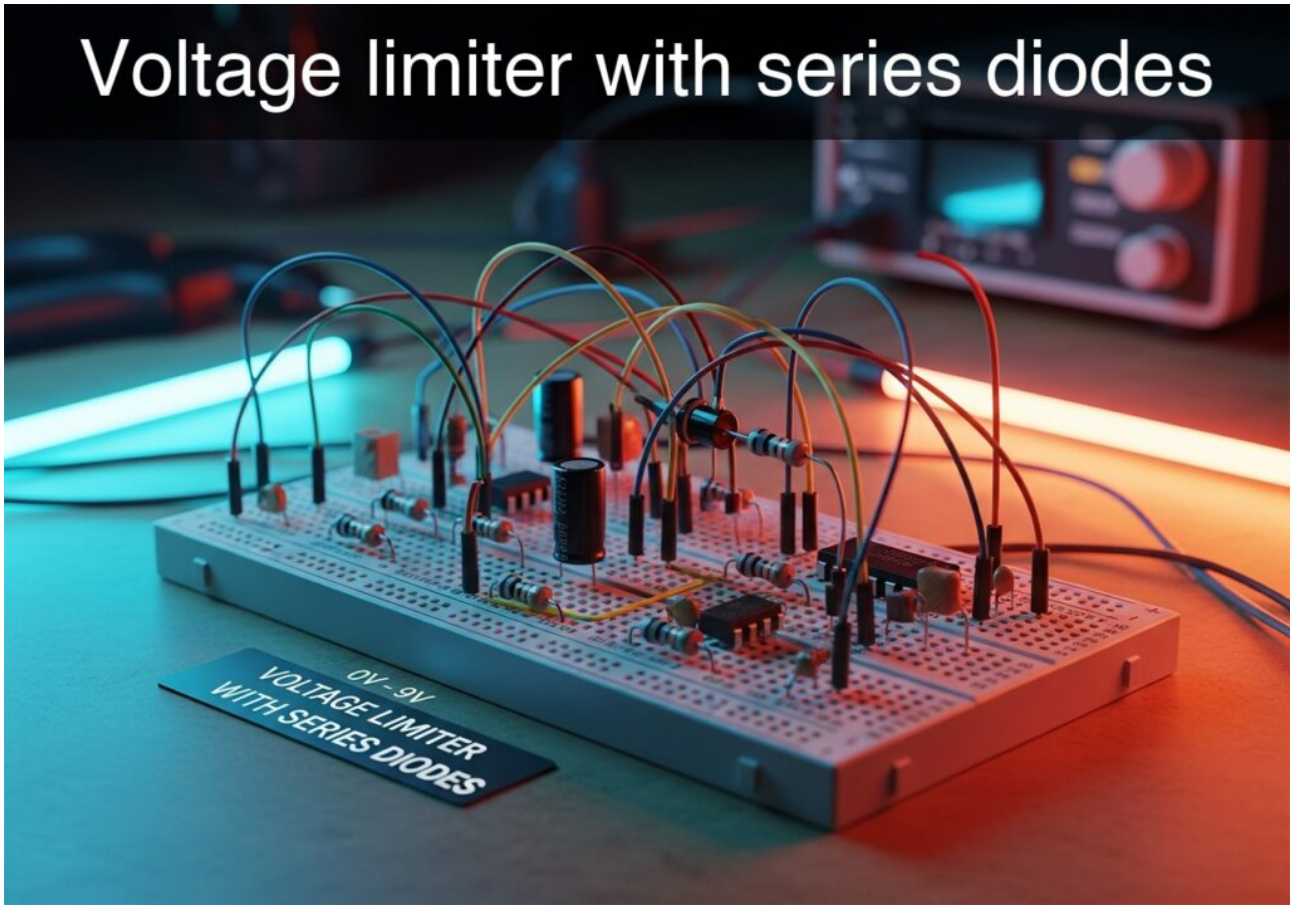
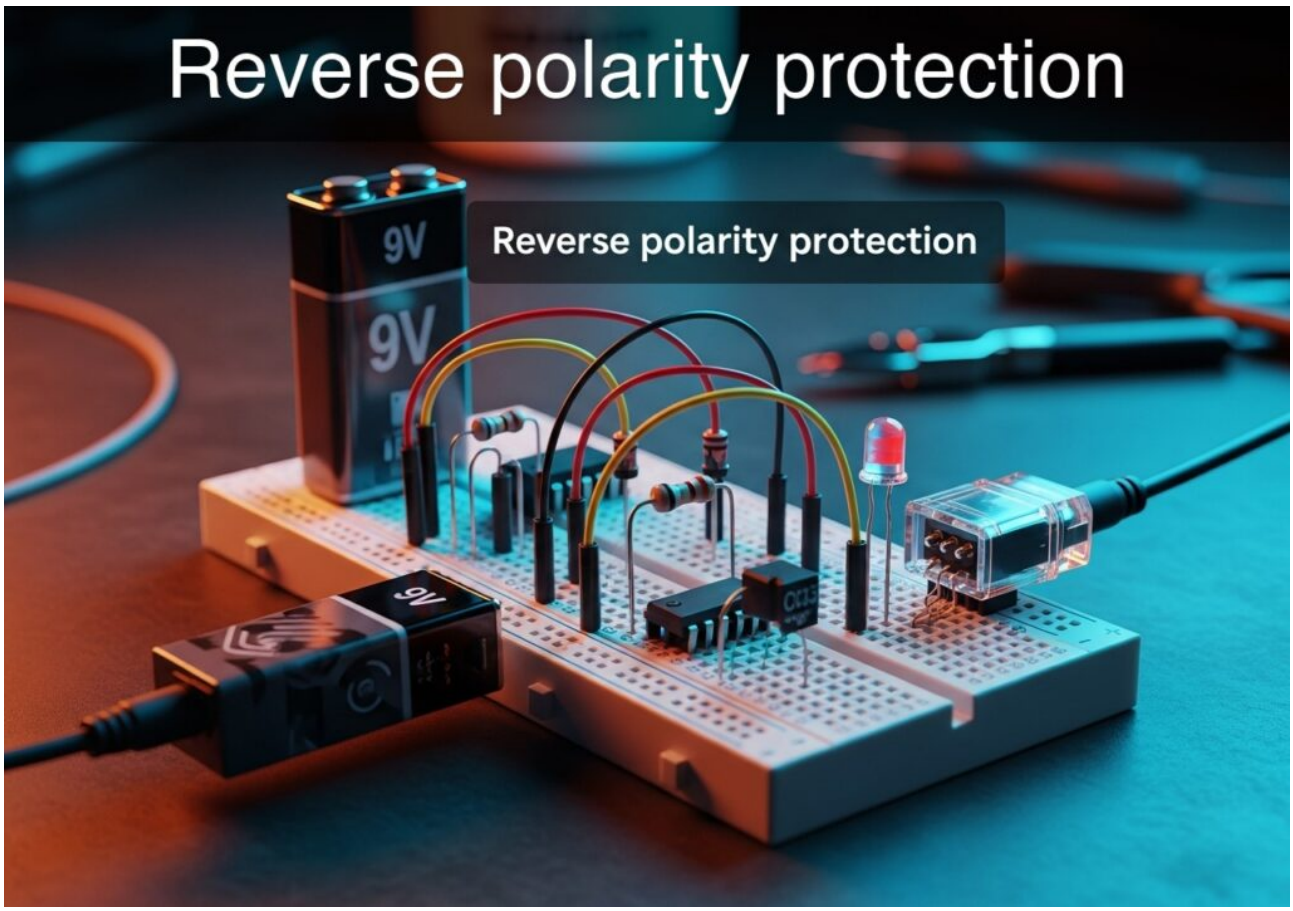
Practical case: Voltage limiter with series diodes



