buildkitboards

Single Motor Kit (Tayto)

How to assemble the Single Motor Tayto Kit

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TOOLS:

- T Tool (1)
- Loctite Thread Locker (1)
- 8mm Wrench (1)
- 5mm Allen Wrench (1)
- 3mm Allen Wrench (1)
- 2.5mm Allen Wrench (1)
- 2mm Allen Wrench (1)
- Motor Mount Spacer (1)

PARTS:

- 31" Tayto Deck (1)
- 97mm Skateboard Wheels (1)
- Truck Hanger (2)
- Truck Baseplate (2)
- 1/4in Riser (2)
- Bearing Set (1)
- Truck Hardware Set (1)
- Wheel Pulley (1)
- Motor Pulley (1)
- 265m-12mm Belt (1)
- Motor Mount (1)
- Motor Hardware Set (1)
- 6354 Motor (1)
- Tayto Enclosure (1)
- Enclosure Hardware Set (1)
- 10s2p Battery (1)
- 10s3a Charger (1)
- Single VESC ESC (1)
- Anti-Spark Switch (1)
- VX1 Remote (1)
- Griptape Hexagons (1)

Step 1 — Single Motor Kit (Tayto)

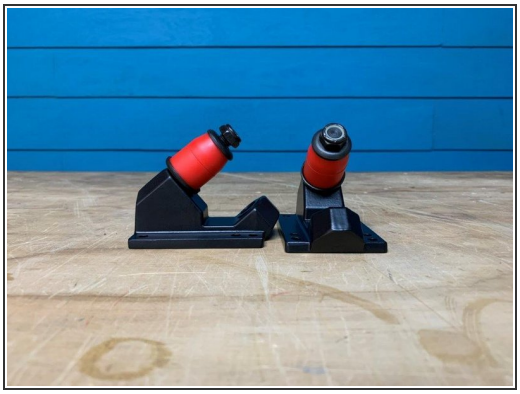

- Gather the wheels and bearings
- Place one bearing in the wheel
- Flip it over and place a silver spacer on top of the bearing.

Step 2



- Place another bearing in the other side of the wheel (bearing, spacer, bearing)
- If your having troule pushing the bearings all the way in the wheel, remove one locknut from a truck hanger and use the truck to push the bearing all the way in
- Repeat the process to complete four wheels

Step 3



- Gather the truck baseplates and black T-Tool
- Remove the locknut from each baseplate
- Remove one bushing and washer from each baseplate
- Place a truck hanger in the baseplate with the words facing inward

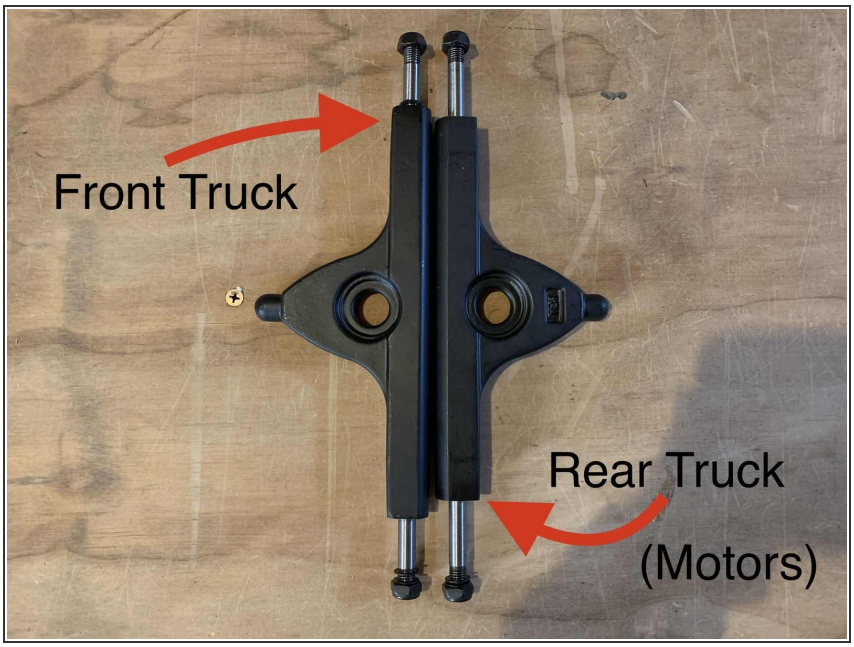
Step 4

- Place the bushing and washer back on and tighten the locknut

ⓘ If your having trouble getting the locknut to start threading, make sure the hanger is pushed all the way into the base of the baseplate (where the hanger comes to a rounded point). You can also apply pressure down on the truck to compress the bushings

- Repeat this process to complete two trucks

Step 5



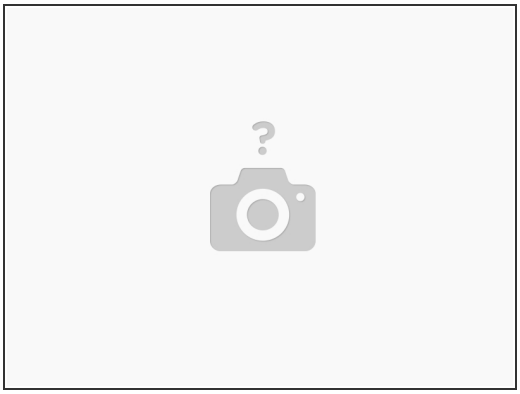
- You will now need to place the wheels on the front truck
- The front truck has a longer hanger
- The rear truck has a shorter hanger to accommodate the wheel pulley

