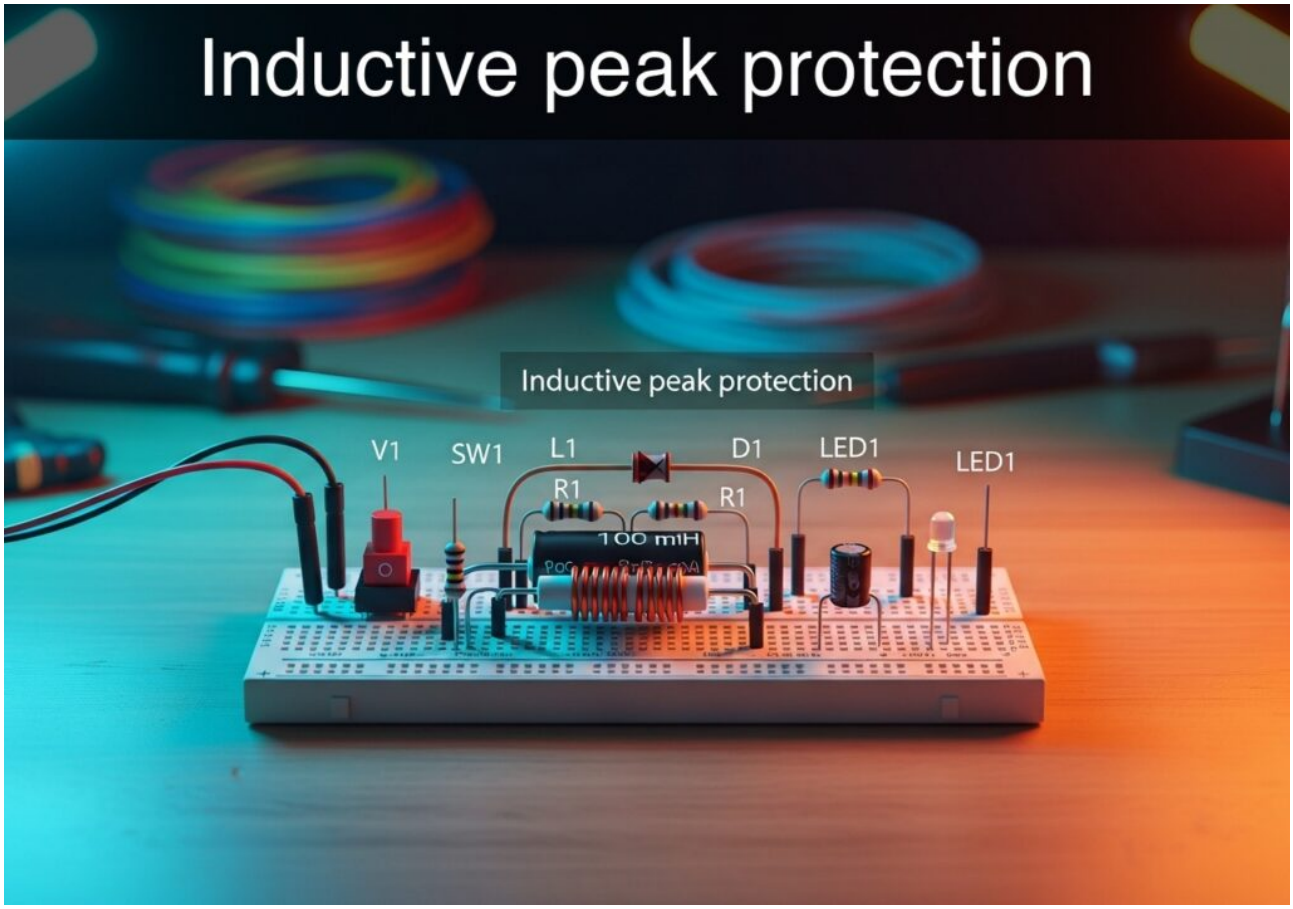
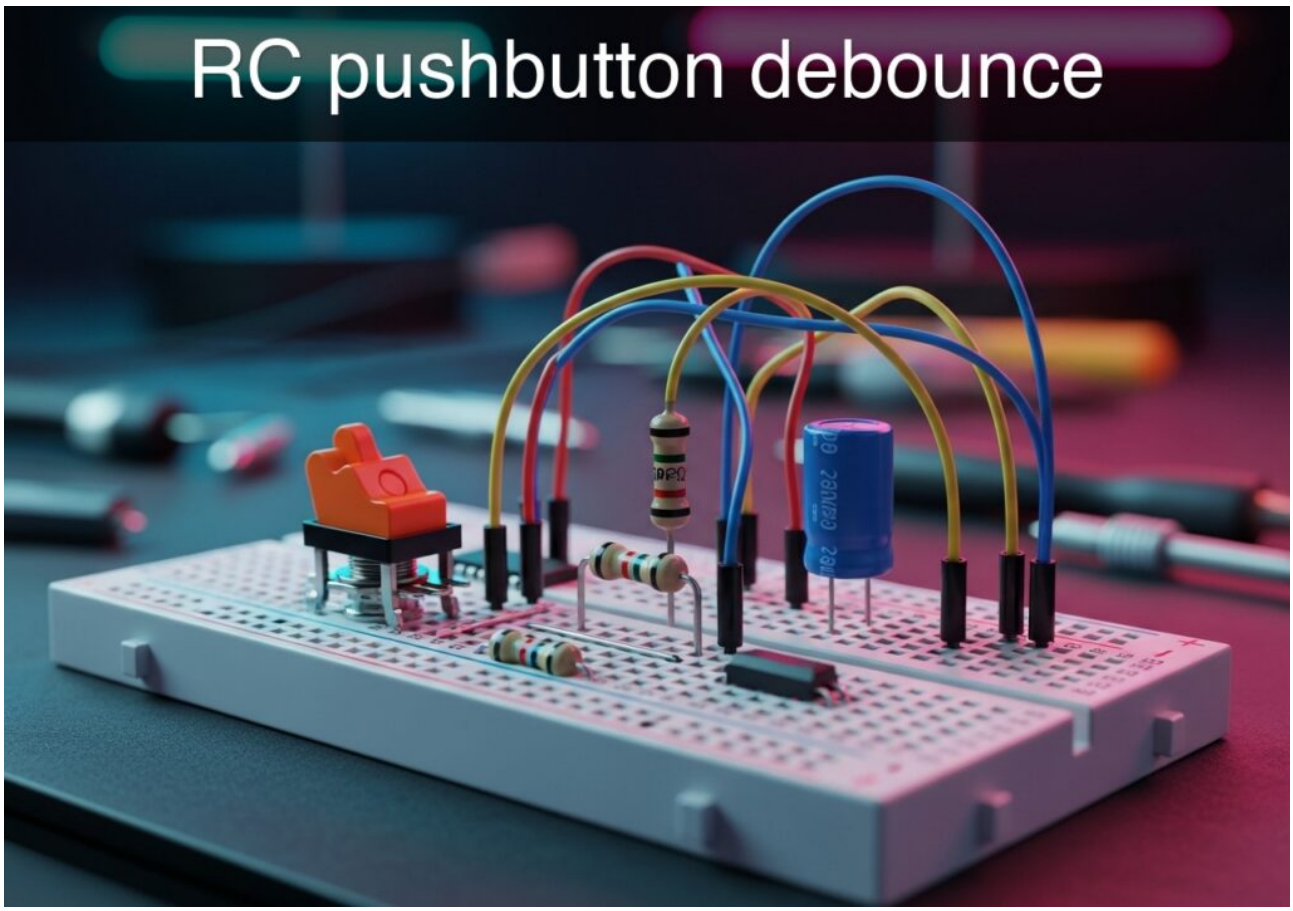
Practical case: Inductive peak protection



