Made in the U.S.A by Semroc Astronautics Corporation - Knightdale, N.C. 27545

Booster-18
Kit No. KM-5

Specifications of Maxi-Micron with Booster-18		Engines	Approx. Altitude
Body Diameter	1.84" (4.2 cm)		
Length	25.8" (65.5 cm)	B6-0,B6-4	500'
Fin Span	6.4" (16.3 cm)	C6-0,B6-4	800'
Net Weight	2.5 oz. (70.9 g)	C6-0,C6-5	1100'

❑ **12.** Mask the tube coupler and the inside of the engine tube and paint the booster with gray paint.

❑ **13.** Insert a booster engine in the top of the Booster-18 assembly with the nozzle facing toward the thrust block. Insert a sustainer engine in the main rocket. Test fit the Booster-18 assembly to ensure it is a snug fit, but not too tight. Insert an igniter in the booster engine and make sure it is placed on the launch rod with the booster at least 4 inches from the blast protector surface. Launch in a vertical position with very little wind. Clean the surfaces after each flight.

ASSEMBLY

❑ **1.** These instructions are presented in a logical order to help you put your Booster-18 together quickly and efficiently. Check off each step as you complete it and we hope you enjoy putting this kit together and flying it with your favorite kit.

NOTE: This is a lower stage and is exposed to hot ignition flames. Use wood glue or epoxy on all surfaces exposed to the flame to reduce the charring.

PARTS LIST

A	1	Body Tube ST-930
B	1	Engine Tube ST-720
C	1	Tube Coupler HTC-18S
D	2	Centering Rings CR-KM-5
E	1	Thrust Block TB-7
F	1	Standoff Set FM-5S
G	1	Shroud Sheet IKM-5S

EXPLODED VIEW

BEFORE YOU START!

Make sure you have all the parts included in this kit that are listed in the Parts List. In addition to the parts included in this kit, you will also need the tools and materials listed below. Read the entire instructions before beginning to assemble your mount. When you are thoroughly familiar with these instructions, begin construction. Read each step and study the accompanying drawings. Check off each step as it is completed. In each step, test-fit the parts together before applying any glue. It is sometimes necessary to sand lightly or build-up some parts to obtain a precision fit. It is important that you always ensure that you have adequate glue joints.

TOOLS: In addition to the parts supplied, you will need the following tools to assemble and finish this kit.

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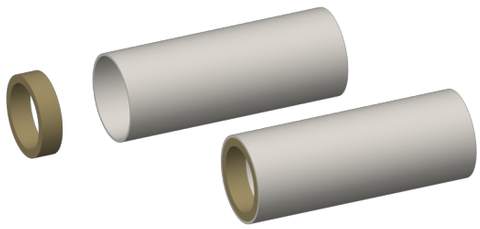
SHROUDS

❑ **2.** Carefully cut out the two paper shrouds (**IKM-5S**). Roll one of the shrouds carefully forming it into a ring. Form this carefully to avoid creasing the paper. Apply a thin layer of white glue on the indicated section inside the dotted line. Line up the opposite edge with the dotted line and press together on a flat surface. Hold it in place until the glue sets then set the adapter nozzle cone aside to dry. Repeat with the other shroud.

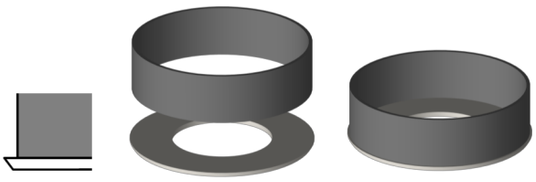


ENGINE MOUNT ASSEMBLY

❑ **3.** Glue the thrust block (**TB-7**) flush with one end of the engine tube (**ST-720**). Allow to dry.

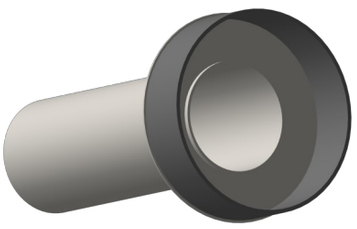


❑ **4.** Stand the engine tube (**ST-720**) on the fin guide on the next page and make marks on the sides of the tube at each position. Find a convenient channel or groove such as a partially open drawer, a door jamb (as shown,) or a piece of molding. Using the channel, extend the marks the length of the tube.

