

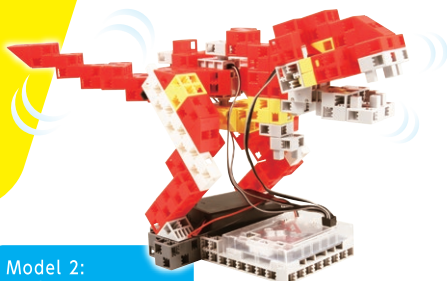
ArTec® Robo

T. REX

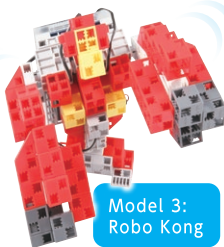
Download software and
guides from our homepage!

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

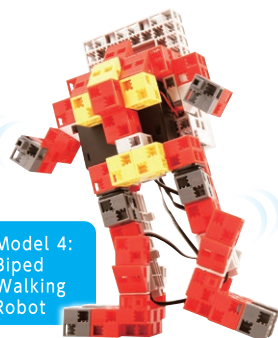
Get instructions for
even more robots!



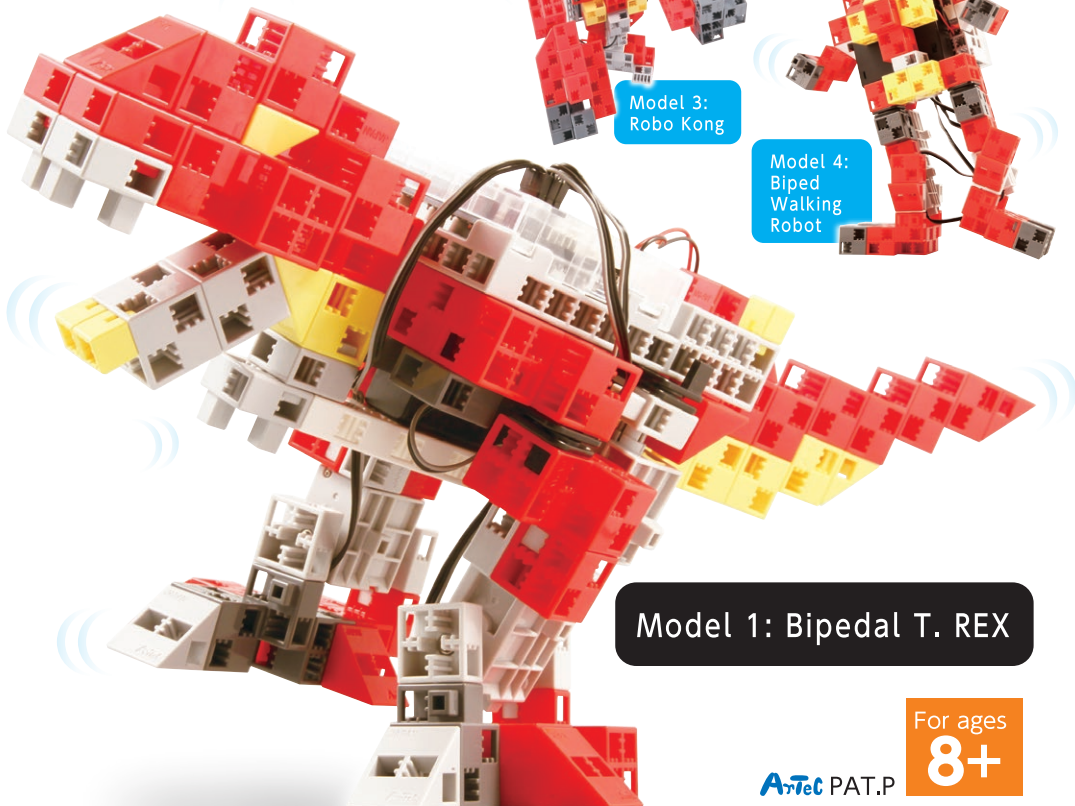
Model 2:
Real Action T. REX



Model 3:
Robo Kong



Model 4:
Biped
Walking
Robot



Model 1: Bipedal T. REX

For ages

8+

ArTec PAT.P

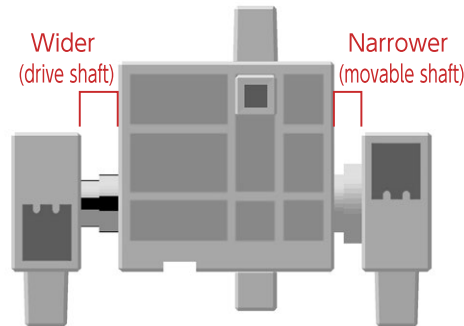
Handling the Servomotor

1 Orientation

The photo to the right shows the servomotor facing you. There are two shafts, the one with the wider space is the drive shaft and the one with the narrower space is the movable shaft.

★ When turning the drive shaft by hand, do so very slowly and gently.

Excessive pressure when turning may cause damage to the servomotor.



2 Calibration and Setting Connector Numbers

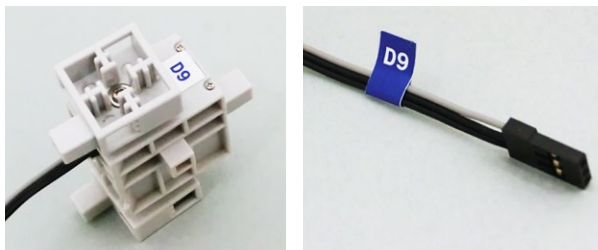
Before building your robot, read **6. Using Servomotors** in the **Studuino Icon Programming Environment Guide** (download from <http://www.artec-kk.co.jp/robotist/>) for instructions on how to calibrate your servomotor.

Building your robot without calibrating your servomotor may cause damage or improper functionality.

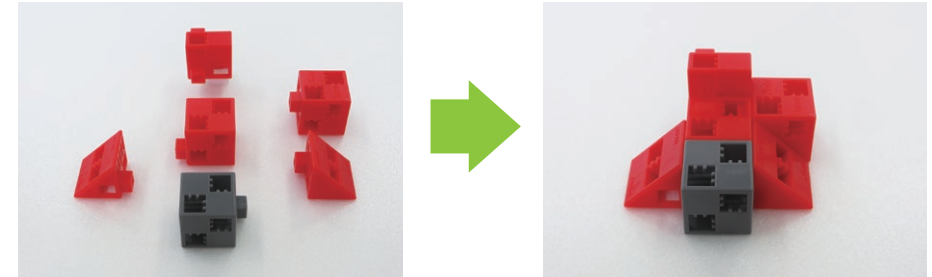
★ Do not change the connector or the servomotor after calibration.
Servomotor calibrations are unique to each servomotor.

