

Simple Minute Timer Parts List

1	Pre-programmed PIC16F690-I/P
1	32768 Hz “watch” crystal (12.5 pF load capacitance)
2	27 pF ceramic capacitors
1	100 nF monolithic ceramic capacitor
8	47 Ω 1/4W resistors
9	1 k Ω 1/4W resistors
5	BC337 NPN transistors
1	10 mm 4-digit common cathode 7-segment LED display module (Lite-On LTC-4727JS)
1	3 \times 4 front-mount keypad (Grayhill 96AB2-152-F)
1	13 mm PCB ext drive piezo sounder, 5 mm spacing (e.g. muRata PKM13EPYH4000)
1	20-pin DIP IC socket
150 mm	8-way ribbon cable (or any suitable to make up 50 mm lengths of 8-way, 5-way and 4-way)
1	2-way AA flat battery holder with fly leads
1	Hand-held instrument case with battery compartment, at least 112 mm \times 66 mm \times 28 mm (e.g. Hammond 1593Q)
6	#4 or M2.5, 6 mm panhead machine screws
	Double-sided foam tape (optional, to mount battery holder – see text)