Step 6



- Gather the front truck, two wheels, and T-Tool
- Remove one locknut and one washer from each side of the truck. Make sure there is still one washer on the truck
- Place one wheel on each side with the letters facing outward
- Add the washer and locknut back onto the truck. From inside to outside the components should be arranged: washer, wheel, washer, locknut
- Repeat on the other side to secure both wheels

Step 7



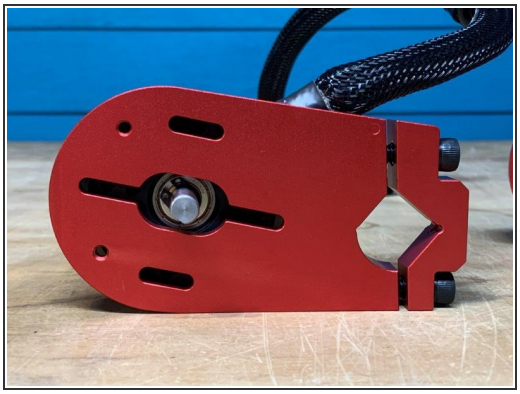
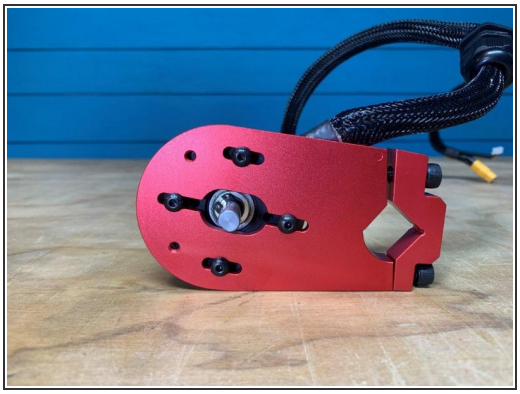
⚠ It is very important not to over tighten the locknuts. It will create much more rolling resistance

- Tighten the lock nuts until they touch the bearing. Then loosen the lock nuts ~ half a turn. You should be able to very lightly move the wheel laterally on the axle. If there is no movement it is too tight, and if the wheel can slide the lock nuts are too loose

Step 8

- Gather the motor mount, motor, motor hardware, loctite, and allen wrenches
- One motor mount has a dot cut out on each side. This is the left motor mount and will go on the left side of the truck (later on). If your motor mount does NOT have these marks, it is a right motor mount, and will be installed on the right side of the truck

Step 9

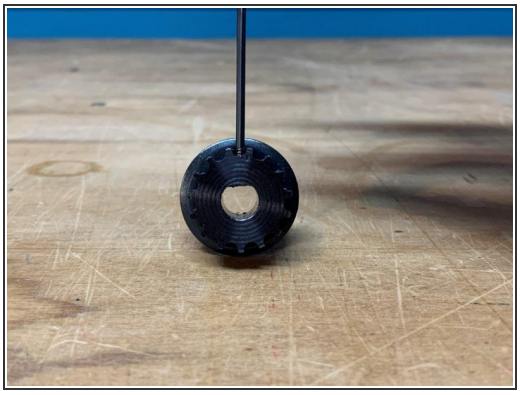
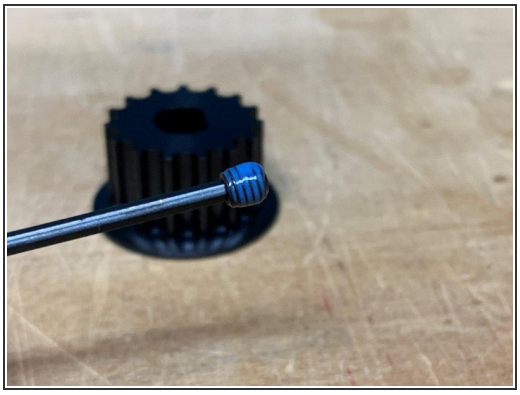
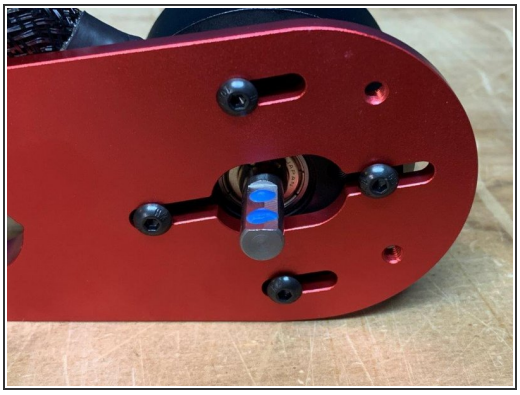




- Place the motor mount on top of the motor with the wires oriented as shown
- Place 3-4 drops of loctite on each bolt and fasten the motor mount and motor together

⚠ Do NOT tighten the bolts all the way. You should be able to move the motor back in forth in the channels. This will allow us to tension the belts later on

