

Paratrooper

MINIJET PARACHUTE DURATION ROCKET

ASSEMBLY INSTRUCTIONS:

Start assembly of nose cone by inserting shock cord through hole in bottom of nose cone adapter. Tie knot large enough to keep cord in place.

Put a thin coat of plastic (styrene) cement around inside of nose cone. Rub cement with the end of your finger to smooth it out and remove excess. Use cement sparingly as it will melt nose cone.

Insert adapter into nose cone then slip nose cone into body tube to insure alignment. With a twisting motion, carefully remove nose cone from body tube and allow to dry.

Insert shock cord into rubber band and tie loop to hold rubber band in place near nose cone. Parachute it hooked to rubber band when preparing for flight.

Punch two holes with a pencil 1/2" apart in the gauze shock cord anchor and thread cord into anchor as shown. Smear glue with a brush or "Q" Tip in body tube about the size of the anchor 3/4" from end. Insert shock cord and anchor into body tube and push into glue with a pencil until securely set in place.

Glue centering ring on engine mount flush with one edge.

Slip second centering ring on engine mount. Slide plastic boat tail over end of engine mount and adjust centering ring so that boat tail is 1/32" from end and halfway covers the centering ring. Mark ring position, remove boat tail and glue ring in place. Put a thin coat of plastic cement around inside of both ends of boat tail and smooth out cement with fingers. Slip boat tail over engine mount and adapter until boat tail covers 1/2 of adapter ring. Allow to dry.

Using cotton swab or brush, smear white glue around inside of mount 2" from rear. Insert thrust ring and push it forward with an engine until 1/8" protrudes. Quickly remove engine.

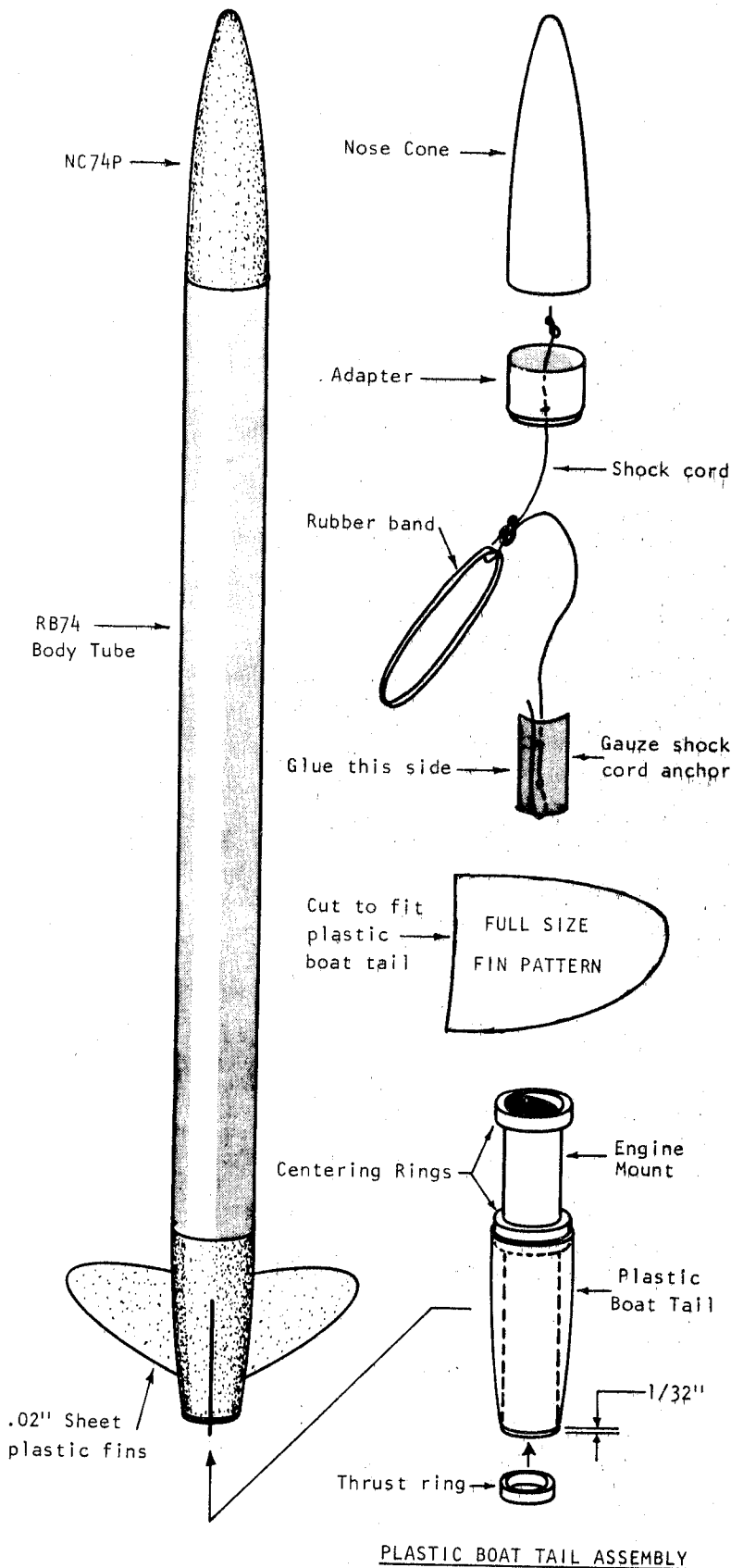
Smear white glue inside rear of body tube 1" from end. Put ring of plastic glue around junction of plastic boat tail and adapter ring. Then push entire assembly in place in rear of body tube. Carefully remove excess glue with finger.

