ROBOMATION

Pio is a cute and intelligent robot used for coding education.

Manufacturer's website: Please be sure to refer to robomation.net.

This manual contains only the basic information about the product.
For more detailed instructions and information, please refer to the website.

Confirmation number for safety confirmation report:

Marking According to the Special Act on the Safety of Children's Products

Product Name: Toy
Model Name: Pio
Manufacturing Date: Notated separately on the main body label
Manufacturer: Robomation
Address / Phone Number: 128 Beobwon-ro, A1101, A1102, A1103, Songpa-gu, Seoul (Munjeong-dong, Munjeong SKV1 GL Metrocity) se/ 02-421-1652
Safety Markings: Notated separately in the instruction manual
Age of Use: 3 years and older
Size/Weight Limit:
70 (Width) × 82.5 (Depth) × 70 mm (Height) / Weight: 210 g
Country of Manufacture: Republic of Korea
※ This product uses sealed secondary batteries with nonacid electrolytes.

FCC ID : 2AK2Q-Pio

KC Battery Certification

Registration Number: XU103382-24001
Reporting Company Name: Dongguan Data Power Technology Limited
Address: Workshop, 4/F, Building B1, Hantong Industrial Park, Luoma Road, Luoma Village, Qingxi (Address) Town, Dongguan, Guangdong, People's Republic of China
Product Name: Battery
Basic Model Name: BZ902030
Derived Model Name: N/A
Model Classification Based on Rating / Safety Standards: 3.7 V, 500 mAh, 1.85 Wh
Safety Standards: KC62133-2(2020-07)

KC Electromagnetic Wave Certification

KC Certification Number: R-R-RXR-Pio
Model Name: Pio
Company Name: Robomation Co., Ltd.
Device Name: Specific low-power wireless device (wireless data communication system device)
Manufacturer (Country of Manufacture): Robomation Co., Ltd. (Republic of Korea)
Manufacturing Date: Notated separately
※ This wireless device may cause interference while in operation.

Caution
THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE.
SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.
IMPORTANT NOTE : FCC RF Radiation Exposure Statement
This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with a minimum distance of 0.5 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

Components

Pio (main body), charging cable, manual

Precautions before Use

① If the battery runs low during operation, the battery status indicator LED will flash red, and an alarm will sound, after which the device may stop working or malfunction.
② If the battery is low, please fully charge Pio before use.
③ Be careful not to drop the product or apply excessive force to prevent any stress on the motor and wheels.
④ Be careful not to forcibly rotate Pio's head and body to avoid damage.
⑤ Pio's activity sheet is made of materials similar to standard A4 and A3 paper. On materials other than regular paper (such as coated paper), the friction acting on the wheels may vary, resulting in differences in the robot's travel distance.
⑥ If dust adheres to the wheels or foreign objects, such as thread, enter the interior, it may cause issues during movement. Therefore, always use the device on clean paper or floors. If the rubber on the wheels wears out and becomes thin, the driving accuracy may decrease, necessitating part replacement.
⑦ The warranty period for consumables (such as motors, batteries, etc.) is six months.
⑧ Batteries are consumables, so their performance may deteriorate depending on the user's usage pattern. If there is a significant decrease in usage time, purchasing a new battery or repair may be necessary.
⑨ The motor and wheels are consumable parts. When the motor reaches the end of its lifespan or malfunctions during use, purchase a new motor and proceed with repairs.
⑩ Due to various physical factors, there may be a margin of error in the product's travel distance or rotation angle.
⑪ Due to the characteristics of the motor, there may be discrepancies between each motor.
⑫ The degree of speed and positional discrepancies of the motors may vary depending on the usage time and battery consumption.
⑬ When connected via Bluetooth, communication may not be smooth depending on the connection environment.
⑭ Pio robots undergo operational testing before shipment. As a result, dust or other foreign objects may adhere to the main body.
⑮ The product's performance and configuration may be upgraded or altered based on the manufacturer's circumstances.

Child Safety

- **Warning!** Not suitable for children under three years old. Small parts included.
- The product contains small detachable parts that pose a choking hazard if swallowed.
- Keep away from children to avoid unsupervised use.
- Toddlers must use it under adult supervision.

Warning

Please observe the following precautions, as there may be risks of overheating, fire, explosion, etc.

