Making a Collision Detection Robot!

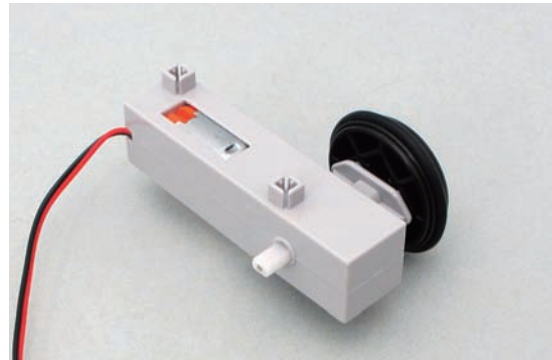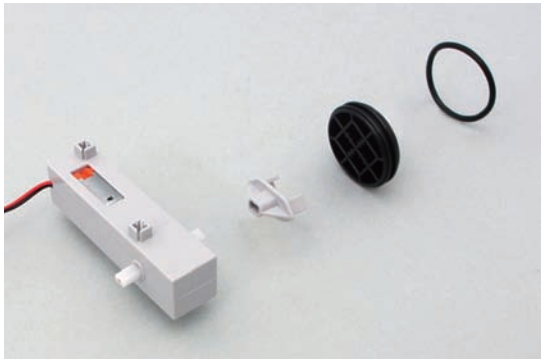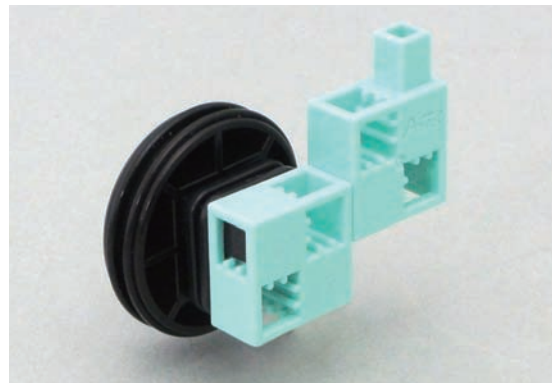