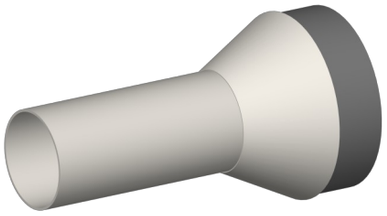


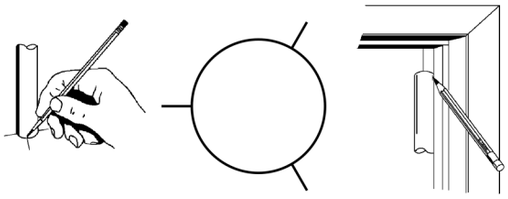
MAIN ASSEMBLY

❑ **7.** Slide the tube coupler assembly over the main body tube (**ST-930**) with the coupler facing away from the tube. Make sure the top edge of the body tube is even with the ring. Apply a bead of glue on each side of the ring at the joint with the body tube. Coat the inside of the tube coupler and the body tube with a film of glue to help protect them from the hot gases. Allow to dry.

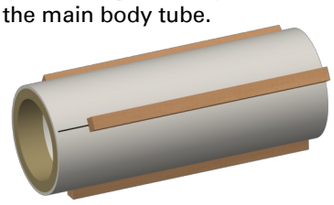


❑ **8.** Slide the smaller shroud over the body tube. Apply a bead of glue around the beveled outer edge of the top ring and slide the shroud into place.





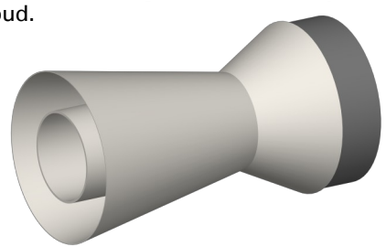
❑ **5.** Apply glue to the root edge of one of the basswood strips and position it along one of the lines drawn for the fins on the side of the main body tube and even with the top (away from the engine block.) Remove the strip, set it aside and allow it to almost dry, apply additional glue, and reposition. Repeat for the other two strips. If you follow these instructions, the strips will not require much additional work to keep them aligned. Allow the assembly to completely dry, checking carefully to make sure they are parallel with the main body tube.



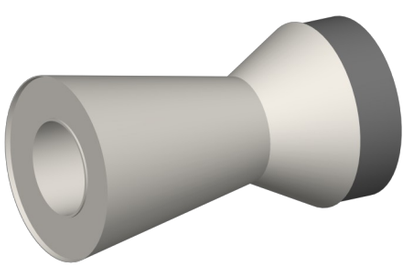
TUBE COUPLER

❑ **6.** Prepare the edges of the two centering rings (**CR-KM-5**). The outside edge of each ring is partially cut through on one side with two laser cuts. Use your thumb to peel the rings off the edges. Sand a bevel on each edge that will fit inside the shrouds. Place one of the rings on a flat surface with the widest edge facing upward. Center the tube coupler (**HTC-18S**) on the ring leaving the same overlap all around the ring. Apply glue to the inside of the coupler against the ring, keeping glue away from the outside of the coupler and the lip formed by the ring. Allow to dry.

❑ **9.** Slide the larger shroud over the body tube as shown. Apply a thin bead of glue at the base of the small shroud and slide the large shroud until it just touches the small shroud.



❑ **10.** Slide the remaining centering ring, with the bevel edge facing toward the shroud, over the base of the body tube and snug against the large shroud. Apply a bead of glue around the joint of the ring and shroud and smooth it with your finger coating the exposed base surfaces to protect it from engine gases and stiffen the end of the shroud. Check that all surfaces that will come in contact with the engine flame are coated with glue or epoxy.



❑ **11.** Apply a thick bead of glue on both sides of each of the basswood strips. Slide the engine mount top (away from the engine block) inside the body tube until the end of the strips is even with the end of the body tube. Turn the assembly to allow the glue to form fillets against the inside of the body tube. Allow to dry.