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› GeekLJT FM Radio Soldering Kit Instruction Manual

GeekLJT Purple

GeekLJT FM Radio Soldering Kit Instruction Manual

Model: Purple

1. INTRODUCTION

The GeekLJT FM Radio Soldering Kit is an electronic DIY project designed for learning and practicing soldering and electronic knowledge. Upon successful assembly, it functions as a portable digital FM radio with stable signal reception and a clear acrylic housing. This kit is an excellent educational tool and a rewarding project for electronics enthusiasts. The finished radio features easy operation with four buttons for frequency and volume adjustment, and can be powered by either a USB cable or two AA batteries, making it convenient for portable use. It also includes a 3.5mm earphone jack for private listening or connection to external speakers.

2. WHAT'S IN THE BOX

Before beginning assembly, please verify that all components listed below are present in your kit:

- Printed Circuit Board (PCB)
- Acrylic Housing Panels
- Electronic Components (resistors, capacitors, ICs, LEDs, etc.)
- Speaker
- Telescopic Antenna
- Battery Holder (for 2 AA batteries)
- USB Power Cable
- Soldering Wire
- Fasteners (screws, nuts)
- User Manual (printed and digital via QR code)

Components of The Radio Kit

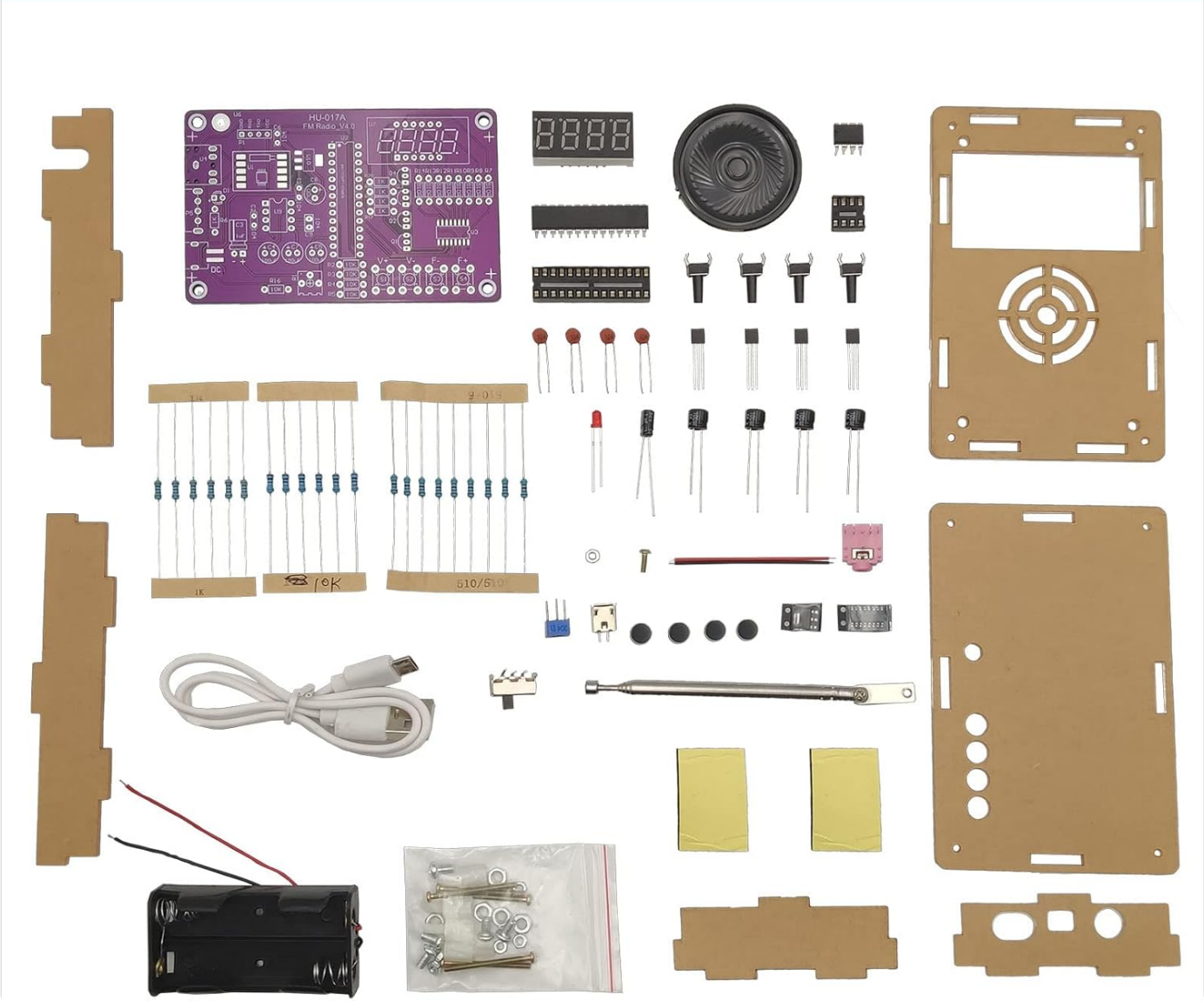


Image: Overview of all components included in the soldering kit.

