

Mobile

ASSEMBLY GUIDE



THANK YOU

For purchasing the Trossen Robotics Mobile AI Machine Learning Kit.

We highly recommend that you also watch the video version of the assembly guide by going to
<https://www.youtube.com/watch?v=BDENPOcgwdU>

If you require additional support, please submit a support ticket at trossenrobotics.com/support

Additional Resources:

Trossen Robotics GitHub: github.com/interbotix

Product Documentation: docs.trossenrobotics.com

PART LIST

Podium	
Podium	1
Electronics Shelf	1
4 Outlet Power Strip	1
Front WX Vertical Mount	1
Velcro Straps - 4ft	2
Frame + Hardware	
Rear WX Vertical Mount	1
Caster Horizontal Mount	1
Touchscreen Mount	1
Camera Stand	1
M3x8mm Socket Head Bolts	20
M3x10mm Socket Head Bolts	5
M4x6mm Button Head Bolts	5
M4x8mm Button Head Bolts	5
M5x8mm Button Head Bolts	5
M5x12 Button Head Bolts	20
M2.5 T-Driver	1
M3 Ball-End Driver	1
M3 T-Driver	1
Loctite	3
Zip Ties - 6 in	10
Zip Ties - 10 in	10
3D Printed Parts	
2020 USB Cable Clip	10
2040 USB Cable Clip	10
Overhead cam mount	2

Electronics Shelf (Inside Podium)	
24v25a Power Supply	2
5-Port Ethernet Switch	1
4-Port USB Hub	1
M12 X-Code 8-Pin Male to RJ45 Male Cable	4
GX16 4-Pin to XT30(2+2) Cable 1600mm	2
GX16 4-Pin to XT30(2+2) Cable 1250mm	2
Electronics + Cables	
Touchscreen	1
USB A 3.0 Male to Male Cable 6 Foot	1
USB 3.0 to Micro B Cable 3m Locking Right Angled	1
RJ45 Male to Male Cable	1
PS4 Controller	1
Cameras	
Intel RealSense D405	1
Computer (If purchased with Mobile AI)	
Laptop	1
Laptop Charger	1
Power Supply	
OUPES 1800W Portable Power Station, 1.4kWh	1
Power Station Charger	1
Robot Base	
SLATE	1
FS-i6S Controller	1
SLATE Power Supply	1
Pigtail Cable	1
USB 3.0 A Male to A Male Cable 3 Foot	1
Robot Arms	
WidowX AI Leader	2
WidowX AI Follower	2

STEP 1

Unpack and organize all parts so they are easy to grab for assembly.



STEP 2

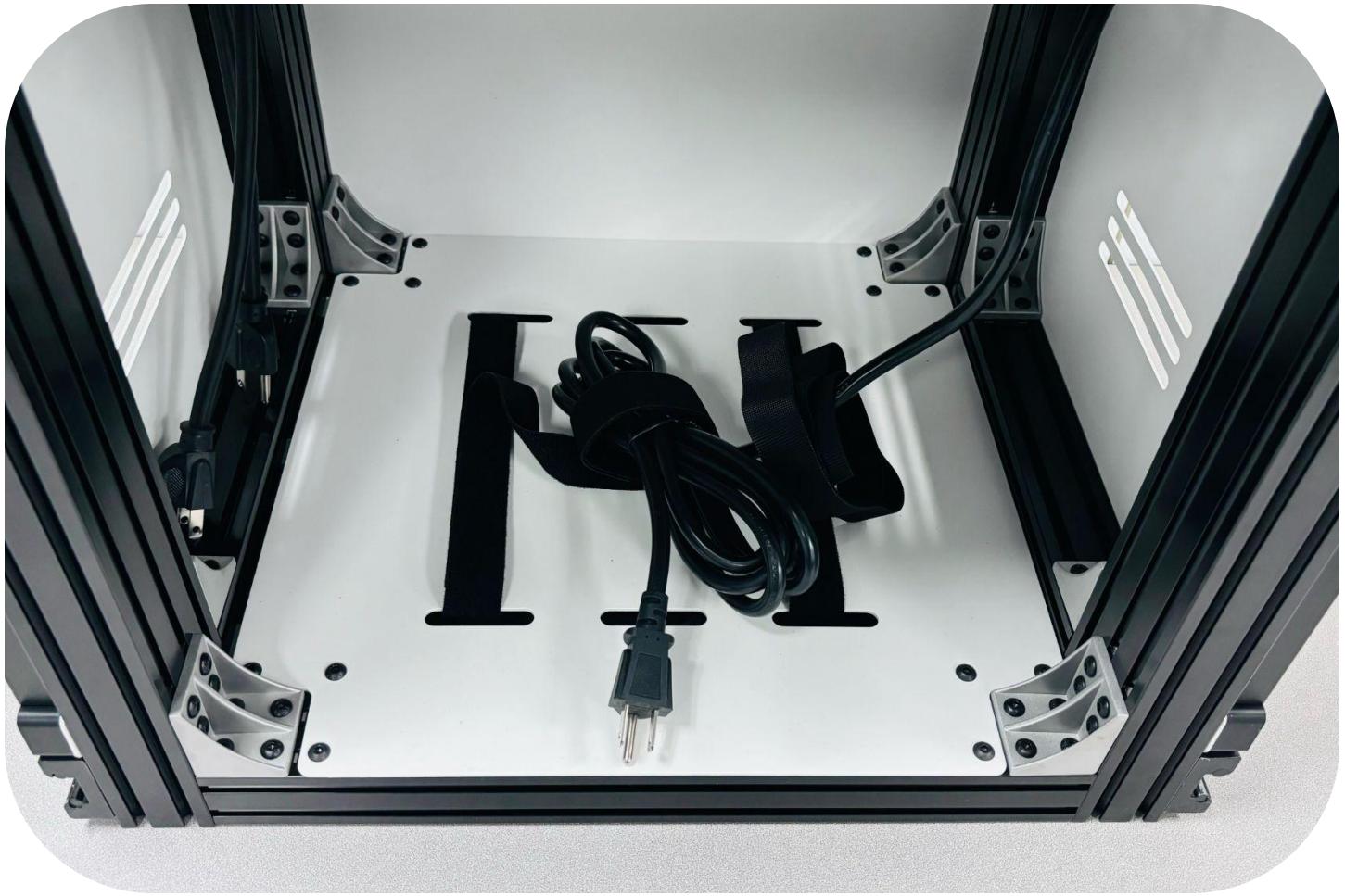
Carefully place the PODIUM on the SLATE. Mount the PODIUM to the SLATE using (12) M5x12b bolts found in the accessory bag.