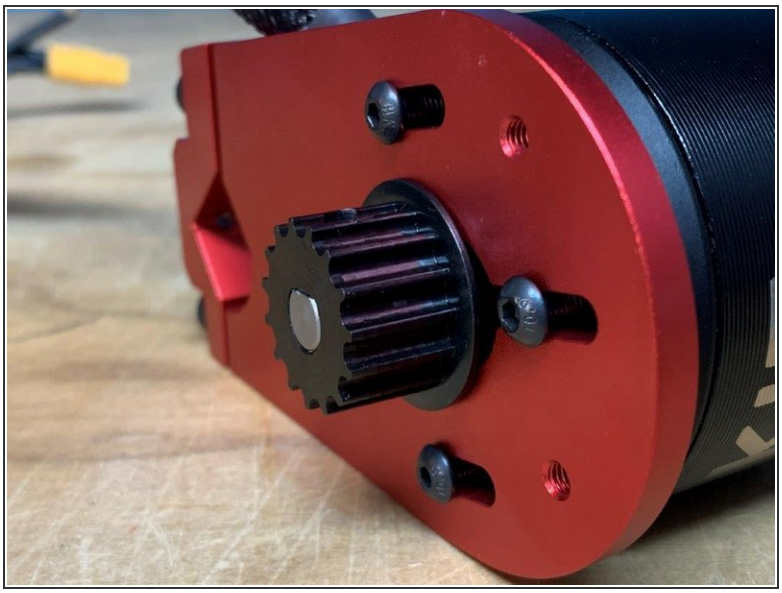
Tip: use the bearing set lid to make sure bolts dont roll away

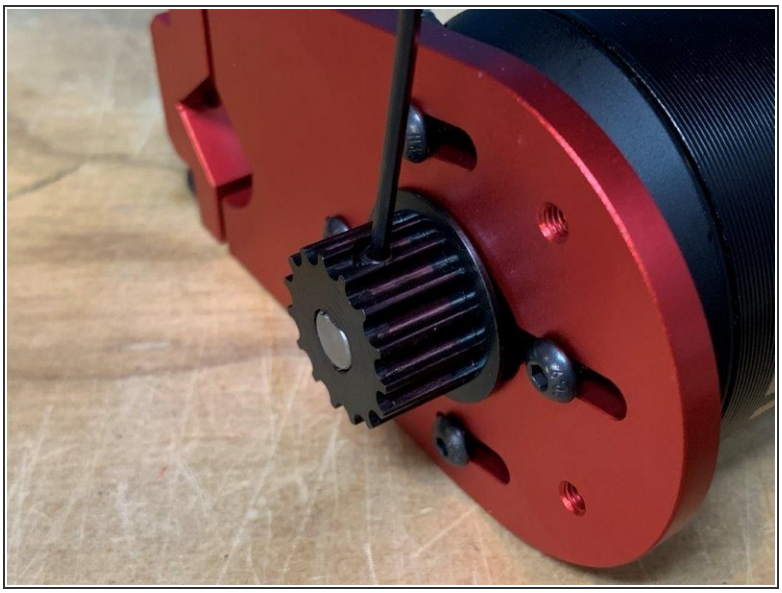
Step 10

- Remove the set screw from the motor pulley
- Add Loctite to the screw
- Add 2 drops of Loctite to the motor shaft

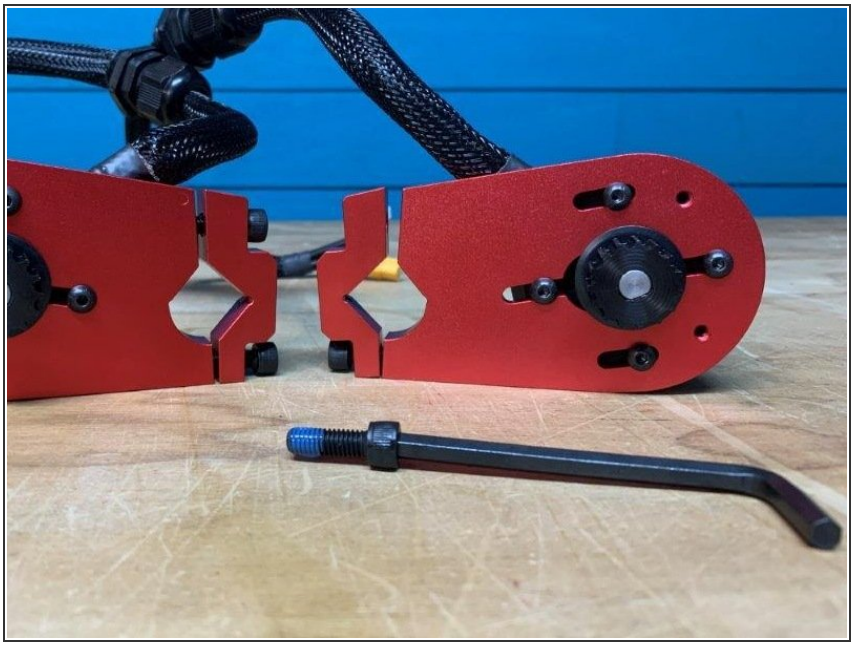
Step 11





- Press the motor pulley onto the shaft
- Make sure the shaft is flush with the end of the motor pulley. The motor shaft has a lip, so it will stop in the correct position
- Re-install the set screw in the motor pulley

