



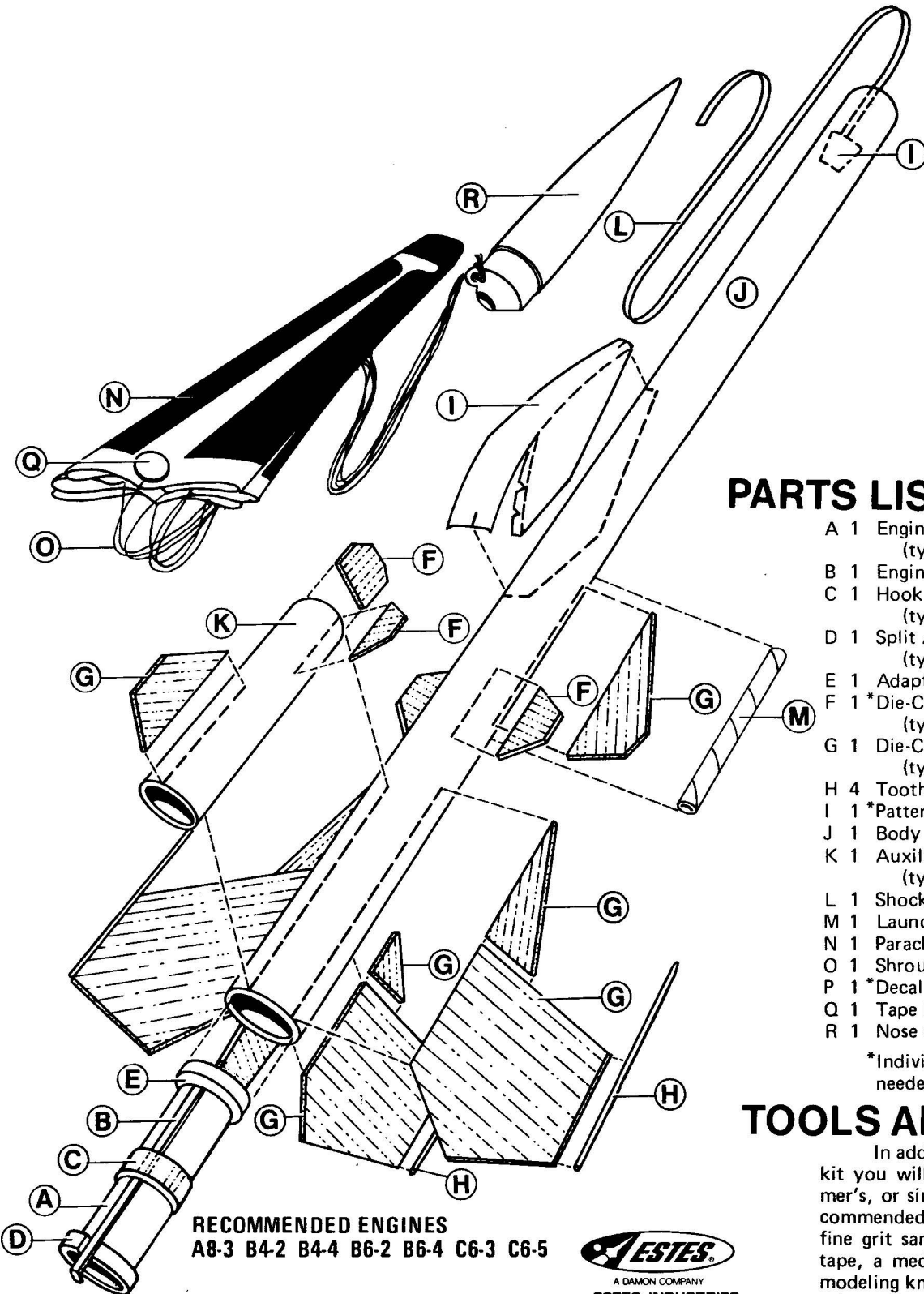


ORION STARFIGHTER

SKILL LEVEL 3 - Recommended for Craftsman Rocketeer.

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 needed for precision assembly.



PARTS LIST KIT NO. 1343

A	1 Engine Mount Tube (type BT-20J) 2-3/4"	30326
B	1 Engine Hook (type EH-2)	35025
C	1 Hook Retainer Ring (type HR-20)	30168
D	1 Split Adapter Ring (type AR-2050S)	80425
E	1 Adapter Ring (type AR-2050)	30164
F	1 *Die-Cut Balsa Sheet (type BF-1343A)	32347
G	1 Die-Cut Balsa Sheet (type BF-1343B)	32348
H	4 Toothpicks (round type) 2-5/8"	32064
I	1 *Pattern Sheet (type SP-1343)	83317
J	1 Body Tube (type BT-50KE)	30364
K	1 Auxiliary Engine Tube (type BT-20G) 3-1/2"	30324
L	1 Shock Cord (type SC-1)	85730
M	1 Launch Lug (type LL-2B)	38178
N	1 Parachute (type PK-12A)	85564
O	1 Shroud Line (type SLT-72)	38237
P	1 *Decal (type KD-1343)	37149
Q	1 Tape Discs (type TD-3F)	38406
R	1 Nose Cone (type PNC-50Y)	71009

*Individual items from this part are needed for each kit.

TOOLS AND MATERIALS

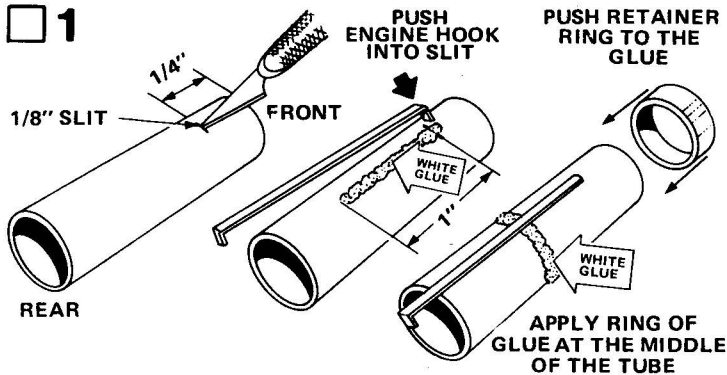
In addition to the parts included in this kit you will need white glue (Titebond, Elmer's, or similar household white glue is recommended.), scissors, pencil, fine and extra-fine grit sandpaper, sanding sealer, masking tape, a medium size modeling paint brush, modeling knife with sharp blade, white spray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

RECOMMENDED ENGINES
A8-3 B4-2 B4-4 B6-2 B6-4 C6-3 C6-5


A DAMON COMPANY
ESTES INDUSTRIES
PENROSE, CO 81240 USA

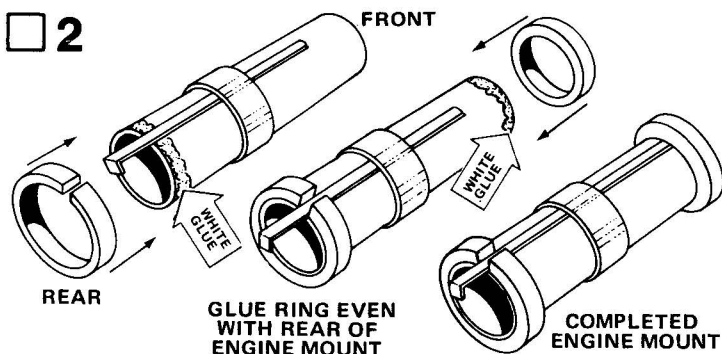
ASSEMBLY INSTRUCTIONS

1



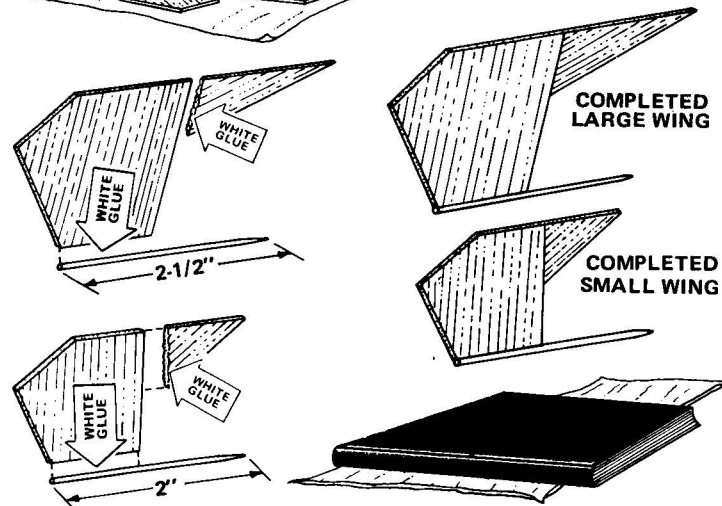
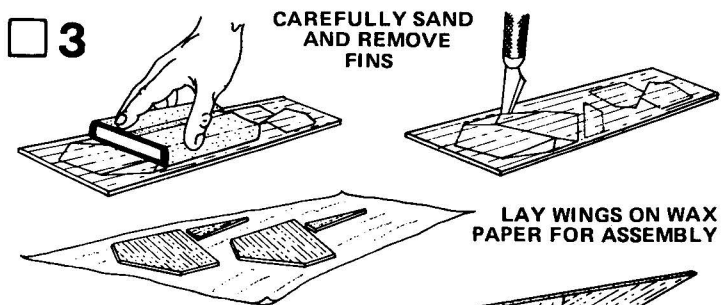
Cut a 1/8" long slit in the engine mount tube (part A), 1/4" from one end as shown. Apply a 1" line of glue to the tube as shown. Push one end of the engine hook (part B) into the slit and press the main part of the hook into the glue. Apply a line of glue around the middle of the tube and slide the hook retainer ring (part C) over the tube and hook and onto the glue.

2



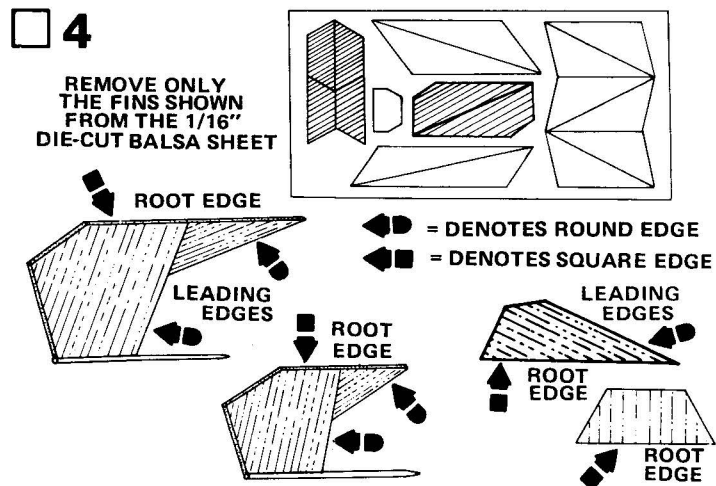
Glue the split adapter ring (part D) to the engine mount tube even with the rear end (the end with the over-hanging hook) so the slot is over the hook. Avoid getting glue in the slot. Glue the other ring (part E) to the front of the engine mount against the end of the hook as shown.

3



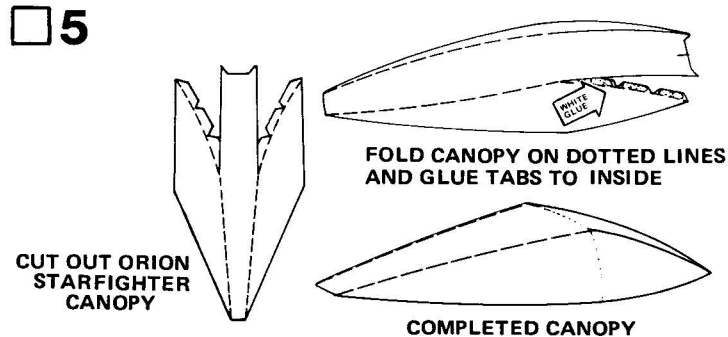
Sand both sides of the 3/32" balsa sheet (part G) until smooth using extra-fine sandpaper wrapped on a sanding block. Carefully remove the parts from the sheet using a sharp knife to separate any uncut spots. Sand the edges of the parts slightly to remove any rough edges, but be careful to leave the edges square and sharp-cornered. Lay the wing assemblies flat on a piece of waxed paper. Glue the four pieces of the two large wings together as shown. Then cut two of the toothpicks (part H) 2-1/2" long and glue as shown. Lay another piece of waxed paper over wing assemblies and weigh down the pieces to hold in position while the glue sets. Do the two smaller wings the same way, but cut the remaining two toothpicks (part H) 2" long and glue as shown.

