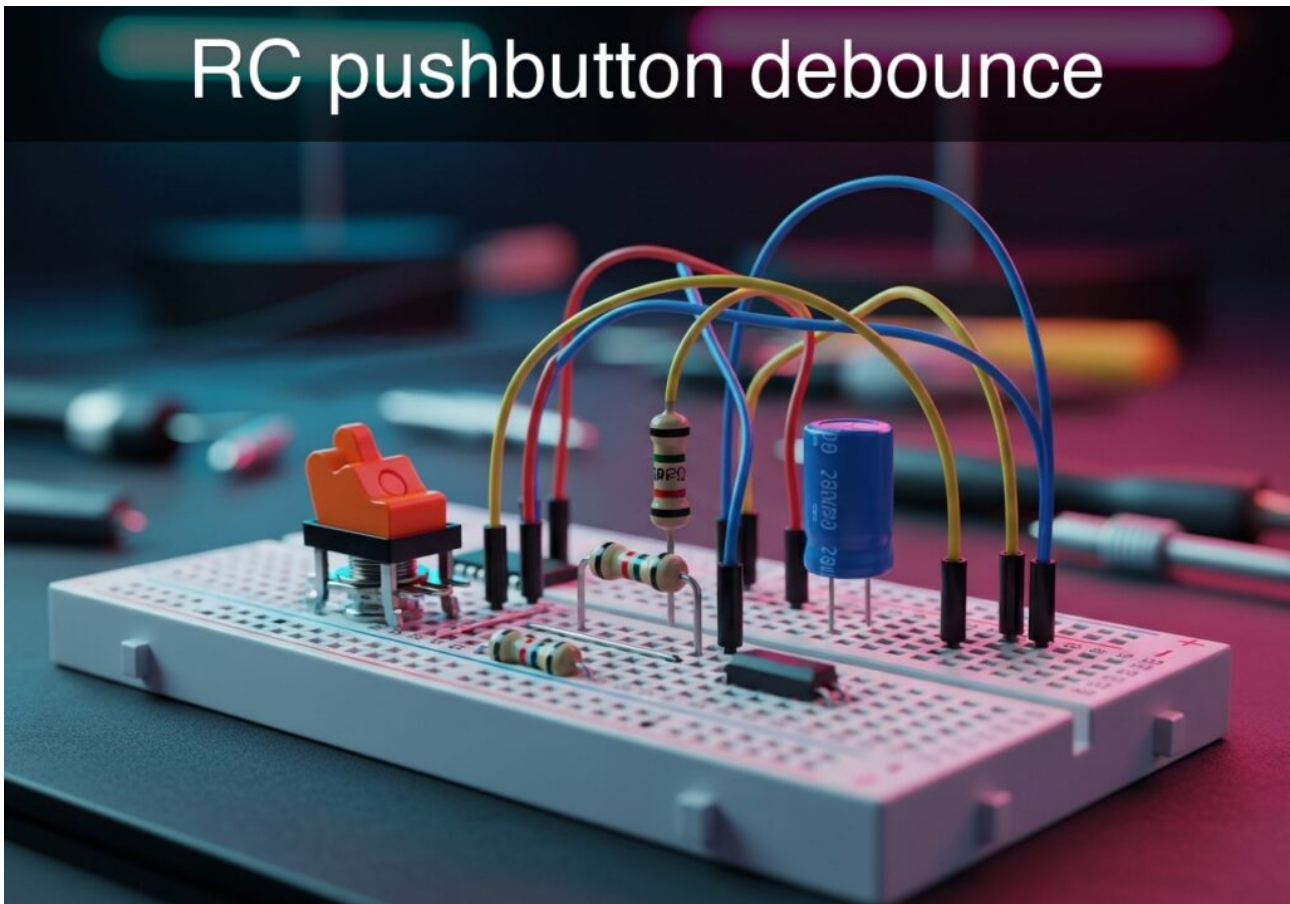


Practical case: RC pushbutton debounce



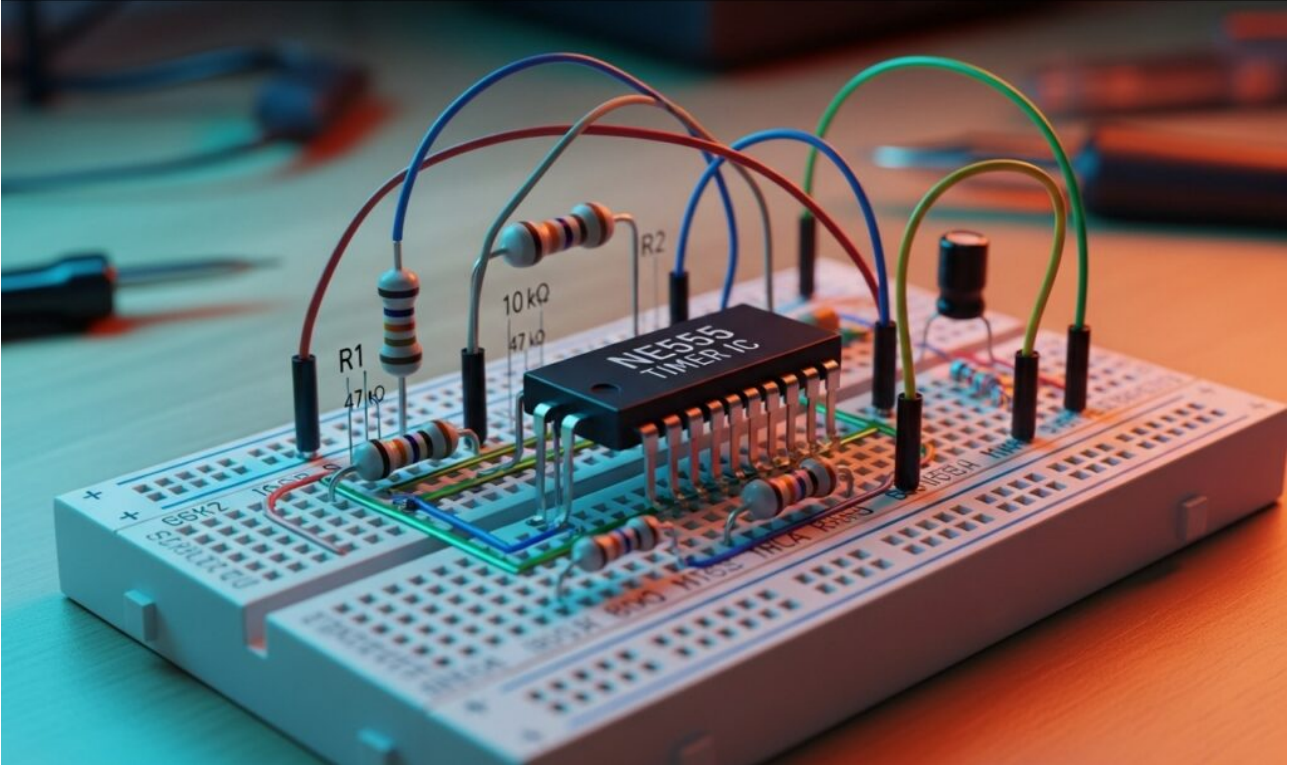
Level: Medium | Use a capacitor to mitigate mechanical noise when actuating a physical switch.

Objective and use case

In this practical case, you will...

