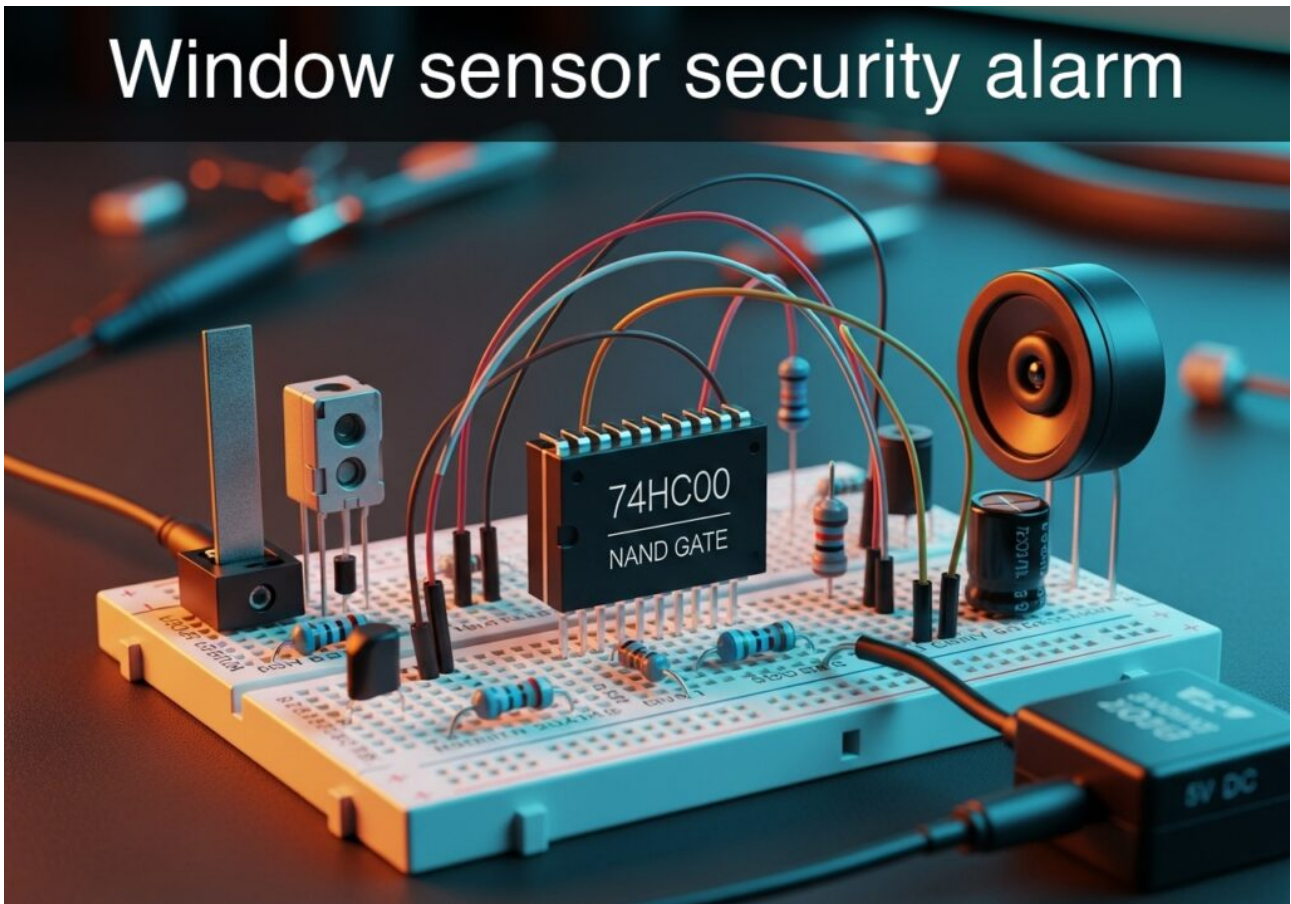


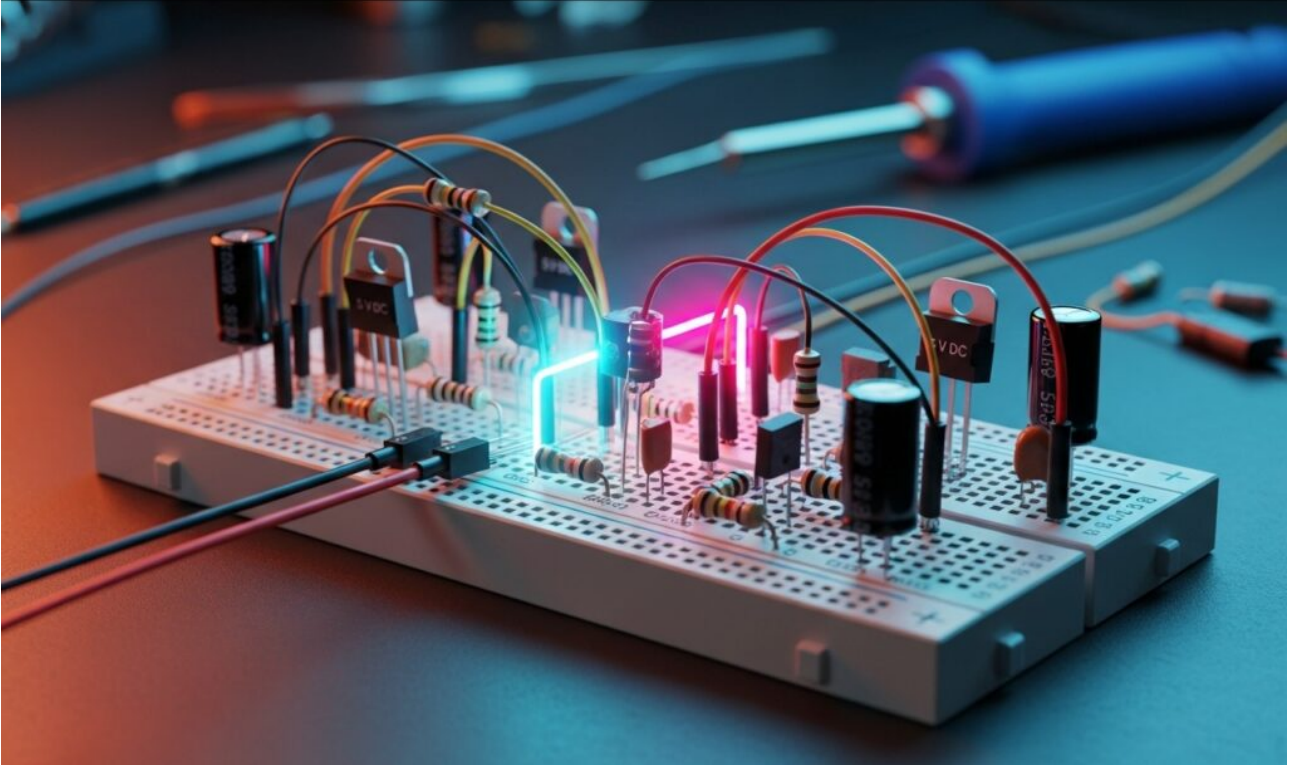
Practical case: Window sensor security alarm



Master Digital Electronics by building a fail-safe alarm with a NAND gate. Detect open windows and trigger a 5V LED signal instantly when security is breached.

