



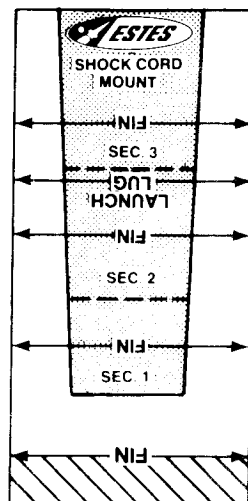


A DAMON COMPANY

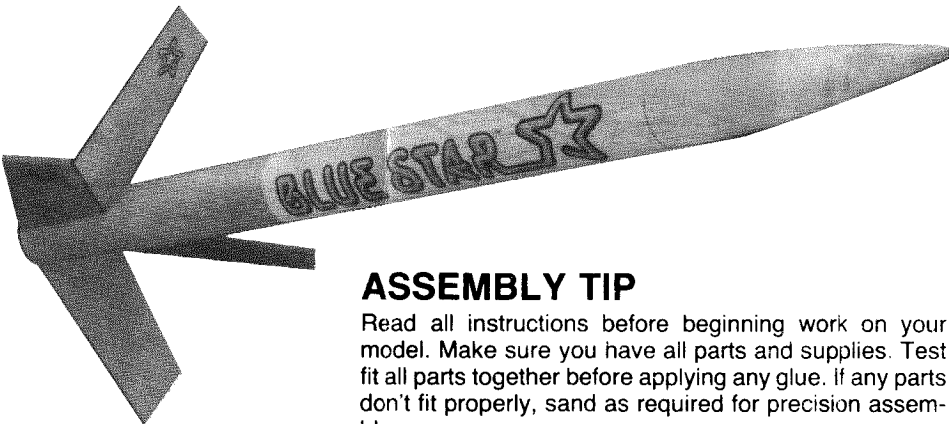
ESTES INDUSTRIES
1295 H Street
Penrose, CO 81240 USA

BLUE STAR™

FLYING MODEL ROCKET #1991



TUBE MARKING GUIDE

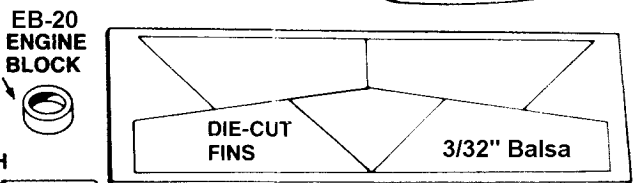
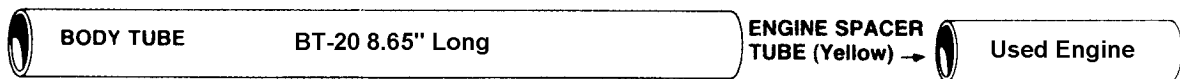


ASSEMBLY TIP

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.

PARTS AND SUPPLIES

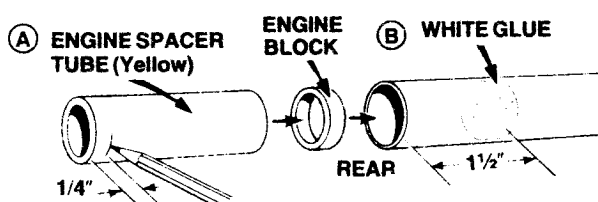
Locate the parts shown below and lay them out on the table in front of you. In addition to the parts included in the kit you will also need:



ROCKET ASSEMBLY

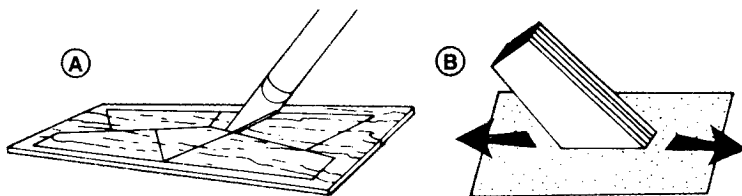
1

- A. Mark engine spacer tube 1/4 inch from one end.
- B. Apply glue inside the body tube 1 1/2 inches from one end. Using the engine spacer tube (yellow), push engine block up into the end of the body tube with glue in it until the mark on the engine spacer tube is even with the end of the body tube. Remove the engine spacer tube IMMEDIATELY.



