

Space Shot 2004 Rocket Instructions



Parts Included:

- 1- 3.00" Red 5:1 Conical Filament Wound Nose Cone
- 1- 4.5" Aluminum Tip
- 1- 3.00" Black G12 Airframe 24"
- 1- 3.00" Black G12 Airframe 44" Slotted
- 1- 3.00" Black G12 Coupler 9"
- 1- 3.00" Switch Band 2"
- 2- G10 Stepped Av Bay Lids
- 1- G10 Nosecone Bulk plate
- 3- G10 Centering Rings
- 1- 54mm G12 Motor Mount Tube 12"
- 4- Red G10 3/32" Fins
- 1- Certificate of Authenticity numbered and signed
- 2- 1010 Black Delrin Rail Buttons
- 1- Detailed Instructions
- 16- Black 2-56 Shear Pins
- 1- SCP 75/54 Aluminum Machined Thrust Plate
- 1- 4ft Motor Mount Shock Cord
- 3- 8-32 Screws
- 3- Black Plastic Rivets

Rocket Length: 88.50" Tall

Rocket Diameter: 3.00" Wide

Recommended Motors: J, K, L

Rocket weight dry: 5.2lbs

Rocket weight with altimeters and recovery: 7lbs

Main Parachute required: 6ft Standard

Drogue Parachute required: 2ft Pro X

-Dual Deploy

-Thin wall fiberglass

-Red and Black Colored Fiberglass

-No need for paint

-Each signed by Ky Michaelson, Jerry Larson and Bruce Lee

-Limited Edition to 100 Kits

-Aluminum Nosecone Tip

-15th Anniversary Edition

-1:3 Scale of CSXT Space Shot rocket

-Easily fits a 6XL 54mm Case

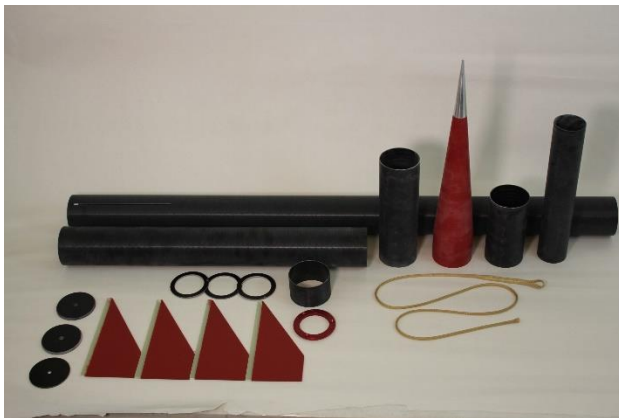
-SCP Thrust Plate

Congratulations, you are now the proud owner of a limited edition 'Go Fast CSXT Spaceshot' rocket kit, produced by Rocketman Enterprises! This rocket is an exact 1:3 Scale replica to the Spaceshot that was launched on May 17th, 2004 at the Black Rock Desert. This launch was the first rocket to ever reach space built by a civilian team, reaching 72 miles in altitude and 3,420mph, history was made on this day.

Features: 3.00" diameter x 88.50" tall, all fiberglass construction, 54mm motor mount, with dual deploy and a beautiful machined billet aluminum thrust plate. The fiberglass is naturally dyed red and black.

Ky Michaelson, Jerry Larson and Bruce Lee were the 3 leading team members of the Civilian Space Exploration Team (CSXT). The actual spaceshot was just over 21ft tall, weighted 724lbs, over 411,000NS, and had a S-50,150 solid fueled motor!

Make sure to read the entirety of the instructions before starting your build to properly know how all the pieces fit together, use fine sandpaper if needed. Also make sure the fins slide in easily and if not use a small file on the slots. When opening the box confirm every part was sent in its entirety, if not, please contact us at 952-881-6260 or sales@the-rocketman.com



Step 1: Take all the parts and wash them with soap and warm water to get all the grease off them, this can be done in a sink or bathtub. Test fit all parts before assembling.



Step 2: Take fine sandpaper, around 200 grit and sand all 3 centering rings near the inner and outer edges, as well as the 4 fins on both sides about 3/4" up from the root. Any part where glue is added, be sure the material has been ruffed up to ensure a tight bond with the glue. Then use a file and add a slight groove on one of the centering rings for the shock cord to pass through.



Step 3: Take one of the other centering rings, and the red aluminum thrust plate, stack them on top of each other evenly centered. Using a 1/8" drill bit, drill through the 3- countersunk holes into the centering ring, this will be the rear centering ring.



Step 4: Using your 3 centering rings, place them onto the motor mount tube. The top centering ring with the filed hole will be 1" down, the plain centering ring will be 3" down from the top, and the last centering ring with the 3 holes is 11.75" down. These measurements are very precise for the correct fitting. Tape everything off so when glue is added, it will not be in the way with the fins. Take the shock cord through the top centering ring and tie a knot around the entire motor mount tube, this is very secure from the shock cord pulling out.



