for the audiophiles of today, the Compass is your way forward, a gateway to the MOON universe—engineered for outstanding performance and lasting reliability, and drawing inspiration from the acclaimed North Collection. The Compass Collection harmonizes modern aesthetics with timeless sophistication. Sleek, elegant lines and minimalist design combine with discreet, intelligent features and an intuitive interface to convey a striking appearance, elevating and refining the listening environment.

Every note and beat resonate with unprecedented clarity to transform casual listeners into passionate connoisseurs.

Let the music guide you on your journey with the Compass Collection.

COMPASS
COLLECTION

Before setting out...

inspect your MOON 461

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 guide is subject to change without notice. The most recent version is available at simaudio.com/guides-downloads.

The MOON 461 includes:

- quick-start guide
- spare fuse
- power cable
- ethernet cable
- warranty information sheet

Note the serial number of your MOON 461 for future reference.

install your MOON 461

Carefully consider the location and environment of your installation.

Set the 461 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 5 cm (2") around the sides and 10 cm (4") above of the unit to enable airflow.

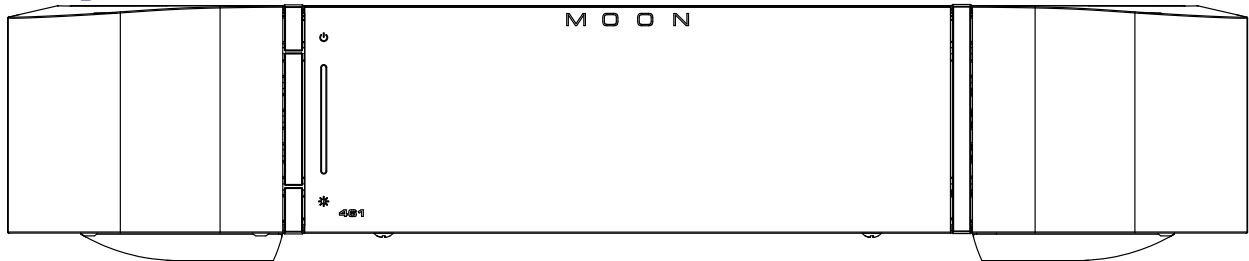
The performance of this device will continue to improve during the first 100 hours of listening. The spirit of this recommendation is to temper expectations and delay your first critical listening session until after all the components in the circuit have stabilized. But that doesn't mean you can't enjoy it from the very first note. It just means that it'll behave most consistently after a few weeks of listening.

M O O N

by SIMAUDIO

Explore the MOON 461

front panel

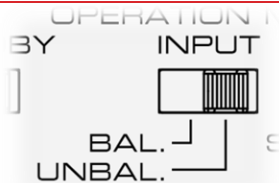
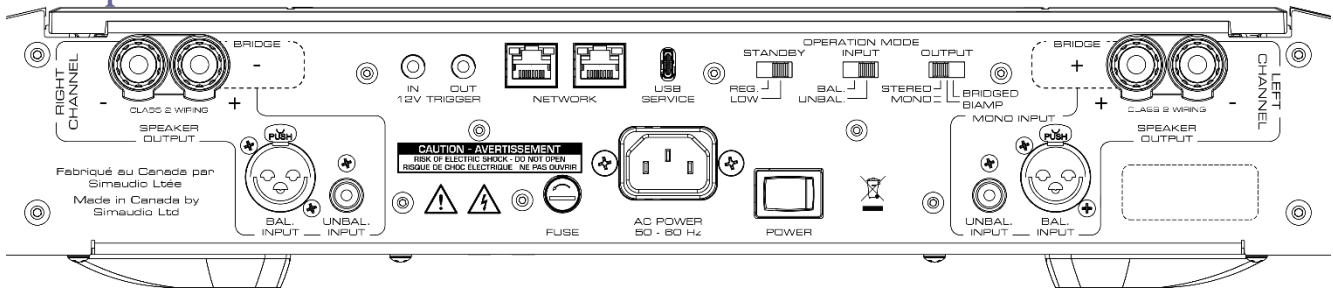


