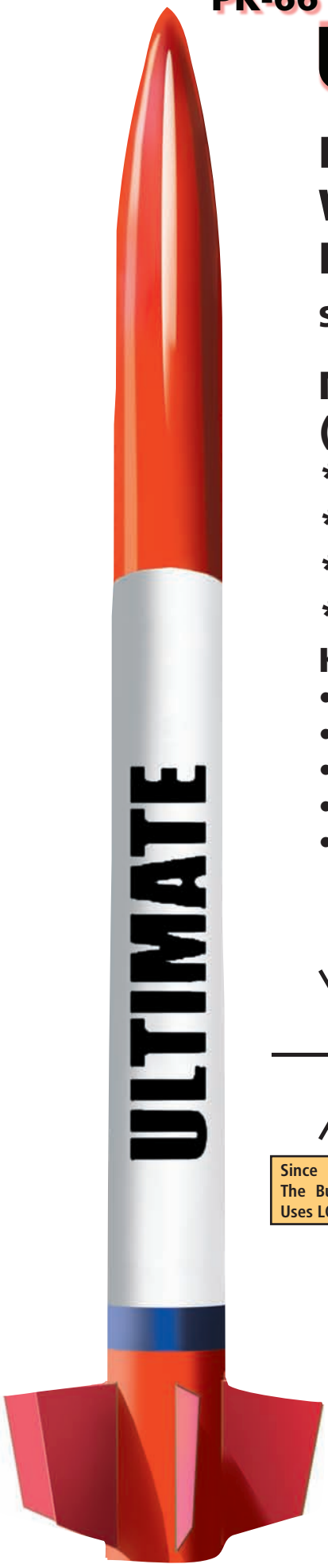
PK-66

ULTIMATE™



Height: 57.75”
Weight: 48 oz.
Diameter: 4.00”

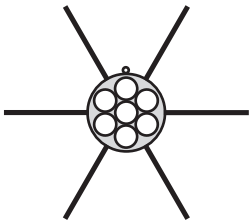
Seven motor flights to over 4,000 ft.

Motor Suggestions:
(1) (3) (5) or (7)
**1 motor: G125-5, H70-6
**3 motors: (3) F80-9
**5 motors: (5) F25-9
**7 motors: (7) F40-12

Kit Features Include:

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

To prevent possible shipping damage, a tube coupler may have been inserted into the slotted end of the main airframe. Remove the tube coupler and discard or keep for future projects.



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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 KITS AVAILABLE:

PK-66 ULTIMATE ASSEMBLY INSTRUCTIONS

PARTS LIST

Nose Cone PNC-3.90
34" Airframe BT-3.90
3 Motor Mount Tubes MMT-1.14, long
2 Centering Rings CR-3.90-1.14,
4 Motor Mount Tubes MMT-1.14, short
1 payload extension PL-3.90
Added Coupler for shipping
Launch Lug LL-50 and/or LL-25
Shock Cord Mount
Nylon Elastic Shock Cord
Nylon Parachute LHPC-36
6 Plywood Fins
1 bulkhead assembly BA-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).

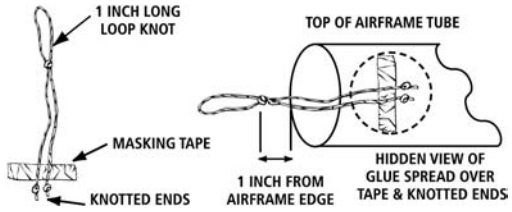
Main Airframe Assembly Instructions

1. Take the 3 long motor mount tubes (29mm) and lay them side by side on a flat surface with their edges even. Place a light bead of epoxy into the 2 valley joints where the 3 motor mount tubes meet. When dry, turn assembly over 180 degrees and epoxy this side in the same manner. Set aside to dry.
2. Epoxy lightly 2 of the short motor mount tubes (29mm), with their bottom edges even, directly in the middle of the 2 valley joints created by the already epoxied 3 motor mount tubes. When dry, turn assembly over 180 degrees and lightly epoxy the other 2 short motor mount tubes to this side, in the same manner. Set aside to dry.
3. Take the completed motor mount tube assembly and epoxy the 2 different centering rings to their respective places 1/8" in on each end of it. Reinforce assembly with a good epoxy fillet at all motor mount tube centering ring joints. Set aside to dry.
4. Apply a continuous bead of epoxy around the inside of pre-slotted airframe, 20" up from its slotted end. DO NOT GET ANY EPOXY IN THE FIN SLOTS! Take motor mount assembly and push it straight up (3 motor mount tube centering ring end first) into the epoxied end of the pre-slotted airframe, until the bottom centering ring is 1/8" below the pre-slotted airframe's edge. Make sure that the six motor mount tube valley joints are positioned DIRECTLY IN THE MIDDLE of the six slots in the airframe! This is important for proper fin seating depth. 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 the fin root edge for better contact in the motor mount tube valley joints.
6. Test fit the fins in the airframe fin slots. Sand fins, if necessary to obtain a proper fit. Place epoxy on the beveled fin root edge and place the fin down into the fin slot until it bottoms out in the motor mount tube valley joint. Keep the airframe in a horizontal position while drying. Make sure that the fin is straight up from the airframe tube. When dry, repeat this procedure with the remaining fins.
7. Sight in the high point (center of the airframe's diameter) of the airframe between any 2 fins and from 7" up from the airframe's aft end, make a small pencil mark. From this mark, make 2 separate straight lines up about 3" long. The first 3" line starts from the mark and the second 3" line starts 12" from the mark. Cut the launch lug in half (preferably on an angle to reduce drag. Epoxy the 2 launch lug halves directly on the 2 lines. Make sure that they are in line to each other and parallel to the airframe. Set aside in a horizontal position to dry.
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.
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

9. Assemble bulkhead assembly per instructions and let dry. When dry, apply a continuous bead of epoxy around the inside of one end of the payload section tube, about 1/4" from it's edge. Push the bulkhead assembly (open coupler end first) straight up into the epoxied payload section tube, about 1/3 to 1/2 of the coupler's length. Immediately set the completed payload section into the top of the main airframe to achieve correct alignment and let dry.
10. Because of the extreme altitudes this vehicle can achieve, it is recommended that (2) 1/16" holes be drilled into the main airframe 180 degrees apart about 1" below the seated payload section's bulkhead. These holes are necessary to vent out excess inside mainframe pressure, which could prematurely pop off the payload section right after motor burnout.
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, 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.
14. Attach the parachute to the shock cord at a point about 1/3 of the length of the shock cord from the payload section. To do this, take the chute shroud line loops 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.
15. For high altitude flights, make sure that the nosecone fits tightly into the payload section. Also the coupler of the payload section should have a slightly snug fit in the main airframe.
16. Select a motor(s) 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 each 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.
17. When using just one motor, the two outer motor mount tubes must be plugged to prevent ejection loss. Because only 1 to 3 motors will activate the recovery system, any additional motors used should have their ejection charges removed and epoxy placed over the motor tops.
18. Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.
19. Always follow motor manufacturer's instructions for motor use and ignition, and launch this vehicle on calm, windless days to insure safe recovery.