

# SKYJIB BUILD MANUAL



**DROIDWORX LTD NEW ZEALAND**

2 PARK DRIVE  
3225 RAGLAN  
NEW ZEALAND

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## FLIGHT OPERATION AND SAFETY



## OPERATION AND SAFETY

This is a quick guide for those new to Multi-Rotor craft offering some basic safety and operational procedures...and are recommended standard operating procedures for those piloting Droidworx or any multi-rotor craft.

Please read the instructions for the relevant Flight Control electronics before proceeding. Go to the web site of your flight control system and make yourself well acquainted with the correct procedure for the electronics installation and software operation.

Caution: never connect and start the engines for the first time with the propellers attached....and always balance your propellers; unbalanced propellers can cause excessive vibration which may lead to material fatigue.

Note: check the orientation of the flight controller you are using (which way is front) and also the engine assignment configuration; for instance which is engine 1,2,3 etc. and check also that your propellers, clockwise and counter clockwise, are also installed correctly before your first flight.

Before the first flight hand test your craft – arm and calibrate your electronics, hold the craft with both hands by the landing gear skids above your head with the front facing away from, and to the front of you, make sure you are well clear of obstructions and other people. You may need the assistance of another person for this test. Raise the throttle to around 25% and gently move the craft around the axis' roll (tipping the craft left and right) and feel for a steady and smooth resistance to your movements, do the same for pitch (tipping the craft forward and backward) and also yaw, rotating the craft clockwise and anti-clockwise whilst keeping it horizontal. If the craft offers smooth resistance to your movements it will fly correctly.

Your first test flight should be in an open field in low or zero wind. A sports field (not currently in use) is a good option; choose a site with short or mown grass. Do not takeoff from dry dusty sites. Make sure any onlookers or spectators do not gather about you...if so ask them to move away from you in a perimeter not less than 50m (150 feet) diameter around you.

Make sure that you have fully charged your transmitter and onboard battery packs. Make sure that the antenna of your Radio (TX) is up and correctly positioned; make sure the receiver (RX) for your craft is well positioned within the craft and secured and that the antenna is facing downward and to the back of your craft and not touching any part of the craft.

Place the craft on level ground and turn on your transmitter – check that you have the correct model selected on your TX.

Set the transmitter timer to about 80% of the known flight duration.

Connect the battery to your crafts FC inputs and wait for the engine controller beeps to stop.

Stand about 4m away from your craft and behind the craft with the craft facing directly away from you.

Check the 50m flight safety perimeter you have established, also checking behind you for children running in to see what you are doing.

Survey the area; look for obstacles that you might not have seen previously, like power-lines and overhead wires.

Never fly your craft near a controlled aerodrome or in controlled airspace.

Check the weather conditions, the wind speed and direction. Do not fly in gusty strong wind at any time. Always try and fly the craft with the wind at your back so the craft will drift directly away from you.

Always keep your eyes on the craft when in flight – if people approach you inside your safety perimeter to talk to you or to ask questions whilst you are flying the craft do not engage in the conversation and ask them to stand well clear of you until you have landed.

Re-check your perimeter and raise the throttle slowly and check to see if the craft wants to tilt to one direction or another; sometimes you may need to adjust the trim on your TX to get a level flight, however most times the craft will fly perfectly first time if you have installed the electronics and the software has been set correctly—check with the Flight Control manufacturer for standard or beginner settings for the craft.

Takeoffs are sometimes easier with a short burst of power to lift the craft off the ground.

Hold the craft in a controlled hover directly in front of you about 2-3m off the ground away from “ground effect” prop wash. When you have mastered this hover position you can then move on to rolling the craft gently from side to side and forward and backward. Make sure that you always stand behind the craft, this makes for easy orientation of the flight controls.

Repeat this exercise several times before you take the craft any higher.

## PRE-FLIGHT SAFETY CHECK

**Thoroughly check the craft before every flight...**

Pre-Flight Safety Check safe and secure and not loose.

Check to see if any wires have come off

Check for loose bolts on the assembly

Check that the battery's are secure

Check the battery voltage, and if you have more than one battery, check your spares too

Check the propellers for marks and nicks

Check the propeller nuts or bolts, make sure they are tight

Check the engine mounts and the bolts and nuts for tightness

Check the Transmitter battery voltage; never fly the craft with a low voltage reading on your transmitter  
(check with the manufacturer of your equipment for minimum and maximum voltage readings).

Check that the transmitter antenna is not damaged.

Check that the craft receiver module is well connected and that the antenna's are properly positioned.

Take a good look over the craft from all sides to make sure that nothing appears unusual or out of place.

Check your flight perimeter.

Check for power-lines and overhead obstacles.

Assess the weather conditions, wind direction and speed. An anemometer (hand held wind speed meter) is a good tool to have, otherwise use some dry grass or a tissue, throwing in the air to gauge the wind direction. Do not fly in gusty and turbulent conditions.

Set your transmitter timer to 80% of the known battery duration.

### DISCLAIMER:

Droidworx NZ Limited disclaims all warranties, whether express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Droidworx NZ Limited does not assume any liability, whether direct or indirect, from the use of the SkyJib 6 or 8. Droidworx NZ Limited shall not be liable for any direct, indirect, special, incidental, punitive, contingent or consequential damages to persons or property caused by the SkyJib craft. In no event shall Droidworx NZ Limited be liable for personal injury up to and including death.

## Do's AND DONT's:

- Never fly in strong wind – the operational safe wind speed for these craft is about 10-15 KPH.
- In the event of a crash or a hard landing, always check the craft for damage before taking off again. In this instance, you must also check that you do not have dirt or grit in the engines; this can cause an engine or engines to overheat and fail in flight resulting in an out of control craft and serious damage or injury to the craft , other people and their property.
- Your launch field should preferably be open and flat with short grass. If it is necessary to take off in a field which only has long grass, manually flatten a 1.5m diameter take off perimeter with your feet.
- Always have a flight plan – visualize your flight path and check again for obstacles.
- Never fly the craft out of direct line of sight and always keep your eyes on the craft whilst it is in the air.
- Never fly the craft above 400 feet in height (the length of a football field).
- Never fly near people – a 50m (150 ft) perimeter around and above people is a recommended minimum and operational law in most countries.
- Always set your transmitter timer before each flight to about 80% of the known flight duration for the battery pack's you have installed in the craft.
- Never turn your transmitter off in flight.
- First person view flights are against the law in some countries – check the relevant aviation safety authority in your country before flying FPV. Always have a “spotter” with if you do fly FPV.
- Never let friends fly your craft unless they are well schooled in the discipline.
- Never fly under the influence of any substance or alcohol. Whilst there is a minimum blood alcohol level allowed for driving an automobile in most countries, the law for pilots in command of flying craft around the globe is universal...there is a zero limit tolerance.
- Always turn your transmitter on before connecting the battery to the craft...and always disconnect the battery from the craft before turning your transmitter off.

## PRE-BUILD CHECKLIST



## REQUIRED TOOLS



M4 7mm Hex Driver



M4 3mm Hex Screw Driver



M3 2.5mm Hex Screw Driver



3mm Phillips Head Driver



M3 6mm Hex Driver

## PRE-BUILD CHECKLIST: SKYJIB 6

### Landing Gear and Gear Rail Parts

Landing gear plate SJ	2
Landing gear skids SJ	2
Battery strap	2
SJ carbon fiber gear rail with tube lock	6
"Droidworx" landing gear sticker	1
Gear rail bracket SJ	2
Carbon fiber gear rail bracing SJ	2
Vibration isolator SJ	2
Battery plate carbon fiber SJ	4
Carbon fiber 360 end plate	2
Vinyl end cap	4
Fluro sticker red	2
Fluro sticker silver	2
M4x20mm socket head cap screw	12
M4x16mm socket head cap screw	4
M4x12mm socket head cap screw	4
M4 alloy low profile nyloc nut	4
M3 nyloc nut ss	4
M4x3.2mm nylon spacer	4
M4 nylon washer	24
Vibration Isolator SJ	2
Landing gear grommets	4
Rubber grommet SJ	12
Camera mounting bracket	1
Rubber grommet SJ	4

### Dome Parts

Dome cover standard	1
Dome high impact high airflow	1
Alloy dome fixing pins standard	4
Alloy dome fixing pins extended	4
R-clips	4
Dome grommets	8
Loop wire (10 cm)	4
Crimps	8

### Center plate parts & boom mounting

Center plate SJ6	2
Boom 410mm SJ	6
Boom nacelle SJ	6
Boom bracket inner SJ	12
Boom bracket outer SJ	16
Boom marking sticker fluro red	1
"Droidworx" boom sticker	1
"SkyJib" boom sticker	1
M4x40mm ss socket head screw	4
M4x35mm alloy socket head screw	12
M4x30mm socket head cap screw	6
M4 alloy low profile nyloc nut	18
M4 ss nyloc nut	4
M4 nylon spacer 20mm	6
M4 nylon spacer 3.2mm	6