Attaching Number Stickers

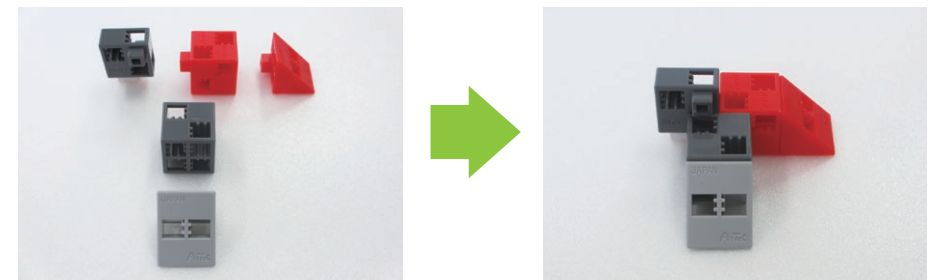
After calibration, we recommend putting a sticker on the connector used for the servomotor so it can be easily identified.



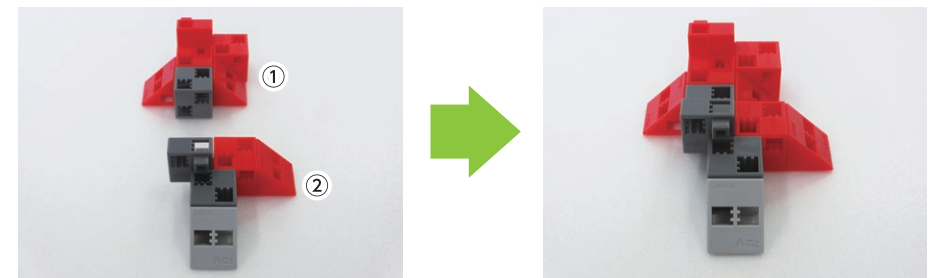
① Assemble the blocks as shown in the picture.



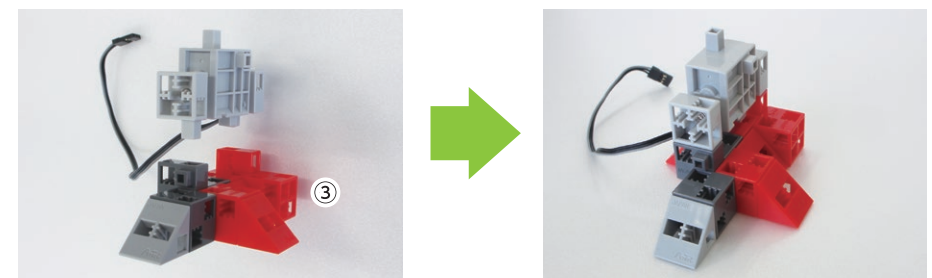
② Assemble the blocks as shown in the picture.



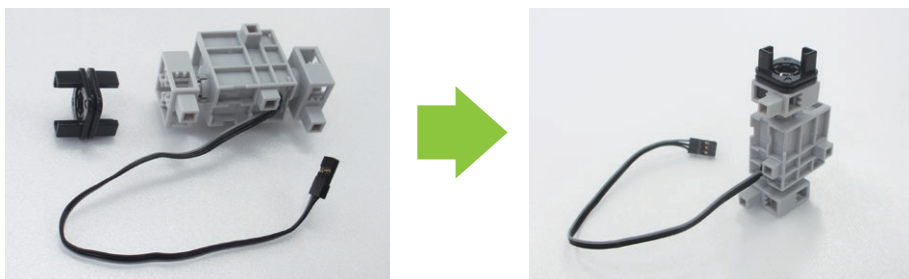
③ Assemble parts ② and ① as shown in the picture.



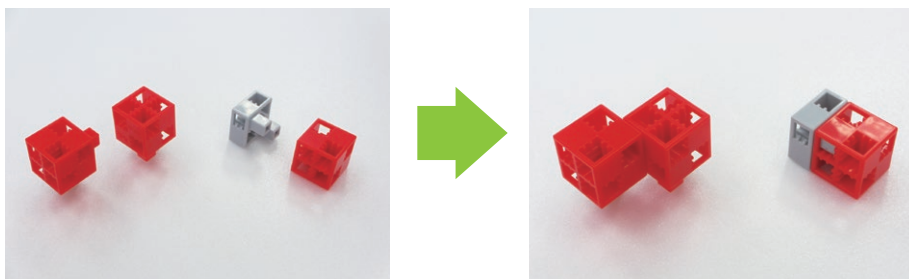
④ Add a servomotor to part ③ as shown in the picture.



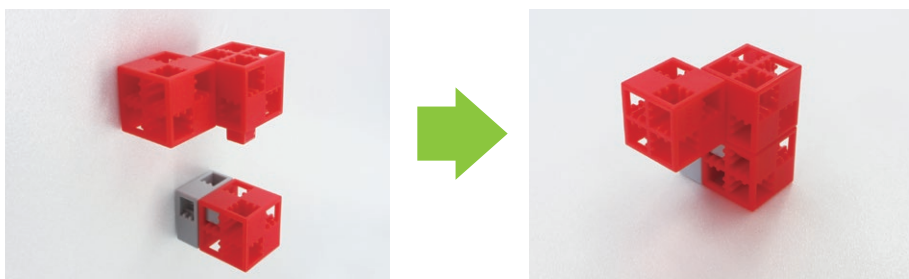
⑤ Add the block shown in the picture to a servomotor.



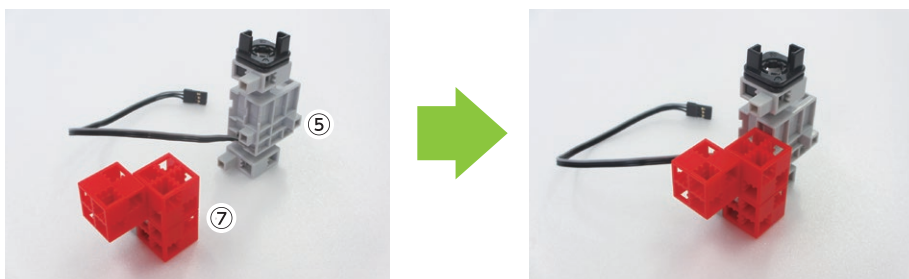
⑥ Assemble the blocks as shown in the picture.



