

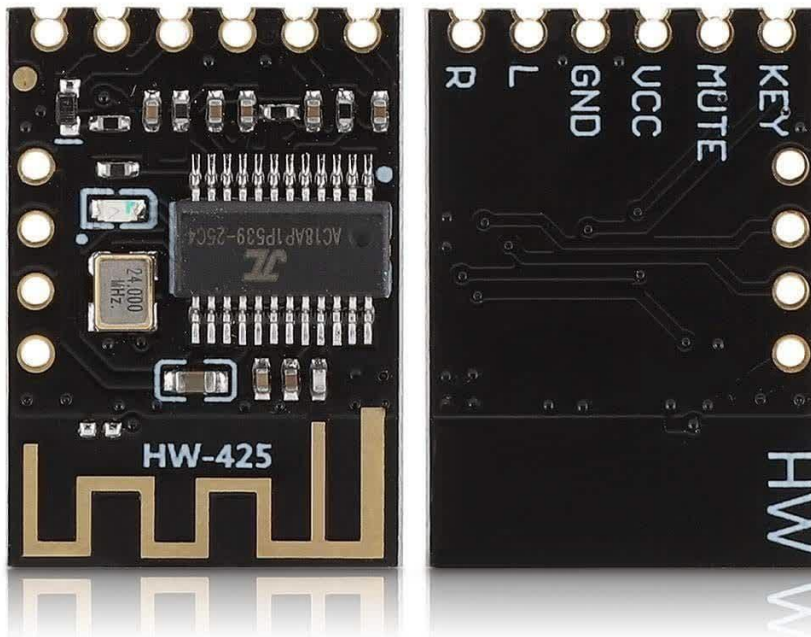
User Manual for the HW-425 Bluetooth Audio Receiver Module

Wireless Stereo MP3 Decoder Board, HiFi-Compatible, Bluetooth 4.2

1. Introduction

This user manual provides detailed instructions for the proper installation, operation, and maintenance of your HW-425 Bluetooth audio receiver module. The module is designed to deliver high-quality, lossless stereo audio reception via Bluetooth 4.2, making it ideal for a wide range of audio modification projects and DIY applications.

The HW-425 module is a wireless audio board with Bluetooth 4.2 support for high-fidelity, lossless stereo sound.



2. Safety Warnings and Precautions

Please read all instructions carefully before using this product, and keep this manual for future reference. Failure to follow these instructions may result in damage, injury, or other hazards.

- **Avoid moisture:** Do not use the product outdoors in rain or in environments with high humidity. Avoid contact with liquids to prevent electric shock.

- **Do not disassemble:** Unauthorized disassembly or repair by non-professionals is strictly prohibited. Improper handling may cause electric shock, fire, or product failure. Contact professional service personnel if needed.
- **Electrical safety:** Before use, make sure the power outlet is in good condition and undamaged. Unplug the device when not in use or when cleaning.
- **Prevent dropping:** Avoid dropping the product from elevated positions to prevent damage.
- **Keep away from children:** Make sure children stay away from the workspace while the device is in use. This product contains small parts that may present a choking hazard and is not suitable for children under 36 months unless directly supervised by an adult.
- **Intended use only:** Do not use the product for any purpose other than its intended application.
- **Disposal:** Dispose of the product and its packaging in accordance with EU WEEE Directive 2012/19/EU and RoHS Directive 2011/65/EU. Do not dispose of it with household waste.

3. Installation and Setup

Install the product parts correctly by following the steps below. Accurate connections and interfaces ensure a proper fit.

3.1. Unpacking Inspection

After unpacking, check that the product is complete and undamaged. Make sure all components are present.

