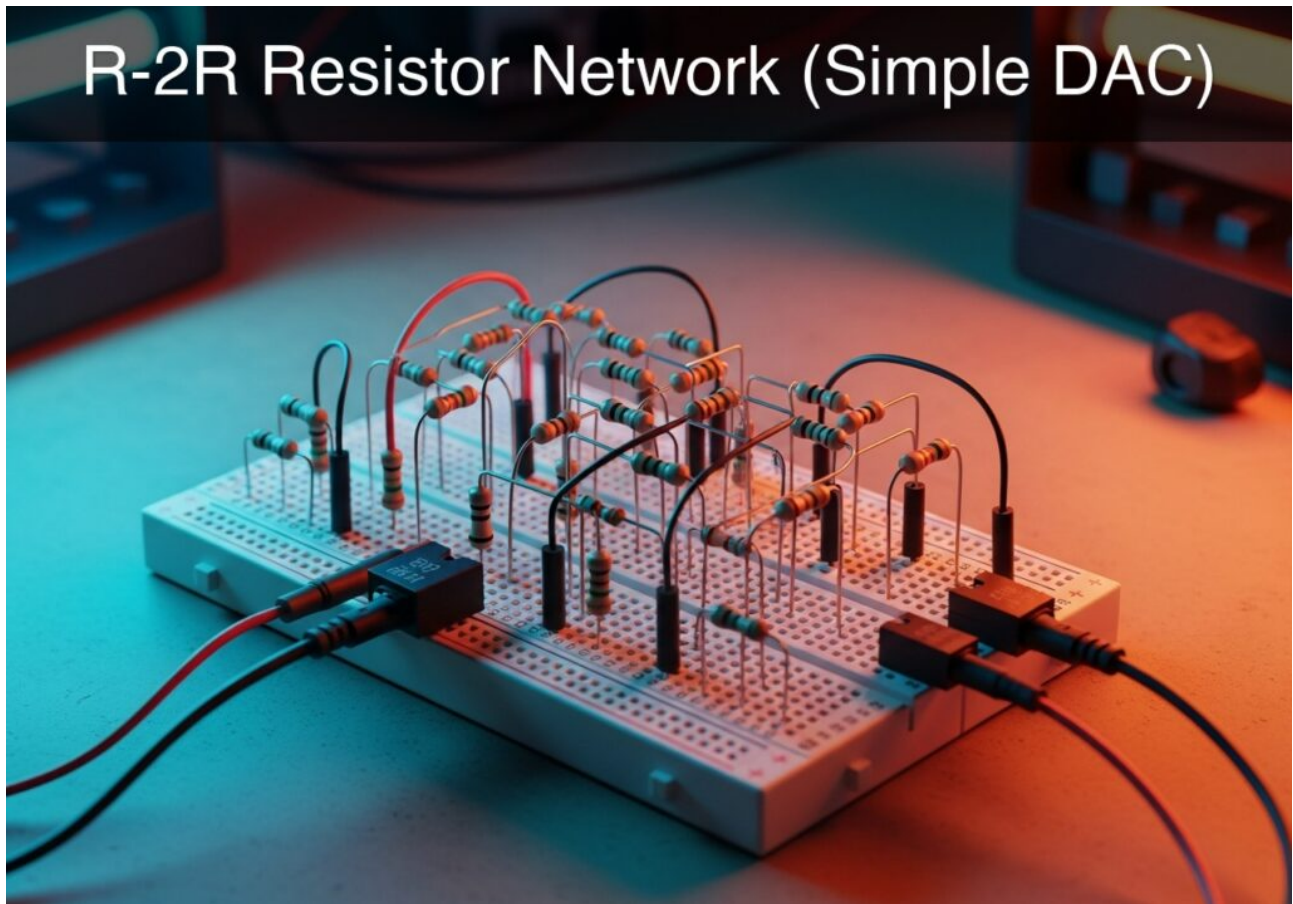


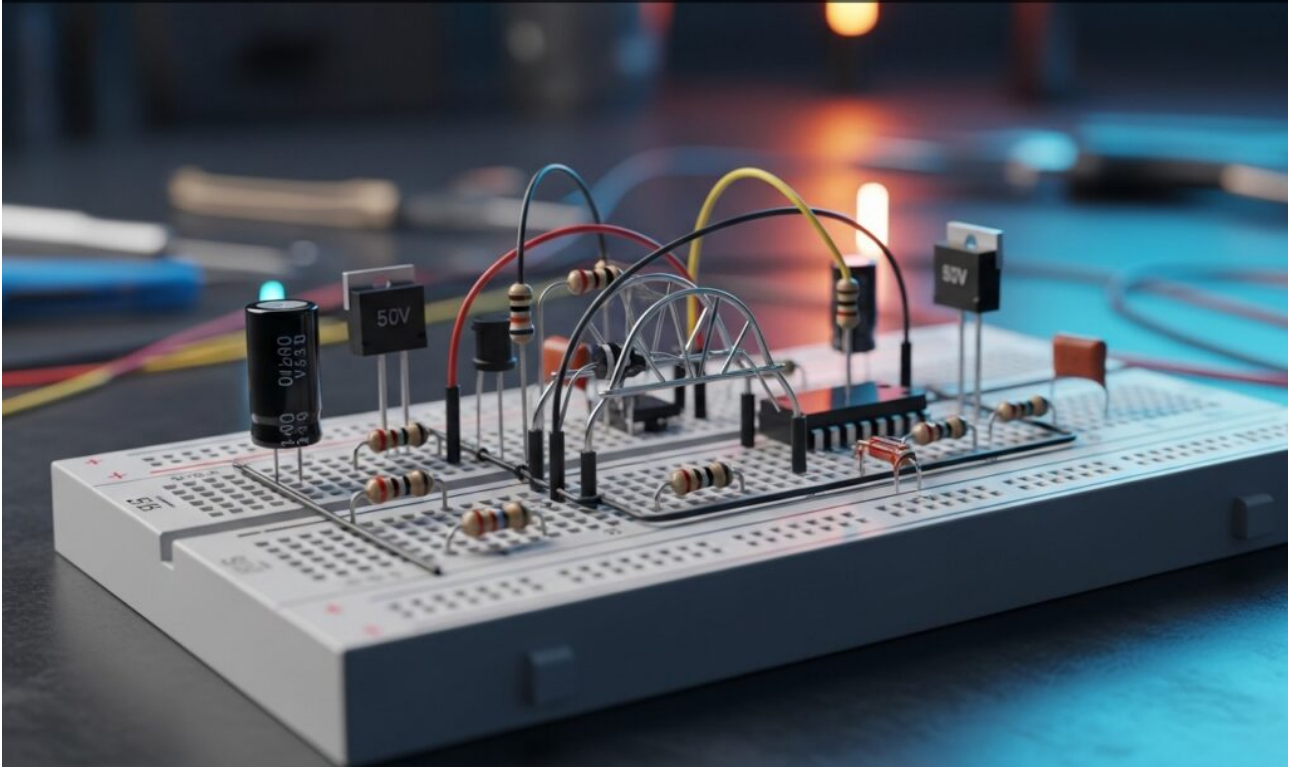
Practical case: R-2R Resistor Network (Simple DAC)



Master Analog Electronics by building a 4-bit DAC using a Resistor ladder. Create precise voltage steps from binary signals for audio synthesis and control.