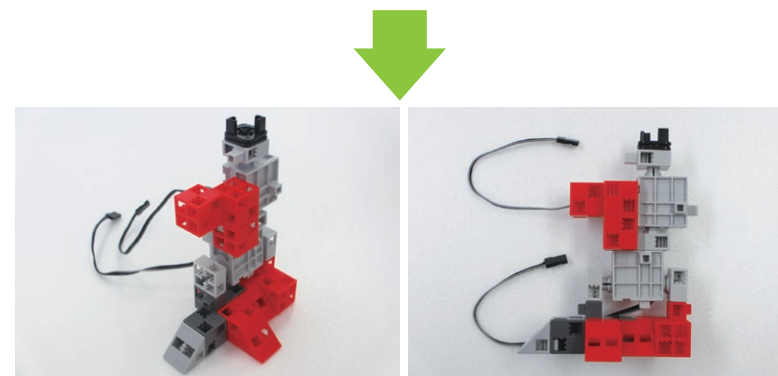
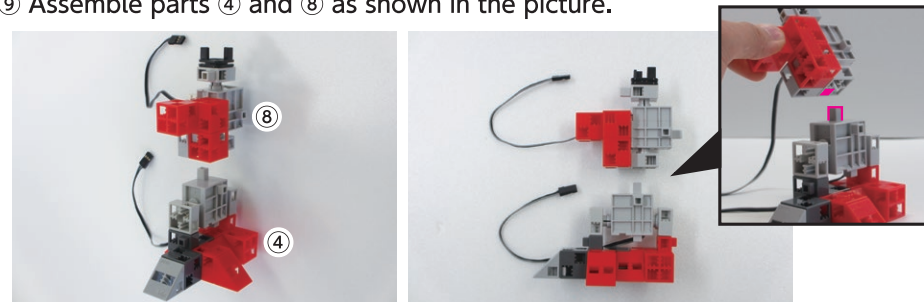
⑦ Assemble the blocks from step ⑥ as shown in the picture.



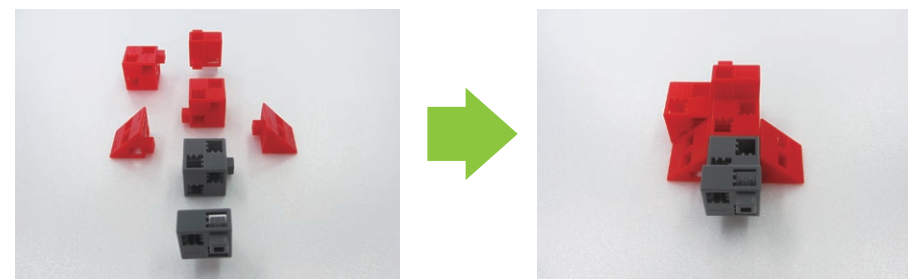
⑧ Assemble parts ⑤ and ⑦ as shown in the picture.



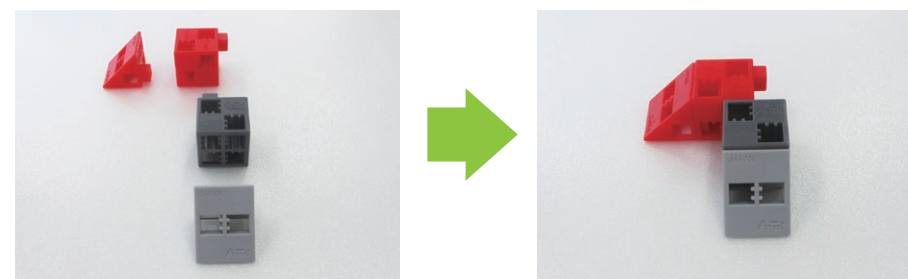
⑨ Assemble parts ④ and ⑧ as shown in the picture.



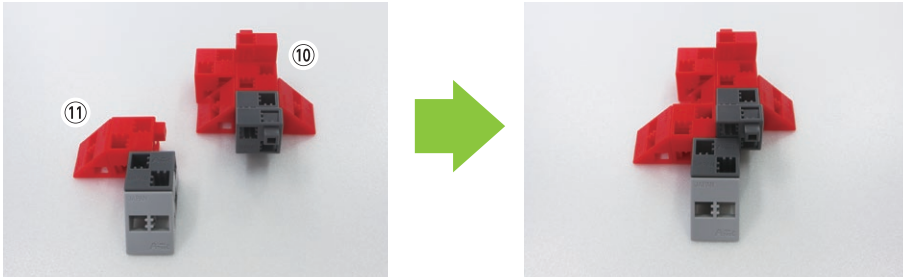
⑩ Assemble the blocks as shown in the picture.



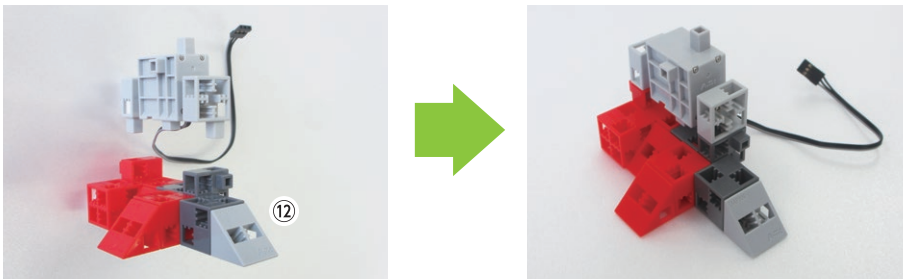
⑪ Assemble the blocks as shown in the picture.



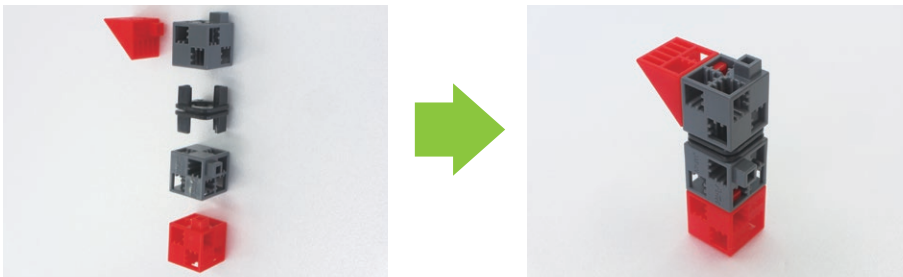
⑫ Assemble parts ⑩ and ⑪ as shown in the picture.



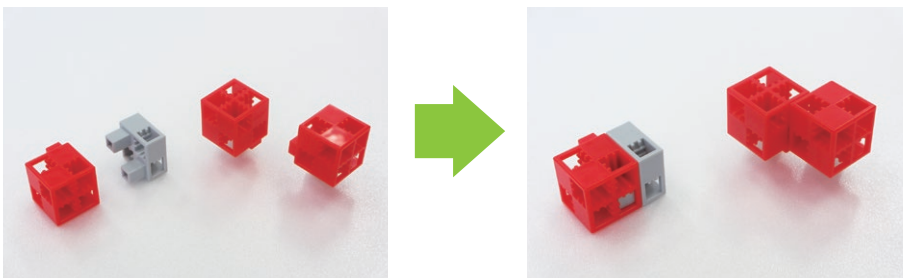
⑬ Add a servomotor to part ⑫ as shown in the picture.



