

M A P L E T R E E  
AUDIO DESIGN

***Super Stealth +***  
**Monobloc Power Amplifier**



***Users' Manual***

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Mapletree Audio Design  
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## Introduction

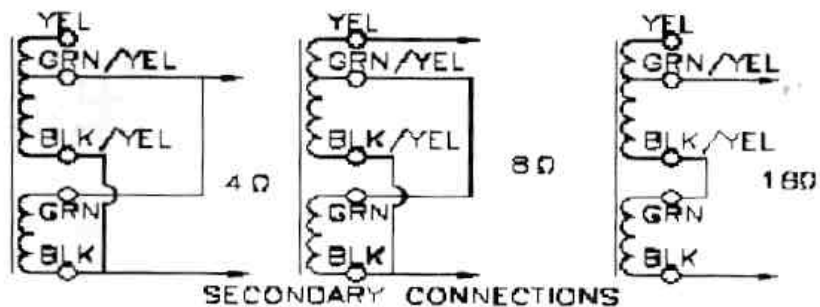
The Mapletree Audio Design *Super Stealth* + Monobloc Vacuum Tube Power Amplifier provides 30 W of clean output power within a compact chassis and offers a number of desirable features:

- ? ? The exclusive use of high quality new old stock (NOS) and current production tubes that can be obtained at modest cost from many suppliers.
- ? ? Class AB Ultra-Linear push-pull beam power tetrodes delivering 30 Watts output power at low distortion.
- ? ? Wide frequency response: 20 Hz – 20 kHz -1 dB at full power output.
- ? ? Input level control and high sensitivity of 0.7 V permit use without a line preamp if desired.
- ? ? Self biased output tubes—no adjustments required.
- ? ? The exclusive use of *Nichicon* polypropylene film signal capacitors and *Nichicon Muse* high performance electrolytic cathode bypass capacitors.

## Adjustments

**Level control** – The sensitivity of the *Super Stealth* + is 0.7 V to produce full power output. For some high-output preamps, it may be advantageous to reduce the input level in order to shift the preamp volume control nearer the mid-position for normal listening. The *Super Stealth* + can also be used without a preamp, directly from a source (e.g. CD player) using the level controls for volume and balance adjustment.

**Speaker impedance** – The standard wiring is for an 8 Ohm loudspeaker. If 4 or 16 Ohm outputs are required, the wiring will need to be changed under the chassis. The connection diagram below shows the connections to be made.



## Specifications

Tube complement: 12SJ7/12SJ7GT, 12SC7, 2 x EL34 matched pair

Rectifier: solid state with ultra high-speed silicon diodes

Output configuration: Class AB<sub>1</sub> ultra-linear push-pull with self bias (EL34 matched pair recommended)

Driver circuit topology: Mullard type with pentode voltage amplifier (12SJ7) and cathode-coupled phase inverter (12SN7)

Rated power output (8 $\Omega$ ): 30 W

Frequency response at 1 W output: 20 Hz–20 kHz –0.5 dB

Gain: 27 dB (22.2) or 0.7 V input for 30 W output

Input resistance: 100 k $\Omega$

Output resistance: < 1 $\Omega$

Noise: < 0.7 mV (87 dB below rated output)

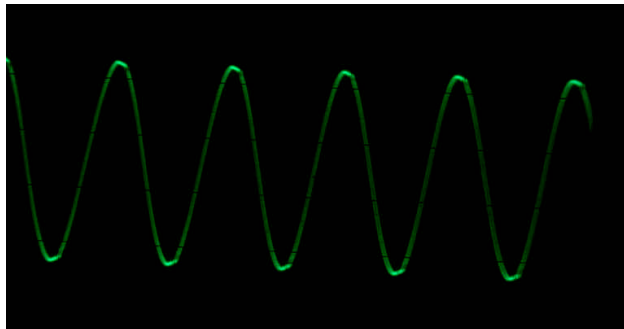
Dimensions: 6" W x 11" D x 6" H overall

Weight: 15 lb

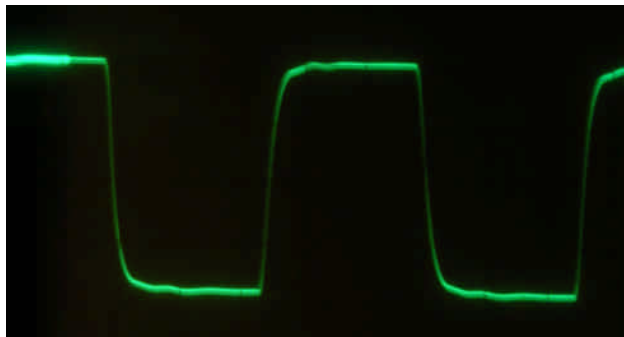
Power consumption: 100 W, 120-125 VAC 50/60 Hz

