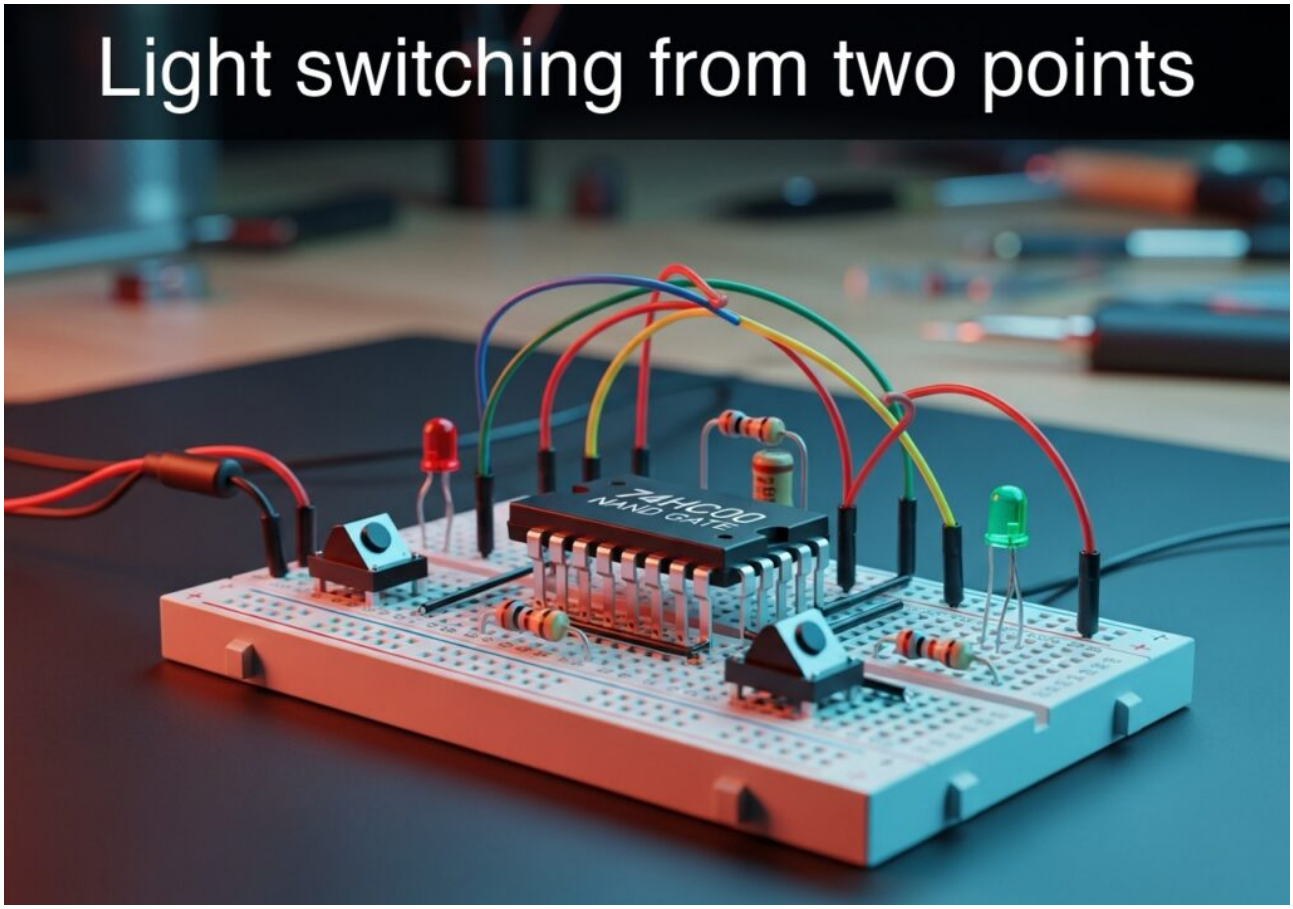
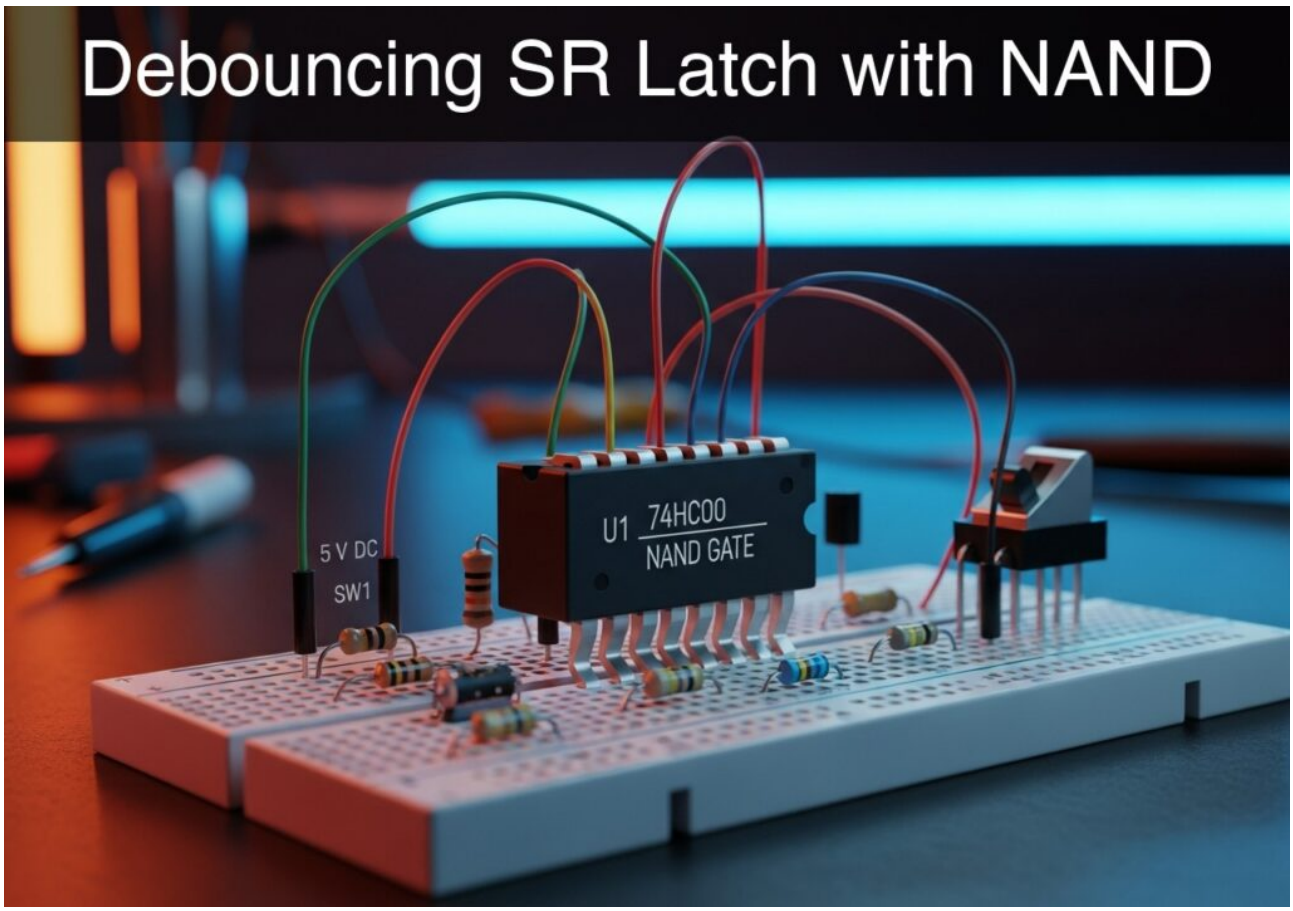
Practical case: Light switching