ArTec Blocks

Robotist

Rocking Woodpecker

# Assembly Instructions

Watch it peck the tree!

Age **8+**

ArTec PAT.P

Handling the Servomotor

Orientation

1 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.

Wider (drive shaft)   Narrower (movable shaft)
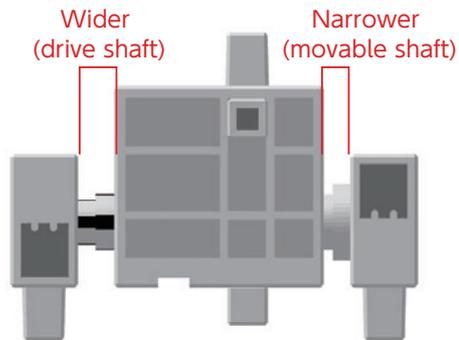
Calibration and Setting Connector Numbers

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.
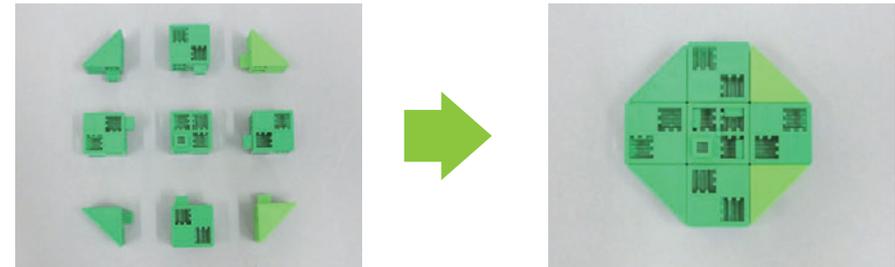
Attaching Number Stickers

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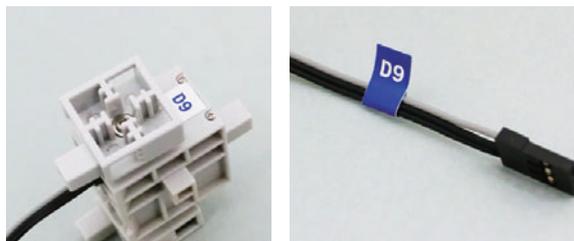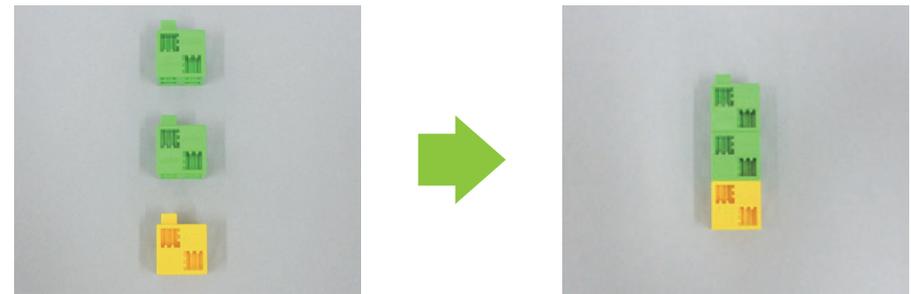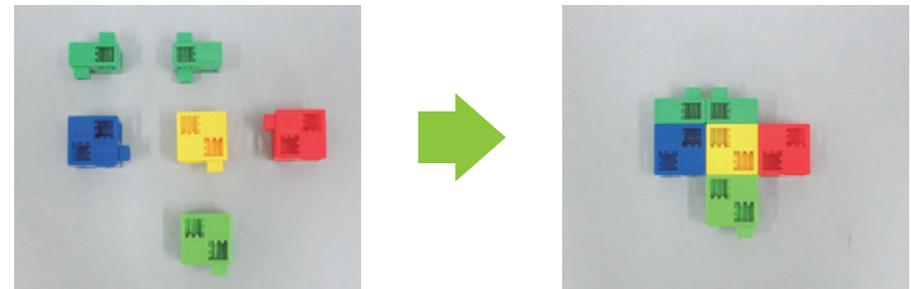

Make the Trunk!