## PRE-BUILD CHECKLIST: SKYJIB 6

Engine mount parts and fittings	SJ6 Flight controller crash cage	Assorted spare items
Engine bracket SJ - fiber reinforced	Crash Cage hub SJ6	M4x30mm socket head cap screw
Engine mount disk - alloy - SJ 25x25	Crash Cage arch	M4x35mm socket head cap screw
Engine mount disk - alloy - SJ 35x35	FC cage mounting bracket	M4x40mm ss socket head cap screw
Carbon fiber engine mount bracing plate	M3x10mm nylon spacer	M4x20mm socket head cap screw
Heatshrink (5 cm)	M3x20mm socket head cap screw	M4x16mm socket head cap screw
M4x35mm socket head cap screw	M3 nylon washer	M4x20mm socket head cap screw
M4x40 stainless socket head cap screw	M3 alloy low profile nyloc nut	M4x8 stainless machine screws
M4 stainless nyloc nut		M3x8 stainless machine screws
M4x8 stainless machine screws	<b>Electronics fittings</b>	M3x6 stainless machine screws
M3x8 stainless machine screws	Universal adapter plate	M4 alloy low profile nyloc nut
M3x6 stainless machine screws	Standoffs 12mm	M3 alloy low profile nyloc nut
	M3 nylon nut	M4 stainless nyloc nut
	M3x6mm nylon machine screws	R-clip
		Dome grommet
		Rubber grommet
		Rubber grommet SJ
		M4 nylon washer
		M4x3.2mm nylon spacer
		M3 10mm nylon spacer
		Vinyl end cap
		Fluro sticker LG red
		Fluro sticker LG silver
		Engine bracket composite - 50mm SJ
		Boom bracket inner SJ
		Boom bracket outer SJ

## PRE-BUILD CHECKLIST: SKYJIB 8

Landing Gear and Gear Rail Parts	Dome Parts	Center plate parts & boom mounting			
Landing gear plate SJ	2	Dome cover standard	1	Center plate SJ8	2
Landing gear skids SJ	2	Dome high impact high airflow	1	Boom 540mm SJ	8
Battery strap	2	Alloy dome fixing pins standard	4	Boom nacelle SJ	8
SJ carbon fiber gear rail with tube lock	6	Alloy dome fixing pins extended	4	Boom bracket inner SJ	16
Droidworx landing gear sticker	1	R-clips	4	Boom bracket outer SJ	24
Gear rail bracket SJ	2	Dome grommets	8	Boom marking sticker fluro red	2
Carbon fiber gear rail bracing SJ	2	Loop wire (10 cm)	4	"Droidworx" boom sticker	2
Vibration isolator SJ	2	Crimps	8	"SkyJib" boom sticker	1
Battery plate carbon fiber SJ	4			M4x40mm ss socket head cap screw	8
Carbon fiber 360 end plate	2			M4x35mm socket head cap screw	16
Vinyl end cap	4			M4x30mm socket head cap screw	8
Fluro sticker red	2			M4 alloy low profile nyloc nut	24
Fluro sticker silver	2			M4 stainless nyloc nut	8
M4x20mm socket head cap screw	12			M4 nylon washer	8
M4x16mm socket head cap screw	4				
M4 alloy low profile nyloc nut	4				
M4x3.2mm nylon spacer	4				
M4 nylon washer	24				
Landing gear grommets	4				
Rubber grommet SJ	12				
Camera mounting bracket	1				
Rubber grommet SJ	4				

## PRE-BUILD CHECKLIST: SKYJIB 8

Engine mount parts and fittings	SJ8 Flight controller crash cage	Assorted spare items
Engine bracket SJ - fiber reinforced	Crash Cage Hub SJ8	M4x30mm socket head cap screw
Carbon fiber engine mount bracing plate	Crash Cage Arch SJ	M4x35mm socket head cap screw
Engine mount disk - alloy - SJ 25x25	FC cage mounting bracket SJ8	M4x40mm ss socket head cap screw
Engine mount disk - alloy - SJ 35x35	M3x10mm nylon spacer	M4x20mm socket head cap screw
Heatshrink (5 cm)	M3x20mm socket head cap screws	M4x16mm socket head cap screw
M4x35mm socket head cap screw	M3 alloy nyloc nut	M3x20mm socket head cap screw
M4x40mm ss socket head screw	M3 nylon washer	M4x8 stainless machine screws
M4 stainless nyloc nut		M3x8 stainless machine screws
M4x8 stainless machine screws	<b>Electronics fittings</b>	M3x6 stainless machine screws
M3x8 stainless machine screws	Universal adapter plate	M4 alloy low profile nyloc nut
M3x6 stainless machine screws	Standoffs 12mm	M3 alloy low profile nyloc nut
	M3 nylon nut	M4 stainless nyloc nut
	M3x6mm nylon machine screws	R-clip
		Dome grommet
		Rubber grommet
		Rubber grommet SJ
		M4 nylon washer
		M4x3.2mm nylon spacer
		M3x10mm nylon spacer
		Vinyl end cap
		Fluro sticker LG red
		Fluro sticker LG silver
		Boom bracket inner SJ
		Boom bracket outer SJ
		Engine Mount bracket 50mm SJ

## ASSEMBLY INSTRUCTIONS



## PART 1: LANDING GEAR ASSEMBLY – PARTS LIST

2 Landing gear plate SJ



2 Landing gear skids SJ



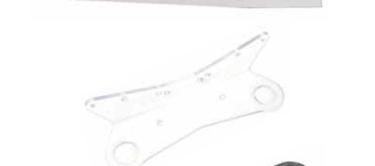
2 Battery strap



6 SJ carbon fiber gear rail with tube lock



1 Droidworx landing gear sticker



2 Gear rail bracket SJ



4 Battery plate carbon fiber SJ



4 Vinyl end cap



1 Camera mounting bracket



2 Fluro sticker red



2 Fluro sticker silver



12 M4x20mm socket head cap screw



4 M4x16mm socket head cap screw



4 M4 alloy low profile nyloc nut



4 M4x3.2mm nylon spacer



24 M4 nylon washer



4 Landing gear grommets



16 Rubber grommet SJ



**1**

Fit the four rubber grommets to the poly-composite gear rail brackets as shown.

  
X2  
X4**2**

Fit the remaining four rubber grommets to the camera mounting bracket.

  
X4**3**

Fit the four rubber grommets to the carbon-fibre battery plates then feed the battery strap through the slots and loop.



X4



X8

Repeat this step for the second set of battery plates.



X2

# 4

Slide the battery plates and camera mounting bracket onto the gear rail tubes followed by the gear rail brackets as shown.



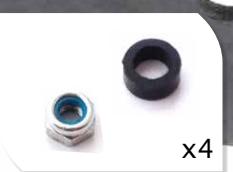
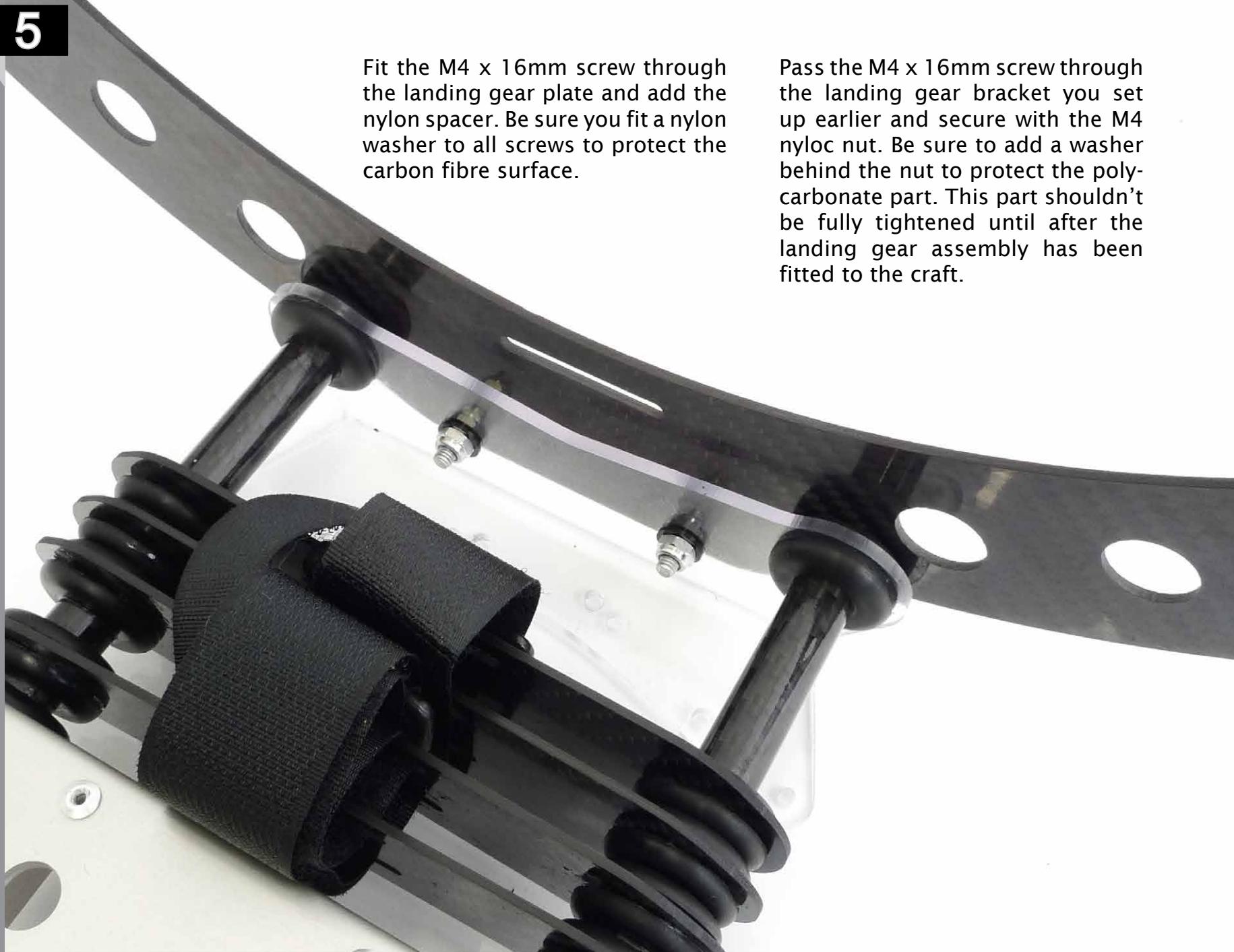
Ensure the gear rail brackets are facing inwards and the tab is to the top.