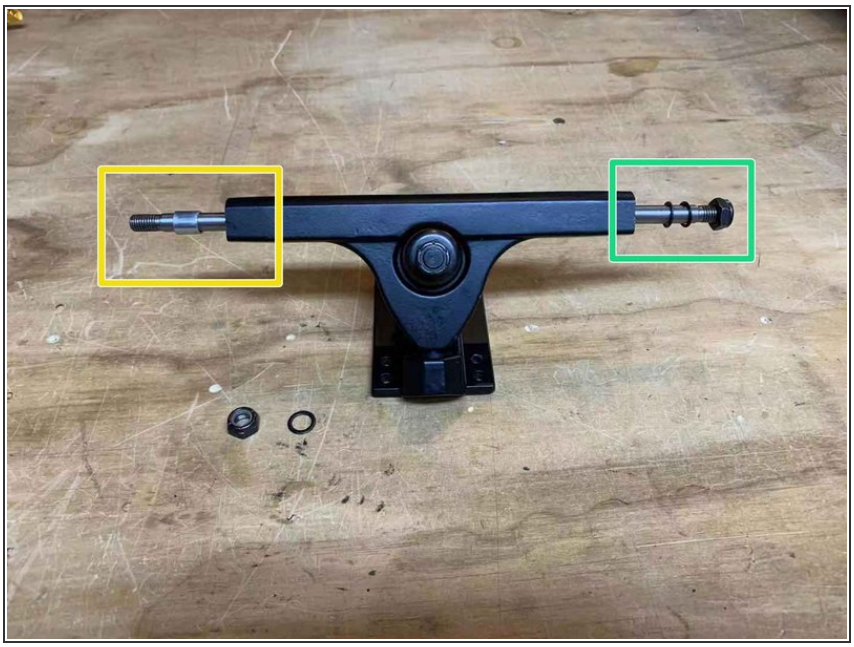
Step 12



- Remove the 2x M6 bolts that fasten the motor mount to the truck.
- Apply 3 drops of Loctite to each bolt and then reinstall the bolts

(Photo taken from Duo assembly, you will only have one motor mount and the wires will not have a black cable sheath)

Step 13



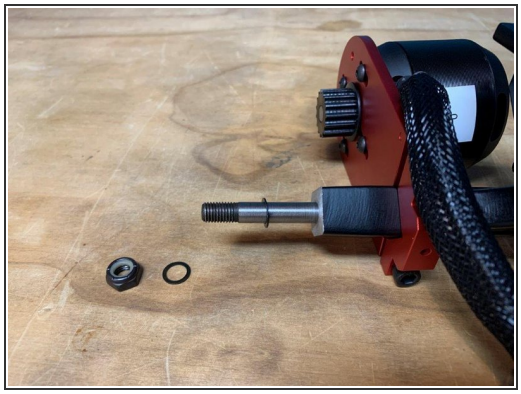
- There is an extra spacer included in the tool kit. This will be used on the rear truck on the side that does not get a motor mount.
- If your motor mount does NOT have a dot on each side, place the spacer on the Green (right) side
- If the motor mount HAS a dot on each side, place the spacer on the YELLOW (left) side

Step 14

- On the side that you just added the spacer to, place the wheel onto the truck
- Secure the wheel with a washer and locknut

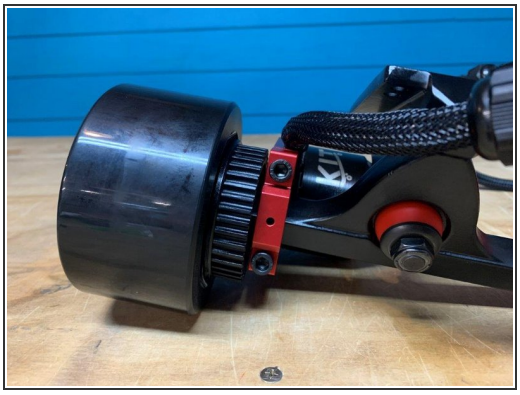
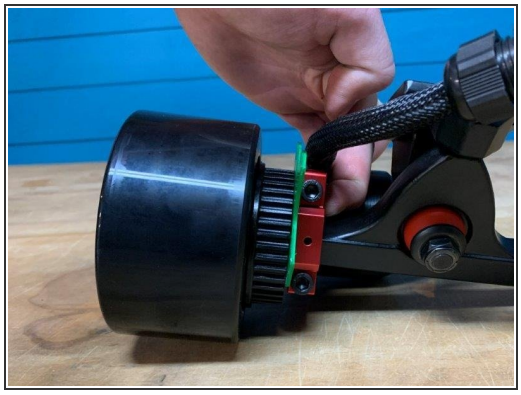
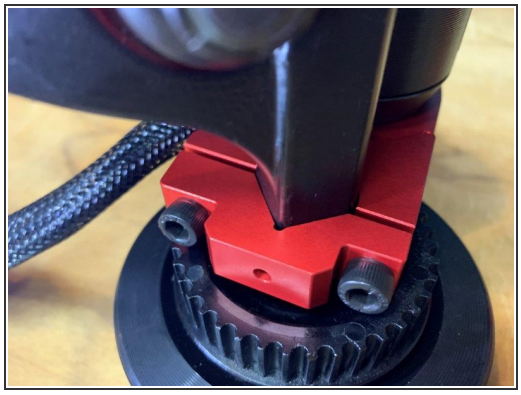
ⓘ The order of components on the truck, from outside to inside is: locknut, washer, wheel, spacer, truck.

