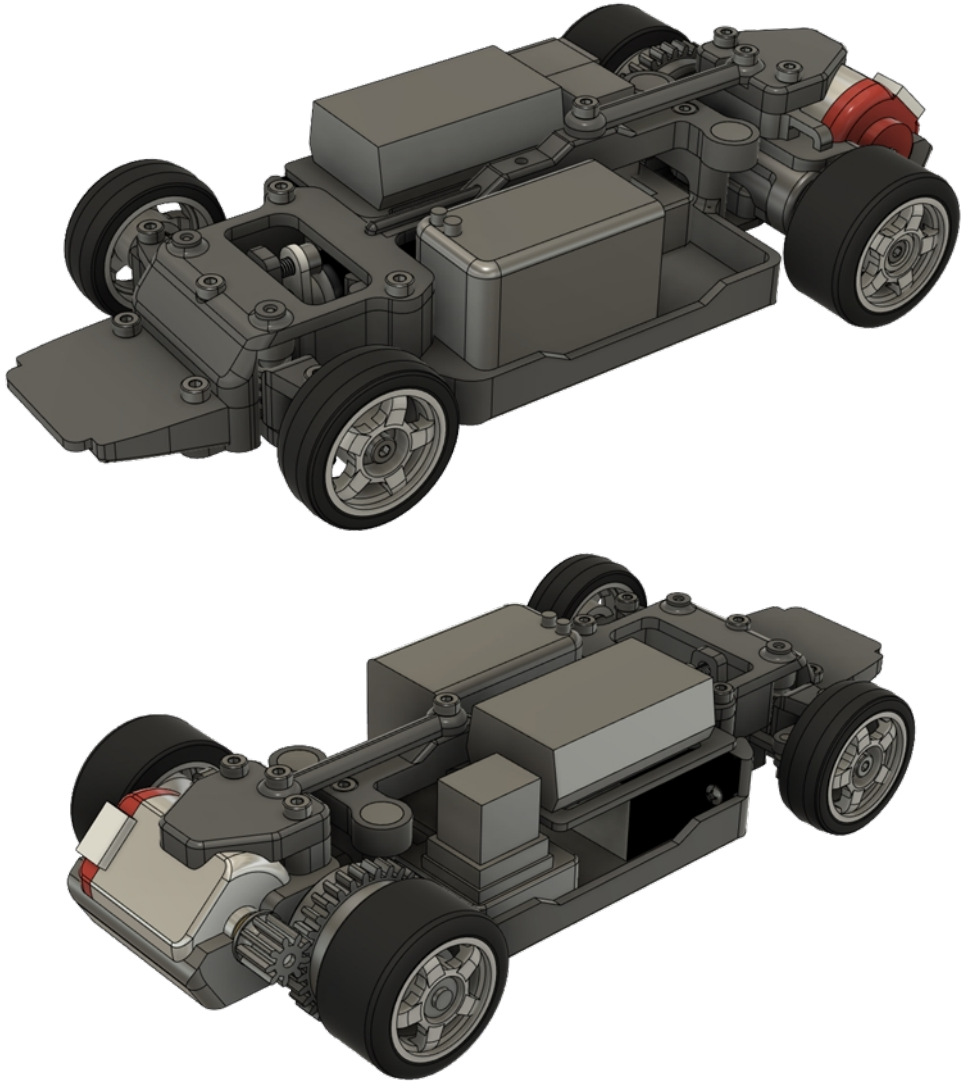


IVONNE
DIGITAL SCALE MODELS

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FEB, 2022

Model: 1:28 RWD Touring RC Chassis
Radio Control 3D printed scale model chassis

Instructions

Part List

Electronics:

Part	Qty	Notes
Servo SG90	1	It can be either plastic or metal gear.
R130 6V DC Motor	1	Make sure it can handle 2s battery.
7.4V 2S Lipo 300-400mah	1	Recomended size: 17mm X 31mm X 21mm.
2S 10A DC Motor ESC	1	With brake is recommended.
2Ch (or more) RC Reciever	1	FS-6BS Recommended, not a must.

Non 3d printed parts:

Part	Qty	Notes
683ZZ Bearing	8	3 x 7 x 3 mm Deep Groove Ball Bearing
3mm Dia x 59mm long stainless steel rod	1	For rear axle
6mm Dia x 3mm Magnet	2	to hold the body
5mm Dia x 8mm Spring	2	for front suspension
1mm Dia Rod x 5mm long stainless steel rod	3	for differential inner gear
2mm Dia Rod x 7mm long stainless steel rod	2	for front hubs

Screws:

