

# CA-100 manual

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## Specifications

1. MCU: 32-bit ARM® Cortex®-M4F @ 64 MHz
2. Voltage Supply
  - ▶ Battery :
    - Range : 3.3 ~ 4.2[V]
    - Normal voltage : 3.7[V] (Li-Po 1cell), 1800mA
  - ▶ USB-C :
    - Range : 4.75[V]~5.25[V]
    - Normal voltage : 5.0[V]
3. Operating Temperature : -5~70[°C]
4. Standby Current : 30mA
5. Bluetooth
  - : Bluetooth 5.1 compliant single-mode Bluetooth Low Energy
6. Internal I/O Device
  - ▶ Button : 4 (Port A, Port B, RESET, POWER)
  - ▶ Joystick(2-axis) : potentiometer
  - ▶ LCD : 320\*240 2.4" TFT LCD module
  - ▶ MIC X 1
  - ▶ speaker X 1
  - ▶ Gyro & acceleration sensor X 1
  - ▶ IR sensor
    - TX (KEL5315C) X 6
    - RX (KDT6315A) : 5
  - ▶ LED
    - 1608size blue LED : 8
    - 1608size Red LED : 1
  - ▶ Battery voltage check : 1
7. External I/O Device : USB-C Charging and firmware update
8. Dynamixel PORT : Magnetic pocopin: 1ea (4pin)

**3****Product overview**

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1. This product improves fun and cognitive ability through interaction with users by using entertainment functions and sensors.
2. This product has coding function and can be used for coding education.
3. It can make various examples by combining Danimixel with this product.

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## Product components

1. Main Body X 1
2. Charging and data cable X 1



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**5** Operation method

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1. Power on with POWER ON/OFF switch. (See description on page 7)
2. Use the cursor movement button to enter each menu and perform the desired function. (See description on page 7)
3. If there is no movement of a specific time, it enters sleep mode.
4. Press and hold the power on/off switch to select the power off menu and power off

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## Hardware description

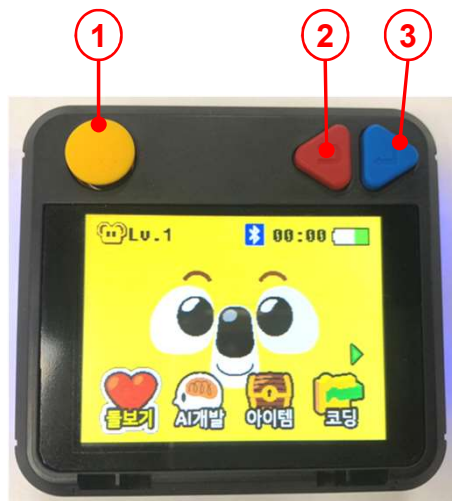
## MAIN DISPLAY Description



- ① Main Menu
- ② Bluetooth connection status
- ③ Battery capacity status indication

**7** Hardware description

Function description of each button

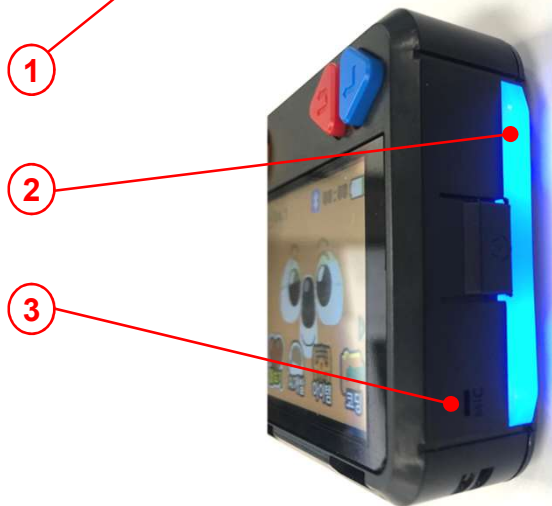


- ① cursor movement button
- ② Back Button
- ③ Enter Button
- ④ POWER ON/OFF Button
- ⑤ RESET Button

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## Hardware description

Detail of fuction



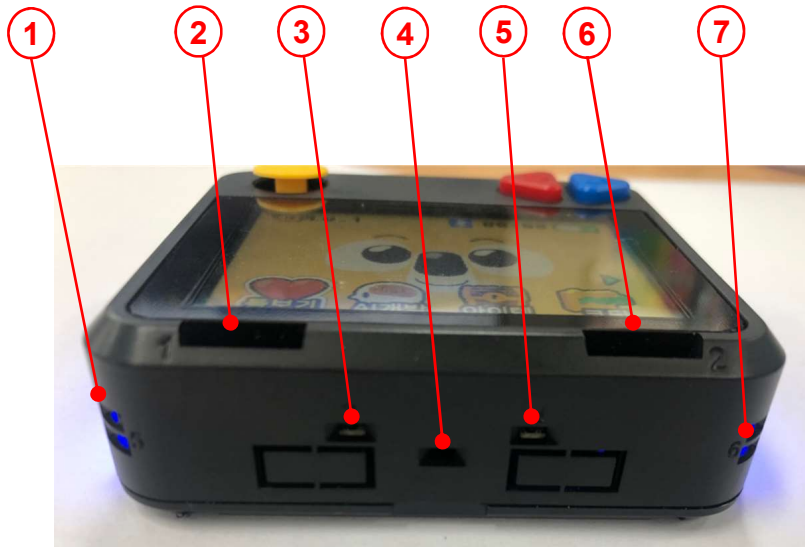
- ① Speaker
- ② LED indicator
- ③ MIC



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## Hardware description

## IR Sensors Function Description



- ① IR sensor emitter/receiver
- ② IR sensor emitter/receiver
- ③ IR sensor emitter
- ④ IR sensor receiver
- ⑤ IR sensor emitter
- ⑥ IR sensor emitter/receiver
- ⑦ IR sensor emitter/receiver

## FCC Information

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 interface, 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 CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment 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 correct the interference by one or more of the following measures:

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

## WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

"CAUTION : Exposure to Radio Frequency Radiation.

Antenna shall be mounted in such a manner to minimize the potential for human contact during normal operation. The antenna should not be contacted during operation to avoid the possibility of exceeding the FCC radio frequency exposure limit.