Step 15

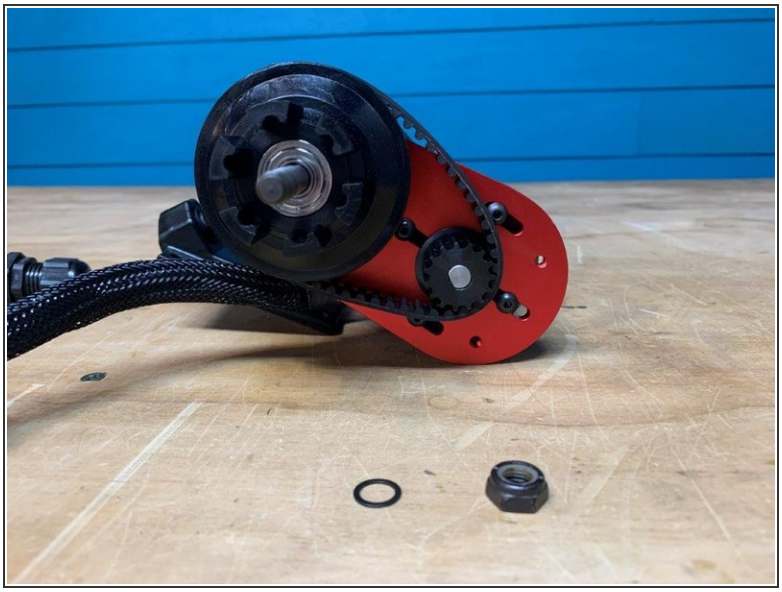

- Slide the motor mount assembly onto the other side of the truck as shown
- Remove one washer and the locknut from the left side of the truck
- Slide the wheel pulley onto the truck as shown

Step 16

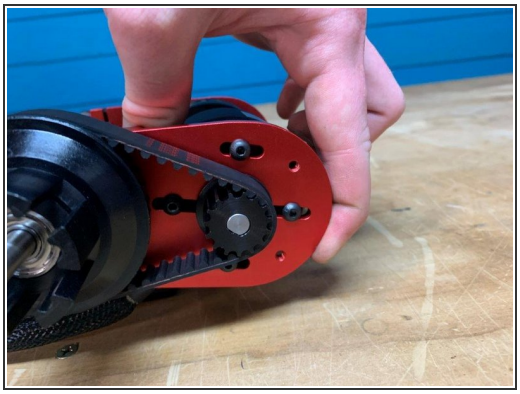
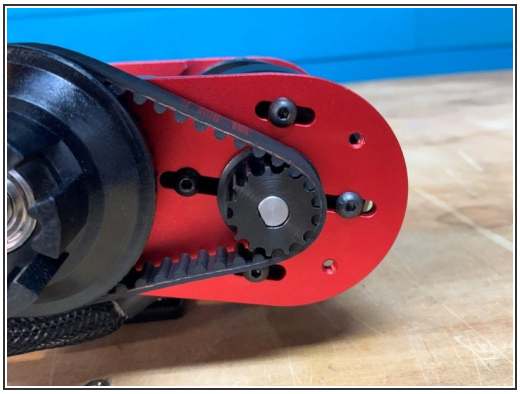
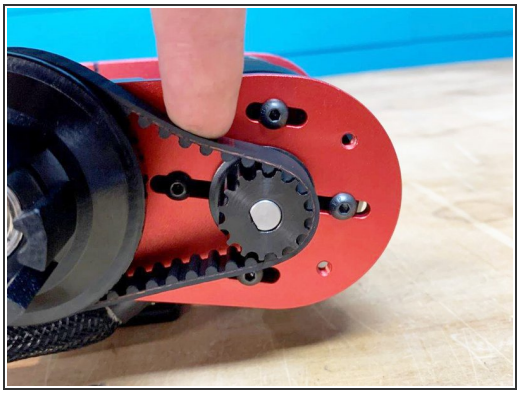
- Slide the wheel onto the truck AND secure it with the washer and locknut you just took of
- Place the motor mount spacer (green, blue, or black) in between the motor mount and wheel pulley. The wheel should not be able to move laterally on the truck
- Tighten the bolts on the motor mount A QUARTER TURN at a time. So, tighten the top bolt a quarter turn, bottom bolt a quarter turn, and repeat until the mount is tight. This will make sure you have even pressure on both bolts, there should be an equal gap between the top and bottom of the motor mount (last photo)
- When done, remove the motor mount spacer

