

HS-B06B Smart trash can

Learning kit assembly manual



Product introduction

Smart trash cans, commonly known as induction trash cans, are relatively ordinary trash cans. In short, the lid can be opened and closed through a sensor without manual or foot stepping, which is more convenient. You can also modify the sample program through programming software such as Arduino IDE and Mixly, or write a new program yourself to control the smart trash can.

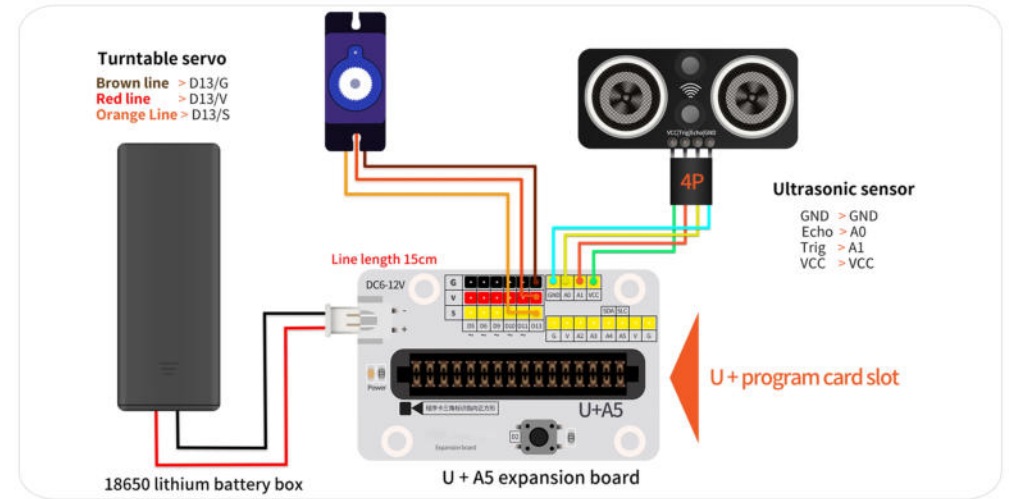
This product must be equipped with a U + program card.
(U + PROGRAM CARD) Use
U + PROGRAM CARD SUPPORTS ARDUINO
IDE, MIXLY, ARDUBLOCK, SCRATCH AND OTHER
PROGRAMMING

Preparation tools and assembly precautions

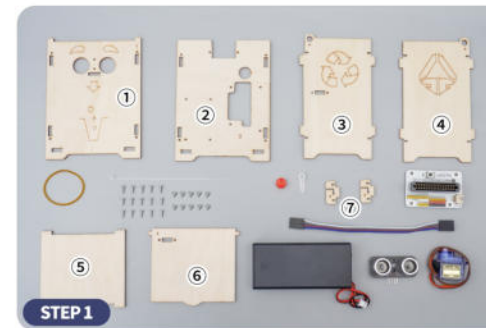
Bring your own assembly tools: a cross screwdriver, a pair of scissors.
Bring your own debugging tools: 1 computer with Windows 7, 8, 10, and 11 operating systems, 1 U + program card, 1 micro usb data cable, and a pair of 18650 lithium batteries.
If you want to easily assemble the kit, you need to read the assembly instructions carefully and assemble it step by step.



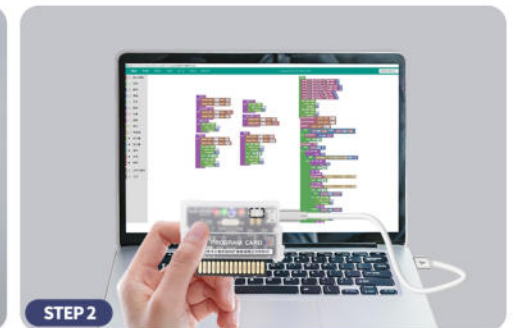
Warning: Persons under the age of 14 must use it under the guidance of a professional teacher or an adult with relevant knowledge! The assembly and debugging of this product require the use of relevant tools. Please take safety precautions when assembling to avoid injury! This product is a teaching experiment product, please do not use its function as a routine product, there will be instability! When you are not using this product, please turn off the power switch on the battery case and remove the battery, and keep the battery properly!