Practical case: Unbalanced Wheatstone Bridge

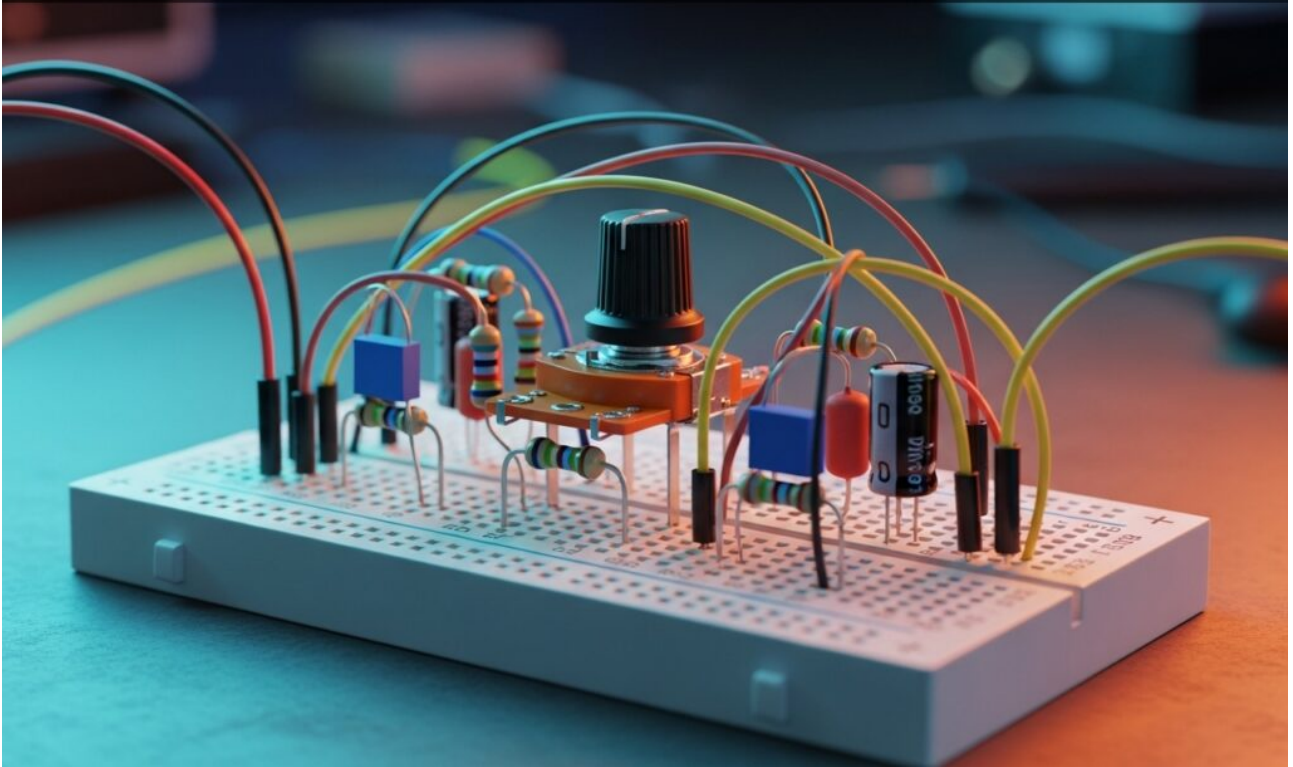
Unbalanced Wheatstone Bridge



Master Analog Electronics by building a Wheatstone bridge with a Resistor sensor. Measure precise differential voltage changes and calibrate zero-point offsets.

