



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 motors. 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 of town and handled all production and model rocket motor manufacturing. For several years, Semroc successfully sold model rocket kits, supplies, and motors 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. Many years of excellent service to the rocketry community passed by until sadly, on August 11 2013, Carl passed away and left a great void in the hearts of many rocketeers. He is forever in our hearts and minds.

In February of 2015, Semroc was sold to eRockets and moved to Dayton, Ohio where it resides today. It is our goal to continue the level of service and dedication to the hobby that Carl and his family were so well known for. We strive to serve you, our customers, to the best of our abilities as we carry the vision of Carl McLawhorn boldly into the future.

About the Maple Seed™

Carl drew the original Maple Seed rocket but it was never released as a kit for a number of reasons. The project was unfinished at the time of his passing. Files for the Maple Seed were found after Randy Boadway and eRockets assumed ownership of the company in 2015. Eric Specht redesigned the hook attachment and changed many other key aspects of the rocket to make it a stable and fun rocket to fly with a highly entertaining and unique recovery system.

January 2017

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SEMROC

MAPLE SEED™

Magnum Series

Precision turned balsa nosecone

Laser cut balsa parts

Helicopter and Parachute Recovery

*Designed by:
Eric Specht*

MADE IN THE USA

FLYING MODEL ROCKET KIT

Made in the U.S.A by Semroc - Dayton, Ohio

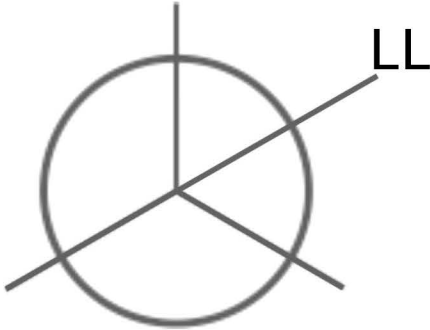
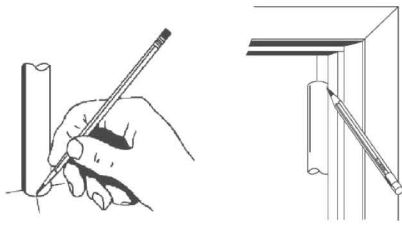
Maple Seed™

Kit No. FA-35

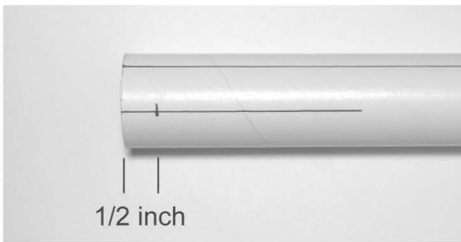
Specifications	Engine	Approx. Altitude
Body Diameter	C11-3	250'
Length	D12-3	500'
Fin Span		
Net Weight	3.5 Oz.	

Skill Level 3

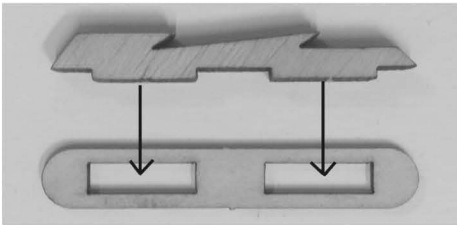
TUBE MARKING



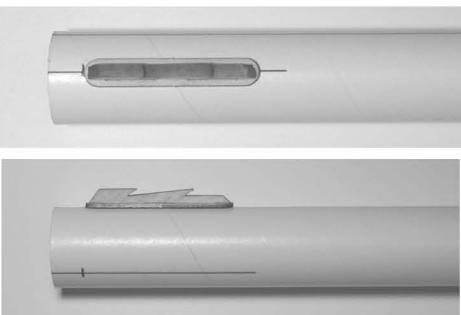
❑ 10. Make a mark on all three fin lines 1/2 of an inch from the bottom of the airframe tube.



❑ 11. Slide the tabs of the basswood hook (lower part I) into the tube hook mount (J) and glue into place. Repeat for other two assemblies to form three tube hooks.

