



2000

CATALOG



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# The History of Estes Industries

Estes Industries was founded by Vern Estes and his wife Gleda in Denver, Colorado. Starting in 1958 with the manufacturing of solid propellant model rocket engines on a machine of his own design, Vern Estes (pronounced "Ess'-tess") later branched out into mass production of balsa nose cones and adapters for model rockets. He and his wife began selling model rockets by mail in 1960.

In 1961, due to a steady increase in orders, Vern Estes moved the company to a 77-acre tract on the outskirts of Penrose, about 30 miles southwest of Colorado Springs. Rapid growth followed, and soon Penrose became known as the "Model Rocket Capital of the World". Estes Industries became, and remains to this day, the world leader in model rocketry, celebrating over 40 years of service.

## Space Foundation



Official Rockets of the  
Space Foundation

Estes has partnered with the Space Foundation to promote space and science to K-12 educators and the public. Estes rockets are the Official Rockets of the Space Foundation and are used in Space Discovery, the SF graduate course for K-12 educators.

Estes worked closely with the Foundation to co-develop the "Ignite the Imagination"™ video and curriculum guide for teachers and youth group leaders. For more information about the SF, call 1-800-691-4000.

## U.S. Space Camp®

Estes has developed a close partnership with the U.S. Space Camp®. Estes rockets are the Official Rockets of U.S. SPACE CAMP®. Estes model rockets are used exclusively in their SPACE CAMP® education programs. For more information about SPACE CAMP®, call 1-800-63-SPACE.



All Estes and Cox products listed in this catalog are recommended for ages 10 and up with adult supervision for those under 12 unless specified otherwise. Unless otherwise specified all models require assembly. Engines, launch system, glue and finishing supplies are not included with kits unless otherwise specified.

Products subject to change without notice. Some supplies are limited.

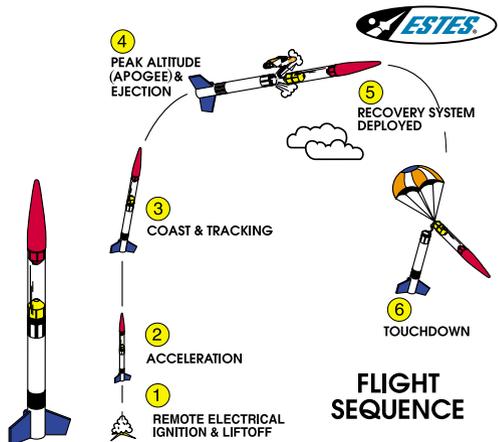
**Caution:** Use of Estes products with any other brand name rocket product containing any defect or causing any damage may void the Estes warranty.

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## How do Estes Model Rockets Work?

Estes model rockets are activity kits produced from lightweight materials such as paper tubing, balsa wood and plastic. Balsa or plastic fins are glued to the air-frame for guidance and stability. The model rocket engine is held securely in place with either a metal hook or plastic ring. Estes was the first to develop reliable, mass produced model rocket engines and has done so for over 40 years.

A model rocket is propelled into the air by an electrically ignited model rocket engine. After its acceleration, the rocket continues upward emitting tracking smoke as it coasts. At the rocket's peak altitude (also called apogee), a recovery device, most commonly a parachute or streamer, is deployed to return the rocket gently to earth. The rocket can then be prepped for another flight.



Maximum altitudes are estimates and may vary.

## Ready to Fly Starter Sets

Experience the thrilling world of Estes rocketry with a flying model rocket starter set. Each starter set comes complete with a high flying rocket and dependable launch system. Just add four AA alkaline batteries and you're ready to fly.

\* (FF) = Recommended First Flight

### GOLDSTRIKE™ EST 1802

The Goldstrike™ is a lightning fast way to get into model rocketry. This ready to fly rocket is fast and can easily reach altitudes up to 1,000 feet!. Colorful prismatic body tube is easy to spot. SPECS: **Length:** 16.6" (42.2 cm); **Dia:** 1.35" (34.3 mm); **Wt:** 2.3 oz. (64 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 1,000 ft (305 m); **Recommended Engines:** A8-3, (FF)\* B4-4, B6-4, C6-5. (includes three engines)



GOLDSTRIKE™

### IONIZER™ EST 1812

The Ionizer™ Starter Set is hot! With its metallic green body, yellow fins and nose cone, the Ionizer™ looks like it's flying at hyperspeed! SPECS: **Length:** 18" (45.7 cm); **Dia:** 1.35" (34.3 mm); **Wt:** 2.7 oz (75 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 600 ft (183 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5 (includes two engines)



IONIZER™

### ASTROCAM® RTF EST 1813

The Astrocams® RTF Starter Set features a real camera that allows you to take photographs of your launch area from 500 feet up! Uses 110 film – not included. SPECS: **Length:** 18.38" (46.7 cm); **Dia:** 1.34" (34.0 mm); **Wt:** 2.7 oz (76 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engine:** C6-7 only (includes two engines)



ASTROCAM® RTF

### RECON™ EST 1814

The Recon™ Starter Set deploys a reconnaissance satellite at peak altitude. The booster is recovered by a parachute, while the satellite comes down separately on its own brightly colored streamer. SPECS: **Length:** 17.5" (44.5 cm); **Dia:** 1.35" (34.3 mm); **Wt:** 3.0 oz (85 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 557 ft (170 m); **Recommended Engines:** B4-2, B6-2 (FF), C6-3, C6-5 (includes two engines)



RECON™

### FREE FALL™ EST 1816

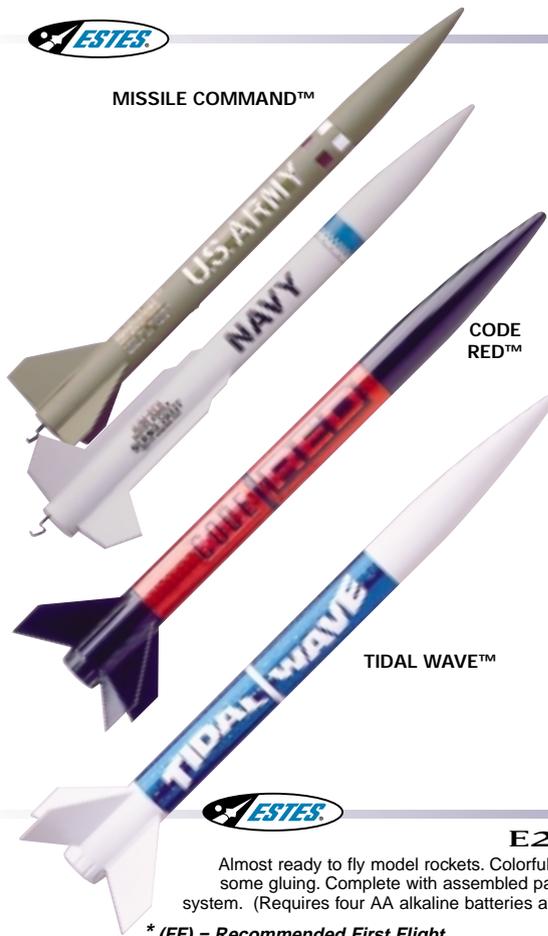
This big colorful rocket ejects a skydiver with parachute at apogee! A separate parachute recovers the rocket booster while the nose cone tumbles to earth by streamer. (Action figure with parachute included). SPECS: **Length:** 18" (45.7 cm); **Dia:** 1.64" (41.6 mm); **Wt:** 3.0 oz (85 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** B4-2, B6-2 (FF), C6-3, C6-5 (includes two engines)



FREE FALL™



### MISSILE COMMAND™



### CODE RED™

### TIDAL WAVE™



### MISSILE COMMAND™ EST 1818

The Missile Command™ Starter Set features two rockets, an "Army" surface-to-surface missile, the other a "Navy" ship-to-air missile. Flight supplies for your first two launches are included. **SPECS:** **Length:** Army - 16.6" (42.2 cm); Navy - 16" (40.6 cm); **Dia:** Army - 1.0" (25.4 mm); Navy - 1.0" (25.4 mm); **Wt:** Army - 1.6 oz (45 g); Navy - 1.7 oz (47 g); **Recovery:** 12" (30 cm) parachutes; **Fins:** Plastic molded; **Max. Altitude:** Army - 1100 ft (335 m); Navy - 1000 ft (305 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7 (includes two engines)

### CODE RED™ EST 1824

A great rocket from Estes! The prismatic red air frame is highly visible in flight! **SPECS:** **Length:** 18" (45.7 cm); **Dia:** 1.35" (34.3 mm); **Wt:** 2.7 oz (76 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 600 ft (183 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5 (includes two engines)

### TIDAL WAVE™ EST 1811

The Tidal Wave™ is visually stimulating on the ground and in the air. The prismatic colored body tube will make waves at your next rocket launch. Powerful liftoffs are followed by soft parachute landings for maximum fun! **SPECS:** **Length:** 18" (45.7 cm); **Dia:** 1.35" (34.3 mm); **Wt:** 2.7 oz (76 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 600 ft (183 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5. (includes two engines)

## E2X® Starter Sets

Almost ready to fly model rockets. Colorful plastic parts, body tubes and decals. Requires some gluing. Complete with assembled parachute, flight supplies and dependable launch system. (Requires four AA alkaline batteries and modeling cement, and/or glue not included).

