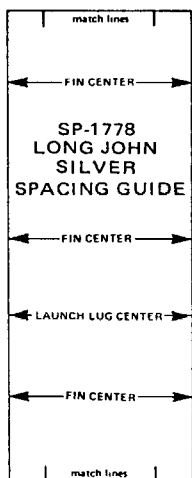




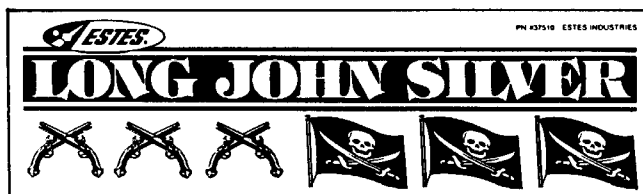
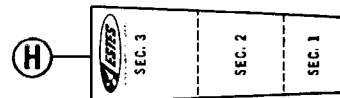
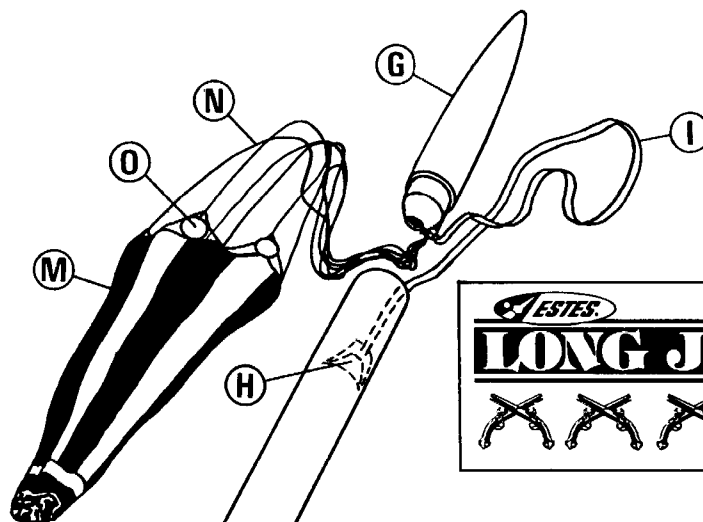


LONG JOHN SILVER

ASSEMBLY INSTRUCTIONS



A



PARTS LIST

A)	1	Fin Spacing Guide (type SP-1778).....	84097
B)	2	Ring Adapters (type RA-2060)	30128
C)	1	Body Tube (type BT-60)	30396
D)	1	Body Tube (type BT-60HE)	30410
E)	1	Body Tube (type BT-20)	30316
F)	1	Engine Hook (type EH-2)	35025
G)	1	Nose Cone (type PNC-60AH)	71043
H)	1	Shock Cord Mount (type SCM-50)	84444
I)	1	Shock Cord (type SC-2MF)	85742
J)	1	Die-Cut Balsa Fin Sheet (type BF-71)	32237
K)	2	Launch Lugs (type LL-2AM).....	38176
L)	1	Decal Sheet (type KD-1778)	37510
M)	1	Parachute (type PK-18A).....	85566
N)	1	Shroud Line (type SLT-108).....	38239
O)	1	Set of 6 Tape Discs (type TD-3F)	38406
P)	1	Stage Coupler (type JT-60C).....	30266

In addition to the materials included in this kit, you will need: White glue; model knife or single edge razor blade; pencil; ruler; sandpaper; paints; and masking tape.

IMPORTANT:

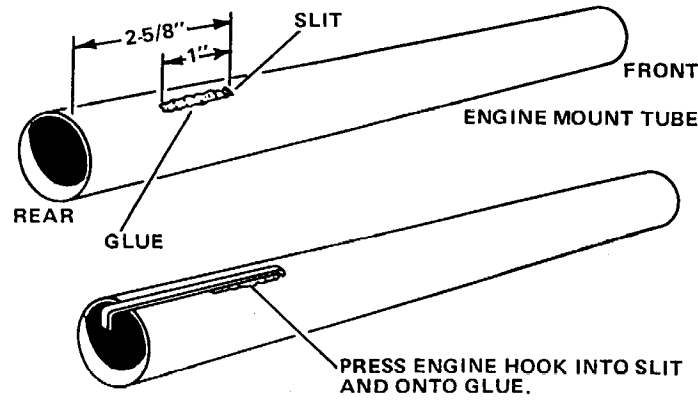
Read all instructions before beginning work on your Long John Silver. When you are thoroughly familiar with the construction sequence, begin construction. Check off each step as you complete it.



