

About Semroc Astronautics Corporation

Semroc Astronautics Corporation was started by Carl McLawhorn in his college dorm at North Carolina State University in November, 1967. Convincing a small group of investors in his home town of Ayden, North Carolina to invest in a small corporation, the company was re-incorporated as Semroc Astronautics Corporation on December 31, 1969.

Semroc produced a full line of model rocket kits and engines. At its peak, Semroc had twenty-five full time employees working at two facilities. One was for research and development, printing, shipping, and administration. The other was outside town and handled all production and model rocket engine manufacturing. For several years, Semroc was successful selling model rocket kits, supplies, and engines by mail-order and in hobby shops. In early 1971, Semroc became insolvent and had to close its doors.

After 31 years of dreams and preparations, Semroc Astronautics Corporation was reincorporated on April 2, 2002 with a strong commitment to helping put the fun back into model rocketry.

About the Maxi-Micron™

The Centuri Micron was released first in 1963 as an entry-level single stage rocket with streamer recovery. Sharing many design features with the competing Estes Astron Mark II, the Micron was a popular first rocket for beginners. The original had a BC-711 balsa nose cone and later models were migrated to plastic nose cones.

The Maxi-Micron™ is a 242% upscale of the original design. The classic looks of the little brother is now available in a much larger demo version featuring low altitudes and slow liftoff, sure to be a crowd pleaser. It has parachute recover, Kevlar shock cord mount, laser-cut fins and balsa nose cone. Easy to build with big rocket appeal, the Maxi-Micron™ is a great addition to your arsenal.

