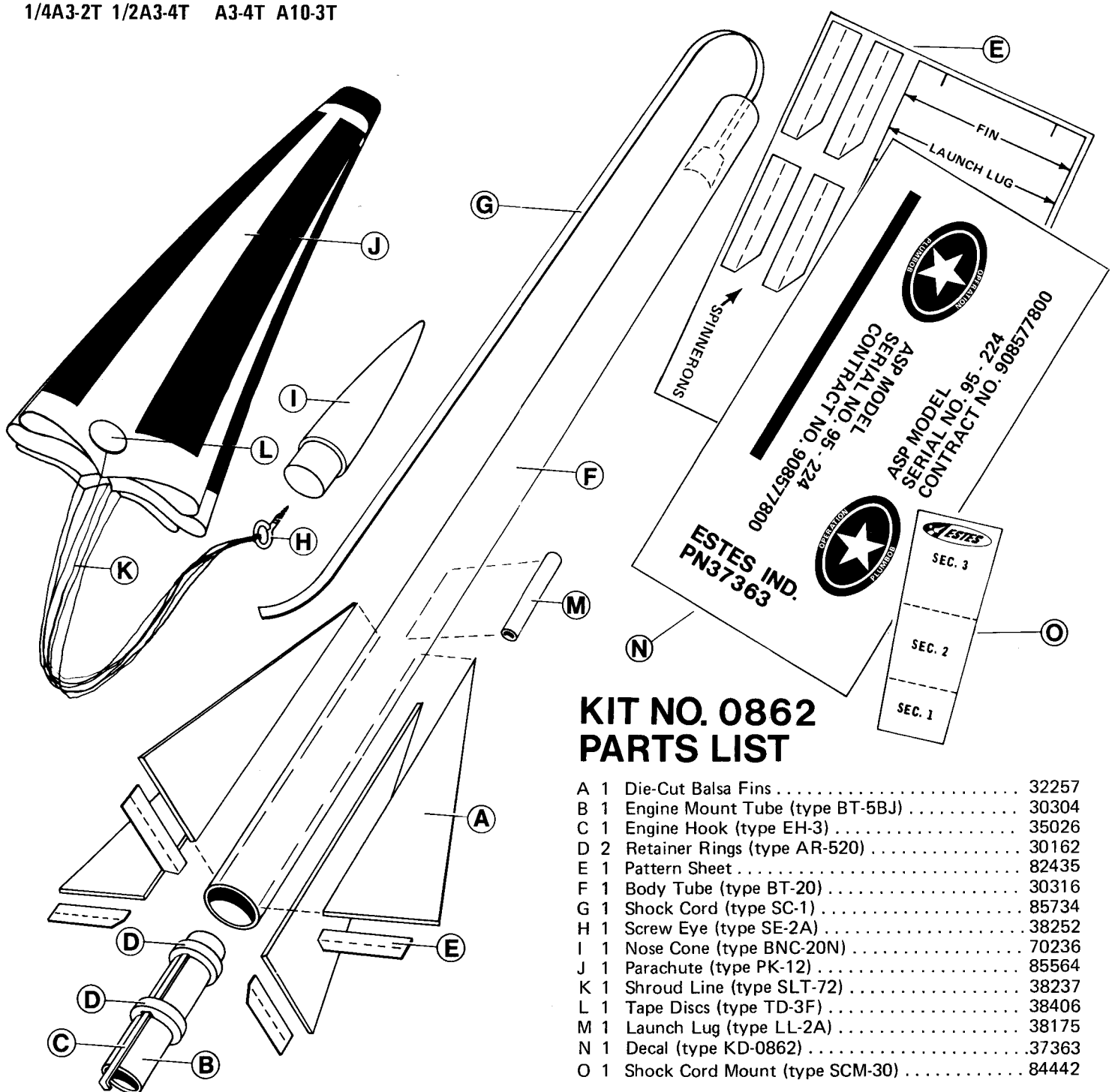
A.S.P.

SKILL LEVEL 2 – Recommended for Intermediate Rocketeers.

