

Linear electronic circuits
MINI PROJECT

TANK OVER FLOW ALARM

GROUP:

- BT21EEE103 B.PRAVALLIKA
- BT21EEE104 D.SHALINI MADHURI
- BT21EEE108 REVATHI CHIKKUDU

AIM :

To make a tank overflow circuit

OBJECTIVE:

Here is a simple solution to prevent the wastage of water from overhead tank. It gives an audio visual indication when the water level rises towards the top of the tank so that the water pump can be switched off to prevent the overflow. This is also an ideal circuit to monitor the water tank with float valve operation.

COMPONENTS:

- IC741
- Resistances:10K(3),1k
- Buzzer
- Transistor BC547
- Red led
- 9V battery
- Connecting wires

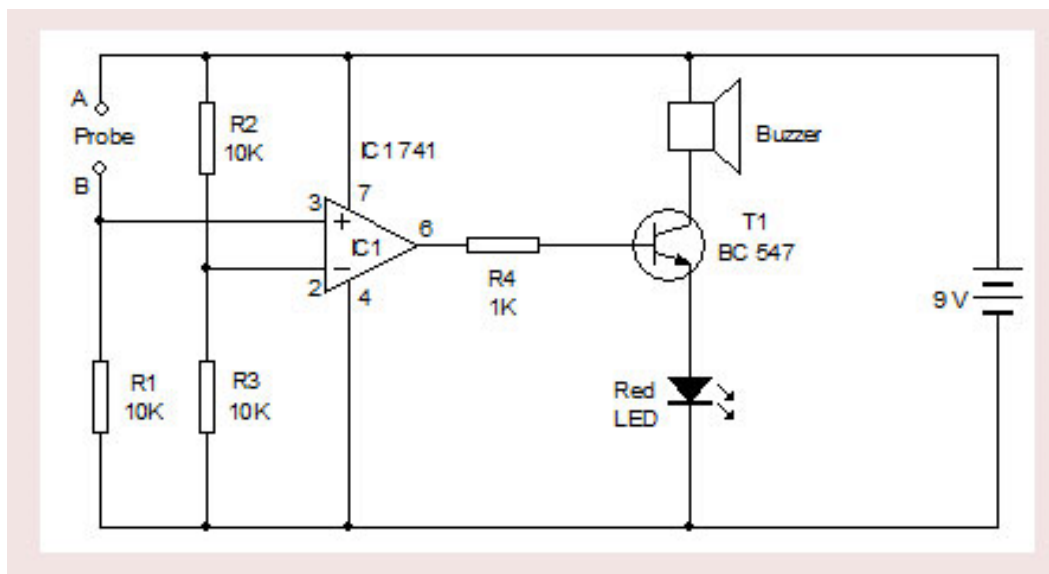
WORKING PRINCIPLE:

IC1 (741) is used as a Voltage comparator with the Inverting input (Pin2) connected to a potential divider R2 and R3 so that pin 2 gets half supply voltage. The Non inverting input (Pin 3) is connected to R1 and the probe B. So when the probes are free, the Inverting input gets higher voltage and the output of the comparator remains low.

This keeps T1 out of conduction so that buzzer and LED remain off. The probes connected to points A and B are kept near the top of the water tank where maximum water level attains. When the water rises through the probes, Pin 3 gets a higher voltage through the moist probes and the output of comparator turns high. This triggers T1 and Red LED lights and buzzer beeps to indicate the overflow.

Circuit can be powered by a standard 9-12 volt DC adapter. Use two brass nails as probes which can be inserted in to the water tank below the lid with 1 cm gap. Connect the probes with the circuit using thin plastic wires.

CIRCUIT DIAGRAM:





CONCLUSION:

The Water Tank Overflow Alarm starts announcing before water falls down from your tank, so you can easily know at what time you switch off the pump. In this way you can stop wasting of water, electricity as well as your money.

Advantages Of Water Tank Overflow Alarm:

1. The Water Tank Overflow Alarm has an announcement system that announces before your tank overflow.
2. The Water Tank Overflow Alarm is easy to install and repairing.
3. You can save water, electricity as well as your money with the help of Water level indicator.