



EstesRockets.com

# DARC-1™

7307



## MODEL ROCKET INSTRUCTIONS

### KEEP FOR FUTURE REFERENCE

**IMPORTANT:** Please record date found on decal and keep for future reference. \_\_\_\_\_

*Read all instructions. Make sure you have all parts and supplies. Test fit all parts before applying glue.*

### SUPPLIES



SCISSORS



PENCIL



RULER



YELLOW GLUE



MEDIUM CA GLUE



HOBBY KNIFE



MASKING TAPE



PRIMER (WHITE)



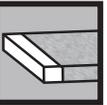
PAINT (GRAY, BLACK)



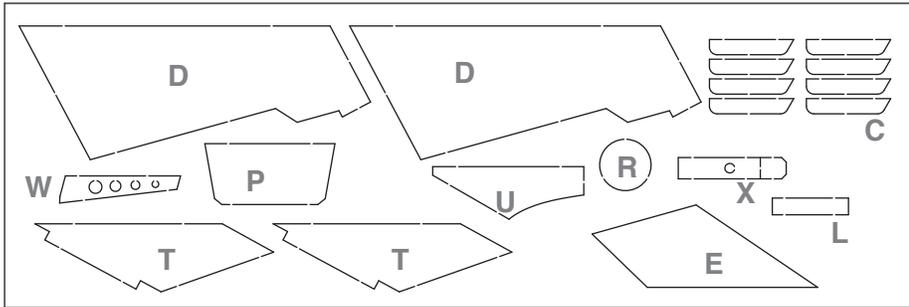
CLEAR COAT (OPTIONAL)



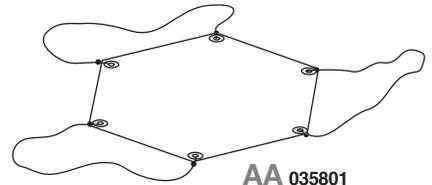
FINE SANDPAPER



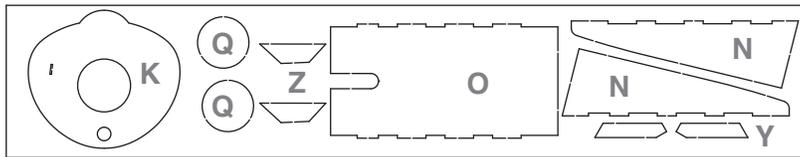
SAND BLOCK



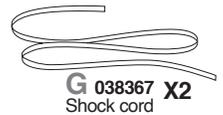
**090051-7307**  
Laser cut wood sheet



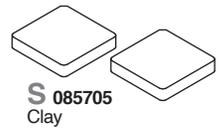
**AA 035801**  
Parachute



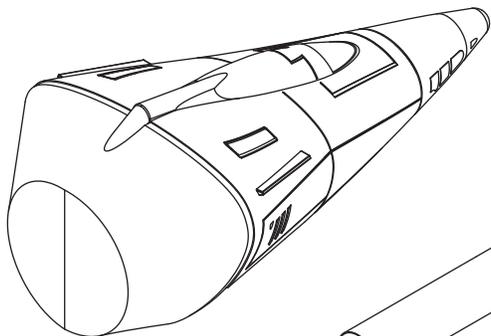
**090052-7307**  
Laser cut card stock



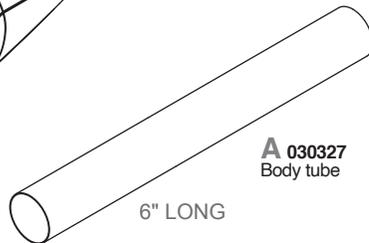
**G 038367 X2**  
Shock cord



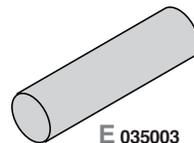
**S 085705**  
Clay



**I 073225**  
Aero shroud



**A 030327**  
Body tube



**E 035003**  
Yellow spacer tool



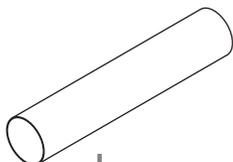
**H 072421**  
Engine retainer



**B 30162-2**  
Green engine block



**F 030168**  
Mylar retainer ring



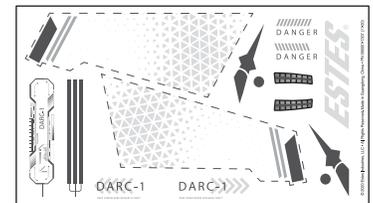
**J 037120**



**M 038178**  
Launch lug



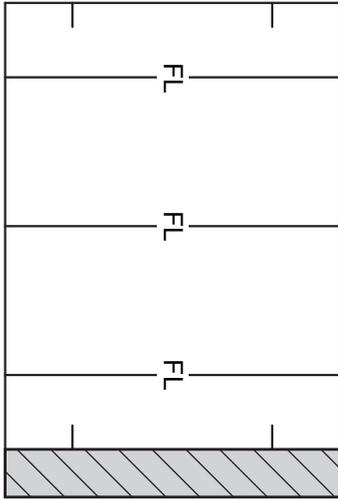
**V 032054**  
Wood dowel



**090001-7307**  
Waterslide decal

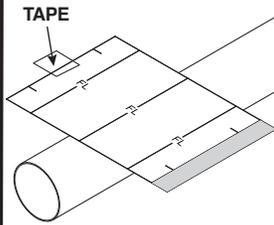
### TUBE MARKING GUIDE

Make a copy if you want to keep instructions.

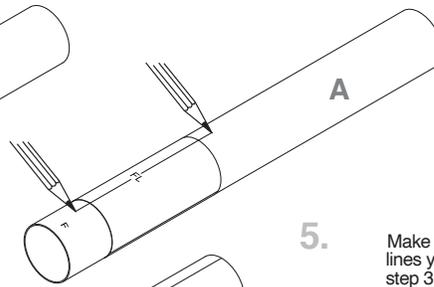


### MARK BODY TUBE

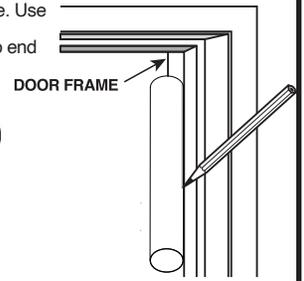
1. **NOTE:**  
Cut from here.



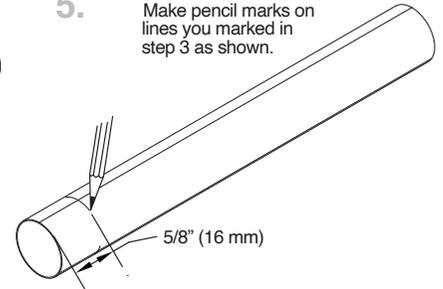
2. Mark **A** as shown.