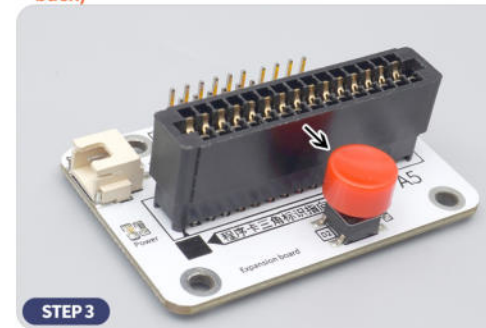
● Circuit wiring reference diagram



● Prepare all accessories and board materials, please check the number on the material carefully when assembling the board materials. **(The wooden board has numbers for the front, no numbers for the back)**



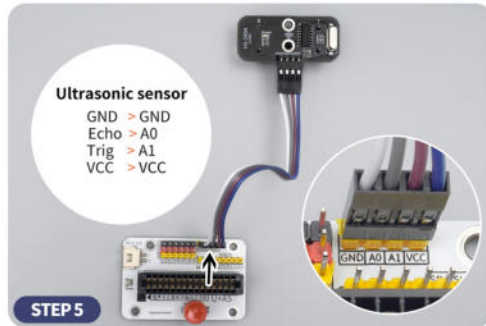
● Use Mixly software to upload the initialization program of the kit to the U + program card.



● Install the red button cap on the U + A5 expansion board.



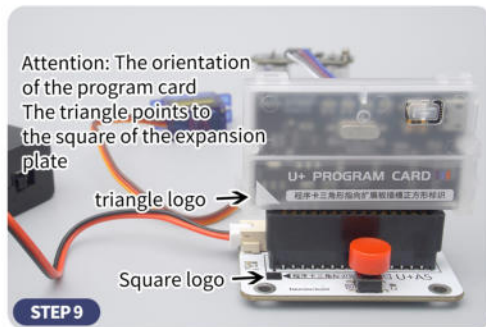
● Plug the 4P DuPont cable port into the ultrasonic module.



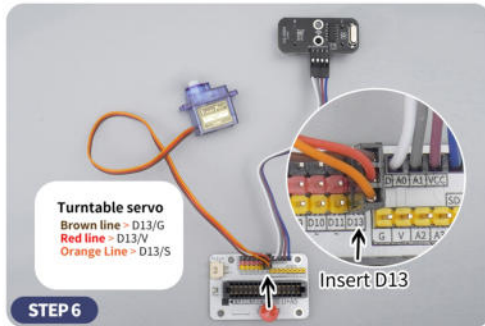
- Refer to [Circuit Wiring Diagram] Plug the ultrasonic sensor 4P DuPont cable port into the GND, A0, A1, and VCC interfaces on the U + A5 expansion board. (Note: Please check the port line sequence before inserting it. Wrong line sequence may burn out the circuit board.)



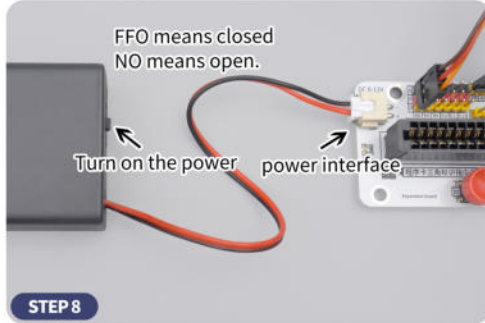
- Referring to the picture above, first push the lid of the battery case open, then install two 18650 lithium batteries, and finally close the lid of the battery case.



- Referring to the figure above, insert the U + program card into the U + A5 expansion board.



- Refer to [Circuit Wiring Diagram] to insert the steering gear cable port into the D13 pin of the U + A5 expansion board. (Note: Please check the port line sequence before inserting it. Wrong line sequence insertion may burn out the circuit board.)



- Refer to [Circuit Wiring Diagram] to insert the wire port of the battery box into the power interface of the U + A5 expansion board.



- When powered on, place your hand on the ultrasonic module 30mm and the steering gear will rotate 180 degrees counterclockwise.



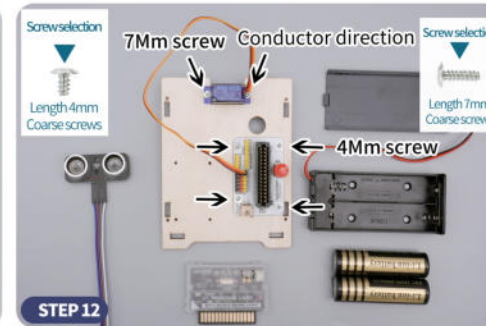
- After removing the hand, ensure that there is no induction (object) in front of the ultrasonic module, wait for the steering gear to turn around, and then turn off the power supply. (Initialize the rudder to 0 degrees).



- Install the steering arm on the steering gear with 7mm coarse-grained screws. (Note: Please be sure to install the steering gear disc (arm) when the steering gear is powered on. There should be no mechanical resistance (such as screwing, breaking, pulling) when the steering gear is powered on. If the resistance is greater than the torque of the steering gear, it will get hot and burn the steering gear.)



