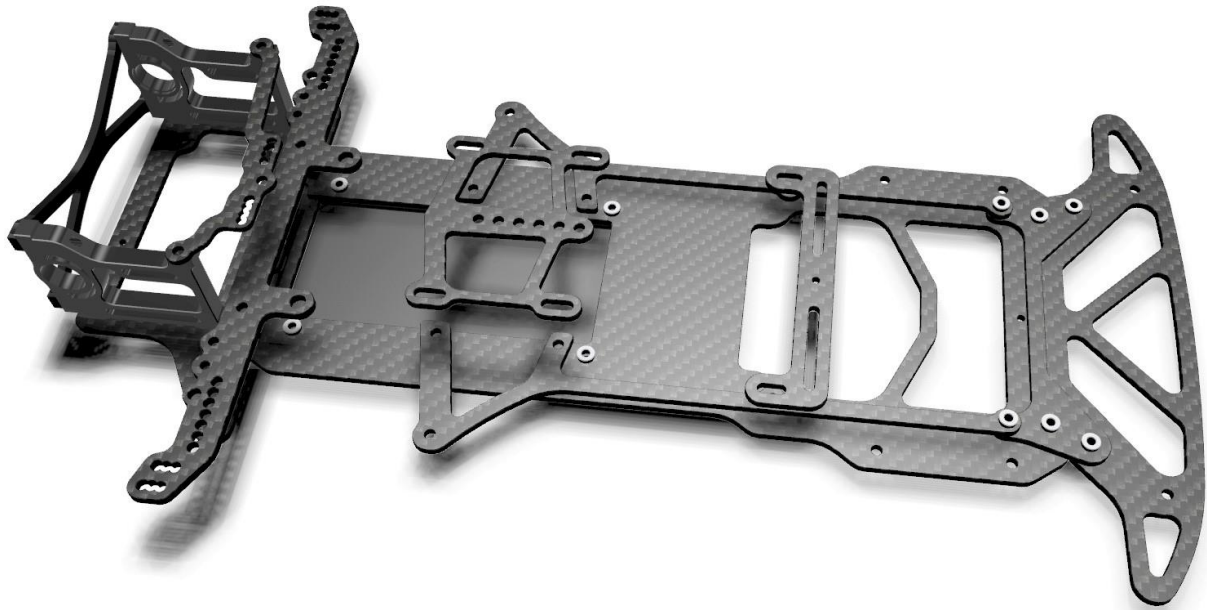


INSTRUCTION MANUAL FOR THE BEZERK RC

LITESABRE_{2.0}



Thank you for purchasing the Litesabre 2.0 Pro10 chassis kit by Bezerk RC, you've invested in one of the best pan car kits available today. Some of the key design features are –

- Unique stepped chassis. This allows higher front ground clearance for mega downforce bodies and minimising the front of the chassis ever hitting the track. It also offers better cornering clearance. The rear chassis plate is cheaper to replace once worn. The ability to flush mount the front bumper and clean up the aero whilst protecting the front edge of the chassis.
- The tweak plate offers multiple setup options, single or multiple side springs, side shocks, roll dampers and multiple body post positions to allow for different shaped bodies.
- Slider rear axle adjustment for easy to set rear ride height. Larger $\frac{1}{4}$ " x $\frac{1}{2}$ " flanged bearings for the rear axle to add longevity and robustness.
- Mirrored rear bulkheads and sliders to minimise what you need to keep as spares. Left bulkhead makes mounting a motor fan easy by using the motor mount slots. Also, extra holes in pod plate can be used for balancing weights or a fan mount.
- Ultra low servo position. Space it up for lower grip tracks/more ground clearance or slam it down below the chassis as far as you dare for higher grip tracks! Made specifically for a 12th Scale servo to reduce c of g and overall weight.
- Customisable when ordering or at a later stage. As we cut to order, we can tailor the kit carbon to suit your needs, e.g. if you want to run a CRC front end, no worries. Want to make it overall narrower, easily done, super stiff or nice and supple, can do. All parts are available separately of course.
- Bottom load Shorty pack battery. We've further lowered the battery so it's just about skimming along the track surface!

- The upper battery plate is slotted to allow for micro adjusting of the centre shock, great for differing shocks as well as easy rear droop adjustment.
- A few key mounting points now use pressnuts instead of nuts to make assembly and working on your Litesabre easier.
- Kit finish is a stealth looking matte, twill carbon, but can be made to suit your preference of course.

The original Litesabre kit was the seed of an idea by Shannon Overson and bought to life by Bezerk RC. Shannon and Clayton Hughes spent many laps developing it to a more than capable platform smashing lap records at Brendale, fastest car to ever lap the track! Shannon and Clayton won nearly every race for the year between them with Shannon taking the championship for the 2019 season. Bezerk then bought it back in house and made it production ready by adding even more options and refining every little detail.

The 2.0 was a more concerted effort to further reduce overall weight and lower the c of g even further for Stock racing. Not to say you can't run modified motors in it, it is Shorty Lipo only though, so keep that in mind.

As this is an upper end kit intended for the enthusiast pan car racer, it is partly assumed you will already have a collection of pan car parts in your possession. Either way, here's a list of what you'll need to complete a rolling chassis. Why buy a kit that has parts you won't use or will probably replace when you can build your ultimate platform with the parts YOU want.

- Body posts x 4
- Body clips x 8
- Servo
- Servo saver
- Steering tie-rods, ballcups and ball studs
- ESC, RX and motor
- Rear axle
- Side springs, spring holders and roll dampers OR side shocks
- Ball studs and nuts for roll dampers or shocks
- Centre shock absorber and hardware
- Front end components

Some of the tools required –

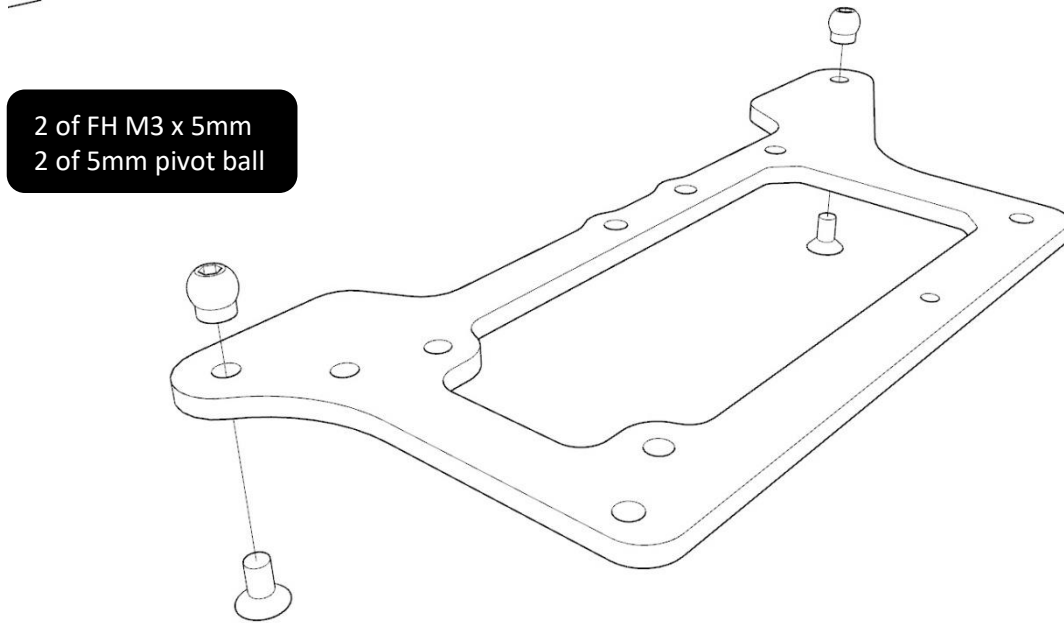
- 1.5mm hex driver
- 2.0mm hex driver
- 2.5mm hex driver
- 5.5mm nut driver
- Mild threadlock for any screws into alloy parts