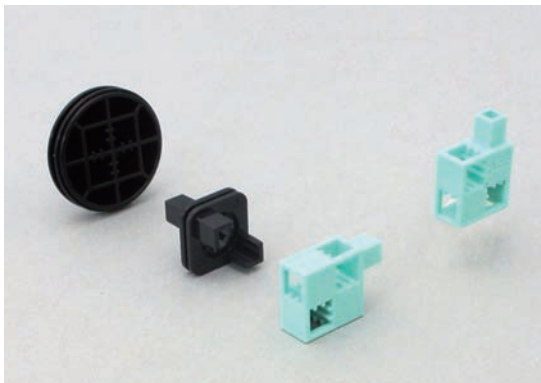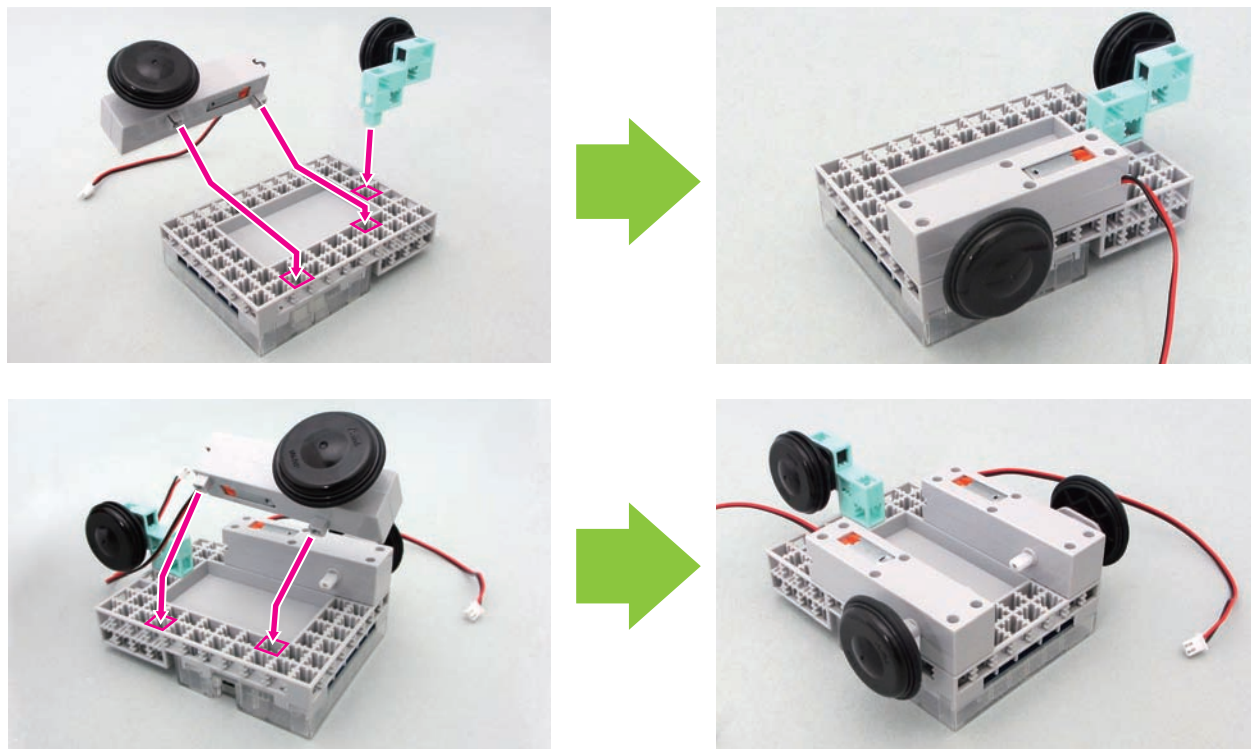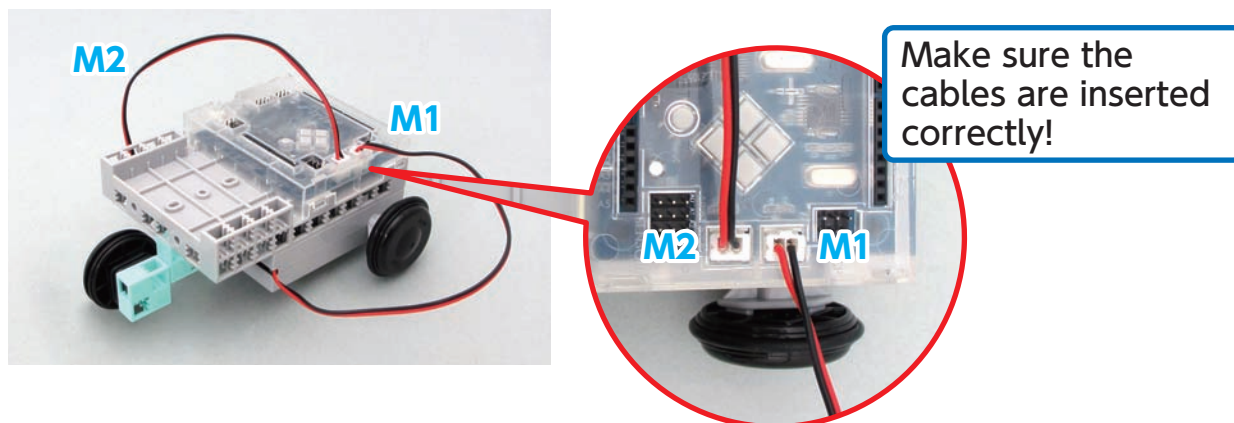① Assemble the