

YBBX3

Black Brant X

Height: 81"
Weight: 58 oz.
Diameter: 3.100"

Flights to over 5,500 ft.

Motor Suggestions:
G80-4*, H128-6*,
H242-8, I161-10

*29mm motors to be used with 29mm MMA-2 Adapter

Kit Features Include:

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



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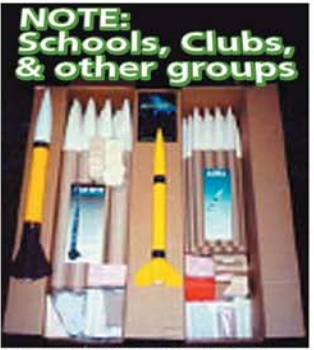
- Assembly Instructions for all kits
- KITS & ACCESSORIES
- VINYL DECALS
- UPDATES

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OTHER KITS AVAILABLE:



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YBBX3 Black Brant X ASSEMBLY INSTRUCTIONS

PARTS LIST

Launch Lug LL-25	Nose & Tail Cone
SCM Assembly	Slotted Airframe 34"
Nylon Shock Cord 15'	Slotted Payload 34"
LOC Parachute LP-36	Motor Mount Tube 38mm 20"
4 Plywood Fins & Canards	1 Tail Cone CR-2.56-38mm
2 Coupler Tubes	3 Centering Rings CR-3.0-38mm
	Bulkhead Assembly

- ◇ 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. Using fine sandpaper, sand the outside of the main airframe, motor mount tube, and launch lug for better epoxy adhesion.
2. Carefully identify the 3 different centering ring types. The 3" ring with a 1/4" hole drilled aside is for shock cord attachment at the top of the motor tube. Make sure to rotate the eye bolt so it does not interfere with the airframe!!! The 2.56x38mm ring is designed to fit in the boat tail at the aft end of the rocket. The middle 2 rings are designed to seat forward and aft of the fin tabs. Please test fit assembly. Depending on your choice of motor retention, once satisfied with ring positioning, glue in place and let dry.
3. Before gluing motor section into place, determine if your shock cord needs to be attached prior to mounting. If your arm cannot reach down the forward end to attach a quick link onto the supplied eyebolt, you may want to do this now. Apply a continuous bead of epoxy around the inside of the pre-slotted airframe 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. Insert coupler into the payload section behind the forward canard fin slots and test fit fins, remove when satisfied with fit. The payload will be assembled later in the instructions.
6. Once all parts fit to your liking, apply a liberal amount of epoxy to the fin tab 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.

Shock Cord Mount Instructions

The 15' section of nylon shock cord has loops sewn into ends. If you did not secure to the motor tube prior to securing it into place, loop a quick link through the loop hole and attach to eyebolt.

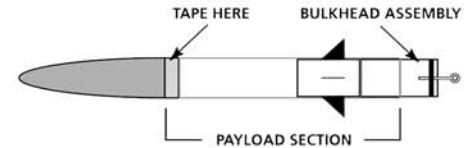
Bulkhead Plate Assembly Instructions

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.

Payload Assembly Instructions

Insert and epoxy a coupler up into payload section to allow through-the-wall fin mounting of the canard fins. Be sure to leave enough room for the bulkhead assembly to also be inserted and epoxied to payload section. See diagram.



1. Glue 1/2 of the length the Bulkhead Assembly into the payload section as shown.

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. A Attach Shock cord to the eyebolt in the completed payload section and to the Shock Cord Mount located in the main airframe.

Main Airframe Assembly Instructions, Continued

9. Seal fins and launch lug with sanding sealer using a brush. Sand lightly between coats, 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.
10. 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.
11. When the paint is completely dry, connect the tubular nylon from the booster to the payload eye bolt.
12. 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.
13. 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.
14. Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.

