





CAREFULLY READ ALL STEPS BEFORE ASSEMBLING

# SUNWARD ICE STORM Model Rocket Kit.

Recommended for Ages 16 and up.  
Adult supervision required for ages 14-15 with  
Intermediate skill level recommended

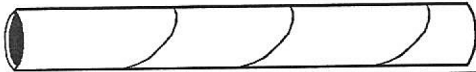
Plastic bags should always be kept away from babies and  
children to avoid suffocation.

Parts List Rev 5 BNC

www.sunward1.com  
Info@sunward1.com

Use only single stage engines in this model  
Recommended engines: C5-3 (First Flight), C6-3, C6-5  
Launch Pad, Ignition System, Engines, Igniters  
and Recovery wadding not included

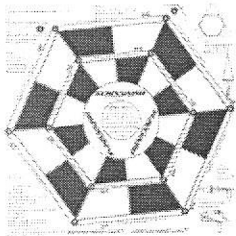
1 MAIN BODY TUBE 18" (45cm) LONG



1 PLASTIC NOSE CONE  
CAREFULLY USE A HOBBY KNIFE  
DO NOT CUT OFF EYELET



1 PARACHUTE SHEET



1 PARACHUTE  
ASSEMBLY STRING



2 LASER CUT BALSA WOOD FIN SHEETS



1 ENGINE  
THRUST RING



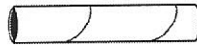
1 METAL ENGINE HOOK



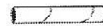
2 ENGINE CENTERING RINGS



1 ENGINE TUBE



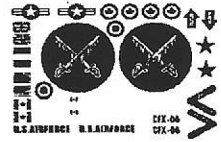
1 LAUNCH LUG



6 PARACHUTE  
REINFORCEMENT RINGS



1 DECAL SHEET



SUNWARD MODEL AEROSPACE  
SUNWARD MODEL AEROSPACE

1 ELASTIC SHOCK CORD



1 "JET ENGINE INTAKE" WRAP-AROUND  
AND FIN REINFORCEMENT SHEET



NOTE: Balsa wings and fins must be removed only by cutting them out with a hobby knife. If you try to "punch" them out by hand, they may be seriously damaged

You will also need:

A ruler, 3/4" (2cm) thick book, white glue, scissors, hobby knife, cellophane tape, pencil, fine sandpaper, spray paint.

To install and ignite rocket engine, follow the instructions that are included with the engines or launch pad

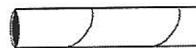
This model is built to work with igniters, engines, recovery wadding and launch pads built by the leading manufacturers

**"D" Motor Assembly Instructions** Use these set of instruction to use "D" engines instead of B/C engines.

2 ENGINE  
CENTERING RINGS



1 ENGINE TUBE



1 ENGINE THRUST RING



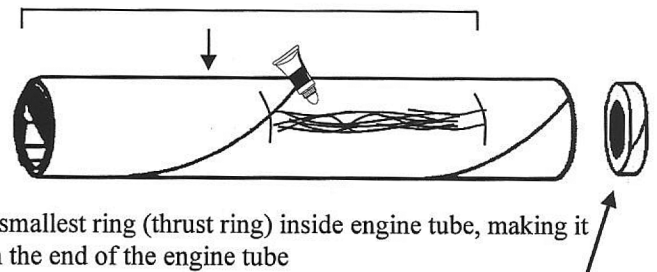
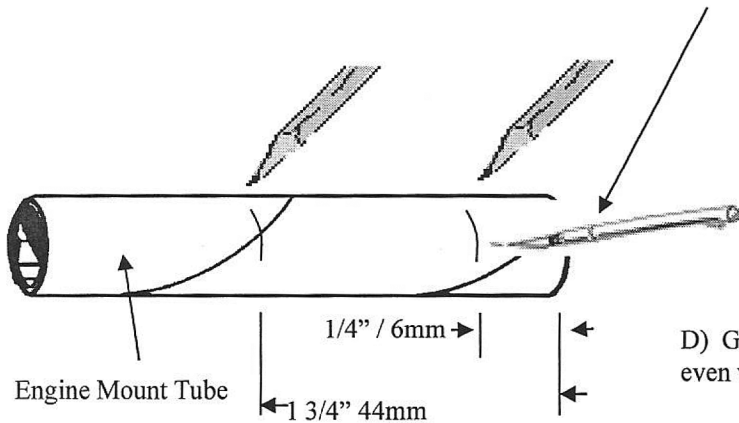
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## Assembly Instructions

A) On the engine tube, mark two lines at  $1/4'' / 6\text{mm}$  and at  $1\ 3/4'' / 44\text{mm}$

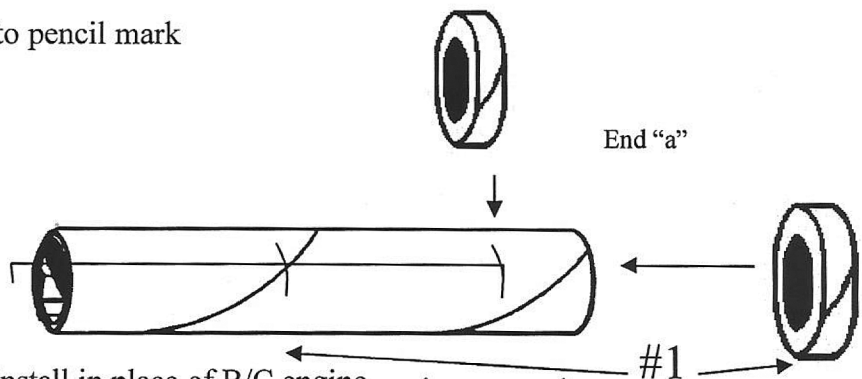
B) Cut  $1/4'' / 6\text{mm}$  slit

C) Place glue as shown. Position hook. Hook may not be exactly as shown.



E) Slide one engine centering ring (#1) to pencil mark shown from end "a"

F) Slide second engine centering ring flush with end of engine tube



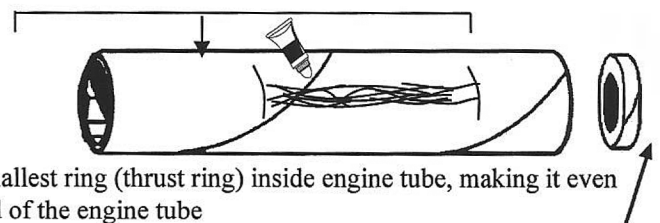
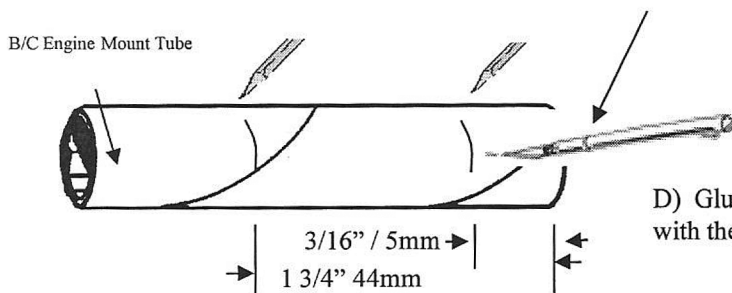
G) Complete tube should be as shown. Install in place of B/C engine mount where shown in instructions. Use D12-3 or D12-5 engines.

## B/C Motor Assembly Instructions

A) On the engine tube, mark two lines at  $3/16'' / 5\text{mm}$  and at  $1\ 3/4'' / 44\text{mm}$

B) Cut  $3/16'' / 5\text{mm}$  slit

C) Place glue as shown. Position hook. Hook may not be exactly as shown.

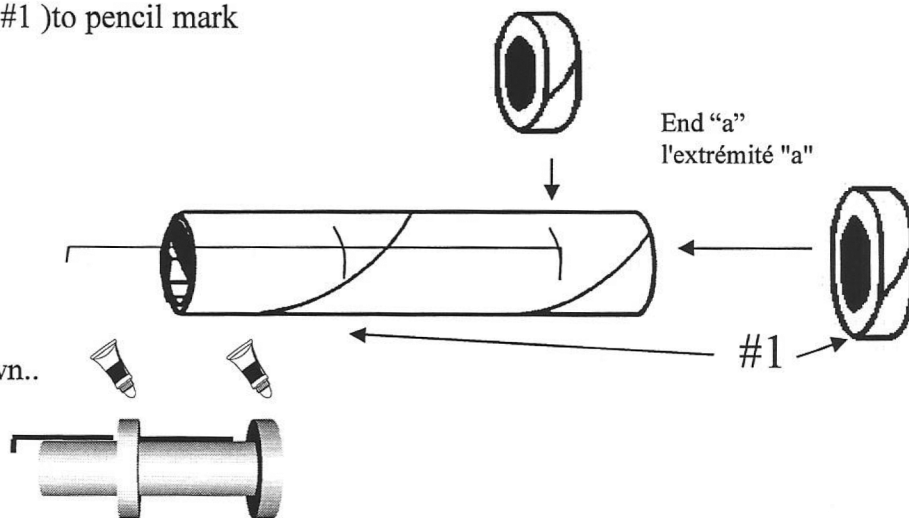


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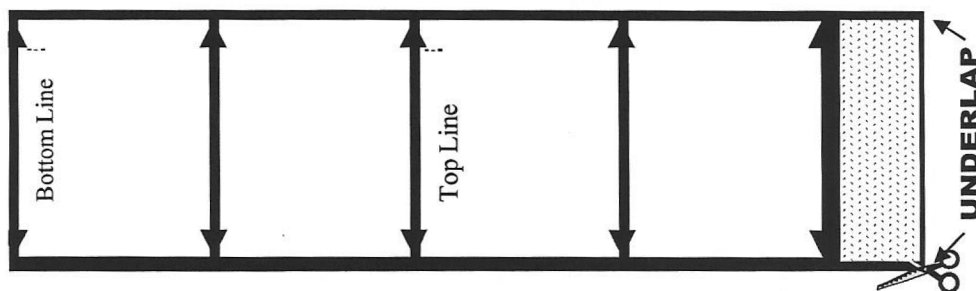
E) Slide one engine centering ring (#1) to pencil mark shown from end "a"

F) Slide second engine centering ring flush with end of engine tube

G) Complete tube should be as shown..

