

Drone Assembly Photo Guide V4a

[Complete Parts List Needed for Assembly](#)



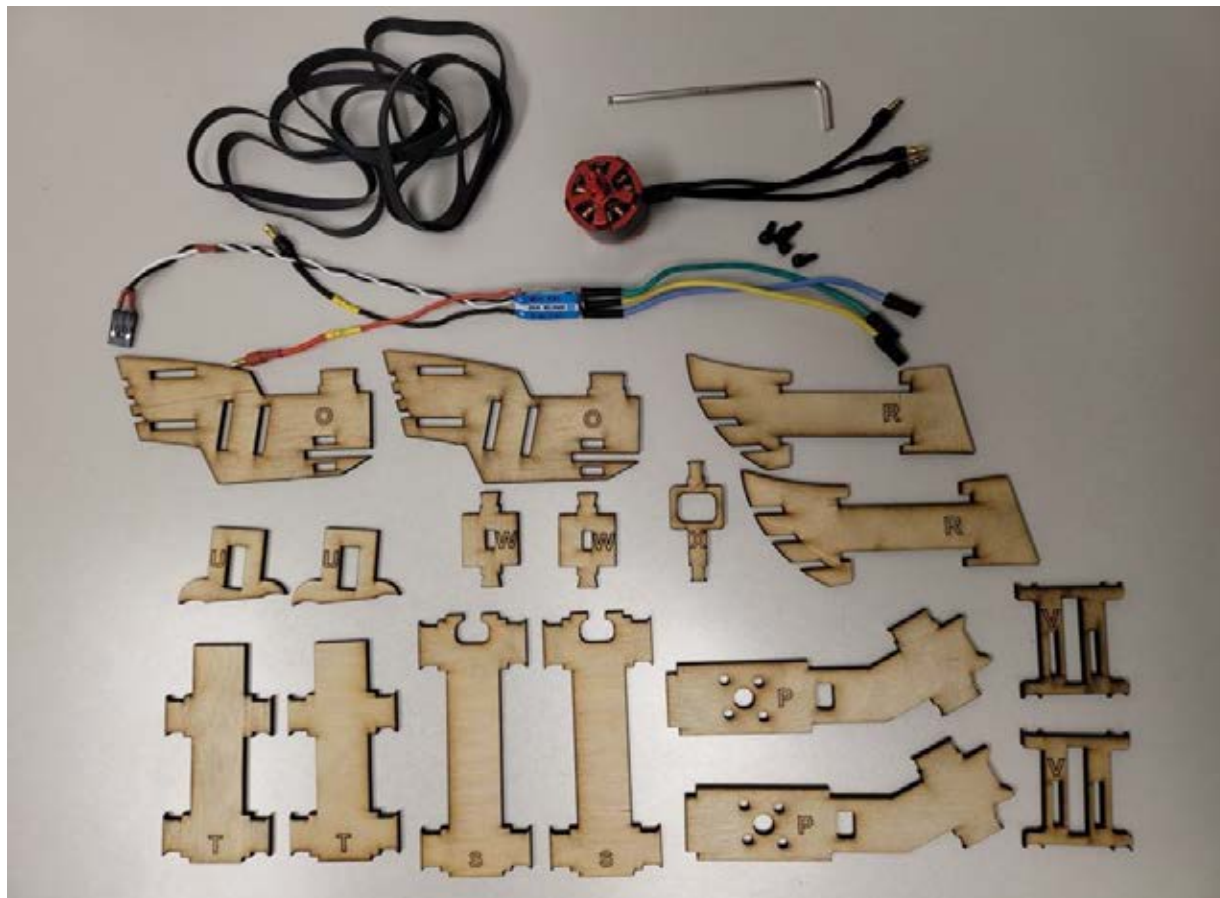
This guide presents step by step photos of the Assembly process. This is a companion guide to the Drone Assembly Video series.

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2X - Arm-Leg Subassembly (CW)

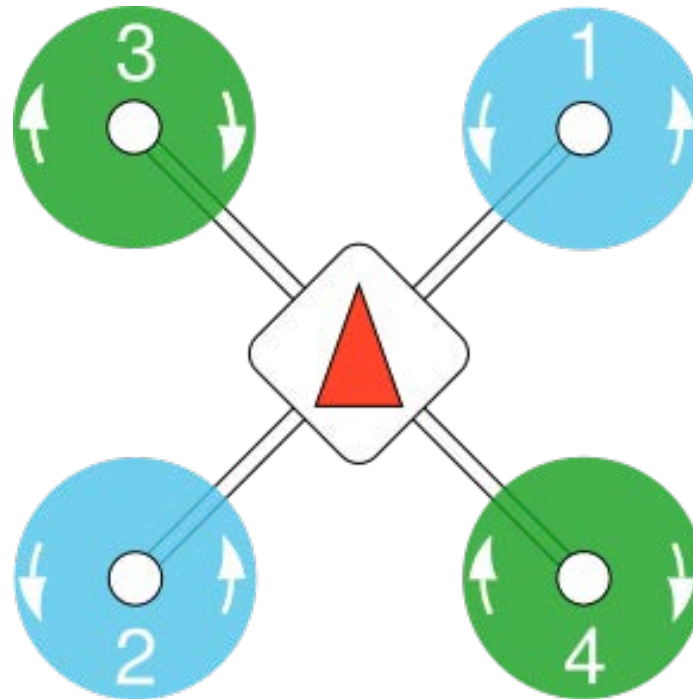
All Parts Needed for this Subassembly are included in the Photo Below



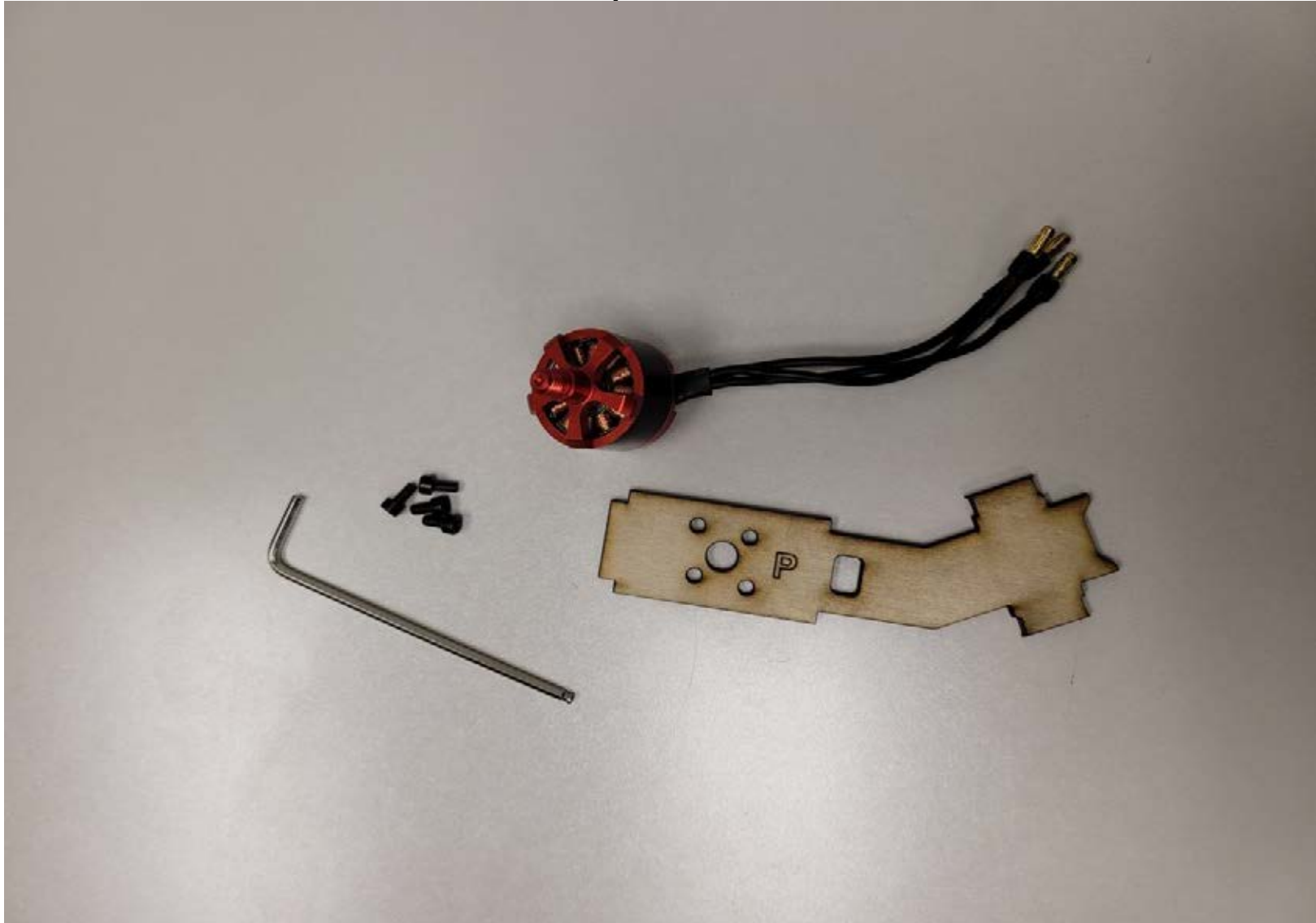
The photo steps for assembling the Clockwise Arm-Leg subassembly are for one arm-leg. You will be building two of these. We recommend actually building both of these arm-leg subassemblies at the same time as you go through these steps.

Your motors may look different from these photos. If you have motors with silver and black tops, the black tops are the counterclockwise motors and the silver tops are Clockwise. If they look like the photos, the ones with the little dimple on top are the CW motors.

It helps to mark each arm-leg subassembly as you build then with the planned position (1, 2, 3, 4) (3 or 4 for clockwise arm-legs and 1 or 2 for counterclockwise legs per the drawing below.

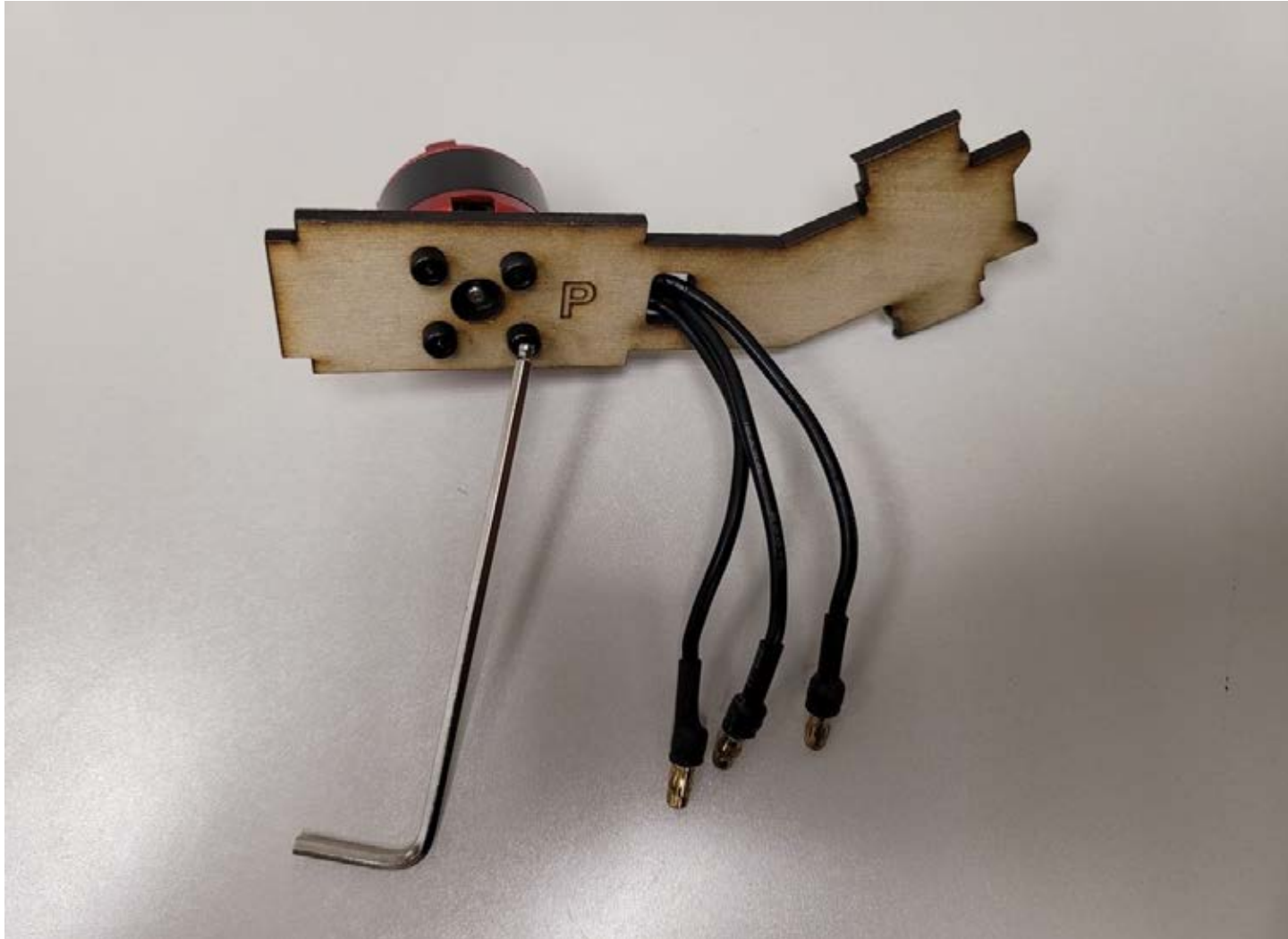


Clockwise Arm – Step 1: Gather CW Motor Parts

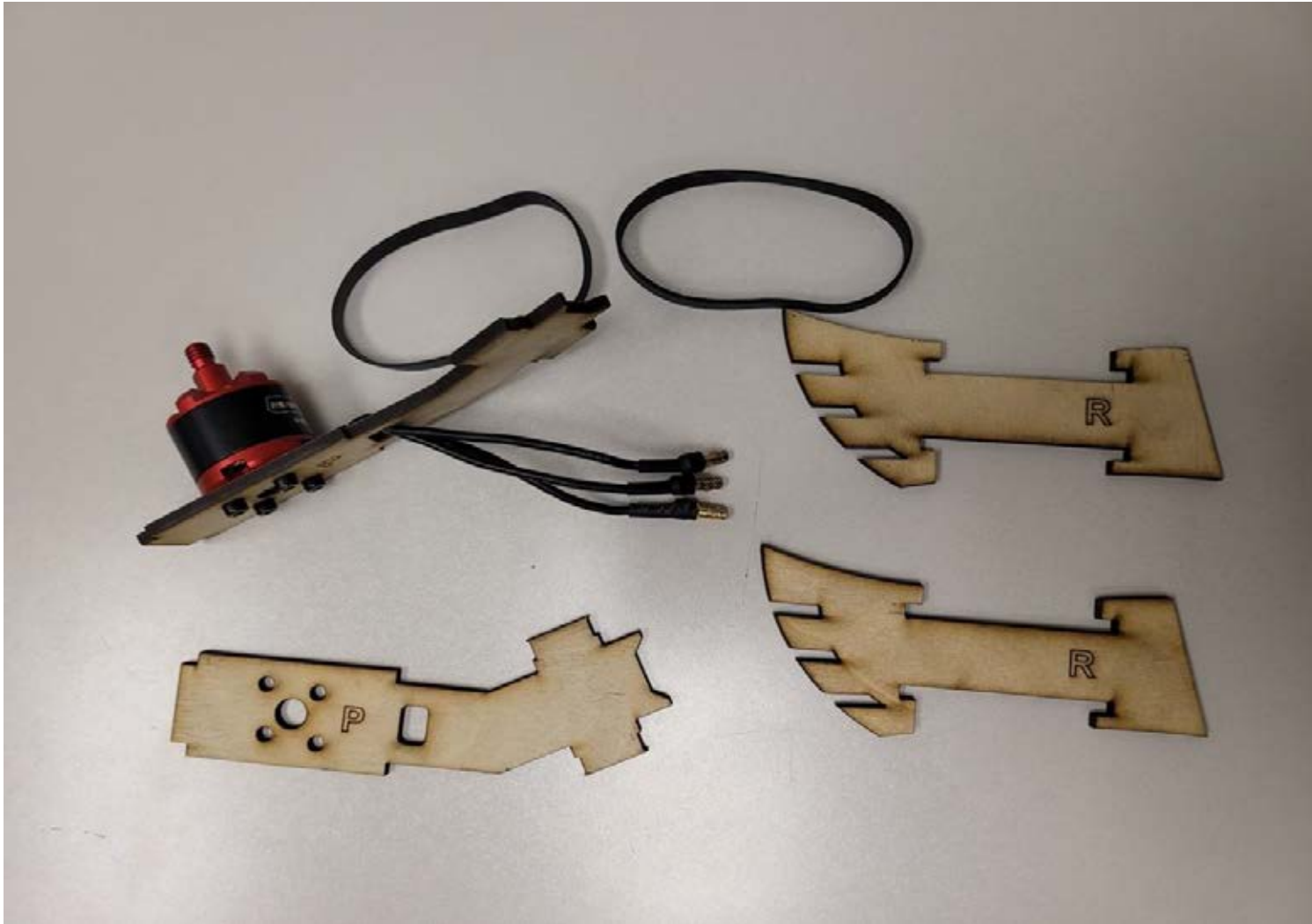


Clockwise Arm - Step-2: Mounting the Motor

Tighten the motor bolts till they are firm, but be careful to not crack the wood.



Clockwise Arm - Step-3: Gather Arm Parts



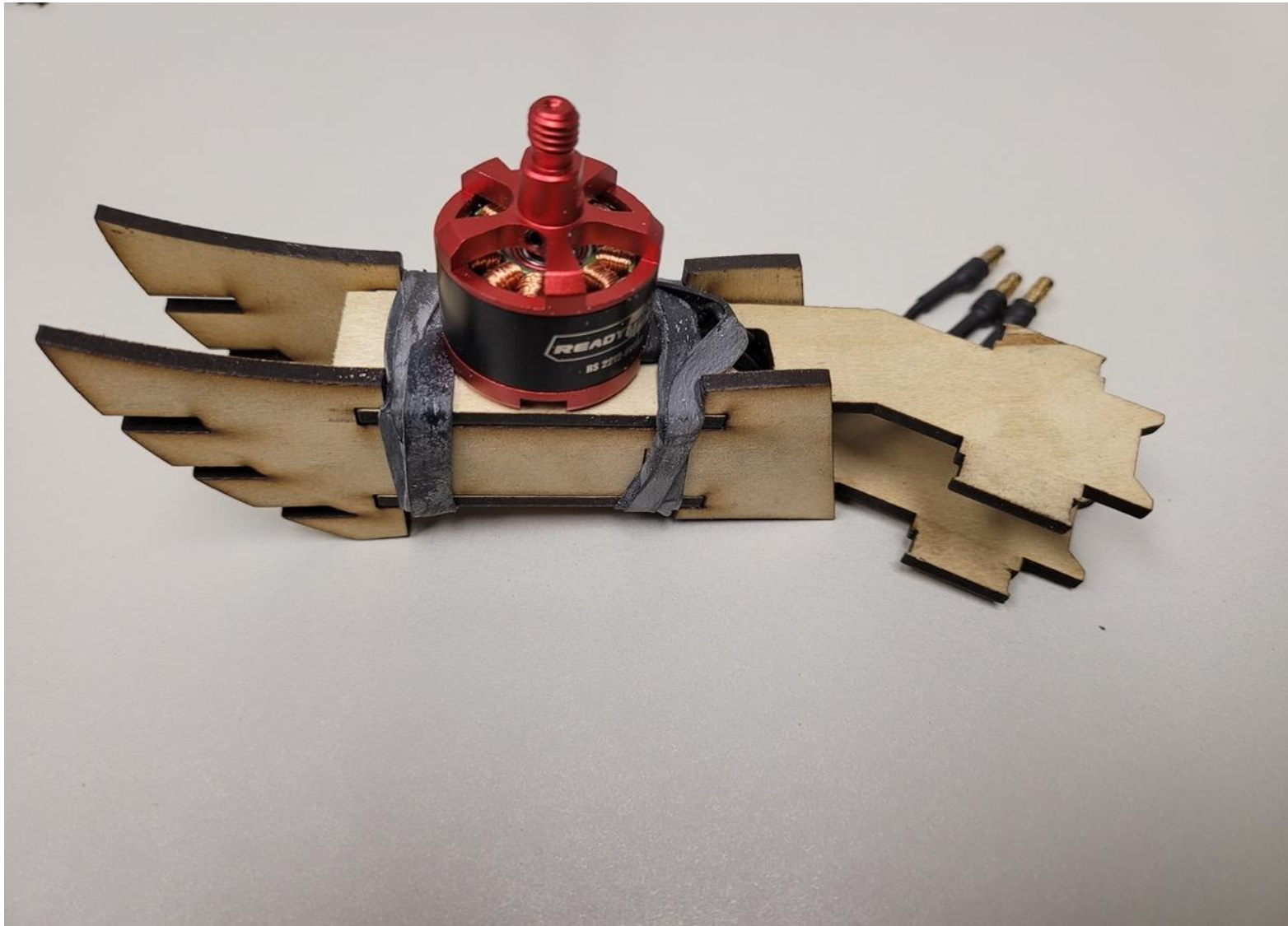
Clockwise Arm - Step-4: Arm Assembly

Mount the two R-plates on either side of the P-Plates so that the feathers at the end of the R plates match.

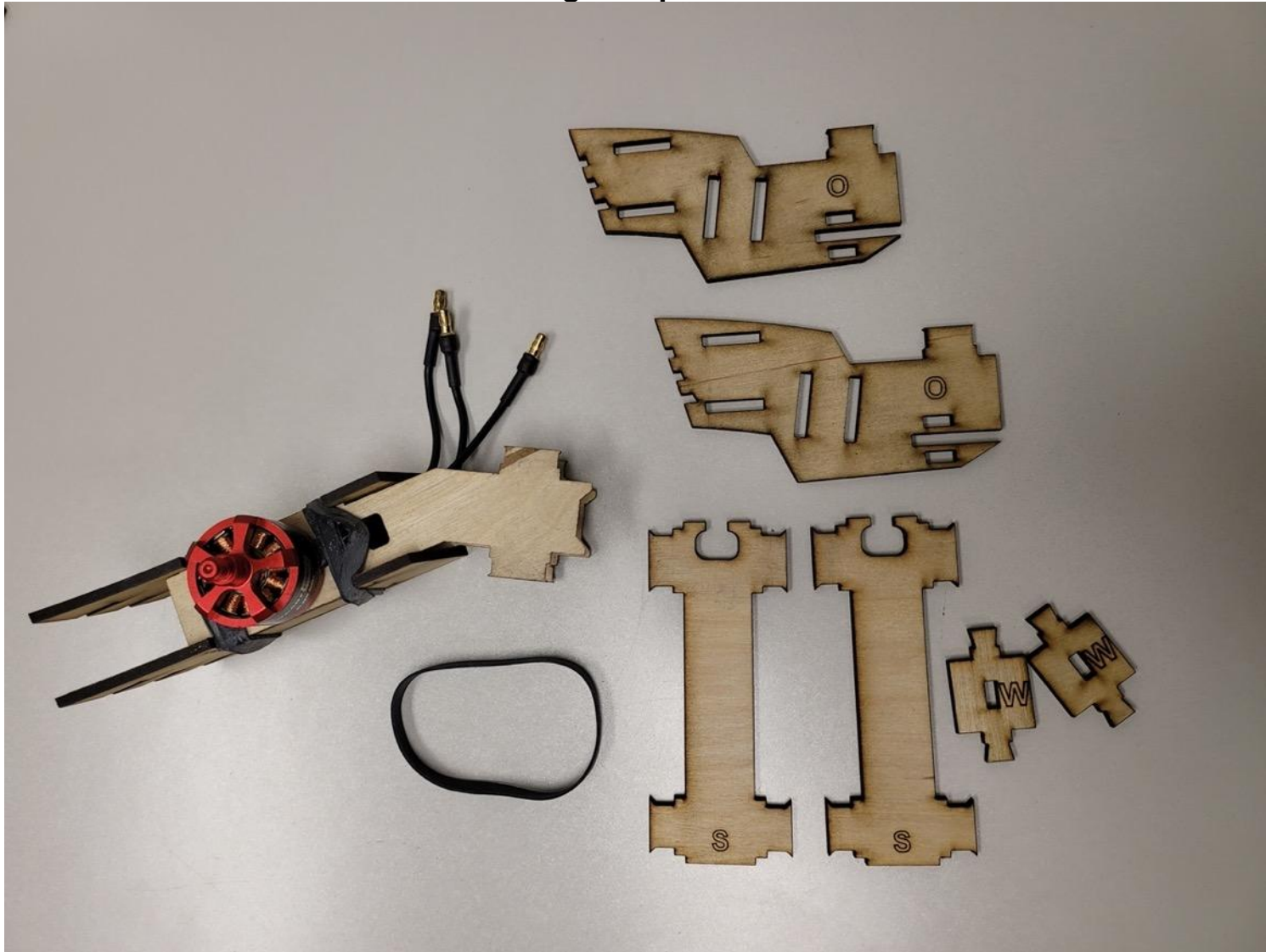
Loop each rubber band 3 times around the P and R plates on either side of the motor. Make sure that the rubber bands do not rub against the rotating part of the motor. It is OK to touch the bottom plate of the motor.



Clockwise Arm - Step-5: Arm Assembly Complete

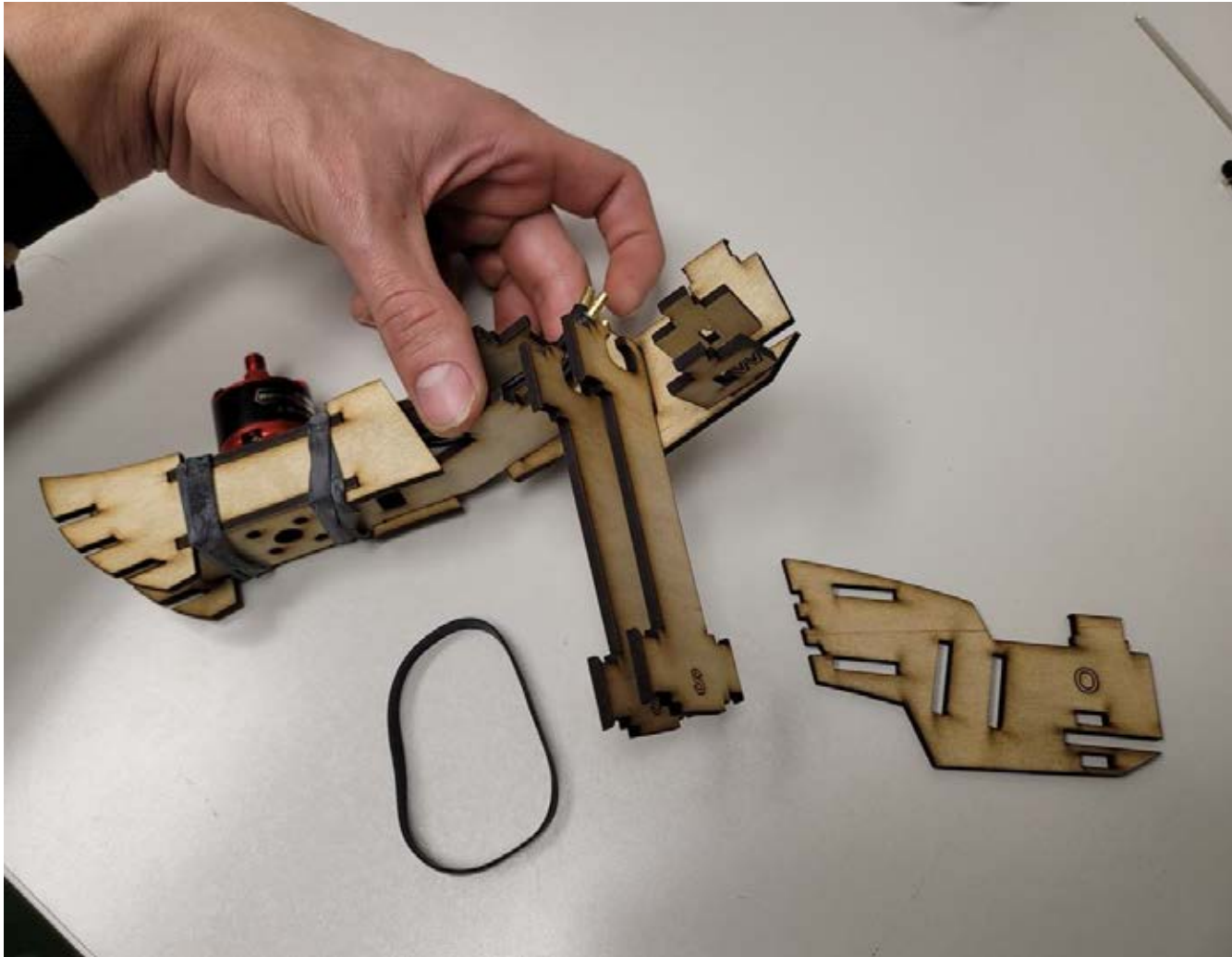


Clockwise Leg - Step-1: Gather Parts



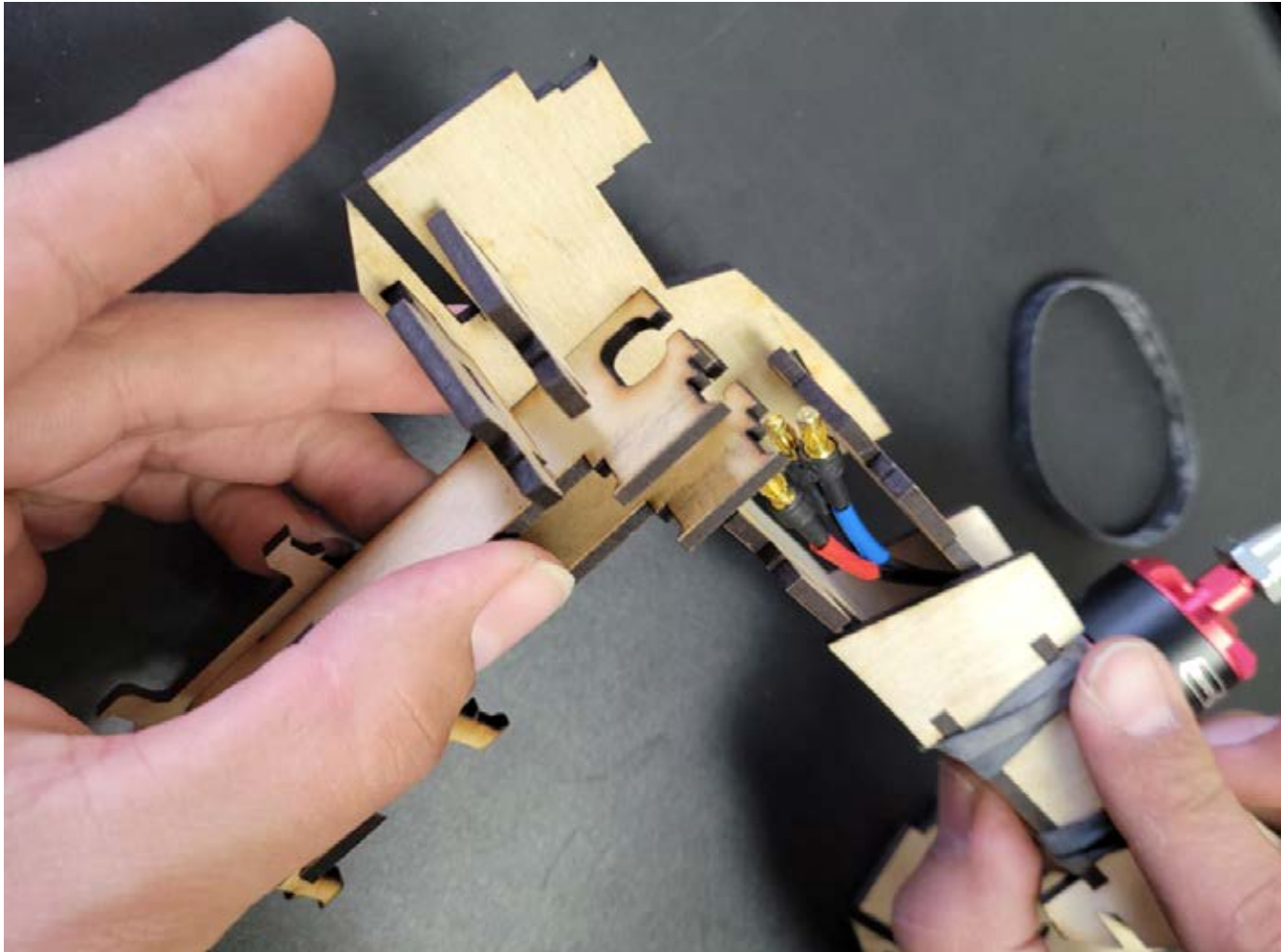
Clockwise Leg - Step-2: Upper Leg Assembly

Mount the 2 W plates as shown, and then the 2 S Plates. Make sure the round holes on the S plates are on the arm so that the motor wires can go through those holes.

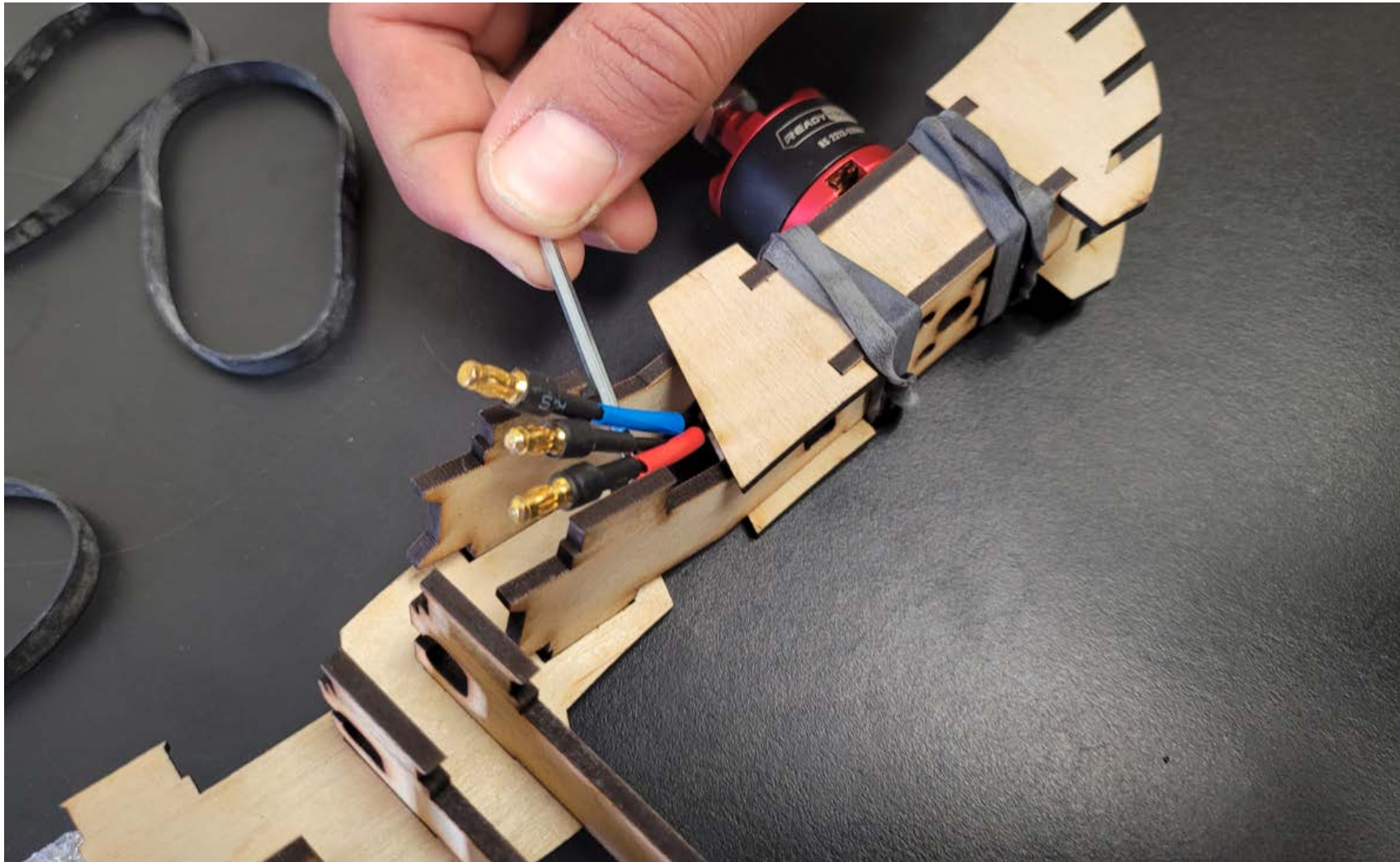


Clockwise Leg - Step-3a: Install ESC - connect wires inside Arm

Next, you need to install the ESC before completing the leg. With the leg partially assembled, find the motor wires.

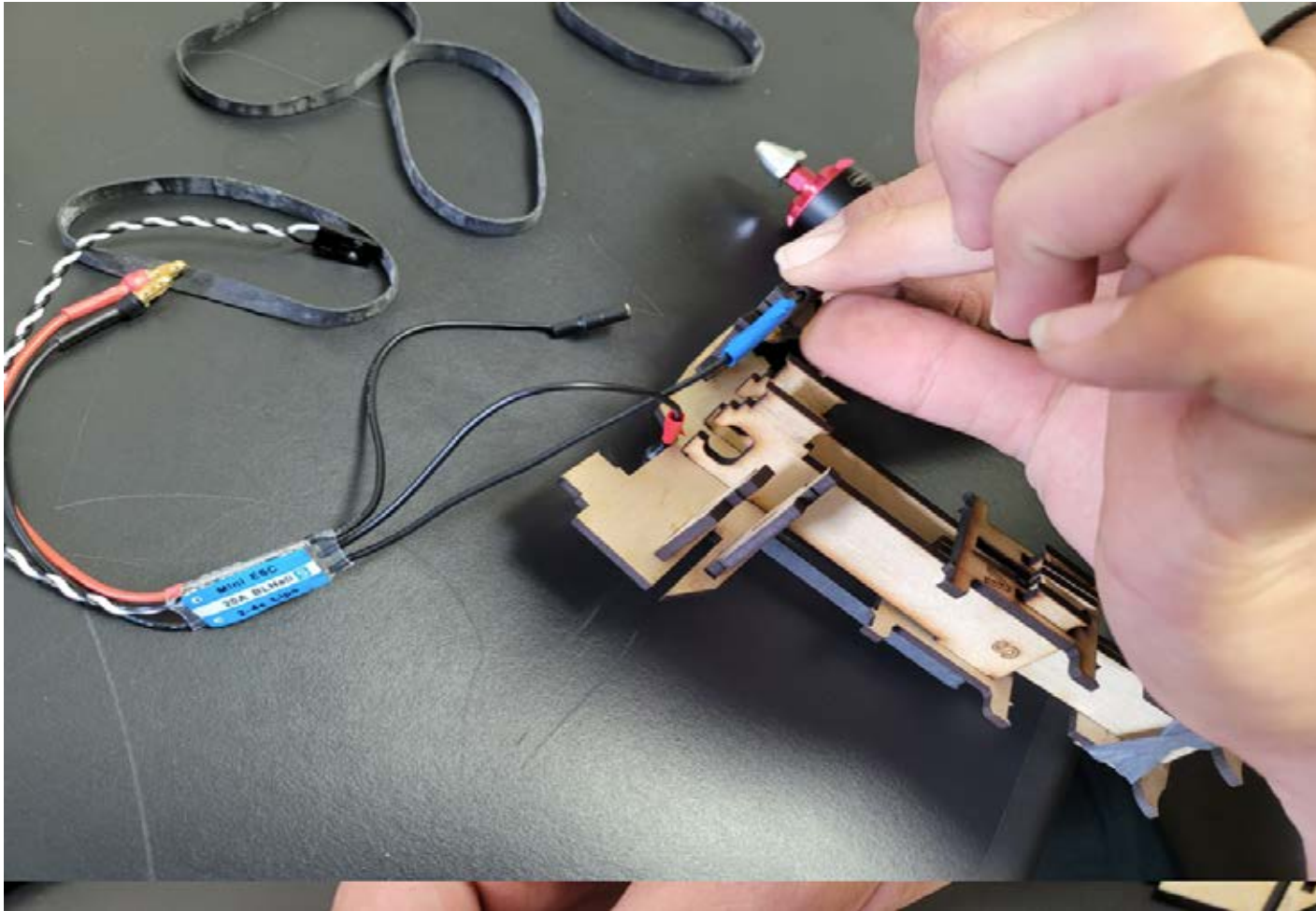


Clockwise Leg - Step-3b: Install ESC - Lift connectors up



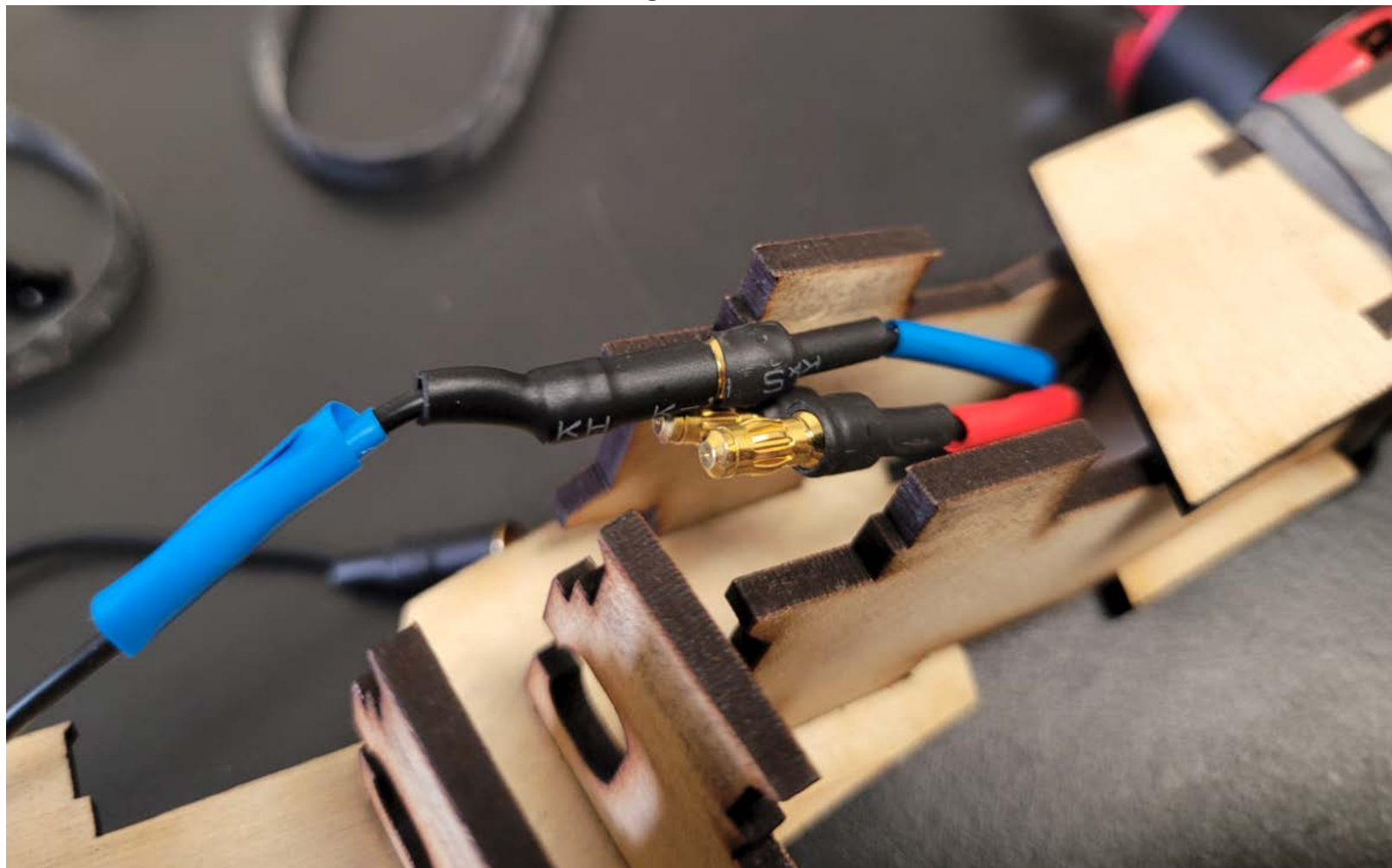
Clockwise Leg - Step-3c: Install ESC - Connect ESC

Bring the ESC wires to the Arm and plug the motor wires into the ESC wires. Make sure to match the colored tape on both sides (Red to Red, Blue to Blue, & Black to Black) to ensure the correct rotation



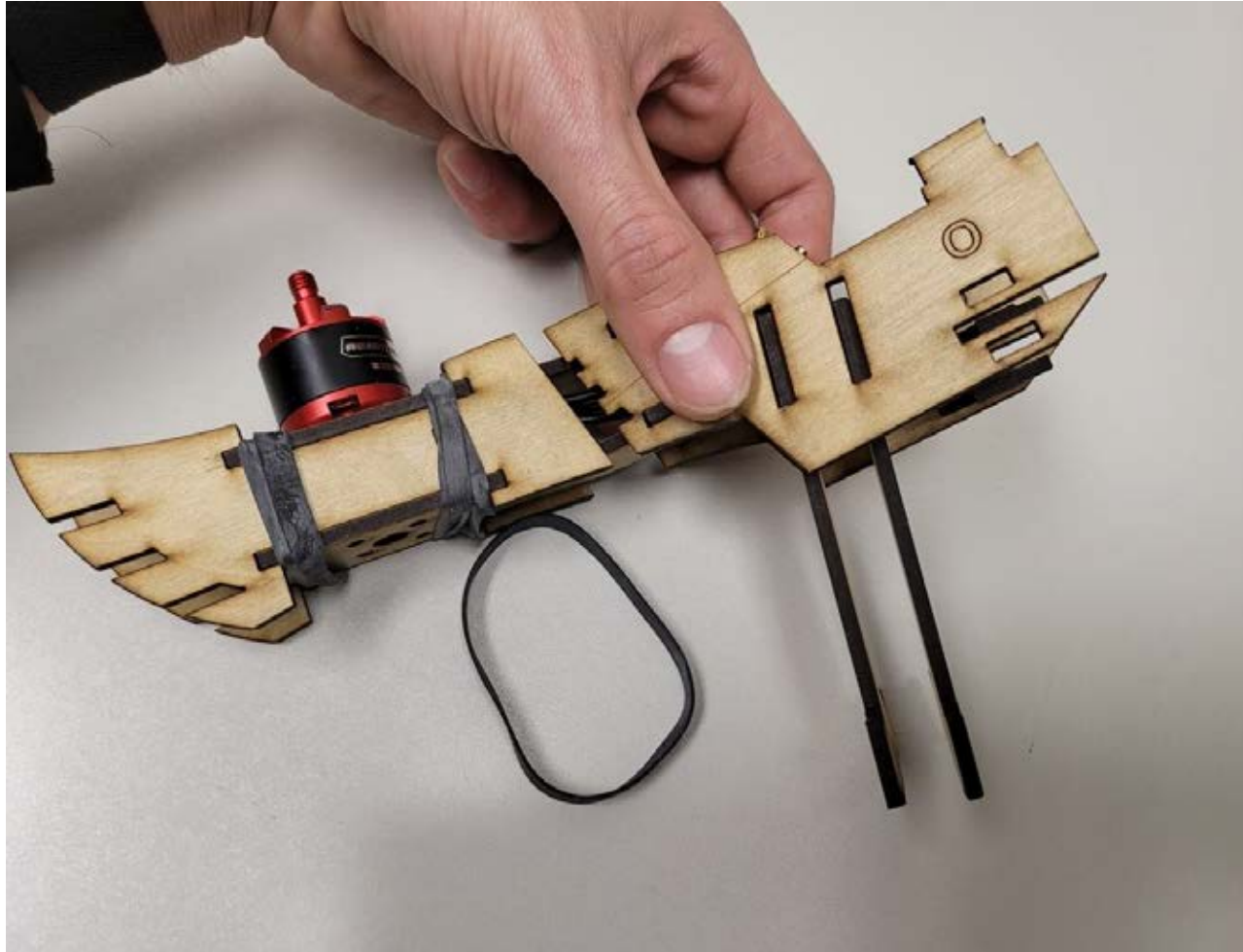
Clockwise Leg - Step-3d: Install ESC - Connect ESC

Once connected, run the connectors/wires through the S-Plate holes.

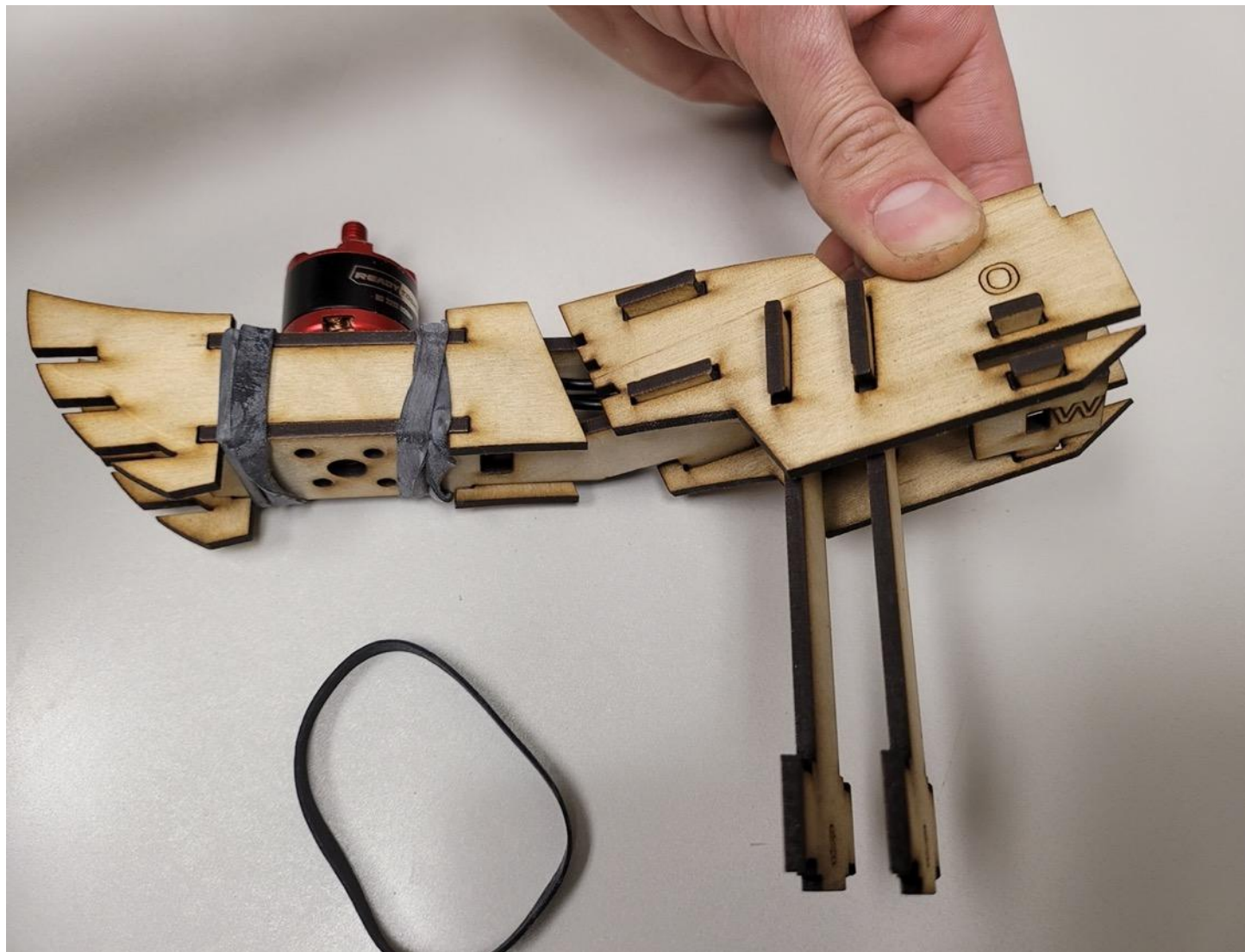


Clockwise Leg - Step-4: Upper Leg Assembly

Now take the other O-plate. Start with the holes closest to the motor and align the pegs and holes from left to right as shown on this photo till you have everything tightly mounted. You will have to wiggle the S and W plates to get them fully through the holes on the O plate. Hold the assembly together.



Clockwise Leg - Step-5: Upper Leg Assembly



Clockwise Leg - Step-6: Upper Leg Assembly

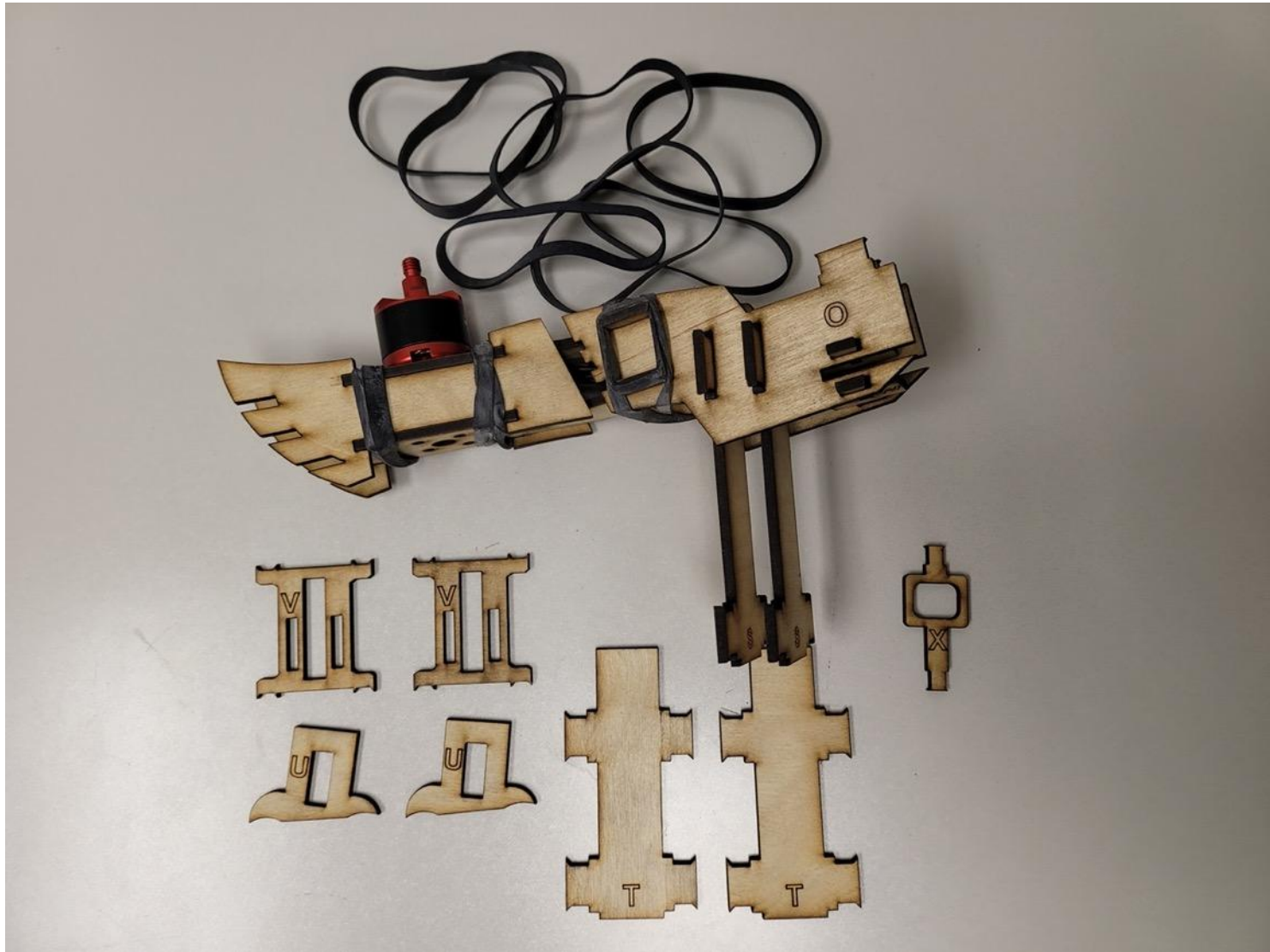
This photo does not show the ESC – but it will be dangling off the top of the arm by now. Take a rubber band and start from the bottom peg where the thumb is shown. Wrap the rubber band up over the top, making one twist, then straight down the back side, another twist across the bottom, then up the front ending with the top peg.

This will hold it all together for your next steps.

It helps to gently fold the ESC and its wires into a small bundle and use a spare rubber band to hold the ESC and wires together on top of the arm and out of the way for the remaining assembly of the leg.

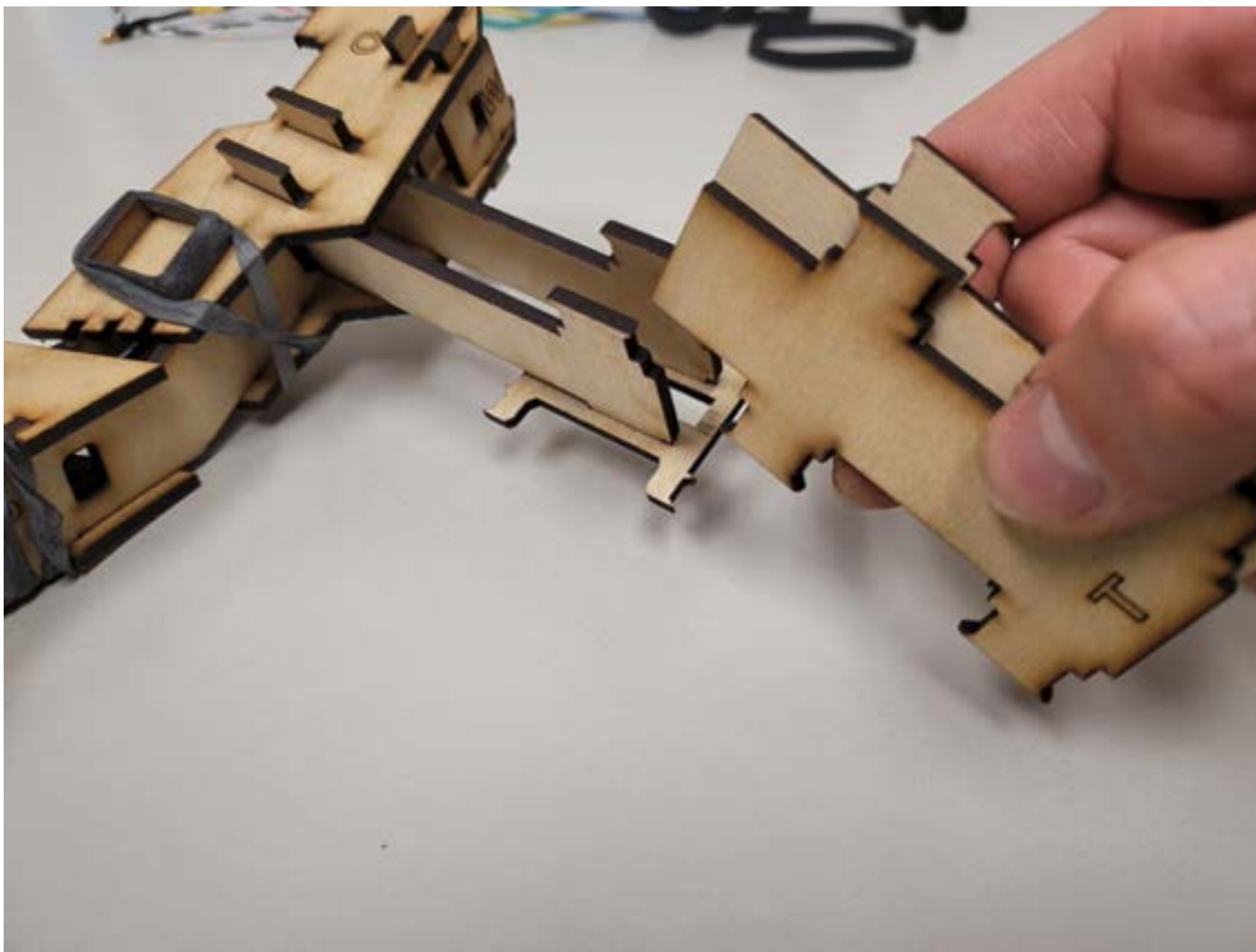


Clockwise Leg - Step-7: Lower Leg Assembly Gather Parts



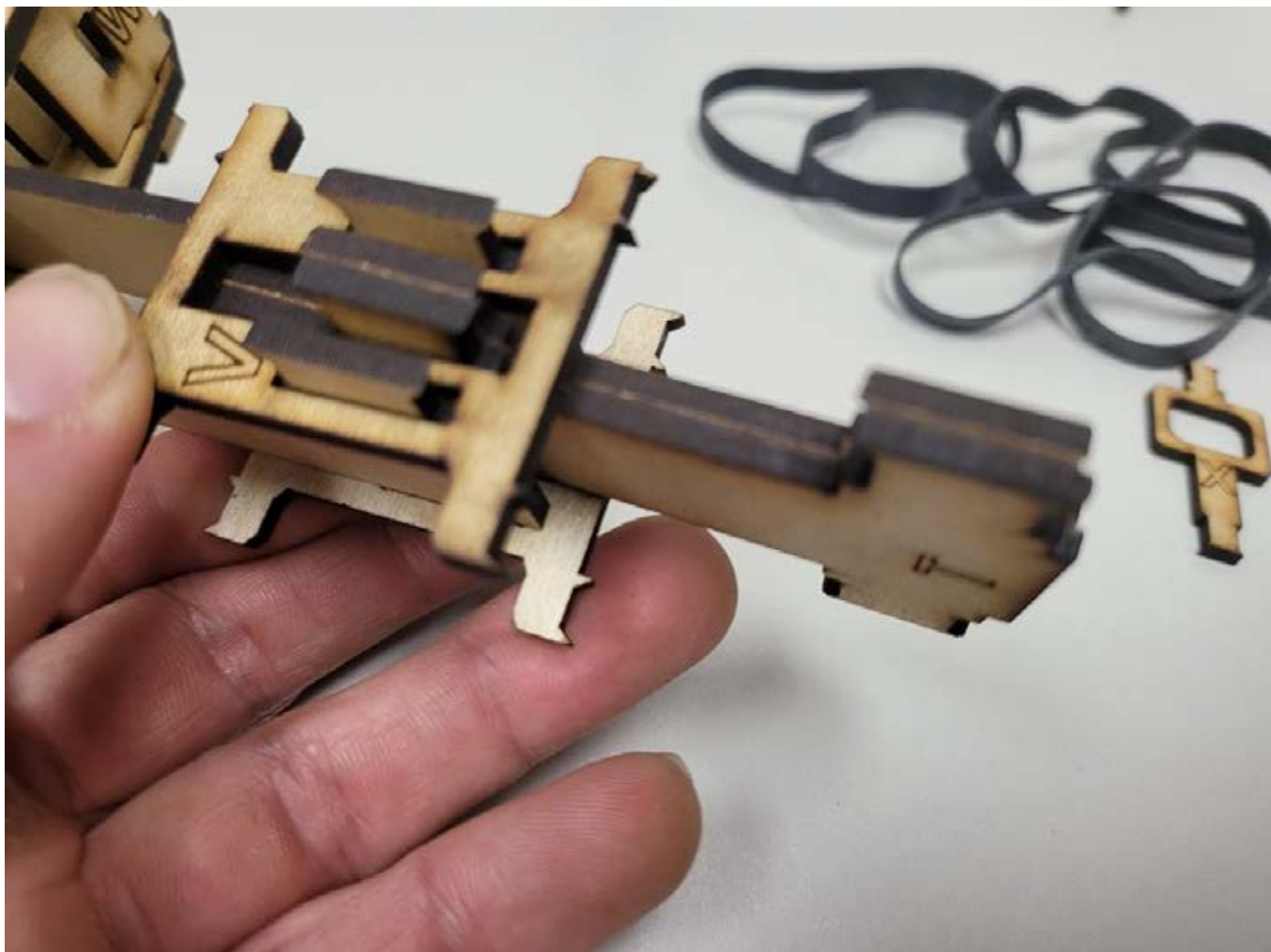
Clockwise Leg - Step-8: Lower Leg Assembly

Mount a V-plate so that the “V” is upright with the leg - use and the holes are to the bottom. Then install the 2 T-plates as shown.



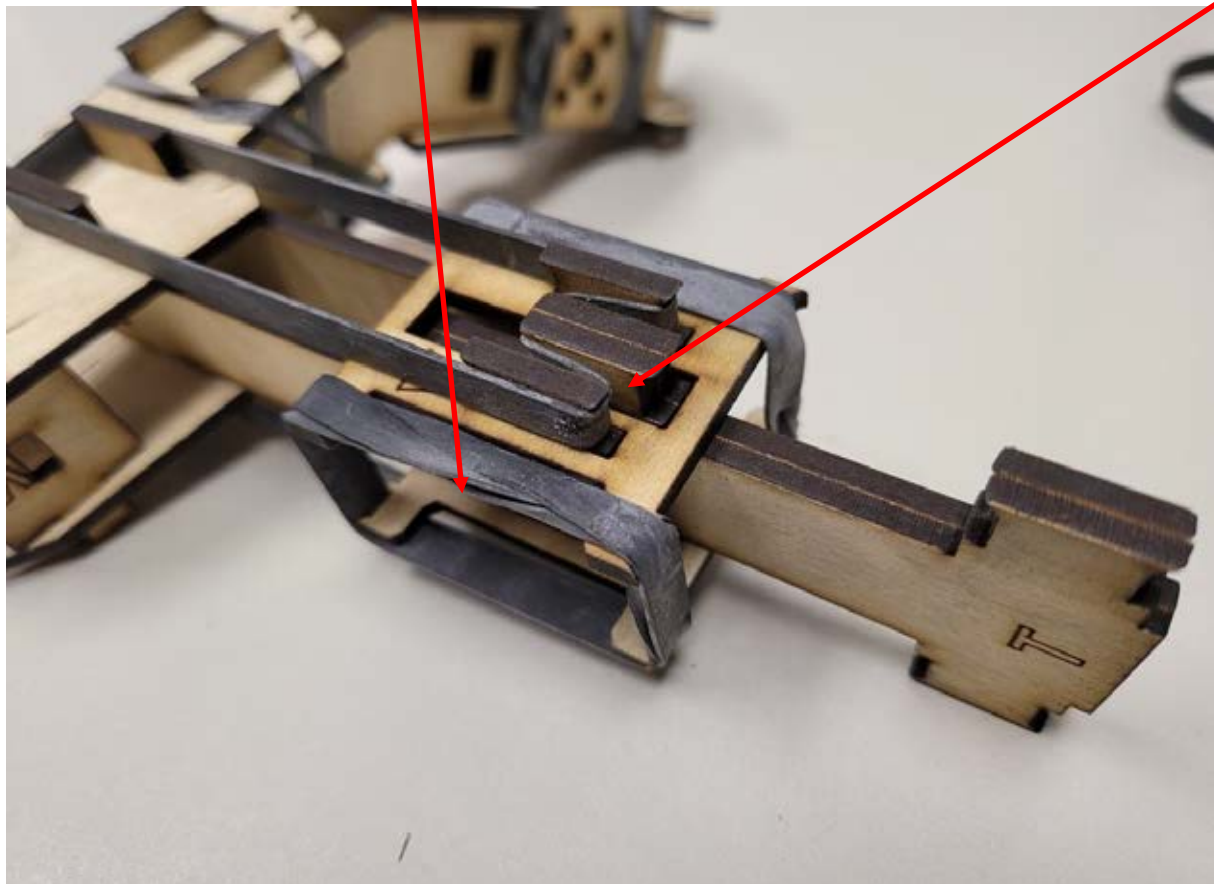
Clockwise Leg - Step-9: Lower Leg Assembly

Mount the other V-plate to hold the T-plates together. Hold onto this as you put the rubber bands on in the next step.



Clockwise Leg - Step-10: Lower Leg Assembly

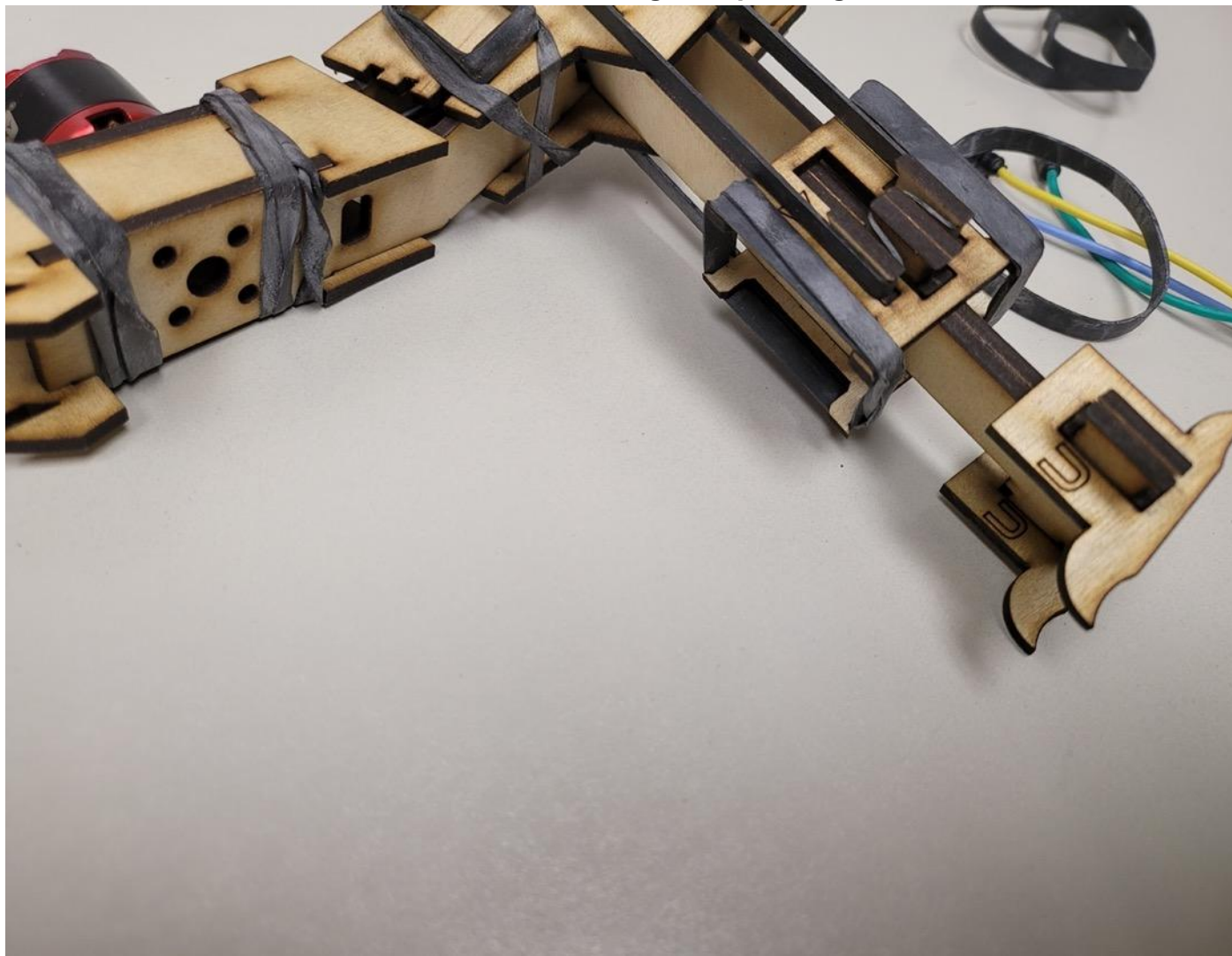
At this point, take two rubber bands and wrap it twice around the outsides of the 2 V-plates putting the rubber band in between the little pegs as shown in this photo. Then install the shock absorber rubber bands on both sides.