**5**

Fit the M4 x 16mm screw through the landing gear plate and add the nylon spacer. Be sure you fit a nylon washer to all screws to protect the carbon fibre surface.

Pass the M4 x 16mm screw through the landing gear bracket you set up earlier and secure with the M4 nyloc nut. Be sure to add a washer behind the nut to protect the polycarbonate part. This part shouldn't be fully tightened until after the landing gear assembly has been fitted to the craft.



M4 x 16mm x4

**6**

Attach the four M4 x 20mm screws through the landing gear plates into the threaded ends of the gear rail tubes; place a nylon washer both sides of the center plate. Try not to over tighten, just make firm contact.

**7**

The remaining gear rail tubes can now be attached as landing gear brace tubes. Place two on each side, at your desired spacing, and secure using the M4 x 20mm screws and washers.



8

Fit the rubber grommets to the end of the landing gear plates and slide the landing gear skids through making the protruding ends even...



...apply the skid stickers. Most prefer to identify the rear with the high visibility stickers but this is entirely your choice...



...finally slide the Vinyl Cap over the stickers of all four skid ends.



9

The final step is to affix the Droidworx Landing Gear Sticker to the front landing gear plate and your setup should look something like this.



## PART 2 : CENTER PLATE AND BOOM ASSEMBLY INSTRUCTIONS

Center plate SJ6	2		M4 alloy low profile nyloc nut	18	
Boom 410mm SJ	6		Universal adapter plate	1	
Boom bracket inner SJ	12		Standoffs 12mm	14	
Boom bracket outer SJ	16		M3 nylon nut	14	
M4x40mm ss socket head screw	4		M3x6mm nylon machine screws	14	
M4x35mm alloy socket head screw	12				
M4x30mm socket head cap screw	6				

**NOTE:** For this model the curve of boom brackets face inward following the curvature of the plate.

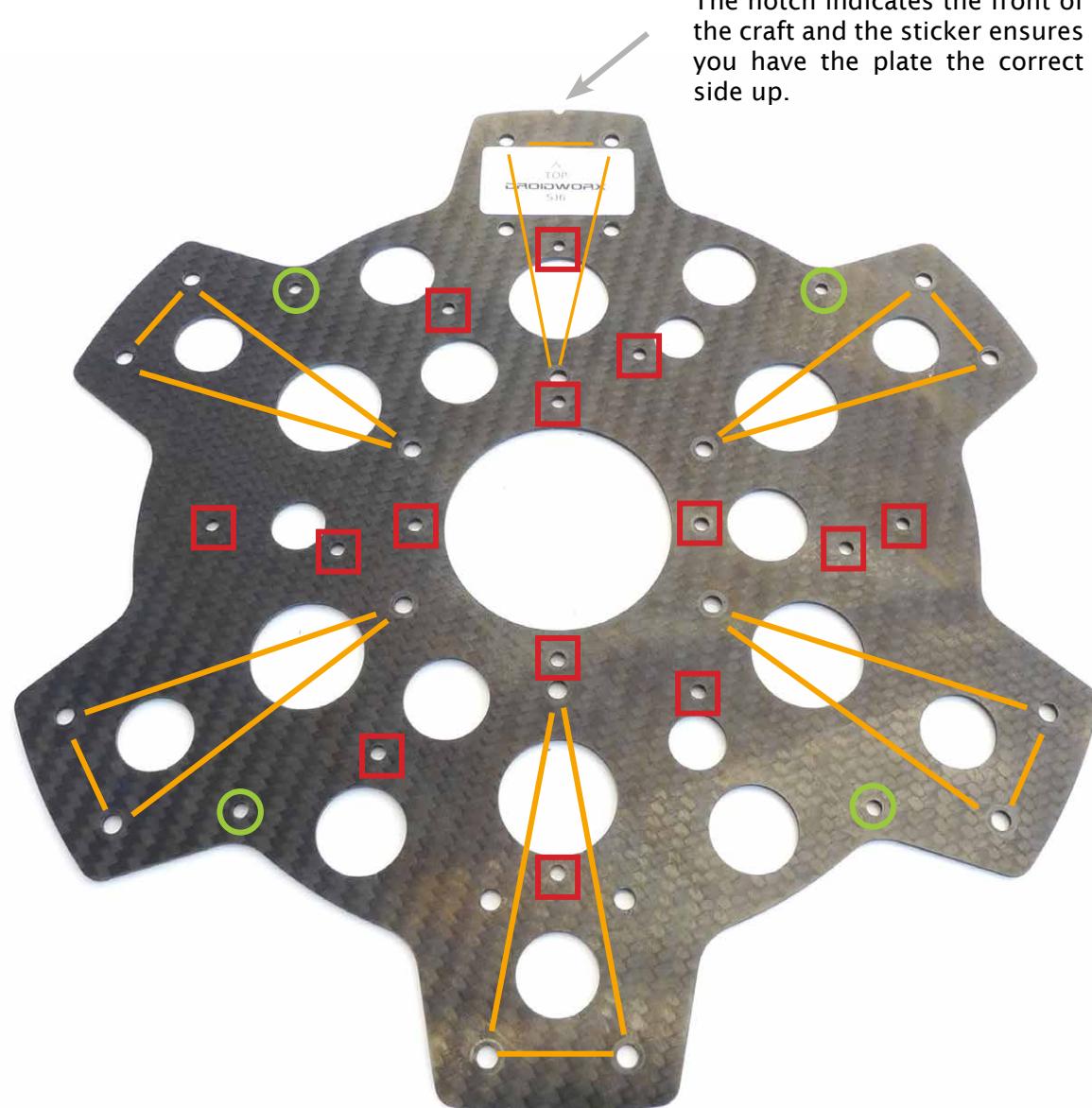


Take a moment to familiarise yourself with the centre plate setup to get an understanding which holes relates to which parts. Take one of the plates and lay it out with the notch at the top and the sticker facing up.

# 1

Attach the four M4 x 20mm screws through the landing gear plates into the threaded ends of the gear rail tubes; place a nylon washer both sides of the center plate. Try not to over tighten, just make firm contact.

- Circles show the holes used for dome fixing.
- Lines indicate the boom mount triangle pattern used for all models.
- Squares represent the remaining holes you can attach the standoffs to. This is all dependent on which electronics you will be using. In this guide we will demonstrate how to attach the Universal Adapter Plate we send with all of our crafts.

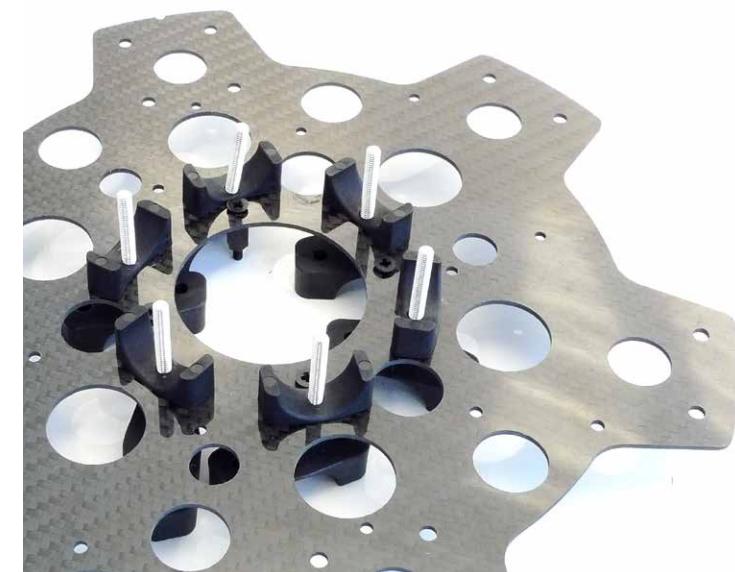


**2**

Fit the electronics standoffs by slotting the supplied nylon M3 x 6mm countersunk screws through the desired holes from the underside. Please ensure the holes for the dome fixing and the triangle boom mounting pattern are not used for this.

**3**

Push the M4 x 30mm alloy screws through the centre row of the boom mount pattern. Turning the plate upside down slot the boom bracket inners onto these screws.



**4**

Lay the booms over the protruding screws. You will notice both ends have holes drilled.

**Please ensure you use the holes** that are closest to the end of the boom. These holes are 11mm from the edge.

**5**

Place the remaining boom bracket inners on top of the booms through the screws.

**6**

Position the second centre plate over the boom cluster **Ensure you align the hole pattern and front notches** so the screws are showing.

