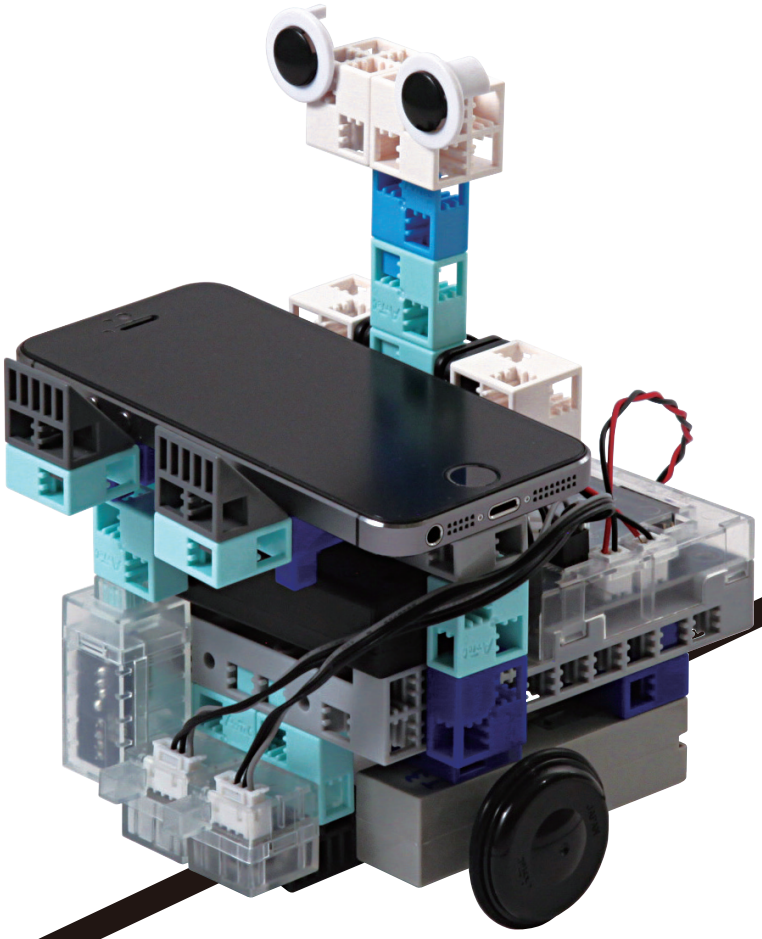
Transporter

Assembly Instructions



Artec Co., Ltd.
Address: 3-2-21 Kitakamei-cho, Yao-shi, Osaka
581-0066 Japan
E-mail: export@artec-kk.co.jp
Website: www.artec-kk.co.jp/en

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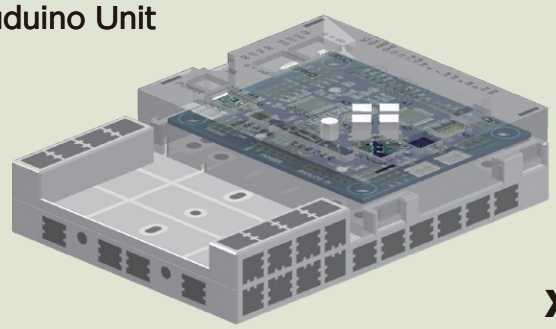
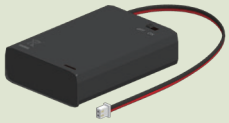
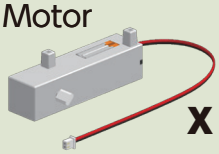
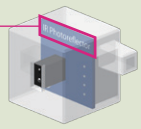
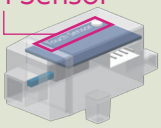
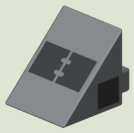
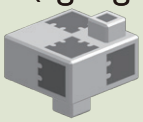
Transporter

Components

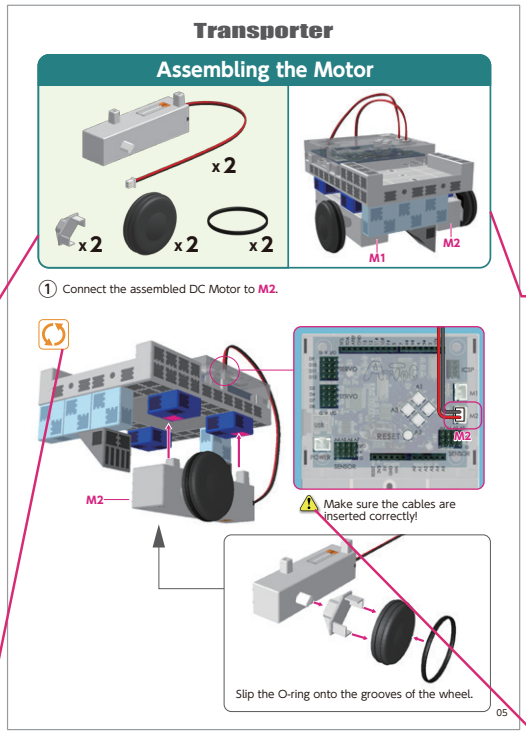
Studuino Unit  x 1	Battery Box  x 1	USB Cable x 1	
	DC Motor  x 2	Sensor Connecting Cable (three-wire 15 cm) x 3	
Reflective Infrared Sensor IR Photoreflector  x 2	Touch Sensor Touch Sensor  x 1	Basic Cube (white) x 4	Triangle A (gray)  x 4
Half A (light gray)  x 2	Half B (blue) x 8	Half C (light aqua) x 19	Half D (aqua) x 2
Rotor Axis C x 2	Hub x 2	Wheel x 2	O-ring x 2	Disk x 2

Assembly Instruction Labels

x 1

Shows the parts needed for assembly. Indicates the number of parts needed for assembly.

Indicates when the direction of a component must be changed for assembly.

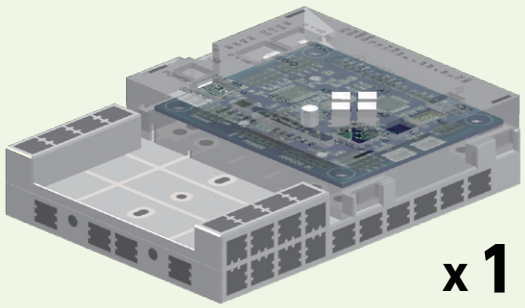


Shows an image of the completely assembled item.

Indicates tips or warnings when building a specific item.

Transporter

Body Assembly (bottom)

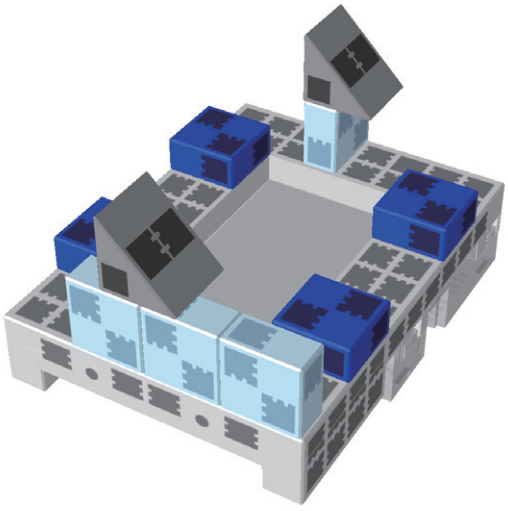


x 1

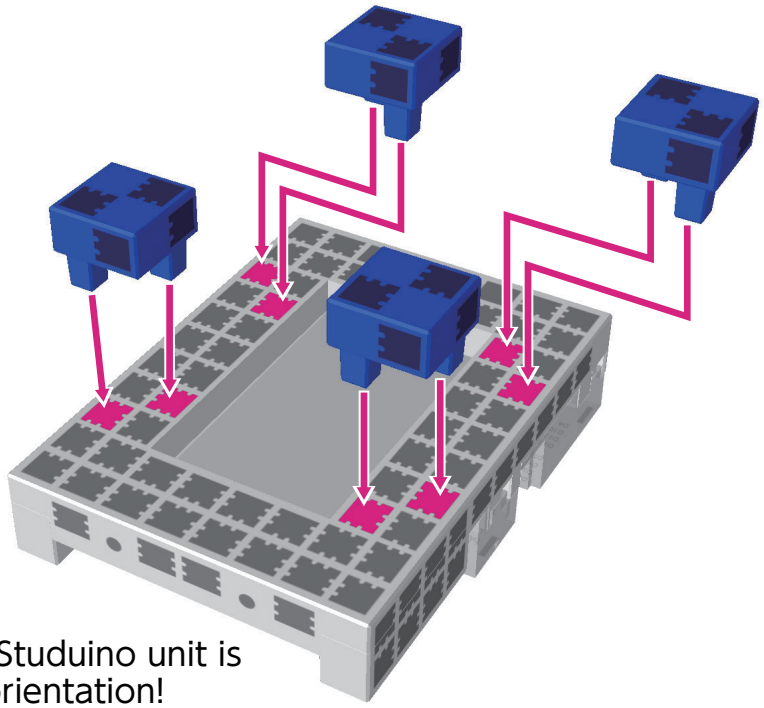
x 4

x 4

x 2



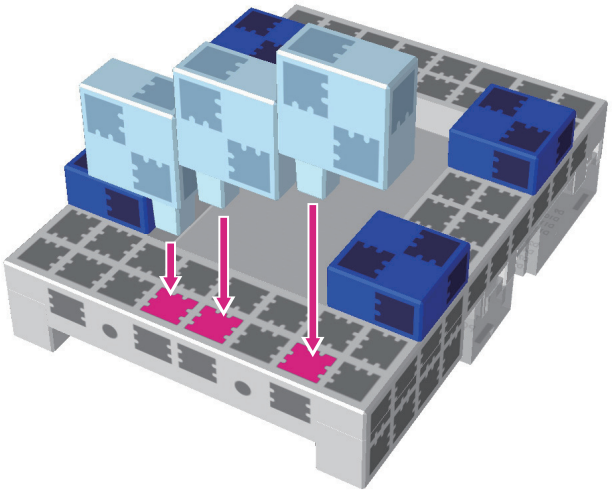
①



⚠ Make sure the Studuino unit is in the correct orientation!

