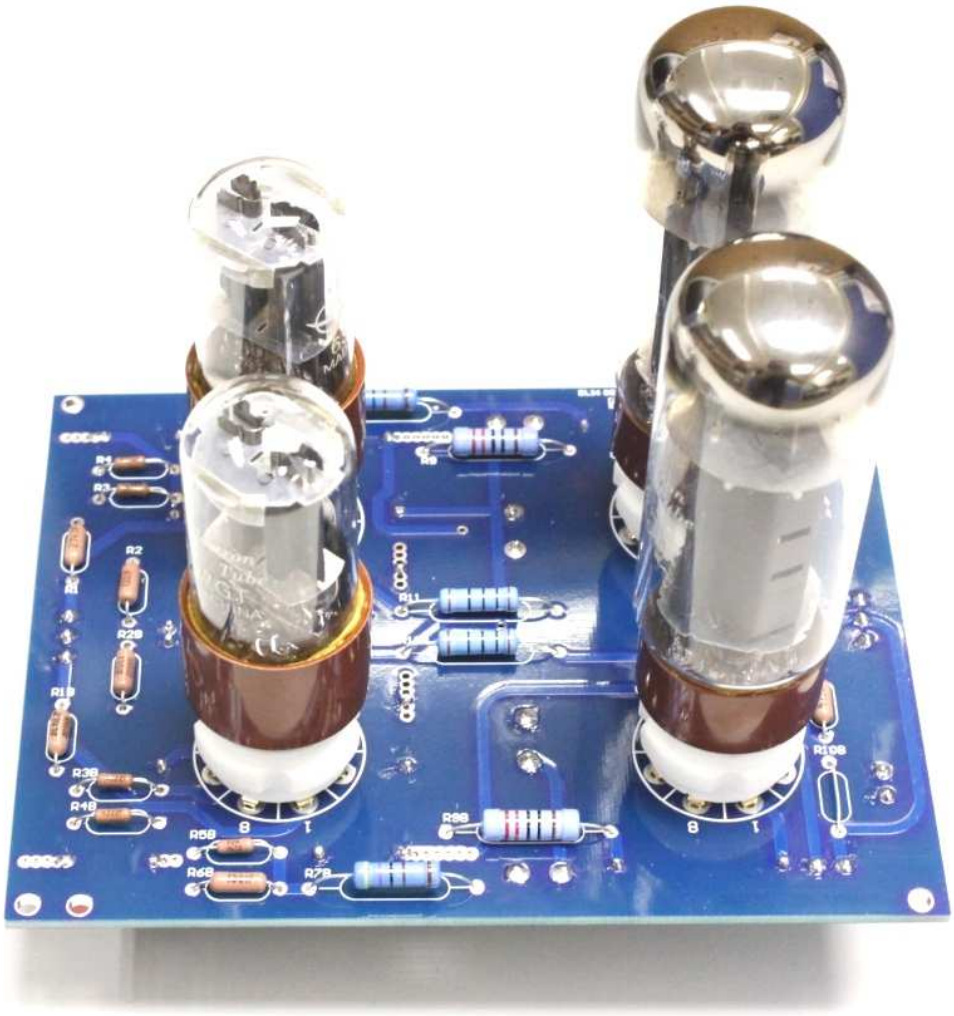
EL34 SE V Amplifier Full Kit

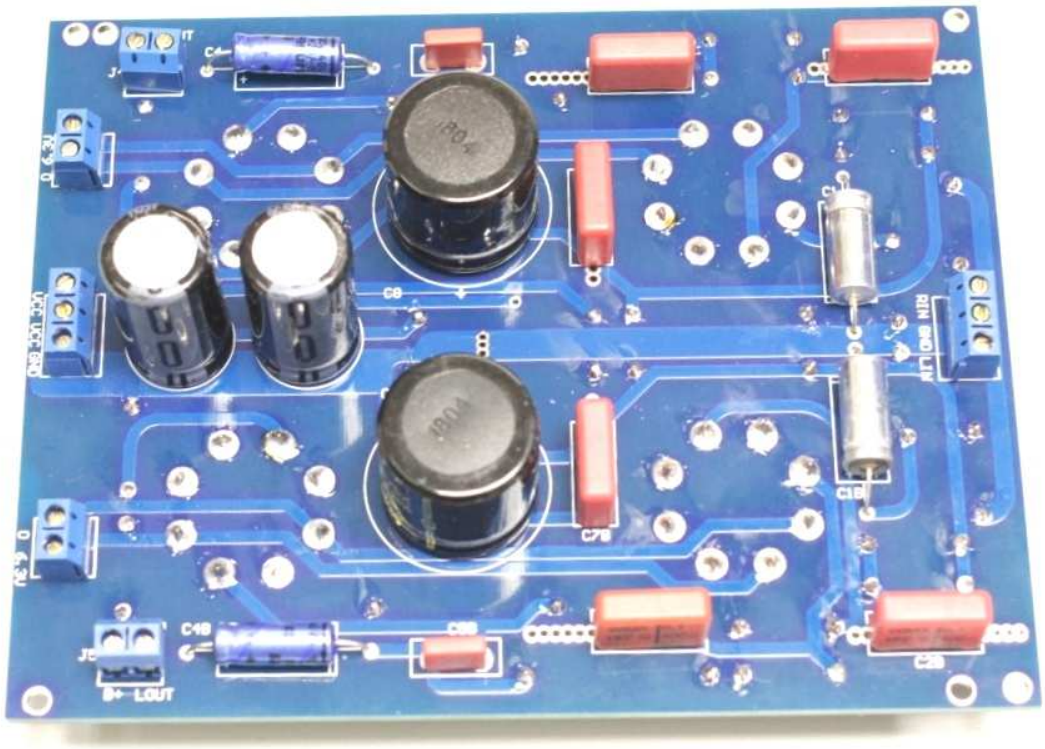
User Manual

Analog Metric

www.analogmetric.com

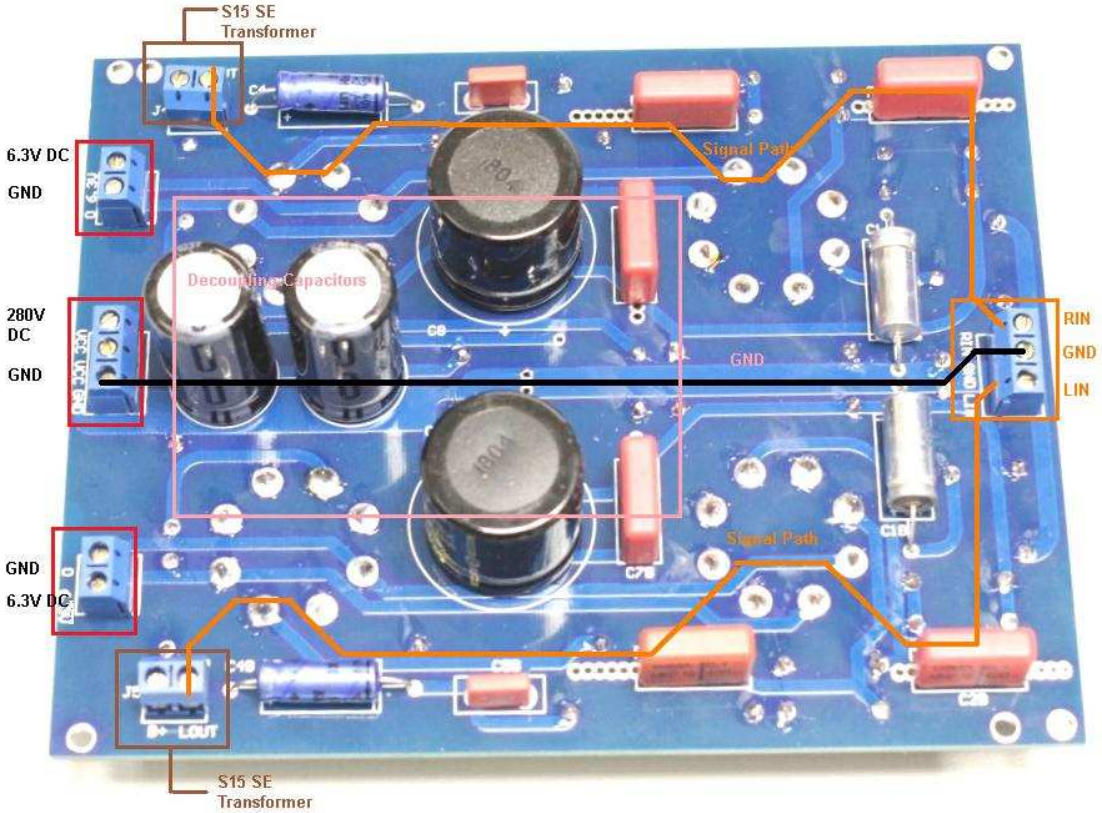
sales@analogmetric.com





INTRODUCTION

This EL34 SE V amplifier employs common pentode EL34 vacuum tubes for the class A amplification with 6SN7 / 6SL7 as the input stage. The 6SN7 tubes are configured as two cascading stages, the common-cathode and cathode follower, respectively. The output power can reach 10W for each channel.



Overview

EL34 SE V amplifier uses common pentode EL34 vacuum tubes for the class A amplification with 6SN7 / 6SL7 as the input stage. The 6SN7 tubes are configured as two cascading stages, the common-cathode and cathode follower, respectively. The output power can reach 10W for each channel.

Specification

Tubes: two EL34 and two 6SN7 / 6SL7
Voltage gain: 22dB
Operating frequency: 20-20KHz
Input impedance: 250K Ohms
Output impedance: 4, 8, 16 Ohms
Output Power: 10W
Input sensitivity: 1.2V RMS
S/N Ratio: >90dB
Stereo single-end input and output
Power requirements: one or two 280V DC (total 250mA) and two 6.3V DC/AC (1.5A)
PCB dimension: 130mm (W) x 165mm (L) for EL34 SE PCB
PCB thickness: 2.4mm, double layer, 2oz copper.

PRECAUTIONS

- Do not use any body parts to touch the metal parts of the kit after power up or power off, since the high voltage capacitors may not fully discharge. It may cause serious electric shock.
- Use a power transformer with fuse (1-3A) socket to limit the supply current in case of short circuit or incorrect assembly.
- Double check the assembled components with the part list.
- Do not attempt the measure the voltage by multimeter with hand after power up. The probes of the multimeter should be mounted by some stands to the points of the measurement before switching on the power supply.
- Turn off the power supply if you observe any smokes or hear strange sound coming out from the transformer or board. If there is short circuit, the transformer will be getting very hot shortly.

PROCEDURES

1. Solder the resistors on the top of the board, and then the tube sockets according to the part list. The resistance of the Dale resistors should be faced upward for easy of future debugging.
2. Solder all remain components on the bottom of the board. Notice to the direction of the electrolytic capacitors C1, C4, C6, C7, and C8. There is no direction of the thin film capacitors. Double check the direction of the electrolytic capacitors, as it may cause hazardous.
3. Apply two 6.3V DC/AC (1.5A) to H2, and one or two 280V DC (100mA) to P1. The tube filament will be growing up gradually. Turn off the power supply if there is a suddenly dropping in the supply voltage at P1, H1, and H2, and double check all the electrolytic capacitors.
4. Connect the output transformer to B+, ROUT and LOUT.