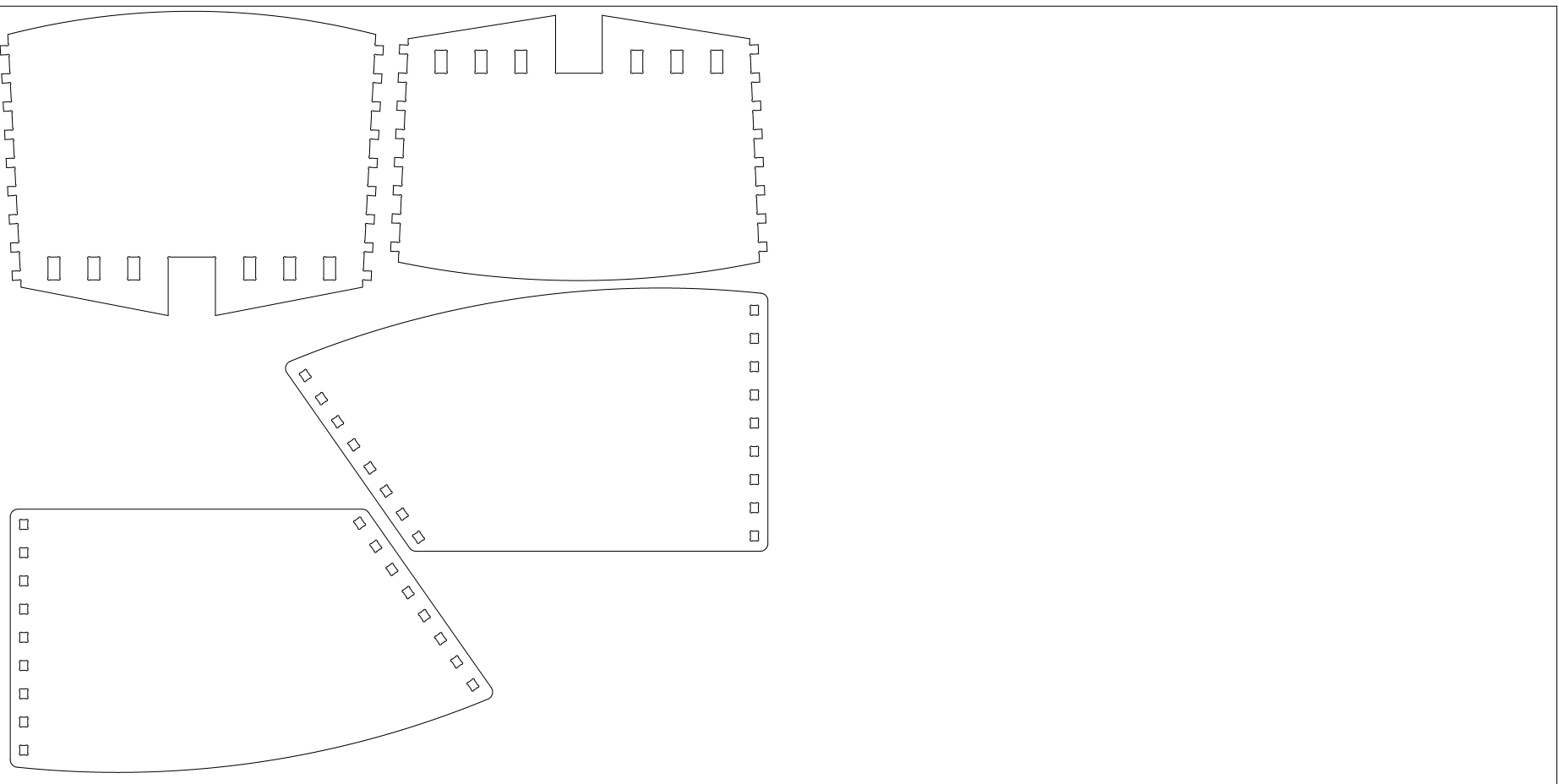
