BANRIA d421cf57-5a36-46b5-b7b1-9565c32b1c31

DIY Bluetooth-Compatible Speaker Kit User Manual

Brand: BANRIA | Model: d421cf57-5a36-46b5-b7b1-9565c32b1c31

1. Product Overview

The BANRIA DIY Bluetooth-Compatible Speaker Kit is an all-in-one electronic project designed for both educational purposes and personal entertainment. This kit allows users to assemble a functional speaker system that supports multiple audio input methods, including Bluetooth, AUX, USB-disk, and TF cards. It also features an integrated FM radio, a digital display, and dynamic LED lights, providing a comprehensive audio experience. This project is ideal for enhancing soldering skills and understanding basic electronic principles.

Figure 1.1: Assembled BANRIA DIY Bluetooth Speaker Kit with remote control.

2. Components in Package

Before beginning assembly, please verify that all components listed below are present in your package.

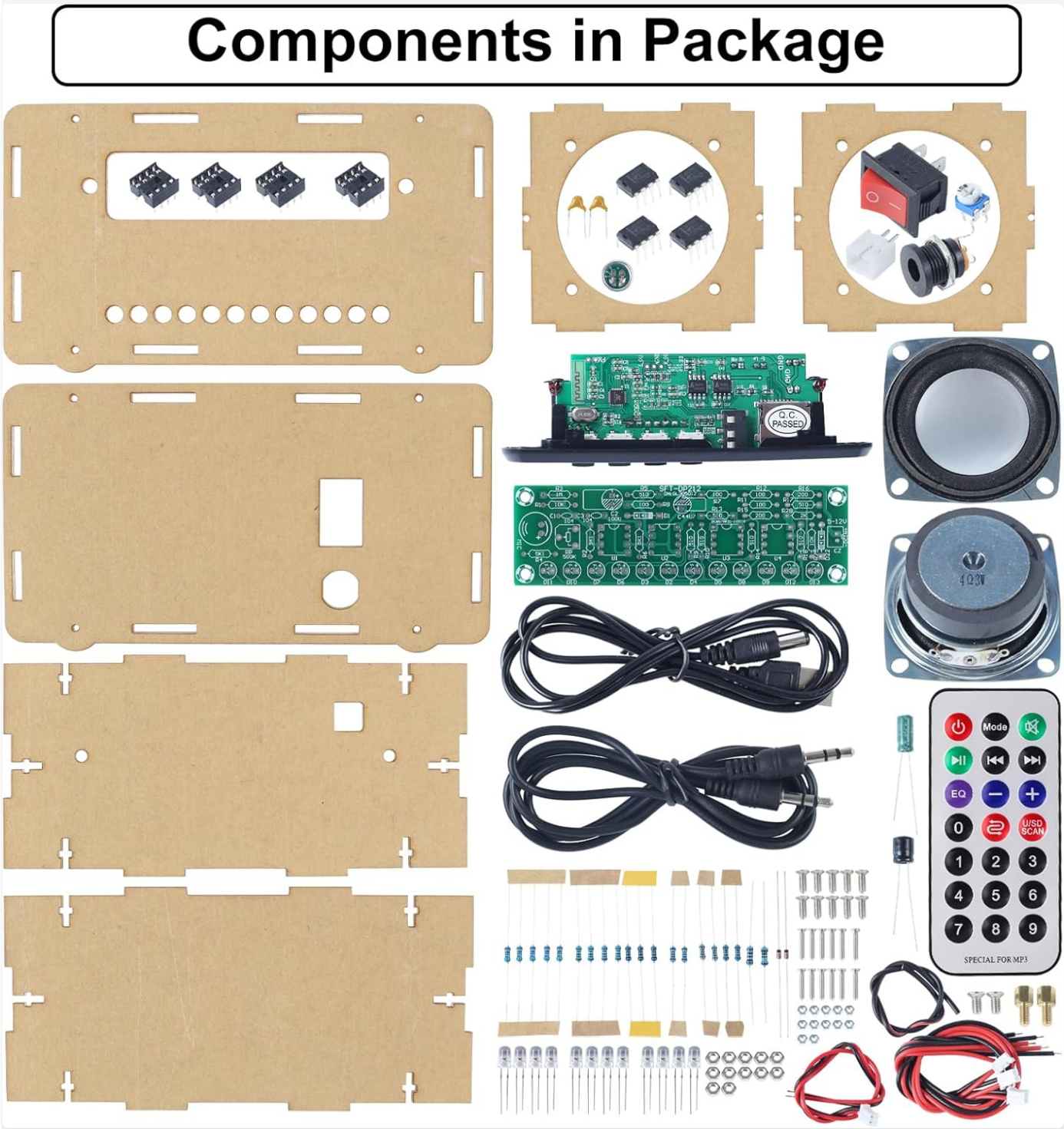

Figure 2.1: Overview of all components included in the DIY speaker kit.

- Acrylic Case Panels (various shapes and sizes)
- Main Control Board (pre-soldered Bluetooth/MP3/FM module)
- LED Spectrum Indicator Board (for soldering)
- Speakers (2x)
- Remote Control
- Power Switch
- Audio Jack (AUX)
- USB Port
- TF Card Slot
- Resistors, Capacitors, Diodes (for LED board)
- LED Lights (various colors)

- Connecting Wires
- Screws and Nuts for assembly
- USB Power Cable
- AUX Audio Cable

3. Assembly Instructions

This kit requires soldering for the LED spectrum indicator board and careful assembly of the acrylic casing. A detailed English soldering manual is available for download on the product page under the "Technical Specification" section. Please refer to that document for step-by-step visual guidance.

3.1 Soldering the LED Spectrum Indicator Board

The main Bluetooth-compatible module board comes pre-soldered. Your primary soldering task involves assembling the LED flashing light kit. Identify the resistors, capacitors, diodes, and LEDs, and solder them onto the designated points on the LED spectrum indicator PCB. Ensure correct polarity for diodes and LEDs.

