

PK-86 LOC R2/ARO™ Assembly Instructions

PARTS LIST:	1 NBT-5.38-20 Airframe Tube	1 NBT-1.52-13 Motor Mount Tube	1 FS-86 Set of fins
	1 Shock Cord & Mount Assy.	1 PNC-5.38L Plastic Nose Cone	1 PTC-5.38 Pre-Slotted Tail Cone
	1 CR-5.38-1.52 Centering Ring	1 CR-3.00-1.52 Bottom Centering Ring	1 LL-50 Launch Lug
	1 Bag of Ballast	1 Quick-link Connector	1 LHPC-50 Parachute

*** Due to the high thrust motors that can be flown in this kit, it is strongly recommended that epoxy be used throughout its entire construction. Scotchweld 1838, a thick, two part epoxy by 3M is recommended for the entire fin/tail cone assembly as it bonds to both plastic and wood.

***THIS KIT USES NEW CONSTRUCTION TECHNIQUES FOR EPOXYING THE TOP CENTERING RING AND FINS! Before beginning construction, read over assembly instructions to become familiar with the proper construction sequence. Check side exposed view for 5.38V2 (same for R2/ARO) carefully for fin position and motor mount/centering ring placement inside the tail cone.

* TEST FIT PARTS BEFORE BONDING TOGETHER WITH EPOXY! It may be necessary to lightly sand some parts to obtain a proper fit.

* The following items will be needed for the construction & finishing of this kit: 12" ruler, Modeling knife, Pen or pencil, Masking tape, Sanding sealer, Paint brushes (assorted sizes), Sandpaper (coarse, medium & fine), Primer and paint, Epoxy (6 or 20 minute), Dremel tool

1. Using fine sandpaper, sand the outside of the main airframe, motor mount tube, and launch lug for better epoxy adhesion.

2. Lightly sand plastic nose cone and tail cone to remove molding seem line Install nose cone ballast per instructions

3. The TOP CENTERING RING has a 1/4" hole in It for the shock cord mount bolt. Place one of the flat washers on top of the hole and push the threaded portion of the eye bolt through. From the bottom of the top centering ring (REDUCED DIAMETER SIDE), tightly secure the bolt using the remaining flat washer and nut. Epoxy both sides and set aside to dry.

4. CAREFULLY sand the top inside diameter of the slotted tail cone 1/8" deep until the smaller, stepped diameter of the TOP CENTERING RING seats properly into it. ***NOTE: SAND DOWN THE THICK WEB AREAS FIRST FOR UNIFORM WALL THICKNESS. CHECK FOR TOP CENTERING RING FIT OFTEN WHILE SANDING!!

5. Drill and de-burr 8 equally spaced 5/16" holes around the tail cones' shoulder that fits up into the main airframe. ALL holes are drilled on a 1/2" centerline from the tail cone's shoulder. These holes will allow for better epoxy retention when the tail cone is epoxied to the inside of the main airframe.

6. Lightly sand the bottom inside diameter of the slotted tail cone until the BOTTOM CENTERING RING fits snugly into it. Also at this time, use a modeling knife or Dremel tool and score out a small groove (1/32") deep into and around the inside bottom of the tail cone right above the sealed bottom centering ring. This groove will allow for maximum bottom centering ring/epoxy retention.

7. Position the bottom centering ring into the bottom of the tail cone flush with its bottom edge. Apply a continuous bead of epoxy around the inside of the tail cone where the bottom centering ring sets and let dry.

8. Position the motor mount tube so that it protrudes 1 9/16" out from the bottom centering ring. Apply a continuous bead of epoxy around the motor mount tube/bottom centering ring joint inside the tail cone. Immediately position, BUT DO NOT EPOXY IN PLACE, the top centering ring down onto the top of the tail cone to center the motor mount tube. Make sure that the small diameter of the top centering ring is seated completely around into the top of the tail cone. KEEP THE TOP CENTERING RING SECURED IN PLACE WITH MASKING TAPE UNTIL ALL THE FINS ARE EPOXIED TO THE MOTOR MOUNT TUBE.

9. Sand all fins smooth and round off their leading and trailing edges using medium then fine sandpaper.

10. Each fin has two fin tabs approximately 4.0" and 1.4" long that protrude out from the fin's root radius edge. Test fit ALL four fins for proper seating of the fin tabs onto motor mount tube and at the rear end of tail cone's bottom centering ring/motor mount tube joint. If necessary, sand fin root radius edge. When properly seated, there should be a light gap between the full length of the fin root radius edge and the outer radius of the tail cone. This gap will be epoxy filled in step 16.

11. Clean outer tail cone surface with rubbing alcohol for better epoxy adhesion. Place epoxy ONLY on the fin tab surfaces that come in contact with the motor mount tube and bottom centering ring. Place one fin into the tail cone slot until it sets onto the motor mount tube and against the bottom centering ring. Keep in a horizontal position while drying and make sure that the fin is straight up from the tail cone. When dry, repeat this procedure with the remaining fins.

