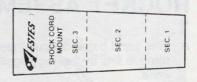
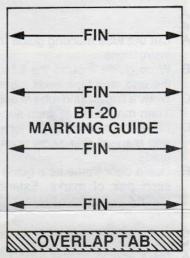




**ESTES INDUSTRIES** 1295 H STREET PENROSE, CO 81240 USA

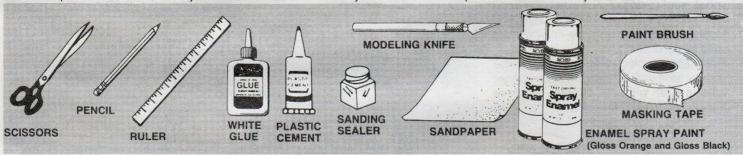


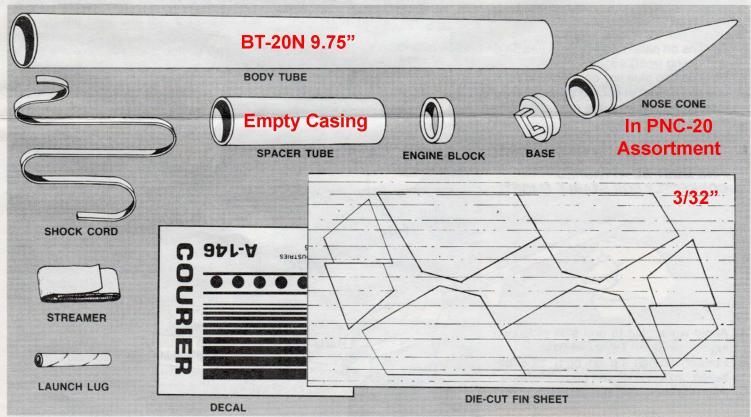




### PARTS AND SUPPLIES

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.

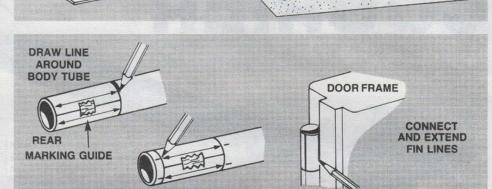
- Fine sand balsa die-cut sheet. Carefully remove fins by freeing edges with sharp knife.
- B. Stack fins together. Sand all edges smooth.

#### 2.

- Cut out tube marking guide from front of instructions.
- B. Wrap guide around the tube even with the end, and tape ends together.
- C. Draw a line around tube at edge of guide.
  Then mark tube at each arrow point.
- Move the marking guide forward slightly and mark all rear arrow points. Remove guide.
- E. Use a door frame as a guide to connect each pair of marks. Extend the lines about 4 inches from the rear of the tube.

# 3.

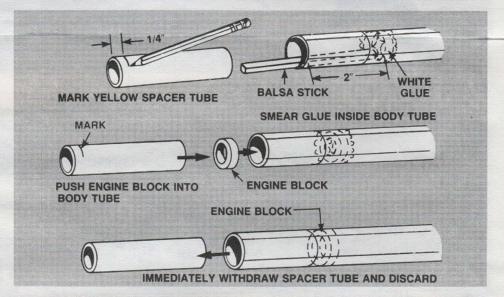
- Mark engine spacer tube 1/4 inch from one end.
- B. Using a piece of scrap balsa from fin sheet, apply a ring of glue inside the body tube about 2 inches from the end (NOTE: Must be same end of tube on which fin lines were drawn.)
- C. Push engine block into body using the spacer tube until 1/4 inch mark on spacer tube is even with end of body. Remove spacer tube IMMEDIATELY.



MARK FIN LOCATION

STACK FINS

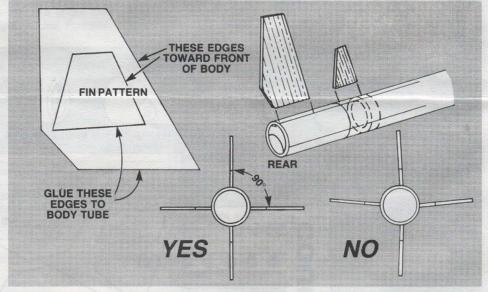
AND SAND



# 4.

- A. Lay fins on pattern to find front (leading) and gluing (root) 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. Apply white glue to one side of launch lug.
- B. Position launch lug on body tube between two fins and even with end of tube.
- C. Align the launch lug straight along tube.

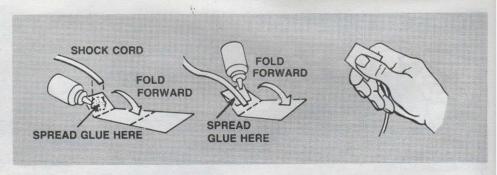


#### 6.

- A. Cut shock cord mount from front of in-
- B. 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.
- C. Clamp unit together with fingers until glue sets.

