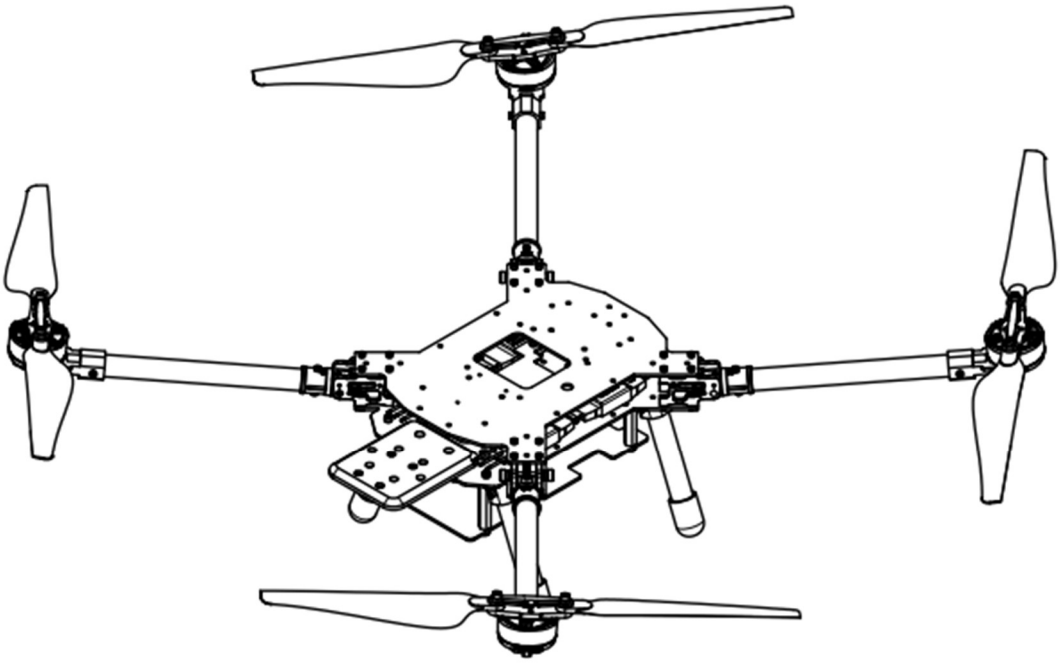
axldrone
your world from above

axl 30L DIY Drone Kit

User Manual V2.0 | 25.03



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Overview

The axl 30L Drone Kit is an advanced, foldable version of the axl 30, designed for hobbyists, educators, researchers, and drone enthusiasts seeking enhanced performance and convenience. Combining the lightweight carbon-fiber airframe of the axl 30 with essential propulsion components—including motors, ESCs, and propellers—the axl 30L delivers a ready-to-build, high-performance platform without the need for sourcing additional parts.

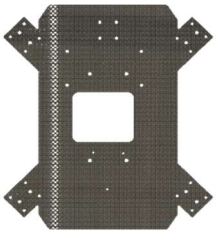
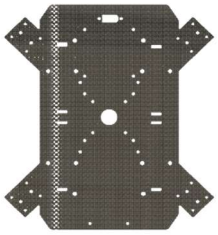
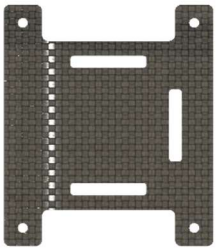
Its foldable design is supported by aluminum folding arm tube joints, allowing for compact storage and easy transport while maintaining structural rigidity. The aircraft-grade aluminum motor mounts provide durability and precise alignment for the motors, ensuring stable and responsive flight under demanding conditions.

The axl 30L is versatile enough to support a variety of applications—from FPV flying and aerial photography to surveying, mapping, surveillance, and exploration. Its foldable, modular, and customizable design encourages adaptation for specific missions, making it suitable for both educational and professional environments.

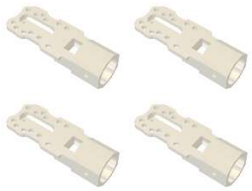
This manual will guide you through the components, assembly of your drone—perfect for learning, experimentation, and advanced hands-on experiences.

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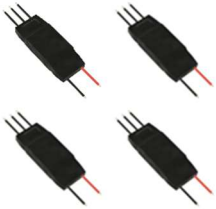
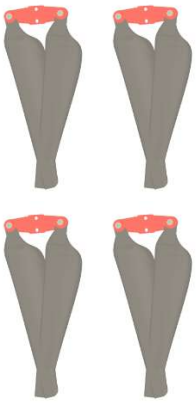
What's in the Box

Component	Quantity	Image
Carbon fiber frame panel (top)	1	
Carbon fiber frame panel (bottom)	1	
Carbon fiber Battery Mount	1	
Carbon fiber FC Mount	1	
Z16 Folding Arm Tube Joint	4 Pcs	

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Arm (294mm Carbon Fiber tube)	4	
Aluminium Standoff/Spacer (10mm)	4	
Aluminium Motor Mount	4 Pcs	
Leg Mount	4	
Leg (100mm Carbon Fiber tube)	4	

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Leg Foot	4	
Camera Mount	1	
ESC	4 Pcs	
Motor	4 Pcs (with Allen bolts)	
Propeller	2 Set (2 CW, 2 CCW) (with Allen bolts)	

