

**FCC Part 15
433.92 MHz Transmitter Certification
& 372 MHz Receiver Declaration of Conformity**

Test Report

**FCC ID: KJ8-ID372R2
FCC Rule Part: 15.231**

ACS Report Number: 03-0197-15C231

Manufacturer: Wayne-Dalton Corporation
Equipment Type: RF Controlled Garage Door Opener
Model: Operator 40XR (Torsion *idrive*TM)
Model Variants: 3660-372, 3661-372, 3662-372, 3663-372, 3740-372,
3760-372, 3761-372, 3762-372

Parts Lists

Motor Control Parts List

Wayne Dalton Operator 40 Motor Control B.O.M. (XR) I-Drive North America / 120VAC

Part No. 312038

© 2003, 2004 Wayne Dalton Corp.

EX-03614

ALTERNATE SUPPLIERS TO BE APPROVED BY WAYNE DALTON CORP.

BOM Revision: 2

BOM Revision Date: 1/08/04

Part Type	Des.	Footprint	Description	Part Name	Part Specifics	Manufacture	Part Number	Comment
1	TEST POINT	TP1	PAD100	*	*	*	*	TEST POINT
2	TEST POINT	TP7	PAD100	*	*	*	*	TEST POINT
3	TEST POINT	TP9	PAD100	*	*	*	*	TEST POINT
4	PKM13EPY	PZ1	PIEZO-2	Piezo Buzzer Alarm	Buzzer	External Drive, 2 Pin, Through Hole	Murata	PKM13EPY-4002
5	0.0033uF	C8	2222-370	Through Hole Film Capacitor	Capacitor	.0033uF, 400V Metal Film Box, 5%	BC / Philips	2222-370-52332
6	0.022uF	C11	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H223KBM
7	330pF	C16	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H331KBM
8	820pF	C37	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H821KBM
9	2200pF	C6	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H222KBM
10	0.01uF	C10	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
11	0.01uF	C17	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
12	1 uF	C2	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 25V, 10%	Panasonic	ECJ-3YB1E105K
13	0.01uF	C20	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
14	0.01uF	C26	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
15	0.01uF	C27	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
16	0.01uF	C29	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
17	0.01uF	C3	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
18	0.01uF	C39	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
19	0.01uF	C42	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
20	0.01uF	C47	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
21	0.01uF	C7	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H103KBM
22	0.1uF	C19	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
23	0.1uF	C21	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
24	0.1uF	C28	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
25	0.1uF	C30	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
26	0.1uF	C31	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
27	0.1uF	C40	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
