
ESTES
60TH
Anniversary
1958
ESTES
2018
PATRIOT

TABLE OF CONTENTS

Prices and availability are subject to change without notice. Color of product may vary.

Please Recycle This Catalog

NEW

Welcome to Estes Industries and the exciting world of model rocketry.

Since its creation by Vern and Gleda Estes 60 years ago, our company has enabled over 500 million rocket launches—with an amazing safety record.

We are now serving our third generation of customers. The first generation, "Vern and Gleda's kids," grew up with the Apollo program. Many of them have gone on to enjoy a lifelong association with the hobby. Many of today's aerospace engineers, technicians, pilots, astronauts, and leaders flew Estes model rockets.

Personally, I am part of the second generation of Estes rocketeers. I've been a lifelong member of the National Association of Rocketry. I got my first Estes rocket when I was three years old, and learned a lot about our country and the world by competing in model rocket competitions. I flew in the very first Team America Rocketry Challenge, held in 2003. Today, for the first time in almost 50 years, Estes is again a family-owned business whose mission is to serve and advance the hobby. I am proud to lead a team of dedicated professionals here in Penrose, Colorado, which remains "the model rocket capital of the world".

Whether you grew up flying Estes rockets or are experiencing them for the first time, we welcome you. Our commitment is to make model rocketry safe, educational, and fun. Come fly with us!

Sincerely,

Ellis Langford
President of Estes Industries

E2X® (EASY TO ASSEMBLE) ROCKET KITS

1958 Alpha® VI
Length: 12.6 in (32 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 2.6 oz (72.7 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), B4-4, B6-4, B6-6, C6-5, C6-7

E2X® (EASY TO ASSEMBLE) ROCKET KITS

7265 Space Crater™
Length: 18.5 in (47 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 2.6 oz (72.7 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 650 ft (198 m)
Recommended Engines: Without egg: B6-4 (first launch), C6-5. With egg: C6-3

1709 Red Diamond™ Bulk Pack
Includes 12 rockets
Length: 27.2 in (69.1 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 3.1 oz (87.9 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 550 ft (168 m)
Recommended Engines: B6-4 (first launch), C6-5

SKILL LEVEL 1 ROCKET KITS

0652 Citation Patriot™
Length: 25.6 in (65 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3.2 oz (90.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2 (first launch) B6-4, C6-5

SKILL LEVEL 2 ROCKET KITS

1295 Mean Machine™
Length: 79 in (200.7 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 8.5 oz (241 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 700 ft (213 m)
Recommended Engines: D12-3 (first launch), D12-5, *E12-4, *E12-6
Requires 3/16th in. Maxi Launch Rod (ESTES PN 2244)

7266 Red Nova™
Length: 21.6 in (54.9 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3 oz. (85 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 800 ft (244 m)
Recommended Engines: D12-5 (first launch), D12-7
Requires 3/16th in. Maxi Launch Rod (ESTES PN 2244)

7265 Space Crater™

1709 Red Diamond™ Bulk Pack

NEW

0652 Citation Patriot™

1295 Mean Machine™

7266 Red Nova™

* E engines require the E™ Launch Controller (2230), sold separately.

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

SKILL LEVEL 3 ROCKET KITS

1293 Black Brant III ***Scale 1/10th***
Length: 20.4 in (51.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.2 oz (34 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1300 ft (396 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

7272 Mini "A" Heli
Length: 17 in (43.2 cm)
Diameter: .54 in (14 mm)
Rotor Diameter: 24.2 in (61.5 cm)
Estimated Weight: .76 oz (21.5 g)
Fins: Laser cut wood
Recovery: Helicopter
Projected Altitude: 400 ft (122 m)
Recommended Engines: A10-3T

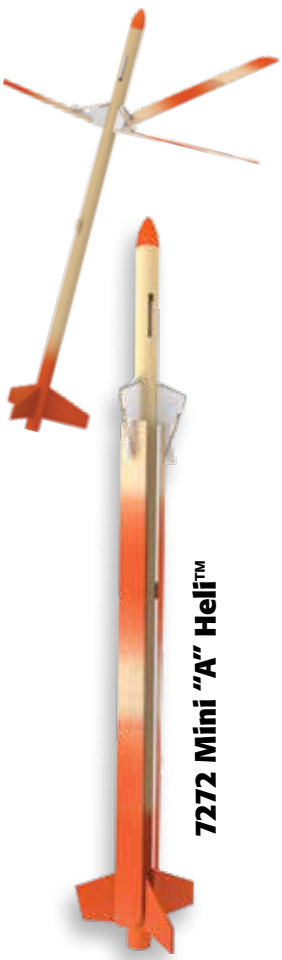
SKILL LEVEL 4 ROCKET KITS

7264 Astron Explorer
Length: 42.2 in (107.2 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 6 oz (170.1 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1200 ft (366 m)
Recommended Engines: D12-3 (first launch), E12-4*

PRO SERIES II™ ROCKET KIT

9719 Super Big Bertha™
Length: 36.8 in (93.4 cm)
Diameter: 2.6 in (66 mm)
Estimated Weight: 8.9 oz (252.3 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1200 ft (366 m)
Recommended Engines: E16-4 (first launch) F15-6
NOTE: This rocket can also be launched on a D12-3 engine when you purchase the ESTES 9753 - 24 mm to 29 mm Engine Adapter.

1293 Black Brant III™



7272 Mini "A" Heli™

NEW

7264 Astron Explorer™

9719 Super Big Bertha™

Pro Series II rockets require a launch controller with 30 feet of wire, such as our E™ (2230) or PSII™ (2240) Launch Controller. In addition to the launch controller, you will need a sturdy launch pad with a ¼" (6 mm) launch rod, or you can purchase our 3552 Estes Pro Series II Launch Pad. Estes Pro Series II model rocketry is recommended for ages 18 and up.

* E engines require the E™ Launch Controller (2230), sold separately.

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

E2X® (EASY TO ASSEMBLE) ROCKET KITS

7277 Galaxy Glow™
Length: 19.6 in (49.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.6 oz (45.4 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, B6-6, C6-5, C6-7

SKILL LEVEL 1 ROCKET KITS

0865 Mini Mean Machine™
Length: 39 in (99.1 cm)
Diameter: .74 in (19 mm)
Estimated Weight: 1.4 oz (39.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 225 ft (69 m)
Recommended Engines: A3-4T (first launch), A10-3T

7275 Sterling Silver™
Length: 22 in (55.9 cm)
Diameter: .74 in (19 mm)
Estimated Weight: 1 oz (31.2 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 2600 ft (792 m)
Recommended Engines:
Rocket only: A8-5 (first launch), B6-6, C6-7
With booster: A8-0 (first launch), B6-0, C6-0

7276 Checkmate™
Length: 17 in (43.2 cm)
Diameter: .74 in (19 mm)
Estimated Weight: 1 oz (28.3 g)
Fins: Laser cut wood
Recovery: Streamer
Projected Altitude: 900 ft (274 m)
Recommended Engines:
Rocket only: A3-4T (first launch), A10-3T
With booster: A10-0T

SKILL LEVEL 3 ROCKET KITS

1329 Multi-Roc™
Length: 25 in (63.5 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 2.5 oz (70.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1200 ft (366 m)
Recommended Engines:
Rocket only: B6-4 (first launch), B6-6, C6-5, C6-7
With booster: B6-0 (first launch), C6-0

7255 Little Joe I ***Scale 1/34th***
Length: 17.62 in (44.75 cm)
Diameter: 2.34 in (59.43 mm)
Estimated Weight: 3.2 oz (90.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 400 ft (122 m)
Recommended Engines: B6-4 (first launch), C6-5

SKILL LEVEL 4 ROCKET KITS

7253 Explorer Aquarius™
Length: 21.8 in (55.4 cm)
Diameter: 2.75 in (69.9 mm)
Estimated Weight: 4.2 oz (119.1 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 750 ft (229 m)
Recommended Engines: D12-3 (first launch), D12-5, *E12-4, *E12-6
Requires 3/16th in. Maxi Launch Rod (ESTES PN 2244)

7277 Galaxy Glow™

0865 Mini Mean Machine™

7275 Sterling Silver™

COMING SOON

Watch our website for release dates.

7276 Checkmate™

1329 Multi-Roc™

7255 Little Joe I

7253 Explorer Aquarius™

* E engines require the E™ Launch Controller (2230), sold separately.

READY TO FLY

1403 Riptide™ Launch Set
Length: 18 in (45.7 cm)
Diameter: 1.35 in (34 mm)
Estimated Weight: 2.7 oz (76.5 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 675 ft (206 m)
Recommended Engines: B4-4 (first launch), B6-4, C6-5

1499 Rascal™ & HiJinks™ Launch Set
Rascal™
Length: 14.5 in (36.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.5 oz (43 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7
HiJinks™
Length: 14.5 in (36.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.5 oz (43 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

E2X® (EASY TO ASSEMBLE)

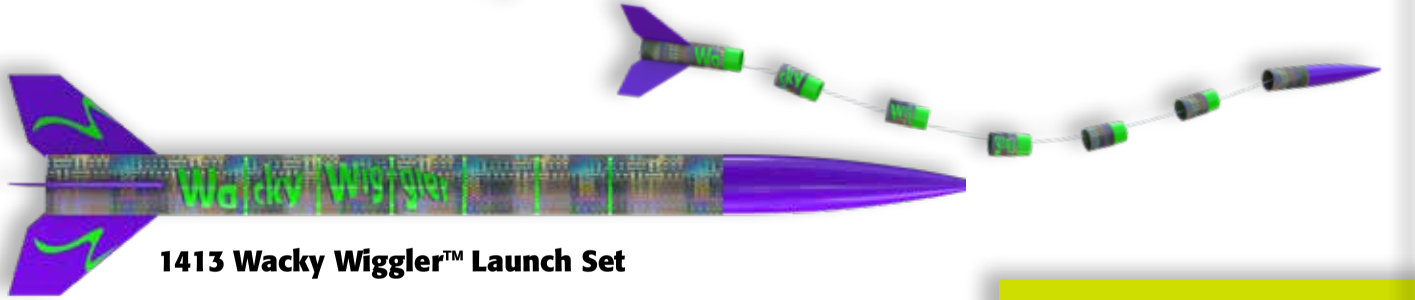
1390 Atomic Sky™ Launch Set
Length: 18 in (45.7 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.4 oz (39.7 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1150 ft (351 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, B6-6, C6-5, C6-7

1413 Wacky Wiggler™ Launch Set
Length: 17.6 in (44.7 cm)
Diameter: 1.1 in (28 mm)
Estimated Weight: 2.3 oz (45.4 g)
Fins: Plastic
Recovery: Break-apart
Projected Altitude: 800 ft (244 m)
Recommended Engines: B6-4 (first launch), C6-5

1403 Riptide™ Launch Set

1499 Rascal™ & HiJinks™ Launch Set

1390 Atomic Sky™ Launch Set



1413 Wacky Wiggler™ Launch Set

Each Launch Set includes Estes Launch Pad and Controller
(Engines and alkaline batteries required – sold separately)

E2X® (EASY TO ASSEMBLE)

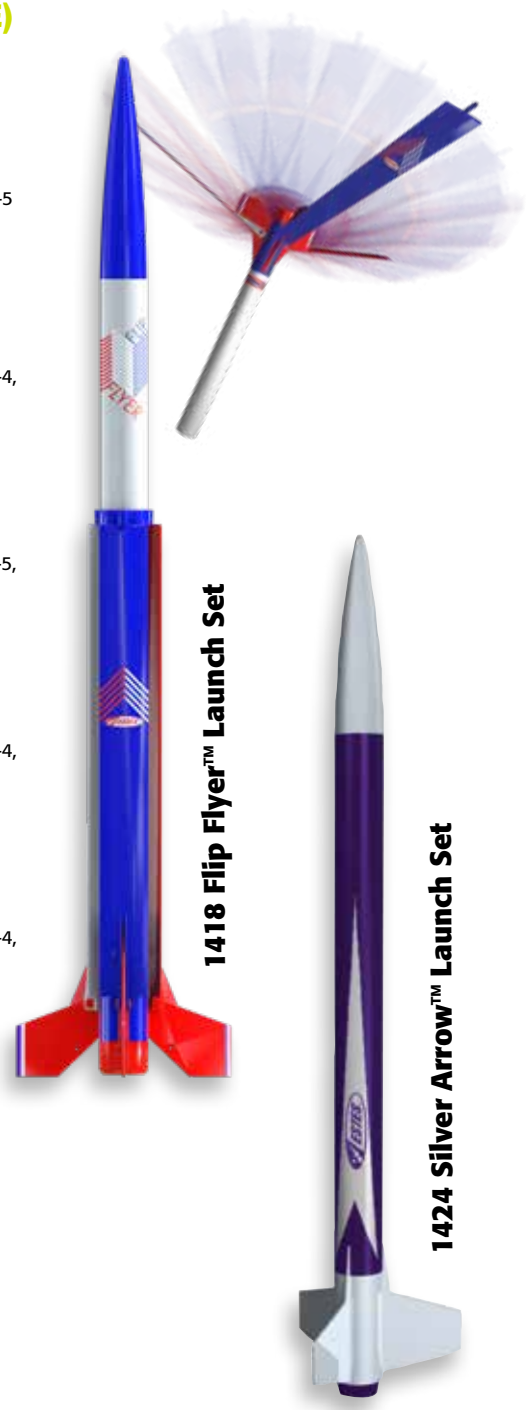
1418 Flip Flyer™ Launch Set
Length: 19.2 in (48.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 3.2 oz (90.7 g)
Fins: Plastic
Recovery: Helicopter, Parachute
Projected Altitude: 750 ft (229 m)
Recommended Engines: B6-4 (first launch), C6-5

