



PEGASUS MK II

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 these kits 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.

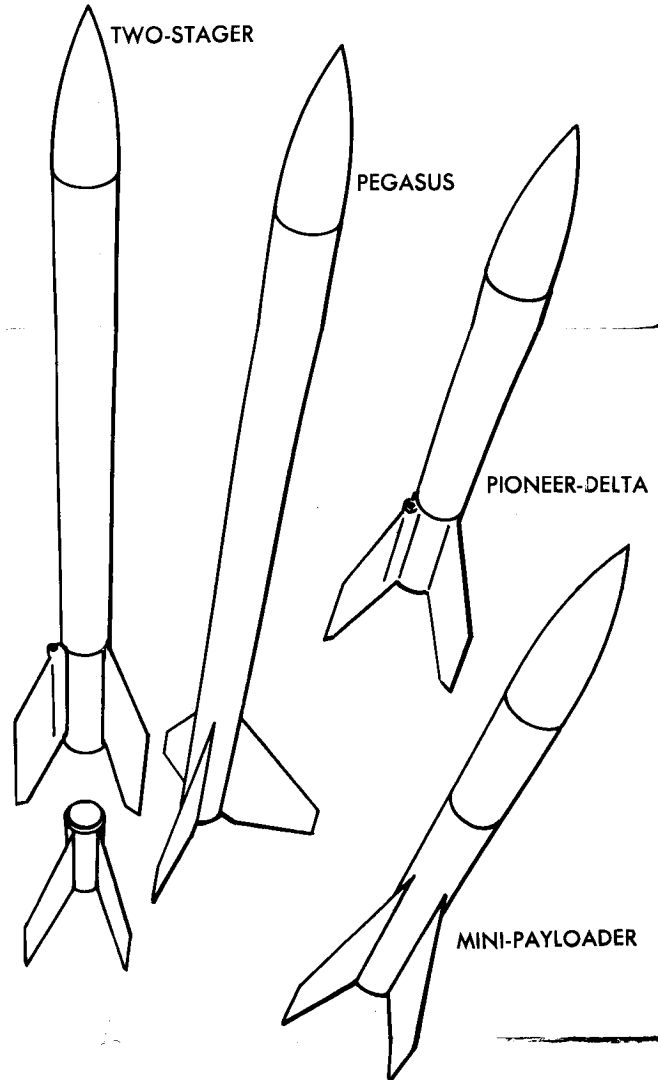
This model rocket has been designed and developed to give you a straight high flight if the instructions are followed carefully. The exciting and educational sport of model rocketry has grown into a full scale national activity, and will continue to grow every time you fly your rocket safely. Formation 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.

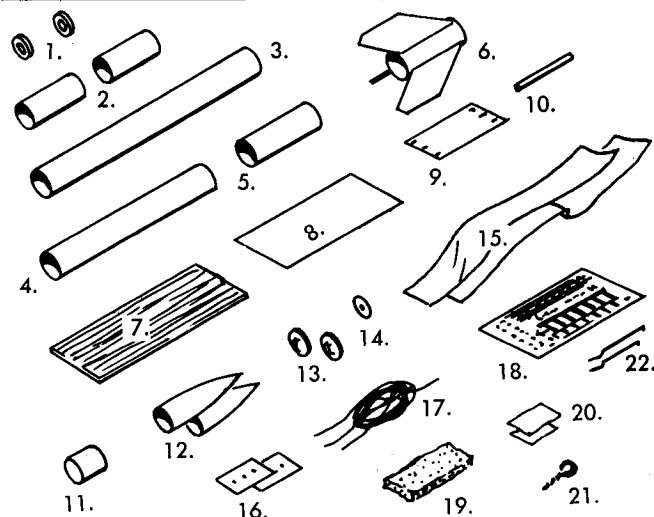
RECOMMENDED TOOLS FOR MODEL ROCKET BUILDING

Modeling knife
Scissors
Extra strong white glue
Styrene cement

Ball point pen or pencil
Fine grit sandpaper
Paint in desired colors
Wood sealer



PARTS LIST



- | | |
|------------------------|----------------------|
| 1. ENGINE BLOCKS | 12. NOSE CONES |
| 2. ENGINE COMPARTMENTS | 13. NOSE CONE PLUGS |
| 3. 9" BODY TUBE | 14. NOSE CONE WEIGHT |
| 4. 6" BODY TUBE | 15. STREAMERS |
| 5. 2 3/4" BODY TUBE | 16. SHOCK MOUNTS |
| 6. PLASTIC FIN | 17. SHOCK CORDS |
| 7. WOOD FIN SHEET | 18. DECAL |
| 8. FIN TEMPLATE | 19. WADDING |
| 9. FIN GUIDE | 20. ADDRESS LABELS |
| 10. LAUNCH LUG | 21. SCREW EYE |
| 11. COUPLER | 22. ENGINE CLIPS |

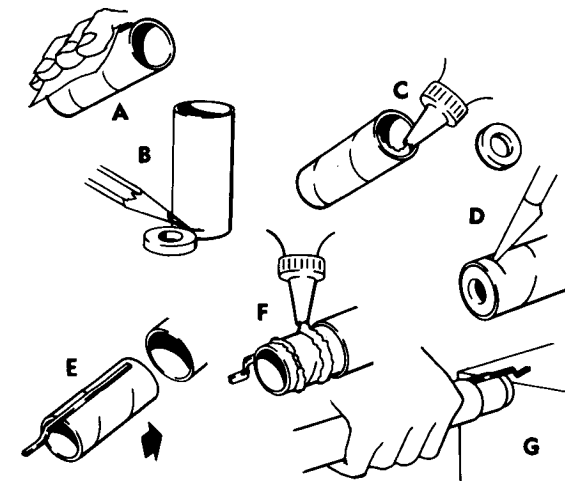
In the PEGASUS MK II kit you have a choice of building one of four rockets, or you can build two at the same time. The only two that can be built at the same time are the MINI-PAYLOADER and the PIONEER-DELTA. Or you can build ONLY one of the following,

PEGASUS or TWO STAGER. Complete assembly instructions can be found on this sheet. Follow the instructions closely to assure a good stable flight.

