

## Optimized Detector (OD-Rev. K) Parts List

(in order of recommended assembly)

Qty.	Symbol	Description
1	R1	10Ω resistor [brown-black-black]
3	R3-R5	10KΩ resistors [brown-black-orange]
1	R6	3.6KΩ ½ W resistor [orange-blue-red]
1	R9	2.2KΩ ½ W resistor [red-red-red]
1	R10	10KΩ resistor [brown-black-orange]
1	R11	2.2MΩ resistor [red-red-green]
1	R12	220KΩ resistor [red-red-yellow]
1	R13	330KΩ resistor [orange-orange-yellow]
2	D1,D2	For regular DC or AC track power select from: 3A, 50V diodes (Mouser 625-1N5400-E3) 6A, 50V diodes (Mouser 625-GI750) For command control, e.g. DCC or Railcommand, select from: 3A, 40V fast recovery diodes (Mouser 625-GI850) 5A, 50V fast recovery diodes (Mouser 625-GI820)
2	D4,D5	1A, 100V diodes 1N4002 (Jameco 76961)
2	D6,D7	Fast Schottky barrier rectifiers (Mouser 625-SD103C)
1	S1	14-pin DIP socket (Jameco 112213)
1	S2	5-pin Waldom side entry connector (Mouser 538-09-52-3051))
3	C1,C5,C6	.1μF monolithic capacitors (Jameco 332671)
1	C2	1.5μF, 35V tantalum capacitor (Jameco 545713)
2	C3,C4	2.2μF, 35V tantalum capacitors (Jameco 33734)
1	R2	10KΩ potentiometer (Jameco 94714)
1	Q1	2N4401 small signal transistor (Jameco 38421)
1	L1	Red diffused size T1 LED (Jameco 333850)
1	U1	LM339N quad voltage comparator (Jameco 23851)

Author's recommendations for suppliers given in parentheses above with part numbers where applicable. Equivalent parts may be substituted. Resistors are ¼W, 5 percent unless otherwise noted and color codes are given in brackets. Note: R7, R8 and D3 are not used with OD Rev. K