two DC motors and wheels.
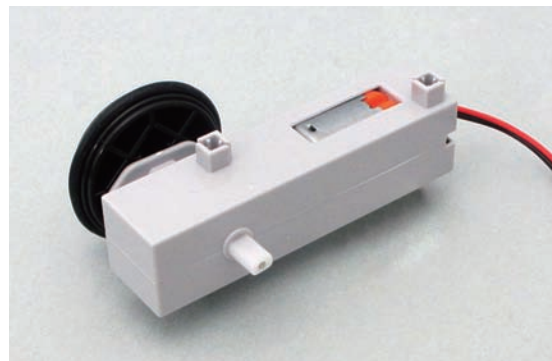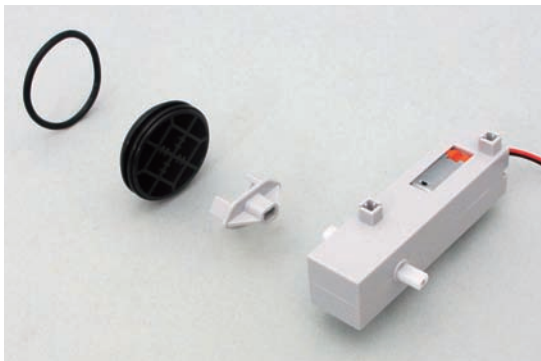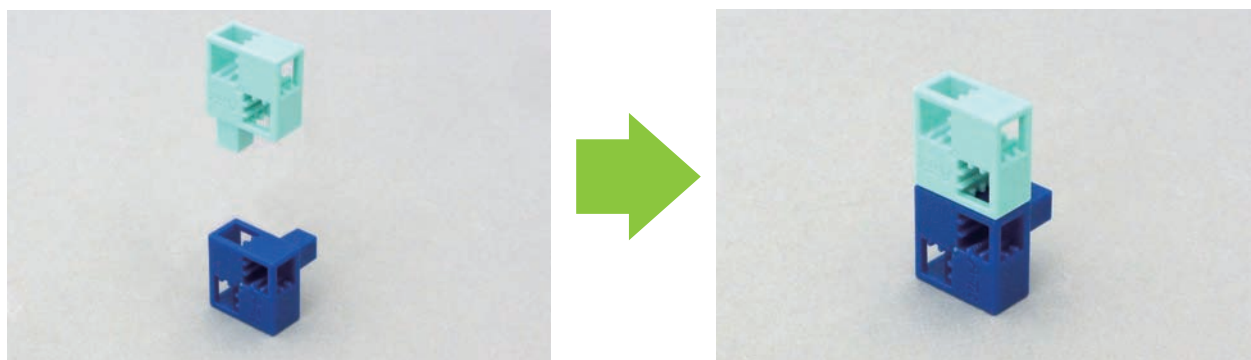