Hardware supplied in the kit –

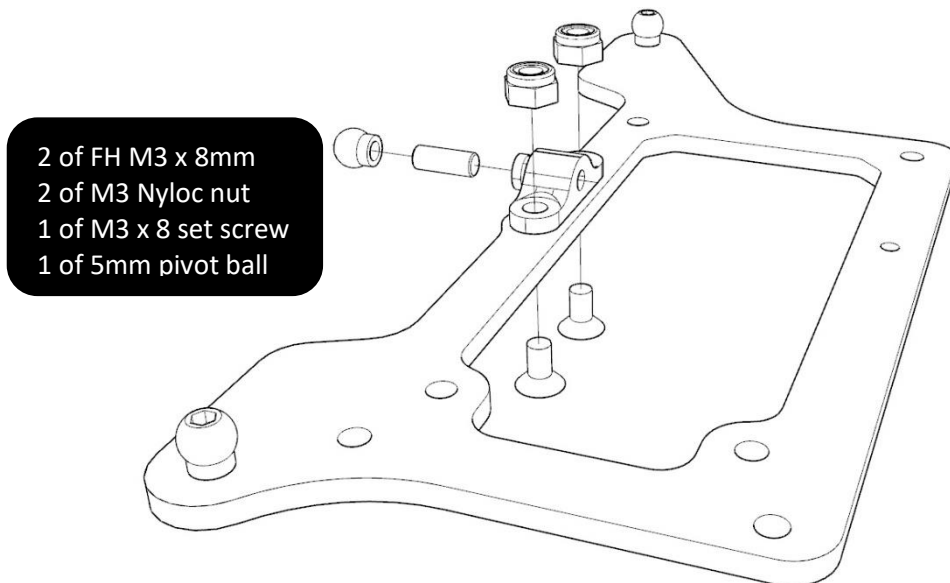
- Caphead capscrews – (CH) 3x10mm, 4x12mm
- Flathead capscrews – (FH) 2x5mm, 14x6mm, 4x8mm, 8x10mm, 6x12mm
- Buttonhead capscrews – (BH) 8x5mm, 8x8mm
- Set Screws – M3 1 x 8mm, 4 x M3 x 10mm
- Stainless 13 x M3 x 7mm diameter washers
- Stainless 2 x M3 Nyloc nuts
- 2 x ¼" x ½" flanged ball bearings
- M3 standoffs 2x6mm, 6x12mm, 2x15mm servo mounts
- M3 Pressnuts – 10 of

Let's get started!

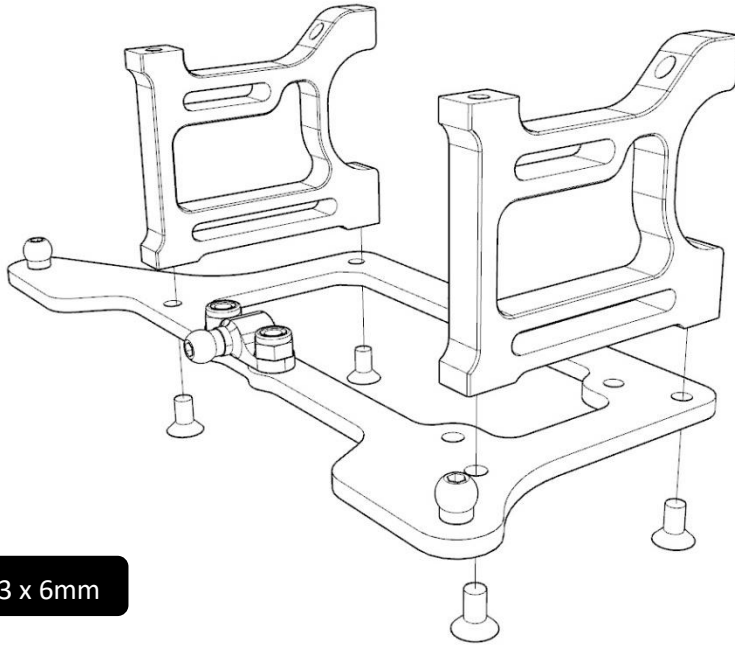
Use M3 x 5mm flathead screws and a mild thread lock to fit the pivot balls for the sidelinks (balls not provided in kit).



Fit the ZEN alloy pivot holder to the pod with the M3 x 8mm flathead screws and Nyloc nuts (note the direction of the holder). Fit the pivot ball using the setscrew. Use a 1.5mm driver from the backside of the holder and a 2.5mm hex driver from the front. You want around half of the setscrew in each component. Mild thread lock should be used.

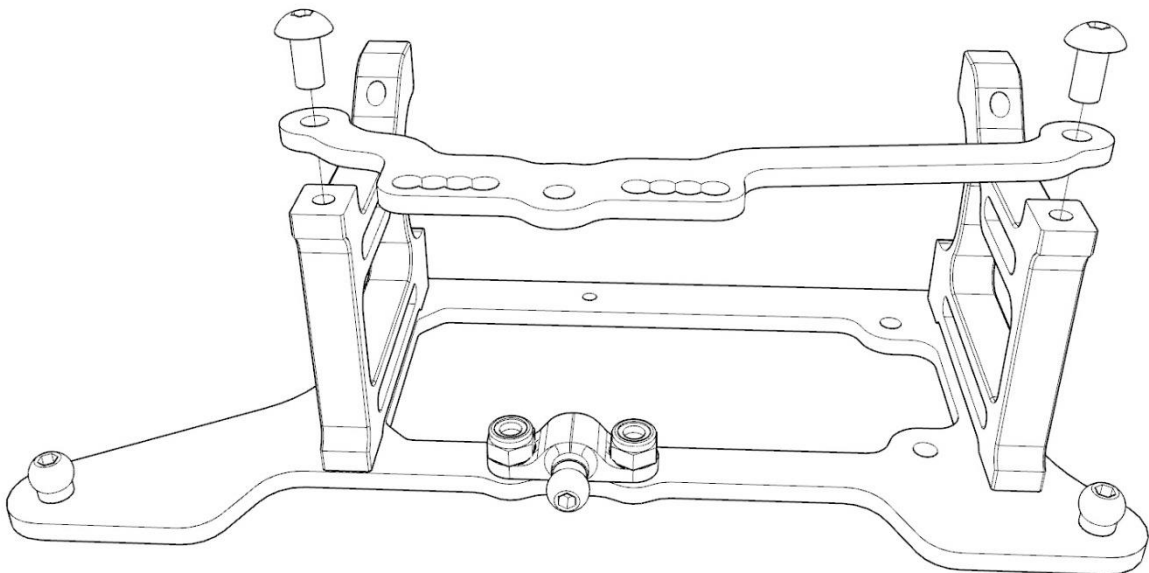


Attach bulkheads with the M3 x 5mm flathead screws, use thread lock.