\* (FF) = Recommended First Flight



### ALPHA III®

### ALPHA III® EST 1406

More people have started with this timeless rocket than any other in the history of model rocketry! Features a brightly molded one-piece fin unit, self-adhesive decals and assembled parachute. **SPECS:** **Length:** 12.25" (31.1 cm); **Dia:** 0.98" (24.9 mm); **Wt:** 1.2 oz (34g); **Recovery:** 12" (30 cm) parachute; **Fins:** One piece plastic molded; **Max. Altitude:** 1100 ft (335 m); **Recommended Engines:** A8-3 (FF)\*, B4-4, B6-4, B6-6, C6-5, C6-7 (includes three engines)

### SCORPION™ EST 1472

Set includes the easy to build, high-flying Scorpion™ rocket and complete launch system and supplies for 2 exciting flights. This high performance design can reach altitudes of 1200 feet! Molded fin assembly, colorful yellow body tube and cool graphics make this an excellent entry level to model rocketry. **SPECS:** **Length:** 15" (38.1 cm); **Dia:** 0.976" (24.8 mm); **Wt:** 1.27 oz (36 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 1200 ft (366 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5, C6-7 (includes two engines)

### SCORPION™

**SUPER SHOT™**

EST 1449

The Super Shot™ rocket delivers high performance and parachute recovery in an easy to build kit. The Twister™ is a simple to build and paint kit featuring a recovery with a different spin – the Twister™ separates into two helicopter recovered pieces.

(Includes two engines)

**Super Shot™**

**SPECS:** Length: 16.5" (41.9 cm); Dia: 1.0" (25.4 mm); Wt: 1.6 oz (46 g); Recovery: 12" (30 cm) parachute; Fins: T3™ Plastic molded; Max. Altitude: 1000 ft (305 m); Recommended Engines: A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7

**Twister™**

**SPECS:** Length: 9.5" (24.1 cm); Dia: 0.74" (18.8 mm); Wt: 0.5 oz (14 g); Recovery: Helicopter; Fins: Die cut balsa; Max. Altitude: 1000 ft (305 m); Recommended Engines: A8-3 (FF), B4-4, B6-4, B6-6



SUPER SHOT™

**AIRWALKER™**

EST 1410

The Airwalker™ can carry bugs, flowers or toy figures into the sky. Launch payloads to over 1000 feet high! Special chrome colored reflective body tube. **SPECS:** Length: 20" (50.8 cm); Dia: 1.0" (25.4 mm); Wt: 2.0 oz (57 g); Recovery: 12" (30 cm) parachute; Fins: T3™ plastic molded; Max. Altitude: 1000 ft (305 m); Recommended Engines: A8-3 (FF), B4-4, B6-4, C6-3, C6-5 (includes three engines)

AIRWALKER™



HELICAT™

**HELICAT™**

EST 1465

A large, rip-roaring rocket with helicopter recovered nose cone. Nearly 3 feet long, this rocket has pre-colored body tubes and cool cat paw graphics. **SPECS:** Length: 33.5" (85.1 cm); Dia: 1.35" (34.3 mm); Wt: 3.7 oz. (105 g); Recovery: Rocket: 18" (46 cm) parachute. Nose cone: Helicopter; Fins: Plastic molded; Max. Altitude: 485 ft. (148 m); Recommended Engines: B4-2, B6-2 (FF), C6-3, C6-5. (Includes three engines)

**SABRE™**

EST 1473

A great starting point for the first time rocketeer! High performance design includes a parachute for soft landings and a streamer for high altitude flights. **SPECS:** Length: 16.5" (41.9 cm); Dia: 1.0" (25.4 mm); Wt: 1.6 oz (45 g); Recovery: 12" (30 cm) parachute or streamer; Fins: T3™ plastic molded; Max. Altitude: 1000 ft (305 m); Recommended Engines: A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7 (includes two engines)

SABRE™





MEGA MAXX™



MEGA MAXX™

EST 1474

This starter set features the easy to build Goliath™ that delivers a thrill as it flies to 500 feet. The sleek Spitfire SSI™ is simple to build and paint. Kit screams to over 900 feet. (Includes two engines)

**Goliath™**

**SPECS:** Length: 28" (71.1 cm); Dia: 1.34" (34 mm); Wt: 3 oz. (85 g); **Recovery:** 18" (46 cm) parachute; **Fins:** plastic molded; **Max. Altitude:** 500 feet (152 m); **Recommended Engines:** B4-2, B4-4, B6-2 (FF), B6-4 and C6-5

**Spitfire SSI™**

**SPECS:** Length: 16.25" (41.3 cm); Dia: 0.98" (24.9 mm); Wt: 1.7 oz. (48 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Die cut balsa; **Max. Altitude:** 900 feet (274 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5 and C6-7

SPACE SHUTTLE™



SPACE SHUTTLE™

EST 1467

Sport scale of the actual Space Shuttle "Orbiter". Flies like the real thing! Rockets to 300 feet and glides back to Earth! The power pod returns with a parachute. **SPECS:** Length: 14.75" (37.5 cm); Wingspan: 10" (25.4 cm); Wt: 7.0 oz. (199 g); **Recovery:** Shuttle: Glider. Power Pod: 18" (46 cm) parachute; **Max. Altitude:** 300 ft. (91 m); **Recommended Engine:** C6-3 only. (Includes two engines)



## Ready to Fly Model Rockets

Ready to fly rockets are completely assembled and decorated. (Requires an Estes launch system and flight supplies, not included).

\* (FF) = Recommended First Flight

HYPER X™

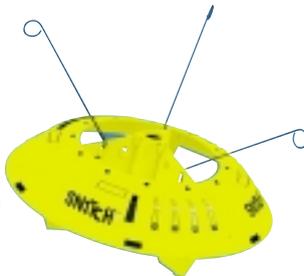


HYPER X™

EST 1804

The Hyper X™ is 19.5" tall and has a two way recovery system. The booster returns to earth using a parachute while the nose cone helicopters down gently using rotor blades. **SPECS:** Length: 19.5" (49.5 cm); Dia: 1.35" (34.3 mm); Wt: 3.1 oz (88 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Plastic molded; **Max. Altitude:** 536 ft (163 m); **Recommended Engines:** B4-2, B6-2 (FF)\*, B6-4, C6-3, C6-5.

SNITCH™



SNITCH™

EST 1807

Travel out of this world with this hot, neon colored flying saucer. This ready to fly alien space ship comes fully assembled and decorated. Uses an Estes C6-0 engine. **SPECS:** Diameter: 7.75" (19.7 cm); **Max Altitude:** 120 feet (37 m) **Recovery:** Spring Action **Recommended Engine:** C6-0 only.

**X-FLYERS™**
**EST 1806**

The X-Flyers™ is a spectacular twin pack of ready-to-fly rockets. Both are equipped with an assembled 12" parachute. They can scream to over 1,200 feet! **SPECS:**

**Length:** #1 - 15.3" (38.7 cm), #2 - 15.8" (40.0 cm); **Dia:** #1 - 0.74" (18.7 mm), #2 - 0.74" (18.7 mm); **Wt:** #1 - 0.7 oz (21 g), #2 - 0.7 oz. (21 g); **Recovery:** 12" (30 cm) parachutes; **Fins:** One piece plastic molded; **Max. Altitude:** #1- 1425 ft (434 m); #2 - 1280 ft (390 m); **Recommended Engines:** A8-3 (FF), B6-6, C6-7

**X-FLYERS™**

**JINX™**
**EST 1809**

Don't let the size of this rocket fool you. This brightly decorated ready to fly model flies over 200 feet into the air. Uses Estes mini engines. **SPECS: Length:** 9.5" (24.1 cm); **Recovery:** 12" (30 cm) parachute; **Max Altitude:** 200 ft (61 m); **Recommended Engines:** 1/2A3-2T (FF), A3-4T, A10-3T

**JINX™**

**MINI MARZ LANDER™**
**EST 1826**

Explore the outer reaches of the galaxy with your very own Mini Marz Lander™. This highly decorated rocket includes spring action landing legs for a pinpoint landing. **SPECS: Length:** 5.38" (13.7 cm); **Recovery:** 12" (30 cm) parachute; **Max Altitude:** 200 ft (61 m); **Recommended Engines:** 1/2A3-2T (FF), A3-4T, A10-3T

**MINI MARZ LANDER™**

**MOONDOG™**
**EST 1839**

This sleek looking retrorocket will have you howling for more flights. Completely assembled and ready to fly. Simply attach the assembled parachute, install an Estes mini engine and you're ready to go. **SPECS: Length:** 9.0" (22.9 cm); **Max Altitude:** 200 ft (61 m); **Recovery:** 12" (30 cm) parachute; **Recommended Engines:** A3-4T, A10-3T (FF)