The shock absorber rubber band goes on TOP of the T-plate, then under the lower S-plate pegs, then up over the top S-plate pegs. You should be able to push the T-plates up and feel the resistance.

Clockwise Leg - Step-11: Lower Leg Assembly

Take the 2 U-Plates and mount them as shown with the “big toe” pointing towards the motor.



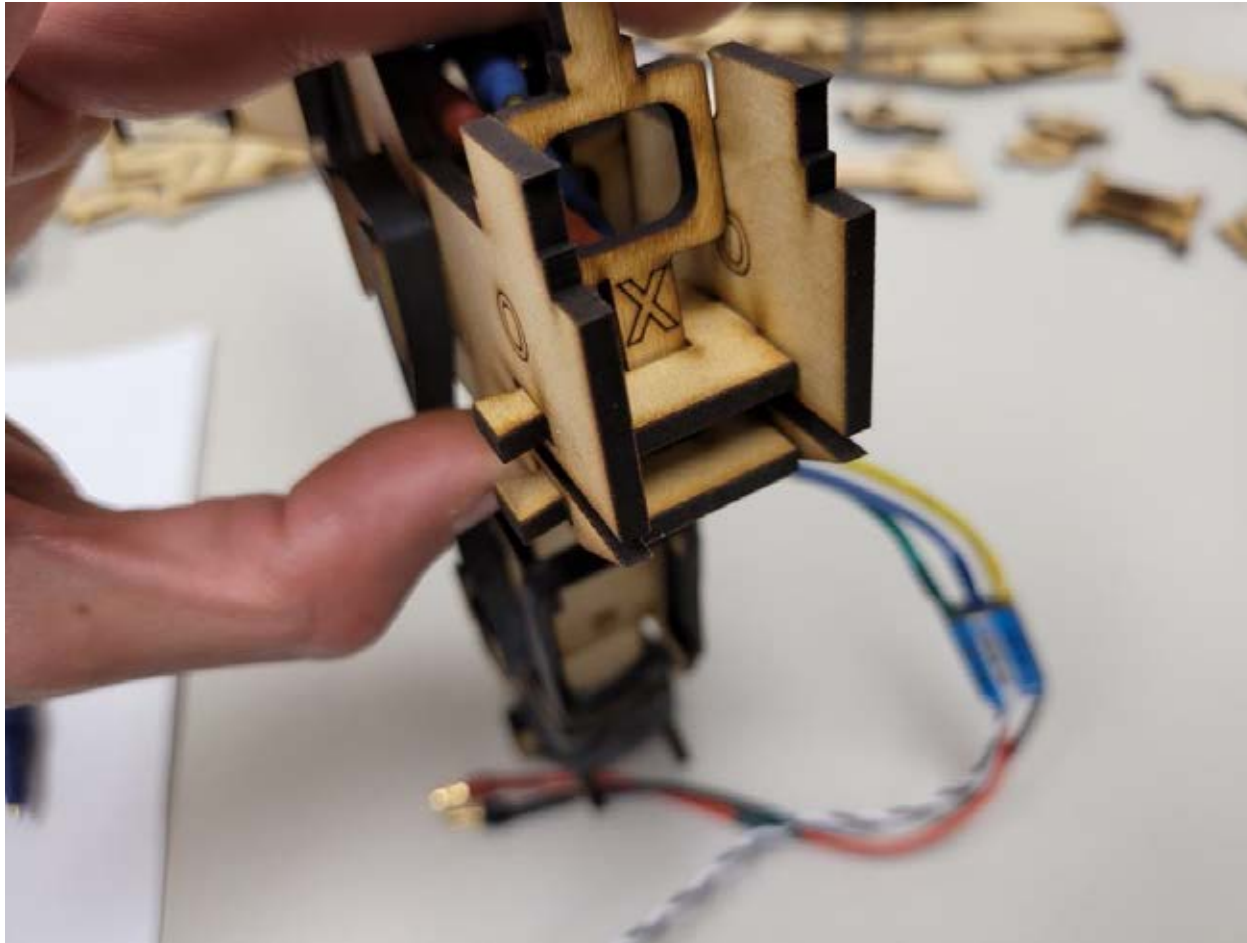
Clockwise Leg - Step-12: Lower Leg Assembly

Take a rubber band and start around one peg, twist on the side, around the other peg, another twist, then all the way back past the first peg to the 2nd peg so that it is tightly wrapped.



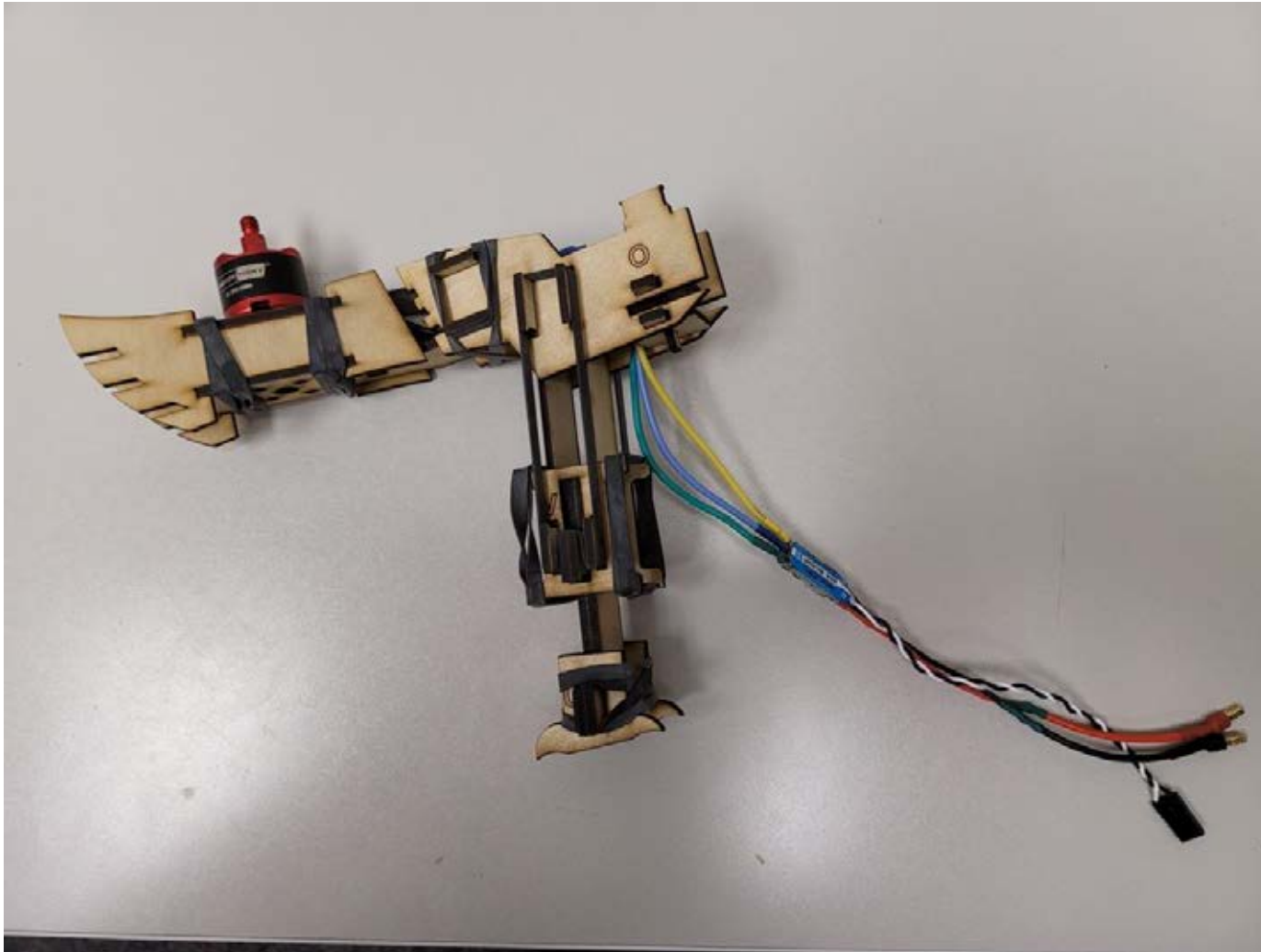
Clockwise Leg – Step - 12: Install X-plate

Once the leg is assembled, put the X-plate in the end as shown. It will be loose and is used to lock the leg to the body in later steps. . The ESC and it's wires tuck down the hole between the leg and the X-plate.



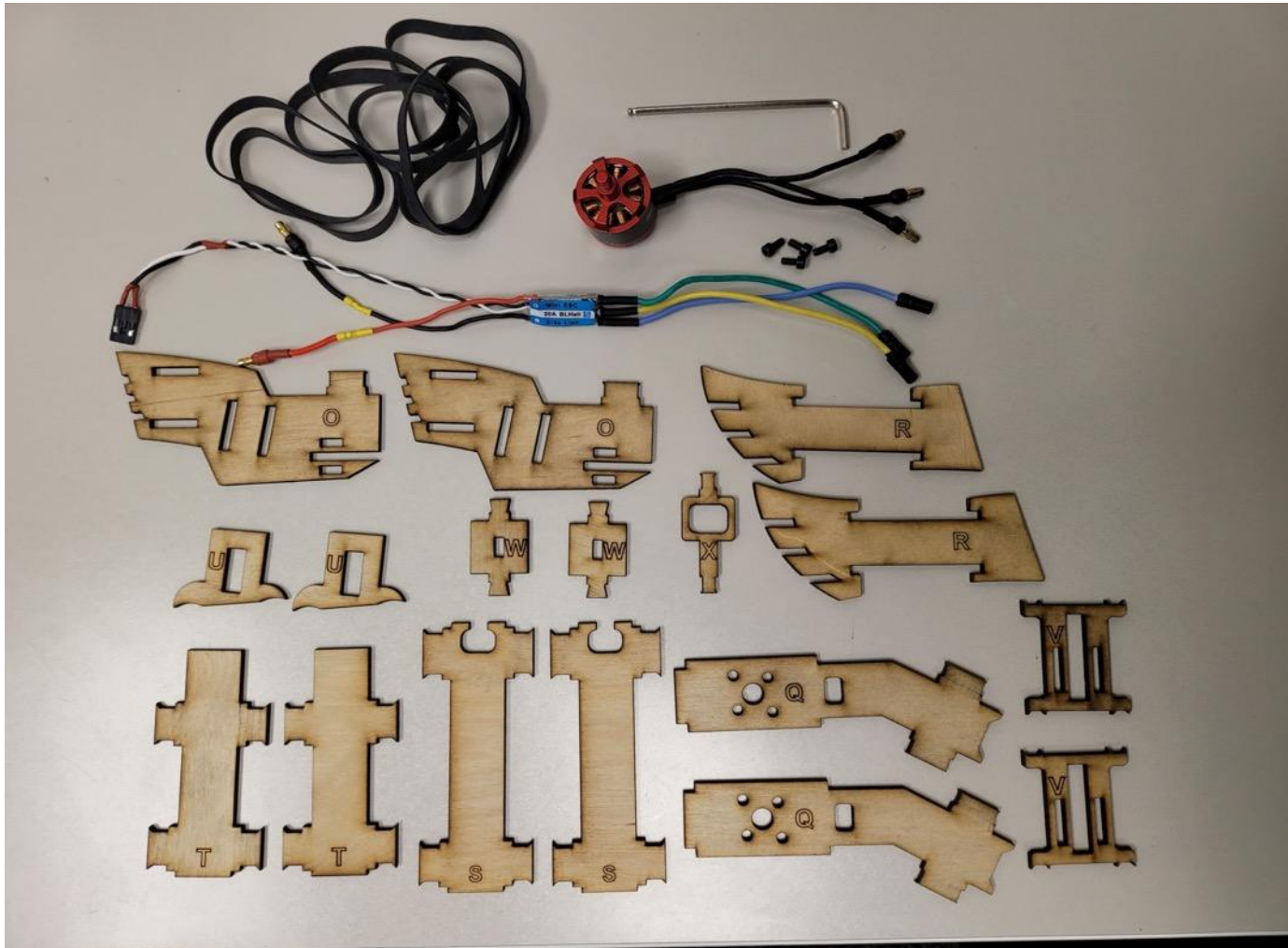
Clockwise Arm/Leg Complete

Set your two Clockwise leg subassemblies to the side and proceed to build the Counterclockwise arm-leg subassemblies



2X - Arm-Leg Subassembly (CCW)

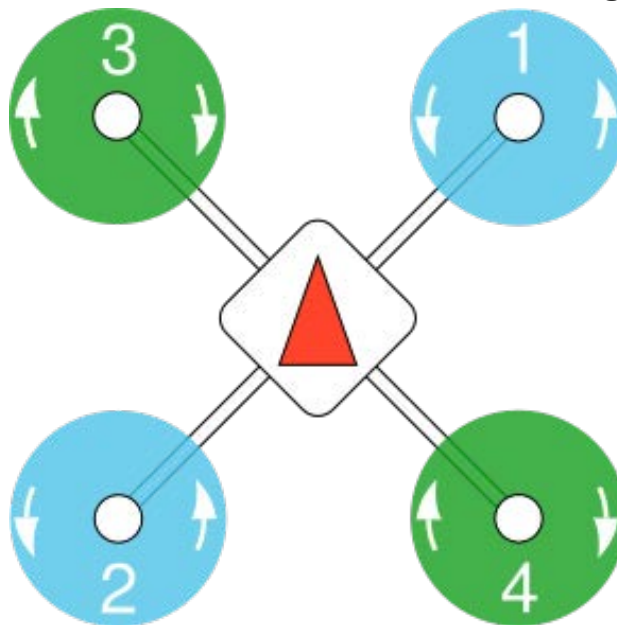
All Parts Needed for this Subassembly are included in Photo Below



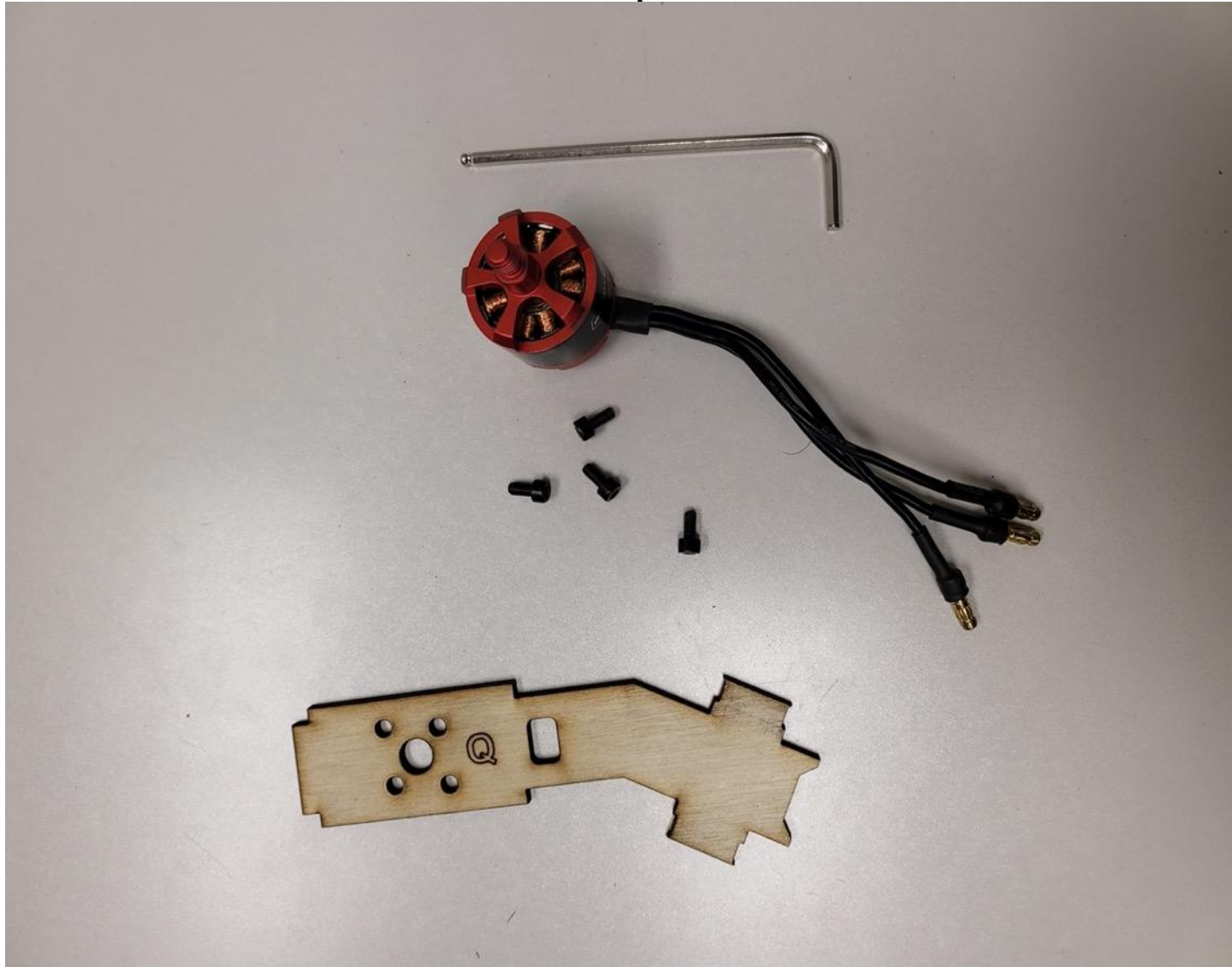
The photo steps for assembling the Counterclockwise Arm-Leg subassembly are for one arm-leg. You will be building two of these. We recommend actually building both of these arm-leg subassemblies at the same time as you go through these steps.

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It helps to mark each arm-leg subassembly as you build then with the planned position (1, 2, 3, 4) (3 or 4 for clockwise arm-legs and 1 or 2 for counterclockwise legs per the drawing below.



Counter Clockwise Arm – Step 1: Gather CW Motor Parts

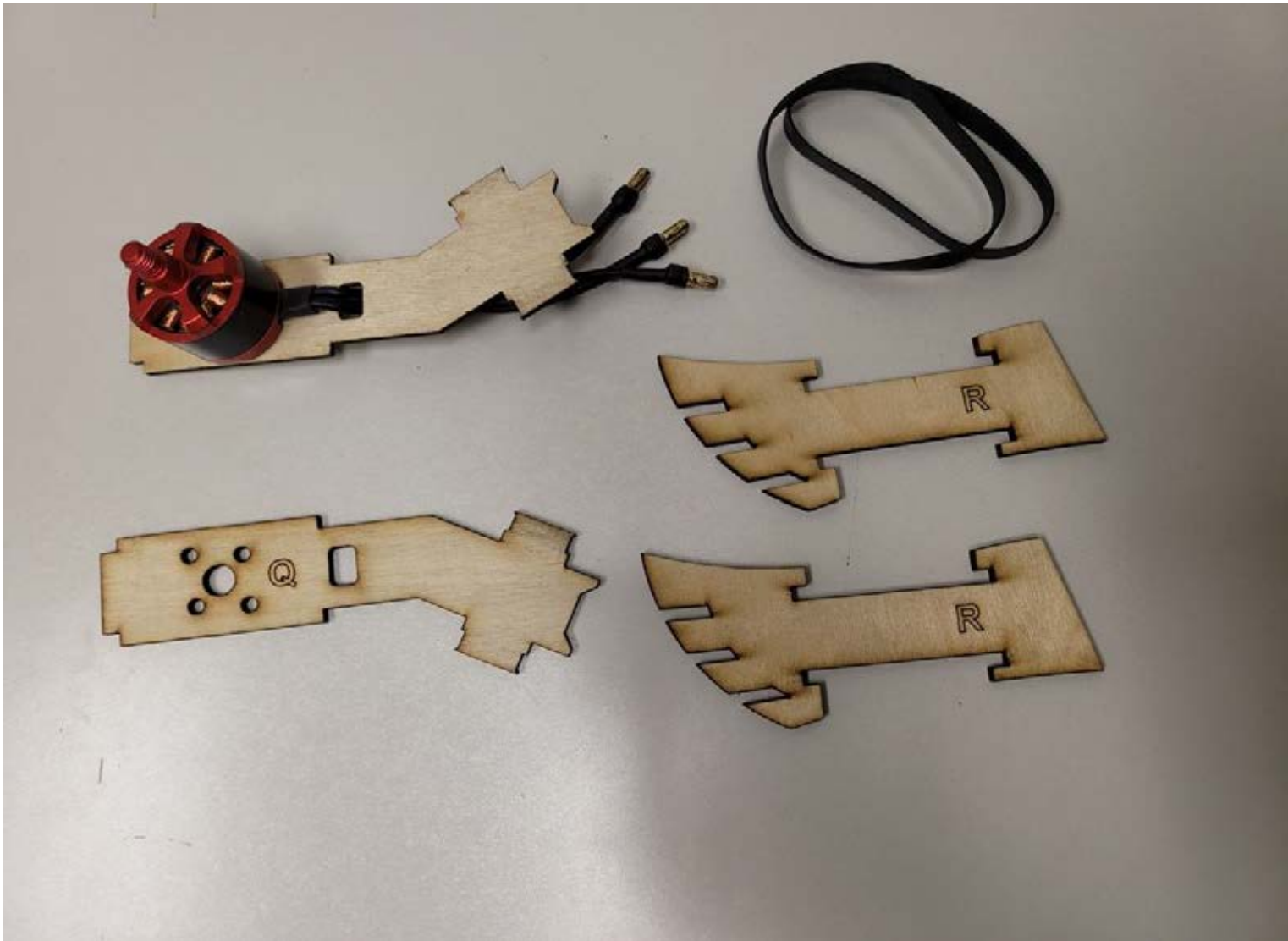


Counter Clockwise Arm - Step-2: Mounting the Motor

Tighten the motor bolts till they are firm, but be careful to not crack the wood.

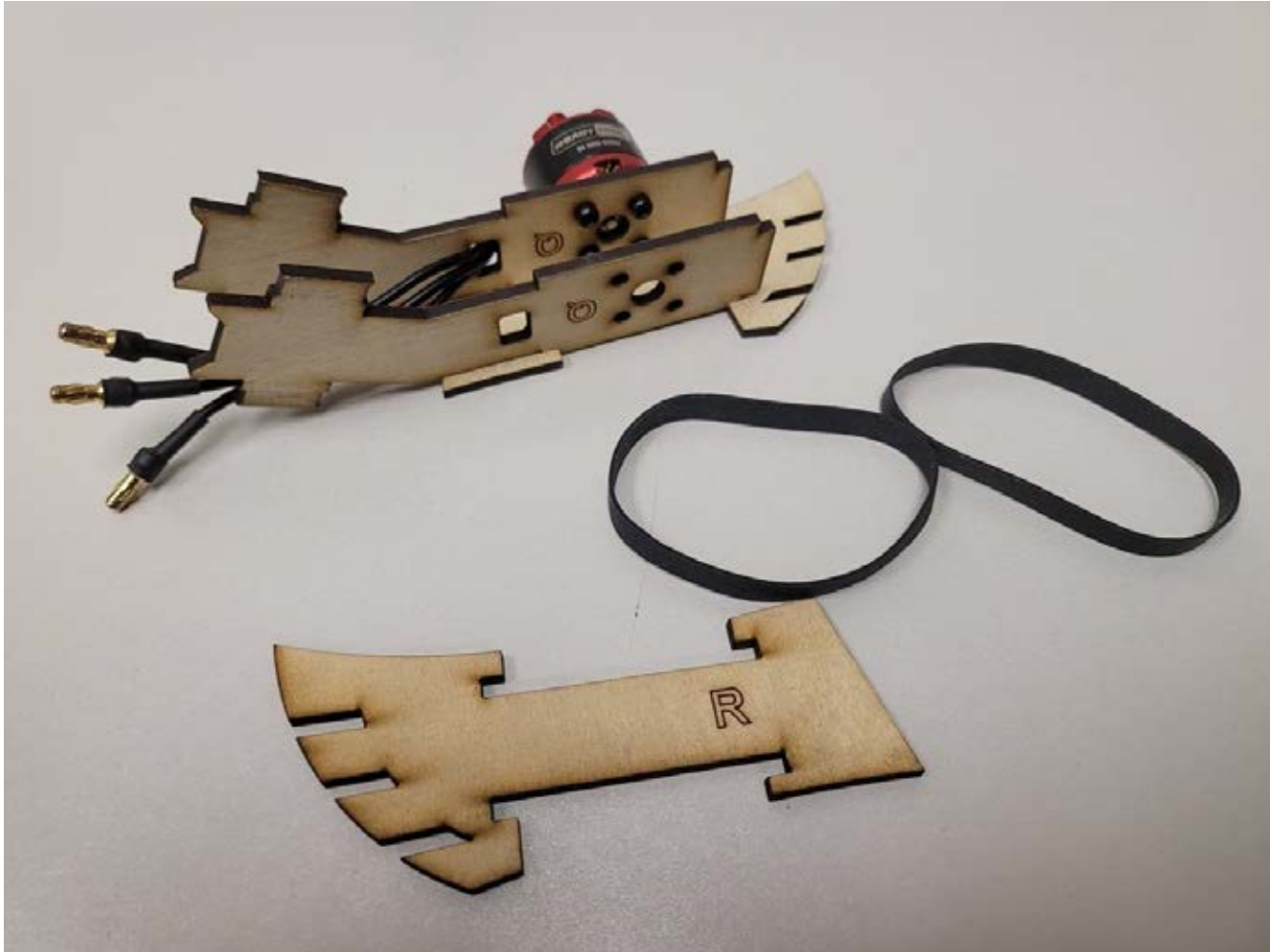


Counter Clockwise Arm - Step-3: Gather Arm Parts

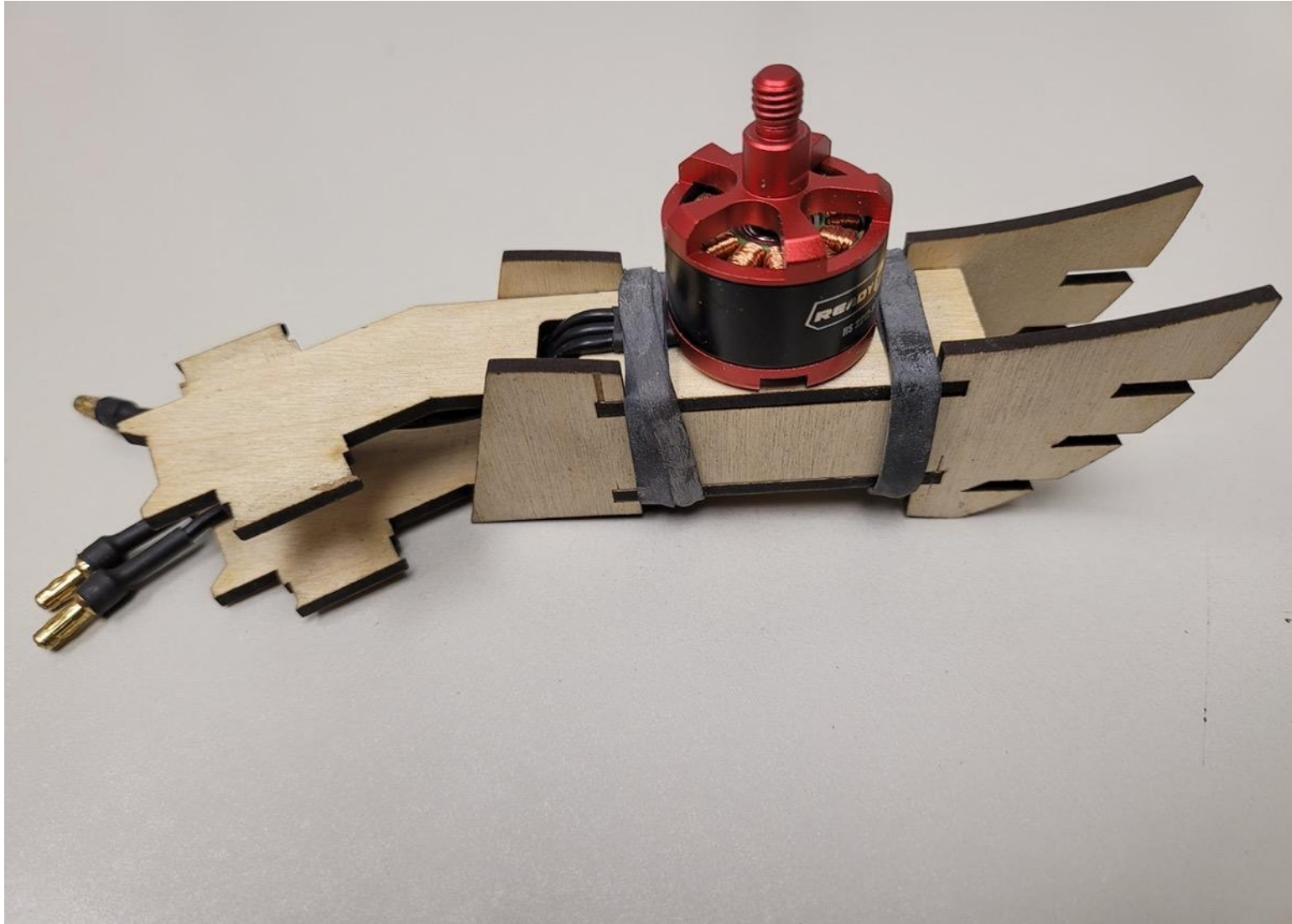


Counter Clockwise Arm - Step-4: Arm Assembly

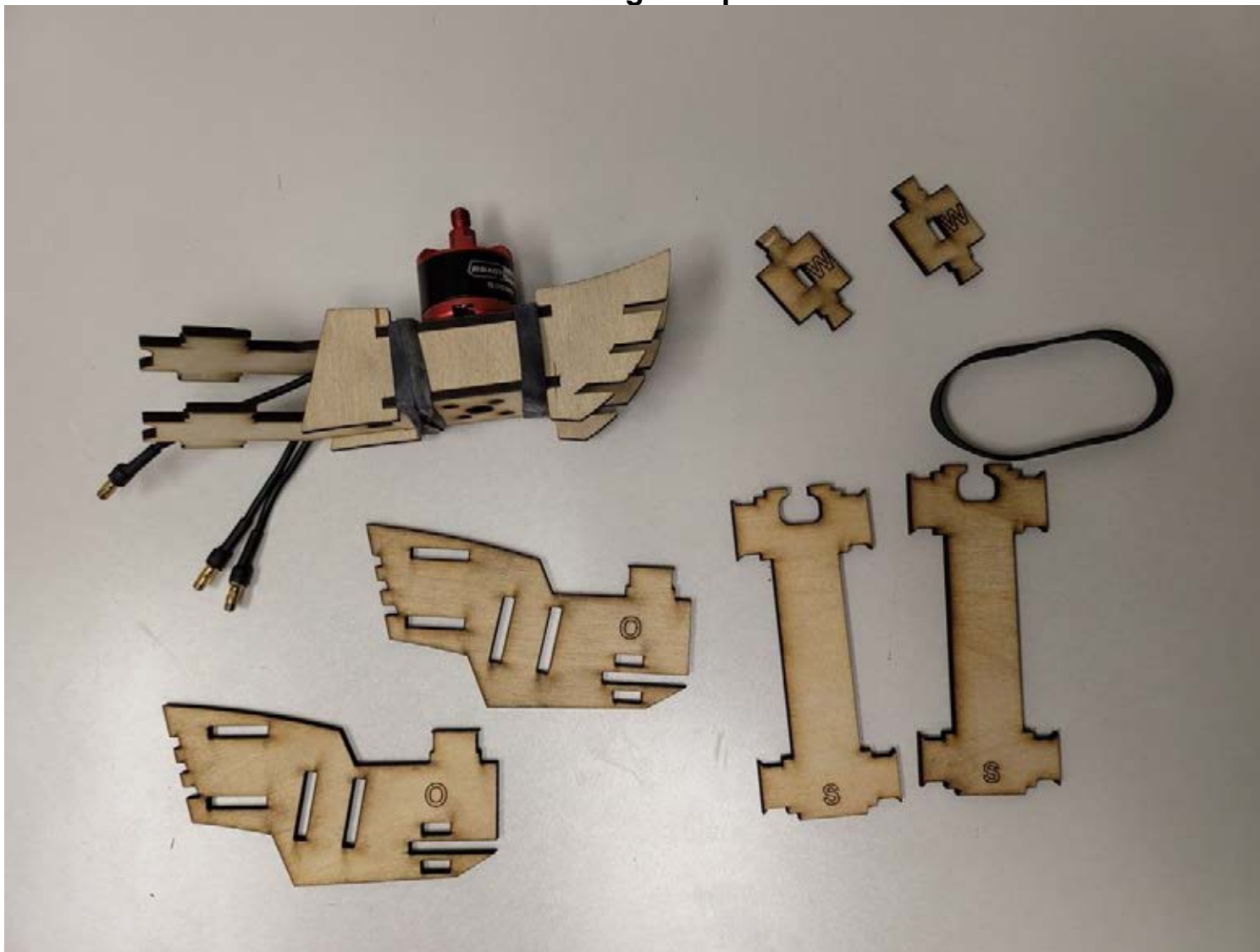
Mount the two R-plates on either side of the P-Plates so that the feathers at the end of the R plates match. Loop each rubber band 3 times around the P and R plates on either side of the motor. Make sure that the rubber bands do not rub against the rotating part of the motor. It is OK to touch the bottom plate of the motor.



Counter Clockwise Arm - Step-5: Arm Assembly Complete

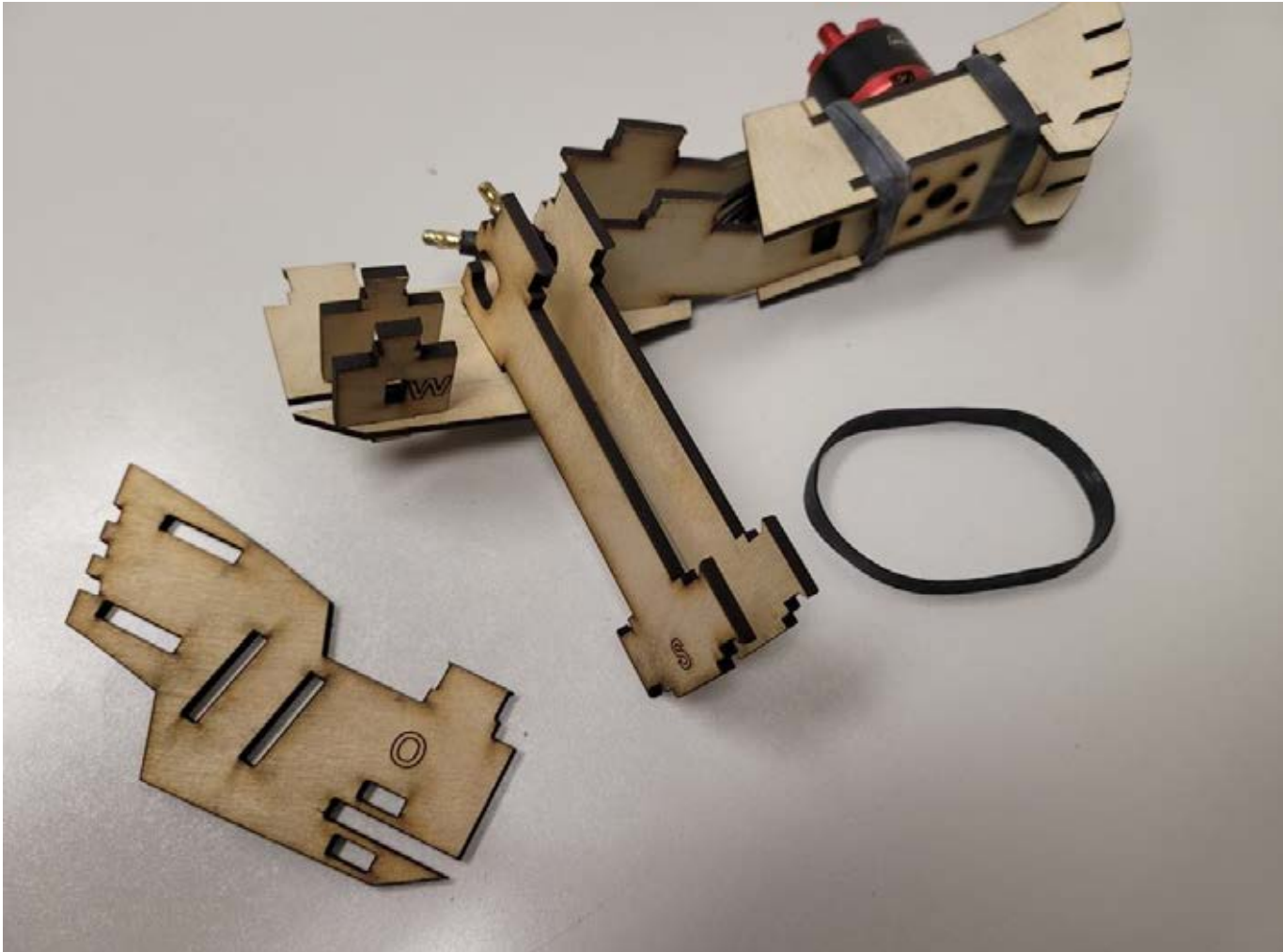


Counter Clockwise Leg - Step-1: Gather Parts



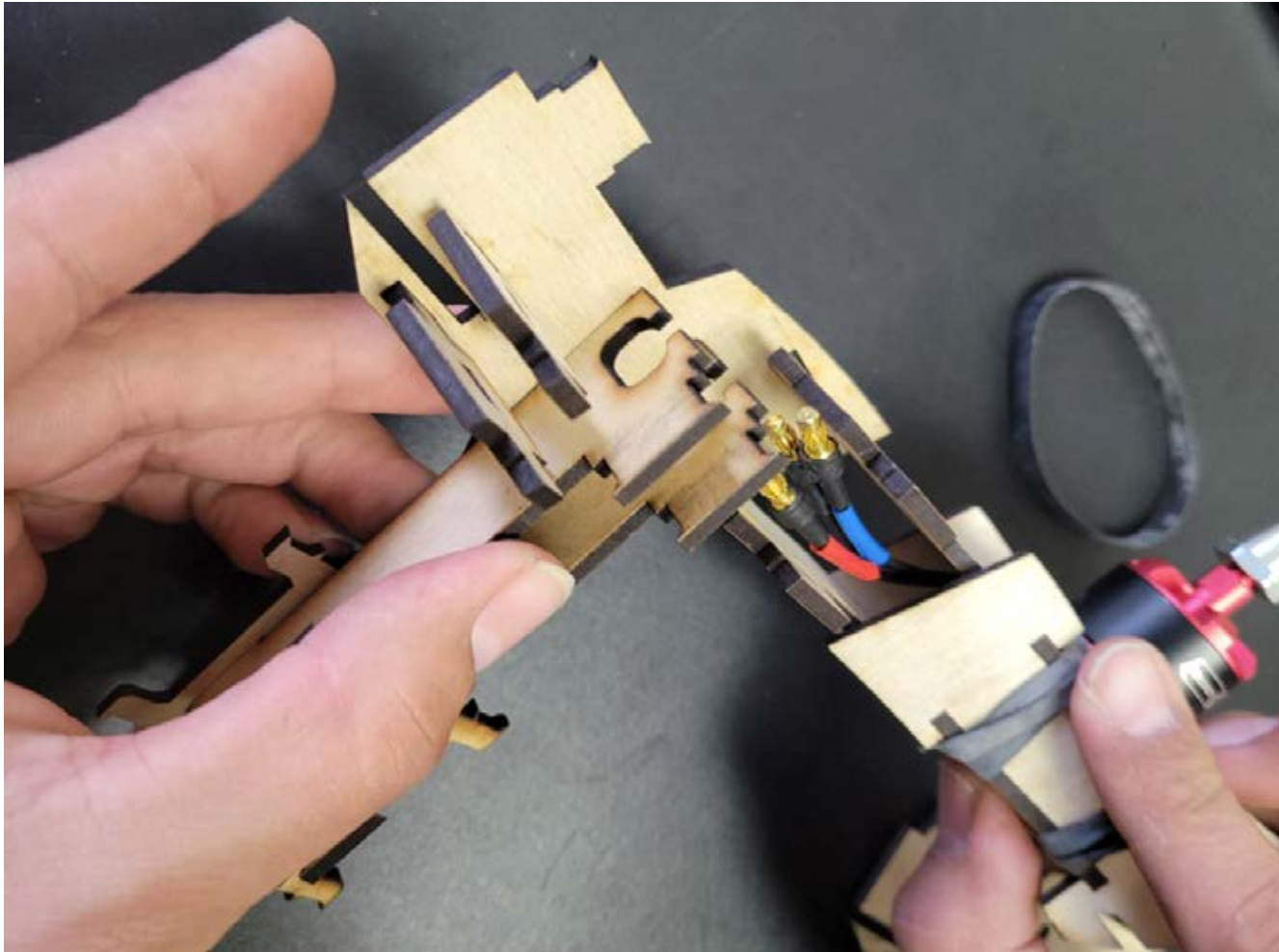
Counter Clockwise Leg - Step-2: Upper Leg Assembly

Mount the 2 W plates as shown, and then the 2 S Plates. Make sure the round holes on the S plates are on the arm so that the motor wires can go through those holes.

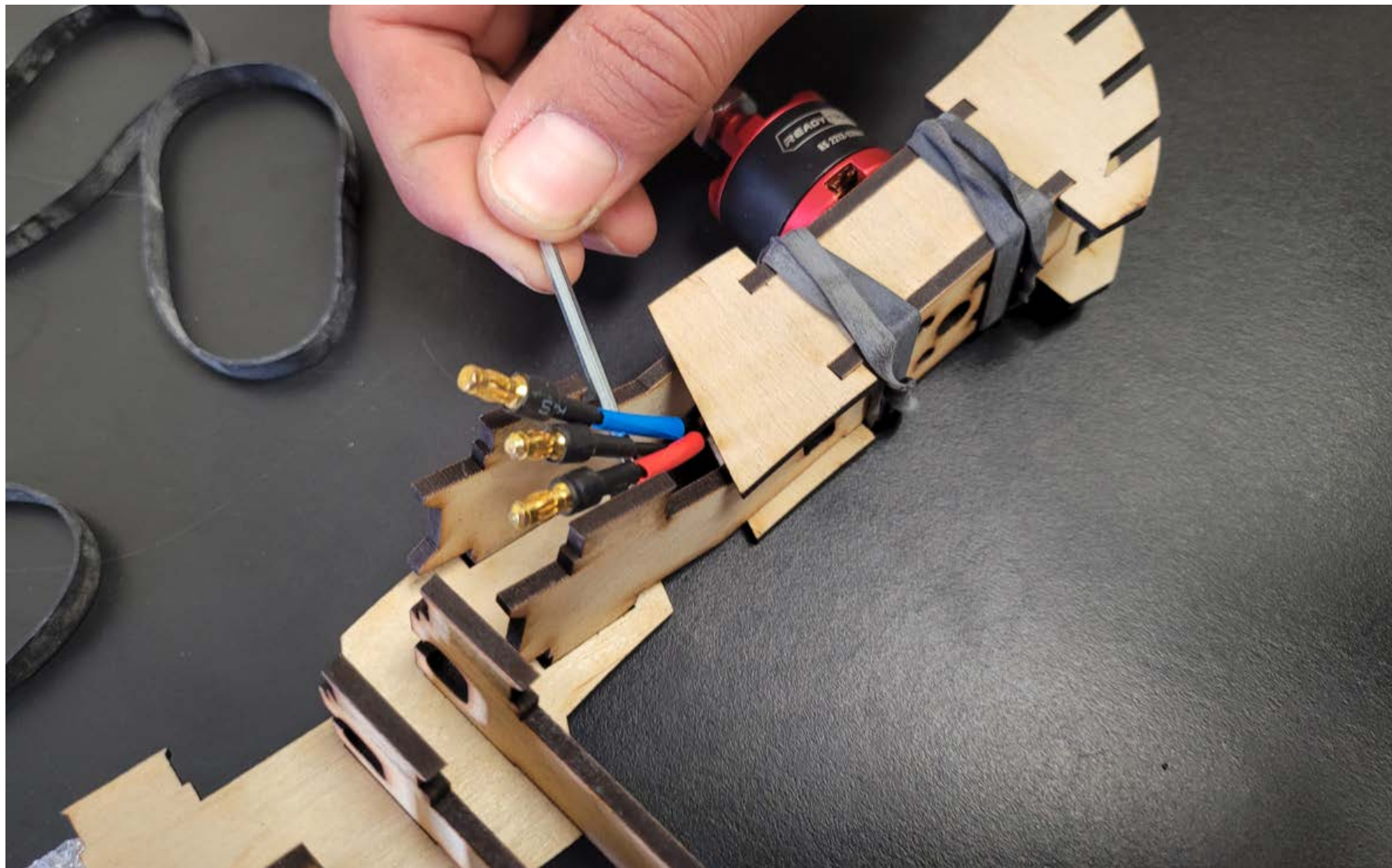


Counter Clockwise Leg - Step-3a: Install ESC - connect wires inside Arm

Next, you need to install the ESC before completing the leg. With the leg partially assembled, find the motor wires.

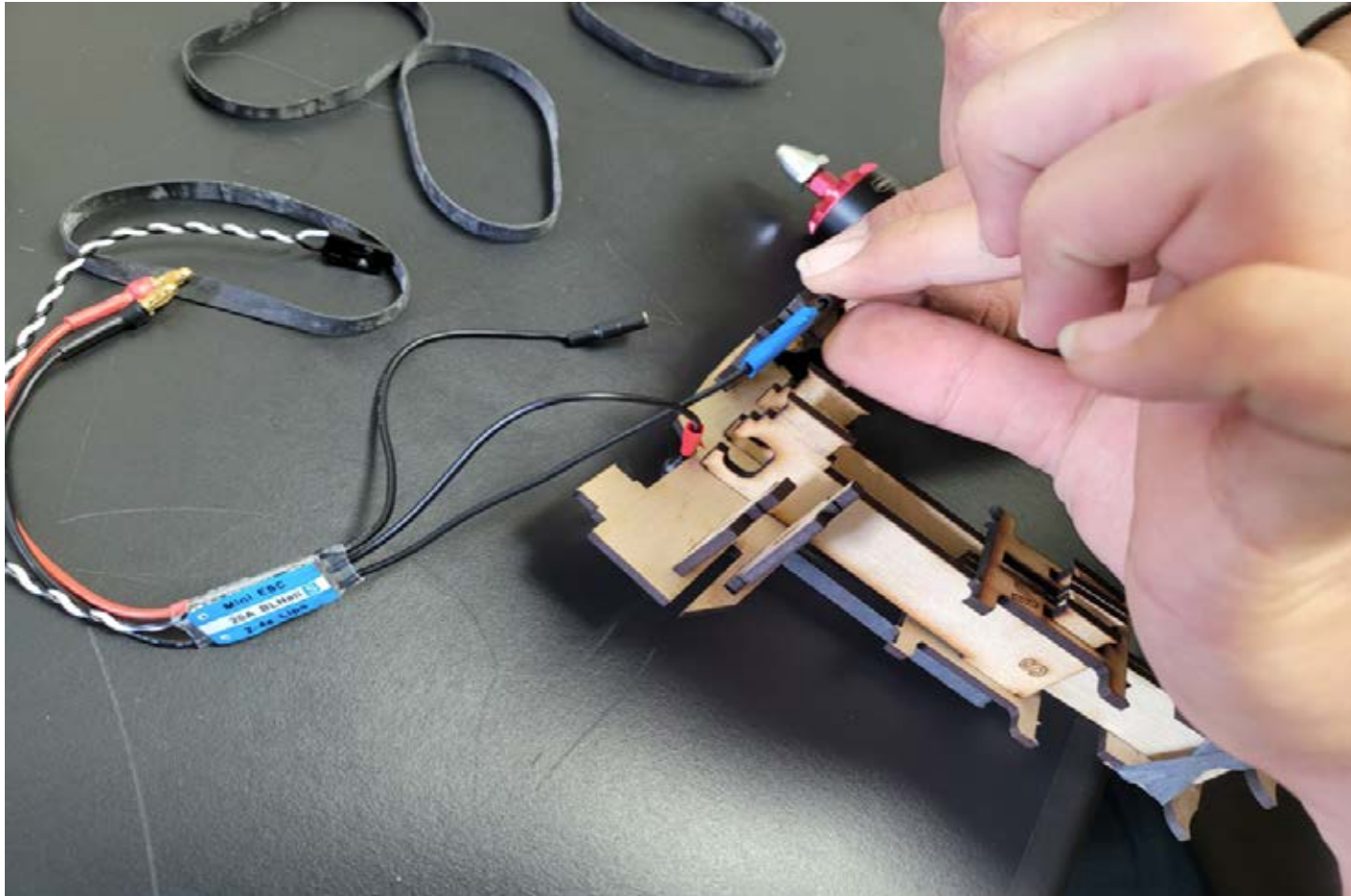


Counter Clockwise Leg - Step-3b: Install ESC - Lift connectors up



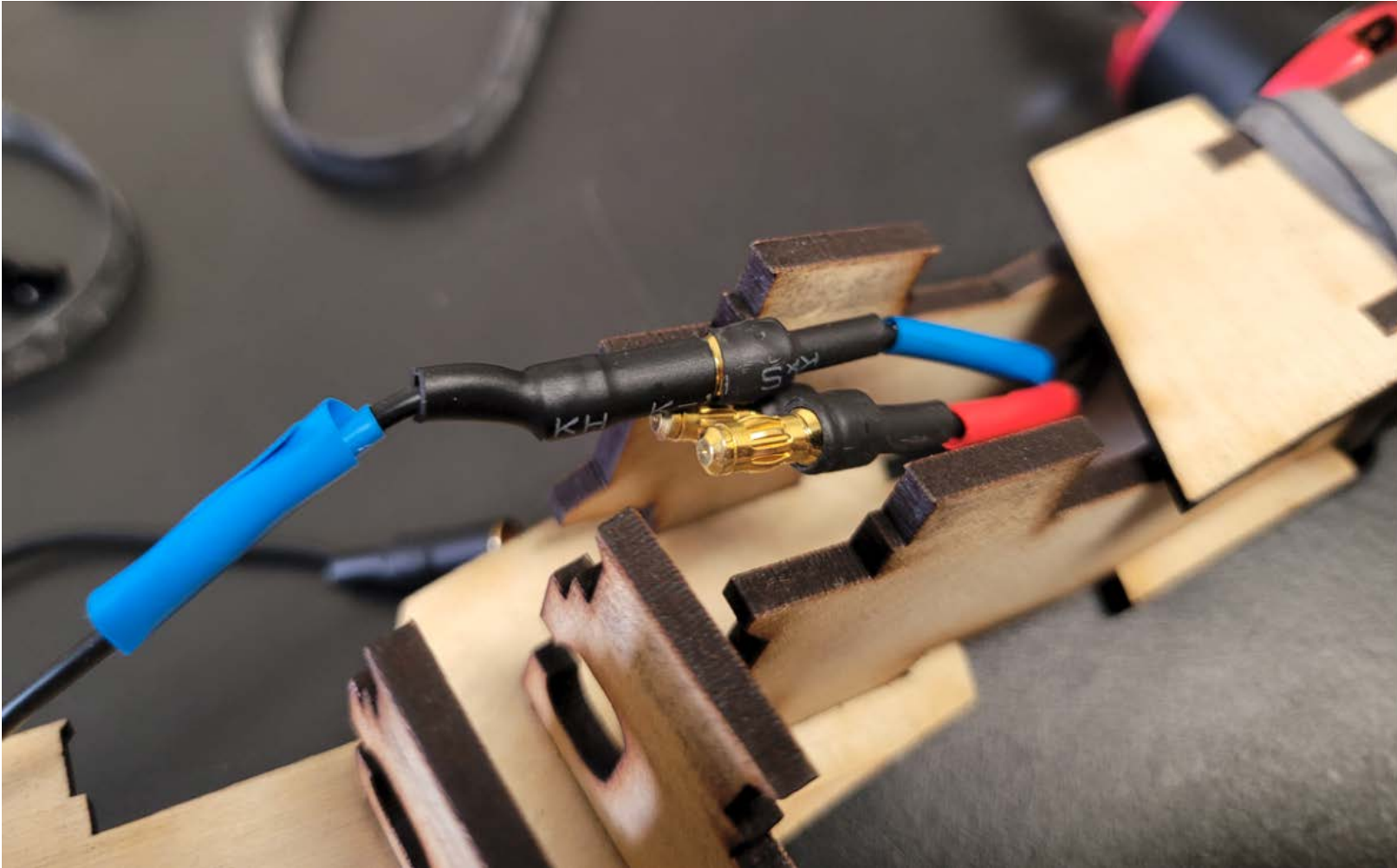
Counter Clockwise Leg - Step-3c: Install ESC - Connect ESC

Bring the ESC wires to the Arm and plug the motor wires into the ESC wires. Make sure to match the colored tape on both sides (Red to Red, Blue to Blue, & Black to Black) to ensure the correct rotation



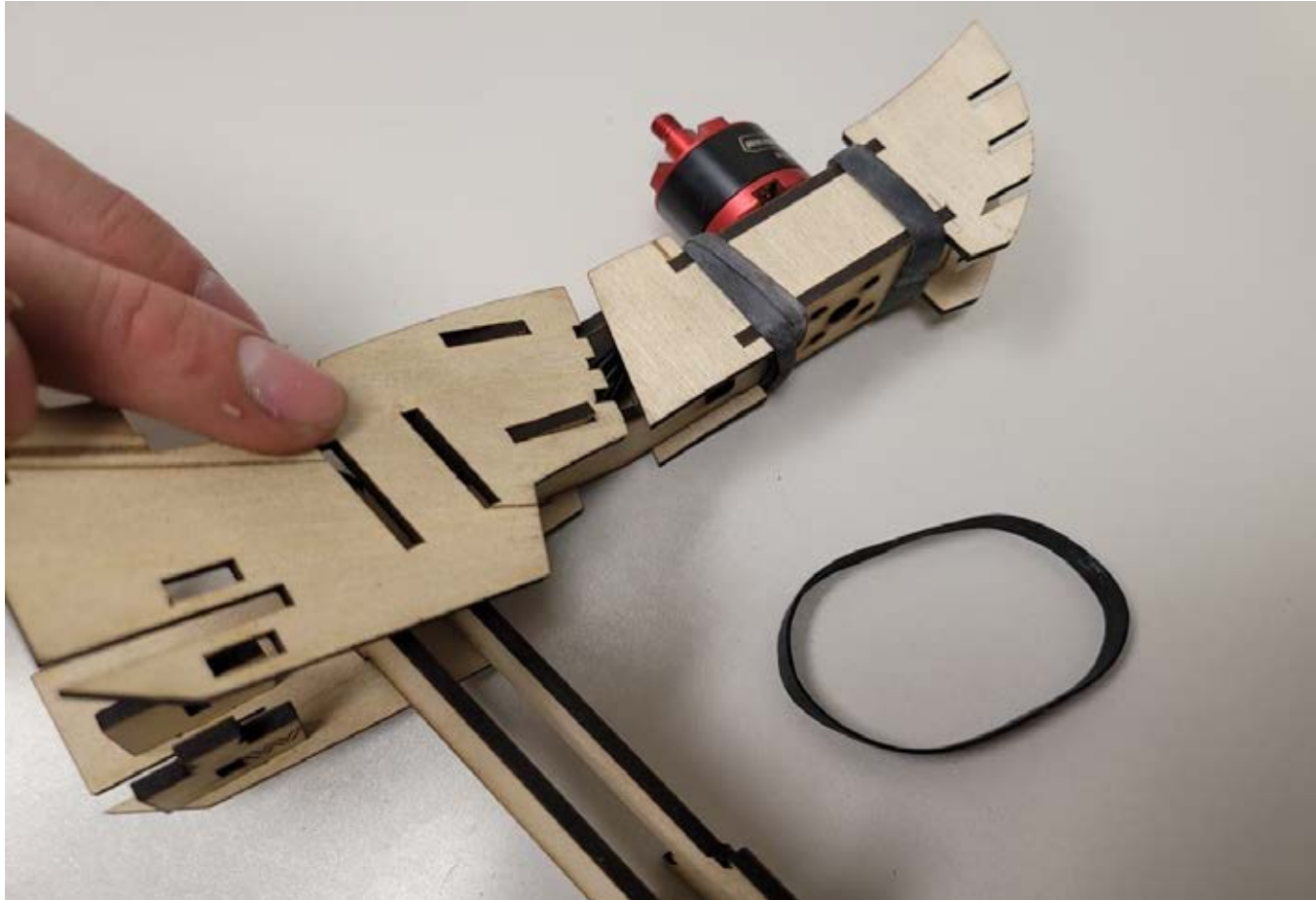
Counter Clockwise Leg - Step-3d: Install ESC - Connect ESC

Once connected, run the connectors/wires through the S-Plate holes.

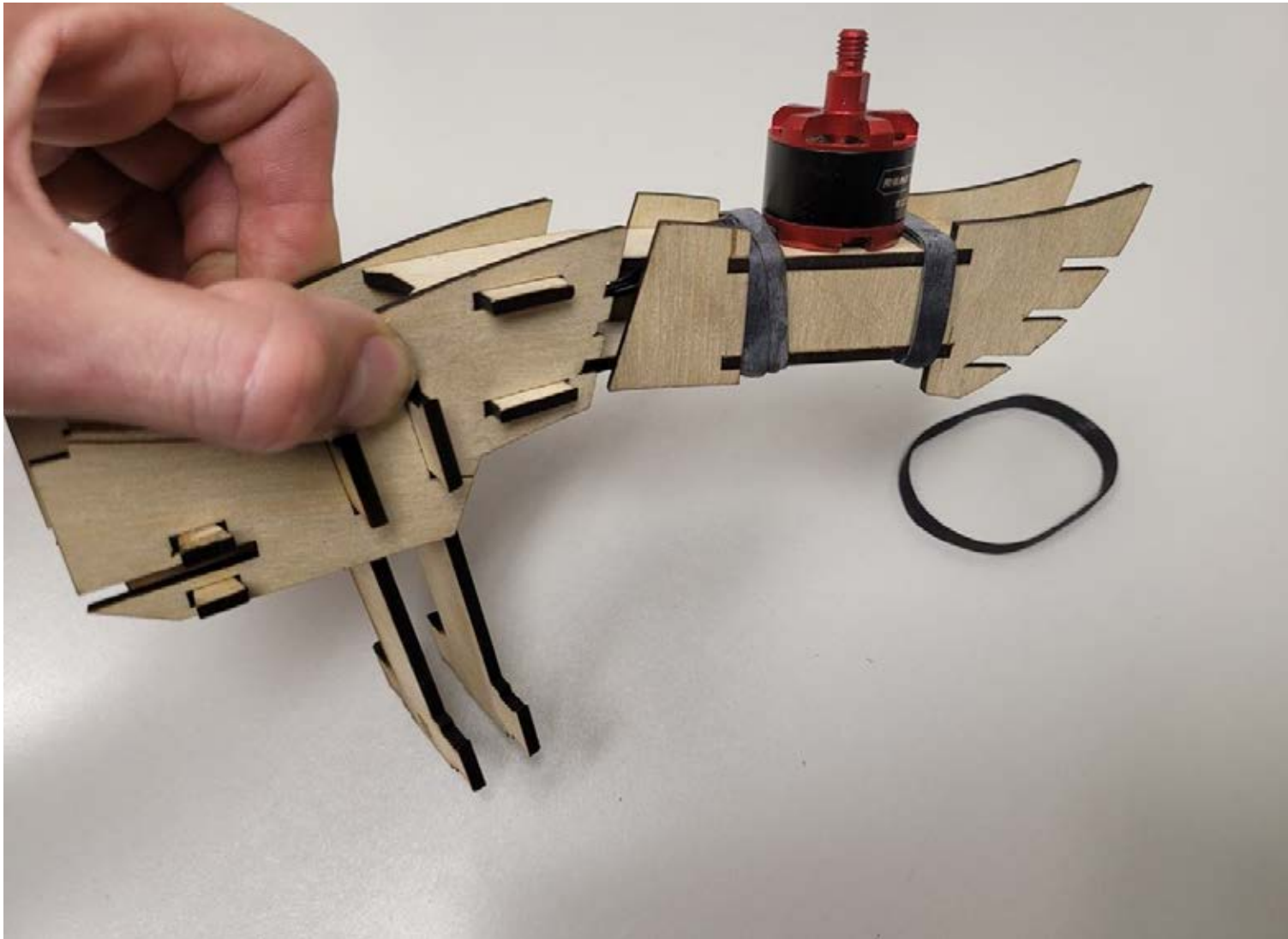


Counter Clockwise Leg - Step-4: Upper Leg Assembly

Now take the other O-plate. Start with the holes closest to the motor and align the pegs and holes from left to right as shown on this photo till you have everything tightly mounted. You will have to wiggle the S and W plates to get them fully through the holes on the O plate. Hold the assembly together.



Counter Clockwise Leg - Step-5: Upper Leg Assembly



Counter Clockwise Leg - Step-6: Upper Leg Assembly

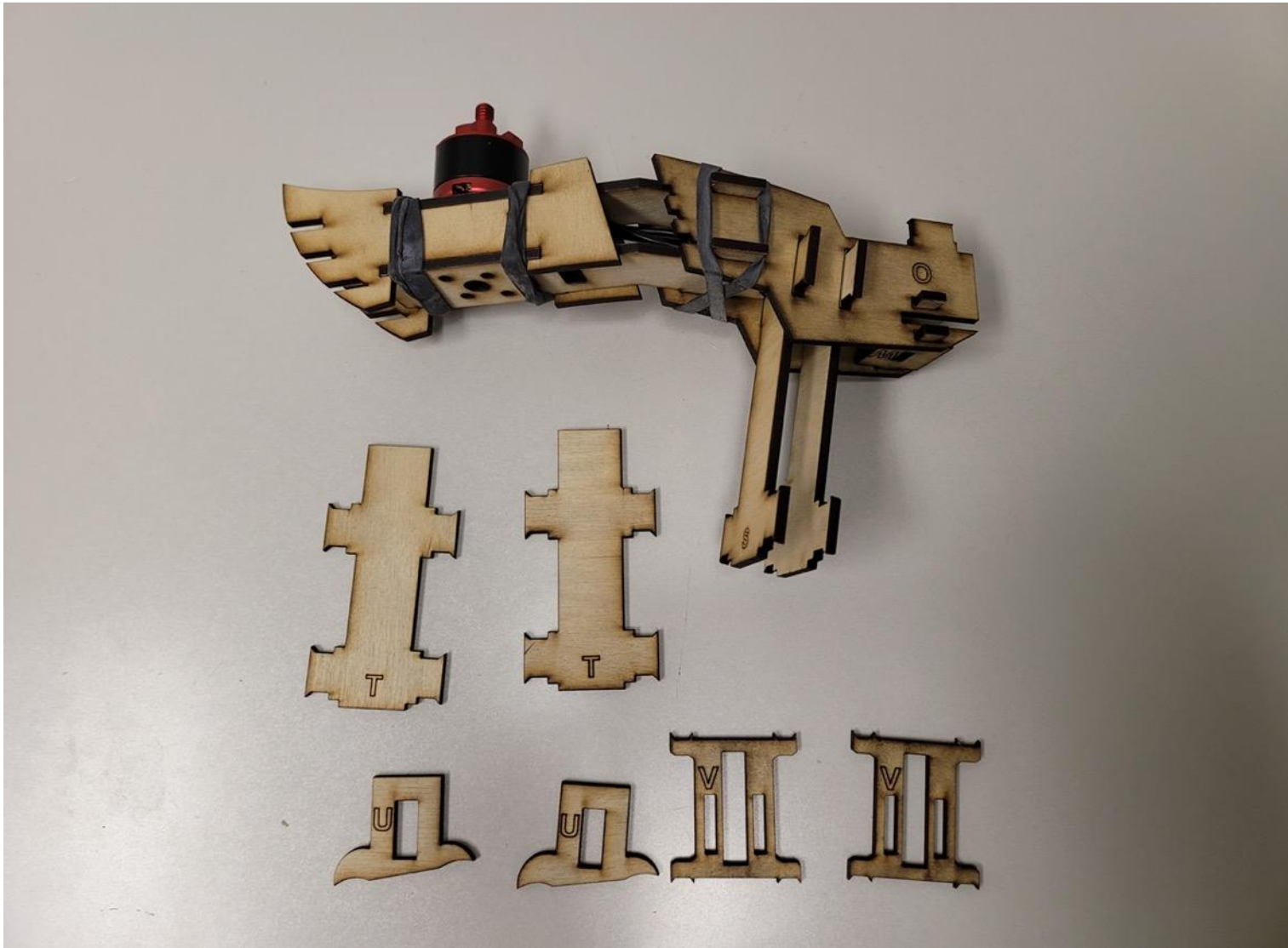
This photo does not show the ESC – but it will be dangling off the top of the arm by now. Take a rubber band and start from the bottom peg where the thumb is shown. Wrap the rubber band up over the top, making one twist, then straight down the back side, another twist across the bottom, then up the front ending with the top peg.

This will hold it all together for your next steps.

It helps to gently fold the ESC and it's wires into a small bundle and use a spare rubber band to hold the ESC and wires together on top of the arm and out of the way for the remaining assembly of the leg.

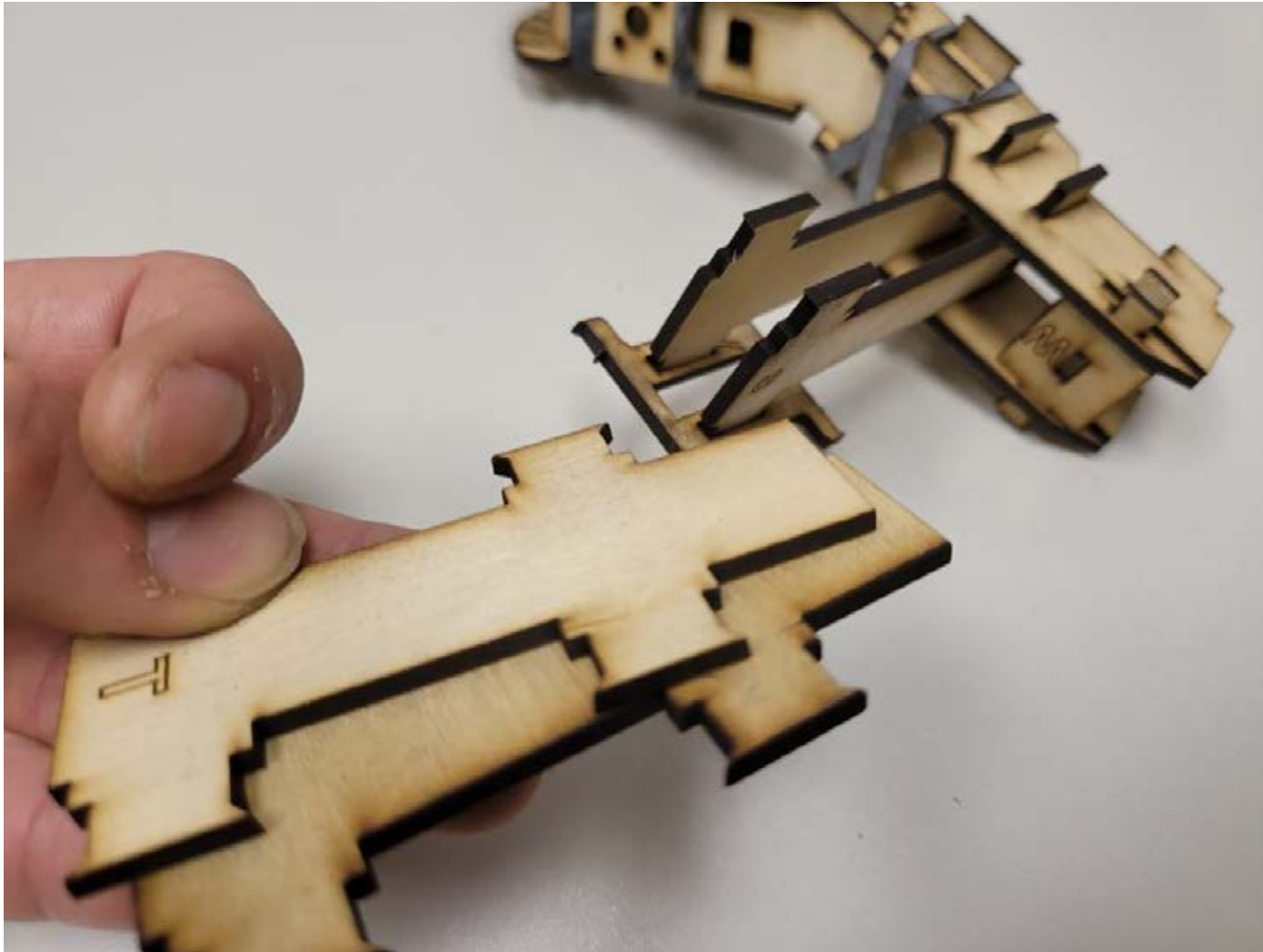


Counter Clockwise Leg - Step-7: Lower Leg Assembly Gather Parts



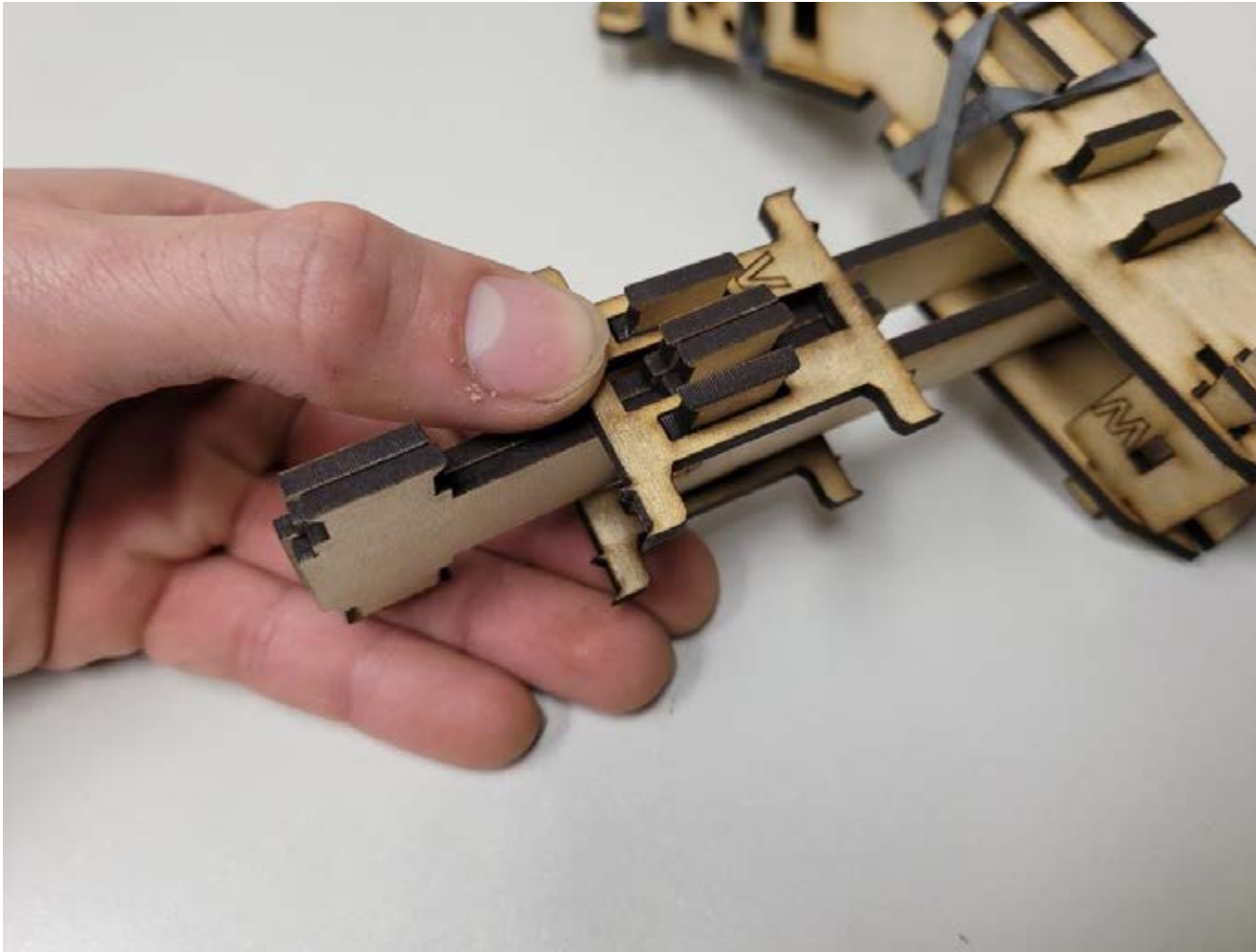
Counter Clockwise Leg - Step-8: Lower Leg Assembly

Mount a V-plate so that the “V” is upright with the leg - use and the holes are to the bottom. Then install the 2 T-plates as shown.