28	0.1uF	C41	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
29	0.1uF	C9	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
30	0.1uF	C1	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
31	0.1uF	C12	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
32	Omitted IR Circuit	C13						
33	0.1uF	C34	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
34	0.1uF	C35	1206	Surface Mount Ceramic Capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
35	0.1uF	C36	1206	Surface Mount Ceramic Capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
36	0.1uF	C4	1206	surface mount ceramic capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
37	0.1uF	C43	1206	surface mount ceramic capacitor	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
38	Omit	C44	*	*	*	Omit	Omit	
39	0.1uF	C45	1206	surface mount ceramic capacitor, Bottom	Capacitor	1206, X7R, Ceramic Chip, 50V, 10%	Panasonic	ECU-V1H104KBW
40	0.33uF	C32	POLY0.33/250VAC	Suppression Capacitor Polyester Film	Capacitor	.33uF, Class X2, 250VAC, 20%	Vishay / Roederstein	F1772-433-2000
41	1.0uF	C46	POLY1U/250VAC	Suppression Capacitor Polyester Film	Capacitor	Metallized Polyester, 250VAC, 20%	Panasonic	ECQ-U2A105ML
42	Omitted IR Circuit	C5						
43	10uF	C33	POLY1.0/400	Radial Electrolytic Capacitor	Capacitor	Cap 10uF 450V Elect EB 20%, -20° to +105°	Panasonic	EEU-EB2W100
44	1uF	C15	RB.197/.394	Polarized, Radial Electrolytic Capacitor	Capacitor	SU-Series, 1.0uF, 50V, 20%	Panasonic	ECA-1HM010
45	1uF	C38	RB.197/.394	Polarized, Radial Electrolytic Capacitor	Capacitor	SU-Series, 1.0uF, 50V, 20%	Panasonic	ECA-1HM010
46	220uF	C23	RB.197/.394	Polarized, Radial Electrolytic Capacitor	Capacitor	SU-Series, 35V, 20%	Panasonic	ECA-1HM221
47	220uF	C24	RB.197/.394	Polarized, Radial Electrolytic Capacitor	Capacitor	SU-Series, 35V, 20%	Panasonic	ECA-1HM221
48	4.7uF	C22	RBSM-VSB	Polarized, Surface Mount Electrolytic Capacitor	Capacitor	VS Series, 35V, Polarized, 20%	Panasonic	ECE-V1VA4R7SR
49	Omit	C14	*	*	*	Omit	Omit	
50	0.015uF	C18	POLY4700/250VAC	Suppressor Capacitor Metal Film	Capacitor	Interference Suppressor, 250VAC, 20%	Panasonic	ECQ-U2A153MV
51	47uF	C25	RBSM-VSD	Polarized, Surface Mount Electrolytic Capacitor	Capacitor	VS Series, 16V, Polarized, 20%	Panasonic	ECE-V1CA470SP
52	RL-7098	L1	IND_RL1283	Power Line Choke	Choke	560uH, 1A AC. See Spec's for details.	Renco Electronics	RL-7098
53	RL-7098	L2	IND_RL1283	Power Line Choke	Choke	560uH, 1A AC. See Spec's for details.	Renco Electronics	RL-7098
54	PMCU5009 (900u @ 1A)	L3	IND_PMCU5009	Line Filter	Common Mode Filter	Refer to Spec Sheet	Premier Magnetics	PMCU5009
55	4904	E1	1285	Tab	Connector	.020" x .187", Right Angle	Keystone Elec.	4904
								See print for orientation

