



No	Part Number	Part Name	Qty	Manufacturer
RL5	G6E-134P-US	Relay (2A, 30 Vdc, 12 Vdc)	1	OMRON
RL1-4	AHJ3241	Relay (5A, 250 Vac, 12 Vdc)	4	Panasonic
IC3, 10	TA7812S	Voltage Regulator (12 Vdc, 1A)	2	Toshiba
SW5,6		DIP Switch	2	
X1		Crystal Oscillator (3.579545 MHz)	1	
TP1,2		Banana Jack (Red, Black)	2	
J1		Banana Jack (Green)	1	
SW2-4	V-103-1A4	Limit Switch	2	OMRON
SW2	PH-M1	Momentary Pushbutton (120/24 Vac, 5A)	1	Summulon
SW1		Toggle Switch	1	
U2		AGC Glass Fuse Holder	1	
U1		AA Ni-MH Battery Holder/4 batteries	1	
C3,4		Capacitor (33 uF, 47 uF)	1	
C2,5-6		Capacitor (0.1 uF)	3	
C1	EECF5R5U105	Capacitor (1F, 5.5 Vdc)	1	Panasonic Elec. Devices
PM4-6	3296, 50k Ohm	Trimming Potentiometer (30 kOhm, 0.5 W, 25 turns)	3	BOURNS
PM1-3	3296, 25k Ohm	Trimming Potentiometer (25 kOhm, 0.5 W, 25 turns)	3	BOURNS
RM1, 2	M6-1-331(471)JU05	Resistor Array (330/470 Ohm) (5)	2	ROHM
R5		Resistor (300 kOhm, 1/4 W)	1	
R3,4		Resistor (100 kOhm, 1/4 W)	2	
R2		Resistor (1 kOhm, 1/4 W)	1	
R1	W5W 10 Ohm J	Resistor (10 Ohm, 5 W)	1	TAKMAN
CdS1	9P5-1/H	Photo Sensor (CdS)	1	Toshiba
IC5-1, IC5-2	TL082CP	Operational Amplifier (2)	1	Texas Instruments
IC4-1, 7-4	TLP 621-2 (or TLP 521-2)	Photo Coupler	4	Toshiba
IC3	LC7385	DTMF Receiver	1	Sanyo
IC2	TA78L005AP	Voltage Regulator (5 Vdc, 100mA)	1	Toshiba
IC1	TA48033S	Voltage Regulator (3.3 Vdc)	1	Toshiba
D34-37	GSF1 0A20	Diode (VRRM=200V, IO=10A)	4	Nippon Inter
D25-33	1N4001	Diode (VRRM=50V, IO=1A)	7	VISHEY
D1-24	6A2	Diode (VRRM=200V, IO=6A)	32	Rectron
PV1-16	FL132-SP-93	PV Cell (15.8Vdc, 2.52 A)	16	Toshiba Electric
PV,C	MP7.2-150	PV Cell (7.2 Vdc, 200 mA)	2	Power Film
Motor1-4	EC Power Max 30/ Gear 26:1	Motor and Planetary Gear (26:1)	4	Maxon Motor
M1-4	DEC70/10	Motor Amplifier (4Q EC)	4	Maxon Motor
M5	ToolStick-F330DC	TOOLSTICK C8051F330 DAUGHTER CARD	1	Silicon Laboratories