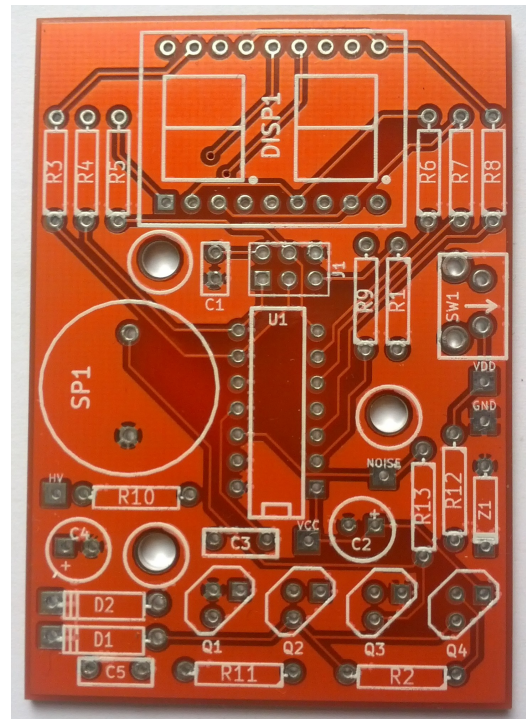
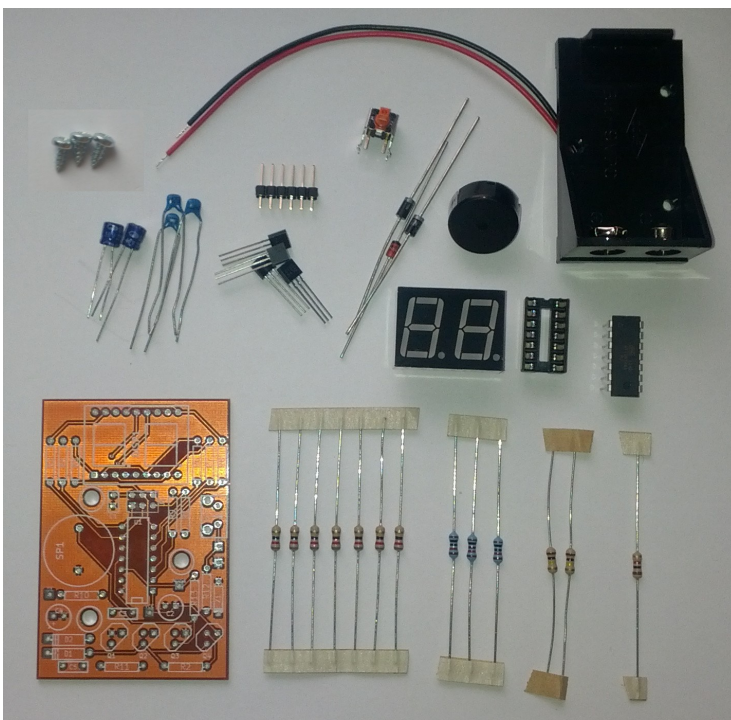




Noise generator assembly instructions

Parts list



Check your kit contains the following parts:

- | | |
|----------------------------|-----------------------|
| 1 x PP3 battery holder | 2 x 100k resistor |
| 3 x 100nF capacitors | 1 x 1k resistor |
| 2 x 10uF capacitors | 1 x speaker |
| 2 x 1N4001 diodes | 1 x button |
| 1 x dual 7 segment display | 1 x ATTINY44 |
| 1 x row of six PCB pins | 1 x 14 pin DIL socket |
| 4 x NPN transistors | 1 x 5.6V zener diode |
| 3 x 10k resistor | 3 x screws |
| 7 x 82R resistor | 1 x PCB |

Assembly

1. Fit the 1k resistor R2 (brown black red).
2. Fit the two 100k resistors R11, R10 (brown black yellow).
3. Fit the three 10k resistors R1, R12 and R13 (brown black orange)
4. Fit the seven 82R resistors R3, R4, R5, R6, R7, R8 and R9 (grey red black)
5. Fit the three flat 100nF capacitors C1, C3 and C5.
6. Fit the two round 10uF capacitors C2 and C4. Ensure the negative pin, indicated by the white band on the capacitor, is on the opposite side as the '+' symbol on the PCB silkscreen.
7. Fit the two black 1N4001 diodes D1 and D2. Ensure the white band on the diode is towards the same end as the band on the PCB silkscreen.
8. Fit the 5.6V Zener diode Z1. Ensure the band on the diode is at the same end as the band on the PCB silkscreen.
9. Fit the transistors Q1, Q2, Q3 and Q4. Ensure the flat side of the body of the transistor corresponds with the flat side on the symbol on the PCB silkscreen. The transistors will naturally sit a few millimeters from the surface of the PCB, don't try and force them to sit directly on the PCB.
10. Fit the DIL socket U1. Ensure the notch in the socket is aligned with the notch on the PCB silkscreen (towards the lower edge of the PCB). Make sure the socket is seated correctly by first soldering two diagonally opposite corners of the socket. When the socket is flat on the PCB, solder the remaining pins.
11. Fit the buzzer SP1
12. Fit the display DISP1. Make sure the orientation of the display corresponds with the symbol on the PCB silkscreen with the decimal points to the bottom. Make sure the display is seated correctly by first soldering two diagonally opposite corners of the socket. When the display is flat on the PCB, solder the remaining pins.
13. Fit the button SW1
14. Insert the ATTINY44 into the DIL socket. Make sure the chip is oriented correctly in the socket with the notch on the device facing towards the notch on the socket (towards the lower edge of the PCB). Make sure that all the pins are seated in the socket properly before gently pressing the chip in to the socket.
15. Solder the red wire of the battery holder to the pad marked '+' on the back of the PCB. Solder the black wire of the battery holder to the pad marked '-' on the back of the PCB. Before screwing the battery holder in to place, test the noise generator by inserting a PP3 battery in to the holder and pressing the button. Make sure the battery is correctly oriented in the holder before pressing the button.
16. If you intend to reprogram the device, fit the PCB pins J1.