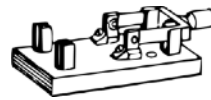


# ASCII Keyboard Tester

## Bill of Materials



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Part	Value	Remarks	Quantity	Reference	Provided
<b>Standoffs</b>	M3	stands	4		
	M3	nuts	4		
<b>Pin header</b>	1 x 2 pins	male vertical	1	J6	
	1 x 4 pins	male horizontal	1	J1	
	1 x 4 pins	male vertical	1	J2	
	1 x 9 pins	male vertical	1	J3	
<b>Socket</b>	14 pins	<i>optional</i>	1	U2	
	16 pins	<i>optional</i>	1	U3	
	16 pins	double spring contact, for easy insertion	2	J4, J5	
	20 pins	<i>recommended</i> <sup>1</sup>	1	U1	
<b>Resistor</b> <sup>2</sup>	270 Ω	1/4 W - red, violet, black, black, brown	11	R1 - R11	
	2 kΩ	1/4 W - red, black, black, brown, brown	2	R13, R16	
	3,3 kΩ	1/4 W - orange, orange, black, brown, brown	1	R12	
	82 kΩ	1/4 W - grey, red, black, red, brown	2	R14, R15	
<b>Capacitor</b>	10 μF	elco radial	2	C1, C2	
<b>IC</b> <sup>3</sup>	74LS00	Quad 2-Input NAND Gate <sup>4</sup>	1	U2	
	74LS123	Retriggerable Monostable Multivibrator	1	U3	
	74LS374	Octal D-Type Edge Triggered Flip-Flops with 3-State Outputs	1	U1	
<b>LED</b> <sup>5</sup>	red	5 mm, round	8	D1 - D8	
	white	5 mm, round	2	D9, D10	
	yellow	5 mm, round	1	D11	
	orange	5 mm, round	1	D12	
		<b>Parts</b>	<b>50</b>		
		<b>Types</b>	<b>22</b>		

### Notes:

- 1) This socket is recommended to be able to attach an optional HEX Display later.
- 2) Some provided resistor-values could differ slightly, as could their band colors, this has no effect on the working of the board.
- 3) Non-LS TTL ICs can be used as well (i.e. 7400, 74123 and 74374).
- 4) This IC has 4 NAND gates, 1 of them is unused and free to use in the breadboard area.
- 5) When preferred, other LED colors can be used. Make sure to check if the values of the resistors R1 - R11 are correct for the LEDs used (especially when using blue and green colored LEDs).