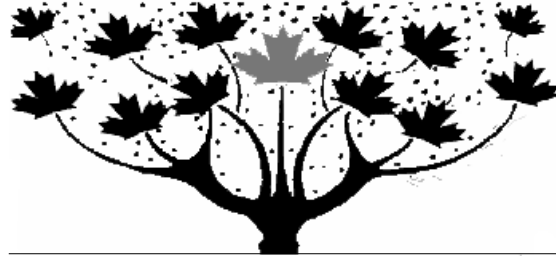
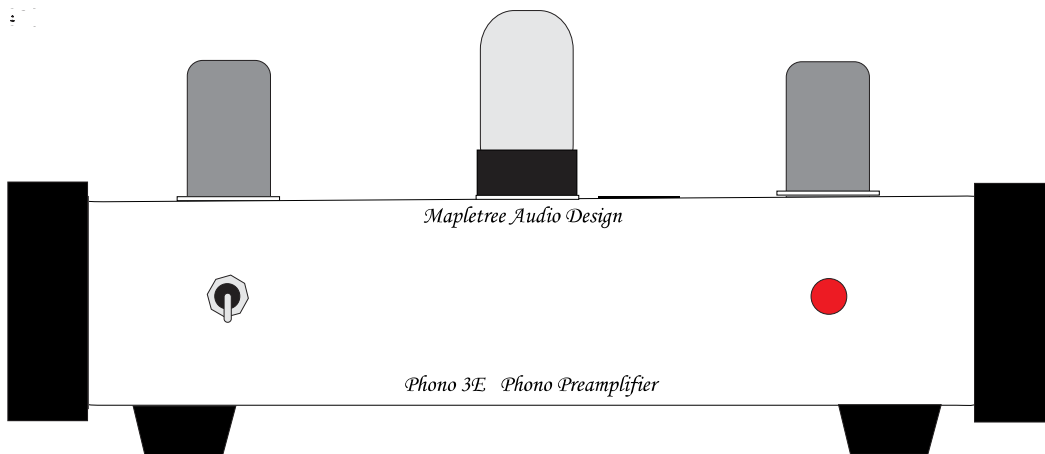


M A P L E T R E E



A U D I O D E S I G N

Phono 3E Phono Preampfier



User's Manual

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Mapletree Audio Design
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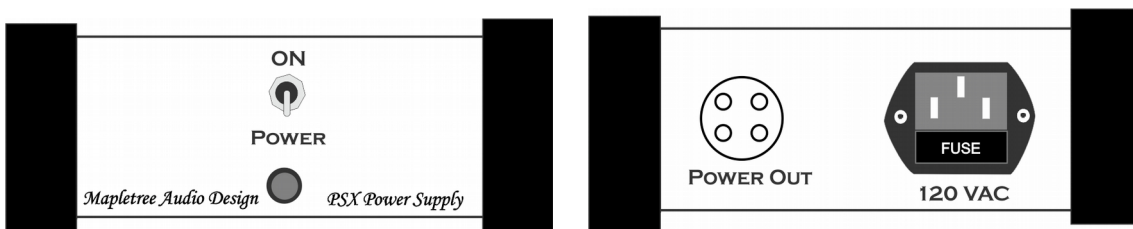
Introduction

The Mapletree Audio Design *Phono 3E Phono Preamplifier* is the companion phono preamplifier to the *Line 2* family of line preamplifiers. The features of the *Phono 3E* include:

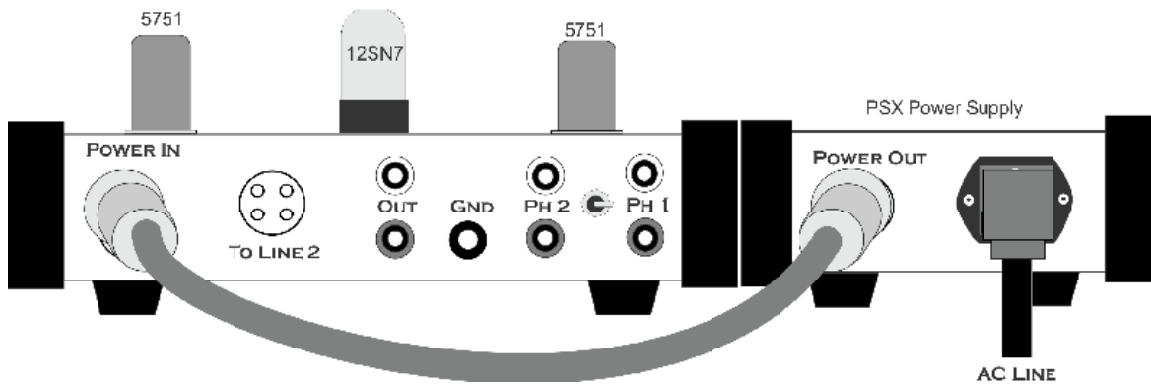
- ◆ Compact chassis layout with separate *PSX* power supply, or designed to share the *Line 2* power supply (*PS 2D*).
- ◆ Low output impedance (<2.5K Ω).
- ◆ RIAA equalization within 0.5 dB, 20 Hz – 20000 Hz.
- ◆ Use of polypropylene film signal coupling capacitors.
- ◆ 40 dB gain suitable for all MM cartridges when used in conjunction with a line preamp with at least 10 dB gain.
- ◆ Selector switch for two separate phono inputs.