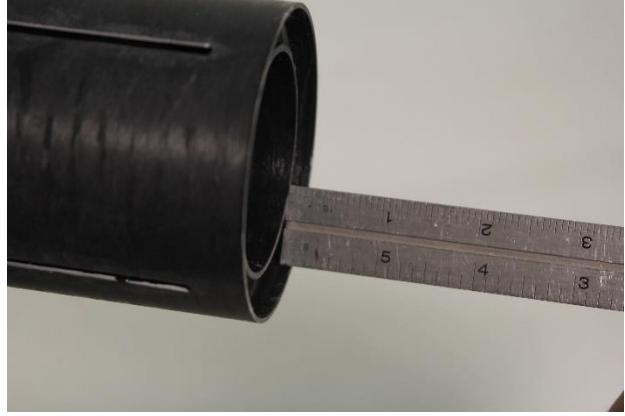
Step 5: Shown with the tape measure is the spacing, place epoxy on both sides of the centering rings evenly, be sure to add a very small amount on the top of rear centering ring as fins will be glued closely. Place glue all over the shock cord and the knot going around MMT. This will need to cure fully before moving further.



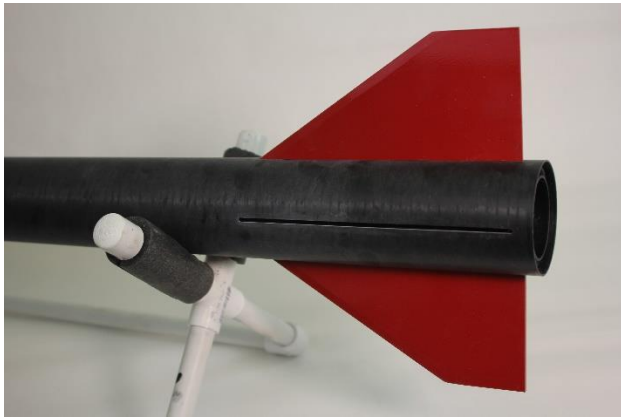
Step 6: Sand each fin slot with rough sandpaper about 1/4" all the way around, don't go to crazy with this, its only needed where the fillets lay.



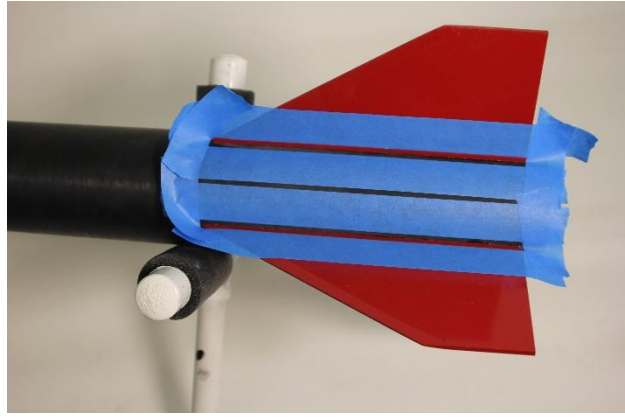
Step 7: Place tape around the booster, more time spent on preparation is less on clean up. Place epoxy around every centering ring.



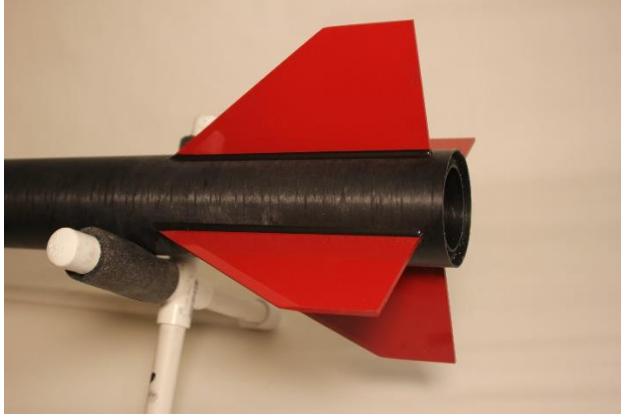
Step 8: Insert the motor mount assembly in, the rear of the tube needs to be exactly $1/8$ " in, to seat perfectly on the aluminum thrust plate. Clean the inside between body tube and motor mount with acetone, cleaning any glue residue sitting there. Let this dry before moving onto next step.



Step 9: Take the fins, one at a time, and glue them in with a bead of glue at the bottom, 10-minute epoxy is recommended here to hold them down and use rocket poxy for the fillets. When gluing the fins, make sure they are perfectly straight by using a guide or looking down the rocket to ensure it flies properly.