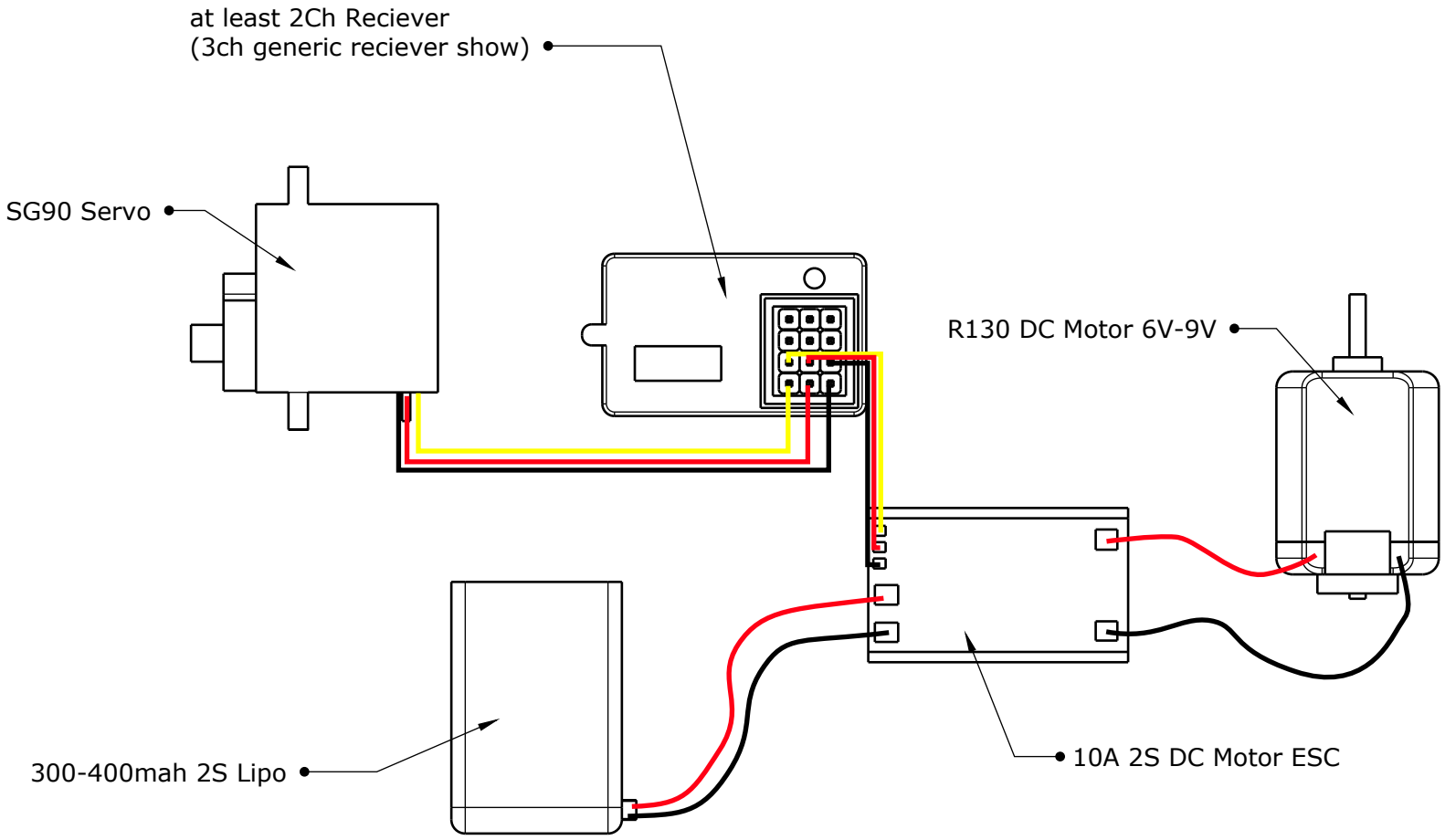
Part	Qty	Notes
M2x16	4	
M2x14	6	
M2x8	9	
M2.5x6	1	For servo arm
Self Tapering Screws M1.6X4	4	
M3 Set screw	1	For rear axle

Tools:

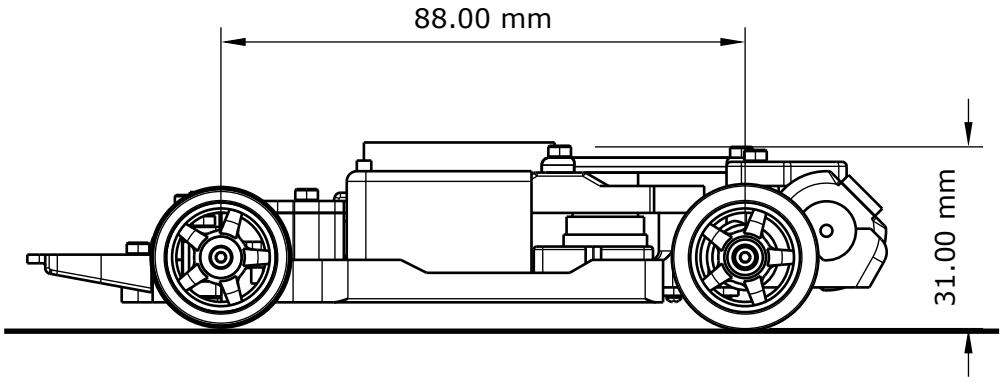
Part	Notes
Rotary tool with cutting disc	This is for cutting axles rods.
Mini Screw Driver and allen key	For small screws
Small vice	This is optional, but is good to have it at hand
Quick Glue	to fit some parts
Twizzers	to working with small parts
Soldering Iron	This is only in case you need to solder connectors.

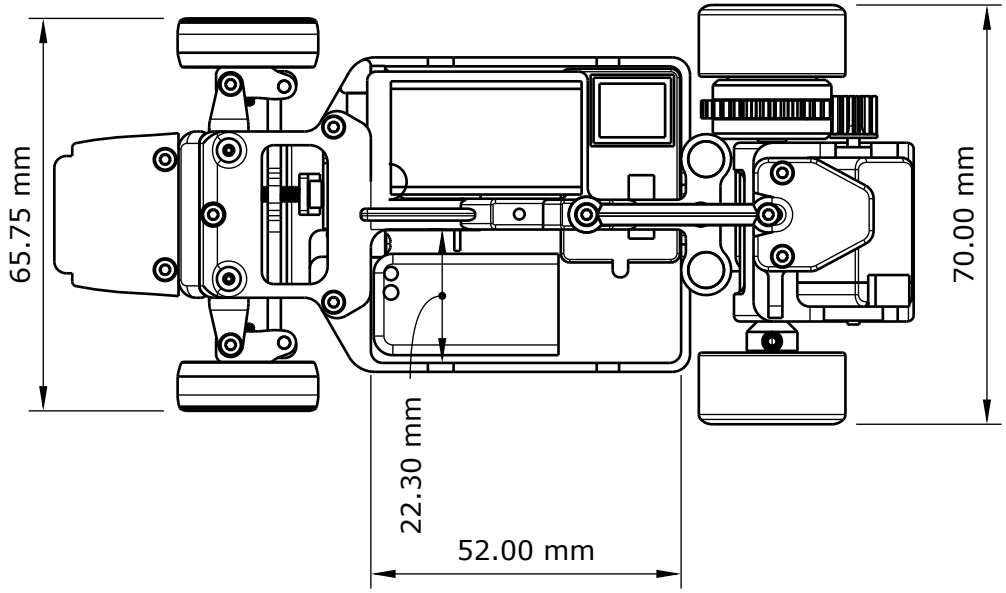
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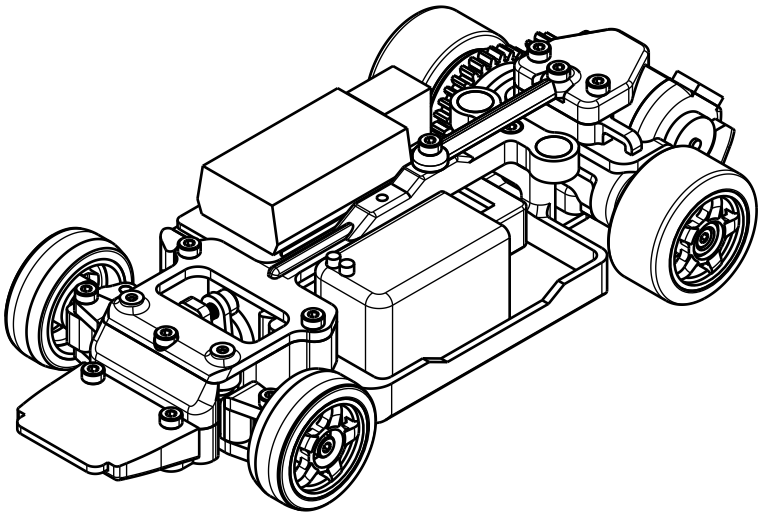
Electronics diagram



