PRODUCT ESTES CATALOG

SAFE & EXCITING FUN
40 YEARS
ES

1998

ESTES • COX • LIGHT GLIDERS
WEST WINGS • *STAR WARS*

COX

LIVE YOUR DREAMS OF FLIGHT

Have you ever dreamed of flying your own airplane or blasting off into space in a rocket? Now you can make your dreams come true with exciting flying models from Estes and Cox. Feel the rush of launching a high performance rocket or a military style missile thousands of feet into the sky! Experience the thrill of taking off and landing your own business jet or attack helicopter. Realize the power of a catapult launched F-15 glider or the fury of a rubber band powered airplane slicing through the air. Live your dreams of flight with real flying models from Estes and Cox.

ENCOUNTER THE EPIC ADVENTURE OF *STAR WARS*

Combine the enchantment of *Star Wars* with the technology of aerodynamics and you'll find a true-life adventure with Estes and Cox *Star Wars* flying models. Blast-off into the universe in your X-wing™ starfighter rocket or skim low over the ground in a Rebel snowspeeder control line fighter. Whether you're a part of the Alliance or the Empire, you'll find the perfect flying model spacecraft to transport you to a galaxy far, far away! Estes and Cox flying models are sure to provide you with a real *Star Wars* adventure!

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ESTES FLYING MODEL ROCKETS

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 its 40th anniversary.

United States Space Foundation

Estes has partnered with the United States Space Foundation to promote space and science to K-12 educators and the public. Estes rockets are the Official Rockets of the United States Space Foundation and are used in Space Discovery, the USSF graduate course for K-12 educators. Estes worked closely with USSF to co-develop the "Ignite the Imagination"™ video and curriculum guide for teachers and youth group leaders. For more information about USSF, call 1-800-691-4000.

Official Rockets of the United States Space Foundation

U.S. Space & Rocket Center

Estes has developed a close partnership with the U.S. Space & Rocket Center. 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.

Official Rockets of U.S. SPACE CAMP®

THE WORLD LEADER IN MODEL ROCKETRY

Look to Estes when you're ready to build a stellar looking display model AND feel the exhilaration of launching a real rocket! Estes flying model rockets are micro-versions of authentic rockets flown all over the world. From scale NASA-based transports to military styled missiles, from futuristic alien spacecraft to high performance sport fliers, Estes rocketry is the only way to go!

Experience the roar of an Estes rocket lifting off the launch pad, screaming into the sky and then safely floating back to earth on a colorful, plastic parachute. Replace the engine and igniter and you are ready to launch again in minutes! You can build all types of Estes rockets and send them skyward with your reusable launch system. All you typically need for additional flights would be extra engines, igniters and recovery wadding.

IS IT SAFE?

Estes model rocketry is one of the safest outdoor activities in the world. Over 300 million model rockets have been launched safely since 1957. It is safer than most sporting activities. Estes has provided 40 years of safe, innovative and breathtaking fun to people of all ages. Whether you're into flying rockets for sport or competition, Estes rockets offer you a truly rewarding experience. And remember, it's up to each and everyone involved to keep model rocketry a safe activity well into the next millennium. You can do your part by following the Model Rocketry Safety Code at ALL times (see page 5 for Safety Code).

HOW DO I START MY OWN ESTES ROCKET FLEET?

The best way to embark in model rocketry is with an Estes flying model rocket starter set. You can either begin with a Ready To Fly Starter Set that has a fully constructed model rocket or an E2X® Starter Set that requires assembly prior to launching. Both of these sets come complete with an electrical launch controller, adjustable launch pad, engines, flight supplies and an information booklet to get you up and flying in no time. You'll need four AA alkaline batteries and possibly some glue, depending on which set you select.

HOW EASY AND HOW MUCH TIME DOES IT TAKE TO BUILD MY ROCKETS?

Estes kits range from ready to launch in several minutes to those that provide many enjoyable hours of building fun. Our kits are classified into six categories:

READY TO FLY: No paint, no glue and no tools, just the pure enjoyment of flight. Assemble the launch pad, prepare the engine, attach and pack the parachute and get ready for a thrill. These models are a perfect introduction for the beginning rocketeer.

ALMOST READY TO FLY (E2X® SERIES): No painting or special tools required! These rocket kits require minor assembly and can be constructed in one or two hours. E2X kits are complete with out-of-this-world, colorful self-adhesive decals and pre-colored parts.

LEVEL 1 (BETA™ SERIES): Quick and easy to build kits with some sanding, cutting and painting required. Easily built on a lazy Saturday afternoon! Most kits feature our T™ Fin System (Through-The-Tube) – giving you strong and precisely mounted fins.

LEVEL 2 (EXPLORER™ SERIES): This is the first tier of craftsman kits. These kits require more time in building and painting. In this series, you will find rockets that use Estes' largest engine - the powerful "D".

LEVEL 3 (CHALLENGE™ SERIES): The second category of craftsmanship includes kits that combine challenging construction techniques with a high level of flying enjoyment.

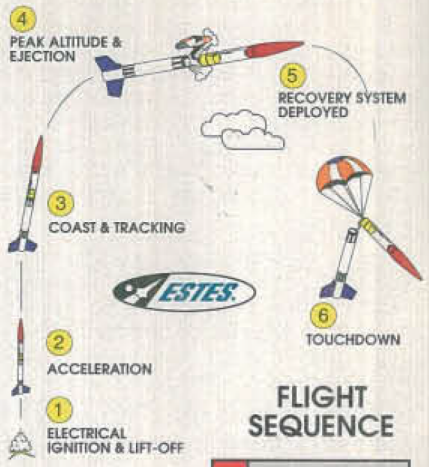
LEVEL 4 (MASTERS™ SERIES): These kits require a high degree of modeling involvement from building to painting. The result is a rocket with museum-like qualities that really flies!

HOW DO ESTES MODEL ROCKETS WORK?

Estes model rockets are activity kits designed out of lightweight materials such as paper tubing, balsa wood and plastic. Balsa or plastic fins are glued to the airframe for guidance and stability. A model rocket engine holder is also part of the airframe to keep the engine in place during thrust.

Estes was the first to develop a safe, mass produced model rocket engine and has produced the engines for 40 years.

The Estes 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, such as a plastic parachute or streamer, is deployed to return the rocket safely to earth. The rocket can then be prepped for another flight.



FLIGHT SEQUENCE

WHERE DO I FLY ESTES MODEL ROCKETS?

The chart on the next page tells you what size field to use for what size engine. Each engine size is designated by a letter and is up to twice as powerful as the letter before it. See the engine section (pages 42-44) of this catalog for more information.

ROCKET TIP

In most cases, baseball, soccer or football fields are great launch areas!

WHAT DO I NEED TO KNOW?

In this catalog, each description lists important INFORMATION:

- ➜ Something fun about the rocket
- ➜ Specifications – how tall, wide and heavy
- ➜ What engines we recommend, especially for that all important very first flight!
- ➜ How high, on the largest engine recommended, the rocket flies (in feet and in meters)
- ➜ The sort of recovery system that brings the rocket back – parachute, streamer or other
- ➜ The type of fin material – plastic, balsa or fiber

Pick out your favorite rockets...and watch for the Rocket Tips for valuable info on model rocketry. Remember - Estes model rocket kits offer you a wide spectrum of building and flying. Best of all, they are all **FUN** to assemble, build and fly!

PLEASE READ: IMPORTANT STUFF!

Estes model rocketry is recommended for ages 10 years and up. Adult supervision is recommended for those under 12 years of age.

Unless otherwise specified all models require assembly. Engines, launch system, glue and finishing supplies are not included with the kits unless specified otherwise.

Prices subject to change without notice.

USE ONLY WITH ESTES PRODUCTS

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

Maximum altitudes are projections only, your rocket's actual performance may vary.

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TM & © 1997 Lucasfilm Ltd. All rights reserved. Used under authorization.

Boys and girls enjoy building and launching Estes model rockets.

FULL ONE YEAR WARRANTY

Your Estes product is warranted against defects in materials or workmanship for one year from the date of the original purchase. Any Estes product, except computer software, which, because of a manufacturing mistake, malfunctions or proves to be defective within the one-year warranty period will be repaired or replaced, at Estes' option and at no charge to you, provided it is returned to Estes with proof of purchase.

This warranty does not cover incidental or consequential damage to persons or property caused by the use, abuse, misuse, failure to comply with operating instructions or improper storage of the warranted product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

For repair or replacement under this warranty, please return the defective part of your Estes product with proof of purchase to: Estes Industries, Customer Service Department, 1295 H Street, P.O. Box 227, Penrose, CO 81240-0227.

MODEL ROCKET SAFETY CODE (EFFECTIVE 10-91)

1. Materials–My model rocket will be made of lightweight materials such as paper, wood, rubber, and plastic suitable for the power used and the performance of my model rocket. I will not use any metal for the nose cone, body, or fins of a model rocket.

2. Motors/Engines–I will use only commercially-made NAR certified model rocket engines in the manner recommended by the manufacturer. I will not alter the model rocket engine, its parts, or its ingredients in any way.

3. Recovery–I will always use a recovery system in my model rocket that will return it safely to the ground so it may be flown again. I will use only flame-resistant recovery wadding if required.

4. Weight and Power Limits–My model rocket will weigh no more than 1500 grams (53 oz.) at lift-off, and its rocket engines will produce no more than 320 Newton-seconds (4.45 Newtons equal 1.0 pound) of total impulse. My model rocket will weigh no more than the engine manufacturer's recommended maximum lift-off weight for the engines used, or I will use engines recommended by the manufacturer for my model rocket.

5. Stability–I will check the stability of my model rocket before its first flight, except when launching a model rocket of already proven stability.

6. Payloads–Except for insects, my model rocket will never carry live animals or a payload that is intended to be flammable, explosive, or harmful.

7. Launch Site–I will launch my model rocket outdoors in a cleared area, free of tall trees, power lines, buildings, and dry brush and grass. My launch site will be at least as large as that recommended in the following table.

LAUNCH SITE DIMENSIONS

Installed Total Impulse (Newtons-seconds)	Equivalent Engine Type	Minimum Site Dimension (feet)	(meters)
0.00– 1.25	1/4A & 1/2A	50	15
1.26– 2.50	A	100	30
2.51– 5.00	B	200	60
5.01– 10.00	C	400	120
10.01– 20.00	D	500	150
20.01– 40.00	E	1000	300
40.01– 80.00	F	1000	300
80.01–160.00	G	1000	300
160.01–320.00	2Gs	1500	450

8. Launcher–I will launch my model rocket from a stable launching device that provides rigid guidance until the model rocket has reached a speed adequate to ensure a safe flight path. To prevent accidental eye injury, I will always place the launcher so that the end of the rod is above eye level or I will cap the end of the launch rod when approaching it. I will cap or disassemble my launch rod when not in use and I will never store it in an upright position. My launcher will have a jet deflector device to prevent the engine exhaust from hitting the ground directly. I will always clear the area around my launch device of brown grass, dry weeds, and other easy-to-burn materials.

9. Ignition System–The system I use to launch my model rocket will be remotely controlled and electrically operated. It will contain a launching switch that will return to "off" when released. The system will contain a removable safety interlock in series with the launch switch. All persons will remain at least 15 feet (5 meters) from the model rocket when I am igniting model rocket engines totalling 30 Newton-seconds or less of total impulse and at least 30 feet (9 meters) from the model rocket when I am igniting model rocket engines totalling more than 30 Newton-seconds of total impulse. I will use only electrical igniters recommended by the engine manufacturer that will ignite model rocket engine(s) within one second of actuation of the launching switch.

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11. Flying Conditions–I will launch my model rocket only when the wind is less than 20 miles (30 kilometers) an hour. I will not launch my model rocket so it flies into clouds, near aircraft in flight, or in a manner that is hazardous to people or property.

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13. Launch Angle–My launch device will be pointed within 30 degrees of vertical. I will never use model rocket engines to propel any device horizontally.

14. Recovery Hazards–If a model rocket becomes entangled in a power line or other dangerous place, I will not attempt to retrieve it.

As a member of the Estes Model Rocketry Program, I promise to faithfully follow all rules of safe conduct as established in the above code.

Signature _____

*This is the official Model Rocketry Safety Code of the National Association of Rocketry and the Model Rocket Manufacturers Association.

Important Note: "G" engines must be sold to and used by adults (18 and up) only.

To launch large model rockets weighing more than one lb. (453 g) but no more than 3.3 lbs. (1500 g) including propellant or rockets containing more than 4 oz. (113 g) but no more than 4.4 oz. (125 g) of propellant (net weight), you must notify and perhaps obtain authorization from the Federal Aviation Administration (FAA). Check your telephone directory for the FAA office nearest you or contact Estes Industries for further information.

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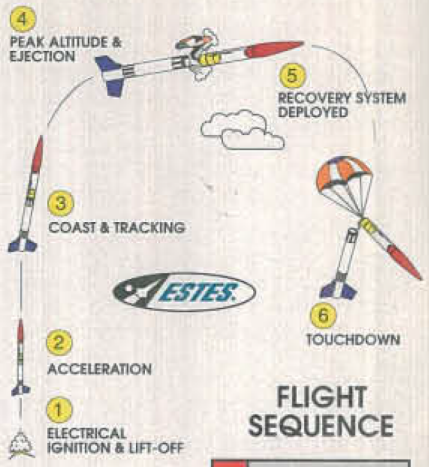

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USE ONLY WITH ESTES PRODUCTS

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Maximum altitudes are projections only, your rocket's actual performance may vary.

© Copyright 1997 Centuri Corporation. All rights reserved.

TM & © 1997 Lucasfilm Ltd. All rights reserved. Used under authorization.

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This warranty does not cover incidental or consequential damage to persons or property caused by the use, abuse, misuse, failure to comply with operating instructions or improper storage of the warranted product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

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Ready to Fly (RTF) Starter Sets
- Fully constructed and decorated rocket
- Assembled parachute
- Ready to launch in minutes
- Complete launch system with flight supplies

Recommended for ages 10 years and up. Adult supervision for those under 12.
Four AA alkaline batteries required – not included.

ESTES 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! (Some sets may require glue.) Each starter set contains:
- A high flying rocket
- The highly reliable Electron Beam® launch controller
- The versatile Porta-Pad® II launch pad
- Engines and flight supplies for your first launch missions
- Model rocketeer's guide booklet
- Model rocketry safety code and full one year warranty

ESTES RTF STARTER SETS

TIDAL WAVE™ EST 1811

The Tidal Wave™ Starter Set will sweep over you with its deep, dark blue air frame, white fins and nose cone. Visually stimulating on the ground and in the air, the Tidal Wave™ will make waves at your next 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 (75 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 600 ft (183 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

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! This is the perfect rocket to start you flying in minutes!

SPECS: Length: 18" (45.7 cm); **Dia.:** 1.35" (34.3 mm); **Wt.:** 2.7 oz (75 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 600 ft (183 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

CODE RED™ EST 1824

A great new rocket from Estes! With its high tech look, the Code Red™ will put everyone on alert! The prismatic red air frame is highly visible in flight! The ideal way to get into the air fast!

SPECS: Length: 18" (45.7 cm); **Dia.:** 1.35" (34.3 mm); **Wt.:** 2.7 oz (75 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 600 ft (183 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

QUICKSILVER™ EST 1800

The Quicksilver™ is a lightning fast way to get flying! This Ready-Built rocket flies straight and true to incredible altitudes before deploying its colorful parachute for a soft, safe recovery. Fly again and again! Available in silver, gold, green or blue.

SPECS: Length: 16.6" (42.2 cm); **Dia.:** 1.35" (34.3 mm); **Wt.:** 2.3 oz (64 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

STARDUST™ EST 1817

Do you want to go to the stars? The Stardust™ Starter Set will take you there! Not only does the rocket feature a prismatic finish, it deploys "glitter stars" at the high point of flight. Enough glitter and engines are included to dust the stars three times!

SPECS: Length: 16.6" (42.2 cm); **Dia.:** 1.0" (25.4 mm); **Wt.:** 1.6 oz (45 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7 (includes three engines)

ESTES.

StarterSets

built READY to Fly

NEW!

EXPLORE AERIAL PHOTOGRAPHY

ASTROCAM® RTF

NEW!

SHELLSHOCKED™

NEW!

RECON™

NEW!

FREE FALL™

Recommended for ages 10 years and up. Adult supervision for those under 12.
Four AA alkaline batteries required – not included.

MISSILE COMMAND™
← ARMY
NAVY ↓

NEW!

ASTROCAM® RTF EST 1813

The Astrocam® RTF Starter Set features a real camera that allows you to take photographs of your launch area from 500 feet up! You'll be snapping pictures right away! You'll look at things as never before with this easy, fun introduction to aerial photography. Uses 110 film – not included.

