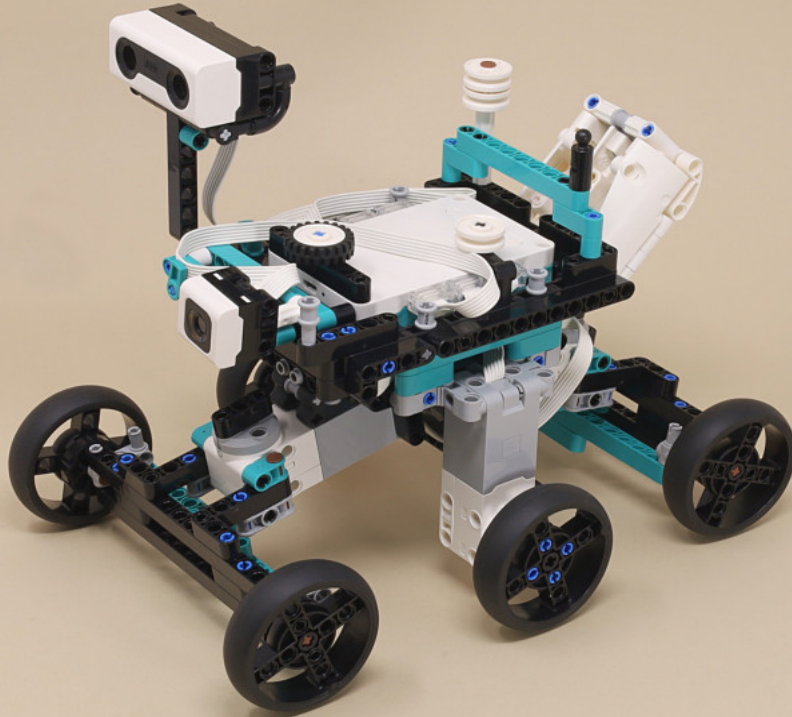


# Mars 2020 Rover

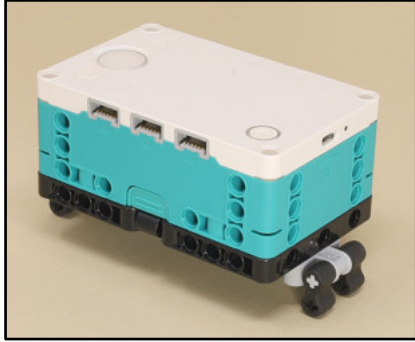
4-Wheel Continuous Steering Version



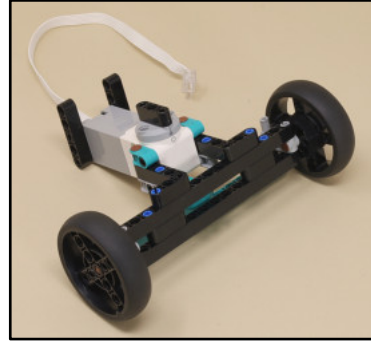
Scroll for  
building  
instructions



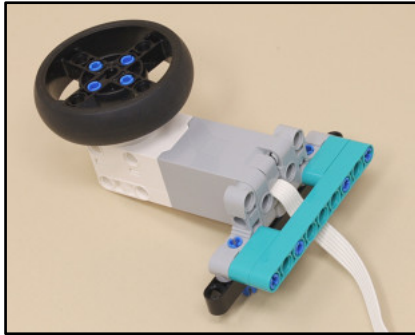
First build these sub-assemblies:



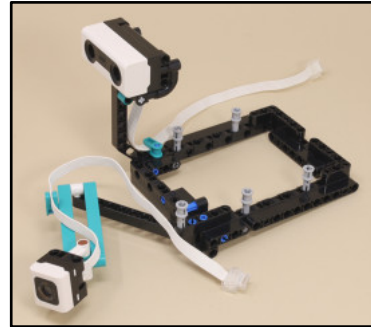
Base



Ackerman Steering  
(make 2x)

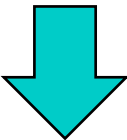


Drive Wheel  
(make 2x)