Practical case: Astable oscillator with NE555

Astable oscillator with NE555



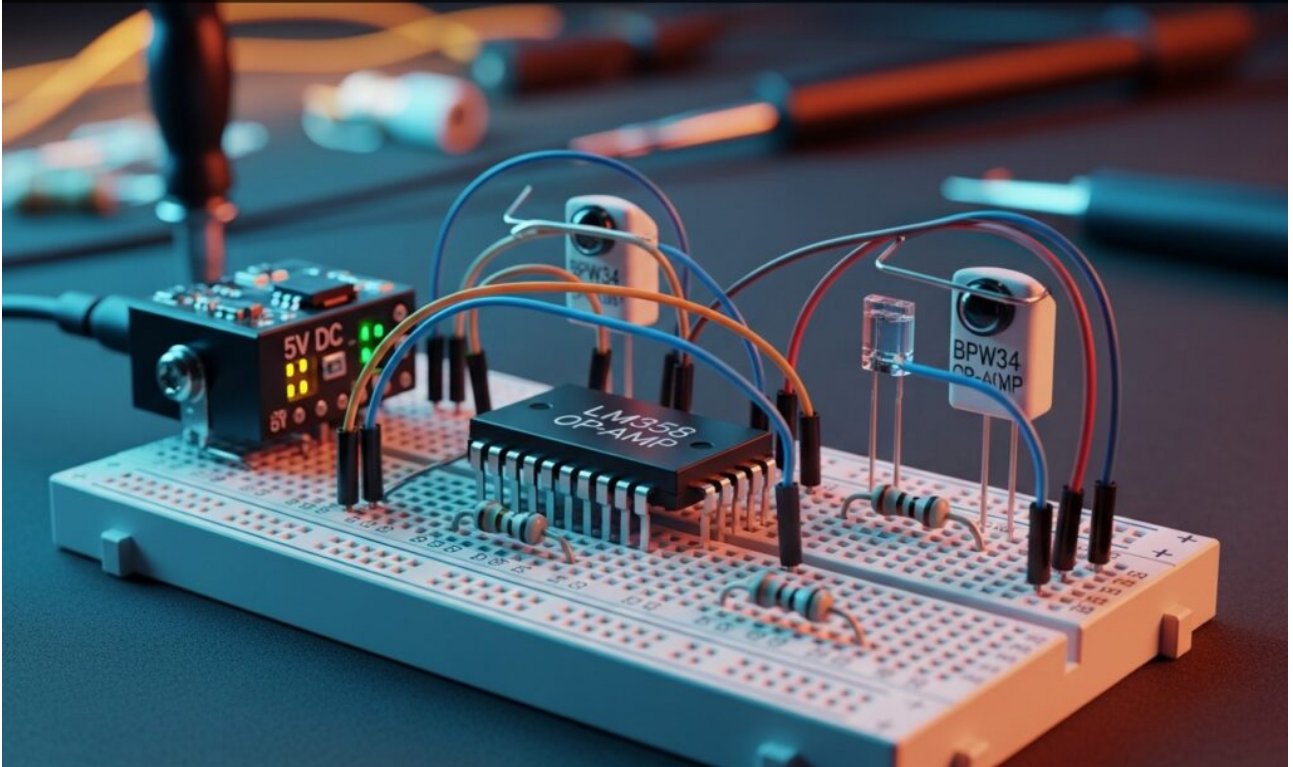
Level: Medium - Configure a capacitor in an NE555 circuit to control the oscillation frequency.

Objective and use case

In this practical case, you will...