**MOONDOG™**

**CRUISE MISSILE**
**EST 1847**

Imagine the thrill of launching this realistic model of America's most potent strategic weapon. With its wings folded and teeth gritted, this ready to fly rocket is powered into the air by an Estes mini engine and returned gently to earth by parachute. **SPECS: Length:** 9.0" (22.9 cm); **Recovery:** 12" (30 cm) parachute; **Max Altitude:** 200 ft (61 m); **Recommended Engine:** A3-4T, A10-3T (FF)

**CRUISE MISSILE**




# MIGHTY MITES™

## BLITZ™ AND SIZZLER®



## TORQUE™ AND FURY™



## HARPOON AND MAVERICK



## NINJA® AND SLIVER™



## OUTLAW™ STARTER SET



## Ready to Fly Model Rockets

\* (FF) = Recommended First Flight

### BLITZ™ AND SIZZLER® EST 1831

Don't let their pint size fool you. These mini rockets can reach heights of up to 400 feet. Completely assembled and molded in bright colors with cool graphics. Each Mighty Mites™ set comes complete with 2 rockets. SPECS: **Length:** Blitz™ - 4.63" (11.7 cm); Sizzler® - 4.5" (11.4 cm); **Max. Altitude:** 400 ft. (122 m); **Recovery:** Streamer; **Recommended Engines:** 1/4A3-3T (FF)\*, 1/2A3-4T, A3-4T, A10-3T

### TORQUE™ AND FURY™ EST 1840

Second in our series of exciting Mighty Mites™ mini rockets. This colorful duo comes fully assembled and ready to fly. Molded in bright orange and black, these high-flying rockets can reach up to 400 feet on Estes mini engines. SPECS: **Length:** Torque™ - 4.25" (10.8 cm); Fury™ - 4.5" (11.4 cm); **Max. Altitude:** 400 ft. (122 m); **Recovery:** Streamer; **Recommended Engines:** 1/4A3-3T (FF), 1/2A3-4T, A3-4T, A10-3T.

### HARPOON AND MAVERICK EST 1845

**New!** The latest additions to the Mighty Mites™ fleet. These two military looking rockets sport exceptional detail. Powered by Estes mini engines, these rockets can easily reach their target altitude. Each Mighty Mites™ set comes complete with 2 rockets. SPECS: **Length:** Harpoon - 5.25" (13.3 cm); Maverick - 5.44" (13.8cm); **Max. Altitude:** 400 ft. (122 m); **Recovery:** Streamer; **Recommended Engines:** 1/4A3-3T (FF), 1/2A3-4T, A3-4T, A10-3T.

### NINJA® AND SLIVER™ EST 1846

**New!** Two exceptionally cool looking Mighty Mites™ in one package! The Ninja® is a brightly colored retro rocket. Sliver™ is very futuristic looking. Powered by Estes mini engines, these rockets can reach heights up to 400 feet. Completely assembled and molded in bright colors and cool graphics. SPECS: **Length:** Ninja® - 5.25" (13.3 cm); Sliver™ - 5.25" (13.3 cm); **Max. Altitude:** 400 ft. (122 m); **Recovery:** Streamer; **Recommended Engines:** 1/4A3-3T, (FF), 1/2A3-4T A3-4T, A10-3T.

### OUTLAW™ STARTER SET EST 1841

This mini sized starter set is the perfect way to get into model rocketry. Starter set includes a colorful launch pad, the neon orange Outlaw™ rocket and flight supplies for two exciting launches. SPECS: **Length:** 5.13" (13.0 cm); **Max. Altitude:** 400 ft. (122 m); **Recovery:** Streamer; **Recommended Engines:** 1/4A3-3T (FF), 1/2A3-4T, A3-4T, A10-3T. (includes 2 engines) (Requires 4 AA alkaline batteries - not included)

## E2X<sup>®</sup> Model Rocket Kits

Easy to assemble flying model rockets. Colorful plastic parts, body tubes and decals. Complete with assembled parachute. (Requires glue and/or plastic cement, an Estes launch system and flight supplies, not included).

\* (FF) = Recommended First Flight

### X-RAY™

EST 0834

Mini-engine boosted rocket with a clear payload capsule! Pre-colored, one-piece fin unit for a quick assembly! Streamer allows for quick and easy recovery! SPECS: **Length:** 14.8" (37.6 cm); **Dia:** 0.74" (18.8 mm); **Wt:** 0.6 oz (17 g); **Recovery:** Streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** 1/2A3-2T (FF)\*, A3-4T, A10-3T



### GNOME™

EST 0886

Mini-powered, almost ready to fly rocket. Super altitudes – great for flying on small fields! SPECS: **Length:** 10.3" (26.0 cm); **Dia:** 0.54" (13.8 mm); **Wt:** 0.4 oz (12 g); **Recovery:** Streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** 1/2A3-2T (FF), 1/2A3-4T, A3-4T, A10-3T

GNOME™



### ALPHA III®

EST 1256

The very first Estes almost-ready-to-fly rocket! One-piece fin unit! Still a favorite! SPECS: **Length:** 12.3" (31.1 cm); **Dia:** 0.98" (24.8 mm); **Wt:** 1.2 oz (34 g); **Recovery:** 12" (30 cm) parachute; **Fins:** One piece plastic molded; **Max. Altitude:** 1100 ft (335 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7

ALPHA III®



### BANDIT™

EST 2060

Rugged, sleek – escapes to over 1000 feet and every flight recovers with a 'chute! SPECS: **Length:** 16.6" (42.2 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 1.6 oz (45 g); **Recovery:** 12" (30 cm) parachute; **Fins:** T<sup>3</sup>™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7

BANDIT™



### MK-109 STINGRAY™

EST 2131

Ship-to-Air missile looks authentic with US Navy markings. Easy to build! No painting! Launches to over 1000 feet! SPECS: **Length:** 16" (40.6 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 1.7 oz (47 g); **Recovery:** 12" (30 cm) parachute; **Fins:** T<sup>3</sup>™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6 C6-5, C6-7

MK-109 STINGRAY™





RAMPAGE™

**RAMPAGE™** EST 2061

No painting, plastic fins, builds in under an hour. A quick way to get into payload rocketry. Cool, pre-colored body tubes and wild decals finish up this hot performer. **SPECS:** **Length:** 19.5" (49.5 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 1.8 oz. (50 g); **Recovery:** 12" (30 cm) parachute; **Fins:** T3™ Plastic molded; **Max. Altitude:** 985 ft (300m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-3, C6-5



SKYWINDER™

**SKYWINDER™** EST 2077

Rocket launches skyward, at apogee the blades fold out and the one-piece rocket copters back to earth. Easy to build and fly – no painting. **SPECS:** **Length:** 20" (50.8 cm); **Dia:** 1.35" (34.3 mm); **Rotor Span:** 20.0" (50.8 cm); **Wt:** 2.5 oz (71 g); **Recovery:** Helicopter; **Fins:** T3™ Plastic molded; **Max. Altitude:** 531 ft (162 m); **Recommended Engines:** B4-2 (FF), B6-2, C6-3



HIJAX™

**HIJAX™** EST 2105

Clear payload capsule, simple to build with no painting makes this an ideal first cargo carrying rocket! **SPECS:** **Length:** 20" (50.8 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 2.0 oz (57 g) **Recovery:** 12" (30 cm) parachute; **Fins:** T3™ plastic molded; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-3, C6-5



MACH-12™

**MACH-12™** EST 2130

Be different with every flight! 12 different fin configurations are possible. Great for exploring performance and drag experiments! **SPECS:** **Length:** 21.3" (54.1 cm); **Dia:** 1.35" (34.3 mm); **Wt:** 1.9 oz (55 g); **Recovery:** 18" (46 cm) parachute; **Fins:** T3™ plastic molded; **Max. Altitude:** 650 ft (198 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5



BANSHEE™

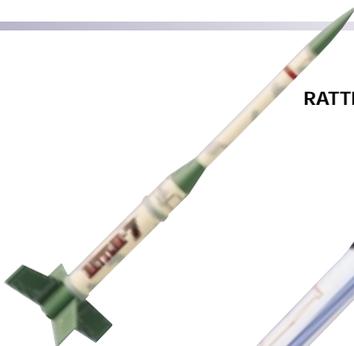
**BANSHEE™** EST 2132

The high performance design assures maximum altitude every time. Features parachute recovery. **SPECS:** **Length:** 16.6" (42.2 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 1.6 oz (45 g); **Recovery:** 12" (30 cm) parachute; **Fins:** T3™ plastic molded; **Max. Altitude:** 1100 ft (335 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7

**RATTLER-7™**

EST 2150

Now you can build this desert warrior in under an hour with its colored body tubes, plastic parts and die cut, self-adhesive camouflage decals. It can reach altitudes of over 1,000 feet (305 m). **SPECS: Length:** 15.5" (39.4 cm); **Dia:** 0.98" (24.8 mm); **Wt:** 1.5 oz (42 g); **Recovery:** 12" (30 cm) parachute; **Fins:** One piece plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7



RATTLER-7™

**ASTROSAT LSX™**

EST 2133

AstroSat LSX™ ejects two streamer equipped satellites at the end of its ascent. Easy to assemble – no painting and authentic looking self adhesive decals! **SPECS: Length:** 19" (48.3 cm); **Dia:** 1.35" (34.3 mm); **Wt:** 3.2 oz (91g); **Max. Altitude:** 300 ft (91 m); **Recovery:** 18" (46 cm) parachute; **Fins:** T3™ plastic molded; **Recommended Engines:** B4-2, B6-2 (FF), C6-3, C6-5