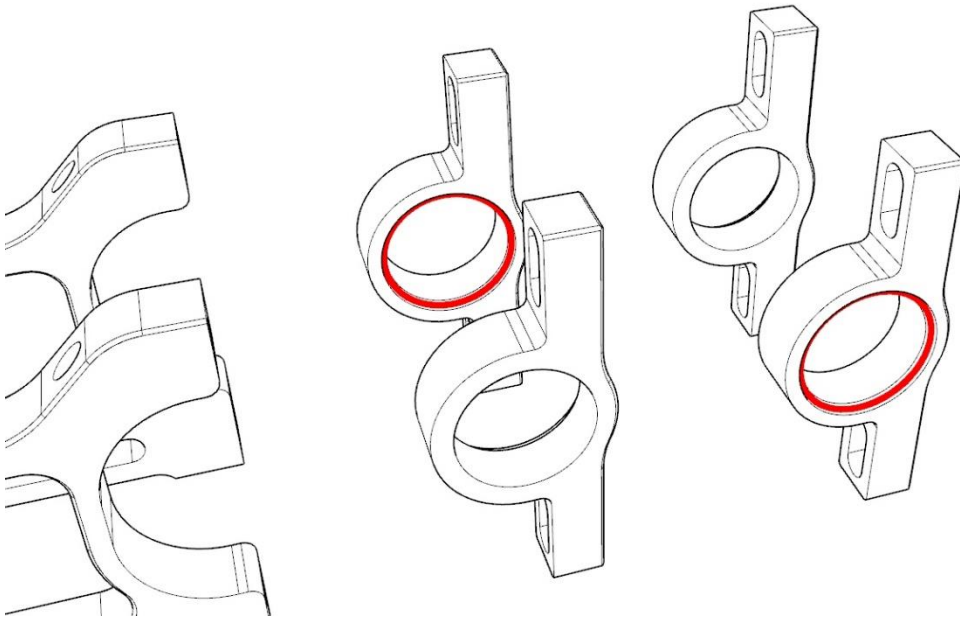


4 of FH M3 x 6mm

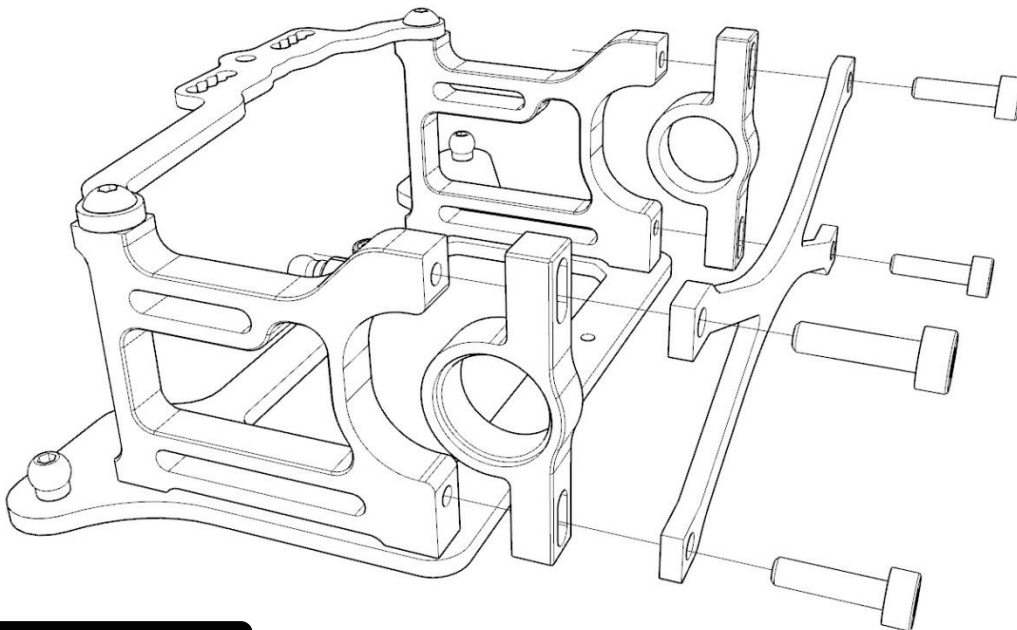
Attach the upper pod plate with 2 of M3 x 5mm buttonhead screws, use threadlock.



Shown below are the sliders different width formats. Left is the wide +1mm position (bearing recess facing inward) and on the right the narrower position. Two flanged bearings $\frac{1}{4}$ " x $\frac{1}{2}$ " are provided for the rear axle.

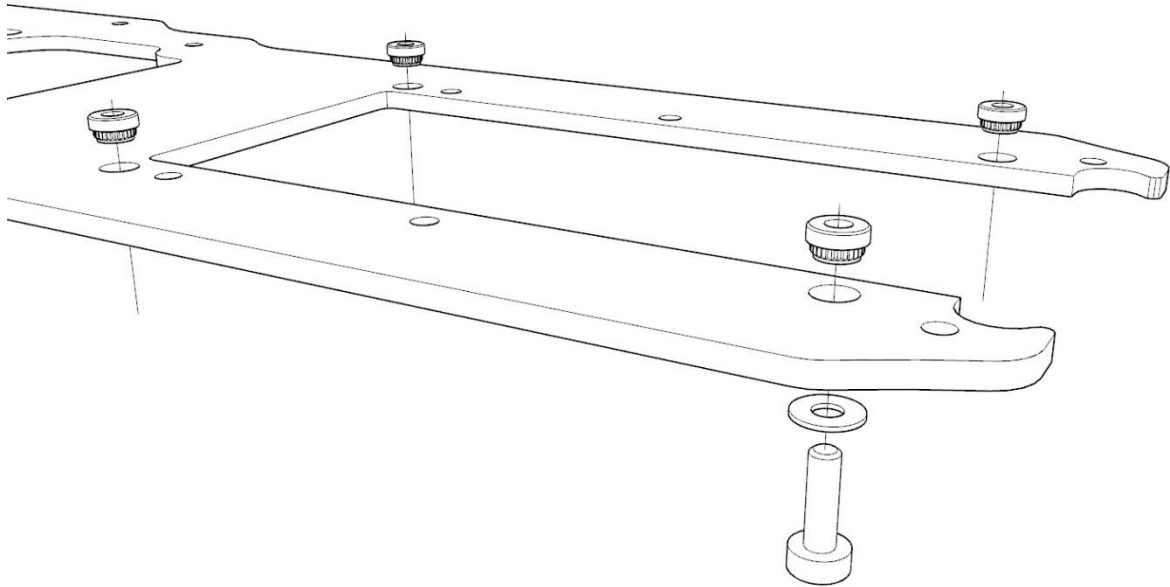


Attach rear axle sliders. Note orientation of bearing rebates in the sliders from the description above. Below showing the narrower setup for lower grip tracks.

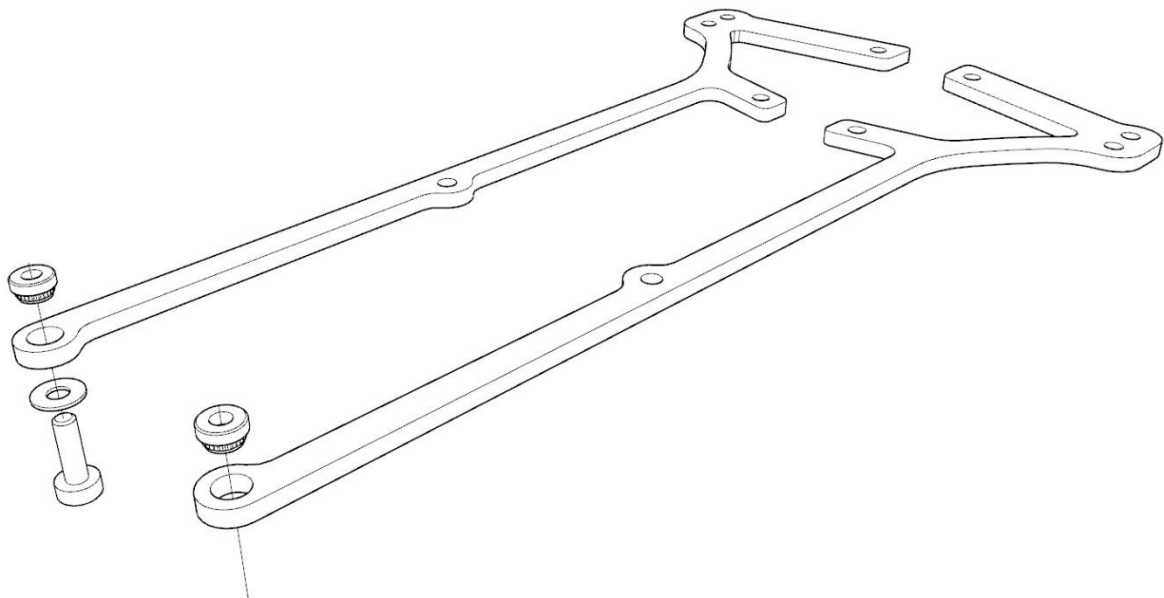


4 of CH M3 x 12mm

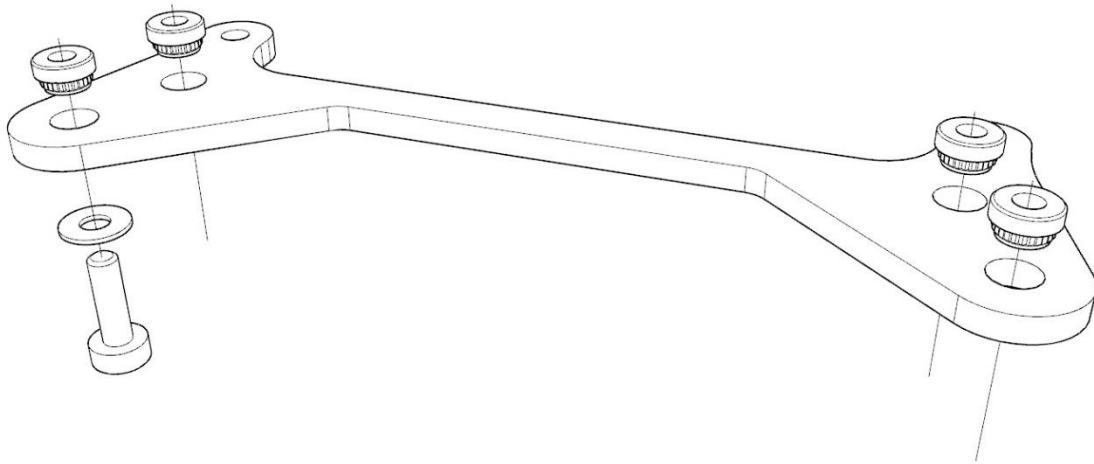
Pressnuts are used throughout the kit for ease of assembly/working on your car. Use one of the motor screws and washer to pull them into the carbon parts. With the main chassis note that the pressnuts are going into the top side.



The lower braces are a set, eg left and right, so note orientation of them before you install the second pressnut.

