

EZE 1.63 Park Flyer



Due to the high thrust motors that can be flown in this rocket, epoxy is recommended!

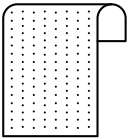
Before beginning construction, read over instructions to become familiar with the proper construction steps. Check Parts List to make sure you have all the parts.

TEST FIT ALL PARTS! Light sanding may be necessary to obtain proper fit.

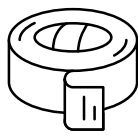
ITEMS YOU WILL NEED TO BUILD THIS KIT



Epoxy – (5, 15 and 30 Minute Recommended)



Fine and Medium Sandpaper



Masking Tape



Pencil and Ruler



Cyanoacrylate Glue (Superglue)



Paint

Parts List

Check your parts before you begin your build!

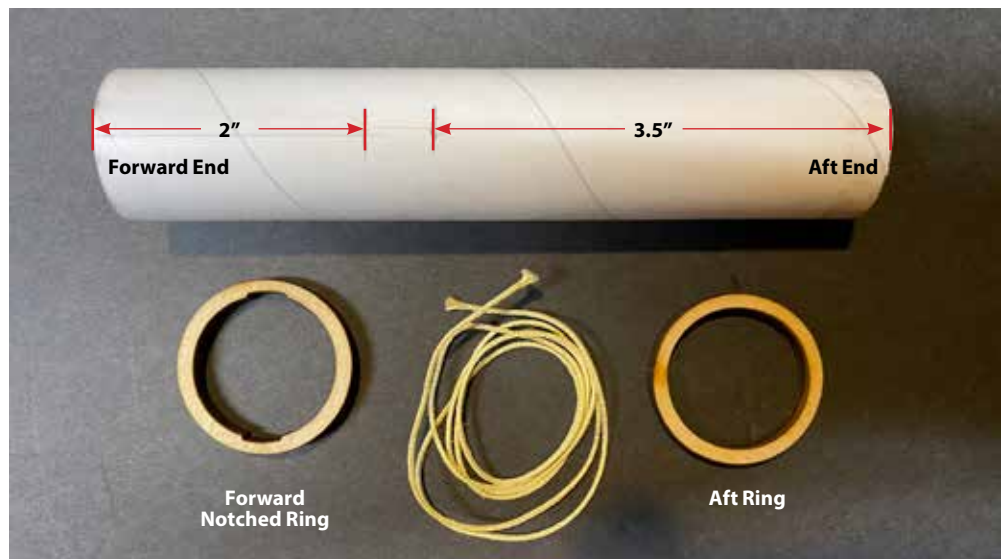
- Polyethylene enhanced nose cone
- Nylon parachute recovery
- Recovery fire blanket
- 1.6" diameter slotted airframe
- 29mm motor mount
- Laser cut rings and fins
- Vinyl decal

Throughout the build, be sure to scuff all parts to be bonded using medium sandpaper

STEP 1 - Motor Tube Assembly

Using fine sandpaper, sand/scuff the outside of the main airframe, motor mount tube and launch lug for better adhesion.

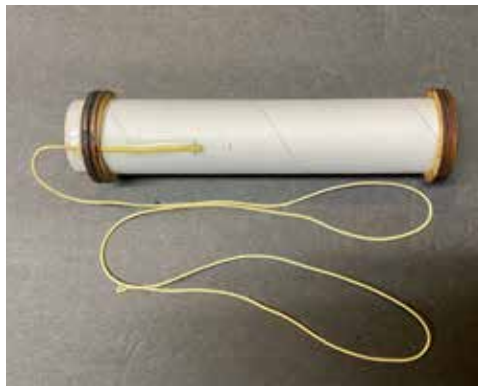
There are two motor mount centering rings; the forward ring has notches machined into the inside diameter. The rear ring has no notches. Test fit the rings onto the motor tube, some light sanding may be necessary to achieve a proper fit. With a ruler, mark a line 2" from the FORWARD (front) end of the motor tube. This will be the end point of the Kevlar® shock cord. Make a second mark 3.5" from the AFT (rear) end of the motor tube.



STEP 1 - Motor Tube Assembly - continued

Epoxy 2" of the Kevlar® shock cord onto the motor tube. Then epoxy the forward (notched) centering ring onto the forward end of the motor tube **anywhere in front of the 3.5" mark**. Epoxy the AFT end centering ring **flush with the AFT end of the motor tube**. Set aside to dry.