4



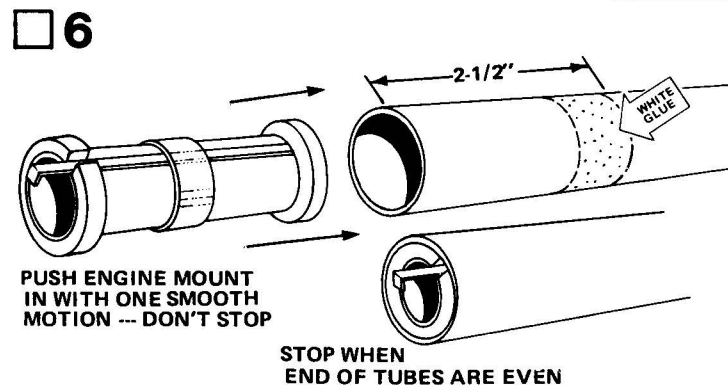
Remove only the fins shown in the illustration above from the 1/16" die-cut balsa sheet (part F) in the same manner as described in step 3. Round the leading edges only on the fins as shown. Sand the root edges square and straight on the two large wings and two small wings after the glue has set.

5

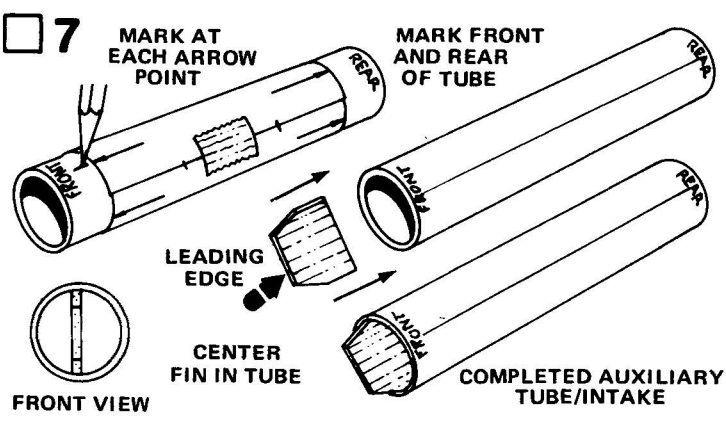


Cut out the canopy from the Orion Starfighter side of the pattern sheet (part I), on the heavy outlines. Fold canopy on dotted lines and glue tabs to inside of canopy as shown.

6



Smear glue around the inside of one end of the large body tube (part J) to cover an area about 2" to 2-1/2" from the end of the tube. Immediately insert the engine mount into the tube in one smooth motion until the end of the tube and the split ring are even.



7 MARK AT EACH ARROW POINT MARK FRONT AND REAR OF TUBE

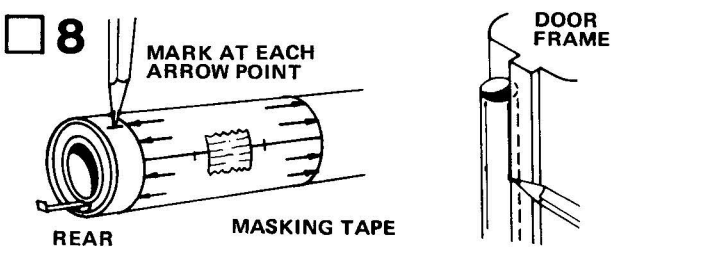
LEADING EDGE

CENTER FIN IN TUBE

FRONT VIEW

COMPLETED AUXILIARY TUBE/INTAKE

Cut out the Orion Starfighter auxiliary engine tube marking guide from the pattern sheet. Locate one 3-1/2" long body tube (part K). Wrap the guide around the tube and make a mark at each arrow point front and rear. Draw a straight line connecting each matching set of marks and extend the lines the full length of the tube. Mark the front and rear edges of the tube where these lines begin and end as shown. Take the remaining piece out of the 1/16" die-cut balsa sheet and sand round the leading edge as shown in step 4. Sand the two ends until it fits into the auxiliary engine tube then glue into place so the intake fin is centered on the tube as shown.



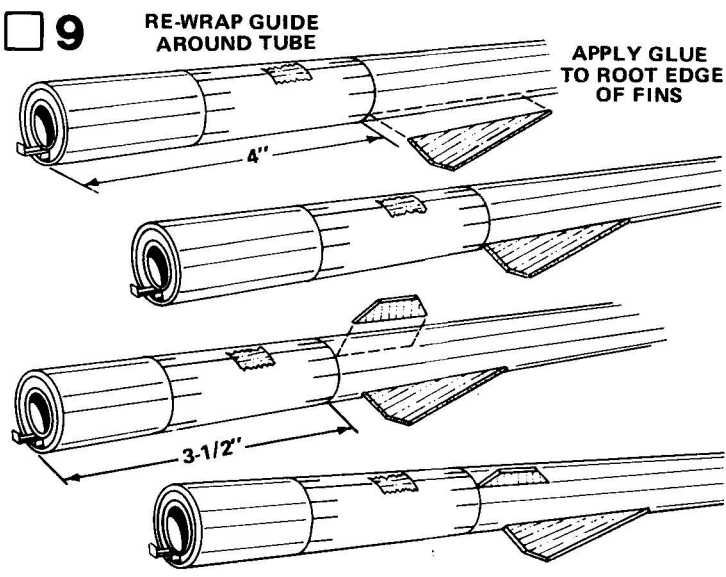
8 MARK AT EACH ARROW POINT

REAR

MASKING TAPE

DOOR FRAME

Cut out the Orion Starfighter body tube marking guide from the pattern sheet. Wrap the guide around the rear of the tube so the engine hook/launch lug arrows are in line with the engine hook. Mark the tube at each arrow point, front and rear. Draw a straight line connecting each matching front and rear mark. Extend the canopy line the full length of the body tube.



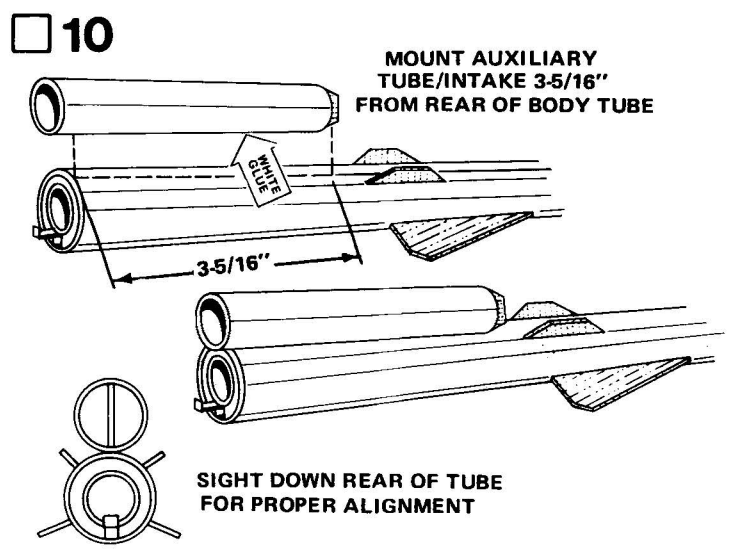
9 RE-WRAP GUIDE AROUND TUBE

APPLY GLUE TO ROOT EDGE OF FINS

4"

3-1/2"

Re-wrap the guide around the tube and slide the guide up the tube until the front of the guide is 4" from the rear of the body tube and re-align the canopy line on the tube with the canopy arrows on the guide. Glue the large fins, as shown, on the alignment lines just ahead of the arrows labeled "large fins" on the guide. Then slide the guide down until the front of the guide is 3-1/2" from the rear of the body tube and re-align the canopy arrows and canopy line on the tube. Glue the small fins as shown, on the alignment lines just ahead of the arrows labeled "small fins" on the guide.

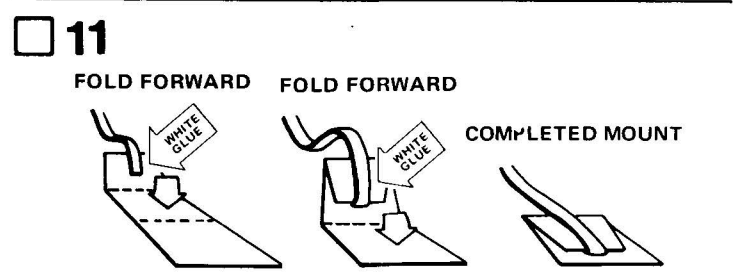


10 MOUNT AUXILIARY TUBE/INTAKE 3-5/16" FROM REAR OF BODY TUBE

3-5/16"

SIGHT DOWN REAR OF TUBE FOR PROPER ALIGNMENT

Glue the auxiliary tube/intake fin unit 3-5/16" from the rear of the body tube on the canopy line. Sight down the rear of the tubes to be sure the center line of the auxiliary tube/intake fin unit is aligned with the center line of the body tube as shown.

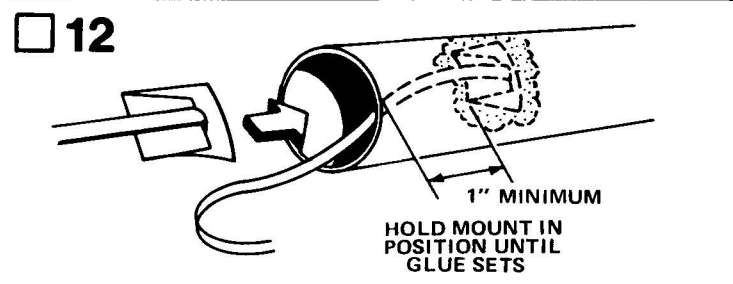


11 FOLD FORWARD FOLD FORWARD

WHITE GLUE

COMPLETED MOUNT

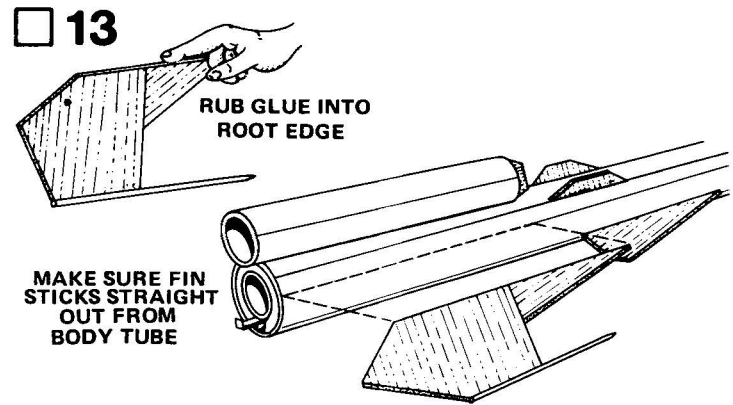
Cut out the shock cord mount from the pattern sheet. Pre-fold it on the dotted lines. Apply glue to section 1 and lay the shock cord (part L) into the glue. Fold over and apply glue to the back of the first section and exposed part of section 2. Lay the shock cord as shown and fold over again. Clamp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