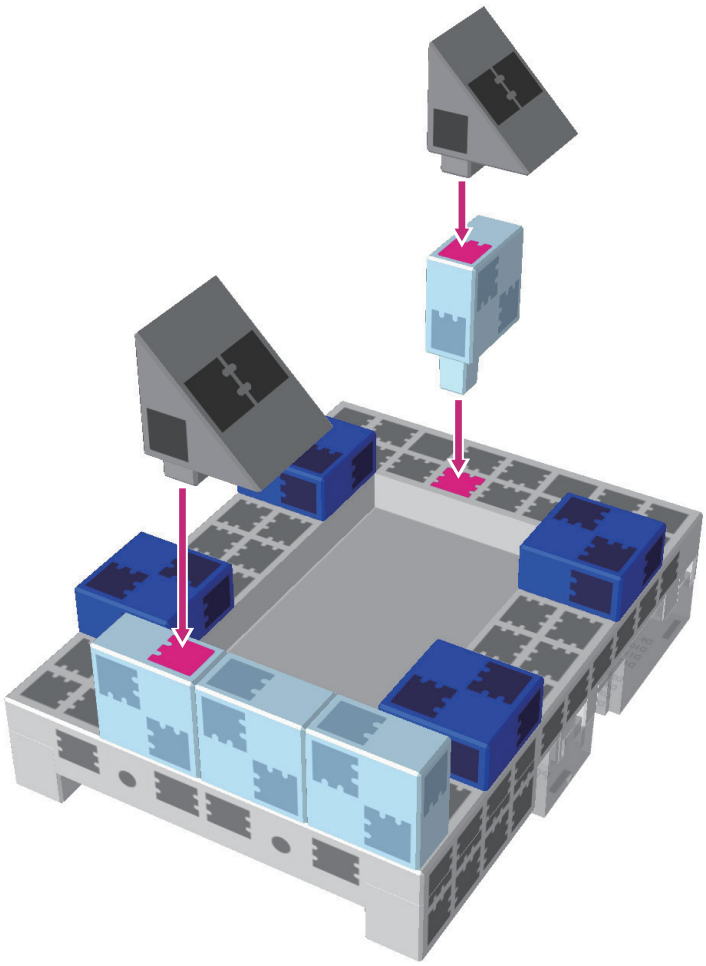
---

②

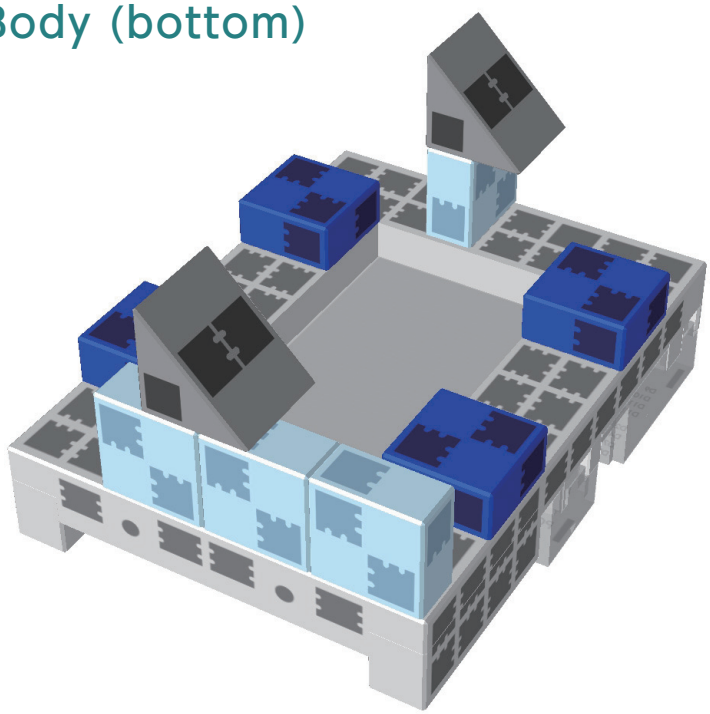


Transporter

③

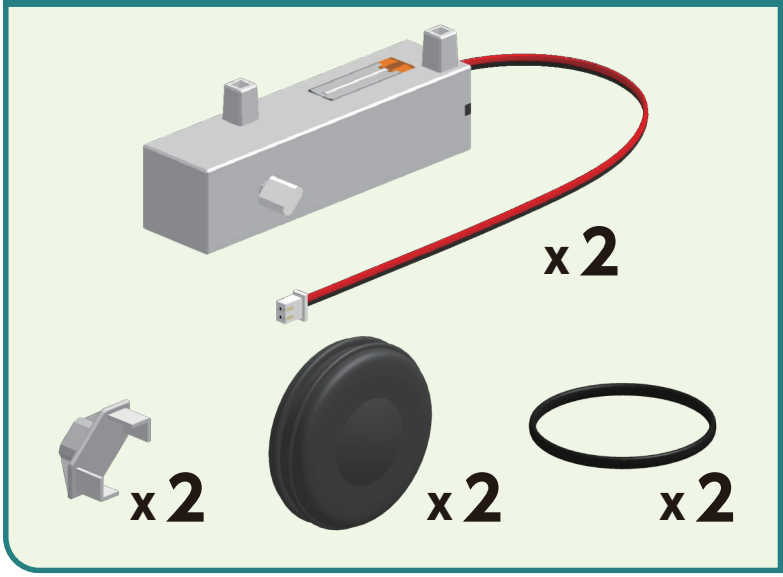


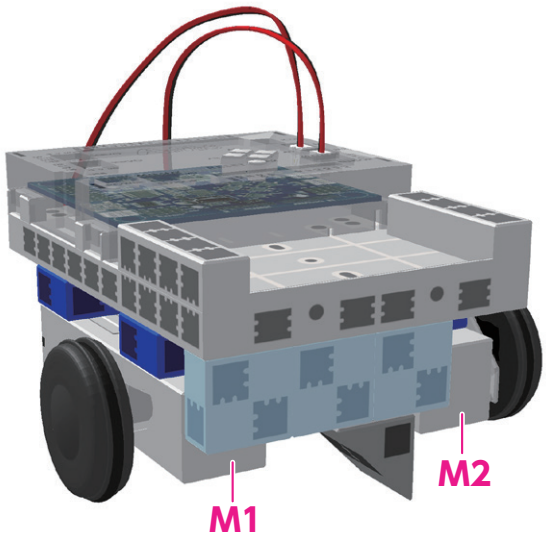
Completed Body (bottom)



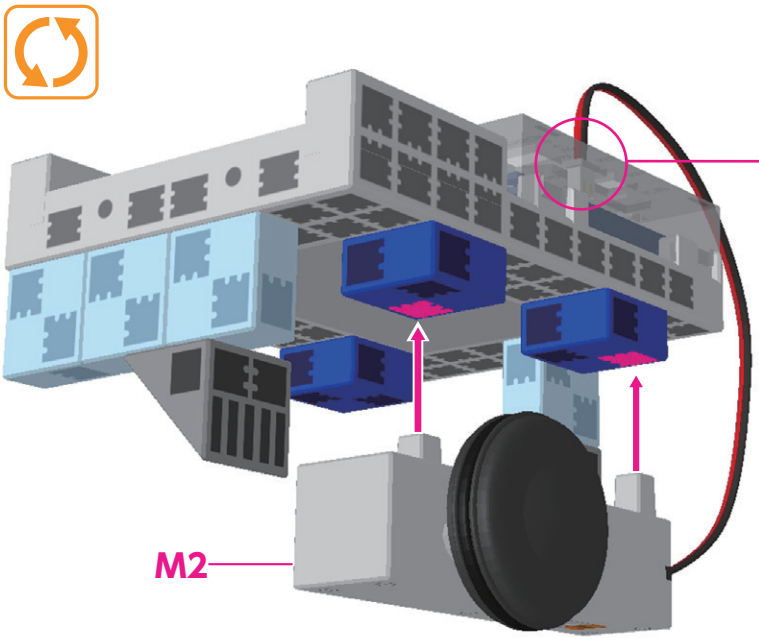
Transporter

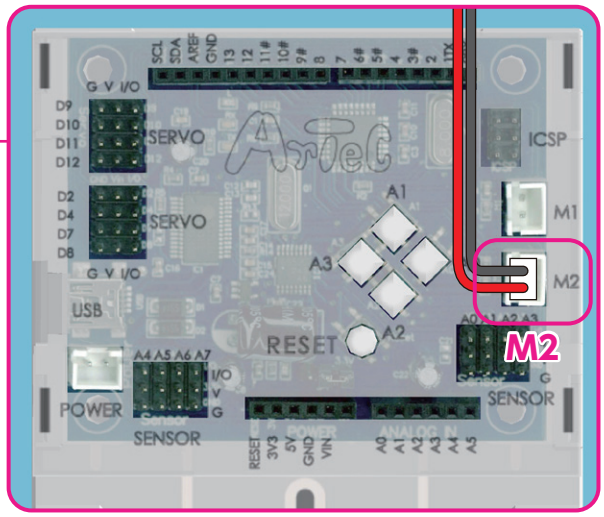
Assembling the Motor



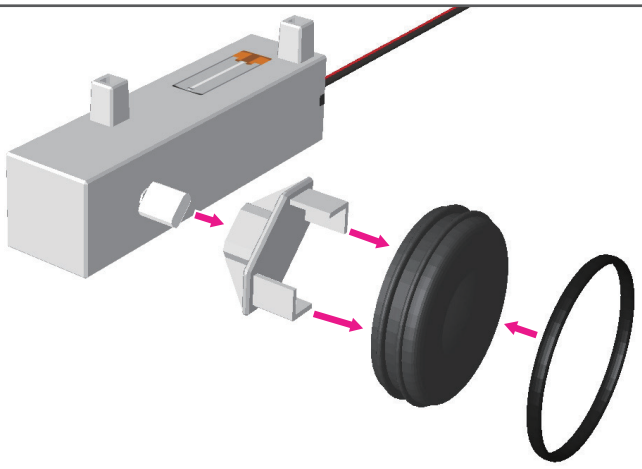


① Connect the assembled DC Motor to **M2**.





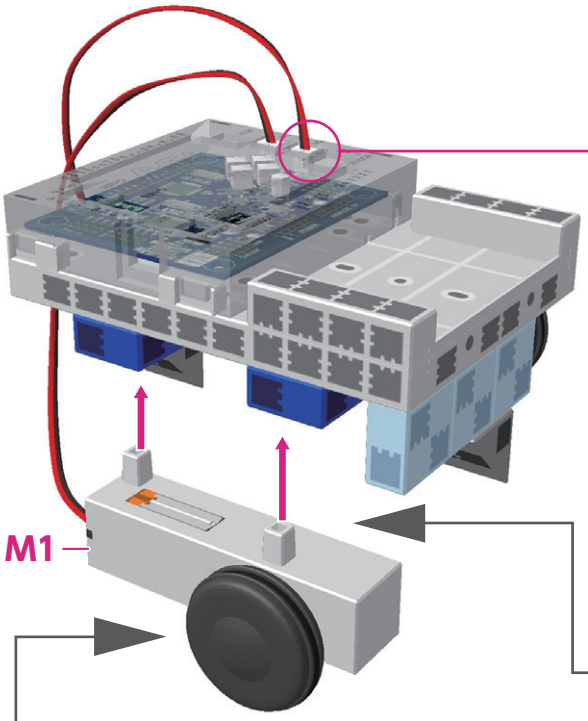
Make sure the cables are inserted correctly!

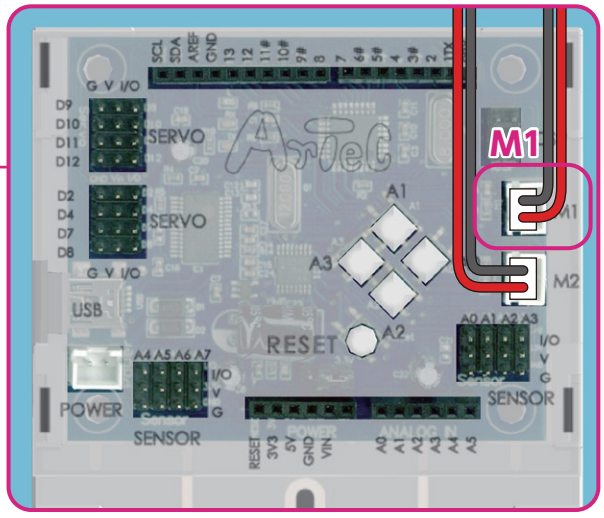


Slip the O-ring onto the grooves of the wheel.

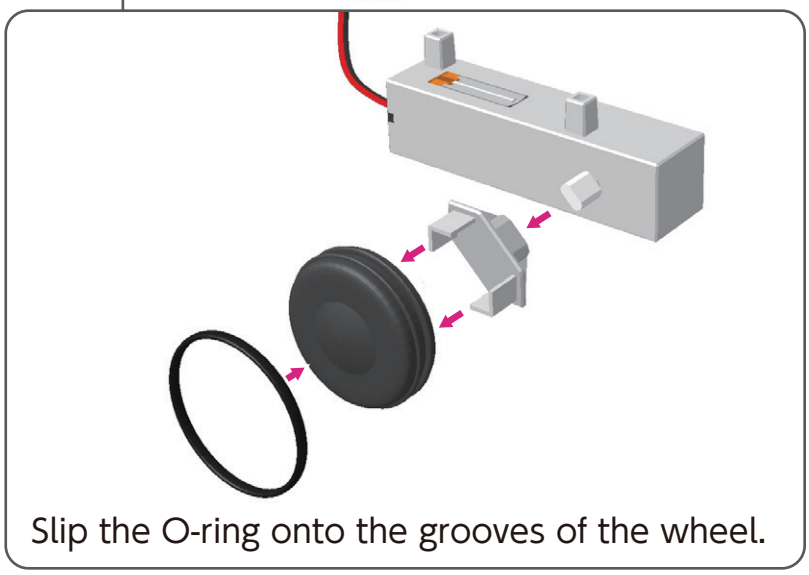
Transporter

② Connect the assembled DC Motor to **M1**.

