

Tenor Audio 150 Hps

Owner's manual

Version 1.0



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Safety Instructions

Save these instructions for later use. Follow all instructions and warnings marked on the unit.

Always use with the correct line voltage. Refer to the manufacturer's operating instructions for power requirements. Be advised that different operating voltages may require the use of a different line cord and/or attachment plug. Do not install the unit in an unventilated rack, or directly above heat producing equipment. Observe the maximum ambient operating temperature listed in the product specification. Slots and opening on the case are provided for ventilation; to ensure reliable operation and prevent it from overheating, these openings must not be blocked or covered. Never push objects of any kind through any of the ventilation slots. Never spill a liquid of any kind on the unit. Never attach audio power amplifier outputs directly to any of the unit's connectors. To prevent shock or fire hazard, do not expose the unit to rain or moisture, or operate it where it will be exposed to water or excessive dampness. Do not remove vacuum tubes without unplugging power cord from AC mains. Do not attempt to operate the unit if it has been dropped, damaged, exposed to liquids, or if it exhibits a distinct change in performance indicating the need for service.

Caution!

Only qualified service personnel should open this unit. Removing covers will expose you to hazardous voltages.

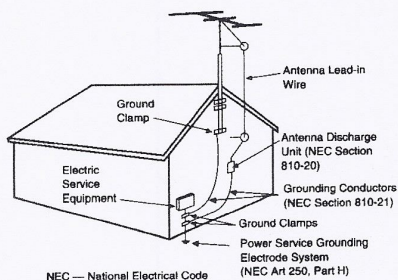
This triangle, which appears on your component, alerts you to the presence of uninsulated dangerous voltage inside the enclosure...voltage that may be sufficient to constitute a risk of shock.



This triangle, which appears on your component, alerts you to important operating and maintenance instructions in this accompanying literature.

Adhere to all warnings on the unit and in the operating instructions. Take precautions not to defeat the grounding or polarization of the unit's power cord. Do not overload wall outlet, extension cords or integral convenience receptacles, as this can result in a risk of fire or electrical shock. Route power supply cords so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to cords at plugs, convenience receptacles, and the point at which they exit from the unit.

The unit should be cleaned only as recommended by the manufacturer.



Outdoor Antenna Grounding

If an outside antenna is connected to the playback system, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See figure.

Note to CATV installers: Article 820-40 of the NEC provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Power Lines: An outside antenna should be located away from power lines.

Introduction

Thank you for purchasing a Tenor Audio product. Please read this manual carefully in order to ensure years of listening pleasure from these carefully designed and crafted amplifiers. Keep this manual for future reference.

Hybrid Series

Hybrid Series amplifiers are based on our novel approach in amplifier design. We aim to maintain the signal's *Harmonic Structural Integrity* (HIS) while being powering even the most difficult loudspeaker loads.

The drive stage of the Hybrid series amplifiers is very similar to our renowned OTL Classic series amplifiers. Only the output stage differs through the use of a uniquely designed trans-impedance solid-state output circuit. As in the OTL, the output stage is exceedingly transparent since it is used as a buffer instead of actually amplifying the signal. The driver and output circuits are complemented with a fully regulated high capacity power supply designed to exceed our requirements.

Dynamics

The dynamic power reserve of all configurations is an impressive 3dB enabling them to momentarily double the output power without any perceived signal degradation.

Stability

With highly effective regulated power supplies, almost complete immunity to AC mains voltage fluctuation, power demand, and loudspeaker load variation is achieved.

Harmonic Structural Integrity

The best technical white paper cannot fully describe how our amplifiers preserve the musical program's *Harmonic Structural Integrity*. This design priority is a step forward in making the reproduction of music as emotionally involving as live music, perhaps the most compelling attribute of any amplifier.

150Hps Stereo

Tenor's 150Hps amplifier is a 150-watt per channel unit designed to drive almost any loudspeaker. The heart of the amplifier is a ten-tube class A stereo gain stage mounted on a fully suspended board. Typically, hybrid amplifiers rely on solid-state gain to complement the tubes whereas Tenor's 100% tube gain stage drives directly the dual trans-impedance output stages. Each channel's output stage uses 8 solid-state devices carefully matched to provide extremely high instantaneous peak power levels on any load.

