



MINI VTAIL FRAME ASSEMBLY GUIDE



Revision 1.0 February 7, 2014

## Mini VTail

Thank you for purchasing a Lynxmotion Mini VTail multi-rotor kit. This guide will help you assemble the mechanical frame. Should any parts be missing or broken, please contact us via the RobotShop Support Center or <supportcenter@robotshop.com>.

### G10 PARTS

- 2x Mini VTail Top Front Arms
- 2x Mini VTail Bottom Front Arms
- 3x Mini VTail Landing Gear
- 2x Mini VTail Rear Arms
- 2x Mini VTail Rear V Supports
- 2x Mini VTail Top Tail Motor Mounts
- 2x Mini VTail Bottom Tail Motor Mounts
- 1x Mini VTail Bottom Body Plate
- 1x Mini VTail Middle Body Plate
- 1x Mini VTail Top Body Plate

### HARDWARE

- 6x 4-40 x 0.5" Stainless Steel Cup Point Set Screws (For Top Body Plate)
- 55x 4-40 x 3/16" Steel Socket Head Screws
- 17x 4-40 x 0.5" Aluminum Hex Standoffs
- 11x 4-40 x 0.25" Aluminum Hex Standoffs
- 6x 4-40 x 1" Aluminum Hex Standoffs
- 4x 1.25" x 0.25" Foam w/ Adhesive back
- 1x 9" Velcro strap

Note: hardware type / quantity may change slightly depending on availability.

## Rear Motor Mount Sub-Assembly (Build 2x)

- 1x Mini VTail Bottom Tail Motor Mount
- 3x 4-40 x 0.25" Aluminum Hex Standoffs
- 3x 4-40 x 3/16" Steel Socket Head Screws



## Foam Arm Sub-Assembly (Build 2x)

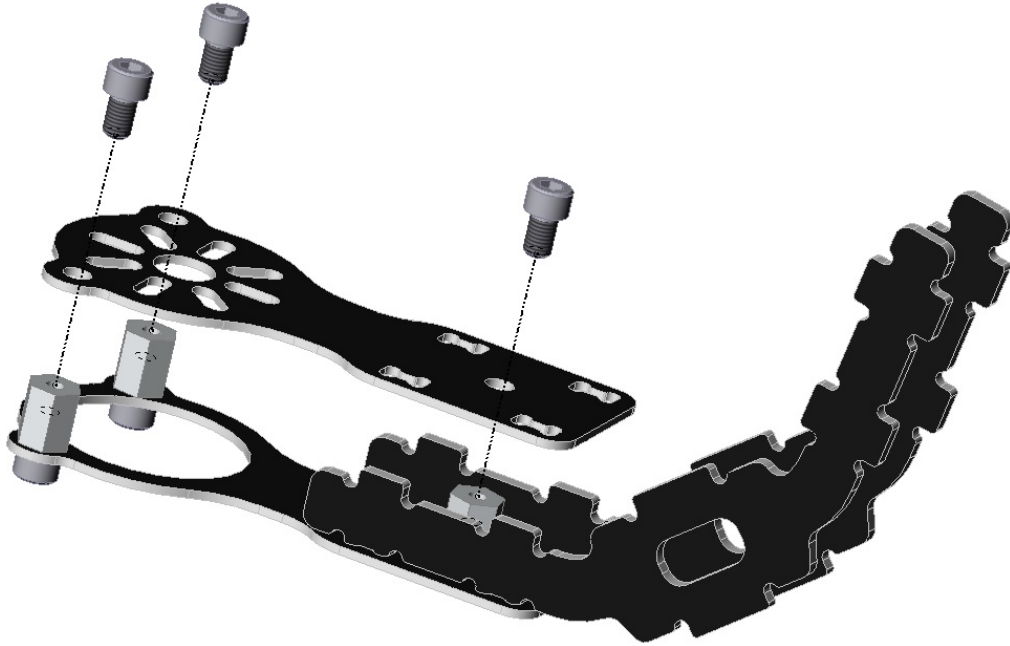
- 1x Mini VTail Rear Arm
- 2x 1.25" x 0.25" Foam w/ Adhesive back (remove backing)



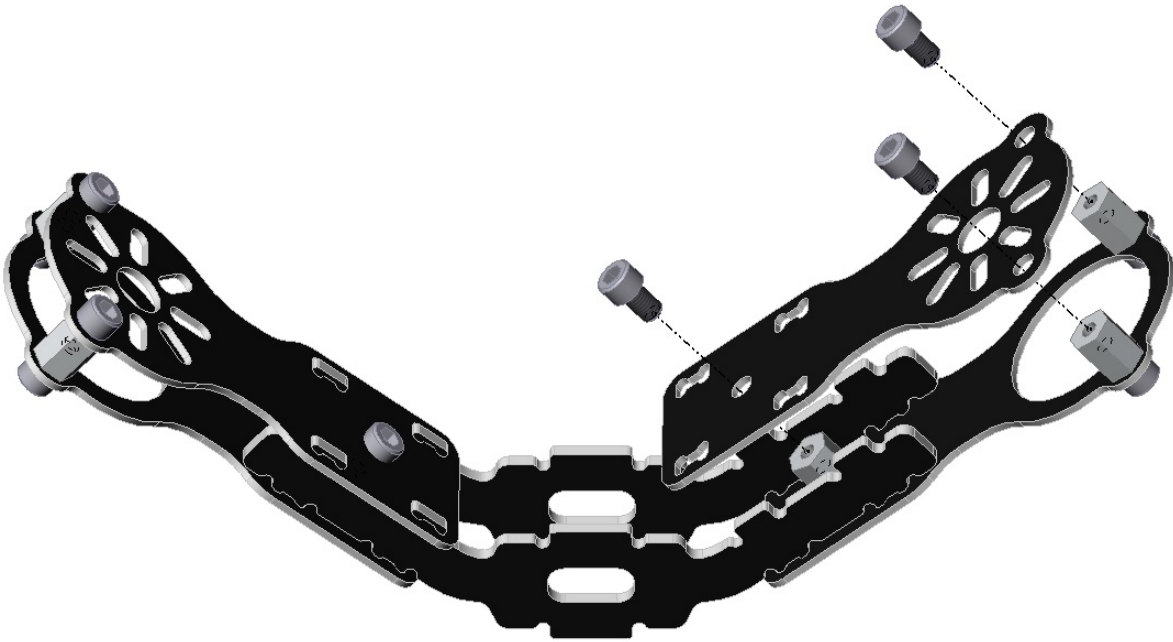
**Repeat this step for the other rear arm plate.**

