

# 25. Assembly the Skateboard

T [teslarcs.com/assembly-manuals/cybertruck/20-25-build-the-skateboard/25-assembly-the-skateboard/](https://teslarcs.com/assembly-manuals/cybertruck/20-25-build-the-skateboard/25-assembly-the-skateboard/)



Difficulty

**Hard**



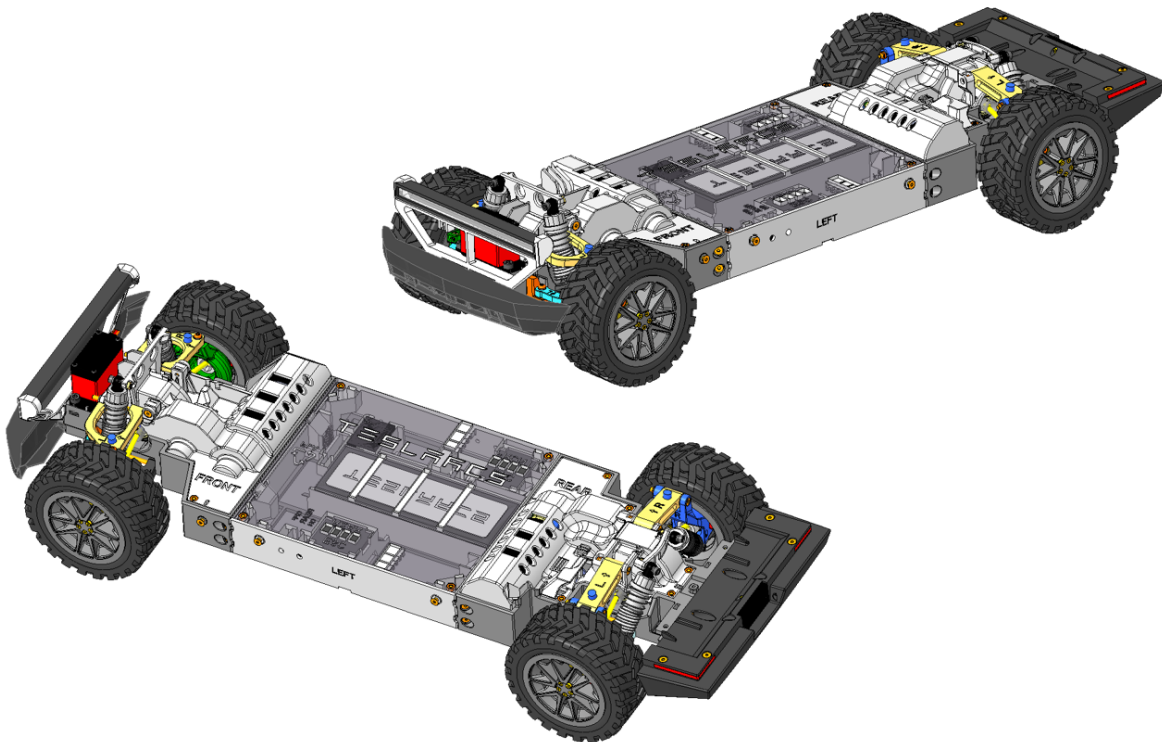
Steps

**16**



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- In this Chapter we will assembly the sub assemblies from 20.-24. Chapter!
- **Because of the different components (ESC (*Electronic Speed Controllers*), Transmitter and remote controller, Battery size) your version maybe slightly looks different!**

- On the images you see the alternative **INJORA T6 Transmitter**, not the **default/preferred FlySky FS-GT5 transmitter!**
- You have to make sure, that you print the correct Skateboard middle part (SK\_MIDDLE\_MAIN), which fit completely for your Electronic components!
- On the images you will see an **All Wheel Drive (AWD)** version, with two cooling fan and with front and rear lights. If you don't use everything, you can skip steps!