3. Remove guide. Use door frame to extend lines to end of tube.



5. Make pencil marks on lines you marked in step 3 as shown.



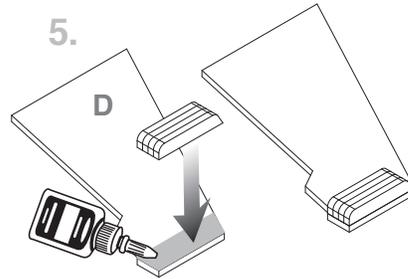
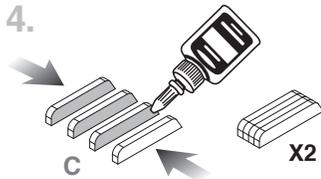
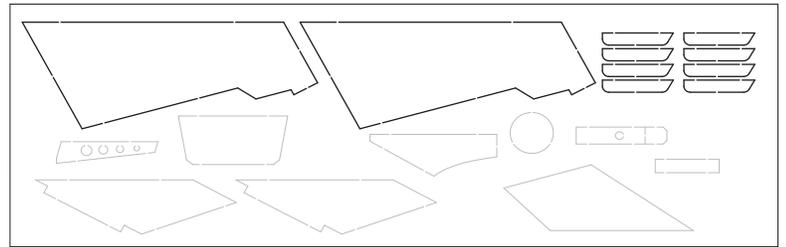
### PREPARE WOOD PARTS

1. Sand both sides.

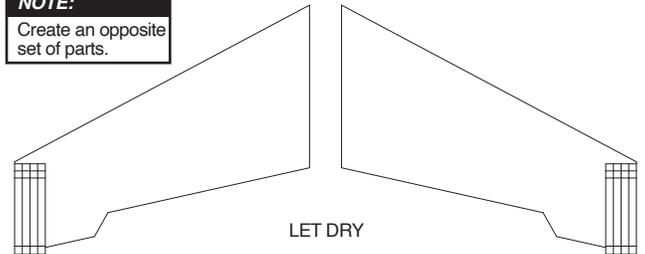


- 2.

3. Wood pieces used in this step.

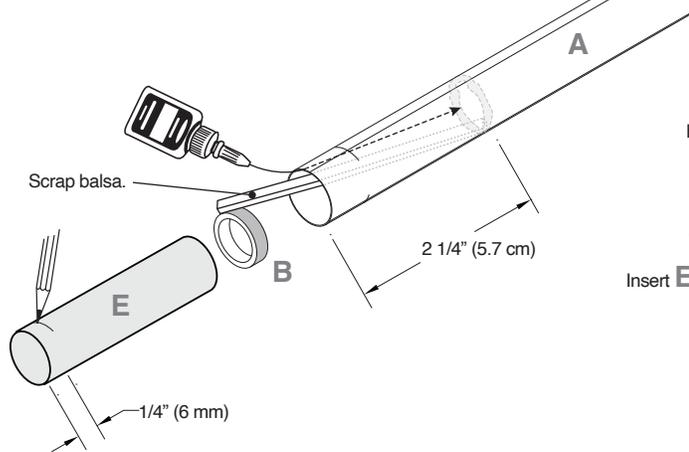


**NOTE:**  
Create an opposite set of parts.



### INSERT ENGINE BLOCK

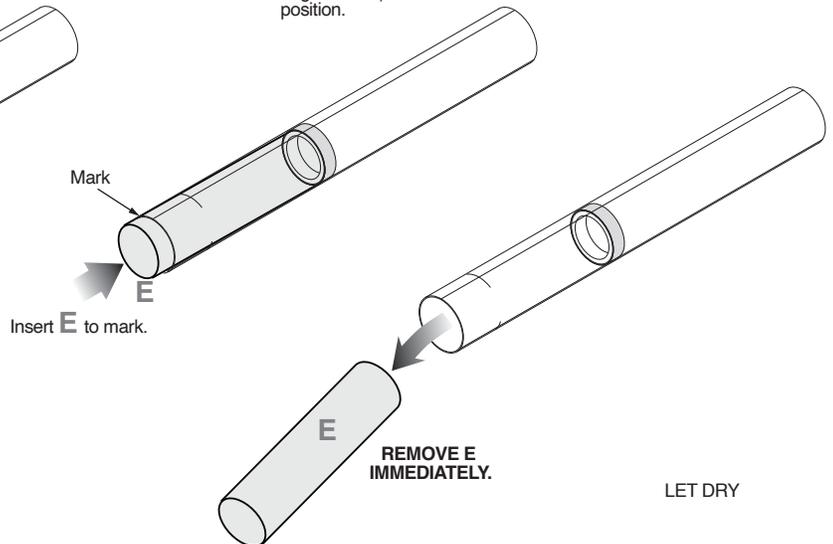
1. Measure and mark **E**.



2. Apply glue inside **A**.

3. Use **E** (yellow spacer tool) to insert **B** (green engine block) into position.

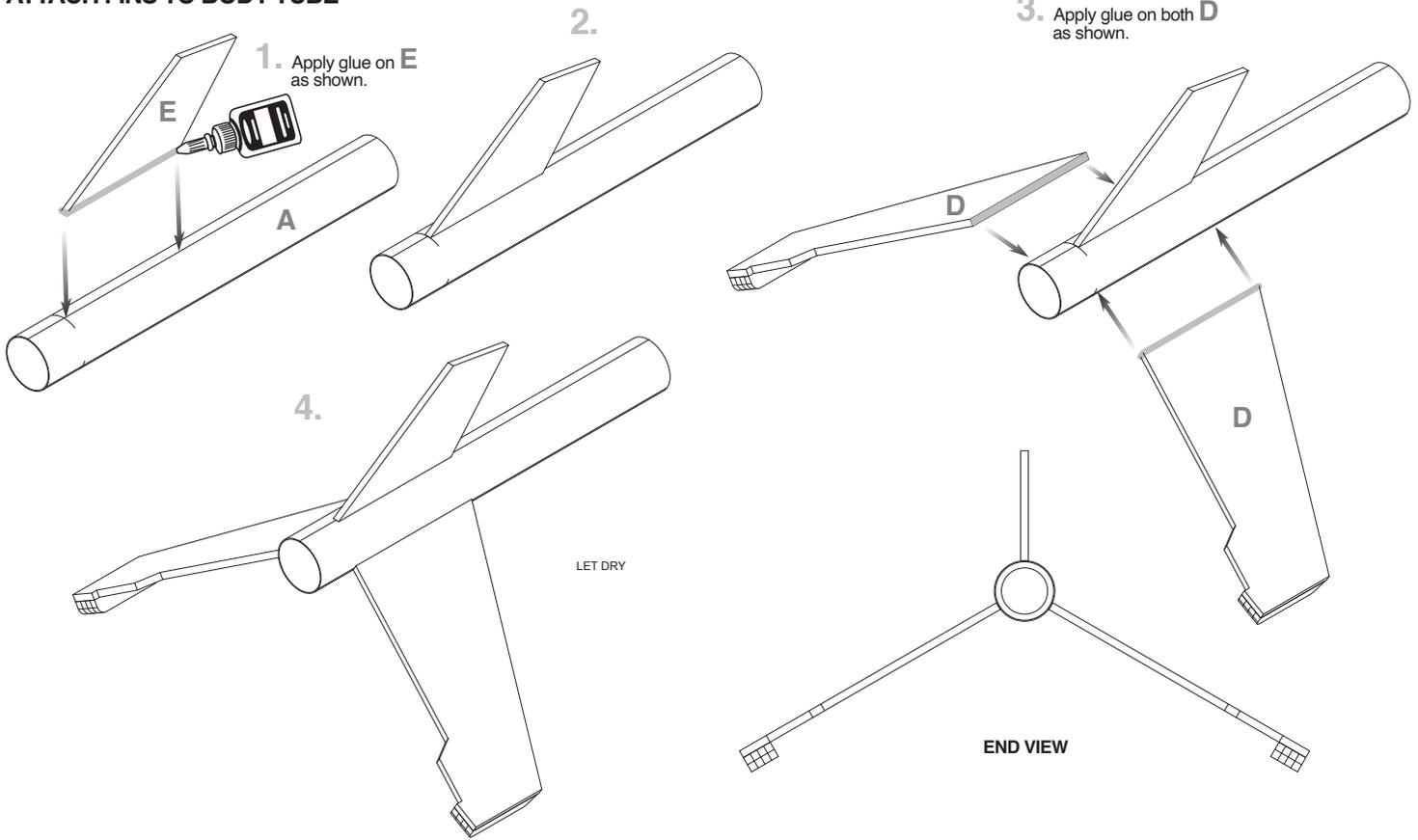
4. Remove **E**.