## Rear 'V' Tail Sub-Assembly

- 2x Rear Motor Mount Sub-Assemblies
- 2x Mini VTail Top Tail Motor Mounts
- 6x 4-40 x 3/16" Steel Socket Head Screws

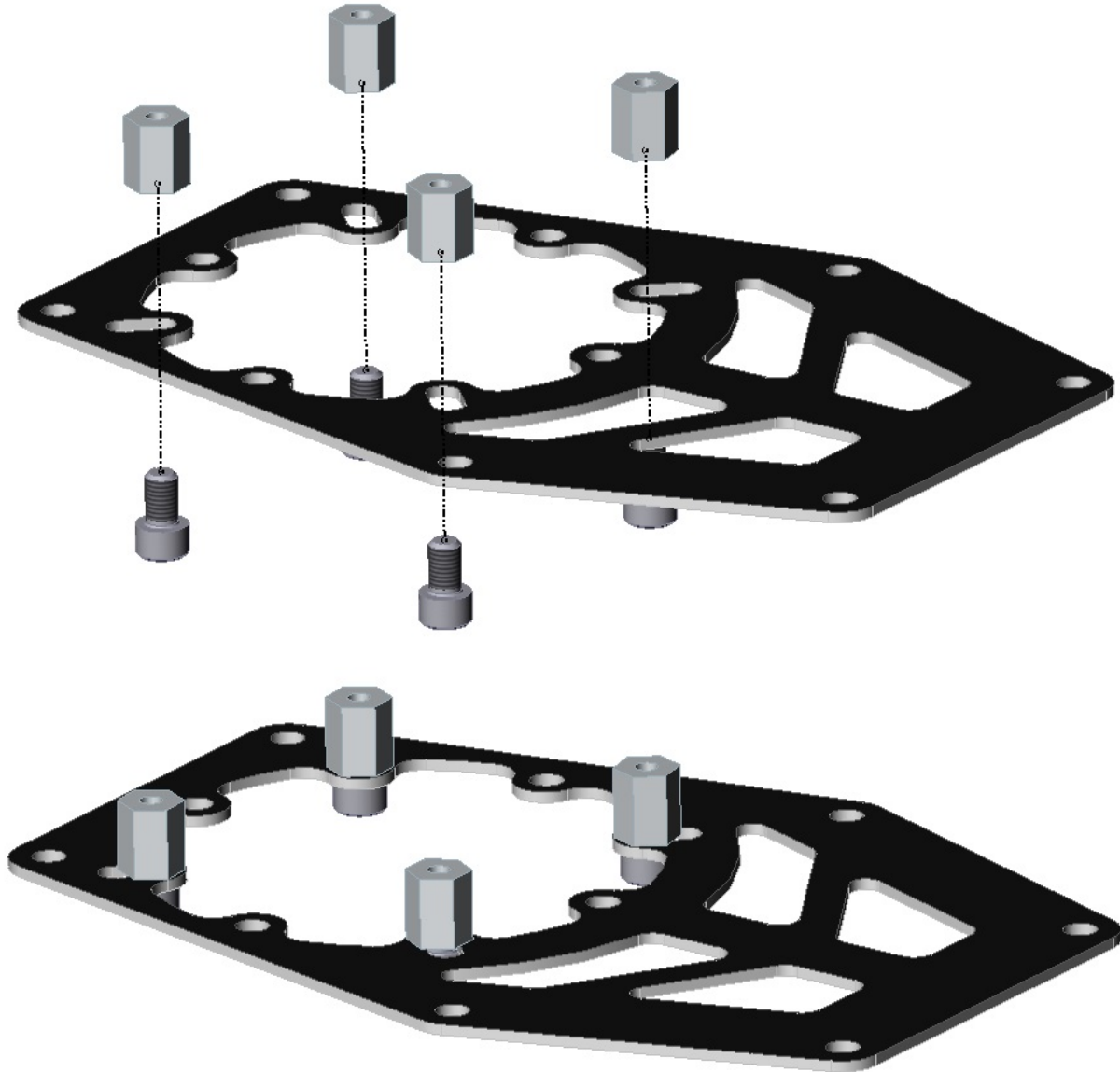


Repeat for other side



## Electronics Mount Sub-Assembly

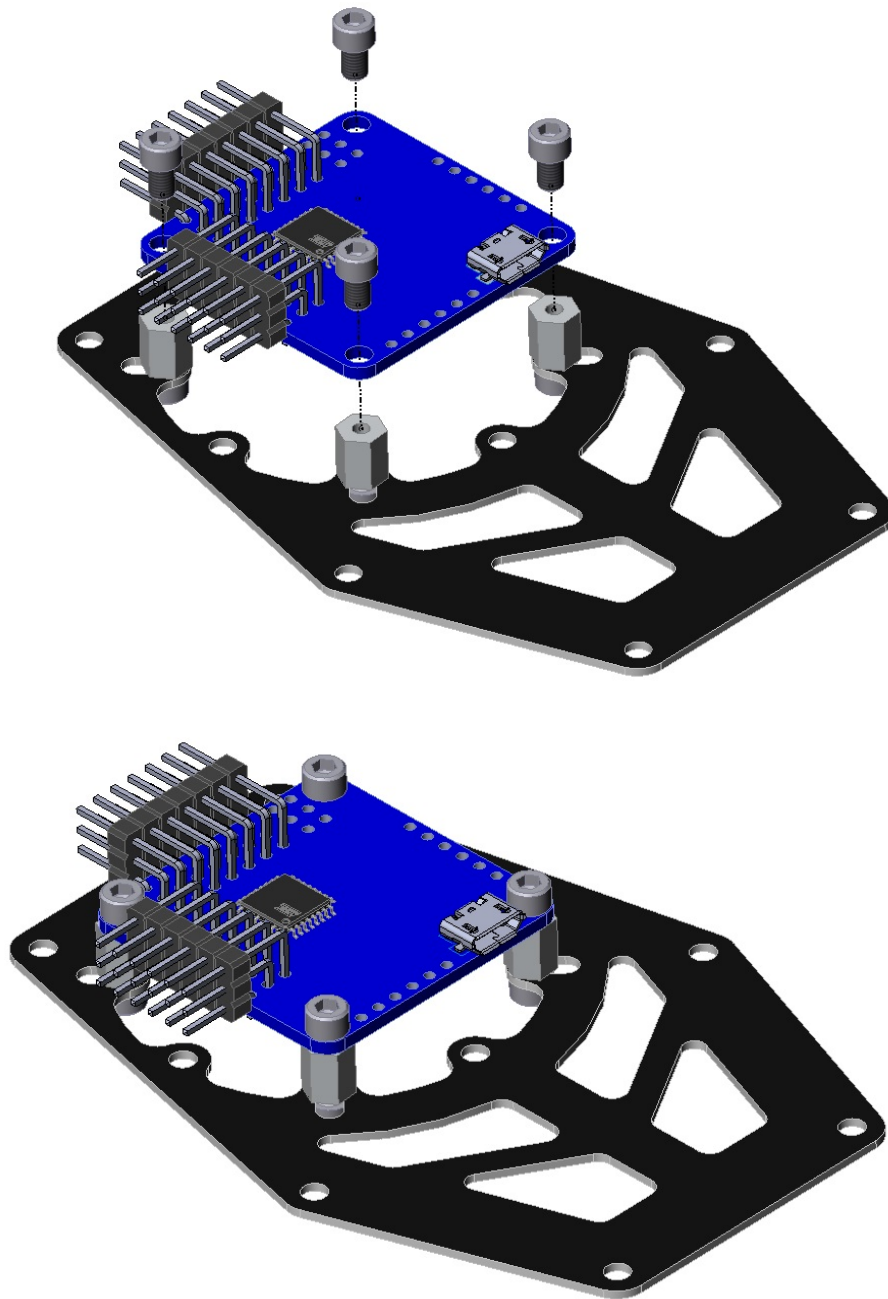
- 1x Mini VTail Middle Body Plate
- 4x 4-40 x 0.25" Aluminum Hex Standoffs
- 4x 4-40 x 3/16" Steel Socket Head Screws



## (Optional) Flight Controller Mounting

At this point, we suggest that you install the flight controller. Note that for the FLIP MultiWii, the USB port faces the FRONT of the VTail. You will find more details / explanation in the electronics assembly guide.