Practical case: Optical sensor for a solar tracker

Optical sensor for a solar tracker

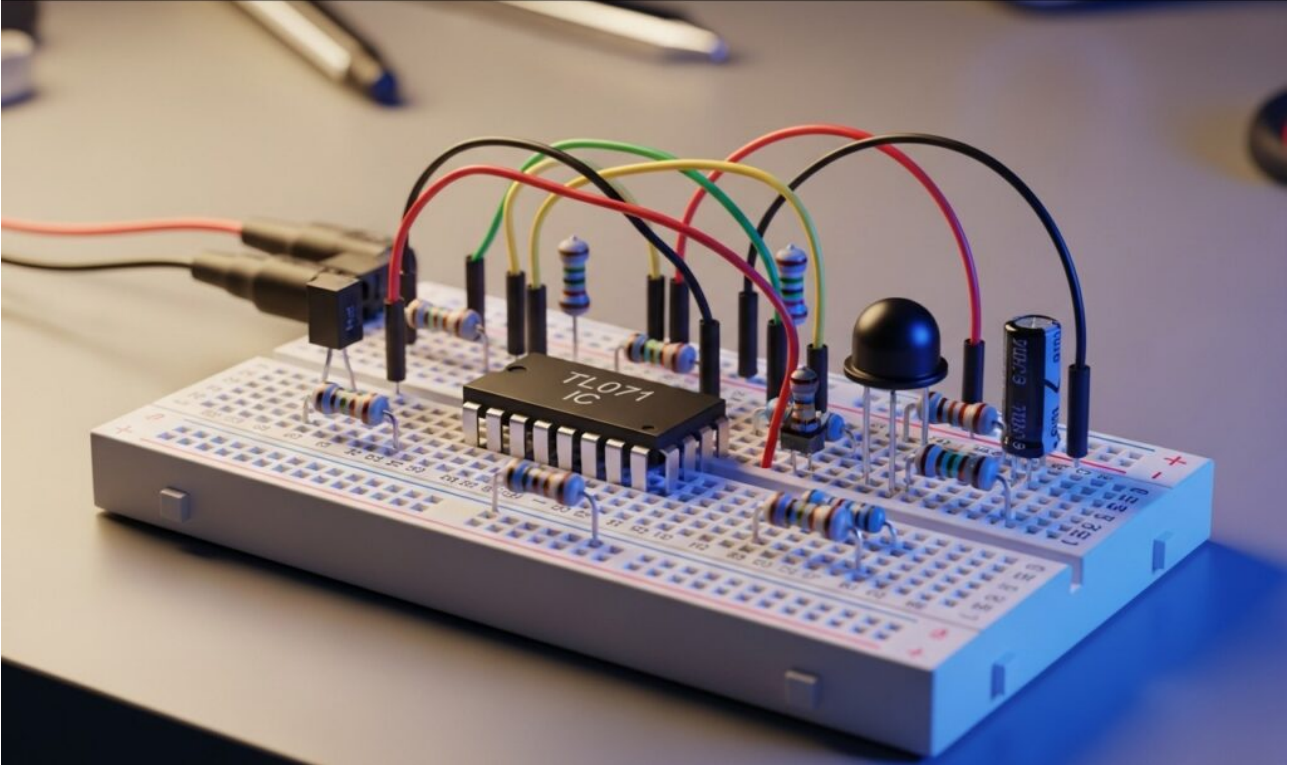


Level: Medium - Design a circuit with two photodiodes in a differential configuration to detect the direction of the highest intensity light source.

##...