② Attach another wheel to the blocks as shown.

③ Add the DC motor to the part ②.

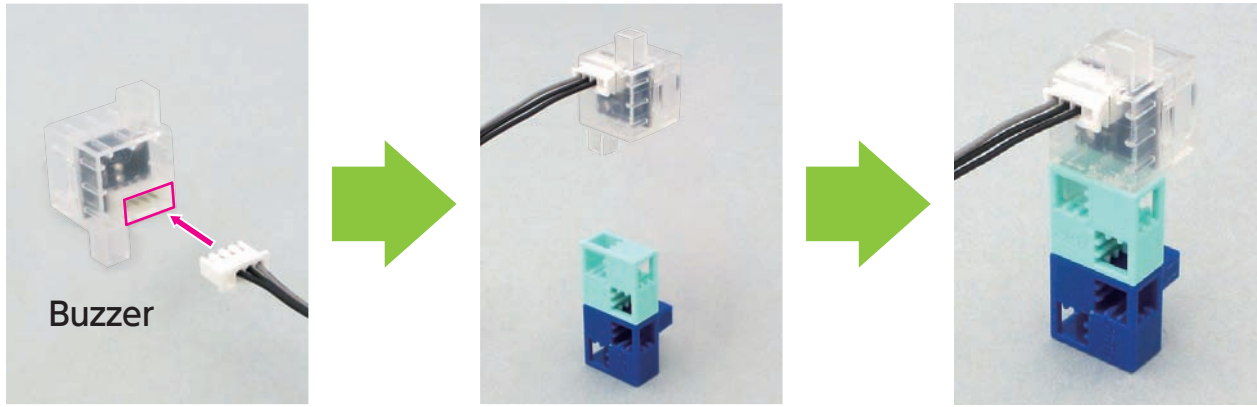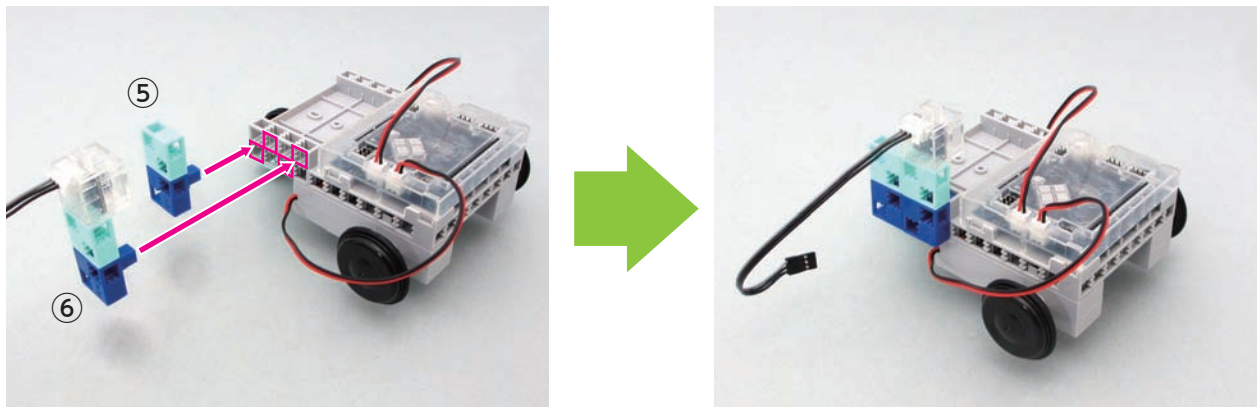④ Insert the cables for the DC motors **M1** and **M2** in to the ports shown on the circuit board.

Make sure the cables are inserted correctly!
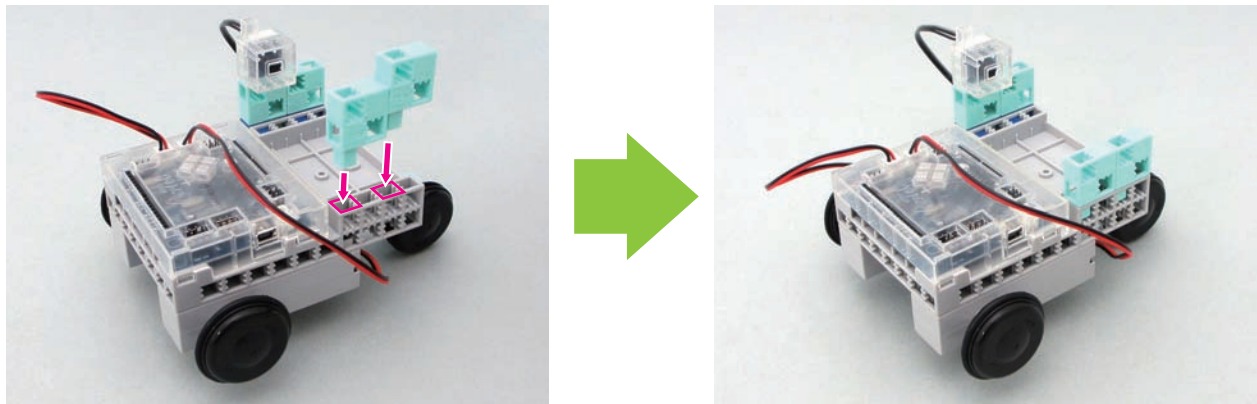
⑤ Make the two sets of the blocks as shown.

