Thank you for purchasing the www.crafthub.io Active Suspension Conversion Physical kit

Active Suspension Conversion Kit For Yokomo YD-2 E series /S series

This is a suspension Conversion kit. To use SuperScale2k20 SS Unit, This kit can use the full potential of the SS unit instantly. And you can get the realistic motion for your Yokomo YD-2chassis.

All of the parts are made with Color Fabb HT automobile grade tough and durable material.
*without body mounts, etc.

Future

- Come with All of the parts that you useSuperScale2K20 SS unit.
- Design for Yokomo YD-2 E series /S series
- Active suspension and conventional suspension hybrid.
- Simple and reliable, easy to swap design.
- Fully compatible original suspension geometry

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What is contained in this kit?

Parts list of this kit

	Name	note	
1	FrontStruttower		
2	FrontstrutArms		
3	RearStrutower	E or S	
4	RearStrutArm		
5	FixScrew	M3*12	4
6	FrontServoBackle		
7	Rear ServoBackle		
	Screw etc kit		
8	servo FixScrew	M3*10 M3*6	14(2)
9	TaperWasher	orange Alu	4
10	Screw	M3*8	4
11	SqueaNut	M3	2
12	M3 Nut	M3	3
13	Ballend	Yokomo4.8	4
14	ballStud	Tamiya	1set
15	TurnBackle	Yokomo4.8	4
16	Rodend	4.8	8
17	HardSpring RED	Tamiya	1set
18	HardSprihg Gray	Tamiya	1set
20	Accessory kit		
21	Gyromount	PLA Only E kit	1
22	servo Hone	PETG	4
23	SSunitMount	PLA Only Ekit	1
28	Body mount	TPU	2
	Fixscrew	M3*10	4

What you need without this kit

- SuperScale2k20 SS unit
- Suitable servo *4
- 10A UBEC
- 3M Double Side Tape

Digital servo required
For Drift Car, Don't need so much torque. 5-10kg may enough, However, metal geared servo is required.

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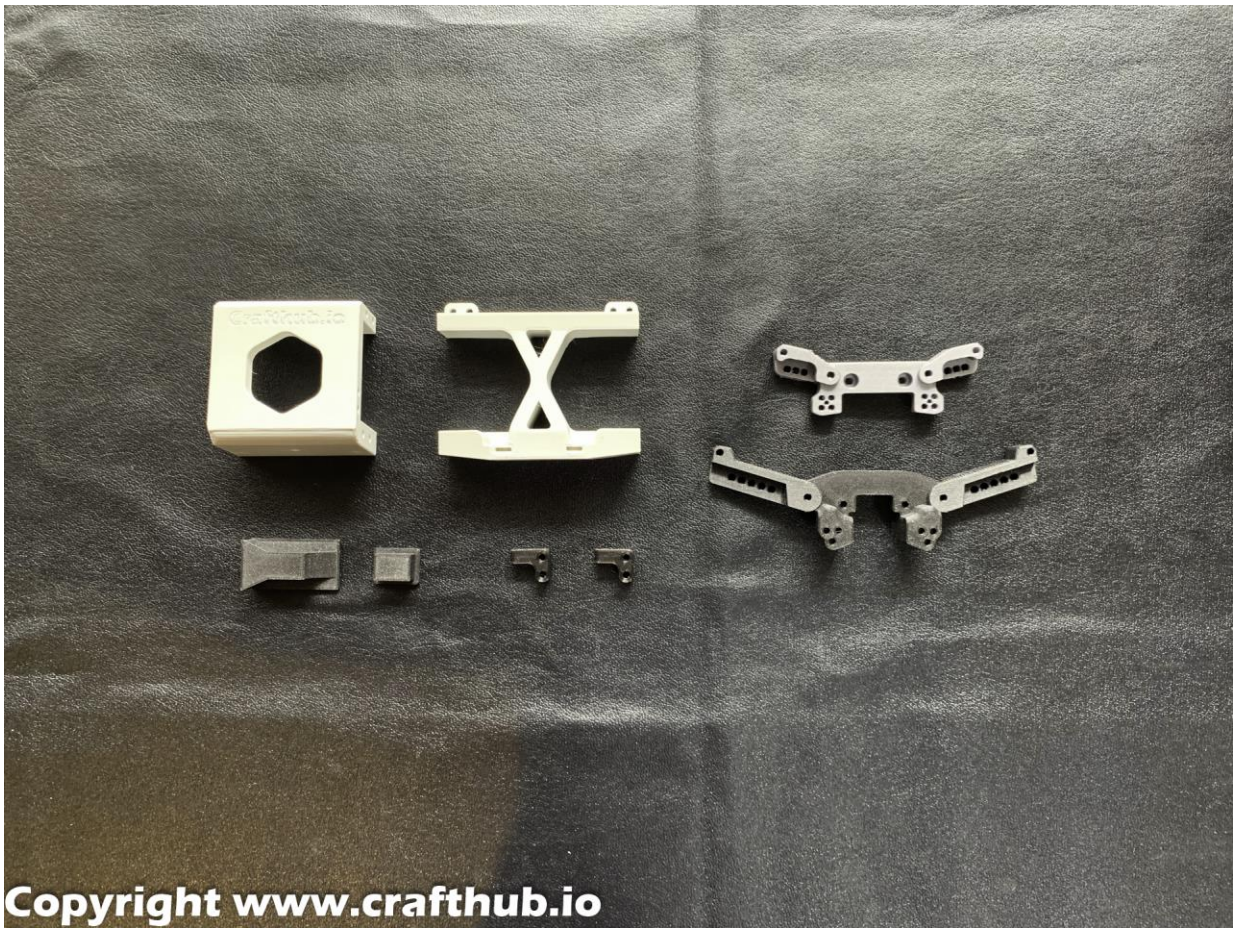

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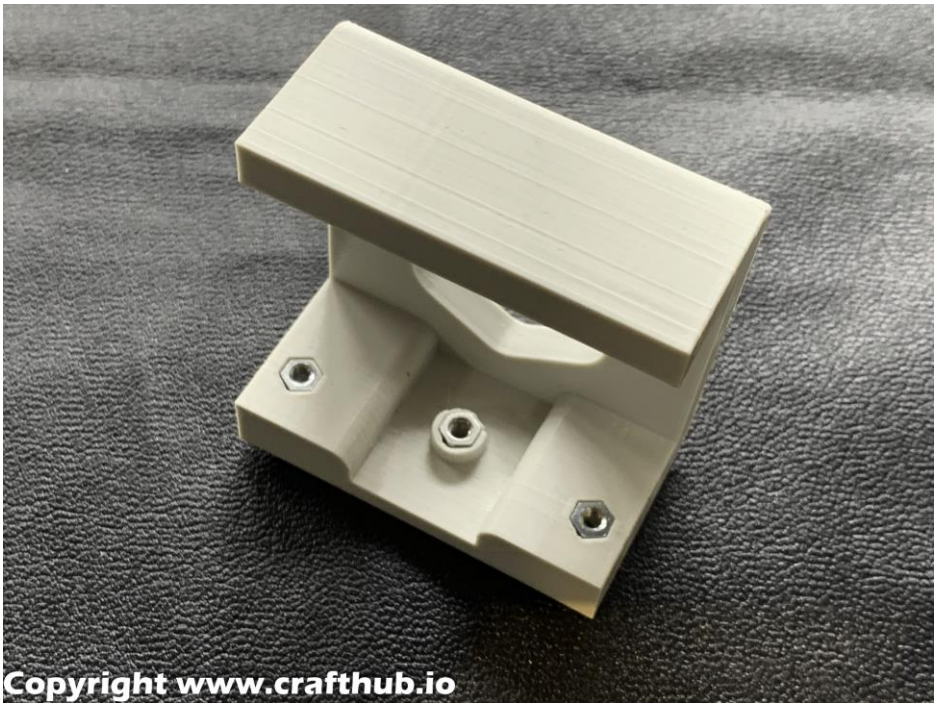
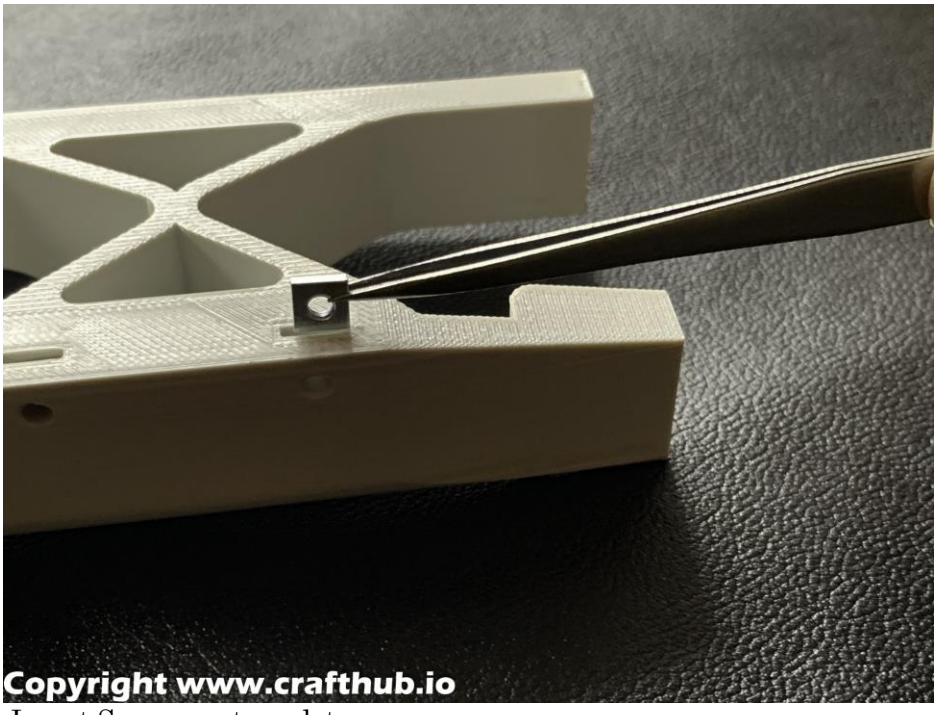
1, Installation