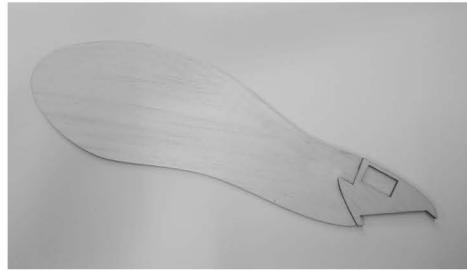


❑ 12. When the glue has dried on the tube hooks, glue them onto the airframe tube at the 1/2 inch mark with the hook facing forward.

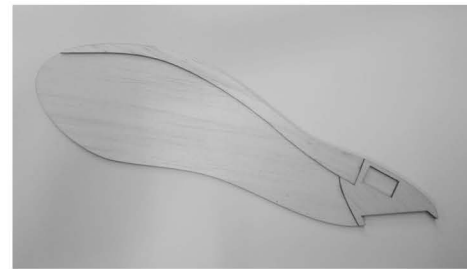


SEED ASSEMBLY

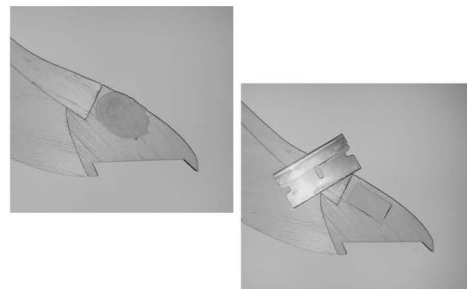
❑ 13. Glue the seed pod (R) to the head of the seed wing (O) as shown.



❑ 14. Attach the 1st turbulator (Q) to the leading edge of the wing using thin CA exactly as shown. Only this side of the seed has turbulators.

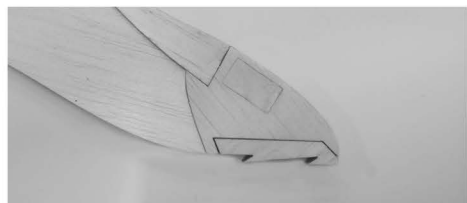


❑ 15. Soften some clay (E) and use it to fill the small rectangular void in the seed pod, then scrape the excess clay away with a razor until the surface of the seed pod is smooth.

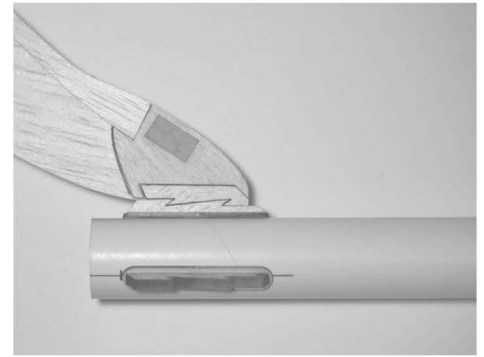


❑ 16. Flip the seed wing over and repeat steps 13 and 15. DO NOT ATTACH ANOTHER TURBULATOR. Proceed after completing the remaining two assemblies

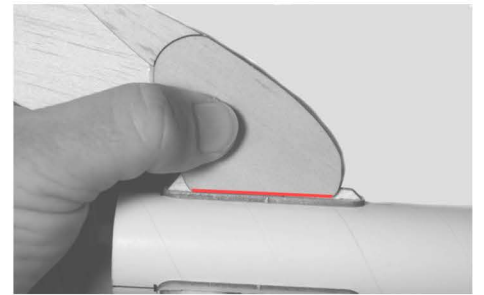
❑ 17. Glue the basswood hook (top of I) in place as shown. Make sure the hook is perfectly centered on the pod.



❑ 18. When the glue is dry on the seed pod hook, hook the seed onto the body.