⑥ Connect the sensor cable to the buzzer. Add the buzzer to the part ⑤.
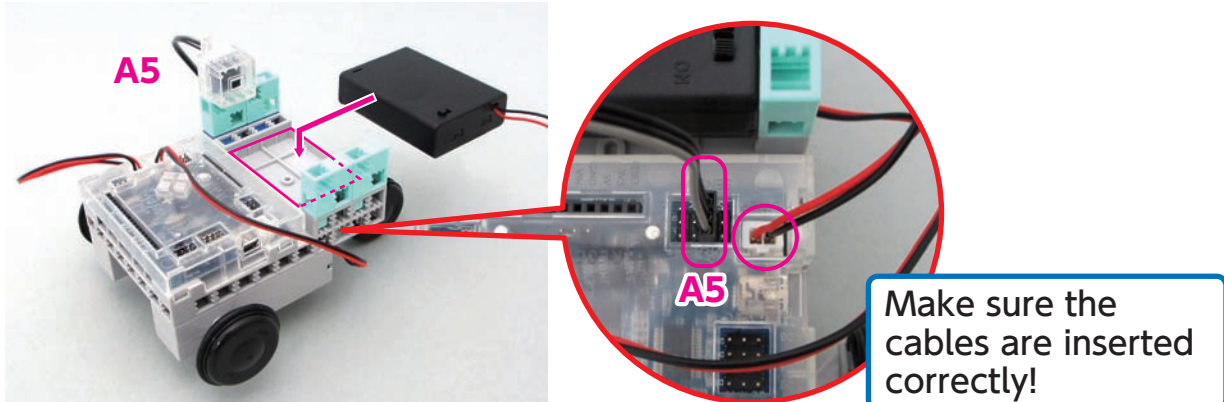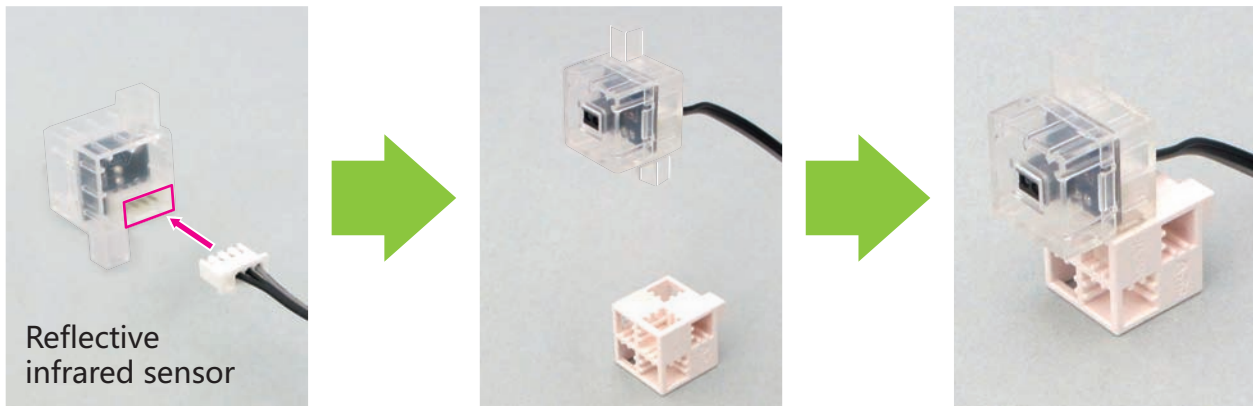

