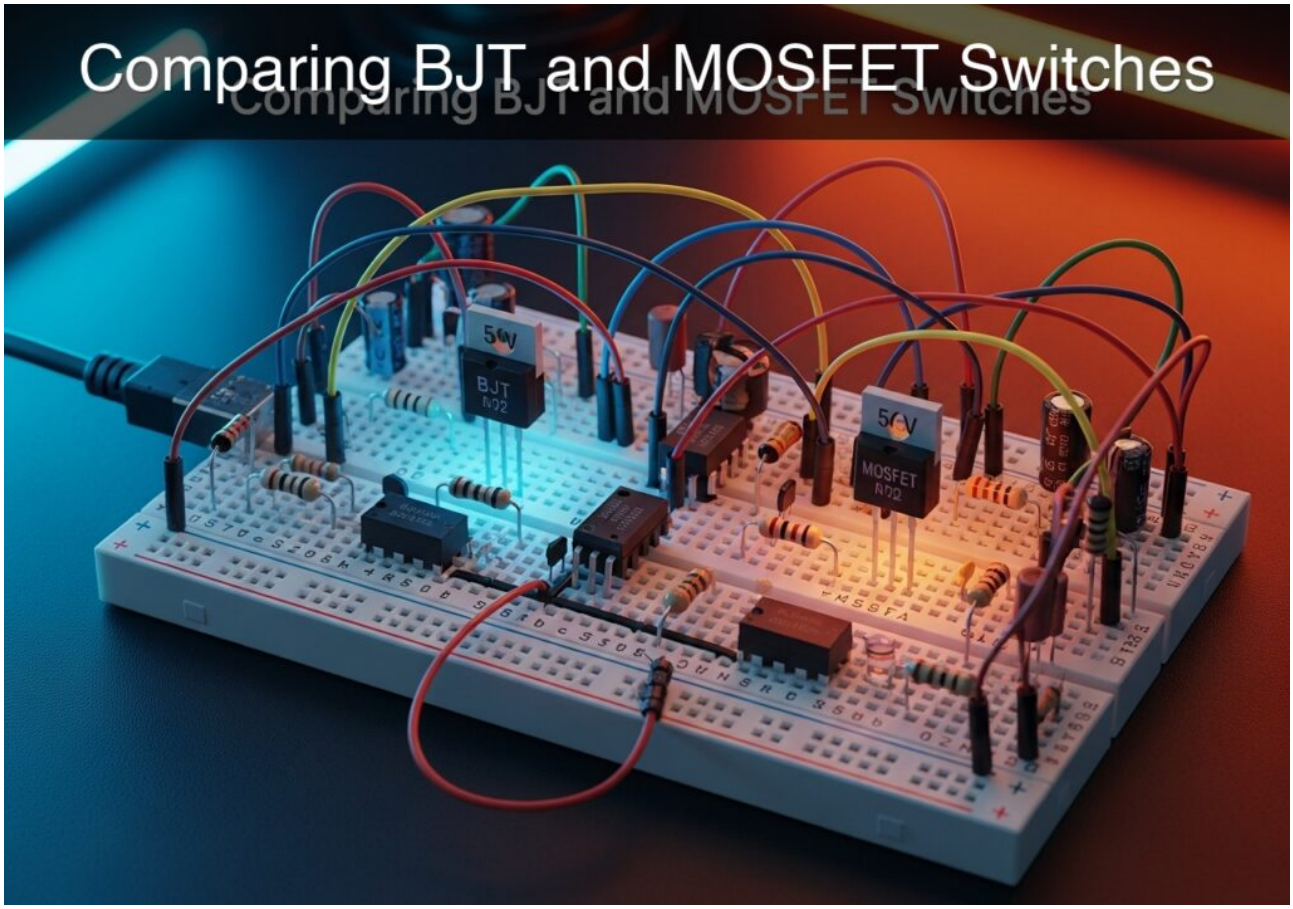
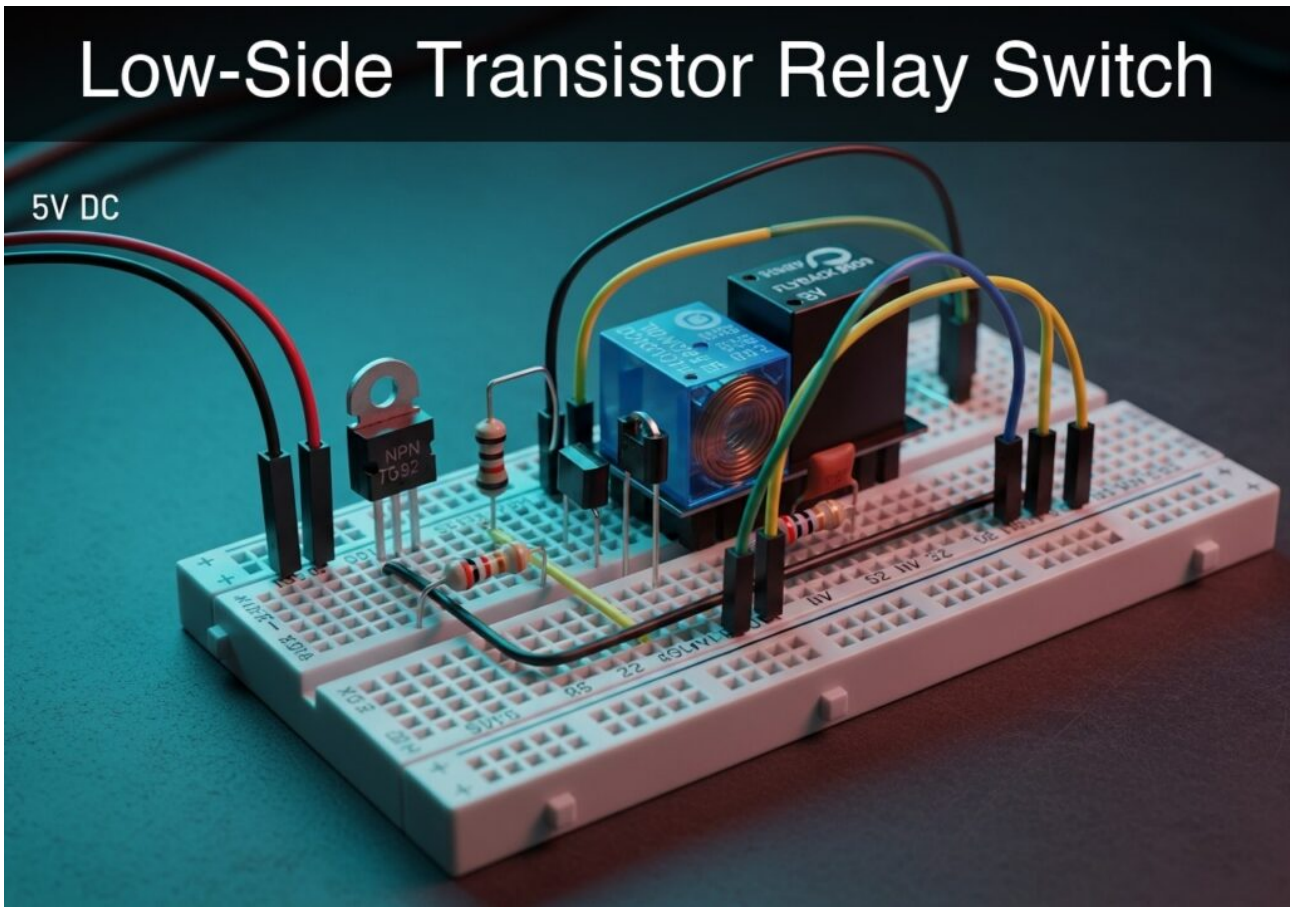
Practical case: Comparing BJT and MOSFET Switches