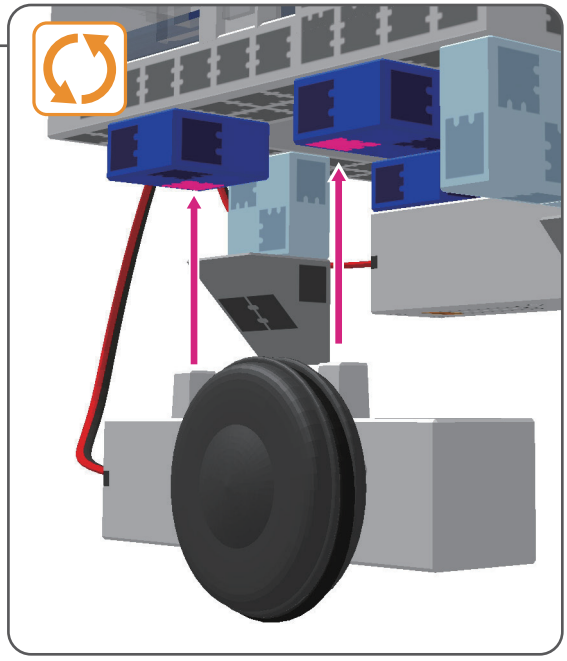




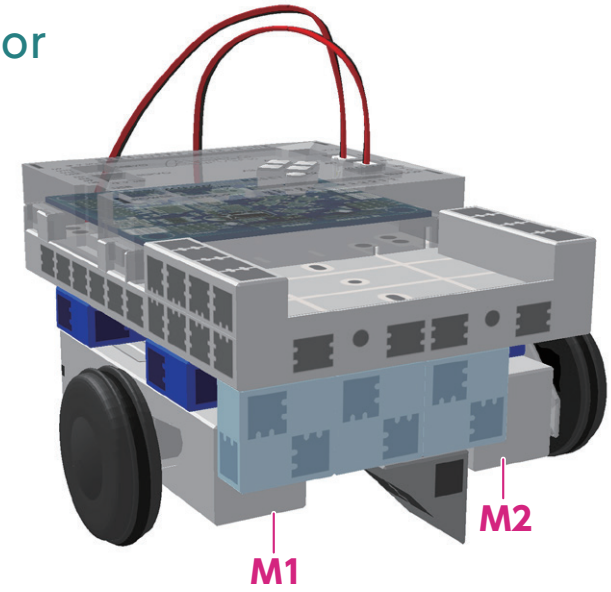
Make sure the cables are inserted correctly!



Slip the O-ring onto the grooves of the wheel.

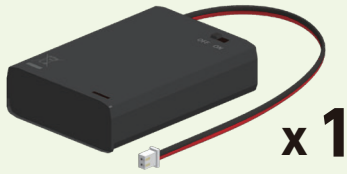


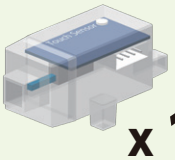
Completed Motor

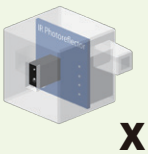


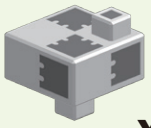
Transporter

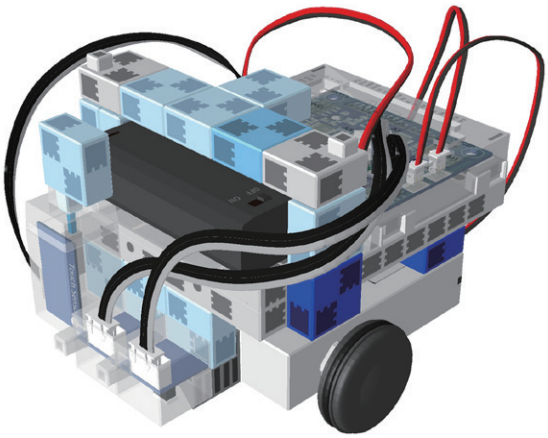
Body Assembly (front)











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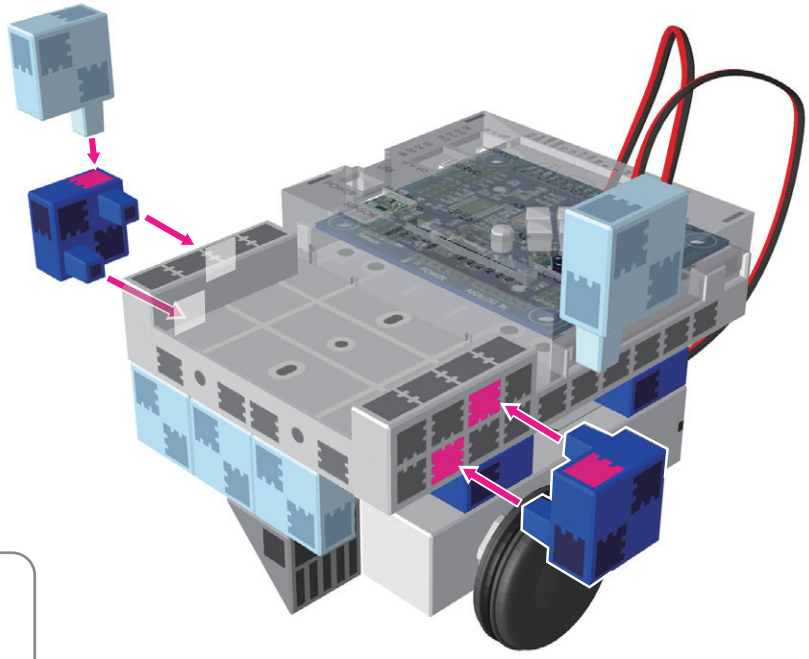
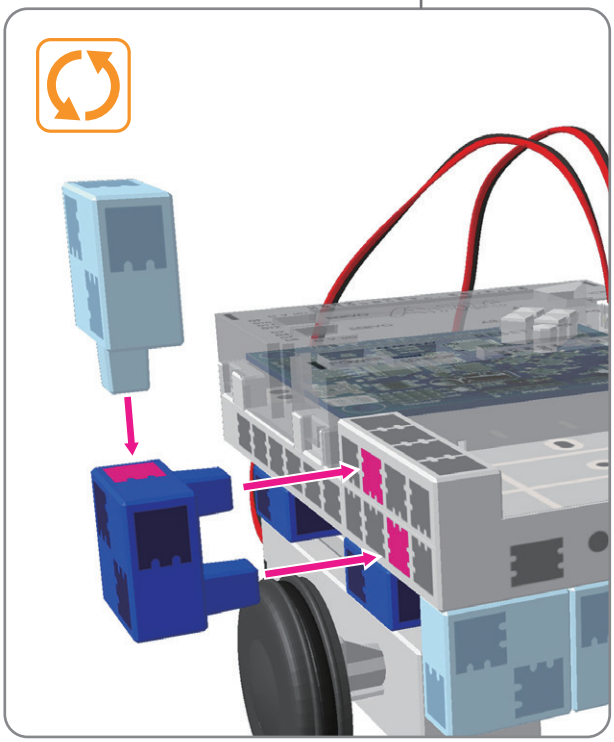
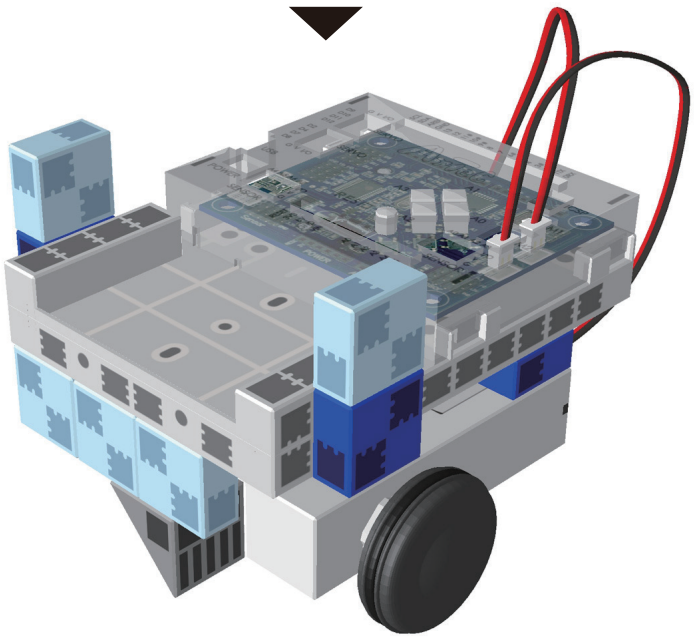


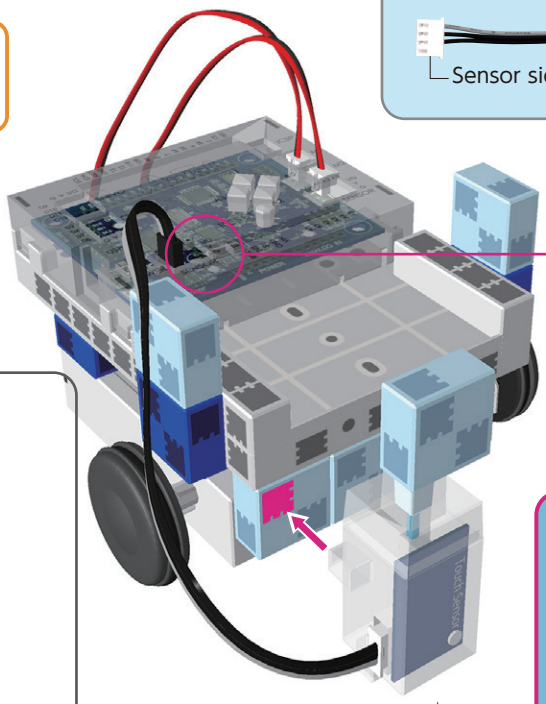


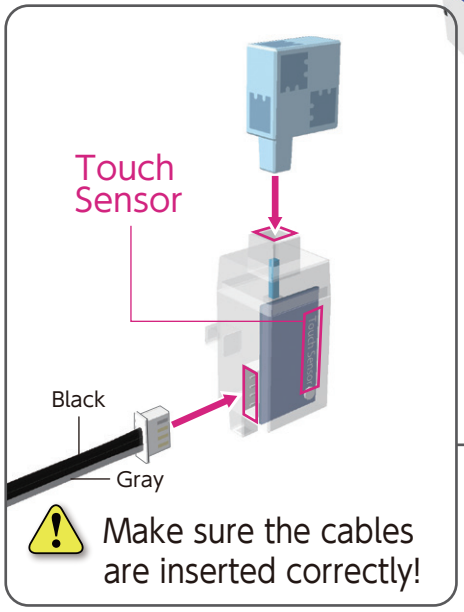


Transporter

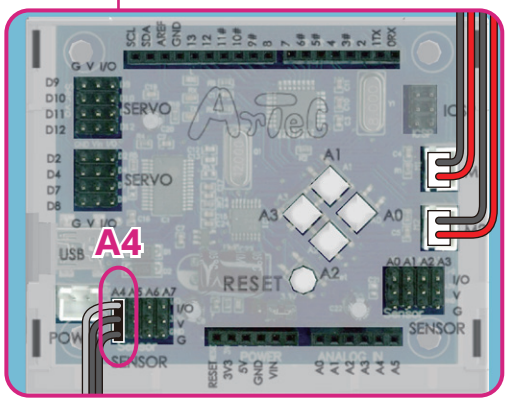
② Connect the touch sensor to **A4**.