## **Step 1: Skateboard rear**

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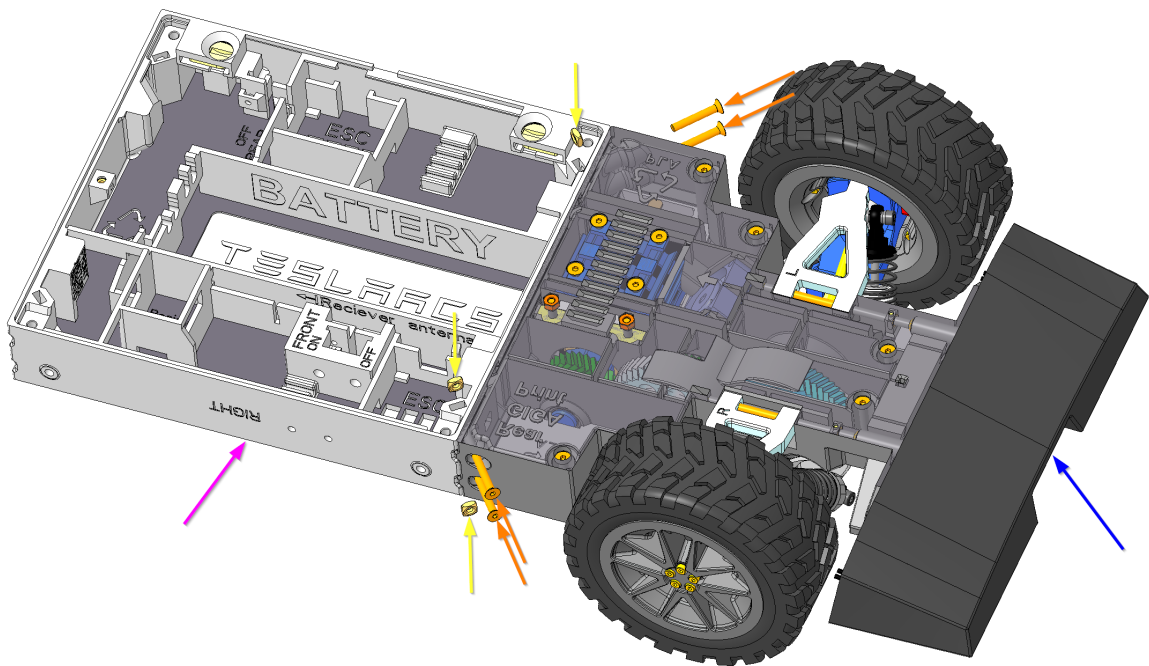
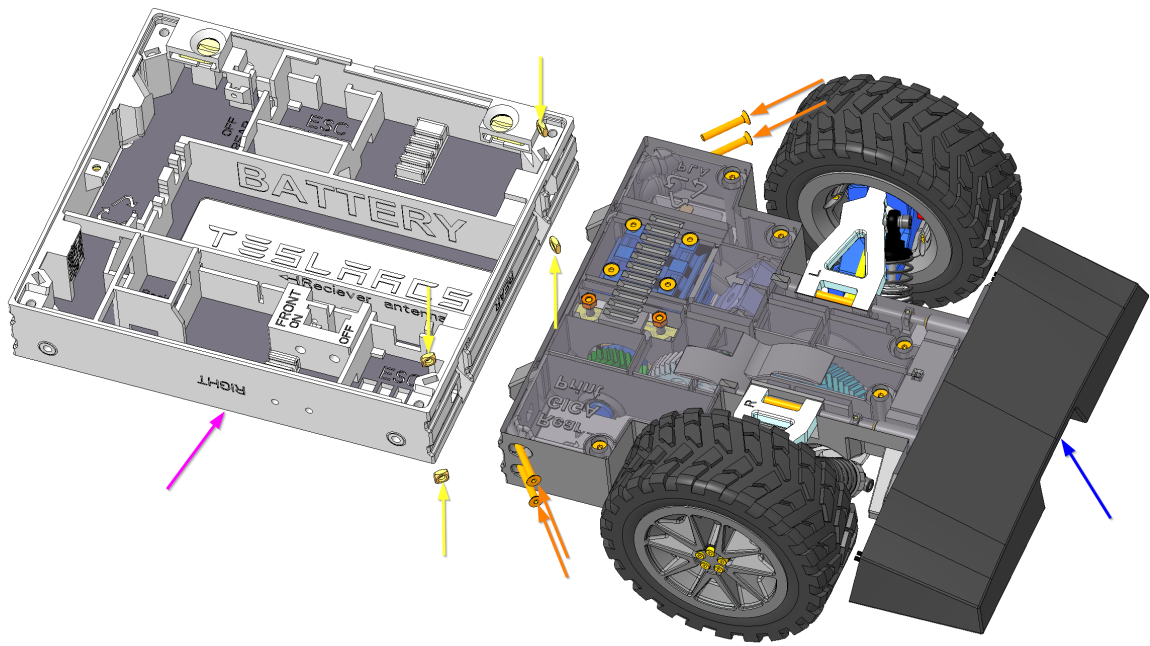
**For the following step, please prepare:**

