

A2100
Digital Amplifier
Installation Manual

SAFETY INSTRUCTIONS



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



ATTENTION: RISQUE DE CHOC ELECTRIQUE NES PAS OUVRIIR



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



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. 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.

Safety Instructions

1. Read these instructions – All the safety and operating instructions should be read before this product is operated.
2. Keep these instructions – The safety and operating instructions should be retained for future reference.
3. Heed all warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow all instructions – All operating and use instructions should be followed.
5. Do not use this apparatus near water – The appliance should not be used near water or moisture – for example, in a wet basement or near a swimming pool, and the like.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacture'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 plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is 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 the plugs, convenience receptacles, and at 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 or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
13. Unplug the apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified 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 has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Use only power supplies listed in the user manual / user instruction.
16. Do not install this equipment in a confined or building-in space such as a book case or similar unit, and remain a well ventilation conditions at open site. The ventilation should not be impeded by covering the ventilation openings with items such as newspaper, table-cloths, curtains etc.
17. **WARNING :** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.
18.  Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.
19.  Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.
20. The mains plug/appliance coupler is used as disconnect device, the disconnect device shall remain readily operable.



CONFORMS TO
UL STD. 60065
CERTIFIED TO
CSA STD. C22.2
No. 60065

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 of 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, or consult the dealer or an experienced radio/TV technician for help.

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.

PRODUCT OVERVIEW

Introduction

The A2100 is a 2-channel digital amplifier designed to be used to boost audio amplification where needed, either as a standalone amplifier, or as an addition to a whole-house distributed audio system in order to provide extra amplifier power in larger rooms or spaces. Its space-saving ½-rack design allows for quick installation and gives flexibility of mixing and matching with other ½-rack products to save valuable equipment rack space.

The powerful 100-watt class D amplifier in the A2100 is combined with features such as 12v trigger control, audio sensing, volume gain adjustment, and a buffered line output that enables even more amplification of the same audio signal when needed.

Product Features

Class D amplifier – The cool running, low-profile, high efficiency design makes the A2100 the perfect choice for even the most space-conscious system designs

100w per channel – A powerful 100 watts per channel are available to provide ample power to even the largest of spaces

Loop Output – A buffered loop output is available for the audio signal, allowing additional amplifiers to be easily driven from the same signal

Trigger in/out – The A2100 can be activated by a 12VDC trigger signal, and can activate additional devices at the same time

Multiple Turn-on modes:

Always On - The A2100 is always active and ready for use

Signal-sensing – The A2100 is in a standby mode when no audio signal is present and will turn on when an audio signal is detected

12v Trigger – Using the 12v trigger allows precise turn on/off when the amplifier is needed, keeping the unit in a power saving standby mode when not in use

Multiple Output modes:

- 8Ω - optimized mode for 8-ohm stereo output
- 4Ω - optimized mode for 4-ohm stereo output
- Bridge – allows the use of the A2100 as a powerful, 8-ohm mono amplifier

Removable speaker connectors – allow for quick, secure installation and accommodate cables of up to 12 ga AWG

Cord Lock – Flip-down cord lock keeps the IEC power cord in its place, preventing accidental disconnection when moving gear in a stack or when pivoting a rack for service

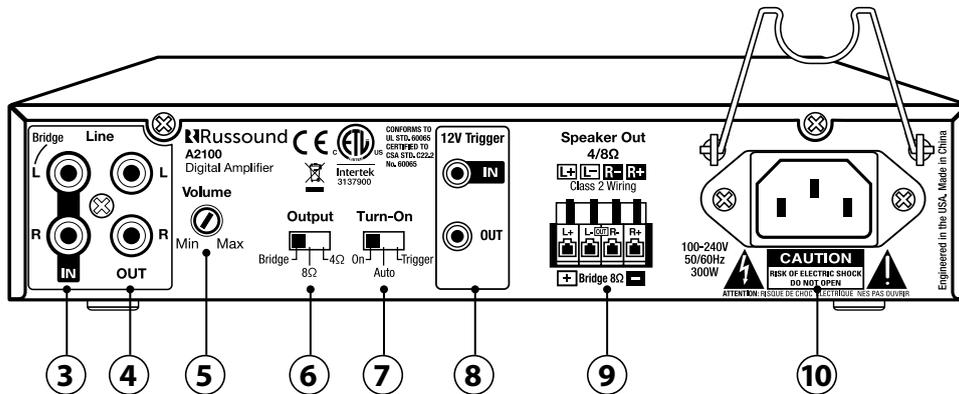
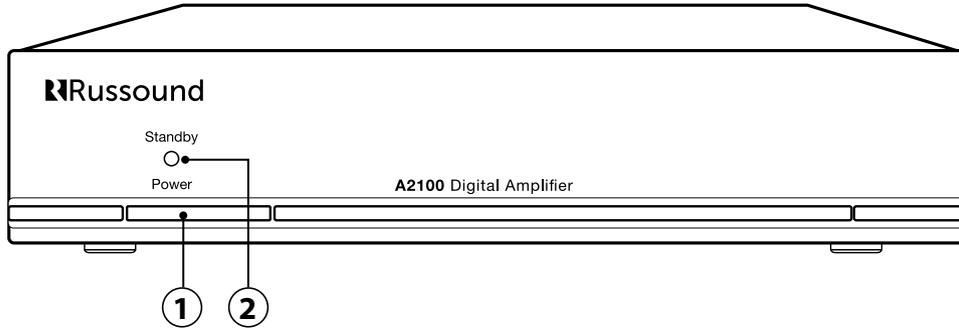
Thermal Protection

