ESTES ROCKETS
1295 H Street
Pensacola, CA 81340
PRINTED IN CHINA
www.estesrockets.com

PARTS:
Locate the parts shown below and lay them out on the table in front of you. DO NOT USE THIS DRAWING TO ASSEMBLE YOUR ROCKET.

ASSEMBLY TIP: Read all instructions before beginning work on your model. Make sure you have all parts and supplies.

TEST-FIT ALL PARTS TOGETHER BEFORE APPLYING ANY GLUE!
If any parts don’t fit properly, sand as required for precision assembly.

SUPPLIES
In addition to the parts included in the kit you will also need:

- Plastic Parts Set - 1 (60901)
- Plastic Parts Set - 2 (60902)
- Modeling Knife
- Plastic Cement
- Mixing Stick
- Fin Glue (worked grit)
- Decal Sheet (60831)

FLYING YOUR ROCKET
Choose a large field (250 ft. [76 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great. Launch only with little or no wind and good visibility.

Always follow the National Association of Rocketry (NAR) SAFETY CODE.

MISFIRES
TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Disconnect the igniter clips and remove the engine. Take the plug and igniter out of the engine. If the igniter has burned, it worked but did not ignite the engine because it was not touching the propellant inside the engine. Put a new igniter all the way inside the engine without bending it. Push the plug in place. Repeat the steps under Countdown and Launch.

PRECAUTIONS

NO DRY GRASS OR WEEDS

TEAM OVERVIEW
Acceleration Engineering

Micky Badgero, the leader of Acceleration engineering, has been studying rockets for over 25 years and has degrees in Electronics and Computer Science. Mr. Badgero is currently a graduate student in computer science at Michigan State University, studying artificial intelligence and robotics.

TEAM SPECIFICATIONS:
Name: Acceleration Engineering
Website: www.acceleration.org
Country: Origin: Bath, Michigan, USA

VEHICLE SPECIFICATIONS:
Name: Lucky Seven
Length: 28.5 ft. (9 m)
Min Diameter: 0.6 ft (20 cm)
Max Diameter: 0.66 ft (20 cm)
Dry Weight: 1.40 lbm (6.35 kg)
Engine: Not yet disclosed
Total Thrust: 16,200 lbf
Packaged/Unopened: 3 passenges, 800 lbm (360 kg)

MISSION SPECIFICATIONS:
Launched from a beachhead, max ascent force on ascent: 3 G.
Max Speed: 3,300 fps (1,000 m/s, local Mach 3). Max Altitude: 62 miles (100 km)
In Weightless Conditions: 200 seconds Lading Method: Guided, parabolic descent to a vertical landing
Total Duration: Approximately 12 hernas.

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1. INSTALL ENGINE MOUNT

A. Hold Engine Hook against Engine Mount Tube.
B. Insert Engine Mount and Engine Hook into Body.

2. INSTALL FINS

A. Insert one Fin into each slot on Body. Slide in until end of Fin is Flush with rear of Body.

3. ASSEMBLE BASE

A. Apply tube type plastic cement to tab on Nozzle. Insert into hole in flat side of Base. Let Dry. Repeat for remaining Nozzles.
B. Apply tube type plastic cement to inside ridge of Body. Apply cement around outside edge of motor tube. Align Engine Hook with slot and insert Base into Body. Let Dry.

4. ASSEMBLE NOSE CONE & ATTACH SHOCK CORD

A. Apply tube type plastic cement to bulkhead of one half of Nose Cone. Install Cap. Let Dry.
B. Insert Shock Cord through eyelet on Cap. Tie with double knot.
C. Cut clay weight in half. Press each half into cavity of Nose Cone halves.
D. Apply tube type plastic cement to edges of Nose Cone and press together. Let Dry.
E. Attach Shock Cord to Base. Pass through eyelet and tie with double knot.

5. ATTACH PARACHUTE

A. Form loop with shroud lines.
B. Lay shock cord over loop about 1 1/2" (3.8 cm) from Base.
C. Pass ‘chute through loop.
D. Pull tight.

6. APPLY DECALS

Peel decals one at a time from backing sheet and apply where shown. Rub down to remove bubbles.

ROCKET PREFLIGHT

A. Insert 2 - 3 loosely crumpled squares of Recovery Wadding.
B. Spike.
C. Fold.
D. Fold Again.
E. Roll.
F. Wrap lines loosely, insert Parachute and Shock Cord into Nose Cone.

WARNING FLAMMABLE

To avoid serious injury, read instructions & NFPA Safety Code included with engines. PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH! If you do not use your prepared engine, remove igniter before storing your engine.