*We recommend having 2 people lift the PODIUM together.



STEP 3

Mount the POWER SUPPLY PLATE to the bottom layer of the PODIUM using an M3 Driver for the (12x) M5x8b bolts.



STEP 4

Remove & reverse the FRONT WIDOWX UPRIGHT that is already installed on the PODIUM.

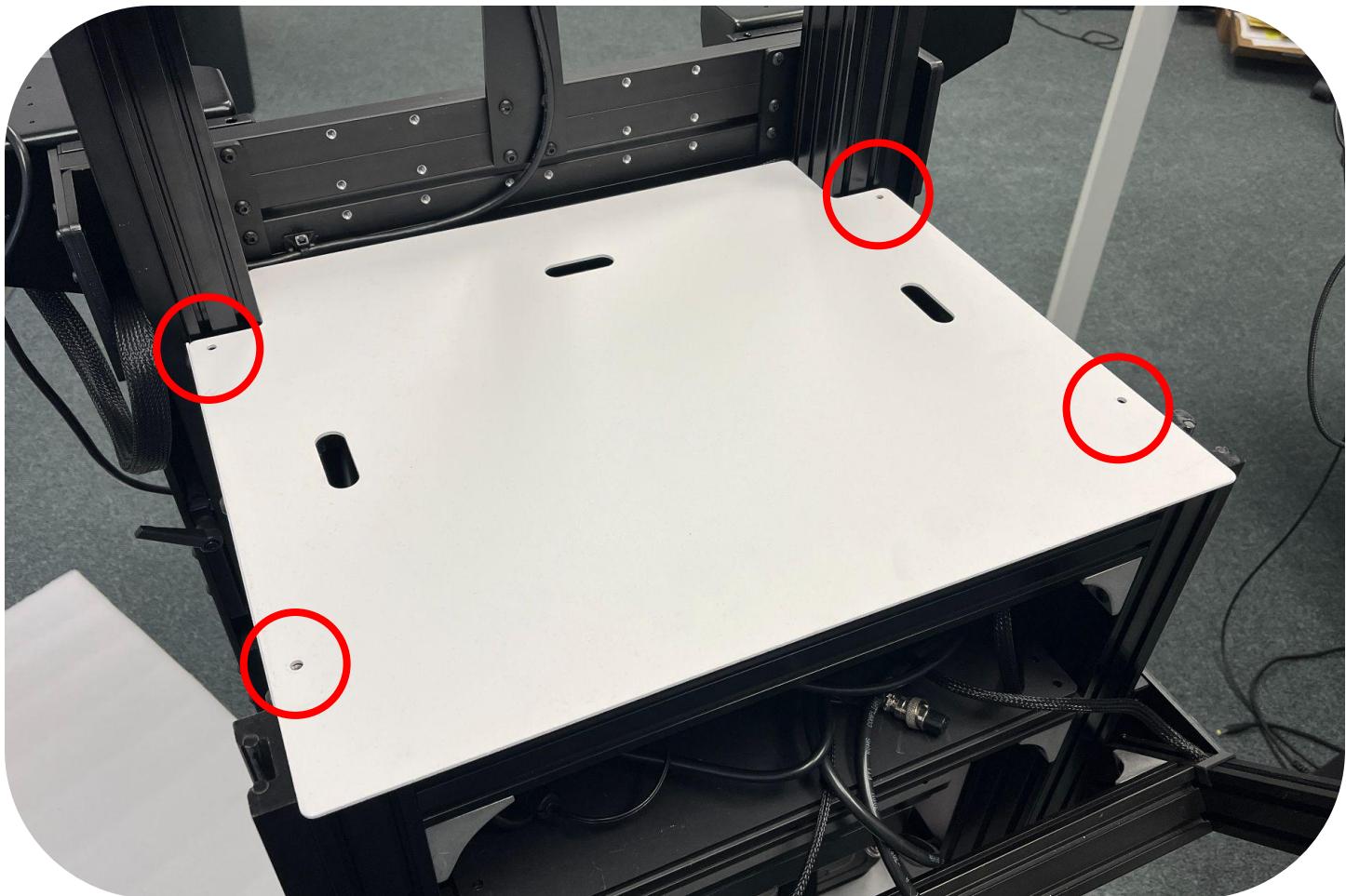
Once installed, lock it into place by twisting the handle clockwise. Pulling up on the handle releases it from the lock and is only meant for re-positioning the handle.



STEP 5

Remove the LAPTOP PLATE from the top of the PODIUM using an M3 Driver.

Save the (4x) M5x8b bolts to reinstall the plate later.



STEP 6

Remove the POWER STRIP using an M3 Driver and save the (4x) M5x14b bolts to reuse later.



STEP 7

Prepare the VELCRO to insert the POWER STATION, putting the front and back velcro together into a V-shape using both ends like in the photo.



STEP 8

While holding on to the rear VELCRO to prevent it from getting stuck in the back, insert the POWER STATION on top of the BOTTOM PLATE.

Mind the orientation of the POWER SUPPLY to match the photo and secure it in place using the VELCRO STRAPS.



STEP 9

Mount the POWER STRIP under the ELECTRONIC PLATE reusing the (4x) M5x14b bolts from STEP 6.