Level: Medium | Objective: Analyze the transient voltage generated when disconnecting an inductor and mitigate it using a flyback diode.

Objective and use…

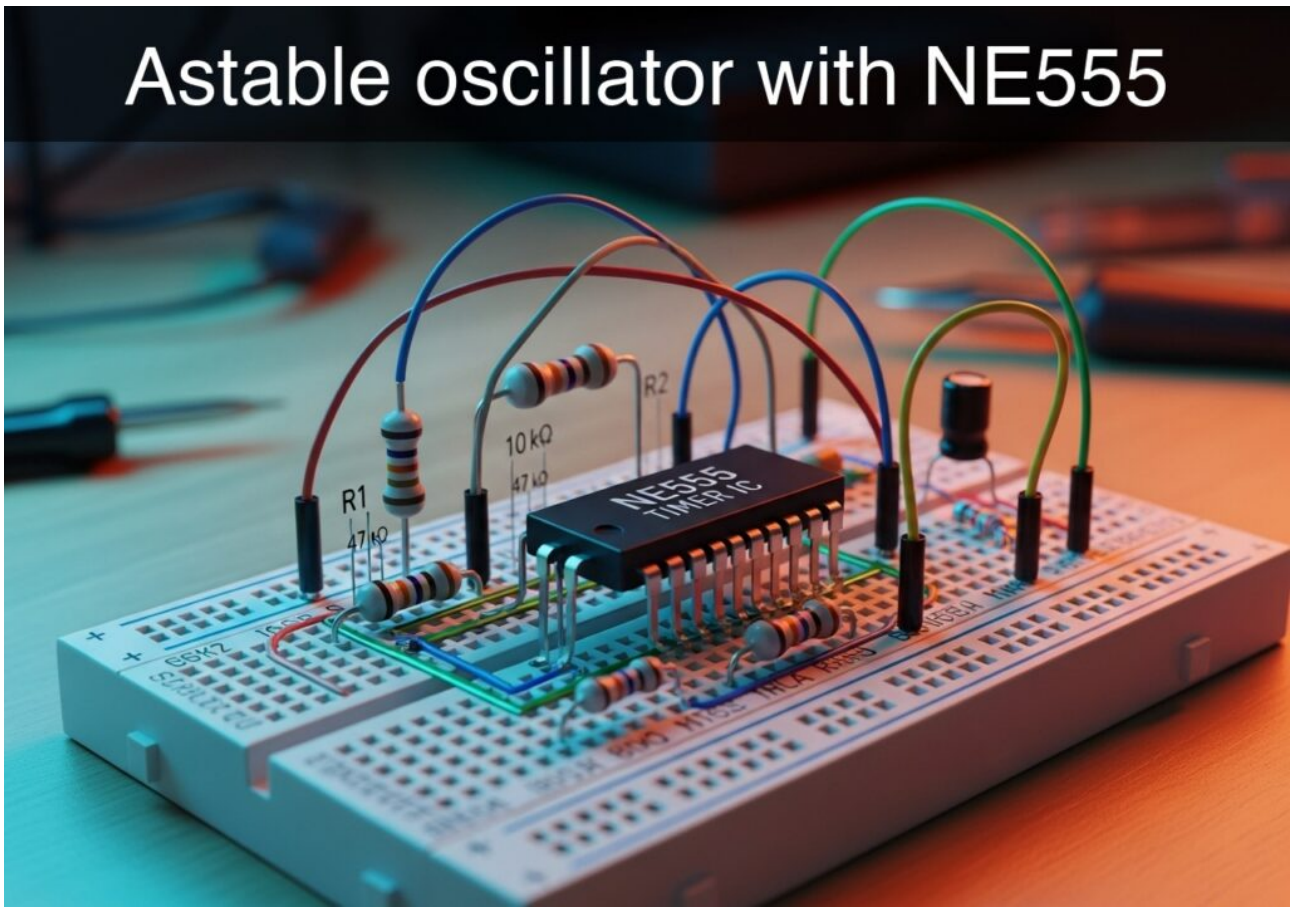