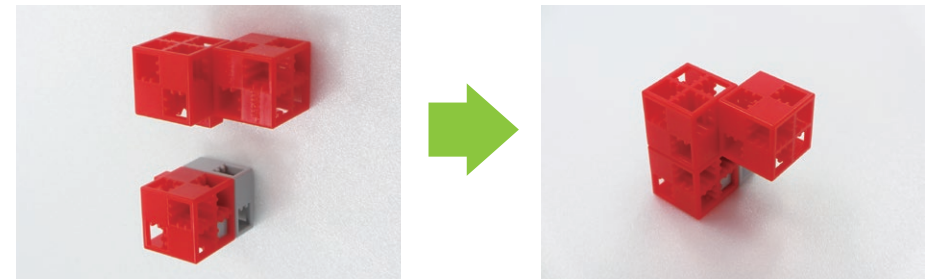
⑭ Assemble the blocks as shown in the picture.



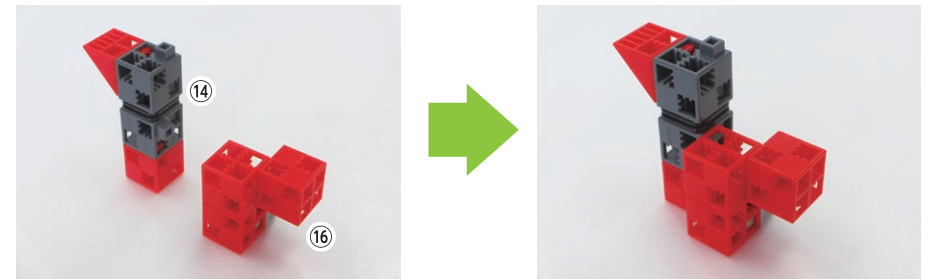
⑮ Assemble the blocks as shown in the picture.



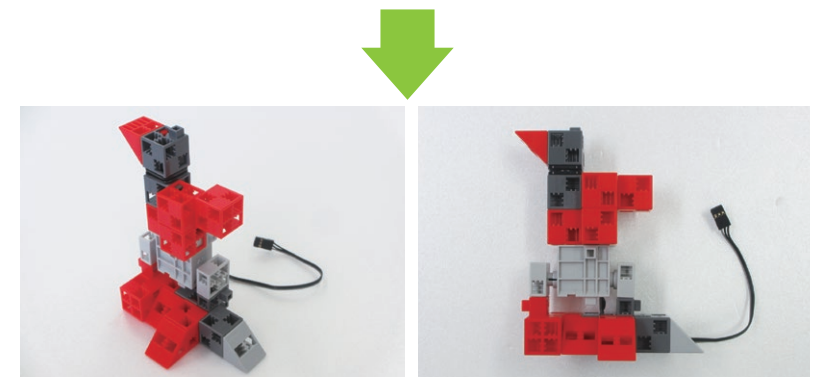
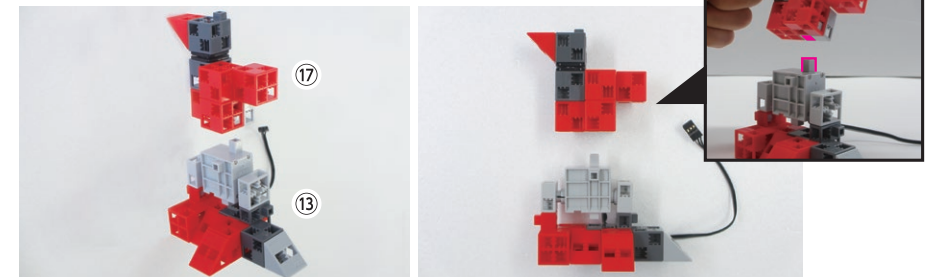
⑯ Assemble the blocks from step ⑮ as shown in the picture.



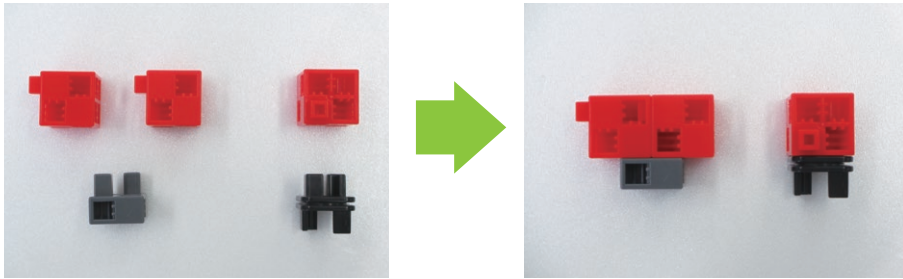
⑰ Assemble parts ⑭ and ⑯ as shown in the picture.



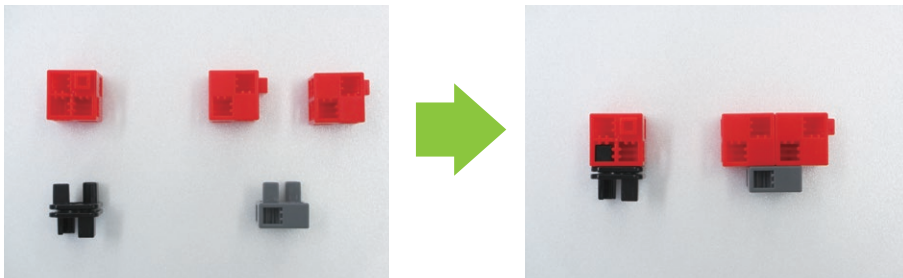
⑱ Assemble parts ⑬ and ⑰ as shown in the picture.



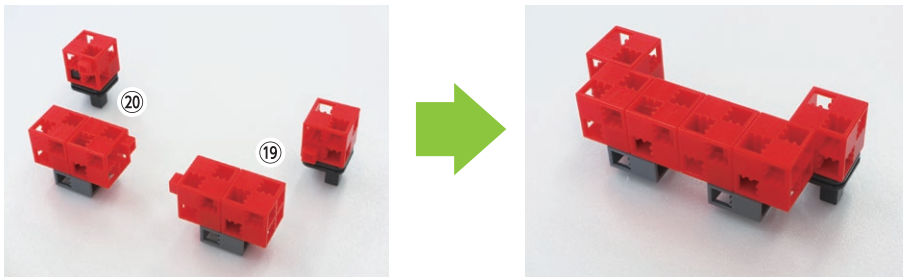
⑲ Assemble the blocks as shown in the picture.



⑳ Assemble the blocks as shown in the picture.