PIONEER-DELTA

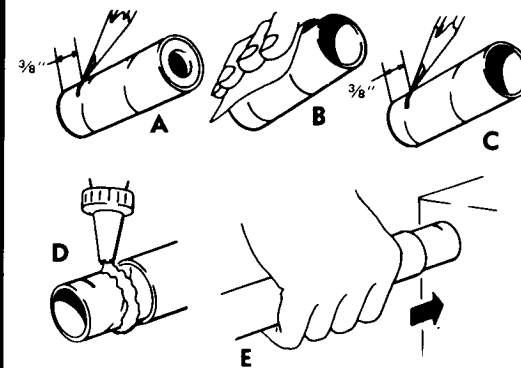
The PIONEER-DELTA, if built an altitude of 390 ft. using the B3-3, and 1450 ft. with light rocket, and very easy to one piece fin assembly. REAL BEFORE BUILDING.

1. SINGLE STAGE ENGINE COMPARTMENTS



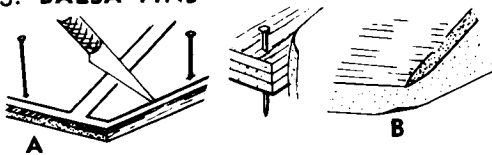
Sand the engine compartment so that it fits easily into the body tube (A). Place an engine block against the engine compartment, and mark with a pencil as shown (B). Apply glue inside this end of engine compartment and insert engine block (C). Cut a slit on the pencil mark (D). Insert the engine clip into the slit in the engine compartment, and insert the engine compartment about half way into the body tube (E). Apply rings of glue around the engine compartment (F). Insert an engine into the engine compartment (use a burned out engine if possible) so that you will not crush the tubes. Place the engine against a solid object, and with constant pressure, push until the ends of the engine compartment and body tube are flush (G).

2. TWO STAGE ENGINE COMPARTMENTS



The TWO STAGER use a booster and an upper stage. Use the instructions from 1. ENGINE COMPARTMENT, but after making the pencil mark with the engine block, make another mark $\frac{3}{8}$ " from the other end of the engine compartment (A). When you push the engine compartment into the body tube, push only as far as the $\frac{3}{8}$ " mark. $\frac{3}{8}$ " MUST EXTEND FROM THE BODY TUBE. Sand the remaining engine compartment so that it fits easily into the $2\frac{3}{4}$ " booster tube (B). Make a pencil mark $\frac{3}{8}$ " from one end (C). The booster engine compartment does not use an engine for bracing when installing engine compartment. Be very careful. As with the upper stage push engine compartment about half way into the tube and apply a ring of glue (D). Push the engine compartment into the $2\frac{3}{4}$ " tube, stopping at the $\frac{3}{8}$ " mark (E). $\frac{3}{8}$ " MUST EXTEND FROM THE BOOSTER TUBE.

3. Balsa Fins

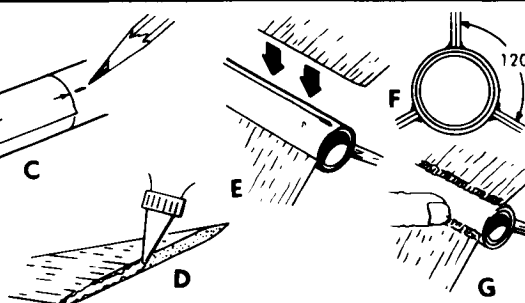


Select the fin design that you're going to be using for your rocket from the fin template. Pin or tape the template to the balsa fin sheet, and cut along the line. (A) Repeat this for the other two fins. If possible, use a ruler to help you get a good straight line.

After the fins are cut, pin together as shown and sand for uniform size.

Remove pins and sand the three edges that do not attach to the body tube, and sand the fin surfaces smooth. (B)

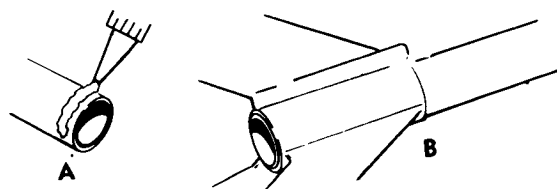
Wrap the fin guide around the body tube where the fins will be attached. Mark the tube near the arrow tips. (C) Remove the fin guide and connect these marks with a straight pencil line to show attaching



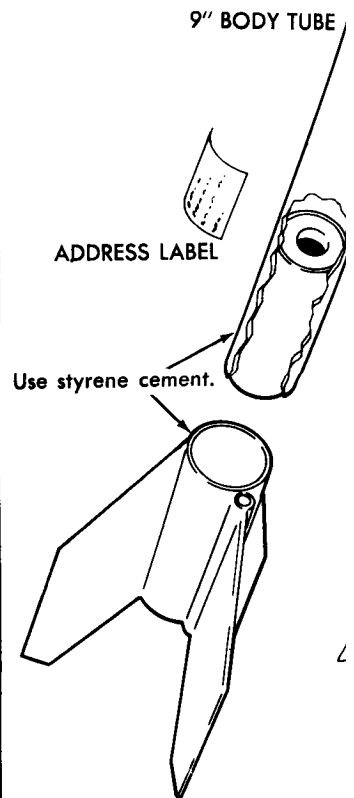
points. Apply glue to root chord (that edge of the fin that attaches to the body tube). (D) Place fin on pencil line and push firmly. (E) Allow glue to dry before attaching other fins. When viewed from the end, the fins should be at the angle shown in drawing. (F) Apply glue fillet to each joint and smooth with a finger. (G) Apply launch lug at this stage (see assembly on page for exact placement). The plastic fin has the launch lug built in, so when this fin is used, leave the paper launch lug off.

