

## History of the Earmark™

One of the earliest model rockets was called the Mark. It was designed by G. Harry Stine for Vern Estes to produce in his new model rocket company. The United States Congress did not miss this historic event. In recent years, there have been many late night, closed door sessions about taking this old, out-of-date model and bringing it firmly into the 21st Century.

First of all, the old fins just had to go! They looked so menacing like some of the military missiles from the early days of the Cold War. Since the pig (*Sus scrofa domestica*) is the official pet of Congress, the natural first choice in committee discussions was to use pig's ears for the fins. The name Ear-Mark stuck and became synonymous with all the best ideas from Congress.

When Congress discovered some innovative interpretations of the tax code and Constitution, they started turning most of the sow's ears into silk purses to hold the trillions of dollars that they had recently "found." So after many more late-night closed-door sessions, they decided to amend the design again and use artificial ears that looked more human-like. It was also an inside joke in Congress that at least their constituents were useful for something besides voting and paying taxes!

The original Mark used a streamer for recovery, along with a rubber shock cord. Studies by the Science Czar showed that ears were resilient enough that extra recovery assistance was not necessary. Since the Crepe Paper and Latex industries were not heavy campaign contributors to either party, they were targeted for cuts, saving billions for the taxpayers. To ward off potential complainers at Town Hall Meetings, the TARP option was added to the amendments. To stimulate the local economies, a TARP could be added to the recovery package. These are best in the 10 foot x 12 foot range. There was no provision in the final bill to make liftoff possible, but the real purpose was to provide stimulus that would create or, even better, save jobs. If you invest in the TARP option, it will also save on walking and allow for the use of smaller engines, since it is not going anywhere, anyway.

Like most industries, model rocketry has been hit hard by the economy. When Congress began planting ACORN's across the country to grow fledgling businesses, they gave us a great idea. We have introduced the BAILOUT option for your Earmark™. For an embarrassing small amount of \$15,200,000, you can bailout Semroc and help the entire model rocket industry, as well as create at least three new jobs. Please contact Semroc directly if you are interested in adding this exciting option to your purchase! Operators are standing by. Due to the nature of this option, quantities are limited.

Since the *Global Warming / Global Cooling / Climate Change / Whatever It Is Doing Today* thing is not going so well right now, we are also discounting Carbon Credits (fire sale or ice sale?) Since we estimate that each flight of the Earmark™ that you do not make replaces at least 3000 carbon credits, we will allow you a debit of \$10.00 that you can pay us for the corresponding footprint elimination product. If this does not make sense to you (the math is complex,) we can calculate exactly how much you owe us to not fly your Earmark™ and bill you directly. When you contact us, be sure to combine your Carbon Credits with the Bailout option (above) for even greater savings.

**Only the United States Congress can help bring you deals like this!**



**SEMROC**  
**EARMARK™**

**THE MOST TALKED ABOUT ROCKET IN 2009!**  
Advertised on every major news outlet, blog, and even C-SPAN and Fox News.

**Precision Turned Balsa Nose Cone**

**Laser Cut Fiber Fins**

**Obama Ears to finish it off**

**Economic Recovery**

*Original Design by G. Harry Stine*  
*Amended by Nancy Pelosi, Harry Reid, and a Parlor of Piggies*

Does not conform to HR 4040.

MADE IN THE USA

FLYING MODEL ROCKET KIT

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

### EARMARK™ Kit No. KA-19

Specifications	Engine	Approx. Altitude
Body Diameter	A8-3	500'
Length	B6-6	800'
Ear Span	C6-7	1400'
Net Weight		0.8 oz. (22.7 g)

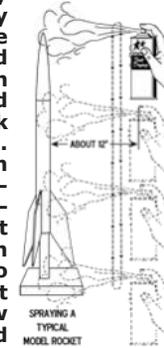
**Skill Level 1**

## Finishing your Earmark™

The Earmark™ is ready to fly as soon as all the glue has dried! It does not have to be painted, but as you become more proficient in your finishing skills, you will want to follow these steps for the best-looking model!

When the glue has dried, the balsa nose cone should be sealed for a smooth professional looking finish. Fill the wood grain with balsa fillercoat or sanding sealer. When dry, sand the nose cone with fine sandpaper. Repeat until smooth.

Wipe off all balsa dust with a dry cloth. Choose a high visibility color like red and gold for the final colors. Mask the fins and apply a red coat. If a roll pattern is desired, mask the area and apply black paint or use black vinyl tape to apply the roll bars. 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.



After the paint has dried, the press-on decals can be applied over the fins. Carefully line them up along the root edge and press them firmly in position. They are permanent, so be sure they are aligned before pressing them into place.

**Your Earmark™ is ready for flight!**

### LIMITATION OF LIABILITY

Model rockets are not toys, but are functional rockets made of lightweight materials and are launched with NAR or Tripoli safety certified model rocket engines, electrically ignited and flown in accordance with the NAR Model Rocket Safety Code. If misused, model rockets can cause serious injury and property damage. Semroc certifies that it has exercised reasonable diligence in the design and manufacture of its products. Semroc cannot assume any liability for the storage, transportation, or usage of its products. Semroc shall not be held responsible for any personal injury or property damage whatsoever arising out of the handling, storage, use, or misuse of our products. The buyer assumes all risks and liabilities therefrom and accepts and uses Semroc products on these conditions.