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Bolts & Nuts		
Component		**Quantity**
Z16 Fold	M2.5×22 mm Allen Bolts and nuts	4
	M2.5x8 mm Allen Bolts	32
Motor Mount	M3×25 mm Allen Bolts and nuts	4
Leg Mount	M3×25 mm Allen Bolts and nuts	4
	M3x10 mm Allen Bolts and nuts	8
Flight Controller Tray	M3×6 mm Allen Bolts	8
	10 mm Spacer	4
Battery Tray	M3×6 mm Allen Bolts	8
	10 mm Spacer	4
Camera Mount	M3×10 mm Allen Bolts and nuts	2

Tools You'll Need

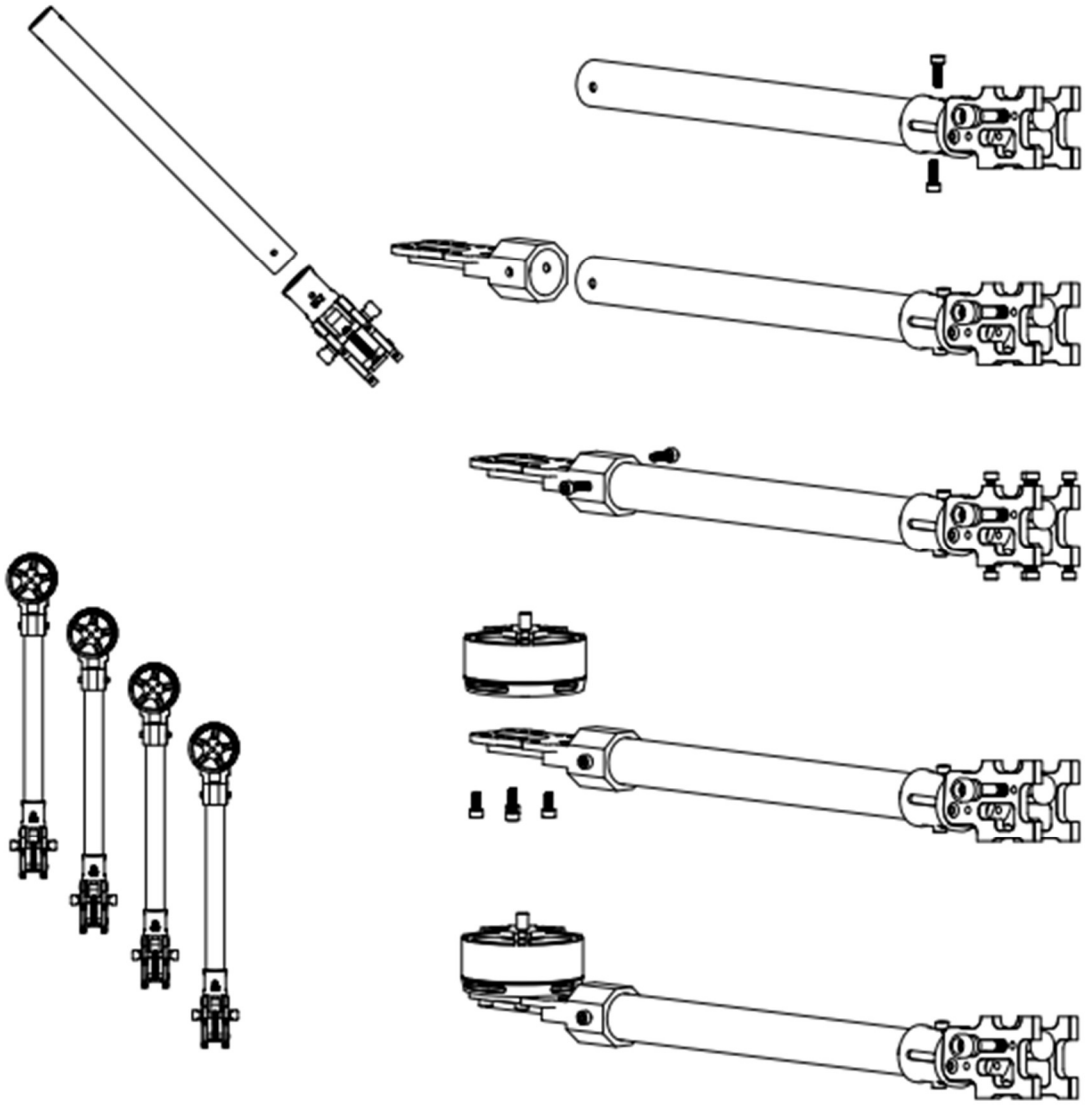
- Allen hex key set
- Nose Player

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Step By Step Assembly

Step 1:

Fix the Z16 aluminium folding arm tube joint to the 170 mm carbon fibre tube using provided M2.5x22mm Allen bolt and nut. Secure the aluminium motor mount with M3x25 mm Allen bolt and nut. Mount the motor using four provided Allen Bolts M3x6 mm