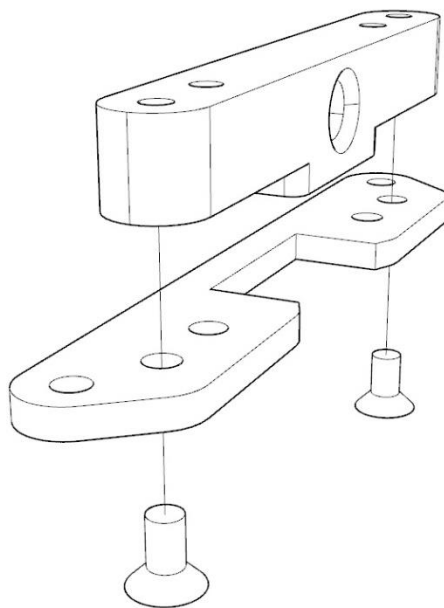


Bumper bracket is simple, put them all in from one side.

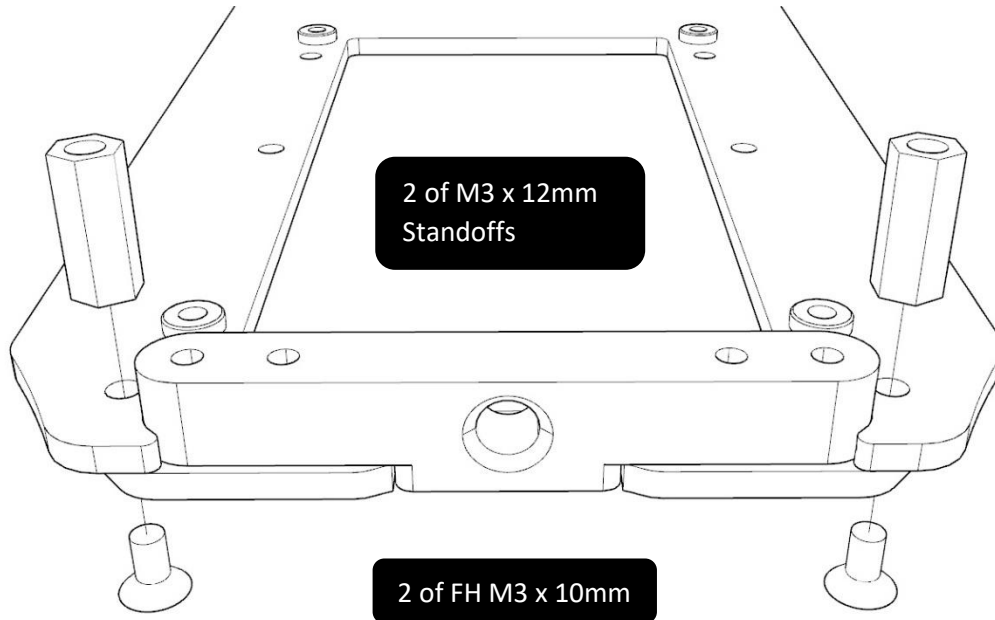


The standard kit comes with the ZEN centre pivot. The newer design has a horizontal pivot ball allowing for some height adjustment. This arrangement allows for the variance of the wheelbase as the links pull it shorter at full lean. This helps prevent binding at the greater angles. Note orientation of the pivot block. We also have an option part for a regular pivot if you so choose.

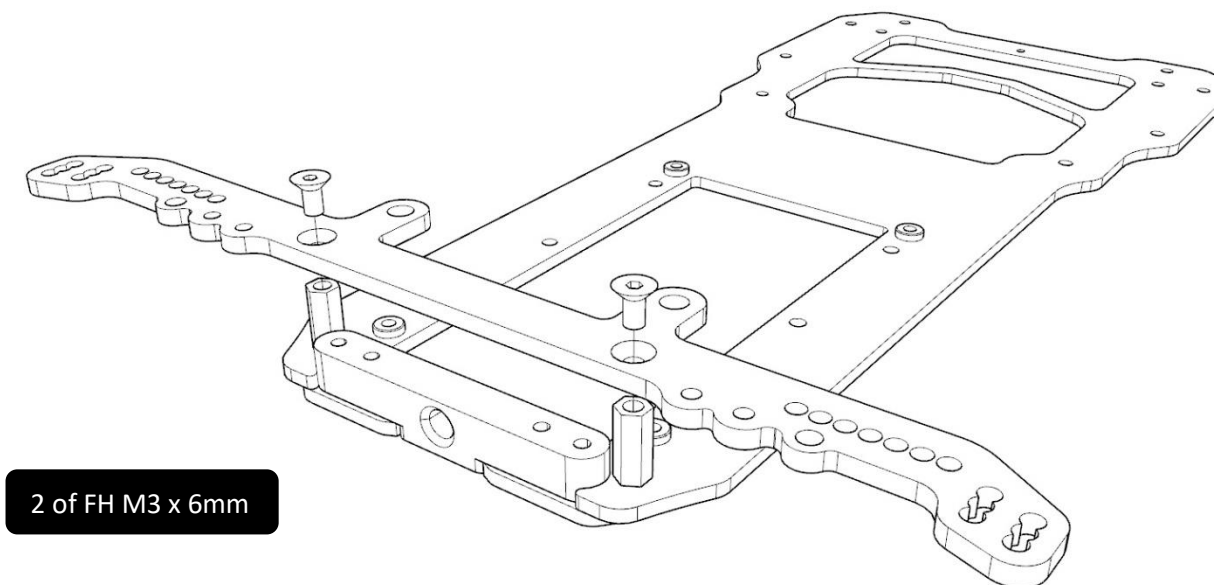
2 of FH M3 x 10mm



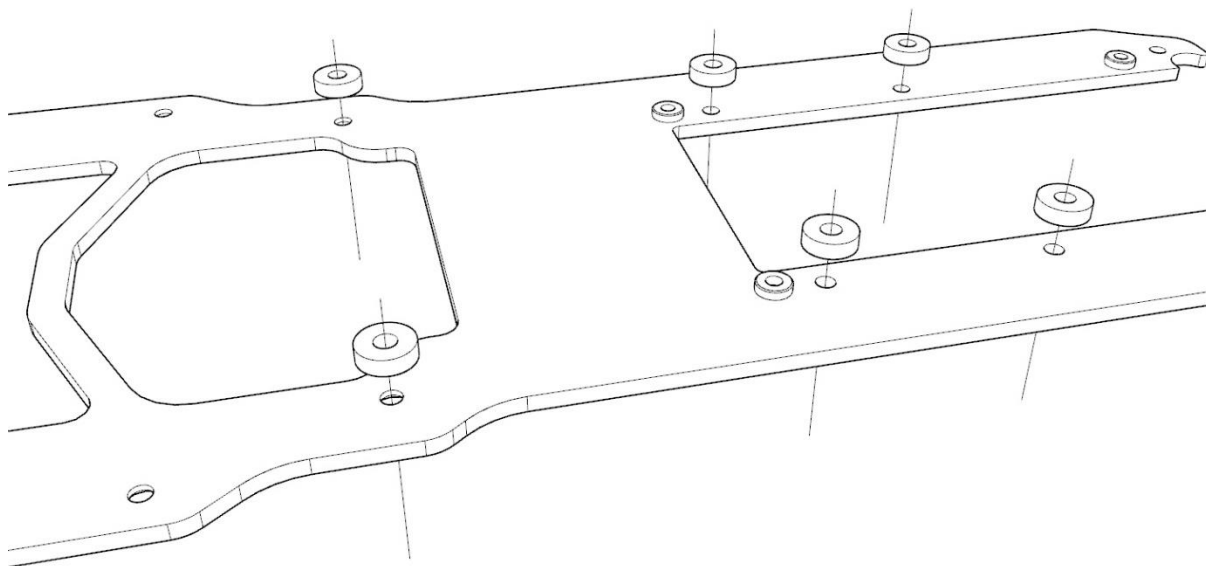
The pivot plate is held in place with the standoffs for the upper tweakplate. Some thread lock as per usual for any screw into alloy. Note that the notch faces rearward.