When the epoxy has cured, bunch up the Kevlar® shock cord and stuff it into the motor tube for the next few steps.



STEP 2 - Motor Tube /Airframe Assembly

A. Lay the motor tube assembly next to the airframe. Make a mark on the airframe where the forward notched centering ring will lay inside the airframe.

B. Then take a small dowel or stick and put one end on the airframe mark you just made. Mark the dowel at the end of the airframe. You'll use the marked dowel to apply epoxy inside the airframe when installing the motor tube.

Before gluing the motor tube into the airframe, test fit to make sure the parts fit. Insert motor tube into airframe and test fit the fins in the slots. Ensure they align between the centering rings. Once satisfied with the fit, remove all test fit parts.

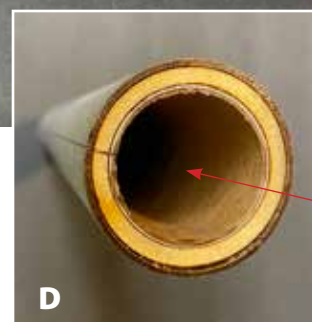
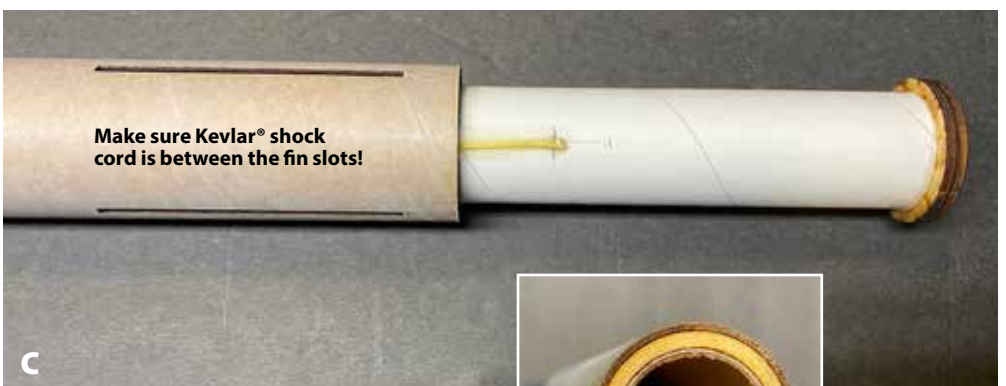
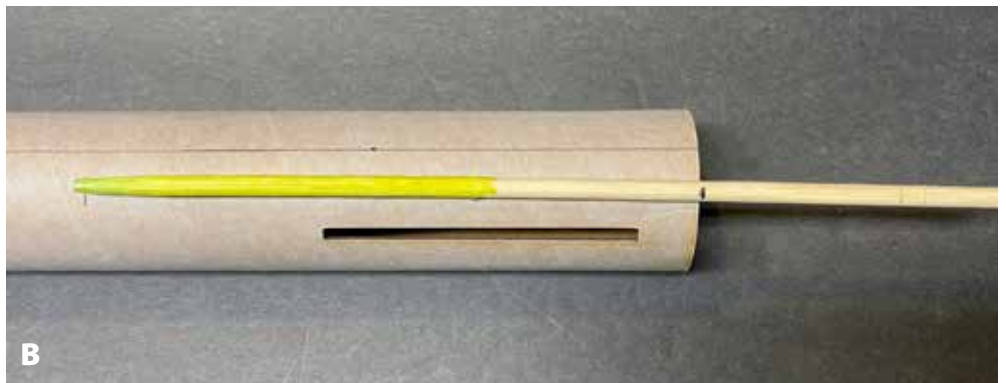
Make sure the Kevlar® shock cord is neatly tucked inside the motor tube, then...

