

★ | **Directions for
using Pingpong**



★ Safety information



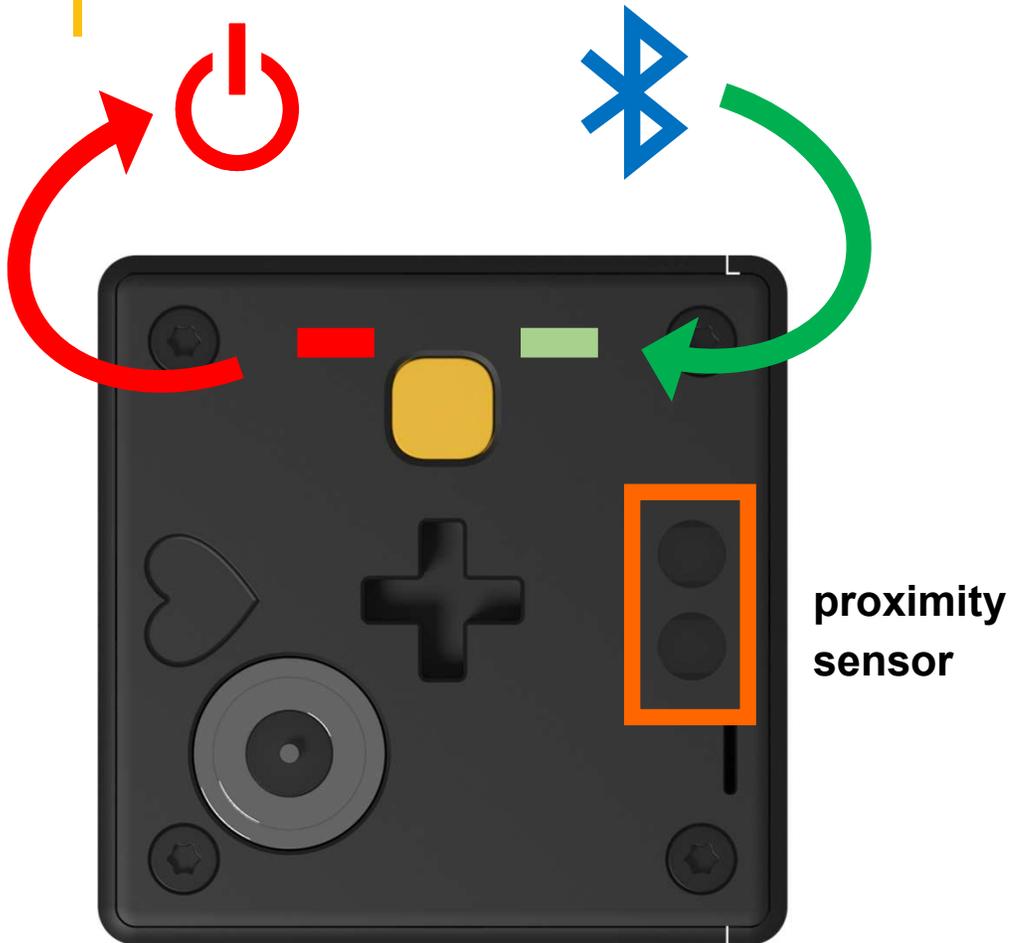
1. Pingpong is designed for **over 6, educational use, and makers**. Keep the unit **away from small children**. Do not use units unintended ways.
2. Pingpong can cause failure or trouble by the wrong power supply, malfunction from hardware or software of computers, users' carelessness, unsuitable installations or environments, or other various causes.
3. Pingpong is designed for **indoor uses**. Never attempt to use in unsuitable environment of power, temperature, moisture, or in places contains pollution, explosive, or combustible gas.
4. Never disassemble, or open the cover.

★ Specifications



Power	DC 5V, 1A
Battery	Lithium-ion battery, 3.7V, 300mAh
Connectivity	Bluetooth LE 5.0 IoT Multiprotocol
Sensors and others	Infrared Proximity sensor
	6DOF IMU, Accelerometer and Gyroscope
	Infrared Origin Detector
	LED: Red for power, Green for Bluetooth, and LED indicator
	Electromagnetic Buzzer
Motor	Stepper 100:1, 180DPS/1000SPS
Digital I/O port	4-pin External input port: Servo, IR Remote connector
CPU	ARM Cortex M4 (32-bit, compatible with BLE 5.0)

★ Getting to know pingpong



★ Getting to know pingpong

stepper



external input (4pin)



magnetic
charger



★ Control button



- ❖ To turn on, press the yellow button shortly.
- ❖ To turn off, press the button longer.
- ❖ To connect pingpong to other devices, press the button one more time.

★ LED indicator



1. **If your pingpong did not connected to others,** the LED indicator slowly changes its colors.
2. **If your pingpongs are paired,** the master's indicator shows red, and slaves shows green, blue, sky-blue, pink, yellow, purple in order.
3. **Until the master pairs to slaves,** the master's indicator flickers in red.
4. **If any paired pingpong loses its connection,** the master flickers again.
5. **If you made a particular group,** your pingpongs shows the color according to your group code.

★ LED indicator



★ Power management



- When the unit won't be used for a long time, press the button long to turn off. Full battery charge is needed before using.
- Recharge your pingpong with rated output adaptor (3A), do not recharge it through USB port in laptop or desktop computers.
- If you recharge several pingpongs with one charging cable, it takes one and a half hours. (It takes same time 1~12 units by one cable.) If the cable recharges more units, it takes more time.
- The battery can manage 1 hours for a wheel drive, 20 minutes for a joint movement.

★ Warning



- **Overheat warning:** When the motor is overheated, the LED indicator flickers in **pink** and the motor stops. Then you need to power off the pingpong, and cool down it more than 10 minutes. The overheat warning occurs if the pingpong raises other units and maintains it, or it worked hard for a long time



←---- LED indicator shows pink, and the motor is out

- **Low battery warning:** When the battery is too low, the LED indicator flickers in **red** 5 times and powered off. The low battery warning occurs by a sag, a sudden voltage dip, or a long time usage of units
- **Idle mode:** When the pingpong is not connected by power or Bluetooth for 5 minutes, the LED indicator flickers in white and it changed into idle mode. Also, the unit will be automatically powered off if idle mode continued 5 minutes.