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maxi-micron™

CLASSIC DESIGN

**GREAT
DEMO MODEL**

EASY TO BUILD

**BALSA FINS &
NOSE CONE**

FLYING MODEL
ROCKET KIT



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

MAXI-MICRON™ Kit No. KA-34

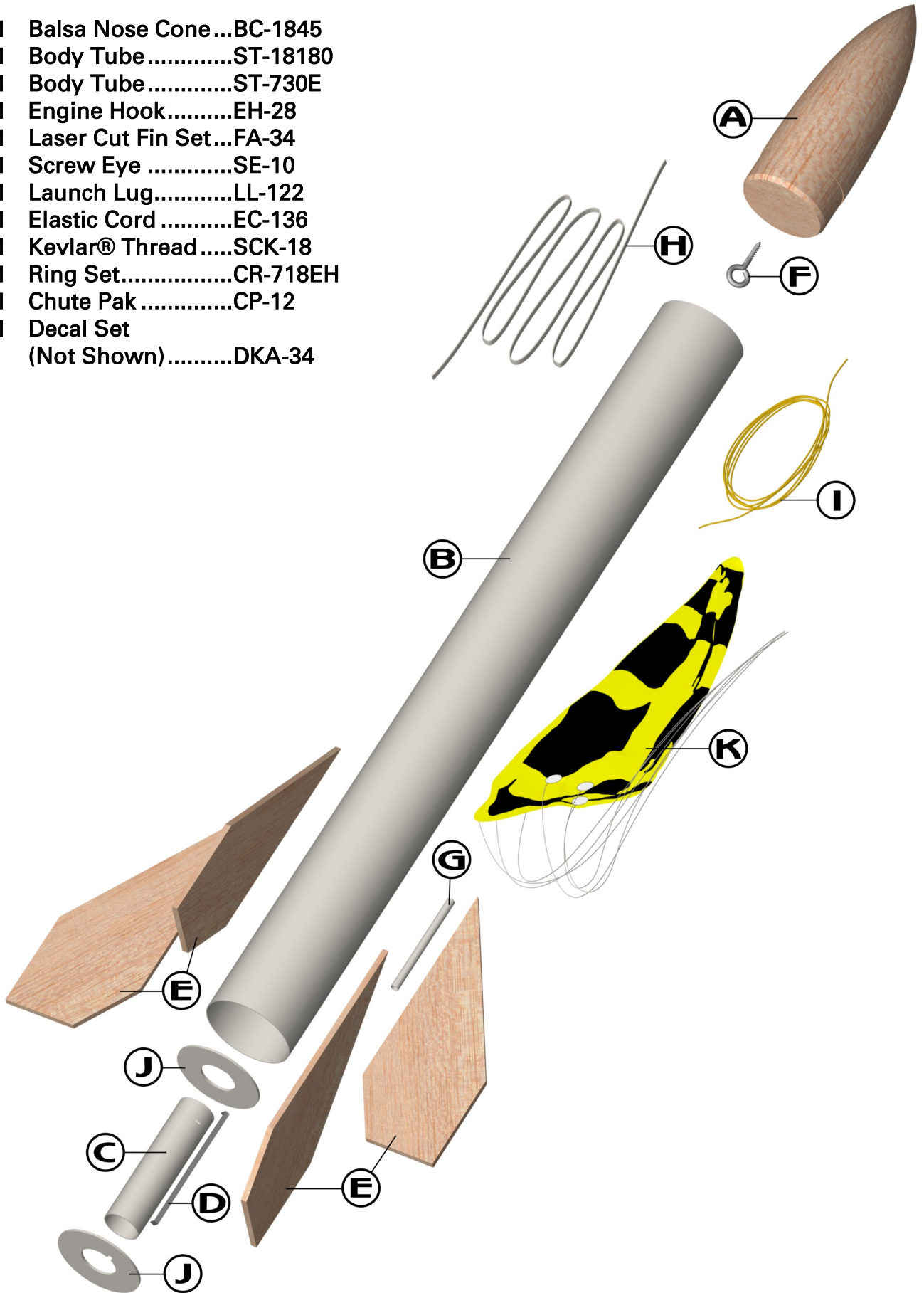
Specifications	Engine	Approx. Altitude
Body Diameter 1.84" (4.7 cm)	A8-3	100'
Length 23.8" (60.5 cm)	B6-4	250'
Fin Span 6.4" (16.3 cm)	C6-5	600'
Net Weight 2.2 oz. (62.4 g)		

PARACHUTE RECOVERY

Parts List

EXPLODED VIEW

- A 1 Balsa Nose Cone...BC-1845
- B 1 Body Tube.....ST-18180
- C 1 Body Tube.....ST-730E
- D 1 Engine Hook.....EH-28
- E 1 Laser Cut Fin Set...FA-34
- F 1 Screw EyeSE-10
- G 1 Launch Lug.....LL-122
- H 1 Elastic CordEC-136
- I 1 Kevlar® ThreadSCK-18
- J 1 Ring Set.....CR-718EH
- K 1 Chute PakCP-12
- L 1 Decal Set
(Not Shown).....DKA-34



BEFORE YOU START!

Make sure you have all the parts included in this kit that are listed in the Parts List in these instructions. 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 rocket. 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. If you are uncertain of the location of some parts, refer to the exploded view to the left. 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.



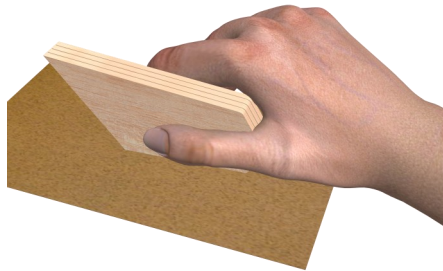
ASSEMBLY

1. These instructions are presented in a logical order to help you put your Maxi-Micron™ together quickly and efficiently. Check off each step as you complete it and we hope you enjoy putting this kit together.

FIN PREPARATION

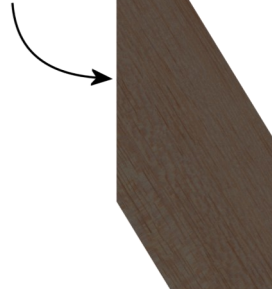
2. Lightly sand each side of the laser-cut fin sheets (FA-34). Carefully push the laser-cut fins from their sheet. Start at one point on each fin and slowly and gently work around the fin.

