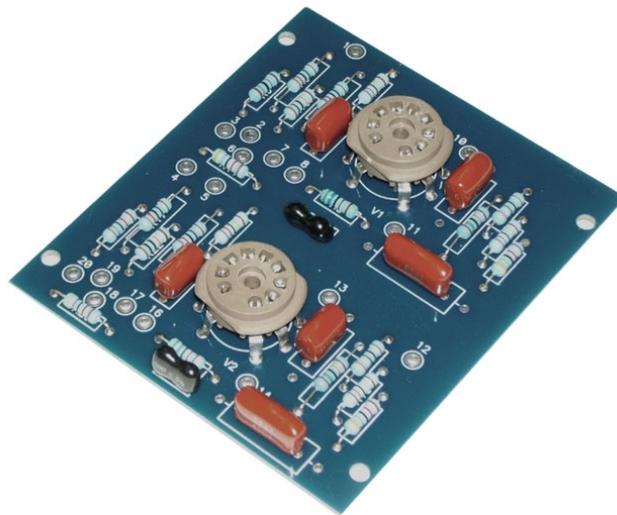


D. Gillespie Designs

PC-11 Preamplifier Board



Assembly and Installation

Thank you for choosing our PC-11 restoration board for your Dynaco SCA-35 amplifier. The PC-11 is intended as a restoration board, and thus, the circuit configuration, and mounting hole locations, are consistent with the original Dynaco PC-11 circuit board.

Upgrading your SCA-35 with our new PC-11 board consists of two stages. The first involves assembling the PC board. The second continues with installing the assembled board in the SCA-35.

! 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.



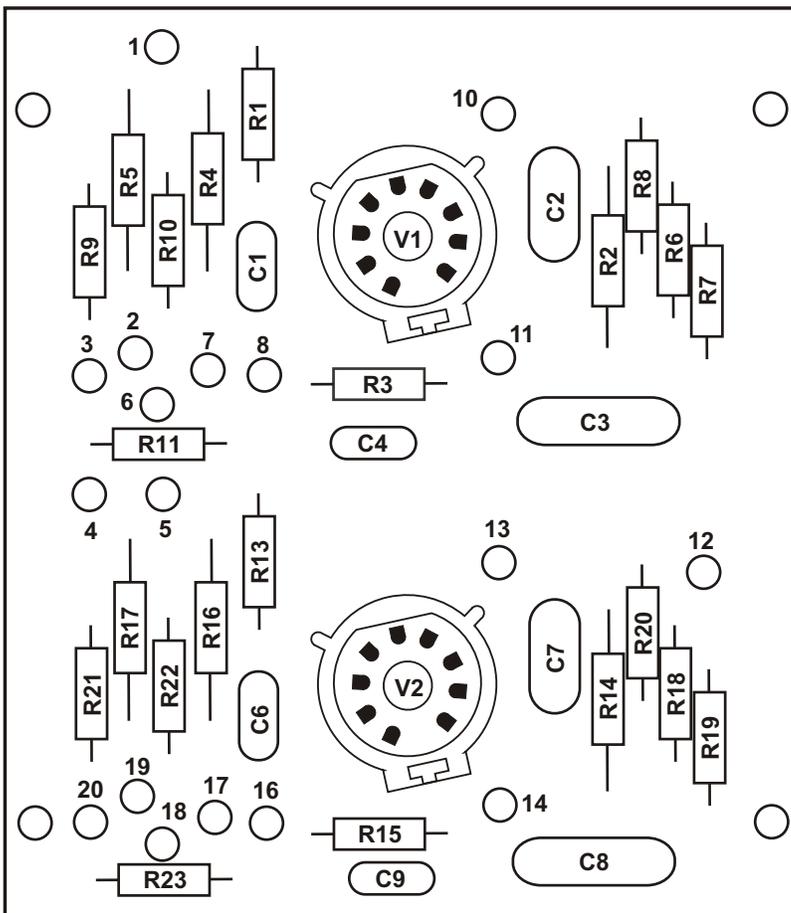
After inserting the component leads into the respective holes on the board, bend the leads outward slightly. This will prevent the component from falling out of the board when it is turned over for the soldering procedure.