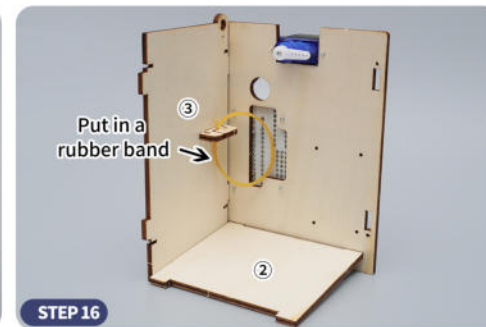
- Referring to the picture above, install the 0006 plate on the back of the 3 plate with 7mm rough-grained screws, and then install another 0006 plate on the back of the 4 plate with 7mm rough-grained screws.



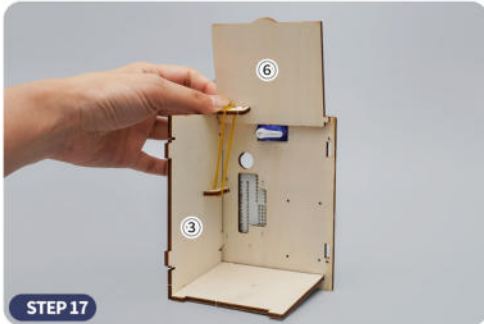
- Remove all other accessories except the steering gear, and then install the steering gear in the groove on the front of the No. 2 plate, fix it with 7mm rough-grain screws, and then install the expansion plate on the front of the No. 2 plate with 4mm rough-grain screws.



- Install the 5 board on the 2 board.

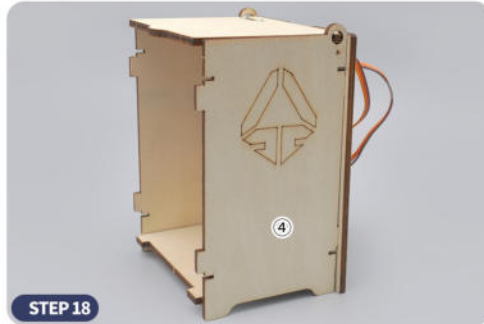


- Install the 3 plate on the 2 plate with 7mm coarse-grained screws, and put the rubber band in the 0006 plate.



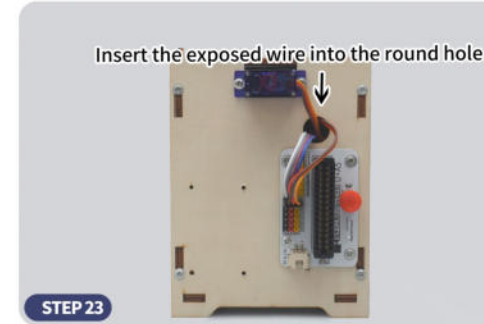
STEP 17

- Install the ④ plate into the round hole of the ③ plate and insert the rubber band into the other 0006 plate.



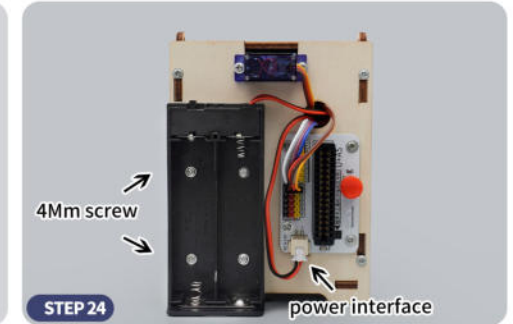
STEP 18

- First install the ④ plate on the ④ and ② plates, and then fix the ④ plate on the ② plate with 7mm coarse-grained screws.



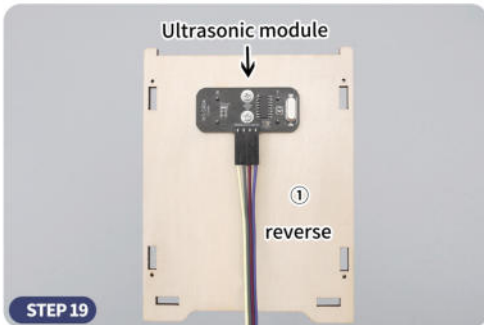
STEP 23

- Pass the DuPont wire of the ultrasonic module and the wire of the steering gear through the round hole of plate ②.



STEP 24

- Install the battery box on the ② board with 4mm coarse-grained screws, and then plug the battery box wire terminal into the power interface of the expansion board.



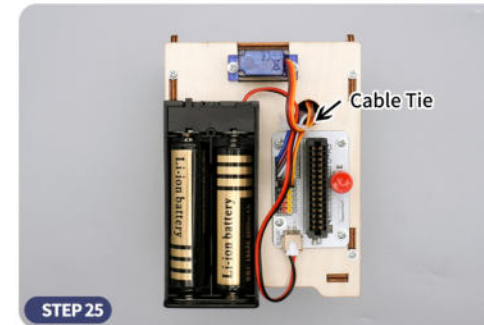
STEP 19

- Install the ultrasonic module on the back of the ① plate with 4mm coarse-grained screws.



