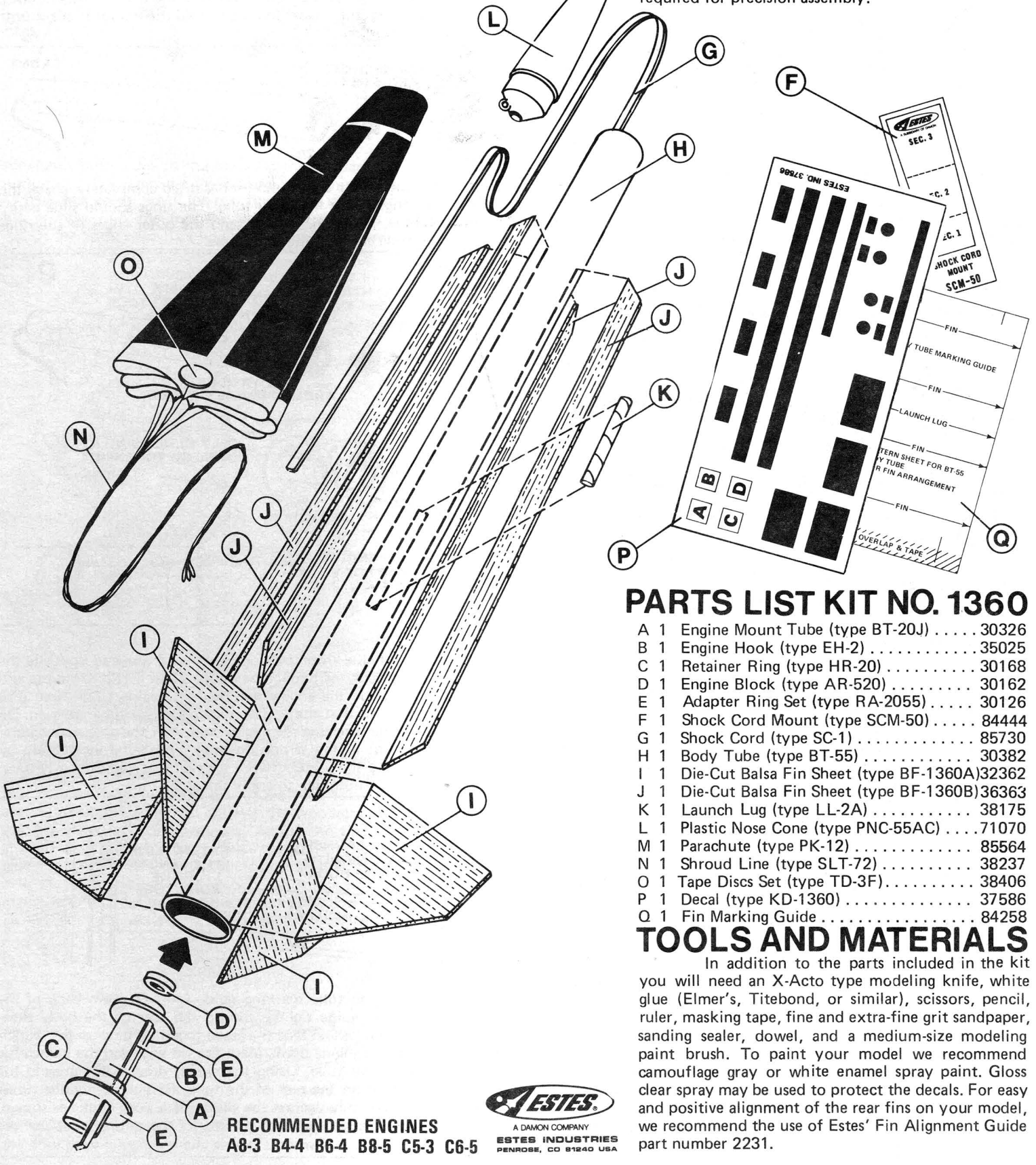
TARTAR

SKILL LEVEL 3 - Recommended for Craftsman Rocketeers.

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. 1360

A	1	Engine Mount Tube (type BT-20J)	30326
B	1	Engine Hook (type EH-2)	35025
C	1	Retainer Ring (type HR-20)	30168
D	1	Engine Block (type AR-520)	30162
E	1	Adapter Ring Set (type RA-2055)	30126
F	1	Shock Cord Mount (type SCM-50)	84444
G	1	Shock Cord (type SC-1)	85730
H	1	Body Tube (type BT-55)	30382
I	1	Die-Cut Balsa Fin Sheet (type BF-1360A)	32362
J	1	Die-Cut Balsa Fin Sheet (type BF-1360B)	36363
K	1	Launch Lug (type LL-2A)	38175
L	1	Plastic Nose Cone (type PNC-55AC)	71070
M	1	Parachute (type PK-12)	85564
N	1	Shroud Line (type SLT-72)	38237
O	1	Tape Discs Set (type TD-3F)	38406
P	1	Decal (type KD-1360)	37586
Q	1	Fin Marking Guide	84258