All Russound amplifiers are designed with special circuitry to safeguard the amplifier under a thermal overload condition. Thermal protection mode can only engage when the unit has been run at high volume for extended periods of time without adequate ventilation and/or when speaker impedances are below the minimum levels for the amplifier. If this fault occurs, turn off the amplifier, and check that the speaker impedance rating is above the minimum rating. Also check for adequate ventilation around the amplifier and make adjustments if necessary. Once the unit has cooled to safe operating temperatures, the amplifier may be powered back on.

Protection Circuitry

All Russound amplifiers are designed with special circuitry to safeguard the amplifier under a short-circuit condition. A faulty speaker can also cause a short circuit condition. The front panel LED illuminates orange when the amplifier is in short circuit protection. If this fault condition occurs, turn off the amplifier and check speakers for short circuit conditions when appropriate.

FRONT PANEL CONNECTORS



① **Power Button: Power** - the front panel switch will manually switch the power on or off.

② **Power/Standby LED:** On start-up, the first LED lights red to show power on. When the amplifier goes into standby, the LED will light amber. The LED will light green during normal operation.

③ **Line In:** Analog stereo audio input for a single input source. In Bridge Mode, use the "L" audio input for the input signal.

④ **Line Out:** A buffered line out is available to extend the audio signal to additional amplifiers as needed.

⑤ **Volume:** Use this gain switch to attenuate the volume level to meet the room's needs.

⑥ **Output:** The output switch has three positions, Bridge (mono), 8Ω (stereo), 4Ω (stereo). The default setting is 8Ω.

⑦ **Turn-On:** There are three turn on-modes: always-on (On), audio sensing (Auto) and activated by the 12v Trigger (Trigger). The default setting is On

⑧ **12VDC Trigger:** Turns on the A2100 when set to Trigger mode and a 12VDC signal is received. The Trigger Out provides 100mA 12VDC max to drive other 12V triggered devices. When using Trigger mode, the front panel power switch must be ON.

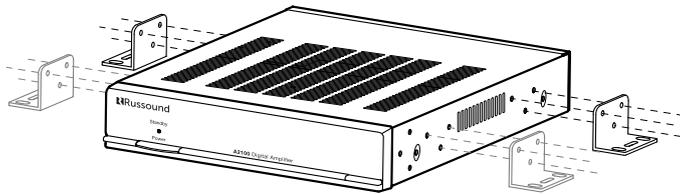
⑨ **Speaker Out:** Connect your loudspeaker(s) here. Up to 12ga AWG wire may be used.

⑩ **AC Input:** Use a 3-prong grounded IEC cord. The locking connector may be engaged to prevent cords from accidentally dislodging in an equipment rack.

The A2100 amplifier can be set on a tabletop or wall-mounted with screws or hook and loop tape. Rack-mounting ears are included to install either one A2100 in a 1U space or two units in a 1U space.

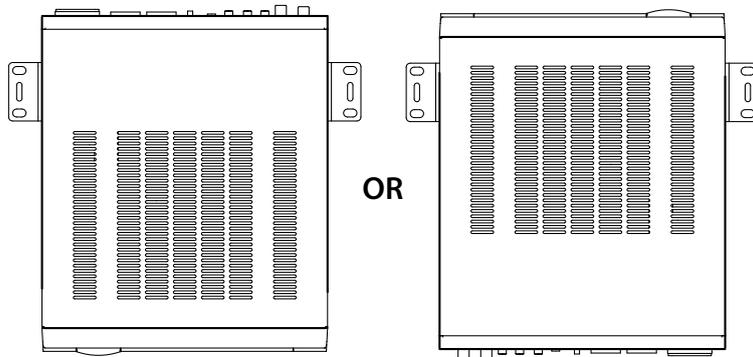
Wall Mounting

The amplifier comes with two wall mounting brackets and attachment screws. There are two attachment locations on each side of the amplifier for more mounting options. Hook and loop tape can be used as well.