Use M3 screw, M3 Nut and gently insert to the M3 Nut position.



Use the screw to pull the nut into M3 Nut position



Insert Square nut on slot.

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2, High Torque Servo installs

Use M3*10 CapScrew(PartsNo13) to screw servos to chassis mount brackets.

The mount screw hole size is 2.8mm and optimize the tolerance for M3 Screw.
The Servo's output shaft should be on the side closest to chassis mount holes.

Front Servo bracket

Only this part, you have to use M3*6 screw, instead ofM3*10 screw to avoid not to interfere with fixing screw.

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3, Remove the bumper

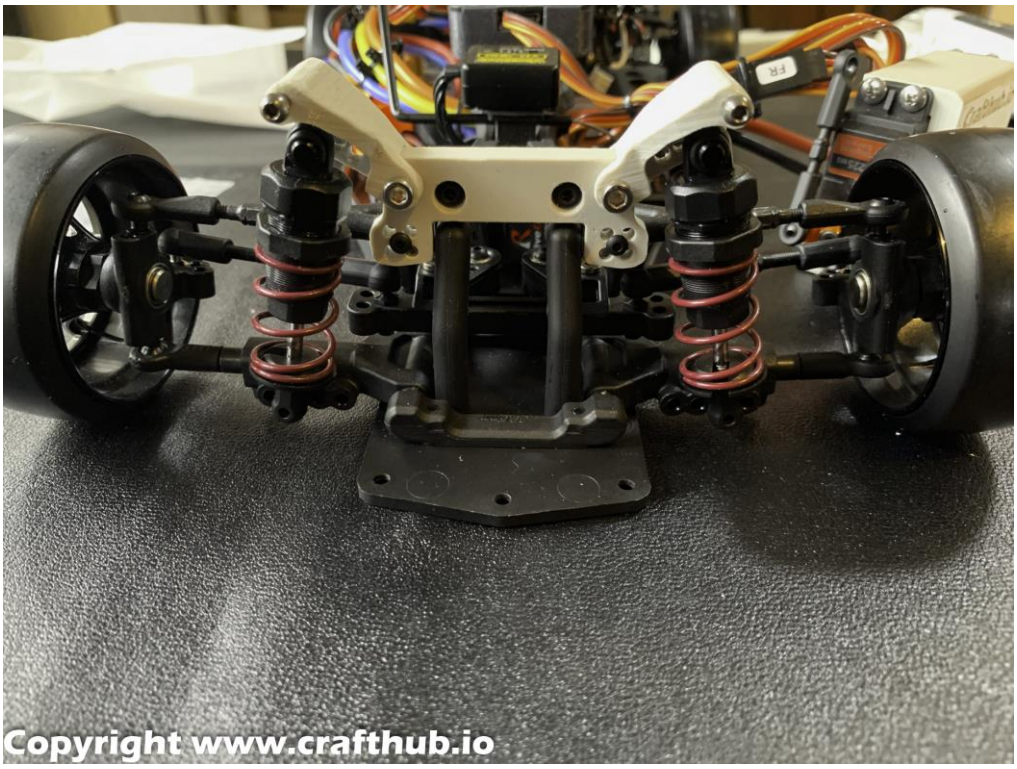
The Bamper fix screw is used to fix a servo Bracket

4, Swap the Strut tower bar(Front)

Front Strut (Remove the original Strut Tower)

Remove the ball end and fix it in a correct position
Use a Tamiya Fluorne coated Stabilizer Ball connector set For the front, use this one.(partsNo14)

Assemble the front Strut tower by adding M3*15 screws for the front. Do not over tighten. Check for minimum play and movement.
The assembled strut tower needs a little bit friction. If this part is too loose, the SS's multiplier value can't increase, and serious oscillation will occur and won't stop. However, regular suspension linkage parts have to always be very smooth.



Check Ball connector position.

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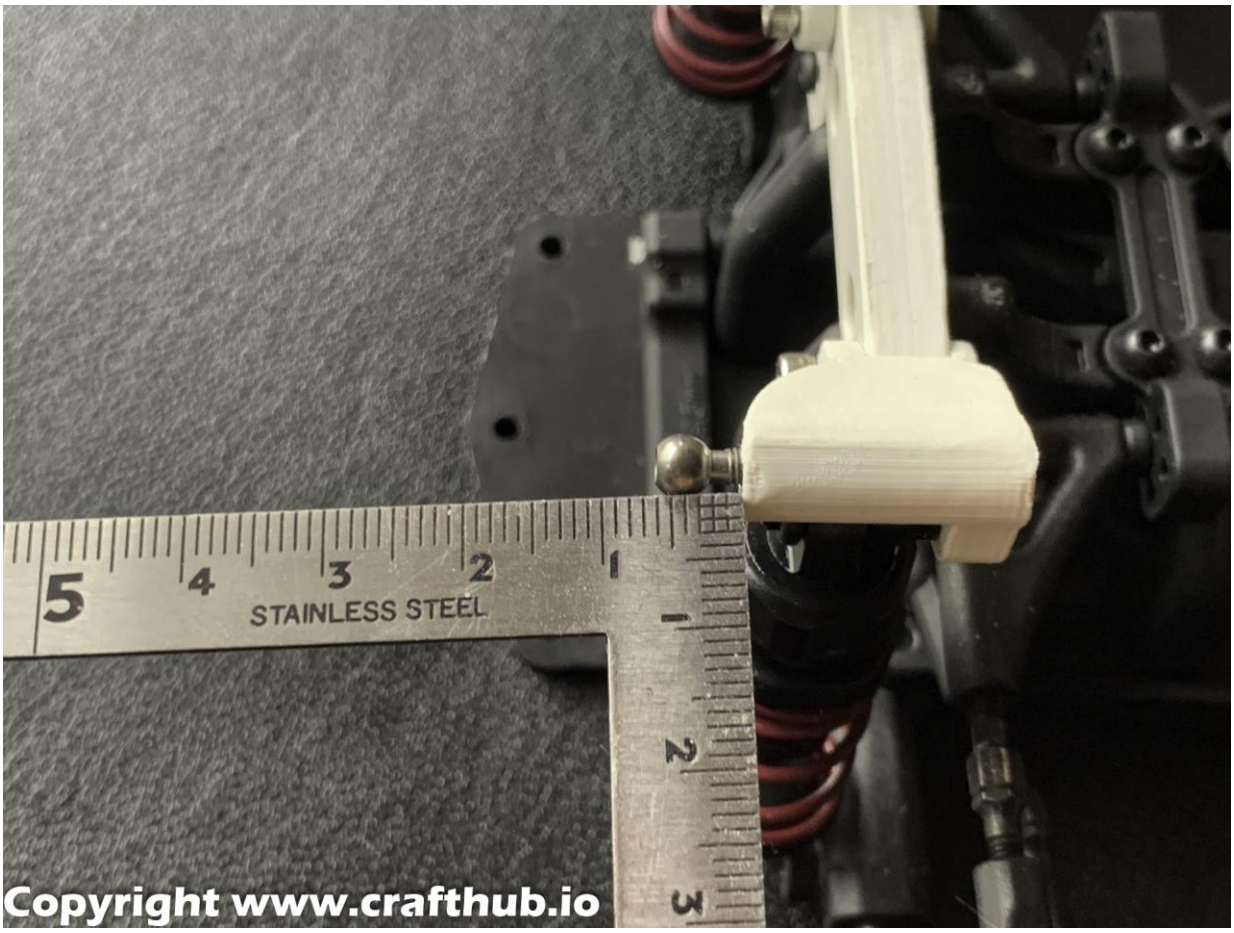

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5, Swap the Strut tower bar (Rear)

Swap the original Strut Tower

For YD-2S

For YD-2E

Assembling the Rear Strut tower: (Assembled)
Using M3*12 screw for the Rear. (Do not over tighten)
Check minimum play (The arms should move easily.)