4. PLASTIC FINS

The fin guide is not needed for the plastic fins. Place a ring of glue around the body tube about $\frac{1}{4}$ " from the end. (A) Slide the plastic fin on until it is in the position shown. (B)



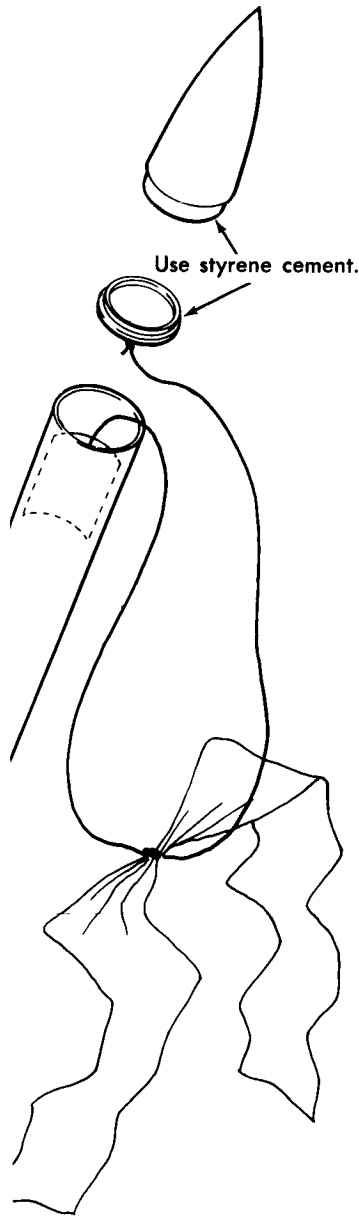
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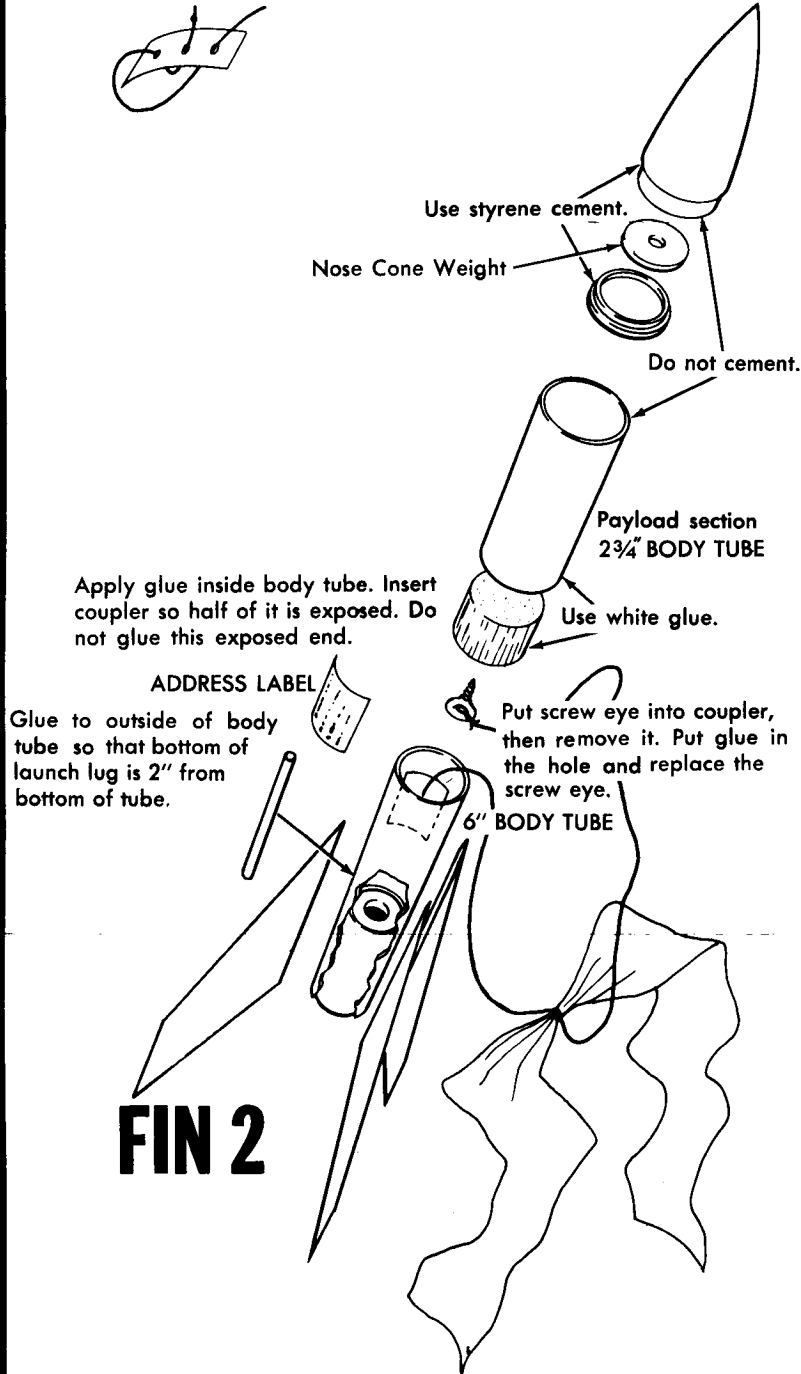


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oint of the streamer.