RECOMMENDED ENGINES
1/4A3-2T 1/2A3-4T A3-4T A10-3T

BEFORE YOU START

Read all instructions before beginning work on your model. Make sure you have all parts and materials. When you are thoroughly familiar with the assembly procedure, begin construction. Check off each step as you complete it. In each step, test-fit the parts together before applying any glue. If some part doesn't fit properly, sand lightly or build up as required for precision assembly.



KIT NO. 0862 PARTS LIST

A	1	Die-Cut Balsa Fins	32257
B	1	Engine Mount Tube (type BT-5BJ)	30304
C	1	Engine Hook (type EH-3)	35026
D	2	Retainer Rings (type AR-520)	30162
E	1	Pattern Sheet	82435
F	1	Body Tube (type BT-20)	30316
G	1	Shock Cord (type SC-1)	85734
H	1	Screw Eye (type SE-2A)	38252
I	1	Nose Cone (type BNC-20N)	70236
J	1	Parachute (type PK-12)	85564
K	1	Shroud Line (type SLT-72)	38237
L	1	Tape Discs (type TD-3F)	38406
M	1	Launch Lug (type LL-2A)	38175
N	1	Decal (type KD-0862)	37363
O	1	Shock Cord Mount (type SCM-30)	84442

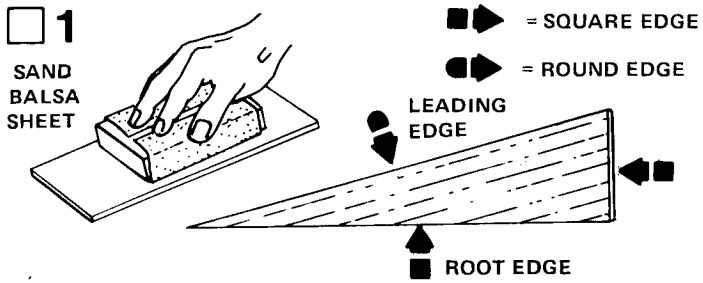
TOOLS AND MATERIALS

In addition to the parts included in this kit you will need scissors, household white glue (Elmer's, Titebond, or similar white glue), pencil, ruler, fine grit sandpaper, sanding sealer, masking tape, modeling knife with sharp blade, paintbrush, gloss white, red, and silver spray paint.

ESTES
A DAMON COMPANY
ESTES INDUSTRIES
PENROSE, CO 81240 USA

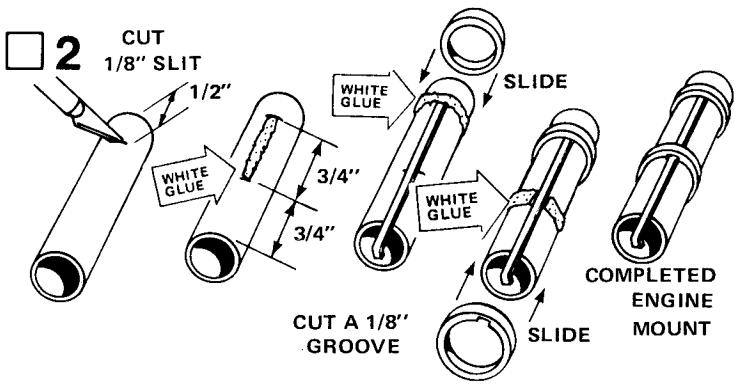
ASSEMBLY INSTRUCTIONS

☐1



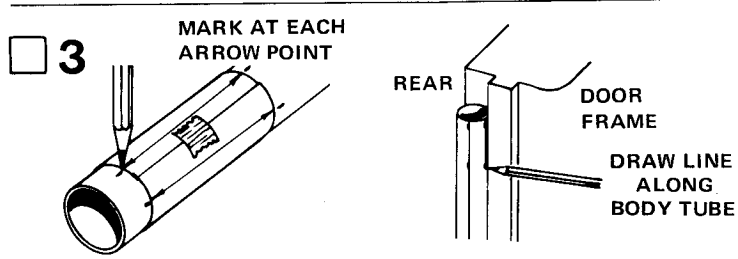
Fine-sand both sides of the balsa fin sheet (part A). Carefully remove the fins from the sheet. Use a sharp knife to cut the corners and edges free. Sand round the leading edge of each fin. NOTE: The leading edge follows the direction of the grain as shown.