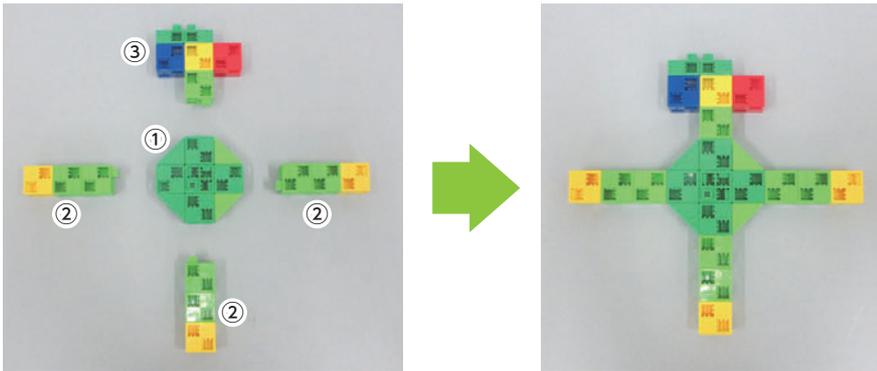① Assemble the blocks as shown in the picture.

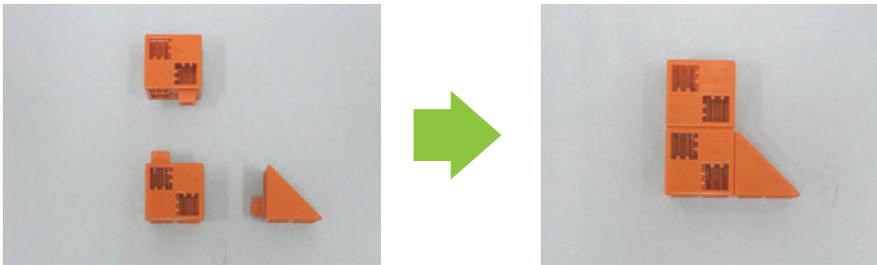② Assemble the blocks as shown in the picture. Make three in total.

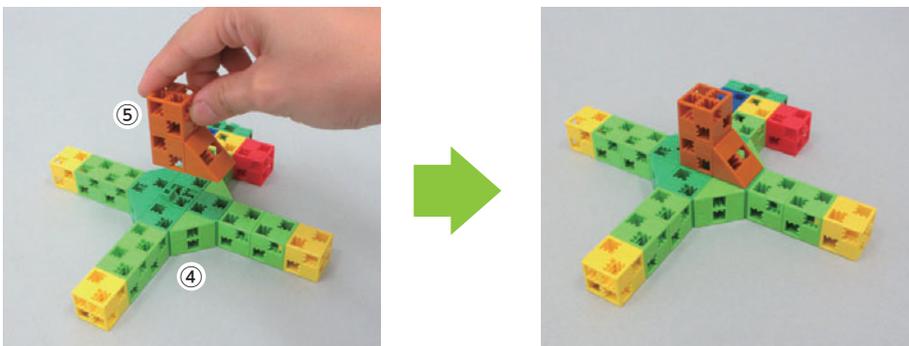③ Assemble the blocks as shown in the picture.

④ Add part ① to parts ② and ③ as shown in the picture.
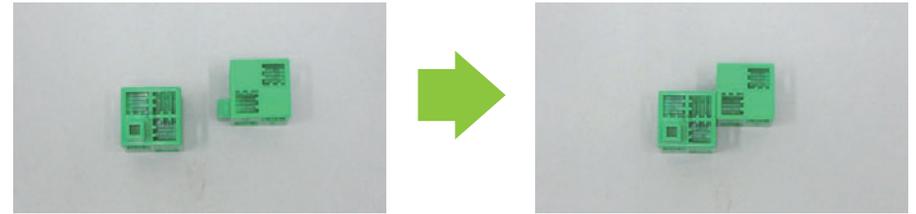