TOOLS AND MATERIALS

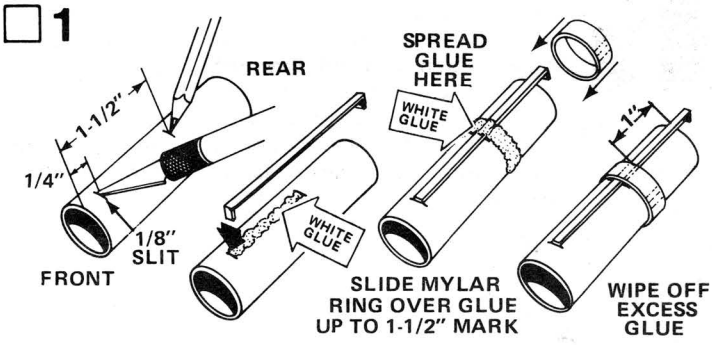
In addition to the parts included in the kit you will need an X-Acto type modeling knife, white glue (Elmer's, Titebond, or similar), scissors, pencil, ruler, masking tape, fine and extra-fine grit sandpaper, sanding sealer, dowel, and a medium-size modeling paint brush. To paint your model we recommend camouflage gray or white enamel spray paint. Gloss clear spray may be used to protect the decals. For easy and positive alignment of the rear fins on your model, we recommend the use of Estes' Fin Alignment Guide part number 2231.

RECOMMENDED ENGINES
A8-3 B4-4 B6-4 B8-5 C5-3 C6-5

ESTES
A DAMON COMPANY
ESTES INDUSTRIES
PENROSE, CO 81240 USA

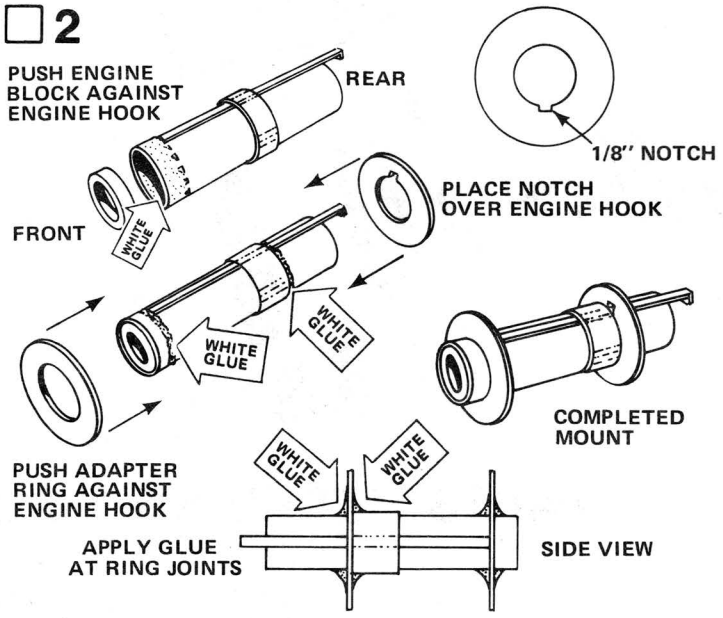
ASSEMBLY INSTRUCTIONS

☐1



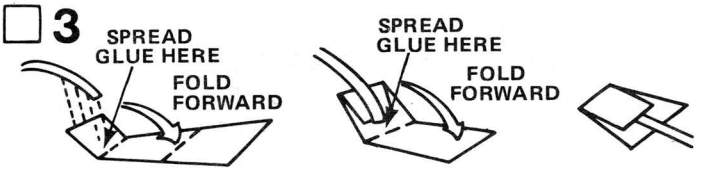
Mark across the engine mount tube (part A) 1/4" and 1-1/2" from one end as shown. Cut a 1/8" wide slit in the tube at the 1/4" mark. Apply glue from the slit to the 1-1/2" mark. Push one end of the engine holder (part B) into the slit and press the main part of the hook into the glue. Apply a thin layer of glue 1/4" wide around the tube to the rear of the 1-1/2" mark. Slide the retainer ring (part C) over the engine hook and the rear of the tube up to the 1-1/2" mark. Wipe off any excess glue.

☐2



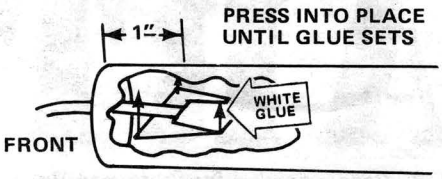
Apply glue to the inside front of the engine tube. Immediately push in the engine block (part D) until the block is against the engine hook. Carefully separate the two adapter rings (part E) from the die-cut card sheet. Cut a notch 1/8" wide and 1/16" deep on the inside of one of the rings as shown. Slide the notched adapter ring over the rear of the engine tube up to the retainer ring so that the notch is over the engine hook. Slide the other adapter ring over the front of the engine tube up to the engine hook as shown. Glue the rings in place by applying a line of glue where ring meets tube all around both sides of each ring. Set the assembly on one end while the glue dries.

☐3



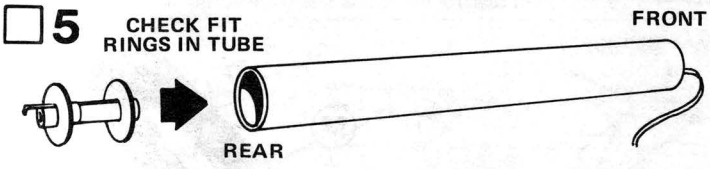
Cut out the shock cord mount (part F). Crease it on the dotted lines by folding. Spread glue on the first section (1) and lay the end of the shock cord (part G) into the glue. Fold over and apply glue to the back of the first section and the exposed part of section 2. Lay the shock cord as shown and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

