



# FLARE-PATRIOT

CONTEST PROVEN FOR NAR QUADRATHON COMPETITION

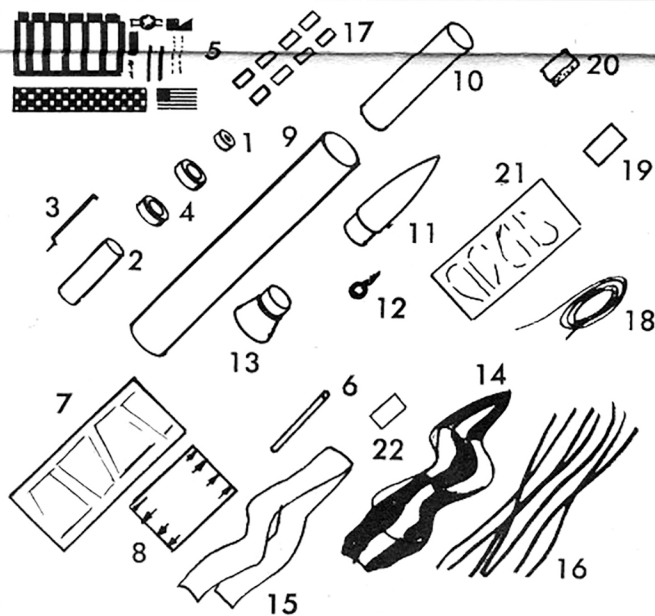
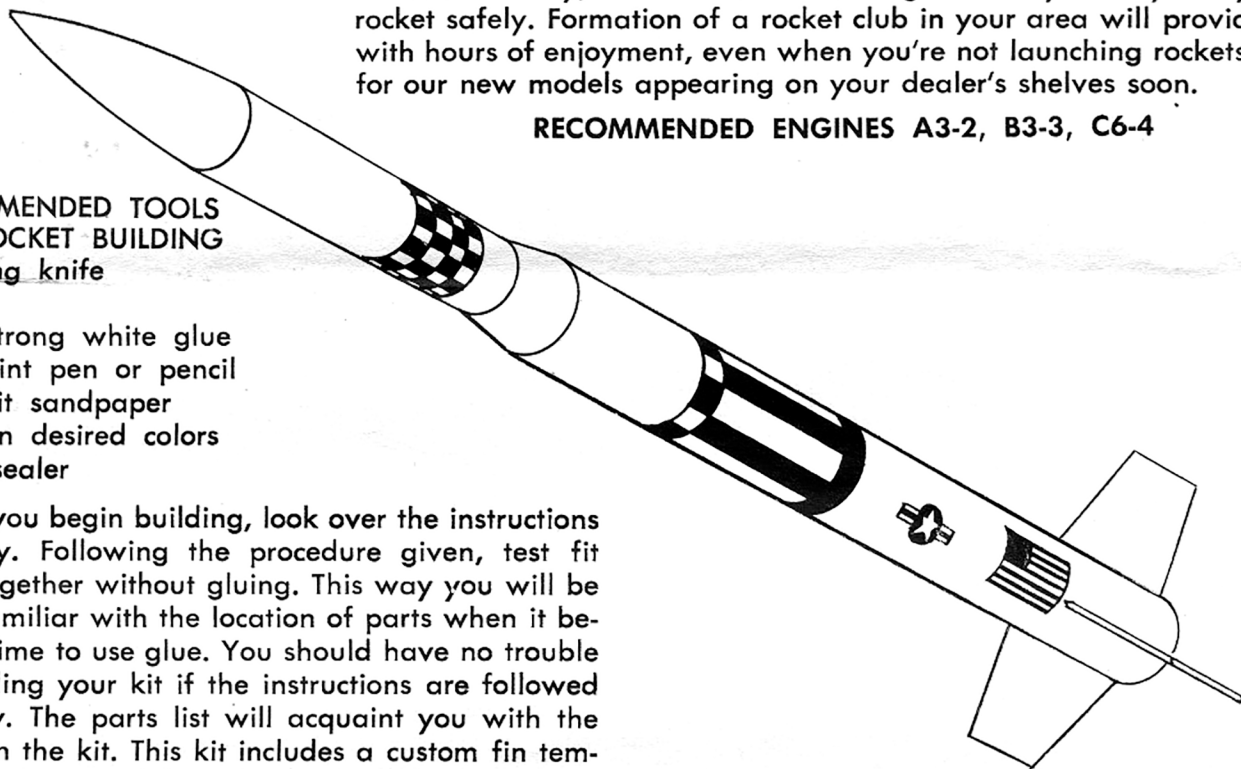
This model rocket has been designed and developed to give you a straight, high flight if the instructions are followed carefully. The exciting and educational sport of model rocketry has grown into a full scale national activity, and will continue to grow every time you fly your rocket safely. Formation of a rocket club in your area will provide you with hours of enjoyment, even when you're not launching rockets. Look for our new models appearing on your dealer's shelves soon.

RECOMMENDED ENGINES A3-2, B3-3, C6-4

## RECOMMENDED TOOLS FOR ROCKET BUILDING

- Modeling knife
- Scissors
- Extra strong white glue
- Ball point pen or pencil
- Fine grit sandpaper
- Paint, in desired colors
- Wood sealer

Before you begin building, look over the instructions carefully. Following the procedure given, test fit parts together without gluing. This way you will be more familiar with the location of parts when it becomes time to use glue. You should have no trouble assembling your kit if the instructions are followed properly. The parts list will acquaint you with the pieces in the kit. This kit includes a custom fin template. If the use of these fins is desired over the use of the standard fins, follow instructions on template.



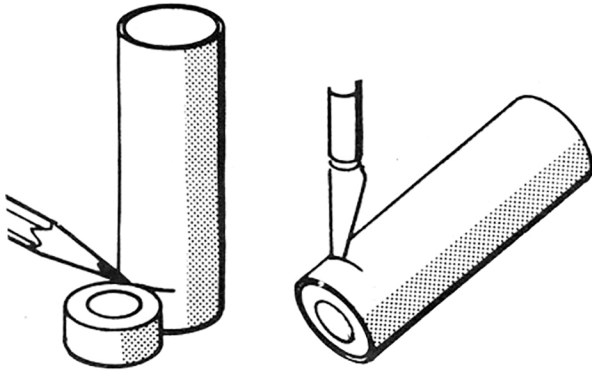
## PARTS LIST

- |                        |                        |
|------------------------|------------------------|
| 1 ENGINE BLOCK         | 12 SCREW EYE           |
| 2 ENGINE COMPARTMENT   | 13 COUPLER             |
| 3 ENGINE CLIP          | 14 PARACHUTE           |
| 4 CENTERING RINGS      | 15 STREAMER            |
| 5 DECALS               | 16 SHROUDS             |
| 6 LAUNCHING LUG        | 17 SHROUD TABS         |
| 7 FIN SHEET            | 18 CORD                |
| 8 FIN GUIDE            | 19 SHOCK MOUNT         |
| 9 BODY TUBE            | 20 WADDING             |
| 10 BODY TUBE (PAYLOAD) | 21 CUSTOM FIN TEMPLATE |
| 11 NOSE CONE           | 22 ADDRESS LABEL       |



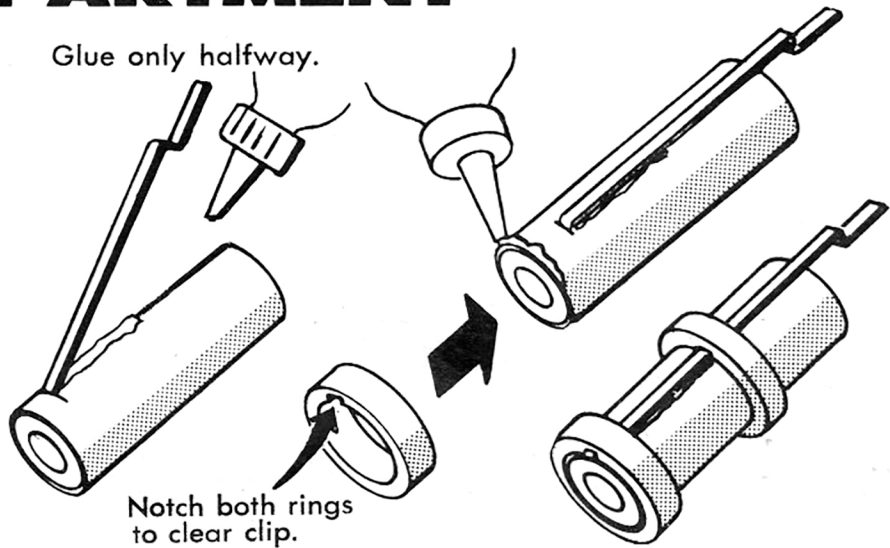
# 1 ENGINE COMPARTMENT

Place an engine block against engine compartment, and mark with a pencil as shown. Apply glue inside this end of engine compartment, and insert engine block.



Cut slit on the pencil mark, and insert engine clip. Apply glue in a straight line so that the engine clip will drop into it. Press firmly, and wrap a piece of tape around the assembly, until the glue is hard.

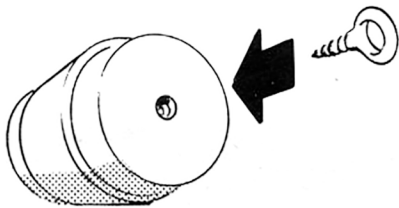
Glue only halfway.



Notch both rings to clear clip.

Apply glue around end of engine compartment. Place centering ring so that it is on this glue and flush with the end of engine compartment, and engine block. Place a line of glue, and the other centering ring about an inch from the other end.