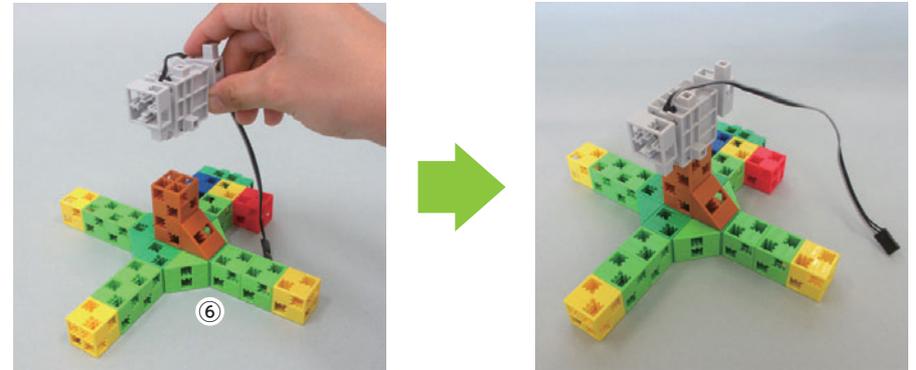⑤ Assemble the blocks as shown in the picture.

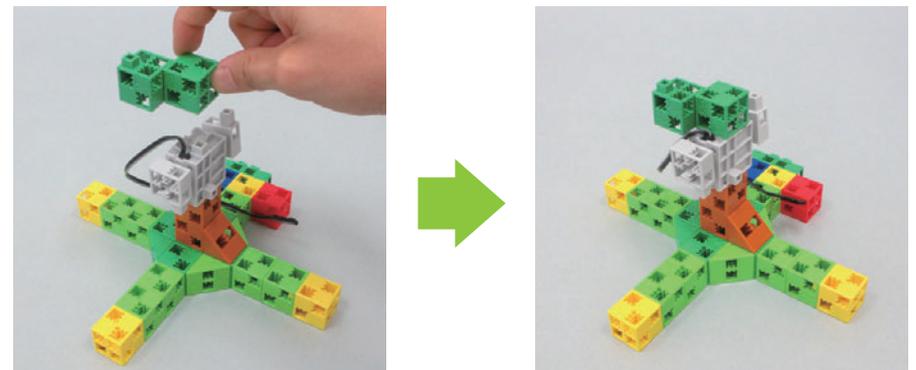⑥ Assemble parts ④ and ⑤ as shown in the picture.

⑦ Assemble the blocks as shown in the picture.

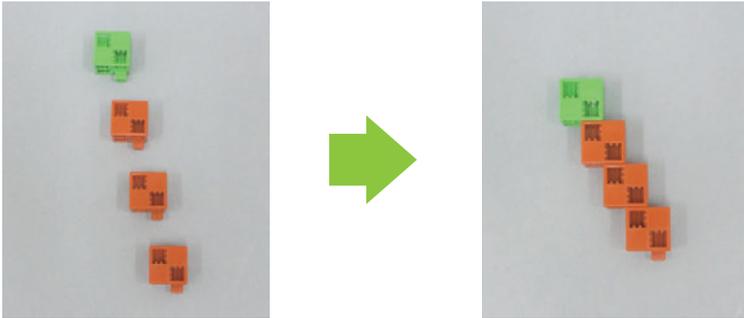⑧ Add the servomotor to ⑥ as shown in the picture.
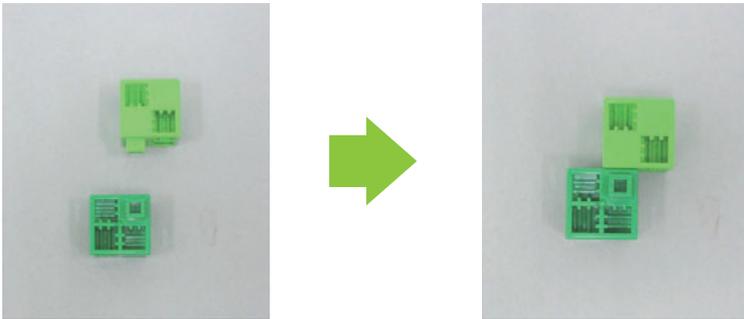

⑨ Add part ⑦ to parts ⑧ as shown in the picture.

