



SONANCE<sup>®</sup>

SONAMP<sup>®</sup> 2120T MKII  
STEREO POWER AMPLIFIER

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INSTRUCTION MANUAL

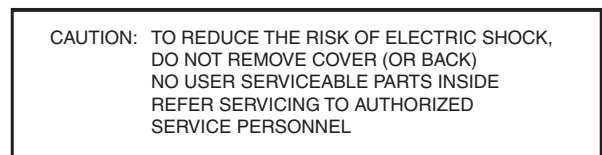


## Important Safety Instructions

1. **Read instructions:** All the safety and operating instructions should be read before the amplifier is operated.
2. **Retain instructions:** The safety and operating instructions should be retained for future reference.
3. **Heed Warnings:** Adhere to all warnings and precautions listed on the amplifier and in the operating instructions.
4. **Follow instructions:** Follow all operating instructions.
5. **Water and Moisture:** The amplifier should never be used next to water — for example, near a bathtub, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. **Carts and Stands:** The amplifier should be used only with a cart or stand that is recommended by the manufacturer.
  - An amplifier and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the amplifier and cart combination to overturn.
7. **CAUTION: To prevent electric shock, do not use the amplifier's polarized plug with an extension cord, receptacle or other outlets unless the blades can be fully inserted to prevent blade exposure.**
8. **Ventilation:** The amplifier should be situated so that its location does not interfere with its proper ventilation. For example, the amplifier should not be situated on a bed, sofa, rug, or similar surface that may impede the flow of air through the ventilation openings.
9. **Heat:** The amplifier should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including other amplifiers) that produce heat.
10. **Power sources:** The amplifier should be connected to a power supply only of the type described in the operating instructions or as marked on the amplifier.
11. **Grounding or Polarization:** Precautions should be taken so that the grounding or polarization means of the amplifier are not defeated.
12. **Power Cord Protection:** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the amplifier.



13. **Cleaning:** To clean the amplifier use only a soft cloth and never use any solvents or abrasives. Fingerprints may be removed with a soft cloth moistened only with a few drops of water.
14. **Non-Use Periods:** The power cord of the amplifier should be unplugged from the outlet when left unused for a long period of time.
15. **Object and Liquid Entry:** Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
16. **Damage Requiring Service:** The amplifier should be serviced by qualified service personnel when:
  - a. The power-supply cord or the plug has been damaged
  - b. Objects have fallen, or liquid has been spilled into the amplifier
  - c. The amplifier has been exposed to rain
  - d. The amplifier does not appear to operate normally or exhibits a marked change in performance
  - e. The amplifier has been dropped, or the enclosure damaged
17. **Servicing:** The user should not attempt to service the amplifier beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