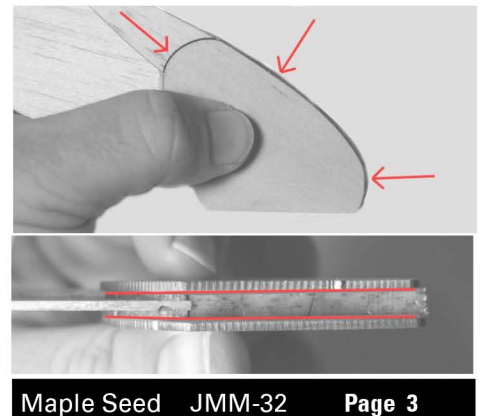
❑ 19. Place an outer pod cover (S) on both sides of the seed pod and hold in place tightly. The bottom of the plate, highlighted in red in the photo below, must be snug against the plywood plate of the tube hook.



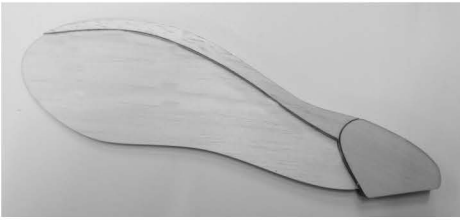
❑ 20. Continue to hold the outer pod covers tightly in place and push forward, releasing the seed hook from the tube hook.



❑ 21. Apply thin superglue to the indicated areas. Be careful to avoid gluing your fingers to the basswood.



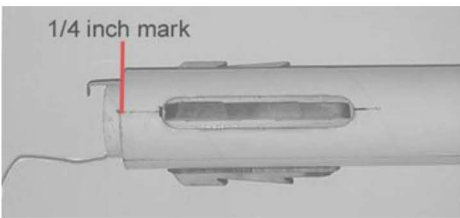
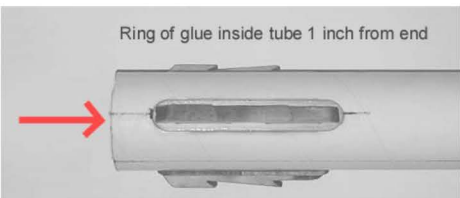
❑ **22.** Now that the outer pod covers are attached, the 2nd turbulator (P) can be installed. Apply glue to the backside of the 2nd turbulator and carefully attach it to the top of the 1st turbulator.



❑ **23.** Repeat steps 17 to 22 for all three of the Maple Seeds.

INSTALL MOTOR MOUNT

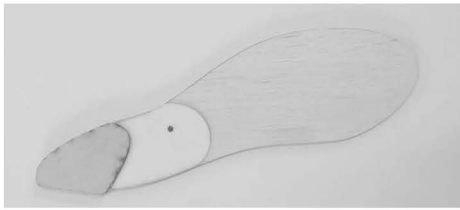
❑ **24.** Make a mark 1/4 inch from the bottom of the motor tube. Check the fit of the motor mount assembly in the airframe tube. Once you're satisfied with the fit, run a line of glue inside the body tube about 1 inch from the end. Line up the motor hook between two fin lines (not with the Launch Lug Line) and with one smooth motion, insert the motor mount assembly until the 1/4 inch mark is even with the end of the airframe tube. Allow time to dry upright before proceeding.



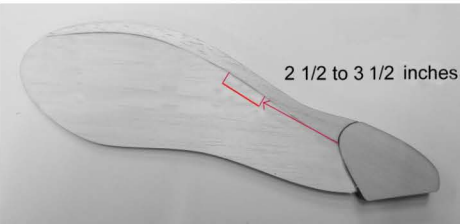
BALANCING

❑ **25.** Balancing the seeds of your Semroc Maple Seed is crucial to its success. Different densities of balsa used in the construction of your Maple Seed results in different amounts of clay being needed from seed to seed to achieve this balance.

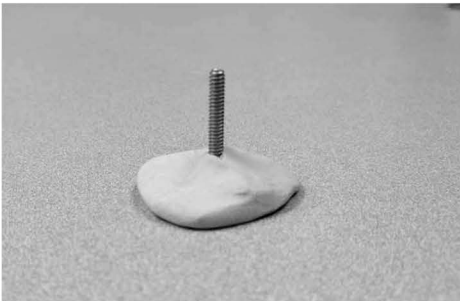
Take the CG marking tool (T) and place it on the back side of the seed wing as shown. Insert a pencil or marker into the hole in the tool to place a dot on the seed wing.