Sensor Deck

...then continue for assembly instructions

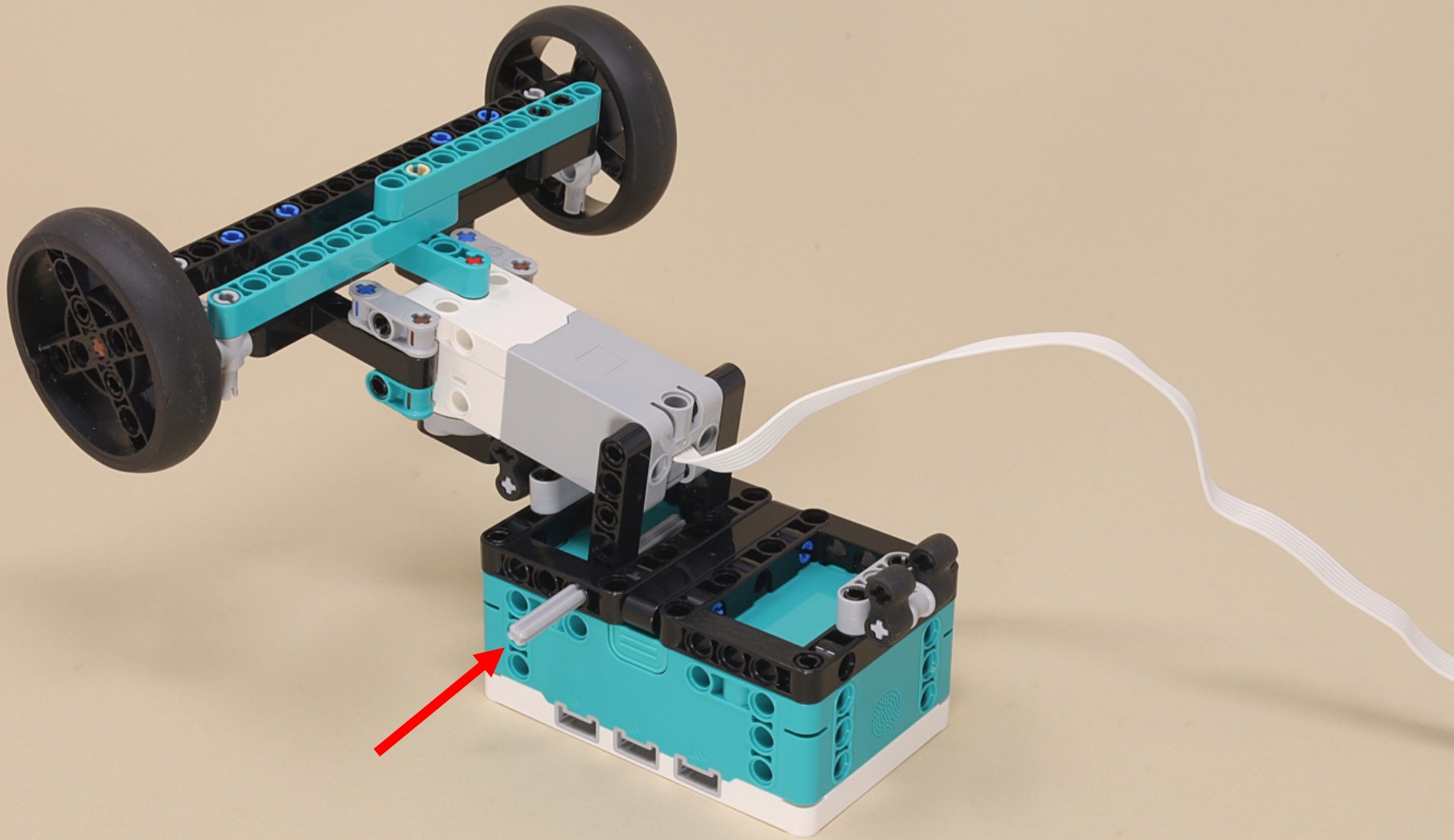


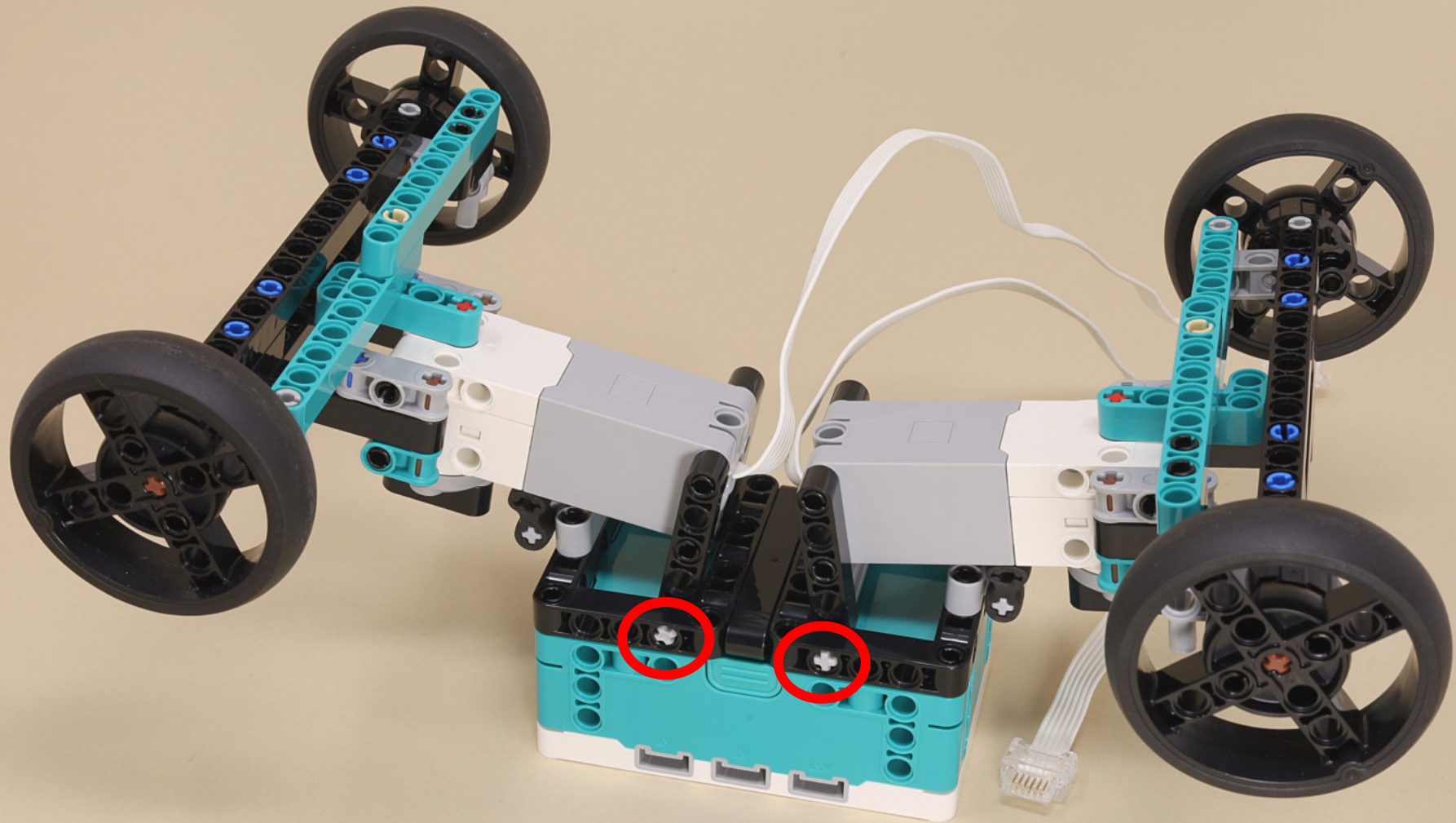


