



# CONDOR

KIT NO.  
0807

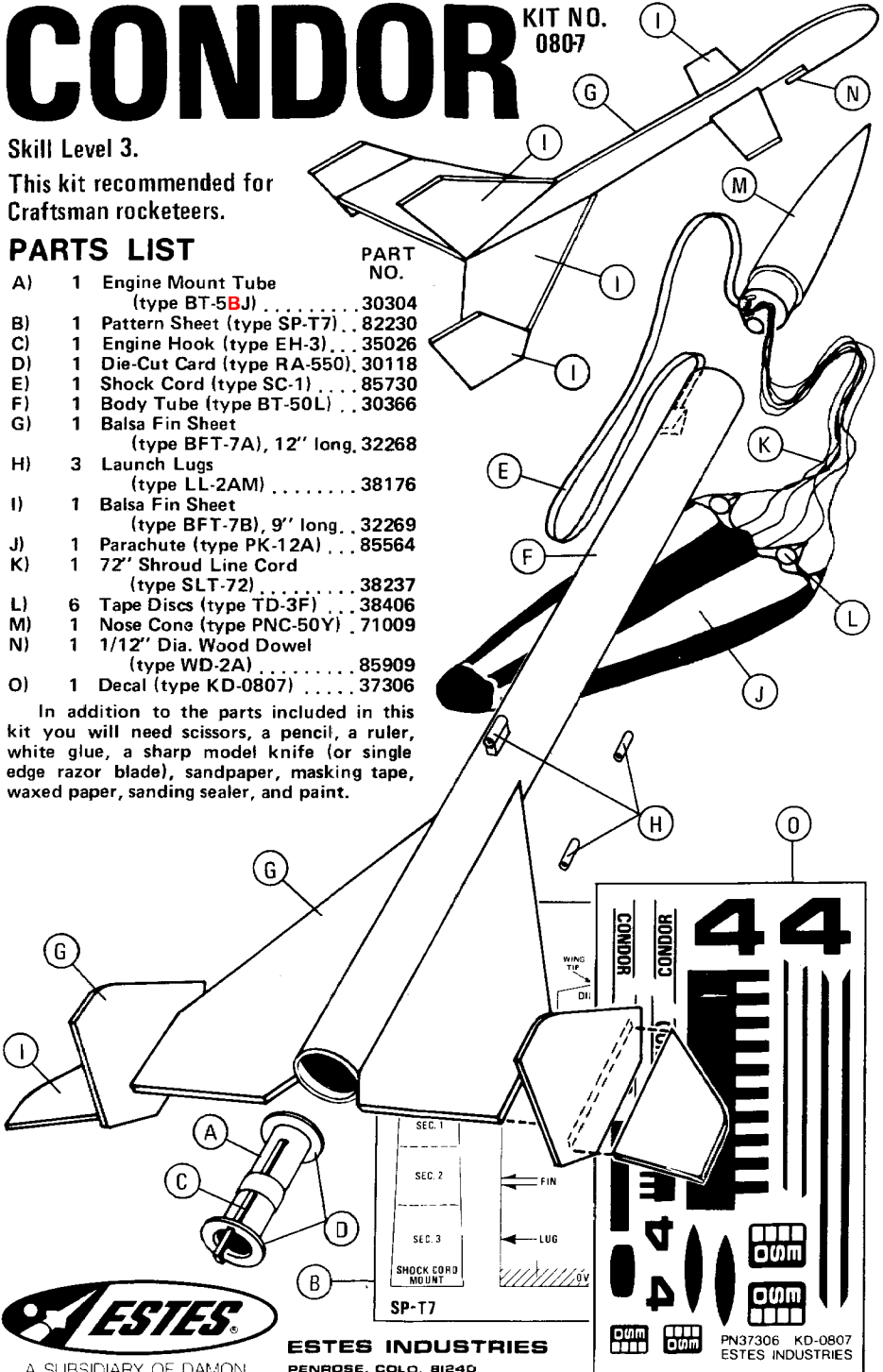
Skill Level 3.

This kit recommended for  
Craftsman rocketeers.

## PARTS LIST

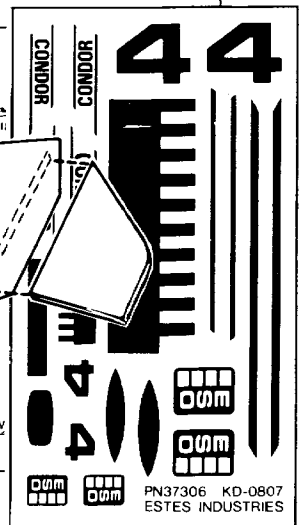
	PART NO.
A) 1 Engine Mount Tube (type BT-5B) .....	30304
B) 1 Pattern Sheet (type SP-T7) .....	82230
C) 1 Engine Hook (type EH-3) .....	35026
D) 1 Die-Cut Card (type RA-550) .....	30118
E) 1 Shock Cord (type SC-1) .....	85730
F) 1 Body Tube (type BT-50L) .....	30366
G) 1 Balsa Fin Sheet (type BFT-7A), 12" long .....	32268
H) 3 Launch Lugs (type LL-2AM) .....	38176
I) 1 Balsa Fin Sheet (type BFT-7B), 9" long .....	32269
J) 1 Parachute (type PK-12A) .....	85564
K) 1 72" Shroud Line Cord (type SLT-72) .....	38237
L) 6 Tape Discs (type TD-3F) .....	38406
M) 1 Nose Cone (type PNC-50Y) .....	71009
N) 1 1/12" Dia. Wood Dowel (type WD-2A) .....	85909
O) 1 Decal (type KD-0807) .....	37306

In addition to the parts included in this kit you will need scissors, a pencil, a ruler, white glue, a sharp model knife (or single edge razor blade), sandpaper, masking tape, waxed paper, sanding sealer, and paint.



