

Parts List

4" x 17" 3 Slot Airframe

1 – 29mm x 6" Motor Tube

1 Plastic Nose Cone

2 – 1/4" x 29mm Centering Rings

TN-12 Shock Cord

SCM-1 Kevlar Mount (SCM-2 optional)

LP-28 28" Parachute

1/4" Launch Lungs

Fin Set

Starter Fire Blanket



-2 Centering Ring Installation

Install eyebolt into forward centering ring.

Glue the centering ring with the screw eye 1/4" from one end of the 6" length of the 29mm motor mount tube – this will be the "Top" or "Forward" end of the assembly. Make sure the eye of the ring is forward. Attach the other centering ring 1/4" from the other end of the motor mount tube – this is the "Bottom" or "Aft" end where the motor will be installed later. Make sure both rings are perpendicular (at right angles to) the motor tube. Set aside to dry completely.

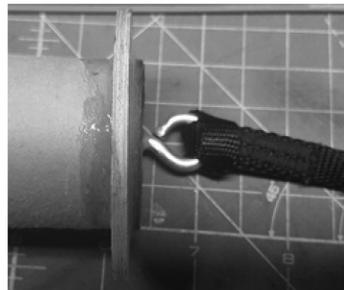
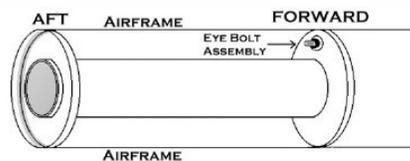


STEP 2 -Shock Cord Mount Instructions eyebolt

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!

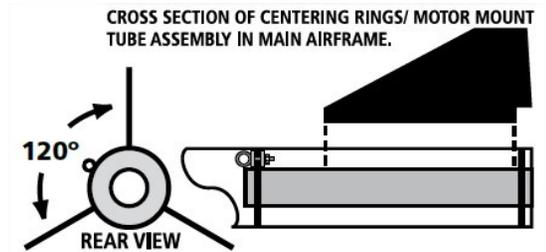
1. Take the length of 2' Kevlar cord and at its center make a 1" long loop knot and pull it tight. Make a knot a 1/4" away from the end of EACH of the two loose ends.

2. Tie the two knotted loose ends of the Shock Cord Mount, passing through screw eye or hole in the forward ring. Knot and glue to secure the knot.



Step 3 Motor tube installation

Slather epoxy in the AFT of the airframe between each fin slot. Insert motor mount assembly up the airframe. Slide all the way up the airframe until the MMT is flush or slightly recessed with the AFT of the airframe. Once cured apply a small layer to the AFT of the AFT ring. Allow to cure.



STEP 4 -Fin Installation

While this assembly is drying, check the fit between the fins and pre-slotted airframe – make sure they fit nicely into the slots. Sand each fin's leading edge (the long angle edge) of the fins to smooth off the square edge – this reduces drag.

Reposition airframe laying down. Apply a generous bead of epoxy to the root edge of one fin and insert in the fin slot. Allow to cure before moving onto the next fin. When all fins are epoxied in place, apply an external file to each fin to airframe joint.

Make certain to align fins as shown above

STEP 4 -Launch Lug

Using a guide such as a door-frame, mark a light pencil line exactly between any two fin slots from 5" up the airframe to 10" up the airframe from the bottom. This will be your guide for gluing on the launch lug.

Cut the launch lug in half at an angle, making them aerodynamic. Find the high point of the airframe between fins. Mark a straight perpendicular line up 10" from the AFT of the airframe. Epoxy one lug 2" up from the AFT of the airframe. Epoxy another at least 8" FWD. Allow to cure.

Recovery

Slide the fire blanket down the shock cored down to shock cord mount and make a tie to hold in place.

Slide nose cone onto shock cord 1/4 of the way down. Tie a knot to secure in place.



-Parachute Rig

The parachute gets tied to the very end of the shock cord. To do this, take the chute shroud line loops 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. If your shock cord has a loop sewn in, pass the shroud lines through the loop. Fold and wrap the parachute and tuck into the blanket so the parachute is protected during ejection. Wadding may also be used in lieu of or with the blanket.



-Finishing

Lightly sand plastic nose cone with fine sandpaper to remove molding seam line. Also sand airframe and fins to produce a smooth finish. Paint with your choice of color! Spray rocket with primer, sand and repeat until smooth finish is obtained. Spray rocket with paint of choice, let dry. Apply protective clear coat.

Model Rocketry Safety Code

Materials. I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.

Motors. I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.

Ignition System. I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the "off" position when released.

Misfires. If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.

Launch Safety. I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance. When conducting a simultaneous launch of more than ten rockets I will observe a safe distance of 1.5 times the maximum expected altitude of any launched rocket.

Launcher. I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor's exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.

Size. My model rocket will not weigh more than 1,500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse.

Flight Safety. I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.

Launch Site. I will launch my rocket outdoors, in an open area at least as large as shown in [the accompanying table](#), and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.

Recovery System. I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.

Recovery Safety. I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.

Revision of August, 2012.

<u>Installed Total Impulse (N-sec)</u>	<u>Equivalent Motor Type</u>	<u>Minimum Site Dimensions (ft.)</u>
0.00-1.25	1/4A, 1/2A	50
1.26-2.50	A	100
2.51-5.00	B	200
5.01-10.00	C	400
10.01-20.00	D	500
20.01-40.00	E	1,000
40.01-80.00	F	1,000
80.01-160.00	G	1,000
160.01-320.00	Two Gs	1,500

LAUNCH SITE DIMENSIONS