MINI-PAYLOADER

The MINI-PAYLOADER, if built as directed will reach an altitude of 300 ft. using the A3-2 engine, 890 ft. with the B3-3, and 1420 ft. with the C6-4. The payload section can be used for flight experiments with insects and other small payloads not exceeding one ounce. READ ALL INSTRUCTIONS BEFORE BUILDING.

Lace shock cord through shock mount, as shown. Glue this assembly into the top of tube about 1" down.



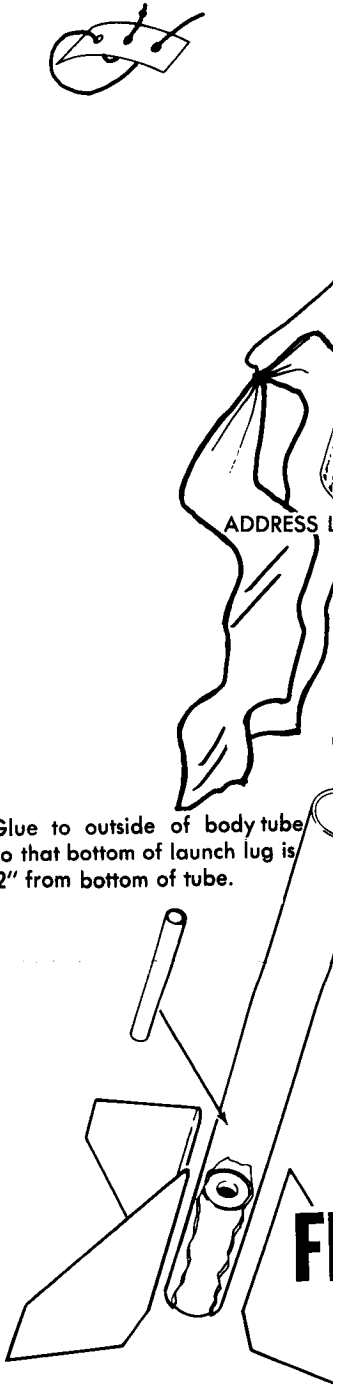
Tie the cord to the streamer at the halfway point of the cord, and halfway point of the streamer.

NOTE: If the balsa coupler is too large, sand the surface until a smooth fit is attained. In some cases the coupler may be loose. If so, wrap tape around the coupler until a good fit is achieved.

PEGASUS

The PEGASUS, if built as directed will reach an altitude of 220 ft. using the A3-2 engine, 890 ft. with the B3-3, and 920 ft. with the C6-4. The payload section can be used for flight experiments with insects and other small payloads not exceeding one ounce. READ ALL INSTRUCTIONS BEFORE BUILDING.

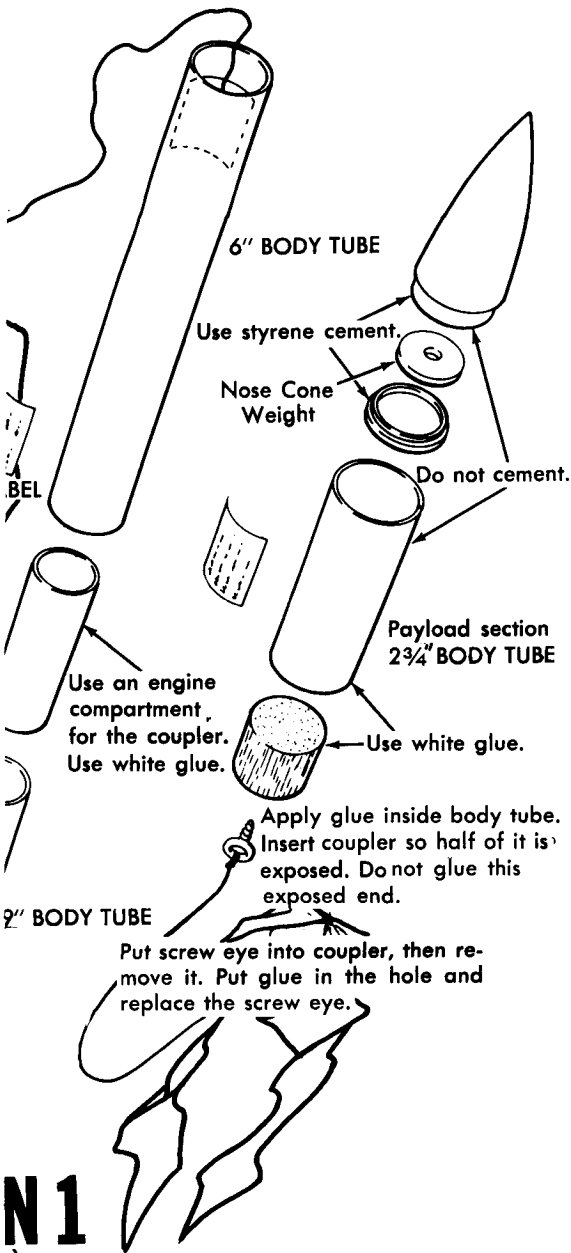
Lace shock cord through shock mount, as shown. Glue this assembly into the top of tube about 1" down.