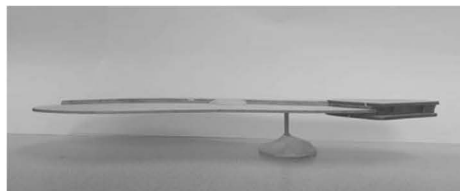
❑ **26.** Make a small mark on the top of the seed wing at 2 1/2 inches from the seed pod and another at 3 1/2 inches.



❑ **27.** Use a chunk of clay (E) to hold a small bolt or a toothpick upright on the table. This serves as a CG pin for balancing the seed.

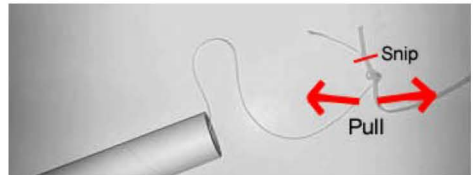
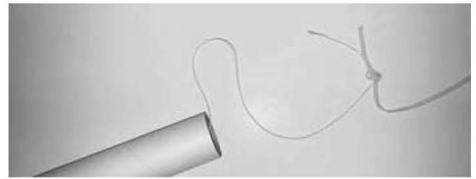


❑ **28.** Center the CG pin on the mark made in step number 24. Add clay between the 2 1/2 and 3 1/2 inch marks until the wing balances from leading to trailing edge. Push the clay up against the back side of the turbulator. Experiment to find the right amount of clay needed. After this balance is achieved, add clay at the tip of the wing as shown until the blade balances.

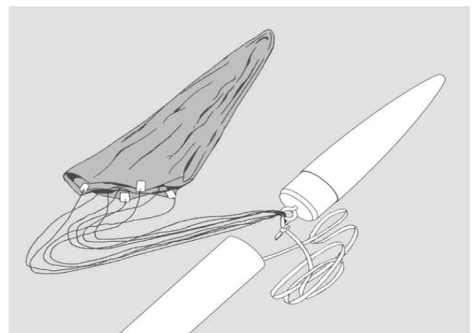


FINAL ASSEMBLY

❑ **29.** Feed the Kevlar cord back through the motor tube and out the top of the rocket. Tie the Kevlar cord to the elastic cord (G). Pull the knot tight and cut off the loose ends.



❑ **29.** Assemble the chute (U) using instructions provided with it. Pull the lines tight on the chute and make sure they are all of equal length. Attach the chute to the screw eye. Put a drop of glue on the knot 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.

