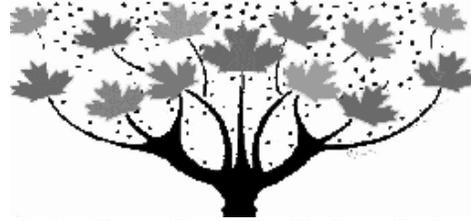


M A P L E T R E E



A U D I O D E S I G N

Super Stealth +
Monobloc Power Amplifier



Users' Manual

Rev. Mar 25, 2019

Mapletree Audio Design
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Introduction

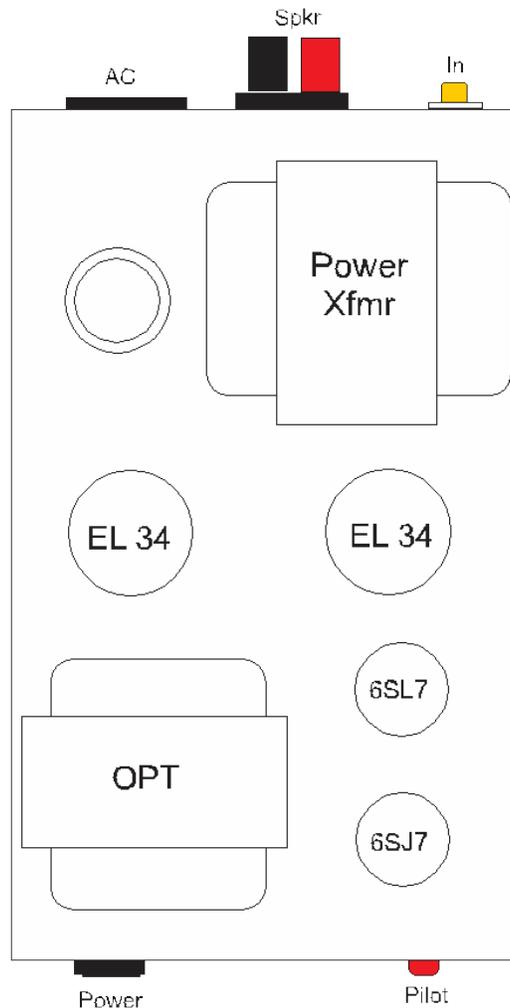
The Mapletree Audio Design *Super Stealth* + Monobloc Vacuum Tube Power Amplifier provides 30 W of clean output power within a compact chassis. It offers a number of desirable features:

- ◆ 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.
- ◆ 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.

Powering Up

Please read this instruction manual thoroughly before powering up your *Super Stealth* + amplifiers for the first time. The location of the tubes is shown below. When installing tubes, locate the key on the central spigot and make sure it matches with the indent on the tube socket. Push the tube into the socket with a slight rocking motion to ensure it seats properly. Removal is also easier if the tube is rocked slightly as it is pulled out. Don't over-do the rocking as it can cause the spigot to break off. The EL34 output tubes are installed as matched pairs as indicated on the boxes supplied with your amplifier. Matched quads are not required for two monoblocs.

With the tubes installed, connect the IEC power cord to the AC input receptacle on the rear of the chassis. A proper sized fuse (3 A/250 V fast blow type) has been installed in the ac socket drawer. Plug the cord into an ac outlet rated for at least 200 W (110-125 VAC, 50-60 Hz). The ac power switch is on the front panel. The pilot light indicates the AC power is on. You will see the heaters light up, particularly in the EL34 tubes. It takes approximately 60 sec for the plate voltage to settle to the operational level and stabilize.



The *Super Stealth* + is designed to run the EL34 output tubes in self biasing mode (cathode bias), so no bias adjustments are required when changing tubes or powering up for the first time. The combined screen and plate current is around 58 mA per tube with a plate voltage of around 380 V. This results in a total dissipation of 21 W, well within the specifications of the EL34.

Input/Output connections

The input RCA jack is located on the rear apron of the chassis. The input resistance is 100 k Ω .

Binding posts for connection to a speaker system are located on the rear apron of the chassis and are appropriately labeled. Speaker interconnect wires can be terminated as bare wire, spade lugs, or banana plugs. The latter are most convenient, especially if different speaker systems are to be connected from time to time. The output speaker impedance is wired for 8 Ohms but can be re-wired easily if required.

Tube substitution

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 6SJ7 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 6SJ7GT. The 6SL7GT supplied is a currently manufactured type but NOS versions are available.

