

MMX Modification for the 1/8th scale paper model ROHINI Sounding Rocket kits by Niels Jahn Knudsen



Materials needed: 65-67lb/145gm2 cardstock, spent MMX casing, kite string, MMX size launch rod, kite string-dental floss-Kevlar chord or similar material, White glue, model clay-or similar for nose weight. Before construction of the rocket begins, Have a copy of Niels's original assembly instructions handy, as I am plagiarizing a bit of his writing © I will refer to them frequently, and for the illustrations. make sure you **leave out** parts **C, D, E, F, J, I**.

Step-1 Glue connector-**B**- to the backside of **A** shown in the instructions. **DO NOT USE C, or D!**

Step-2 Roll and glue **A** into a tube.

Step-3 Roll and glue **G** into a cone using the connector.

Step-4 **FIT** part **H** into the top of the rocket. Glue only the parts of strip **H** where the overlap! To each other **ONLY! DO NOT GLUE H TO THE TUBE!** This will form the nose cone shoulder later. Remove when dry.

Step-5 Glue the tabs of **H** into the nose-cone. Let dry.

Step-6 Cut out and fold the fins **K** as shown.

Step-7*- Both versions covered! Cut out and roll the launch lug strip loosely around an MMX sized launch rod. Glue the overlapping portion that meets. Glue the launch lug to the rocket body-**A**, along the body seam, (use the seam to align it straight along the body)

Version-1 The rear of the lug should be 68mm's from the rear of the rocket body.

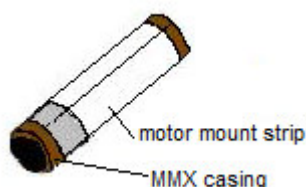
Version-2 The rear of the lug should be 50mm's from the rear of the rocket body.



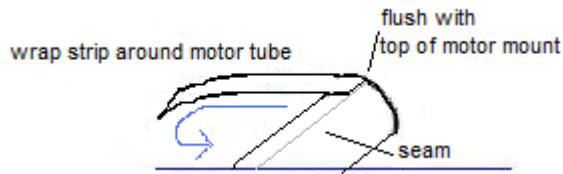
Step-8 Motor mount assembly/installation

A-Cut out the motor mount and centering strip. Fold and cut the strip in half making 2.

B-Wrap the motor mount loosely around a spent MMX engine casing. Place glue on the light grey tab, and glue the mount into a tube. Remove from the casing as soon as the glue sets.

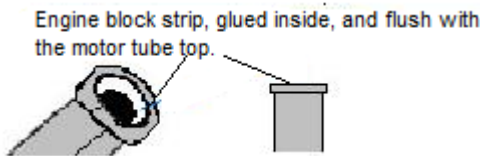


C- Start gluing one of the centering strips around the top of the engine mount, starting where the mount wrap ends. Continuing gluing the strip around itself to form the upper centering wrap. Before the glue completely sets, test fit the mount into the rear of the rocket body **A**. If the mount is too tight, remove a little of the strip at a time until a relaxed but snug fit is achieved. Smooth around the strip with your fingers, and let dry.



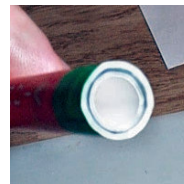
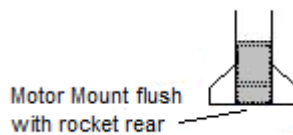
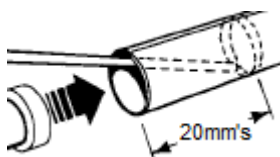
D- Glue the other strip to the engine mount, in the same manner, just above the gray rear portion. Use the area where the first strip wrap ended as a place to stop for this 2nd centering wrap. Test fit the mount again into the rear of rocket body **A**. If the mount is too tight, remove a little of the strip at a time, if it is too loose, glue on an additional small portion of the strip until a relaxed but snug fit is achieved. Smooth around the strip with your fingers, and let dry.