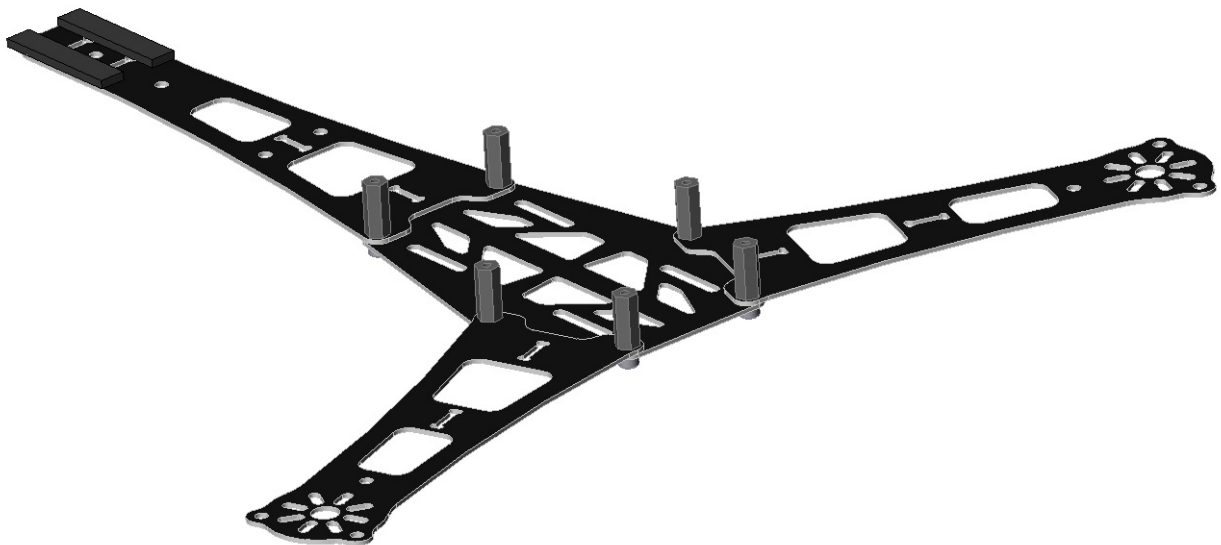
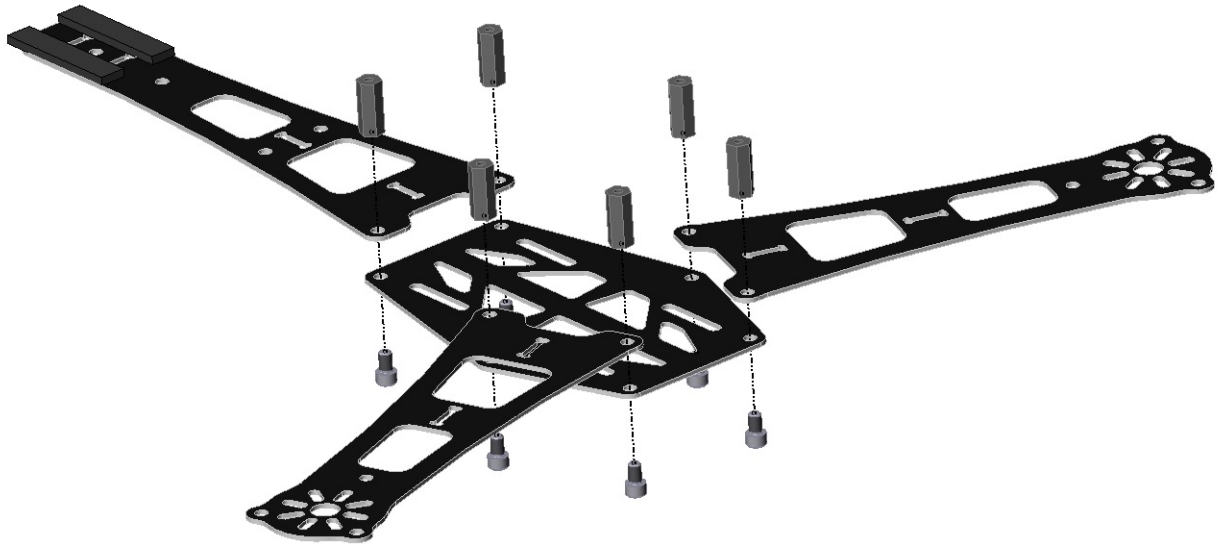
- 4x 4-40 x 3/16" Steel Socket