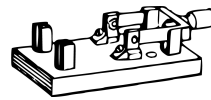


ASCII Keyboard Tester

Bill of Materials



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Part	Value	Remarks	Quantity	Reference	Provided
Standoffs	M3	stands	4		
	M3	nuts	4		
Pin header	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	
Socket	14 pins	<i>optional</i>	1	U2	
	16 pins	<i>optional</i>	3	J4, J5, U3	
	20 pins	<i>recommended</i> ¹	1	U1	
Resistor ²	270 Ω	1/4 W - red, violet, black, black, brown	11	R1 - R11	
	2 k Ω	1/4 W - red, black, black, brown, brown	2	R13, R16	
	3,3 k Ω	1/4 W - orange, orange, black, brown, brown	1	R12	
	82 k Ω	1/4 W - grey, red, black, red, brown	2	R14, R15	
Capacitor	10 μ F		2	C1, C2	
IC ³	74LS00	Quad 2-Input NAND Gate ⁴	1	U2	
	74LS123	Retriggerable Monostable Multivibrator	1	U3	
	74LS374	Octal D-Type Edge Triggered Flip-Flops with 3-State Outputs	1	U1	
LED ⁵	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	

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).