Your "PATRIOT" was designed with the sport flying model rocketeer in mind. The kit features a durable, all-plastic nose cone and die-cut balsa fins for ease of construction. Two gigantic decal sheets (5 colors in all) provide a spectacular "All-American" red, white and blue decor. The "PATRIOT" is complete with a large bright fluorescent red orange and white parachute to bring it safely back to Earth flight after flight.

In addition to the parts included in this kit, you will also need; a modeling knife, pen or pencil, white glue, ruler, fine and extra fine grit sandpaper, sanding sealer, and paints.

GLUE: WHITE GLUE is best: You may use balsa model airplane cement.

PAINTS: Use enamel or dope for rocket body. DO NOT use dope on plastic nose cone. Dope will "craze" the plastic surface. Use only enamel specifically for plastics.

RECOMMENDED ENGINES: B4-2, B6-4 or C6-5 (Use B4-2 for first flight)

READ THE INSTRUCTIONS CAREFULLY BEFORE BEGINNING CONSTRUCTION.
ASSEMBLY INSTRUCTIONS

1. Slit the engine mount tube (part A) in Fig. 1. Insert engine holder (part B) and slide mylar retainer ring (part C) into position. Glue the retainer ring approximately 6-3/8” from the front of the engine mount tube. Glue engine mount rings (part D) onto tube as indicated. Allow to dry completely.

2. Slip the marking guides (part D) onto the rocket body tube (part E) and mark for fin and launch lug alignment lines.

3. Cut out the shock cord mount (part F) and prefold on dotted lines. Glue shock cord end (part G) into place as in Fig. 3. Glue completed mount into rocket body tube. (Hold mount in place until glue sets.)

4. Using a dowel, or paint brush, apply a 1/4” wide band of glue around the inside of the rocket body tube approximately 6-1/2” from the rear. Slide the engine mount assembly into the body tube until the metal engine holder end is even with the body tube end. Glue the rear engine ring-body tube joint.

5. Sand fin sides (part I) smooth. (Do this before removing them from balsa sheet.) Sand leading and trailing edges round. Other edges remain square.

Rub a small amount of glue into the root edge (body edge) of each fin. Allow glue to set. Then glue (one at a time) to the body tube directly upon the fin alignment lines as shown. BE SURE that all fins project straight away from the body tube. Glue the launch lugs (part J) to the launch lug alignment line exactly as shown.

6. Assemble the parachute (part K) as directed in the parachute instructions. Tie the parachute shroud lines (part L) and shock cord to nose cone ring (part H).
TOOLS & MATERIALS REQUIRED
In addition to the parts included in this kit, you will also need:
- a modeling knife, pen or pencil, white glue, ruler, fine and extra fine grit sandpaper, sanding sealer, and paints.

ASSEMBLY INSTRUCTIONS

1. Sit the engine mount tube (part A) in Fig. 1. Insert engine holder (part B) and slide mylar retaining ring (part C) into position. Glue the retaining ring approximately 6-1/2" from the front of the engine mount tube. Glue engine mount rings (part D) onto tube as indicated. Allow to dry completely.

2. Slip the marking guides (part D) onto the rocket body tube (part E) and mark for fin and launch lug alignment lines.

3. Cut out the shock cord mount (part F) and prefold on dotted lines. Glue shock cord end (part G) into place as in Fig. 3. Glue completed mount into rocket body tube. (Hold mount in place until glue sets.)

4. Using a dowel, or paint brush, apply a 1/4" wide band of glue around the inside of the rocket body tube approximately 6-1/2" from the rear. Slide the engine mount assembly into the body tube until the metal engine holder end is even with the body tube end. Glue the rear engine ring body tube joint.

5. Sand fin sides (part I) smooth. Do this before removing them from balsa sheet. Sand leading and trailing edges round. Rub a small amount of glue into the root edge (body edge) of each fin. Allow glue to set. Then glue (one at a time) to the body tube directly upon the fin alignment lines as shown. BE SURE that all fins project straight away from the body tube. Glue the launch lug (part J) to the launch lug alignment line exactly as shown.