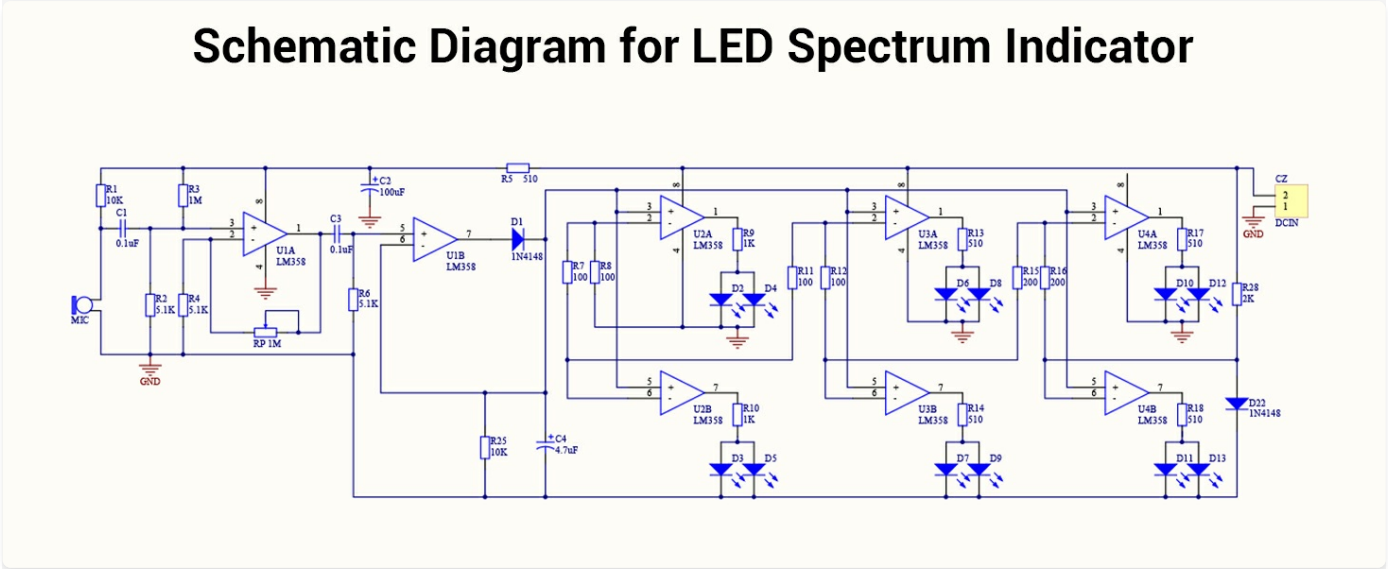

Figure 3.1: Schematic Diagram for the LED Spectrum Indicator.

3.2 Wiring and Case Assembly

Once the LED board is soldered, connect the wires from the main control board to the speakers, power switch, AUX port, and the newly assembled LED board according to the wiring diagram.