☐2



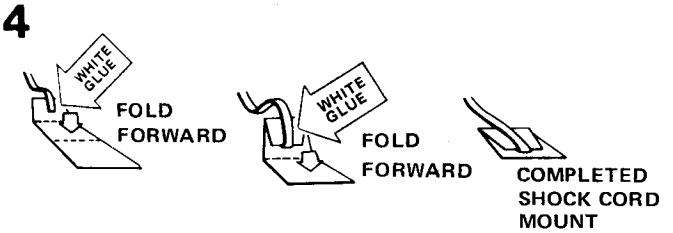
Cut a 1/8" wide slit in the engine mount tube (part B), 1/2" from one end as shown. Apply a 3/4" line of glue along the engine tube as shown. Push one end of the engine hook (part C) into the slit and press the main part of the hook into the glue. Glue one retainer ring (part D) to the engine mount tube against the engine hook as shown. Cut a groove 1/8" wide and 1/16" deep on the inside of the other retainer ring as shown. Glue this retainer ring on the engine mount tube 3/4" from the end with the overhanging hook so that the groove is over the engine hook.

☐3



Carefully cut out the fin marking guide (part E) from the panel back. Wrap the guide tightly around one end of the body tube (part F). Match the printed guide marks and tape the ends of the guide together. Mark all the guide lines on the body tube. Label the launch lug line with an "L". Remove the guide and place the body tube against the inside edge of a door frame as shown. Draw a line through each mark and extend each line halfway along the tube.

☐4



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

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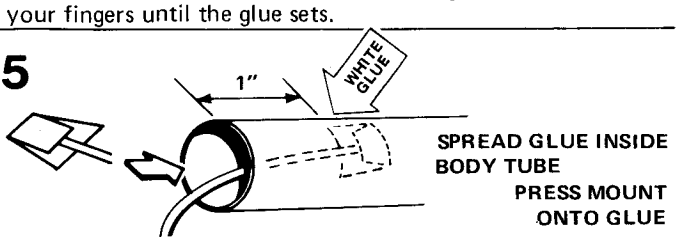
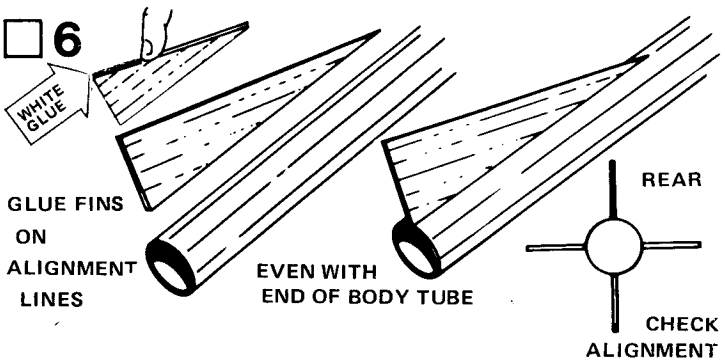


Apply glue to the inside of the body tube at one end over an area about 1" to 2" from the end. The glued area should be about the same size as the shock cord mount. Press the mount into the glue as shown and hold it until the glue sets.

☐6

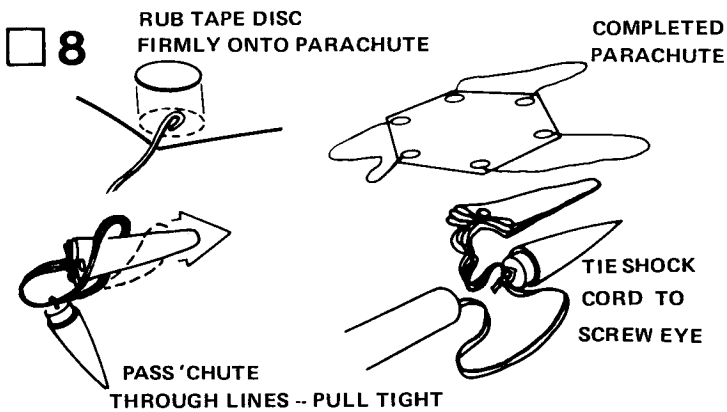


Rub a line of glue into the root edge of each fin and allow to dry. Glue the fins to the body on the alignment lines. The rear of each fin should be even with the rear of the body tube. Once the glue has begun to set, stand the rocket up on a flat surface and adjust the fins so they project straight out from the body. Allow the fins to dry completely before handling.

☐7

Insert the screw eye (part H) into the rear of the nose cone (part I). Remove the screw eye and squirt a small amount of glue into the hole. Re-insert the screw eye.

☐8



Cut out the parachute (part J) on its edge lines. Cut three 24" lengths of shroud line (part K). Attach line ends to the top of the parachute with tape discs (part L) as shown. Pass the shroud line loops through the screw eye on the nose cone. Pass the parachute through the loop ends and pull the lines tight against the screw eye. "Set" the knot with a drop of glue. Tie the free end of the shock cord to the screw eye.

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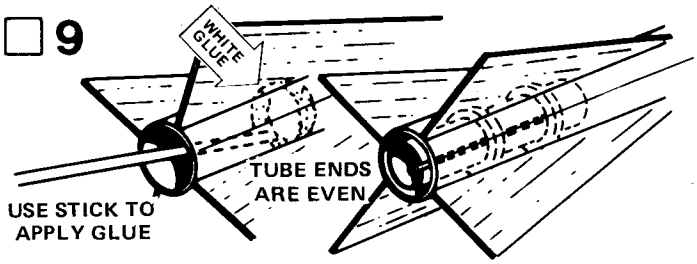
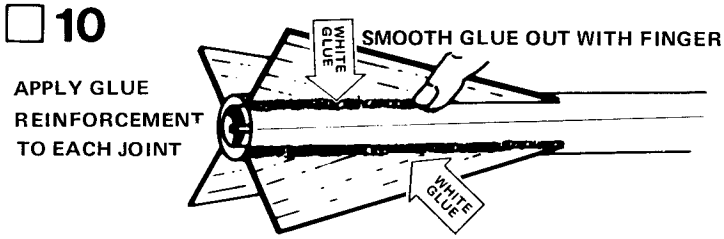


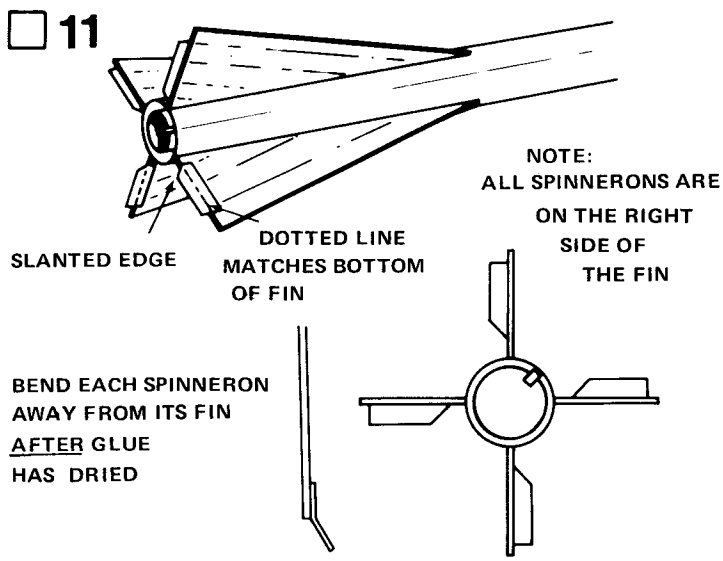
Smear a line of glue around the inside of the rear end of the body tube. The glue should be from 1-1/2" to 2" from the end of the tube. Push the engine mount unit in with one smooth motion so that the engine hook is lined up with the launch lug line on the tube and the tube ends are even as shown.

☐ 10



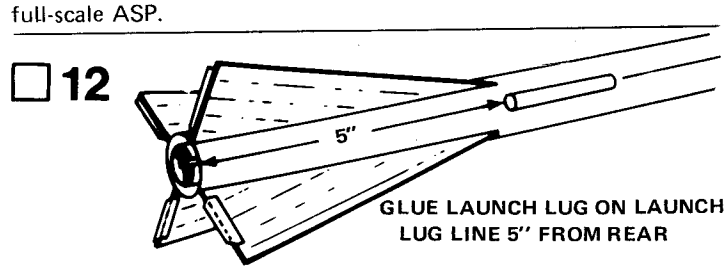
When the fin joints have dried, apply a glue reinforcement to each joint. Holding the model level, apply a narrow line of glue to both sides of each fin joint. Smooth out the glue with your finger. IMPORTANT: Keep the model level until the glue dries.

☐ 11



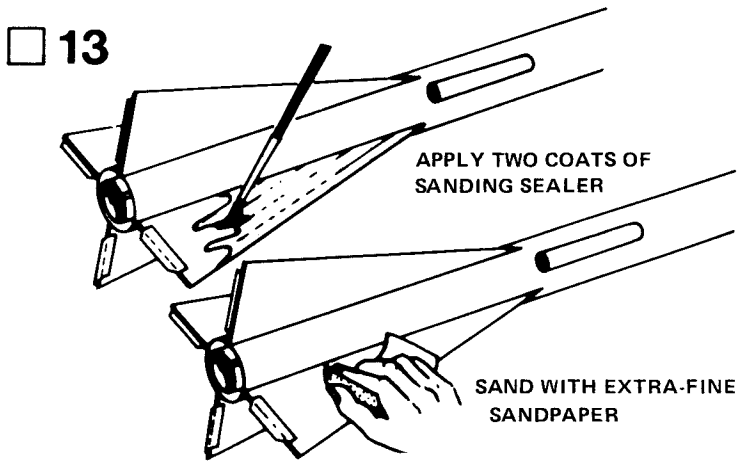
Carefully cut out the spinnerons from the pattern sheet. Glue the spinnerons to the bottom of the fins so that the slanted edge is at the bottom towards the body tube and the dotted line is in line with the fin's edge. IMPORTANT: Be sure that each spinneron is on the same side of the fin as the others as shown. After the glue holding the spinnerons has dried, bend each slightly away from its fin. This will cause the rocket to spin in flight as does the full-scale ASP.

☐ 12



Glue the launch lug (part M) on the launch lug guide line 5" from the rear of the body tube. Adjust the launch lug straight along the body tube.

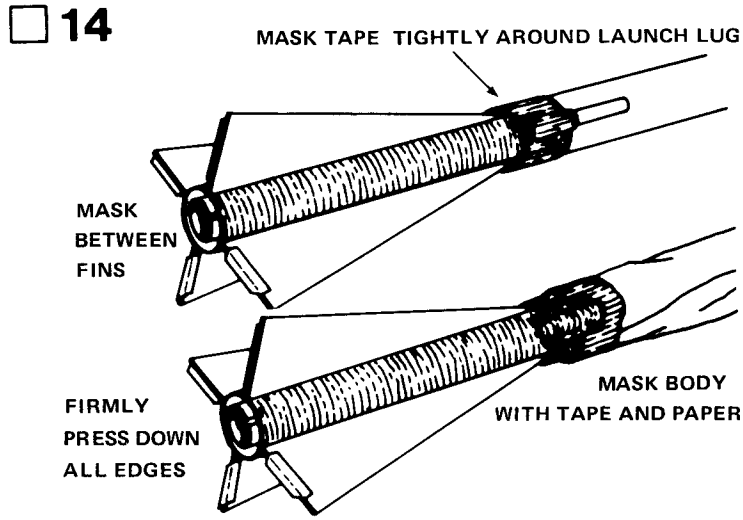
☐ 13



When all glue on the outside of the body is dry, prepare the balsa parts of the model for painting. Apply at least two coats of sanding sealer to all exposed balsa surfaces. Let dry and sand thoroughly with extra-fine sandpaper after each coat. Do this until the tiny holes in the wood are filled and everything looks and feels smooth.

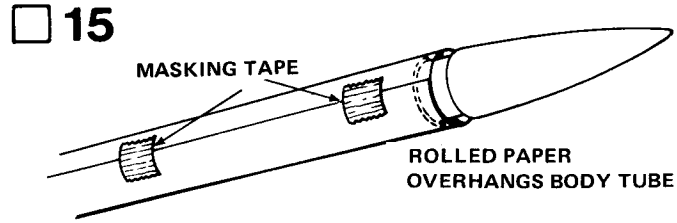
Paint the model with two coats of gloss white spray paint. Let the paint dry overnight.

☐ 14



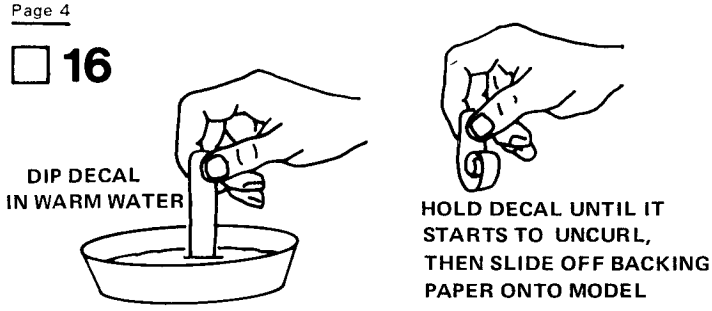
Carefully mask off the fins for painting. Wrap a piece of masking tape around the body at the top of the fins. Be sure to fit the tape tightly around the launch lug. Tape the body tube areas between the fins. Wrap a piece of paper around the front of the body tube taping the paper securely to the first piece of tape. Firmly press down all edges of the masking tape so that the paint will not leak under the tape. Spray the fins with several light coats of insignia red paint. Carefully remove the paper and masking tape after the paint has dried. Slowly and carefully pull the tape from the rocket to avoid pulling off the paint.

☐ 15



Pull the nose cone part way out of the body tube. Wrap a piece of paper around the body tube and the exposed neck of the nose cone. Tape the paper on the seams to keep it tight. Spray paint the nose cone chrome silver and remove the tape and paper after the paint has dried.

☐ 16



When all paint is completely dry, apply decals (part N) in the positions shown. To apply the decals, cut out a decal section, dip it in lukewarm water for 10-20 seconds, and hold it until it starts to uncurl. Slip the decal off the backing sheet and onto your model. Blot excess water away with a damp cloth. When all decals are in place, let the model dry overnight. After drying, apply a coat of clear spray to protect the decals.

LAUNCHING COMPONENTS

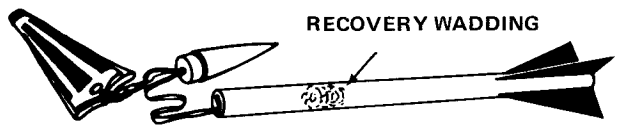
To launch your rocket you will need the following items:
An Estes model rocket launch system
Parachute recovery wadding (Estes Cat. No. 2274)
Recommended Engines: 1/4A3-2T, 1/2A3-4T, A3-4T, and A10-3T. Use a 1/2A3-4T for your first flight.

Be sure to follow the HIAA-NAR* Model Rocket Safety Code when carrying out your model rocket activities.

*HIAA -- Hobby Industry Association of America
NAR -- National Association of Rocketry

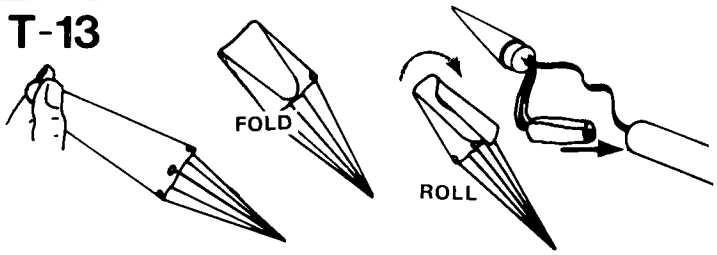
COUNTDOWN CHECKLIST

T-14



Pack 2 or 3 squares of loosely crumpled recovery wadding into the body tube.

T-13



Hold the parachute at its center and pass the other hand down it to form a "spike" shape. Fold this spike in half. Roll parachute into tube shape to fit easily into body. Pack 'chute into the tube on top of the wadding. Pack the shroud lines and shock cord in on top of the parachute and slip the nose cone into place.

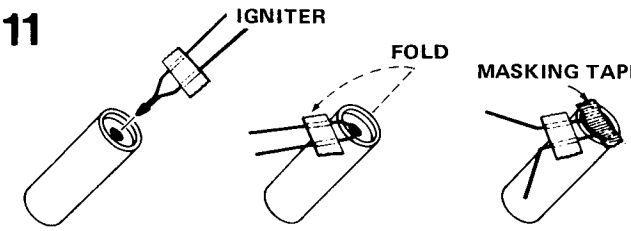
NOTE: DO NOT pack parachute until you are actually ready to launch. For maximum parachute reliability, lightly dust the 'chute with ordinary talcum powder before each flight, especially in cold weather.

T-12

Pack parachute, shroud lines, and shock cord neatly into rocket body.

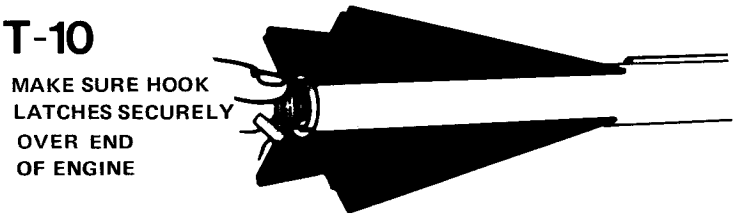
NOTE: Nose cone should separate easily from rocket body tube, but should not be extremely loose. If fit is too tight, sand inside of body tube and shoulder of nose cone with fine sandpaper. If fit is too loose, add a wrapping of transparent or masking tape to the shoulder of the nose cone.

T-11



Select an engine and install an igniter as directed in the engine instructions. Use a 1/2A3-4T engine for your first flight.

T-10

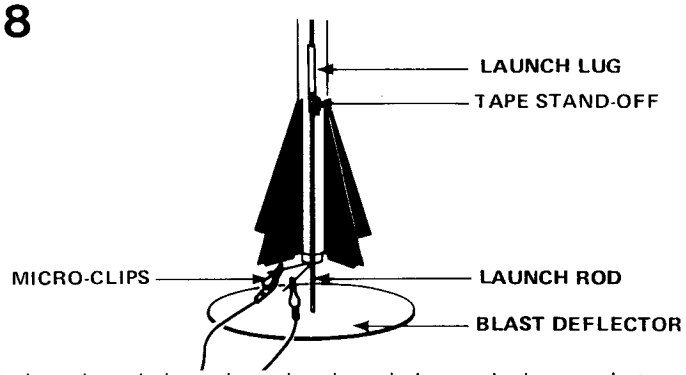


Insert engine into rocket engine mount. Engine hook must latch securely over end of the engine.

T-9

Disarm the launch panel -- REMOVE SAFETY KEY!

T-8



Slide launch rod through rocket launch lug and place rocket on launch pad. Make sure the rocket slides freely on the launch rod. Wrap a piece of tape around the launch rod to hold the rocket off the blast deflector. Clean the micro-clips and attach them to the igniter wires. Arrange the clips so they do not touch each other or the metal blast deflector. Attach clips as close to engine as possible.

T-7

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

T-6

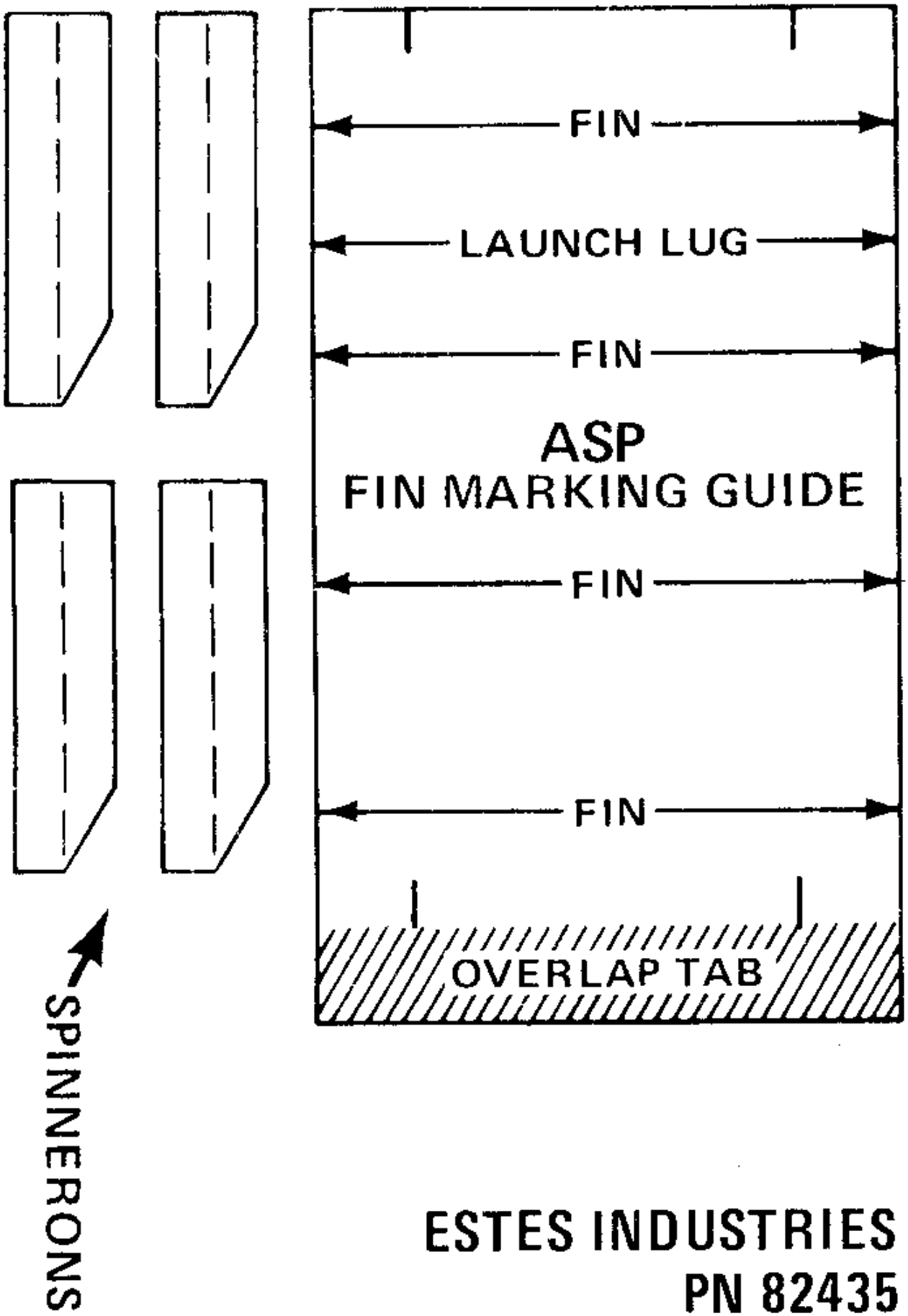
Arm the launch panel -- INSERT SAFETY KEY!

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

Repeat Countdown Checklist for each flight.

MISFIRE PROCEDURE

Occasionally the igniter will heat and burn into two pieces without igniting the engine. This is almost always caused by a failure to install it correctly. REMOVE SAFETY KEY from launch panel, remove the model, clean the igniter residue from the engine nozzle, and install a new igniter. Repeat the Countdown Checklist.



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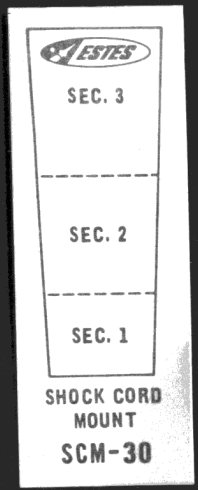
ESTES
SEC. 3
SEC. 2
SEC. 1
SHOCK CORD
MOUNT
SCM-30

ESTES IND.
PN37363

ASP MODEL
SERIAL NO. 95 - 224
CONTRACT NO. 908577800

ASP MODEL
SERIAL NO. 95 - 224
CONTRACT NO. 908577800

A.S.P.

Atmospheric Sounding Projectile

FLYING MODEL ROCKET

SKILL LEVEL 2

- Semi-Scale Sounding Rocket
- Realistic Spin-Flight Performance
- Mini Engine Powered
- Die-Cut Balsa Fins
- Realistic Kit Decals
- 12" Parachute Recovery

#2662