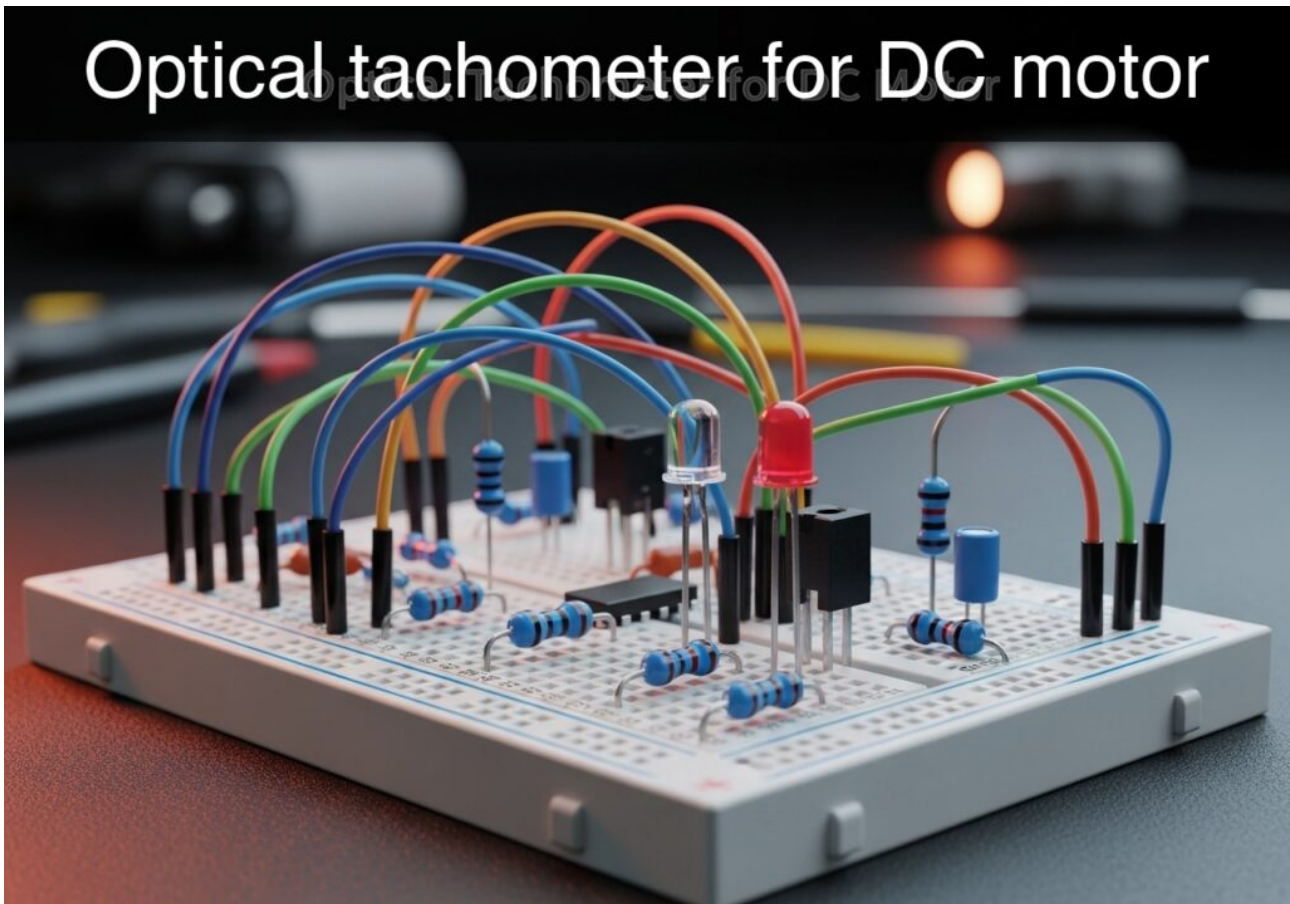


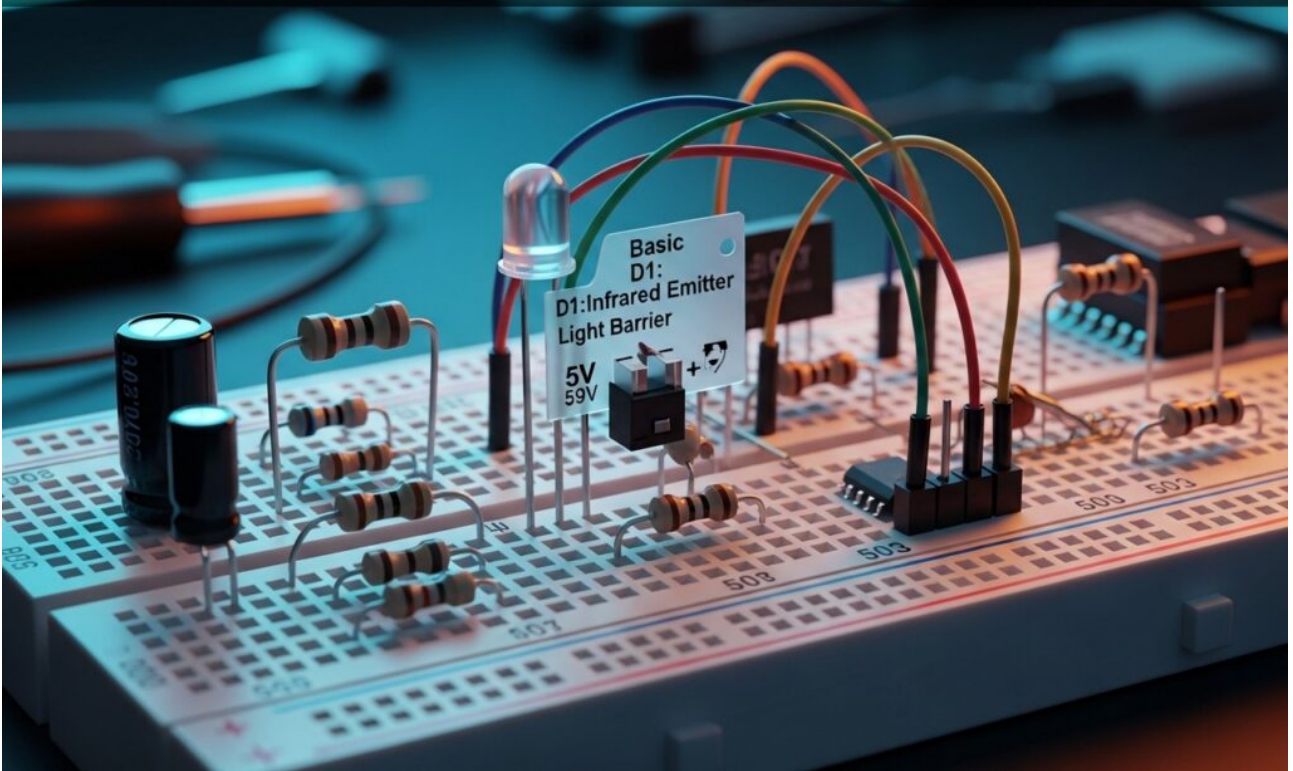
Practical case: Optical tachometer for DC motor



Master Analog Electronics by building a non-contact RPM sensor. Use a Photodiode to detect rotation and generate clean digital pulses for motor speed control.