6. Assemble the parachute (part K) as directed in the parachute instructions. Tie the parachute shroud lines (part L) and shock cord to nose cone ring (part H).

COLOR SCHEME
- White: Overall rocket
- Black: One fin, nose cone

ENGINE HOOK END MUST BE EVEN WITH BODY TUBE END
COLOR SCHEME

WHITE — OVERALL ROCKET
BLACK — ONE FIN, NOSE CONE
7 FINISHING AND PAINTING

A FILLET IS...
A smooth joint - built up between body and fin by applying glue along the joint and smoothing the glue with a finger.

7 When fin joints are completely dry, apply a glue fillet to each side of the fin-body tube joint. Run a narrow bead of glue along the joint and wipe smooth with finger as in Fig. 7. Allow glue to set and repeat. (Support rocket horizontally while drying.)

8 Allow all glue joints to dry completely. Apply sanding sealer to balsa surfaces, fine sand and repeat until smooth.

9 Give the rocket a light base coat of white spray paint. Follow with a second light coat, allow to dry and sand very lightly. Finish with a fine coat of gloss white paint. Mask one fin and paint black.

10 Apply decals (parts N and O) as directed on the decal backing. Refer to photographs for proper decal positioning. Use a wet paint brush to help smooth out air bubbles from beneath decals.

PRE-FLIGHT PREPARATION AND LAUNCH

T-14 Pack seven (7) squares of crumpled recovery wadding loosely into rocket body tube.

T-13 Gather parachute into a triangular shape. Roll 'chute as shown and wrap shroud lines around it. If 'chute is too large, unroll and repack until it slides easily into the rocket. A very tight fit may prevent parachute from ejecting properly.

FOLD AND WRAP SHROUD LINES AROUND PARACHUTE

PARACHUTE MUST SLIDE EASILY INTO ROCKET

Pack shock cord neatly into rocket. NOTE: DO NOT pack parachute until you are actually ready to launch. For maximum parachute reliability, lightly dust the 'chute with ordinary talcum powder before each flight, especially in colder weather. NOTE: Flying your rocket when temperatures are 35° or less is not recommended. The plastic parachute becomes stiff and will not always open properly at ejection.

T-12 Slide nose cone into place. Nose cone should separate easily from rocket body tube, but not be extremely loose. If fit is too tight, sand inside of body tube end and shoulder of nose cone with fine sandpaper.

If nose cone is too loose, add a wrapping of transparent tape to the shoulder of the nose cone.

T-11 Select an engine and install an igniter. The recommended engines for use with this rocket are B4-2, B6-4 and C6-5. Use B4-2 engine for first flight.

To operate properly igniter must touch the propellant grain. Push it into the engine nozzle as far as it will go. Apply a square of masking tape or tape disc to the nozzle and leads as shown. The eraser on the end of a pencil is good for pressing the tape securely into place.

T-10 Insert engine into rocket. Engine hook must latch securely over the end of the engine.

T-9 Disarm the launch panel - remove safety key.

T-8 Place rocket on launch pad. Making sure rocket slides freely on launch rod. Clean the micro-clips, then clip one to each lead of the igniter. The clips must not touch each other and the igniter leads must not cross. The rocket may be supported with a scrap of wood or an empty engine casing to make it easier to attach the clips and to keep the clips from touching the blast deflector plate and short-circuiting.

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

T-6 Arm the launch panel - insert safety key.

FORMULA OF MISFIRE PROCEDURE

Occasionally the igniter will heat and burn in two without igniting the engine. This is almost always caused by a failure to install it correctly. Disarm the launch panel, remove the model, clean the igniter residue from the nozzle and install a new igniter. Follow the launching procedure again.

82006A
CITATION

ESTES
A SUBSIDIARY OF DIAMON

Recommended for ages 10 to adult.

Patriot
FLYING MODEL
ROCKET

SKILL LEVEL 2

Over 3 feet tall

$4.25

FLYING MODEL
ROCKET

DEGREE OF CHALLENGE: 2

(three to four for the junior)