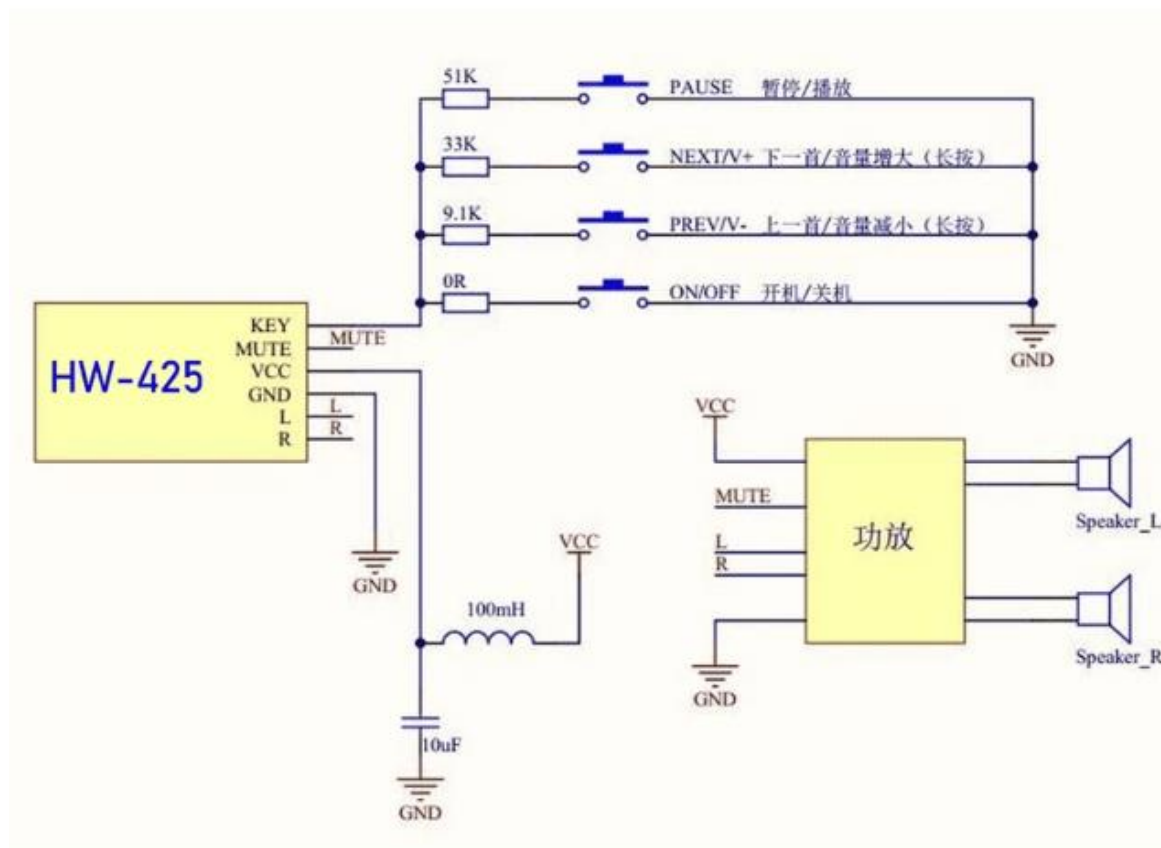
3.2. Wiring Method

The HW-425 module, labeled on the back, requires careful wiring to connect to your audio system. Refer to the diagram below for proper connections.

Connection points on the module:

- **VCC:** Connect to the positive (+) terminal of your DC 5V power supply. The module can also operate at 3.7–4.2V.
- **GND:** Connect to the negative (-) terminal of the power supply and the common audio ground.
- **L:** Left audio channel output. Connect to the positive input (+) of the left speaker.

- **R:** Right audio channel output. Connect to the positive input (+) of the right speaker.
- **Mute:** Mute control pin (optional, typically connected to a switch or microcontroller for mute functionality).
- **Key:** Key input pin (optional, used for control buttons such as play/pause, next/previous).