- () Install the 1.2M resistors, R1, R6, R13, R18. Solder the leads to the pads and trim excess lead length.
- () Install the 150K resistors, R2, R14 and the 120 ohm resistors, R4, R5, R16, R17. Solder the leads to the pads and trim excess lead length.
- () Install the 5.6K resistors, R3, R15 and the 47K resistors, R7, R11, R19, R23. Solder the leads to the pads and trim excess lead length.
- () Install the 390 ohm resistors, R8, R20, the 18K resistors, R9, R21 and the 100K resistors R10, R22. Solder the leads to the pads and trim excess lead length.
- () Install the 330pF mica capacitors, C4, C9. Solder the leads to the pads and trim excess lead length.
- () Install the 0.1uF capacitors, C1, C2, C6, C7. Solder the leads to the pads and trim excess lead length.
- () Install the 0.22uF capacitors, C3, C8. Solder the leads to the pads and trim excess lead length.
- () Install the tube sockets, V1, V2. Solder the pins to the pads on the PC board..

Assembly of the PC-11 board is now complete. It is highly recommended that you double check your assembly.

PC-11 BOM

| DESIG | DESCRIPTION | QTY. | PART NUMBER | VALUE/NOTES |
|-------------------|-----------------------|------|------------------------------------------------------|-------------------|
| R1, R6, R13, R18 | Resistor, Metal Film | 4 | Digikey # PPCHJ1.2MCT-ND | 1.2M / 0.5W / 5% |
| R2, R14 | Resistor, Metal Film | 2 | Mouser # 273-150K-RC or | 150K / 0.5 / 1% |
| R3, R15 | Resistor, Metal Film | 2 | Mouser # 273-5.6K-RC | 5.6K / 0.5W / 1% |
| R4, R5, R16, R17 | Resistor, Metal Film | 4 | Mouser # 273-120-RC | 120 / 0.5 / 1% |
| R7, R11, R19, R23 | Resistor, Metal Film | 4 | Mouser # 273-47K-RC | 47K / 0.5W / 1% |
| R8, R20 | Resistor, Metal Film | 2 | Mouser # 273-390-RC or | 390 / 0.5W / 1% |
| R9, R21 | Resistor, Metal Film | 2 | Mouser # 273-18K-RC | 18K / 0.5W / 1% |
| R10, R22 | Resistor, Metal Film | 2 | Mouser # 273-100K-RC | 100K / 0.5W / 1% |
| C1, C2, C6, C7 | Capacitor, Polyester | 4 | Mouser # 667-ECQ-E4104KF or Digikey # EF4104-ND | 0.1uF / 400V |
| C3, C8 | Capacitor, Polyester | 2 | Mouser # 667-ECQ-E4224KF or Digikey # EF4224-ND | 0.22uF / 400V |
| C4, C9 | Capacitor, Mica | 2 | Mouser # 5982-15-500V330 or Digikey # 338-1045-ND | 330pF / 500V / 5% |
| V1, V2 | Tube Socket, Micallex | 2 | Tube Depot # Belton SK-B-VT9-PT | 9 Pin / PC Mount |



PC-11 Components

- C1 and C6 .1 uF 400V
- *C2 and C7 .1 uF 400V
- *C3 and C8 .22 uF 400V
- C4 and C9 330 pF mica
- R1 and R13 1.2 megohms
- R2 and R14 150,000 ohms
- R3 and R15 5,600 ohms
- R4 and R16 120 ohms
- R5 and R17 120 ohms
- R6 and R18 1.2 megohms
- R7 and R19 47,000 ohms
- R8 and R20 390 ohms
- R9 and R21 18,000 ohms
- R10 and R22 100,000 ohms
- R11 and R23 47,000 ohms
- V1 and V2 9 Pin PC mount socket

*These capacitor values have been increased over the stock PC-11 to improve the low end response.

Installation Procedure

You may wish to refer to the original Dynaco SCA-35 assembly manual when installing the PC-11. If you should require a manual you may download a free copy at www.tubes4hifi.com.



HIGH VOLTAGE WARNING

Vacuum tube amplifiers contain lethal voltages. Make sure the power cord is disconnected before installing the PC-11 board. Wait 30 minutes before removing the top and bottom covers to allow the voltage on the power supply capacitors to bleed off.

- () Remove the tubes on the existing PC-11 circuit board.
- () Carefully unsolder and remove all the wires from the eyelets on the original Dynaco PC-11 circuit board. **Be sure to label** each wire with the related eyelet number as you remove them.
- () After all the wires are unsoldered and labeled remove the four screws that secure the original PC-11 board and remove the board.
- () Install the new PC-11 board using the screws that were removed in step 2. Be careful to install in the same orientation as the original.
- () Solder the wires (previously removed and labeled) to the related eyelets on the new PC-11 board.

The installation is now complete. After double checking the wiring, the wire labels can be removed.