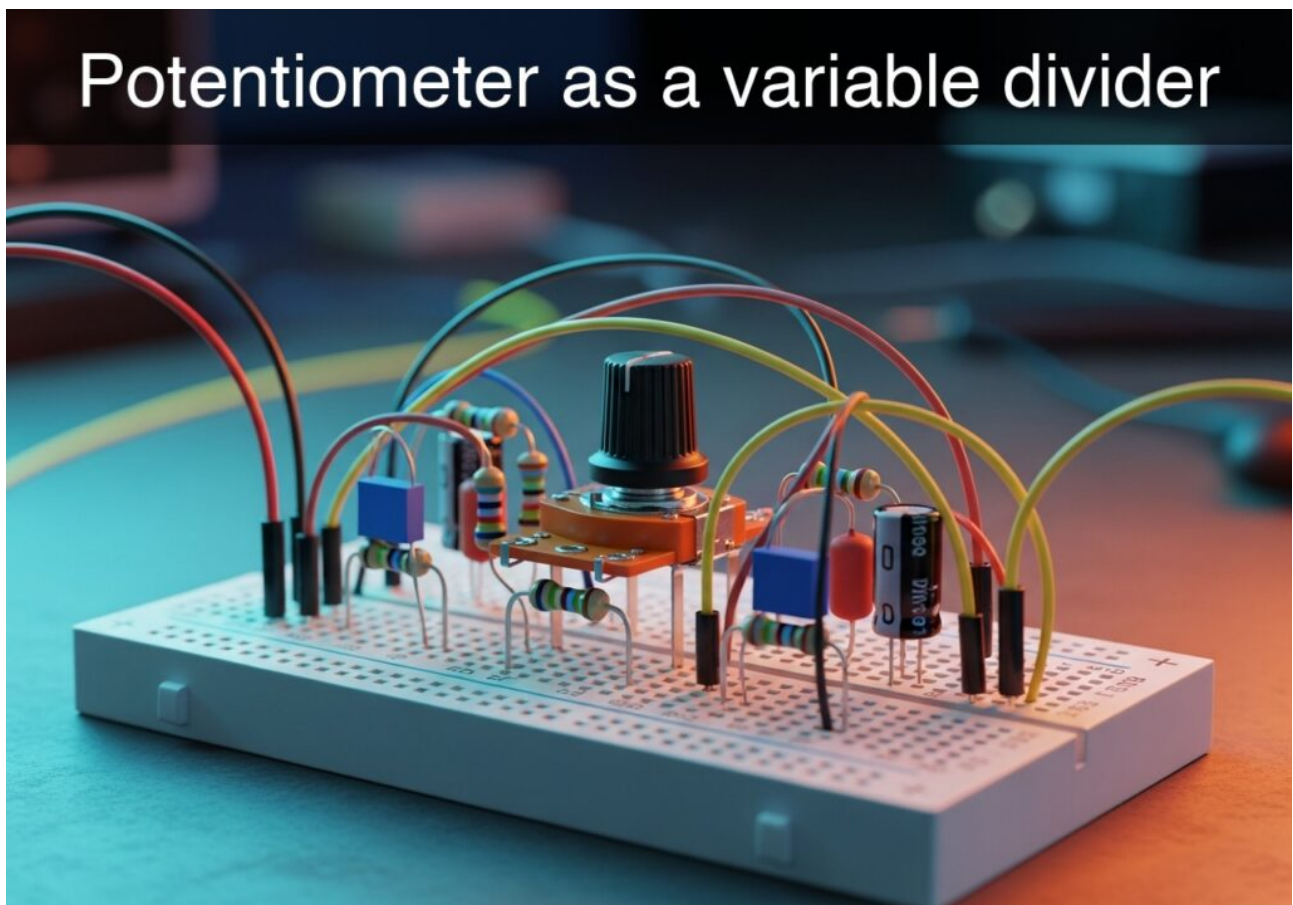


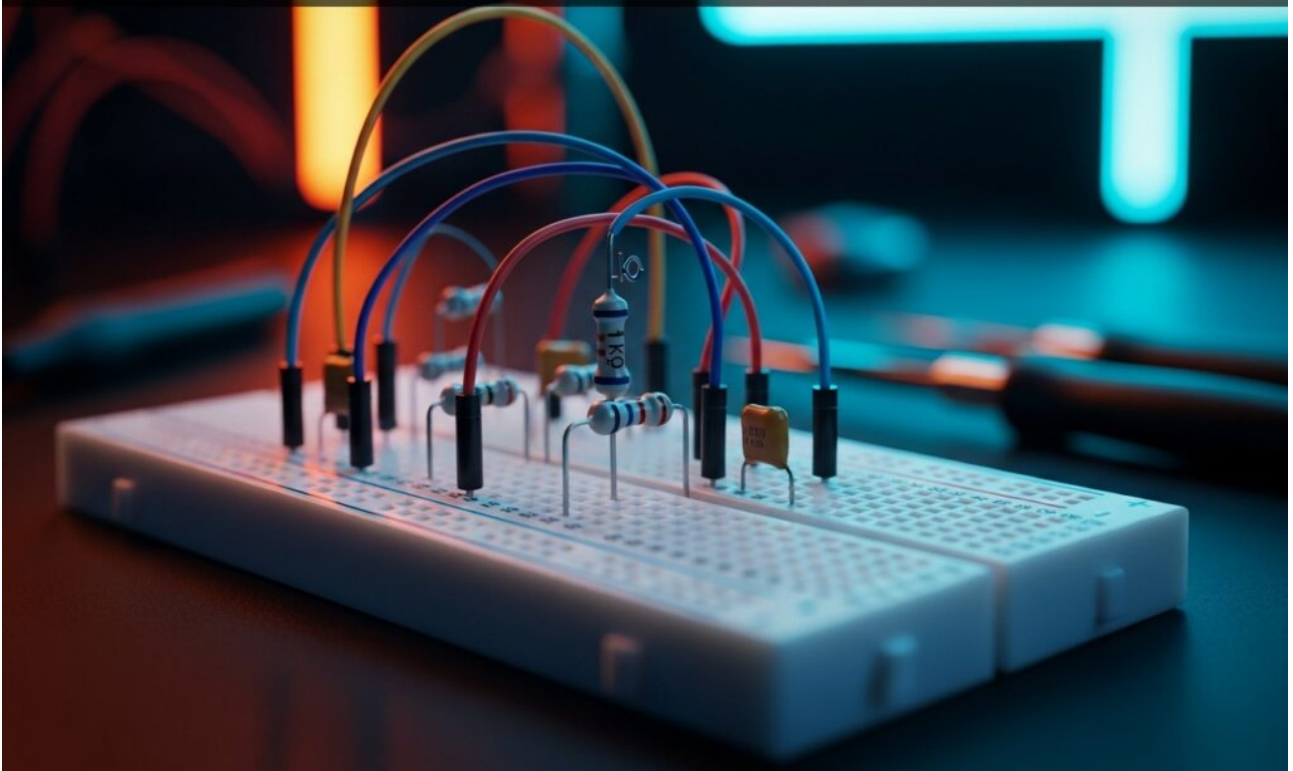
Practical case: Potentiometer as a variable divider



Master Analog Electronics basics by building a variable voltage divider. Use a potentiometer as a variable Resistor to control output signals from 0V to 5V.

