

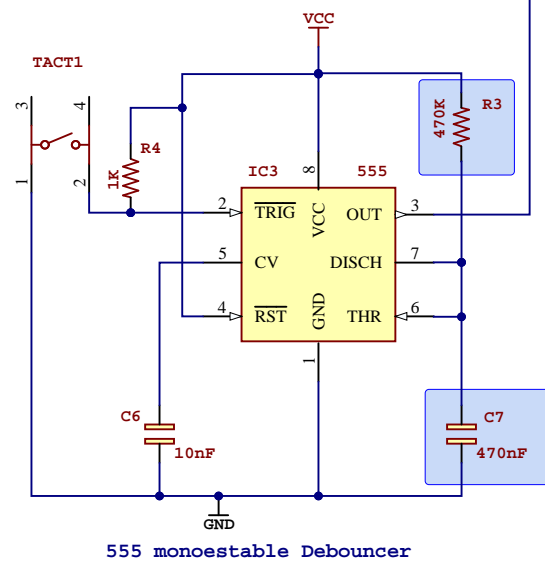
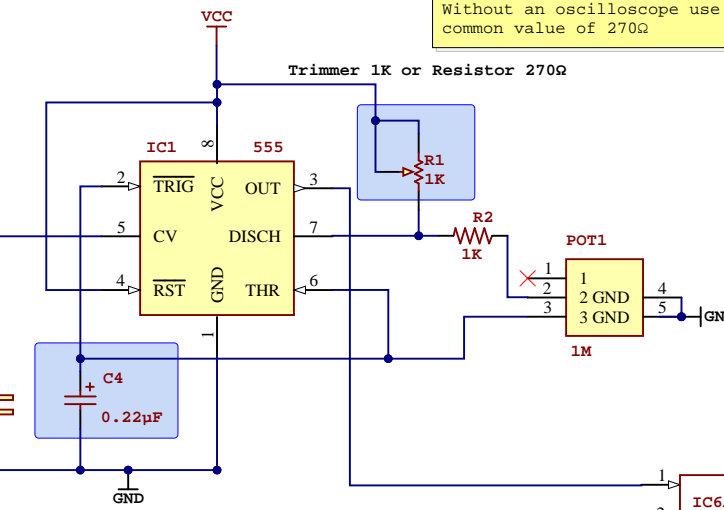
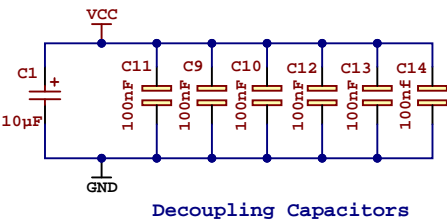
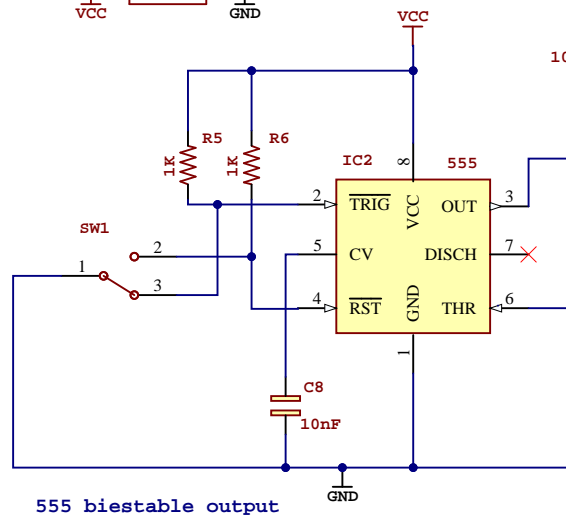
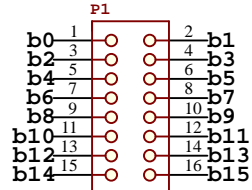
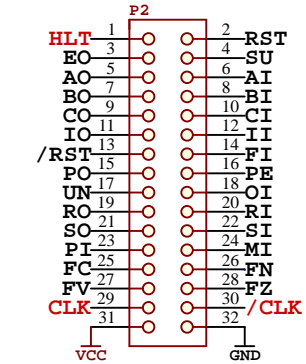
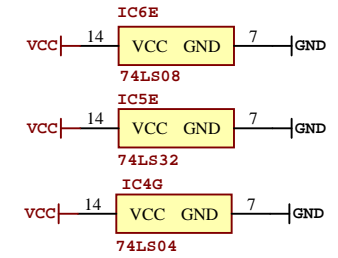