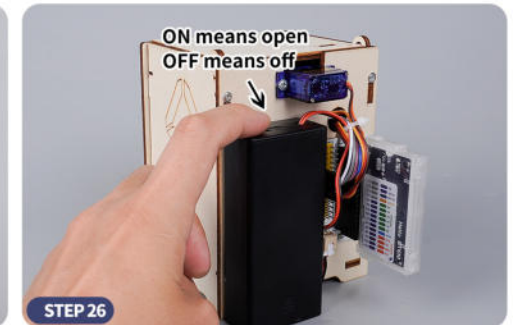
STEP 20

- Pass the DuPont wire of the ultrasonic module through the round hole of plate ②. And fix the ① panels on the ③ and ④ panels.



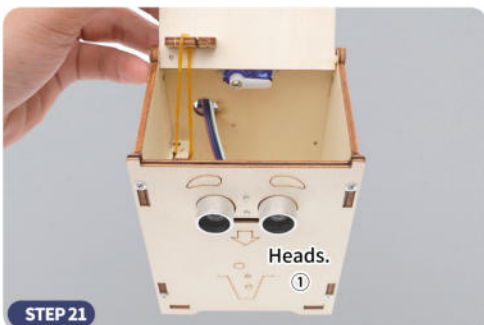
STEP 25

- Use the cable ties to tie the wires, then trim off the excess cable ties with scissors, and finally put the battery in the battery case. **Attention: Be careful when using scissors to avoid injury.**



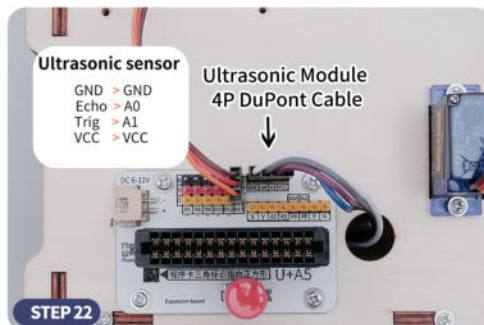
STEP 26

- First cover the lid of the battery case, plug in the U + program card, turn the switch on the battery case to the ON direction, and the smart trash can will start to work.



STEP 21

- Fix the ① plate on the ③ and ④ plates with 7mm coarse-grained screws. **(Note: ① The front of the board faces out.)**



STEP 22

- Plug the ultrasonic module 4P DuPont cable port into the GND, A0, A1, and VCC interfaces on the U + A5 expansion board. **(Note: Please check the port line sequence before inserting it. Wrong line sequence insertion may burn out the circuit board.)**



STEP 27

- Assembly is complete.



STEP 28

- Put your hand on the sensing area of the ultrasonic module, and the lid of the smart trash can will automatically open. After the handle is removed, the lid of the trash can will automatically close with a delay of three seconds.

After the assembly is completed, you also need to check whether it is installed correctly to avoid danger during debugging!



1. Carefully check whether the entire kit has the wrong accessories. If there are wrong accessories, the entire kit will not function normally.
2. Carefully refer to the circuit connection reference diagram to check whether the wire connection is correct. Wrong wire connections can lead to circuit short circuits, burn electronic components, and seriously lead to dangerous situations such as fire and explosion.
3. Carefully check whether the pins at the bottom of the circuit board accessories are in contact with other metals. If there is any contact, please check whether any accessories are not installed, resulting in the circuit board not being isolated from other metals.
4. Please check the power supply type of this kit and the battery model used. Wrong use of the power supply or battery can lead to dangerous situations such as fire and explosion.
5. If you encounter any problems you don't understand, please contact the online customer service of the official service website or consult relevant professionals during working hours from Monday to

Refer to the process below to debug the kit.

Download and install the U + program card driver on the computer, and install the programming software.

Download the sample program to the U + program card using the data cable.

Insert the U + program card into the expansion card slot of the kit.

Turn on the power switch of the kit and the kit starts to work.

During debugging, you may encounter the following problems. Please refer to the following prompts to see if you can troubleshoot!



1. Check whether the wiring is loose or wrong, please refer to the circuit wiring diagram for details.
2. Check whether the battery has insufficient power, and it is recommended to replace it with a new battery.
3. Check whether the DuPont cable of the sensor and the expansion board is connected correctly, please refer to the circuit wiring diagram.
4. Check whether the U + PROGRAM CARD program card has downloaded the program.
5. Check whether the U + PROGRAM CARD program card is inserted upside down. Inserting upside down will cause a short circuit. Please refer to the card insertion method of [STEP9] to insert the card.