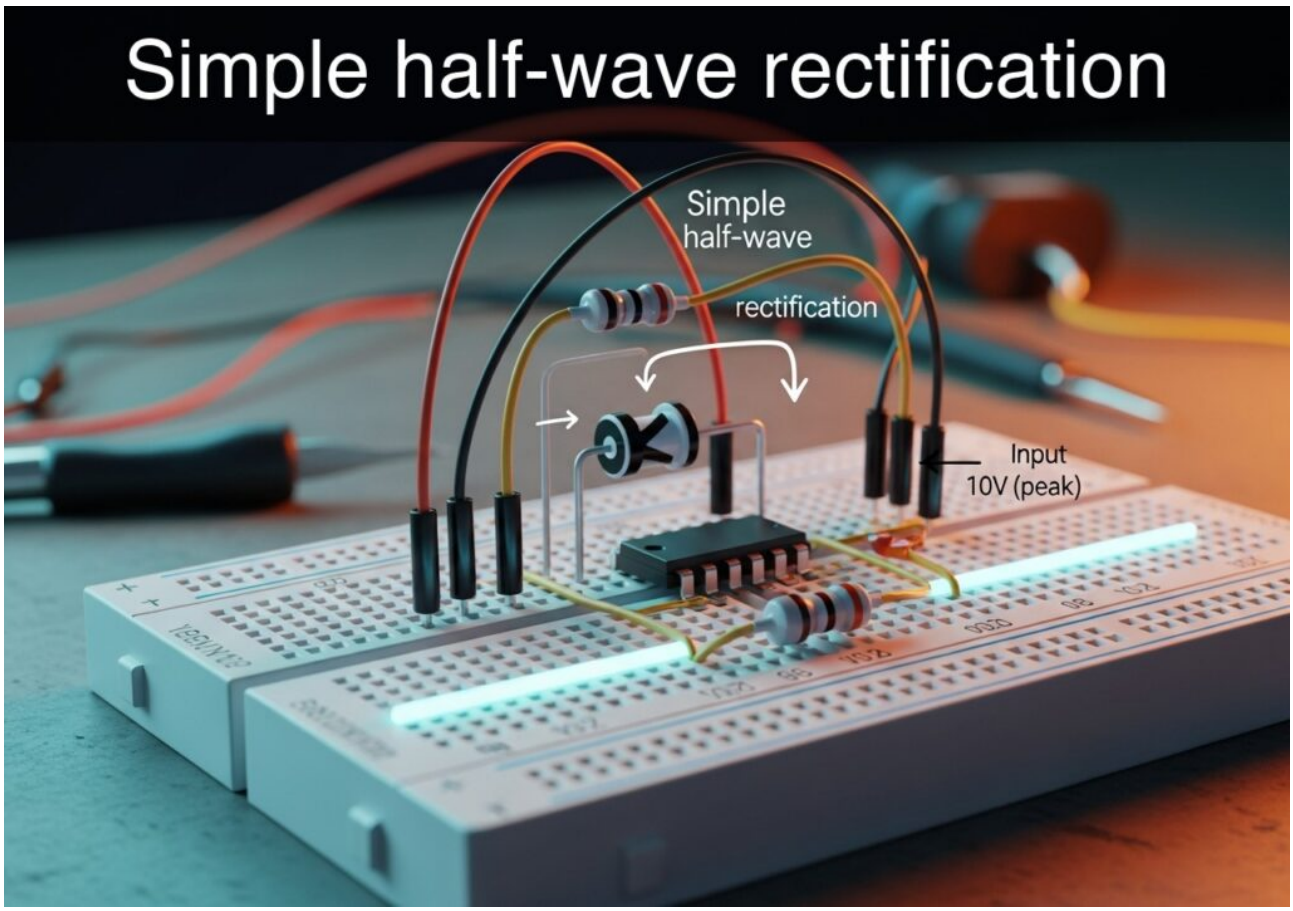
Master Analog Electronics by building a voltage limiter with a simple Diode circuit. Protect inputs and clamp signals to 2.1V for safe, stable output results.

