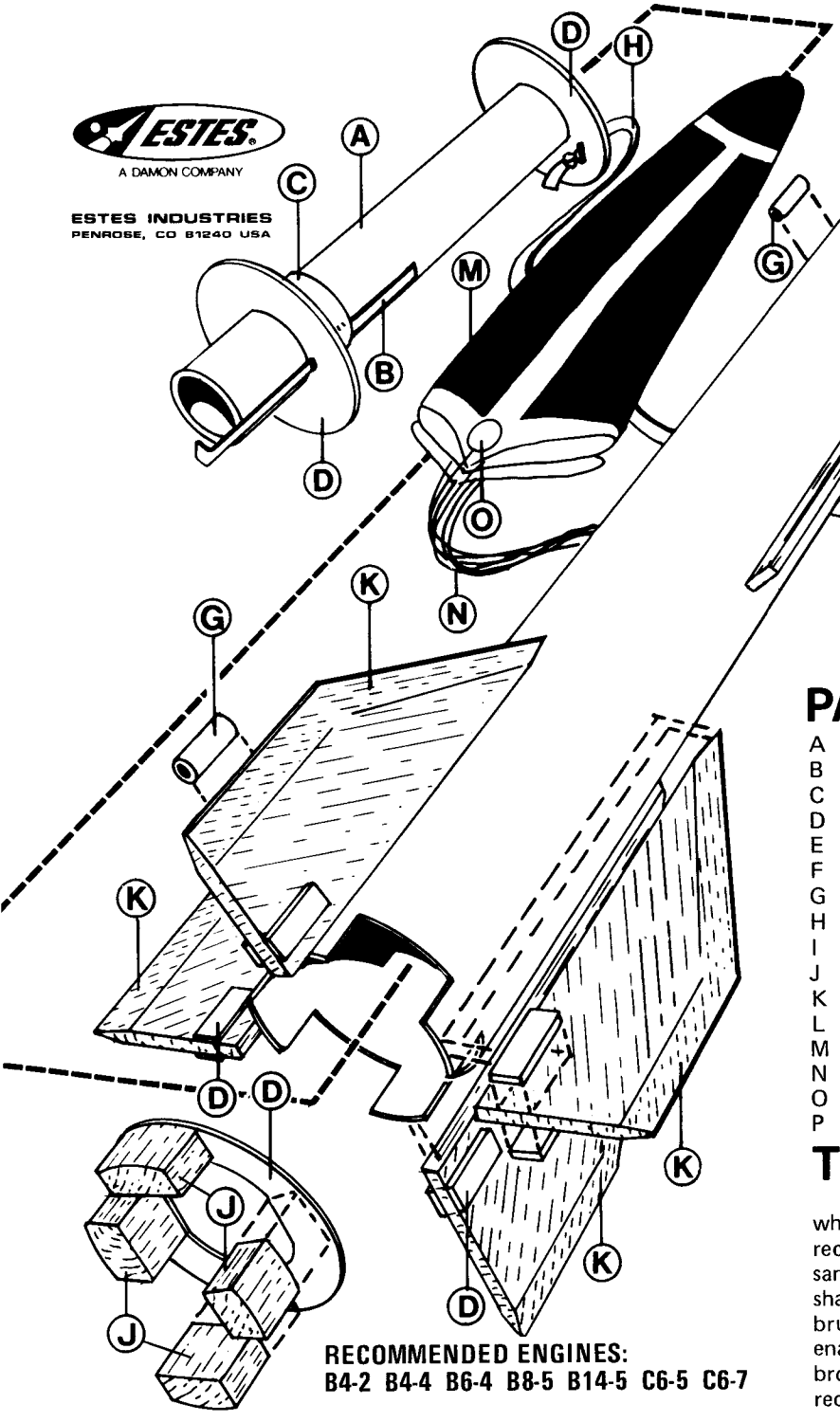
RUSSIAN SS-1C SCUD-B

SKILL LEVEL 2 – Recommended for Intermediate Rocketeers.

ESTES
A DAMON COMPANY

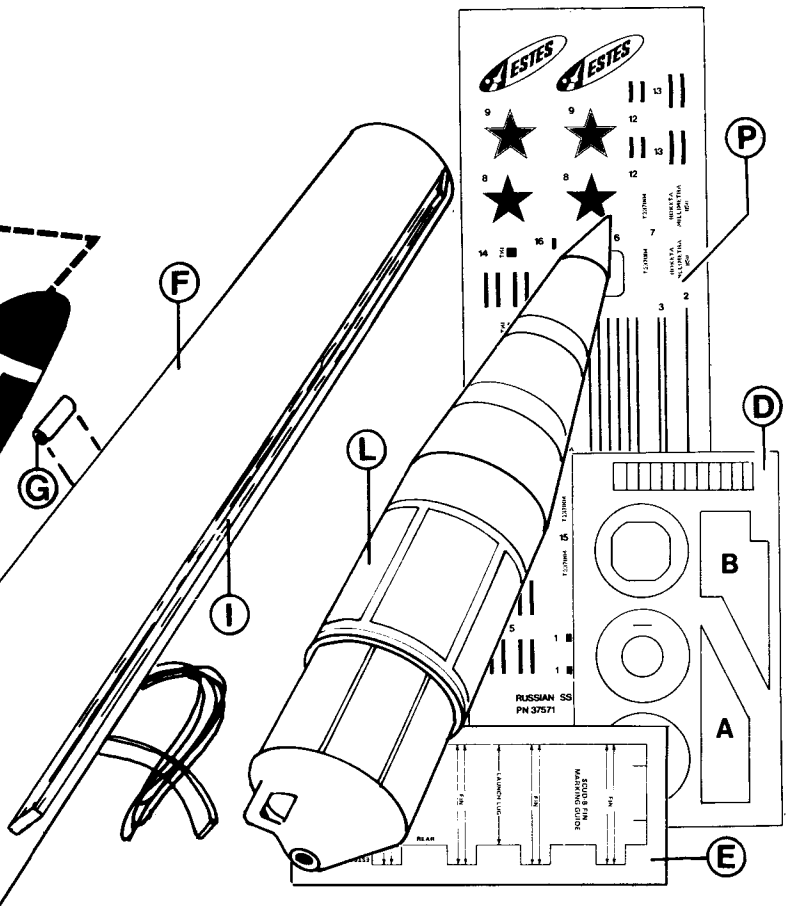
ESTES INDUSTRIES
PENROSE, CO 81240 USA



RECOMMENDED ENGINES:
B4-2 B4-4 B6-4 B8-5 B14-5 C6-5 C6-7

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.



PARTS LIST KIT NO. 1340

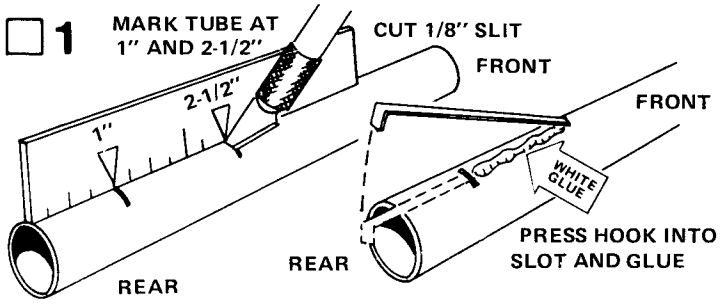
A	1	Engine Mount Tube (type BT-20D) . . . 6.5"	30322
B	1	Engine Hook (type EH-2)	35025
C	1	Retainer Ring (type HR-20)	30168
D	1	Die-Cut Card Sheet (type TA-1340)	30096
E	1	Pattern Sheet (type SP-1340)	84204
F	1	Body Tube (type BT-60AE) . . . 14.25"	30404
G	2	Launch Lug (type LL-2AM)	38176
H	1	Shock Cord (type SC-2MJ)	85738
I	1	Wood Strip (1/8" x 1/8" x 12")	85923
J	1	Balsa Strip (1/2" x 1/4" x 1-1/2")	32381
K	1	Balsa Fin Sheet (type BF-1340)	32344
L	1	Nose Cone (type PNC-60B)	71015
M	1	Parachute (type PK-18A)	85566
N	1	Shroud Line (type SLT-108)	38239
O	1	Tape Discs (type TD-3F)	38406
P	1	Decal (type KD-1340)	37571

TOOLS AND MATERIALS

In addition to the parts included in this kit you will need white glue (Titebond, Elmer's, or similar household white glue is recommended.), scissors, pencil, ruler, fine and extra-fine grit sandpaper, sanding sealer, masking tape, modeling knife with a sharp blade, black ball-point pen, medium size modeling paint brush, a bottle of bright yellow enamel paint, a bottle of silver enamel paint, "light earth" spray enamel (or a medium dark brown), and clear flat spray paint (Testor's "Dull-Cote" is recommended.).