The assembled strut tower needs a little bit friction. If this part is too loose, the SS's multiplier value can't increase, and serious oscillation will occur and won't stop. However, regular suspension linkage parts have to always be very smooth.

Use a Tamiya Fluorne coated Stabilizer Ball connector set For the Rear , use this one.(partsNo17)

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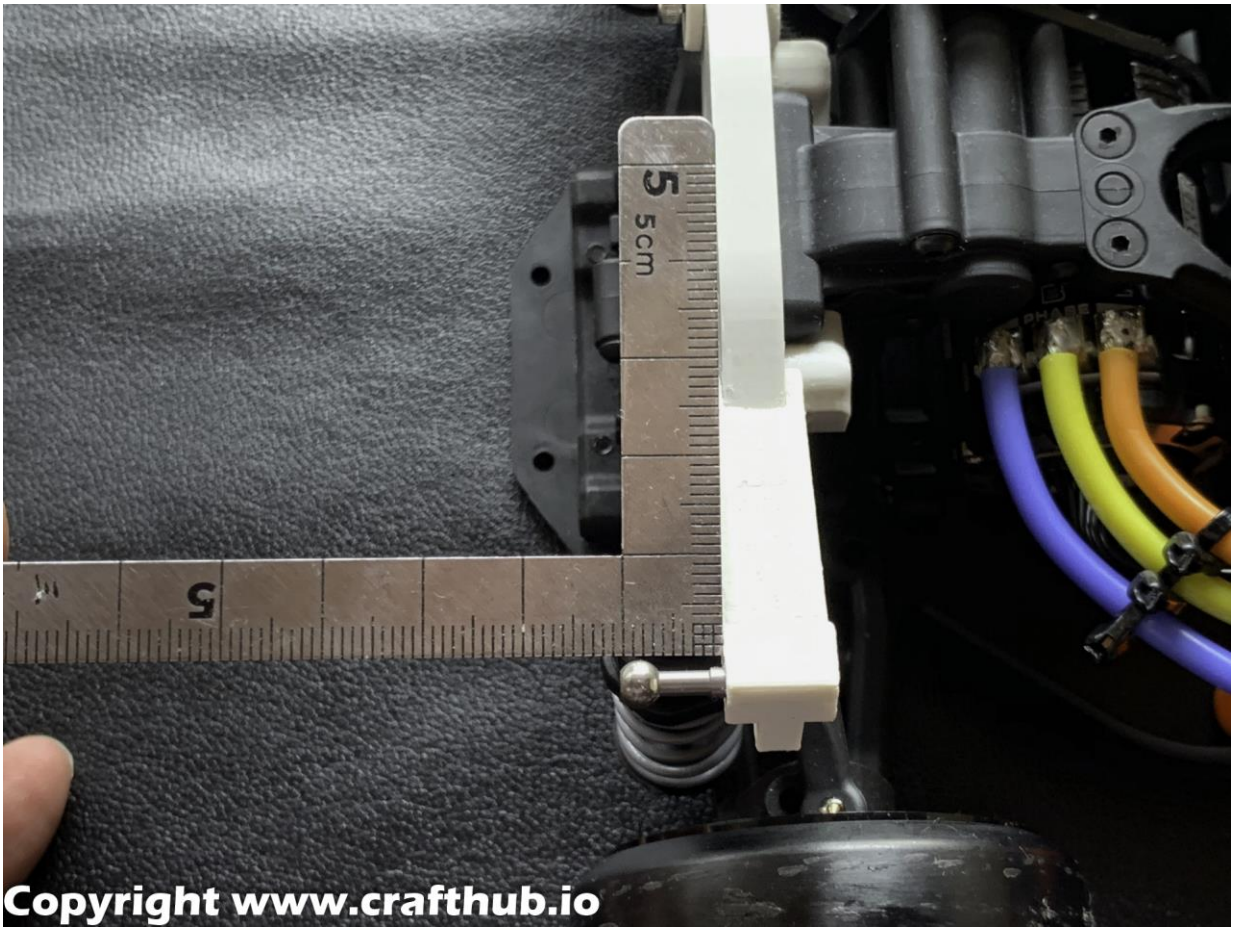

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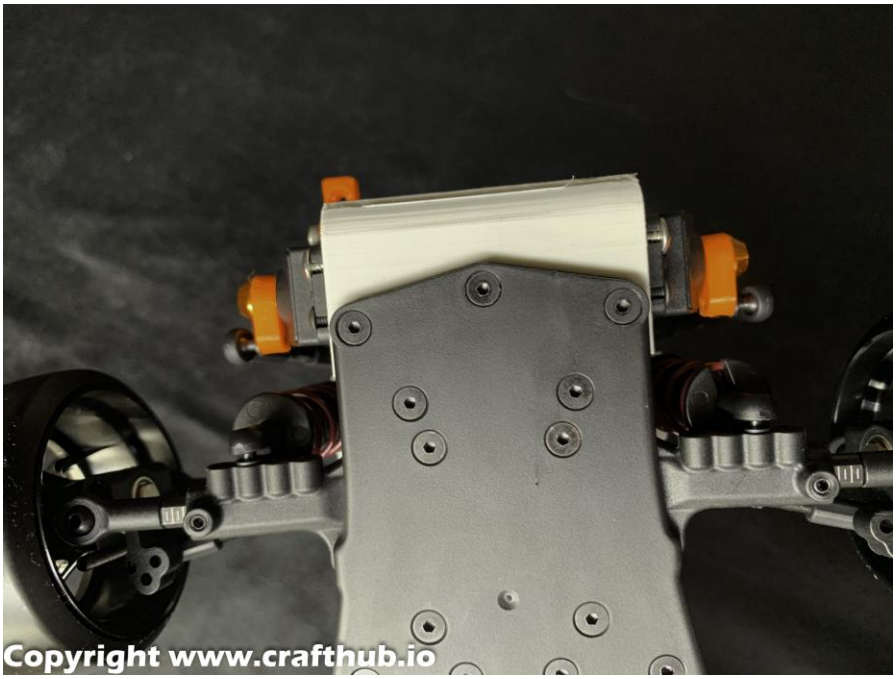
6, Mounting the servo holder

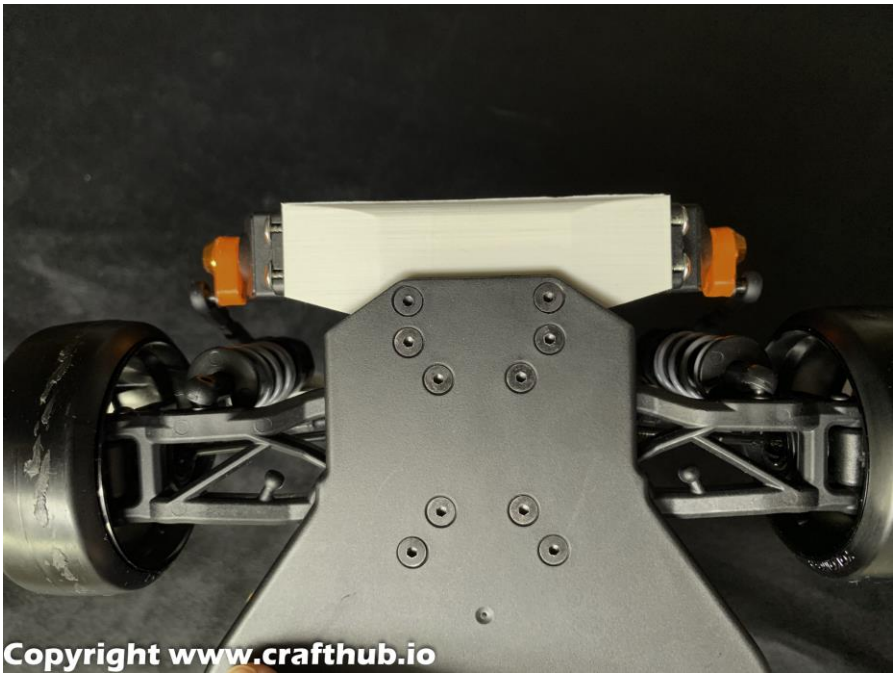
Frontside



Use the screw that Yokomo original Bumperfix used.

The *Front servo holder has 3 screws. The rear servo holder has 2 screws.

Rear Side



Remove the original bumper and replace to Servo holder.
About the Rear screw. Use the screw that MST original used.