SPECS: Length: 18.35" (46.7 cm); **Dia.:** 1.34" (34.0 mm); **Wt.:** 2.7 oz (76 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engine:** C6-7 only (includes three engines)

RECON™ EST 1814

The Recon™ Starter Set is a futuristic vehicle that deploys a reconnaissance satellite at peak altitude. You can launch your own mission in minutes! 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) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 557 ft (170 m); **Recommended Engines:** B4-2, B6-2 (first flight) C5-3, C6-3, C6-5 (includes three engines)

SHELLSHOCKED™ EST 1815

For payload fun, try the Shellshocked™ egglofter! Imagine the fun of lofting an egg to altitudes in excess of 200 feet, and then safely recovering it on a fully assembled 24" parachute. If you're not careful, you can end up with egg on your face! The Shellshocked™ can also carry a variety of other large payloads, right out of the box!

SPECS: Length: 18" (45.7 cm); **Dia.:** 1.35" (34.3 mm); **Wt.:** 2.5 oz (71 g); **Recovery:** 24" (61 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** Without egg: 358 ft (109 m)
With egg: 243 ft (74 m)
Recommended Engines: (includes three engines)
Without Egg: B4-2 (first flight), B6-2, C6-5
With egg: C5-3, C6-3 only

FREE FALL™ EST 1816

The Free Fall™ Starter Set rocket ejects a skydiver on a separate parachute at apogee. The booster rocket is recovered by a parachute, while the nose cone acts as a target marker, being recovered on a separate streamer. The action figure is included in this set so you can launch today!

SPECS: Length: 18" (45.7 cm); **Dia.:** 1.64" (41.8 mm); **Wt.:** 3.0 oz (85 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** B4-2, B6-2 (first flight) C5-3, C6-3, C6-5 (includes three engines)

MISSILE COMMAND™ EST 1818

The Missile Command™ Starter Set features two rockets, one resembling an "Army" surface to surface missile, and the other a "Navy" ship-to-air missile. You can defend your airspace in no time with this exciting military rocket set! Flight supplies for your first three launches are included in this exciting introduction to model rocketry.

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 - 1.8 oz (45 g); Navy - 1.7 oz (47 g); **Recovery:** Two 12" (30 cm) assembled parachutes; **Fins:** Plastic molded; **Max. Altitude:** Army - 1100 ft (335 m); Navy - 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7 (includes three engines)

StarterSets E2X SERIES

MEGA MAXX™ STARTER SET
← GOLIATH™
SPITFIRE™ ↓

NEW!

FLIGHTS TO 1000 FEET (305 M)!

SABRE™ STARTER SET

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, glue and four AA alkaline batteries required – not included.

E2X® Starter Sets
- Almost ready to fly rocket
- Assembled parachute
- Self-adhesive decals
- Complete launch system with engines
- Colored parts

ALPHA III® STARTER SET

ESTES E2X® STARTER SETS

MEGA MAXX™ EST 1474

The starter set combines the power of the over two-foot Goliath™ and the speed of the Spitfire™ to create one powerful package. The easy to build Goliath™ delivers a thrill as it flies to 500 feet. The sleek Spitfire™ is a simple to build and paint kit, which screams to over 900 feet. (Includes two engines.)

GOLIATH™

Specs: Skill Level: Almost Ready To Fly (E2X® Series); **Length:** 25" (71.1 cm); **Dia.:** 1.34" (34 mm); **Wt.:** 3 oz. (85 g); **Recovery:** 18" (46 cm) Parachute; **Fins:** T™ plastic molded; **Max. Altitude:** 500 feet (152 m); **Recommended Engines:** B4-2, B4-4, B6-2 (first flight), B6-4 and C6-5

SPITFIRE SSI™

Specs: Skill Level: 1 (Beta™ Series); **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 (first flight), B4-4, B6-4, C6-5 and C6-7

SABRE™ EST 1473

A great starting point for the first time rocketeer! High performance design with two interchangeable recovery systems. Includes a parachute for soft landings and a streamer for high altitude flights. Also includes engines for the first two exciting 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:** T™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, C6-5, C6-7 (includes two engines)

ALPHA III® EST 1405

More people have started with this timeless rocket than any other in the history of the world! Features a brightly molded one-piece fin unit and nose cone and engines for three fantastic parachute recovered flights.

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:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7 (includes three engines)

ESTES

StarterSets E2X SERIES

SUPER SHOT™ STARTER SET
← SUPER SHOT™
TWISTER™ ↓

HELICAT™ STARTER SET

SPACE SHUTTLE™ STARTER SET

AIRWALKER™ STARTER SET

ROCKET TIP

Apogee is the highest point in a rocket's flight.

Recommended for ages 10 years and up. Adult supervision for flights under 12. Assembly, glue and four AA alkaline batteries required – not included.

SUPER SHOT™ EST 1449

A two rocket combo with superb performance and a sky full of fun! The Super Shot™ rocket delivers high performance and parachute recovery in an easy to build kit. The second rocket, the Twister™, is a simple to build and paint kit featuring a recovery with a different spin – after an out-a-sight flight, the Twister™ separates into two helicopter recovered pieces. Three engines included for three super flights!

SUPER SHOT™

SPECS: Skill Level: Almost Ready To Fly (E2X® Series); **Length:** 16.5" (41.9 cm); **Dia.:** 1.0" (25.4 mm); **Wt.:** 1.6 oz (46 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** T™ Plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight) , B4-4, B6-4, B6-6, C6-5, C6-7

TWISTER™

SPECS: Skill Level: 1 (Beta™ Series); **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:** 1/2A6-2 (first flight), A8-3, B4-4, B6-4, B6-6

HELICAT™ EST 1465

A huge, rip-roaring rocket with helicopter recovered nose cone. The nearly three foot tall rocket has a colorful, extra large decal sheet and engines for your first three flights!

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:** T™ plastic molded; **Max. Altitude:** 485 ft (148 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3, C6-5 (includes three engines)

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. Includes two engines for two missions!

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)

AIRWALKER™ EST 1410

Sleek high performance payload rocket. The Airwalker™ can carry bugs, flowers or toy figures into the sky. Launch payloads to over 1000 feet high; get 'em back on a 'chute! 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:** T™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C5-3, C6-3, C6-5 (includes three engines)

READY TO FLY (RTF) ROCKETS

Ready-Built ready to fly rockets are completely assembled and come with fully assembled parachutes. The rockets are decorated with stellar looking tube wraps or a prismatic body wrap and graphics.

RED STORM™ EST 1803

The Red Storm™ has a bright, red prismatic body tube and stands over 19.5" high. This red menace of the sky is sure to be a high flying favorite. It recovers with an assembled 12" parachute.

SPECS: Length: 19.5" (49.8 cm); **Dia.:** 1.35" (34.3 mm); **Wt.:** 2.7 oz (75 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** T™ Plastic molded; **Max. Altitude:** 600 ft (183 m); **Recommended Engines:** B4-4, B6-4 (first flight), C6-5

HYPER X™ EST 1804

The Hyper X™ is sure to complement your rocket arsenal. The Hyper X™ is 19.5" tall and has a two way recovery system. The booster returns to earth using an assembled 12" parachute while the nose cone helicopters down gently using rotor blades. It's great fun to watch and fly!

SPECS:Length: 19.5" (49.5 cm); **Dia.:** 1.35" (34.3 mm); **Wt.:** 3.1 oz (88 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** T™ Plastic molded; **Max. Altitude:** 536 ft (163 m); **Recommended Engines:** B4-2, B6-2 (first flight), B6-4, C6-5

ASTEROID HUNTER™ EST 1805

The Asteroid Hunter™ is an attractive sport rocket at 19.5" in length and has a sleek, fast design built for altitude. Attach the assembled 12" parachute and you can be out flying in minutes! Over 1,000 feet in altitude is possible with the Asteroid Hunter™!

SPECS:Length: 19.5" (49.5 cm); **Dia.:** 0.98" (24.8 mm); **Wt.:** 1.8 oz (50 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** One piece plastic molded; **Max. Altitude:** 1025 ft (312 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5, C6-7

X-FLYERS™ EST 1806

The X-Flyers™ is a spectacular twin pack of Ready-Built rockets. These two terrific, high performance rockets will tear up the skies. 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:** Two 12" (30 cm) assembled parachutes; **Fins:** One piece plastic molded; **Max. Altitude:** #1 - 1425 ft (434 m), #2 - 1280 ft (390 m); **Recommended Engines:** 1/2A6-2, A8-3 (first flight) B6-6, D5-7

REDIROCS™ INVADER™ EST 2122

Ready to fly – no building, just zap on the decals (You can paint it if you want or color it with markers!). Mini-engine powers on any field. Lightweight with safe featherweight recovery!

SPECS:Length: 3.5" (8.9 cm); **Wt.:** 3 oz (85 g); **Recovery:** Featherweight; **Max. Altitude:** 100 ft (30 m); **Recommended Engine:** A10-3T only

ESTES

E2X SERIES

Almost Ready to Fly (E2X® Series)
- Great First Rockets!
- No Painting Required
- Assemble in about an hour

MK-109 STINGRAY™

ASTROSAT LSX™

NEW!

BANDIT™

FLASHES IN THE SKY!

FLASH™

RATTLER-7™

- Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, glue, launch equipment and flight supplies required – not included.

RATTLER-7™ EST 2150

Hidden deep in the Army bunkers of the desert is the Rattler-7™ ground support missile. 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: 16.5" (39.4 cm); **Dia.:** 0.98" (24.8 mm); **Wt.:** 1.5 oz (42 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** One piece plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

ASTROSAT LSX™ EST 2133

AstroSat LSX™ (Light Satellite Experimental) ejects two streamer equipped satellites at the end of its ascent. This futuristic vehicle flies missions up to 300 feet. 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:** T™ plastic molded; **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-5, C6-6

BANDIT™ EST 2060

Rugged, sleek and merciless performance every time – 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™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

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 altitude!

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™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4 B6-6 C6-5, C6-7

FLASH™ EST 2137

A stellar performer with a giant, pre-wrapped prismatic payload section. The huge 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:** T™ plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4 B6-6, B6-8, C6-5

ESTES

E2X SERIES

NIKE ARROW™

GNOME™

ALPHA III®

RAMPAGE™

BANSHEE™

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, glue, launch equipment and flight supplies required – not included.

ATHENA™ EST 2026

Plastic chrome nose cone, one-piece fin unit and a high performance design combine to make one cool-looking, sleek rocket!

SPECS: Length: 15" (38.1 cm); **Dia.:** 0.98" (24.8 mm); **Wt.:** 1.3 oz (36 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** One piece plastic molded; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

GNOME™ EST 0906

Mini-powered, almost ready to fly rocket. Super altitudes on mini-engines – great for flying on small backs! Features shroud body tube and a one-piece fin unit.

SPECS: Length: 10.3" (26.0 cm); **Dia.:** 0.54" (13.8 mm); **Wt.:** 0.8 oz (12 g); **Recovery:** Streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** 1/2A3-2T (first flight), 1/2A3-4T, A3-4T, A10-3T

NIKE ARROW™ EST 0838

Sleek and fast with scale appearance. Reflective colored body tube and two one-piece plastic fin units – easy to build! Single stage mini-engine power and streamer recovery!

SPECS: Length: 17" (43.2 cm); **Dia.:** 0.74" (18.8 mm); **Wt.:** 1.0 oz (28 g); **Recovery:** Streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 305 ft (93 m); **Recommended Engines:** 1/2A3-2T, A3-4T, A10-3T (first flight)

ALPHA III® EST 1256

The very first Estes almost-ready-to-fly rocket! One-piece fin unit! Millions have started with this classic design. 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:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

RAMPAGE™ EST 2061

No painting, plastic fins, builds in under an hour! A quick way to get into payloading. 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:** T™ plastic molded; **Max. Altitude:** 985 ft (300 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-3, C6-5

BANSHEE™ EST 2132

Howl at the sun with this screaming bad boy! Lean and mean! Quick to build! 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:** T™ plastic molded; **Max. Altitude:** 1100 ft (335 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

ESTES

E2X SERIES

BAIL-OUT™

OMLOID™

MACH-12™

ROCKET TIP

Payloading is the science of carrying "stuff" into near-earth orbit. Launch toy action figures, flowers, glow sticks, marbles, eggs, real science experiments, etc.

X-RAY™

HIJAX™

BAIL-OUT™ EST 2070

This "transport" rocket carries your favorite Estes Space Corps trooper aloft and ejects it with a parachute at apogee. Can carry any 3-3/4" figure – figure NOT included. Easy to build kit, no painting and includes two 'chutes and special harness for your figures.

SPECS: Length: 24.5" (62.2 cm); **Dia.:** 1.64" (41.6 mm); **Wt.** (without figure): 3.1 oz (87 g); **Recovery:** Rocket: 12" (30 cm) Parachute, Nose Cone: Streamer, Two 24" (61 cm) parachutes (one spare) for figure; **Fins:** One piece plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3, C6-5

OMLOID™ EST 2075

Egg lofting: launch a raw egg and bring it back without breaking it! The favorite in egg loft contests! Pre-colored payloader with a giant (2 inches wide!) twist-together cargo capsule.

SPECS: Length: 18.8" (47.8 cm); **Dia.:** 1.35" (34.3 mm); **Empty Wt.:** 2.5 oz (71 g); **Recovery:** 18" (46 cm) Parachute; **Fins:** T™ plastic molded; **Max. Altitude:** 305 ft (93 m); **Recommended Engines:** (With Egg) - C5-3, C6-3; (Without Egg) - B4-2 (first flight), B6-2, C5-3, C6-3

MACH-12™ EST 2130

Be different with every flight! 12 different fin configurations are possible. Transform the Mach-12 between flights. 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:** T™ plastic molded; **Max. Altitude:** 650 ft (198 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5

X-RAY™ EST 0834

Mini-engine boosted rocket with its clear payload capsule! Pre-colored, one-piece fin unit for a quick assembly! Streamer allows for quick, easy and safe 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(first flight), A3-4T, A10-3T

HIJAX™ EST 2105

Clear payload capsule, high performance design and 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:** T™ plastic molded; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** A5-3 (first flight), B4-4, B6-4, C5-3, C6-3, C6-5

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, glue, launch equipment and flight supplies required – not included.

ESTES

E2X SERIES

BETA SERIES

Level 1 (Beta™ Series)
- Quick and easy-to-build kits with some sanding, cutting and painting required.
- Most kits feature our T²™ (Through-The-Tube) Fin System

ROCKET TIP

Featherweight recovery means the rocket is so lightweight, the engine ejects and the rocket returns safely to the ground.

SKYWINDER™

TURBO COPTER™

MANTA™

MOSQUITO™

QUARK™

NINJA®

Recommended for ages 10 years and up. Adult supervision for those under 12.
Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

ALMOST READY TO FLY (E2X™ SERIES) ROCKETS

SKYWINDER™ EST 2077

The easiest way to get into heli-recovery. 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:** T™ Plastic molded; **Max. Altitude:** 531 ft (162 m); **Recommended Engines:** B4-2 (first flight), B6-2, C6-3

TURBO COPTER™ EST 2096

Hot Stuff! With a wild helicopter recovered nose cone and an ultra performance design, this rocket is out-of-sight! Features a one-piece fin unit and no painting required!

SPECS: Length: 13.9" (35.3 cm); **Dia:** 0.74" (18.7 mm); **Wt.:** 0.9 oz (26 g); **Recovery:** Nose cone: Helicopter, Rocket: Streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 1400 ft (427 m); **Recommended Engines:** 1/2A6-2 (first flight), A8-3, B4-4, B6-4, B6-6, C6-5, C6-7

MANTA™ EST 2097

Futuristic-looking foam glider rides piggyback on the booster. At apogee the glider detaches for its long glide home. Easy to build, no painting!

SPECS: Length: 16.5" (41.9 cm); **Dia.:** 0.98" (24.8 mm); **Wt.:** 1.8 oz (51 g); **Recovery:** Glider, Booster: streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 690 ft (210 m); **Recommended Engines:** A8-3 (first flight), B4-2, B6-2

LEVEL 1 (BETA™ SERIES) ROCKETS

QUARK™ EST 0802

Mini-engine powered mighty mite. With incredibly simple construction (only seven parts), a little spray paint and decals, and whoosh – out-a-sight flights to 700 feet! Safe featherweight 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:** 1/2A3-4T (first flight), A3-4T, A10-3T

MOSQUITO™ EST 0801

Mini-engine powered bug of a rocket with screaming high altitude performance. Featherweight recovery for safe returns.

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:** 1/2A3-4T (first flight), A3-4T, A10-3T

NINJA® EST 0882

Lightning quick performance and super altitudes on mini-engine power. Die cut card fins and hot self-adhesive decals!