7

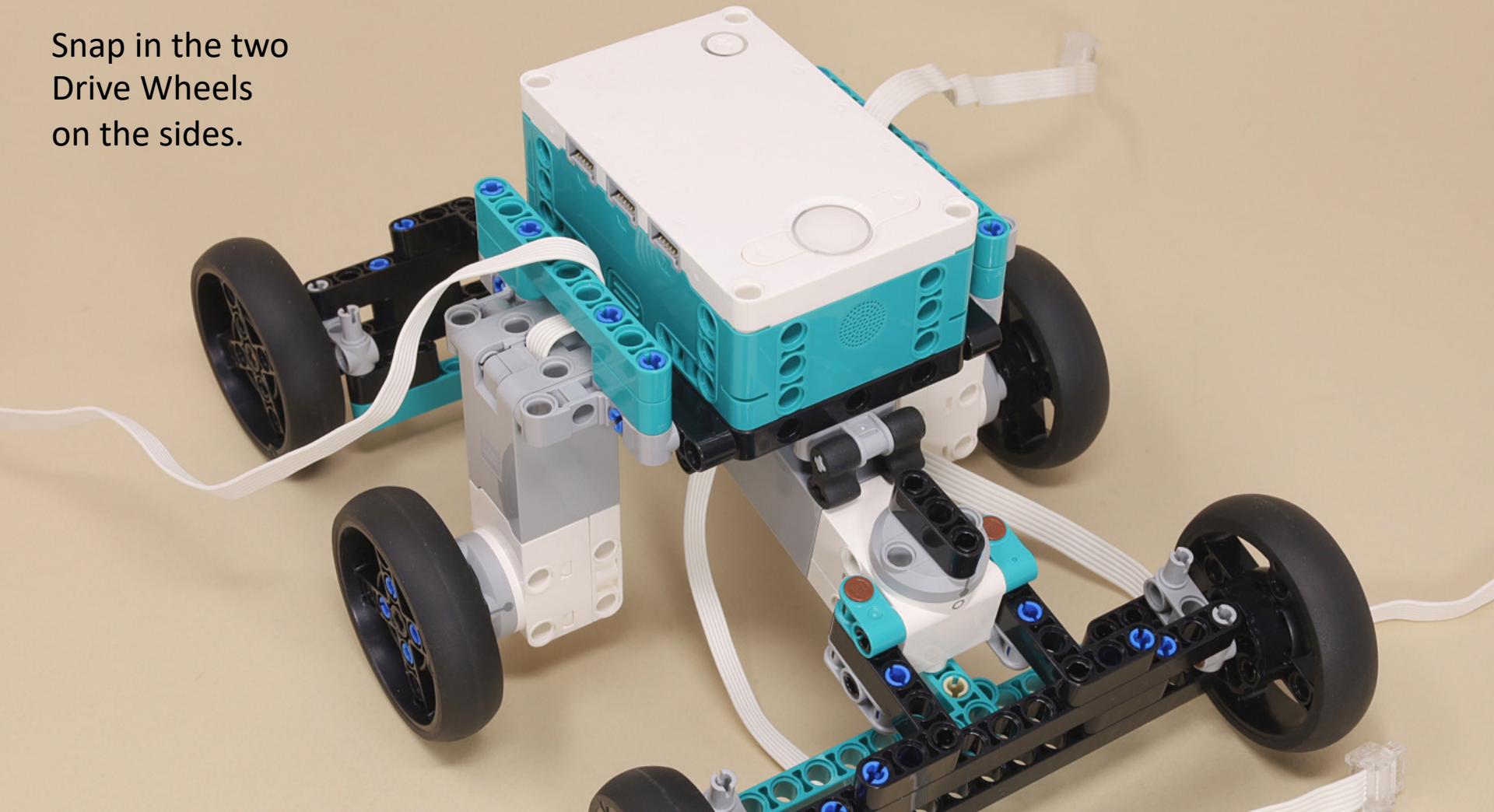


7





Snap in the two  
Drive Wheels  
on the sides.