Practical case: RC pushbutton debounce



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

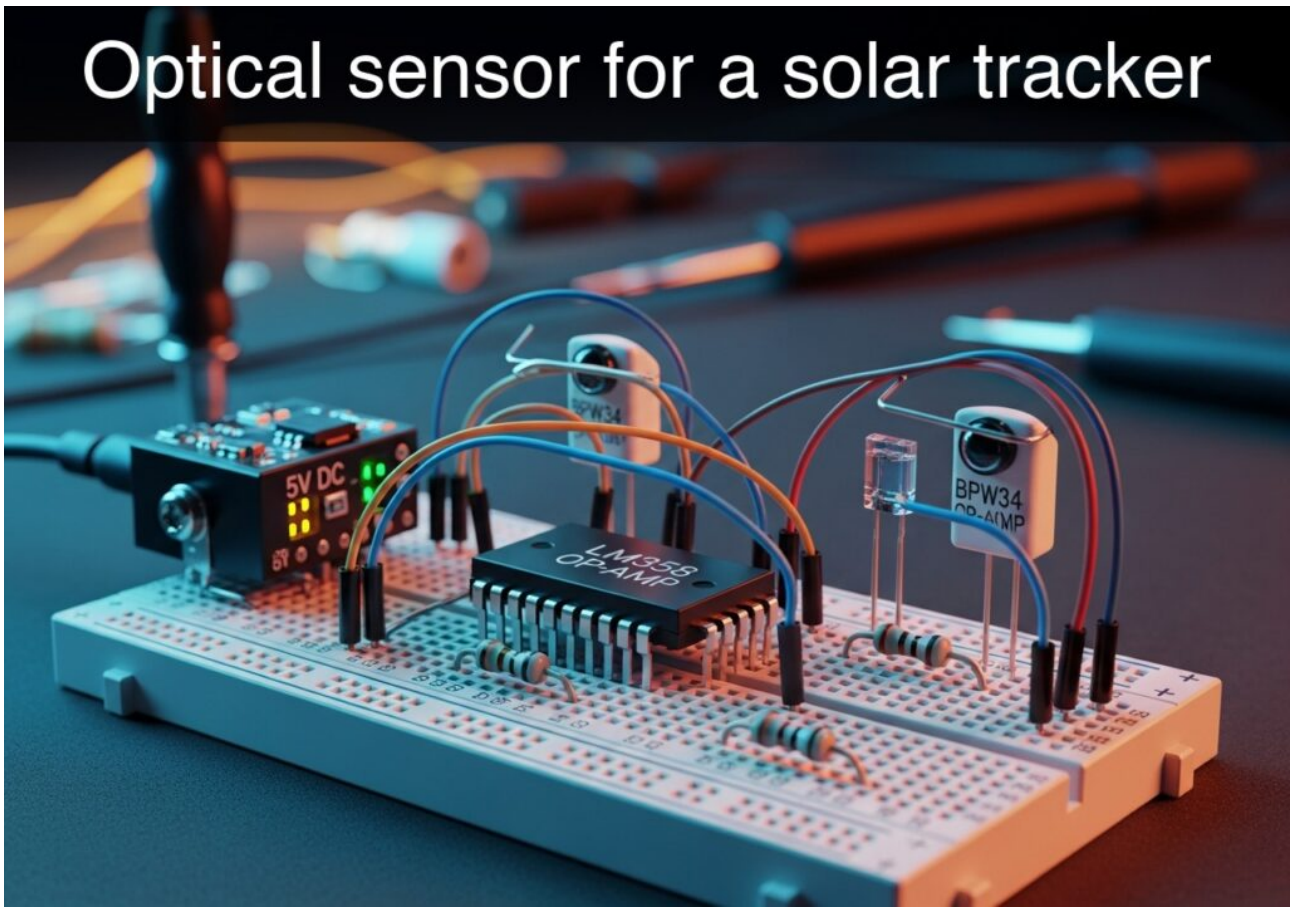


Level: Medium – Configure a capacitor in an NE555 circuit to control the oscillation frequency.

