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› GeekLJT Bluetooth LED Speaker & FM Radio Soldering Kit User Manual

GeekLJT LDSR-3AS

GeekLJT Bluetooth LED Speaker & FM Radio Soldering Kit User Manual

Model: LDSR-3AS

1. INTRODUCTION

This GeekLJT Bluetooth LED Speaker and FM Radio Soldering Kit provides an engaging and educational experience for electronics enthusiasts, students, and hobbyists. It allows you to assemble a fully functional stereo speaker system with Bluetooth 5.0 connectivity, FM radio capabilities, and dynamic LED spectrum lights. This DIY project is an excellent way to learn about electronic components, soldering techniques, and basic circuit principles while creating a practical and enjoyable audio device.



Figure 1: The fully assembled Bluetooth LED Speaker and FM Radio Kit, showcasing its transparent acrylic casing, dual speakers, colorful LED lights, and the included remote control.

2. COMPONENTS LIST

Before beginning assembly, please verify that all components listed below are present in your kit. Familiarize yourself with each part to ensure a smooth building process.

Components in The Radio Audio Kit



Figure 2: All individual components of the kit, including the circuit board, speakers, wires, resistors, capacitors, acrylic panels, screws, and the remote control, laid out on a surface.

Component	Description	Quantity
Main Circuit Board	Pre-printed circuit board for soldering components.	1
Speakers	3W dual speakers for audio output.	2
Acrylic Panels	Transparent casing panels.	6
Electronic Components	Resistors, capacitors, diodes, ICs, etc.	Assorted
LED Lights	Colorful spectrum LEDs.	Assorted
Remote Control	Infrared remote for controlling functions.	1
Wires & Connectors	Various wires and connectors for internal wiring.	Assorted
Screws & Standoffs	Hardware for assembling the acrylic casing.	Assorted

3. ASSEMBLY INSTRUCTIONS

Assembling this kit requires basic soldering skills. Please follow the detailed instructions provided in the official user manual PDF for a successful build. Take your time and double-check each step.

3.1 Tools Required

- Soldering Iron
- Solder Wire
- Wire Cutters / Strippers
- Small Screwdriver Set
- Multimeter (recommended for testing)
- Safety Glasses

3.2 Step-by-Step Assembly Overview

1. **Identify Components:** Sort and identify all electronic components (resistors, capacitors, diodes, ICs, etc.) according to their values and markings.
2. **Solder Smallest Components First:** Begin by soldering the smallest components (resistors, diodes) onto the PCB, followed by larger ones (capacitors, IC sockets, headers).
3. **Install ICs:** Carefully insert the integrated circuits into their respective sockets, ensuring correct orientation.
4. **Connect Speakers:** Solder the speaker wires to the designated points on the PCB.
5. **Assemble Acrylic Casing:** Once the electronics are complete and tested, assemble the transparent acrylic panels using the provided screws and standoffs.
6. **Final Connections:** Connect the main PCB to the control panel and speakers within the casing.

For detailed schematics and step-by-step visual instructions, please refer to the comprehensive user manual available online: [Official User Manual \(PDF\)](#)

LED Speaker & FM Radio Soldering Project



Figure 3: A close-up view of a person engaged in the soldering process, assembling the electronic components onto the printed circuit board of the speaker kit. This highlights the hands-on nature of the project.

4. OPERATING INSTRUCTIONS

Once assembled, your Bluetooth LED Speaker and FM Radio is ready for use. This section outlines the basic operation of the device.

Multiple Input & Play Modes



FM



BT



TF Card



USB



AUX



Colorful LED lights

Powered by 5V charger

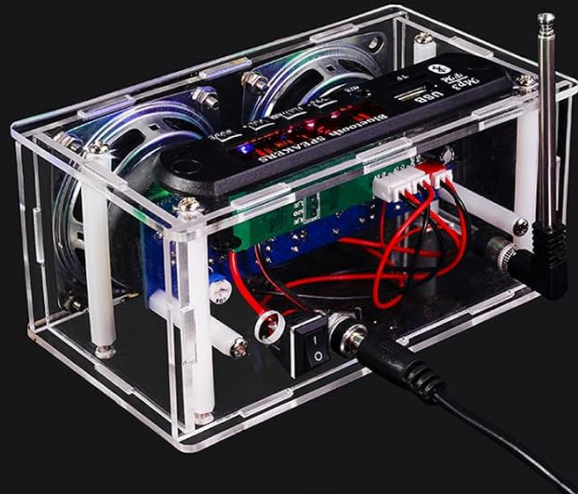


Figure 4: This diagram illustrates the versatile input and playback options available for the assembled speaker, including FM radio, Bluetooth connectivity, TF card slot, USB port, and an AUX input.