☐4



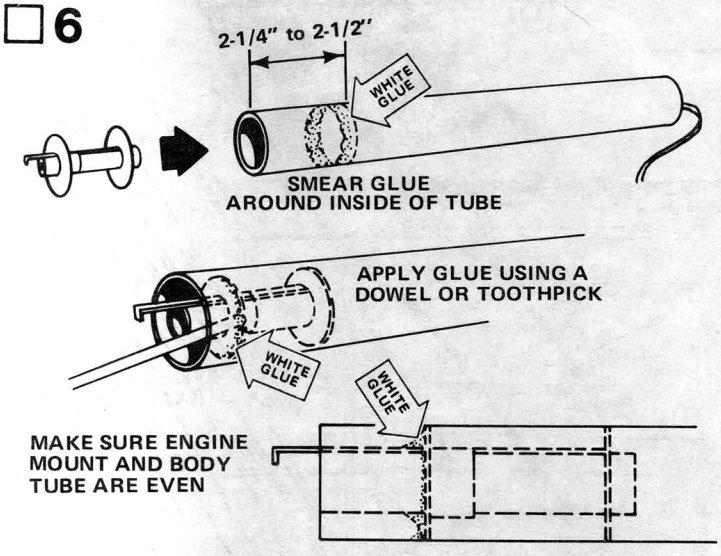
Smear glue over the entire back side of the shock cord mount. Hold the mount as shown and press it into place inside the end of the rocket body tube (part H). Make sure the front of the mount is at least 1" from the end of the tube. Hold the mount in place until the glue dries.

☐5



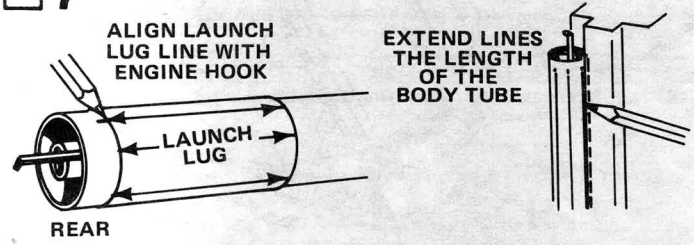
When the glue on the engine mount has dried completely, check the fit of the rings inside the body tube. The rings should slide easily into the tube. If the fit is tight, sand the outer edges of the rings until they slide easily in the body tube.

☐6



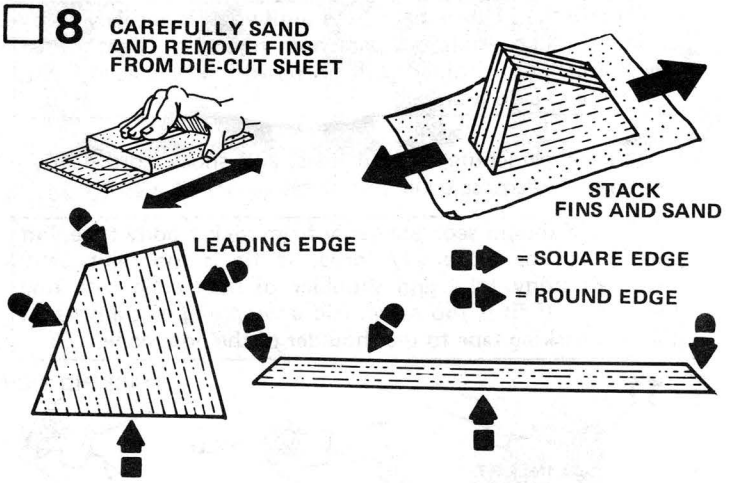
Apply a ring of glue around inside of rear end (the end opposite the shock cord mount) of body tube about 2" to 2-1/2" from the end of the tube. Slide the engine mount unit, engine block first, into the body tube so that the engine tube and body tube are even. Do not pause while inserting the engine mount or the glue may "grab" with the mount in the wrong position. Finish the installation by applying glue to the joint between the rear ring and the body tube. (Use a dowel or toothpick to apply the glue.)

☐7



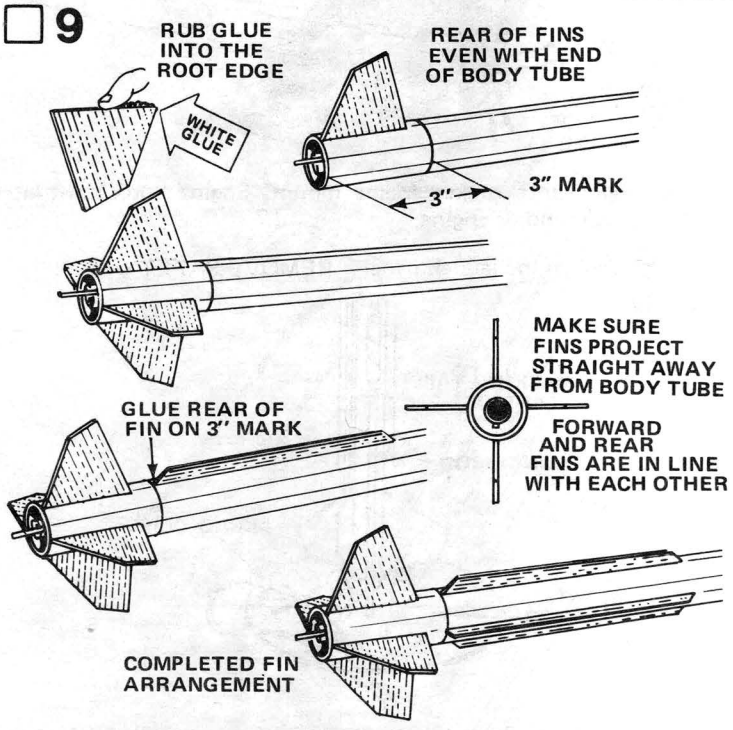
Cut out the body tube marking guide (part Q) from back of the panel. Wrap the guide tightly around the rear of the body tube. Align the guide lines and tape the guide together. Line up the launch lug line with the engine hook. Mark the fin lines and the launch lug lines on the body tube. Using the guide, draw a line around the body tube 3" from the rear of the tube. Remove the guide. Press the body tube firmly against the inside of a door frame as shown. Draw a line through each pair of marks the entire length of the body tube.