12. Remove the temporarily positioned top centering ring from the top of the tail cone. Add epoxy fillets to both sides of the exposed fin tabs that protrude INSIDE the tail cone. Use epoxy where the fin tab contacts the motor mount tube AND ALSO where it passes through the INSIDE of the tail cone. Set in a horizontal position to dry. When dry, repeat this procedure with the remaining fin tabs.

13. The top centering ring is NOW epoxied in place. Apply a LARGE continuous bead of epoxy around the diameter of the motor mount tube and inside the top edge of the tail cone. Push the REDUCED DIAMETER of the top centering ring into the tail cone until it is seated against the tail cone's top edge. Set upside down and secure with masking tape until dry.

14. Using a thick slow cure epoxy, apply a LARGE continuous bead of epoxy around the inside of the main airframe, 1" up into one of its ends. IMMEDIATELY place epoxy around the tail cone's shoulder diameter and into the 8 drilled holes. Slide the tail cone/fin assembly into place until it seats against the airframe's bottom edge. POSITION tail cone EVENLY AROUND Airframe and let dry. ***For a smooth transition between tail cone and airframe diameters, sand airframe/tail cone junction and apply spot glazing putty and finish accordingly

15. Sight in the high point (center of airframe's diameter) of the airframe between any two fins. Make a small pencil mark 15" from the fins' bottom edge. From this mark, make a straight line up about 6" long. Cut the launch lug at an angle to reduce drag. Epoxy the launch lug directly on this line, making sure that it is parallel to the airframe. Set aside to dry in a horizontal position.

16. Give all fin and launch lug outer joints added epoxy fillets for MAXIMUM strength.

17. Seal fins and launch lug with sanding sealer using a brush. Sand lightly between coats to fill pores and obtain a smooth finish.

18. When you are satisfied with the smooth sanded finish of your model, it is ready to prime and then paint in the color or colors of your choice.

19. When the paint is completely dry, take one end of the shock cord and pass it through the quick link. Secure it with a double knot. Take the other end of the shock cord and pass it through the eyelet of the plastic nose cone and secure it with a double knot. Using a toothpick, place a SMALL drop of epoxy on both knots to keep them permanently secured. The quick link nut is threaded to open up and attaches to the shock cord mount bolt. Secure in place by tightening the nut. This method of attachment provides easy access of shock cord plus convenient transportation breakdown.

20. The parachute is attached to the shock cord about 5" away from the nose cone. Using ALL the chutes' shroud line loop ends, tie a double knot around the shock cord and PULL ON IT tightly. ALWAYS CHECK DOUBLE KNOT RIGHT BEFORE LAUNCHING!

21. Select a motor for first flight. Because of all the different motor combinations available (with varying motor lengths), this kit uses no motor blocks. Instead, wrap 1" wide masking tape around the nozzle end of the motor to a diameter equal to that of the motor mount tube. This will keep the motor from pushing forward upon ignition. Friction fit the motor in place by wrapping masking tape around the motor in two places for a snug fit in the motor mount tube. This will prevent the motor from ejecting rearward upon activation of the ejection charge.

22. Because of the close proximity of the shock cord near the top of the motor mount tube, it is highly recommended that the motor mount tube be filled loosely with recovery wadding IN ADDITION to the wadding used to protect the shock cord and chute from the hot ejection charge gases.

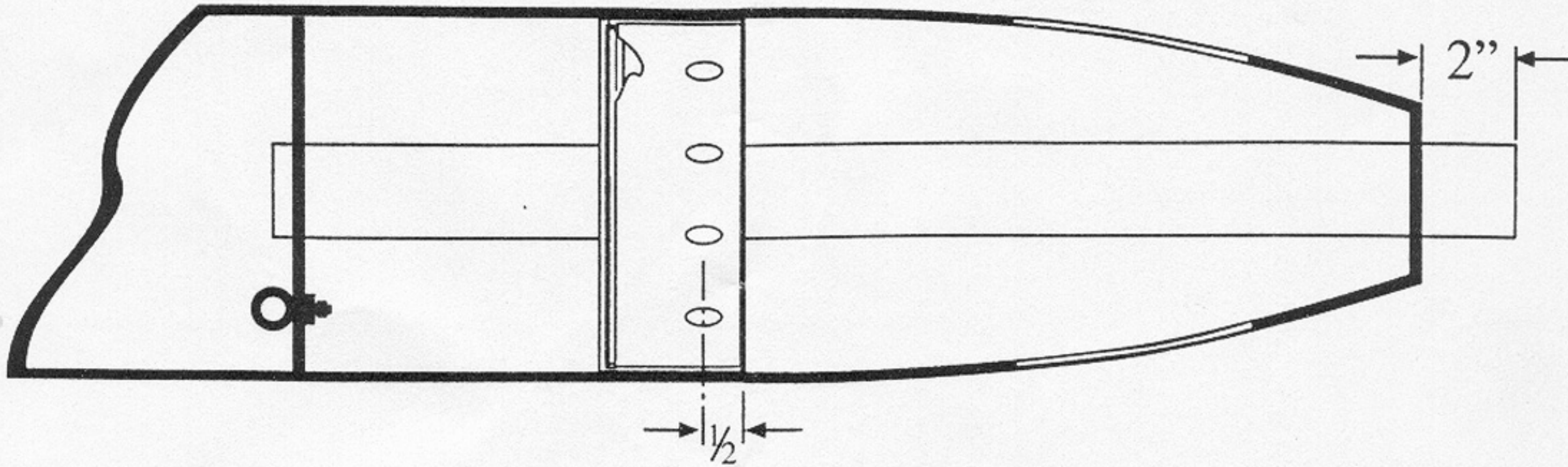
23. Always follow motor manufacturer's instructions for motor ignition and launch this vehicle on calm, windless days to insure safe recovery.