① Do not apply force to rotating parts
② Connect and use only with products warranted by Robomation
③ Do not place near heat sources (do not put in a microwave)
④ Do not leave in the car during summer
⑤ Do not store or use in high temperature and humidity environments
⑥ Do not place on blankets, electric blankets, or carpets, and avoid using for extended periods
⑦ Do not store in enclosed spaces for extended periods while the power is on
⑧ Be careful not to let metal objects, such as necklaces, coins, keys, watches, etc., come into contact with the battery terminals
⑨ Use only with devices warranted by the manufacturer
⑩ Do not disassemble, crush, or puncture
⑪ Avoid subjecting the device to abnormal shocks, such as dropping from a height
⑫ Do not expose to temperatures exceeding 60°C
⑬ Avoid exposure to moisture and humidity

Product Warranty Information

The warranty period for this product is one year from the date of purchase (proof of purchase required), and free repair service is provided for performance/function failures that occur under normal usage conditions during the warranty period. However, consumable parts are warranted for six months. The app or service provided with this product may be subject to change or discontinuation without prior notice because of unavoidable circumstances. In such cases, please contact Robomation, and we will respond sincerely. However, for issues regarding defects, changes, or discontinuations of apps and software not developed by Robomation, please contact the respective service provider, as they are not relevant to Robomation.

Even during the warranty period, charges may be incurred for the following situations:

① Malfunctions caused by the user's intentional, negligent, or careless actions (such as mishandling, dropping, impact, damage, immersion, excessive operation, etc.)
② Damage caused by external forces
③ When the product has been disassembled, modified, or altered arbitrarily
④ Replacement of consumable parts with diminished performance due to regular use
⑤ Malfunctions of the product due to natural disasters
⑥ Malfunctions caused by the use of incorrect specification chargers
⑦ Malfunctions caused by failure to follow the precautions in the instruction manual
⑧ Malfunctions that occurred during use in unsuitable environmental conditions (low temperature, high temperature, humidity)
⑨ Malfunctions caused by immersion in beverages or water, or contamination by foreign objects
⑩ Malfunctions resulting from user manipulation of software and hardware
⑪ Other cases where user negligence is acknowledged

Exchange and Return Information

① The initial exchange or return of defective products can only be done at the place of purchase.
② If the product is damaged upon delivery, contact the place of purchase immediately upon confirming the damage to the product received.
③ Only hardware defects occurring within seven days of purchase are eligible for warranty with presentation of the purchase receipt (exclusions include software issues or change of mind).
④ After seven days of purchase, only free repairs within the warranty period are available.
⑤ The purchase receipt (purchase specification) received at the time of purchase must be submitted, and simplified invoices will not be accepted.
⑥ Refunds will not be acknowledged if the product's appearance is damaged after receipt or if the entire set of components is not returned.

Please Read Carefully

① When sending in a product for the after-sales (AS) service, the shipping cost must be paid in advance. (Returns using a designated courier service are available within seven days of receiving the product.)
② When using courier services, the shipping fee follows a 1:1 advance payment principle between the consumer and the company. In the case of paid shipping, the consumer is responsible for both outbound and return shipping costs.
③ The serial and genuine authentication stickers attached to the product are used to verify authenticity, check the manufacturing date, and confirm responsibility for disassembly and modification. Damage may result in issues in the AS service (such as voiding the free AS service).
④ Please securely package the product with packing material.
⑤ Repair costs are determined according to our service regulations.
⑥ Please apply for AS service reception through the "Customer Support" -> "Product AS Reception" menu on our website, robomation.net.
⑦ If there are parts, equipment, or devices not sold by our company, please remove them from the product before sending it for inspection.

Inspection Fee

For paid repairs, there may be a basic inspection fee even if the repair is not performed because of repair cost issues. (Subject to our company's policies) No separate service inspection fee is incurred for free repairs.

Service Information

AS Service Inquiry Phone Number	AS Service Inquiry/Reception Website
1551-1651	robomation.net