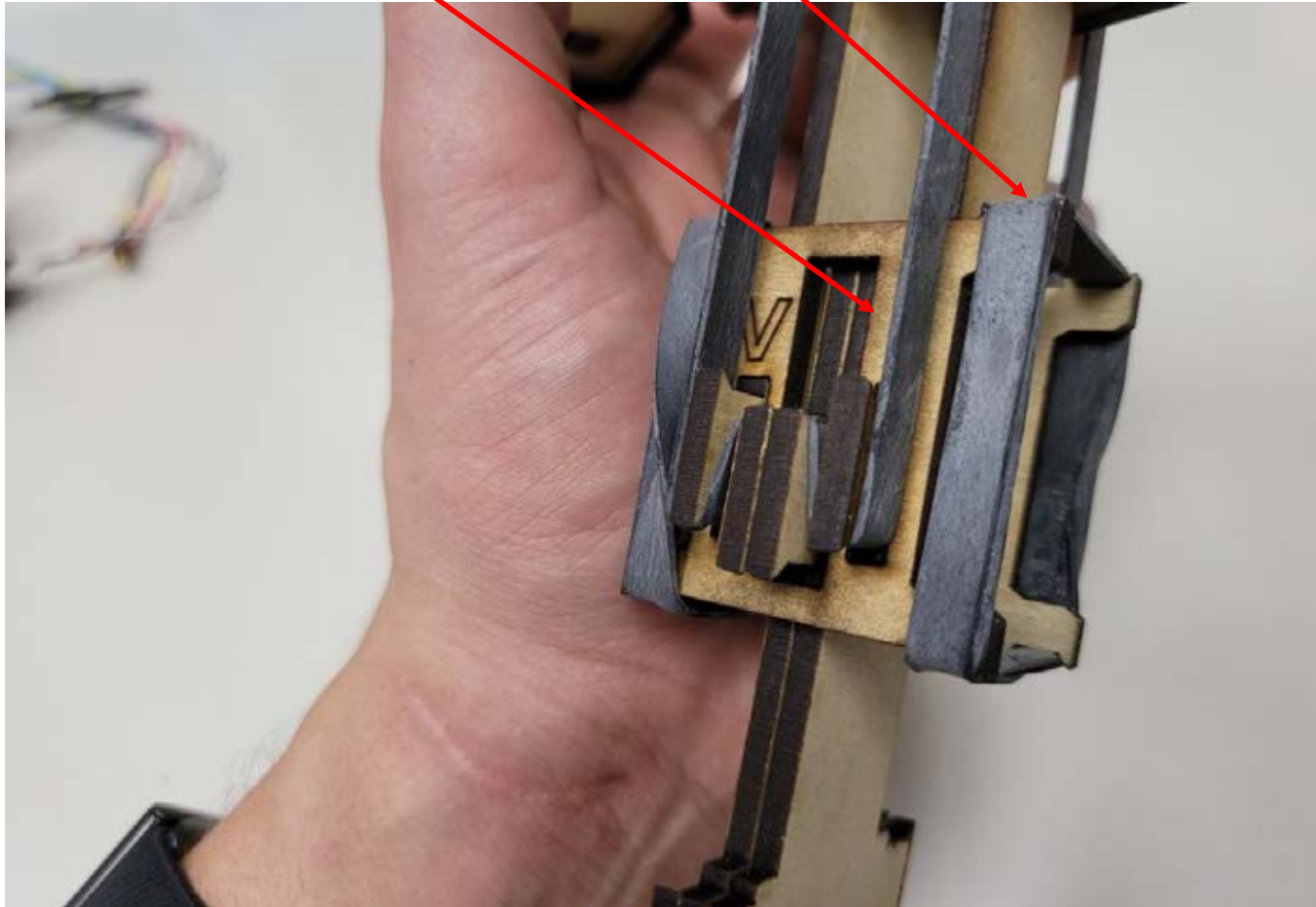
Counter Clockwise Leg - Step-9: Lower Leg Assembly

Mount the other V-plate to hold the T-plates together. Hold onto this as you put the rubber bands on in the next step.

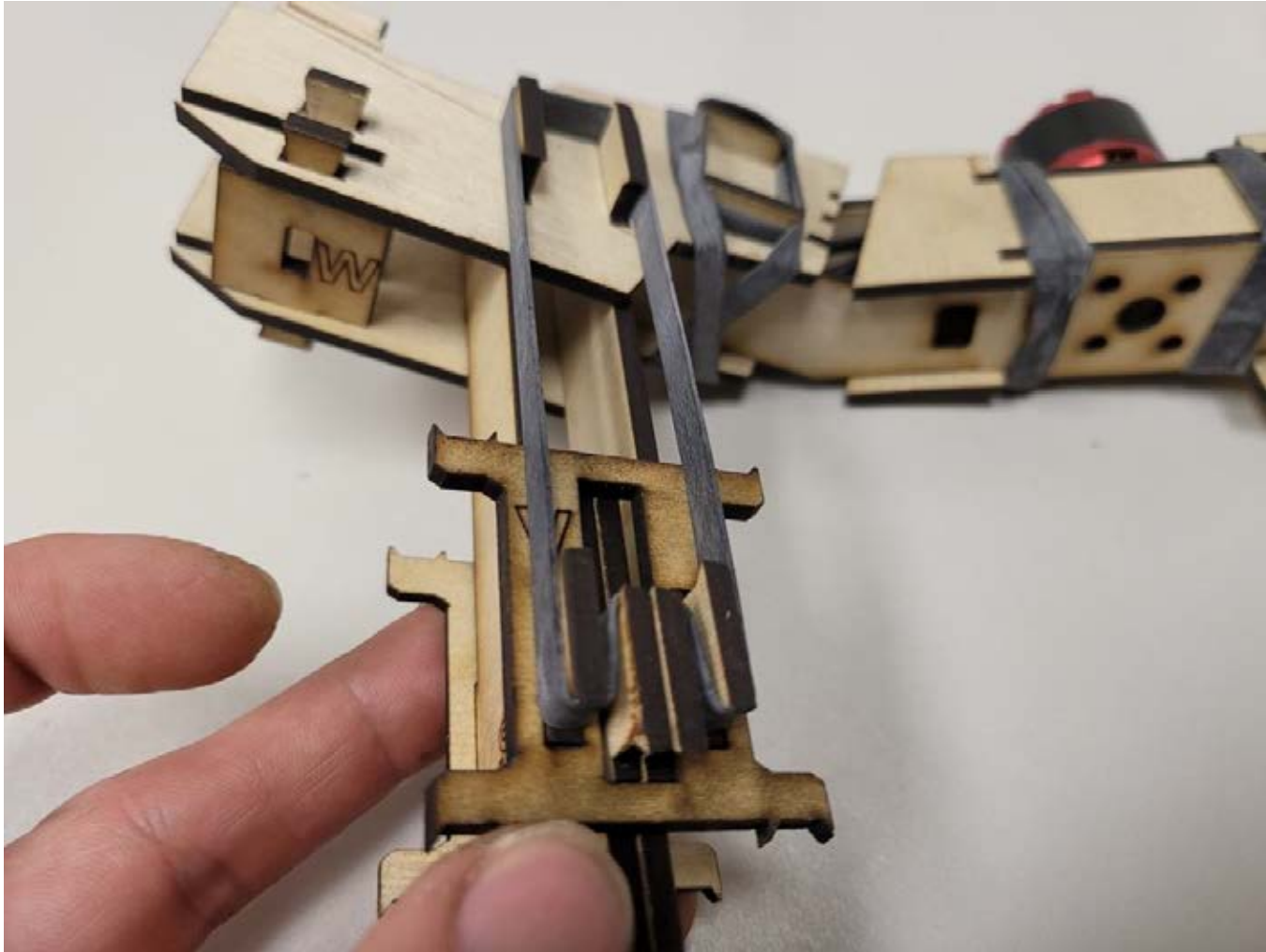


Counter Clockwise Leg - Step-10: Lower Leg Assembly

At this point, take two rubber bands and wrap it twice around the outsides of the 2 V-plates putting the rubber band in between the little pegs as shown in the following photo. Then install the shock absorber rubber bands on both sides.



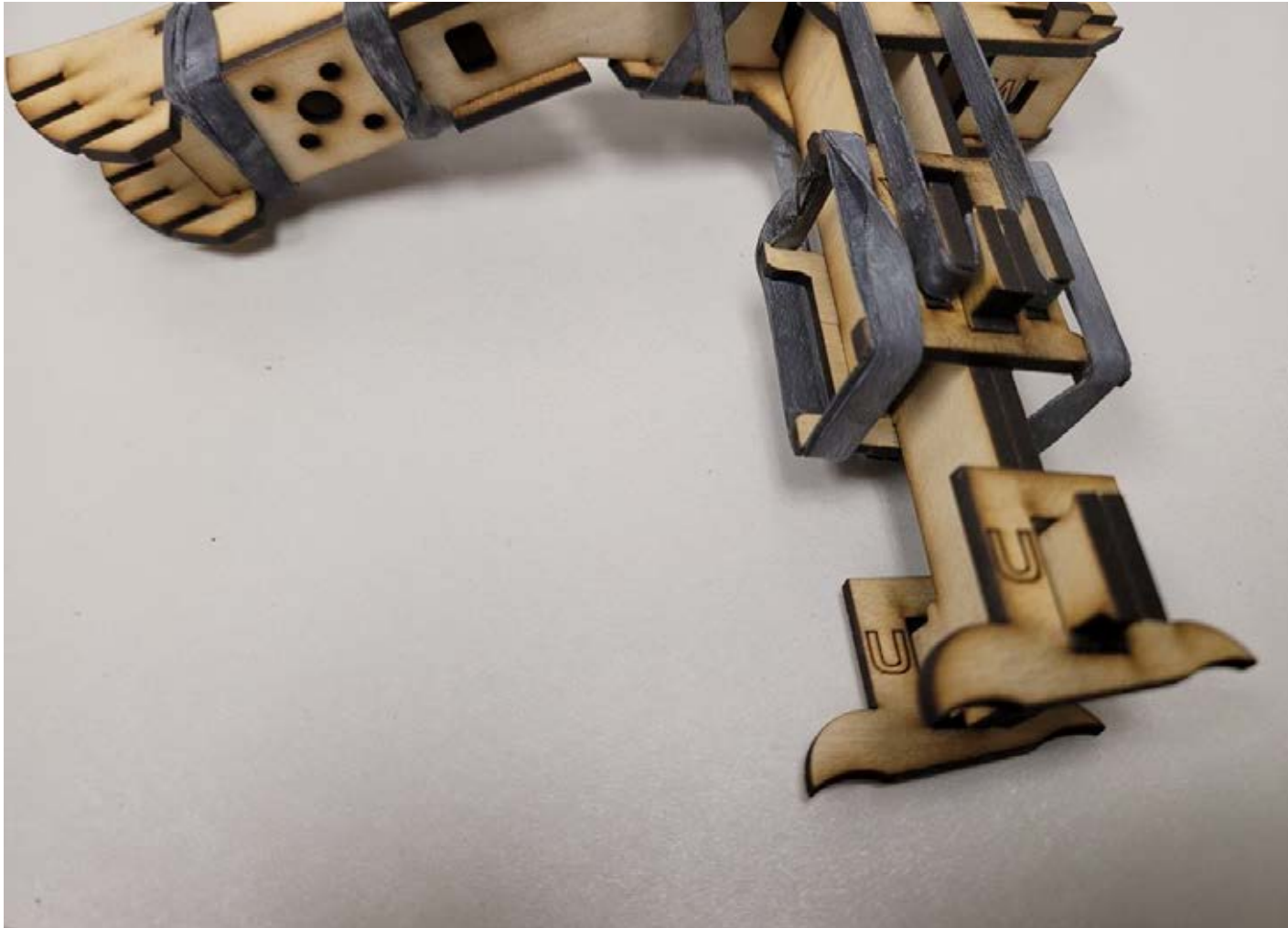
This photo shows the shock absorber rubber band positioning.



The shock absorber rubber band goes on TOP of the T-plate, then under the lower S-plate pegs, then up over the top S-plate pegs. You should be able to push the T-plates up and feel the resistance.

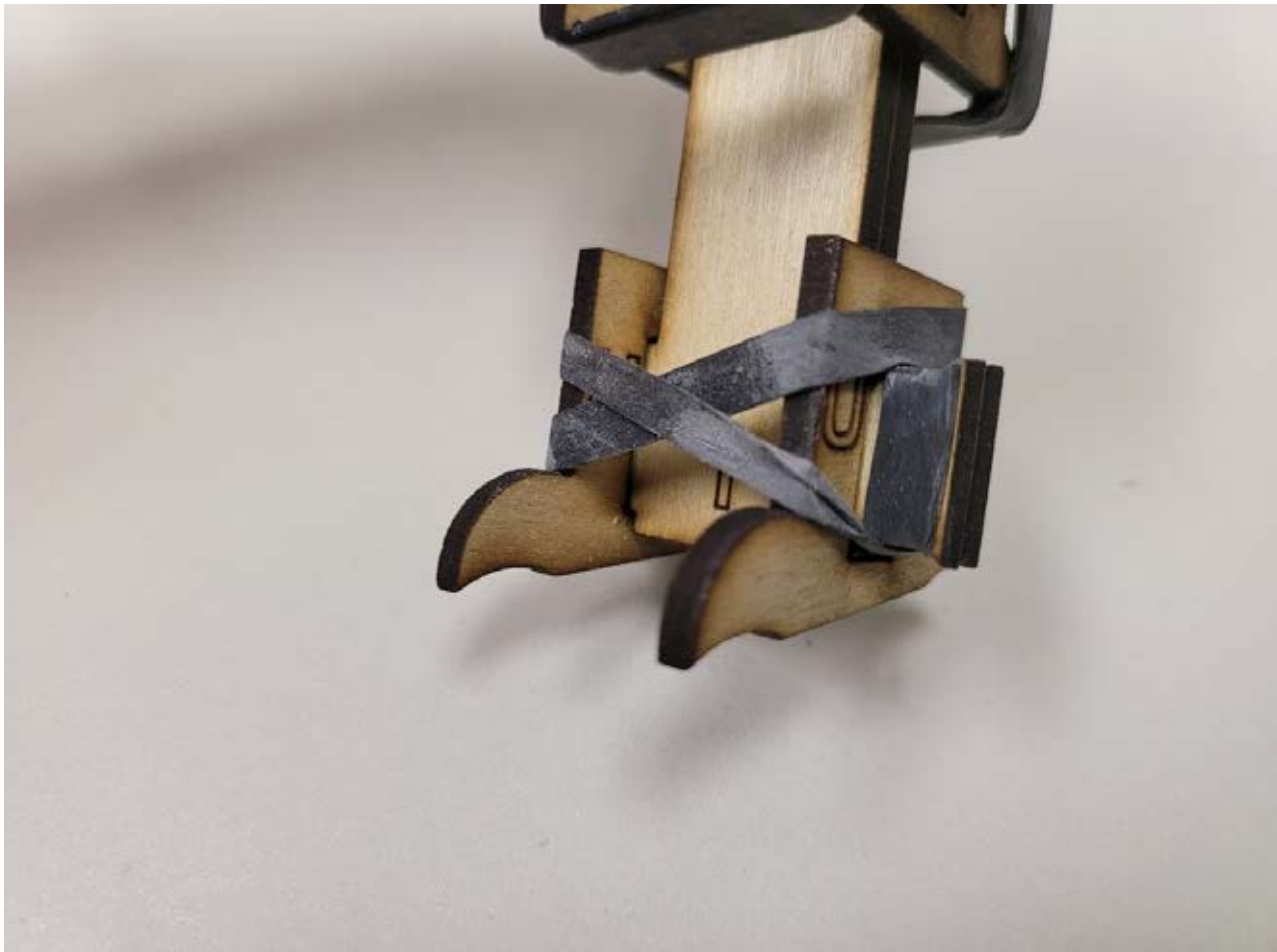
Counter Clockwise Leg - Step-11: Lower Leg Assembly

Take the 2 U-Plates and mount them as shown with the “big toe” pointing towards the motor.



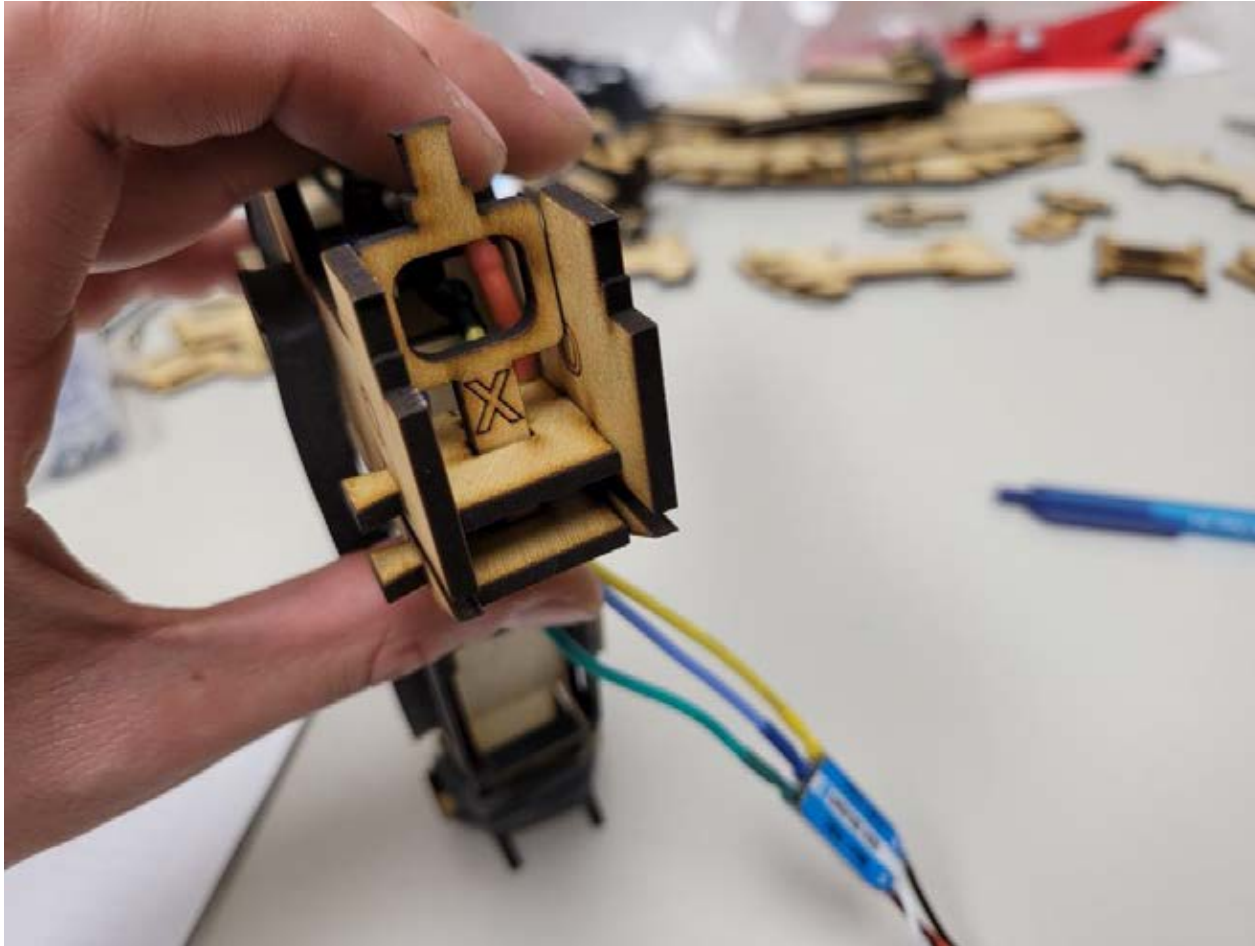
Counter Clockwise Leg - Step-12: Lower Leg Assembly

Take a rubber band and start around one peg, twist on the side, around the other peg, another twist, then all the way back past the first peg to the 2nd peg so that it is tightly wrapped.

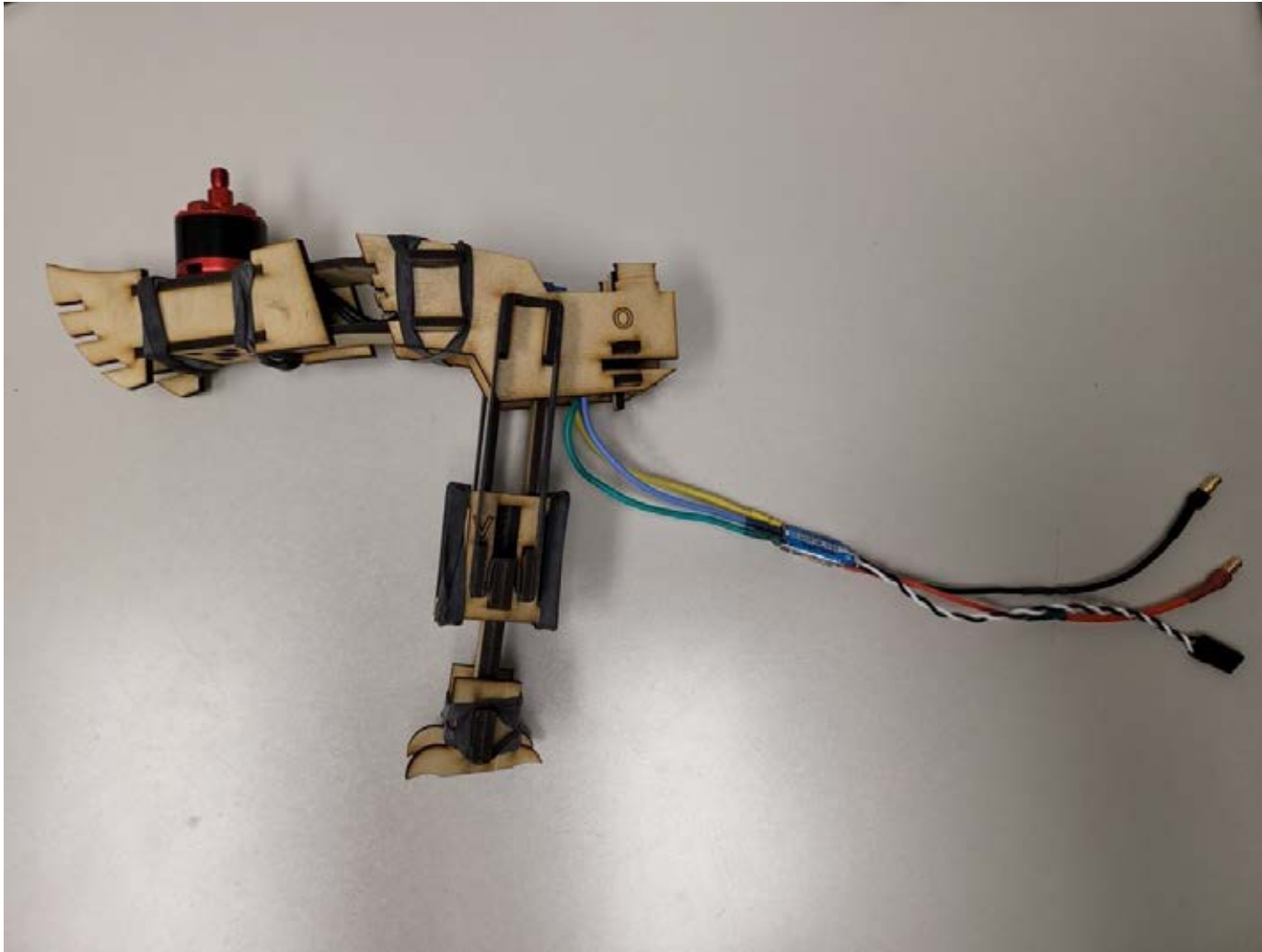


Counter Clockwise Leg – Install X-plate

Once the leg is assembled, put the X-plate in the end as shown. It will be loose and is used to lock the leg to the body in later steps. The ESC and its wires tuck down the hole between the leg and the X-plate.



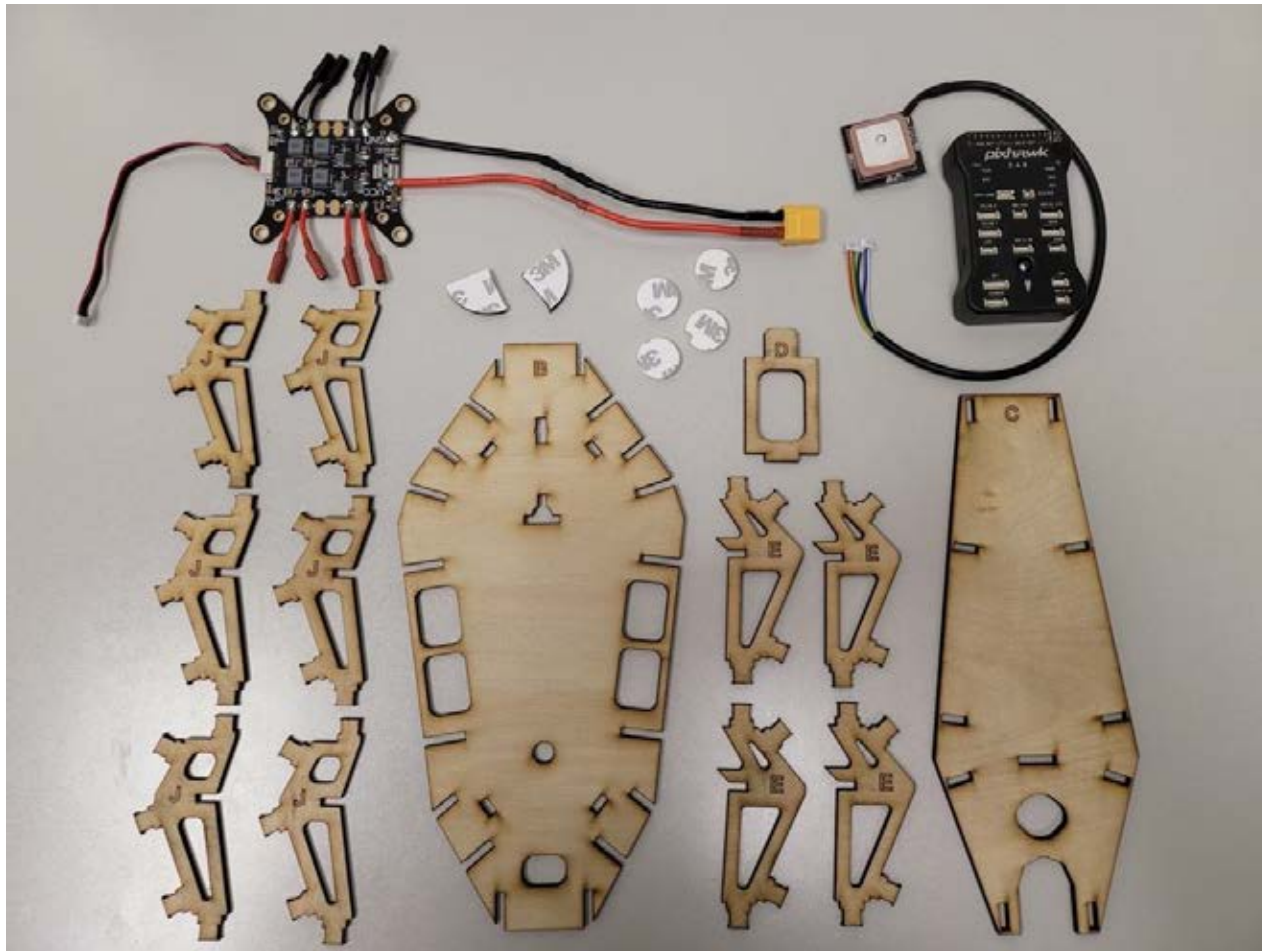
Counter Clockwise Arm/Leg Complete
Set your two Counterclockwise leg subassemblies to the side.



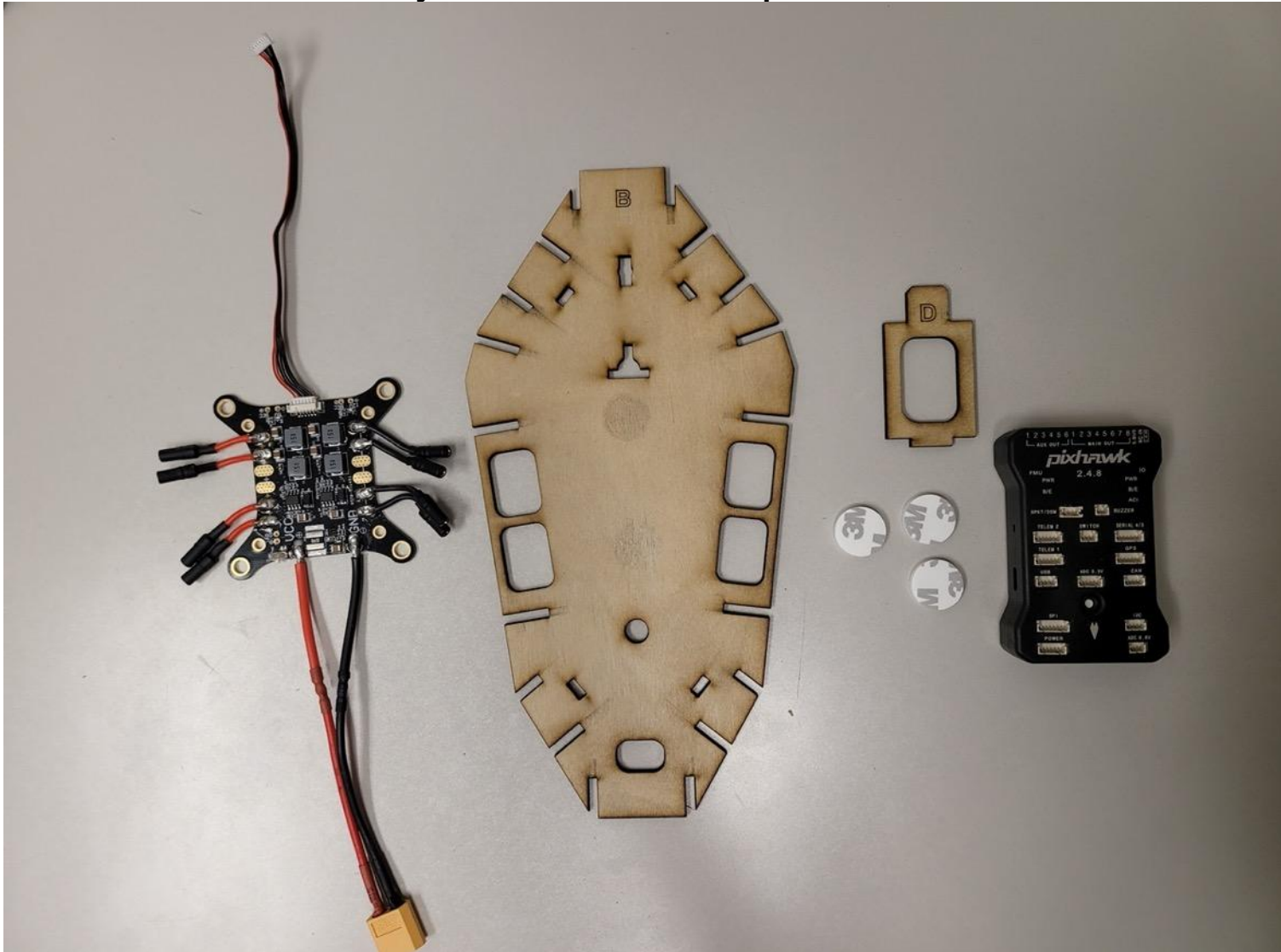
1X - Main Body Subassembly

The Parts Needed for this Subassembly are included in the Photo Below

Note: you actually will have received 4 of the quarter circle foam pads.

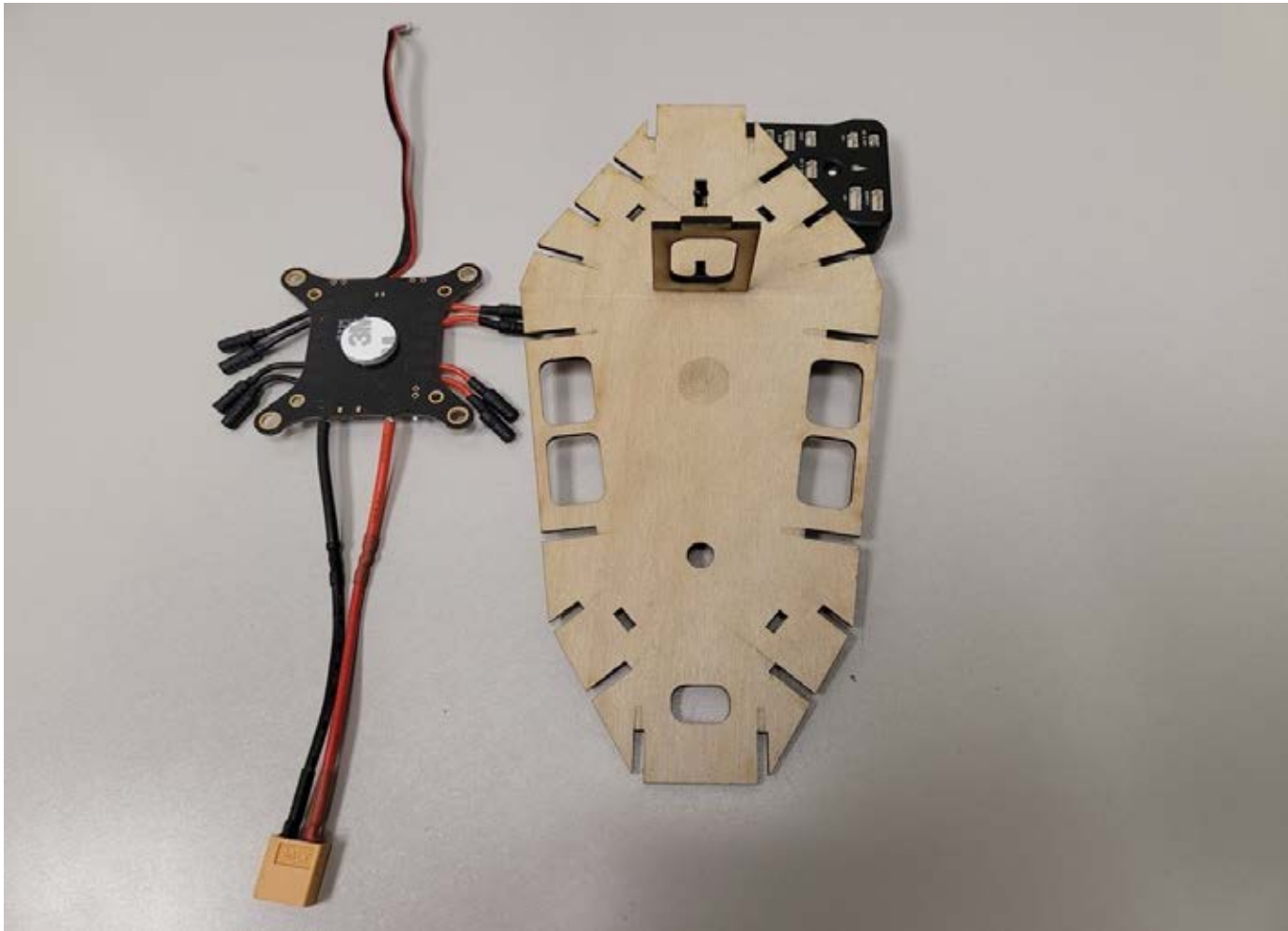


Main Body- Center Section – Step 1: Gather Parts



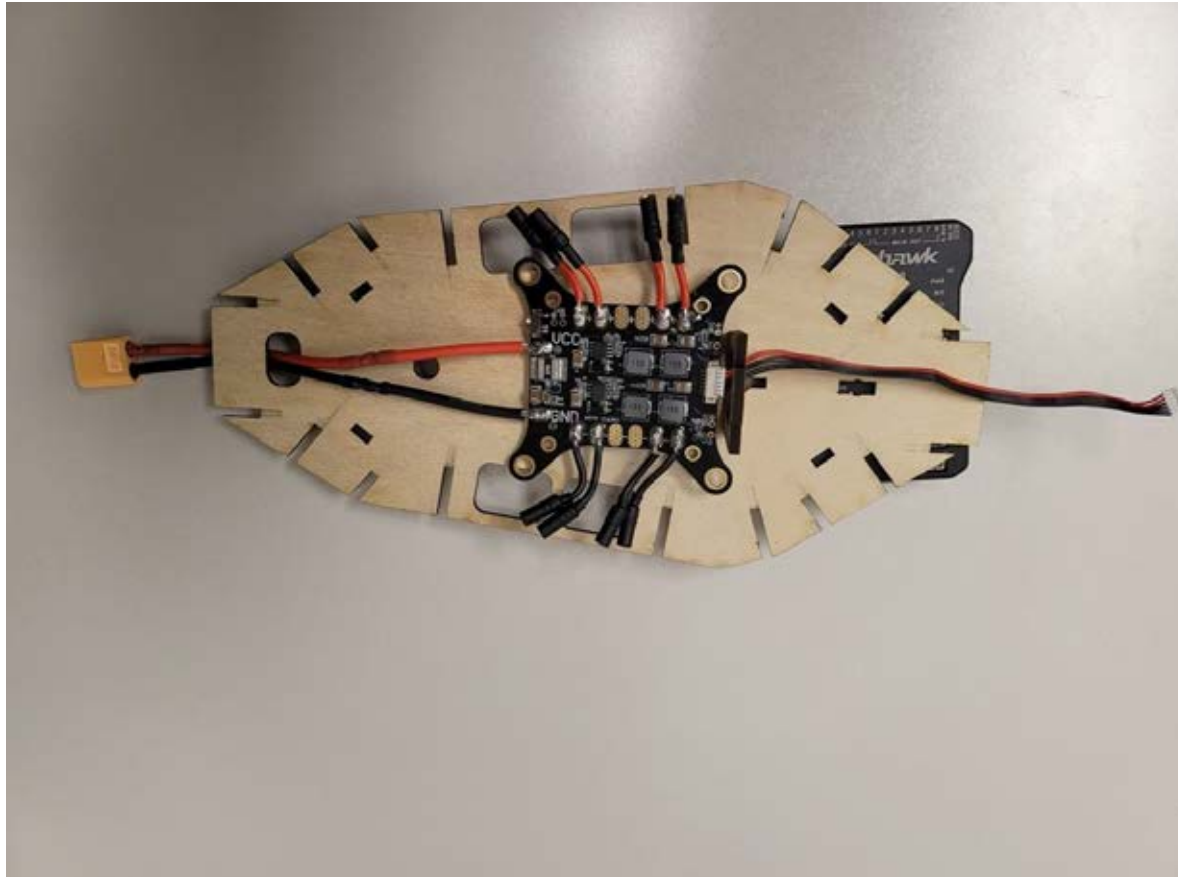
Main Body- Center Section – Step 2: Install Part D

Install the D-plate temporarily as shown. Put one of the foam quarter circles (not a full circle as shown) in the center of the bottom of the PDB (the side with no electronics) and do not remove the protective film.



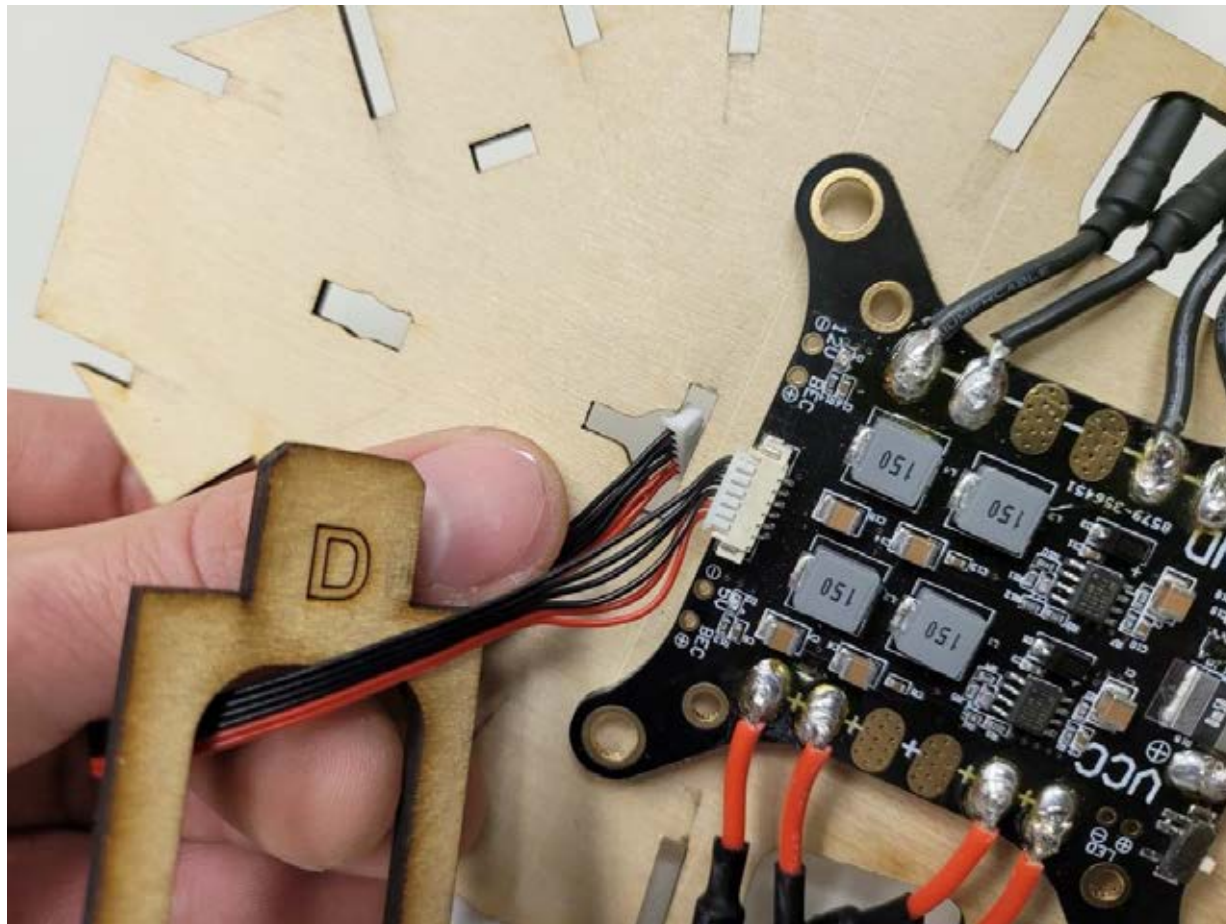
Main Body- Center Section – Step 2: Mount Power Distribution Board

First, position the FMU so that that it looks like this, and mark the sides with a pencil for where it needs to go. Then, remove the D-plate and lay the B plate flat. Then remove the protective film from the foam and carefully position the PDB and stick it plate-B. Next, run the orange connector out the hole as shown. Finally, take the small red & black cable and feed the end that is not connected to the PDB through the hole where the D-plate goes to the other side. (not shown).



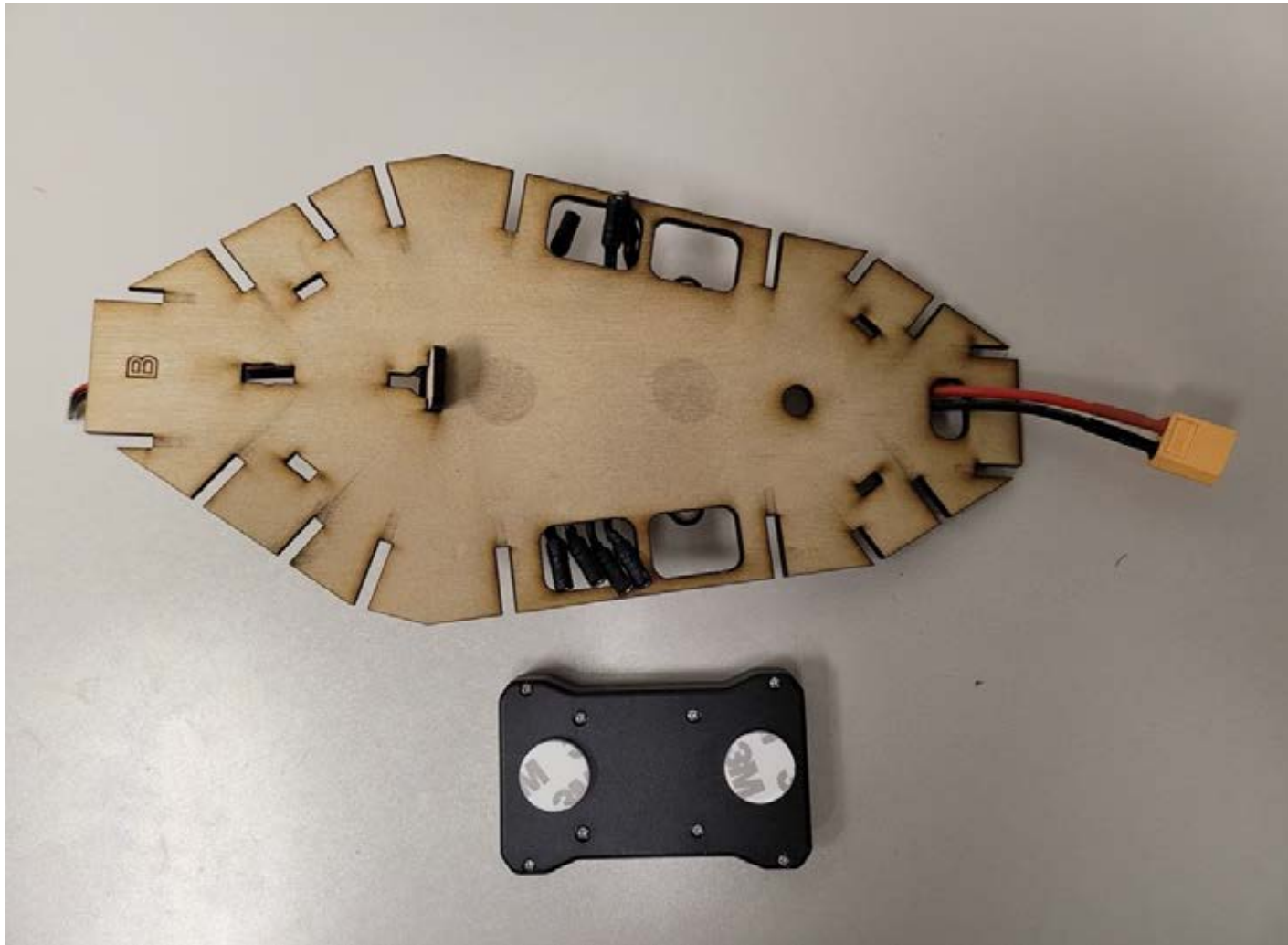
Main Body- Center Section – Step 3: Route PDB to FMU power cable

Finally, take the small red & black cable and feed the end that is not connected to the PDB through the hole in the D-plate and then through the D-plate mounting hole to the other side.



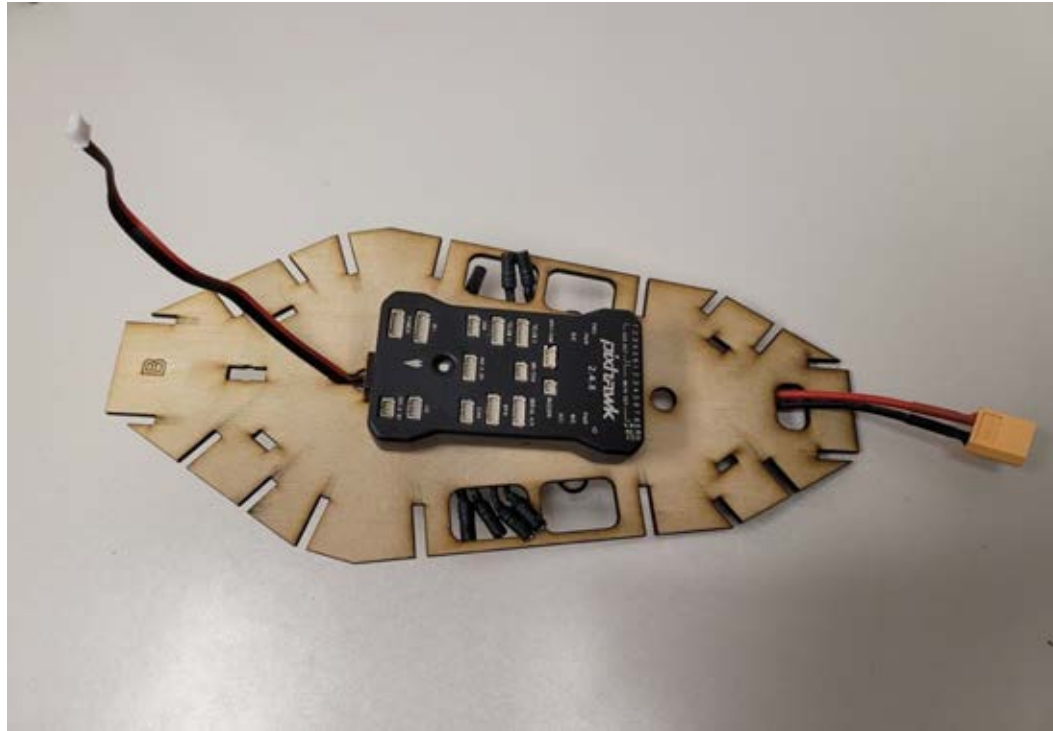
Main Body- Center Section – Step 4: Put foam pads on FMU

Put the D-plate back in its hole and turn the B plate over. Put two foam circles on the bottom of the FMU, but do not remove the other side of the protective film.



Main Body- Center Section – Step 5: Mount FMU

Position the FMU so that it is right up against the D-plate and the arrow is pointing at the center of the D-plate. Center the FMU left to right carefully. The FMU MUST be mounted in the exact center of the drone as shown. Using a pencil, draw an outline around where the FMU needs to go. Remove the D-plate so that you can lay the B plate reasonably flat on your work surface (a small hand towel may be helpful to stabilize it since the PDB is below the plate. Now, remove the other side of the foam circle protective films and carefully mount the FMU onto the B-plate.



At this point, take the cable coming from the power distribution board that is shown in the above photo, and plug that wire into the FMU Power port and then push the extra wire back down towards the PDB on the other side and replace the D-plate in the hole.

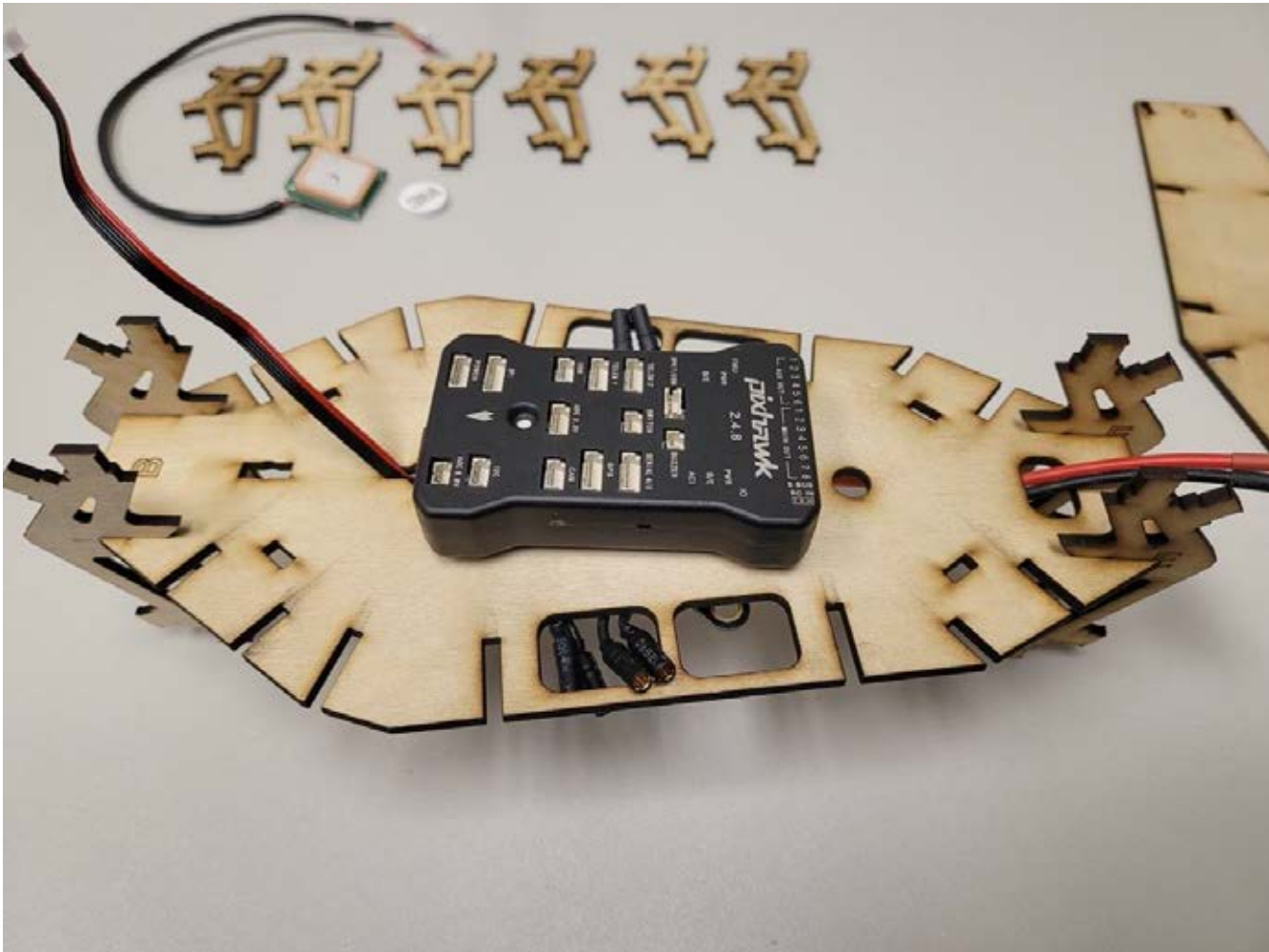
Main Body- Center Section – Step 7: Mount Rear Ribs

Turn the B-plate over so that the PDB is on top (opposite of these next photos). Install 2 E-ribs on the back end (where the big orange connector is). The short end of the rib is on the FMU side.



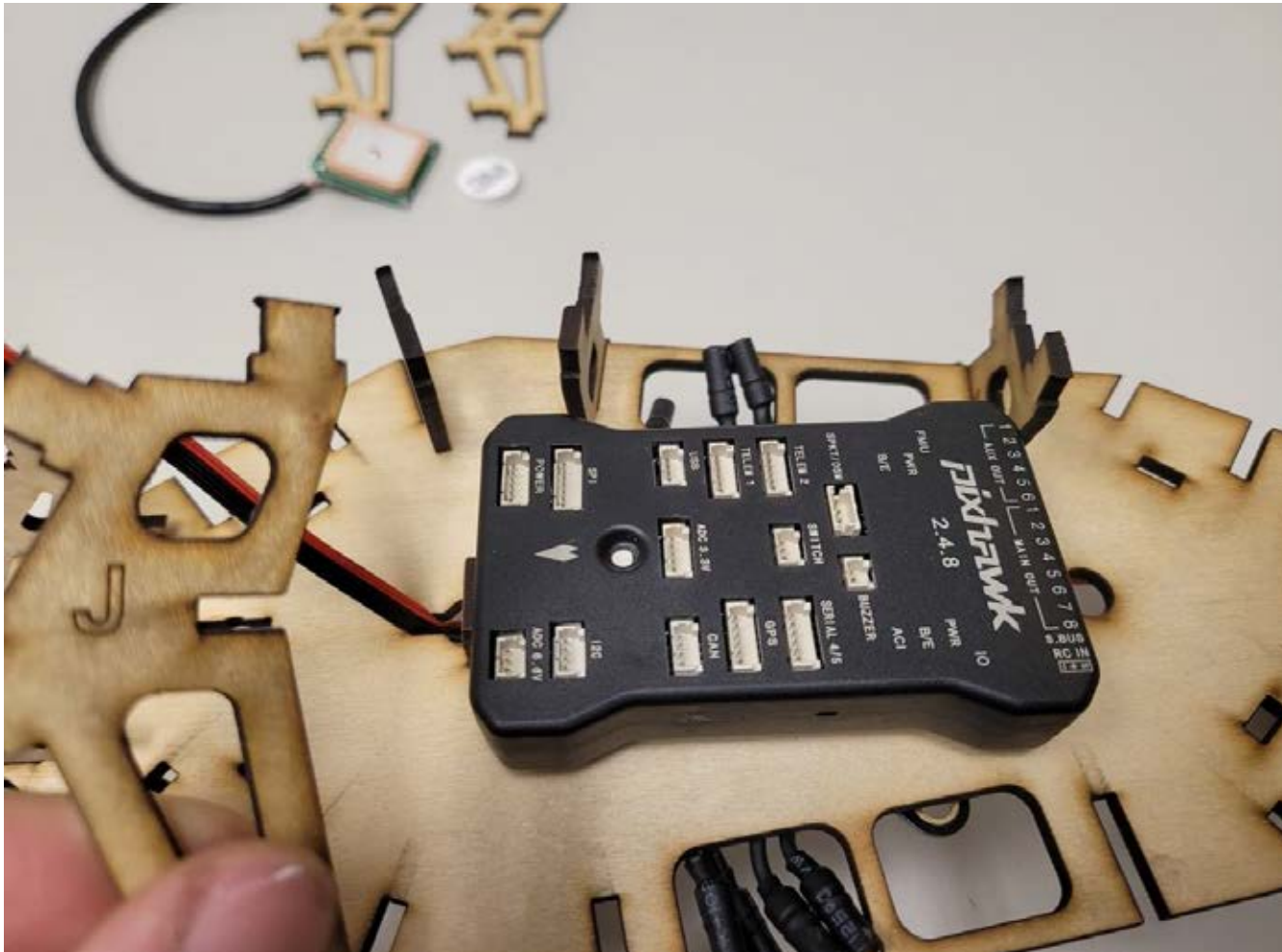
Main Body- Center Section – Step 8: Mount Front Ribs

Mount the other two E ribs to the other end – remember you will have this with the PDB facing up – opposite to this photo.



Main Body- Center Section – Step 9a: Mount Side Ribs

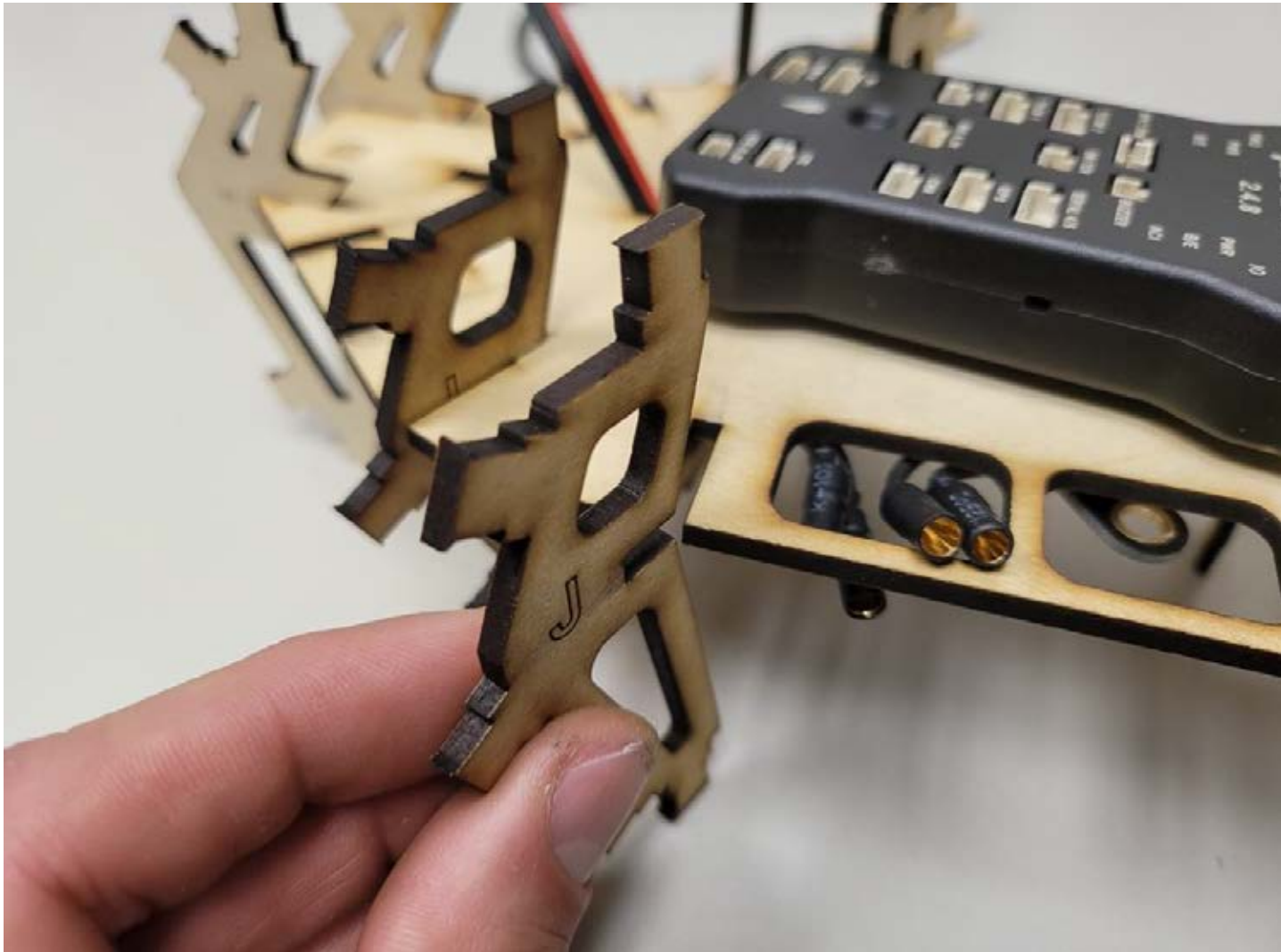
Mount the J ribs on the side slots with the short side down (to the FMU side), and the long side up to the PDB side.