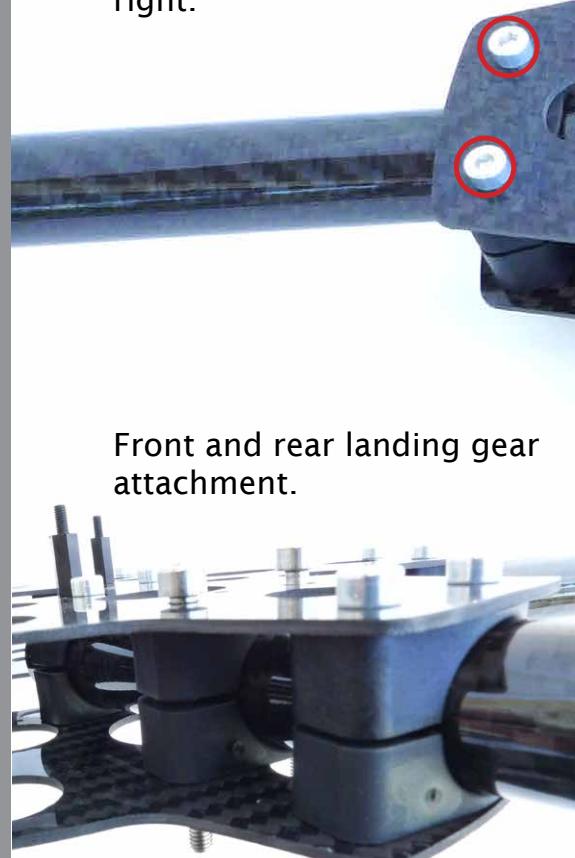
Fit the M4 alloy nyloc nuts to the screws - do not tighten them, just make them secure whilst you work your way around.



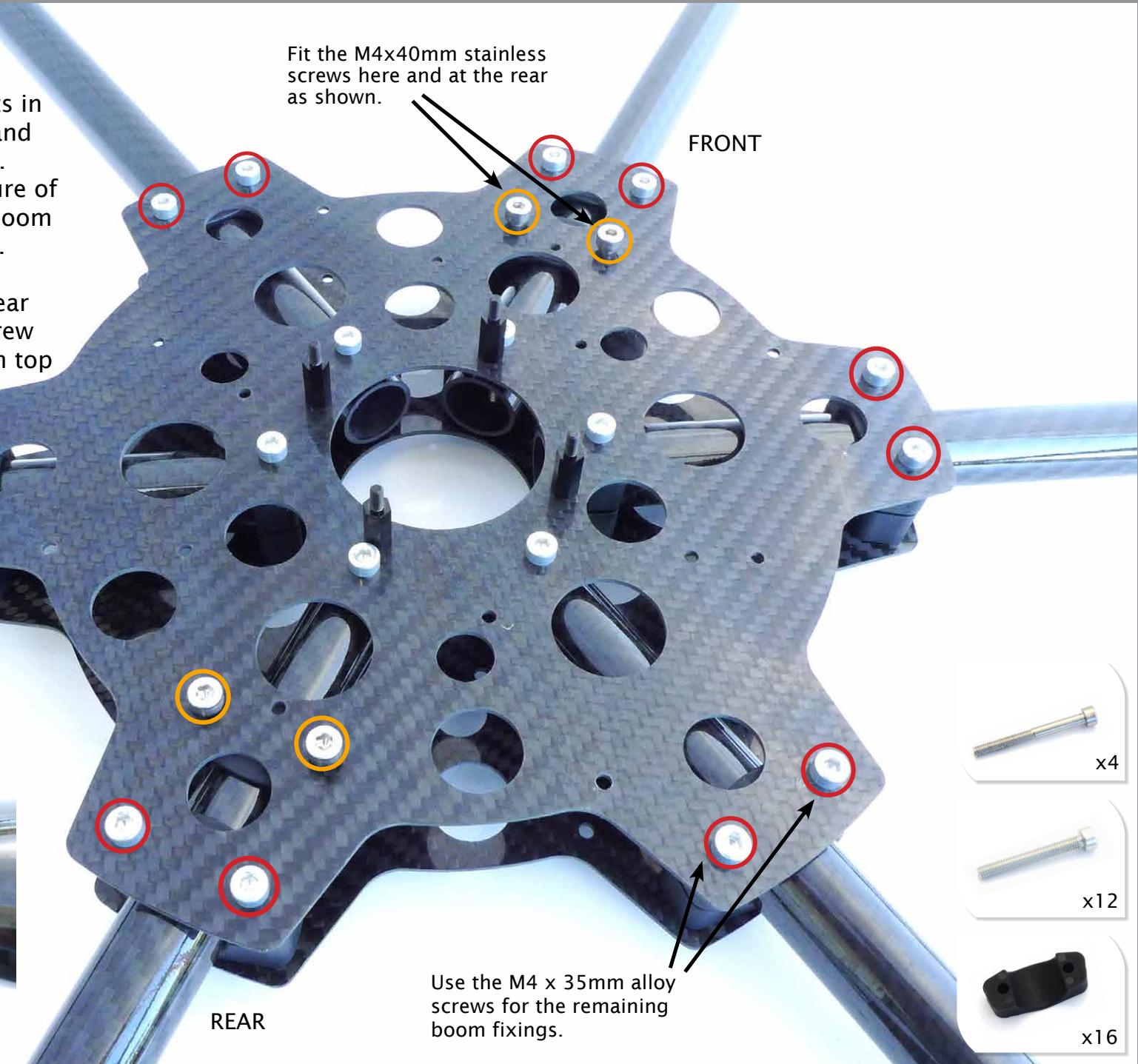
7

Slide the outer boom brackets in place. One above the boom and one below till the holes align. These also follow the curvature of the plates. Do this for each boom and affix with correct screws.

The front and rear landing gear screws need to be slotted through boom brackets also as shown top right.



Front and rear landing gear attachment.



**8**

Finally screw the remaining M3 alloy nuts to all of the alloy screws and tighten, leaving the stainless landing gear mounting screws loose. You should now have a complete setup that looks like this.



x12

## PART 2 : CENTER PLATE AND BOOM ASSEMBLY INSTRUCTIONS

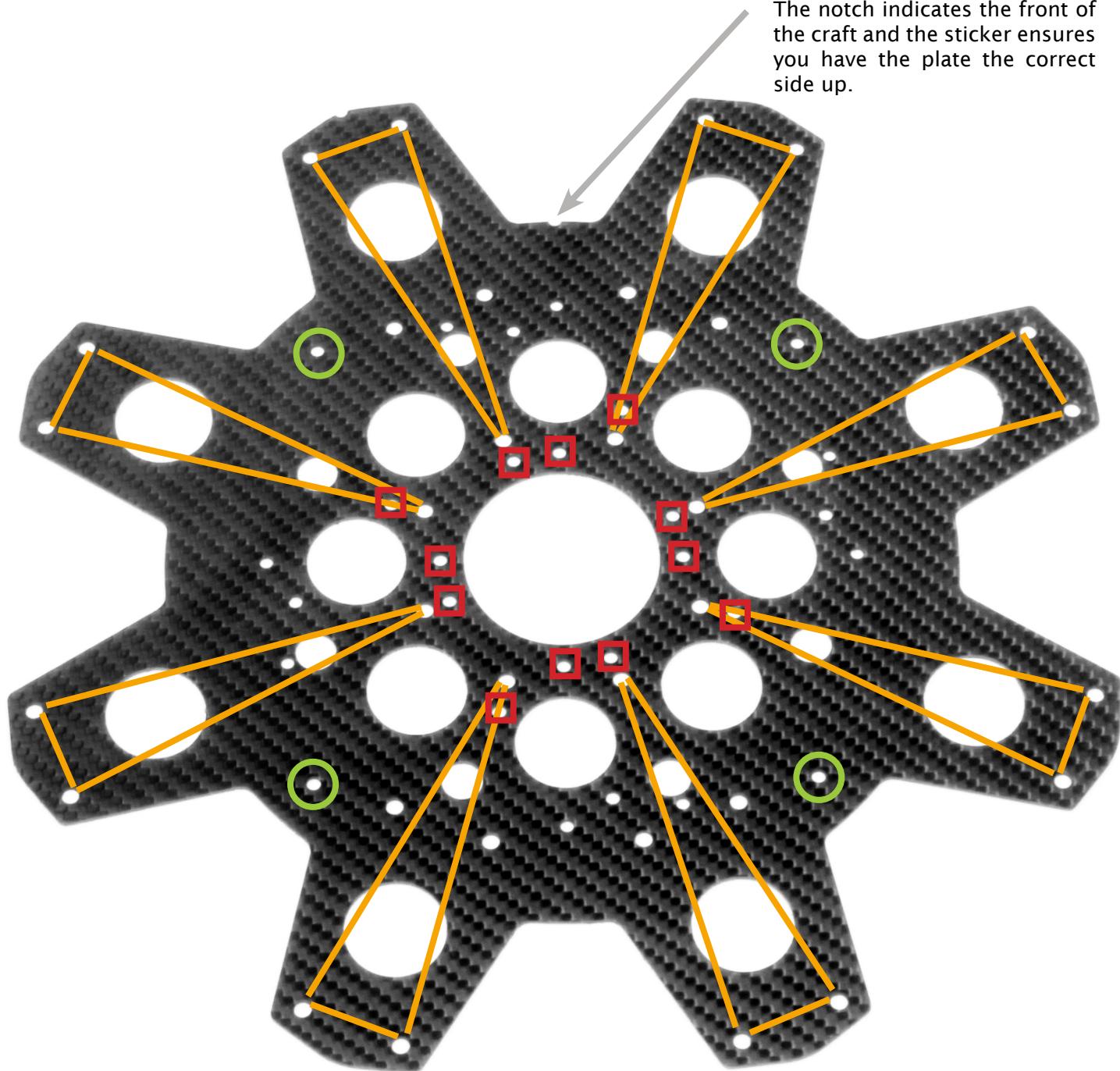
Center plate SJ8	2		M4 alloy low profile nyloc nut	24	
Boom 500mm SJ	8		Universal adapter plate	1	
Boom bracket inner SJ	16		Standoffs 12mm	16	
Boom bracket outer SJ	24		M3 nylon nut	16	
M4x40mm ss socket head screw	8		M3x6mm nylon machine screws	16	
M4x35mm socket head cap screw	16		Crash Cage Mounting bracket (NB: part comes in Crash Cage Pack)	8	
M4x30mm socket head cap screw	8				



**NOTE:** For this model the curve of the inner boom brackets face outward against the curvature of the plate and the outer boom brackets face inward following the curvature of the plate.