1424 Silver Arrow™ Launch Set
Length: 15.5 in (39.4 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.3 oz (36.9 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1125 ft (343 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, B6-6, C6-5, C6-7

1427 Alpha III® Launch Set
Length: 12.1 in (30.7 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.2 oz (34 g)
Fins: Plastic
Projected Altitude: 1150 ft (351 m)
Recovery: Parachute
Recommended Engines: A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

1435 Zombie™ Launch Set
Length: 19 in (48.3 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.7 oz (48.2 g)
Fins: Plastic
Projected Altitude: 1150 ft (351 m)
Recovery: Parachute
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

1436 Javelin™ Launch Set
Length: 15 in (38 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.3 oz (36.9 g)
Fins: Plastic
Projected Altitude: 600 ft (183 m)
Recovery: Parachute
Recommended Engines: A8-3 (first launch), B4-4, B6-4



1427 Alpha III® Launch Set

1436 Javelin™ Launch Set

1435 Zombie™ Launch Set

Each Launch Set includes Estes Launch Pad and Controller
(Engines and alkaline batteries required – sold separately)

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

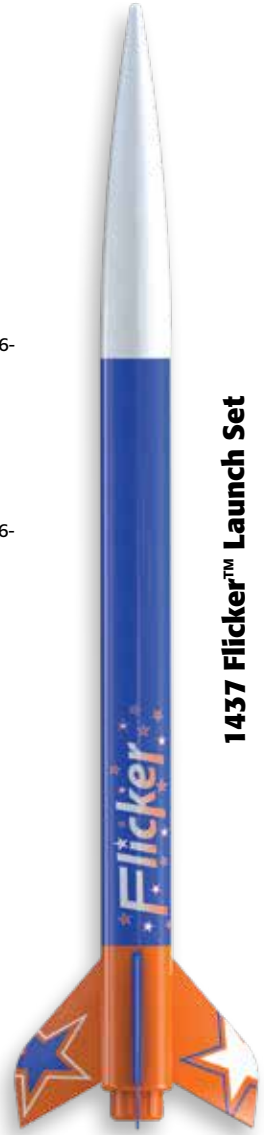
E2X® (EASY TO ASSEMBLE)

1437 Flicker™ Launch Set
Length: 21 in (53.3 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 3.2 oz (90.7 g)
Nose Cone: LED lights
Fins: Plastic
Projected Altitude: 650 ft (198 m)
Recovery: Parachute
Recommended Engines: B6-4 (first launch), C6-5

1438 Sky Twister™ Launch Set
Length: 21.3 in (54.1 cm)
Diameter: 1.35 in (34 mm)
Estimated Weight: 2.9 oz (82.2 g)
Fins: Plastic
Recovery: Parachute; Nose Cone - Helicopter
Projected Altitude: 650 ft (198 m)
Recommended Engines: B4-2, B6-2 (first launch), B6-4, C6-3, C6-5

1441 Journey™ Launch Set
Length: 19.3 in (49 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.8 oz (51 g)
Fins: Plastic
Projected Altitude: 1100 ft (335 m)
Recovery: Parachute
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

1446 Whirlybird™ Launch Set
Length: 21.2 in (53.8 cm)
Diameter: 1.35 in (34 mm)
Estimated Weight: 2.9 oz (82.2 g)
Fins: Plastic
Projected Altitude: 650 ft (198 m)
Recovery: Parachute; Nose Cone - Helicopter
Recommended Engines: C6-5 (first launch)



1437 Flicker™ Launch Set

1438 Sky Twister™ Launch Set

1441 Journey™ Launch Set

1446 Whirlybird™ Launch Set

Each Launch Set includes Estes Launch Pad and Controller
(Engines and alkaline batteries required – sold separately)

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

E2X® (EASY TO ASSEMBLE)

1469 Tandem-X™ Launch Set
Amazon™
Length: 29.4 in (74.7 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 3 oz (85 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2 (first launch), B4-4, B6-2, B6-4, C6-3, C6-5
Crossfire ISX™
Skill Level 1
Length: 15.6 in (39.6 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.3 oz (37 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1150 ft (351 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

1475 Solar Scouts™ Launch Set
Sky Dart™
Length: 10.3 in (26.2 cm)
Diameter: .54 in (14 mm)
Estimated Weight: .4 oz (11.3 g)
Fins: Plastic
Recovery: Streamer
Projected Altitude: 900 ft (274 m)
Recommended Engines: 1/2A3-2T (first launch), 1/2A3-4T, A3-4T, A10-3T
Farside™
Length: 16.5 in (41.9 cm)
Diameter: 1.1 in (28 mm)
Estimated Weight: 1.6 oz (45.4 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1000 ft (305 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, B6-6, C6-5, C6-7

1478 Flash'! Launch Set
Length: 16.2 in (41.1 cm)
Diameter: 1.1 in (28 mm)
Estimated Weight: 1.8 oz (52 g)
Recovery: Parachute
Fins: Plastic
Projected Altitude: 925 ft (282 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

1491 Taser™ Launch Set
Length: 17 in (43.2 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.5 oz (42.5 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, B6-6, C6-5, C6-7

1469 Tandem-X™ Launch Set

1475 Solar Scouts™ Launch Set

1478 Flash®! Launch Set

1491 Taser™ Launch Set

Each Launch Set includes Estes Launch Pad and Controller
(Engines and alkaline batteries required – sold separately)

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

AIR-POWERED ROCKETS

1908 Rocket-Star™ Rocket Launch Set
Rocket 1
Length: 8.8 in (22.4 cm)
Rocket 2
Length: 6.1 in (15.5 cm)
Fins: Foam
Recovery: Bounce
Projected Altitude: 25 ft (7.6 m)
Recommended for ages 5 years and up.

1911 Mini Blaster™ Rocket Launch Set
Rocket 1
Length: 8.8 in (22.4 cm)
Rocket 2
Length: 6.1 in (15.5 cm)
Fins: Foam
Recovery: Bounce
Projected Altitude: 25 ft (7.6 m)
Recommended for ages 5 years and up.

1913 Volt™ and Zolt™ Air Rocket
Ready to fly
Length: 11.5 in (29.2 cm)
Estimated Weight: .87 oz (24.7 g)
Fins: Foam
Recovery: Bounce
Projected Altitude: 150 ft (46 m)

1915 Blast Jets™ Air Rocket
Ready to fly
Length: 11.5 in (29.2 cm)
Estimated Weight: .87 oz (24.7 g)
Fins: Foam
Recovery: Bounce / Glide
Projected Altitude: 150 ft (46 m)

1916 Whirlwind™ Air Rocket
Ready to fly
Length: 11.5 in (29.2 cm)
Estimated Weight: .87 oz (24.7 g)
Fins: Foam
Recovery: Helicopter / Bounce
Projected Altitude: 150 ft (46 m)

1923 Sonic Booom™ Air Rocket Launch Set
Ready to fly
Length: 11.5 in (29.2 cm)
Estimated Weight: .87 oz (24.7 g)
Fins: Foam
Recovery: Bounce
Projected Altitude: 150 ft (46 m)

1924 Whirlwind™ Air Rocket Launch Set
Ready to fly
Length: 11.5 in (29.2 cm)
Estimated Weight: .87 oz (24.7 g)
Fins: Foam
Recovery: Helicopter / Bounce
Projected Altitude: 150 ft (46 m)

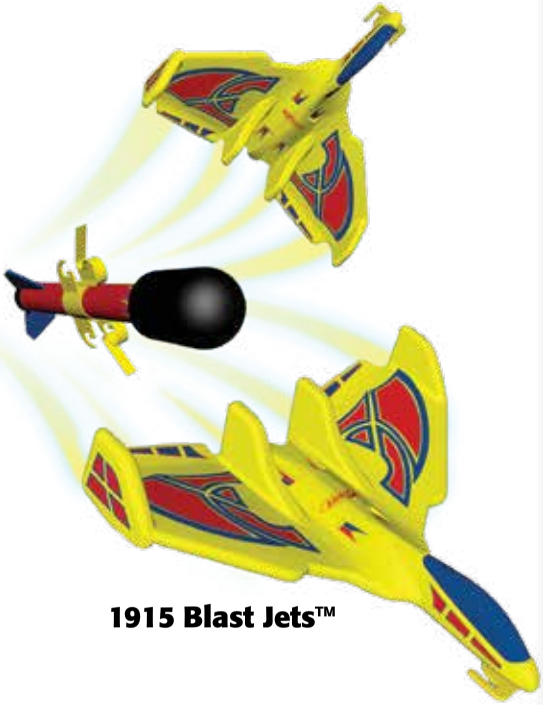
1908 Rocket-Star™ Launch Set

1911 Mini Blaster™ Launch Set

1913 Zolt™

1913 Volt™

1923 Sonic Booom™



1915 Blast Jets™

1924 Whirlwind™

1916 Whirlwind™

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

READY TO FLY ROCKETS

2452 Athena™
Length: 17 in (43.2 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.4 oz (39.7 g)
Fins: Plastic
Recovery: 12 in (30.5 cm) Parachute
Projected Altitude: 1125 ft (343 m)
Recommended Engines: A8-3 (first launch), B6-4, C6-5

2603 Sundancer™
Length: 16.5 in (41.9 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.4 oz (39.7 g)
Fins: Plastic
Recovery: 12 in (30.5 cm) Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3 (first launch), B6-4, C6-5

ALMOST READY TO FLY ROCKETS

2486 Flying Colors™
Length: 21 in (53.3 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3 oz (85 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2 (first launch), B6-2, B6-4, C6-3, C6-5

2488 Firestorm™
Length: 20.8 in (52.8 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3 oz (85 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2 (first launch), B6-2, B6-4, C6-3, C6-5

2452 Athena™

2603 Sundancer™

2486 Flying Colors™

2488 Firestorm™

ALMOST READY TO FLY

READY TO FLY

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

ALMOST READY TO FLY ROCKETS

2490 Fractured™
Length: 18 in (45.7 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3.7 oz (104.9 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 550 ft (168 m)
Recommended Engines: B4-2, B6-2 (first launch), C6-3, C6-5

2491 Drifter™
Length: 18.6 in (47.2 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 2.9 oz (82.2 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 700 ft (213 m)
Recommended Engines: B4-2, B6-2, B6-4 (first launch), C6-3, C6-5

INCREASE YOUR ALTITUDE BY 800 FEET!