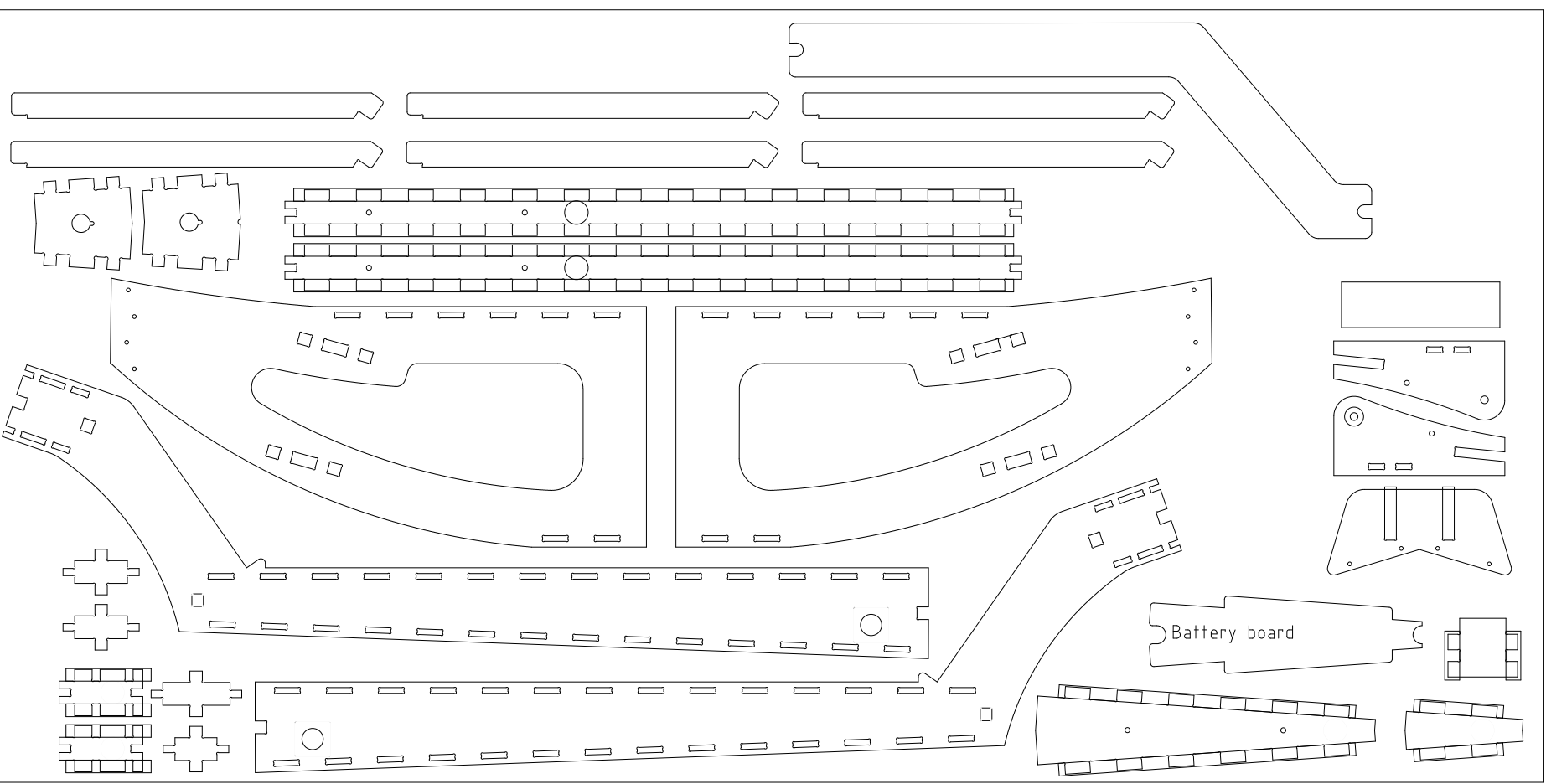
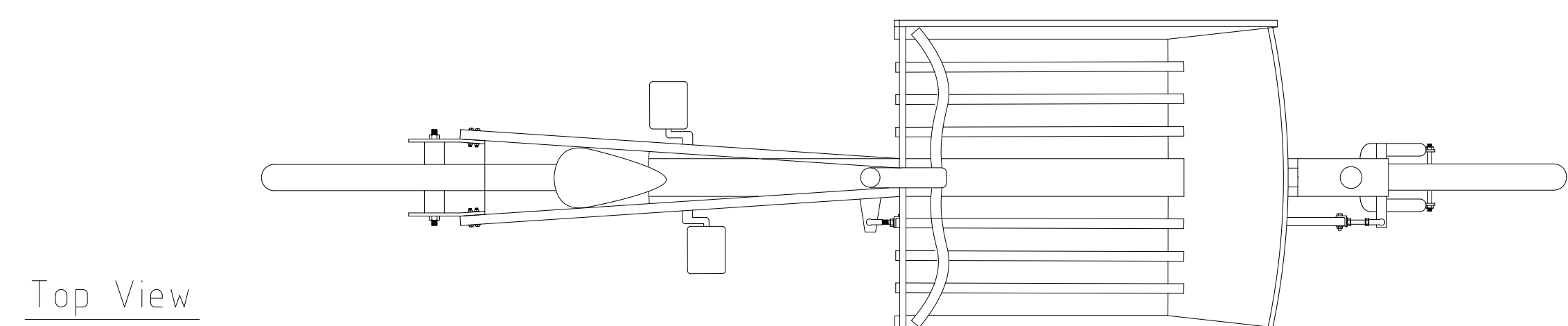
