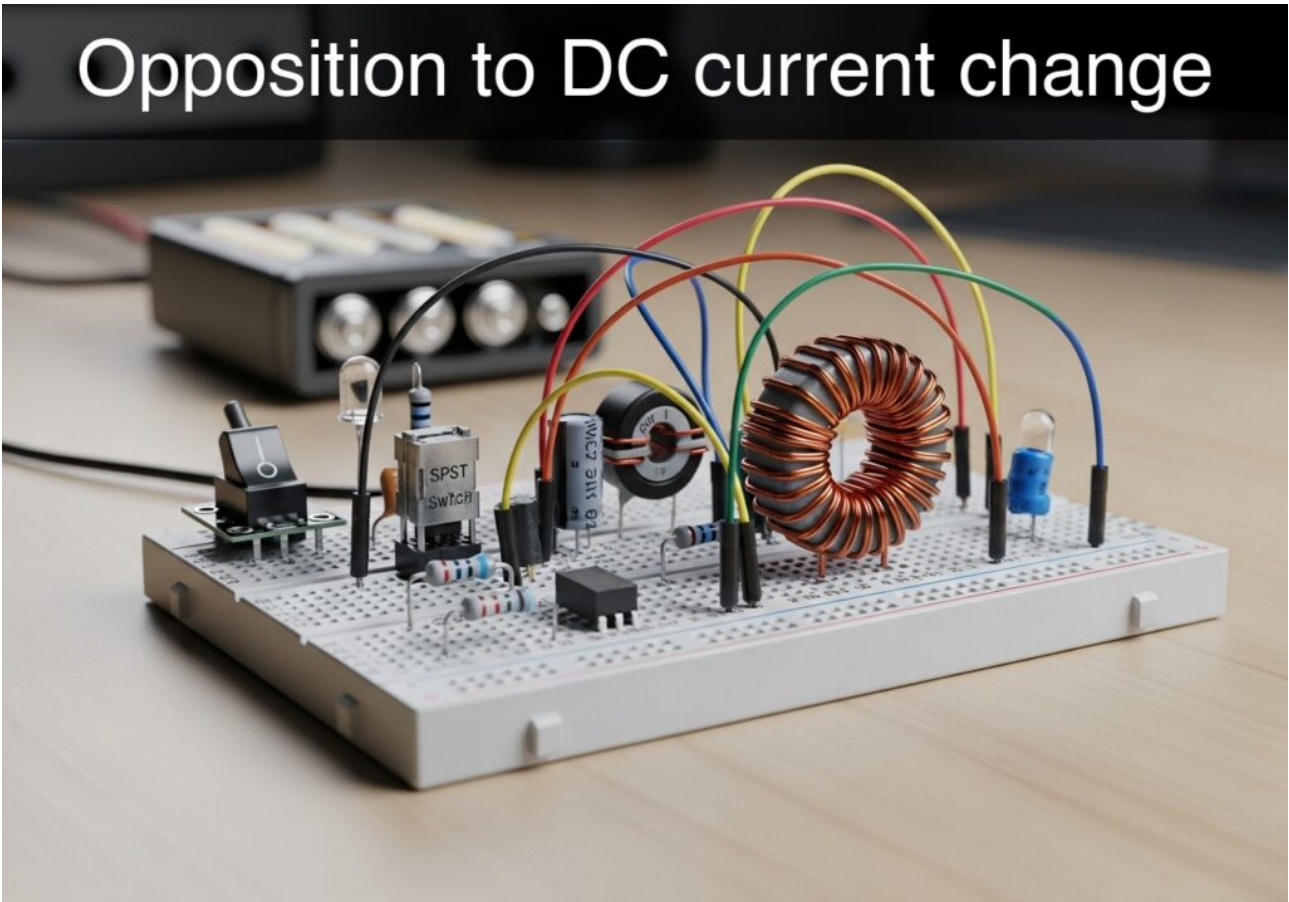


Practical case: Opposition to DC current change

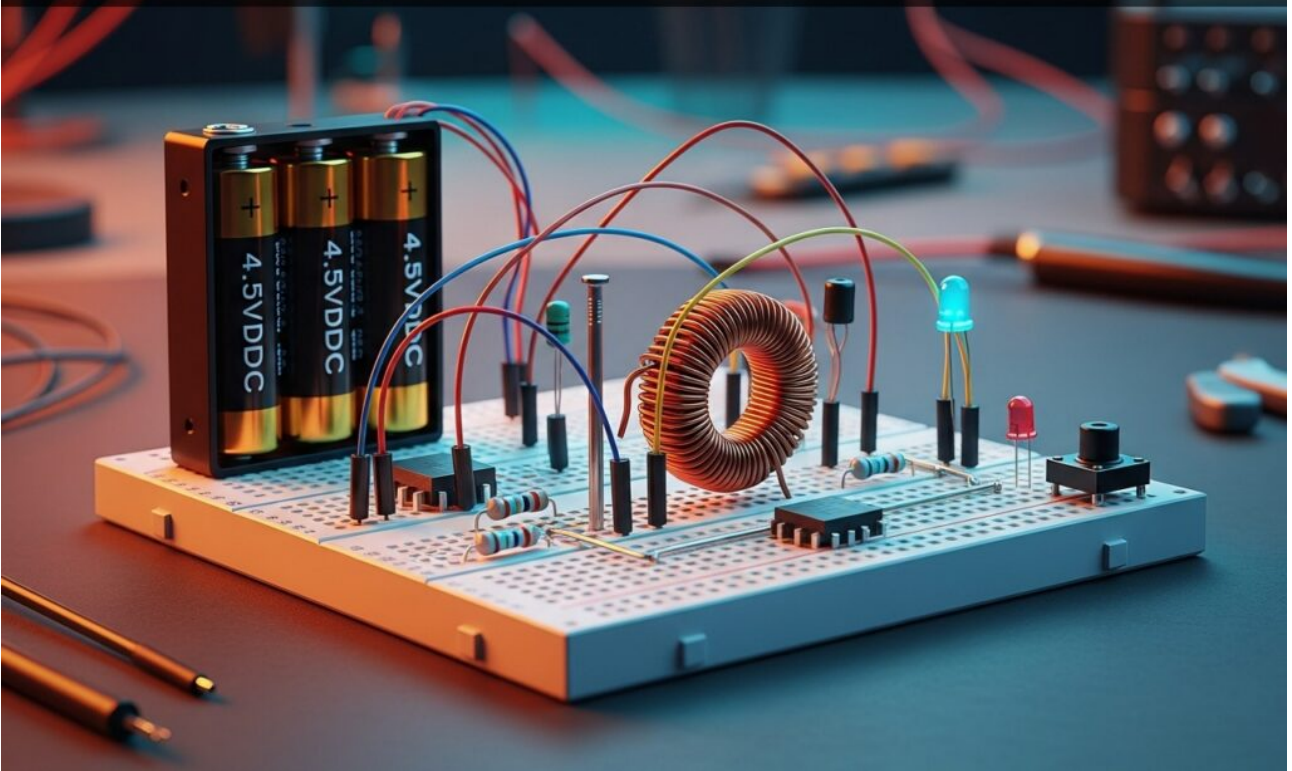
Opposition to DC current change



Master Analog Electronics by building a soft-start circuit with an Inductor. Visualize current delay as a lamp gradually brightens to limit inrush current.

