

Updated 4/10/2017

Ben Eater's 8-bit breadboard Computer Parts List

Part	Amount	Description
Board	1	17" x 15" Plywood Board
5 Volt Phone Charger	1	USB Phone Charger
USB Cable	1	USB Cable
Breadboard	14	830 tie point solderless breadboard
22 gauge wire (100' Spools)	5	WIRE,22AWG,SOLID Green,Blue,Red,Black,White
Jumper wires		Breadboard jumper wires (For testing)
555	3	555 timer
74LS00	2	Quad NAND gate
74LS04	6	Hex inverter
74LS08	2	Quad AND gate
74LS32	1	Quad OR gate
74LS86	2	Quad XOR gate
74ls138	1	3-to-8-line Decoder Multiplexer
74LS157	4	Quad 2-to-1 line data selector
74LS161	4	4-bit synchronous binary counter
74LS173	10	4-bit D-type register
74LS189	2	64-bit RAM
74LS245	6	Octal bus transceiver
74LS283	2	4-bit binary full adder
CAT28C16AP	6	16 Kbit CMOS parallel EEPROM
Total IC's	51	
Toggle switch	2	Double-pole toggle switch
Momentary switch	5	Microtivity 6mm tact switch
Bit Switch 4	1	SWITCH,DIP,4 POS,ON OFF,SPST
Bit Switch 8	1	SWITCH,DIP,8 POS,ON OFF,SPST
7 Segment Display	3	Blue Anode 7 Segment Display
LED (blue)	24	
LED (green)	11	
LED (red)	44	
LED (yellow)	18	
Potentiometer 1M Ω	1	
Resistor 100k Ω	1	
Resistor 10k Ω	2	
Resistor 1K Ω	6	
Resistor 330 Ω	8	
Resistor 100 Ω	1	
Capacitor 0.01 μ F	5	
Capacitor 0.1 μ F	4	
Capacitor 1 μ F	1	
Capacitor 2 μ F	1	

EEPROM programmer

Arduino Nano	1	Arduino Nano
74HC595	2	8-bit shift register

Optional 4 Digit Display (Cathode)

555	1	555 timer
74LS76	1	Dual JK flip-flop
74LS139	1	Dual 2-line to 4-line decoder
28C16 EEPROM	1	28C16 EEPROM
4 Digit 7-Segment Display	1	4 Digit Red Common Cathode 7-segment display
1k resistor	1	1k resistor
100k resistor	1	100k resistor
10nF capacitor	2	10nF capacitor

Optional 4 Digit Display (Anode)

555	1	555 timer
74LS76	1	Dual JK flip-flop
74LS139	1	Dual 2-line to 4-line decoder
28C16 EEPROM	1	28C16 EEPROM
4 Digit 7-Segment Display	1	4 Digit Blue Common Anode 7-segment display
1k resistor	1	1k resistor
100k resistor	1	100k resistor
10nF capacitor	2	10nF capacitor
BS250 P-CH MOSFET	4	TRANSISTOR BS250 P-CH MOSFET
Resistor 100Ω	4	100Ω resistor