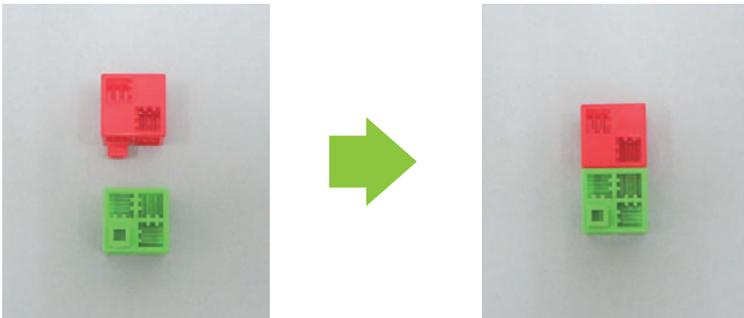Finished!

Make the Branch!

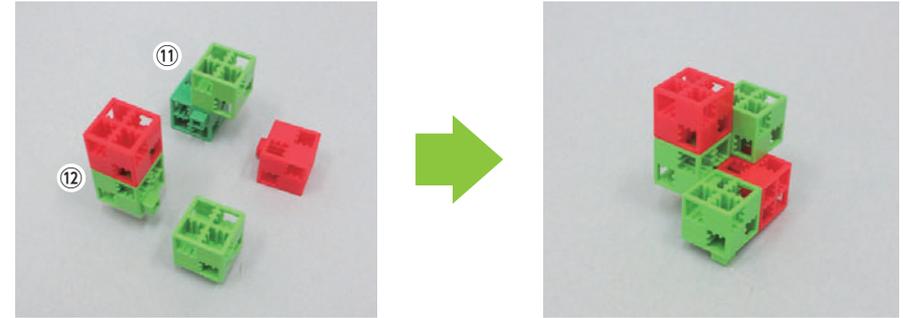⑩ Assemble the blocks as shown in the picture.

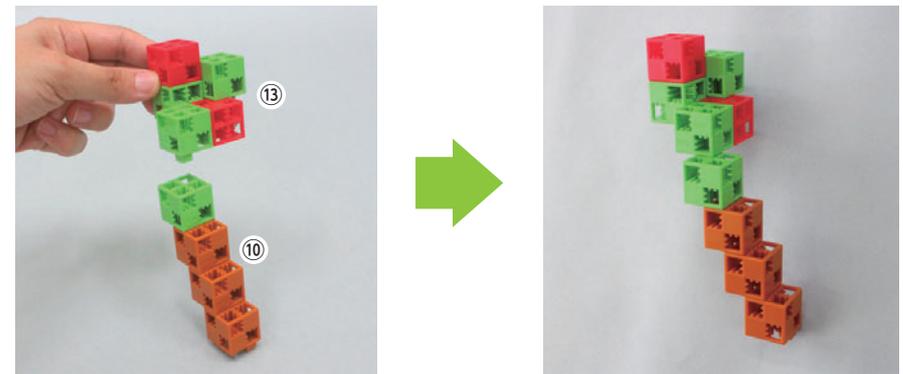⑪ Assemble the blocks as shown in the picture.

⑫ Assemble the blocks as shown in the picture.