2

- A. Fine-sand balsa pre-cut sheet. Carefully remove fins by freeing edges with sharp knife.
- B. Stack fins together. Sand all edges smooth.



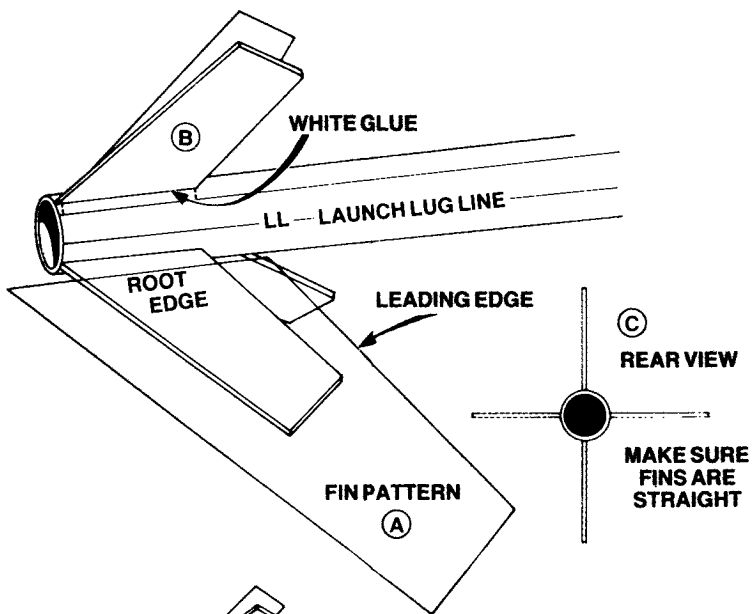
3

- A. Cut out tube marking guide from front of instructions and wrap guide around the tube. Secure it with tape. Mark tube at arrows and remove guide and save.
- B. Connect marks with lines. Extend launch lug line.



4

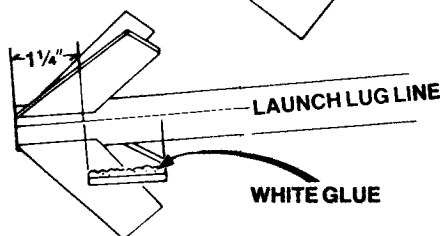
- A. Lay fins on pattern to find gluing (root) and front (leading) edges.
- B. Position and glue fins on alignment lines one at a time. Let each dry several minutes before applying the next one.
- C. Adjust fins to project straight out from tube.
- D. Do not set rocket on fins while glue is wet.



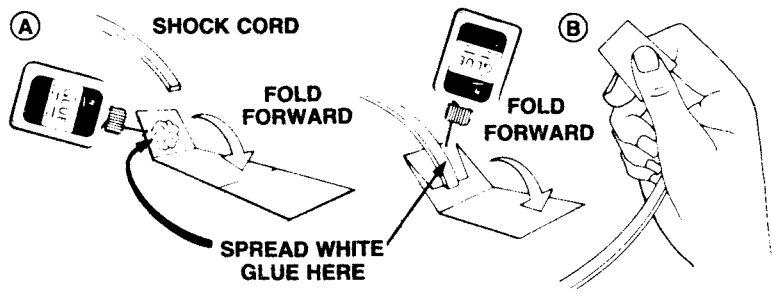
FINS MUST BE ATTACHED CORRECTLY FOR STABLE FLIGHT!

5

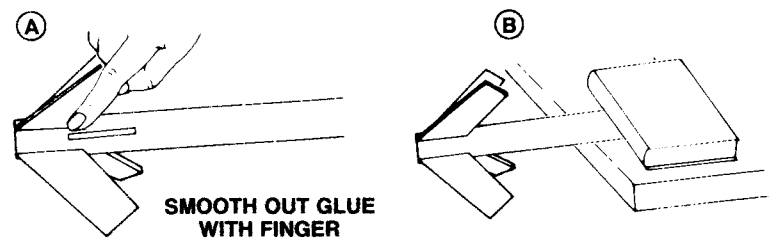
- A. Glue launch lug straight on launch lug line 1 1/4 inches from rear of tube as shown.



