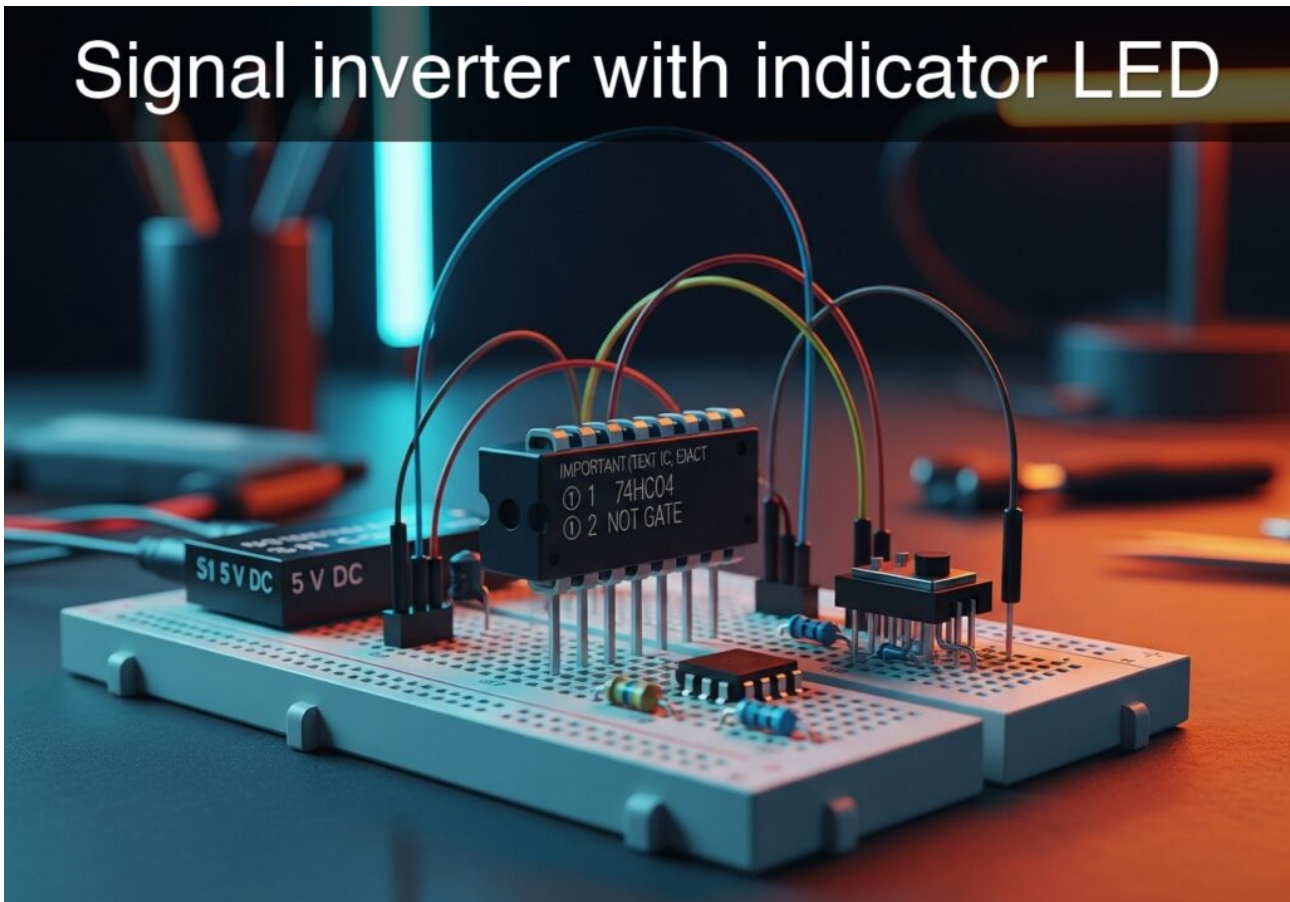


## Practical case: Signal inverter with indicator LED

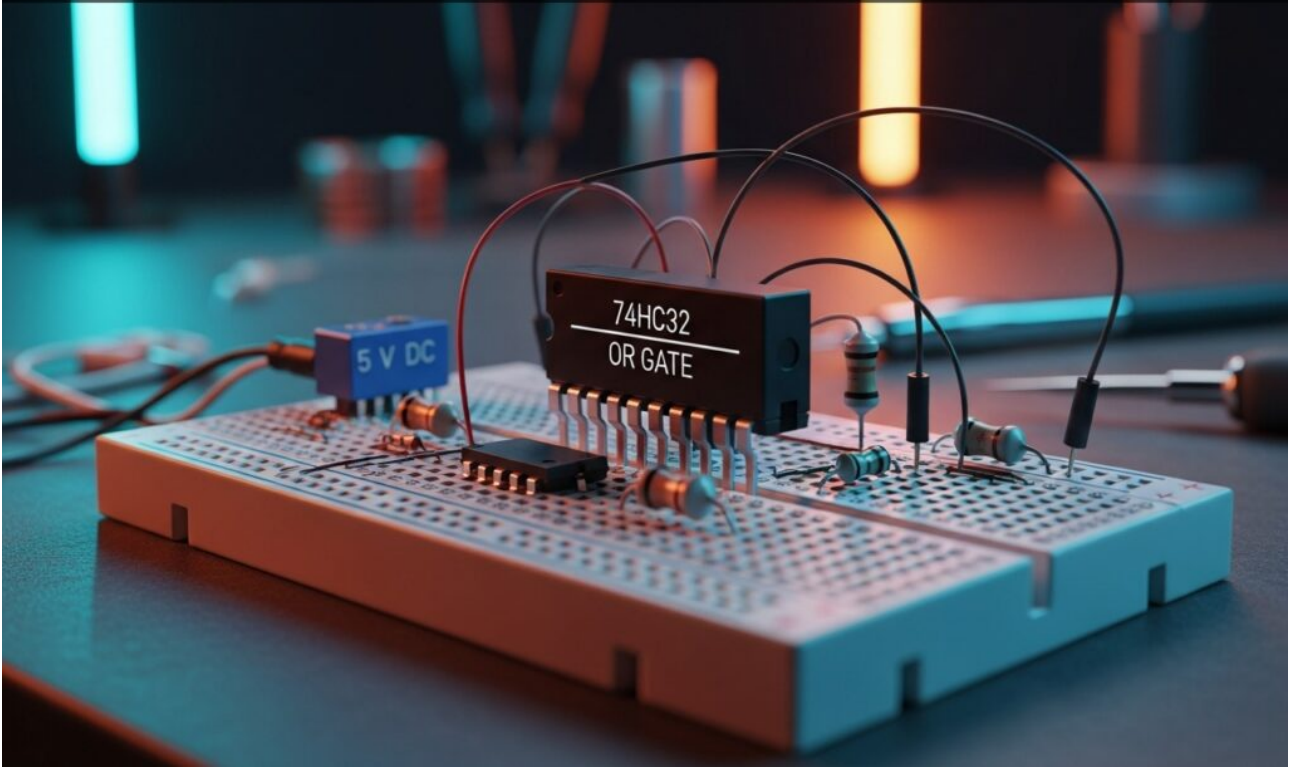


Master Digital Electronics by building a safety interlock circuit with a NOT gate. Learn to invert logic signals and control LED indicators for real-world...

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## Practical case: Emergency water pump activation