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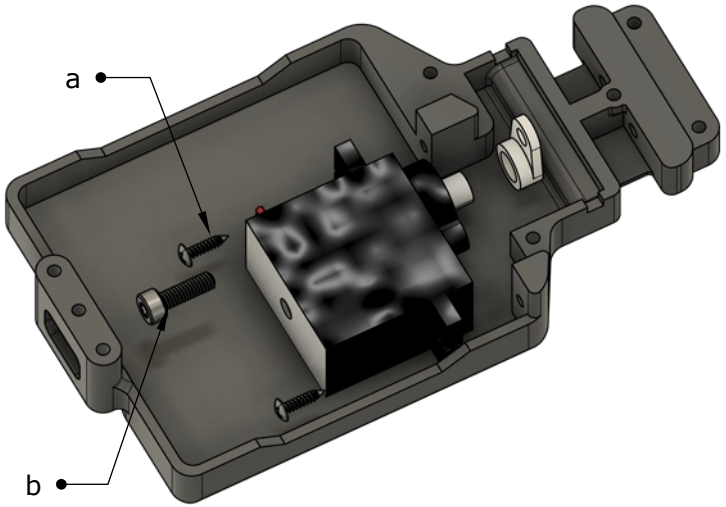
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Model: 1:28 RWD Touring RC Chassis
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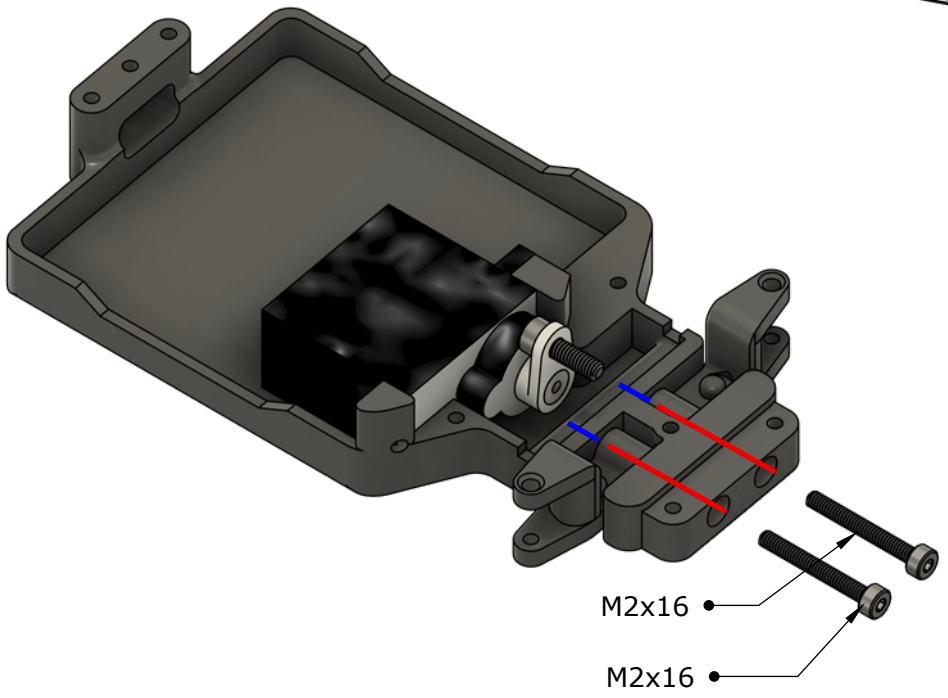
General Dimensions and Info.

1 Screw the SG90 servo in place.

a. Use the two selft tapering screws that somes with the servo.
b. For the servo arm, using a 2mm drill bit open the second hole of the single arm (included with the servo) to screw in a M2.5x6 screw.



1 Screw front suspension arms to main chassis.

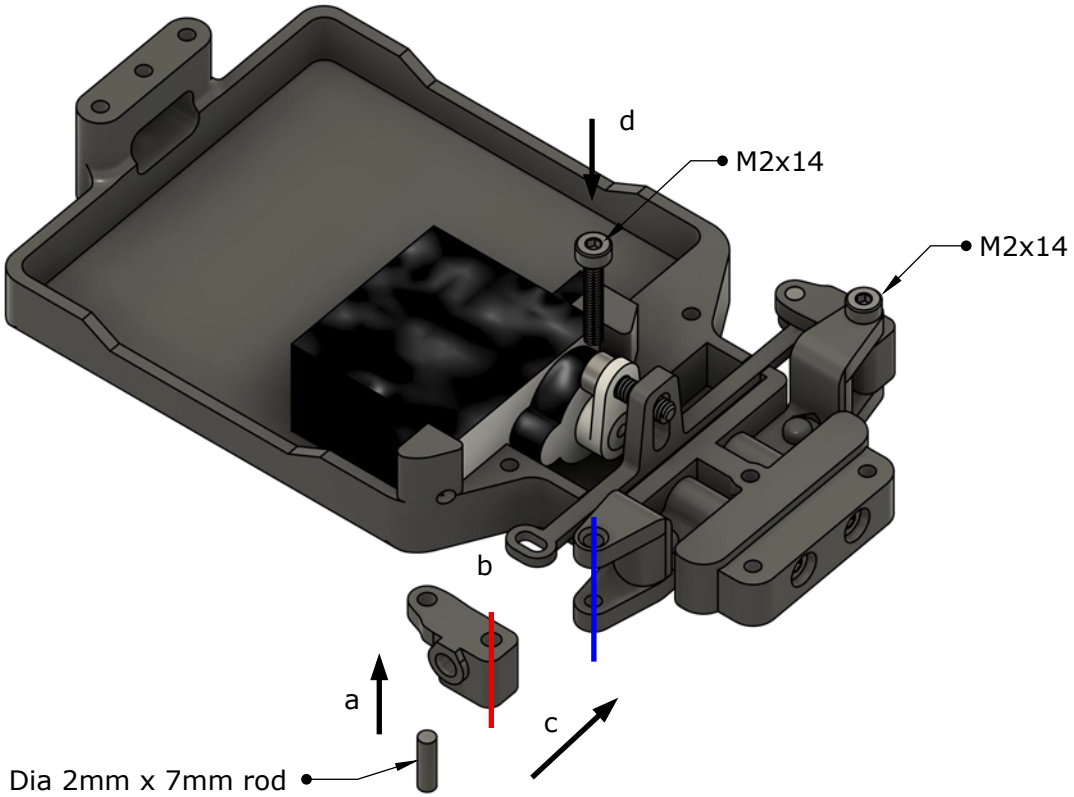


a. Using 2 M2x16 screws, screw the front suspensions arms to Main chassis. You might need to drill to size the first hole on the chassis and the hole on the suspension arm (red) so the screw pass through, the screw will be screwed on the second hole (blue).