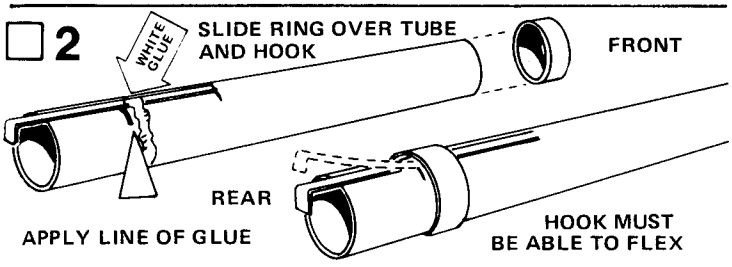
ASSEMBLY INSTRUCTIONS

☐1



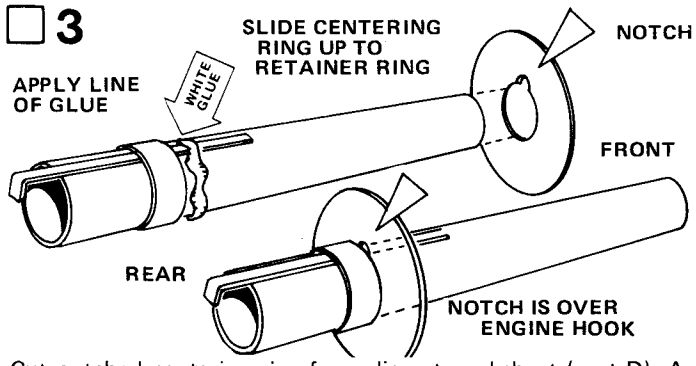
Mark the engine mount tube (part A) at 1" and 2-1/2" from one end. Cut a 1/8" long slit at the 2-1/2" mark. Apply a dab of white glue to the slit. Apply a line of glue between the slit and 1" mark as shown. Push engine hook end (part B) into slit. Press main part of hook into the glue. Align hook so that it runs STRAIGHT along the tube.

☐2



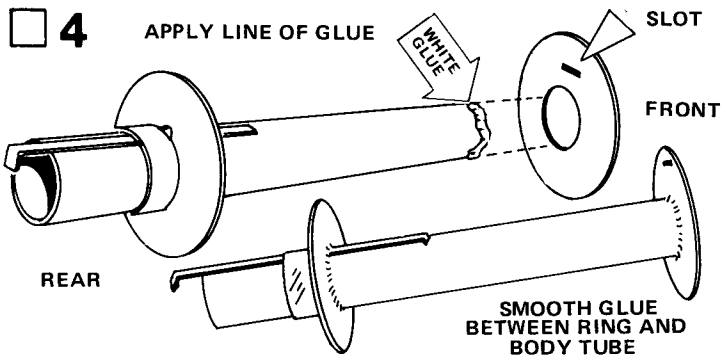
Apply a line of glue around the engine mount tube just FORWARD of the 1" mark. Slip hook retainer ring (part C) onto front end of tube. Slide ring rearward over engine hook and back to the 1" mark. The overhanging engine hook end must be free to flex slightly as shown. Be sure that hook runs STRAIGHT along tube.

☐3



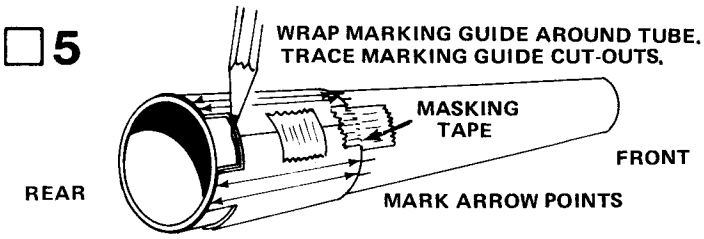
Cut notched centering ring from die-cut card sheet (part D). Apply line of glue around engine tube just FORWARD of hook retainer ring. Slip notched centering ring onto front of tube. Slide centering ring rearward until it stops firmly against hook retainer ring. Be sure notch is centered over engine hook.

☐4



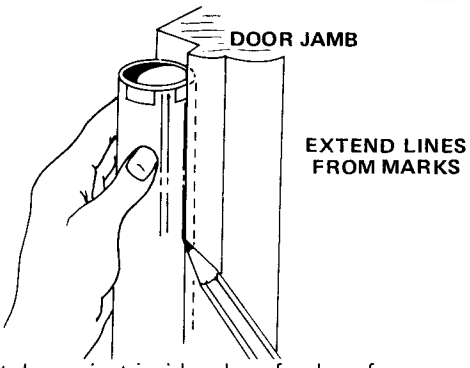
Cut centering ring with slot from die-cut card sheet. Push knife blade tip into slot to open it slightly. Apply a generous line of glue around front end of engine tube. Slip centering ring onto tube end. Smooth glue line around on both sides of ring/tube joint with your finger. Allow to dry completely.

☐5



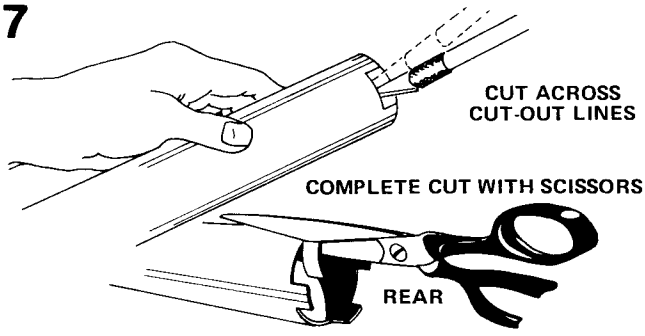
Cut out body tube marking guide from pattern sheet (part E). Wrap rear guide edge around either end of rocket body tube (part F) as shown. Match printed guide marks shown on illustration and tape guide ends together. Add another strip of masking tape to hold front guide edge in place on tube. Trace around marking guide cut-outs with a pencil. Mark tube at each arrow point. Label tube lightly with pencil at the launch lug and fin/raceway arrows. Remove guide.

☐6



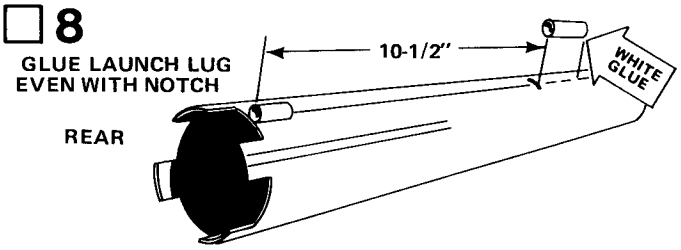
Place body tube against inside edge of a door frame as shown. Draw a line from tube end through each guide mark. Draw all fin lines about 5" long. Draw the launch lug and fin/raceway lines the entire tube length.

☐7



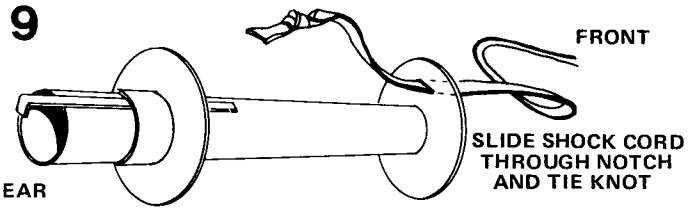
Use a sharp model knife or single-edge razor blade to cut across body tube along the tube cut-out lines. Make repeated light cuts along the lines until tube is cut completely through. Now use scissors to complete the cut-outs as shown.

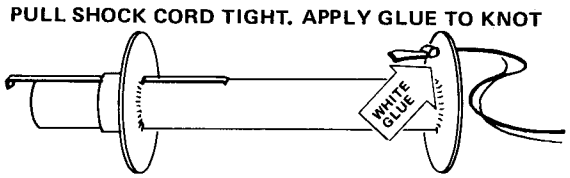
☐8



Mark launch lug line at 10-1/2" from tube cut-out. Glue front launch lug (part G) to rocket body at 10-1/2" mark. Glue rear launch lug (part G) even with tube cut-out. Center both lugs on launch lug line. Be sure to align lugs straight along rocket body.