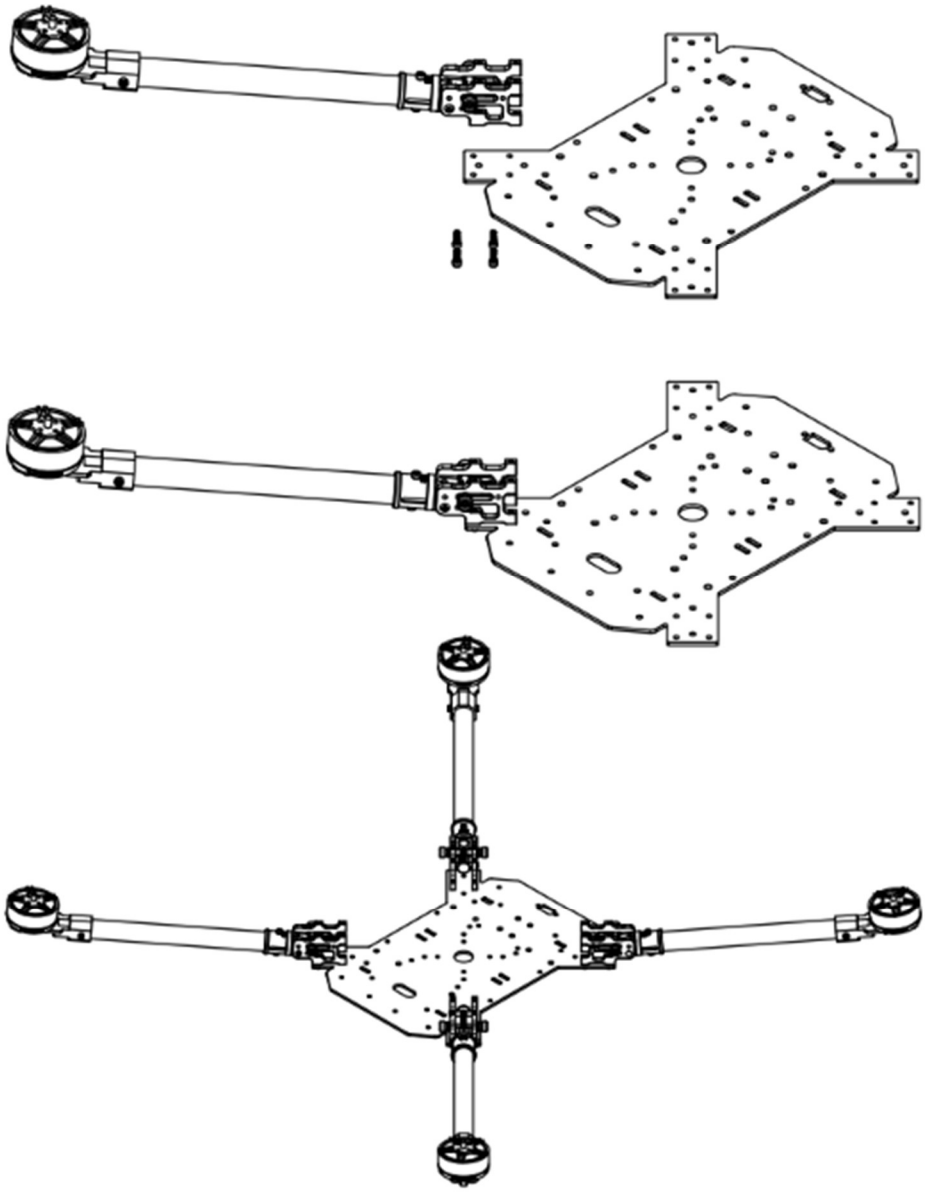


Follow the same procedure to assemble the remaining three arms.

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Step 2:

The motor-mounted carbon fibre tube arm is securely fixed to the 2 mm thick carbon fibre bottom panel using four M2.5x8 mm long Allen Bolts.