NOTE: If the balsa coupler is too large, sand the surface until a smooth fit is attained. If so, wrap tape around the coupler until a good fit is achieved.

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RE BUILDING.

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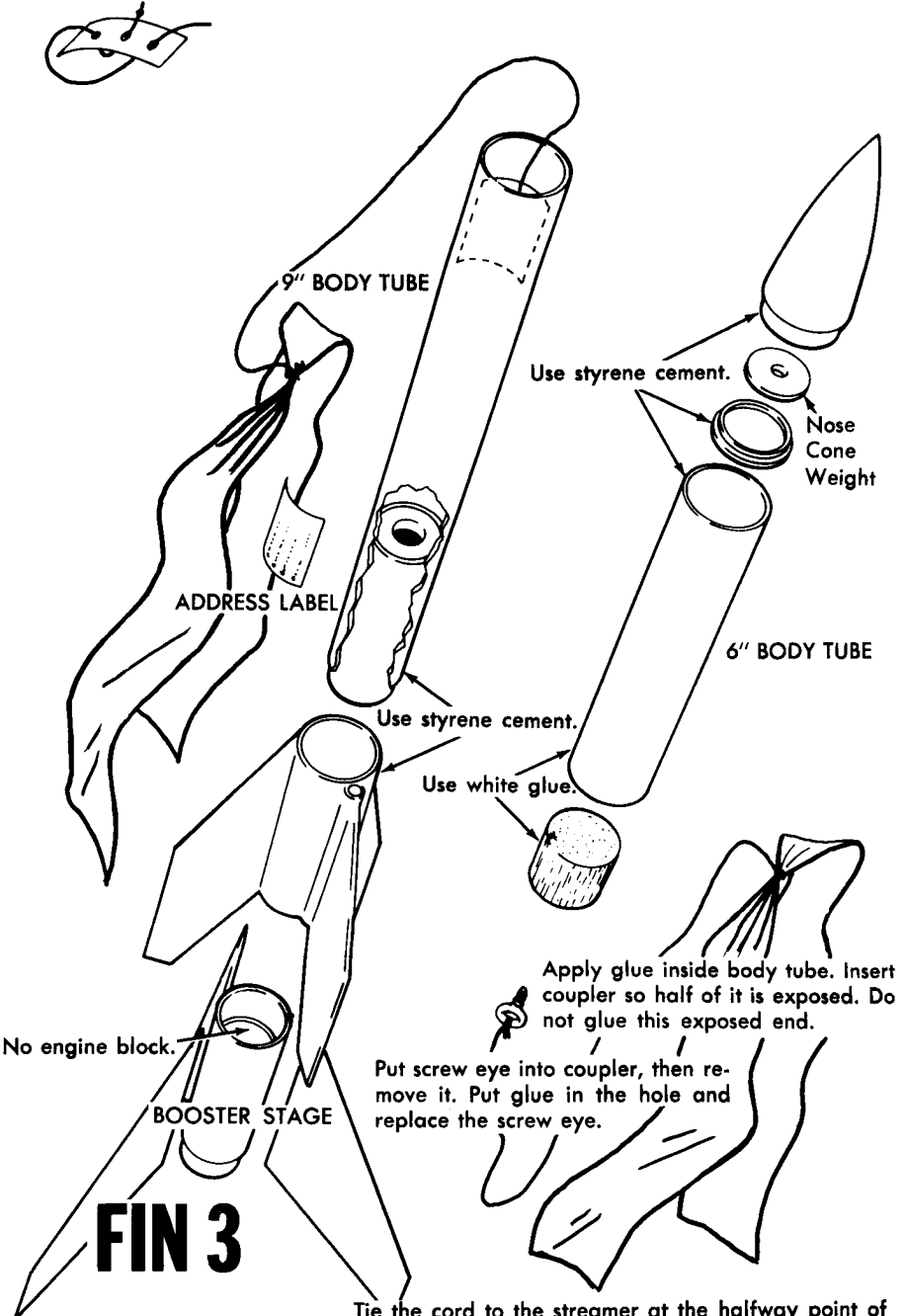
Tie the cord to the streamer at the halfway point of the cord, and halfway point of the streamer.

er is too large, sand the surface until a
some cases the coupler may be loose.
he coupler until a good fit is achieved.

TWO STAGER

The TWO STAGER, if built as directed, will reach an altitude of over 500 ft. using the B6-0 for the booster, and the A3-2 for the upper stage. The TWO STAGER is an interesting rocket to watch as it "stages." The booster does not have a recovery system, so keep an eye on where it falls. READ ALL INSTRUCTIONS BEFORE BUILDING.

Lace shock cord through shock mount, as shown. Glue this assembly into the top of tube about 1" down.



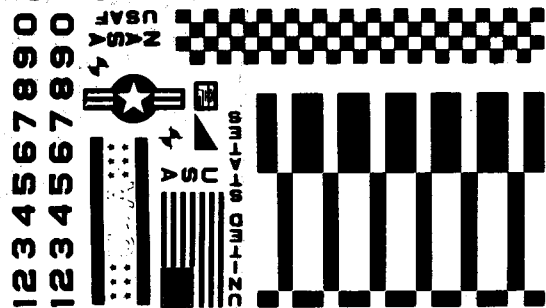
FIN 3

Tie the cord to the streamer at the halfway point of the cord, and halfway point of the streamer.