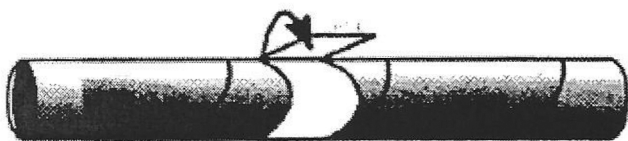


#2: CUT OUT THIS MARKING TEMPLATE ALONG THE OUTSIDE EDGE

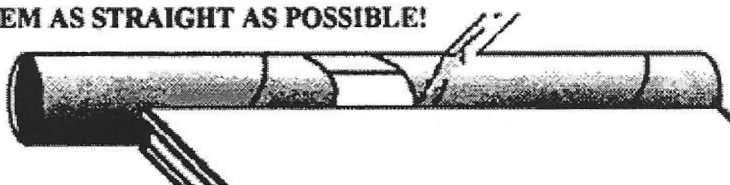


**STEP 3: WRAP TEMPLATE AROUND BODY (LARGER) TUBE. FASTEN IT TOGETHER WITH TAPE SO THAT THE SHADED AREA IS COVERED.**

**TAPE TEMPLATE IN PLACE AROUND THE MIDDLE OF THE BODY TUBE. MARK BODY TUBE WHERE ARROWS POINT, THEN REMOVE TEMPLATE.**



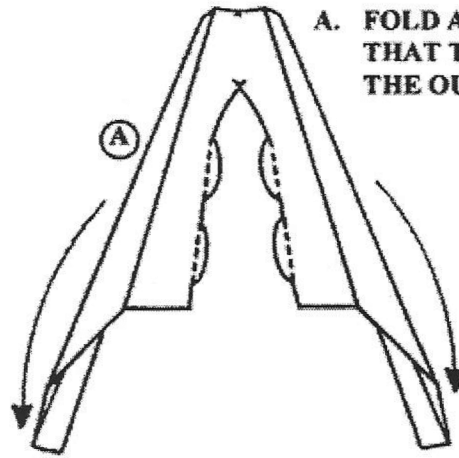
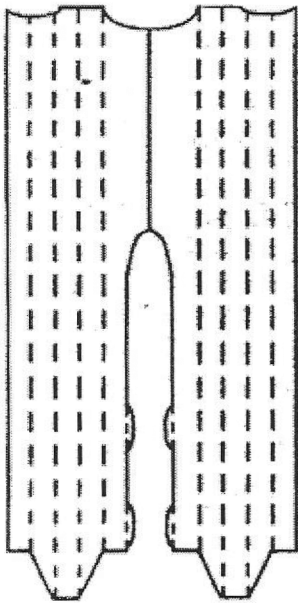
**STEP 4: USING A HARD COVER BOOK AS A STRAIGHT EDGE, DRAW LINES FROM ONE END OF BODY TUBE TO THE OTHER END. BE SURE THAT THEY MATCH UP WITH THE MARKS YOU JUST MADE ON THE BODY TUBE. BE CAREFUL TO MAKE THEM AS STRAIGHT AS POSSIBLE!**



**STEP 5:**

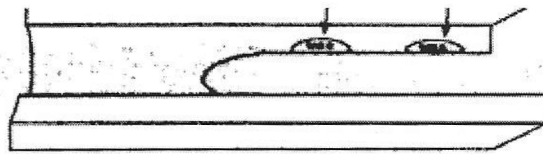
**CUT OUT BODY WRAP FROM CARD. USING A HOBBY KNIFE, CUT OPEN ALL SLOTS**

(A Hobby knife is better to use for this job – Do not cut any dotted lines)



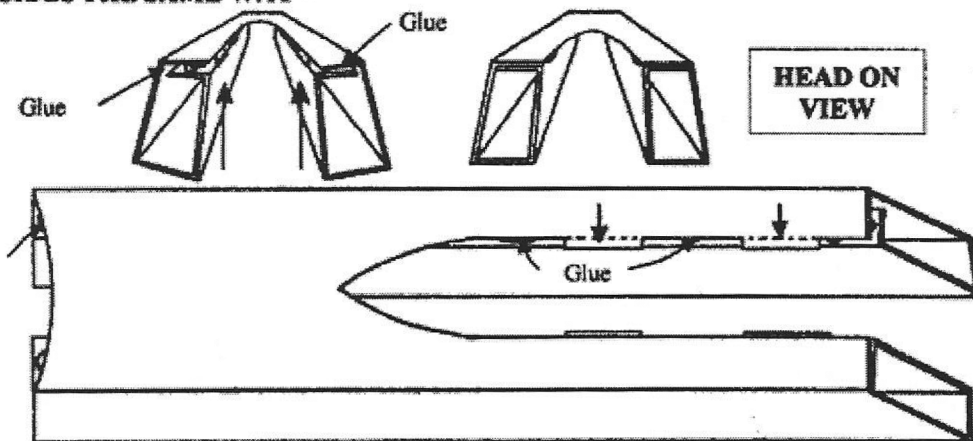
**A. FOLD ALL DOTTED LINES SO THAT THE PRINTED SIDE IS ON THE OUTSIDE OF EACH FOLD.**

**B. WITH SLOTS OPEN AND TABS FOLDED, RUN A BEAD OF GLUE ALONG THE AREA MARKED "GLUING AREA". (Bring Slots And Tabs Together.)**



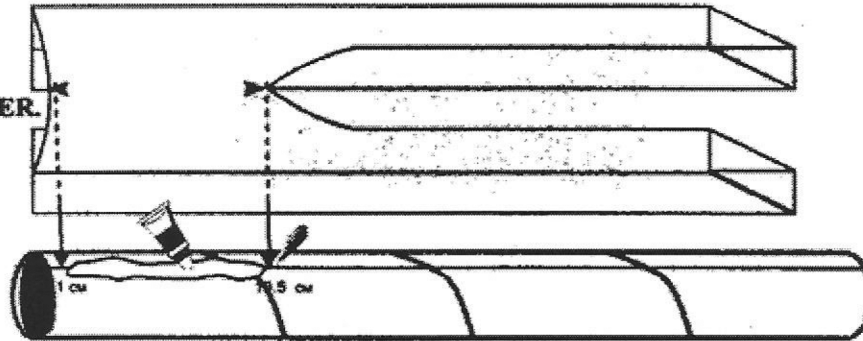
**STEP 6:**

**SLIP TABS INTO THEIR MATCHING SLOTS, PRESS GLUED AREA UNTIL GLUE SETS \* USE A NARROW RULER TO PRESS DOWN GLUING AREA INSIDE ASSEMBLY ASSEMBLE BOTH SIDES THE SAME WAY \***



**STEP 7:** DRAW A MARK ON THE "BOTTOM LINE", 10.5CM (4 1/8"), FROM ONE END OF THE BODY TUBE. THEN, DRAW ANOTHER MARK ON THE "TOP LINE", 1CM (3/8") FROM THE OTHER END OF THE BODY TUBE.

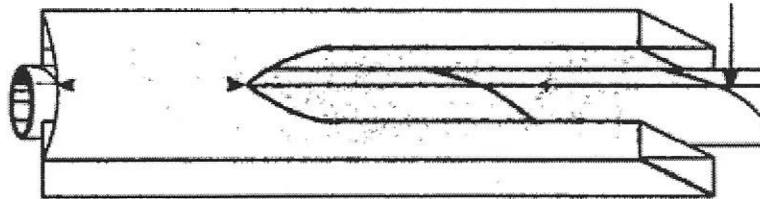
**B. RUN A BEAD OF GLUE FROM ONE MARK TO THE OTHER.**



**STEP 8:**

**A. LAY BODY WRAP ON TUBE IN GLUE SO THAT ITS ARROWS LINE UP WITH THE "BOTTOM LINE" OF THE TUBE. THE REAR ARROW SHOULD LINE UP WITH THE 1CM MARK YOU DREW IN STEP 7.**

**B. TURN MODEL OVER, BOTTOM LINE DOWN, AND LAY IT ON A TABLE OR OTHER FLAT SURFACE. ALLOW GLUE TO DRY FOR 30 MINUTES. DO NOT PROCEED UNTIL GLUE BONDS FIRMLY.**