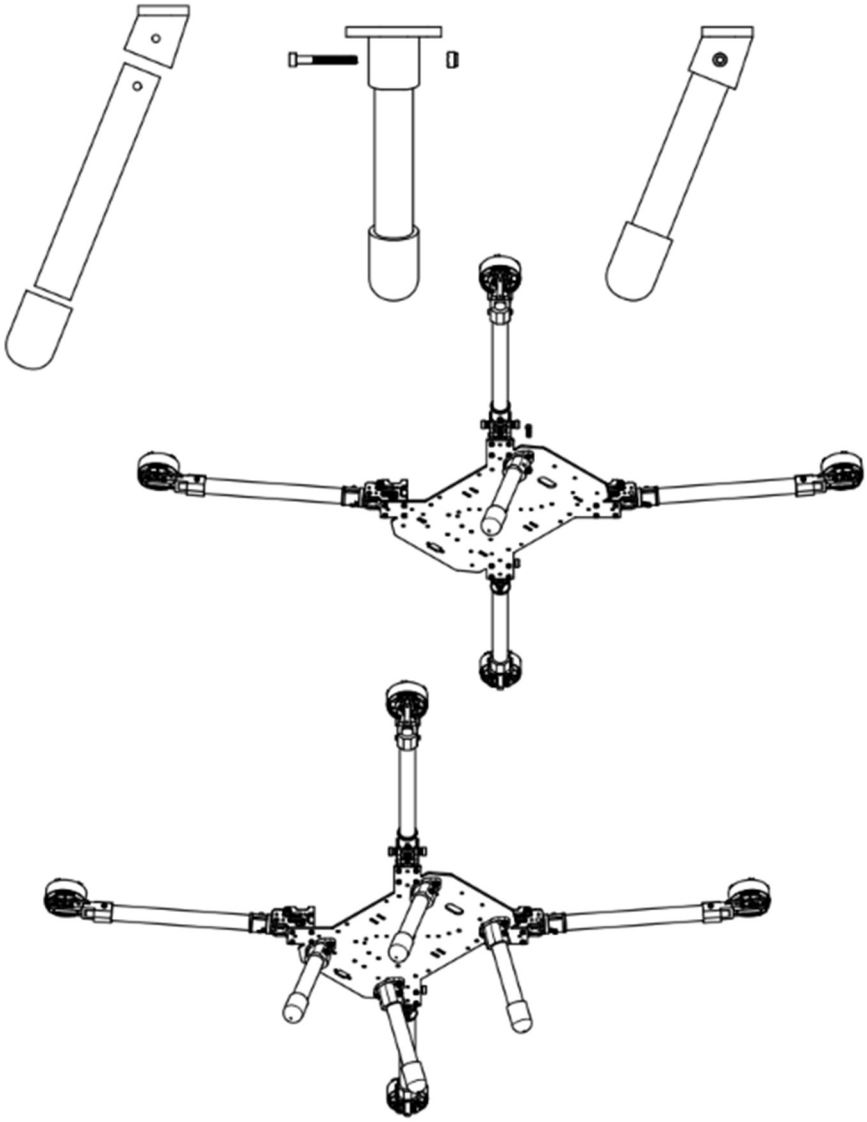


Repeat the same procedure for fixing the remaining three arms to the bottom panel.

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Step 3:

Insert the 100 mm rod (leg) into the foot. A secure attachment is established between the rod and the leg mount using a M3 x 25 mm Allen bolt and nut. Attach the landing gear to the bottom side of the bottom panel using two M3 x 10 mm Allen bolts and nuts.

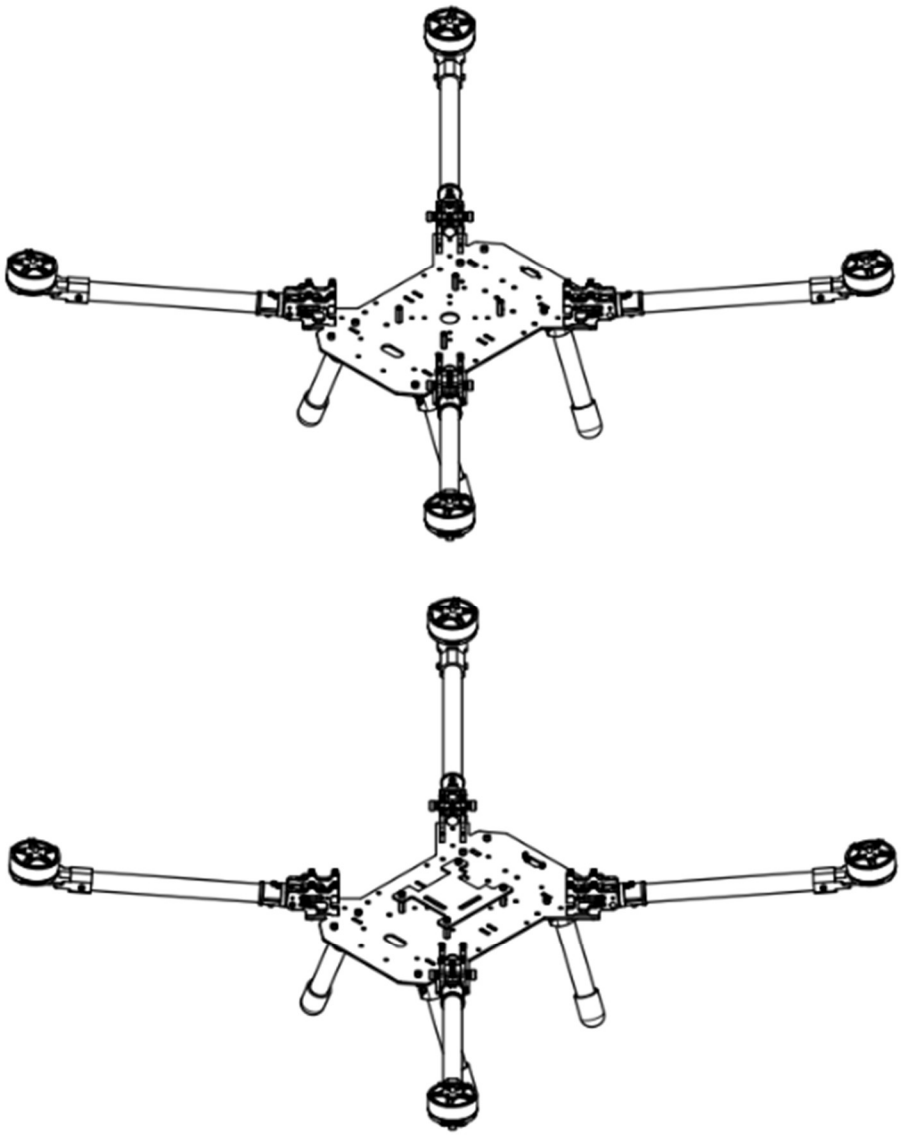


Repeat the same procedure for the remaining three landing gears.

