TIMED ENTRY/EXIT ALARM

The function is based on 2 monostables. R1/C1 hold the reset of the monostables low while C1 charges preventing them from triggering. This provides the exit delay. IC1 monstable output goes high for set time lighting the LED and giving the entry time. At the end of this pulse the output from pin 3 goes low. This causes both plates of C3 to go low until it charges. This pulse is very brief but enough to trigger the second 555 monostable. The output from IC2 monostable turns on Q1 which drives an audible warning device. This can be up to 500mA with the transistor shown.

The timing periods are all variable. The times are those using the values shown in the diagram. These can of course be altered. However take care never to connect pin 7 of either 555 timer directly to +v, eg by turning a potentiometer fully to zero ohms. If using a a variable resistor, it is a good idea to put a resistor in series of at least 100ohms.

Exit time = C1 and VR1, 0 to 10 seconds
Entry time = C2 and VR2, 0.5 to 11 seconds
Alarm time = C3 and VR3, up to 4 minutes

Secondly an LED has been added to show when the alarm has been triggered by an intruder.

The option to have an active low or active high trigger has been added to the PCB.

Exit time = up to 0 to 10 seconds
Entry time = 0.5 to 11 seconds
Duration = up to 4 minutes