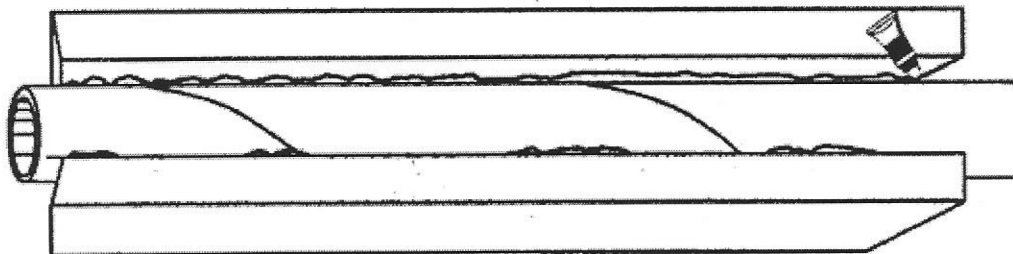


**STEP 9:**

**RUN A THIN BEAD OF GLUE DOWN THE SIDES OF THE BODY TUBE WHERE IT TOUCHES THE BODY WRAP SO THAT THE TUBE AND THE BODY WRAP WILL BOND. BE CAREFUL TO BE NEAT! SOME OF THIS BEAD OF GLUE WILL BE VISIBLE WHEN THE MODEL IS FINISHED!**

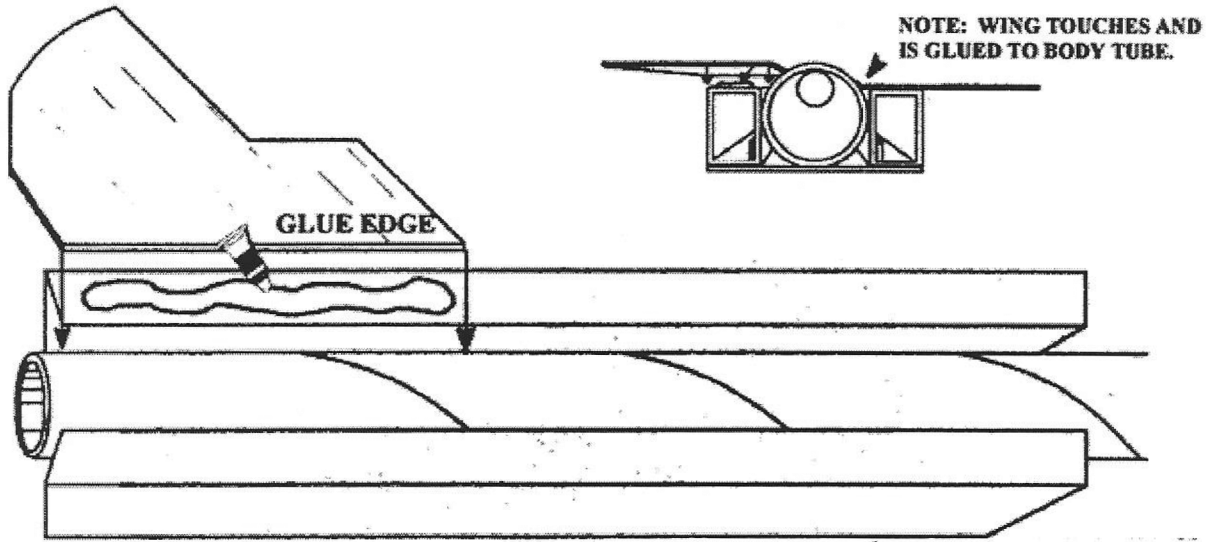
**PRESS BODY WRAP AGAINST TUBE UNTIL GLUE SETS. ALLOW GLUE TO DRY 30 MINUTES BEFORE CONTINUING.**

**\*\* KEEP MODEL ON A FLAT SURFACE UNTIL GLUE DRIES.**

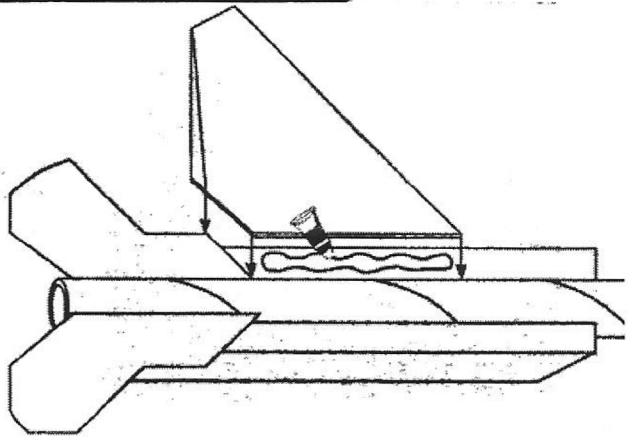


**STEP 10:**

**A. GLUE REAR WING ONTO BODY WRAP AND BODY TUBE. IT SHOULD LINE UP WITH REAR CORNER OF BODY WRAP AND LIE SQUARELY AGAINST BODY TUBE, COVERING THE GAP BETWEEN BODY WRAP AND BODY TUBE. MAKE SURE WING IS GLUED TO BOTH BODY WRAP AND BODY TUBE. HOLD WING STRAIGHT AND IN POSITION UNTIL GLUE SETS FIRMLY. DO THE SAME FOR BOTH SIDES.**

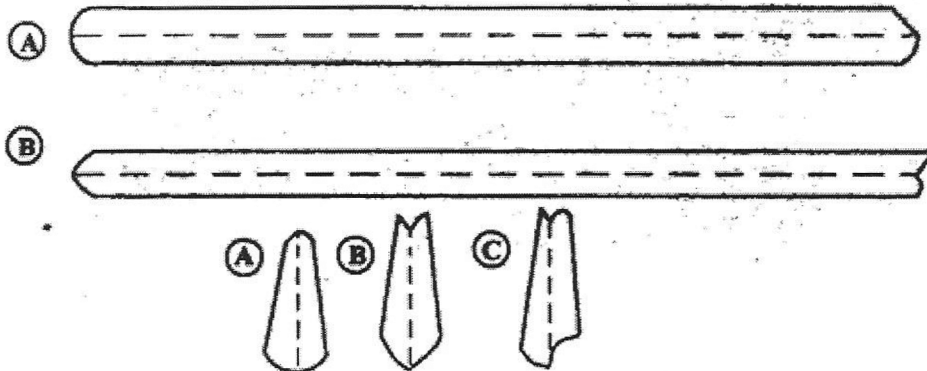


Step 11: Attach main wings by gluing them to the body wrap and body tube. Also ensure that they are glued to the front edges of the real wings. Hold them in place so that they fit snugly against body tube and rear wings until glue sets



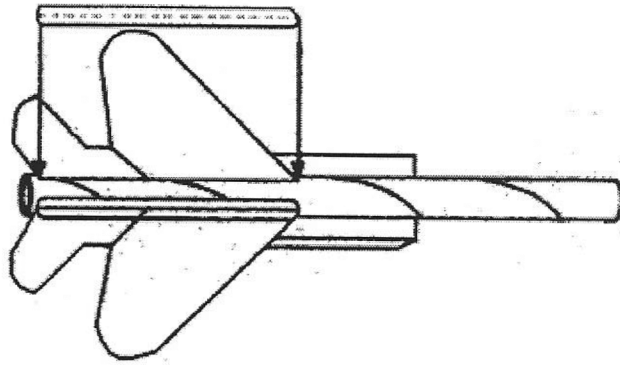
**STEP 12:**

**A, B CUT OUT AND FOLD MAIN WING REINFORCEMENT TAB (PRINTED SIDE INSIDE FOLD).**



**C. CURL THE TAB SO THAT IT WILL MATCH THE CONTOUR OF THE BODY TUBE.**

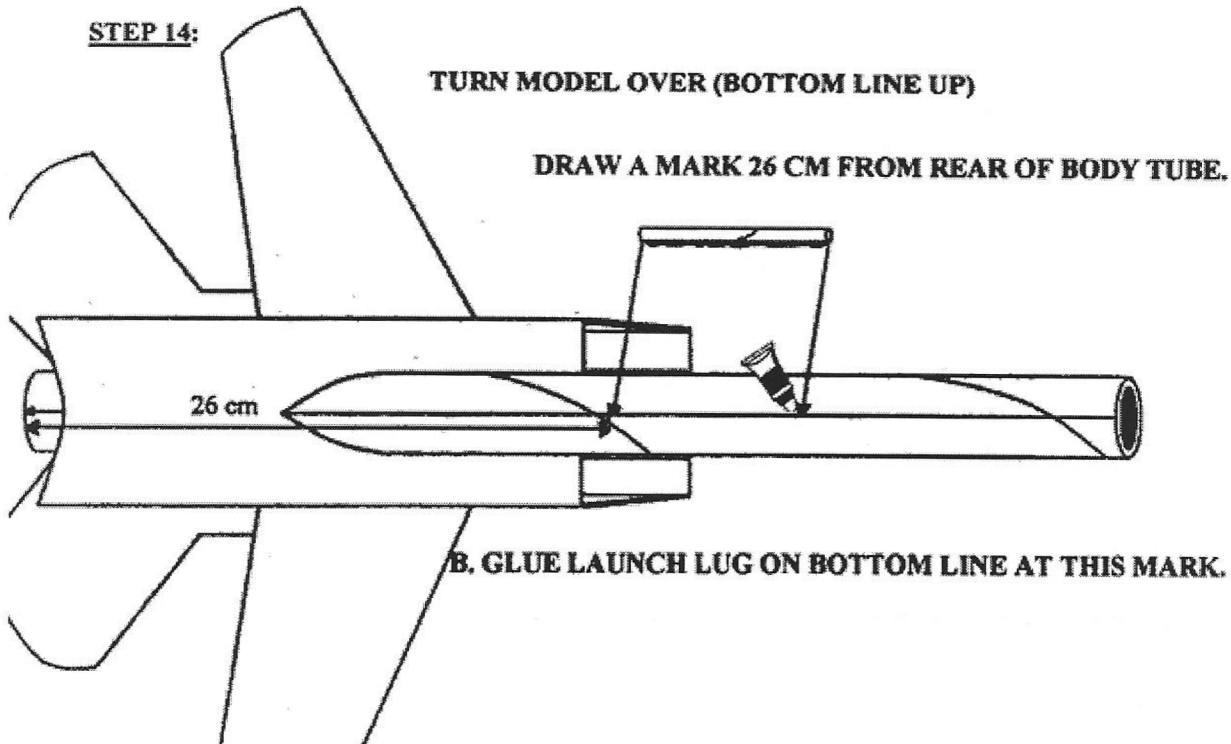
Step 13: gluing reinforcement tab onto the joint between the wings and the body tube. Make sure folded edge fits deeply into joint. Front corner of tab should line up with leading edge of main wing.



