

MOTOR SPEED CONTROL PARTS LIST

Ref	PART NO.	DESCRIPTION	Package	Manufacturer	VENDOR	QTY	Price US	Total	Notes
MAIN PCB									
SEMI-CONDUCTORS									
BRG1	KBL02-E4/51GI-ND	Bridge rectifier, 200V / 4A			Digikey	1	\$1.50	\$1.50	Chargeur 18V P.S.
D1	1N4004DICT-ND	1N4004, Rectifier Diode, 1A, 400V	D0-41		Local	1	\$0.26	\$0.26	
IC1	497-1382-5-ND	IC, L200C, Volt & Cur. Regulator	L200S		Digikey	1	\$3.11	\$3.11	
IC2,4	OPA2277PA-ND	IC DUAL PRECISION OPAMP			Digikey	2	\$3.53	\$7.06	
IC3	296-12732-5-ND	IC REF02, +5V VOLTAGE REFERENCE	8-DIP		Digikey	1	\$3.11	\$3.11	
Q1,6,7	58K8760	Trans. BC557, PNP, -45V, 100ma	TO-92		Newark	3	\$0.18	\$0.54	
Q2	06F1639	Trans. BD140, PNP, -80V, 1.5A	TO-225AA		Newark	1	\$0.40	\$0.40	
Q3,4	58K8751	Trans. BC337, NPN, 45V, 0.8A	TO-92		Newark	2	\$0.20	\$0.39	
Q5	58K8753	Trans. BC547, NPN, -45V, 100ma	TO-92		Newark	1	\$0.14	\$0.14	
Q8	06F1638	Trans. BD139, NPN, 80V, 1.5A	TO-225AA		Newark	1	\$0.41	\$0.41	
CAPACITORS									
C1,20		Cap. 1000uF, 35V, Panasonic FC	E5-12.5		Digikey	2	\$1.11	\$2.22	
C5,6	P11253-ND	Cap. 1000uF, 16V, Panasonic FC	E5-10		Digikey	2	\$0.77	\$1.54	
C2,3,4	505mkp20.22/100	Cap. 220nF, Wima MKP 100V	C5B7.2		Mouser	3	\$1.02	\$3.06	
C7-10	P10274-ND	Cap. 470uF, 16V, Panasonic FC	E3.5-8		Digikey	4	\$0.53	\$2.12	
C11-13	505mkp20.1/100	Cap. 100nF, Wima MKP 100V	C3B5		Mouser	3	\$0.87	\$2.61	
C14	5982-15500V100	Cap. 100pF, CDE Mica x15	C5B3		Mouser	1	\$0.58	\$0.58	
C15		Cap. 0.1uF, Wima MKP 63V			Mouser	1	\$0.75	\$0.75	Optional
RESISTORS - 1/4W, 1% (Otherwise Noted)									
R1	P750CACT-ND	Res. 750R		Panasonic	Digikey	1	\$0.02	\$0.02	
R2		Res. 3K01		Panasonic	Digikey	1	\$0.02	\$0.02	
R3	PPC1.5W-1CT-ND	Res. 0R75, 1W, 1%, (2 X 1.5R)		Phoenix	Digikey	2	\$0.68	\$1.36	
R4	P16.0CACT-ND	Res. 4R0, 1W, 1%, (4 X 16R)		Panasonic	Digikey	4	\$0.68	\$2.72	
R5,10,12,14,26,31,34,39		Res. 4K75		Panasonic	Digikey	8	\$0.02	\$0.14	
R6		Res. 4R99, (2 X 10R)		Panasonic	Digikey	2	\$0.02	\$0.03	
R7		Res. 49R9		Panasonic	Digikey	1	\$0.02	\$0.02	
R8,9		Res. 100R		Panasonic	Digikey	2	\$0.02	\$0.03	
R11,13,19,21,22		Res. 1K		Panasonic	Digikey	5	\$0.02	\$0.09	
R15		Res. 475R		Panasonic	Digikey	1	\$0.02	\$0.02	
R16		Res. 681R, RN60D, 1/8W, 1%		Dale	Mouser	1	\$0.25	\$0.25	
R17,18,20,27,30,35,38		Res. 10K		Panasonic	Digikey	7	\$0.02	\$0.12	
R23		Res. 475K		Panasonic	Digikey	1	\$0.02	\$0.02	
R24		Res. Select, Depends on Motor Current		Panasonic	Digikey	1	\$0.02	\$0.02	Add if Motor Current is too low, ex: 1K
R25,32,33,40		Res. 2K49		Panasonic	Digikey	4	\$0.02	\$0.07	
R28,29,36,37		Res. 20K		Panasonic	Digikey	4	\$0.02	\$0.07	
POTENTIOMETERS & SWITCHES									