SPECS: Length: 10.6" (26.9 cm); **Dia.:** 0.74" (18.7 mm); **Wt.:** 0.6 oz (16 g); **Recovery:** Streamer; **Fins:** Die cut card; **Max. Altitude:** 525 ft (160 m); **Recommended Engines:** 1/2A3-4T (first flight), A3-4T, A10-3T

ESTES

BETA SERIES

NEW!

GLOW-IN-THE-DARK DISPLAY STICKERS

NEW!

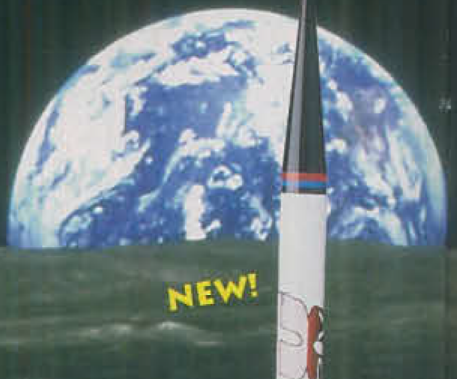
BIG DAWG™

ROCKET TIP

These rockets have the T™ Fin System. The body tube on the rocket has been slotted and the fins fit through the slot. This makes the fin joint strong and properly aligned.

T™ is a trademark of Estes Industries.

PROWLER™



NEW!

ZENIX SSRV™

NEW!

AIM-120 AMRAAM

NEW!

WILDFIRE™

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

BIG DAWG™ EST 2151

This bulldog of a rocket has a slotted body tube for precise fin alignment and strong fin/tube joints. It comes with cool, junkyard dog looking self-adhesive decals and die cut balsa fins. It's built tough to keep on flying over and over. A fun sport flyer that soars over 700 feet high!

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™ Die cut balsa; **Max. Altitude:** 700 ft (213 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5, C6-7

PROWLER™ EST 2156

This sleek, menacing looking rocket is designed to seek out the darkest reaches of the universe. 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. This awesome rocket will provide the modeler with a glowing display rocket. (Not intended for flight launches)

SPECS: Length: 40.5" (102.9 cm); **Dia.:** 1.64" (41.7 mm); **Wt.:** 4.2 oz (120 g); **Recovery:** 24" (61 cm) assembled parachute; **Fins:** T™ Die cut balsa; **Max. Altitude:** 360 ft (110 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3

ZENIX SSRV™ EST 2152

Soar into the future with the Zenix SSRV™, a highly interactive model rocket. The Zenix SSRV™ launches hundreds of feet into the air and then deploys its external boosters to be recovered by streamers. The main booster is safely recovered via parachute. Witness action in the sky with the Zenix SSRV™!

SPECS: Length: 31.8" (80.8 cm); **Dia.:** 1.32" (33.5 mm); **Wt.:** 4.6 oz (130 g); **Recovery:** External boosters - streamers, Main booster - 18" (46 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 380 ft (116 m); **Recommended Engines:** B4-2, B6-2 (first flight) C5-3, C6-3

AIM-120 AMRAAM EST 2153

This is a stellar-looking scale military rocket of the US Air Force air-to-air missile. The Estes version of the AMRAAM features high quality die cut balsa fins, slotted body tubes and extremely detailed, self-adhesive decals (taken from actual blueprints). Create excitement in the air with this authentic air combat flying model rocket.

SPECS: Length: 27.5" (69.9 cm); **Dia.:** 1.33" (33.8 mm); **Wt.:** 4.2 oz (120 g); **Recovery:** 18" (46 cm) assembled parachute; **Fins:** T™ Die cut balsa; **Max. Altitude:** 401 ft (122 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3, C6-5

WILDFIRE™ EST 2154

This hot looking, high performance rocket screams to altitudes over 1,000 feet. It is then recovered by a parachute and streamer (parastream) combination for high visibility and close proximity recovery. Fiery looking self-adhesive decals cap off this terrific, high flying model rocket.

SPECS: Length: 15" (38.1 cm); **Dia.:** 0.98" (24.9 mm); **Wt.:** 1 oz (29 g); **Recovery:** 12" (30 cm) assembled parachute and 18" (46 cm) streamer; **Fins:** T™ Die cut balsa; **Max. Altitude:** 1027 ft (313 m); **Recommended Engines:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

ESTES

BETA SERIES

Recommended for ages 10 years and up. Adult supervision for those under 12.
Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

YELLOW JACKET™ EST 2008

A rocket with a lot of zip. All-round great performance highlights this sport rocket. Easy to build with water transferable decals!

SPECS: Length: 16.8" (42.7 cm); **Dia.:** 0.98" (24.9 mm); **Wt.:** 1.1 oz (31 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 1400 ft (427 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

WIZARD™ EST 1292

No tricks here – the Wizard™ is an easy-to-build, high-performance kit. Featuring die cut balsa fins and self-adhesive decals, the Wizard™ is recovered via a bright streamer for soft, safe landings. A great first or second kit that promises real excitement and fun!

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:** 1/2A6-2 (first flight), A8-3, B4-4, B6-4, B6-6, C6-5, C6-7

BIG BERTHA™ EST 1948

Burly, big and beautiful! Over the decades this is the first big (two feet tall) 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 (first flight), B6-4, C6-5

YANKEE™ EST 1381

A rocket with All-American performance – screams to 1400 foot 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:** 1/2A6-2 (first flight), A8-3, B4-4, B6-4, B6-6, C6-5, C6-7

ALPHA® EST 1225

For over 30 years, the Alpha® has been the first choice for millions of rocket modelers. Easy to build, rugged high 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:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

NOVA PAYLOADER™ EST 1960

Clear payload capsule, lightweight design with balsa fins and high altitude performance combine to make this a great cargo carrying rocket!

SPECS: Length: 21.1" (53.6 cm); **Dia.:** 0.98" (24.9 mm); **Wt.:** 1.3 oz (38 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5; (With payload) B4-2, B6-2, C5-3, C6-3

ESTES BETA SERIES

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

FIREBIRD™ EST 2138

Too hot to hold back! Punch holes in the sky with this fantastic two foot tall sport flier! Ripping through the air to over 1000 feet high flight after flight.

SPECS: Length: 23.9" (60.7 cm); **Dia.:** 1.33" (33.8 mm); **Wt.:** 2.1 oz (60 g); **Recovery:** 18" (46 cm) Parachute; **Fins:** T™ Die cut balsa; **Max. Altitude:** 1080 ft (329 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, C6-5, C6-7

FATBOY™ EST 2139

Fat boy...and proud of it! Over 2-1/2 inches in diameter and just over 12 inches high! 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™ Die cut balsa; **Max Altitude:** 325 ft (99 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3

SIZZLER® EST 2127

Hot looking rocket over two feet tall! Fantastic performance – blazes to 400 feet. Features a rear ejecting engine pod, deploying a huge parachute at apogee. No wadding needed!

SPECS: Length: 27.8" (70.6 cm); **Dia.:** 1.64" (41.7 mm); **Wt.:** 3.9 oz (110 g); **Recovery:** 18" (46 cm) Parachute; **Fins:** T™ Die cut balsa; **Max Altitude:** 400 ft (122 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3, C6-5

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:** T™ Die cut balsa; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:** 1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6, C6-5

CORKSCREW™ EST 2114

Special engine and fin position makes this rocket spin and spiral on the way up! The Corkscrew™ leaves wild smoke trails in the sky! Easy to build – great fun to fly!

SPECS: Length: 21.3" (54.1 cm); **Dia.:** 1.0" (25.4 mm); **Wt.:** 1.9 oz (53 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** T™ Die cut balsa; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** A8-3 (first flight), B4-4, B6-2, B6-4, C6-3, C6-5

ESTES

BETA SERIES

TRANSWING™ SUPER GLIDER

TAKE PICTURES FROM HIGH UP!

ASTROCAM® 110

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

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 Transwing™ transforms into a long duration glider. Easy to build – no painting! Flights over one minute are possible!

SPECS: Length: 22" (55.9 cm); **Dia.:** 0.98" (24.9 mm); **Glider Wingspan:** 24" (61 cm); **Total 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 (first flight), C6-3

ASTROCAM® 110 EST 1327

What's it look like from up there? This camera rocket gives you the big picture – hundreds of feet up! EASY to build, NO painting – almost ready to fly! Simple to use and fly! Kit includes camera! Uses 110, 200 ASA film – not included

SPECS: Length: 19.1" (48.5 cm); **Dia.:** 1.34" (34 mm); **Wt.:** 3.7 oz (106 g); **Camera shutter speed:** 1/500 sec.; f-stop: 11; **Recovery:** 12" (30 cm) Parachute; **Fins:** One piece plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engine:** C6-7 only!

VIKING™ EST 1949

Fantastic rocket with multiple possible fin configurations – 48 in all. Features die cut card fins, self-adhesive decals and streamer recovery. Super high altitude flights!

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 (first flight), B4-4, B6-4, C6-5, C6-7

MONGOOSE™ EST 2092

Snakes won't get close to this one! 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 (first flight), B4-4, B6-4, C6-5; Two Stage Flights: Booster Stage - B6-0 (first flight), C6-0; Second Stage - B6-6 (first flight), C6-7

VENOM™ EST 2140

No one knows what part of the universe this rocket comes from, but it's got attitude, altitude and sneaky good looks – quick strikes to 1100 feet.

SPECS: Length: 18.5" (47 cm); **Dia.:** 0.98" (24.9 mm); **Wt.:** 1.2 oz (34g); **Max Altitude:** 1100 ft (335 m); **Recovery:** 12" (30 cm) Parachute; **Fins:** T™ Die cut balsa; **Recommended Engines:** A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

ESTES

BETA SERIES

F-22 AIR SUPERIORITY FIGHTER™

CAUTION - ALIEN INSIDE!

VENUS PROBE™

Recommended for ages 10 years and up.
Adult supervision for those under 12.
Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

AIM-9 SIDEWINDER™

F-22 AIR SUPERIORITY FIGHTER™

EST 2124

The fighter aircraft of the Estes Space Corps! The F-22 rockets skyward on a booster straight into the air. At apogee, booster falls away and glider swoops down out of the sky. Easy-to-build glider and booster.

SPECS: Glider Length: 13.5" (34.3 cm); **Wingspan:** 9.3" (23.6 cm); **Glider Wt.:** 1.6 oz (45 g); **Booster Length:** 25.5" (64.8 cm); **Dia.:** 1.33" (33.8 mm); **Wt.:** 1.9 oz (55 g); **Recovery:** Glider & Booster: 18" (46 cm) Parachute; **Fins:** T™ Die cut balsa; **Max. Altitude:** 250 ft (76 m); **Recommended Engines:** B4-2 (first flight), B6-2, C6-3, C6-7

ZINGER™ EST 1917

A great super light-weight rocket with sizzling heavy-weight performance – 2000 feet altitude! Comes with cool self adhesive decals and lightweight balsa fins.

SPECS: Length: 10.5" (26.7 cm); **Dia.:** 0.74" (18.8 mm); **Wt.:** 0.3 oz (9 g); **Recovery:** Streamer; **Fins:** Balsa; **Max. Altitude:** 2000 ft (610 m); **Recommended Engines:** 1/2A6-2, A8-3 (first flight), B4-4, B6-6, C6-7

VENUS PROBE™ EST 2120

Find the Truth! 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™ Die cut balsa; **Max. Altitude:** 250 ft (76 m); **Recommended Engines:** C5-3 (first flight), C6-3

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™ 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™ Die cut balsa; **Max. Altitude:** 390 ft (119 m); **Recommended Engines:** B4-2 (first flight), B6-2, C5-3, C6-3

ESTES

EXPLORER SERIES

D ENGINE POWER

SILVER COMET™

NEW!

SM-3 SEAHAWK™

D ENGINE POWER

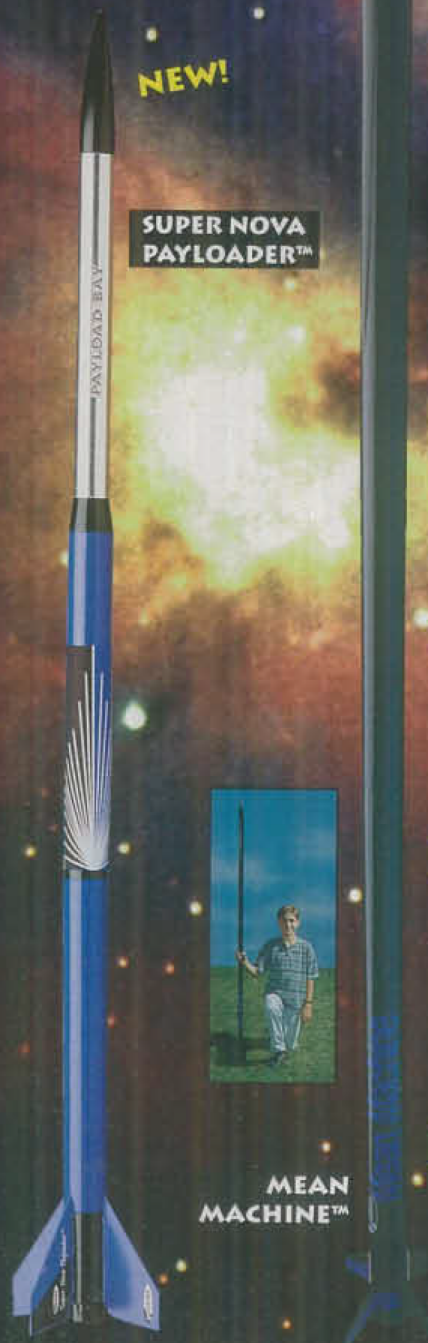
GEMINI DC™

PYTHON™

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

Level 2 (Explorer™ Series)
- Requires more skill in building and painting
- Includes rockets that use Estes "D" engines

NEW!



SUPER NOVA PAYLOADER™

MEAN MACHINE™

SILVER COMET™ EST 2141

Attention all fans of "retro" science fiction, your space ship has landed! 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:** T™ Die cut balsa; **Recommended Engines:** D12-3 (first flight), D12-5. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

SM-3 SEAHAWK™ EST 2149

This "D" engine powered, single stage rocket stands over three feet tall and uses the mighty Estes D12 rocket engine to launch it hundreds of feet into the air. The SM-3 Seahawk™ utilizes two fully assembled 18" parachutes for recovery. It incorporates plastic fins with slotted body tubes for easy assembly and quick finishing. This is a must for every big rocket enthusiast.

SPECS: Length: 39.5" (100.3 cm); **Dia.:** 1.84" (46.7 mm); **Wt.:** 6.2 oz (175 g); **Recovery:** Two 18" (46 cm) assembled parachutes; **Fins:** T™ Plastic molded; **Max. Altitude:** 465 ft (142 m); **Recommended engine:** D12-5 only. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

GEMINI DC™ EST 2135

Twin parachutes are rear-ejected from the side pods on this stunning rocket. Nearly out of this world flights. Easy to build! A great flier! A unique rocket!

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:** T™ Die cut balsa; **Max Altitude:** 800 ft (244 m); **Recommended Engines:** B4-2, B4-4, B6-2 (first flight), B6-4, C6-5

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 (160g); **Recovery:** 18" (46 cm) Parachute; **Fins:** T™ Plastic Molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** D12-5 (first flight), D12-7. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

SUPER NOVA PAYLOADER™ EST 2155

Using the powerful Estes "D" engine, the Super Nova Payloader™ lifts your specimen hundreds of feet into the air. 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:** T™ Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** D12-5 only. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

MEAN MACHINE™ EST 1295

Stand back from this beauty! Over six feet of rocket with kick-in-the-pants "D" power to boot. Its long, lean looks and great soaring flights make this one of our most popular rockets.

SPECS: Length: 78.8" (200.2 cm); **Dia.:** 1.64" (41.7 mm); **Wt.:** 5.8 oz (164 g); **Recovery:** 24" (61 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 600 ft (183 m); **Recommended Engine:** D12-5 only. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

ESTES

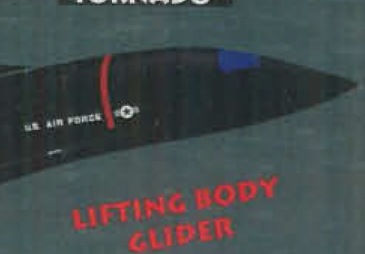
EXPLORER SERIES

D ENGINE POWER

MANIAC™

A.R.V. CONDOR™

TWO GLIDERS



SR-X™

LIFTING BODY GLIDER

TORNADO™

BULL PUP 12D™

LONG SHOT™

D ENGINE POWER!

TWO STAGE FUN!

BLACK BRANT II™

MANIAC™ EST 2001

Get ready to see the magic performing rocket – now on "D" engines. One piece fin unit and pre-painted nose cone make it a cinch to build!

