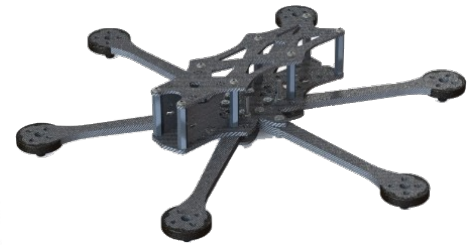



SENTEL6™



5" Hexcopter

	M3 Round Screws (6mm)	M3 Round Screws (8mm)	M3 Cap Screws (14mm)	M3 Sunken Bolt (18mm)	M3 Rivet Press Nuts	M3 Nylock Nuts	M3 Threaded Spacers (30mm)	Gummy Shock Absorbers	M3 Round Motor Screws (10mm)
Fittings	8	4	12	4	8	4	8	4	24
Symbol	A	B	C	D	E	F	G	H	I

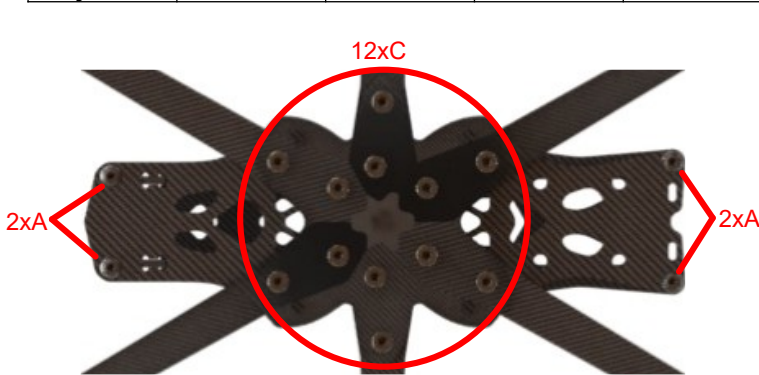


Figure 1: Hex Bottom View (Missing Sandwich plate)

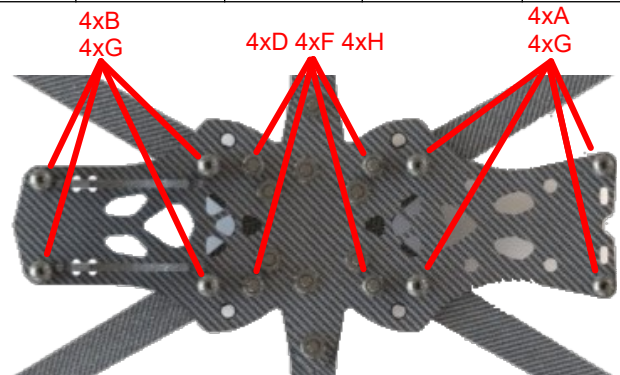
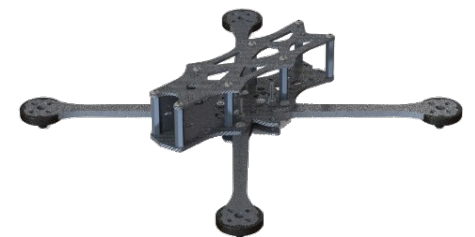



Figure 2: Hex Top View

SENTEL4™



6" Quadcopter

	M3 Round Screws (6mm)	M3 Round Screws (8mm)	M3 Cap Screws (14mm)	M3 Sunken Bolt (18mm)	M3 Rivet Press Nuts	M3 Nylock Nuts	M3 Threaded Spacers (30mm)	Gummy Shock Absorbers	M3 Round Motor Screws (10mm)
Fittings	8	4	12	4	8	4	8	4	16
Symbol	A	B	C	D	E	F	G	H	I