Objective and use case

In this practical case, you will…

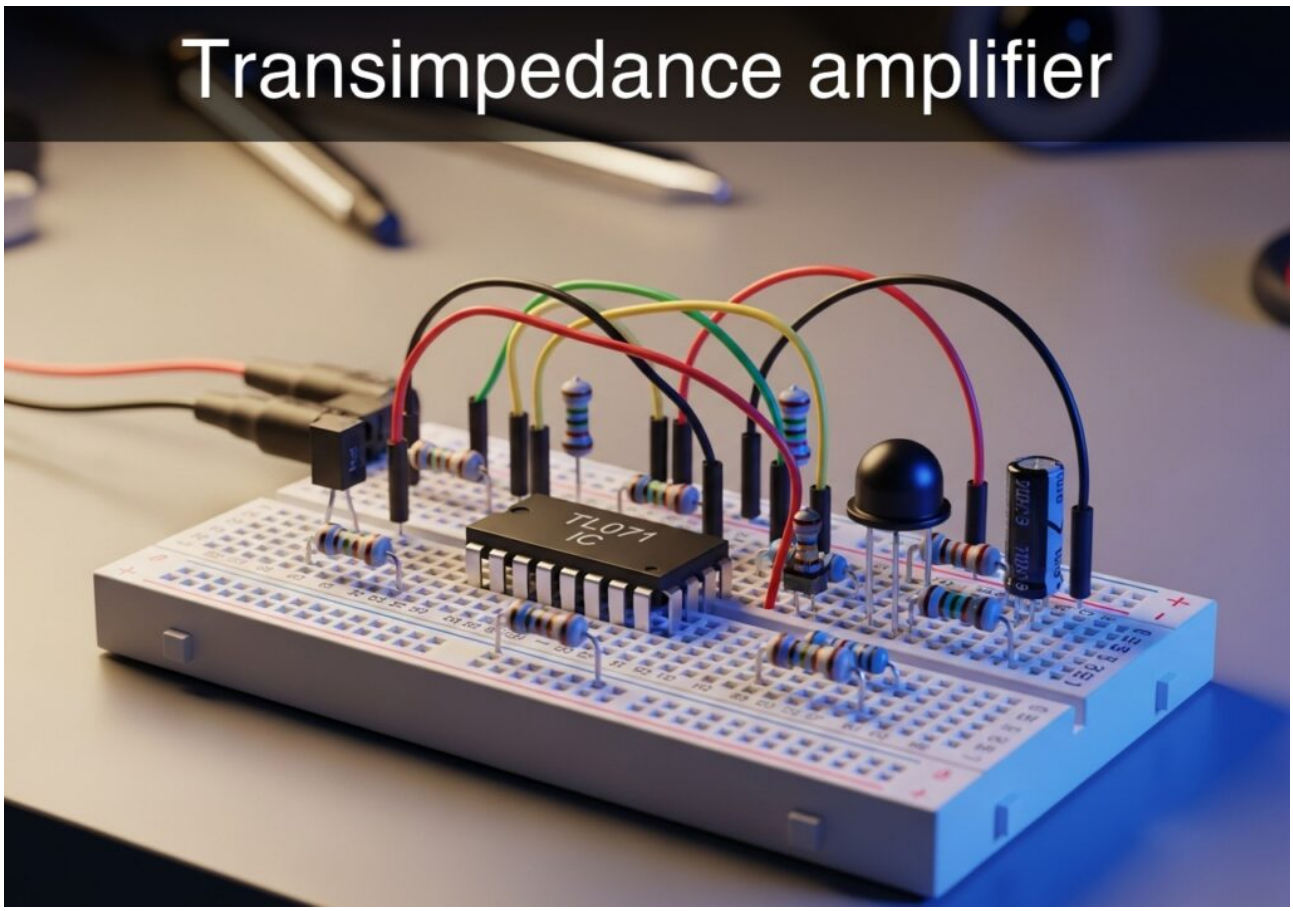
Practical case: Optical sensor for a solar tracker



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

##...