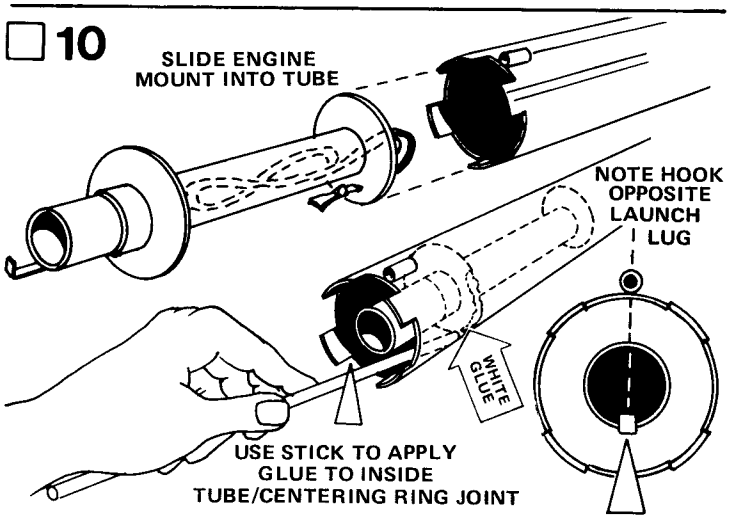
☐9





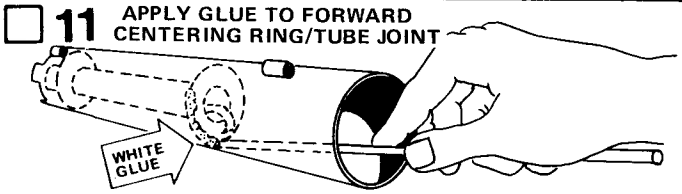
Pass end of shock cord (part H) through slot in front centering ring. Tie a double knot as shown. Pull knot tight against backside of centering ring. Apply a dab of glue to both sides of slot.

☐ 10



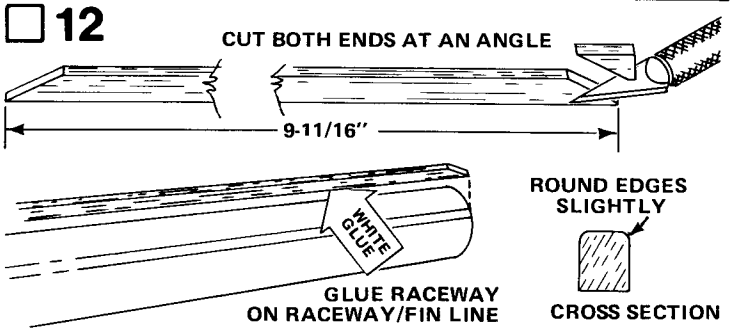
Temporarily stuff shock cord inside engine tube. Slide engine mount into rear of rocket body tube. Push it inside until engine hook end and rocket tube end are even. Center engine hook in tube cut-out, opposite the launch lug line as shown. Apply a line of glue around the rear body tube/ring joint. Use a wood dowel or balsa stick to apply glue.

☐ 11



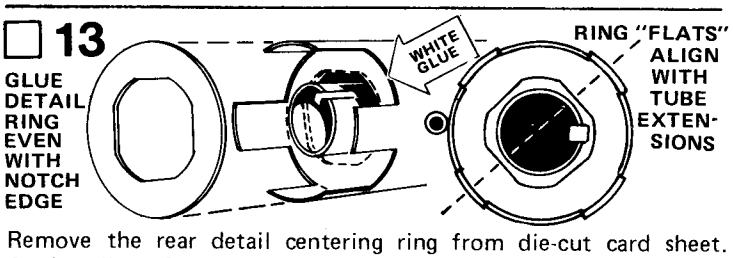
Apply a line of glue around the forward body tube/ring joint. Stand tube upright while the glue dries.

☐ 12



Cut a 9-11/16" length from the wood raceway strip (part I). Cut both ends to match shape shown. Round the top edges very slightly with sandpaper. Glue raceway to rocket body. Place forward end even with front of rocket body. Press carefully into place centered along the fin/raceway lines.

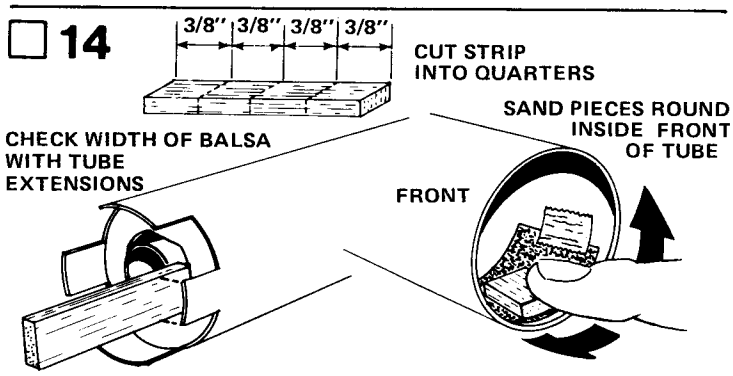
☐ 13



Remove the rear detail centering ring from die-cut card sheet. Apply a line of glue inside rear of rocket, along the body cut-outs.

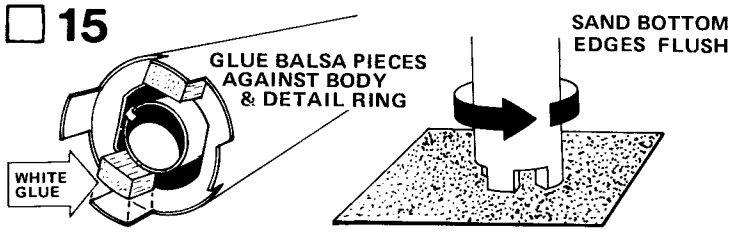
Slide detail ring onto body rear. Position ring "flats" as shown. Make sure ring fits evenly around body along the cut-out edges.

☐ 14



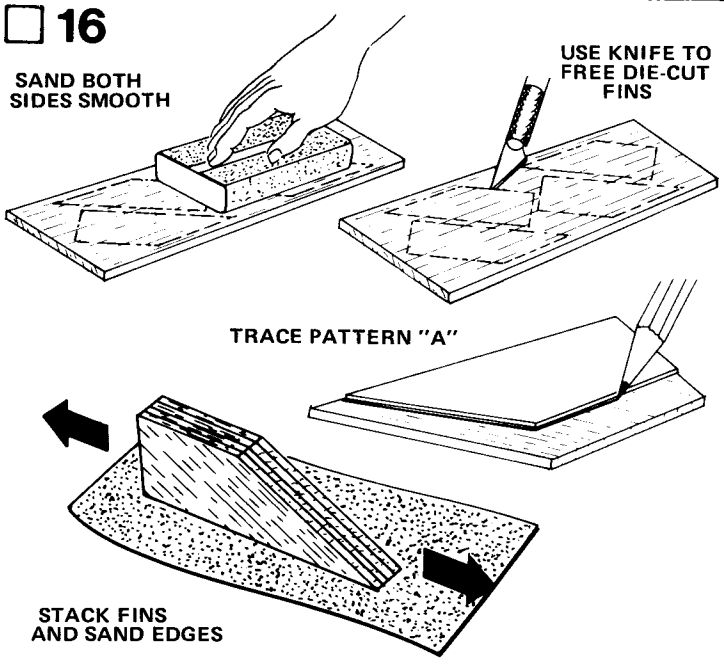
Sand smooth all sides of the balsa detail strip (part J). Use extra-fine sandpaper. Sand 1/2" wide side of strip, if necessary, until it matches width of the overhanging rocket body ends. Cut four 3/8" long pieces from the balsa strip. Slide a small sheet of extra-fine sandpaper into front end of rocket body as shown. Tape ends in place. Sand one side of each balsa piece until it matches the inside curve of the body. Take your time to complete this step. Sand, then check size and fit of pieces frequently at rear of rocket.