# 3 FINAL ASSEMBLY



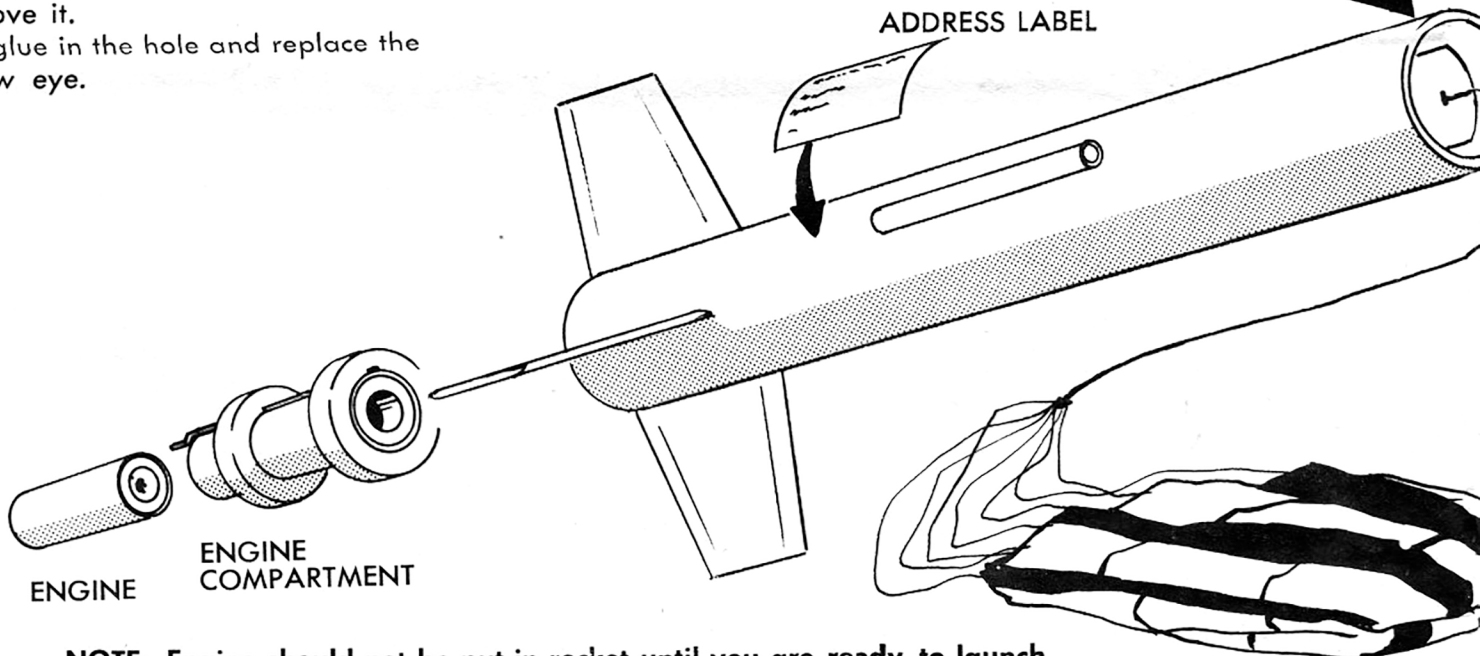
Put screw eye into coupler, then remove it. Put glue in the hole and replace the screw eye.

If parts fit loose in body tubes, wrap with a piece of tape.

Lace cord through shock mount as shown, and glue assembly inside body tube one inch from the end.

WADD

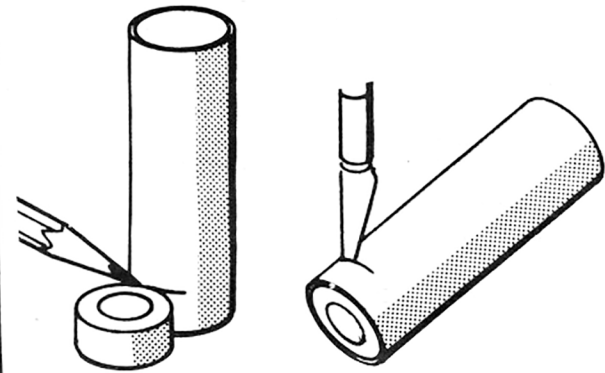
Use approx 1 square



**NOTE:** Engine should not be put in rocket until you are ready to launch.

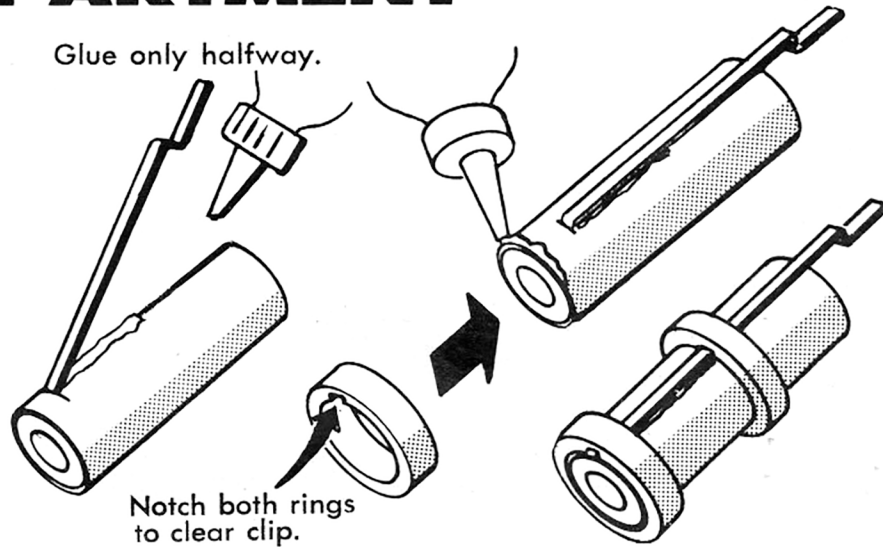
# 1 ENGINE COMPARTMENT

Place an engine block against engine compartment, and mark with a pencil as shown. Apply glue inside this end of engine compartment, and insert engine block.



Cut slit on the pencil mark, and insert engine clip. Apply glue in a straight line so that the engine clip will drop into it. Press firmly, and wrap a piece of tape around the assembly, until the glue is hard.

Glue only halfway.

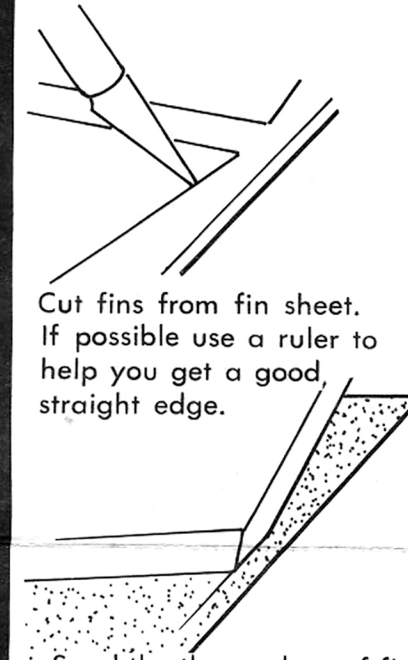


Notch both rings to clear clip.

Apply glue around end of engine compartment. Place centering ring so that it is on this glue and flush with the end of engine compartment, and engine block. Place a line of glue, and the other centering ring about an inch from the other end.

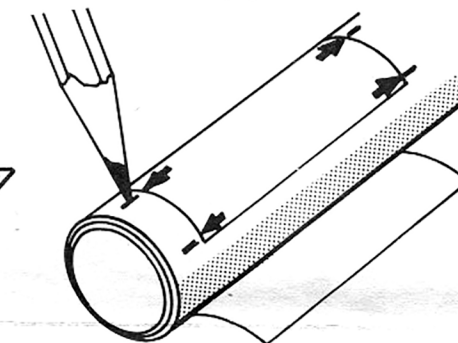
# 2 FIN ASSEMBLY

Cut fins from fin sheet. If possible use a ruler to help you get a good, straight edge.



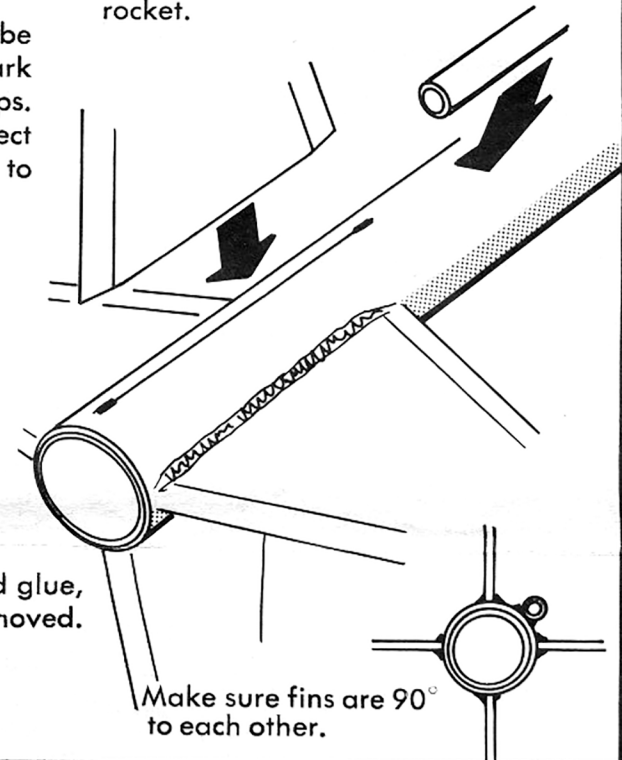
Sand the three edges of fins that do not attach to body tube. Sand the surfaces smooth.

Wrap fin guide around body tube where fins will be attached. Mark the body tube near the arrow tips. Remove the fin guide and connect these marks with a straight line to show attaching points.



For best adhesion of paint and glue, sand tubes until all gloss is removed.

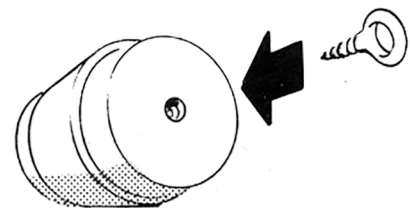
The bottom of the launching lug should be 5 1/2" from bottom of rocket.



Make sure fins are 90° to each other.

# 3 FINAL ASSEMBLY

Lace cord through shock mount as shown, and glue assembly inside body tube one inch from the end.



Put screw eye into coupler, then remove it. Put glue in the hole and replace the screw eye.

If parts fit loose in body tubes, wrap with a piece of tape.