Wayne Dalton Operator 40 Motor Control B.O.M. (XR) I-Drive North America / 120VAC

Part No. 312038

© 2003, 2004 Wayne Dalton Corp.

EX-03614

ALTERNATE SUPPLIERS TO BE APPROVED BY WAYNE DALTON CORP.

BOM Revision: 2

BOM Revision Date: 1/08/04

Part Type	Des.	Footprint	Description	Part Name	Part Specifics	Manufacture	Part Number	Comment	
56	4904	E2	1285	Tab	Connector	.020" x .187", Right Angle	Keystone Elec.	4904	See print for orientation
57	43232-0004	J1	MOLEX3930	Mini-Fit, Jr. Recp. 4.20mm, (.165")	Connector	5 Pos Header, 94-V0, Early Make, Late Break	Molex	43232-0004	
58	63849-1	J7	1285	Quick Fit Terminal Tab	Connector	Terminal .250" FE Vertical .032" Tab	AMP	63849-1	
59	63982-1	J6	1285	Quick Fit Terminal Tab	Connector	Terminal .187" FE Vertical .020" Tab	AMP	63982-1	
60	ED3100/5	J2	ED2285	Side Entry Terminal Block	Connector	.197" (5mm) Spacing, 28-14 AWG	On-Shore Technology	ED3100/5	
61	FR305	D9	1.5KEL B	Axial Rectifier Diode	Diode	3 Amp 600 PIV Rectifier	Diodes Inc.	FR305	
62	FR305	D10	1.5KEL B	Axial Rectifier Diode	Diode	3 Amp 600 PIV Rectifier	Diodes Inc.	FR305	
63	FR305	D11	1.5KEL B	Axial Rectifier Diode	Diode	3 Amp 600 PIV Rectifier	Diodes Inc.	FR305	
64	FR305	D12	1.5KEL B	Axial Rectifier Diode	Diode	3 Amp 600 PIV Rectifier	Diodes Inc.	FR305	
65	DL4005	D4	DIODE.04L B	Surface Mount Rectifier Diode	Diode	1 Amp 600V SMT MELF	Diodes Inc.	DL4005	
66	DL4005	D6	DIODE.04L B	Surface Mount Rectifier Diode	Diode	1 Amp 600V SMT MELF	Diodes Inc.	DL4005	
67	DL4005	D7	DIODE.04L B	Surface Mount Rectifier Diode	Diode	1 Amp 600V SMT MELF	Diodes Inc.	DL4005	
68	DL4005	D13	DIODE.04L B	Surface Mount Rectifier Diode	Diode	1 Amp 600V SMT MELF	Diodes Inc.	DL4005	
69	DL4005	D16	DIODE.04L B	Surface Mount Rectifier Diode	Diode	1 Amp 600V SMT MELF	Diodes Inc.	DL4005	
70	DL4005	D17	DIODE.04L B	Surface Mount Rectifier Diode	Diode	1 Amp 600V SMT MELF	Diodes Inc.	DL4005	
71	DL4005	D20	DIODE.04L B	Surface Mount Rectifier Diode	Diode	1 Amp 600V SMT MELF	Diodes Inc.	DL4005	
72	DL4935	D15	DIODE.04L B	Surface Mount Diode Glass Passivated	Diode	1 Amp, 200V, FAST-RECOVER Diode	Diodes Inc.	DL4935	
73	DL4935	D21	DIODE.04L B	Surface Mount Diode Glass Passivated	Diode	1 Amp, 200V, FAST-RECOVER Diode	Diodes Inc.	DL4935	
74	DL4935	D23	DIODE.04L B	Surface Mount Diode Glass Passivated	Diode	1 Amp, 200V, FAST-RECOVER Diode	Diodes Inc.	DL4935	
75	LL4148	D1	DL-35	Surface Mount High Speed Rectifier	Diode	DL-35	Diodes Inc.	LL4148	
76	LL4148	D5	DL-35	Surface Mount High Speed Rectifier	Diode	DL-35	Diodes Inc.	LL4148	
77	LL4148	D8	DL-35	Surface Mount High Speed Rectifier	Diode	DL-35	Diodes Inc.	LL4148	
78	LL4148	D14	DL-35	Surface Mount High Speed Rectifier	Diode	DL-35	Diodes Inc.	LL4148	
79	LL4148	D18	DL-35	Surface Mount High Speed Rectifier	Diode	DL-35	Diodes Inc.	LL4148	
80	Omit	D19	*	*	*	*	Omit	Omit	
81	LL4148	D22	DL-35	Surface Mount High Speed Rectifier	Diode	DL-35	Diodes Inc.	LL4148	