Head Screws





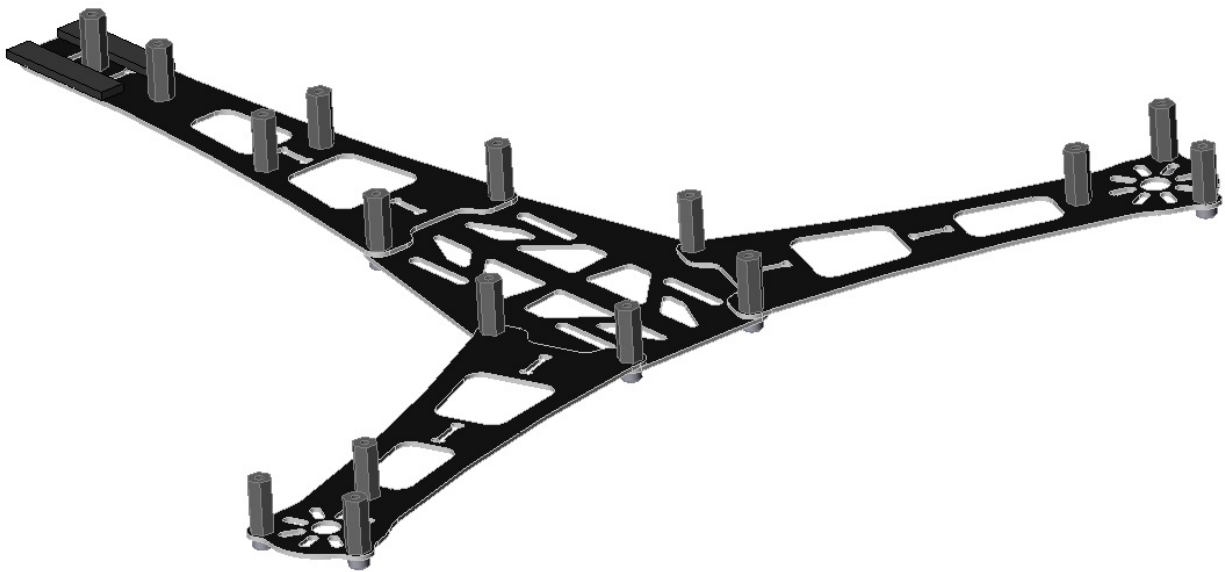
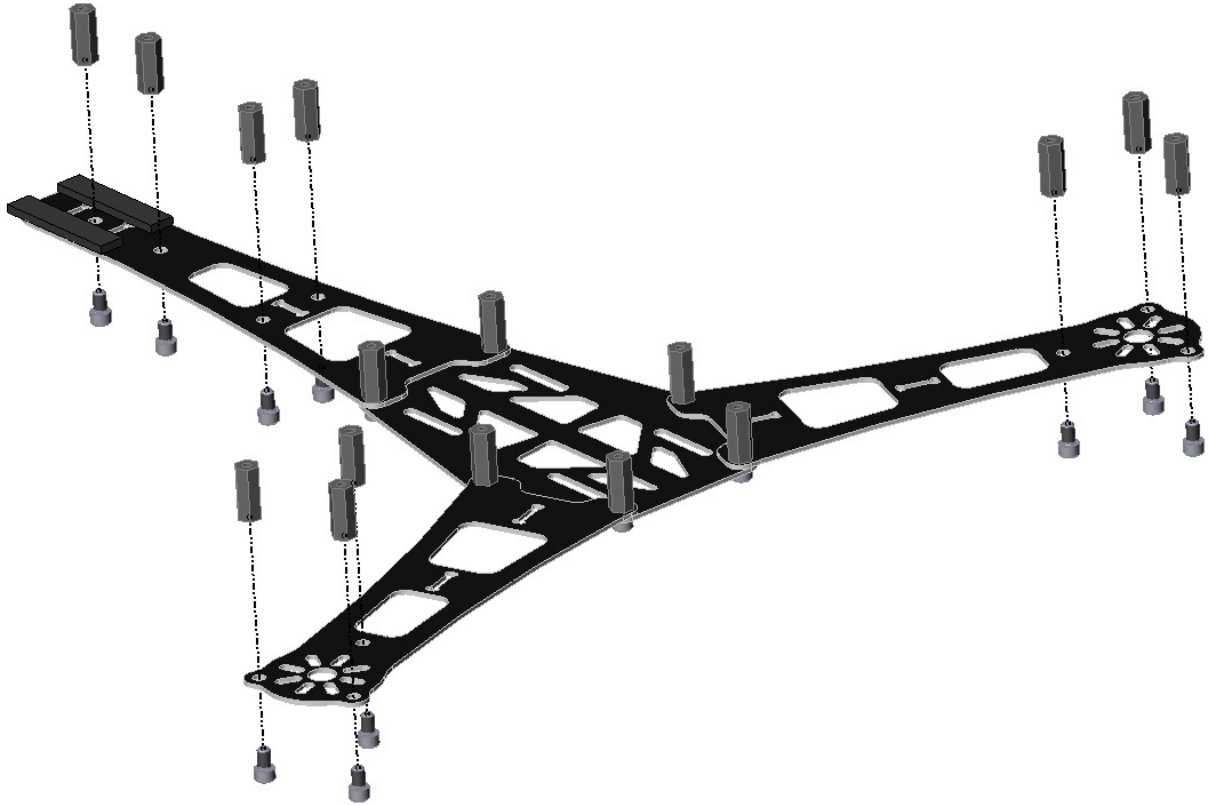
## Base