Power Supply Connections

For operation with a separate line preamp other than the *Line 2* family, a headphone amplifier or an integrated amplifier, the *Phono 3E* can be supplied with the *PSX* power supply, which provides high voltage (B+) and DC heater voltage (A+) for the preamp. The physical separation of amplification and power supply units eliminates induced hum originating from power supply circuitry and components. The *PSX* provides 12 VDC at 0.6 A for the tube heaters and 200 VDC at 15 mA for the B+ plate voltage. A power interconnect cable provides power from the *PSX* to the *Phono 3E* chassis (“Power In” jack). The power switch on the *Phono 3E* should remain in the ON position when using the *PSX* power supply.

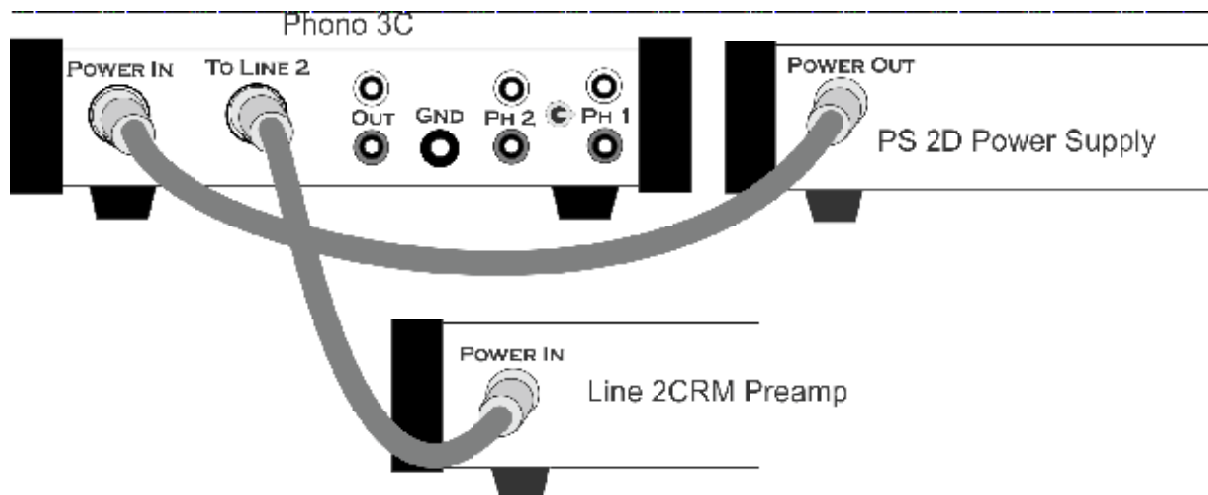


PSX Power Supply



Phono 3E connection to PSX Power Supply

For use with a *Line 2CRM/PS 2D* line preamp/power supply, a power interconnect cable is connected from the *Phono 3E* to the *PS 2D* power supply and a separate power interconnect cable is connected from the power supply to the *Line 2CRM* preamp power input jack. The connections are shown below. When using the *Phono 3E*, the power switch on the front panel should be turned ON; otherwise, it should be turned OFF.



Phono 3E connection to PS 2D Power Supply

The *PSX* and *PS 2D* power supply chassis are connected to the AC line ground but are otherwise isolated from the preamp chassis, which is connected to the signal ground. This eliminates the possibility of ground loops between the two chassis, through the signal interconnect shield and the AC line ground circuit, which can produce hum.