Step 17



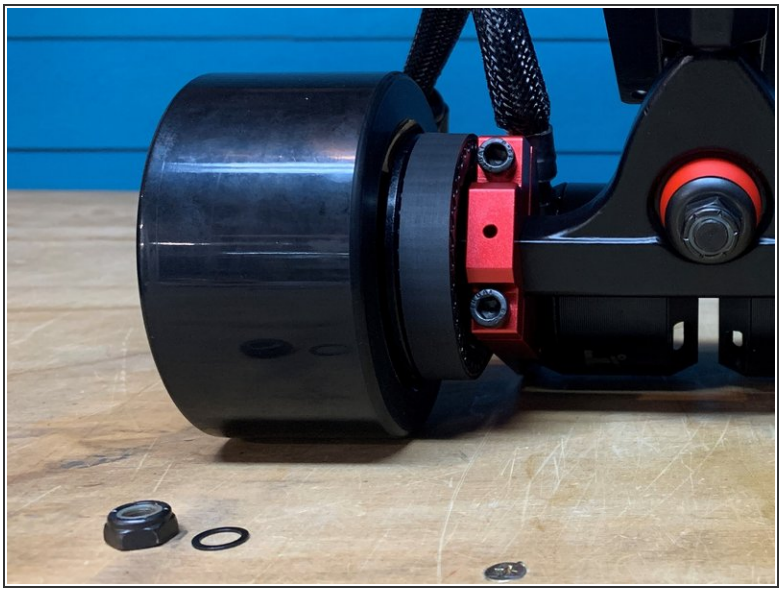
- Remove the locknut, one washer, and wheel from the truck
- Place a belt around the motor and wheel pulley as shown
- During the next step, make sure the wheel pulley stays as far back on the truck as it will go

Step 18

- Slide the motor outwards from the truck to put tension on the belt
- Tighten all four bolts
- Put a small amount of pressure downwards on the belt. It should deflect slightly as shown in the 3rd photo
  - If the belt deflects more than you need more tension, so loosen the bolts to readjust
  - If the belt barely deflects, or dosnt at all, they are too tight. Loosen the screws to readjust.
  - Tighten the bolts when done adjusting until you find the proper belt tension. It is always better to have loose belts compared to tight ones

Step 19



- Slide the wheel back onto the truck
- Secure it with a washer and lock nut

Step 20

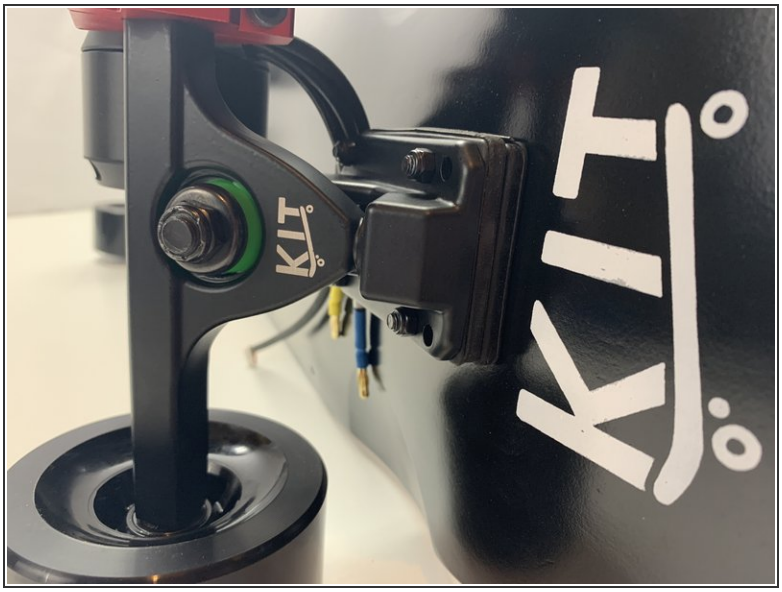
- Gather the deck, front truck assembly, drivetrain assembly, 2x risers, and truck hardware.

Step 21

- Install the front truck with one riser and 4x M5x35 Bolts and Lock Nuts

⚠ Note that the trucks angle in towards the center of the deck

Step 22



- Install the drivetrain on the rear of the deck. Use one riser and 4x M5x35 bolts and locknuts

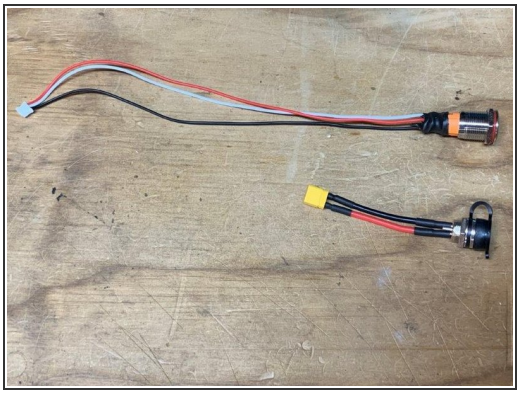
ⓘ Note: your deck and truck will not have the KIT logo, they have since been removed

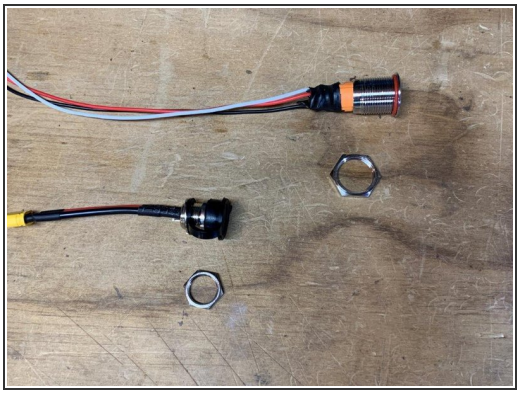
Step 23

- Gather the enclosure, battery, and battery velcro. Install the velcro on the battery and then press firmly into the enclosure as shown