12 1" MINIMUM

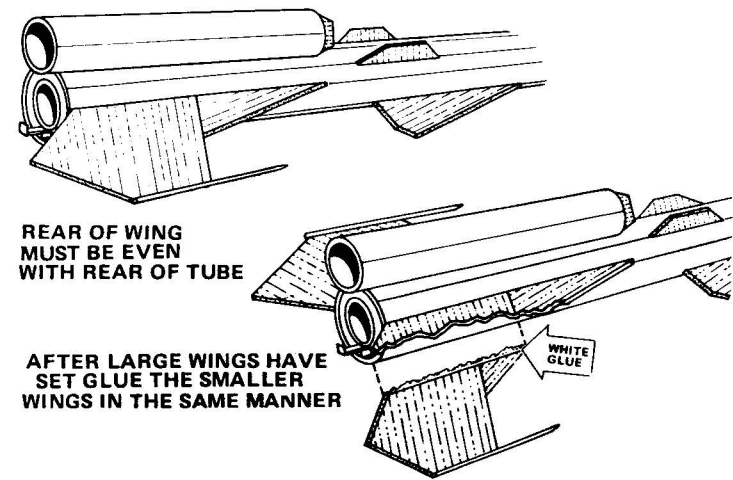
HOLD MOUNT IN POSITION UNTIL GLUE SETS

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



13 RUB GLUE INTO ROOT EDGE

MAKE SURE FIN STICKS STRAIGHT OUT FROM BODY TUBE



REAR OF WING
MUST BE EVEN
WITH REAR OF TUBE

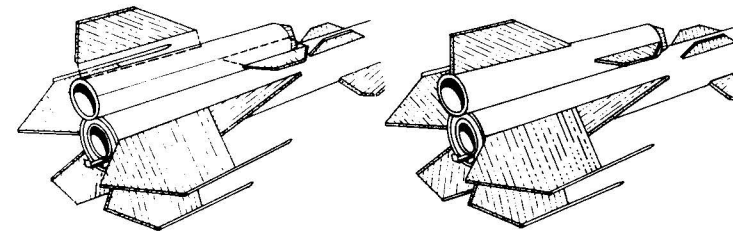
AFTER LARGE WINGS HAVE
SET GLUE THE SMALLER
WINGS IN THE SAME MANNER

WHITE
GLUE

COMPLETED WING
ASSEMBLY

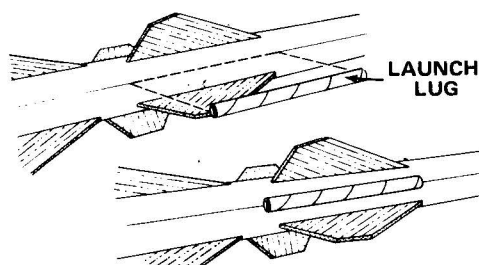
Apply a line of glue to the root edge of each large wing and rub it into the wood. Allow several moments for the glue to set. Apply another line of glue and position each wing on the appropriate alignment line on the tube. Refer to the illustration to be sure you position the wings correctly. The rear of the wing must be even with the rear of the body tube. After the large wings have set, glue the two smaller wings on their alignment lines in the same manner as for the large wings.

14 APPLY GLUE TO THE ROOT
EDGES OF REMAINING FINS



Glue the remaining fins to their alignment lines, referring to the illustration for positions. Adjust the fins so they project straight away from the body tube.

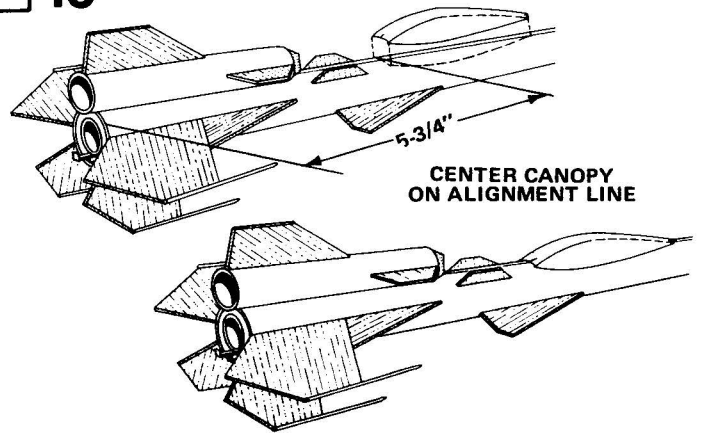
15
GLUE LAUNCH
LUG 3-3/4"
FROM REAR OF
BODY TUBE



LAUNCH
LUG

Glue the launch lug (part M) to the body on the alignment line 3-3/4" in front of the rear of the body tube. Align it straight on the body.

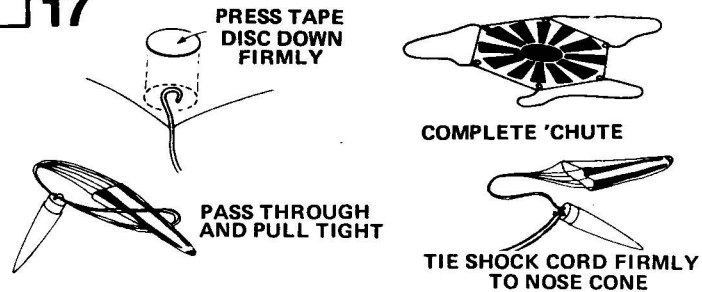
16



CENTER CANOPY
ON ALIGNMENT LINE

Glue the canopy to the body tube with the rear of the canopy 5-3/4" from the rear of the body tube. Center the canopy on the alignment line with the small marks on the canopy as shown.

17



PRESS TAPE
DISC DOWN
FIRMLY

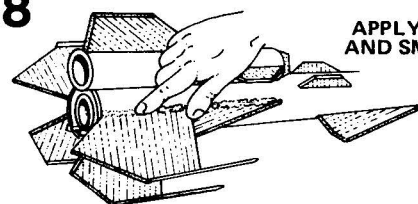
COMPLETE 'CHUTE

PASS THROUGH
AND PULL TIGHT

TIE SHOCK CORD FIRMLY
TO NOSE CONE

Cut out the parachute (part N) on its edge lines. Cut three 24" lengths of shroud line (part O). Attach line ends to the top of the parachute with tape discs (part Q) as shown. Pass the shroud line loops through the ring on the nose cone (part R). Pass the parachute through the loop ends and draw the lines tight against the ring. Tie the free end of the shock cord to the nose cone.

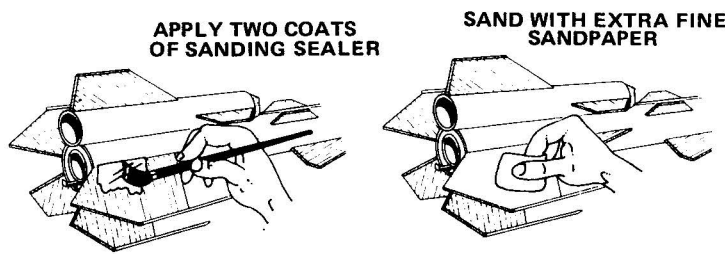
18



APPLY THIN LINE OF GLUE
AND SMOOTH WITH FINGER

Apply glue reinforcements to each fin joint and around canopy. Holding the model level, apply a narrow line of glue to both sides of each fin joint. Smooth out the glue with your finger. Keep the model level until the glue dries.

19

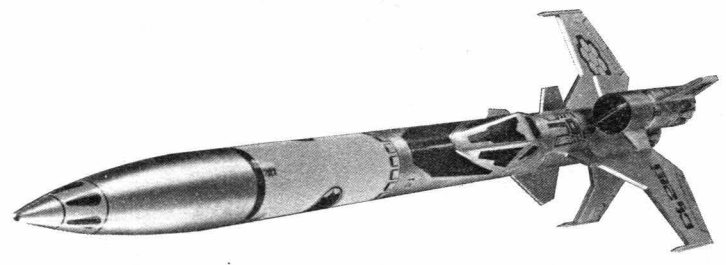


APPLY TWO COATS
OF SANDING SEALER

SAND WITH EXTRA FINE
SANDPAPER

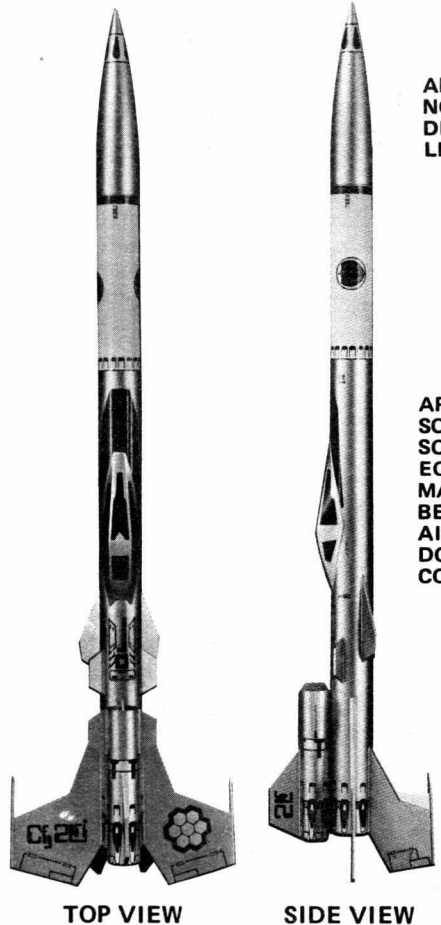
When all glue on the outside of the body is dry, prepare the fins for painting. Apply at least two coats of sanding sealer to the fins. Let dry and sand thoroughly between coats. Do this until the tiny holes in the wood are filled, and everything looks and feels smooth. See pages 5 and 6 for painting instructions, decal placement, and Countdown Checklist.

PAINTING AND DETAILING ORION STARFIGHTER



Spray paint entire model white. When dry, mask (with a section of plastic bag and masking tape) the front of the body tube from the body tube/nose cone joint line back 4-1/2" on the body tube. Spray paint the rear of the model and the nose cone with gold spray paint. Let dry and then carefully unmask front section to reveal the white area. Let the paint dry overnight.

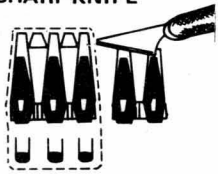
DECAL PLACEMENT



APPLY DECAL AROUND NOSE CONE AND MOVE DECAL UNTIL ITS EDGES LINE UP

DECALING TIP: APPLYING A DECAL SOLVENT SUCH AS SOLVASET OR ITS EQUIVALENT, HELPS MAKE DECALS STICK BETTER, ELIMINATES AIR BUBBLES, SNUGGLES DOWN IN SEAMS AND CONTOURS.

BE SURE TO TRIM DECALS WITH A SHARP KNIFE

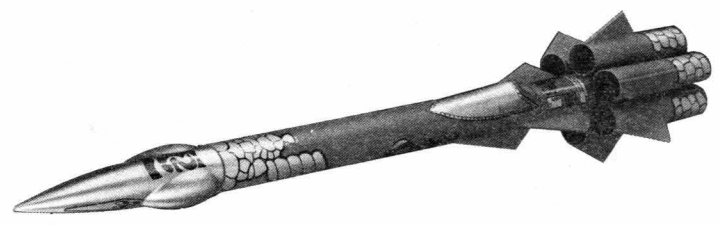


TOP VIEW

SIDE VIEW

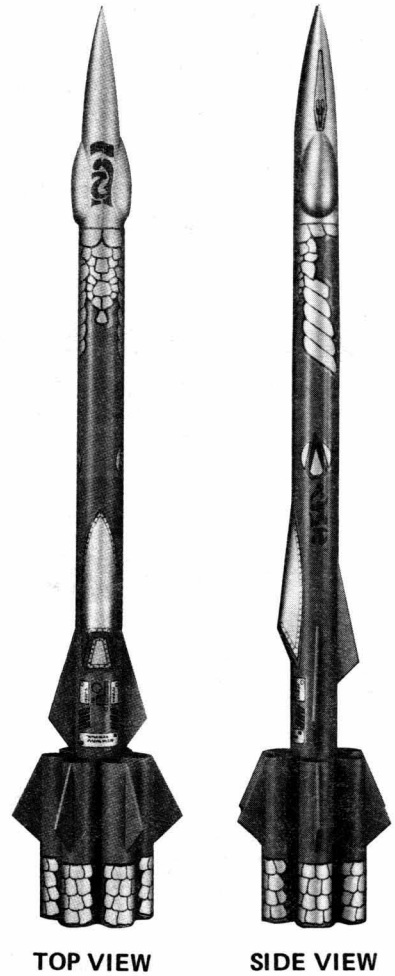
When all paint is completely dry, apply decals (part P) in positions shown. Trim the decals as shown in the illustration before application. Dip each in lukewarm water for 10 seconds, and hold it until it starts to uncurl. Slip decal off the backing sheet and onto your model. Blot away excess water. When all decals are in place, let the model dry overnight. After drying, apply a coat of clear spray to protect the decals.

PAINTING AND DETAILING TORELLIAN INVADER

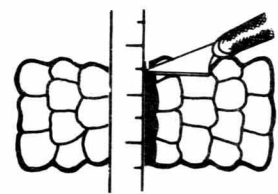


Paint the nose cone chrome silver and the rest of the model chromate green or artillery olive. Let dry overnight.

