

BANRIA GY21751

BANRIA DIY Eagle Bird Sound Soldering Kit Instruction Manual

Model: GY21751

1. INTRODUCTION

Thank you for choosing the BANRIA DIY Eagle Bird Sound Soldering Kit. This kit provides an engaging hands-on experience in electronics assembly and soldering, resulting in a functional Bald Eagle-shaped device that plays realistic bird sounds and features flashing RGB LED lights. It is designed for individuals interested in STEM education, electronics, and DIY projects.

2. SAFETY INFORMATION

Please read and understand all safety precautions before beginning assembly. Soldering involves high temperatures and can produce fumes. Adult supervision is recommended for younger users.

- Always wear **safety glasses** to protect your eyes from solder splashes or flying debris.
- Work in a **well-ventilated area** to avoid inhaling solder fumes. Consider using a fume extractor.
- Ensure your soldering iron is placed in a **safe holder** when not in use.
- Avoid touching the hot tip of the soldering iron or recently soldered components. Allow components to cool before handling.
- Keep the kit and tools out of reach of small children.
- Unplug the soldering iron when not in use.

3. PACKAGE CONTENTS

Verify that all components listed below are present in your package before starting assembly. If any parts are missing or damaged, please contact BANRIA customer support.

- Eagle-shaped PCB (Printed Circuit Board)
- Main control PCB
- Various resistors
- Various capacitors

- 34 through-hole RGB LEDs
- 3 SMD chips
- Speaker
- Control buttons (Play/Pause, Volume, Next Sound)
- Power switch
- Brightness adjustment knob
- USB power cable
- Mounting hardware (screws, standoffs)
- Detailed assembly instructions (printed)

Components in Package



Image: All components of the kit, including the eagle PCB, main board, speaker, LEDs, resistors, capacitors, buttons, and USB cable.

4. SETUP AND ASSEMBLY INSTRUCTIONS

This kit requires basic soldering skills. The estimated assembly time is approximately 1.5 hours. Refer to the included

printed instructions for detailed, step-by-step guidance specific to this kit.

4.1 Required Tools (Not Included)

- Soldering iron with a fine tip
- Solder wire (rosin core recommended)
- Solder wick or solder pump (for desoldering mistakes)
- Wire cutters/flush cutters
- Needle-nose pliers
- Multimeter (optional, for testing connections)

4.2 Assembly Steps Overview

1. **Prepare your workspace:** Ensure it is clean, well-lit, and well-ventilated. Gather all necessary tools.
2. **Identify components:** Carefully match each component with its corresponding label on the PCB. Pay close attention to component values (e.g., resistor codes) and polarity for diodes, LEDs, and integrated circuits (ICs).
3. **Solder SMD components first:** The kit includes 3 SMD chips. Solder these first as they are smaller and easier to access before through-hole components are in place.
4. **Solder through-hole components:** Begin with the lowest profile components (resistors, small diodes), then proceed to taller components (capacitors, IC sockets, buttons, LEDs).
5. **Solder the 34 RGB LEDs:** Ensure correct orientation and secure soldering for each LED.
6. **Connect the speaker:** Solder the speaker wires to the designated pads on the PCB.
7. **Mount the eagle PCB:** Attach the eagle-shaped PCB to the main control board using the provided standoffs and screws.
8. **Final inspection:** Visually inspect all solder joints for bridges, cold joints, or unsoldered pins. Correct any issues before powering on.