NOTE: If the balsa coupler is too large, sand the surface until a smooth fit is attained. In some cases the coupler may be loose. If so, wrap tape around the coupler until a good fit is achieved.

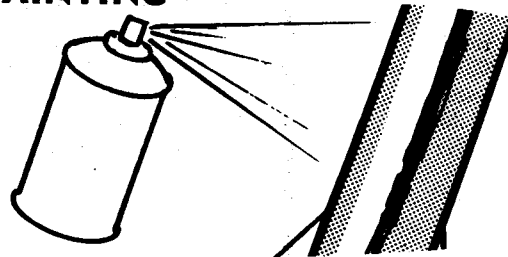
2 ENGINES REQUIRED FOR TWO STAGER

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.

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.

ENGINE SELECTION

For your first flights, use only these engines with the proper rockets.

MINI-PAYLOADER — A3-2 PIONEER-DELTA — A3-2

PEGASUS — A3-2

TWO-STAGER — B6-0 (Booster) — A3-2 (Upper Stage)

After you have become acquainted with model rocket flight, you may substitute these engines with the more powerful engines listed below.

MINI-PAYLOADER — B3-3 or C6-4

PIONEER-DELTA — B3-3 or C6-4

PEGASUS — B3-3 or C6-4

TWO-STAGER — B6-0 or C6-0 (Booster) B3-3 or C6-4 (Upper Stage)

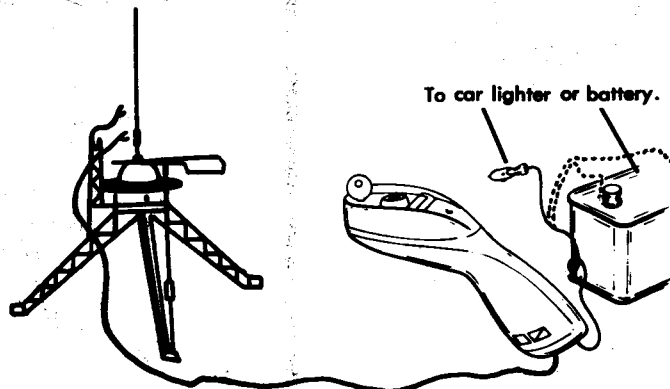
SELECTING A LAUNCH SITE

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.

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.

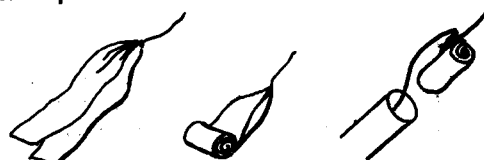


RECOMMENDED BATTERIES

EVEREADY #732 LANTERN
EVEREADY #1463 HOT SHOT
MARATHON #926 OR 904
RAY-O-VAC #904 OR 922

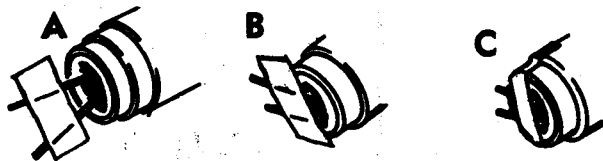
MALLORY M904
BRIGHT STAR #164 OR #187
BURGESS TW2 OR S461
BURGESS 4F6H OR 2G8H

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



DO NOT USE FUSE OF ANY KIND, AS IT IS DANGEROUS AND ILLEGAL

Before approaching launching 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 of engine as far as it will go. (A) Bend ignitor over against engine. (B) Press tape down onto engine to hold in place. (C) Insert engine into engine compartment (with nozzle outward) until engine is locked in place. This procedure for all rockets except the upper stage of two stager, which is ignited by the hot gases of the booster.



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 you're using. Begin countdown procedure from countdown card, included in every MPC model rocket kit.

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

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.

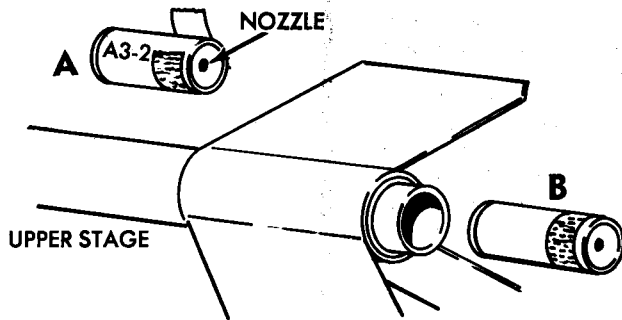
If you are a minor your order must be accompanied with a note from parent or guardian.