- 2x Mini VTail Bottom Front Arm
- 1x Mini VTail Bottom Body Plate
- 1x Foam Rear Arm Sub-Assembly
- 6x 4-40 x 3/16" Steel Socket Head Screws
- 6x 4-40 x 0.5" Aluminum Hex Standoffs



## Standoffs

- 10x 4-40 x 3/16" Steel Socket Head Screws
- 10x 4-40 x 0.5" Aluminum Hex Standoffs



## Front Arms

- 2x Mini VTail Top Front Arm
- 2x Mini VTail Landing
- 6x 4-40 x 3/16" Steel Socket Head Screws



## Rear Arm, V Tail & Landing

- Rear V Tail Sub-Assembly
- 1x Mini VTail Landing
- 4x 4-40 x 3/16" Steel Socket Head Screws

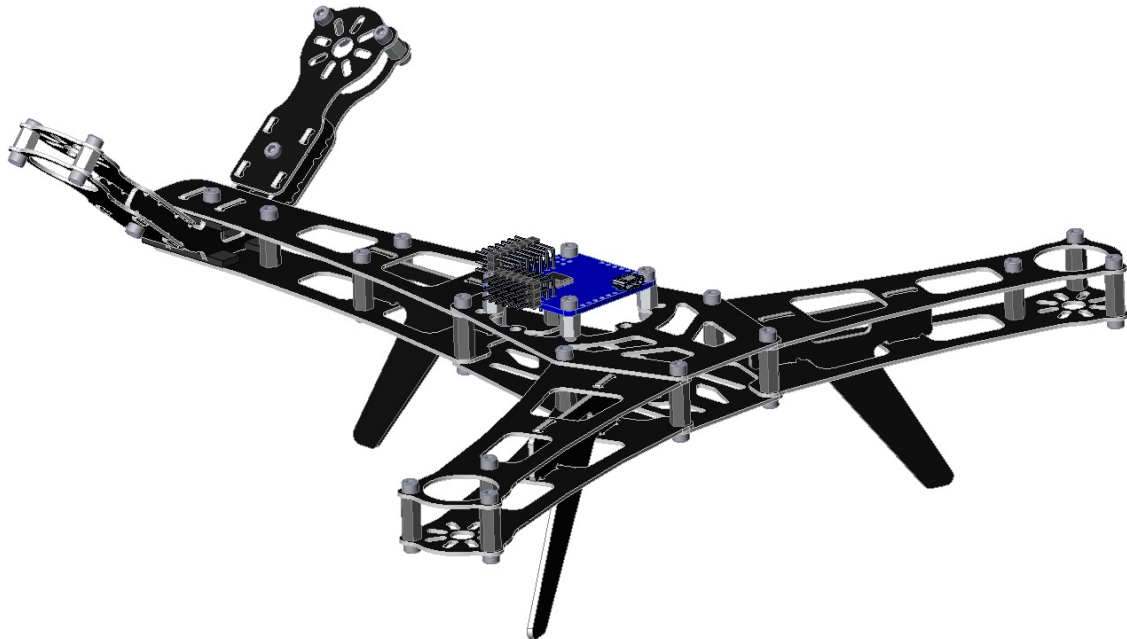
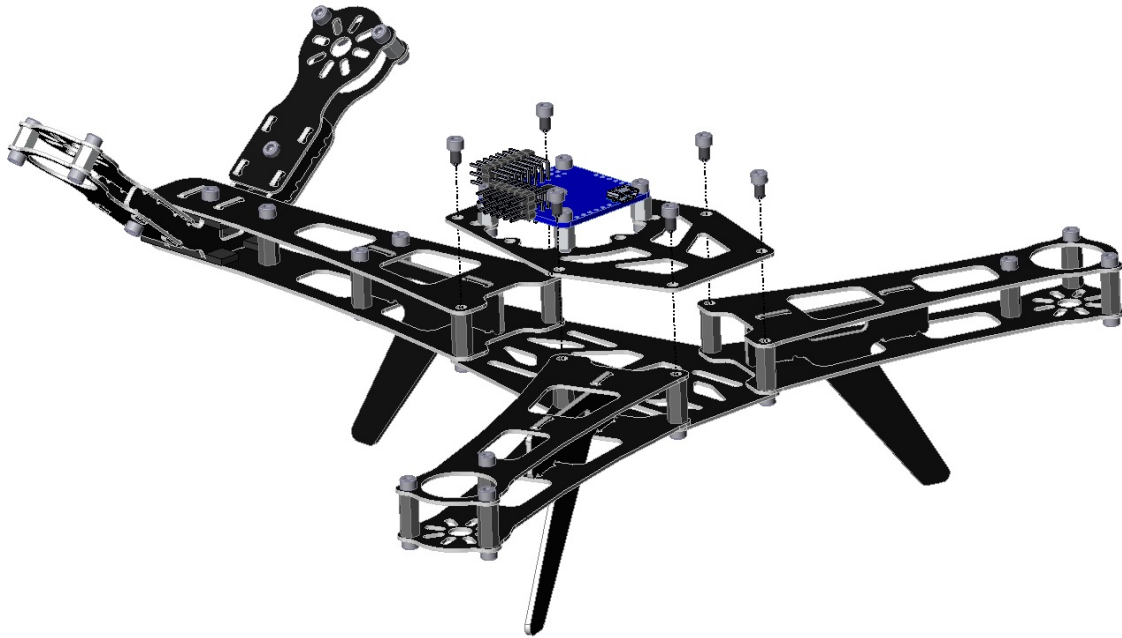


**Note: The foam compresses the tail to prevent it from moving  
(The foam will not be shown again in the assemblies below for clarity)**



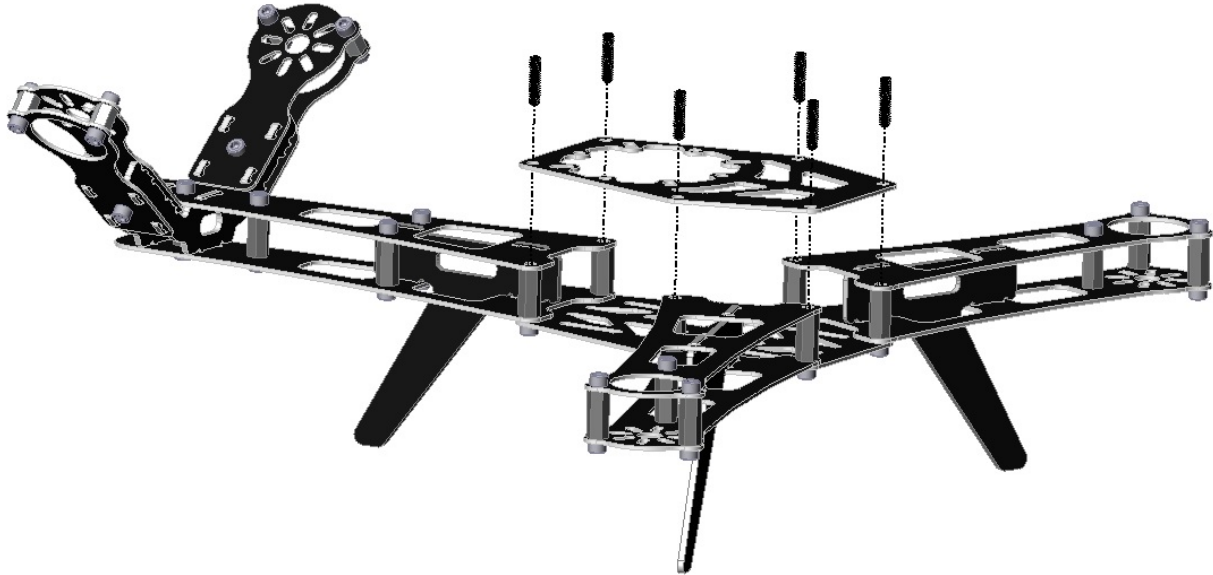
## Middle Plate (Option 1)

- 1x Mini VTail Middle Body Plate (with or without electronics)
- 6x 4-40 x 3/16" Steel Socket Head Screws

