

D. Gillespie Designs

PC-10A Amplifier Board



PC Board Assembly

Thank you for choosing our PC-10A board set for your Dynaco SCA-35 amplifier. Our PC-10A differs from the original Dynaco PC-10 in that it is configured to use either a 6GH8A or 6U8A driver tube in place of the 7199. However, the PC-10A is not just a tube swap with some pin rewiring. Additional components are included to insure stability and low distortion when 6GH8A or 6U8A tubes are employed in place of the 7199.

Note: The original 7199 tubes are NOT compatible with the PC-10A. The pin wiring is different.

Upgrading your SCA-35 with the PC-10A 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 SCA-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 R29, R31, R33, R35, R36, R37, R38. Solder the leads to the pads and trim excess lead length.
- () Install the 1W metal oxide resistors R30, R32, R34. Solder the leads to the pads and trim excess lead length.
- () Install the mica capacitors C1, C21. Solder the leads to the pads and trim excess lead length.
- () Install film capacitors C17, C19, C20. Solder the leads to the pads and trim excess lead length.

Assembly Procedure Ctd.

- () Install film capacitor C18. 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-10A board is now complete. It is highly recommended that you double check your assembly.

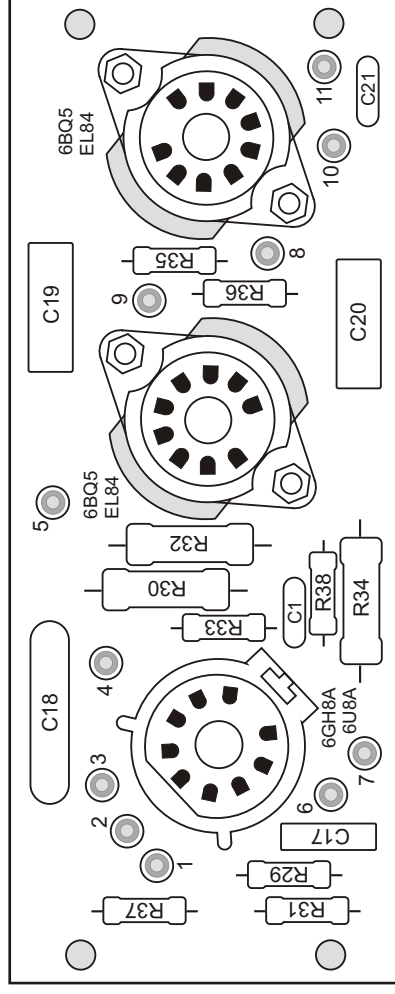
PC-10A BOM

DESIG	DESCRIPTION	QTY.	PART NUMBER	VALUE/NOTES
R29	Resistor, Metal Film	2	Mouser # 594-VR37000004704JR5	4.7M / 0.5W / 5%
R30	Resistor, Metal Oxide	2	Mouser # 261-270K-RC or DigiKey # 270KW-1-ND	270K / 1W / 5%
R31	Resistor, Metal Film	2	Mouser # 273-560-RC	560 / 0.5W / 1%
R32	Resistor, Metal Oxide	2	Mouser # 261-22K-RC or DigiKey # 22KW-1-ND	22K / 1W / 5%
R33	Resistor, Metal Film	2	Mouser # 273-120K-RC	120K / 0.5W / 1%
R34	Resistor, Metal Oxide	2	Mouser # 261-27K-RC or DigiKey # 27KW-1-ND	27K / 1W / 5%
R35, R36	Resistor, Metal Film	4	Mouser # 273-470K-RC	470K / 0.5W / 1%
R37	Resistor, Metal Film	2	Mouser # 273-82K-RC	82K / 0.5W / 1%
R38	Resistor, Metal Film	2	Mouser # 273-100K-RC	100K / 0.5W / 1%
C1	Capacitor, Mica	2	Mouser # 5982-15-500V18 or Digikey # 338-2820-ND	18pF / 500V / 5%
C17	Capacitor, Polypropylene	2	Mouser # 667-ECW-F2104JAQ or Digikey # P14240	0.1uF / 250V / 105C
C18	Capacitor, Polyester	2	Mouser # 80-R60IN4100AA30K or Digikey # 399-6003-ND	1.0uF / 250V / 105C
C19, C20	Capacitor, Polyester	4	Mouser # 667-ECQ-E6104KF or Digikey # ECQ-E6104KF	0.1uF / 630V / 105C
C21	Capacitor, Mica	2	Mouser # 5982-CD15-CD120J03 or Digikey # 338-2819-ND	12pF / 500V / 5%
None	Tube Socket, Micallex	2	Tube Depot # Belton SK-B-VT9-PT	9 Pin / PC Mount
None	Tube Socket, Micallex	4	Tube Depot # Belton SK-B-VT9-ST-2	9 Pin / Chassis Mount
None	Resistor, Metal Film	2	Mouser # 273-10K-RC	*See Note