BANRIA DIY Soldering Learning Kit

Contains 34 through-hole LED lights
and 3 SMD chips, need about **1.5 hours to finish.**

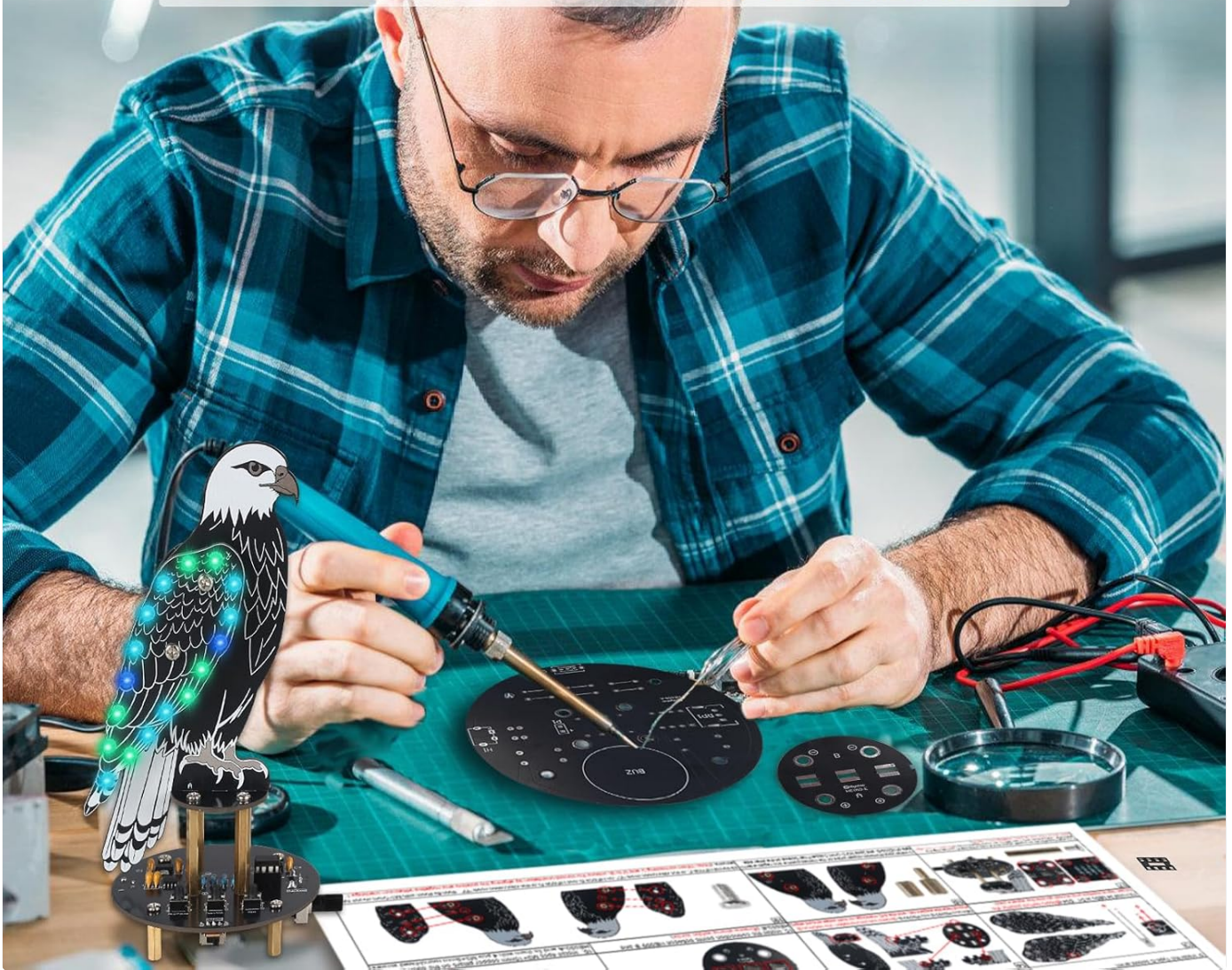


Image: A person demonstrating the soldering process for the kit.

5. OPERATING INSTRUCTIONS

Once assembled, connect the kit to a 5V USB power source using the provided USB cable. The device will power on and be ready for operation.