**STEP 14:**

**TURN MODEL OVER (BOTTOM LINE UP)**

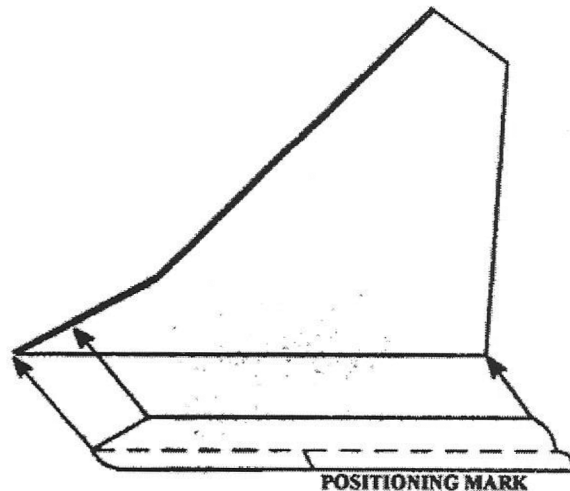
**DRAW A MARK 26 CM FROM REAR OF BODY TUBE.**



**B. GLUE LAUNCH LUG ON BOTTOM LINE AT THIS MARK.**

Step 15: cut out top fin reinforcement tabs. Fold them on dotted lines. (Print side inside fold).

Glue them to top fins so that match its bottom edge and the cut corner of the tabs matches the front corner of the fin.  
Glue tabs onto both sides of each fin.



\*Ensure the bottom edge of fin lines up perfectly with the folded edge of the tab.

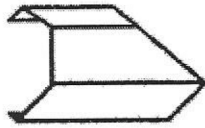
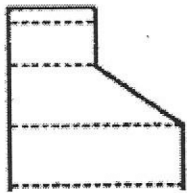
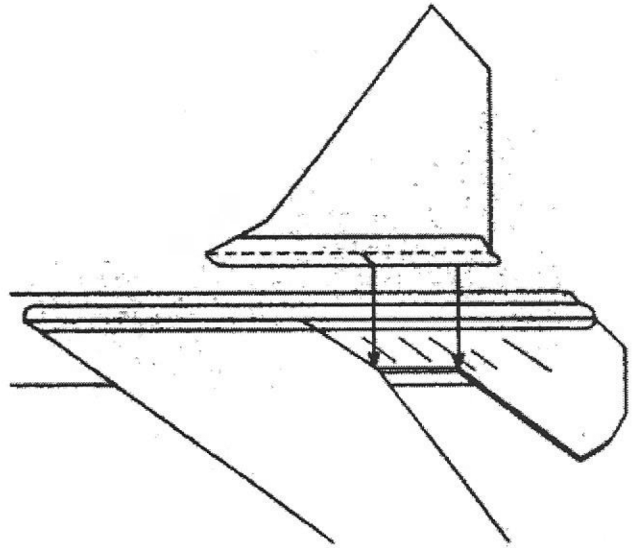




Step 16: Glue top fins down so that the "positioning mark" on the fin reinforcement tab lines up with the joint between the main wing and tail wing.

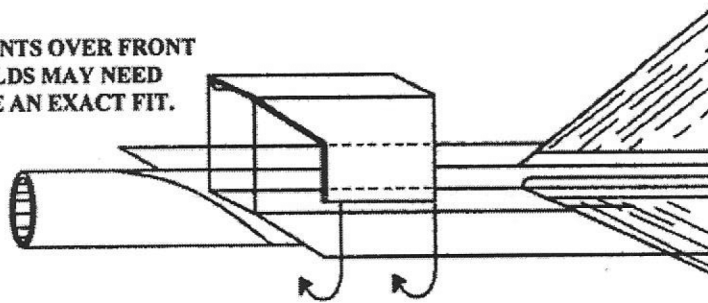
The outside edge of the reinforcement tab should be flush with the edge of the rear wing as shown.

Insure that the top fins are parallel with the body tube measuring with a ruler. The distance from the front the fin to the body tube, and the back of the fin to the body tube, the distances must be equal!

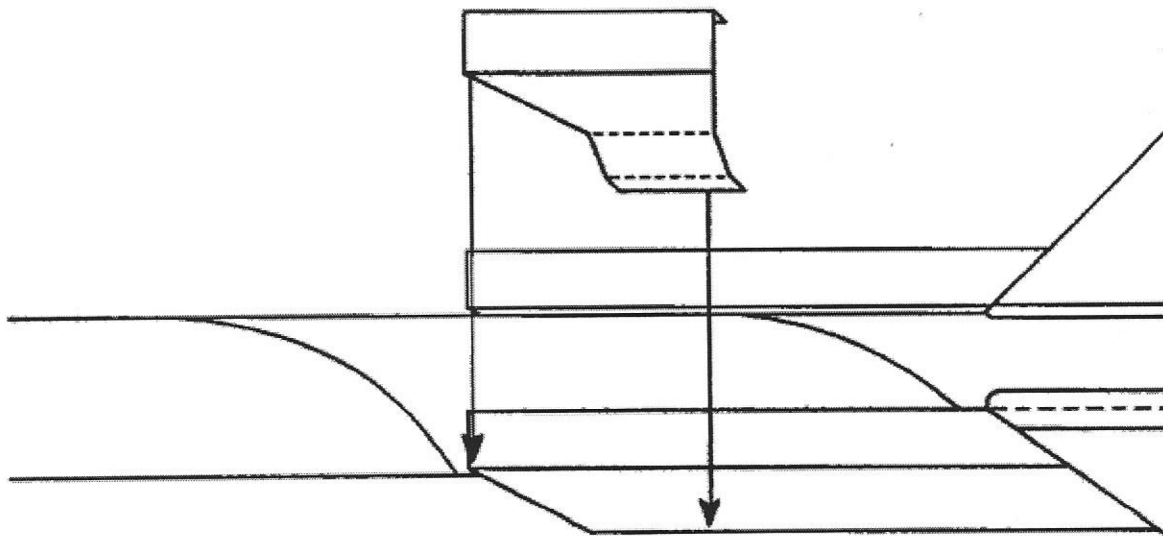


Step 17: A. Cut out jet intake reinforcements and fold them on the dotted lines – printed side on the outside of the fold.

**B. TEST FIT REINFORCEMENTS OVER FRONT OF BODY WRAP. SOME FOLDS MAY NEED TO BE REMADE TO ENSURE AN EXACT FIT.**

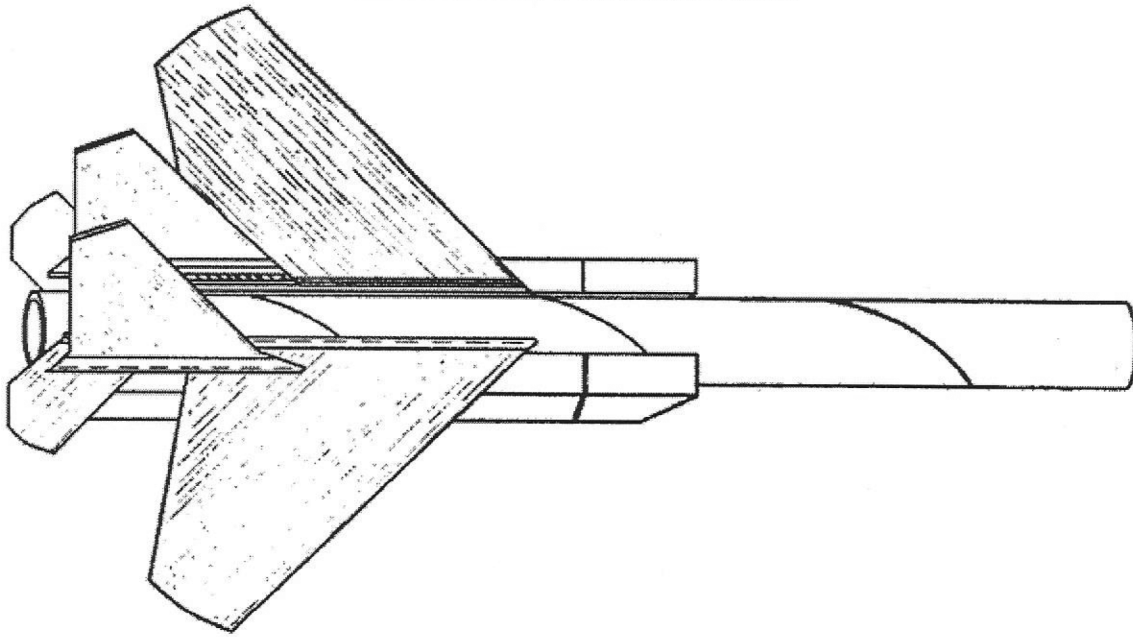


**STEP 18:**  
**SPREAD GLUE OVER INSIDE SURFACE OF EACH JET INTAKE REINFORCEMENT, AND WRAP IT AROUND THE FRONT OF THE APPROPRIATE SIDE OF THE BODY WRAP.**