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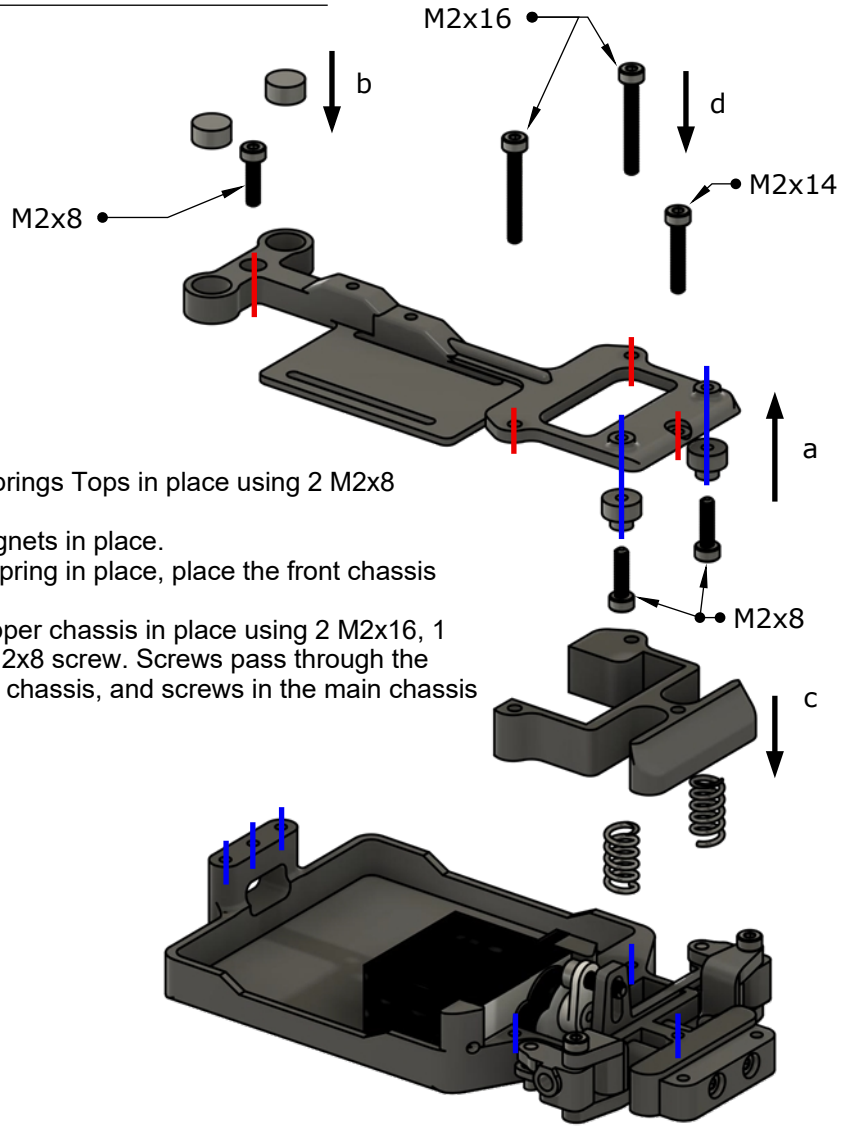
3 Steering Assembly

a. Glue a 2mm x 7mm rod to each front hubs in place.
b. Put the steering arm in place, as show.
c. Slide each hub into each arm and slide the 2 mm rod inside the slot at each end of the steering arm. Should slide freely.
d. Secure each hub with a M2x14 screw. The screw should pass through the hole on the hub, the hub should rotate freely



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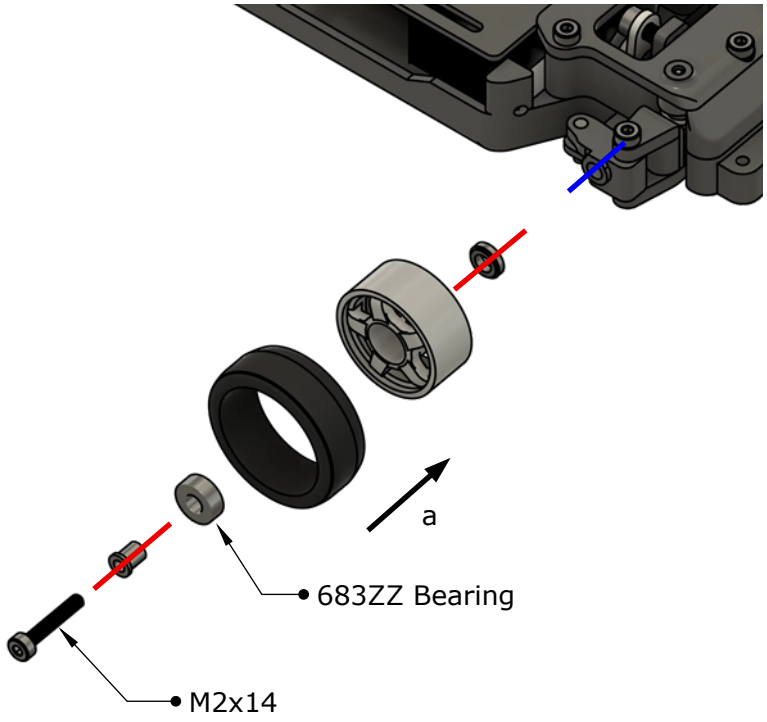
4 Front suspension and upper chassis



a. Screw the Springs Tops in place using 2 M2x8 screws.
b. Glue the magnets in place.
c. Place each spring in place, place the front chassis too.
d. Screw the upper chassis in place using 2 M2x16, 1 M2x14 and 1 M2x8 screw. Screws pass through the upper and front chassis, and screws in the main chassis

5 Front Wheels

a. Glue or press fit the front tire to the front rim.
b. Using a M2x14 screw, secure all parts as show to the hub
The screw pass through all parts, screws on the hub. The Front bearing holder (green) fits inside the hole of the separator (orange). The bearing fits inside the rim.