 Standby: toggles the 461 between active and inactive modes when the device is powered on

 Brightness: toggles the status indicator light through five levels of intensity

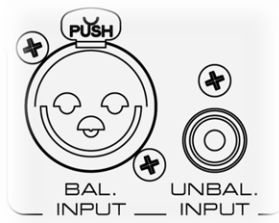
The status indicator is white under normal operating conditions.

rear panel



INPUT

switch for activating either the balanced (BAL.) or the unbalanced (UNBAL.) inputs



BAL. INPUT

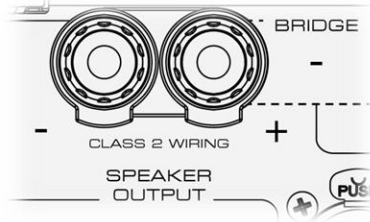
differential (XLR) connection for a balanced preamplifier

UNBAL. INPUT

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

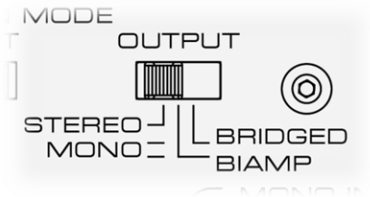
M O O N

by SIMAUDIO



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 or bare wire contacts.



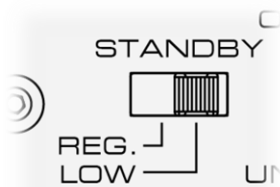
OUTPUT

switch for reconfiguring the amplifier:

- stereophonic output
- bridged monophonic output
- bi-amping monophonic output

Connecting loudspeakers to the SPEAKER OUTPUT posts varies depending on the OUTPUT configuration...

- STEREO: Connect the **red** **[+]** and **black** **[-]** SPEAKER OUTPUT terminals from **each CHANNEL** to the corresponding **red** **[+]** and **black** **[-]** terminals on each loudspeaker.
- MONO: When connecting two mono 46l units, connect each channel from the preamplifier outputs to only the **MONO INPUT** (LEFT CHANNEL) on the power amplifier.
 - BRIDGED
 1. Connect the **red** **[+]** **BRIDGE +** (LEFT CHANNEL) SPEAKER OUTPUT to the **positive** loudspeaker terminal on one loudspeaker.
 2. Connect the **red** **[+]** **BRIDGE -** (RIGHT CHANNEL) SPEAKER OUTPUT to the **negative** loudspeaker terminal on the same loudspeaker.
 - BIAMP
 1. Disconnect any jumper cables or bridges if present between the two pairs of terminals on each loudspeaker.
 2. Connect the **LEFT CHANNEL red** **[+]** and **black** **[-]** SPEAKER OUTPUT terminals to one pair of corresponding terminals on the loudspeaker.
 3. Connect the **RIGHT CHANNEL red** **[+]** and **black** **[-]** SPEAKER OUTPUT terminals to the other pair of corresponding terminals on the same loudspeaker.



STANDBY

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.

MOON

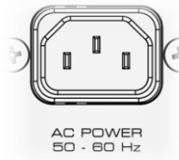
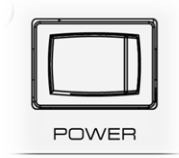
by SIMAUDIO

POWER

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

With the power switch on, the unit may be toggled into and out of Standby using the ⏻ button on the front panel, a remote control, the mobile app, 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.



AC INPUT

for connecting the power cable

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.



12V TRIGGER

mini-jack (TS) connection for coupling a compatible preamplifier to synchronize Standby behaviours across multiple devices without MOONLink support

- Use IN to connect a preamplifier.
- Use OUT to daisy-chain the unit to additional units (eg, when using two units in mono configurations).



