

MORSEDUINO 2.3 – Parts List in Order of Assembly

Qty	Item	Board Label	Notes
<input type="checkbox"/> <input type="checkbox"/>	1 Morseduino 2 PCB	Note: Clean both sides with alcohol before soldering components	
<input type="checkbox"/> <input type="checkbox"/>	1 1 K Ω Resistor	R1	
<input type="checkbox"/> <input type="checkbox"/>	2 470 Ω Resistors	R2, R3	brown tabs
<input type="checkbox"/> <input type="checkbox"/>	3 150 Ω Resistors	R4, R5, R6	yellow tabs
			These are slightly longer than the hole spacing so bend the leads in tight
<input type="checkbox"/> <input type="checkbox"/>	1 3mm Blue LED	LED1 (right most LED)	Put short leads in squares
<input type="checkbox"/> <input type="checkbox"/>	1 3mm Red LED	LED2 (left most LED)	Bend so LEDs extend from edge of board
<input type="checkbox"/> <input type="checkbox"/>	1 16 MHz Crystal	XTAL	
<input type="checkbox"/> <input type="checkbox"/>	2 0.01 μ F Capacitors	C4, C10 near ATmega	mustard yellow
<input type="checkbox"/> <input type="checkbox"/>	1 2.2 μ F Capacitor	C1	blue with paint dot
<input type="checkbox"/> <input type="checkbox"/>	3 0.22 μ F Capacitors	C2, C3, C5	blue
<input type="checkbox"/> <input type="checkbox"/>	2 22 pF Capacitors	C6, C7	red
<input type="checkbox"/> <input type="checkbox"/>	3 Push buttons	RESET, SW1, SW2	
<input type="checkbox"/> <input type="checkbox"/>	1 28 Pin IC Socket	ATmega 328	Notch is up.
<input type="checkbox"/> <input type="checkbox"/>	2 8 Pin IC Sockets	41010, 567	Notches go up
<input type="checkbox"/> <input type="checkbox"/>	2 Headphone Jacks	Headphone, Audio In	
<input type="checkbox"/> <input type="checkbox"/>	1 red&black leads plug&jack	Vin	Red lead at '+'
<input type="checkbox"/> <input type="checkbox"/>	1 10 K Ω potentiometer	R7	LCD Contrast
<input type="checkbox"/> <input type="checkbox"/>	2 2 Pin Male Headers	AUX, AUX	alternate audio in/out
<input type="checkbox"/> <input type="checkbox"/>	3 3 Pin Male Headers	J2, 5V, GND	
<input type="checkbox"/> <input type="checkbox"/>	1 header shunt/jumper	Goes on J2	left dim bk lt. Right bright
<input type="checkbox"/> <input type="checkbox"/>	2 4 Pin Male Headers	D5-D8, KEY-SPK	
<input type="checkbox"/> <input type="checkbox"/>	1 5 Pin Male Header	D13-D9	
<input type="checkbox"/> <input type="checkbox"/>	1 6 Pin Male Header	RESET-D4	
<input type="checkbox"/> <input type="checkbox"/>	1 8 Pin Male Header	RSET-5V	
<input type="checkbox"/> <input type="checkbox"/>	2 22 μ F Electrolytic Caps	C8, C9	long leads square holes
<input type="checkbox"/> <input type="checkbox"/>	1 5V Voltage Regulator	7805	Tab next to R1

Before installing ICs:

<input type="checkbox"/>		Make sure there is no continuity between +5V and GND
<input type="checkbox"/>		Apply input voltage 7 – 12 Volts
<input type="checkbox"/>	4	Spare jumpers (ribbon cable)

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<input type="checkbox"/>		Place a jumper between D8 and one of the GND pins	blue LED lights up
<input type="checkbox"/>		Place a jumper between D5 and one of the GND pins	red LED lights up
<input type="checkbox"/>		Remove input voltage	
<input type="checkbox"/>		Remove jumpers	

Mount LCD Panel:

<input type="checkbox"/>		Remove the rosin from your solder connections on the PCB with alcohol and a brush	
<input type="checkbox"/>	1	20x4 LCD Panel	Clean solder pads with alcohol
<input type="checkbox"/>	4	Nylon Screws	Attach standoffs to back of LCD with screws.
<input type="checkbox"/>	4	10mm White Standoffs (short)	Do this at all four corners.
<input type="checkbox"/>	4	Nylon Washers	Place on threaded end of standoffs
<input type="checkbox"/>	1	16 Pin Male Header	Connect headers and insert between PCB and LCD
<input type="checkbox"/>	1	16 Pin Female Header	(Male pins on LCD) – Sandwich together
<input type="checkbox"/>	2	Black nuts	Attach to top two PCB corners
<input type="checkbox"/>	2	12mm White Standoffs (long)	Attach to bottom two PCB corners
<input type="checkbox"/>		Solder all header pins	
<input type="checkbox"/>		Remove bottom two screws	
<input type="checkbox"/>	2	12mm White Standoffs (long)	Install where screws were removed
<input type="checkbox"/>	2	Ring Connectors.	Bend slightly and attach as legs in front with 2 screws

Install ICs:

<input type="checkbox"/>	1	Microcontroller	ATMega 328	Notch is up
<input type="checkbox"/>	1	10 K Ω digital pot	41010	Notch is up
<input type="checkbox"/>	1	tone decoder chip	567	Notch is up