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:

- Pre-Slotted Airframe Tubing
- Precision Cut Plywood Fins & Rings
- Plastic Nose Cone
- Nylon Parachute Recovery

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

LOC/PRECISION™ ADVANCED ROCKETRY KITS AND COMPONENTS

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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

Other LOC Kits Available:

PK-1 AURA

PK-4 Lil Nuke

PK-7 Starfighter 152

PK-8 Legacy

PK-12 ONYX

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PK-20 Viper III

PK-36 4-29SS

PK-48 LOC IV

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36+ MID AND HIGH POWER KITS
IS ALSO AVAILABLE - ASK YOUR DEALER
OR CALL LOC/PRECISION TODAY!

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PK-24 VIPER-IV Assembly Instructions

PARTS LIST:

1 Airframe SBT-2.56-3S 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 CR-2.56-1.14	

◊ 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

1. Take the four motor mount tubes (24mm) and lay them in two separate sets of two, on a flat surface, with their edges even. Epoxy the two separate sets of motor mount tubes by placing a light bead of epoxy lengthwise, in valley joints where each set of the motor mount tubes meet. When dry, lightly epoxy the two sets together, placing one set directly on top of the other, with their edges even, forming a "four tube square". Set aside to dry.
2. The quad motor tube assembly has 2 centering rings on the same end. Epoxy one centering ring 3 1/4" down from the top of the quad-motor mount tube assembly and epoxy the other centering ring 3" up from the first. When dry, give both sides of the two centering ring/motor mount tube joints a good fillet coat of epoxy to insure maximum strength. Do one side at a time, letting it dry in an upright position before starting on the opposite side.
3. In the middle, where all the tubes are joined, a void is formed. This void must be sealed on top (centering ring end) 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.
4. Apply a continuous bead of epoxy around the inside of the main airframe, 2" in from its bottom end. Take the centering ring/motor mount tube assembly (centering ring end first) and push it straight up into the epoxied end of the main airframe, until the bottom centering ring is 1/8" below the main airframe's edge. Set in an upright position to dry. When dry, turn assembly upside down and give exposed bottom centering ring a light layer of epoxy for additional strength. Set aside to dry.
5. 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.
6. 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.
7. 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.
8. Give all fin and launch lug joints added epoxy fillets for maximum strength.

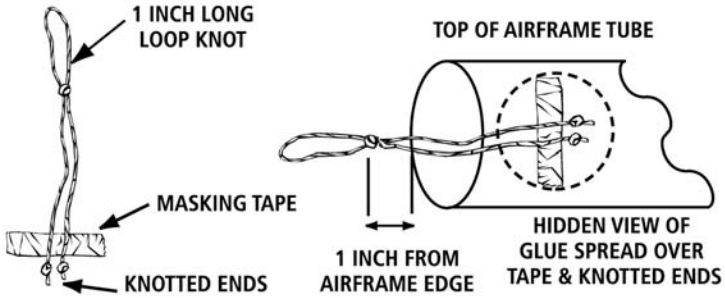
Shock Cord Mount Instructions

LOC/PRECISION'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!

1. 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.
2. Cut a piece of masking tape 1/4" wide by 1 1/4" long. This is centered crosswise just ahead of the two knots.

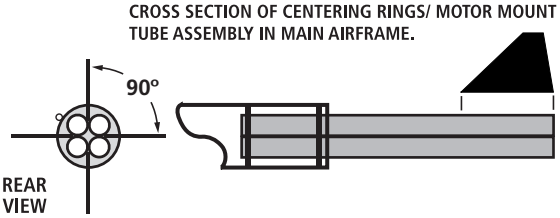
Shock Cord Mount Instructions, cont'd

3. 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.
4. 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

9. Seal fins and launch lug with sanding sealer using a brush. Sand lightly between coats to fill pores and obtain a smooth finish.
10. 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.
11. 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.
12. 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.
13. 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.
14. Select four of the same motors for first flight. Because of all the different motor combinations available with varyingmotor 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.
15. Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.
17. Always follow motor manufacturer's instructions for motor use and ignition, and launch this vehicle on calm, windless days to insure safe recovery.



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