## 1

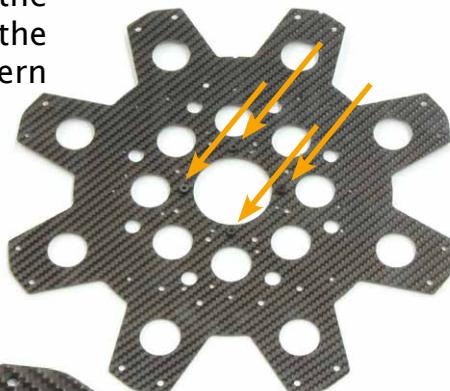
Take a moment to familiarise yourself with the centre plate setup to get an understanding which holes relates to which parts. Take one of the plates and lay it out with the notch at the top and the sticker facing up.



2

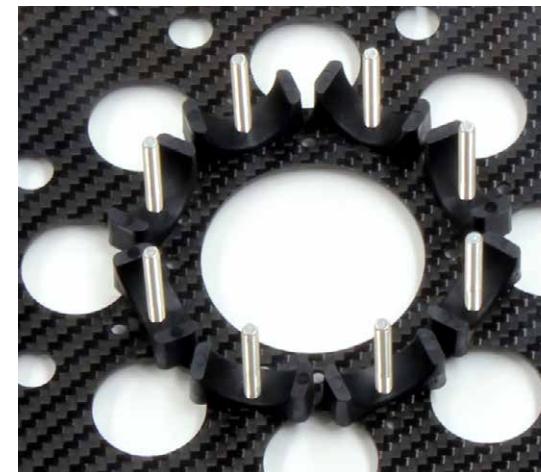
Fit the electronics standoffs by slotting the supplied nylon M3 x 6mm countersunk screws through the desired holes from the underside. Please ensure the holes for the dome fixing and the triangle boom mounting pattern are not used for this.

**NOTE:** 12x nylon standoff hardware supplied for extra electronic fittings.



3

Push the M4 x 30mm alloy screws through the centre row of the boom mount pattern. Turning the plate upside down slot the boom bracket inners onto these screws.



4

Lay the booms over the protruding screws. You will notice both ends have holes drilled.



**Please ensure you use the holes that are closest to the end of the boom. These holes are 11mm from the edge.**



**5**

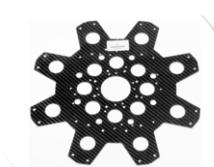
Place the remaining boom bracket inners on top of the booms through the screws.



x8

**6**

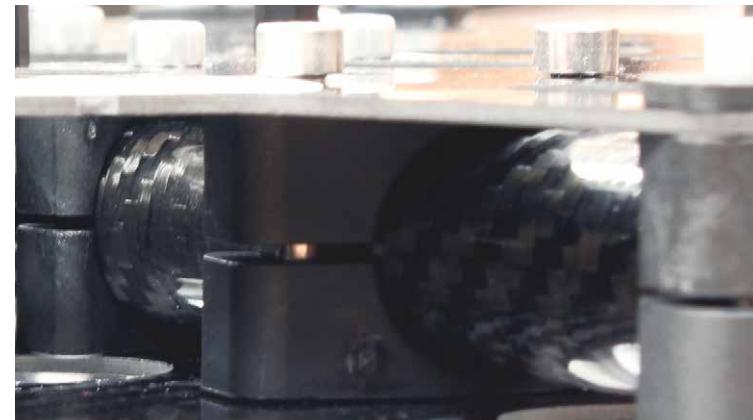
Position the second centre plate over the boom cluster **Ensure you align the hole pattern and front notches** so the screws are showing. Fit the M4 alloy nyloc nuts to the screws - do not tighten them, just make them secure whilst you work your way around.



x8

**7**

**NOTE:** To attach landing gear, two outer boom brackets sit inside front and rear as shown.

**8**

Slide the outer boom brackets in place. One above the boom and one below till the holes align. These follow the curvature of the plates.



x2

**9**

Place Crash Cage Mounting bracket as shown. Fit the M4 x 35mm screws through the top plate connecting both plates and boom brackets.