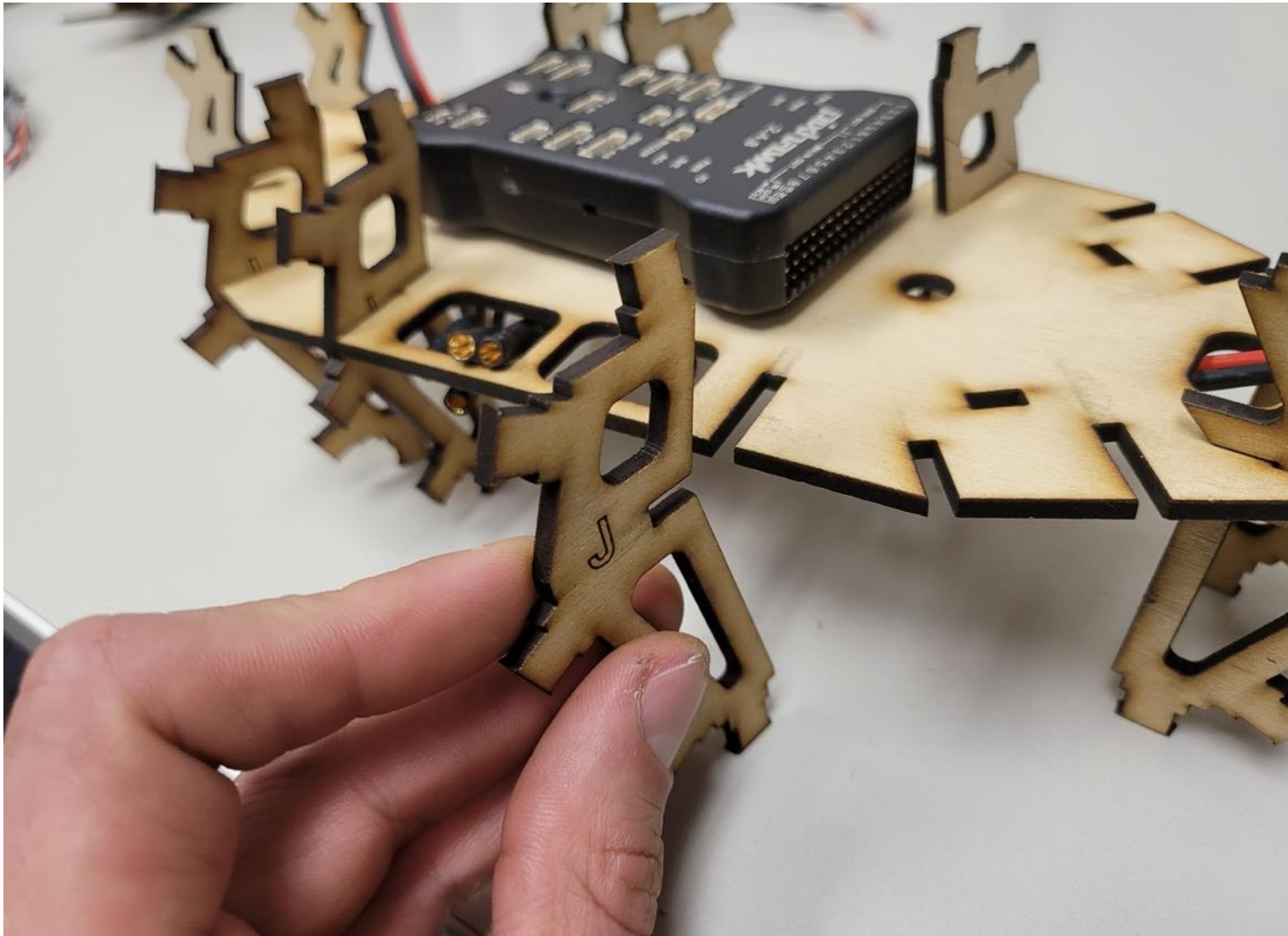
Main Body- Center Section – Step 9b: Mount Side Ribs



Main Body- Center Section – Step 9c: Mount Side Ribs

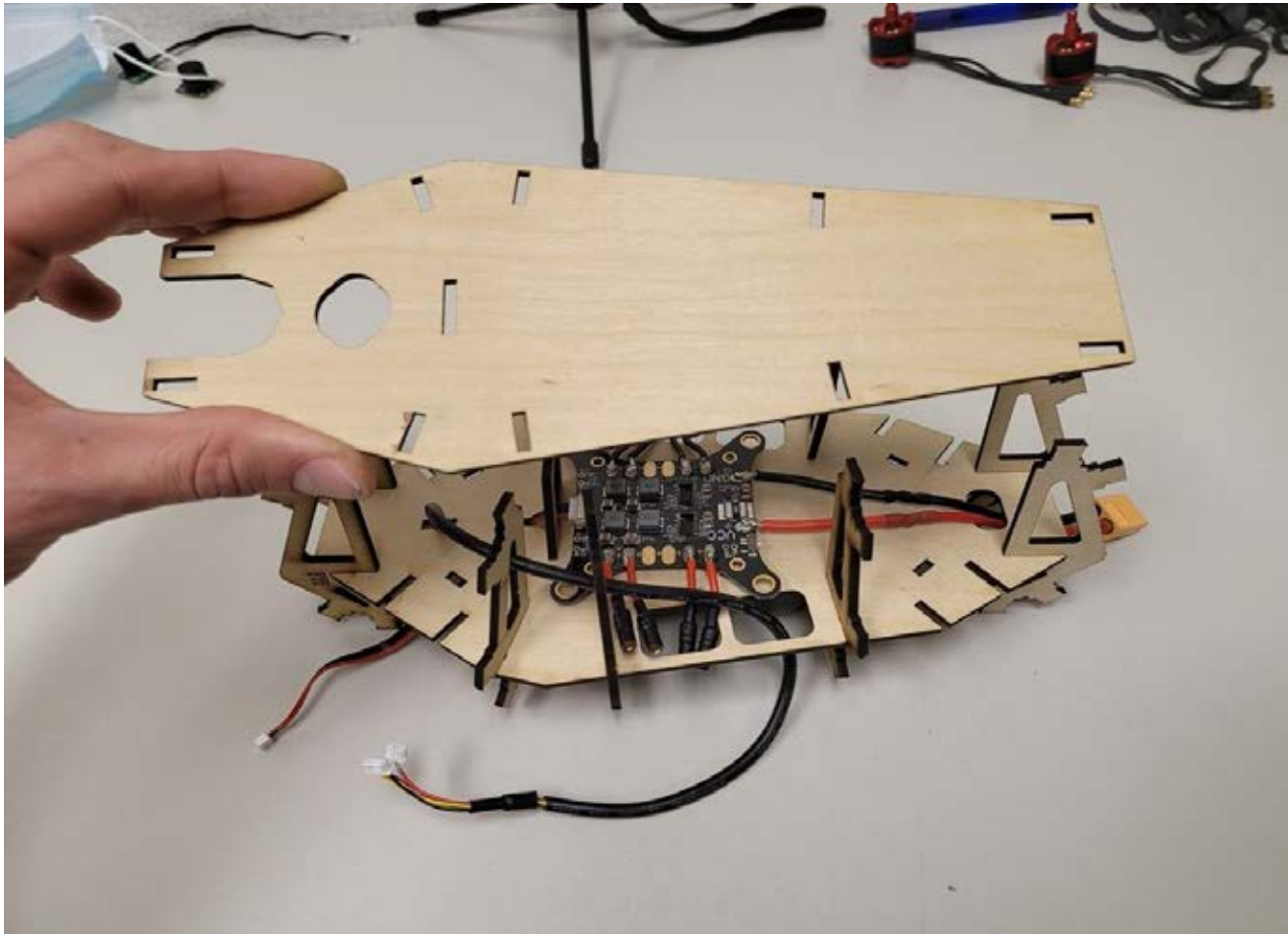


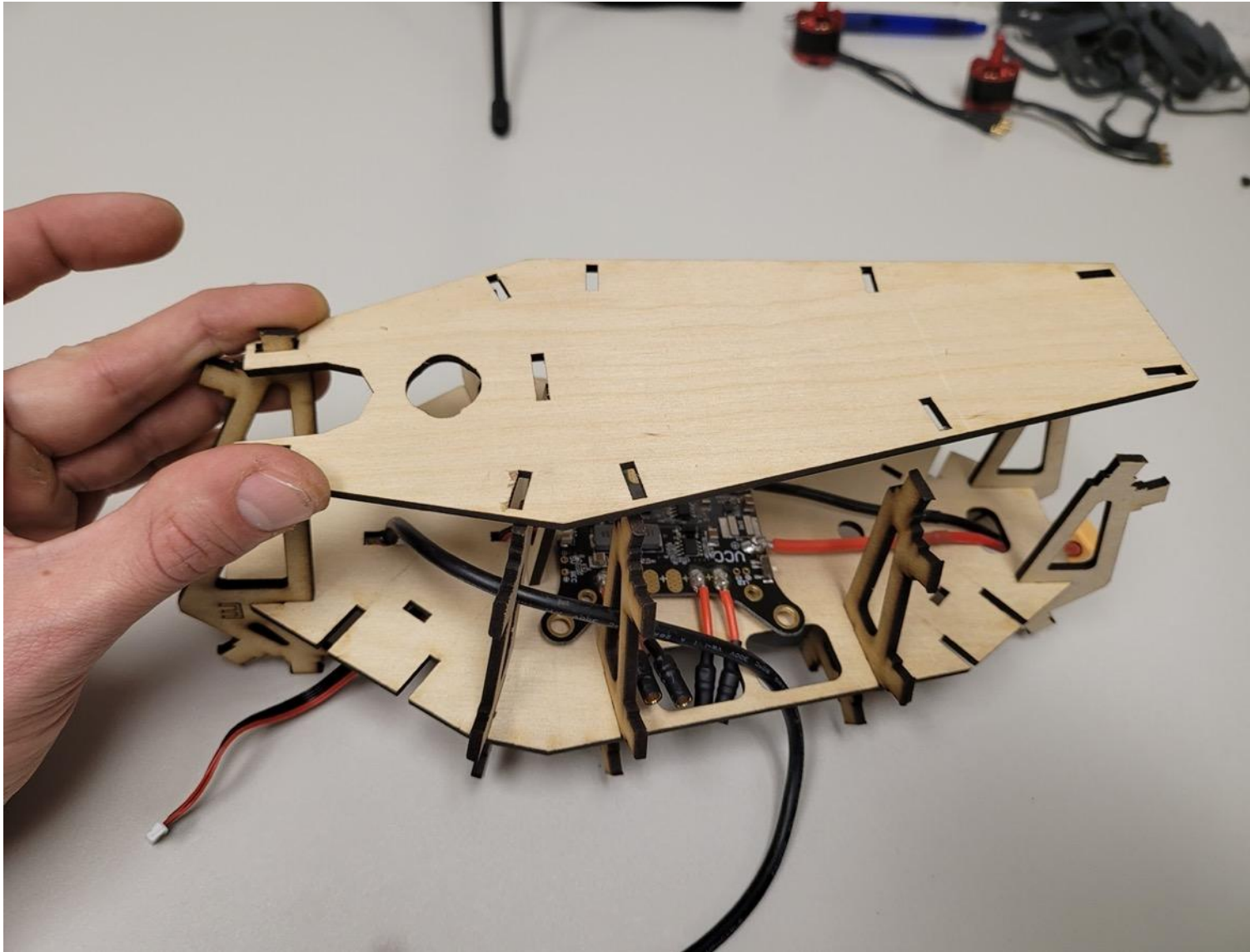
Main Body- Center Section – Step 9d Mount Side Ribs

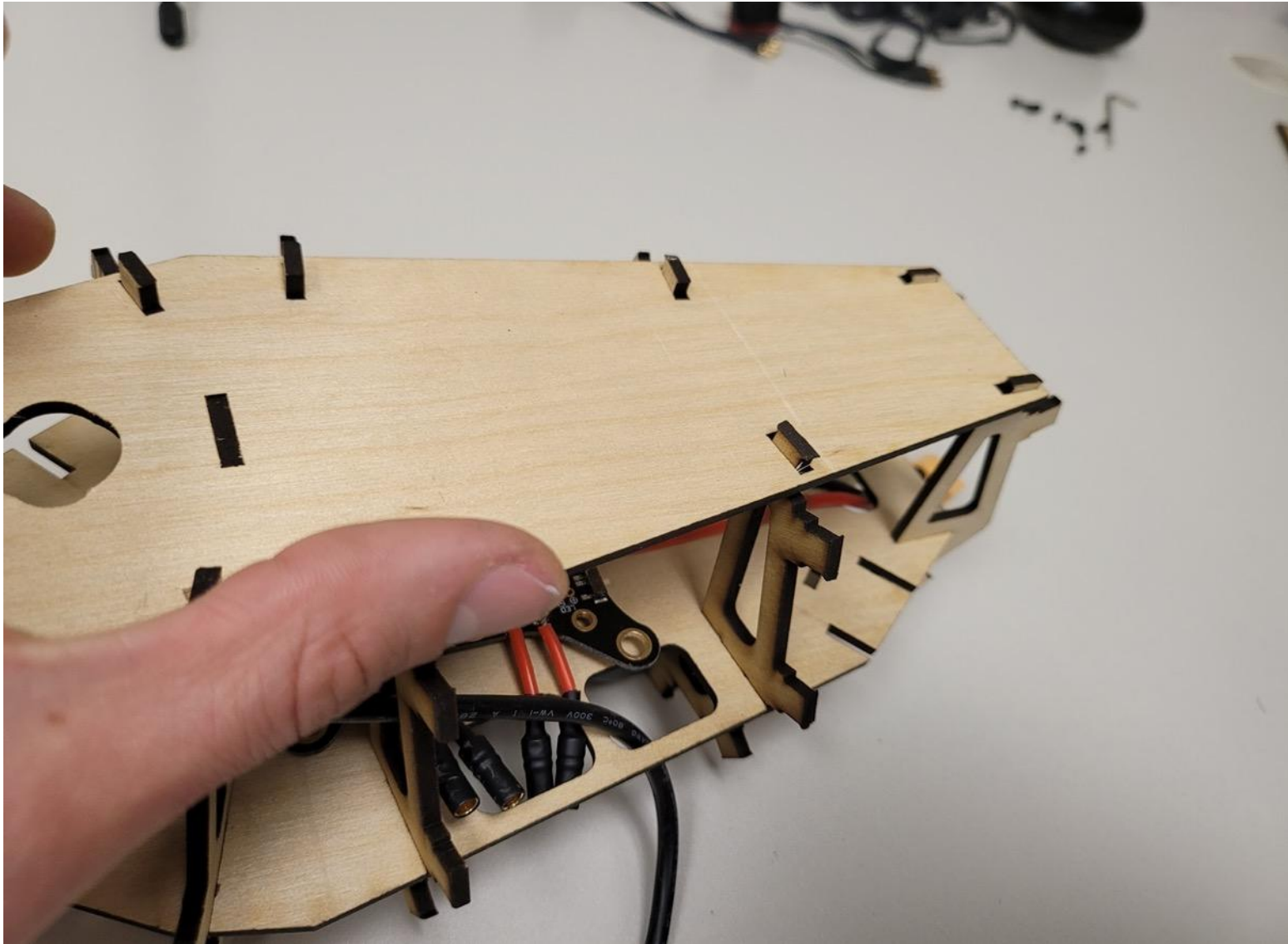


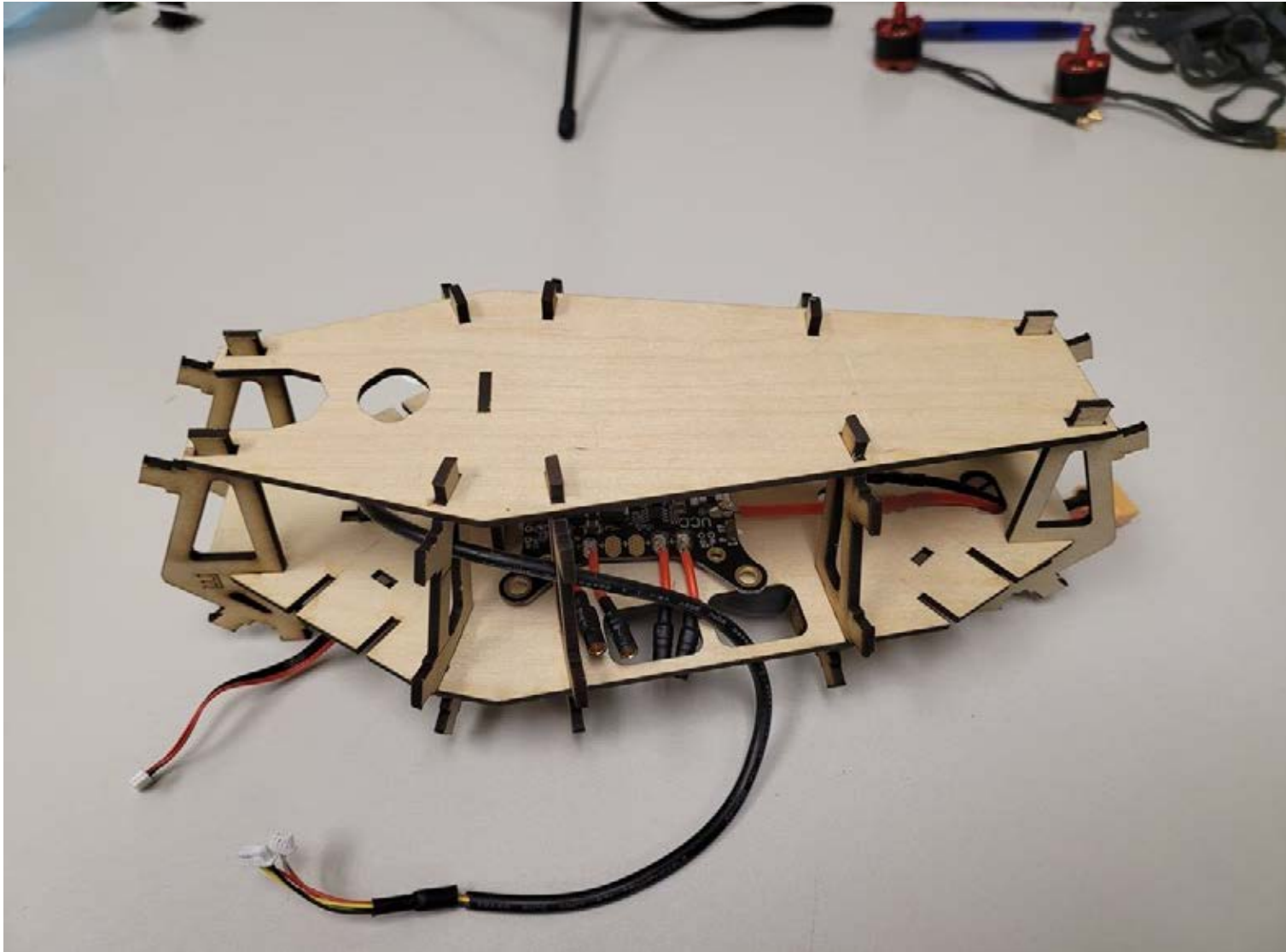
Main Body- Center Section – Step 10 Mount C-Plate

Take the C-plate, with the bug “U”-shaped hole to the front of the drone. Start from the front positioning it on the E ribs, and work your way to the back, getting all the ribs seated into the C plate. This will hold it all together for the next steps.



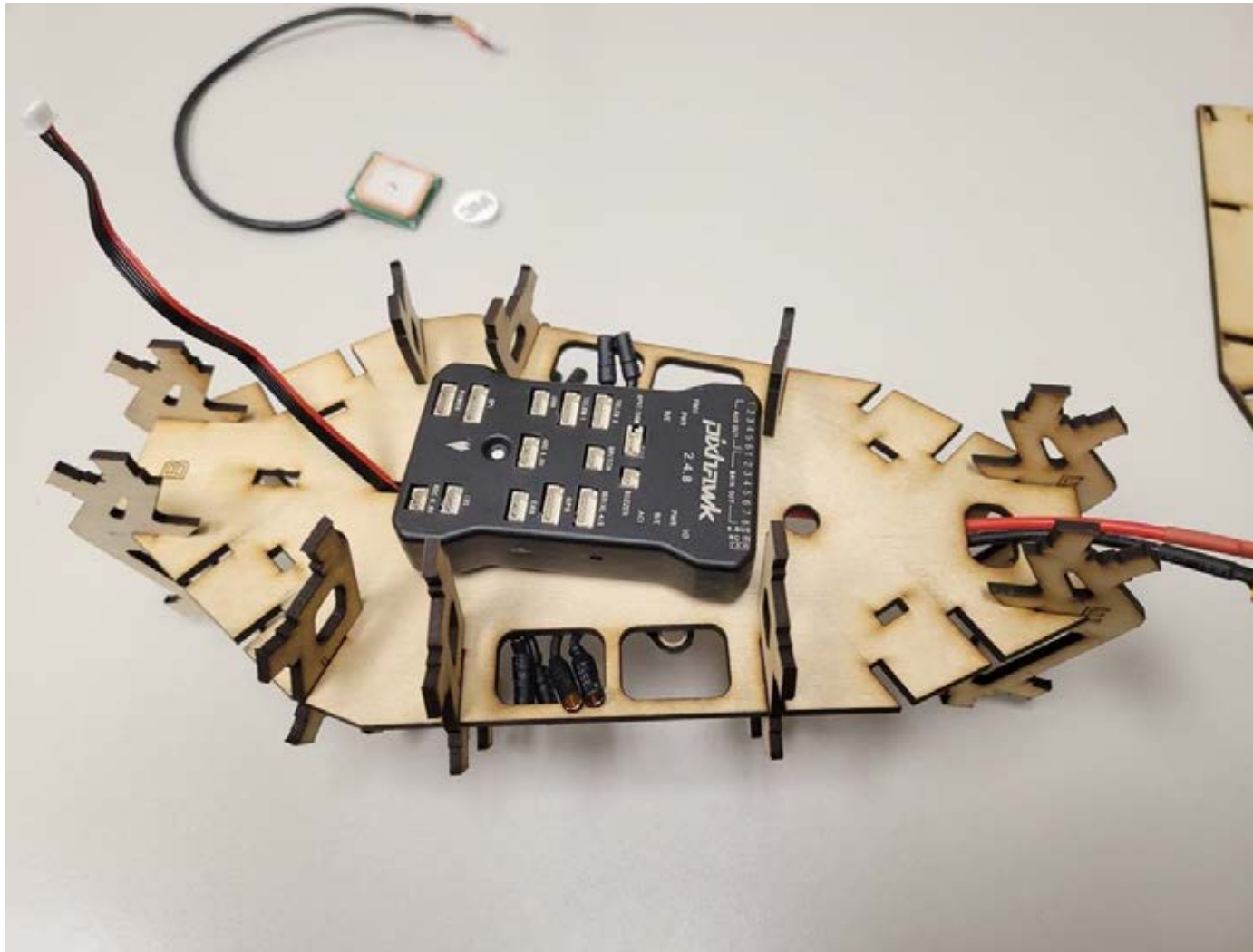






Main Body- Center Section – Step 10 Gather GPS Parts

Note the PDB cable should already be connected to the FMU.



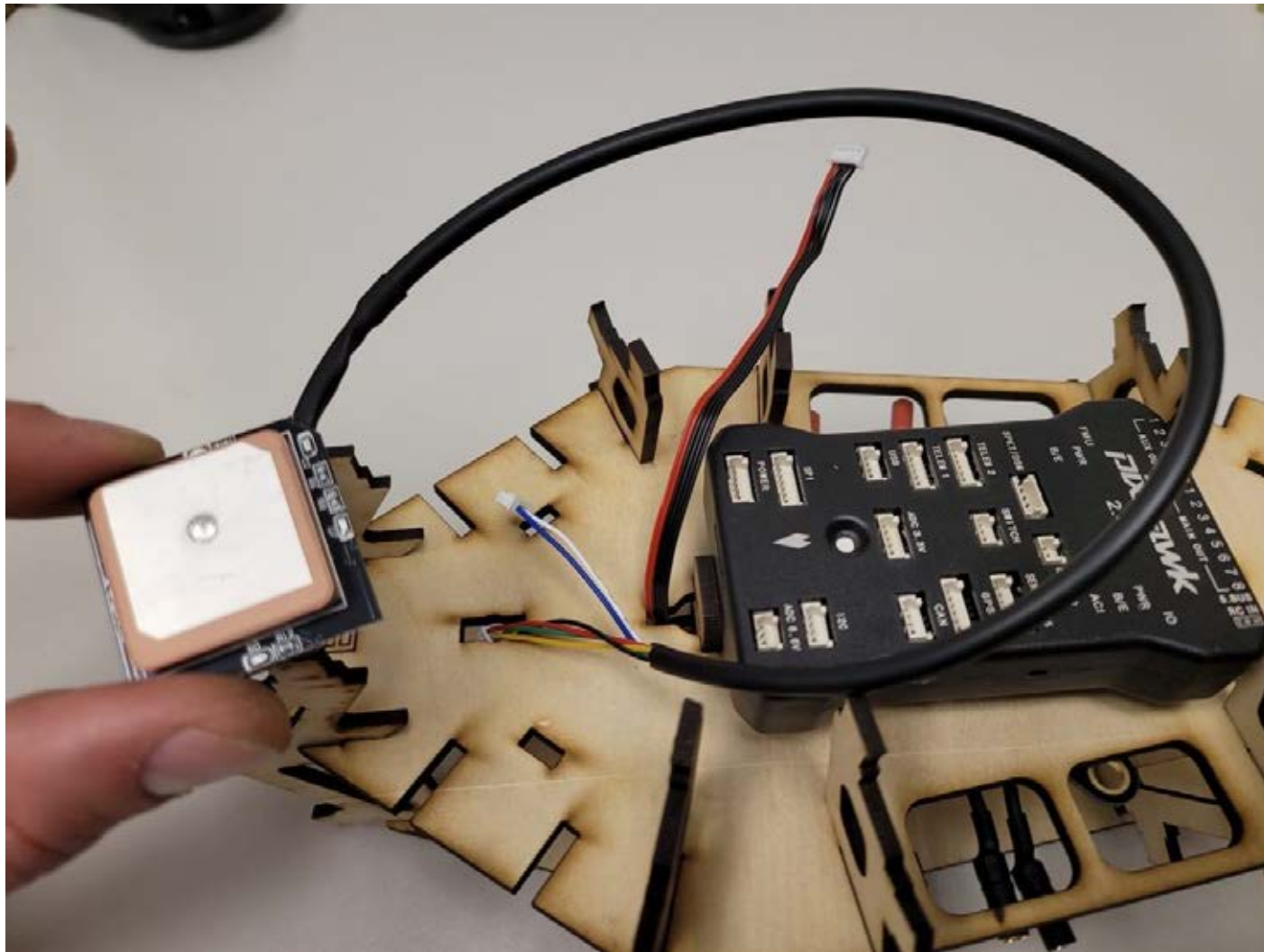
Main Body- Center Section – Step 11 Put Foam Pad on GPS

Put 2 of the quarter circle foam pieces on the electronics side of the GPS, and then a circular foam piece so you have 2 layers of foam. Do not remove the top protective film of the circle yet.



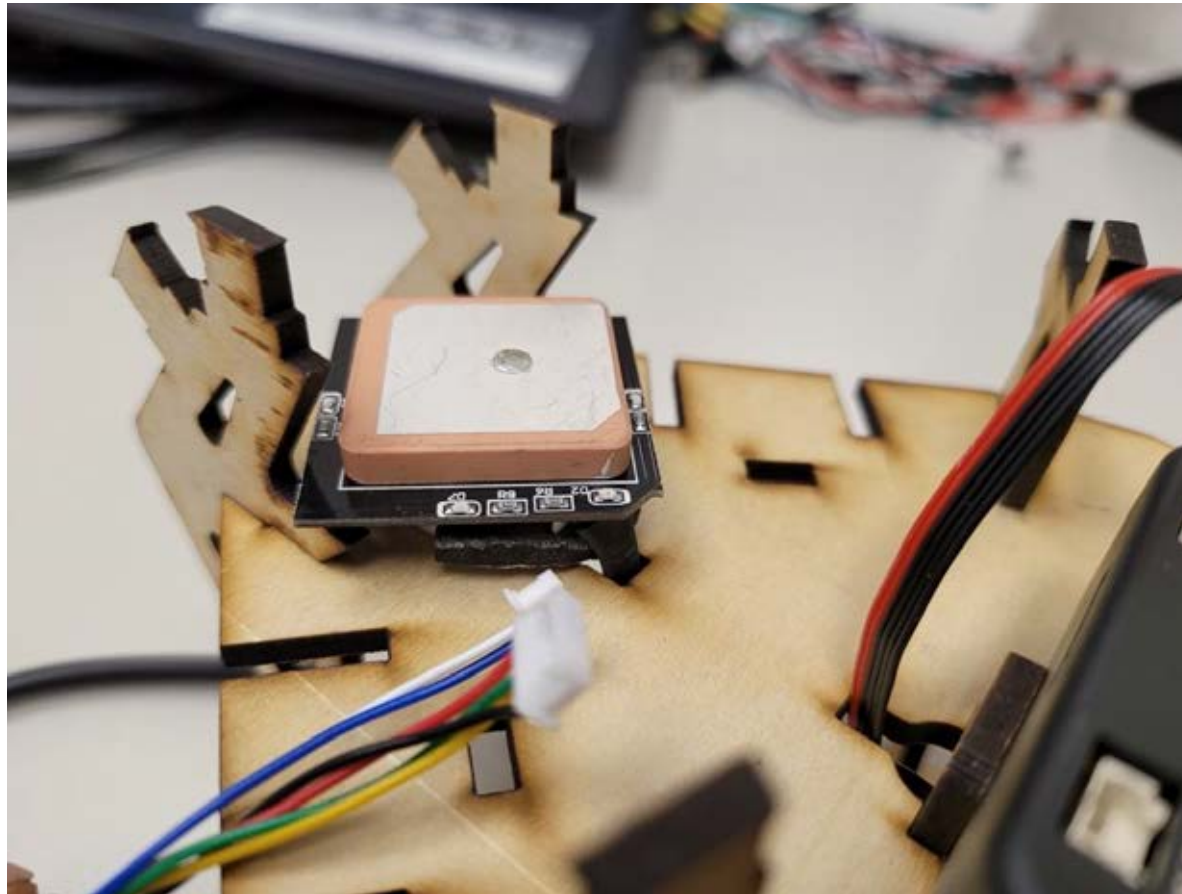
Main Body- Center Section – Step 12a Position GPS

Feed the GPS cable through the hole as shown.



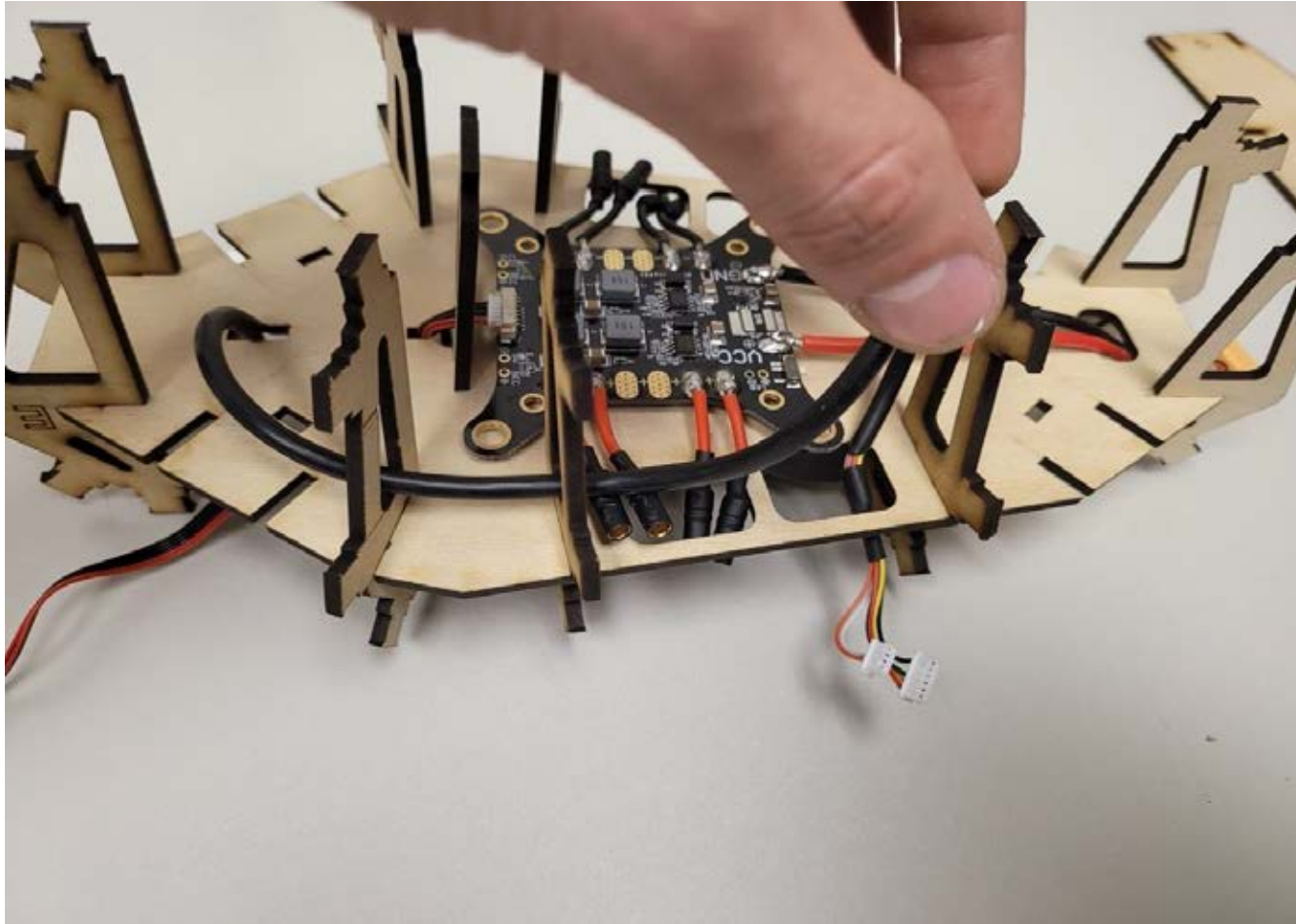
Main Body- Center Section – Step 12b: Mount GPS

The GPS is mounted closely into the E ribs WITHOUT pushing them out. It will be in the orientation shown. This will require pushing the rest of the GPS wires to the other side. Once you have the position set, remove the last protective film from the foam and mount the GPS to the B plate.

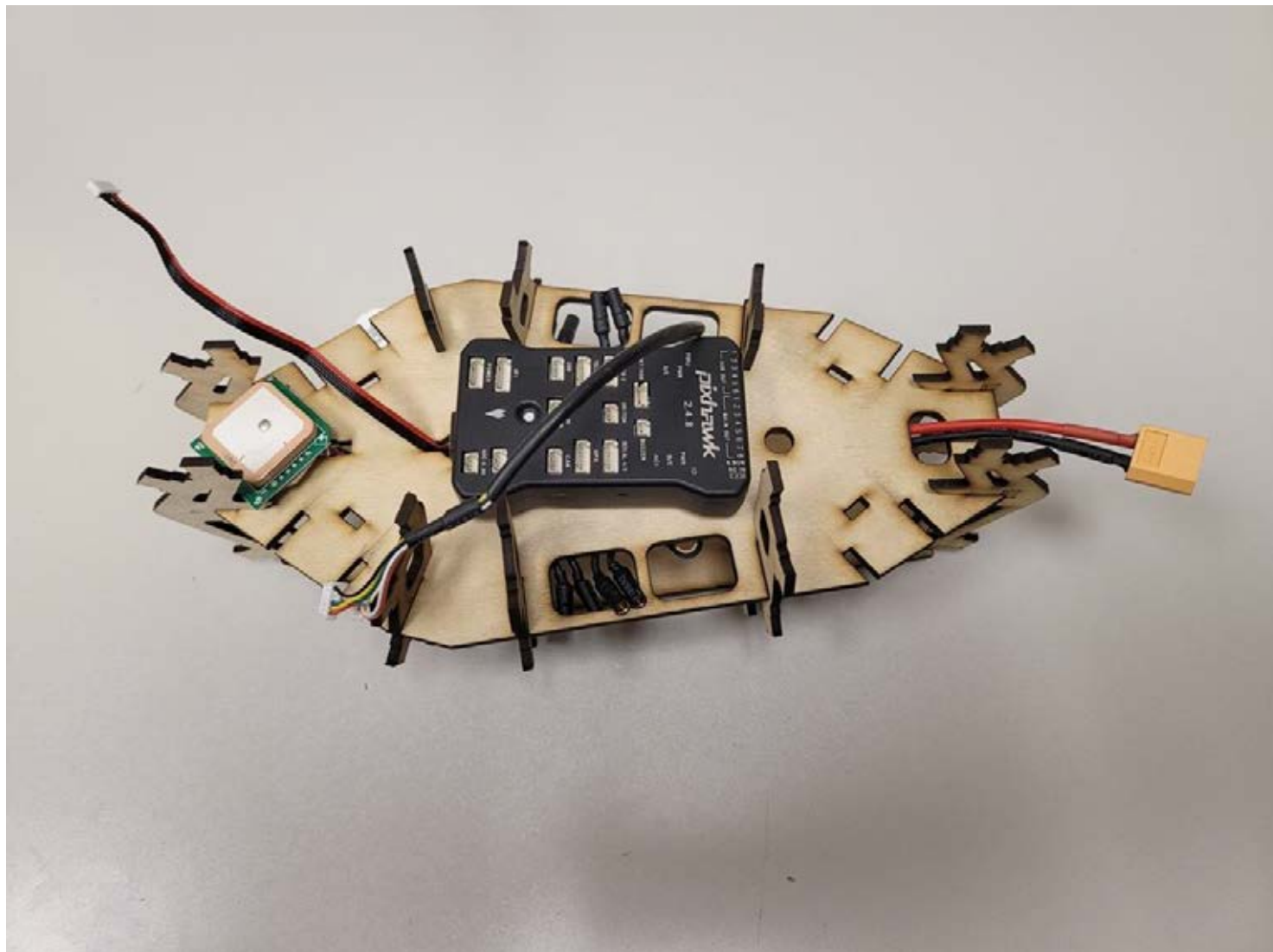


Main Body- Center Section – Step 12c: Route GPS Wires

Route the GPS through the holes in the ribs on the PDB side as shown (this photo does not have the C plate to make it easier to see the wire routing).

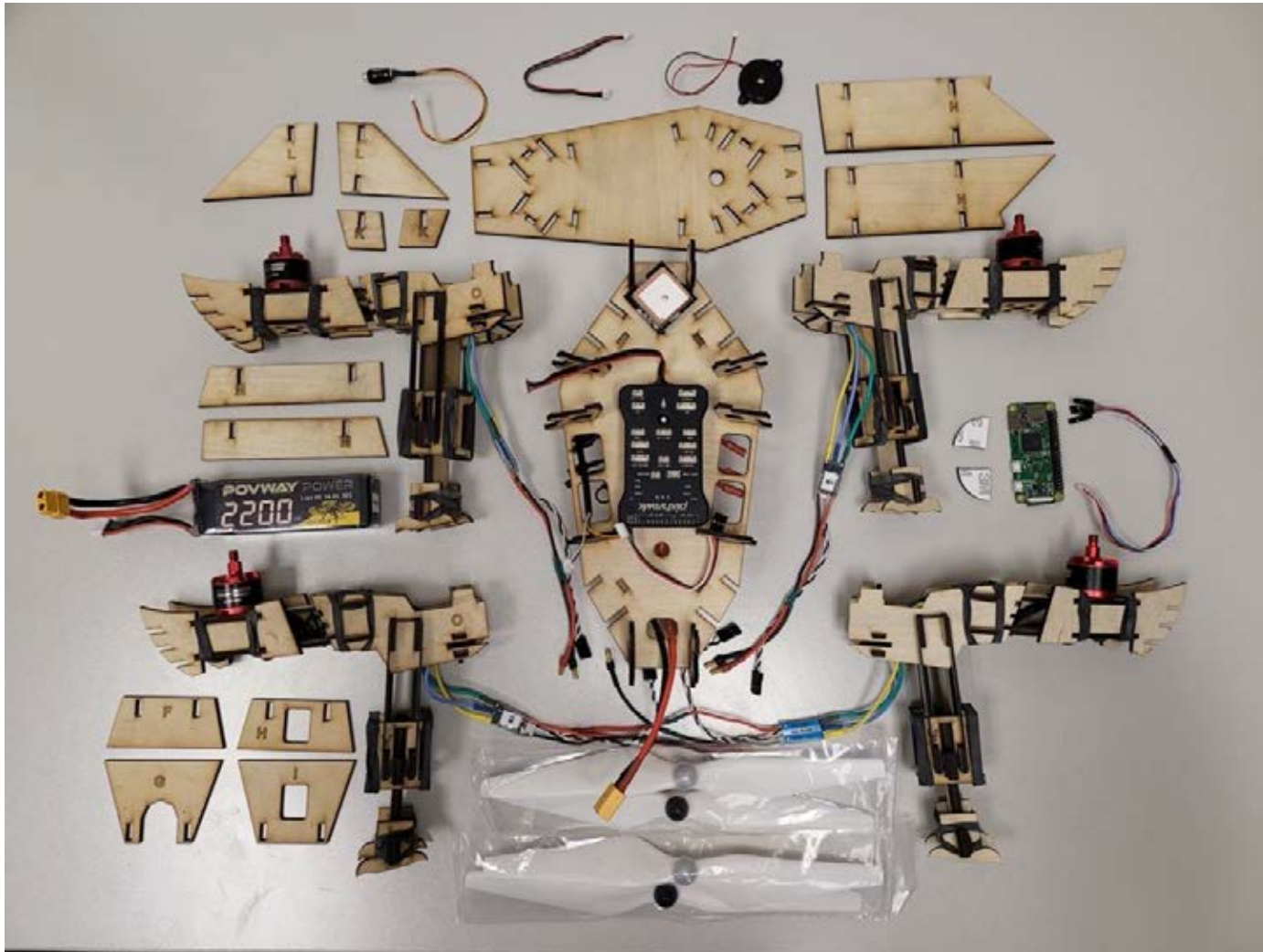


Main Body- Center Section – Complete – turn over for Frame Assembly

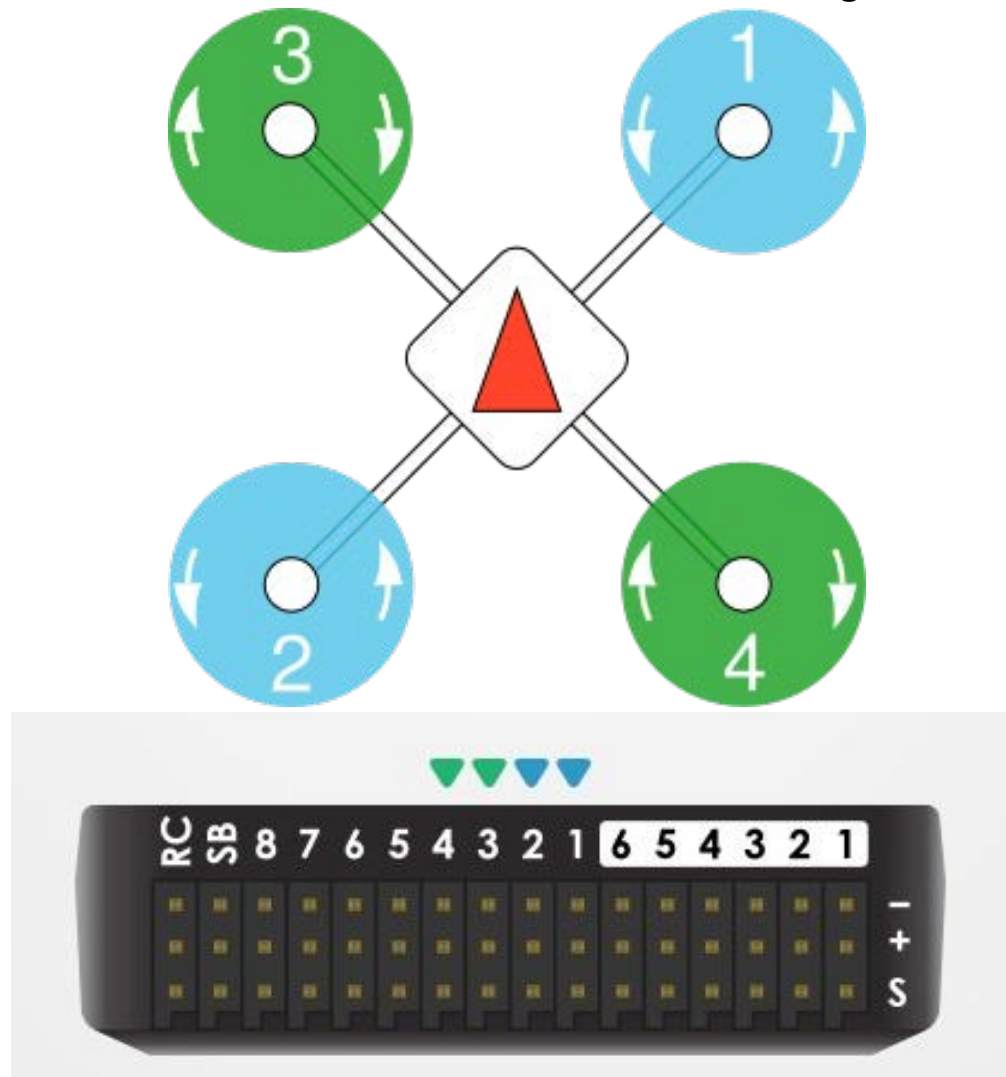


Frame Assembly

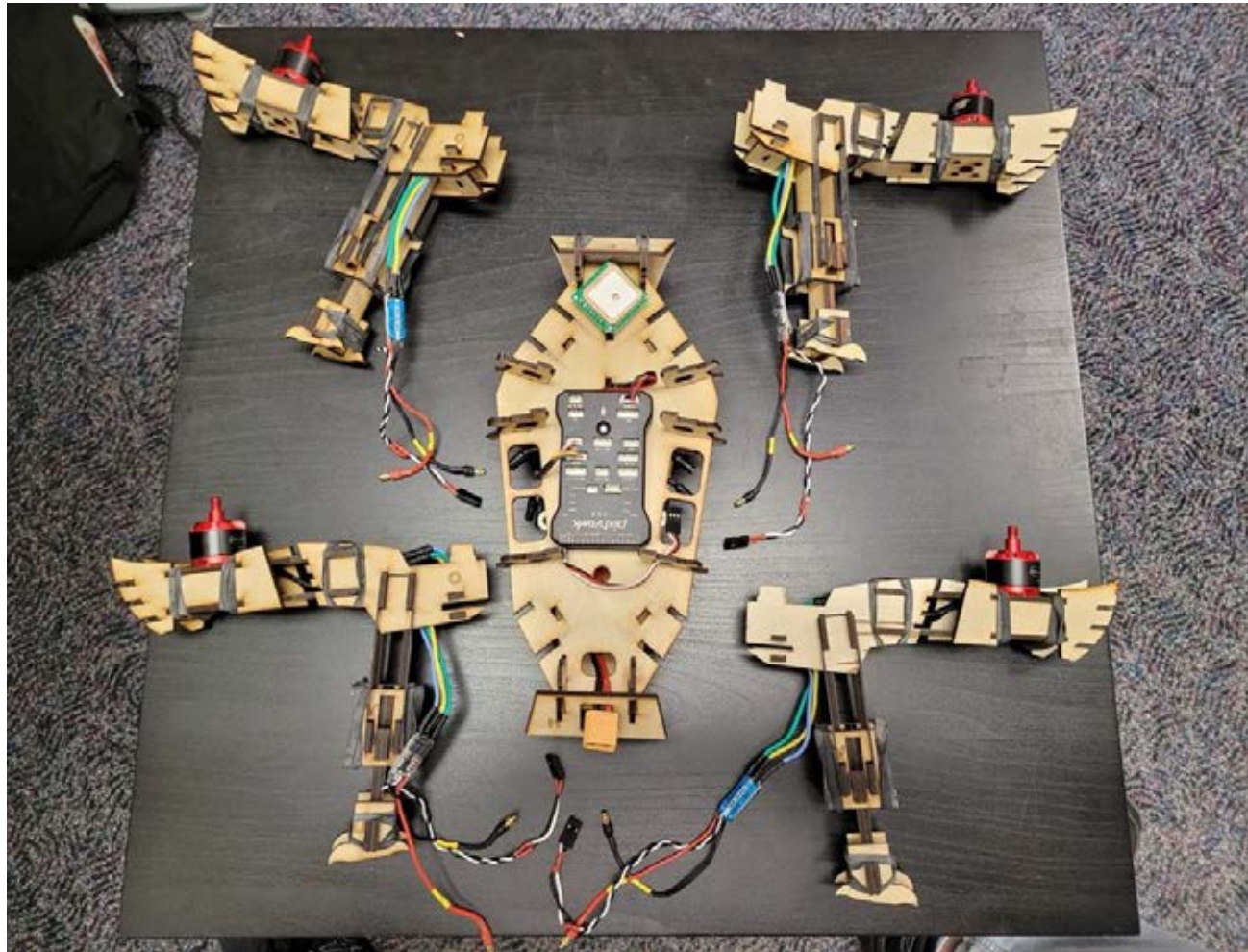
All Parts and Subassemblies for the Frame Assembly are included in the Photo Below



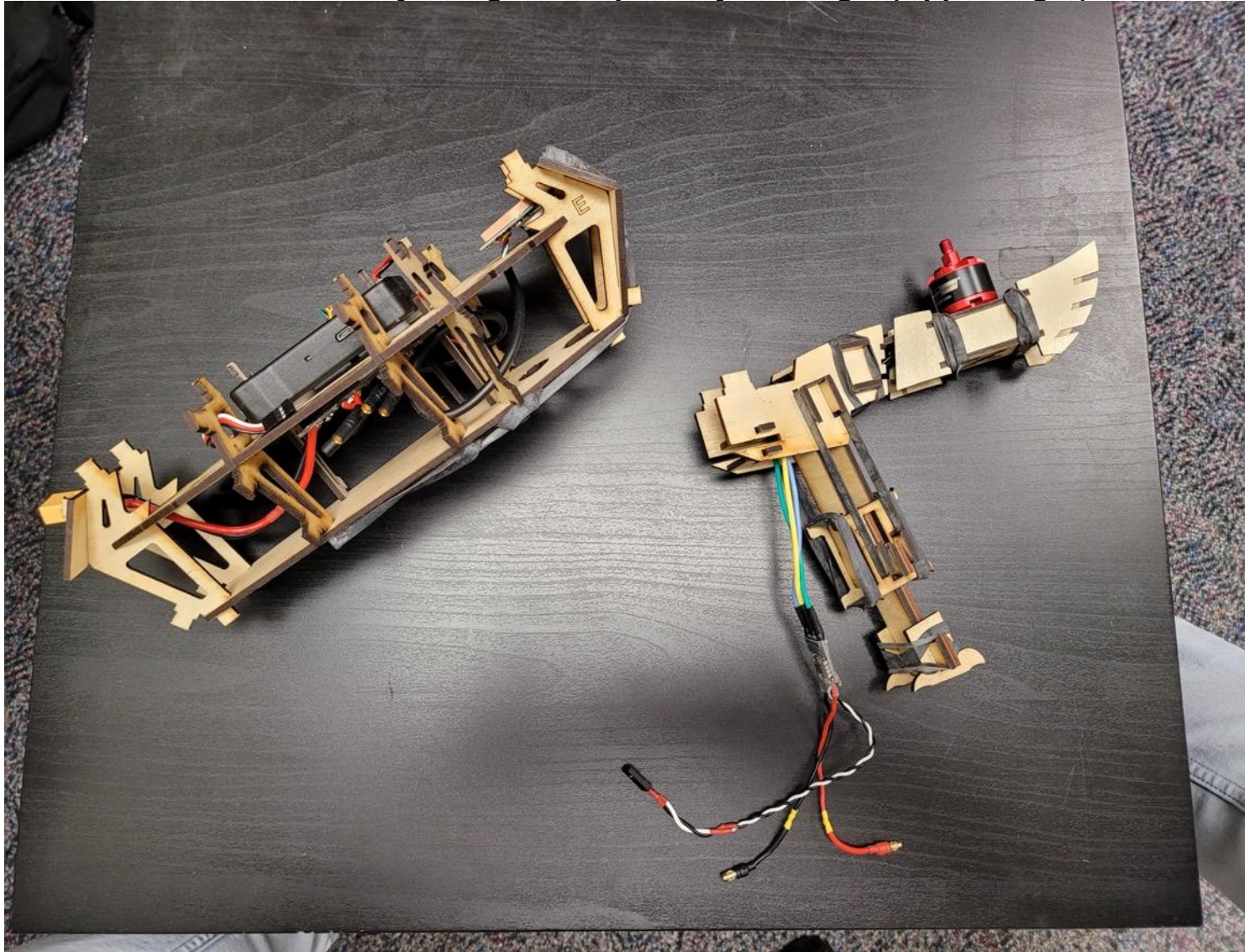
The diagrams below show where the RC Receiver and the ESC signal wires plug into the FMU



Frame Assembly – Step 1: Lay out Arm/Legs
Clockwise on Upper Left (3) & Lower Right (4)
Counterclockwise on Upper Right (1) and Lower Left (2)



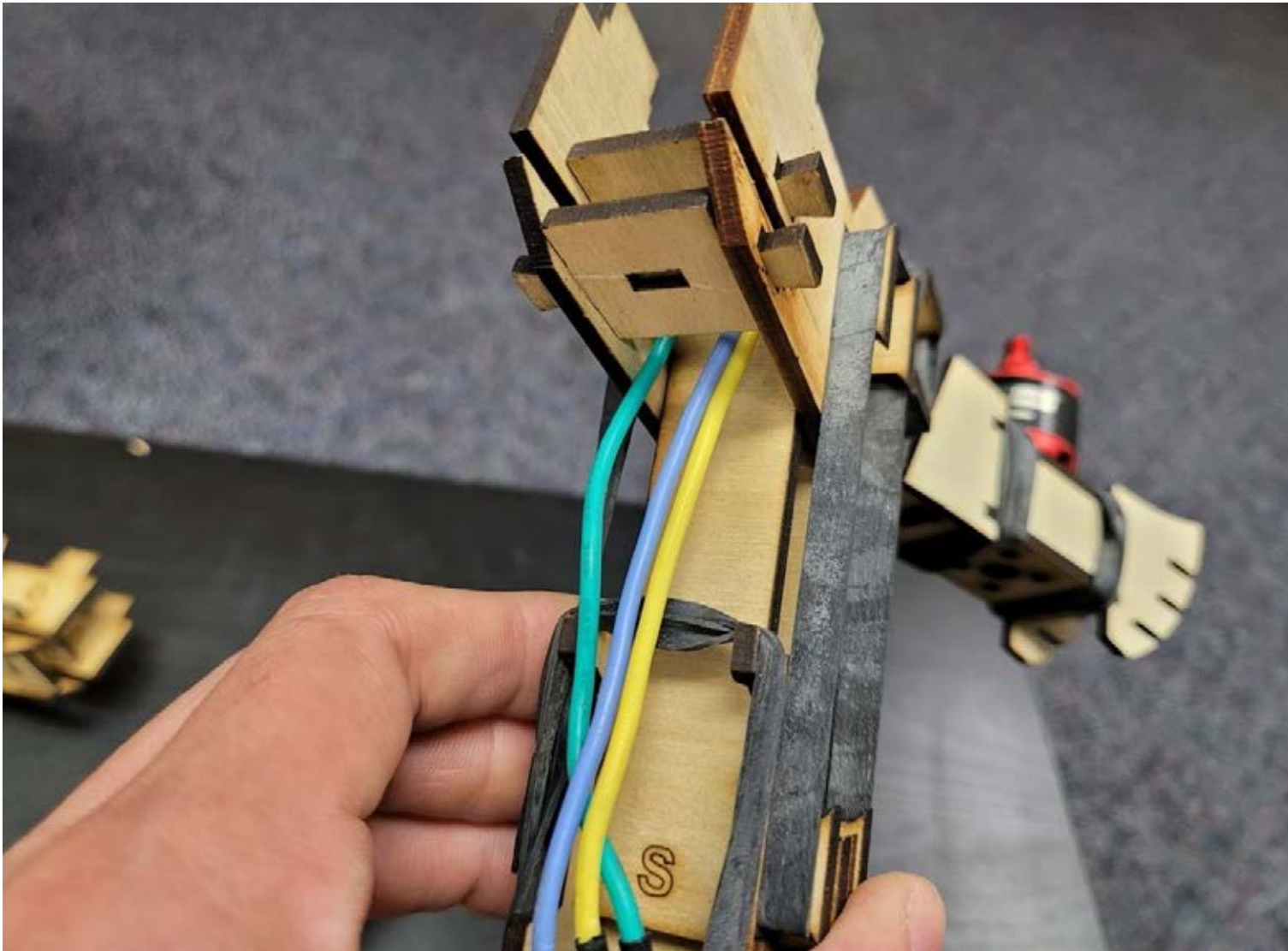
Frame Assembly – Leg 1 – Step 1: Lay out Leg 1 (Upper Right)



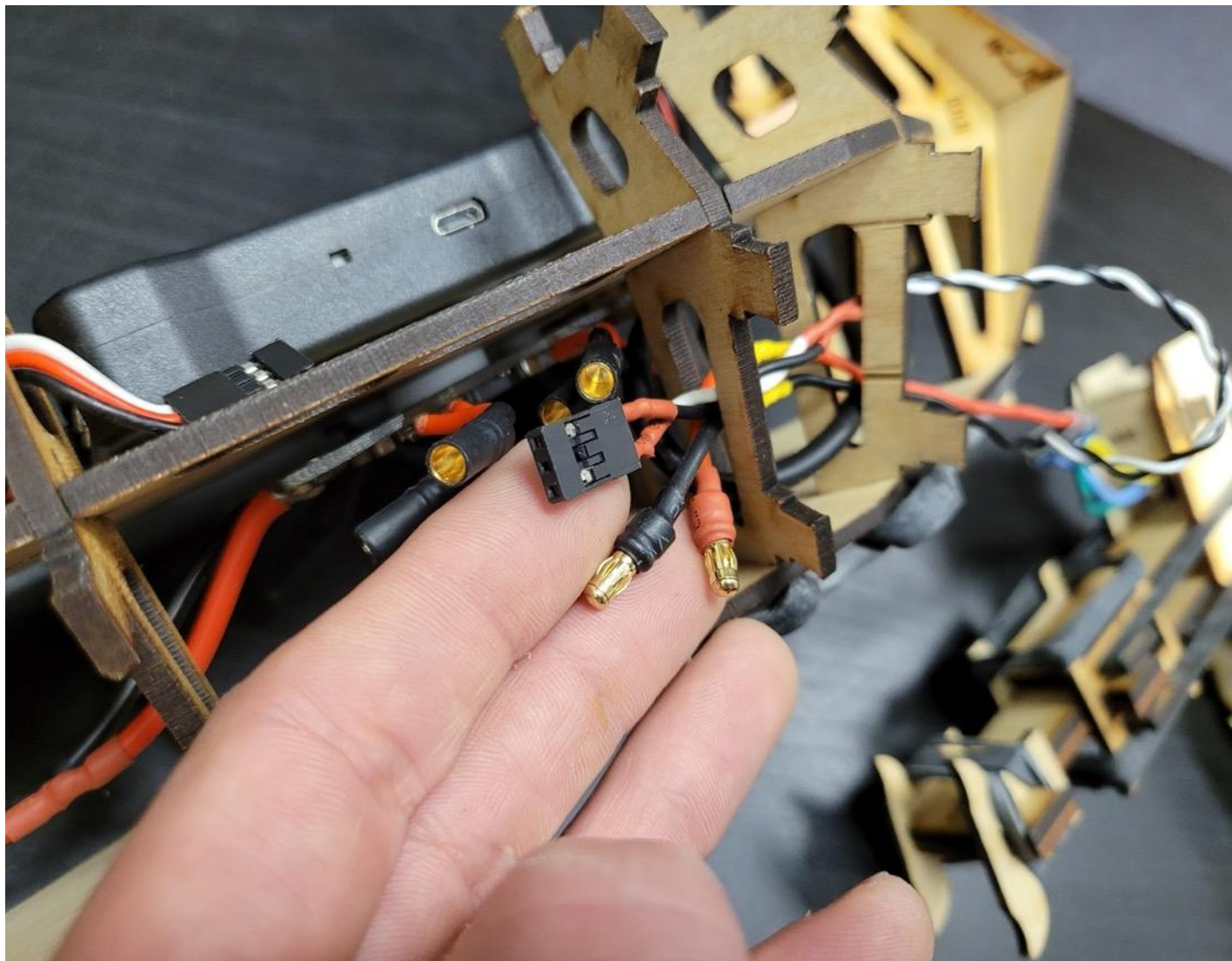
Frame Assembly – Leg 1 – Step 2a: Verify ESC Wires Routing
Remove the X locking pin from the arm-leg subassembly.



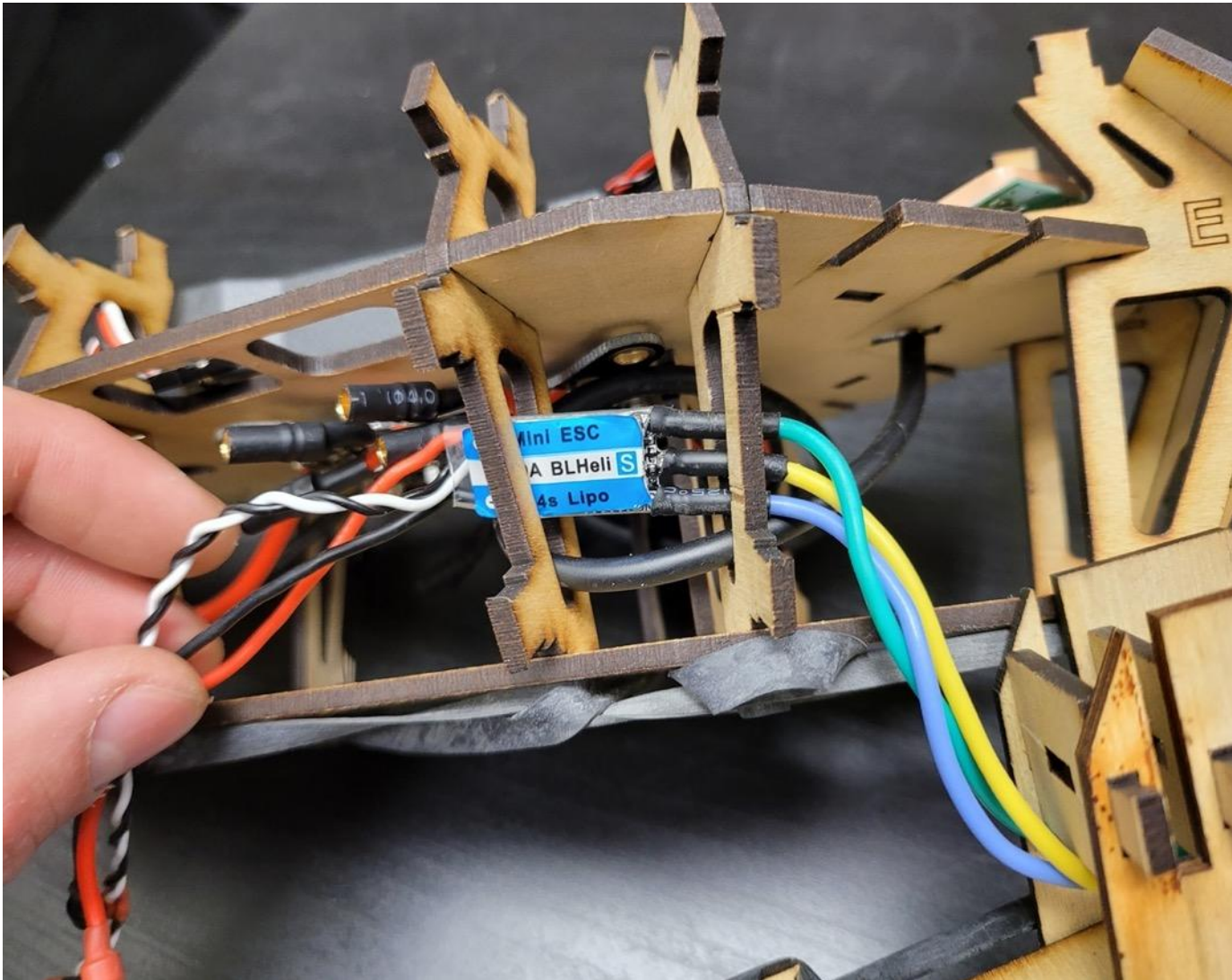
Frame Assembly – Leg 1 – Step 2b: Verify ESC Wires Routing



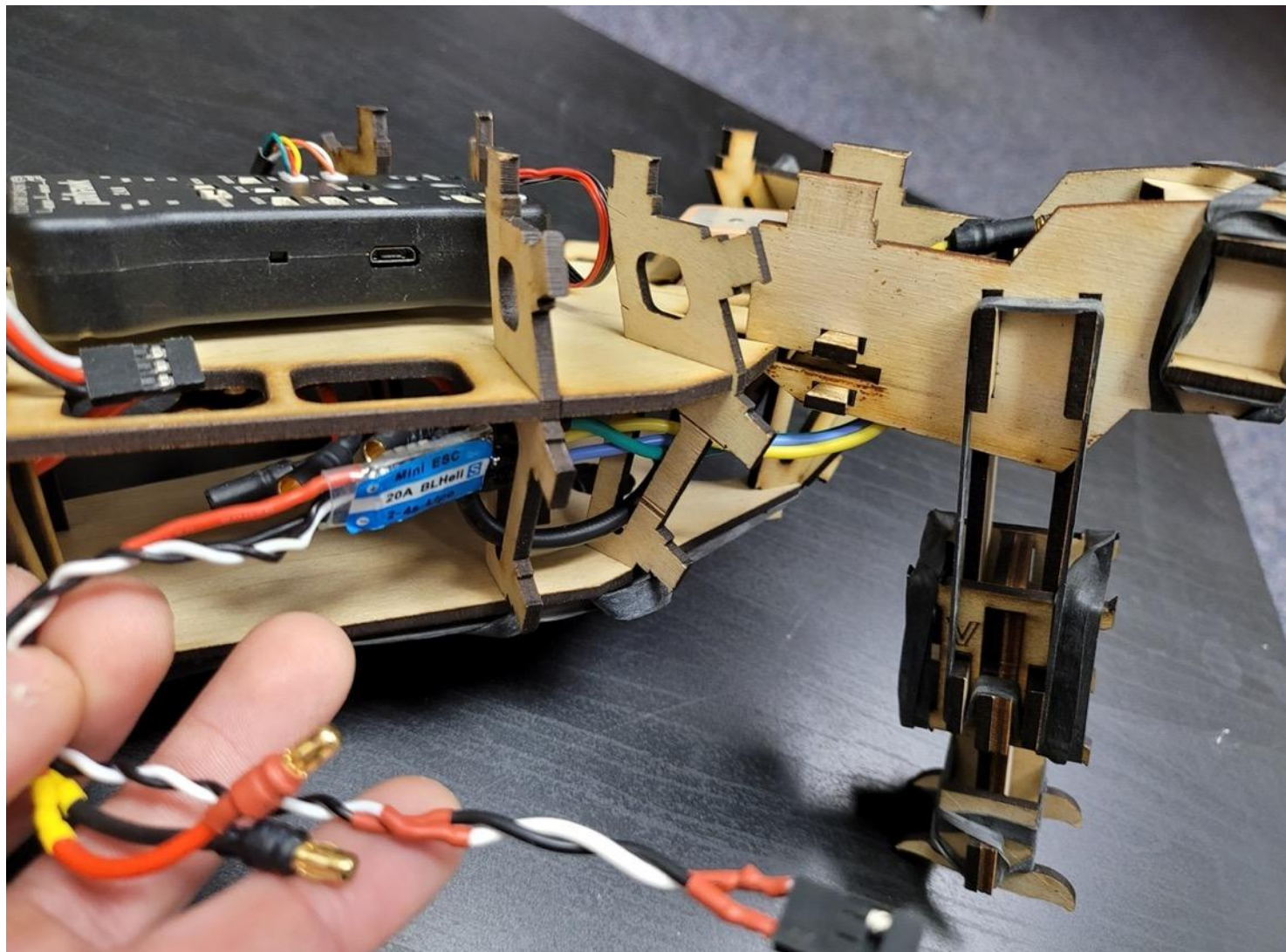
Frame Assembly – Leg 1 – Step 3a: Route ESC Wires Through Ribs



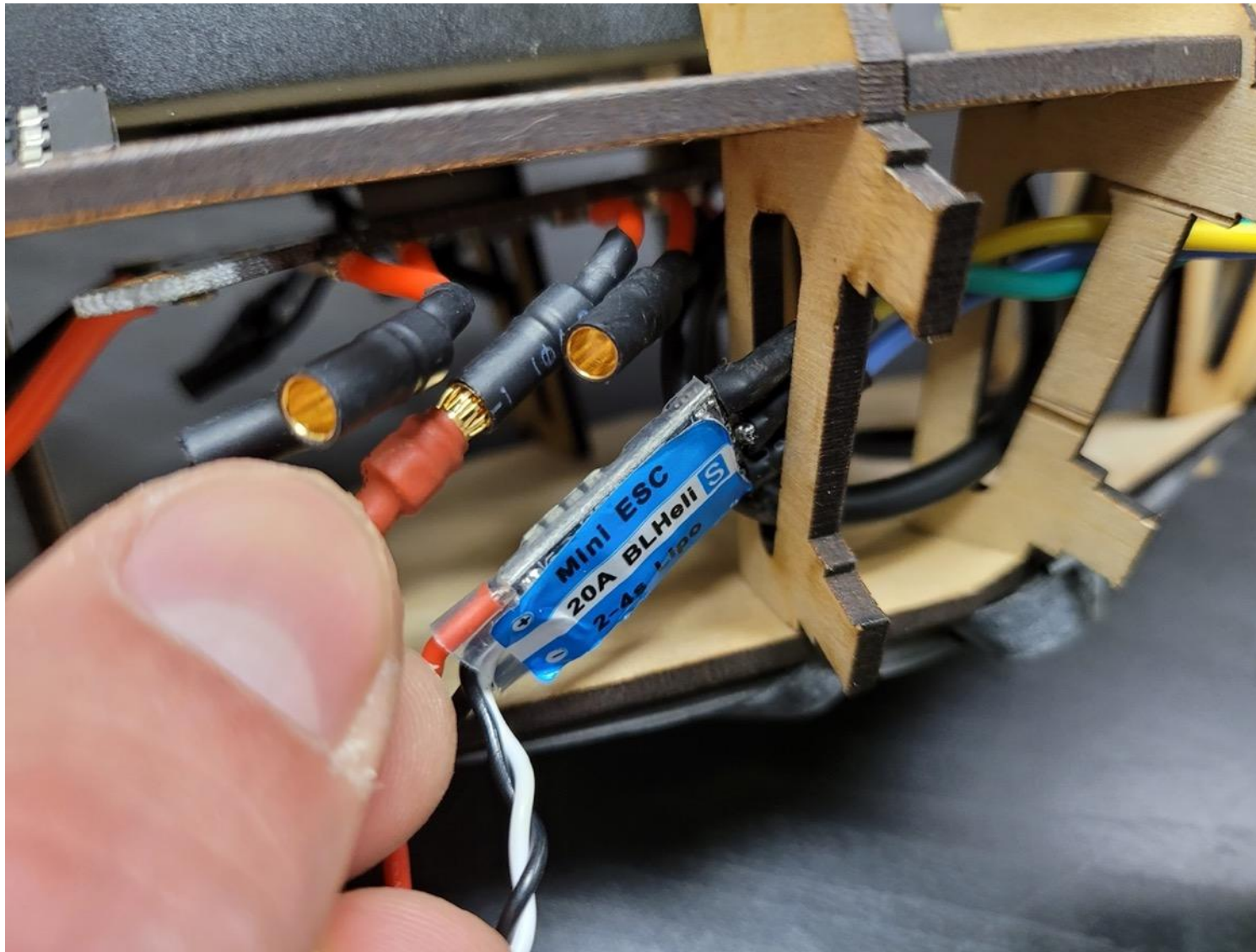
Frame Assembly – Leg 1 – Step 3b: Pull ESC Through Ribs



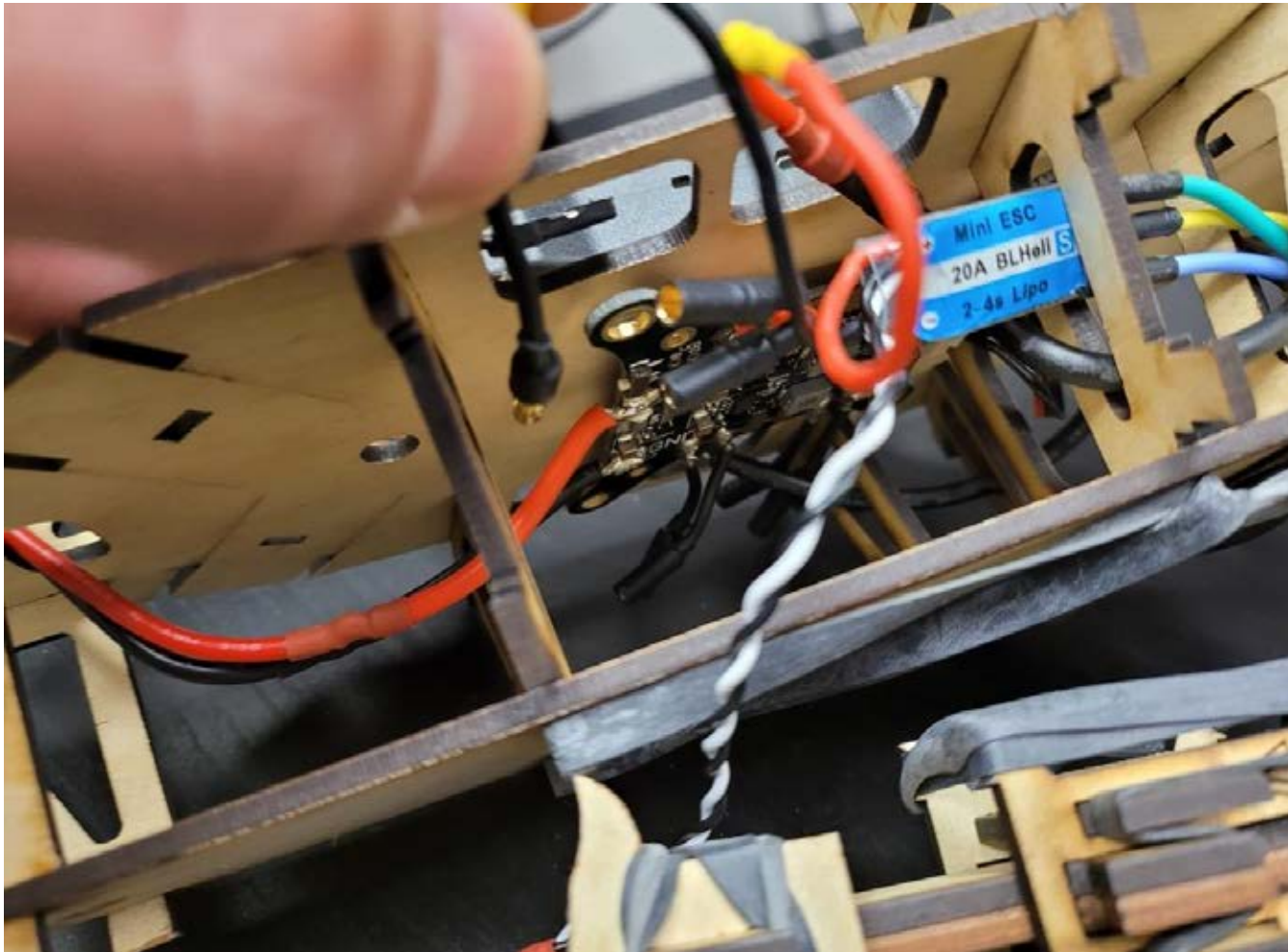
Frame Assembly – Leg 1 – Step 3c: Pull ESC Through Ribs



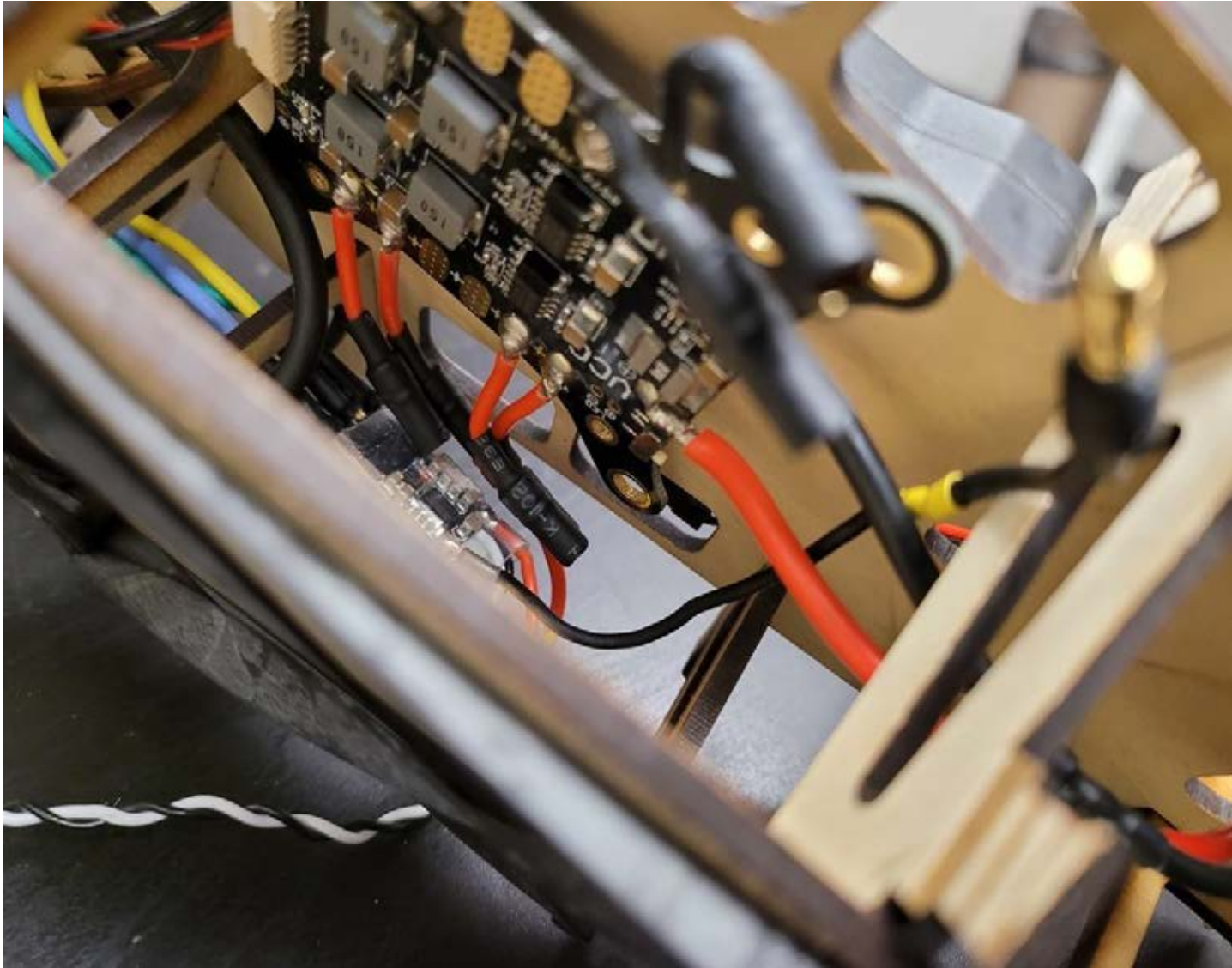
Frame Assembly – Leg 1 – Step 4a: Connect ESC Power – Positive (Red)



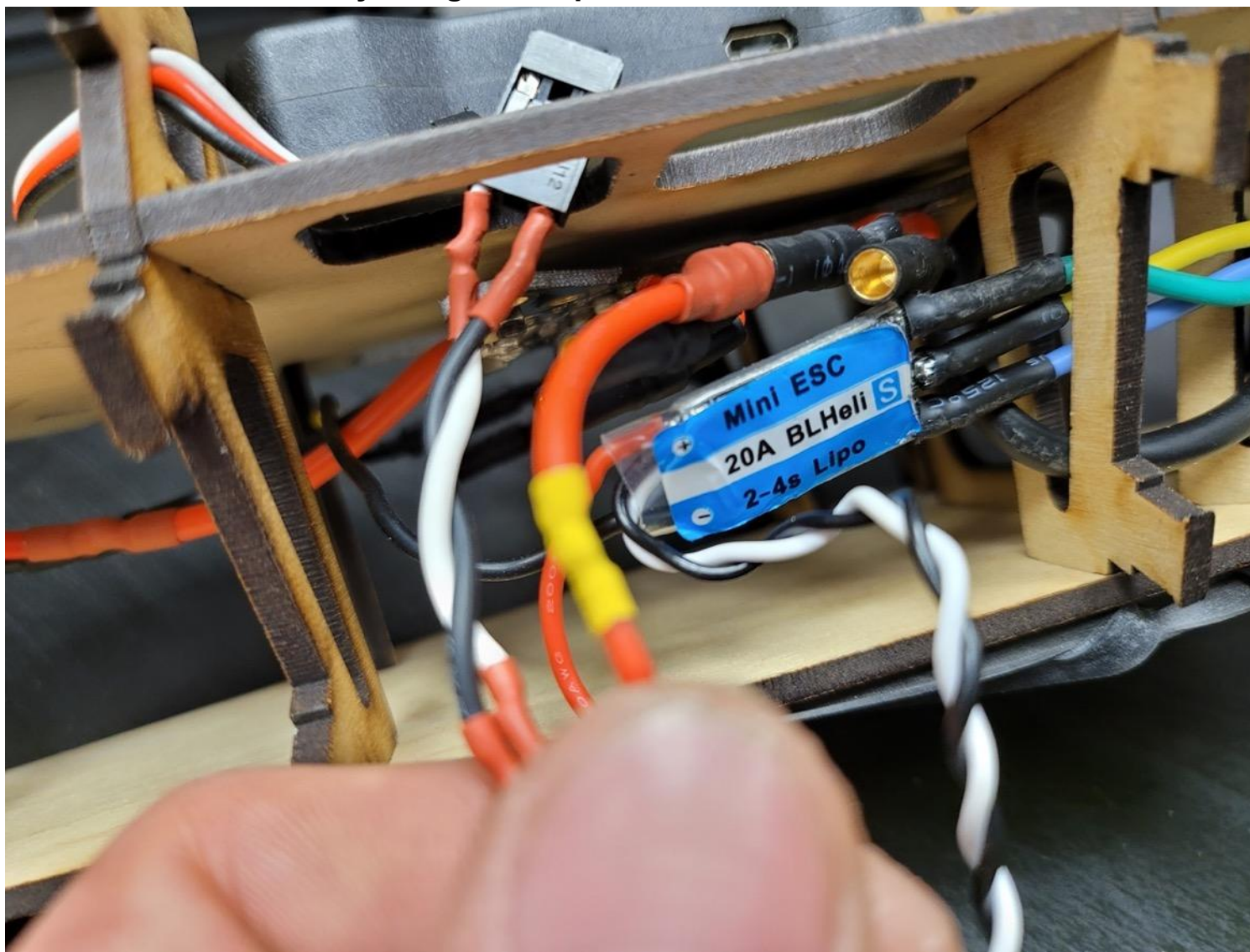
Frame Assembly – Leg 1 – Step 4b: Connect ESC Power – Route Ground Wire (Black)
Route the black ground wire between the B plate and the PDB so that it can clear the battery later.