Practical case: High power circuit isolation

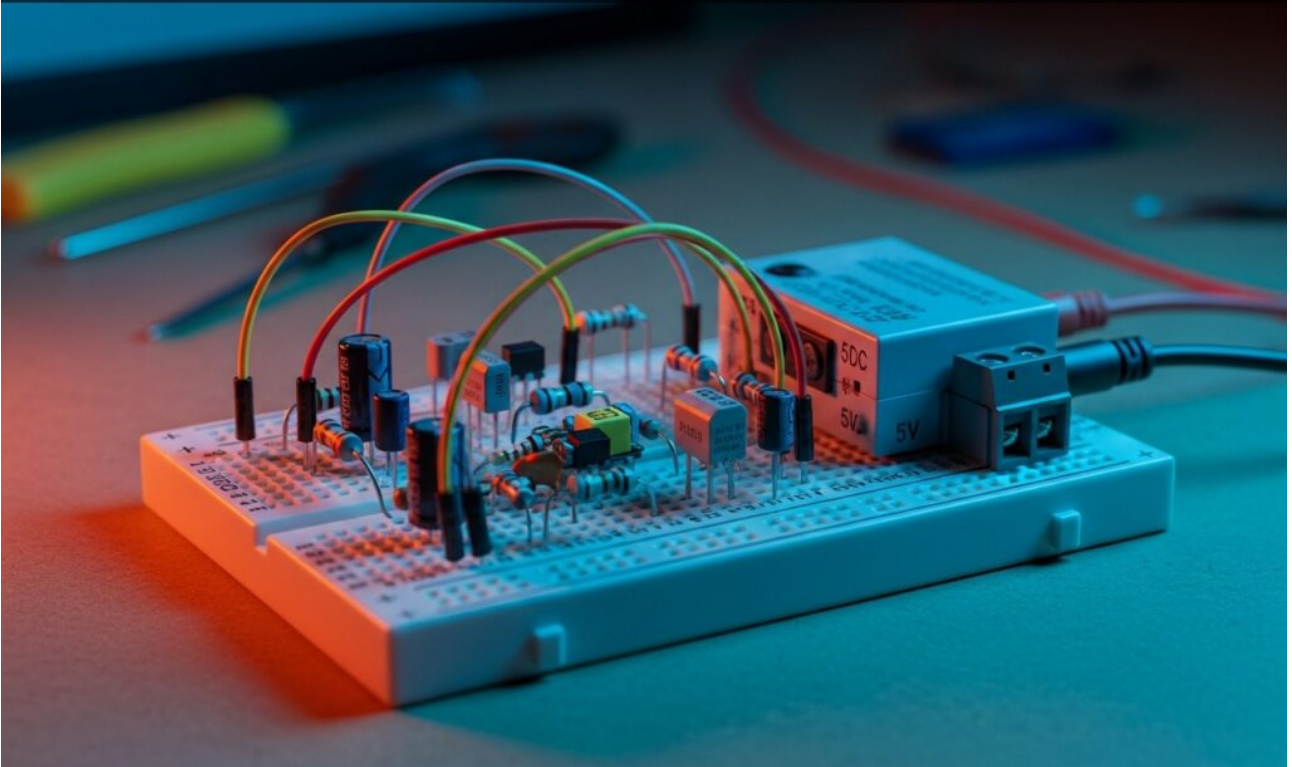
High power circuit isolation



Master Analog Electronics by building a Relay driver circuit. Learn to safely switch high-power loads with low-voltage signals and verify galvanic isolation.