3. Stack all the fins in a set. Line the set of fins up squarely and sand the fins back and forth over some fine sandpaper to get rid of the hold-in tabs as shown below.



4. Round all the edges of each fin, except the root edges. Leave them flat. Repeat for all four fins. The root edges will be glued to the body tube.

ROOT EDGE



ENGINE MOUNT

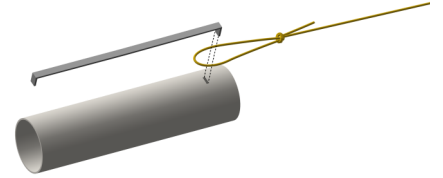
5. Bend the engine hook (EH-28) slightly so it forms a slight bow in the direction shown.



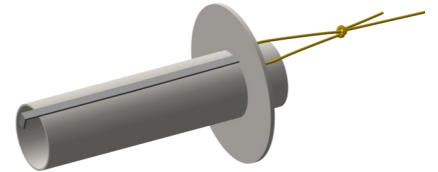
6. Tie a loop in one end of the yellow Kevlar® cord (SCK-18). Pull knot tight.



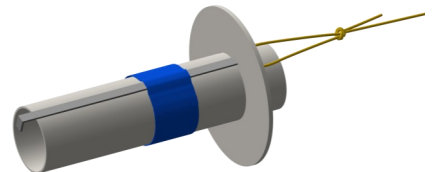
7. Insert one end of the engine hook (EH-28) through the loop in the Kevlar cord and into the pre-punched engine tube (ST-730E).



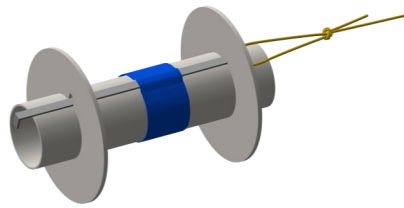
8. Carefully remove the two centering rings from the laser-cut set (CR-718EH). Select the one with the small notch and align the notch over the engine hook. Slide it from the bottom of the engine tube until it is against the end of the engine hook and against the yellow Kevlar® cord.



9. Wrap masking tape around the center of the engine tube to hold the engine hook in place and centered along its length. Run a bead of glue along the masking tape and along the engine hook between the tape and the ring. Allow to dry.

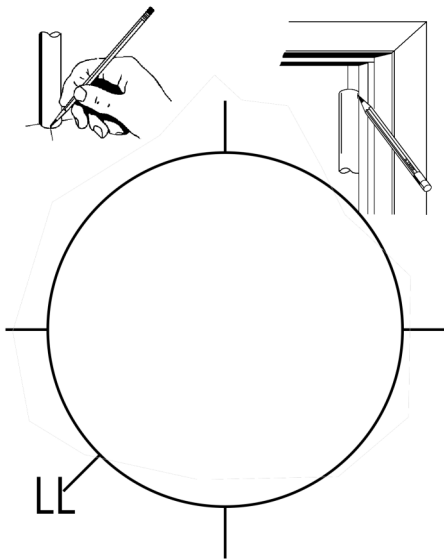


10. Select the remaining centering ring that has the wider notch. Align the notch over the engine hook and slide it from the bottom of the engine tube until it is 5/8" from the bottom of the engine tube. Apply a bead of glue around both sides of both centering rings and against the engine tube. Keep glue away from the outer edges of both rings and from the notch in the lower ring. Make sure the engine hook moves freely. Allow to dry in an upright position.



