

2.0

PenguinBot

ELEGOO

Thank you for your support and purchasing ELEGOO products.

If you have any questions regarding our products please feel free to contact us at service@elegoo.com (North America area) or ouservice@elegoo.com (Europe and Asia area)

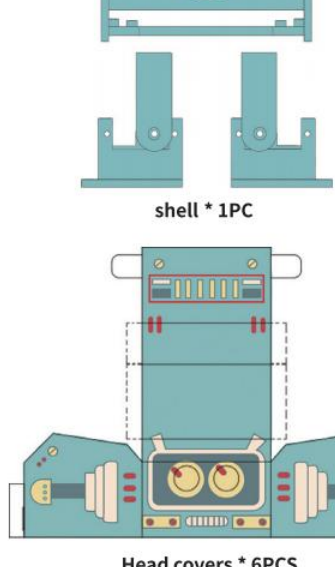
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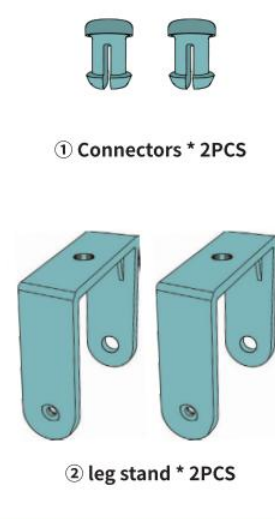
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Connectors * 3PCS (1 for spare)
M2*10 Phillips Screw * 11PCS (1 for spare)
M2*20 Copper * 2PCS
M2*5 self-tapping screw * 5PCS (1 for spare)
M2.6*8 self-tapping screw * 5PCS (1 for spare)
M2 Nuts * 10 PCS (2 for spare)
M2*6 Phillips Screw * 3PCS (1 for spare)

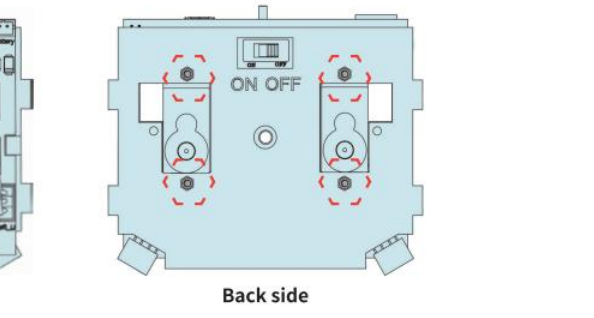
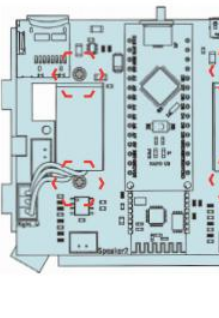
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Assemble the legs

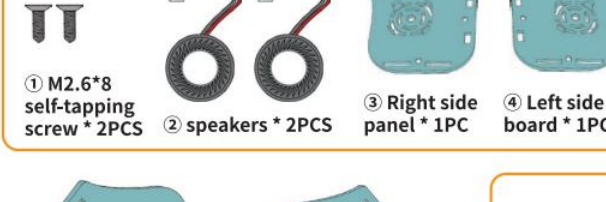


After finishing assembling the legs please do not rotate the servo to its limits in case of damages.

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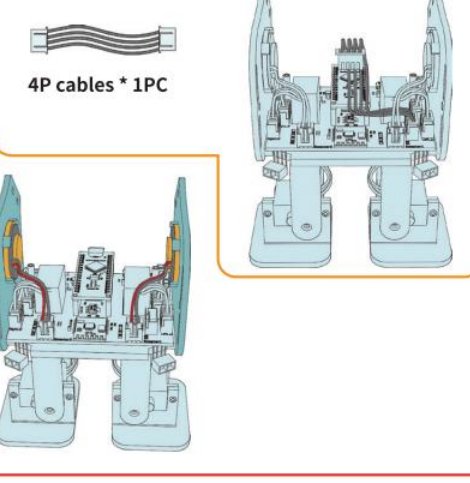
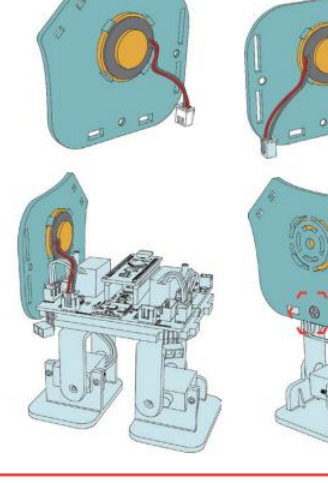


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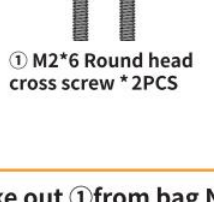