Practical case: The coil as a simple electromagnet

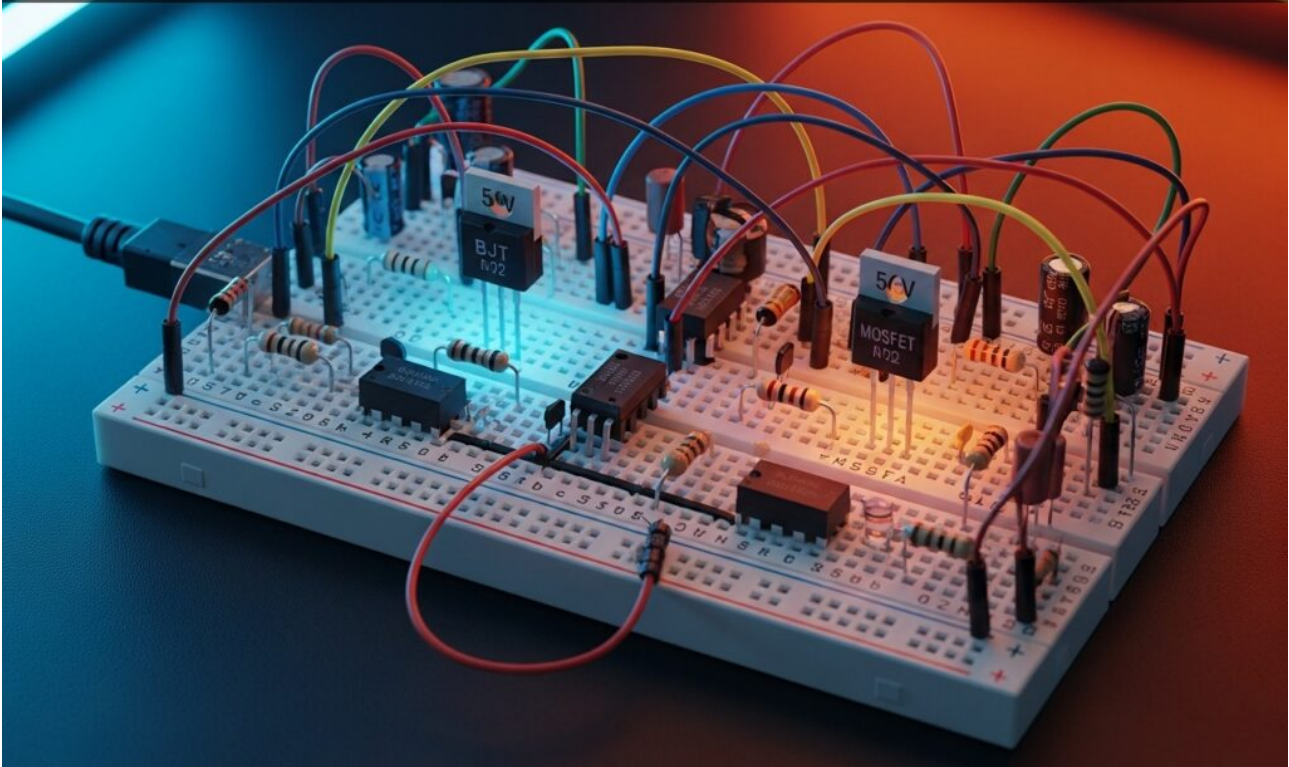
The coil as a simple electromagnet



Master Analog Electronics by building a powerful electromagnet using a simple Inductor. Learn to control magnetic fields and lift metal objects with DC current.