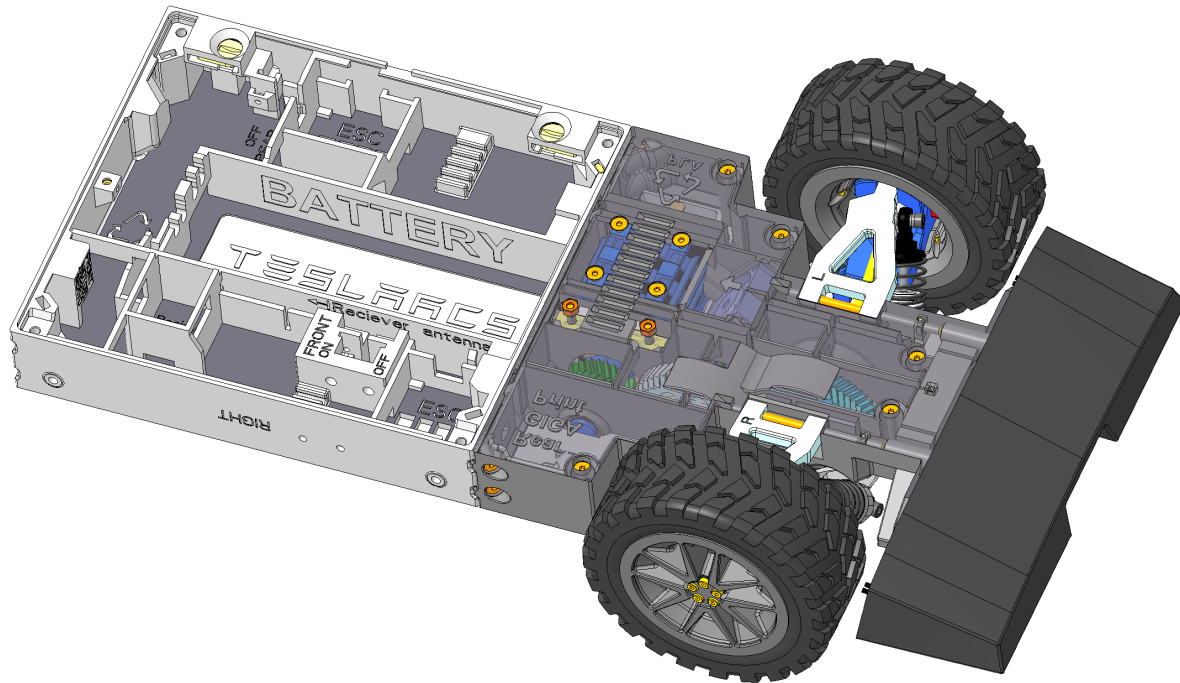
- Skateboard: Middle (1x)
  - Skateboard: Rear (1x)
  - M3 Square Nut (4x)
  - M3x20 Screw (4x)
- 

### **Sub-Steps:**

- Put two-two M3 Square nut in the Skateboard: Middle (●) slot and put the cables through the cables hole!
  - With two-two M3x20 Screw tight the Skateboard Middle to the Skateboard Rear
- 

**Tighten carefully as you might break the printed parts.**





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## **Step 2: Skateboard front**

**For the following step, please prepare:**

- Skateboard: Middle&Rear (1x)
- Skateboard: Front (1x)
- M3 Square Nut (4x)
- M3x20 Screw (4x)

