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2.007 Design and Manufacturing I
Spring 2009

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2.007 - Design and Manufacturing I

Spring 2009 Kit List

#	Picture	Q	Item Description	SW File / Info
Stock (provided in storage container)				
1		1	Plastic storage container (Rubbermaid Roughneck 14 gal 2212)	
2		1	Calipers - Digital!	
3		1	Birch plywood square - nominally 16" x 16" x 3/8"	
4		1	6063-T6 Box Extrusion - 1" x 3" x 12" - 1/8" thick	
5		1	6063-T6 Box Extrusion - 1" x 1" x 18" - 1/8" thick	
6		4	6063-T6 Box Extrusion - 1" x 1" x 18" - 1/16" thick	
7		1	6061-T6 Bar - 2" x 12" x 1/4" thick	
8		1	6061-T6 Angle Bar - 1.5" x 1.5" x 12" - 1/4" thick	
9		2	Al Angle Iron 1" x 1" x 1/8" x 18"	
10		1	6061-T6 Rod - 1/4" x 18"	
11		2	6061-T6 Rod - 5/16" x 18"	
12		2	5052-H32 Sheet - 1/16" x 18" x 18"	
13		2	2011 Hex Rod - 5/16" x 12"	
14		1	Threaded steel rod - 1/4-20, 12" length	
15		24"	Steel strips -1" x 0.048" (not in container, too big, as need)	
16		1	Steel Sheet - 18" x 18" x 1/32"	
17		4	1/8" diameter x 36" welding rod (not in container, too big, as need)	
18		1	Delrin Rod 1" Diameter x 6" Length	
19		1	Delrin Rod 2" Diameter x 4" Length	
20		2	ABS Sheet 12" x 12" x 1/4"	
21		2	Small PVC pipe - 1.0" I.D. x 18"	
22		2	Large PVC pipe - 1.25" I.D. x 18"	
23		2	Square HDPE Bar 1/2" x 1/2" x 6"	
Wheels (provided in storage container)				
24		4	Polypropylene Wheel 3" X 13/16", 1/4" Axle	McMaster Part #: 2781T72
25		2	Low-Profile Caster Swivel, 1-1/4" X 9/16"	McMaster Part #: 2390T2
26		2	Solarbotics 2-5/8" Diameter Servo Wheel	Solarbotics Part #: SW
Electrical (spares limited)				
27		1	Parallax Homework Board	www.parallax.com
28		2	Parallax Continuous Rotation Servos	www.parallax.com
29		2	Hitec Standard Servo HS-311	www.hitecrod.com
30		1	Hitec Low Profile Servo HS-77BB	www.hitecrod.com
31		1	Hitec HS-805BB+ Mega 1/4 Scale Servo	www.hitecrod.com
32		1	9V Battery	
Springs (stocked in storage closet)				
33		4	Constant force spring (small)	McMaster Part # (special order from Vulcan)
34		4	Compression spring	9657k152
35		4	Extension springs (small)	9654K14
36		4	Extension springs (medium)	9654K52
37		4	Extension springs (large)	9654K369
38		4	Torsion spring (small)	9271K452
39		4	Torsion spring (large)	9271K232
Gears (stocked in storage closet)				
40		4	Nylon spur gear, module 1, 12 teeth	Huco Part #: 101283012
41		4	Nylon spur gear, module 1, 24 teeth	Huco Part #: 101283024
42		4	Nylon spur gear, module 1, 36 teeth	SDP/SI Part #: 101283036
43		2	Nylon bevel gear, 24 diametral pitch, 24T	SDP/SI Part #: A 1M 3-Y24024
44		2	Nylon bevel gear, 24 diametral pitch, 48T	SDP/SI Part #: A 1M 3-Y24048
45		1	Length 12", 24 Diametral Pitch, 1/4" Face, 1/4" Height	SDP/SI Part #: A 1N12-N24
Little Bits (stocked in storage closet)				
46		as need	Spring pins	98296A133
47		as need	1/4" Nylon bushing	6389K627
48		as need	5/16" Nylon bushing	6389K626
49		as need	E clip for 1/4" shaft	97431A300
50		as need	E clip for 5/16" shaft	97431A310
51		as need	1/8" Flat push-on retaining clips	94807A024
52		as need	1/4" Flat push-on retaining clips	94807A029
53		as need	5/16" Flat push-on retaining clips	94807A030
54		as need	1/8" Washer - .130" ID, .285" OD, .054"-.070" Thk	90295A070
55		as need	1/4" Washer - .260" ID, .687" OD, .054"-.070" Thk	90295A150
56		as need	5/16" Washer - .340" ID, .740" OD, .057"-.067" Thk	90295A160
Odds n'Ends (stocked in bins)				
57		as need	1/8" x 48" Buna-N cord, 70 durometer	
58		as need	3" x 24" x 1/16" Buna-N sheet stock	
59		as need	25' of braided nylon twine, 0.046" dia, 95 lb strength	
60		as need	Alcohol wipes	
61		as need	Two part epoxy packets	
62		as need	Zip tie wraps - 4" length	
63		as need	Cable zip tie mounts	
64		as need	Rubber bands	
Standard Lab Supplies				
		as need	An Assortment of Glues and Loctites	
		as need	Pop Rivets - 1/8" diameter, others possible	
		as need	Stocked Fasteners	
		as need	Other supplies provided by Pappalardo staff as needed	