General wiring steps:

1. Connect the VCC pin of the HW-425 module to a stable DC 5V power supply (or 3.7–4.2V).
2. Connect the GND pin of the module to the ground of the power supply and the audio amplifier/speaker system.
3. Connect the L (left) output pin to the positive input of the left speaker channel or your audio amplifier.
4. Connect the R (right) output pin to the positive input of the right speaker channel or your audio amplifier.
5. Make sure all connections are secure and properly polarized to avoid damage.

4. Operation

The HW-425 module provides user-friendly operation with its simple design.

4.1. Powering On

After correct wiring and power supply, the module usually enters pairing mode automatically. An indicator light, if present, may blink to show that it is ready to connect.

4.2. Bluetooth Pairing

1. Make sure the HW-425 module is powered on.
2. On your Bluetooth-enabled device (for example, a smartphone or tablet), open Bluetooth settings.
3. Scan for available devices. The module should appear as a discoverable device (for example, “HW-425” or a similar name).
4. Select the module from the list to pair it. After pairing, the indicator light may turn solid or change its blinking pattern.
5. You can now play audio from your device, and it will be transmitted wirelessly to the HW-425 module and played through the connected speakers.

The module supports Bluetooth 4.2 transmission and provides lossless two-channel stereo playback. In open spaces or under low-interference conditions, the connection range can reach up to 20 meters.

5. Cleaning and Storage

5.1. Cleaning

To maintain optimal performance and appearance, wipe dust or surface stains immediately after use with a soft, dry cloth. Do not use liquid cleaners or abrasive materials.

5.2. Storage

When not in use, store the product in a dry, well-ventilated place away from direct sunlight, excessive heat, and high humidity. Make sure the power supply is disconnected before storage.

6. Troubleshooting

If you encounter problems with the HW-425 module, try the following steps:

No Power

- Check the power supply connections (VCC and GND) to make sure they are secure and providing the correct voltage (5V or 3.7–4.2V).
- Confirm that the power source is functioning properly.

Pairing/Connection Fails

- Make sure the module is powered on and within the 20-meter transmission range of your device.
- Turn Bluetooth off and on again on your device, then try scanning again.
- Make sure no other device is currently paired with the module.
- Restart the module by disconnecting and reconnecting power.

No Sound / Poor Sound Quality

- Check the speaker connections (left, right, ground) for correct wiring and polarity.
- Make sure the volume on both your source device and the connected amplifier/speakers is turned up.
- Confirm that audio is playing correctly on your device.
- Reduce interference by moving away from other wireless devices or obstacles.

Short Transmission Range

- Make sure there are no major obstacles (walls, metal objects) between the module and your device.
- Minimize electromagnetic interference from other electronic devices.
- For best range, operate in an open area.

7. Specifications

The technical specifications of the HW-425 Bluetooth audio receiver module are as follows:

- **Type:** Module
- **Origin:** Mainland China
- **Condition:** New
- **Material:** ABS
- **Color:** As shown (typically black PCB)
- **Rated Voltage:** 5V / 3.7–4.2V
- **Operating Current:** 20mA
- **Transmission Range:** 20 meters (in open space or low-interference conditions)
- **Operating Temperature:** -40 to +85°C
- **Product Size:** 23 x 16 x 3 mm / 0.91 x 0.63 x 0.12 in
- **Product Weight:** 4 g
- **Package Size:** 34 x 21 x 3 mm / 1.34 x 0.83 x 0.12 in
- **Gross Weight:** 5 g

8. User Tips

- For the best sound quality, make sure your power supply is stable and noise-free. If you hear humming, consider adding a small capacitor between the VCC and GND lines.
- When integrating the module into a custom enclosure, ensure proper ventilation to prevent overheating, although the module has low power consumption.
- For optimal Bluetooth range, keep the module's antenna (the zigzag trace on the PCB) away from metal objects.
- If using a battery, make sure the battery voltage remains within 3.7 to 4.2V for stable operation.

9. Warranty and Support

This product is manufactured to high-quality standards. For any issues or support requests, please refer to the seller's return policy or contact customer service.