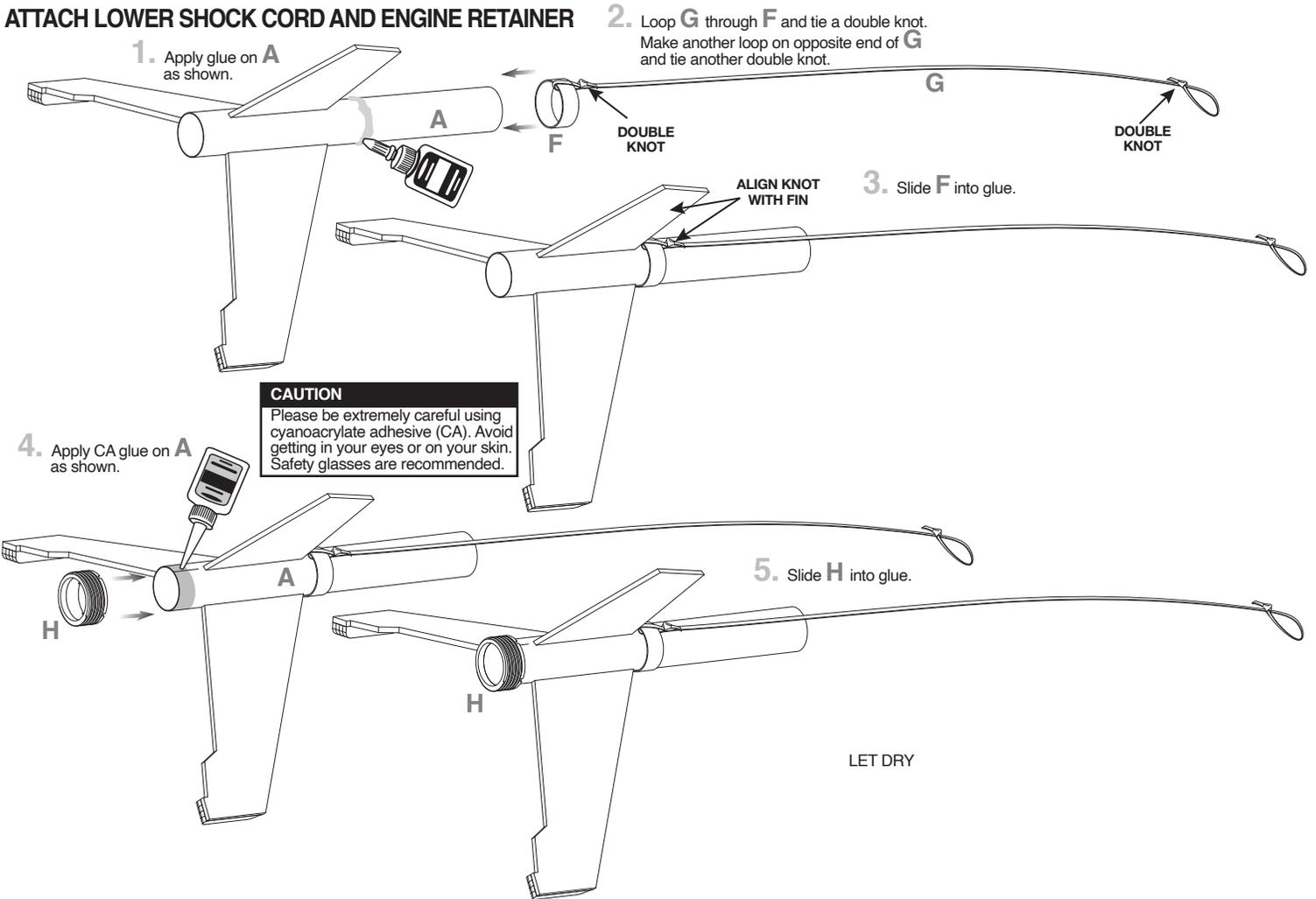
**REMOVE E IMMEDIATELY.**

LET DRY

**ATTACH FINS TO BODY TUBE**



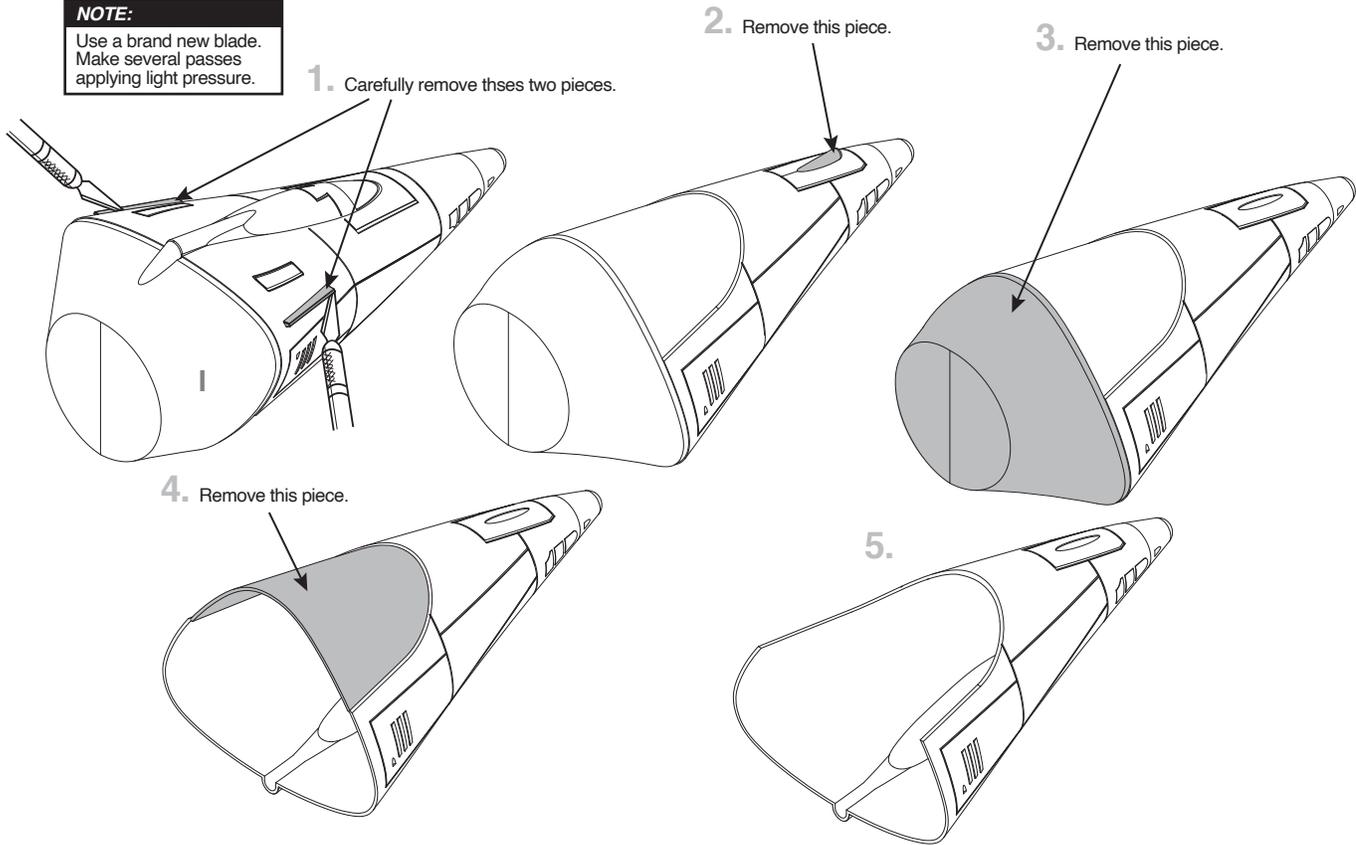
**ATTACH LOWER SHOCK CORD AND ENGINE RETAINER**



## PREPARE AERO SHROUD

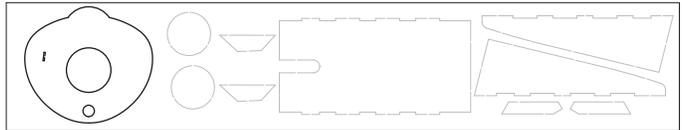
**NOTE:**

Use a brand new blade.  
Make several passes  
applying light pressure.

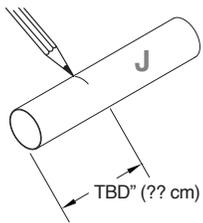


## ASSEMBLE UPPER FIN UNIT SUPPORT

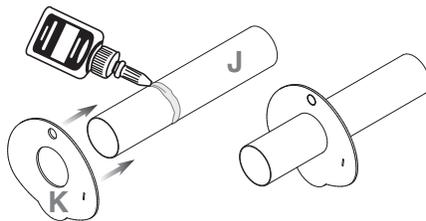
1. Laser cut card stock used in this step.



2. Measure and mark J.

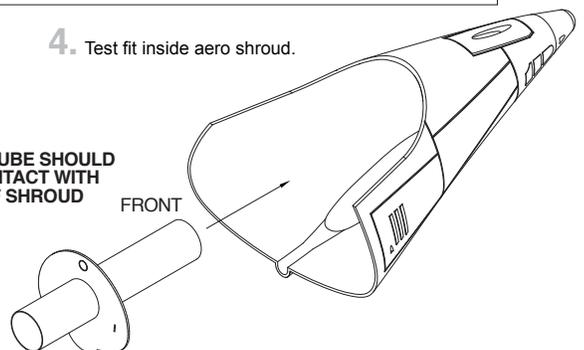


3. Apply glue on mark. Slide K into glue.