STEP 10

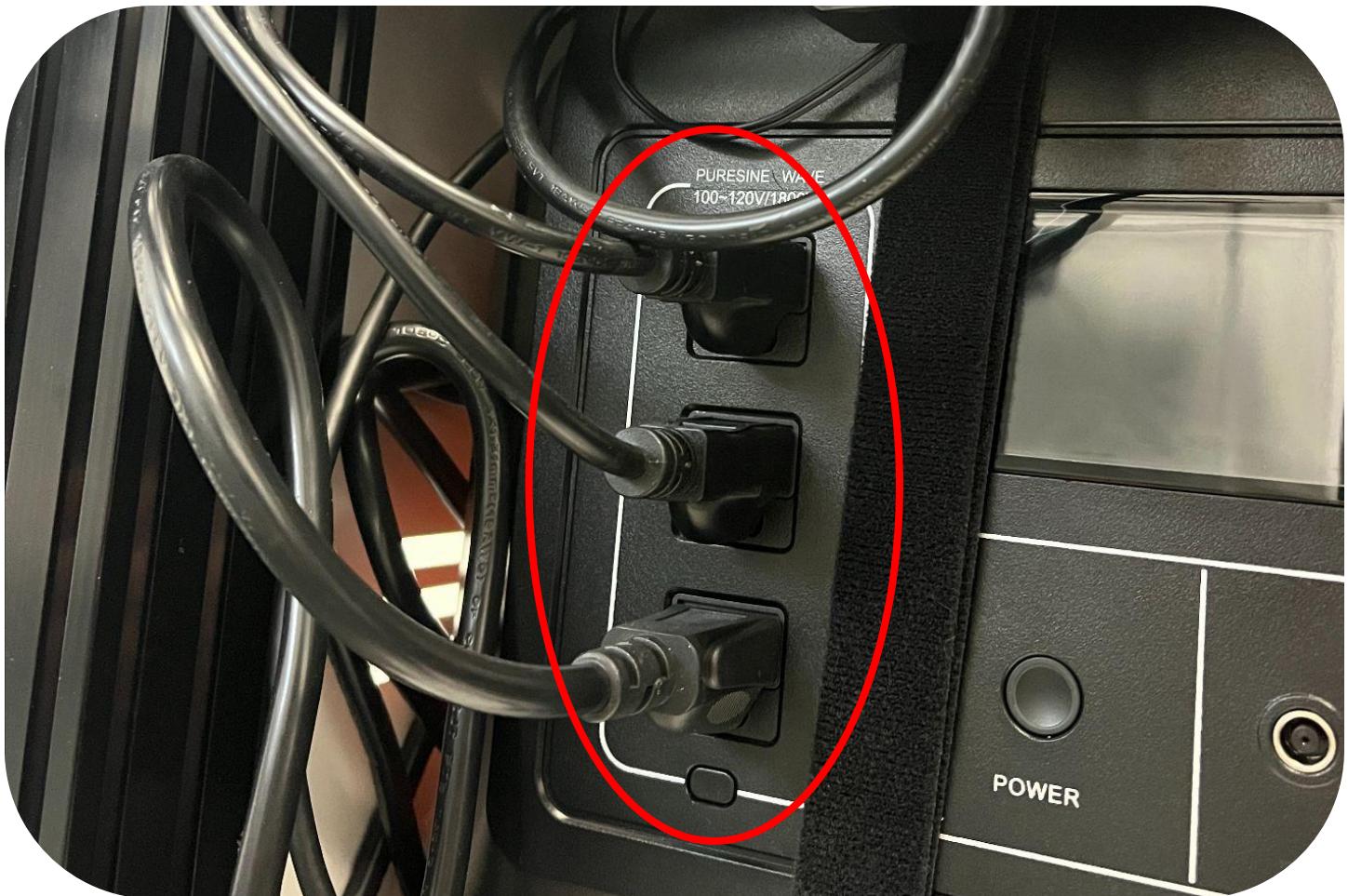
Pull down any loose cables from the ELECTRONIC PLATE.



STEP 11

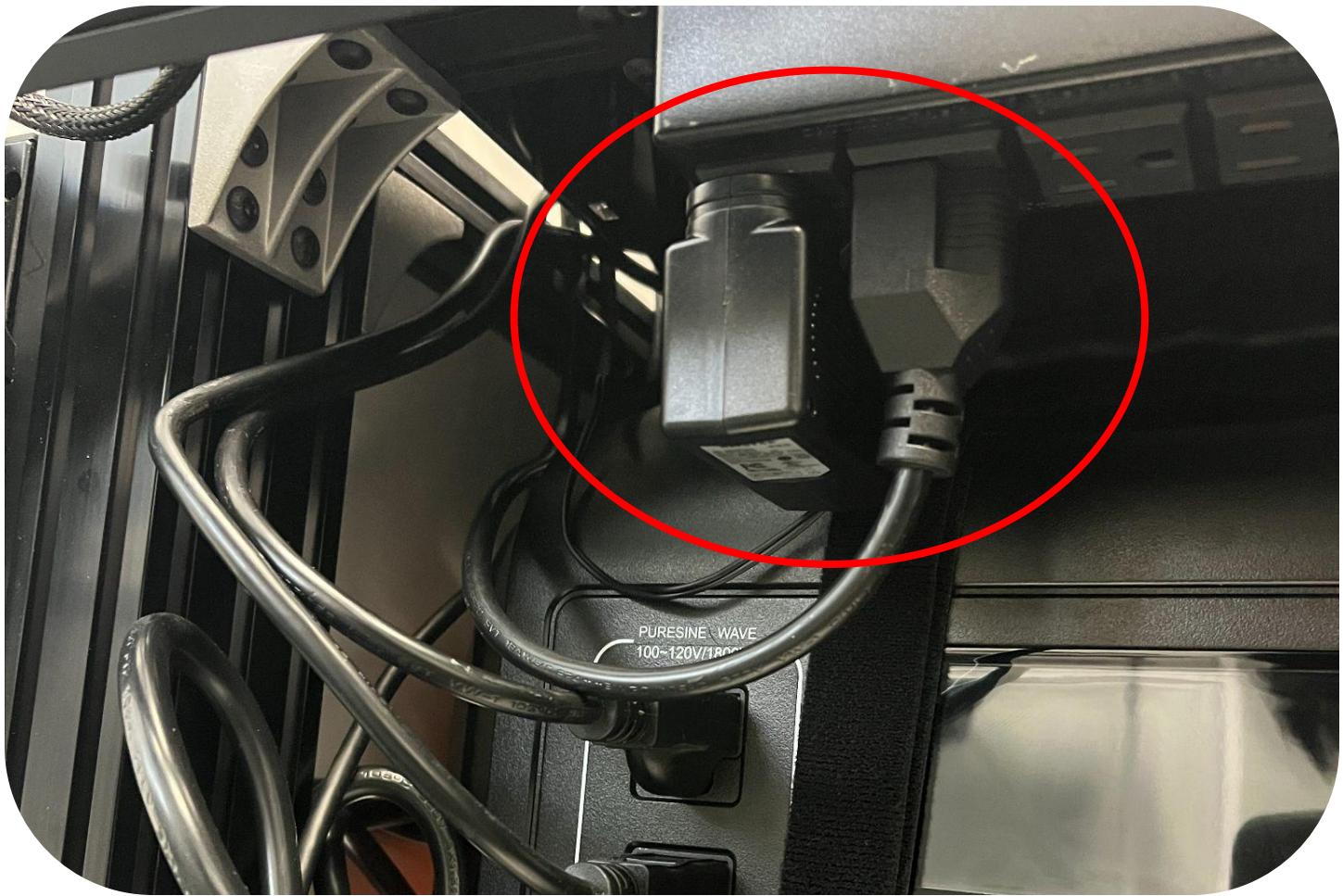
Plug in the POWER SUPPLIES for the ARMS into the POWER STATION.