## Control BUS Connector

## Data BUS Connector

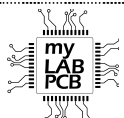
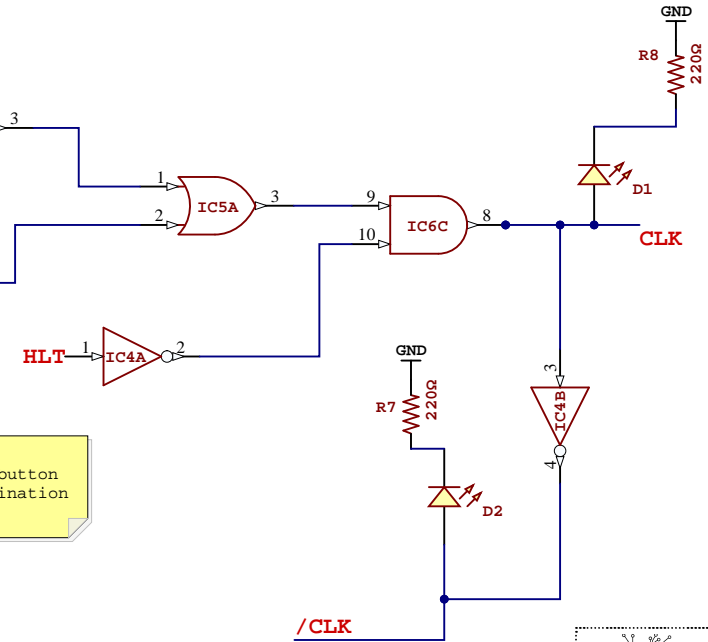
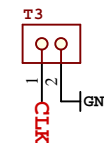
## 555 astable oscillator

Control the duty cycle of the clock signal using R1. Without an oscilloscope use a common value of 270Ω



Control debouncing threshold of push button using a right combination of C7 and R3