ADDRESS LABEL

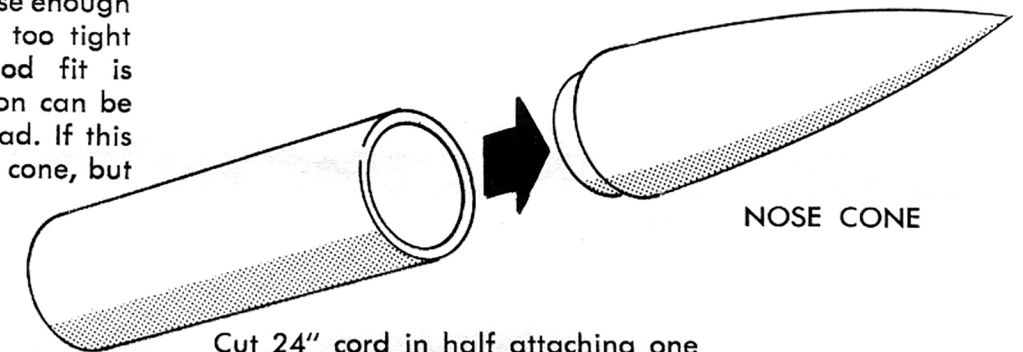
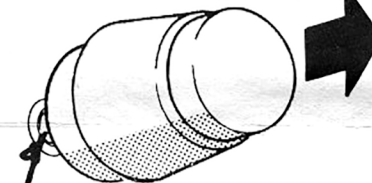
WADDING



Use approx. 1 square inch.

The coupler must fit snug in the body tube, but must be loose enough to eject. If the coupler is too tight sand lightly until a good fit is achieved. The upper section can be used for a 1 ounce payload. If this is desired, don't glue nose cone, but be sure of a snug fit.

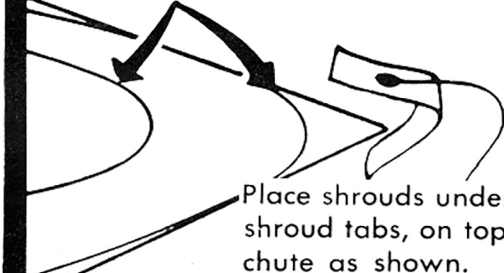
Glue here.



NOSE CONE

Cut 24" cord in half attaching one length to parachute and main body tube. Attach the other length to the streamer and coupler. If dual recovery is not desired, either the streamer or parachute may be used singly.

Parachute may be made smaller by cutting on these lines.



Place shrouds under shroud tabs, on top of chute as shown.

Shroud should be curled under tab as shown.

For faster Descent, center of parachute may be cut out.

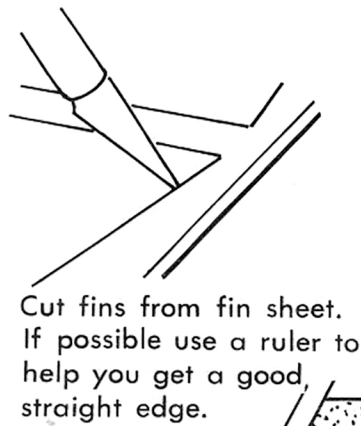


Place knot here.

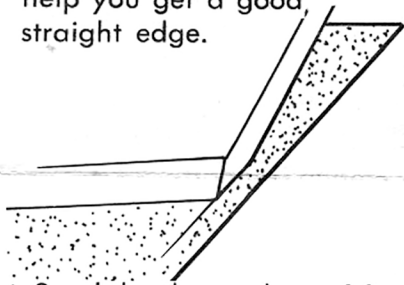
NOTE: Engine should not be put in rocket until you are ready to launch.

# 2 FIN ASSEMBLY

The bottom of the launching lug should be  $5\frac{1}{2}$ " from bottom of rocket.

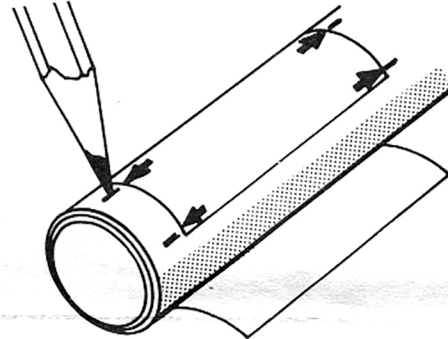


Cut fins from fin sheet. If possible use a ruler to help you get a good, straight edge.

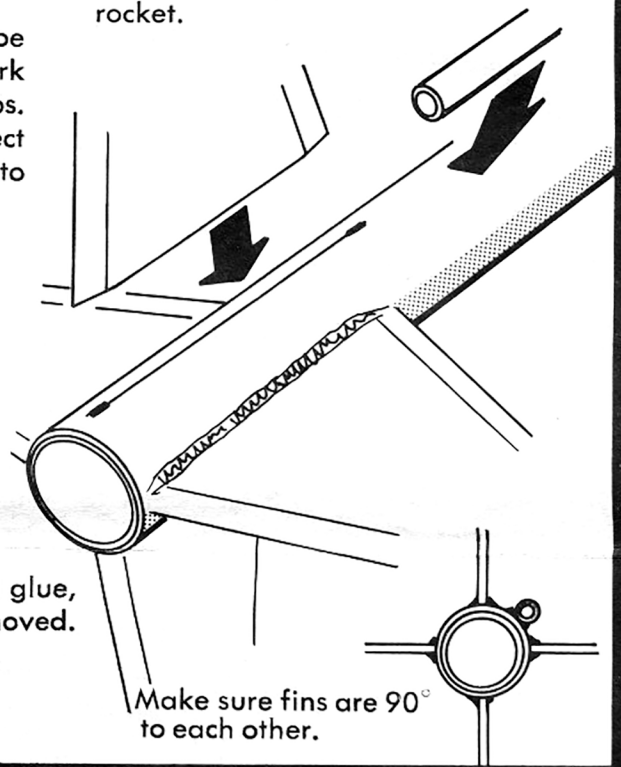


Sand the three edges of fins that do not attach to body tube. Sand the surfaces smooth.

Wrap fin guide around body tube where fins will be attached. Mark the body tube near the arrow tips. Remove the fin guide and connect these marks with a straight line to show attaching points.



For best adhesion of paint and glue, sand tubes until all gloss is removed.



Make sure fins are  $90^\circ$  to each other.

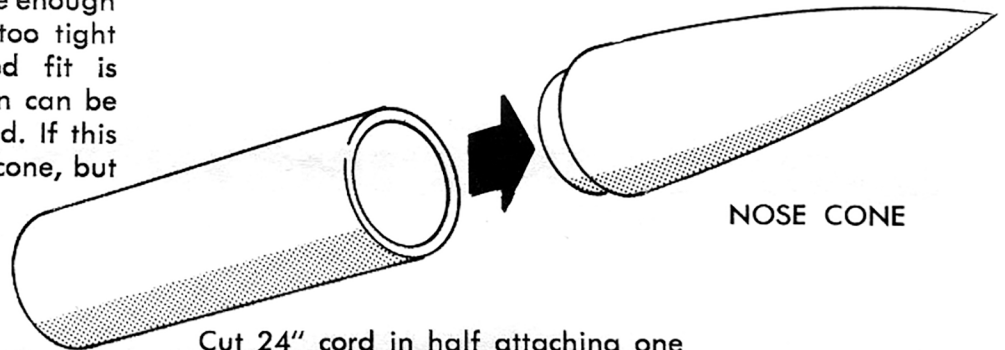
The coupler must fit snug in the body tube, but must be loose enough to eject. If the coupler is too tight sand lightly until a good fit is achieved. The upper section can be used for a 1 ounce payload. If this is desired, don't glue nose cone, but be sure of a snug fit.

ING



prox. 1 inch.

Glue here.

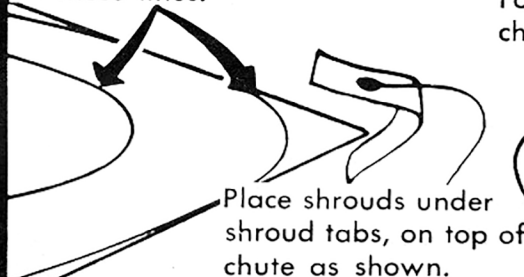


NOSE CONE

Cut 24" cord in half attaching one length to parachute and main body tube. Attach the other length to the streamer and coupler. If dual recovery is not desired, either the streamer or parachute may be used singly.

Parachute may be made smaller by cutting on these lines.

For faster Descent, center of parachute may be cut out.



Place shrouds under shroud tabs, on top of chute as shown.

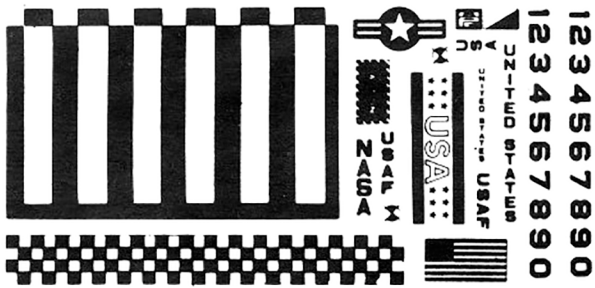


Shroud should be curled under tab as shown.



Place knot here.

## 4 DECALS

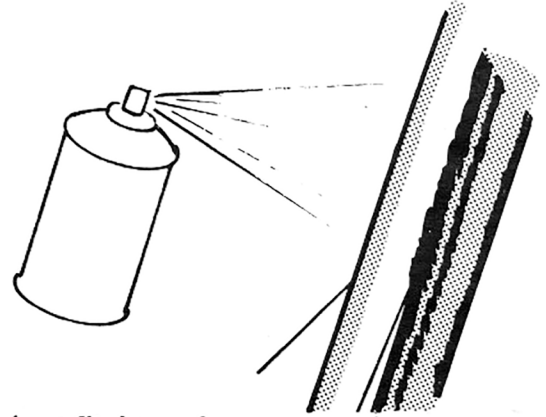


The custom decal arrangement shown is only a suggestion. Many other combinations are possible.

To apply the decals; cut apart each individual design, dip it into water for a few minutes, then slide it off the paper backing as you apply it to the model. Before the decals dry, smooth out any bubbles with a damp cloth.

This decal sheet has a clear coat of lacquer over its entire surface. For best results cut the decal apart as close to the designs as possible.

## 5 PAINTING



For best flight performance and appearance your rocket should have a smooth, hard finish. The cardboard and balsa parts should have several coats of sealer, sanding lightly between each coat. When painting, if a brush is used, sand carefully after each coat. If a spray can is used, apply several light coats avoiding runs. Bright colors are best for easy spotting and recovery.

