

WATER LEVEL INDICATOR SYSTEM USING NOT GATE

INTRODUCTION

Prevent overflow and dry-run of tanks by automatically indicating high/low water levels and switching a pump when needed — using very simple logic (an inverter/NOT gate).

WORKING

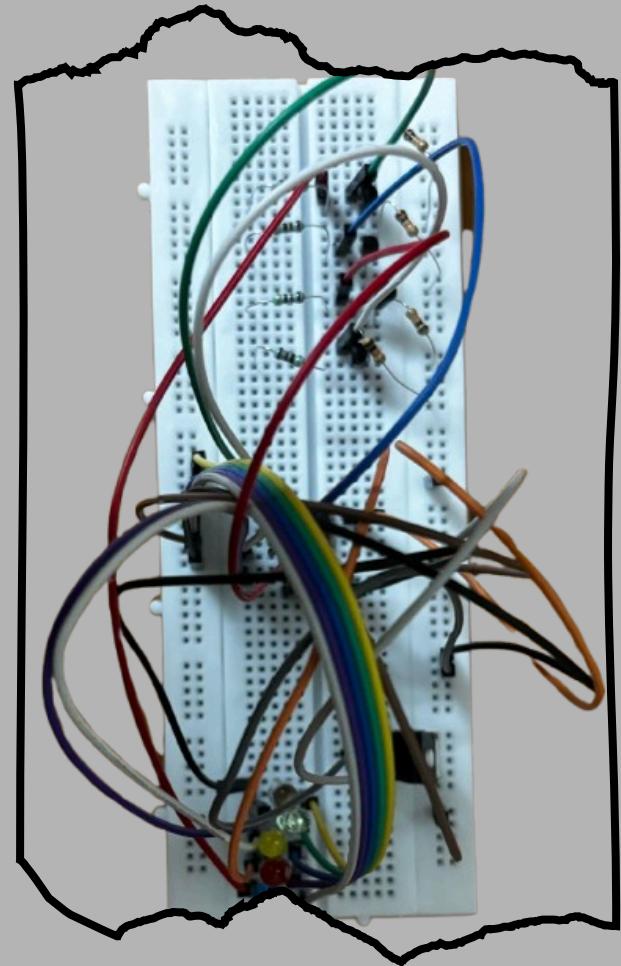
A pure-logic circuit using a NOT gate (inverter) reads a water-level sensor and drives indicators and a pump driver (via a transistor/relay). When the “Low” sensor is not detecting water, the NOT gate output goes HIGH and turns the pump ON; when the “High” sensor detects water, it disables the pump.

WHY NOT GATE

1. Inversion: The NOT gate inverts the sensor input, allowing the pump to turn ON when the low-level sensor detects dry conditions and OFF when water is present.
2. Simple logic: The NOT gate provides a straightforward logic operation, making it easy to design and implement.
3. Low component count: Using a NOT gate minimizes the number of components required, reducing complexity and cost.

COMPONENTS REQUIRED

- | | |
|--------------------------------|--------------------------------|
| 1) IC 7404 | 6) LED |
| 2) BC 547 Transistor. | 7) 9v Battery |
| 3) Resistor (10k ohm, 220 ohm) | 8) 7805
(Voltage regulator) |
| 4) Breadboard. | |
| 5) Jumper Wire. | |



CONCLUSION

This simple water level controller utilizes a NOT gate to automatically manage tank water levels, activating the pump when the level is low and deactivating it when the water reaches the desired level, preventing dry running and overflow.