Plug in the POWER STRIP into the POWER STATION.



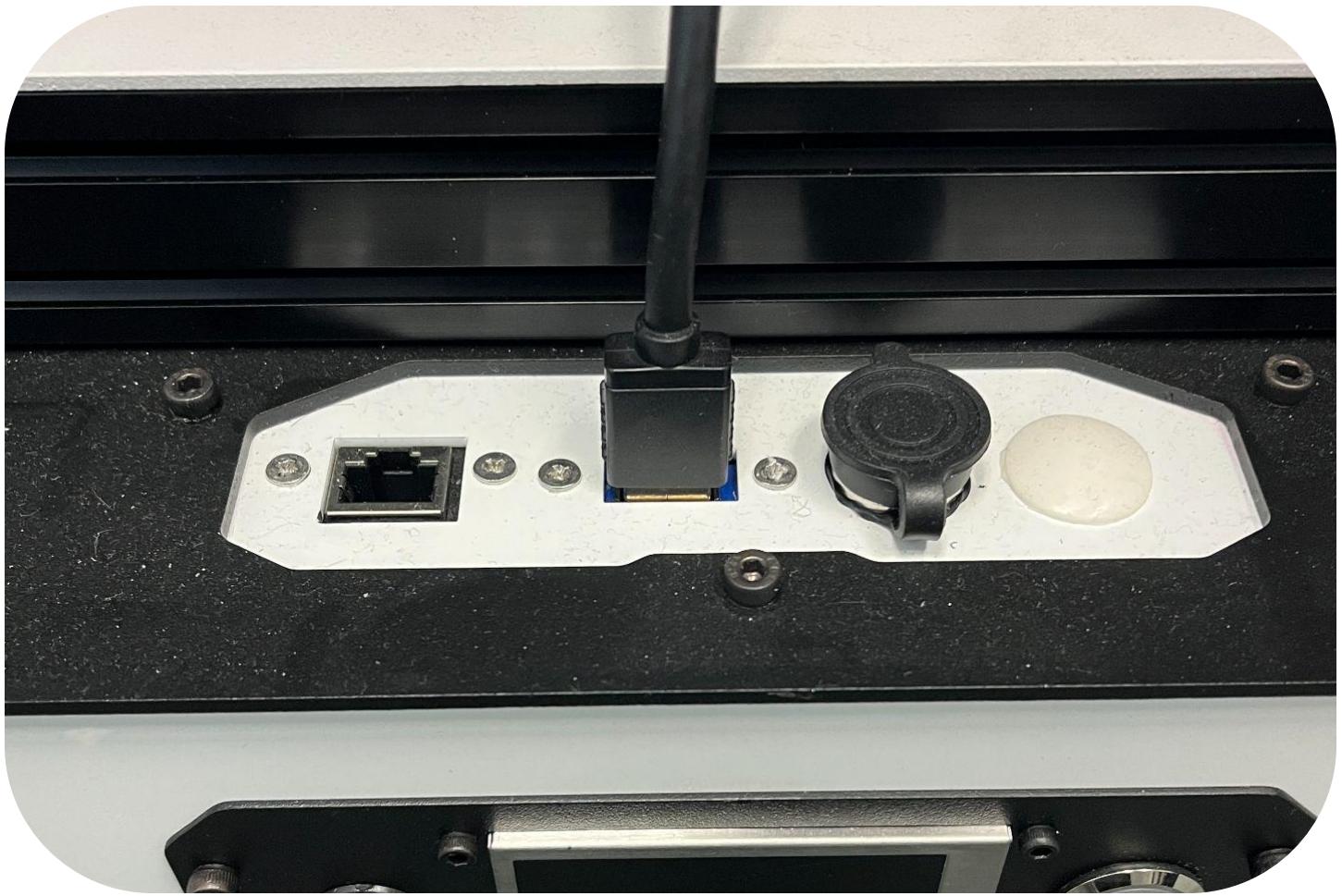
STEP 12

Plug in POWER SUPPLIES for both the USB HUB and the 5-PORT ETH SWITCH into the 4-PORT POWER STRIP.