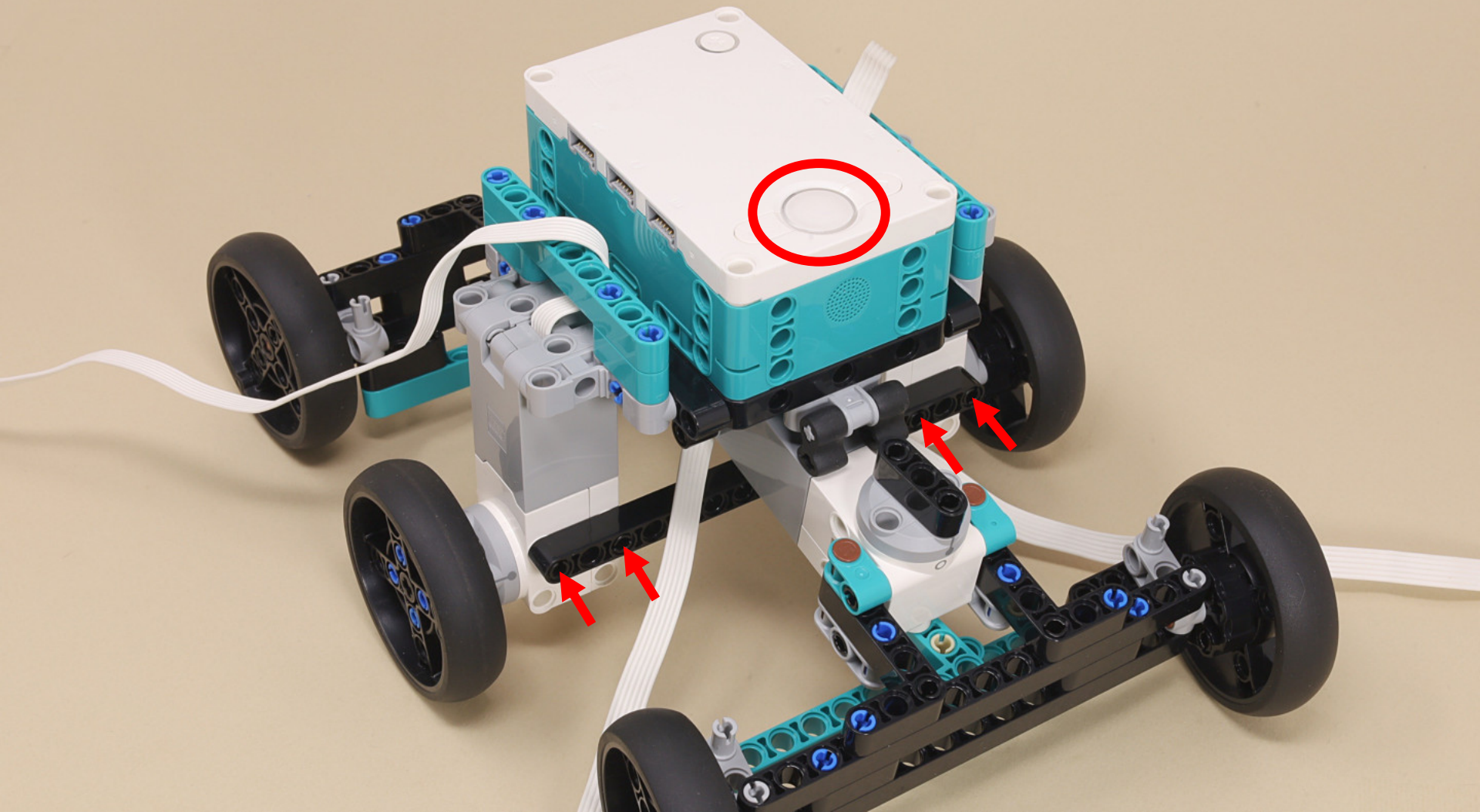




15



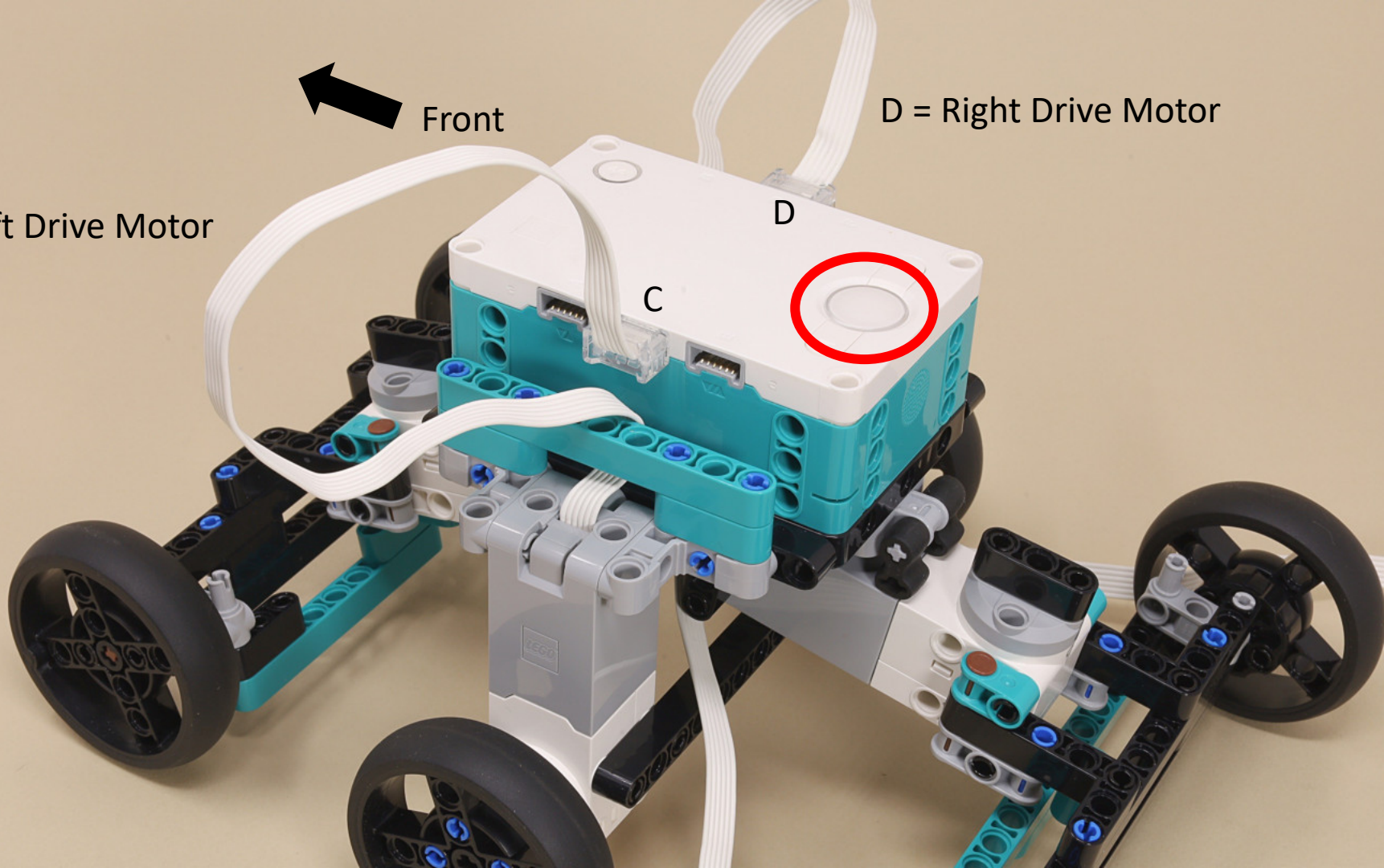




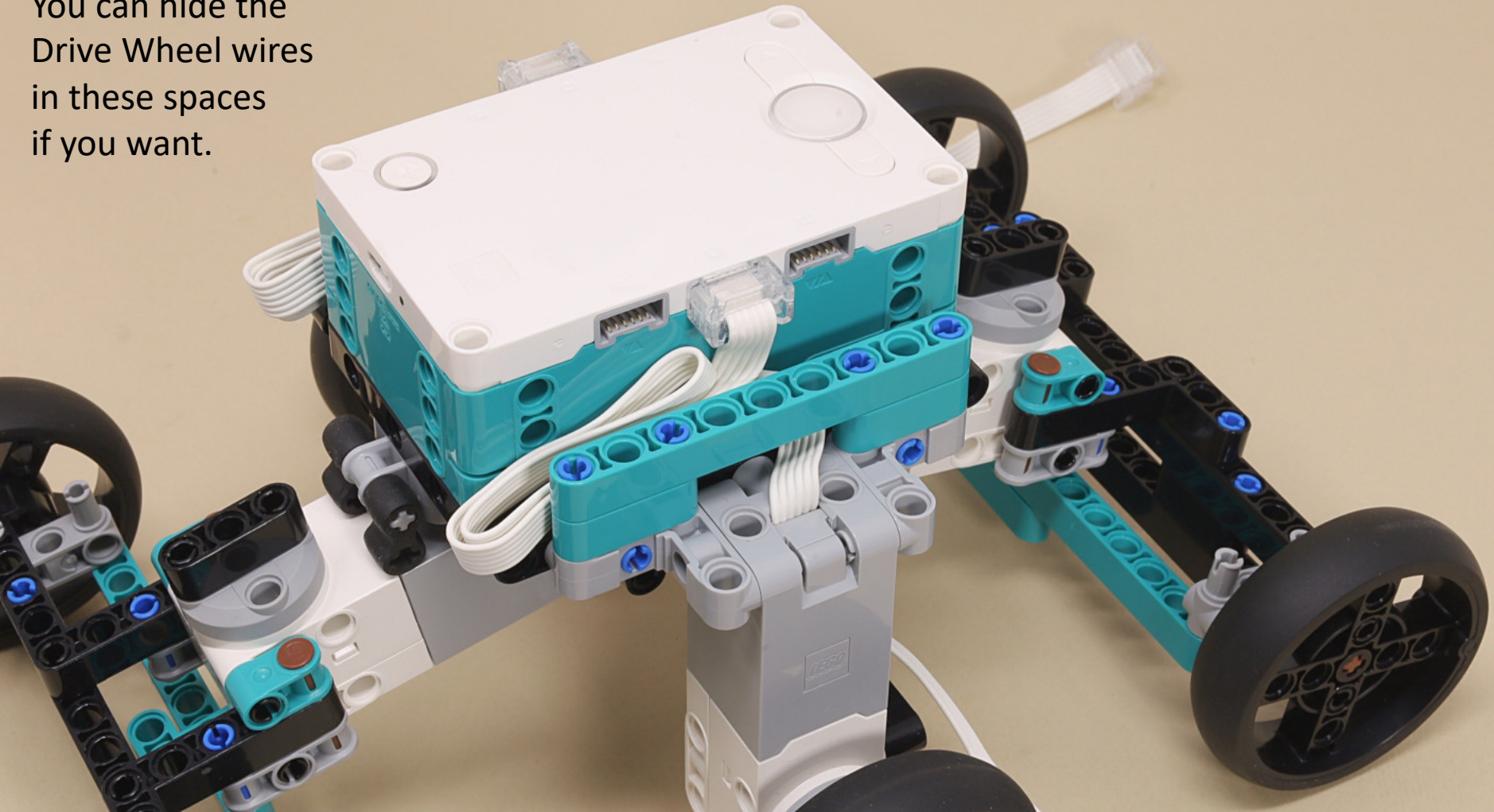
← Front