☐ 15



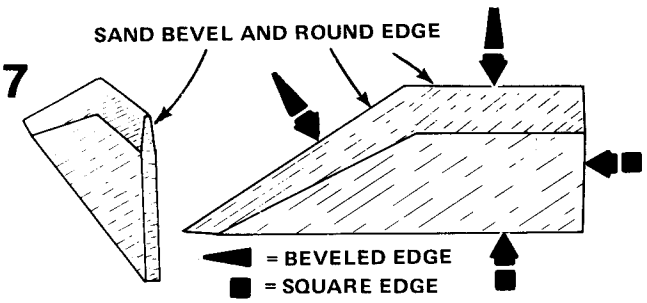
Glue balsa detail pieces to detail ring and body at rear of rocket as shown. When glue has dried, stand rocket body upright on sheet of extra-fine sandpaper. Rotate body until ends of detail pieces are sanded square and are even with end of body.

☐ 16



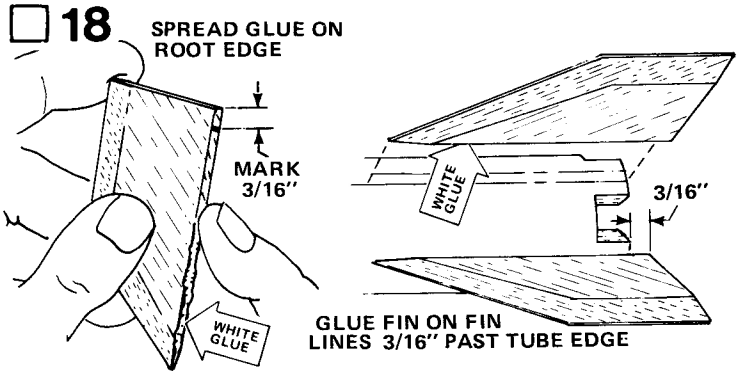
Fine-sand both sides of the balsa fin sheet (part K). Carefully remove fins from sheet. Use a sharp knife to cut free the corners and edges of each fin. Stack fins together as shown. Sand fins until all edges are smooth and straight. Remove fin pattern "A" from die-cut card sheet. Place pattern against fin side as shown. Trace pattern with pencil. Trace both sides of each fin in the same manner.

☐ 17



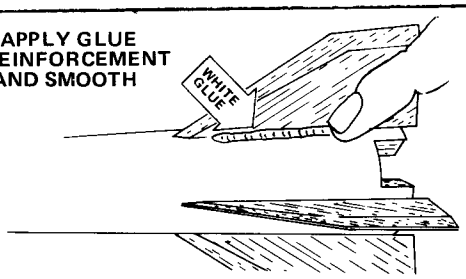
Sand each fin to match illustrations. Begin sanding with fine sandpaper. Sand from lines out to the fin edges. Use extra-fine sandpaper to complete, shaping smooth, flat surfaces on both fin sides. Next, very slightly sand round the leading and fin tip edges Both body edge and rear edge must remain square. For best results, use a small wood sanding block to shape the fin edges.

☐ 18



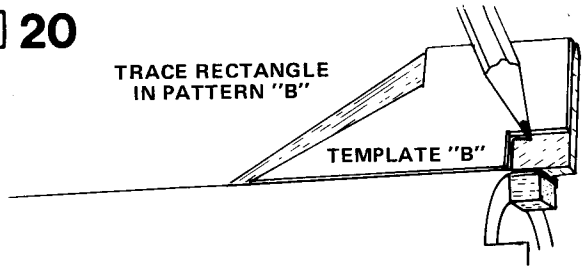
Mark root edge of each fin 3/16" from rear of fin. Rub a line of glue into the body edge of each fin. Allow glue to dry. Glue fins to rocket body. Position the rear of each fin 3/16" beyond rocket body as shown. Center fins between fin alignment lines. Adjust fins so they project straight away from rocket body. Stand rocket body upside down. Do not set rocket on its fins while the glue is wet.

☐ 19



When the fin joints have dried, apply a glue reinforcement to each fin. Hold model level and apply a narrow line of glue to both sides of the fin joint. Smooth out glue with your finger. Apply and smooth glue on only one fin at a time. Keep model level while glue dries.

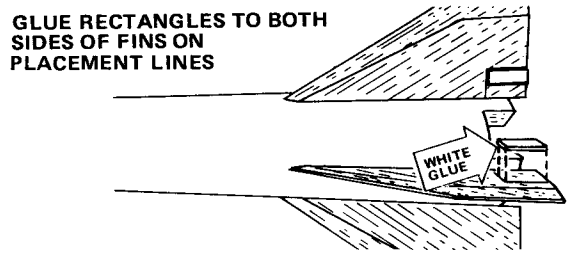
☐ 20



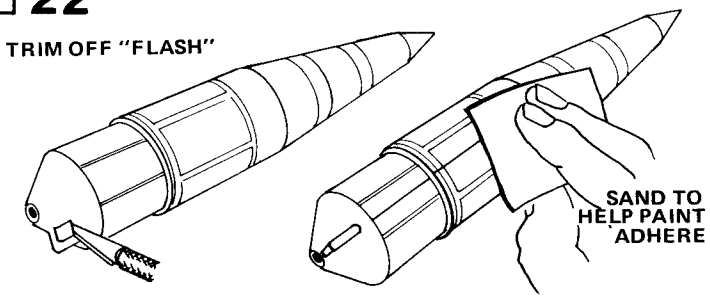
Remove fin pattern "B" from die-cut card sheet. Hold pattern in place against a fin side as shown. Lightly trace the small rectangular cut-out with pencil. Trace both sides of each fin in the same manner.

☐ 21

Remove eight small rectangular card pieces from die-cut card sheet. Glue rectangles to sides of the fins. Position each rectangle on pencil lines and even with fin rear. Use enough glue, but do not over-glue. Wipe off excess glue if too much glue is applied.



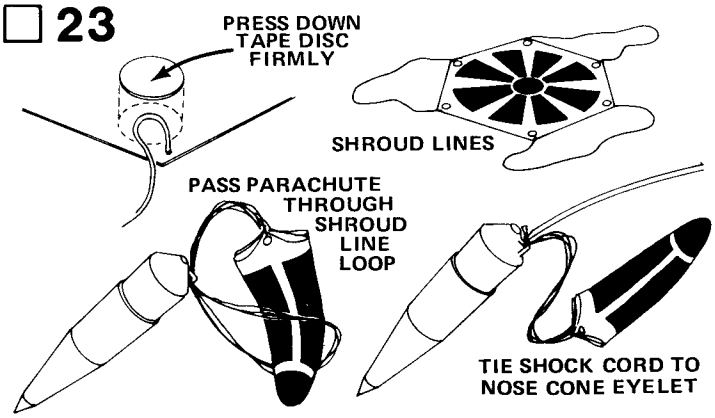
☐ 22



Trim and sand smooth all excess molding plastic (called "flash") from around the nose cone (part L). Carefully remove any "flash" from inside the nose cone eyelet. Wash nose cone in lukewarm soapy water. Rinse well and dry with cloth.

NOTE: Fingerprint oils and molding release residue could prevent paint from sticking to plastic surface. For best paint adhesion, lightly sand nose cone with super fine 400 grit sandpaper before painting.

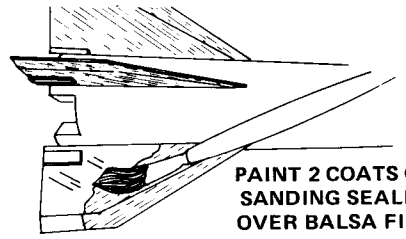
☐ 23



Cut out parachute (part M) on its edge lines. Cut three 36" lengths of shroud line (part N). Attach line ends to top (printed side) of parachute with tape discs (part O) as shown. Pass shroud line loop ends through nose cone eyelet. Pass 'chute through loop ends. Pull lines tight against eyelet. Secure knot with dab of glue. Tie shock cord end to eyelet with a double knot. Pack 'chute and shock cord into rocket body. Slide nose cone into place.

NOTE: You may prefer to attach parachute and shock cord to nose cone after painting in Step 25.