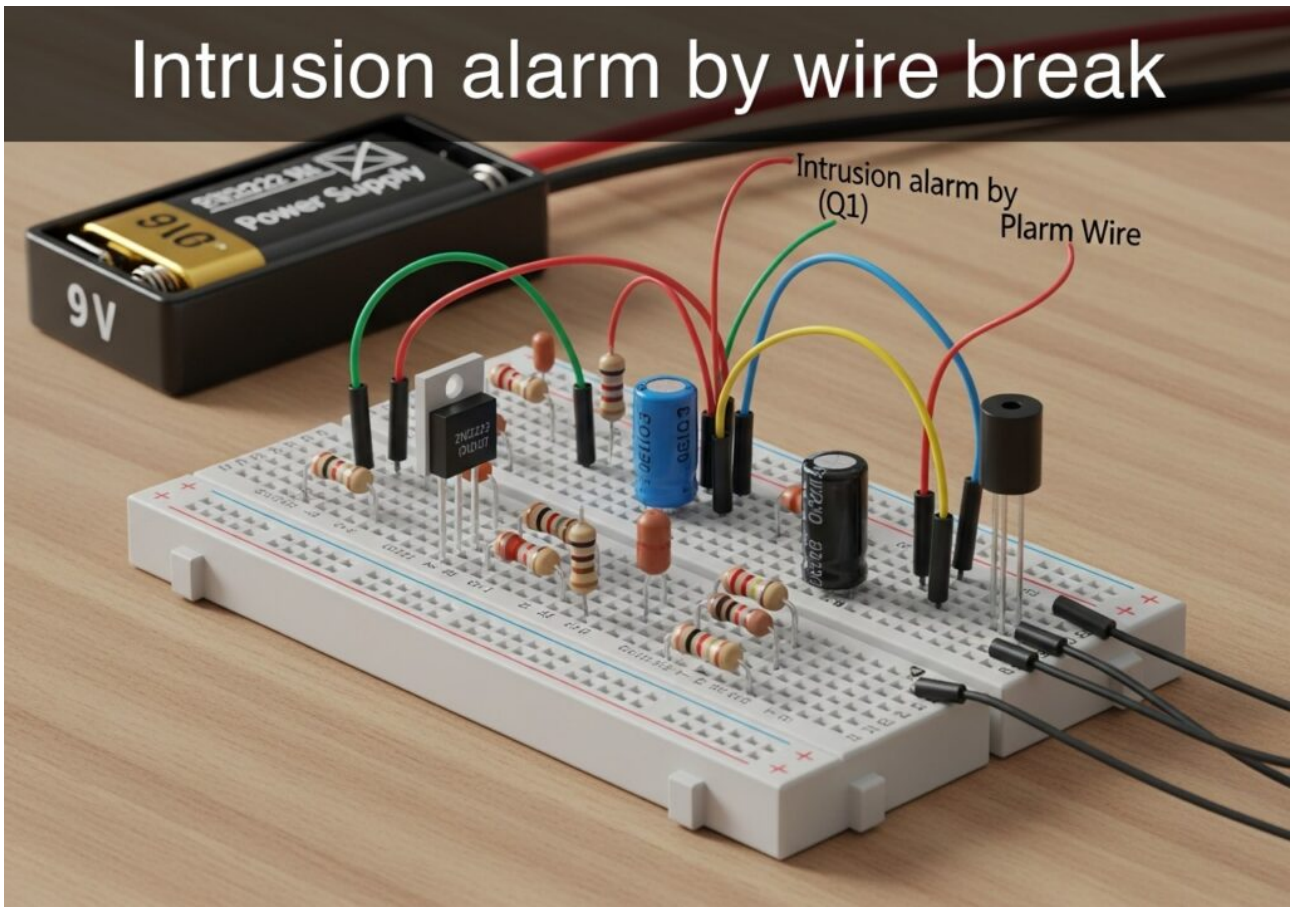
Master Analog Electronics by building two Transistor switching circuits. Compare BJT and MOSFET efficiency by measuring real input currents and voltage drops.