Fuse: 3 A fast blow type rated at 250 V

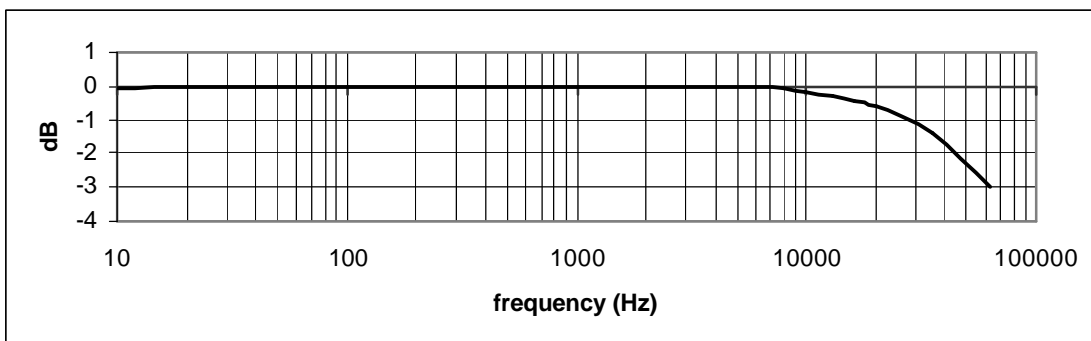
1 kHz sinewave at 32 W output  
into 8 $\Omega$  load (16 V rms)



10 kHz square wave at 10 V p-p  
output into 8 $\Omega$  load



Frequency response at 1 W  
output into 8 $\Omega$

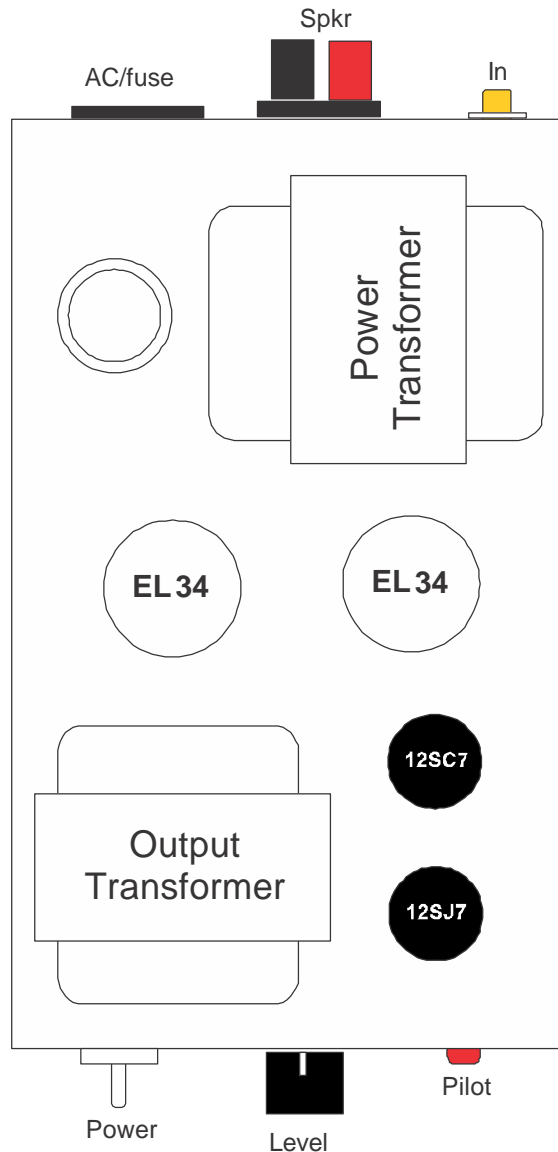




## Tube substitutions

Matched pairs of currently made EL34s are easily obtained at moderate cost. The Russian-made EL34s supplied are an excellent sounding, high-reliability design. However, users may wish to substitute NOS (new old stock) versions from a variety of manufacturers made over the past 50 years. NOS EL34s should be matched (dc) within 5%.

The 12SJ7 is a pentode developed for audio and low frequency RF circuits and exhibits very low noise. It rivals the EF86 in most respects. It is also available in glass as the 12SJ7GT. The 12SC7 is electrically equivalent to a 12SL7GT but with a common cathode shared by the two triodes. It is especially well suited to the phase splitter role in the *Super Stealth* +. There is no substitute for this tube nor is there a glass version.



## **Warranty**

Your Mapletree product is warranted against failure due to materials, components, and workmanship for 2 years from the date of shipment. This warranty is not transferable without agreement from Mapletree Audio Design. Tubes are warranted against failure for 90 days. This warranty is not inclusive of shipping costs.

## **Care of your Amplifier**

Heat is the enemy of the components in your amplifier, particularly the capacitors. Please ensure that there is adequate space for air to circulate over the top of the amplifier. Heat rises, so it is not advisable to place heat sensitive components on a shelf directly above a tube amplifier.

The painted surfaces of your amplifier are finished in baked lacquer. The finish hardens with age due to heat and becomes quite scratch resistant. However, hardness does not prevent chipping of the surface. It is possible to touch up small chips with spray lacquer applied with a fine brush so a drop of paint fills in the chip. Consult Mapletree Audio Design for the automotive paint color for your unit.

Do not attempt to clean the painted surface or labels of your unit with any liquid other than water applied with a slightly damp cloth. Dust is best removed using a soft 1" paintbrush.