3. SETUP AND ASSEMBLY

This kit requires soldering to assemble. Detailed step-by-step instructions are provided in the included user manual and can also be accessed via the QR code on the packaging or by visiting the official user guide link:

[Download Full Installation Manual \(PDF\)](#)

3.1. General Assembly Steps:

1. **Component Identification:** Familiarize yourself with all electronic components and their corresponding locations on the PCB.
2. **Soldering Components:** Carefully solder each component onto the PCB according to the provided schematics and layout. Pay close attention to polarity for diodes, LEDs, and integrated circuits.
3. **Speaker and Antenna Connection:** Connect the speaker and telescopic antenna to their designated points on the

PCB.

4. **Housing Assembly:** Once all electronic components are soldered and verified, assemble the clear acrylic housing around the PCB using the provided screws and nuts.
5. **Power Connection:** Insert two AA batteries into the battery holder or connect the provided USB cable to the DC input port.

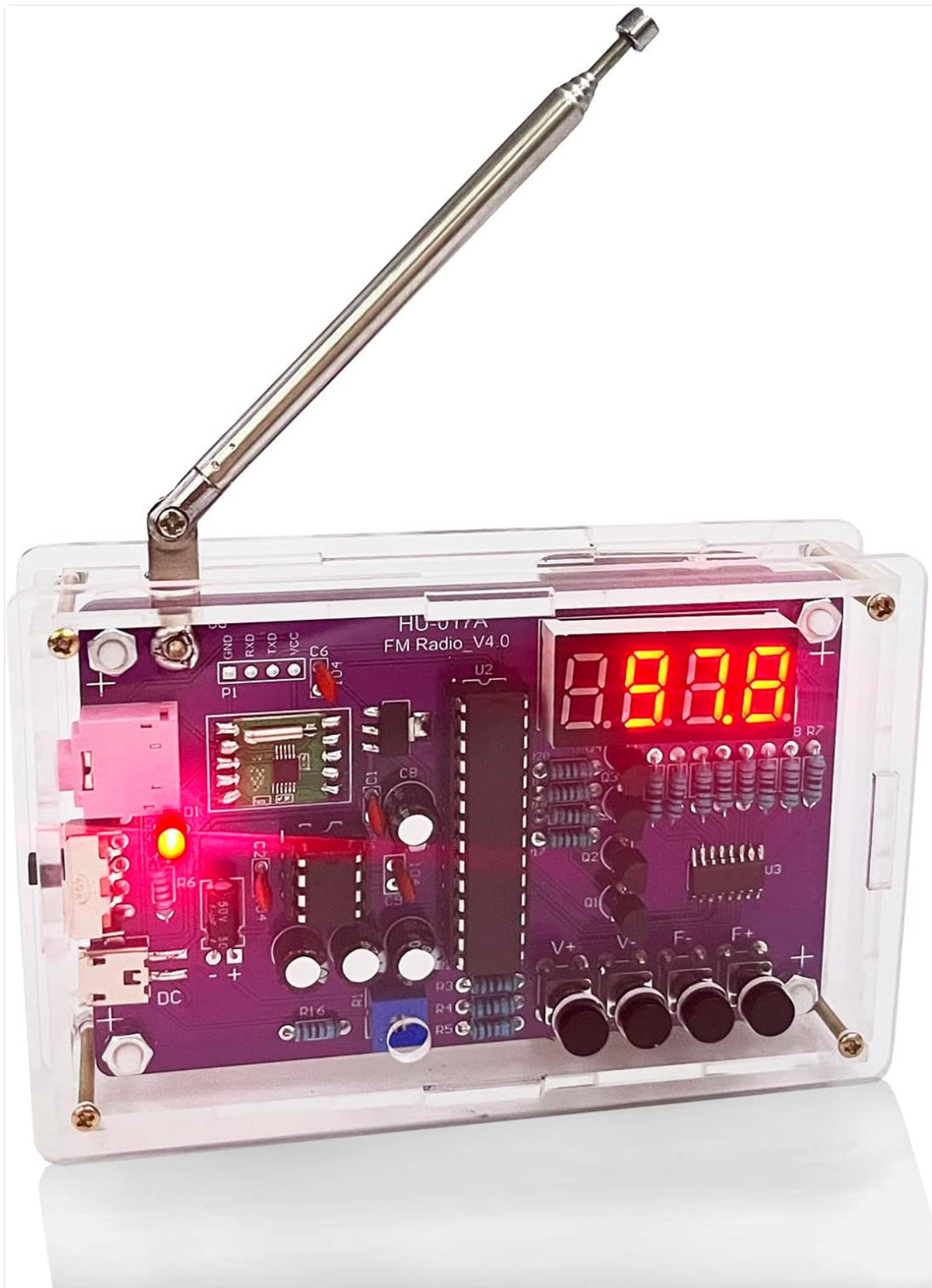


Image: The fully assembled FM Radio Kit, ready for operation.