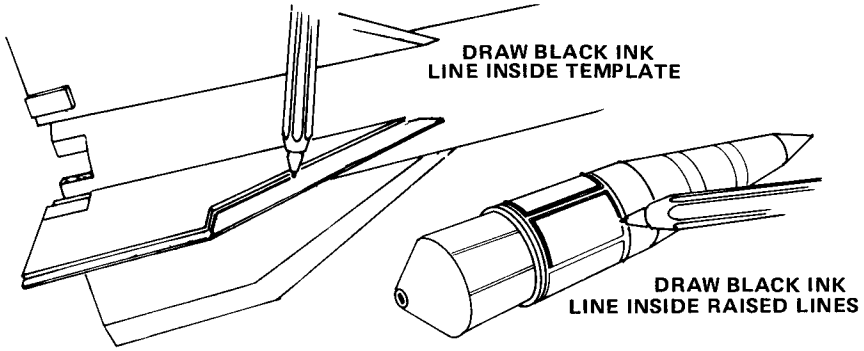
☐ 24



When all glue on the outside of the model is dry, prepare the balsa parts for painting. Apply at least two coats of sanding sealer to fins and detail pieces. Apply only one sealer coat to raceway strip. Let dry and sand lightly with extra-fine sandpaper between coats. Repeat as necessary until the tiny grain lines in the wood are filled and everything looks and feels smooth.

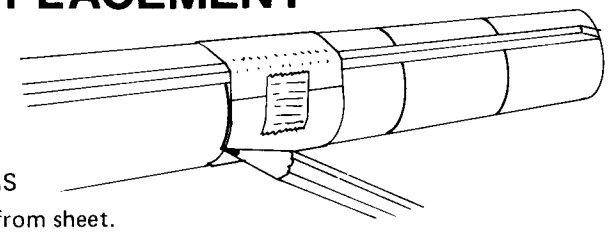
☐25 PAINTING AND DETAILING

Before painting, wipe the model with a slightly damp cloth to remove oily fingerprints. Since it is difficult to cover the darker brown color with the yellow, the yellow band areas of the nose cone should be covered with masking tape prior to painting. (See illustration for yellow band locations.) The silver paint will cover well, so the tip need not be masked.



After masking, paint the entire rocket "light earth". After the paint has thoroughly dried, remove the masking tape and paint the yellow bands and the silver tip. Remove the nose cone and set aside until paint is dry. Ink the leading edge panel lines on both sides of each fin using a black ball-point pen and template B from the die-cut card. (See illustration.) Once the paint on the nose cone has dried, you may ink in the four panels on the bottom of the nose cone. Using the black ball-point pen, carefully draw around the inside of the raised lines on the nose cone. The raised lines will serve as a guide for the pen. You may have to go over the lines several times to get a good, dark line.

☐26 DECAL PLACEMENT



GENERAL APPLICATIONS

1. Cut decal section from sheet.
2. Dip decal in water until decal slides on backing paper (10-20 seconds).
3. Slide decal from backing paper onto model.
4. Position decal exactly.
5. Gently blot decal to remove air bubbles and excess water.
6. If decal is not in proper position and tends to "stick", apply a small amount of water to decal with a brush. You can then move the decal into position without risk of tearing it.

SPECIFIC INSTRUCTIONS

All decals on the sheet (part P) are numbered. Corresponding numbers on the illustration show where the decals are applied. The body bands #2, 3, & 4 (six of #4) are applied first. Use a ruler to mark band locations on the body according to dimensions on illustration. Use the body marking guide. (It must be wrapped over the raceway.) to extend a light pencil line around body at each mark. Using the pencil lines as a guide, apply the body bands.

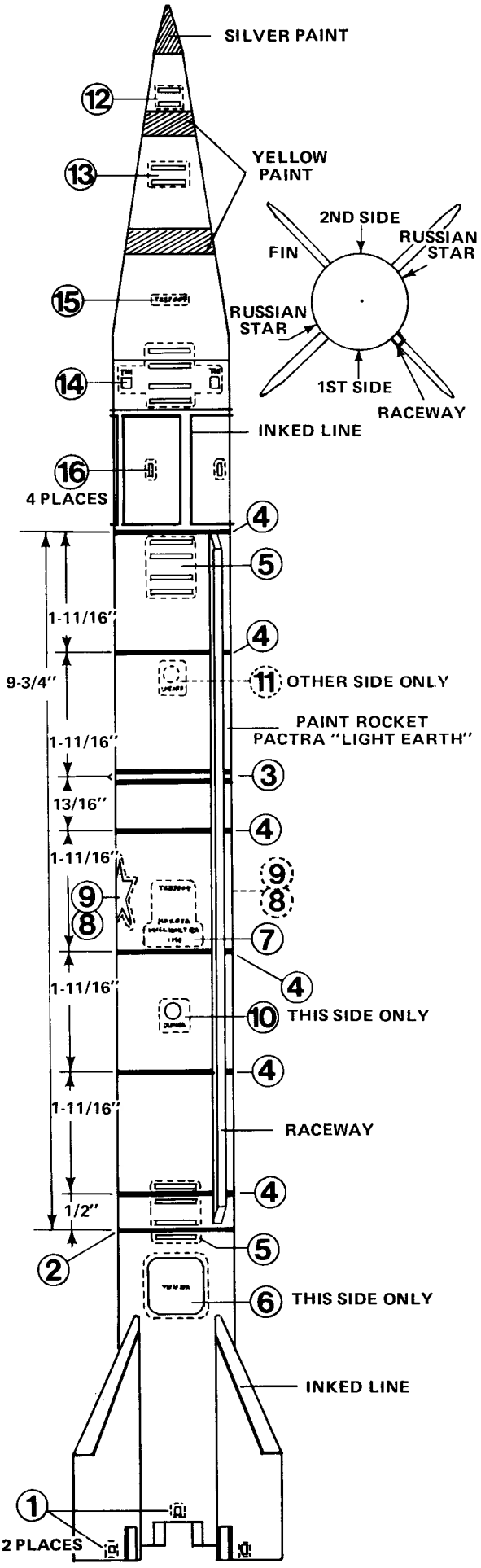
The next series of decals are centered between two fins and to the left of the raceway. These are decals #5 (two each of this), 6, 7, 10, 12, 13, 14, and 15. The vertical location of these decals is determined by comparing proximity to body bands and painted stripes. Rotate the rocket half-way over so other side of rocket is up. With the exception of #6 and #10, the identical series of decals is applied to the opposite side of the rocket. In addition, decal #11 is applied to this second side only.

Decal #16 (four of this) is applied to the center of each panel on the lower portion of the nose cone.

The Russian Stars, #8 and #9, are applied to each side, just to the left of decals #7. The white star (#8) is applied first. The red star (#9) is applied directly over the white star. The finished appearance is that of a red star with a white line around it and a red line around the white line.

Apply twelve small squares (decal #1) to the bottom of the body and fins.

After the decals are dry, you may wish to spray the rocket with Testor's "Dull-Cote". This hides the decal shine by providing a uniform flat finish. It also seals and protects the paint and 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)
Estes B4-2, B4-4, B6-4, B8-5, B14-5, C6-5, or C6-7 model rocket engines. Use a B6-4 engine for your first flight.

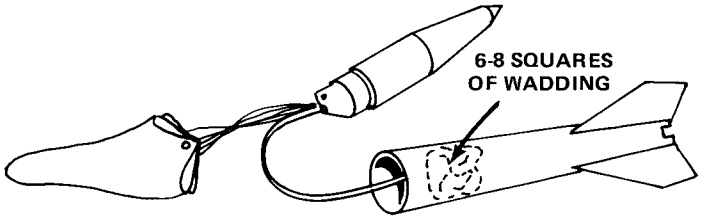
IMPORTANT:

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

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

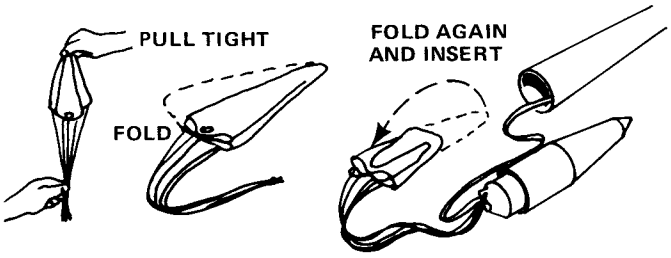
COUNTDOWN CHECKLIST

T-14



Pack 6 or 8 squares of loosely crumpled recovery wadding into the rocket body.

