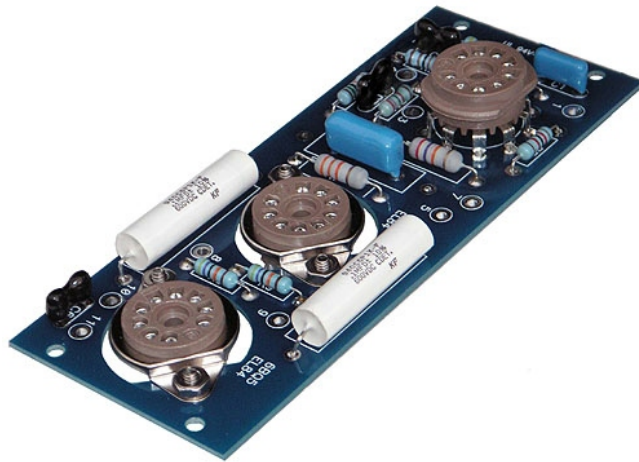


D. Gillespie Designs

PC-13 Amplifier Board



PC Board Assembly

Thank you for choosing our PC-13 board set for your Dynaco ST-35 amplifier. Our PC-13 remains true to the original Dynaco circuitry, only upgraded to employ modern components. The board dimensions, layout, and connection eyelet locations are exactly as the original.

Upgrading your ST-35 with our PC-13 board set consists of two stages. The first, covered in this document, involves assembling the PC boards. The second continues with installing the assembled boards in the ST-35, and is covered in a separate installation manual.

! Please note before continuing:

Proper Soldering is Vital

It is assumed that you possess the necessary skills and equipment to properly solder components to a printed circuit board. The majority of problems encountered after assembly are directly related to poor solder connections, such as “cold” joints, or solder “bridges” resulting in unintended connections between components.

Color Coded Components

The resistors will be coded with colored rings which denote their value and tolerance. If you are not familiar with the color coding system it is advisable to check the value of each resistor with an ohmmeter before installing it in the board.

Assembly Procedure:

General Notes

When installing axial components, like resistors, for neatest appearance, pre-bend the leads with small needle-nosed pliers such that the leads align with the associated holes on the board. Besides a neater appearance, this will also allow the components to sit flat against the board when installed.



After inserting the component leads into the respective holes on the board, bend the leads outward slightly. This will prevent the component from falling out of the board when it is turned over for the soldering procedure.

- () Install the 0.5W metal film resistors R1, R2, R3, R4, R5, R8, R9, R10. Solder the leads to the pads and trim excess lead length.
- () Install the 1W metal oxide resistors R6, R7. Solder the leads to the pads and trim excess lead length.
- () Install the mica capacitors C2, C6, C7. Solder the leads to the pads and trim excess lead length.
- () Install film capacitor C1. Solder the leads to the pads and trim excess lead length.

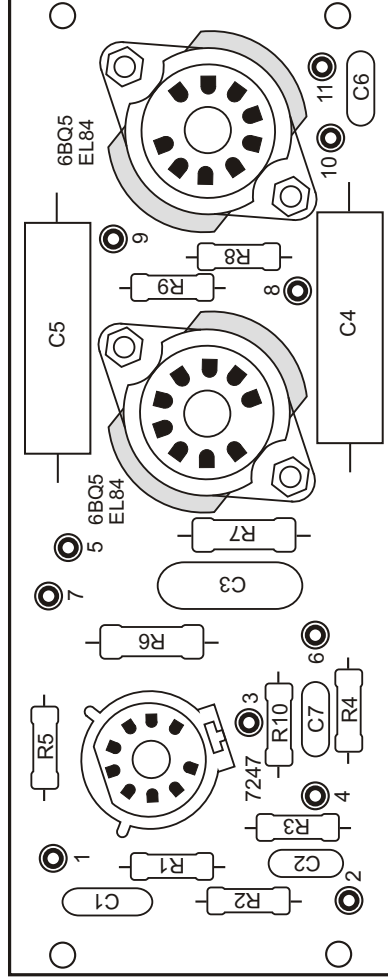
Assembly Procedure Ctd.

- () Install film capacitors C4, C5. Solder the leads to the pads and trim excess lead length.
- () Install film capacitor C3. Solder the leads to the pads and trim excess lead length.
- () Install the PC mount tube socket. Solder all the pins to the pads. It is usually not necessary to trim the small excess lead length.
- () Install the chassis mount tube sockets. Observe the proper orientation as shown in the assembly diagram.

Assembly of the PC-13 board is now complete. It is highly recommended that you double check your assembly.

