
# PK-40 STOVI™

## Height: 44.5”
## Weight: 22 oz.
## Diameter: 3.100” to 2.260”

**Single motor flights to over 1,200 ft.**

## Motor Suggestions:
**(24mm) F39-5(R), G42-6**
**(29mm) F50-6, G40-7**

## Kit Features Include:
- 24mm Main Motor Mount
- 29mm Main Motor Mount Option
- Heavy Duty Airframe Tubing
- Precision Cut Plywood Fins & Rings
- Pre-slotted Airframe
- Plastic Nose Cone
- Plastic Airframe Reducer
- Nylon Parachute Recovery

*This kit is recommended for those with previous model rocket building experience.

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LOC/PRECISION MULTI-PACKS are now available for this and other LOC/PRECISION models. For more information on launching model rockets in your area contact the National Association of Rocketry (NAR) at www.nar.org or the Tripoli Rocketry Association at www.tripoli.org

***OTHER KITS AVAILABLE:***

# PK-40 STOVI ASSEMBLY INSTRUCTIONS

**PARTS LIST:** 6 External Tank Tubes MMT-1.14-12" 1 Main Airframe SBT-3.00-14" 1 Sub Airframe PL-2.14-10" 1 Centering Ring 6 Plywood Fins
1-24mm Main Motor Tube 12.6" 1 Nose Cone PNC-2.14 1 Airframe Reducer AR-3.00-2.14 1 Shock Cord Mount 1 Nylon Elastic Shock Cord
1-29mm Optional Motor Tube 12.6" 1 1/4" Small Centering Ring 1 Nylon Parachute LP-28 1 Launch Lug LL-25

◊ 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 become familiar with the proper construction sequence. Check rear and side exposed views (shown at bottom of instructions) carefully for fin positions and motor mount/centering ring placement inside the main airframe.

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

◊ The following items will be needed for the construction & finishing of this kit: 12" ruler, Modeling knife, Pen or pencil, Masking tape, Sanding sealer, Paint brushes (assorted sizes), Sandpaper (medium & fine), Primer and paint, Yellow Carpenter's Glue, Epoxy (5 or 15 minute), CA Glue (cyanacrilate).

◊ **Caution: This model is designed for single 24mm or 29mm motor usage only. LOC/PRECISION does not recommend the use of any 24mm motors in the "external tank" tubes when this model is built using the main 24mm motor mount tube.**

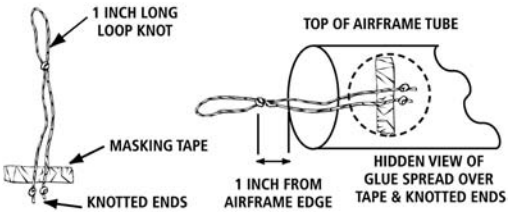
◊ **THE STOVI KIT HAS BEEN REDESIGNED FOR OPTIONAL 29mm MOTOR USAGE! FOR THIS OPTION, USE ASSEMBLY STEPS 1 TO 3 MARKED "29mm OPTION" ONLY!!**