ⓘ It does not matter what side of the battery the velcro is placed on

Step 24





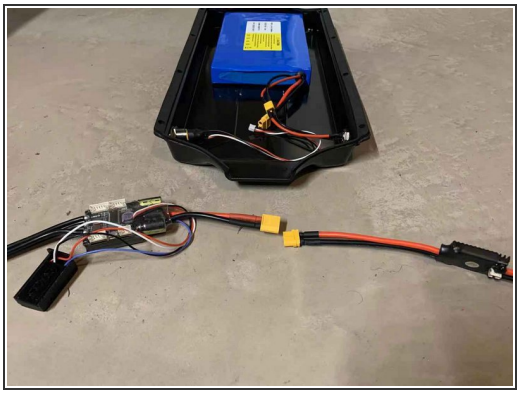
- Gather the switch and chargerport
- Remove the locknut from the switch and charge port
- Install them in the enclosure and secure with the locknuts you just removed.
- Connect the charge port to the battery with the yellow XT30 connector

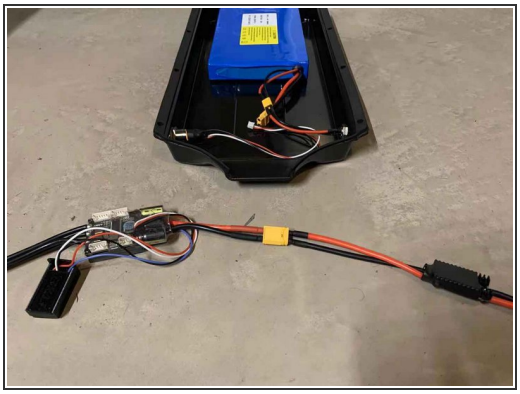
Step 25

⚠ DO NOT PLUG THE BATTERY BEFORE ANY OF THESE STEPS.

- Ensure that the on/switch is in the off position (flush)

Step 26





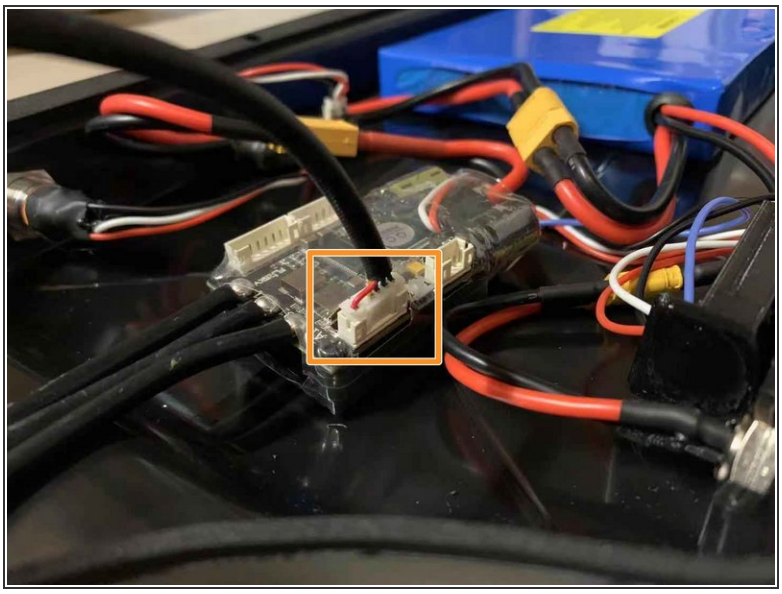
- Gather the ESC and Switch PCB
- Plug the ESC into the switch PCB (larger yellow connectors)
- Plug the switch wire into the Switch PCB

Step 27

⚠ Verify that the switch is still in the OFF position

- Plug the Switch PCB into the battery (yellow connectors)
- Arrange the ESC and Switch PCB inside the enclosure
- Peel the paper off of the black receiver case and place it in the enclosure (lower right-hand side)

Step 28



- Plug the motor into the ESC (3pin Yellow connector)
- Plug the motor sensor wire into the ESC

Step 29

- Flip the enclosure to the proper orientation. If the enclosure does not sit flush with the deck, place your hand inside the enclosure and move the power wires

Step 30

- Align the motor wires so they go through the cable shroud

Step 31

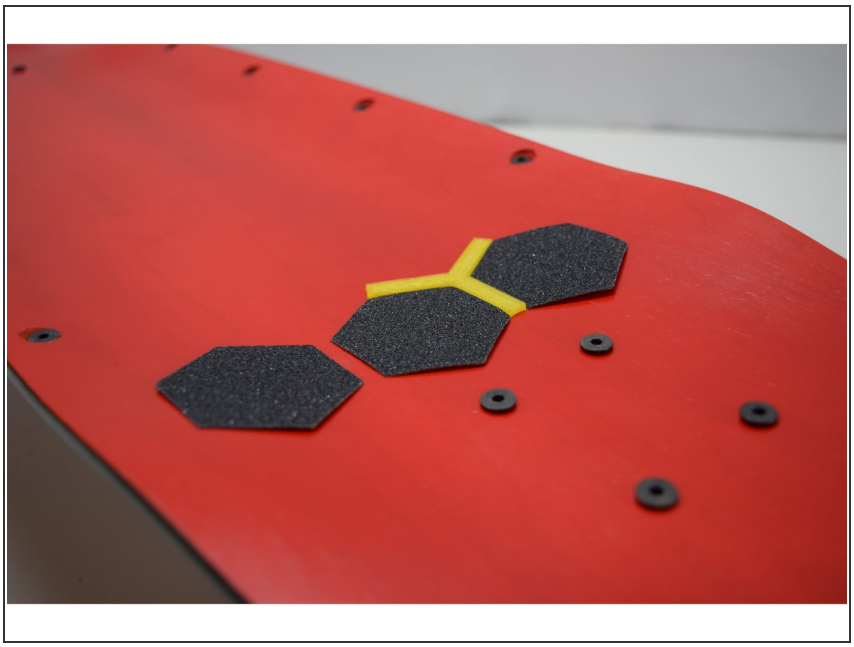
- Secure the enclosure with 8x M5x25 bolts, rubber washer, metal washer, and locknut. Make sure the rubber washer is against the enclosure with a metal washer and locknut on top of it.