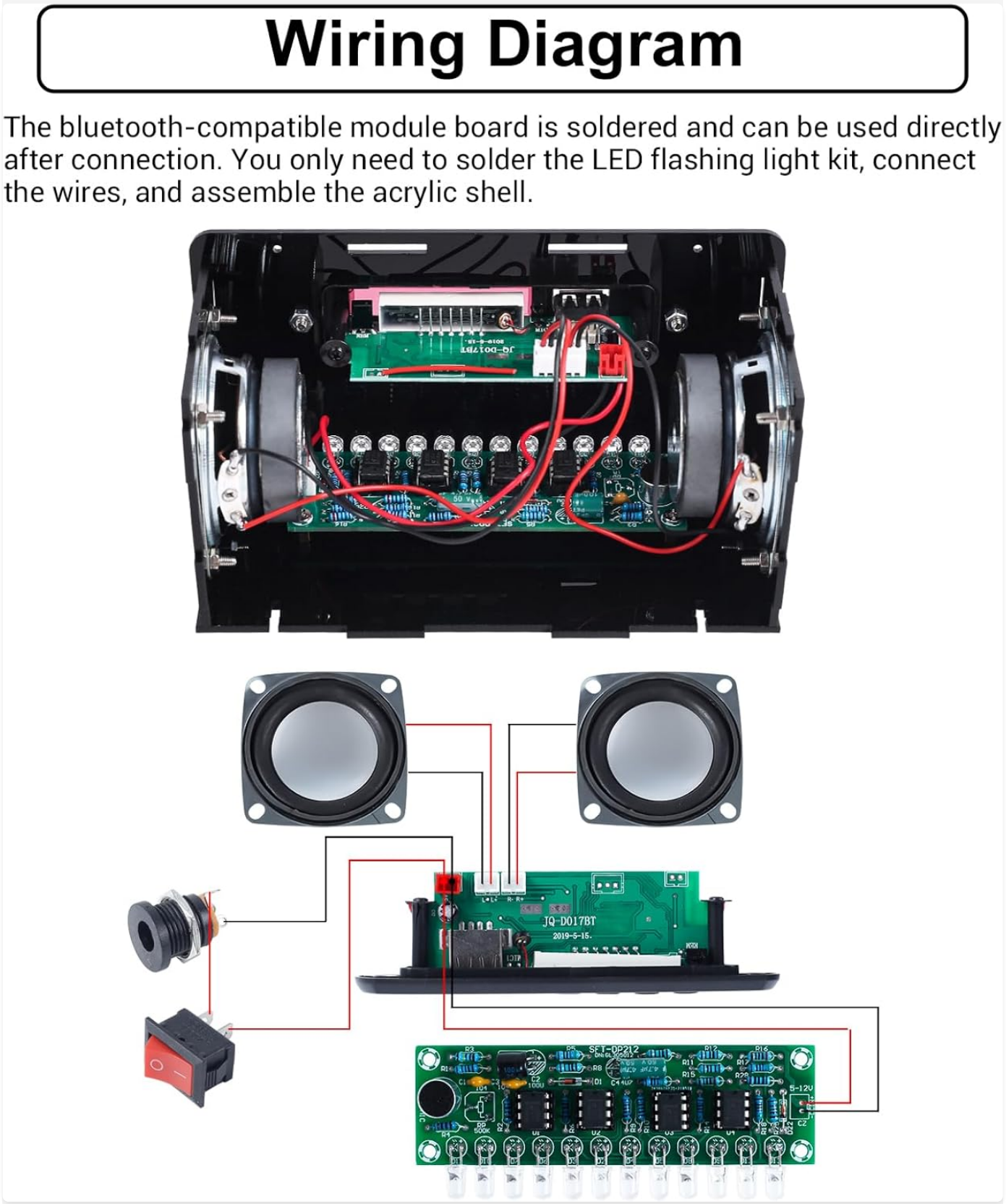

Figure 3.2: Wiring Diagram for the DIY Bluetooth Speaker Kit.

Carefully assemble the acrylic shell using the provided screws and nuts. Ensure all components are securely mounted and wires are not pinched. Some users find it helpful to use a small magnet to hold nuts in place during assembly.

4. Operating Instructions

4.1 Powering On/Off

Connect the speaker kit to a USB power source using the provided USB cable. Use the power switch located on the back of the unit to turn the speaker on or off. For full power off, use the physical switch. The remote control can put the main

unit into standby, but the LED bargraph may remain active.

4.2 Input and Play Modes

The speaker supports multiple input sources. Use the "Mode" button on the unit or the remote control to cycle through the available modes: Bluetooth (BT), FM Radio (FM), AUX, USB-disk, and TF Card.

Figure 4.1: The speaker supports 5 different input and play modes.

Bluetooth Mode (BT)

Switch to Bluetooth mode. The digital display will show "BT". On your mobile device, search for Bluetooth devices and select the speaker (usually named "Bluetooth Speakers" or similar). Once paired, you can play audio from your device.

FM Radio Mode (FM)

Switch to FM mode. To auto-scan for stations, press and hold the "Play/Pause/SCAN-FM" button on the unit or the remote. The speaker will scan and save available stations. Use the "VOL-/Prev" and "VOL+/Next" buttons to navigate between saved stations.

Figure 4.2: FM Radio features including antenna setup, automatic station search, and power-off memory.

AUX Mode

Connect an external audio device (e.g., smartphone, MP3 player) to the AUX port using the provided 3.5mm audio cable. Switch the speaker to AUX mode. Audio will play from the connected device.

USB-disk / TF Card Mode

Insert a USB flash drive or a TF (MicroSD) card containing MP3 audio files into the respective slots. The speaker will automatically detect and begin playing music from the inserted storage.

Figure 4.3: Two primary ways to play music: via AUX cable and Bluetooth 5.0.

4.3 Controls and Display

The speaker features an LCD digital display and controls on the front panel, complemented by a full-function remote control.