82	LL4148	D24	DL-35	Surface Mount High Speed Rectifier	Diode	DL-35	Diodes Inc.	LL4148	
83	Omit	D25	*	*	*	*	Omit	Omit	
84	ZMM5231B	DZ1	DL-35	5.1V Surface Mount Zener Diode	Diode, Zener	DL-35	Diodes Incorporated	ZMM5231B	
85	ZMM5233B	DZ3	DL-35	6V Surface Mount Zener Diode	Diode, Zener	DL-35	Diodes Incorporated	ZMM5233B	
86	5600000131	FU1	FUSEHLD_WICKMAN	PCB Mount, 3.5A 250V TR-5	Fuse Socket	TR-5 Fuse Holder Mach Contacts	Wickmann	5600000131	
87	5600000131	FU2	FUSEHLD_WICKMAN	PCB Mount, 3.5A 250V TR-5	Fuse Socket	TR-5 Fuse Holder Mach Contacts	Wickmann	5600000131	
88	3731315041	Fuse		3.15A Fast Actcing, TR-5	Fuse	TR-5 Fuse	Wickmann	3731315041	
89	3731315041	Fuse		3.15A Fast Actcing, TR-5	Fuse	TR-5 Fuse	Wickmann	3731315041	
90	22-03-2051-P	J10	HEADER 5	5 Circuit Header, Straight	Header	.100" Spacing	Molex / Waldom	22-03-2051-P	See print for orientation
91	22-03-2051-P	J4	HEADER 5	5 Circuit Header, Straight	Header	.100" Spacing	Molex / Waldom	22-03-2051-P	See print for orientation
92	22-03-2051-P	J9	HEADER 5	5 Circuit Header, Straight	Header	.100" Spacing	Molex / Waldom	22-03-2051-P	See print for orientation
93	HEADER 2X2	J8	HEADER 2_DUAL	4 Pin Dual Row Right Angle	Header	.100" Pin Spacing	Sullins	PTC02DBAN	Do Not Place Part
94	ASP-23443-03	J3	8-HEAD	2 Pin Dual Row Right Angle	Header	.100" Pin Spacing, Modified	Samtec	ASP-23443-03	
95	Socket (Prototyping)		2-382571-1	DIP 28	IC, Socket	Socket for microprocessor	AMP	0-0390261-9	
96	312040	U1	DIP28S	Microprocessor	IC, Microprocessor	Dip 28, PIC16F876A-I/SP	Microchip	312040	Programmed Part
97	8MHz	U2	HC-49-3	Ceramic Resonator	Resonator	3 Pin Built in Caps	Murata	CSTLS8M00G53-B0	
98	LM555	U3	SOIC-8	Timer, SO-8	IC, Timer	555 Timer	National Semiconductor	LM555CM	
99	4N35	U4	DIP6	DIP 6	IC, Optocoupler	DIP 6, Standard Pack	Motorola	4N35	
100	H11A817C	U5	DIP-12	Phototransistor Optocoupler	IC, Optocoupler	4-Pin Dip, .300"	QT Optoelectronics	H11A817C	Single Source
101	H11A817C	U9	DIP-12	Phototransistor Optocoupler	IC, Optocoupler	4-Pin Dip, .300"	QT Optoelectronics	H11A817C	Single Source
102	H11A817C	U13	DIP4	Phototransistor Optocoupler	IC, Optocoupler	4-Pin Dip, .300"	QT Optoelectronics	H11A817C	Single Source
103	MC78L05ABD	U6	SOIC-8	Surface Mount Voltage Regulator	Regulator	SOIC-8, 5%, 100ma, -40°C / 125°C	Motorola	MC78L05ABD	
104	LM2904	U7	SOIC-8	8 Pin Dual Op-Amp	IC, Op-Amp	Surface Mount Dual Op-Amp	Motorola	LM2904D	
105	LM2904	U8	SOIC-8	8 Pin Dual Op-Amp	IC, Op-Amp	Surface Mount Dual Op-Amp	Motorola	LM2904D	
106	MC33363ADW	U10	SOP16L	High Voltage Off Line Switching Regulator	IC, Regulator	SOIC-16	Motorola	MC33363ADW	
107	LM2903	U11	SO-8	Low Offset Voltage Dual Comparator	IC, Comparator	SOIC-8	On Semiconductor	LM2903D	
108	TL431ACD	U12	TO92_TL431	Adj Precision Shunt Regulators	Regulator	SO-8	Texas Instrument	TL431ACD	
109	Omitted IR Circuit	U14							
110	Omitted IR Circuit	D3							

