

Wildcat 20mm Student Rocket

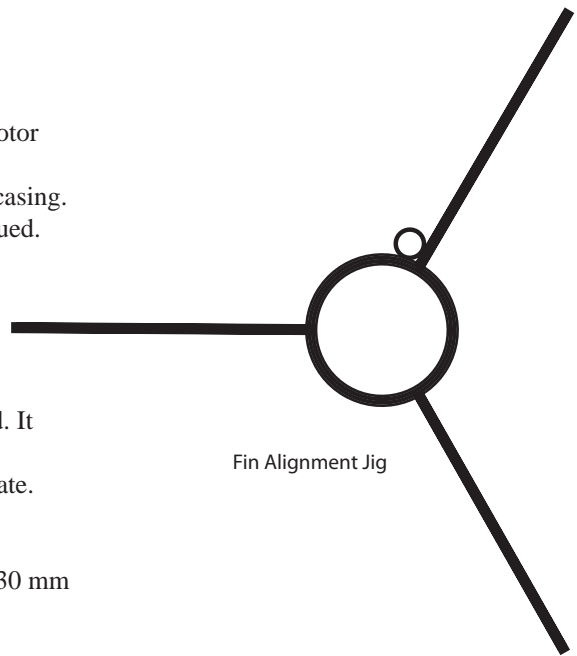
ASSEMBLY INSTRUCTIONS

Step 1: Motor Mount Assembly

- Insert an expended 18mm motor casing into the other end so that the motor sticks out 8mm (@.25 inches) from the mount.
- Insert the motor block on the other end so that it is touching the motor casing.
- Glue block into mount making sure that the engine casing is not also glued.
- Carefully remove casing and set aside until the glue is dry.

Step 2: Marking Fin Location on Airframe

- Cut out the FIN ALIGNMENT TEMPLATE.
- Wrap around the airframe 1 cm from one end.
- Tape template together with clear scotch tape once it is properly aligned. It should be snug on the airframe.
- Using a sharp pencil, mark the airframe at the dotted lines on the template. Mark a mark on both sides of the line.
- Remove template from airframe and discard.
- Using a fin marking tool or a doorframe, draw a line for each fin about 30 mm long from the end of the airframe.



Fin Alignment Jig

Step 3: Installing Motor Mount

- Apply a thin bead of glue along the inside of the airframe on the end where the fins attach. Use your finger to spread it around.
CAUTION: If you apply too much glue, it will leak into the motor mount and you will not be able to install a motor.
- MAKING SURE THAT THE END WITH THE MOTOR BLOCK GOES IN FIRST**, insert the motor mount into the airframe and slide it forward until the bottoms of the mount and airframe are flush.

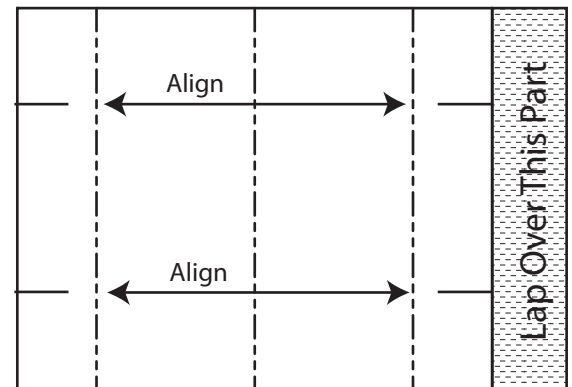
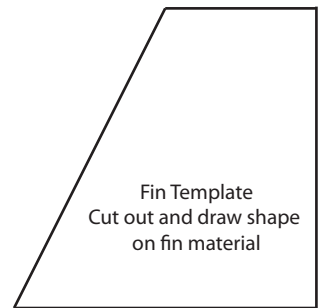
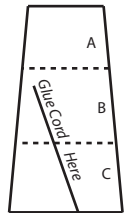
Step 4: Fins and Launch Lug

- Cut out the fin template and use it to mark the outlines of 3 fins on the fin material.
- CAREFULLY** cut 3 fins with sharp scissors. You want 3 identical fins.
- Use fine sandpaper to round off the leading and trailing edges. **DO NOT ROUND OFF THE ROOT EDGE.**
- Apply a small bead of glue to the root edge.
- Wait one full minute and then attach fin along the right side of one of the fin markings on the airframe.
repeat the process for the other two fins.
- Glue the launch lug along one of the fin roots.
- Place rocket on the Fin Alignment Jig to check alignment. Set aside to dry.