Assemble the speakers

Take out 1 from bag No.2

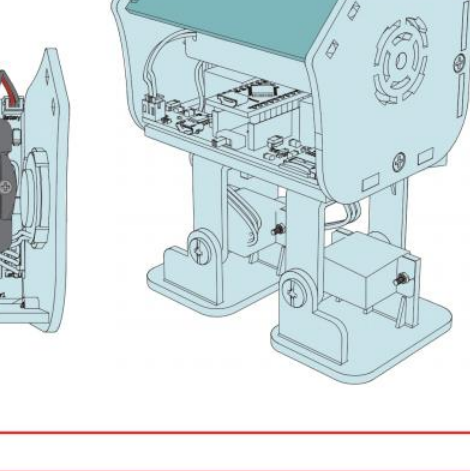
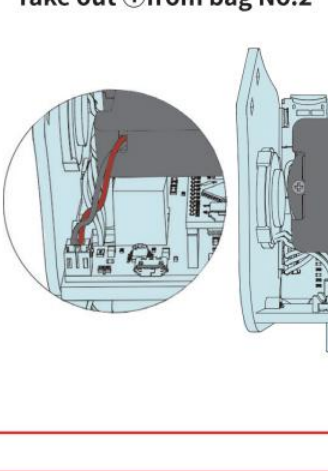


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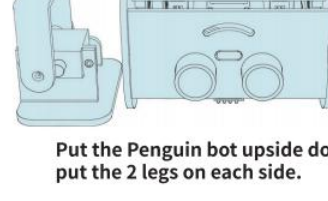


Assemble the Cell Box

Take out 1 from bag No.2

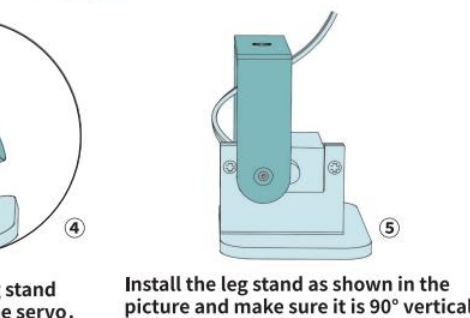
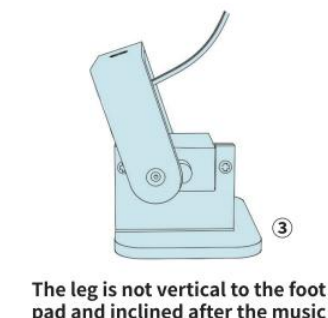


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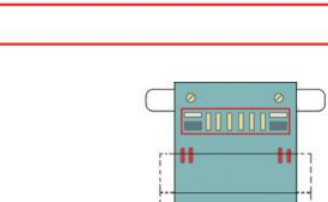


Calibrate the servo

Turn on the power of the controller board.

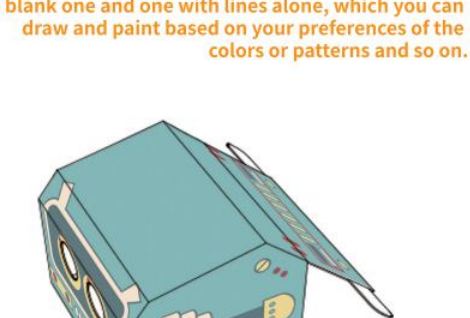
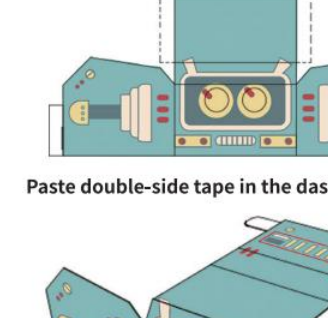


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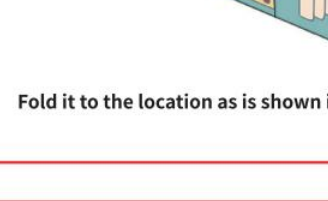


Making Head Covers

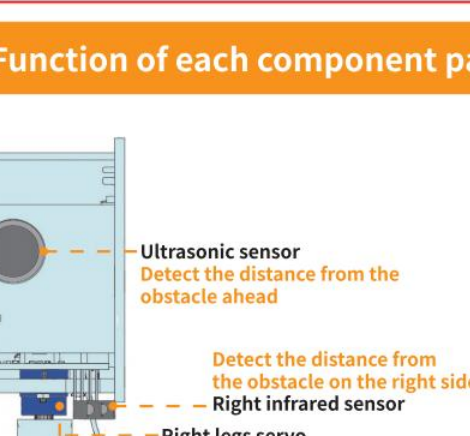
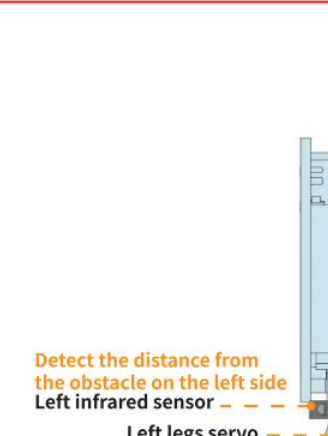
It comes with 6 different kinds of head covers and among them, there is a blank one and one with lines alone, which you can draw and paint based on your preferences of the colors or patterns and so on.



