

Gikfun EK1831

Gikfun Mini Electronic Transparent Stereo Speaker Box DIY Kit EK1831

Instruction Manual

1. INTRODUCTION

This manual provides detailed instructions for assembling, operating, and maintaining your Gikfun Mini Electronic Transparent Stereo Speaker Box DIY Kit (Model EK1831). This kit offers an engaging project for electronics enthusiasts to build a functional stereo speaker system with LED light indicators, housed in a transparent acrylic casing.

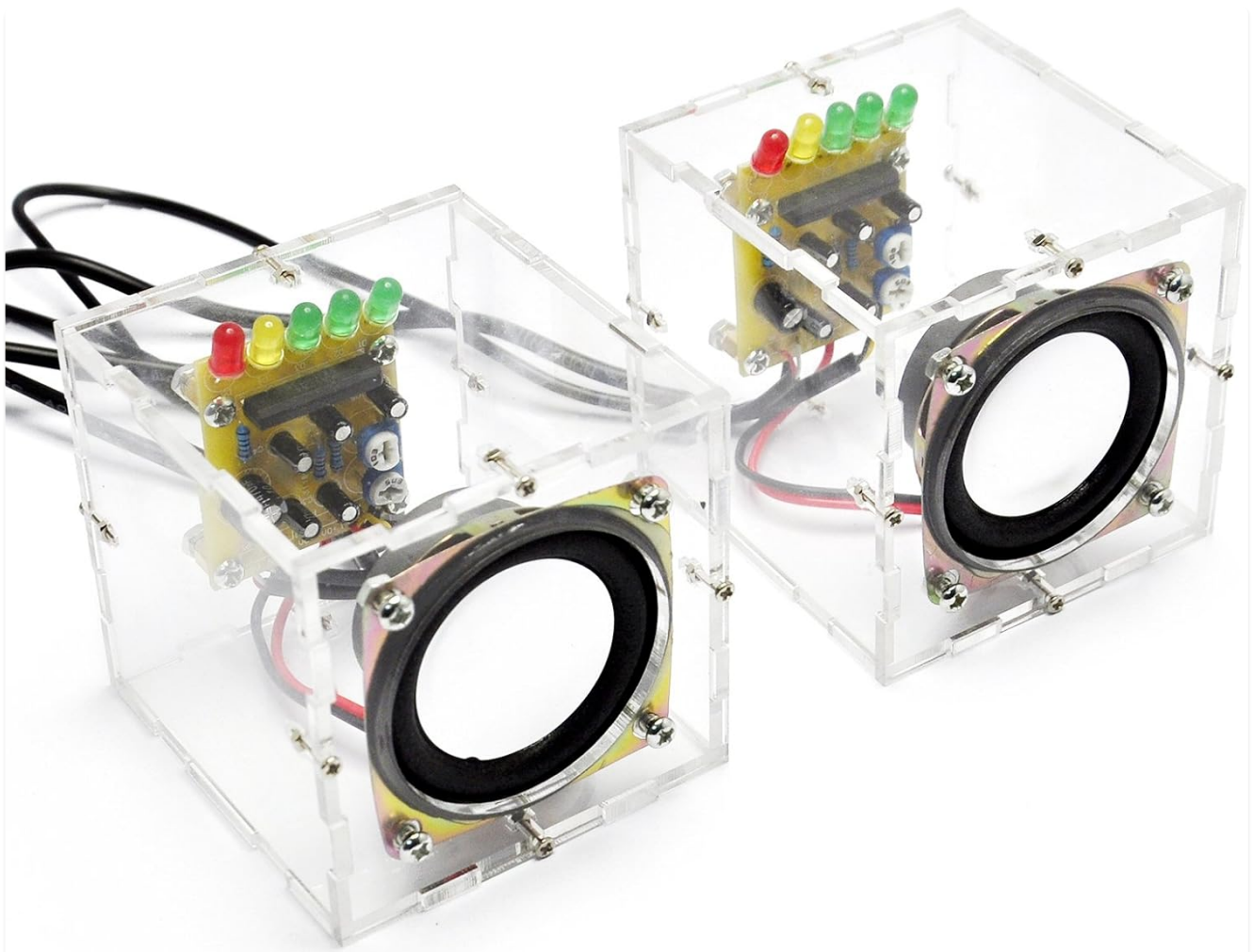


Figure 1: Assembled Gikfun Mini Electronic Transparent Stereo Speaker Box DIY Kit EK1831

2. SAFETY INFORMATION

- **Soldering Iron Safety:** This kit requires soldering. Always use a 30W (110V) soldering iron and ensure proper ventilation. Wear appropriate safety glasses to protect your eyes.
- **Electrical Safety:** Ensure all connections are secure before powering on the device. Avoid contact with live circuits.
- **Small Parts:** The kit contains small components. Keep them out of reach of children to prevent choking hazards.
- **Acrylic Handling:** Handle acrylic parts carefully to avoid scratches or breakage. Do not overtighten screws, as this can crack the plastic.

3. COMPONENTS LIST

Before beginning assembly, verify that all components listed below are present in your kit. Refer to Figure 2 for a visual guide.