5.1 Controls Overview

Electronic Bird Sound Player Soldering Kit

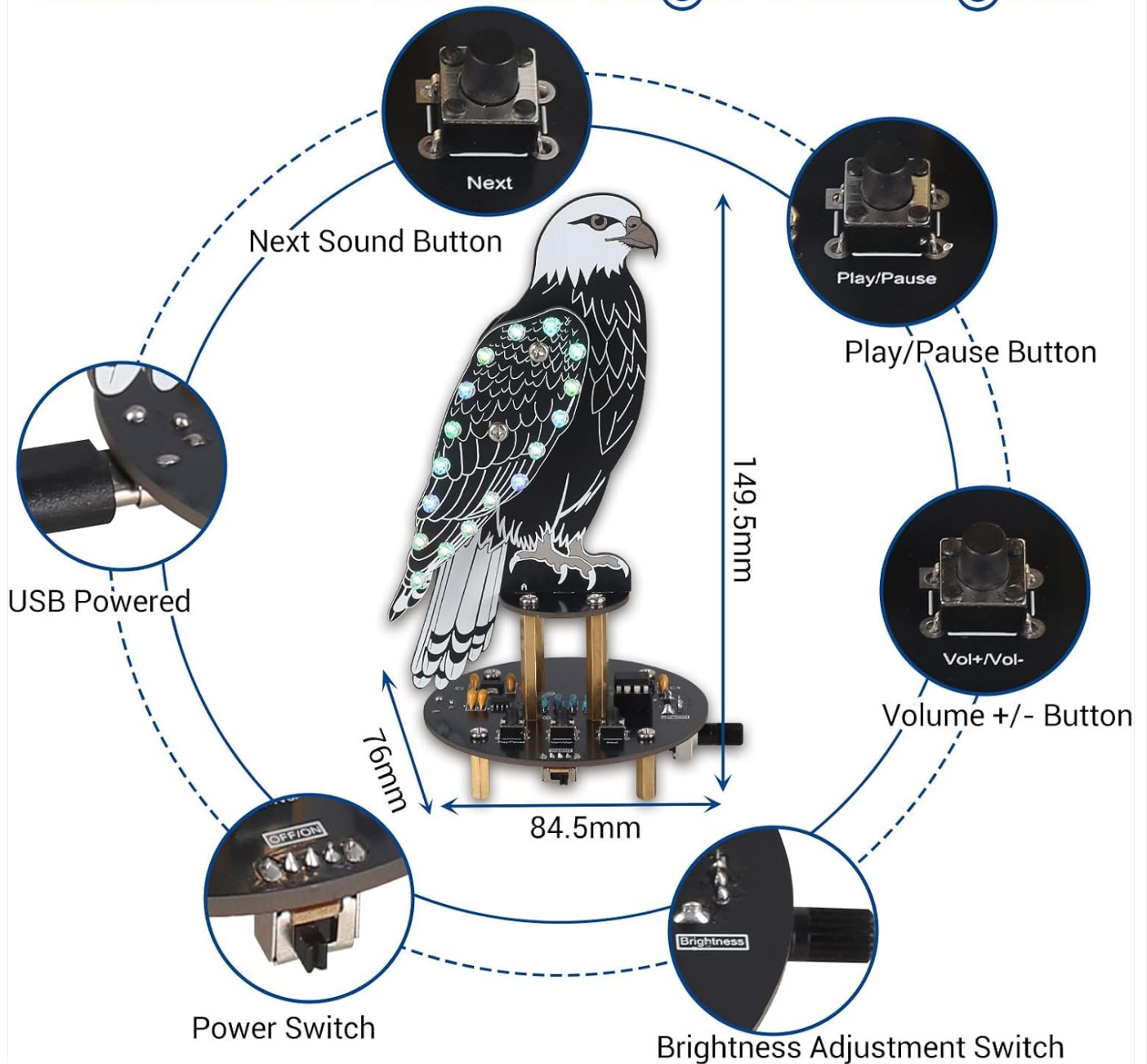


Image: Diagram illustrating the various control points on the assembled eagle kit.

- **Power Switch (ON/OFF):** Located on the base, this switch controls the main power to the device.
- **Play/Pause Button:** Press to start or pause the bird sound playback.
- **Volume +/- Button:** Press to adjust the playback volume. A long press (over 3 seconds) sets the volume to maximum. If at maximum, a short press resets the volume to the lowest level.
- **Next Sound Button:** Press to cycle through the 10 different realistic bird sounds.
- **Brightness Adjustment Knob:** Rotate this knob to adjust the intensity of the RGB LED lights on the eagle's wings.