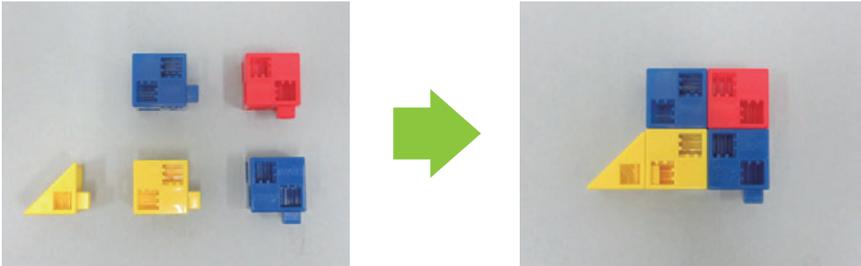⑬ Assemble the blocks as shown in the picture.
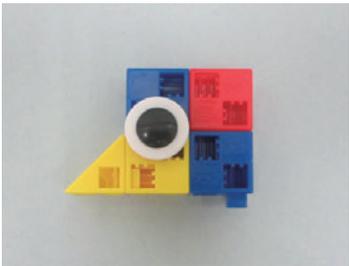

⑭ Add part ⑩ to part ⑬ as shown in the picture.

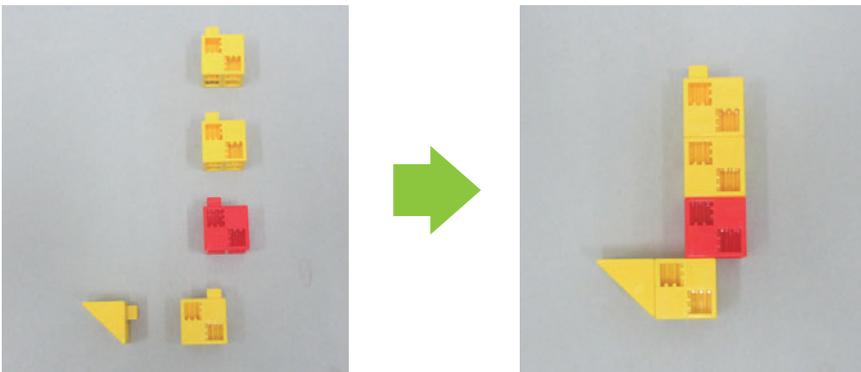Finished!

Make the Woodpecker!

⑮ Assemble the blocks as shown in the picture.

⑯ Add a disk block to the part ⑮ as shown in the picture.
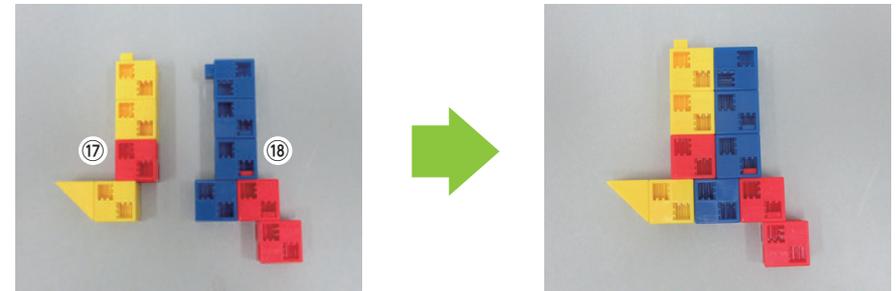

⑰ Assemble the blocks as shown in the picture.
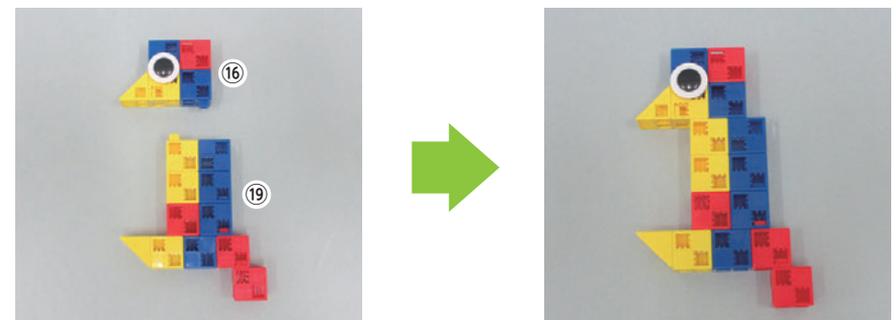

⑱ Assemble the blocks as shown in the picture.