Figure 2: Kit Components

- Acrylic Panels for Speaker Enclosures
- Speaker Drivers (2 units)
- Printed Circuit Boards (PCBs) with pre-soldered surface mount ICs (2 units)
- Various Electronic Components (resistors, capacitors, diodes, etc.)
- LED Lights (multiple colors, 2 sets for spectrum display)
- Nuts and Screws for assembly
- Audio Input Cable (3.5mm jack)
- USB Power Cable
- Speaker Wires

4. ASSEMBLY INSTRUCTIONS

Follow these steps carefully to assemble your speaker kit. A soldering iron (30W, 110V recommended) is required.

1. **Prepare Components:** Organize all electronic components. Identify the PCBs and ensure the tiny surface mount ICs are securely attached.
2. **Solder Components to PCB:** Solder the through-hole components (resistors, capacitors, diodes, LED lights) onto the designated spots on the PCBs. Pay close attention to component values and polarity. *Note: A common issue is that the C2 1uF capacitor on the schematic may need to be a 10uF capacitor for optimal performance. Verify against the component installation diagram.*
3. **Connect Speaker Wires:** Solder the speaker wires to the appropriate terminals on the PCBs and the speaker drivers. *Note: Some kits may have yellow wire holes that are too small; a 3/64" drill bit can be used to widen*

them if necessary.

4. **Assemble Acrylic Enclosures:** Carefully assemble the transparent acrylic panels to form the speaker boxes. Secure them using the provided nuts and screws. *Caution: Do not overtighten screws, as the plastic can crack.*
5. **Mount Speakers and PCBs:** Mount the speaker drivers into the front panels of the acrylic enclosures. Secure the PCBs inside the enclosures. *Tip: Consider using slightly longer standoffs to mount the circuit board with the potentiometers (pots) facing the rear. This allows for easier adjustment. If doing so, drill 1/8" holes in the rear acrylic panel for access to the pots.*
6. **Connect Audio and Power:** Connect the audio input cable and USB power cable to the assembled speaker units. Ensure the 3.5mm audio connector is handled with care as it can be flimsy.

5. OPERATING INSTRUCTIONS

Once assembled, your Gikfun Stereo Speaker Kit is ready for use.

1. **Power On:** Connect the USB power cable to a compatible USB power source (e.g., computer USB port, USB wall adapter).
2. **Connect Audio Source:** Plug the 3.5mm audio jack into your audio source device (e.g., laptop, MP3 player, smartphone, tablet).
3. **Play Music:** Start playing audio on your connected device. The LED lights on the speaker units will illuminate and react to the music spectrum.
4. **Adjust Volume:** Control the volume directly from your connected audio source device. If you modified the assembly to expose the potentiometers, you can use them to balance the speaker volumes.

6. MAINTENANCE

To ensure the longevity and optimal performance of your Gikfun Stereo Speaker Kit, follow these simple maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to gently wipe the transparent acrylic enclosures. Avoid abrasive cleaners or solvents that could damage the plastic.
- **Storage:** Store the speakers in a cool, dry place away from direct sunlight and extreme temperatures.
- **Cable Care:** Avoid bending or pulling the audio and power cables excessively to prevent internal damage.

7. TROUBLESHOOTING

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

- **No Sound from One Speaker:**
 - Check all soldered connections on the PCB for the affected speaker.
 - Inspect the speaker wire connections for continuity.
 - Verify the 3.5mm audio input cable is fully inserted and not damaged. A faulty or flimsy audio plug can cause signal loss to one channel.
- **No Sound from Both Speakers:**
 - Ensure the USB power cable is connected and receiving power.
 - Check the volume level on your audio source device.

- Confirm the 3.5mm audio cable is securely connected to both the speakers and the audio source.

- **Distorted Sound:**

- Reduce the volume on your audio source device.
- Check for loose connections or faulty components on the PCBs.

- **LED Lights Not Working:**

- Verify the polarity of the LED lights during soldering.
- Check for cold solder joints or broken connections to the LED array.

8. SPECIFICATIONS

Feature	Detail
Brand	Gikfun
Model Name	EK1831
Speaker Maximum Output Power	3 Watts per channel
Connectivity Technology	Auxiliary
Audio Output Mode	Stereo
Mounting Type	Tabletop Mount
Speaker Type	Bookshelf
Color	Transparent
Is Waterproof	No
Control Method	External Device (e.g., Smartphone, Tablet)
Speaker Size	7 Centimeters
Number of Audio Channels	2.0
Power Source	Corded Electric (USB)
Item Dimensions (D x W x H)	2.76"D x 2.76"W x 2.99"H
Item Weight	411 Grams
Compatible Devices	Laptop, MP3 Player, Smartphone, Tablet
Audio Driver Type	Dynamic Driver

9. WARRANTY AND SUPPORT

Gikfun Inc. focuses on electronic design, development, and marketing of Arduino-compatible products. While specific warranty details are not provided, Gikfun values customer feedback and aims to improve its products based on user suggestions.

For support or to provide feedback, please refer to the contact information provided with your purchase or visit the

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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.

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