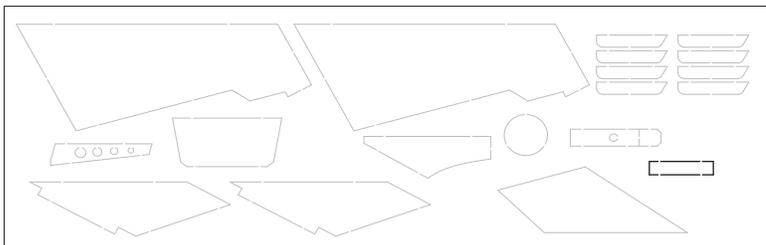


4. Test fit inside aero shroud.

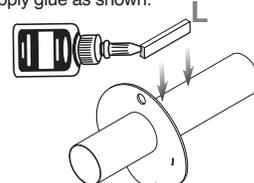
FRONT OF TUBE SHOULD  
MAKE CONTACT WITH  
INSIDE OF SHROUD



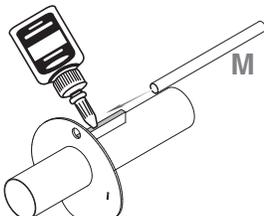
5. Laser cut wood sheet used in this step.



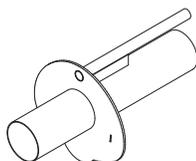
6. Apply glue as shown.



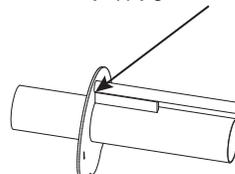
7.



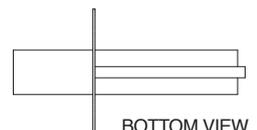
8.



6. Only apply glue fillets in these locations.



LET DRY

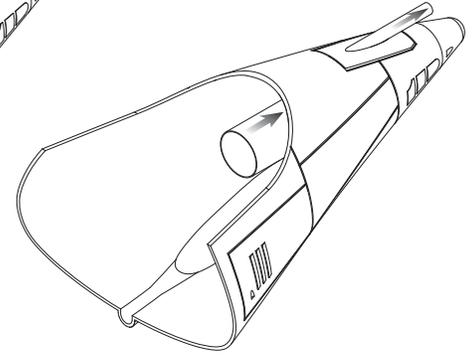
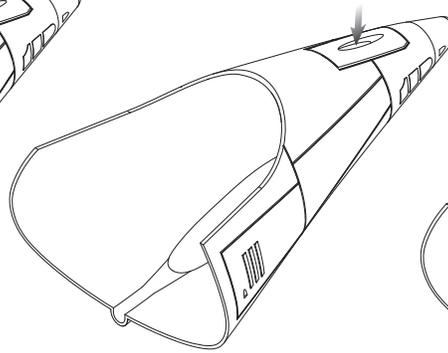
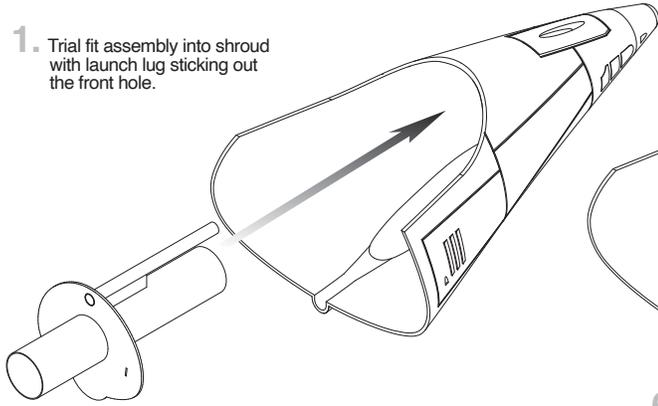