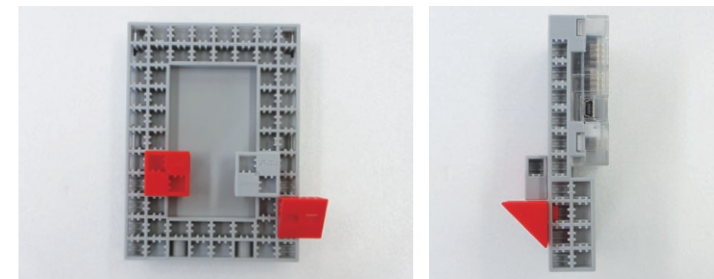
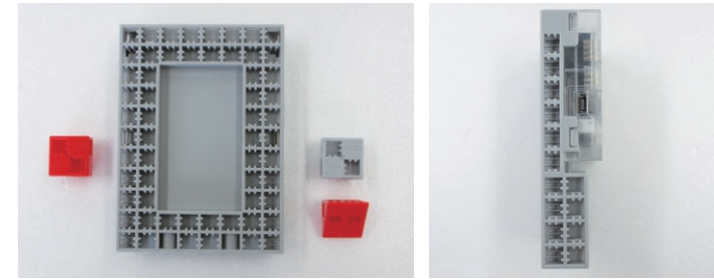
㉑ Assemble parts ⑲ and ㉒ as shown in the picture.



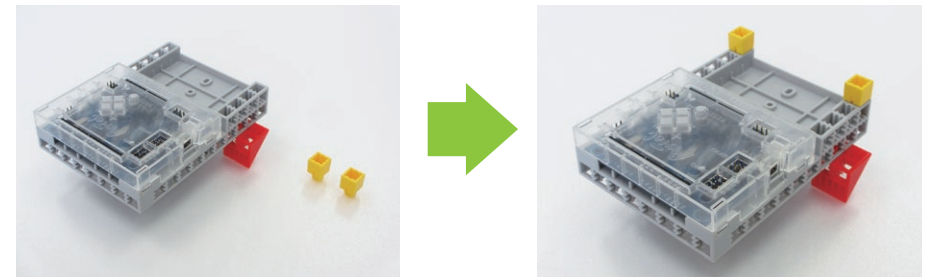
㉒ Attach parts ⑨ and ⑱ to part ㉑ as shown in the picture.



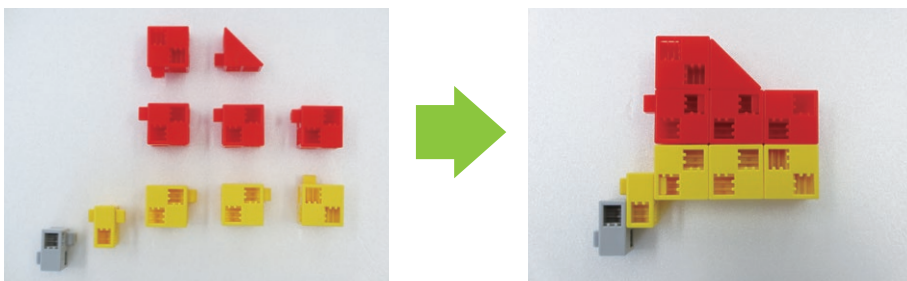
㉓ Add the blocks shown in the picture to the circuit board mount.



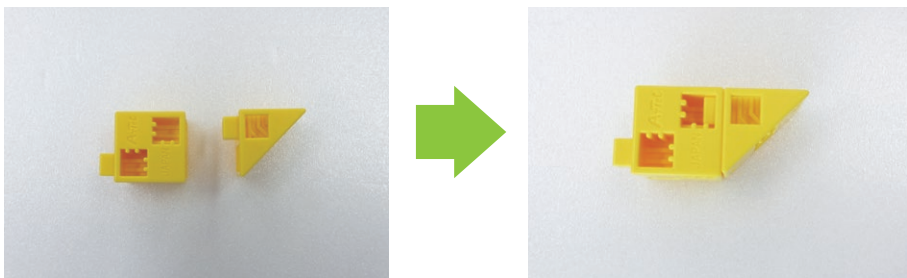
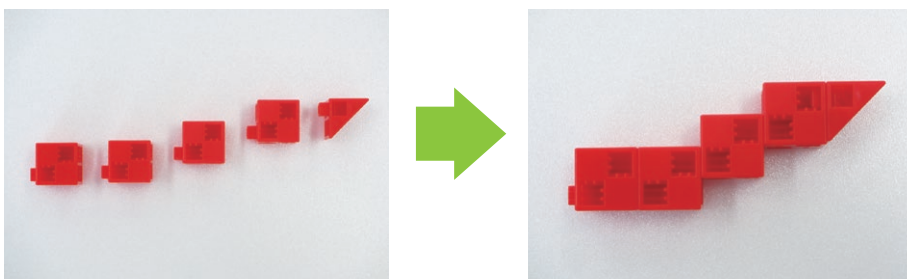
㉔ Assemble the blocks as shown in the picture.



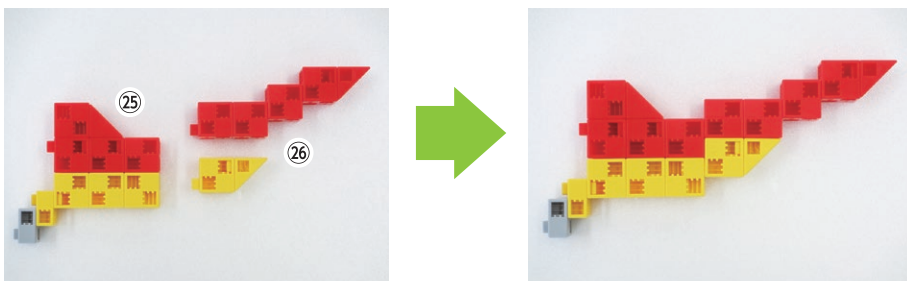
②⑤ Assemble the blocks as shown in the picture.



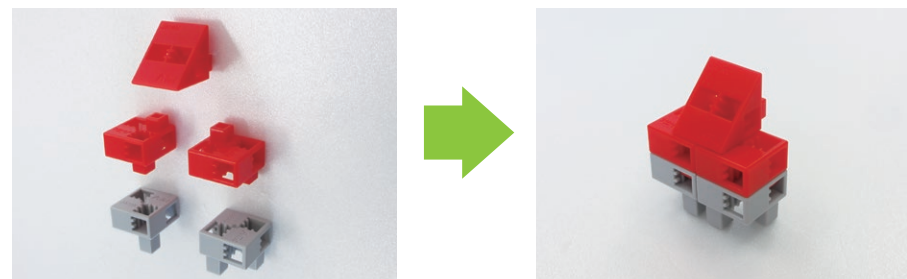
②⑥ Assemble the blocks as shown in the picture.