Buzzer

⑦ Add part ⑤ and ⑥ to the base.
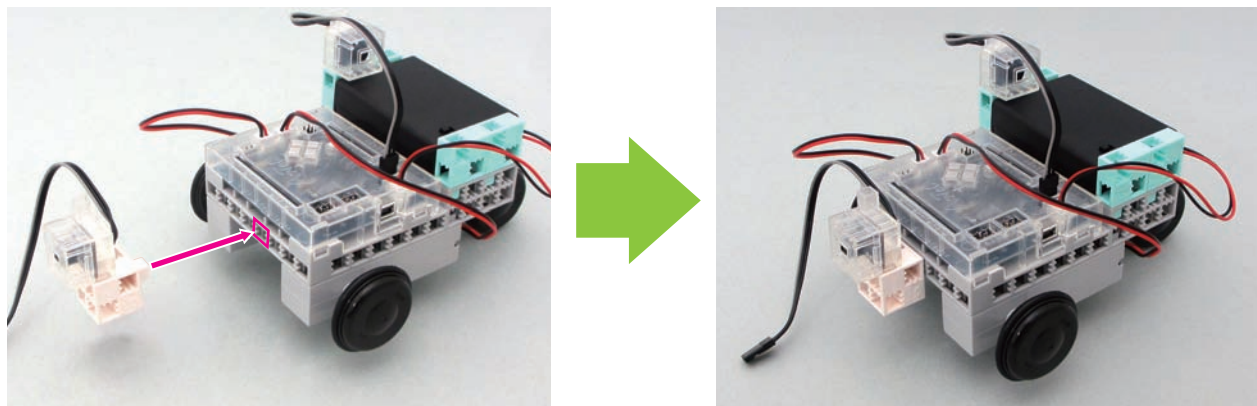

⑤
⑥

⑧ Push the blocks into the base as shown.

⑨ Place the battery box on the base. Connect the battery cable, and the sensor cable to **A5** on the circuit board.

A5

A5

Make sure the cables are inserted correctly!

⑩ Connect the sensor cable to the reflective infrared sensor. Add the block as shown.
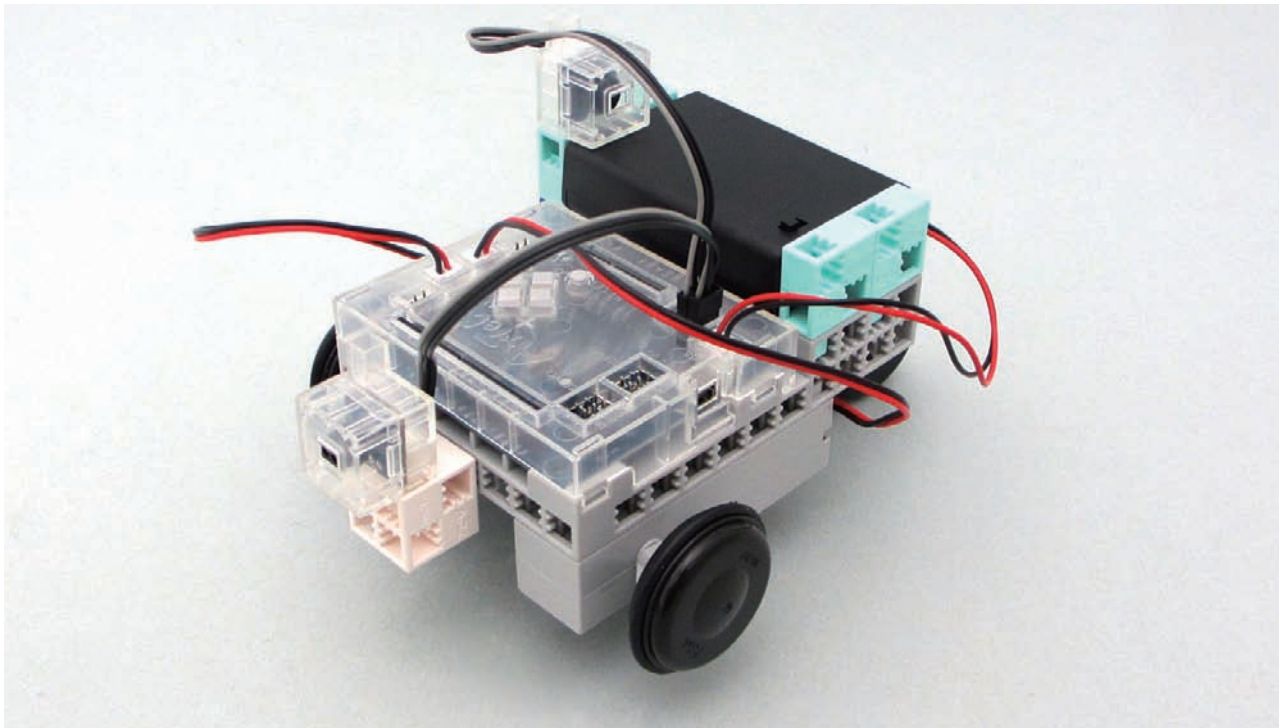

Reflective
infrared sensor

⑪ Push the part ⑩ into the base as shown.

