

PK-37

ATHENA-3™

Height: 59.325"

Weight: 44 oz.

Diameter: 3.10"

Flights to over 3450 ft.

Motor Suggestions:

F50T-6,

G80T-7, H128-10,

I200W-10

24mm motors require the MMA-1 Adapter.
Range of flight from 565' to 3475'

Kit Features Include:

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

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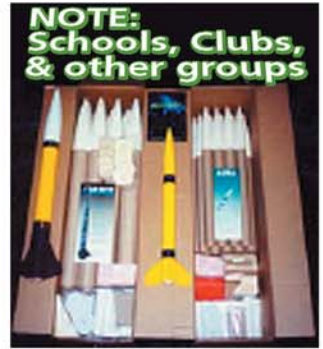
- Assembly Instructions for all kits
- KITS & ACCESSORIES
- VINYL DECALS
- UPDATES



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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:



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PK-37 ATHENA-3 ASSEMBLY INSTRUCTIONS

PARTS LIST

Launch Lug LL-25 or LL-50
Shock Cord Mount
Nylon Shock Cord 15'
Nylon Parachute LP-36
6 Plywood Fin

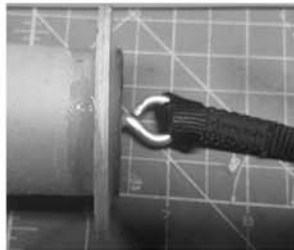
Nose Cone PNC-3.00
Slotted Airframe SBT-3.0-34"-65
Motor Mount Tube MMT-1.14
2 Centering Rings CR-3.00-1.14
Payload-10"

- ◇ 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!!!!
- ◇ To reduce shipping damage, a tube coupler has been inserted into the slotted end of the main airframe. Remove the tube coupler and discard or keep for future projects. 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. Using fine sandpaper, sand the outside of the main airframe, motor mount tube, and launch lug for better epoxy adhesion.
2. Test fit the centering rings onto the motor tube. The centering ring with the drilled hole is the forward ring. Place the forward ring onto the motor tube so the motor tube protrudes 1/8" beyond the ring.

Place the aft ring on the motor tube so 1/8" of the motor tube protrudes from the ring. Install eye bolt in the forward ring and tighten. Give both sides of each ring/motor tube joint a fillet coat of epoxy.



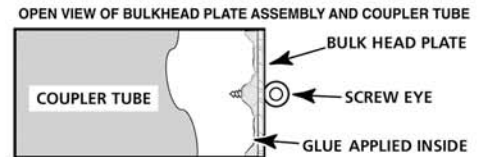
Attach shock cord to forward ring eye bolt. Pass loop through eye bolt, then shock cord through its own loop as shown in picture.

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 fins 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. Once all parts fit to your liking, apply a liberal amount of epoxy to the fin root area and along the edge mating with the airframe and position fin perpendicular to the airframe – set aside to cure. Keep the airframe in a horizontal position while the epoxy sets up. Make sure that the fin is straight up from the airframe tube and against the slot's bottom edge. Repeat with each of the remaining fins.
7. Sight in the high point (center of the airframe's diameter) of the airframe between any 2 fins and from 8" up from the airframe's aft end, make a small pencil mark. From this mark, make a straight line up about 6" long. Cut the launch lug at an angle to reduce drag. Epoxy the launch lug directly on this line, making sure that it is parallel to the airframe. Set aside to cure in the horizontal position.
8. Give all fin and launch lug joints ADDED epoxy fillets for MAXIMUM strength.

Bulkhead Plate Assembly Instructions

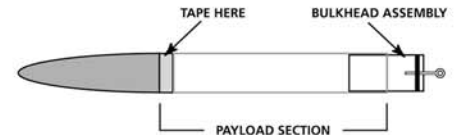
Assemble the *Bulkhead Plate Assembly* and the *Payload Assembly* per the instructions below.

1. Screw in the threaded portion of the screw eye straight into the center hole of the bulkhead plate. Check for alignment. Place a generous bead of glue around the threaded portion of the screw eye sticking out from atop the bulkhead plate. Keep assembly propped up while drying so screw eye alignment is not disturbed.
2. When dry, check fit of bulkhead plate assembly into either end of coupler. It may be necessary to sand the inside edge of the coupler and the outside edge of the bulkhead plate assembly to obtain a smooth fit. When this is done, place a large continuous bead of glue around the inside of the coupler's edge. Carefully, push the bulkhead plate assembly straight into the coupler so that the bulkhead plate assembly is even with the edge of the coupler. Set the entire assembly upright immediately, making sure it is not disturbed while drying.
3. For MAXIMUM STRENGTH, when dry, place another layer of glue around the inside of the bulkhead plate and screw eye thread.



Payload Assembly Instructions

1. Glue 1/2 of the length the Bulkhead Assembly into the payload section as shown. Be sure to seat the eyebolt deep into the wood ring and fillet the backside of this well with glue. The force of motor ejection can be enough to pull out an eyebolt if it is not well seated.
2. Secure Nosecone to Payload section with masking tape for a tight friction fit. (Note: as an alternate, small screws can be used here if desired –not included with kit).
3. Attach Shock cord to the eyebolt in the completed payload section and to the Shock Cord Mount located in the main airframe.
4. Attach Parachute to the shock cord approximately 3' from the payload section.



Main Airframe Assembly Instructions, Continued

10. 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.
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 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 Payload section 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 at a point about 3' 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.
14. Select a motor for first flight. When using 24mm motors, it is necessary to use LOC's motor mount adapter MMA-1, for 24mm motors (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.
15. Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.
16. 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.

