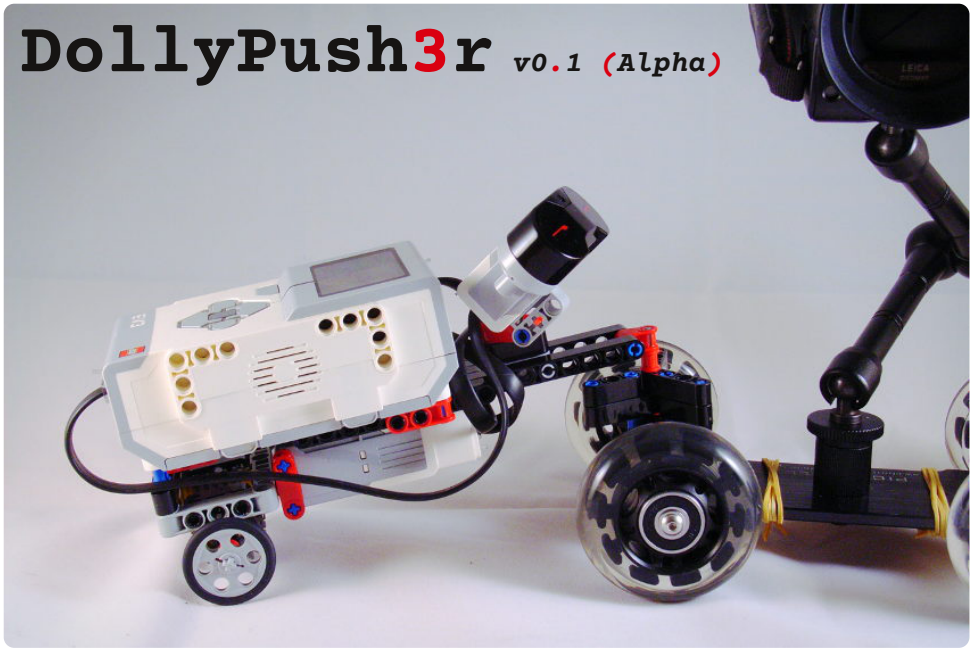
DollyPush3r *v0.1 (Alpha)*



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Introduction:

DollyPush3r is a LEGO MINDSTORMS EV3 robot which pushes a (small) camera dolly for making travel shots. This robot isn't designed for speed, but rather for making slow movements.
DollyPush3r was designed with the *PC Pico Dolly Kit* in mind, but with some modifications it'll probably work with many other (small) camera dollies as well.

Key Features:

* Built with the LEGO MINDSTORMS EV3 Home set.
  (firmware V1.09H)
* 4 Modes; *ManualStop*, *AutoStop*, *StopMotion* and *TimeLapse*.
* Adjustable settings for speed/power, distance, time-intervals and total running time.
* Controlled with the EV3 Infrared Beacon/Remote Controller.
* The EV3 Intelligent Brick can easily be (de)attached.

I'm certain DollyPush3r can be improved in various areas and you are of course completely free to do so yourself, but in its current state it seems to be quite functional already.

To Do List (maybe):

* Improve the user interface and controls.
* Ease-in and ease-out functions.
* Code clean up.
* Build a better and/or more elegant version.
* Building instructions for different type of dolly attachments.
* Saving & Loading presets.
* Whatever may come to mind.

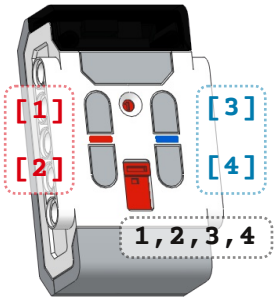
Basic usage:

Open the DollyPush3r_v0_1.ev3 project file with the LEGO MINDSTORMS EV3 LabVIEW software and download the programs to the EV3 Brick *(or SD card)*. I'll assume you already know how to download your own programs to the EV3 Brick, so I won't go any further into that.

When installed, you'll find the folder *DollyPush3r_v0_1* on the EV3 Brick, containing 4 programs *(modes)*; *ManualStop*, *AutoStop*, *StopMotion* and *TimeLapse*. Just run the desired program as any other.

When one of the the programs is running, the Brick Status Light will be turned off and all the controls will be handled using the EV3 Infrared Beacon/Remote Controller.
(to quit the program press the Back button on the EV3 Brick)
At start, the Display on the EV3 Brick will show the *Settings Menu* for the current mode you are in, change the settings to your desire and press the *Start Task* button.
(the various settings cannot be changed while a task is running)

Buttons & functions:



ManualStop Mode:
1[1] Start Task / Stop Task
1[2] Back To Settings Menu *(only available after the task has been completed)*
1[3] Increase Power/Speed
1[4] Decrease Power/Speed

AutoStop Mode:
1[1] Start Task
1[2] Back To Settings Menu *(only available after the task has been completed)*
1[3] Increase Power/Speed
1[4] Decrease Power/Speed
2[1] Increase Total Travel Distance
2[2] Decrease Total Travel Distance

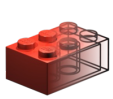
StopMotion Mode:
1[1] Start Task
1[2] Back To Settings Menu
1[3] Increase Power/Speed / *Travel 1 Step Forward*
1[4] Decrease Power/Speed / *Travel 1 Step Backward*
2[1] Increase Travel Distance Per Step
2[2] Decrease Travel Distance Per Step

TimeLapse Mode:
1[1] Start Task
1[2] Back To Settings Menu *(only available after the task has been completed)*
1[3] Increase Power/Speed
1[4] Decrease Power/Speed
2[1] Increase Total Travel Distance
2[2] Decrease Total Travel Distance
2[3] Increase Recording Time
2[4] Decrease Recording Time
3[1] Increase Amount Of Seconds Per 1 Frame *(set this corresponding to your camera settings)*
3[2] Decrease Amount Of Seconds Per 1 Frame

All programs will prevent the EV3 Brick to go to Sleep, however in *TimeLapse Mode*, after the task has been completed the program will automatically quit *(after 1 minute)* to the EV3 main menu and the EV3 Brick can go to Sleep *(when set)*.

Building instructions:

(on the following pages...)


LDraw


Bricksmith


LPub4


Scribus


GIMP

This project is hosted at GitHub:
github.com/tumtidum/dollypush3r

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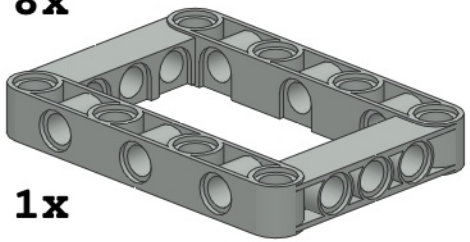

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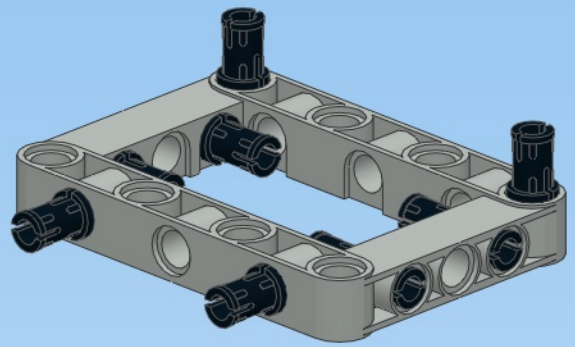

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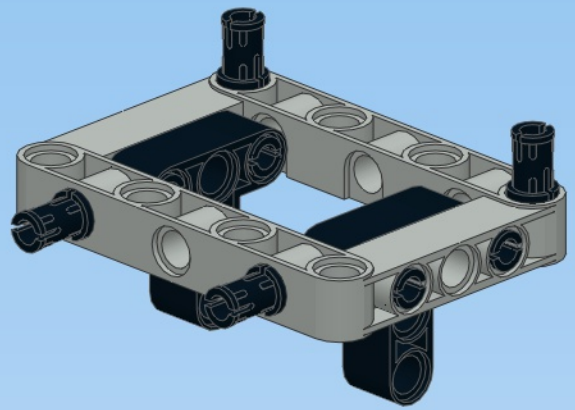

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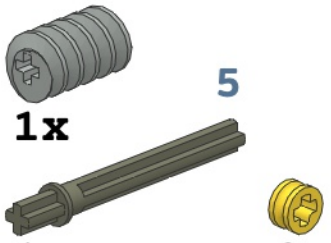