## INSTALL BOOSTER SUPPORT AND SHOCK CORD

1. Trial fit assembly into shroud with launch lug sticking out the front hole.

2. Enlarge hole with round file or sandpaper rolled into a tube until assembly fits in place without bending launch lug.

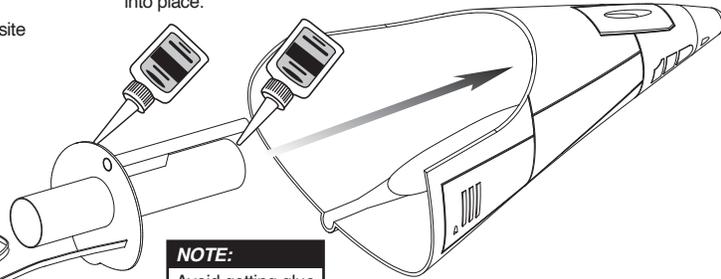
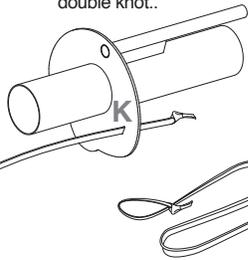
3. Slide tube unit assembly into place.



4. Tie a double knot in end of G.

5. Remove tube unit assembly. Slide G through slot in K. Make another loop on opposite end of G and tie another double knot.

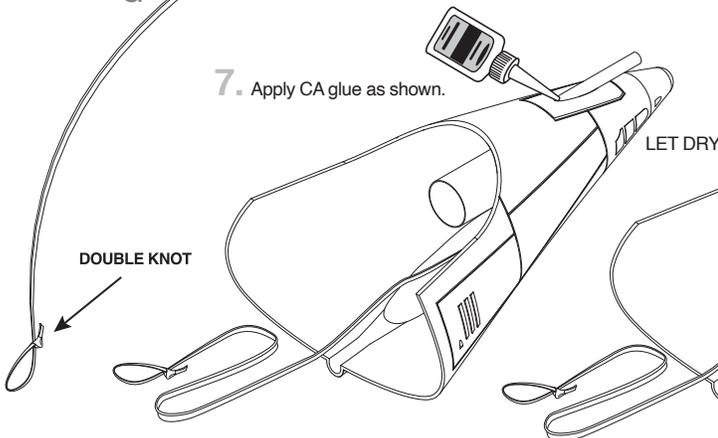
6. Apply CA glue as shown. Slide tube unit assembly into place.



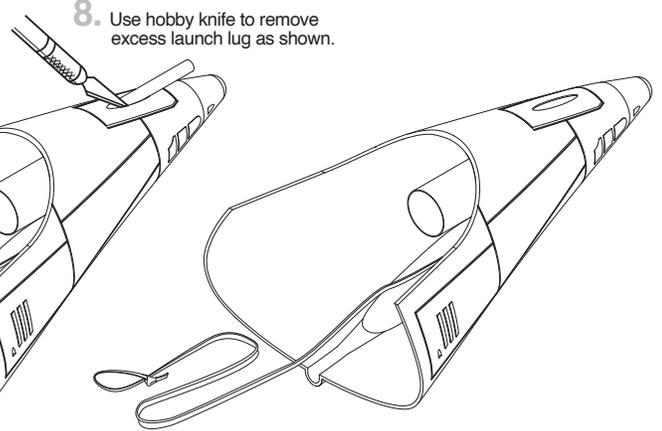
**NOTE:**  
Avoid getting glue on shock cord.

7. Apply CA glue as shown.

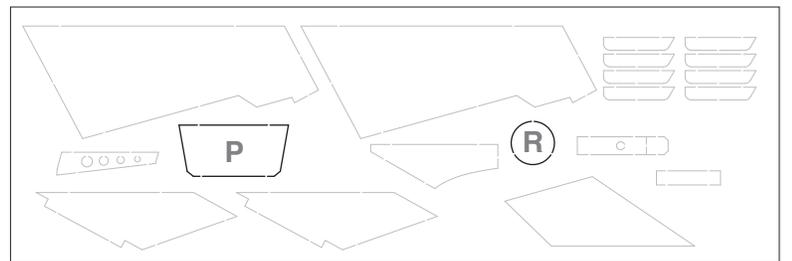
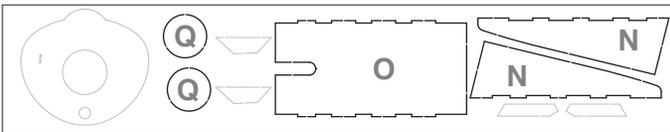
8. Use hobby knife to remove excess launch lug as shown.



LET DRY



## ASSEMBLE RECOVERY COMPARTMENT

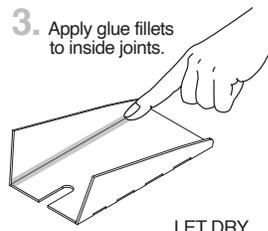
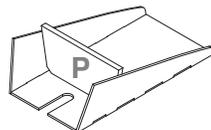
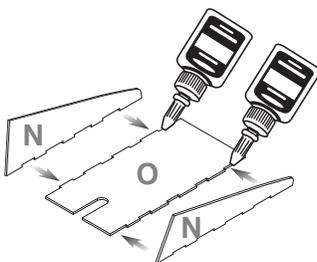


1. Apply glue as shown.

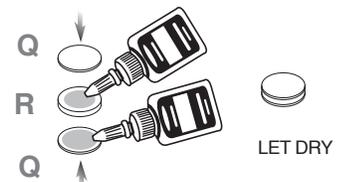
2. Use P to set angles of N.