Practical case: Basic Infrared Light Barrier

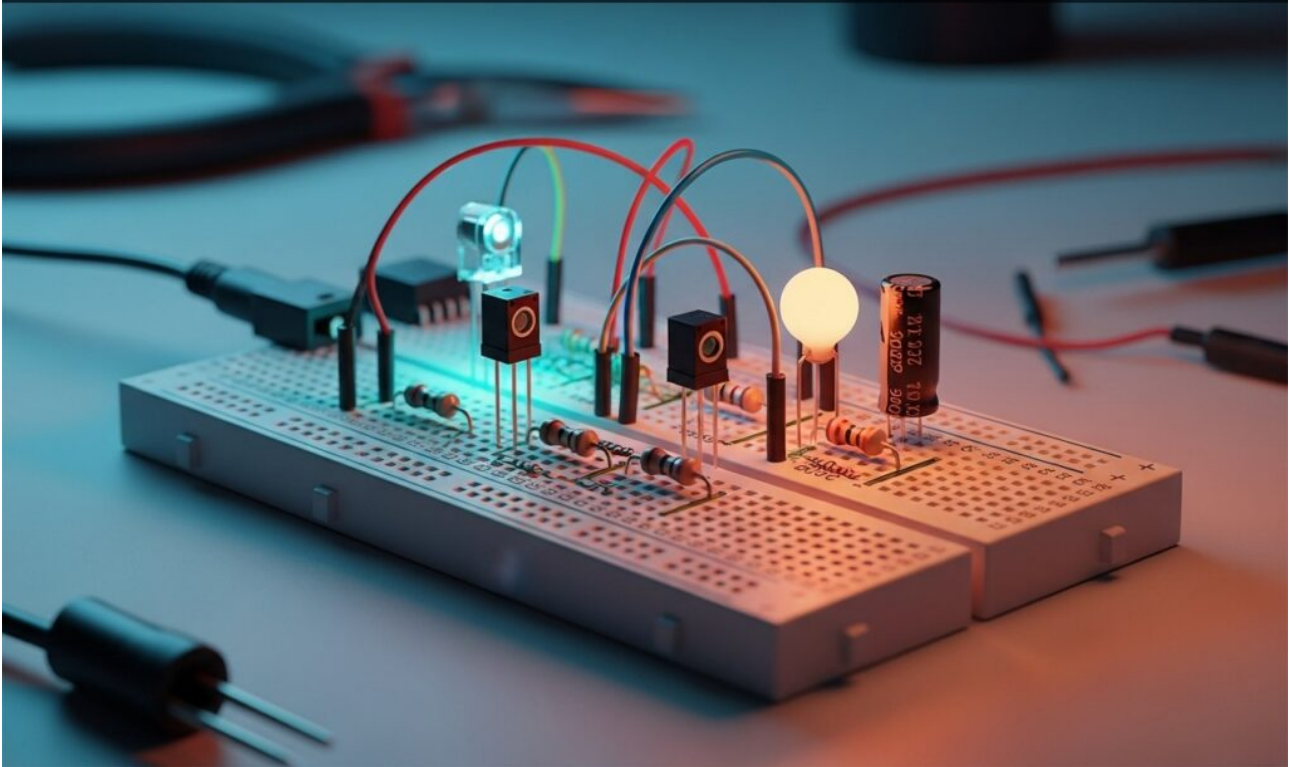
Basic Infrared Light Barrier



Master Analog Electronics by building a light beam alarm. Use a Photodiode to detect interruptions and trigger a 0.7V signal that lights up a security LED.

Practical case: Photodiode vs photoresistor comparison

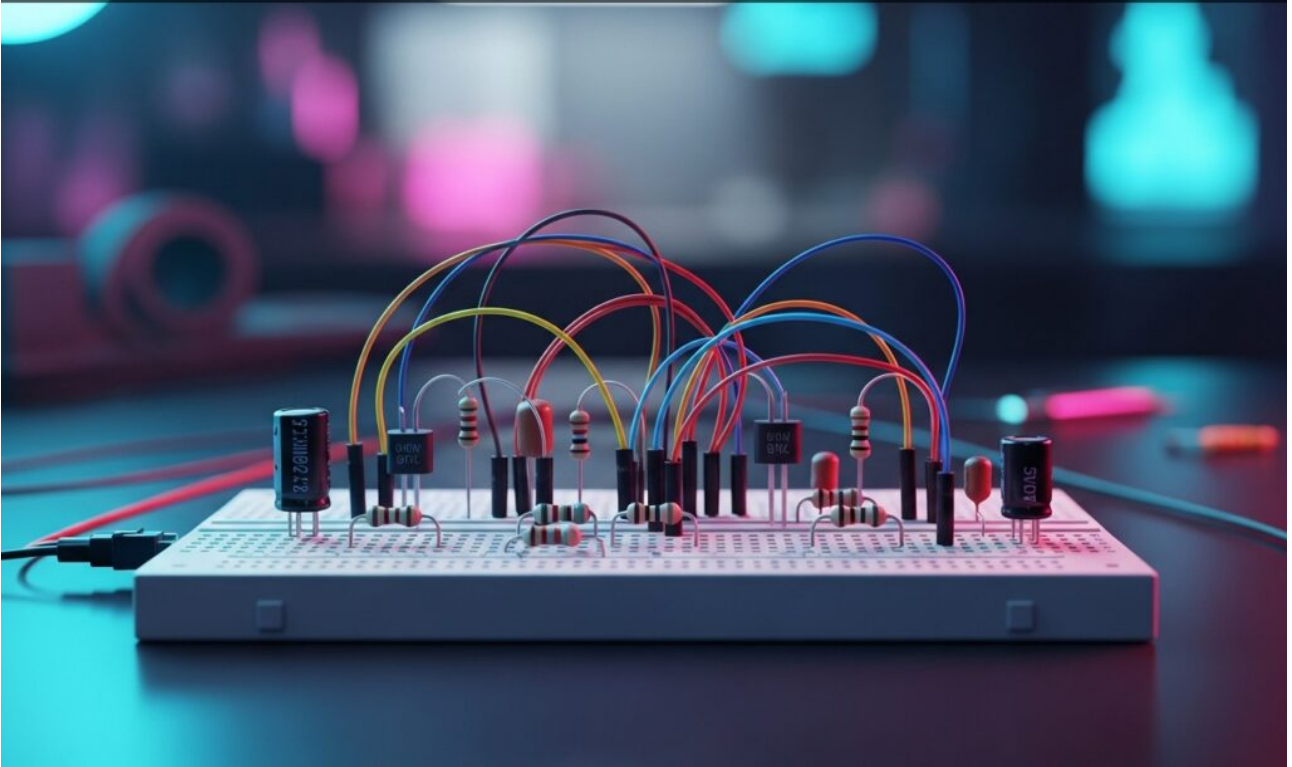
Photodiode vs photoresistor comparison



Master Analog Electronics by comparing sensor speeds. Build a circuit using a Photodiode and LDR to observe sharp square waves versus slow voltage curves.

