

## 2002 Kit of Parts Checklist

### Green Container - Drill Bag

✓	Part Name/Description	Dimensions	Category	Qty /Kit	Product Supplier
<input type="checkbox"/>	Drill Drive Assembly	225 in-lb max, 3/8-24 UNF	Motors & Pumps	3	S-B Power Tool Company
<input type="checkbox"/>	Drill Housing Cover		Misc Hardware	2	S-B Power Tool Company
<input type="checkbox"/>	Drill Motor	12 Vdc	Motors & Pumps	3	S-B Power Tool Company

### Green Container - Electronics Bag

✓	Part Name/Description	Dimensions	Category	Qty /Kit	Product Supplier
<input type="checkbox"/>	15 Pin Solder Cup Connector	DB15 Female	Control System	2	AMP Foundation
<input type="checkbox"/>	25 Pin Solder Cup Connector	DB25 Male	Control System	2	AMP Foundation
<input type="checkbox"/>	Circuit Breaker	60 Amps, Ratings: 1-63A set at	Control System	1	SquareD
<input type="checkbox"/>	Fuse Panel	ATC, 12 fuseable, 12 unfused	Control System	2	Bussmann
<input type="checkbox"/>	Johnson Electric Motor	40.55W max @ 27.59 m-Nm,	Motors & Pumps	1	Johnson Electric North
<input type="checkbox"/>	LED, Panel Mount	Red, 12V	Control System	2	Chicago Miniature Lamp, Inc.
<input type="checkbox"/>	LED, Panel Mount	Green, 12V	Control System	2	Chicago Miniature Lamp, Inc.
<input type="checkbox"/>	LED, Panel Mount	Amber, 12V	Control System	2	Chicago Miniature Lamp, Inc.
<input type="checkbox"/>	Muffin Fan (Tiny)	12 Vdc	Control System	5	EBM Industries
<input type="checkbox"/>	Plastic Shield for 25 Pin Connector	fits DB25 Connector	Control System	2	AMP Foundation
<input type="checkbox"/>	Snap-Action Circuit Breaker	30 amp, 12 volt, Auto-Resetting	Control System	6	Snap-Action, Inc.
<input type="checkbox"/>	Snap-Action Circuit Breaker	20 amp, 12 volt, Auto-Resetting	Control System	6	Snap-Action, Inc.

### Green Container - Loose

✓	Part Name/Description	Dimensions	Category	Qty /Kit	Product Supplier
<input type="checkbox"/>	1 Conductor Wire	10', #6 AWG, Black	Control System	1	Delphi Packard Electric
<input type="checkbox"/>	9 Pin Cable	DB9 Male to Female, 6',	Control System	4	Innovation First
<input type="checkbox"/>	Battery	12 volt	Control System	2	Exide
<input type="checkbox"/>	Caster, W/ 1/2-13x1 1/2 stem	300 Pounds, swivel	Wheels	2	Fastenal
<input type="checkbox"/>	Drill Housing Kit w/ Shift Lever	T-Handle Style Grip, Left/Right	Motors & Pumps	2	S-B Power Tool Company
<input type="checkbox"/>	Fisher-Price 10 Web Jeep Driver	Black	Motors & Pumps	2	Fisher-Price, Inc.
<input type="checkbox"/>	Fisher-Price Axle	7/16"Ø x 26"	Motors & Pumps	1	Fisher-Price, Inc.
<input type="checkbox"/>	Fisher-Price Motor/Gearbox	12 Vdc stall torque (mNm)	Motors & Pumps	2	Fisher-Price, Inc.
<input type="checkbox"/>	Globe Motor with Drive Assembly	12Vdc	Motors & Pumps	2	Globe Motors
<input type="checkbox"/>	Muffin Fan	12 Vdc	Control System	1	EBM Industries
<input type="checkbox"/>	Optical Sensor		Control System	4	Banner Engineering
<input type="checkbox"/>	PWM/Relay Cable	Hitec/JR-style, 36" Long	Control System	8	Innovation First
<input type="checkbox"/>	PWM/Relay Y Cable	Hitec/JR-style, 24" Long	Control System	2	Innovation First
<input type="checkbox"/>	Torque Motor		Motors & Pumps	1	Belimo Aircontrols, Inc.