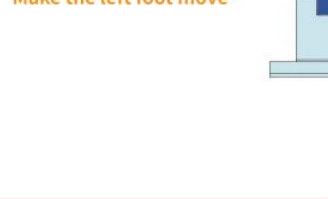
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Function of each component part



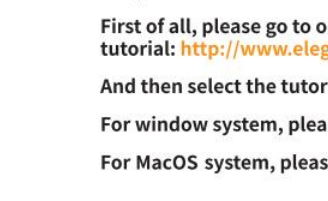
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Upload Penguin Bot Program



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Control the Penguin Bot with the Bluetooth APP

STEP1: Install the application

You can download the latest version of the "ELEGOO BLE TOOL" app on the App Store and Google Play.

Function of each component part

Speakers - Play Music

Battery box - Power Supply

USB port for programming - Upload program

Music mode - TF card interface

Save music files

Switch button between Bluetooth control / Programming

USB port for charging - Charge the battery

(When charging, the LED light next to the port will turn yellow, and when it is fully charged, it will turn green.)

Servo adjustment function: You can use this function to adjust the correction angle of each servo separately.

After pressing the servo correction button, the corresponding icons of the four icons are as shown:

If the bot's feet and legs are not perpendicular to each other as shown in the right picture, and the offset angle is within $\pm 15^\circ$, the steering gear can be fine-tuned by the APP's servo adjustment function, each time pressing "+" or "-" the servo will rotated 1° to the left or right.

If the offset angle of the servo is greater than $\pm 15^\circ$, it must be corrected in accordance with the previous "Corrective the servo" method on page 12-13.

The Rocker Control panel of the "Elegoo BLE Tool" App.

Direction control mode: When pressing the 4 direction button, the Penguin Bot will enter the Direction Control mode, and the bot will move accordingly to the direction you pressed, you can press the middle stop button to make it stop.

Servo adjustment function: You can use this function to adjust the correction angle of each servo separately.

After pressing the servo correction button, the corresponding icons of the four icons are as shown:

If the bot's feet and legs are not perpendicular to each other as shown in the right picture, and the offset angle is within $\pm 15^\circ$, the steering gear can be fine-tuned by the APP's servo adjustment function, each time pressing "+" or "-" the servo will rotated 1° to the left or right.

If the offset angle of the servo is greater than $\pm 15^\circ$, it must be corrected in accordance with the previous "Corrective the servo" method on page 12-13.

The DIY control panel of the "Elegoo BLE Tool" App.

In the default settings, the DIY interface has only a few blank grids, we need to set their names, messages and colors to create buttons.

Long press the button you want to set, a "Button editor" option box will pop up as shown above. You need to fill in the "Button Name", "Message" and select the color of the button in this page (All preset Messages are of the character type, so you only need to check the "Character" option.)

The comparison table of default Message and the Function is above.

function Message

FORWARD f

BACK b

LEFT l

RIGHT r

Music mode 1

Dance mode 2

Obstacles mode 3

Follow mode 4

Volume Volume = 4 Volume = 5

Servo 1 Angle = 3 Angle = 4

Servo 2 Angle = 0 Angle = a

Servo 3 Angle = 7 Angle = c

Servo 4 Angle = 8 Angle = e

Message and Function

- The battery should be fully charged before using. The status indicator will flash blue when there is low power. Charge the battery through the USB cable.
- The Penguin Bot cannot work in places with strong light because infrared ray can affect the sensitivity of the sensor.
- When the power is on, please do not rotate the SG90 servo in case of damage.
- Servo calibration is very important and if the 2 legs are not vertical to the foot pads it will affect the robot's movement.
- The three default music files can be replaced. Please refer to the tutorial on our website for more details.
- When the power is low, the speaker of penguin bot will have some noises or even no sound during dancing mode.
- Tutorial download link: <https://www.elegoo.com/pages/arduino-kits-support-files>
- Video link: <https://www.youtube.com/elegooofficial/>
- If you have any questions during assembling or testing, please feel free to contact us at service@elegoo.com (North American customers) or ouservice@elegoo.com (European and Asian customers)

ELEGOO Team

Precautions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that

interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

The device has been evaluated to meet general RF exposure requirements, the device can be used in portable exposure conditions without restriction