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Step 4:

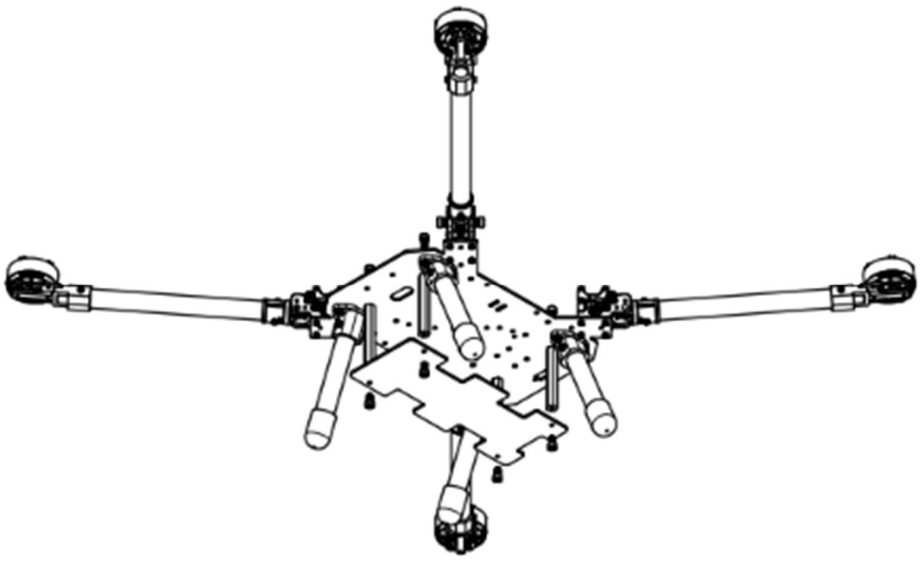
Fix four 10 mm long M3 standoffs to the centre of the bottom panel (carbon fibre sheet) using four M3x6 mm Allen Bolts. Then mount the FC mount panel onto the standoffs using the same four M3x6mm Allen Bolts.

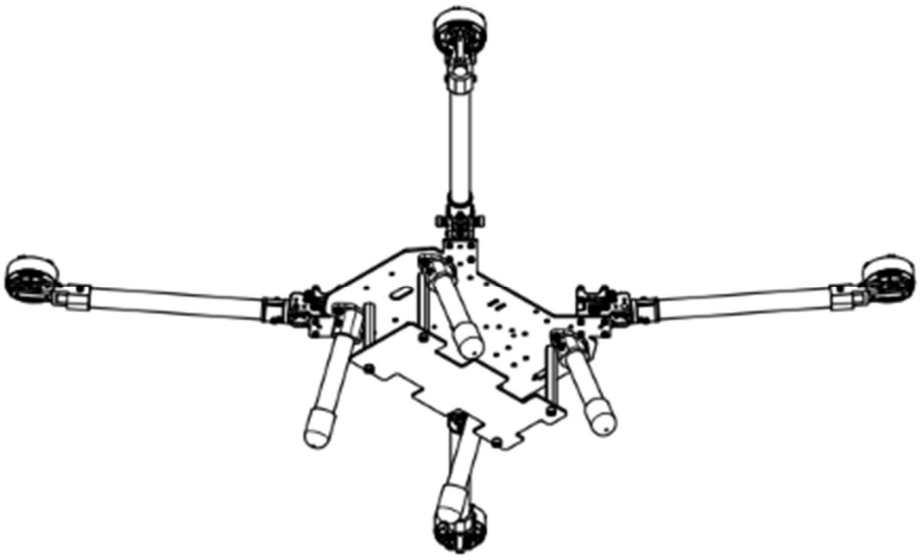


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Step 5:

The 10mm long aluminum spacers are securely attached to the bottom side of the bottom panel (carbon fiber sheet) using four M3x6mm Allen Bolts. These spacers are then mounted onto the battery mount panel, which is a 2mm thick carbon fiber sheet, and tightened with four M3x6mm Allen Bolts.