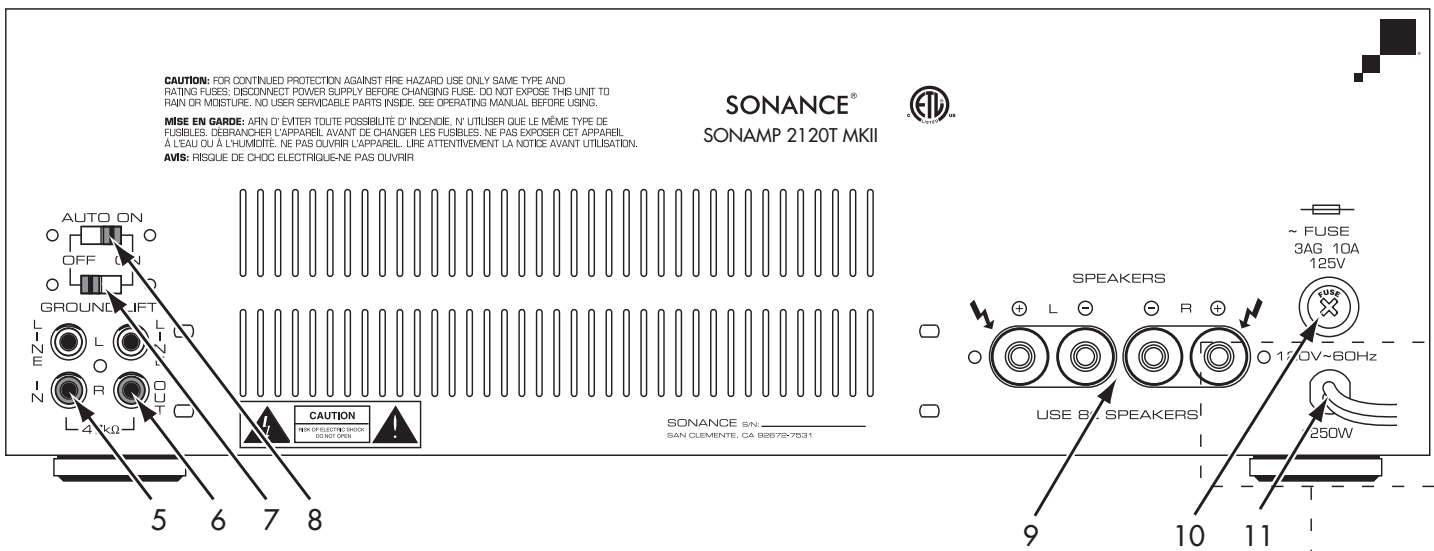
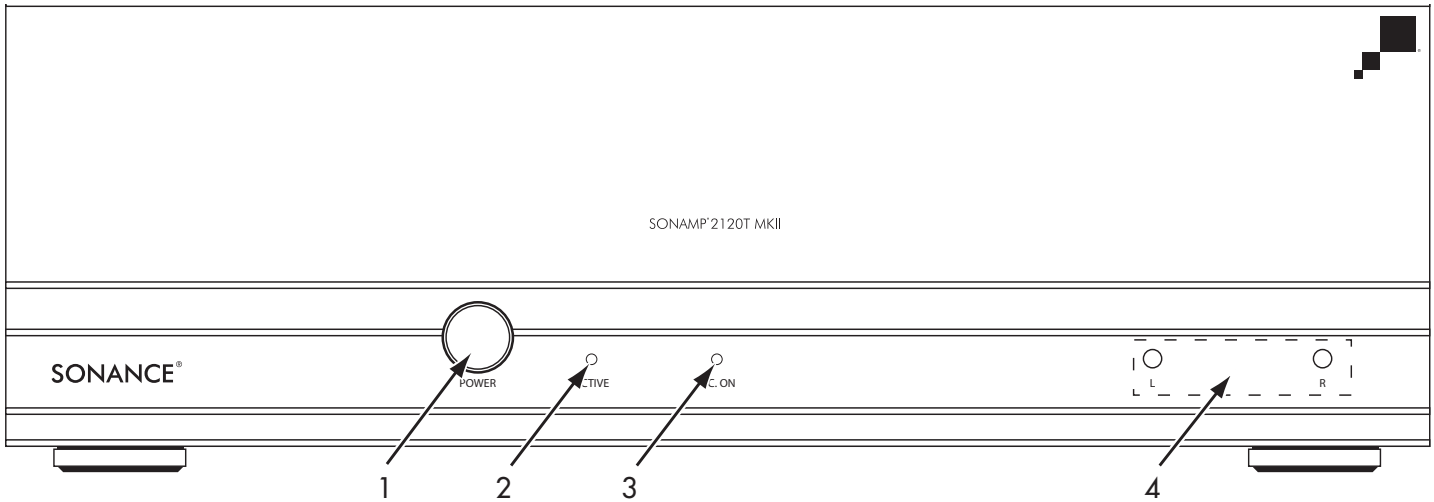


The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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.