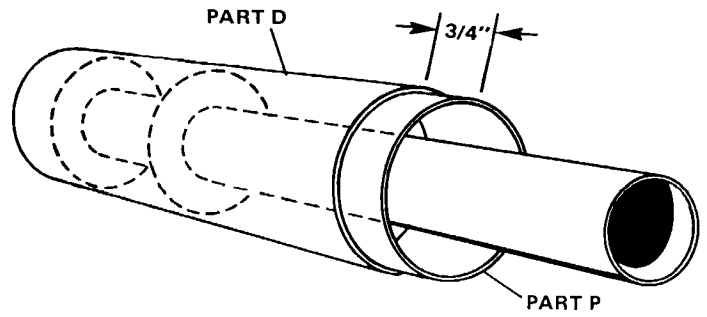
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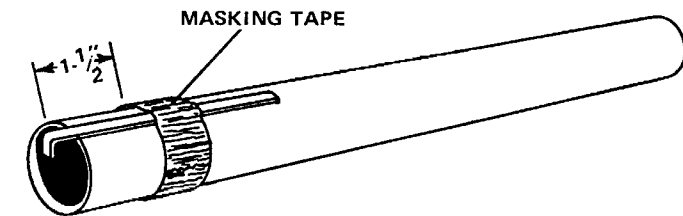
ring/tube joints. After glue is fully dry, apply a second coat of glue to ring/tube joints at each of the two ends.



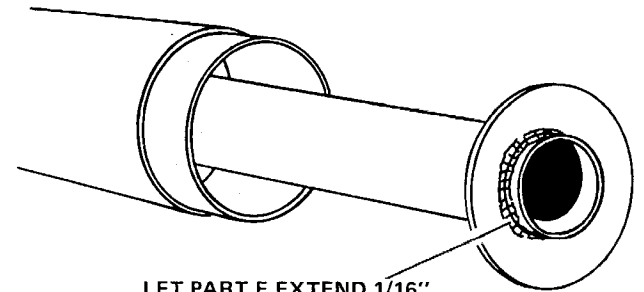
1 Cut a $1/8''$ slit in the engine mount tube (part E), $2\text{-}5/8''$ from one end. Apply a straight $1''$ line of glue to the tube beginning at the mark as shown. Push one end of the engine hook (part F) into the slit and press the main part of the hook into the glue.



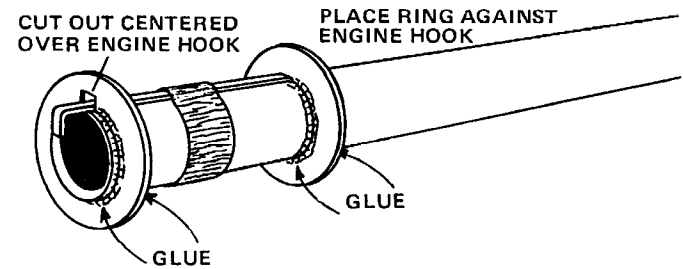
5 Glue stage coupler (part P) into forward end of body tube. Stage coupler should extend $3/4''$ beyond end of body tube. Wipe off any glue on exposed portion of stage coupler.