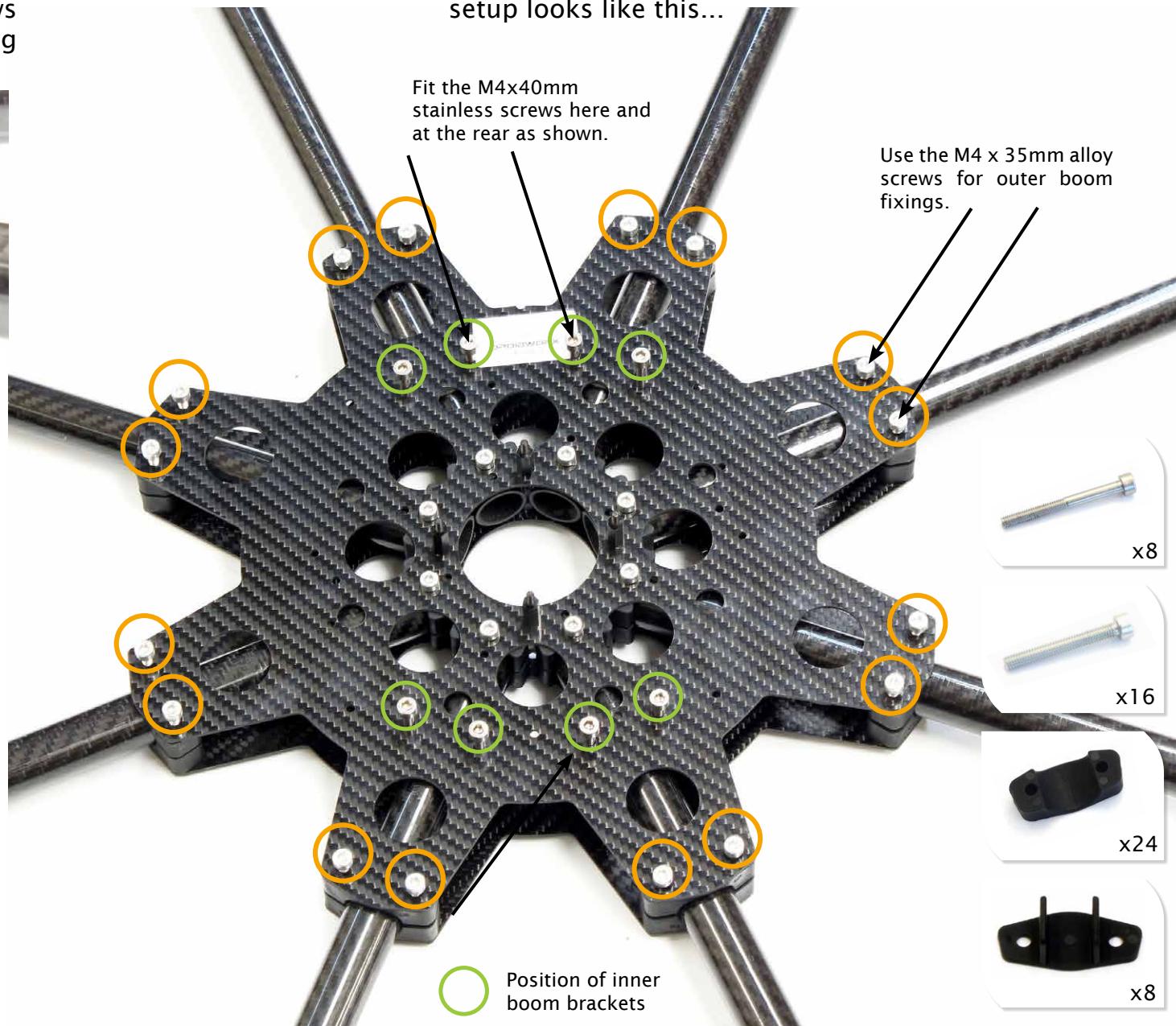
x1



x2

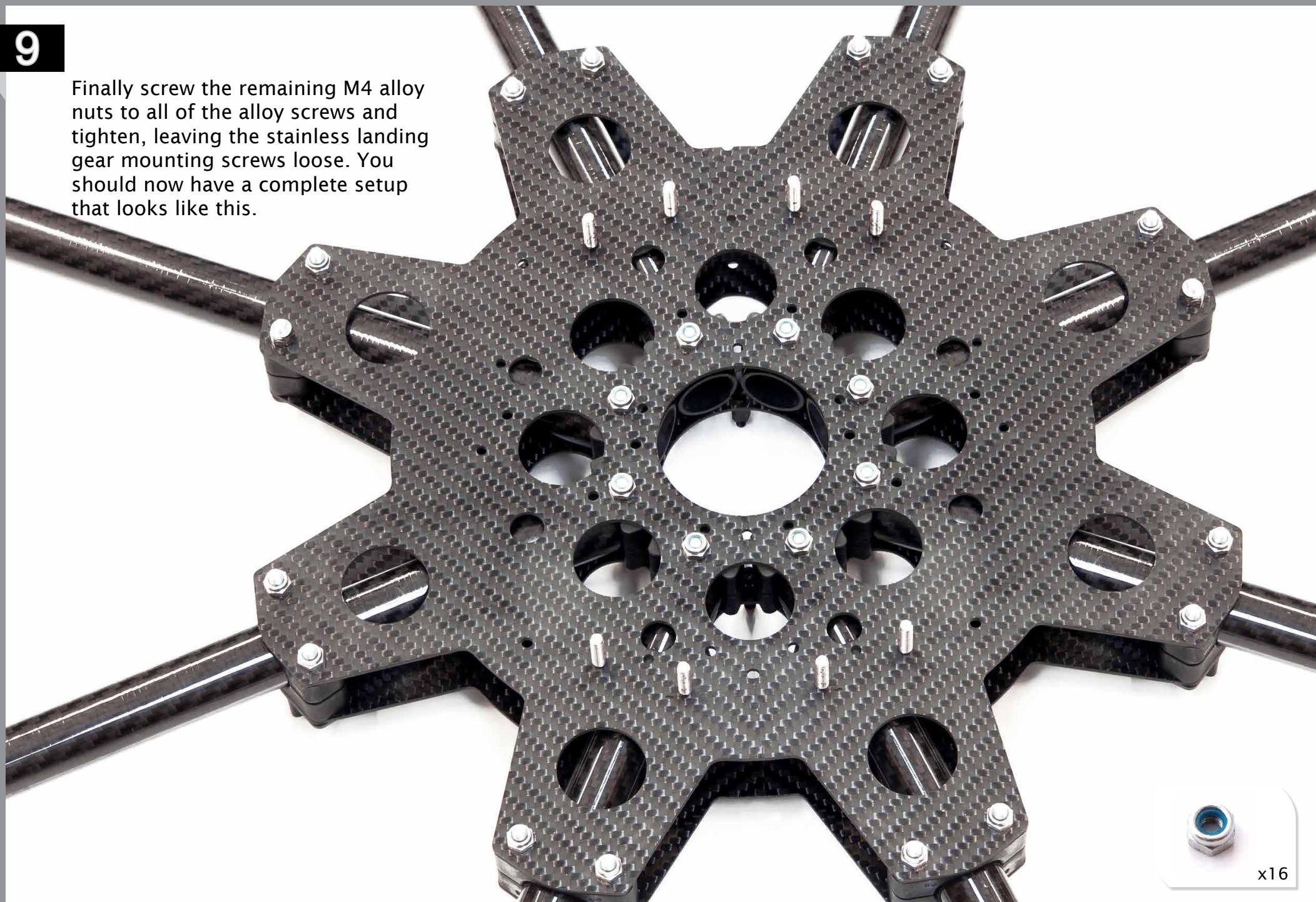
**10**

Repeat steps 7 and 8 so your setup looks like this...



**9**

Finally screw the remaining M4 alloy nuts to all of the alloy screws and tighten, leaving the stainless landing gear mounting screws loose. You should now have a complete setup that looks like this.



x16

## PART 3 : LANDING GEAR - CENTER PLATE ATTACHMENT INSTRUCTIONS



Your SkyJib 6 Center Plate and Boom Setup



Your Landing Gear Setup

Carbon fiber gear rail bracing 2



M3x12mm Alloy socket screw 4



Vibration isolator 2



M3 Alloy nyloc nut 4

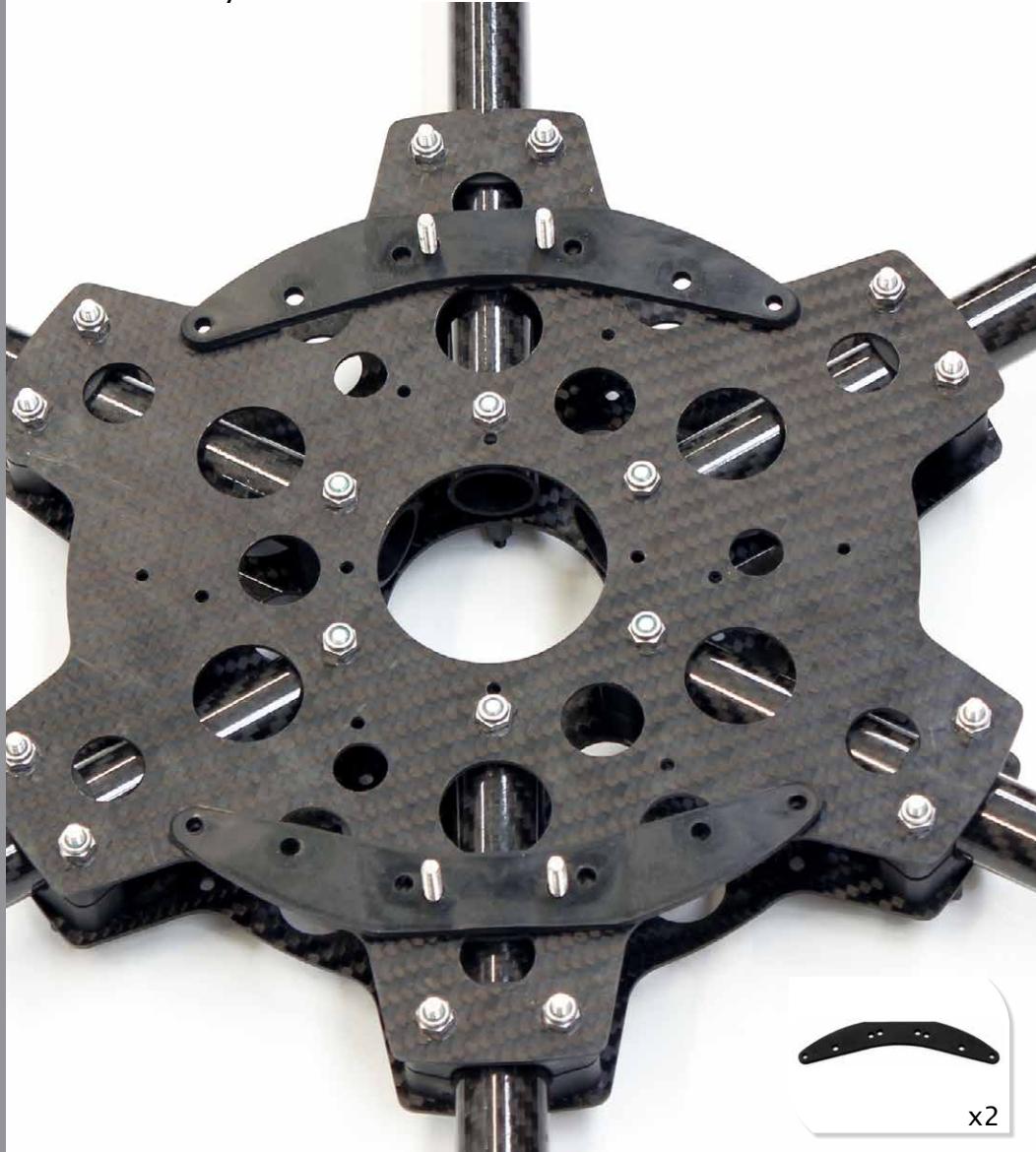


M4 Stainless nyloc nut 4



**1**

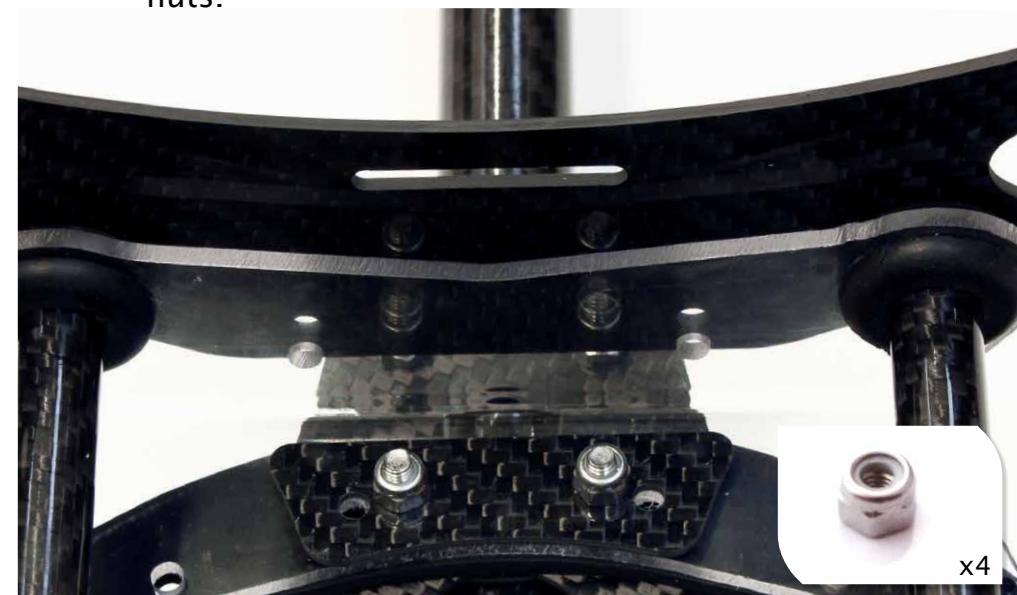
Fit the vibration dampeners to the M4 x 40mm stainless screws you left loose during the Center Plate assembly.