☐ 8



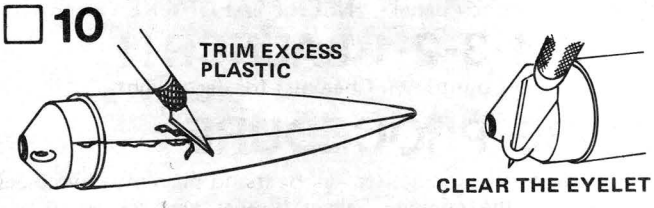
Fine-sand both sides of the balsa fin sheets (part I & J). Carefully remove the fins from the sheet using a sharp knife to cut free the corners and edges. Stack the rear fin set and sand as shown. Repeat the process with the forward fin set. Sand round each fin edge except the body edge. The body edge must be square.

☐ 9



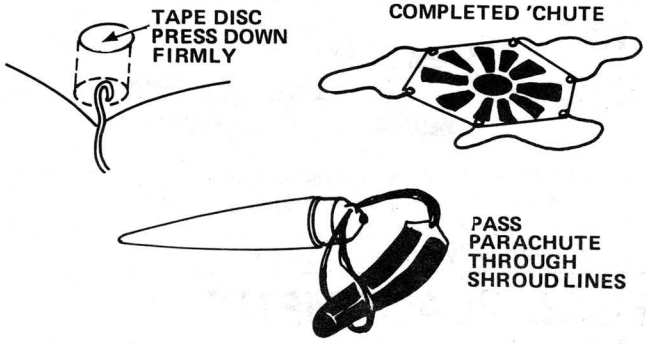
Rub a line of glue into the root (body) edge of each fin. Allow the glue to dry. Glue the rear fins to the body tube on the guide lines so that they are even with the rear of the body tube. Be sure that the leading edge (the edge that follows the wood grain direction) is to the front of the tube as shown. Adjust the fins so they project straight away from the body. Once the glue on the rear fins has set, glue the forward fins on the guide lines so that the rear of each fin is at the 3" mark drawn in Step 7. Adjust the fins so that they are in line with the rear fins. Set the rocket upright while the glue dries. DO NOT set the rocket on its side while the glue is wet.

☐ 10



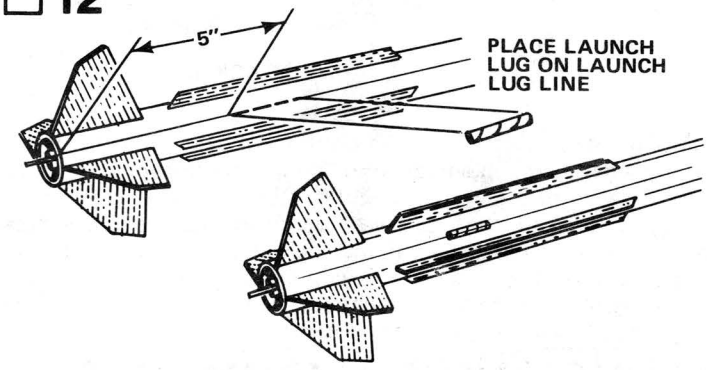
Trim or sand any excess plastic from around the sides of the nose cone (part L). Use a sharp knife to remove any excess plastic from the inside of the molded eyelet at the rear of the nose cone. Wash the nose cone in warm soapy water, rinse well, and let dry.

☐ 11



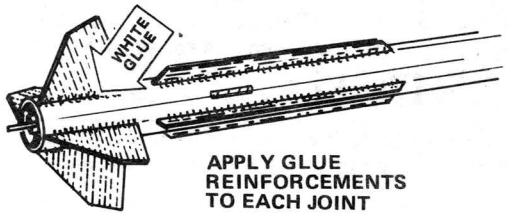
Cut out the parachute (part M) on its edge lines. Cut three 24" lengths of shroud line (part N). Attach line ends to the top of the parachute with tape discs (part O) as shown. Pass the shroud line loops through the eyelet on the nose cone. Pass the parachute through the loop ends and pull the lines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

☐ 12



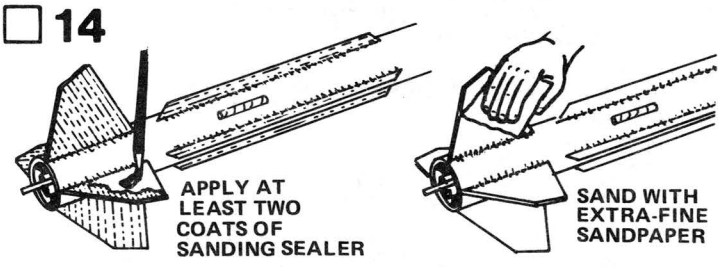
Glue the launch lug (part K) on the launch lug guide line so that the rear of the launch lug is 5" from the rear of the body tube. Align the launch lug straight along the body tube.

☐ 13



When the fin joints and launch lug 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 and the launch lug. Smooth out the glue with your finger. Be sure there is no excess glue in front of or behind the launch lug. Keep the model level until the glue dries.