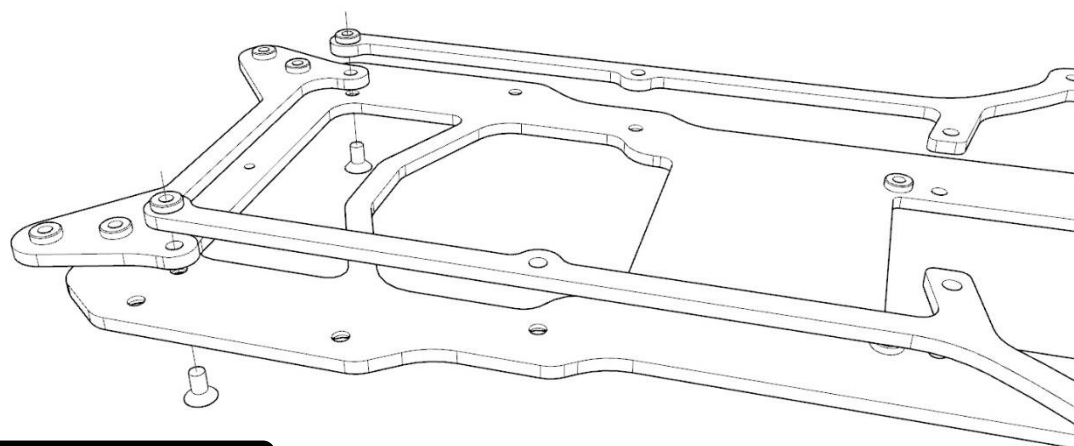
Fit the tweakplate as shown. If you're using the optional upper topdeck, fit the pressnuts into the tweakplate before installing. They are fitted from underneath.



Pic below shows the positioning of the carbon 2.5mm spacers provided in the kit. This is just a reference for their location, you don't need to sit them all in place for the next step!

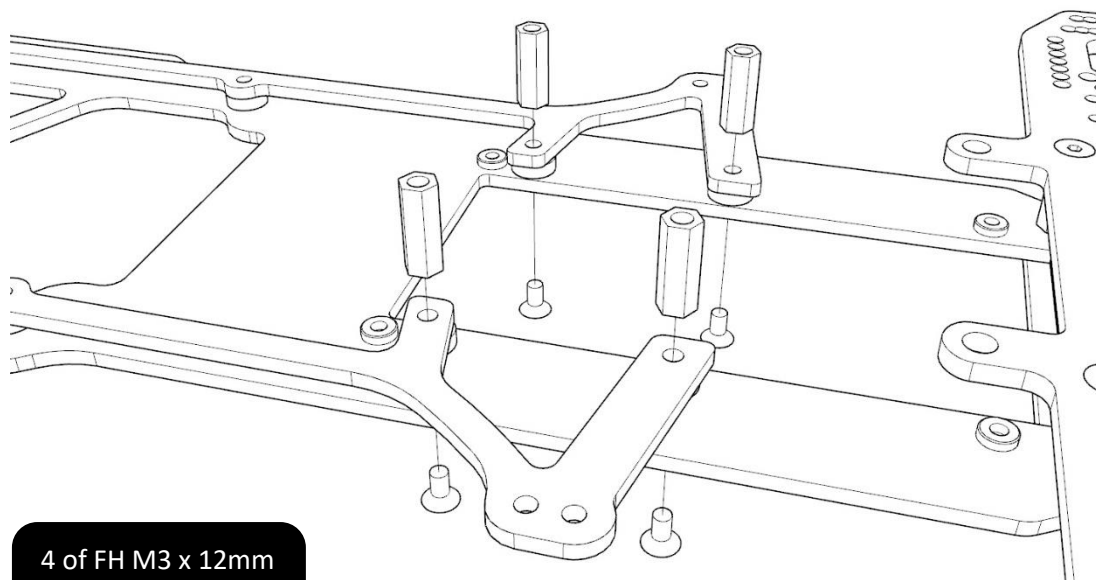


Next step fits a few parts at once, the bumper bracket and the front of the chassis braces. Note that all the pressnuts face upward. Just nip up the screws to stop the braces swinging around. You can come back later and threadlock these once the braces are fully in place.



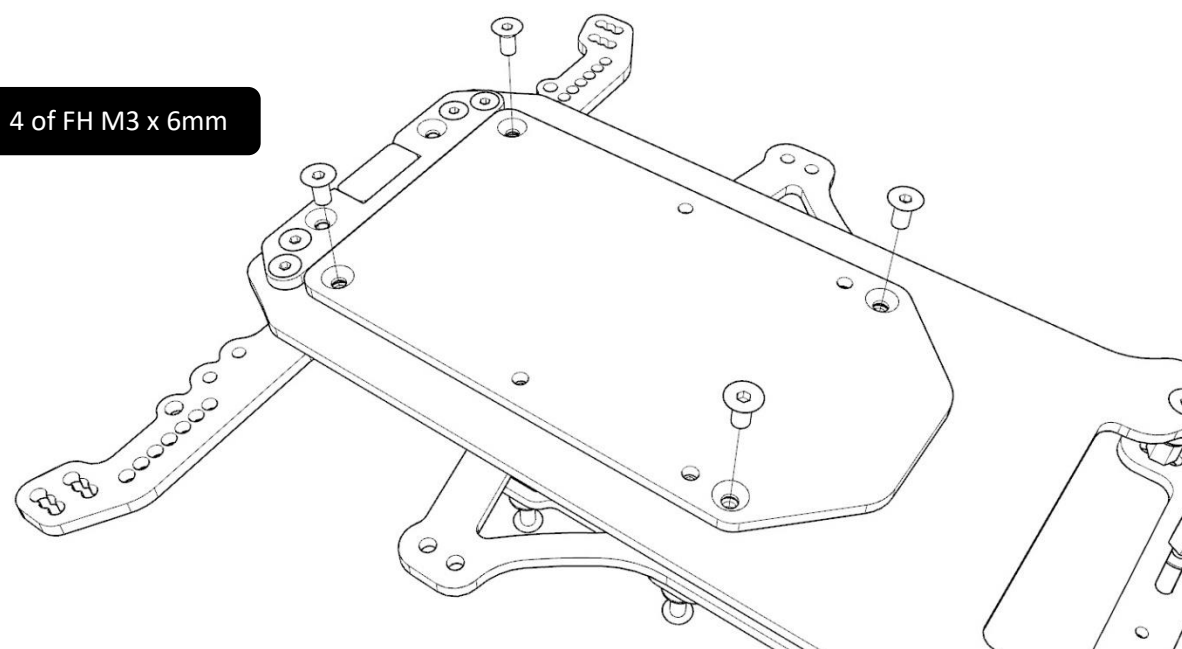
2 of FH M3 x 10mm

The setup for the battery can be a little time consuming to dial in, but it's well worth the effort! The 2.5mm carbon spacers are fitted between the main chassis and the braces first. These are then followed by alloy standoffs. The screws may appear a bit long at first, but this is to allow for the shims that you may require to suit the height of your battery pack. Standoffs are M3 x 12mm



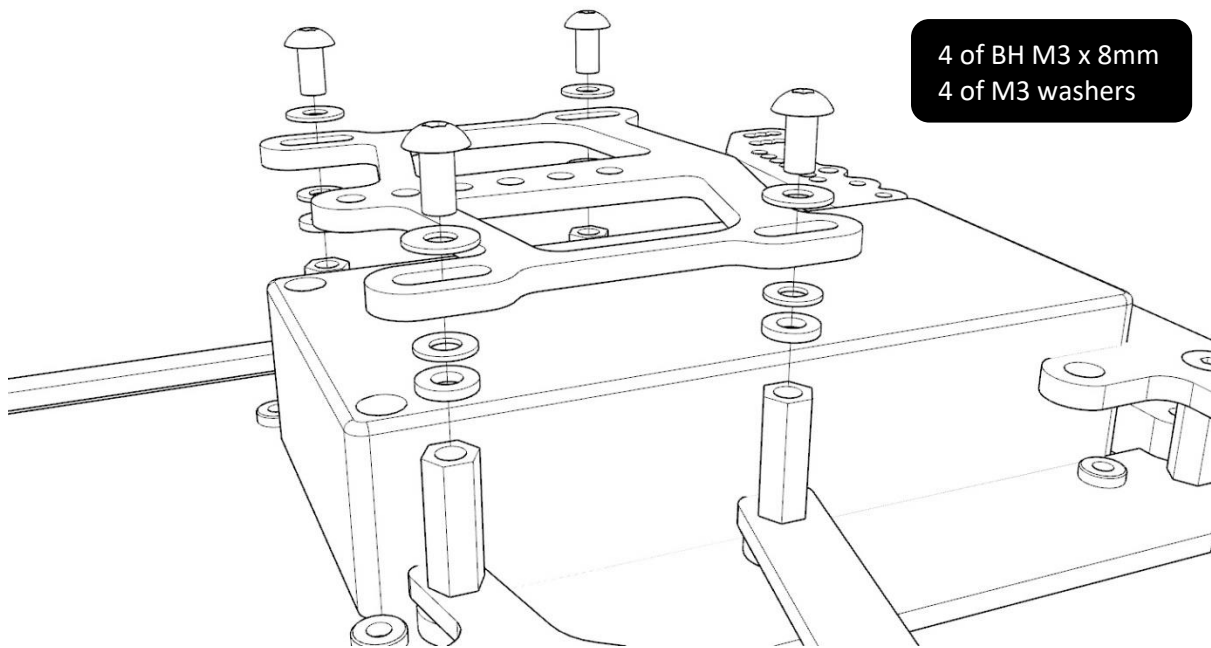
4 of FH M3 x 12mm
4 of M3 x 12mm
Standoffs

Fit the battery lid in place. Note the four access holes for the upper standoffs.