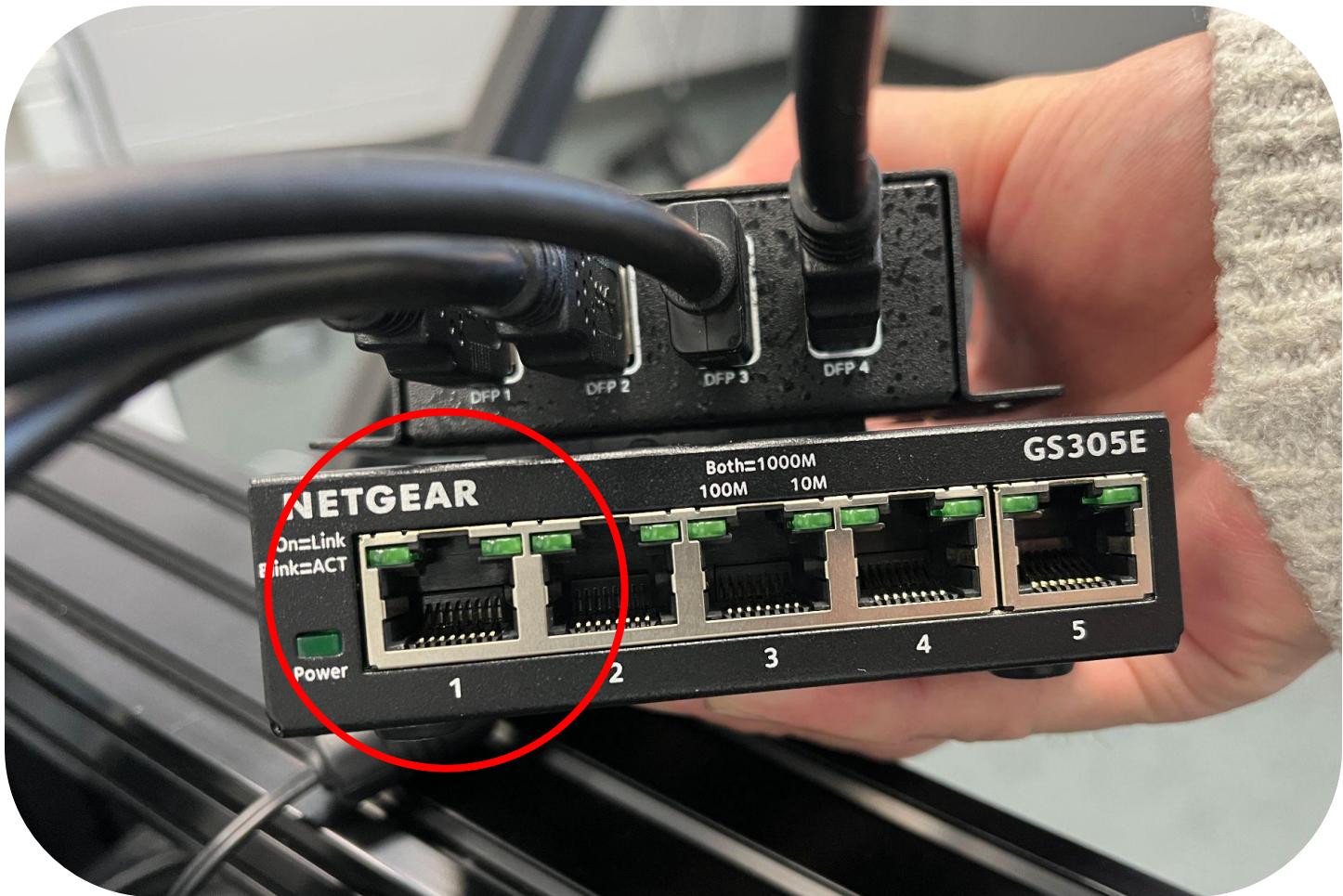
STEP 13

Plug in the USB-A MALE TO MALE CABLE into the SLATE and into the USB HUB.



STEP 14

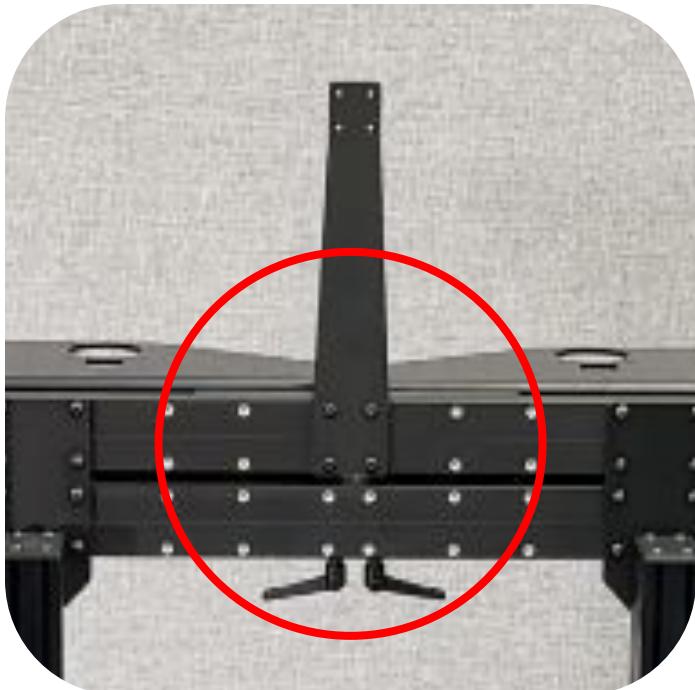
Plug in one end of the RJ45 MALE TO MALE CABLE into the 5-PORT ETHERNET SWITCH and leave the other end unplugged.



STEP 15

Using an M3 Driver, mount the CAMERA STAND with (4x) M5x12b bolts.

Using an M2.5 Driver, mount the CAMERA BRACKET to the stand with (4x) M4x8b bolts.



STEP 16

Using an M2 Driver, mount the REALSENSE CAMERA into the CAMERA BRACKET using (2x) M3x10s bolts.

Ensure that the slot for the cable is aligned with the opening on the side of the bracket.



STEP 17

Mount the REAR WIDOWX UPRIGHT to the PODIUM and lock it into your desired height by twisting the handle clockwise.



STEP 18

Take out the TOUCHSCREEN from its packaging and remove the pre-installed kickstand.

This should be pulled out with little force.



STEP 19

Using an M3 Driver, mount the TOUCH SCREEN MOUNT to the REAR WIDOWX UPRIGHT using (3x) M5x8b bolts.

Note that the mount is facing the ceiling for proper orientation.



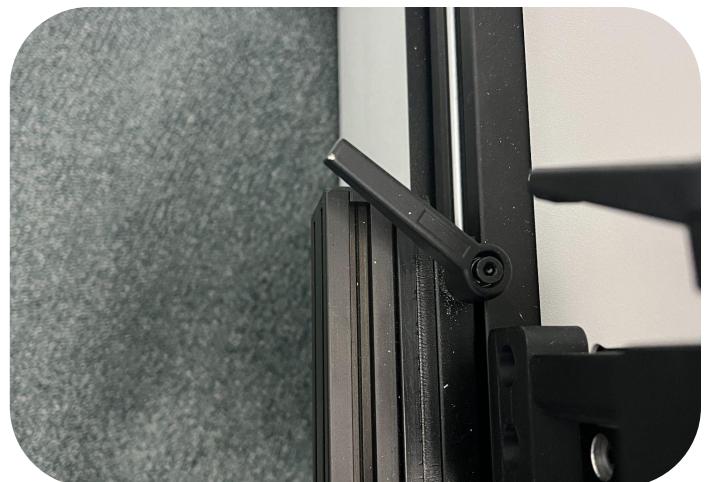
STEP 20

Using an M2.5 Driver, mount the TOUCH SCREEN to the TOUCH SCREEN MOUNT using (4x) M4x6b bolts.



STEP 21

Slide the CASTER ASSEMBLY onto the PODIUM and lock it into place by twisting the handles in a clockwise direction.



STEP 22

Assemble the WX AI Follower parts, including the Camera Cables.

WidowX AI Follower Assembly Video:

<https://www.youtube.com/watch?v=w5s9EzMBmsU>



STEP 23

Assemble the WX AI Leader parts.