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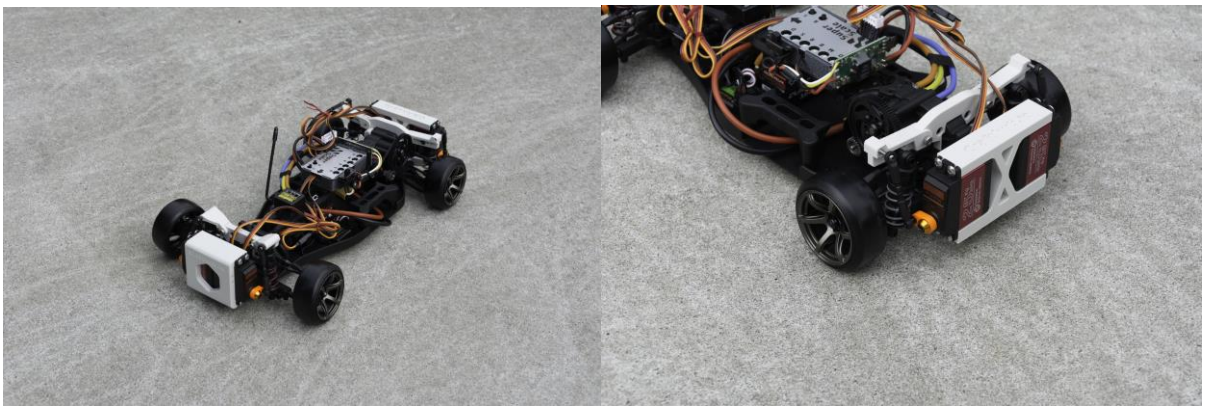
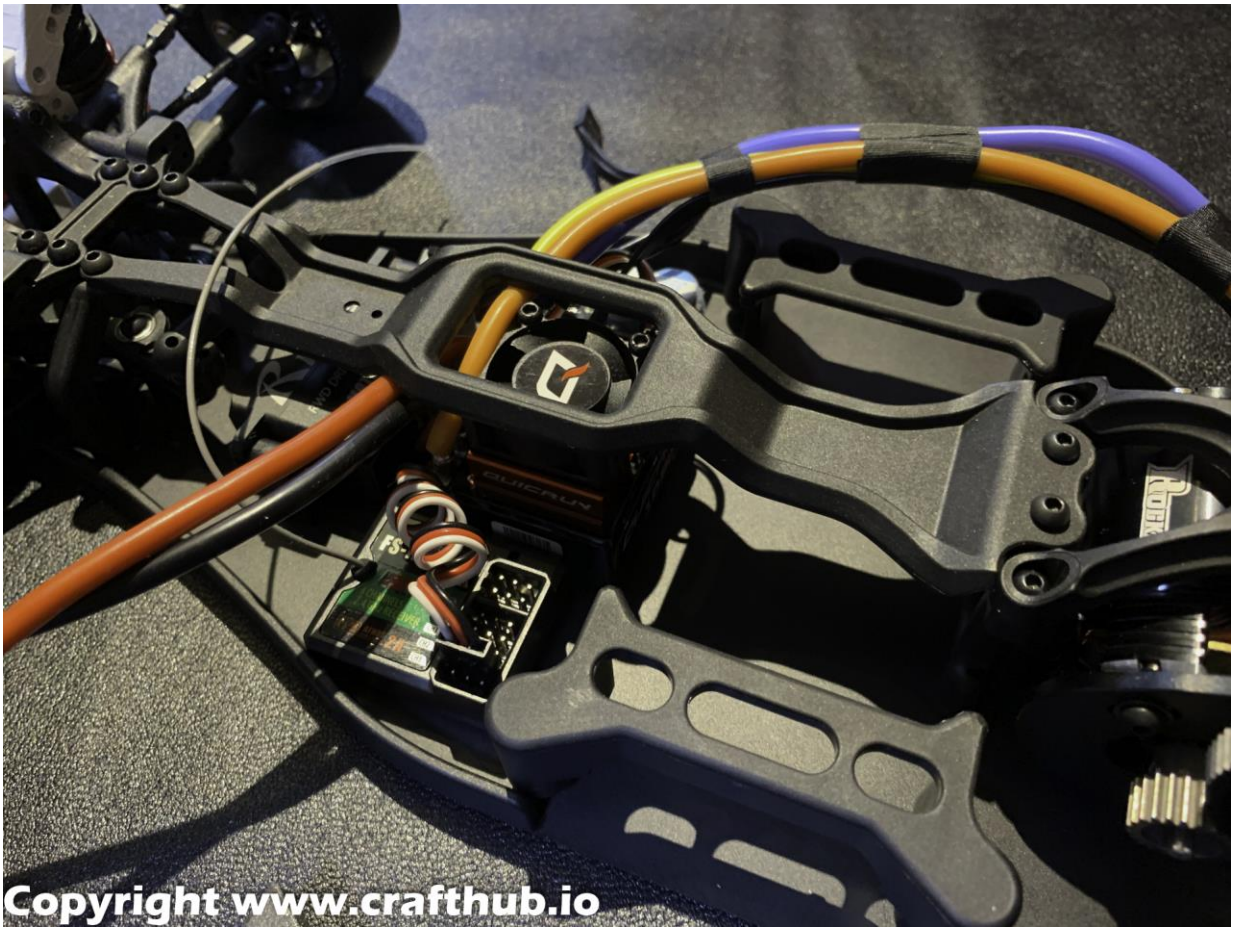


7, Initial setup of SS unit



Use Double side tape and fix on Upperdeck

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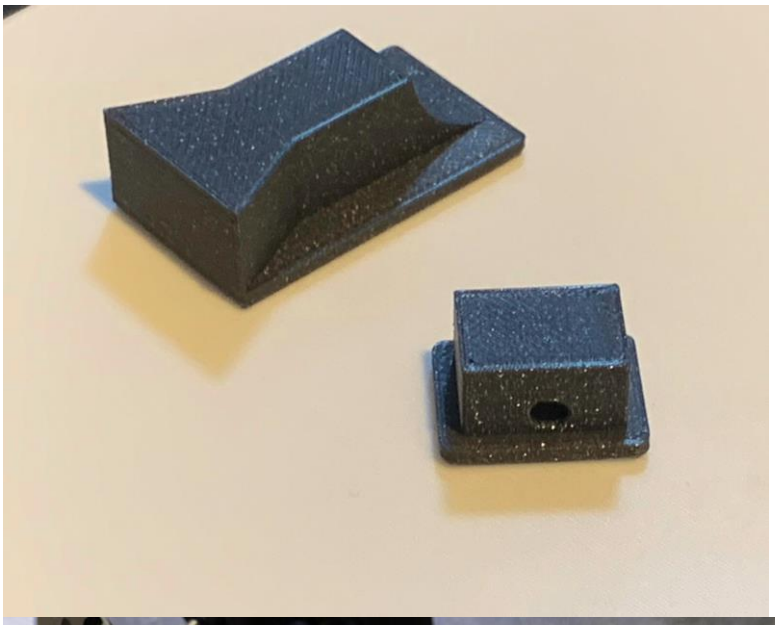