4.1 Powering On

Connect the speaker to a 5V power source using a USB cable (e.g., phone charger, power bank). The device will power on automatically, and the LED lights will illuminate.

4.2 Mode Selection

Press the 'Mode' button on the control panel or remote control to cycle through available modes: Bluetooth, FM Radio, TF Card, USB, and AUX input.

The Finished Project-Colorful Speaker & Radio



Recording Function:

Long press the mode button in USB/TF card playback mode to enter the recording, long press the mode button again during recording to end the recording, and short press the mode button to play the recording from the USB disk/TF card.

Figure 5: A detailed diagram of the speaker's top panel, clearly labeling each button and port, such as USB socket, TF card socket, AUX socket, play/pause, volume controls, mode button, and the LED spectrum light.

4.3 Bluetooth Mode

- Switch to Bluetooth mode. The device will enter pairing mode, indicated by a flashing Bluetooth icon on the display.
- On your smartphone or other Bluetooth-enabled device, search for available Bluetooth devices and select 'GeekLJT Speaker' (or similar name).
- Once paired, the speaker will confirm the connection, and you can begin playing audio wirelessly.

Support 5.0 Bluetooth Wide Compatibility



Figure 6: This image demonstrates the speaker's Bluetooth 5.0 compatibility, showing it wirelessly connected to a smartphone, with music notes visually representing the audio streaming.

4.4 FM Radio Mode

- Switch to FM Radio mode.
- Use the 'Previous/Next Song' buttons (or corresponding buttons on the remote) to scan for radio stations. Long press to auto-scan, short press to fine-tune.
- Extend the antenna for better reception.

4.5 TF Card/USB Playback

- Insert a TF card or USB drive containing MP3 audio files into the respective slot.
- The speaker will automatically switch to the correct mode and begin playing audio.
- Use the 'Play/Pause', 'Previous Song', and 'Next Song' buttons to control playback.

4.6 Remote Control Functions

The included remote control provides convenient access to all speaker functions, including power, mode selection, volume control, track navigation, FM tuning, and equalizer settings.

5. MAINTENANCE

To ensure the longevity and optimal performance of your GeekLJT 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 scratch the surface.
- **Storage:** Store the speaker in a cool, dry place away from direct sunlight and extreme temperatures.
- **Handling:** Handle the assembled unit with care to prevent damage to the electronic components or the acrylic casing. Avoid dropping the device.
- **Power Source:** Always use a stable 5V power supply. Do not use power adapters with higher voltage, as this can damage the circuit.

6. TROUBLESHOOTING

If you encounter issues with your speaker kit, refer to the following common troubleshooting steps. For more detailed solutions, consult the official user manual PDF.

- **No Power:** Ensure the 5V power supply is correctly connected and functional. Check the USB cable for damage.
- **No Sound:** Verify that the volume is turned up. Check speaker connections to the PCB. Ensure the correct input mode is selected.
- **Bluetooth Not Connecting:** Make sure the speaker is in Bluetooth pairing mode. Turn off and on Bluetooth on your source device. Ensure no other devices are currently connected to the speaker.
- **Poor FM Reception:** Extend the antenna fully. Try repositioning the speaker to improve signal reception.
- **LEDs Not Working:** Check the soldering connections for the LED lights. Ensure they are inserted with correct polarity.
- **Distorted Audio:** Check for loose connections or cold solder joints on the PCB. Ensure the input audio source is not overdriven.

7. PRODUCT SPECIFICATIONS

Feature	Detail
Model Number	LDSR-3AS
Brand	GeekLJT
Connectivity	Bluetooth 5.0, FM Radio, TF Card, USB, AUX
Speaker Output	Dual 3W Speakers
Power Input	5V USB
LED Lights	Colorful Spectrum LED
Shipping Dimensions	13.8 x 10.5 x 8.5 cm

Feature	Detail
Item Weight	395 grams

8. WARRANTY AND SUPPORT

GeekLJT products are designed for quality and performance. For any questions regarding assembly, operation, or troubleshooting that are not covered in this manual or the detailed PDF, please contact GeekLJT customer support. Information regarding warranty coverage is typically provided with your purchase documentation or can be obtained by contacting the manufacturer directly.

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Details

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

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