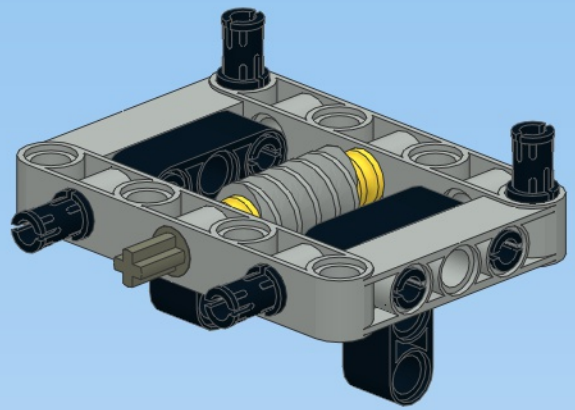

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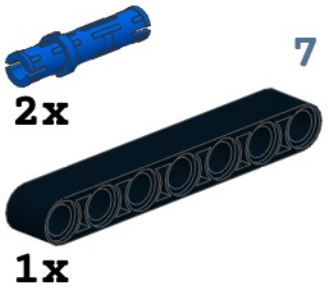

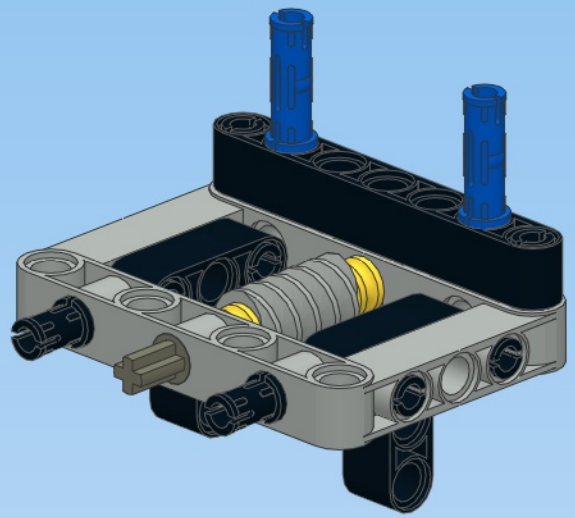

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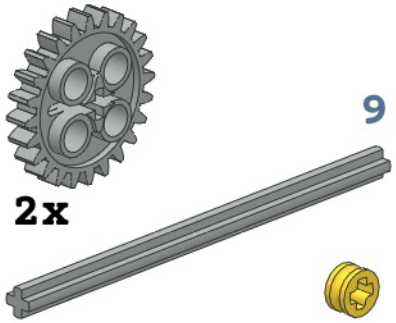

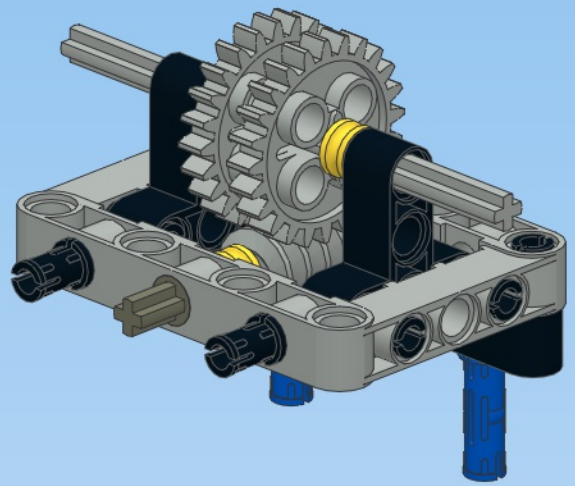

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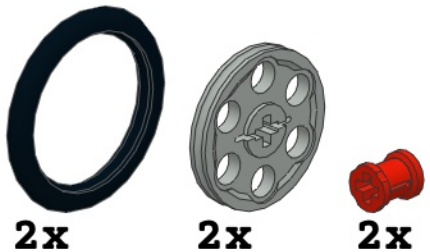

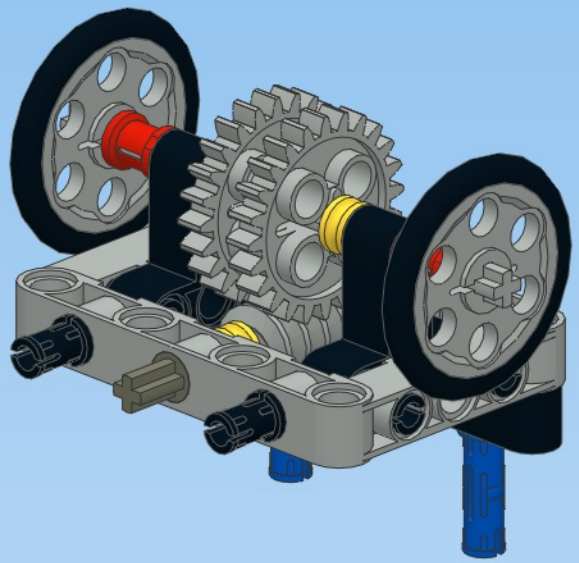

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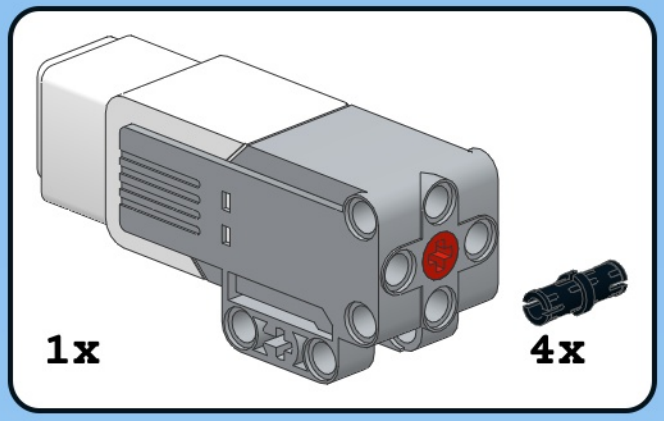

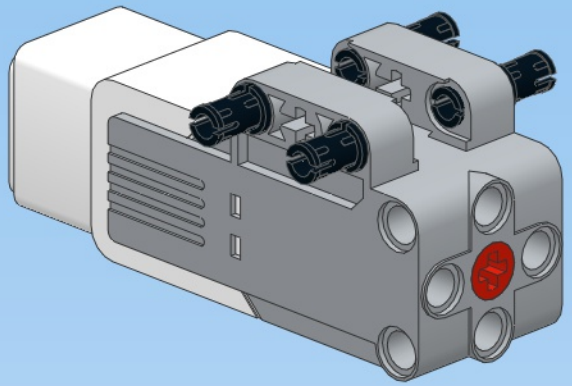

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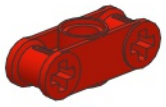

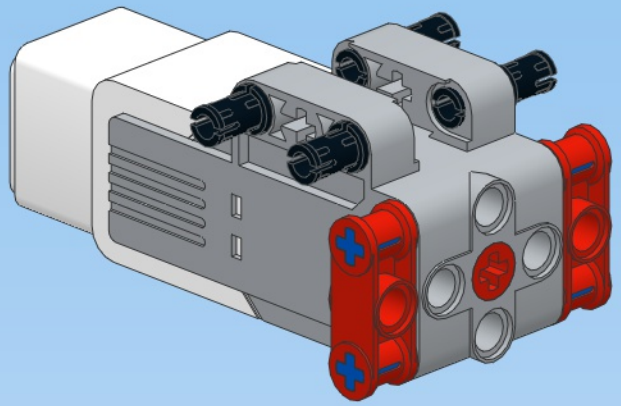

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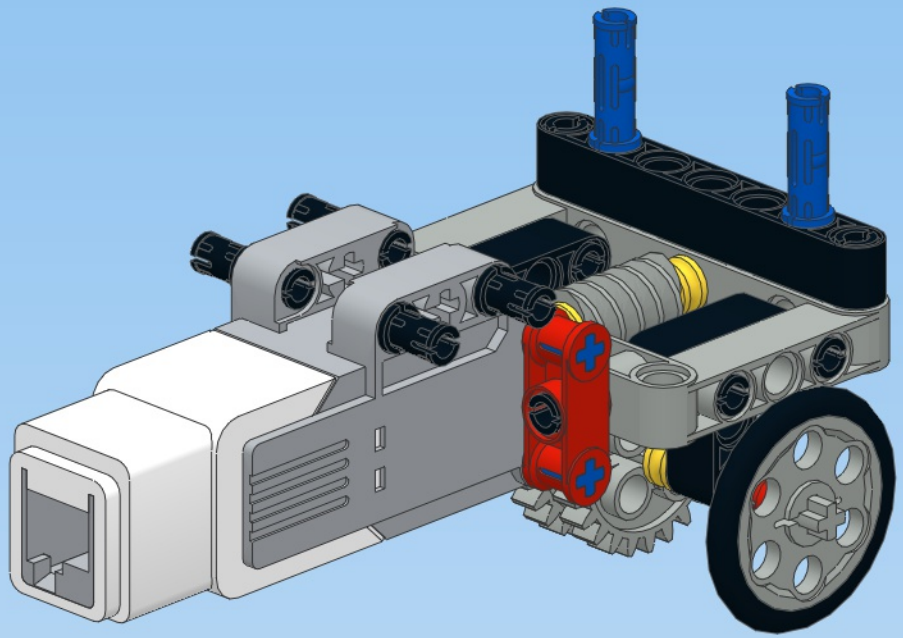