***NOTE:** These two 10K/0.5W resistors will replace jumper wires connecting the output tube sockets to the PC board.

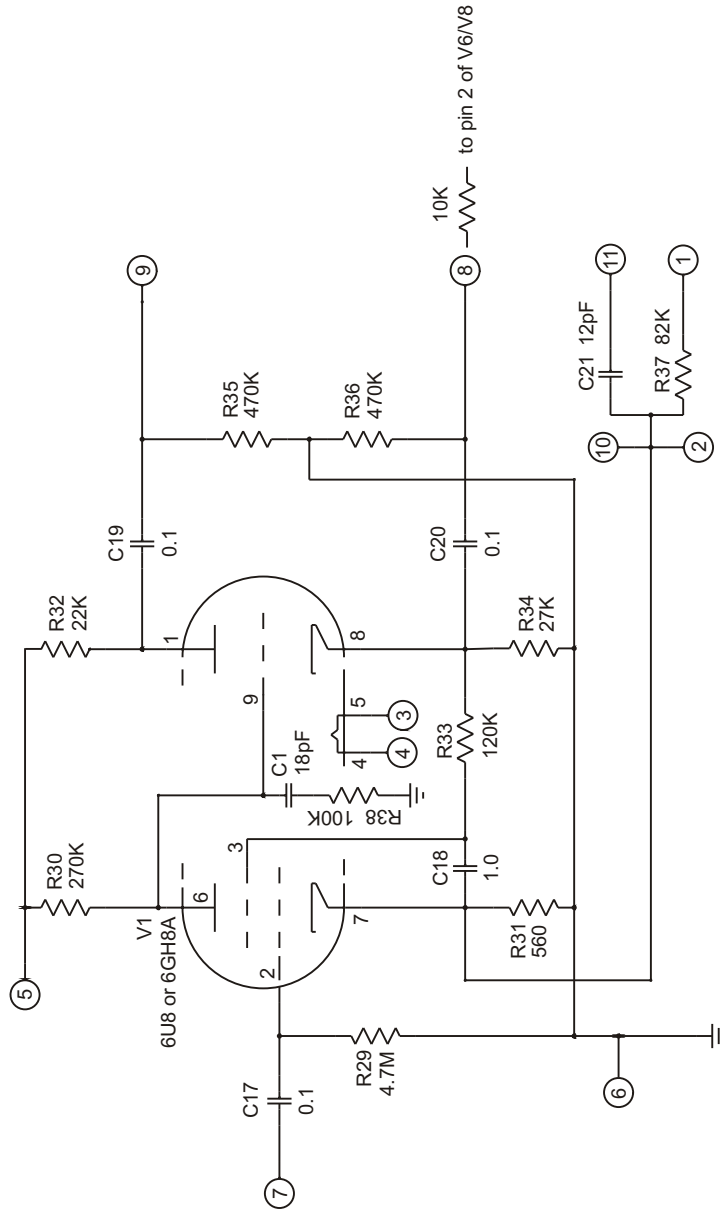
PC-10A Components

C1	18pF	500V	1/2W
C17	0.1 uF	100V	1W
C18	1.0uF	250V	1/2W
C19	0.1uF	630V	1W
C20	0.1uF	630V	1W
C21	12 pF	500V	1/2W
R29	4.7 megohms		1/2W
R30	270,000 ohms		1W
R31	560 ohms		1/2W
R32	22,000 ohms		1W
R33	120,000 ohms		1/2W
R34	27,000 ohms		1W
R35	470,000 ohms		1/2W
R36	470,000 ohms		1/2W
R37	82,000 ohms		1/2W
R38	100,000 ohms		1/2W



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PC-10A Assembly



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PC-10A Schematic