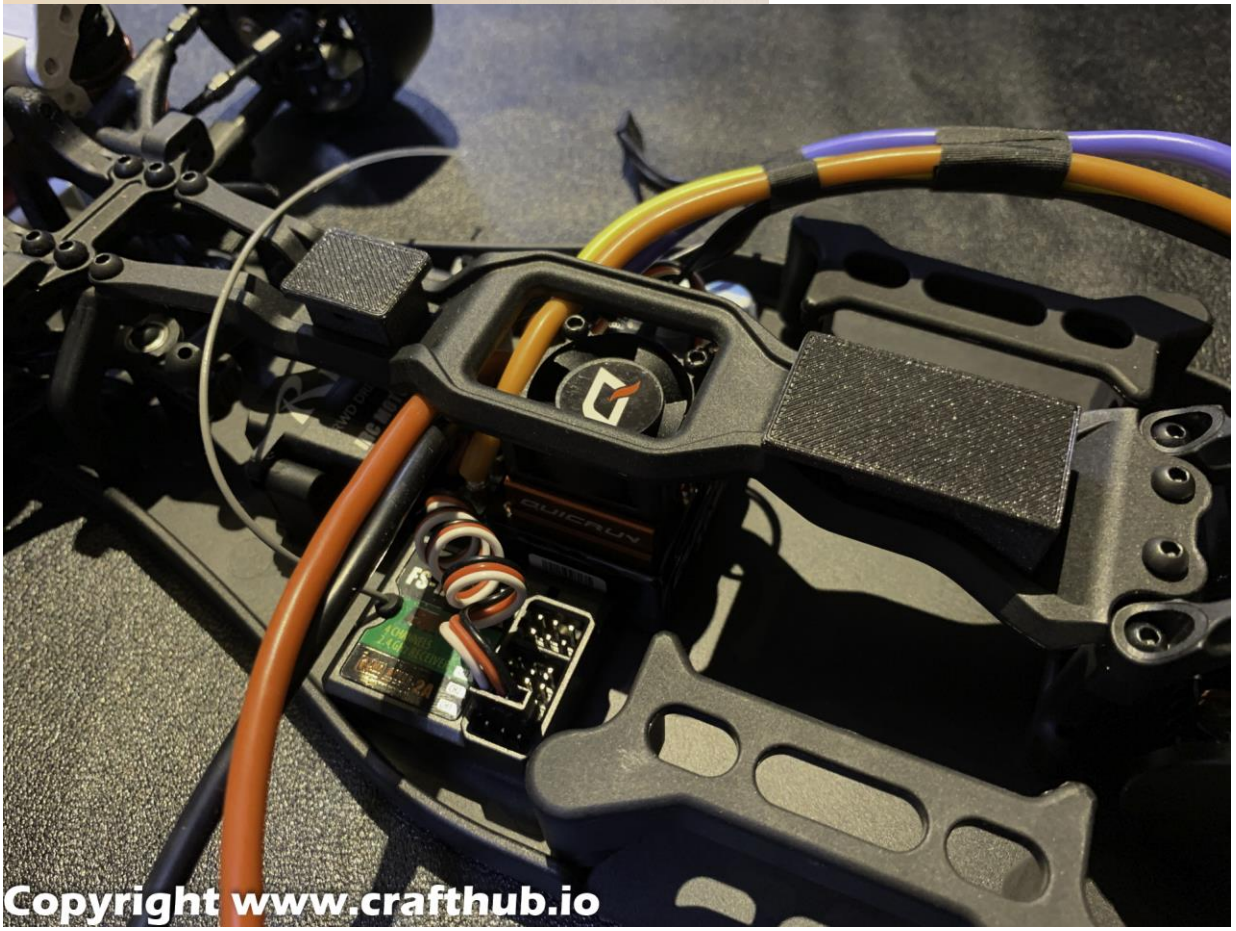

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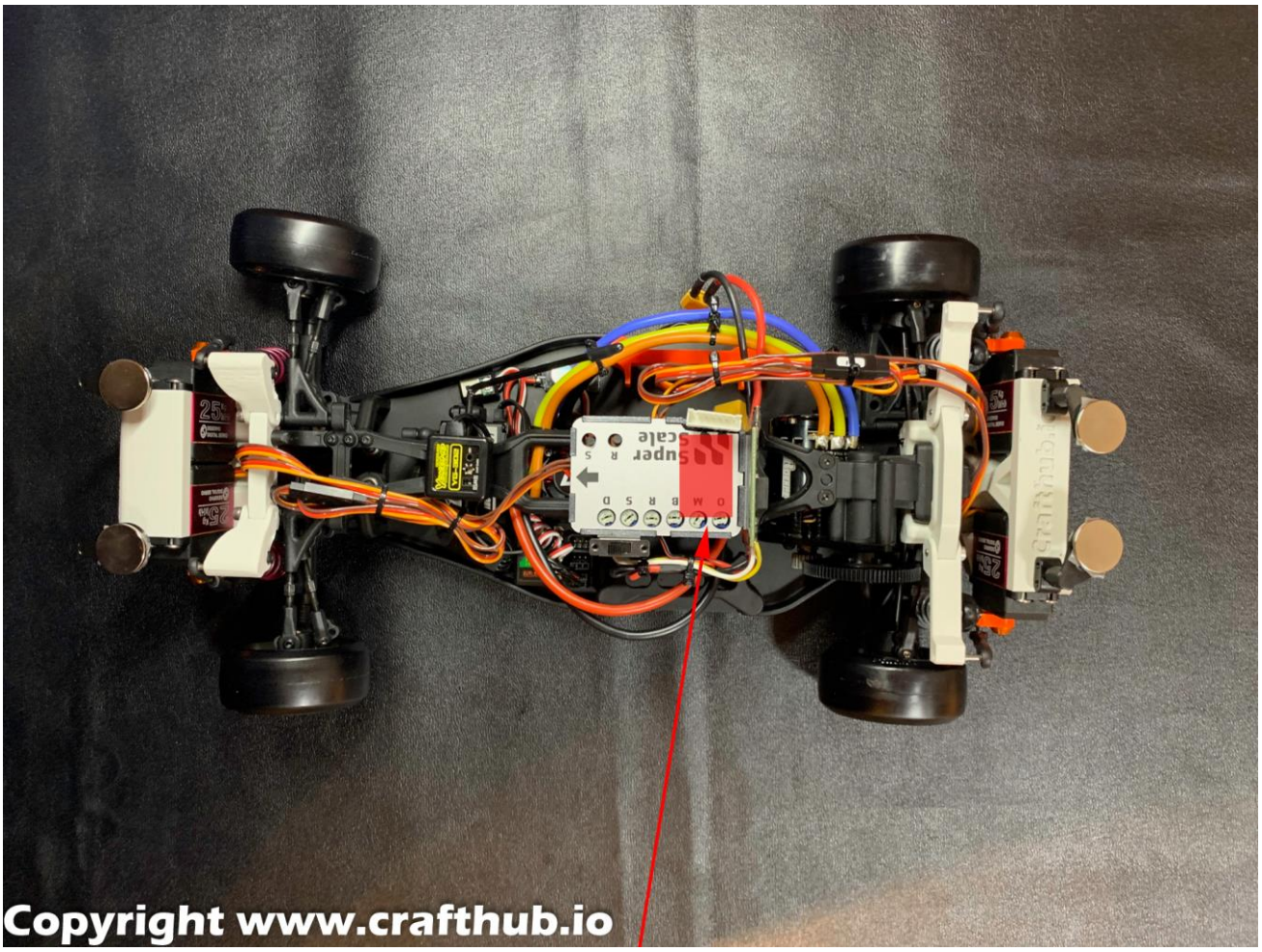


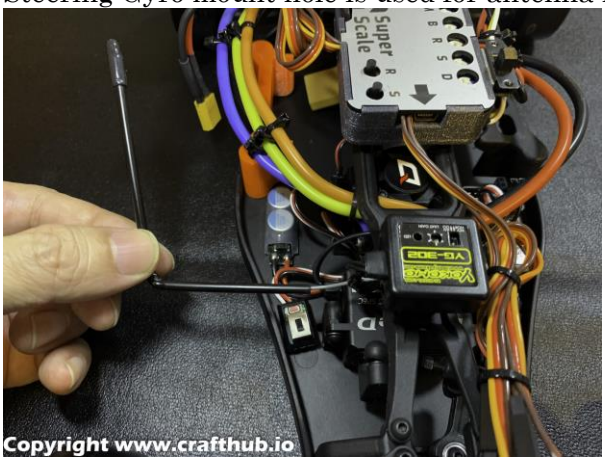
Be aware of the gyro sensor position in SS unit

Firmware needed from SuperScale2k20

SUPERSCALE_V1.2.ino.hex

***this firmware is pre installed**

Steering Gyro mount hole is used for antenna hold.



8, How to setup SS unit

You need to install Arduino configuration software. Please download from the link below.
https://www.arduino.cc/en/Main/Software

You may download Arduino IDE software for your suitable platform. MacOS or Win

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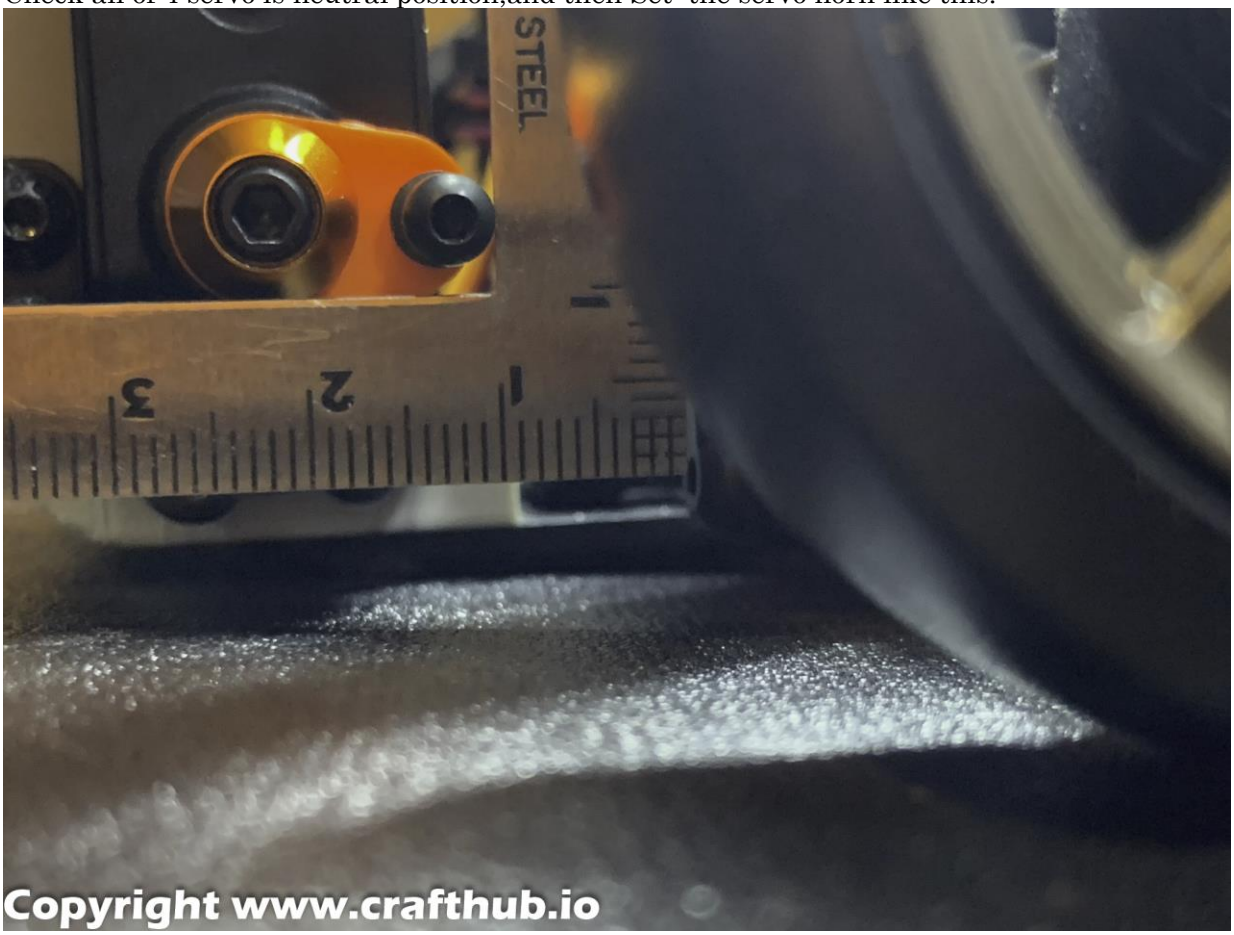
Step 1