Practical case: Series and parallel resistors

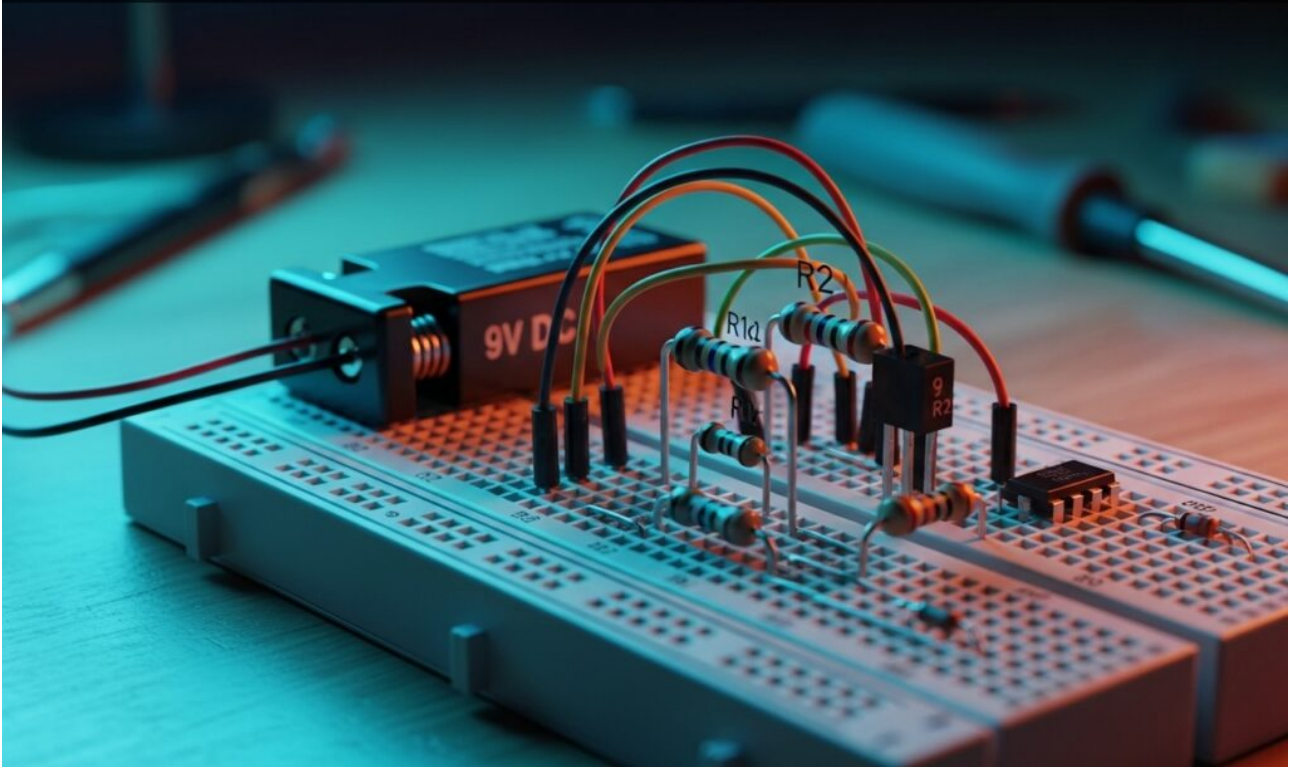
Series and parallel resistors



Master Analog Electronics basics by building series and parallel Resistor circuits. Measure equivalent resistance to design precise voltage dividers and loads.

Practical case: Simple voltage divider

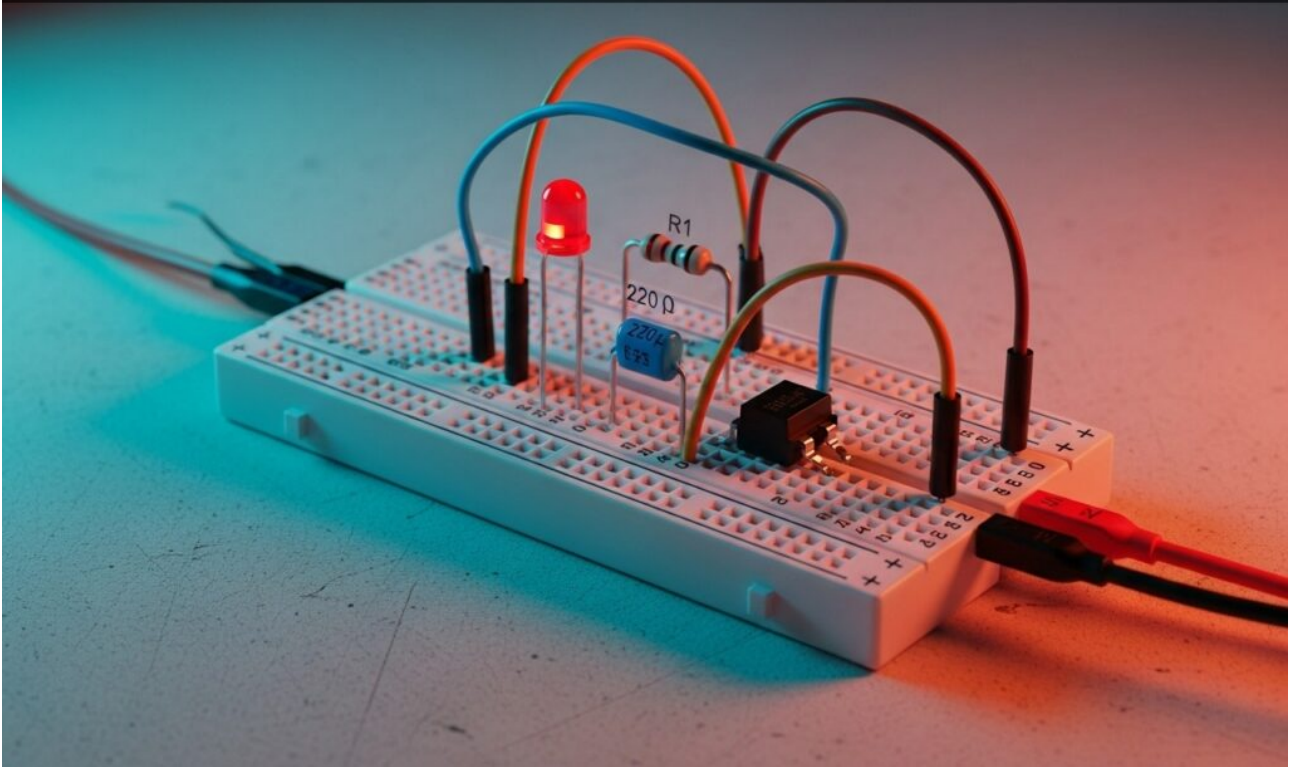
Simple voltage divider



Master Analog Electronics by building a voltage divider with a Resistor pair. Learn to step down 9V to 4.5V for sensor interfacing and verify the output ratio.