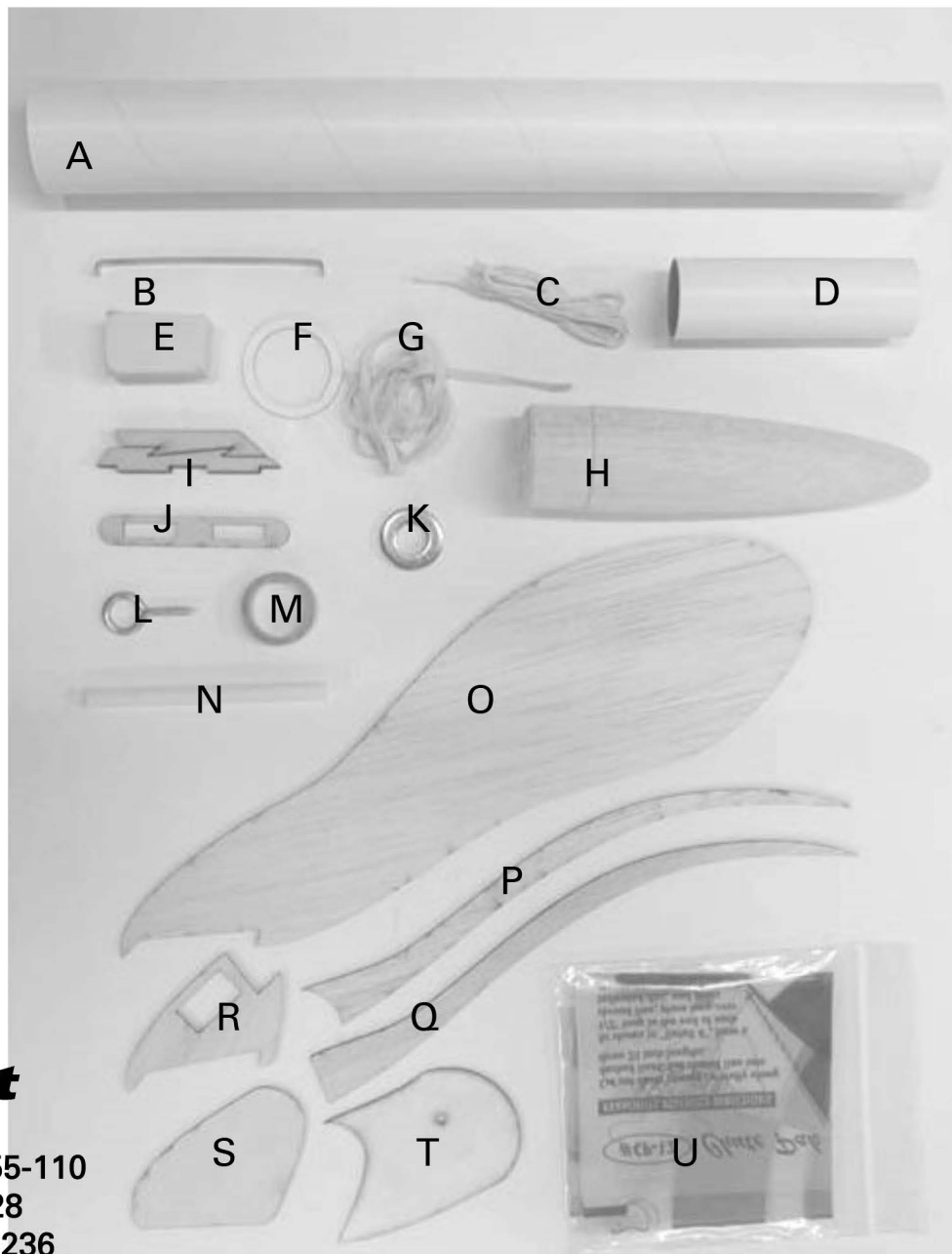


❑ **30.** Insert an unused D12-3 motor. Take your balanced Maple Seeds and hang them on their hooks. Using a piece of cardstock or a ruler, balance your Maple Seed rocket and make a mark on the launch lug line at the balance point. Remove the seeds from the hooks. Mark the center of the launch lug. Line up the mark on the launch lug with the mark you made on the launch lug line and glue it into place.

This completes the assembly of your Semroc Maple Seed. We hope you have a lot of fun flying it. Here are some tips to help you have a successful flight.

FLIGHT PREPPING

- ❑ 1. Apply a piece of tape to the launch rod to support the launch lug. Make sure it's far enough away from the blast deflector plate to prevent any of the seeds from touching it.
- ❑ 2. Remove the nosecone and add 3 to 5 sheets of loosely crumpled recovery wadding. Carefully roll the parachute and insert it into the rocket. Replace nosecone—check the fit.
- ❑ 3. Select a motor and install it. Attach Maple Seeds and check to see that they can slide off when moved towards the nose of the rocket.
- ❑ 4. Take your Maple Seed to the pad, install and igniter, slide it down until the launch lug sits on the tape.
- ❑ 5. Enjoy the flight and entertaining recovery!



Parts List

A	1	Airframe Tube	BT-55-110
B	1	Motor Hook	EH-28
C	1	200# Kevlar 36"	SCK-236
D	1	Motor Tube	ST-930E
E	1	Clay Weight.....	WC-5
F	2	Centering Ring.....	CR-9-55E
G	1	Elastic Cord.....	EC-124
H	1	Balsa Nosecone.....	BNC-55X
I	3	Basswood Hooks.....	FA-35
J	3	Tube Hook Mount.....	FA-35
K	2	Washer Weight.....	WW-8
L	1	Screw Eye.....	SE-12
M	1	Thrust Ring.....	CR-20-50
N	1	Launch Lug.....	LL-330
O	3	Seed Wing.....	FA-35
P	3	2nd Turbulators	FA-35B
Q	3	1st Turbulators	FA-35A
R	6	Seed Pod.....	FA-35
S	6	Outer Pod Cover... ..	FA-35
T	1	CG Marking Tool.....	TKA-35
U	1	12" Chute Pack.....	CP-12