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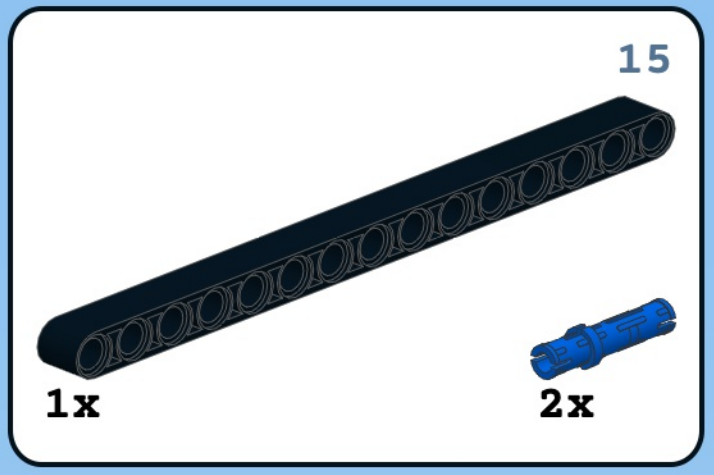

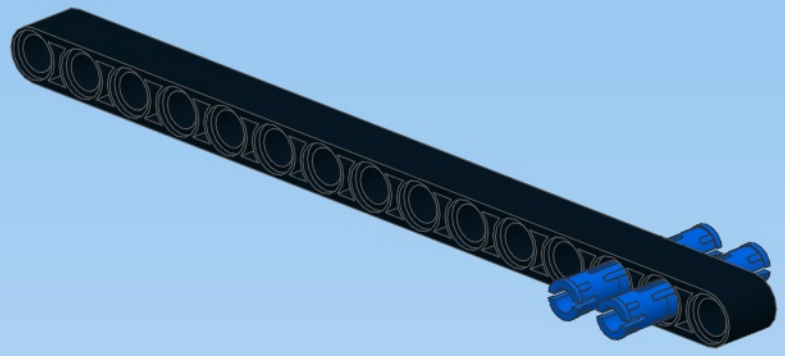

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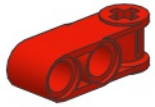

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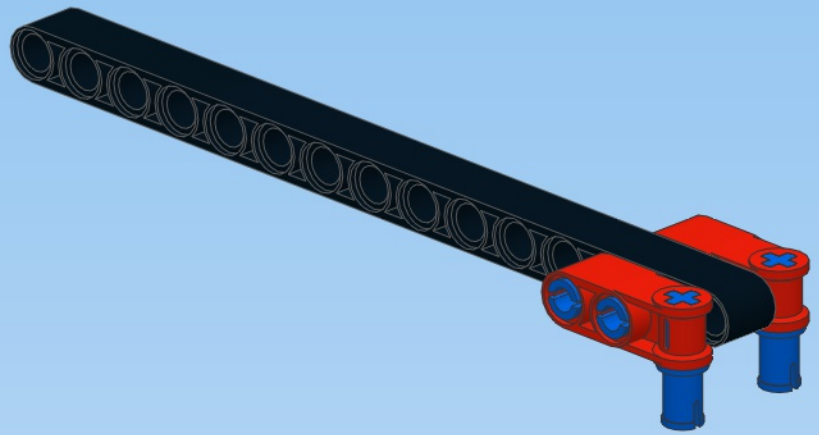

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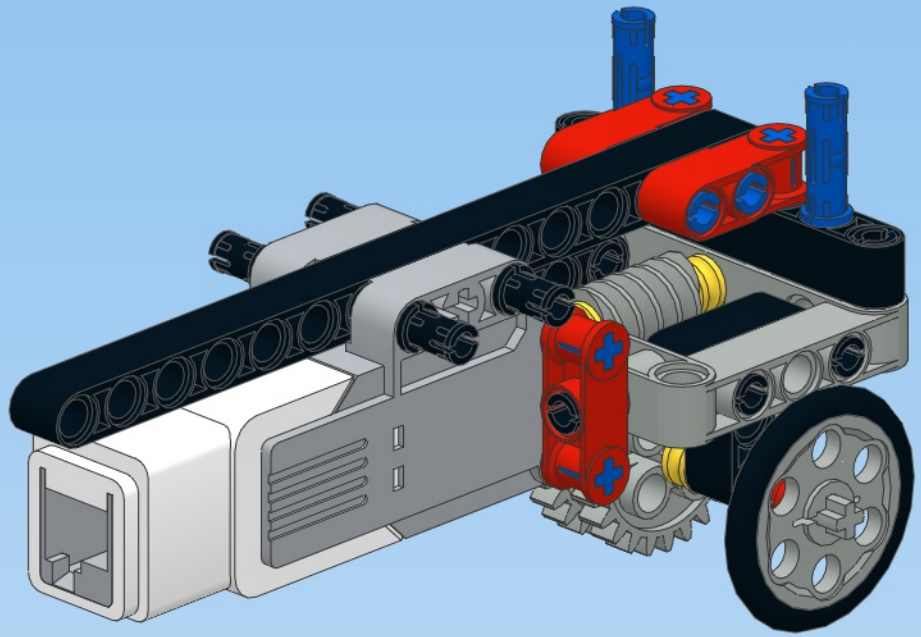

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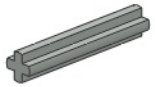

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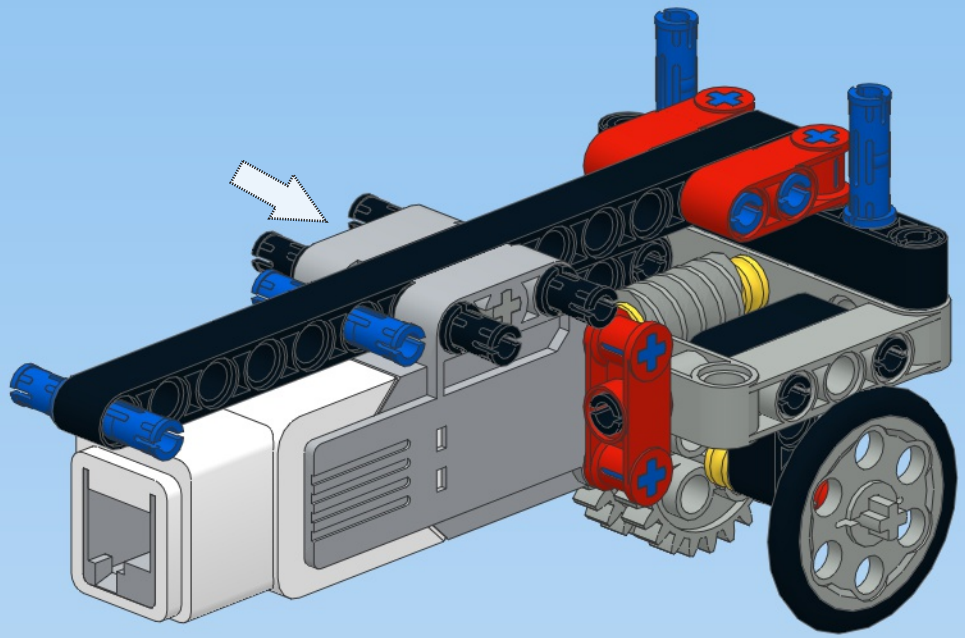

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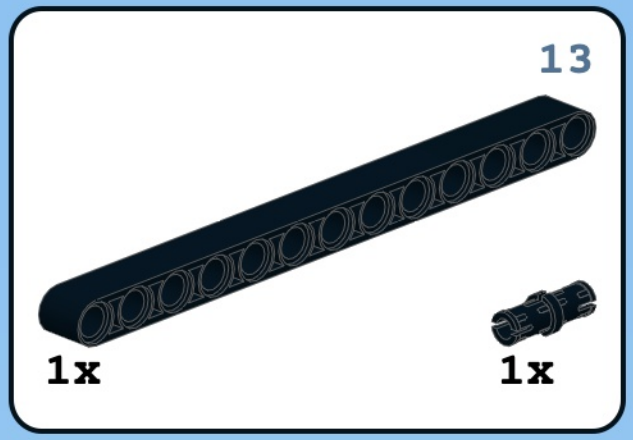