ASTROSAT LSX™

**FLASH™**

EST 2137

A stellar performer with a giant, pre-wrapped prismatic payload section. Flash™ will be noticed anywhere – on the ground or in the air. **SPECS: Length:** 28.3" (71.9 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 2.0 oz (57 g); **Recovery:** 12" (30 cm) parachute; **Fins:** T3™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7



FLASH™

**FIREFLASH™**

EST 2159

This tall rocket will dominate the sky with its sleek appearance. Pre-colored body tubes and one-piece fins make for an easy to build rocket. **SPECS: Length:** 41.6" (105.7 cm.); **Dia:** 0.98" (24.9 mm); **Wt:** 2.3 oz (65 g); **Fins:** One piece plastic molded; **Max. Altitude:** 800 ft (244 m); **Recovery:** 12" (30 cm) parachute; **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5, C6-7



FIREFLASH™

**AGM-57X HEATSEEKER™ EST 2158**

Defend your neighborhood with this air to air missile. This E2X® version has molded plastic fins and can be mission ready within an hour. **SPECS: Length:** 18.6" (47.2 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 1.9 oz (55 g); **Fins:** plastic molded; **Max. Altitude:** 800 ft (244 m); **Recovery:** 12" (30 cm) parachute; **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7

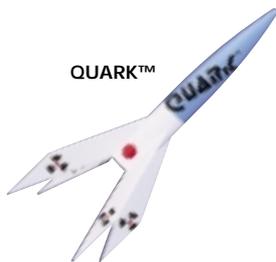
AGM-57X HEATSEEKER™



## Beta™ Series Model Rocket Kits

Quick and easy to build kits with some gluing, sanding, cutting and painting required. Most kits feature our T™ (Through-The-Tube) Fin System. (Requires hobby tools, adhesives, paint, an Estes launch system and flight supplies, not included).

**\* (FF) = Recommended First Flight (Level 1)**

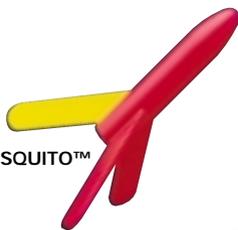


QUARK™

### QUARK™

EST 0802

With incredibly simple construction, a little spray paint and decals, and whoosh – out-a-sight flights to 700 feet! Feather-weight recovery for this micro rocket! **SPECS:** **Length:** 5.2" (13.2 cm); **Dia:** 0.54" (13.7 mm); **Wt:** 0.1 oz (3 g); **Recovery:** Featherweight; **Fins:** Balsa; **Max. Altitude:** 700 ft (213 m); **Recommended Engines:** 1/4A3-3T, 1/2A3-4T(FF)\*, A3-4T, A10-3T



MOSQUITO™

### MOSQUITO™

EST 0801

Mini-engine powered bug of a rocket with screaming high altitude performance. Featherweight recovery. **SPECS:** **Length:** 3.9" (9.9 cm); **Dia:** 0.54" (13.7 mm); **Wt:** 0.1 oz (2.8 g); **Recovery:** Featherweight; **Fins:** Balsa; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** 1/4A3-3T, 1/2A3-4T(FF), A3-4T, A10-3T



ALPHA®

### ALPHA®

EST 1225

For over 30 years, the Alpha® has been the first choice for millions of rocket modelers. Easy to build, rugged performance, parachute recovery – the perfect rocket to get you started! **SPECS:** **Length:** 12.3" (31.2 cm); **Dia:** 0.98" (24.9 mm); **Wt:** 0.8 oz (23 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Die cut balsa; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7



WIZARD™

### WIZARD™

EST 1292

The Wizard™ is an easy-to-build, high-performance kit. Featuring die cut balsa fins and self-adhesive decals and a bright streamer for soft, gentle landings. **SPECS:** **Length:** 12" (30.5 cm); **Dia:** 0.74" (18.8 mm); **Wt:** 0.8 oz (22 g); **Recovery:** Streamer; **Fins:** Die cut balsa; **Max. Altitude:** 1500 ft (457 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7



YANKEE™

### YANKEE™

EST 1381

A rocket with All-American performance – screams to 1400 feet altitude! Comes with cool self-adhesive decals for that red, white and blue look. **SPECS:** **Length:** 11" (27.9 cm); **Dia:** 0.74" (18.8 mm); **Wt:** 0.4 oz (12 g); **Recovery:** Streamer; **Fins:** Die cut balsa; **Max. Altitude:** 1400 ft (427 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5, C6-7

**VIKING™**

EST 1949

Fantastic rocket with multiple fin configurations – 48 in all. Features self-adhesive decals and streamer recovery. SPECS: **Length:** 12.1" (30.7 cm); **Dia:** 0.74" (18.8 mm); **Wt:** 0.6 oz (17 g); **Recovery:** Streamer; **Fins:** Die cut card; **Max. Altitude:** 1470 ft (448 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5, C6-7



VIKING™

**BIG BERTHA®**

EST 1948

Over the decades this is the first big rocket for many modelers! Slow, realistic lift-offs from this true classic! SPECS: **Length:** 24" (61 cm); **Dia:** 1.64" (41.7 mm); **Wt:** 2.2 oz (62 g); **Recovery:** 18" (46 cm) parachute; **Fins:** Die cut balsa; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** B4-2, B4-4, B6-2 (FF), B6-4, C6-5



BIG BERTHA®

**MONGOOSE™**

EST 2092

Perfect first two-stage rocket! Super-quick to build with high altitude performance – over 1600 feet! Pre-colored with two one-piece fin units, crazy-looking self-adhesive decals. SPECS: **Length:** 26.5" (67.3 cm); **Dia:** 0.98" (24.9 mm); **Wt:** 2.3 oz (65 g); **Recovery:** Streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 1600 ft (488 m); **Recommended Engines:** Single Stage flights - A8-3 (FF), B4-4, B6-4, C6-5; Two Stage Flights: Booster Stage - C6-0; Second Stage - B6-6 (FF), C6-7



MONGOOSE™

**FIRE STREAK™**

EST 2107

Two long metallic-looking red and gold recovery streamers highlight this rocket. Hot flame decor and high altitude performance! SPECS: **Length:** 14.8" (37.6 cm); **Dia:** 1.0" (25.4 mm); **Wt:** 1.4 oz (39 g); **Recovery:** Dual Streamers; **Fins:** T3™ Die cut balsa; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, B6-6, C6-5

FIRE STREAK™

**TRANSWING™ SUPER GLIDER** EST 2112

Blazes off the pad like a rocket, but at apogee the power pod falls away, releasing the wings and the "rocket" transforms into a long duration glider. Easy to build – no painting! SPECS: **Length:** 22" (55.9 cm); **Dia:** 0.98" (24.9 mm); **Glider Wingspan:** 24" (61 cm); **Wt:** 3.8 oz (108 g); **Recovery:** Glider, Power Pod: Streamer; **Fins:** Die cut balsa; **Max. Altitude:** 305 ft (93 m); **Recommended Engines:** B4-2, B6-2 (FF), C6-3



TRANSWING™ SUPER GLIDER

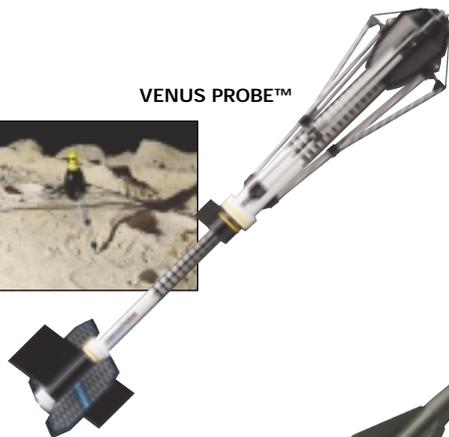


**BIG DAWG™**

**BIG DAWG™ EST 2151**

Features a slotted body tube for precise fin alignment and strong fin/tube joints. It comes with cool looking self-adhesive decals and die cut balsa fins. SPECS: **Length:** 12.8" (32.5 cm); **Dia:** 1.33" (33.8 mm); **Wt:** 1.6 oz (45 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** T<sup>3</sup>™ Die cut balsa; **Max. Altitude:** 700 ft (213 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5, C6-7

**VENUS PROBE™**



**VENUS PROBE™ EST 2120**

Mothership deploys alien lander (alien included!). Lander extends legs and descends under its own parachute – lands upright every time! Mothership returns on its own 'chute! SPECS: **Length:** 27" (68.6 cm); **Dia:** 1.33" (33.8 mm); **Wt:** 5.1 oz (145 g); **Landing Gear Span:** 24" (61 cm); **Alien Lander Ht:** 10.5" (26.7 cm); **Recovery:** 12" (30 cm) and 18" (46 cm) parachute; **Fins:** T<sup>3</sup>™ Die cut balsa; **Max. Altitude:** 250 ft (76 m); **Recommended Engine:** C6-3 only

