measuring ruler

A-40

DIY Radio

DIY Radio Introduction

Radio, That is a receiver for wireless broadcasting. Modulated by the high frequency of the antenna input, the weak signal, after amplification, frequency conversion and detection, is reduced to the sound frequency signal. According to different needs, the radio can be combined with different meta-devices and wiring formulas.

Let's make our own DIY Radio!

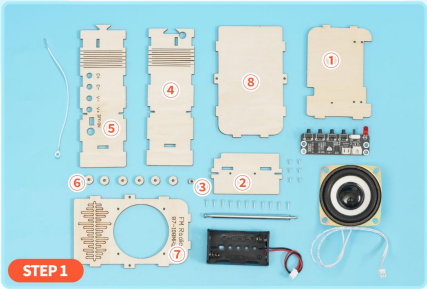
Required production tools and self-contained materials

You need to prepare a small screwdriver and two AA batteries. A screwdriver is required to install screws during the production process, and the battery needs to be used after the production is completed to make the made model work normally.

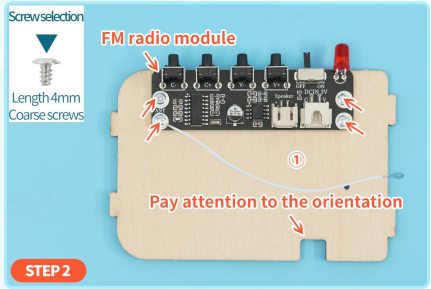
NOTE

- Hello child! Please be careful when opening the material package to avoid the sudden loss of small materials.
- The loss of small materials may cause your small production to fail!
- Children, please do not assemble small productions alone. Making them alone may be dangerous. You must be accompanied by your parents or teachers to make them!
- If you want to easily make a small production model, you need to read the instructions carefully and follow the steps to make it. If you don't understand any questions, you can ask your parents or teachers. Seeking help from others is also a kind of learning!

Do it with me

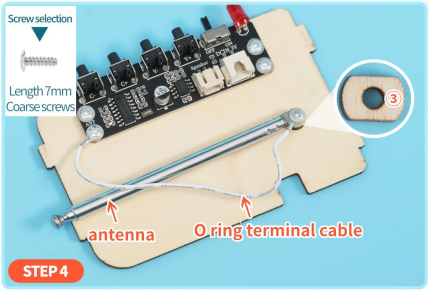


- Prepare small fabrication materials.**The wooden board has a pattern surface for the front, but no pattern for the back.Note: Gently install or remove the ④ and ⑤ boards to avoid damage.**

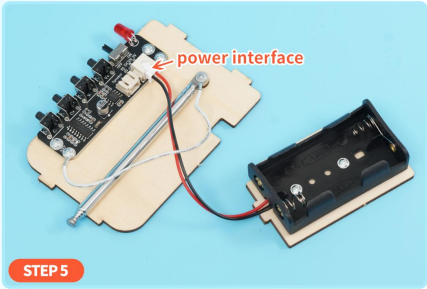


- Referring to the picture above, install the FM radio module and one end of the O ring terminal cable Referring to the diagram above, install the FM radio module and one end of the O ring terminal cable on the ① board using 4 mm coarse-grained screws.**(Note:The O ring terminal cable are stacked above the FM radio module)**

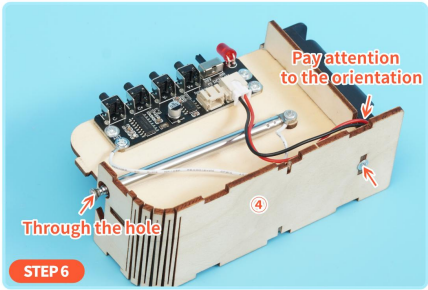
- Install the battery box on board ② with 4mm coarse-grained screws.



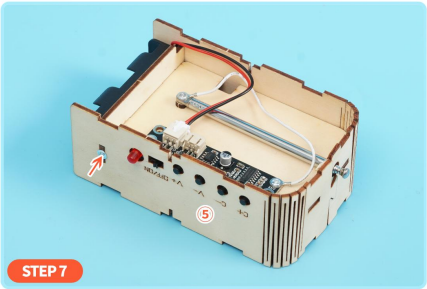
- First, stack the other end of the O ring terminal cable, the antenna, and board #3 on top of each other, and then secure it to board #1 with 7mm coarse-grain screws.