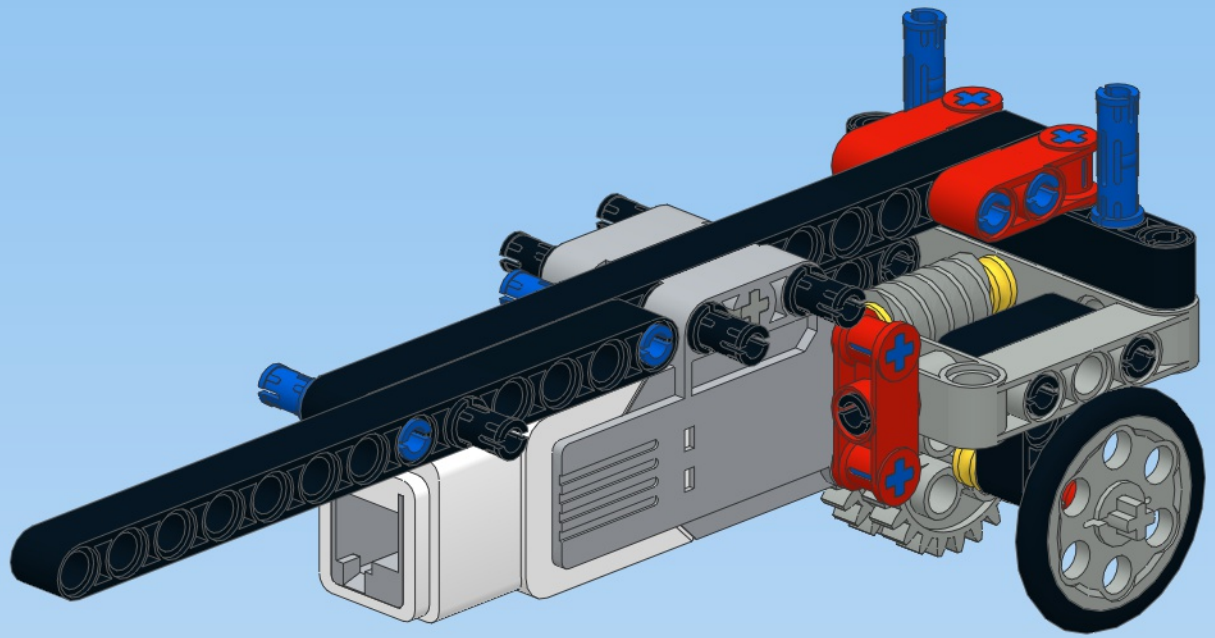

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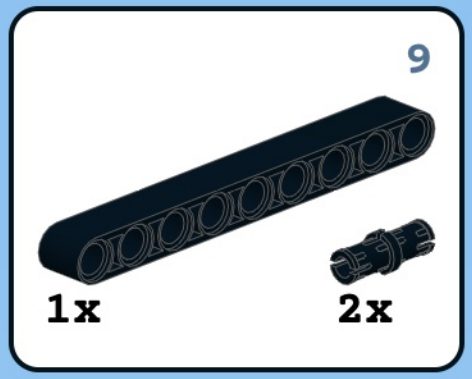

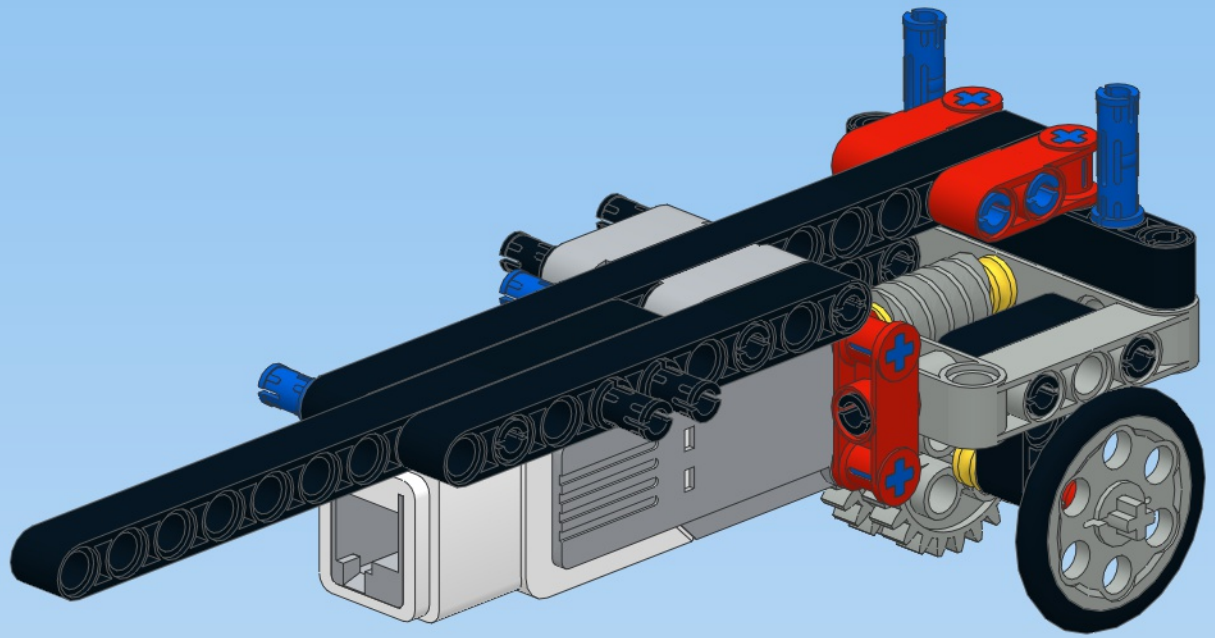

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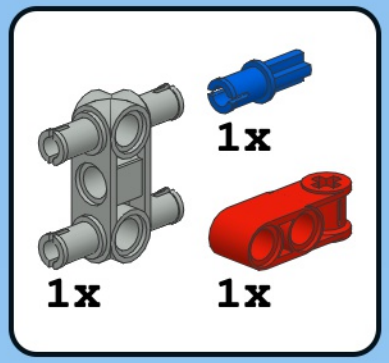

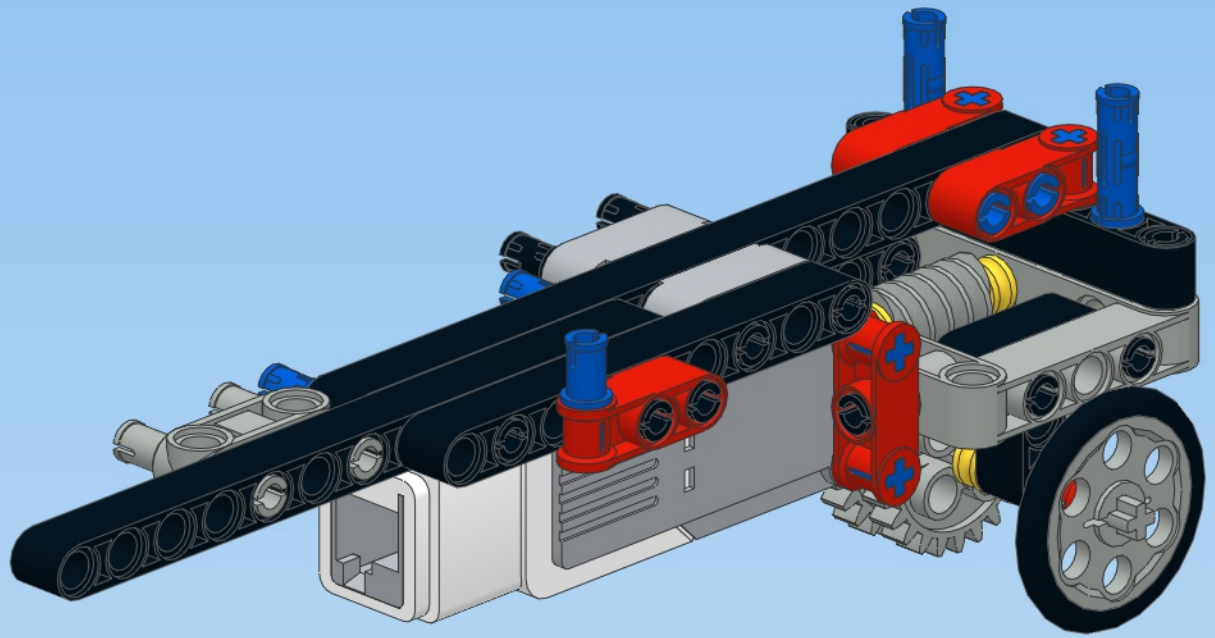

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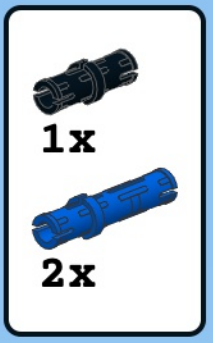