Practical case: Potentiometer as a variable divider

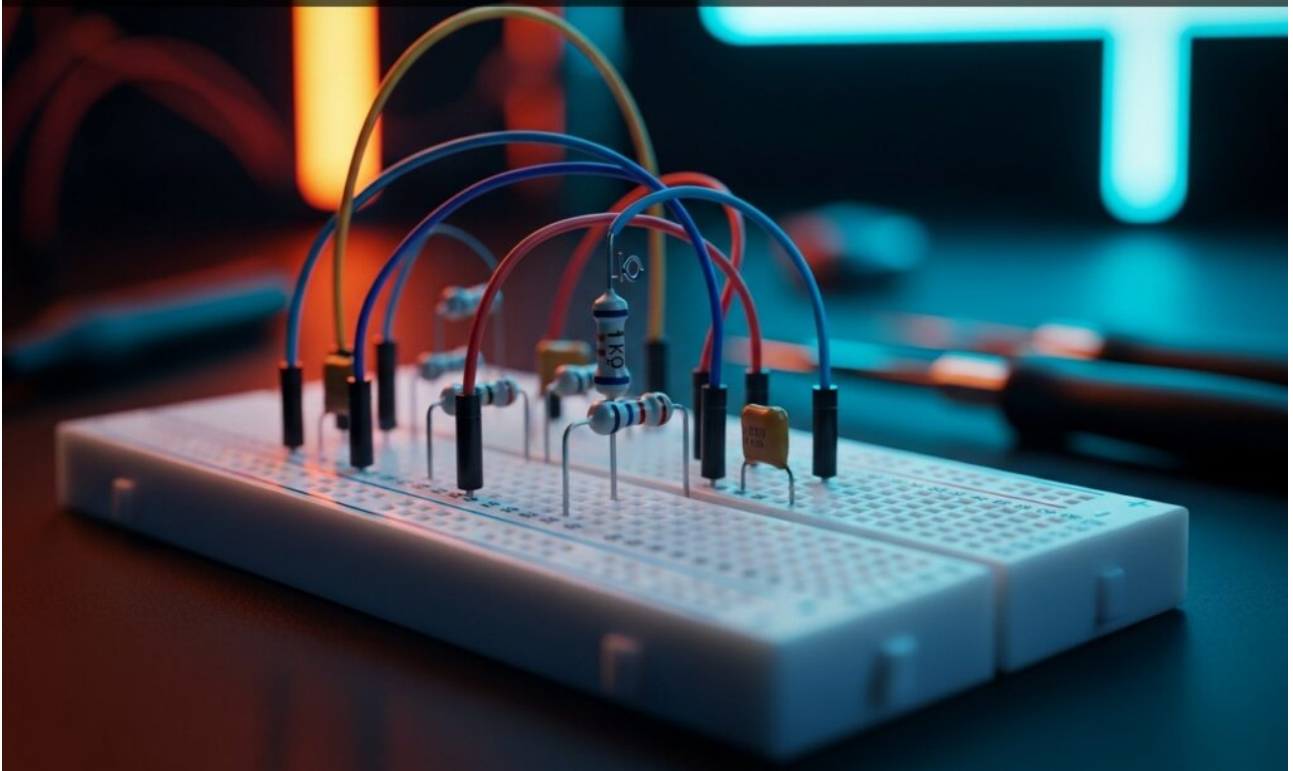
Potentiometer as a variable divider



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

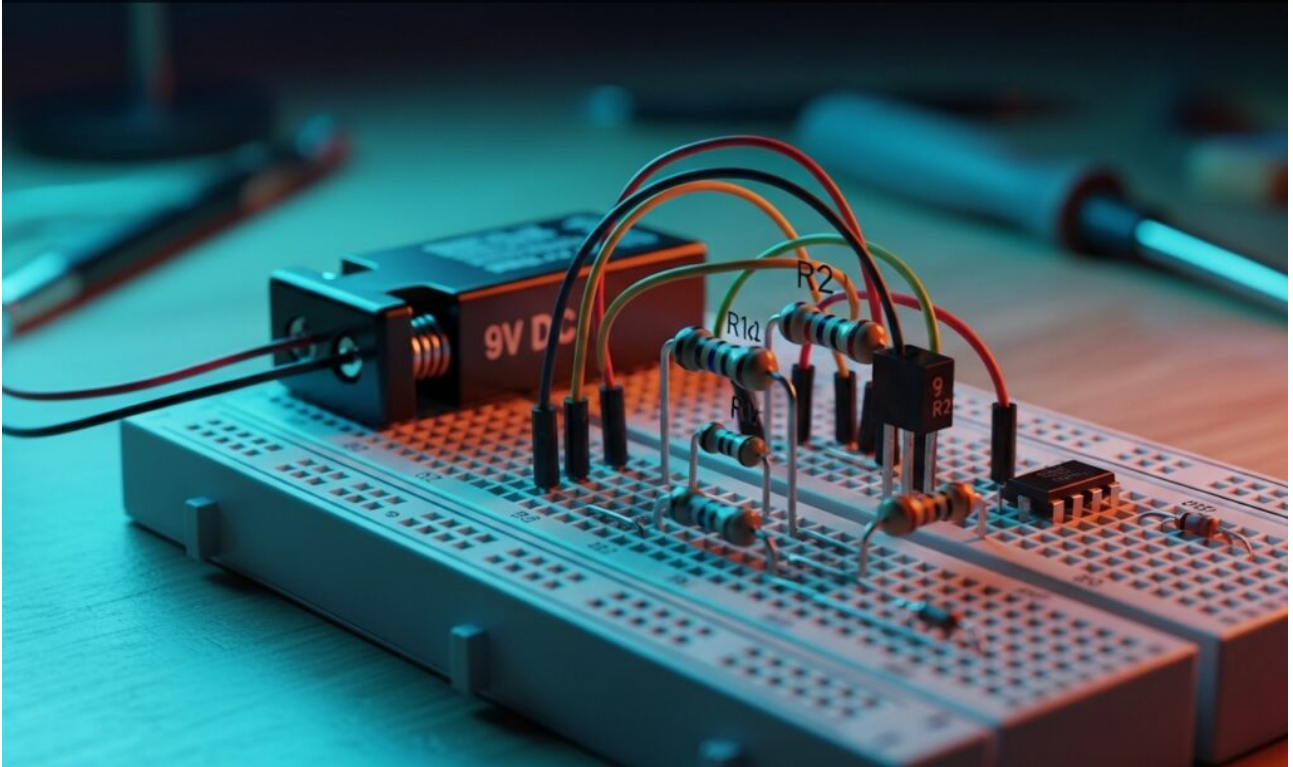
