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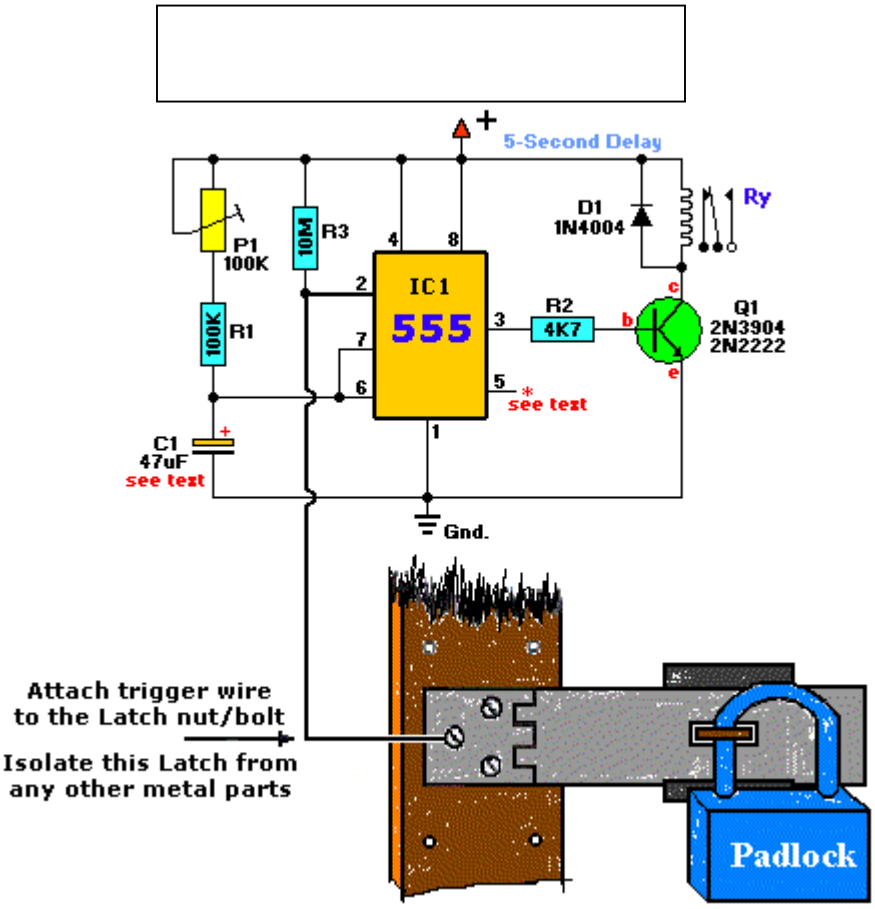
Touch activated alarm



Parts List

R1 = 100K
R2 = 4K7
R3 = 10M
P1 = 100K
Ry = Relay
D1 = 1N4004, general purpose diode
C1 = 47µF/16V
IC1 = 555 Timer
Q1 = 2N3904, 2N2222, or similar

Additional Notes

Not much to tell here as the circuit speaks for itself. The 555 can be almost any type, they are all pin-compatible. Although some CMOS types may not have enough power to drive the transistor, in that case use an ordinary 555. **C1's** working voltage should be increased to 25V if you decide to go with a 12V power source. Change the value of C1 for the desired output pulse.

For the timing use this equation: **T=1.1*(R1+P1)*C1** assuming R1 + P1 = 150K, then select C1 as follows: C1 = 6µF for each 1-second pulse width. For example, if you want the pulse width to be 5 seconds, C1 should be 30uf or nearest value like 22 or 33µF. Additionally, P1 can adjust the rest.
Rule of thumb: the working voltage of capacitors are at least double the supplied voltage, in other words, if the power source is 9Volt, your capacitor(s) is at least 18V. Transistor T1 can be any approximate substitute. Use any suitable relay for your project and if you're not tight on space, use any size. I've build this particular circuit to prevent students from fiddling with the security cameras in computer labs at the University I am employed. I made sure the metal casing was not grounded. But as the schematic shows you can basically hook it up to any type of metal surface. I used a 12-vdc power source. Use any suitable relay to handle your requirements. A 'RESET' switch (**N**ormally **C**losed) can be added between the positive and the 'arrow-with-the-+'. The trigger (touch) wire is connected to pin 2 of the 555 and will trigger the relay, using your body resistance, when touched. It is obvious that the 'touching' part has to be clean and makes good contact with the trigger wire. This particular circuit may not be suitable for all applications. Just in case you wonder why pin 5 is not listed in the schematic diagram; it is not really needed. In certain noisy conditions a small 0.01&microF; ceramic capacitor is placed between pin 5 and ground. It does no harm to add one or leave it out.