from two points



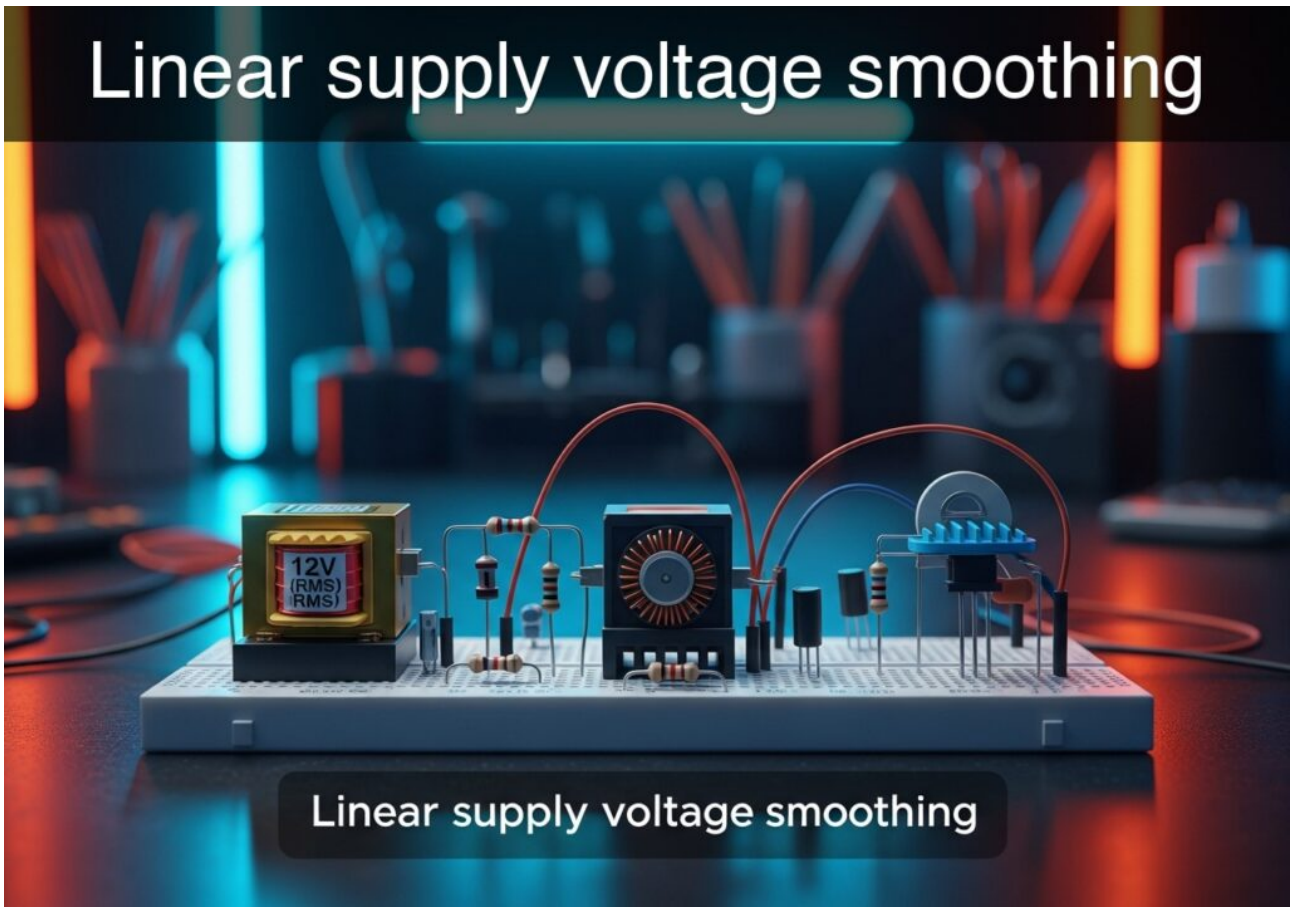
Master Digital Electronics by building a 2-way switch using the universal NAND gate. Synthesize XOR logic to toggle LED states based on dual input signals.