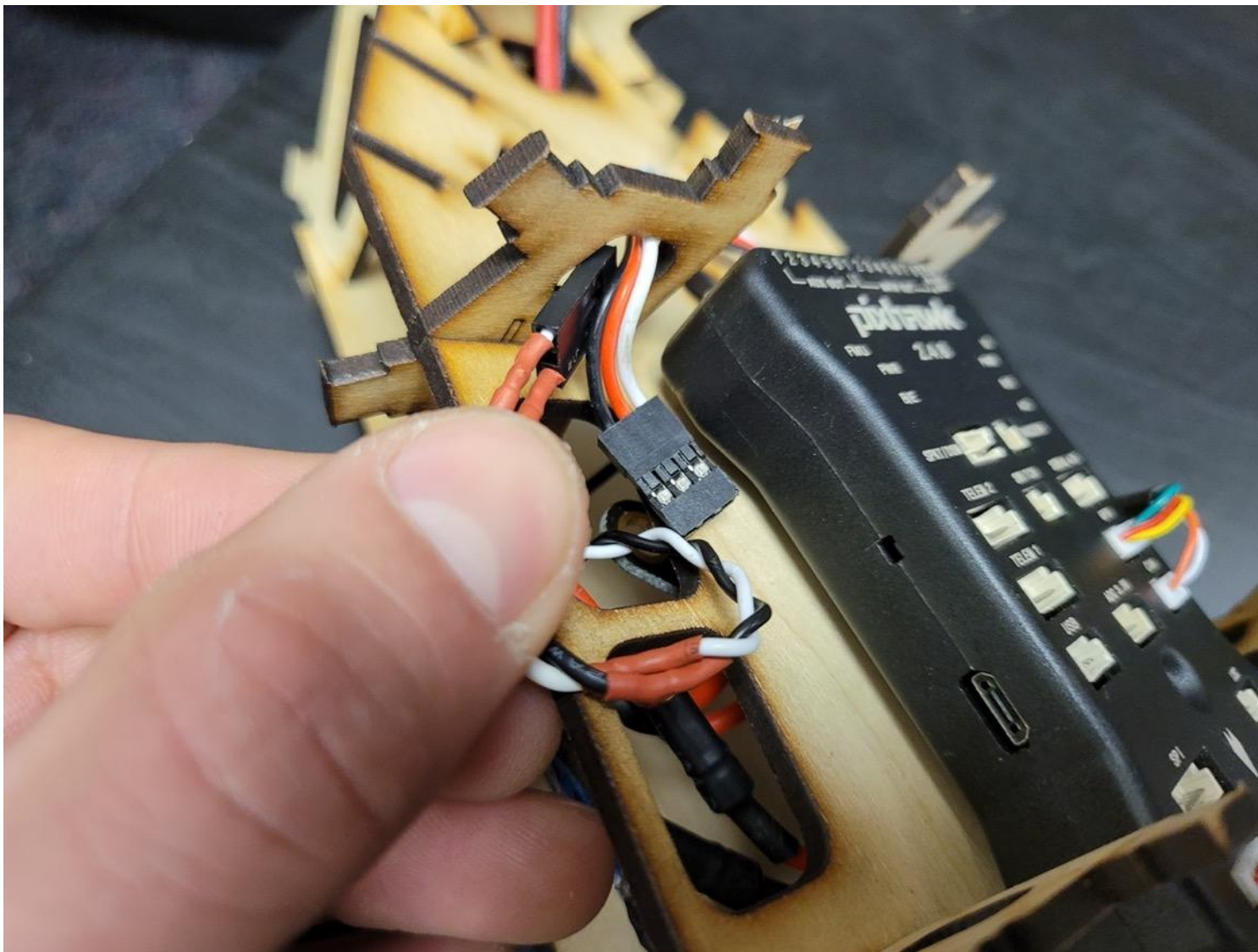
Frame Assembly – Leg 1 – Step 4c: Connect ESC Power – Connect Ground Wire (Black)



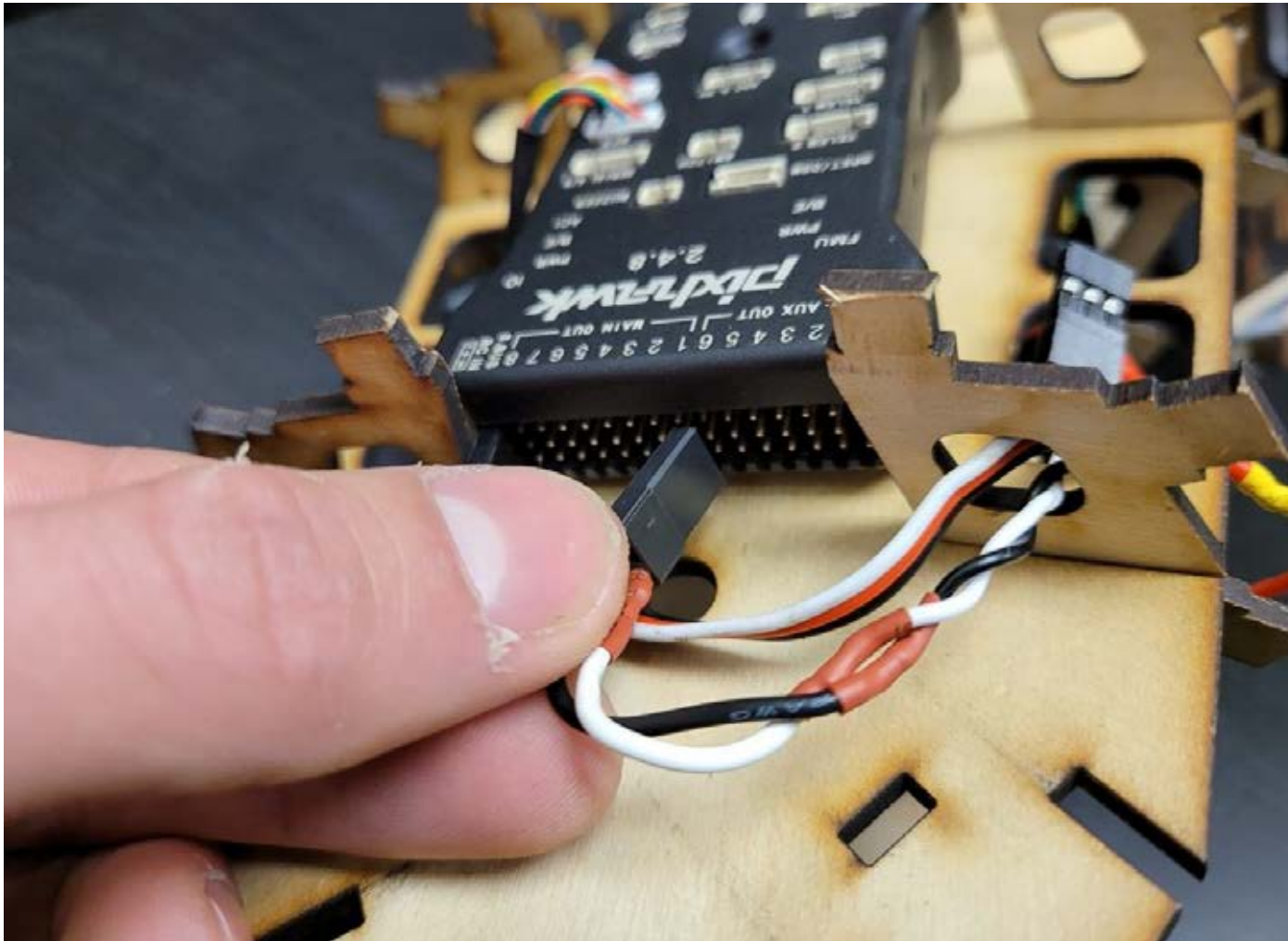
Frame Assembly – Leg 1 – Step 5a: Route ESC Control wires to FMU



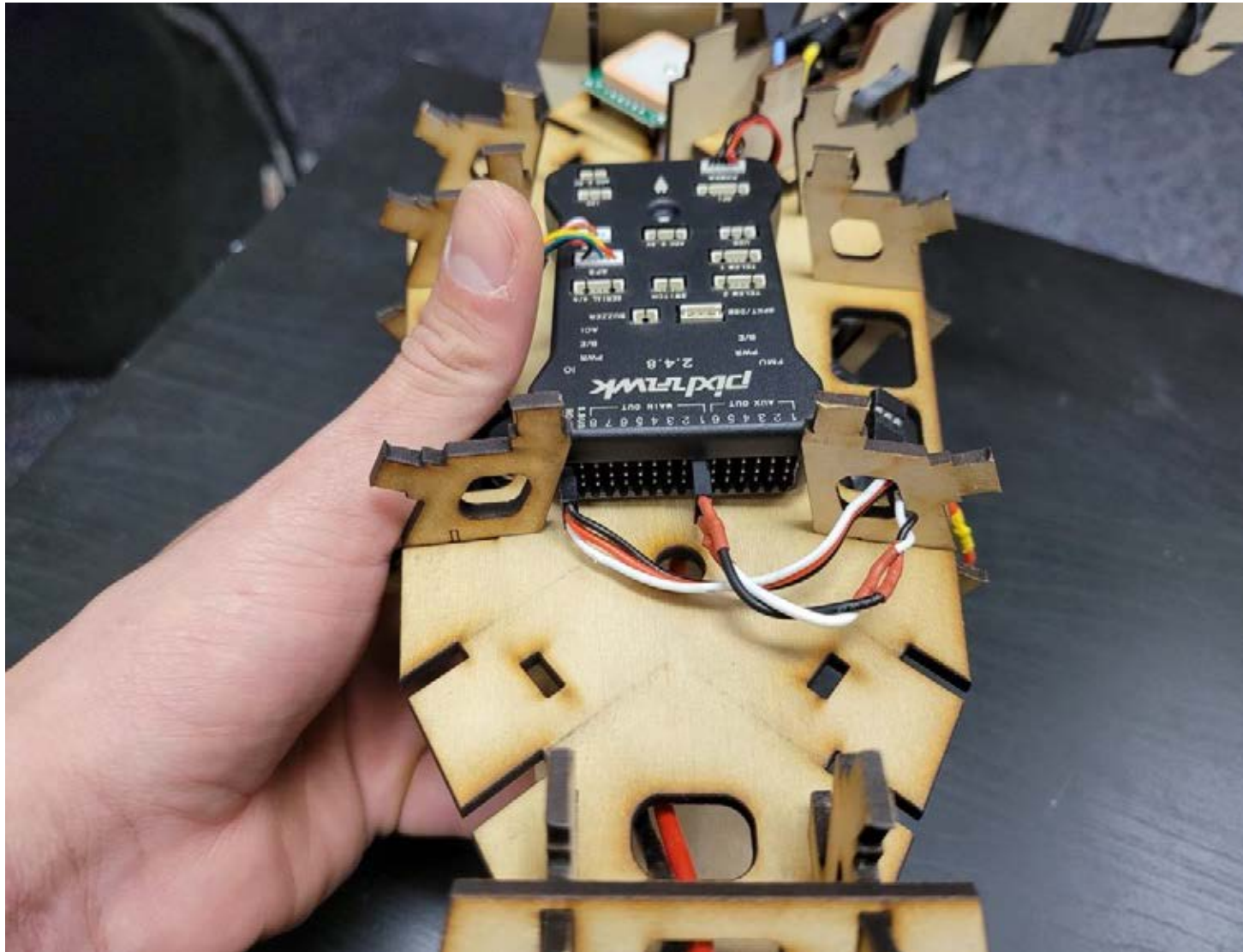
Frame Assembly – Leg 1 – Step 5b: Route ESC Control wires to FMU



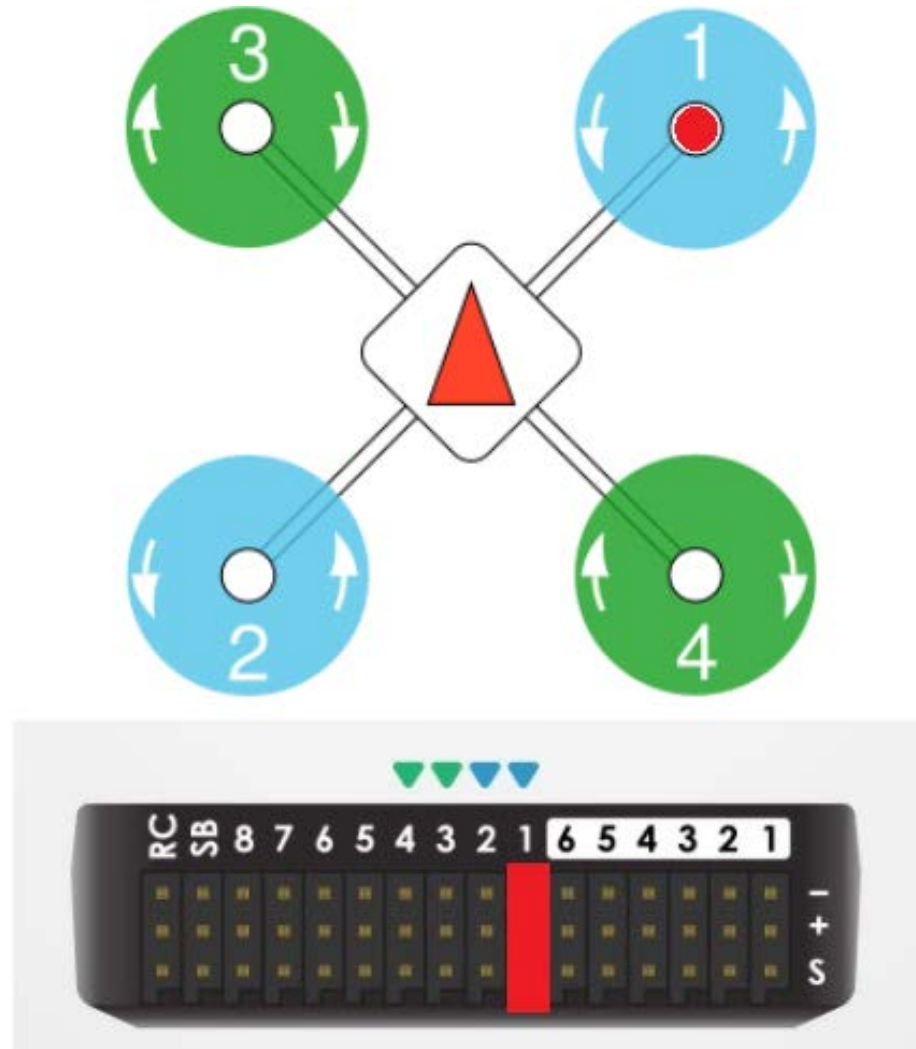
Frame Assembly – Leg 1 – Step 5c: Connect ESC Control wires to FMU Main Out 1
Make sure that the black wire is on top and the white wire is on the bottom as you plug the ESC into the FMU.



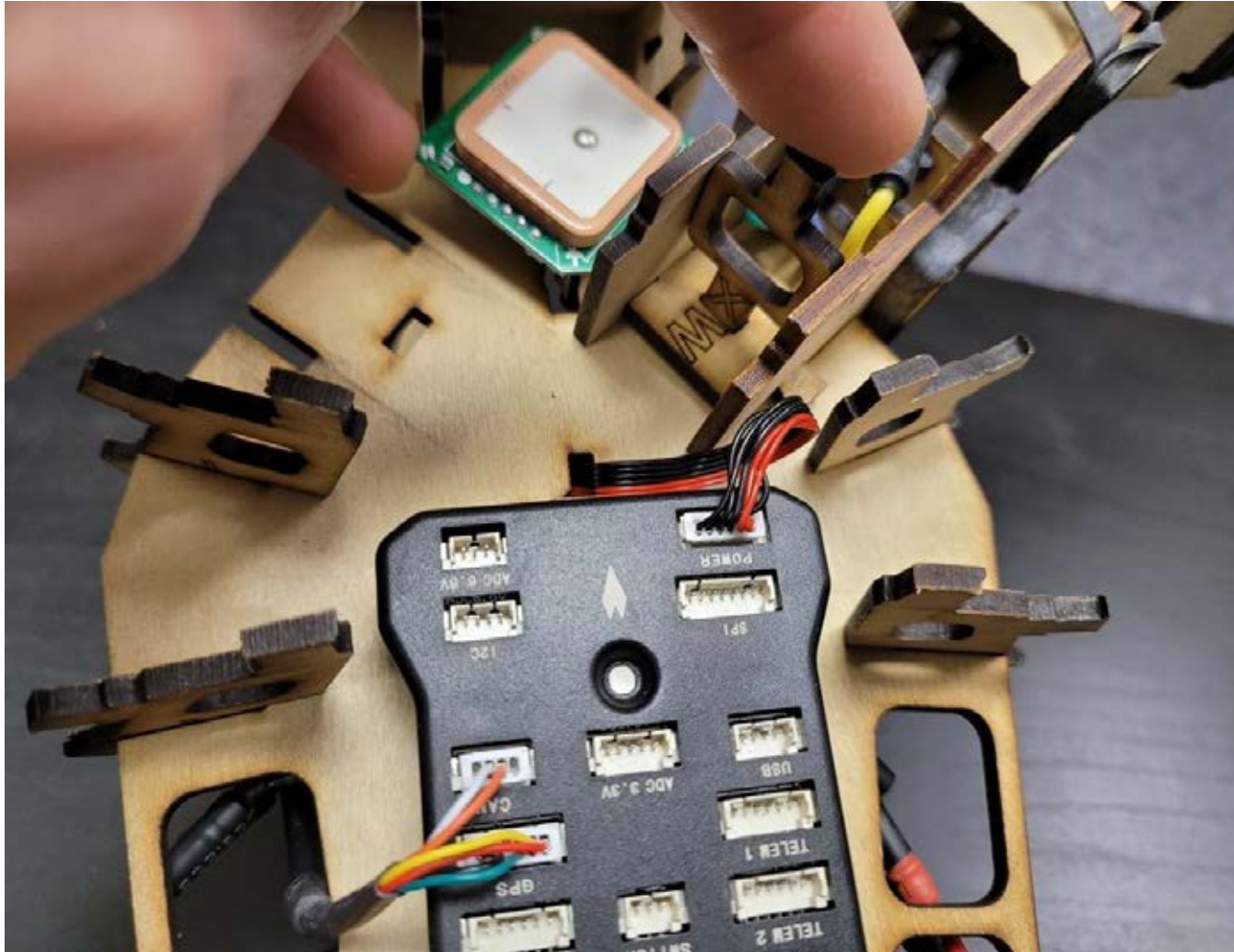
Frame Assembly – Leg 1 – ESC1 Connected to FMU Main Out 1



Frame Assembly – Leg 1 – ESC1 Connected to FMU Main Out 1

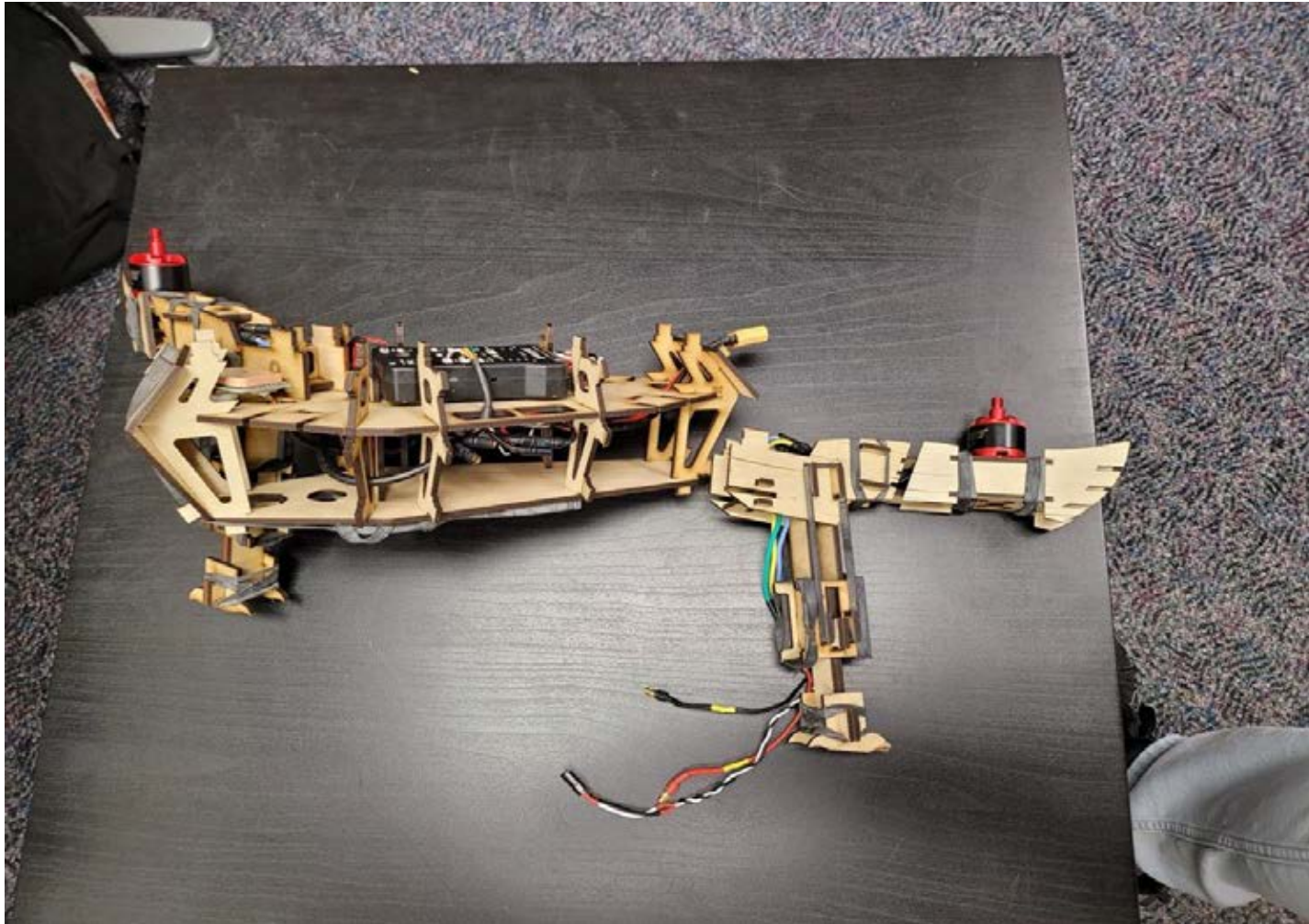


Frame Assembly – Leg 1 – Step 6: Lock Leg 1 to Frame
Put the X locking pin in to lock the arm-leg subassembly to the body.

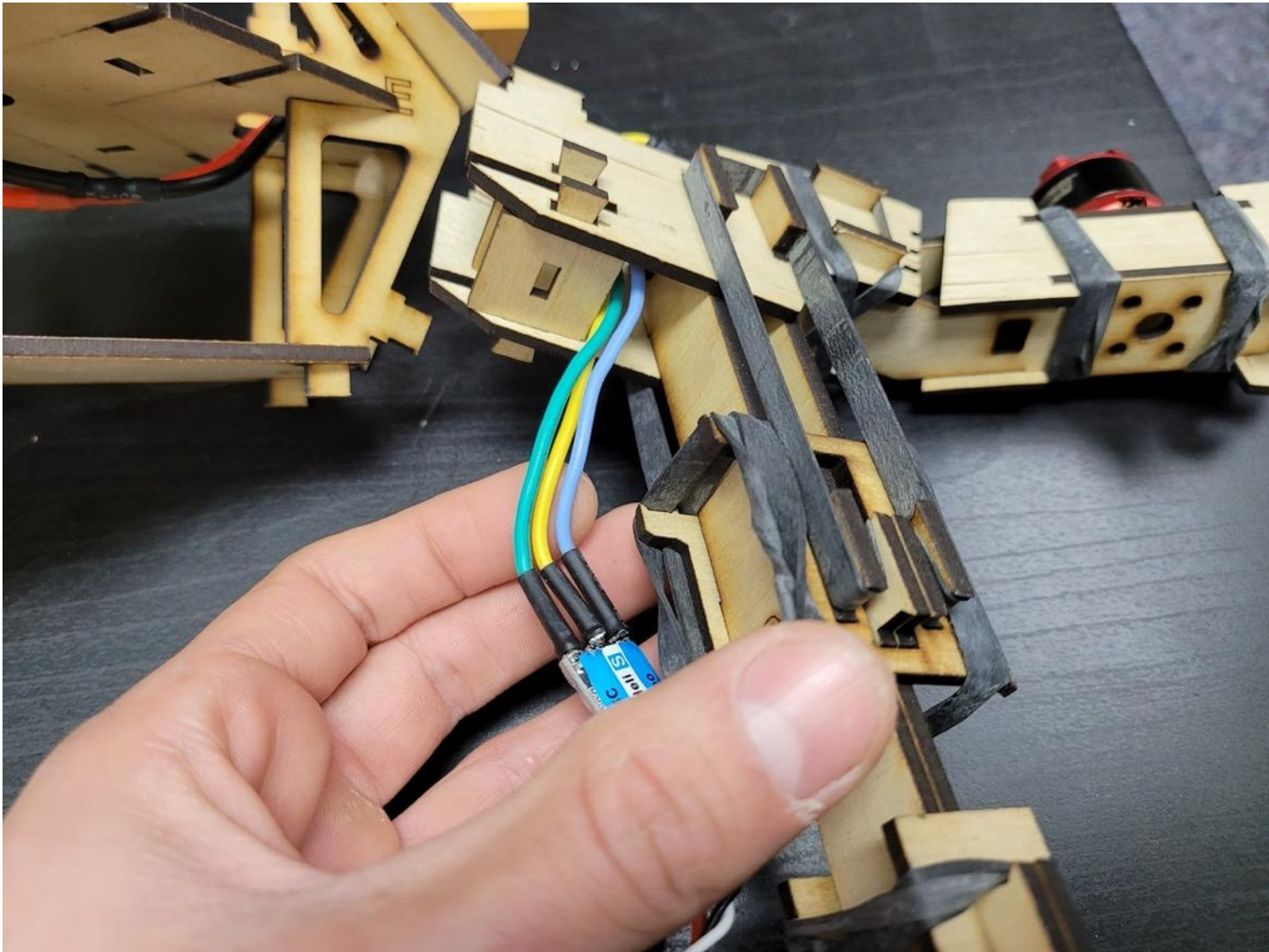


Frame Assembly – Leg 2 – Step 1: Lay out Leg 2 (Lower Left)

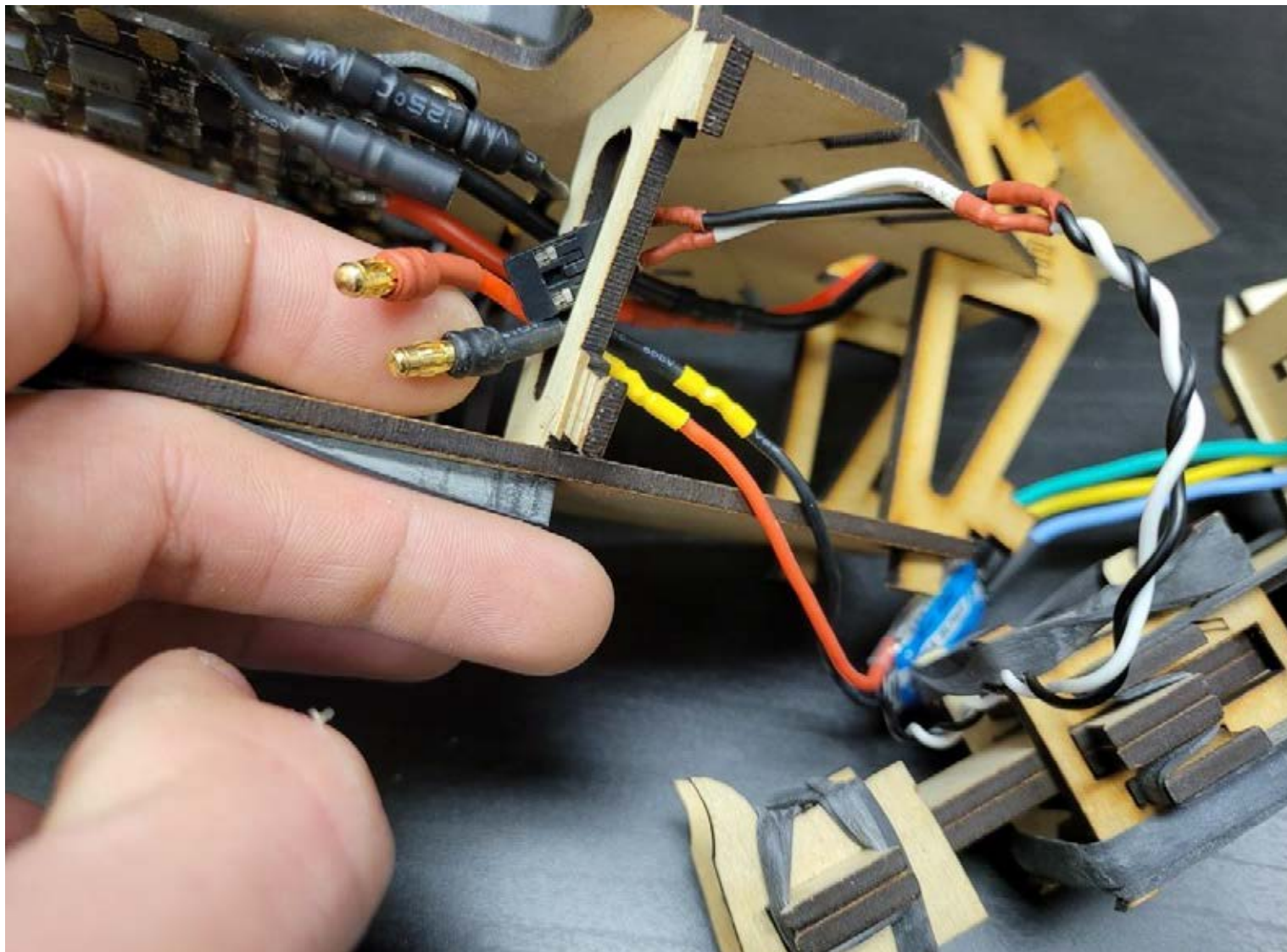
Note: Do not lock the rear arm-leg assemblies, as you will need to pull them back a little bit to be able to connect the rest of the ESC connections to the FMU.



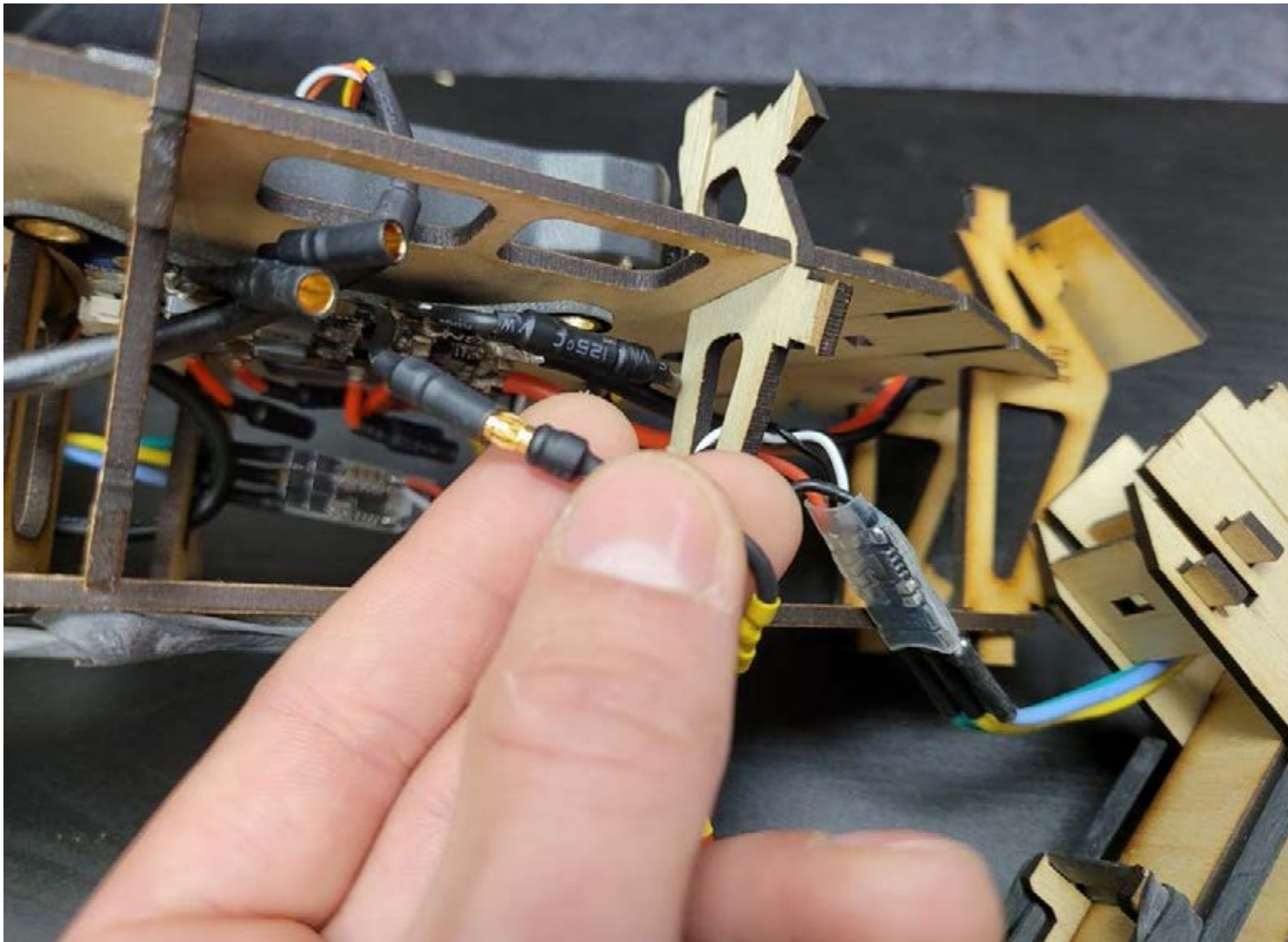
Frame Assembly – Leg 2 – Step 2: Verify ESC Wires Routing



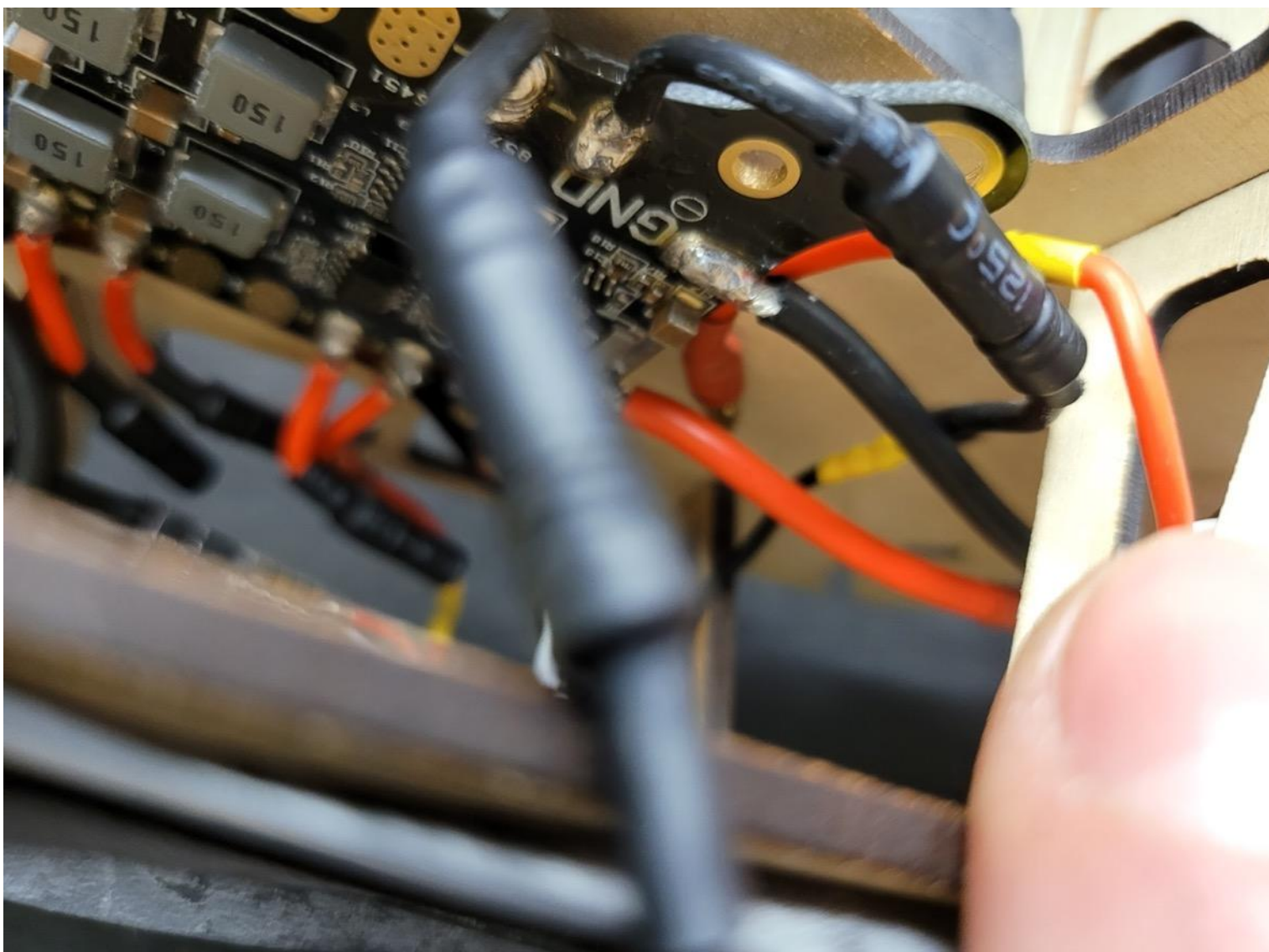
Frame Assembly – Leg 2 – Step 3a: Route ESC Wires Through Ribs



Frame Assembly – Leg 2 – Step 4a: Connect ESC Power – Connect Ground Wire (Black)

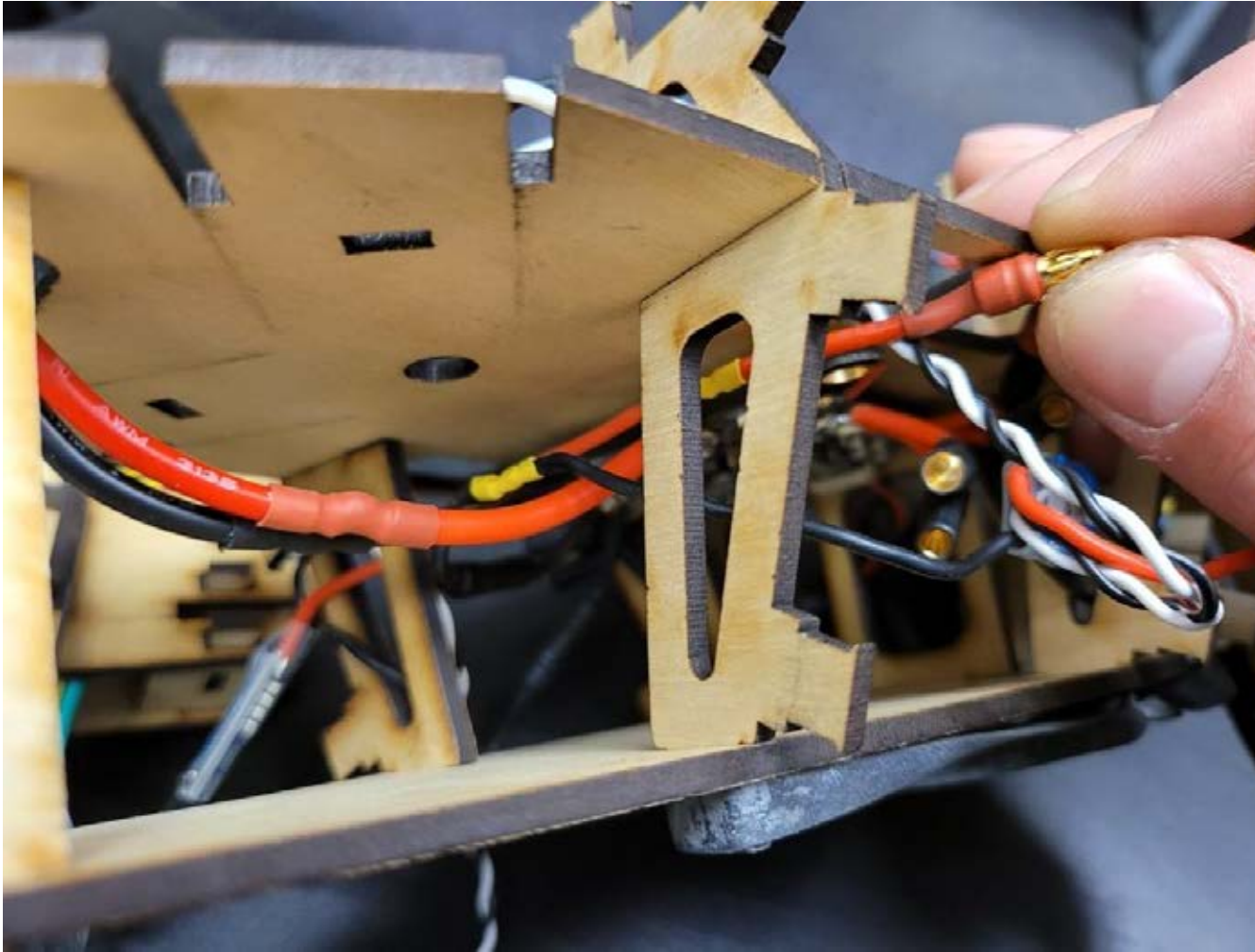


Frame Assembly – Leg 2 – Step 4b: Connect ESC Power – Connect Ground Wire (Black)

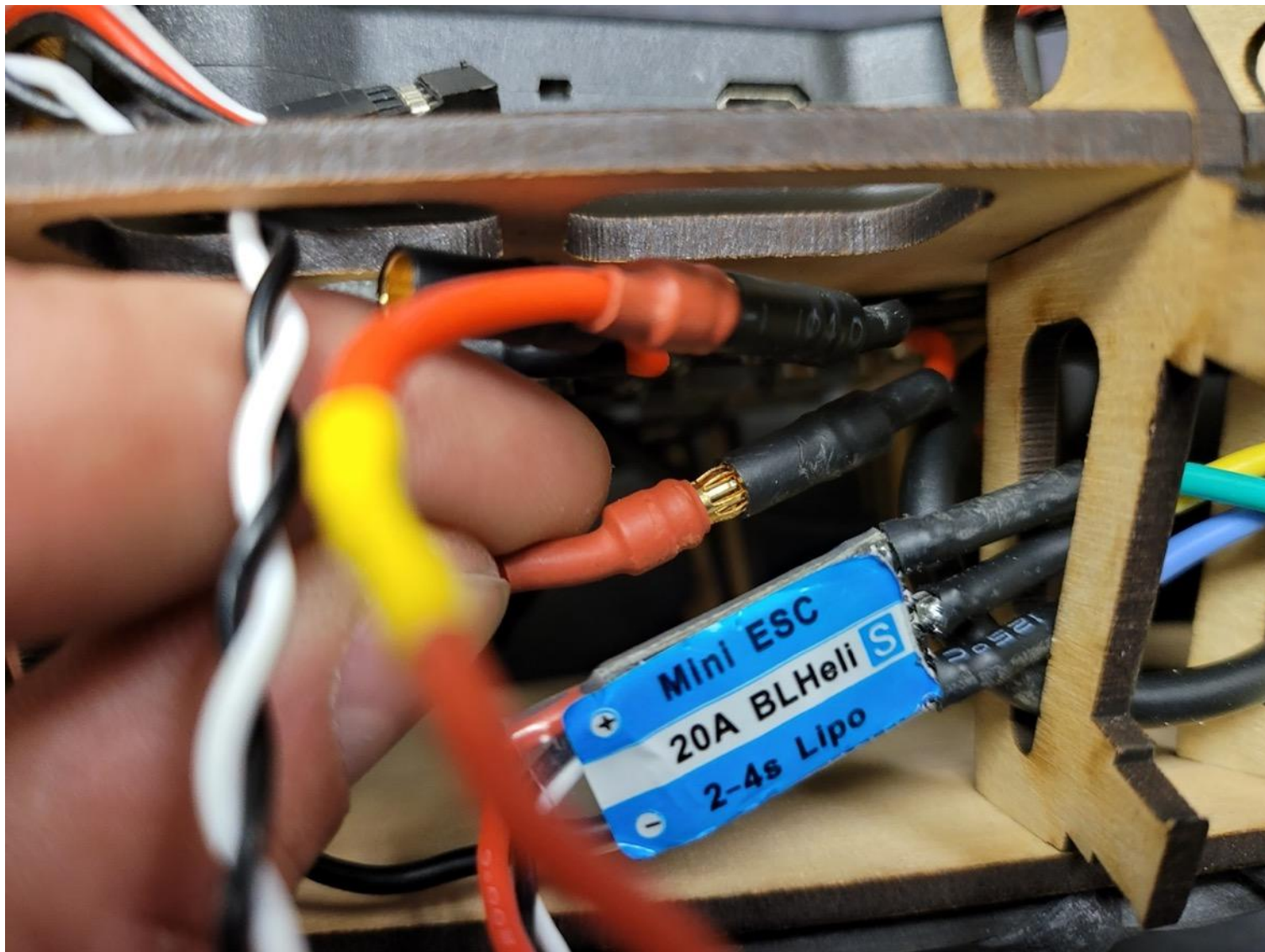


Frame Assembly – Leg 2 – Step 4c: Connect ESC Power – Route Positive Wire (Red)

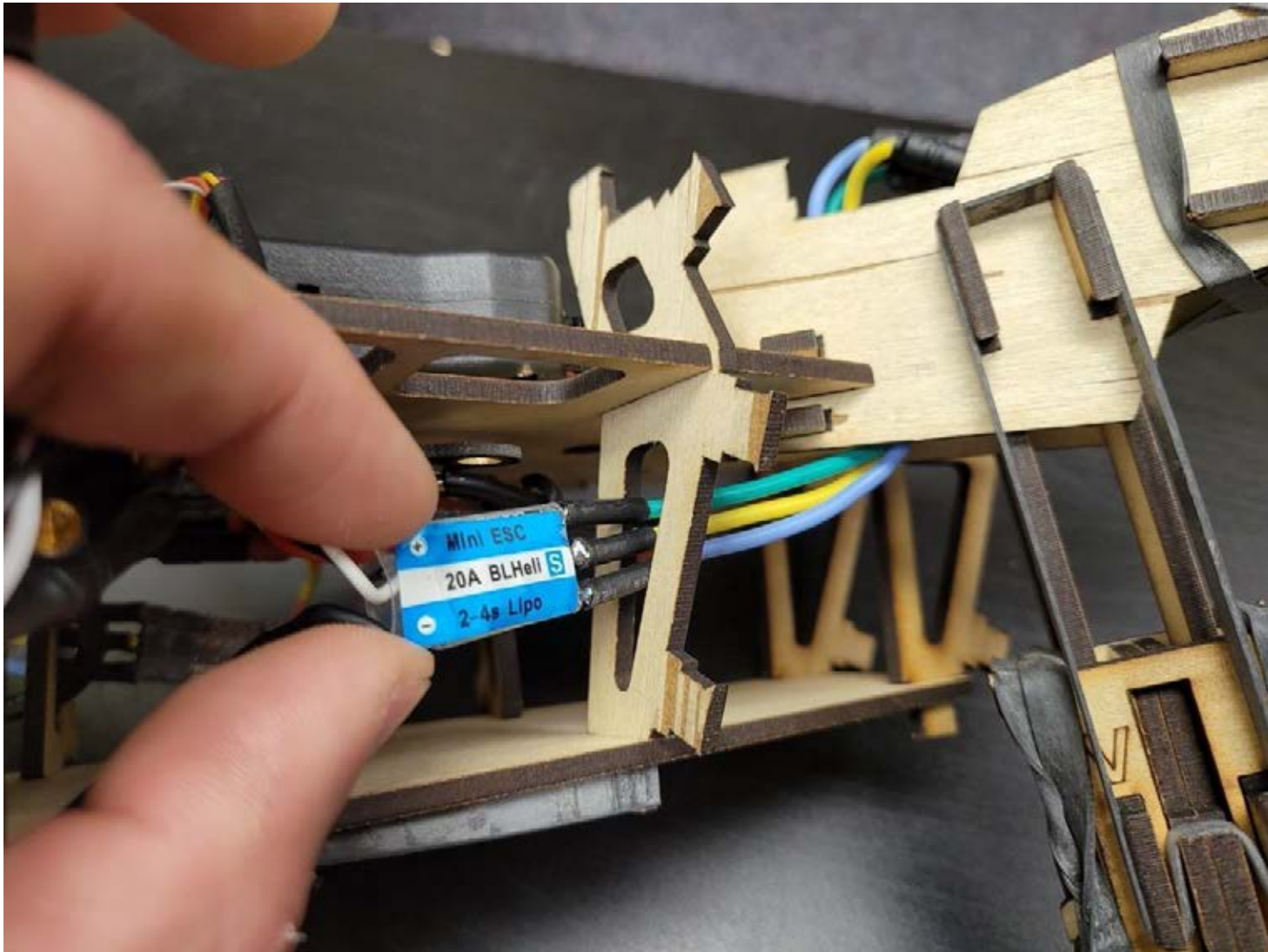
Run the red power wire between the B plate and the PDB to keep it out of the way of the center area where the battery is going to be.



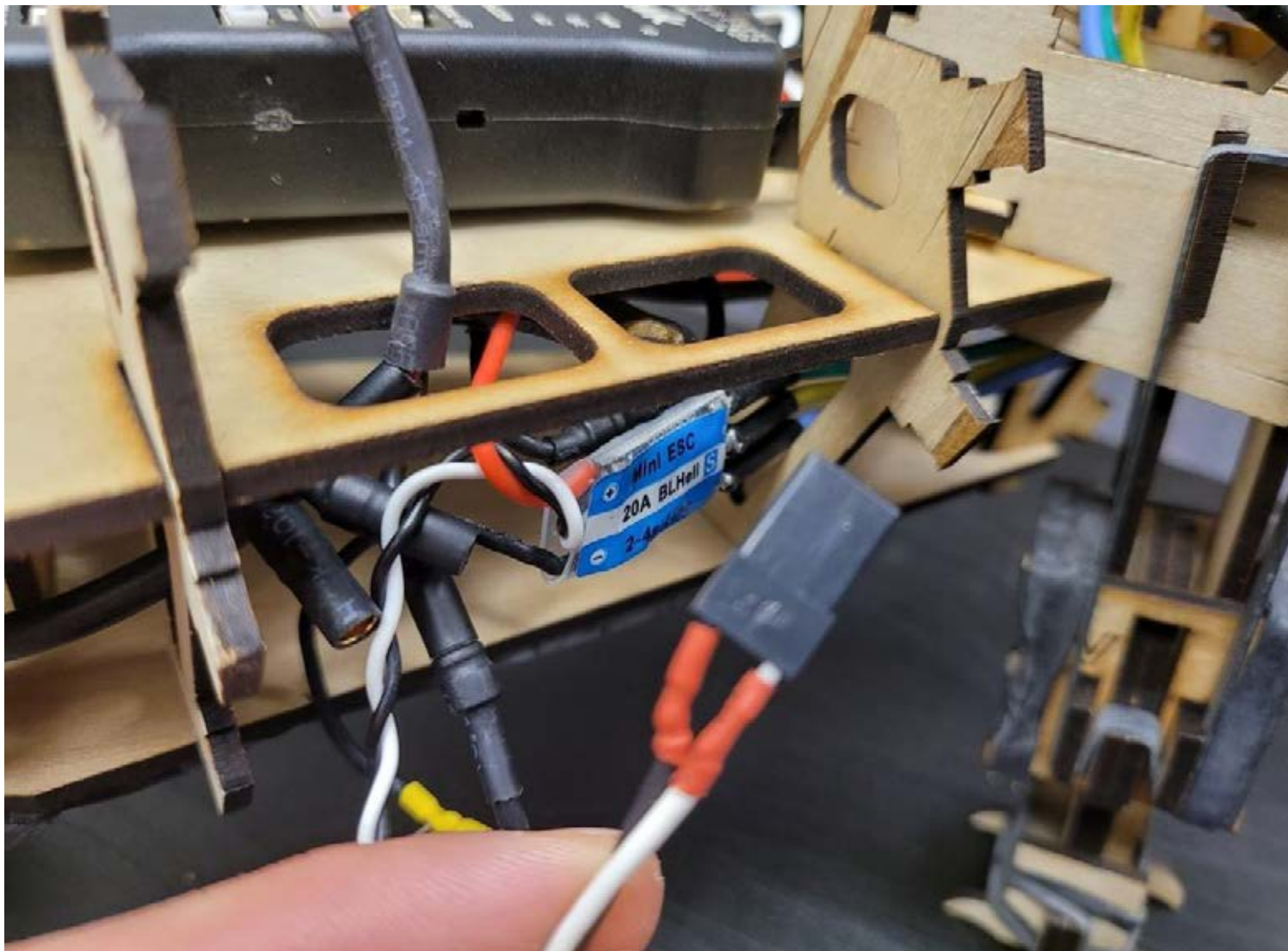
Frame Assembly – Leg 2 – Step 4d: Connect ESC Power – Positive (Red



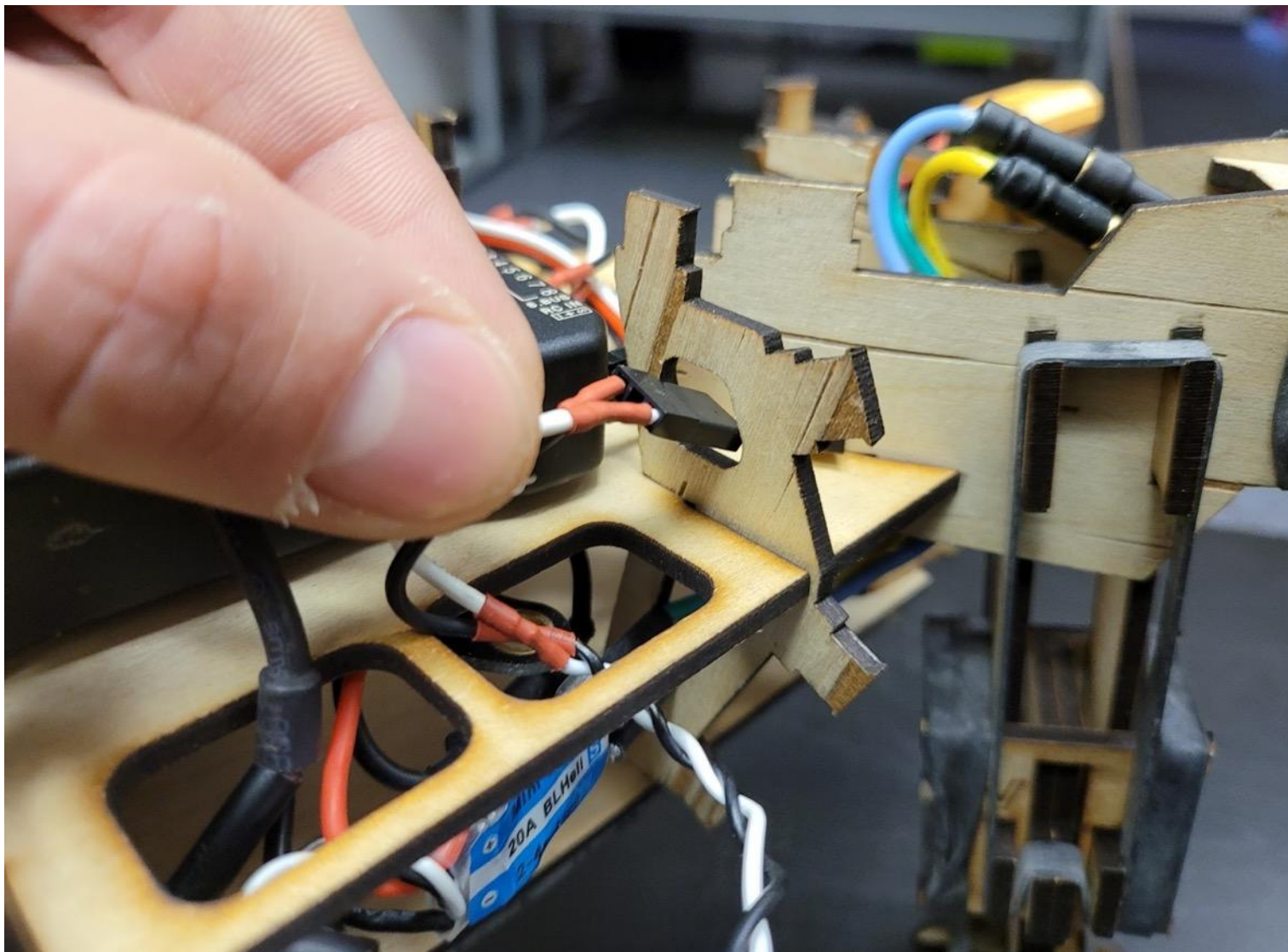
Frame Assembly – Leg 2 – Step 5: Pull ESC Through Ribs



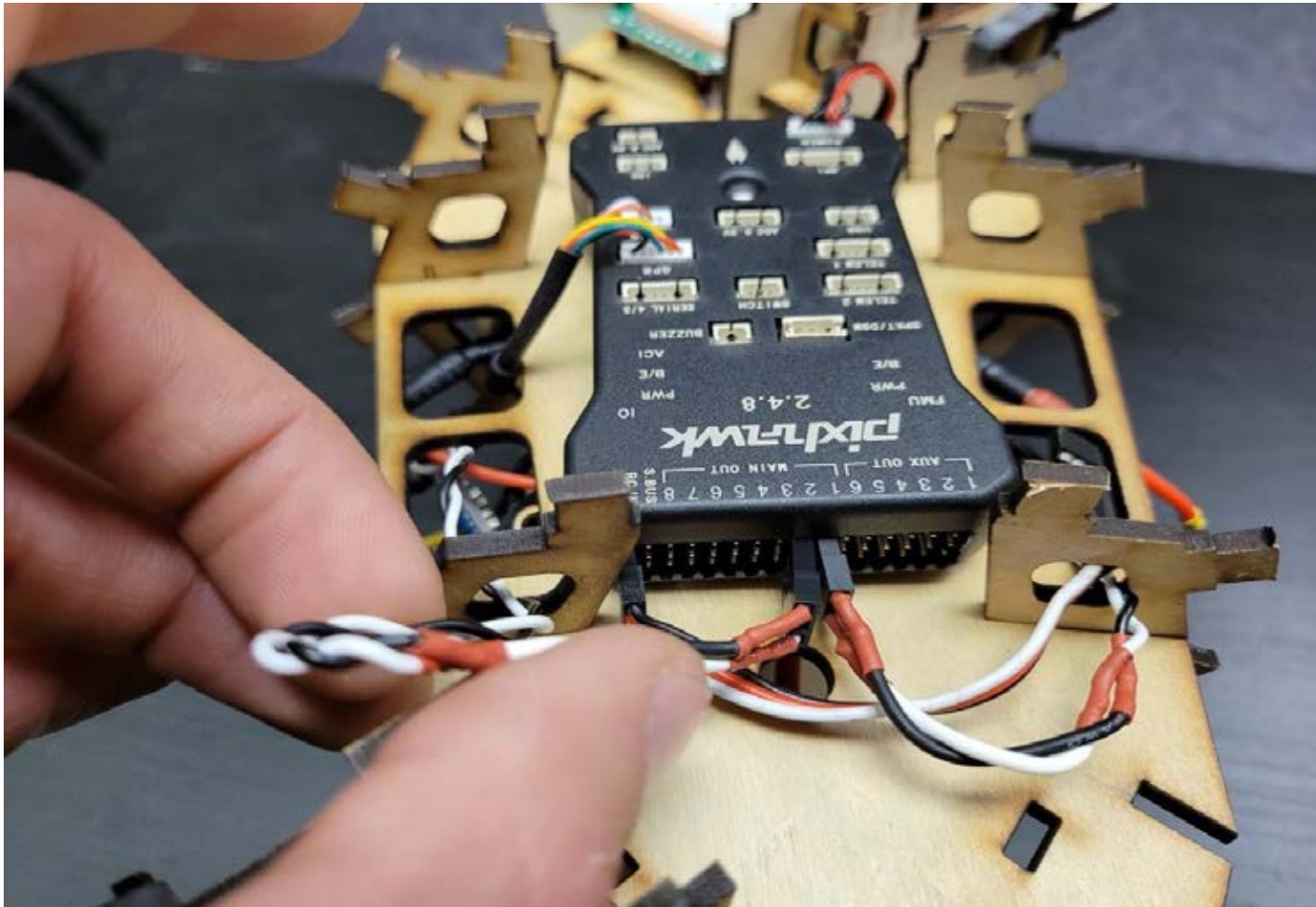
Frame Assembly – Leg 2 – Step 6a: Route ESC Control wires to FMU



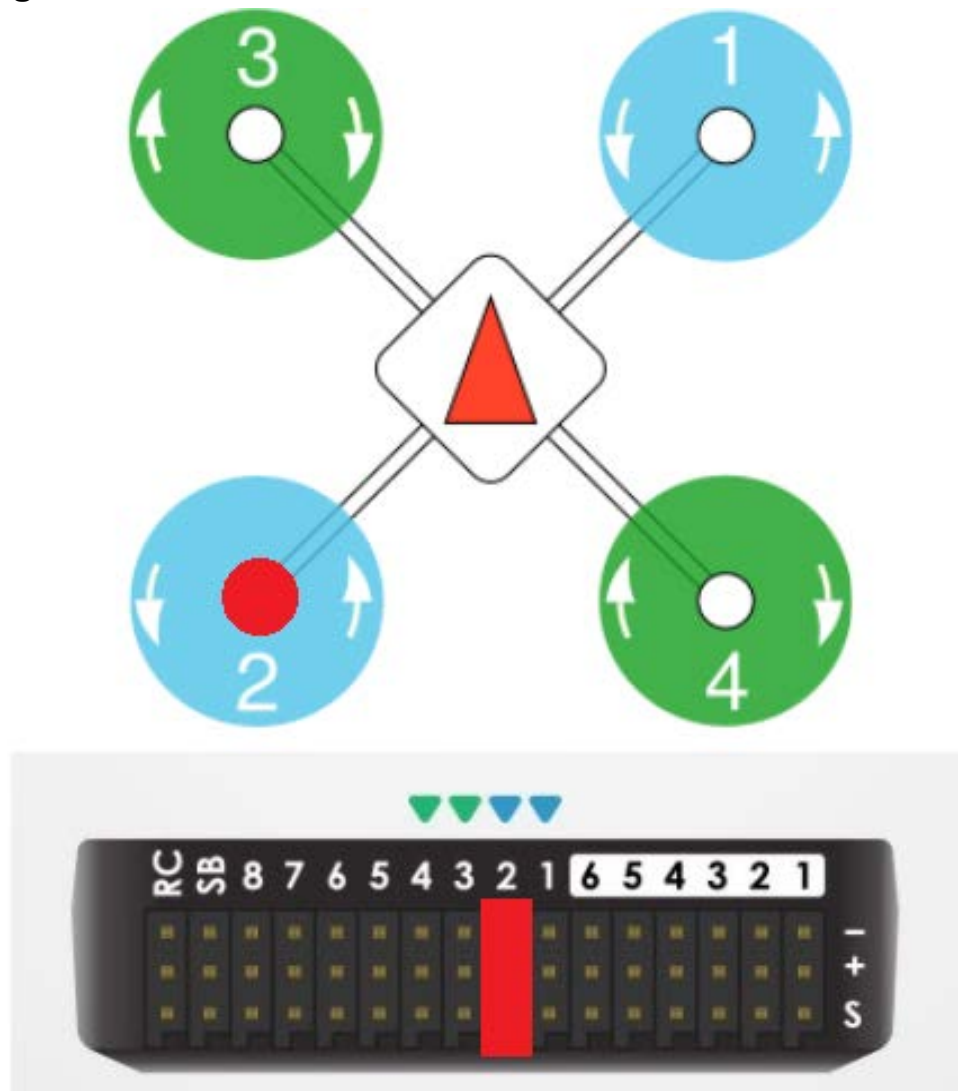
Frame Assembly – Leg 2 – Step 6b: Route ESC Control wires to FMU



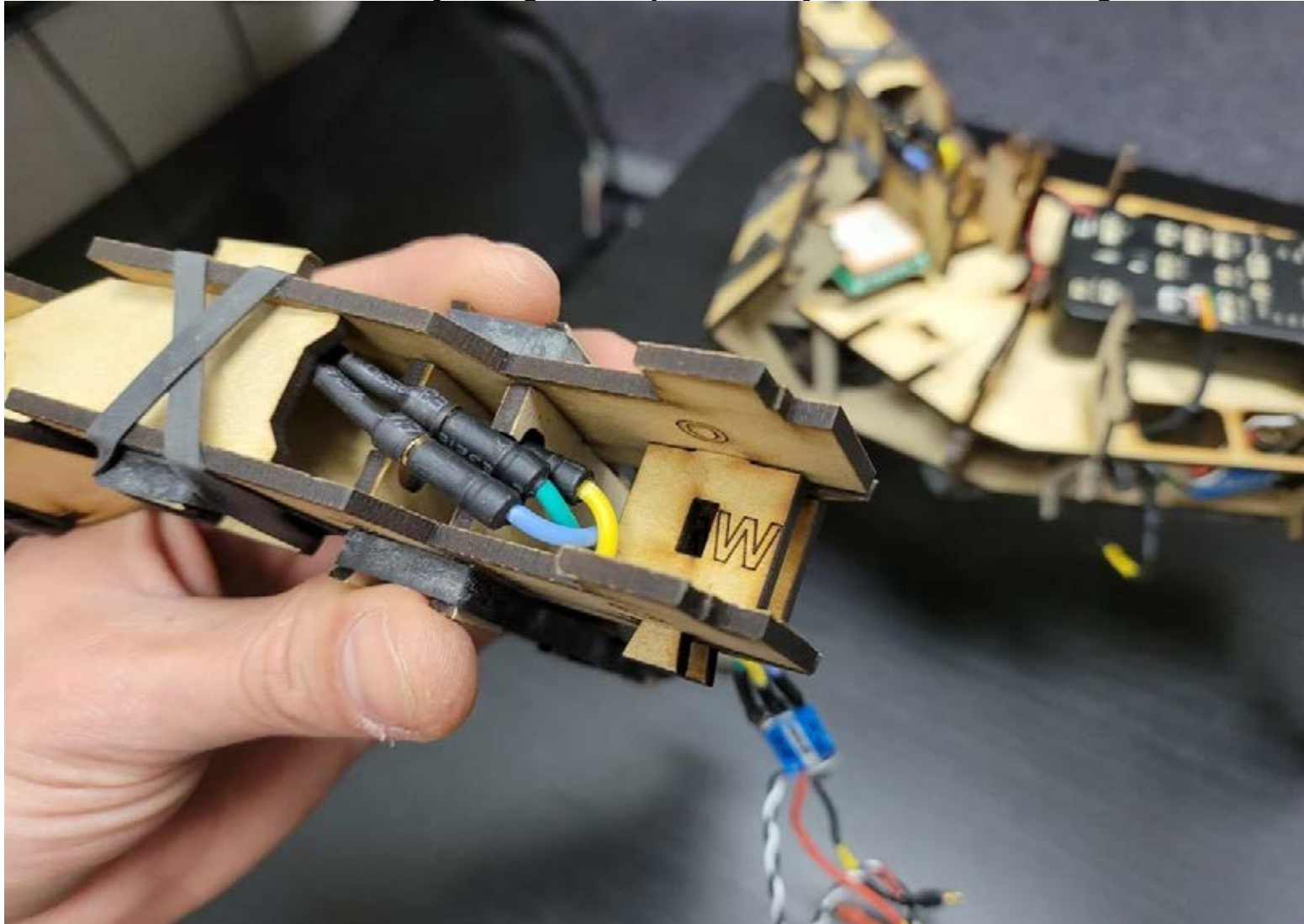
Frame Assembly – Leg 2 – Step 6c: Connect ESC Control wires to FMU Main Out 2
Note that the left rear leg (2) has been pulled back to allow your fingers to get in and plug ESC/Motor 2 into the FMU. Again, the black wire is on the top of the connector when looking down at the FMU.