A SUBSIDIARY OF DAMON

**ESTES INDUSTRIES**  
PENROSE, COLO. 81240

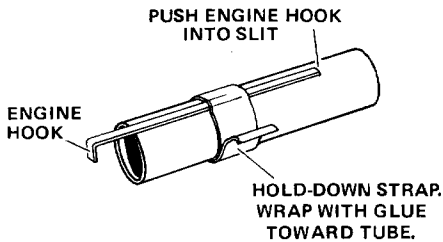
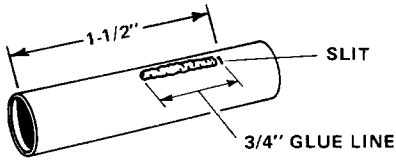


PN37306 KD-0807  
ESTES INDUSTRIES

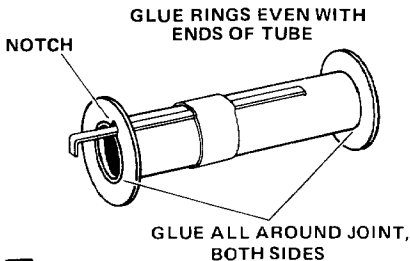
## IMPORTANT:

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 appropriate for precision assembly.

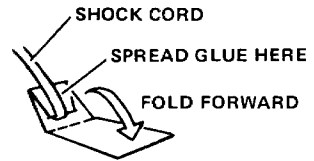
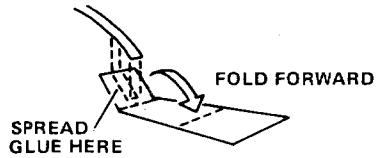
## BOOSTER ASSEMBLY INSTRUCTIONS



- 1** Cut a 1/8" wide slit in the engine mount tube (part A), 1-1/2" from one end as shown. Cut out the hold-down strap from the pattern sheet (part B). Apply a 3/4" long line of glue to the 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. Apply glue to one side of the hold-down strap and wrap it tightly around the middle of the tube over the engine hook.

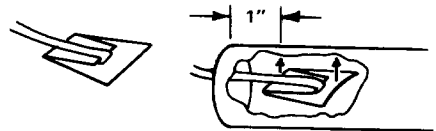


- 2** Separate the adapter rings from the die-cut card (part D). Glue the rings on the engine mount tube in the positions shown, with the notched ring over the engine hook. Let this assembly dry completely.



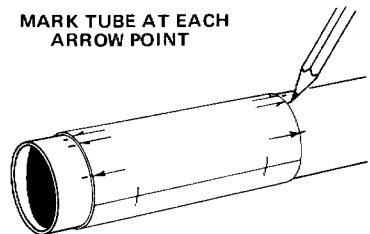
- 3** Cut out the shock cord mount from the pattern sheet. Crease it on the dotted lines by folding. Spread glue on the first section (1) and lay the end of the shock cord (part E) into the glue. Fold over and apply glue to the back of the first section and the exposed part of section 2. Lay the shock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

SET BACK AT LEAST 1" TO ALLOW FOR NOSE CONE



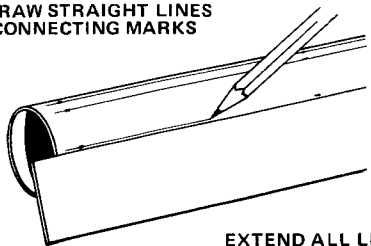
- 4** Apply glue to the inside of the body tube (part F) at one end over an area about 1" to 2" from one end. The glued area should be the same size as the shock cord mount. Press the mount into the glue as shown and hold it until the glue sets.

MARK TUBE AT EACH ARROW POINT



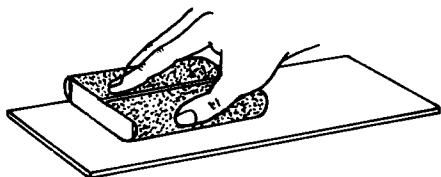
- 5** Cut out the body tube marking guide from the pattern sheet. Wrap it around the

**DRAW STRAIGHT LINES  
CONNECTING MARKS**



**EXTEND ALL LINES  
FORWARD 7"**

body tube near the end away from the shock cord mount. Mark the tube at each arrow point. Draw a straight line connecting each matching front and rear mark. (Use a ruler when drawing lines.) Extend the lines forward 7".



**ROUND THESE EDGES**

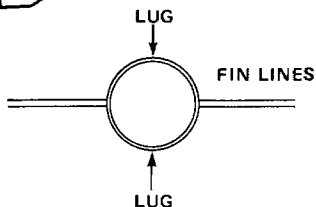
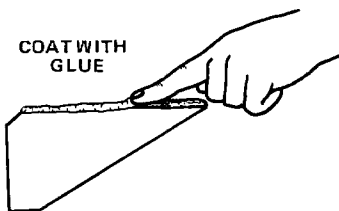
**LEADING  
EDGE**

**TRAILING  
EDGE**



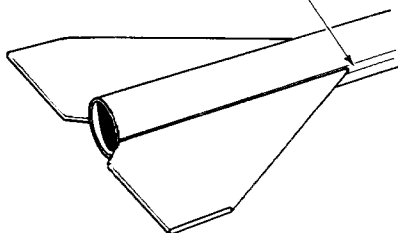
**6** Fine sand the large balsa sheet (part G), then carefully remove the large main fins from the sheet. Free the edges with a sharp knife. Sand the leading and trailing edges of the fins round. Leave the other edges square.