SPECS: Length: 30.5" (78.2 cm); **Dia.:** 1.38" (34.9 mm); **Wt.:** 4 oz (113 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** D12-5 (first flight), D12-7. With optional Quick Change Engine Mount (EST 2002) (not included): C5-3, C6-3. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

A.R.V. CONDOR™ EST 2025

Attention, scientists! Welcome to the next century! An unmanned space probe designed for a glorious return to Earth. Rocket-powered on a "D" engine!

SPECS: Booster Length: 18.5" (47.0 cm); **Upper Length:** 8" (15.5 cm); **Booster Dia.:** 2.38" (34.9 mm); **Upper Wingspan:** 18.6" (47.1 cm); **Booster Wt.:** 3.7 oz (105 g); **Upper Wt.:** 0.5 oz (14 g); **Recovery:** Separating booster/upper; **Fins:** Die cut balsa; **Max. Altitude:** 700 ft (213 m); **Recommended Engines:** D12-5 (first flight), D12-7. With optional Quick Change Engine Mount (EST 2002) (not included): C5-3, C6-3. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

TORNADO™ EST 2004

The thrilling duo of unmanned gliders – one for exciting orange activities, the Tornado™ separates with two parachutes each spinning helicopter style to the ground!

SPECS: Length: 9.5" (24.1 cm); **Dia.:** 2.6" (38.1 mm); **Wt.:** 0.5 oz (14 g); **Recovery:** Two Piece Separating; **Fins:** Die cut balsa; **Max. Altitude:** 800 ft (300 m); **Recommended Engines:** 1/2A6-2 (first flight), A8-3, B6-4, C6-5.

BULL PUP 12D™ EST 2009

Short, stubby and powerful! Our USAF X-ray "D" Bull Pup rides tail fins and patented quick-change nose cone system!

SPECS: Length: 19.8" (50.3 cm); **Dia.:** 1.65" (42.0 mm); **Wt.:** 3.3 oz (93 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 225 ft (200 m); **Recommended Engines:** A8-3 (first flight), B4-4, C6-5.

SR-X™ EST 2115

Mysterious, sleek and dark – the Estes Space Corps' Project Aurora. Uniquely shaped lifting body made from a two-piece aeroform shell. Great performing glider.

SPECS: Length: 18" (45.7 cm); **Wingspan:** 11.5" (29.2 cm); **Wt.:** 6.5 oz (185 g); **Recovery:** Glider, Power Pod: 12" (30 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 200 ft (61 m); **Recommended Engines:** B4-2 (first flight), B6-2, C5-3, C6-3.

LONG SHOT™ EST 2120

Never bet against this rocket! Powerful two stage fun! A "D" booster/regular upper stage engine combo rips this rocket to 1300 feet. One-piece fin units make it a cinch to build.

SPECS: Length: 46" (116.8 cm); **Dia.:** 1.38" (34.9 mm); **Wt.:** 5.7 oz (161 g); **Recovery:** Streamer; **Fins:** One piece plastic molded; **Max Altitude:** 1300 ft (396 m); **Recommended Engines:** Single Stage flights: C5-3 (first flight), C6-3; Two stage flights: booster stage - D12-0; Second Stage - B6-4 (first flight), C6-7. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

BLACK BRANT II™ EST 1956

Beautiful 1/15 scale model of a Canadian research sounding missile used in the 1950's. High altitude flights on "D" engines. Great detailing!

SPECS: Length: 24.9" (63.2 cm); **Dia.:** 1.33" (33.8 mm); **Wt.:** 2.3 oz (65 g); **Recovery:** 18" (46 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 1170 ft (357 m); **Recommended Engines:** D12-5 (first flight), D12-7.

Recommended for ages 10 years and up. Adult supervision for those under 12.
Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

1998 CATALOG PRICE LIST

Items are listed in part number sequence

Prod. No.	Description	Sugg. Retail
	ESTES® MODEL ROCKETRY PRODUCTS	
0801	Mosquito™	$3.19
0802	Quark™	3.49
0834	X-Ray™	5.49
0835	Nike Arrow™	6.99
0882	Ninja®	5.09
0886	Gnome™	5.29
1225	Alpha®	8.09
1256	Alpha III®	9.99
1284	Space Shuttle™	27.59
1292	Wizard™	5.09
1295	Mean Machine™	23.29
1327	Astrocam® 110	30.69
1380	Phoenix™	24.39
1381	Yankee™	5.09
1382	Comanche-3™	14.79
1406	Alpha III® Starter Set	31.79
1410	Airwalker™ Starter Set	32.89
1449	Super Shot™ Starter Set	34.99
1456	Teacher's Starter Set	38.95
1463	Designer's Special™	44.09
1465	HeliCat™ Starter Set	33.89
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1473	Sabre™ Starter Set	29.99
1474	Mega Maxx™ Starter Set	30.56
1503	1/2A3-2T Engines (4 pack)	4.79
1504	1/2A3-4T Engines (4 pack)	4.79
1507	A3-4T Engines (4 pack)	4.79
1510	A10-0T Engines (4 pack)	4.79

Prod. No.	Description	Sugg. Retail
1768	X-Ray™ Bulk Pack (12 Pack)	39.99
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1770	Venom™ Bulk Pack (12 Pack)	69.99
1771	Omloid™ Bulk Pack (12 Pack)	109.99
1773	*Star Wars* X-wing™ Fighter Bulk Pack (6 Pack)	64.99
1780	1/2A3-2T Engines Bulk Pack (24 Pack)	27.39
1781	A8-3 Engines Bulk Pack (24 Pack)	37.99
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1784	B6-0/B6-6 Engines Bulk Pack (12 each per Pack)	38.89
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1786	Hi-Lite® Light Glider Bulk Pack (12 Pack)	44.99
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1804	Hyper X™ RTF	13.99
1805	Asteroid Hunter™ RTF	11.99
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1812	Ionizer™ RTF Starter Set	26.99
1813	AstroCam® RTF Starter Set	39.99
1814	Recon™ RTF Starter Set	34.99
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1817	Stardust™ RTF Starter Set	29.99
1818	Missile Command™ RTF Starter Set	34.99
1824	Code Red™ RTF Starter Set	26.99

Prod. No.	Description	Sugg. Retail
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2137	Flash™	10.99
2138	Firebird™	10.99
2139	Fat Boy™	11.99
2140	Venom™	8.49
2141	Silver Comet™	19.99
2149	SM-3 Seahawk™	22.99
2150	Rattler-7™	8.99
2151	Big Dawg™	8.99
2152	Zenix SSRV™	TBD
2153	AIM-120 AMRAAM	11.99
2154	Wildfire™	8.49
2155	Super Nova Payloader™	TBD
2156	Prowler™	12.99
2237	Transroc II™ Rocket Locator	35.59
2794	Ignite the Imagination™ Video	11.15
2847	Science & Model Rockets Curriculum	3.65
2848	Physics & Model Rockets Curriculum	3.65
2849	Mathematics & Model Rockets Curriculum	3.65
2850	Industrial Technology & Model Rockets Curriculum	3.65
2851	Aviation & Light Gliders Curriculum	3.65
2852	Ignite the Imagination™ Curriculum	5.00
2853	*Star Wars* X-wing™ Fighter Lesson Guide	2.00
7000	Bull Pup 12D™	9.99
7003	SR-71 Blackbird™	17.99

Prod. No.	Description	Sugg. Retail
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302271	Parachute 24"	4.59
302274	Recovery Wadding	2.99
302275	Streamer Kit	5.79
302278	Shock Cords & Mount Pack	2.29
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302301	Model Rocket Igniters (6 Pack)	2.99
302320	Launch Lug Pack	3.19
302995	Decal Pack	2.29
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303084	BT-5 Body Tubes (4)	3.19
303085	BT-20 Body Tubes (4)	3.79
303086	BT-50 Body Tubes (3)	3.89
303087	BT-55 Body Tubes (3)	4.59
303088	BT-56 Body Tubes (3)	4.59
303089	BT-60 Body Tubes (3)	4.99
303090	BT-80 Body Tubes (2)	4.99
303091	HBT-1090 Body Tubes (3)	3.99
303143	Engine Hook Accessory Pack	3.49
303157	Mini-Engine Mount Kit	3.79
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303160	NC-5 Nose Cones (5 Pack)	4.29
303161	NC-20 Nose Cones (5 Pack)	4.49
303162	NC-50 Nose Cones (5 Pack)	4.49
303163	NC-55 Nose Cones (4 Pack)	5.29
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303168	NC-80b Nose Cones (1 Pack)	3.99
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303193	Dowel, Fin Stock & Patterns Pack	4.99
303194	Payload Section PS-20 & PS-50/55	4.99
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C00130	Tee Dee® .010	64.99
C00150	Black Widow .049	44.99
C00170	Tee Dee® .049	64.99
C00210	Tee Dee® .09	69.99
C00340	Killer Bee .049	44.99
C00350	Babe Bee .049	34.99
C00405	Basic Starting Kit	11.99
C00885	Deluxe Starting Kit	21.99
C04050	Firebird™	41.99
C04060	E-Z Flyer® Aerobat™	41.99
C04070	E-Z Flyer® Cessna Skymaster	41.99
C04080	E-Z Flyer® Piper Comanche	41.99
C04100	Alien Hovercraft	57.99
C04300	Air Rescue™	48.99
C04420	Comanche Helicopter	57.99
C04500	Attack Cobra	57.99
C04506	Texaco .049	39.99
C04800	Sky Jumper®	57.99
C05300	R/C Recon™	99.99
C05820	Turbo Hawk™	49.99
C05840	Electric Powered Glider	29.99
C06010	E-Z Flyer® Formula One™	41.99
C06030	Backdraft™	59.99
C06040	Slipstream™	59.99
C06050	Apache Helicopter	59.99
C07400	Cessna	6.99
C07410	Cessna Classic	11.99
C07420	Piper	6.99

Prod. No.	Description	Sugg. Retail
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C07440	Fun Flyer™ Heli	6.99
C09050	Flex Wing Flyer	89.99
C09501	F8F Bearcat™ w/o Battery & charger	49.99
C09561	F8F Bearcat™ w/Battery & charger	79.99
C09800	AT-6 Texan™	41.99
C09870	Piper J-3 Cub	59.99
C09880	Extra 300s	59.99
C09890	AT-6 Texan™ Bomb Drop	59.99
C90445	R/C Fly Boy™	199.99
C90450	Lazy Bee™ w/2 Ch. Radio - 27 MHz	289.99
C90469	R/C Sky Bird™ w/2 Ch. Radio - 27 MHz	357.99
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C90478	R/C Sky Bird™ Glow w/2 Ch. Radio - 27 MHz	279.99
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	LIGHT GLIDERS	
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	WEST WINGS	
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5012	SR-71 Blackbird™	5.99
	Star Wars	
1490	X-wing™ Fighter Starter Set	36.99
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2103	*Star Wars* X-wing™ Fighter Commemorative	18.99
2104	*Star Wars* R2-D2™ Commemorative	28.59
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2144	Vader's TIE Fighter™ Model Rocket	16.99
2147	Star Destroyer™ Model Rocket	29.99
2500	X-wing™ Fighter Air Powered Rocket Set	TBD
NCR3540	High Impulse™ X-wing™ Fighter	99.99
5020	Star Destroyer™ Catapult Glider	8.49
5021	A-wing Fighter™ Catapult Glider	8.49
5022	X-wing™ Fighter Glider	6.49
5023	Y-wing™ Fighter Glider	6.49
STE6760	X-wing™ Fighter Control Line	24.99
STE6761	Y-wing™ Fighter Control Line	24.99
C09310	X-wing™ Fighter Control Line	59.99
C09320	Snowspeeder™ Control Line	59.99
C09430	Landspeeder™ R/C	99.99

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RTF = Ready to Fly

TBD = To be determined.

Prices are subject to change without notice.

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(12-97) 906352

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1593	1/2A6-2 Engines (3 pack)	4.79
1598	A8-3 Engines (3 pack)	4.79
1601	B4-2 Engines (3 pack)	5.09
1602	B4-4 Engines (3 pack)	5.09
1605	B6-2 Engines (3 pack)	5.09
1606	B6-4 Engines (3 pack)	5.09
1607	B6-6 Engines (3 pack)	5.09
1608	B6-0 Engines (3 pack)	5.09
1613	C6-3 Engines (3 pack)	5.69
1614	C6-5 Engines (3 pack)	5.69
1615	C6-7 Engines (3 pack)	5.69
1616	C6-0 Engines (3 pack)	5.69
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1665	D12-0 Engines (3 pack)	8.79
1666	D12-3 Engines (3 pack)	8.79
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2008	Yellow Jacket™	8.99
2026	Athena™	10.59
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2127	Sizzler®	12.99
2128	Longshot™	19.99
2129	Python™	16.99
2130	Mach-12™	14.99
2131	Mk-109 Stingray™	9.99

9020	Assortment of 9025, 9026, 9027 (4 each, Apple)	178.00
9025	Introduction to Model Rocketry (Apple)	11.90
9026	Aerodynamics of Model Rocketry (Apple)	23.85
9027	Physics of Model Rocketry (Apple)	11.90
9028	AstroCad™ (Apple)	9.50
9036	Physics of Model Rocketry (IBM)	11.90
9037	AstroCad™ (IBM)	9.50
9038	Introduction to Model Rocketry (IBM)	11.90
9039	Aerodynamics of Model Rocketry (IBM)	23.85
9040	AstroCad™ (Mac)	9.50
9041	Introduction to Model Rocketry (Mac)	11.90
9042	Aerodynamics of Model Rocketry (Mac)	23.85
9043	Physics of Model Rocketry (Mac)	11.90
9052	Assortment of 9041, 9042 & 9043 (4 each Mac)	178.00
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302205	Safety Cap/Key	1.79
302215	Porta-Pad® II Launch Pad	18.89
302218	Electron Beam®/Porta-Pad® II Combo	31.79
302220	Electron Beam® Launcher	22.29
302227	Rocket Builder's Marking Guide	5.79
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302232	AltiTrak™	18.89
302233	Emergency Repair Kit	7.59
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302243	1/8" Two-Piece Launch Rod	5.29
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302260	18" Nylon Parachute	5.99
302261	24" Nylon Parachute	6.99

ESTES

Masters™ SERIES

Level 4 (Masters™ Series)
These kits require a high degree of modeling involvement from building to painting to flying.

MERCURY ATLAS™

GLIDING ORBITER

SPACE SHUTTLE™

r/c glider

R/C Glider
- Rocket-powered, radio-controlled sailplane
- Launch or boost vertically, then gently guide it toward a thermal

ROCKET-POWERED

OUTSTANDING SLOPE SOARER!

Recommended for ages 10 years and up. Adult supervision for those under 12.
Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.

MASTER™ SERIES

MERCURY ATLAS™ EST 2111

A highly detailed 1/35 scale model of the vehicle that put the first American in orbit. Injection and vacuum-formed plastic parts with simulated stainless steel body wraps. Requires removable stabilizer fins for flight.

SPECS: Length: 33" (83.8 cm); **Dia.:** 3.4" (86.4 mm); **Wt.:** 7.8 oz (220 g); **Recovery:** Capsule - 12" (30 cm) Parachute; Main body - 24" (61 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 250 ft (76 m); **Recommended Engine:** D12-3 only. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) – available separately.

SPACE SHUTTLE™ EST 1284

Accurately detailed in 1/162 scale of America's workhorse space vehicle. Orbiter features glide return; External Tank and SRB's return via 'chute. Requires removable stabilizer fins for flight.

SPECS: Total Length: 13.6" (34.5 cm); **Wt.:** 4.4 oz (124 g); **Orbiter Length:** 9.0" (22.9 cm); **Recovery:** Orbiter: Glider; SRB's/ET: 18" (46 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 197 ft (60 m); **Recommended Engines:** C5-3 (first flight), C6-3

ESTES R/C GLIDER

SWEET VEE™ EST 2116

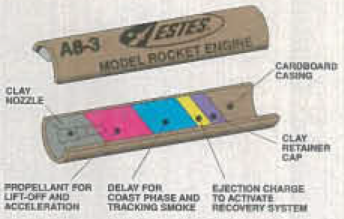
Launch this glider vertically, then guide it toward a thermal and watch it fly. This model features a blow-molded fuselage and pre-cut foam wing cores and Obeche wood coverings. Kit comes complete with a special plastic mechanical mixer. The Sweet Vee™ requires at least a two-channel radio with a mini, micro or mid-size servo – R/C equipment NOT included. R/C building and flying experience required.

SPECS: Length: 34" (86.4 cm); **Wingspan:** 55" (139.7 cm); **Wing Area:** 340 sq. in. (0.22 sq. m); **Wt.:** 16-20 oz. (453-567 g); **Max. Altitude:** 148 ft (45 m); **Recommended Engine:** D11-P only

ESTES MODEL ROCKET ENGINES

These are the famous model rocket engines that made model rocketry the safe hobby it is today. They incorporate a safe, intelligent design, manufactured under precise and strict engineering tolerances. Estes model rocket engines have been proven consistent and reliable in more than 300,000,000 launches. They are the key to the outstanding safety record model rocketry has achieved over the past 40 years.