Cut out fin pattern and trace on thin plastic sheet. Cut out fins with scissors or razor blade. Glue fins 120° apart to plastic boat tail with plastic glue 1/8" from rear. When dry, apply a plastic glue fillet on each side of all fins. Allow to dry thoroughly. Edges of fins can be rounded with fine sandpaper for better performance.

Build "pop" launch lug. (See instructions.)

Assemble parachute. (See instructions.)

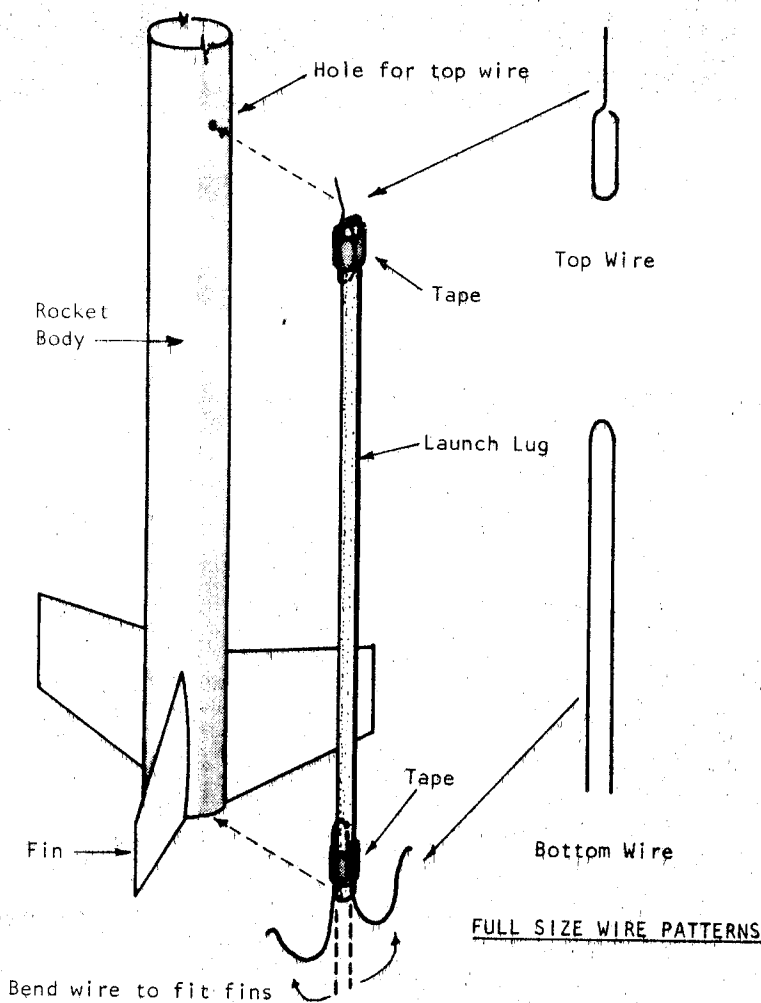
With the rocket completely assembled sand entire body tube with fine sandpaper. Sand the nose cone joint and the boat tail joint smooth. If necessary, fill the boat tail joint with glue and sand smooth. The body can be coated with sanding sealer, sanding between coats. Do not paint the plastic parts except with paint for plastics.



PLASTIC BOAT TAIL ASSEMBLY

FLYING INSTRUCTIONS:

Push flameproof wadding into body tube until it rests against thrust ring. Carefully fold parachute and connect it to rubber band. Insert it into body tube, then insert nose cone. Following engine manufacturer's instructions, install engine. Attach "pop" launch lug and place rocket on the launch rod. Attach igniter clips, countdown and ignite.



POP LAUNCH LUG INSTRUCTIONS:

Cut one piece of wire 1 1/2" long and bend to shape of top wire. Bend remaining piece of wire in half to hairpin shape of bottom wire.

Cut paper tape into two equal pieces. Peel off backing and wrap around top and bottom wires and launch lug as shown. Make sure wires are aligned on same side of launch lug.

Bend bottom wire to hook around two fins so that launch lug is centered between fins. Hook launch lug over fins and mark body tube 1/4" from tip of top wire. Drill or punch hole at this point and bend front wire downward to fit easily. Adjust so that launch lug is snug but will pop off easily when pushed on top.

The pop launch lug is always attached after the rocket is prepared for launching complete with engine, recovery device and nose cone installed. To use pop launch lug, slide lug over rod, slip a 1" piece of plastic tubing, or wrap top of rod with 2 or 3 turns of masking tape. Rod must be tight on launch pad. After rocket leaves pad the pop lug will remain on the rod. The rocket can be reattached to the lug without removing the lug from the rod.

PARACHUTE INSTRUCTIONS:

Parachute is precut to a circular shape. Fold in half, then fold in thirds to obtain the location of the shroud lines. Crease parachute at folds or mark with marking pencil. Cut off tip of parachute when folded to provide a vent hole to aid in parachute folding and opening after ejection. When reopened there should be 6 equally spaced places for shroud lines.

Cut 6 shroud lines, equal in length to the diameter of the parachute.

Cut 6 pieces of wide tape about 5/8" long. Peel off paper backing and attach by pressing tape over a loop of shroud line.

Gather free ends of shroud line together, insert through snap swivel and tie into a knot. Apply a drop of glue to knot so it will not loosen. Attach snap swivel to hook in nose cone or payload coupler.

There are many ways of folding a parachute for insertion into a body tube. Experience will dictate the best method for each individual. One way is to first dust the parachute with talcum powder to keep it from sticking to itself. Then form the parachute by holding the snap swivel with one hand and tip of canopy with the other and straighten the chute. Fold the canopy once or twice to fit the space in the body tube and insert it. Pack the shroud lines and shock cord in over the parachute and push the nose cone or payload section into place.