☐ 14



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

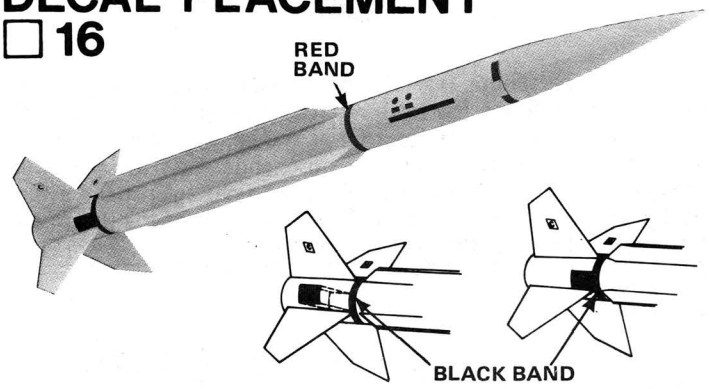
PAINTING AND DETAILING

☐ 15

Insert a sheet of rolled-up newspaper or heavy paper into the rocket body tube as shown. Apply two or three light coats of camouflage gray or white enamel spray paint to the entire unit. Allow each coat to dry thoroughly before applying the next coat.

DECAL PLACEMENT

☐ 16



Apply the decals (part P) in the positions shown. To apply decals, cut out a decal section and dip it in lukewarm water for 20 seconds. Hold decal until it starts to uncurl or slides easily on the backing sheet. Use a small brush to "wet" the model surface where decal will be applied. Slide decal off the backing sheet and onto model. Blot excess water away with a damp cloth. Allow decaled model to dry overnight. Apply a final light coat of gloss clear spray enamel over decaled areas 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)
Estes A8-3, B4-4, B6-4, B8-5, C5-3, or C6-5 model rocket engines. Use a B4-4 engine for your first flight.

IMPORTANT:

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

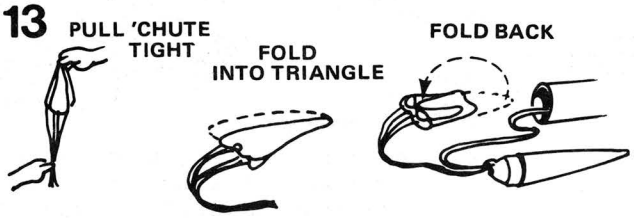
*HIAA -- Hobby Industry Association of America
NAR -- National Association of Rocketry

COUNTDOWN CHECKLIST

T-14

Pack 8 to 10 squares of loosely crumpled recovery wadding into the rocket body.

T-13



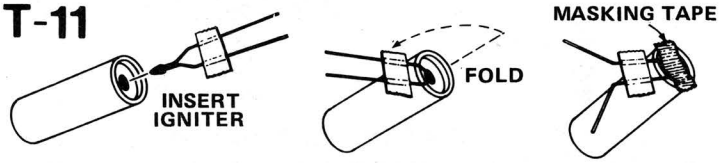
Gather the parachute as shown then fold into a triangular shape. Fold again and insert into rocket body.

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. Slide nose cone into place.

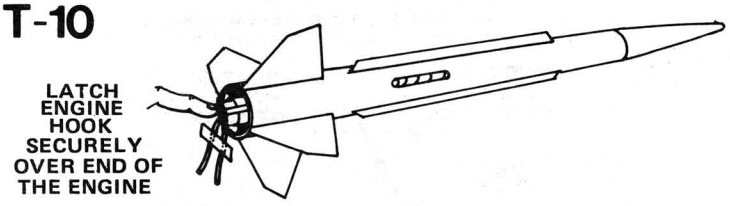
Nose cone should separate easily from rocket body tube, but should not be extremely loose. If fit is too tight, sand inside of body tube and shoulder of nose cone with fine sandpaper. If fit is too loose, add a wrapping of transparent tape or masking tape to the shoulder of the nose cone.

T-11



Select an engine and install an igniter as directed in the engine instructions. Use a B4-4 engine for your first flight.

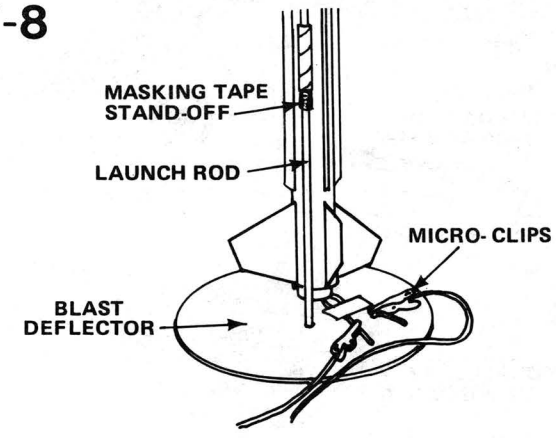
T-10



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.

