

Two-way radio



Introduction

Two-way radio communication has unique advantages in emergency communication and instant communication, and is therefore widely used in fields such as public security, fire fighting, medical rescue, petrochemical industry, and civil construction, property management, hotels and restaurants, shopping malls, schools, and people's daily lives, where two-way radios play an important role.

Next, let's make a pair of two-way radios of our own!

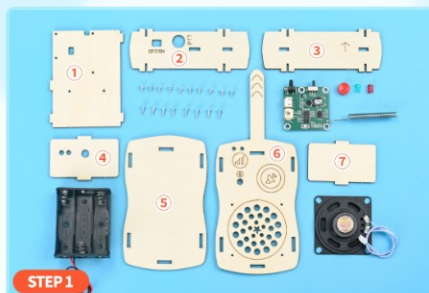
Tools and materials to be prepared

You need to prepare a small screwdriver and three AA 5-size batteries. A screwdriver is required to install screws during the assembly process, and batteries are needed to make the assembled model work normally after completion.

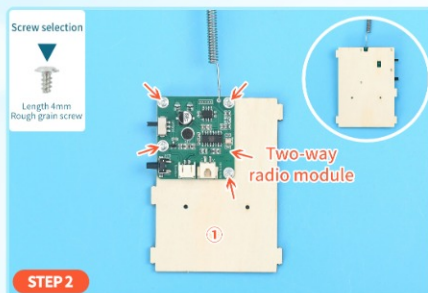
NOTE

- Hello little friend! Please handle the Kaifeng material kit with care to avoid sudden loss of small materials. The loss of small materials may cause your small creation to be poorly made!
- Little friends, please do not assemble small creations alone. Assembling alone may be dangerous. You must have the company of your parents or a teacher when making creations!
- To easily make small creation models, you need to read the instructions carefully, follow the steps, and if you have any questions, you can ask your parents or teacher. Seeking help from others is also a form of learning!

Follow me and do it together

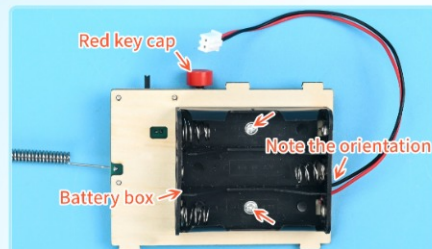


- Prepare small craft materials. The patterned side of the wood is the front, and the side without a pattern is the back. Materials subject to actual objects.



STEP 2

- Install the intercom module on board ① using 4mm coarse-threaded screws.



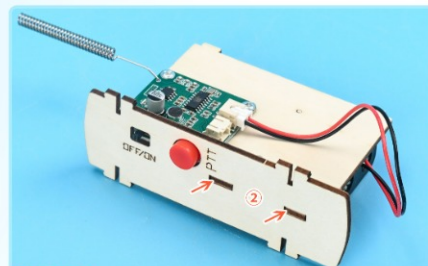
STEP 3

- Firstly, install the red key cap on the intercom module, then use a 4mm coarse-threaded screw to mount the battery case on the reverse side of the No. ① board.



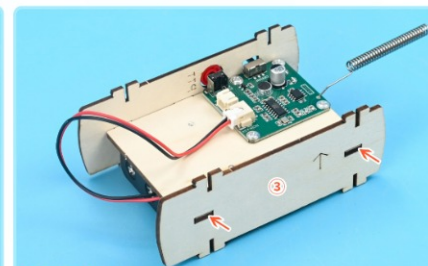
STEP 4

- Insert the battery box wire into the power interface on the intercom module.



STEP 5

- Install the ② board on the ① board.



STEP 6

- Install the ③ board on the ① board.



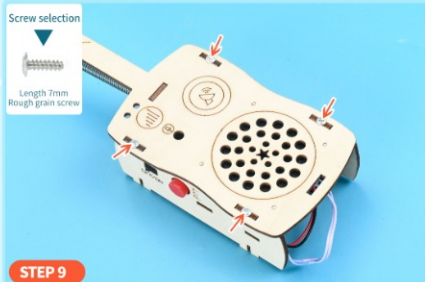
STEP 7

- Install the speaker with a 4mm coarse-thread screw on the back side of the ⑥ board.



STEP 8

- Insert the horn wire into the horn jack on the intercom module.



STEP 9

- Mount Plate 6 onto Plates ②, ③ and 4 with 7mm coarse-thread screws.



STEP 10

- Refer to the figure above, mount Plate 7 onto Plate ⑤.



STEP 11

- Install the batteries and test the product. After confirming that the product is working, screw on the back board ⑤. **Note: To prevent children from swallowing the battery, the back board ⑤ is designed to be permanently sealed. Thanks for your understanding.**



STEP 12

- The intercom production is complete! When the intercom receives voice information, the indicator light turns green. When communicating with others, press the PTT button and speak. Once you finish speaking, you can release the button, and the voice just transmitted will be heard and received by others on the same channel.



Encountered trouble while making?

The walkie-talkie is not working.

1. Check if the battery is low on power, as insufficient battery power may cause the model to malfunction, and it is recommended to replace it with a new battery for testing.
 2. Check if the wires in STEP 4 and STEP 11 are loose, as loose wires may cause the model to short circuit or fail to operate.
 3. Need more help? Customer support: Support@annisoka.com
- ⚠ WARNING: This tool is not a toy. Keep out of reach of children at all times.**
- Do not mix old and new batteries.
 - Do not mix alkaline, standard (carbon-zinc), or re-chargeable batteries.)



Scientific little knowledge

Scientific facts about walkie-talkies

1. **Wireless Communication:** Two-way radios communicate through radio waves, without relying on networks or other infrastructure. They use specific frequency ranges to send and receive voice signals.
2. **Frequency Modulation Technology:** Most two-way radios use frequency modulation (FM) technology. FM can better maintain voice quality and clarity, reducing noise and interference.
3. **Channel Selection:** Two-way radios typically have multiple selectable channels, allowing users to choose different channels for communication as needed. This helps avoid interference from signals on other channels.
4. **Transmission and Reception:** Two-way radios contain transmitters and receivers. The transmitter converts voice signals into radio waves and sends them out, while the receiver receives and demodulates these signals, converting them back into audible voice.
5. **Battery Power:** Two-way radios are usually powered by batteries, commonly rechargeable ones. The battery's capacity and lifespan affect the duration of use for the two-way radio.
6. **Antenna:** The antenna of a two-way radio is used for sending and receiving radio signals. The length and shape of the antenna affect the strength and range of the signal.
7. **Communication Distance:** The communication distance of two-way radios is affected by various factors, including transmission power, antenna height, environmental obstructions, etc. Generally, the communication distance of two-way radios is within a few kilometers.
8. **Emergency Calls:** Some two-way radios are equipped with emergency call buttons for quickly issuing alarms or requesting help in emergencies.
9. **Signal Enhancement:** In some cases, such as in mountainous areas or dense urban environments, signal boosters or repeaters may be needed to expand the range.

Two-way radios are widely used in many fields, such as business, outdoor activities, public safety, etc. Understanding these scientific facts can help us better understand and use two-way radios.

FCC Warning:

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.