Sensor Connecting Cable



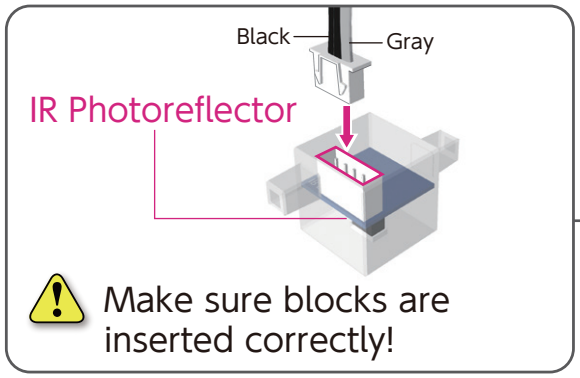


Make sure the cables are inserted correctly!

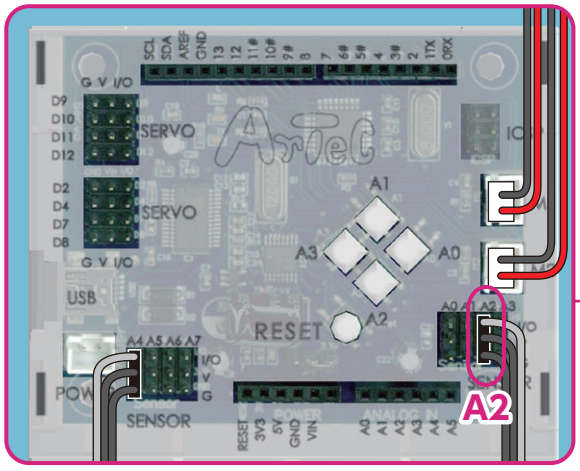


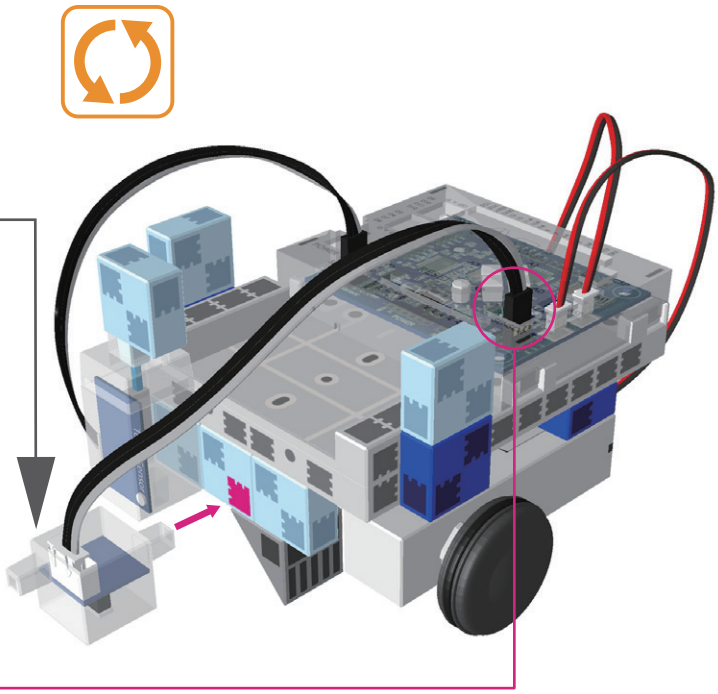
Make sure the cables are inserted correctly!

③ Connect the reflective infrared sensor (IR Photoreflector) to **A2**.



Make sure blocks are inserted correctly!

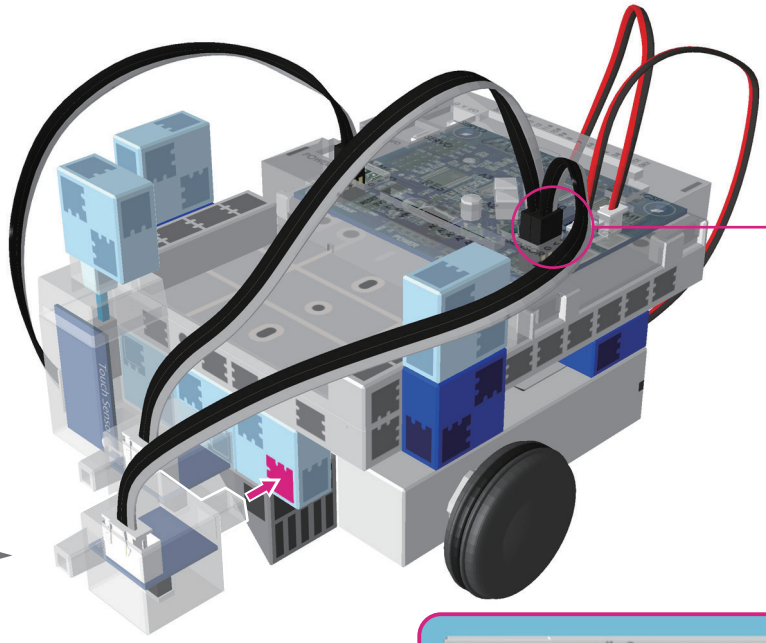


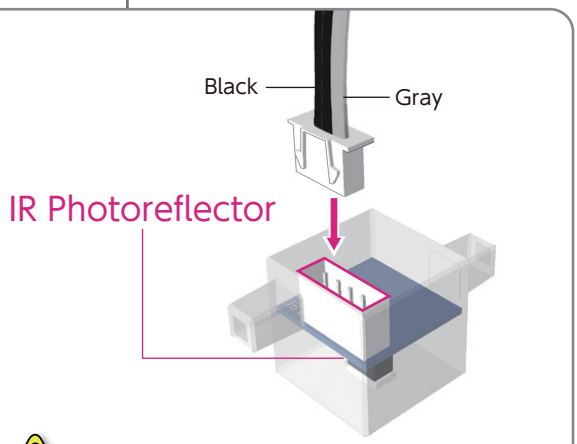


Make sure the cables are inserted correctly!

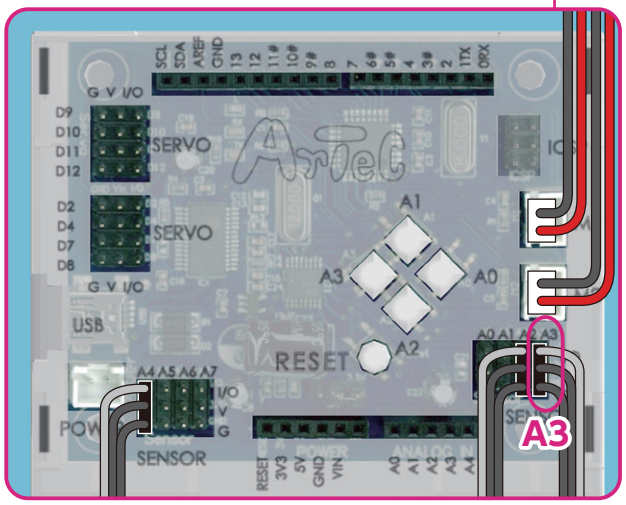
Transporter

④ Connect the reflective infrared sensor (IR Photoreflector) to **A3**.



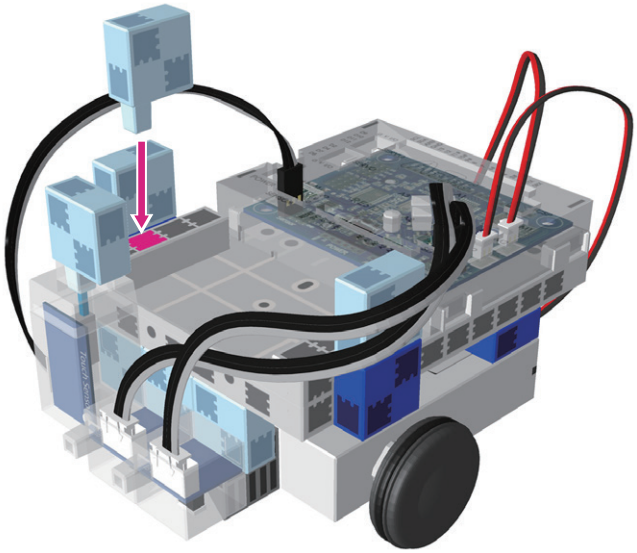


⚠ Make sure blocks are inserted correctly!

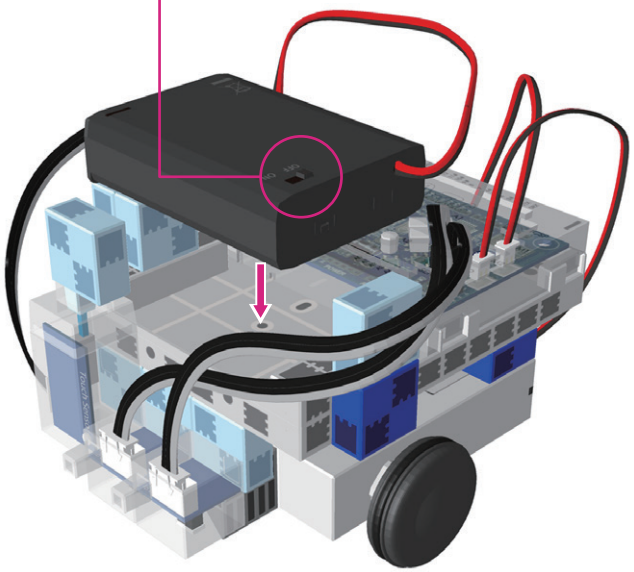


⚠ Make sure the cables are inserted correctly!

⑤

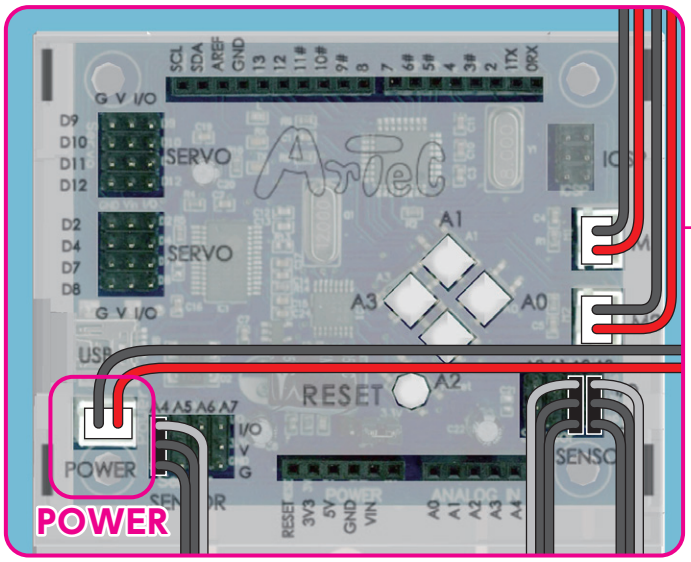


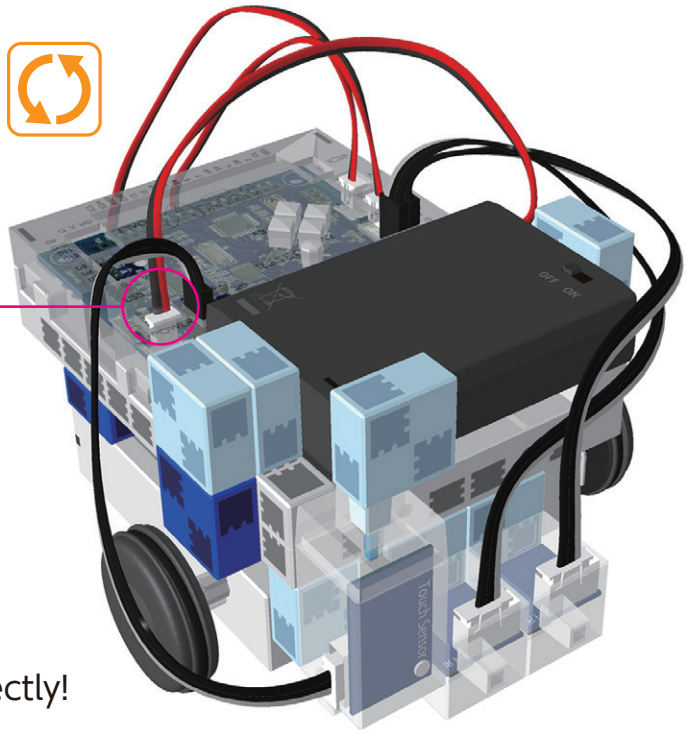
⑥ ⚠ You should see the battery box switch here.



