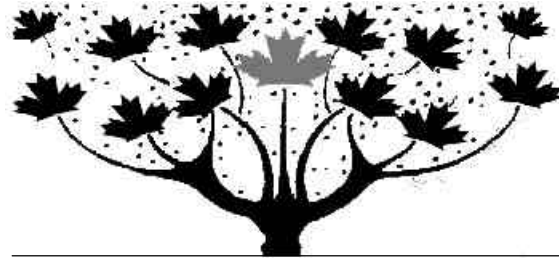
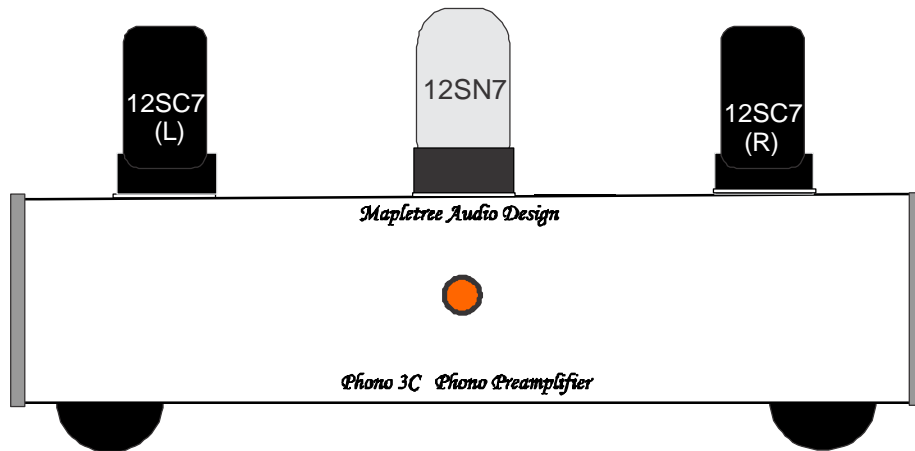


M A P L E T R E E



A U D I O   D E S I G N

## ***Phono 3C Phono Preampfier***



## **User's Manual**

Revised June 22/15

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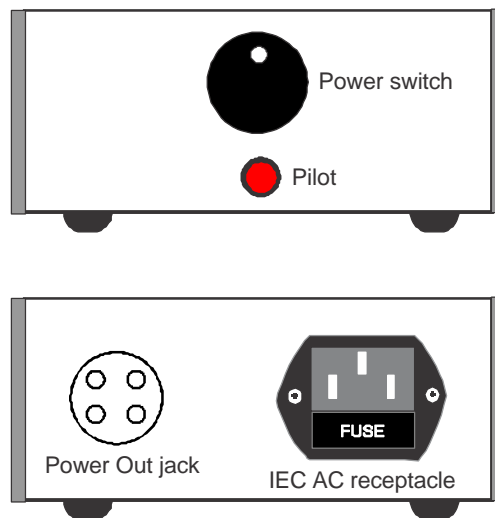
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## Introduction

The Mapletree Audio Design *Phono 3C Phono Preamplifier* is part of the modular series of components that includes the *Line 2C* line preamp, the *Ultra 4C* phono/line preamp, the *LR 1* line router, and the *PS 2C* and *PSX* power supplies. The features of the *Phono 3C* include:

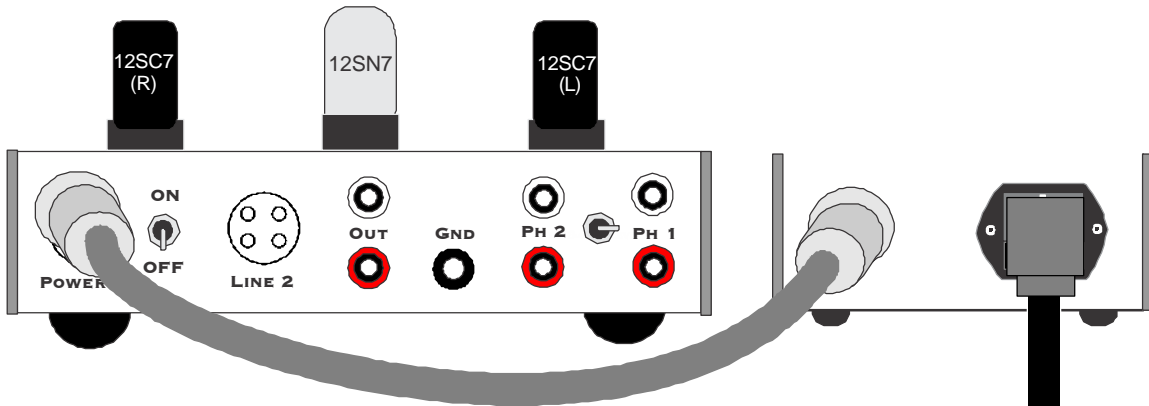
- ? ? Compact chassis layout and separate power supply for low noise.
- ? ? Exclusive use of New Old Stock (NOS) 12SN7 and 12SC7 octal tubes, known for low distortion and musicality.
- ? ? Low output impedance (<2.5K $\Omega$  ).
- ? ? RIAA equalization within 0.5 dB, 20 Hz – 20000 Hz.
- ? ? Use of polypropylene 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.