ENGINE INSTALLATION FOR TWO STAGER

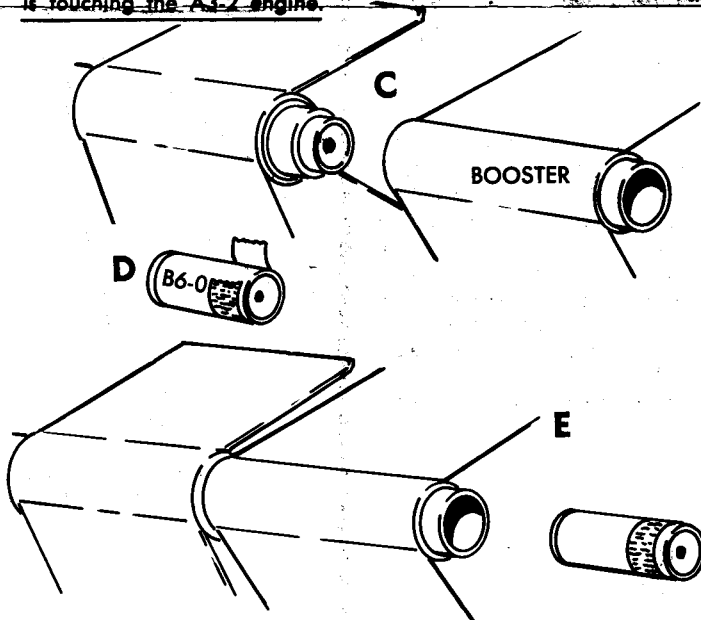
WARNING! — Please read and follow these instructions carefully. If proper care is not taken to insure that the engines are held firmly in place in the engine compartment, and are butted together, then upon staging, the engine will be ejected from the body tube and will fail to ignite the next stage. If this happens, the parachute will fail to open and you will have a free falling dangerous missile that will bury itself several inches in the ground upon impact. This can be extremely dangerous for anyone in the area. Therefore it is extremely important that a very large area be allowed for a flying field. We have recommended a field at least 500' on a side, but a larger area may be required if there is a wind blowing.

Multi-stage kits are intended for advanced modelers only.

Wrap one layer of masking tape around nozzle end of A3-2 engine, as shown (A). Insert engine into upper stage, to check for fit. If the engine is loose add additional tape until a tight fit is achieved (B).

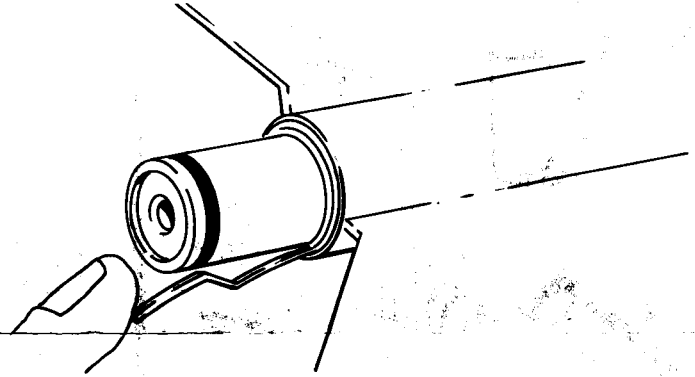


Once the upper stage engine is in place, slide the booster stage over the upper stage engine (C). Wrap a layer of masking tape around the nozzle end of the B6-0 engine (D). Insert engine into booster stage, check for a tight fit, and add additional tape if needed (E). Make sure the B6-0 is touching the A3-2 engine.



ENGINE INSTALLATION FOR SINGLE STAGE ROCKETS

Be sure the engine clip is held firmly in the rocket. Bend the engine clip aside slightly and slide the engine all the way into the engine compartment. Be sure the engine is held firmly by the engine clip.

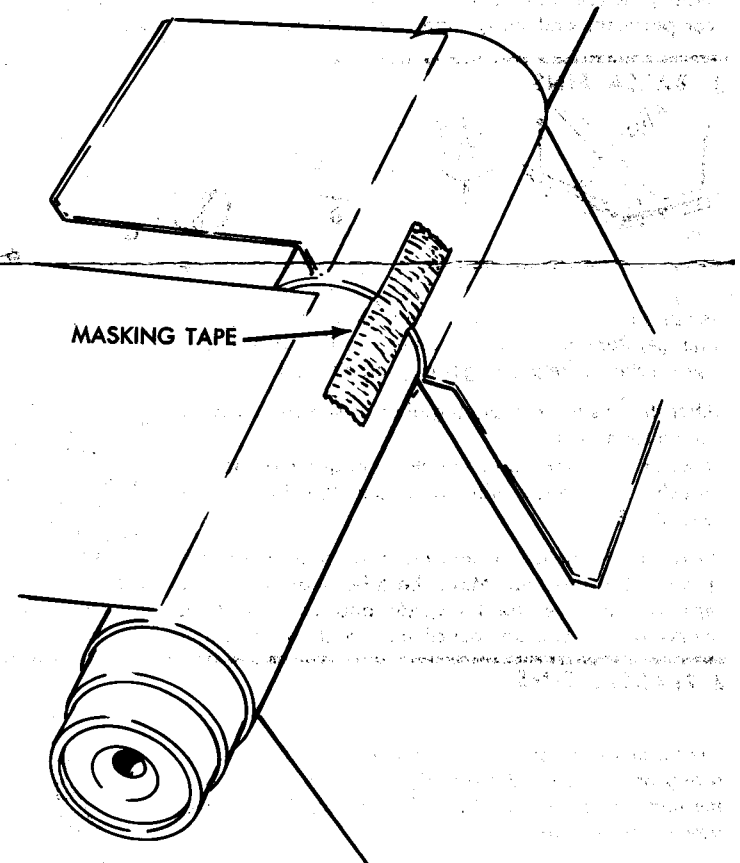


MULTI-STAGE IGNITION

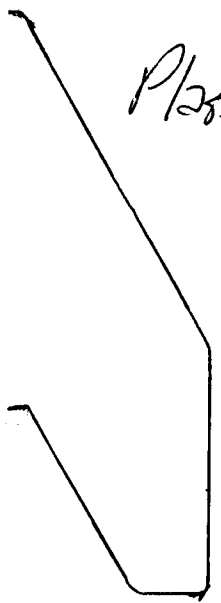
The first stage engine of a multi-stage rocket is ignited electrically with an ignitor wire. Upon burn-out of this engine hot gases and burning particles are blown forward into the nozzle of the next stage igniting that engine automatically. This process continues for as many stages as you have.