SEMROC

MAPLE SEED™

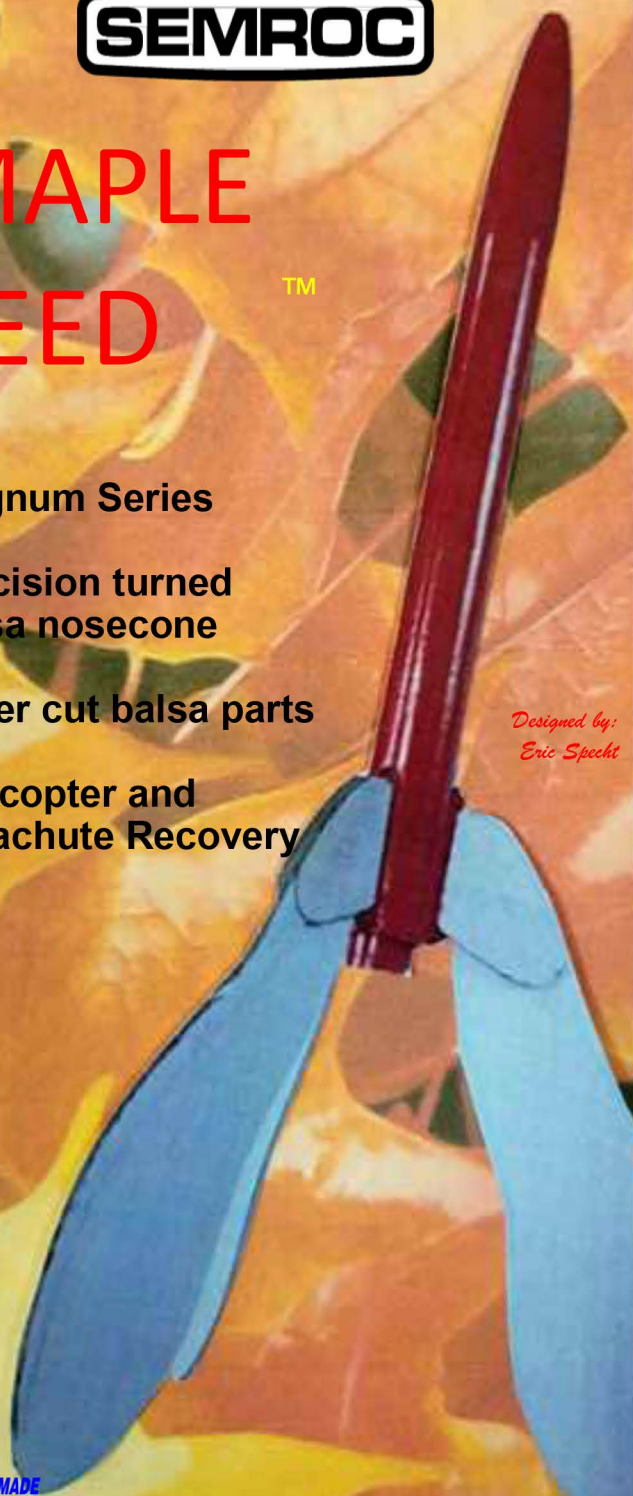
Magnum Series

**Precision turned
balsa nosecone**

Laser cut balsa parts

**Helicopter and
Parachute Recovery**

*Designed by:
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**FLYING MODEL
ROCKET KIT**

Made in the U.S.A by Semroc - Dayton, Ohio

Maple Seed™ Kit No. FA-35

Specifications		Engine	Approx. Altitude
Body Diameter	1.325"	C11-3	250'
Length	22.5"	D12-3	500'
Fin Span	10.5"		
Net Weight	3.5 Oz.		

Skill Level 3