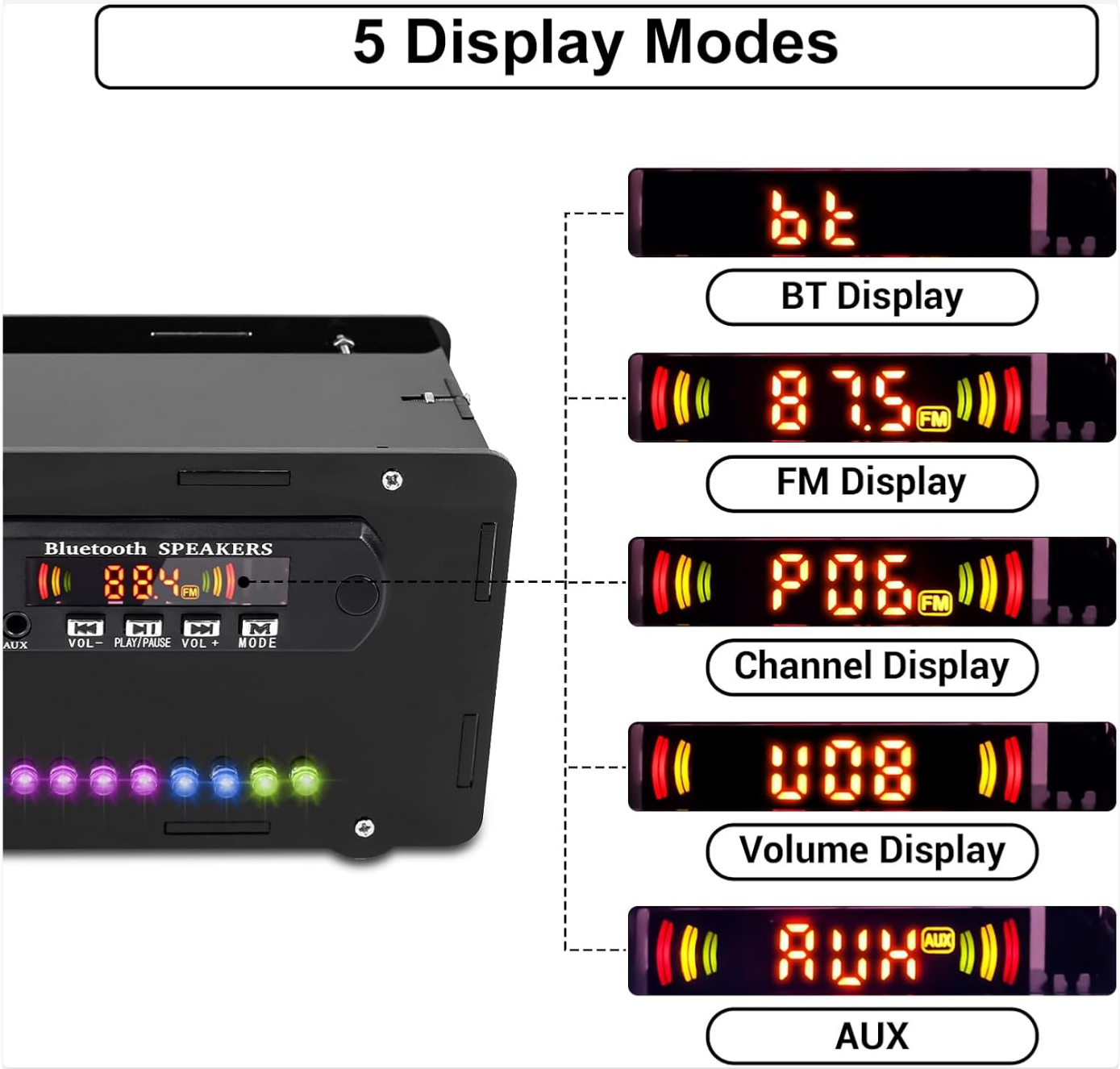

Figure 4.4: The digital display shows various modes and information.

Figure 4.5: Front panel controls and remote control functions.

- **LCD Display Screen:** Shows current mode (BT, FM, AUX), frequency, volume level, and track information.
- **Mode Button:** Cycles through input sources.
- **Play/Pause/SCAN-FM:** Plays/pauses audio; long press in FM mode to auto-scan.
- **VOL-/Prev:** Decreases volume; short press for previous track/station.
- **VOL+/Next:** Increases volume; short press for next track/station.
- **Adjust Spectrum Sensitivity:** A knob (potentiometer) on the side or back to adjust the responsiveness of the LED lights.
- **Remote Control:** Provides full control over power, mode, volume, track selection, EQ settings, and direct station/track selection.

5. Features and Capabilities

- **Bluetooth 5.0 Connectivity:** Ensures stable signal transmission and good sound quality for wireless audio streaming from compatible devices.