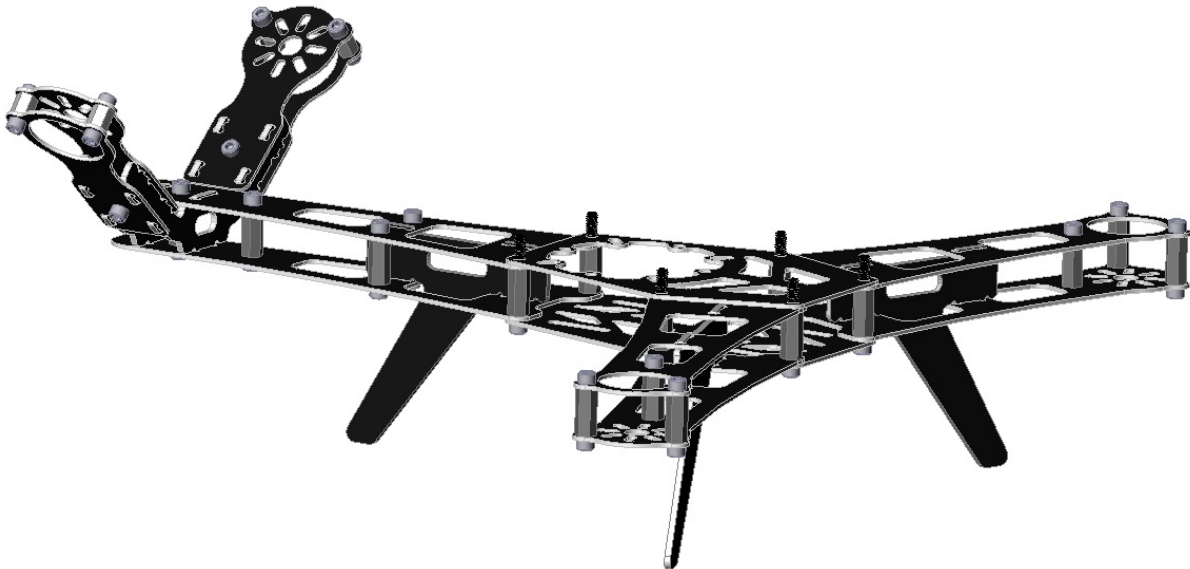


## Top Body Plate (Option 2)

- 1x Mini VTail Middle Body Plate
- 6x 4-40 x 3/16" Steel Socket Head Screws

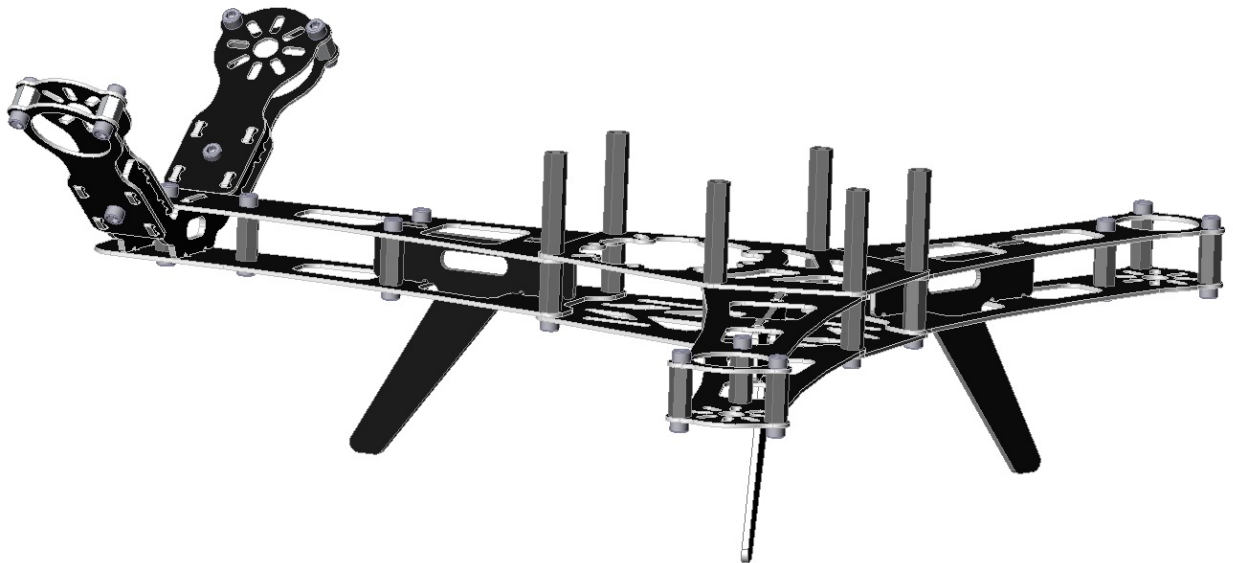
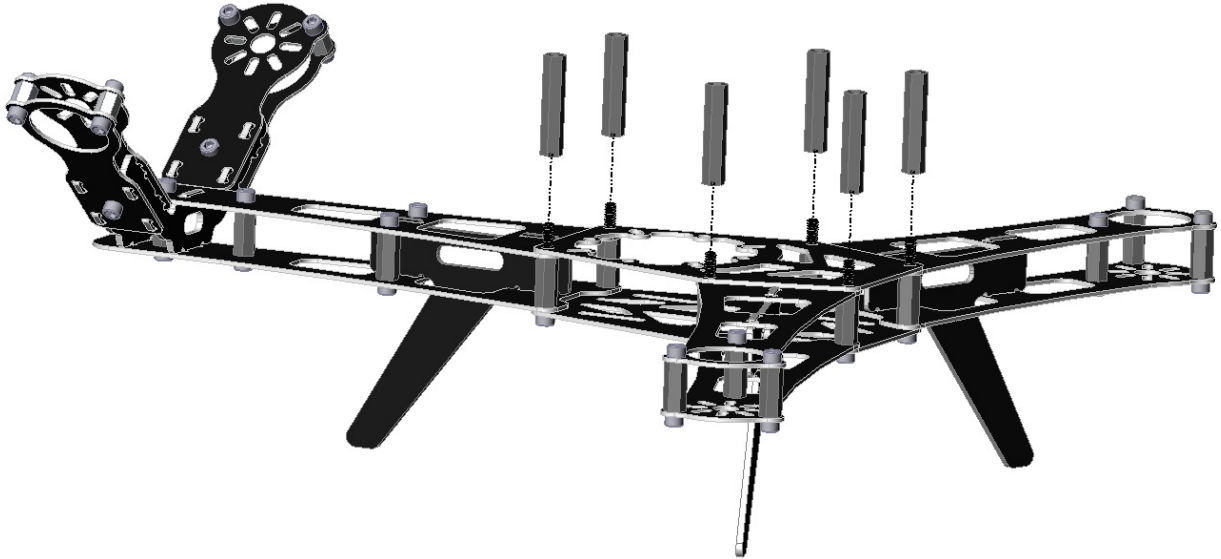