**COAT WITH  
GLUE**



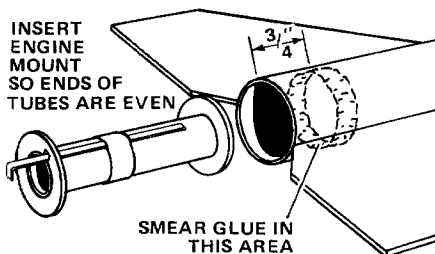
**7** Rub a line of glue into the root edge of each main fin and allow to dry. Glue the fins to the body on the fin alignment lines drawn in step 5. Refer to the illustration to be sure you position the fins correctly. Adjust

**ALIGN BETWEEN  
FIN LINES**



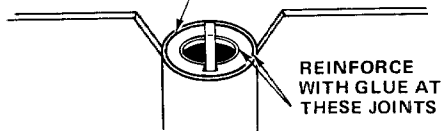
the fins so they project straight away from the body tube. Do not set the rocket on its fins while the glue is wet.

**INSERT  
ENGINE  
MOUNT  
SO ENDS OF  
TUBES ARE EVEN**



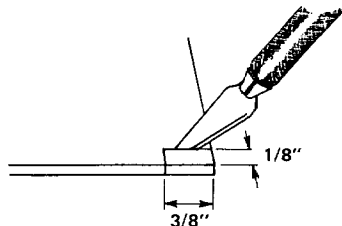
**SMEAR GLUE IN  
THIS AREA**

**TUBE ENDS EVEN**



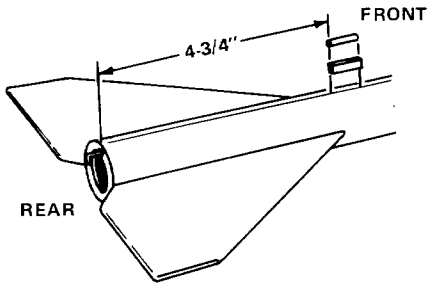
**REINFORCE  
WITH GLUE AT  
THESE JOINTS**

**8** Test the fit of the engine mount assembly in the body tube. If necessary, sand the edges of the rings until the unit slides smoothly in the body. Smear glue around the inside of the body tube about 3/4" from the rear. Immediately slide the engine mount into place, unnotched ring first, so the end of the engine mount is even with the rear of the body tube. Do not pause during this operation, or the glue may stick with the mount in the wrong position. Add extra glue as shown after installation.

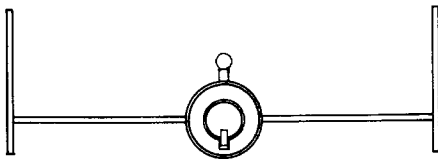
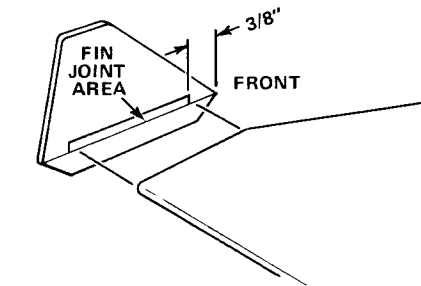
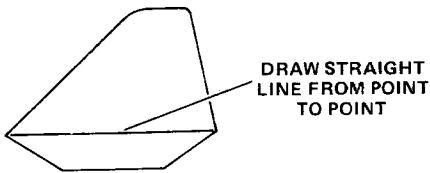


**9** Cut a piece 3/8" long by 1/8" wide from an edge of the large fin sheet. Glue one of the launch lugs (part H) to this piece to

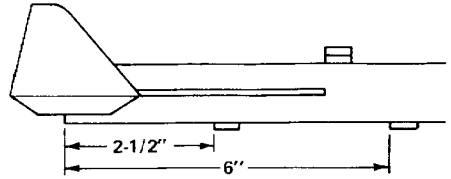




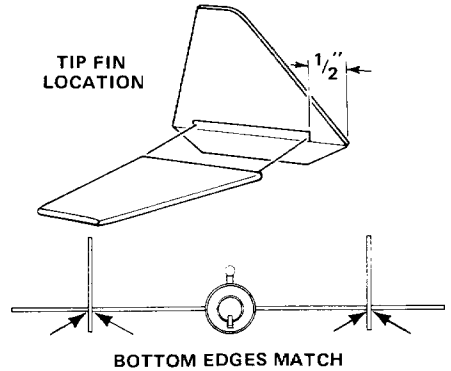
make the glider support lug. Glue the assembly to the body on a lug alignment line, 4-3/4" from the rear of the model. This side of the model now becomes the upper side of the model.



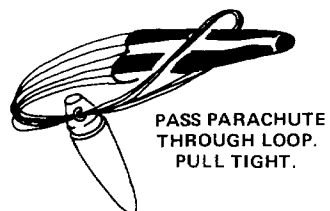
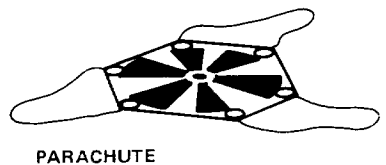
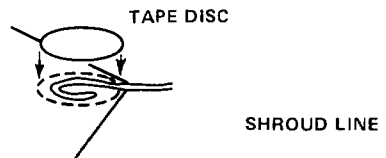
**10** Separate the vertical stabilizers from the large balsa sheet. Draw a straight line connecting front and rear points on both sides of each. Glue the stabilizers to the main fins so the front of the stabilizer is 3/8" ahead of the front edge of the fin and the bottom surface of the fin is exactly on the alignment line. Make sure the upper tips of the stabilizers are on the same side of the model as the glider support lug.