2 Wrap a layer of masking tape around the engine hook as shown in diagram.

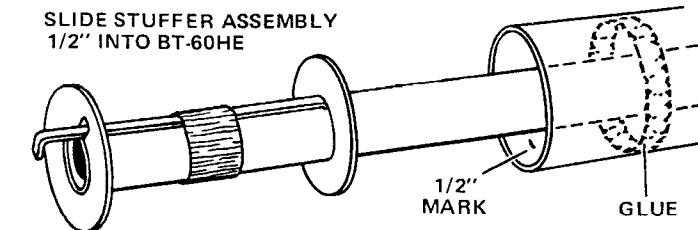


LET PART E EXTEND $1/16''$ BEYOND RING

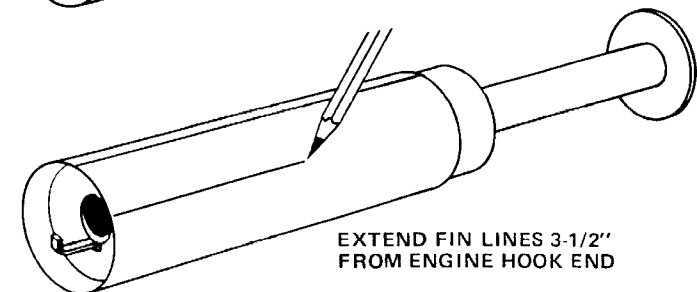
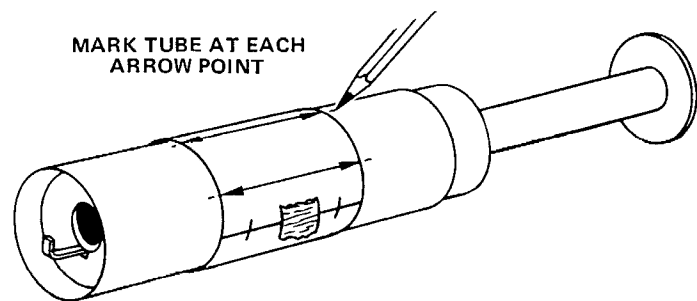


3 Remove three of the ring adapters from the two ring adapter sheets (part B). (The fourth ring is a spare.) Cut a $1/8'' \times 1/8''$ square, as shown above, in one ring. Place this ring over the tube and engine hook so that the $1/8'' \times 1/8''$ square allows clearance for the engine hook. Space this ring $1/16''$ from the end of the tube and glue it to the tube. Be sure not to get glue on the engine hook. Hook should work freely in the $1/8'' \times 1/8''$ slot. Place second ring over the front end of tube and bring it down until it contacts the front end of engine hook and glue in place. Save third ring for use in step 6.

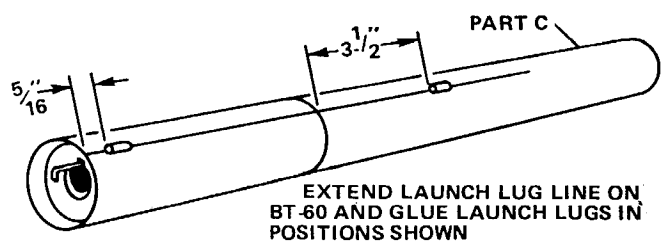
6 Glue ring adapter onto end of stuffer tube as shown. This ring was saved in step 3.



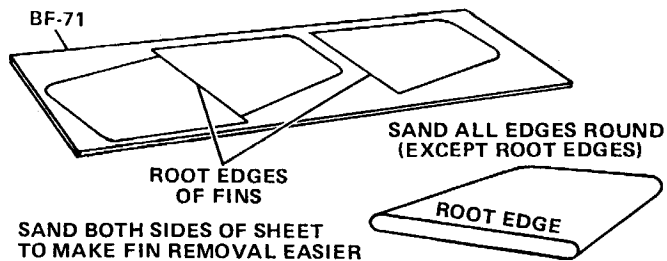
4 Mark inside of body tube (part D) $1/2''$ from one end. Smear a band of glue inside about $2''$ from marked end. Insert assembly from step 3 into body tube from marked end until rear ring adapter is even with $1/2''$ mark. Apply glue to rear