Unpacking your new amplifier

The 150Hps amplifier weighs 120 pounds or 54 kilos and the center of gravity is located towards the rear of the units.

Two people are required to lift the amplifier out of the crate.

Carefully remove the protective linings.

Inspect the equipment for visible signs of shipping damage.

Make sure that all the accessories are included. See the list below.

Caution: The amplifier **must** be brought to room temperature before operation. If it has been stored or transported in cold temperature, overnight standing out of the box and unplugged is required.

Do not discard the packaging materials.

List of included accessories:

- 1 Power cords
- 2 Hex key
- 1 Owners manual
- 2 Spare mains AC fuses
- 4 Spare 10A 32mm fuses

Installation

The amplifier must be installed on a firm surface allowing adequate ventilation.

Do not attempt to operate the unit on a soft surface (i.e. carpet) where the ventilation openings located on the bottom plate could be partially or totally blocked. Keep the unit away from sources of heat or humidity (moisture). Do not stack.

Bear in mind that parts of the chassis can become hot during operation. Keep out of reach of small children or pets. Do not cover or install the unit in an unventilated enclosure.

A minimum space of 1 inch (2.5 cm) is necessary between the bottom plate of the amplifier and the surface on which the amplifier is installed to allow proper convection.

Operation and Hook-up

To ensure maximum performance, use high quality interconnect and speaker cables with proper termination. All interconnects from source components and speaker cables should be of equal length.

Operation

- **Input:** The line input can be used with an **RCA** or an **XLR** balanced connector.
- **Mute:** The Mute switch is located under the front panel. Press and hold for 1 second for the mute function to engage or disengage.

The Mute function is active (muted) when the front panel's lighted display is red. During the 4 minute Soft-Start cycle, the mute function is active.

The Mute function is inactive (un-muted) when the front panel's lighted display is blue.

- **DC, Shorts & Overload protection status display:**

Display alternates Red/Blue:

The amplifier has detected DC at the output. The display will flash from red to blue and the mute function will also alternate on/off until the amplifier has corrected the fault.

The amplifier is overloaded (clipping). The display will flash from red to blue and the mute function will be activated for a short period until the fault is corrected. To correct the fault, reduce the source volume to minimum.

Display alternates Red/Red: The amplifier has been shorted.

The amplifier is in thermal protection mode Level 1. The display will flash from red to red and the mute function will be activated until the temperature decrease. The mute function will automatically deactivate (un-mute) when the temperature of the unit has returned to normal.

In thermal protection mode Level two, the amplifier will shut down completely. When the temperature turns to normal, the amplifier will automatically power on and proceed with the 4 minute Soft Start.

The amplifier has detected a short in the output stage. Internal output stage fuse replacement is necessary. A small LED pilot light will be visible from the top through the top cover ventilation holes at the rear left or right. Replace fuse only with the proper type and value supplied with the amplifier.

