

# *Sophia Electric*

Model 91-01 Mono-block  
300B Tube Amplifiers



**USER'S MANUAL**

## Step by step tube installation guide

Step 1: Find out the serial number for each amplifier (on the back).

Step 2: Both 6SN7 and 300B tubes were marked with a serial number. You match the tube with amplifier by serial number.

Step 3: 300B tube installation: **two big pins go to the two big holes** -- very important, otherwise, it can damage the tube/amplifier.

Step 4: When you face the amplifier, the middle socket is for the 300B tube, the left socket is for the rectifier and the right socket is for the 6SN7 tube.

Step 5: After you install all of the tubes correctly, connect your speaker and interconnect cables.

Step 6: Double check the above steps and if everything is correct, connect the power cord and turn on the power.

Step 7: Enjoy!

Please note the amplifiers may not sound good for the first 48 hours after their arrival due to the movement of the transit.

## **Introduction**

Sophia Electric wishes to thank you for choosing the Sophia Electric model 91-01 300B mono-block tube amplifier. Please read this manual thoroughly before using your new product so that you may gain maximum enjoyment from your music collection.

## **Warning**

To reduce the risk of fire and electric shock, please:

DO NOT expose this appliance to rain or moisture.

Do not operate in the presence of children or pets.

Do not remove the base plate: High Voltage inside and  
THERE ARE NO USER SERVICEABLE PARTS INSIDE.

## **Warranty**

The 91-01 300B mono-block tube amplifiers are warranted against any defect in material and workmanship for a period of 12 months from date of purchase. Within this period, we undertake to supply replacement parts and labor free of charge, provided failure was not occasioned by misuse or negligence. Sophia Electric brand tubes are warranted for 12 months and third party tubes are warranted for 6 months.

## **Service**

If service is required, the amplifiers should be returned to an authorized Sophia Electric dealer or agent. Please remember to insert foams between two amplifiers inside one box to prevent collision damage during shipment.

## **Partnering Equipment**

The amplifier is capable of very high resolution but, as with any audio system, will be limited by the “weakest link” in the chain. We therefore suggest and recommend that you select high quality source equipment (pre-amp, speaker cable, power cord, CD player etc).

## Unpacking

Before your new amplifier left our factory, it was inspected and tested to ensure your satisfaction: In the event of damage during shipping, please note:

THE RIGHT TO A CLAIM AGAINST A PUBLIC CARRIER CAN BE FORFEITED IF THE CARRIER IS NOT NOTIFIED PROMPTLY IN WRITING AND IF THE SHIPPING CARTON AND PACKING MATERIALS ARE NOT AVAILABLE FOR INSPECTION BY THE CARRIER.

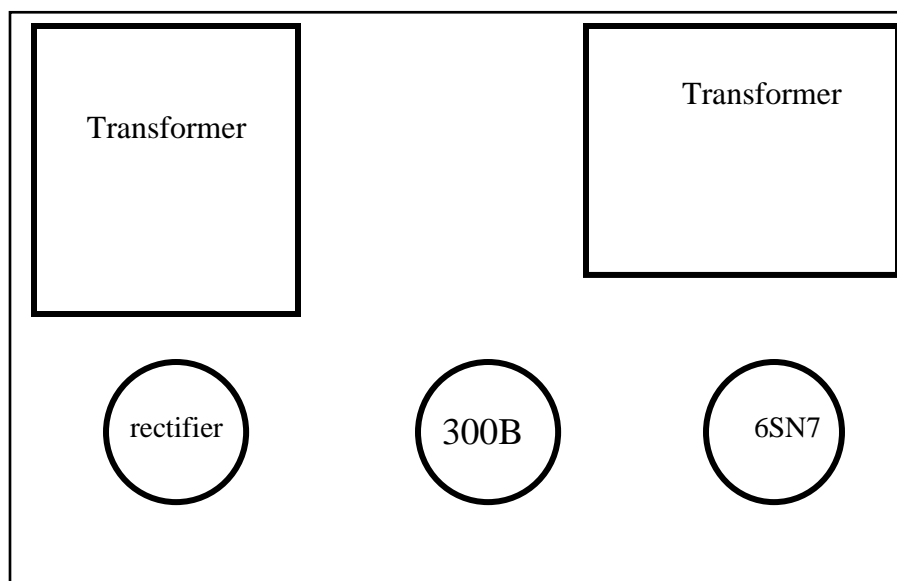
Ensuring that the carton is the correct way up, cut through the security bands and carefully cut through the sealing tape on the outer carton. Carefully cut through the sealing tape on the inner carton. Fold back the carton closure flaps and remove the top polystyrene shell. Prepare a stable surface large enough to set the amplifier down. Stand so that the heavy side of the amplifier is towards you. Have an associate hold the box carton down. Place each hand at each side of the chassis with the fingers securely under the amplifier and lift the amplifier free of the carton.

**WARNING!** The tube amplifier is heavy (25 lbs for each channel). To reduce the possibility of injury, wear a back protection belt. Sophia Electric cannot accept liability for injury resulting from handling of the amplifier.

Save all packing materials as they are intended to reduce the possibility of transportation damage should the need to ship your amplifier arise down the road.

## Tube Installation (See Diagram Below)

Always handle the tubes with clean hands. **NEVER** touch them when an amplifier is turned on or for at least ten minutes after it is turned off. You may suffer severe burns to your fingers and hands.



Following diagram above, first insert the 6SN7 input tube and 5U4G/5Z3PAT rectifier into sockets, then insert the 300B tube into the 300B socket (**make sure the two big pins go to the two big holes**). You should line up the pins of the tube with the holes in the socket (The two big holes are for the two big Filament pins). Press down gently until the tube fits securely into the base. If the tube doesn't fit readily, Do Not use brute force. Take it out and start again. Please make sure you put the tubes in correctly.