T-13

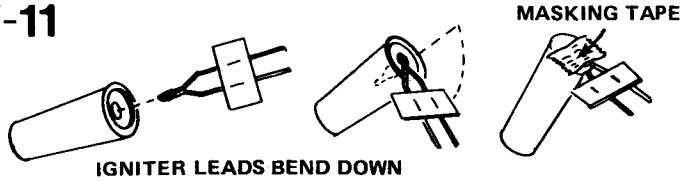


Gather the parachute as shown, then fold into a triangular shape. Fold again and insert into rocket body.

T-12 Pack parachute, shroud lines, and shock cord neatly into rocket body. Slide nose cone into place. 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.

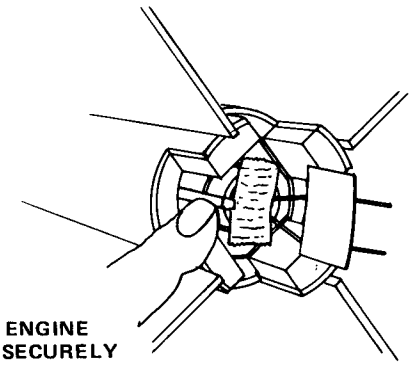
NOTE: DO NOT pack parachute until you are actually ready to launch. For maximum parachute reliability, lightly dust the 'chute with ordinary talcum powder before each flight, especially in cold weather.

T-11



Select an engine and install an igniter as directed in the engine instructions. Use a B6-4 engine for your first flight.

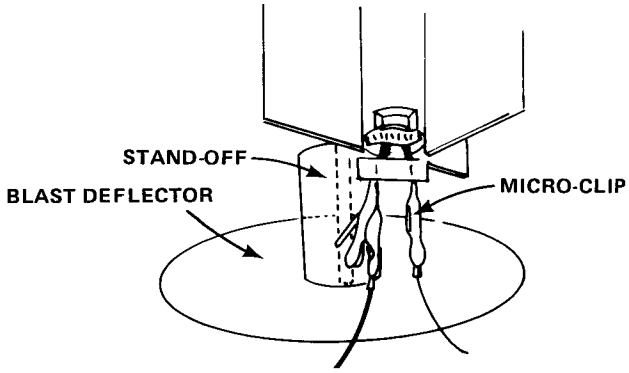
T-10



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

NOTE: ALWAYS launch this rocket with a stand-off on your launch rod to raise the base of the rocket above the blast deflector.

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

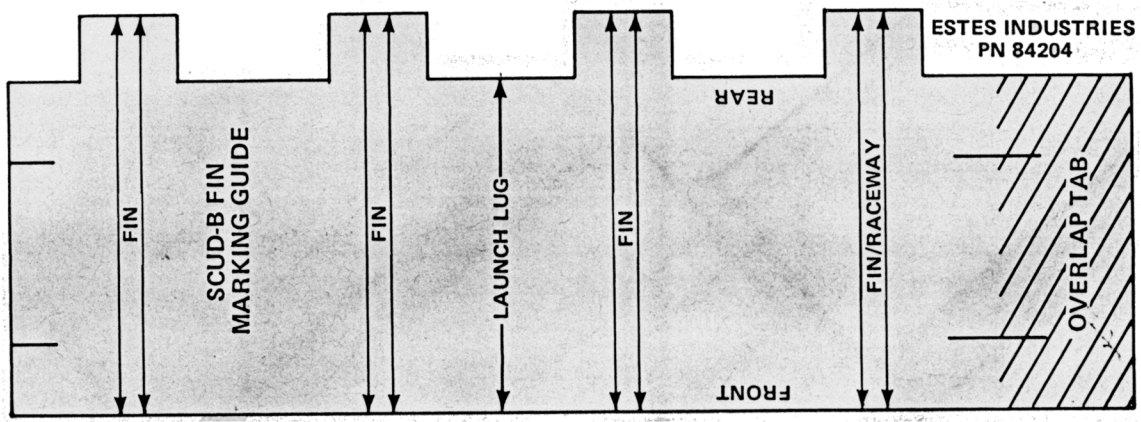
T-6 Arm the launch panel -- INSERT SAFETY KEY!

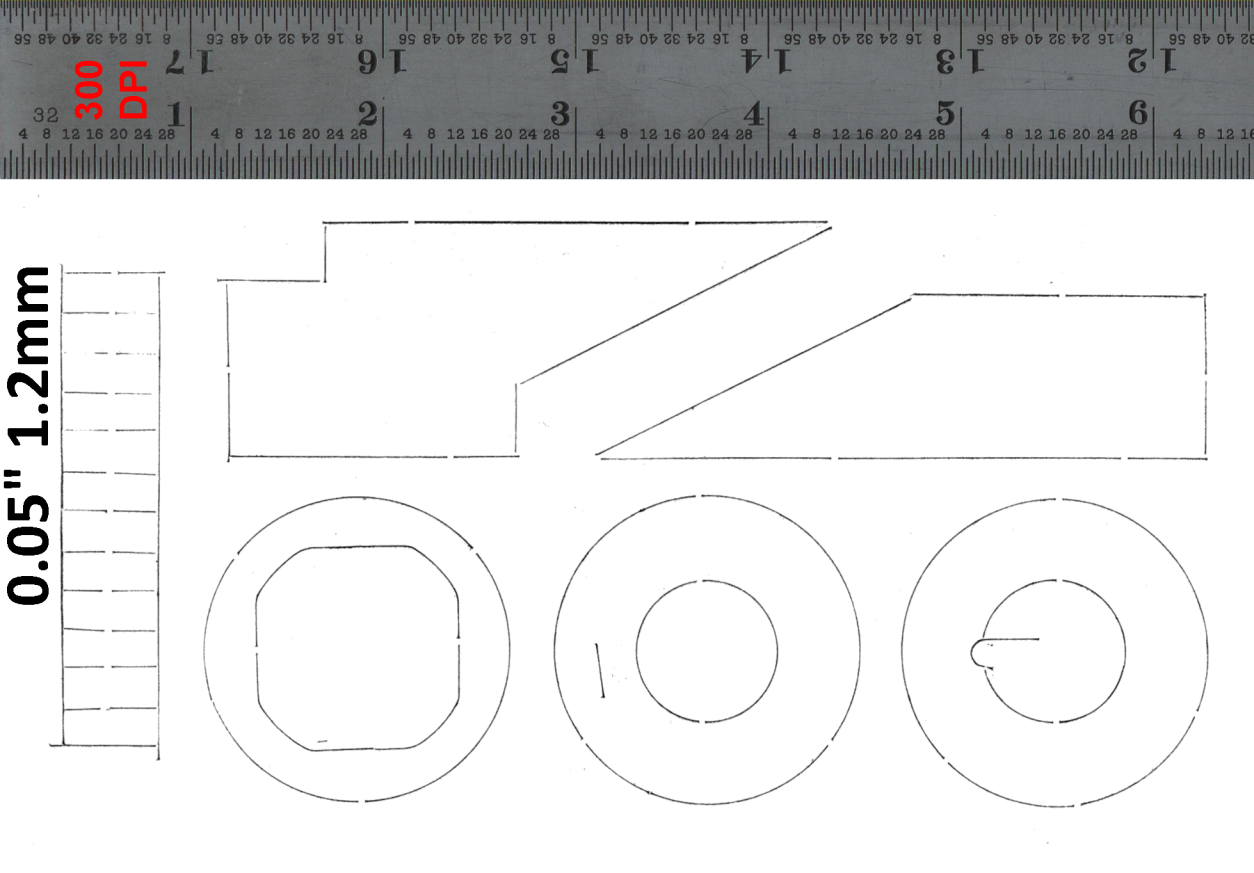
-5-4-3-2-1-LAUNCH!!