Practical case: Simple twilight switch

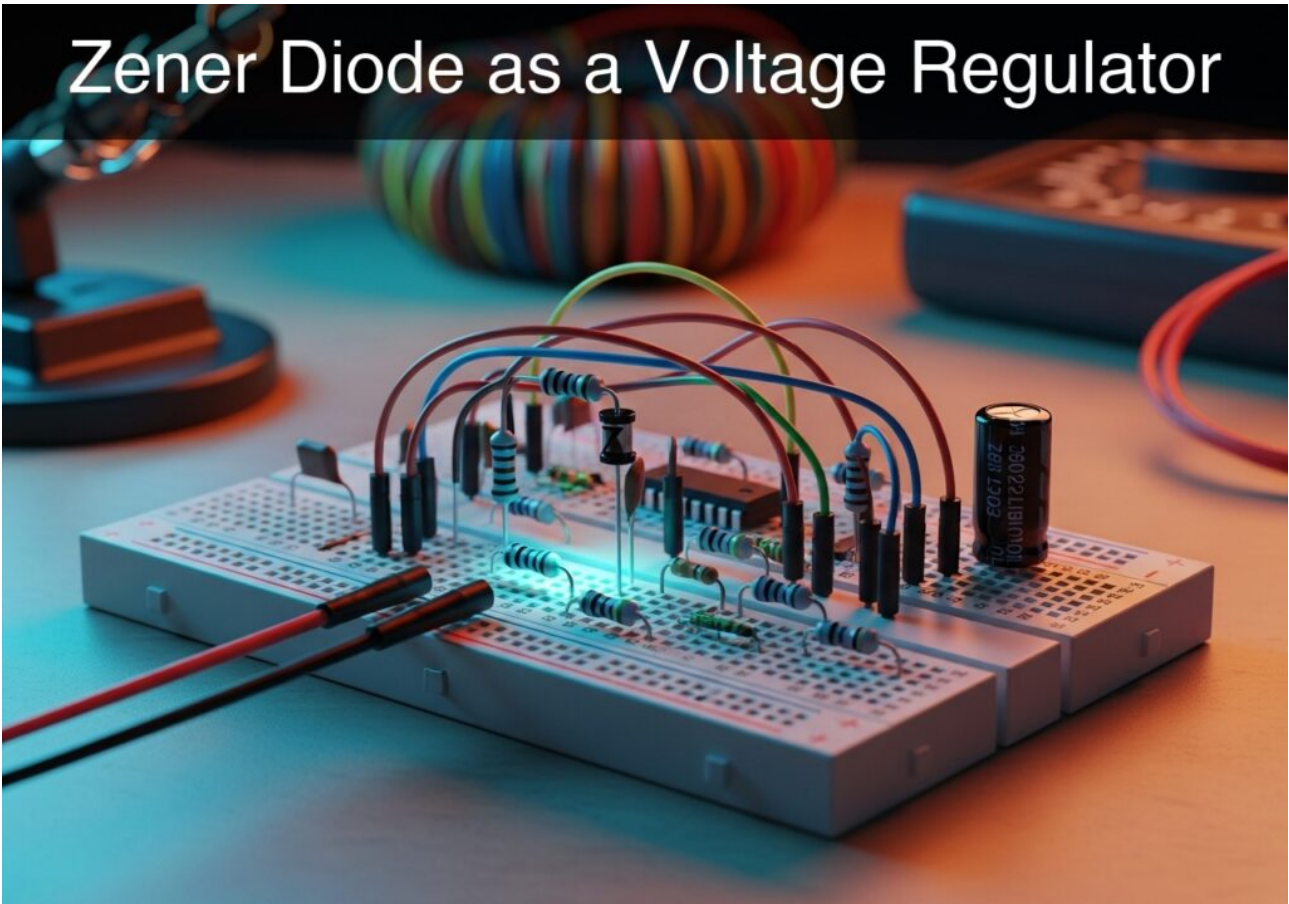
Simple twilight switch



Learn Analog Electronics by building a dark sensor circuit. Use a Photodiode to switch an LED on when light drops, mastering transistor switching logic.

Practical case: Reverse Bias Photodiode Light Detection

Zener Diode as a Voltage Regulator



Master Analog Electronics by designing a Zener Diode voltage stabilizer. Build a circuit to clamp output at 5.1V and protect loads from voltage spikes.