Practical case: Low-Side Transistor Relay Switch



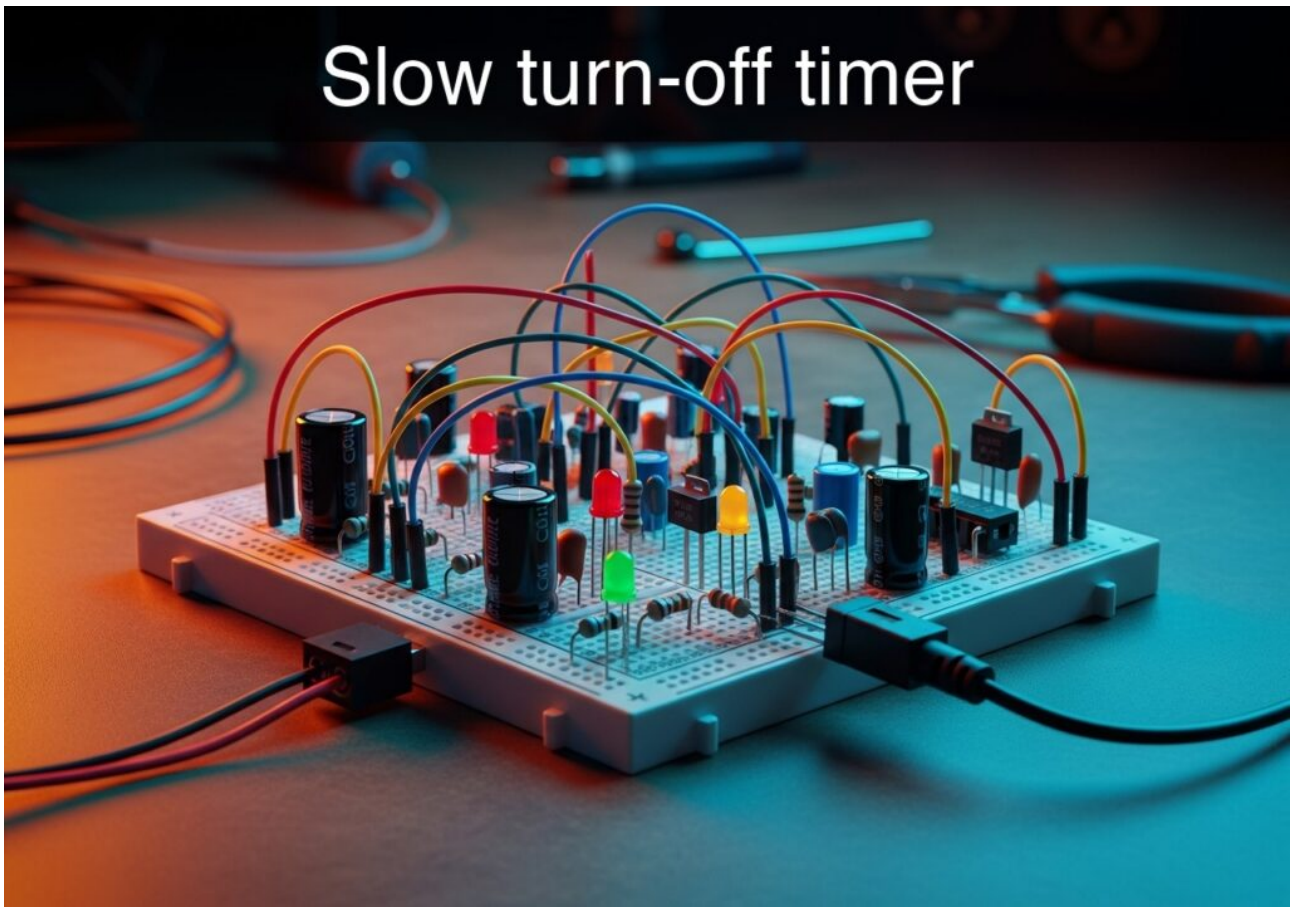
Master Analog Electronics by building a relay driver circuit. Use an NPN Transistor to safely switch high-voltage loads and protect logic chips from spikes.