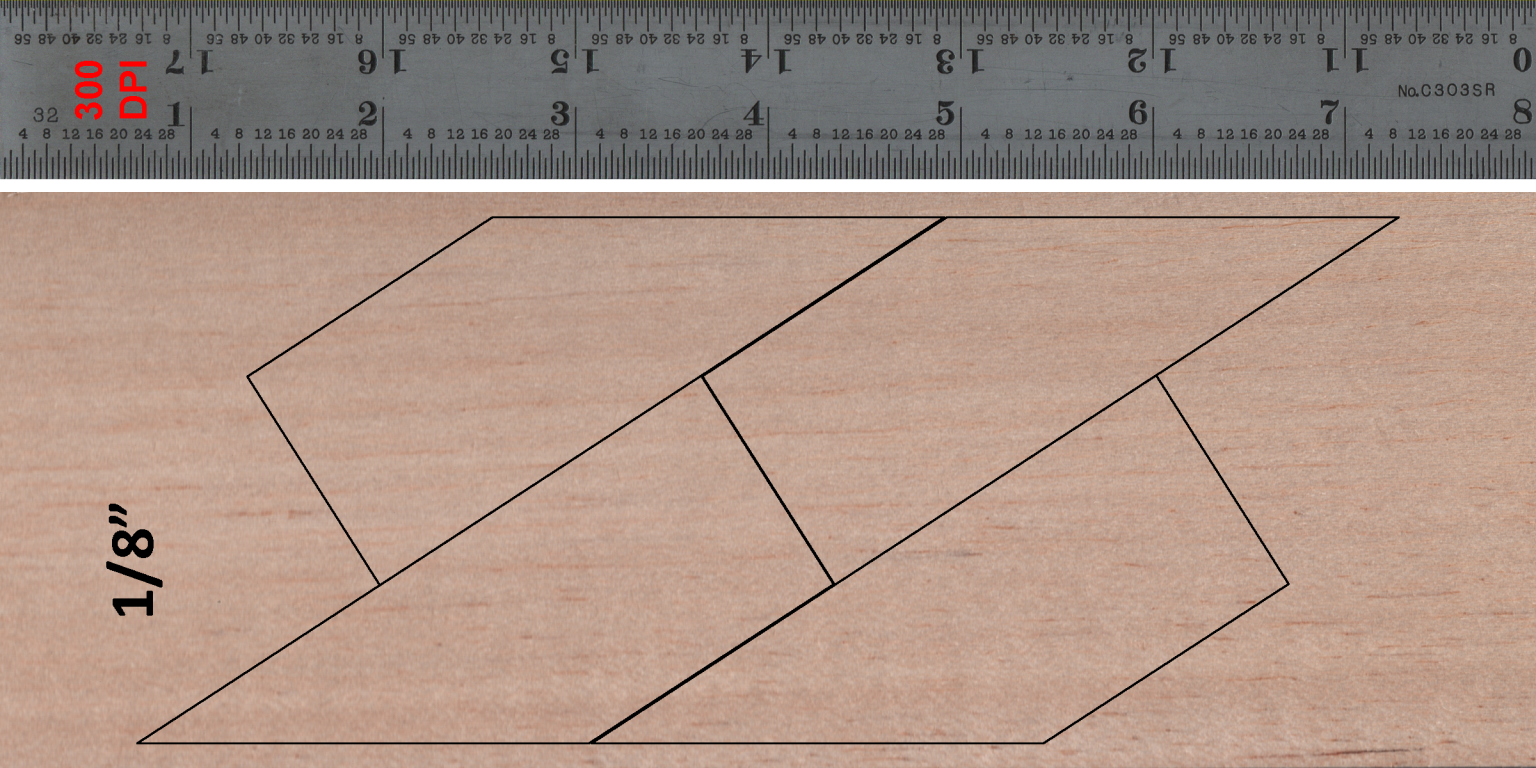
Repeat Countdown Checklist for each flight.

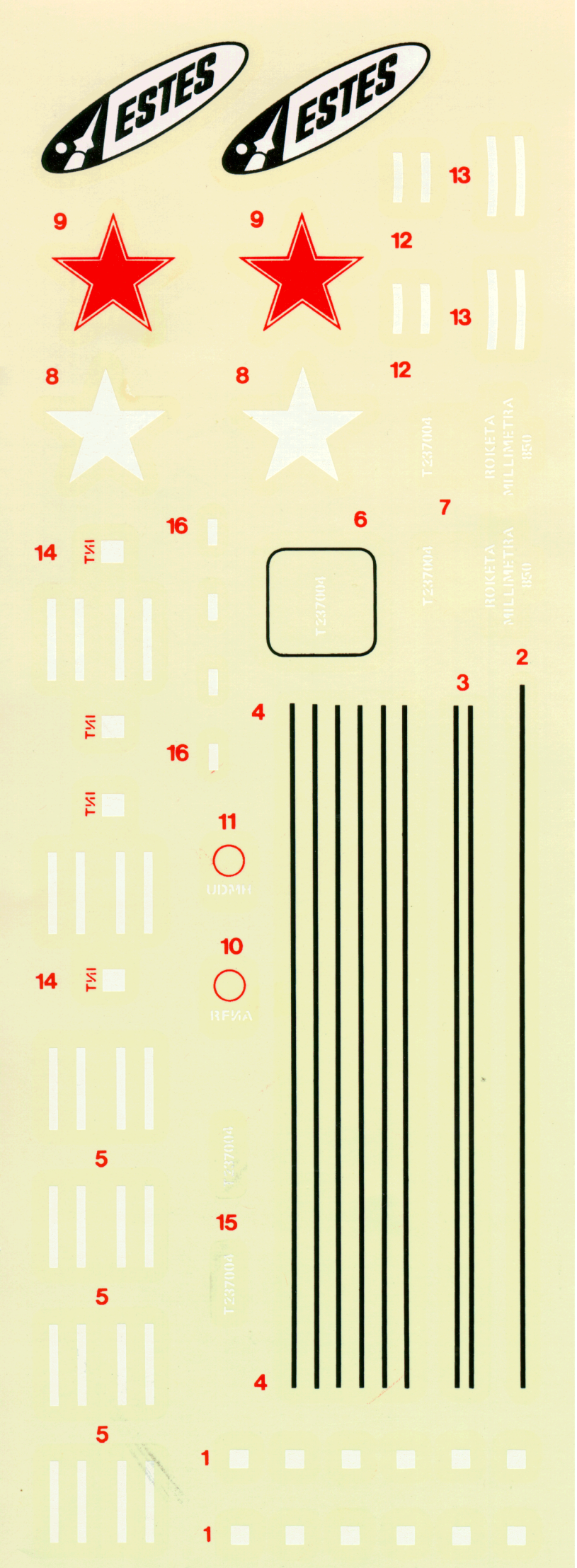
MISFIRE PROCEDURE

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.

