

# Spartacus 300

## Mono Power Amplifier

by Thrax Audio

## Operating Manual

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### CAUTION

THE UNIT CONTAINS NO USER SERVICEABLE PARTS. DO NOT REMOVE THE COVERS. LETHAL VOLTAGES ARE PRESENT WITHIN THE CHASSIS.

NEVER OPERATE THE AMPLIFIER WITH THE CHASSIS COVERS REMOVED.  
DO NOT OPERATE THE UNIT IF WET OR NEAR WATER.

THE AMPLIFIER IS FAIRLY HEAVY. BE SURE TO USE PROPER LIFTING TECHNIQUES TO AVOID BACK STRAIN AND INJURY. BE CERTAIN TO INSTALL IT IN A SECURE LOCATION FROM WHICH IT CANNOT FALL OR TIP OVER.

**WARNING:** The tubes become very hot during operation. Take care to keep them out of reach, especially around children and pets, as they become extremely hot and may cause serious injury. Never touch a tube if the glass is broken. The internal structures carry high voltage and could present a serious, possibly lethal shock. If a tube breaks, unplug the amplifier and wait 30 minutes, then remove the tube. Keep flammable objects away from the amplifier.

TIME SPENT FAMILIARIZING YOURSELF WITH THIS MANUAL WILL BE WELL REWARDED.

# CONTENTS

- 1. Important Safety Instructions ..... 3
- 2. Introduction ..... 4
- 3. Specifications ..... 4
- 4. Unpacking and Installation
  - Unpacking ..... 5
  - Installation ..... 6
- 5. Front Panel ..... 6
- 6. Back Panel ..... 7
- 7. Operation ..... 8
- 8. Tube replacement ..... 8

## IMPORTANT SAFETY INSTRUCTIONS

**READ ALL INSTRUCTIONS:** All the safety and operating instructions of your Thrax Audio equipment should be read before power is applied to the equipment.

**RETAIN OWNER'S MANUAL:** These safety and operating instructions should be retained for future reference.

**HEED WARNING:** All warnings on the unit and in the operating instructions should be adhered to.

**FOLLOW INSTRUCTIONS:** All operating and use instructions should be followed.

**CLEANING:** Unplug the unit from the wall outlet and leave for at least 30 min. - make sure the unit is not hot before you start cleaning. Use dry or damp soft cloth to clean the surfaces. Do not use sprays, abrasive or corrosive cleaning products.

**VENTILATION:** Do not block any ventilation openings. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers). The unit should not be installed in a built-in location such as a bookcase or rack unless proper ventilation is provided.

**GROUNDING:** Do not defeat the safety purpose of the grounding-type plug. A grounding-type plug has two blades and a third grounding prong. 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.

**POWER CORD PROTECTION:** Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

**LIGHTNING:** Unplug this apparatus during lightning storms or when unused for long periods of time.

**SERVICING:** Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as if the power-supply cord or plug is damaged, liquid has been spilled inside the appliance or it has been exposed to moisture, the appliance does not operate normally, or has been dropped.

**DO NOT OPEN THE CABINET:** There are no user serviceable components inside this product. Opening the cabinet may present a shock hazard, and any modification to the product will void your warranty.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

## INTRODUCTION

The Spartacus 300 mono power amplifier is the world's finest audio amplifier and an absolutely unique component. Its unusual topology, premium parts, and flexibility make it a pleasure to hear and operate. Spartacus is a two stage shunt regulated Directly Heated Triode power amplifier.

### Features

- 1 XLR balanced input
- 50W pure 300B amplification
- dB/Watt meter display
- 1 pair of Binding Posts

### Inside you get

Tube rectified choke input PSU feeding film reservoir capacitors. Then each stage has its own constant current fed shunt regulator.

The input/driver stage is a single-ended directly heated triode with grounded cathode and fixed bias and loaded with a rather special Japanese transformer.

The output stage is two pairs of directly heated triodes operating independent windings on the same Japanese Permalloy core transformer biased through innovative servo circuitry. The heating of all the filaments is done through voltage controlled current sources.