WidowX AI Leader Assembly Video:

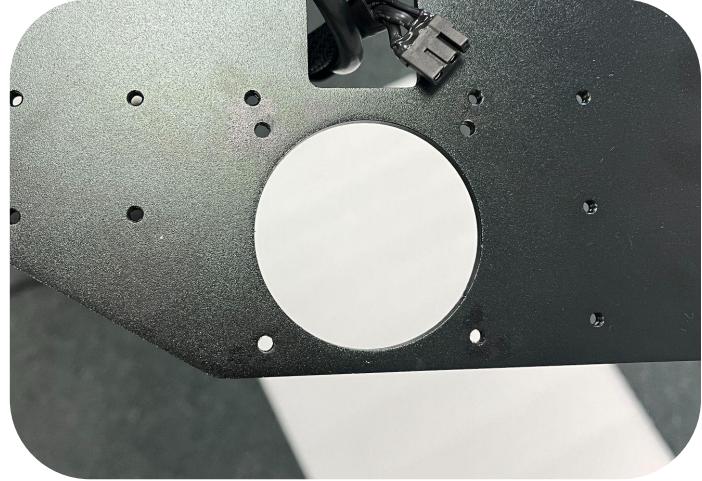
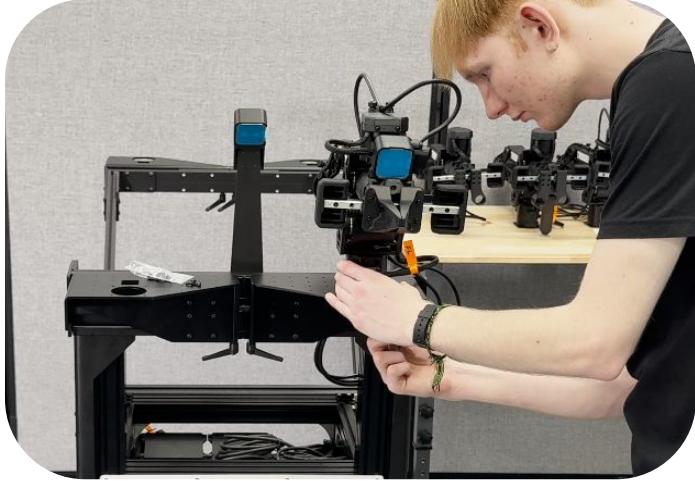
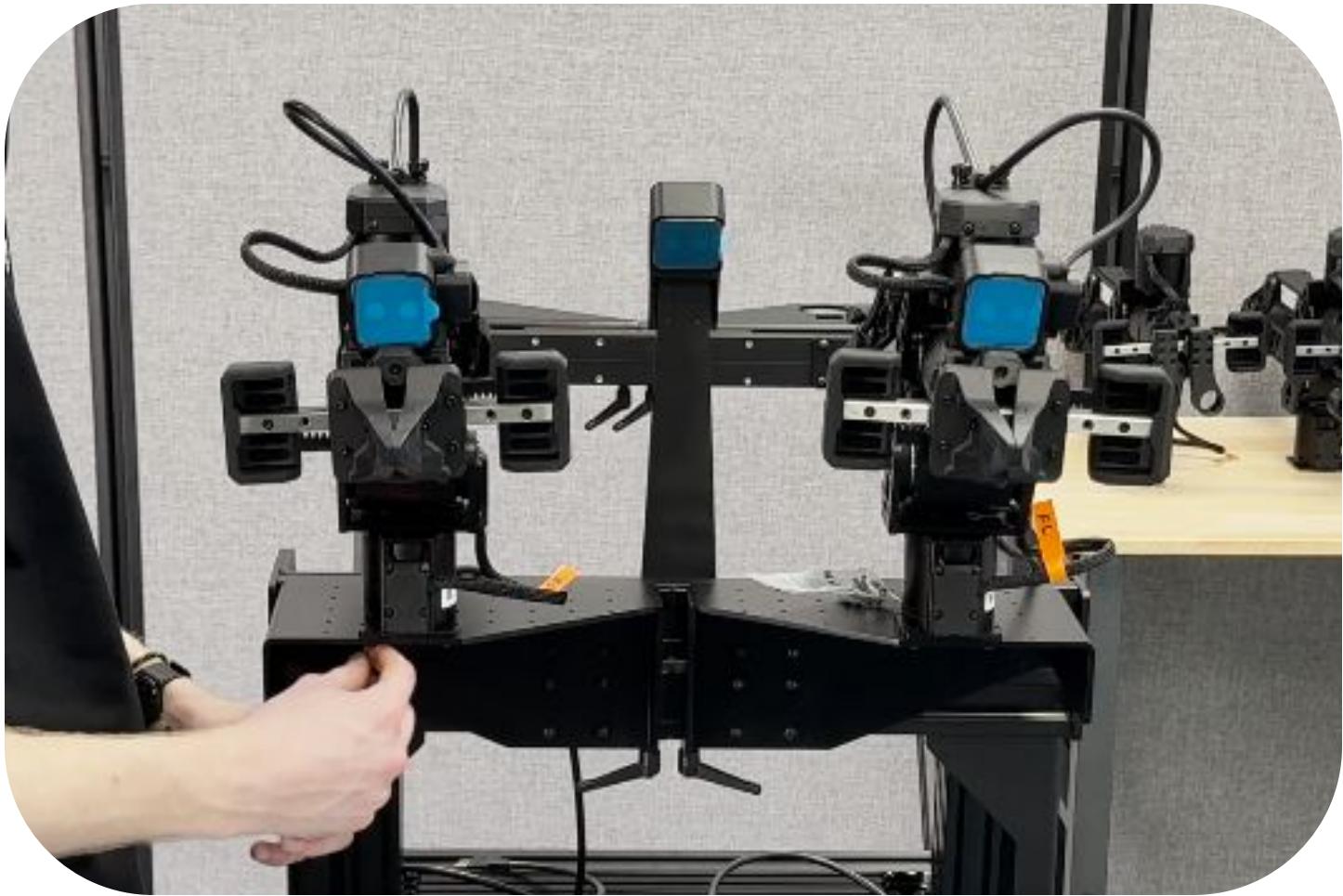
<https://www.youtube.com/watch?v=hdPAw-pwMm4>



STEP 24

Mount the FOLLOWER WX ARMS to the FRONT WIDOWX UPRIGHT using an M2.5 Driver with (4x) M3x8s bolts.