Specifications

Tube complement: 6SJ7/6SJ7GT, 6SL7, 2 x EL34 matched pair

Rectifier: solid state with ultra high-speed silicon diodes

Output configuration: Class AB₁ ultra-linear push-pull with self bias (EL34 matched pair recommended)

Driver circuit topology: Mullard type with pentode voltage amplifier (6SJ7) and cathode-coupled phase inverter (6SL7)

Rated power output (8Ω): 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 kΩ

Output resistance: < 1Ω

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

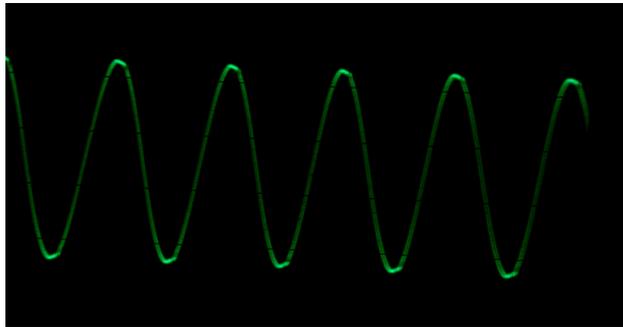
Dimensions: 8" W x 12" D x 6" H overall

Weight: 15 lb

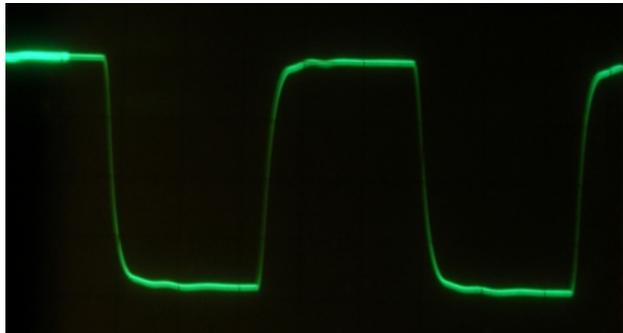
Power consumption: 100 W, 120-125 VAC 50/60 Hz

Fuse: 3 A fast blow type rated at 250 V

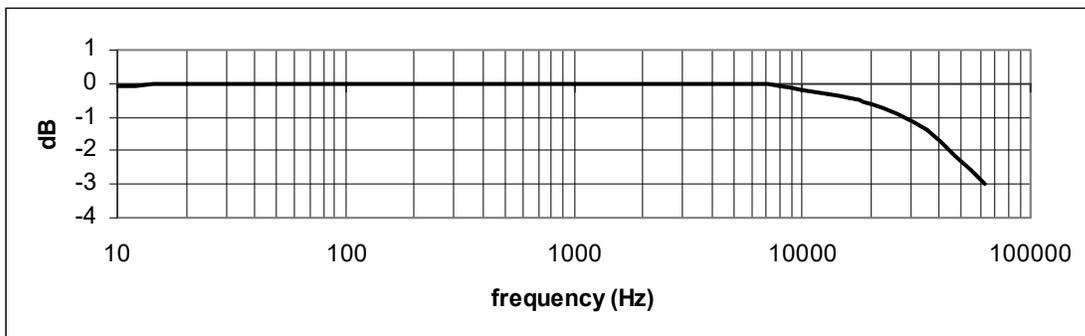
1 kHz sinewave at 32 W output
into 8Ω load (16 V rms)



