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› DIY Bluetooth-Compatible Speaker Kit Instruction Manual

BANRIA FBAAEAGY21404-3

DIY Bluetooth-Compatible Speaker Kit Instruction Manual

Model: FBAAEAGY21404-3

1. INTRODUCTION

This instruction manual provides detailed guidance for assembling and operating your BANRIA DIY Bluetooth-Compatible Speaker Kit. This kit is designed to offer a comprehensive learning experience in electronics and soldering, culminating in a fully functional multi-feature speaker system. It integrates Bluetooth connectivity, FM radio, recording capabilities, and various audio input options, along with an LED spectrum display.



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

2. SAFETY INFORMATION

Please read and understand all safety precautions before beginning assembly or operation. Failure to follow these instructions may result in injury or damage to the product.

- **Soldering Safety:** Always work in a well-ventilated area. Use appropriate personal protective equipment, including safety glasses. Avoid touching hot soldering iron tips or recently soldered components. Ensure proper disposal of solder waste.
- **Electrical Safety:** Do not connect the kit to a power source until assembly is complete and verified. Use only the specified USB power source. Avoid contact with exposed wires or circuit board traces when powered.
- **Component Handling:** Handle electronic components carefully. Some components may be sensitive to static electricity. Avoid bending or forcing pins.
- **Adult Supervision:** This kit contains small parts and requires soldering. Adult supervision is recommended for users under 16 years of age.

- **Environment:** Keep the kit away from water, excessive heat, and direct sunlight.

3. PACKAGE CONTENTS

Before starting assembly, verify that all components listed below are present in your kit. If any parts are missing or damaged, please contact customer support.