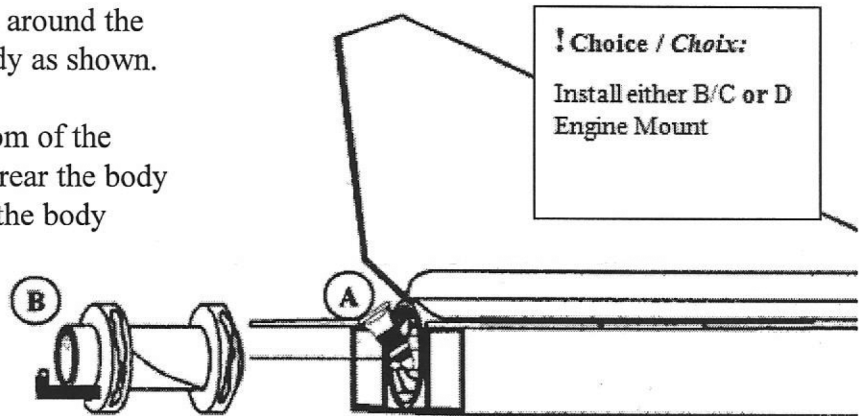
**STEP 19:**

**MODEL SHOULD NOW LOOK LIKE THIS.**



Step 20: A. Spread a thick bead of glue around the inside surface of the rear end of the body as shown.

With the engine hook towards the bottom of the model, push the engine mount into the rear the body tube until the engine tube is even with the body tube. (The engine hook must take out)



**CAUTION: ALLOW ALL GLUE TO DRY FOR AT LEAST 12 HOURS BEFORE LAUNCHING MODEL.**



**! Install D engine mount so end of engine tube is even with edge of body tube**

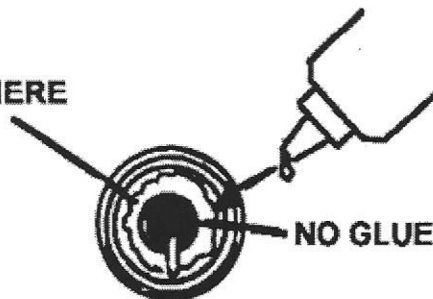
**Step 21:**

**WHEN THE ENGINE MOUNT HAS BONDED, IT CAN BE FURTHER STRENGTHENED BY "POOLING" SOME GLUE ON THE CENTERING RINGS (BETWEEN THE BODY TUBE AND THE ENGINE TUBE). THIS ALSO HELPS HOLD THE ENGINE HOOK FIRMLY IN PLACE.**

**KEEP THE TAIL OF THE MODEL TURNED UPWARDS UNTIL THE GLUE DRIES.**

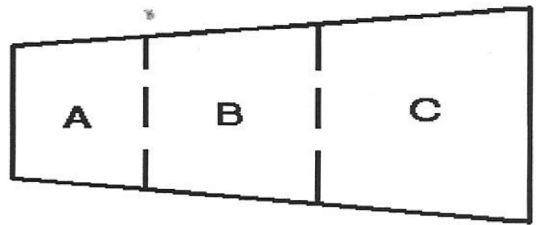
**DO NOT ALLOW ANY GLUE TO DRIP INSIDE THE ENGINE TUBE OR YOU WILL BE UNABLE TO INSTALL THE ROCKET ENGINE WHEN LAUNCHING.**

**GLUE GOES HERE**

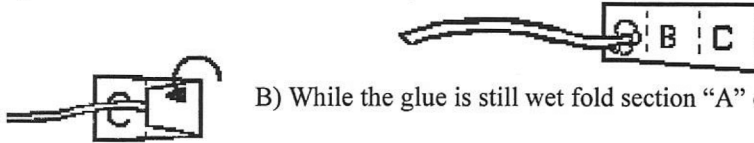


**NO GLUE IN HERE**

**Step 22:** Cut Out the Following Shock Cord Mount:



A) Put a blob of glue on the section marked "a" lay the end of the "shock cord" in the glue

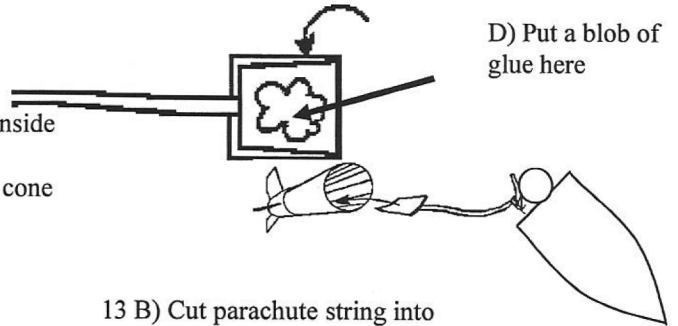


B) While the glue is still wet fold section "A" over on the dotted line and press it together with section "B"

C) Fold over sections "A" & "B" and glue them over to section "C" and press it together.

**Step 23:** A) Glue the "shock cord mount about 1 1/2" (4.5cm) down inside the top of the body tube

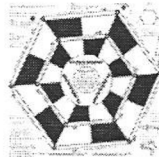
B) Tie the other end of the "shock cord" through the hole on the nose cone



D) Put a blob of glue here

**Step# 24: PARACHUTE**

A) Cut out parachute with sharp scissors at the 18" size



13 B) Cut parachute string into 3 equal lengths

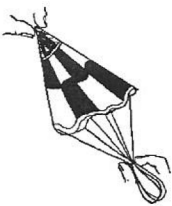


C) Stick the Reinforcement Rings to the Parachute Over the Circles Printed on the Parachute

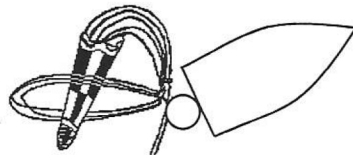
D) With a pencil, punch a hole through the circles printed on the parachute

E) Attach the strings to the parachute by tying them through the rings and holes

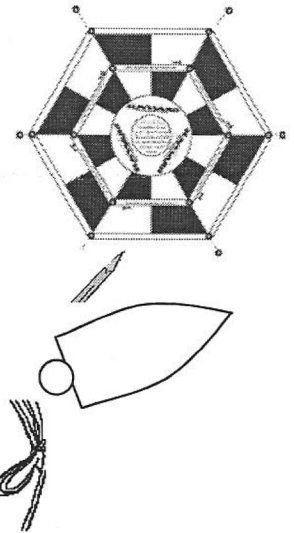
F) Pinching the parachute in the centre, bring all strings to form one loop, pass loop through eyelet on the nose cone



G) Pass parachute through loop and pull tight.



H) The parachute is now attached, fold and tuck it inside the body tube



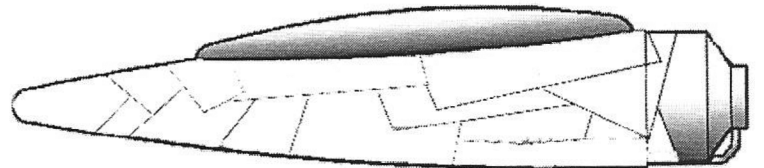
**Step 25:** Painting your model:

A. Sand fin until they are smooth. (Rounding fin edges by careful sanding will improve appearance and aerodynamics)

B) Sand nose cone if needed.

**Step 26:** A) Spray paint entire model. Use light coats. Use only enough paint to cover model evenly.

B) Remove nose cone



C. (OPTION STEP) WHEN PAINT IS COMPLETELY DRY, USE MASKING TAPE TO COVER NOSE CONE, EXCEPT FOR CANOPY. Paint Black. CAREFULLY REMOVE MASKING TAPE AFTER PAINTING

**Step 27: PREPARING ROCKET FOR LAUNCH**

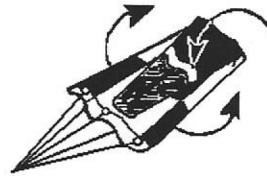
- A) Stuff 4 loosely crumpled squares of rocket recovery wadding (available from your local hobby retailer) into the top of rocket body tube
- B) Push down with a pencil.