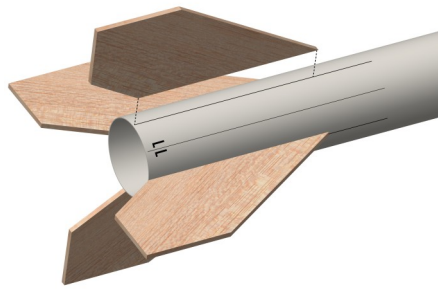
MARK TUBE

- 11. Stand the large body tube (BT-18180) on the fin guide below and make the fin position marks on the sides of the tube. 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 3" from the bottom of the tube.



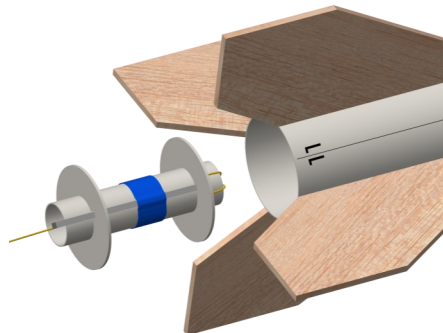
ATTACH FINS

- 12. Apply glue to the root edge of one of the fins and position it along one of the lines drawn for the fins on the side of the main body tube and even from the bottom. Remove the fin, set it aside and allow it to almost dry, apply additional glue, and reposition. Repeat for the other three fins. If you follow these instructions, the fins will not require much additional work to keep them aligned. Allow the fins to completely dry, checking carefully to make sure they are parallel with the main body tube.



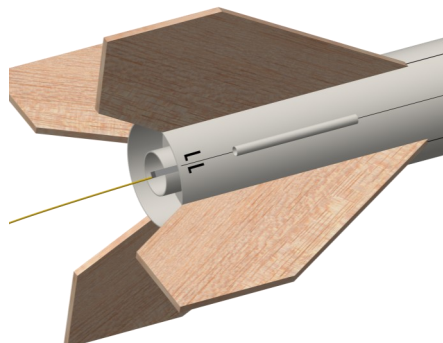
ATTACH MOUNT

- 13. Apply a thick bead of glue inside the aft end of the main body tube and on the top side of the bottom ring, keeping glue away from the engine hook slot. Insert the engine mount assembly with the thrust ring end first into the main body tube until the engine tube is even with the main body tube and the engine hook is centered between two of the fins. Do not stop until it is in the correct place. Allow to dry completely in a vertical position.



LAUNCH LUG

- 14. Apply a bead of glue to the launch lug (LL-122) and apply it to the main body tube, centered between two fins and about 1" from the bottom of the tube. Sight from one end to make sure it is parallel with the fins.

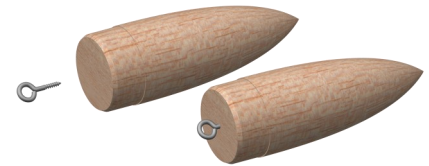


APPLY FILLETS

- 15. After the fins are completely dry, run a small bead of glue along both sides of each fin-body tube joint. Using your forefinger, smooth the glue into fillets. Apply a fillet of glue on each side of the launch lugs. Allow this assembly to dry in a vertical position.

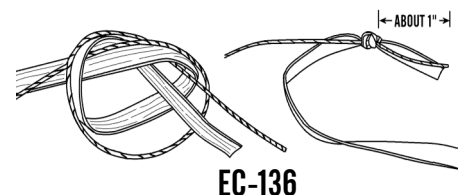
NOSE CONE

- 16. Insert the nose cone (BC-1845) in the main body tube and check for proper fit. The nose cone should be snug to hold itself in alignment. If it is too loose, add masking tape. If it is too tight, sand the shoulder slightly.
- 17. Screw the screw eye (SE-10) into the base of the nose cone, remove and fill the hole with glue. Reinsert the screw into the nose cone until the eye is flush with the base of the nose cone.