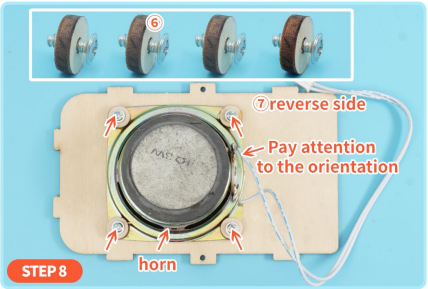
- Insert the battery box cable into the FM radio module.



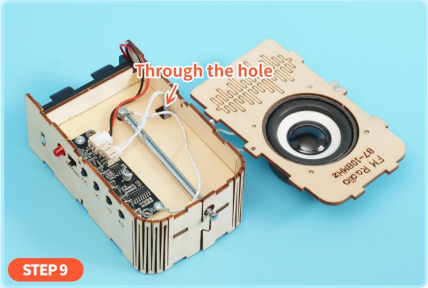
- First, install the ② board on the ① board, then pass the antenna through the hole of the ④ board, and finally install the ④ board on the ① and ② boards with 7mm coarse-grained screws.



- Install the ⑤ boards on the ① and ② boards with 7mm coarse-grained screws.

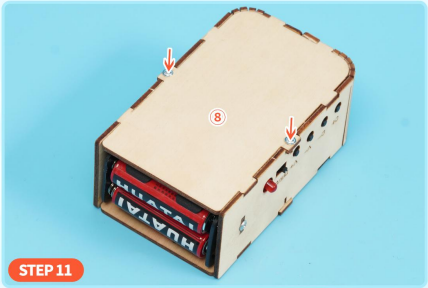


- Referring to the picture above, screw the 7mm coarse-grained screw to the ⑥ board (screw to half), then stack the speaker on the reverse side of the ⑦ board, and finally install the screws of the ⑥ board on the ⑦ board.**Note: Do not screw to the bottom to prevent the screw from protruding and scratching your hand.**



- First pass the horn wire through the hole in the ① board, and then plug the horn wire into the FM radio module.

- Install the ⑦ board on the ④ and ⑤ boards with 7mm coarse-grained screws.



- First, install the ⑧ board on the ④ and ⑤ boards with 7mm coarse-grained screws, and then install the battery in the battery box.**PS: Batteries not included, you need to prepare your own.**

- Toggle the DIY radio to the "On" direction and the DIY radio will start working! You can press the C+ and C buttons to switch channels and the V+ and V- buttons to adjust the volume.

- **Better signal reception in open areas**

Is there any trouble with the production? See if there is the following problem!

DIY radio not working

1. Check whether the battery is insufficient. If the battery is insufficient, the model will not operate normally. It is recommended to replace it with a new battery for testing.
2. Receiving signals in complex construction areas will be unstable. It is recommended to receive signals in open areas.

Science tips

Who invented the first radio?

The invention of the first radio was a multi-scientist, multi-technological breakthrough process that involved the contributions of multiple scientists and inventors, but is generally credited to the achievements of Italian Guglielmo Marconi and Englishman John Ambrose Fleming.

Marconi won the Nobel Prize in Physics for the invention of wireless telegraphy, while Fleming's invention of the vacuum tube laid the foundation for the development of the radio. Other important contributors include the Russian physicist Bobov, who successfully sent and received radio signals between the two places in 1895, and the American inventor DeForest, who designed the first practical radio in history in 1906. Together, these inventions marked the birth of radio technology.

FCC Warnning:

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 againstharmful interference in a residential installation. This equipment generates, uses and can radiateradio frequency energy and, if not installed and used in accordance with the instructions, maycause harmful interference to radio communications. However, there is no guarantee thatinterference will not occur in a particular installation. If this equipment does cause harmfulinterference to radio or television reception, which can be determined by turning the equipmentoff and on, the user is encouraged to try to correct the interference by one or more of thefollowing 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.