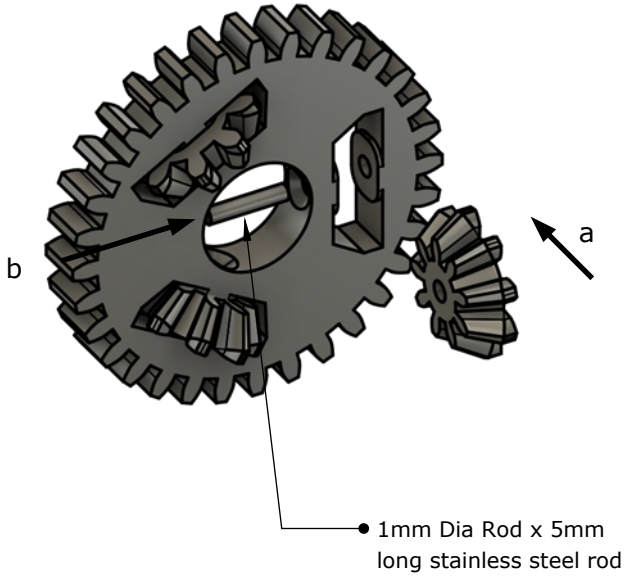


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6 Differential Gear

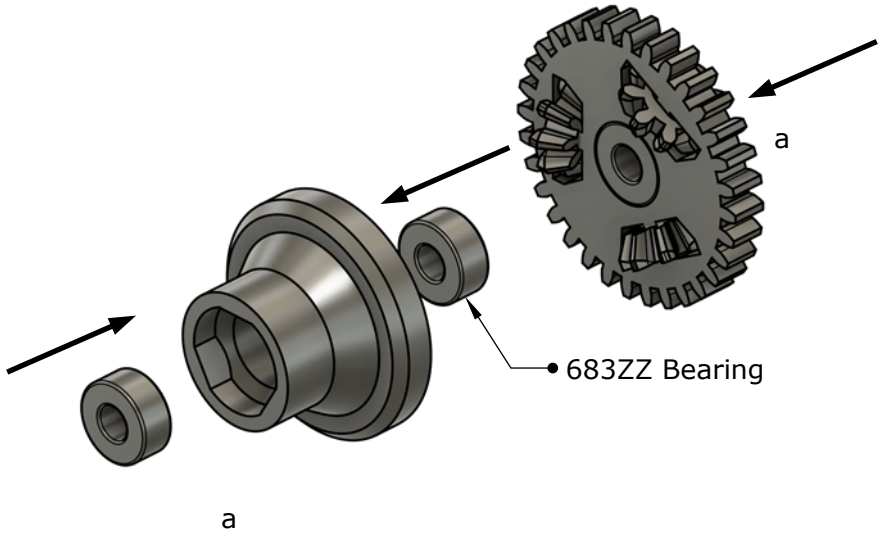
a. Make sure the 1 mm rod can pass trough the inner gear freely, then, place the inner gear in its place without the rod.
b. Using a tweezer, slide the rod trough the hole on the main gear, then trough the hole on the inner gear.

Repeat for each inner gear.



7 Differential Gear

a. Place a 683ZZ bearing on the center of the main gear. Use the pushers tools included on the Stls.
b. Place two 683ZZ bearing on the center of the exterior gear, one at each side. Use the pushers tools included on the Stls.



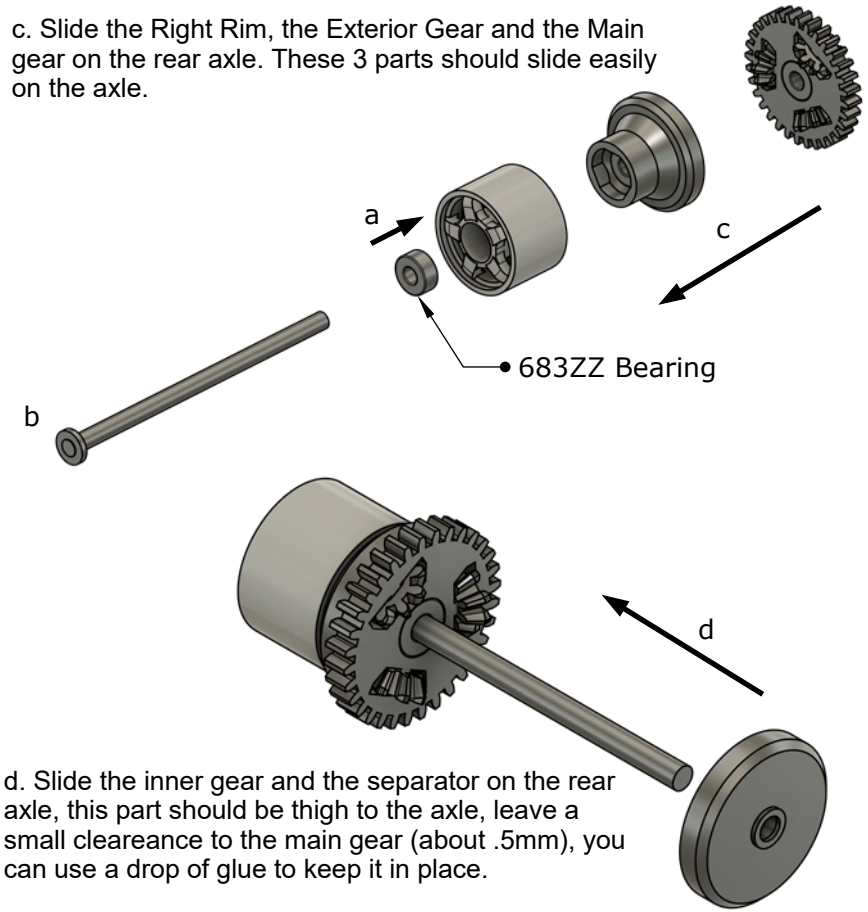
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8 Rear Axle

a. Place a 683ZZ bearing on the center of the right rim, use the pushers included on the stls.

b. Set in place the top diferential part on one end of the rear axle, you might use a drop of glue to make sure it fits in place.

c. Slide the Right Rim, the Exterior Gear and the Main gear on the rear axle. These 3 parts should slide easily on the axle.