Practical case: DC Motor Reversing

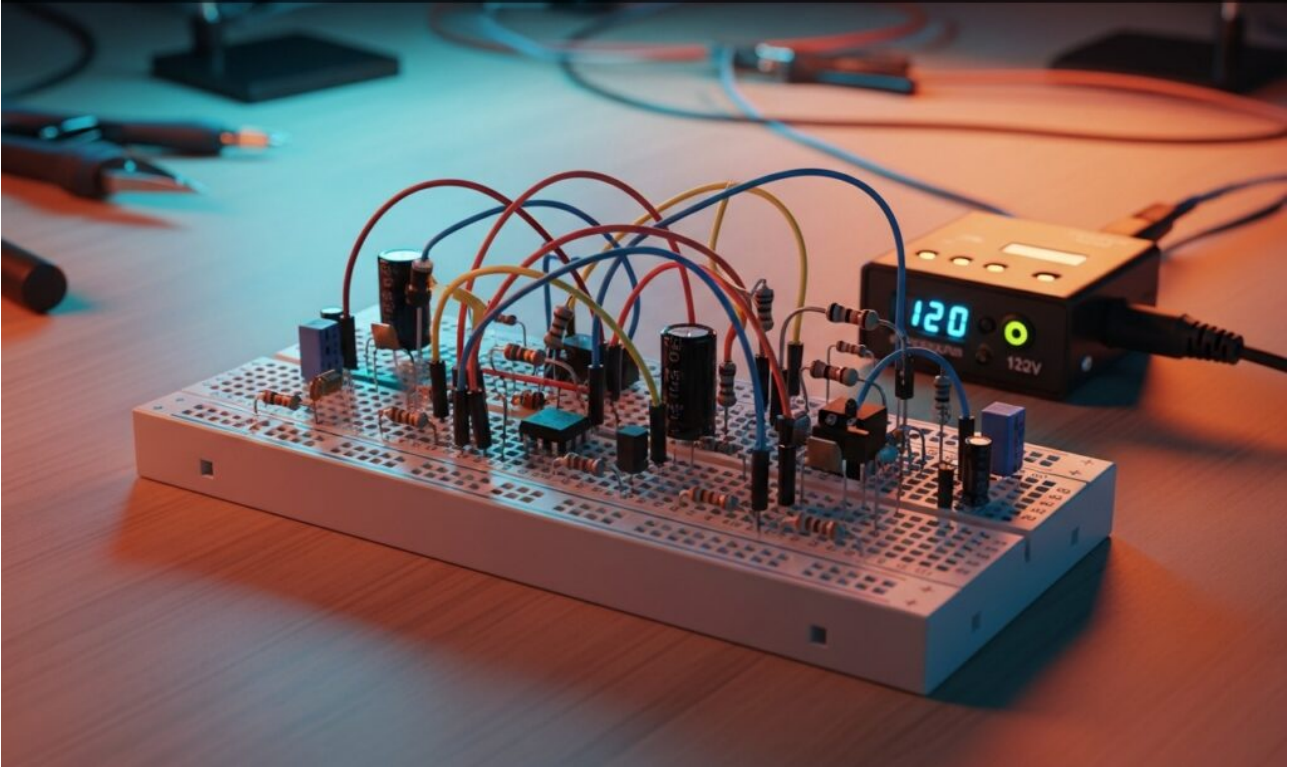
DC Motor Reversing



Master Analog Electronics by building a Relay H-bridge to control DC motor direction. Learn to switch polarity for clockwise spin, reverse motion, and braking.

Practical case: Latching Alarm System

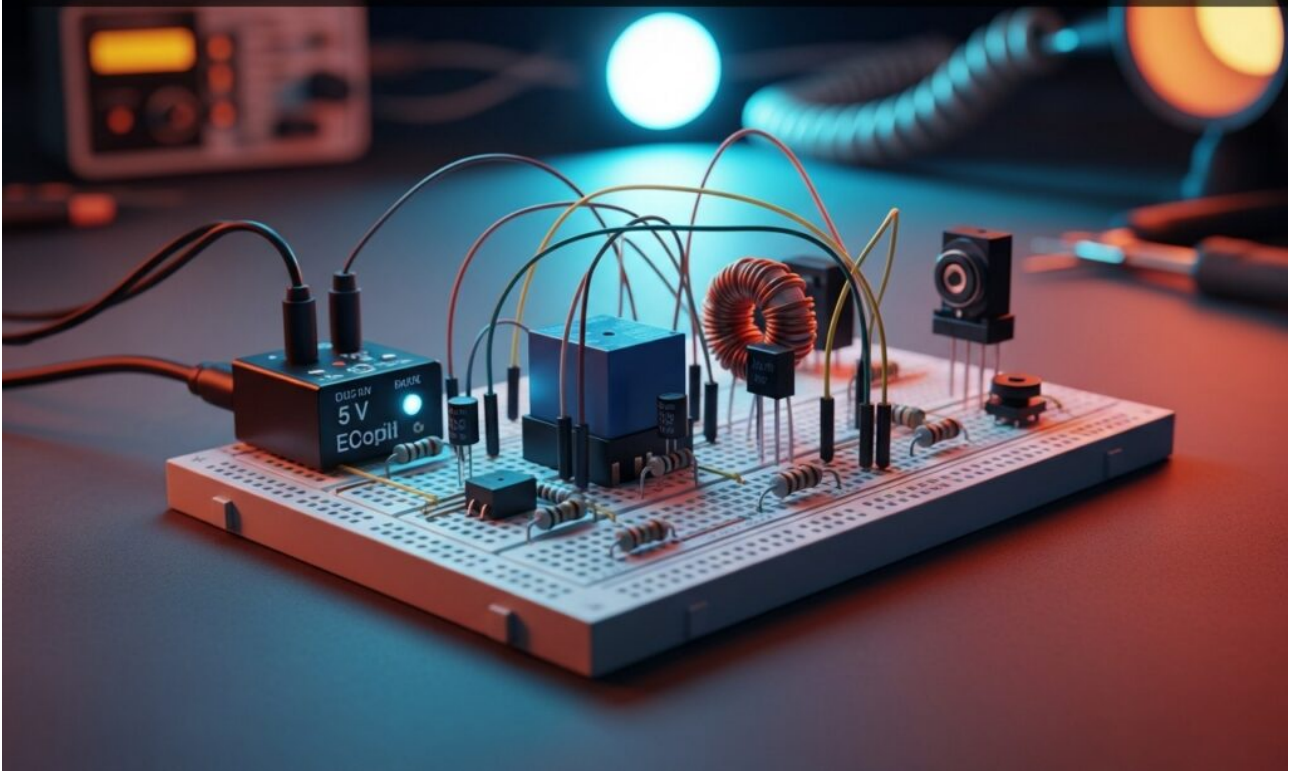
Latching Alarm System



Master Analog Electronics by building a self-latching Relay circuit. Create a reliable alarm memory system that holds active states until manually reset.