2256 Booster-60
For use with rockets 2486 Flying Colors™, 2488 Firestorm™, 2490 Fractured™, 2493 Spectra™, 2498 Rookie™, 2887 Helios™
Recommended Engine: D12-0

2257 Booster-55
For use with rockets 2491 Drifter™, 2492 Spirit™, 2495 Chiller™, 2497 Nova™
Recommended Engine: D12-0

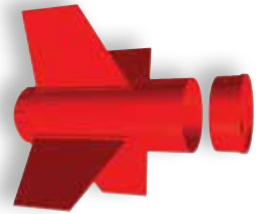
2258 Booster-60 Stager Replacement
For use with 2257 Booster-60

2259 Booster-55 Stager Replacement
For use with 2256 Booster-55

2490 Fractured™

2491 Drifter™

2258 Booster-60 Stager Replacement



2256 Booster-60

2259 Booster-55 Stager Replacement

2257 Booster-55

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

ALMOST READY TO FLY ROCKETS

2493 Spectra™
Length: 16.6 in (42.2 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3.5 oz (99.2 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 550 ft (168 m)
Recommended Engines: B6-2 (first launch), C6-3, C6-5

2494 Dazzler™
Length: 17.5 in (44.5 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.5 oz (30.5 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1125 ft (343 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

2498 Rookie™
Length: 23.3 in (59.2 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3.6 oz (102 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 550 ft (168 m)
Recommended Engines: B6-2 (first launch), C6-3, C6-5

2887 Helios™
Length: 18.2 in (46.2 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3.7 oz (104.9 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2 (first launch), B6-2, B6-4, C6-3, C6-5

2498 Rookie™

2887 Helios™

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

E2X® (EASY TO ASSEMBLE) ROCKET KITS

0803 Bandito™
Length: 11.2 in (28.4 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .60 oz (17 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: 1/4A3-3T (first launch), 1/2A3-2T, A3-4T, A10-3T

0804 Firehawk™
Length: 11.2 in (28.4 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .65 oz (18.4 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 550 ft (168 m)
Recommended Engines: 1/4A3-3T (first launch), 1/2A3-2T, A3-4T, A10-3T

0806 Firestreak SST™
Length: 10.2 in (25.9 cm)
Diameter: .86 in (22 mm)
Estimated Weight: 1.1 oz (31.2 g)
Fins: Plastic
Recovery: Streamer
Projected Altitude: 350 ft (107 m)
Recommended Engines: 1/2A3-2T, 1/2A3-4T, A3-4T (first launch), A10-3T

1256 Alpha III®
Length: 12.1 in (30.7 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.2 oz (34 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), B4-4, B6-4, B6-6, C6-5, C6-7

1260 No. 2 Estes Sky Writer®
Length: 26 in (66 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.5 oz (42.5 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5

0804 Firehawk™

0803 Bandito™

0806 Firestreak SST™

1256 Alpha III®

1260 No. 2 Estes Sky Writer®

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

E2X® (EASY TO ASSEMBLE) ROCKET KITS

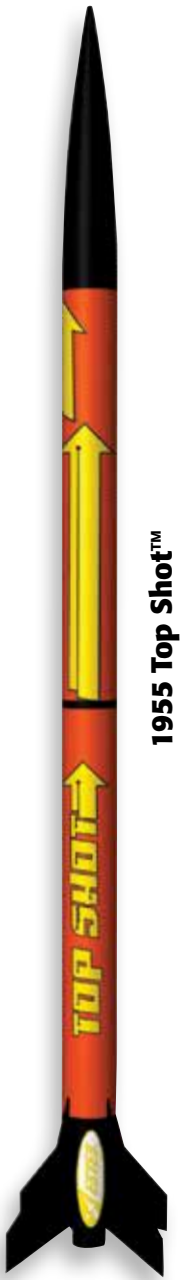
1263 Sky Twister™
Length: 21.3 in (54.1 cm)
Diameter: 1.35 in (34 mm)
Estimated Weight: 2.9 oz (82.2 g)
Fins: Plastic
Recovery: Parachute; Nose Cone - Helicopter
Projected Altitude: 650 ft (198 m)
Recommended Engines: B6-2, B6-4 (first launch), C6-3, C6-5

1330 Freefall™
Length: 20.5 in (52.1 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 2.5 oz (71 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 575 ft (175 m)
Recommended Engines: B4-2 (first launch), B6-2, B6-4, C6-3, C6-5

1954 Red Flare™
Length: 24.4 in (62 cm)
Diameter: 2.6 in (6.6 cm)
Estimated Weight: 6.5 oz (184.3 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1000 ft (305 m)
Recommended Engines: D12-5 (first launch), E9-4*, E9-6*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

1955 Top Shot™
Length: 37 in (94 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 5.3 oz (150.3 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1150 ft (351 m)
Recommended Engines: D12-5 (first launch), E9-6*, E12-6*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

1954 Red Flare™



1955 Top Shot™

* E engines require the E™ Launch Controller (2230), sold separately.

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

E2X® (EASY TO ASSEMBLE) ROCKET KITS

The Mix-n-Match kits contain enough parts to build up to 3 rockets with 100s of possible color combinations.

2005 Mix-n-Match-50™
Diameter: .98 in (25 mm)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3, B4-4, B6-4 (first launch), C6-5, C6-7

2006 Mix-n-Match-55™
Diameter: 1.33 in (34 mm)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B6-2, B6-4 (first launch), C6-3, C6-5

2007 Mix-n-Match-60™
Diameter: 1.64 in (42 mm)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 500 ft (152 m)
Recommended Engines: B6-2 (first launch), C6-3, C6-5

2005

2006

2007

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

E2X® (EASY TO ASSEMBLE) ROCKET KITS

2008 Generic E2X©
Length: 13.5 in (34.3 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.3 oz (36.8 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

2169 Dragonite™
Length: 16 in (40.6 cm)
Diameter: 1.1 in (28 mm)
Estimated Weight: 1.8 oz (51 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1125 ft (343 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

2183 Shuttle Xpress™
Length: 17.7 in (45 cm)
Diameter: 1.35 in (34 mm)
Estimated Weight: 3.2 oz (90.7 g)
Fins: Plastic
Recovery: Parachute; Shuttles: Glide
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2 (first launch), B4-4, B6-2, B6-4, C6-3, C6-5

2416 Flip Flyer™
Length: 19.2 in (48.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 3.2 oz (90.7 g)
Fins: Plastic
Recovery: Helicopter, Parachute
Projected Altitude: 750 ft (229 m)
Recommended Engines: B6-4 (first launch), C6-5

2433 Zinger™
Length: 15 in (38.1 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .9 oz (25.5 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 500 ft (152 m)
Recommended Engines: 1/2A3-4T (first launch), A3-4T, A10-3T

2183 Shuttle Xpress™

2416 Flip Flyer™

2433 Zinger™

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

E2X® (EASY TO ASSEMBLE) ROCKET KITS

2437 Savage™
Length: 31.8 in (80.6 cm)
Diameter: 1.33 in 34 mm)
Estimated Weight: 4.7 oz (133.2 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1600 ft (488 m)
Recommended Engines:
Single Stage: B4-2, B6-2, B6-4 (first launch), C6-5
Booster: D12-0
With Booster: A8-5, B6-4 (first launch) B6-6, C6-5, C6-7

2435 3 Bandits™
3 rocket set
Length: 10.8-11.1 in (27.4-28.2 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .6-.71 oz (17-20.1 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 550 ft (168 m)
Recommended Engines: 1/2A3-4T (first launch), A3-4T, A10-3T

2466 Show Stopper™
Length: 26.2 in (66.5 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 4 oz (113.4 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 875 ft (267 m)
Recommended Engines: C11-3 (first launch), C11-5, D12-5, D12-7

2468 Sky Cruiser™
Length: 29 in (73.7 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.9 oz (53.9 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1000 ft (305 m)
Recommended Engines: B4-4, B6-4 (first launch), C6-5

2437 Savage™

2435 3 Bandits™

2466 Show Stopper™

2468 Sky Cruiser™

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

E2X® (EASY TO ASSEMBLE) ROCKET KITS

2481 Power Patrol™
Length: 20.5 in (52.1 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.6 oz (45.4 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

2482 Solaris™
Length: 18.5 in (47 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.6 oz (45.4 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1125 ft (343 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

2483 Phantom Blue™
Length: 19.4 in (49.3 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.4 oz (39.7 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 1150 ft (351 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

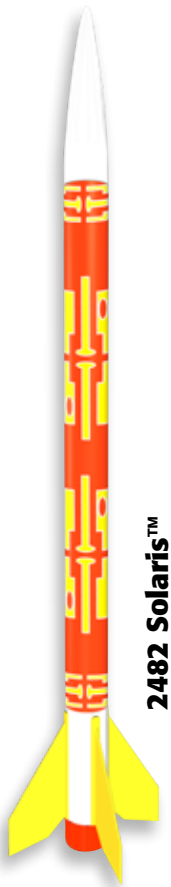
2492 Spirit™
Length: 21 in (53.3 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 3.1 oz (87.9 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2, B6-2, B6-4 (first launch), C6-3, C6-5

2495 Chiller™
Length: 17.3 in (43.9 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 2.7 oz (76.5 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2, B6-2, B6-4 (first launch), C6-3, C6-5

2497 Nova™
Length: 20.6 in (52.3 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 2.5 oz (70.9 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 700 ft (213 m)
Recommended Engines: B6-2, B6-4 (first launch), C6-3, C6-5

7261 Air Walker™
Length: 21.7 in (55.1 cm)
Diameter: 1.1 in (28 mm)
Estimated Weight: 2 oz (56.7 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 950 ft (290 m)
Recommended Engines: B4-4, B6-4 (first launch), C6-5

2481 Power Patrol™



2482 Solaris™

2483 Phantom Blue™

2492 Spirit™

2495 Chiller™

2497 Nova™

7261 Air Walker™

SKILL LEVEL 1 ROCKET KITS

0651 Der Red Max™
Length: 16.3 in (41.4 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 2.4 oz (68 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-2, B4-4, B6-2 (first launch), B6-4, C6-5

0810 220 Swift™
Length: 4.5 in (11.4 cm)
Diameter: .54 in (14 mm)
Estimated Weight: .09 oz (2.5 g)
Fins: Laser cut wood
Recovery: Tumble
Projected Altitude: 850 ft (259 m)
Recommended Engines: 1/4A3-3T (first launch), 1/2A3-2T, 1/2A3-4T, A3-4T, A10-3T

1225 Alpha®
Length: 12.3 in (31.2 cm)
Diameter: .98 in (25 mm)
Estimated Weight: .8 oz (22.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1000 ft (305 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

1261 Baby Bertha™
Length: 12.8 in (32.5 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 1.9 oz (53.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 575 ft (175 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5

1292 Wizard™
Length: 12 in (30.5 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .5 oz (14.2 g)
Fins: Laser cut wood
Recovery: Streamer
Projected Altitude: 1600 ft (488 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

1345 Mosquito™
Length: 3.8 in (9.6 cm)
Diameter: .54 in (14 mm)
Estimated Weight: .11 oz (3.1 g)
Fins: Laser cut wood
Recovery: Tumble
Projected Altitude: 800 ft (244 m)
Recommended Engines: 1/4A3-3T (first launch), 1/2A3-2T, 1/2A3-4T, A3-4T, A10-3T

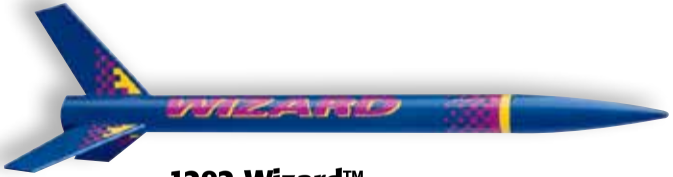
0651 Der Red Max™

1225 Alpha®

0810 220 Swift™

1261 Baby Bertha™

1345 Mosquito™



1292 Wizard™

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

SKILL LEVEL 1

SKILL LEVEL 1 ROCKET KITS

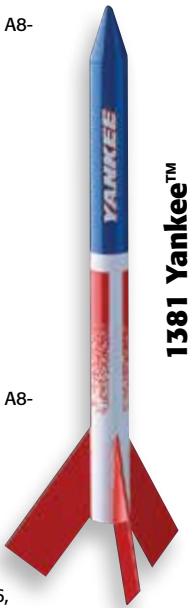
1381 Yankee™
Length: 11 in (27.9 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .4 oz (12 g)
Fins: Laser cut wood
Recovery: Streamer
Projected Altitude: 1850 ft (564 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

1948 Big Bertha™
Length: 24 in (61 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 2.5 oz (71 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 500 ft (152 m)
Recommended Engines: B4-2, B4-4, B6-2, B6-4 (first launch), C6-5

1949 Viking™
Length: 12.1 in (30.7 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .6 oz (17 g)
Fins: Card stock
Recovery: Streamer
Projected Altitude: 1600 ft (488 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

2056 U.S. Army Patriot M-104 ***Scale 1/10th***
Length: 21.3 in (54.1 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 2 oz (56.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-4 (first launch), B6-4, B6-6, C6-5

2092 Mongoose™
All pre-colored parts
Length: 27 in (68.6 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 2.3 oz (65 g)
Fins: Plastic
Recovery: Parachute; Tumble
Projected Altitude: 1600 ft (488 m)
Recommended Engines:
Single Stage: A8-3 (first launch), B4-4, B6-4, C6-5;
Two Stage: Booster – B6-0 (first launch), C6-0;
Upper Stage: A8-5 (first launch), B6-6, C6-7



1381 Yankee™

1948 Big Bertha™

1949 Viking™

2056 U.S. Army Patriot M-104

2092 Mongoose™

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

SKILL LEVEL 1 ROCKET KITS

2178 Hi-Flier®
Length: 12 in (30.5 cm)
Diameter: .74 in (19 mm)
Estimated Weight: .9 oz (25.5 g)
Fins: Laser cut wood
Recovery: Streamer
Projected Altitude: 1500 ft (457 m)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-6, C6-5, C6-7

2178 Hi-Flier®

2442 Mini Fat Boy™
Length: 8.5 in (21.6 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 1.3 oz (36.8 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 250 ft (76 m)
Recommended Engines: A10-3T

2446 Mini Honest John *Scale 1/24th*
Length: 11.75 in (29.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.2 oz (34 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 325 ft (99 m)
Recommended Engines: 1/2A3-2T (first launch), A3-4T, A10-3T

3031 Star Trooper™
Length: 7 in (17.8 cm)
Diameter: .54 in (14 mm)
Estimated Weight: .3 oz (8.5 g)
Fins: Laser cut wood
Recovery: Streamer
Projected Altitude: 900 ft (274 m)
Recommended Engines: 1/4A3-3T, 1/2A3-4T (first launch), A3-4T, A10-3T