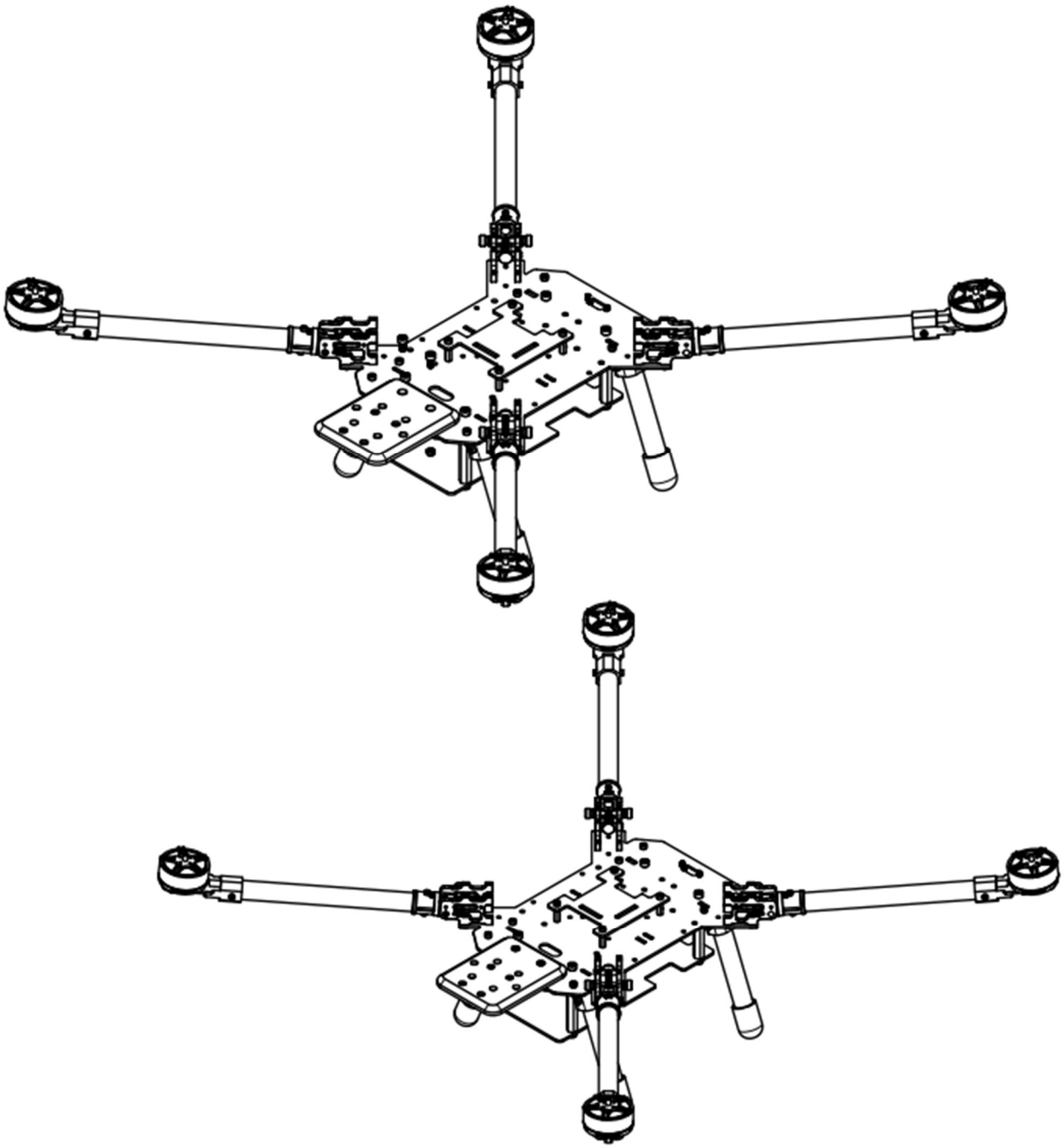




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Step 6:

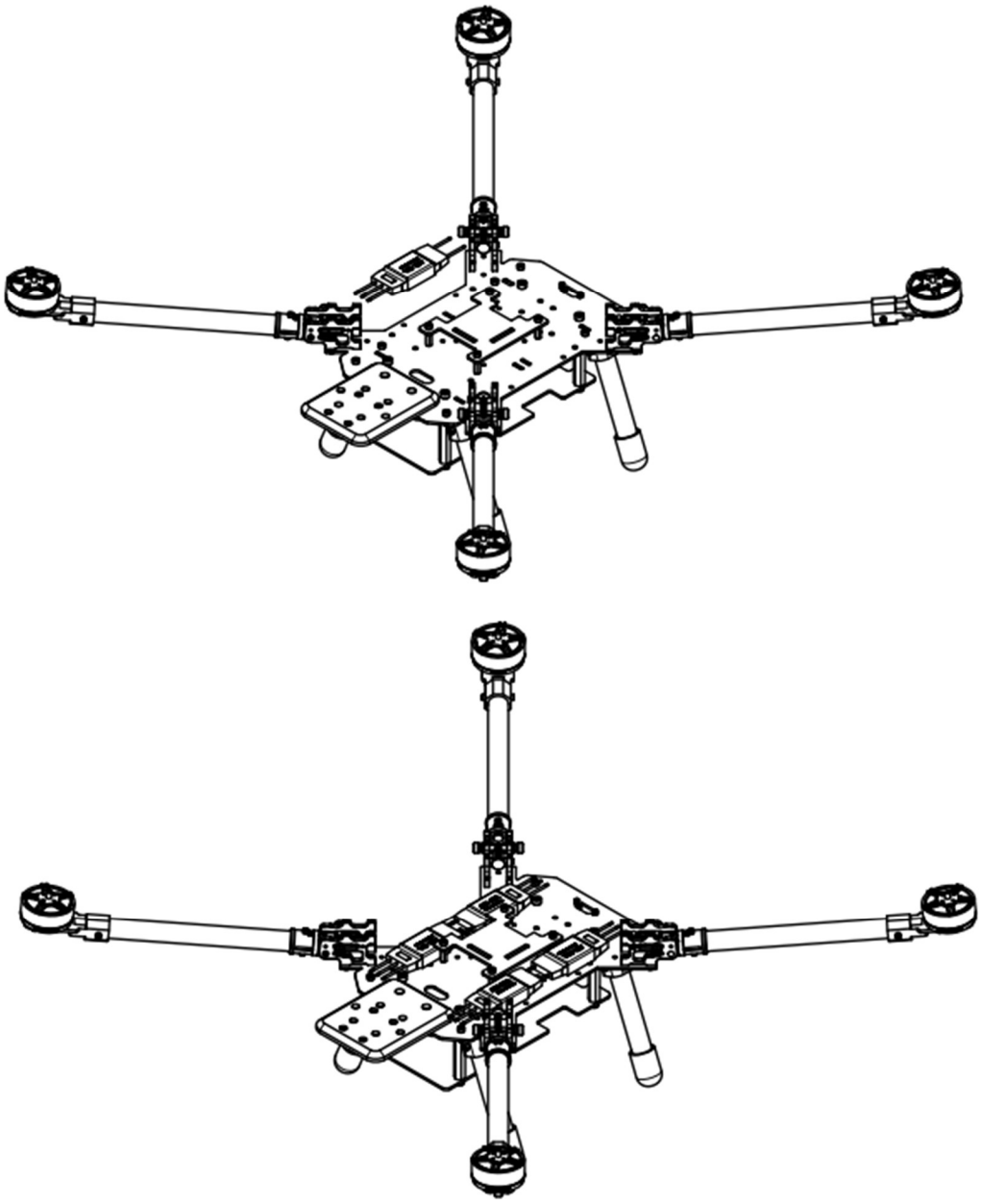
The camera mount is fixed on the front of the bottom panel using the two M3x10mm Allen Bolts and nuts.