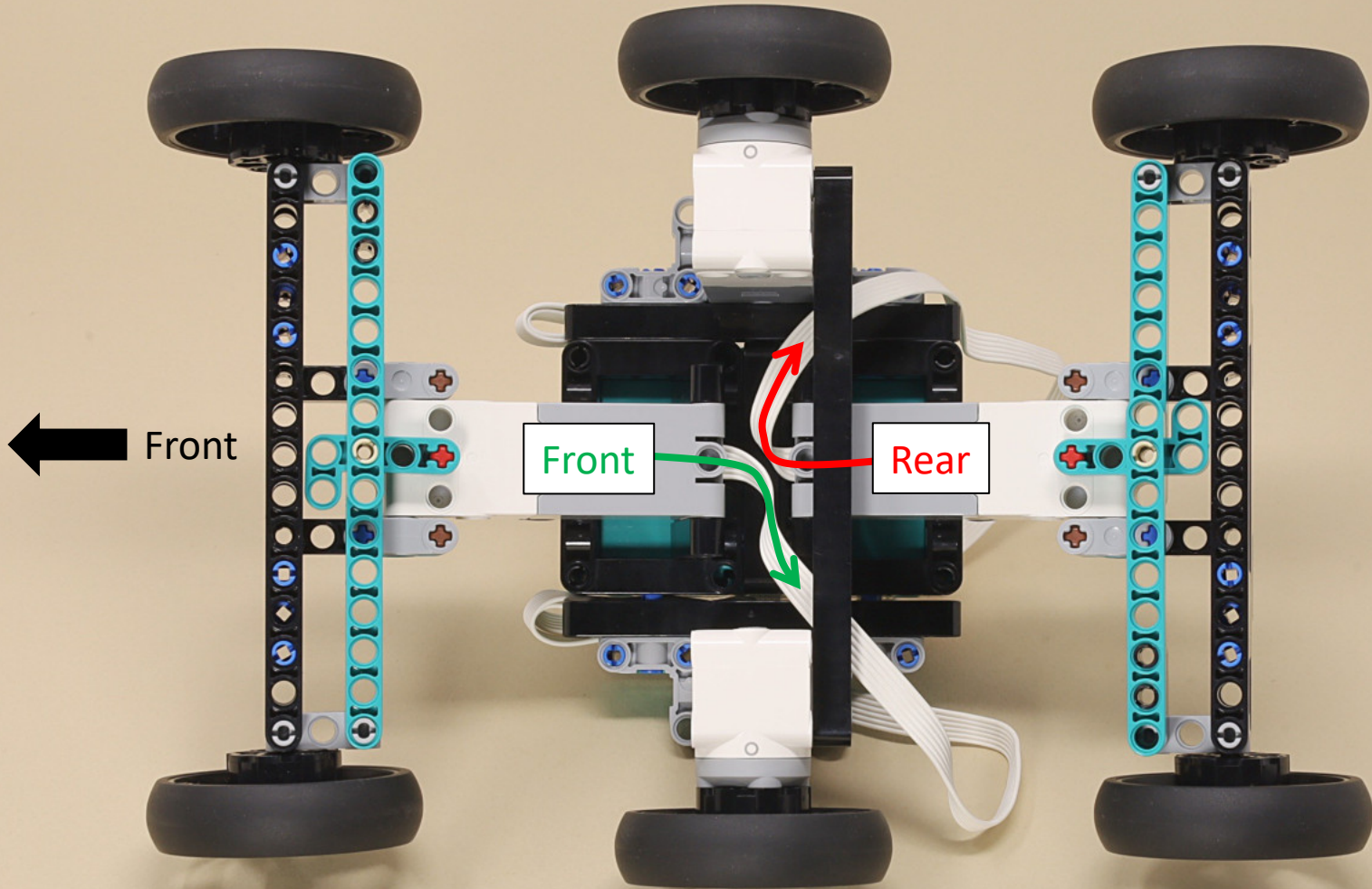
D = Right Drive Motor

C = Left Drive Motor



You can hide the  
Drive Wheel wires  
in these spaces  
if you want.