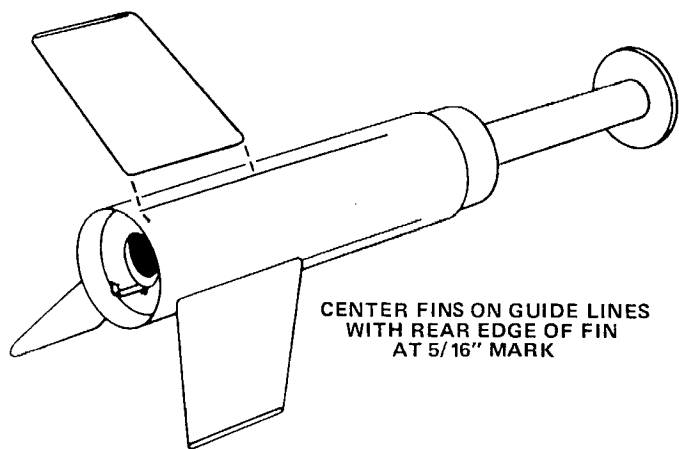
7 Cut out fin spacing guide (part A). Wrap guide around the $8\text{-}1/2''$ long body tube and tape ends together with alignment marks matched. Mark body at each arrow point. Use a pencil because ink will show through paint. Remove spacing guide and connect each set of marks with a straight line. Fin lines should extend $3\text{-}1/2''$ from engine hook end of tube. The launch lug line should be extended to both ends of tube.



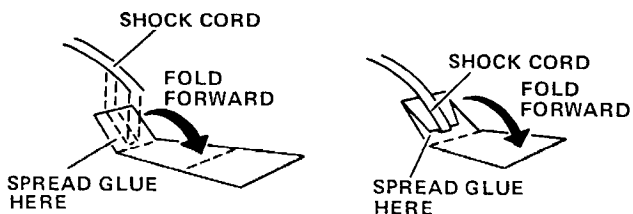
- 8 Temporarily slide body tube (part C) over forward ring adapter and stage coupler. Extend launch lug line as shown. Glue two launch lugs (part K) on launch lug line at illustrated locations. Remove body tube and set aside temporarily.



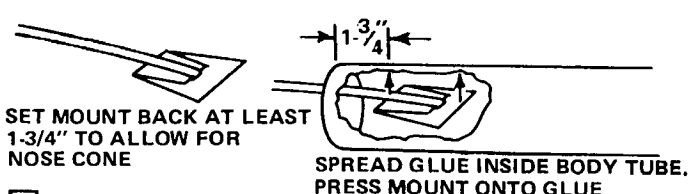
- 9 Lightly sand both sides of die-cut balsa fin sheet (part J) and remove fins. Carefully cut out the fins with a sharp modeling knife. Gently sand all fin edges (except root edges) to airfoil shape shown.



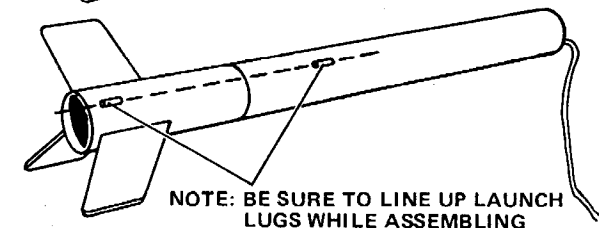
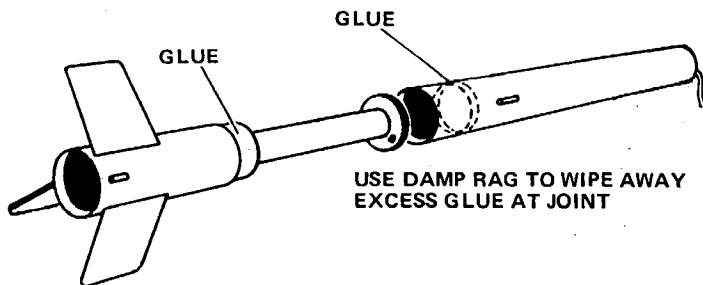
- 10 Mark each fin line 5/16" from rear of body tube. Glue a fin on each fin line (centered on line) with rear edge of fin at 5/16" mark.