3230 Estes Jetliner™
Length: 9.3 in (23.6 cm)
Diameter: 1.64 in (42 mm)
Wingspan: 11 in (27.9 cm)
Estimated Weight: 1.9 oz (53.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 150 ft (46 m)
Recommended Engines: A10-3T

3231 Curvilinear™
Length: 10.5 in (27.7 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 1.5 oz (42.5 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 175 ft (53 m)
Recommended Engines: A10-3T

2442 Mini Fat Boy™

2446 Mini Honest John

3230 Estes Jetliner™

3031 Star Trooper™

3231 Curvilinear™

SKILL LEVEL 1

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

SKILL LEVEL 1 ROCKET KITS

7220 Crossfire ISX™
Length: 15.6 in (39.6 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.3 oz (37 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1150 ft (351 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

7238 Sequoia™
Length: 20 in (50.8 cm)
Diameter: .74 in (19 mm)
Estimated Weight: 1.1 oz (31.2 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 350 ft (107 m)
Recommended Engines: A3-4T (first launch), A10-3T

7244 Indicator™
Length: 21.2 in (53.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.3 oz (36.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 200 ft (61 m)
Recommended Engines: A3-4T (first launch), A10-3T

7254 Nike Apache *Scale 1/12th*
Length: 23 in (58.4 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 1.8 oz (51 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 925 ft (282 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5, C6-7

7258 Space Twister™
Length: 24.7 in (62.7 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.5 oz (42.5 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 900 ft (274 m)
Recommended Engines: A8-3 (first launch) B6-4, C6-5

7220 Crossfire ISX™

7238 Sequoia™

7244 Indicator™

7254 Nike Apache

7258 Space Twister™

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

SKILL LEVEL 1

SKILL LEVEL 2 ROCKET KITS

2123 EggsCaliber™
Length: 20 in (50.8 cm)
Diameter: 1 in (25 mm)
Estimated Weight. (without egg): 2.6 oz (74 g)
Fins: Laser cut wood
Recovery: 2 Parachutes
Projected Altitude: 1700 ft (518 m) without egg
Recommended Engines: With egg – B6-2 (first launch), C6-3, C11-3, D12-3, E9-4*; Without egg – B4-2 (first launch),
B6-2, C6-5, D12-5, E9-6*.
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

2162 Big Daddy™
Length: 19 in (48.3 cm)
Diameter: 3 in (76 mm)
Estimated Weight: 5.3 oz (150.3 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 900 ft (274 m)
Recommended Engines: C11-3 (first launch), D12-3, D12-5, E9-4*, E9-6*
Requires 3/16 in (5 mm) Maxi™ Launch Rod (2244), sold separately.

2448 Mini Comanche-3™
Length: 31.1 in (79 cm)
Diameter: .74 in (19 mm)
Estimated Weight: 1.5 oz (42.5 g)
Fins: Laser cut wood
Recovery: Streamer
Projected Altitude: 900 ft (274 m)
Recommended Engines:
Single Stage: 1/2A3-2T (first launch), A3-4T, A10-3T
Two or Three Stage:
Booster and Second Stage: A10-0T
Upper Stage: 1/4A3-3T (first launch), 1/2A3-2T, A3-4T, A10-3T

3226 Hi-Flier® XL
Length: 31 in (78.7 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 3.5 oz (99.2 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1325 ft (404 m)
Recommended Engines: C11-3 (first launch), D12-5, D12-7, E9-6*, E9-8*
Requires 3/16 in (5 mm) Maxi™ Launch Rod (2244), sold separately.

3227 Loadstar™ II
Length: 23.3 in (59.2 cm)
Diameter: 1.33 in (34 mm)
Payload Diameter: 1.64 in (42 mm)
Estimated Weight: 2.8 oz (79.4 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1000 ft (305 m)
Recommended Engines:
Single Stage: B4-4 (first launch), B6-4 C6-5
Two Stage:
Booster Stage: B6-0 (first launch), C6-0
Upper Stage: A8-5 (first launch), B6-4, B6-6, C6-7

2162 Big Daddy™

2123 EggsCaliber™

2448 Mini Comanche-3™

3226 Hi-Flier® XL

3227 Loadstar™ II

* E engines require the E Launch Controller (2230), sold separately.

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

SKILL LEVEL 2 ROCKET KITS

3232 Centuri®
Length: 29.3 in (74.4 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 3.1 oz (87.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B4-4 (first launch), B6-4, C6-5

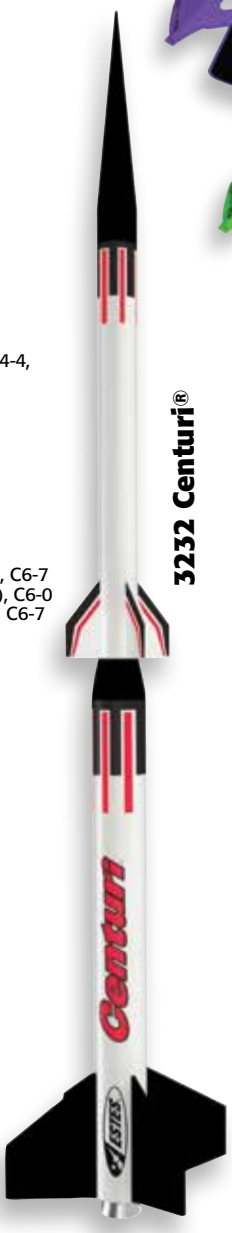
3233 Blenders™
Length: 2.6 in (6.6 cm)
Diameter: 4.8 in (12.2 cm)
Estimated Weight: .4 oz (11.3 g)
Fins: Laser cut wood
Recovery: Spin
Projected Altitude: 75 ft (23 m)
Recommended Engine: A10-0T

7000 Bull Pup 12D ***Scale 1/9th***
Length: 15.6 in (39.6 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 1.8 oz (51 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 675 ft (206 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5

7217 Hyper Bat™
Length: 21.9 in (55.6 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.8 oz (51 g)
Fins: Laser cut wood
Recovery: Parachute and Tumble
Projected Altitude: 2125 ft (648 m)
Recommended Engines:
Single Stage: B6-4, (first launch), B6-6, C6-5, C6-7
Two Stage: Booster: A8-0, B6-0 (first launch), C6-0
Upper Stage: A8-5, B6-6 (first launch), C6-5, C6-7

7234 Crossbow SST™
Length: 15 in (38.1 cm)
Diameter: .74 in (19 cm)
Estimated Weight: 1.1 oz (31.2 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1600 ft (488 m)
Recommended Engines: A8-3 (first launch), B6-4, C6-5

7237 Goblin™
Length: 14.4 in (36.6 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 2.5 oz (70.9 g)
Fins: Laser cut wood
Recovery: 2 Streamers
Projected Altitude: 1400 ft (427 m)
Recommended Engines: C11-3, C11-5, D12-5 (first launch), D12-7



7000 Bull Pup 12D

7217 Hyper Bat™

7234 Crossbow SST™

7237 Goblin™

* E engines require the E Launch Controller (2230), sold separately.

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SKILL LEVEL 2

SKILL LEVEL 2 ROCKET KITS

7239 Sky Warrior™
Length: 19 in (48.3 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 1.9 oz (53.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 850 ft (259 m)
Recommended Engines: B6-4 (first launch), C6-5

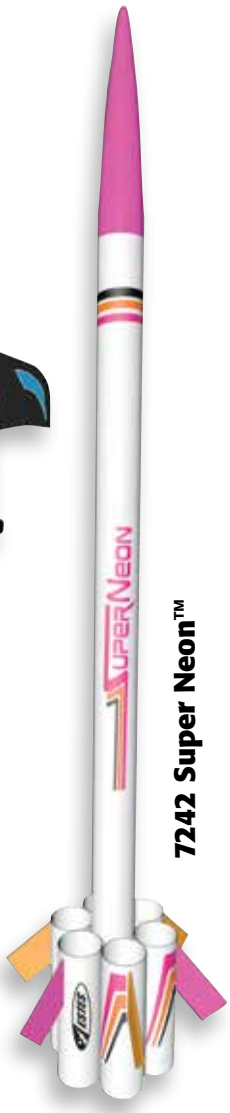
7242 Super Neon™
Length: 22.3 in (56.6 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 1.9 oz (53.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1000 ft (305 m)
Recommended Engines: A8-3 (first launch), B4-4, B6-4, C6-5

7247 Nike Smoke *1/10th*
Length: 22.9 in (58.2 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 2.4 oz (68 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 650 ft (198 m)
Recommended Engines: B6-4 (first launch), C6-5

7248 Supernova™
Length: 27.5 in (69.9 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 2 oz (56.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1550 ft (472 m)
Recommended Engines:
Rocket only: A8-5 (first launch), B6-6, C6-7
With booster: B6-0 (first launch), C6-0

7259 Nike-X
Length: 23.4 in (59.4 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 2.4 oz (68 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: B6-4 (first launch), C6-5

7239 Sky Warrior™



7242 Super Neon™

7247 Nike Smoke

7248 Supernova™

7259 Nike-X

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

SKILL LEVEL 2

SKILL LEVEL 3 ROCKET KITS

1921 Liberty Bell 7 Mercury Redstone ***Scale 1/34th***
Length: 28.6 in (72.6 cm)
Diameter: 2.05 in (52 mm)
Estimated Weight: 3.07 oz (104.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 200 ft (61 m)
Recommended Engines: C6-3

1951 Executioner
Length: 38.5 in (97.8 cm)
Diameter: 2.6 in (66 mm)
Estimated Weight: 8.1 oz (229.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 600 ft (183 m)
Recommended Engines: D12-3, D12-5, *E12-4, *E12-6

2440 Magician™
Length: 34 in (86.4 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 3.5 oz (100 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1600 ft (488 m)
Recommended Engines: D12-5 (first launch), E9-6*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

3228 V2 ***Scale 1/25th***
Length: 22.4 in (56.9 cm)
Diameter: 2.6 in (66 mm)
Estimated Weight: 6.3 oz (178.6 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 725 ft (221 m)
Recommended Engines: C11-3 (first launch), D12-3, E9-4*, E9-6*
Requires 3/16 in (5 mm) Maxi™ Launch Rod (2244), sold separately.

7225 Extreme 12™
Length: 46.4 in (117.8 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 7.1 oz (201.3 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1900 ft (579 m)
Recommended Engines:
Single Stage: D12-3, D12-5(first launch), E9-4*, E9-6*, E12-6*
With Booster:
D12-0: D12-5 (first launch), E9-6*, E12-6 *
E12-0*.: D12-5 (first launch), D12-7, E9-6*, E12-6*, E12-8*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

1921 Liberty Bell 7 Mercury Redstone

1951 Executioner™

2440 Magician™

3228 V2

7225 Extreme 12™

* E engines require the E™ Launch Controller (2230), sold separately.

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

SKILL LEVEL 3 ROCKET KITS

7228 Cobra™
Length: 16.2 in (41.1 cm)
Diameter: .98 in (42 cm)
Wingspan: 8 in (20,3 cm)
Estimated Weight: 2.9 oz (82.2 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 925 ft (282 m)
Recommended Engines: B4-2 (first launch), B6-2, C6-3, C6-5

7232 Scorpion™
Length: 13.4 in (34 cm)
Diameter: .74 in (19 cm)
Estimated Weight: 1.1 oz (31.2 g)
Recovery: Parachute
Projected Altitude: 400 ft (122 m)
Recommended Engines: A3-4T (first launch), A10-3T

7233 Lynx™
Length: 13 in (33 cm)
Diameter: .74 in (19 cm)
Estimated Weight: 1.2 oz (34 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 400 ft (122 m)
Recommended Engines: A3-4T (first launch), A10-3T

7240 Honest John *Scale 1/14th*
Length: 23 in (58.4 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 4.4 oz (124.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1400 ft (427 m)
Recommended Engines: C11-3, D12-5 (first launch), E9-6*, E12-6*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7241 Quinstar™
Length: 3 in (7.6 cm)
Diameter: 8 in (20.3 cm)
Estimated Weight: .8 oz (22.7 g)
Fins: Laser cut wood
Recovery: Helicopter
Projected Altitude: 150 ft (46 m)
Recommended Engines: B6-0 (first launch), C6-0

7245 Comanche-3™
Length: 41 in (104.1 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 2.5 oz (70.9 g)
Fins: Laser cut wood
Recovery: Streamer
Projected Altitude: 2250 ft (686 m)
Recommended Engines:
3 Stage launches:
1st Stage: C11-0, D12-0; 2nd Stage: B6-0, C6-0; 3rd Stage: B6-6, C6-7
2 Stage launches:
Using 2nd and 3rd stages: 2nd Stage: C6-0; 3rd Stage: B4-4, B6-6, C6-7
Using 1st and 3rd stages: 1st Stage: D12-0; 3rd Stage: B6-6, C6-7
Single Stage:
3rd Stage: B4-4, B6-4, C6-5

7233 Lynx™

7240 Honest John

7245 Comanche-3™

7241 Quinstar™

* E engines require the E™ Launch Controller (2230), sold separately.