Source Components

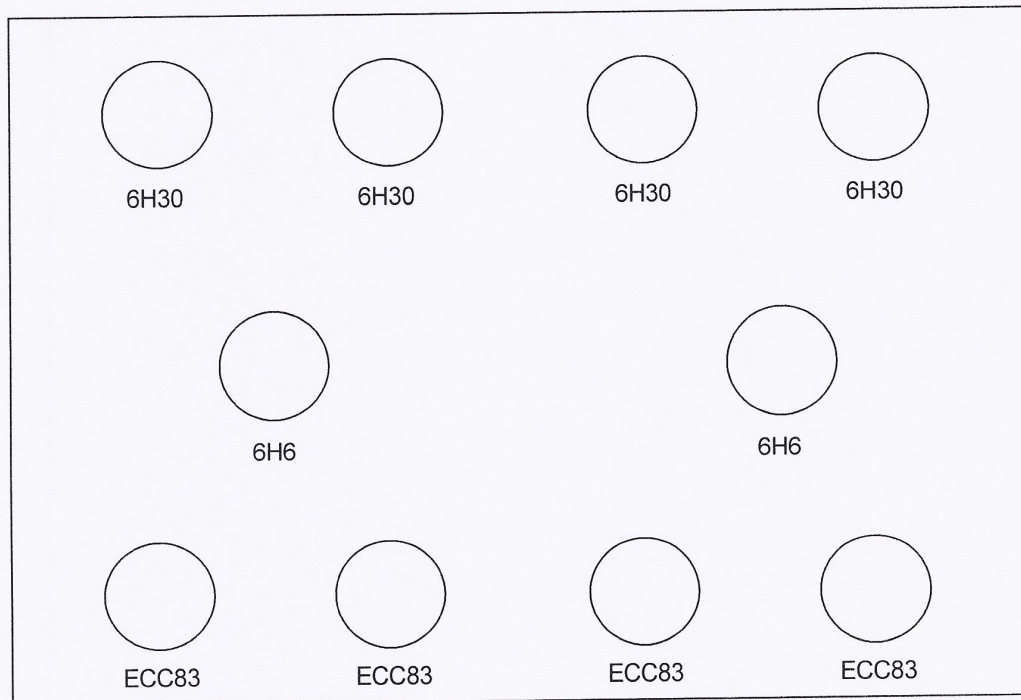
Hook up the left channel output of the individual source component (CD player, Tuner, etc...) to the left channel amplifier input (white RCA connector) and the right channel output of the source device to the corresponding input for the right channel amplifier input (red RCA connector).

Speakers

Connect the speaker making sure to respect polarity: the positive (+) output should be connected to the positive speaker connector (labeled generally "+" or red color connector) and the negative output (-) to the negative connector of the loudspeaker (labeled "-" or white connector).

Notes: Speaker output terminals are "floating" outputs, they must **never** be grounded or in contact with the metal chassis.

Tube Compendium



FRONT

150Hps Features

- 4 minute soft start
- XLR - RCA selector
- Balanced input ground lift switch
- 5 way WBT binding posts
- 70 Amp internal speaker cable
- 1,85 KVA toroidal power transformer
- 8 internal protection fuses
- Solid-State Trans-impedance output stages
- Suspended driver circuit
- Separate high voltage tube transformer
- Multiple gain stages, ECC83 and 6H6P
- Tube driver stage, 6H30
- DC, Shorts & Overload protection status display
- Underside mute switch
- High Gloss hand polished solid cherry wood

150Hps Specifications

Amplifier type	Stereo Power amplifier
Rated power: 2, 4, 8 Ohms	600, 300, 150 W
S/N Ratio	-105dB A-weighted
Power Bandwidth	3 to 200 000 Hz
Harmonic distortion	< 0,5%
Intermodulation distortion	< 0,5%
Dynamic headroom	3dB
Input impedance	33 K Ohms
Output impedance	0.08 Ohms
Input sensitivity	1,7 V Bal. - 1,5 V RCA.
Main power transformer	1,85 KVA
Input	RCA or XLR
Input tube compendium	4 x 12AX7A, 2 x 6H6P, 4 x 6H30P
Soft start / Mute	4 minute
Maximum power consumption	1800 W
Supply voltage	100 to 240VAC factory set
AC mains input	20A IEC detachable power cord
Weight per unit	120 pounds

WARRANTY

THREE YEARS LIMITED WARRANTY

PROOF OF PURCHASE REQUIRED

Tenor Audio warrants the product referred to in this manual to be free from defects in materials or workmanship, for a period of three (3) years from the date of the original purchase. This warranty does not include liability for damage resulting from accident, misuse, abuse, alteration, improper connection or incorrect line voltage. Vacuum tubes are guaranteed for a period of six months after purchase.

Should the unit become defective during the warranty period, Tenor Audio will elect to repair or replace the unit free of charge.

Tenor Audio will NOT accept packages without prior authorization, original wood crates, pre-paid freight and proper insurance.

Please call **514-938-5556** for a return authorization number.

THE USE OF TUBES NOT SUPPLIED BY TENOR AUDIO WILL VOID THE WARRANTY.

ATTEMPTING TO REPAIR OR MODIFY UNIT IS NOT RECOMMENDED AND WILL VOID WARRANTY.

MISSING OR ALTERED SERIAL NUMBERS AUTOMATICALLY VOID WARRANTY.

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