⑫ Connect the reflective infrared sensor to **A4** on the circuit board.

A4

A4

Make sure the
cables are inserted
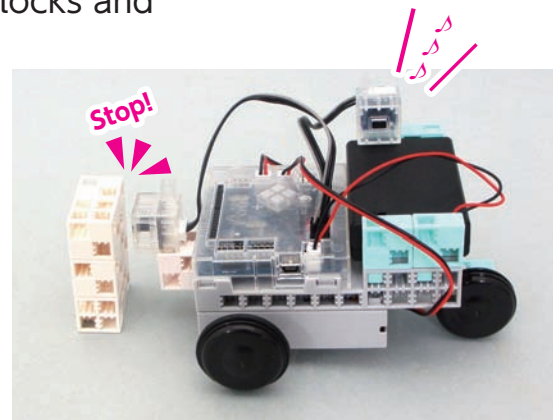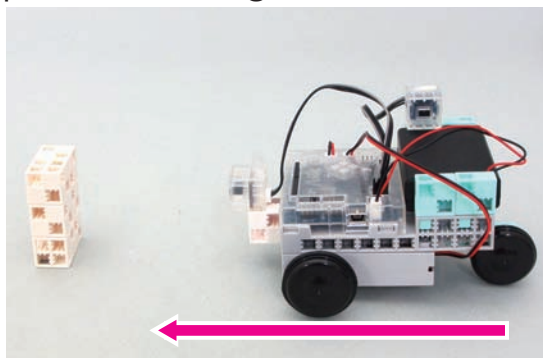correctly!
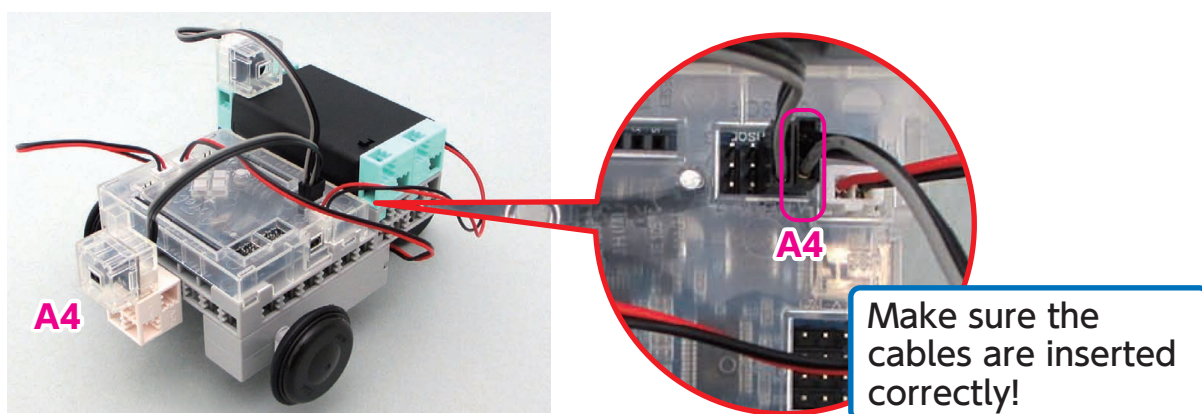
⑬ Your Collision Detection Robot is finished.

Once you're finished, use a USB cable to connect your board to your PC!

⑭ After sending the program to your Studuino, check that your robot is operating correctly by turning it on.