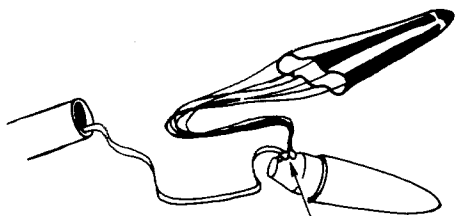


**11** Glue the remaining two launch lugs to the underside of the body on the alignment line, one 2-1/2" from the rear of the body, the other 6" from the body rear.



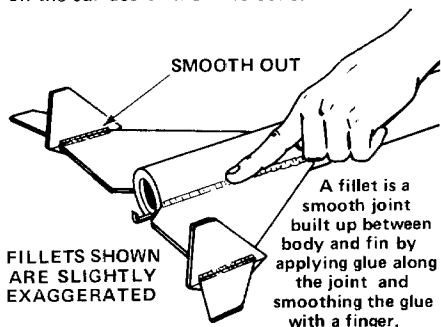
**12** Fine sand the smaller balsa sheet (part 1). Carefully separate the tip fins. Sand all edges round except the root edges. Glue the tip fins to the vertical stabilizers. The bottom surfaces of the fins should be exactly on the line on the stabilizer. Position the tip fins so the front of each fin is 1/2" behind the front tip of the stabilizer.





TIE SHOCK CORD TO NOSE CONE

**13** 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 ring on the nose cone (part M). Pass the parachute through the loop ends and draw the lines tight against the ring. Set the knot with a drop of glue. Tie the free end of the shock cord to the nose cone. Scrape away any extra "flash" on the surface of the nose cone.

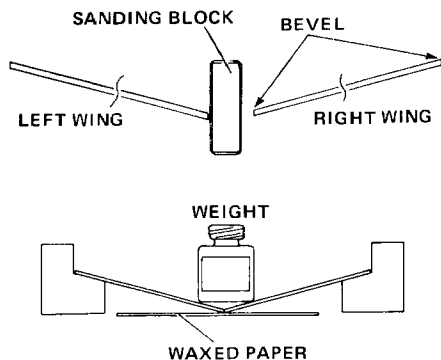


FILLETS SHOWN ARE SLIGHTLY EXAGGERATED

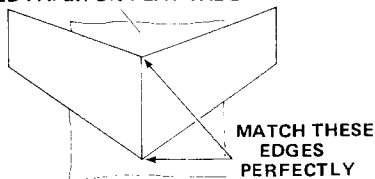
A fillet is a smooth joint built up between body and fin by applying glue along the joint and smoothing the glue with a finger.

**14** Apply a glue reinforcement to each fin joint. Holding the rocket horizontally (level), apply a line of glue to both sides of each joint. Smooth out the glue with your finger. Keep the rocket level until the glue dries.

## GLIDER ASSEMBLY INSTRUCTIONS

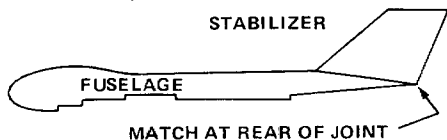


WAXED PAPER ON FLAT TABLE TOP



MATCH THESE EDGES PERFECTLY

**15** Separate the wings from the smaller balsa sheet. Gently sand a slight bevel in the root and tip edges of the wings. Glue the wings together; place them on a sheet of waxed paper on a flat surface, matching leading and trailing edges exactly. Support each tip 1/2" above the center. (Use the dihedral guides to measure.) Place small weights (Small paint bottles are ideal.) on the center of the wing to hold the joint flat.

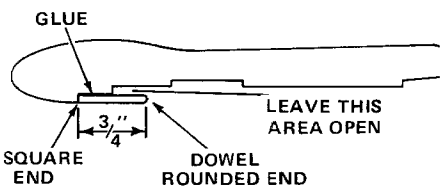


STABILIZER

FUSELAGE

MATCH AT REAR OF JOINT

**16** Separate the fuselage from the large balsa sheet and the stabilizer from the small balsa sheet. Glue the stabilizer to the fuselage. Lay the assembly on its side while the glue dries.



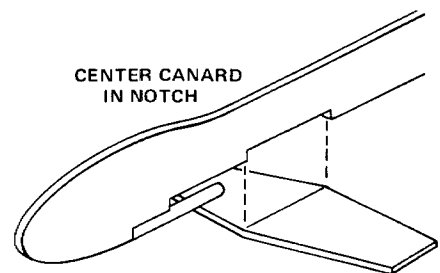
GLUE

SQUARE END

DOWEL ROUNDED END

LEAVE THIS AREA OPEN

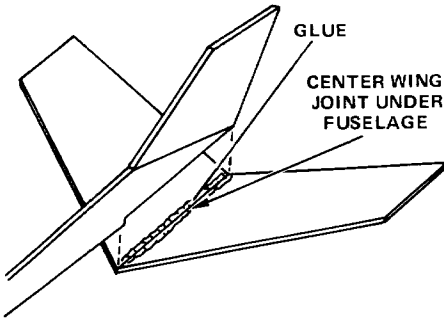
**17** Cut a 3/4" long piece from the dowel (part N). Sand round one end of the dowel. Sand the other end square. Glue the dowel in place at the front of the fuselage.



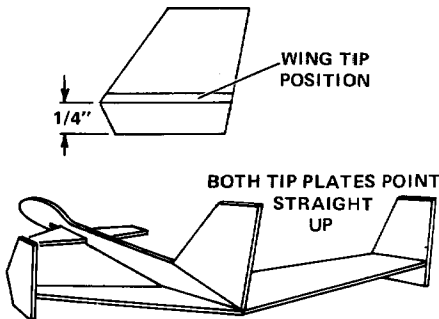
CENTER CANARD IN NOTCH

**18** Separate the canard from the balsa sheet. Glue it in place, centered, in the notch in the bottom of the fuselage. (The center of the canard is 1-1/8" from the tips.) Make sure the canard is square to the fuselage when viewed from the front.