- The concept of a factory assembled model rocket engine is the foundation of this safe, scientific and educational activity!
- 3% of all Estes engines are static-tested at the factory for reliability and adherence to performance specs.
- All engines comply with the codes of the National Fire Protection Association and are certified by the National Association of Rocketry.



HOW DOES A MODEL ROCKET ENGINE WORK?

1. Insert engine into rocket. Insert igniter and igniter plug into engine. Place rocket over launch rod on launch pad, hook igniter clips to igniter. U.S. Patent Nr. 5,509,354

2. When launch button is pushed, engine produces thrust and boosts rocket into the sky.

3. After propellant is used up, delay is activated, allowing rocket to coast.

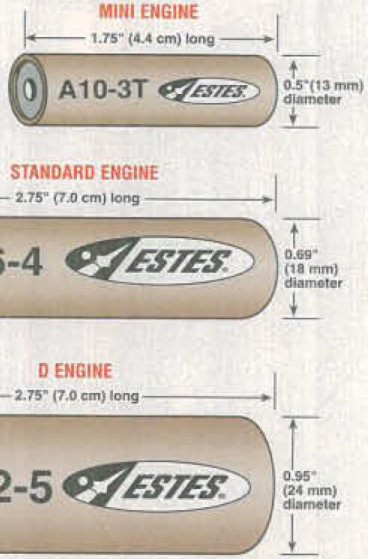
4. After delay, ejection charge is activated, deploying recovery system.

MAKE CERTAIN SAFETY KEY HAS BEEN REMOVED FROM CONTROLLER!

WHAT SIZES ARE AVAILABLE?

Estes engines are available in a wide variety of sizes and power levels:

TYPE	TOTAL IMPULSE	ENGINE TYPES
1/2A	0.626 - 1.25	Standard, Mini
A	1.26 - 2.50	Standard, Mini
B	2.51 - 5.00	Standard
C	5.01 - 10.00	Standard
D	10.01- 20.00	"D" Size



WHAT DO THE DIFFERENT COLOR ENGINES MEAN?

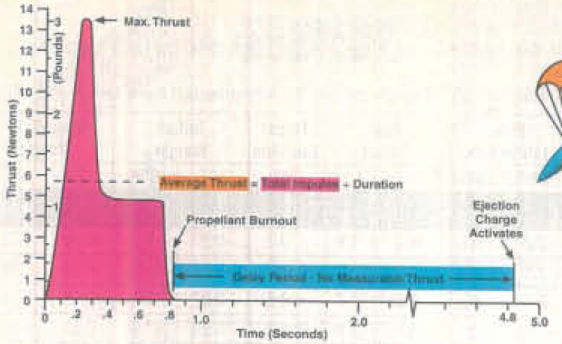
Each type of engine is printed in a different color:

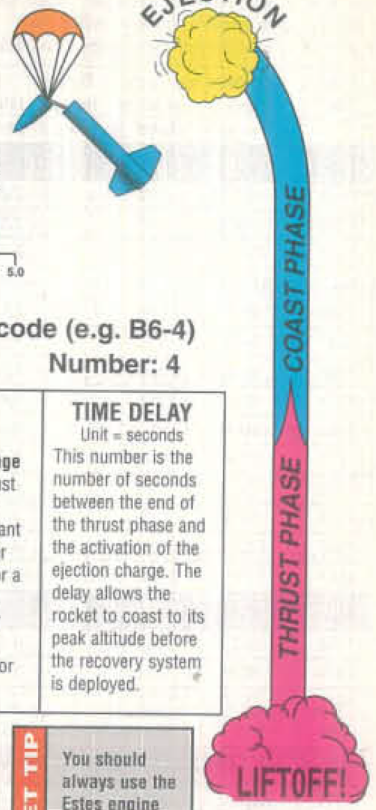
Single Stage engines are printed green.

Upper Stage engines are printed purple. (Upper stage engines can be used as single stage engines in lightweight rockets.)

Booster engines are printed red. (Booster engines contain no delay or ejection charge.)

Plugged engines are printed black. (They are used for R/C gliders and contain no delay or ejection charge.)





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

Letter: B **Number: 6** **Number: 4**

TOTAL IMPULSE

Unit = Newton-seconds (N-sec)

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.)

AVERAGE THRUST

Unit = Newton

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.

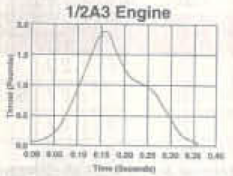
TIME DELAY

Unit = seconds

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.

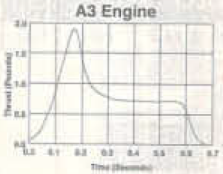
TIME/THRUST CURVES

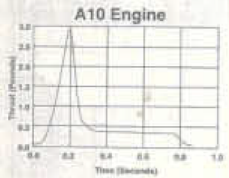
- Time/thrust curves are representative of random production samples.
- Time/thrust curve graphs are shown in pounds (not Newtons).
- Graphs are not drawn to the same scale.

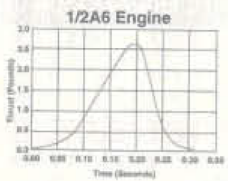


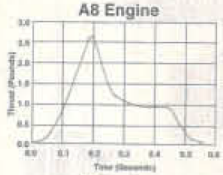
ROCKET TIP

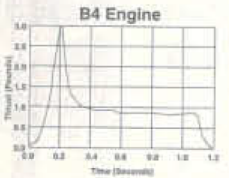
You should always use the Estes engine recommended for your specific kit.

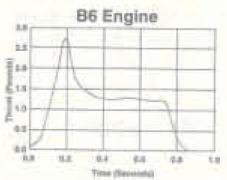


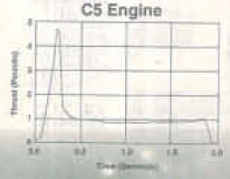


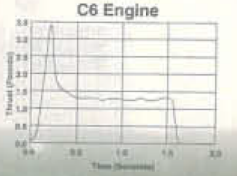












ENGINE CHART

- 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
SINGLE STAGE ENGINES (GREEN LABEL)												
1503	1/2A3-2T	1.25	2	2.0	57	8.3	1.9	0.3	0.20	5.6	0.06	1.75
1593	1/2A6-2	1.25	2	2.0	57	11.8	2.7	0.3	0.53	15.0	0.06	1.56
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
UPPER STAGE ENGINES (PURPLE LABEL)												
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	C6-7	10.00	7	2.5	71	15.3	3.4	1.6	0.95	26.9	0.44	12.48
1668	D12-7	20.00	7	8.0	226	32.9	7.4	1.6	1.55	44.0	0.88	24.93
BOOSTER STAGE ENGINES (RED LABEL)												
1510	A10-0T	2.50	None	5.0	142	13.0	2.9	0.8	0.24	6.7	0.13	3.70
1608	B6-0	5.00	None	4.0	113	12.1	2.7	0.8	0.58	16.4	0.22	6.24
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
PLUGGED ENGINES -FOR USE WITH R/C ROCKET GLIDER (BLACK LABEL)												
1669	D11-P	20.00	None	16.0	453	27.6	6.2	1.8	1.55	44.0	0.88	24.93

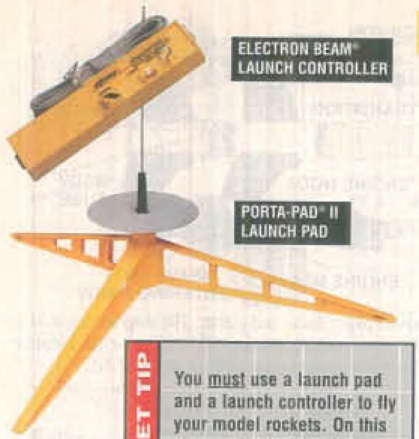
The data listed above is from randomly chosen production samples.
NOTE: The "T" designates a mini-engine.

FLIGHT ACCESSORIES

BLAST-OFF® FLIGHT PACK
EST 1672
Contains 24 engines, 24 igniter plugs , 30 igniters and a pack of recovery wadding. Engines include six each of the A8-3, B6-4, C6-3 and C6-5. Ideal way to have fun on a Saturday afternoon!

RECOVERY WADDING
EST 302274
Flame resistant wadding to protect your recovery system. Required in most Estes rockets. Contains 75 sheets – enough for about 18-25 flights!

IGNITERS
EST 302301
Dependable, easy-to-use Estes igniters in a convenient six pack. It is always a good idea to have a few spares.



ROCKET TIP
You must use a launch pad and a launch controller to fly your model rockets. On this page, you will find all the equipment you need to fly your rockets safely.

LAUNCH ACCESSORIES

ELECTRON BEAM® LAUNCH CONTROLLER EST 302220
Launch controller comes complete with safety key, continuity light, push button launch button, safety decals, 17 feet (5.2 m) of cable and micro-clips for igniter hook up. No assembly required! Requires four AA alkaline batteries – not included.

PORTA-PAD® II LAUNCH PAD EST 302215
Sturdy, bright plastic tripod design with tilt adjustment (up to 30° from vertical). Easy to set up and take down – no tools required! Comes complete with blast deflector and standoff, two-piece 1/8" (3 mm) launch rod, safety cap and key. Porta-Pad® II can accommodate a 3/16" (5 mm) launch rod – not included.

ELECTRON BEAM®/PORTA-PAD® II COMBO EST 302218
Contains a complete Electron Beam® and Porta-Pad® II launch pad system. Requires four AA alkaline batteries – not included.

1/8" (3 MM) TWO-PIECE LAUNCH ROD EST 302243
Replacement rod; ideal for most rockets.

3/16" (5 MM) TWO-PIECE MAXI™ LAUNCH ROD EST 302244
Launch rod with extra strength and stiffness for larger rockets.

LAUNCH ROD SAFETY CAP AND KEY EST 302205
Always keep an extra one handy!

BLAST DEFLECTOR WITH STANDOFF EST 302241
Replaces that worn-out deflector.

ROCKET BUILDER'S MARKING GUIDE™ EST 302227
Easy way to mark fin and launch lug placement lines. Fits all current Estes body tubes. Marks fins at 90° and 120° apart. The angled ruler measures metric and inches. A pencil holder to mark tube circumferences and a fin gluing jig are also included. Molded out of durable plastic. A must for any rocket builder!

FIN ALIGNMENT GUIDE™ EST 302231
Allows you to position and glue 3/32" (2 mm) and 1/8" (3 mm) thick fins quickly and easily. Designed to fit all current Estes body tubes, aligning fins at 90° and 120°. Molded out of durable plastic.

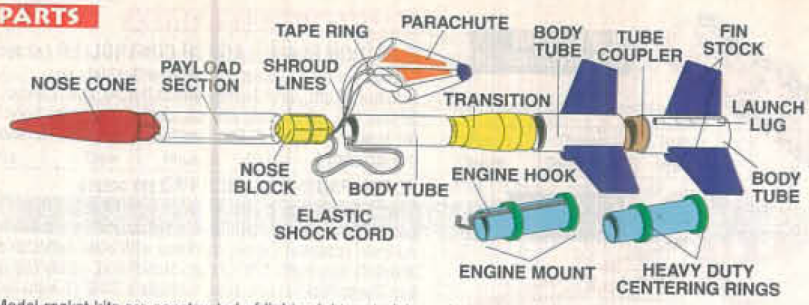
DESIGNER'S SPECIAL™ EST 1463
Design and build your own rockets! Contains nose cones and body tubes for BT-5, BT-20, BT-50, BT-55 and BT-60 designs. Also contains parachute and streamer kits, engine mounts, launch lugs, fin stock, tube couplers, centering rings and much more!

ALTITRAK™ EST 302232
How high did it really go? Next time, measure it with this easy to use device. Follow the rocket in the sights to apogee, release the trigger to lock the reading. Easy-to-read display gives you your altitude in meters along with the elevation angle. Use two Altitraks™ for greater accuracy. Great for school and science projects!

TRANSROC II™ ROCKET LOCATOR EST 2237
On-board sonic unit fits any BT-20 (3/4" or 18 mm) or larger body tube. Unit emits high pitched tone to aid in recovery. Use the directional locating device with the included headphones to make finding your rocket easier. Requires one 9 volt battery and one 6 volt (type 2CR1/3N) battery – not included.

EMERGENCY REPAIR KIT EST 302233
Contains many things you need on the launch pad or to make field repairs on your rockets. Comes in a handy reclosable pouch. Contains: shock cord mounts, tape rings, safety key, recovery wadding, 12" (30 cm) parachute kit, shroud line, launch lugs, shock cords and launch rod safety cap.

PARTS



Model rocket kits are constructed of lightweight materials such as paper, balsa and plastic. The diagram above shows how parts fit together. Nearly all Estes parts that have the same series description number fit together. For instance, a BT-20 body tube will fit a NC-20 nose cone. An AR2050 centering ring will center a BT-20 into a BT-50.

BODY TUBES

High quality spiral wound paper tubes. Use tube couplers to connect tubes of the same diameter.

Four tubes per package with BT-5 & BT-20, three per package with BT-50, BT-55, BT-60 & HBT-1090, two per package in BT-80.

Product Number	Body Tube Size	Inside Dimension in./mm	Outside Dimension in./mm	Length in./cm
303084	BT-5	0.518/13.2	0.544/13.8	18.0/45.7
303085	BT-20	0.710/18.0	0.736/18.7	18.0/45.7
303086	BT-50	0.950/24.1	0.976/24.8	18.0/45.7
303087	BT-55	1.283/32.6	1.325/33.7	18.0/45.7
303088	BT-56	1.304/33.1	1.346/34.2	18.0/45.7
303089	BT-60	1.595/40.5	1.637/41.6	18.0/45.7
303090	BT-80	2.588/65.7	2.600/66.0	14.2/36.1
303091	HBT-1090	0.950/24.1	1.000/25.4	11.0/27.9

NOSE CONE ASSORTMENTS

Each package of nose cones contains a variety of shapes. Some are one piece, others two-piece. All have eyelets for shock cord and shroud line attachments.

NC-5 Nose Cone Assortment
EST 303160
Five cones per pack

NC-20 Nose Cone Assortment
EST 303161
Five cones per pack

NC-50 Nose Cone Assortment
EST 303162
Five cones per pack

NC-55 Nose Cone Assortment
EST 303163
Four cones per pack

NC-56 Nose Cone Assortment
EST 303164
Four cones per pack. Same cone shape, different colors.

NC-60A Nose Cone Assortment
EST 303165
Two cones per pack
Big Bertha™ and Bailout™ style.

NC-60B Nose Cone Assortment
EST 303166
Two cones per pack Mean Machine™ and Tomcat™ (without canopy) style

NC-80A Nose Cone
EST 303167
One cone per pack
Phoenix™ style

NC-80B Nose Cone
EST 303168
One cone per pack
Fat Boy™ style

NC-1090 Nose Cone
EST 303169
Four cones per pack
Bandit™ and Fire Streak™ style

SMALL TUBE COUPLERS

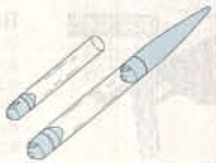
EST 302297
Two couplers each for BT-5, BT-20 and BT-50.

LARGE TUBE COUPLERS

EST 303196
Two couplers for BT-55, BT-56 and BT-60; One for BT-80.

PAYLOAD SECTION KITS

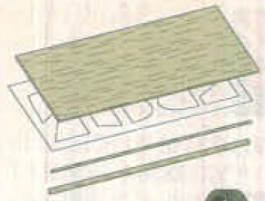
Payload Section PS-20 & PS-50/55 - EST 303194
Complete with two clear payload sections (BT-20 and BT-50 size). Fits BT-20 and BT-50-sized rockets – 0.74" (18.7 mm) and 0.98" (24.8 mm) diameters plus includes a transition section to fit the BT-50 sized clear tube onto a BT-55 (1.33" or 33.7 mm) body tube. Kit includes plastic bulkheads and instructions. Nose cones not included!



Payload Section PS-55/60 - EST 303195
Large BT-60 (1.6" or 40 mm) clear tube to fit BT-55 and BT-60 size rockets. Complete with bulkheads, transitions and nose cone.

ROCKET TIP
Convert your favorite rockets over to carry payloads! Just look for your rocket's diameter in the rocket specs in this catalog. Select the payload section that fits.

We reserve the right to change packaging contents and quantities.