Your purchase and use of any Semroc products is construed as your agreement to and acceptance of these terms. If you do not agree to these terms and conditions, you must return the product, unused, for refund or credit.

## Preparing for Launch

Follow these steps to prepare your Earmark™ for its first flight.

### PREFLIGHT:

**11.** Select a model rocket engine. Use an A8-3 engine for the first flight. Later flights may be made with a B6-6 or C6-7 if your field is large enough.

**10.** Add a few wraps of masking tape to the outside of the engine to secure it in the body tube. Install an electrical igniter in the engine using the instructions that were supplied with the engine.

**9.** Insert the shock cord into the top of the tube and insert the nose cone, making sure it does not pinch the shock cord.

**8.** Place your Earmark™ on the launcher. Make sure the launch controller is not armed. Attach the micro-clips to the igniter leads, checking to make sure they are not touching.

**7.** Clear the flight area, check for low-flying aircraft, and alert all the other participants of your pending flight.

**6.** Arm your launch controller and start your countdown...

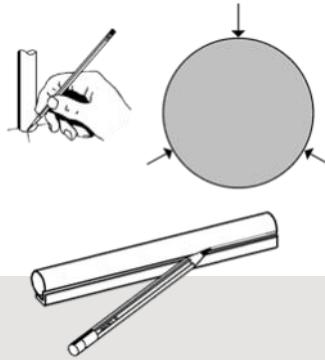
5 4 3 2 1  
**Launch!**

### POSTFLIGHT:

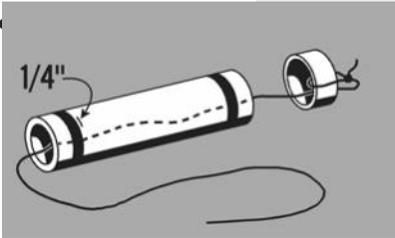
**Safely recover your Earmark™. Some parts may still be warm. Remove the spent engine casing and dispose of properly. Clean your Earmark™ before its next flight. A Q-tip® will work, but is not recommended by our Ear, Nose, and Throat medical advisor.**

## Assembly

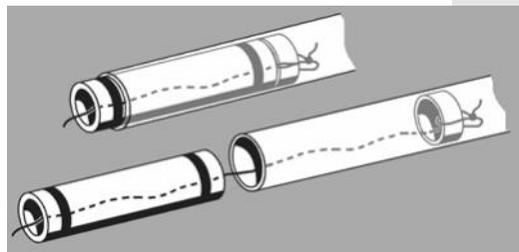
**1.** Place one end of the body tube over the guide and place marks on the tube at each arrow. Find a convenient channel or groove such as a partially open drawer, a door jamb, or a piece of molding (as shown.) Using the channel, extend the marks the full length of the tube to provide lines for aligning the fins.



**2.** Tie one end of the yellow Kevlar® thread around the thrust ring using an overhand knot. Pass it back through the spacing tube. Mark the spacing tube 1/4" from the end opposite the thrust ring, as shown.



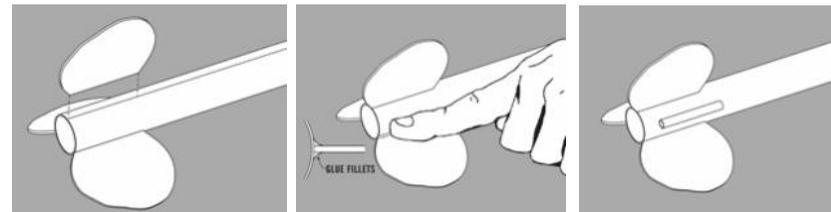
**3.** Apply a bead of glue inside one end of the body tube. Use the spacing tube to push the thrust ring into the body tube until the 1/4" mark is even with the end of the tube. **DO NOT STOP UNTIL THE ASSEMBLY IS IN THE CORRECT PLACE!**



**4.** Remove all the fins carefully from the laser-cut fiber sheet. No sanding is required. A small amount of thin cyanoacrylate glue (super glue) around the edges will help seal and protect them.

**5.** Run a THIN bead of glue along the root edge (flat) of one of the fins. Attach the fin on the body tube even with the thrust ring end and on one of the lines drawn earlier. Remove the fin and wait a few minutes until the glue gets tacky. Re-apply the fin and check for proper alignment. Repeat for the other fins.

**6.** After the fin assembly is dry, run a small bead of glue along both sides of each fin-body tube joint. Using your index finger, smooth the glue into fillets as shown.



**7.** Using the same technique you used on the fins, glue the launch lug between two of the fins and about 1/4" from the bottom of the body tube.

**8.** Test the nose cone for fit. Sand it slightly if it is too tight. Turn the screw eye into the base of the nose cone. Unscrew it and squirt some glue into the hole. Reinstall the screw eye and wipe off any excess glue.



## Building your Earmark™

Make sure you have all the parts in the diagram below. In addition to the parts included in this kit, you will also need white or yellow glue to assemble it. Sandpaper and paint are required if you want to finish your Earmark™. 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 below. It is important that you always ensure that you have adequate glue joints.

Copyright © 2009, Semroc Astronautics Corp.