WAXED PAPER



**19** When the wing center joint is dry, glue the wing assembly to the fuselage. Position the wing so the center joint is exactly in line with the center of the fuselage. Hold the wing in place until the glue sets.

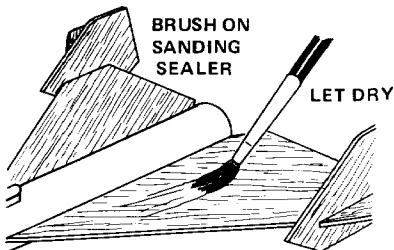


**20** Separate the tip plates from the balsa sheet. Glue one to each wing tip so the bottom edge of the tip plate is parallel to the lower surface of the wing and 1/4" below the wing.

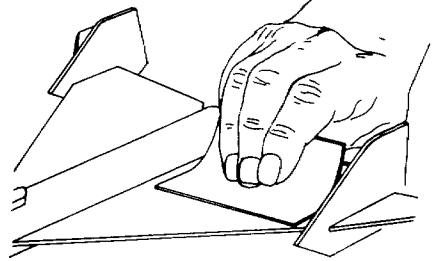
**21** After the glue joints on the glider have dried, apply a glue reinforcement to each joint. Support the glider horizontally while the glue dries so it doesn't "run".

## FINISHING INSTRUCTIONS

BE SURE ALL GLUE HAS DRIED HARD AND CLEAR



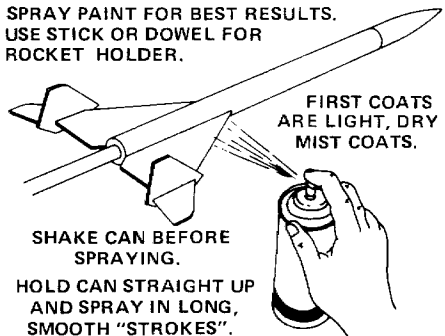
SAND WITH EXTRA FINE SANDPAPER



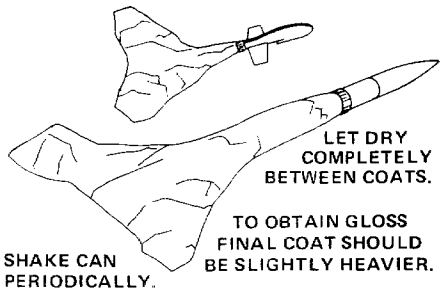
REPEAT AS NECESSARY TO COMPLETELY FILL PORES IN WOOD

**22** When all glue on the outside of the model is completely dry, prepare the balsa parts for painting. Apply at least two coats of sanding sealer to the balsa surfaces. Let dry and sand lightly between coats. Do this until the tiny holes in the wood are filled and everything looks and feels smooth.

SPRAY PAINT FOR BEST RESULTS. USE STICK OR DOWEL FOR ROCKET HOLDER.



MASKING TAPE AND PAPER PROTECT MODEL FROM SECOND COLOR SPRAY.

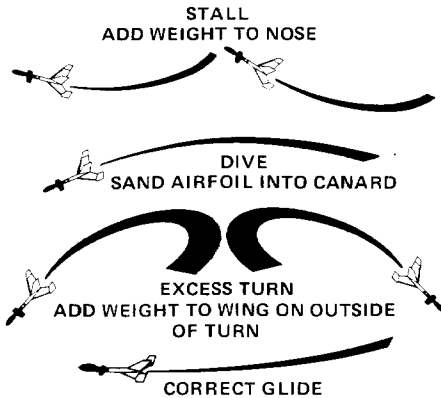


NOTE: APPLY FINAL COAT WITH "WET" LOOK.

**23** After the last coat of sanding sealer, sand again, then dust off the model. Paint the entire model white. Let the white dry overnight. Paint the nose cone and front 2" of the booster body tube red. Paint the front of the glider red (starting 1/32" behind the canard).



## TRIMMING THE GLIDER



Your Condor glider is designed to glide correctly the first time if it is assembled with care according to the instructions. For best results, however, watch the glider carefully on each flight as it descends after separation from the booster.

The Condor relies on balance and the difference in angle between the canard and the wing to make it glide. If, after separation, the glider tends to stall, dive, or turn sharply, trim the model as shown in the illustration. Several 1/2" square pieces of masking tape should be enough weight to correct the glide.

## LAUNCHING COMPONENTS

To launch your rocket you will need the following items:

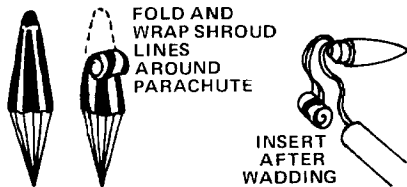
- An Estes model rocket launching system.
- Parachute recovery wadding (Estes Cat. No. 2274)
- Estes 1/2A3-2T, A3-2T, or A3-4T mini model rocket engines. (Use a 1/2A3-2T engine for first flight.)

Be sure to follow the HIAA-NAR\* Model Rocketry Safety Code when carrying out your model rocketry activities.

\*HIAA-NAR — Hobby Industry Association of America-National Association of Rocketry.