**FRONT PANEL**

- 1. POWER Button
- 2. ACTIVE L.E.D.
- 3. AC ON L.E.D.
- 4. Input Level Controls

**REAR PANEL**


- 5. Line Inputs
- 6. Line (Looping) Outputs
- 7. Ground-Lift Switch
- 8. Auto-On Switch
- 9. Speaker Connectors
- 10. AC Fuse
- 11. Power Cord (120V version)
- 12. IEC Power Cord Connector (230V version)

FIGURE 1: 2120T MKII FRONT AND REAR PANELS



## Introduction

Congratulations on your purchase of this precision audio component and thank you for your selection of Sonance®. Your Sonamp has been designed with the latest technology to become the heart of the finest stereo and home theater and music systems. Its high power output is matched by enormous current capacity that can drive multiple pairs of high-quality speakers. A robust toroidal transformer provides reserve power. An ultra-fast discrete Class AB output stage assures flawless audio reproduction. There's even a ground-lift switch to combat hum in rack-mount installations. You have made an excellent choice.

The Sonamp 2120T MKII is ETL listed. 

Please take a few moments now to read these instructions thoroughly so you may fully understand the sophisticated capabilities of your new power amplifier.

NOTE: THIS MANUAL COVERS THE 2120T MKII AND 2120T MKII RMF, BOTH IN 120V AND 230V VERSIONS.

## Box Contents

Your Sonamp 2120T MKII Amplifier box should contain the following items:

- (1) Sonamp 2120T MKII amplifier

## Unpacking

Save the carton and the styrofoam inserts for future safe transport, in case you move or the amplifier ever requires shipping for repair. It is best if you place it into an additional outer "over-carton" before shipment to minimize the chance of theft in shipment.

Before you proceed, find the serial number which is located on the rear panel of the unit and note it here for future reference.

S/N:

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## Placement

- Keep the amplifier out of direct sunlight and away from windows that could let in rain.
- The amplifier should be placed away from heat sources such as hot air ducts or radiators.
- Do not place the amplifier directly on carpet that could interfere with airflow into its bottom vent openings.
- If you place the amplifier on the floor, elevate it up off the carpet.
- If you stack your components, it is better to place the amplifier above or alongside your other components.

When driven hard, the amplifier creates significant heat and can affect components stacked on top of it.

- If you place the amplifier inside a cabinet, allow ample ventilation and at least 2" (51mm) clearance on top and both sides.
- Very sensitive low-level sources might pick up some hum radiated from the amplifier's power supply.

## Rack-Mounting

2120T MKII RMF amplifiers can be mounted in 3 spaces of a standard 19" EIA rack.

- When mounting the 2120T MKII in a rack, set the Ground Lift switch to the ON position. This will isolate the amplifier chassis from the audio circuitry, preventing noise caused by ground loops. See *Ground Lift Switch*, on page 5.
- Very sensitive low-level components might pick up some hum radiated from the 2120T MKII's power supply. If this occurs, move the amplifier to another rack position, away from the other components.

## Protection Circuits

The 2120T MKII has several circuits designed to protect the amplifier from damage. If any are triggered, the ACTIVE LED (see *Figure 9*, on page 6) will flash and you may hear the sound of the protection relay clicking to protect the amplifier. After the fault has been corrected, the amplifier will automatically reset itself for normal operation. But it is advised that you turn off the amp's POWER button (see *Figure 6*, on page 6) while you are troubleshooting for shorted connections or faults with source components.

## Powering the Amplifier

The 120V version of the 2120T MKII has a permanent power cord; the 230V version has an IEC power cord connection. (A power cord is not supplied with the 230V version.)

Plug the amplifier's power cord into a wall socket or an AC outlet on your preamplifier. Make sure your preamp's outlet rating is equal to or greater than the 2120T MKII's power consumption rating (750 watts).

If you choose to use the 2120T MKII's Auto On feature, you must leave the amplifier plugged into an unswitched AC outlet that is always "live" even when the preamp is turned off.

Use only a heavy-duty extension cord, if required, to avoid starving the amplifier of all current necessary for full power operation.

