

SEMROC

MERCURY CAPSULE



EASY TO BUILD

LASER-CUT RINGS

PRECISION Balsa PARTS

SKILL LEVEL 1



SEMROC

NOSE CONE FOR BT-20 THROUGH BT-60 TUBES

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

MERCURY CAPSULE KM-2

Specifications

Body Diameter	1.8" (4.6 cm)
Length	3.2" (8.2 cm)
Net Weight	.20oz. (5.7 g)

Parts List

- A 1 Balsa Antenna Canister..... BNC-20MC
- B 1 Balsa Heat Shield BNC-20MH
- C 1 Body Tube..... BT-20J
- D 1 Ring Set..... CR-KM-2
- E 1 Shroud and Pattern Sheet . IKM-2S
- F 1 Launch Lug LL-2A
- G 1 Screw Eye..... SE-1

ABOUT THE MERCURY CAPSULE

The Estes Mercury Capsule was released in the 1963 catalog and was sold for many years. It was not a true scale of the Mercury Capsule, but was a fun addition to an "experienced" rocket to have a nose cone and payload section that was a little different. The Mercury Capsule was introduced as Catalog #PSM-1 for \$1.00.

The Semroc Retro-Repro Mercury Capsule attempts to capture some of the fun of this early and unusual payload section.

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



July 25, 2007

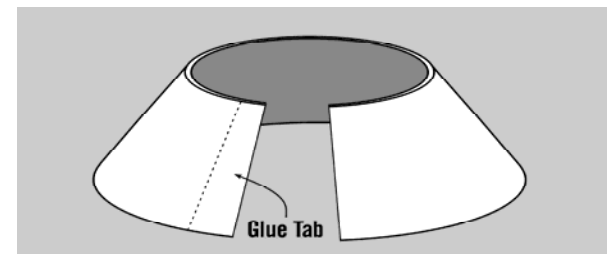
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Box 1271 Knightdale, NC 27545 (919) 266-1977

ASSEMBLY

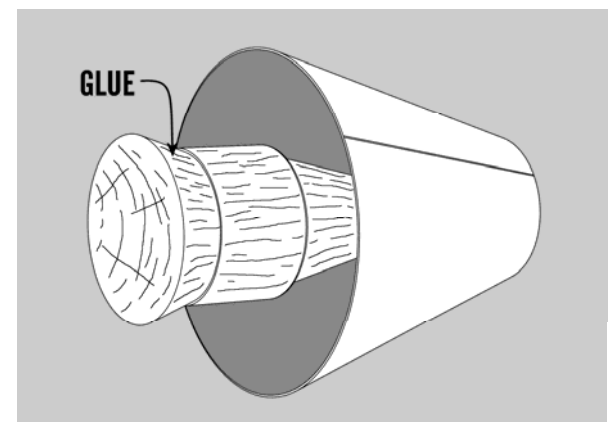
1. These instructions are presented in a logical order to help you put your Mercury Capsule together quickly and efficiently. Check off each step as you complete it and we hope you enjoy putting this kit together.

CAPSULE ASSEMBLY

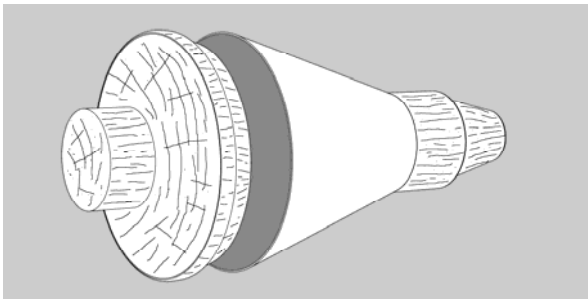
2. Cut out the conical afterbody shroud from the pattern sheet. Form it into a cone with the printed side to the outside. Apply glue to the tab, align the edge of the shroud over the glue and hold in place until the glue sets.



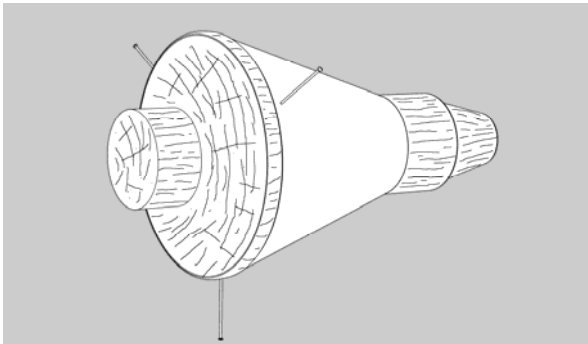
3. Slide the completed shroud over the top of the Antenna Canister. Make sure it slides over the flat area and seats against the shoulder. If it does not fit, sand the balsa gently until it will slip snugly into position. Apply a bead of glue around the shoulder and push back into place. Allow to dry.



4. Fit the heat shield into the base of the shroud. Sand the edge slightly to fit.



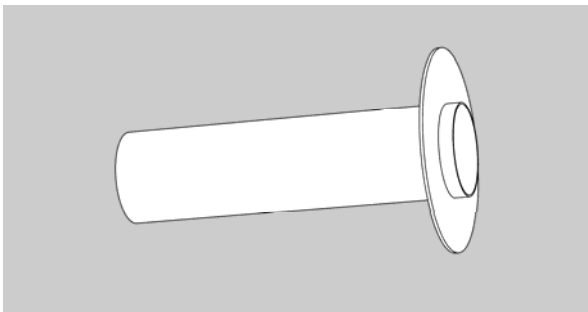
❑ **5.** If the capsule is not going to be used for payloads, the shroud may be glued to the shoulder of the heat shield. If you want to use the inside of the payload section, use three straight pins evenly spaced to hold the shroud in place as shown. Push the pins flush with the surface of the shroud.



