

2016

World Leader in Model Rocketry

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RADIO CONTROL

4814 Proto Z™ Quadcopter

4814 Proto Z™ Quadcopter

Diameter: 5 9/16 in (14.1 cm)

Bright, built-in LEDs, One-Button Flip, True

Direction Flight and a fast charge time makes
this the ideal Drone for indoor flying. A 2.4GHz
radio not only allows for interference-free flight
but also allows for multiple ProtoZ's to fly at once. A 3.7V 100mAh LiPo battery, USB charge cord and spare rotor blades are also included in the ready-to-fly package. Recommended for ages 14+.

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 flight), F15-8

SKILL LEVEL 1 ROCKET KITS

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 flight), 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 flight), A10-3T



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 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

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, D12-3,

D12-5 (first flight)

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 flight), 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 flight), B4-4, B6-4,

7247 Nike Smoke Scale

Length: 22.9 in (58.2 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 2.4 oz (65.2 g)

Fins: Laser cut wood Recovery: Parachute

Projected Altitude: 650 ft (198 m)

Recommended Engines: B6-4 (first flight), C6-5

7248 Supernova™

Length: 27.5 in (69.9 cm) Diameter: .98 in (24 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 flight), B6-6, C6-7

With booster: B6-0 (first flight), C6-0









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

7240 Honest John Scale

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 flight), E9-6*,

Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

7241 Ouinstar™

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 flight), 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, Č6-7

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

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 flight), A10-3T





NEW 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 4 ROCKET KITS

7227 Apollo Little Joe II 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 flight),

D12-5, E12-4*

Requires 3/16 in (5 mm) Maxi™ launch rod (2244),

sold separately.

SKILL LEVEL 5 ROCKET KITS

2157 Apollo II Saturn V Scale

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: È12-4* (first flight),

Composite E30-4* 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 flight), E12-4* Requires 3/16 in (5 mm) Maxi™ launch rod (2244), 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 flight), B6-4, C6-5

1460 Eliminator XL™ Launch Set

Length: 44.25 in (112.4 cm)
Diameter: 1.35 in (34 mm)
Estimated Weight: 5.6 oz (158.8 g)

Fins: Plastic

Recovery: Parachute Projected Alfitude: 1,400 ft (427 m) Recommended Engines: D12-3 (first flight), E9-6*, E9-8* *Requires 3/16 in (5 mm) Maxi™ Launch Rod (2244),

1499 Rascal™ & HiJinks™ Launch Set Rascal

Length: 14 in (35.6 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.5 oz (43 g)

Fins: Plastic

Recovery: Parachute
Projected Altitude: 1,200 ft (366 m) Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5, C6-7 **HiJinks**™

Length: 14 in (35.6 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.5 oz (43 g)

Fins: Plastic

Recovery: Parachute Projected Altitude: 1,200 ft (366 m)

Recommended Engines: A8-3 (first flight), 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: 1,150 ft (351 m) Recommended Engines: A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

1401 Hunter's Choice™ Launch Set Short Round™

Length: 11.1 in (28.2 cm) Diameter: .74 in (19 mm) Estimated Weight: .74 oz (19 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 575 ft (175 m)

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

Magnum Load™

Length: 18.5 in (47 cm)
Diameter: 1.35 in (35 mm)
Estimated Weight: 2 oz (56.7 g) Fins: Plastic

Recovery: Parachute

Projected Altitude: 775 ft (236 m) Recommended Engines: B4-4 (first flight), B6-4, C6-5

1424 Silver Arrow™ Launch Set

Length: 15 in (38 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.3 oz (36.9 g) Fins: Plastic Recovery: Parachute Projected Altitude: 1,125 ft (343 m) Recommended Engines: A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

403 Riptide™ Launch Set







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

1424 Silver Arrow™ Launch Set

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

E2X® (EASY TO ASSEMBLE)

1425 Manta™ II Launch Set

Length: 15 in (38 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.3 oz (36.9 g) Fins: Plastic

Recovery: Parachute and Glide Projected Altitude: 600 ft (183 m)

Recommended Engines: A8-3 (first flight), B4-4, B6-4

1427 Alpha® III Launch Set

Length: 12.3 in (31.2 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.2 oz (34 g) Fins: Plastic

Projected Altitude: 1,150 ft (351 m)

Recovery: Parachute Recommended Engines: A8-3 (first flight), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

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 flight), B6-4,

C6-3, C6-5

C6-5, C6-7

1440 Wild Flyer™ Launch Set

Length: 19.9 in (50.5 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.8 oz (51 g) Fins: Plastic Projected Altitude: 1,100 ft (335 m)

Recovery: Parachute

Recommended Engines: A8-3 (first flight), B4-4, B6-4,

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: 1,100 ft (335 m)

Recovery: Parachute

Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5, C6-7

1465 HeliCat™ Launch Set

Length: 30.25 in (76.8 cm) Diameter: 1.35 in (34 mm) Estimated Weight: 3.5 oz (99 g) Fins: Plastic

Recovery: Parachute; Nose Cone - Helicopter Projected Altitude: 550 ft (168 m)

Recommended Engines: B4-2, B6-2 (first flight), C6-3, C6-5





1440 Wild Flyer[™] Launch Set

1441 Journey[™] Launch Set

1465 HeliCat™ 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 flight), 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 flight), 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: 950 ft (290 m)

Recommended Engines: 1/2A3-2T (first flight), 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: 1,100 ft (335 m)

Recommended Engines: A8-3 (first flight), 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 flight), 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: 1,100 ft (335 m)

Recommended Engines: A8-3 (first flight), B4-4, B6-4, B6-6,

SKILL LEVEL 2

1466 Maxi Alpha™ 3 Launch Set

Skill Level: 2

Length: 33.25 in (84.5 cm) Diameter: 2.6 in (66 mm)

Estimated Weight: 8 oz (226.8 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 700 ft (213 m)

Recommended Engines: D12-3, É9-4*, E9-6* Requires 3/16 in (5 mm) Maxi™ Launch Rod (2244), included.