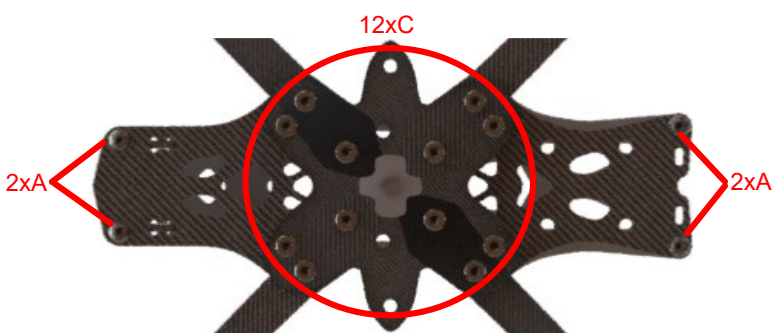


Figure 1: Quad Bottom View

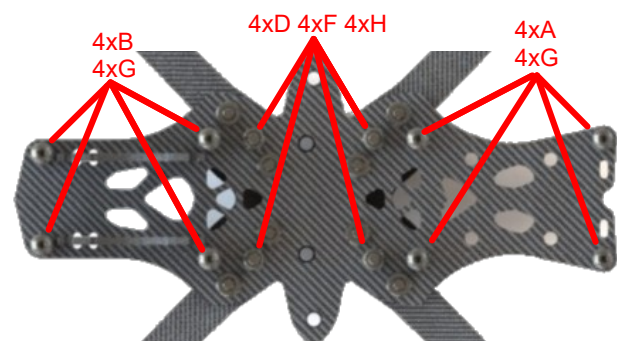


Figure 2: Quad Top View

Sentinel 64™

Assembly: The Pancake Flip Method

Tools Required: m3 socket wrench/driver, small allen key set

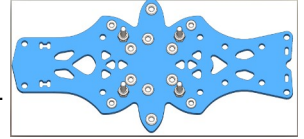
Step 1: Getting Organized

Open frame packages and sac of fittings and separate all parts. Find the sandwich plate, arms, keystone, and twelve 14mm cap screws. Choose what orientation you will pursue, quad or hex, and determine which holes will be required by viewing the screw diagram.

Note 1: The triangle in the middle of the sandwich plate points in the forward direction; it is important to ensure that it always faces forward during assembly.

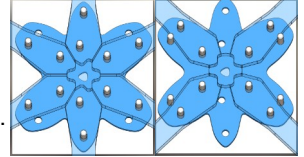
Step 2: Fitting Sunken Bolts and Nylock nuts, note the fitted Press Nuts

Fix the four sunken bolts onto the Bottom plate by using a m3 screwdriver and holding the nylock nut with a socket wrench, socket driver, or crescent wrench. These bolts should fit flush into the chamfered holes on the bottom plate.



Step 3: Setting up for the Arms, First Pancake Flip

Place all 12 M3 cap screws (14mm) screws in the sandwich plate that will hold the arms. The Sentinel4 variant has four 14mm cap screws that will not penetrate the arms, these can be ignored at this stage. Once all screws have been placed in the sandwich plate, place the Sentinel cardboard box or a hardcover book on top of the screw caps and flip both the sandwich plate and box simultaneously. The next step you can do while the frame rests on the box.



Step 4: Fitting the Arms and setting up the Bottom Plate

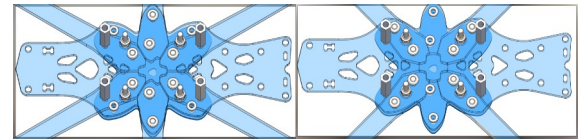
Place the Sentinel universal arms on the screws ensuring that you can fit the grooves to the keystone as indicated. After you have ensured that the keystone and the sandwich plate are both facing forward, you can gently lay the bottom plate onto the bolts with the four press nuts facing up. *****It is very important not to force the bottom plate onto the bolts as the weight will be supported on the rivet press nuts, which can be pushed out if you are careless.*****

Note 2: The hex keystone is asymmetric, and should be oriented exactly as indicated in the diagram.

Note 3: You may have to rotate the arms as they are asymmetrical in order to fit them to the keystone.

Step 5: Second Pancake Flip, Tightening the Arm's 14mm Cap Screws

Holding the unscrewed frame steady with one hand, use the other hand to hold the box firmly, but gently against the bottom side of the frame. Flip both simultaneously, so that you can access and gently screw in the 14mm cap screws. Tighten the screws enough so that there is no lateral movement in the arms.

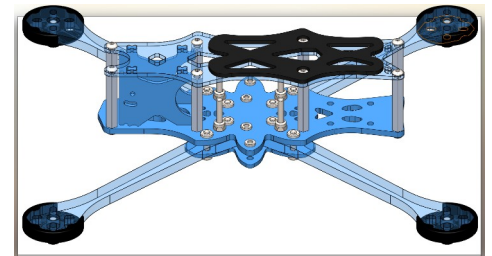


Step 6: Installing the standoffs

Install each of the standoffs using the required screws as seen in figure 2.

Note 4: The hex frame uses four of the 14mm arm screws to screw into the inner standoffs.

Note 5: The quad frame requires four extra 14mm screws to screw into the inner standoffs.



Step 7 (optional) Installing the arm guards and battery pad:

The 3D printed arm guards with extended 10mm motor bolts and battery pad are included as accessories in the kit. These can be installed at the owners discretion.

Step 8: Build your drone!

We hope you like the frame!! There are still some accessories that have to be completed. Expect to see a GoPro mount, antenna holders, gimble, cage, etc... If you have the Sentinel 64, you are entitled to receive free accessory .stl files for the Sentinel 64 as they come out. Send us a picture to see your frame posted on rasstech.net.

Load Bearing Capabilities:

The Sentinel 64 was designed with load bearing capabilities in mind, check back with rasstech.net to see updates on load bearing research.

Other Important Dimensions:

ESC/FC hole dimensions: 30.5mm

Video receiver hole dimensions: 20mm

Camera Bracket separation: 19mm

Arm height: 5mm

Bottom plate height: 3mm

Sandwich plate height: 2mm

Top plate height: 2mm