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

SKILL LEVEL 3 ROCKET KITS

7250 Twin Factor™
Length: 6 in (15.2 cm)
Diameter: 4.3 in (10.9 cm)
Estimated Weight: .8 oz (22.7 g)
Fins: Laser cut card stock
Recovery: Tumble
Projected Altitude: 150 ft. (46 m)
Recommended Engines: 2 Stage Launches
Booster Stage: A10-0T. Rocket with Booster: 1/4A3-3T, 1/2A3-2T, 1/2A3-4T, A3-4T (first launch), A10-3T
Single Stage: A3-4T (first launch), A10-3T, A10-PT

7256 Puma™
Length: 12.3 in (31.2 cm)
Diameter: .74 in (18 mm)
Estimated Weight: .8 oz (22.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 400 ft (122 m)
Recommended Engines: A3-4T (first launch), A10-3T

7257 Airborne Surveillance Missile
Length: 11.3 in (28.7 cm)
Diameter: .98 in (25 mm)
Estimated Weight: .9 oz (26 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 375 ft (114 m)
Recommended Engines: A3-4T (first launch), A10-3T

7260 Protostar™
Length: 24 in (61 cm)
Diameter: 1.64 in. (42 mm)
Estimated Weight: 5 oz (141.7 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1350 feet (411 m)
Recommended Engines: C11-3 (first launch), D12-5, *E12-6

7262 Starship Nova™
Length: 20 in (50.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 2.1 oz (59.5 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 500 ft (152 m)
Recommended Engines: B4-2 (first launch), B6-2, C6-3, C6-5

7263 Hex-3™
Length: 3.2 in (8.1 cm)
Diameter: Hub: 3.8 in (9.6 cm)
Overall Diameter: 11.5 in (29.2 cm)
Estimated Weight: .6 oz (17 g)
Fins: Printed card stock
Recovery: Parachute
Projected Altitude: 100 ft (30 m)
Recommended Engines: B6-0 (first launch) C6-0

7257 Airborne Surveillance Missile

7260 Protostar™

7262 Starship Nova™

7263 Hex-3™

* E engines require the E™ Launch Controller (2230), sold separately.

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

SKILL LEVEL 4 ROCKET KITS

7227 Apollo Little Joe II ***1/45th Scale***
Length: 23.3 in (59.18 cm)
Diameter: 3.42 in (86.9 mm)
Estimated Weight: 8.3 oz (235.3 g)
Fins: Plastic
Recovery: Parachute
Projected Altitude: 800 ft (244 m)
Recommended Engines: Composite E30-4*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7236 Estes SLV™
Length: 34.2 in (86.9 cm)
Diameter: 1.33 in (34 mm)
Estimated Weight: 6.4 oz (181.4 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1000 ft (305 m)
Recommended Engines: C11-3, D12-3 (first launch), D12-5, E12-4*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7249 Expedition™
Length: 25.6 in (65.1 cm)
Diameter: 2.22 in (56 mm)
Estimated Weight: 5 oz (141.8 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1100 ft (305 m)
Recommended Engines: C11-3 (first launch), D12-5, E12-4*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7227 Apollo Little Joe II

7236 Estes SLV™

7249 Expedition™

* E engines require the E™ Launch Controller (2230), sold separately.

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

SKILL LEVEL 5 ROCKET KITS

7222 Black Star Voyager™
Length: 39.7 in (100.8 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 7 oz (198.4 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1100 ft (336 m)
Recommended Engines: D12-3 (first launch), E9-4*, E12-4*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

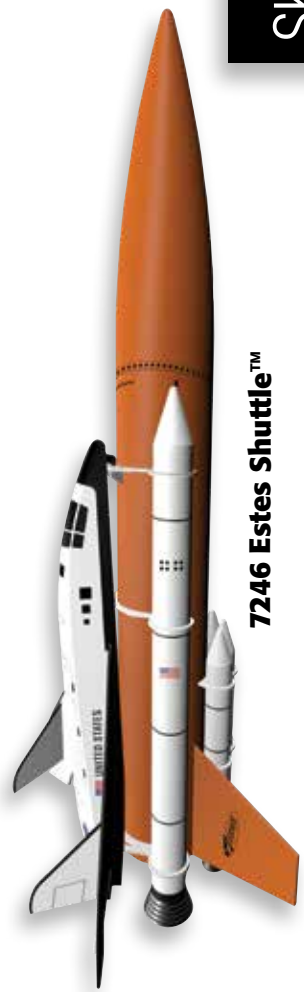
7230 Conquest™
Length: 28.6 in (72.6 cm)
Diameter: 1.64 in (42 mm)
Wingspan: 12.8 in (32.5 cm)
Estimated Weight: 5.5 oz (155.9 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1100 ft (335 m)
Recommended Engines: D12-3 (first launch), E9-4, E12-4*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7235 Odyssey™
Length: 22.7 in (57.7 cm)
Diameter: 1.33 in (34 mm)
Wingspan: 11 in (27.9 cm)
Estimated Weight: 5 oz (141.8 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 950 ft (290 m)
Recommended Engines: C11-3 (first launch), D12-5
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7246 Estes Shuttle™
Length: 23.2 in (58.9 cm)
Diameter: 2.6 in (66 mm)
Estimated Weight: 9.5 oz (269.3 g)
Shuttle length: 12.2 in (31 cm)
Shuttle wingspan: 8.9 in (22.6 cm)
Fins: Laser cut wood
Recovery: Parachute / Glide
Projected Altitude: 500 ft (152 m)
Recommended Engines: D12-3 (first launch), E12-4*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7230 Conquest™

7235 Odyssey™



7246 Estes Shuttle™

* E engines require the E™ Launch Controller (2230), sold separately.

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Adult supervision is recommended for those under 12 years of age.

PRO SERIES II™ E2X®
(EASY TO ASSEMBLE) ROCKET KITS

9706 Ascender™
Length: 42.1 in (106.9 cm)
Diameter: 2 in (5.1 cm)
Payload Diameter: 2.5 in (6.4 cm)
Estimated Weight: 11 oz (311.8 g)
Fins: Plastic
Recovery: Nylon Parachute
Projected Altitude: 2000 ft (610 m)
Recommended Engines: E16-6, F15-6 (first launch), F15-8

9707 Majestic™
Length: 35.3 in (89.7 cm)
Diameter: 2 in (5.1 cm)
Estimated Weight: 9.6 oz (272.2 g)
Fins: Plastic
Recovery: Nylon Parachute
Projected Altitude: 2000 ft (610 m)
Recommended Engines: E16-6, F15-6 (first launch), F15-8

9710 Prowler™ Launch Set
Includes Estes Porta Pad E™ Launch Pad and E™ Launch Controller
Length: 33.6 in (85.3 cm)
Diameter: 2 in (5.1 cm)
Estimated Weight: 8.5 oz (241 g)
Fins: Plastic
Recovery: Nylon Parachute
Projected Altitude: 2000 ft (610 m)
Recommended Engines: E16-6, E16-8,
F15-6 (first launch), F15-8

9716 Star Orbiter™
Length: 45.2 in (114.8 cm)
Diameter: 1.64 in (42 mm)
Estimated Weight: 5.9 oz (167.2 g)
Fins: Laser cut wood
Recovery: Parachute
Projected Altitude: 1800 ft (549 m)
Recommended Engines: E16-6 (first launch), F15-8

9706 Ascender™

PRO SERIES II™

9707 Majestic™

9710 Prowler™ Launch Set
Includes Estes Porta Pad E™ Launch Pad and E™ Launch Controller

9716 Star Orbiter™

Pro Series II rockets, require a launch controller with 30 feet of wire, such as our E™ (2230) or PSII™ (2240) Launch Controller. In addition to the launch controller, you will need a sturdy launch pad with a ¼" (6 mm) launch rod, or you can purchase our 3552 Estes Pro Series II Launch Pad.

Estes Pro Series II model rocketry is recommended for ages 18 and up.

PRO SERIES II™ ACCESSORIES

PRO SERIES II™ MODEL ROCKET MOTORS
(1 per pack)

9770 E30-4T Motor
9772 F26-6FJ Motor
9774 F50-6T Motor
9776 G40-7W Motor

29 mm MODEL ROCKET ENGINES
(2 per pack)

1695 E16-0
1696 E16-4
1697 E16-6
1698 E16-8
1650 F15-0
1651 F15-4
1652 F15-6
1653 F15-8

All motors not shown.

2240 PS II™ Launch Controller

2305 Sonic™ Igniter

2261 24 in Nylon Parachute
2273 30 in Nylon Parachute

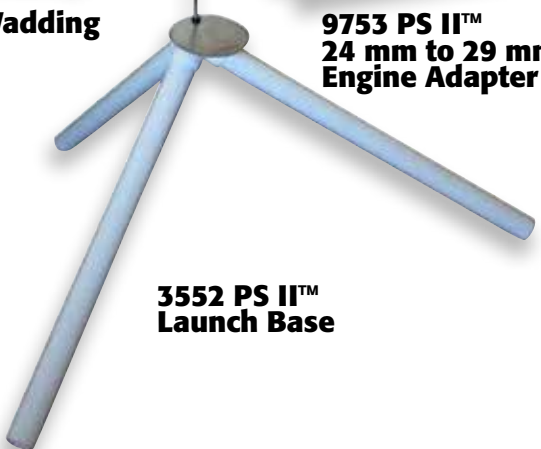
3172 PS II™ Shock Cord Accessory Pack

9750 PS II™ 29 mm Motor Retainer Set

9752 PS II™ Booster
For use with rockets 9706 Ascender™, 9707 Majestic™, 9709 Trajector™ and 9710 Prowler Launch Set™
Recommended Engine: F15-0

3556 PS II™ Recovery Wadding

9753 PS II™ 24 mm to 29 mm Engine Adapter Set



3552 PS II™ Launch Base

Pro Series II rockets, require a launch controller with 30 feet of wire, such as our E™ (2230) or PSII™ (2240) Launch Controller. In addition to the launch controller, you will need a sturdy launch pad with a ¼" (6 mm) launch rod, or you can purchase our 3552 Estes Pro Series II Launch Pad.

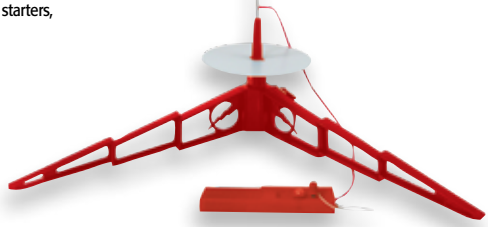
G motors require users to be ages 18 years and up.

MODEL ROCKET ACCESSORIES

1672 Blast-Off® Flight Pack
Includes 6 each of A8-3, B6-4, C6-3, C6-5 engines, 30 starters, 30 starter plugs and 75 sheets of recovery wadding.

2215 Porta-Pad® II Launch Pad
Quick assembly - no glue or tools required! Launch rod angle is adjustable. Comes complete with blast deflector, standoff, two-piece 1/8 in (3 mm) launch rod and safety cap. Can accommodate a 3/16 in (5 mm) Maxi™ launch rod - not included.

2220 Electron Beam® Launch Controller
Launch controller comes assembled with safety key and 15 ft (4.6 m) of cable. Requires four AA alkaline batteries - not included.

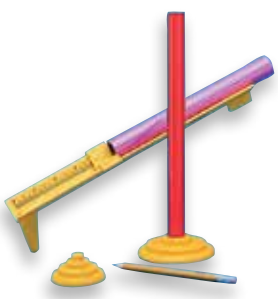


2221 Astron II™ Launch Controller
Comes assembled with safety key and 17 ft (5.2 m) of cable. Requires 1 9V alkaline battery - not included.

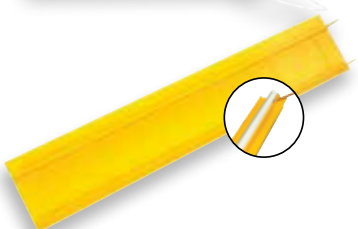
2222 Porta-Pad® II Launch Pad with Electron Beam® Launch Controller
Quick assembly - no glue or tools required! Launch rod angle is adjustable. Comes complete with blast deflector, standoff, two-piece 1/8 in (3 mm) launch rod and safety cap. Can accommodate a 3/16 in (5 mm) Maxi™ launch rod - not included. Launch controller comes assembled with safety key and 15 ft (4.6 m) of cable. Requires four AA alkaline batteries - not included.

2230 E™ Launch Controller
Comes assembled with safety key and 30 ft (9 m) of cable. Requires 4 AA alkaline batteries - not included.

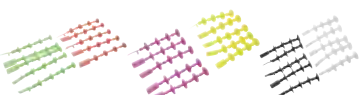
2238 Porta-Pad® E Launch Pad
Quick assembly - no glue or tools required. Launch rod angle is adjustable. Includes a 1/4 in (6 mm) launch rod, but can accommodate a 3/16 in (5 mm) Maxi™ launch rod - not included.



2227 Tube Marking Guide
Easy way to mark fin and launch lug placement lines. Also includes a fin gluing jig. Body tube not included.