120V Version only:

**CAUTION: To prevent electric shock, match the wide blade of the power plug to the wide slot in the outlet. Fully insert the blades into the slots.**



## Ground Lift Switch

The Sonamp 2120T MKII features a Ground Lift switch (see *Figure 3*) that can eliminate hum caused by ground loops. This often happens when rack-mount adapters (sold separately) are used and the chassis makes contact with the equipment rack. Flipping the Ground Lift switch may eliminate the hum, avoiding the need to insulate the rack with nylon washers.

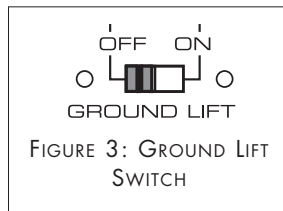


FIGURE 3: GROUND LIFT SWITCH

## Connections

**IMPORTANT:** Before making any signal or speaker connection, make sure the amplifier is turned off and unplugged.

Always use quality high fidelity interconnect cables such as Sonance MediaLinQ® interconnects. If source components are located more than 20 feet (6m) from the amplifier, use the Sonance LS2 and LR2 balanced line-level sender and receiver (sold separately) to avoid signal degradation.

When making connections, make sure there is no strain or tension on input leads or speaker wires that could cause them to pull loose in the future.

### Line Inputs

Connect the source component to the R and L Line Inputs (*Figure 4*). Make sure these are consistent with R and L outputs from your preamplifier or source component.

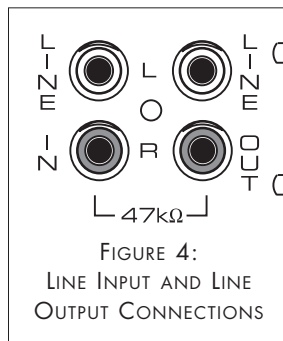


FIGURE 4:  
LINE INPUT AND LINE  
OUTPUT CONNECTIONS

### Line Outputs

The 2120T MKII provides a pair of RCA Line Out jacks (*Figure 4*) which duplicate the input signal. These can link additional power amplifiers to a single source component without using messy Y-cord adapters.

## Speaker Connections

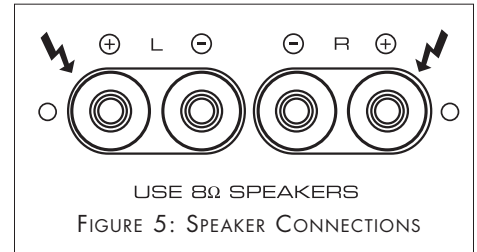
### Use Good Speaker Wire

For best results you should never use thin gauge speaker wire — it will constrict the sound and deteriorate bass response. You may wish to experiment with audiophile-grade speaker cable and interconnects, but be sure to check local codes governing wire that may be installed within walls or ceilings.

Each brand of wire will have a different characteristic sound and some may be more compatible with the sonic “signature” of your various components. Your Sonamp 2120T MKII is stable with any reputable brand of wire or speaker cable.

The Sonamp 2120T MKII features binding post speaker connectors that can accept bare wire and wire terminated in pins or single banana connectors (see *Figure 5*).

NOTE: IF YOU’RE USING SINGLE BANANA CONNECTORS, BE SURE THE AMPLIFIER’S CONNECTOR TERMINALS ARE CLOSED (ROTATED FULLY CLOCKWISE) BEFORE INSERTING THE CONNECTOR.



If you use bare wire, make sure you strip only enough wire (1/2" — 13mm) to fit into the slot in the terminal. Before inserting the wire, twist all strands tightly to prevent strays that could cause a short circuit between the “+” and “-” terminals! Insert wire in the direction of terminal rotation (clockwise) to force the wire around the terminal post to make a secure connection.

### Polarity

It is important to observe correct polarity for proper stereo reproduction. One side of the speaker lead will have some sort of mark, either printing, a raised ridge on the insulation or different color of conductor. This permits you to know which wire you had connected to the “+” and which to the “-” speaker terminals so you can repeat these connections at the power amplifier terminals.

