

PK-12

Onyx™

Height: 25.25"

Weight: 13 oz.

Diameter: 3.100"

Flights to over 2,600 ft.

Motor Suggestions:

D12-3*

E15-4*

F50-9

G40-10

G64-10

* To be used with 29-24mm MMA-1 Adapter

Kit Features Include:

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

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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-1 AURA
- PK-3 WEASEL
- PK-4 LIL' NUKE
- PK-5 NUKE PRO MAXX
- PK-7 STARFIGHTER 152
- PK-8 LEGACY
- PK-40 STOVI
- 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-48 LOC-IV
- PK-50 FANTOM
- PK-51 FANTOM-EXL
- PK-57 3.90 V2

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PK-12 Onyx - ASSEMBLY INSTRUCTIONS

PARTS LIST

Nose Cone PNC-3.00	Launch Lug LL-25
14" Airframe BT-3.00	Shock Cord Mount
Motor Mount Tube MMT-1.14	Nylon Elastic Shock Cord SC-250
2 Centering Rings CR-3.00-1.14	Nylon Parachute LP-14
3 Plywood Fins	

- ◇ 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. Position a wooden centering ring onto each end of the 29mm 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 glue to insure maximum strength.
2. Apply a continuous bead of glue around the inside of the main airframe 4" up from its end (THE END WITH THE PRE-MARKED FIN GUIDE LINES). Take the assembled motor mount and push it straight up into the glued 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 glue for additional strength. Set aside to dry.
3. Sand all fins smooth and round off the leading and trailing edges of them using medium, then fine sandpaper.
4. Place glue on one of the fins' root edge and place it directly on the right edge of one of the three pre-marked fin guide lines on the main airframe 1" up from bottom. Keep the airframe in a horizontal position while drying making sure that the fin is straight up from the airframe tube. When dry, repeat this procedure with the remaining fins.
5. Glue the launch lug directly on the right edge of the pre-marked launch lug guideline on the main airframe. Set aside to dry in a horizontal position.
6. Give all fin and launch lug joints ADDED glue fillets for MAXIMUM strength.

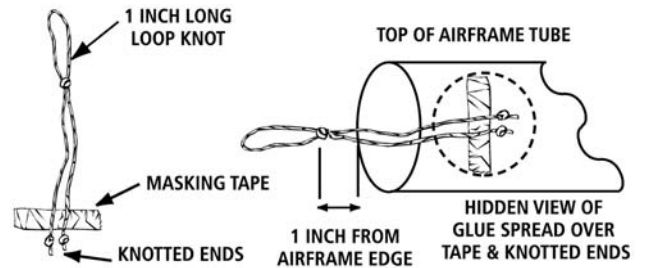
Shock Cord Mount Instructions

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.

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, Continued

7. 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.
8. 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.
9. 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 glue on both knots to keep them permanently secured.
10. Attach the parachute to the shock cord at a point about 1/3 of the length of the shock cord from the nose cone. 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.
11. Select a motor for first flight. When using 24mm motors it is necessary to use LOC's motor mount adapter MMA-1 (not included in kit). 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 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.
12. Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.
13. 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.