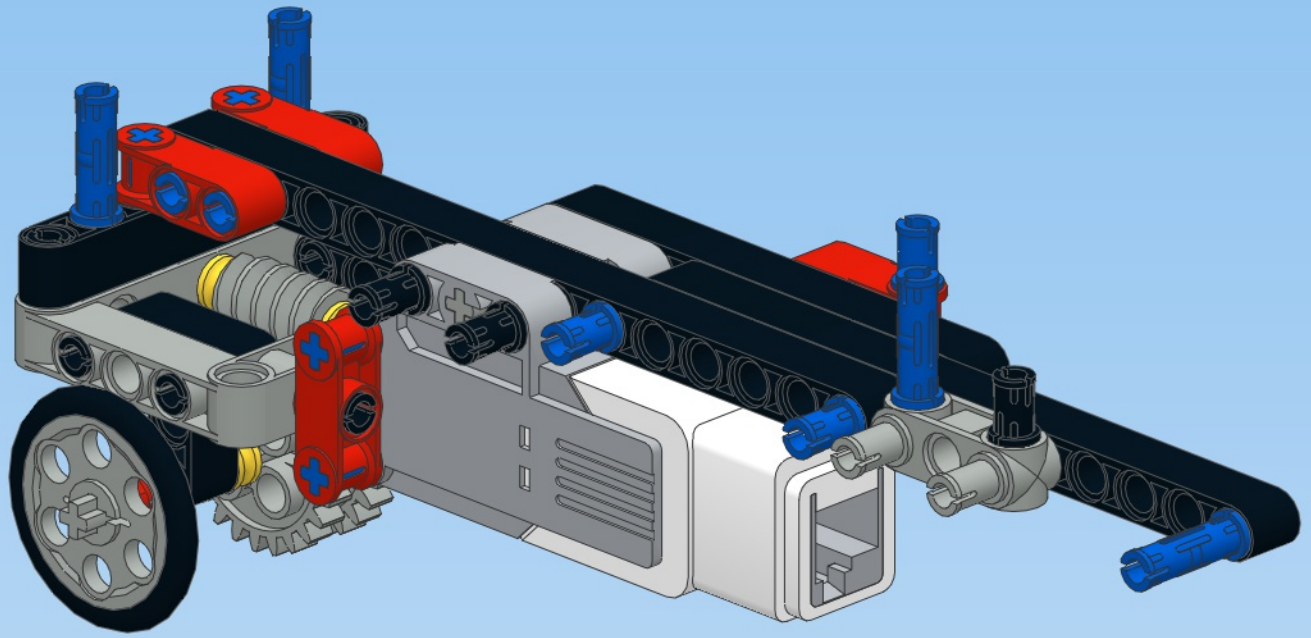

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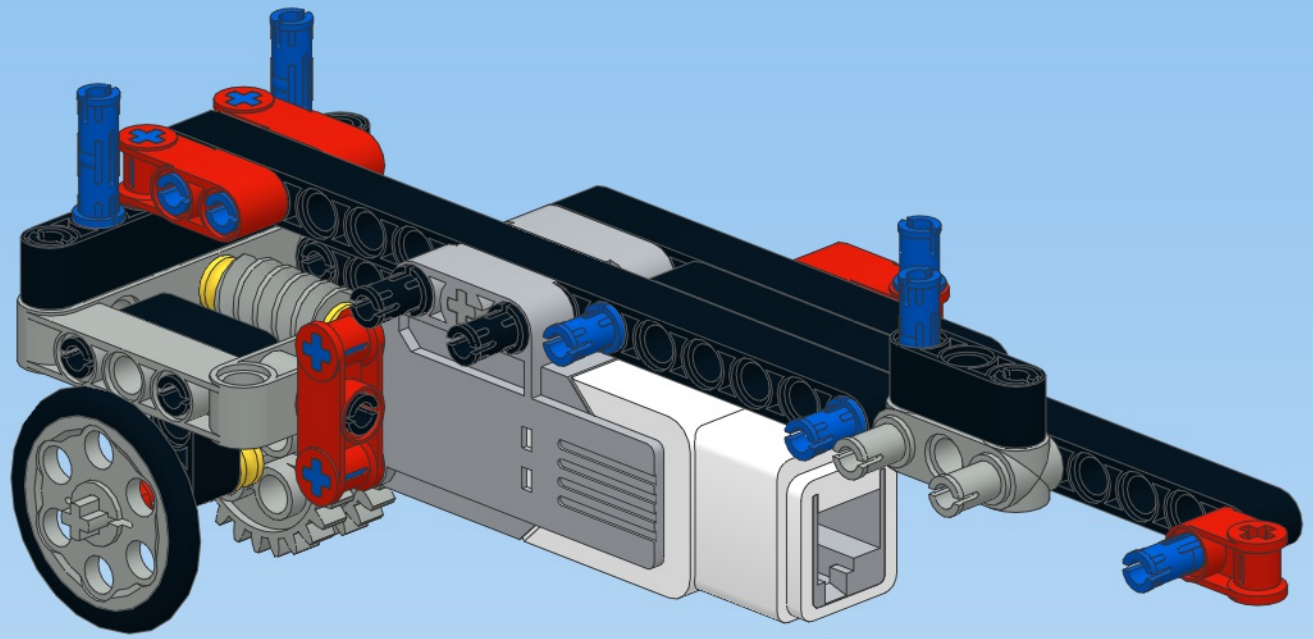

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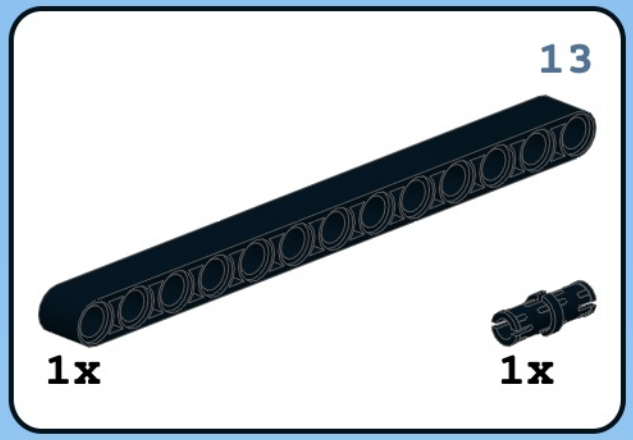

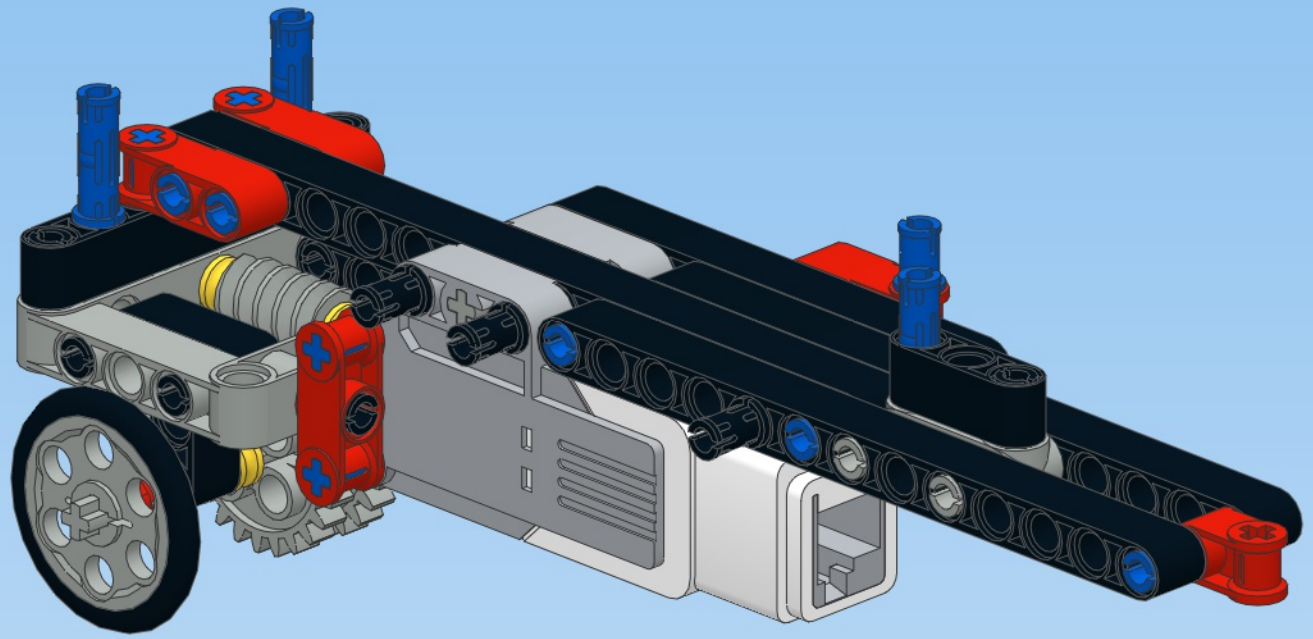

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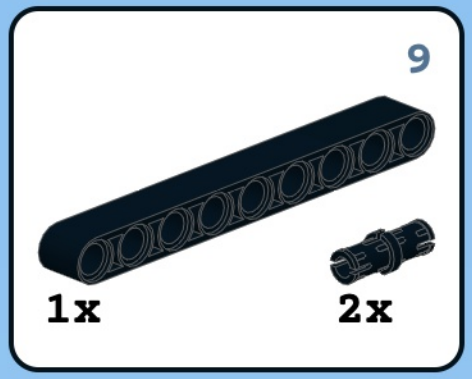