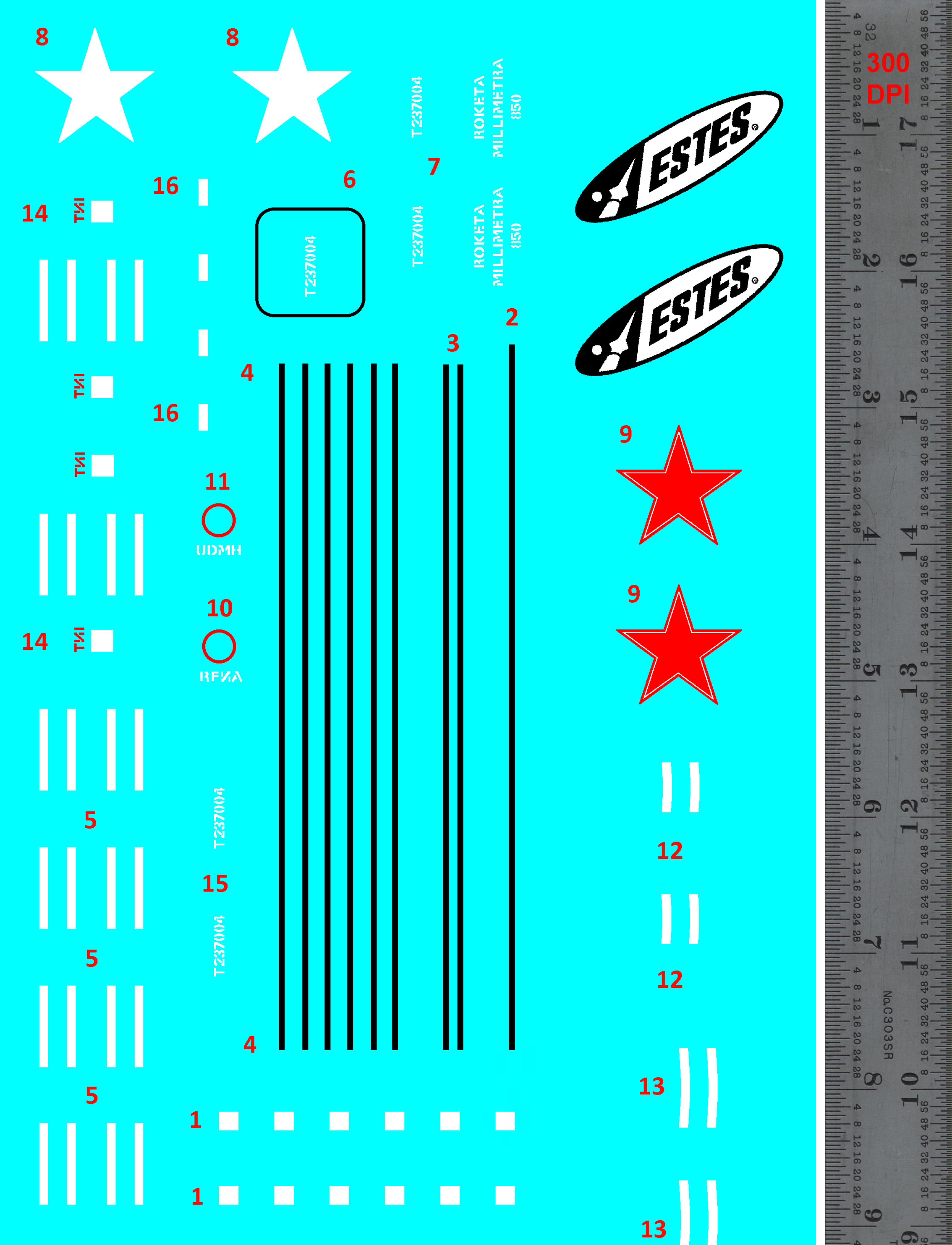

ESTES INDUSTRIES
PN 84204
FIN
SCUD-B FIN
MARKING GUIDE
FIN
LAUNCH LUG
FIN
REAR
FRONT
FIN/RACEWAY
OVERLAP TAB


300 DPI
0.05" 1.2mm

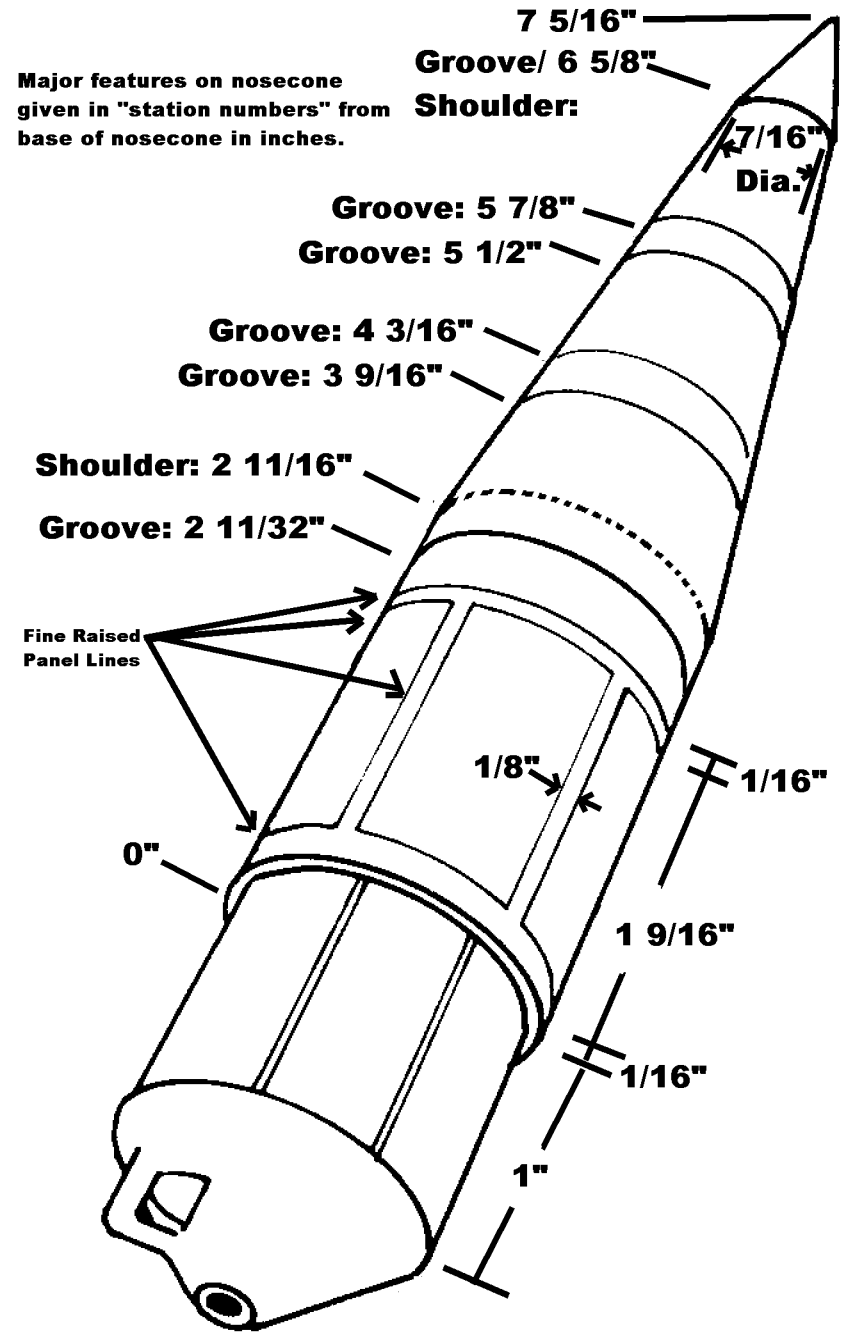

300 DPI
No.C303SR
1/8”



RUSSIAN SS-1C SCUD-B MISSILE
PN 37571 ESTES INDUSTRIES



RUSSIAN SS-1C SCUD-B MISSILE
PN 37571 ESTES INDUSTRIES
REDRAWN BY JimZ



Nose cone details for Estes Scud-B #1340.

Note: Shoulder at Sta 2 11/16 is not recessed or extruded. Dotted line is for illustrative purposes only.

Prepared for JimZ's site by John Joseph July 1998.

PARTS LIST KIT N0. 1340 - RUSSIAN SS-1C SCUD-B								
Quantity	Description	Type	Number	Details1	Details2	Details3	Details4	Comment
1	PAPER BODY TUBE	BT-20D	30322	6.5" long	0.710" ID	0.736" OD	0.013" wall	Glassine
1	ENGINE HOLDER	EH-2	35025	2.8" long	.100" wide	.025" thick		Reg. & D
1	MYLAR RETAINER RING	HR-20	30168	0.3" long	0.74" ID	0.76" OD	0.01" wall	BT-20
1	Die-Cut Card Sheet	TA-1340	30096	3.6" wide	6.5" long	0.05" thick	1.2mm	Scan
1	Pattern Sheet	SP-1340	84204	3" wide	6.5" long	Heavy Paper		Scan
1	PAPER BODY TUBE	BT-60AE	30404	14.25" long	1.595" ID	1.637" OD	0.021" wall	Glassine
2	LAUNCH LUG	LL-2AM	38176	5/32" ID	1/8" rod	3/8" long		Mylar
1	Shock Cord	SC-2MJ	85738	30" long	1/4" wide			Rubber
1	BALSA WOOD STRIP	BWS-40	85923	1/8" square	12" long			
1	BALSA WOOD STRIP	N/A	32381	1/2" wide	1/4" high	1-1/2" long		
1	BALSA FIN STOCK	BF-1340	*32344	3" wide	8" long	1/8" thick	0.125	Scan
1	PLASTIC NOSE CONE	PNC-60B	71015	7 5/16" long	1.627" dia.	1" shoulder	Conical with details	Blow molded
1	Parachute	PK-18A	85566	18" dia.	18" x 6 Shrouds	LDPE plastic	Org/Blk/Wht	
1	Shroud Line	SLT-108	38239	108"	.020" diameter	Twisted cotton		For 18" to 24" parachute
1	Tape Discs	TD-3F	38406	1/2" dia.	Paper	Self-Stick		Set of 6
1	Decal	KD-1340	37571	4" wide	12" long	Red, Wht, Blk	Waterslide	Scan
* BALSA FIN STOCK BFS-40 #3172								


RUSSIAN
SS-1C
SCUD-B
FLYING
MODEL
ROCKET
RUSSIAN
SS-1C
SCUD-B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