3. Apply glue fillets to inside joints.

4. Apply glue as shown.



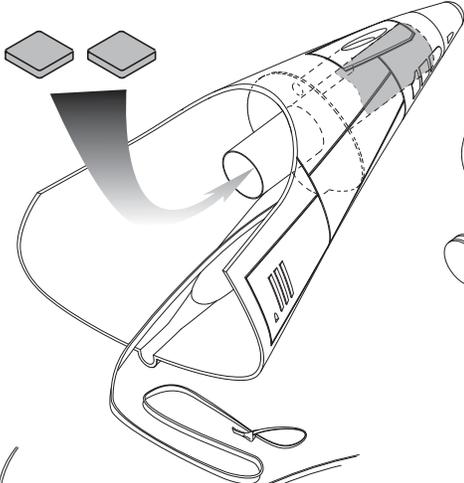
LET DRY



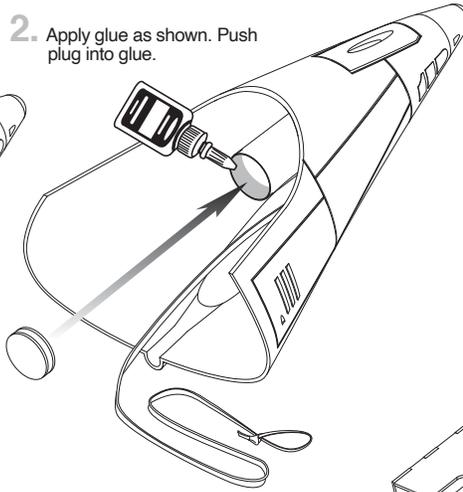
LET DRY

## ASSEMBLE RECOVERY COMPARTMENT AND INSTALL NOSE WEIGHT

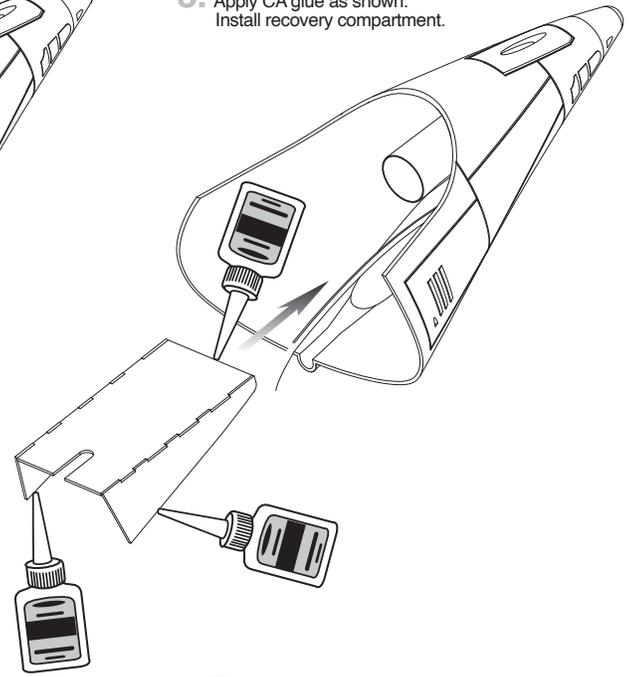
1. Insert **S** all the way into forward body tube as shown.



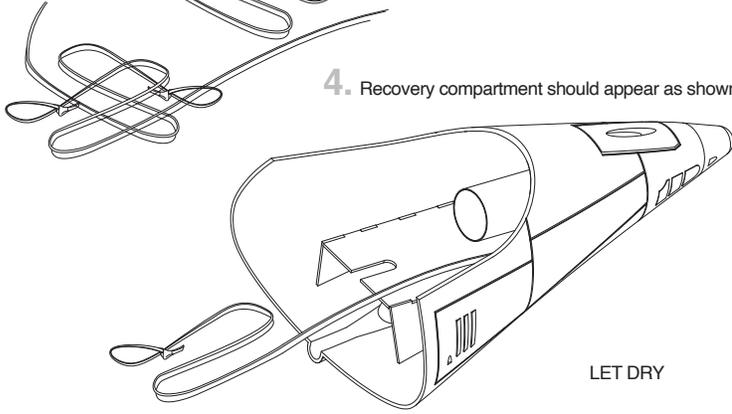
2. Apply glue as shown. Push plug into glue.



3. Apply CA glue as shown. Install recovery compartment.



4. Recovery compartment should appear as shown.

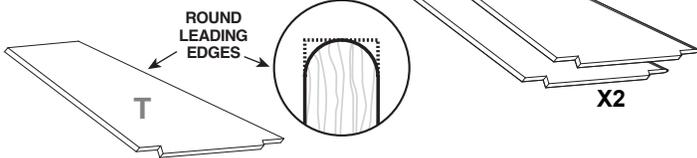


LET DRY

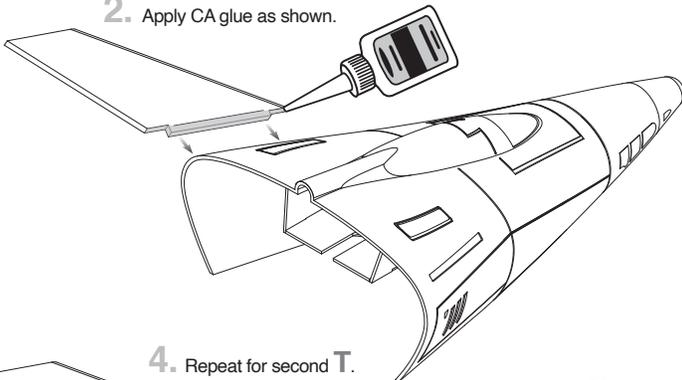
END VIEW

## ATTACH AERO SHELL FINS

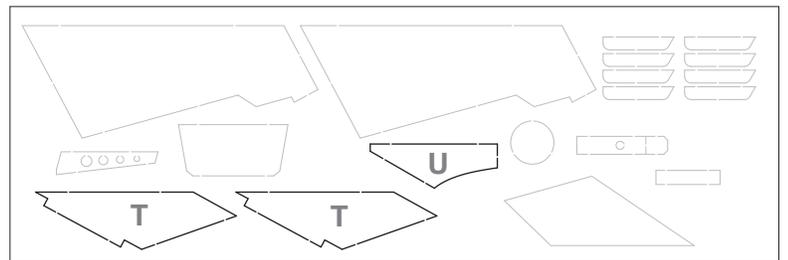
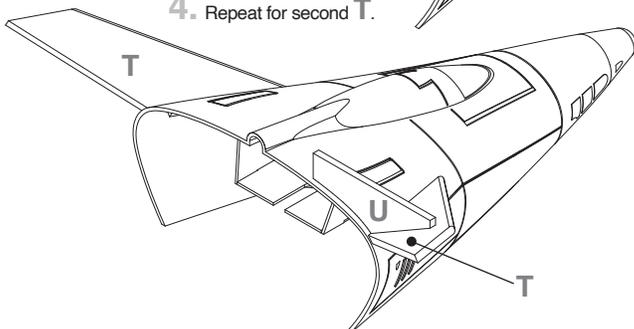
1. Round leading edges as shown.