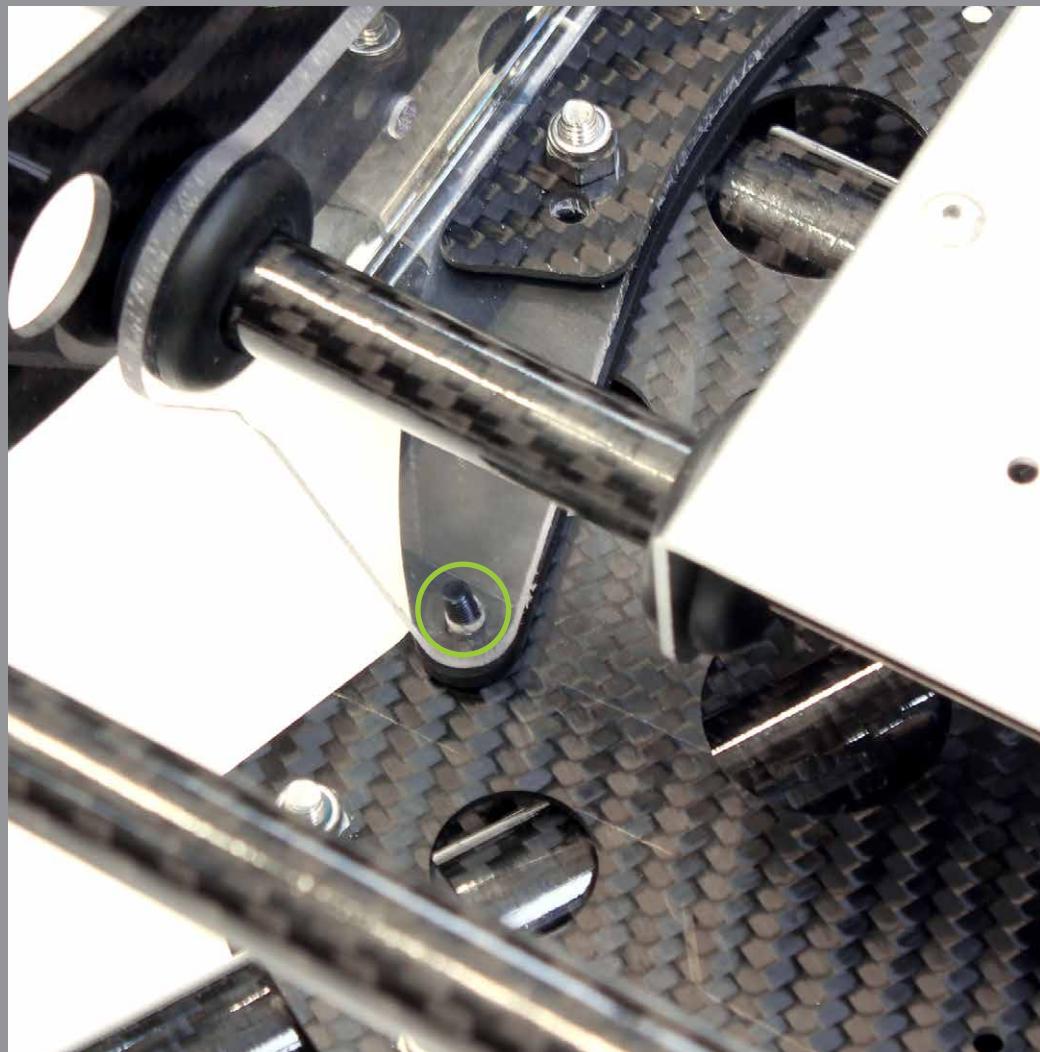
**2**

Place the landing gear over the M4 x 40mm mounting screws followed by the Carbon Fibre backing plate.

**3**

Secure with the M4 stainless nyloc nuts.

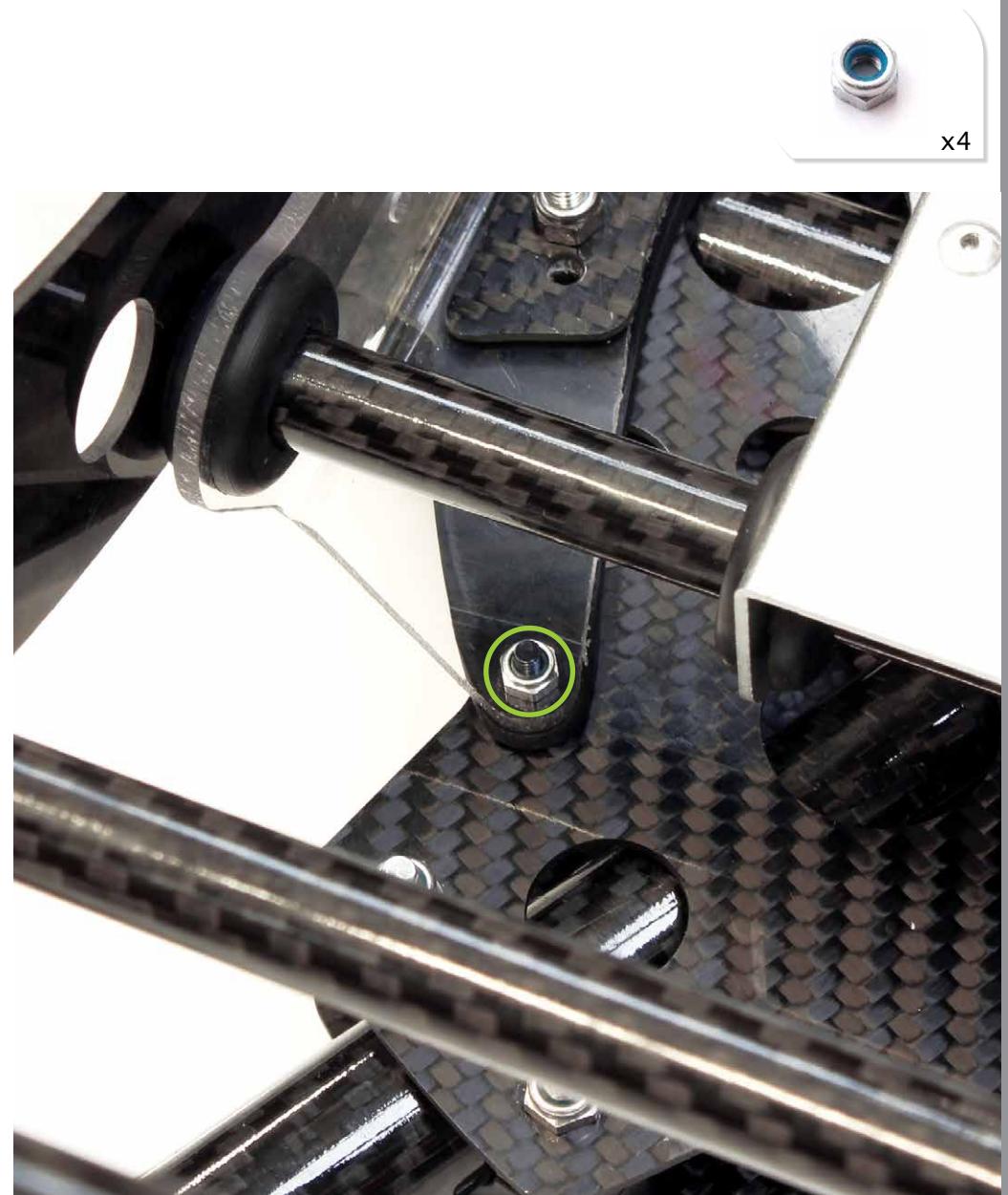


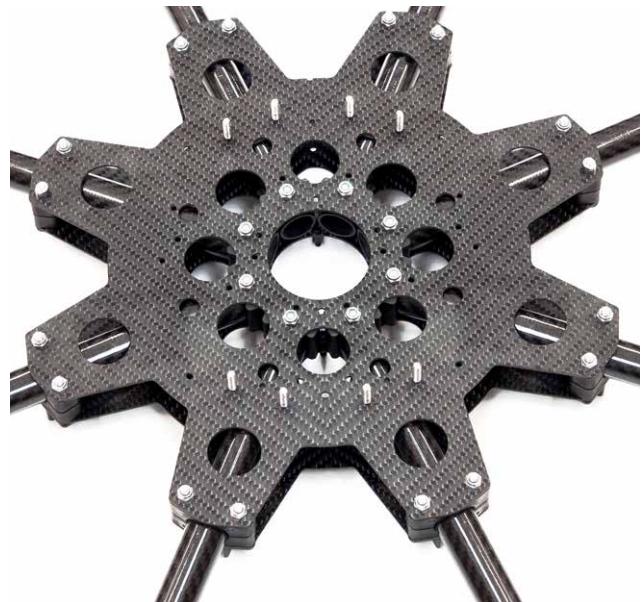
**4**

Slot two M3x12mm alloy socket screws through the setup...

**5**

... and tighten with a M3 nyloc nut.





Your Skyjib 6 Center Plate and Boom Setup



Your Landing Gear Setup

Carbon fiber gear rail bracing 2



M4 Stainless nyloc nut 8



Gear rail Vibration Dampener 2



**1**

Fit the vibration dampener to the M4 x 40mm stainless screws you left loose during the Center Plate assembly.

**2**

Place the landing gear over the M4 x 40mm mounting screws followed by the Carbon Fibre backing plate.

**3**

Secure with the M4 stainless nyloc nuts.