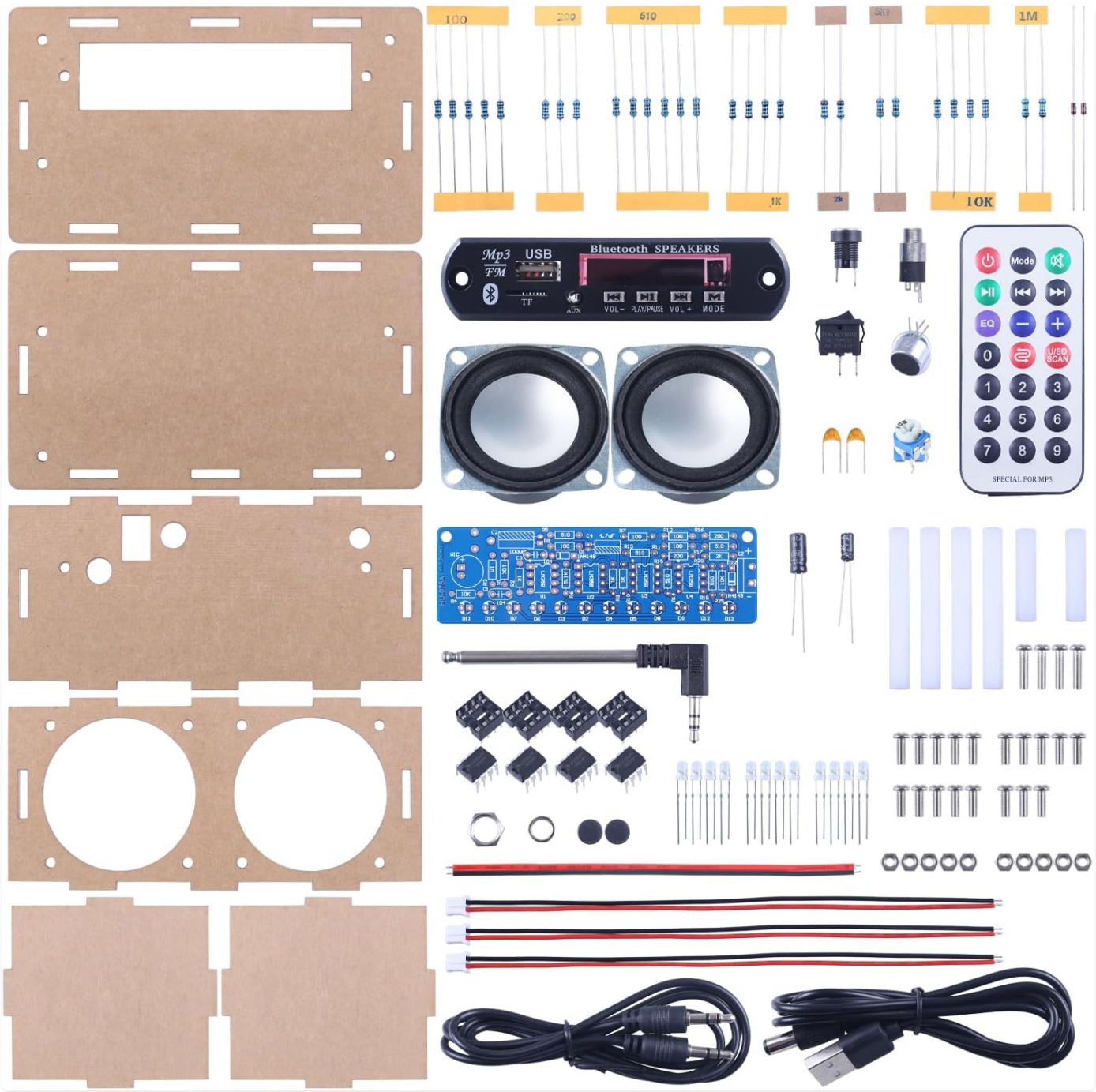


Figure 3.1: Overview of all kit components.

Component	Description	Quantity
Main Control Board	Pre-assembled module with Bluetooth, FM, USB, TF card reader.	1
Speaker Units	Audio output transducers.	2
Acrylic Casing Panels	Transparent panels for speaker enclosure.	Multiple (as per design)
Remote Control	Infrared remote for controlling speaker functions.	1

Component	Description	Quantity
Antenna	Retractable antenna for FM radio reception.	1
Power Switch	On/Off toggle switch.	1
Power Jack	DC power input connector.	1
Potentiometer	Adjustable resistor for volume control.	1
LEDs	Light Emitting Diodes for spectrum display.	Multiple
Resistors	Various values for circuit operation.	Multiple
Capacitors	Various values for circuit operation.	Multiple
Diodes/Transistors	Semiconductor components.	Multiple
Wires & Connectors	For internal wiring.	Assorted
Screws & Nuts	For assembling the acrylic casing.	Assorted
USB Power Cable	For powering the device.	1
Audio Cable (AUX)	For wired audio input.	1
English Manual	Printed instruction guide.	1

4. ASSEMBLY INSTRUCTIONS (SETUP)

This section guides you through the step-by-step assembly of your DIY Bluetooth Speaker Kit. Soldering skills are required. Refer to the detailed English manual provided in the kit for visual aids and more specific component placement.

Soldering Practice

Enhance your soldering skills and enjoy the experience of DIY



Figure 4.1: Soldering practice is a key part of the assembly process.

4.1. Preparing Components

1. Identify all components using the provided component list and the circuit diagram in the manual.
2. Organize components by type (resistors, capacitors, LEDs, etc.) to streamline the soldering process.
3. Ensure your soldering iron is properly heated and tinned. Prepare your workspace with good ventilation.

4.2. Soldering the Circuit Board

Follow the circuit diagram and component layout provided in the detailed manual. It is generally recommended to solder smaller components first, then larger ones.

- **Resistors and Diodes:** Solder these components, paying attention to the polarity of diodes (if applicable).
- **Capacitors:** Observe polarity for electrolytic capacitors.
- **LEDs:** Ensure correct polarity (long leg is positive, short leg is negative).
- **Potentiometer:** Solder the potentiometer into its designated position.

- **Power Switch and Jack:** Solder the power switch and DC power jack to the board, ensuring secure connections.
- **Antenna Connector:** Solder the antenna connector.