Wayne Dalton Operator 40 Motor Control B.O.M. (XR) I-Drive North America / 120VAC

Part No. 312038

© 2003, 2004 Wayne Dalton Corp.

EX-03614

ALTERNATE SUPPLIERS TO BE APPROVED BY WAYNE DALTON CORP.

BOM Revision: 2

BOM Revision Date: 1/08/04

Part Type	Des.	Footprint	Description	Part Name	Part Specifics	Manufacture	Part Number	Comment
111 D65ZOV301RA150	RV1	VAR1	M.O.V. / 300 VAC	Metal Oxide Varistor	Radial Dipped	Maida	D65ZOV301RA150	
112 Omit	Q2	*	*	*	*	Omit	Omit	
113 MTP10N40E	Q1	TO-220AB SCR	N-Channel Logic Level MOSFET	Mosfet	TO-220	Motorola	MTP10N40E	Place low as possible
114 10K (60mm)	R4	SLIDE	Slide Potentiometer	Potentiometer	60MM Stroke, 20%	Bourns	PTA6043-2010CI-B103	
115 T7CV5D-12	RE1	T7CV-2	DPST PCB Mount Relay	Relay	DPST	Potter & Brumfield	T7CV5D-12	
116 T7CV5D-12	RE2	T7CV-2	DPST PCB Mount Relay	Relay	DPST	Potter & Brumfield	T7CV5D-12	
117 0.1 ohm / 3 watt	R25	RS3W UP	Through Hole Resistor	Resistor	Resistor Silicone .10 Ohm 3W, 1%	Huntington Electric Inc.	ALSR3F-.10	Sleeve Lead, One side
118 0	R79	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEY0R00V	
119 0	R80	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEY0R00V	
120 20	R53	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ200V	
121 100	R66	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ101V	
122 100	R73	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ101V	
123 100	R75	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ101V	
124 100	R76	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ101V	
125 220	R19	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ221V	
126 Omitted IR Circuit	R68							
127 470	R60	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ471V	
128 470	R8	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ471V	
129 1.0K	R10	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ102V	
130 1.0K	R35	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ102V	
131 1.0K	R36	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ102V	
132 1.0K	R47	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ102V	
133 100	R56	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ101V	
134 1.0K	R61	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ102V	
135 1.0K / 1%	R40	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 1%	Panasonic	ERJ-8ENF1001V	
136 47.5 / 1%	R43	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 1%	Panasonic	ERJ-8ENF47R5V	
137 47.5 / 1%	R45	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 1%	Panasonic	ERJ-8ENF47R5V	
138 1.5K	R5	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ152V	
139 100 1W	R38	2512	Resistor Surface Mount, Bottom	Resistor	2512, Thick Film Chip, 5%	Panasonic	ERJ-1WYJ101U	
140 100K 1W	R64	2512	Resistor Surface Mount, Bottom	Resistor	2512, Thick Film Chip, 5%	Panasonic	ERJ-1WYJ104U	
141 100K 1W	R65	2512	Resistor Surface Mount, Bottom	Resistor	2512, Thick Film Chip, 5%	Panasonic	ERJ-1WYJ104U	
142 10K	R12	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
143 10K	R13	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
144 Omitted IR Circuit	R16							
145 10K	R17	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
146 10K	R20	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
147 10K	R21	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
148 10K	R24	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
149 10K	R27	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
150 10K	R28	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
151 10K	R29	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
152 10K	R30	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
153 10K	R32	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
154 10K	R34	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
155 10K	R37	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
156 1.0K	R41	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ102V	
157 10K / 1%	R39	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 1%	Panasonic	ERJ-8ENF1002V	
158 10K / 1%	R44	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 1%	Panasonic	ERJ-8ENF1002V	
159 12K	R46	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ123V	
160 10K / 1%	R77	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 1%	Panasonic	ERJ-8ENF1002V	
161 10K	R54	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
162 10K	R6	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
163 10K	R67	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
164 10K	R69	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
165 10K	R7	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	

Wayne Dalton Operator 40 Motor Control B.O.M. (XR) I-Drive North America / 120VAC

Part No. 312038

© 2003, 2004 Wayne Dalton Corp.

EX-03614

ALTERNATE SUPPLIERS TO BE APPROVED BY WAYNE DALTON CORP.