## Loudspeaker Connection

First connect your loudspeakers. The 8 ohm connection is the Red binding post (see diagram below). The adjust pot in between red and black binding post is hum control.

**CAUTION:** While it is very unlikely that damage will result if you power your amplifier up without the loudspeakers connected, SOPHIA ELECTRIC RECOMMENDS THAT YOU DO **NOT** POWER THE AMPLIFIER UP UNLESS LOUDSPEAKERS OF THE PROPER IMPEDANCE ARE CONNECTED TO BOTH CHANNELS.

## Connecting the 9101 300B mono-block amplifier into the system

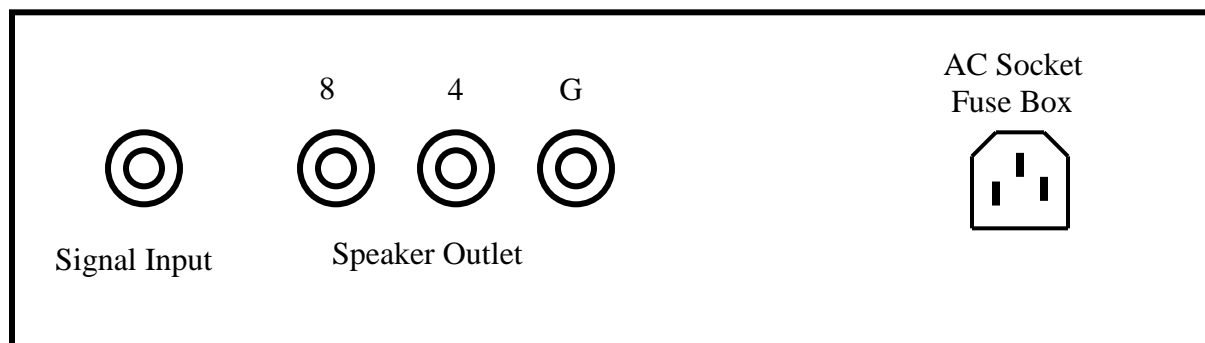
All connections are located on the rear panel of the unit. Looking at the panel, you will see RCA input and a binding post for the ground connection.

Fuse: Only one fuse (3A) is fitted and is accessible from the outside of the tube amplifier.

AC Input: 120V/60Hz (USA) or 235V/50Hz (Europe).

The toggle switch between the transformers: when it set towards the speaker binding posts, it is connected to the ground, otherwise, it is ground lifted.

### *Rear view of 300B Amplifier*



**The IEC AC power** input socket connection is located at the far left in the back. A main fuse is located inside under IEC socket. A pair of Computer grade main cables (Detachable) is included with the 300B mono-block tube amplifier. If you choose to replace the AC main cable with an esoteric type, make sure that it has a third pin for grounding the unit.

**ON/OFF Switch:** Left Side Panel control: On/Off push button power switch.

**Hum Control Pots:** Two hum controls located on the top deck next to the 300B tube, the one in the front is for the 300B tube. User can adjust this main hum control to achieve min hum/noise when changing to another 300B tube. The second hum control right behind the 300B hum pot is for 6SN7 driver tube. User can adjust the pot to achieve min hum/noise when changing to another 6SN7 tube.

## **TROUBLESHOOTING**

If you encounter “Hum” or “Buzzing” in speakers, please set the toggle switch towards the face plate to lift the ground or install a 3-pins to 2-pins adaptors on the power plugs.

## **Using Sophia Electric 300B mono-block tube amplifier**

- 1) Allow the unit about 10-20 minutes to warm up before doing any serious listening. This will allow the circuit to stabilize and components to settle.
- 2) Avoid repeatedly turning the unit on and off in quick succession. This may damage the tubes and some of the power supply capacitors quickly.
- 3) Never disconnect the output wires while your amplifier is turned on (damages to the single ended output transformer may happen).
- 4) Caution: Do not touch tubes by hand once the amplifier is on or within 10 minutes after it is turned off.
- 5) **Do not keep the amplifier on around the clock overnight. Capacitors and tubes have finite lifespan. Recommend to take a short break every 5 hours to let the amplifier cool down to the room temperature before your next session.**
- 6) Do not do silly things with a vacuum tube amplifier, such as take amplifier for car wash. Do not use dish washer to clean tubes.

Please contact to your dealer for any questions you may have. Or Send fax/email to Sophia Electric when dealer advice is not possible. Thank you for using Sophia Electric Products.

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### 300B amplifier hum control adjustment procedure:

1. Set multimeter at AC voltage function
2. Connect multimeter two legs to the speaker binding posts – black to black, red to red. Make sure you still have the speaker cables connect to the amplifier
3. Play one track, you should see the meter reading fluctuates.
4. Turn off the amplifier. Unplug the signal cable.
5. If you need to adjust the hum for 300B tube, wait for 30 seconds to unplug the 6SN7 tube.
6. Before you turn on the amplifier again, please make sure the speaker cable is attached to the amplifier. Turn on the amplifier, check the meter reading. You can use a small screw driver to gently turn the hum pot left or right to see the meter reading change.
7. After you finish the hum adjustment for 300B tube, turn off the amplifier. Wait for 30 seconds, then put the 6SN7 and signal cable back. Remove the multimeter. Make sure the speaker cables are still attached to the amplifiers before you turn on the amplifiers again.
8. If you need to adjust the hum for 6SN7 tube, make sure all of the tubes are installed, then repeat step 6.