Image: Close-up of the Power ON/OFF Switch.

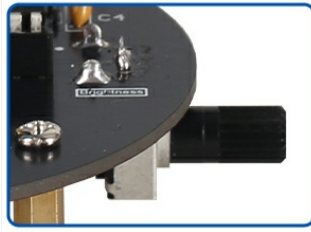


Image: Close-up of the Brightness Adjustment Knob.

5.2 Bird Sound Playback

The kit features 10 distinct bird calls, including those of the Bald Eagle, Blue Jay, and American Robin. Use the **Play/Pause** and **Next Sound** buttons to control playback and selection. Adjust the volume using the **Volume +/-** button.



Image: The eagle kit playing bird sounds, with musical notes depicted.

5.3 RGB LED Lights

The eagle's wings are adorned with colorful RGB LEDs that flash and glow. The brightness of these lights can be

adjusted by rotating the **Brightness Adjustment Knob**.

Adjustable Colorful Slow-Flashing LED Bird Wings for a Stunning Display!



Image: The eagle kit showcasing its adjustable slow-flashing RGB LED lights.

5.4 Operational Video

Your browser does not support the video tag.

Video: This video demonstrates the operational features of the BANRIA Eagle-Shaped Bird Sound Player Soldering Project Kit, including volume control and LED effects.

6. MAINTENANCE

To ensure the longevity and proper functioning of your BANRIA Eagle Bird Sound Soldering Kit, follow these simple maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to gently wipe the surface of the eagle and the PCB to remove dust. Avoid using liquid cleaners or solvents, as they may damage the electronic components.
- **Storage:** Store the assembled kit in a dry, cool place away from direct sunlight and extreme temperatures.

- **Handling:** Handle the device with care to avoid bending or breaking components, especially the LEDs and the PCB.

7. TROUBLESHOOTING

If you encounter any issues with your assembled kit, refer to the following troubleshooting tips:

- **No Power:**
 - Ensure the USB cable is securely connected to both the kit and a working 5V USB power source.
 - Check if the power switch on the base is in the 'ON' position.
 - Inspect the power input solder joints for any cold joints or bridges.
- **No Sound:**
 - Verify that the speaker wires are correctly soldered and connected.
 - Check the volume level using the Volume +/- button.
 - Ensure the audio-related components (e.g., amplifier IC, capacitors) are correctly oriented and soldered.
- **LEDs Not Lighting Up or Incorrectly:**
 - Check the polarity of each LED. LEDs are diodes and must be installed in the correct direction.
 - Inspect all LED solder joints for cold joints or short circuits.
 - Ensure the brightness adjustment knob is not set to the lowest level.
- **Intermittent Functionality:**
 - Carefully re-examine all solder joints for any 'cold' joints (dull, lumpy appearance) or solder bridges (solder connecting two adjacent pads that should not be connected).
 - Ensure all components are firmly seated and not loose.

8. SPECIFICATIONS

Brand	BANRIA
Model Number	GY21751
Included Components	PCB, resistors, capacitors, LEDs, speaker, buttons, USB cable, etc.
Display Type	LED
Number of Items	1
Unit Count	1.0 Count
Estimated Assembly Time	Approximately 1.5 hours

Note: The 'Upper Temperature Rating: 480 Degrees Celsius' mentioned in product specifications refers to the recommended maximum temperature for a soldering iron used with similar components, not the operating temperature of the kit itself.

9. WARRANTY AND SUPPORT

Specific warranty information for the BANRIA DIY Eagle Bird Sound Soldering Kit is not provided in this manual. For any

questions, technical support, or warranty inquiries, please contact BANRIA customer service directly through their official channels or the retailer where the product was purchased.

ASK A QUESTION ABOUT THIS MANUAL

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

you@example.com

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