First connect the SS unit to the PC and set the offset to 0.
Next set BALANCE to 50.
The servo ‘s neutral PWM value is almost 1500
FLpos 1500
RLpos 1500

*you should provide the power for SS Unit cause USB doesn't provide enough power to move the servo neutral position.

Step2

Check all of 4 servo is neutral position,and then Set the servo horn like this.



Servohorn and endball fix with M3x8 cap screw

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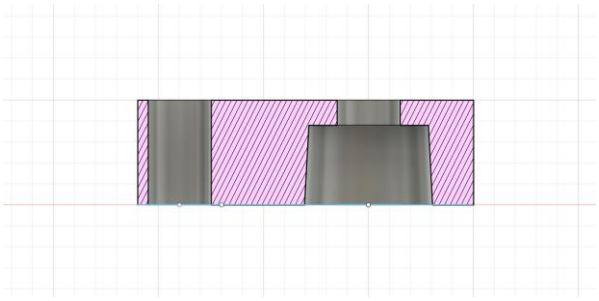
This hone has tapered servo shaft connection, so any spline servo can perfect fit for this servo horn. so this servo horn material is PETG.

Use with Tapered washer like the photo, it contains the kit (Parts No9).



Servohorn cut image

Step3

Adjust The turnbuckle length, and then connect servo and Strut arm.

Parts No16

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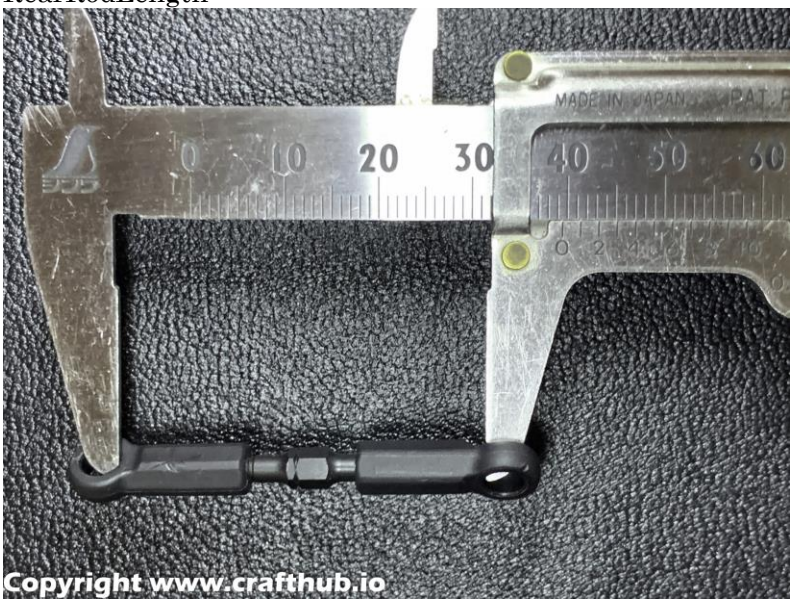
Front and Rear Rod Length

Front Rod length

Front=41mm

RearRodLength



Rear=39.3mm

All about physical setup is done, please test the sample setting value.

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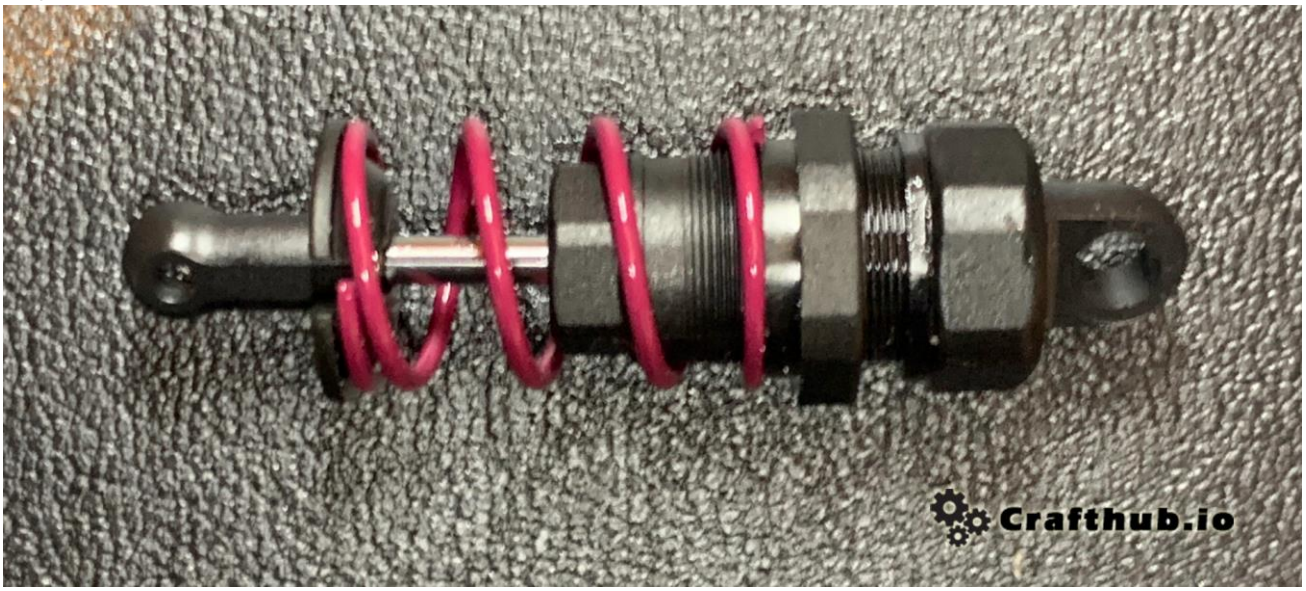
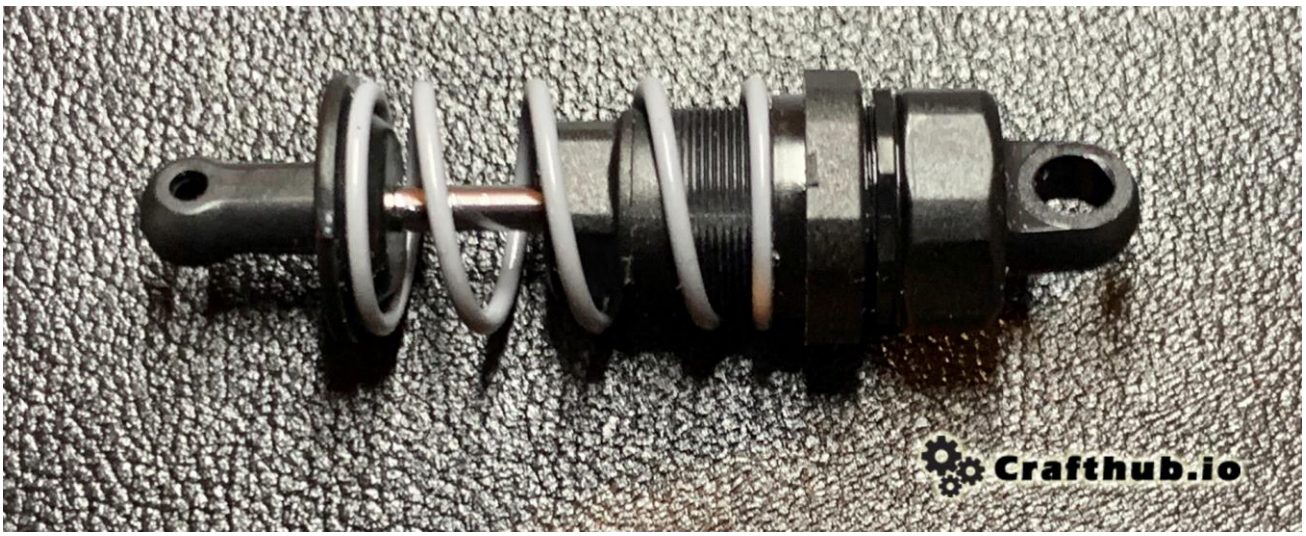
Spring preload