# Emergency water pump activation

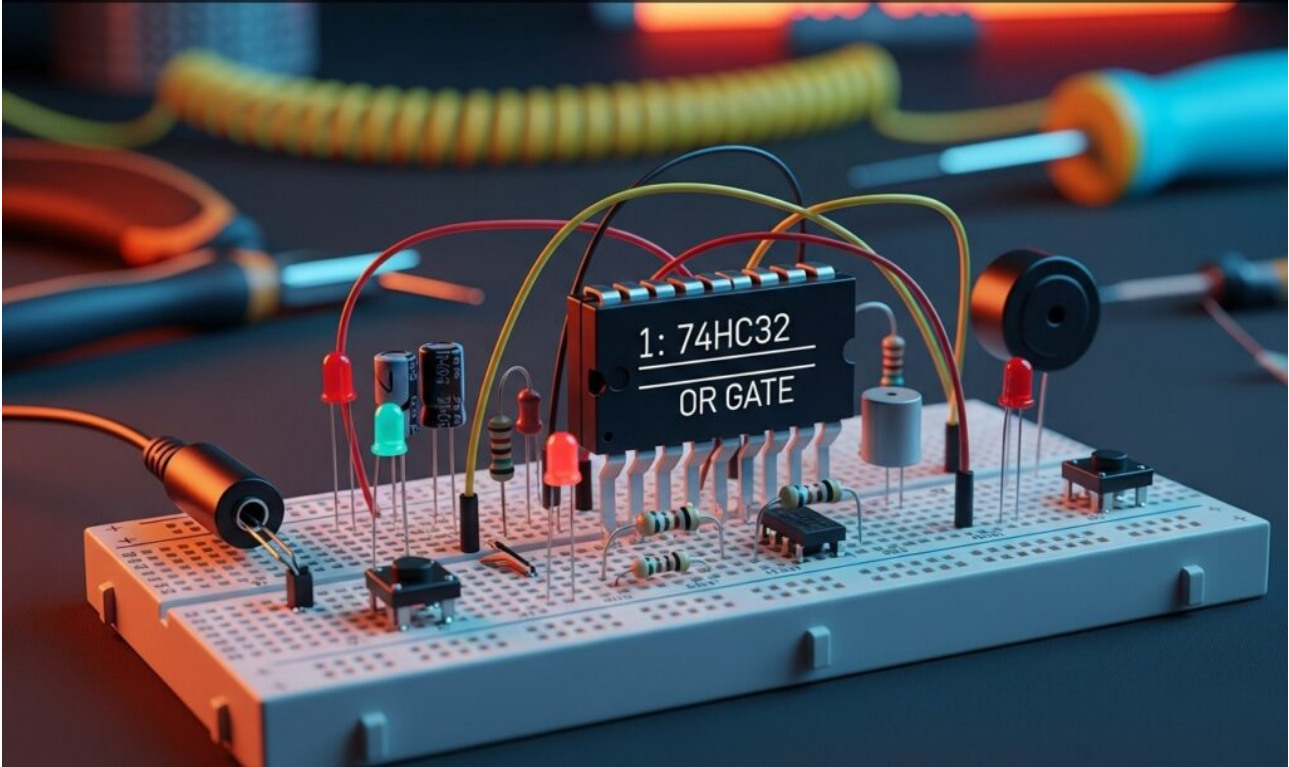


Master Digital Electronics by building a flood prevention system. Use an OR gate to activate a drainage pump when water sensors trigger a 5V logic signal.

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## **Practical case: Car Door Open Warning System**