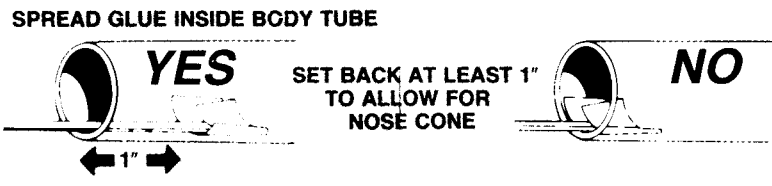
- 6**
- Cut shock cord mount from tube marking guide. Crease on dotted lines by folding. Spread glue on section 1 and lay end of shock cord into glue. Fold over and apply glue to back of first section and exposed part of section 2. Lay shock cord as shown and fold mount over again.
 - Clamp unit together with fingers until glue sets.



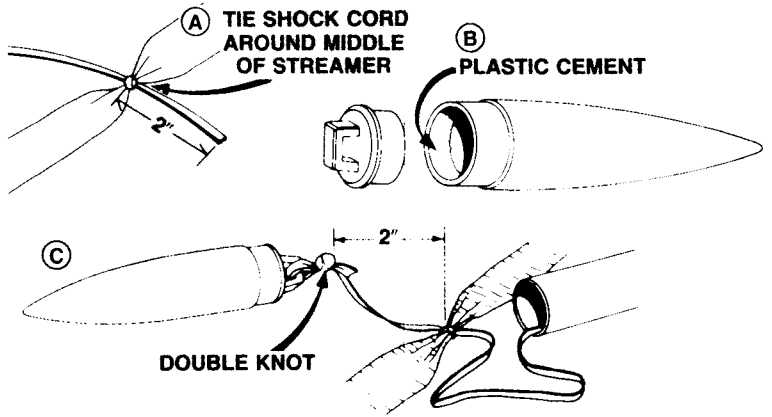
- 7**
- Apply a glue reinforcement to each fin/body tube joint and each side of launch lug.
 - Support rocket as shown until glue dries.



- 8**
- Apply glue inside front of body tube to cover an area no less than 1 inch to 2 inches from end. The glued area should be same size as shock cord mount.
 - Hold until glue sets.

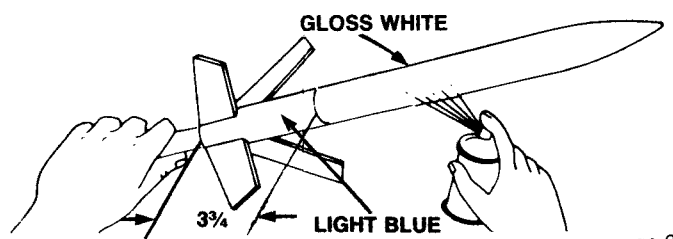


- 9**
- Using a double knot, tie the free end of the shock cord around the middle of the streamer about 2 inches from end of shock cord.
 - Apply plastic model cement (NOT white glue) around the inside of the nose cone. Push the nose cone insert into the nose cone. Let cement dry.
 - Tie end of shock cord to nose cone loop.

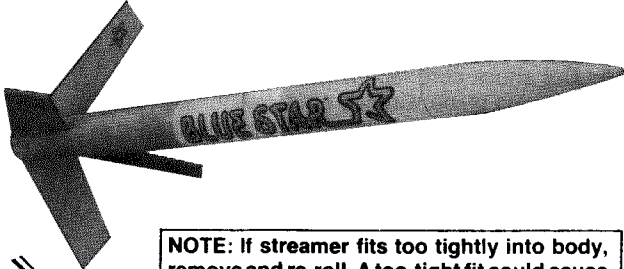


FINISHING YOUR ROCKET

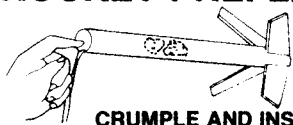
Apply sanding sealer to part with small brush. When sealer is dry, lightly sand all sealer surfaces. When sealer is completely dry, paint entire model with gloss white spray enamel. Follow instructions on spray can for best results. Let paint dry overnight. Mask top of model and paint lower $3\frac{3}{4}$ inches of rocket light blue. Avoid lacquer paints. Allow model to dry overnight before applying decals.