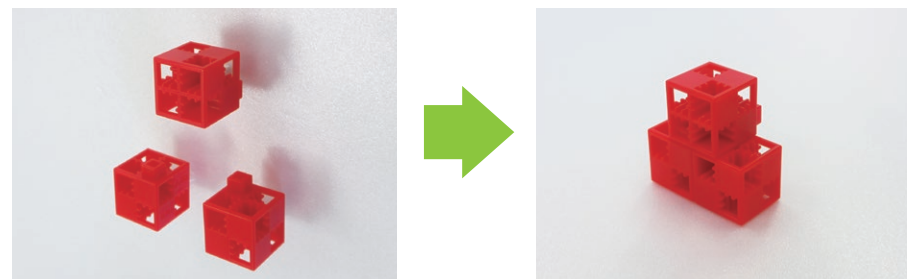
②⑦ Assemble parts ②⑤ and ②⑥ as shown in the picture.



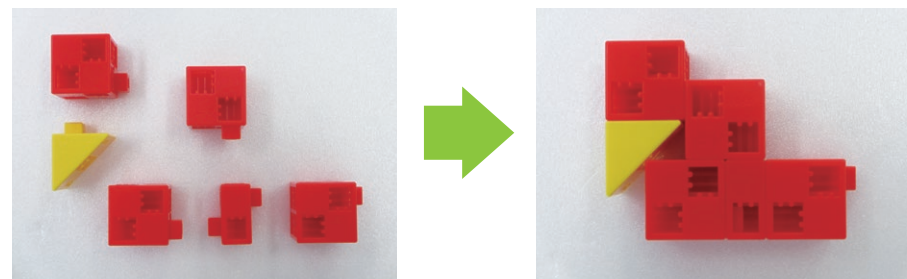
②⑧ Assemble the blocks as shown in the picture.



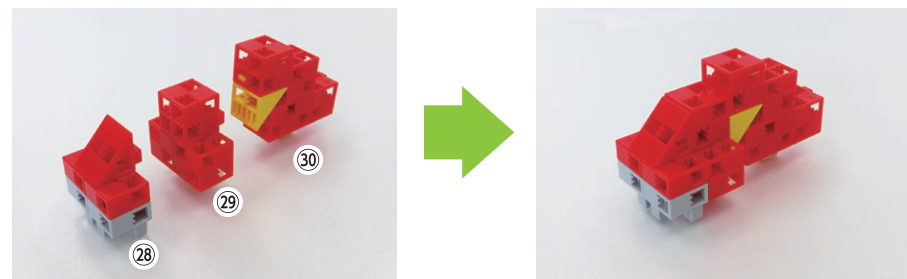
②⑨ Assemble the blocks as shown in the picture.



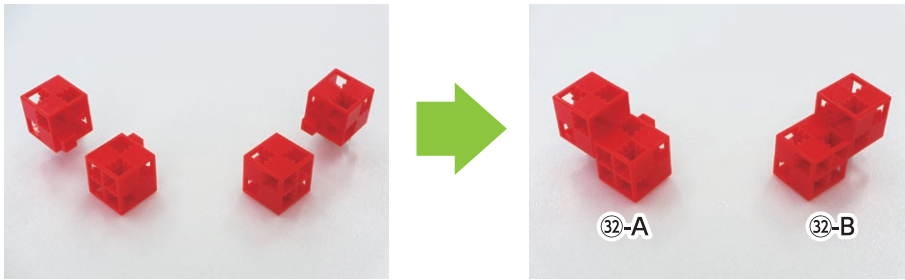
③⑩ Assemble the blocks as shown in the picture.



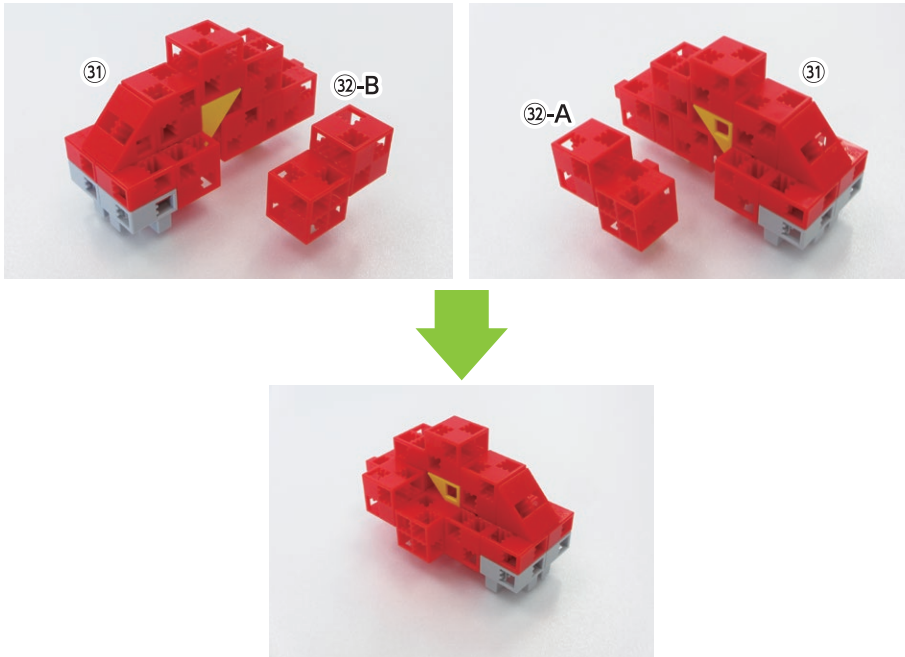
③① Assemble parts ②⑧, ②⑨ and ③⑩ as shown in the picture.



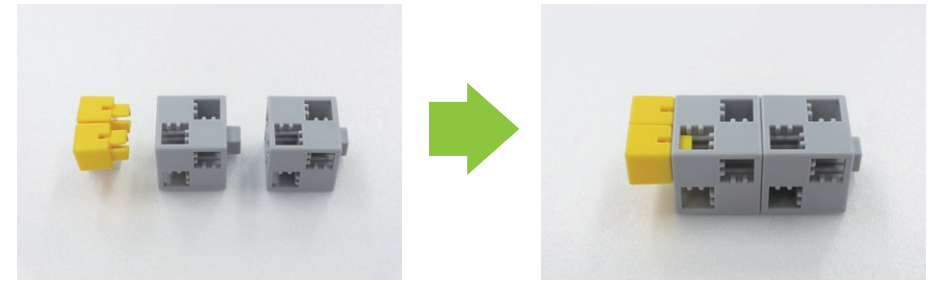
③② Assemble the blocks as shown in the picture.



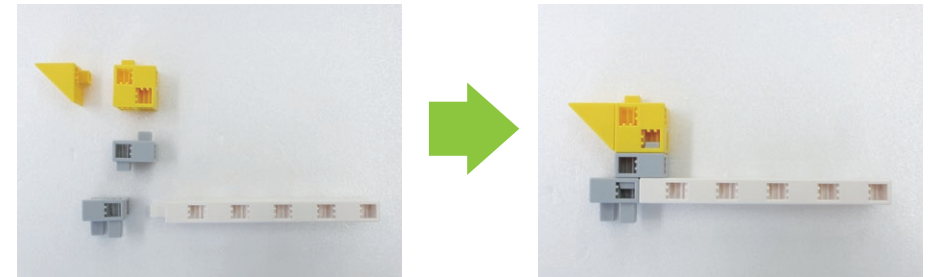
③③ Add parts ③②-A and ③②-B to part ③①.