## 6 LAUNCHING INSTRUCTIONS

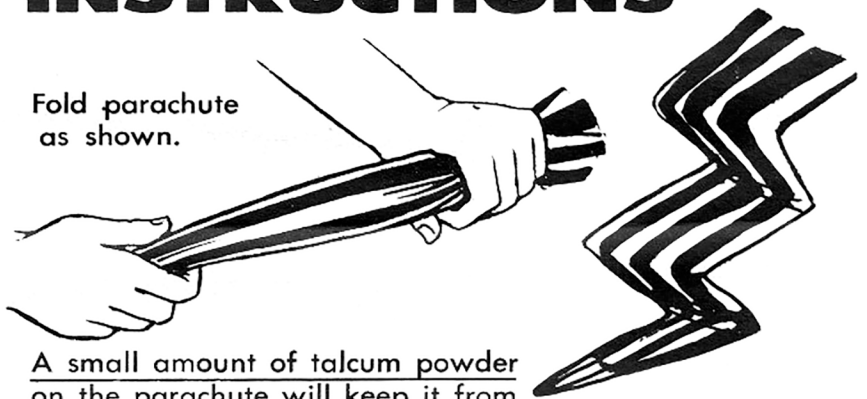
Pack flameproof wadding into the body tube from the top, pushing it down towards the engine. Fold the parachute carefully and pack it on top of the wadding. Pack the shroud lines and cord on top of chute and insert the nose cone assembly in place.

Use an MPC Ignitor or bend a short piece of nichrome wire and insert in engine. Hold wire in place with a piece of tape. Insert the engine in engine compartment. Be sure the engine is a tight fit. If the engine can be pulled out with just the finger it is too loose. Apply tape lengthwise on the engine until a good fit is achieved. **A TIGHT FIT IS A MUST!**

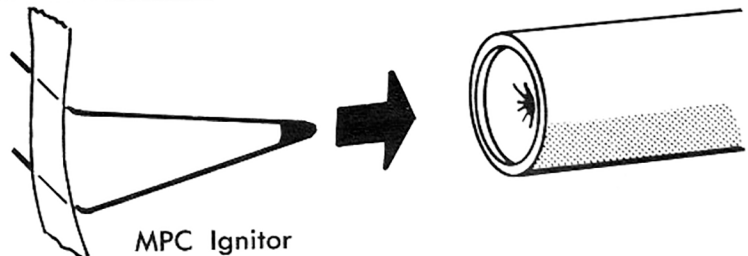
**NOW FOLLOW PROCEDURE LISTED ON COUNT DOWN CARD**

For extended storage, the chute should not be left folded.

Fold parachute as shown.



A small amount of talcum powder on the parachute will keep it from sticking together.



MPC Ignitor

In the event that engines are not available in your area, take advantage of our three engine package by sending \$1.00 to MODEL PRODUCTS CORP., 126 Groesbeck, Mt. Clemens, Michigan 48043.





## WARNING!

(MODEL ROCKET)

A flying model rocket is a scientifically designed educational model . . . NOT A TOY! If misused it can be dangerous. It is capable of attaining speeds up to 300 mph. It should be used only as instructed, and treated with care and respect.

build this kit only as shown. Do not attempt to alter the design in any way. Each kit was designed to give maximum stability, and any alteration or variation of the rocket design could make it unsafe.

(MODEL ROCKET ENGINES)

Solid propellant Rocket Reaction Engines are specifically designed for the sole purpose of propelling model rocket vehicles. They are scientifically designed, produced on automatic machinery, and subjected to statistical quality control tests. It is very important, however, that caution be exercised in their use. All instructions must be read thoroughly first and followed completely. Model rocket engines are designed for one purpose only. They are not toys—and their misuse must be absolutely avoided. Model rocketry has proven itself to be as safe as any other hobby, when common sense codes are used.

This model rocket has been designed and developed to give you a straight high flight if the instructions are followed carefully. The exciting and educational sport of model rocketry has grown into a full scale national activity, and will continue to grow every time you fly your rocket safely. Formation of a rocket club in your area will provide you with hours of enjoyment even when you're not flying rockets. Look for our new models appearing on your dealer's shelves soon.

Before you begin building, look over the instructions carefully. Following the procedure given, test fit the parts without gluing. This way you will be more familiar with the location of parts when it becomes time to use glue. The parts list will acquaint you with the pieces in the kit.

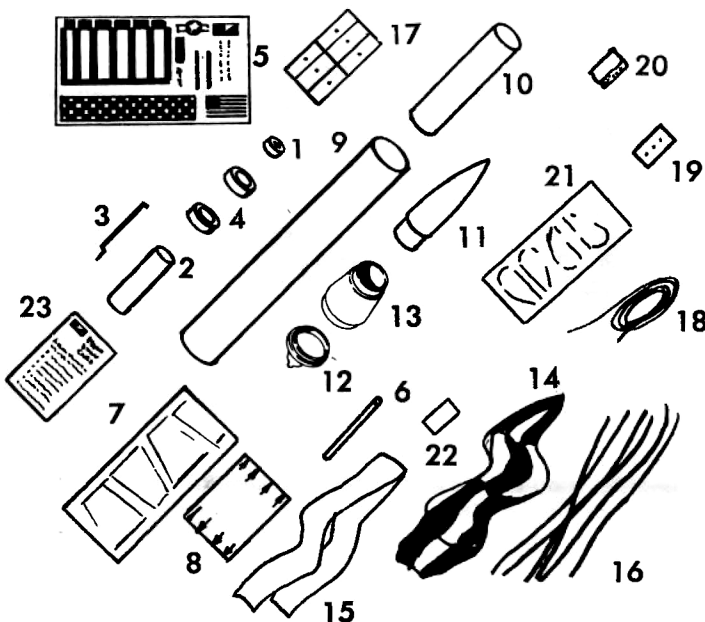
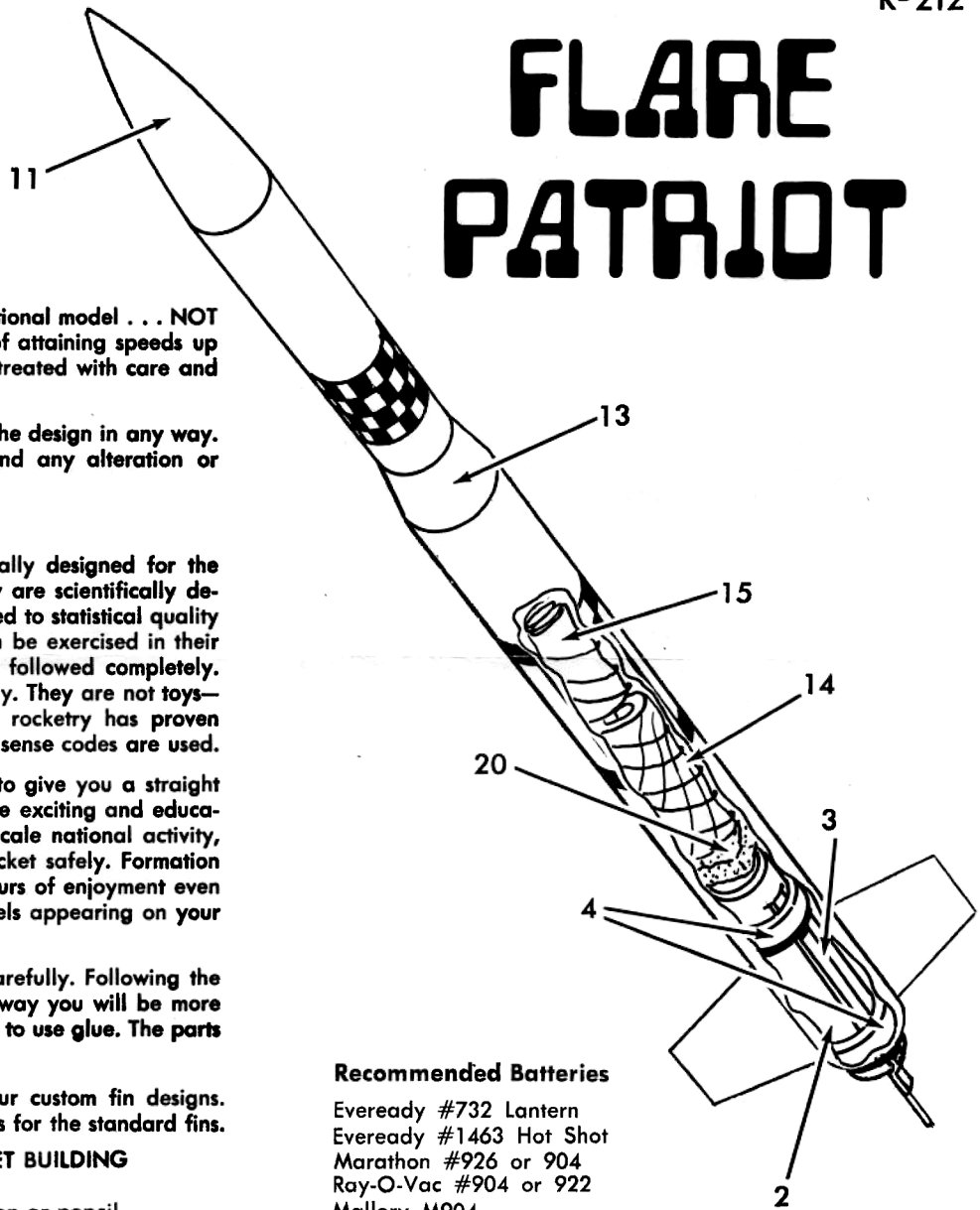
Included in this kit is a custom fin template, with four custom fin designs. Find instructions for the custom fins with the instructions for the standard fins.