## COUNTDOWN CHECKLIST

**T-15** Pack four squares of loosely crumpled recovery wadding into body tube.



**T-14** Fold the parachute into a triangular shape. Roll 'chute tightly as shown and wrap shroud lines around it. If 'chute is too large, unroll it and repack until it slides easily into

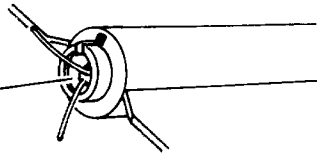
rocket. A fit that is too tight may prevent parachute from ejecting properly.

**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-13** Pack shock cord neatly into rocket, then 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 end 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 the shoulder of the nose cone.

USE  
WADDING  
TO KEEP  
IGNITER  
IN PLACE.

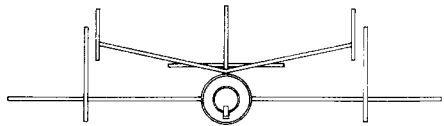


**T-12** Select an engine and install an igniter as directed in the engine instructions.

**T-11** Insert engine into rocket. Engine hook must latch securely over end of engine.

**T-10** Disarm the launch panel--remove safety key.

**T-9** Place rocket on launch pad, making sure rocket slides freely on launch rod. Clean the micro-clips and attach them to the igniter.



**T-8** Install the glider on the booster. Make sure the glider fits evenly between the booster's vertical stabilizers.

**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!!**

## 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. Disarm the launch panel, remove the model, clean the igniter residue from the nozzle, and install a new igniter. Follow the launching procedure again.

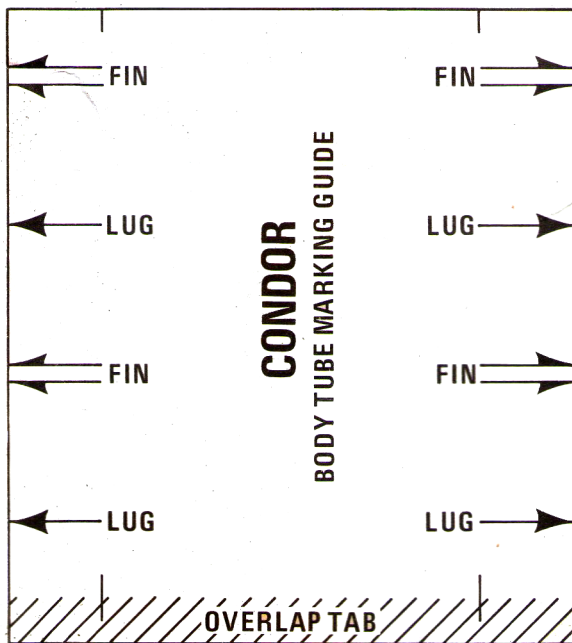
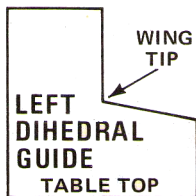
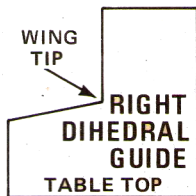
HOLD-DOWN STRAP