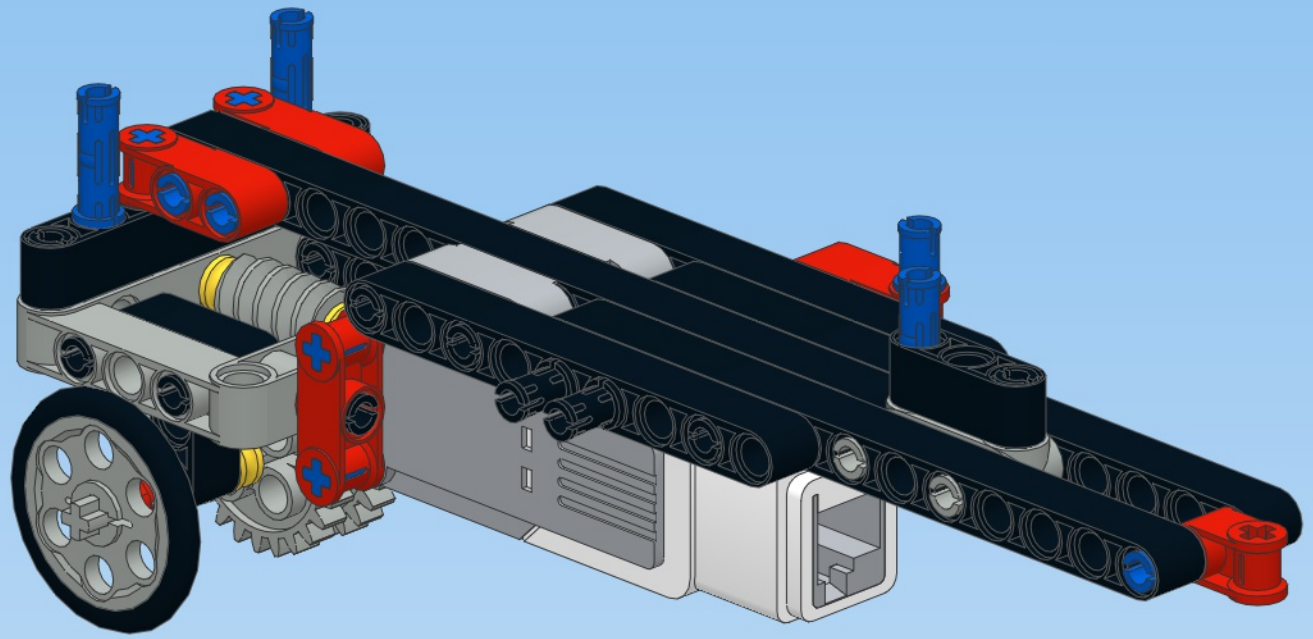

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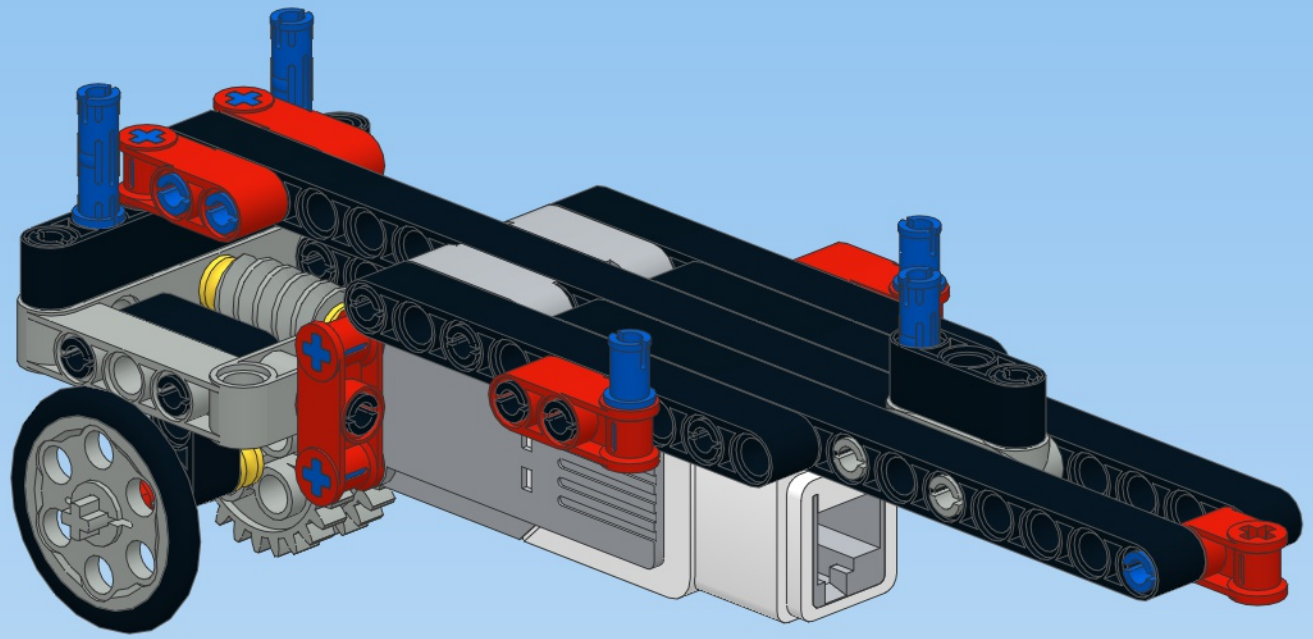

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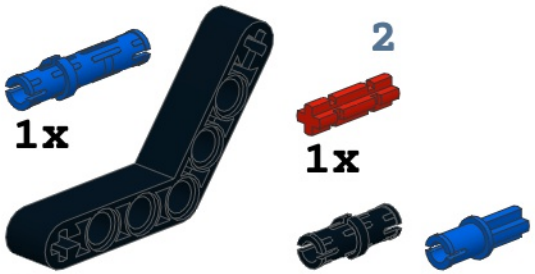

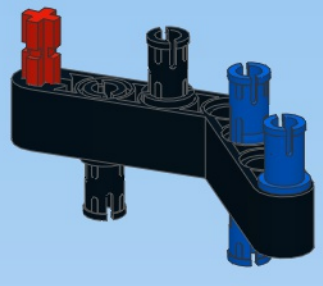

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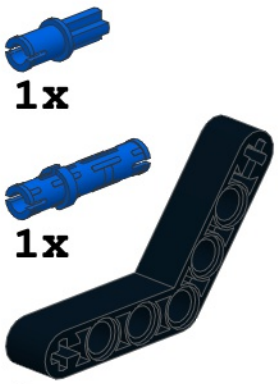

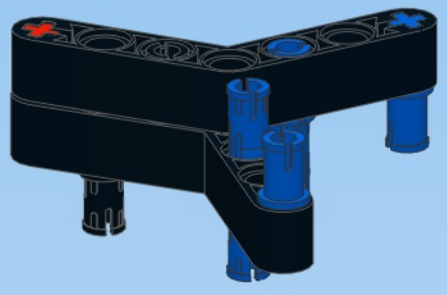

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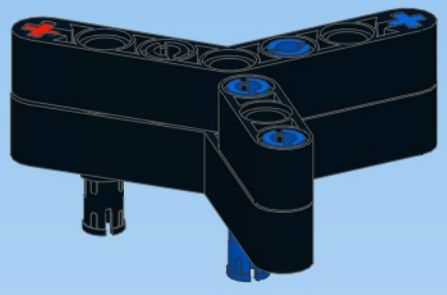

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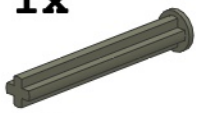

