

AUTO ALARM

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In operation, the alarm circuit allows a 0 - 47 second time delay, as determined by the R1 /C1 combination, after the switch is armed to allow the vehicle's motion sensor to settle down. This allows you time to get a bag of groceries out of the trunk and not have the hassle of juggling the groceries and the key switch at once.

During the time delay, half of LED1, which is actually a single, bi-colored, three-legged common cathode device, lights green. At the same time, pins 8 and 4 of U2 (a 555 oscillator/timer) are held low by U1 (a 3905 oscillator/timer), causing the alarm to remain silent. Once the delay is over, LED1 turns red, indicating that the circuit is armed. Schematic

At that point, a ground at pin 2 of U2 forces pin 3 of U2 high, closing the contacts of KI and sounding the siren for a time duration determined by R4 and C2. Once the time has elapsed, pin 3 is pulled low, KI opens, and the circuit is again ready to go. The circuit can be manually reset by the simple expedient of opening and closing the key switch. Potentiometer R3 controls the LED's illumination intensity.

Diode D1 ensures that the green segment of LED1 is fully extinguished when Q1 is turned on-which turns the LED to red. Resistors R4 and R5 must be connected to the + V bus. not to pin 7 of U1. otherwise U2 will mysteriously trigger itself each time the initial delay ends.