# X8+ setup:

Notes on what was changed from the factory setup, parts ordered, etc.

**Initial Differences:**

* Propeller attachment nuts are different. Prop shaft on X8+ is slightly smaller dia than 2013 X8.
* M3 hardware everywhere is the same (standoffs, nuts, bolts)
* Uses I2C bus (doesn’t make a difference to us)

**Other component notes (should change 2013 X8 to be the same as this:**

* 30 mm M/F (or F/F) standoffs for pixhawk plate
* 19 mm spacers for body and motor plates
* 18 mm F/F standoffs

**Changes:**

* Unplugged GPS line (compass line still connected in I2C port)
* Unplugged and removed telemetry component.
* Unplugged telemetry line from RC Reciever into Pixhawk telem2

**Parts to order, for both platforms:**

Hardware from McMaster Carr:

* Carbon rods for blade guards, 48” long, qty 4
  + 0.315 OD, P/N**[:](http://www.mcmaster.com/" \l "2153T37)** 2153T37
  + http://www.mcmaster.com/#carbon-fiber-tubing/=w2g3b1
* M3 x 8 mm screws, stainless, pan head, 1 pack of 100
  + Hokuyo Mounting
  + P/N: 92000A118
  + http://www.mcmaster.com/#machine-screws/= wc5es2
* 5mm M3 screws, stainless, pan head, 1 pack of 100
  + Leg standoff mounting
  + P/N: 92000A114
  + http://www.mcmaster.com/#machine-screws/= wc5es2
* Thin Lock Washers – No. 2, 18-8 stainless steel, 0.195 ID, 1 pack of 100
  + lock on props
  + P/N: 91757A107
  + http://www.mcmaster.com/#standard-washers/=wc5ft3
* Standoff for PX4Flow Mount Plate, qty 12
  + M3, 5mm length, 6 mm hex
  + P/N: 95783A403
  + [http://www.mcmaster.com/#standard-threaded-standoffs/=wc6hro](http://www.mcmaster.com/" \l "standard-threaded-standoffs/=wc6hro)
* Acrylic plate for px4flow mount, qty 1
  + Optically Clear Cast Acrylic Sheet, 3/32" Thick, 6" x 12"
  + P/N: 8560K188
  + http://www.mcmaster.com/#standard-plastic-sheets/

Hardware from McGuckins:

* Propeller Nuts – 5 of each type.
  + Different for each quad, need both

From CanadaDrones.com:

* 30 mm M/F M3 threaded standoffs, plastic, get 2 packs of 4 each
  + For Top plate mounting on both platforms
  + http://www.canadadrones.com/product-p/m3x30-nl-spc-mf-blk.htm
* 18 mm F/F standoffs, plastic, M3 threads, qty: 1 pack of 6
  + For legs on both quads, replacements and spares
  + http://www.canadadrones.com/product-p/m3x18-nl-spc-ff-blk.htm

Other Hardware for new quad, random sources:

* BEC, qty 1
  + http://www.hobbyking.com/hobbyking/store/uh\_viewItem.asp?idProduct=65309
* USB hub, qty 1
  + http://plugable.com/products/usb2-hub4bc
* FTDI cable, qty 1
  + <http://store.3drobotics.com/products/ftdi-cable-3-3v>