Back Panel

Front Panel

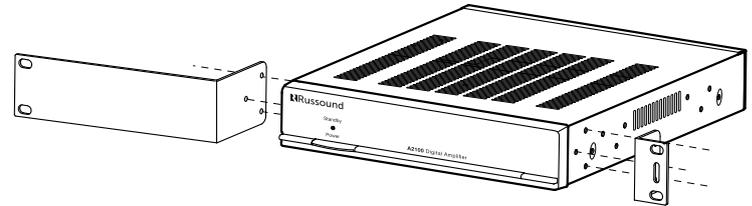


Wall mounting option

Rack Mounting

The rack mounting ears support either one or two amps in a single rack space.

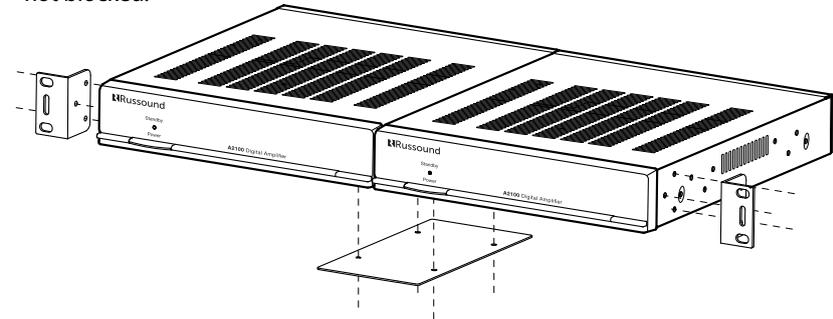
To install one amplifier in a rack space, use the long ear and one of the wall-mount brackets. The unit can be mounted either to the left or right side of the rack space.



Single unit rack mounting option

For two units in one rack space, use the flat plate to support and connect them, and use one wall-mount bracket on each outer side of the units.

When using the two-unit mounting option, the small side ventilation slots on the amps will be next to one another in the middle of the rack space. To avoid overheating situations, make sure the copious top panel ventilation holes are not blocked.



Dual unit rack mounting option

Continuous Output Power: 100W @ 8 Ohms < 0.1% THD+N
 125W @ 4 Ohms < 0.5% THD+N
 225W Bridged @ 8 Ohms < 0.2% THD+N

Minimum Impedance: Stereo mode - 4 ohms
 bridged mode - 8 ohms

Wire Gauge: Up to 12ga AWG

Power Requirements: *North American and European Models:*
 (Autoswitching Power Supply) 100VAC to 240VAC 50/60Hz 2.5A

IEC 320 type connector with 3 terminal
 detachable power cord

Standby Power: ≤0.5 Watts

Dimensions: 8.5" W x 10.5" D x 1.75" H
 (21.59 x 26.67 x 4.45 cm)

Weight: 3.95 lbs. (1.8 kg)

Limited Warranty: Two years

Limited Warranty:

The Russound A2100 Amplifier is guaranteed against all defects in materials and workmanship for two (2) years from the date of purchase. During this period, Russound will replace any defective parts and correct any defect in workmanship without charge for either parts or labor.

For this warranty to apply, the unit must be installed and used according to its written instructions. If service is necessary, it must be performed by Russound. The unit must be returned to Russound at the owner's expense and with prior written permission. Accidental damage and shipping damage are not considered defects, nor is damage resulting from abuse or from servicing by an agency or person not specifically authorized in writing by Russound.

This Warranty does not cover:

- Damage caused by abuse, accident, misuse, negligence, or improper installation or operation
- Power surges and lightning strikes
- Normal wear and maintenance
- Products that have been altered or modified
- Any product whose identifying number, decal, serial number, etc. has been altered, defaced or removed.

Russound sells products only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Any Russound product purchased from an unauthorized dealer or other source, including retailers, mail order sellers and online sellers will not be honored or serviced under existing Russound warranty policy. Any sale of products by an unauthorized source or other manner not authorized by Russound shall void the warranty on the applicable product.

Damage to or destruction of components due to application of excessive power voids the warranty on those parts. In these cases, repairs will be made on the basis of the retail value of the parts and labor. To return for repairs, the unit must be shipped to Russound at the owner's expense, along with a note explaining the nature of service required. Be sure to pack the unit in a corrugated container with at least three (3) inches of resilient material to protect the unit from damage in transit.

Before returning a unit for repair, call Russound at (603) 659-5170 for a Return Authorization number. Write this number on the shipping label and ship to:

Russound
 ATTN: Service
 1 Forbes Road
 Newmarket, NH 03857

Due to continual efforts to improve product quality as new technology and techniques become available, Russound/FMP, Inc. reserves the right to revise system specifications without notice.



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28-1403 08.22.16