# Car Door Open Warning System

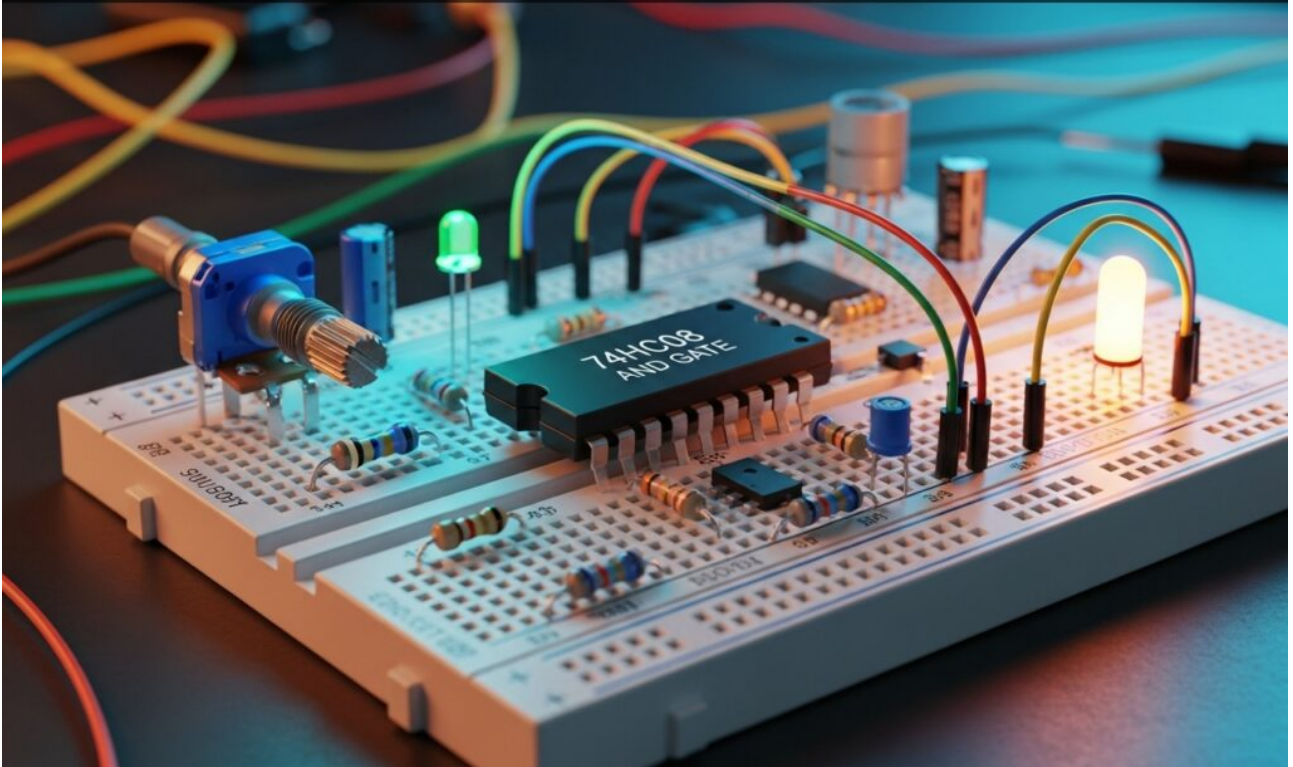


Master Digital Electronics by building a car door alarm with a 74HC32 OR gate. Learn to detect open circuits and trigger LED alerts for safer security systems.

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**Practical case: Conditional automatic irrigation system**

# Conditional automatic irrigation system

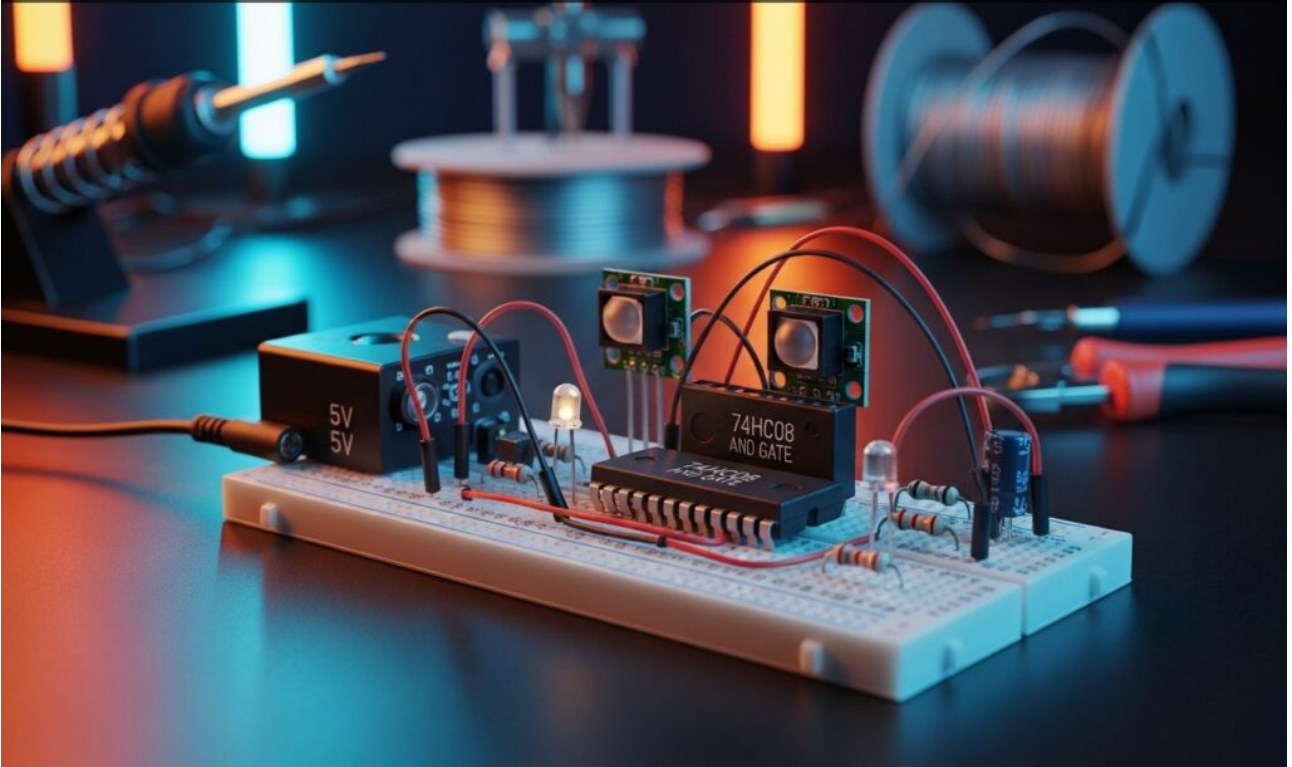


Master Digital Electronics by building a smart irrigation controller with a 74HC08 AND gate. Create a safety circuit that activates a pump only when safe.