Practical case: Reverse polarity protection



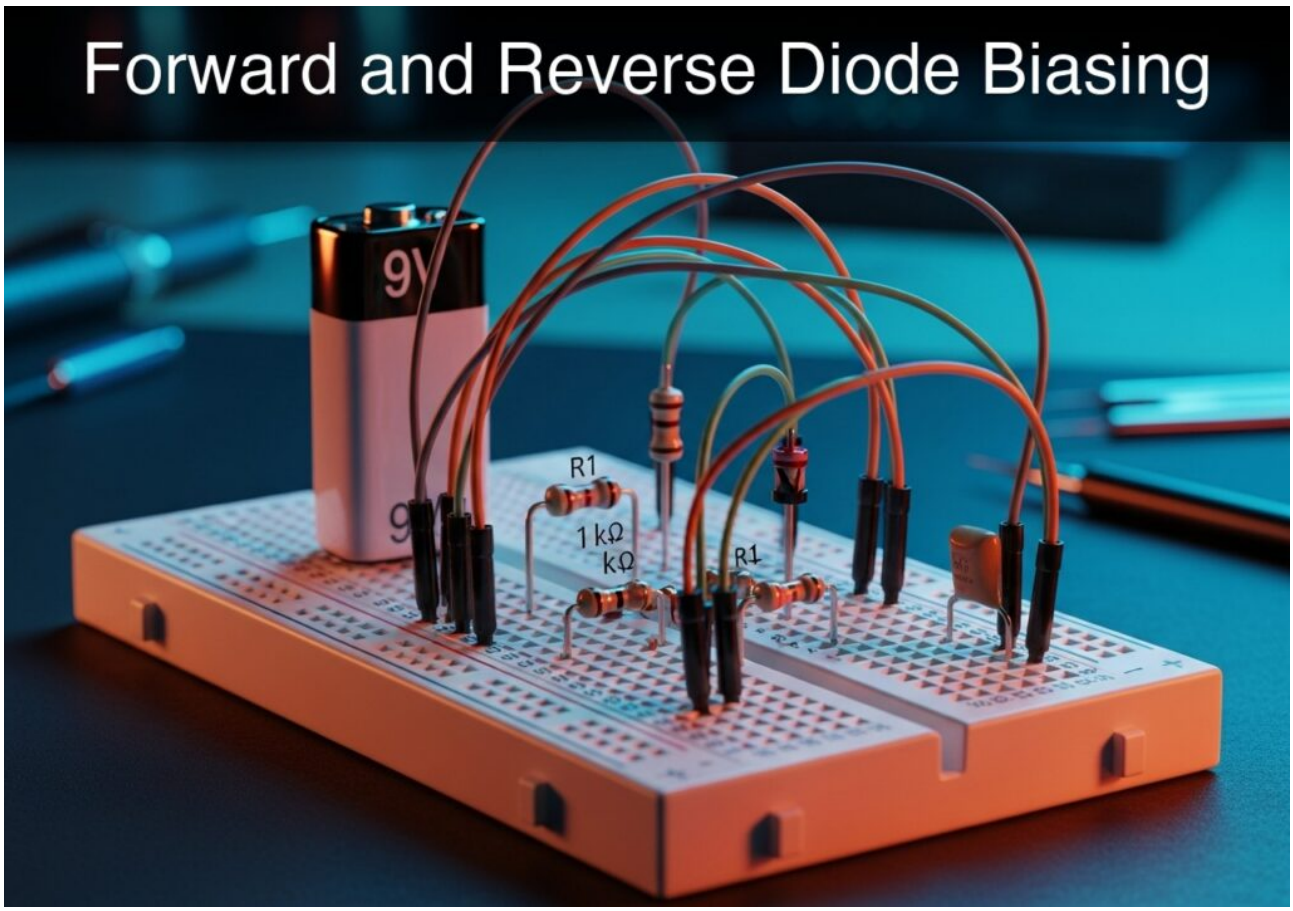
Learn Analog Electronics by building a Diode protection circuit for a DC motor. Prevent damage from reverse polarity and measure the 0.7V voltage drop.