Antenna



Power Switch



Power Jack



Potentiometer

4.3. Connecting Main Module and Speakers

1. Connect the main control board to the soldered circuit board using the provided wires and connectors. Ensure correct pin alignment and secure connections.
2. Connect the two speaker units to the designated audio output terminals on the circuit board. Observe polarity (+/-).

4.4. Assembling the Acrylic Casing

1. Carefully remove the protective film from all acrylic panels.
2. Mount the speakers and the main control board onto the appropriate acrylic panels using the provided screws and nuts.
3. Assemble the acrylic panels to form the speaker enclosure, ensuring all components are securely housed and wires are not pinched.
4. Attach the antenna to its connector on the casing.

5. OPERATING INSTRUCTIONS

This section details how to operate your assembled Bluetooth speaker kit.

5.1. Powering On/Off

- Connect the provided USB power cable to the DC power jack on the speaker and to a compatible USB power source (e.g., USB wall adapter, computer USB port).
- Flip the power switch to the "ON" position to power on the speaker. The LED spectrum lights will illuminate.
- Flip the power switch to the "OFF" position to power off the speaker.

5.2. Function Introduction (Control Panel & Remote)



Figure 5.1: Control Panel Function Overview.

- **Mode Button:** Short press to switch between Bluetooth, FM Radio, AUX, USB, and TF Card modes. Long press to initiate recording (in USB/TF mode).

- **Play/Pause Button:** Short press to play or pause audio. Long press for volume control (Volume -).
- **Next Track Button:** Short press for next track/station. Long press for volume control (Volume +).
- **TF Card Slot:** Insert a TF (MicroSD) card for music playback.
- **USB Port:** Insert a USB flash drive for music playback.
- **Audio Line Jack (AUX):** Connect external audio devices via a 3.5mm audio cable.



Figure 5.2: FM Radio and Remote Control Functions.

The remote control provides additional functionality:

- **ON/OFF:** Power on/off the speaker.
- **Mode:** Switch playback modes.
- **Mute:** Mute/unmute audio.
- **Prev/Next:** Previous/next track or FM station.
- **VOL-/VOL+:** Adjust volume.
- **EQ:** Cycle through equalizer settings.
- **USB/SCAN:** Switch to USB mode or initiate FM auto-scan.
- **Number Buttons (0-9):** Directly select FM stations (after auto-scan).

5.3. Audio Input Modes

Four Audio Input Methods



Figure 5.3: Available Audio Input Methods.

- **Bluetooth Mode:**

- a. Switch the speaker to Bluetooth mode. The display will show "BT" and a pairing indicator.
- b. Enable Bluetooth on your device (smartphone, tablet, etc.) and search for "Bluetooth Speakers".
- c. Select "Bluetooth Speakers" to pair. Once paired, you will hear a confirmation tone.
- d. Play audio from your device.

- **FM Radio Mode:**

- a. Switch the speaker to FM mode. Extend the antenna for better reception.
- b. Long press the "Play/Pause" button on the speaker or press "USB/SCAN" on the remote to initiate auto-station searching. The speaker will scan and save available stations (e.g., P01, P02).
- c. Use the "Prev/Next" buttons on the speaker or remote, or the number buttons on the remote, to select a saved station.

- **USB Disk / TF Card Mode:**

- a. Insert a USB flash drive into the USB port or a TF card into the TF card slot.

- b. The speaker will automatically switch to the corresponding mode and begin playing audio files (MP3, WAV, etc.). If not, manually switch using the "Mode" button.
- c. Use "Prev/Next" and "Play/Pause" buttons for control.

- **AUX Mode:**

- a. Connect your external audio device to the "Audio Line Jack" using the provided 3.5mm audio cable.
- b. Switch the speaker to AUX mode.
- c. Play audio from your connected device. Volume control can be done via the speaker or the external device.

5.4. Recording Function



Figure 5.4: Utilizing the recording function.