The case is made from plates of different thickness machined solid aircraft grade aluminium.

## SPECIFICATIONS

- Input
  - 1 balanced XLR connector
- Output ..... up to 50W in 4  $\Omega$  or 8  $\Omega$
- Power supply ..... 115 or 230 V
- Power consumption ..... 380W
- Dimensions ..... 440W x 540D x 300H mm
- Weight ..... 55Kg
- Finish ..... Black or Silver anodized aluminum
- Tube compliment :
  - 1x EML300B input
  - 4x EML300B amplification
  - 1x EML300B shunt regulator

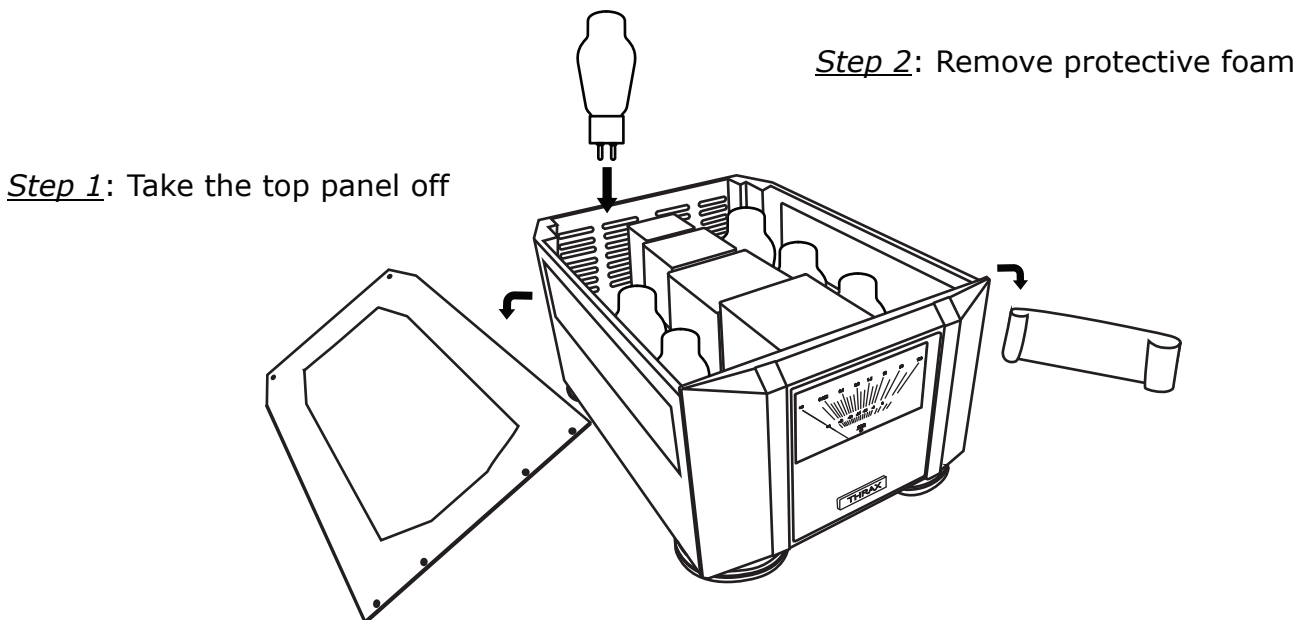
## UNPACKING AND INSTALLATION

### Unpacking

All Thrax Audio shipping boxes have been specially designed to protect their contents and special care has been taken to prevent damage under normal shipping conditions. Mishandling should be evident upon inspection of the shipping container. Carefully remove your new component from its packing and examine it closely for signs of shipping damage. We strongly recommend saving all original packing to protect your component from damage should you wish to store it or ship it at a later date.

Spartacus is shipped with protective polyethylene foam around the tubes. You will need a 2.5mm hex key to remove the top panel and foam - make sure all the tubes are firmly in place before replacing the panel.