Transporter

⑦ Connect the cable from the battery box to the **POWER** section.





⚠ Make sure the cables are inserted correctly!

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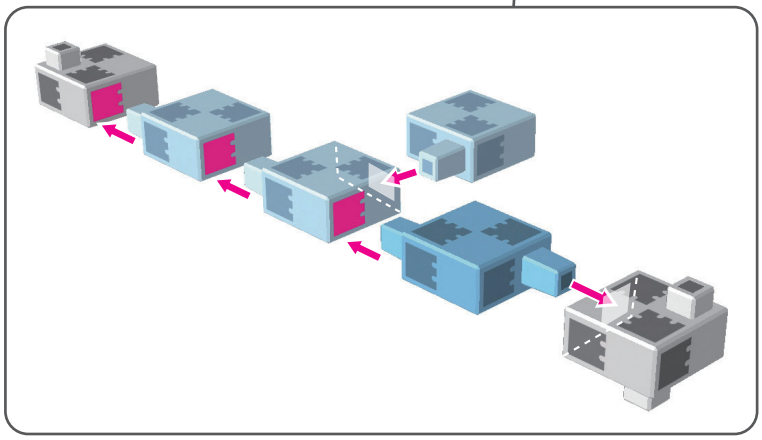
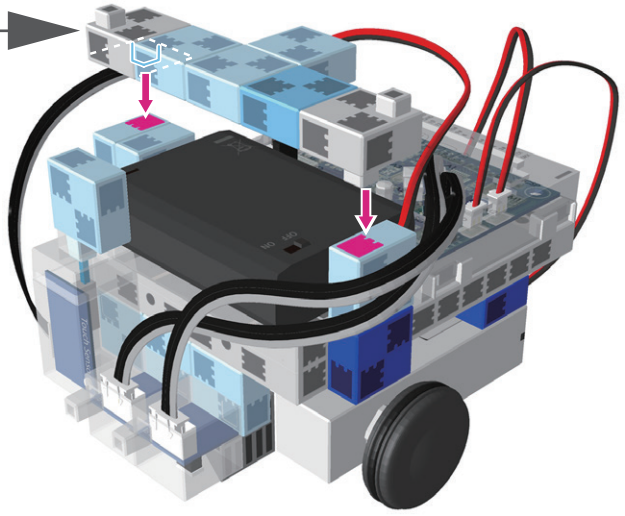
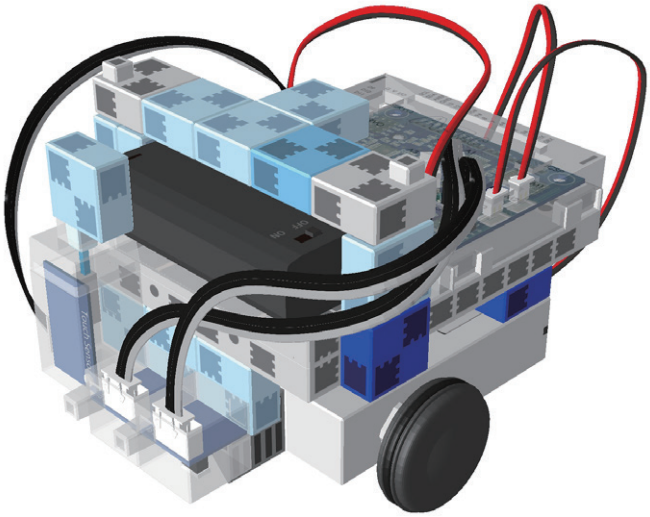
⑧





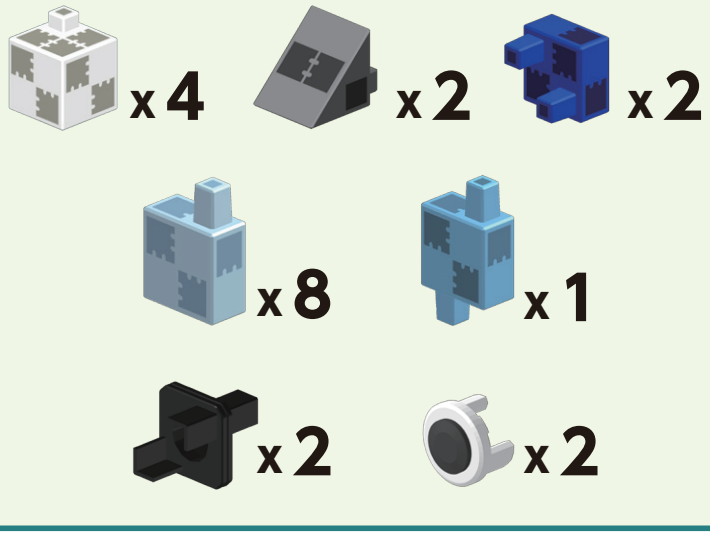
Completed Body (front)

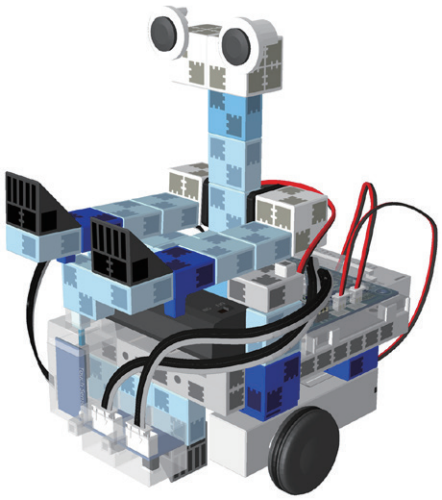
⚠ Make sure the sensor cables are on the sides of the car body.