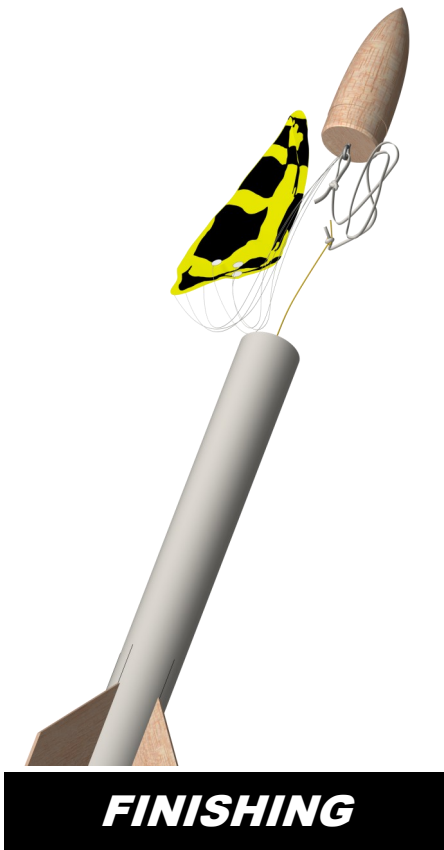


FINAL ASSEMBLY

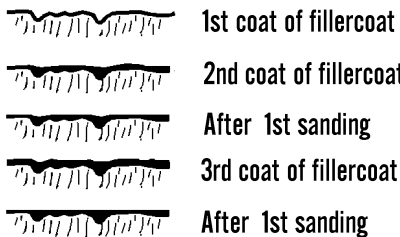
- 18. Tie the free end of the Kevlar® cord to one end of the elastic cord (EC-136) using an overhand knot. Pull the elastic cord and Kevlar cord back through the main body tube and out the top of the tube.



- 19. Assemble the chute (CP-12) using the instructions provided with it. Pull the lines tight on the chute and make sure they are all of equal length. Attach the chute by tying them to the screw eye. Put a drop of glue on the joint to keep the lines from moving. Attach the free end of the elastic cord to the screw eye. Put a drop of glue on that joint as well.



20. When all the fillets have dried, prepare balsa surfaces for a smooth professional looking finish. Round the edges of the fins, then fill the wood grain with balsa fillercoat or sanding sealer. When dry, sand with fine sandpaper. Repeat until smooth.



21. After all balsa surfaces have been prepared, wipe off all balsa dust with a dry cloth. First spray the model with an enamel primer. Choose a high visibility color like white for the final color. Spray painting your model with a fast-drying enamel will produce the best results. PATIENCE...is the most important ingredient. Use several thin coats, allowing each coat to completely dry before the next coat. Start each spray a few inches above the model and end a few inches below the model. Keep the can about 12" away and use quick light coats. The final coat can be a little heavier to give the model a glossy wet-looking finish.

22. After the paint has dried, decals should be applied. The decals supplied with the Maxi-Micron™ are waterslide decals. Each decal should be cut separately from the sheet. Use the cover photo for suggested placement. Dip each decal in a small dish of water that has a drop of detergent. It will take about 30 seconds before the decal is loose enough to apply. Slide the decal in place and use the paper backing to work the bubbles out. Repeat for all the decals.

FLIGHT PREPPING

23. Mounting the engine: Insert the engine and make sure the engine hook keeps the engine in snugly. The hook may be slightly bent to make sure the engine is retained.

24. Apply a few sheets of recovery wadding in the top of the main body tube. Fold the chute and pack it and the shock cord on top of the recovery wadding. Slide the nose cone into place, making sure it does not pinch the shock cord or chute.

25. Refer to the model rocket engine manufacturer's instructions to complete the engine prepping. Different engines have different igniters and methods of hooking them up to the launch controllers.

26. Carefully check all parts of your rocket before each flight as a part of your pre-flight checklist. Launch the Maxi-Micron™ from a 1/8" diameter by 36" long launch rod.

27. After each flight, promptly remove the spent engine casing and dispose of properly.