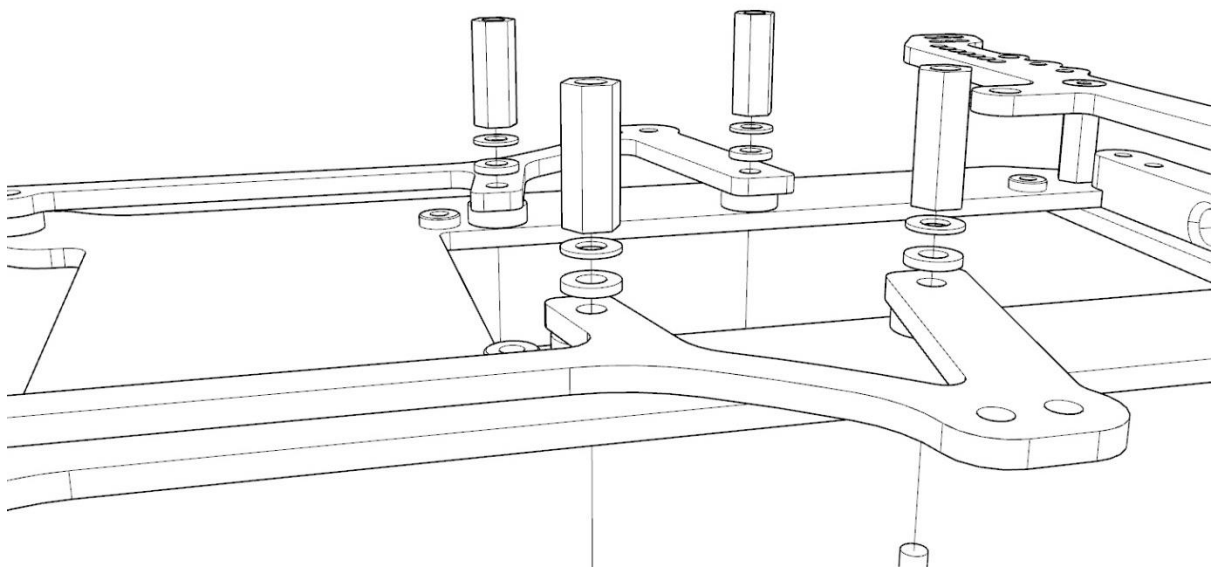


4 of FH M3 x 6mm

Drop your intended battery in place and see how the upper brace fits. We want to aim for a little movement of the pack, so the brace should ideally sit approximately 0.5mm above the top of the battery. Add shims to get this height right.

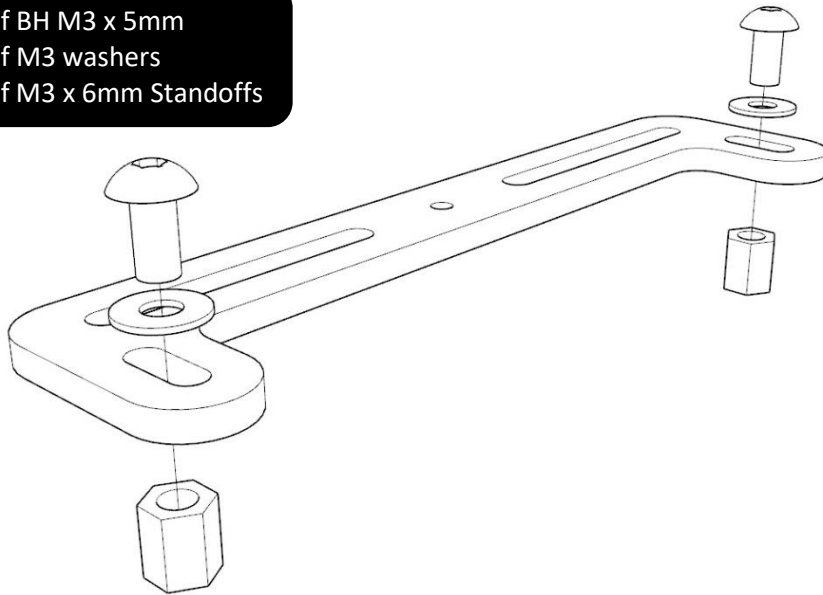


Now that we've established the height of the upper brace, we suggest moving those shims to below the standoffs to make working on your car easier. Threadlock the lower screws. Note: the battery lid can be left in place or removed to do this step, there are access holes in the lid for your 2mm driver.



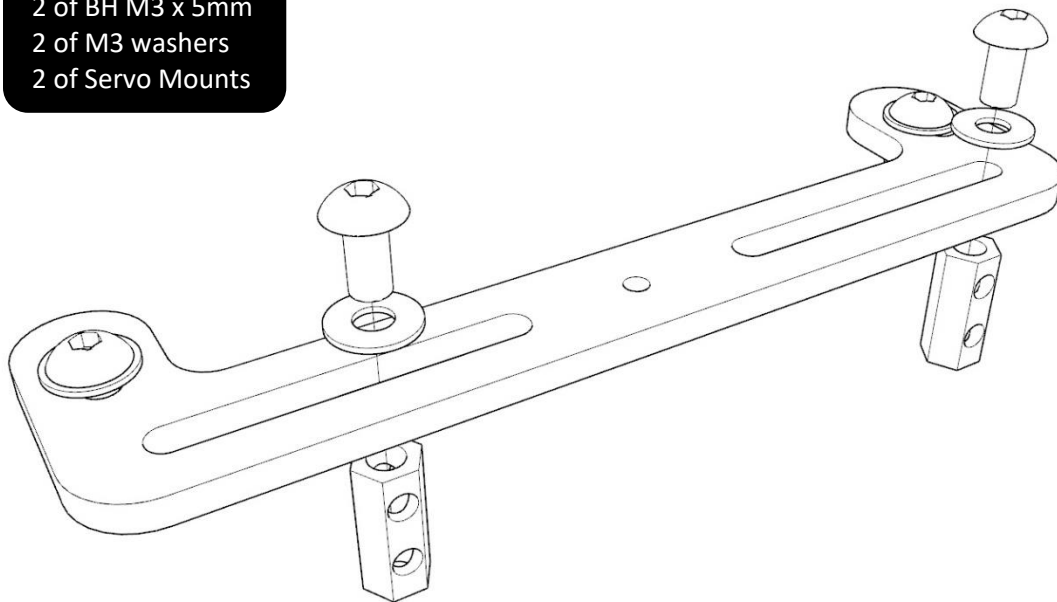
Fit the standoffs to the servo plate. Central in the slots is a starting point, adjustment fore and aft will allow for Ackermann fine tuning.

2 of BH M3 x 5mm
2 of M3 washers
2 of M3 x 6mm Standoffs

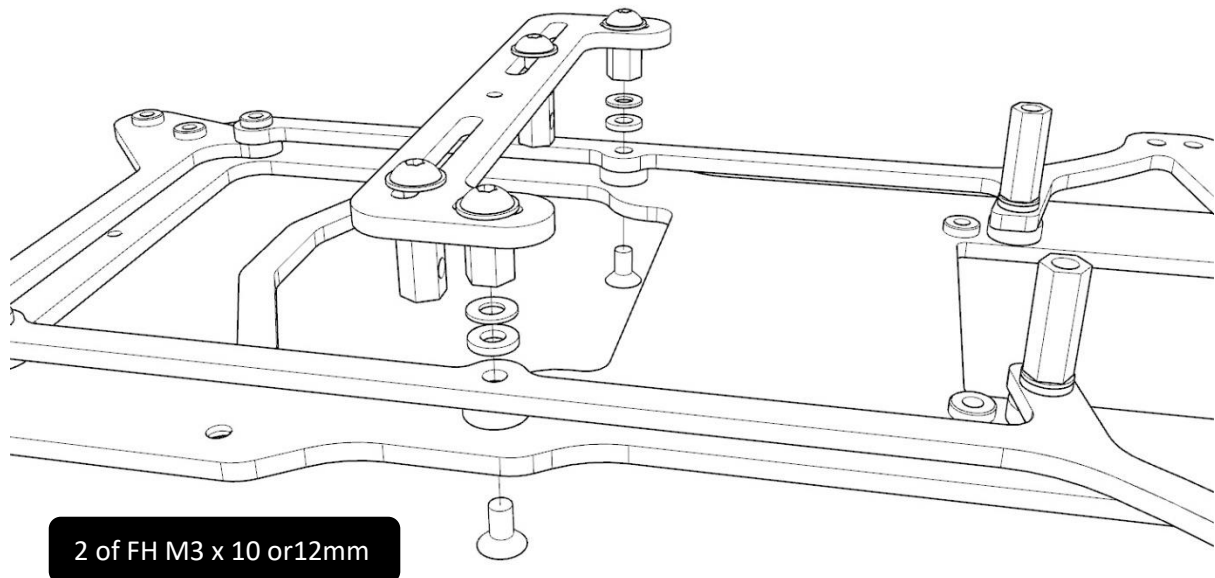


This kit only accepts 12th scale sized servos to reduce weight and keep the overall centre of gravity low. Fit the servo posts. Fit your choice of servo and align the servo shaft with the central hole.