DECAL PLACEMENT



BE SURE TO USE A STRAIGHT-EDGE TO CUT DECALS



TOP VIEW

SIDE VIEW

When all paint is completely dry, apply decals (part P) in positions shown. Trim the decals as shown in the illustration before application. Dip each in lukewarm water for 10 seconds, and hold it until it starts to uncurl. Slip decal off the backing sheet and onto your model. Blot away excess water. When all decals are in place, let the model dry overnight. After drying, apply a coat of clear spray to protect the decals.

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, B4-2, B4-4, B6-2, B6-4, C6-3 or C6-5 model
 rocket engines. Use a B4-4 engine for your first flight.

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

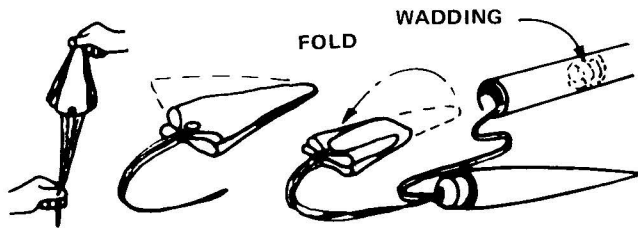
*HIAA -- Hobby Industry Association of America
 NAR -- National Association of Rocketry

COUNTDOWN CHECKLIST

T-14

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

T-13



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

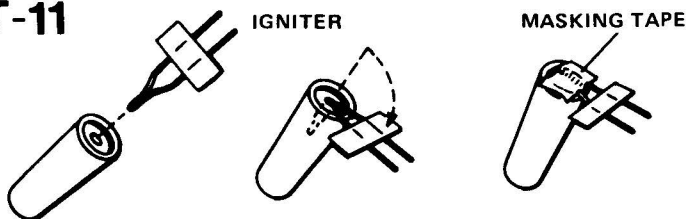
NOTE: DO NOT pack parachute until you are actually ready
 to launch. For maximum parachute reliability, lightly dust the
 'chute with ordinary talcum powder before each flight, especially
 in cold weather.

T-12

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

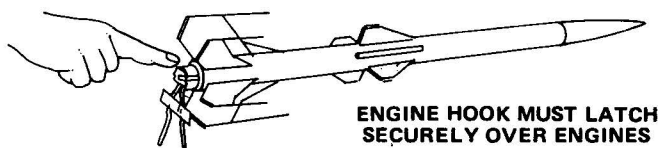
Nose cone should separate easily from rocket body tube, but
 should not be extremely loose. If fit is too tight, sand inside of
 body tube and shoulder of nose cone with fine sandpaper. If fit
 is too loose, add a wrapping of transparent tape or masking tape
 to the shoulder of the nose cone.

T-11



Install an igniter in an engine as directed in the engine instructions.

T-10

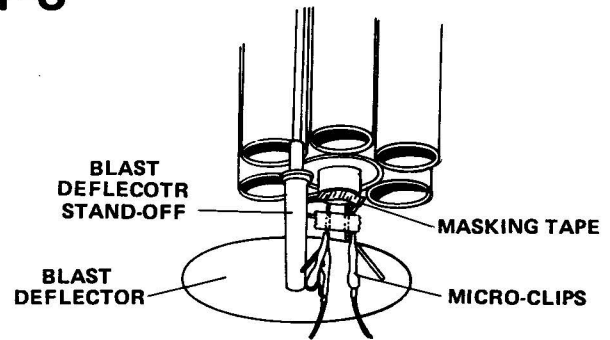


Insert engine into rocket engine mount. Engine hook must latch
 securely over end of engine.

T-9

Disarm the launch panel -- REMOVE SAFETY KEY!

T-8



Slide the launch rod through the launch lug on the rocket. Slide
 the rocket down on the launch pad. If the launch pad you are using
 does not have a deflector stand off, use an expended engine slid
 down on the launch rod before putting your rocket on the launch
 rod. 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 the engine nozzle 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

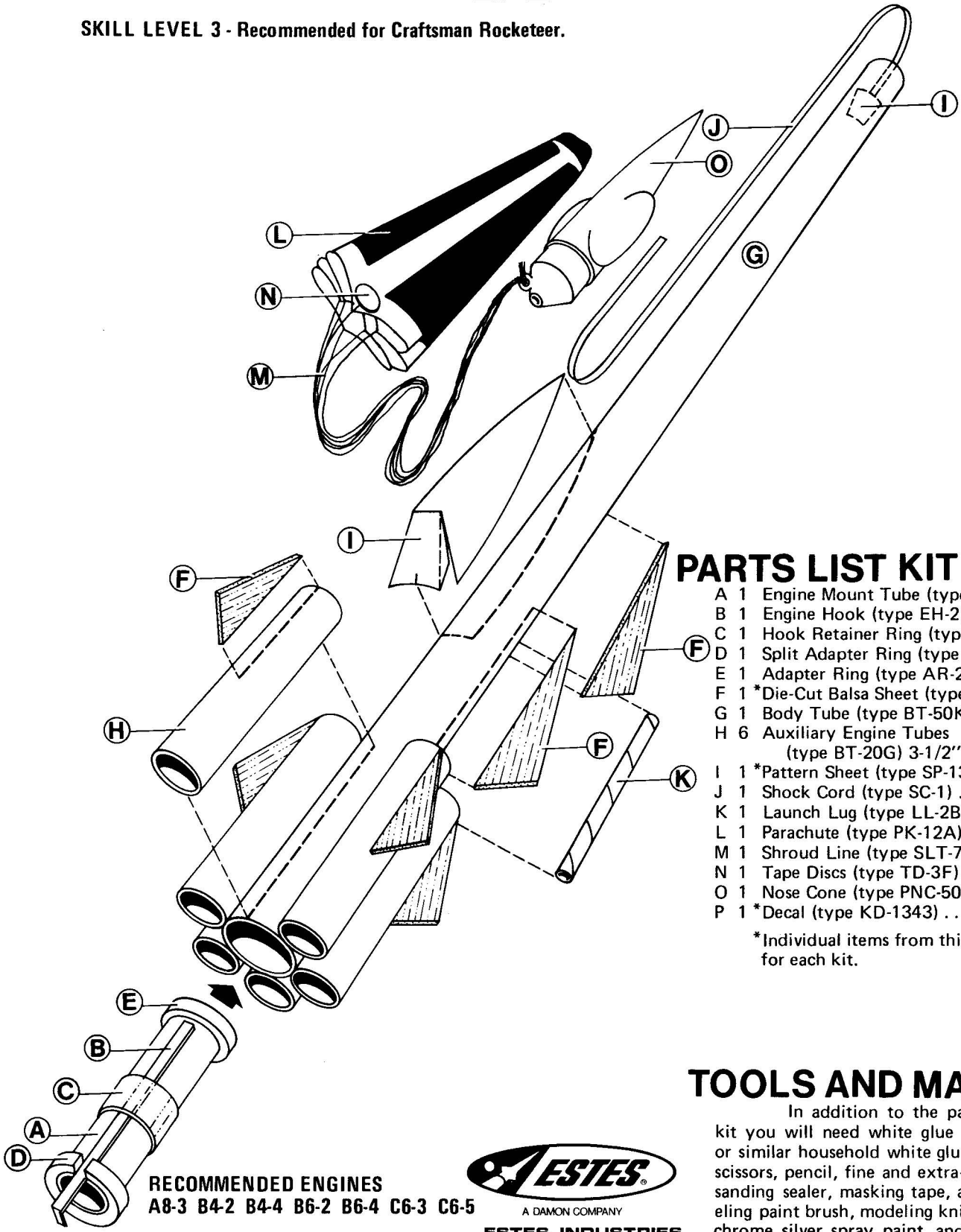
Occasionally the igniter will heat and burn into two pieces
 without igniting the engine. This is almost always caused by a
 failure to install it correctly. Remove safety key from launch panel,
 remove the model, clean the igniter residue from the engine nozzle,
 and install a new igniter. Repeat the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

TORRELLIAN INVAIDER

SKILL LEVEL 3 - Recommended for Craftsman Rocketeer.

BEFORE YOU START

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- B 1 Engine Hook (type EH-2) 35025
- C 1 Hook Retainer Ring (type HR-20) . . . 30168
- D 1 Split Adapter Ring (type AR-2050S) .80425
- E 1 Adapter Ring (type AR-2050) 30164
- F 1 *Die-Cut Balsa Sheet (type BF-1343A).32347
- G 1 Body Tube (type BT-50KE) 15" 30364
- H 6 Auxiliary Engine Tubes
(type BT-20G) 3-1/2" 30324
- I 1 *Pattern Sheet (type SP-1343)83317
- J 1 Shock Cord (type SC-1) 85730
- K 1 Launch Lug (type LL-2B) 2-3/8" . . . 38178
- L 1 Parachute (type PK-12A) 85564
- M 1 Shroud Line (type SLT-72) 38237
- N 1 Tape Discs (type TD-3F) 38406
- O 1 Nose Cone (type PNC-50CA) 71005
- P 1 *Decal (type KD-1343) 37149

*Individual items from this part are needed for each kit.

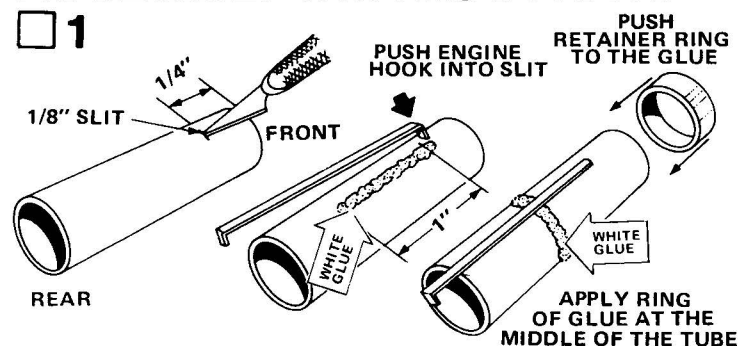
RECOMMENDED ENGINES
A8-3 B4-2 B4-4 B6-2 B6-4 C6-3 C6-5



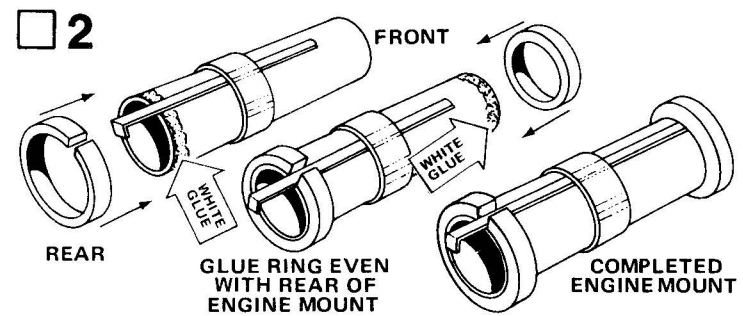
TOOLS AND MATERIALS

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, fine and extra-fine grit sandpaper, sanding sealer, masking tape, a medium size modeling paint brush, modeling knife with sharp blade, chrome silver spray paint, and chromate green or artillery olive spray paint.

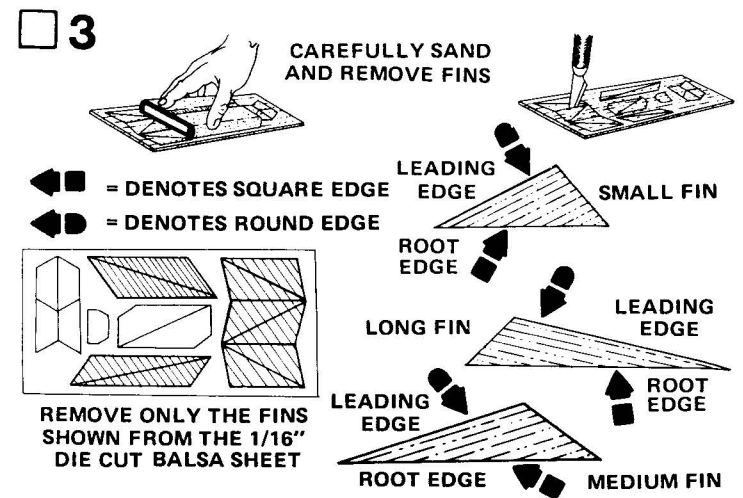
ASSEMBLY INSTRUCTIONS



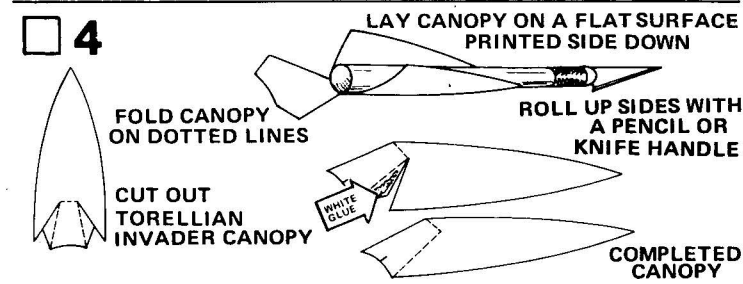
Cut a 1/8" long slit in the engine mount tube (part A), 1/4" from one end as shown. Apply a 1" line of glue to the tube as shown. Push one end of the engine hook (part B) into the slit and press the main part of the hook into the glue. Apply a line of glue around the middle of the tube and slide the hook retainer ring (part C) over the tube and hook and onto the glue.