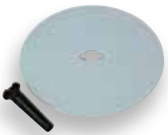
2228 Ultimate Tube Marking Guide
Marks body tube for accurate fin placement.



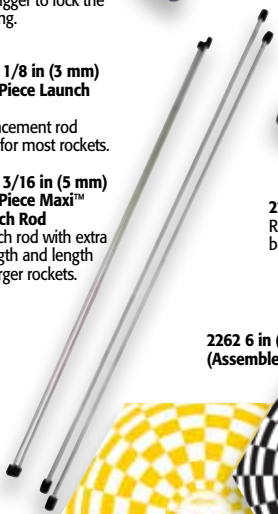
2250 1/4A3, 1/2A3, A3 and A10 Engine Plugs
5 Orange, 5 Green
2251 1/2A6, A8, B4, B6, and C6 Engine Plugs
5 Magenta, 5 Yellow
2252 C11, D12, E9, E12, E16 and F15 Engine Plugs
5 White, 5 Black

2232 Altitrak™
Measure altitude with this easy to use device. Follow the rocket in the sights to apogee, release the trigger to lock the reading.

2231 Fin Alignment Guide
Fast and accurate fin alignment for three- or four-finned rockets.



2241 Blast Deflector Plate
Replaces that worn-out deflector. For use with 2215 and 2239



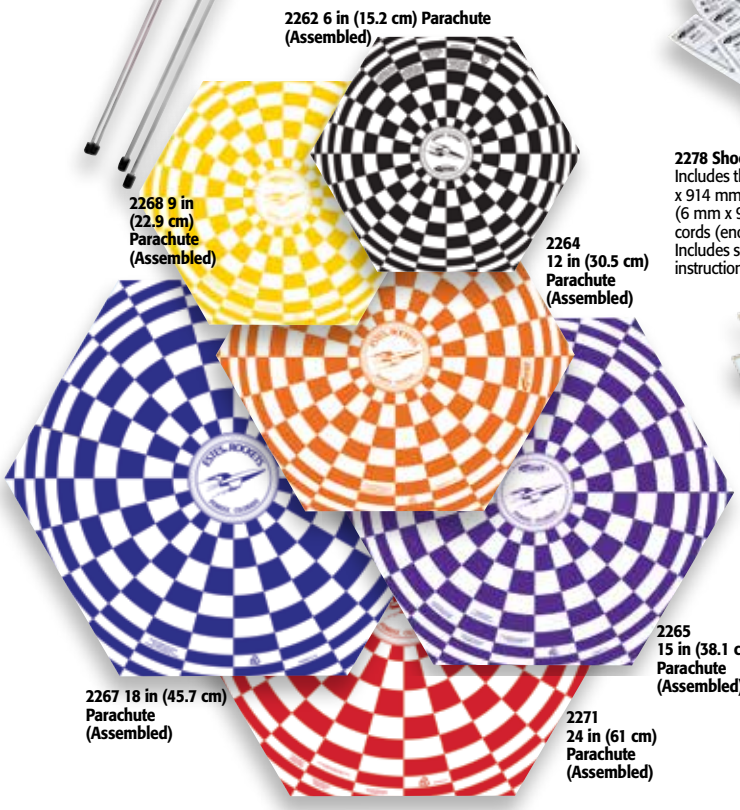
2243 1/8 in (3 mm) Two-Piece Launch Rod
Replacement rod ideal for most rockets.

2244 3/16 in (5 mm) Two-Piece Maxi™ Launch Rod
Launch rod with extra strength and length for larger rockets.

2246 Altimeter
Record up to 10 flights. LCD display, battery included.

2274 Recovery Wadding
Flame resistant wadding protects recovery system. Required in most Estes rockets. Contains 75 sheets – enough for about 18-25 flights!

2278 Shock Cords & Mount Pack
Includes three 1/8 in x 36 in (3 mm x 914 mm) and one 1/4 in x 36 in (6 mm x 914 mm) rubber shock cords (enough for four shock cords). Includes shock cord mounts and instructions.



2262 6 in (15.2 cm) Parachute (Assembled)

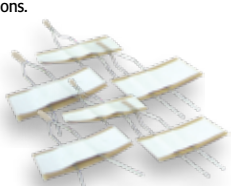
2268 9 in (22.9 cm) Parachute (Assembled)

2264 12 in (30.5 cm) Parachute (Assembled)

2265 15 in (38.1 cm) Parachute (Assembled)

2267 18 in (45.7 cm) Parachute (Assembled)

2271 24 in (61 cm) Parachute (Assembled)



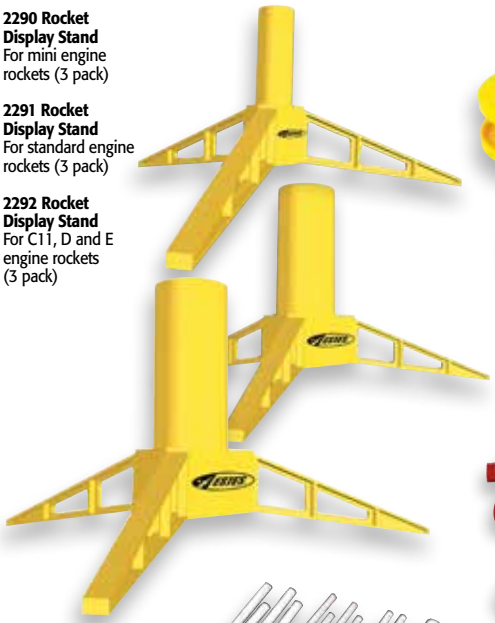
2302 Model Rocket Starters
Dependable, easy-to-use Estes starters in a convenient six pack. It's always a good idea to have a few spares.

MODEL ROCKET ACCESSORIES

2290 Rocket Display Stand
For mini engine rockets (3 pack)

2291 Rocket Display Stand
For standard engine rockets (3 pack)

2292 Rocket Display Stand
For C11, D and E engine rockets (3 pack)



2315 Tube Cutting Guides
Assorted sizes: BT-5, BT-20, BT-50, BT-55, and BT-60 (hobby knife not included)

2316 Mini to Standard Engine Adapters
Two simple steps transform a mini engine into a standard size. Insert a mini engine into the adapter, and insert the adapter into a rocket. 3 adapters per pack. Reusable. (Engines not included.)

2320 Launch Lug Pack
Contains 4 each: 1/8 x 2 3/8 in (3 x 60 mm), 1/8 x 1 1/4 in (3 x 32 mm), 3/16 x 2 in (5 x 51 mm) and 1/4 x 1 in (6 x 25 mm) launch lugs.

2317 Standard to D Engine Adapters
Two simple steps transform a standard engine into a D size. Insert a standard engine into the adapter, and insert the adapter into a rocket. 3 adapters per pack. Reusable. (Engines not included.)

3143 Engine Hook Accessory Pack
Hooks fit mini engines (two), regular and D engines (three) and E engines (two).

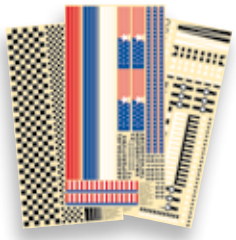
3158 Regular Engine Mount Kit
Fits BT-50, 55 and 60 tubes. Can also be used to make a conversion mount for lightweight D powered rockets.

3159 D And E Engine Mount Kit
Heavy duty engine mounts for D and E engines. Fits BT-55, 60 and 80 tubes.

NOSE CONE ASSORTMENTS

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

3160 Nc-5 Nose Cone Assortment (5 pack)
3161 Nc-20 Nose Cone Assortment (4 pack)
3162 Nc-50 Nose Cone Assortment (5 pack)
3163 Nc-55 Nose Cone Assortment (4 pack)
3164 Nc-56 Nose Cone Assortment (4 pack)
3165 Nc-60A Nose Cone Assortment (3 pack)
3168 Nc-80B Nose Cone (1 Pack)
3173 Sci-Fi Nose Cone Assortment (5 pack)



3170 Waterslide Decal Set

3171 Clear Payload Assortment

3175 Centering Ring Assortment BT5-BT50

3176 Tube Couplers BT5-BT50

3177 Tube Couplers BT55-BT60

3178 Tube Couplers BT80

3179 Laser Cut Centering Rings and Shroud Templates

3180 Clay Nose Cone Weights

3181 Engine Mount Parts Assortment

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 and BT-60 and two per package in BT-80.

Product Number	Body Tube Size	Inside Dimension in./mm	Outside Dimension in./mm	Length in/cm
3084	BT-5	.52/13	.54/14	18.0/45.7
3085	BT-20	.71/18	.74/19	18.0/45.7
3086	BT-50	.95/24	.98/25	18.0/45.7
3087	BT-55	1.28/33	1.33/34	18.0/45.7
3089	BT-60	1.60/41	1.64/42	18.0/45.7
3090	BT-80	2.56/65	2.60/66	14.2/36.1

3196 Large Tube Coupler Pack
Includes two couplers for BT-55, BT-56 and BT-60; One for BT-80.

9751 24 mm Motor Retainer Set (2 sets)

Contents and specifications subject to change without notice.

GET YOUNG PEOPLE EXCITED ABOUT LEARNING!

Inspiring students and young people – that's what Estes Educator is here to do! Just log onto EstesEducator.com to find everything you need for your classroom or youth organization. We've made it easy to bring the fun of model rockets to your students.

- Free lesson plans
- Automated list of items needed
- Links to funding and grants
- Extensive resource materials
- Special discount bulk packs

Estes Makes it EASY!

"Estes model rockets are the best hands-on activity I have ever done with my students!"

FREE LESSON PLANS ONLINE

Use the handy pull-down menus to:

- Choose a grade level
- Choose a subject
- Choose the number of classroom sessions

The perfectly matched lesson plan will be displayed!

All matched to National Learning Standards

AUTOMATED LIST OF ITEMS NEEDED

After choosing a lesson plan, just enter the number of students and our website will automatically display a list of recommended rockets and accessories. We've removed the guesswork and determined the best, most budget-friendly choices for you.

LINKS TO FUNDING

We've located a number of organizations that support teaching with model rockets. From EstesEducator.com, you can link directly to funding opportunities to get the application process started. Many are easy to request and you can expect a response quickly.

EXTENSIVE RESOURCES ONLINE

In addition to free lesson plans, we have many resources available and easily accessed. At EstesEducator.com you can find useful information about:

- How to Choose a Launch Site
- The Basics of Model Rocketry
- Reference Guide for Teachers and Youth Group Leaders
- Worksheets for the Classroom
- Videos, Curricula and much more



ESTES EDUCATOR.com
launch learning fun

SPECIAL BULK PACKS FOR EDUCATORS

Estes offers 12-piece discount Bulk Packs especially for educators and youth group leaders. Bulk Packs are available for a variety of rockets, including E2X® Easy To Assemble Rockets and Skill Level 1 and 2 Rocket Kits. (Rocket Engines, Recovery Wadding, Starters and Starter Plugs are sold separately.)

AIR POWERED PARTY PACK ROCKETS

1700 T-Bolt™ Party Pack Rocket Set
6 Ready to fly rockets
Length: 11.5 in (29.2 cm)
Estimated Weight: .87 oz (24.7 g)
Fins: Foam
Recovery: Bounce
Projected Altitude: 150 ft (46 m)

E2X® EASY TO ASSEMBLE BULK PACK ROCKETS

E2X Kits can be assembled in about one hour. Simply glue the parts together according to the instructions, apply decals and attach the parachute. They require no special tools or painting.

1715 Color the Sky™
(12-pack*)
Length: 19.8 in (50.3 cm)
Recommended Engines: B4-2, B6-2 (first launch), B6-4, C6-5

1749 Gnome™
(12-pack)
Length: 10.3 in (26.2 cm)
Recommended Engines: 1/2A3-2T, 1/2A3-4T (first launch), A3-4T, A10-3T

1751 Alpha III®
(12-pack)
Length: 12.1 in (30.7 cm)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

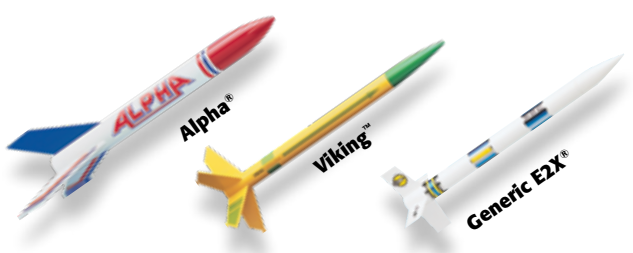
1764 Generic E2X®
(12-pack)
Length: 13.5 in (34.3 cm)
Recommended Engines: 1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

1792 Firestreak SST™
(12-pack)
Length: 10.2 in (25.9 cm)
Quick Snap – No gluing!
Recommended Engines: 1/2A3-2T (first launch), 1/2A3-4T, A3-4T, A10-3T

1793 UP Aerospace™ SpaceLoft™
(12-pack)
Length: 11.1 in (28.2 cm)
Recommended Engines: 1/2A3-2T, 1/2A3-4T (first launch), A3-4T, A10-3T

1753 AVG BULK PACK

(12-pack) 4 of each rocket



Recommended Engines:
½A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

SKILL LEVEL 1 & 2 BULK PACK ROCKET KITS

Skill Level 1 & 2 Rocket Kits require more model building and decorating. Most can be built in less than two hours and require fins to be assembled and some painting.