CAUTION: Do not operate a power supply when it is not connected to a preamp. Damage to components may result from operating the power supply with no load.

Once the interconnecting power cable(s) are securely attached (use of the locking rings is recommended) between the power supply and the preamp(s), and the line cord is plugged in, the power supply AC power switch may be turned on.

The pilot lamps on the power supply and the *Phono 3E* chassis indicate that the power supply is on and the preamp is active. It takes about 30 seconds for the tubes to reach operating temperature ready for use. During operation, it is normal for the power supply chassis to become quite warm to the touch.

The *PSX* and *Line 2D* power supplies are protected by 20mm, 1 A, 250 V fast-acting fuses that can be accessed by removing the fuse drawer from the AC receptacle after disconnecting the AC line cord. Under normal conditions, it should not be necessary to replace the fuse. If power fails to come on, you can check the fuse and replace with a spare if necessary. A spare fuse is also located within the fuse drawer. If the fuse blows a second time, you should not try to operate the unit. Contact Mapletree Audio Design for information regarding service.

Input/Output Connections

RCA jacks are provided for two stereo phono inputs, selectable using the toggle switch located between them, and one stereo output. The same ground binding post is used for both inputs. Left channel jacks (white) are uppermost.

Tubes

The vacuum tubes supplied are new or new-old stock (NOS) and have been pre-tested. A burn-in period of several hours may be needed to achieve the best sonic performance. Tube life should be thousands of hours. Aging tubes may result in a reduced gain in one or both channels or an increase in noise levels. Infrequently, a heater may burn out which is indicated by total loss of sound. Replacement tubes can be obtained from several suppliers in the U. S. and Canada.

Some listeners enjoy trying different brands and variants of tubes. The highly regarded 12SX7GT is equivalent to the 12SN7GT.

The choice of driver tubes is largely up to the owner, based on experience with the sonic character of the brand and type variant. Lacking such direction, it is recommended that the listener try currently manufactured tubes such as Russian and Slovakian 12AX7, ECC83, and 5751. The 12AY7, which is a low noise version with slightly less gain, is

also recommended. All these types are also available as NOS but at significantly higher prices.

Warranty

Mapletree Audio Design warrants the materials and workmanship (parts and labor) for a period of 2 years to the original purchaser. Tubes are warranted for 90 days. Electrolytic capacitors are heat sensitive with lifetimes that vary with usage and are not covered by the warranty. Warranty service does not include shipping costs.

Phono 3E Specifications

RIAA equalization: 20 Hz–20 kHz ± 0.5 dB (typically ± 0.3 dB)

Gain: 40 dB ± 0.5 dB with 470K load (connected to *Line 2CRM*)