BOM Revision: 2

BOM Revision Date: 1/08/04

Part Type	Des.	Footprint	Description	Part Name	Part Specifics	Manufacture	Part Number	Comment	
166	10K	R9	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
167	10K	R52	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
168	10K	R70	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
169	10K	R71	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
170	10K	R72	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
171	10K	R78	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
172	10K	R81	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
173	0	R82	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEY0R00V	
174	15K	R33	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thich Film Chip, 5%	Panasonic	ERJ-8GEYJ153V	
175	Omit	R49	*	*	*	Omit	Omit		
176	15K	R57	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ153V	
177	10K	R48	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ103V	
178	2.2K	R11	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ222V	
179	Omitted IR Circuit	R15							
180	2.2K	R18	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ222V	
181	2.2K	R26	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ222V	
182	2.2K	R50	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ222V	
183	2.2K	R51	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ222V	
184	2.2K	R55	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ222V	
185	Omit	R1	*	*	*	Omit	Omit		
186	2.4K	R58	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ242V	
187	3.3K	R3	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ332V	
188	3.9K	R2	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ392V	
189	39 1/4W	R23	1210	Resistor Surface Mount, Bottom	Resistor	1210, Thick Film Chip, 1/4W, 5%	Panasonic	ERJ-14YJ390U	
190	3.9K	R74	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ392V	
191	750 1W	R22	2512	Resistor Surface Mount	Resistor	2512, Thick Film Chip, 1W, 5%	Panasonic	ERJ-1WYJ751U	
192	750 1W	R59	2512	Resistor Surface Mount, Bottom	Resistor	2512, Thick Film Chip, 1W, 5%	Panasonic	ERJ-1WYJ751U	
193	68K 1/2W	R31	2010	Resistor Surface Mount, Bottom	Resistor	2010, Thick Film Chip, 1/2W, 5%	Panasonic	ERJ-12ZYJ683U	
194	68K 1/2W	R42	2010	Resistor Surface Mount, Bottom	Resistor	2010, Thick Film Chip, 1/2W, 5%	Panasonic	ERJ-12ZYJ683U	
195	680K	R62	1206	Resistor Surface Mount, Bottom	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ684V	
196	680K	R63	1206	Resistor Surface Mount	Resistor	1206, Thick Film Chip, 5%	Panasonic	ERJ-8GEYJ684V	
197	Omitted IR Circuit	R14							
198	TL1105JA	SW1	2PIN-TH-SW-90	Tact Switch	Switch	4 Pin 90° Degrees	E-Switch	TL1105JA-F250Q	
199	10K / Thermistor	RT1	603	Surface Mount Thermistor	Thermistor	0603, NTC, 10K, 10%	Tama	NTCC16Y103K370H	
200	E09003	TRA1	FLYBK_6WATT	Flyback Continuous Mode	Transformer	114-370V Input / 12V/24V/Bias Output	Falco Electronics	E09003	
201	Omitted IR Circuit	T1							
202	FMMT2222A	T2	SOT-23N	Surface Mount NPN Transistor	Transistor	SOT-23	Diodes Inc.	MMBT2222A	
203	FMMT2222A	T3	SOT-23N	Surface Mount NPN Transistor	Transistor	SOT-23	Diodes Inc.	MMBT2222A	
204	FMMT2222A	T4	SOT-23N	Surface Mount NPN Transistor	Transistor	SOT-23	Diodes Inc.	MMBT2222A	
205	FMMT2222A	T5	SOT-23N	Surface Mount NPN Transistor	Transistor	SOT-23	Diodes Inc.	MMBT2222A	
206	FMMT2222A	T6	SOT-23N	Surface Mount NPN Transistor	Transistor	SOT-23	Diodes Inc.	MMBT2222A	
207	FMMT2222A	T8	SOT-23N	Surface Mount NPN Transistor	Transistor	SOT-23	Diodes Inc.	MMBT2222A	
208	FMMT2907A	T7	SOT-23N	Surface Mount PNP Transistor	Transistor	SOT-23	Diodes Inc.	MMBT2907A	
209	MMBTA42LT1	T9	SOT-23N	Surface Mount NPN Transistor	Transistor	SOT-23	Motorola	MMBTA42LT1	
210	P6KE200A	DZ2	1.5KEL B	Transient Voltage Suppressor	TVS	600W Axial	Diodes Incorporated	P6KE200A	
211	PCB	*	*	Printed Circuit Board, See Gerbers	PCB	Two Layer, FR-4, 0.062", 94V-0	Approved Suppliers	EX-03380 Ver. P9, 1/07/04	
212	PVI-S18-1100-BLK			UL No. E52331, PCV-105 Insul	Tubing	Tubing, DIM. 04/100, Size 18	SPC Technonogy	PVI-S18-1100-BLK	L1, L2 and R25
213	TS-54017-ADNT			Black Anodized Aluminum	Heat Sink	HEATSINK TO-220 5W BLK	Thermshield	TS-54017-ADNT	NO TAB
214	300257	*	*	Ground Clip	Clip		Wayne Dalton Corp.	300257	See Print

Note:

1 Microprocessor socket will be used for prototyping and qualifying production runs.

Transceiver Parts List

Bill of Materials: Operator 40 RF Daughter Board (XR) - 372.5MHz Rx / 433.92MHz Tx

Part No. 312039

Wayne-Dalton Corp.