E- Cut out the motor block strip. Wrap up, and glue inside the **TOP** of the motor mount. An MMX casing should stick out 3-4mm's from the rear when completed. Let dry.



Completed mount shown with MMX casing inside sticking out

F- Using a small dowel, pen, pencil, etc, place a small amount of glue about 20mm's up inside the rear of rocket body **A**. Place another small amount of glue on the rear centering wrap of the mount. Quickly insert the motor mount into rocket body **A**, so that it is flush with the rear of the rocket. Let dry completely.



Shown in place/completed

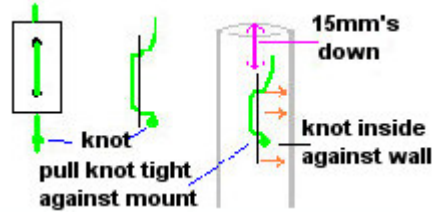
Step-9 Glue the rocket fins in place.

Step-10 Shock chord/mount installation

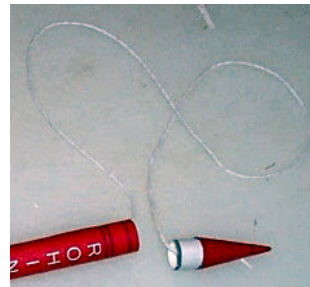
A- Cut out a length of kits string, or similar material, about 35cm's in length.

B- Cut out the shock chord mount, and punch out the 2 black diamonds. Thread one end of the string, (or similar material), through the holes, and tie the end into a knot.

C- Glue the completed mount assembly inside the **FRONT** of the rocket body, at least 15mm's down from the top, against the inside wall, as shown in the following illustrations. Let dry.



D- Tie a knot in the other end of the string. Place a couple drops of glue into the inside of the nose cone tip. Using a small stick/wire, etc, push the knotted string into the glue, and tip of the nose cone. Let dry completely!

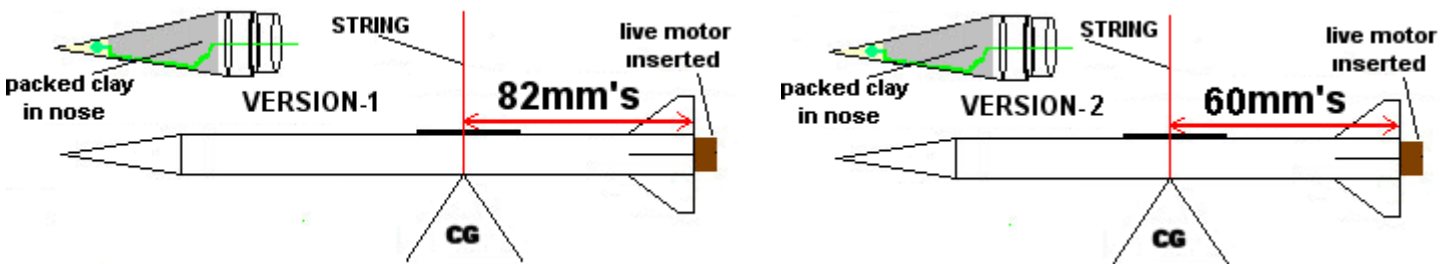


completed assembly

Step-11* Both versions covered! Balance the rocket (CG)

The proper balance point (CG) for the model is
Version-1 82mm's from the rear, with an MMX motor loaded!
Version-2 60mm's from the rear, with an MMX motor loaded!

This can be checked by tying a string around the rocket, adjusting it up/down the length till the rocket is parallel to the floor, (balanced). Add weight or other material into the nose, and packing it with a pencil or similar object until balance point, is reached. (The string should be 82mm's from the rear of the rocket when it is balanced©)



Give your rocket a protective clear coat finish if you wish.

Friction fit an MMX into the rear, and get your gear! It's launch time! **HAVE FUN!** ☺