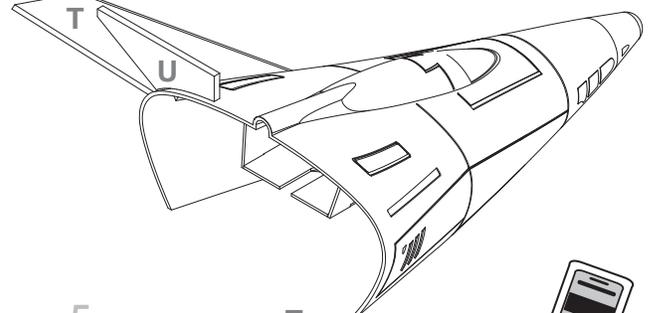
2. Apply CA glue as shown.



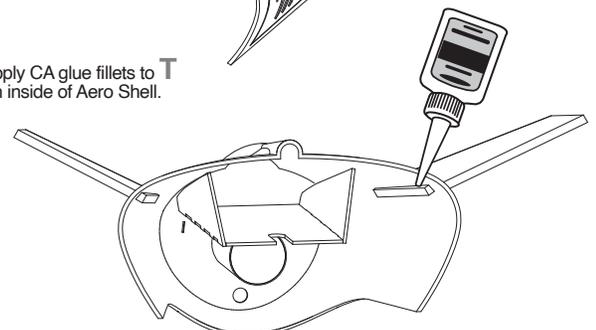
4. Repeat for second **T**.



3. Use **U** to set angle of **T**.



5. Apply CA glue fillets to **T** on inside of Aero Shell.

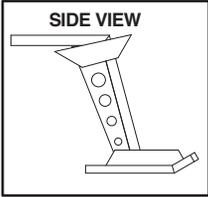
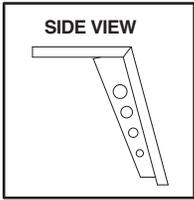


LET DRY

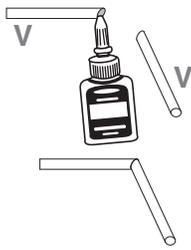
## ASSEMBLE FRONT LANDING GEAR

### NOTE:

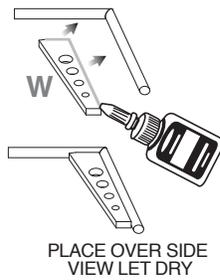
Place wax paper over **SIDE VIEWS** and glue parts together on top of the wax paper.



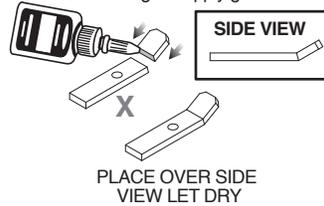
1. Use **SIDE VIEW** to cut **V** at correct lengths and angles.



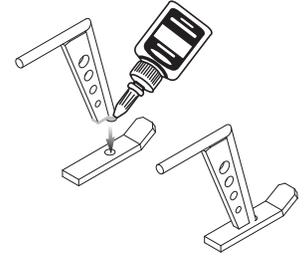
2. Apply glue as shown.



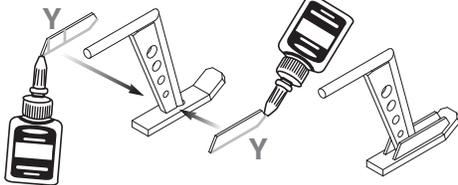
3. Use **SIDE VIEW** to cut and sand **X** at correct angles. Apply glue as shown.



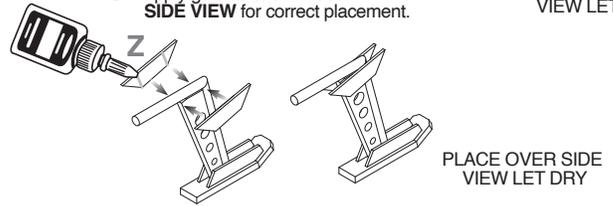
4. Apply glue as shown. Use **SIDE VIEW** to align parts.



5. Apply glue as shown. Use **SIDE VIEW** to align parts.

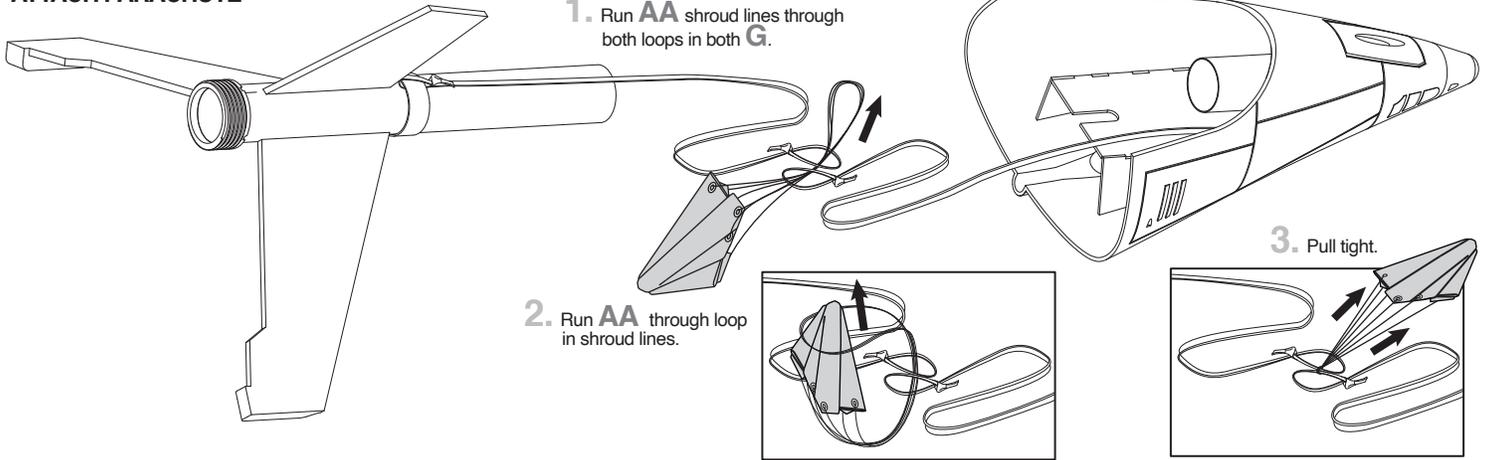


6. Apply glue as shown. Use **SIDE VIEW** for correct placement.



## ATTACH PARACHUTE

1. Run **AA** shroud lines through both loops in both **G**.

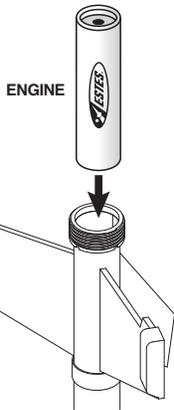


2. Run **AA** through loop in shroud lines.

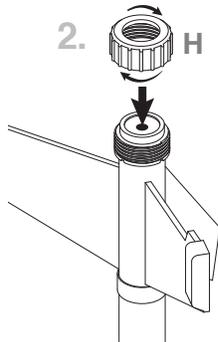
3. Pull tight.

## PREPARE ENGINE

1.



2.