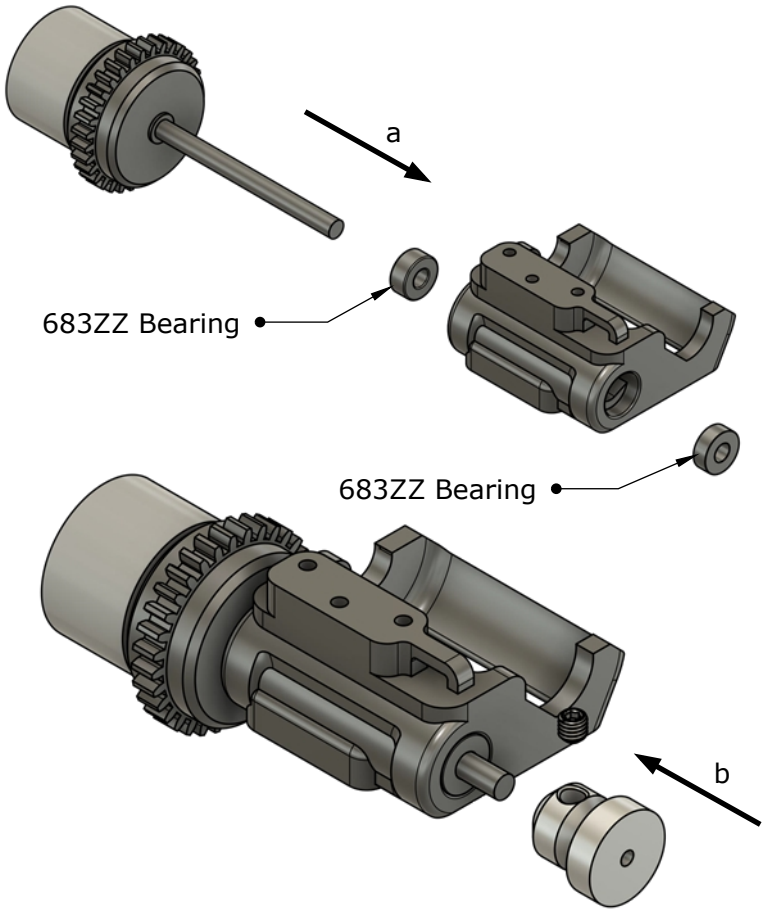


d. Slide the inner gear and the separator on the rear axle, this part should be thigh to the axle, leave a small cleareance to the main gear (about .5mm), you can use a drop of glue to keep it in place.

9 Motor mount

a. Place one 683ZZ bearing at each side of the motor holder. Slide the rear axle trough the bearings.

b. Place the left hub on the end of the axle, screw the set screw in place, there should be a small clearance between the hub and the corresponding bearing, about .5 mm.



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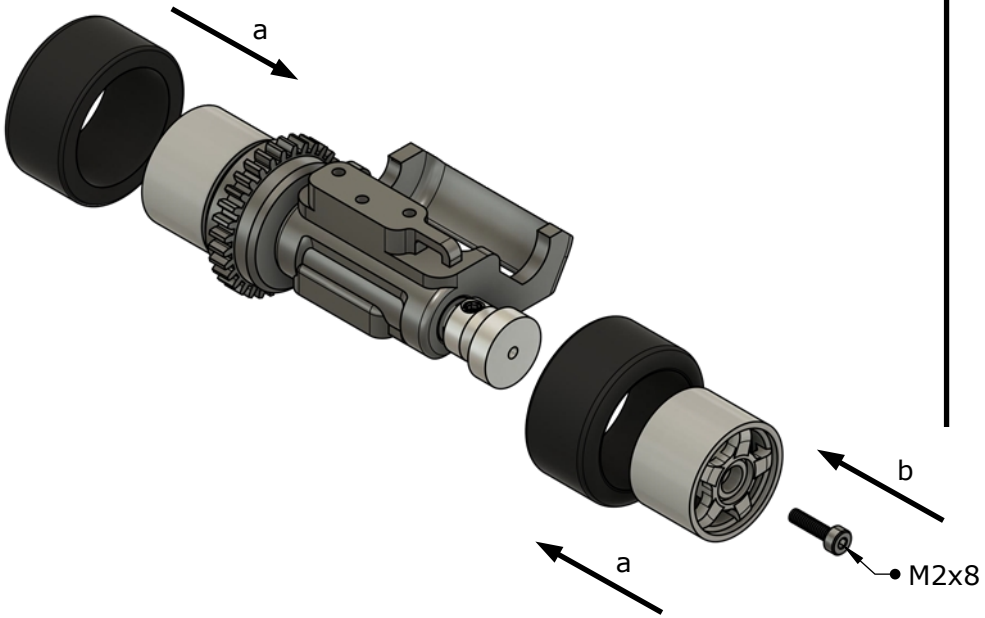
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Chassis assembly process

10 Rear tires

a. Fit tires to each rim, you can use a drop of glue to keep them in place.

b. Screw the left wheel to the left rear hub.

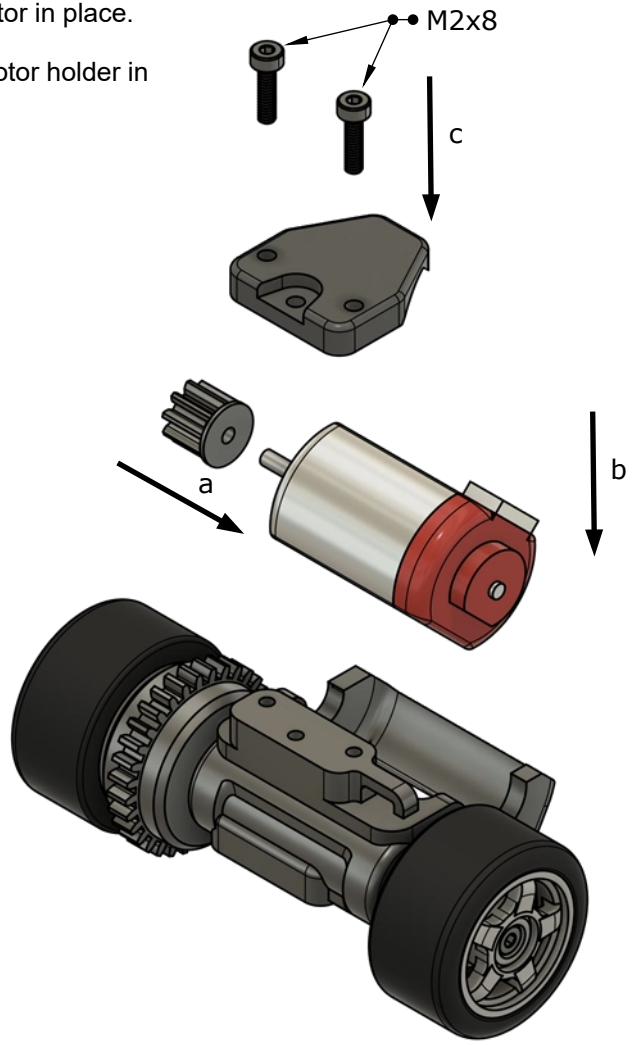


11 Motor placement

a. Fit pinion on motor axle.

b. Push motor in place.