★ Make sure the battery box switch is OFF before transferring the program. Otherwise the robot will start running right after the data transfer is completed.
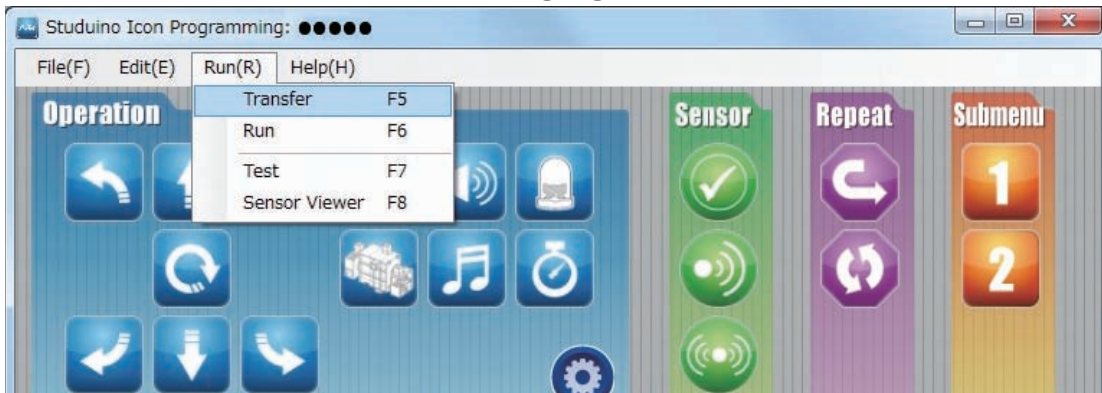
Test your robot if it runs to the wall made of blocks and stops before hitting it.

Having trouble?

· Check to make sure you've assembled your robot correctly.

· Make sure that the cables have been properly inserted.

· Read **6. Using Servomotors** in the **Studuino Icon Programming Environment Guide**
  (download from http://www.artec-kk.co.jp/robotist/) for instructions on
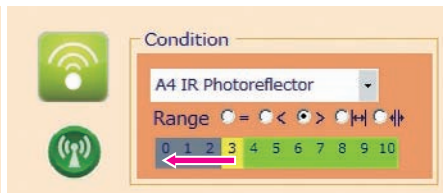 how to calibrate your servomotor.

Being in a place with too much light can interfere with the light sensors.

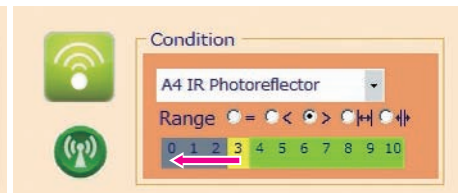· If your robot hits the obstacle, change the sensor value to a smaller number.
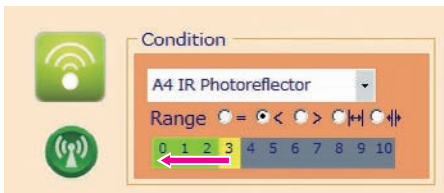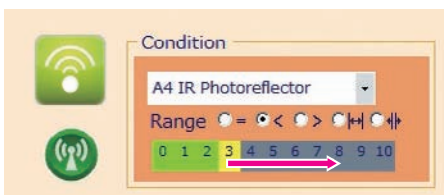
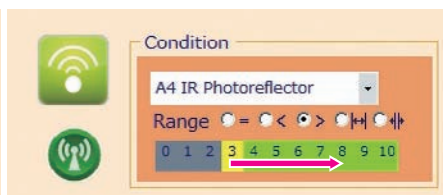1st   2st   3st

· If your robot does not run smoothly, change the sensor value to a larger number.
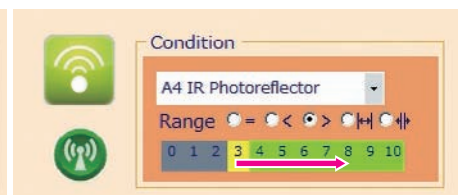
1st   2st   3st

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