EX-03615

PCB v17 11/04/02

BOM Revision: 3

BOM Revision Date: 1/08/04

Item	Part Type	Designator	Footprint	Description	Part Name	Part Specifics	Manufacturer	Part Number	Comment
1	Antenna Wire	TP4	PTH	Wire, Yellow, EX-03615-1	Wire	22 AWG, Solid, PVC, 300V, UL1007/1569	Any	312039-1	See Print
2	0.1uF	C4	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 0.1uF, X7R, 16V,10%	BC Components	0603B104K160BT	
3	0.1uF	C6	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 0.1uF, X7R, 16V,10%	BC Components	0603B104K160BT	
4	0.1uF	C8	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 0.1uF, X7R, 16V,10%	BC Components	0603B104K160BT	
5	100pF	C5	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 100pF, NPO, 50V, 5%	BC Components	0603N101J500NT	
6	100pF	C7	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 100pF, NPO, 50V, 5%	BC Components	0603N101J500NT	
7	0.022uF	C9	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 .022uF, 16V, 10%, X7R	BC Components	0603B223K160BT	
8	4.7uF	C10	3216	Capacitor, Surface Mount	Capacitor	Tantalum, 16V, ±20%, 125°C	Panasonic	ECS-T1CY475R	
9	MMBT2222A	Q2	SOT-23	Surface Mount NPN	Transistor	Trans., NPN, gen. pur. 40V	On Semi	MMBT2222A	
10	MMBT2222A	Q3	SOT-23	Surface Mount NPN	Transistor	Trans., NPN, gen. pur. 40V	On Semi	MMBT2222A	
11	3.3K	R6	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 3.3K, 1/10W, 5%	Panasonic	ERJ-3GEYJ332V	
12	3.3K	R8	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 3.3K, 1/10W, 5%	Panasonic	ERJ-3GEYJ332V	
13	47K	R5	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 47K, 1/10W, 5%	Panasonic	ERJ-3GEYJ473V	
14	47K	R7	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 47K, 1/10W, 5%	Panasonic	ERJ-3GEYJ473V	
15	2.89MHz	XT1	DUALCRYS	Ceramic Resonator	Resonator	Res., Cer., TH, 2.89MHz	Vanlong	ZTA2.89MG	
16	MC78LC50NTR	U1	SOT-25	Voltage Regulator	Regulator	Volt. Reg., 5V, SOT-25	National Semi	MC78LC50NTR	
17	MICRF001BM	U2	SO-14	IC, Receiver, SMT	IC	IC, RF receiver	Micrel	MICRF001BMTR	
18	22nH	Z1	0603	Inductor, Surface Mount	Inductor	Inductor, 0603, 22nH, 2%	Panasonic	ELJ-RE22NGF2	
19	4pF	Z3	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 4pF	Yageo America	0603CG409D9B200	
20	0 ohm	Z2	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 0 ohm, 1/10W, 5%	Yageo America	9C06031A0R00JLHFT	
21	4.0 pF	C1	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 4.0 pF, 50V, 0.25pF, NPO	Yageo America	0603CG409C9B200	
22	1.0 pF	C2	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 1.0 pF, 50V, 0.25pF, NPO	BC Components	0603N1R0C500NT	
23	100 pF	C3	0603	Capacitor, Surface Mount	Capacitor	Cap, Chip 0603 100pF, 50V, 5%, NPO	BC Components	0603N101J500NT	
24	470K	R1	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 470K, 1/10W, 5%	Panasonic	ERJ-3GEYJ474V	
25	NP	R2						NP	
26	47	R3	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 47 ohm, 1/10W, 5%	Panasonic	ERJ-3GEYJ470V	
27	470	R4	0603	Resistor, Surface Mount	Resistor	Res., Chip 0603, 470 ohm, 1/10W, 5%	Panasonic	ERJ-3GEYJ471V	
28	FMMTH10	Q1	SOT-23	Transistor, RF	Transistor	Trans., NPN, RF, 25V, 25mA, RF	Zetex	FMMTH10TA	
29	RFM-SM2	SAW1	SM-2	SAW res., 433.92 MHz	SAW	SAW resonator, 433.92 MHz	RFM	R02101A	
30	PCB	*	*	Printed Circuit Board	PCB	Two Layer, FR-4, 94V-0, 0.062"	Approved Suppliers	EX-03616 rev 17, 11/04/02	