Front



4mm

Rear



1mm

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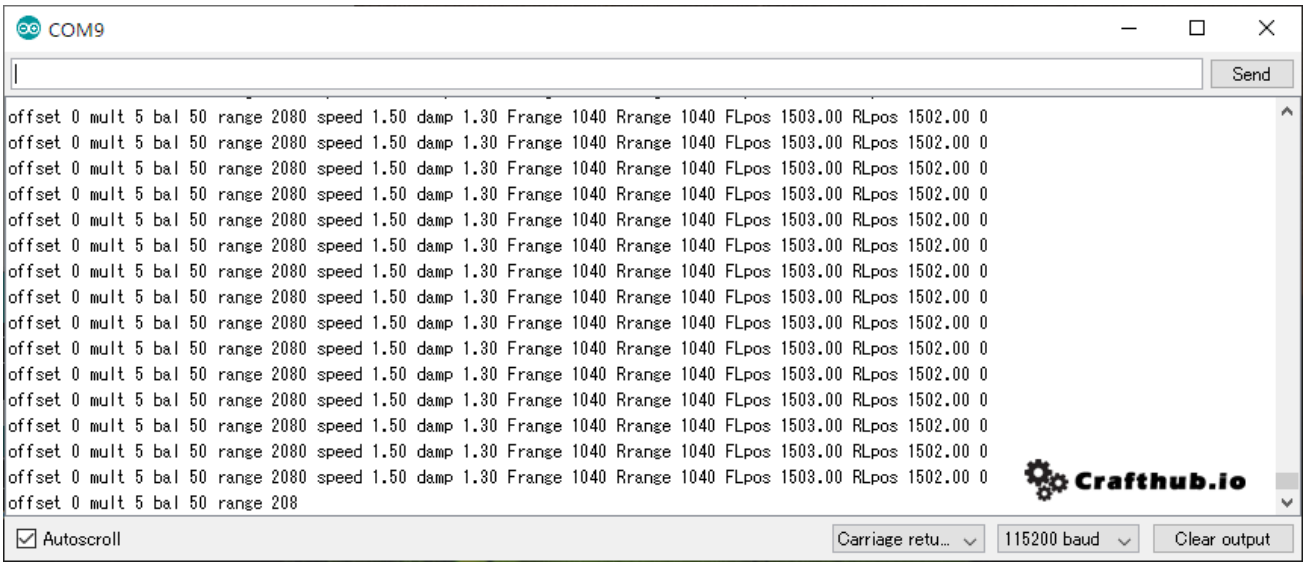
Yokomo YD-2 sample setup value



This is the start value to set up the active suspension
More detail, please refer to SS unit manual.

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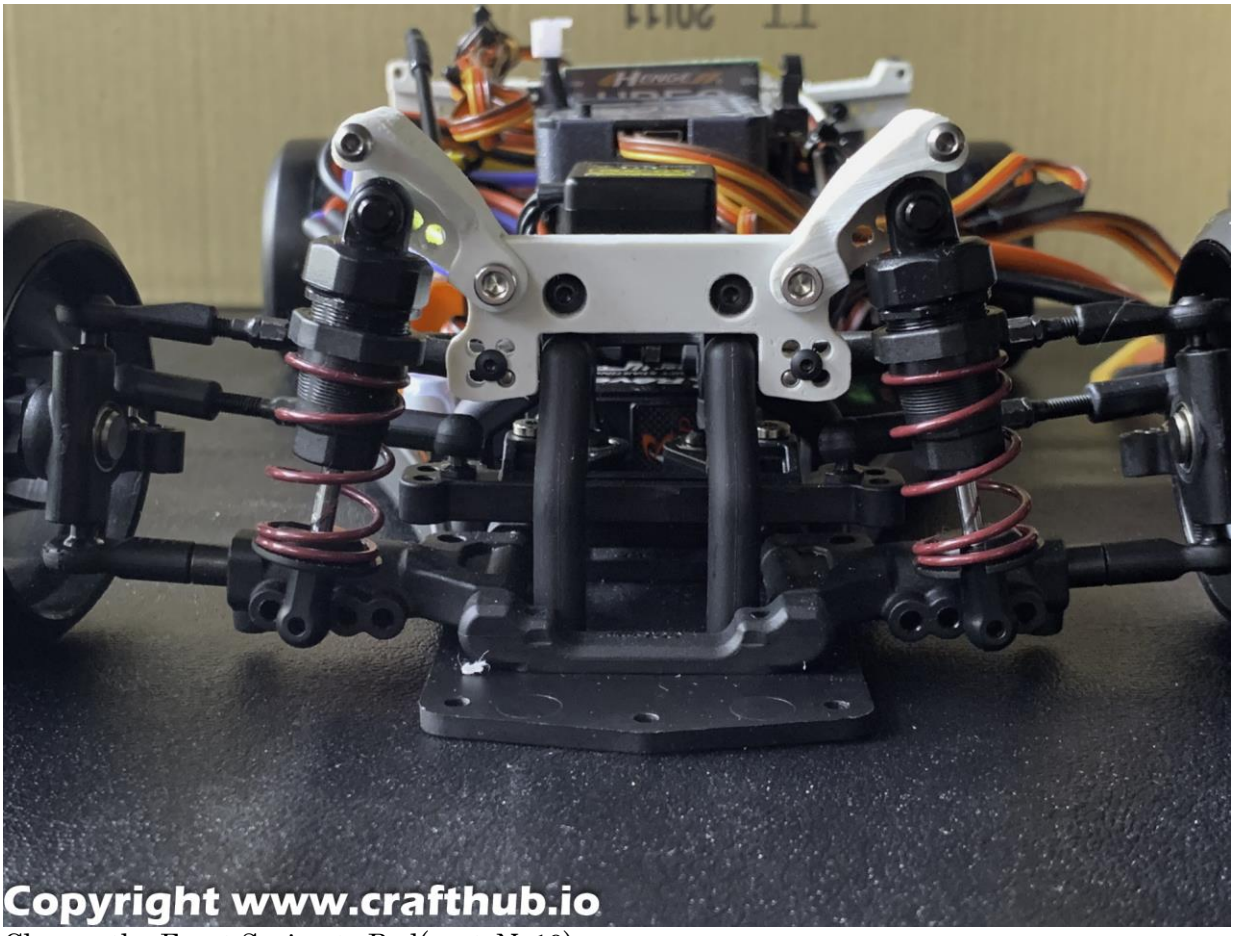
Front Suspension Setting



Change the Front Spring to Red(partsNo19) .