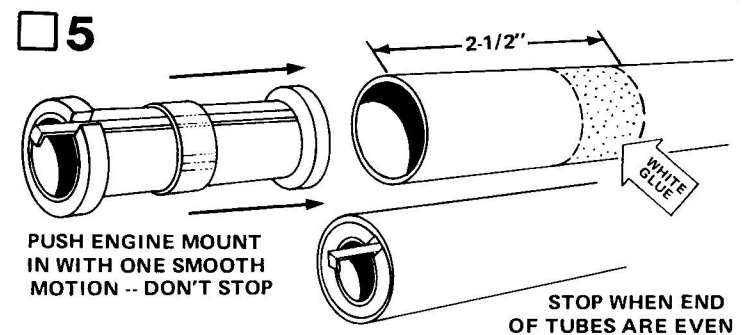
Glue the split adapter ring (part D) to the engine mount tube even with the rear end (the end with the over-hanging hook) so the slot is over the hook. Avoid getting glue in the slot. Glue the other ring (part E) to the front of the engine mount against the end of the hook as shown.



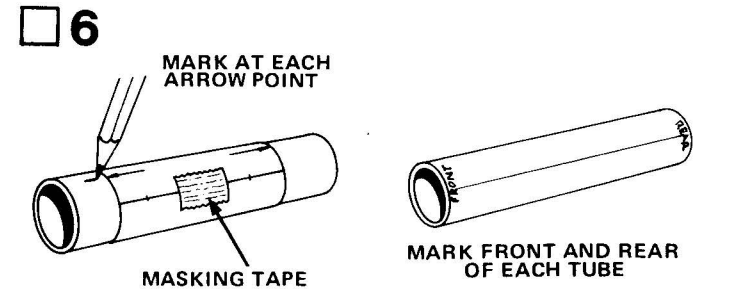
Sand both sides of the 1/16" balsa sheet (part F) until smooth using extra-fine sandpaper wrapped on a sanding block. Carefully remove only the parts needed from the sheet, as shown, using a sharp knife to separate any uncut spots. Round the leading edges only on the fins shown.



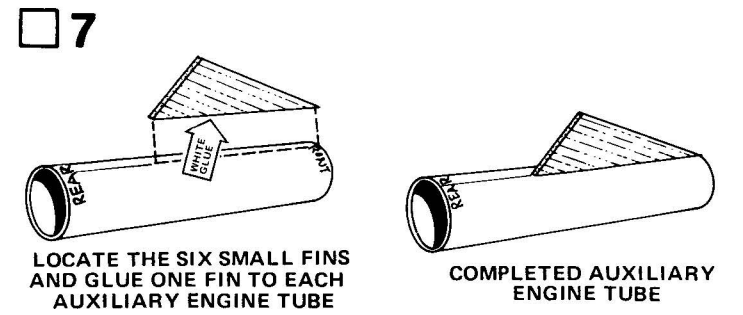
Cut out the canopy from the Torellian Invader side of the pattern sheet (part I) on the heavy outlines. Fold rear of canopy on dotted lines. Roll the sides up around a pencil or knife handle. Glue the rear of the canopy to the sides as shown.



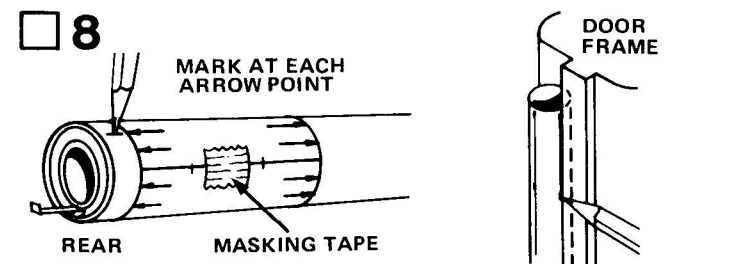
Smear glue around the inside of one end of the large body tube (part G) to cover an area about 2" to 2-1/2" from the end of the tube. Immediately insert the engine mount into the tube in one smooth motion until the end of the tube and the splitting ring are even.



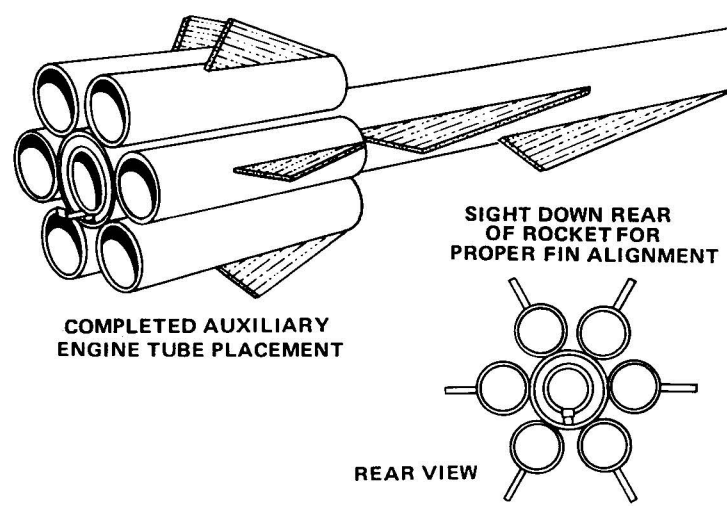
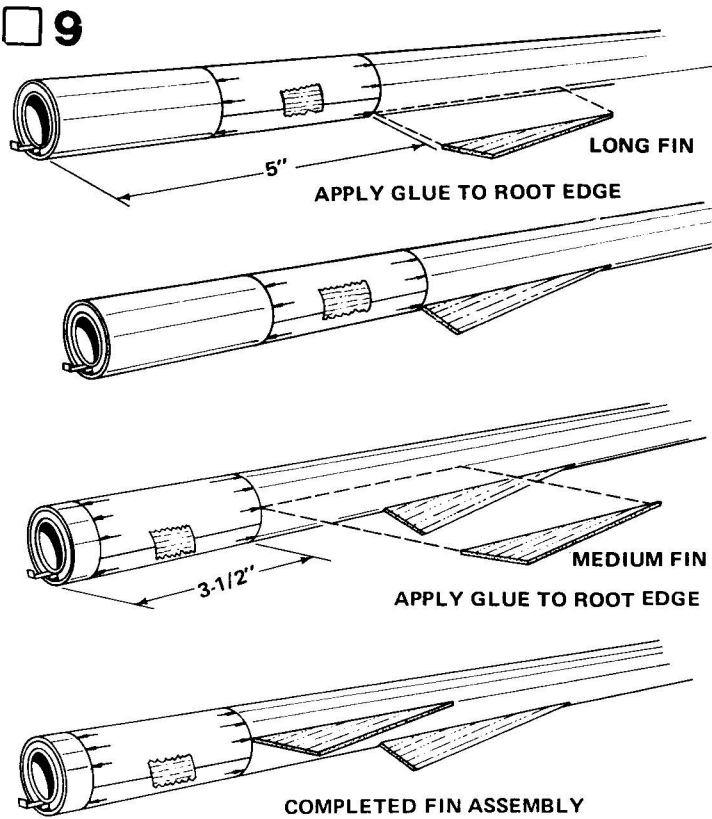
Cut out the Torellian Invader auxiliary engine tube marking guide from the pattern sheet. Locate six 3-1/2" auxiliary engine tubes (part H). Wrap the guide around each tube and mark at each arrow point, front and rear. Draw a straight line connecting each matching set of marks and extend each line the full length of the tube. Mark the front and rear edges of the tubes where the lines end and begin as shown.



Locate the six small fins, from step 3, and glue one fin to each auxiliary engine tube with the tip of the fin just touching the front of the tube on one of the alignment lines, as shown.

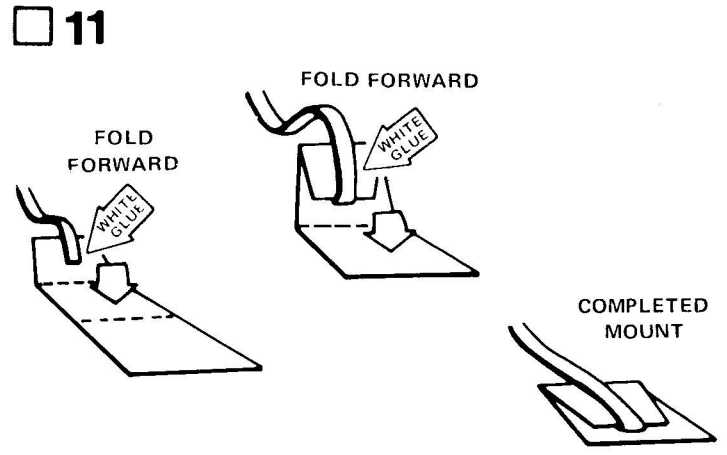


Cut out the Torellian Invader body tube marking guide from the pattern sheet. Wrap the guide around the rear of the large body tube so the engine hook/launch lug arrow on the guide is in line with the engine hook. Mark the tube at each arrow point, front and rear. Draw a straight line connecting each matching front and rear set of marks. Extend all lines 12 inches forward from rear of tube.

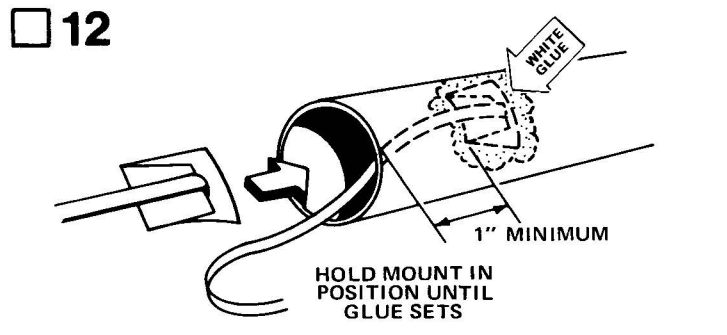
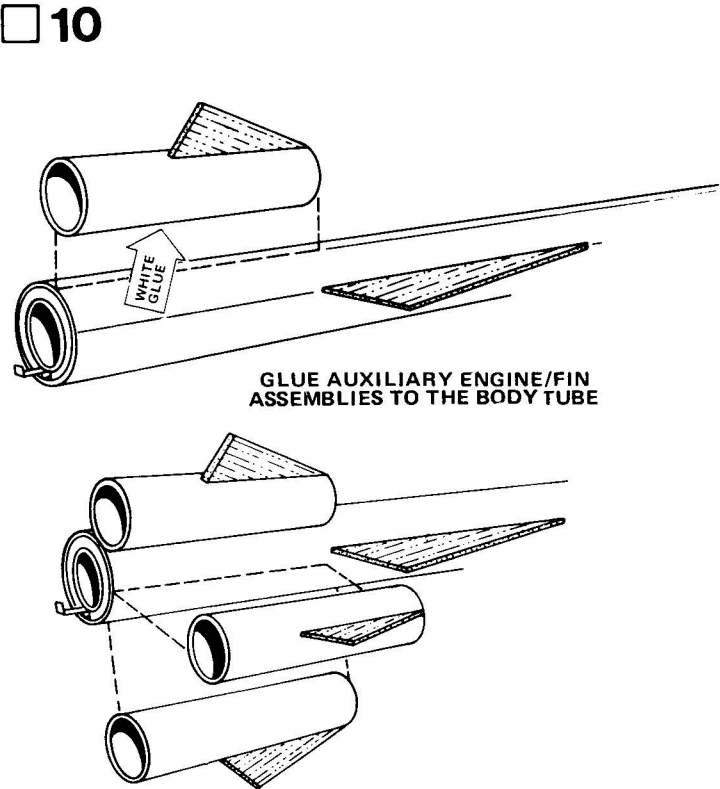


Next glue each of the six auxiliary engine/fin assemblies to the body tube, flush with the rear of the body tube and so the alignment lines on the body tube correspond to the front and rear marks on the auxiliary engines as shown. These tubes must align straight down the body tube. Sight down the rear of the tubes to be sure the center line of the auxiliary tube and fin units are aligned with the center line of the body tube as shown so the fins on the tubes project straight away from the tube.