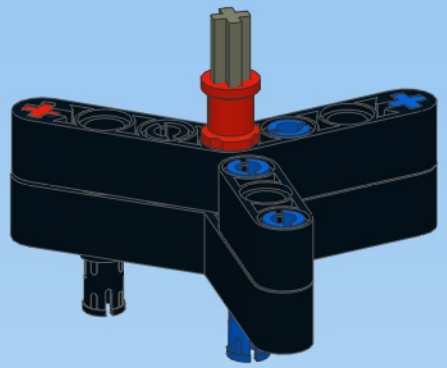

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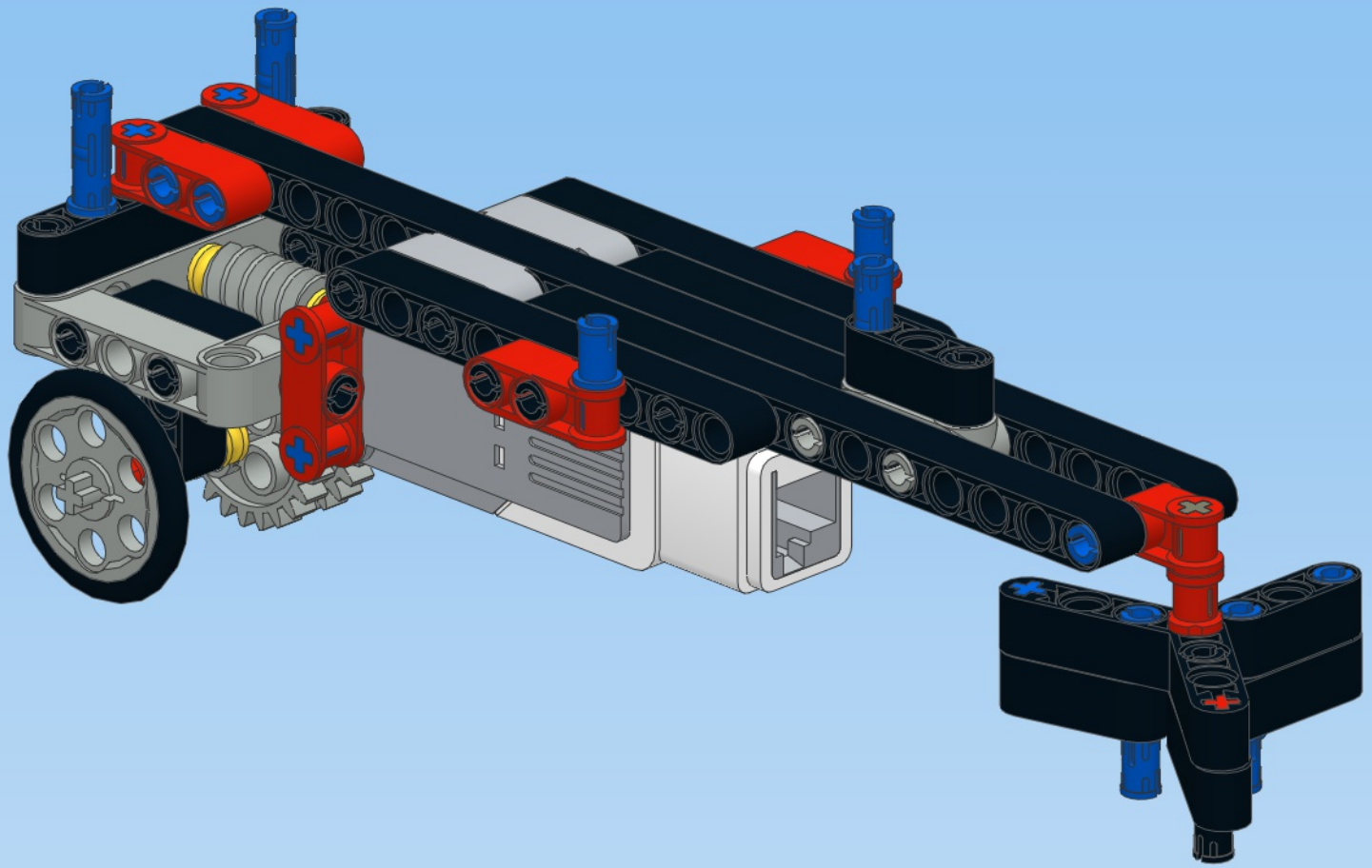

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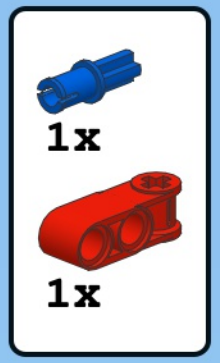

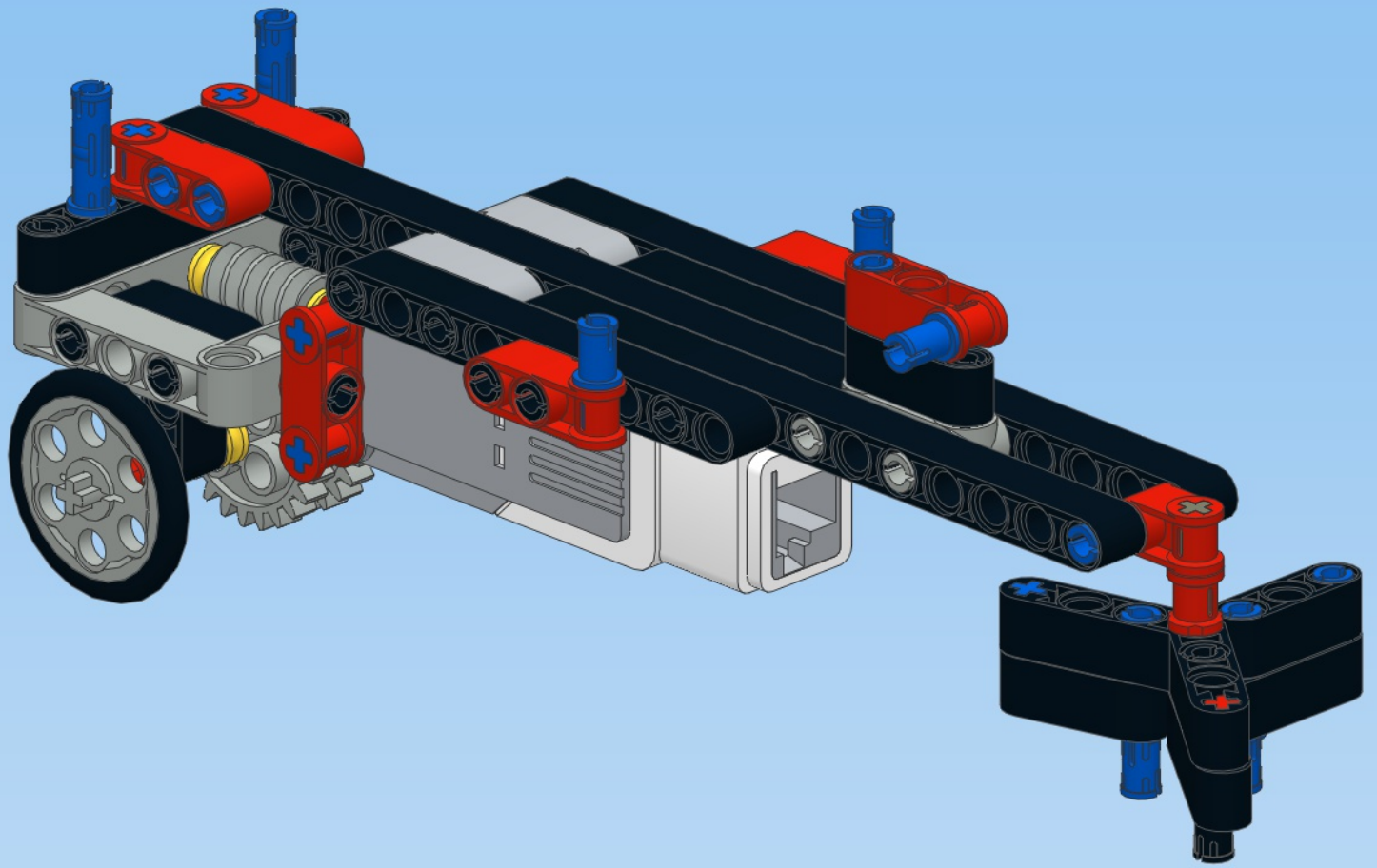

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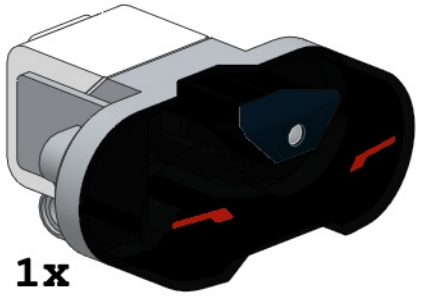