469 Tandem-X™ Launch Set



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

AIR-POWERED ROCKETS

1708 Rocket-Star™ Party Pack Rocket Set See page 78

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: 50 ft (15.2 m)

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: 50 ft (15.2 m)

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)

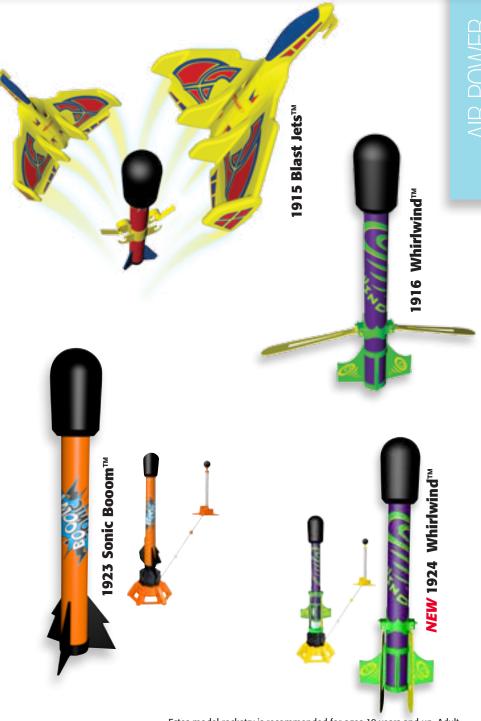
Fins: Foam

Recovery: Helicopter / Bounce Projected Altitude: 150 ft (46 m)









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

1102 Rocket Red™

1104 Outer-space Orange™

1105 Blast-off Blue™

1106 Yellow Star™

1107 Black Hole™

1108 Galaxy Gold™

1109 Meteorite White™

1110 Atomic Aqua™

1111 Satellite Silver™

Length: 19.8 in (50.3 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 2.8 oz (79.4 g)

Fins: Plastic

Recovery: Parachute Projected Altitude: 550 ft (168 m)

Recommended Engines: B4-2, B6-2 (first

flight), B6-4,C6-5

Note: The Color the Sky Bulk Pack rockets (1715) are E2X® (Easy to Assemble) and do require assembly.

1894 Sky Hawker™ Length: 16.5 in (41.9 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.5 oz (42.5 g) Fins: Plastic Recovery: Parachute Projected Altitude: 1,125 ft (343 m) Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5, C6-7

2452 Athena™

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: 1,125 ft (343 m) Recommended Engines: A8-3 (First Flight), B6-4, C6-5

2455 Code Red™

Diameter: 1.35 in (47.6 cm)
Diameter: 1.35 in (34 mm)
Estimated Weight: 2.2 oz (62.4 g)
Recovery: 12 in (30.5 cm) Parachute
Projected Altitude: 725 ft (221 m) Recommended Engines: B4-4, B6-4 (First Flight), C6-5











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

2457 Prospector™ Length: 23 in (58.4 cm) Diameter: 1.35 in (34 mm) Estimated Weight: 2.4 oz (68 g) Recovery: 12 in (30.5 cm) Parachute Projected Altitude: 700 ft (213 m) Recommended Engines: B4-4, B6-4 (First Flight), C6-5

2460 Fat Jax™

Length: 12.6 in (32 cm) Diameter: .74 in (19 mm) Estimated Weight: .72 oz (20.4 g) Fins: Plastic Recovery: 6 in (15.2 cm) Parachute Projected Altitude: 425 ft (130 m)

Recommended Engines: 1/2A3-4T (First Flight), A3-4T,

A10-3T

2461 Nitro™

Length: 12.6 in (32 cm) Diameter: .74 in (19 mm) Estimated Weight: .69 oz (19.6 g) Fins: Plastic Recovery: 6 in (15.2 cm) Parachute Projected Altitude: 425 ft (130 m)

Recommended Engines: 1/2A3-4T (First Flight), A3-4T,

2462 Sky Duster[™] Length: 12.9 in (32.8 cm) Diameter: .74 in (19 mm) Estimated Weight: .74 oz (21 g) Fins: Plastic Recovery: 6 in (15.2 cm) Parachute Projected Altitude: 425 ft (130 m) Recommended Engines: 1/2A3-4T (First Flight), A3-4T, A10-3T

2472 Sizzler™

Length: 14.5 in (36.8 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 2.1 oz (59.5 g) Fins: Plastic

Recovery: Parachute
Projected Altitude: 550 ft (168 m)

Recommended Engines: B4-4(first flight), C6-5

2473 Shooting Star™

Length: 19.25 in (48.9 cm) Diameter: 1.35 in (34 mm) Estimated Weight: 2.3 oz (65.2 g) Recovery: Parachute Projected Altitude: 725 ft (221 m)

Recommended Engines: B4-4, B6-4 (First Flight), C6-5







2473 Shooting Star™





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

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 flight), 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 flight), 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 flight), B4-4, B6-4,

C6-5, C6-7

2485 L.G.M. 0095™

Length: 21 in (53.3 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 2.7 oz (79.5 g) Fins: Plastic

Recovery: Parachute

Projected Altitude: 650 ft (198 m)

Recommended Engines: B4-2 (first flight), B6-2, B6-4,

C6-3, C6-5

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 flight), 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

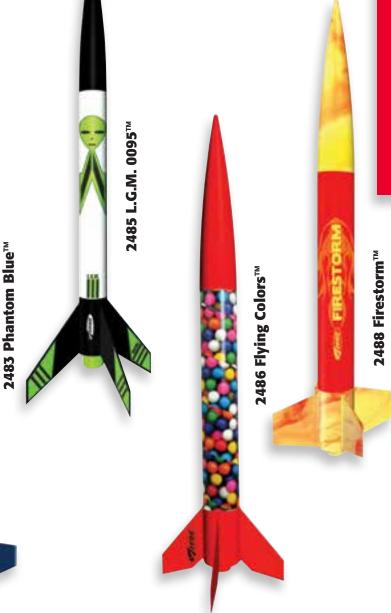
Projected Altitude: 600 ft (183 m)

Recommended Engines: B4-2 (first flight), B6-2, B6-4,

C6-3, C6-5







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

2489 Hyper Dart™

Length: 16.1 in (40.9 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.4 oz (39.7 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 1125 ft (343 m)

Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5. C6-7

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 flight), 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 flight), C6-3, C6-5

2492 Spirit™

Length: 20 in (50.8 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 2.6 oz (73.7 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 700 ft (213 m)

Recommended Engines: B4-2, B6-2, B6-4 (first flight), C6-3, C6-5

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 flight), 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 2485 L.G.M. 0095™, 2491 Drifter™, 2492 Spirit™, 2495 Chiller™, 2497 Nova™, 2884 Red Rider™ 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



1258 Booster-60 Stager Replacement



2259 Booster-55 Stager Replacement



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

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 flight), B4-4, B6-4,

C6-5, C6-7

2495 Chiller™

Length: 17.3 in (43.9 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 2.2 oz (62.4 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 600 ft (183 m) Recommended Engines: B4-2, B6-2, B6-4 (first flight), 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 flight), C6-3, C6-5

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 flight), C6-3, C6-5

2884 Red Rider™

Length: 18.5 in (47 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 3 oz (85 g)

Fins: Plastic Recovery: Parachute

Projected Altitude: 700 ft (213 m)

Recommended Engines: B4-2 (first flight), B6-2, B6-4,

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 flight), B6-2, B6-4,

C6-3, C6-5







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 flight),

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 flight), 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,

A3-4T (first flight), A10-3T

1256 Alpha III®

Length: 12.3 in (31.2 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.2 oz (34 g) Fins: Plastic

Recovery: Parachute

Projected Altitude: 1,100 ft (335 m) Recommended Engines: 1/2A6-2, A8-3 (first

flight),

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: 1.7 oz (48.2 g)

Fins: Plastic

Recovery: Parachute Projected Altitude: 1,100 ft (335 m)

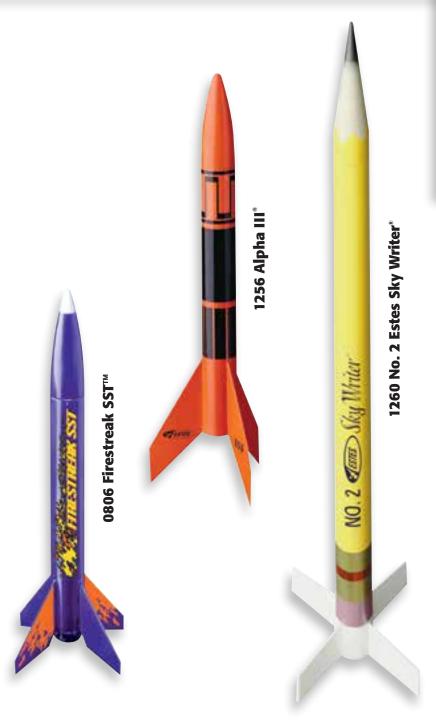
Recommended Engines: A8-3 (first flight), B4-4,

B6-4, C6-5









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 flight), 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 flight), 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 flight), E9-4*,

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 flight), E9-6*, E12-6*

Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

1956 Firebolt™

Length: 36.5 in (92.7 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 6.8 oz (192.8 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 1000 ft (305 m)

Recommended Engines: D12-5 (first flight), E9-6*,

Requires 3/16 in (5 mm) Maxi™ launch rod (2244),

sold separately.







* 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 flight),

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 flight), 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 flight), C6-3, C6-5















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

2132 Banshee™

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 flight), A8-5,

B4-4, B6-4, B6-6, C6-5, C6-7

2132 Banshee™

Length: 15.6 in (39.6 cm) Diameter: 1.1 in (28 mm) Estimated Weight: 1.9 oz (53.9 g) Fins: Plastic

Recovery: Parachute

Projected Altitude: 1100 ft (335 m) Recommended Engines: A8-3 (first flight), B4-4, B6-4, B6-6, C6-5, C6-7

2158 AGM-57X Heatseeker™

Length: 18.6 in (47.2 cm) Diameter: 1.1 in (28 mm) Estimated Weight: 2.3 oz (65.2 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 875 ft (267 m)

Recommended Engines: B4-4 (first flight), B6-4, C6-5

2168 Metalizer™

Length: 22.5 in (57.2 cm) Diameter: 1.35 in (34 mm) Estimated Weight: 2.4 oz (68 g)

Fins: Plastic Recovery: Parachute

Projected Altitude: 760 ft (232 m)

Recommended Engines: B4-4 (first flight), B6-4, C6-5

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: 1,125 ft (343 m)

Recommended Engines: A8-3 (first flight), B4-4,

B6-4, C6-5, C6-7







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

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 flight), 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: 900 ft (274 m)

Recommended Engines: B6-4 (first flight), C6-5

2428 Orange Crush™

Length: 32.7 in (83.1 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 2.3 oz (65.2 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 850 ft (259 m)

Recommended Engines: C11-3 (first flight), D12-3, D12-5

2429 Humdinger™

Length: 22.5 in (57.2 cm) Diameter: .54 in (14 mm)

Estimated Weight: .65 oz (18.4 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 1000 ft (335 m)

Recommended Engines: 1/2A3-2T (first flight), 1/2A3-4T,

A3-4T, A10-3T







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**

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 flight), A3-4T, A10-3T

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 flight), C6-5

Booster: D12-0

With Booster: A8-5, B6-4 (first flight) B6-6, C6-5,

C6-7

2439 Shattered™

Length: 34 in (86.4 cm) Diameter: .98 in (25 mm)

Estimated Weight: 2.5 oz (70.9 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 925 ft (282 m)

Recommended Engines: B6-4 (first flight), C6-5

2435 3 Bandits™

3 rocket set

Length: 10.8-11.1 in (27.4-28.3 cm)

Diameter: .74 in (19 mm)

Estimated Weight: .6-.71 oz (19.8-20.1 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 550 ft (168 m)

Recommended Engines: 1/2A3-4T (first flight),

A3-4T, A10-3T

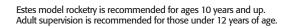








2439 Shattered™



E2X® (EASY TO ASSEMBLE) **ROCKET KITS**

2438 Sky Shark™

Length: 15.1 in (38.4 cm) Diameter: .74 in (19 mm)