Practical case: Transimpedance amplifier

Transimpedance amplifier

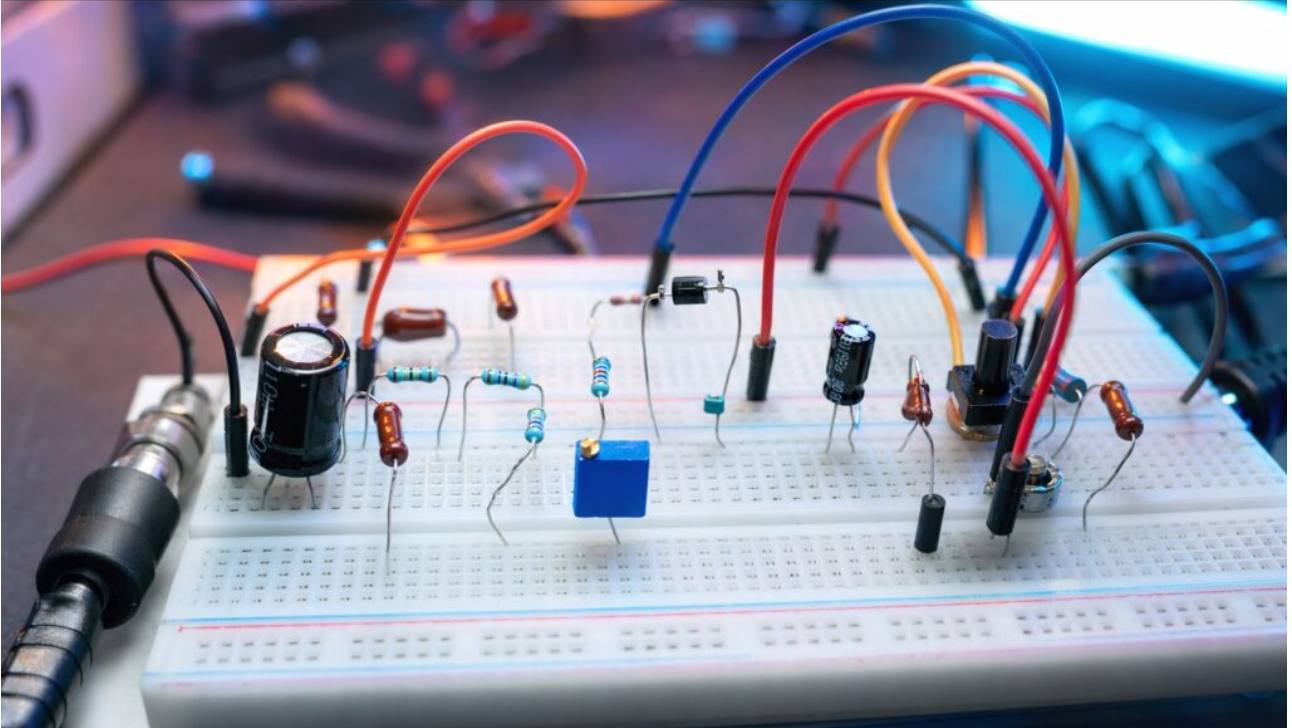


Level: Medium - Design an OPAMP transimpedance amplifier to convert the small photodiode current into a measurable voltage.

Objective and use case
You...

Practical case: DC level clamper circuit

DC level clamper circuit

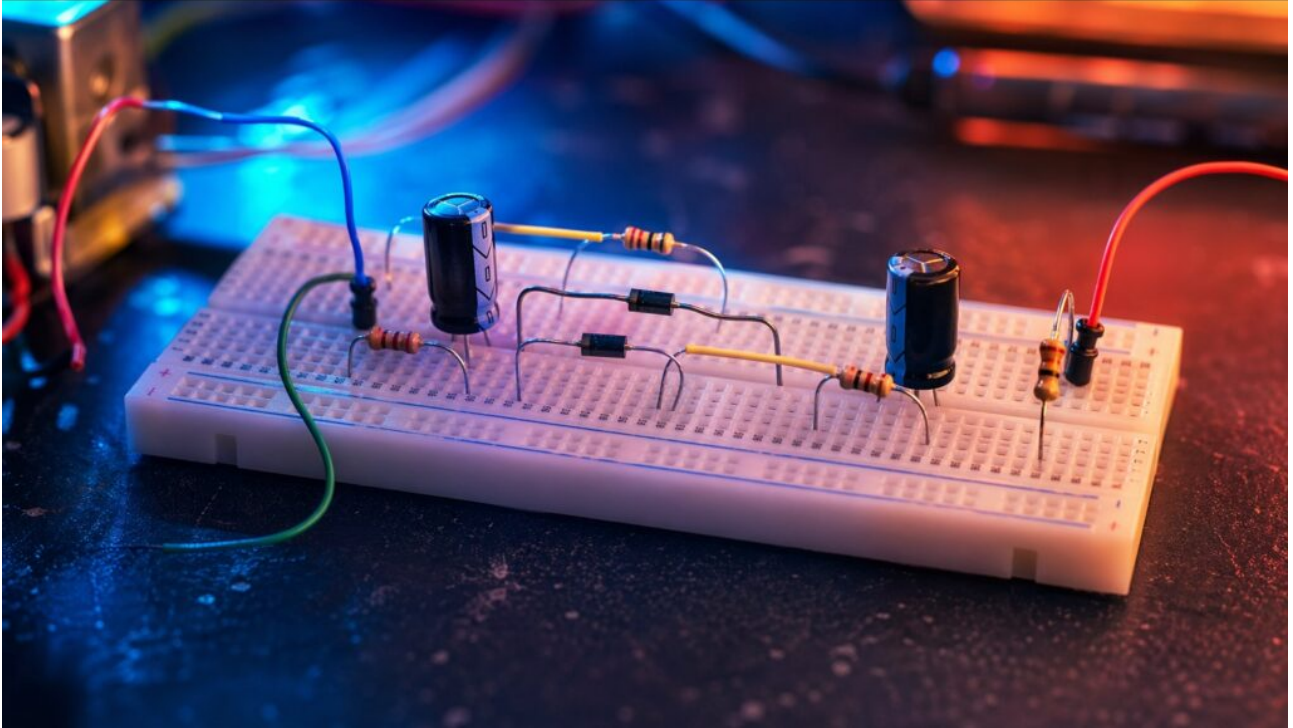


Level: Medium | Understand the shifting of the DC level of an AC signal using a diode and a capacitor.

Objective and use case
You will build a positive...

Practical case: Half-wave voltage doubler

Half-wave voltage doubler



Level: Medium | Objective: Analyze and assemble a voltage doubler circuit to increase the peak voltage of an AC signal.

Objective and use case
In this...