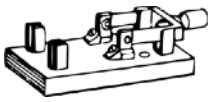
Super Breadboard
Bill of Materials



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Part	Value	Remarks	Qty	Reference	Provided
Standoffs	M3	nylon stands 8mm	**4**		
	M3	nylon nuts	**4**		
Pin header	1 x 4 pin	male vertical	**1**	J2	
	2 x 2 pin	male horizontal *(backside)*	**1**	J1	
	2 x 5 pin	male horizontal *(backside)*	**1**	J3	
	2 x 10 pin	male vertical	**1**	J6	
Jumper	1 x 2 pin	jumper	**10**	J6	
	1 x 2 pin	jumper with pull-tab	**1**	J2	
Connector	USB	5 pin Mini-B USB connector	**1**	J14	
Socket	1 x 2 pin	female vertical bus	**3**	J9, J11, J12	
	1 x 4 pin	female vertical bus	**1**	J15	
	1 x 10 pin	female vertical bus	**2**	J7, J8	
	2 x 2 pin	female vertical bus	**1**	J10	
	2 x 2 pin	female horizontal bus *(backside)*	**1**	J4	
	2 x 5 pin	female horizontal bus *(backside)*	**1**	J5	
Resistor [1]	330 Ω	1/4 W - orange, orange, black, black, brown	**1**	R1	
Resistor Net	330 Ω [2]	3x resistor, 6 legs	**1**	RN1	

Notes:

1) Some provided resistor-values could differ slightly, as could their band colors, this has no effect on the working of the board.

Important:

- If a finished 8-bit Workbench is available; on a flat table, mount the standoffs and insert the unsoldered pin headers (J1, J3) into the female busses of the Workbench to have them perfectly aligned before soldering them.

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Part	Value	Remarks	Qty	Reference	Provided
Capacitor	100 nF	marked with '104'	**2**	C2, C4	
	10 µF	elco radial	**1**	C3	
	22 µF	elco radial	**1**	C1	
Transistor	BC547	Bipolar NPN	**1**	Q1	
IC	AMS1117-3.3V	800 mA 3.3V voltage regulator *(backside)* [2]	**1**	U1	
Fuse	500 mA	PPTC resettable fuse SMD 1206 [2]	**1**	F1	
Switch	ON	Push Button	**1**	SW1	
LED [3]	red	3 mm, round [4]	**1**	D1	
	green	3 mm, round	**1**	D2	
	orange	5 mm, round	**1**	D3	
	spacer	8 mm for 3 mm LED [4]	**1**	D1	
Misc	400 pin	breadboard with adhesive, black	**1**	-	
		Parts	**48**		
		Types	**29**		

Notes:

2) Use a pair of tweezers to solder the two SMD parts. Apply a blob of solder on one pad, then seat the SMD part with the tweezers while heating the already applied solder blob. When the part is seating correctly, solder the remaining pad(s).

3) When preferred, other LED colors can be used. Make sure to check if the values of the resistor R1 and resistor network RN1 are correct for the LEDs used (*see* Schematics).

4) Put the LED spacer between the legs of the red LED (D1) before soldering.

<u>Important:</u>

- Check the LED (D1-D3) 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-J5 for shorts between all side to side pins using a multimeter in continuity mode. Do the same for the voltage regulator (U1) on the backside.