USB SERVICE

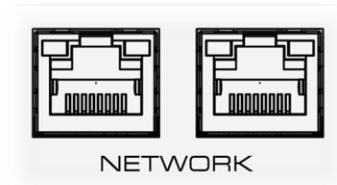
for use only by authorized service technicians



MOON

by SIMAUDIO

NETWORK



network (RJ-45) connections for ethernet cables...

- to connect the device to a network router
- to extend the network to an additional device (eg, NAS device or TV)
- to join a MOONLink Group with compatible MOON products

MOONLink technology makes MOON products more intelligent. Configure the MOONLink group and manage the 461 with the interface on a compatible preamplifier, integrated amplifier, or DAC.

- Update the firmware of the 461 from any device in the MOONLink Group.
- MOONLink Holding the  button on the front panel for two seconds automatically toggles Standby mode on all the devices in the MOONLink Group.

When connecting the 461 to another device via ethernet, ensure that the other device is powered on and connected to the network before powering on the 461.

Begin your journey

Consult the included quick-start guide. Then, follow these steps to connect your 461.

1. Connect the preamp to the corresponding INPUT connectors, and toggle the INPUT switch accordingly.
2. Connect the loudspeakers in one of the three following configurations...
 - a. *Stereophony*
Connect the LEFT and RIGHT CHANNEL red (+) and black (–) SPEAKER OUTPUT terminals to their corresponding left and right loudspeaker terminals, and toggle the OUTPUT switch to STEREO.
 - b. *Bi-Amping Monophony*
Connect each 461 to its corresponding loudspeaker as follows...
 - i. If present, remove the jumper brackets or wires between the two pairs of terminals on the loudspeakers.
 - ii. Connect the LEFT CHANNEL red [+] and black [–] SPEAKER OUTPUT terminals to either pair of corresponding terminals on the loudspeaker.
 - iii. Connect the RIGHT CHANNEL red [+] and black [–] SPEAKER OUTPUT terminals to the other pair of corresponding terminals on the same loudspeaker.
 - iv. Toggle the OUTPUT switch to BIAMP.
 - c. *Bridged Monophony*
 - i. Connect the red [+] BRIDGE + (LEFT CHANNEL) SPEAKER OUTPUT to the positive loudspeaker terminal.
 - ii. Connect the red [+] BRIDGE – (RIGHT CHANNEL) SPEAKER OUTPUT to the negative loudspeaker terminal.
 - iii. Toggle the OUTPUT switch to BRIDGED.
3. Connect the supplied power cable between the AC POWER connector and an electrical outlet.
4. For use with MOONLink (optional), connect the two devices with the ethernet cable, or connect the cable to a network router.
5. Toggle the POWER rocker switch to On [I].
6. Press the  button.
7. To learn more about this product, follow this QR code, or visit our website.



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.

white	solid	normal operation
white	pulsating	powering up
violet	pulsating	firmware update
violet	blinking	firmware update error
red	blinking	temperature protection
orange	blinking	voltage protection
yellow	blinking	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.

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.

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.

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.
 - 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.

Technical

specifications

Output Power per Channel (8 Ω)	150 W
Output Power per Channel (4 Ω)	300 W
Bridged Mono Output Power (8 Ω)	450 W
Input Sensitivity	1 V
Input Impedance	22 k Ω
Gain	31 dB
Frequency Response	2 Hz – 100 kHz (+0 dB / –3 dB)
Crosstalk	–114 dB
Total Harmonic Distortion + Noise (@ 1 W)	0.005%
Total Harmonic Distortion + Noise (@ 150 W)	0.003%
Intermodulation Distortion	0.005%
Signal-to-Noise Ratio	114 dB
Damping Factor	425
Power Consumption (Idle)	35 W
Power Consumption (Regular Standby)	34 W
Power Consumption (Low Standby)	1.25 W
Dimensions (L x H x D)	42.9 cm x 8.7 cm x 36.8 cm 16.9" x 3.5" x 14.5"
Shipping Weight	11 kg / 24 lbs
Fuse (120 V / 240 V)	F 8A H 250V 3AG