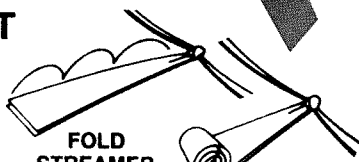
DECALS: To apply decals, cut each out, dip in lukewarm water for 20 seconds, and hold until it uncurls. Refer to photograph on front page and/or on front of panel for decal placement. Slip decal off backing sheet and onto model. Blot away excess water. For best results, let decals dry overnight and apply a coat of clear gloss spray paint to protect decals.



ROCKET PREFLIGHT



**CRUMPLE AND INSERT
2 SQUARES
OF RECOVERY WADDING**



**FOLD
STREAMER
3 TIMES**



**ROLL
TIGHTLY**

NOTE: If streamer fits too tightly into body, remove and re-roll. A too-tight fit could cause an ejection malfunction during flight.

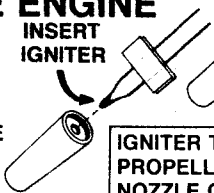


**INSERT SHOCK CORD, STREAMER,
AND NOSE CONE INTO ROCKET**

PREPARE ENGINE

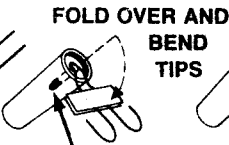


**SEPARATE
IGNITERS
ENGINE**

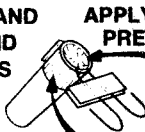


**INSERT
IGNITER**

**IGNITER TIP MUST TOUCH
PROPELLANT DEEP INSIDE
NOZZLE OPENING**

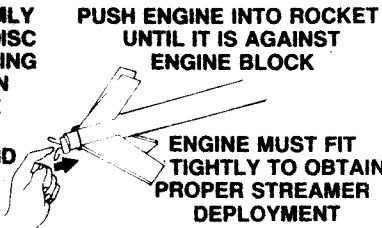


**FOLD OVER AND
BEND
TIPS**



**APPLY AND FIRMLY
PRESS TAPE DISC
OR MASKING
TAPE IN PLACE**

**WRAP TAPE AROUND
REAR OF ENGINE
FOR FRICTION FIT**



**PUSH ENGINE INTO ROCKET
UNTIL IT IS AGAINST
ENGINE BLOCK**

**ENGINE MUST FIT
TIGHTLY TO OBTAIN
PROPER STREAMER
DEPLOYMENT**

LAUNCH SUPPLIES

To launch your rocket you will need the following items:

- An Estes model rocket launching system
- Estes Recovery Wadding (No. 2274)
- Recommended Engines: 1/2A6-2, A8-3, A8-5, B4-4, B6-4, B6-6, C6-5, or C6-7.

Use 1/2A6-2 engine for your first flight to become familiar with your rocket's flight pattern.

FLYING YOUR ROCKET

Choose a large field away from power lines, tall trees, and low flying aircraft. Try to find a field at least 250 feet square. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great. Launch only during calm weather with little or no wind and good visibility.

Launch area must be free of dry weeds and brown grass.

MISFIRES

Failure of the model rocket engine to ignite is nearly always caused by incorrect igniter installation. An Estes igniter will function properly even if the coated tip is chipped. However, if the coated tip is not in direct contact with the engine propellant, it will only heat and not ignite the engine.

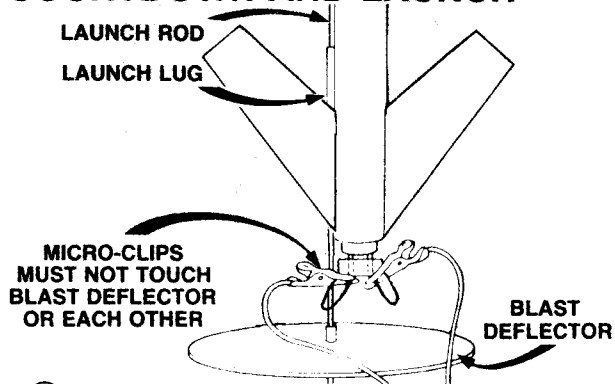
When an ignition failure occurs, remove the safety key from the launch control system and wait one minute before approaching the rocket. Remove the expended igniter from the engine and install a new one. Be certain the coated tip is in direct contact with the engine propellant, then tape the igniter leads firmly to base of engine as illustrated above. Repeat the countdown and launch procedure.