Practical case: Debouncing SR Latch with NAND



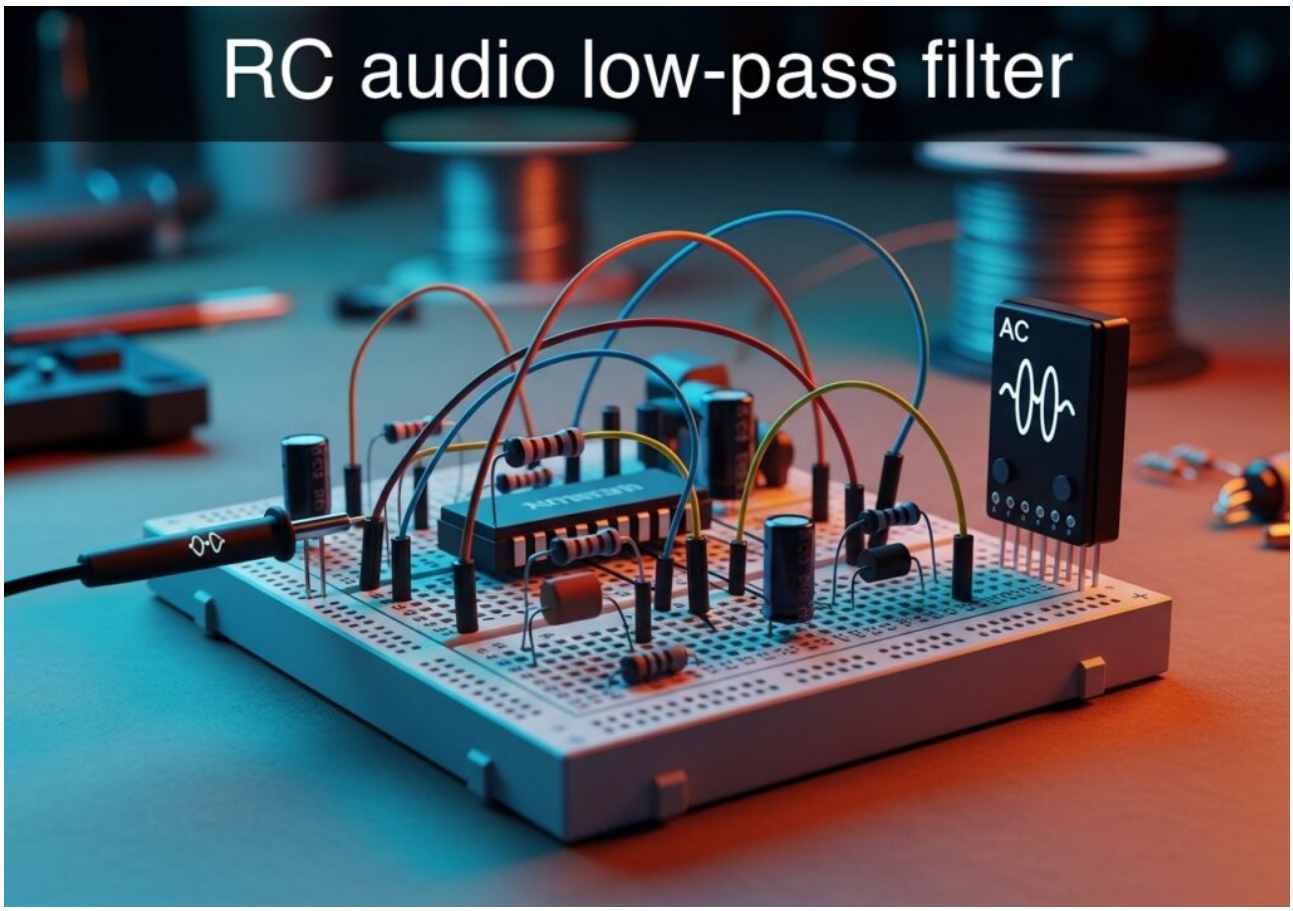
Master Digital Electronics by building a NAND gate SR latch to eliminate switch noise. Ensure clean signals and verify stable memory states with LEDs.