SEC. 1

SEC. 2

SEC. 3

SHOCK CORD  
MOUNT



300  
DPI

SP-T7

82230



**CONDOR**

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**CONDOR**

**44**

PN37306 KD-0807  
ESTES INDUSTRIES

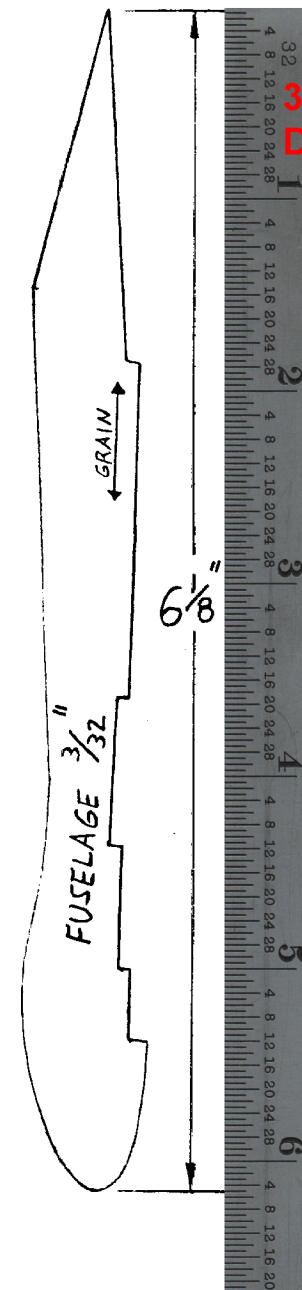
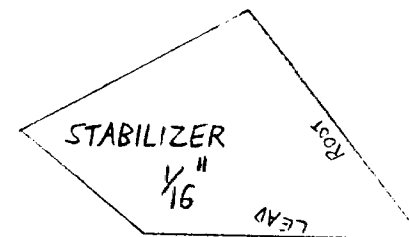
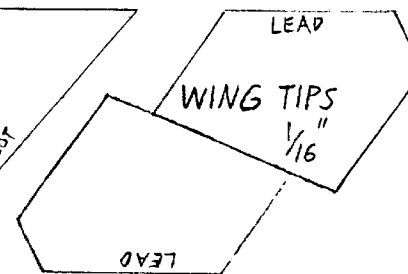
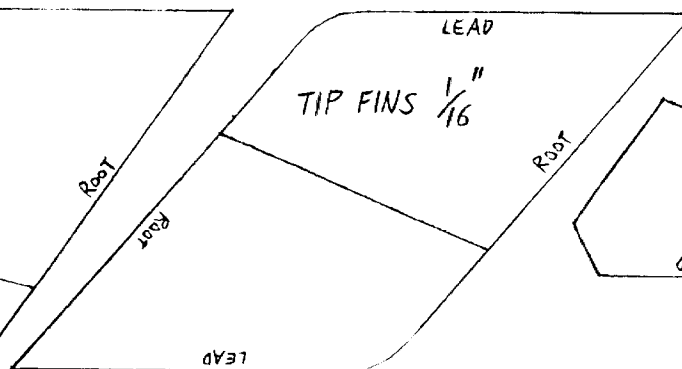
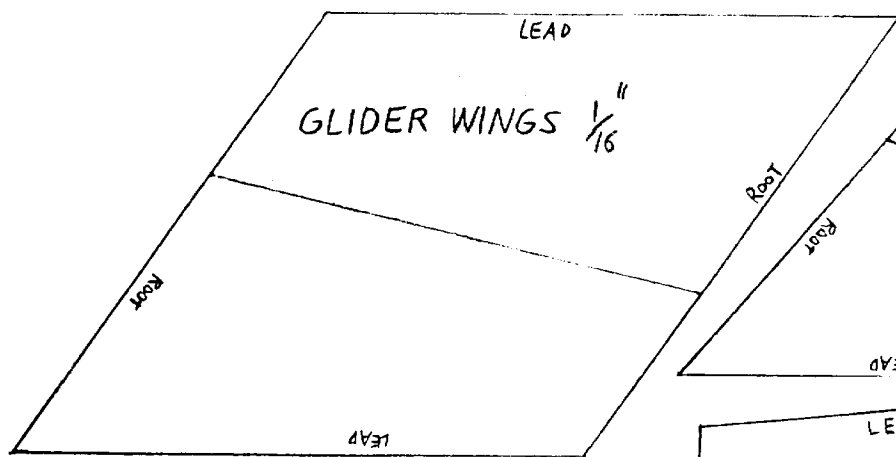
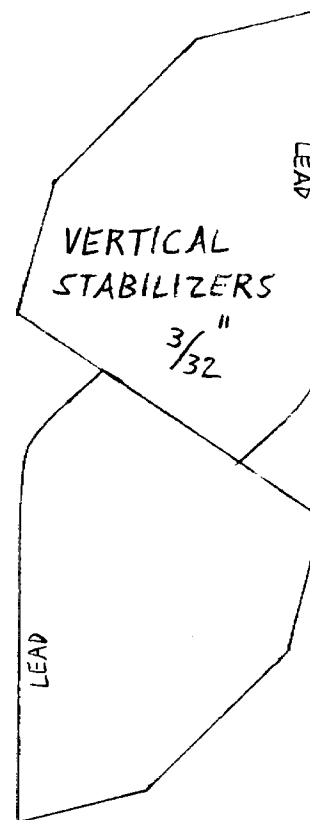
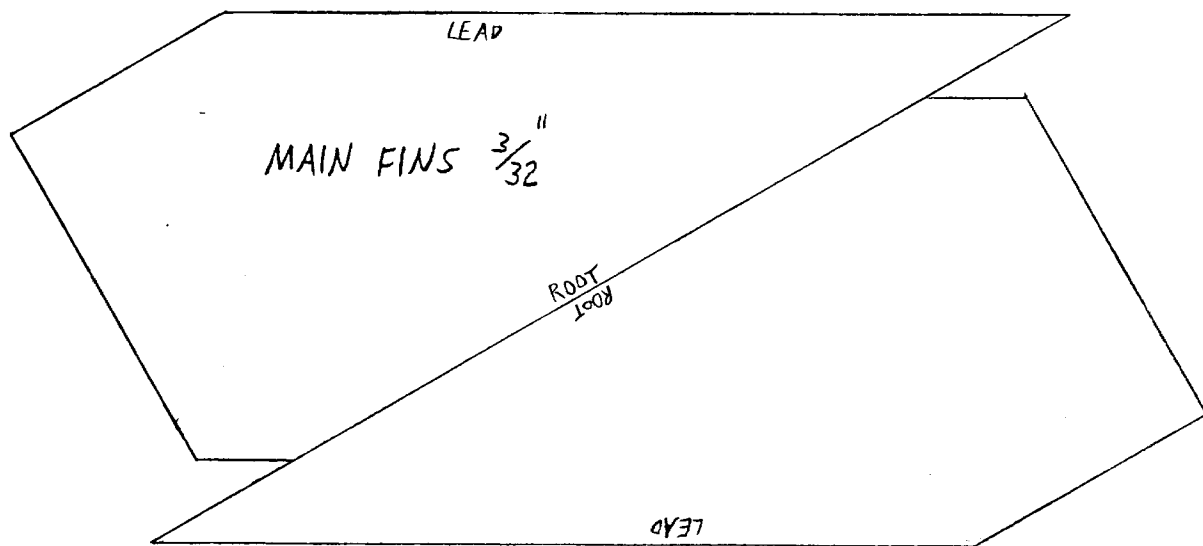