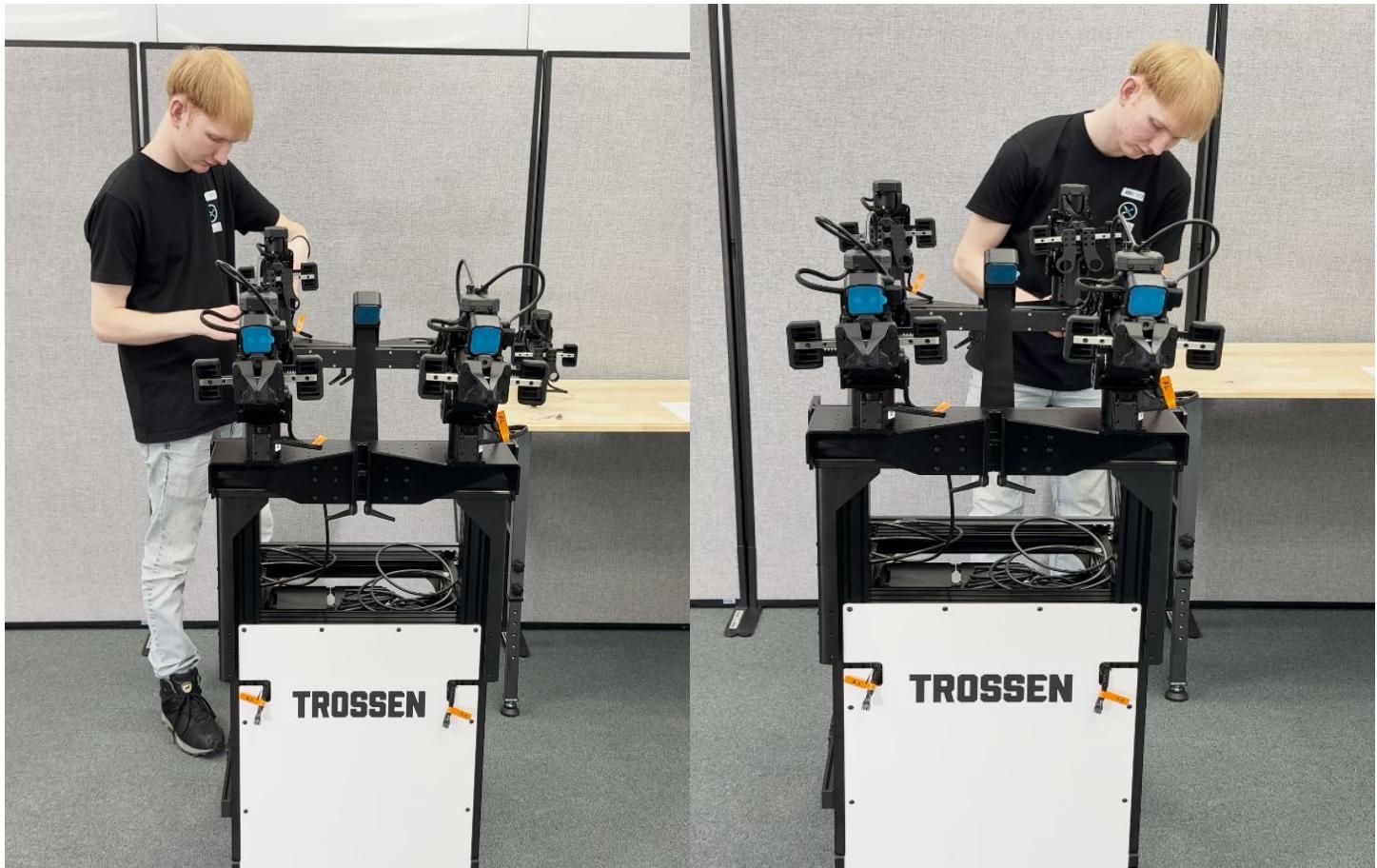
Make sure that the LEFT FOLLOWER is on the **left side of the PODIUM when standing behind the REAR WIDOWX UPRIGHT.*



STEP 25

Mount the LEADER WX ARMS to the REAR WIDOWX UPRIGHT using an M2.5 Driver with (4x) M3x8s bolts.

*Make sure that the LEFT LEADER is on the **left** side of the PODIUM when standing behind the REAR WIDOWX UPRIGHT.*



STEP 26

Add the CAMERA CABLE to the PODIUM CAMERA and **hand-tighten** the cable to the camera to lock it into place.



STEP 27

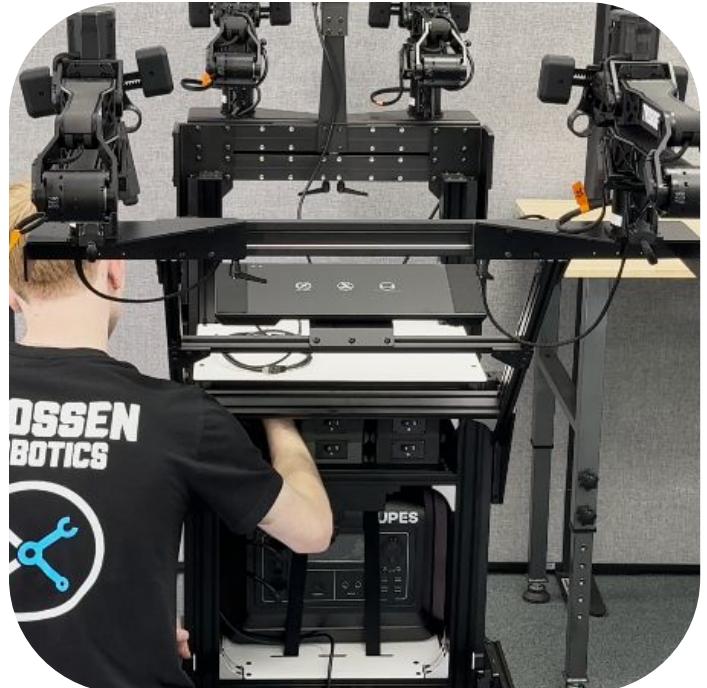
Turn on the CONTROLLER BOXES & POWER STATION found within the PODIUM and check if all electronics power on correctly.

LED Lights turning on indicates power is being provided to all components properly.



