

## Parts for Electronics & Robotics II Car

Updated 8/29/12

Part Description	Source	Part #	Unit Cost	Quantity	Total Cost	Notes
<b>Electronics:</b>						
Yellow LED's	Electronics Express	08L53YD	\$0.08	5	\$0.40	Purchased in quantities of 100+
Green LED's	Electronics Express	08L53GD	\$0.07	5	\$0.35	Purchased in quantities of 100+
1N5817 Schottky Diode	Jameco	177949	\$0.14	8	\$1.12	Purchased in quantities of 10+
1 K Ohm Resistor	Electronics Express	13.551K	\$0.03	5	\$0.15	Purchased in quantities of 200+
4.7 K Ohm Resistor	Electronics Express	13.554.7K	\$0.03	1	\$0.03	Purchased in quantities of 200+
10 K Ohm Resistor	Electronics Express	13.5510K	\$0.03	6	\$0.18	Purchased in quantities of 200+
25 K Tripot	Electronics Express	18STS25K	\$0.80	1	\$0.80	Purchased in quantities of 10+
1000 uF Capacitor	Jameco	30015	\$0.19	1	\$0.19	Purchased in quantities of 10+
SPDT Switch	Electronics Express	17SLDH251	\$1.20	2	\$2.40	Purchased in quantities of 10+
SPDT Long Lever Switch	Jameco	187805	\$2.69	3	\$8.07	Purchased in quantities of 10+
78L05 Voltage Regulator	Jameco	51182	\$0.22	2	\$0.44	Purchased in quantities of 10+
16F88-I/P PIC Microcontroller	MICROCHIP	16F88-I/P	\$2.51	2	\$5.02	Purchased in quantities of 26+
74LS04 Hex Inverter IC, DIP14	Jameco	46316	\$0.45	1	\$0.45	Purchased in quantities of 10+
SN754410 Motor Driver IC	Pololu Robotics	0024	\$2.95	1	\$2.95	
Connector 40 Position Header 2.54mm	Jameco	160882	\$0.38	1	\$0.38	
Hantronix HDM716216H-5-3005 16 x 2 LCD	Jameco	618003	\$7.95	1	\$7.95	Purchased in quantities of 5+
Devantech SRF04 Ultrasonic Range Finder	Acroname Robotics	R93-SRF04	\$29.50	1	\$29.50	
6.5"x0.3" Solderless Breadboard	Electronics Express	03MBD	\$1.80	1	\$1.80	
6.5"x2.1" Solderless Breadboard w/ Wire Kit	Electronics Express	03MB102WWK	\$7.95	1	\$7.95	
6.5"x1.4" Solderless Breadboard	Electronics Express	03MBT	\$2.60	1	\$2.60	
Wire, #22 AWG	-	-	-	-	-	Not included in unit costs
9 Volt Battery Snap	Jameco	216452	\$0.32	1	\$0.32	Purchased in quantities of 10+
9 Volt Batteries	Medic Batteries	MN1604	\$1.24	5	\$6.20	Purchased in quantities of 72
Miscellaneous Capacitors, Headers	-	-	\$3.50	1	\$3.50	
Wire Jumpers	-	-	\$3.00	1	\$3.00	
<b>Motors:</b>						
Futaba S3003 Hobby Servo	Tower Hobbies	LM0816	\$10.65	1	\$10.65	Purchased in packs of 3
Gearhead Motor, GH12-1641T-F, 71 RPM	Jameco	155855	\$22.49	2	\$44.98	Purchased in quantities of 5+
<b>Body &amp; Hardware:</b>						
1/8"x12"x12" Aluminum	MPH Inc.	-	\$11.00	1	\$11.00	
Miscellaneous Aluminum Stock	Lowe's	-	\$5.60	1	\$5.60	
Miscellaneous Screws/Washers/Nuts	Zell's Hardware	-	\$3.00	1	\$3.00	
9 Volt Battery Mounting Clip	Jameco	105794	\$0.32	1	\$0.32	Purchased in quantities of 10+
#4 x 3/16" Long Nylon Round Spacer	MSC	83083824	\$0.06	2	\$0.12	Purchased in quantities of 100
M3x5mm S/S Machine Screw	MSC	68019165	\$0.10	6	\$0.60	Purchased in quantities of 100
1/2"x1/4"x3/16" Rubber Grommets	MSC	32828535	\$0.125	6	\$0.75	
Ball Caster with 3/4" Metal Ball	Pololu	#955	\$4.99	1	\$4.99	
O-ring Tire	MSC	75749572	\$0.15	2	\$0.30	Purchased in quantities of 50
Aluminum Wheels - Made on Lathe, See website	<a href="http://cornerstonerobotics.org/curriculum/lessons_year2/eriu_making_wheels.pdf">http://cornerstonerobotics.org/curriculum/lessons_year2/eriu_making_wheels.pdf</a>			2	\$0.00	
1 1/2" Aluminum Stock for Wheels	MSC	2629426	\$4.50	2	\$9.00	Purchased in 36" Piece
Shipping Total			\$45.00	0.167	\$7.52	
<b>Lab Fees:</b>						
Lab Manual Printing					\$16.00	
Miscellaneous Wire Jumpers, Equipment Repair, Lathe Inserts, Sander Belts, etc.					<u>\$15.00</u>	
<b>Total:</b>					<b>\$215.58</b>	Costs exclude sales tax

### Source List:

Vendor Name	Website	Telephone	Notes:
Acroname Robotics	acroname.com	720-564-0373	
Digi-Key	digkey.com	800-344-4539	\$5 Handling fee on orders < \$25
Electronics Express	elexp.com	800-972-2225	\$20.00 Minimum order
Jameco	jameco.com	800-831-4242	\$20.00 Minimum order over phone
MICROCHIP	microchipdirect.com	888-624-7435	
Pololu Robotics & Electronics	pololu.com	877-776-5658	
Medic Batteries	medicbatteries.com	800-479-6334	
MSC	www1.msdirect.com	800-645-7270	