Re-wrap the guide around the tube and slide the guide up the tube until the front of the guide is 5" from the rear of the body tube and re-align the canopy line on the tube and the canopy arrows on the guide. Glue the long fins, as shown, on the alignment lines just ahead of the arrows labeled "long fin" on the guide. Then slide the guide down toward the rear of the body tube until the front of the guide is 3-1/2" from the rear of the body tube, re-align the canopy line and arrows on the guide. Glue the medium size fins on the alignment lines just ahead of the arrows labeled "medium fin/engine" on the guide.

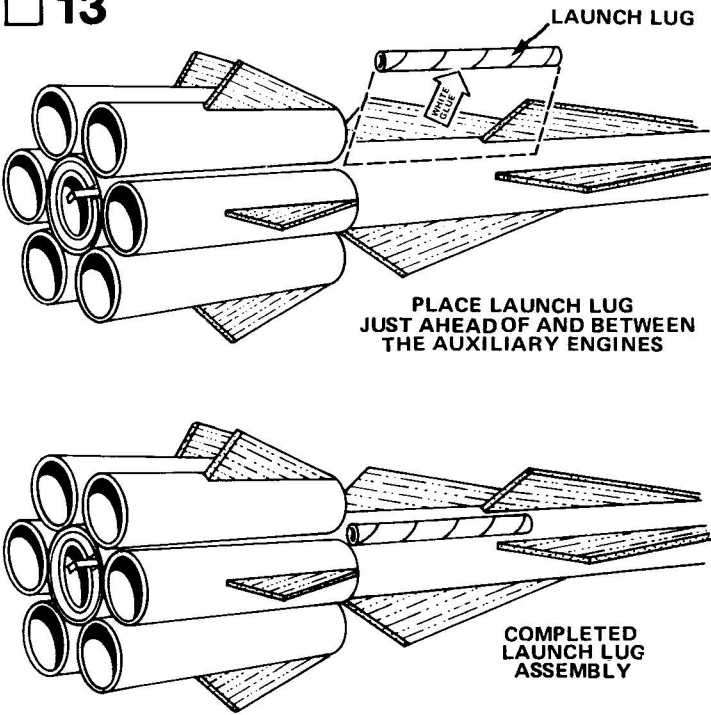


Cut out the shock cord mount from the pattern sheet. Pre-fold on the dotted lines. Apply glue to section 1 and lay the shock cord (part J) into the glue. Fold over and apply glue to the back of the first section and exposed part of section 2. Lay the shock cord as shown and fold over again. Clamp the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



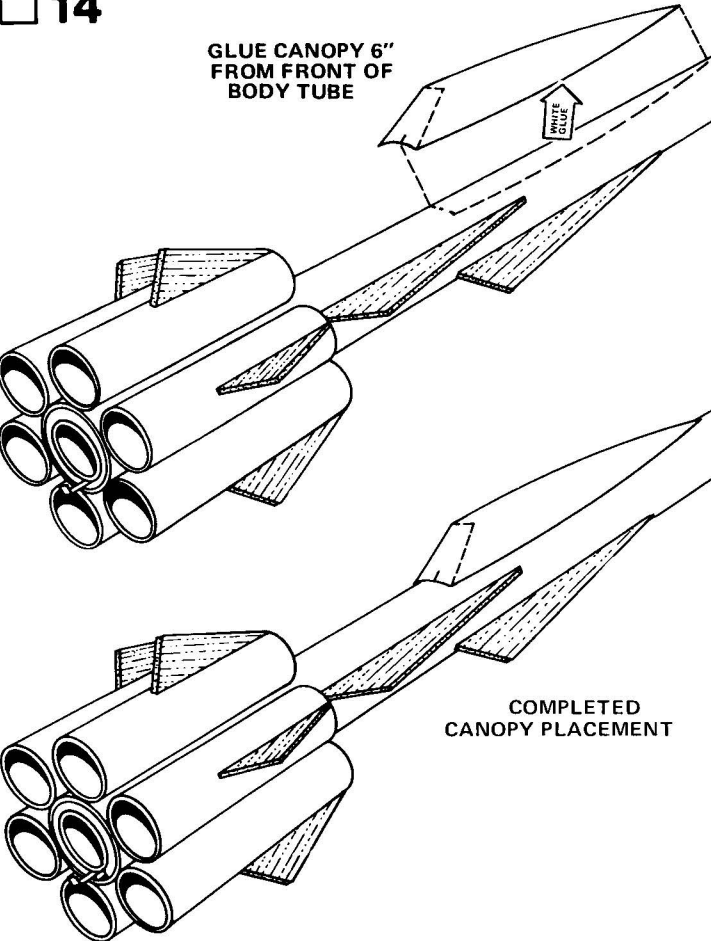
Apply glue to the inside of the body tube in the front end over an area about 1" to 2" from the front end. The glued area should be the same size as the shock cord mount. Press the mount into the glue as shown and hold until the glue sets.

13



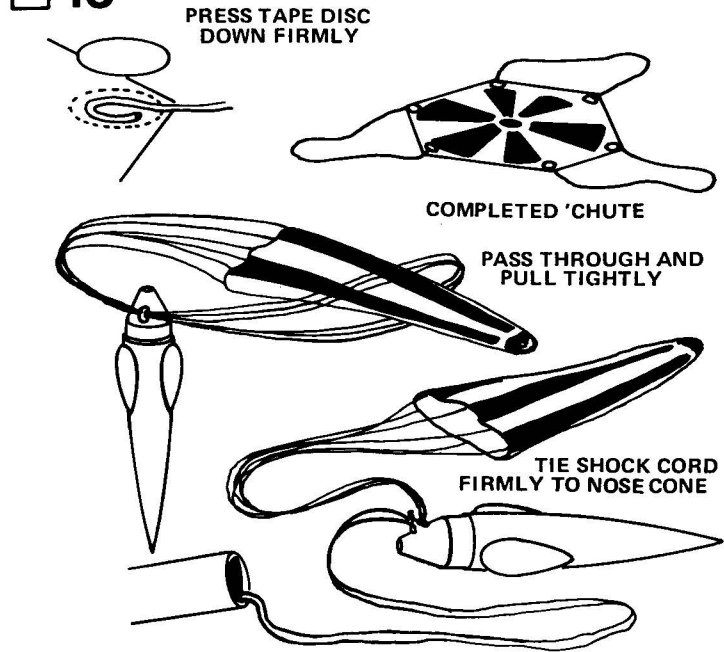
Glue the launch lug (part K) to the body on its line just ahead of and between the auxiliary engines as shown. Align it straight on the tube.

14



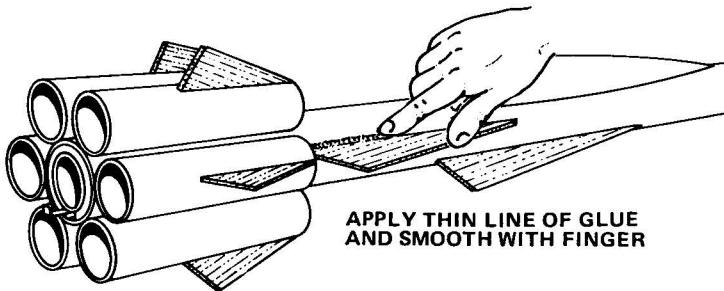
Glue the canopy to the body tube with the front point of the canopy 6" from the front of the body tube. The front point and the small mark on the rear of the canopy should be on the canopy line.

15



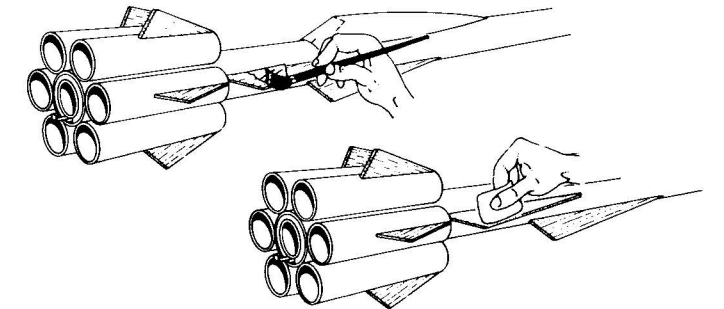
Cut out the parachute (part L) on its edge lines. Cut three 24" lengths of shroud line (part M). Attach line ends to the top of the parachute with tape discs (part N) as shown. Pass the shroud line loops through the ring on the nose cone (part O). Pass the parachute through the loop ends and draw the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

16



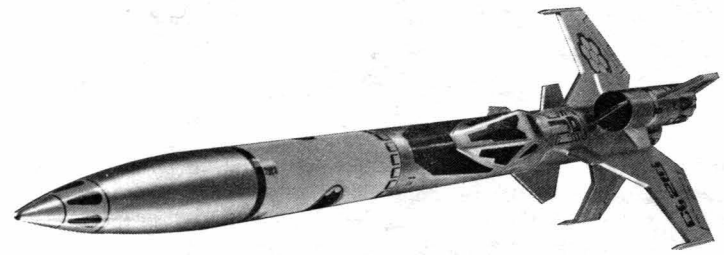
Apply glue reinforcements to each fin joint and around canopy. Holding the model level, apply a narrow line of glue to both sides of each fin joint. Smooth out the glue with your finger. Keep the model level until the glue dries.

17



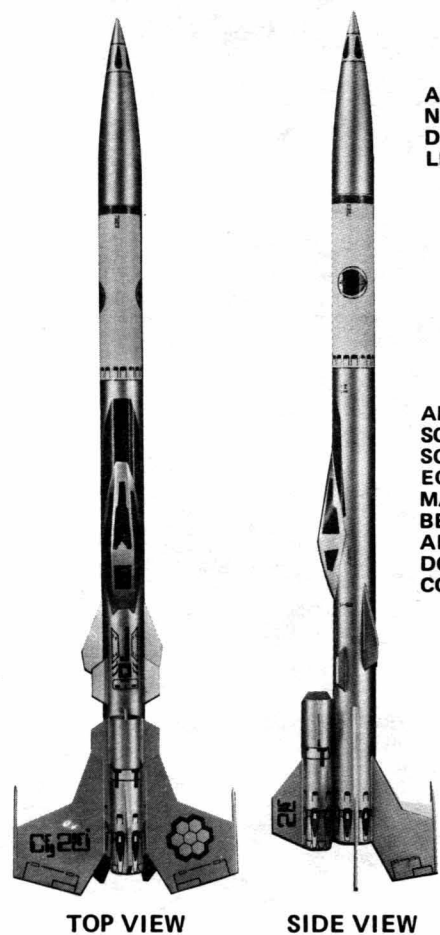
When all glue on the outside of the body is dry, prepare the fins for painting. Apply at least two coats of sanding sealer to the fins. Let dry and sand thoroughly between coats. Do this until the tiny holes in the wood are filled, and everything looks and feels smooth. See pages 5 and 6 for painting instructions, decal placement, and Countdown Checklist.

PAINTING AND DETAILING ORION STARFIGHTER



Spray paint entire model white. When dry, mask (with a section of plastic bag and masking tape) the front of the body tube from the body tube/nose cone joint line back 4-1/2" on the body tube. Spray paint the rear of the model and the nose cone with gold spray paint. Let dry and then carefully unmask front section to reveal the white area. Let the paint dry overnight.

DECAL PLACEMENT



APPLY DECAL AROUND NOSE CONE AND MOVE DECAL UNTIL ITS EDGES LINE UP

DECALING TIP: APPLYING A DECAL SOLVENT SUCH AS SOLVASET OR ITS EQUIVALENT, HELPS MAKE DECALS STICK BETTER, ELIMINATES AIR BUBBLES, SNUGGLES DOWN IN SEAMS AND CONTOURS.

