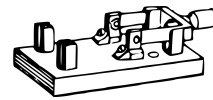


# Hex Keyboard

## Bill of Materials



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Part	Value	Remarks	Qty	Reference	Provided
<b>Standoffs</b>	M3	nylon stands 8 mm	4		
	M3	nylon nuts	4		
<b>Pin header</b> <sup>1</sup>	2 x 2 pin	male horizontal ( <i>backside</i> )	1	J1	
	2 x 5 pin	male horizontal ( <i>backside</i> )	1	J2	
<b>Connector</b>	1 x 2 pin	JST PH contact strip horizontal ( <i>backside</i> ) <sup>2</sup>	1	J3	
<b>Resistor</b>	270 $\Omega$	1/4 W - red, violet, black, black, brown	1	R1	
<b>Resistor Net</b>	2.2 k $\Omega$	4x resistor, 5 legs <sup>3</sup>	2	RN1, RN2	
<b>Switch</b>	DPDT	Small slide Switch ON-ON	1	SW3	
	16 pos.	Hex thumbwheel rotary switch <sup>4</sup>	2	SW1, SW2	
<b>LED</b> <sup>5</sup>	yellow	3 mm, round	1	D1	
		<b>Parts</b>	<b>18</b>		
		<b>Types</b>	<b>10</b>		

### Notes:

- 1) If a finished 8-bit Workbench is available, insert the unsoldered **pin headers** (J1, J2) into the female busses of the Workbench to have them perfectly aligned before soldering them.
- 2) This **power connector** (J3) can be used to attach a *logic probe*, handy in combination with the *Super Breadboard*. The pins are marked with + and - at the backside of the PCB.
- 3) Make sure the dot-marking side of the **resistor net** (RN1, RN2) goes into the square pad on the PCB.
- 4) The dot-marking on the **rotary switch** (SW1, SW2) should point to the top left corner, i.e. the zero (0) should point to the top edge of the PCB.
- 5) Check the LED (D1) polarity. The long leg is the anode (+) and the short leg the cathode (-). The short leg should go through the square pad and the long leg through the round pad.

**Before applying power, check J1 and J2 for shorts between all side-to-side pins using a multimeter in continuity mode.**