Step 5: Recovery System

- Cut out Shock Cord Holder from instructions.
- Apply a small amount of glue over the diagonal *glue cord here* text.
- Apply glue onto section B of the holder. Fold Section A over Section B and press firmly. Apply glue onto Section C and fold over the A/B section over Section C.
- Apply glue to one side of the holder and glue holder into the upper end of the airframe at least 4 cm inside the airframe.
- Set aside to dry.
- Stretch out shock cord on table and lay over one end of the streamer.
- Attach streamer onto shock cord about 10 cm from end with scotch tape.
- Tie the shock cord onto the nose cone.
- Roll up streamer and insert it into the airframe along with the shock cord.
- Insert the nose cone into the airframe.

Shock Cord Holder
Cut out on solid line
and fold on dotted



Fin Alignment Template
Cut out and wrap around airframe
to mark location of fins (dotted lines)

Wildcat 20mm Student Rocket

Length: 317.5 mm. , Diameter: 20.02 mm. ,
 Span diameter: 100.02 mm.
 Nose Cone: Elliptical
 Fins: Clipped Delta
 CP: 10.6767 In.

NOSE CONE SHAPES



Conical



Elliptical



Ogive



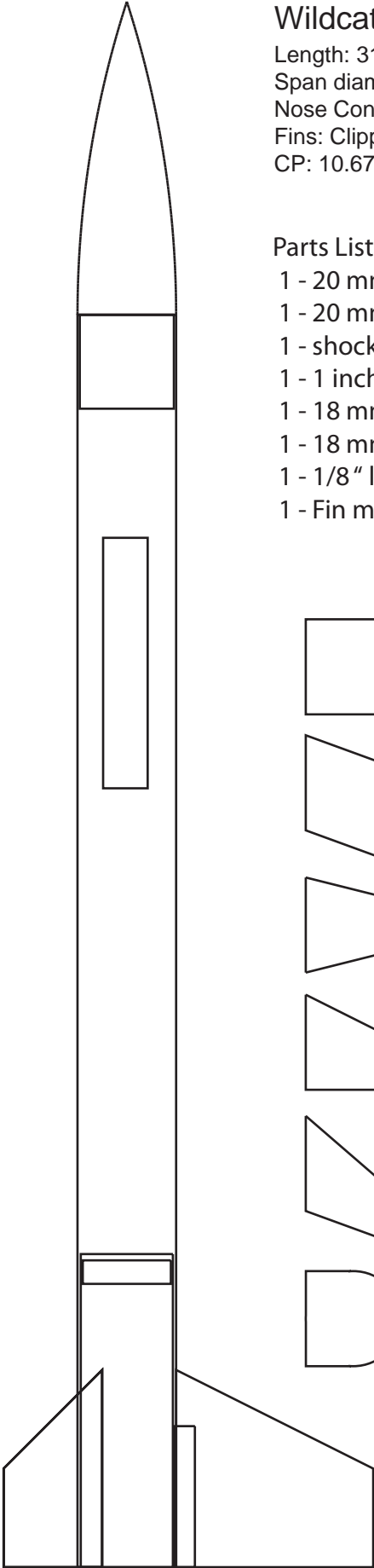
Parabolic



Sears-Haake



Conical
(Capsule)



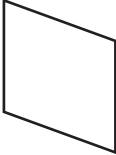
Parts List

- 1 - 20 mm nose cone
- 1 - 20 mm airframe, 25.4 cm long
- 1 - shock cord, 60 cm long
- 1 - 1 inch x 10 inch mylar streamer
- 1 - 18 mm motor mount, 64 mm long
- 1 - 18 mm motor block
- 1 - 1/8" launch lug, 25 mm long
- 1 - Fin material for three fins

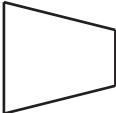
FIN SHAPES



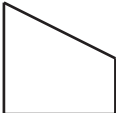
Rectangular



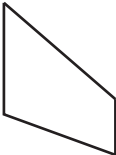
Swept



Trapezoidal



Clipped Delta



Swept Delta



Elliptical