Front



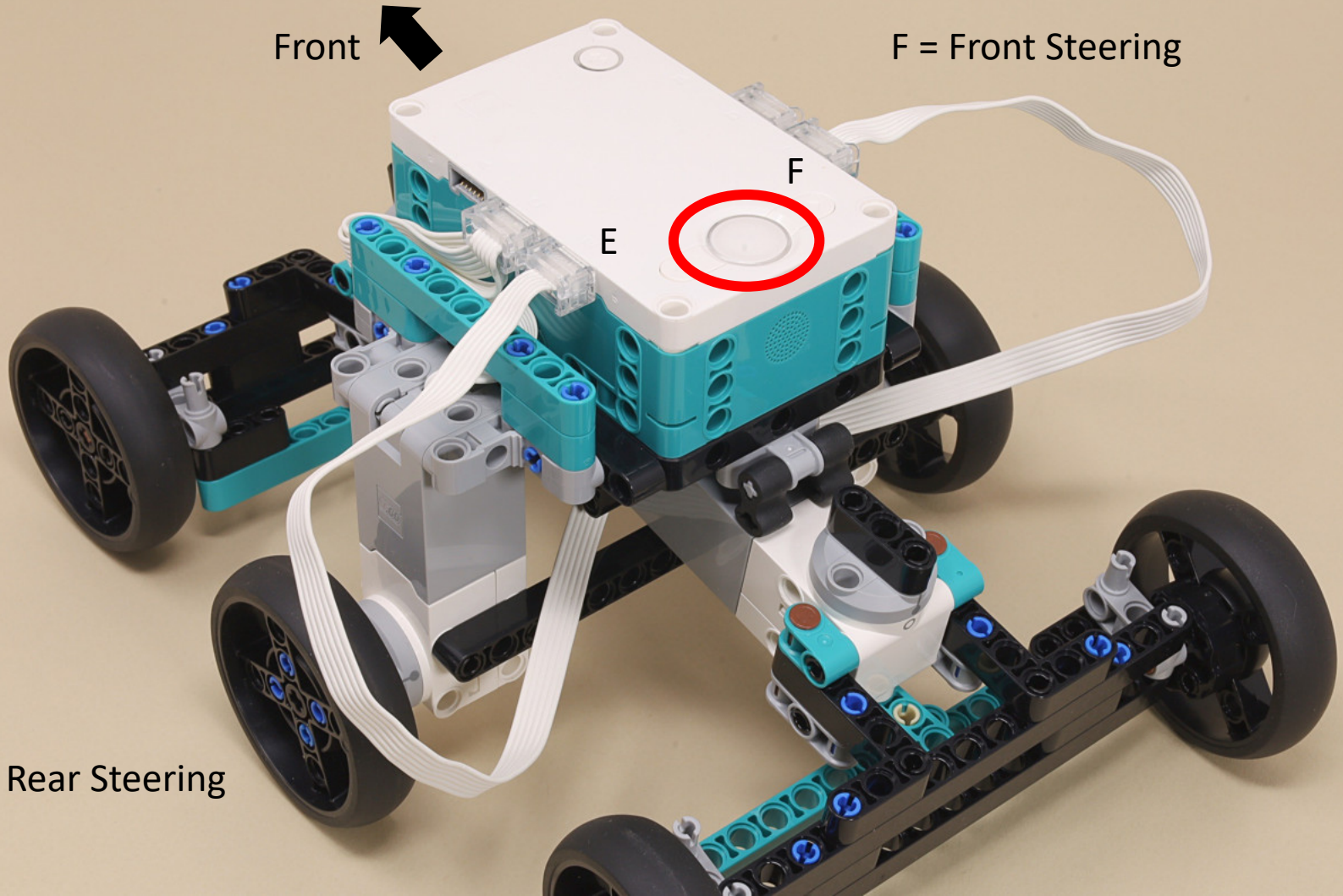
F = Front Steering

F

E

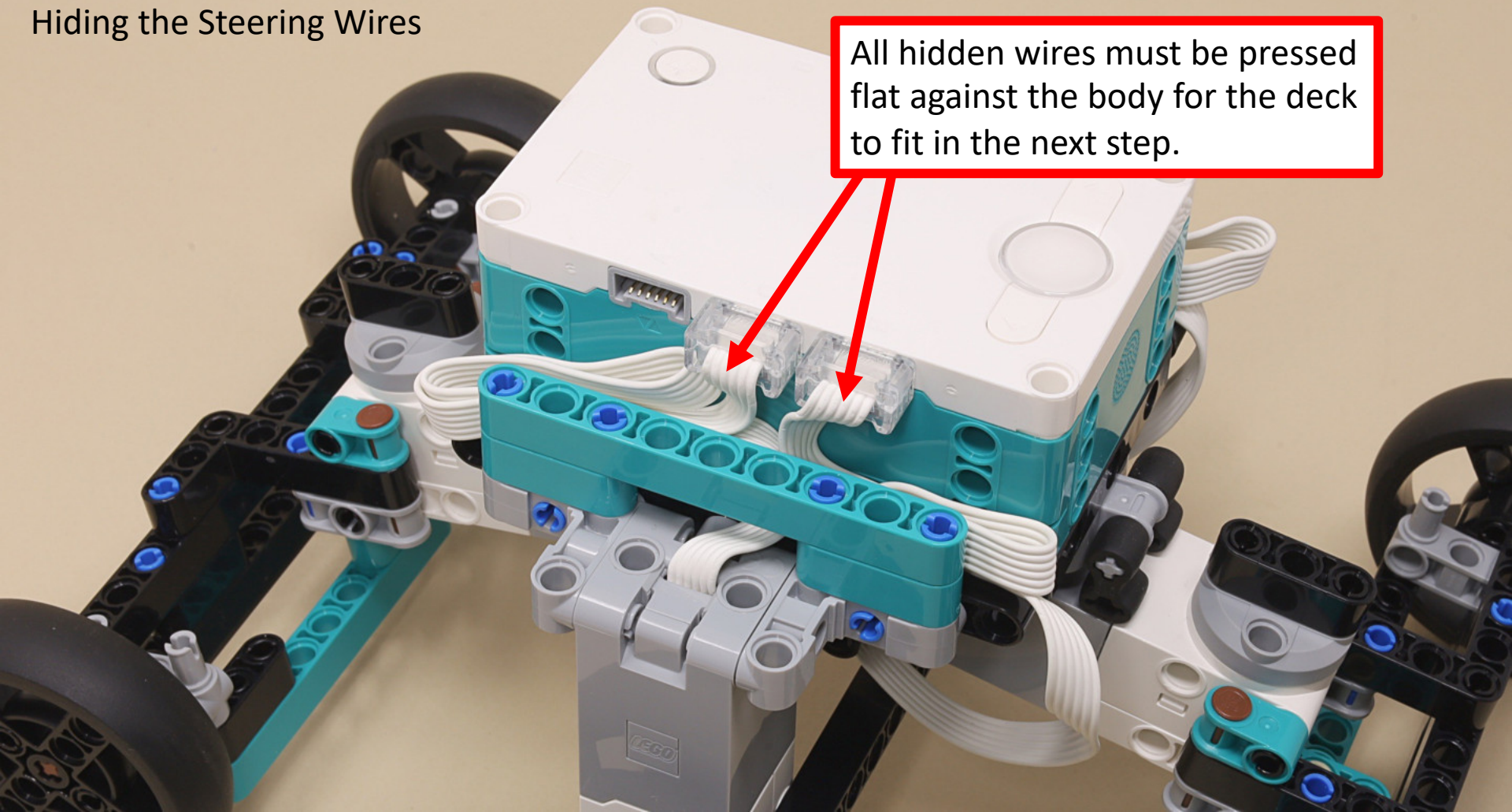


E = Rear Steering



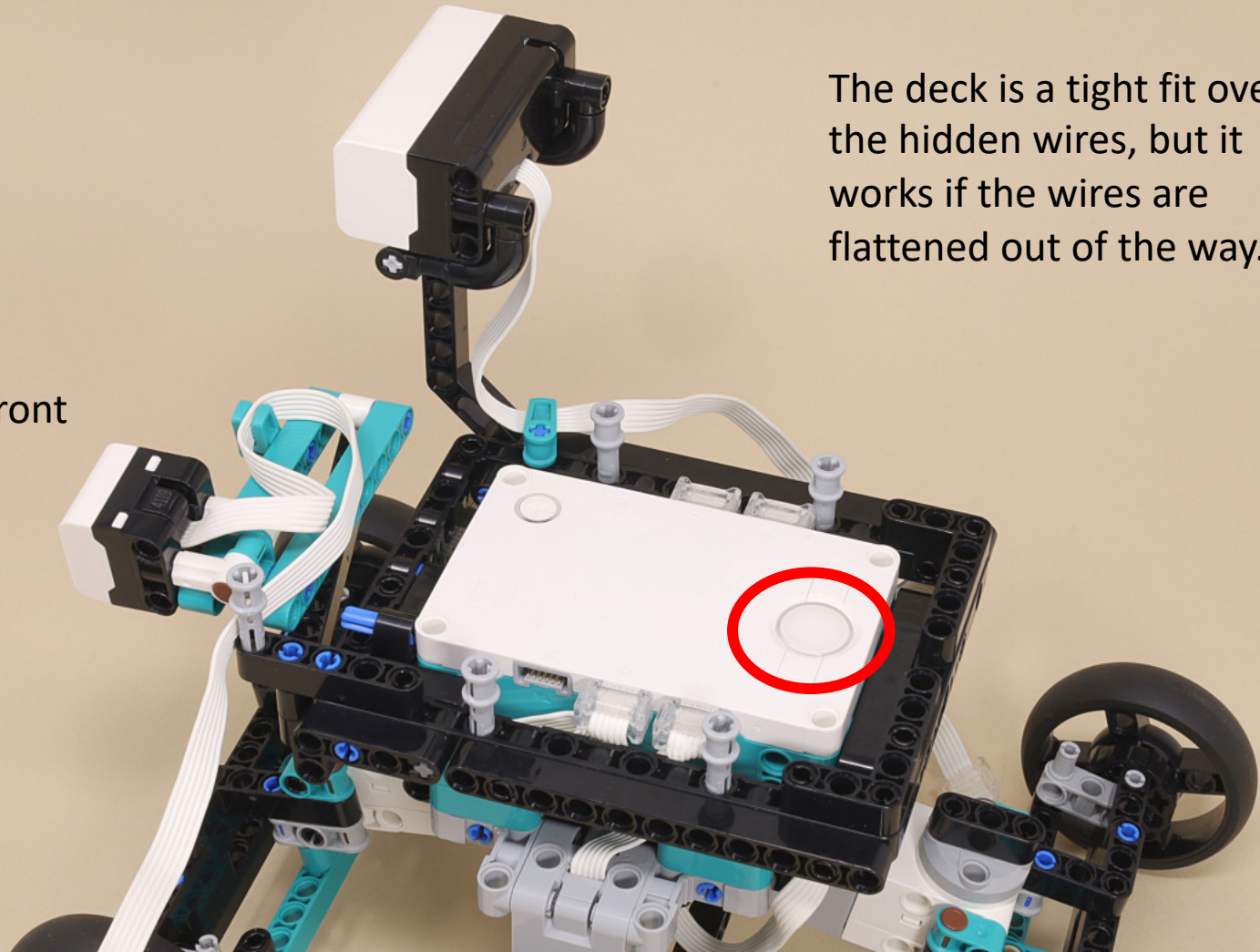
## Hiding the Steering Wires

All hidden wires must be pressed flat against the body for the deck to fit in the next step.