**Note: Electronics mounting not shown for clarity**



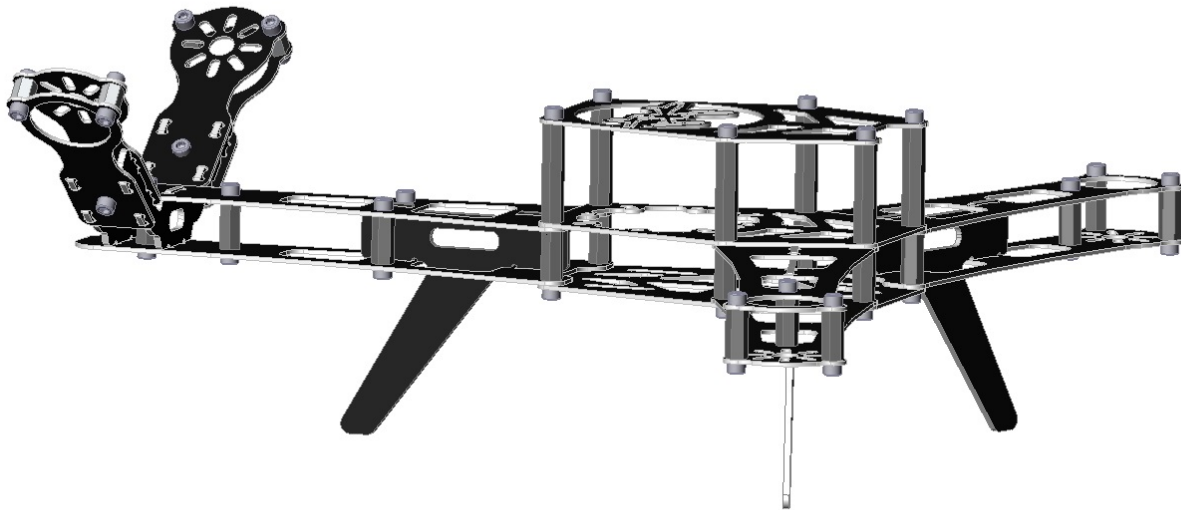
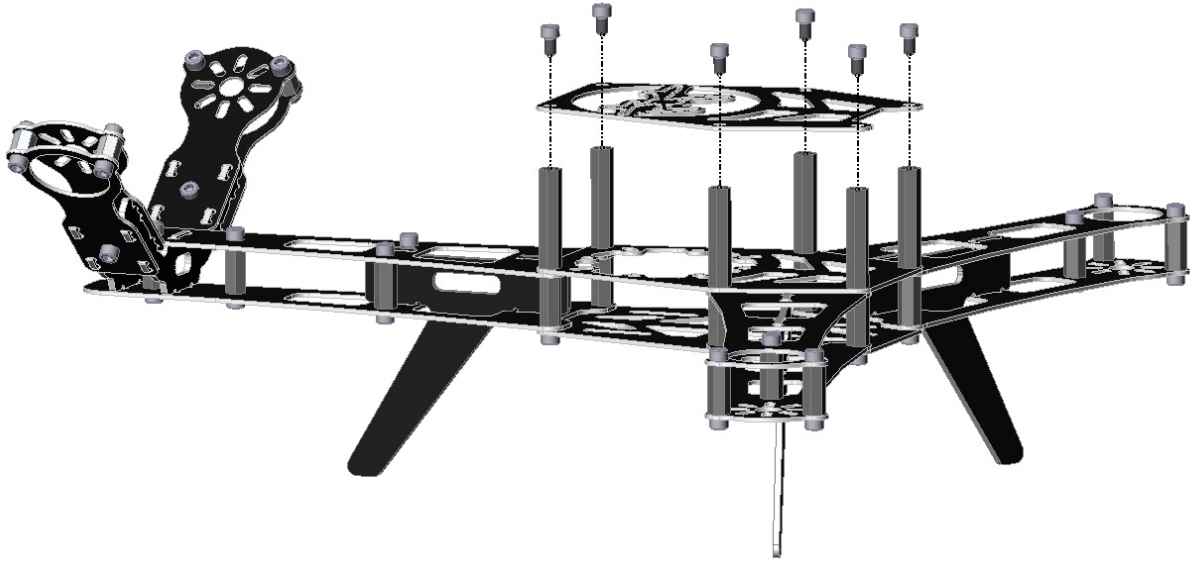
## Top Body Plate Standoffs

- 6x 4-40 x 1" Aluminum Hex Standoffs



## Top Body Plate

- 1x Mini VTail Top Body Plate
- 6x 4-40 x 3/16" Steel Socket Head Screws



**Proceed to the Electronics Assembly Guide**