If the stages are not joined securely, the pressure created by these hot gasses can cause the stages to separate prematurely, not allowing the next stage to ignite.

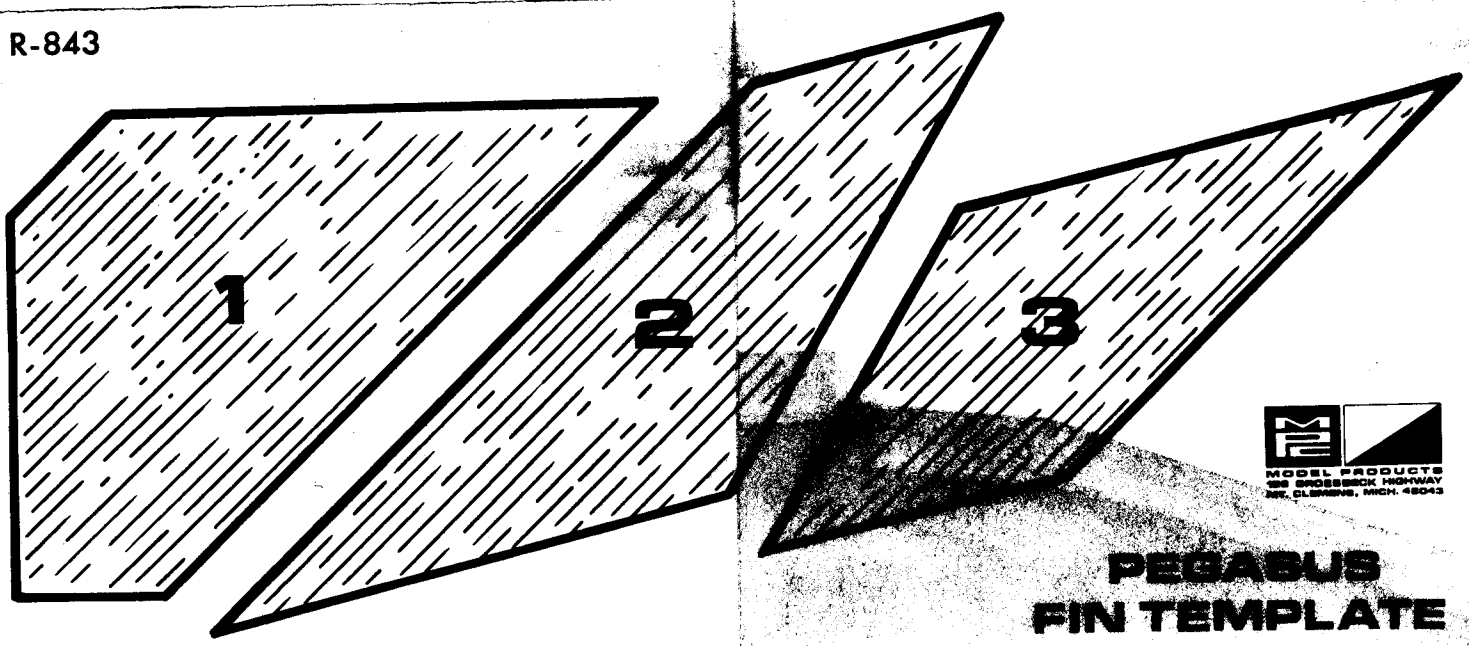
To insure that the stages stay together long enough to allow proper ignition, place two pieces of masking tape across each joint, one piece on each side of the rocket.



Plastic Fin Unit



R-843



 **MODEL PRODUCTS**
200 CROSSBICK HIGHWAY
S.E. OLIVARIA, WICH. 68043

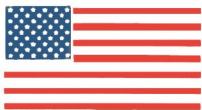
**PEGASUS
FIN TEMPLATE**

1 2 3 4 5 6 7 8 9 0

1 2 3 4 5 6 7 8 9 0



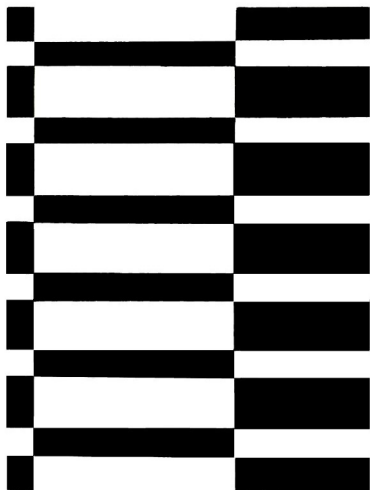
USA
NA
USAF



USA



UNITED STATES



PEGASUS MK2 FLYING MODEL ROCKET KIT

ASTROLINE SERIES
**NEW! MOLDED
PLASTIC PARTS**
WITH FOAM-TUBE ROCKET BODY

BONUS! TWO IN ONE KIT!

BUILD THE 32 1/2" TWO-STAGE
ROCKET OR A 22 1/2" SINGLE
STAGE ROCKET OR 2 COM-
PLETE 8" SINGLE-STAGE
ROCKETS



Engines and Launcher
Not included in kit.
USE ONLY THE FOLLOWING
MPC ROCKET ENGINES:

2 STAGE VERSION
UPPER BOOSTER
A3-2 B5-0
B6-4 C6-0
C6-6

SINGLE STAGE VERSION
A3-2, B3-3, B6-4, C6-4,
C9-3