### Connecting Multiple Speakers

The Sonamp® 2120T MKII is stable into low impedances, so it can drive more than one pair of 8-ohm speakers. If you are in doubt about the impedance of your speakers, consult your dealer or Sonance Technical Support.

To connect more than one pair of speakers to the 2120T MKII, you will need to connect the speaker wires from each speaker in parallel. The safest and most efficient way to do this is to use dual-banana plug connectors which are plugged into each other, end-to-end. If you are connecting bare wires from each pair of speakers together, we recommend you make this junction at a point that is not immediately at the speaker terminals. This is because each joined bundle of wires will be too thick to fit into its speaker terminals and you will run the risk of causing a short circuit between the “+” and “-” terminals. We recommend using a Sonance SS6 or SS4 speaker selector to connect multiple pairs of speakers.



## Operating the 2120T MKII

The Sonamp 2120T MKII has an ingenious and sophisticated Auto On turn on/off circuit. Please read these instructions carefully for proper operation.

### Power Switch

Press the Power switch (*Figure 6*) once to the "in" position to turn the amplifier on. Press the switch again to the "out" position to turn it off. Leave the switch in the "in" position when using the Auto On turn on/off feature. (The Auto On feature will automatically switch the amplifier's power on when an audio signal is present at its input jacks (see below).

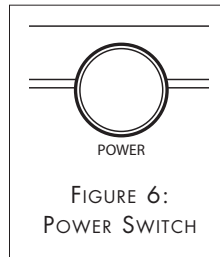


FIGURE 6:  
POWER SWITCH

### Auto-On Switch

When the Auto On switch (*Figure 7*) is in the ON position, any audio signal arriving at the 2120T MKII's left input jack will automatically activate the amp for operation within 1.5 seconds. The green ACTIVE LED on the front panel (see *Figure 2*, on page 3) will illuminate, indicating that the amplifier is operational.

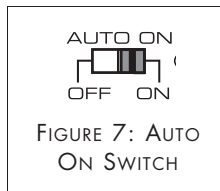


FIGURE 7: AUTO  
ON SWITCH

NOTE: THE AMPLIFIER IS SHIPPED WITH THE AUTO-ON SWITCH IN THE ON POSITION.

The amplifier will remain on for approximately 3 minutes after the audio signal has ceased. This provides ample time to prevent erratic operation from pauses between musical passages or while changing signal sources. With this feature there is no limit to where you can place the 2120T MKII. Here are a few installation possibilities:

- Local room system coupled with a multi-CD changer
- Surround sound front, side, or rear channels
- Multi-room, multi-source control systems

If the Auto-On turn on/off feature is not required, it can be defeated by moving the rear panel AUTO ON switch to its OFF position. Use a small flat-bladed screwdriver to move the recessed switch. Do not apply excessive force. Now the 2120T MKII's front-panel Power switch will function conventionally and the amplifier can be turned ON and OFF from a switched AC outlet on your preamp.

### Level Controls

The 2120T MKII has recessed front-panel Level Controls (see *Figure 8*) that allow adjustment by screwdriver only. This prevents accidental tampering with levels.

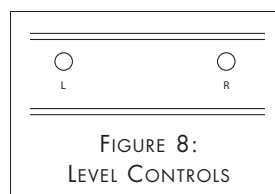


FIGURE 8:  
LEVEL CONTROLS

You can use the Level Controls to adjust the left/right channel balance, to limit the maximum safe gain to protect the speakers or to optimize the signal-to-noise ratios between the source components and amplifier. Many volume controls, on source components, are overly-sensitive near their minimum positions; by reducing the 2120T MKII's input level control settings, you "compel" the source component volume control to operate in its more uniform adjustment range.

In a system that incorporates in-wall speaker volume controls, the 2120T MKII's Level Controls can be used to set a safe maximum level that prevents volume control transformer saturation, distortion or burn-out.