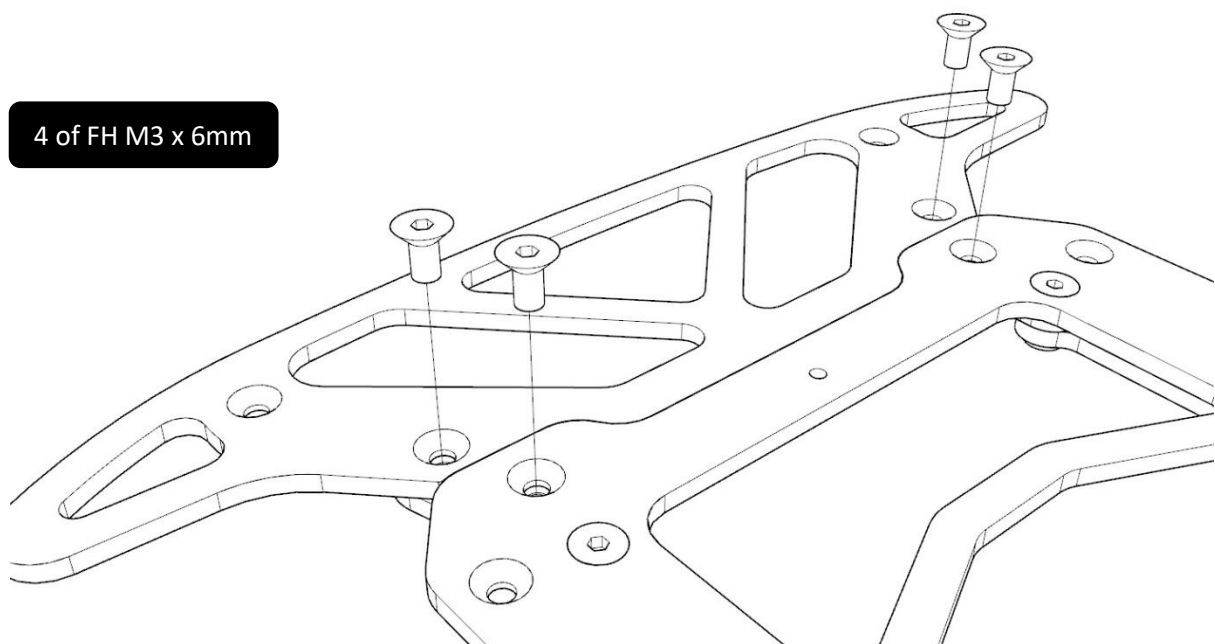
2 of BH M3 x 5mm
2 of M3 washers
2 of Servo Mounts



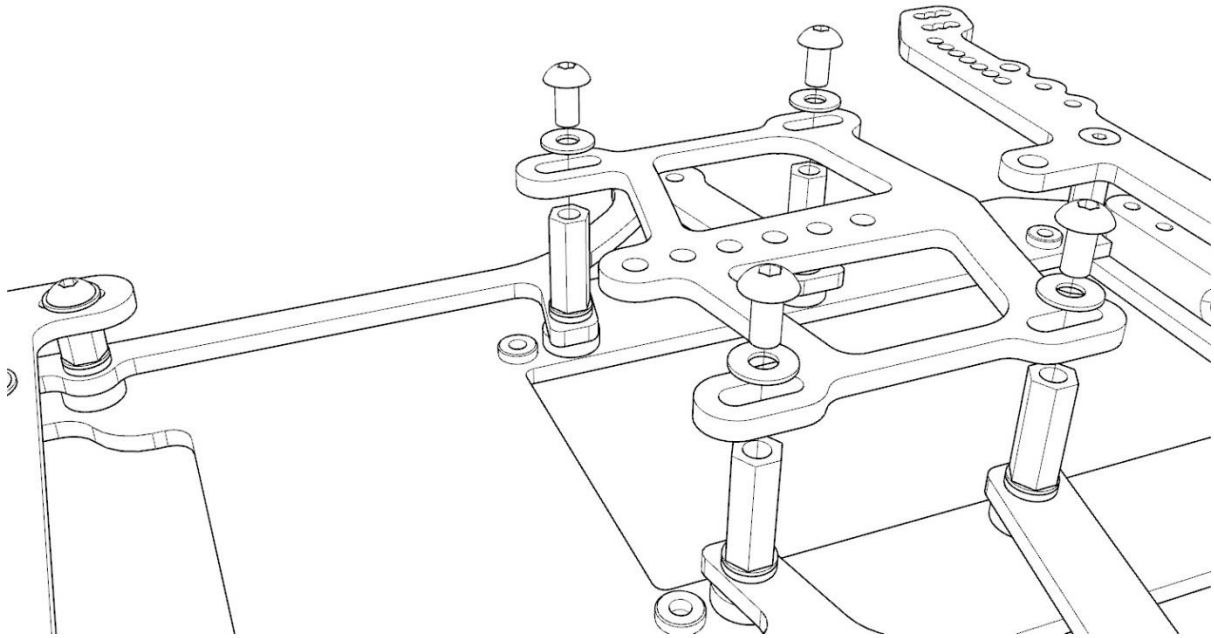
Here's where you need to make the decision on how brave you are regarding the servo height from the ground! With no shims it will have the base of the servo below the main chassis and a bit above the base of the battery lid. Add shims to raise it to your comfort level. If you run on high grip tracks the lower the better. If low to medium, then just add some shims. Use the 10mm length screws with no or little number of shims or the 12mm with a large amount of shims



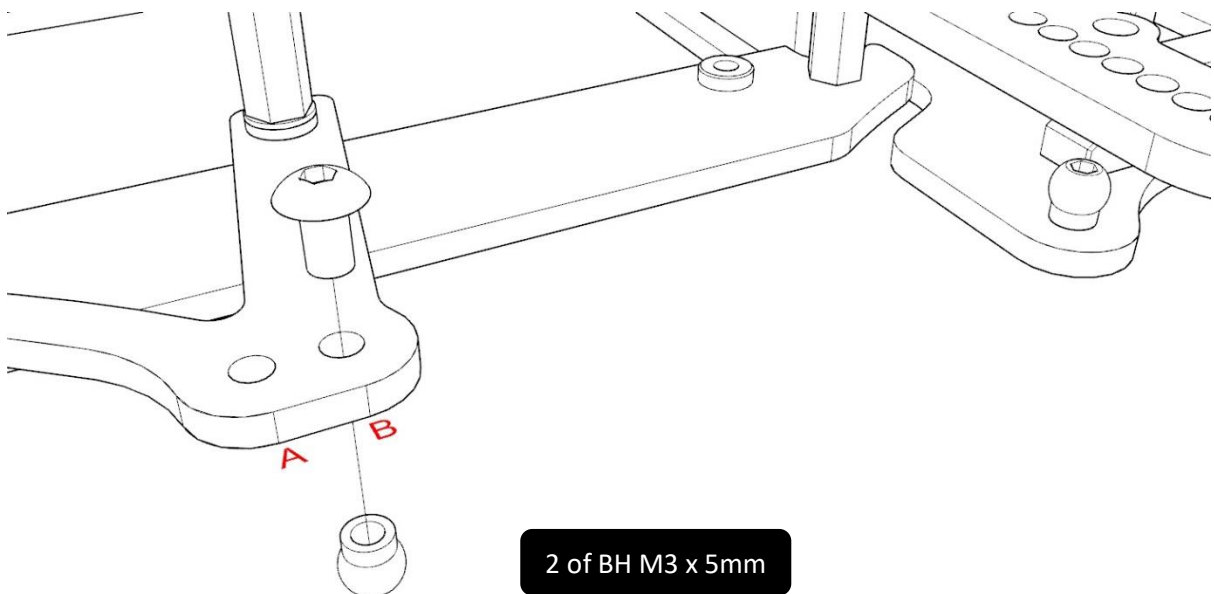
The bumper is fitted from the underside into the bumper bracket. It features a flush fit against the front of your chassis to protect it when you get a little enthusiastic with the curbs. Two M3 x 8 CS screws are supplied for front body post mounting.