Practical case: Linear supply voltage smoothing



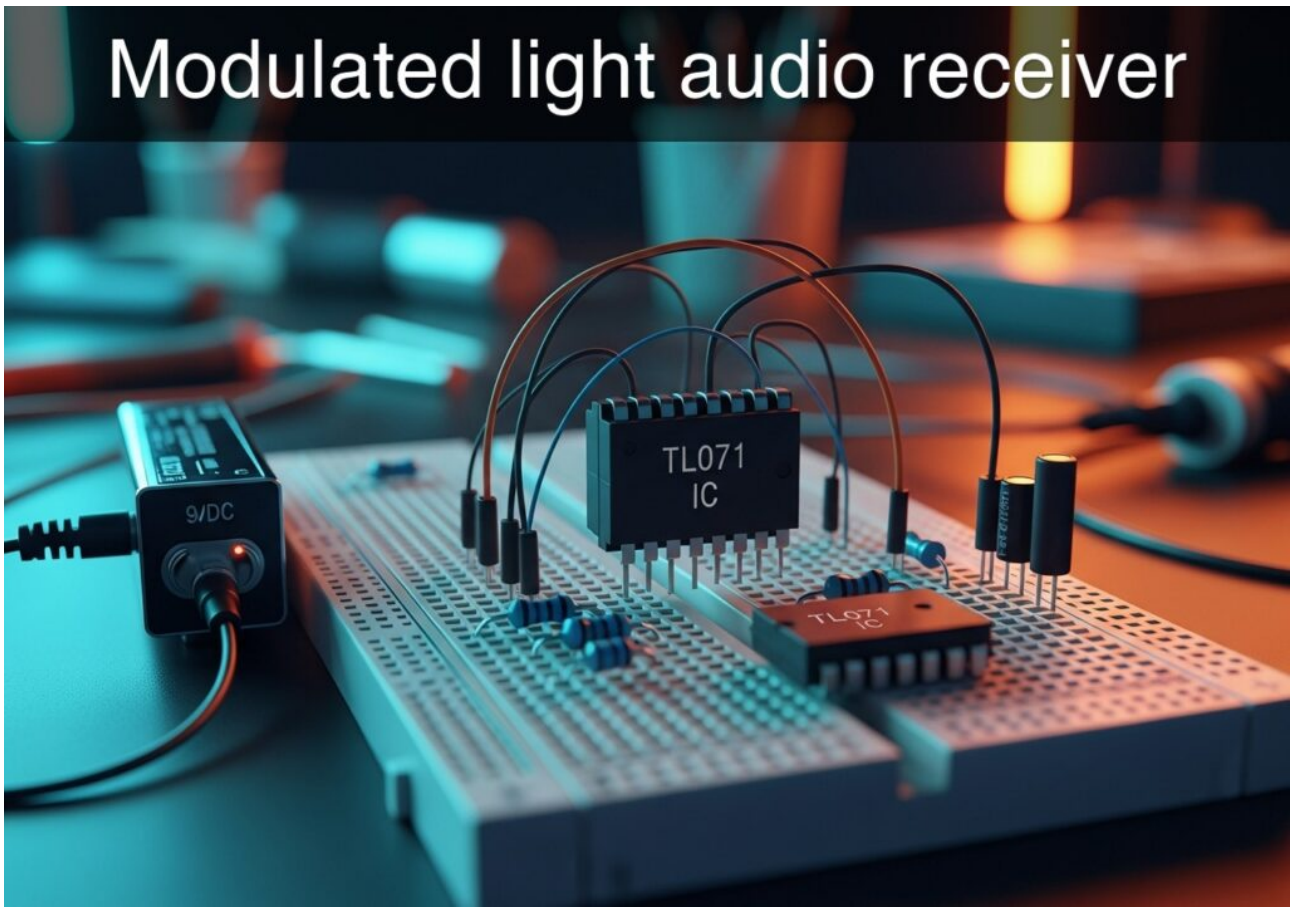
Master Analog Electronics by building a power supply filter. Test how Capacitor values reduce voltage ripple from 5V to 0.5V, ensuring stable DC for circuits.

