The PICAXE MOTOR DRIVE KIT uses a PCB made by Wiltronics, using a PICAXE 14M2 microprocessor and a L293D dual motor driver chip.

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This Motor Drive Board is produced and distributed by Wiltronics
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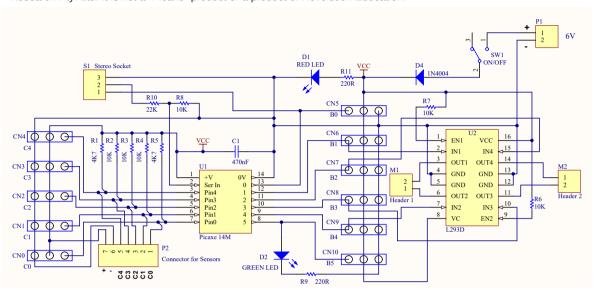


Figure 1. Circuit Diagram

COMPONENT LIST

Qty Part No.	Description	Designator
1 LED-5MM	1/G 5mm Green Led	D2
1 LED-5MM	1/R 5mm Red Led	D1
1 SW1845	DPDT PUSH ON-OFF PCB SWITCH	SW1
1 P-AXE01	7M2 Picaxe 14M2	U1
1 CN2240	TB53 3 WAY PCB CONN 5mm L.S.	P2
3 CN2238	TB52 2 WAY PCB CONN.5mm L.S.	P1,P2,P2
1 L293D	L293D Motor Driver Chip	U2
1 RS1645	22K CR25 CARB RESISTOR	R10
1 IC1014	14Pin Dual Wipe IC Socket	U1 Socket
1 IC1016	16Pin Dual Wipe IC Socket	U2 Socket
1 PL6114	SOCKET 3.5MM STEREO PCB MINI (Program)	S1
1 1N4004	1N4004 Rectifier Diode	D4
2 RS1405	220R CR25 CARB RESISTOR	R9, R11
2 RS1565	4K7 CR25 CARB RESISTOR	R1, R5
1 CC0065	470nF 50V Ceramic	C1
6 RS1605	10K CR25 CARB RESISTOR	R2-R4,R6,R7,R8
1 CN2513	3 Way Male Pin Strip Header	B0
1 PL6114 1 1N4004 2 RS1405 2 RS1565 1 CC0065 6 RS1605	SOCKET 3.5MM STEREO PCB MINI (Program) 1N4004 Rectifier Diode 220R CR25 CARB RESISTOR 4K7 CR25 CARB RESISTOR 470nF 50V Ceramic 10K CR25 CARB RESISTOR	S1 D4 R9, R11 R1, R5 C1 R2-R4,R6,R7,R

Figure 2. Top Overlay Motor Drive PCB

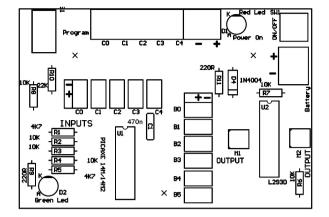
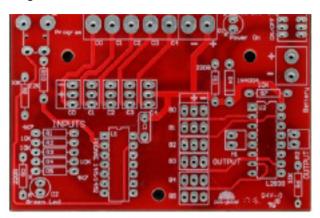


Figure 3. Motor Drive PCB



Construction of PCB

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Insert components and solder in this order.

- 1. Place and solder the resistors on the board R1 R11
- 2. Place and solder the diode D4 (Note polarity Cathode is the end with the printed band)
- 3. Place and solder the IC sockets U1 Socket & U2 Socket (Note polarity, they have a Notch in one end)
- 4. Place and solder the Red and Green Leds D1, D2 (Note Polarity insert with Short Leg Cathode to K on Overlay and Long Leg Anode to A on Overlay)
- 5. Place and solder the 470nF capacitor (C1) NO Polarity
- 6. Place and solder the 7way Input Terminal Block (+,-,C4,C3,C2,C1,C0) (clip 2 x CN2238 and 1x CN2240 together first) (Note which way Terminals end up facing)
- 7. Place and solder the 2 way Battery Terminal Block CN2238 (Note direction it faces).
- 8. Place and solder ON/OFF Switch SW1 and Program Socket S1.

Preliminary Testing of Circuit Boards

We are now ready to apply 6V DC to P1, the 2 way Battery connector, take care polarity is correct.

If the ON/OFF switch is already in ON position, the Red LED should light when 6V DC applied, if switch is not ON push to bring Red LED ON. This will indicate power getting to circuit board correctly; if switch was ON push to make sure it will turn OFF correctly. If Red Led cannot be made to come ON and OFF with SW1 operation, See below

- Check all Components are inserted correctly in respective position as per Overlay and Circuit Diagram.
- Check that there are no soldering defects i.e. shorts or joints not soldered properly.
- Recheck 6V DC is correctly connected.

The two IC's U1(Picaxe 14M) and U2(L293D) may be fitted now. Ensure correct Polarity and Static Control are adhered to.