10 kHz square wave at 10 V p-p
output into 8Ω load

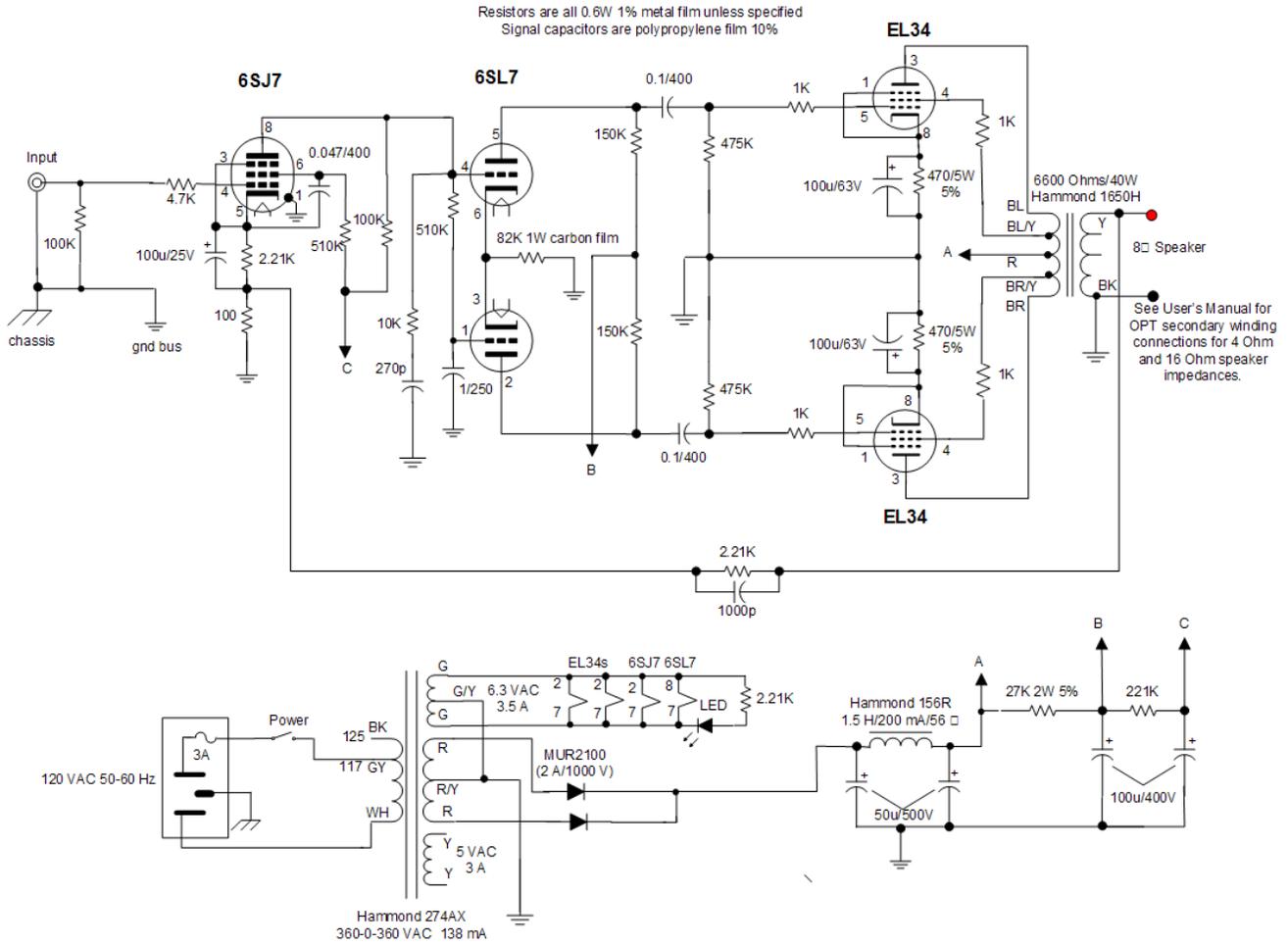


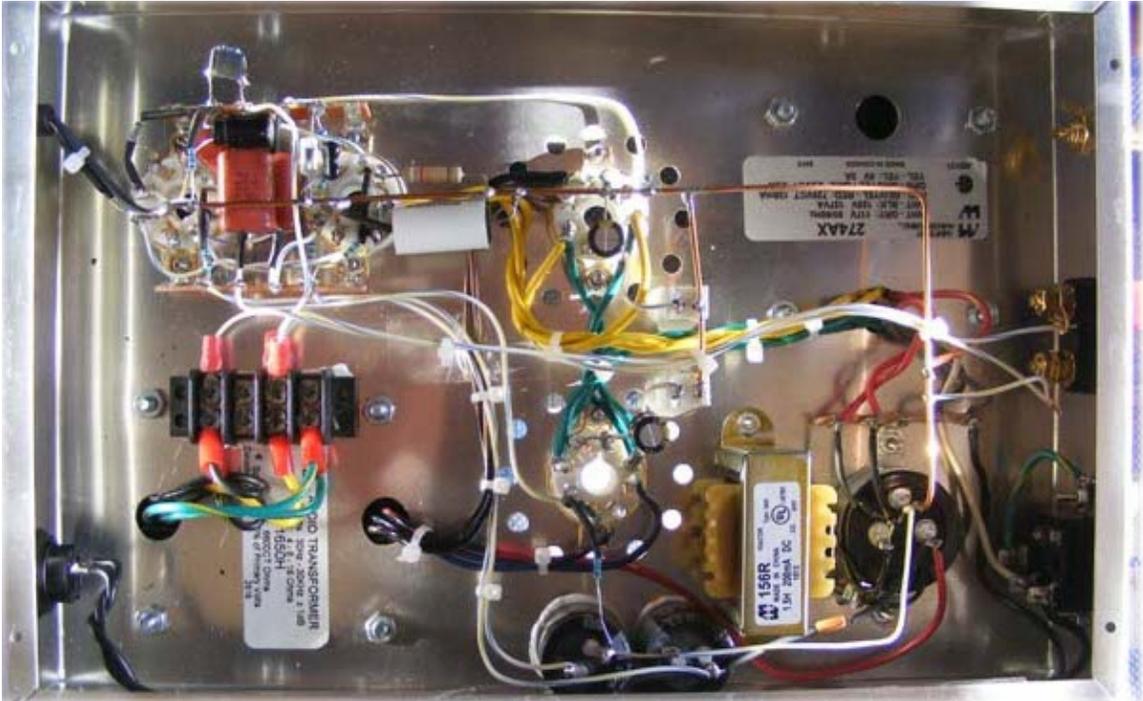
Frequency response at 1 W
output into 8Ω



Mapletree Audio Design *Super Stealth* + Monobloc Power Amplifier

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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. 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.