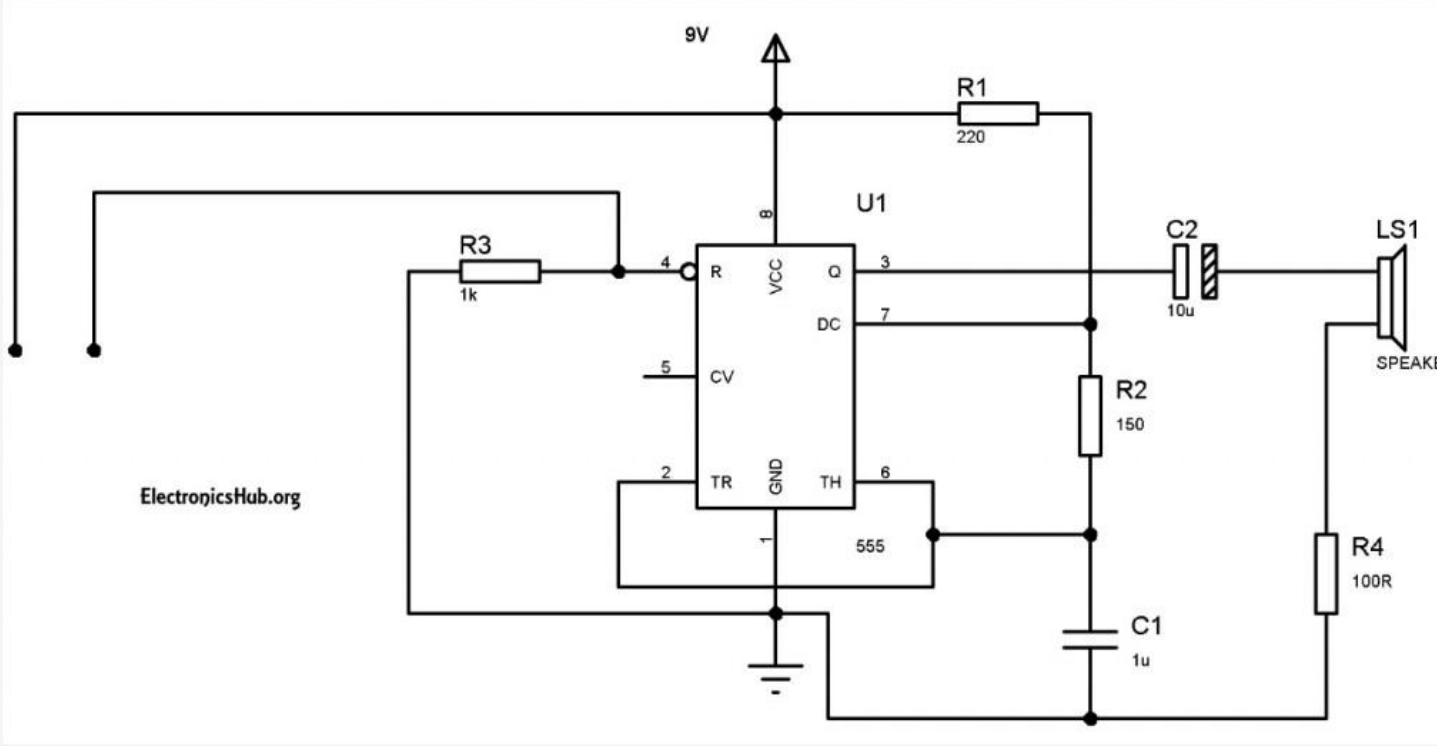
Water Level Alarm Using 555 Timer

How many times did your overhead water tank overflows due to your forgetfulness? It is a frequent problem in all homes where people turn ON the water pump and forget to turn it off when the water is filled. This project is made to solve this problem.

In this project, we are using a water level alarm using simple and low cost hardware using a 555 timer circuit. The aim of this project is to make a water level detecting alarm with simple and low cost hardware without compromising on the performance of the device.

Water Level Alarm Using 555 Timer Circuit Diagram:



Circuit Diagram of Water Level Alarm using 555 Timer – ElectronicsHub.Org

The circuit uses a 555 timer in astable mode with R1=220 ohms, R2= 150 ohms and C1=1 uF. As we know, the frequency of operation of the IC 555 in astable mode depends on the values of R1, R2 and C1. By calculating the frequency of the given astable circuit, we get the frequency to be around 1.18KHz. The frequency at which it operates is in the audio frequency.

The 1K Resistor R3 whose ends are connected to pin-4 and ground disables the circuit by default and it enables when the water reaches its full level when the probes get dipped in water.

The two probes which are shown in the circuit should be kept at the high level for the water. The astable multivibrator in the circuit is normally disabled and it gets enabled only when the probes touch the water. The distance between the probes

should be less than a few centimeters to ensure that the conduction between the probes will take place when water is touched to these probes. When the water level rises to the height of the probes, then the 555 circuit will get enabled and the output of the 555 timer produces a square wave output with a frequency of about 1.18Khz. This output is given to the mini loudspeaker which then beeps at an audio frequency of 1.18KHz.

Source: http://www.electronicshub.org/water-level-alarm-using-555-timer/