Estimated Weight: .76 oz (21.5 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 550 ft (168 m)

Recommended Engines: 1/2A3-2T (first flight),

1/2A3-4T, A3-4T, A10-3T

2463 Dark Zero™

Length: 21.3 in (54.1 cm) Diameter: 1.1 in (28 mm)

Estimated Weight: 2.1 oz (59.5 g)

Fins: Plastic

Recovery: Parachute

Projected Altitude: 975 ft (297 m)

Recommended Engines: B4-4, B6-4 (first flight), C6-5

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 flight), 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 flight), C6-5

2476 Black Diamond™

Length: 26.25 in (66.7 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 3.3 oz (93.6 g)

Fins: Plastic

Recovery: Parachute Projected Altitude: 500 ft (152 m)

Recommended Engines: B4-2 (first flight), B6-2, C6-3









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

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

flight), 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 flight),

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: 1,000 ft (305 m)

Recommended Engines: 1/2A6-2, A8-3 (first flight), 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 flight), 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: 1,600 ft (488 m)

Recommended Engines: 1/2A6-2, Á8-3 (first flight), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

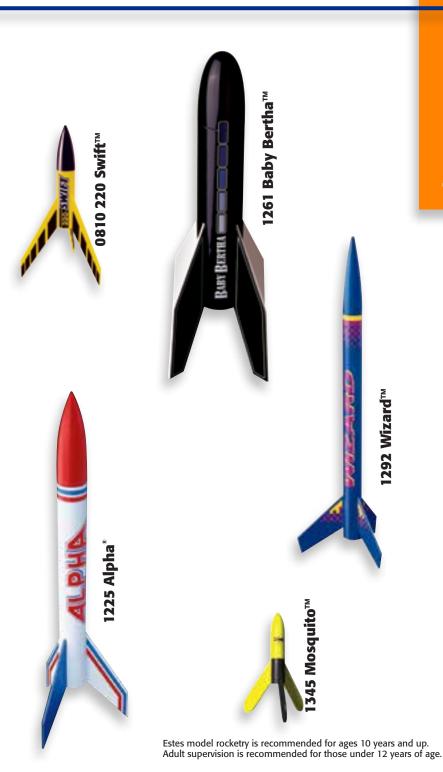
1345 Mosquito™

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 flight), 1/2A3-2T, 1/2A3-4T, A3-4T, A10-3T





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: 1,850 ft (564 m)

Recommended Engines: 1/2A6-2, A8-3 (first flight), A8-5,

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

flight), 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: 1,600 ft (488 m)

Recommended Engines: 1/2A6-2, Á8-3 (first flight), A8-5,

B4-4. B6-4, B6-6, C6-5, C6-7

2056 U.S. Army Patriot M-104 Scale

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 flight), 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: 1,600 ft (488 m)

Recommended Engines:

Single Stage: A8-3 (first flight), B4-4, B6-4, C6-5; Two Stage: Booster - B6-0 (first flight), C6-0; Upper Stage: A8-5 (first flight), B6-6, C6-7

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: 1,500 ft (457 m)

Recommended Engines: 1/2A6-2, A8-3 (first flight), A8-5,

B4-4, B6-4, B6-6, C6-5, C6-7





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

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

2444 Fletcher™

Length: 39.25 in (99.7 cm) Diameter: .74 in (19 mm) Estimated Weight: 1.4 oz (39.7 g) Fins: Laser cut wood Recovery: Parachute Projected Altitude: 325 ft (99 m) Recommended Engines: A3-4T (first flight), A10-3T

2445 Mini Max™

Length: 8.8 in (22.4 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.3 oz (37 g) Fins: Laser cut wood Recovery: Streamer Projected Altitude: 300 ft (91.5 m)

Recommended Engines: 1/2A3-2T (first flight), 1/2A3-

4T, A3-4T, A10-3T

2446 Mini Honest John Scale

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 flight),

A3-4T, A10-3T

3009 Chuter-Two™

Length: 18.5 in (47 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.2 oz (34 g) Fins: Laser cut wood Recovery: 2 Parachutes

Projected Altitude: 900 ft (274 m)

Recommended Engines: A8-3 (first flight), B6-4, C6-5

3013 Flutter-By™

Length: 8.25 in (21 cm) Diameter: .98 in (25 mm) Estimated Weight: 1.4 oz (39.7 g) Fins: Laser cut wood Recovery: Tumble Projected Altitude: 575 ft (175 m) Recommended Engines: 1/2A6-2, A8-3

(first flight), B4-2, B4-4, B6-2, B6-4





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

3024 Phoenix Bird™

Length: 24 in (61 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 2.8 oz (79 g)

Fins: Laser cut wood Recovery: Parachute

Projected Altitude: 550 ft (168 m)

Recommended Engines: B4-4 (first flight), B6-4, C6-5

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

flight), A3-4T, A10-3T

3037 Hornet

Length: 19.25 in (48.9 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 2.3 oz (65 g) Fins: Laser cut wood

Recovery: Parachute

Projected Altitude: 775 ft (236 m)

Recommended Engines: B4-4 (first flight), B6-4, C6-5

3201 Taser Twin™

Length: 15.4 in (39 cm) Diameter: .74 in (19 mm) Estimated Weight: 1.8 oz (51 g) Fins: Laser cut wood Recovery: Tumble; Streamer

Projected Altitude: 2,000 ft (610 m)

Recommended Engines:

Upper and Single Stage: A8-5 (first flight), B6-6,

C6-5, C6-7

Booster: A8-0 (first flight), B6-0, C6-0

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

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 flight),

B4-4, B6-4, C6-5, C6-7









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

2123 EggsCaliber™

Length: 20 in (50.8 cm) Diameter: 1 in (25 mm)

Estimated Weight. (without egg): 2.6 oz (74 g)

Recovery: 2 Parachutes
Projected Altitude: 1700 ft (518 m) without egg
Recommended Engines: With egg – B6-2 (first flight), C6-3, C11-3, D12-3, E9-4*; Without egg – B4-2 (first flight), 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 flight), 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 flight), A3-4T, A10-3T

Two or Three Stage: Booster and Second Stage: A10-0T Upper Stage: 1/4A3-3T (first flight), 1/2A3-2T, A3-4T, A10-3T

3026 Photon Probe™

Length: 23 in (58.4 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 3,5 oz (99.2 g)

Fins: Laser cut wood

Recovery: Parachute Projected Altitude: 575 ft (175 m) Recommended Engines: B4-4 (first flight), B6-4, C6-5

3217 Vagabond™

Length: 35.3 in (89.7 cm) Diameter: 1.64 in (42 mm)

Estimated Weight: 4.1 oz (116.2 g)

Fins: Laser cut wood

Recovery: Parachute

Projected Altitude: 1,275 ft (389 m)

Recommended Engines: D12-5 (first flight), D12-7, E9-6*,

Requires 3/16 in (5 mm) Maxi™ launch rod (2244),

sold separately.