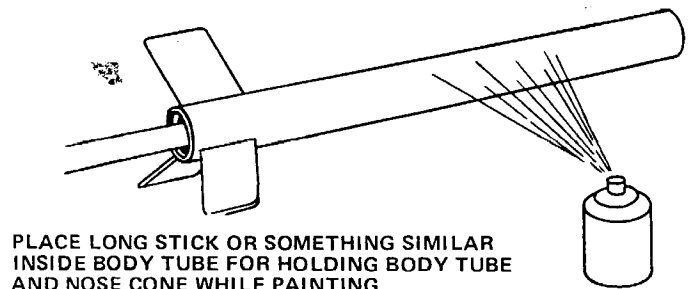
- 11 Cut out the shock cord mount (part H). Crease it on the dotted lines by folding. Spread glue on the first section (1) and lay the end of the shock cord (part I) into the glue. Fold over and apply glue to the back of the first section and exposed part of section 2. Lay the shock cord as shown and fold over again. Clamp the unit together with your fingers until the glue sets.



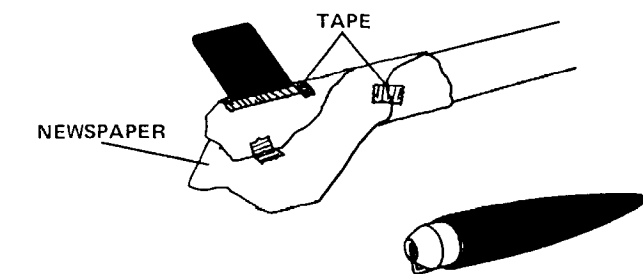
- 12 Apply glue to the inside of the main body tube at one end to cover an area about 1-3/4" to 2-3/4" from the end. The glued area should be the same size as the shock cord mount. Press the mount into the glue as shown. Hold it until the glue sets.



- 13 Smear a band of glue inside body tube as shown and apply a very light coat of glue on stage coupler. Being very careful to line up launch lugs on fin unit and forward tube, slide body tube over ring adapter and stage coupler. If glue squeezes from joint between body tubes, use a damp rag and wipe off excess glue immediately. (Be careful not to smear glue.)

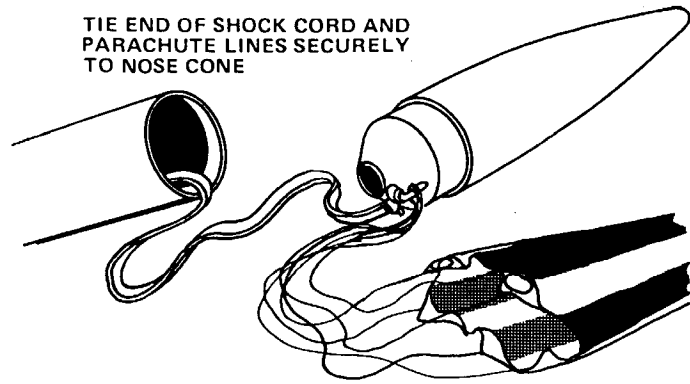


- 14 Use a long stick or similar object to hold rocket while painting. For best results, apply a white base coat first, then follow with silver spray paint. Allow paint to dry thoroughly before proceeding to next step.



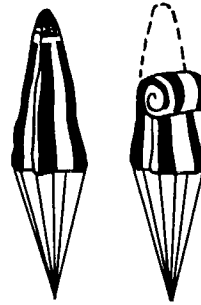
- 15 Use newspaper and masking tape to mask off one fin. Paint this fin and the nose cone with flat black enamel.

TIE END OF SHOCK CORD AND PARACHUTE LINES SECURELY TO NOSE CONE



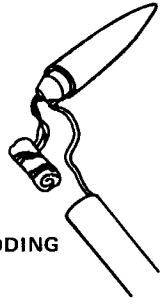
COUNTDOWN CHECKLIST

14 Pack eight to ten squares of crumpled recovery wadding loosely into body tube.



FOLD AND WRAP SHROUD LINES AROUND PARACHUTE

INSERT AFTER WADDING



13 Fold parachute into a triangular shape. Roll 'chute tightly as shown and wrap shroud lines around it. If 'chute is too large, unroll and repack until it slides easily into rocket. A very tight fit may prevent parachute from ejecting properly.