Practical case: Simple half-wave rectification



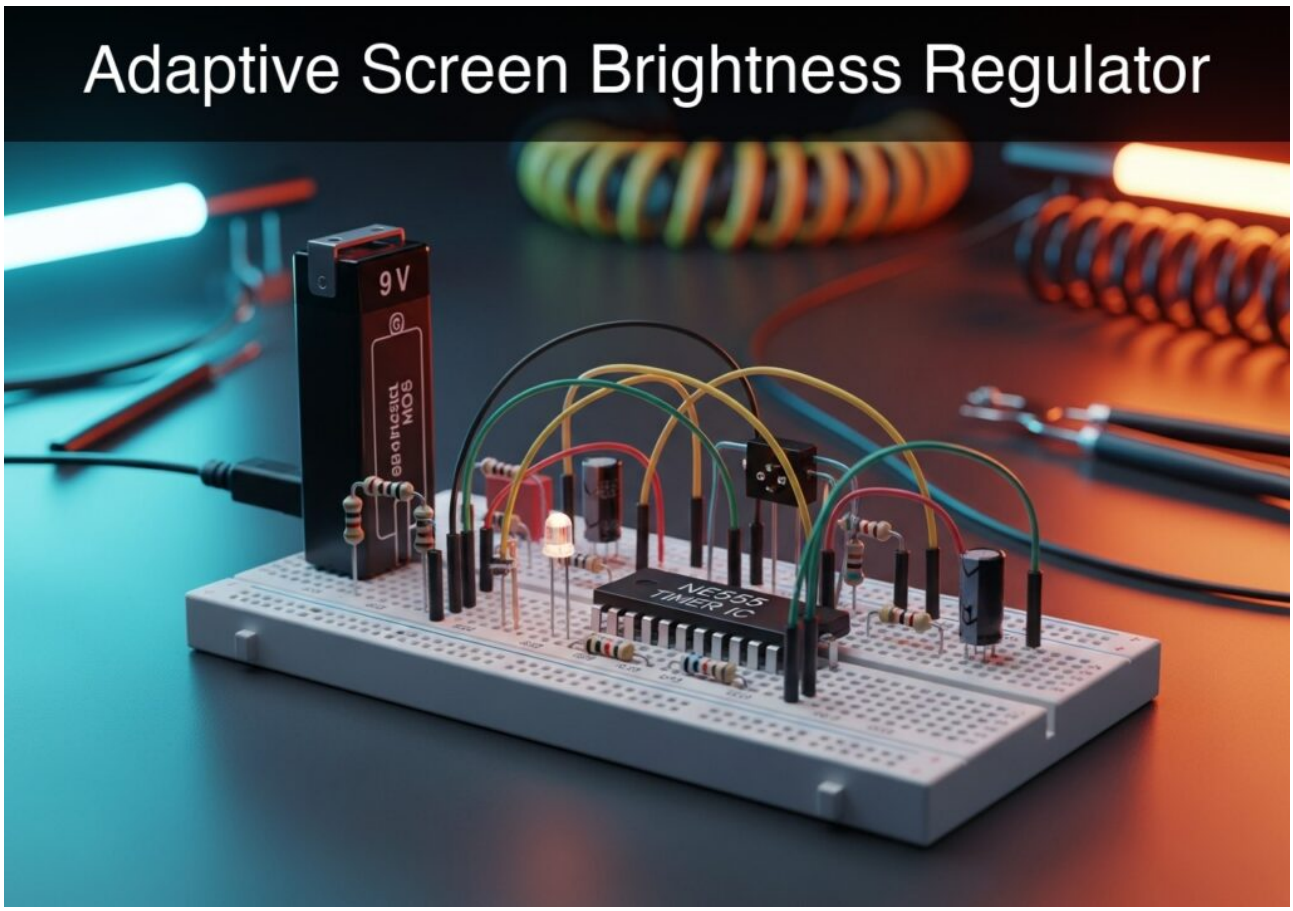
Master Analog Electronics by building a half-wave rectifier using a Diode. Convert AC to pulsating DC and visualize signal clipping on your oscilloscope.