300  
DPI

# CONDOR

ESTES #0807

SOURCE: FIN SHEET TRACING  
THICKNESS AS INDICATED  
ALL PARTS SHOWN TO SCALE





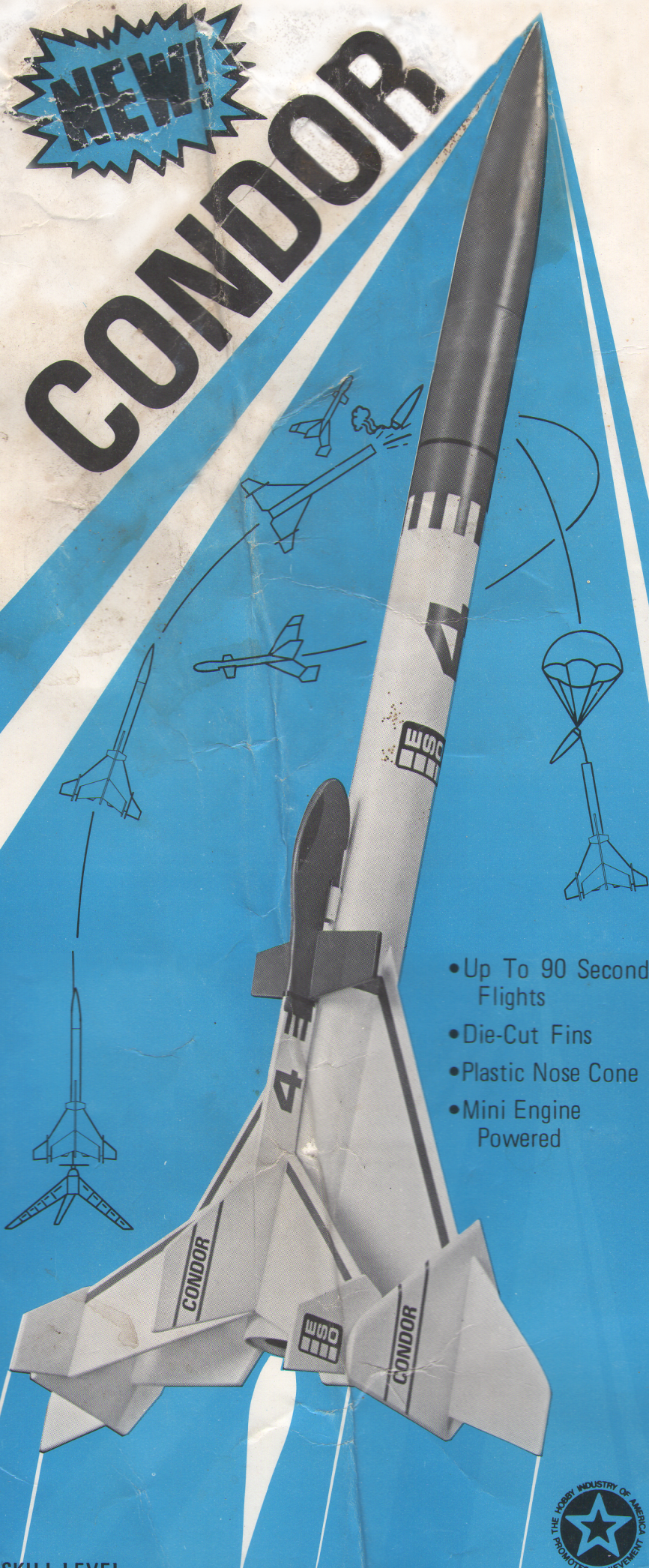
## PARTS LIST KIT NO. 0807 - Condor

Quantity	Description	Type	Number	Detail1	Detail2	Detail3	Detail4	Comment
1	PAPER BODY TUBE	*BT-5BJ	30304	2" long	0.515" ID	0.541" OD	0.013" wall	Glassine
1	Pattern Sheet	SP-T7	82230	5" wide	6" high	67lb cardstock		Scan
1	ENGINE HOLDER	EH-3	35026	1.8" long	.125" wide	.025" thick	13mm	Mini
1	PAPER ADAPTER	RA-550	30118	.542" ID	.949" OD	1/16" thick	One ring notched.	Set of 2
1	Shock Cord	SC-1	85730	18" long	1/8" wide			Rubber
1	PAPER BODY TUBE	BT-50L	30366	12.7" long	0.950" ID	0.976" OD	0.013" wall	Glassine
1	BALSA FIN STOCK	*BFS-30L	3170	3" wide	12" long	3/32" thick	0.09375	Scan
3	LAUNCH LUG	LL-2AM	38176	5/32" ID	1/8" rod	3/8" long		Mylar
1	BALSA FIN STOCK	*BFS-20	3164	3" wide	9" long	1/16" thick	0.0625	Scan
1	Parachute	PK-12A	85564	12" hexagon	1.25 mil thick	LDPE plastic	Org/Wht	
1	Shroud Line	SLT-72	38237	72"	.020" diameter	Twisted cotton		
6	Tape Disc	TD-3F	38406	1/2" dia.	Paper	Self-Stick		Set of 6
1	PLASTIC NOSE CONE	PNC-50Y	71009	4.35" long	.974" dia.	.6" shoulder	BT-50 - Ogive	Blow Molded
1	WOOD DOWEL	WD-2A	85909	1/8" dia.	1" long	`		Wood
1	Decal	KD-0807	37306	3.75" wide	6.25" high	red, blk	waterslide	Scan
*Plan incorrectly calls for BT-5BJ which is 5" long, 30304 is BT-5J, 2" long.								
*BFT-7A, 12" long die-cut (32268)								
*BFT-7B, 9" long die cut (32269)								



**NEW!**

# CONDOR



- Up To 90 Second Flights
- Die-Cut Fins
- Plastic Nose Cone
- Mini Engine Powered

### SKILL LEVEL

1—Beginner	2—Intermediate	3—Craftsman	4—Advanced	5—Expert
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**SPECIFICATIONS**  
 Length 18.25" (46.4cm)  
 Body Dia. 0.976" (24.8mm)

Weight (Complete Vehicle)  
 1 oz. (28.3 g)  
 Wing Span (Glider) 5" (12.7cm)  
 12" Parachute Recovery

**RECOMMENDED ENGINES:**  
 1/2A3-2T A3-2T A3-4T  
 Use 1/2A3-2T for first flights.

This is a hobby kit requiring construction. Launch system, engines, and glue are not included with this kit.



## # 0807



**ESTES INDUSTRIES**  
 PENROSE, COLO. 81240