2448 Mini Comanche-3™

SKILL LEVEL 2 ROCKET KITS

3225 Solar Warrior™

Length: 27 in (68.6 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 3.1 oz (87.9 g)

Fins: Laser cut wood Recovery: Parachute

Projected Altitude: 925 ft (282 m)

Recommended Engines: C11-3 (first flight), C11-5,

D12-5, D12-7

Requires 3/16 in (5 mm) Maxi™ Launch Rod (2244), sold separately.

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: 1,325 ft (404 m)

Recommended Engines: C11-3 (first flight), 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: 1,000 ft (305 m)

Recommended Engines: Single Stage: B4-4 (first flight), B6-4 C6-5

Two Stage: Booster Stage: B6-0 (first flight), C6-0 Upper Stage: A8-5 (first flight), B6-4, B6-6, C6-7

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 flight), 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





^{*} 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

7000 Bull Pup 12D Scale

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 flight), 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: 2,125 ft (648 m) Recommended Engines: Single Stage: B6-4, (first flight), B6-6, C6-5, C6-7 Two Stage: Booster: A8-0, B6-0 (first flight), C6-0 Upper Stage: A8-5, B6-6 (first flight), C6-5, C6-7

7221 STM-012™

Length: 44.4 in (112.8 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 5.7 oz (161.6 g) Fins: Laser cut wood Recovery: Parachute Projected Altitude: 1125 ft (343 m) Recommended Engines: C11-3 (first flight), D12-5, E9-4*, E9-6*, E12-6* Requires 3/16 in (5 mm) Maxi™ launch rod (2244),

7224 Astron Sprint XL™

sold separately.

Length: 22.8 in (57.9 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 3.4 oz (96.4 g)

Fins: Laser cut wood Recovery: Parachute Projected Altitude: 1300 ft (396 m) Recommended Engines: C11-3 (first flight), D12-5, E9-6*, E9-8*, E12-6*, E12-8* Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

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 flight),

B6-4, C6-5









SKILL LEVEL 3 ROCKET KITS

1921 Liberty Bell 7 Mercury Redstone Scale

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

2134 MIRV™

Length: 24.5 in (62.2 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 4.7 oz (134 g) Fins: Laser cut wood Projected Altitude: 600 ft (183 m)

Recommended Engines:

Booster Stage: B6-0, (first flight) C6-0 Second Stage: A10-3T Only (Requires three A engines

and one B or C booster engine per launch.)

2425 Super Neon XL™

Length: 37.75 in (95.9 cm) Diameter: 1.64 in (42 mm) Estimated Weight: 7 oz (198 g) Fins: Laser cut wood

Recovery: Parachute

Projected Altitude: 1,000 ft (305 m)

Recommended Engines: D12-5 (first flight), E9-4*, E9-6* Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold

separately.

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: 1,600 ft (488 m)

Recommended Engines: D12-5 (first flight), E9-6* Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold

separately.

3222 Tercel™

Length: 16.5 in (41.9 cm) Diameter: .54 in (14 mm) Wingspan: 10.9 in (27.7 cm) Estimated Weight: .78 oz (22.1 g) Fins: Laser cut wood Recovery: Parachute and glider Projected Altitude: 700 ft (213 m)

Recommended Engines: 1/2A3-2T (first flight), A3-4T,

A10-3T





* 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

3228 V2 Scale

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 flight),

D12-3, E9-4*, E9-6

Requires 3/16 in (5 mm) Maxi™ Launch Rod (2244), sold separately.

3229 Astron Skydart II™

Length: 15.4 in (39.1 cm) Diameter: .98 in (25 mm) Wingspan: 12.5 in (31.8 cm) Estimated Weight: 3.1 oz (87.9 g) Fins: Laser cut wood Recovery: Parachute & Glider Projected Altitude: 500 ft (152 m)

Recommended Engines: B6-2 (first flight), C6-3

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 flight), E9-4*, E9-6*, E12-6*

With Booster:

D12-0: D12-5 (first flight), E9-6*, E12-6 *

E12-0*.: D12-5 (first flight), D12-7, E9-6*, E12-6*, E12-8* Requires 3/16 in (5 mm) Maxi™ launch rod (2244), sold separately.

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 flight), 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

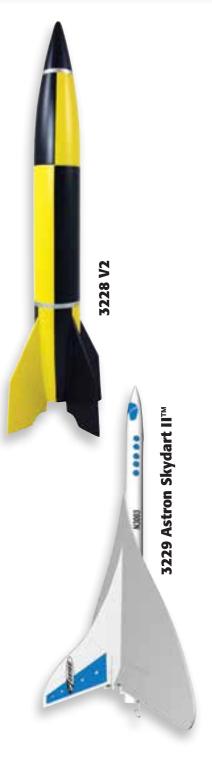
Projected Altitude: 400 ft (122 m)