## Test Output

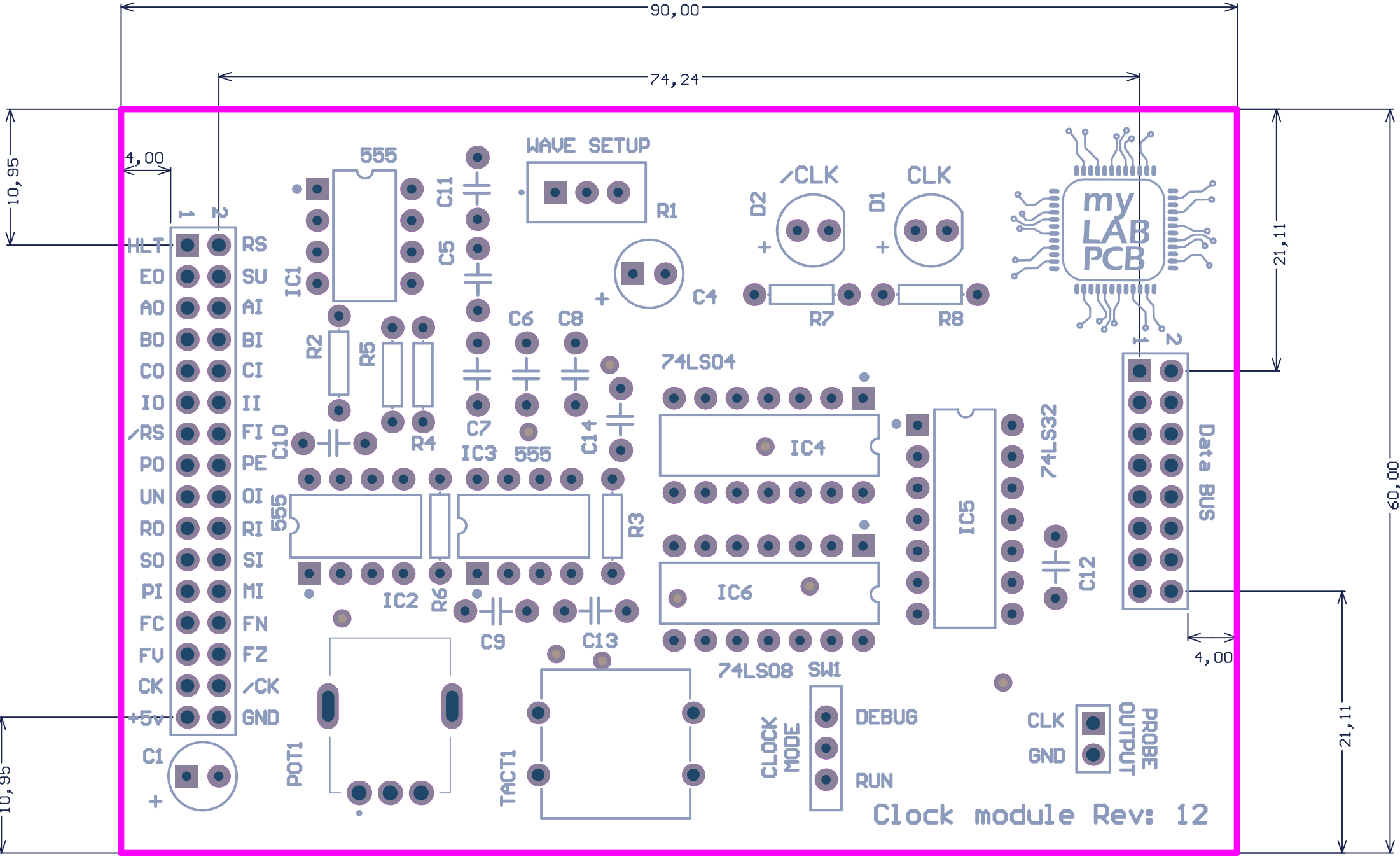


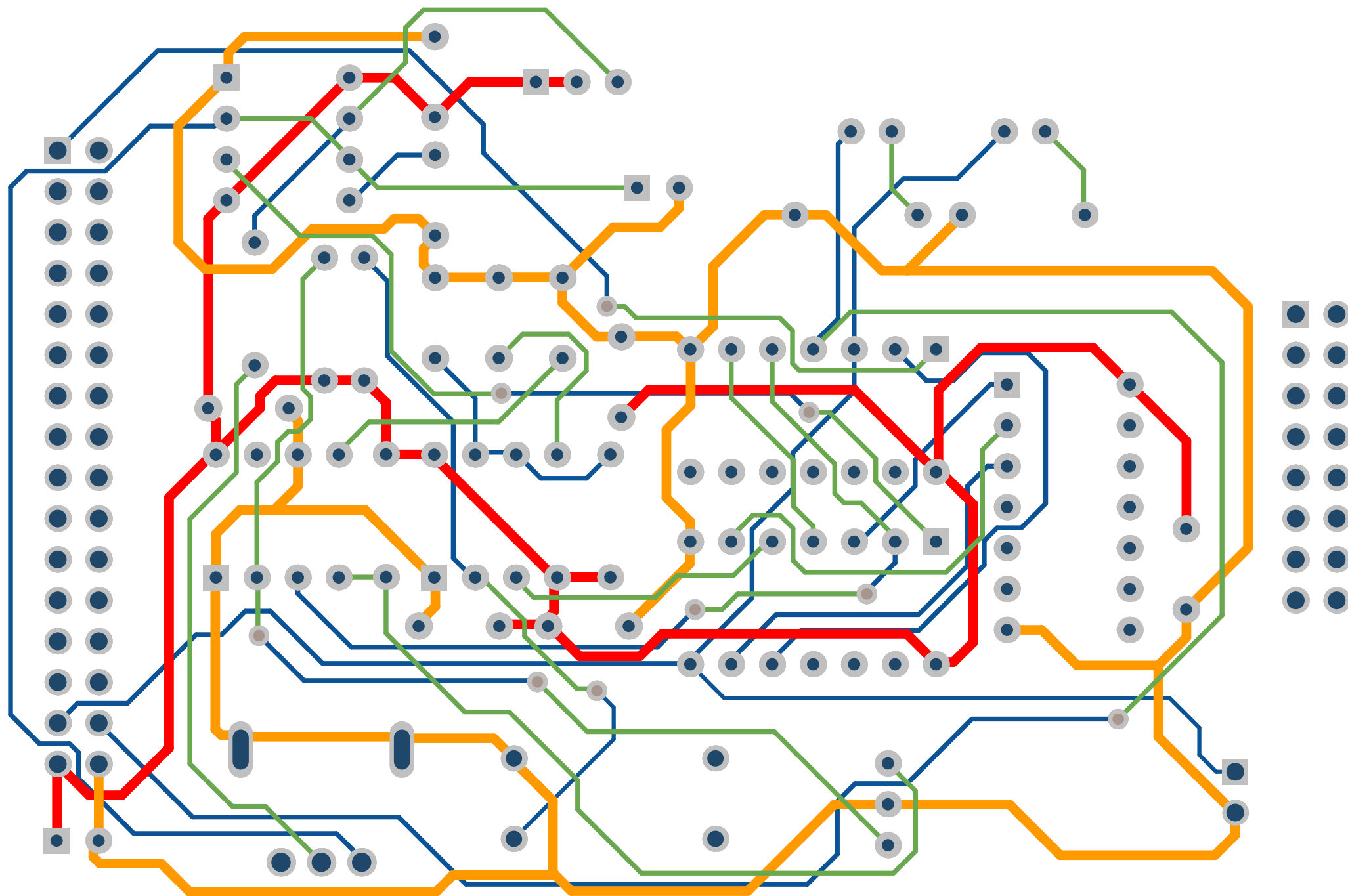
Project: myCPU Clock module

Revision: 12

Date: 24/06/2022

Author: Rafa Hernández









# Bill of Materials

Designator	Description	Value	Q
IC1, IC2, IC3	555 Timer	555	3
C5, C6, C8	Ceramic capacitor	10nF	3
C7	Ceramic capacitor	470nF	1
C9, C10, C11, C12, C13, C	Ceramic capacitor	100nF	6
C1	Electrolytic capacitor 16v/50v	10μF	1
C4	Electrolytic capacitor 16v/50v	0.22μF	1
IC4	Hex inverters	74LS04	1
D1, D2	Led 5mm Round		2
SW1	Mini slide switch 2 pos, 3 pins		1
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	16p	1
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	32p	1
T3	Pin Header, THT, pitch 2.54mm, Single Row, Vertical	2p	1
POT1	Potentiometer vertical, rotary, 3pins	1M	1
IC6	Quad 2-input AND gates	74LS08	1
IC5	Quad 2-input OR gates.	74LS32	1
R2, R4, R5, R6	Resistor axial	1K	4
R3	Resistor axial	470K	1
R7, R8	Resistor axial	220Ω	2
TACT1	Tactile button 12 mm		1
R1	Trimmer resistor 3 pin	1K	1



# Assembly List

Desig.	Description	Value