12 Pack shock cord neatly into rocket.

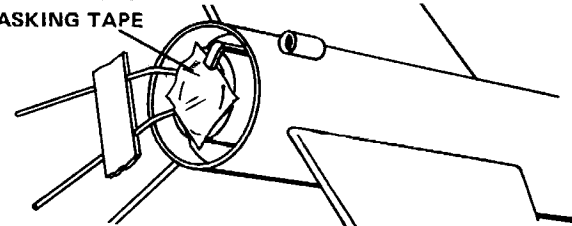
NOTE: DO NOT pack parachute until you are actually ready to launch. For maximum parachute reliability, lightly dust 'chute with ordinary talcum powder, especially in cold weather.

Slide nose cone into place. Nose cone should separate easily from rocket body tube, but should not be extremely loose. If it is too tight, sand inside of body tube and shoulder of nose cone with extra fine sandpaper. If nose cone is too loose, add a wrapping of transparent tape or masking tape to shoulder of nose cone.

11 Select an engine and install an igniter as directed in the engine instructions.

Estes engines recommended for use with this rocket are the B4-4 and C6-5. Use a B4-4 engine for your first flight.

MASKING TAPE



10 Insert engine into rocket. Engine hook must latch securely over end of engine.

9 Disarm launch panel--remove safety key.

8 Place rocket on launch pad making sure rocket slides freely on launch rod. Clean micro-clips and attach them to igniter leads.

7 Clear the launch area, alert recovery crew and trackers. Check for low flying aircraft and unauthorized persons in recovery area.

6 Arm launch panel--insert safety key.

5 - 4 - 3 - 2 - 1 LAUNCH !!

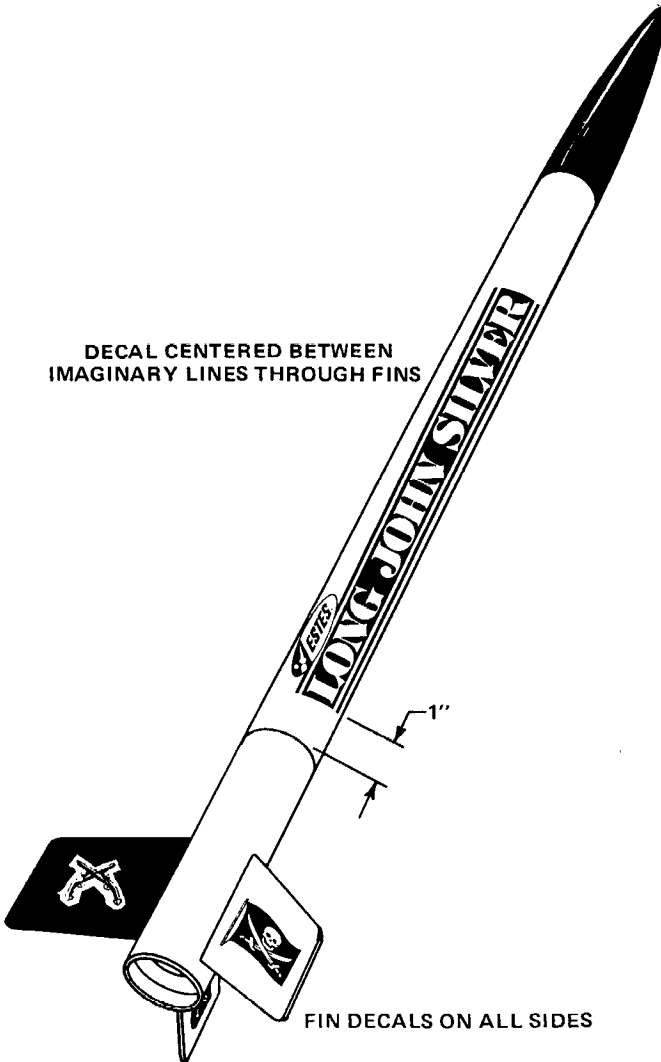
MISFIRE PROCEDURE

Occasionally an igniter will heat and burn into two parts without igniting the engine. This is almost always caused by a failure to install it correctly. Disarm launch panel, remove the model, clean igniter residue from nozzle and install a new igniter. Follow launching procedure again.

16 Remove nose cone (part G) from rocket and pull shock cord from body tube. (Be sure that it comes out front end of tube.) Tie end of shock cord to nose cone with a secure double knot.