Practical case: Current limiting in an LED

Current limiting in an LED



Master Analog Electronics basics by building a circuit where a Resistor protects an LED. Apply Ohm's Law to limit current and ensure safe, steady illumination.

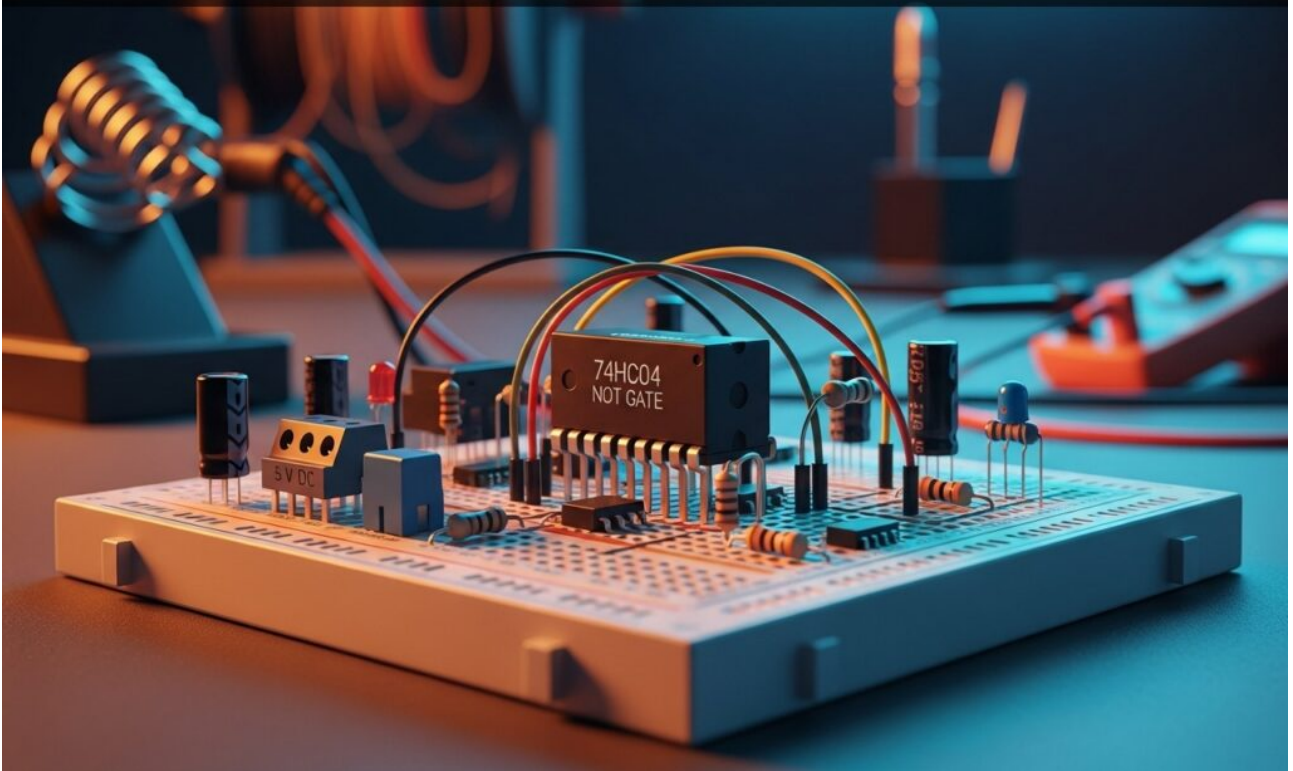
Practical case: Empty Tank Level Indicator

Empty Tank Level Indicator

Master Digital Electronics by building a water level alarm with a NOT gate. Design a circuit that lights an LED when tanks empty, preventing pump damage.

Practical case: Emergency deactivation

Emergency deactivation



Learn Digital Electronics by building a safety kill switch using a NOT gate. Create a circuit where pressing a button instantly cuts the Ready signal voltage.