















# Bill of Materials

Designator	Description	Value	Q
C1	Electrolytic capacitor 16v/50v	10μF	1
C2, C3, C4, C5, C6	Ceramic or tantalum capacitor	100nF	5
FC, FN, FV, FZ	Led 3mm Round	Red	4
IC1	4-bit D-Type Register with 3 state outputs	74LS173	1
IC2	4-Bit sync counter	74LS161	1
IC3	3-Line to 8-Line decoder/demultiplexer	74LS138	1
IC5	Quad 2-input NAND gates	74LS00	1
IC6	Quad 2-input OR gates.	74LS32	1
L1, L2, L3	Led 3mm Round	Yellow	3
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 16p	16p	1
P2	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 32p	32p	1
P3	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 8p	8p	1
P4	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 6p	6p	1
R1, R2, R3, R4, R15	Resistor Axial	330Ω	5
R7, R8, R9, R10, R1	Resistor Axial	220Ω	7
R14	Resistor Axial	4.7K	1
RN1	Resistor array 8 elements, 9 pins	220Ω	1
SP1, SP2, SP3, SP4,	Led 3mm Round	Blue	8



# Assembly List

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C1	Electrolytic capacitor 16v/50v	10 $\mu$ F
C2	Ceramic or tantalum capacitor	100nF
C3	Ceramic or tantalum capacitor	100nF
C4	Ceramic or tantalum capacitor	100nF
C5	Ceramic or tantalum capacitor	100nF
C6	Ceramic or tantalum capacitor	100nF
FC	Led 3mm Round	Red
FN	Led 3mm Round	Red
FV	Led 3mm Round	Red
FZ	Led 3mm Round	Red
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P4	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 6p	6p
R1	Resistor Axial	330 $\Omega$
R2	Resistor Axial	330 $\Omega$
R3	Resistor Axial	330 $\Omega$
R4	Resistor Axial	330 $\Omega$
R7	Resistor Axial	220 $\Omega$
R8	Resistor Axial	220 $\Omega$
R9	Resistor Axial	220 $\Omega$
R10	Resistor Axial	220 $\Omega$
R11	Resistor Axial	220 $\Omega$
R12	Resistor Axial	220 $\Omega$
R13	Resistor Axial	220 $\Omega$
R14	Resistor Axial	4.7K
R15	Resistor Axial	330 $\Omega$
RN1	Resistor array 8 elements, 9 pins	220 $\Omega$
SP1	Led 3mm Round	Blue
SP2	Led 3mm Round	Blue
SP3	Led 3mm Round	Blue
SP4	Led 3mm Round	Blue
SP5	Led 3mm Round	Blue
SP6	Led 3mm Round	Blue
SP7	Led 3mm Round	Blue
SP8	Led 3mm Round	Blue