

MOTOR CONTROLLER PARTS LIST

Ref	PART NO.	DESCRIPTION	Manufacturer	VENDOR	Price US\$	QTY	Total
ea							
MAIN PCB							
SEMI-CONDUCTORS							
BRG1	RS402LDI-ND	Bridge rectifier, 100V / 4A		Digikey	\$1.50	1	\$1.50
D1	1N4004DICT-ND	1N4004, Rectifier Diode, 1A, 400V		Digikey	\$0.26	1	\$0.26
D2	1N4936	Diode, Fast Recovery, 1A, 400V, DO-41		Digikey	\$0.27	1	\$0.27
IC1	497-1382-5-ND	IC, L200C, Volt & Cur. Regulator		Digikey	\$1.92	1	\$1.92
IC2,4	OPA2277PA-ND	IC DUAL PRECISION OPAMP		Digikey	\$3.53	2	\$7.06
IC3	296-12732-5-ND	IC REF02, +5V VOLTAGE REFERENCE		Digikey	\$3.11	1	\$3.11
Q1,6,7	512-BC557	Trans. BC557, PNP, -45V, 100ma		Mouser	\$0.11	3	\$0.33
Q2	511-BD140	Trans. BD140, PNP, -80V, 1.5A		Mouser	\$0.41	1	\$0.41
Q3,4	512-BC337	Trans. BC337, NPN, 45V, 0.8A		Mouser	\$0.15	2	\$0.30
Q5	512-BC547	Trans. BC547, NPN, -45V, 100ma		Mouser	\$0.09	1	\$0.09
Q8	511-BD139	Trans. BD139, NPN, 80V, 1.5A		Mouser	\$0.41	1	\$0.41
CAPACITORS							
C1	P5555-ND	Cap. 1000uF, 35V, Panasonic NHG		Digikey	\$1.11	1	\$1.11
C5,6	P10253-ND	Cap. 1000uF, 16V, Panasonic FC		Digikey	\$0.77	2	\$1.54
C2,3	505mkp20.22/100/5	Cap. 220nF, Wima MKP 100V		Mouser	\$1.02	2	\$2.04
C4	505mkp20.33/100/5	Cap. 330nF, Wima MKP 100V		Mouser	\$1.18	1	\$1.18
C7-10	P10274-ND	Cap. 470uF, 16V, Panasonic FC		Digikey	\$0.53	4	\$2.12
C11-13,15	505mkp20.1/100/5	Cap. 100nF, Wima MKP 100V		Mouser	\$0.65	4	\$2.60
C14	5982-15500V100	Cap. 100pF, CDE Mica x15		Mouser	\$0.58	1	\$0.58
C16	P5556-ND	Cap. 2200uF, 35V, Panasonic NHG		Digikey	\$1.71	1	\$1.71
RESISTORS - 1/4W, 1% (Otherwise Noted)							
R1	750XBK-ND	Res. 750R, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	1	\$0.10
R2	3.01KXBK-ND	Res. 3K01, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	1	\$0.10
R3	71-RS1A-0.75	Res. 0R75, 1W, 1%, RS1A1 Wirewound	Dale	Mouser	\$1.35	1	\$1.35
R4	71-RS01A4R000FE12	Res. 4R0, 1W, 1%, RS1A1 Wirewound	Dale	Mouser	\$1.04	1	\$1.04
R5,10,12,14,26,31,34,39	4.75KXBK-ND	Res. 4K75, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	8	\$0.78
R6	71-RN55D-F-4.99	Res. 4R99, 1/4W, 1%, MF, RN55	Dale	Mouser	\$0.99	1	\$0.99
R7	49.9XBK-ND	Res. 49R9, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	1	\$0.10
R8,9	100XBK-ND	Res. 100R, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	2	\$0.20
R11,13,19,21,22	1.00KXBK-ND	Res. 1K, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	5	\$0.49
R15	475XBK-ND	Res. 475R, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	1	\$0.10
R16	681XBK-ND	Res. 681R, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	1	\$0.10
R17,18,20,27,30,35,38	10.0KXBK-ND	Res. 10K, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	7	\$0.69
R23	475KXBK-ND	Res. 475K, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	1	\$0.10
R24	Not Used	Res. Select, Depends on Motor Current	Yageo	Digikey	\$0.10	0	\$0.00
R25,32,33,40	2.49KXBK-ND	Res. 2K49, 1/4W, 1%, MF, MF25	Yageo	Digikey	\$0.10	4	\$0.39