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Step 7:

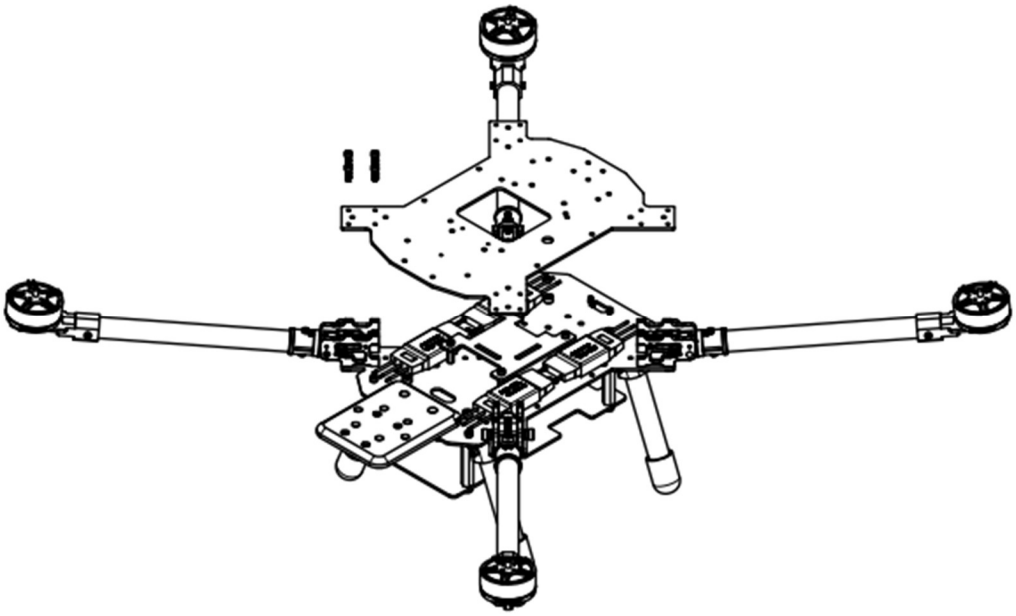
ESCs are fixed corresponding to the four motors.

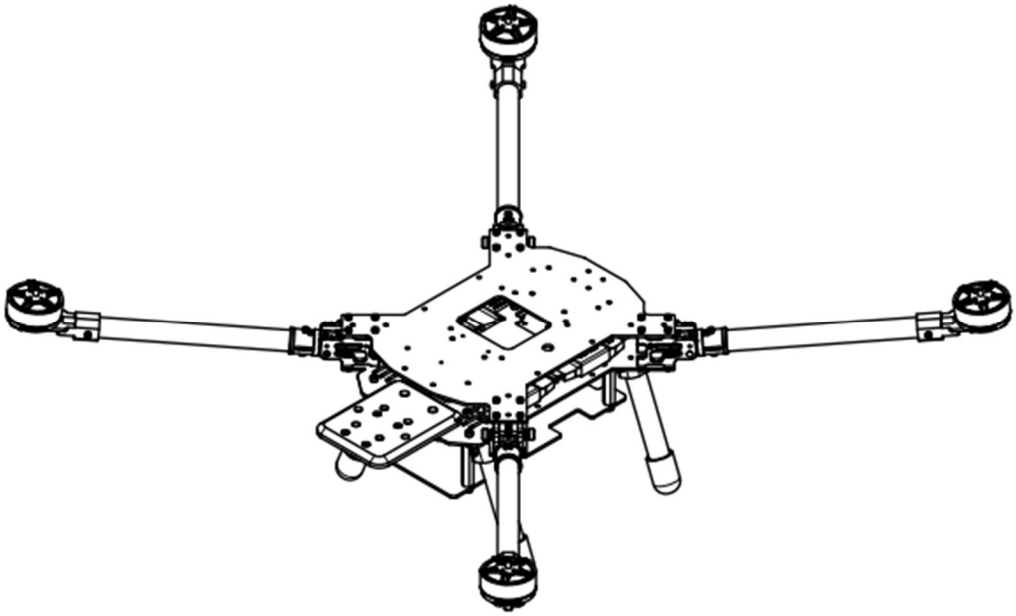


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Step 8:

The 2mm thick carbon fiber top panel is affixed to the protruding screw of the Z16 fold and secured with the provided four M2.5x8 mm Allen Bolts.

