

PCB Component Label	Component Name/ Value	Insert either way?	Notes
Power	DC Barrel Jack Connector	No	2.1mm centre pole diameter
D1	Schottky Diode 1A 40v	No	Diode OR power supply select
D2	Schottky Diode 1A 40v	No	Diode OR power supply select
DB9	Serial DB9 right angle pcb connector	No	Carries motor, camera and limit switch signals out of th
C1	Electrolytic Capacitor 100uF 16v	No	Power supply filtering
C2	Electrolytic Capacitor 100uF 16v	No	Power supply filtering
C3	Ceramic Capacitor 0.1uF	Yes	Reset pin
C4	Ceramic Capacitor 22pf	Yes	Crystal
C5	Ceramic Capacitor 22pf	Yes	Crystal
C6	Ceramic Capacitor 0.1uF	Yes	For reset pin when transferring code
Reg	5v Linear Regulator	No	Voltage regulator
Trim	10k Trimpot	Yes	LCD contrast control
R1	220 Ohm 1/4 Watt Resistor LCD	Yes	LCD backlight
R2	220 Ohm 1/4 Watt Resistor	Yes	4n35 resistor
R3	220 Ohm 1/4 Watt Resistor	Yes	4n35 resistor
R4	1.5K Ohm 1/4 Watt Resistor	Yes	Reset pull-up resistor
Opt1	4n35 Opto-isolator	No	Camera signal isolation
Opt2	4n35 Opto-isolator	No	Camera signal isolation
ATMega	ATMega328 + DIP socket	No	The MCU
Crystal	16Mhz Crystal	Yes	MCU clock
Easydriver	Easydriver v4.4 Stepper	No	Motor driver
Btn 1	Mini push button switch	Yes	Manual control - forward
Btn 2	Mini push button switch	Yes	Manual control - backward
Btn 3	Push button switch 12mm	Yes	Main function button
Encoder	Standard rotary encoder with push button switch	No	Menu navigation and setting changes
DIP	DIP switch (2 channel)	No	For pulling Easydriver MS1 and MS2 pins high or low
(not labelled)	Male pcb header x 45	Yes	About 45 male pcb headers needed throughout the board - standard 2.54 pitch