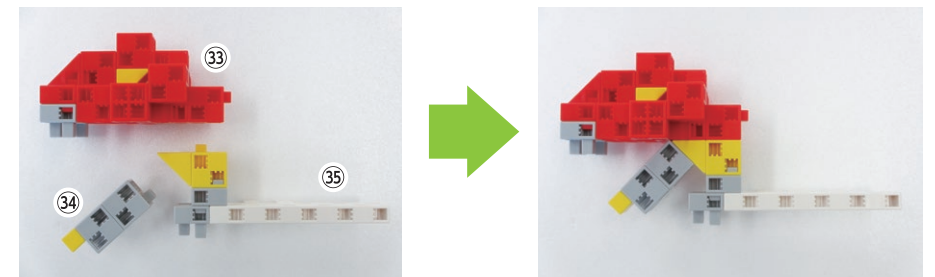
③④ Assemble the blocks as shown in the picture.



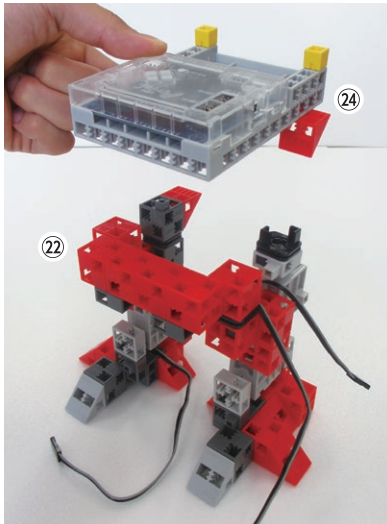
③⑤ Assemble the blocks as shown in the picture.



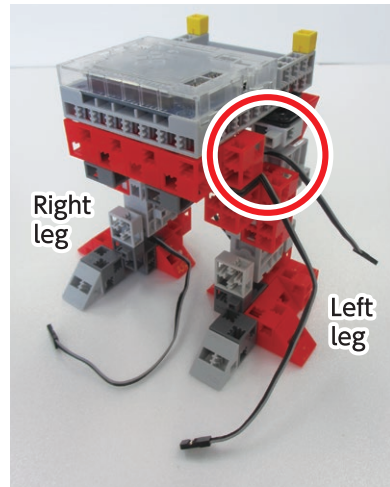
③⑥ Add parts ③④ and ③⑤ to part ③③.



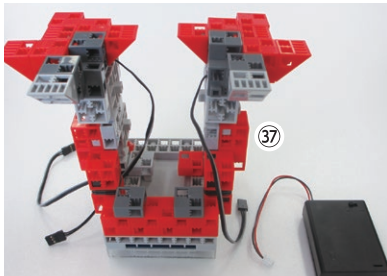
③⑦ Add the circuit board mount to parts ②② and ②④.



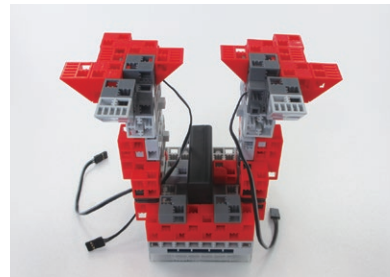
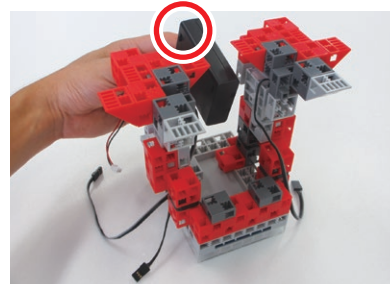
The two servomotor cables for the left leg should pass through the gap between the leg and the mount.



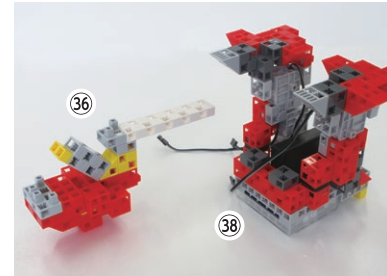
③⑧ Turn part ③⑦ over and insert the battery box.



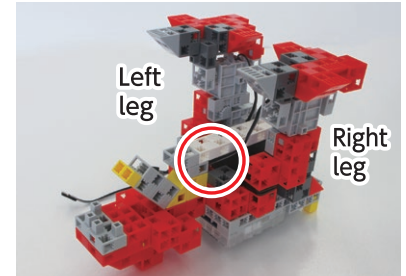
The switch should be on this side.



③⑨ Assemble parts ③⑧ and ③⑥ as shown below.



The servomotor cables for the right leg should pass under the white blocks.



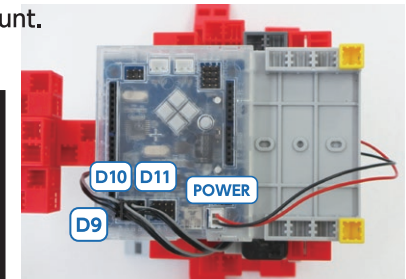
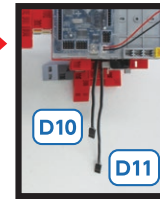
④① Plug the cables into your circuit board mount.

Right leg servomotor → D9

Left leg servomotor (shorter) → D10

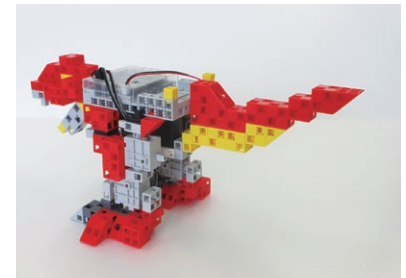
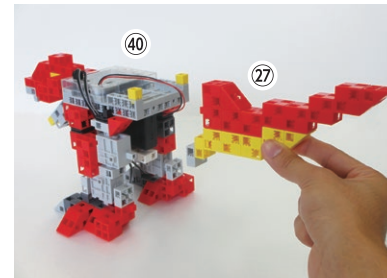
Left leg servomotor (longer) → D11

Battery box → POWER



Gray servomotor wires should face inward as shown.

④① Attach part ②⑦ to part ④① as shown.



[Finished!] Turn the switch on and watch your robot move!