- Ensure a USB disk or TF card is inserted into the speaker.
- While playing music from the USB disk or TF card, long press the "Mode" button to start recording.
- Long press the "Mode" button again to stop recording. The recorded file will automatically play back.

5.5. Hands-Free Calling



Figure 5.5: Hands-free calling feature.

- When connected via Bluetooth to a smartphone, the speaker can be used for hands-free calls.
- Answering/Ending Calls: Use the "Play/Pause" button on the speaker or remote to answer or end a call.

- The built-in high-sensitivity microphone ensures clear communication.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your speaker kit.

- **Cleaning:** Use a soft, dry cloth to clean the acrylic casing and control panel. Avoid abrasive cleaners or solvents.
- **Storage:** Store the speaker in a cool, dry place away from direct sunlight and extreme temperatures.
- **Component Check:** Periodically inspect soldered joints for any signs of cracking or corrosion. Re-solder if necessary.
- **Power Off:** Always power off the speaker when not in use for extended periods.

7. TROUBLESHOOTING

If you encounter issues with your speaker kit, refer to the following troubleshooting guide.

Problem	Possible Cause	Solution
No power / Speaker does not turn on.	• Power cable not connected. • Power switch is off. • Faulty power source. • Poor solder joint on power input.	• Ensure USB power cable is securely connected. • Flip the power switch to "ON". • Try a different USB power adapter or port. • Inspect and re-solder power connections if necessary.
No sound from speakers.	• Volume is too low or muted. • Incorrect audio input mode selected. • Loose speaker connections. • Faulty speaker unit or main board.	• Increase volume using the potentiometer or remote. Check mute status. • Press "Mode" button to cycle through input modes. • Check speaker wire connections to the circuit board. • Inspect solder joints for speakers.
Bluetooth pairing issues.	• Speaker not in Bluetooth mode. • Device Bluetooth is off. • Too far from the speaker. • Interference.	• Switch speaker to Bluetooth mode. • Ensure Bluetooth is enabled on your device. • Move device closer to the speaker (within 10 meters). • Restart both speaker and device.
Poor FM radio reception.	• Antenna not extended. • Weak signal in the area. • Interference.	• Fully extend the telescopic antenna. • Relocate the speaker to an area with better reception. • Perform auto-scan again.
Recording function not working.	• No USB disk or TF card inserted. • Card/disk is full or corrupted. • Not in USB/TF card playback mode.	• Ensure a formatted USB disk or TF card is inserted. • Check storage space or try a different card/disk. • Switch to USB or TF card playback mode before attempting to record.

8. SPECIFICATIONS

Not Only For Music



Figure 8.1: Product Dimensions.

Feature	Detail
Product Model	FBAAEAGY21404-3
Brand	BANRIA
Product Dimensions (L x W x H)	5.9 x 3.54 x 1.96 inches (15.0 x 9.0 x 5.0 cm)
Item Weight	13.9 ounces (394 grams)
Material	Plastic (Acrylic Casing)
Connectivity Technology	Bluetooth, USB, AUX, TF Card
Special Features	Recording Function, FM Radio, LED Spectrum, Hands-free Call, Remote Control
Power Source	USB

Feature	Detail
Radio Bands Supported	FM

9. WARRANTY AND SUPPORT

This product is a DIY kit, and successful assembly depends on the user's soldering skills and adherence to instructions. While the manufacturer provides all necessary components and detailed instructions, specific warranty terms for self-assembled products may vary.

- **Technical Support:** For assembly questions, missing parts, or technical assistance, please refer to the detailed English manual included in your kit, which may contain QR codes or contact information for the manufacturer.
- **Online Resources:** You may also find additional support or community forums online by searching for "BANRIA DIY Bluetooth Speaker Kit" or the model number "FBAAEAGY21404-3".
- **Returns/Replacements:** For issues related to initial product defects or missing components upon receipt, please contact your retailer within their specified return period.

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Product: DIY Bluetooth-Compatible Speaker Kit

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question