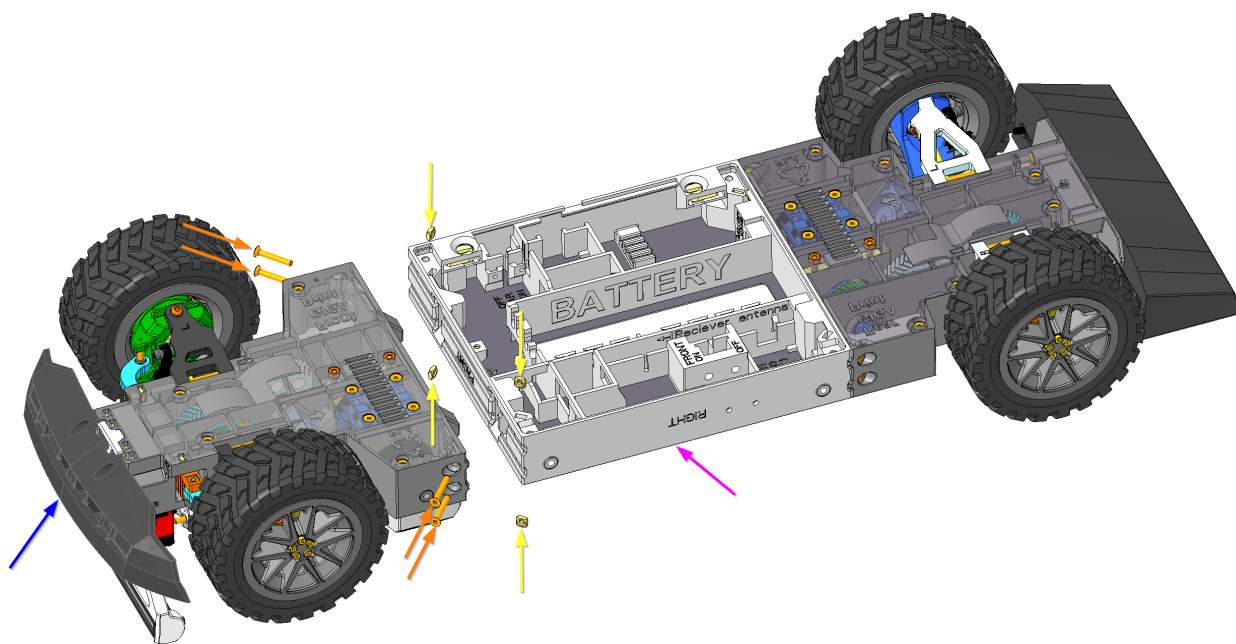
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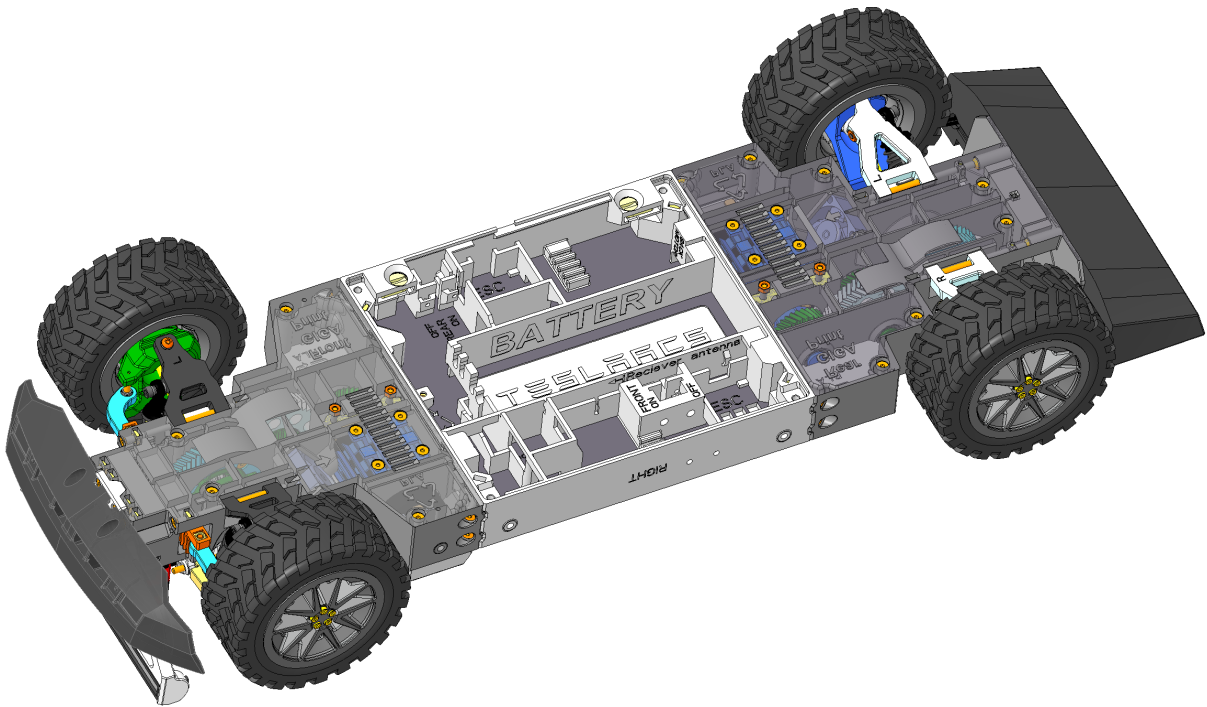
### **Sub-Steps:**