Practical case: Comparing BJT and MOSFET Switches

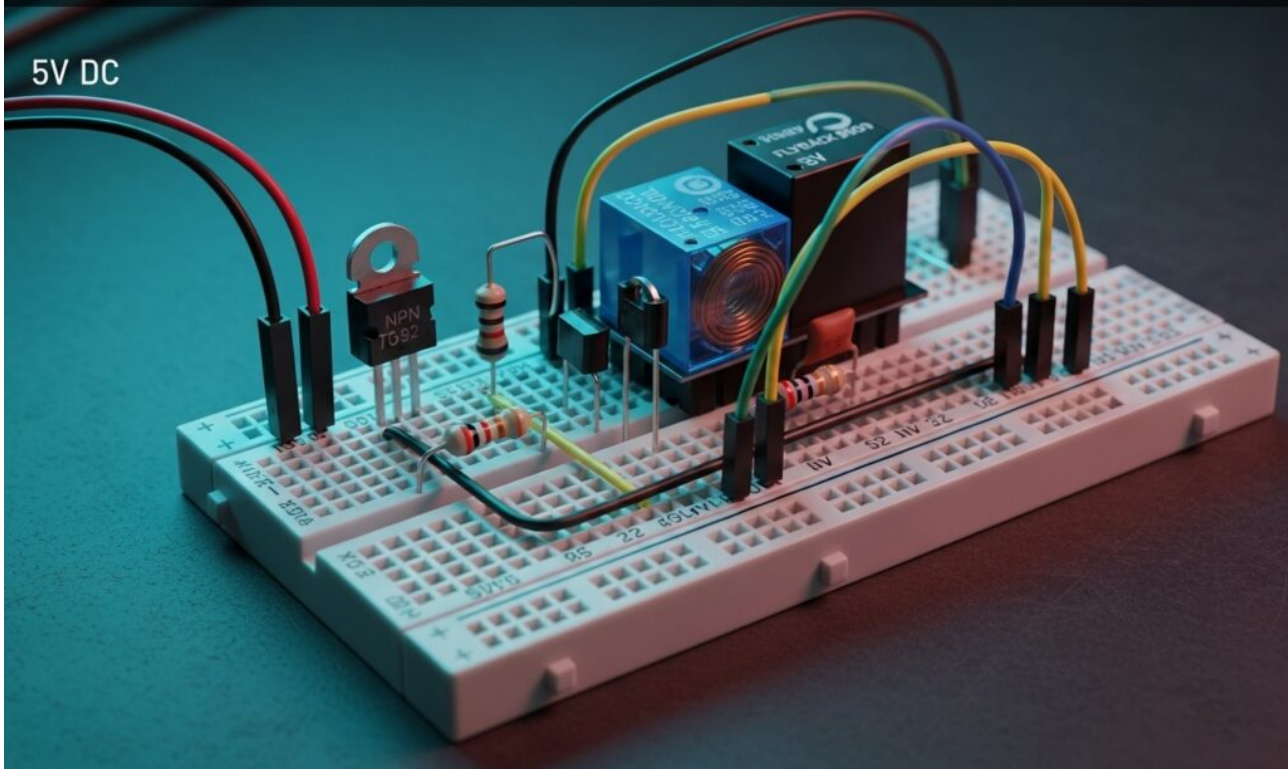
Comparing BJT and MOSFET Switches



Master Analog Electronics by building two Transistor switching circuits. Compare BJT and MOSFET efficiency by measuring real input currents and voltage drops.