Practical case: Intrusion alarm by wire break



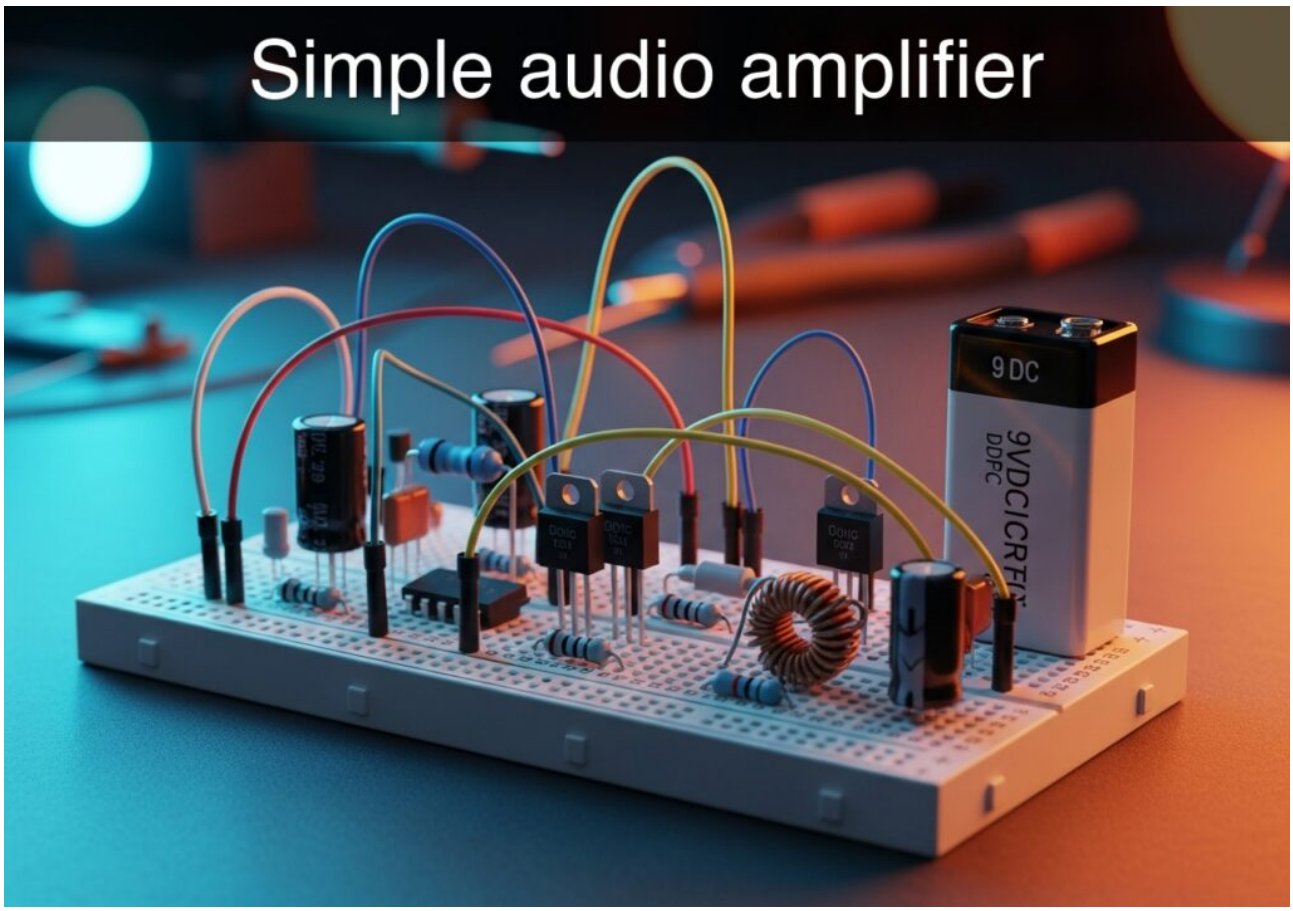
Master Analog Electronics by building a wire-cut alarm. Learn how a Transistor switch triggers an LED instantly when a security loop is broken.