### RECOMMENDED TOOLS FOR MODEL ROCKET BUILDING

Modeling knife	Ball point pen or pencil
Scissors	Fine grit sandpaper
Extra strong white glue	Paint in desired colors
Styrene cement	Wood sealer

### Recommended Batteries

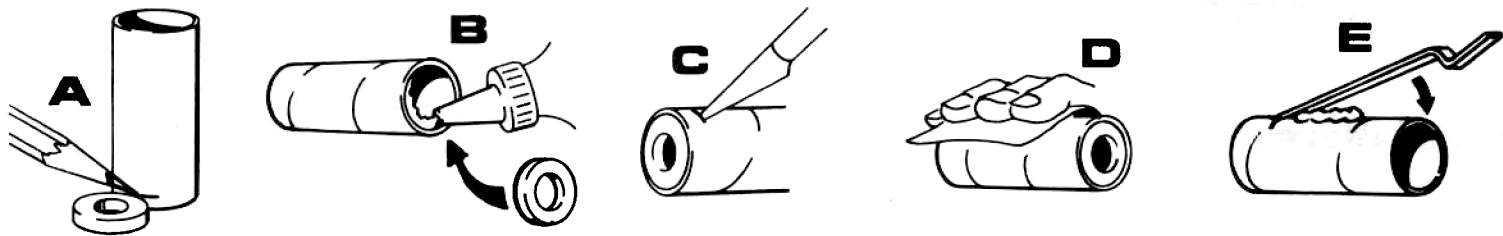
Eveready #732 Lantern  
 Eveready #1463 Hot Shot  
 Marathon #926 or 904  
 Ray-O-Vac #904 or 922  
 Mallory M904  
 Bright Star #164 or #187  
 Burgess TW2 or S461  
 Burgess 4F6H or 2G8H



## PARTS LIST

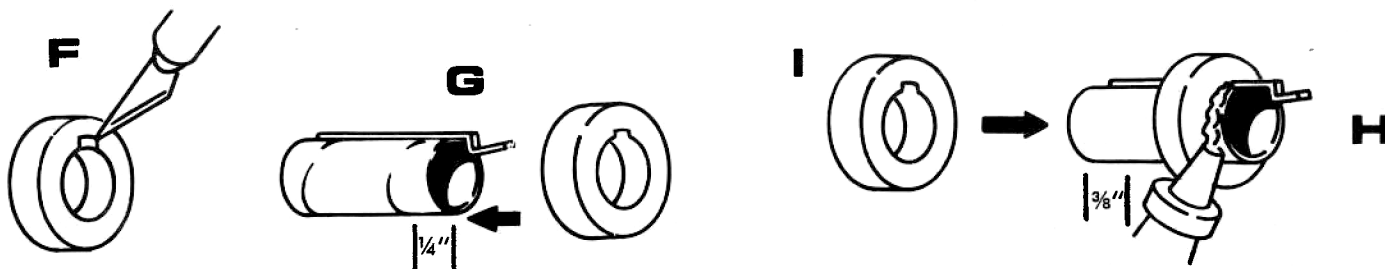
1	ENGINE BLOCK	13	COUPLER
2	ENGINE COMPARTMENT	14	PARACHUTE
3	ENGINE CLIP	15	STREAMER
4	CENTERING RINGS	16	SHROUDS
5	DECAL	17	SHROUD TABS
6	LAUNCHING LUG	18	SHOCK CORD
7	FIN SHEET	19	SHOCK MOUNT
8	FIN GUIDE	20	WADDING
9	BODY TUBE	21	CUSTOM FIN TEMPLATE
10	BODY TUBE (PAYLOAD)	22	ADDRESS LABEL
11	NOSE CONE	23	COUNT DOWN CARD
12	COUPLER PLUG		

# 1



Place the engine block against the engine compartment (brown paper tube) and mark with a pencil (A). Apply glue around the inside edge of the engine compartment and insert engine block so the ends are flush (B) and allow to dry. Cut a slit  $\frac{1}{4}$ " along pencil line (C). Sand the out-

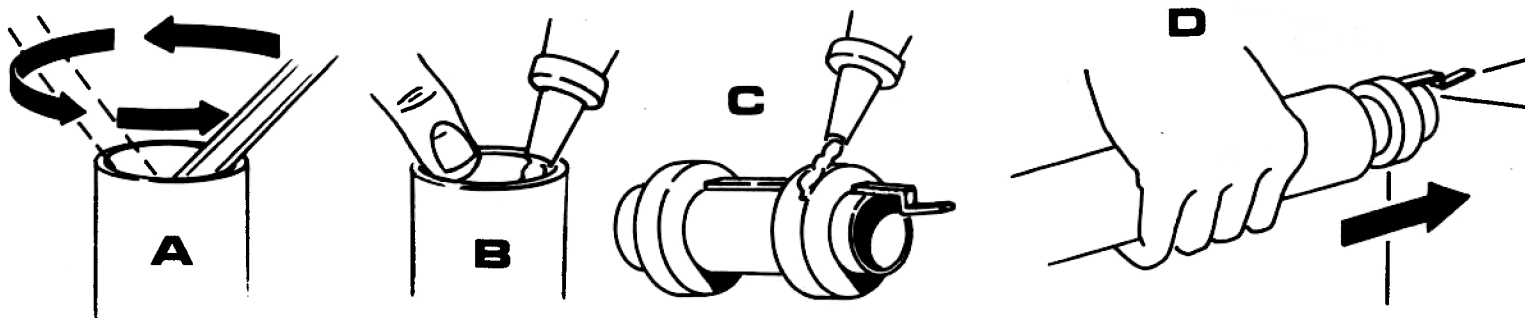
side of the engine compartment (D). Slide one centering ring onto the engine compartment for test-fit. Ring should fit smoothly but not bind. Remove ring. Apply glue half way down tube, starting from slit, and insert engine clip (E).



Press clip down, allow to dry. Cut a notch in both centering rings to allow the rings to slide over engine clip (F). Glue centering ring onto engine compartment  $\frac{1}{4}$ " from the end opposite the engine block (G).

Lay a heavy bead of glue around both sides of the centering ring where it joins the engine compartment (H). Glue the remaining centering ring to the engine compartment (I),  $\frac{3}{8}$ " from the end, and allow to dry thoroughly.

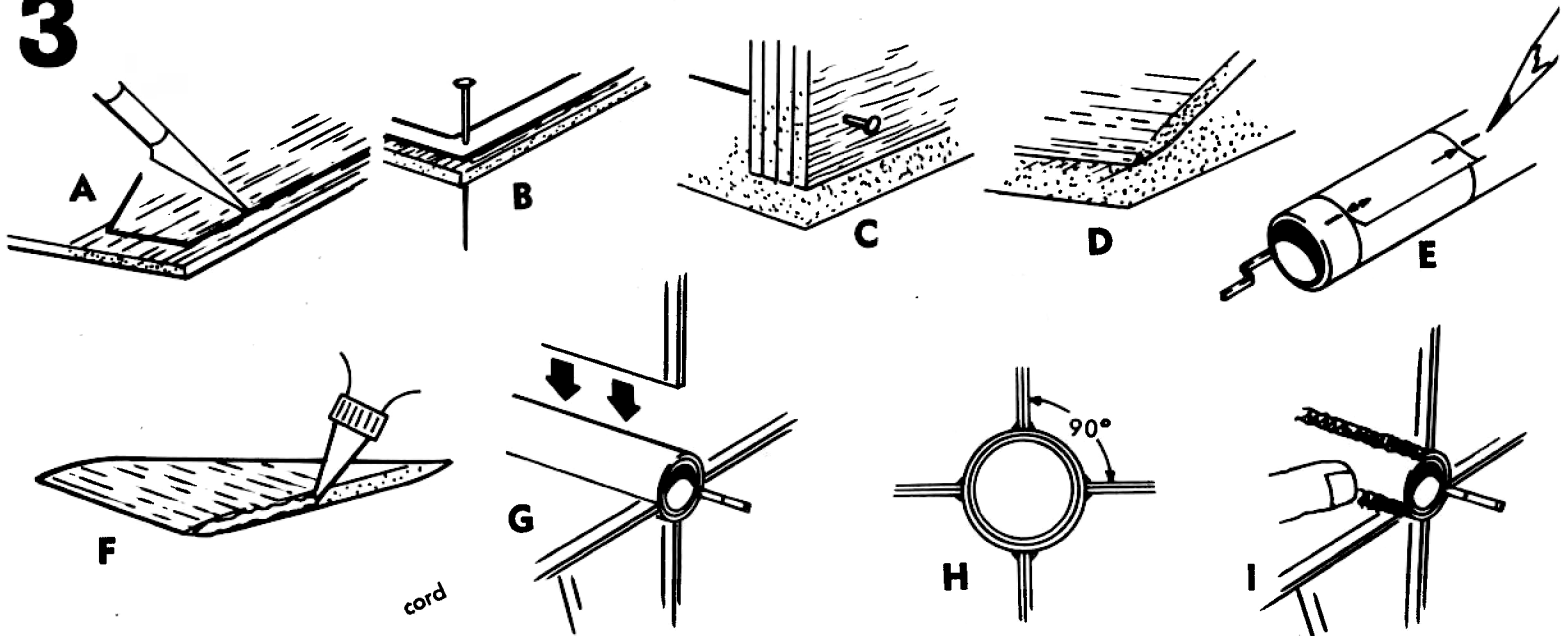
# 2



With a pencil, roll inside edge of the 12" 25 mm body tube (A). Apply white glue to inside of body tube and spread evenly with your finger (B). Apply glue around the outside edge of the centering rings (C). With constant pres-

sure, against the edge of a table, push the engine mount into the body tube until the back centering ring is flush with the end of the body tube (D).

# 3



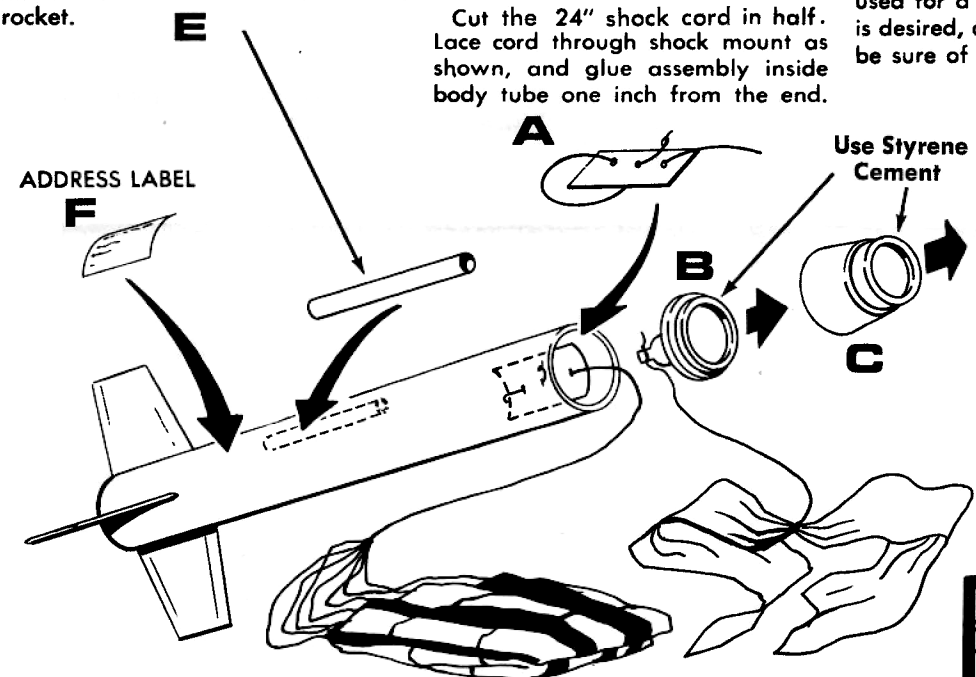
Cut fins from fin sheet (A). If possible use a ruler to help you get a good straight line. If the custom fins are desired, select the shape that you want, and pin this shape to the blank side of the fin sheet (B). Cut out four fins of this shape.