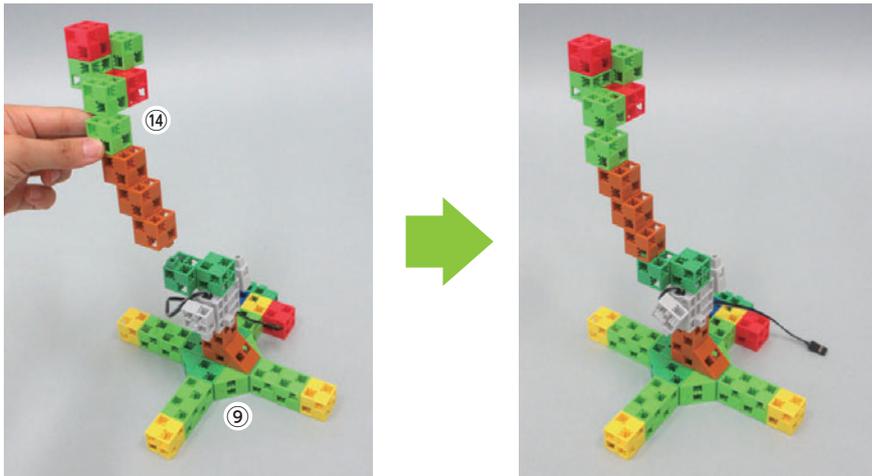⑲ Assemble parts ⑰ and ⑱ as shown in the picture.
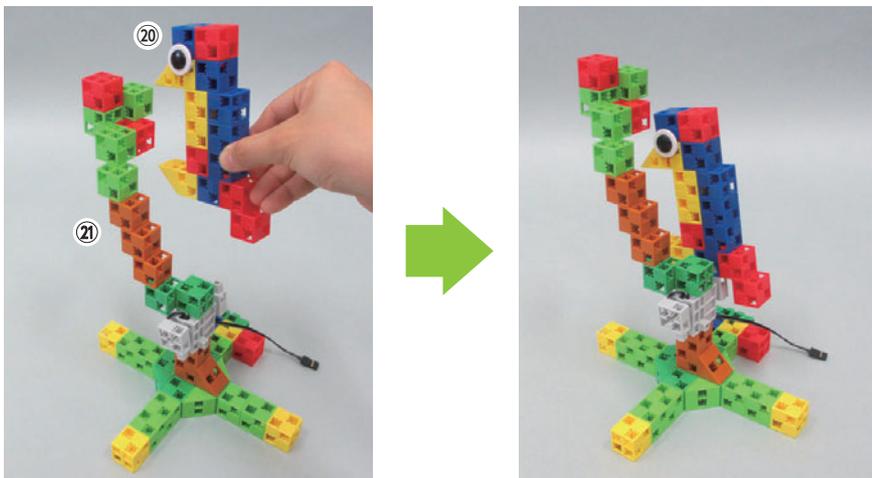

⑳ Add part ⑯ to part ⑲ as shown in the picture.

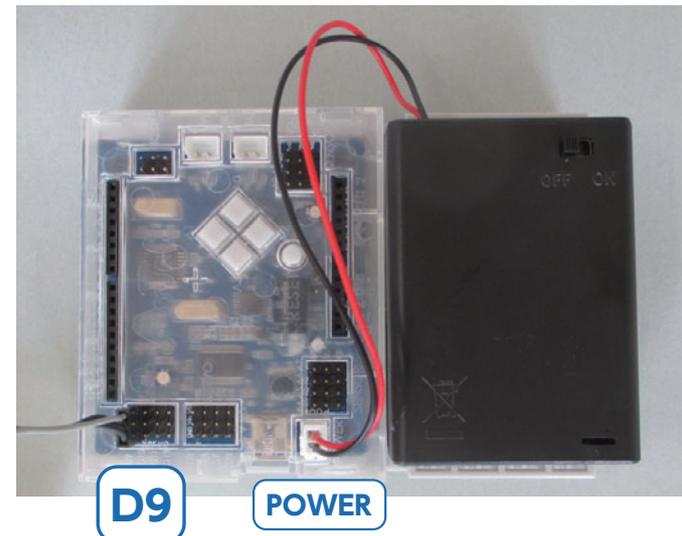Finished!