- Put two-two M3 Square nut in the Skateboard: Middle ( ● ) slot, put the cables through the cables hole!
- With two-two M3x20 Screw tight the Skateboard Front to the Skateboard Middle&Rear

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**Tighten carefully as you might break the printed parts.**





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### **Step 3: Cables identify.**

For the following step, please prepare:

- **Rear Motor cables (2x: 1 red and 1 black – Must have)**
- Rear LED Light (1x – optional)
- Rear fan (1x – optional)
  
- Front Motor cables (2x: 1 red and 1 black – optional)
- Front LED Light (1x – optional)
- **Servo drive (1x – Must have)**
- Front fan (1x – optional)

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#### **Sub-Steps:**

Identify all cables and guide them into the Skateboard main

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**Because of the different ESC (*Electronic Speed Controllers*), Transmitter, Battery size, your version maybe slightly looks different!**

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## **Step 4: Battery install**

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**For the following step, please prepare:**

- Battery (1x)
  - T-dean Plug Y Splitter: 1 female to 2 male (1x) – it is need for **All Wheel Drive (AWD)** only
  - T-dean Plug end for Rear Wheel drive
  - T-dean Plug end for Front Wheel drive
- 

### **Sub-Steps:**

- Put the T-Dean Plug Y Splitter on the Battery (●) if you build an All Wheel Drive (AWD) version. If you build a Rear Wheel Drive (RWD) version, you should skip this step
  - Put the battery in the Battery holder in the Skateboard Center
  - , ● Guide the T-Dean plugs like it is shown on the image.
- If you build a Rear Wheel Drive (RWD) version only, you should orient the battery T-dean plug like the Rear Wheel drive T-dean plug (●)
-

Make sure during the complete cables installation, that you need to remove the battery easily for charging!





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## Step 5: Rear ESC install

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For the following step, please prepare:

- Rear ESC (1x)
  - ESC Connection to the Transmitter (1x)
  - ESC T-dean Plug (1x)
  - ESC Turn on/off button (1x)
  - ESC Connections to the motor (2x)
- 

### Sub-Steps:

- Put the Rear ESC main body into the Skateboard center slot
- Put the Rear ESC turn off/on button into the Skateboard center slot
- Connect the Rear ESC motor cables to the Rear motor. Later on, if the wheel turning in the wrong direction you need to **change the cables connection!**

*Default cable connection (because the number of the gear pairs in the drivetrain):*

- Rear ESC **Yellow** cable – **Black** motor connection
  - Rear ESC **Blue** cable – **Red** motor connection
-

- Prepare the ESC Connection for later use, it will be connect to the Transmitter later on
- 

If the wheel turning in the wrong direction you need to **change the cables connection!**



## **Step 6: Transmitter install**

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**For the following step, please prepare:**

- Transmitter (1x)
  - Transmitter antenna (1x)
- 

### **Sub-Steps:**

- Put the Transmitter in the main body into the Skateboard center slot
  - Guide the Transmitter antenna into the Skateboard center, like it is shown on the image
- 

**Because of the different components (ESC (*Electronic Speed Controllers*), Transmitter and remote controller, Battery size) your version maybe slightly looks different!**