BE SURE TO TRIM DECALS WITH A SHARP KNIFE

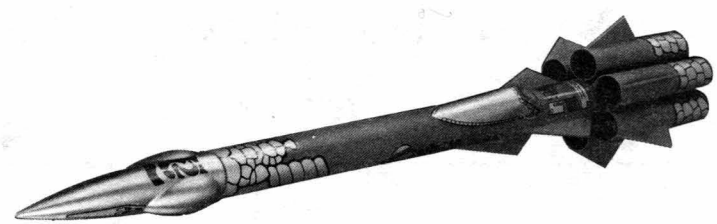


TOP VIEW

SIDE VIEW

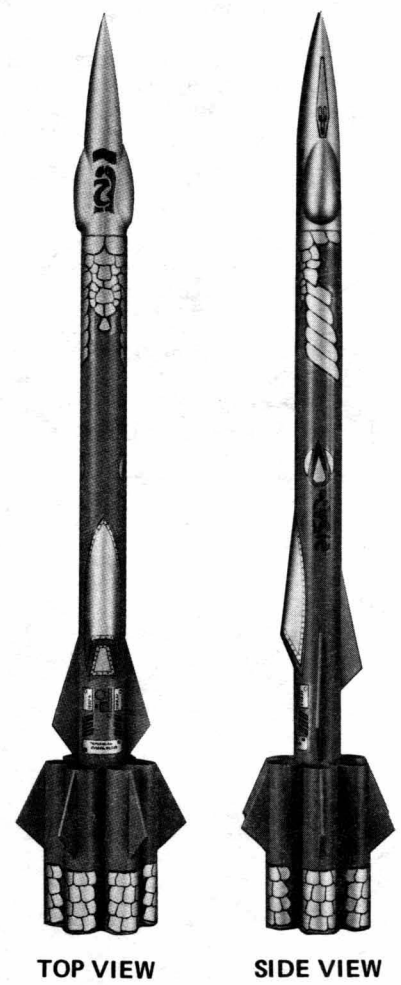
When all paint is completely dry, apply decals (part P) in positions shown. Trim the decals as shown in the illustration before application. Dip each in lukewarm water for 10 seconds, and hold it until it starts to uncurl. Slip decal off the backing sheet and onto your model. Blot away excess water. When all decals are in place, let the model dry overnight. After drying, apply a coat of clear spray to protect the decals.

PAINTING AND DETAILING TORELLIAN INVADER

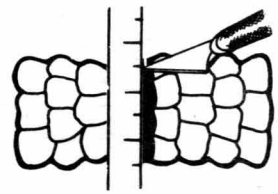


Paint the nose cone chrome silver and the rest of the model chromate green or artillery olive. Let dry overnight.

DECAL PLACEMENT



BE SURE TO USE A STRAIGHT-EDGE TO CUT DECALS



TOP VIEW

SIDE VIEW

When all paint is completely dry, apply decals (part P) in positions shown. Trim the decals as shown in the illustration before application. Dip each in lukewarm water for 10 seconds, and hold it until it starts to uncurl. Slip decal off the backing sheet and onto your model. Blot away excess water. When all decals are in place, let the model dry overnight. After drying, apply a coat of clear spray to protect the decals.

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, B4-2, B4-4, B6-2, B6-4, C6-3 or C6-5 model
 rocket engines. Use a B4-4 engine for your first flight.

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

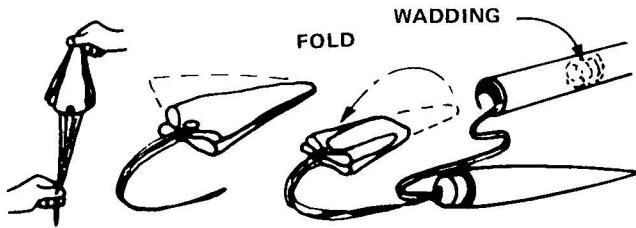
*HIAA -- Hobby Industry Association of America
 NAR -- National Association of Rocketry

COUNTDOWN CHECKLIST

T-14

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

T-13



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

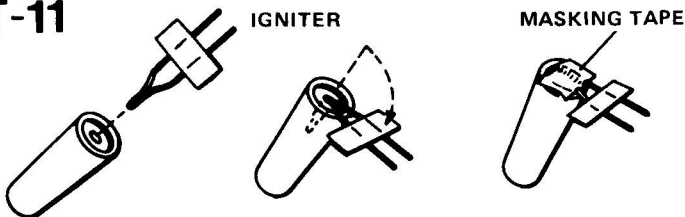
NOTE: DO NOT pack parachute until you are actually ready
 to launch. For maximum parachute reliability, lightly dust the
 'chute with ordinary talcum powder before each flight, especially
 in cold weather.

T-12

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

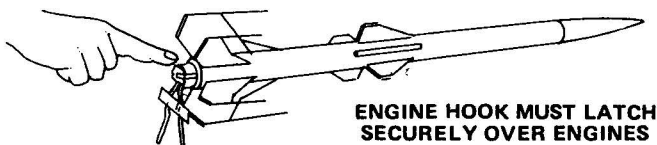
Nose cone should separate easily from rocket body tube, but
 should not be extremely loose. If fit is too tight, sand inside of
 body tube and shoulder of nose cone with fine sandpaper. If fit
 is too loose, add a wrapping of transparent tape or masking tape
 to the shoulder of the nose cone.

T-11



Install an igniter in an engine as directed in the engine instructions.

T-10

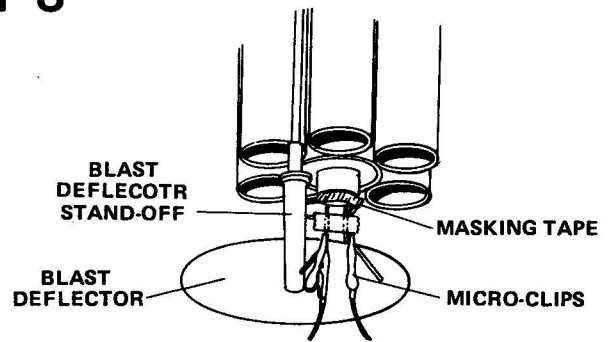


Insert engine into rocket engine mount. Engine hook must latch
 securely over end of engine.

T-9

Disarm the launch panel -- REMOVE SAFETY KEY!

T-8



Slide the launch rod through the launch lug on the rocket. Slide
 the rocket down on the launch pad. If the launch pad you are using
 does not have a deflector stand off, use an expended engine slid
 down on the launch rod before putting your rocket on the launch
 rod. 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 the engine nozzle 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

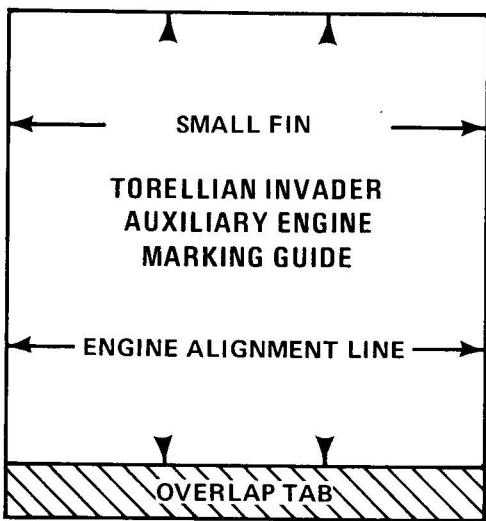
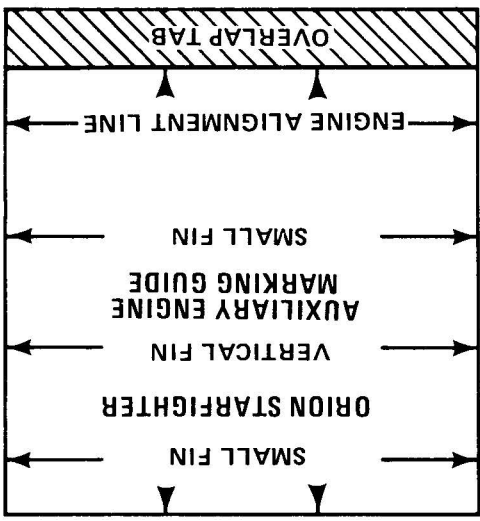
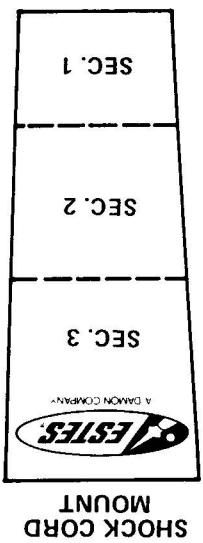
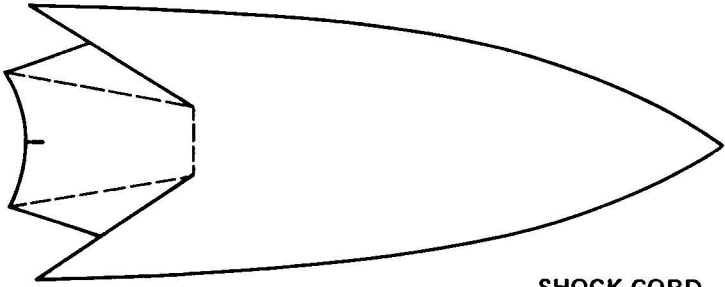
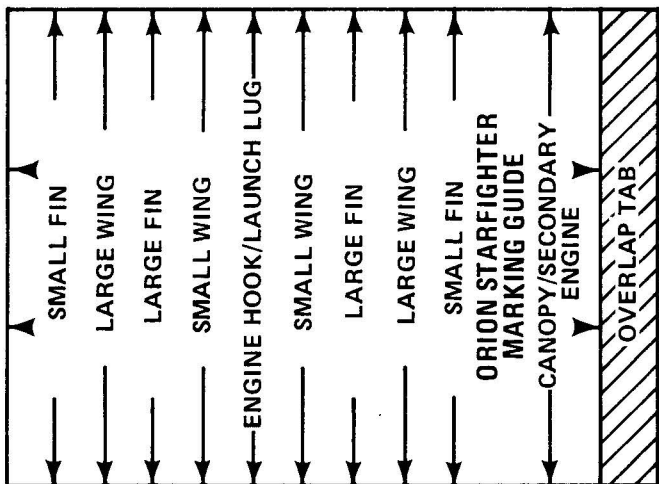
Arm the launch panel -- INSERT SAFETY KEY!

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

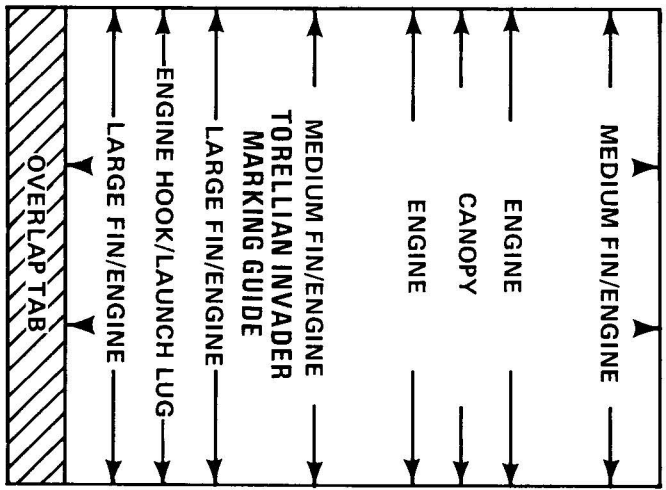
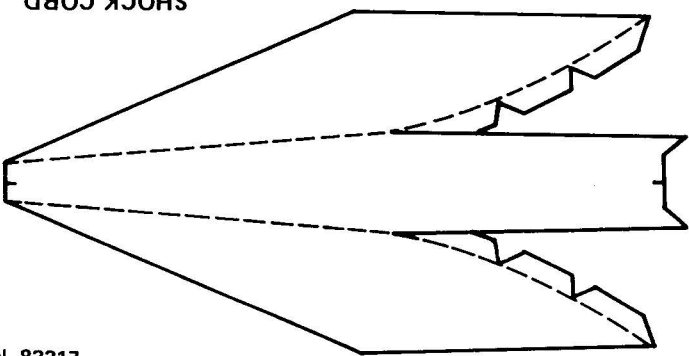
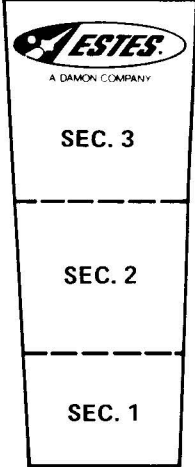
Repeat Countdown Checklist for each flight.