- **Multi-Source Playback:** Supports music playback from USB drives, TF cards, and external devices via AUX input, in addition to Bluetooth.
- **Integrated FM Radio:** Features a built-in antenna for clear reception, automatic station search, and power-off memory to retain last channel settings.
- **Digital Display:** Provides clear and intuitive information regarding current mode, frequency, and volume.
- **12 Colored LED Lights:** Dynamic LED lights enhance the visual experience, reacting to audio playback.
- **Remote Control:** Offers convenient operation from a distance.
- **Portable Design:** Compact dimensions (4.64 x 6.88 x 1.37 inches) and light weight (12.3 ounces) make it easy to transport for indoor or outdoor use.

Figure 5.1: Key features including remote control, LED lights, and speaker specifications.

Product Details

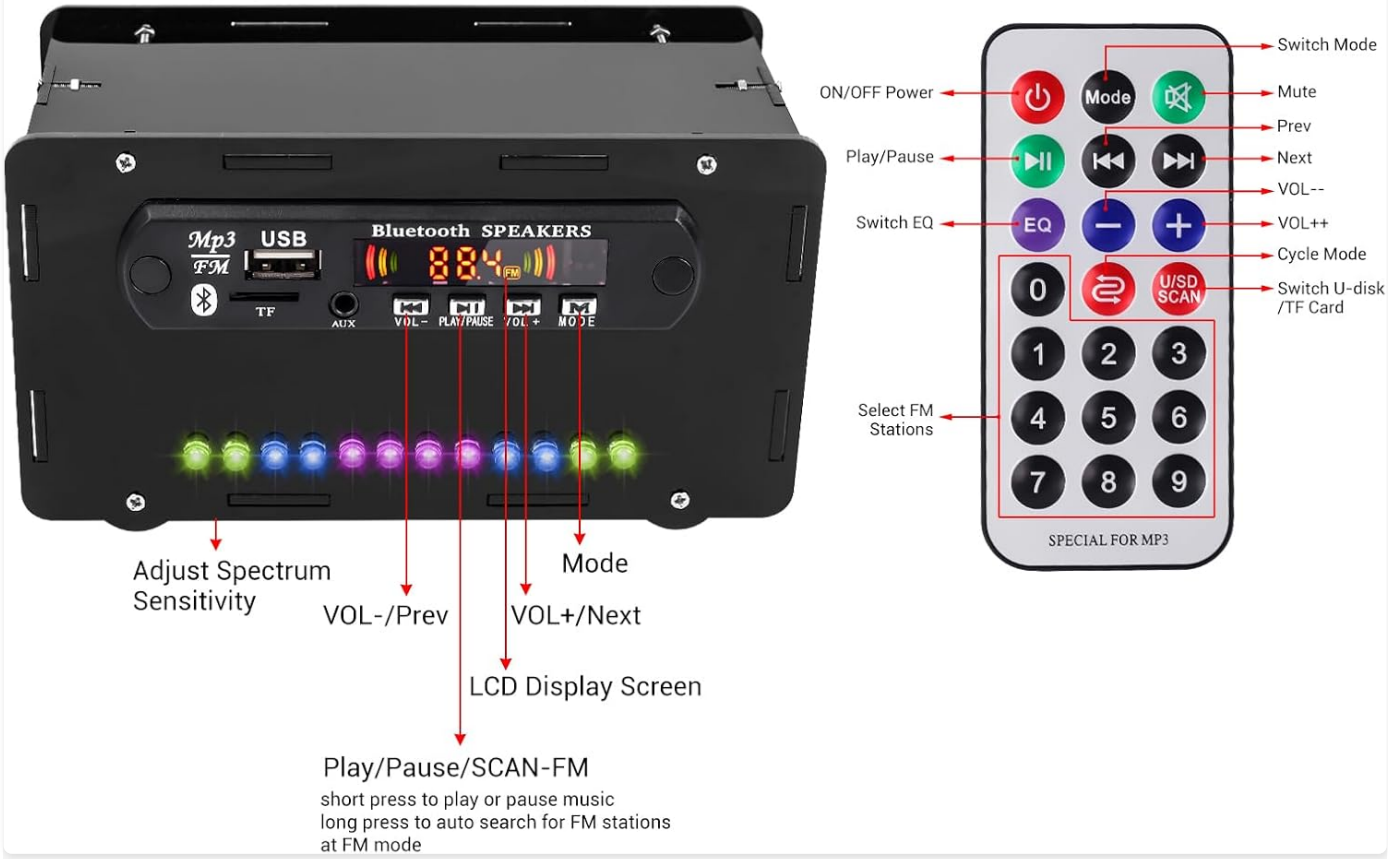

Figure 5.2: The compact size makes the speaker portable for various environments.

6. Maintenance

To ensure the longevity and optimal performance of your DIY speaker kit, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to wipe down the acrylic casing. Avoid abrasive cleaners or solvents that could damage the plastic.
- **Handling:** Handle the assembled unit with care, especially the acrylic case, which can be fragile. Avoid dropping or subjecting it to strong impacts.
- **Power Source:** Always use a stable USB power source. Disconnect power when the unit is not in use for extended periods.
- **Storage:** Store the speaker in a cool, dry place away from direct sunlight and extreme temperatures.

7. Troubleshooting

If you encounter issues with your DIY speaker kit, refer to the following common problems and their solutions:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
No power/Unit does not turn on.	• USB power source issue. • Power switch not fully engaged. • Wiring error during assembly.	• Ensure USB cable is securely connected and power source is active. • Check the physical power switch on the back. • Review wiring diagram (Figure 3.2) for correct connections.