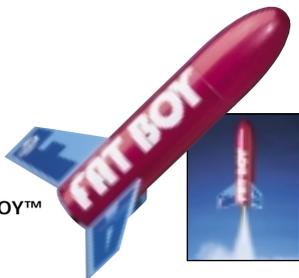
**AIM-9 SIDEWINDER™**



**AIM-9 SIDEWINDER™ EST 2125**

Giant 1/4 scale model of the famous air-to-air missile. Model comes complete with plastic detailed nose cone and the T<sup>3</sup>™ Fin Mounting System for main and nose cone mounted fins. SPECS: **Length:** 30.2" (76.7 cm); **Dia:** 1.33" (33.8 mm); **Wt:** 4.2 oz (120 g); **Recovery:** 12" (30 cm) and 18" (46 cm) parachutes; **Fins:** T<sup>3</sup>™ Die cut balsa; **Max. Altitude:** 390 ft (119 m); **Recommended Engines:** B4-2 (FF), B6-2, C6-3

**FAT BOY™**



**FAT BOY™ EST 2139**

Fat boy...and proud of it! Over 2-1/2 inches in diameter. It bullies its way to over 300 feet in altitude and recovers with a 'chute! SPECS: **Length:** 12.9" (32.8 cm); **Dia:** 2.60" (66.0 mm); **Wt:** 3.0 oz (85 g); **Recovery:** 18" (46 cm) parachute; **Fins:** T<sup>3</sup>™ Die cut balsa; **Max. Altitude:** 325 ft (99 m); **Recommended Engines:** B4-2, B6-2 (FF), C6-3



### AIM-120 AMRAAM™ EST 2153

The Estes version of the AMRAAM features high quality die cut balsa fins, slotted body tubes and self-adhesive decals. SPECS: **Length:** 27.5" (69.9 cm); **Dia:** 1.33" (33.8 mm); **Wt:** 4.2 oz (120 g); **Recovery:** 18" (46 cm) parachute; **Fins:** T<sup>3</sup>™ Die cut balsa; **Max. Altitude:** 401 ft (122 m); **Recommended Engines:** B4-2, B6-2 (FF), C6-3, C6-5

AIM-120 AMRAAM™

### PROWLER™ EST 2156

The Prowler™ is over three feet tall and comes with a large glow-in-the-dark display decal set. It has die cut balsa fins and a slotted body tube for easy assembly. (Not intended for night launches) SPECS: **Length:** 40.5" (102.9 cm); **Dia:** 1.64" (41.7 mm); **Wt:** 4.2 oz (120 g); **Recovery:** 24" (61 cm) parachute; **Fins:** T<sup>3</sup>™ Die cut balsa; **Max. Altitude:** 360 ft (110 m); **Recommended Engines:** B4-2, B6-2 (FF), C6-3



PROWLER™

### EXO SKELL™ EST 2163

This spectacular flying model rocket has a reptilian look that will WOW even the biggest sci-fi fan. The mothership deploys the alien pod hundreds of feet in the air. The pod then extends its legs and descends to earth under its own parachute. The alien rotates inside the pod to observe the successful launch and landing. SPECS: **Length:** 18.5" (47 cm); **Dia:** 2.25" (57 mm); **Wt:** 5.3 oz (150 g); **Fins:** plastic molded; **Max. Altitude:** 215 ft (65.5 m); **Recovery:** **Booster:** 12" (30 cm) parachute, **Alien pod:** 18" (46 cm) assembled parachute; **Recommended Engine:** C6-3 only



EXO SKELL™



## Explorer™ Series Model Rocket Kits

Flying model rocket kits that require more skill in building and painting. This category includes kits that are "D" engine powered. Some kits feature our T<sup>3</sup>™ (Through-The-Tube) Fin System. (Requires hobby tools, adhesives, paint, an Estes launch system and flight supplies, not included)

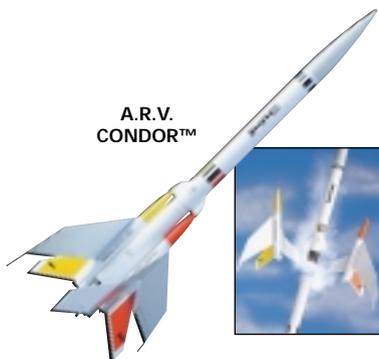
\* (FF) = Recommended First Flight

### (Level 2)

#### A.R.V. CONDOR™ EST 2075

Atmospheric research vehicle of the next century! At apogee, two drones detach for a gliding return to Earth. Booster returns on a streamer! SPECS: **Booster Length:** 18.5" (47.0 cm); **Drone Length:** 6.1" (15.5 cm); **Booster Dia:** 0.98" (24.9 mm); **Drone Wing-Span:** 10.8" (27.4 cm); **Booster Wt:** 1.1 oz (32 g); **Drone Wt:** 0.5 oz (14 g); **Recovery:** **Drones:** Glider, **Booster:** Streamer; **Fins:** Die cut balsa; **Max. Altitude:** 700 ft (213 m); **Recommended Engines:** B4-2 (FF)\*, B6-2, C6-3

A.R.V.  
CONDOR™



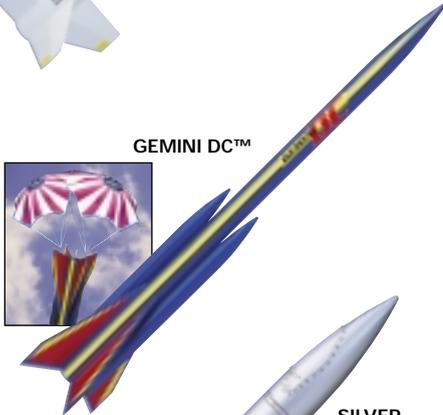


PYTHON™

PYTHON™

EST 2129

The main air-to-air missile of the Estes Space Corps! High performance plastic fins and scale-like decals. Big "D" engine power! SPECS: **Length:** 33.3" (84.6 cm); **Dia:** 1.84" (46.7 mm); **Wt:** 5.6 oz (160 g); **Recovery:** 18" (46 cm) parachute; **Fins:** T3™ Plastic Molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engine:** D12-5. only Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) - available separately.



GEMINI DC™



GEMINI DC™

EST 2136

Twin parachutes are rear-ejected from the side pods on this stunning rocket. Easy to build! A great flier! SPECS: **Length:** 21.5" (54.6 cm); **Dia:** 0.98" (24.9 mm); **Wt:** 3.4 oz (95 g); **Recovery:** Dual 12" (30 cm) parachutes; **Fins:** T3™ Die cut balsa; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** B4-2, B4-4, B6-2 (FF), B6-4, C6-5



SILVER COMET™

SILVER COMET™

EST 2141

Great details, blow molded tail and nose cone and "D" engine power are featured in this giant nostalgic-styled spacecraft. SPECS: **Length:** 25" (63.5 cm); **Dia:** 2.60" (66.0 mm); **Wt:** 5.1 oz (145 g); **Max. Altitude:** 500 ft (152 m); **Recovery:** 18" (46 cm) parachute; **Fins:** T3™ Die cut balsa; **Recommended Engines:** D12-3 (FF), D12-5. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.



BIG DADDY™

BIG DADDY™

EST 2162

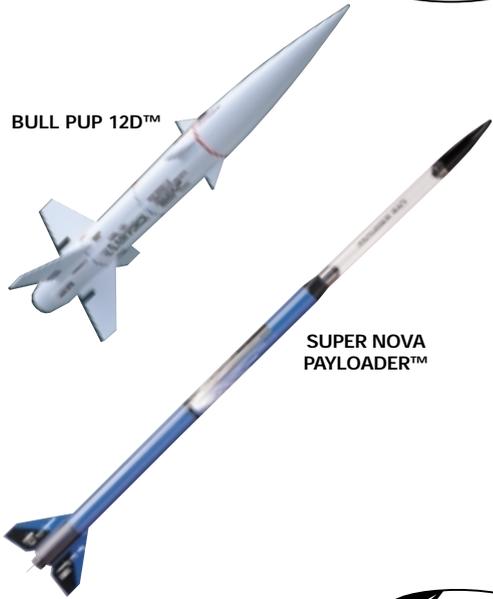
Watch out, because Big Daddy™ thinks he's king of the skies! Backed by the power of the mighty Estes "D" engine, this rocket is KING! Features pre-slotted body tube and colorful decals. SPECS: **Length:** 19" (48.3 cm); **Dia:** 3.0" (7.6 cm); **Wt:** 5.3 oz (150 g); **Recovery:** 24" (61 cm) parachute; **Fins:** T3™ die cut balsa; **Max. Altitude:** 350 ft (107 m); **Recommended Engines:** D12-3 (FF), D12-5. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.