DOWELS, FIN STOCK & PATTERNS PACK EST 303193

Includes three different sheets of balsa:
- 3" X 12" X 3/32" (75 mm X 305 mm X 2 mm)
- 3" X 12" X 1/8" (75 mm X 305 mm X 3 mm)
- 3" X 12" x 3/16" (75 mm X 305 mm X 3.5 mm);

and two different dowel stock:
- 1/12" X 12" (2 mm X 305 mm)
- 1/8" X 12" (3 mm X 305 mm);

and includes pattern sheets containing many popular fin shapes.

CENTERING RING PACK EST 302296

Heavy duty centering rings for centering tubes in other tubes or for making custom engine mounts. Includes rings that center BT-5 in BT-20 (six each), BT-20 in BT-50 (12 each) and BT-50 in BT-55 (six each).

FLAT CENTERING RING PACK EST 302295

Die-cut card stock rings for centering tubes in other tubes or for making custom engine mounts. Includes instructions and pattern sheet to make paper shrouds for transitions and boat tails. Rings will center BT-20 in BT-50, 55, 56 and 60 and BT-50 centered in BT-60 and BT-80.

ENGINE HOOK PACK EST 303143

Hooks for engine mounts - Fits mini-engines (one each), regular and "D" engines (three each) and 3-1/2" long hooks for special applications (two each). Includes spacer for long engine hooks.

LAUNCH LUG PACK EST 302320

Contains eight 1/8" (3 mm), four 3/16" (5 mm) and two 1/4" (6 mm) launch lugs.

DECALS

Apply these boldly colored decals anywhere – on rockets, model cars, airplanes, notebooks, etc.

Assortment 1 EST 302995 – Water transferable decals with US Flags, military "Stars and Bars", letters and numbers plus more!

Assortment 2 EST 302996 – Self-adhesive chrome foil decals with hatches, cockpits and more!

PLASTIC PARACHUTES

Colorful chutes complete with tape rings, shroud lines, snap swivels (for quick changes) and instructions.

Product No.	Parachute Diameter
EST 302264	12" (30 cm)
EST 302267	18" (46 cm)
EST 302271	24" (61 cm)

NYLON PARACHUTES

Red, ripstop nylon chutes, pre-assembled. Fits rockets with a BT-60 (1.6" or 42 mm) or greater body tube.

Product No.	Parachute Diameter
EST 302260	18" (46 cm)
EST 302261	24" (61 cm)

STREAMER KITS EST 302275

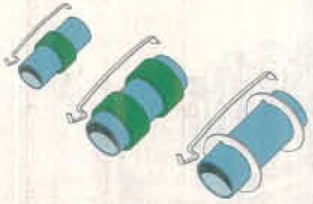
Contains two different types of streamer material:
One 2" X 90" (5 cm x 230 cm) red crepe paper and two 1.75" X 36" (4.5 cm X 91 cm) metalized plastic streamers (One gold, one red).
Comes complete with snap swivels.

SHOCK CORDS AND MOUNT PACK EST 302278

Contains two 1/8" X 18" (3 X 450 mm), and one 1/4" X 36" (6 mm X 910 mm) elastic shock cords (enough for four shock cords). Includes mounts and instructions.

ENGINE MOUNT KITS

Engine mounts for conversions and original designs. Easy to assemble with complete instructions. Each kit has enough parts for two complete mounts.



MINI-ENGINE MOUNT - EST 303157
Fits BT-20 tubes. Also can be used to fly lightweight standard engine kits with mini-engines.

STANDARD ENGINE MOUNT - EST 303158
Fits BT-50, 55, 56 & 60 tubes. Plus can be used to make a conversion mount for lightweight D powered rockets.

D ENGINE MOUNT KIT - EST 303159
Heavy duty engine mounts for D engines. Fits BT-55, 60 and 80 tubes.

MODEL ROCKETRY AND EDUCATION

FOR MORE DETAILS AND INFORMATION ON OUR MODEL ROCKET EDUCATIONAL SUPPLIES, SEE THE ESTES EDUCATOR™ CATALOG.

MODEL ROCKET BULK PACKS

12 rockets per pack, complete with 12 sets of instructions and extra parts.

ALMOST READY TO FLY (E2X® SERIES)

Gnome™ Bulk Pack (See page 18 for rocket description) . . . . . **EST 1750**

Alpha III® Bulk Pack (See page 18 for rocket description) . . . . . **EST 1751**

Bandit™ Bulk Pack (See page 16 for rocket description) . . . . . **EST 1752**

Generic E2X® Bulk Pack (pictured at right) . . **EST 1764**

X-Ray™ Bulk Pack (See page 21 for rocket description) . . . . . **EST 1768**

Mach-12™ Bulk Pack (See page 20 for rocket description) . . . . . **EST 1769**

Omloid™ Bulk Pack (See page 20 for rocket description) . . . . . **EST 1771**

SKILL LEVEL 1 (BETA™ SERIES)

Wizard™ Bulk Pack (See page 26 for rocket description) . . . . . **EST 1754**

Viking™ Bulk Pack (See page 30 for rocket description) . . . . . **EST 1755**

Alpha® Bulk Pack (See page 27 for rocket description) . . . . . **EST 1756**

Nova Payloader™ Bulk Pack (See page 27 for rocket description) . . . . . **EST 1757**

Performance™ Bulk Pack (pictured at right) . . **EST 1765**

Venom™ Bulk Pack (See page 28 for rocket description) . . . . . **EST 1770**

SKILL LEVEL 2 (EXPLORER™ SERIES)

Tornado™ Bulk Pack (See page 36 for rocket description) . . . . . **EST 1758**

Loadstar™ Bulk Pack (pictured at right) . . . . . **EST 1760**

Bull Pup 12D™ Bulk Pack (See page 36 for rocket description) . . . . . **EST 1767**

PROPELLER DRIVEN AIRPLANE

Hi-Lite® Light Glider Bulk Pack (See page 65 for description) . . . . . **EST 1786** NEW!

ANOTHER EXCITING NEW KIT

***Star Wars* X-wing Fighter™ Bulk Pack** (6 pack) (See page 70 for rocket description) . . . . . **EST 1773** NEW!

MODEL ROCKET ENGINE BULK PACKS

Includes 24 engines and igniter plugs, 30 igniters and a package of recovery wadding (enough for 25 flights).

1/2A3-2T Bulk Pack . . . . . **EST 1780**

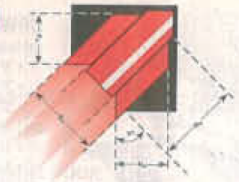
A8-3 Bulk Pack . . . . . **EST 1781**

B6-4 Bulk Pack . . . . . **EST 1783**

B6-0/B6-6 Bulk Pack (12 each) . . . . . **EST 1784**

C5-3 Bulk Pack . . . . . **EST 1785**

(See pages 42-44 for additional engine information)



ESTES EDUCATOR™

SOFTWARE

Learn about the principles of aerodynamics, physics and space flight with these programs. Provided on a 5.25" floppy disk for Apple computers and a 3.5" floppy disk for Mac and IBM compatible computers.

IN SEARCH OF SPACE - INTRODUCTION TO MODEL ROCKETRY™

Covers: flight profile; parts; engine and classification; safety code plus bonus program on multi-staging and igniter installation and function.

Apple . . . . . **EST 9025**
Mac . . . . . **EST 9041**
IBM Compatible/Windows . . . . . **EST 9038**

FLIGHT: AERODYNAMICS OF MODEL ROCKETS™

Covers: forces; aerodynamics; stability; drag; center of gravity; center of pressure.

Apple . . . . . **EST 9026**
Mac . . . . . **EST 9042**
IBM Compatible/Windows . . . . . **EST 9039**

PHYSICS OF MODEL ROCKETRY™

Covers: action; reaction; inertia; momentum; acceleration; energy; staging and satellites.

Apple . . . . . **EST 9027**
Mac . . . . . **EST 9043**
IBM Compatible/Windows . . . . . **EST 9036**

ASTROCAD™

Computer program for basic model rocket performance analysis such as: Apogee Determination, Drag and Performance Prediction, Flight Simulation, Rocket Design, Aerodynamic Stability, Optimum Weight and Elliptical fin design. Written by Michael Gasperi

Apple . . . . . **EST 9028**
Mac . . . . . **EST 9040**
IBM Compatible/Windows . . . . . **EST 9037**

ESTES TEACHER'S STARTER SET

EST 1456

Contains a Generic E2X® rocket (Almost-Ready-To-Fly) and an Alpha® rocket (Skill Level 1). Plus:

- Electron Beam® Launch Controller
- Porta-Pad® II Launch Pad
- Glue, sandpaper and razor blade
- Engines, recovery wadding, igniters and plugs – enough for six launches
- Teacher and Youth Group Leaders Guide, science and math applications plus more!

NEW!

VIDEO

Ignite the Imagination™ . . . . . **EST 2794**
- Great for Estes model rocketry and space studies.
- Accompanies the Ignite the Imagination™ Curriculum Guide.

CURRICULA

Science and Model Rocketry™ . . . . . **EST 2847**
(For grades 5-8)

Physics and Model Rockets™ . . . . . **EST 2848**
(For grades 8-10)

Mathematics and Model Rockets™ . . . . . **EST 2849**
(For grades 5-12)

Industrial Technology and Model Rockets™ . . **EST 2850**
(For grades 6-12)

Aviation And Light Gliders™ . . . . . **EST 2851**
(For Grades 2-4 and up) – Use with Estes Light Gliders.

NEW! **Ignite the Imagination™** . . . . . **EST 2852**
(For Grades 5-8)

NEW! **X-wing™ Fighter Lesson Guide™** . . . . . **EST 2853**
(For Grades 5-8)

COX

fun flyer™

RUBBER POWERED MODEL AIRPLANE KITS

- Easy to assemble...No Glue... No Tools...No Sweat!
- Tough durable construction
- Foam fuselages and wings
- Plastic propeller and landing gear
- Cool self-adhesive decals

CESSNA C07400
Wingspan: 15" (38.1 cm)

PIPER C07420
Wingspan: 15" (38.1 cm)

CESSNA CLASSIC C07410
Wingspan: 19" (48.3 cm)

PIPER CRUISER C07430
Wingspan: 19" (48.3 cm)

FUN FLYER™ HELI C07440
This exciting rubber band powered helicopter is easy to assemble. Made from durable foam and plastic construction, you can be flying your "whirlybird" in less than 30 minutes.

SPECS: Skill level: Beginner; **Length:** 10" (25.4 cm); **Rotorspan:** 15.25" (38.7 cm)

CESSNA

PIPER

CESSNA CLASSIC

FUN FLYER™ HELI

PIPER CRUISER

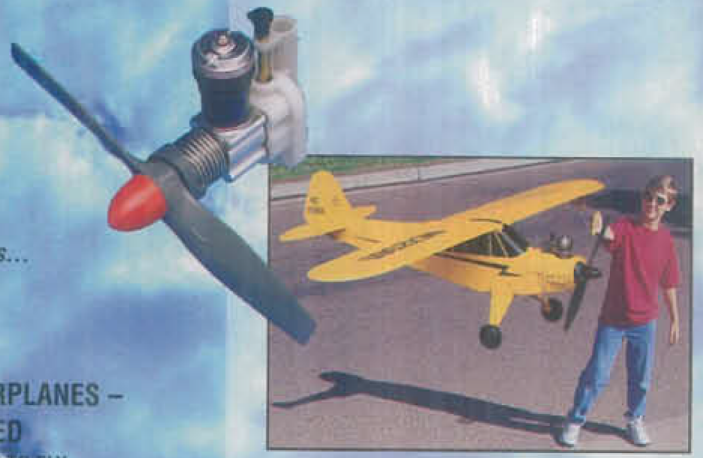
Recommended for ages 8 and up.

COX

For over 50 years, Cox has filled the air with the sound of propellers and the fantasy of flight. Cox brings that fantasy-of-flight to life with nitro powered glow engines, the whir of electric power and the gentle pull of rubber power!

+ COX POWER
+ COX FLIGHT
+ COX FUN.

When the action starts...
The fun never ends!



CONTROL LINE AIRPLANES – ELECTRIC POWERED

THE ULTIMATE IN READY TO FLY

These Cox control line airplanes are ready to fly right out of the box. Just connect the power lines, plug in a fully-charged Cox Super Power 9.6 volt battery pack and push the button on the Cox exclusive Touch & Go D-handle. Smooth take-offs and three point landings are as easy as pushing a button. With the Super Power battery pack clipped to your belt, long flight times are no problem.

- Each plane comes fully assembled and ready to fly out of the box
- Quiet electric power will not disturb the neighborhood
- Factory-installed motor assembly
- Just supply battery and charger and you're ready to fly!

(Super Power 9.6V battery pack and charger not included.)

F8F BEARCAT C09501
Wingspan: 19" (48.3 cm)
Length: 14.8" (37.6 cm)

F8F BEARCAT W/BATTERY AND CHARGER C09561

TOUCH & GO D-HANDLE

Recommended for ages 8 and up.

E-Z FLYERS™

With the roar of a glow fuel engine and the propeller chopping through the air, you can take command of the sky with these high performance control line airplanes.

- Each one is equipped with our famous .049 engine with Snap Starter®.
- Rubber band assembly and tough molded polystyrene withstand the rigors of flight training.
- Quick to assemble and easy to fly! Complete assembly and flight instructions.
- Glow fuel and starting battery not included. You will need the Cox 405 or 885 Starting kit. See page 63!

E-Z Flyers is a registered Cox trademark.

EACH KIT COMES WITH TWO SETS OF COLORFUL DECALS!

CESSNA SKYMASTER

FORMULA ONE™

PIPER COMANCHE

CESSNA SKYMASTER C04070

Scale model of famous civilian and military aircraft. Includes multiple decals and a second propeller for advanced flight performance.
Length: 13" (33 cm)
Wingspan: 15.9" (40.4 cm)

FORMULA ONE™ C06010

Sleek pylon racer design complete with multiple decals and a streamer for custom flying.
Length: 13.5" (34.3 cm)
Wingspan: 13.5" (34.3 cm)

PIPER COMANCHE C04080

Own this model of a popular low-wing private airplane! Multiple decals for custom decorating!
Length: 13" (33 cm)
Wingspan: 16.1" (40.9 cm)

FIREBIRD™

FIREBIRD™ C04050

With the Reno Unlimited racing look of this control line plane, you'll come on strong!
Length: 13.5" (34.3 cm)
Wingspan: 13.5" (34.3 cm)

AEROBAT™ C04060

Own your own private plane – classic high wing design.
Length: 12.5" (31.8 cm)
Wingspan: 16.0" (40.6 cm)

AEROBAT™

Recommended for ages 10 and up.

CONTROL LINE SCALE MODELS

History comes to life with these rugged control line model airplanes. Powered by a Cox .049 glow engine with our exclusive Snap Starter®, you'll get into the air quickly. Engine and control line accessories included.

EXTRA 300S

AT-6 TEXAN BOMB DROP

SURE START™

The future of flight – NOW!
The next generation of powerful Cox .049 glow engines feature Sure Start™. It eliminates the need for external priming, giving you a quicker, easier starting engine. Each Sure Start™ engine comes complete with the Cox Snap Starter®.

BACKDRAFT™

Ages 10 and up. Adult supervision for those under 12.

PIPER J-3 CUB

AT-6 TEXAN

SLIPSTREAM™

APACHE HELICOPTER

CONTROL LINE SCALE MODELS

EXTRA 300S C09880
This is a replica of the world class, FAI Aerobatic Extra 300s. This spectacular model is reproduced in semi-scale detail and features Cox's exclusive Sure Start™ .049 engine and complete flying accessories.

SPECS: Skill level: Beginner; **Length:** 17" (43.2 cm); **Wingspan:** 19.5" (49.5 cm)

PIPER J-3 CUB C09870
One of the most successful full size training planes ever designed is now available in a highly detailed flying model. The Cub features the super reliable Sure Start™ .049 engine. Easy to assemble and fun to fly.

SPECS: Skill level: Beginner; **Length:** 17" (43.2 cm); **Wingspan:** 22" (55.9 cm)

AT-6 TEXAN BOMB DROP C09890
You can experience the thrill of flying precision targeting missions and make hits on targets from heights of 20 feet, all from the confines of your own backyard. The bombing Texan comes complete with flying accessories and bomb attachment with safe, featherweight balls.

SPECS: Skill level: Beginner; **Length:** 15" (38.1 cm); **Wingspan:** 20.5" (52.1 cm)

AT-6 TEXAN C09800
Modeled after the famous AT-6 Reno pylon racers. Wonderful beginner's airplane. Rubber band pop-apart assembly for the rigors of flight training and racing.

SPECS: Skill level: Beginner; **Length:** 15" (38.1 cm) **Wingspan:** 20.5" (52.1 cm)

SLIPSTREAM™ C06040
This business jet has you piloting the skies in style. Realistic looking – great flying! Wide wingspan provides a stable flight for beginners and intermediate fliers! Outfitted with the new Cox Sure Start™ .049 engine.