After the fins are cut, pin them together and sand them to a uniform size (C). Remove the pins and sand the three edges that do not attach to the body tube, and sand the fin surfaces smooth (D). Sand the body tube in the area that the fins are to be lo-

cated. Wrap the fin guide around this area, and mark the body tube near the arrow tips (E). Remove the fin guide and connect these marks with a straight pencil line to show attaching points. Apply glue to root chord (that edge that attaches to the body tube) (F). Place fin on pencil line, and push firmly (G). Allow glue to dry before attaching other fins. When viewed from the end the fins should be at the angle shown in drawing (H). Apply glue fillet to each joint, and smooth with a finger (I).

# 4

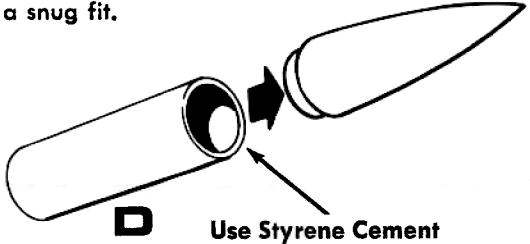
The bottom of the launching lug should be  $5\frac{1}{2}$ " from bottom of rocket.



Cut the 24" shock cord in half. Lace cord through shock mount as shown, and glue assembly inside body tube one inch from the end.

The coupler must fit snug in the body tube, but must be loose enough to eject. If the coupler is too tight sand lightly until a good fit is achieved. The upper section can be used for a 1 ounce payload. If this is desired, don't glue nose cone, but be sure of a snug fit.

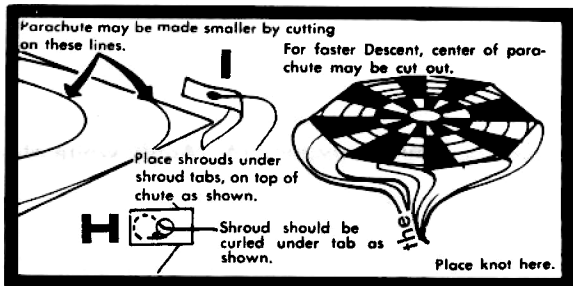
NOSE CONE



G Cut parachute to shape. Punch out hole (with pencil) in shroud tab. Remove from paper backing. Thread one end of shroud line through hole in shroud tab. Shroud line should be curled as shown (H). Place shroud tab on top of chute (I). Repeat for all corners.

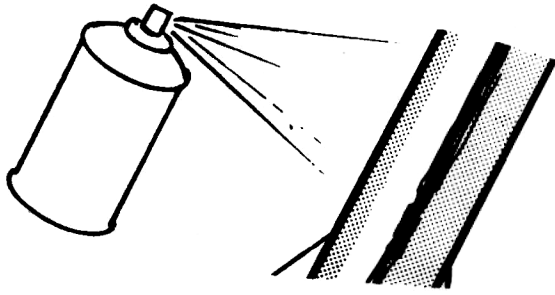
J Attach one length of shock cord to the parachute and main body tube. Attach the other length to the streamer and coupler. If dual recovery is not desired, either the streamer or parachute may be used singly.

If parts fit loose in body tubes, wrap with a piece of tape.



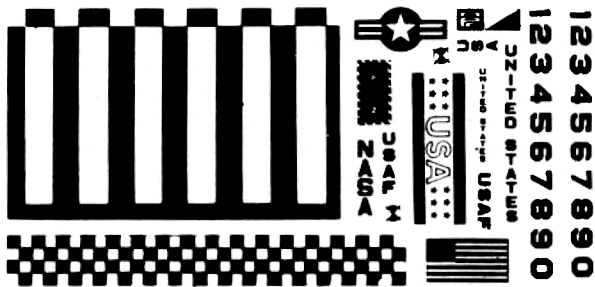
Parachute may be made smaller by cutting on these lines.  
For faster descent, center of parachute may be cut out.  
Place shrouds under shroud tabs, on top of chute as shown.  
Shroud should be curled under tab as shown.  
Place knot here.

## A PAINTING



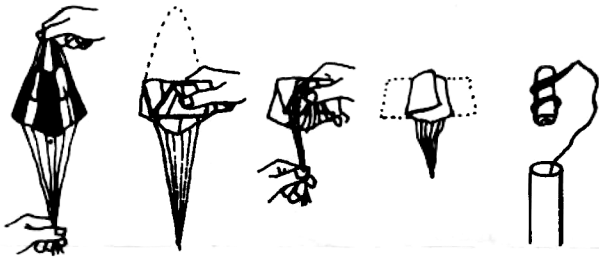
For best flight performance, and appearance, your rocket should have a smooth, hard finish. The cardboard should have several coats of sealer, sanding lightly between each coat. When painting, if a brush is used, sand carefully after each coat. If a spray can is used, apply several light coats avoiding runs.

## B DECALS



Get decal ideas from the box your rocket came in. To apply decals, cut them apart individually, cut close to the designs, then dip in water for a few minutes. Next slide it off of the paper as you apply it to your rocket. Before the decals dry, smooth out any bubbles with a damp cloth.

## C PARACHUTE



Pack flameproof wadding into the top of the body tube, pushing it down toward the engine. Fold the parachute carefully, as shown and pack on top of the wadding. Use a small amount of talcum powder to keep the chute from sticking together. Pack the shroud lines and shock cord on top of the chute.

To pack the streamer into your rocket, just fold where it is tied to the coupler and roll it into a tube shape. Insert the streamer into the body tube, and pack on top of the parachute. Pack the shock cord on top of the rolled streamer and put coupler in place.



**For a good flight, each and every time, use an MPC LUNAR LECTRIC LAUNCH PAD, and LAUNCH CONTROL to fly your model rocket.**

## D ENGINE SELECTION

For your first flights with the FLARE-PATRIOT we recommend the A-2 or B3-3 engines. After you have become acquainted with model rocket flight, you may use the C series engines for maximum altitude. Use all engines with extreme caution.

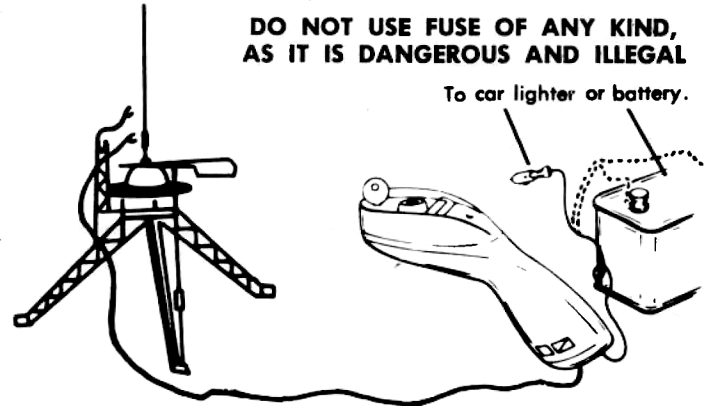
## E SELECTING A LAUNCH SITE

Choose a level area as your launch site. Clear the area under the launch pad of dry grass, and other flammable materials. Your launch site should be clear of trees, high buildings, power lines, and roads and freeways. An area 500' by 500' minimum is recommended for safe flight and recovery. We have recommended a field at least 500' on a side, but a larger area may be required if there is a wind blowing.

## F LAUNCH INSTRUCTIONS

All model rockets must be launched electrically, using the MPC LUNAR-LECTRIC or similar launching system. Check with your hobby dealer.

**IMPORTANT:** All model rockets must be launched from a launch rod at least 36 inches long.



Before approaching launch pad, remove safety key from launch control handle, and disconnect leads from power source.

Approach launch pad with model, engine, and Ignitor. Peel paper backing from taped Ignitor, and insert into nozzle as far as it will go (A). Bend Ignitor over against engine (B). Press tape down onto engine to hold Ignitor in place (C). Insert engine into engine compartment (with nozzle outward) until engine is locked in place, with engine clip.

Lower rocket onto the launch rod by sliding the launch lug over rod. Attach one micro clip to each of the Ignitor leads extending from the engine. Retreat to launch control and give an audible warning to persons in the area that a countdown is about to begin. Connect leads to power source, insert safety key in the LUNAR-LECTRIC launch control, or whatever launch control your using. Begin countdown procedure from countdown card, included in every MPC model rocket kit.

In the event that engines are not available in your area, take advantage of our three engine package by sending \$1.25 to MODEL PRODUCTS CORP., 126 Groesbeck, Mt. Clemens, Michigan 48043.

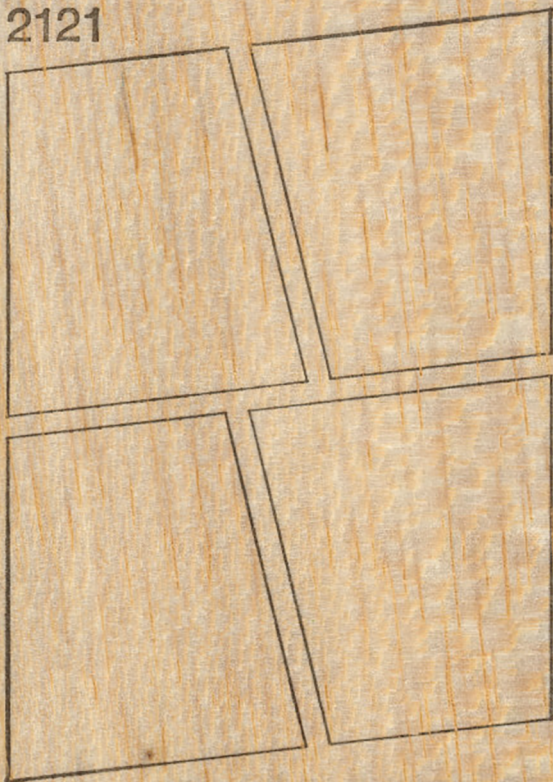
If you are a minor your order must be accompanied with a note from parent or guardian.