Practical case: Low-Side Transistor Relay Switch

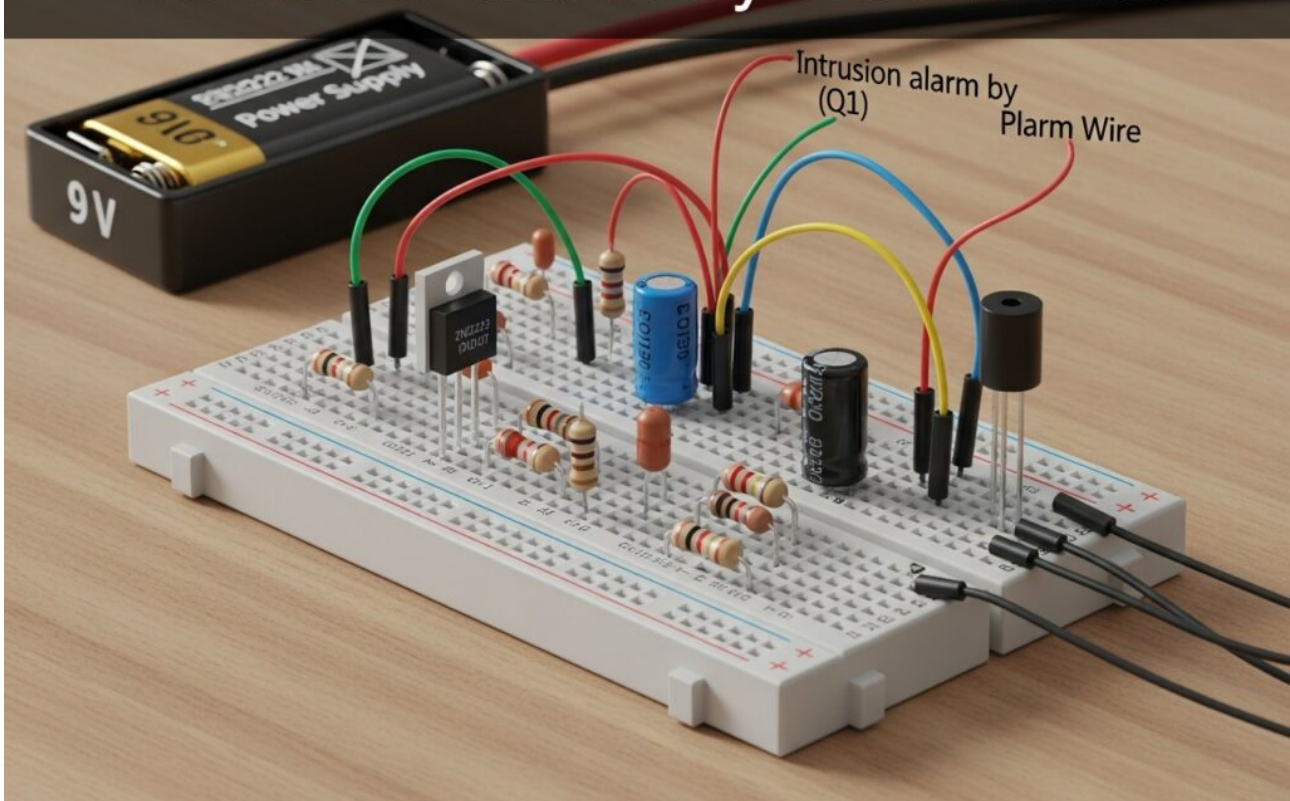
Low-Side Transistor Relay Switch



Master Analog Electronics by building a relay driver circuit. Use an NPN Transistor to safely switch high-voltage loads and protect logic chips from spikes.

Practical case: Intrusion alarm by wire break

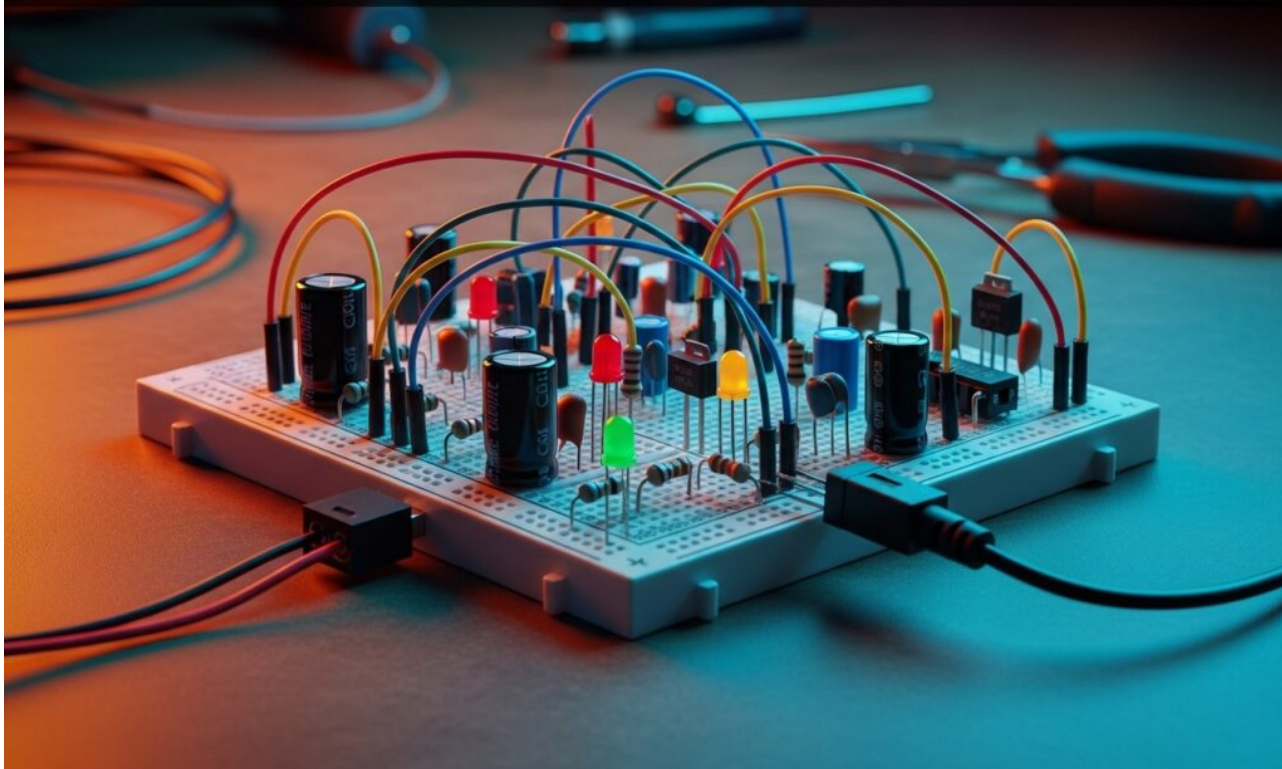
Intrusion alarm by wire break



Master Analog Electronics by building a wire-cut alarm. Learn how a Transistor switch triggers an LED instantly when a security loop is broken.

Practical case: Slow turn-off timer

Slow turn-off timer



Master Analog Electronics by building a fade-out LED circuit. Use a Transistor and capacitor to create a 5-second delay timer that mimics car interior lighting.