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

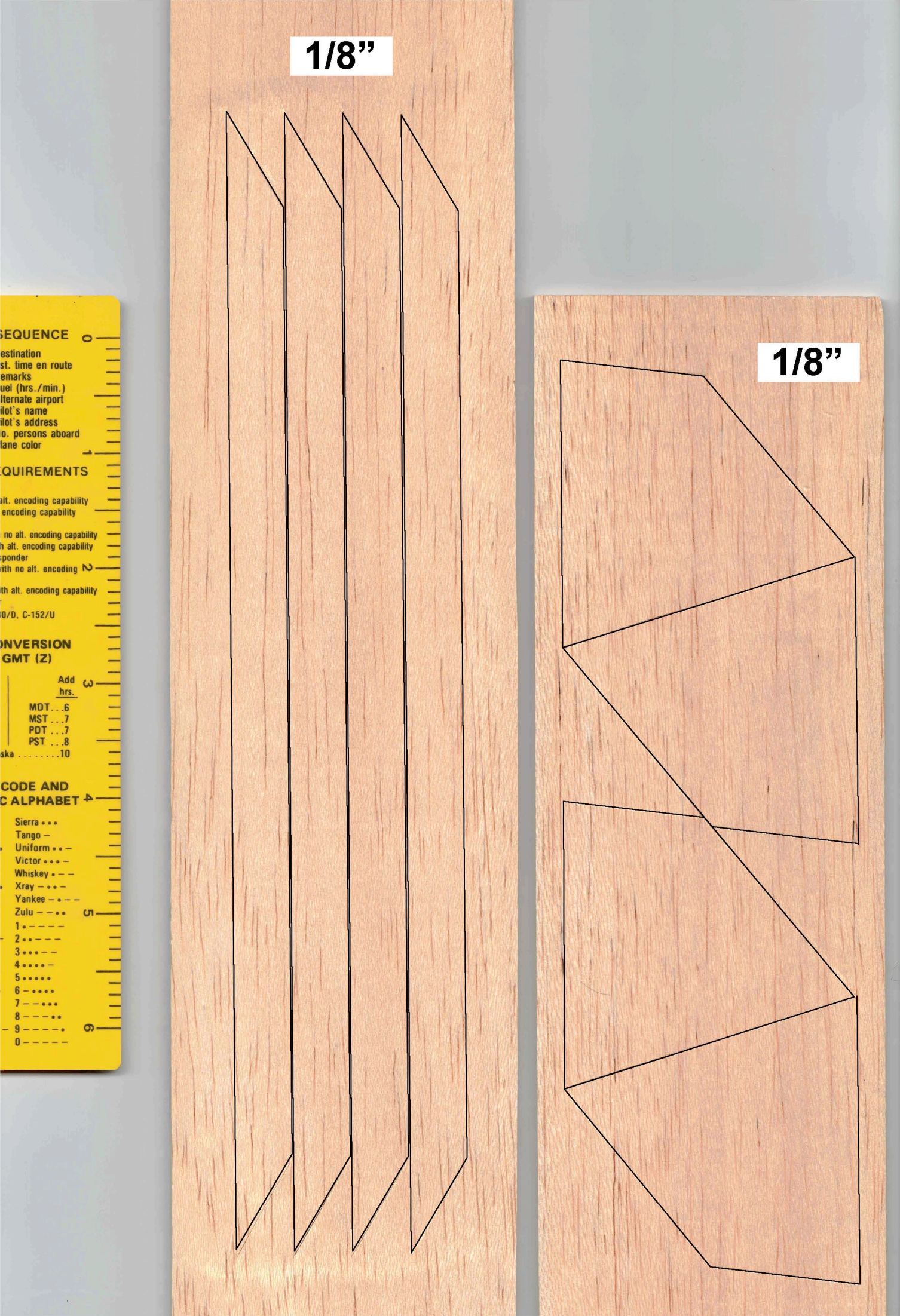
T-6 Arm the launch panel -- INSERT SAFETY KEY!

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

Repeat the 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.


1/8”
1/8”
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emarks
uel (hrs./min.)
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ilot's name
ilot's address
o. persons aboard
lane color
QUIREMENTS
lt. encoding capability
encoding capability
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sponder
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th alt. encoding capability
0/D, C-152/U
ONVERSION
GMT (Z)
Add hrs.
MDT...6
MST...7
PDT...7
PST...8
ska.....10
CODE AND
C ALPHABET
Sierra • • •
Tango –
Uniform • • –
Victor • • • –
Whiskey • – –
Xray – • • –
Yankee – • – –
Zulu – – • •
1 • – – – –
2 • • – – –
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4 • • • • –
5 • • • • •
6 – • • • •
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9 – – – – •
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FLIGHT PLAN SEQUENCE

Type flight plan	Destination
Plane number	Est. time en route
Plane type	Remarks
Special equipment	Fuel (hrs./min.)
Est. TAS	Alternate airport
Point of departure	Pilot's name
Proposed dep. time	Pilot's address
Cruising altitude(s)	No. persons aboard
Route	Plane color

EQUIPMENT REQUIREMENTS

X– no transponder
T– transponder with no alt. encoding capability
U– transponder with alt. encoding capability
D– DME, no transponder
B– DME, transponder with no alt. encoding capability
A– DME, transponder with alt. encoding capability
M– TACAN only, no transponder
C– RNAV, transponder with no alt. encoding capability
F– RNAV, transponder with alt. encoding capability
W– RNAV, no transponder

Examples: BE-50/B, PA-30/D, C-152/U

TIME CONVERSION TO GMT (Z)

	Add hrs.		Add hrs.
EDT	4	MDT	6
EST	5	MST	7
CDT	5	PDT	7
CST	6	PST	8
Hawaii & Alaska	10		