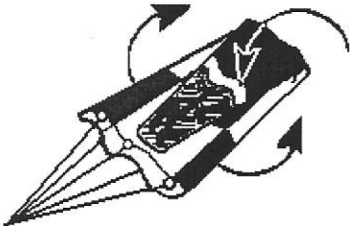
**\*\*\*DOT USE FACIAL TISSUE – IT IS FLAMMABLE!!!\*\***

**Step 28: Fold and insert parachute**

- A) Pinch parachute in the centre and straighten its strings
- B) Loosely fold over and roll outside edges inward

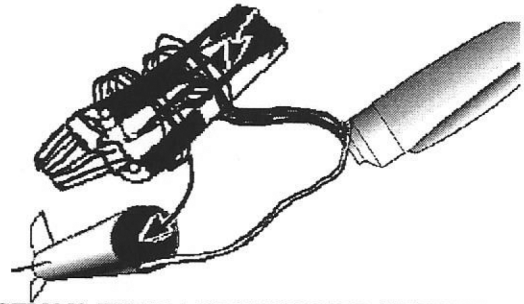


FINS NOT SHOWN FOR CLARITY



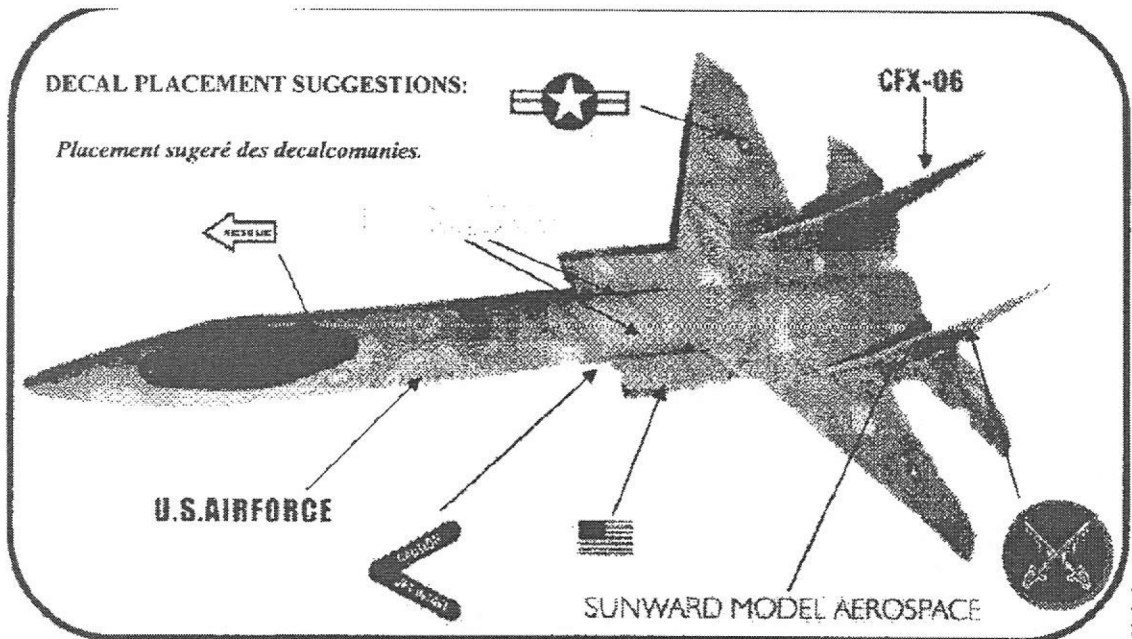
c. LOOSELY WRAP PARACHUTE STRINGS AROUND PARACHUTE AND DROP THE PARACHUTE INTO THE BODY TUBE

d. PUSH THE REST OF THE STRING AND “SHOCK CORD” INTO THE BODY TUBE AND THEN INSERT NOSE CONE.



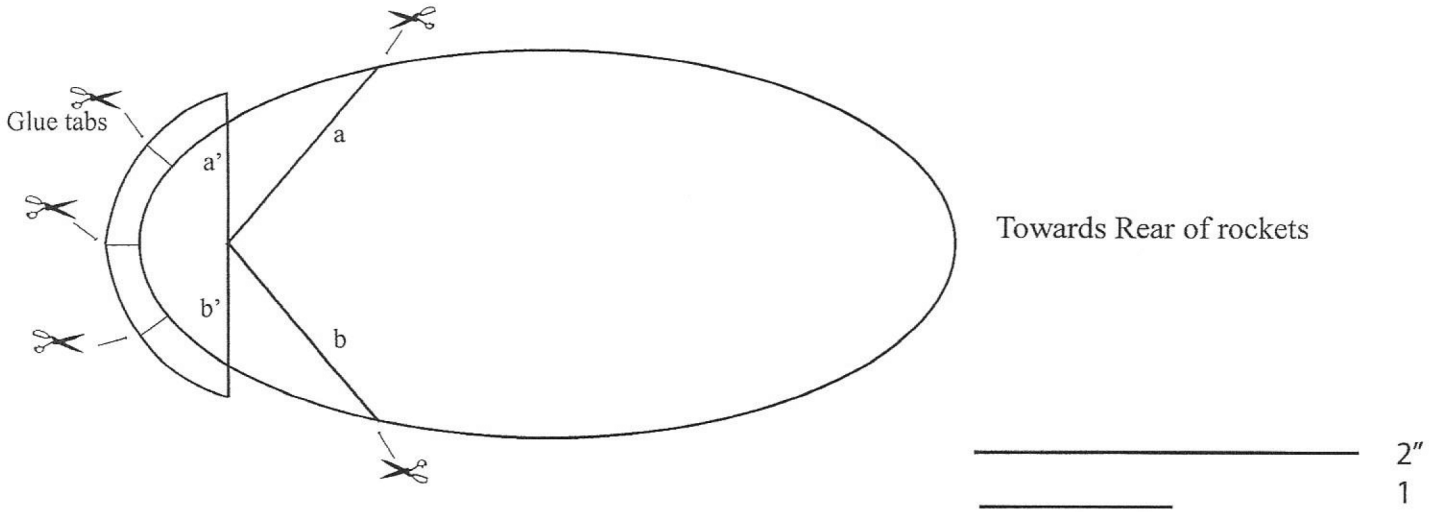
TO INSTALL AND IGNITE ROCKET ENGINE, FOLLOW THE INSTRUCTIONS THAT ARE INCLUDED WITH THE ENGINES OR LAUNCH PAD. THIS MODEL IS BUILT TO WORK WITH IGNITERS, ENGINES, RECOVERY WADDING AND LAUNCH PADS BUILT BY THE LEADING MANUFACTURERS SEE MAIN INSTRUCTIONS FOR RECOMMENDED ENGINES. **\*\*USE ONLY SINGLE STAGE ENGINES!!!\*\***

Decal Placement.

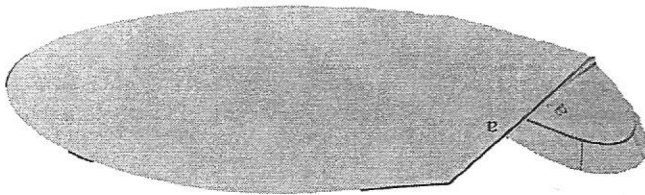


# Sunward Canopy Template

For added realism, we have provided a template for a canopy to place on the nose cones of the Jet Fighter model rocket kits.

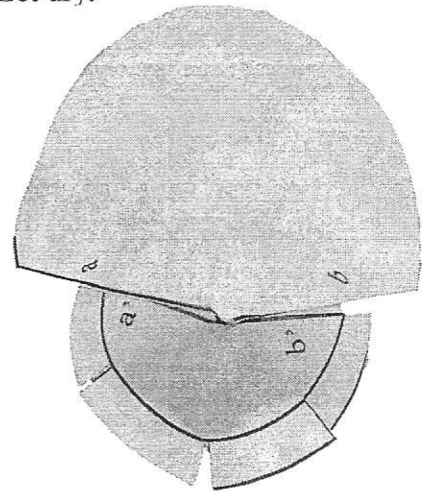


- 1) Cut on outside of template.
- 2) Cut along line "a". Fold tab under tab "a" so a' meets "a". Glue or tape in place.
- 3) Repeat for b/b'
- 4) cut 3 glue tabs
- 5) apply bead of glue along base of template and glue to nose cone. Let dry.
- 6) As shown:



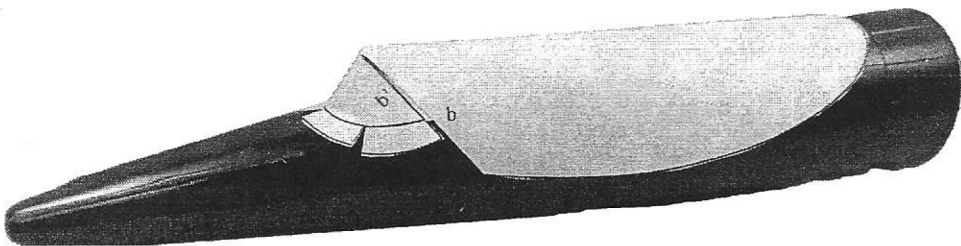
Step 1

NOT TO SCALE



Step 2

Completed nose cone



TO INSTALL AND IGNITE ROCKET ENGINE, FOLLOW THE INSTRUCTIONS THAT ARE INCLUDED WITH THE ENGINES OR LAUNCH PAD

THIS MODEL IS BUILT TO WORK WITH IGNITERS, ENGINES, RECOVERY WADDING AND LAUNCH PADS BUILT BY THE LEADING MANUFACTURERS

RECOMMENDED ENGINES: SEE FIRST PAGE.

**\*\*USE ONLY SINGLE STAGE ENGINES!!!\*\***

PREPARING THE ROCKET FOR LAUNCH: **\*\*IMPORTANT\*\***

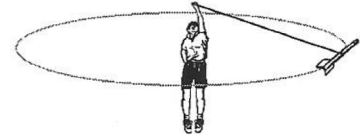
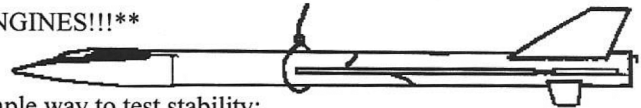
FLIGHT TEST: Every rocket must be tested for stability, here is a simple way to test stability:

A) With engine, wadding, and parachute installed and painting done, tie a 10' (3m) string around the rocket on its balancing point (the spot where it will hang level) tape string in place

B) "Fly" the rocket by twirling the string over your head so that the rocket "orbits" you at high speed

C) If the rocket flies straight, nose first, it is stable. If it does not, add weight to the nose cone. This can be done by dropping small balls of plasticine into the nose cone and pressing them into the point with the flat end of a pencil. Keep on testing, and if necessary, adding more weight to the nose cone until the rocket is stable. Then the rocket is stable, it may be launched.

