

## Baseline (6 – 14 pin) Training and Development Board Parts List

### PCB-mounted components

Qty	Description
4	22 pF ceramic capacitors
1	3.3 nF ceramic capacitor
1	10 nF ceramic capacitor
1	47 nF ceramic capacitor
1	82 nF ceramic capacitor
1	100 nF ceramic capacitor
16	330 $\Omega$ 5% 1/4W resistors
7	1 k $\Omega$ 5% 1/4W resistors
1	4.7 k $\Omega$ 5% 1/4W resistor
3	10 k $\Omega$ 5% 1/4W resistors
2	22 k $\Omega$ 5% 1/4W resistors
1	100 k $\Omega$ 5% 1/4W resistor
1	10 M $\Omega$ 5% 1/4W resistor
1	10 k $\Omega$ trimpot with thumbwheel (e.g. Bourns 3352T)
1	100 k $\Omega$ trimpot with thumbwheel (e.g. Bourns 3352T)
3	BC337 NPN transistors (or BC547 / BC548 or similar)
1	1N400x series rectifier diode
2	32768 Hz “watch” crystal (12.5 pF load capacitance)
1	4.00 MHz ceramic resonator with built-in capacitor
3	common-cathode 7-segment LED displays (10-pin DIP, e.g. Kingbright SC52-11SRWA)
1	NE555 timer (bipolar)
1	74HCU04N hex inverter (unbuffered)
9	5 mm LEDs (red, green or yellow: normal intensity, diffused)
2	CDS photocells (LDRs), 20-60 k $\Omega$ when illuminated

1	DC power jack (2.1 / 5.5 mm)
1	1 × 16-pin 0.1" pitch header socket
1	1 × 6-pin 0.1" pitch right-angle header
1	1 × 32-pin 0.1" snappable header (snap into 16 × 1×2 headers)
1	1 × 9-pin 0.1" snappable header (snap into 3 × 1×3 headers)
1	2 × 19-pin 0.1" snappable header (snap into 1 × 2×3, 1 × 2×4, 1 × 2×6, and 3 × 2×2 headers)
1	13 mm PCB ext drive piezo sounder (e.g. muRata PKM13EPYH4000)
1	8-pin DIP IC socket
1	14-pin DIP IC socket
2	6 mm PCB-mount tactile pushbutton switches

### Accessories

Qty	Description
4	self-adhesive rubber feet
1	2" × 3" solderless breadboard
	22 AWG solid-core insulated jumper wire
20	header shunts

**Additional components supplied for use with Gooligum baseline and mid-range tutorials**

<b>Qty</b>	<b>Description</b>
1	PIC10F200-I/P MCU
1	PIC12F509-I/P MCU
1	PIC12F629-I/P MCU
1	PIC12F1501-I/P MCU
1	PIC16F506-I/P MCU
1	PIC16F684-I/P MCU
1	PIC16F1824-I/P MCU
1	1 nF ceramic capacitor
1	100 nF ceramic capacitor
2	1 $\mu$ F ceramic capacitor
1	100 $\Omega$ 5% 1/4W resistor
1	1 k $\Omega$ 5% 1/4W resistor
1	4.7 k $\Omega$ 5% 1/4W resistor
2	6.8 k $\Omega$ 5% 1/4W resistor
2	10 k $\Omega$ 5% 1/4W resistors
2	22 k $\Omega$ 5% 1/4W resistors
2	100 k $\Omega$ 5% 1/4W resistors
2	1N4148 diodes
1	74HC14N hex Schmitt-trigger inverter
2	CDS photocells (LDRs), 20-60 k $\Omega$ when illuminated
1	PCB-mount pushbutton switch