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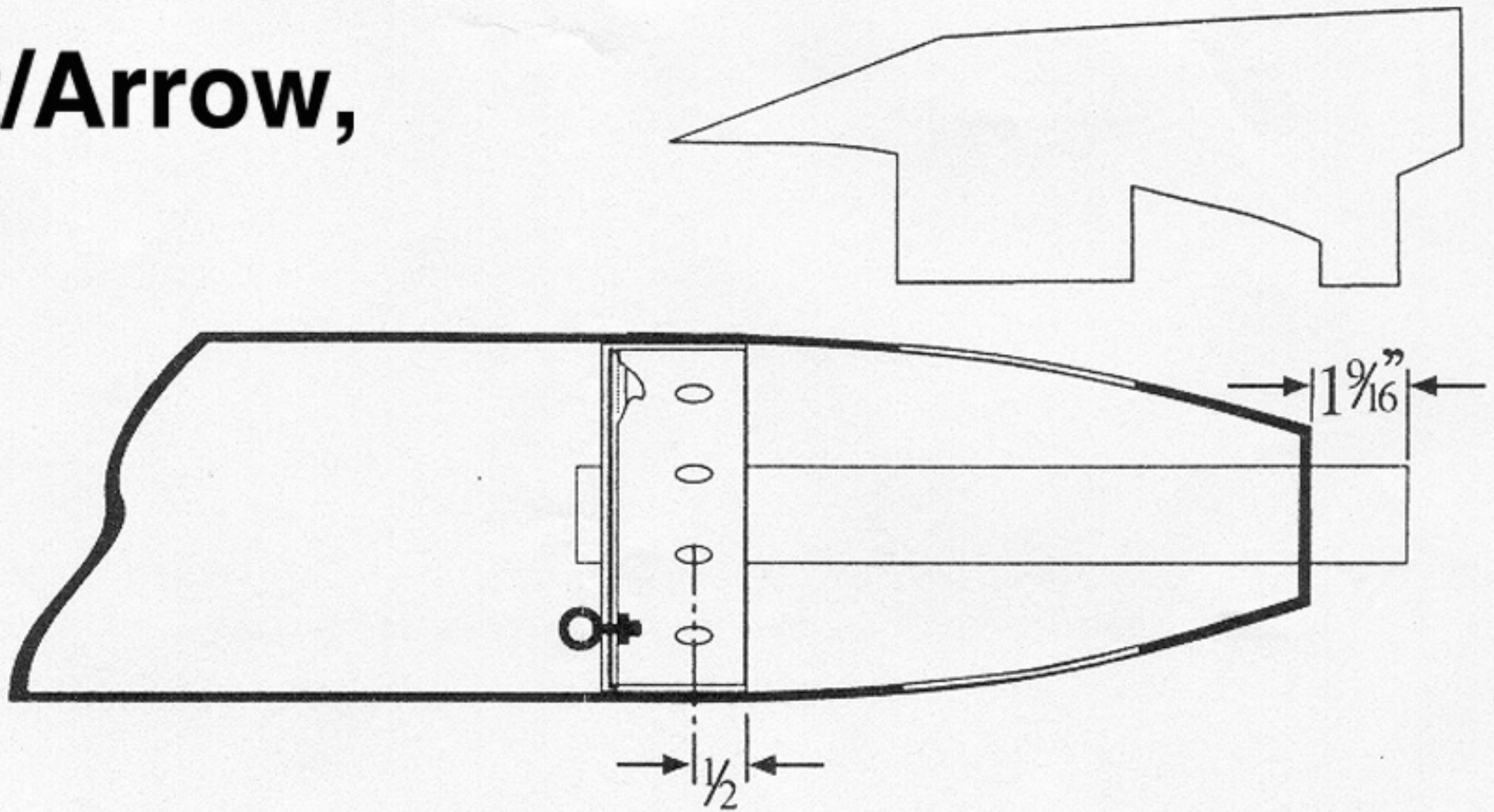
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7.51 V-2, R2/Arrow



5.38 R2/Arrow,

5.38 V-2



5.38 SYONIC