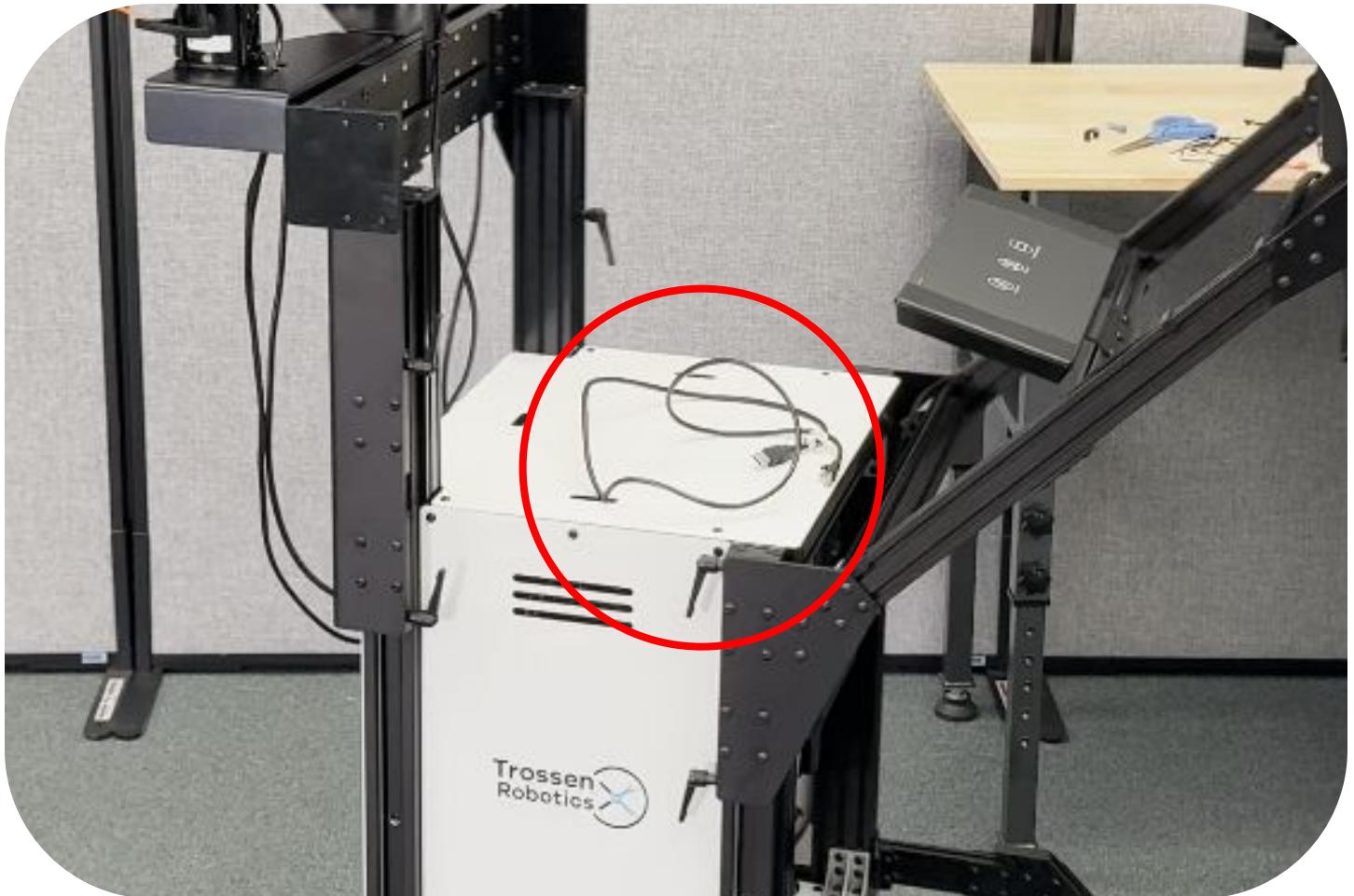
STEP 28

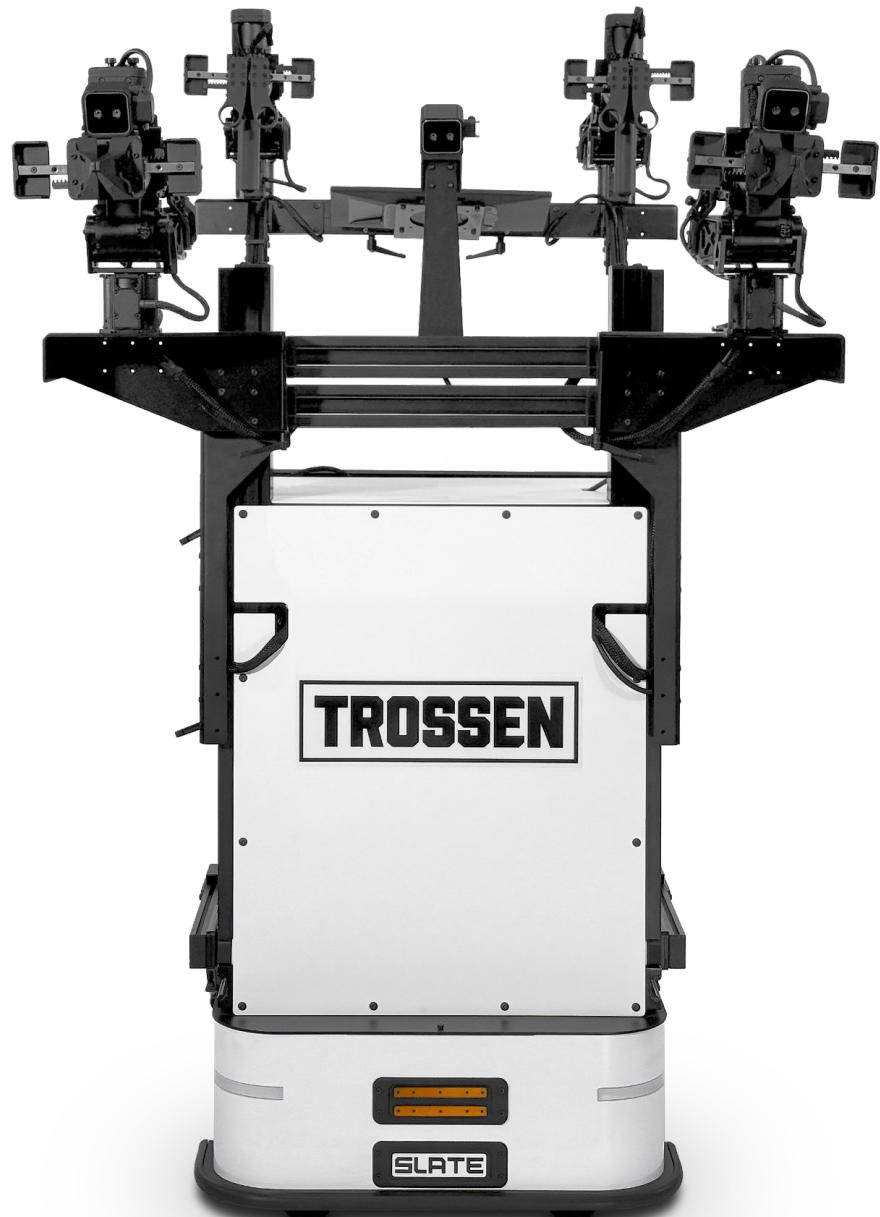
Using an M3 Driver, mount the LAPTOP PLATE reusing the (8x) M5x8b bolts from STEP 5.



STEP 29

Pull the USB-A MALE CONNECTOR from the USB HUB, and the RJ45 MALE CONNECTOR from the ETH SWITCH, through the LAPTOP PLATE slots for access to the Laptop on top of the PODIUM.





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