**\*\*\*Never launch an untested rocket.\*\*\***



### ROCKET COMPONENTS WARRANTY

Sunward guarantees that the components of this kit will reach you in good condition. If the kit does not reach you in good condition, simply return it\* to the address below and we will send you a replacement as soon as possible.

Since building and launching skills vary from one hobbyist to another, Sunward will not take responsibility for a rocket's performance, altitude loss or damage to property or injury to persons resulting from the use or misuse of any of our products. The buyer assumes all risks and liabilities therefrom and accepts and uses our products on these conditions. Your purchases from Sunward affirms your agreement to these conditions.

Sunward Group Limited, 9 Rooksgrove Place, Toronto, ON, Canada, M6M 2W3

\*Return Merchandise Authorization is required for all exchanges. Please contact Sunward Customer Service at [info@sunward1.com](mailto:info@sunward1.com)

### Model Rocket Safety Code National Association of Rocketry [www.nar.org](http://www.nar.org)

Used with permission.

- 1) Materials. I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.
- 2) Motors. I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.
- 3) Ignition System. I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the "off" position when released.
- 4) Misfires. If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.
- 5) Launch Safety. I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance.
- 6) Launcher. I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor's exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.
- 7) Size. My model rocket will not weigh more than 1,500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse. If my model rocket weighs more than one pound (453 grams) at liftoff or has more than four ounces (113 grams) of propellant, I will check and comply with Federal Aviation Administration regulations before flying.
- 8) Flight Safety. I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.
- 9) Launch Site. I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.
- 10) Recovery System. I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.
- 11) Recovery Safety. I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.

#### LAUNCH SITE DIMENSIONS Revision of February, 2001

Installed Total Impulse (N-sec)	Equivalent Motor Type	Minimum Site Dimensions ft / m
0.00-1.25	1/4A, 1/2A	50 / 15
1.26-2.50	A	100 / 30
2.51-5.00	B	200 / 60
5.01-10.00	C	400 / 120
10.01-20.00	D	500 / 150
20.01-40.00	E	1,000 / 300
40.01-80.00	F	1,000 / 300
80.01-160.00	G	1,000 / 300
160.01-320.00	Two Gs	1,500 / 450

#### CANADA'S MODEL ROCKET SAFETY CODE

- 1) CONSTRUCTION. I will always build my model rocket using only lightweight materials such as paper, wood, plastics or rubber without any metal airframe components. My model shall include aerodynamic surfaces or a mechanism to assure a safe, stable flight.
- 2) MOTORS. I will only use rocket motors and reloads approved by Natural Resources Canada, Explosives Regulatory Division (NRC/ERD). I will store these motors in a safe and secure manner as described by the manufacturer and NRC/ERD. I will never subject these motors to excessive shock or extremes of temperature. I will not attempt to use, alter, or reload commercial rocket motors, except as instructed by the manufacturer.
- 3) RECOVERY. My model rocket will always use a recovery system to return it safely to the ground so that my model rocket may be refown. I shall prepare the recovery system with due care to assure that it will properly deploy.
- 4) WEIGHT LIMITS. My model rocket will not weigh more than 1500 grams at lift-off, and the model rocket engine(s) will contain no more than 125 grams of propellant and produce no more than 160 N-s combined total-impulse..
- 5) FIRING SYSTEM. I will always use a remote electrical system to ignite the model rocket engine(s). My firing system will include an ignition switch that returns to "off" when released, and a safety interlock to prevent accidental ignition. I will never leave the safety interlock key in my firing system between launches.
- 6) LAUNCH SYSTEM. My model rocket will always be launched from a stable platform having a device to initially guide its motion. My launcher will have a jet deflector to prevent motor exhaust from directly contacting the ground. To protect myself and other from eye injury, I will position the launch rod or rail so that the upper end is above eye level, or else I will place a large guard on the upper end between launches.
- 7) LAUNCH SITE. I will never launch my model rockets near buildings, power lines, into clouds, or become a hazard to aviation. The area immediately around the launch system will be cleared of any flammable materials. I will always obtain the permission of the launch site owner prior to using the launch site for my model rocket activities.
- 8) LAUNCH CONDITIONS. I will never launch model rockets in high winds or in conditions of low visibility which may impair the observation of my model rocket in flight, or in a direction below 30 degrees from the vertical.
- 9) LAUNCH SAFETY. I will remain at least 5 metres away from any model about to be launched. I will always announce to persons within the launch site that I am about to launch my model rocket, and I shall give a loud countdown of at least 5 seconds duration. I shall immediately remove the safety interlock key from my firing system after the launch of my model rocket.
- 10) MISFIRES. In the event of an ignition misfire, I shall not immediately approach my model rocket, but remove the safety interlock key and remain back for a safe period until assured that no ignition will occur.
- 11) ANIMAL PAYLOADS. I will never endanger live animals by launching them in my model rocket.
- 12) TARGETS. I will never launch my rocket so that it will fall on, or strike, ground or air targets. Nor will I include any explosive or incendiary payload.
- 13) HAZARDOUS RECOVERY. I will never attempt to recover my model rocket from power line, high place, a tree, or other dangerous location.
- 14) PRE FLIGHT TESTS. Whenever possible, I will always test the stability, operation and reliability of my model rocket designs prior to flight. I will launch unproven designs in complete isolation from other persons.

TOP FIN REINFORCEMENT TAB

FOLD LINE - DO NOT CUT  
TOP FIN REINFORCEMENT TAB

TOP FIN REINFORCEMENT TAB  
FOLD LINE - DO NOT CUT

TOP FIN REINFORCEMENT TAB

A B C

SHOCK CORD MOUNT

INTAKE REINFORCEMENT

INTAKE REINFORCEMENT

WING REINFORCEMENT TAB  
FOLD LINE - DO NOT CUT

REA  
SLOT A

Ⓜ

TAB A

TAB C

FRONT

Ⓜ

REA  
SLOT C

GLUE AREA

GLUE AREA

SLOT A

SLOT B

®

TAB A

TAB B

TAB C

TAB D

FRONT

®

SLOT C

GLUE AREA

SLOT D

GLUE AREA

®

CEMENT TAB

WING REINFORCEMENT TAB



SLOT B

GLUE AREA

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GLUE AREA

FOLD LINE - DO NOT CUT

FOLD LINE - DO NOT CUT

FOLD LINE - DO NOT CUT

FOLD LINE - DO NOT CUT

TAB B

TAB D

BODY WRAP

BACK

FOLD LINE - DO NOT CUT

FOLD LINE - DO NOT CUT

FOLD LINE - DO NOT CUT

FOLD LINE - DO NOT CUT

SLOT D

GLUE AREA

GLUE AREA

WING REINFORCEMENT TAB

FOLD LINE - DO NOT CUT

1/8"





1/8"