TODAY

3/32"

2121



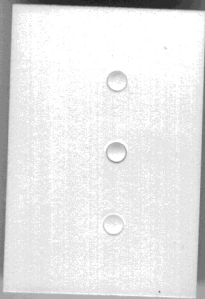
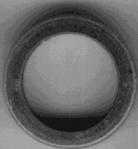
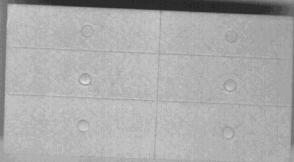
FLARE PATRIOT

IF FOUND PLEASE RETURN TO

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE \_\_\_\_\_



**1 Inch**

1234567890  
1234567890



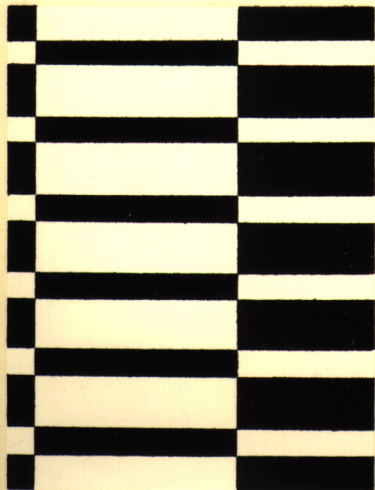
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USA



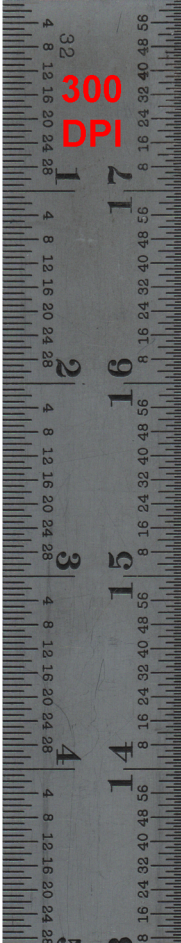
USA  
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UNITED STATES



32  
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DPI



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1 2 3 4 5 6 7 8 9 0



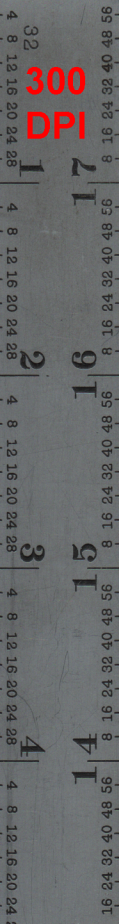
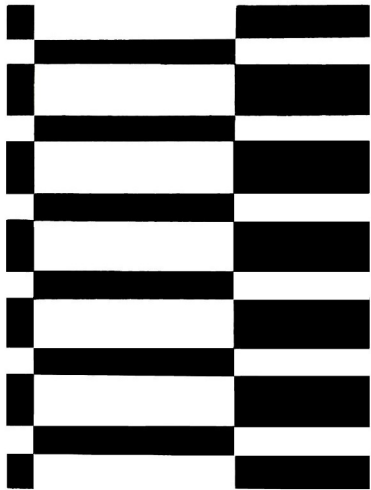
USA  
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ASC



UNITED STATES



32

300  
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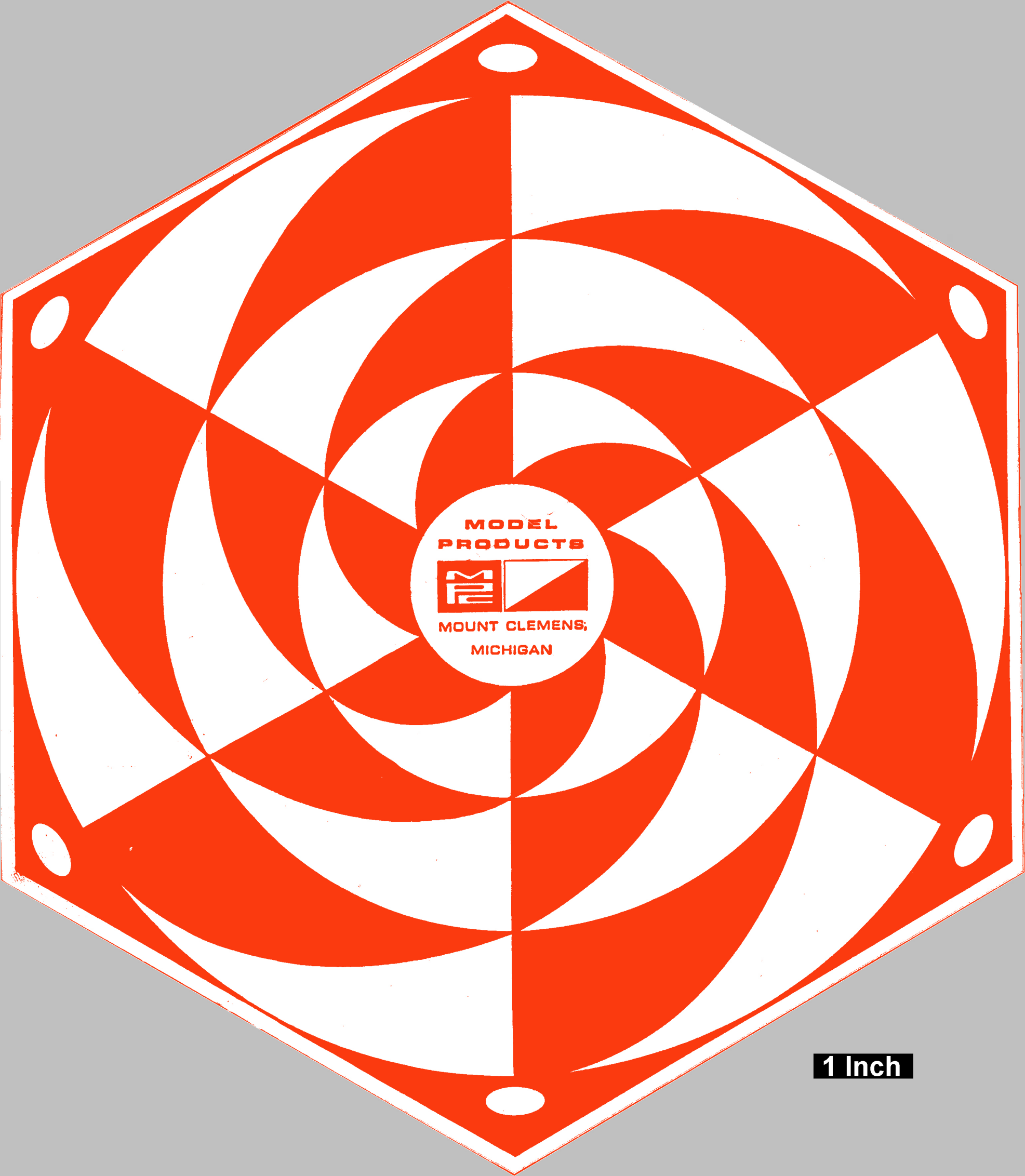
18

76

19

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20



**MODEL  
PRODUCTS**



**MOUNT CLEMENS,  
MICHIGAN**

**1 Inch**



# COUNT DOWN CARD

## WARNING!

### (Model Rocket)

A flying model rocket is a scientifically designed educational model . . . not a toy! If misused, it can be dangerous. It is capable of attaining speeds up to 300 mph. It should be used only as instructed and treated with care and respect.

### (Model Rocket Engine)

Solid Propellant Rocket Reaction Engines are specifically designed for the sole purpose of propelling model rocket vehicles. They have been scientifically designed, produced on automatic machinery, and subjected to rigid statistical quality control tests. It is very important, however, that caution be exercised in their use. **ALL INSTRUCTIONS MUST** be read thoroughly first and followed completely. Model Rocket engines are designed for one purpose only. They are not toys, and their misuse must be absolutely avoided. Model rocketry has proven itself to be as safe as any other hobby when common sense codes are followed.

### Model Rockets must be electrically launched using the MPC "Lunar-Lectric" or similar launch system.

During an actual launching, the person in control of the firing switch should not stand closer than 12 feet from the rocket. Be sure everyone else is back at least 25 feet.

T Minus 10—**PRE-FLIGHT SAFETY CHECK:** Engine installed tightly; nose cone and recovery system GO; fins straight and undamaged.

T Minus 9—**FIRING SYSTEM SAFETY KEY IN HAND!**

T Minus 8—Load Launcher. Model slides freely on launch rod.

T Minus 7—Clean firing systems clips. Hook up ignitor.

T Minus 6—Adjust launcher tilt for wind.

T Minus 5—Clear launching area.

T Minus 4—**RANGE SAFETY CHECK:** Launch area clear. No aircraft overhead.

T Minus 3—**KEY IN.** Panel armed.

T Minus 2—**CONTINUITY LIGHT ON.**

T Minus 1—**IGNITION SEQUENCE START.**

T Minus 0 **ENGINE IGNITION LIFT OFF.**

**MISFIRE PROCEDURE:** Release firing switch. Remove safety key. Wait one minute. Approach launcher carefully. Keep hands and fingers from under model. Keep head, body and hands to side of model. Initiate misfire cause tests.