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## **Step 7: Front ESC -1 (optional)**

**For the following step, please prepare:**

- Front ESC (1x)
- Front ESC Connection to the Transmitter (1x)
- Front ESC Connection to the Transmitter – Red Cable (1x)

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### **Sub-Steps:**

- Prepare your front ESC on a table
- Remove from the Transmitter Connector the Red cable (●), by pressing in the connector's "leg" with some tweezers and pull out the red cable
- Protect the removed red cables against a short circuit with some insulation tape

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Use a tweezers to remove the connector leg









## **Step 8: Front ESC – 2 (optional)**

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**For the following step, please prepare:**

- Front ESC (1x)
  - ESC Connection to the Transmitter (1x)
  - ESC T-dean Plug (1x)
  - ESC Turn on/off button (1x)
  - ESC Connections to the motor (2x)
- 

**Sub-Steps:**

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- Put the Front ESC main body into the Skateboard center slot
- Put the Front ESC turn off/on button into the Skateboard center slot
- Connect the Front ESC motor cables to the Front motor. Later on, if the wheel turning in the wrong direction you need to **change the cables connection!**

*Default cable connection (because the number of the gear pairs in the drivetrain):*

- Front ESC **Yellow** cable – **Red** motor connection
- Front ESC **Blue** cable – **Black** motor connection

- Prepare the ESC Connection for later use, it will be connect to the Transmitter later on
- 

If the wheel turning in the wrong direction you need to **change the motor cables connection!**



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## **Step 9: Servo cable install**

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**For the following step, please prepare:**

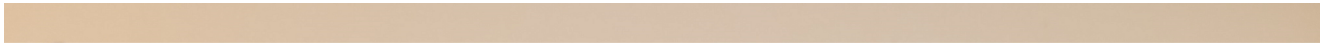
- Transmitter (1x)
  - Servo cable (1x)
  - Transmitter #1 slot (1x)
- 

### **Sub-Steps:**

● Put the Servo cable into the Transmitter (●) #1 Slot (●). Orient the Servo cable (signal, +, -) like it is on the images.

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Orient the Servo cable (signal, +, -) like it is on the images. Guide the cables through the cutouts, like it is on the image.



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## **Step 10: ESC Cable install**

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**For the following step, please prepare:**

- Rear ESC (1x)
  - Front ESC (1x)
  - JR Extension Y Wire Cable – Male connection (1x)
  - JR Extension Y Wire Cable – Female connection to Rear ESC (1x)
  - JR Extension Y Wire Cable – Female connection to Front ESC (1x)
  - Transmitter #2 slot (1x)
- 

**Sub-Steps for Rear Wheel Drive (RWD):**

● Connect the Rear ESC directly to the Transmitter #2 (●) slot. Orient the ESC cable (signal, +, -) like it is on the images.

**Sub-Steps for All Wheel Drive (AWD):**

- Put the JR Extension Y Wire Cable male connection into the Transmitter #2 Slot (●).
  - Connect into the JR Extension Y Wire Cable female connection the Rear ESC
  - Connect into the JR Extension Y Wire Cable female connection the Front ESC
- 

If the wheel turning in the wrong direction you need to **change the cables connection!**





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## **Step 11: Servo and ESC test**

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**For the following step, please prepare:**

- Rear ESC Turn on/off button (1x)
  - Front ESC Turn on/off button (1x)
  - Remote controller Turn on/off button
  - Remote controller acceleration arm. Press left for Acceleration
  - Wheel rotation during acceleration
- 

### **Sub-Steps:**

- Turn on the Rear ESC
- Turn on the Front ESC (for AWD version)
- Turn on the Remote controller
- Press on the Remote controller the acceleration arm to the left (**accelerate**) **very gently** and check that the **wheels rotated clockwise** (●), when the skateboard is on the bottom side.

If the front, or rear wheels rotated counterclockwise, than change the front/rear motor

connections to the ESC. Go back to the Step 5 and step 8 and reverse the motor cables!