## Main Airframe Assembly Instructions

1. **29mm OPTION** Mark a point to point .46" flat distance across on one end of an external tank tube. From these marks, draw 2 parallel lines along the full length of tube. Next, place a cutting support ring inside each end of the tube and CAREFULLY cut out the .46" section using a modelling knife. MAKE SURE THE CUT IS STRAIGHT AND CLEAN!! When done, repeat this procedure with the remaining external tank tubes.
2. **29mm OPTION** Position the 6 external tank tubes standing up with their openings against the optional 29mm motor tube with all their bottom edges even. CHECK FOR FIT INSIDE MAIN AIRFRAME! Lightly sand openings if fit is tight. Place three loose fitting rubber bands evenly around this assembly. Adjust all tubes so that they are parallel to each other and secure in place using a thick CA glue. Set aside to dry. Next, place a small bead of epoxy lengthwise in each external tank tube valley joint and set aside to dry.
3. **29mm OPTION** Position the top centering ring down onto the protruding 29mm motor mount tube until it rests on the 6 external tank tube tops and epoxy in place. When dry, continue with step 5.
1. On a flat surface, take two of the external tank tubes (12" long) and position one on each side of the 24mm main motor mount tube (12.6" long) with their bottom edges EVEN. When done correctly, the middle main motor tube will extend out on top 6". Place a light bead of epoxy lengthwise into the 2 valley joints where the 3 tubes meet. When dry, turn assembly over 180 degrees and epoxy this side in the same manner. Set aside to dry.
2. Lightly epoxy 2 of the external tank tubes with their bottom edges even, directly in the middle of the 2 valley joints created by the already epoxied 3 tubes. When dry, turn over 180 degrees and lightly epoxy the other 2 external tank tubes to this side, in the same manner. Set aside to dry.
3. On a flat surface, position the 1/4" fiber ring into the main centering ring with their bottom edges even and epoxy in place.
4. Take the complete tube assembly and slide the single centering ring (FLAT END SIDE DOWN) onto the PROTRUDING main motor tube until it rests on the 6 external tank tube tops. Epoxy in place and set aside to dry.
5. Apply a large, continuous bead of epoxy around the inside of the main airframe, 2" up from its bottom end. Take the motor mount "external tank" tube assembly and push it straight up (centering ring end first) into the epoxied end of the main airframe 3". Set in upright position to dry. For additional strength, when dry, turn assembly upside down and lightly epoxy between the external tank tubes where the assembly goes into the main airframe. This will permit the epoxy to flow downward to the bottom of the top centering ring. Set aside to dry.
6. 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.
7. Take one fin and place epoxy on the beveled, fin root edge and position it in one of the external tank tube valley joints with the bottom of the fin even with the external tank tube's bottom edge. Keep the entire airframe assembly in a horizontal position while drying. Make sure that the fin is straight up from the external tank tube joint. When dry, repeat this procedure with the remaining fins.
8. Sight in the high point (center of the airframe's diameter) of the airframe between any 2 fins and from 1" up from the airframe's bottom edge, make a small pencil mark. From this mark, make a straight line up 6" long. Epoxy the launch lug directly on this line, making sure that it is parallel to the airframe. Set aside in a horizontal position to dry.
9. Lightly sand seam line of plastic nose cone and reducer with fine sandpaper.
10. Apply a continuous bead of epoxy around the inside of the sub airframe 1/2" in from one of it's ends. Push the airframe reducer all the way up into this end. Set aside to dry in an upright position.
11. Give all fin and launch lug joints added epoxy fillets for maximum strength.

## Shock Cord Mount Instructions

LOC/PRECISION'S Shock Cord Mount is easy to make and install, yet is very strong! This mounting system makes shock cord attachment quick and easy. Follow instructions carefully!




1. Take the length of nylon braided cord and at its center make a 1" long loop knot and pull it tight. Make a knot a 1/4" away from the end of EACH of the two loose ends.
2. Cut a piece of masking tape 1/4" wide by 1 1/4" long. This is centered crosswise just ahead of the two knots.
3. Carefully place the two knotted loose ends of the Shock Cord Mount, with tape attached, inside the top of airframe tube so that the 1" long loop knot is protruding out about 1" from the airframe tube's edge. Using a small piece of wooden dowel, press the masking tape down firmly around the inside of the airframe tubing. The masking tape will keep the Shock Cord Mount in place while gluing.
4. Place a generous bead of epoxy over the knotted ends and length of masking tape. Spread the epoxy around until they are completely covered and place the airframe in a horizontal position to dry.
   REPEAT STEP 4 UNTIL A SMOOTH EPOXY LAYER IS ACHIEVED OVER THE MASKING TAPE AND KNOTTED ENDS.

## Main Airframe Assembly Instructions Cont'd

12. Seal fins and launch lug with sanding sealer using a brush. Sand lightly between coats to fill pores and obtain a smooth finish.
13. When you are satisfied with the smooth sanded finish of your model, it is ready to prime and then paint in the color or colors of your choice.
14. When 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 a double knot. Take the other end of the shock cord and pass it through the eyelet of the airframe reducer and also secure it with a double knot. Using a toothpick, place a TINY drop of epoxy on both knots to keep them permanently secured.
15. Attach the parachute to the shock cord about 3 feet away from the eyelet of the airframe reducer. To do this, take all the chute shroud line loop ends in one hand, and with the other hand, take the chute and go around the shock cord, passing the chute through the shroud line loops. When the chute is pulled through tightly, it will form a knot.
13. Select a motor for first flight. 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 motor from pushing forward upon ignition. Friction fit the 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 motor from ejecting rearward upon activation of the ejection charge.
14. Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases.
15. Always follow motor manufacturer's instructions for motor use and ignition, and launch this vehicle on calm, windless days to insure safe recovery.