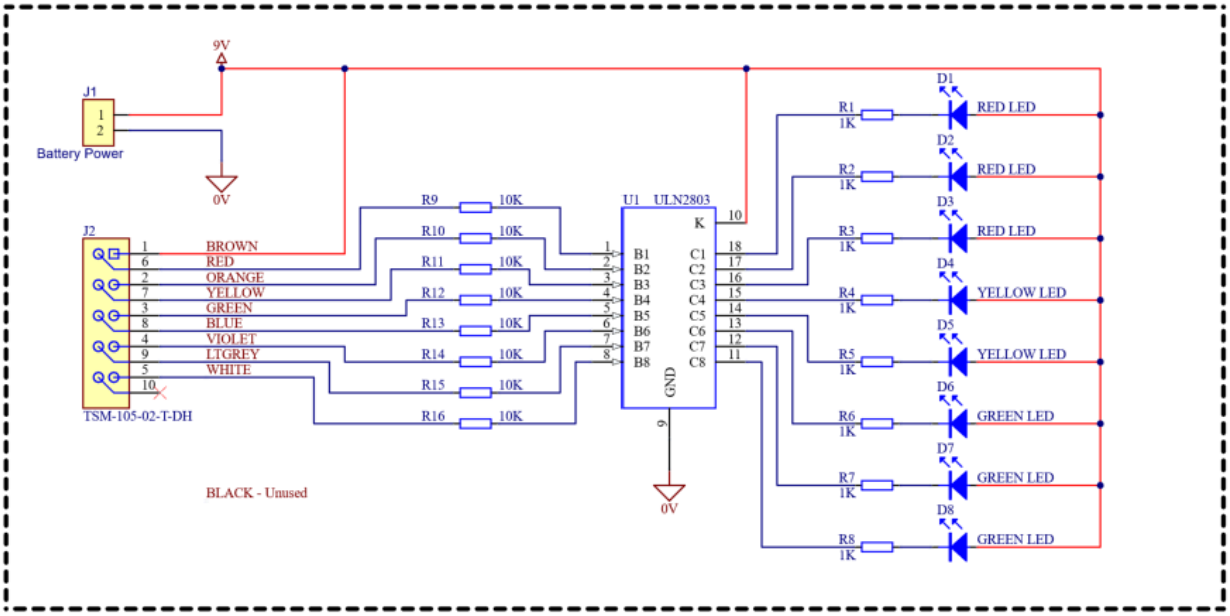
Water Level Sensor

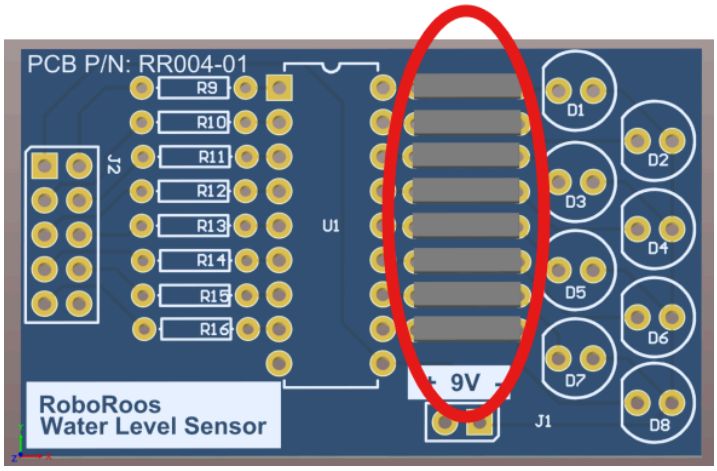
This kit contains the electronics to create a water level sensor, capable of showing how much water is contained in a container.