No sound from speakers.	• Volume too low or muted. • Incorrect input mode selected. • Speaker wires disconnected or incorrectly wired. • Faulty speaker.	• Increase volume using unit controls or remote. Check for mute. • Press "Mode" button to select correct input (BT, AUX, USB, TF, FM). • Verify speaker connections to the main board. • Test speakers if possible.
FM radio not receiving stations clearly.	• Poor antenna connection or placement. • Not performed auto-scan.	• Ensure the FM antenna wire is properly crimped and positioned for best reception. • Perform an auto-scan by long-pressing the "Play/Pause/SCAN-FM" button.
LED lights not working or flickering incorrectly.	• Soldering errors on LED board. • Incorrect LED polarity. • Sensitivity knob setting.	• Inspect solder joints on the LED spectrum indicator board for cold joints or bridges. • Verify LEDs are inserted with correct polarity. • Adjust the "Adjust Spectrum Sensitivity" knob.
Acrylic case difficult to assemble or cracks.	• Forceful assembly. • Misalignment of panels.	• Assemble gently, do not overtighten screws. • Ensure all panels are correctly aligned before tightening. A small magnet can help hold nuts.

8. Specifications

Feature	Detail
Product Dimensions	4.64 x 6.88 x 1.37 inches
Item Weight	12.3 ounces
Model Number	d421cf57-5a36-46b5-b7b1-9565c32b1c31
Connectivity Technology	Bluetooth (Bluetooth 5.0), USB, 3.5mm Jack (AUX), TF Card
Controller Type	Remote Control
Special Features	Digital Display, LED Lights, FM Radio, Soldering Practice Kit
Compatible Devices	Smartphone, USB-disk, TF Card, any device with 3.5mm audio output
Audio Output Mode	Stereo
Manufacturer	BANRIA
Country of Origin	China

9. Support and Further Information

For additional support, detailed assembly instructions, or inquiries regarding your BANRIA DIY Bluetooth-Compatible Speaker Kit, please refer to the official user manual PDF available for download on the product's Amazon page under the "Technical Specification" section. You may also contact BANRIA customer support through the Amazon platform for further assistance.

Download Official User Manual (PDF)