### BULL PUP 12D™ EST 7000

Sport scale version of the USAF AGM -12D Bull Pup. Plastic tail cone and authentic color decals! Great first scale model! SPECS: **Length:** 15.6" (39.6 cm); **Dia:** 1.33" (33.8 mm); **Wt:** 1.8 oz (51 g); **Recovery:** 12" (30 cm) parachute; **Fins:** Die cut balsa; **Max. Altitude:** 675 ft. (206 m); **Recommended Engines:** A8-3 (FF), B4-4, B6-4, C6-5

BULL PUP 12D™



SUPER NOVA PAYLOADER™

### SUPER NOVA PAYLOADER™ EST 2155

The large, clear payload section allows you to stock it with science experiments, bugs, small action figures or other exciting cargo. Pre-colored body tubes and plastic parts make this "D" engine powered payloader super to build and fly. SPECS: **Length:** 46.5" (118.1 cm); **Dia:** 1.64" (41.7 mm); **Wt:** 6.2 oz. (175 g); **Recovery:** 24" (61 cm) parachute; **Fins:** T3™ Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engine:** D12-5 only. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

## Light Gliders™ and Glo Streaks™



Ages 8 and up

### HI-LITE® EST 4000

Brightly colored printed foam wings and tail surfaces will have you flying fast. Easy to assemble and fly with plastic joining pieces. No tools, no glue and no cutting. **Wingspan:** 13" (33 cm); **Length:** 13.8" (35.1 cm)



HI-LITE®

### WHIRLWIND™ EST 4005

You'll love this terrific flying rubber powered airplane with a 15 inch cambered wing span. Self adhesive decals and plastic connecting pieces. No tools, cutting or glue – quick assembly! **Wingspan:** 15" (38.1 cm); **Length:** 16.3" (41.4 cm)



WHIRLWIND™

### FIRESTORM™ EST 4006

The unique rear, rubber band powered propeller gives this airplane a distinctive look. Large 16" wingspan provides extra gliding power. Glossy black connecting pieces and self adhesive decals. Easy to assemble and fly. **Wingspan:** 16" (40.6 cm). **Length:** 20" (50.8 cm)



FIRESTORM™

### JESTER™ EST 5101

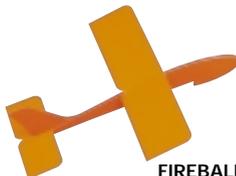
With its exciting double wings this hot neon colored airplane is a flying fool! All parts are die cut and require only a glue stick to assemble. Complete with catapult launcher. **Wingspan:** 7.5" (19.1 cm).



JESTER™

### FIREBALL™ EST 5100

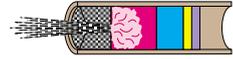
This neon colored action flying model airplane is easy to build and fly! All parts are die cut and requires only a glue stick to assemble. Complete with catapult launcher. **Wingspan:** 8.25" (21 cm).



FIREBALL™

# How Does a Model Rocket Engine Work?

1. When engine is ignited it produces thrust and boosts rocket into the sky.



2. After propellant is used up, delay is activated, producing tracking smoke and allowing rocket to coast to apogee.



3. After delay, ejection charge is activated, deploying recovery system.



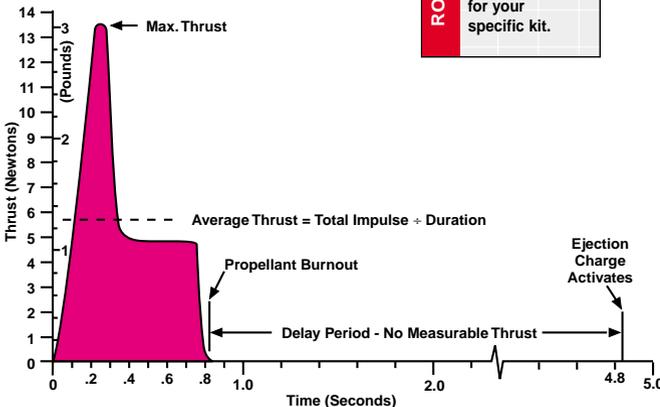
Each engine has a letter-number-number code (e.g. B6-4)

Letter: B Number: 6 Number: 4

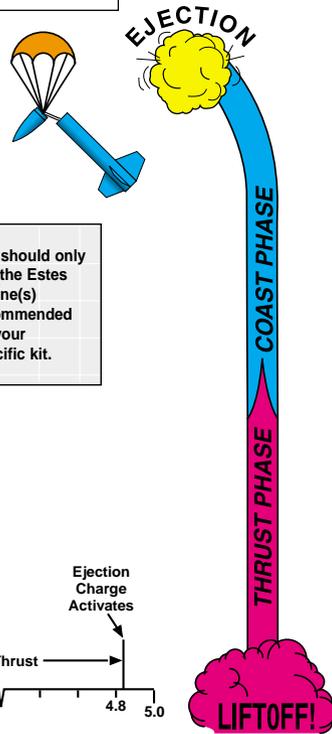
TOTAL IMPULSE	AVERAGE THRUST	TIME DELAY
Unit = Newton-second (N-sec)	Unit = Newton	Unit = second
This letter indicates the total power the engine produces. Total Impulse is measured in Newton-seconds. One Newton-second is the total impulse produced by one Newton of thrust for a duration of one second. A "B" engine (5 N-sec) can produce up to 5 Newtons of thrust for 1 sec, 10 Newtons for 1/2 sec or any combination that equals up to 5 N-sec. (1N = 0.225 lbs.)	This number tells you the Average Thrust of the engine during thrust phase. The actual thrust varies during engine burn. The propellant may burn quickly giving a higher average thrust or burn slowly for a lower average thrust. Generally, higher average thrust is best for heavier rockets, lower average thrust is usually more efficient for smaller, lighter rockets.	This number is the number of seconds between the end of the thrust phase and the activation of the ejection charge. The delay allows the rocket to coast to its peak altitude before the recovery system is deployed.

## Time/Thrust Curves

- Time/thrust curves are representative of random production samples.



**ROCKET TIP** You should only use the Estes engine(s) recommended for your specific kit.



## ENGINE CHART

- Delays have a tolerance of plus or minus 10% or 1 second, whichever is greater
- All Estes engines come complete with igniters and patented Igniter Plugs (Pat. No 5,509,354). The Estes Igniter Plug makes engine ignition extremely reliable.
- Do not fly a rocket/engine combination whose maximum lift-off weight exceeds the recommended maximum lift-off weight.

Prod. No.	Engine Type	Total Impulse		Time Delay		Max Lift Weight		Max Thrust		Thrust Duration		Initial Weight		Propellant Weight	
		N-sec	Sec.	oz.	gm	Newtons	Lbs.	Sec.	oz.	gm	oz.	gm			
<b>SINGLE STAGE ENGINES (GREEN LABEL)</b>															
1502	1/4A3-3T	0.625	3	1.0	28	4.95	1.1	0.25	0.20	5.6	0.03	0.85			
1503	1/2A3-2T	1.25	2	2.0	57	8.3	1.9	0.3	0.20	5.6	0.06	1.75			
1507	A3-4T	2.50	4	2.0	57	8.5	1.9	0.6	0.27	7.6	0.12	3.50			
1511	A10-3T	2.50	3	3.0	85	13.0	2.9	0.8	0.28	7.9	0.13	3.78			
1598	A8-3	2.50	3	3.0	85	11.8	2.7	0.5	0.57	16.2	0.11	3.12			
1601	B4-2	5.00	2	4.0	113	13.2	3.0	1.1	0.70	19.8	0.29	8.33			
1602	B4-4	5.00	4	3.5	99	13.2	3.0	1.1	0.74	21.0	0.29	8.33			
1605	B6-2	5.00	2	4.5	127	12.1	2.7	0.8	0.68	19.3	0.22	6.24			
1606	B6-4	5.00	4	4.0	113	12.1	2.7	0.8	0.71	20.1	0.22	6.24			
1617	C5-3	10.00	3	8.0	226	21.0	4.7	1.9	0.90	25.5	0.45	12.70			
1613	C6-3	10.00	3	4.0	113	15.3	3.4	1.6	0.88	24.9	0.44	12.48			
1614	C6-5	10.00	5	4.0	113	15.3	3.4	1.6	0.91	25.8	0.44	12.48			
1666	D12-3	20.00	3	14.0	396	32.9	7.4	1.6	1.49	42.2	0.88	24.93			
1667	D12-5	20.00	5	10.0	283	32.9	7.4	1.6	1.52	43.1	0.88	24.93			
<b>UPPER STAGE ENGINES (PURPLE LABEL)</b>															
1504	1/2A3-4T	1.25	4	1.0	28	8.3	1.9	0.3	0.21	6.0	0.06	1.75			
1607	B6-6	5.00	6	2.5	71	12.1	2.7	0.8	0.78	22.1	0.22	6.24			
1615	C-6-7	10.00	7	2.5	71	15.3	3.4	1.6	0.95	26.9	0.44	12.48			
<b>BOOSTER STAGE ENGINES (RED LABEL)</b>															
1616	C6-0	10.00	None	4.0	113	15.3	3.4	1.6	0.80	22.7	0.44	12.48			
1665	D12-0	20.00	None	14.0	396	32.9	7.4	1.6	1.44	40.9	0.88	24.93			

The data listed above is from randomly chosen production samples.

NOTE: The "T" designates a mini engine.

