

PK-51

TM

FANTOM-EXL

Height: 61.75"

Weight: 58 oz.

Diameter: 4.00"

Flights to over 3,200 ft.

Motor Suggestions:

G80-7*, H128-M*

H180-M*

* To be used with 38-29mm MMA-2 Adapter

H97-M, H123-M

I161-W

Kit Features Include:

- Heavy Duty Airframe Tubing
- Pre-slotted Airframe
- 38mm Motor Tube
- Precision Cut Plywood Fins
- Precision Cut Plywood Centering Rings
- Extended Electronics Bay
- Bulkhead Plate Assembly
- Plastic Nose Cone
- Nylon Parachute Recovery

Download the FREE graphic at www.locprecision.com

A FULL COLOR CATALOG DISPLAYING OUR 36+ MID AND HIGH POWER KITS IS ALSO AVAILABLE - ASK YOUR DEALER OR CALL LOC/PRECISION TODAY!

Since LOC/PRECISION Cannot Control The Use Of Its Products Once Sold, The Buyer Assumes All Risks And Liabilities There From, And Accepts And Uses LOC/PRECISION Products On These Conditions.



PO Box 470396, Broadview Heights, Ohio, 44147 USA Tel: 440-546-0413

Fax: 440-546-7942 www.locprecision.com

THANK YOU FOR CHOOSING LOC/PRECISION!



876957001168



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 KITS AVAILABLE:

- PK-1 AURA
- PK-3 WEASEL
- PK-4 LIL' NUKE
- PK-5 NUKE PRO MAXX
- PK-7 STARFIGHTER 152
- PK-8 LEGACY
- PK-12 ONYX
- PK-16 GRADUATOR
- PK-20 VIPER III
- PK-24 VIPER IV
- PK-25 ISIS
- PK-26 SHADOWHAWK
- PK-27 TWEED-B
- PK-28 STARBURST
- PK-32 FORTE
- PK-45 NORAD PRO MAXX
- PK-46 BULLET
- PK-48 LOC-IV
- PK-50 FANTOM
- PK-57 3.90 V2

©2006 Rockets By Melissa, Inc. dba LOC/PRECISION™ ALL RIGHTS RESERVED



PK-51 *FANTOM-EXL* ASSEMBLY INSTRUCTIONS

PARTS LIST

- 1 Launch Lug LL-50
- 2 Shock Cord Mounts
- 2 Nylon Elastic Shock Cords
- 2 Nylon Parachutes LP-36 and LP-18

- Nose Cone PNC-3.90
- Slotted Airframe SBT-3.90-34"-3
- Motor Mount Tube MMT-1.52
- 2 Centering Rings CR-3.90-1.52
- 3 Plywood Fins
- Electronics Bay EB-3.90

◇ 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 become familiar 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 (medium & fine), Primer and paint, Yellow Carpenter's Glue or Epoxy (5 or 15 minute).

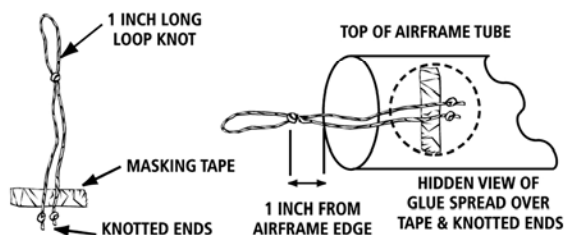
Main Airframe Assembly Instructions

1. Rough-up with course grit sandpaper the root edges of the fins, the outer diameter of the motor mount tube and the main airframe where epoxy is to be placed for better epoxy adhesion. The glassine layer can be completely removed from the motor mount tube for maximum adhesion.
2. Position a wooden centering ring onto each end of the 38mm motor mount tube so that the motor mount tube protrudes 1/8" beyond the centering ring and glue in place. Give both sides of the two centering ring/motor mount tube joints a good fillet coat of epoxy to insure maximum strength.
3. Apply a continuous bead of epoxy around the inside of the pre-slotted airframe 12" up from its slotted end. Take the assembled motor mount and push it straight up into the epoxied end of the airframe until the bottom end of the motor mount tube is flush with the airframe's bottom edge. Set in 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.
4. Sand all fins smooth and round off the leading and trailing edges of them using medium, then fine sandpaper.
5. Test fit the fin tabs (which protrude out from the fin's root edge) into the airframe's fin slots. Sand the tab edge that will mate to the motor mount tube if necessary to obtain a good flush fit.
6. Place epoxy on the fin root edge and position one fin directly into its slot and onto the 38mm motor mount tube. Make sure that the fin root edge is completely parallel to the airframe and that the fin is perpendicular to its diameter. Place in a horizontal position while curing. When dry, repeat this procedure with the remaining fins. When all fins are attached, give the fin and main centering ring added epoxy fillets for maximum strength and let cure.
7. Epoxy the shock cord mount SCM 3.5" from the top of the main airframe following the instructions provided below.

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.
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 epoxy over the knotted ends and length of masking tape. Spread the epoxy around until they are completely covered and place the airframe in a horizontal position to dry.
REPEAT STEP 4 UNTIL A SMOOTH EPOXY LAYER IS ACHIEVED OVER THE MASKING TAPE AND KNOTTED ENDS.

Main Airframe Assembly Instructions, Continued

8. Sight in the high point (center of the airframe's diameter) of the airframe between any 2 fins and from 1" up from the airframe's aft end, make a small pencil mark. From this mark, make two separate STRAIGHT lines 5" long. The first 5" line starts from this mark and the second line starts 14" from this mark. Cut the two launch lugs at an angle to reduce drag. Epoxy the two launch lugs directly on the two lines. Make sure that they are in a straight line to each other and parallel to the airframe. Set aside to cure in the horizontal position.
9. Give all fin and launch lug joints ADDED epoxy fillets for MAXIMUM strength.
10. Assemble the EB-3.90 Electronics Bay Assembly using the instructions provided.
11. 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. At this time, remove any plastic flash that was molded into the nose cone eyelet. This is necessary for shock cord attachment.
12. 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.
13. When the paint is completely dry, pass one end of the drogue shock cord through the eyebolt of the main airframe section and pass the other end through its loop sliding the complete length through to form a strong tight loop attachment. Attach one end of the cord to the bolt eye of the electronics bay.
14. To connect the nose cone, slide one end of the "main" shock cord through the nose cone mount and pass the other end through the loop, sliding the complete length through to form a tight loop attachment. Connect the other end to the opposite side of the EB-3.90 Electronics Bay using a quick link through its eyebolt. This end of the assembly can be friction fit into the payload tube or secured with mechanical devices (such as screws or bolts—not provided) or epoxied permanently. Note: if it is to be epoxied permanently, make certain the access wing nuts are protruding out of the end opposite the nose cone to ensure easy access and remember that your arms will need to be long enough to fit ejection charges through the wall into the bay.
15. The parachute is attached to the shock cord 3" away from the bolt eye of the payload section. Using ALL the chutes' shroud line ends, TIGHTLY tie a double knot around the shock cord. ALWAYS CHECK DOUBLE KNOT RIGHT BEFORE LAUNCHING!!
16. Select a motor recommended for first flight. Because of all the different motors available (with varying motor lengths), this kit uses no motor block. Instead, wrap 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. Wrap masking tape around the motor in two places, until a snug fit is achieved inside the motor mount tube. This will prevent the motor from ejecting rearward upon activation of the ejection charge.
17. Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.
18. 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 CENTERING RINGS/ MOTOR MOUNT TUBE ASSEMBLY IN MAIN AIRFRAME.