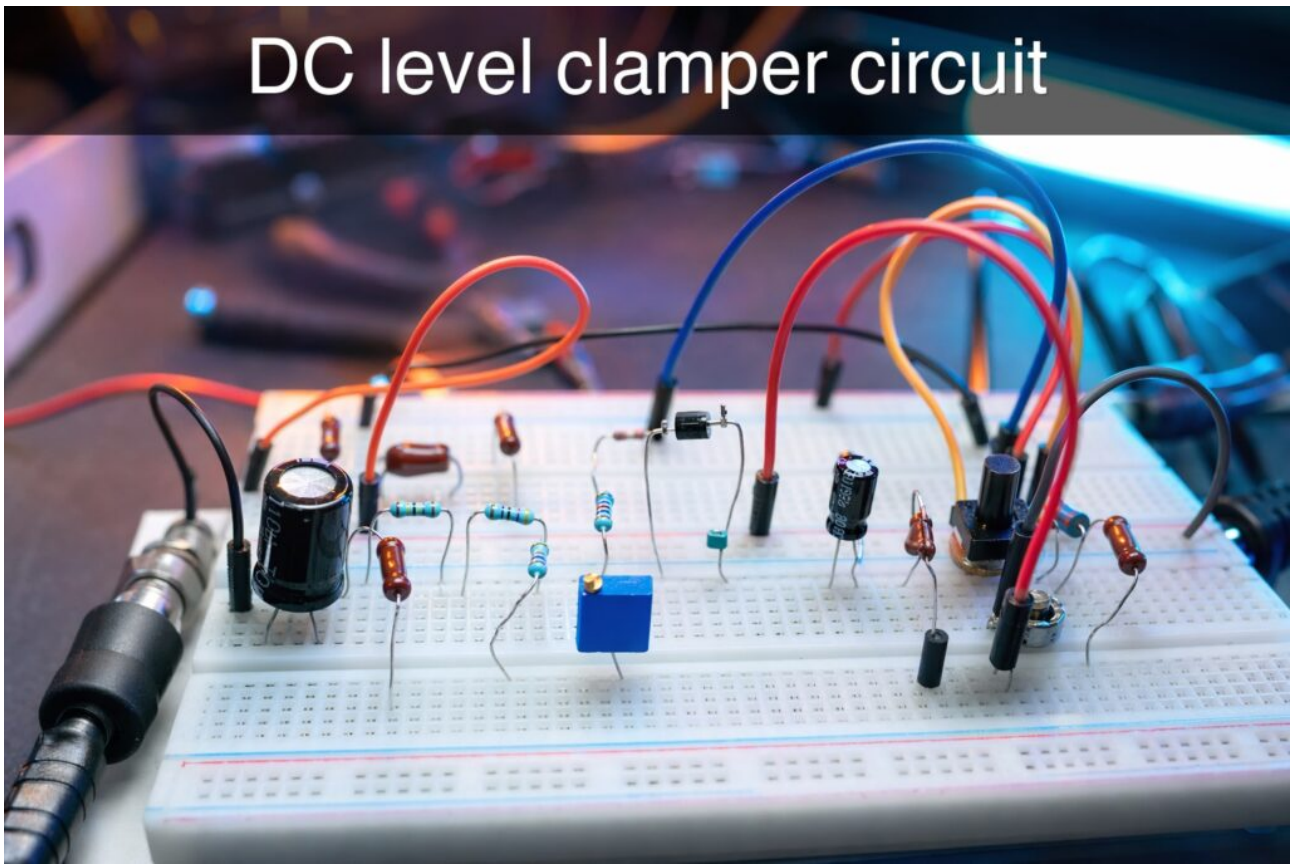
Practical case: Transimpedance amplifier



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



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…