TJ DCR Project -Audio Amplifier

|  |  |
| --- | --- |
| 1. Lay out the board... 12 pads total 2. Use half inch pads for the base and quarter inch pads everywhere else. 3. Three transistor rows, three pads each. 4. One row of two pads for the potentiometer between Q3 and Q4. 5. One pad for the output. |  |
| 1. Solder in all resistors for the first stage 2. Check the values 3. Conserve space on the pads – there are many components to solder in |  |
| 1. Capacitors next – 2. Electrolytics are polarized – look for the – or >>> 3. Check the schematic for correct orientation |  |
| 1. Solder in the caps for the DC rail and first stage |  |
| 1. Transistor is next 2. Carefully check the leads 3. 2N3904 – looking at the flat face from left to right    1. E, B, C |  |
| 1. Measure and record the voltage on the Collector, Base and Emitter |  |
| 1. Prepare the volume pot. 2. Get 6” each of red, black and green wire 3. Braid the wire – this acts a natural shield keeping unwanted signals out |  |
| 1. Potentiometer wiring 2. Red to the signal side 3. Green to the middle (wiper) 4. Black to the ground side |  |
| 1. Solder in the pot leads 2. Connect a speaker to the output pad and touch the input with a screwdriver or piece of wire – you should hear a buzz 3. Adjust the volume to see if it goes up and down |  |
| 1. For the second stage    1. Solder the resistors    2. Solder the caps    3. Solder the transistor, Q4    4. Check and record the voltages on C, B,E    5. Repeat the buzz test |  |
| 1. Fort the third stage    1. Solder the resistors, no collector resistor on Q5    2. Solder the caps    3. Solder the transistor, Q5 2. Transformer –    1. Bend up the middle leads – we won’t use those    2. Look for the “P” for primary winding – that side goes to Q5 |  |
| 1. On the “P” side – top lead to the DC rail, bottom lead to the collector of Q5 2. On the output side, top lead to the output pad, bottom lead to ground 3. Check and record voltage on Q5 C,B,E 4. Hookup speaker and test |  |