1754 Wizard™
(12-pack)
Skill Level 1
Length: 12 in (30.5 cm)
Recommended Engines:
1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

1755 Viking™
(12-pack)
Skill Level 1
Length: 12.1 in (30.7 cm)
Recommended Engines:
1/2A6-2, A8-3 (first launch), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

1756 Alpha®
(12-pack)
Skill Level 1
Length: 12.3 in (31.2 cm)
Recommended Engines:
1/2A6-2, A8-3 (first launch),
A8-5, B4-4, B6-4,
B6-6, C6-5, C6-7

1760 Loadstar™ II
(12-pack)
Skill Level 2
Length: 23.3 in (59.2 cm)
Recommended Engines:
Single Stage: B4-4 (first launch), B6-4 C6-5;
Two Stage: Booster Stage: B6-0 (first launch), C6-0;
Upper Stage: A8-5 (first launch), B6-4, B6-6, C6-7

ROCKET ENGINE BULK PACKS

Every launch requires Engines, Recovery Wadding, Starters and Plugs. These convenient Engine Bulk Packs include enough of each for 24 launches. Choose from a variety of engine sizes. We advise using the smallest recommended engine for first launchs.

1781	A8-3 Engines (24)
1783	B6-4 Engines (24)
1784	B6-0/B6-6 Engines (12 each)
1788	½ A3-4T Engines (24)
1789	C6-5 Engines (24)
1672	Blast-Off Flight Pack (6 each of A8-3, B6-4, C6-3 & C6-5)

LAUNCH EQUIPMENT

For first time flights you'll need launch equipment, which can be re-used launch after launch. We recommend choosing a Launch Set, as shown on pages 10-17 of this catalog. With each Launch Set you get the Launch Controller, Launch Pad, plus a rocket for the teacher.

USEFUL CLASSROOM TOOLS

2227	Tube Marking Guide
2228	Ultimate Tube Marking Guide
2231	Fin Alignment Guide
2232	AltiTrak™ Altitude Finder
2246	Altimeter
2315	Tube Cutting Guides
2290-2292	Model Rocket Display Stands

5302 Rocket Science Starter Set

Discover the fun of science! Build the rocket, launch with one of the three included engines, and observe as a reaction occurs to make the rocket soar! Launch again with a different size engine and measure the difference in altitude.

Set Includes:
1 Rocket
1 Launch Pad
1 Launch Controller
1 12 in (30.5) Parachute
1 each A8-3, B6-4, C6-5 Single Stage Model Rocket Engine
4 Starters
8 Plugs
12 Sheets of Recovery Wadding
1 Altitude Tracker

Length: 19.2 in (48.8 cm)
Diameter: .98 in (25 mm)
Estimated Weight: 3.2 oz (90.7 g)
Fins: Plastic
Recovery: Helicopter, Parachute
Projected Altitude: 575 ft (175 m)
Recommended Engines: A8-3 (first launch), B6-4, C6-5

1980 Designer's Special

Comes with everything you see here. Build and fly your own designs. 100+ parts to build up to 8 rockets. Turn your imagination into reality. Color of product may vary.

Blurzz™ Rocket-Powered Dragsters

AVAILABLE in 3 exciting colors! Scream down the 90 foot race track and come to a stop with the 6 inch parachute brake! Challenge your friends to a drag race and be the Estes Dragster champion!

Uses Estes 1505 A10-PT engines.
Estes model rocketry is recommended for ages 10 years and up.
Adult supervision is recommended for those under 12 years of age.

Controller requires 1 high quality 9V alkaline battery – sold separately.

8311 ZipDisc™ Sports Set

Disc glides on a cushion of air, indoors and out. Includes: disc, 2 hockey sticks and 2 goals. Disc requires 4 AA alkaline batteries – sold separately.

FOAM GLIDER

4018 Wind Seeker™ Glider
Rubber band powered airplane
Length: 19.7 in (50 cm)
Wingspan: 16.2 in (41.1 cm)

4018 Wind Seeker™ Glider

MISCELLANEOUS

4024 Spin Factor™
Rubber band powered, handheld helicopter

4024 Spin Factor™

HOW DO I START MY OWN ESTES ROCKET FLEET?

The best way to begin model rocketry is with an Estes flying model rocket launch set. Most of our launch sets are from the E2X® (Easy To Assemble) line. The rocket itself requires minor assembly. All launch sets come with an electrical launch controller, launch pad and instructions to get you out and flying in no time. You will need to purchase flight supplies (engines, recovery wadding, starters and starter plugs) and new alkaline batteries (for the controller) – sold separately.

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

Estes model rocket kits range from ready to fly in just minutes to those that provide many enjoyable hours of building fun. Estes kits are classified into eight categories.

READY TO FLY (RTF): No paint, glue or modeling skills required. Rocket comes assembled and is ready to launch in minutes.

ALMOST READY TO FLY (ARF): Very minor assembly required and is ready to launch in just a few minutes.

E2X® (EASY TO ASSEMBLE): No paint or special tools needed. E2X® kits contain parts that are pre- colored, easy to assemble, plastic fins or fin units and plastic nose cones. Glue the parts together as instructed, apply the self-stick decals and attach the recovery system.

Skill Level 1: Requires some painting, gluing and sanding. Features laser cut wood fins, plastic or balsa nose cones, self-stick or waterslide decals, unfinished body tubes and step-by-step instructions. Most kits are single stage rockets.

Skill Level 2: First tier of more advanced kits that require beginner skills in model rocket construction, finishing and painting. Features laser cut wood fins, plastic or balsa nose cones, self-stick or waterslide decals, unfinished body tubes and step-by-step instructions. These are unique designs that include multi-stages, payloads and scale models.

Skill Level 3: Second tier of more advanced kits that require moderate skills in model rocket construction, finishing and painting. Features multiple laser cut wood fins and parts, unfinished body tubes, waterslide decals, balsa or plastic nose cones, vacuum-formed plastic detailing and step-by-step instructions. These complex designs include scale models, payloaders and multi-stagers that can use D and E engines.

Skill Level 4: Requires a high degree of construction and finishing skills. Features multiple laser cut wood fins, unfinished body tubes and waterslide decals. Assembly can take several days depending on the details required.

Skill Level 5: The most advanced and challenging kit level. These kits are designed for very experienced, master modelers. Construction is extremely complex using advanced wood, paper and plastic techniques. Finishing is detail-oriented that may involve elaborate paint schemes. Building and finishing these rockets can take up to a week or more.

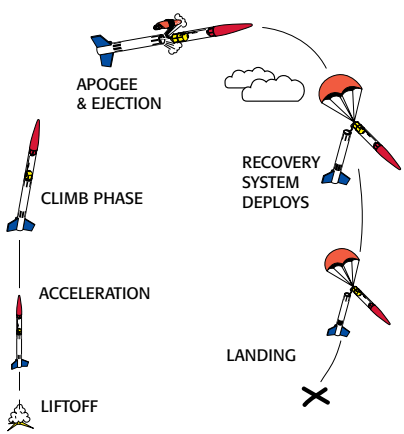
WHAT IS AN ESTES MODEL ROCKET?

Estes model rockets are activity kits designed of lightweight materials such as paper tubing, balsa wood and plastic. Fins attached to the body tube help provide guidance and stability. An engine mount assembly holds the engine in place during rocket flight in most models.

HOW DOES IT WORK?

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 parachute or streamer, is deployed to return the rocket gently to earth. The rocket can then be prepared for another flight.

FLIGHT SEQUENCE



WHERE DO I FLY ESTES MODEL ROCKETS?

The chart on page 82 tells you what size field to use for each 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 83-86) of this catalog for more information.

HOW DID IT ALL GET STARTED?

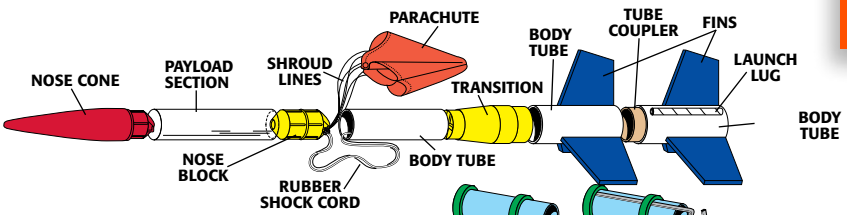
In the mid-1950s when the space age began, flying rockets became very popular. However, there were no propellants readily available to launch model rockets. In 1958 Vernon Estes developed the first, mass-produced model rocket engine. The Estes rocket engine was destined to make model rocketry one of the most popular outdoor activities enjoyed today. Estes products have changed with the times and you can see all of the exciting rockets in this catalog or on the web at www.estesrockets.com.

WHAT DO I NEED TO KNOW?

In this catalog, each description lists important INFORMATION:

- Specifications – length, diameter and estimated weight.
- What engines we recommend.
- How high, on the largest engine recommended, the rocket flies (feet and meters).
- Projected altitudes are estimates only and your rocket's actual performance may vary.
- The type of recovery system that brings the rocket back – parachute, streamer or other.

PARTS OF A MODEL ROCKET



Model rocket kits are constructed of lightweight materials such as paper, balsa and plastic. This diagram 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.

* Not included in RTF or E2X® kits.

PLEASE READ!

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, recovery wadding, starters and starter plugs, launch system, glue and finishing supplies are not included with model rocket kits.

FULL ONE-YEAR WARRANTY

Your Estes model rocket product is warranted against defects in materials or workmanship for one year from the date of the original purchase. If this Estes product, because of a manufacturing mistake, malfunctions or proves to be defective within the one-year warranty period, it will be repaired or replaced, at Estes' option and at no charge to you.

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 products. 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 contact us at www.estesrockets.com or by mail at Estes Industries, LLC, Customer Service Department, 1295 H Street, Penrose, Colorado 81240-9698.

National Association of Rocketry
MODEL ROCKET SAFETY CODE
(Basic Version, Eff. August 2012)

1. Materials. I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.

2. Motors. I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.

3. Ignition System. I will launch my rockets with an electrical launch system and electrical motor starters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the "off" position when released.

4. Misfires. If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.

5. Launch Safety. I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance. When conducting a simultaneous launch of more than ten rockets I will observe a safe distance of 1.5 times the maximum expected altitude of any launched rocket.

6. Launcher. I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor's exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.

7. Size. My model rocket will not weigh more than 1500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse.

8. Flight Safety. I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.

9. Launch Site. I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.

LAUNCH SITE DIMENSIONS

Installed Total Impulse (N-sec)	Equivalent Motor Type	Minimum Site Dimensions (ft.)
0.00-1.25	1/4A, 1/2A	50
1.26-2.50	A	100
2.51-5.00	B	200
5.01-10.00	C	400
10.01-20.00	D	500
20.01-40.00	E	1000
40.01-80.00	F	1000
80.01-160.00	G	1000
160.01-320.00	Two Gs	1500

10. Recovery System. I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.

11. Recovery Safety. I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.

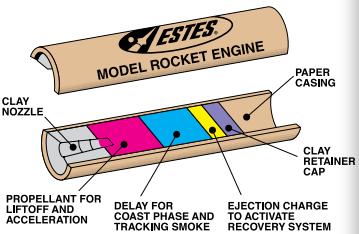
www.nar.org

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

ESTES MODEL ROCKET ENGINES

The famous model rocket engines that made model rocketry the great activity it is today. Estes model rocket engines have been proven consistent and reliable in more than 275,000,000 launches.

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

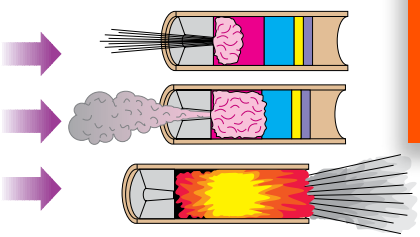


HOW DOES A MODEL ROCKET ENGINE WORK?

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

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

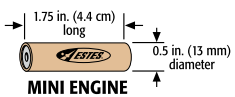
3. After delay, ejection charge is activated, deploying recovery system.

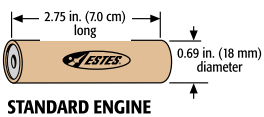


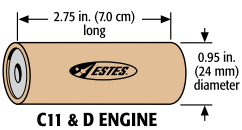
WHAT SIZES ARE AVAILABLE?