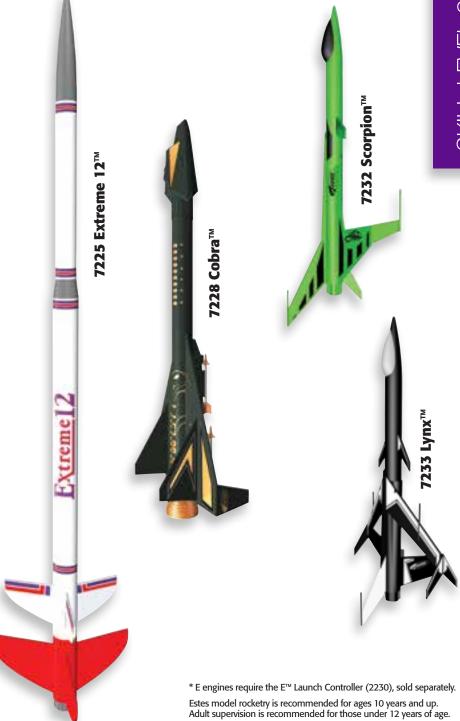
Recommended Engines: A3-4T (first flight), A10-3T

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 flight), A10-3T





SKILL LEVEL 4 ROCKET KITS

1351 Cosmic Interceptor™

Length: 40.5 in (102.9 cm)
Diameter: 2 in (51 mm)
Estimated Weight: 10.1 oz (286.3 g)

Fins: Laser cut wood Recovery: Nylon parachute Projected Altitude: 625 ft (190 m)

Recommended Engines: D12-3 (first flight),

E9-4*, E12-4*,

PSII E30-4T Requires 3/16 in (5 mm) Maxi™ launch rod (2244),

sold separately.

3221 QCC Explorer™

Length: 35 in (88.9 cm) Diameter: 1.64 in (42 mm)
Estimated Weight: 5 oz (141.2 g)
Fins: Laser cut wood

Fins: Laser Cut Wood Recovery: Parachute Projected Altitude: 1225 ft (373 m) Recommended Engines: C11-3 (first flight), D12-5, E9-4*, E9-6* Requires 3/16 in (5 mm) Maxi™ launch rod

(2244), sold separately.

7229 Dark Silver™

Length: 29.8 in (75.7 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 4.1 oz (116.2 g) Fins: Laser cut wood

Recovery: Parachute Projected Altitude: 400 ft (122 m) Recommended Engines: C6-3







* 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 5 ROCKET KITS

3223 Xarconian Cruiser™

Length: 22.7 in (57.7 cm) Diameter: 1.33 in (34 mm) Estimated Weight: 3.7 oz (105 g) Wing Span: 8.4 in (21.3 cm) Fins: Laser cut wood Recovery: Parachute

Projected Altitude: 525 ft (160 m)

Recommended Engines: B6-2 (first flight), C6-3

3224 Asteroid Hunter™

Length: 16.2 in (41.1 cm) Diameter: .98 in (25 mm) Wingspan: 8 in (20.3 cm) Estimated Weight: 4.4 oz (124.7 g) Fins: Laser cut wood Recovery: 2 Parachutes Projected Altitude: 500 ft (152 m) Recommended Engine: C6-3

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 flight), 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 flight), E9-4,

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 flight), D12-5 Requires 3/16 in (5 mm) Maxi™ launch rod (2244),

sold separately.







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 flight), 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 flight), F15-8

9708 Mammoth™

Length: 59.5 in (151.1 cm) Diameter: 2 in (5.1 cm)

Estimated Weight: 11.9 oz (337.4 g)

Fins: Plastic

Recovery: Nylon Parachute

Projected Altitude: 1600 ft (488 m)

Recommended Engines: E16-4, E16-6, E16-8, F15-6 (first flight),

F15-8

9709 Traiector™

Length: 35.3 in (89.7 cm) Diameter: 2 in (5.1 cm)

Estimated Weight: 10.7 oz (303.3 g)

Fins: Plastic

Recovery: Nylon Parachute

Projected Altitude: 1600 ft (488 m)

Recommended Engines: E16-6, F15-6 (first flight), 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 flight), F15-8







9710 Prowler Launch SetTM Includes Estes Porta Pad ETM Launch Controller

Pro Series II rockets, require a launch controller with 30 feet of wire, such as our E^{∞} (2230) or PSII $^{\infty}$ (2240) Launch Controller. In addition to the launch controller, you will need a sturdy launch pad with a $\frac{1}{4}$ " (6 mm) launch rod, or you can purchase our 3552 Estes Pro Series II Launch Pad.

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

PRO SERIES II™ ROCKET KITS

9701 Ventris™

Length: 46.25 in (117.5 cm) Diameter: 2.5 in (6.4 cm) Estimated Weight: 15.6 oz (442.3 g)

Fins: Laser cut plywood

Recovery: 24 in (60 cm) Nylon Parachute

Projected Altitude: 2,000 ft (610 m)

Recommended Motors: F26-6FJ, F50-6T, G40-7W,

G80-7T

9702 Partizon™

Length: 56 in (142.2 cm) Diameter: 2.5 in (6.4 cm) Estimated Weight: 19.1 oz (541.5 g)

Fins: Laser cut plywood

Recovery: 24 in (60 cm) Nylon Parachute Projected Altitude: 1,800 ft (549 m)

Recommended Motors: F26-6FJ, F50-6T, G40-7W, G80-7T

9703 Argent™

Length: 56.4 in (143.3 cm) Diameter: 2.5 in (6.4 cm) Estimated Weight: 16.5 oz (467.6 g) Fins: Laser cut plywood Recovery: 24 in (60 cm) Nylon Parachute Projected Altitude: 1,700 ft (518 m) Recommended Motors: F26-6FJ, F50-6T, G40-7W, G80-7T

9704 Nike Smoke Scale

Length: 41.8 in (106.2 cm) Diameter: 3 in (7.6 cm) Estimated Weight: 17.5 oz (496.1 g) Fins: 2 piece plastic Recovery: 24 in (60 cm) Nylon Parachute Projected Altitude: 1,500 ft (457 m) Recommended Motors: F26-6FJ, F50-6T, G40-7W, G80-7T

9705 Mega Der Red Max™

Length: 40 in (101.6 cm) Diameter: 4 in (10.2 cm) Estimated Weight: 31 oz (878.9 g) Fins: Laser cut plywood with wood laminate Recovery: 30 in (76 cm) Nylon Parachute Projected Altitude: 500 ft (457 m) Recommended Motors: F50-6T, G40-7W, G80-7T



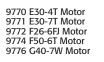


G motors require users to be ages 18 years and up.

