

# Re: Need simple timer module or kit for car alarm project

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- *From:* ehsjr <ehsjr@xxxxxxxxxxxxxxxxxxxx>
  - *Date:* Thu, 29 Jun 2006 03:56:22 GMT
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googlegroups@xxxxxxxxxxxxxxxxxxxx wrote:

Hi, my car was just broken into yesterday, so I decided it's time to get a car alarm. It's an old car, so I bought a cheap (but good brand) basic vibration sensing alarm. Being the tinkerer I am (and not wanting to irritate my neighbors with false alarms), I want to install a timer that will wait a little bit before sounding the siren.

I also bought another cheap alarm system (\$20 on eBay) that instead of a siren sends a message to a pager. Thus, assuming both alarms trigger, the neighbor annoying siren won't go off immediately, but I will still be informed. Ideally, these two systems should be combined, so that I'm using the good brand vibration sensor to activate both the siren and pager, but I'll leave that project for later. (Incidentally, I'm also going to install a homemade fuel pump kill switch, but this won't be connected to the alarm system.)

I'm thinking I'd need to put an initially open relay in series with the siren and the timer in parallel. When the circuit closes (i.e. alarm tries to go off) the timer gets activated and closes the relay after a certain (hopefully adjustable) amount of time. When the alarm tries to turn off the siren (i.e. I hit the stop button on the alarm's remote), this will kill power to both the timer and siren. Doing so will reset the timer so it's ready for next time. I suppose I could also live with a timer that needs a manual reset using a button or whatever.

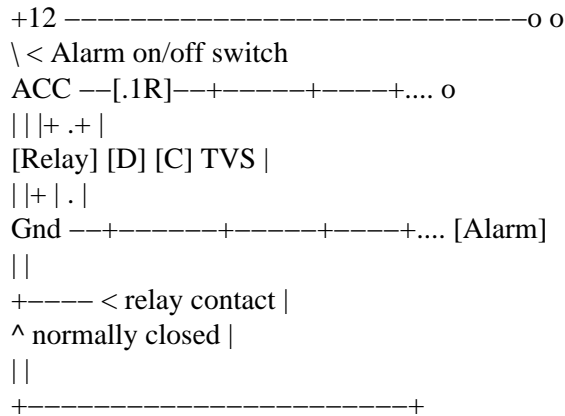
Anyone know where I can get such a timer? This timer needs to be inexpensive, as I'm disabled and living off public assistance.

Before becoming disabled, I was a computer science major at UC Berkeley, so I have basic electronics knowledge. My experience with soldering, however, is limited to a single light sensing switch I made. (That was a fun project, intended to operate a window shade that would open with the morning sun.)

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I don't think you really want a delay between the time a vibration sensor is disturbed and the siren goes off. Normally, the kind of delay you want is a delay between the time you turn the alarm on, and the time it arms, to allow yourself time to get out of the car and lock the door. That prevents the siren when you shut the door on exit. Opening the door should not disturb the vibration sensor enough to trigger the alarm.

There are many ways exit delay can be done. I'll show one that is the simplest and cheapest way, or close to it. The ACC line is a line that goes to +12 when the ignition switch is turned on. The +12 line is +12 regardless of the ignition switch. The circuit shown gives you roughly 10–15 seconds to exit the car from the time you turn the ignition switch off.



The relay is an Omron G6R–1–DC12 with a 655 ohm coil and contacts rated 5A at 30 VDC. D is a diode like a 1N4004. C is a 3300 uf electrolytic, which will give you roughly 10–15 seconds delay from the time you turn the ignition off until you turn the alarm on, exit the car, and lock it, before the alarm arms. You can put more capacitance in parallel to increase the time if you want.

The parts are available at Allelectronics.

<http://www.allelectronics.com/>

The cap is CAT #3300/25VA for 90 cents, the relay is CAT # RLY–428 for \$1.75, and the 1N4004 is CAT# 1N4004 at 9 for \$1.00. The .1 ohm 10 watt resistor is needed if you use the TVS, and is CAT #.1–10 at 2 for \$1.00.

You might want to add a transient suppression diode – Mouser part #576–1.5KE22 – in parallel with D but oriented with (+) to (+) and (–) to (–) (D is oriented backwards). It's shown dotted in on the schematic as TVS. I haven't found the TVS necessary, but some insist on it. If you don't use the TVS, you don't need the .1R

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Ed

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