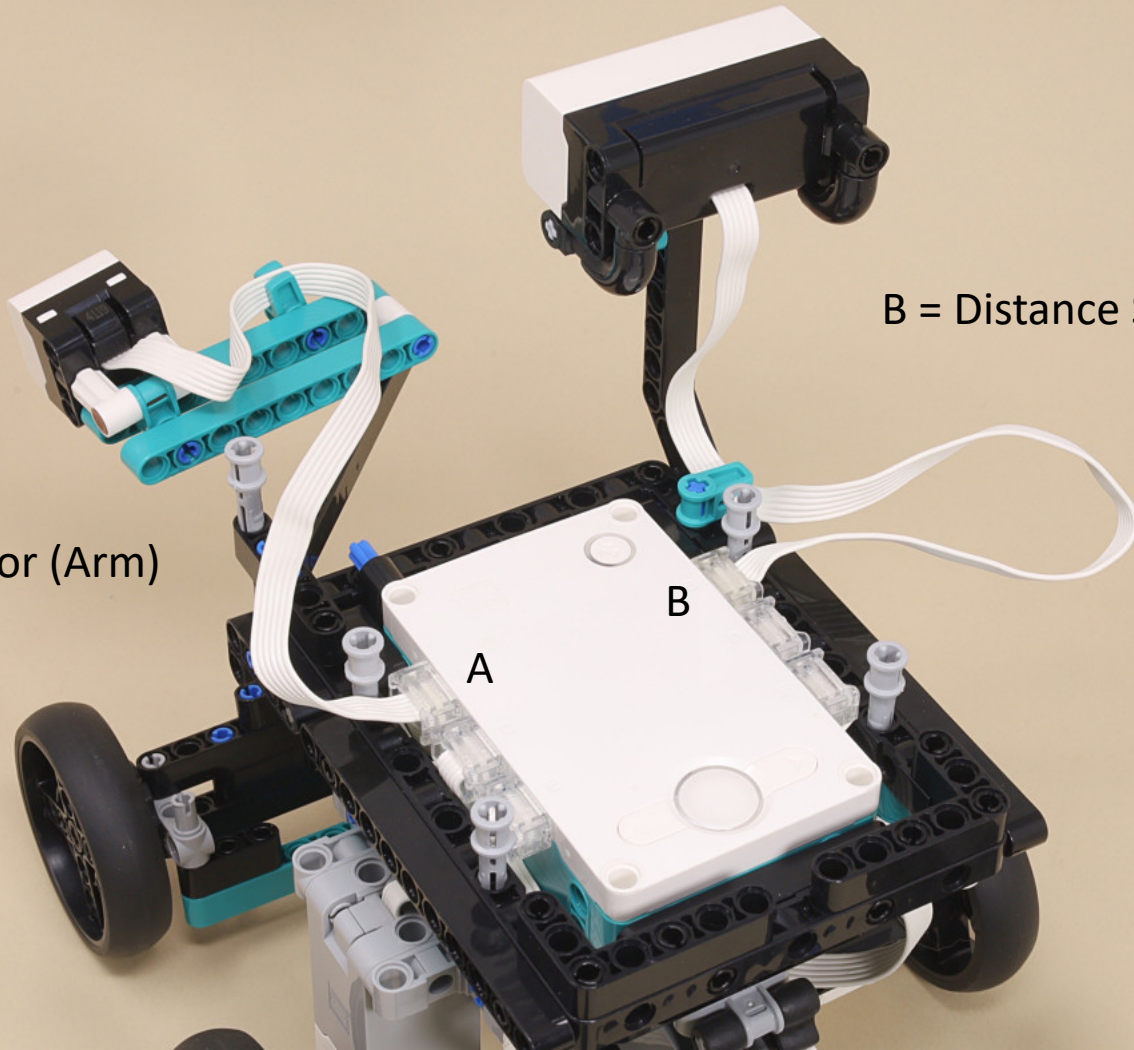
 Front

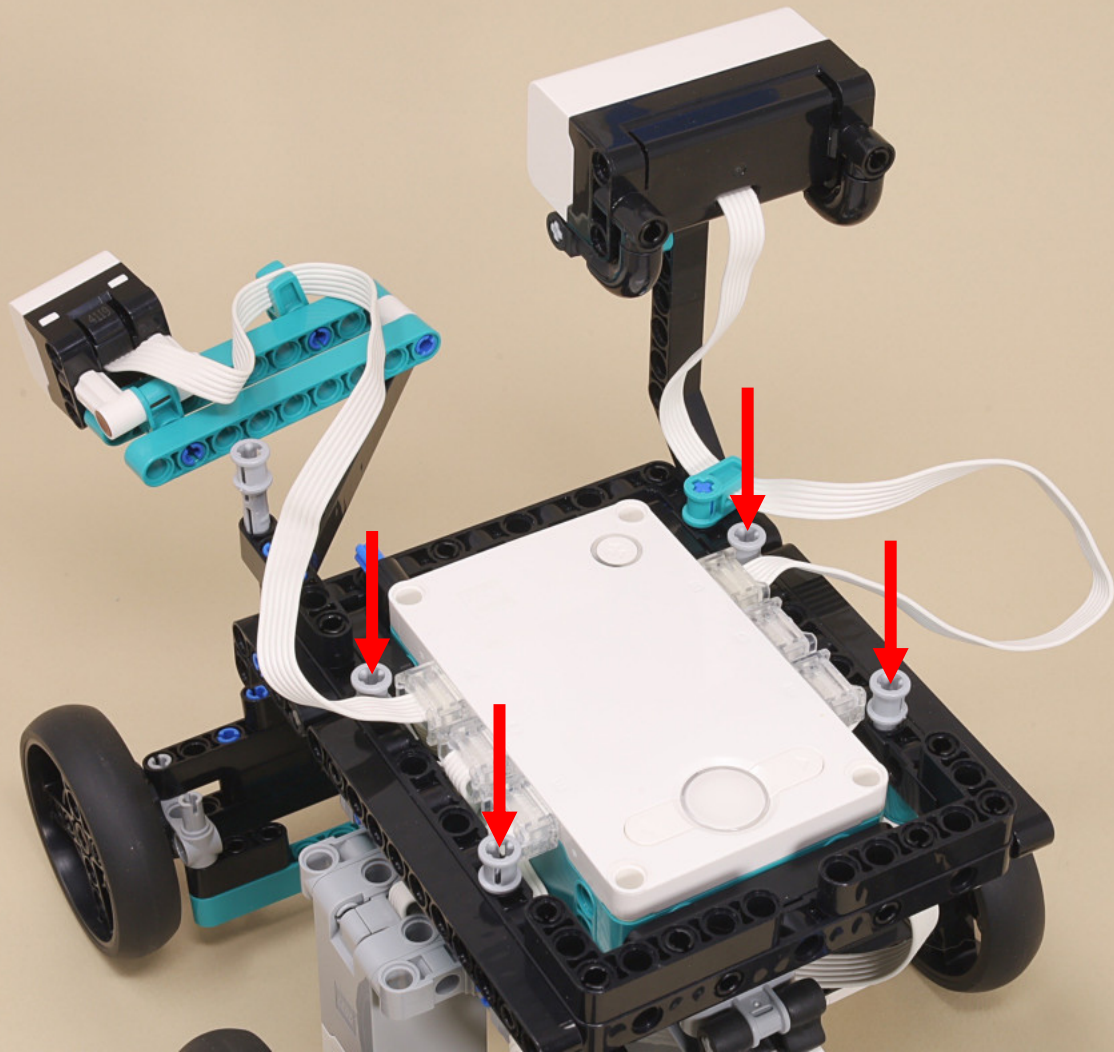
The deck is a tight fit over the hidden wires, but it works if the wires are flattened out of the way.



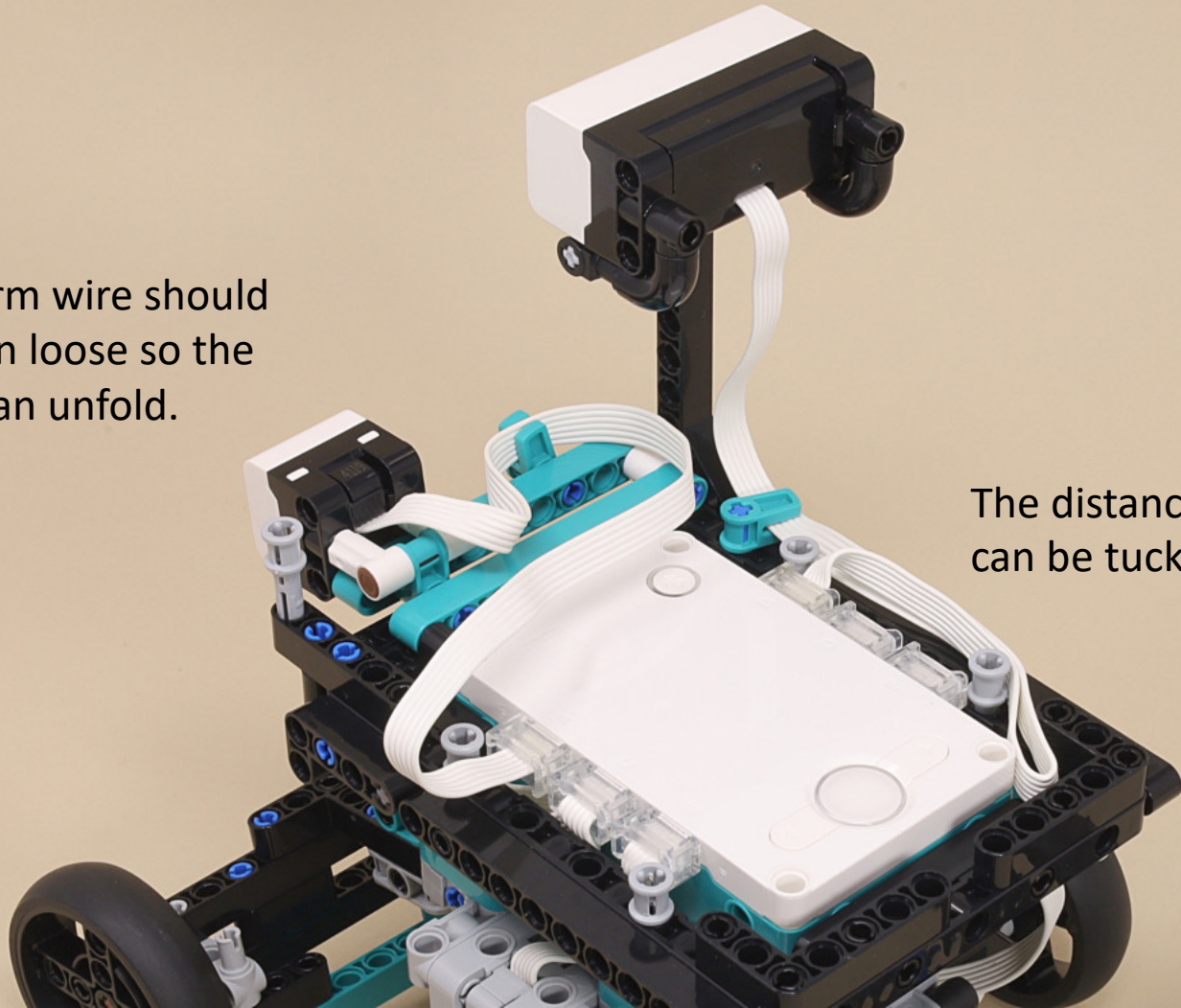
A = Light Sensor (Arm)