### Green Container - Seat / Window Bag

✓	Part Name/Description	Dimensions	Category	Qty /Kit	Product Supplier
<input type="checkbox"/>	Flexible Motor Shaft	13.5" Long, Fits Seat Motor	Rods & Shafts	2	Grand Rapids Controls
<input type="checkbox"/>	Flexible Shaft Coupling	Black	Misc Hardware	2	DEKA
<input type="checkbox"/>	Servo	42 oz./in. peak torque, 0.19	Control System	2	Hitec RCD, Inc.
<input type="checkbox"/>	Worm Gear Actuator-Left Hand	2 inch linear movement	Other	1	Excellence Manufacturing, Inc.
<input type="checkbox"/>	Worm Gear Actuator-Right Hand	2 inch linear movement	Other	1	Excellence Manufacturing, Inc.

### Green Container - Velcro Bag

✓	Part Name/Description	Dimensions	Category	Qty /Kit	Product Supplier
<input type="checkbox"/>	Velcro 1" Hook & Loop Tape	36" Length, Adhesive Backing	Fasteners	1	Velcro USA, Inc.
<input type="checkbox"/>	Velcro 1" One Wrap Tape	24" Lengths, Orange	Fasteners	1	Velcro USA, Inc.
<input type="checkbox"/>	Velcro 18" One Wrap grip tie	1"x18" grip tie White	Fasteners	2	Velcro USA, Inc.

## 2002 Kit of Parts Checklist

<input type="checkbox"/>	Velcro 5/8" One Wrap Tape	24" Lengths, Red	Fasteners	1	Velcro USA, Inc.
<input type="checkbox"/>	Velcro 8" One Wrap grip tie	1"x8" grip tie Gray	Fasteners	10	Velcro USA, Inc.
<input type="checkbox"/>	Velcro grip tie (2 in a pack)	6"x 1"	Fasteners	1	Tyton Hellermann
<input type="checkbox"/>	Velcro Grip Ties	8" x 1.75"	Fasteners	2	Tyton Hellermann

### Red Container - Bearing Bag

<input checked="" type="checkbox"/>	<u>Part Name/Description</u>	<u>Dimensions</u>	<u>Category</u>	<u>Qty /Kit</u>	<u>Product Supplier</u>
<input type="checkbox"/>	Gear, cluster (for Chiaphua motor)		Motors & Pumps	2	Atwood Mobile Products
<input type="checkbox"/>	Pillow Block	1/2"	Bearings	2	The Torrington Company
<input type="checkbox"/>	Radial Ball Bearing With Spherical O.D.,	1/2" I.D., Self Locking Collar	Bearings	4	The Torrington Company
<input type="checkbox"/>	Single Row Radial Flanged Ball Bearing,	1/4" I.D.	Bearings	4	The Torrington Company
<input type="checkbox"/>	Single Row Radial Flanged Ball Bearing,	3/8" I.D.	Bearings	4	The Torrington Company
<input type="checkbox"/>	Two Bolt Self Aligning Flange, 40MST	Fits 1/2" Bearing	Bearings	8	The Torrington Company