Step 3: Make sure tubes are firmly in place



Fit each tube into the matching socket firmly, noting the location of holes in the socket and pins of the tubes, making sure that its pin pattern corresponds to the holes in the tube socket.

When inserting and removing tubes, handle them by their bases, not by their glass bulbs.

**WARNING:** Do not allow anything to touch the tubes in normal operation - they become very hot. Make sure to keep everyone, especially children and pets, away from the tubes which become extremely hot and may cause serious injury. Never touch a tube if the glass is broken. The internal structures carry high voltage and could present a serious, possibly lethal shock. If a tube breaks, unplug the amplifier and wait 30 minutes, then remove the tube. Keep flammable objects away from the amplifier.

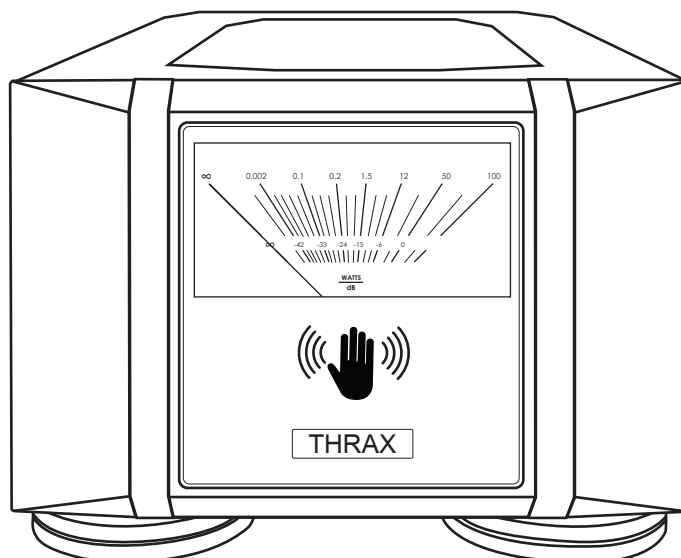
## INSTALLATION

- Provide adequate ventilation. Do not operate on carpet or any other surface that might block air flow. The chassis will become warm in normal use!
- Do not allow the chassis to touch any metal parts, such as the frame of an equipment rack. This might create a parallel ground path that could degrade the sound of your system.
- Input connection is via XLR jacks.
- Connect the input and speaker cables.
- Connect the power supply to the power source indicated on the voltage selector card (visible by the main fuse), either 115 or 230 volts AC. You may select what voltage to use by means of the removable selector card located behind the fuse in the power connectors. Remove the card and reinstall so that the desired voltage may be read; be certain to change the fuse to the correct value. Connect the power supply to the power source indicated on the rear panel. Avoid power conditioners that float the ground pin. ALWAYS connect power cord to component before plugging it into an AC outlet, and make sure that unit's power switch is set to the "OFF" position before making the final connection. For best performance, try to route the power cord away from signal cables.
- Power requirements are approximately 380 watts per channel. Pay close attention to power quality, and be aware that different power cords can alter the sound.

## FRONT PANEL

### "ON/OFF" Sensor

Tap the front panel to switch the unit on and off. See OPERATION SECTION for details.



## BACK PANEL

### Input

A XLR jack is provided for balanced connection to a pre-amplifier.