MORSE CODE AND PHONETIC ALPHABET

Alfa	• –	Sierra	• • •
Bravo	– • • •	Tango	–
Charlie	– • – •	Uniform	• • –
Delta	– • •	Victor	• • • –
Echo	•	Whiskey	• – –
Foxtrot	• • – •	Xray	– • • –
Golf	– – •	Yankee	– • – –
Hotel	• • • •	Zulu	– – • •
India	• •	1	• – – – –
Juliett	• – – –	2	• • – – –
Kilo	– • –	3	• • • – –
Lima	• – • •	4	• • • • –
Mike	– –	5	• • • • •
November	– •	6	– • • • •
Oscar	– – –	7	– – • • •
Papa	• – – •	8	– – – • •
Quebec	– – • –	9	– – – – •
Romeo	• – •	0	– – – – –

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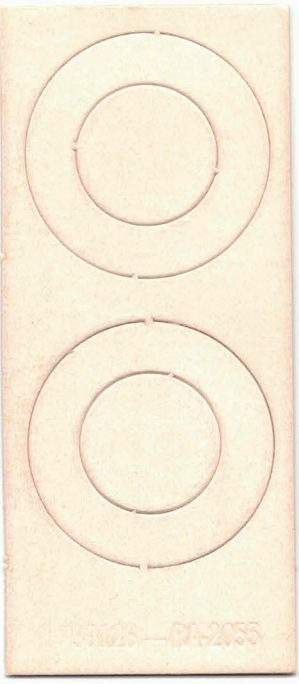
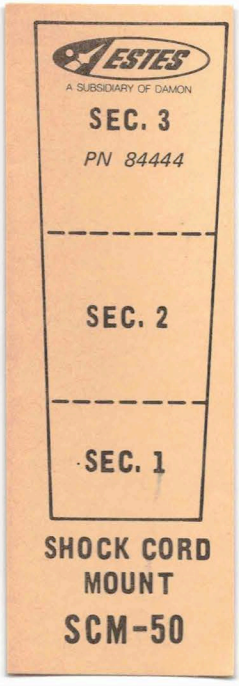
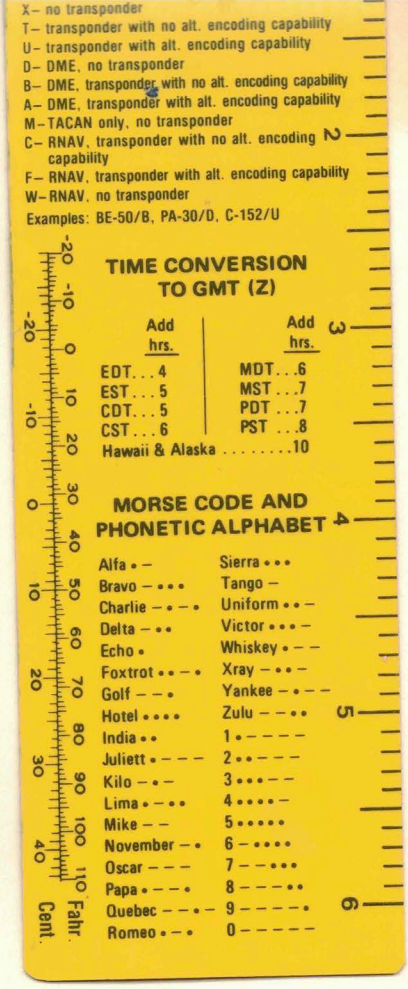