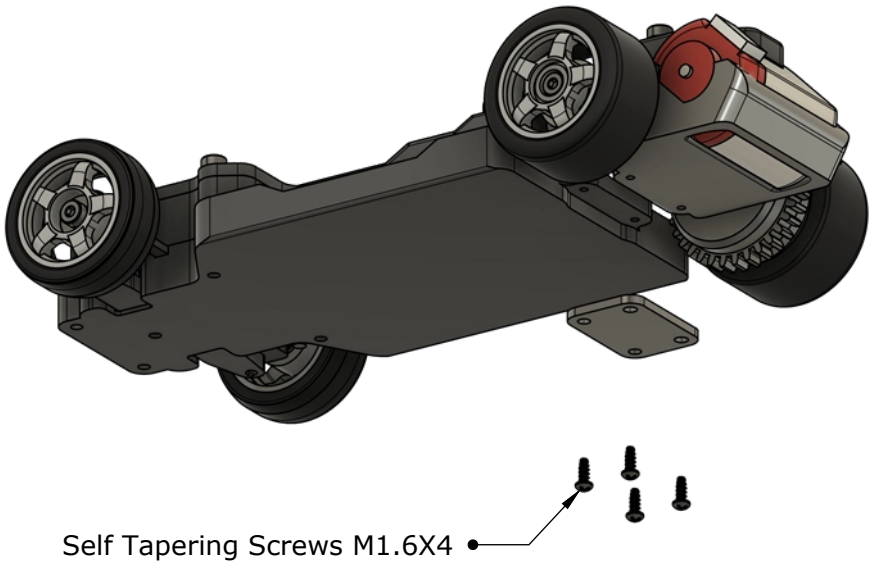
c. Screw motor holder in place.



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12 Rear suspension plate

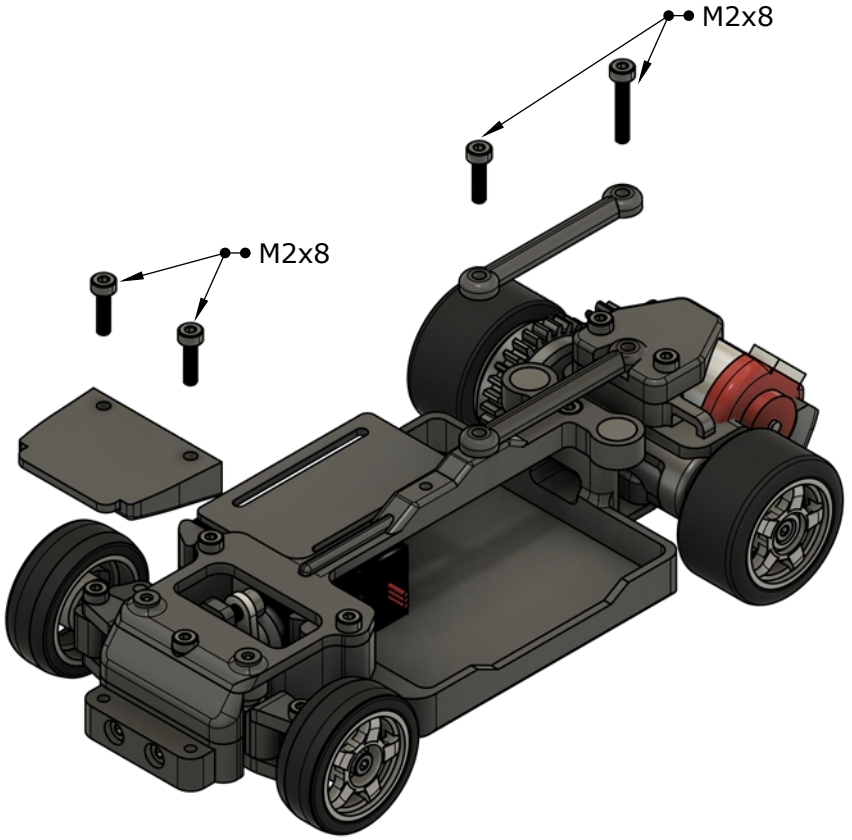
a. Screw rear to main chassis using the rear suspension place and the self tapering screws.



Self Tapering Screws M1.6X4

13 Rear suspension arm

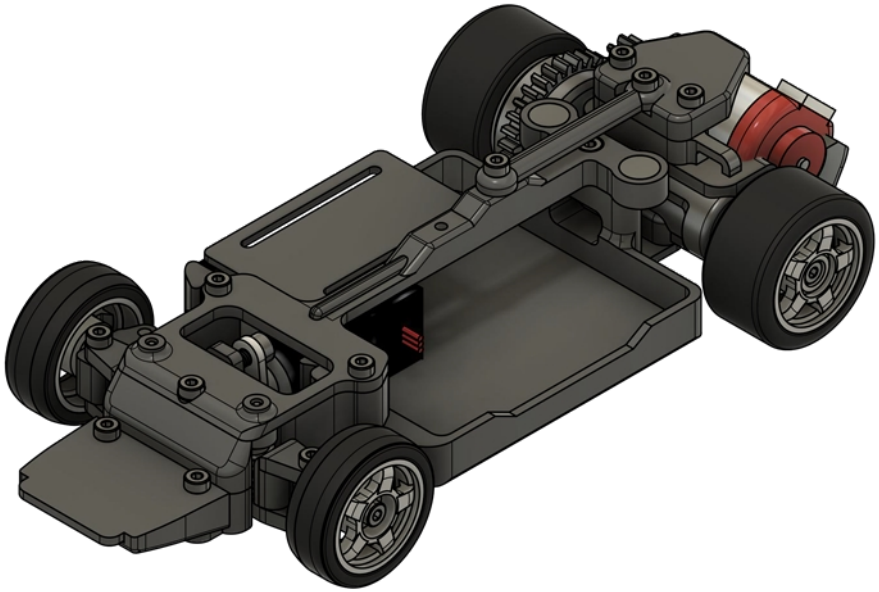
a. Screw front body holder and rear suspension arm in place.