SPECS: Skill level: Beginner; **Length:** 20.5" (52.1 cm); **Wingspan:** 22" (55.9 cm)

BACKDRAFT™ C06030
Futuristic pusher design with a stealthy appearance. Unique pop-up fuselage allows safe engine starting. Backdraft™ comes complete with military decals for an authentic look. Powered by the new Cox Sure Start™ .049 engine.

SPECS: Skill level: Beginner; **Length:** 16" (40.6 cm); **Wingspan:** 18" (45.7 cm)

APACHE HELICOPTER C06050
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.

SPECS: Skill level: Beginner; **Length:** 18.5" (47.0 cm); **Rotor Span:** 15" (38.1 cm)

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

FREE FLIGHT HELICOPTERS

Powered by the quick starting .049 engine, these free flight helicopters climb to 200 ft (60 m) in the air. After the fuel is expended, the choppers descend safely to earth by auto-rotation. Each kit is easily assembled and comes complete with fuel-proof decals. The .049 engine comes with the Cox Snap Starter® for easy starting.

COMANCHE

AIR RESCUE™

ATTACK COBRA™

SKY JUMPER®

Sky Jumper is a registered trademark of Cox.

COMANCHE C04420

The Comanche is the latest in advanced helicopter technology from Boeing & Sikorsky and our model is authentic in every detail. Featuring the Sure Start™ .049 engine. Some assembly required.

SPECS: Skill level: Beginner; **Length:** 15" (38.1 cm); **Rotorspan:** 19.5" (49.5 cm)

AIR RESCUE™ C04300

This scale model of the Huey UH-1D comes to your rescue in a bright "Search and Rescue" scheme.

SPECS: Skill level: Beginner; **Length:** 12" (30.5 cm); **Rotorspan:** 19.5" (49.5 cm)

ATTACK COBRA™ C04500

Go on the attack with this scale model of the Cobra gunship. Comes with two decor schemes – Marines or Army.

SPECS: Skill level: Beginner; **Length:** 15" (38.1 cm); **Rotorspan:** 19.5" (49.5 cm)

SKY JUMPER® C04800

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 safely auto-rotates back to Earth.

SPECS: Skill level: Beginner; **Length:** 12" (30.5 cm); **Rotorspan:** 19.5" (49.5 cm)

TOP SECRET

ΤΟΠ ΣΕΚΡΕΤ C04100

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.

SPECS: Skill level: Beginner; **Body Diameter:** 14.3" (36.3 cm); **Rotorspan:** 19.5" (49.5 cm)

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

COMING THIS SPRING

ΤΟΠ ΣΕΚΡΕΤ

Ages 10 and up. Adult supervision for those under 12.

COX RADIO CONTROL

For exciting radio control action, Cox offers you the choice of either quiet electric flight or the hi-speed action of .049 glow-powered engines. You're in charge of the skies with our exclusive single channel FailSafe™ or our more advanced two-channel systems.

FLEX WING FLYER™

R/C SKY BIRD™ ELECTRIC

FLY BOY™

FREE FLIGHT

Often regarded as the purest form of the sport of model airplane flying, Cox now offers two exciting electric versions. With minimal assembly required, you can be out in the field flying in a matter of minutes – without all the complications of radio control. Simply turn on the motor and let the plane do the rest.

COMING THIS SPRING

TURBO HAWK ™

ELECTRIC R/C

Your easiest entry into R/C flight. You can fly these electric powered airplanes almost any time or anywhere. All kits come complete with an installed motor, all radio equipment, on-board battery pack and charger. Requires six AA alkaline batteries for the transmitter and six "D" batteries for the charger – not included.

FLEX WING FLYER™ C09050

A truly economical way to get into R/C flying. Kit comes complete with die cut foam parts, Ni-Cad battery, motors and radio equipment included.
Wingspan: 28" (71.1 cm)
Length: 14" (35.6 cm)

FLY BOY™ C90445

Minimum assembly requirements and a powerfully geared electric motor that starts at the press of a button make the economical Fly Boy™ a natural entry into R/C flight. Includes a fully installed motor drive and Cox FailSafe™ radio system.
Wingspan: 27" (68.6 cm)
Length: 20" (50.8 cm)

R/C SKY BIRD™ ELECTRIC C90469

Designed as the ideal trainer for people who prefer quiet, clean electric power, the Electric Sky Bird™ comes complete with high efficiency, geared propeller drive system, rechargeable on-board battery pack, battery charger, and proportional two-stick, two-channel radio. The Sky Bird™ features a polyhedral wing to allow slow flight and good stability.
Wingspan: 42" (106.7 cm)
Length: 31" (78.7 cm)

TURBO HAWK™ C05820

Experience the sight and sound of a true jet-type aircraft. Model comes complete with motor, ducted fan unit and Ni-Cad battery pack all installed, includes battery charger.
Wingspan: 27" (68.6 cm)
Length: 22.5" (57.2 cm)

TOP SECRET C05840

The easiest way ever to get airborne. Simply pop on the tail assembly, charge the Ni-Cads and gently release into the breeze.
Wingspan: 20.5" (52.1 cm)
Length: 19.1" (48.5 cm)

COMING THIS SPRING

TOP SECRET

Recommended for ages 10 and up.

GLOW POWER R/C

Enjoy extended flight times and the sound of power as you expand your R/C horizon. All kits feature the powerful Cox .049 engine and a complete radio system.

R/C E-Z BEE® II C90476

Same size and shape as the E-Z Bee Sport, yet is equipped with two channel Cobra radio system. The ideal trainer if you want to get into serious R/C flying!
Wingspan: 55" (139.7 cm)
Length: 31" (78.7 cm)

LAZY BEE™ C90450

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. Cox .049 equipped with a long duration fuel tank. Two channel two stick, fully proportional equipped radio system is included. Plane is easy to assemble. Made of tough yet lightweight foam.
Wingspan: 39" (99.1 cm)
Length: 32.75" (83.2 cm)

R/C E-Z BEE® SPORT C90480

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 keep these planes light for long duration flights!
Wingspan: 55" (139.7 cm)
Length: 31" (78.7 cm)

R/C SKY BIRD™ GLOW C90478

R/C Sky Bird™ comes with a two channel, two stick, fully proportional equipped radio system. Shorter wingspan for increased wind penetration. Comes with the powerful Cox Babe Bee™ .049 engine. Easy to assemble in less than hour
Wingspan: 42" (106.7 cm)
Length: 31" (78.7 cm)

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

Recommended for ages 12 and up.

R/C RECON™ C05300

Get a bird's eye view of your neighborhood with your very own spy plane. As a free flight aircraft, all you do is start the engine and launch the airplane. It does all the flying for you. Then, when the plane is in the right position, snap the picture with the radio control transmitter. The plane will gently land when all the fuel is used up. Uses a disposable 35 mm camera for superb picture quality. Camera not included.

Wingspan: 47" (119.4 cm)
Length: 31" (78.7 cm)

DROP IN DISPOSABLE 35 MM CAMERA

Recommended for ages 12 and up.

BABE BEE™ .049

BLACK WIDOW™ .049

TEXACO .049

TEE DEE® .049

TEE DEE® .09

TEE DEE® .010

KILLER BEE™ .049

PEE WEE™ .020

COX GLOW FUEL ENGINES

BABE BEE™ .049 ..... C00350

BLACK WIDOW™ .049 ..... C00150
Reed valve engines for all-round Control Line, R/C and Free Flight flying

TEXACO .049 ..... C04506
The standard in R/C duration flying in the 1/2A class

TEE DEE® .049 ..... C00170

TEE DEE® .09 ..... C00210
Tee Dee® engines – precision machined for intense competition

TEE DEE® .010 ..... C00130
World's smallest production engine for R/C and Free Flight

KILLER BEE™ .049 ..... C00340
The ultimate competition engine – ultra high RPM's on small props with high nitro fuel and high compression glow head. Multiple head gaskets allow lower compressions, lower nitro and bigger props.

PEE WEE™ .020 ..... C00100
Reed valve dependability in a miniature package

COX ACCESSORIES

BASIC STARTING KIT C00405
Contains: 1/2 pint of Super Power Fuel®, fuel filler hose, battery case holder for 2 "D" size alkaline batteries (not included), exclusive Cox Starter Stick™, glow head clip and two multi-purpose .049 engine wrenches.

DELUXE STARTING KIT C00885
Deluxe reusable plastic field box contains: 1/2 pint of Super Power Fuel®, fuel filler hose, battery case holder for 2 "D" size alkaline batteries (not included), exclusive Cox Starter Stick™, glow head clip and two multi-purpose .049 engine wrenches.

BASIC STARTING KIT

DELUXE STARTING KIT

COX 90 DAY WARRANTY

For 90 days from the date of purchase, Cox will repair or replace any factory defects without charge. If you find a defect or need replacement parts, please contact the Cox Customer Service Department. If you wish to return a defective part, **send only the affected part** along with proof of purchase to: Cox Customer Service, 1295 H Street, Penrose, CO 81240. Please do not send the entire model. There may be an additional handling charge if you send the entire model kit.

This warranty applies only if the product is operated in accordance with the enclosed assembly and operating instructions provided with each model. Cox assumes no liability except for the exclusive remedy of repair or replacement of parts as specified above. Cox shall not be liable for consequential or incidental damages. Some states do not allow the exclusion of consequential or incidental damages so the above limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

The above warranty excludes all glow heads used on glow fuel powered models.

JOIN THE ESTES AIR FORCE'S LIGHT GLIDER SQUADRON

Light Gliders come in two varieties:

- Rubber powered aircraft complete with plastic propellers and pre-built plastic landing gear
- Die cut foam wings and tail surfaces
- No tools, no glue and no cutting – easy and quick to build

NEW!

FIRESTORM™

WHIRLWIND™

CYCLONE™

Or:

- Long duration fliers with pre-shaped bamboo wings, stabilizers and rudder
- Features plastic ribs and connectors for easy assembly
- Brightly colored Flite Coat tissue provided to cover flying surfaces
- Requires a glue stick and minimal cutting
- Simple to build. Glue and tools not included

PHANTOM™

Light Gliders

BY Estes

HI-LITE®

MIRAGE™

FIRESTORM™ EST 4006

The onique rear, rubber band powered propeller gives this airplane a distinctive look. Large 16" wingspan provides ext 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)

HI-LITE® EST 4000

Brightly colored printed foam wings and tail surfaces will h you flying fast. Easy to assemble and fly with plastic joinin pieces. No tools, no glue and no cutting.

Wingspan: 13" (33 cm); **Length:** 13.8" (35.1 cm)

WHIRLWIND™ EST 4005

You'll love this terrific flying rubber powered airplane with 15 inch cambered wing span. Self adhesive decals and plas connecting pieces. No tools, cutting or glue – quick assem

Wingspan: 15" (38.1 cm); **Length:** 16.3" (41.4 cm)

CYCLONE™ EST 4004

No trouble getting this giant 21 inch wing span glider into t air. Features cambered foam wings, stab and tail surfaces. Bright neon green plastic pieces and self adhesive decals. Great flying airplane!

Wingspan: 21" (53.3 cm); **Length:** 25" (63.5 cm)

PHANTOM™ EST 4001

Pull this fantastic flier into the air like a kite, release the tow and the glider floats back to earth. Can also be hand launch

Wingspan: 23.5" (59.7 cm)

MIRAGE™ EST 4002

Wind the prop on this plane, toss it into the air and watch i Rubber powered featuring plastic propeller and landing gea

Wingspan: 19.5" (49.5 cm)

FLIGHT MASTER® EST 4003

Huge 23.5 inch wingspan gives you a super duration flyer! Rubber powered featuring plastic propeller and landing gea

Wingspan: 23.5" (59.7 cm); **Length:** 21" (53.3 cm)

FLIGHT MASTER®

EARN YOUR WINGS IN THE ESTES AIR FORCE WITH WEST WINGS

- Easy to build profile model airplane kits
- Die cut high grade balsa
- Printed with authentic details and markings
- Add your own colors with markers
- Great flying gliders
- Catapult-launched gliders come complete with plastic handle and heavy duty rubber band

WEST WINGS BY Estes

NEW!

SR-71 BLACKBIRD

F-15 EAGLE

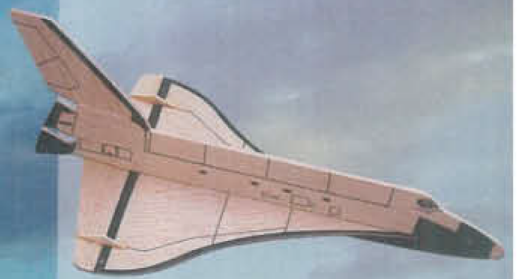
F-111 AARDVARK

F-16 FALCON

F-18 HORNET

C-130 HERCULES

F-14 TOMCAT



SPACE SHUTTLE

SR-71 BLACKBIRD EST 5012
Monitor the skies with this sleek, spy plane! Printed in blac
Hand Launched.
Wingspan: 7.0" (17.8 cm); **Length:** 13.0" (33 cm)

F-15 EAGLE EST 5009
Catapult launch your own model of a USAF fighter bomber.
Veteran of Desert Storm! Printed in blue.
Wingspan: 9.9" (25.1 cm); **Length:** 15.0" (38.1 cm)

F-111 AARDVARK EST 5008
Zoom into the sky with the Air Force's supersonic swing wi
fighter bomber! Catapult launched. Printed in blue.
Wingspan: 11.75" (29.8 cm); **Length:** 15.25" (38.7 cm)

F-16 FALCON EST 5001
Command the skies with your own USAF front line tactical
fighter! Printed in black. Hand launched.
Wingspan: 7.75" (19.7 cm); **Length:** 11.25" (28.6 cm)

F-18 HORNET EST 5007
Fly off the deck with this premier US Navy fighter! Printed i
black. Hand launched.
Wingspan: 8.75" (22.2 cm); **Length:** 11.50" (29.2 cm)

C-130 HERCULES EST 5000
Fly your own version of the USAF's heavy lifter! Over 15 inc
wingspan. Printed in black. Hand launched.
Wingspan: 15.25" (38.7 cm); **Length:** 11.25" (28.6 cm)

F-14 TOMCAT EST 5005
Be your own Top Gun with this US Navy fighter! Printed in
black. Hand launched.
Wingspan: 7.25" (18.4 cm); **Length:** 11.50" (29.2 cm)

SPACE SHUTTLE EST 5004
Command your own Shuttle on its glide path back to Earth!
Printed in black. Hand launched.
Wingspan: 7.0" (17.8 cm); **Length:** 11.75" (29.8 cm)

Recommended for ages 8 and up for hand launched kits, ages 10 and up for catapult launched kits.
Requires modeling knife, straight pins, wax paper and white or yellow glue – not included.

STAR WARS™

ESTES

BURST INTO THIS GALAXY WITH *STAR WARS* ACTION MODELS! FEEL HOW REAL!

X-WING™ STARFIGHTER

Y-WING™ STARFIGHTER

RED SQUADRON X-WING™ STARFIGHTERS

built READY to Fly

StarterSets

ESTES STARTER SETS

All Starter Sets include:

- Electron Beam® Launch Controller
- Porta-Pad® II Launch Pad
- Engines and flight supplies for multiple missions
- 4 AA alkaline batteries required – not included!

VADER'S TIE FIGHTER™

R2-D2™

Ages 10 and up. Adult supervision for those under 12.

STAR WARS READY-BUILT READY TO FLY STARTER SETS

Blast-off into the *Star Wars* galaxy with Ready-Built rockets. The *Star Wars* ready to fly starter sets include six engines, a special edition launch control system and a Star Wars assembled parachute. You'll be ready to jump to lightspeed in minutes with these complete ready to fly launch sets.

X-WING™ STARFIGHTER EST 1819

A highly detailed, fully assembled and painted model of Luke's famous Red 5 X-wing. This X-wing is the version that Luke uses to annihilate the first Imperial Death Star. Feel the Force!

SPECS: Skill Level: Ready To Fly; **Length:** 10.9" (27.7 cm); **Dia.:** 1.4" (36 mm); **Wingspan:** 8.9" (22.6 cm); **Wt.:** 3.5 oz (99 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** B6-2 (first flight), C5-3, C6-3 (includes six engines)

VADER'S TIE FIGHTER™ EST 1820

Darth Vader's personal ship. This highly detailed and painted model is a great addition to the *Star Wars* series of RTF model rockets.

SPECS: Skill Level: Ready To Fly; **Length:** (with removable flight probe) 25.5" (67.3 cm); **Wingspan:** 5.75" (14.6 cm); **Wt.:** 3.6 oz (107 g); **Recovery:** 18" (46 cm) assembled para chute; **Fins:** Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3, C6-5 (includes six engines)

Y-WING™ STARFIGHTER EST 1821

Relive the excitement as the Rebel pilots battle to destroy the evil Empire's Death Star. Estes' highly detailed model comes fully assembled and painted in official *Star Wars* squadron colors.