B = Distance Sensor





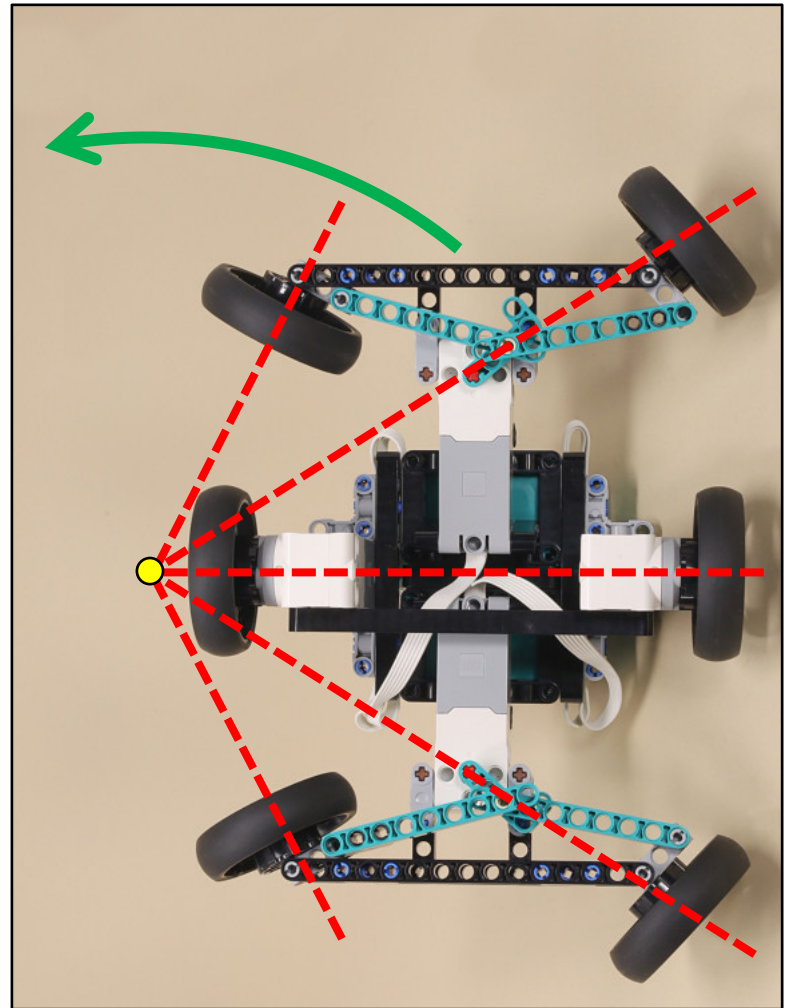
The arm wire should remain loose so the arm can unfold.



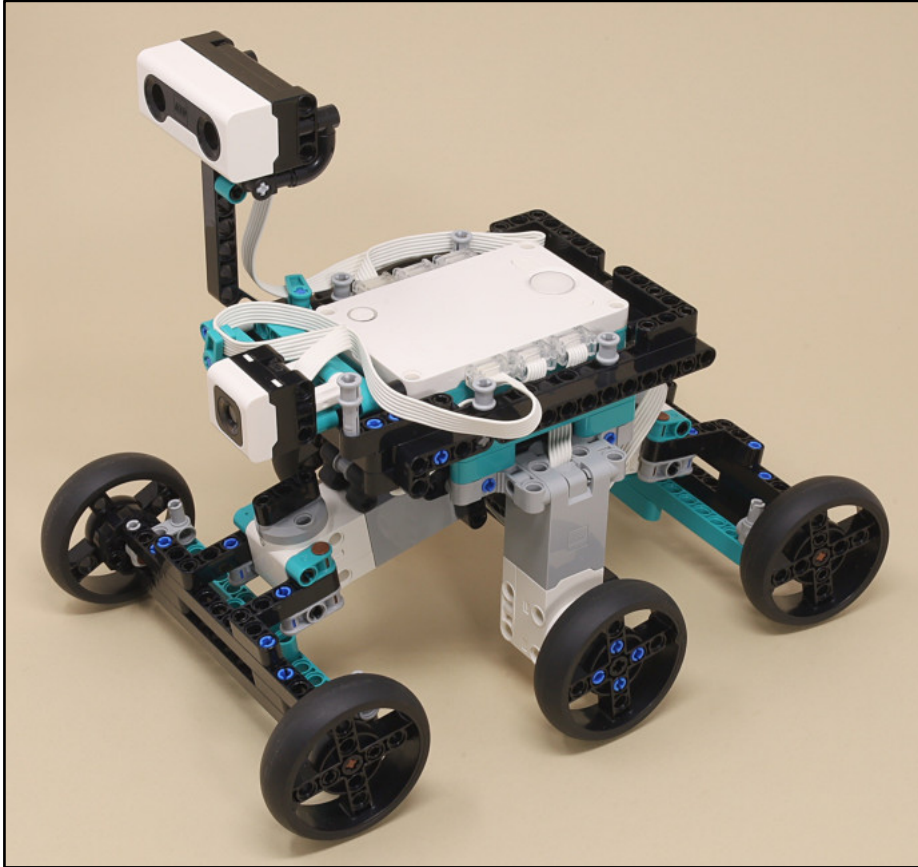
The distance sensor wire can be tucked in here.

In an Ackerman Steering geometry, the inside wheels steer more than the outside wheels during a tight turn.

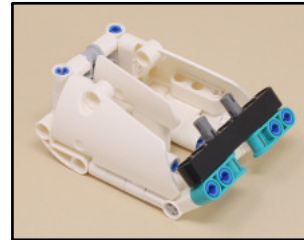
This keep all the wheels approximately perpendicular to a single shared turning center, for less tire scrub and better turning efficiency.



The rover is fully functional at this point



...or for more visual details, add:



Nuclear Power Source



Finishing Touches