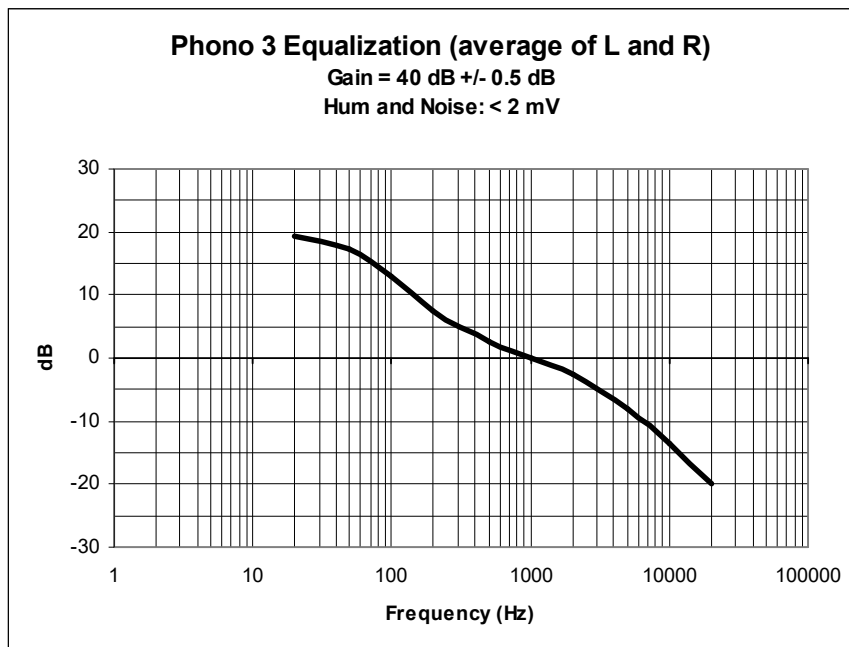
Output impedance (1 kHz): 2.5 k Ω

Input impedance: 47 k Ω for both inputs

Hum and noise at output: less than 2 mV rms

Phase: inverting

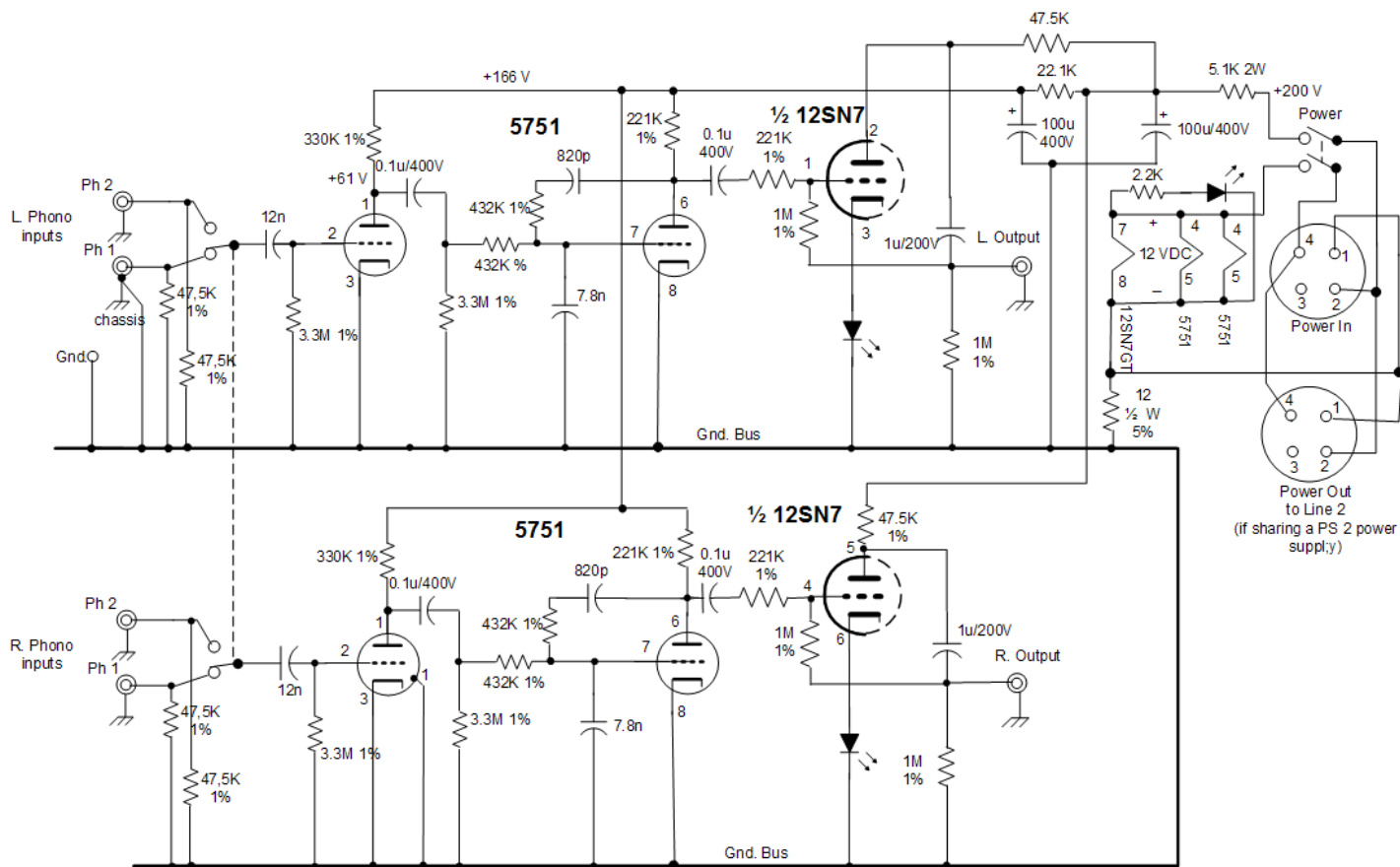
Power requirements: 30 W (12 VDC@0.6 A; 200 VDC@10 mA)



Mapletree Audio Design Phono 3E Preamplifier

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Mapletree Audio Design Preamplifier Power Supply PSX

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