C1	Electrolytic capacitor 16v/50v	10 $\mu$ F
C4	Electrolytic capacitor 16v/50v	0.22 $\mu$ F
C5	Ceramic capacitor	10nF
C6	Ceramic capacitor	10nF
C7	Ceramic capacitor	470nF
C8	Ceramic capacitor	10nF
C9	Ceramic capacitor	100nF
C10	Ceramic capacitor	100nF
C11	Ceramic capacitor	100nF
C12	Ceramic capacitor	100nF
C13	Ceramic capacitor	100nF
C14	Ceramic capacitor	100nF
D1	Led 5mm Round	
D2	Led 5mm Round	
IC1	555 Timer	555
IC2	555 Timer	555
IC3	555 Timer	555
IC4	Hex inverters	74LS04
IC5	Quad 2-input OR gates.	74LS32
IC6	Quad 2-input AND gates	74LS08
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	16p
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	32p
POT1	Potentiometer vertical, rotary, 3pins	1M
R1	Trimmer resistor 3 pin	1K
R2	Resistor axial	1K
R3	Resistor axial	470K
R4	Resistor axial	1K
R5	Resistor axial	1K
R6	Resistor axial	1K
R7	Resistor axial	220 $\Omega$
R8	Resistor axial	220 $\Omega$
SW1	Mini slide switch 2 pos, 3 pins	
T3	Pin Header, THT, pitch 2.54mm, Single Row, Vertical	2p
TACT1	Tactile button 12 mm	