# 7.

- A. Apply glue to 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.
- B. Press mount firmly into glue as shown.
- C. Hold until glue sets.



#### SPREAD WHITE GLUE INSIDE BODY TUBE

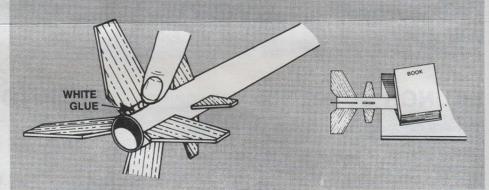


SET BACK AT LEAST 1" TO ALLOW FOR NOSE CONE



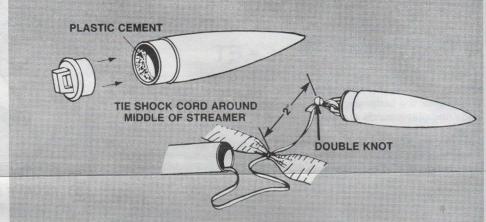
#### 8.

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



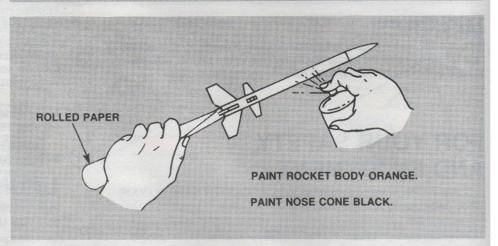
#### 9.

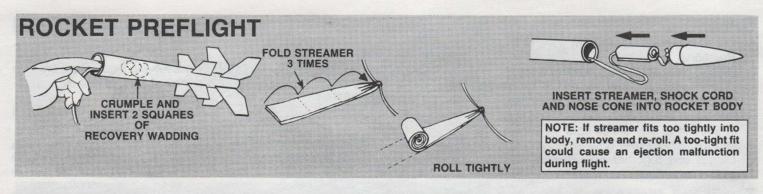
- A. Apply plastic model cement (NOT white glue) around the inside of the nose cone. Push the base into the nose cone. Let cement dry.
- B. Tie end of shock cord to nose cone loop.
- C. Using a double knot, tie the free end of the shock cord around the middle of the streamer about 2 inches from end of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

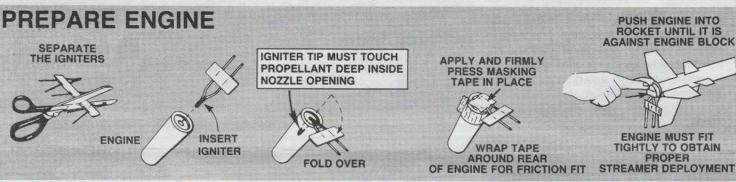


# FINISHING YOUR ROCKET 10.

Apply sanding sealer to wood parts with small brush. When sealer is dry, lightly sand all sealed surfaces. Repeat sealing and sanding until balsa grain is filled and smooth. Spray paint the rocket gloss orange and the nose cone gloss black. Follow instructions on spray can for best results. Refer to photo on front page and photo on front of panel for decal placement. To apply decals, cut each out, dip in lukewarm water for 20 seconds and hold until it uncurls. Slip decal off backing sheet and onto model. Blot away excess water.







### LAUNCH SUPPLIES

To launch your rocket you will need the following items:

-An Estes model rocket launching system

-Estes Parachute recovery wadding (No. 2274)

—Recommended Engines: 1/2A6-2, A8-5, B4-4, B4-6, B6-4, B6-6, B8-5, C6-5, or C6-7

Use A8-5 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 area must be free of dry weeds and brown grass.

Launch only during calm weather with little or no wind and good visibility.

### **MISFIRES**

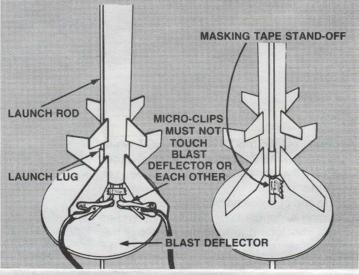
Failure of the rocket engine to function properly is nearly always caused by a failure to install the igniter correctly. This failure permits the igniter to heat and burn into two pieces without igniting the engine.

# 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

# **COUNTDOWN AND LAUNCH**



- (5) REMOVE SAFETY KEY to disarm the launch controller.
- Remove safety cap and slide launch lugs over launch rod to place rocket on launch pad. Make sure the rocket slides freely on the launch rod.
- 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.
- 2 Move back from your rocket as far as launch wire will permit (at least 15 feet).
- 1 INSERT SAFETY KEY to arm the launch controller.

#### LAUNCH!!!

PUSH AND HOLD LAUNCH BUTTON UNTIL ENGINE IGNITES

Remove safety key-Replace cap on rod.