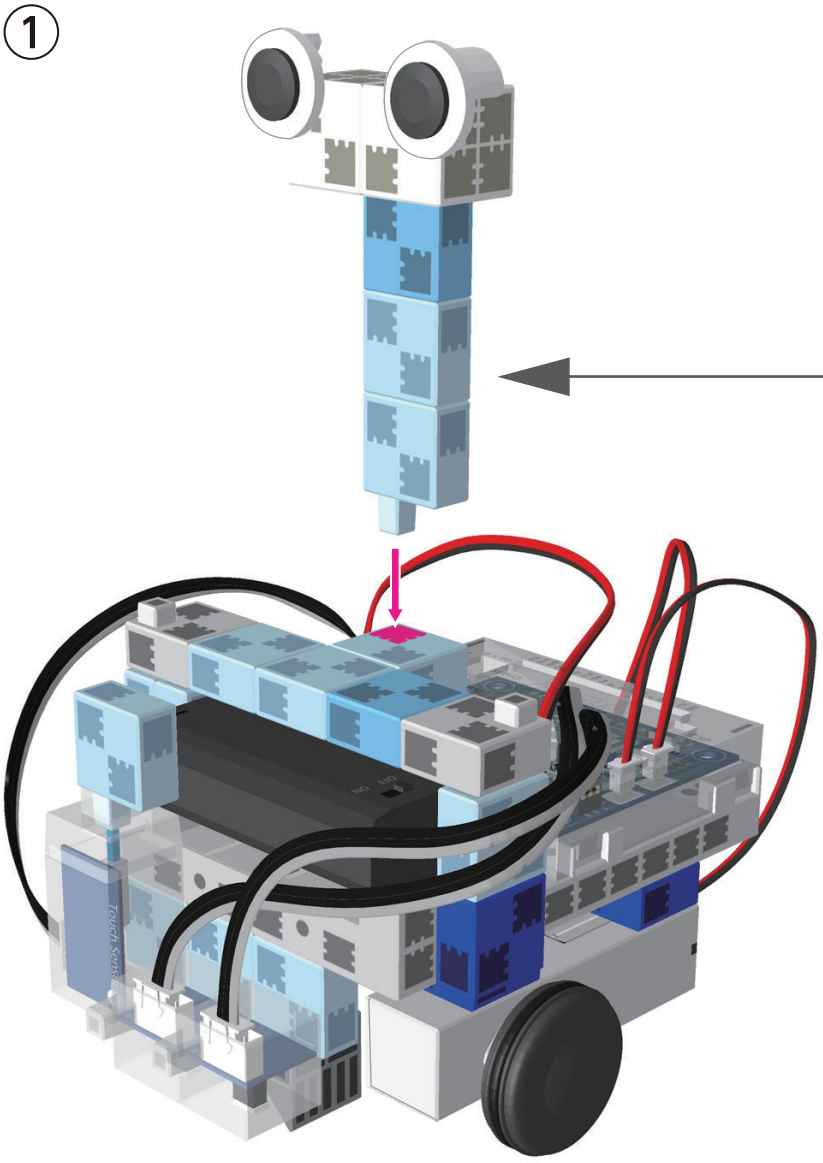
Transporter

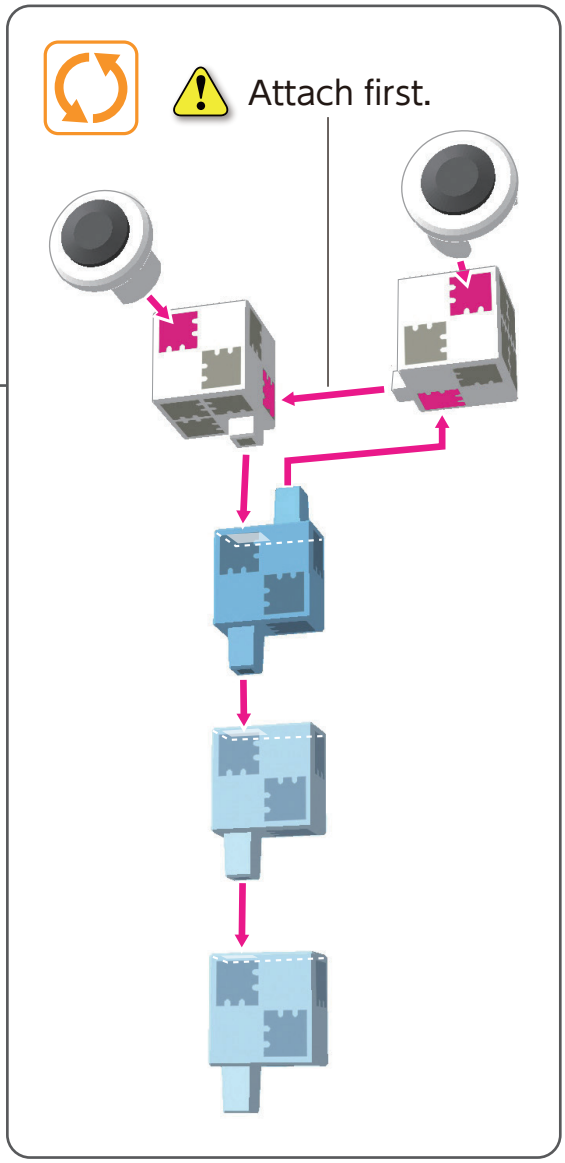
Assembling the Head and Arms





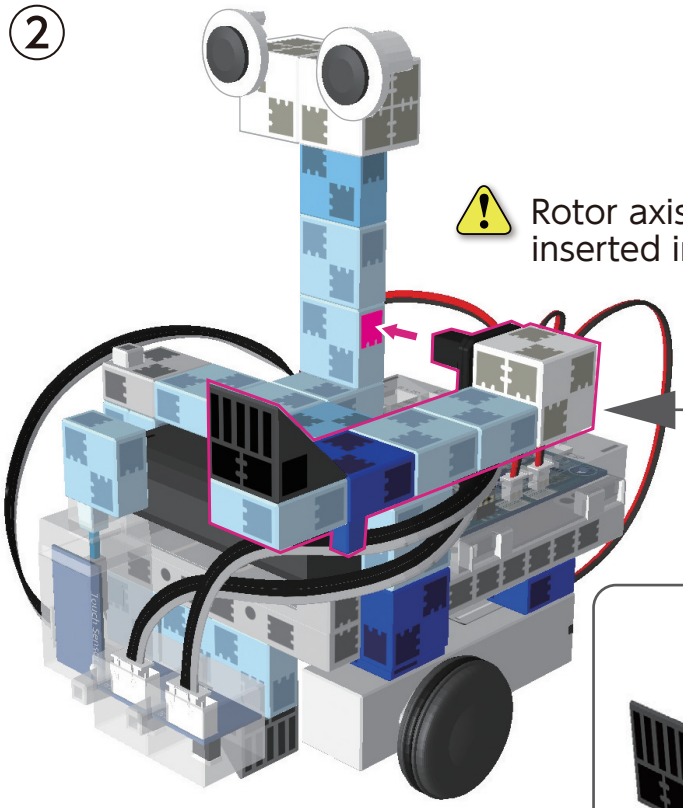
①



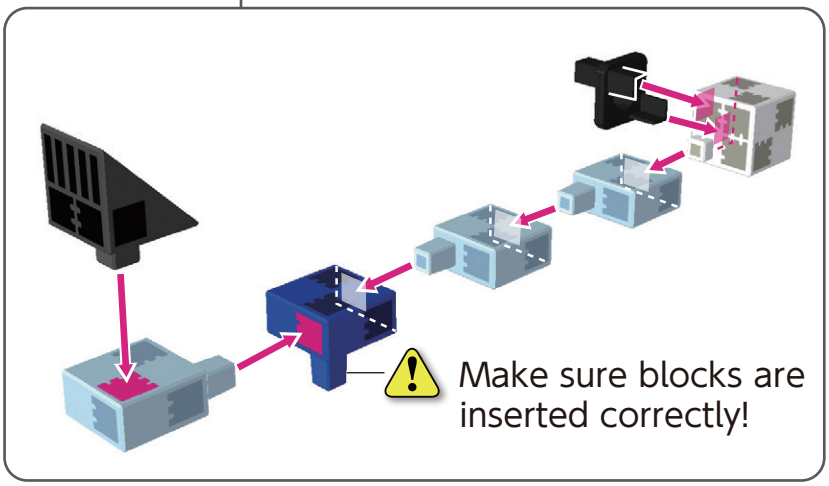


Transporter

②

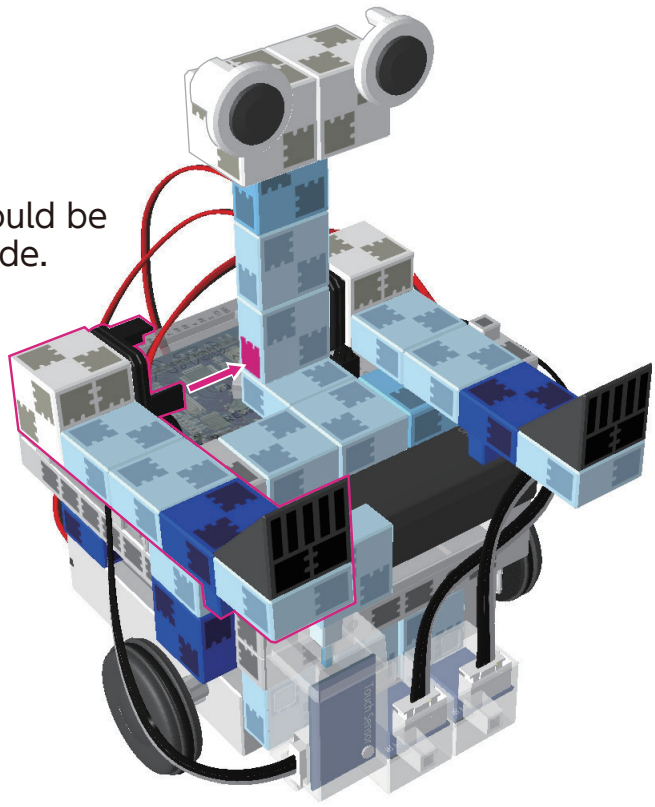


Rotor axis stud should be inserted into the side.

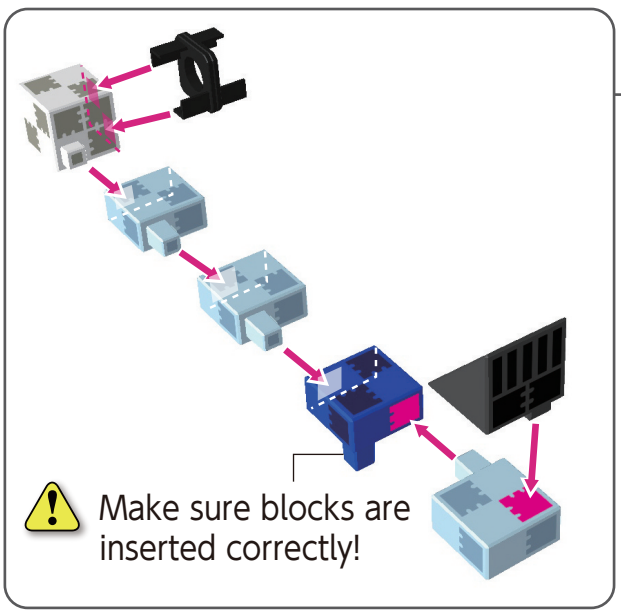


Make sure blocks are inserted correctly!

③



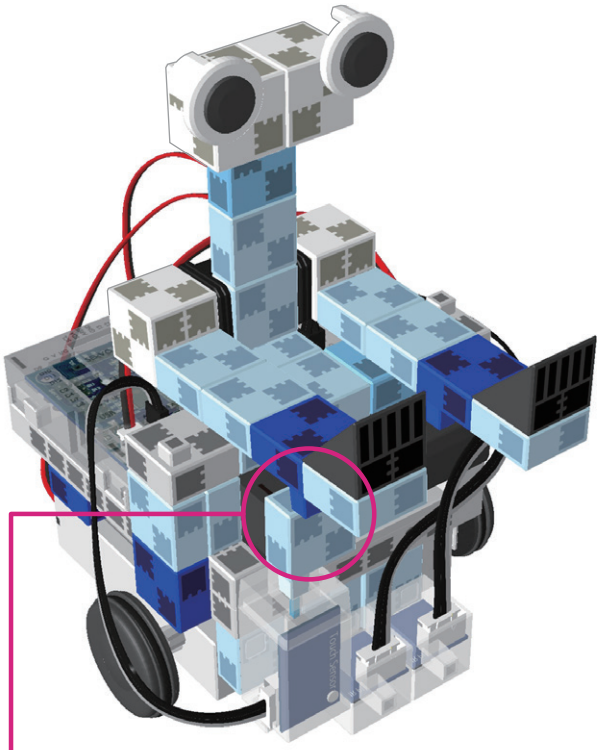
Rotor axis stud should be inserted into the side.

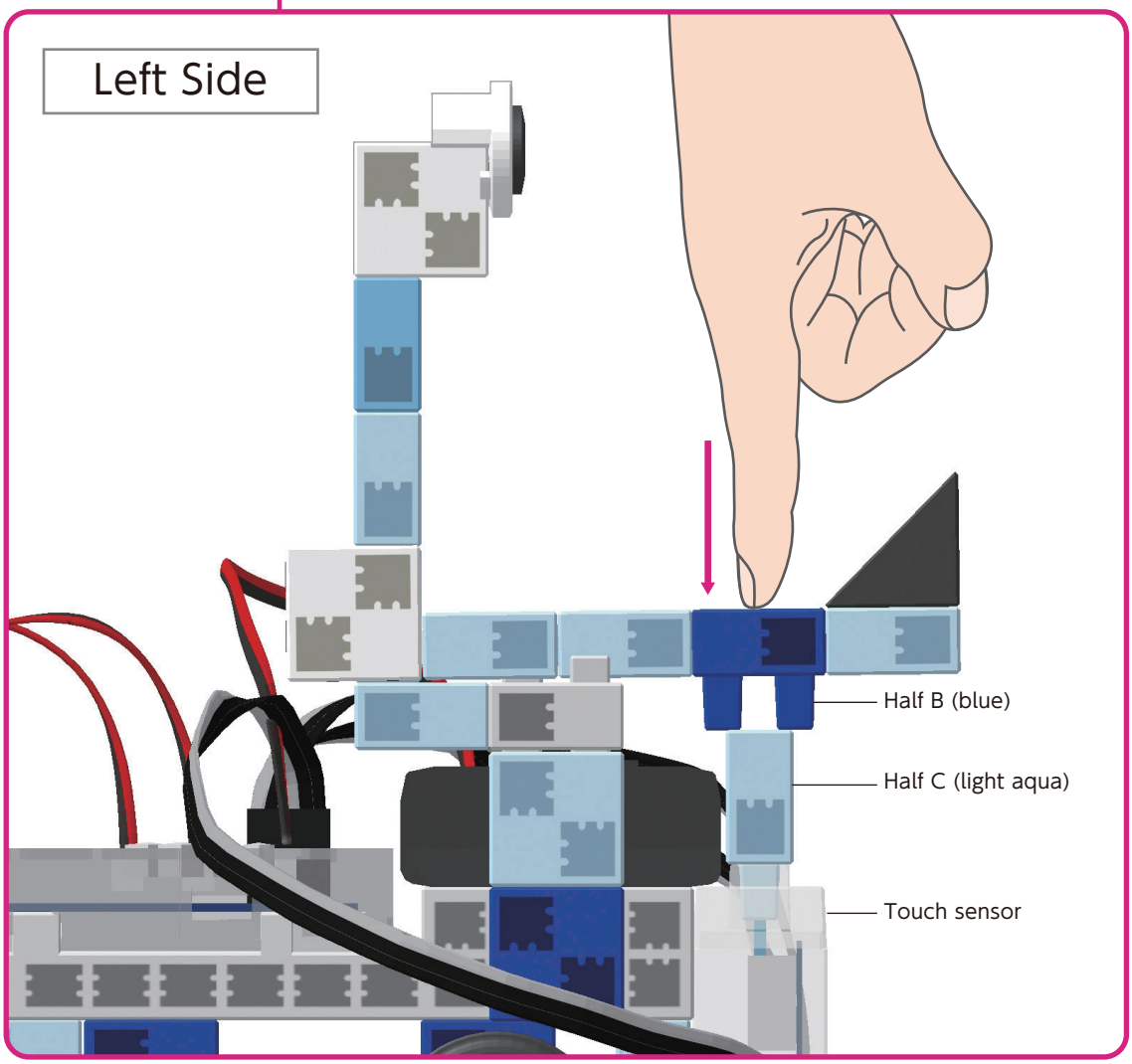


Make sure blocks are inserted correctly!

Transporter

④



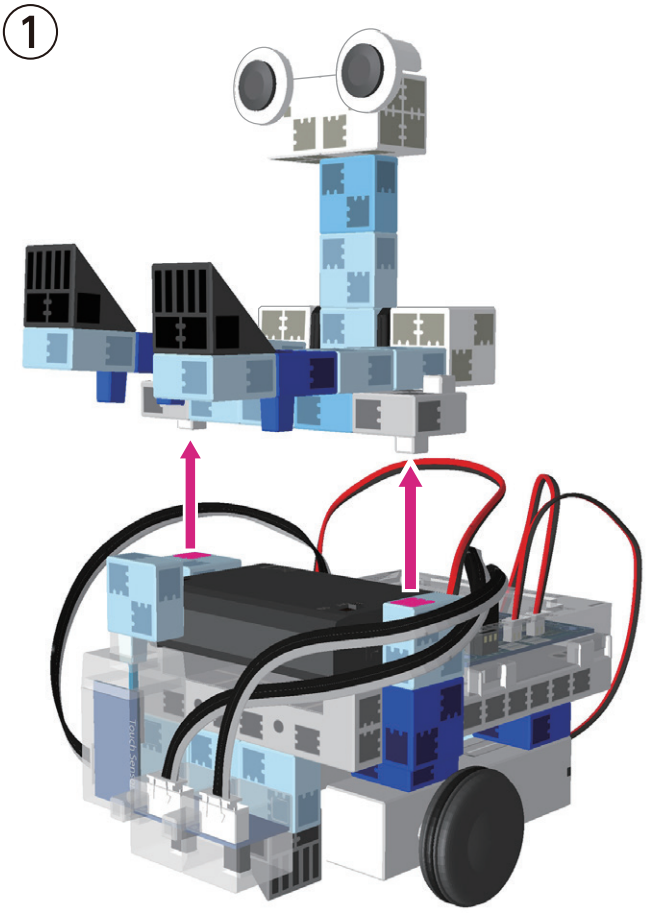


Do not insert the Half B (blue) studs into Half C (light aqua). Push the Half B (blue) block down with your finger, as illustrated, so that it is pushing down on Half C (light aqua). Half C (light aqua) should be inserted into the touch sensor.