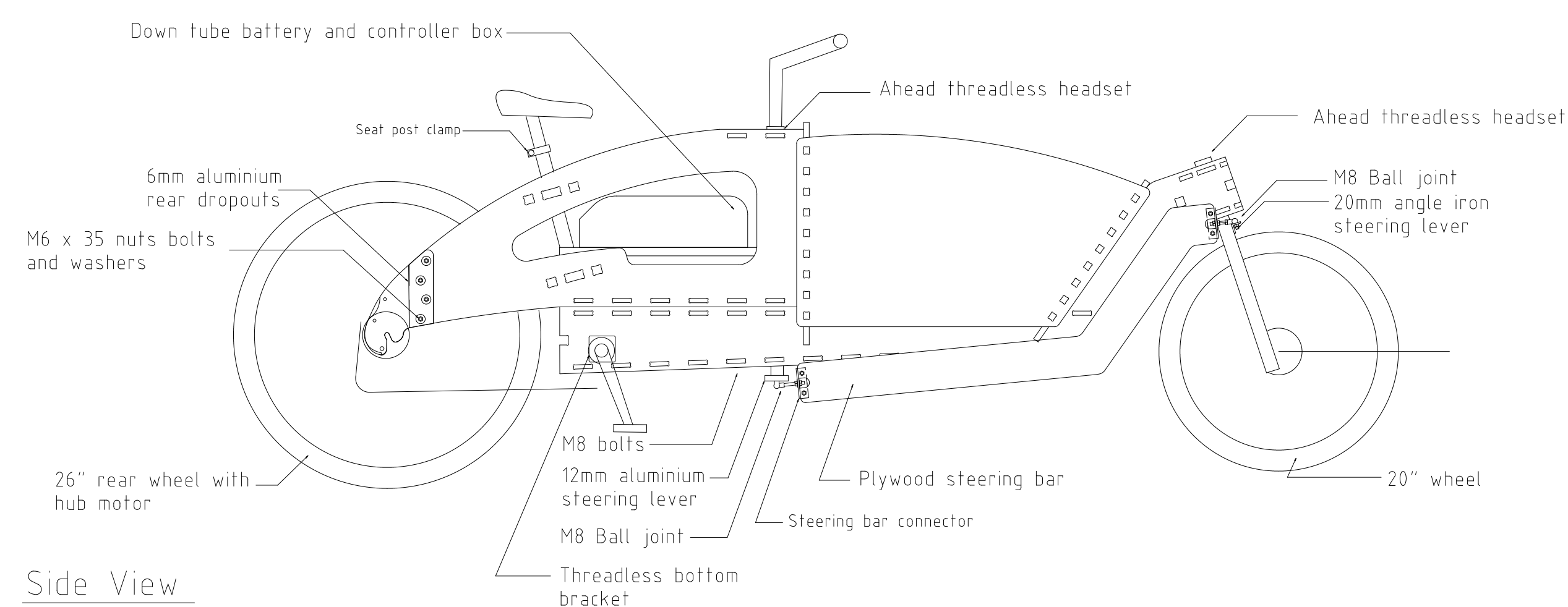