If you're using the Sonamp 2120T MKII with a THX®-certified surround processor, set the Level Controls to their maximum clockwise rotation to take full advantage of the processor's calibrated volume control settings.

### A.C. ON LED

This red LED (*Figure 9*) indicates that the amplifier's AC power cord is plugged into a live AC outlet. If the amp's main AC line fuse ever opens, this LED will go out. To use the Auto-On feature, this LED must remain ON at all times (i.e., with an unswitched outlet). The Power switch has no effect on this LED.

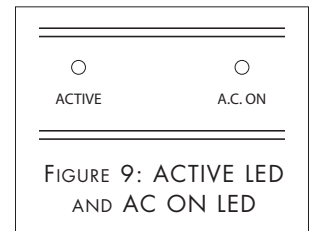


FIGURE 9: ACTIVE LED  
AND AC ON LED

### ACTIVE LED

The primary function of this LED (*Figure 9*) is to show amplifier operational activity. In the Auto-On mode, this LED turns ON at the presence of an audio signal to the input jacks. The first time AC power is applied to the 2120T MKII, the ACTIVE LED will illuminate for about 3 minutes and then extinguish. This is a normal reaction of the Auto-On circuitry the very first time it receives power. Thereafter, the 2120T MKII is ready for Auto-On operation.

Whenever AC power to the 2120T MKII has been interrupted, the ACTIVE LED will again illuminate for about 3 minutes when power is first restored to the amplifier.

NOTE: WHEN THE AUTO ON FEATURE IS DEFEATED, THE ACTIVE LED FUNCTIONS AS A CONVENTIONAL ON/OFF POWER INDICATOR.

### High-Pass Filter

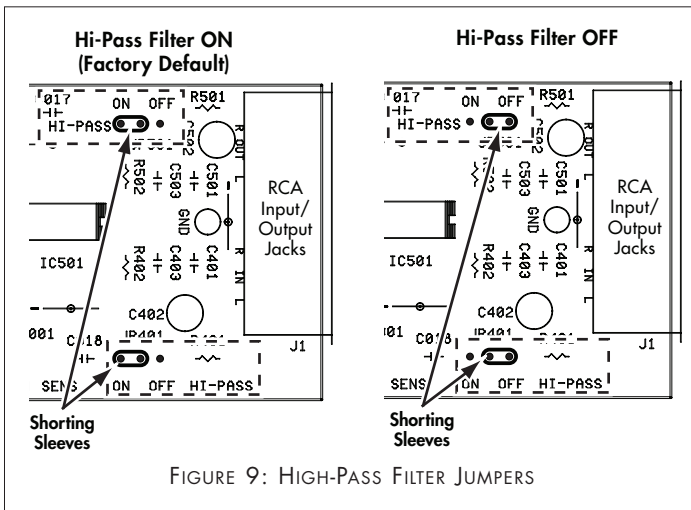
The 2120T MKII has a built-in defeatable high-pass filter with jumpers that are set at the factory to the ON position. The jumpers are located on the circuit board just behind the input/output jacks. The filter settings are determined by the positions of a pair of shorting sleeves on jumper pins.



**IMPORTANT:** Sonance highly recommends that these jumpers remain in the ON position if the amplifier will be used in a system that includes in-wall volume controls for the speakers. The high-pass filters reduce infrasonic energy and help protect autoformer-based volume controls from saturation and overload.

To bypass the high-pass filters, set the jumpers to the OFF position:

1. Unplug the amplifier's power cord from the AC outlet.
2. Remove the amplifier's top cover.
3. As shown in *Figure 9*, remove the shorting sleeves from their factory-set (ON) position on the Hi-Pass Filter jumper pins and replace them in the OFF positions. Make sure you insert the shorting sleeves all the way onto the jumper pins.