## PART 4 : SKYJIB 50mm ENGINE MOUNT ASSEMBLY

Engine bracket SJ - fiber reinforced 2



CF engine mount bracing plate 1



Engine mount disk - alloy - SJ 1



M4 stainless nyloc nut 2



NOTE: The M4x40mm stainless screws provided are not required here. They can be used when setting up a X4 coaxial configuration. Please contact us for more details on this.

M4x35mm socket head cap screw 2



Heat shrink (5 cm) 1



M4x8 stainless machine screws 4



**OR**(dependent on motors)

M3x8 stainless machine screws 4

...and your engine!



**NOTE:** This Build Manual is shown using AXi 4120 series engines. However, the lighter **2826 series engines** are recommended for standard set-ups.

**1**

Fit the two M3 x 30mm alloy screw through the engine mount disk - make sure the chamfered slots are facing inwards.

**2**

Affix the engine to the engine mount disk by slotting the desired machine screws through the chamfered side of the disk and into the firewall mount holes of the engine.

**3**

Add an engine mount bracket as shown.



**4**

Apply the heat shrink.

**6**

Take up the slack in the nuts. Make sure the engine assembly is vertical in relation to the crafts horizontal plane.

**5**

Insert boom with the wires to the back and locate the engine mount dimple into the top boom locating hole. Add the bottom bracket and CF bracing plate and "start" to thread on the two M4 stainless nyloc nuts.

**NOTE:**

There is some play in the boom...it can be twisted slightly to get the engine mount vertical.

Then tighten the inner boom mounting assembly at the centre plate section and then tighten the engine mounts evenly.

If the top of the engine mount bolt is not accessible - use long nose pliers to hold the bolt while you tighten the nut.

## PART 5 : CRASH CAGE ASSEMBLIES

FC cage hub

2



FC cage arch

12



M3 Nylon washer

26



M3x10mm nylon spacer

13



M3x20mm socket head cap screw

13



M3 alloy nyloc nut

13



**1**

Crash Cage mounting brackets were assembled in the Center Plate and Boom Assembly section as shown.

**2**

Take an arch and push the M3 x 20mm screws and washer through the holes mid way up the plate. Slot a M3 x 10mm spacer onto the screw followed by the other arch and secure with a M3 alloy nyloc nut and washer.



REPEAT this for each pair of arches.

**3**

Affix each arch setup to the mounting brackets using the same method as step 2.

*x2**x2*

**4**

Place a cage hub on top of the arches ensuring the notches slot into the hub grooves.



**5**

Finally slot a M3 x 20mm screw with washer through the hole on the top hub. Then slot second hub and secure with a M3 alloy nyloc nut and second washer.



## PART 5 : CRASH CAGE ASSEMBLIES

FC cage hub

2



FC cage arch

12



M3 Nylon washer

48



M3x10mm nylon spacer

24



M3x20mm socket head cap screw

24



M3 alloy nyloc nut

24



**1****2**

Take an arch and push the M3 x 20mm screws and washer through the holes mid way up the plate. Slot a M3 x 10mm spacer onto the screw followed by the other arch and secure with a M3 alloy nyloc nut and washer.



REPEAT this for each pair of arches.

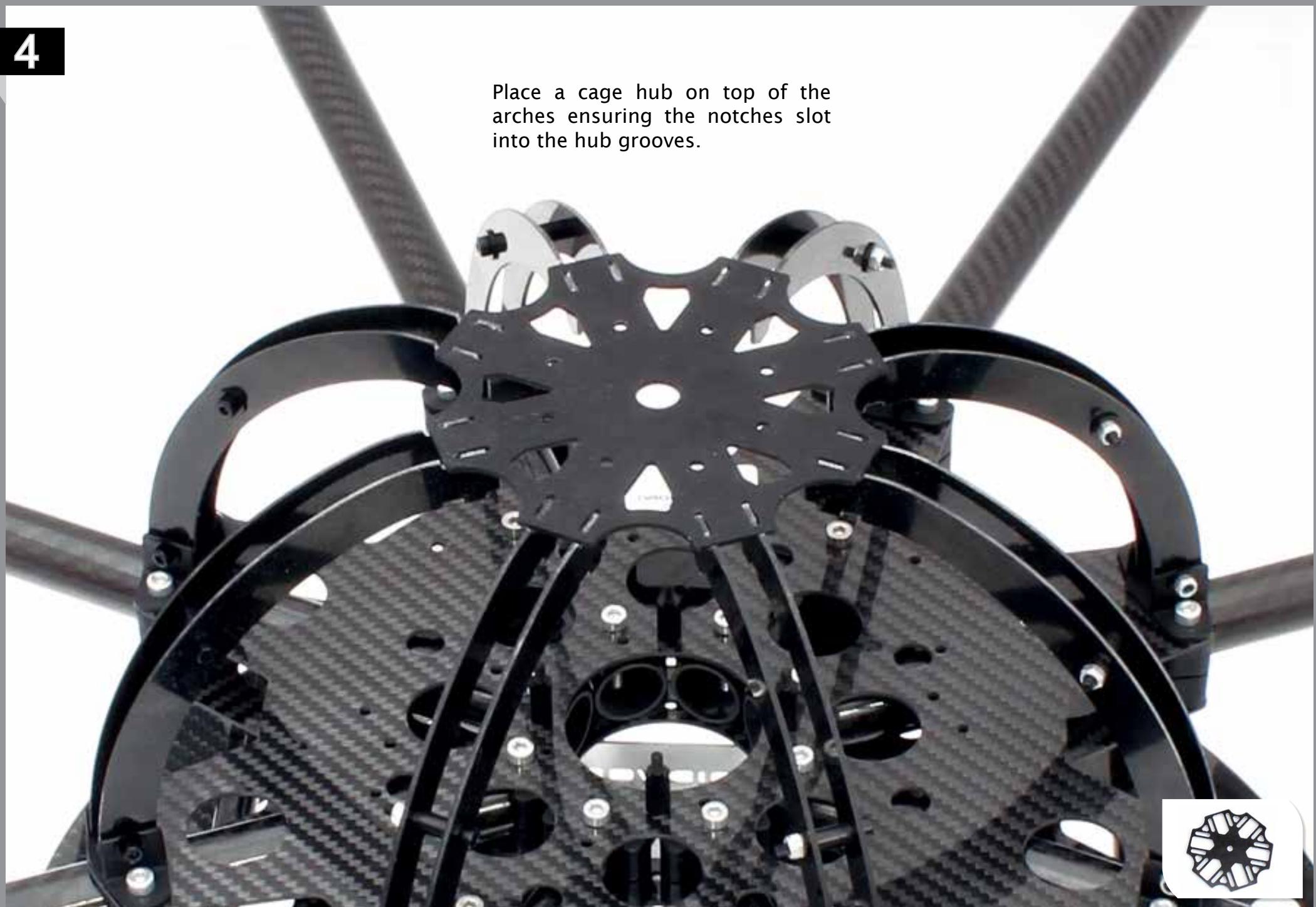
**3**

Affix each arch setup to the mounting brackets using the same method as step 2.



4

Place a cage hub on top of the arches ensuring the notches slot into the hub grooves.





5

Finally slot a M3 x 20mm screw with washer through the hole on the top hub. Then slot second hub and secure with a M3 alloy nyloc nut and second washer.

x2



## PART 6 : Dome Cover Assembly

Dome

1



Alloy dome fixing pins standard 4



Alloy dome fixing pins extended 4



R-clips

4



Dome grommets

8



Loop wire (10 cm)

4



Crimps

8



V3 dome sticker

1



**1**

Fit 4 of the rubber grommets to the dome as shown.

**2**

Slot 4 of the desired dome fixing pins through the grommets. There are two holes milled into the pins to adjust tension.



Standard dome pin setup

Extended dome pin setup

**3**

Cut the stainless steel coated wire to around 10cm's each and feed on one of the crimps.

**4**

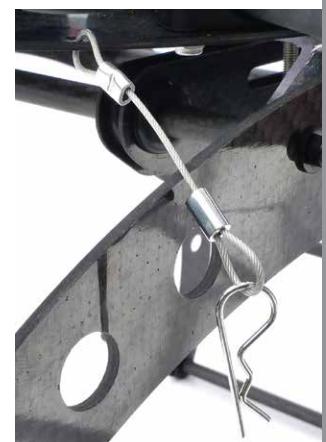
Fit the wire through the lower center plate hole looping it back on itself pushing the end through the crimp.



Pull the crimp tight making the loop smaller and use some pliers to squash it.



Repeat this process on the other end of the wire and push on a R-clip.



# 5

Repeat the last couple of steps so you have all 4 dome fixings in place. You can now place the dome on your assembly, apply the sticker and locate the R-clip into the dome pin hole.



## TIPS, TRICKS & RECOMMENDATIONS



## PART 1: REVERSING THE INNER BOOM BRACKET SCREWS

As we hope for nothing to go wrong with your craft sometimes accidents can happen. A good tip for easy replacement of a boom bracket or boom is to reverse the

inner boom bracket screws so they can be removed without disrupting you powerboard setup.



## PART 2: ATTACHING YOUR BOOM NACELLES

**Application:** Bonding surfaces should be clean and dry. Once the adhesive is applied, the bonded parts should be held in contact until the part has developed handling strength. This will occur in 4-8 hours at 77 F after which the pressure used during cure may be removed. Since full bond has not yet been attained, load application should be small at this time. It is not necessary to clamp the parts unless movement during curing is likely.



We recommend the use of a good 2K glue, preferably Loctite Hysol 9462