SPECS: Skill Level: Ready To Fly; **Length:** 14.6" (37.1 cm); **Wingspan:** 7.9" (20.1 cm); **Wt.:** 4.3 oz (122 g); **Recovery:** 12" (30 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 300 ft (91 m); **Recommended Engines:** B6-2 (first flight), C5-3, C6-3 (includes six engines)

RED SQUADRON EST 1822

Known throughout the galaxy for their tenacity and willingness to take on the most impossible missions, the Red Squadron embodies the ideals of the Rebel Alliance. Now you can fly the Red Squadron Red 5 or Red 3 X-wing. Blast-off in multi-engine power with these highly detailed mini X-wing starfighters. Only the most skilled, daring and cunning belong to the Red Squadron. Includes two mini X-wing starfighters.

SPECS: Skill Level: Ready To Fly; **Length:** 6" (15.2 cm); **Wingspan:** 5" (12.7 cm); **Wt.:** 1.6 oz (45 g); **Recovery:** Two 36" (90 cm) streamers & the X-wings nimble; **Fins:** Plastic molded; **Max. Altitude:** 205 ft (62 m); **Recommended Engines:** A10-3T (first flight), A3-4T (includes four engines)

R2-D2™ EST 1823

Everybody's favorite droid. Now you can have a highly detailed, fully assembled and painted model of the real hero of the *Star Wars* trilogy. Artoo is ready to fly in minutes.

SPECS: Skill Level: Ready To Fly; **Length:** 8" (20.3 cm); **Dia.:** 2.60" (6.6 cm); **Wt.:** 3 oz (85 g); **Recovery:** 18" (46 cm) assembled parachute; **Fins:** Plastic molded; **Max. Altitude:** 250 ft (76 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3 (includes six engines)

STAR WARS™

Starter Sets

ESTES

X-WING™ STARTER SET

DEATH STAR™ STARTER SET

FLYING MODEL ROCKET KITS

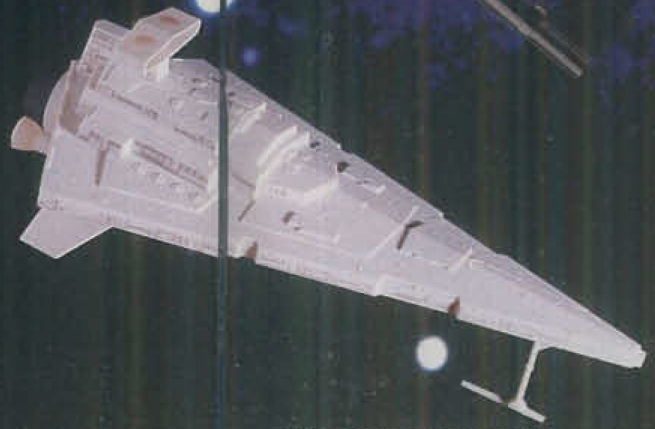
Add to your *Star Wars* collection with these models! Some painting, cutting and gluing required.

R2-D2™

SHOWN WITH FLIGHT PROBE

DARTH VADER'S TIE FIGHTER™

DEATH STAR™



STAR DESTROYER™

Ages 10 and up. Adult supervision for those under 12.

STAR WARS READY-BUILT READY TO FLY ROCKET

built READY to Fly

Experience launching a *Star Wars* X-wing starfighter in minutes. This Ready-Built rocket includes a mini-engine for your first solo mission. Fly it with your current launch system and protect the Rebel Alliance today!

LUKE SKYWALKER'S RED SQUADRON X-WING™ STARFIGHTER

ESTES STARTER SETS

X-WING™ STARFIGHTER EST 1490

Be Luke Skywalker and fly his X-wing! Easy to build with detailed plastic construction! Parachute recovery. Soars to over 400 feet (122 meters)!

SPECS: Skill Level: 1; **Length:** 10.9" (27.7 cm); **Dia.:** 1.4" (36 mm); **Wt.:** 3.5 oz (99 g); **Wingspan:** 8.9" (22.6 cm); **Recovery:** 12" (30 cm) Parachute; **Fins:** Plastic molded; **Max. Altitude:** 500 ft (152 m); **Recommended Engines:** B6-2 (first flight), C5-3, C6-3 (includes two engines)

DEATH STAR™ EST 1493

Fly the Death Star and watch it burst apart in the sky. Multiple pieces return on streamers. Reassemble and fly again and again!

SPECS: Skill Level: 1; **Length:** 15.5" (39.4 cm); **Dia.:** 5.0" (12.7 cm); **Wt.:** 2.3 oz (65 g); **Recovery:** Streamers and 12" (30 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 156 ft (48 m); **Recommended Engines:** B6-2 (first flight), C5-3, C6-3 (includes two engines)

READY-BUILT READY TO FLY ROCKET

RED SQUADRON

Luke Skywalker's X-wing™ Starfighter EST 1810

Imagine flying an X-wing starfighter with this Ready-Built flying model rocket. This highly detailed X-wing leaps off the launch pad on mini-engine power. Streak through the *Star Wars* galaxy with your own version of Luke's Red 5 X-wing!

SPECS: Skill Level: Ready To Fly; **Length:** 6" (15.2 cm); **Wingspan:** 5" (12.7 mm); **Wt.:** 1.6 oz (45 g); **Recovery:** 36" (90 cm) streamer on the pod; the X-wing tumbles; **Max. Altitude:** 205 ft (62 m); **Recommended Engine:** A10-3T (includes one engine)

FLYING MODEL ROCKET KITS

R2-D2™ EST 2142

Fly the heroic droid of the *Star Wars* saga. Easy to build with realistic details and graphics.

SPECS: Skill Level: 1; **Length:** 8.0" (20.3 cm); **Dia.:** 2.60" (6.6 cm); **Wt.:** 3.0 oz (85 g); **Recovery:** 12" (30 cm) Parachute; **Fins:** Plastic molded; **Max. Altitude:** 250 ft (76 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3

DARTH VADER'S TIE FIGHTER™ EST 2144

Fight the Rebels with Vader's personal attack craft. Molded in highly detailed plastic. Special atmospheric flight probe attaches quickly for flight. Soars to over 500 ft (152 m).

SPECS: Skill Level: 1; **Length:** 26.5" (67.3 cm); **Dia.:** 5.75" (14.6 cm); **Wt.:** 3.8 oz (107 g); **Recovery:** 18" (46 cm) Parachute; **Fins:** Plastic molded; **Max. Altitude:** 250 ft (76 m); **Recommended Engines:** B4-2, B6-2 (first flight), C5-3, C6-3, C6-5

DEATH STAR™ EST 2143

Fly the Death Star and watch it burst apart in the sky. Multiple pieces return on streamers. Reassemble and fly again and again!

SPECS: Skill Level: 1; **Length:** 15.5" (39.4 cm); **Dia.:** 5.0" (12.7 cm); **Wt.:** 2.3 oz (65 g); **Recovery:** Streamers and 12" (30 cm) Parachute; **Fins:** Die cut balsa; **Max. Altitude:** 156 ft (48 m); **Recommended Engines:** B6-2 (first flight), C5-3, C6-3

STAR DESTROYER™ EST 2147

A fantastic "D" powered, easy to build, semi-scale model of the work horse of the Empire's fleet. This classic model is sure to be a hit with *Star Wars* enthusiasts everywhere.

SPECS: Skill Level: 2; **Length:** 37.1" (94.2 cm); **Dia.:** Probe: 1" (2.5 cm), Span: 8" (20.3 cm); **Wt.:** 8.8 oz (250 g); **Recovery:** Two 18" (46 cm) parachutes; **Fins:** Plastic molded; **Max. Altitude:** 185 ft (56 m); **Recommended Engine:** D12-3 only

STAR WARS™

ESTES *STAR WARS* COMMEMORATIVE SERIES

Join the epic space adventure with these exciting flying models!

ESTES

X-WING™ FIGHTER

R2-D2™

TIE FIGHTER™

Ages 10 and up. Adult supervision for those under 12. Assembly, construction supplies, launch equipment and flying supplies required.

X-WING™ FIGHTER

Y-WING™ FIGHTER

A-WING™ FIGHTER

All gliders require assembly and construction supplies. Hand launched gliders for ages 8 and up. Catapult gliders for ages 10 and up.

ESTES *STAR WARS* AIR POWERED ROCKET

Safe fun for kids of all ages!

X-WING™ FIGHTER

WESTWINGS BY Estes

WEST WINGS *STAR WARS* FLYING ACTION MODELS

- Profile flying kits from the *Star Wars* movies
- Precision die-cut balsa with printed details and markings
- Easy to build and fly!
- The catapult launched models include plastic-molded launcher and heavy-duty rubber band.

STAR DESTROYER™

CLASSIC COMMEMORATIVE SERIES OF *STAR WARS* FLYING MODEL ROCKETS

X-WING™ FIGHTER EST 2103

Blast the Empire with this scale reproduction of the X-wing fighter. Features plastic molded fuselage and detail parts. Includes authentic decals!

Specs: Skill Level: 2; **Length:** 10.9" (27.7 cm); **Wingspan:** 8.0" (22.6 mm); **Wt.:** 3.5 oz (99 g); **Recovery:** 12" (30 cm) Parachute; **Max. Altitude:** 300 ft (91 m); **Recommended Engine:** D6-3 only

R2-D2™ EST 2104

Fly your own version of the famous droid R2-D2. 1/5 scale kit includes many plastic parts and a detailed self-adhesive body wrapper.

Specs: Skill Level: 2; **Length:** 9" (22.9 cm); **Dia.:** 3.74" (95 mm); **Wt.:** 5.1 oz (145 g); **Recovery:** 18" (46 cm) Parachute; **Max. Altitude:** 300 ft (91 m); **Recommended Engines:** B6-2 (first flight), C6-3

TIE FIGHTER™ EST 2102

Attack the Rebel fleet with your own Imperial TIE Fighter! Kit includes highly detailed plastic cockpit and fuselage with molded energy cannon. This version requires a special atmospheric flight probe.

Specs: Skill Level: 3; **Length:** 5.4" (13.7 cm); **Length with probe:** 21" (53.3 cm); **Wingspan:** 5.0" (12.7 cm); **Wt.:** 3.8 oz (107 g); **Recovery:** 18" (46 cm) Parachute; **Max. Altitude:** 300 ft (91 m); **Recommended Engine:** C6-3

AIR POWERED ROCKET

X-WING™ FIGHTER EST 2500

Fly your own X-wing using only the power of air. Our X-wing starfighter is die cut of soft, pliable foam. Parts are interlocking and easy to assemble. Provides hours of fun for young Rebel pilots.

Specs: Skill Level: Almost Ready To Fly; **Length:** 11.5" (29.2 cm); **Wingspan:** 8.5" (21.6 cm); **Wt.:** 0.9 oz (26 g); **Recovery:** Tumble

WEST WINGS BALSA GLIDERS

X-WING™ FIGHTER EST 5022

Fly this key Rebel fighter craft. Hand launched gliding model – printed in Rebel blue ink.

Specs: Wingspan: 10.5" (26.7 cm); **Length:** 11.5" (29.2 cm)

Y-WING™ FIGHTER EST 5023

Add to your Rebel fleet with this fighter. Hand launched gliding model – printed in Rebel blue ink.

Specs: Wingspan: 7" (17.8 cm); **Length:** 13.5" (34.3 cm)

STAR DESTROYER™ EST 5020

Command your own Star Destroyer against the Rebel fleet! Catapult launched gliding model – printed in Imperial black ink.

Specs: Wingspan: 9.5" (24.1 cm); **Length:** 12.1" (30.7 cm)

A-WING™ FIGHTER EST 5021

Fly one of the Rebel's fastest fighters. Catapult launched gliding model – printed in Rebel blue ink.

Specs: Wingspan: 6.5" (16.5 cm); **Length:** 10.7" (27.2 cm)

STAR WARS™

COX® AIRCRAFT

Fly through the *Star Wars* universe with these exciting Cox *Star Wars* models. Each is powered by a Cox Sure Start™ .049 engine and molded out of tough polystyrene to absorb the bumps and bruises of battle. Each kit assembles quickly, no glue required.

X-WING™ FIGHTER

Recommended for ages 10 and up
Actual product may vary slightly in appearance.

SNOWSPEEDER™

STERLING™ MODELS CONTROL LINE FLIERS

Build and fly your own profile *Star Wars* control line fighters. All balsa parts are precision die cut. Engine mount, wheels and control system are molded in tough nylon and included in each kit. Requires a Cox Babe Bee .049 engine and 405 or 885 starting kit (not included). Each kit includes full plans, instructions and highly detailed decal sheet.

X-WING™ FIGHTER

Y-WING™ FIGHTER

Recommended for those 10 years of age and up. Adult supervision recommended for those under 12 years of age.

LANDSPEEDER™

North Coast Rocketry
BY ESTES

NORTH COAST ROCKETRY®

High Impulse® model rocket fun for the adult rocket modeler

Kit requires assembly. Modeling tools, glue and paint not included. Recommended for ages 18 and up.

COX® AIRCRAFT

X-WING™ FIGHTER CONTROL LINE CO9310
Blast through the galaxy with Luke in your own X-wing fighter!
Specs: Wingspan: 13.6" (34.5 cm); **Length:** 13.5" (34.3 cm)

SNOWSPEEDER™ CONTROL LINE CO9320
Reenact the Battle of Hoth with your control line snowspeeder.
Specs: Wingspan: 12" (30 cm); **Length:** 12" (30 cm)

LANDSPEEDER™ RADIO CONTROL CO9430
Race across the deserts of Tatooine in your own single channel R/C controlled landspeeder. Powered by the Sure Start™ .049 engine. Simulated hover with special wheel setup!
Specs: Wingspan: 9" (22.9 cm); **Length:** 13.5" (34.3 cm)

All kits require the Cox 405 or 885 Starting Kit – not included.

STERLING™ MODELS

X-WING™ FIGHTER CONTROL LINE . . . STE 6760
Experience the Force as you build and fly your own X-wing fighter.
Specs: Wingspan: 13" (33 cm); **Length:** 16" (41 cm)

Y-WING™ FIGHTER CONTROL LINE . . . STE 6761
Fly this unique flying model of this Rebel mainstay fighter! Fight the Empire!
Specs: Wingspan: 10.75" (27.3 cm); **Length:** 18.5" (47 cm)

NORTH COAST ROCKETRY®

X-WING™ FIGHTER
HIGH IMPULSE® ROCKET . . . . . RCR 3548
Huge! For advanced rocketeers, this High Impulse® X-wing features vacuum-formed body halves, detailed plastic parts and a rear-ejected 36" (91 cm) parachute.
SPECS: Length: 20" (50.8 cm); **Dia.:** 3.25" (8.3 cm); **Wingspan:** 18" (45.7 cm); **Wt.:** 30.2 oz (855 g); **Recovery:** 36" (91 cm) Nylon Parachute; **Max. Altitude:** 800 ft (244 m); **Recommended Motors:** F62-4, G70-5

HIGH IMPULSE®

F & G POWER FOR FANTASTIC FLIGHTS!

THE ULTIMATE X-WING™ FIGHTER

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STERLING™ MODELS

Discover the adventure of model aviation and boating with Sterling™ Models by Estes®. The Sterling™ Modeling world of balsa, wood and precision plastic models includes rubber band powered free flight aircraft of WWI, WWII, aerobatic and civilian favorites, control line flying models of famous trainers, stunters and scale aircraft designed for .049 to .36 model engines plus model sail boats, racing boats and battleships for action on the "high seas".

North Coast Rocketry BY ESTES

NORTH COAST ROCKETRY®

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Recommended for ages 18 and up.

For more product information, call or write for your free Sterling™ Models and North Coast Rocketry® catalogs.

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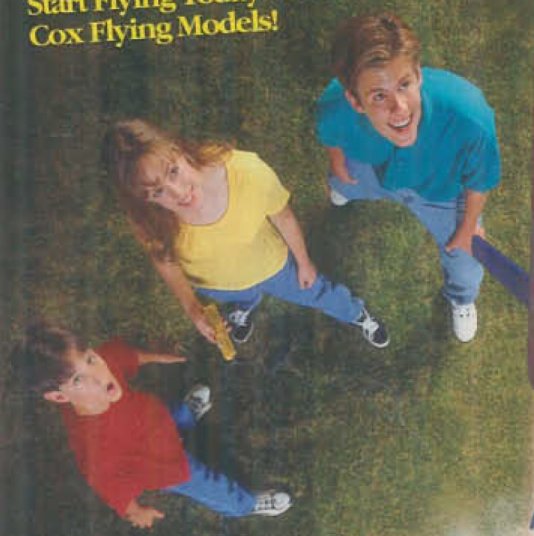

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