Wik-E-Cargo Bike Short Master Drawing. Aaron Moore

Oct 2024

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5mm tolerance on length of all mortices
Assume 18mm plywood is 18.5mm thick

- Tools Needed
- Access to a laser cutter to cut aluminium
 - Access to a CNC Router to cut full sheets of plywood
 - 4mm x 20mm router cutter (to fit dog-bones in cutting file)
 - Hacksaw
 - Files
 - Metal vice
 - Spanners and sockets
 - Allen keys
 - Tap Wrench
 - M10 x1 tap and clearance drill
 - G clamps 8pcs x 150mm
 - Pillar drill and assorted bits.

- Materials
- 1 sheet 2440 x 1220 x 18 birch/marine plywood main frame.
 - .5 sheet 2440 x 1220 x 12 birch/marine plywood (cargo bucket).

- 1pc. 350 x 28.6 x 16 Seat tube (seat tube)
- 1pc. 660 x 28.6 x 16 Seat tube (inner steering tube)
- 1pc. 375 x 37 x 1.6 Head tube (handle bar steering tube)
- 1pc. 116 x 37 x 1.6 Seat tube (seat tube)
- 1pc. 130 x 31.8 x 1.5 Headstock sleeve tube (bottom sleeve)
- 1pc. 150 x 31.8 x 1.5 Headstock sleeve tube (top sleeve)
- 1pc. 160 x 25 x 25 x 3 m/s angAle iron (top steering lever)
- 2pc. 65 x 20 x 20 x 3 m/s angle iron (steering bar connectors)
- 1pc. 300 x 300 x 6 aluminium plate (laser cut rear drop outs).
- 1pc. 200 x 200 x 12 aluminium plate (laser cut rear steering lever and bottom bracket plate).
- 1pc. 12mm dia. stainless steel rod (kick stand pivot).
- 1pc. 25 x 25 x 3 x 360 angle section mild steel (kick stand foot).
- 1pc.. 5M 10mm bungee cord (acts as spring for kick stand)
- 1pc. 210mm x 6mm rod (keeps seat post from rotating)

- Waterproof wood glue.
- Yacht varnish.
- Sandpaper plus optional Orbital sander.

- Bicycle Parts
- 2pcs. A-head, threadless headsets 1 1/8
 - 1pc. thread-less bottom bracket (for use with hub motor version).
 - 1pc. Seat.
 - 1pc. Seat clamp for 28.6 seat-post.
 - 20 fork with attachment for disk brake and 130mm long steerer tube.
 - 20 front wheel with attachment for disk brake.
 - 26 rear wheel with hub motor, compatible battery and controller.
 - 7 speed derailier mechanism.
 - 2 sets of mechanical disk brakes (with extra long cable for front brake).
 - 1 set of cranks with pedals.
 - 1pc. 40 tooth chain wheel.
 - 1pc. handlebar stem.
 - 1pc. Handlebar.
 - 1 pair handlebar grips.

- Fixings
- 8pcs. 35 x M6 nuts bolts and penny washers (to secure rear dropouts to frame).
 - 1pc. 50 x M6 nuts bolts and washer (to secure bottom steering lever).
 - 1pc. 40 x M6 nuts bolts and washer (to secure top steering lever).
 - 2pcs. 100 x M8 threaded rod (to attach steering levers to steering bar).
 - 6pcs M8 nuts and washers (for steering lever assembly).
 - 3pcs. 250 x M8 nuts bolts and washer (to secure main frame to rear frame).
 - 2pcs. Jubilee clips (to secure seat post to to rear frame).
 - 4pcs. 35 x M6 nuts bolts and washers (to secure foot to kick stand).
 - 4pcs. 30 x M6 nuts bolts and washers (to secure connectors to steering bar).
 - 2pcs. 12mm penny washers.
 - Split pin (to secure kick stand pivot)