◆ **Check the servo steering center position!** It should be in the center when you turn on the Remote controller. If the steering is off from the center you have two option:

- **Recommended:** Go back to the [Chapter 23 / Step 5](#), remove the Servo assembly, set back the SK\_STEERING\_RACK to the center and fix back the Servo assembly
- **Not recommended:** Compensate the Steering with your remote controller. It is recommended only for the fine tuning!

◆ **Check the Servo steering at complete left and complete right position. If you hear crackling, crunching sounds from the steering, you have to limit the steering ([Chapter 26 / Step 5](#)), or you will produce extra load on your steering rod!**

◆, ◆ Turn off the Rear ESC and Front ESC to continue with the next steps.

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Please read your Transmitter + Remote Controller user manual to have the knowledge howto use it! It is a **must** criteria to use your Cybertruck RC!

You can found detailed information about the Transmitter settings in the [Chapter 26!](#)







## **Step 12: Motor fan(s)\_(optional)**

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**For the following step, please prepare:**

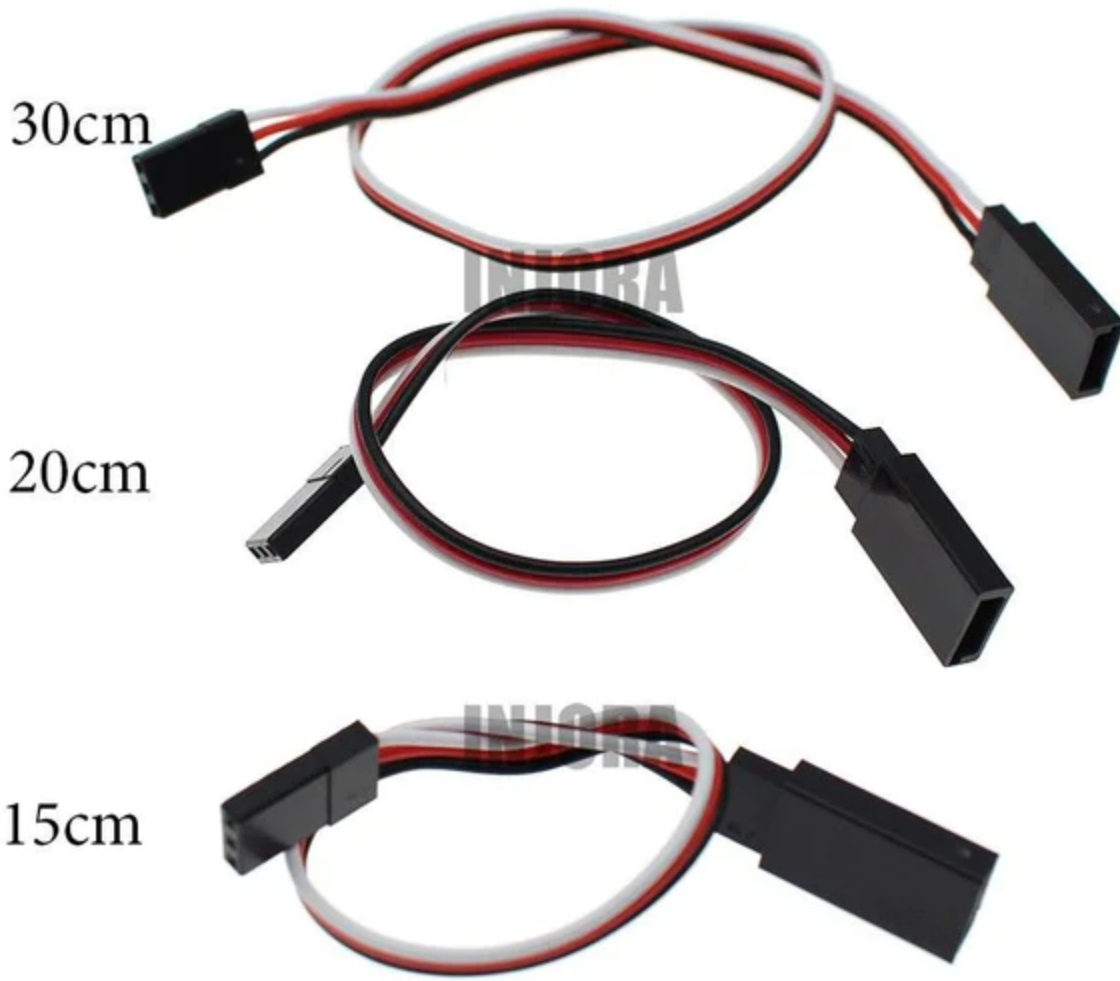
- Transmitter #3 slot (1x)
  - JR Extension Y Wire Cable – Female connection (1x)
  - JR Extension Y Wire Cable – Female connection (1x)
  - JR Extension Y Wire Cable – Male connection (1x)
- 

### **Sub-Steps for Rear Wheel Drive (RWD):**

- Connect the Rear Motor fan directly to the Transmitter #3 (●) slot.