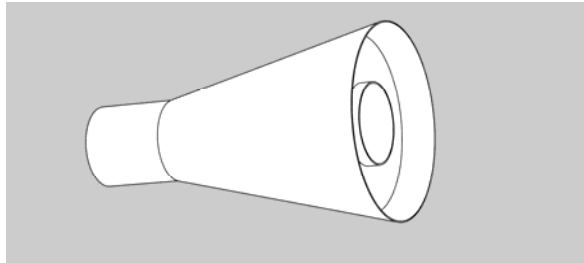
ADAPTING THE CAPSULE TO YOUR ROCKET

❑ **6.** There are rings included for many of the available body tubes. The universal tapered shroud can be cut to fit your rocket body tube. Cut the tapered shroud around the outside lines. Then cut the line to match the diameter of your body tube. Assemble the shroud like you assembled the conical afterbody.

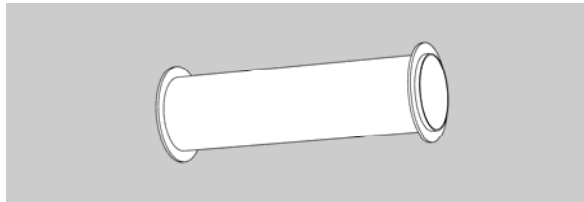
❑ **7.** If you are adapting to a BT-20, BT-30, or BT-40, locate an adapter ring that will fit your body tube and punch out the correct ring. Glue it over the end of your body tube leaving about 1/16" showing.



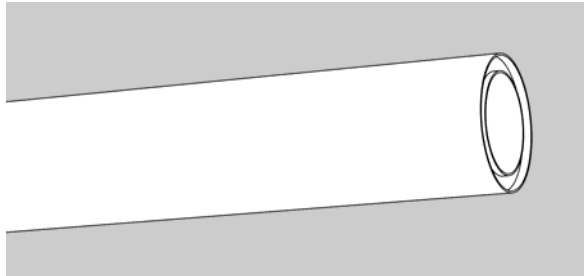
❑ **8.** Slide the universal shroud over the bottom of the ring and glue into place. If you are using a BT-40, glue the BT-20J inside the BT-40. Skip to Step 13.



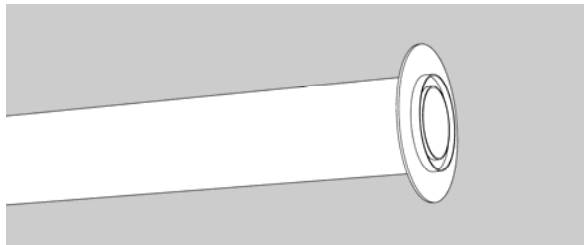
❑ **9.** If you are using a BT-50, BT-55, or BT-60, use the BT-20J as the stuffer tube. Glue a ring on each end to match your body tube.



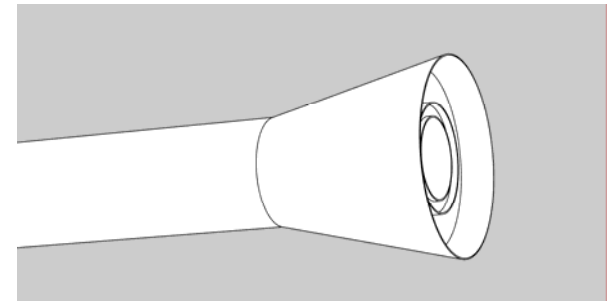
❑ **10.** Slide this assembly into the top of your body tube, even with the top of the body tube.



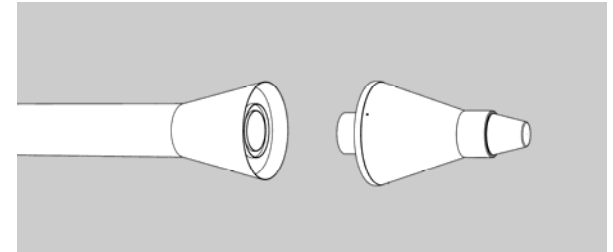
❑ **11.** Locate the adapter ring that fits over your body tube and glue into place.



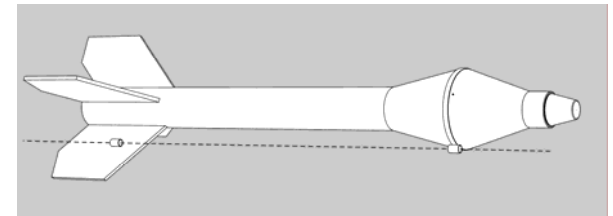
❑ **12.** Slide the universal shroud over the bottom of the ring and glue into place.



❑ **13.** Test fit the capsule into the adapter. Sand if necessary to get a good fit. If your body tube is a BT-30, tape may be necessary.



❑ **14.** Screw the eye into the base of the capsule and apply glue. Cut the launch lug into two pieces and glue one piece to the side of the capsule and the other on one of the fins and in line with the top launch lug. Attach your parachute and shock cord to the screw eye.



Note: After using your capsule for a while, the pin holes may enlarge. If this happens, rotate the shroud and make a new set of holes.

This completes the assembly of your

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**MERCURY
CAPSULE**