ESTES
A SUBSIDIARY OF DAMON
SEC. 3
PN 84444
SEC. 2
SEC. 1
SHOCK CORD MOUNT
SCM-50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Examples: BE-50/B, PA-30/D, C-152/U
TIME CONVERSION TO GMT (Z)
Add hrs.
EDT...4
EST...5
CDT...5
CST...6
Add hrs.
MDT...6
MST...7
PDT...7
PST...8
Hawaii & Alaska.....10
MORSE CODE AND PHONETIC ALPHABET
Alfa • –
Bravo – • • •
Charlie – • – •
Delta – • •
Echo •
Foxtrot • • – •
Golf – – •
Hotel • • • •
India • •
Juliett • – – –
Kilo – • –
Lima • – • •
Mike – –
November – •
Oscar – – –
Papa • – – •
Quebec – – • –
Romeo • – •
Sierra • • •
Tango –
Uniform • • –
Victor • • • –
Whiskey • – –
Xray – • • –
Yankee – • – –
Zulu – – • •
1 • – – – –
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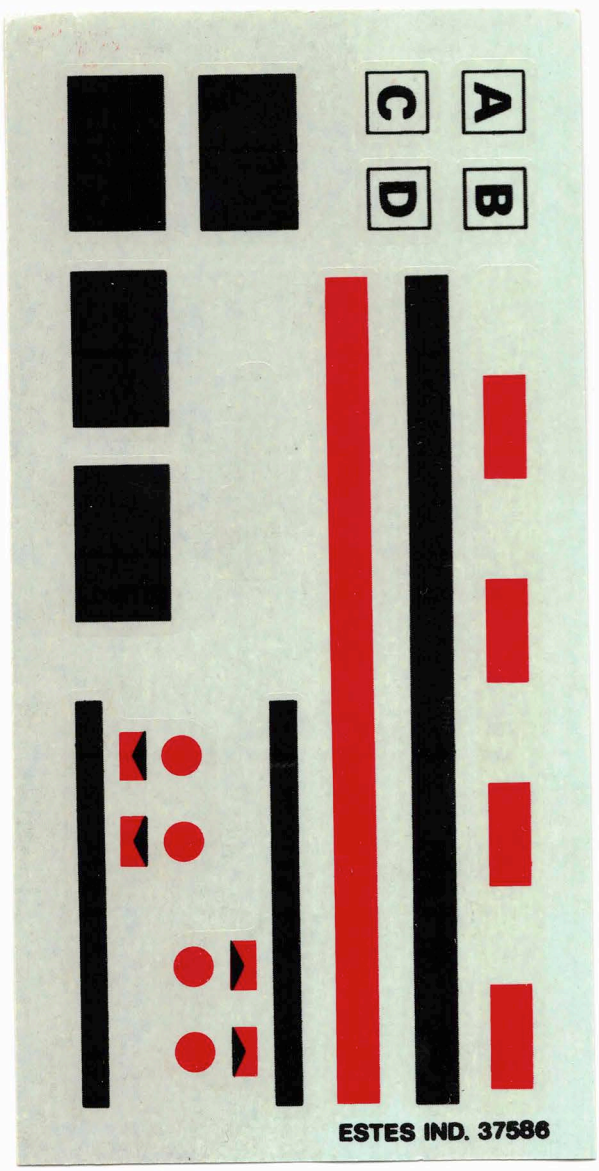
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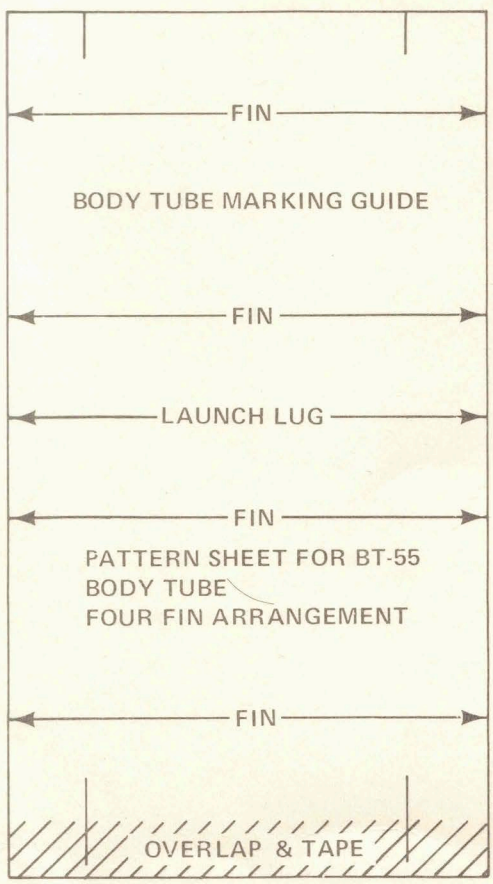
FIN
BODY TUBE MARKING GUIDE
FIN
LAUNCH LUG
FIN
PATTERN SHEET FOR BT-55
BODY TUBE
FOUR FIN ARRANGEMENT
FIN
OVERLAP & TAPE

PN 84258

PARTS LIST KIT N0. 1360 - Tartar								
Quantity	Description	Type	Number	Details1	Details2	Details3	Details4	Comment
1	PAPER BODY TUBE	BT-20J	30326	2.75" long	0.710" ID	0.736" OD	0.013" wall	Glassine
1	ENGINE HOLDER	EH-2	3141/35025	2.8" long	.100" wide	.025" thick		Reg. & D
1	MYLAR RETAINER RING	HR-20	3340/30168	.774" ID	.25" wide			Strapdown ring
1	CENTERING RINGS	AR-520	30162	.69" OD	.542" ID	0.25" long	BT-5 in BT-20	
1	PAPER ADAPTER	RA-2055	30126	0.738" ID	1.27" OD	.05" thick	Set of 2	
1	Shock Cord Mount	SCM-50	84444/900511					Scan
1	Shock Cord	SC-1	85730/38367	18 " long	1/8" wide			Rubber
1	PAPER BODY TUBE	BT-55	30382	18" long	1.283" ID	1.325" OD	0.021" wall	
1	Die-Cut Balsa Fin Sheet	BFS-40	32362	3” wide	9” long	1/8” thick	BF-1360A	Scan
1	Die-Cut Balsa Fin Sheet	BFS-40L	36363	3” wide	12” long	1/8” thick	BF-1360B	Scan
1	LAUNCH LUG	LL-2A	2321/38175	5/32" ID	1/8" rod	1-1/4" long		
1	PLASTIC NOSE CONE	PNC-55AC	71070	5.4" long	1.325" dia.	.5" shoulder	Secant-Ogive	Blow molded
1	Parachute	PK-12	2263/85564	12" dia.				
1	Shroud Line	SLT-72	38237	72"				
1	Tape Disc Set	TD-3F	38406	1/2" dia.				6x
1	Decal	KD-1360	37586	3" wide	6" long	Red/Black	Waterslide	Scan
1	Fin Marking Guide		84258					Scan

TARTAR

FLYING MODEL ROCKET

SKILL LEVEL 3

1-Beginner 2-Intermediate 3-Craftsman
4-Advanced 5-Expert

- Semi-Scale Anti-Aircraft Missile
- Excellent Performance
- Die-Cut Balsa Fins
- Plastic Nose Cone
- Quick-Release Engine Mount
- Realistic Kit Decals
- 12" Parachute Recovery

Length:
23.25" (59.1 cm)
Diameter:
1.329" (34 mm)
Weight:
2.4 oz. (68 g)
Engines:
A8-3 B4-4 (1st Flt.)
B4-4, B6-6, C6-3 C6-5

This is a hobby kit requiring assembly. Recommended for ages 10 to adult. Engines, launch system, glue and finishing supplies are not included. Adult supervision is suggested for those under 12 years of age when flying model rockets.

#1360

ESTES

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PENROSE, CO 81240 USA