VR1	3296W-503LF-ND	Pot. 50K, 1/2", Vertical, Linear, 25T		Bourns	Digikey	1	\$2.50	\$2.50	
VR2,3	3006P-502LF-ND	Pot. 5K, 3/4" Horizontal, 25T		Bourns	Digikey	2	\$1.73	\$3.46	Use VR2/3 OR VR4/5
VR4,5	91A1A-B24-B13-ND	Pot. 5K, 12mm,1T, 500mW, Cond Plastic		Bourns	Digikey	0	\$4.33	\$0.00	Type Spectrol 248-7-10-501
SW1	7205MD9AV2BE	Switch, DPDT, On-On Vert-Right Angle	CKN1486-ND	C&K	Digikey	1	\$10.76	\$10.76	Unthreaded Bushing
SW2,3	7101SD9AV2BE	Switch, SPDT, On-On Vert-Right Angle	CKN1447-ND	C&K	Digikey	2	\$6.39	\$12.78	Unthreaded Bushing, Threaded is CKN1450-ND
SW4,5	CT2068-ND	8 DIP sw.,.206 series,top slide		CTS	Digikey	1	\$0.81	\$0.81	
Leds Battery Status Indicator									
R51,54,55		Res. 1K, MF, 1%		Panasonic	Digikey	3	\$0.02	\$0.05	
R52		Res. 330, MF, 1%		Panasonic	Digikey	1	\$0.02	\$0.02	Changed from 3.3K
R53		Res. 2K21, MF, 1%		Panasonic	Digikey	1	\$0.02	\$0.02	
R56		Res. 47K5, MF, 1%		Panasonic	Digikey	1	\$0.02	\$0.02	Blue led resistor
D51		1N5237B, Zener Diode, 8.2V, 1/2W	DO-41		Digikey	1	\$0.43	\$0.43	
D52,58	1N4148-TP	1N4148, Small Signal Diode	DO-35		Digikey	2	\$0.05	\$0.11	
D53,57	Not Used	1N4148, Small Signal Diode	DO-35		Digikey	2	\$0.05	\$0.11	Not Used with my choice of leds
D54		Led, Green	T-1		Local	1	\$0.05	\$0.05	
D55		1N4731B, Zener Diode, 4.3V, 1W	DO-41		Digikey	1	\$0.43	\$0.43	
D56		1N4741B, Zener Diode, 11V, 1W	DO-41		Digikey	1	\$0.43	\$0.43	
D59		Led, Yellow	T-1		Local	1	\$0.05	\$0.05	
D60		1N5245B, Zener Diode, 15V, 1/2W	DO-41		Digikey	1	\$0.43	\$0.43	
D61		Led, Red	T-1		Local	1	\$0.05	\$0.05	
D62	67-1748-ND	Led - Blue T1(3MM) POWER Indicator			Digikey	1	\$2.32	\$2.32	
HARDWARE & MISC									
TRANSFORMERS									
T1	TE70033-ND	Transformer, Output: 15VAC Serie @ 0.466A	50x50x23		Digikey	1	\$15.42	\$15.42	Chargeur 18V P.S.
CONNECTORS									
J2	25-732-0	Conn. Mike 2 pins connector, Panel Mount		Mode	e-sonic	1	\$1.42	\$1.42	
J2a	25-722-0	Conn. Mike 2 pins Male (For cable)		Mode	e-sonic	1	\$1.37	\$1.37	
J3	Q212-ND	AC Input Conn.			Digikey	1	\$1.00	\$1.00	
X1-N,L	A29B38CT-ND	Stack-On, PCB mount connector			Digikey	2	\$0.12	\$0.24	
X2,3	281-1421-ND	Conn. 2 pins, Screw Terminal, 5MM,45 deg		Weidmuller	Digikey	1	\$0.84	\$0.84	
FUSES & etc.									
Fuse Socket	520101	5x20mm PCB mount fuseholder	Littlefuse	Digikey	Digikey	2	\$1.02	\$2.04	Added Battery Fuse F2
F1,2	F2416-ND	0.5A, 250V IEC SLO 5X20MM (GDC 500ma)			Digikey	2	\$0.82	\$1.64	
HARDWARE & MISC									
JP1		Header, 3 pins, plus jumper			Local	1	\$0.05	\$0.05	
	ED58083-ND	IC Socket, DIP8, gold plated			Digikey	3	\$0.77	\$2.31	
Case	1455T2201	Hammond Alu. (L8.66" X W6.50" X H2.03")	HM905-ND		Digikey	1	\$26.00	\$26.00	PCB Inside 8.6 X 6.319"