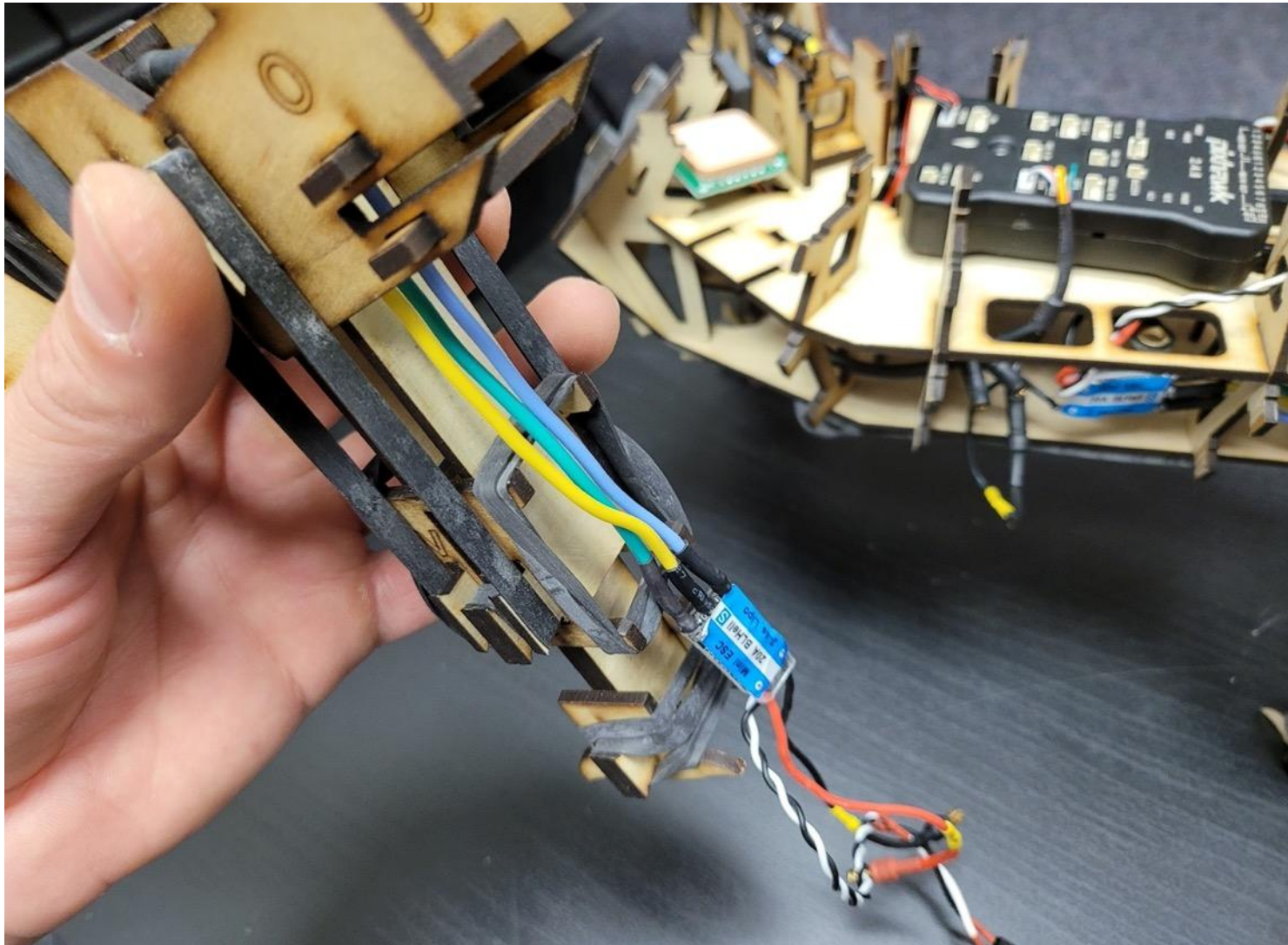
Frame Assembly – Leg 2 – ESC2 Connected to FMU Main Out 2



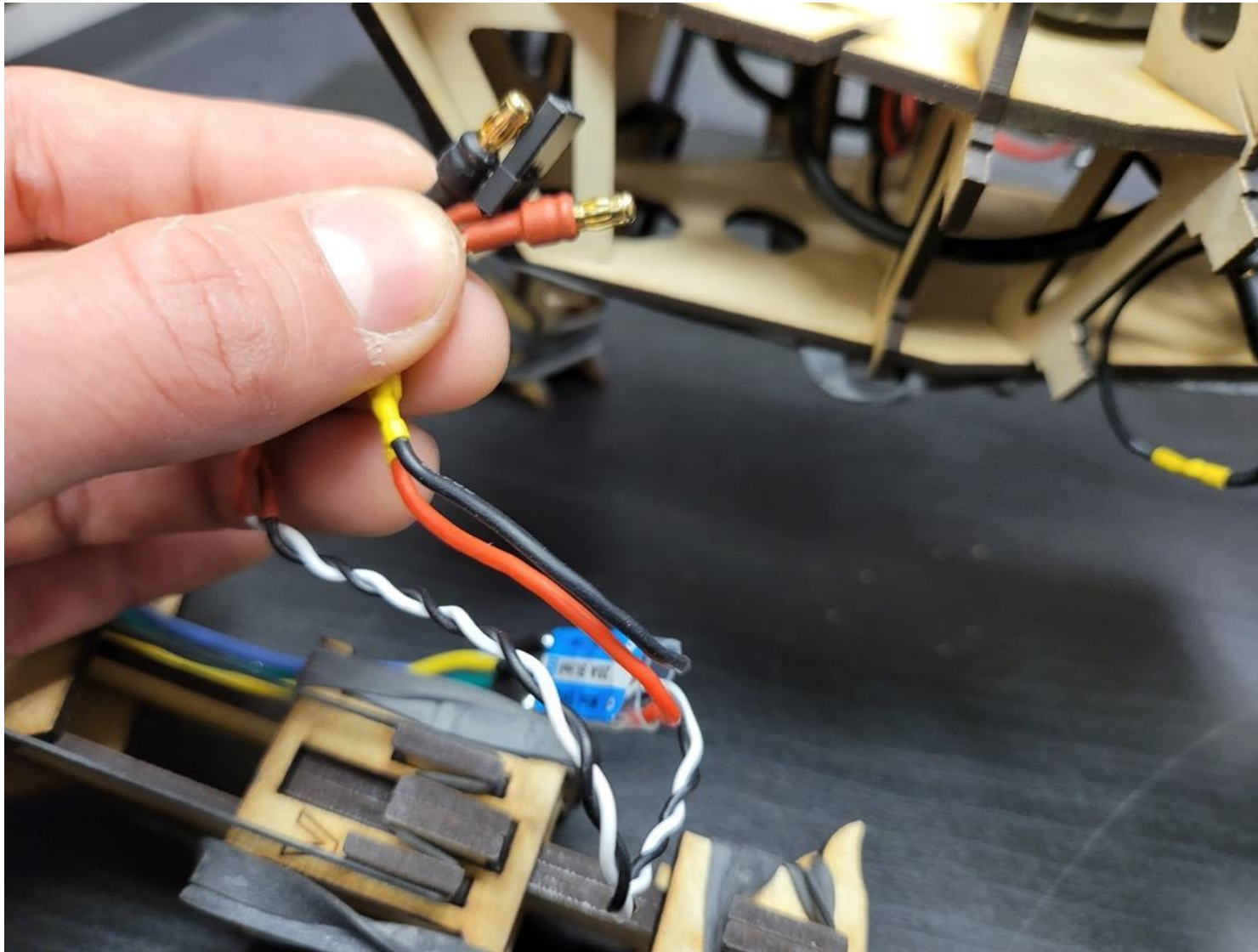
Frame Assembly – Leg 3 – Step 1a: Verify ESC Wires Routing



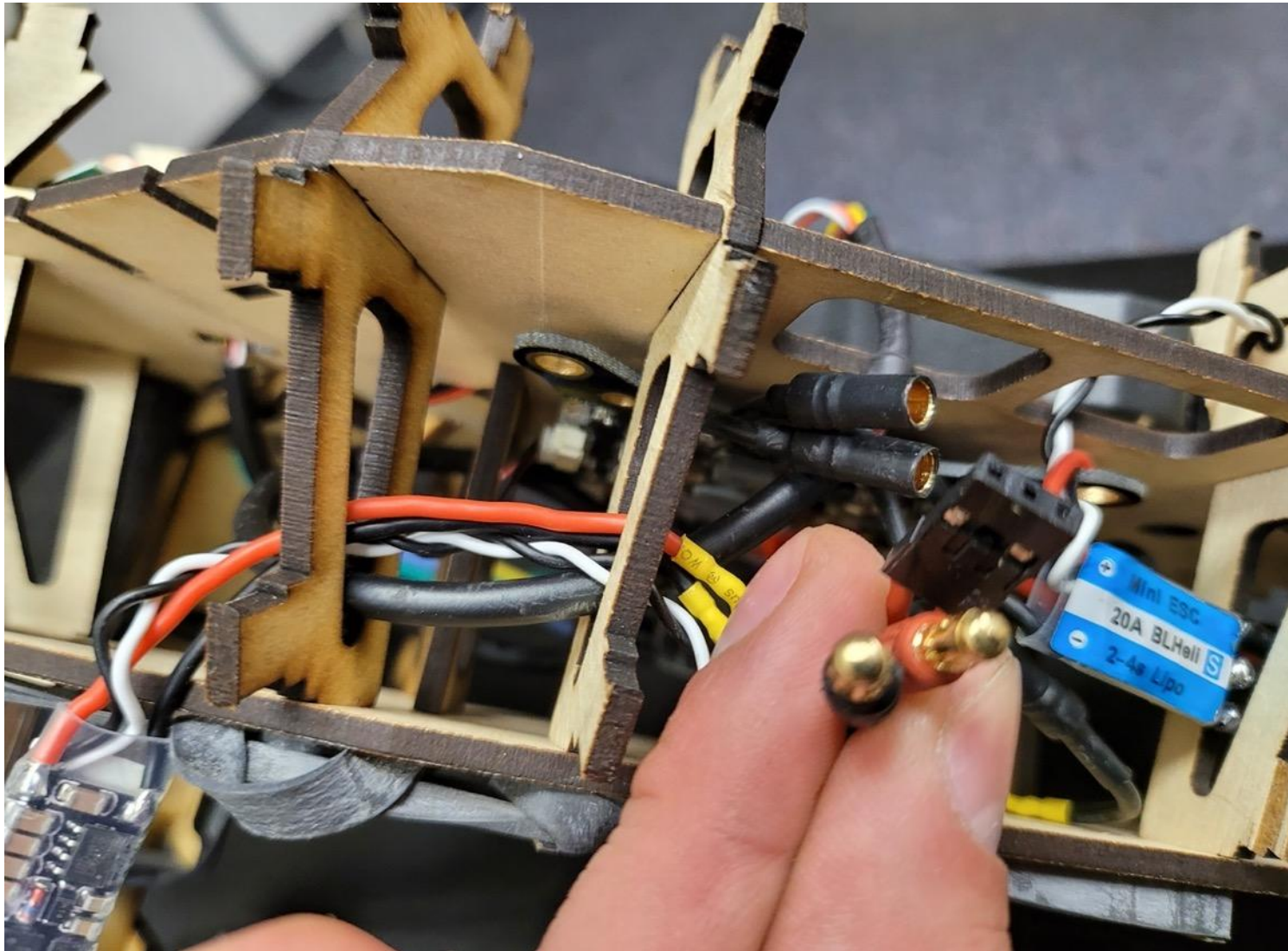
Frame Assembly – Leg 3 – Step 1b: Verify ESC Wires Routing



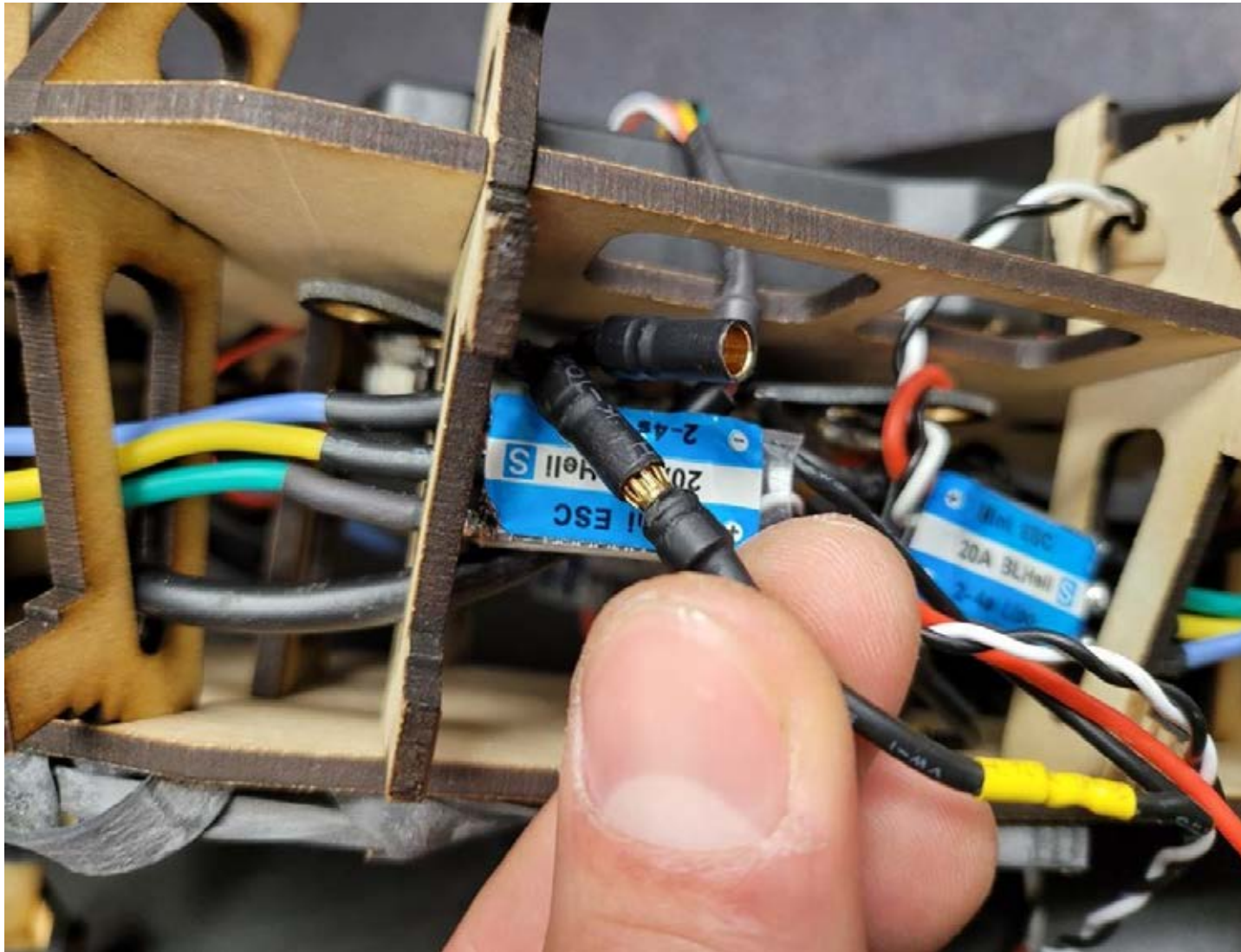
Frame Assembly – Leg 3 – Step 1c: Gather ESC Wires



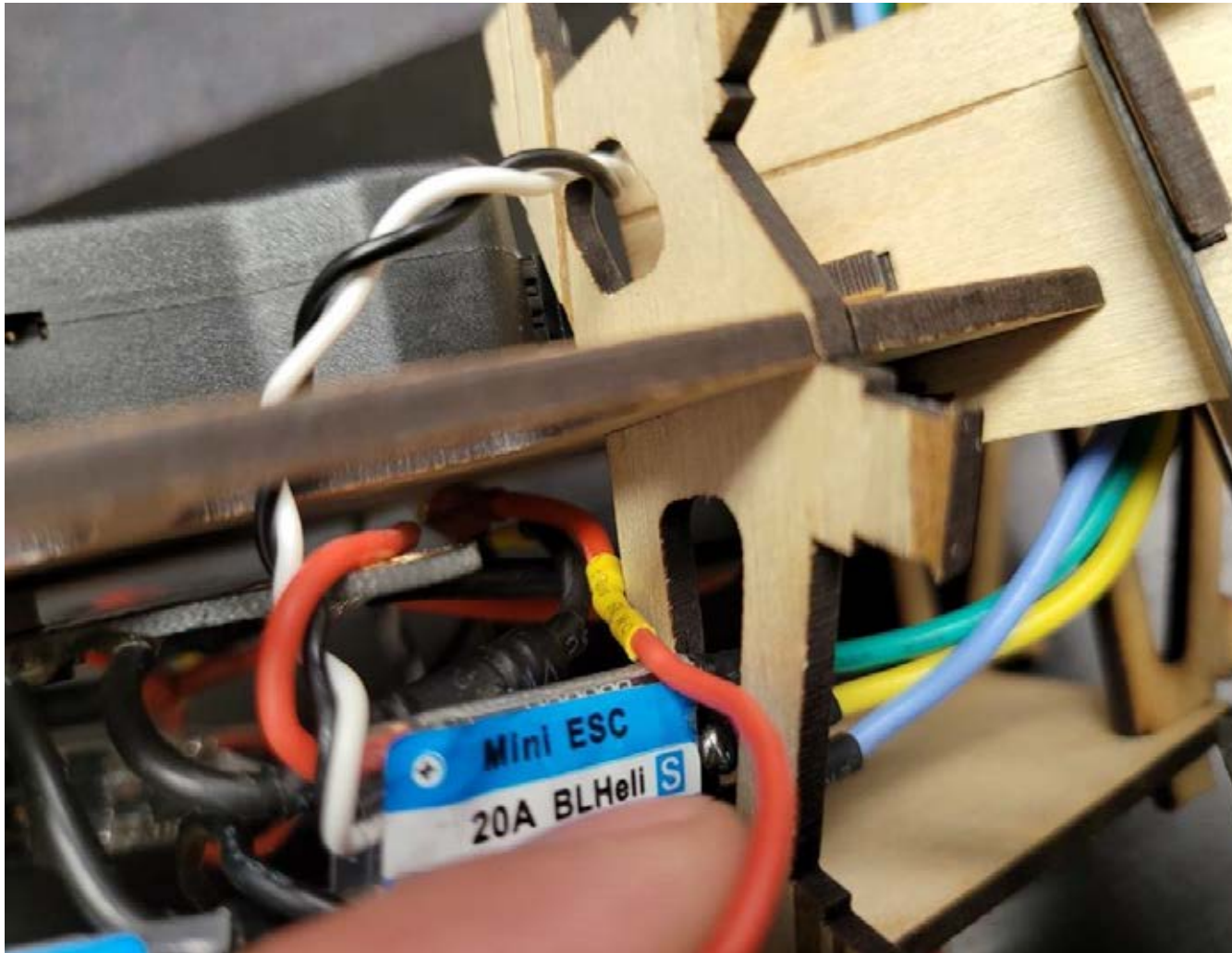
Frame Assembly – Leg 3 – Step 1d: Route ESC Wires Through Ribs



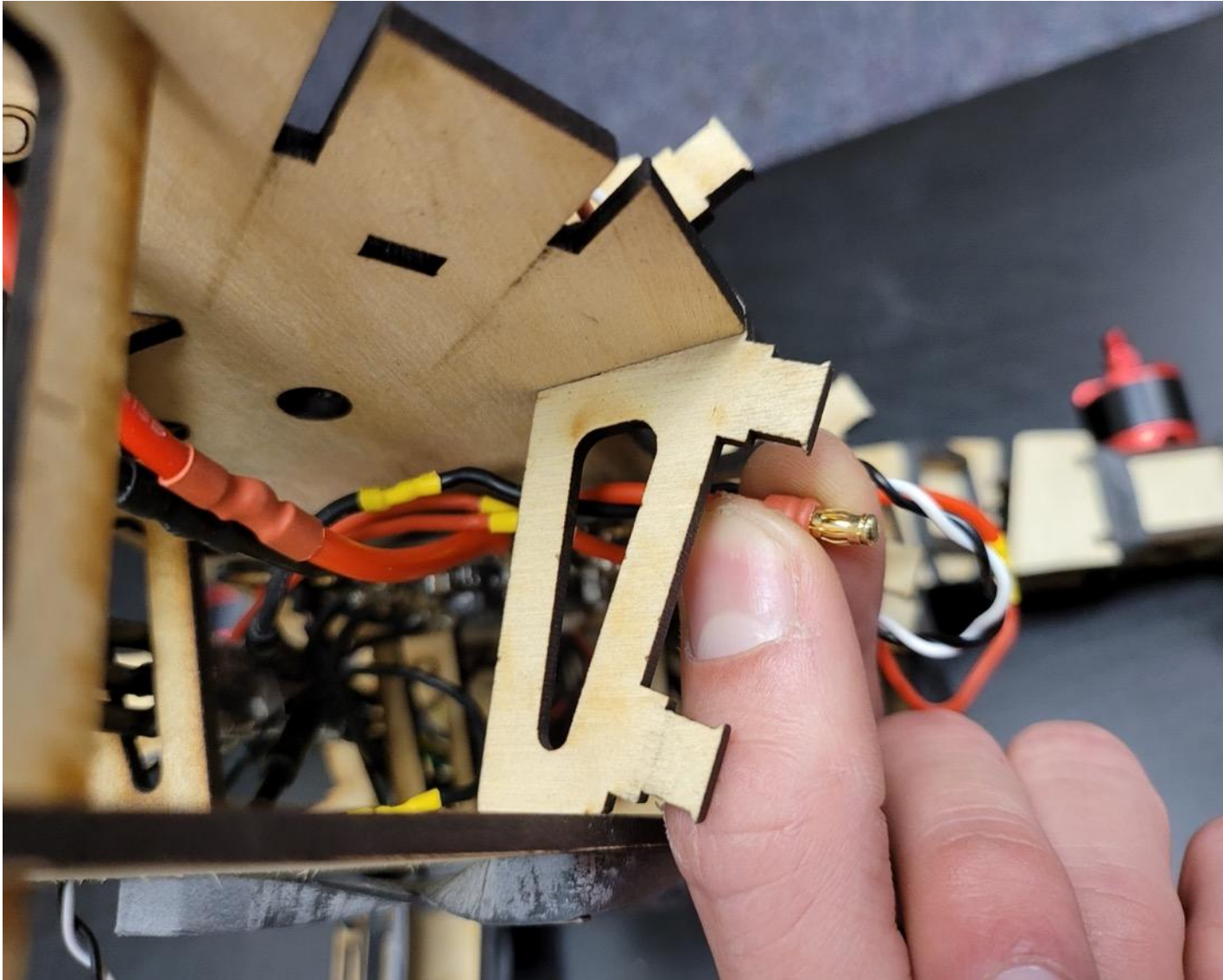
Frame Assembly – Leg 3 – Step 2: Connect ESC Power – Connect Ground Wire (Black)



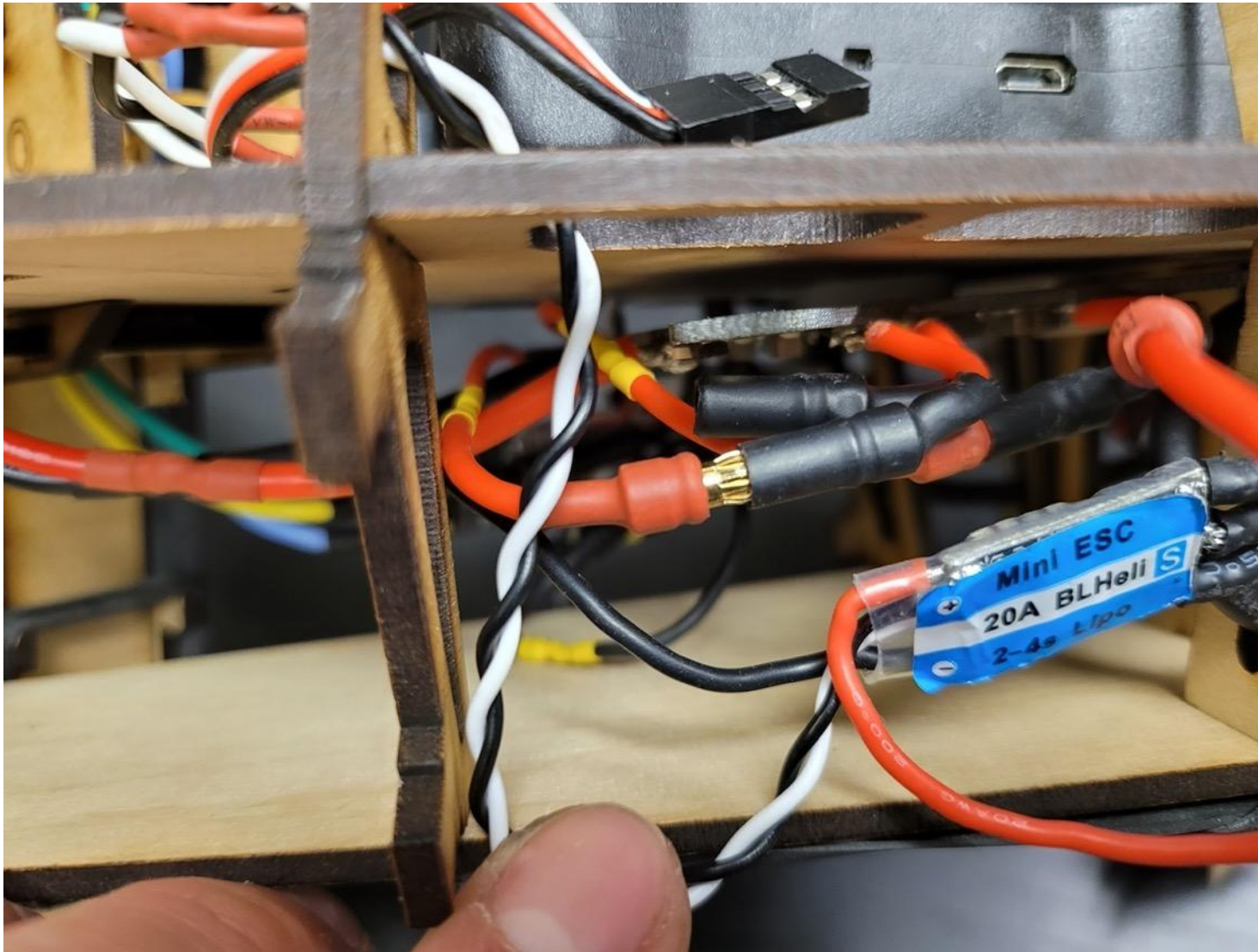
Frame Assembly – Leg 3 – Step 3a: Connect ESC Power – Route Positive Wire (Red)
Route the red power wire between plate C and the PDB.



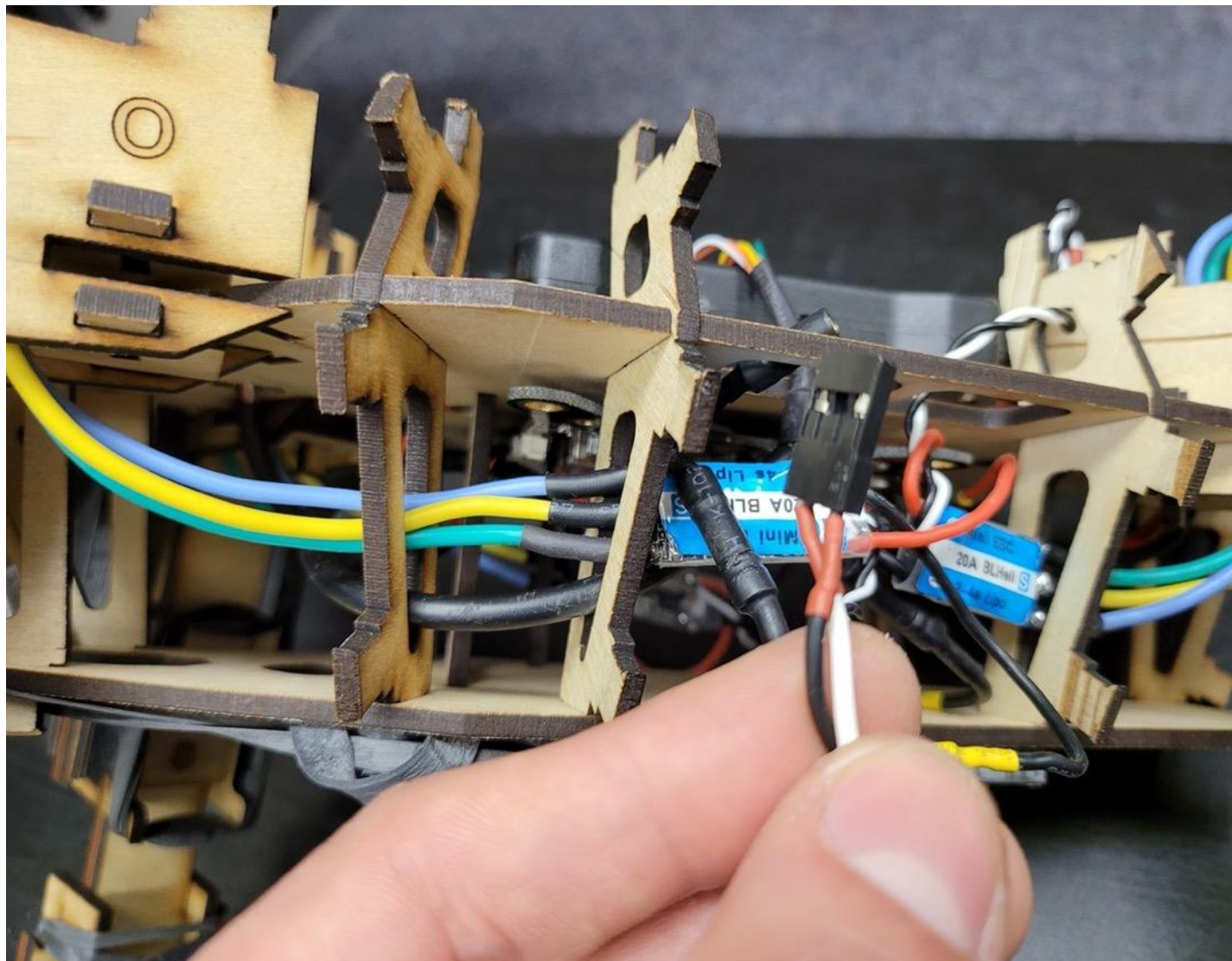
Frame Assembly – Leg 3 – Step 3b: Connect ESC Power – Route Positive Wire (Red)



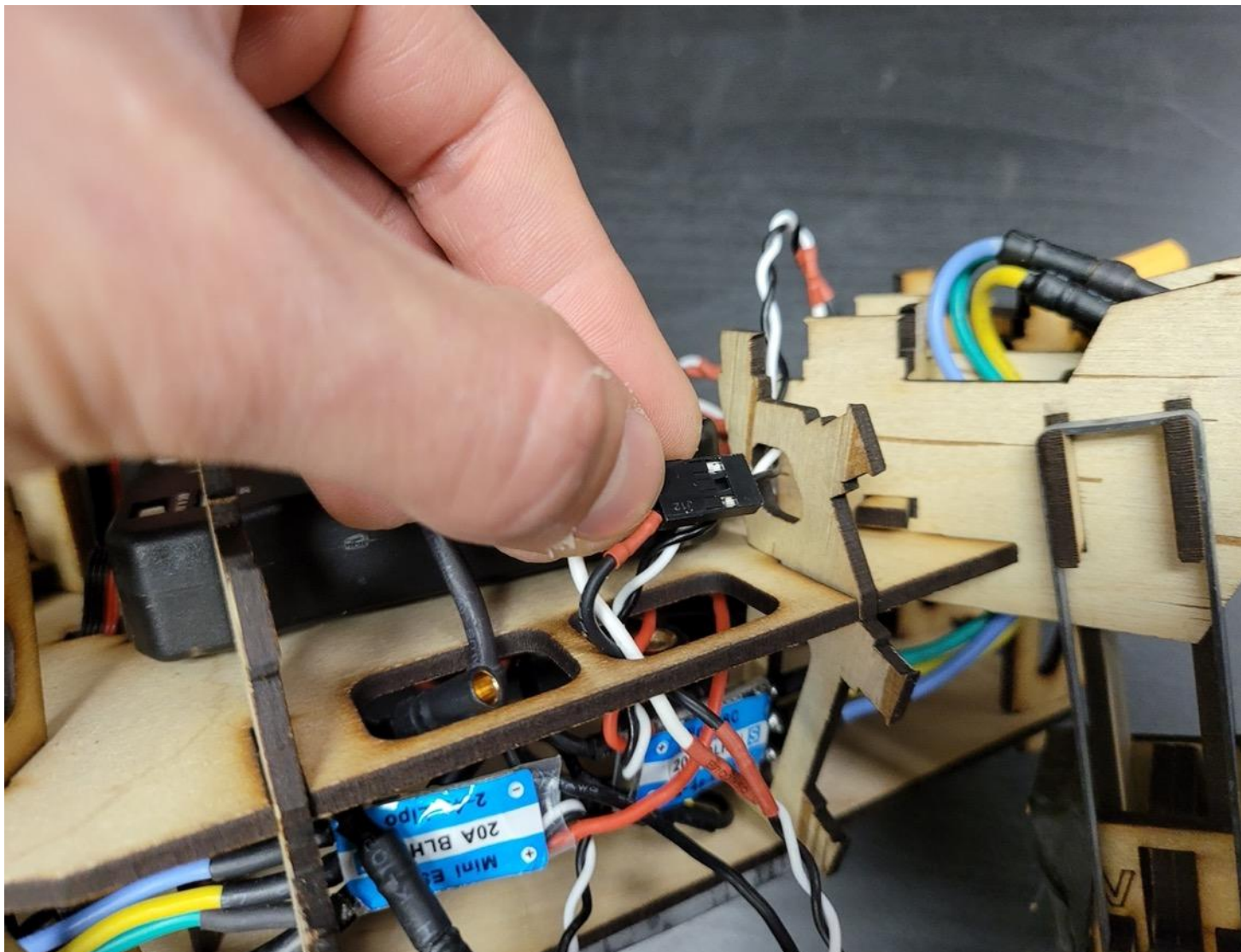
Frame Assembly – Leg 3 – Step 3c: Connect ESC Power – Positive (Red)



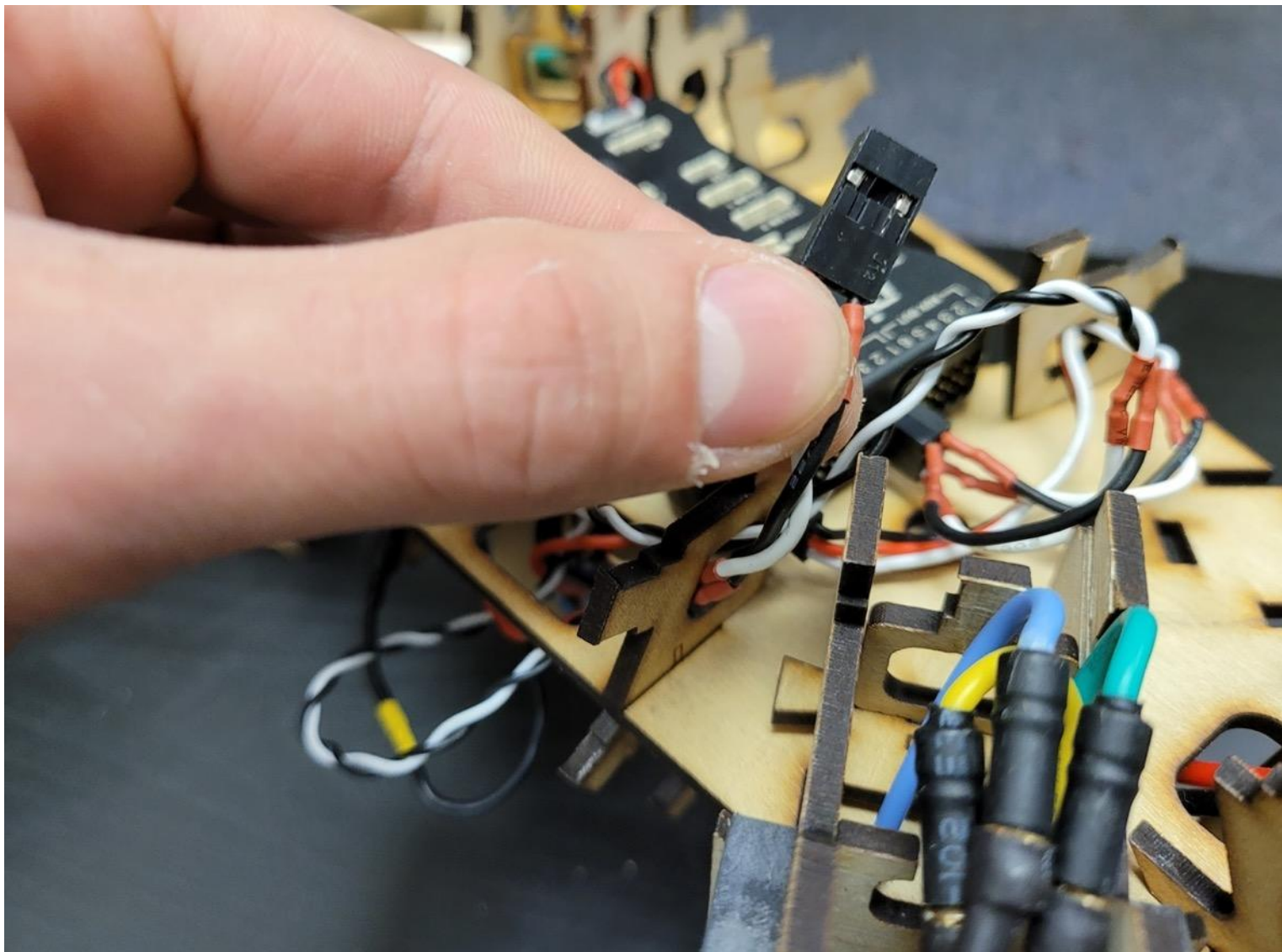
Frame Assembly – Leg 3 – Step 4a: Route ESC Control wires to FMU



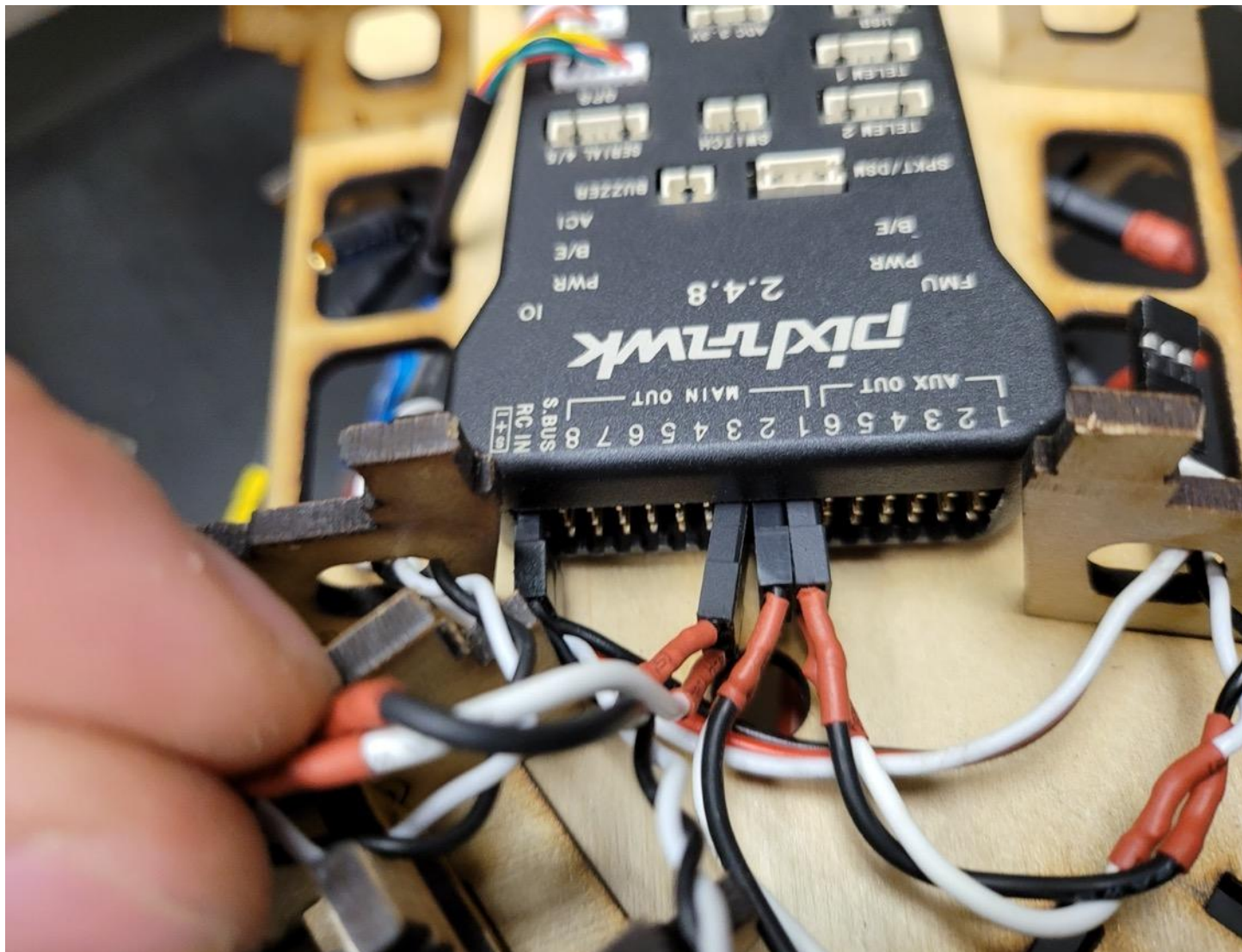
Frame Assembly – Leg 3 – Step 4b: Route ESC Control wires to FMU



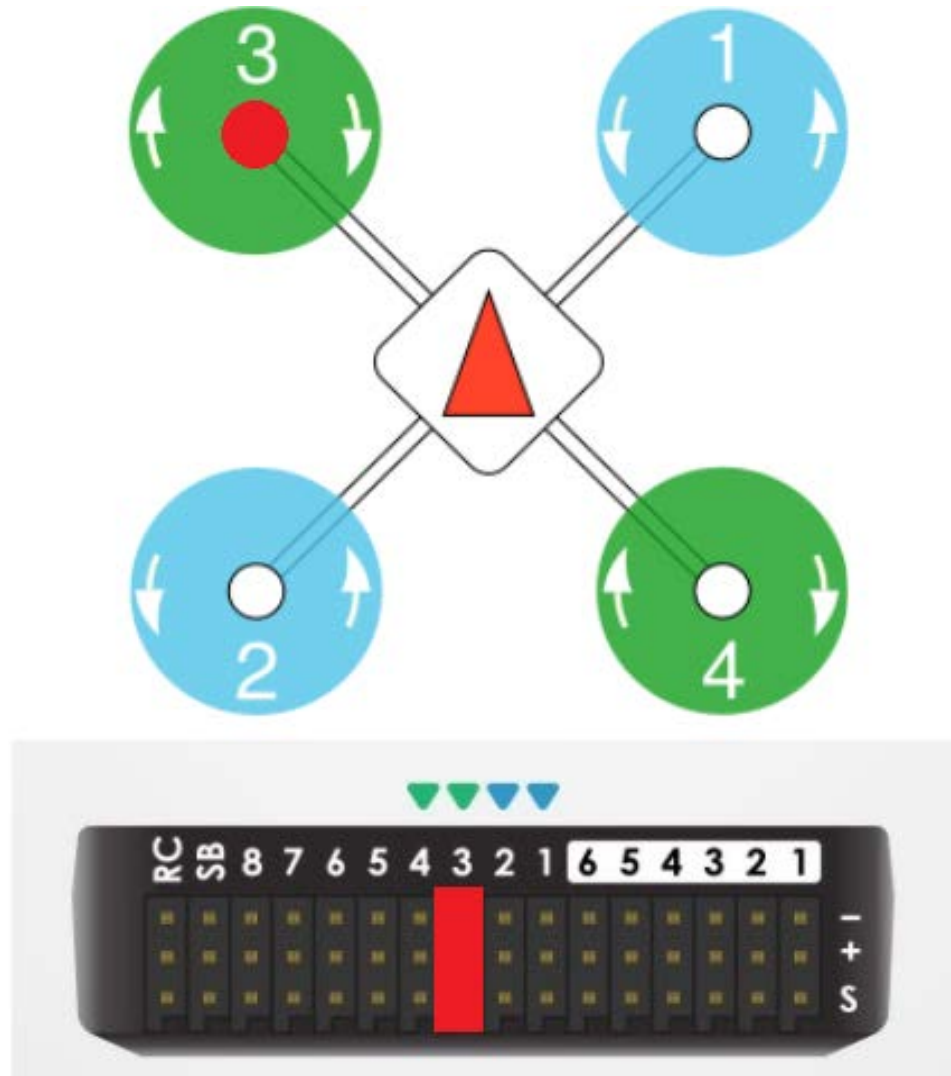
Frame Assembly – Leg 3 – Step 4c: Route ESC Control wires to FMU



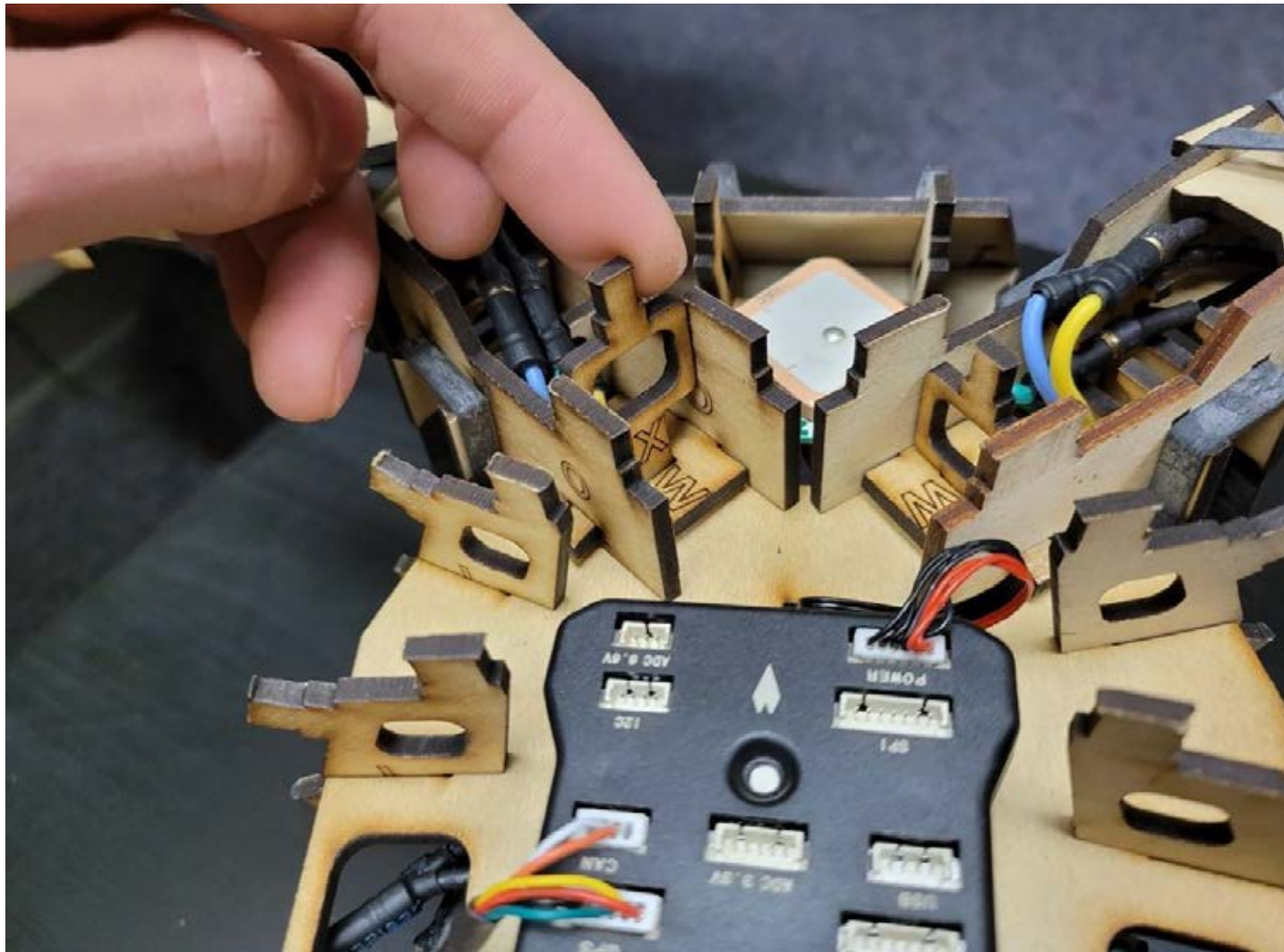
Frame Assembly – Leg 3 – Step 4d: Connect ESC Control wires to FMU Main Out 3



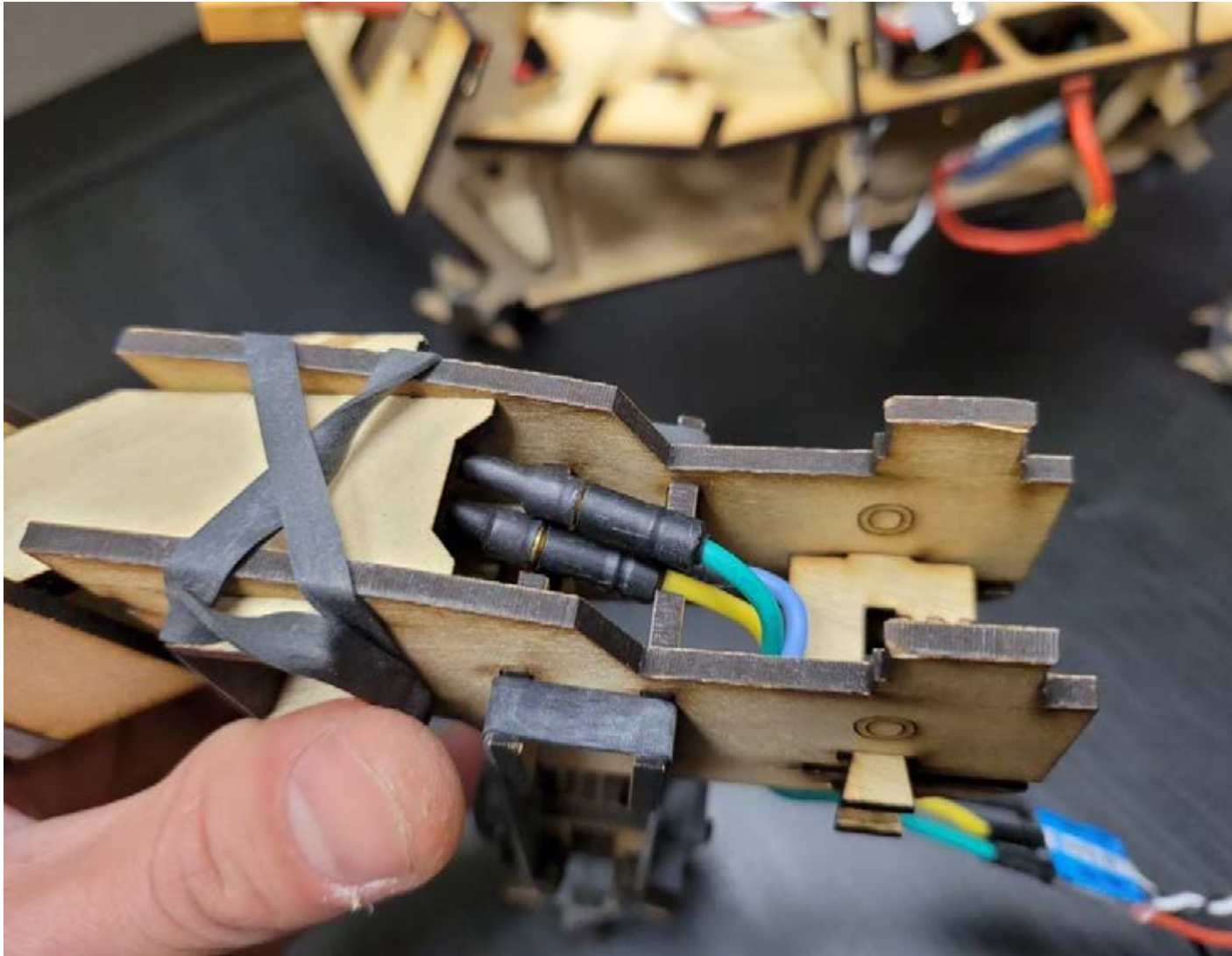
Frame Assembly – Leg 3 – ESC3 Connected to FMU Main Out 3



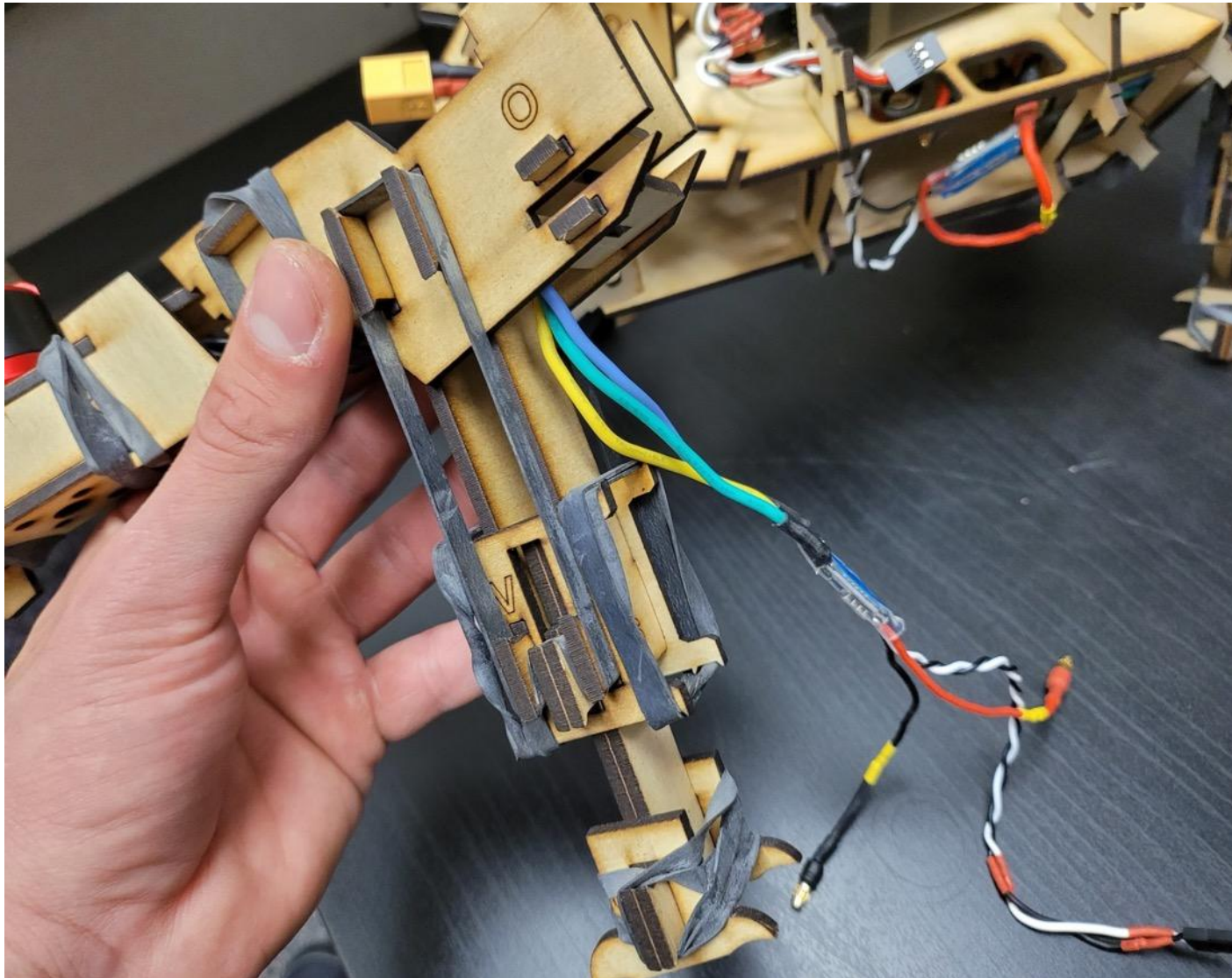
Frame Assembly – Leg 3 – Step 5: Lock Leg 3 to Frame



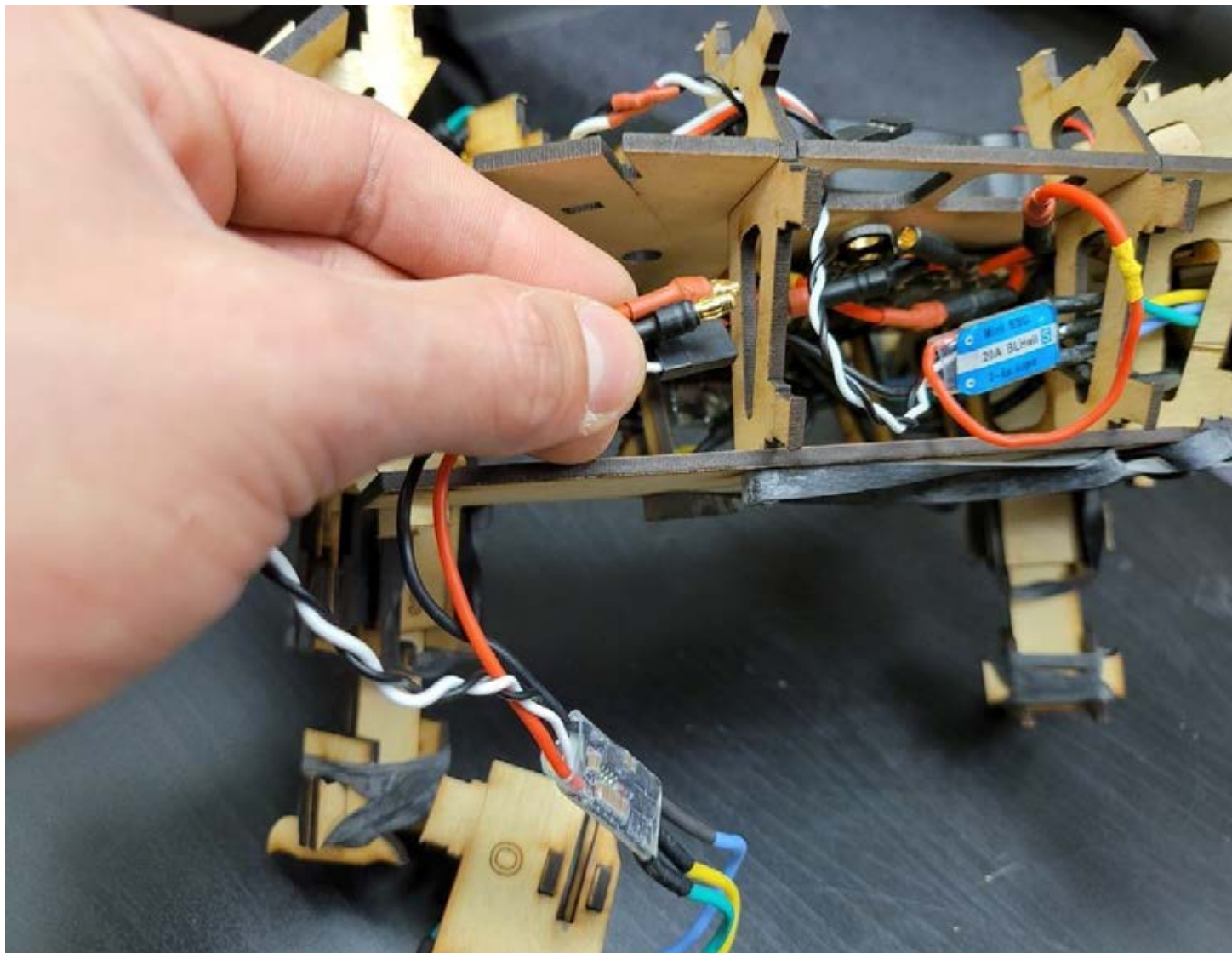
Frame Assembly – Leg 4 – Step 1a: Verify ESC Wires Routing



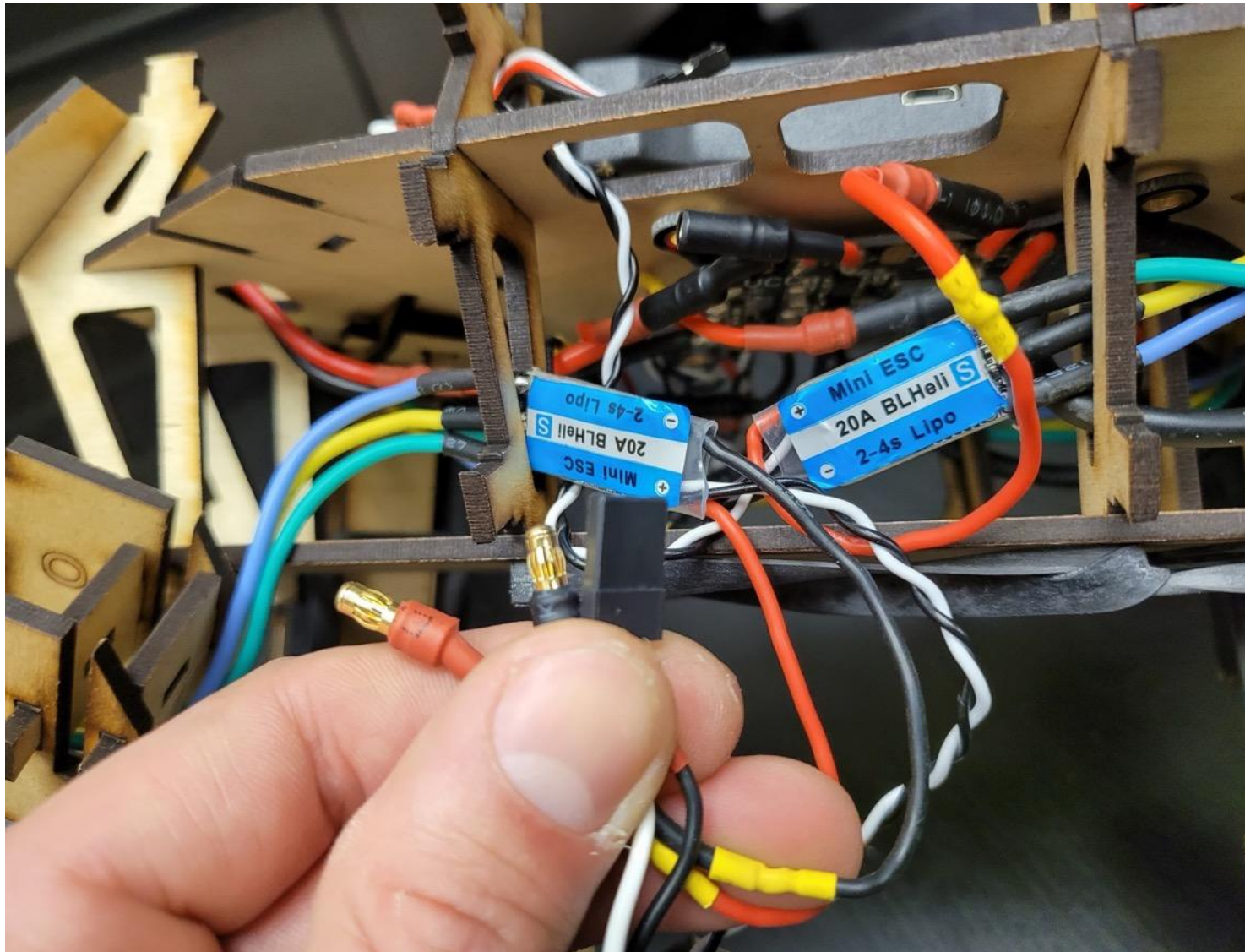
Frame Assembly – Leg 4 – Step 1b: Verify ESC Wires Routing



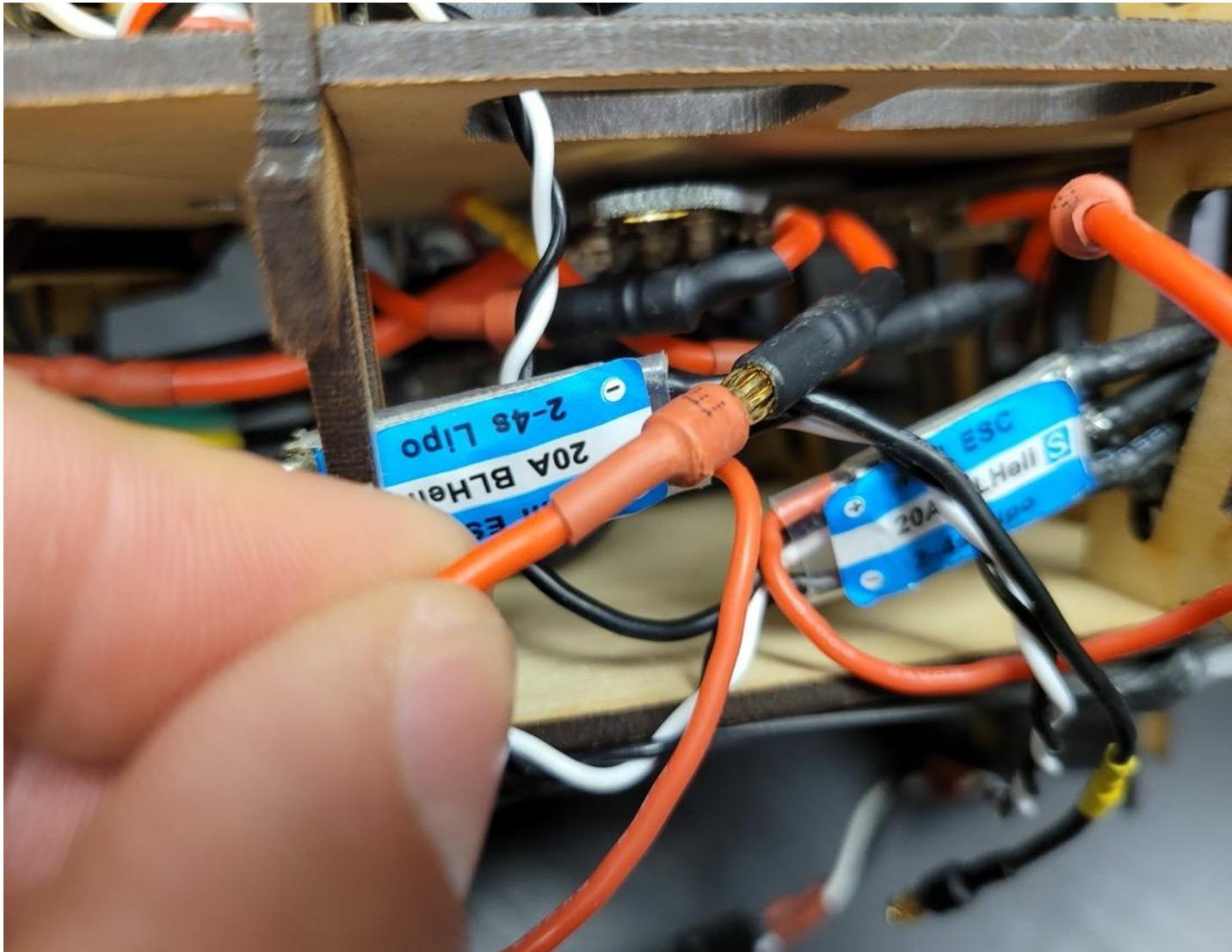
Frame Assembly – Leg 4 – Step 2a: Route ESC Wires Through Ribs



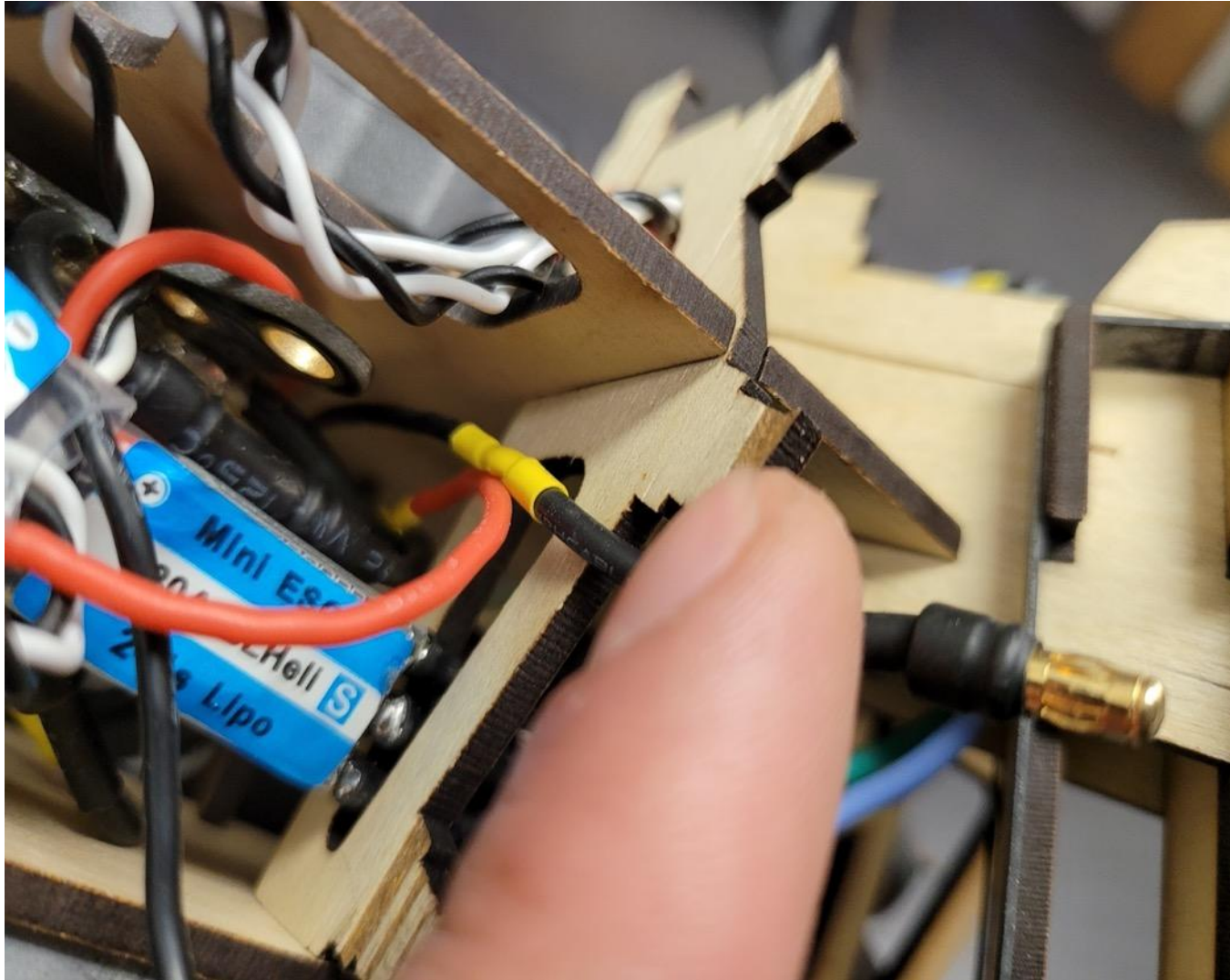
Frame Assembly – Leg 4 – Step 2b: Pull ESC Through Ribs



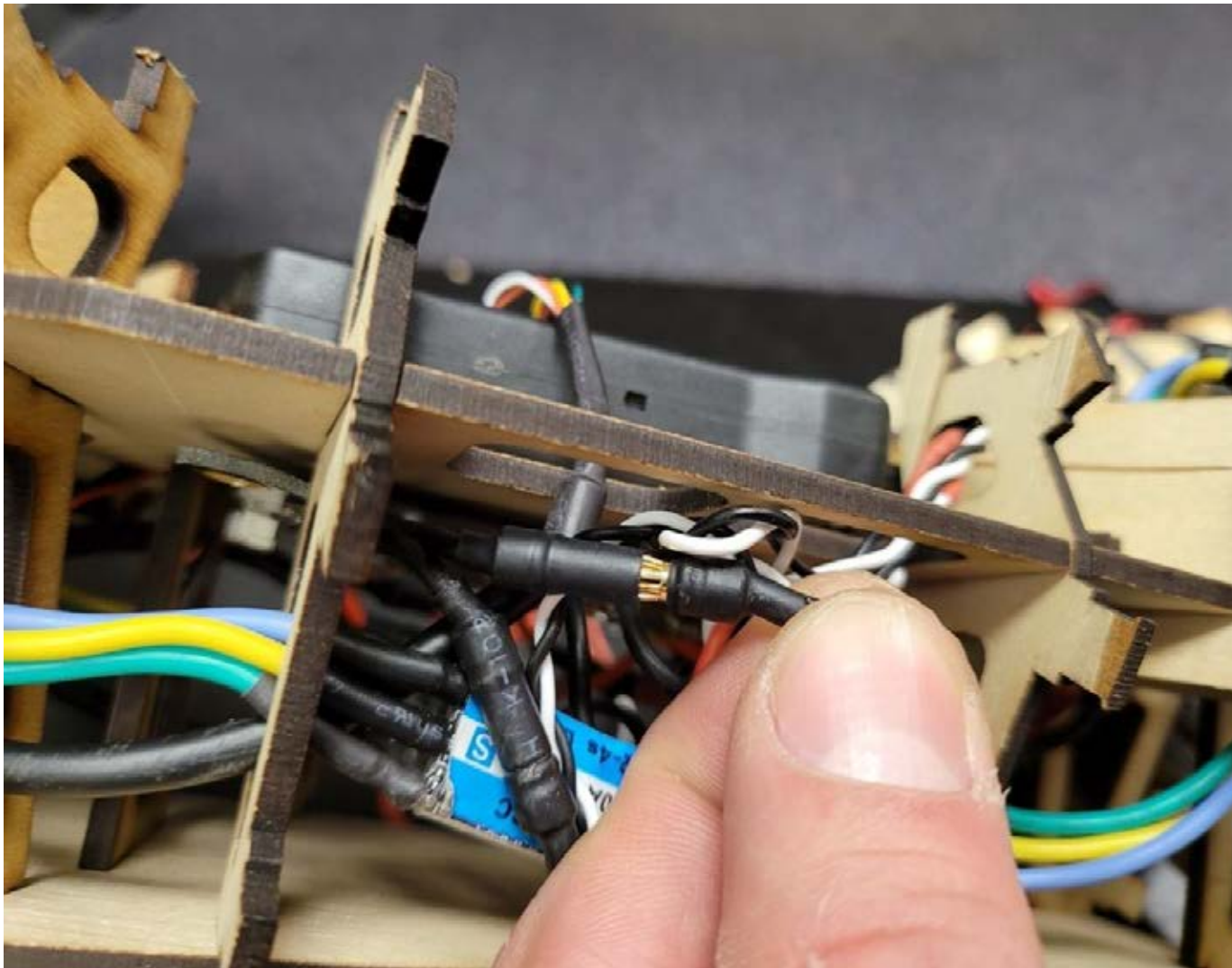
Frame Assembly – Leg 4 – Step 3: Connect ESC Power – Positive (Red)



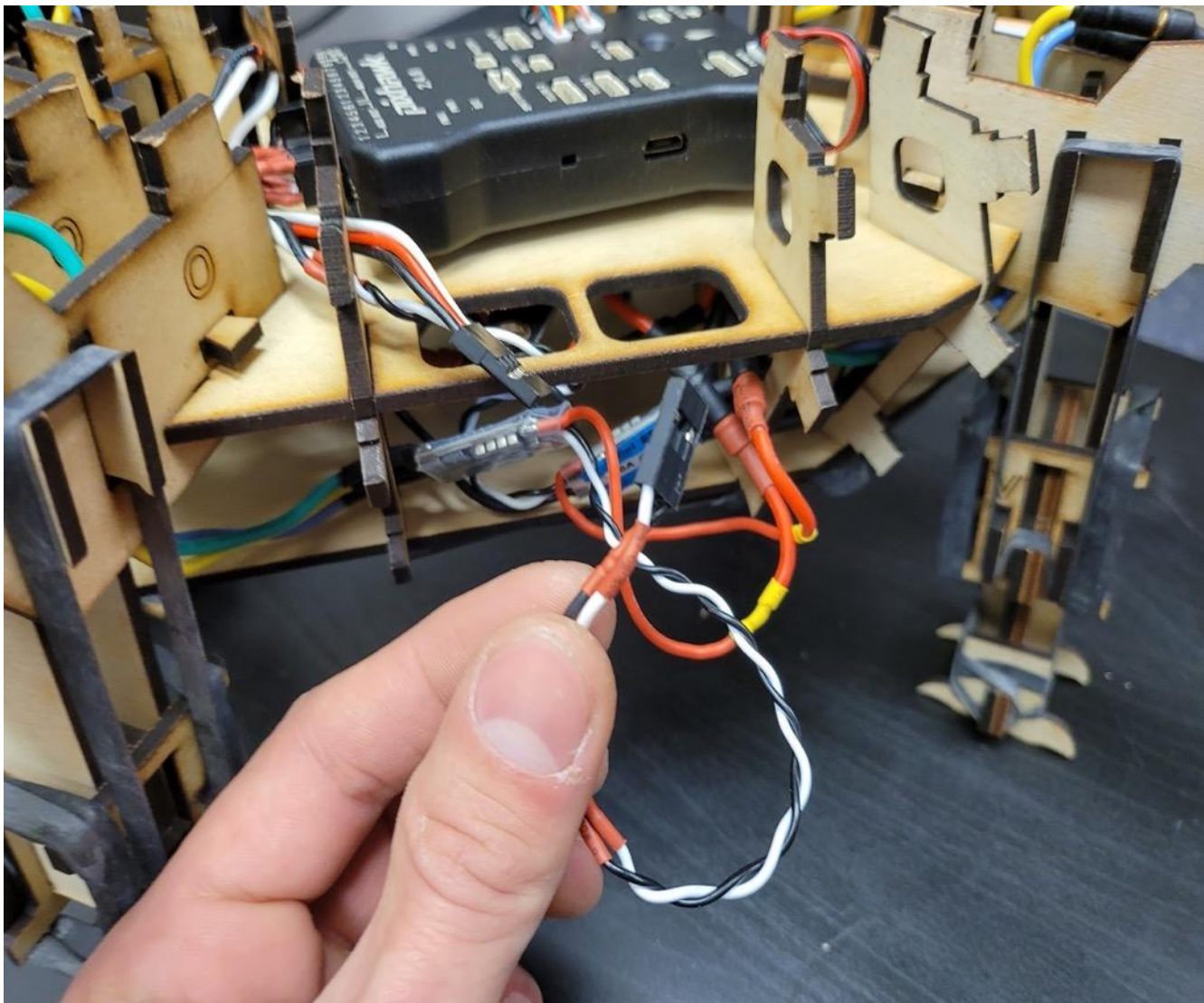
Frame Assembly – Leg 4 – Step 4a: Connect ESC Power – Route Ground Wire (Black)
Route the black ground wire between plate B and the PDB.



