

STEP 8

Pass the Kevlar end of the shock cord through the screw eye 2'. Make a knot on the screw eye leaving 2' at the end. At the end of the Kevlar, knot on the quick on. Attach parachute shroud lines by looping over shock cord and passing back through shroud lines making a knot.

STEP 9

Cut the launch lug in half at an angle, making them aerodynamic. Find the high point of the airframe between fins. Mark a straight perpendicular line up 16" from the AFT of the airframe. Epoxy one lug 2" up from the AFT of the airframe. Epoxy another at least 12" FWD.

Notes

IF using the optional booster with your kit...you'll need to friction fit the motor in the motor tube. Apply a wrap of masking tap around the OD of the AFT of the motor. We want to be sure to make this snug enough so the motor does not pop out upon apogee ejection.

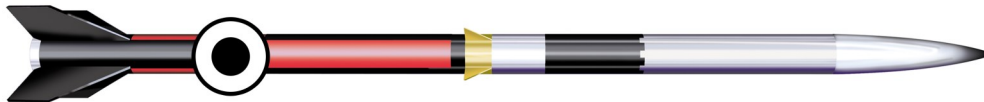
IF building this kit to only fly the sustainer, make sure to retain your motor using your preferred method.

FINISH

Spray rocket with primer, sand and repeat until smooth finish is obtained. Spray rocket with paint of choice, let dry. Apply protective clear coat.

ATTENTION

For ultra performance flying. Reinforce the fins with fiberglass or carbon fiber.



CP= 46" +/- .5"
Measured from tip of nose cone toward AFT.

Sim!

This rocket is recommended for high power rocket motor F — H impulse. Depending on your flying field and finished weight, this is a very versatile kit. The Rocksim file is available on the 2" BBX product page on our website. Always check stability to ensure stable flight; the Center of Gravity (CG) must be forward of the Center of Pressure (CP) in flight ready condition.

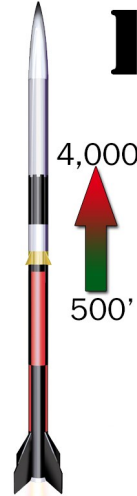
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BLACK BRANT X

PERFORMANCE SERIES



38MM

F-H

Capable Impulse

DIAMETER **2.26"**

HEIGHT **61"**

WEIGHT **21oz**

Featuring:

- 2.26" Pre-Slotted Airframe
- 24" Rip-Stop Nylon Parachute
- 15' Kevlar Shock Cord
- 38mm MMT
- Launch Lug Hardware



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LOC 2" B BX

- 34" Slotted Booster, 17" Payload
- Polypropylene Nose Cone
- 1 Coupler
- 24" Parachute
- 15' Kevlar Shock Cord
- 11" 38mm Motor Tube
- 2—1/8" Fin Sets
- 2 1/4" Centering Rings
- 1/4" Launch Lug
- 1/8" Quick Link, Screw Eye

STEP 2 — To accept the 3" Booster. If you are not going to add the booster, skip to **STEP 3**.

Align the motor tube flush next to the airframe. Slide the AFT ring on and align check the distance with a fin tab. You want to allow enough room for the airframe reducer to fully fit in the Sustainer. As you see pictured we ran wires as well to allow for airstarts. Tack AFT ring into place. Once cured apply epoxy fillets to both sides. Be sure not to get epoxy where the fin tabs will be on the FWD end of the ring or motor tube! Once cured, slather epoxy in the AFT of the airframe between each fin slot FWD of where the airframe reducer will slide up. Insert motor mount assembly up the airframe a few inches. Apply more epoxy in between each fin slot inside the airframe so the AFT ring will catch some. Slide all the way up the airframe until the MMT is flush with the AFT of the airframe. Once cured apply a small layer to the AFT of the AFT ring. Once again, please mind the length of the airframe reducer.



STEP 3 — *Conventional build—no future booster addition.*

Insert AFT ring onto AFT of the motor mount so a good 1/8" to 1/4" is exposed. Epoxy fillet both sides, allow to cure. Slather epoxy in between or FWD of the fin slots inside the airframe. Insert MMT assembly up the airframe until the AFT ring is recessed 1/8" to 1/4". Allow to cure. Flip booster so AFT end is up. Apply an epoxy fillet to where the ring meets the airframe. Allow to cure.

STEP 4

Reposition airframe laying down. Apply a generous bead of epoxy to the root edge of one fin and insert in the fin slot. Allow to cure before moving onto the next fin. When all fins are epoxied in place, apply an external fillet to each fin to airframe joint.

STEP 5

The FWD end of the canard fins measure 3.75" from the FWD end of the 34" booster. Ensure they are aligned perfectly with the aft fins for stability purposes. Epoxy them on the surface of the booster with epoxy fillets.

STEP 6

Install screw eye in bulkhead. Tighten and epoxy both sides where the screw eye meets the bulkhead. Allow to cure. Insert into coupler so the bulkhead is recessed 1/8". Apply epoxy fillet to both sides where bulkhead meets coupler. Allow to cure. Slather epoxy in the payload, slide coupler in half the length, allow to cure.

STEP 7

Friction fit with masking tape or screw/epoxy cone into FWD end of payload.

Due to the high thrust motors that can be flown in this rocket, epoxy is recommended!

Before beginning construction, read over instructions to become familiar with the proper construction steps. **TEST FIT ALL PARTS!** Light sanding may be necessary to obtain proper fit.



STEP 1

Rough sand the motor tube to ensure proper adhesion OR remove the outer glassine wrap. Slide the FWD ring onto the 38mm motor tube so the tube is 1/8" exposed from the ring. OR measure out where the FWD of the fin tab will be, some choose to sandwich their rings to the fin tabs. Tack ring into place with epoxy. Feed Kevlar shock cord through the notch in one side of the ring. Tie your favorite knot. Epoxy fillet both sides where the ring meets the motor tube. **TIP:** Feed the shock cord down to the AFT of the motor tube. Rubber band or tape to the inside AFT of the motor tube. This will help keeping epoxy away from it in the next steps.