Practical case: Forward and Reverse Diode Biasing



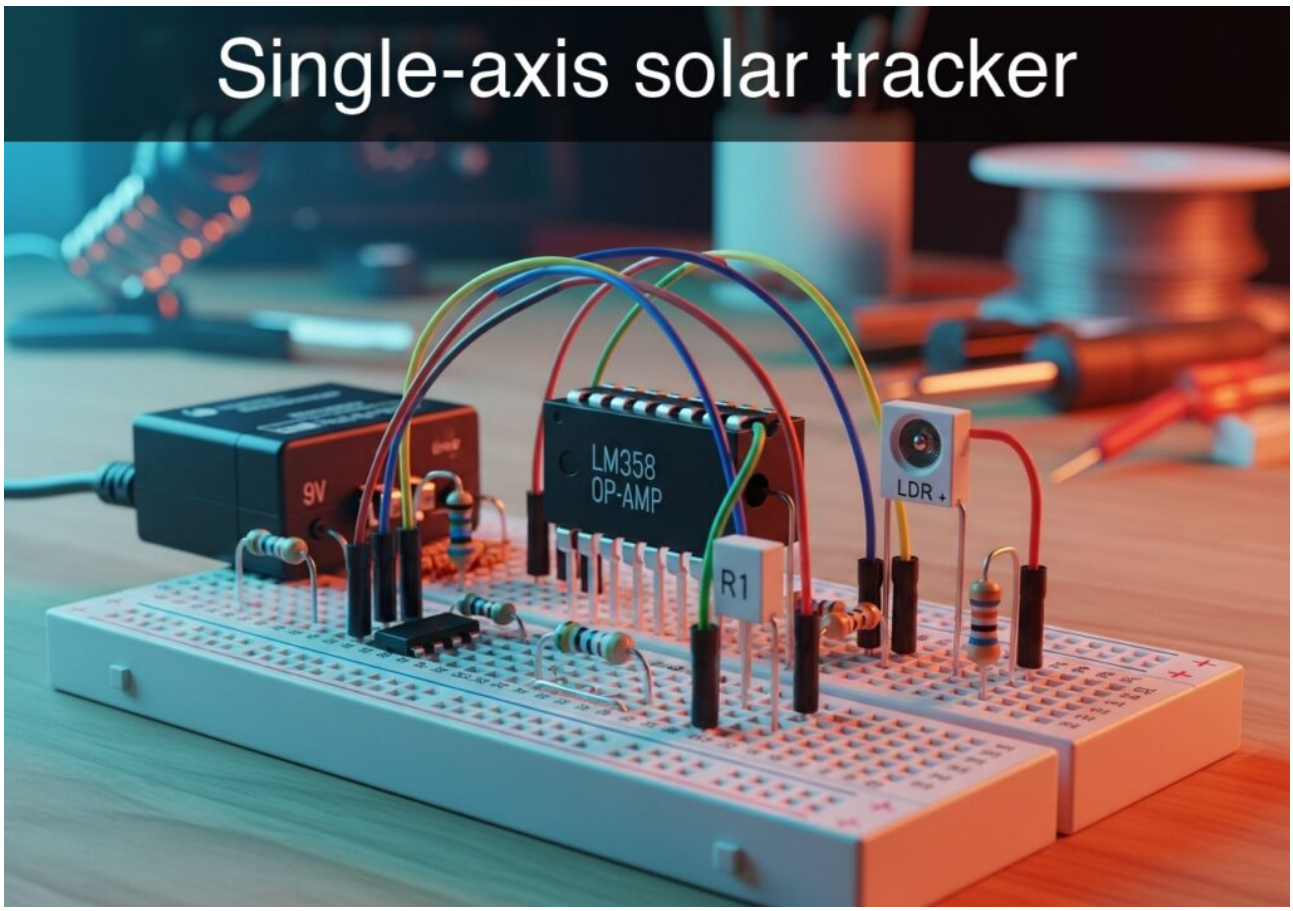
Master Analog Electronics by building a Diode circuit to verify unidirectional current flow. Measure 0.7V drops and block reverse polarity in this lab.

Practical case: Adaptive Screen Brightness Regulator



Master Analog Electronics by building a smart dimmer. Use a Photoresistor and 555 timer to auto-adjust LED brightness via PWM based on ambient light levels.

Practical case: Single-axis solar tracker



Master Analog Electronics by building a sun seeker circuit. Use a Photoresistor pair to drive a motor that actively tracks the brightest light source.