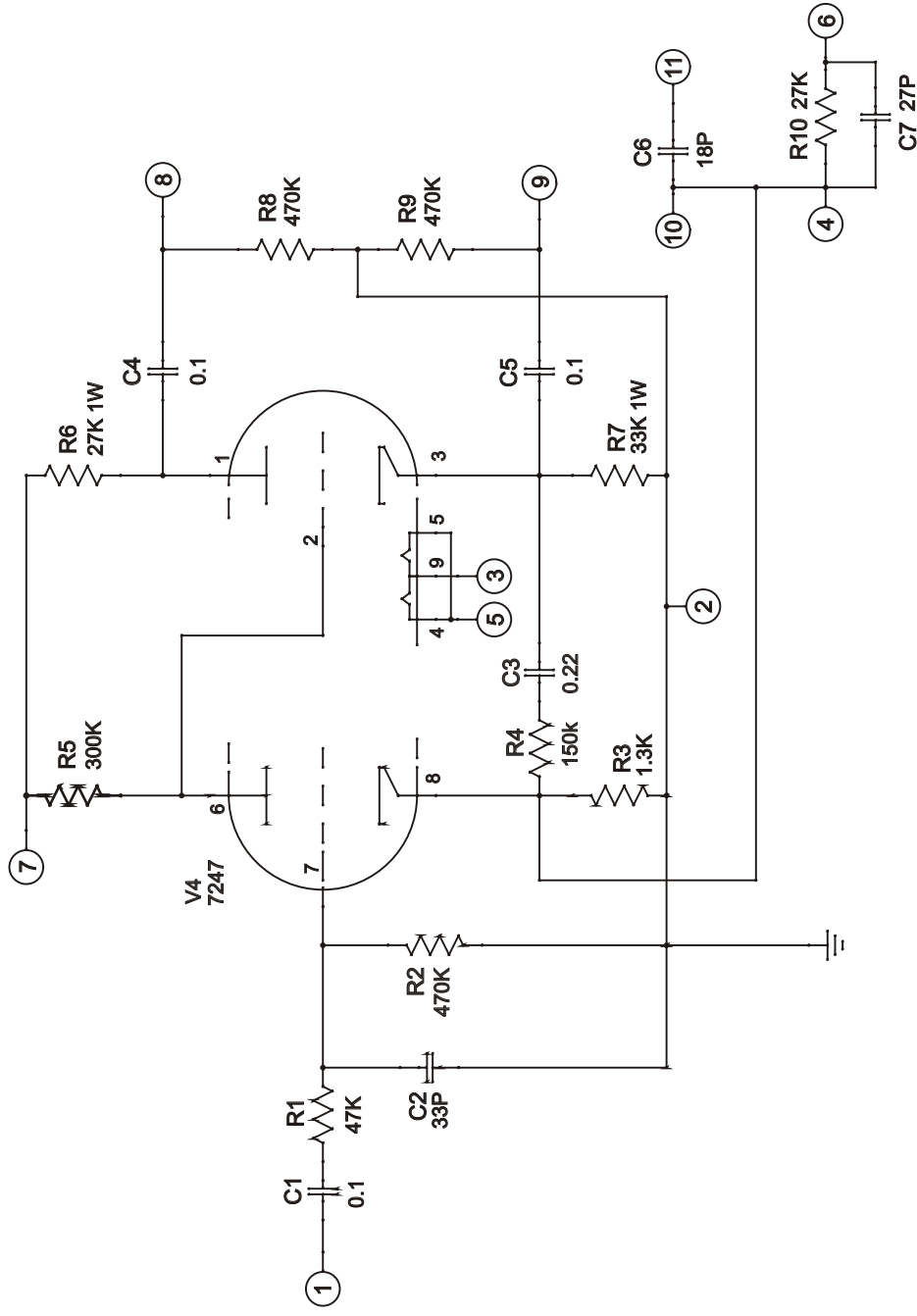
PC-13 Board Set BOM

DESIG	DESCRIPTION	QTY.	PART NUMBER	VALUE/NOTES
R1	Resistor, Metal Film	2	Mouser # 273-47K-RC	47K / 0.5W / 1%
R2, R8, R9	Resistor, Metal Film	6	Mouser # 273-470K-RC	470K / 0.5W / 1%
R3	Resistor, Metal Film	2	Mouser # 273-1.3K-RC	1.3K / 0.5W / 1%
R4	Resistor, Metal Film	2	Mouser # 273-150K-RC	150K / 0.5W / 1%
R5	Resistor, Metal Film	2	Mouser # 273-300K-RC	300K / 0.5W / 1%
R6	Resistor, Metal Oxide	2	Mouser # 261-27K-RC or DigiKey # 27KW-1-ND	27K / 1W / 5%
R7	Resistor, Metal Oxide	2	Mouser # 261-33K-RC or DigiKey # 33KW-1-ND	33K / 1W / 5%
R10	Resistor, Metal Film	2	Mouser # 273-27K-RC	27K / 0.5W / 1%
C1	Capacitor, Polypropylene	2	Mouser # 667-ECW-F2104JAQ or Digikey # P14240	0.1uF / 250V / 105C
C2	Capacitor, Mica	2	Mouser # 5982-15-500V33 or Digikey # 338-1047-ND	33pF / 500V / 5%
C3	Capacitor, Polyester	2	Mouser # 667-ECQ-E4224KF or Digikey # EF4224-ND	0.22uF / 400V / 105C
C4, C5	Capacitor, Polypropylene	4	Mouser # 598-940C6P1K-F	0.1uF / 600V / 105C
C6	Capacitor, Mica	2	Mouser # 5982-15-500V18 or Digikey # 338-2820-ND	18pF / 500V / 5%
C7	Capacitor, Mica	2	Mouser # 5982-15-500V27 or Digikey # 338-1085-ND	27pF / 500V / 5%
7247	Tube Socket, Micallex	2	Tube Depot # Belton SK-B-VT9-PT	9 Pin / PC Mount
6BQ5/EL84	Tube Socket, Micallex	4	Tube Depot # Belton SK-B-VT9-ST-2	9 Pin / Chassis Mount



- R1 47K 0.5W
- R2 470K 0.5W
- R3 1.3K 0.5W
- R4 150K 0.5W
- R5 300K 0.5W
- R6 27K 1W
- R7 33K 1W
- R8 470K 0.5W
- R9 470K 0.5W
- R10 27K 0.5W

- C1 .1uF 250V
- C2 33pF 500V
- C3 .22uF 400V
- C4 .1uF 600V
- C5 .1uF 600V
- C6 18pF 500V
- C7 27pF 500V



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PC-13 Schematic