Practical case: RC audio low-pass filter



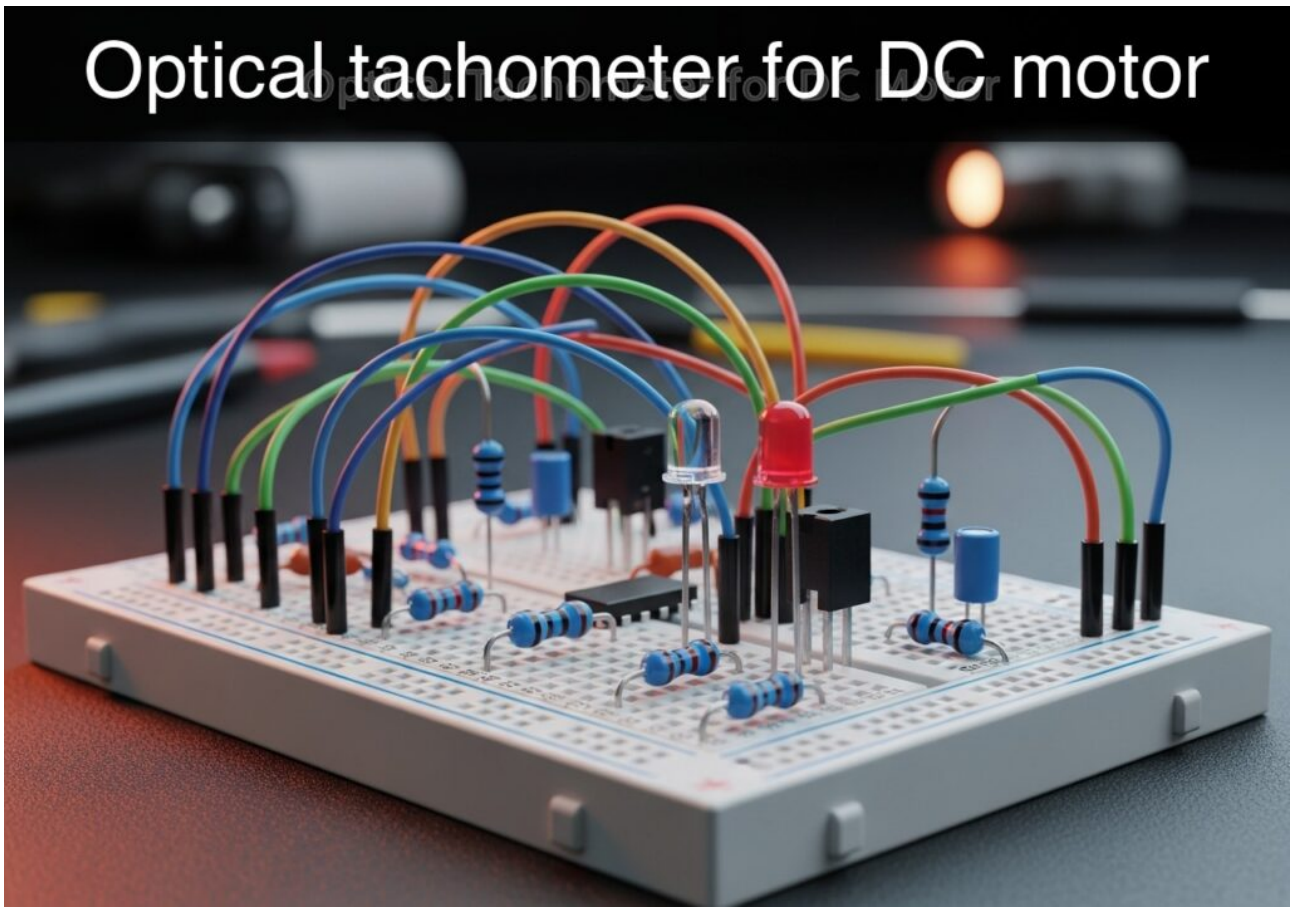
Master Analog Electronics by building a Low-Pass Filter with a Capacitor. Learn to attenuate high frequencies and verify signal cutoff points in real circuits.

Practical case: Modulated light audio receiver



Master Analog Electronics by building an optical audio receiver. Use a Photodiode and TIA to demodulate light beams into clear, isolated audio signals.

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.