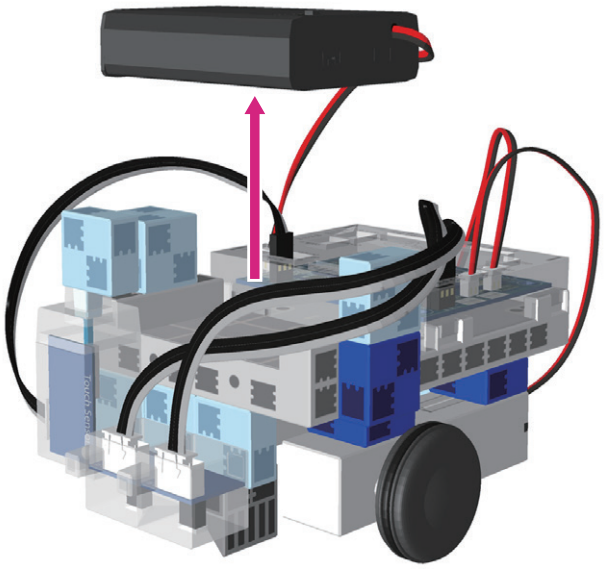
Transporter

Replacing the Batteries

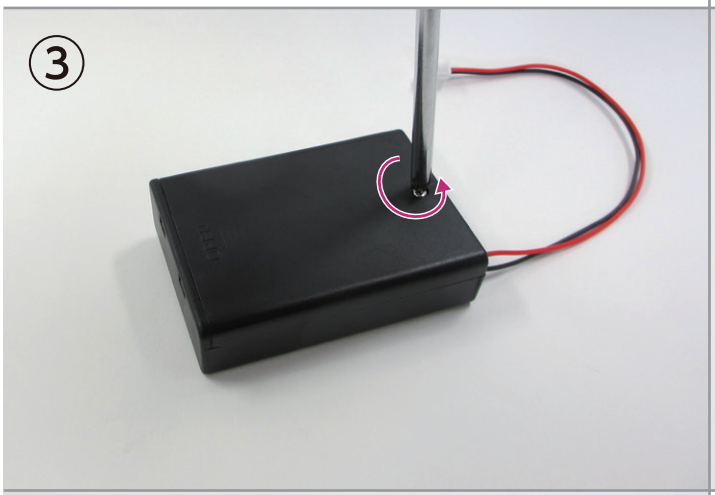
①



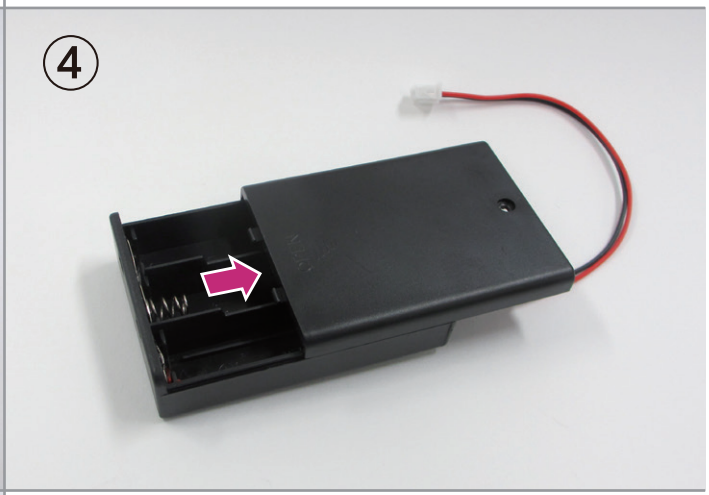
②



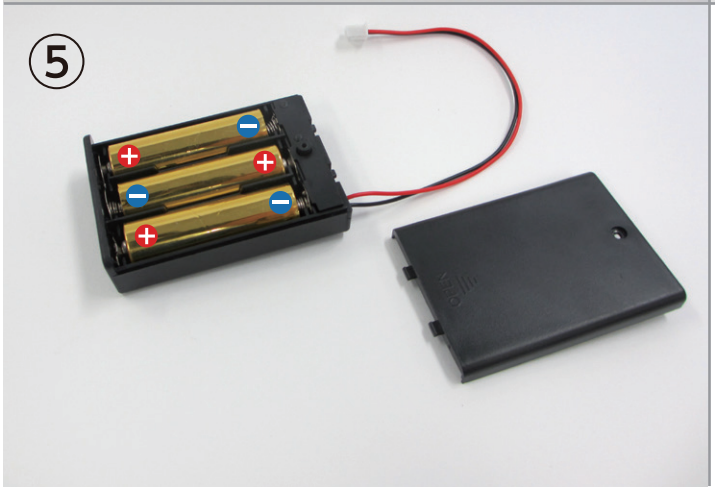
③



④



⑤



Use a screwdriver (Phillips #1) to open.

⚠ Insert batteries in the correct polarity.

Put the lid of the battery box back in place.

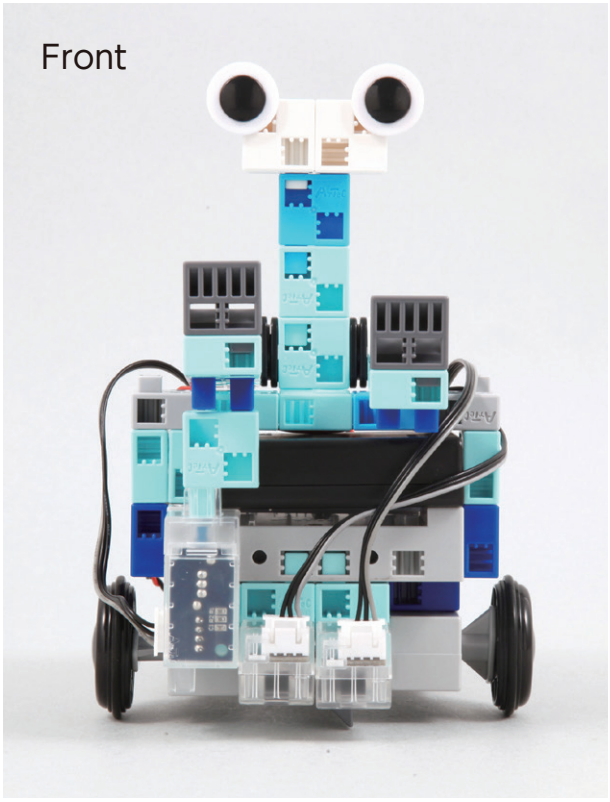
Transporter

Completed Transporter

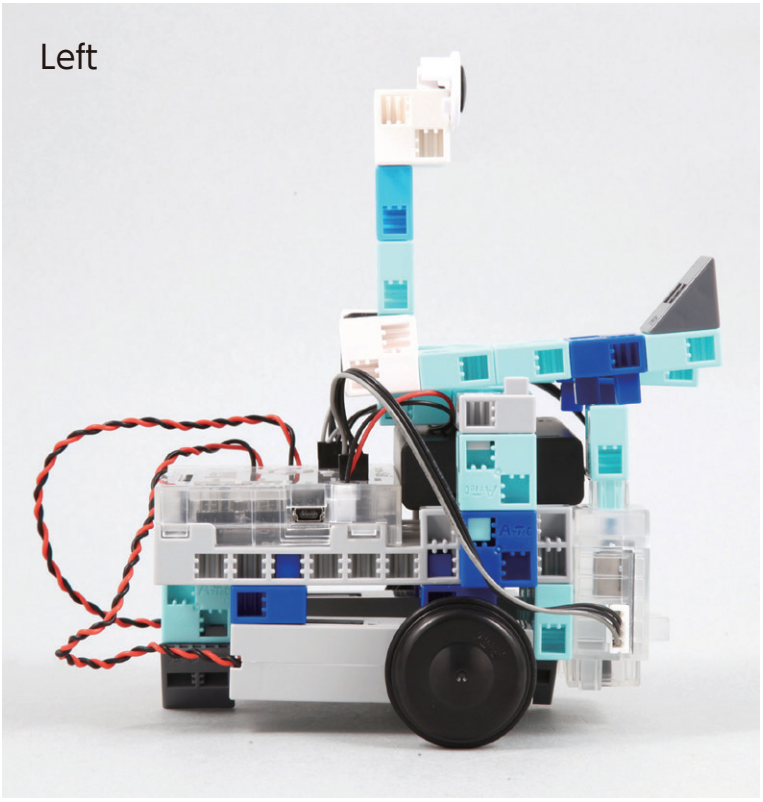
⚠ Be cautious of cables that could become entangled in the moving parts of the motor and cause the robot to disconnect. Arrange cables with caution.

⚠ Before operating your robot, check the assemby instructions again to confirm your robot has been assembled correctly.

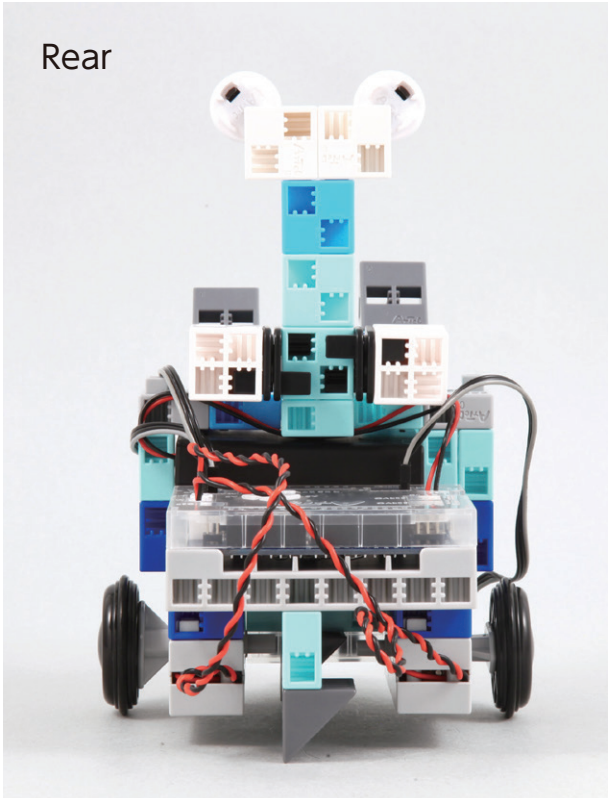
Front



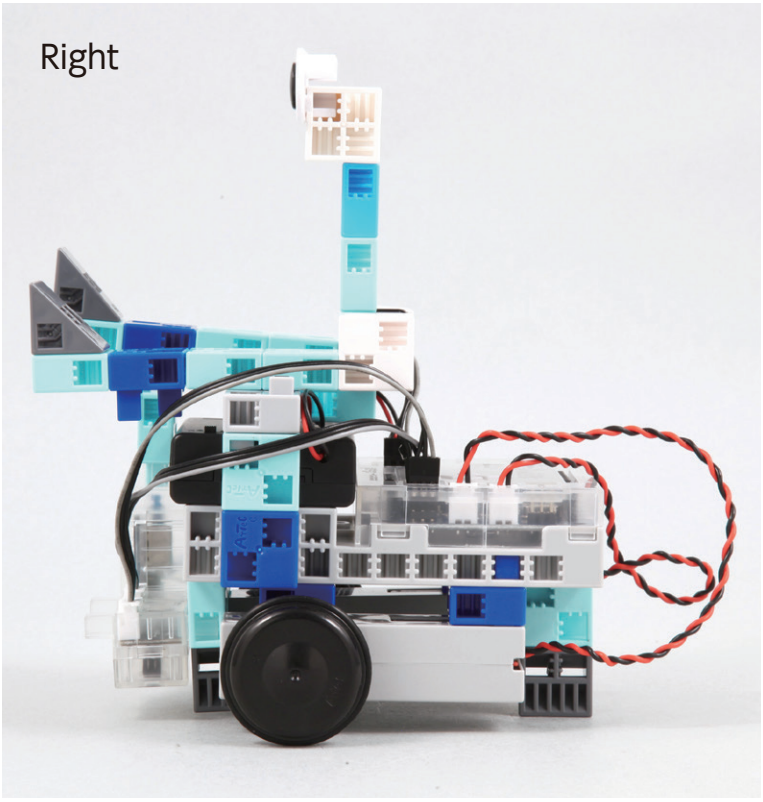
Left



Rear



Right



Transporter

Making Your Transporter Run

Install the software from the URL below to setup the **Studuino Programming Environment.**

★ Proceed to Step 1 when software installation is complete.

http://www.artec-kk.co.jp/studuino/

① Connect the USB cable to the PC and the Studuino unit.
Refer to **1.3. About Studuino** in **Studuino Programming Environment Manual** for more details.