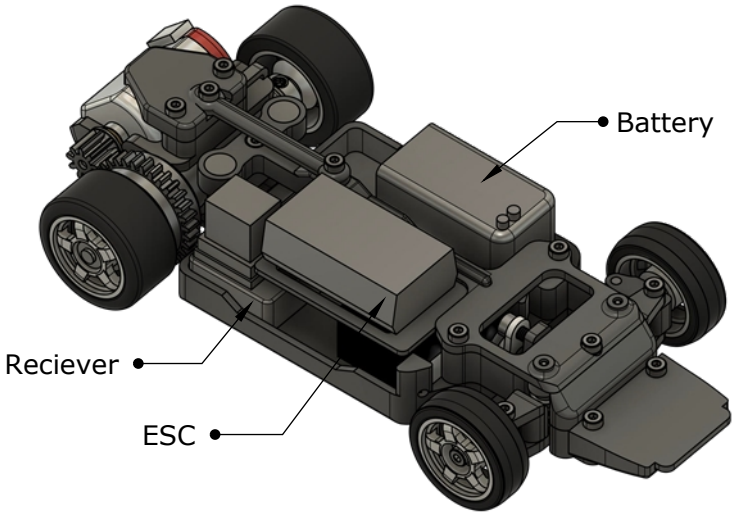
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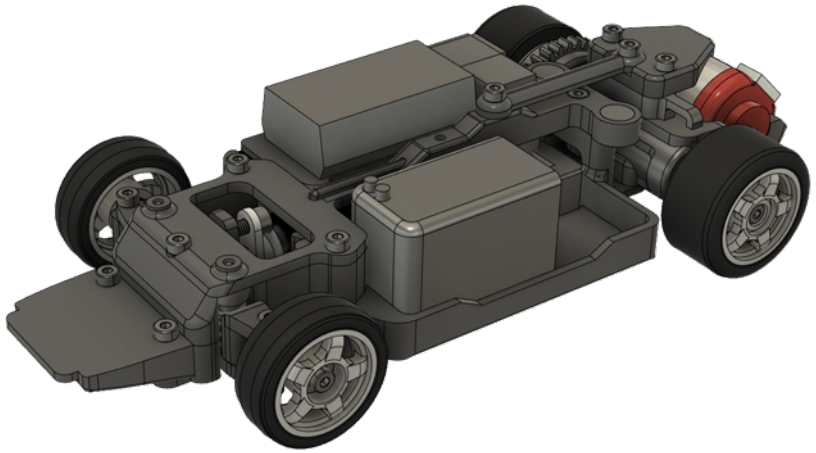
14 Final Chassis

Chassis is ready for electronics



15 Electronics placement





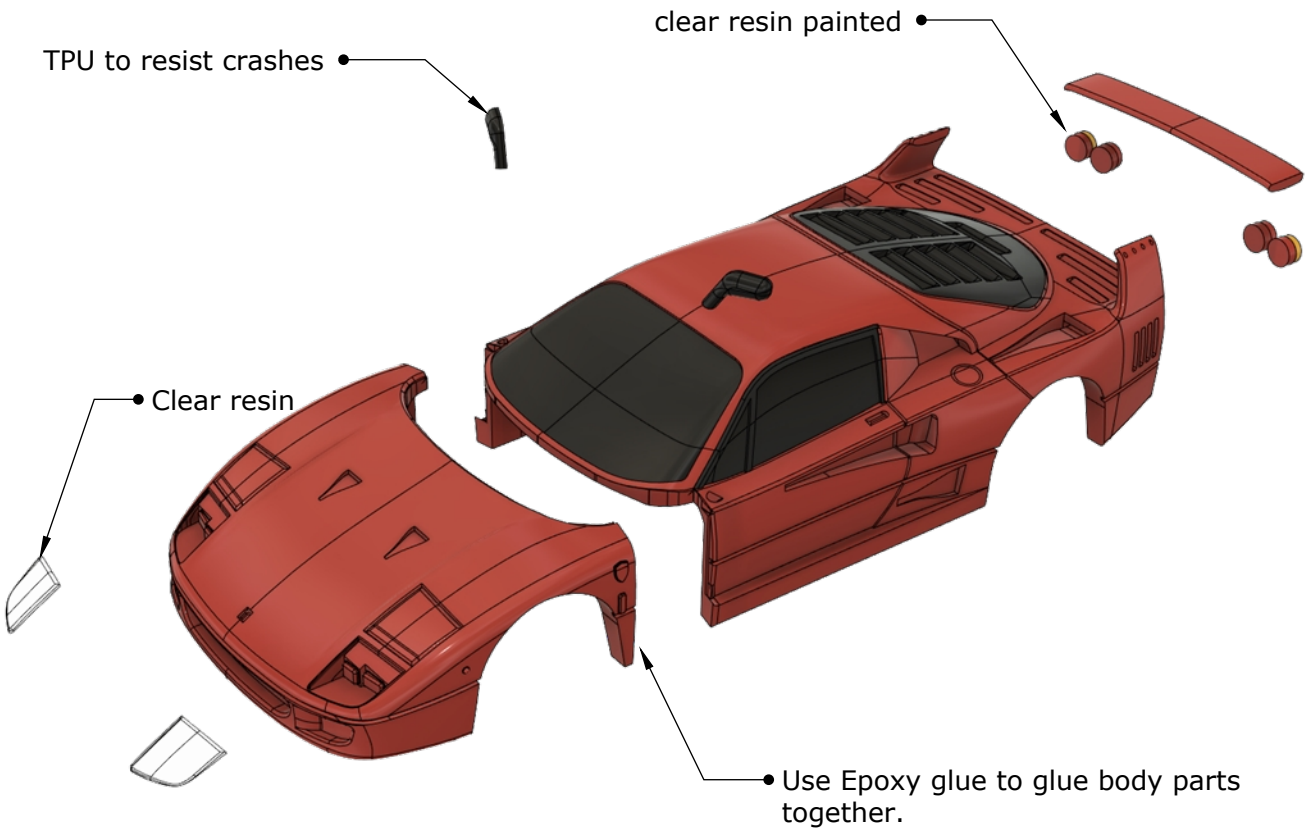
Final model

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Model: 1:28 RWD Touring RC Chassis
Radio Control 3D printed scale model chassis

F40 Body (DLP version)



Painting the model:

Use acrylic primer over the printed parts. Sand imperfections.
Repeat this process at least 2 times.

After priming, regular modeling paints can be use over the model.

Recommended process:

3 Layers of primer+sanding.

2 layers enamel full color (red show).

2 layers of acrylic paint over details (black, red, yellow,white silver).

1 layer of gloos coat.

1 wash of black+clean with paper towel.

2 finals coats of 2K gloss coat thinned.

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Model: 1:28 RWD Touring RC Chassis
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Final model