### Red Container - Loose

<input checked="" type="checkbox"/>	<u>Part Name/Description</u>	<u>Dimensions</u>	<u>Category</u>	<u>Qty /Kit</u>	<u>Product Supplier</u>
<input type="checkbox"/>	1 Conductor Wire	35', #10 AWG, Red	Control System	1	Delphi Connection Systems
<input type="checkbox"/>	1 Conductor Wire	35', #10 AWG, Black	Control System	1	Delphi Connection Systems
<input type="checkbox"/>	15 Pin Molded Cable	DB15 pin M-M, 6 feet	Control System	2	Innovation First
<input type="checkbox"/>	2 Conductor Jacketed Wire	35', #16 AWG	Control System	1	BICC General
<input type="checkbox"/>	2 Conductor Jacketed Wire	30', #24 AWG	Control System	1	BICC General
<input type="checkbox"/>	3 Conductor Shielded Wire	30', #24 AWG	Control System	1	BICC General
<input type="checkbox"/>	Battery Charger	Sealed Lead Acid Battery, 4	Control System	1	Exide
<input type="checkbox"/>	Connector for Seat Motor	2 pin, 16 AWG x 12" cable	Control System	2	Delphi Packard Electric
<input type="checkbox"/>	Connector for Yaw Rate Sensor	3 pin, 24 AWG x 12" cable	Control System	1	Delphi Packard Electric
<input type="checkbox"/>	FedEx Airbills		Documentation	4	FedEx
<input type="checkbox"/>	FedEx Envelope - Introduction Letter		Documentation	1	
<input type="checkbox"/>	Kee Klamp Pipe Fitting Brochure		Documentation	1	Kee Industrial Products
<input type="checkbox"/>	Kee Lite Pipe Fitting Brochure		Documentation	1	Kee Industrial Products
<input type="checkbox"/>	Motor, Chiaphua		Motors & Pumps	2	Chiaphua
<input type="checkbox"/>	Operator Interface		Control System	1	Innovation First
<input type="checkbox"/>	Power Supply for Operator Interface	9 Vdc	Control System	1	Innovation First
<input type="checkbox"/>	PUMA Size 5 Soccer Ball, Yellow	Size 5, Yellow	Other	1	PUMA
<input type="checkbox"/>	Radio Modem for Operator Interface	RS-422, 9 pin F, metal antenna	Control System	1	Innovation First
<input type="checkbox"/>	Radio Modem for Robot Controller	RS-422, 9 pin F, rubber	Control System	1	Innovation First
<input type="checkbox"/>	Relay Module (Spike)	12V, 20A Max	Control System	4	Innovation First
<input type="checkbox"/>	Robot Controller		Control System	1	Innovation First
<input type="checkbox"/>	Seat Motor, Keyang	12 Vdc	Motors & Pumps	2	Delphi Automotive
<input type="checkbox"/>	Speed Controller (Victor 883)		Control System	4	Innovation First
<input type="checkbox"/>	The Robotics Competition 2002 - Manual		Documentation	1	FIRST
<input type="checkbox"/>	Wheelchair Wheel	6" Ø, 5/16" I.D. Bearings, 1-1/2"	Wheels	2	Skyway Recreation Products
<input type="checkbox"/>	Wheelchair Wheel	8" Ø, 5/16" I.D. Bearings, 1-1/2"	Wheels	2	Skyway Recreation Products
<input type="checkbox"/>	Window Motor, Left, Jideco		Motors & Pumps	1	Jideco
<input type="checkbox"/>	Window Motor, Right, Jideco		Motors & Pumps	1	Jideco
<input type="checkbox"/>	Yaw Rate Sensor		Control System	1	BEI Systron Donner

### Red Container - Miscellaneous Bag

<input checked="" type="checkbox"/>	<u>Part Name/Description</u>	<u>Dimensions</u>	<u>Category</u>	<u>Qty /Kit</u>	<u>Product Supplier</u>
<input type="checkbox"/>	Compression Spring	0.600" O.D. x 2.25" Long	Springs	2	Associated Spring Raymond
<input type="checkbox"/>	Constant Force Spring, Extra Small	0.34" I.D.	Springs	2	Associated Spring Raymond
<input type="checkbox"/>	Constant Force Spring, Large	1.02" I.D.	Springs	2	Associated Spring Raymond

## 2002 Kit of Parts Checklist

<input type="checkbox"/>	Constant Force Spring, Medium	0.59" I.D.	Springs	2	Associated Spring Raymond
<input type="checkbox"/>	Constant Force Spring, Small	0.51" I.D.	Springs	2	Associated Spring Raymond
<input type="checkbox"/>	Drill Housing Screws	#4 x 3/4, Pan Head - Phillips	Fasteners	10	Fastenal Company
<input type="checkbox"/>	Drill Motor / Gearbox Screw	M4 x 6mm, Button Head 19	Fasteners	4	Fastenal Company
<input type="checkbox"/>	Extension Spring	0.650" O.D. x 2.000" Long	Springs	2	Associated Spring Raymond
<input type="checkbox"/>	Helical Plastic Wire Wrap	1/4" Ø x 24"	Fasteners	1	Tyton Hellermann
<input type="checkbox"/>	Helical Plastic Wire Wrap	1/2" Ø x 24"	Fasteners	1	Tyton Hellermann
<input type="checkbox"/>	Latex Tubing	1/4" I.D., 3/8" O.D., 5'	Springs	1	Kent Elastomer
<input type="checkbox"/>	Motor, Mabuchi		Motors & Pumps	1	Mabuchi Motor America
<input type="checkbox"/>	Polyethylene grommet	3/16" x 24"	Fasteners	1	Tyton Hellermann
<input type="checkbox"/>	Polyethylene grommet	3/8" x 24"	Fasteners	1	Tyton Hellermann
<input type="checkbox"/>	Torque Motor Anti-Rotation Bracket		Fasteners	1	Belimo Aircontrols, Inc.
<input type="checkbox"/>	Torsion Spring, Left Hand	180 Degrees, 0.404" Dia	Springs	2	Associated Spring Raymond
<input type="checkbox"/>	Torsion Spring, Right Hand	180 Degrees, 0.404" Dia	Springs	2	Associated Spring Raymond