Series and parallel resistors



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

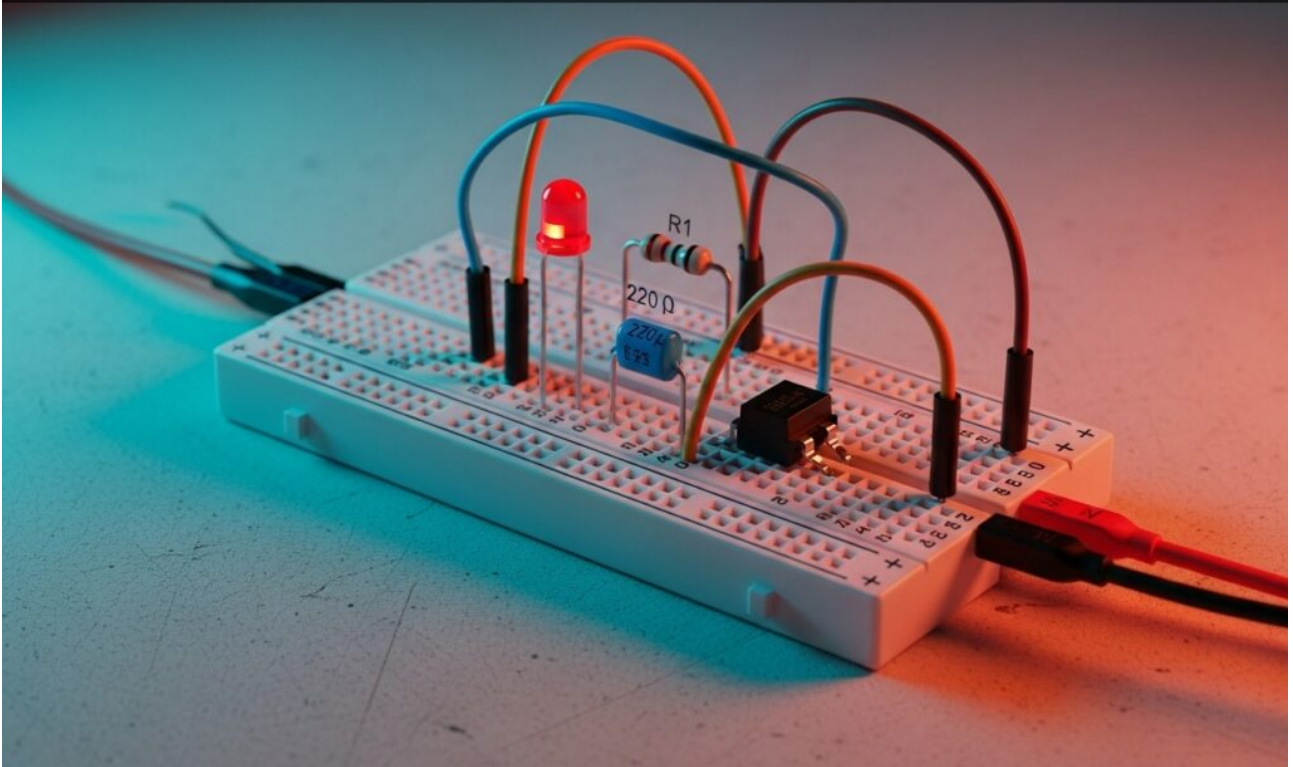
Simple voltage divider



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.