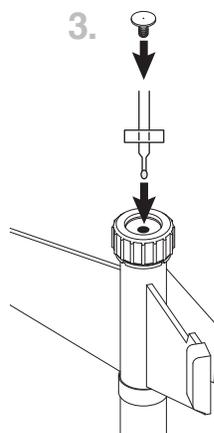


Use 1 each. **STARTER**

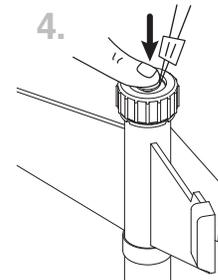


**TIP MUST TOUCH PROPELLANT!**

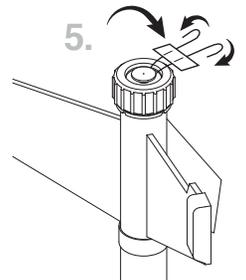
3.



4.



5.



### ⚠ WARNING: FLAMMABLE

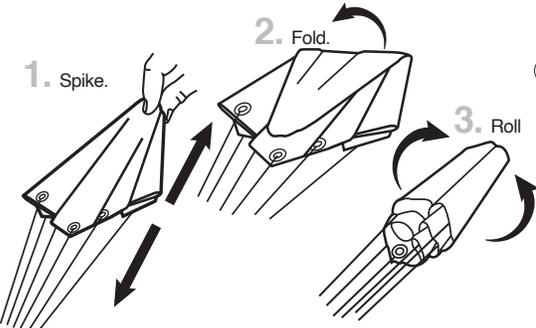
To avoid serious injury, read instructions & NAR Safety Code included with engines. **PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH.** If you do not use your prepared engine, remove the starter before storing your engine.

## PREPARE PARACHUTE AND MODEL FOR FLIGHT

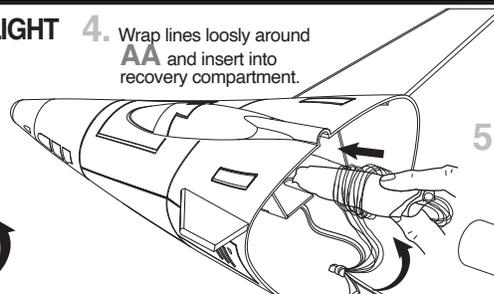
1. Spike.

2. Fold.

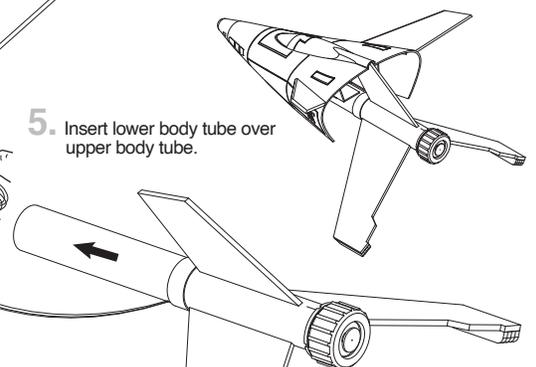
3. Roll



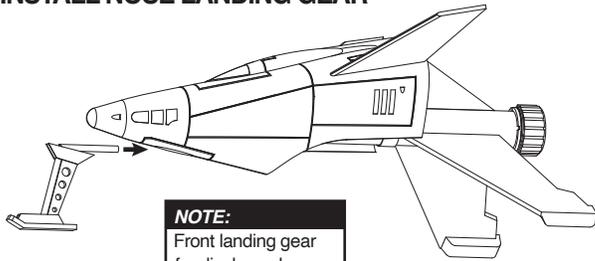
4. Wrap lines loosely around **AA** and insert into recovery compartment.



5. Insert lower body tube over upper body tube.



## INSTALL NOSE LANDING GEAR



**NOTE:**

Front landing gear for display only.

## ROCKET FINISHING

1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth, then paint.
2. Apply decals after paint is dry.
3. Cut decals from sheet, trimming close to edge.
4. One at a time, place in warm water until decal curls and begins to relax.
5. Remove and position on rocket, sliding decal away from backing material.
6. Blot with clean paper towel. Let set overnight.
6. OPTIONAL: Apply protective clear coat.

**NOTE:**

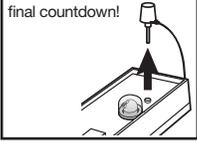
Please refer to packaging for suggested paint scheme and/or decal placement.



## COUNTDOWN AND LAUNCH

**NOTE:**

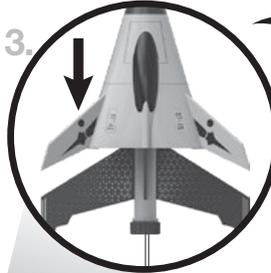
Key always out until final countdown!



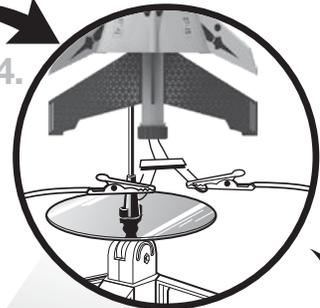
2.



3.

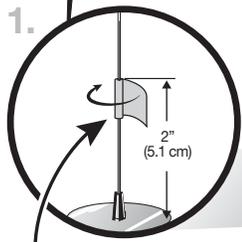


4.



5. Fully extend your launch controller wire before launching.

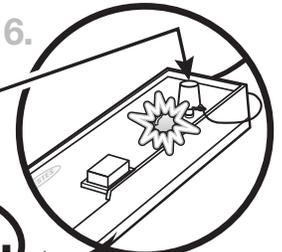
1.



MASKING TAPE

16.4 ft. (5 m)

6.



KEY

Insert key, push down hard. Bulb will light.

7.



4... 3... 2... 1...

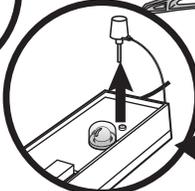
**NOTE:**

Estimated weight : 2 oz. (56.7 g)

**ESTES® LAUNCH SUPPLIES NEEDED**

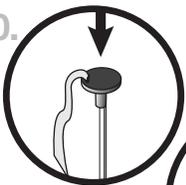
- (Sold Separately)
- Launch Pad
  - Launch Controller
  - Recovery Wadding
  - Starters (with engines)
  - Plugs (with engines)
  - Estes® Engines: B6-2, C5-3

9.



While holding key down FIRMLY, press launch button until LIFTOFF!

10.



## PRECAUTIONS



NAR SAFETY CODE



NO DRY GRASS OR WEEDS

**PRE-LAUNCH CHECK** For safety, never launch a damaged rocket. Check the rocket's body, nose cone and fins. Also, check the engine mount, recovery system and launch lug(s). Repair any damage before launching the rocket.

**FLYING YOUR ROCKET** Choose a large field (500 ft. [152 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 SAFETY CODE (enclosed).

**MISFIRES TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET.** Disconnect the micro-clips and remove the engine. Take the plug and starter out of the engine. A burned starter means the starter tip was not touching engine propellant. Install a new starter; be sure the tip is touching propellant inside the engine. Push the plug in place. Repeat steps under Countdown and Launch.

