

WATER LEVEL INDICATOR

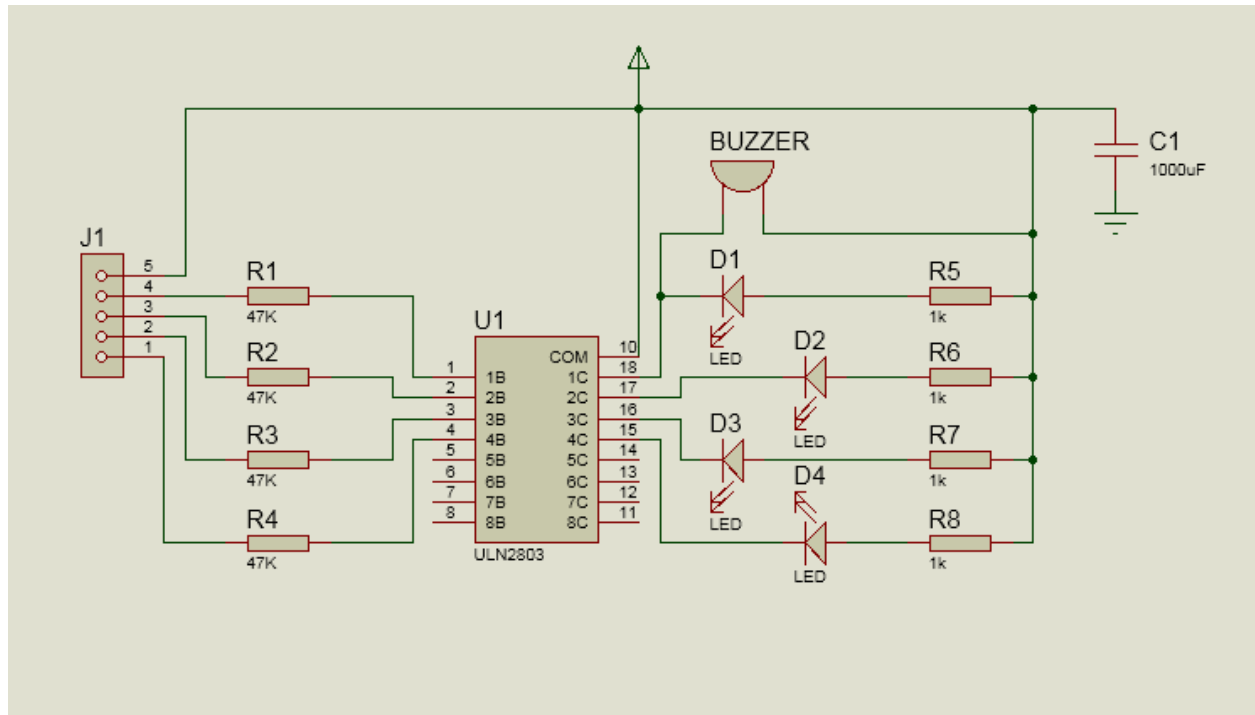
In day to day life storing water is one of the important task we have to do & with that we need to keep eye on that storage that the supply of water should be stopped when it reaches to its maximum level, so this is best, cheapest & easiest circuit to do this task by just looking at LED indication from your working place to control your water level.

It can give up to 8 indications for different water levels in the overhead tank. The circuit is simple and uses a single IC and a few components.

The main part of the water level circuit is the 8 channel Darlington array IC ULN2803. We have connected its 4 inputs to 4 wires to sense the water level and the corresponding outputs are connected to three LEDs through current limiting resistors. A common probe (common) is connected to the positive rail and this is used as the bottom probe. When the water level reaches to each probe it will make electrical connectivity between the positive rail and the probe due to which associated LED will light up. The operating voltage of the circuit is 9V.

Probes should be plugged into the tank through the side. The low probes in the lower position, half probes in the middle positions and high ones in two upper positions. If the tank is empty, no LEDs will be on.

CIRCUIT DAIGRAM



COMPONENTS REQUIRED

- RESISTORS ($R_1=R_2=R_3=R_4=47K$)
($R_5=R_6=R_7=R_8=1K$)
- CAPACITOR(1000uF)
- IC ULN2803
- LED(LIGHT DEPENDENT RESISTOR)
- BUZZER

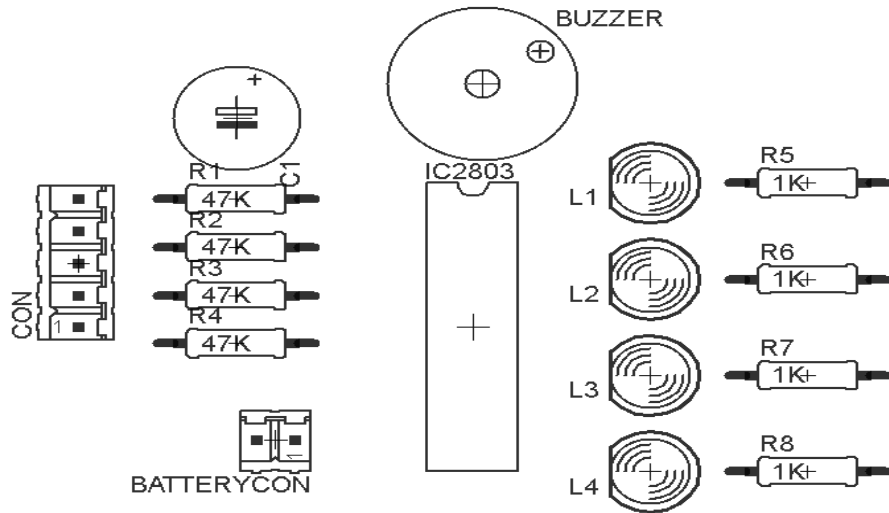


PRINCIPLE AND WORKING

The principle of this circuit is very easy to understand and it is very practical. The elements which are used in this circuit are CMOS input compatible, 8- channel IC which is a Darlington array. If the water level rises in the tank, then the water comes into contact with probes which are from 4B to 1B (refer circuit diagram) and thus the pin 4 through 1 high sequentially. Hence the equivalent output pins 15 to 18 will go low one after another and the LED's from 4 to 1 will go in the order. If the water level is at the final probe 1B then the sound is produced by the buzzer and it is connected to the output pin 18 along with the D1.

PCB LAYOUT:

FRONT SIDE:



BACK SIDE:

