

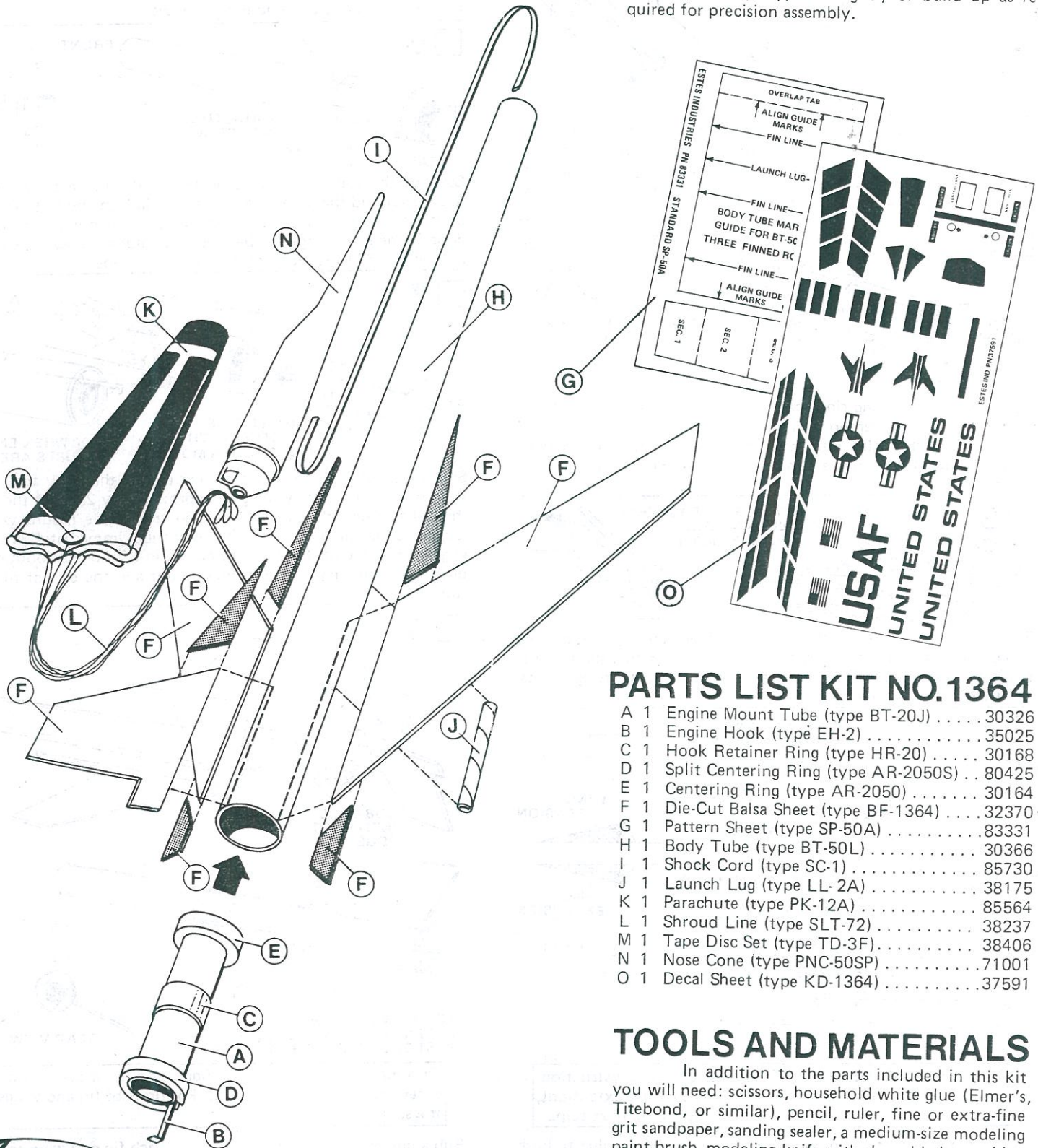
1725 - Eng #4 1928 -

FALCON COMMANDER

SKILL LEVEL 1 - Recommended for Beginning Rocketeers

BEFORE YOU START

Read all instructions before beginning construction 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.



PARTS LIST KIT NO.1364

A	1	Engine Mount Tube (type BT-20J)	30326
B	1	Engine Hook (type EH-2)	35025
C	1	Hook Retainer Ring (type HR-20)	30168
D	1	Split Centering Ring (type AR-2050S)	80425
E	1	Centering Ring (type AR-2050)	30164
F	1	Die-Cut Balsa Sheet (type BF-1364)	32370
G	1	Pattern Sheet (type SP-50A)	83331
H	1	Body Tube (type BT-50L)	30366
I	1	Shock Cord (type SC-1)	85730
J	1	Launch Lug (type LL-2A)	38175
K	1	Parachute (type PK-12A)	85564
L	1	Shroud Line (type SLT-72)	38237
M	1	Tape Disc Set (type TD-3F)	38406
N	1	Nose Cone (type PNC-50SP)	71001
O	1	Decal Sheet (type KD-1364)	37591

TOOLS AND MATERIALS

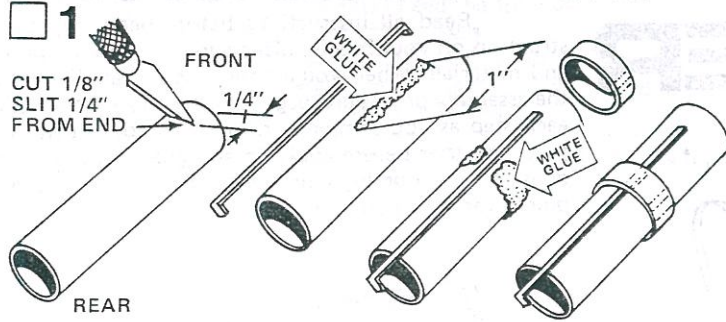
In addition to the parts included in this kit you will need: scissors, household white glue (Elmer's, Titebond, or similar), pencil, ruler, fine or extra-fine grit sandpaper, sanding sealer, a medium-size modeling paint brush, modeling knife with sharp blade, masking tape, a dowel, and gloss white enamel spray paint.

For easy and positive alignment of the fins on your model, we recommend the use of Estes' Fin Alignment Guide, Part No. 2231.

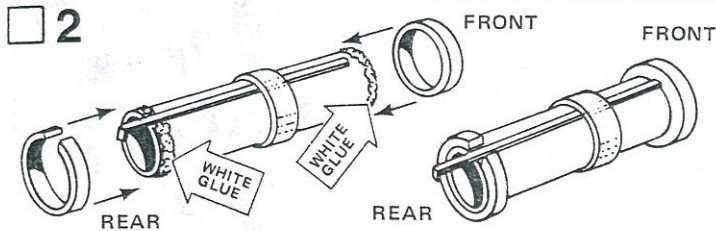
RECOMMENDED ENGINES:
 A8-3 A8-5 B4-4 B6-4
 B6-6 B8-5 C6-3 C6-5



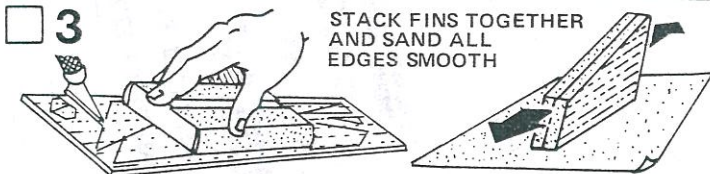
ASSEMBLY INSTRUCTIONS



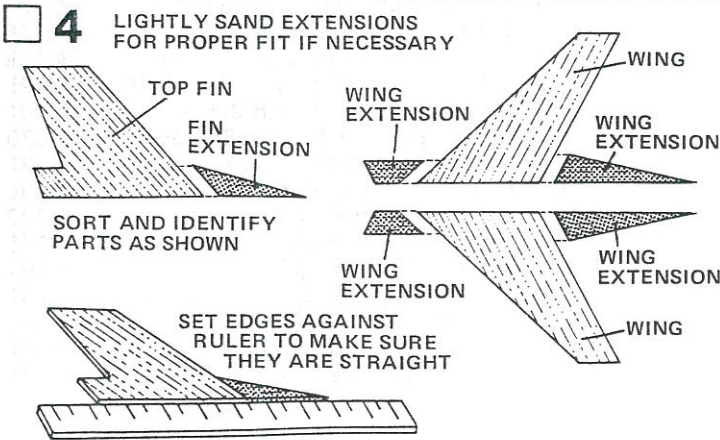
1 CUT 1/8" SLIT 1/4" FROM END. Apply a 1" long line of glue to the tube. Push one end of the engine hook (part B) into the slit and press the main part of the hook into the glue. Apply a line of glue around the middle of the tube and slide the hook retainer ring (part C) over tube and hook, onto the glue.



2 Glue the split centering ring (part D) to the engine mount tube so the engine hook is centered in slot in ring and even with rear of tube. Avoid getting glue into the slot. Glue the other ring (part E) to the front of the engine tube against the end of the hook as shown.



3 Fine-sand the balsa die-cut sheet (part F), then carefully remove the die-cut parts from the sheet by freeing the edges with a sharp knife. Sand the edges of the fin parts slightly to remove any rough spots, but leave edges square and sharp.

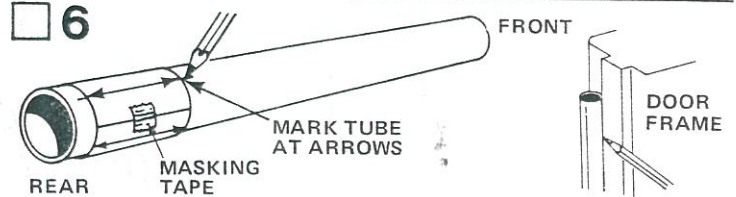


BEGINNING MODELER'S NOTE: For ease of construction, you may wish to leave off all the fin and wing extensions, shown shaded in illustrations, and proceed to the next step.

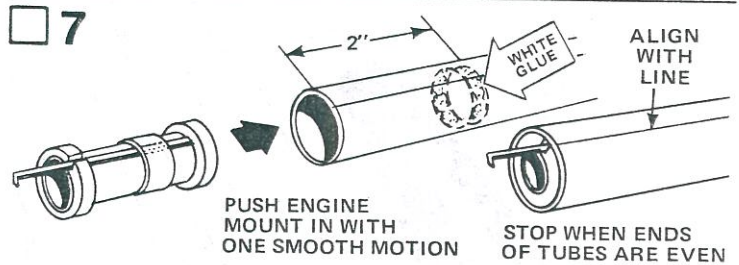
Glue extensions to top fin and to both wings. Apply glue to both edges to be joined. Let glue partially dry. Apply second bead of glue to one edge and press parts together. Set bottom edge of parts against a ruler to make sure they are straight. Wipe away any excess glue and set fin and wings aside to dry.



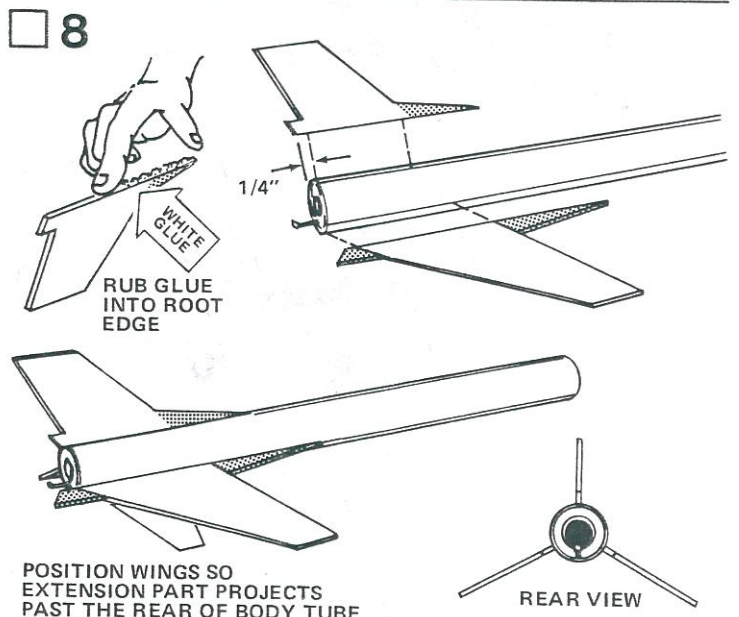
5 APPLY AT LEAST TWO COATS OF SANDING SEALER TO FIN AND WINGS. When fin and wings are completed, with or without extending, lightly sand all parts. Apply a coat of sanding sealer to each part. Apply sealer to all edges except the root edge. When sealer is dry, lightly sand all the sealed surfaces. Repeat sealing and sanding process until balsa grain no longer shows.



6 Cut out the tube marking guide from pattern sheet (part G) and wrap it around the body tube (part H). Mark the body tube at each of the arrow points. Draw straight lines connecting each mark. A door frame inside edge can be used as a guide as shown. Extend the lines about 6" forward from the rear of the tube.



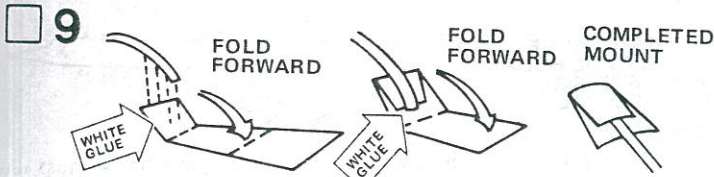
7 Smear glue around the inside of rear end of the body tube. Use a stick or dowel to apply the glue approximately 2" from the end of the tube. Align the engine hook on the engine mount with launch lug alignment line on the body tube. Immediately insert engine mount unit. Push engine mount in with one smooth motion until the split ring on the engine mount and the end of the body tube are even.



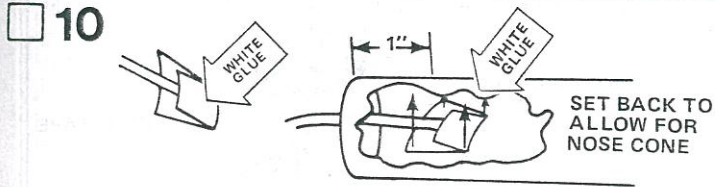
8 POSITION WINGS SO EXTENSION PART PROJECTS PAST THE REAR OF BODY TUBE

Optional wing and fin configuration is shown with the extension parts shown shaded. Positions of fin and wings are the same in both cases.

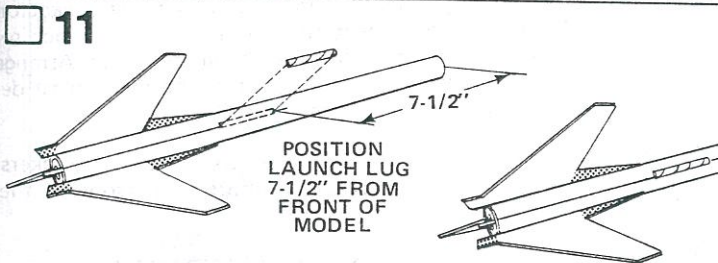
Rub a line of glue into the root edge of each fin and wing and allow to dry. Apply glue to the top fin and position fin on alignment line so 1/4" of the fin projects past the rear of the tube as shown. Apply glue to the wings and position them on their alignment lines as shown. Refer to the illustration to be sure of these positions.



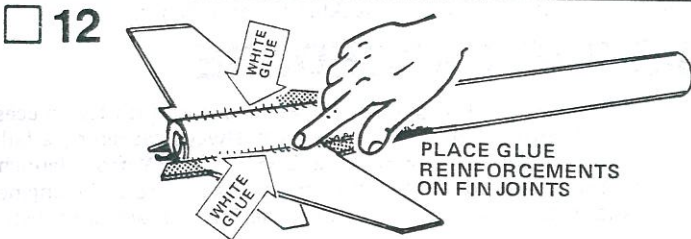
Cut out the shock cord mount from the pattern sheet. Crease it on the dotted lines by folding. Spread glue on the first section (1) and lay the end of the shock cord (part I) into the glue. Fold over and apply glue to the back of the first section and the exposed part of section 2. Lay the shock cord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



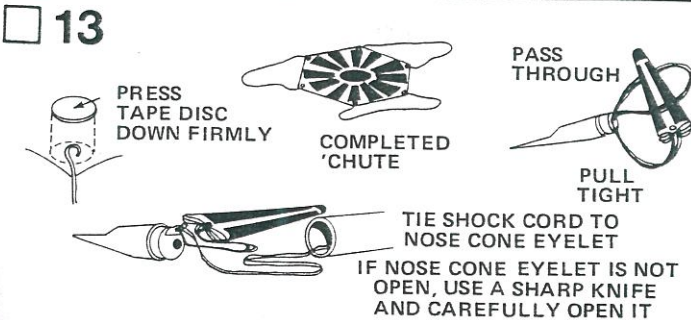
Smear glue over the back of the shock cord mount. Hold the mount as shown and press it into place at least 1" from the tube front end to allow for the nose cone. Hold the mount in place until glue sets.



Glue launch lug (part J) to rocket body tube on the launch lug line. front of the lug should be 7-1/2" from the front edge of the body tube. Align the launch lug straight along the body.



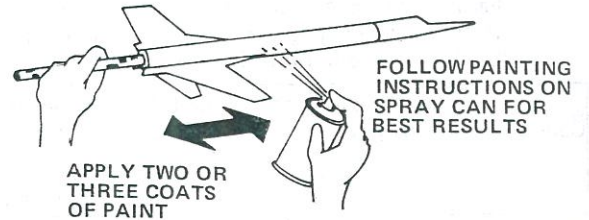
When the glue on the fin joints has dried, apply a glue reinforcement to each fin/body tube joint. Holding the model level, apply a line of glue to both sides of each fin joint. Smooth out the glue with your finger. **IMPORTANT** -- Keep the model level until the glue dries.



Cut out the parachute (part K) on its edge lines. Cut three 24" lengths of shroud line (part L). Attach line ends to the top (printed side) of the parachute with tape discs (part M) as shown. Pass the shroud line loops through the nose cone (part N) eyelet. Pass the parachute through the loop ends and pull the lines tight against the eyelet. Tie the free end of the shock cord to the eyelet with a double knot. Pack 'chute and shock cord into rocket body. Slide nose cone into place.

PAINTING AND DETAILING

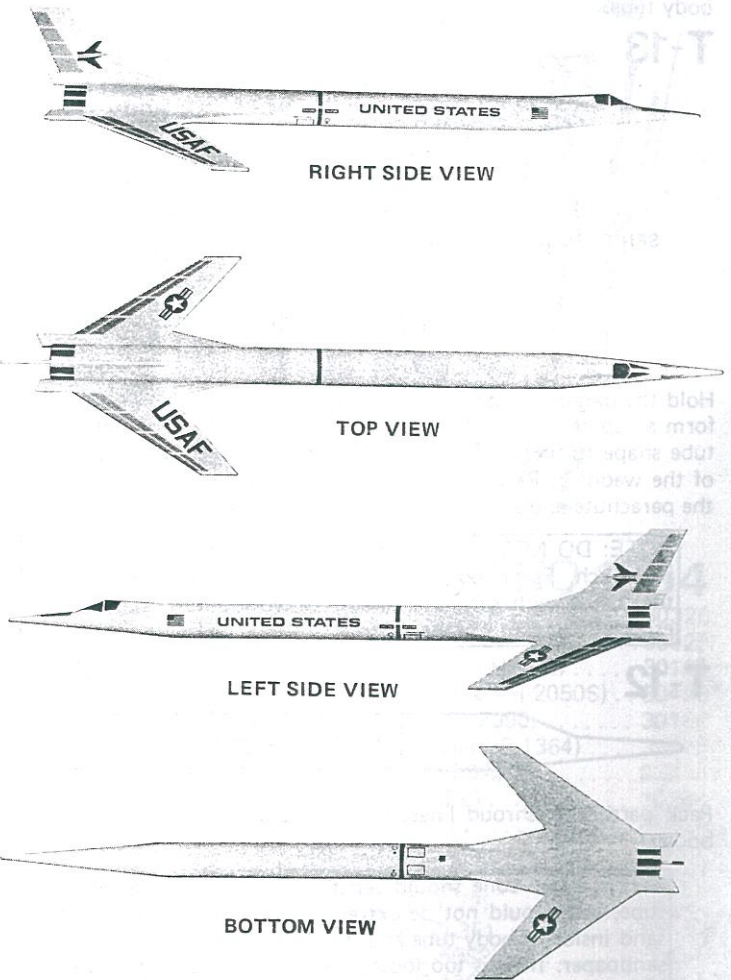
14



When all glue on the outside of the body is dry, insert a sheet of rolled-up newspaper or heavy paper into rear of rocket body as shown. **THE PAPER MUST FIT TIGHTLY.** Apply two or three light coats of gloss white spray enamel to the entire model. Allow each coat of paint to dry completely. Follow painting instructions on spray can for best results.

DECAL PLACEMENT

15



Apply the decals (part O) in the positions shown in the photographs. (A) Cut out only one decal at a time from the sheet. (B) Submerge the decal in water for 15 to 30 seconds (until decal slides on backing paper). (C) Gently slide decal from backing paper onto model. (D) Move decal into exact position and carefully blot away excess water with a soft cloth. (E) If the decal "sticks" before you have it in position, apply water over the decal with a brush. This will permit the decal to be moved. (F) Smooth out all wrinkles and air bubbles before the decal dries.

We recommend that the completed model be sprayed with Testor's "Dull-Cote". This is a clear, flat spray that kills the decal shine and protects the model's finish.

LAUNCHING COMPONENTS

To launch your rocket you will need the following items:

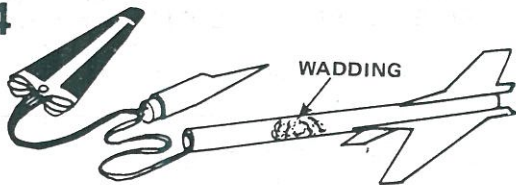
- An Estes model rocket launch system
- Parachute recovery wadding (Estes Cat. No. 2274)
- Recommended engines: A8-3 (First Flight), A8-5, B4-4, B6-4, B6-6, B8-5, C6-3, and C6-5.

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

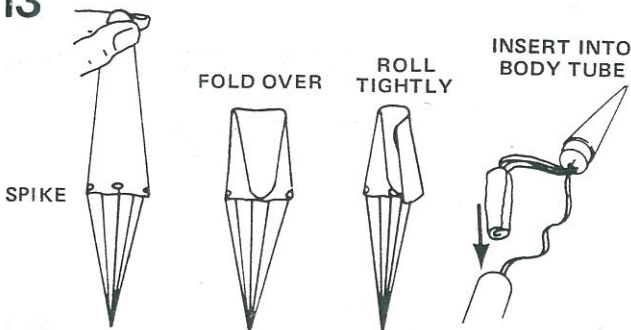
COUNTDOWN CHECKLIST

T-14



Pack 4 or 5 squares of loosely crumpled recovery wadding into the body tube.

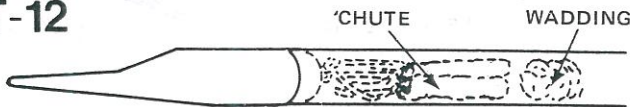
T-13



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.

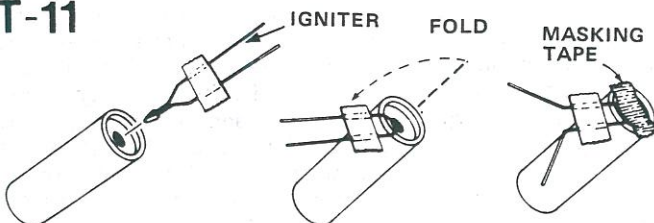
T-12



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 tape or masking tape to the shoulder of the nose cone.

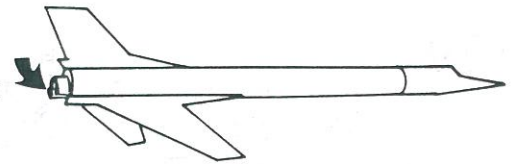
T-11



Select an engine and install an igniter as directed in the engine instructions. Use an A8-3 engine for your first flight.

T-10

MAKE SURE ENGINE HOOK LATCHES SECURELY

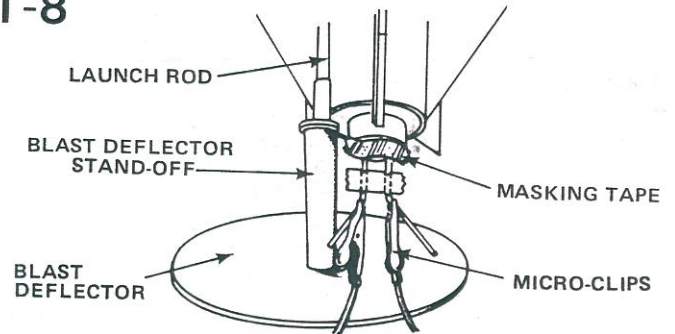


Insert engine into rocket engine mount. Engine hook must latch securely over end of the engine.

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. 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

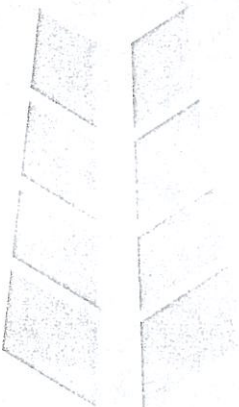
Arm the launch panel -- INSERT SAFETY KEY!

-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.



CAUTION

CAUTION



CONTROL CONN.

CONTROL CONN.



USAF
UNITED STATES
UNITED STATES

ESTES IND. PN37591