CHINA

inch

1 12 13 14

1

2

3

4

5

6

JQ00D

No. 18

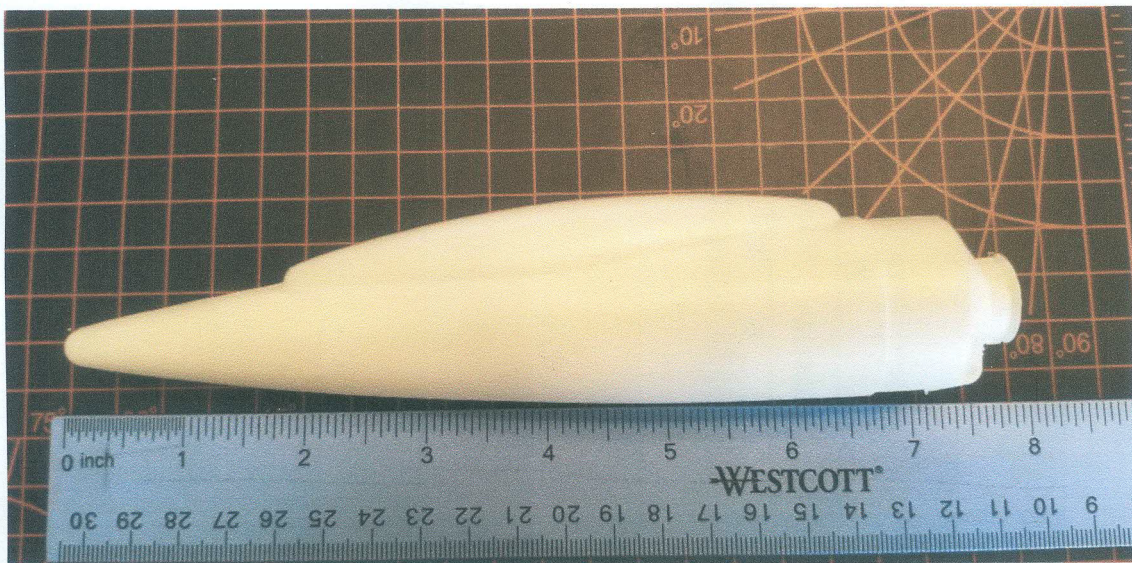
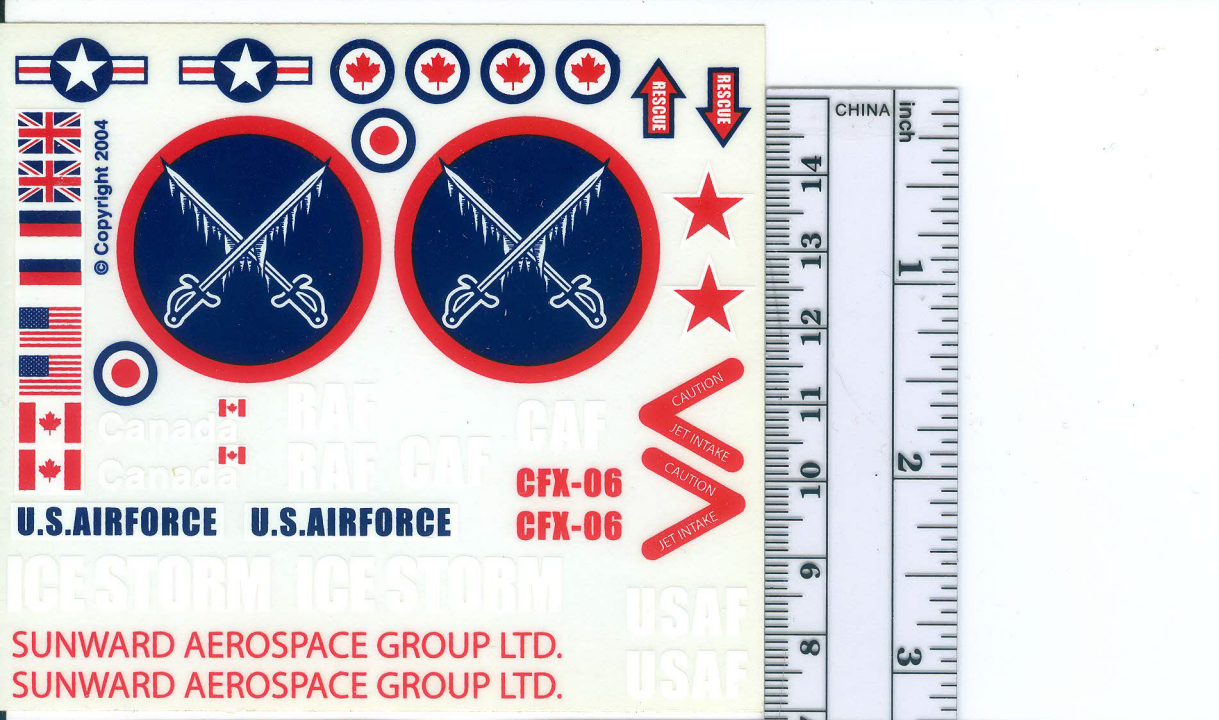
WESTCOTT®

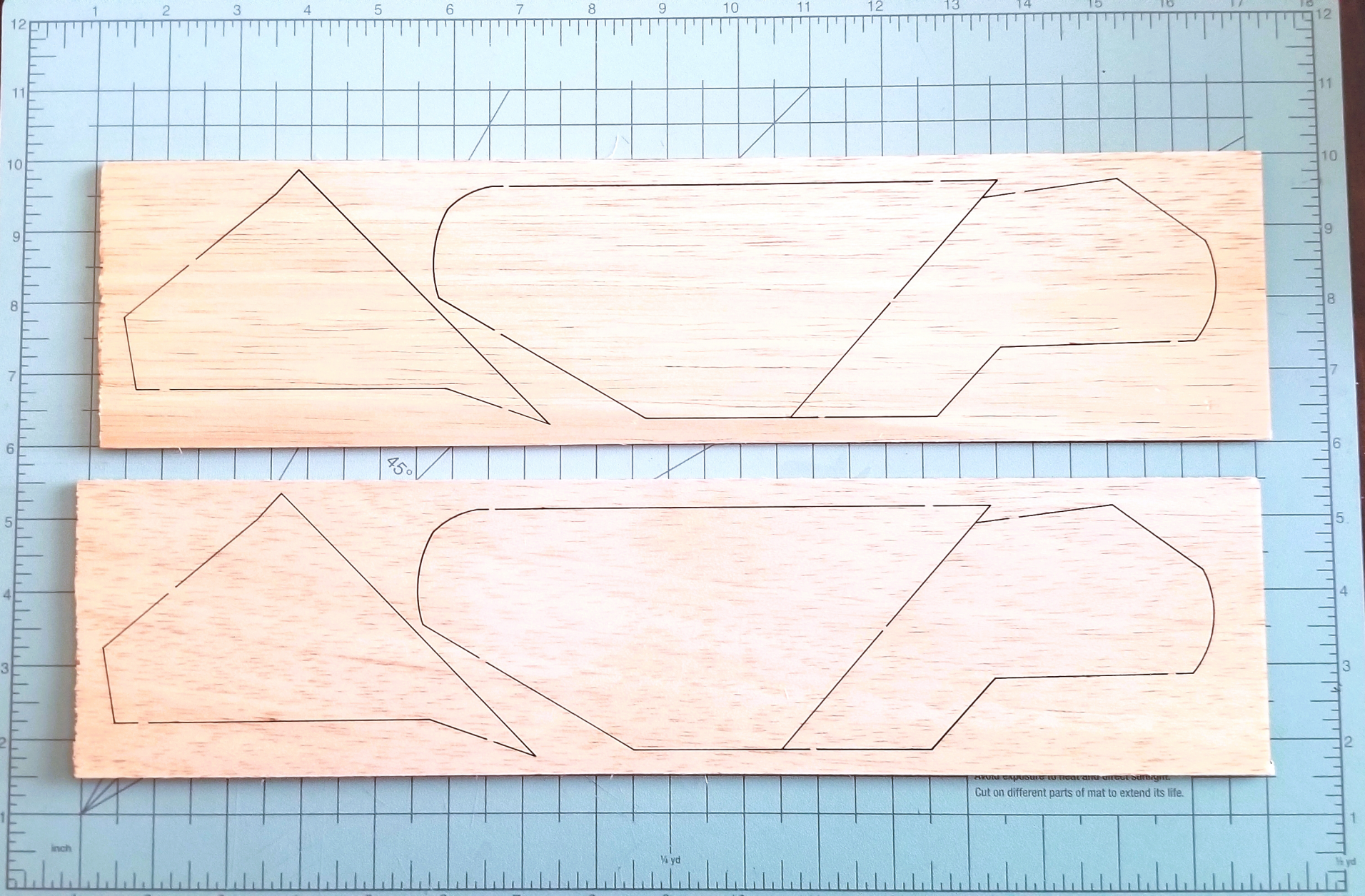
1 cm



1/8"







avoid exposure to heat and direct sunlight.  
Cut on different parts of mat to extend its life.

inch

1/4 yd

1/2 yd

"D" / 24mm  
Engine Mount  
Upgrade Parts

60°

45°

18" Inch

BT-56

**Care:**  
18in x 12in  
(457.2mm x 300mm)  
Store flat — do not roll.  
Avoid exposure to heat and direct sunlight.  
Cut on different parts of mat to extend its life.

MODEL  
ROCKETS,  
ACCESSORIES,  
and more model parts.

**SUNWARD**  
MODEL AEROSPACE

PARTS  
AND  
COMPONENTS  
at Sunward

# ICE STORM

Wingspan: 12" (30.5cm)  
Envergure:

Length: 25" (65cm)  
Longueur:

Recommended Engine  
Type: F1G0, D12-5, D12-5

Build to use B/C engines or  
to use "D" Engines!  
D12-3 D12-5

**RADICAL OFFSET WING DESIGN**

Design Des Ailes Des  
Maquettes Revolutionnaire

**SPECTACULAR 500 FT (153M) FLIGHTS**

Vois à 500 pieds (153m)

**SAFE 18" PARACHUTE RECOVERY**

18" Parachute

**HIGH QUALITY LASER CUT Balsa**

Decoupage au laser de balsa de qualité

**SUNWARD**  
MODEL AEROSPACE

Look for the Sunward logo  
on your favorite model parts

100% MADE IN CANADA  
© 1992 Sunward Model Parts



# ICE STORM

Model Rocket Kit

Skill Level 3



- Length 25" / 63cm
- Radical Offset Wing Design
- Wingspan 12" / 31cm
- Flights to over 800' / 240m
- Quality Nose Cone
- Láser Cut Balsa Fins
- Based on MIG-25 Foxbat to MIG-29 Fulcrum
- Safe 18" / 46cm parachute recovery - clear with red printing for easy tracking

- Full instructions with 3 Colour Silkscreen Decal
- Recommended Engines:  
TWO ways to Build:  
B6-2 (first flight), B6-4  
C6-3, C6-5, OR  
D12-3, D12-5, D12-7

One Model Rocket Kit.  
Not to any scale.  
Recommended for ages 14 and up.  
Adult supervision required for children 15-16.  
Check local regulations for engine age requirements.  
Use only with 1/8" diameter rod for launching.  
This model requires assembly.  
Glue, epoxy, paint, wadding, engines, ignitors, launch system, and tools not included.  
Plastic bags should be always kept away from babies and children to avoid suffocation.  
Contents subject to change



SUNWARD  
ICE STORM  
SNW0006

[www.sunward1.com](http://www.sunward1.com) [info@sunward1.com](mailto:info@sunward1.com)

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