pio

Basic Robot Information

1 Right Eye LED

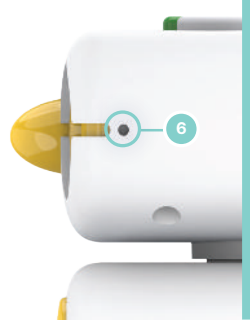
2 Left Eye LED

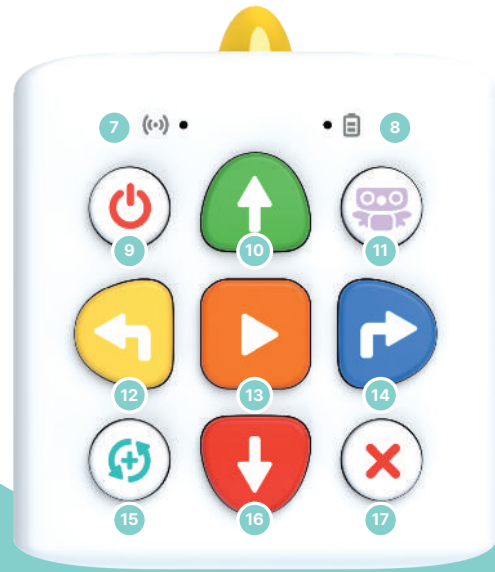
3 USB-C Charging Port

4 Wheel

5 Ball Caster

6 Reset Button





7 Status Indicator

8 Battery Indicator

9 Power Button

10 Forward Button

11 Action Button

12 Left Arrow Button

13 Execution Button

14 Right Arrow Button

15 Repeat Button

16 Backward Button

17 Delete Button

Status Indicator

Pio's Mode Status	Status Indicator	Status Description
Unplugged Mode	White LED is turned on	"Input standby" or "in operation" for Command button
	Command button color is blinking	When the Command button is pressed
Bluetooth Mode	Blue LED is turned on	Bluetooth connected
	Blue LED is blinking	Data exchange in progress

Battery Status Indicator

Pio's Status	Battery Indicator
Charging in progress	The red indicator light is on
Charging done	The red indicator light is off
Low battery	The red indicator light is blinking

Power Button

▶ **Power On**

① Press the Power button briefly.

② After a moment, various colors will blink on both eye LEDs along with a starting sound.

▶ **Power Off**

① Press and hold the Power button.

② Both eye LEDs will turn off, accompanied by a shutdown sound.

Command Button

- The standard unit size is determined by a square measuring 10×10 cm.
- Pio can store up to 16 input commands.

Execution Button

- Pio executes the entered commands.
- When the Execute button is pressed while Pio is moving, its operation will stop.

Forward Button

- Pio moves forward one unit.

Backward Button

- Pio moves backward one unit.

Left Arrow Button

- Pio turns left by 90° and proceeds forward by one unit.

Right Arrow Button

- Pio turns right by 90° and proceeds forward by one unit.

Action Button

- Pio randomly executes one of the actions stored in the robot.

Repeat Button

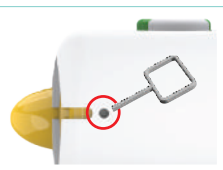
- Pio repeats the entered commands.
- Pio repeats the previously entered command as many times as the button is pressed.

Delete Button (Press and Hold)

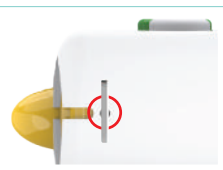
- Clear the inputted commands on Pio.
- When the Delete button is briefly pressed while Pio is moving, its operation will stop.

Reset Button

If Pio is not functioning properly despite having sufficient battery, press the Reset button.



Prepare the clip.



Align the clip with the Reset button hole, and gently press down.

① Using the pointed end of a clip, gently press the Reset button located inside the small hole. (The clip is not included in this package.)

② Press the Power button on Pio to turn it on.

How to Connect via Bluetooth

Pio is a device capable of connecting to a PC (dongle for connection sold separately) or a mobile device via Bluetooth.

▶ Refer to robomation.net for detailed Bluetooth connection instructions.

How to Pair with Mini Dongle+ (Sold Separately)

① Turn on Pio, and bring it close to the dongle. (The distance between Pio and the dongle should be approximately 20 cm.)

② When a beep sound is made by Pio and the Bluetooth indicators on both Pio and the dongle remain blue or flash, it indicates a successful connection. During data reception via Bluetooth communication, the indicator flashes rapidly. While connected but not receiving data, the indicator light is continuously on.

- Once paired using this method, the dongle will automatically connect to the corresponding Pio when in range.
- Therefore, pairing must be done only once initially, and afterward, there is no need to bring Pio close to the dongle again for re-pairing.
- If you wish to connect a new Pio, simply follow the same procedures to pair the new Pio with the dongle.
- The dongle remembers only the most recently paired Pio.
- After pairing, Pio and the dongle can exchange data even when they are far apart.
- As pairing between Pio and the dongle occurs only when they are nearby, multiple robots and dongles can be paired and used simultaneously in a classroom environment.

* For more detailed instructions on connecting with PCs and software, please refer to the Robomation website.

Product Specifications

Item	Specification
Size	70×82.5×70 mm (Width × Depth × Height)
Weight	Approximately 210 g (measured with Pio's body)
Tech specs	3 Microstepping motors 2 Full-color LEDs 1 Piezo speaker 1 Status indicator (Color) 1 Battery indicator (Red)
Communication Method	Connecting dongle required (sold separately) for connection to a BLE 5.x/PC
Input Device	1 Power button, 8 Command buttons, 1 Reset button
Battery	Li-Poly / 3.7 V / 500 mA (charging voltage: 5 V)
Charging Port	USB-C charging port
Operating Time	Approximately 40 min

※ The operating time is based on laboratory measurements, so the actual usage time may vary depending on the user's usage patterns.