② Download the program file **Transporter.ipd** from the URL below in the **ArtecRobo** section.

http://www.artec-kk.co.jp/artecrobo/

③ Open the downloaded file.

④ Transfer the program to the Studuino unit by clicking the Transfer button .

⑤ Remove the USB cable from the Studuino unit.

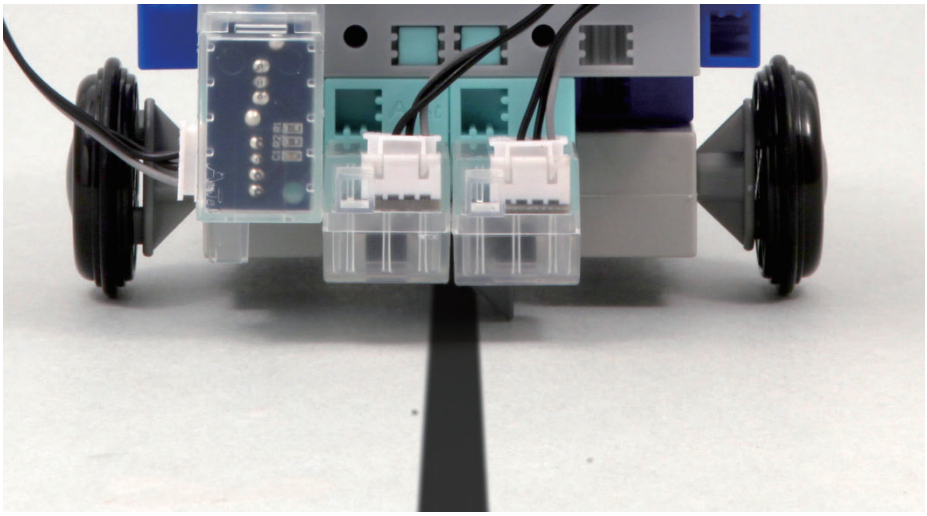
Transporter

Making Your Transporter Run

⑥ On the last page of the instructions there is an A4 size printout of a run course for your robot.

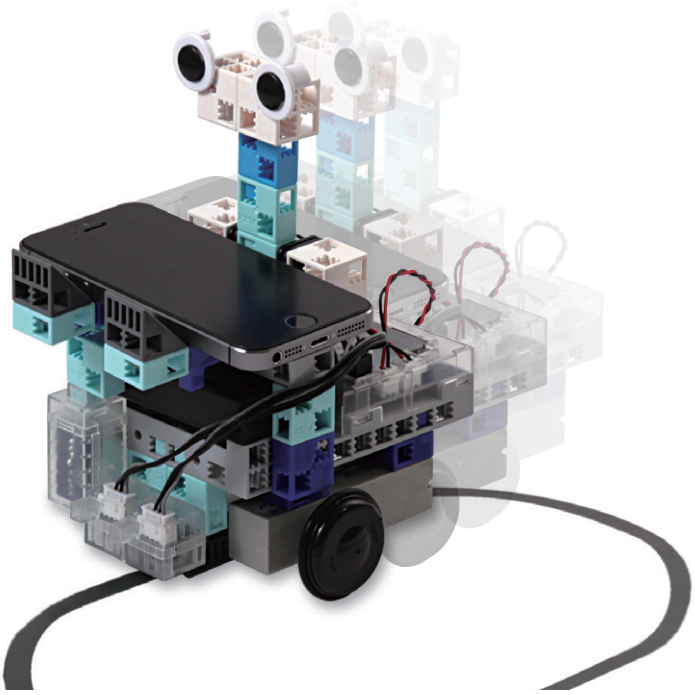
If you cannot print out the course, you can draw your own. Draw the lines of the run course using a thick, black marker and white paper.
The thickness of the lines should be between 5 mm and 10 mm.
Your robot cannot make sharp turns.

⑦ Place the robot onto the course where the left and right reflective infrared sensor can detect the course line.



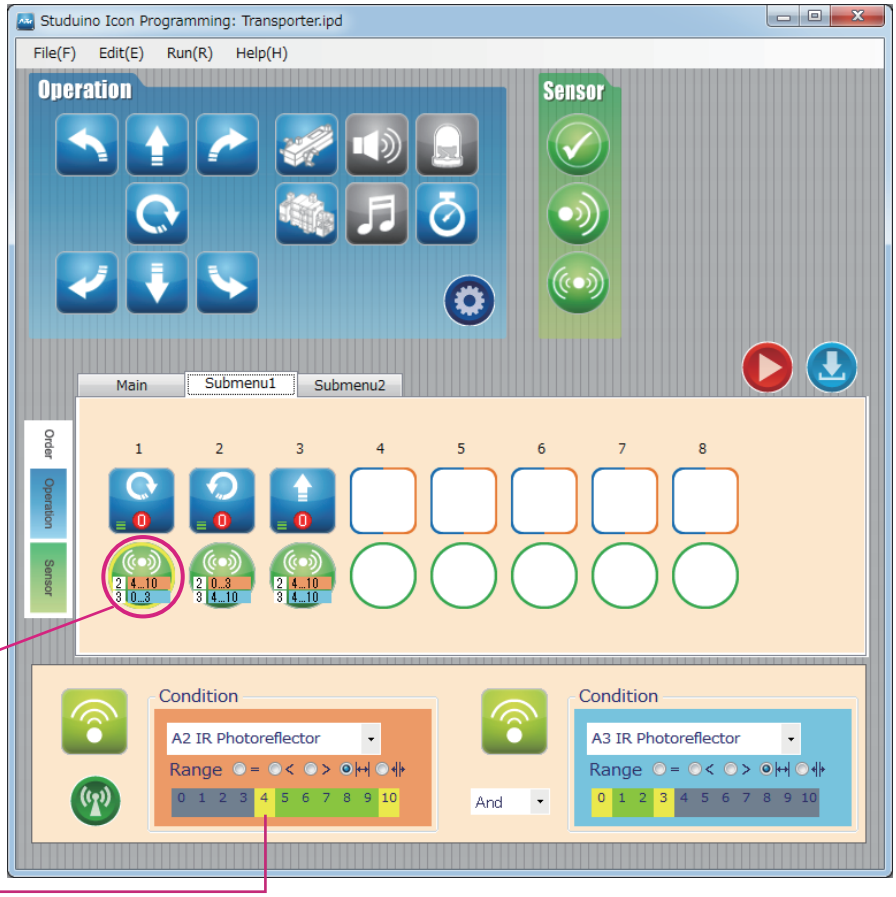
⑧ Turn the switch on the battery box to ON.

⑨ When the touch sensor is on, the robot will detect objects placed in its arms and run along the track.



Sensor Calibration

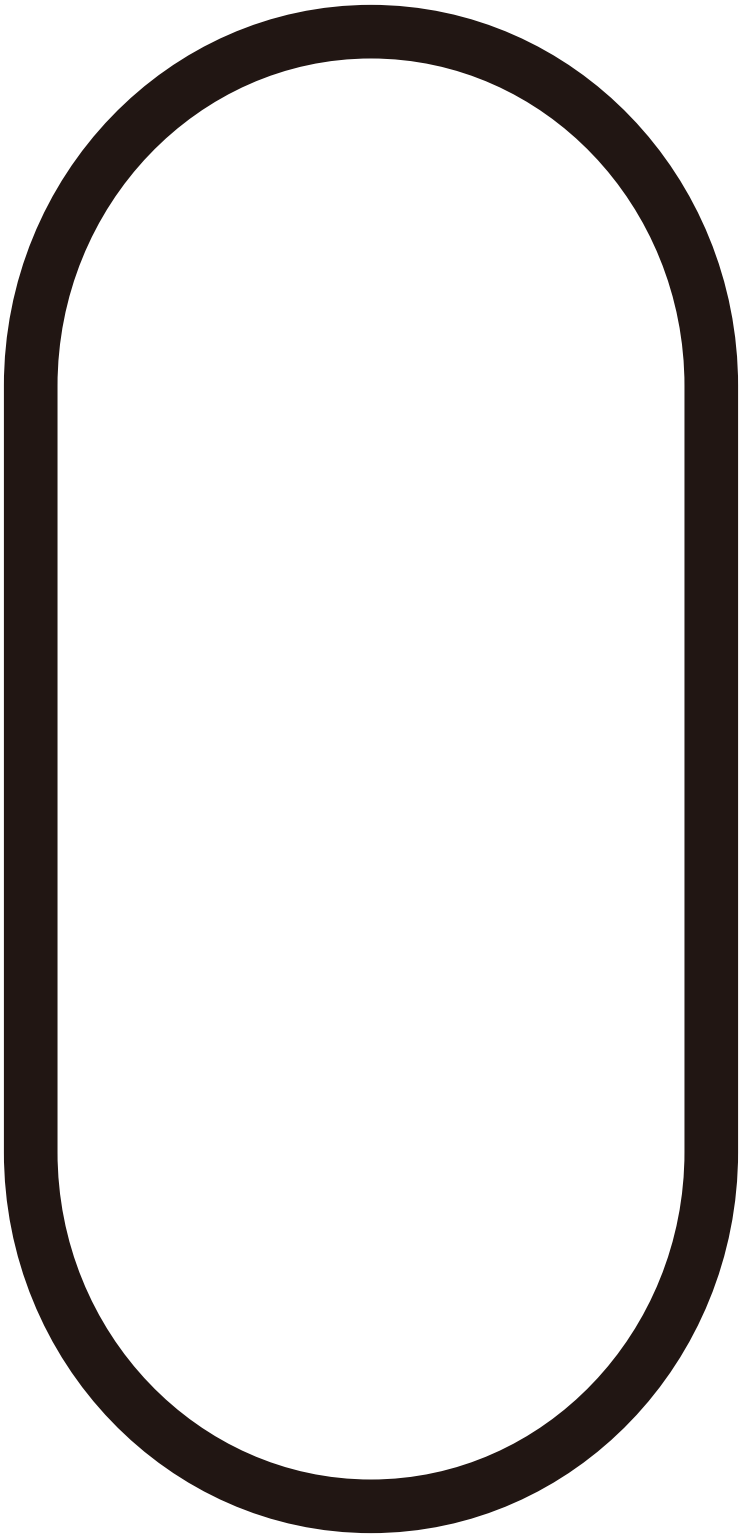
Some sensors may not function properly after you run the program for the first time. If the sensors are malfunctioning, calibrate the sensor settings.



Click the sensor icon in the box and you can adjust the range settings in the condition box below.

Drag the mouse left or right to adjust the range settings.

Refer to the **Condition Icon** sections in **4.4. The Attribute Field** of the **Studuino Programming Environment Manual** for more details.



Transporter Robot Course