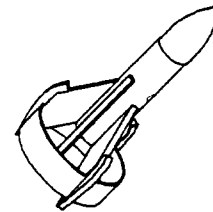


Classic Plan

Astron

# Sprite

Design by Estes Industries  
Drawn by Peter Alway

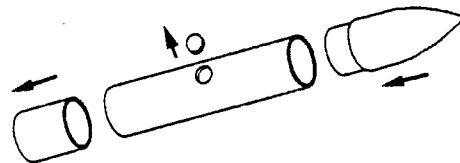


## Parts List:

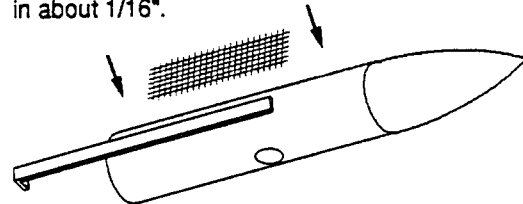
All parts currently available from  
Estes Industries except gauze

- A) Nose Cone BNC-30D (From Estes Scout III Kit)
- B) Body Tube 2 3/4" BT-30 ( Cut From Estes Scout III Kit)
- C) Tail Ring 0.7" BT-70
- D) Engine Holder EH-2 (Standard engine hook)
- E) 3 Main Fins from 1/8" Balsa
- F) 3 Fin Caps from 1/8" Balsa
- G) Launch Lug 1 1/4" long (From Estes Scout III Kit)
- H) Gauze Reinforcing 1/2" x 1 1/5"

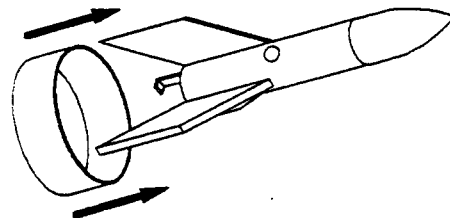
Start with the body tube. Cut 3/4" off the end of the Scout III body tube (if you are starting with an original Scout or Scout II, cut off the end with the punched hole). Next, cut a 1/4" diameter hole centered 1 1/2" from the rear of the tube. Glue the nose cone to the front of the tube.



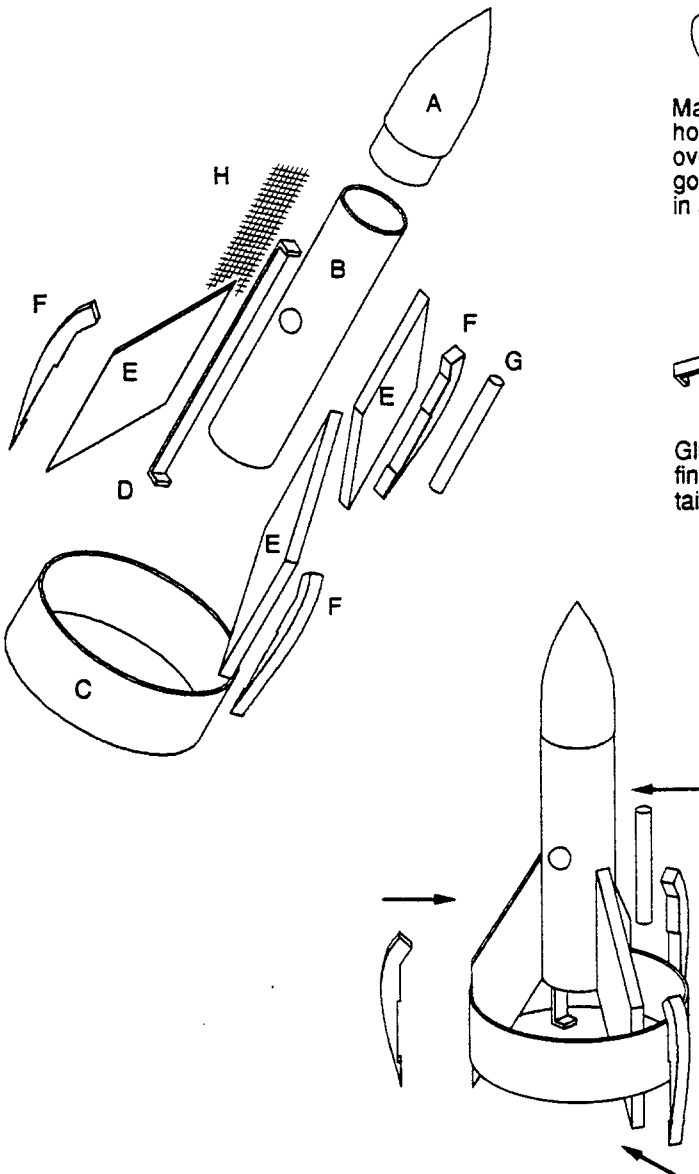
Mark the body tube, and cut a slit for the engine holder. Glue the 1/2" x 1 1/2" piece of gauze over the engine holder. When everything is good and dry, bend the rear of the engine holder in about 1/16".



