

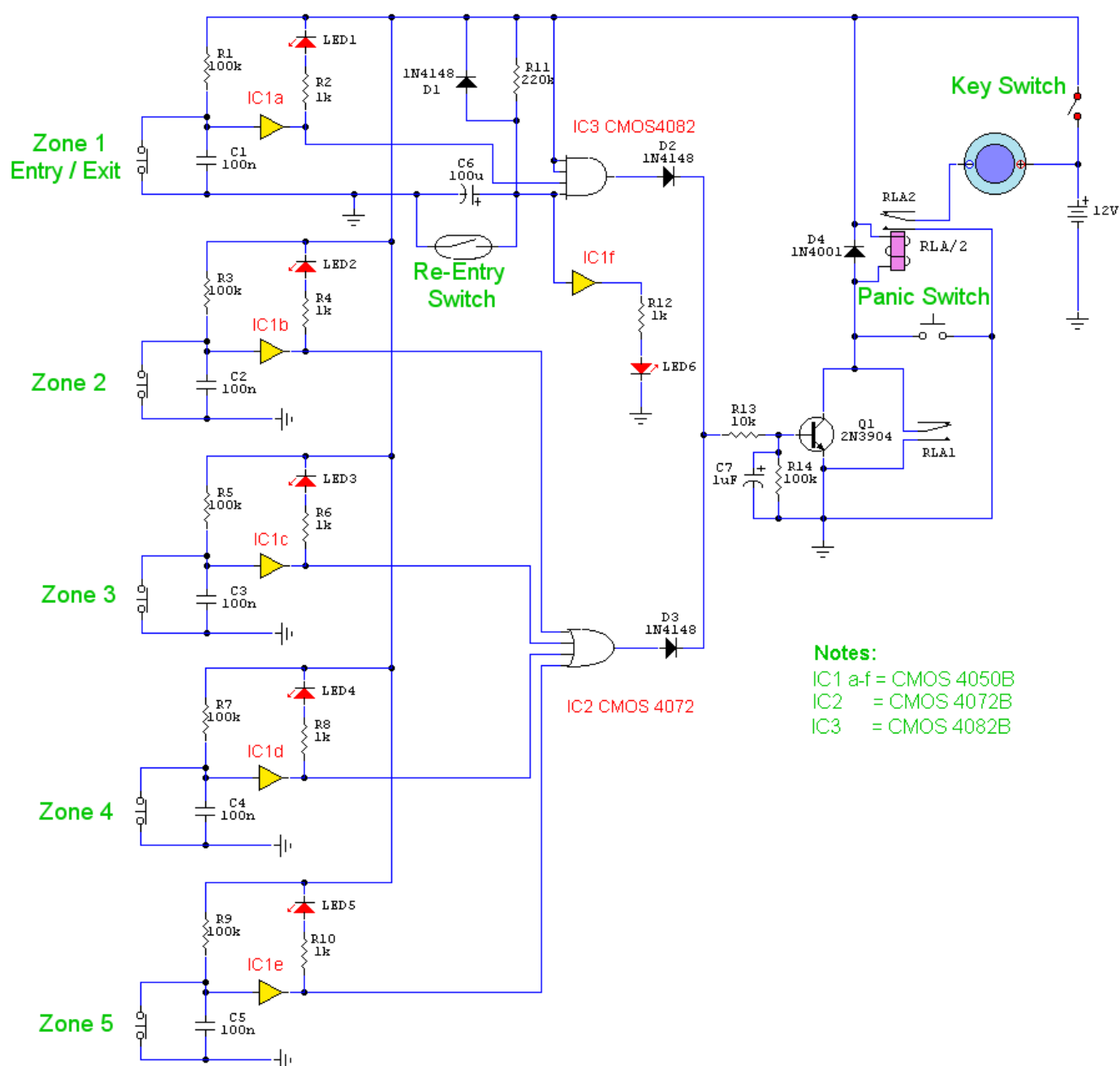
## 5 Zone Alarm System

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### Description:

This is a complete alarm system with 5 independent zones suitable for a small office or home environment. It uses just 3 CMOS IC's and features a timed entry / exit zone, 4 immediate zones and a panic button. There are indicators for each zone a "system armed" indicator. The schematic is as follows:



Please Note: This diagram is drawn with Relay and Switch Contacts labeled as in my [Practical Section](#)

Wheres the Parts List ? On the diagram [click here for more info.](#)

### Circuit Notes

Each zone uses a normally closed contact. These can be micro switches or standard alarm contacts (usually reed switches). Suitable switches can be bought from alarm shops and concealed in door frames, or window ledges.

Zone 1 is a timed zone which must be used as the entry and exit point of the building. Zones 2 - 5 are immediate zones, which will trigger the alarm with no delay. Some RF immunity is provided for long wiring runs by the input capacitors, C1-C5. C7 and R14 also form a transient suppressor. The key switch acts as the Set/Unset and Reset switch. For good security this should be the metal type with a key.

### Operation

At switch on, C6 will charge via R11, this acts as the exit delay and is set to around 30 seconds. This can be altered by varying either C6 or R11. Once the timing period has elapsed, LED6 will light, meaning the system is armed. LED6 may be mounted externally (at the bell box for example) and provides visual indication that the system has set. Once set any contact that opens will trigger the alarm, including Zone 1. To prevent triggering the alarm on entry to the building, the concealed re-entry switch must be operated. This will discharge C6 and start the entry timer. The re-entry switch could be a concealed reed switch, located anywhere in a door frame, but invisible to the eye. The panic switch, when pressed, will trigger the alarm when set. Relay contacts RLA1 provide the latch, RLA2 operate the siren or buzzer.