There is a big chance that the cable will be not long enough, use an 15 cm long “RC Servo Extension Wire Cable” to extend the cable!

Orient the ESC cable (signal, +, -) like it is on the images.

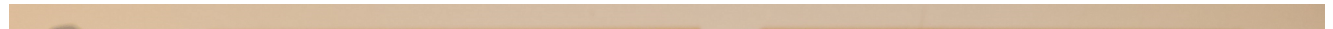


#### Sub-Steps for All Wheel Drive (AWD):

- Put the JR Extension Y Wire Cable Male connection into the Transmitter #3 Slot (●).
- Connect into the JR Extension Y Wire Cable female connection the Rear Motor fan
- Connect into the JR Extension Y Wire Cable female connection the Front Motor fan

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Guide the cables through the cutouts, like it is on the image.



**Step 13: Back LED (optional)**

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**For the following step, please prepare:**




- Transmitter #4 slot (1x)
  - Back LED Cable – Male connection (1x)
  - JR Extension Wire Cable – Female connection (1x)
  - JR Extension Wire Cable – Male connection (1x)
- 

**Sub-Steps :**

- Put the JR Extension Wire Cable Male connection into the Transmitter #4 Slot (●).
  - Connect to the JR Extension Wire Cable Female connection the Back LED (●) male connection
- 

Guide the cables through the cutouts, like it is on the image.



**Step 14: Front LED (optional)**

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**For the following step, please prepare:**

- Transmitter #5 slot (1x)
  - Front LED Cable – Male connection (1x)
- 

### Sub-Steps:

- Put the Front LED Cable Male connection into the Transmitter #5 Slot (●).
- 

Guide the cables through the cutouts, like it is on the image.

## **Step 15: Middle cover**

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**For the following step, please prepare:**

- M3x8 Screw (1x)
  - M3x30 Screw (4x)
  - EX\_BATTERY\_REMOVER\_TOOL (1x)
  - SK\_MIDDLE\_Locking (2x)
  - SK\_MIDDLE\_COVER\_AWD, or SK\_MIDDLE\_COVER\_RWD (1x)
- 

### Sub-Steps for Rear Wheel Drive (RWD):

● Put the SK\_MIDDLE\_COVER\_RWD in position. It has to be slightly rotated (like it is on the images) to make sure, it will fit in position.

### Sub-Steps for All Wheel Drive (AWD):

● Put the SK\_MIDDLE\_COVER\_AWD in position. It has to be slightly rotated (like it is on the images) to make sure, it will fit in position.

### Sub-Steps for Rear and All Wheel Drive (RWD, AWD):

- Screw in four M3x30 Screw into the SK\_MIDDLE\_MAIN to fix the Cover (●)
  - Screw in one M3x8 Screw into the SK\_MIDDLE\_MAIN to fix the Cover (●)
  - With your EX\_BATTERY\_REMOVER\_TOOL rotate the SK\_MIDDLE\_Locking (●) with 90-90 degree
- 

You can choose between the “Screw cover fixing” (●, ●) and “Locking part fixing” (●), you can apply one of them or both of them to make extra sure, that you battery stay in position even after a heavy usage!

## **Step 16: Wheel cover (optional)**

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**For the following step, please prepare:**

- ◆ SK\_Wheel\_cover (4x)
- 

### **Sub-Steps:**

- ◆ Snap in the SK\_Wheel\_cover (4x) on the wheels. Rotate the wheel cover, until it is snap in position.
- 

Be carefully! If you snap the wheel cover on the wheel, it will be very hard to remove from the wheel! You need a thin screwdriver to remove the wheel cover.