Glue the fins on. Test fit the tail ring over the fins, and sand the fin tips as needed. Glue the tail ring in place, 1/4" from the fin trailing edges.



Finish up by gluing the fin caps in place. Add a layer or two of glue over the gauze reinforcement. And don't forget to add the launch lug!

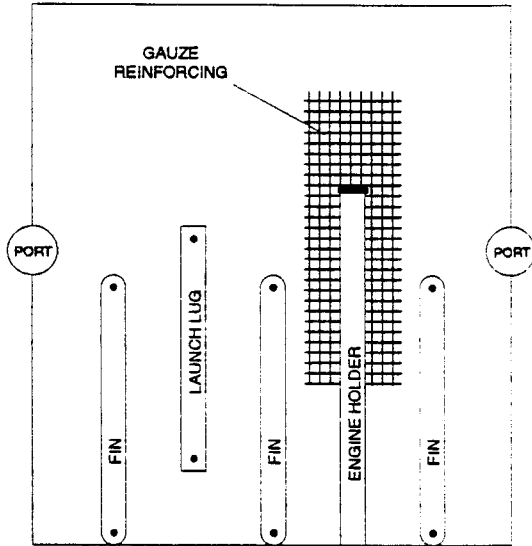


# Astron Sprite

Design by Estes Industries  
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## Classic Plan

### Tube Marking Guide



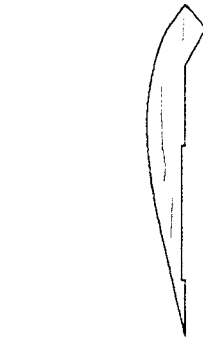
Punch holes in guide at dots, mark tube through holes, connect marks with vertical lines. Cut slit for engine holder through guide.

The Astron Sprite uses tumble recovery; the model is stable on the way up and unstable on the way down. The transformation from stable to unstable occurs when the ejection charge shoves the engine casing rearward.

For this to work you must use short engines or a reasonable facsimile. Estes quit making short engines way back in the early 70's, and they are now quite rare. Sawing off standard engines is against the safety code, even when nobody's looking. Besides, the extra-thick casing of the original engines played a critical role in the operation of the weight-shifting tumble recovery system.

To create an NAR legal short engine, saw off 1 3/4" of the casing from an expended standard engine. Cram an appropriate Estes or Apogee mini engine into this casing. Use tape for an extra-tight fit if necessary, though glue is not NAR kosher. The resulting mock short engine should slide freely in the body tube. When the Sprite kit was altered to use mini engines, Estes recommended the 1/4A3-2T, 1/2A6-2T, and A3-4T.

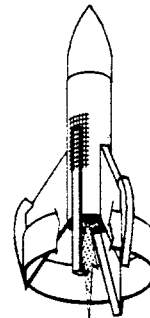
If your model kicks the engine, bend the engine holder inward before the next flight.



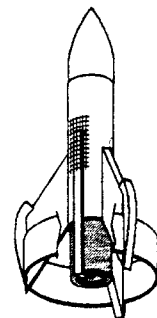
FIN CAP  
Make 3 from 1/8" balsa



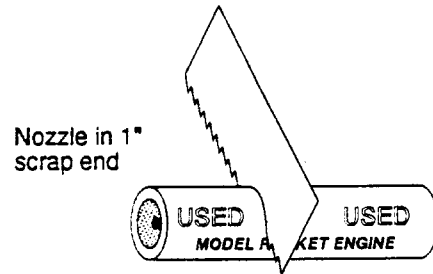
MAIN FIN  
Make 3 from 1/8" balsa



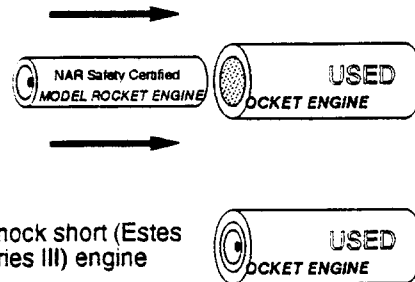
Engine in forward position for stable boost



Engine in rear position for unstable descent



Nozzle in 1" scrap end



A mock short (Estes Series III) engine