PRO SERIES II™ ACCESSORIES

PRO SERIES II™ MODEL ROCKET MOTORS

(1 per pack)



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











2261 24 in Nylon Parachute 2273 30 in Nylon Parachute





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



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



3556 PS II™ Recovery Wadding

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.

2239 Astron II™ Launch Pad Quick assembly - no glue

or tools required! Comes complete with blast deflector, standoff, two-piece 1/8 in (3 mm) launch rod and safety cap.



2227 Tube Marking Guide

Easy way to mark fin and launch lug placement lines. Also includes a fin gluing iig. Body tube 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. Adult supervision recommended for anyone under 18 when launching E engine powered rockets



2250 1/4A3, 1/2A3, A3 and A10 Engine Plugs 5 Orange, 5 Green

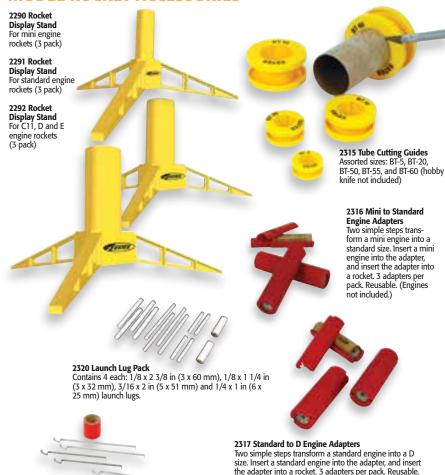
2251 1/2A6, A8, B4, B6, C6 and E12 Engine Plugs 5 Magenta, 5 Yellow

2252 C11, D12, E9, E16 and F15 Engine Plugs 5 White, 5 Black





MODEL ROCKET ACCESSORIES



3143 Engine Hook Accessory Pack

Hooks fit mini engines (one), regular and D engines (three) and E engines (two). Includes spacer for E engine hooks.



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

(Engines not included.)

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)





3175 Centering Ring Assortment BT5-BT50



3171 Clear Payload Assortment



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!

Solution 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









launch learning fun

SPECIAL BULK PACKS **FOR EDUCATORS**

Estes offers 12- and 24-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)



1708 Rocket-Star™ Party Pack Rocket Set 12 Rockets Length: 8.8 in (22.4 cm) Fins: Foam Recovery: Bounce

Projected Altitude: 50 ft (15.2 m)



E2X® EASY TO ASSEMBLE BULK PACK ROCKETSE2X 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 flight), B6-4, C6-5

Note: The individual sale Color the Sky rockets (1100-1111) are Ready to Fly and do not require assembly.

Generic Elx®



1749 Gnome™ (12-pack) Length: 10.3 in (26.2 cm)

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

1751 Alpha® III (12-pack)

Length: 12.3 in (31.2 cm) Recommended Engines: 1/2A6-2, A8-3 (first flight), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

Alpha III

1764 Generic E2X® (12-pack)

Length: 13.5 in (34.3 cm) Recommended Engines: 1/2A6-2, A8-3 (first flight), A8-5, B4-4, B6-4, B6-6, C6-5, C6-7



1792 Firestreak SST™ (24-pack*)

Length: 10.2 in (25.9 cm) Quick Snap - No gluing! Recommended Engines: 1/2A3-2T (first flight), 1/2A3-4T, A3-4T, A10-3T

Length: 11.1 in (28.2 cm) Recommended Engines: 1/2A3-2T, 1/2A3-4T (first flight), A3-4T, A10-3T

UP Remspace" Spacetoft" 1793 UP Aerospace™ **SpaceLoft™** (12-pack)



^{*} Quantity subject to change

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.



1722 Comet Chaser™ (12-pack) Skill Level 1 Length: 14.4 in (36.5 cm) Recommended Engines: A8-3, (first flight), B6-4, C6-5, C6-7

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



1756 Alpha* (12-pack) (121760 Loadstar™ II (12-pack) Skill Level 2 Length: 23.3 in (59.2 cm) Recommended Engines: Single Stage: B4-4 (first flight), B6-4 C6-5; Two Stage: Booster Stage: B6-0 (first flight), C6-0; Upper Stage: A8-5 (first flight), 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 flights.





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)

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 12-17 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	2246	Altimeter
2228	Ultimate Tube Marking Guide	2315	Tube Cutting Guides
2231	Fin Alignment Guide	2290-2292	Model Rocket
2232	AltiTrak™ Altitude Finder		Display Stands

1980 Designer's Special

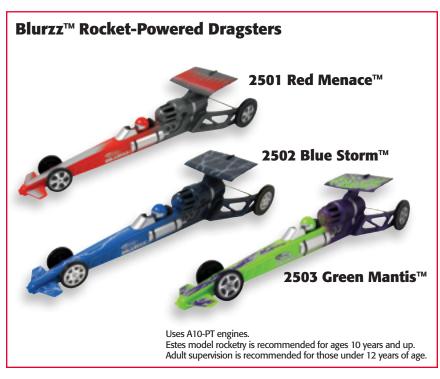


Comes with everything you see here. Build and fly your own designs. 100+ parts to build up to 8 rockets. Turn your imagination into reality. Color of product may vary.

8311 ZipDisc™ Sports Set

Disc glides on a cushion of air, indoors and out. Includes: disc, 2 hockey sticks and 2 goals.





BALSA GLIDERS

3430 Tuff Birds Stratosphere™

Rubber Band Power Length: 11 in (27.9 cm) Wingspan: 12.8 in (32.5 cm)

3520 Tuff Birds Estes™ Length: 8.8 in (22.4 cm) Wingspan: 9 in (22.9 cm)

FOAM GLIDERS

4014 Hydra™, Condor™ and Hothead™ Rubber Band Power

Length: 12 in (30.5 cm) Wingspan: 13.5 in (34.3 cm)

4018 Wind Seeker™ Glider

Rubber band powered airplane Length: 19.7 in (50 cm) Wingspan: 16.2 in (41.1 cm)

MISCELLANEOUS

4024 Spin Factor™ Rubber band powered, handheld helicopter







RADIO CONTROL



4604 Diamondback™

Length: 24 in (61 cm) Width: 3.8 in (9.6 cm) Height: 8.8 in (22.6 cm)

Main Rotor: 18 in (45.7 cm)
Includes fully assembled helicopter, Radio Controller, Rechargeable 7.4V, 1000mAh battery, AC Wall Charger, extra blades and instructions. Recommended for ages 14+.