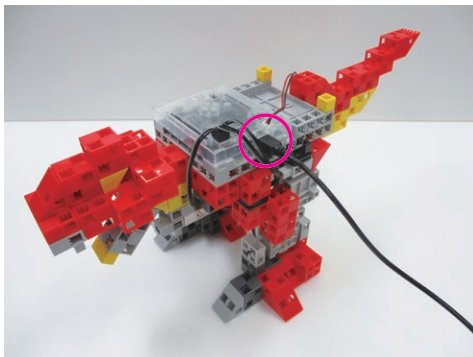
[Programming Your Robot]

Download your programming software from the Artec homepage at http://www.artec-kk.co.jp/studuino/download_en.html.

- ① Click on Start → Artec and open **Studuino Programming Environment**.
Choose **Icon Programming Environment**.

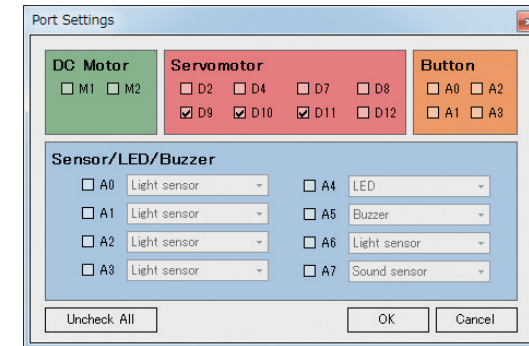


- ② Use a USB cable to connect your circuit board mount to your PC.

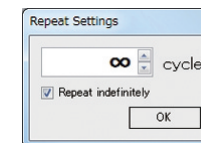
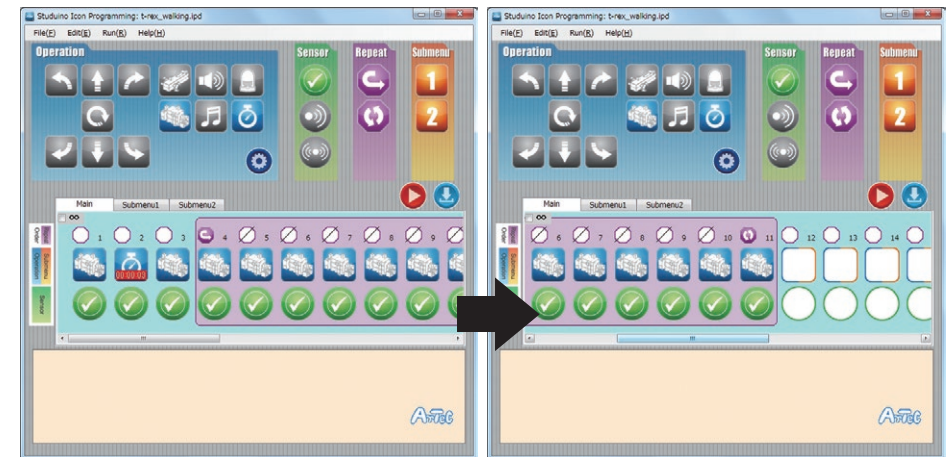


- ③ Choose your port settings.

Tick the boxes for D9, D10, and D11 in the Port Settings dialog box.

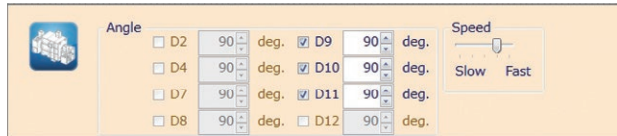


- ④ Place the icons you see in the picture below.



Click Repeat indefinitely in the Repeat Settings dialog.

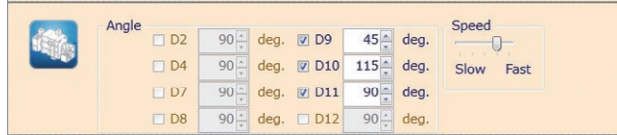
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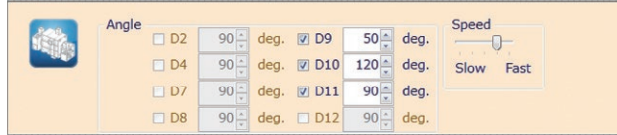
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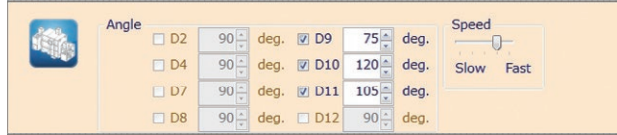
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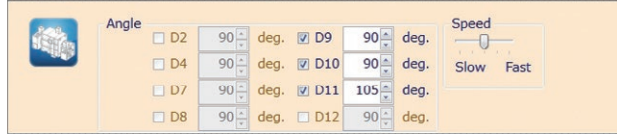
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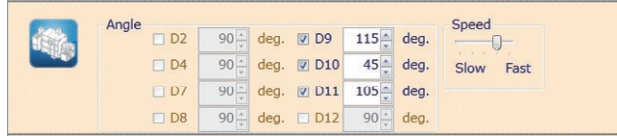
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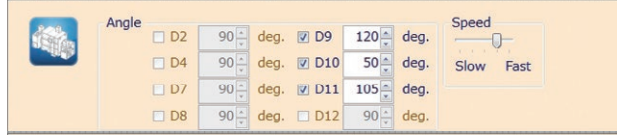
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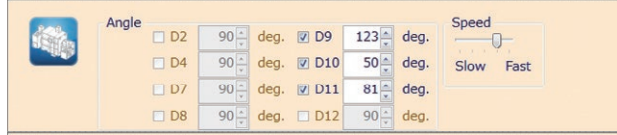
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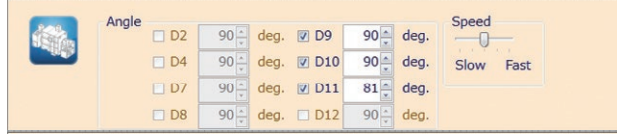
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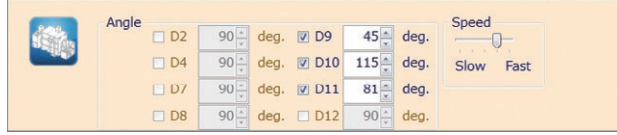
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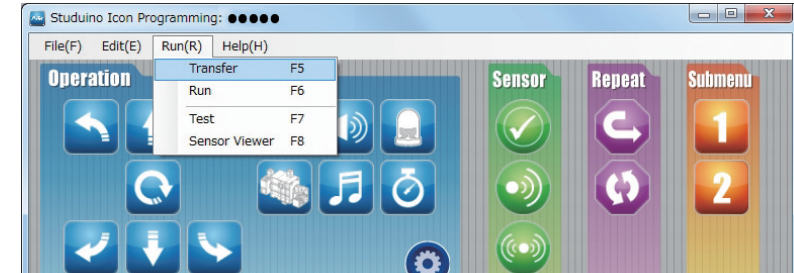
10



11



- ⑤ After sending the program to your circuit board, check that your robot is operating correctly by turning it on.



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/artecrobo/>) for instructions on how to calibrate your servomotor.

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