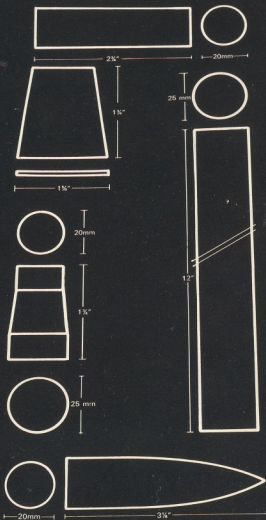
## MODEL ROCKETRY SAFETY CODE

1. **CONSTRUCTION** My model rockets will be made of lightweight materials such as paper, wood, plastic and rubber without any metal as structural parts.
2. **ENGINES** I will use only pre-loaded factory made model rocket engines in the manner recommended by the manufacturer. I will not change in any way nor attempt to reload these engines.
3. **RECOVERY** I will always use a recovery system in my model rockets that will return them safely to the ground so that they may be flown again.
4. **WEIGHT LIMITS** My model rocket will weigh no more than 453 grams (16 ozs.) at liftoff, and the engines will contain no more than 113 grams (4 oz.) of propellant.
5. **STABILITY**—I will check the stability of my model rockets before their first flight, except when launching models of already proven stability.
6. **LAUNCHING SYSTEM** The system I use to launch my model rockets must be remotely controlled and electrically operated, and will contain a switch that will return to "off" when released. I will remain at least 10 feet from any rocket that is being launched.
7. **LAUNCH SAFETY**—I will not let anyone approach a model rocket on a launcher until I have made sure that either the safety interlock key has been removed or the battery has been disconnected from my launcher.
8. **FLYING CONDITIONS** I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low flying aircraft or under any conditions which might be dangerous to people or property.
9. **LAUNCH AREA**—My model rockets will always be launched from a cleared area, free of any easy to burn materials, and I will only use non-flammable recovery wadding in my rockets.
10. **JET DEFLECTOR**—My launcher will have a jet deflector device to prevent the engine exhaust from hitting the ground directly.
11. **LAUNCH ROD** To prevent accidental eye injury I will always place the launcher so the end of the rod is above eye level or cap the end of the rod with my hand when approaching it. I will never place my head or body over the launching rod. When my launcher is not in use I will always store it so that the launch rod is *not* in an upright position.
12. **POWER LINES** I will never attempt to recover my rocket from a power line or other dangerous places.
13. **LAUNCH TARGETS AND ANGLE** I will not launch rockets so their flight path will carry them against targets on the ground, and will never use an explosive warhead nor a payload that is intended to be flammable. My launching device will always be pointed within 30 degrees of vertical.
14. **PRE-LAUNCH TEST** When conducting research activities with unproven designs or methods, I will, when possible, determine their reliability through pre-launch tests. I will conduct launchings of unproven designs in complete isolation from persons not participating in the actual launching.



**DUAL PARACHUTE AND STREAMER RECOVERY  
WITH PAYLOAD SECTION AND DECALS**

Successful model rocketry is totally dependent upon the constant observation of safety regulations. MPC urges all rocketeers to know and abide by The National Association of Rocketry's model rocket safety code:



FINISHED MODEL LENGTH 18.5 INCHES, WT. 1.3 OZ.

**KIT INCLUDES:** Balsa nose cone • Balsa coupler • Balsa fin sheet • 2 fiber body tubes • fiber engine tube • fiber engine block • spacer • brass motor clip • launch lug • screw eye • 10" parachute • shroud lines • tape discs • 18" streamer • fin guide • shock mount • shock cord • decals • optional fin plans

MODEL PRODUCTS CORPORATION • MOUNT CLEMENS, MICHIGAN 48043



R-212-200



## PARTS LIST KIT NO. R-212 - Flare Patriot

Quantity	Description	Type	Number	Detail1	Detail2	Detail3	Detail4	Comment
1	ENGINE BLOCK	EB-20A	30224	.708" OD	.65" ID	.25" thick	0.058" wall	Black
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	35025	2.8" long	.100" wide	.025" thick		Reg. & D
2	CENTERING RINGS	AR-2050	30164	0.25" long	0.737" ID	0.949" OD	0.106" wall	Green
1	PAPER BODY TUBE	BT-50?	30351	12" long	0.950" ID	0.976" OD	0.013" wall	white
1	BALSA ADAPTER	TA-2050A	70008	2.0" long	1.0" taper	.5" front	.5" back	BT-20 to BT-50
1	PAPER BODY TUBE	WBT-20J	30408	2.75" long	0.710" ID	0.736" OD	0.013" wall	White
1	BALSA NOSE CONE	BNC-20N	70236	2.75" long	.736" dia.	.5" shoulder		
1	LAUNCH LUG	LL-2B	38178	5/32" ID	1/8" rod	2-3/8" long		Mylar
1	BALSA FIN STOCK	BFS-30		3" wide	6" long	3/32" thick	0.09375	Scan
1	Parachute	PK-10	2262	10" dia.	1.25 mil thick	LDPE plastic	Org/Wht	
1	Plastic Streamer	?	38272	1.2" wide	18" long	Flo. Orange	Surveyor's Tape	polyethylene
1	Shroud Line	SLT-72	38237	72"	.020" diameter	Twisted cotton		
6	Tape Disc	TD-3F	38406	1/2" dia.	Paper	Self-Stick		Set of 6
1	Shock Cord	SC-1	85730	18" long	1/8" wide			Rubber
1	DECAL	N/A	N/A	5" long	3" wide	Red/Wht/Blu/Blk	Waterslide	Scan





MODEL PRODUCTS

# FLARE-PATRIOT

CONTEST PROVEN FOR NAJ QUADRANTION COMPETITION

This model rocket has been designed and developed to give you a strong, lightweight and powerful performance. The exciting and exhilarating sport of model rocketry is growing every day. Your rocket early, formation of a rocket club in your area will provide you with hours of enjoyment, even when you're not launching. For our new models appearing on your dealer's shelves.

RECOMMENDED ENGINES A3.2, B1

RECOMMENDED TOOLS  
FOR ROCKET BUILDING  
Modeling knife

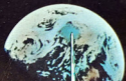


# FLARE PATRIOT

FLYING MODEL  
ROCKET KIT

MACH 10 SERIES  
BALSA PARTS  
WITH FIBER-TUBE ROCKET BODY

MPC RECOMMENDS ADULT SUPERVISION IN FLYING MODEL ROCKETS



Engines & Launcher  
NOT Included in kit  
USE ONLY THE FOLLOWING  
MPC ROCKET ENGINES  
A3-2, B3-3, B8-4, C8-4





# FLARE PATRIOT

FLYING MODEL ROCKET KIT  
BALSA PARTS/FIBER BODY



R-212-200



# FLARE PATRIOT

FLYING MODEL  
ROCKET KIT

MACH 10 SERIES  
BALSA PARTS  
WITH FIBER-TUBE ROCKET BODY

MPC RECOMMENDS ADULT SUPERVISION IN FLYING MODEL ROCKETS



Engines & launcher  
NOT included in kit  
USE ONLY THE FOLLOWING  
MPC ROCKET ENGINES  
A3-2, B3-3, B6-4, C6-4,



APOGEE

EJECTION

BURNOUT

TYPICAL MODEL  
ROCKET FLIGHT

RECOVERY

LIFT OFF

APOGEE

EJECTION

BURNOUT

TYPICAL MODEL  
ROCKET FLIGHT

RECOVERY

LIFT OFF

# FLARE PATRIOT

FLYING MODEL ROCKET KIT  
BALSA PARTS/FIBER BODY

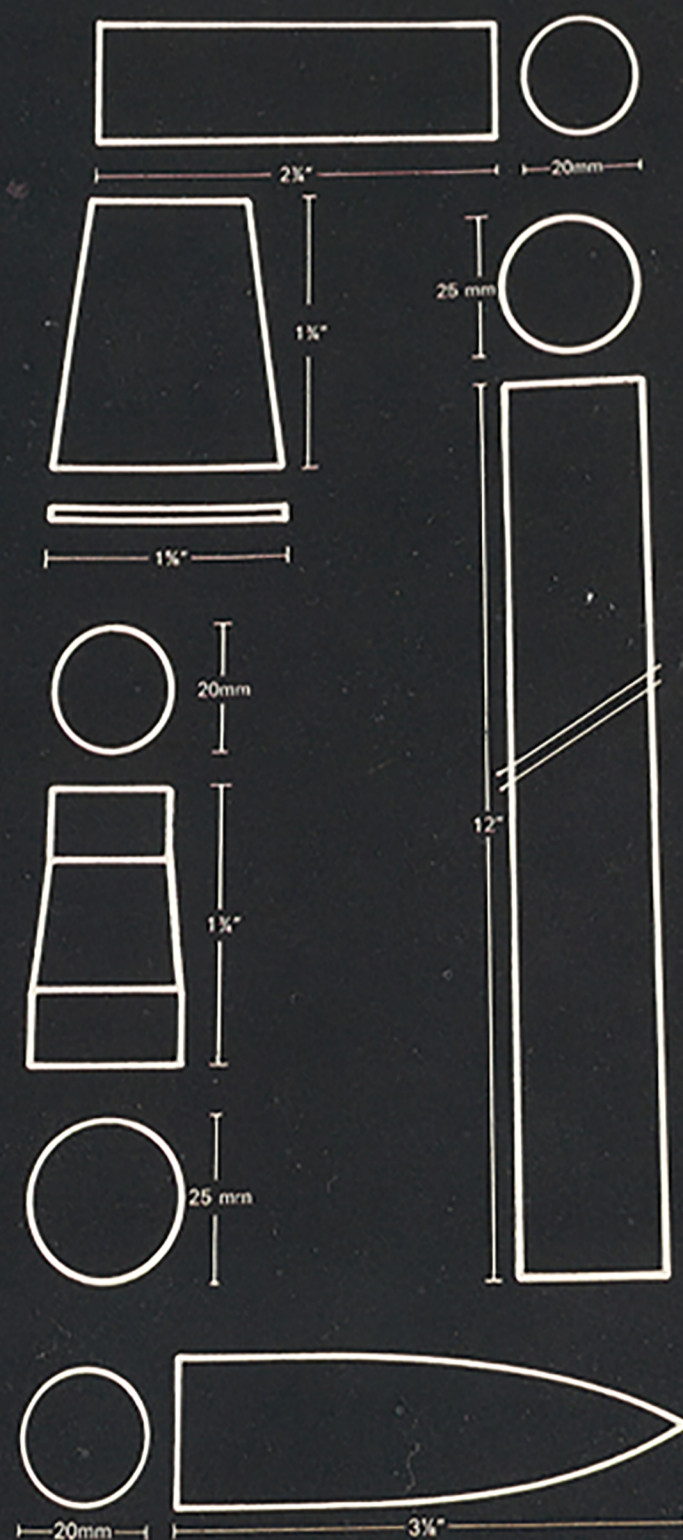


R-212-200



## DUAL PARACHUTE AND STREAMER RECOVERY WITH PAYLOAD SECTION AND DECALS

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FINISHED MODEL LENGTH 18.5 INCHES, WT. 1.3 OZ.

KIT INCLUDES: BALSA NOSE CONE • BALSA COUPLER • BALSA FIN SHEET • 2 BALSA BODY TUBES • FIBER ENGINE TUBE • FIBER ENGINE BLOCK • SPACER • BRASS MOTOR CLIP • LAUNCH LUG • SCREW EYE • 10" PARACHUTE • SHROUD LINES • TAPE DISCS • 18" STREAMER • FIN GUIDE • SHOCK MOUNT • SHOCK CORD • DECALS • OPTIONAL FIN PLANS

MODEL PRODUCTS CORPORATION • MOUNT CLEMENS, MICHIGAN 48043