17 Assemble parachute (part M) according to instructions on parachute. You also use shroud line (part N) and tape discs (part O) for parachute assembly. Tie completed parachute securely to nose cone.

DECAL CENTERED BETWEEN IMAGINARY LINES THROUGH FINS



FIN DECALS ON ALL SIDES

18 Apply decals (part L) to Long John Silver as shown in illustration.

match lines

← FIN CENTER →

LONG JOHN SILVER SPACING GUIDE

← FIN CENTER →

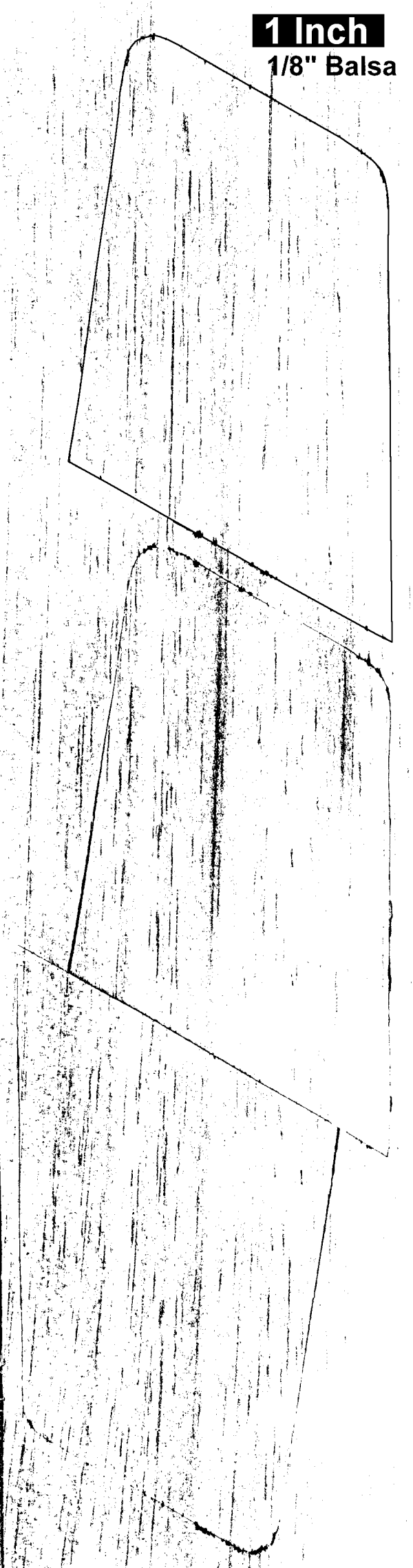
← LAUNCH LUG CENTER →

← FIN CENTER →

match lines

1 Inch

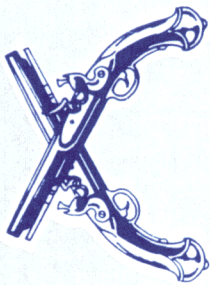
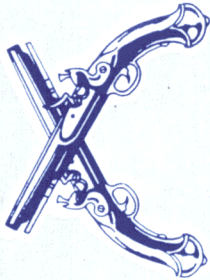
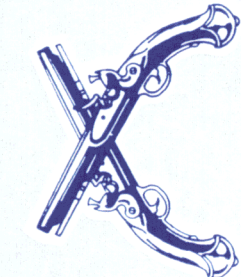
1/8" Balsa



PN #37510 ESTES INDUSTRIES



LONGHORN





LOOKING FOR A NEW CHALLENGE?

EASY TO ASSEMBLE!

ROCKETRY KIT

Includes 10 pieces of hardware and 10 pieces of plastic. All you need is a screwdriver and a few minutes to assemble. The kit is suitable for ages 10 and up. The kit is suitable for ages 10 and up. The kit is suitable for ages 10 and up.



\$29.00 Value

ALMOST 3 FEET TALL!

The rocket is almost 3 feet tall. It is made of plastic and metal. It is easy to assemble. The kit is suitable for ages 10 and up. The kit is suitable for ages 10 and up. The kit is suitable for ages 10 and up.

FLYING MODEL ROCKETRY STARTER OUTFIT