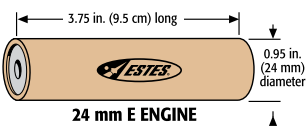
Estes engines are available in a wide variety of sizes and power levels:

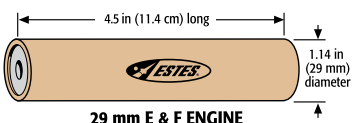
TYPE	TOTAL IMPULSE	ENGINE TYPES
1/4A	0.313 - 0.625	Mini
1/2A	0.626 - 1.25	Standard, Mini
A	1.26 - 2.50	Standard, Mini
B	2.51 - 5.00	Standard
C6	5.01 - 10.00	Standard
C11	5.01 - 10.00	D Size
D	10.01 - 20.00	D Size
E	20.01 - 30.00	E Size
F	45.01 - 50.00	F Size











Each engine type is color coded.

- **Single Stage** - Green
- **Upper Stage** - Purple (Upper stage engines can be used as single stage engines in lightweight rockets.)
- **Booster** - Red (Booster engines contain no delay or ejection charge.)
- **Plugged** - Blue (Plugged engines are used for R/C gliders and contain no delay or ejection charge.)

Each engine has an alpha-numeric code printed on it.

B = TOTAL IMPULSE
This letter is the total power (in Newton-seconds) produced by the engine. Each succeeding letter has up to twice the total power as the previous letter. (Example: "B" engines have up to twice the power of "A" engines, which results in approximately twice the altitude the rocket will reach.)

6 = AVERAGE THRUST
This number shows the engine's average push or how fast the engine powers the rocket to go. The higher the number, the faster the speed. It is measured in Newtons (4.45 Newtons = 1 lb.).

4 = TIME DELAY
This number gives you the time delay in seconds between the end of the thrust phase and ignition of the ejection charge. Engine types ending in "0" have no time delay or ejection and are used for booster stages and special purposes only. Engines ending in "P" have no time delay or ejection charge and the forward end is plugged.

MODEL ROCKET ENGINE CHART

- Delays have a tolerance of plus or minus 10% or one second, whichever is greater.
- All Estes engines come complete with starters and starter plugs.
  The Estes starter plug makes engine ignition extremely reliable.
- Do not fly a rocket/engine combination whose liftoff weight exceeds the recommended maximum liftoff weight.

Prod. No.	Engine Type	Total Impulse	Time Delay	Max. Lift Wt.		Max. Thrust		Thrust Duration	Initial Weight		Propellant Weight	
		N-sec	Sec	oz	g	Newtons	lbs	Sec	oz	g	oz	g
SINGLE STAGE ENGINES												
1502	1/4A3-3T*	0.625	3	1.0	28	4.9	1.1	0.25	0.21	5.9	0.05	1.3
1503	1/2A3-2T*	1.25	2	2.0	57	8.3	1.9	0.3	0.23	6.4	0.07	1.9
1507	A3-4T*	2.50	4	2.0	57	6.8	1.5	0.6	0.28	8	0.12	3.3
1511	A10-3T*	2.50	3	3.0	85	13.0	2.9	0.8	0.29	8.1	0.12	3.5
1593	1/2A6-2	1.25	2	2.0	57	8.9	2.0	0.3	0.48	13.6	0.10	2.7
1598	A8-3	2.50	3	3.0	85	10.7	2.4	0.5	0.55	15.5	0.14	4.1
1601	B4-2	5.00	2	4.0	113	13.2	3.0	1.1	0.66	18.6	0.27	7.6
1602	B4-4	5.00	4	3.5	99	13.2	3.0	1.1	0.68	19.2	0.27	7.6
1605	B6-2	5.00	2	4.5	127	12.1	2.7	0.8	0.61	17.3	0.23	6.5
1606	B6-4	5.00	4	4.0	113	12.1	2.7	0.8	0.63	17.8	0.23	6.5
1613	C6-3	10.00	3	4.0	113	15.3	3.4	1.6	0.83	23.4	0.43	12.2
1614	C6-5	10.00	5	4.0	113	15.3	3.4	1.6	0.85	24	0.43	12.2
1522	C11-3	10.00	3	6.0	170	22.1	4.9	0.8	1.13	32.1	0.44	12.4
1523	C11-5	10.00	5	5.0	142	22.1	4.9	0.8	1.18	33.4	0.44	12.4
1566	D12-3	20.00	3	14.0	396	32.9	7.4	1.6	1.57	44.5	0.85	24.2
1567	D12-5	20.00	5	10.0	283	32.9	7.4	1.6	1.61	45.7	0.85	24.2
1673	E9-4	30.00	4	15.0	425	25.0	5.6	2.8	2.16	61.2	1.30	36.9
1674	E9-6	30.00	6	12.0	340	25.0	5.6	2.8	2.23	63.2	1.30	36.9
1692	E12-4	30.00	4.6	17.0	482	30.6	6.9	2.7	2.16	61.2	1.30	36.9
1693	E12-6	29.50	7	14.0	397	29.6	6.7	2.7	2.23	63.2	1.30	36.9
1651	F15-4	49.61	4	21	595	25.26	5.7	3.45	3.59	101.5	2.12	60
1652	F15-6	49.61	6	17	482	25.26	5.7	3.45	3.66	103.7	2.12	60
1696	E16-4	33.68	4	20	566	26.44	5.9	2.09	2.86	81.0	1.41	40
1697	E16-6	33.68	6	16	453	26.44	5.9	2.09	2.92	82.7	1.41	40
UPPER STAGE ENGINES												
1504	1/2A3-4T*	1.25	4	1.0	28	8.3	1.9	0.3	0.23	6.6	0.07	1.9
1599	A8-5	2.50	5	2.0	57	13.3	3.0	0.5	0.55	15.7	0.14	4.1
1607	B6-6	5.00	6	2.5	71	12.1	2.7	0.8	0.64	18.2	0.23	6.5
1615	C6-7	10.00	7	2.5	71	15.3	3.4	1.6	0.85	24.3	0.43	12.2
1524	C11-7	10.00	7	4.0	113	22.1	4.9	0.8	1.19	33.8	0.44	12.4
1568	D12-7	20.00	7	8.0	226	32.9	7.4	1.6	1.62	46.0	0.85	24.2
1675	E9-8	30.00	8	10.0	283	25.0	5.6	2.8	2.24	63.5	1.30	36.9
1694	E12-8	29.80	8	12.0	340	31.8	7.1	2.7	2.24	63.5	1.30	36.9
1653	F15-8	49.61	8	15	425	25.26	5.7	3.45	3.69	104.4	2.12	60
1698	E16-8	33.68	8	14	396	26.44	5.9	2.09	2.99	84.7	1.41	40

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

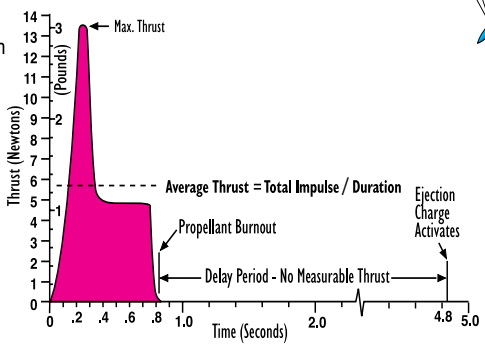
MODEL ROCKET ENGINE CHART CONTINUED

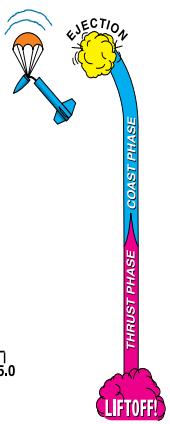
Prod. No.	Engine Type	Total Impulse	Time Delay	Max. Lift Wt.		Max. Thrust		Thrust Duration	Initial Weight		Propellant Weight	
		N-sec	Sec	oz	g	Newtons	lbs	Sec	oz	g	oz	g
BOOSTER STAGE ENGINES												
1510	A10-0T*	2.50	None	4.0	113	13	2.9	0.8	0.24	6.8	0.12	3.5
1600	A8-0	2.50	None	3.0	85	13.3	3.0	0.3	0.47	13.5	0.14	4.1
1608	B6-0	5.00	None	4.0	113	12.1	2.7	0.8	0.55	15.7	0.23	6.5
1616	C6-0	10.00	None	4.0	113	15.3	3.4	1.6	0.76	21.4	0.43	12.2
1521	C11-0	10.00	None	6.0	170	22.1	4.9	0.8	1.03	29.2	0.44	12.4
1565	D12-0	20.00	None	14.0	396	32.9	7.4	1.6	1.43	40.4	0.84	23.8
1691	E12-0	28.80	None	16.0	454	31.3	7.0	2.6	2.05	58.1	1.30	36.9
1650	F15-0	49.61	None	19	539	25.26	5.7	3.45	3.32	94.0	2.12	60
1695	E16-0	33.68	None	18	509	26.44	5.9	2.09	2.58	73.2	1.41	40
PLUGGED ENGINES - FOR USE WITH ROCKET POWERED RACERS & R/C ROCKET GLIDERS												
1505	A10-PT*	2.50	None	3.0	85	13.0	2.9	0.8	0.26	7.4	0.13	3.78

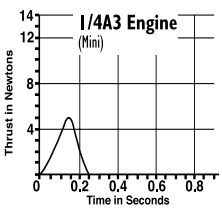
* There are 4 mini engines per package. All other engines are 2 or 3 per package.

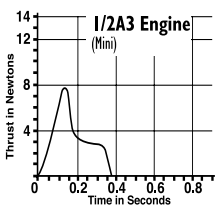
ENGINE TIME/THRUST CURVES

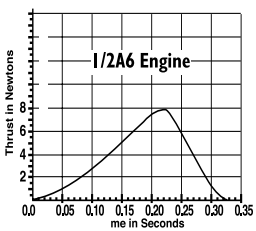
- Time/thrust curves are representative of random production samples
- Graphs are not drawn to the same scale



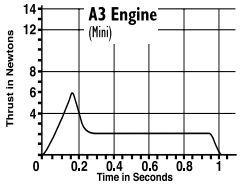


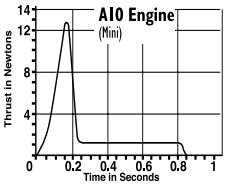


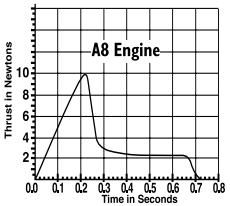


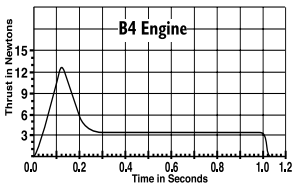


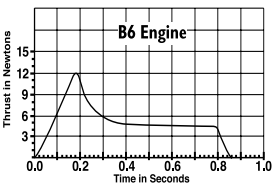
ENGINE TIME/THRUST CURVES

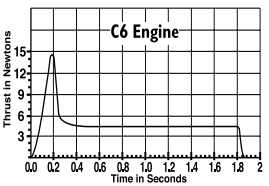


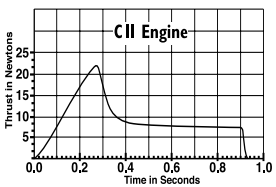


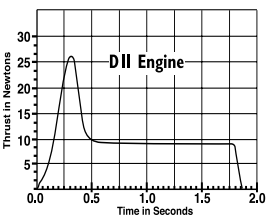


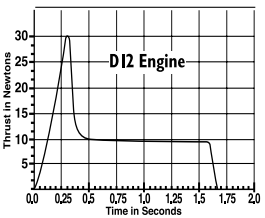


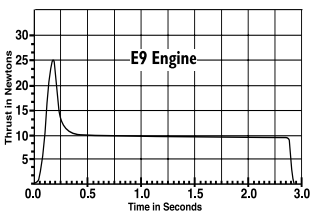


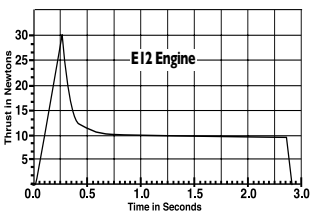


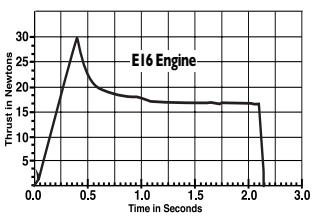


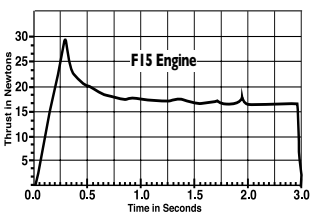


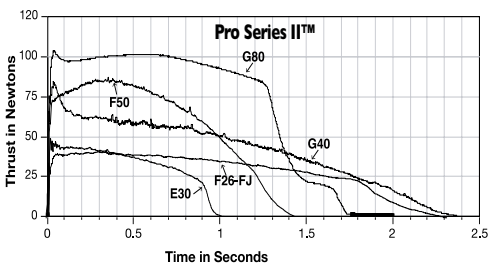












2157 Apollo II Saturn V ***Scale 1/100th***
Length: 43.25 in (110 cm)
Diameter: 3.94 in (100 mm)
Estimated Weight: 11 oz (311.8 g)
Fins: Plastic
Recovery: 3 Parachutes
Projected Altitude: 150 ft (46 m)
Recommended Engines: E12-4* (first launch), Composite E30-4*
Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.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