## PSX Power Supply Connections



For operation with a separate line preamp, headphone amplifier or integrated amplifier, the *Phono 3C* is supplied with the *PSX* power supply, which provides high voltage (B+)

and 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 3C* chassis (“Power In” jack) as shown below.



The power supply chassis is connected to the AC line ground but is 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.

**Note:** The power output jack labeled “Line2” on the rear panel of the *Phono 3C* is used only when sharing a *PS 2C* power supply with a *Line 2C* preamp. Separate user instructions are provided for this operation, which are not needed if you are using the *PSX* power supply.

**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.

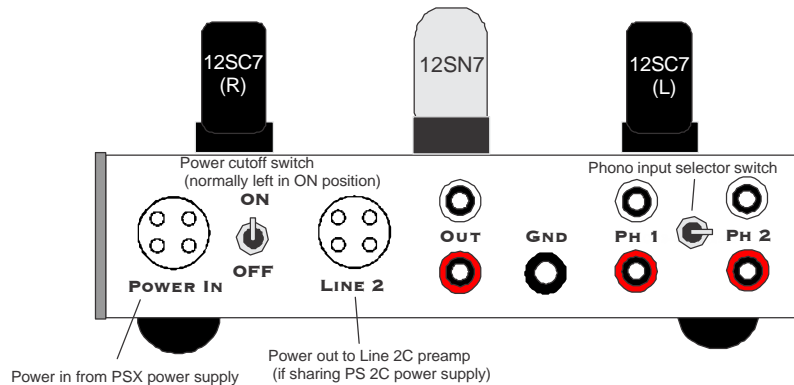
Once the interconnecting power cable is securely attached (use of the locking rings is recommended) between the *PSX* power supply and *Phono 3C* and the line cord is plugged in, the *PSX* ac power switch may be turned on.

A separate power switch is located on the rear panel of the *Phono 3C*, between the two power jacks. The *Phono 3C* can be powered off with this switch, which disables both the plate and heater voltages for the *Phono 3C* but maintains the power feed to the *Line 2* (if applicable). When using the *PSX* power supply, it is recommended that the *Phono 3C* power switch be left permanently in the “On” position.

The pilot lamp on the front of the *Phono 3C* chassis indicates that 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* power supply is protected by a 20mm, 1 A, 250 V fast-acting fuse 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-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.

### 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 3C 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 2B*)

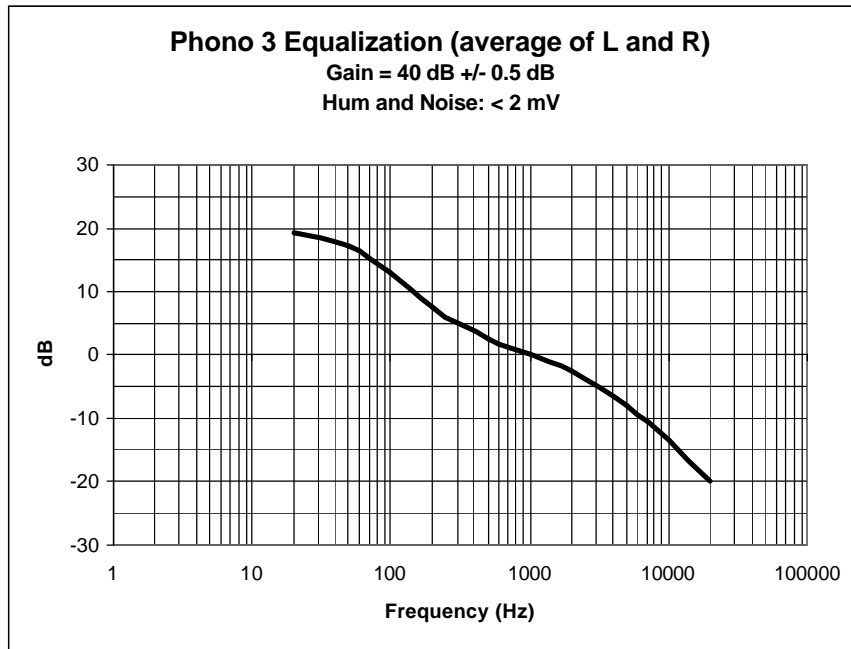
**Output impedance (1 kHz):** 2.5 k?