Frame Assembly – Leg 4 – Step 4b: Connect ESC Power – Connect Ground Wire (Black



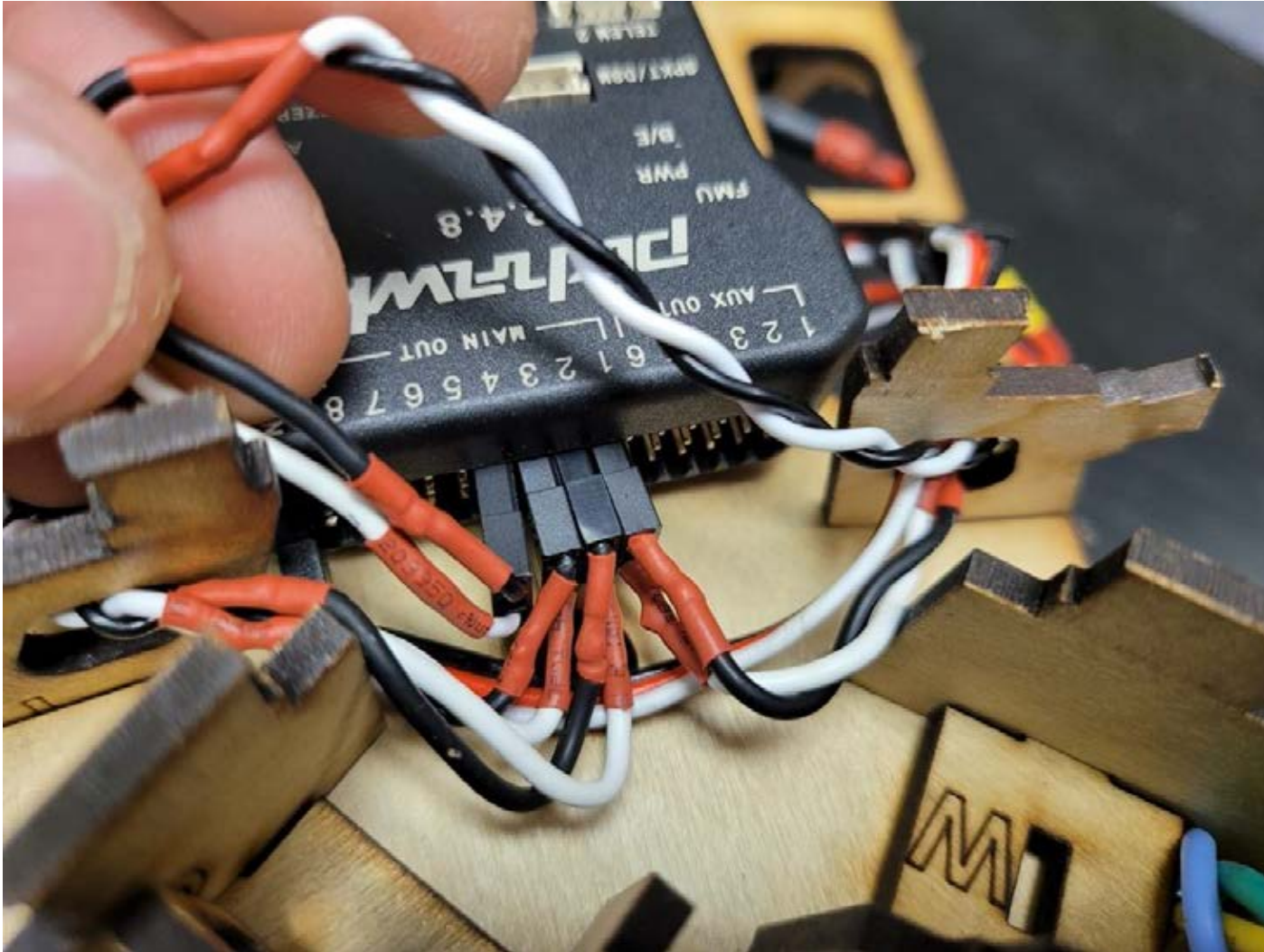
Frame Assembly – Leg 4 – Step 5a: Route ESC Control wires to FMU



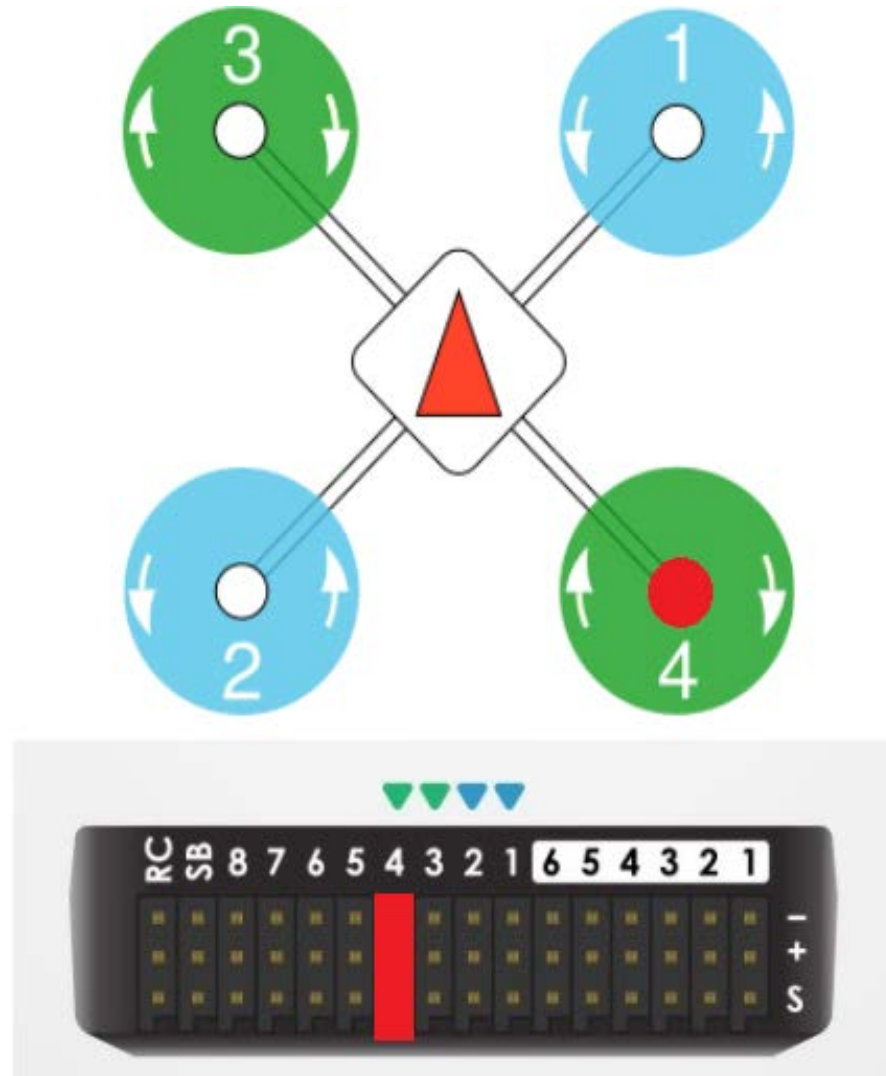
Frame Assembly – Leg 4 – Step 5b Route ESC Control wires to FMU



Frame Assembly – Leg 4 – Step 5c: Connect ESC Control wires to FMU Main Out 4
Pull both rear legs back until you have enough room to plug the last ESC into the FMU.



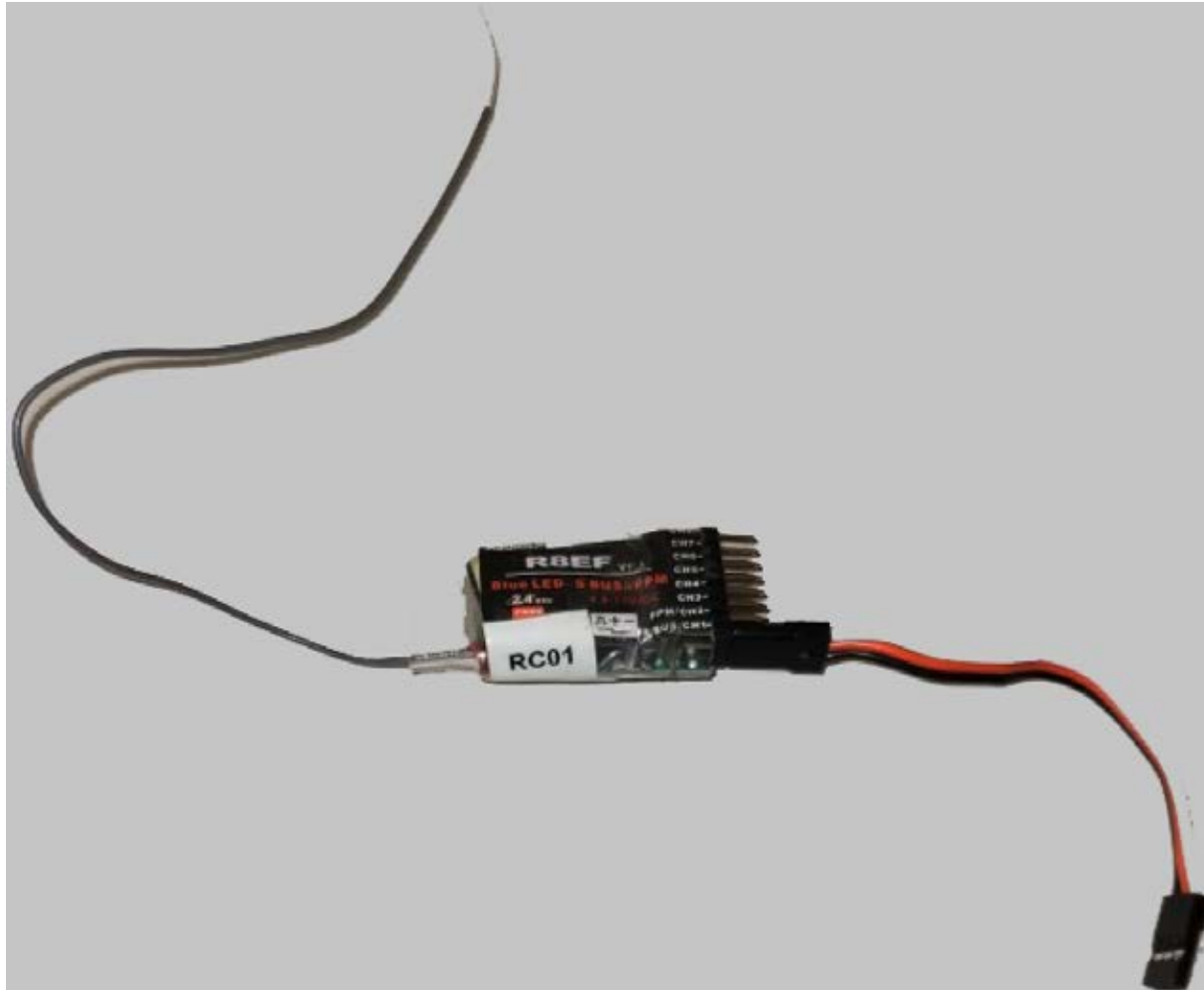
Frame Assembly – Leg 4 – ESC1 Connected to FMU Main Out 4



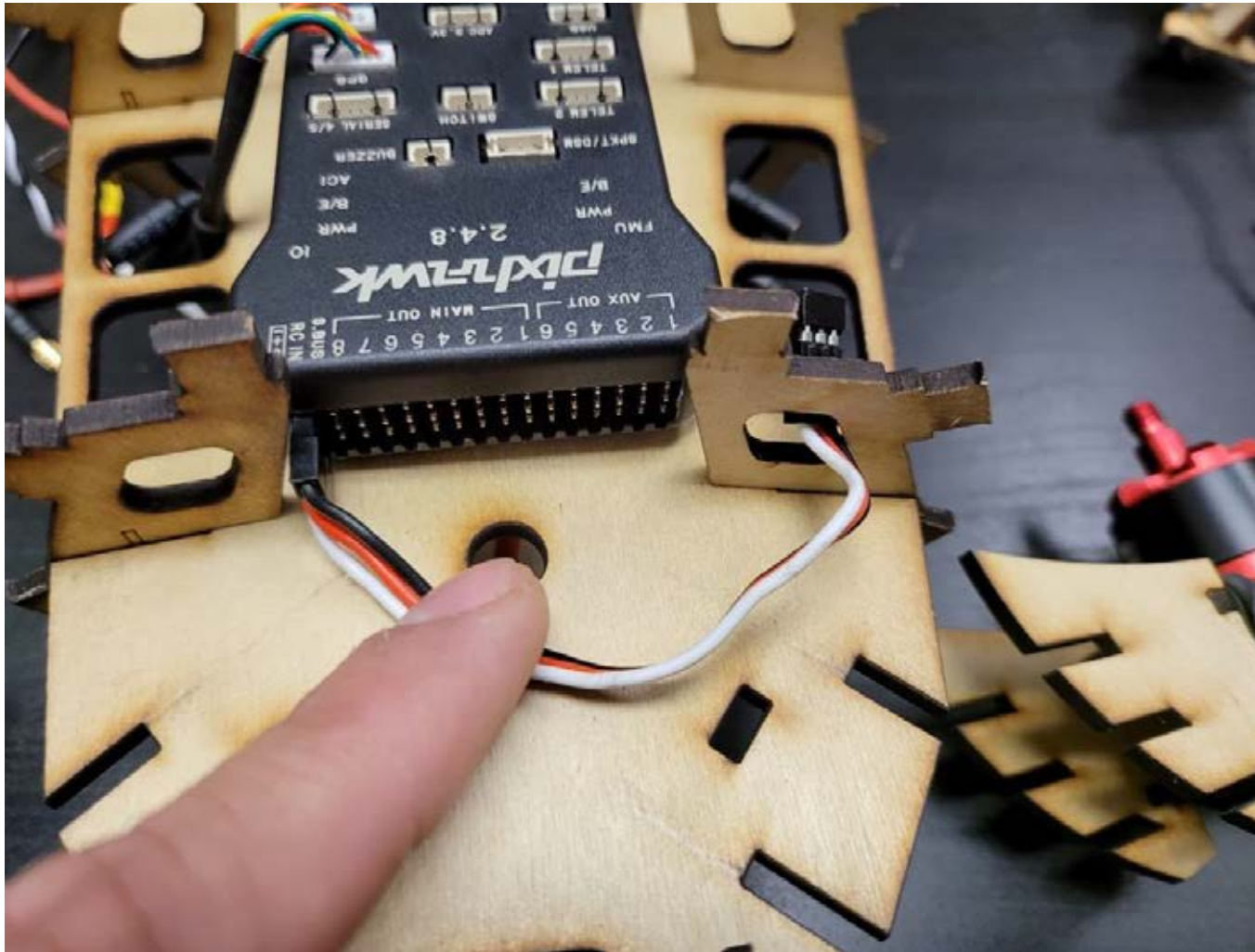
Frame Assembly – RC Controller radio receiver wire routing.

Before you lock in the back two legs, find the RC controller wire.

Plug one end into the far left slot on the FMU marked “RC”



Other Electronics – RC receiver connected – make sure that the black wire is to the top of the FMU

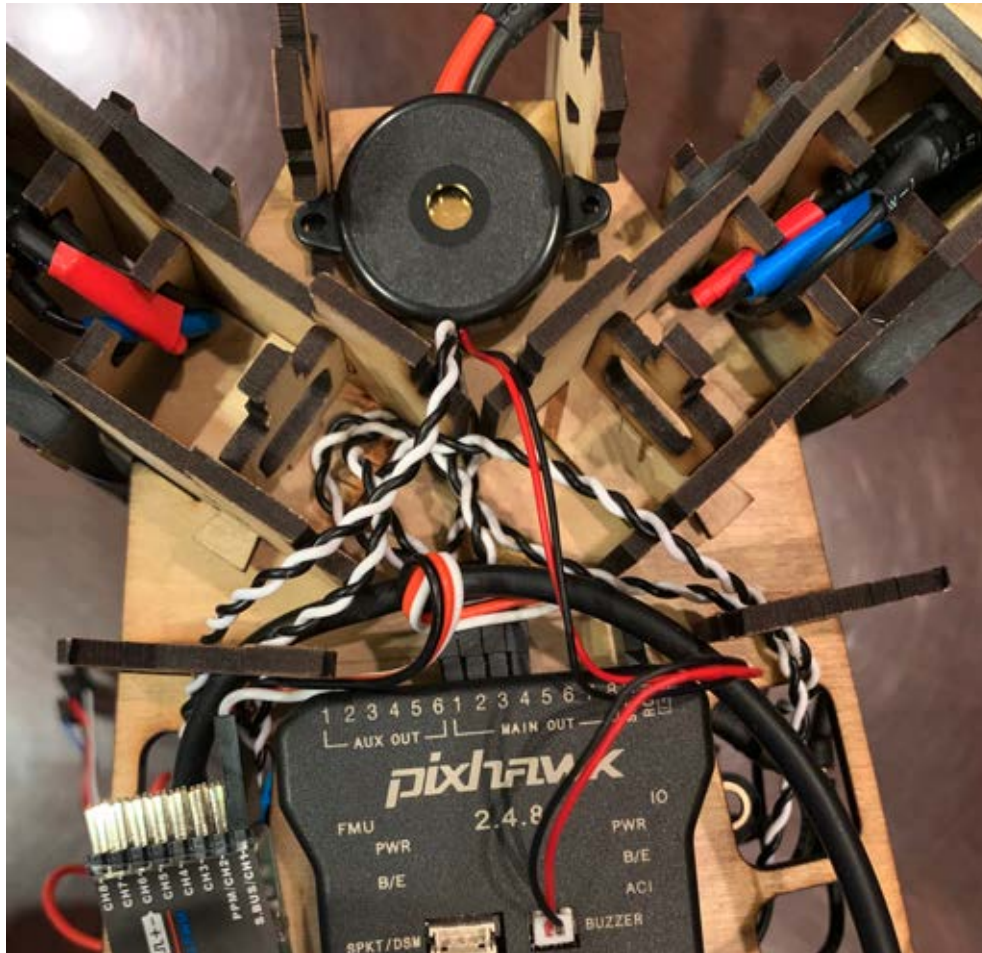


Frame Assembly – Lock all legs into position
Lock the two rear legs into position with their X-plates.



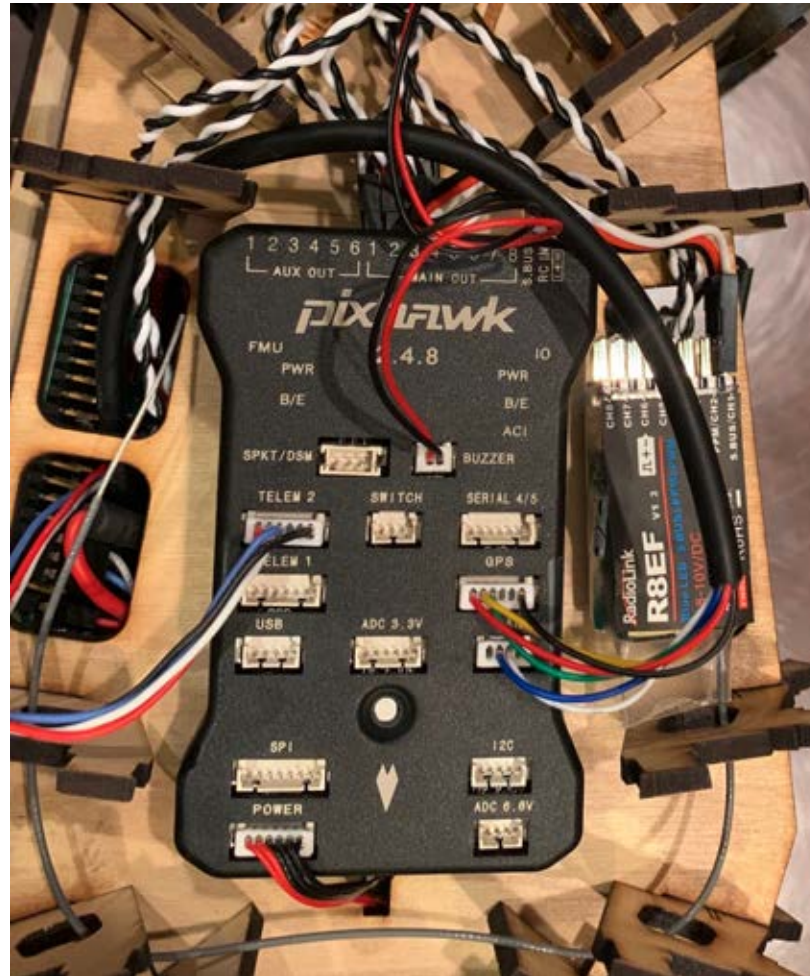
Buzzer Installation

Take the buzzer and place it at the back of the drone as shown below and plug it into the “buzzer” port on the FMU.

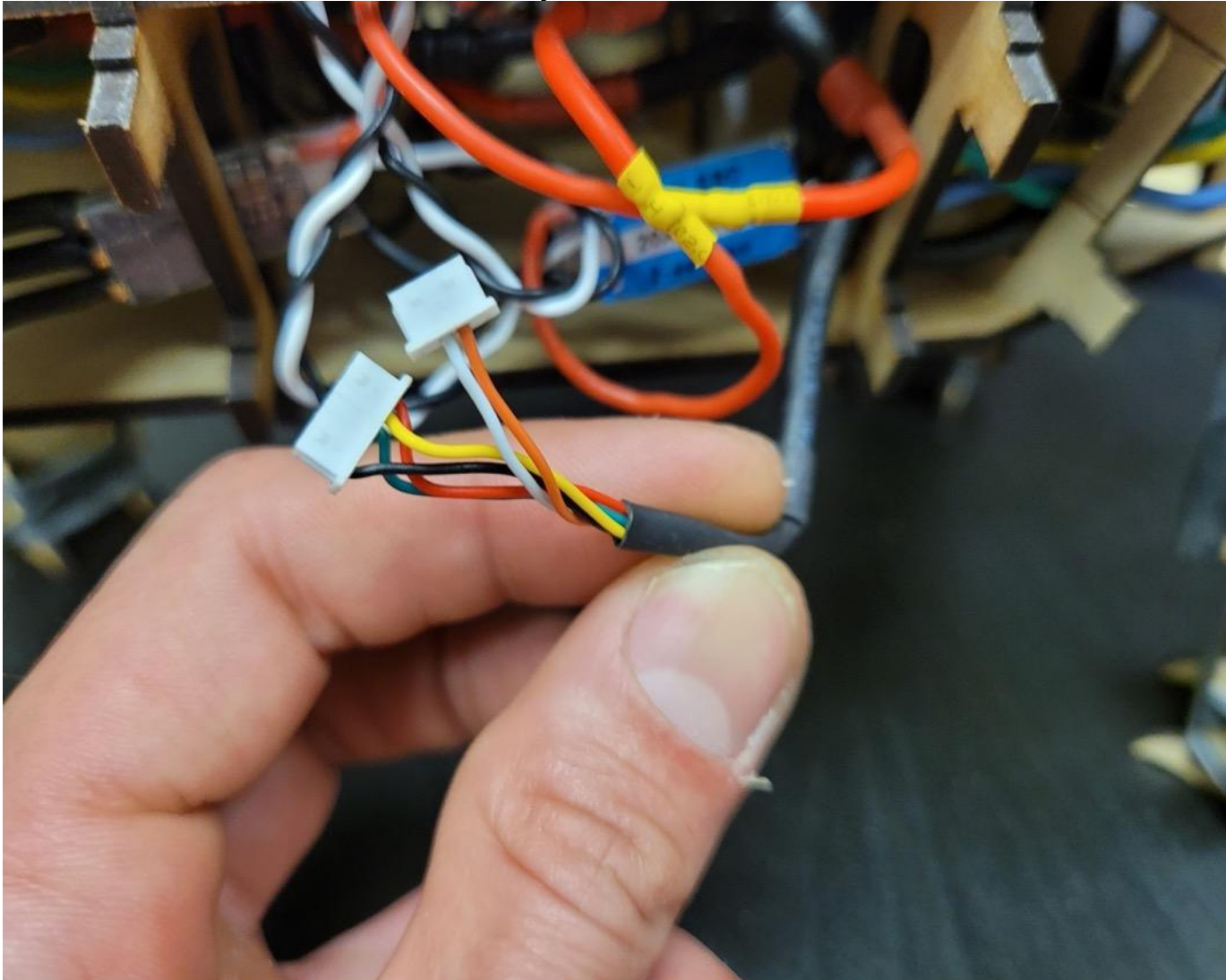


RC Receiver antenna placement

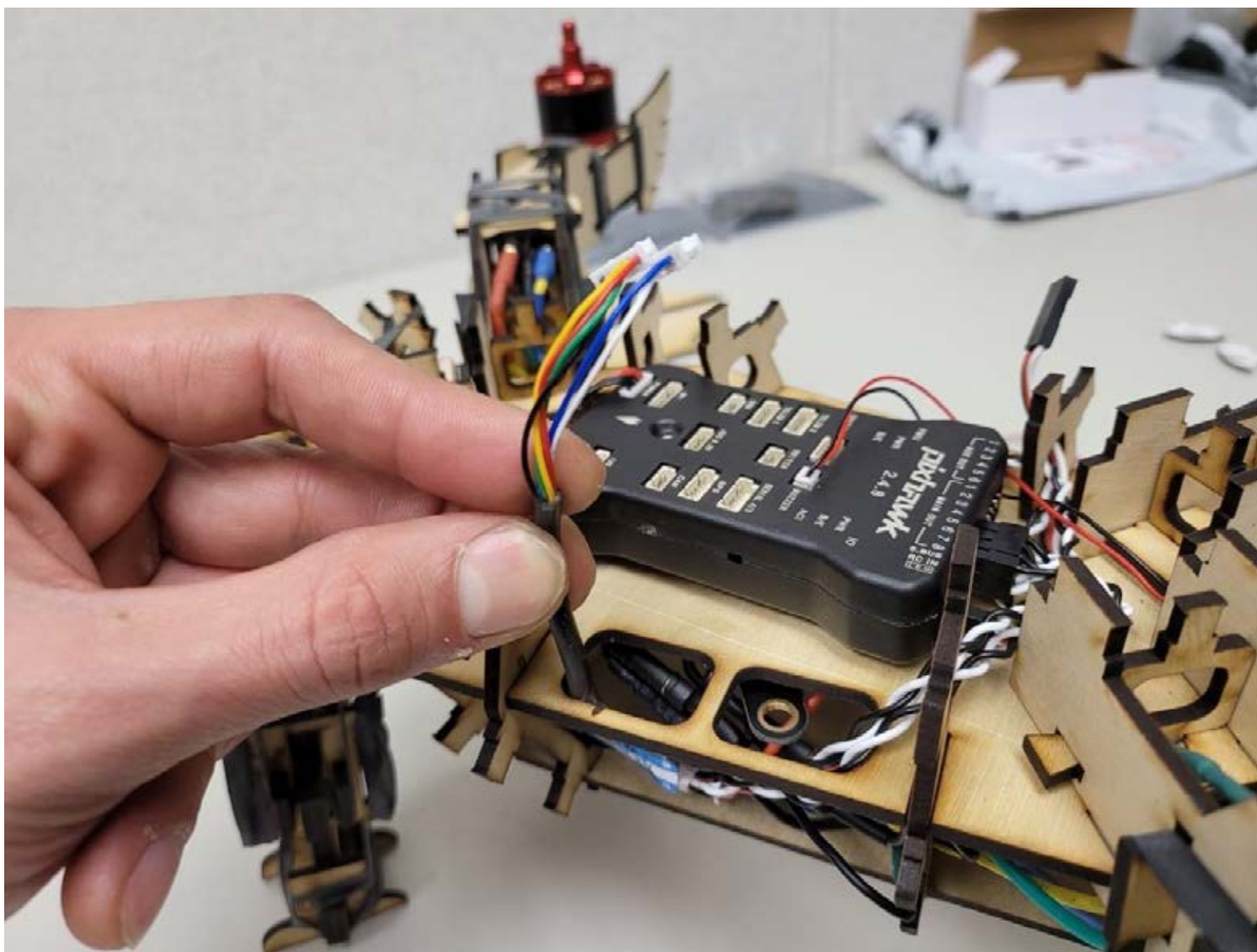
Route the RC receiver antenna around the FMU and feed it through the holes in the ribs on the other side.



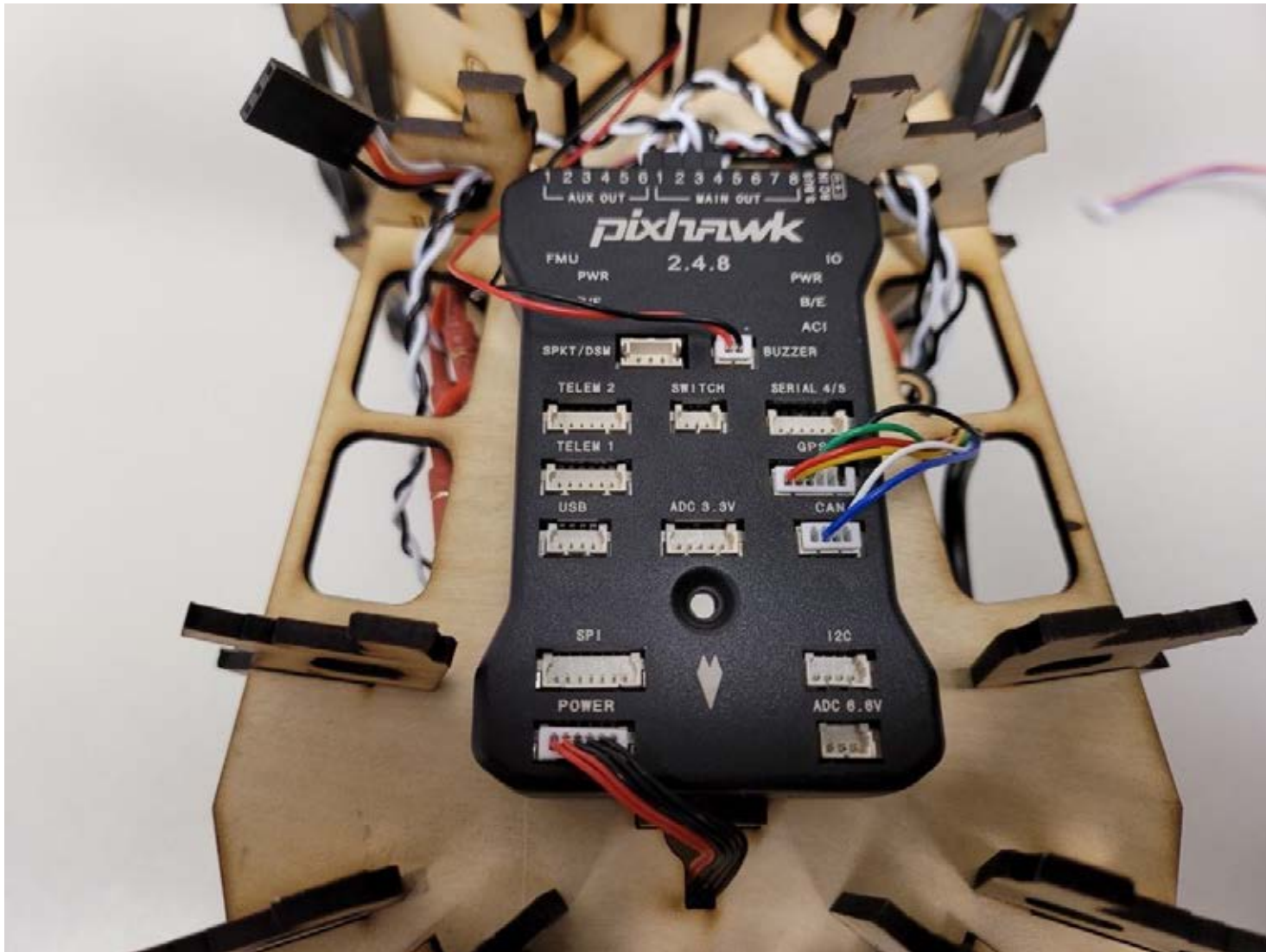
GPS – Step 1: Find GPS Wires



GPS – Step 2 Route GPS Wires



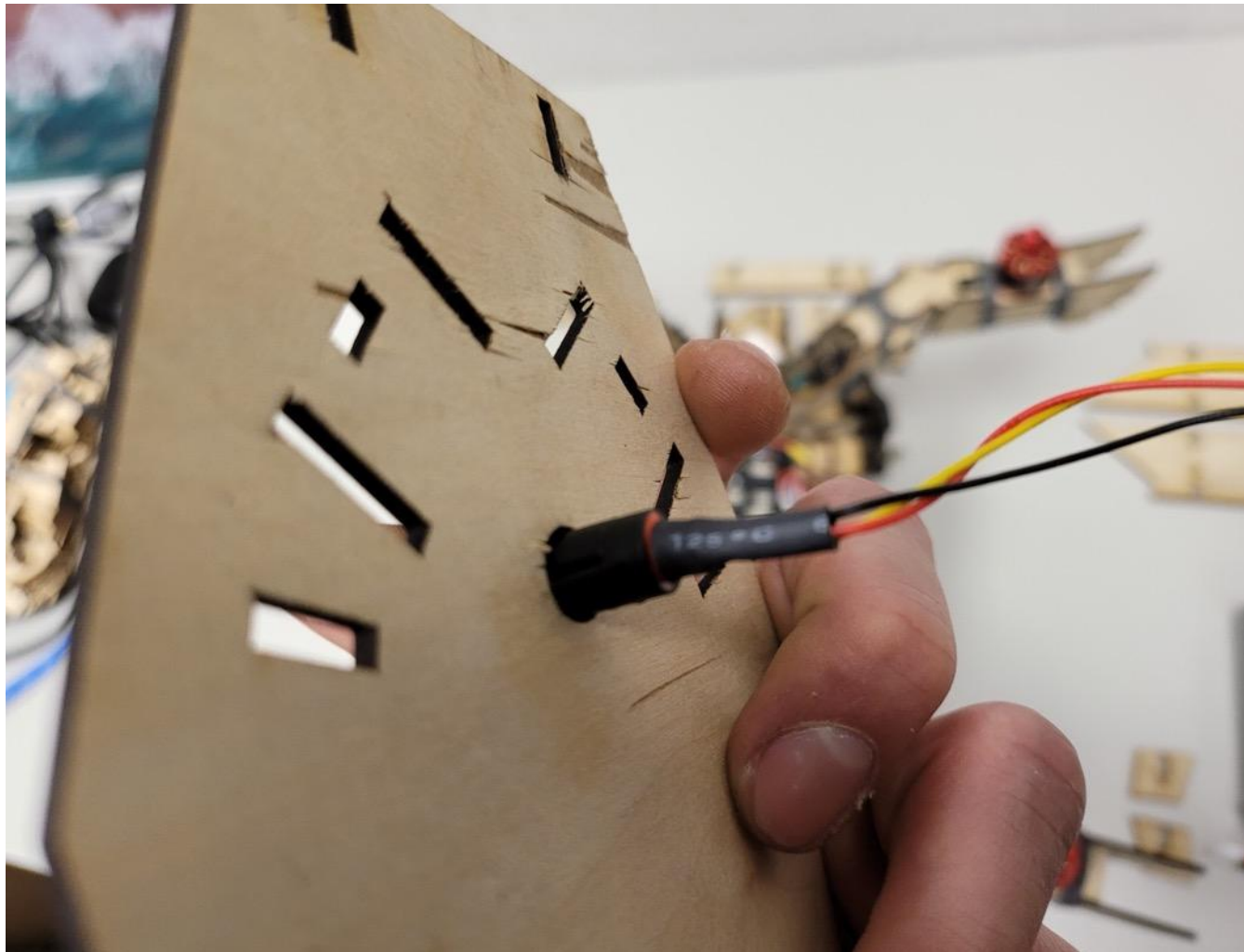
GPS – Step 3 Connect GPS Wires to FMU GPS & CAN ports



Arm Switch – Step 1 Mount Arm Switch on Upper Place A

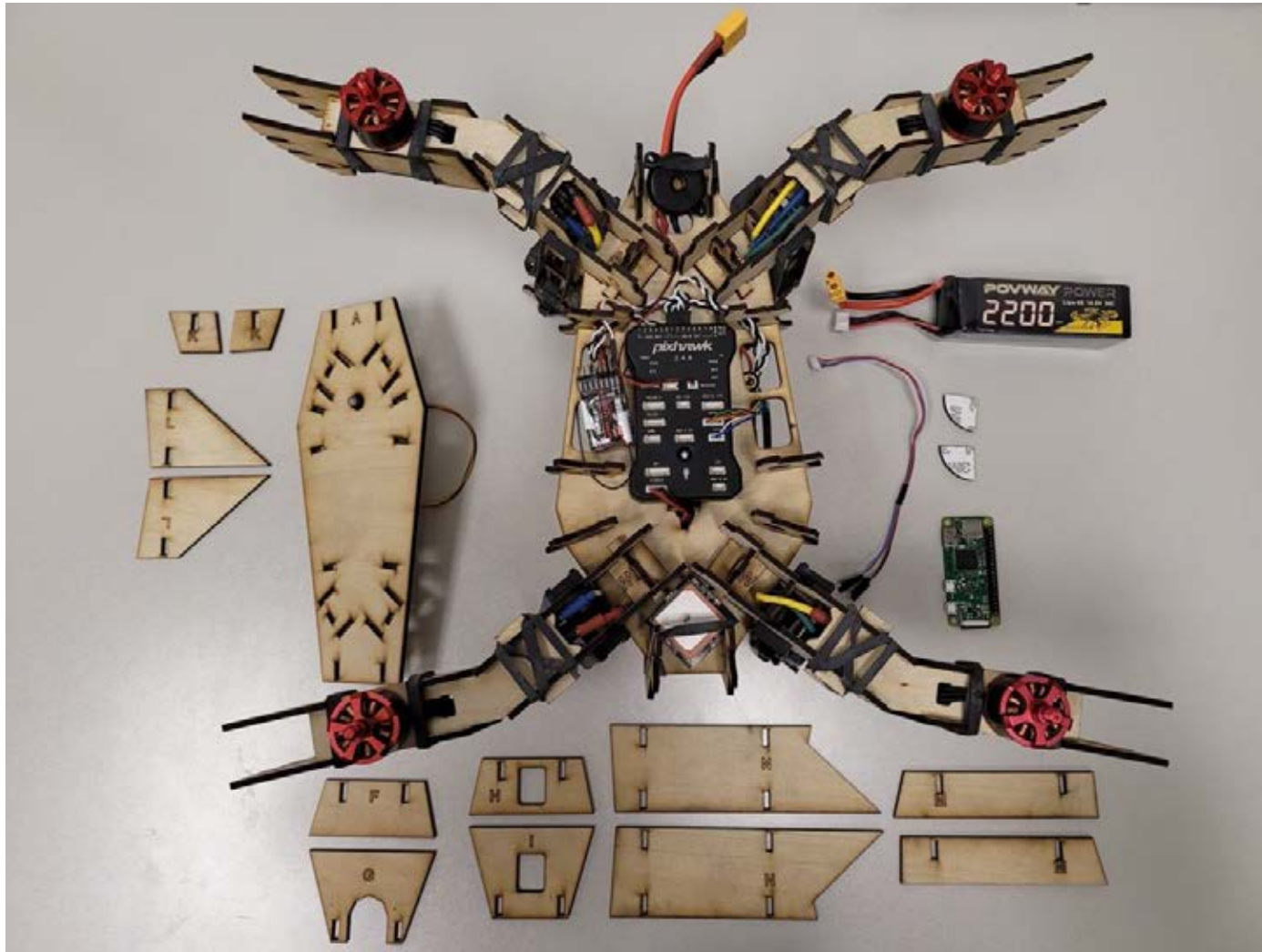
Get the ARM switch and insert it into the A plate as shown. This will be the top of the A plate. Leave the switch loose and do not push it all the way into the plate.



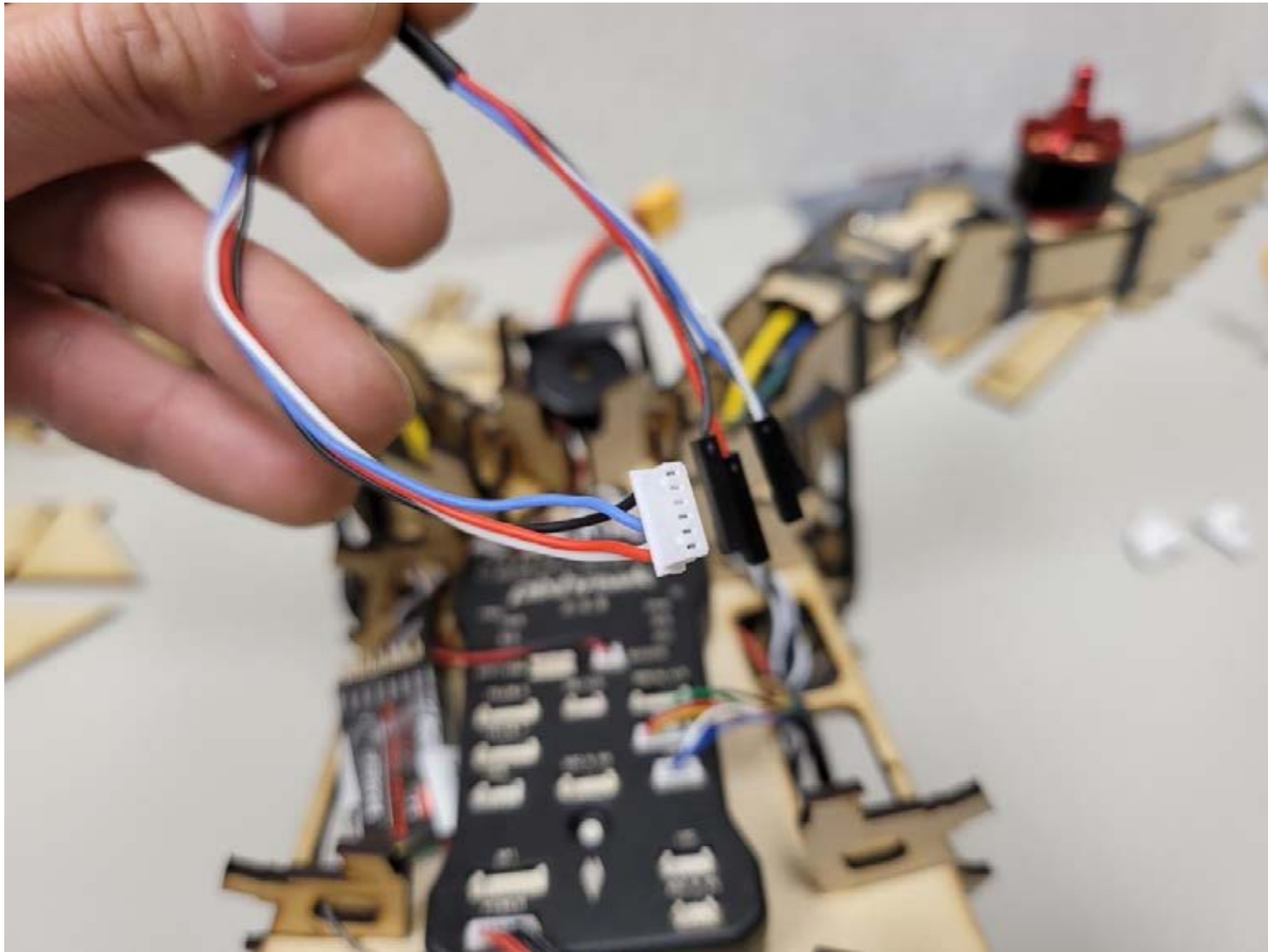


Final Assembly

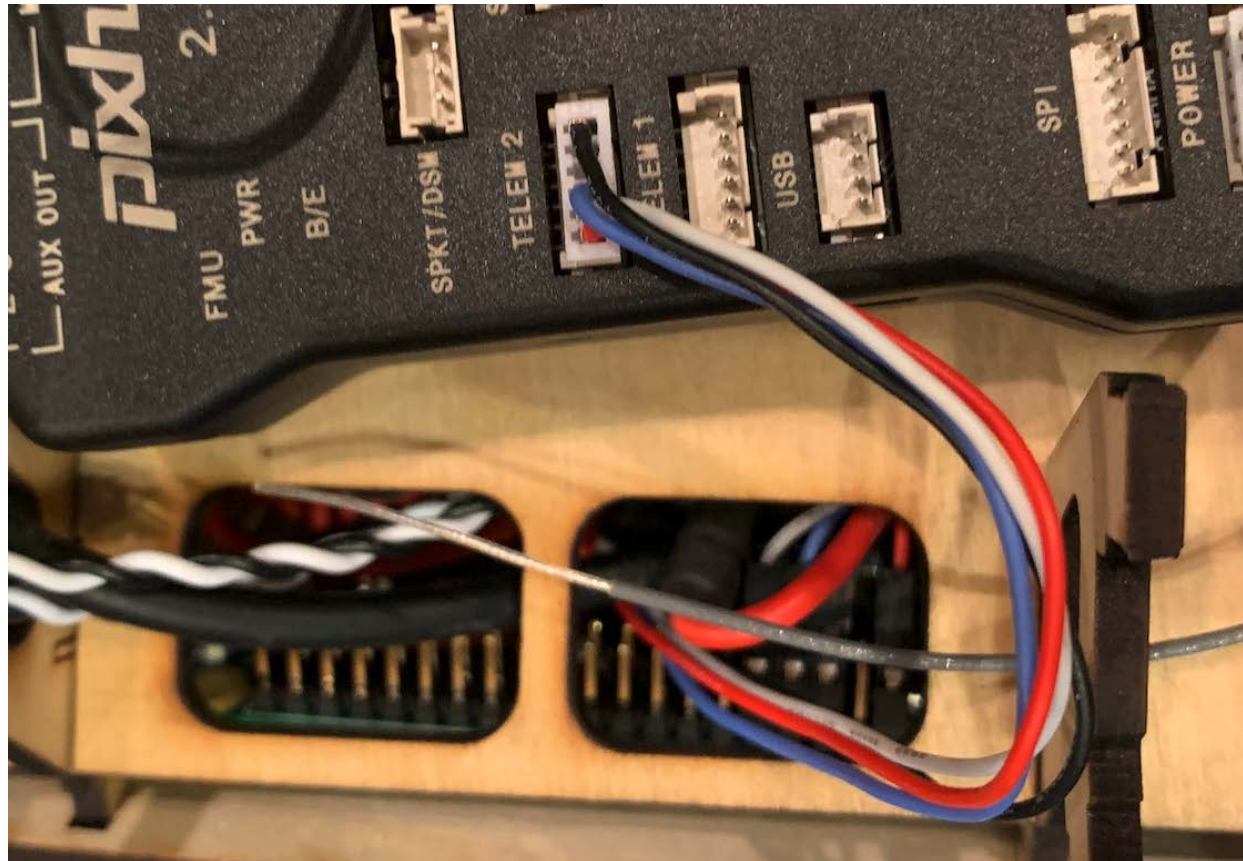
The Parts and Subassemblies for the Final Assembly are included in the Photo Below



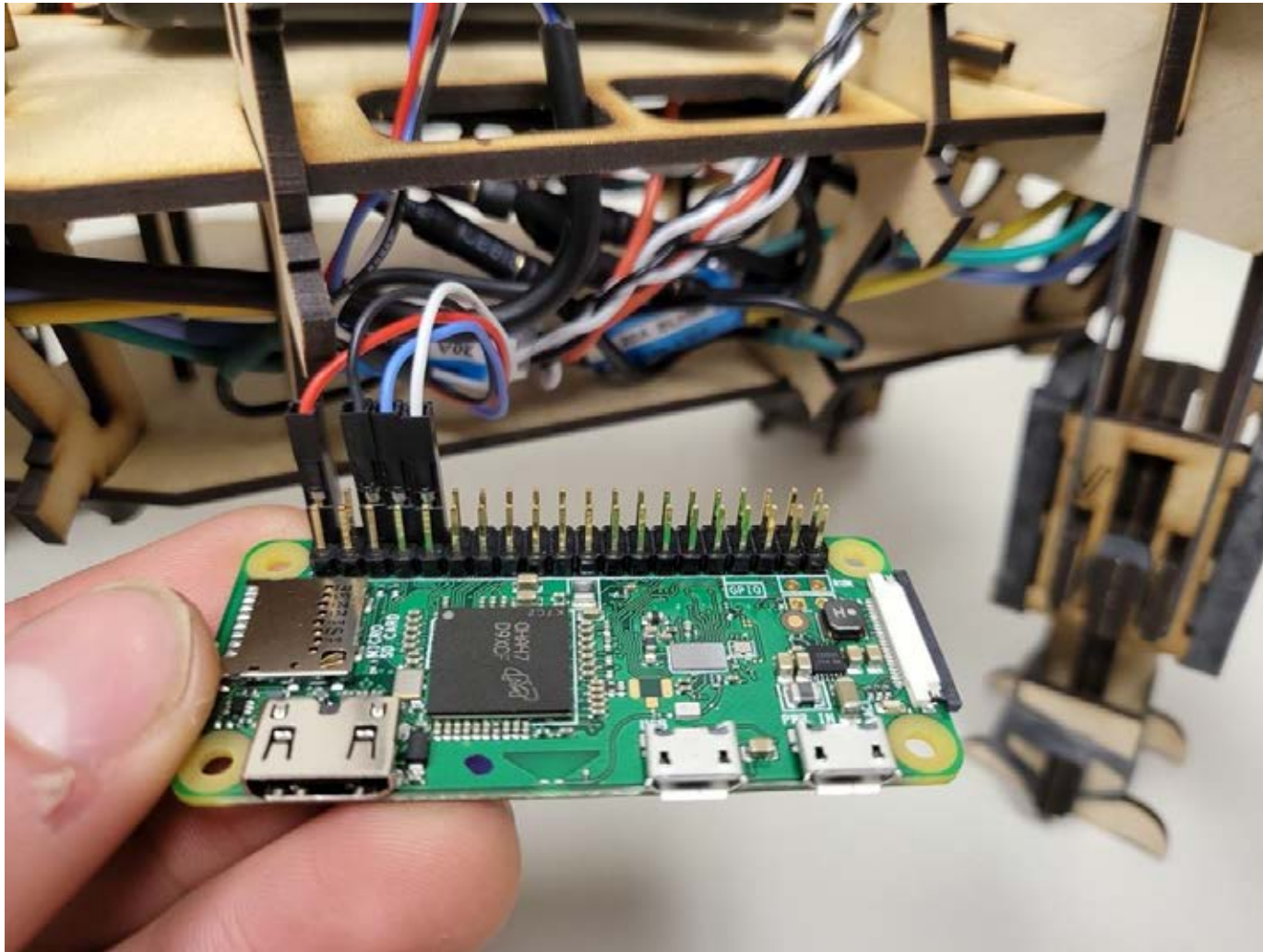
Final Assembly – Step 1a Companion Computer Wires



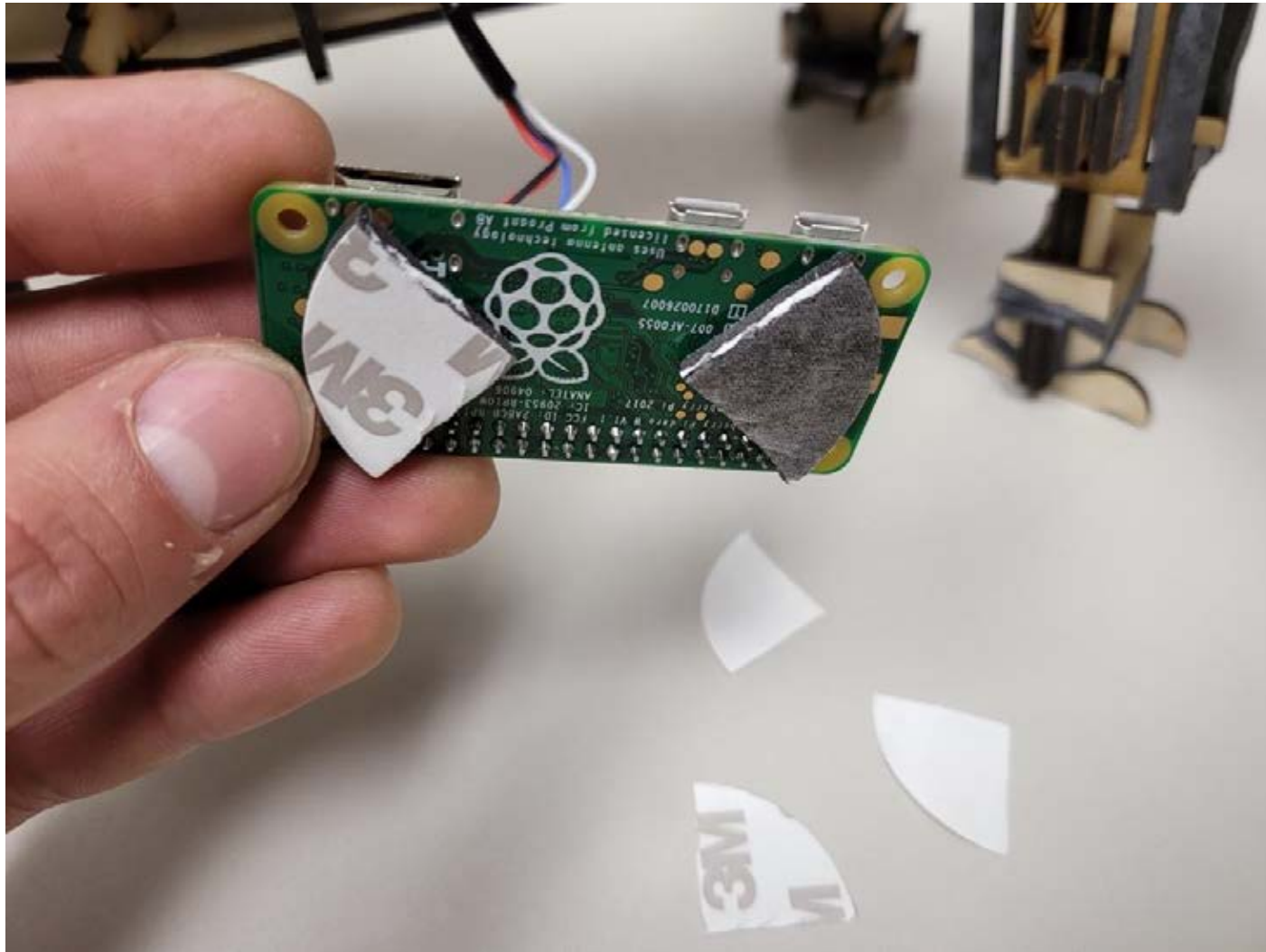
Other Electronics – Step 1b Connect Companion Computer Signal to FMU TELEM1 Port
Plug the companion computer connector into the TELEM2 port on the FMU, as shown below. Then route the wire through the hole in plate B by the RC receiver as shown.



Other Electronics – Step 1c Position Companion Computer on Right Side or Body
Plug the connectors into the Companion Computer as shown



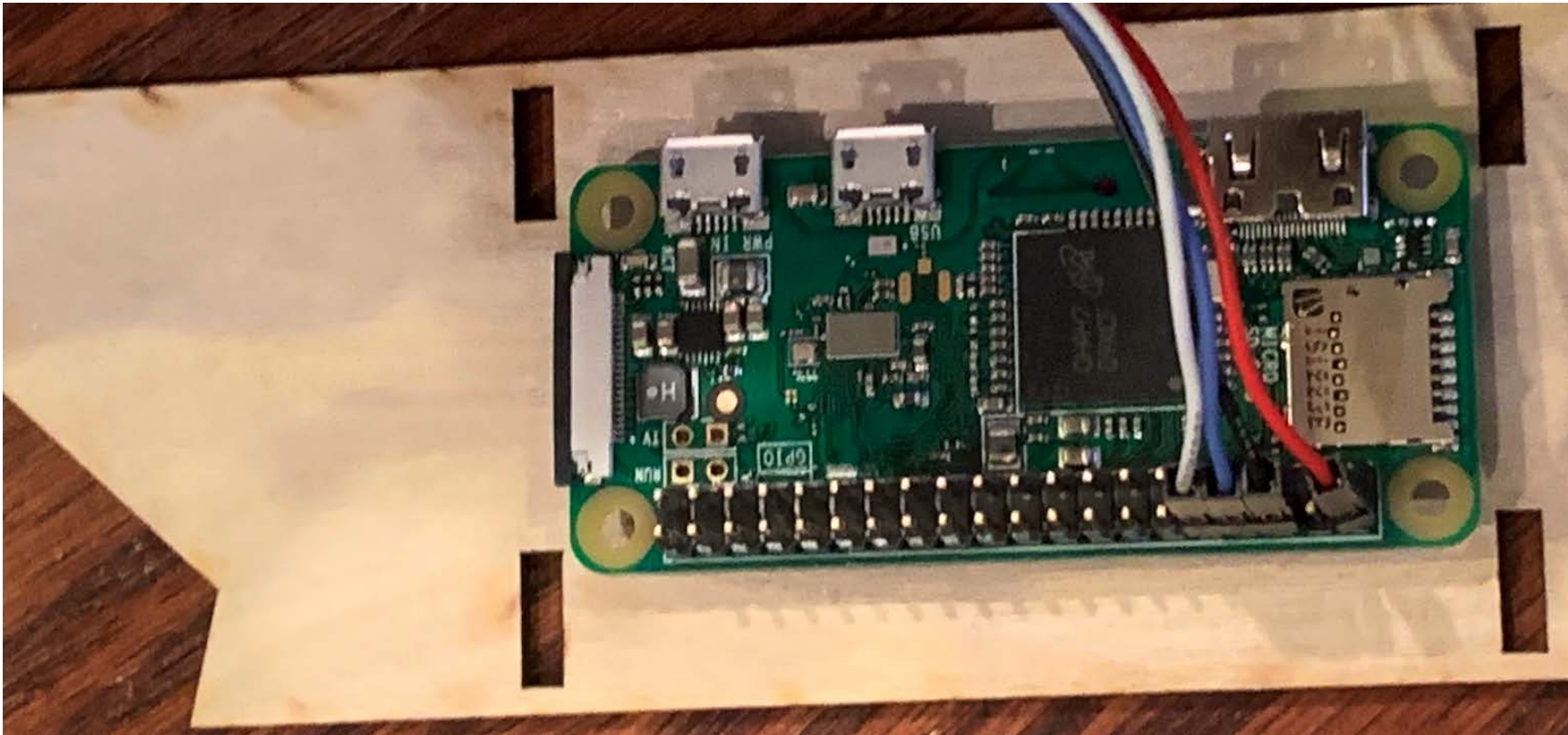
Other Electronics – Step 1d Put Foam quarter Circles on the back of the Companion Computer



Other Electronics – Step 1e Mount the Companion Computer

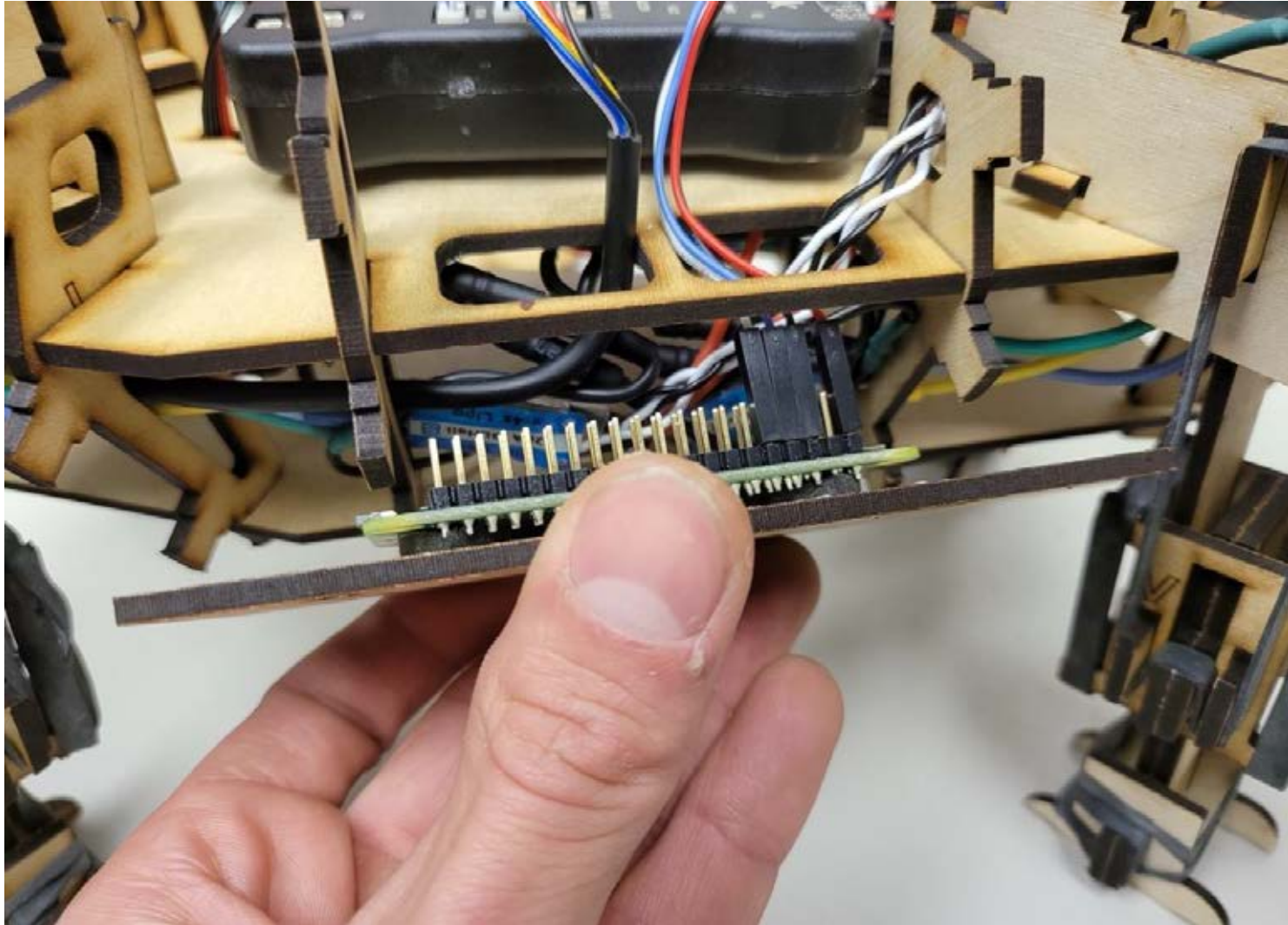
Take plate N and position it so that the long point is towards the rear of the drone.

