

4-29 SS Assembly Instructions

PARTS LIST:

1 main airframe	1 motor tube assembly thrust ring	1 shock cord mount	1 parachute
1 plastic nose cone	1 motor tube retaining coupler	1 shock cord	1 launch lug
4 motor mount tubes	1 set of fins		

The LOC 4-29 SS (SLIP/SLIDE) is a new design approach in motor tube/main airframe attachment! You have the option to permanently epoxy the motor tube assembly in place (STEP 10a) or slip/slide it in place with friction fit (STEP 10b). Extra, low cost assemblies can be obtained from LOC for "gang" prepping or for adding different bottom color schemes.

****Due to the high thrust motors that can be flown in this kit, it is strongly recommended that epoxy be used throughout its entire construction.

****Before beginning construction, read over assembly instructions to familiarize yourself with proper construction sequence. Check rear and exposed side views for fin position and motor tubes/coupler placement inside the main airframe.

***TEST FIT PARTS BEFORE BONDING TOGETHER WITH EPOXY!!! It may be necessary to lightly sand some parts to obtain a proper fit.

****The following items will be needed for the construction and finishing of this kit:

CA glue	sandpaper (medium and fine)
Epoxy (6 or 20 minute)	masking tape
modeling knife	sanding sealer
12" ruler	paint brushes (assorted sizes)
pen or pencil	primer and paint

1. Sand the outer surface of the main airframe and motor mount tubes with 320 grit paper for better epoxy and primer/paint adhesion.

2. Using 120 grit paper, sand smooth and radius both INSIDE edge ends of the coupler and main airframe for easier component insertion.

3. The motor tube assembly thrust ring (1/8" plywood ring) is epoxied in place. Use a slow cure epoxy for better flow. Apply a continuous bead of epoxy around the inside of the main airframe EXACTLY 7" up from one of its ends. Immediately place the motor tube assembly thrust ring inside the main airframe and push it into position using the motor tube retaining coupler (6" long). Continue pushing the ring up with coupler until both coupler and airframe bottom ends are even. CAREFULLY remove coupler so as not to disturb thrust ring position and let the epoxy flow down onto the ring. Set in upright position to dry.

4. Take the 4-29mm motor mount tubes and lay them in two separate sets of two on a flat surface with their edges even. Glue the two separate sets of motor mount tubes together by placing 4 evenly spaced drops of CA lengthwise, in the valley joints where the tubes meet. When dry, lightly use CA glue to join the two sets together, placing one set directly on top of the other, with their edges even, forming a "four tube square." Set aside to dry.

5. Place light epoxy fillets lengthwise into the four valley joints of the motor mount tube assembly. Do one at a time and let it dry in a horizontal position.

6. CAREFULLY insert and push the motor mount tube assembly (it will fit snug) into the motor tube retaining coupler until their top ends are even. Starting 1/2" in from the coupler's top end, place a 5" long epoxy bead lengthwise in the four separate places where the motor mount tubes contact the coupler. Slightly rotate the coupler in both directions around motor mount tubes to distribute the epoxy evenly. Make sure coupler and motor mount tube ends are even. Set aside to dry.

7. In the middle, where all the tubes are joined, a void is formed. This void must be sealed to prevent ejection charge loss. Also at this time, two of the motor mount tubes DIAGONAL from each other are sealed to permit "two motor only use." To seal, carefully cut two discs and one square from THICK cardboard to fit snug in the above mentioned places. Insert on the same end (coupler), all three pieces into the motor mount tube assembly 1/4" deep. Carefully CA in place. When dry, fill to top with epoxy and let cure. Using a black marking pen, place a LARGE "X" on the inside bottom of the 2 motor tubes that were sealed. This will help identify which tubes are INACTIVE when prepping.

8. Sand all fins smooth and round off the leading and trailing edges of them, using medium, then fine sandpaper. Also bevel both sides of fin root edge for better contact in the motor mount tube valley joints.

9. Place epoxy on the beveled, fin root edge and position it in one of the valley joints of the motor mount tube assembly. Keep bottom of fin even with motor

mount tube ends. Keep the airframe in a horizontal position while drying and make sure that the fin is straight up from the motor mount tube joint. When dry, repeat this procedure with the remaining fins.

10a. Apply a THIN continuous layer of epoxy around the inside of the main airframe (THRUST RING END). Insert the motor mount tube/coupler assembly and push up on it until it stops against the thrust ring. Set aside to dry making sure that no epoxy runs down the TWO ACTIVE MOTOR TUBES.

10b. Use masking tape around the bottom end of the coupler for a SNUG friction fit inside the main airframe.

11. Sight in the high point (center of airframe's diameter) of the airframe between any two fins and from the main airframe's bottom edge make a straight line up about 6" long. Epoxy the launch lug directly on this line, making sure that it is parallel to the airframe. Set aside to dry in a horizontal position.

12. Give all fin and launch lug joints added epoxy fillets for maximum strength.

13. Install shock cord mount per instructions and let dry.

14. Seal fins and launch lug with sanding sealer using a brush. Sand lightly between coats to fill pores and obtain a smooth finish.

15. Lightly sand plastic nose cone with fine sandpaper to remove molding seam line. At this time, use a hobby knife to remove any plastic flash that was molded into the nose cone eyelet. This is necessary for shock cord attachment.

16. When you are satisfied with the smooth sanded finish of your model it is ready to paint in the color, or colors, of your choice.

17. When the paint is completely dry, take one end of the shock cord and pass it through the loop of the shock cord mount. Secure it with double knot. Take the other end of the shock cord and pass it through the eyelet of the plastic nose cone and also secure it with a double knot. Place a SMALL drop of epoxy on both knots to keep them permanently secured.

18. The chute is attached to the shock cord about 3" away from the nose cone. Using ALL the chute shroud line loop ends, tie a double knot around the shock cord and pull on it TIGHTLY. ALWAYS CHECK DOUBLE KNOT RIGHT BEFORE LAUNCHING!

19. Select two or four of the same motors for first flight. When using 2 motors, place in ACTIVE MOTOR TUBES ONLY. When using 4 motors, remove ejection charge from 2 of the motors that are placed in the INACTIVE TUBES. Because of all the different motor combinations available (with varying motor lengths), this kit uses no motor blocks. Instead, wrap 1/2" wide masking tape around the nozzle end of each motor to a diameter equal to that of the motor mount tube. This will keep the motors from pushing forward upon ignition. Friction fit each motor in place by wrapping masking tape around the motor in two places for a snug fit in the motor mount tube. This will prevent the motors from ejecting rearward upon activation of the ejection charge.

20. Remember to use enough recovery wadding to protect the chute from the hot ejection charge gases.

21. Always follow motor manufacturer's instructions for motor ignition and launch this vehicle on calm, windless days to insure safe recovery.