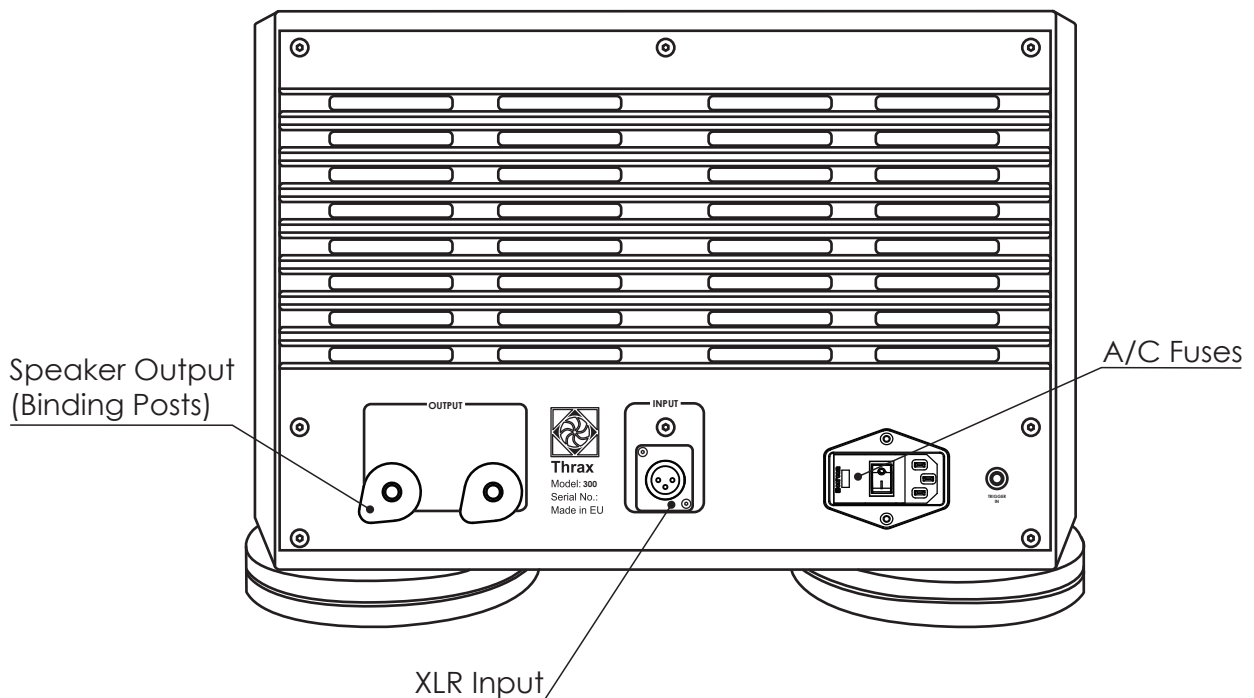
**NOTE:** Do not remove and connect input cables or speaker cables while the amplifier is running, you risk damaging your loudspeakers or amplifier. Do not operate the amplifier without a loudspeaker.

### Speaker output

The speaker cables connect to the Speaker Connectors. Either banana jacks, bare wires or spade plugs can be used. If bare wire is used, be careful that no stray strands get loose and cause a short-circuit. The "Common" or "Ground" lead connects to the black jack. The "Hot" lead goes to the red jacks. Bare wires and spade plugs must be tightened by rotating the ratchet screw clockwise.

### A/C Fuses

There are fuses located in the IEC power connector on the back panel. For 220 volt operation 6.3 amperes "slow blow" fuses are used. For 110 volt operation the fuses should be 10.0 amperes. If power does not come on, contact your authorized service representative or consult the factory for more information.



## OPERATION

For initial power up press the main switch located on the back panel.

Tap the front panel to turn the amplifier on. The meter on the front will light up.

To turn the amplifier off tap the front panel again. If you are not going to use the amplifier for a long period we recommend turning it off using the power switch on the back panel, to save power.

As with all high fidelity products, the sound characteristic changes somewhat as it warms up. Best sound will be achieved after about 15 minutes of operation.

Any time that the Spartacus power amplifier has not been used for a few weeks the sound may be different. This is also normal for high resolution audio equipment. Optimum sound should return after a few hours of operation, preferably with an audio signal.

Note that although your Thrax Audio System has been run for 72 hours at the factory, it will continue to "break in" for approximately 150 hours. Also be aware that many components display the need for a new break in period after being transported in unheated cargo aircraft.

## TIPS

### **Tube replacement**

300B's are some of the sturdiest long-life tubes on the market and would normally last 10 years or more, but in case of tube failure there would be a very noticeable deterioration in sound quality and should be replaced immediately - we strongly advise you to order replacement tubes from your Thrax Audio dealer as soon as possible.