C. Using your marked dowel, apply a continuous bead of epoxy around the inside of the pre-slotted airframe up from the slotted (AFT) end. Take the assembled motor mount and push it straight up into the epoxied end of the airframe until the bottom (AFT) end of the motor tube is flush with the airframe's bottom (AFT) end. **Make sure the Kevlar shock cord is between the fin slots so it does not interfere with the fin installation.**

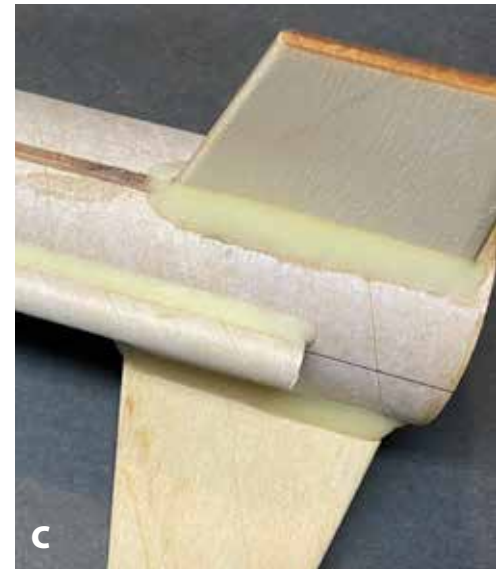
Set in an upright position to dry.

D. When dry, turn assembly upside down and give exposed AFT centering ring a light layer of epoxy for additional strength.

DO NOT get epoxy on the inside of the motor tube! Set aside to dry.



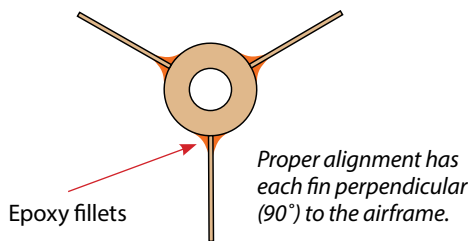
Don't get epoxy in the motor tube!



STEP 3 - Fin /Launch Lug Assembly

Sand all fins smooth and round off the leading and trailing edges using medium, then fine sandpaper.

Test fit the fin tabs (which protrude out from the fin's root edge) into the airframe's fin slots. Sand where necessary for a good flush fit.



A. Once all parts fit satisfactorily, apply a liberal amount of epoxy to one fin tab area and along the edge mating to the airframe. Insert fin into fin slot. **Make sure the fin is at a right angle (90°) to the airframe.** Set aside to dry. Keep the airframe in a horizontal position until the epoxy cures. Do one fin at a time, and let dry; then move on to the second fin and repeat the epoxy process. Repeat with the last remaining fin.

B. Once all the fins have completely cured, add epoxy fin fillets for additional strength.
C. Epoxy the launch lug directly 1" from the aft end of the rocket airframe centered between the fins. Make sure the launch lug is straight on the airframe. Set aside to cure in the horizontal position. Once the launch lug has cured, apply epoxy fillets for additional strength.

LOC PRO Build Tip! Making Fillets is Easy!

Easy fin fillets are a simple 4 step process that will give professional results every time.



1. Mark off 1/8" rules along the fin and airframe.

2. Apply tape along the rules.

3. Apply glue fillets as shown.

4. Remove tape while glue is still wet for straight clean fillets!



STEP 4 - Recovery Assembly

Remove any molding lines or plastic flash from the nose cone. Also remove any plastic flash from nose cone recovery eyelet.

A. Put the end of the Kevlar® shock cord through the slit in the Nomex® chute protector. Slide the Nomex® protector down into the airframe. Tie a loop on the end of the Kevlar® shock cord.

B. Attach the elastic shock cord to the Kevlar shock cord.

C. Then attach the elastic shock cord to the loop in the nose cone. (See *PRO Build Tip* below for nose cone mods).

D. Make a loop in the elastic shock cord approximately 2' from the nose cone. Attach the parachute to this loop. (Option - use a quick link to attach chute to loop for easy parachute exchanges).