## Model Rocket Accessories

1463	Designer's Special™	<b>A</b>	303084	BT-5 Body Tube (4 pack)
1672	Blast-Off® Flight Packs	<b>B</b>	303085	BT-20 Body Tube (4 pack)
2237	Transroc II™ Rocket Locator	<b>C</b>	303086	BT-50 Body Tube (3 pack)
302215	Porta-Pad® II Launch Pad	<b>D</b>	303087	BT-55 Body Tube (3 pack)
302220	Electron Beam® Launch Controller	<b>E</b>	303089	BT-60 Body Tube (3 pack)
302227	Rocket Builder's Marking Guide	<b>F</b>	303090	BT-80 Body Tube (2 pack)
302232	AltiTrak™ Clinometer	<b>G</b>	303143	Engine Hook Accessory Pack
302233	Emergency Repair Kit		303157	Mini Engine Mount Kit
302241	Blast Deflector Plate		303158	Regular Engine Mount Kit
302243	1/8" Two-Piece Launch Rod		303159	D and E Engine Mount Kit
302244	3/16" Two-Piece Maxi™ Rod		303160	NC-5 Nose Cone (5 pack)
302261	24" Nylon Parachute		303161	NC-20 Nose Cone (5 pack)
302264	12" Parachute		303162	NC-50 Nose Cone (5 pack)
302267	18" Parachute		303163	NC-55 Nose Cone (4 pack)
302271	24" Parachute		303164	NC-56 Nose Cone (4 pack)
302274	Recovery Wadding	<b>H</b>	303165	NC-60a Nose Cone (2 pack)
302296	Heavy Duty Centering Rings Pack		303168	NC-80b Nose Cone (1 pack)
302301	Model Rocket Igniters (6pk)	<b>I</b>	303169	NC-1090 Nose Cone (4 pack)
302320	Launch Lug Pack		303193	Dowel, Fin Stock and Patterns Pack
302996	Decal Pack		303194	Payload PS-20 & PS-50/55 Kit
			303196	Large Tube Coupler Pack





## FUN FLYERS™

Ages 8 and up

### CESSNA COX 7400

This scale looking rubber powered free flight model looks like the real thing in the air. Easy to assemble and fly! Pre-colored foam parts, plastic propeller, wire landing gear, cool looking decals. **Wingspan:** 15" (38.1 cm); **Length:** 12" (30 cm)

CESSNA



### CESSNA CLASSIC COX 7410

This large rubber powered free flight model looks like the real thing in the air. Easy to assemble and fly! Pre-colored foam parts, plastic propeller, wire landing gear, cool looking decals. **Wingspan:** 19" (48.3 cm); **Length:** 14" (35.5 cm)

CESSNA CLASSIC



### SKYBOT™ COX 5840

Be airborne in minutes with this electric, free flight model plane. Simply pop on the factory assembled tail, charge the factory installed batteries in less than 1 minute, turn the motor on and launch skyward. Includes portable quick charger. **Wingspan:** 15" (38.1 cm); **Length:** 19.1" (48.5 cm) Requires 4 'C' batteries - Sold Separately.

SKYBOT™



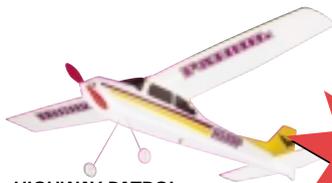
## SKY CRUISERS™

Ages 8 and up

### HIGHWAY PATROL COX 5841

Have a blast at the park with the "Highway Patrol" electric, free flight model plane. Takes off from the ground! Simply assemble and attach the wings to the factory-assembled fuselage, charge for in less than 1 minute and take off into the sky. Includes clip-on-the-belt charger. **Wingspan:** 21" (54.6 cm); **Length:** 16" (41.9 cm) Requires 4 'C' batteries - Sold Separately.

HIGHWAY PATROL



NEW

### VIPER™ COX 5842

Styled after a racing P-51 Mustang, Viper™ is hand launched into the sky for awesome speedy flights. Comes painted with factory installed electric motor and rechargeable batteries. Assembly takes only minutes. Includes portable belt clip charger. **Length:** 18" (45.7 cm); **Wingspan:** 22" (55.6 cm) Requires 4 'C' batteries - Sold Separately.

NEW

VIPER™



### ELECTRASTAR™ COX 5845

You control every flight of the ElectraStar™, electric control line flying plane. Easy to fly right outside the house. ElectraStar™ comes partially assembled with a speedy electric motor and quick charging batteries. Includes a belt clip charger that gets you flying again in less than a minute. Comes with 12 feet of control line and an easy to use control handle. **Length:** 18" (45.7 cm); **Wingspan:** 20" (51 cm) Requires 4 'C' batteries - Sold Separately.

ELECTRASTAR™

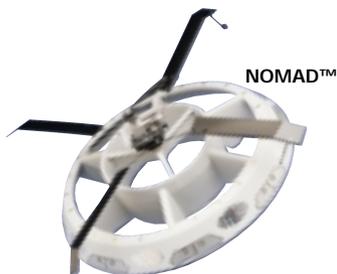


ELECTRIC CONTROL LINE

NEW



## FREE FLIGHT HELICOPTERS



NOMAD™

### NOMAD™

COX 4100

Watch as your own alien aircraft slowly rises from your hands, then sweeps across the sky in random fashion until it runs out of fuel and auto-rotates back to the ground. Includes the Sure Start™ .049 engine.

**Body Diameter:** 14.3" (36.3 cm);

**Rotor Span:** 19.5" (49.5 cm)



COMANCHE

### COMANCHE

COX 4420

The Comanche is the latest in advanced helicopter technology. Our model is authentic in every detail. Climbs as high as 200 feet (61 m)! Includes the Sure Start™ .049 engine. Some assembly required. **Length:** 15" (38.1 cm);

**Rotor Span:** 19.5" (49.5 cm)



ATTACK COBRA

### ATTACK COBRA

COX 4500

Powered by the quick starting .049 engine, this scale model of the Cobra gunship climbs to 200 feet in the air. After the fuel is expended, the chopper descends safely to earth by auto rotation. Each kit is easily assembled and comes complete with fuel-proof decals in two décor schemes - Marines and Army.

**Length:** 15" (38.1 cm);

**Rotor Span:** 19.5" (49.5 cm)



SKY JUMPER®

### SKY JUMPER®

COX 4800

Scale model of the Huey UH-1D in a US Marine decor. When the fuel runs out, the sky jumper ejects and parachutes back to earth (figure and parachute included). The copter auto-rotates back to Earth. Easy starting .049 engine included.

**Length:** 12" (30.5 cm);

**Rotor Span:** 19.5" (49.5 cm)

All kits require a Cox 405 or 885 Starting Kit - sold separately.



## "LECTRO-LINER™" REMOTE CONTROL ACTION



A-7 BOMB DROP

NEW

### A-7 BOMB DROP

COX 8205

New from COX is this exciting trigger action remote controlled electric bomb drop airplane. Practice precision bombing by simply pressing the "bomb drop" button. Completely finished, just add 4 "AA" batteries (not included) and you're ready for your first "strike mission".

**Wingspan:** 9.5" (24.1 cm);

**Length:** 12.5" (31.8 cm).

# CONTROL LINE MODELS



## BACKDRAFT™ COX 6030

Futuristic pusher design with a stealthy appearance. Unique pop-up fuselage allows engine starting access. Backdraft™ comes complete with military decals for an authentic look. Powered by the Cox Sure Start™ .049 engine.

**Length:** 16" (40.6 cm);  
**Wingspan:** 18" (45.7 cm)



## SLIPSTREAM™ COX 6040

This business jet has you piloting the skies in style. Realistic looking – great flying! Outfitted with the Cox Sure Start™ .049 engine.

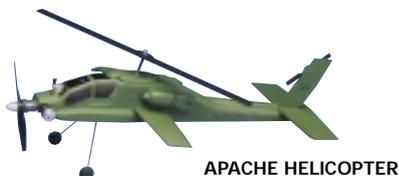
**Length:** 20.5" (52.1 cm);  
**Wingspan:** 22" (55.9 cm)



## APACHE HELICOPTER COX 6050

Be a chopper jock with the world's only control-line autogyro helicopter. Highly detailed scale-like design. Exciting flights for beginner to advanced pilots. Rigged with the Cox Sure Start™ .049 engine.

**Length:** 18.5" (47.0 cm);  
**Rotor Span:** 15" (38.1 cm)



## PIPER J-3 CUB COX 9870

One of the most successful control line training planes ever designed. The Cub features the super reliable Sure Start™ .049 engine. Easy to assemble and fun to fly.

**Length:** 17" (43.2 cm);  
**Wingspan:** 22" (55.9 cm)



## EXTRA 300S COX 9880

This spectacular model is reproduced in semi-scale detail and features the COX exclusive Sure Start™ .049 engine.

**Length:** 17" (43.2 cm);  
**Wingspan:** 19.5" (49.5 cm)



## AT-6 TEXAN BOMB DROP COX 9890

You can experience the thrill of flying precision targeting missions. The Texan comes with a target, bomb attachment and featherweight ball bombs.

**Length:** 15" (38.1 cm);  
**Wingspan:** 20.5" (52.1 cm)



All kits require a Cox 405 or 885 Starting Kit - sold separately.



