



ESTES INDUSTRIES  
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The World Leader in Model Rocketry

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# SHELLSHOCKED™

EST 1815  
READY-BUILT™ FLYING MODEL ROCKET INSTRUCTIONS

## 1. PARACHUTE ATTACHMENT

A. Form loop with parachute shroud lines.

B. Move shock cord and insert loop through eyelet on rear nose cone half.

C. Pass parachute through loop.

D. Pull tight.

Labels: EYELET, SHOCK CORD, REAR NOSE CONE HALF

## 2. PAYLOAD PREPARATION

A. Stuff an egg or other payload into hollow foam padding. NOTE: You may want to pack the egg in a plastic bag.

B. Use scissors to cut apart the foam slugs, then plug both ends of the payload foam.

C. Gently slide payload into front nose cone half.

D. Screw nose cone halves together until the cardboard ring won't move between pieces.

Labels: FRONT NOSE CONE HALF, CARDBOARD RING

## 3. FLIGHT PREPARATION

### PARACHUTE PREPARATION

A. Insert four squares of loosely crumpled recovery wadding into rocket body tube.

B. Spike parachute.

C. Fold twice.

D. Roll.

E. Wrap shroud lines loosely around chute. Insert parachute into rocket. Parachute should slide easily into body tube. If fit is too tight, unfold and repack again.

F. Slide shock cord and nose cone into place.

**IMPORTANT:** Wadding must be in place and slide easily for rocket to work properly!

### ENGINE PREPARATION

**WARNING - FLAMMABLE**  
BEFORE PROCEEDING, READ INSTRUCTIONS AND NAR 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 the igniter before storing your engine.

A. Twist off plastic engine lock ring at the rear of your rocket.

B. Slide engine into rear of rocket as shown.

C. Twist plastic engine lock ring into locked position to hold engine in place.

D. Separate igniter and igniter plug.

E. Hold rocket upright, drop in igniter. Igniter must touch propellant.

F. Insert igniter plug.

G. Firmly push all the way in.

H. Bend igniter wires back.

Labels: NOZZLE END

## LAUNCH SUPPLIES

To launch your rocket, you will need the following:

- Launch Pad (Estes Porta-Pad® II)
- Launch Controller (Estes Electron Beam®)
- Recommended Estes Engines: Without an Egg, use a B4-2, B6-2, C5-3 or a C6-3. Loft your ShellShocked™ with an egg on a C5-3 or C6-3 engine only.

Use only Estes products to launch this rocket.

## PROJECTED ALTITUDES

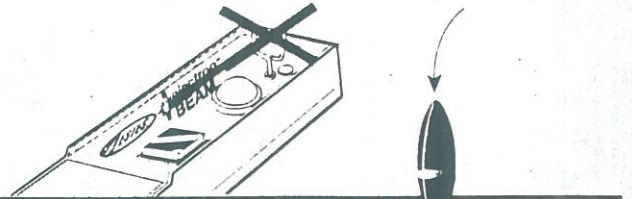
WITHOUT EGG	FEET	METERS
B4-2	168	51
B6-2	176	54
C5-3	358	109
C6-3	338	103
WITH EGG	FEET	METERS
C5-3	243	74
C6-3	226	69

## TIPS FOR FLYING YOUR ROCKET

- Choose a large field away from power lines, buildings, tall trees, and low flying aircraft. Try to find a field at least 250 feet (76 meters) square. The larger the launch area, the better your chance of recovering your rocket.
- Launch area must be free of dry weeds and brown grass.
- Launch only during calm weather with little or no wind and good visibility.
- Don't leave parachute packed more than a minute or so before launch during cold weather (colder than 40° Fahrenheit [4° Celsius]).
- Always follow the National Association of Rocketry (NAR) MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities. The safety code is enclosed with this kit.

## COUNTDOWN AND LAUNCH

- 10...** Safety key must not be in launch controller. The safety cap with safety key attached should already be on the launch rod.



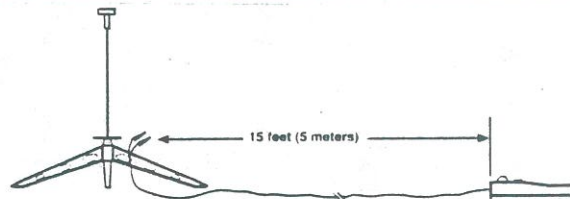
- 9...** Remove safety cap from launch rod, slide launch lugs over rod. Make sure rocket slides freely and micro-clips are clean for good electrical contact.



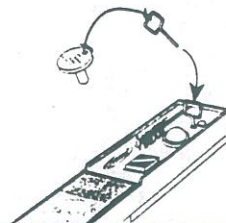
- 8...** Attach micro-clips to the igniter wires. Arrange the micro-clips so they do not touch each other or the metal blast deflector. Attach micro-clips as close to protective tape on igniter as possible.



- 7...** Move everyone back from your rocket as far as launch wire will permit (at least 15 feet - 5 meters).



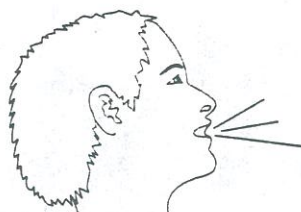
- 6...** Insert safety key to arm the launch controller.



- 5...** Start audible countdown.

**4...3...2...1.....**  
**LAUNCH!**

Push and hold button until engine ignites. For safety, immediately remove safety key from launch controller and replace safety cap on launch rod.



## MISFIRES

When an ignition failure occurs, remove the safety key from the launch control system and wait one minute before approaching the rocket. Remove the expended igniter from the engine and install a new one. Be certain the coated tip is in direct contact with the engine propellant. Broken or chipped coating will not affect the performance of the igniter. Reinstall the igniter plug as illustrated previously. Repeat the countdown and launch procedure.