4. Replace the amplifier's top cover

## Specifications

Number of Channels:	2 (one stereo pair)
Output Power, Stereo mode:	120 watts RMS/ch @ 8 ohms; 160 watts RMS/ch @ 4 ohms
Dynamic Power at Clipping:	163 watts/ch @ 8 ohms; 242 watts/ch @ 4 ohms
Dynamic Headroom:	+1.33dB @ 8 ohms; +1.79dB @ 4 ohms
Total Harmonic Distortion:	0.05% (20Hz – 20kHz, 8 ohms, 120 WRMS); 0.1% (20Hz – 20kHz, 4 ohms, 160 WRMS) 0.01% (1kHz, 8 ohms, 120 WRMS); 0.02% (1kHz, 4 ohms, 160 WRMS)
I.M. Distortion: (SMPTE 4:1) @ 8 ohms	0.02% @ 1 watt; 0.02% @ 120 watts
Frequency Response: (Hi-Pass Filter OFF)	20Hz – 20kHz, ±0.25dB
Hi-Pass Filter Characteristic:	-1dB @ 57Hz; -3dB @ 27Hz
Signal to Noise Ratio:	-100dB below rated output (w/22kHz A-WTG filter)
Input Sensitivity:	1.1V for 120 watts RMS @ 8 ohms; 1.0V for 100 watts RMS @ 8 ohms
Input Impedance:	47k ohms
Power Consumption	750 watts maximum (full power @ 4 ohms); 6 watts (idle — no signal)
Dimensions (W x H x D):	16¾" x 5⅝" x 12⅝" (425mm x 143mm x 321mm)
RMF Dimensions (W x H x D):	19" x 5¼" x 12⅝" (483mm x 133mm x 321mm)
Rack Space Requirement:	3U
Shipping Weight:	26 lb (11.8 kg)

## LIMITED FIVE (5) YEAR WARRANTY

Sonance warrants to the first end-user purchaser that this Sonance-brand product ("Product"), when purchased from an authorized Sonance Dealer/Distributor, will be free from defective workmanship and materials for the period stated below. Sonance will at its option and expense during the warranty period, either repair the defect or replace the Product with a new or remanufactured Product or a reasonable equivalent.

## EXCLUSIONS

TO THE EXTENT PERMITTED BY LAW, THE WARRANTY SET FORTH ABOVE IS IN LIEU OF, AND EXCLUSIVE OF, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED BY SONANCE. ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, IMPLIED WARRANTY OF FITNESS FOR USE, AND IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY EXCLUDED. No one is authorized to make or modify any warranties on behalf of Sonance.

The warranty stated above is the sole and exclusive remedy and Sonance's performance shall constitute full and final satisfaction of all obligations, liabilities and claims with respect to the Product. IN ANY EVENT, SONANCE SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, ECONOMIC, PROPERTY, BODILY INJURY, OR PERSONAL INJURY DAMAGES ARISING FROM THE PRODUCT, ANY BREACH OF THIS WARRANTY OR OTHERWISE.

This warranty statement gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion of implied warranties or limitations of remedies, so the above exclusions and limitations may not apply. If your state does not allow disclaimer of implied warranties, the duration of such implied warranties is limited to period of Sonance's express warranty.

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Your Product Model and Description: 2120T MKII

Warranty Period for this Product: Five (5) years from the date on the original sales receipt or invoice or other satisfactory proof of purchase.

Additional Limitations and Exclusions from Warranty Coverage: The warranty described above is non-transferable, applies only to the initial installation of the Product, does not include installation of any repaired or replaced Product, does not include damage to allied or associated equipment which may result for any reason from use with this Product, and does not include labor or parts caused by accident, disaster, negligence, improper installation, misuse (e.g. overdriving the amplifier or speaker, excessive heat or cold or humidity, outdoor installation), or from service or repair which has not been authorized by Sonance.

Obtaining Authorized Service: To qualify for the warranty, you must contact your authorized Sonance Dealer/Installer or call Sonance Customer Service at (800) 582-0772 within the warranty period, must obtain a return merchandise number (RMA), and must deliver the Product to Sonance shipping prepaid during the warranty period, together with the original sales receipt, or invoice or other satisfactory proof of purchase.



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