Step 32

- Almost done! While you apply the griptape I recommend to charge the board. It is shipped almost fully discharged for safety. Dont forget to charge the remote as well!

Note: we are not using upgraded chargers that look slightly different

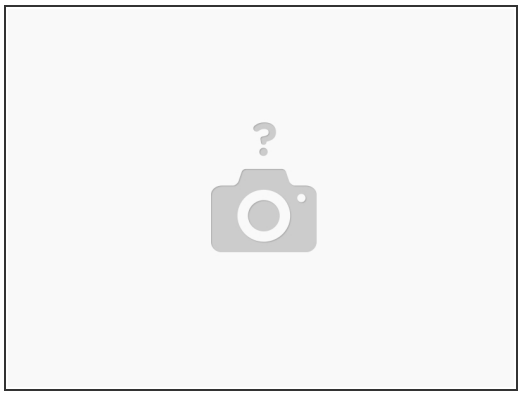
Step 33



- Apply the griptape hexagons however you see fit! You can use the included Y Spacer to get even spacing between all of the hexagons.

⚠ Take your time, and try to make it look organized!

Step 34



⚠ WARNINGS!

- **VERY IMPORTANT:** Do NOT leave the switch in the on position when not using the board! It will completely drain the battery (and make in unusable). Remember to turn the board off after every ride.

ⓘ If you are not going to use the board for 2 weeks or more, be sure to charge the battery to 36V and unplug it.

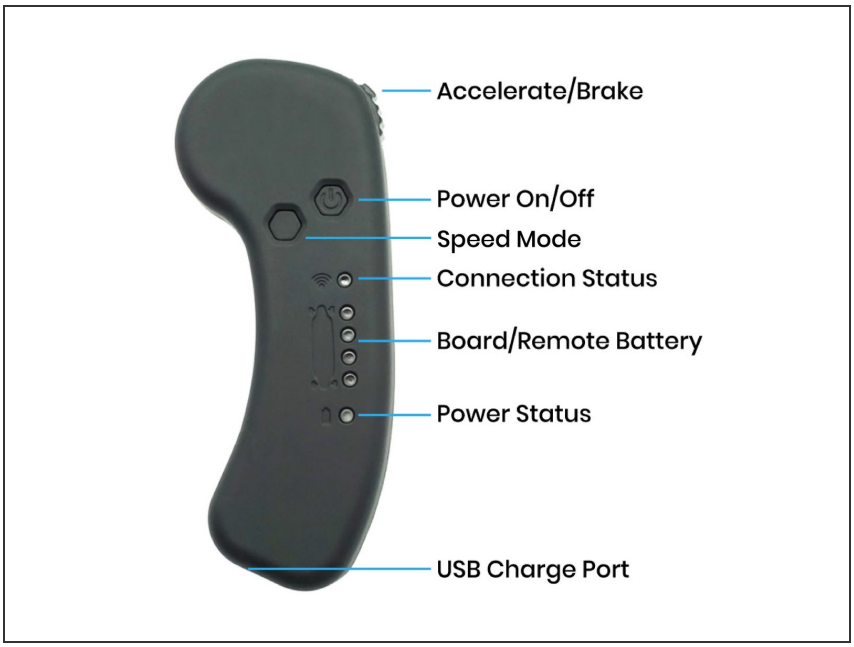
⚠ ALWAYS WEAR A HELMET! THEY SAVE LIVES. DONT WEAR IT FOR YOU, WEAR IT FOR YOUR FAMILY.

- Electric skateboarding is a very fun and rewarding sport. But, everyone has fallen off their board at some point. It's not a matter of if it will happen, but when it will happen. Please wear at least a helmet and always ride within your comfort zone

- Treat the board with respect! It is a vehicle after all. Do NOT drop the board from a vertical position to set it down as it put a lot of stress on the enclosure. Give the board a good once over before every ride to make sure bolts are tight and things look normal.

⚠ NEVER CHANGE THE FIRMWARE ON THE VESC! IF YOU ARE HAVING AN ISSUE REACH OUT TO SUPPORT BEFORE CHANGING ANY SETTINGS ON THE VESC!

Step 35



- Its time to ride! The remote has three acceleration modes
  - Red = full acceleration
  - Yellow = medium acceleration
  - Green = low acceleration (beginner)
- When riding for the first time make sure you are in the green mode. Then slowly work you way up to red. THE BOARD HAS MORE POWER THAN YOU REALIZE.

⚠ ALWAYS RESPECT THE BOARD AND RIDE WITHIN YOUR LIMITS. OBEY ALL TRAFFIC LAWS AND WEAR A HELMET.