R28,29,36,37	20.0KXBK-ND	Res. 20K	Yageo	Digikey	\$0.10	4	\$0.39
POTENTIOMETERS & SWITCHES							
VR1	594-64W503	Pot. 50K, 3.8", Vertical, Linear, 25T	Spectrol	Mouser	\$1.95	1	\$1.95
VR2,3	3006P-502LF-ND	Pot. 5K, 3/4" Horizontal, 25T	Bourns	Mouser	\$1.23	2	\$2.46
VR4,5	91A1A-B24-B13L-ND	Pot. 5K, 12mm,1T, 500mW, Cond Plastic	Bourns	Digikey	\$4.75	2	\$9.50
SW1	360-1836-ND	Switch, DPDT, On-On Vert-Right Angle	NKK	Digikey	\$7.60	1	\$7.60
SW2,3	360-1792-ND	Switch, SPDT, On-On Vert-Right Angle	NKK	Digikey	\$5.35	2	\$10.70
SW4,5	CT2068-ND	8 DIP sw.,206 series,top slide	CTS	Digikey	\$0.65	2	\$1.30
SW & Led Battery Status Indicator							
R51,54,55	1.00KXBK-ND	Res. 1K, MF, 1%	Panasonic	Digikey	\$0.10	3	\$0.29
R52	332XBK-ND	Res. 332, MF, 1%	Panasonic	Digikey	\$0.10	1	\$0.10
R53	2.21KXBK-ND	Res. 2K21, MF, 1%	Panasonic	Digikey	\$0.10	1	\$0.10
R56	47.5KXBK-ND	Res. 47K5, MF, 1%	Panasonic	Digikey	\$0.10	1	\$0.10
D51	1N5237B-TP	1N5237B, Zener Diode, 8.2V, 1/2W		Digikey	\$0.08	1	\$0.08
D52,58	1N4148-TP	1N4148, Small Signal Diode		Digikey	\$0.05	2	\$0.11
D53,57	Not Used	1N4148, Small Signal Diode		Digikey	\$0.05	0	\$0.00
D54	160-1142-ND	Led, Green, 3MM HI-EFF DIFFUSED		Digikey	\$0.19	1	\$0.19
D55	1N4731A-TP	1N4731A, Zener Diode, 4.3V, 1W		Digikey	\$0.08	1	\$0.08
D56	1N4741A-TP	1N4741A, Zener Diode, 11V, 1W		Digikey	\$0.08	1	\$0.08
D59	160-1145-ND	Led, Yellow, 3MM HI-EFF DIFFUSED		Digikey	\$0.19	1	\$0.19
D60	1N5245B-TP	1N5245B, Zener Diode, 15V, 1/2W		Digikey	\$0.08	1	\$0.08
D61	160-1139-ND	Led, Red, 3MM HI-EFF DIFFUSED		Digikey	\$0.19	1	\$0.19
D62	160-1600-ND	LED - Blue T1(3MM) POWER Indicator		Digikey	\$0.50	1	\$0.50
HARDWARE & MISC							
TRANSFORMERS							
T1	TE70033-ND	Transformer, Output: 15VAC Serie @ 0.466A		Digikey	\$14.83	1	\$14.83
CONNECTORS							
J1 (Battery)	31-157-0	Conn. 2.1MM DC POWER JACK 2A, Panel	Mode	e-sonic	\$1.55	1	\$1.55
J1a	31-121-0	Conn. 2.1MM DC POWER PLUG SHORT	Mode	e-sonic	\$0.72	1	\$0.72
J2 (Motor)	25-732-0	Conn. Mike 2 pins connector, Panel Mount	Mode	e-sonic	\$1.92	1	\$1.92
J2a	25-722-0	Conn. Mike 2 pins Male (For cable)	Mode	e-sonic	\$1.92	1	\$1.92
J3	Q210-ND	AC Input Conn.		Digikey	\$1.00	1	\$1.00
X1L,N	A29938CT-ND	Stack-On, PCB mount connector		Digikey	\$0.06	2	\$0.11
X2,3	281-1421-ND	Conn. 2 pins, Screw Terminal, 5MM	Weidmuller	Digikey	\$0.75	2	\$1.50
FUSES & etc.							
Fuse Socket	96F8317	5x20mm PCB mount fuseholder	Schurter	Newark	\$1.02	2	\$2.04
F1,2	F2416-ND	0.5A, 250V IEC SLO 5X20MM (GDC 500ma)		Digikey	\$0.82	2	\$1.64
HARDWARE & MISC							
JP2	93K5737	Header, 3 pins, gold		Newark	\$0.10	1	\$0.10
	97F9686	Header Jumper, 2 pins, long		Newark	\$0.14	1	\$0.14
	BER110-ND	HEATPAD TO-220 .009" SP600		Digikey	\$0.73	2	\$1.46
	BER120-ND	HEATPAD TO-247 .009" SP600		Digikey	\$1.36	1	\$1.36
	ED58083-ND	IC Socket, DIP8, gold plated		Digikey	\$0.77	3	\$2.31