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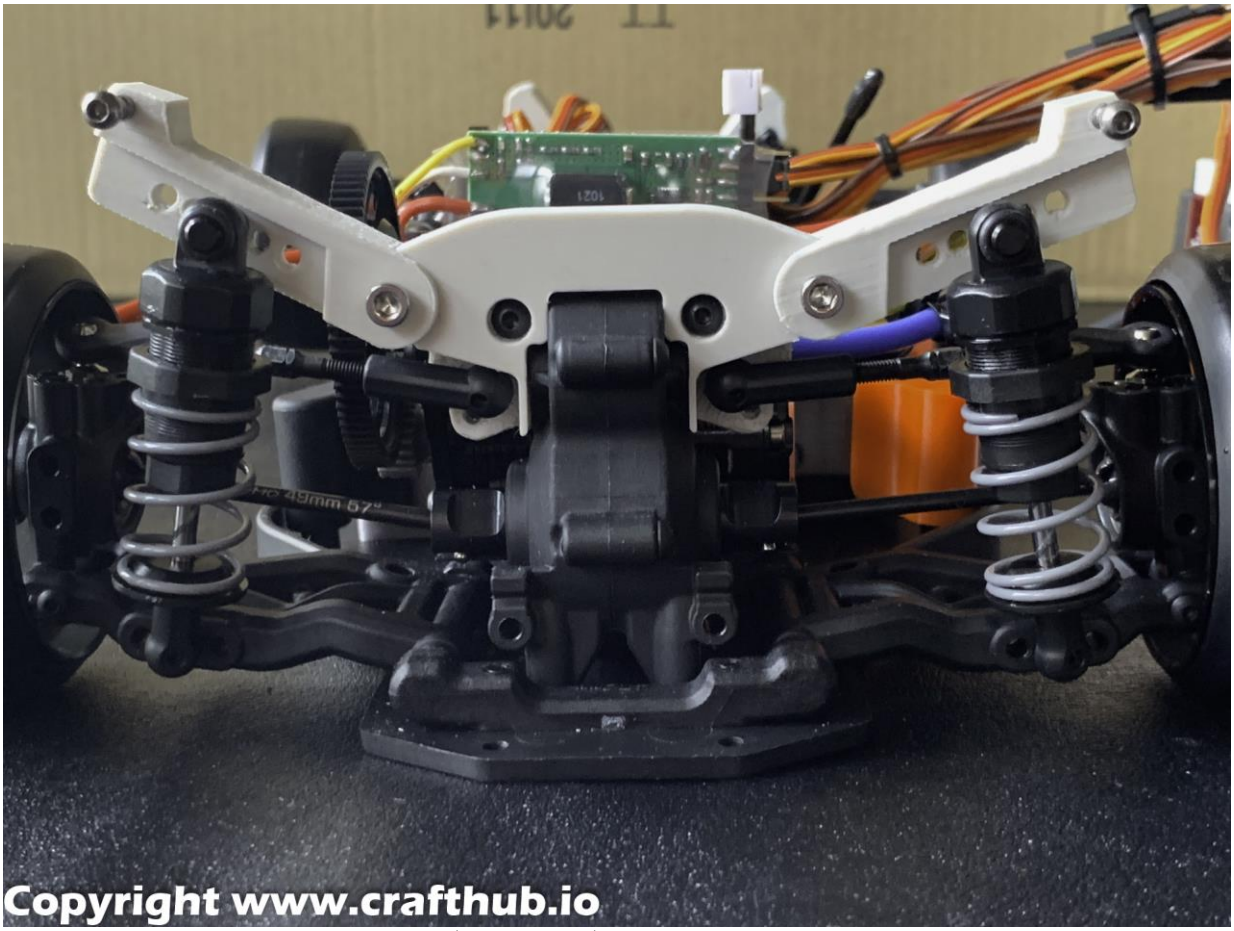
Rear Suspension Setting



Change the Front Spring to Gray (partsNo20).

It will be better to change more high viscosity dumper oil.

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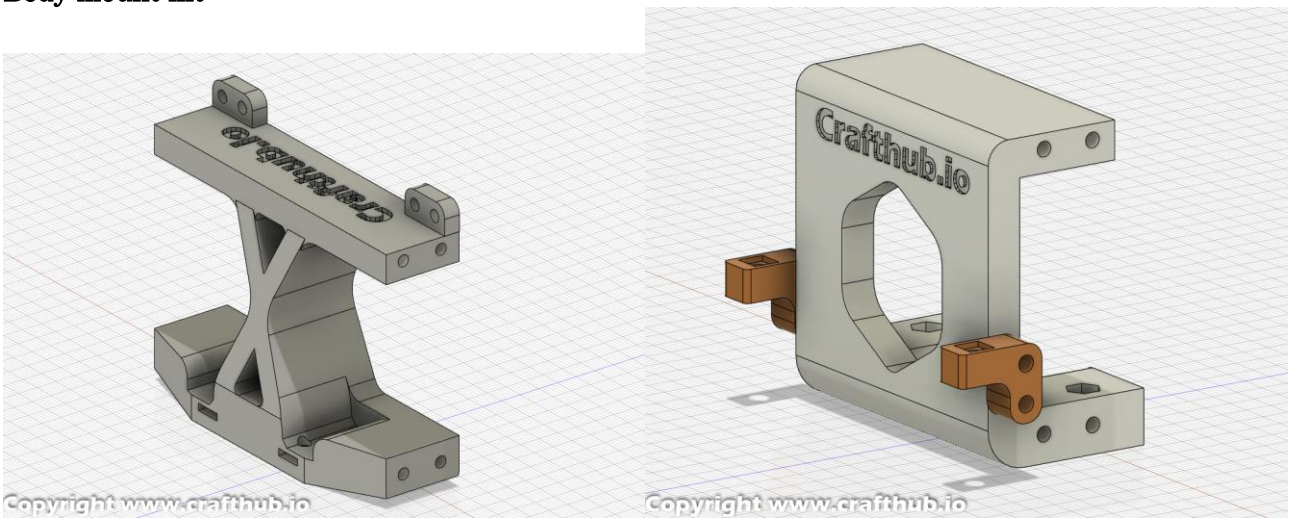
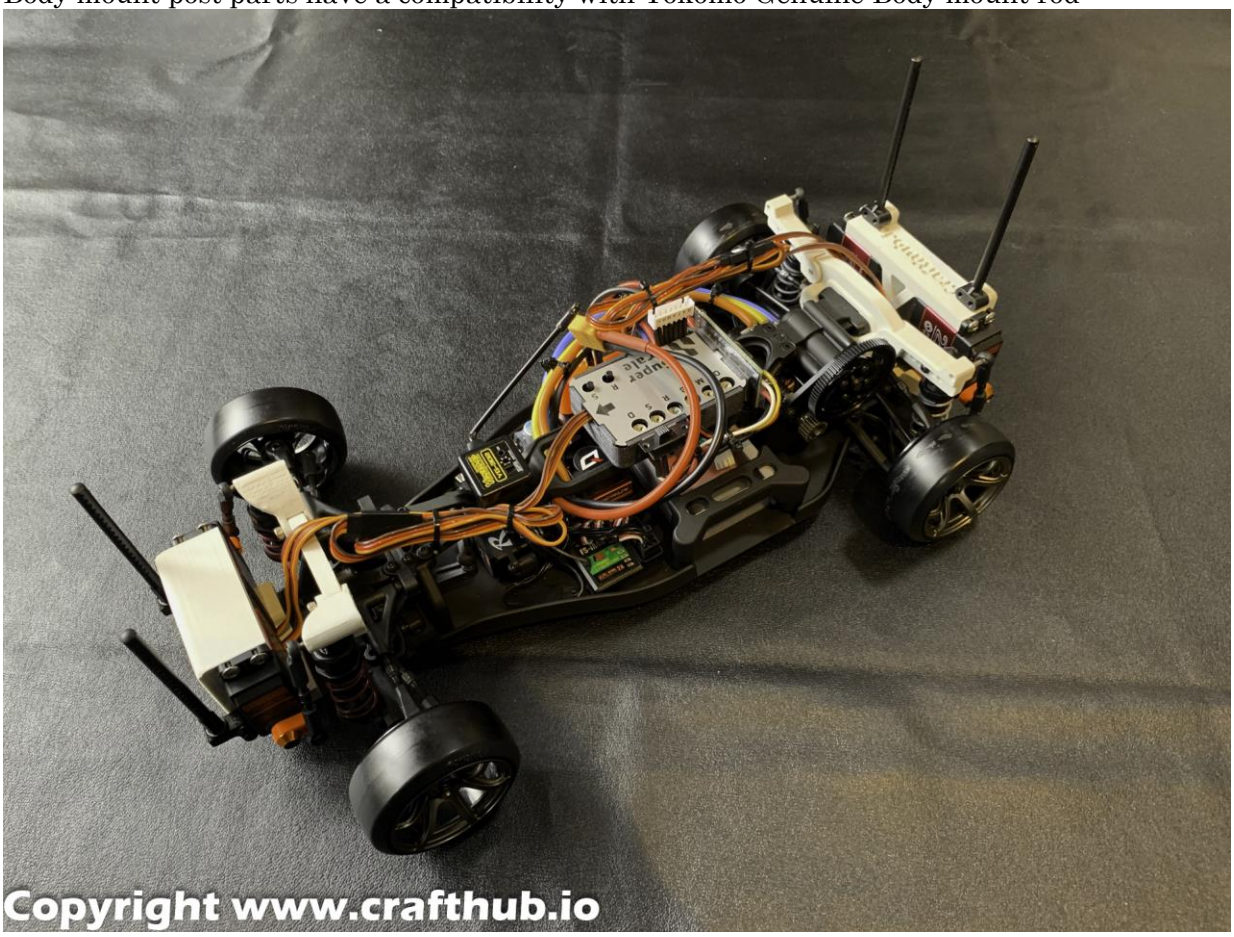
Body mount kit



Body mount post parts have a compatibility with Yokomo Genuine Body mount rod



You can use your suitable third party body mount. Or make a hole on body and fix the body use Body pin.

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This model was made FDM 3Dprinter, the parts have some additive markings, however, no problem for those parts function.

We use ColorfabbHT firmament
https://colorfabb.com/colorfabb-ht-tritan

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