Circuit Diagram :

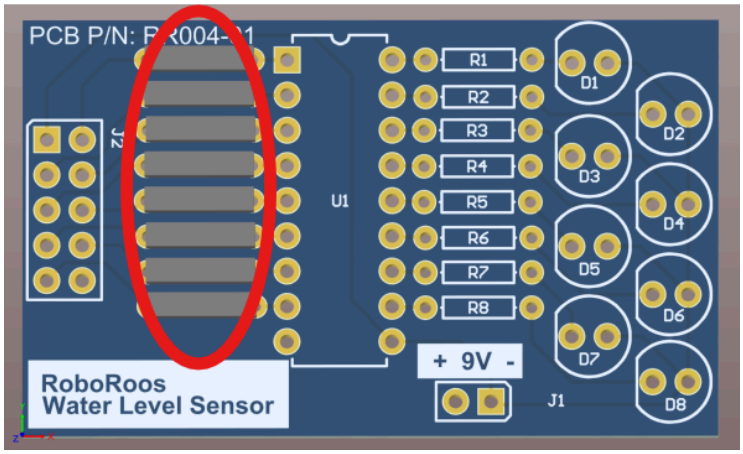


Build Instructions :

1. Load the 10K resistors (Brown, Black and Red bands) into locations
   R1 R2 R3 R4
   R5 R6 R7 R8

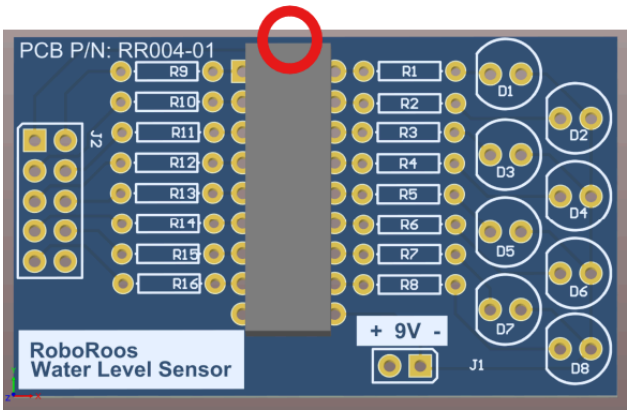


2. Load the 1K resistors (Brown, Black and Orange bands) into locations
   R9 R10 R11 R12
   R13 R14 R15 R16

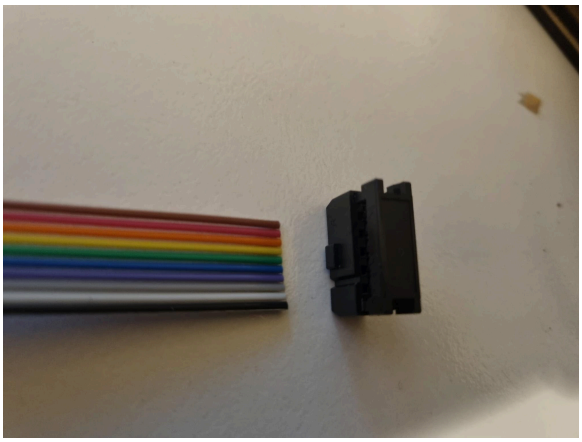


3. Load the Red LEDs into locations D1, D2 and D3
4. Load the Yellow LEDs into locations D4, and D5
5. Load the Green LEDs into locations D6, D7 and D8
6. Load the pin header into J2
7. Solder the battery leads into J1 (9V)
   a. Note Black is (+) and Red is (-)

8. Solder the ULN2803 Chip into U1
    a. Notes that the indent on the chip needs to face the top of the board



9. Align the wire into the header so that the small bump is facing the cable.



10. Insert the cable and crush the connector onto the wires.

11. Cut the wires so that :-
    a. the Red wire is shorter than the Brown by 5-10mm.
    b. The Orange wire is shorter than the Red by 5-10mm.
    c. The Yellow wire is shorter than the Orange by 5-10mm.
    d. The Green wire is shorter than the Yellow by 5-10mm.
    e. The Blue wire is shorter than the Green by 5-10mm.
    f. The Violet wire is shorter than the Blue by 5-10mm.
    g. The Grey wire is shorter than the Violet by 5-10mm.
    h. The White, and black wires are both shorter than the Grey by 5-10mm.

    i. For better results strip the insulation from the end of the wire to have 0.5 - 1mm bare

12. Connect the cable to the PCB
13. Connect the battery to the battery clip

Now dip the end of the cable into water and the corresponding LEDs will come on.

For better results put a little salt into the water? Why does this work better?