### Red Container - Pulley Bag

<input checked="" type="checkbox"/>	<u>Part Name/Description</u>	<u>Dimensions</u>	<u>Category</u>	<u>Qty /Kit</u>	<u>Product Supplier</u>
<input type="checkbox"/>	Bushing (for CMT pulleys)	fits 0.375"+0-.0005 (h6)	Pulleys	2	Custom Machine & Tool Co.,
<input type="checkbox"/>	Bushing (for CMT pulleys)	fits 0.500"+0-.0005 (h6)	Pulleys	2	Custom Machine & Tool Co.,
<input type="checkbox"/>	Pulley, aluminum timing (use CMT 1216)	20 teeth,5mm HTD pitch,to	Pulleys	2	Custom Machine & Tool Co.,
<input type="checkbox"/>	Pulley, plastic timing (use CMT 1216)	30 teeth,5mm HTD pitch,to	Pulleys	1	Custom Machine & Tool Co.,
<input type="checkbox"/>	Pulley, plastic timing (use CMT 1216)	60 teeth,5mm HTD pitch,to	Pulleys	1	Custom Machine & Tool Co.,

### Red Container - Tube

<input checked="" type="checkbox"/>	<u>Part Name/Description</u>	<u>Dimensions</u>	<u>Category</u>	<u>Qty /Kit</u>	<u>Product Supplier</u>
<input type="checkbox"/>	Aluminum Rod	1/2" Ø x 24"	Rods & Shafts	1	Northstar Steel and Aluminum,
<input type="checkbox"/>	Shaft, TGP (turned, ground, polished)	1/4" Ø x 18" TGP	Rods & Shafts	1	Northstar Steel and Aluminum,
<input type="checkbox"/>	Shaft, TGP (turned, ground, polished)	3/8" Ø x 18" TGP	Rods & Shafts	1	Northstar Steel and Aluminum,
<input type="checkbox"/>	Shaft, TGP (turned, ground, polished)	5/16" Ø x 18" TGP	Rods & Shafts	1	Northstar Steel and Aluminum,
<input type="checkbox"/>	Shaft, TGP (turned, ground, polished)	1/2" Ø x 18" TGP	Rods & Shafts	1	Northstar Steel and Aluminum,

### Shipped to Teams

<input checked="" type="checkbox"/>	<u>Part Name/Description</u>	<u>Dimensions</u>	<u>Category</u>	<u>Qty /Kit</u>	<u>Product Supplier</u>
<input type="checkbox"/>	1 Conductor Wire	10', #6 AWG, Red	Control System	1	Delphi Packard Electric
<input type="checkbox"/>	Anderson Power Products Catalog	Catalog	Control System	1	Anderson Power Products
<input type="checkbox"/>	Quick-Disconnect Power Connector (with 1'	#6 AWG Red/Black Wire, pair	Control System	2	Anderson Power Products
<input type="checkbox"/>	Reflexite, retroreflective		Other	1	Reflexite
<input type="checkbox"/>	Revolving Light	w/ red and,blue lenses	Control System	1	North American Signal

### Supplemental Kit

<input checked="" type="checkbox"/>	<u>Part Name/Description</u>	<u>Dimensions</u>	<u>Category</u>	<u>Qty /Kit</u>	<u>Product Supplier</u>
<input type="checkbox"/>	Flightstick Joystick	7" Cable with Male DB15	Control System	2	CH Products
<input type="checkbox"/>	Microsoft, XP, Project, Front Page		Documentation	1	Microsoft
<input type="checkbox"/>	Pneumatics Kit		Pneumatics	1	Various