[Putting it Together]

㉑ Assemble part ⑨ [Trunk] to part ⑭ [Branch] as shown in the picture.

㉒ Assemble parts ⑳ and ㉑ as shown in the picture.
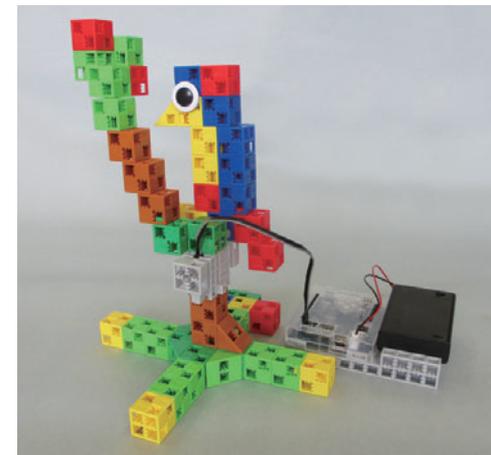

㉓ Plug your servomotor cable into D9 and your battery box cable into the POWER port on the circuit board.

D9   POWER

Gray servomotor wires should face inward as shown.

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

[Programming Your Robot]

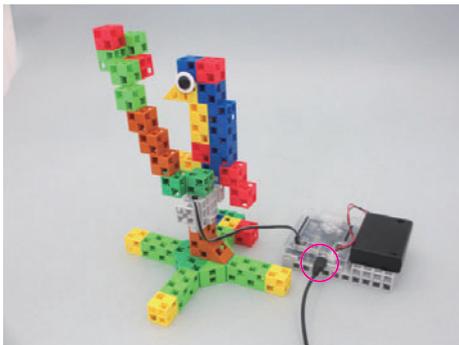Download your programming software from the Artec homepage.

Studuino Programming Environment

URL: http://artec-kk.co.jp/studuino/download_en.html

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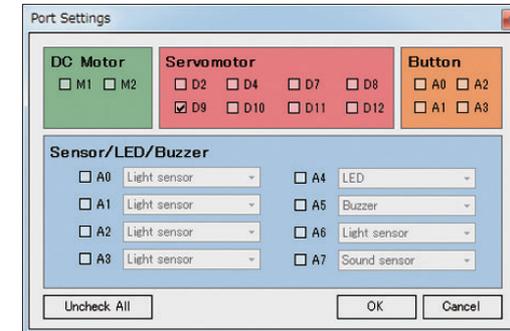Choose Icon Programming Environment.

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

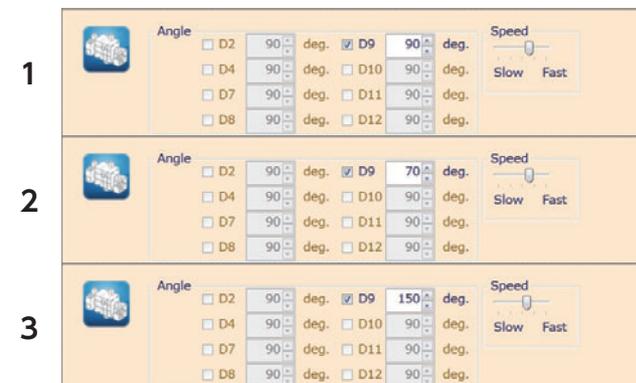③ Choose your port settings.

Tick the D9 servomotor box in the Port Settings window.

④ Place the icons you see in the picture below.

Click Repeat indefinitely in the Repeat Settings dialog.

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/robotist/) for instructions on how to calibrate your servomotor.
  Building your robot without calibrating your servomotor may cause damage or improper functionality.

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