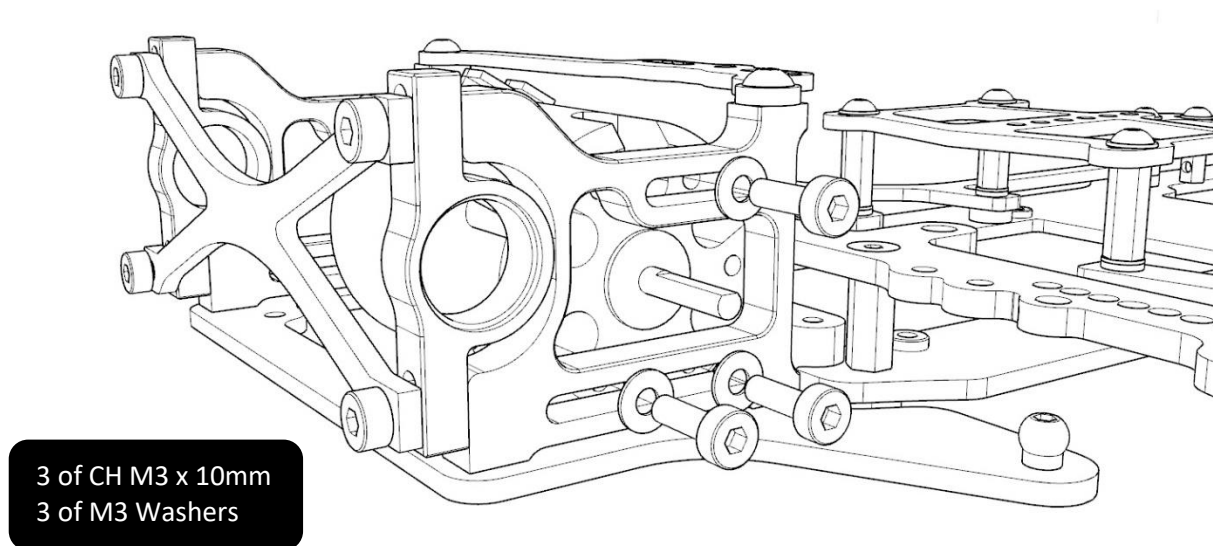
May as well loosely refit the upper brace. This will need to be taken on and off a few times until the centre shock is installed, it will then probably never move! Note the slots, they allow for finetuning of either shock length or rear droop. Once set, the battery can easily be removed from underneath.



The standard side braces offer two lengths of side link options – A) for the longer XRAY style links or B) for the AE/Roche/Saxo links. Fit the balls in the appropriate holes, slip the pod into the pivot and add your choice of side links.



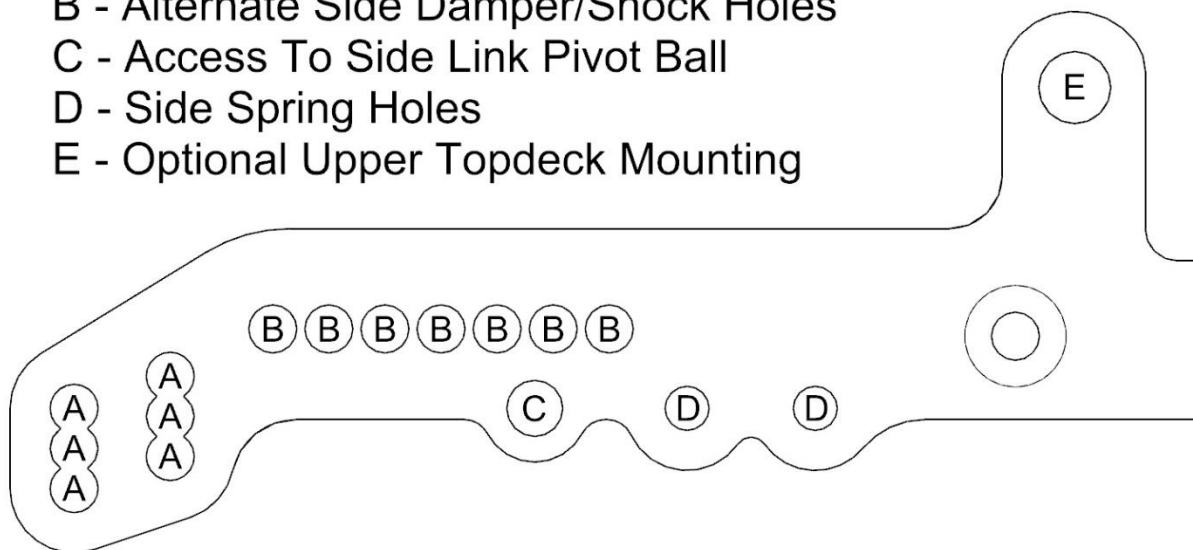
Screws and washers are provided for mounting your choice of motor. Three screws make it very secure, but feel free to run one upper and one lower or two lower screws only.



3 of CH M3 x 10mm
3 of M3 Washers

Picture below shows the options for the tweakplate. We offer multiple positions for the body posts (two M3 x 8mm BH screws supplied for post mounting) to allow for different body shapes. Multiple holes for your choice of either side shocks or side damper tubes. We also offer two positions for side springs to either allow a softer range (inner hole) or harder range of settings (outer hole) Furthermore, the two sets can be used as a two stage setting to allow a soft initial setting that increases to hard as you push hard through sweepers etc. Four M3 x 10mm setscrews are supplied for side spring mounting

- A - Alternate Rear Body Post Positions
- B - Alternate Side Damper/Shock Holes
- C - Access To Side Link Pivot Ball
- D - Side Spring Holes
- E - Optional Upper Topdeck Mounting



Setup Notes

As the Litesabre has a stepped chassis, take advantage of that! If you normally run say 5mm front rideheight and 5.5mm rear, add 2.5mm to the front rideheight, so you'll have 7.5/5.5 F/R rideheight. This will provide better cornering clearance, better bump handling and better at higher speed by minimising the chassis touching down on curbs and the ground from higher downforce from current bodies.

Front rideheight can be more easily adjusted with the optional Bezerk carbon shims.

Rear rideheight uses the slider rear adjusters. Using a dedicated block under the pod makes adjustment quick, put block under, loosen screws and let wheels fall to your setup board and retighten.

How you control the roll of the Litesabre is a very personal preference. Some love side shocks, some side springs and roll damper tubes. The ability to mount either does make the Litesabre very flexible. We provide two sets of setscrews to allow mounting of either a single set of lower side springs (inboard or outboard) or multiple sets for larger high-speed tracks.

The centre shock has multiple fixing options to allow for different length shocks. If your chosen shock doesn't have an easy way of adjusting it's overall length, we have you covered for droop adjustment by have the upper battery mount sliding.

1/ set your initial rear rideheight with the rear sliders.

2/ use your preferred method for measuring the rear droop, slide the upper battery mount forward or rearward to get to your desired amount.

3/ use the shock collar to set the rear of the chassis to the desired rideheight, typically similar to the height you've set the pod to.

Front body posts can alternatively be mounted above the bumper mount rather than the bumper itself; you'll need longer screws to achieve this.

Option Parts

Long upper battery brace – use this to stiffen the chassis up even further, connects to the tweak plate via pressnuts and shims

XRAY rear pod and pivot plate – use the most current xray rear pivot ('21 '22)

Vertical rear pivot pod and pivot plate – use older xray pivot, Roche, Saxo etc

Front width ZEN NOS inserts – vary the front width of your car with optional +/- inserts, available in 0.5, 1.0 and 1.5mm

Front rideheight shims – carbon shims, a set of 0.5 1.0 and 2.0mm for quick adjustments

Front brace for ZEN NOS – standard width or to suit a width you like with the optional inserts

ZEN NOS carbon upper caps – replace the plastic ones with a neat carbon one

Topdecks – if you need thinner or thicker or a custom link length, we can help

Front arms – to suit newer XRAY fixed kingpins, to suit AMX A12 fixed kingpins

Front brace – to suit either of the option arms above