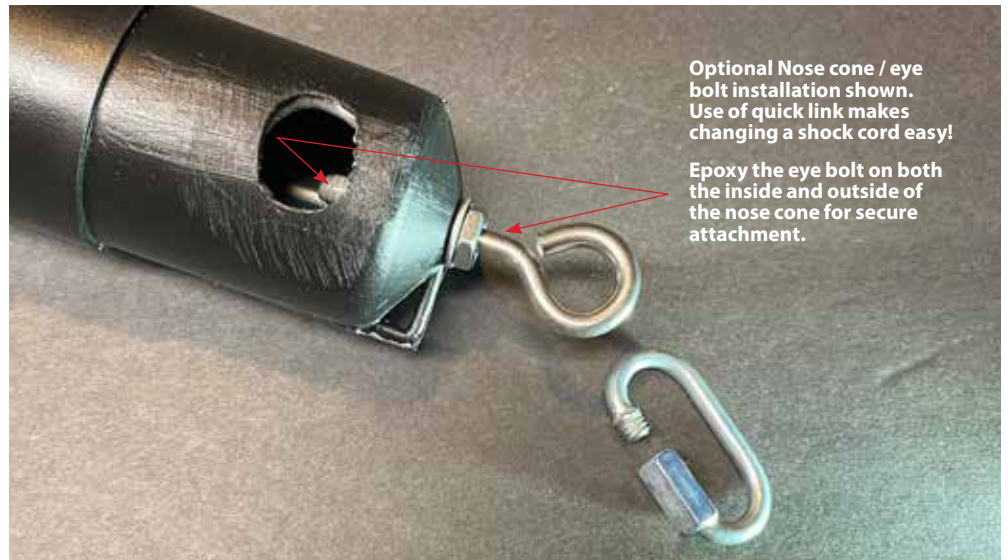
Place a small drop of super glue on the Kevlar® knot for secure attachment.



LOC PRO Build Tip!

Nose cone/shock cord mods for additional strength

For added strength you may modify the the shoulder end of the nose cone by notching two slots and securing the elastic shock cord in/out of each lot and knotting. Or, another common method is to use a screw eye and epoxy for added security and strength. Whichever method you choose, make sure it is secure and can withstand the motor ejection charge/event.



STEP 5 - Paint / Finish

Seal fins and launch lug with sanding sealer using a brush. Sand lightly between coats to fill pores and obtain a smooth finish. Lightly sand plastic nose cone with fine sandpaper to remove molding seam line. At this time, remove any plastic flash that was molded into the nose cone eyelet.

When you are satisfied with the smooth sanded finish of your model, it is ready to prime and paint.

- Spray rocket with primer, sand and repeat until smooth finish is obtained
- Spray rocket with paint of choice, let dry.
- Apply protective clear coat
- Apply vinyl decals to your liking
- Repeat with clear coat.

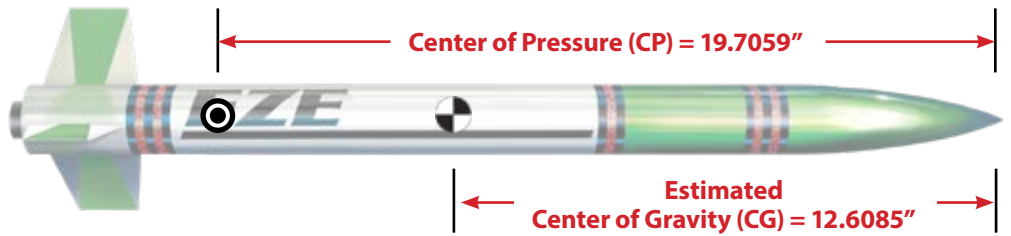


PREFLIGHT

Sim Your Rocket!

This rocket is recommended for high power rocket motors F through H impulse. Depending on your flying field and finished weight, this is a very versatile kit. The Rocksim® file is available on the EZE product page on our website.

Always check stability to ensure stable flight; the Center of Gravity (CG) must be forward of the Center of Pressure (CP) in flight ready condition.



EZE Specs

Height: 25.0"
Diameter: 1.6"

Motor Suggestions

Motor	Number of Motors	Altitude in Feet
D12/5	1	400'
E16/9	1	1200'
F40/13	1	3300'
G33/14	1	4100'



WEIGH YOUR ROCKET!

Install the entire recovery system, including parachute, then weigh your rocket for accurate sim flights.

Select a motor for first flight. When using 24mm motors, it is necessary to use LOC's motor mount adapter [MMA-1](#). 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.

Remember to use enough recovery wadding to protect the chute and shock cord from the hot ejection gases .

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



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Model Rocket 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.

Launch Site Dimensions

Installed Total Impulse (N-sec)	Equivalent Motor Type	Minimum Site Dimensions (Ft.)
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 G's	1,500'

Schools, Clubs and Other Groups

Loc Precision Multi-Packs are available for this and other Loc Precision Rocket kits. Call or email us for multi-pack pricing.



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