## FREE FLIGHT

### GLOW FUEL ENGINE POWERED



RECON™

RECON™

COX 5300

Get a bird's eye view of any terrain with this picture taking, free flight model plane. Designed to do all the flying for you. Takes a picture when you activate the on board camera mechanism by remote control. Gently lands after the fuel runs out. Uses a disposable 35mm camera (not included). Easy to assemble. Includes a COX Sure Start™ .049 engine and push button radio control transmitter. **Wingspan:** 47" (119.4 cm); **Length:** 31" (78.7 cm) (Requires 1- 9 volt battery, 4 "AAA" alkaline batteries, not included)

Requires a Cox 405 or 885 Starting Kit - sold separately.



## RADIO CONTROL

### GLOW FUEL ENGINE POWERED



LAZY BEE™

R/C E-Z BEE® SPORT

LAZY BEE™

COX 90450

Unique looking plane is sure to be noticed on any flying field! A great trainer. Large control surfaces for quick response and can be flown in a small area. Plane is easy to assemble. Includes the easy starting COX .049 engine. Made of tough yet lightweight foam. Complete with 2 channel 27 MHz radio system. **Wingspan:** 39" (99.1 cm); **Length:** 32.75" (83.2 cm) (Requires 6 "AA" and 4 "AAA" alkaline batteries, not included)

R/C E-Z BEE® SPORT

COX 90480

Features the FailSafe™ Radio Control System and the powerful Snap Starter® equipped .049 Cox Babe Bee™ engine. Plastic nose makes a durable support for landing gear and engine. Tough polyfoam wings, fuselage and tail keeps this plane light for long duration flights!

**Wingspan:** 55" (139.7 cm); **Length:** 31" (78.7 cm); **Frequency:** 27 MHz (Requires 6 "AA" and 4 "AAA" alkaline batteries, not included)

All kits require a Cox 405 or 885 Starting Kit - sold separately.



## RADIO CONTROL

### ELECTRIC POWERED



ZOOPER™

ZOOPER™

COX 9050

A truly economical way to get into R/C flying. Kit comes complete with die cut foam parts. Ni-Cad battery, electric motors and 2 channel radio equipment. **Wingspan:** 28" (71.1 cm); **Length:** 14" (35.6 cm) **Frequency:** 27 MHz (Requires 1- 9 volt alkaline battery, not included)



# RADIO CONTROL

## ELECTRIC POWERED

### AIRWAVE™ MkII COX 8200

Get started in multi-channel R/C flying with this easy to fly, 2 in 1 electric model plane. The unique propeller unfolds when the motor is running, then retracts when the motor stops. This allows you to transform AirWave™ from a powered airplane into a glider during flight. AirWave™ comes partially assembled requiring no special tools or glue to build. Also includes a 3 Channel radio system, 7.2 volt rechargeable flight battery and a 15 minute battery charger that works from your car's cigarette lighter. **Wingspan:** 54" (137.2 cm); **Length:** 30" (76.2 cm). Requires 6 'AA' Alkaline batteries - Sold Separately.



AIRWAVE™MKII

### XB-29 AIRLIFTER™ COX 8203

You can fly a radio controlled jet model with no previous flying experience with the XB-29 Airlifter™. This big, electric twin engine model is designed to fly right out of the box. Flight is controlled with a basic 2 channel radio that changes engine speeds to turn left and right. XB-29 Airlifter™ requires no tools or glue to assemble. Comes complete with radio, 6.0 volt rechargeable battery and 15 minute battery charger that works off a car's cigarette lighter. **Wingspan:** 50" (127 cm); **Length:** 36" (91.4 cm). Requires 1-9 volt transistor battery - Sold Separately



XB-29 AIRLIFTER™

### BOOMERANG!™ COX 8206

Buzz around the schoolyard with this eye-catching R/C jet. Powered by a screaming Electrofan™ electric motor, Boomerang!™ is easy to control with a simple single channel radio. Ready to fly practically out of the box, Boomerang!™ assembles without any special tools and comes complete with radio, 6.0 volt rechargeable flight battery and 15 minute charger that operates from the cigarette lighter of your car. **Wingspan:** 33 1/2" (85.1 cm); **Length:** 12 3/4" (32.4 cm). Requires 6 'AAA' Alkaline batteries - Sold Separately.



BOOMERANG!™

### AIR-O-COMMANDER™ COX 8207

Double the fun of flying an R/C model plane. This twin engine sensation is so easy to operate that you will be a professional pilot in no time. There are no moving surfaces to control, no linkages to hook up and no need for tons of added accessories to fly. Designed to fly in confined spaces. Assembles in minutes without the need for tools. Comes complete with radio, rechargeable flight battery and 15 minute charger that operates from the cigarette lighter of your car. **Wingspan:** 32" (81.3 cm); **Length:** 26" (66.0 cm). Requires 1-9 volt transistor battery - Sold Separately.



AIR-O-COMMANDER™

**All Electric R/C Models come complete with radio system, rechargeable flight battery and 15 minute charger.**



# COX GLOW FUEL ENGINES



BABE BEE™ .049



BLACK WIDOW™ .049



TEXACO .049



KILLER BEE™ .049



PEE WEE™ .020



TEE DEE® .010



TEE DEE® .09



TEE DEE® .049

## BABE BEE™ .049 C00350

Cox's economy reed valve .049 engine. Perfect for 1/2A control line or free flight models.

## BLACK WIDOW™ .049 C00150

A higher performance reed valve engine for all applications. Anodized black for distinctive appearance and heat dissipation.

## TEXACO .049 C04506

The standard engine in 1/2A R/C duration events.

## KILLER BEE™ .049 C00340

Ultra high performance reed valve engine. Multiple head gaskets allow lower compression, less nitro and larger props.

## PEE WEE™ .020 C00100

Reed valve performance in a miniature package.

## Tee Dee® Series Engines

### TEE DEE® .010 C00130

World's smallest production engine for R/C and Free Flight

### TEE DEE® .09 C00210

Great engine for larger competitive airplanes.

### TEE DEE® .049 C00170

The most popular competition class motor.

Precision manufactured for high performance, all Tee Dee Engines feature front rotary intakes and high compression piston/cylinders for maximum rpm's.

## Starting Kits

### DELUXE STARTING KIT C00885



### BASIC STARTING KIT C00405

CONTAINS THE ACCESSORIES AND FUEL FOR STARTING COX GLOW FUEL MODEL ENGINES.



(2 - 'D' size alkaline batteries required - not included)

## AIR POWERED PRODUCTS



TORNADO™

**TORNADO™** EST 1850

This Tornado™ rocket gives you the same performance you expect from Estes model rockets, but it is powered by air. Launch the Tornado™ hundreds of feet into the air. At apogee, the rotor blades fold out and the rocket helicopters gently down to earth. Some assembly required. Comes complete with Techno-Orb™ launch system.

**Length:** 16" (40.6 cm); **Recovery:** Helicopter



JOLLY ROGER™

**JOLLY ROGER™** EST 1855

There are plenty of great features in the Jolly Roger™ making it one of the best performing air-powered planes around! It has a highly efficient, 100 square inch (654 sq.cm) upswept wing that produces large amounts of lift. Bigger tail surfaces for greater stability. A larger air motor and air tank for greater power and longer flights. And a large diameter, super efficient propeller that pulls your Jolly Roger™ around the sky with authority.

**Length:** 18" (45.7 cm); **Wingspan:** 23" (58.4 cm)



CYCLONE™

**CYCLONE™** EST 1853

There's a storm heading your way and it's the Estes Cyclone™. Fill the gliders reservoir with water, attach the pump and begin pumping. After a few quick pumps, release the glider into the wind and get ready to get wet. Water is released from the glider as it soars up to 200 feet (61 m) through the sky.

Everything you need to fly this glider is included; an easy to assemble glider, self-adhesive decals, pump and water bottle.

**Length:** 14.5" (36.8 cm); **Wingspan:** 15.5" (39.4 cm)



JET STIX™

**JET STIX™** EST 1854

Pump it up and watch it FLY! This sporty little glider comes with a small hand pump for great flying fun. Place your thumb over the pump hole, pump several times, release your thumb and "POP", the glider is off and flying. The glider can fly straight, perform loops or rolls. You decide the flight! The pre-assembled glider and pump in HOT neon colors is everything you need to start flying.

**Length:** 6.25" (15.9 cm)

# GREAT GARAGES™

## Model Display Kits

### CHEVROLET® CORVETTE® GREAT GARAGES™ EST 8001

Wonderfully detailed 3 dimensional display kits of a motor-head's favorite place...his garage! Each Great Garages™ kit includes a classy, clear window display box, detailed wall and floor graphics, scale reproductions of equipment and tools, and a collector quality 1:43 scale die cast metal car.



### DODGE® VIPER GREAT GARAGES™ EST 8000

Each car features a die cast metal body painted in authentic factory colors, opening engine hood, detailed interior and realistic rubber tires. Requires assembly. Paint and glue not included. 1:43 scale die cast metal car.



### 1:24 SCALE GREAT GARAGES™ EST 8050

The ultimate haven for your favorite 1:24 scale die cast or plastic model car, truck or SUV. This beautiful display kit comes complete with an attractive window display box, large assortment of equipment, tools, accessories and graphics for the walls that make your garage become almost real! Assembly required. Paint and glue not included. Does not include vehicle.

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