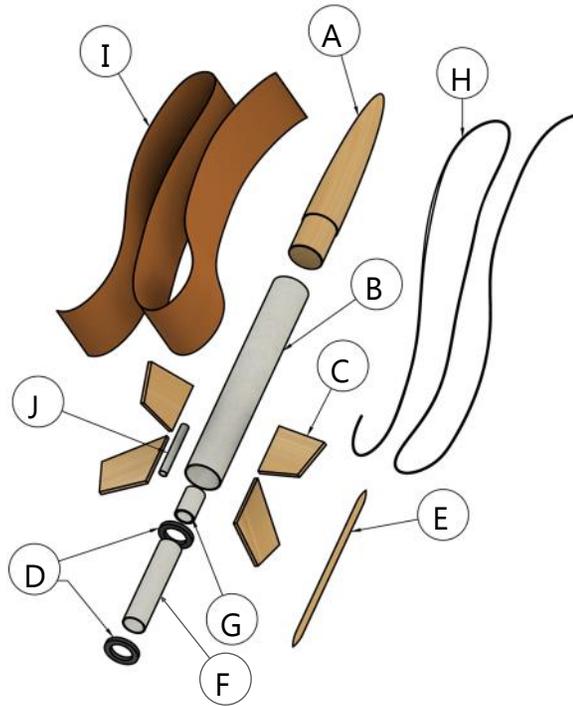


## EXPLODED VIEW



### PARTS LIST

- A 1 Balsa Nose Cone ..... BNC-4X
- B 1 Body Tube ..... BT-4-3
- C 1 Laser-cut Fin Set..... FM-05
- D 1 Centering Rings..... RA-2-4
- E 1 Wood Dowel 1/12"x2.5" W D - 13
- F 1 Motor Tube..... BT-2-125
- G 1 Thrust Block..... TB-1+
- H 1 Kevlar Cord ..... SCK-24
- I 1 Streamer Pack ..... SP-124
- J 1 Launch Lug..... LL-MX

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### About the MX Goblin™

The MX Goblin is a Downscale of the popular D-engine powered Goblin originally produced by Estes Industries. It was designed by Wayne Kellner and was released in their 1972 catalog as Catalog Number 702-K-55 and sold for \$2.50.

Jay Berry was inspired to engineer the MX Goblin™ to utilize the Micro Maxx brand of engines. These engines allow MX rockets to be flown in a smaller flying field for

### About Semroc

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 putting 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 Carl and his family were so well known for.



**Downscale of the Classic Goblin**

**Precision Turned Balsa Nose Cone**

**Laser Cut Basswood Fins**

**Water Slide Decals**

**Streamer Recovery**

Engineered by

FLYING MOD-

Made in the U.S.A by Semroc -

### MX Goblin™

Kit No. **KMX-05**

| Specifications |                    | Engine     | Approx. Altitude |
|----------------|--------------------|------------|------------------|
| Body Diameter  | .488" (1.24 cm)    | Micro Maxx | 240'             |
| Length         | 4.687" (11.81 cm)  |            |                  |
| Fin Span       | 2" (51 cm)         |            |                  |
| Net Weight     | 0.149 oz. (4.25 g) |            |                  |

**Skill Level 1**

## TOOLS

You will need the following for your assembly:

Pencil Ruler Knife Wax Paper

White or Wood Glue

220 Grit Sandpaper

Medium Viscosity Super Glue

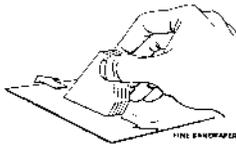
Brush on Spray Paint

## ASSEMBLY

❑ **1.** Find the motortube and place a mark 1/8 inch from each end of the tube. Tie a double overhand knot in the Kevlar shock cord near one end. See picture at right to see how to tie the knot. Put some glue in one end of the motor tube to hold the motor thrust block. Insert the end of the Kevlar shock cord with the knot into the motor tube before inserting the thrust block into the motor tube trapping it between the thrust block and motor tube. Push the thrust block in until it is flush with the motor tube. Pull Shock cord until the knot is seated against the motor block. Install the two black centering rings onto the motor tube and glue them at the marks that were made on the



❑ **2.** 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.



❑ **3.** When the motor tube has dried, feed the shock cord through the body tube. Before inserting the motor tube into the body tube, put a good bead of glue on the forward centering ring and the forward side of the aft centering ring. Insert the motor tube and slide it in until it is flush with the rear of the body tube. Stand body tube upright and allow glue to dry.

❑ **4.** After the glue has had a chance to set up around the motor mount, using a scrap piece of balsa or a toothpick add a fillet of glue around the aft centering ring from the rear of the body tube.

❑ **5.** Using this picture, determine which edge of the fin is the root edge. This is the edge which will be glued to the body tube.



❑ **6.** Using the enclosed fin alignment guides, glue the fins to the body tube. Because of the size of the fins, it is recommended that you use Medium Viscosity Super Glue to initially bond the fins to the body.

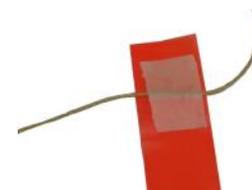


❑ **7.** After you have all four fins attached, glue the plastic Launch Lug to the side of the body tube even with the rear of the body tube. Again use Medium Viscosity Super Glue. After all the fins and the launch lug have dried, add white or wood glue fillets to all glue

❑ **8.** Take the toothpick and push it approximately 1/2 way into the rear end of the Nose Cone. Make a mark on the toothpick and then remove it. Fill the hole with glue and insert the end of the shock cord. Cut the toothpick at the mark you made and insert it into the hole to hold the shock cord in place.



❑ **9.** Cut the piece of supplied Streamer material in half lengthwise. Attach one of these pieces to the shock cord near the nose cone with a piece of Masking Tape as shown.



## FINISHING

❑ **10.** Prior to painting, the wood surfaces should be prepared by giving them several coats of Sanding Sealer to fill the open grain of the wood. This should be then sanded with 220 sandpaper to give it a smooth surface. The colors that were used on our cover picture were Testors #1214 Gloss Yellow for the Body Tube and Three of the Fins, and Testors #1247 Gloss Black for the other Fin and Nose Cone.

## FLIGHT PREP

❑ **11.** Prior to launching your MX Goblin you will need to install a motor in the motor tube. Put a small piece of masking tape on the side of the motor to friction fit it in the motor tube. It should be tight enough it will not come out when the ejection charge goes off. You will also need to put some recovery wadding into the body tube before you put the shock cord and streamer into the tube. This will keep the streamer from getting damaged when the ejection charge goes off. Put the nose cone back on the body tube making sure not to get any of the shock cord trapped between the

❑ **12.** Using the eRockets Micro Maxx Launch Rod and Holder #eR 9080, prep your launch rod by inserting the igniter in the provided holes at the base of the launch rod. Slide the MX Fat Boy onto the launch rod, sliding it down until it sits on top of the igniter with the igniter fully inserted in the nozzle of the motor. Connect the power clips to the igniter, clear the range, perform a countdown, and launch

❑ **13.** Always check your rocket for damage and make repairs prior to launch. Have fun, and fly safely!