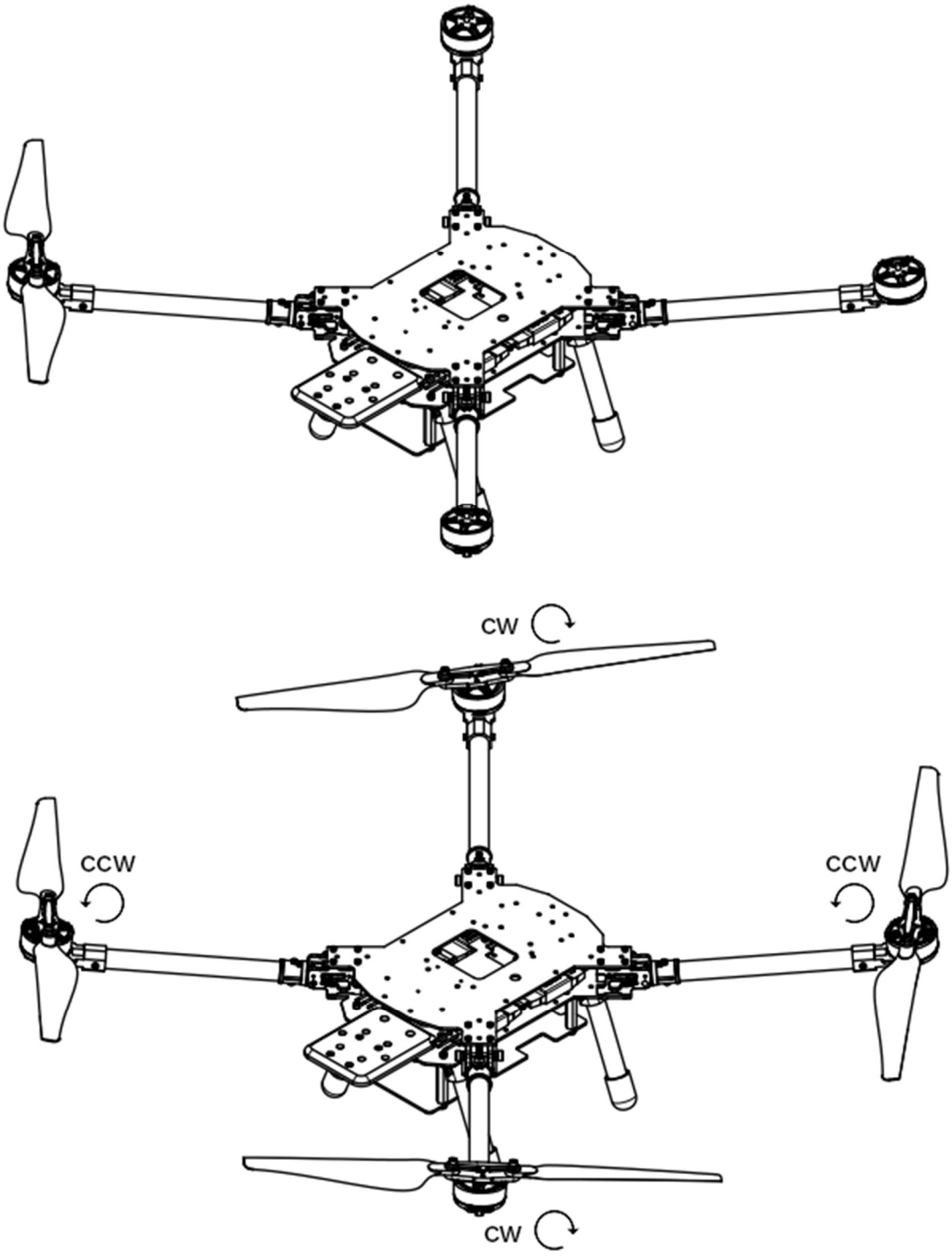




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Step 9:

The propellers are secured using the allen bolts (M2.5x8mm) provided in the propeller set.



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Specifications

Parameter	Value
Total Weight	~1450
Size	509 x 904 x 182 mm (L*W *H)
Frame Material	Carbon Fiber, ABS, Aluminium
Max load capacity of the frame	~4000g
Propeller	2 Pairs 15-inch nylon fiber Foldable Propeller, Fitting Screw Accessories
Motor	4* 380 KV Motor
ESC	4* 4S - 6S, 30-40 Amps
Folding Mechanism	4* Z16 CNC Aluminum Folding Arm Tube Joint
Motor Mount	4* Aircraft-grade Aluminum Motor Mount

Storage & Maintenance

- Store frame parts in a cool, dry place, away from direct sunlight, heat, or heavy objects to prevent warping, resin breakdown, or mechanical stress.
- For cleaning, remove loose dirt with a dry soft brush or canned air; use isopropyl alcohol (70–90%) on a lint-free cloth to gently clean stubborn grime—avoid water or harsh chemicals—and ensure all components are completely dry before reassembly.

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Safety guidelines

- **Wear protective gear** during assembly, especially when handling carbon fiber and ABS components. Use gloves and eye protection to prevent injury from sharp edges or splinters.
- **Beware carbon fiber dust**: If cutting or drilling frame parts, do so in a well-ventilated area or use dust collection systems and wear a respiratory mask (HEPA-rated) to avoid inhalation
- **Verify fasteners**: Make sure all M3 screws, nuts, and standoffs are properly tightened. Use thread locker to prevent loosening due to vibration.

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Feel free to connect

Kakkanad, Ernakulam,
Kerala, India – 682030
P : +91 484 299 3399,
+91 949 771 7654
E : info@axldrone.com

C5 UL Cyber Park,
Special Economic Zone
Calicut, India – 673016
P : +91 9645 426 414
E : info@axldrone.com

1441 Broadway,
#5, New York, NY 10018
P : +(646) 260-6311
E : info@axldrone.com