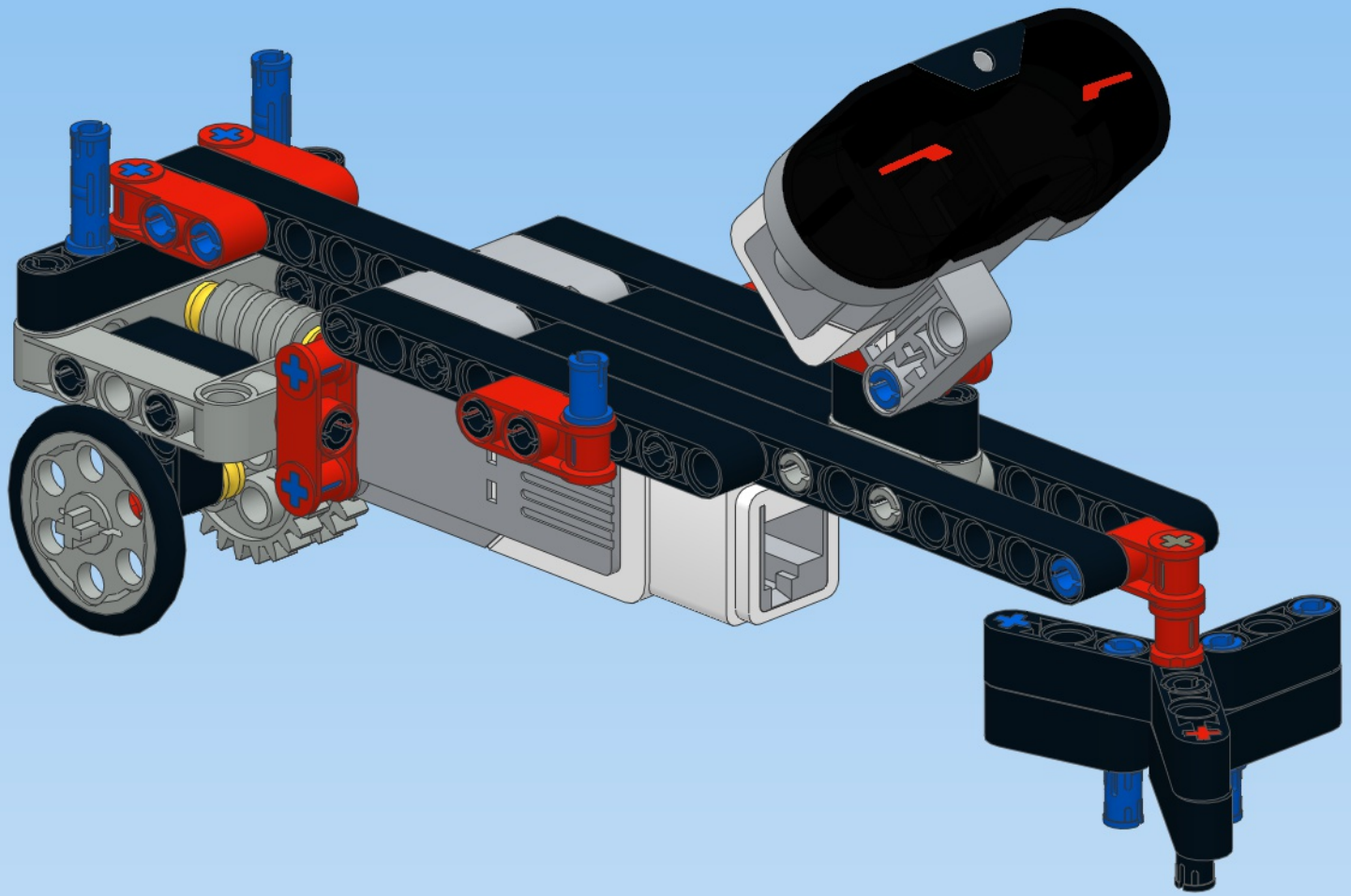

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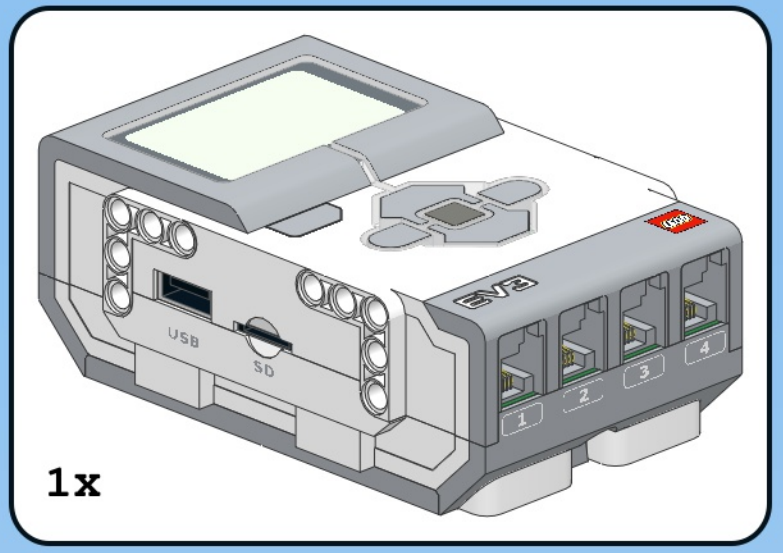

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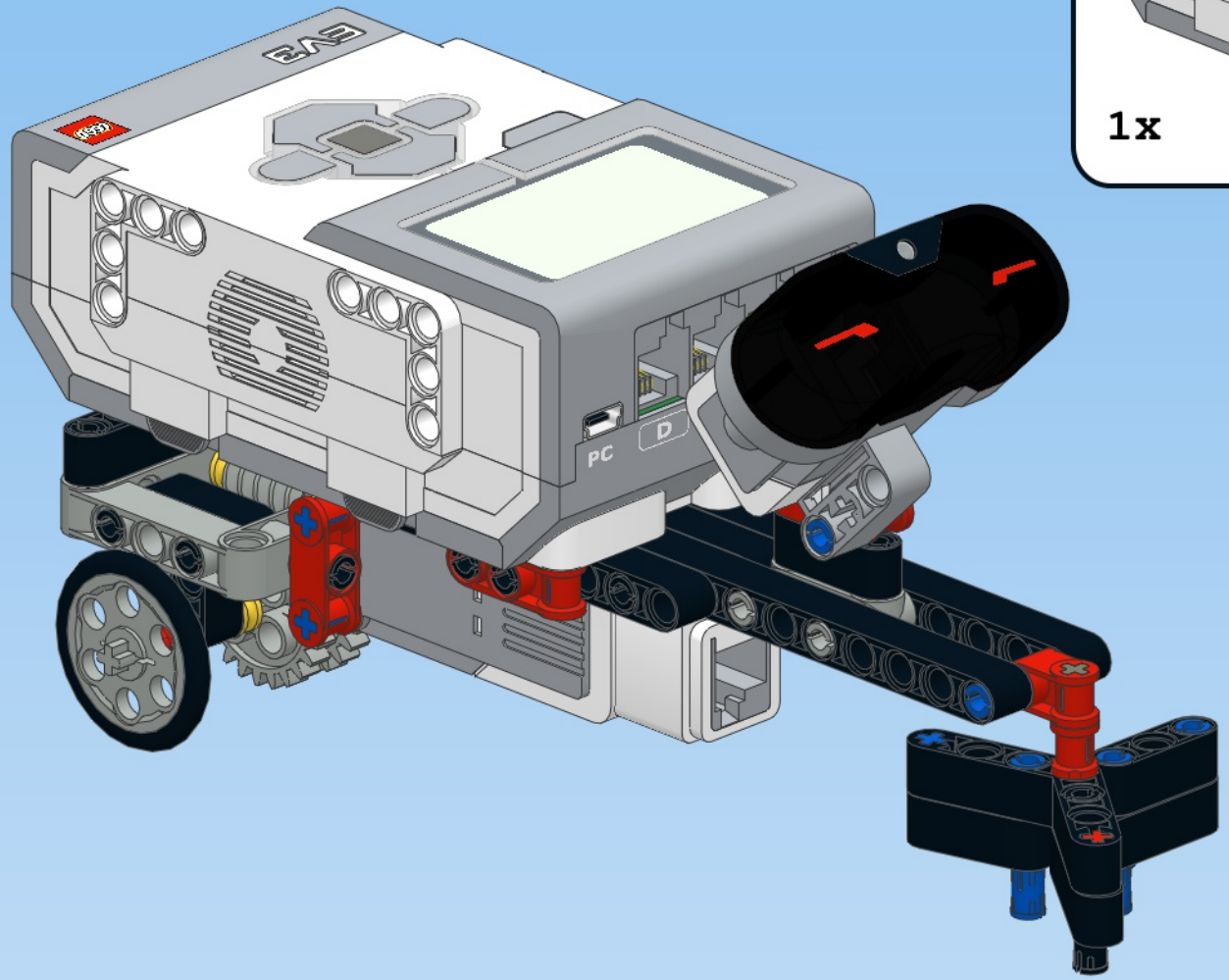

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