**Input impedance:** 47 k? For both inputs

**Hum and noise at output:** less than 2 mV rms

**Phase:** inverting

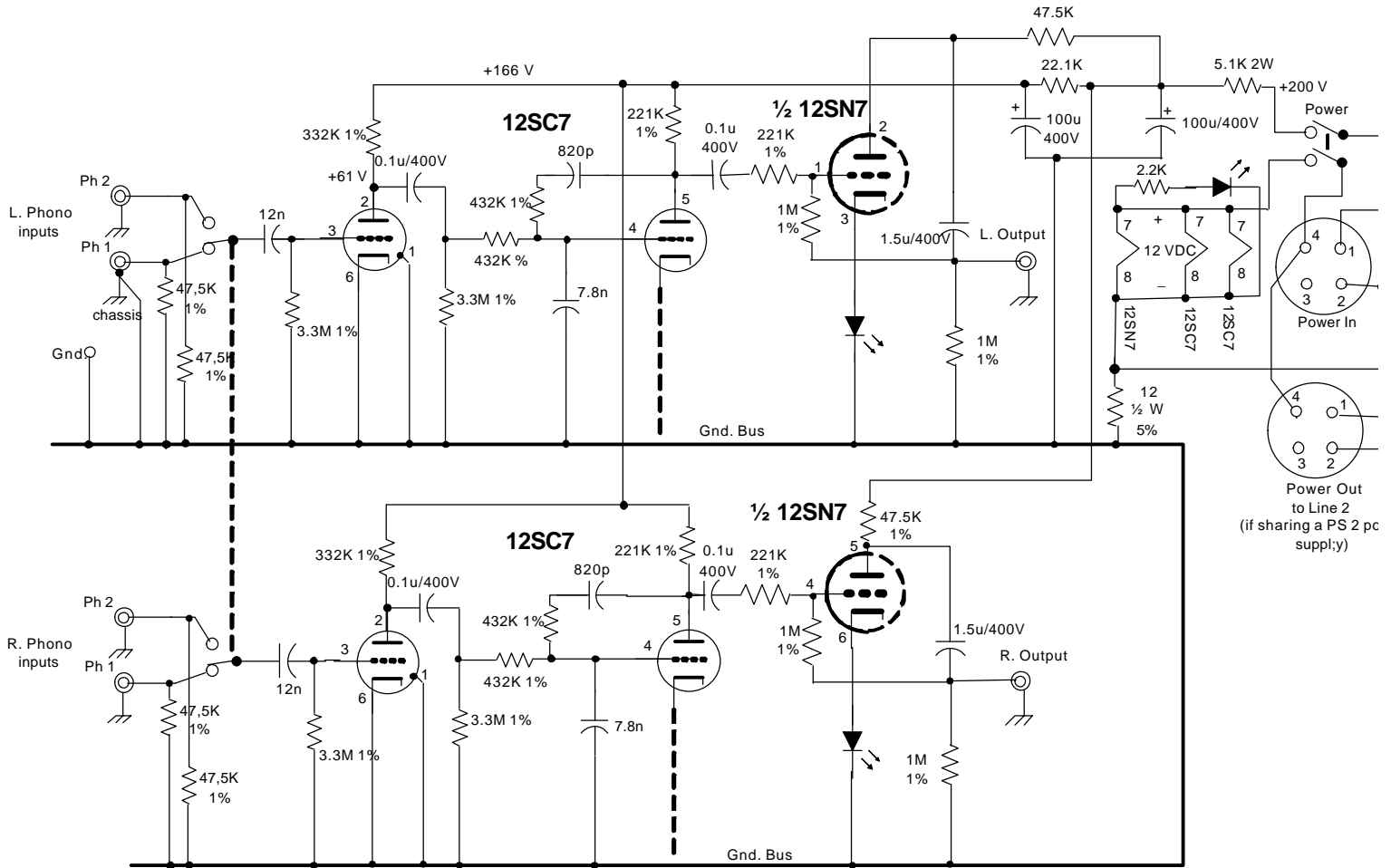
**Power requirements:** 30 W (12 VDC@0.6 A; 200 VDC@10 mA)



# Mapletree Audio Design Phono 3C Preamplifier

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# Mapletree Audio Design Preampifier Power Supply PSX

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