Practical case: DC motor control with relay and pushbutton

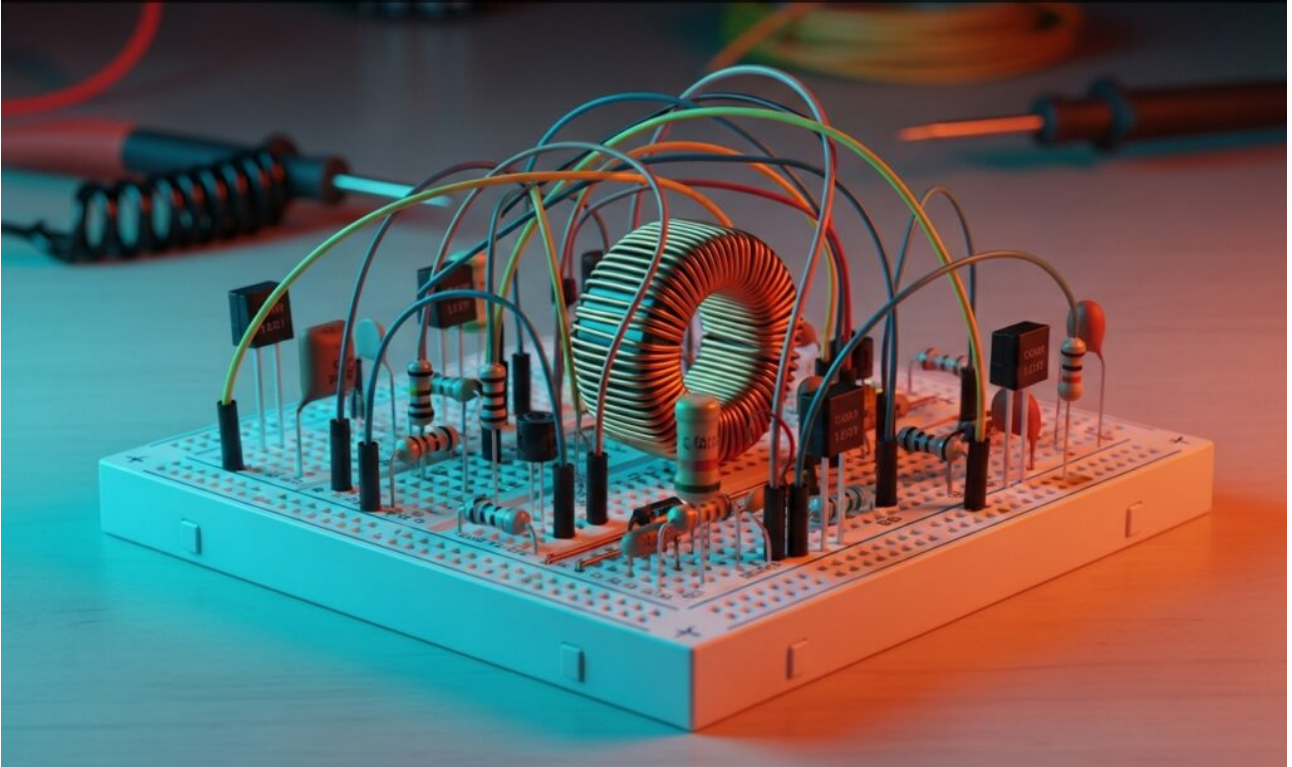
DC motor control with relay and pushbutton



Master Analog Electronics by building a Relay circuit to safely control high-power motors. Learn to isolate signals and achieve reliable switching protection.

Practical case: Voltage induction by magnetic movement

Voltage induction by magnetic movement



Learn Analog Electronics by building a generator with an Inductor and a magnet. Observe real voltage spikes and light an LED using Faraday's Law of Induction.