Practical case: Slow turn-off timer



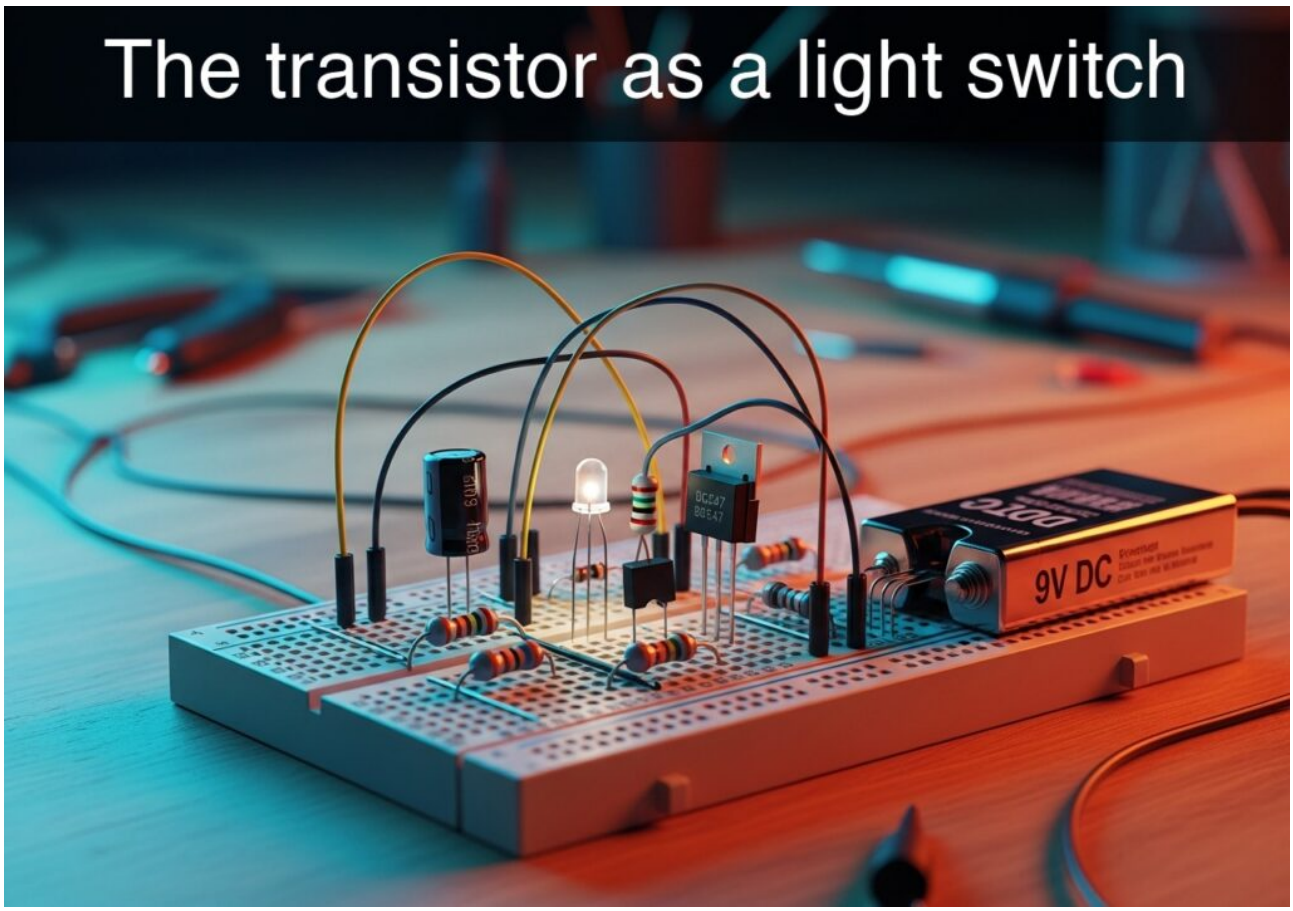
Master Analog Electronics by building a fade-out LED circuit. Use a Transistor and capacitor to create a 5-second delay timer that mimics car interior lighting.

Practical case: Simple audio amplifier



Master Analog Electronics by building a Class A amplifier. Use an NPN Transistor to boost weak audio signals and observe voltage gain with phase inversion.

Practical case: The transistor as a light switch



Master Analog Electronics by building a Transistor switch circuit. Learn to control high-current loads like LEDs and measure saturation voltage drops.