Proto X™ Quadcopter

World's smallest quadcopter! 2.4 GHz controller allows you to fly with your friends. Bright LED lights for flying in the low light conditions. Designed for great indoor flights. Includes USB charge cord for quick recharging. Requires 2 "AAA" batteries, not included. Recommended for ages 14+.





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.

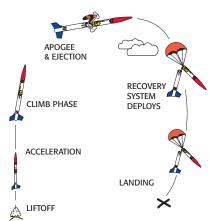
WHAT IS AN ESTES MODEL ROCKET?

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 5 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 91-94) of this catalog for more information.

HOW DID IT ALL GET STARTED?

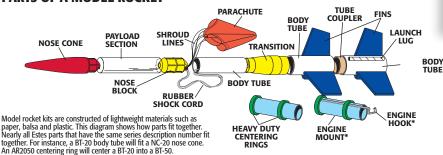
In the mid-1950s when the space age began, flying rockets became very popular. However, there were no propellants readily available to launch model rockets. In 1958 Vernon Estes developed the first, mass-produced model rocket engine. The Estes rocket engine was destined to make model rocketry one of 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



* 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-Cox Corp., Customer Service Department, 1295 H Street, PO Box 227, Penrose, Colorado 81240-0227.

National Association of Rocketry MODEL ROCKET SAFETY CODE

(Basic Version, Eff. August 2012)



- 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 count-down 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 1,500 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	Α	100				
2.51-5.00	В	200				
5.01-10.00	С	400				
10.01-20.00	D	500				
20.01-40.00	Е	1,000				
40.01-80.00	F	1,000				
80.01-160.00	G	1,000				
160.01-320.00	Two Gs	1,500				

- 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.

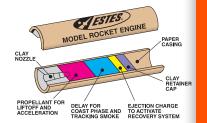
www.nar.org

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.

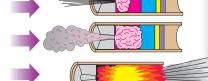
- The concept of a factory assembled model rocket engine is the foundation of this scientific and educational activity!
- 3% of all Estes engines are static-tested at the factory for reliability and adherence to performance specifications.
- All engines comply with the code requirements of the National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





HOW DOES A MODEL ROCKET ENGINE WORK?

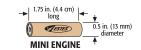
- 1. When engine is ignited, it produces thrust and boosts rocket into sky.
- 2. After propellant is used up, delay is activated, producing tracking smoke and allowing rocket to coast.
- After delay, ejection charge is activated, deploying recovery system.

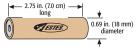


WHAT SIZES ARE AVAILABLE?

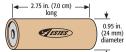
Estes engines are available in a wide variety of sizes and power levels:

TYPE	TOTAL IMPULSE	ENGINE TYPES
1/4A	0.313 - 0.625	Mini
1/2A	0.626 - 1.25	Standard, Mini
Α	1.26 - 2.50	Standard, Mini
В	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

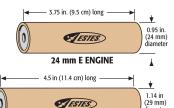




STANDARD ENGINE



C11 & D ENGINE



29 mm E & F ENGINE

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.).

ESTES.

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.

diameter

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 (patent pending) 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	Ma Lift \		Max. Thrust		Thrust Duration	Initial Weight			ellant ight
		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	0.46	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 ENGINE	S										
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

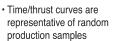
The data listed above is from randomly chosen production samples. NOTE: The "T" designates a mini engine.

MODEL ROCKET ENGINE CHART CONTINUED

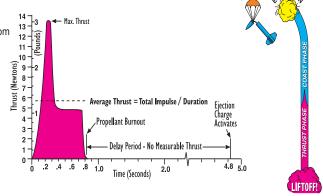
Prod. No.	Engine Type	Total Impulse	Time Delay	Max. Lift Wt.		Max. Thrust		Thrust Duration	Initial Weight		Propellant Weight	
		N-sec	Sec	OZ	g	Newtons	lbs	Sec	oz	g	oz	g
BOOST	BOOSTER STAGE ENGINES											
1510	A10-0T*	2.50	None	4.0	113	13	2.9	0.8	0.24	6.8	0.12	3.5
1600	A8-0	2.50	None	3.0	85	13.3	3.0	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
PLUGO	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

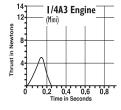
^{*} There are 4 mini engines per package. All other engines are 2 or 3 per package.

ENGINE TIME/THRUST CURVES

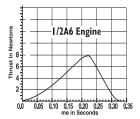


 Graphs are not drawn to the same scale

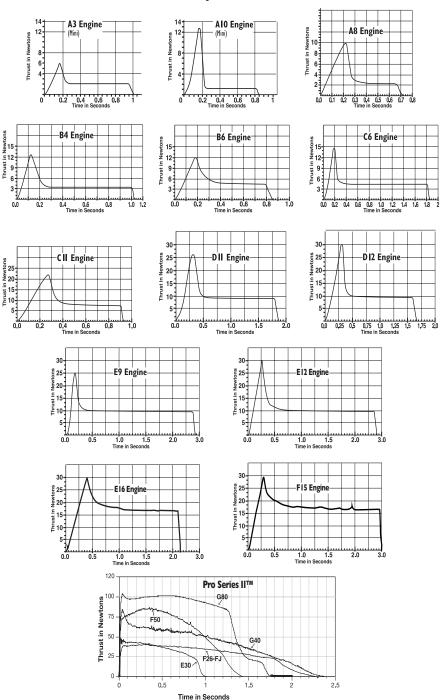








ENGINE TIME/THRUST CURVES





ROCKET POWERED DRAGSTERS

Blue Storm™

Red Menace™

Green Mantis™

Uses 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.



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