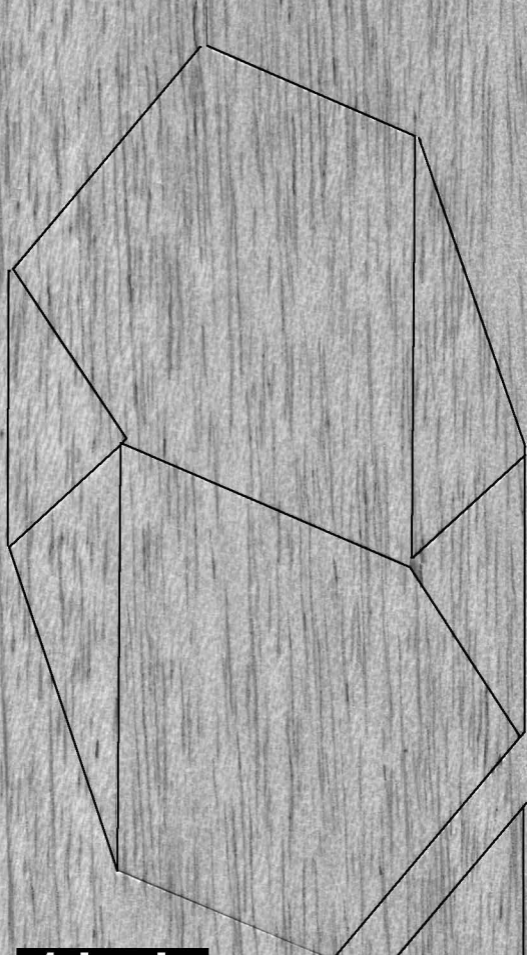
MISFIRE PROCEDURE

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.

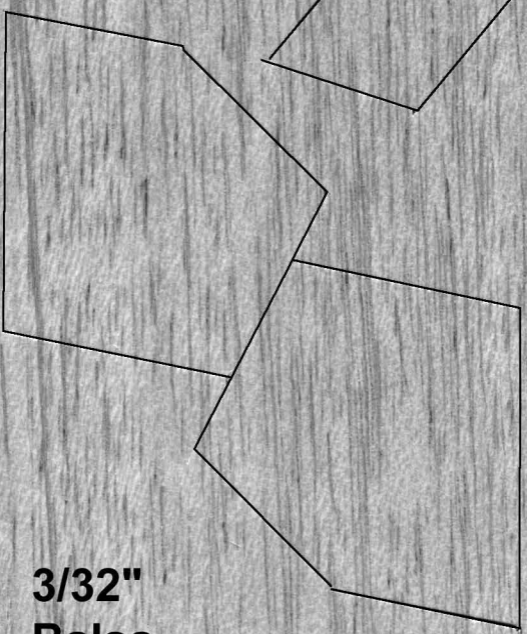


SHOCK CORD MOUNT





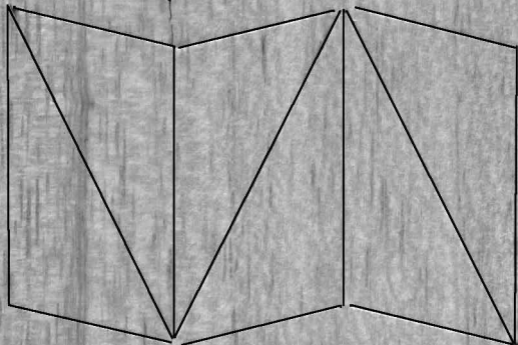
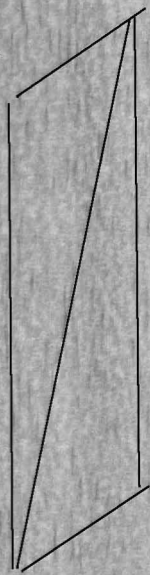
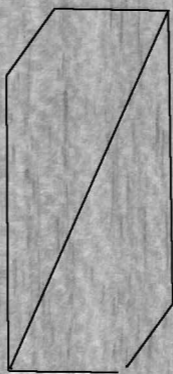
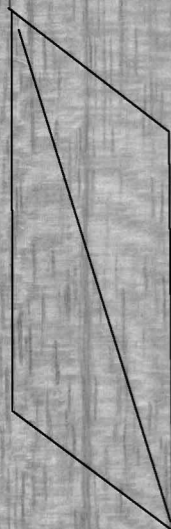
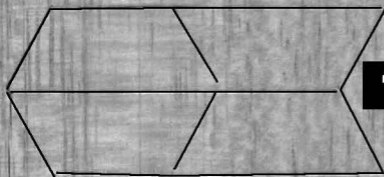
1 Inch



3/32"
Balsa

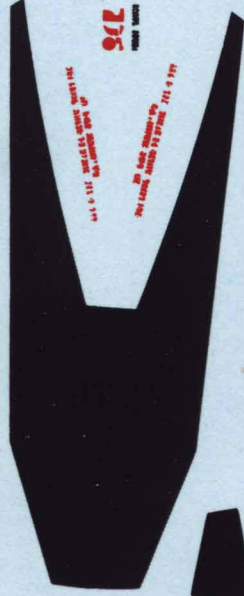
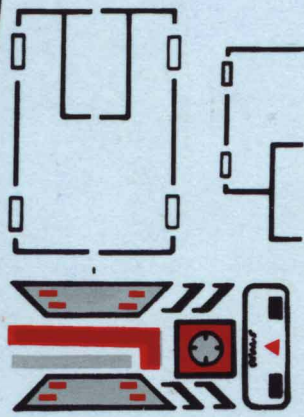
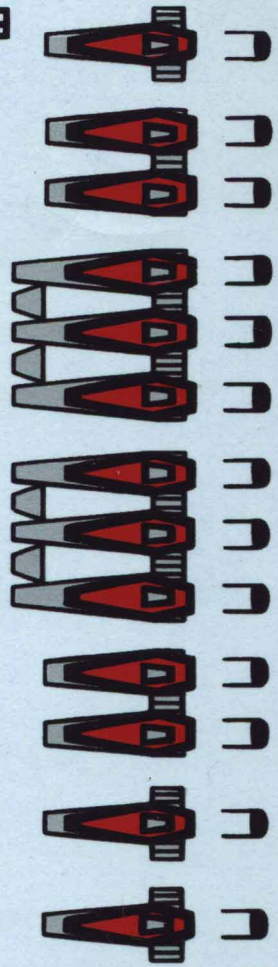
3/32"

1 Inch



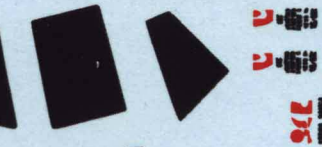


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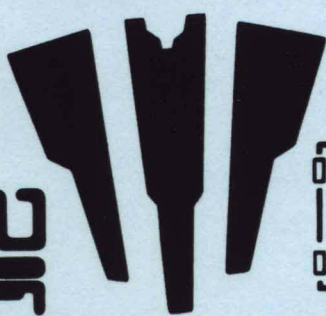


735

1/2" x 1 1/2" x 1 1/2" (12.7 x 38.1 x 38.1 mm)
1/2" x 1 1/2" x 1 1/2" (12.7 x 38.1 x 38.1 mm)
1/2" x 1 1/2" x 1 1/2" (12.7 x 38.1 x 38.1 mm)



735

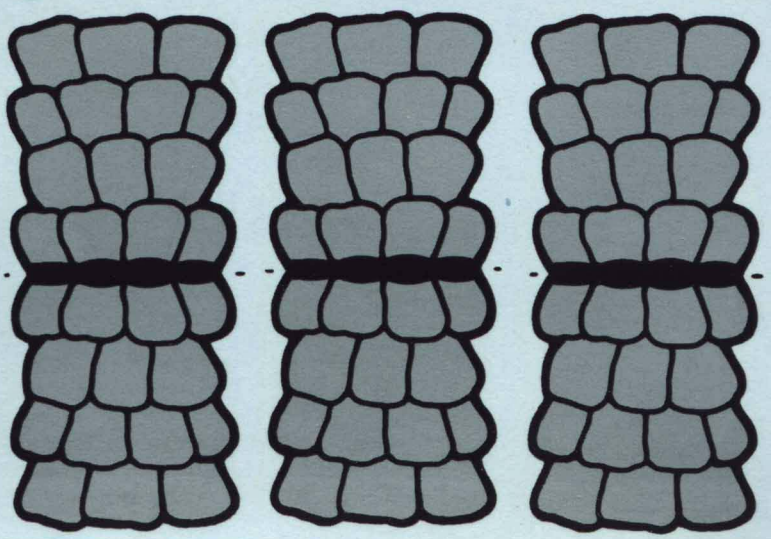
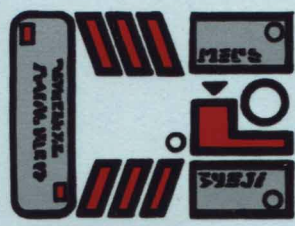
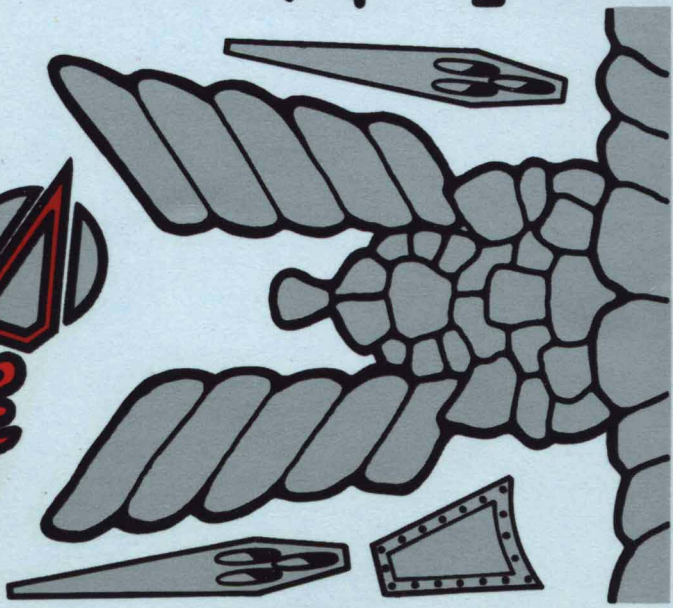


735

735



ORION STARFIGHTER
TORELLIAN INVADER



STARFIGHTER COMBO KIT

TWO COMPLETE FLYING MODEL ROCKETS

SKILL LEVEL 3

1 Beginner 2 Intermediate 3 Customer

4 Advanced 5 Expert
This is a highly advanced model rocket. Recommended for ages 12 to adults. Engines, launch button, glue and folding supplies are not included. A launch controller is required for those under 12 years of age when flying model rockets.

ORION STARFIGHTER

Primary defense starfighter for the Orion system. Confined within white plastic wings, stabilizer and battery reveal engine for easy break construction. Includes starfighter decal. Does not burn fins, quick release engine mount, and 12" parachute recovery.

Specifications:

Length: 21 7/8" (55.44 cm)
Diameter: 3.57" (9.07 cm)
Weight: 1.13 oz. (31.8 g)

Recommended Engines:
A6-3 A6-4 A6-5 Fire Flyer
907 904 906 914S 916 924

SUPER VALUE!
Includes both Orion Starfighter and Turrellian Invader

TORELLIAN INVADER

Primary Invader and primary attack fighter from the Turrellian Empire. Capable of hovering, professional grade motor and launching mechanisms required. Features include: realistic nose cone, dorsal battle fins, quick release engine mount, and 12" recovery parachute.

Specifications:

Length: 20" (50.8 cm)
Diameter: 3.57" (9.07 cm)
Weight: 1.05 oz. (29.8 g)

Recommended Engines:
A6-3 A6-4 A6-5 Fire Flyer
907 904 906 914S 916 924



1343

ESTES INDUSTRIES
PHENIX, CO. 87000 USA