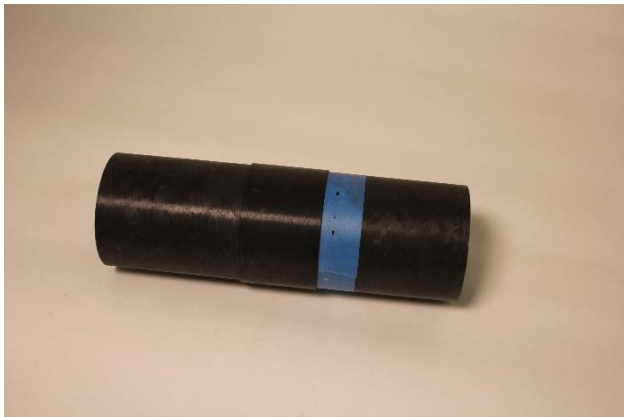
Step 10: Once all 4 fins are secure, tilt the rocket so both fins are off to the side equally. Place tape roughly $3/16$ " away to create a nice small fillet, also place tape at the front and back of the fillet to prevent a runoff.



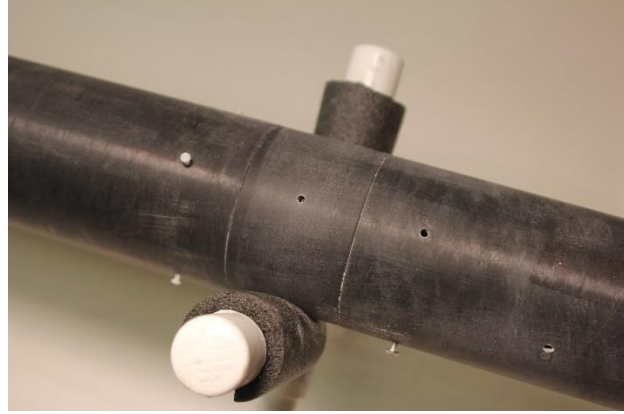
Step 11: Remove the tape from fillets 30-40 minutes after when the glue starts to set up. You will need to do this with all 4 fins, which will be 8 fillets total. When the glue is dry, take fine sandpaper and sand the fillets smooth.



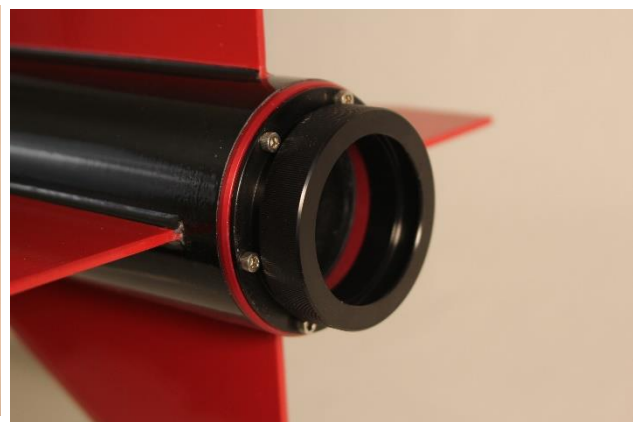
Step 12: Now the booster should be nearly complete. Take the 6" nosecone coupler and nosecone, tape 3.5" up the coupler, there should be 2.5" left, which will go into the nosecone. Sand this edge with rough sandpaper as well inside of the nosecone. Place a small amount of epoxy and slide the coupler into the nosecone.



Step 13: The next thing to do would be to work on the av bay/electronics section. You will need to take the 2" switch band and the 9" coupler, tape one end of the coupler off, and make a line 3.5" in from both ends. Lightly sand the area between the lines, add a thin line of glue all the way around, sliding the switch band over it, always be prepared to remove any glue residue from this.



Step 14: Once all the glue is fully dry, place tape around the middle of the rocket around the coupler so all parts stay in place. Measure 1" above, in the middle of the switch band, and 1" below the switch band, do the same on the nosecone 1" below. In line with the fins take a piece of angle iron and mark through each previous marking. Using a $\frac{1}{8}$ " bit along the switch band, drill 4-holes on your markings, this will be for your vent holes for your electronics. Then take a #50 bit and drill 4 more holes about 1" down on the bottom airframe, these will be the holes for your shear pins for the drogue. These same holes will need to be drilled through the nose cone coupler with the top airframe all the way around for the main parachute. Lastly, drill 4- $\frac{1}{8}$ " holes for the plastic rivets snap on the bottom half of the top airframe, these snap in rivets hold the Av Bay to the airframe when the charge goes off but breaks the shear pins.



Step 15: Take the red aluminum thrust plate and the 3, 8-32 Screws and thread them into the rear centering ring, you may need to use a tap to get it to bite good. Adding a bit of glue on the threads will help if they strip or for a permanent fit. After this, take your Aeropack Flanged Retainer and screw it onto the thrust plate securely. Congratulations your rocket is now done! Feel free to contact us for any questions regarding decal installation or the rocket kit assembling.