FOR YOUR SAFETY AND ENJOYMENT

Always follow the NAR-HIA* MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities.

*National Association of Rocketry-The Hobby Industry of America page 4

COUNTDOWN AND LAUNCH

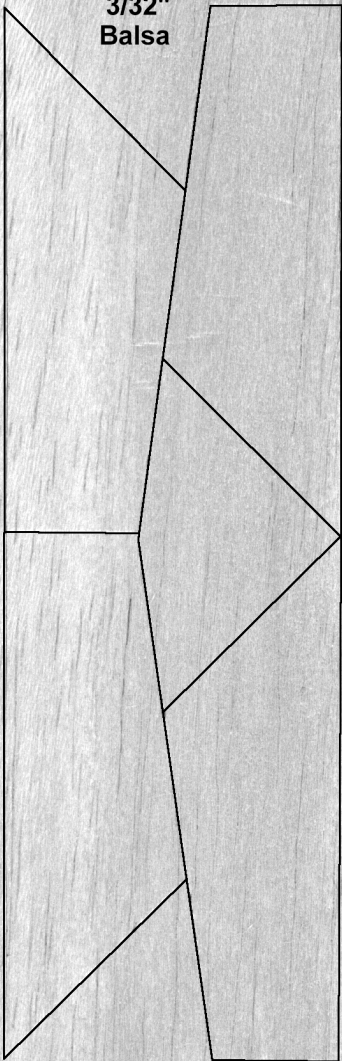


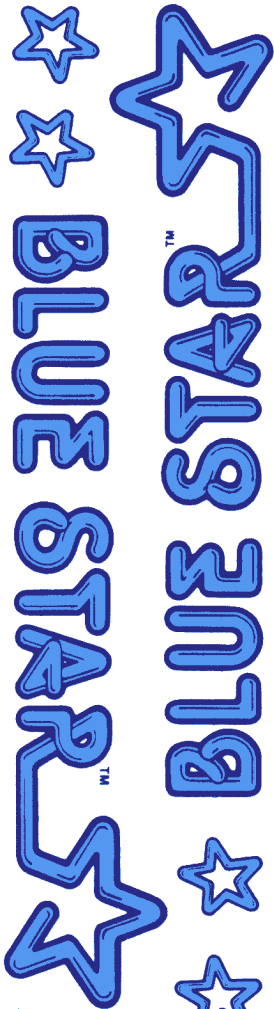
- ⑩ REMOVE SAFETY KEY to disarm the launch controller.
- ⑨ Remove safety cap and slide launch lug over launch rod to place rocket on launch pad. Make sure the rocket slides freely on the launch rod.
- ⑧ Attach micro-clips to the igniter wires. Arrange the clips so they do not touch each other or the metal blast deflector. Attach clips as close to protective tape on igniter as possible.
- ⑦ Move back from your rocket as far as launch wire will permit (at least 15 feet).
- ⑥ INSERT SAFETY KEY to arm the launch controller. Give audible countdown...5...4...3...2...1...

LAUNCH!!! PUSH AND HOLD LAUNCH
BUTTON UNTIL ENGINE IGNITES
Remove safety key—Replace cap on rod.

3/32"
Balsa

1 Inch





ESTES
PN 37320B

BLUE STAR

FLYING MODEL ROCKET

SMALL LEVEL 1
For ages 10 and up

■ **SAY-EDGE
FLIGHTS**

■ **Basic Five**

■ **Streamer**

Length: 11.50 in.

Wt.: 7.20 oz.

Weight: 37 oz.

Recommended

Engines:

11400-2 (Five Flights)

80-3, 80-5, 80-4,

80-4, 80-5, 80-3

or 24-F

**1000 FOOT
FLIGHTS**



AMERICAN ASSOCIATION OF
ROCKETRY

#1991

This exciting
flying model
is made of
strong, durable
plastic and
is perfect for
beginners and
experienced
flyers.



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