Mount the Companion Computer to Plate n as shown – centered between the holes.



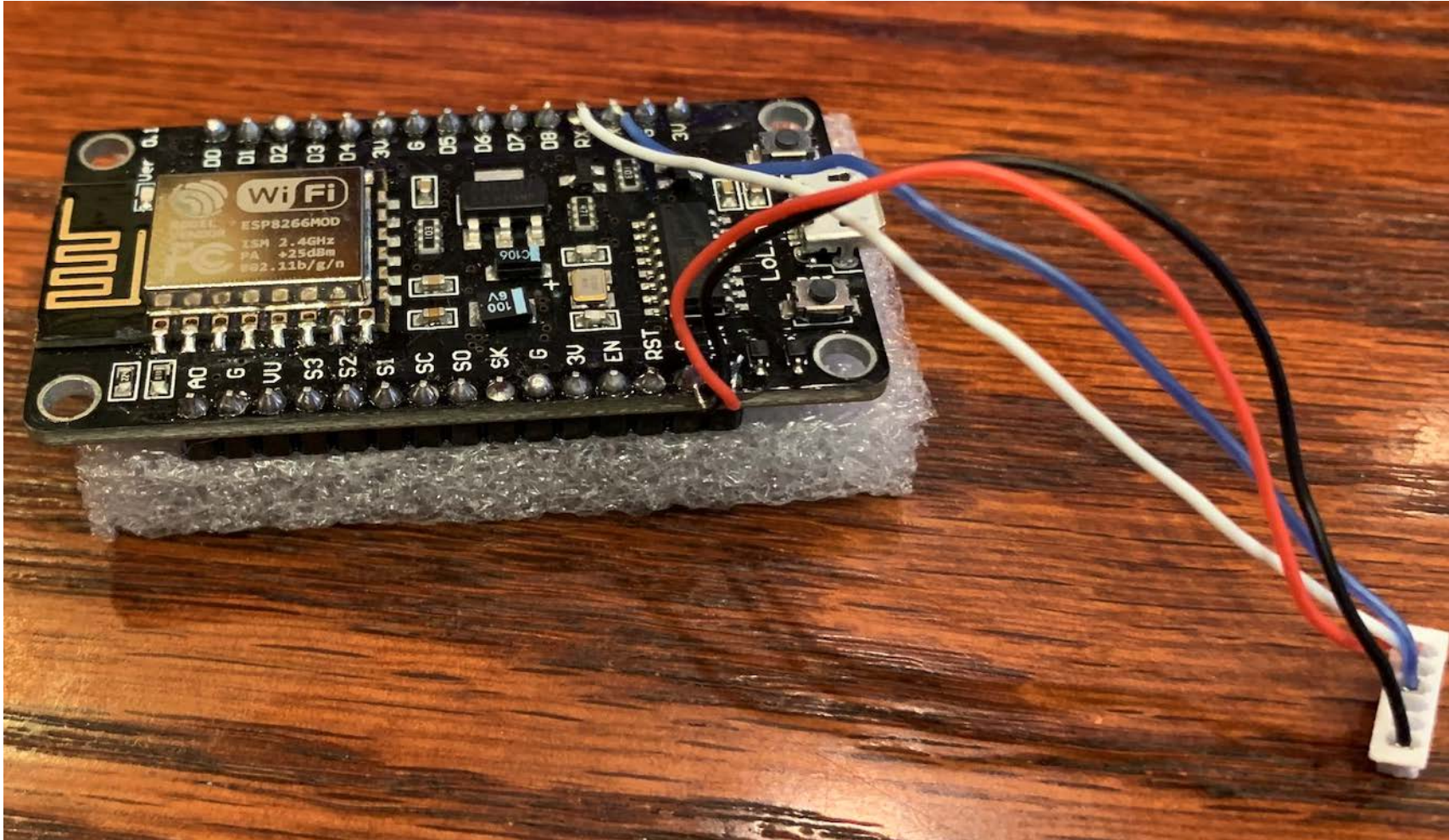
Other Electronics – Step 1f Mount the Companion Computer

Slide the pointed end of plate N under the right rear arm and slide it onto the pegs.



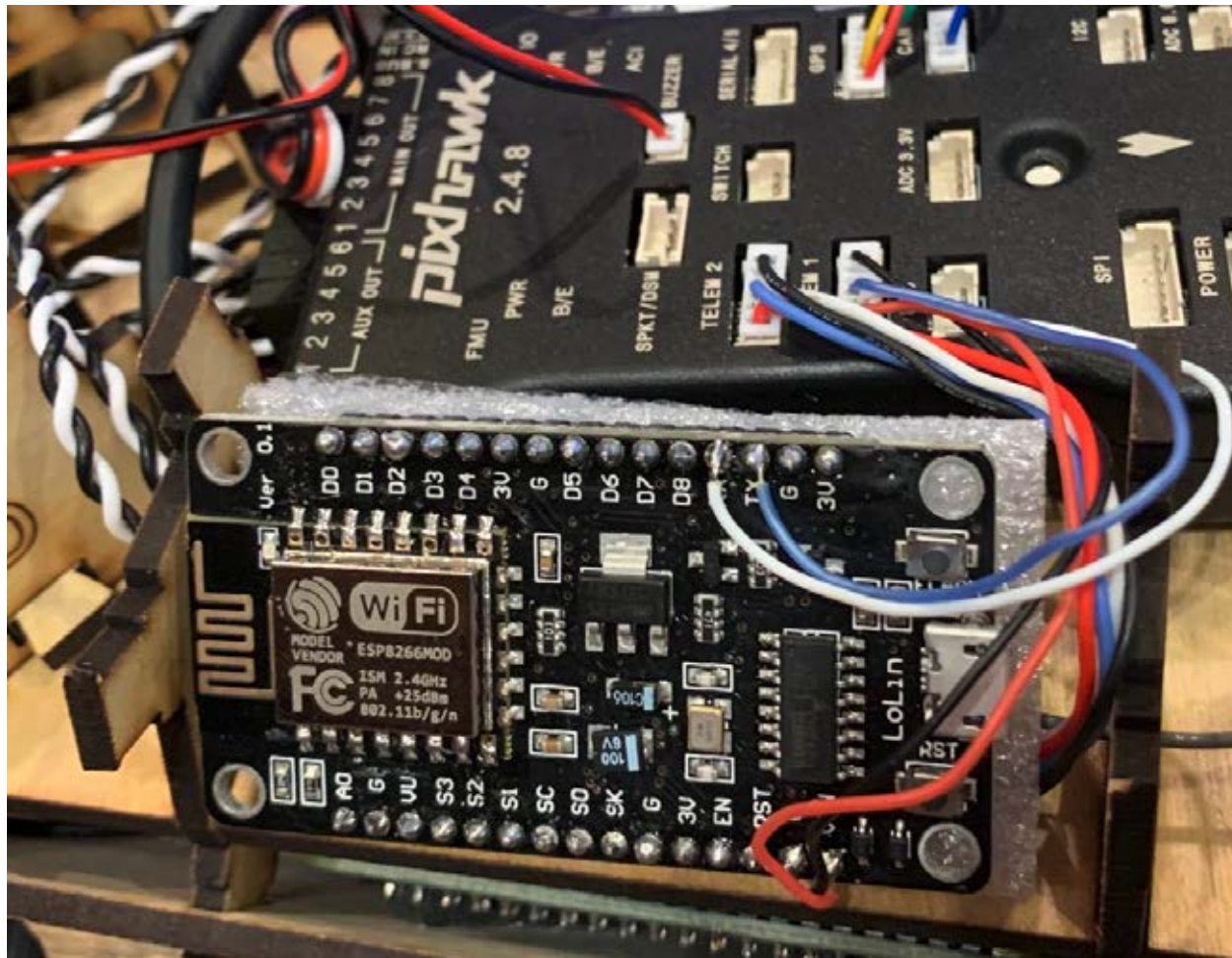
Other Electronics – Step 1a Place the WiFi Board

Leave the piece of protective foam on the bottom of the wifi board to protect the pins.



Other Electronics – Step 1b Place the WiFi Board

The WiFi board is positioned on the left side of the FMU (above the Companion Computer and is plugged into the TELEM1 Port. You may need to tilt it so that there is room for the side panel as shown below.



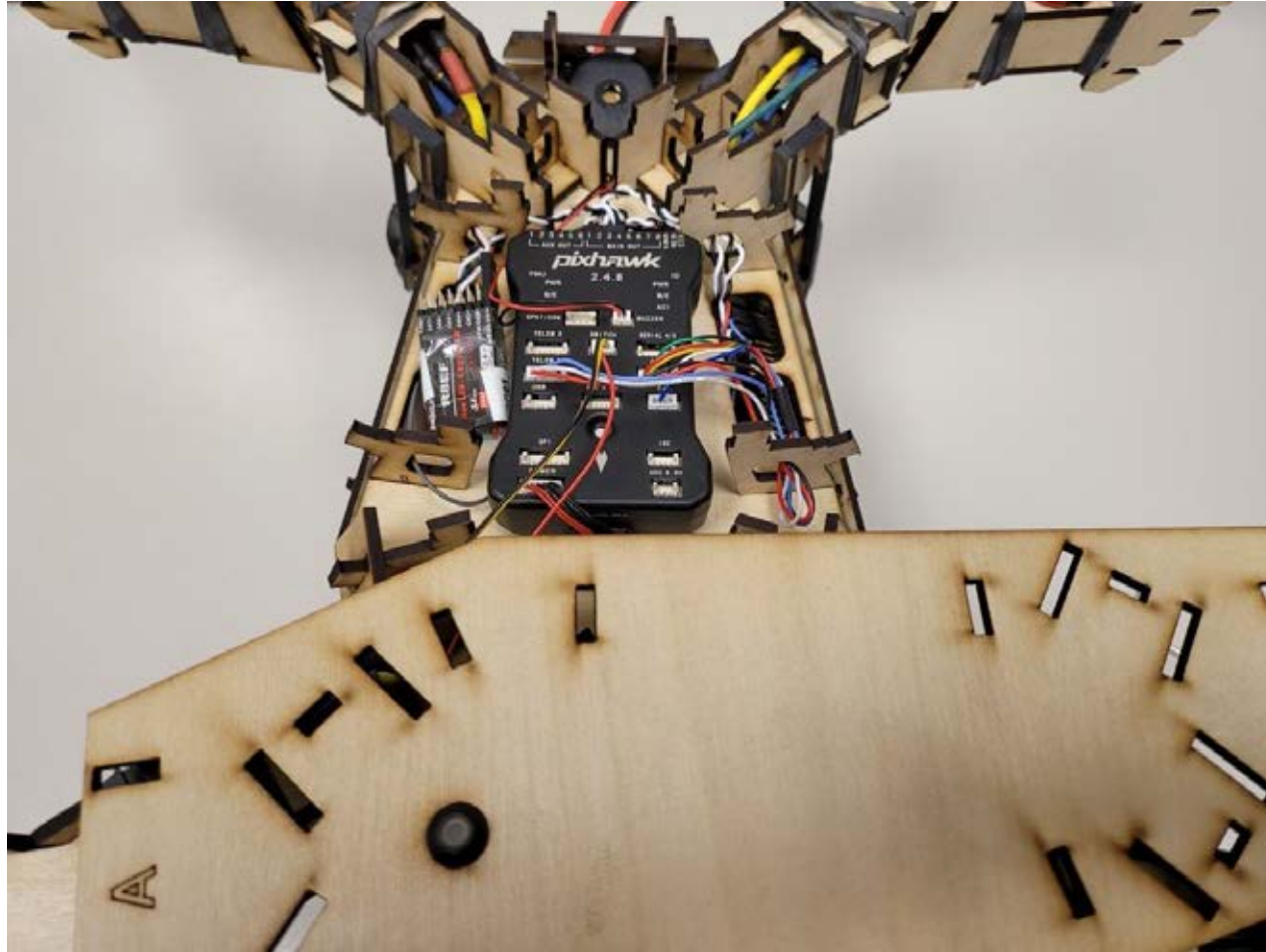
Final Body Assembly

Before you start the final body assembly, it is recommended that you run the *Motor Rotation Check* procedure as described in the *Flight Controller Guide* at this point in the construction. This will tell you if all the ESC's are plugged into the proper FM ports and if the ESC to motor wiring is correct for the correct motor rotation.

Make sure there are no propellers attached, and nothing near the motors that might get caught as they rotate.

Final Body Assembly – Step 1: Connect the ARM switch

Get Panel A with the arm switch and plug the arm switch into the “switch” port on the FMU.



First, plug your battery into its charger if you have not already done that, so that it is fully charged when you get to the end of this sequence. Next check to see that all of your wires are NOT in the way of the mounting pins of the ribs.

Then check that all the X-keys are fully inserted. Watch the Drone Assembly Video Chapter 5 for how to get Plate A on – it is tricky. The WiFi board may fall out the side – that is OK, just keep watching the wires from all sides to make sure no wires are getting pinched by the top plate or under the ribs. If the top plate is not going all the way down, check all the sides to make sure no wires are in the way, and that each peg is centered in the holes.

As you position the top plate A, starting from the front, gently pull up on the arm switch so that the wires are not loosely draped over the FMU. This prevents them from getting caught in between the top plate and the ribs.

**Final Body Assembly – Step 2: Mount Top Plate
See Drone Assembly Video Chapter 5**

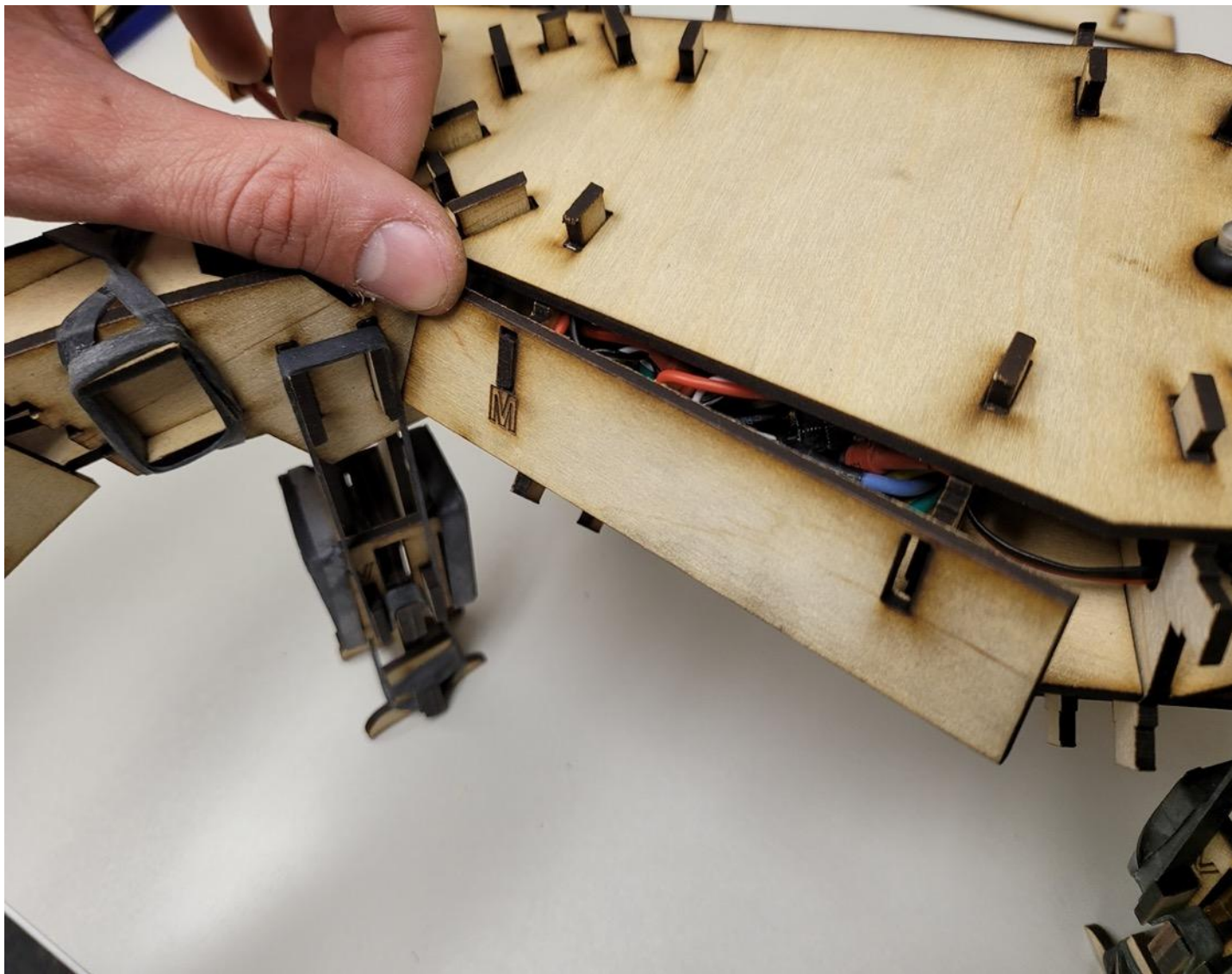
Final Body Assembly – Step 3a: Mount Front Plates



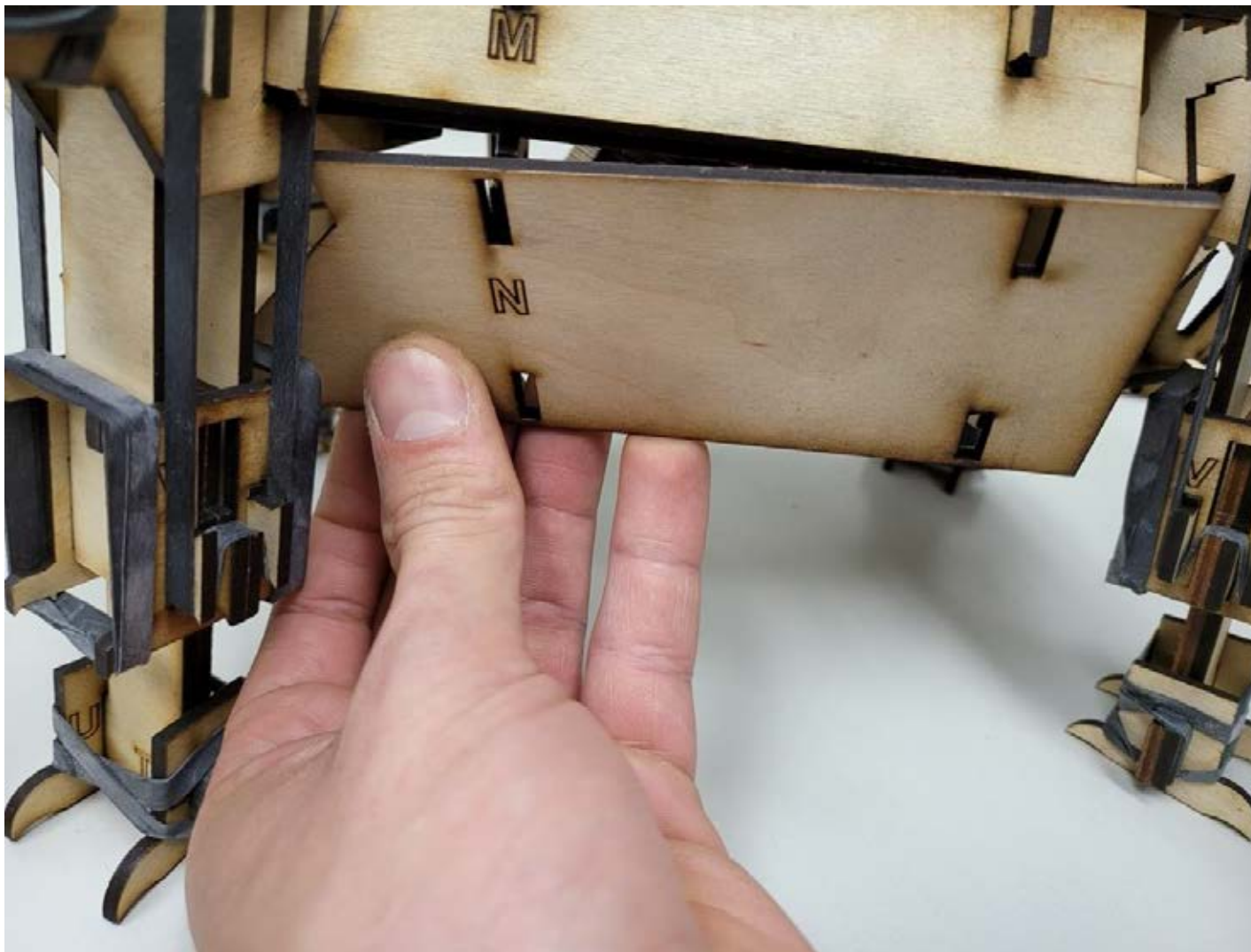
Final Body Assembly – Step 3b: Mount Front Plates



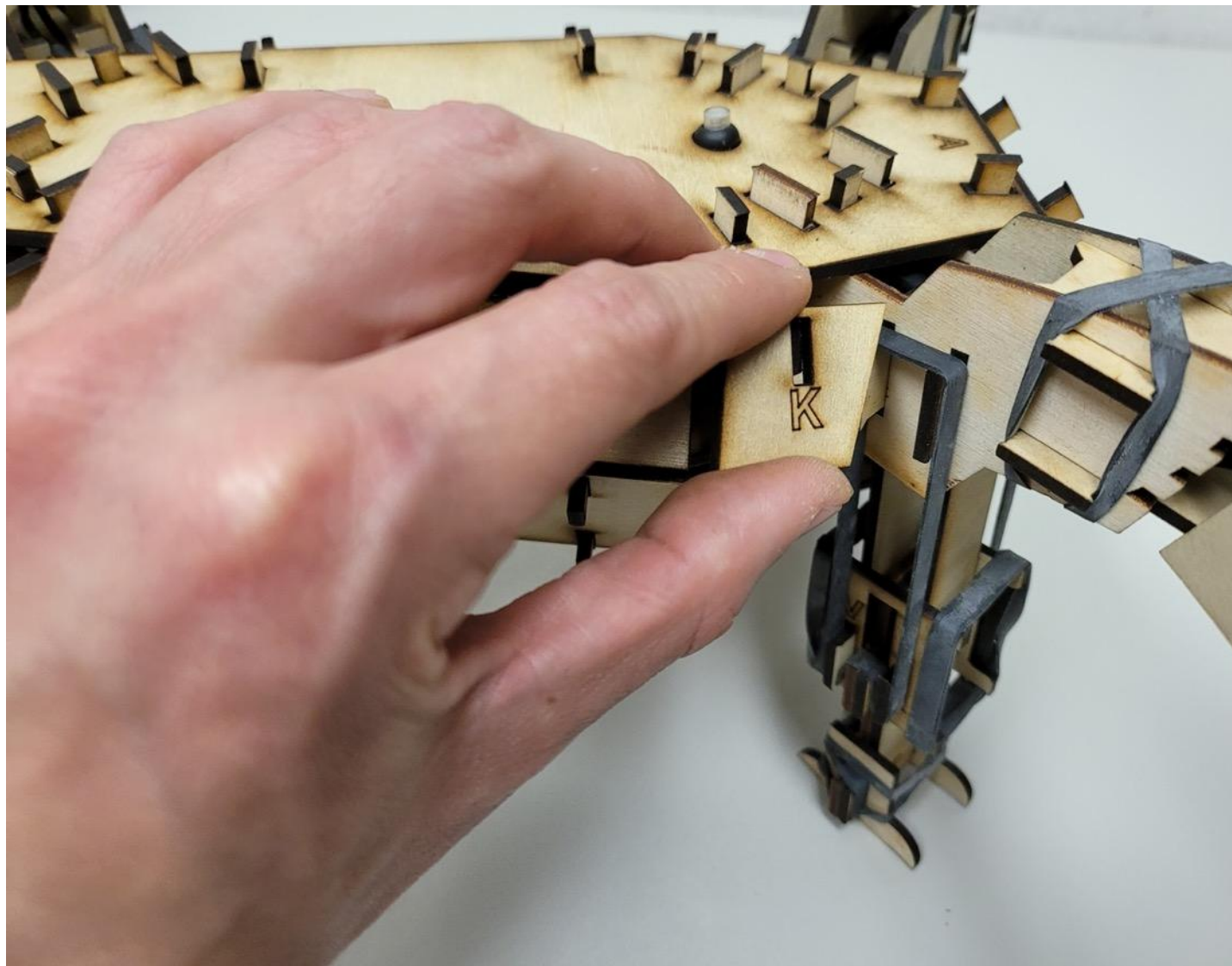
Final Body Assembly – Step 4a: Mount Remaining Side Plates



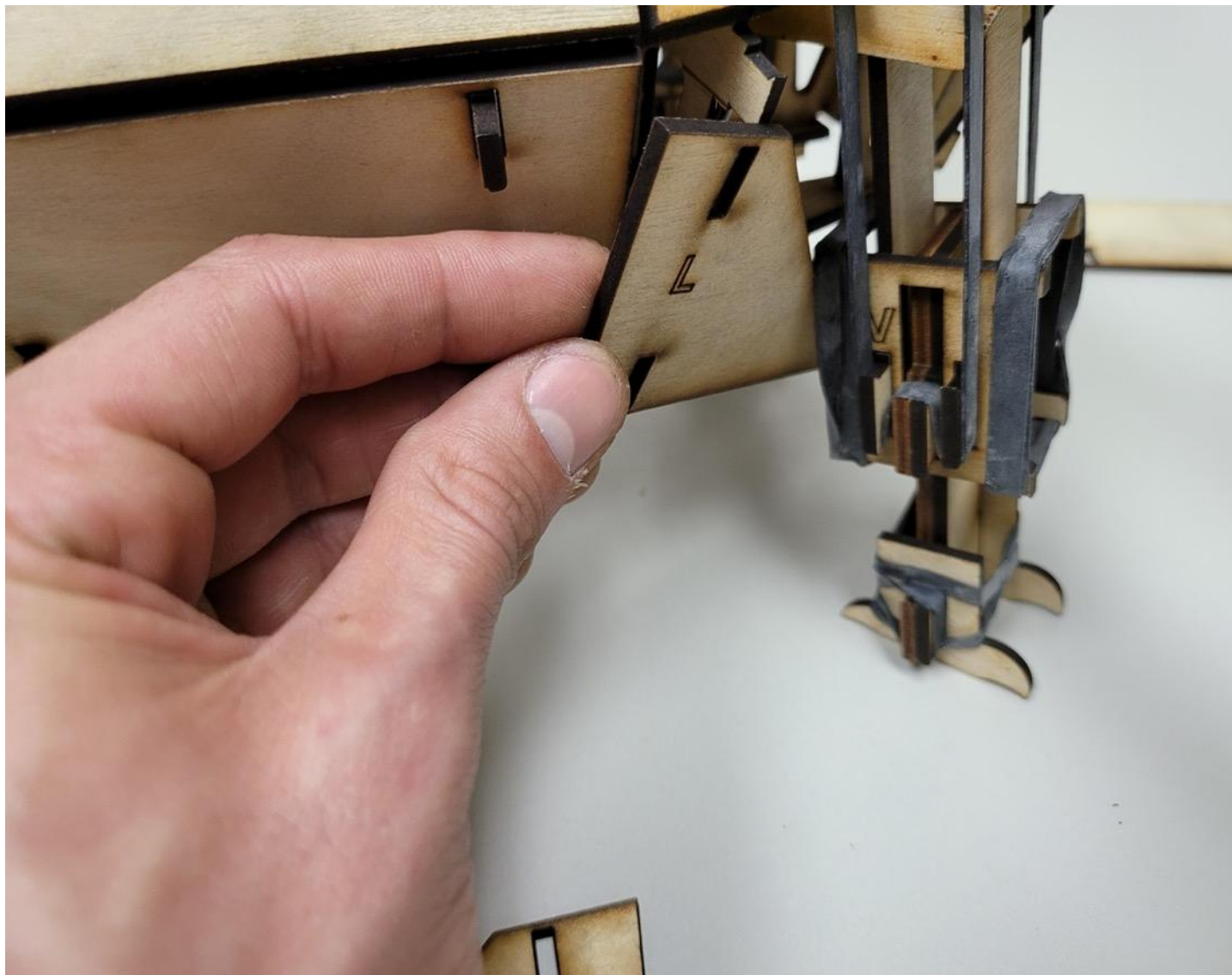
Final Body Assembly – Step 4b: Mount Remaining Side Plates



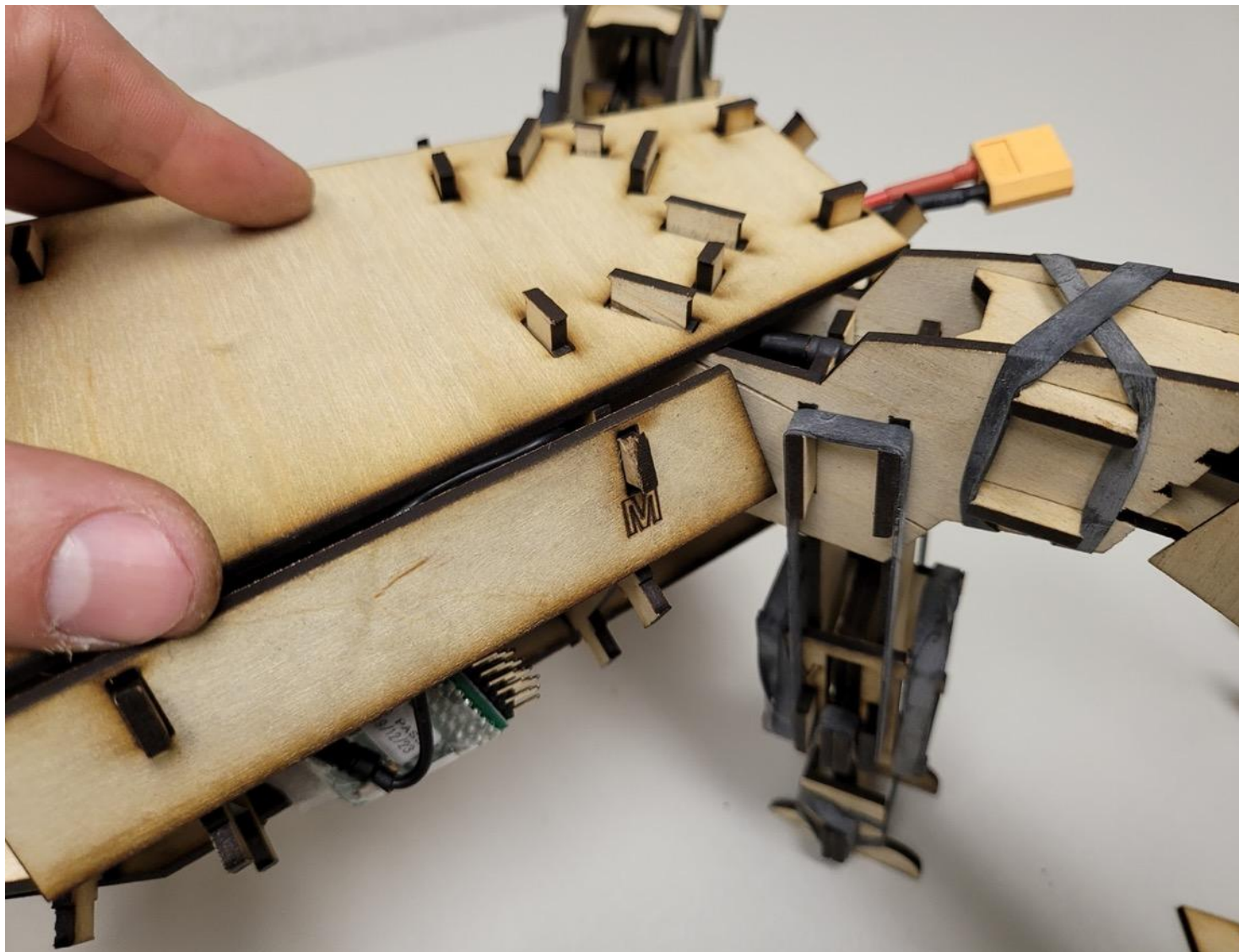
Final Body Assembly – Step 4c: Mount Remaining Side Plates



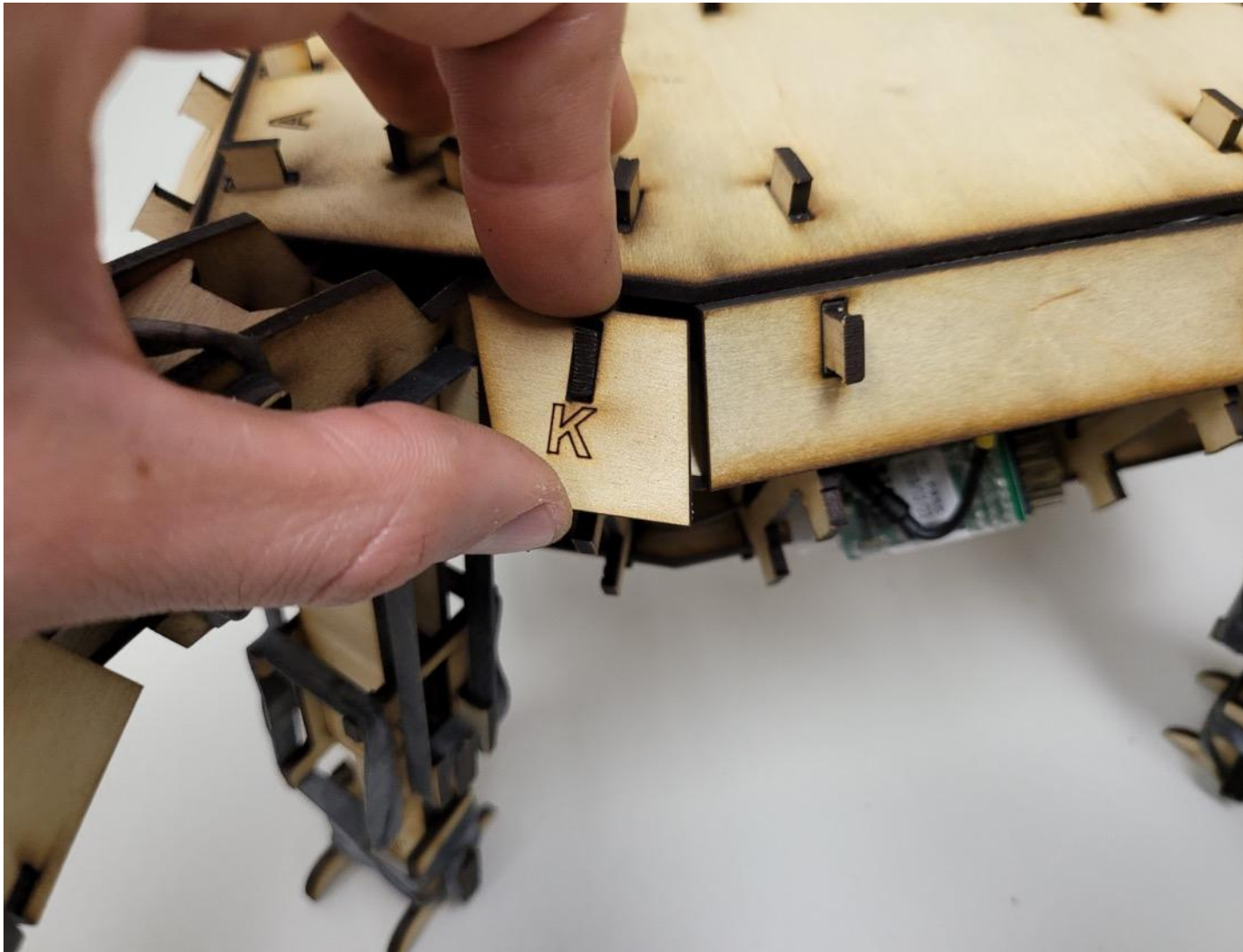
Final Body Assembly – Step 4d: Mount Remaining Side Plates



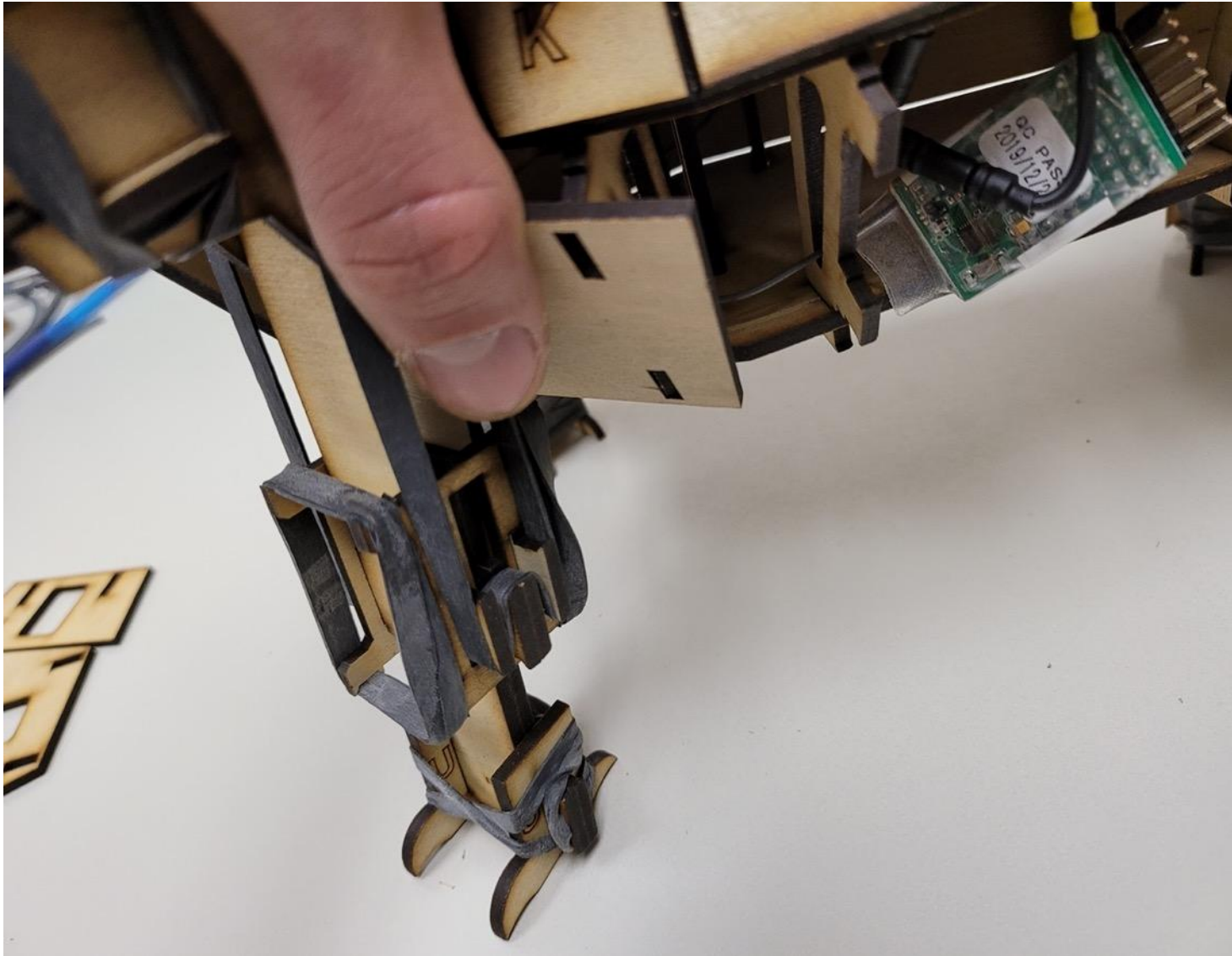
Final Body Assembly – Step 4e: Mount Remaining Side Plates



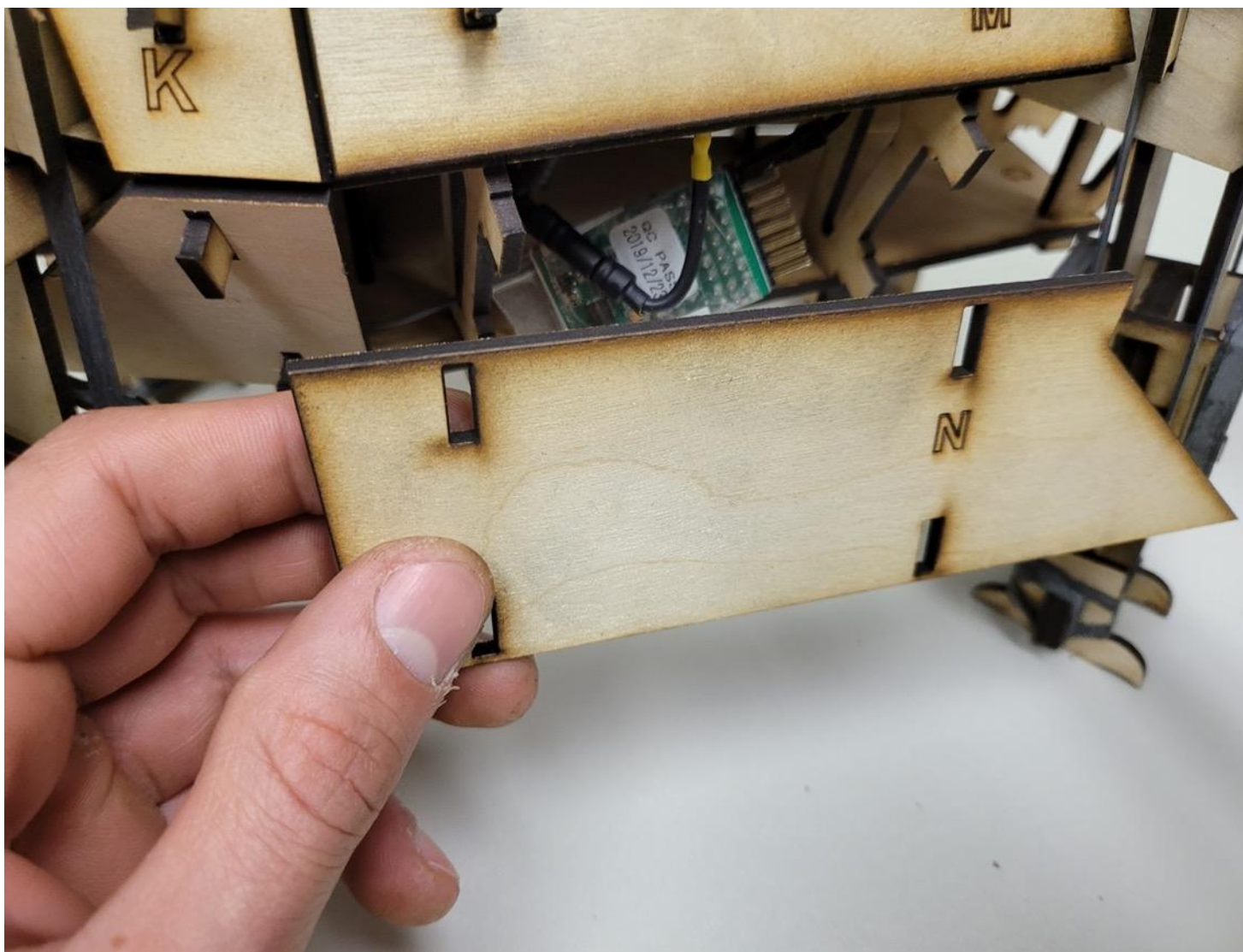
Final Body Assembly – Step 4f: Mount Remaining Side Plates



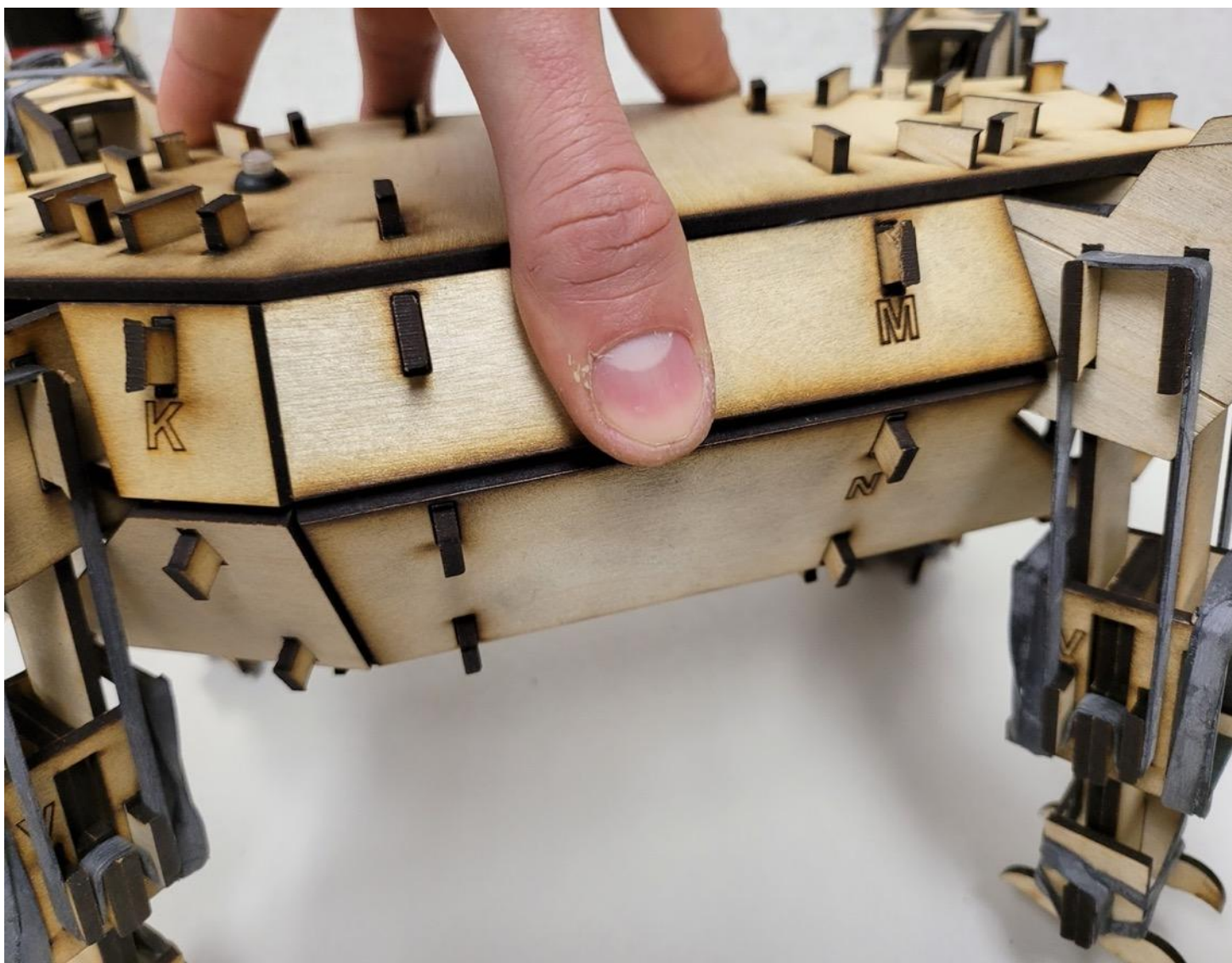
Final Body Assembly – Step 4g: Mount Remaining Side Plates



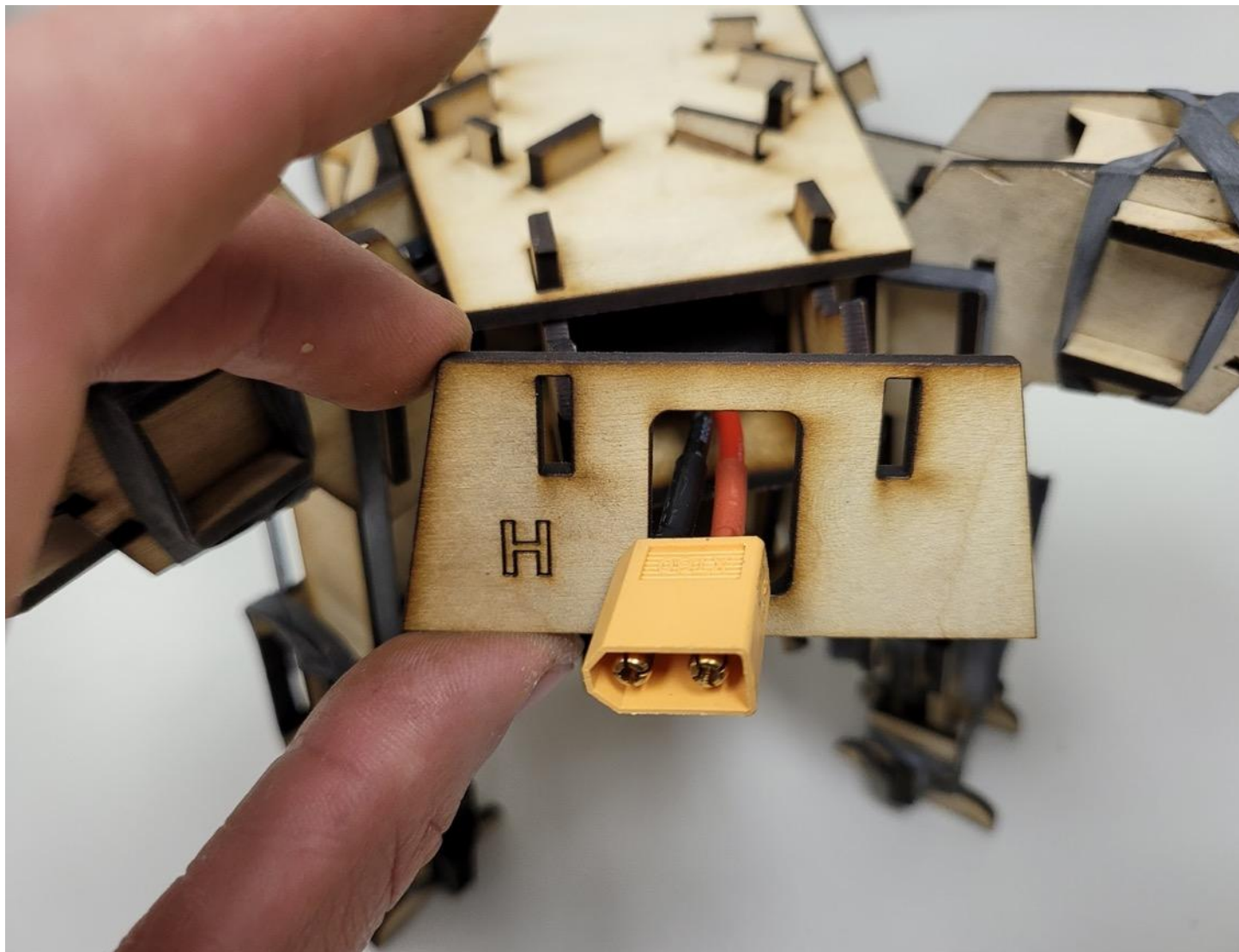
Final Body Assembly – Step 4h: Mount Remaining Side Plates



Final Body Assembly – Step 4i: Side Plates Mounted

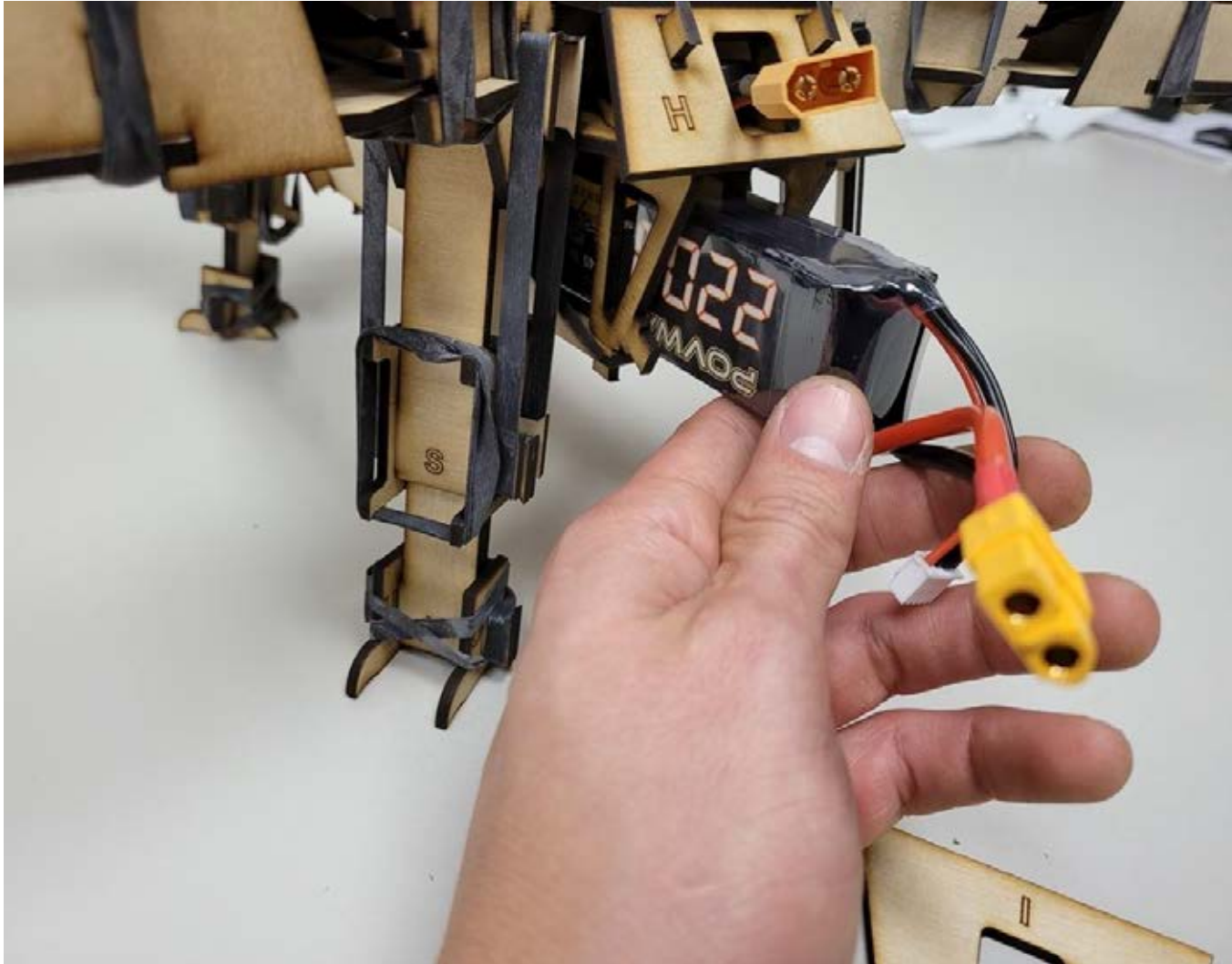


Final Body Assembly – Step 5a: Mount Back Plates & Battery

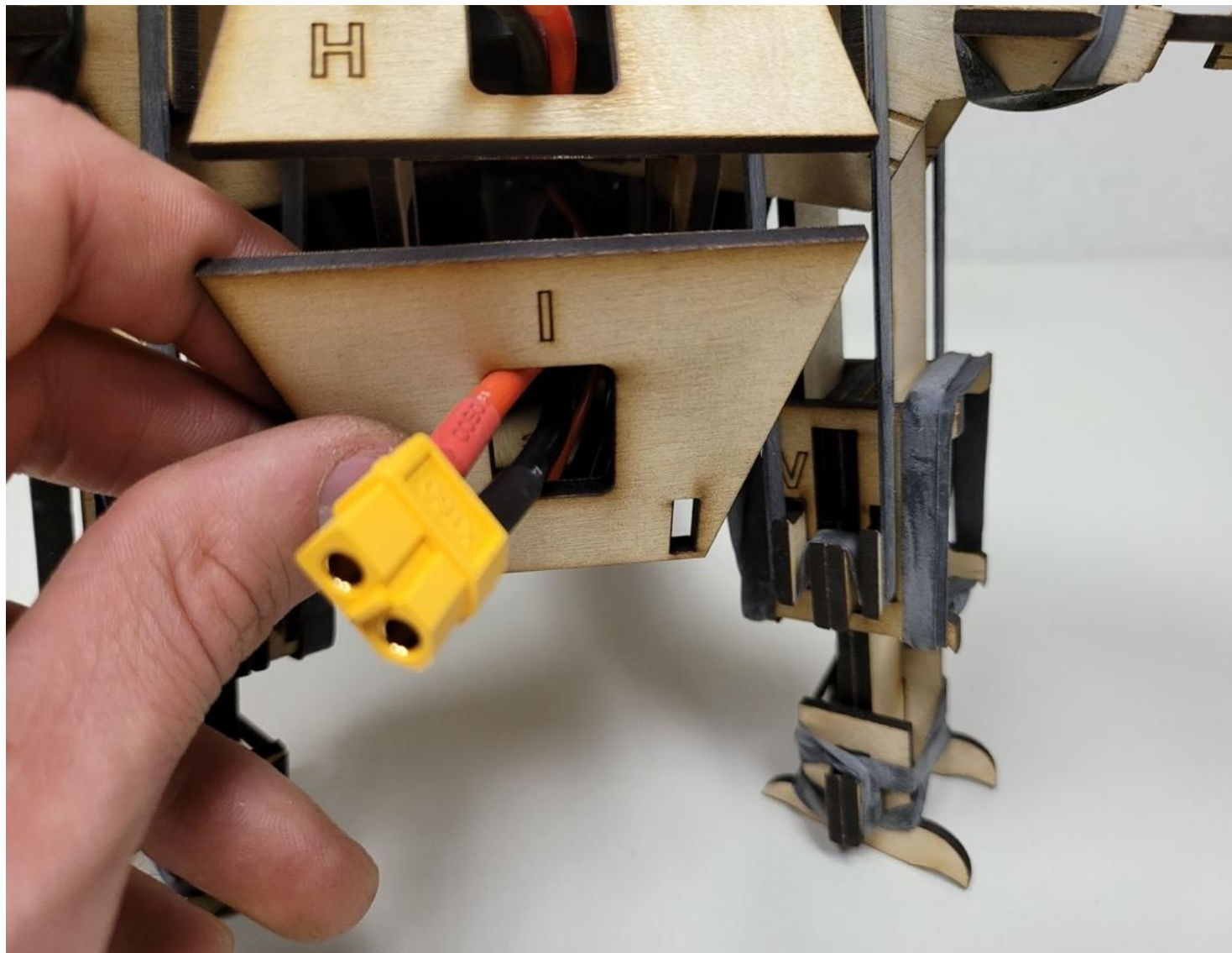


Final Body Assembly – Step 5b: Insert Battery

Before you put the battery in – make sure it is charged.

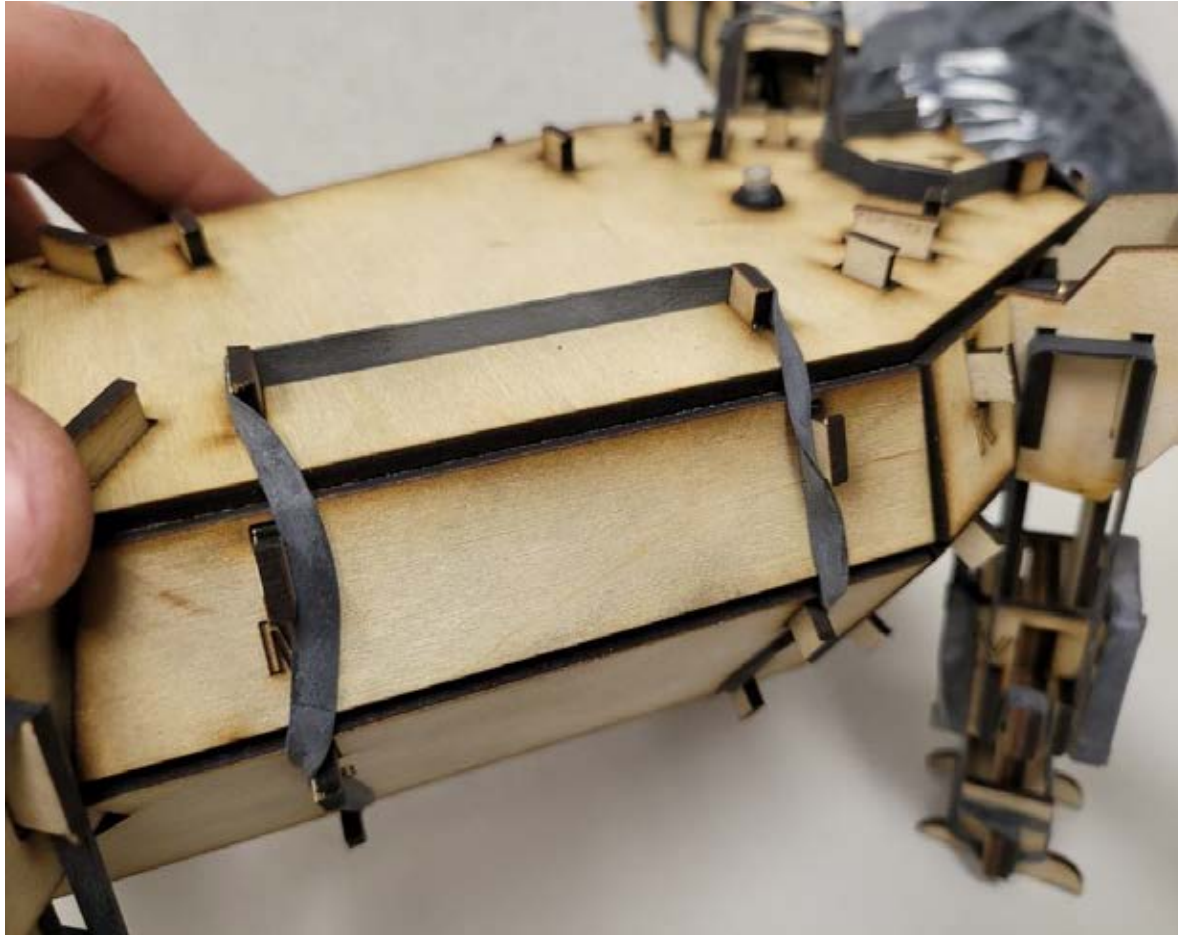


Final Body Assembly – Step 5c: Mount Back Plates



Final Body Assembly – Step 6a: Fasten Body Rubber Bands

Place 2 rubber bands around the main body to hold everything together as you finish up. Start the first one on the 2 middle-side pegs as shown below, and then wrap that rubber band down under the body



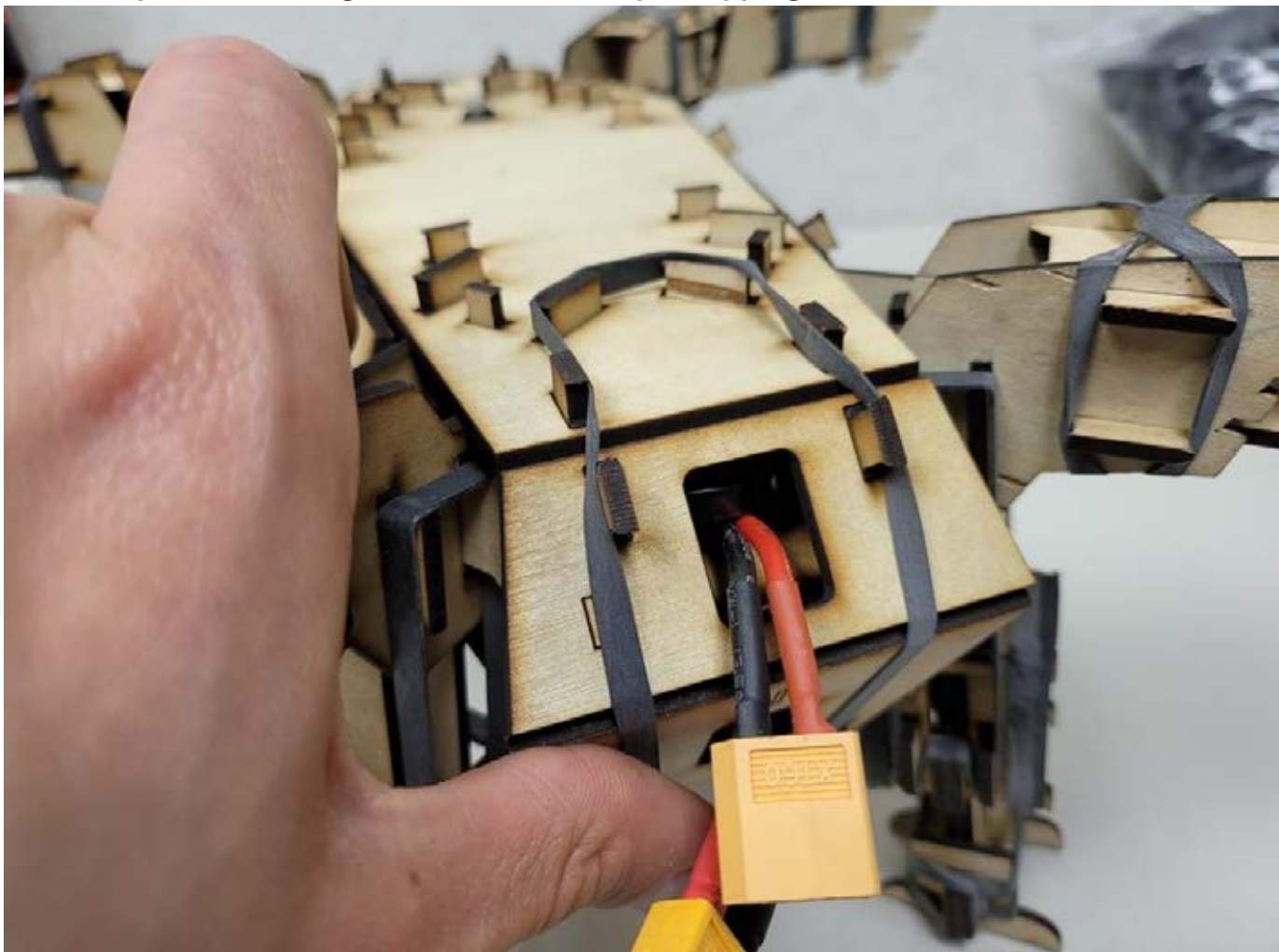


Finally, pull that rubber band all the way across the bottom to the bottom two pegs on the opposite side from the top pegs you started with. Then put the 2nd rubber band around the body starting with the 2 unused side pegs on the top, so that they both cross on the bottom.



Final Body Assembly – Step 6b: Fasten Back Body Rubber Bands

Now, fasten the rear panels, starting as shown on the top, wrapping around to the bottom





Final Body Assembly – Step 6c: Fasten Front Body Rubber Bands

Next, start on the front top 2 pegs as shown, and wrap around to the bottom as shown in the next 2 photos





Final Body Assembly – Step 6d: Fasten Body Rubber Bands

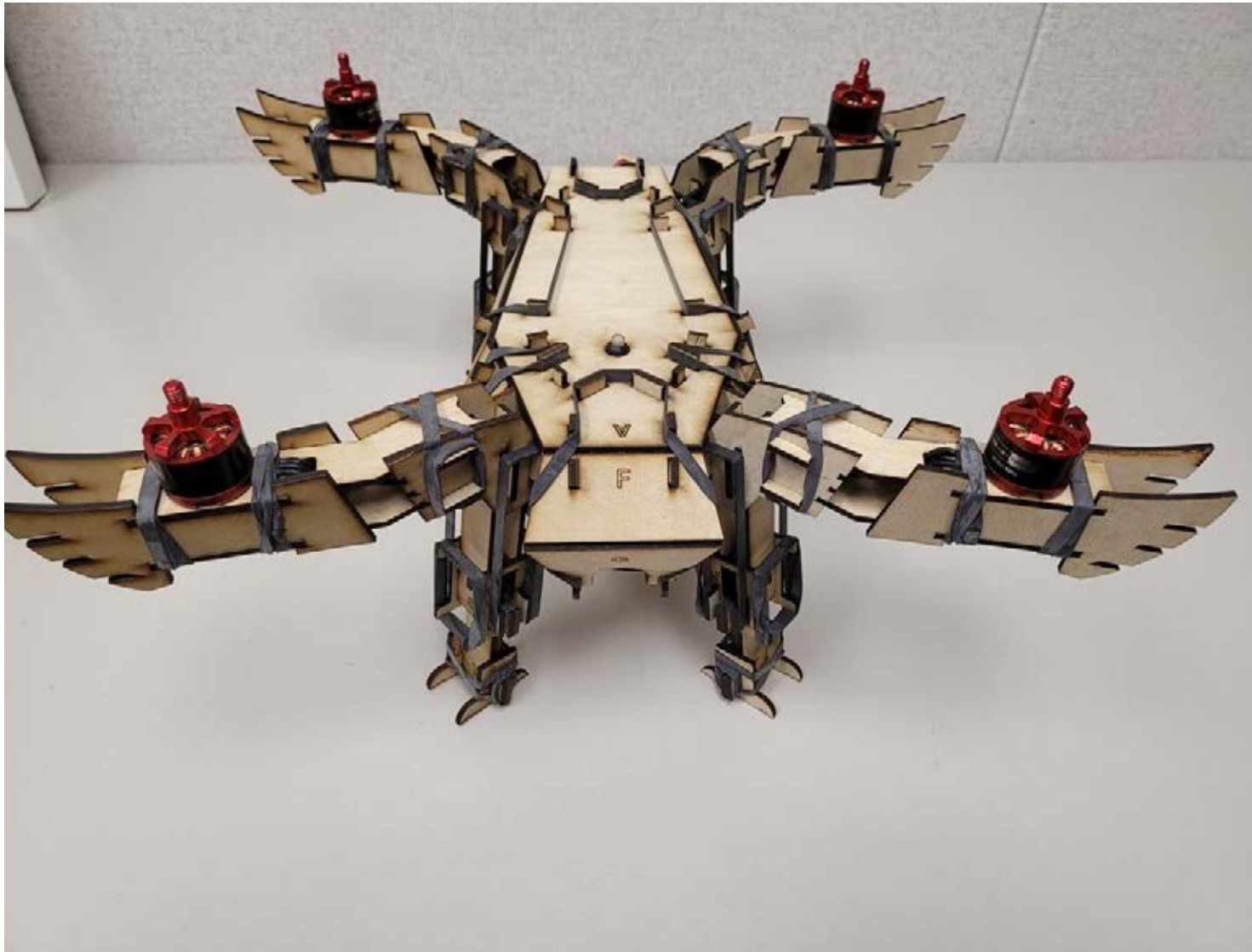
Now wrap panels K & L, starting from the top, twisting down the side, and running across the body to the other side of the bottom as shown in the following 2 photos.





Then repeat for the other side K & L panels.

Final Body Assembly – Body Assembly Complete



Attach Propellers

First, use the 400 grit sandpaper to lightly sand the propeller leading edges to prevent cuts from the propellers. Next, put the CW propellers on the left front and right rear, and the CCW propellers on the right front and left rear.

Your Drone is now Assembled - Congratulations!