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## Practical case: Dual sensor alarm activation

# Dual sensor alarm activation

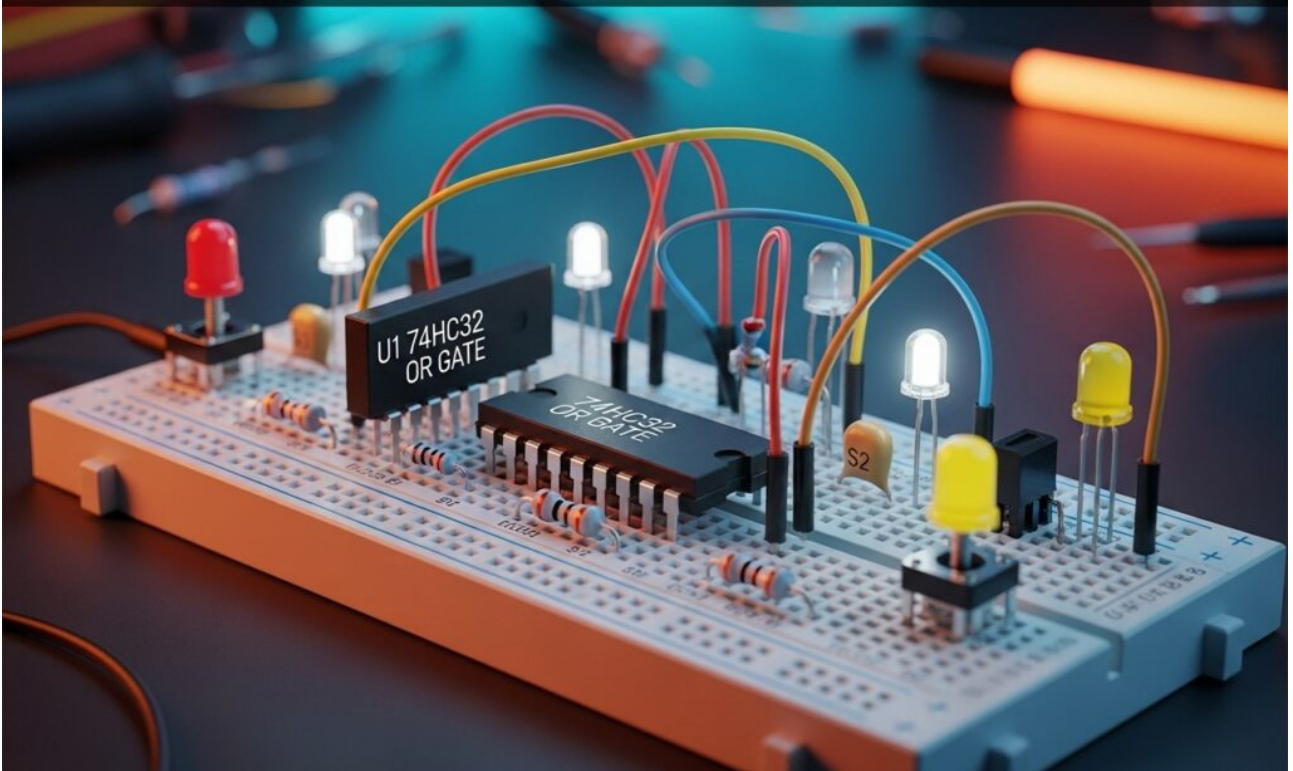


Master Digital Electronics by building a dual-sensor security alarm. Learn how an AND gate validates simultaneous inputs to trigger a verified output signal.

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**Practical case: Lighting control from two points**

# Lighting control from two points



Master Digital Electronics by building a dual-switch control circuit. Use an OR gate to trigger an LED signal from independent inputs, simulating alarm systems.