

PK-24

VIPER-IV™

Height: 47.5"

Weight: 18 oz.

Diameter: 2.630"

**4 MOTOR CLUSTER FOR
FLIGHTS TO 2,400 ft.**

Motor Suggestions:

4 D12-5 4 D21-7

4 E9-6 4 E30-10

4 E15-7 4 F21-8

Kit Features Include:

- Airframe Tubing
- Precision Cut Plywood Fins
- Plastic Nose Cone
- Nylon Parachute Recovery

This kit is recommended for those with previous model rocket building experience.



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- Assembly Instructions for all kits
- KITS & ACCESSORIES
- VINYL DECALS
- UPDATES

LOC/PRECISION MULTI-PACKS

are now available for this and other LOC/PRECISION models. For more information on launching model rockets in your area contact the National Association of Rocketry (NAR) at: www.nar.org

or the Tripoli Rocketry Association at: www.tripoli.org

**NOTE:
Schools, Clubs,
& other groups**



Other LOC Kits Available:

PK-1 AURA



PK-4 Lil Nuke



PK-7 Starfighter 152



PK-8 Legacy



PK-12 ONYX



PK-3 Weasel



PK-20 Viper III



PK-36 4-29SS



PK-48 LOC IV



**NEW Park Flyer
Series 1.6" kits!**

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PK-24 VIPER-IV Assembly Instructions

PARTS LIST:	1 Airframe SBT-2.56 30 Inch	4 Motor Mount Tubes MMT-0.95-24mm	1 Launch Lug LL-25
	1 Shock Cord & Mount Assy.	1 Set of fins	1 Nylon Parachute LP-18
	1 Plastic Nose Cone PNC-2.56	2 Centering Rings	

- ◇ 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.
- ◇ Before beginning construction, read over assembly instructions to familiarize you with the proper construction sequence. Check rear and side exposed views (shown at bottom of instructions) carefully for fin positions and motor mount/centering ring placement inside the main airframe.
- ◇ **TEST FIT PARTS BEFORE BONDING TOGETHER WITH GLUE!!!!**
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, Yellow Carpenter's Glue or Epoxy (5 or 15 minute).

Main Airframe Assembly Instructions

- Slide a ring 4" from the end to the motor tubes. Slide the next 1/4" from the ends of the motor tubes. Epoxy the rings into place. Once dry, wad up some tissue and fill the void between the tubes and epoxy filling the void. Once dry spread epoxy 3" into inside airframe. Insert the motor assembly into the airframe so the aft ring is 1/4" recessed into the airframe. Once dry epoxy the aft ring into place filling the 1/4" void with epoxy.
- Place light epoxy fillets lengthwise into the four valley joints of the motor mount tube assembly. Do one at a time and let it dry in a horizontal position.
- In the middle, where all the tubes are joined, a void is formed. This void must be sealed to prevent ejection charge loss. To seal, use a mixture of epoxy and tissue. Use enough so that the seal in the void is about 1/2" thick.
- Run a bead of glue inside of the main airframe assembly and insert the coupler end of the quad motor tube set pushing it to the point the coupler is flush with the back of the airframe.
- Sand all fins smooth and round off the leading and trailing edges of them, using medium, then fine sandpaper. Also bevel both sides of fin root edge for better contact in the motor mount tube valley joints.
- Place epoxy on the beveled, fin root edge and position it in one of the valley joints of the motor mount tube assembly. Keep the bottom of fin even with motor mount tube ends. Keep the airframe in a horizontal position while drying and make sure that the fin is straight up from the motor mount tube valley joint. When dry, repeat this procedure with the remaining fins.
Sight in the high point (center of airframe's diameter) of the airframe between any two fins and from 3" up from the main airframe's bottom edge, make a small pencil mark. From this mark, make a straight line up about 6" long.
- 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.
- Make epoxy fillets on the launch lug.
- Make epoxy fillets on the fin joints.
- Lightly sand epoxy fillets to prepare for paint.

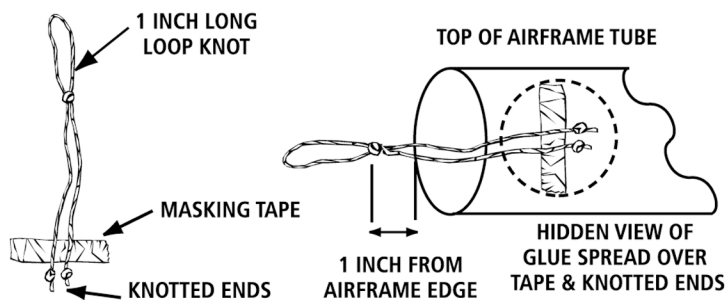
Shock Cord Mount Instructions

LOC/PRECISSION'S Shock Cord Mount is easy to make and install, yet is very strong! This mounting system makes shock cord attachment quick and easy. Follow instructions carefully!

- Take the length of nylon braided cord and at its center make a 1" long loop knot and pull it tight. Make a knot a 1/4" away from the end of EACH of the two loose ends.
- Cut a piece of masking tape 1/4" wide by 1 1/4" long. This is centered crosswise just ahead of the two knots.

Shock Cord Mount Instructions, cont'd

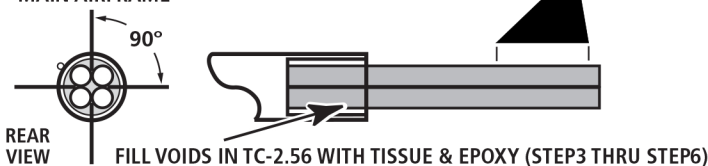
- Carefully place the two knotted loose ends of the Shock Cord Mount, with tape attached, inside the top of airframe tube so that the 1" long loop knot is protruding out about 1" from the airframe tube's edge. Using a small piece of wooden dowel, press the masking tape down firmly around the inside of the airframe tubing. The masking tape will keep the Shock Cord Mount in place while gluing.
- Place a generous bead of glue over the knotted ends and length of masking tape. Spread the glue around until they are completely covered and place the airframe in a horizontal position to dry. REPEAT STEP 4 UNTIL A SMOOTH GLUE LAYER IS ACHIEVED OVER THE MASKING TAPE AND KNOTTED ENDS.



Main Airframe Assembly Instructions, cont'd

- Seal fins and launch lug with sanding sealer using a brush. Sand lightly between coats to fill pores and obtain a smooth finish.
- Lightly sand plastic nose cone with fine sandpaper to remove molding seam line. Use a modelling knife to remove any plastic flash that was molded into the nose cone eyelet. This is necessary for shock cord attachment.
- 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.
- When paint is completely dry, take one end of the shock cord and pass it through the loop of the Shock Cord Mount. 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 also secure it with a double knot. Place a SMALL drop of epoxy on both knots to keep them permanently secured.
- Attach the parachute to the shock cord about 3 feet away from the nose cone. To do this, take the chute shroud line loop ends in one hand, and with the other hand, take the chute and go around the shock cord, passing the chute through the shroud line loops. When the chute is pulled through tightly, it will form a knot.
- Select four of the same motors for first flight. Because of all the different motor combinations available with varying motor lengths, this kit uses no motor blocks. Instead, wrap 1/2" 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.
- Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.
- Always follow motor manufacturer's instructions for motor use and ignition, and launch this vehicle on calm, windless days to insure safe recovery.

CROSS SECTION OF QUAD MOTOR MOUNT TUBE ASSEMBLY IN COUPLER AND MAIN AIRFRAME



THANK YOU FOR CHOOSING LOC PRECISION!