4. OPERATING INSTRUCTIONS

4.1. Powering On/Off

To power on the radio, ensure batteries are inserted or the USB cable is connected, then use the power switch located on the side of the unit.

4.2. Adjusting Frequency and Volume

The radio features four buttons for control:

- Two buttons are used to adjust the FM frequency. Pressing them will tune the radio to different stations.
- The other two buttons control the volume level.



Image: The radio's digital display and control buttons for frequency and volume.

4.3. Antenna Adjustment

Extend the telescopic antenna for optimal signal reception. Adjust its position and length to improve clarity for different stations.

4.4. Earphone/External Speaker Connection

A 3.5mm earphone jack is located on the side of the radio. You can connect earphones for private listening or an external amplifier/speaker for louder output. Please note that some headphones, particularly those with microphones, may not be compatible. Use 3-ring audio cables with round connectors for best compatibility.



Image: Rear view of the radio showing the battery compartment and earphone jack.

4.5. Product Demonstration Video

For a visual guide on assembly and operation, please watch the official product video:

Your browser does not support the video tag.

5. MAINTENANCE

To ensure the longevity and optimal performance of your FM Radio Soldering Kit, follow these general maintenance guidelines:

- **Keep Dry:** Avoid exposing the radio to moisture or liquids, as this can damage the electronic components.
- **Clean Gently:** Use a soft, dry cloth to clean the acrylic housing. Do not use harsh chemicals or abrasive materials.
- **Handle with Care:** While the acrylic housing provides protection, avoid dropping or subjecting the radio to strong impacts.
- **Battery Care:** If using batteries, remove them if the radio will not be used for an extended period to prevent leakage.

6. TROUBLESHOOTING

If you encounter issues with your FM Radio Soldering Kit, please refer to the following common problems and their solutions:

Problem	Possible Cause	Solution
Radio does not power on.	Incorrect power connection, dead batteries, or faulty power switch.	Ensure batteries are correctly inserted and charged, or USB cable is securely connected. Check the power switch for proper engagement. Verify all power-related solder joints.
No sound or distorted sound.	Speaker not connected, faulty speaker, incorrect earphone/audio cable, or poor signal.	Check speaker connections. Ensure earphones/audio cables are 3-ring type and fully inserted. Adjust antenna for better signal. Verify volume level.
Cannot tune to stations or poor reception.	Antenna not extended, weak signal area, or frequency band incompatibility.	Fully extend and adjust the telescopic antenna. Try moving the radio to a location with better FM reception. Note that the radio operates within specific FM bands and may not receive all local stations if they fall outside this range.
Digital display not working or showing incorrect characters.	Loose connections to the display, faulty display component, or soldering error.	Carefully inspect all solder joints related to the digital display and its driving ICs (e.g., 74HC595D). Ensure no short circuits or cold solder joints.
Battery holder issues (batteries falling out).	Design limitation or improper battery insertion.	Ensure batteries are fully seated. If the issue persists due to design, consider using the USB power option for more stable power.

7. SPECIFICATIONS

Feature	Detail
Product Dimensions	4.13 x 2.75 x 0.59 inches
Item Weight	6 ounces
Model Number	Purple
Brand	GeekLJT
Color	Purple (PCB) / Clear (Housing)
Connectivity Technology	Auxiliary (for earphone/speaker)
Tuner Technology	FM
Power Source	Battery Powered (2 AA) or USB Cable
Radio Bands Supported	AM/FM (Note: Specific FM range may vary based on module)
Material	Acrylic (Housing)
Display Type	LED or LCD (Digital Segment Display)

8. WARRANTY AND SUPPORT

GeekLJT is committed to customer satisfaction and product quality. If you encounter any problems during the assembly or operation of your FM Radio Soldering Kit, please do not hesitate to contact us. We are dedicated to providing support and resolving any issues you may experience.

For additional assistance, you may refer to the comprehensive user manual available online:

[GeekLJT FM Radio Soldering Kit User Manual \(PDF\)](#)

Please retain your purchase receipt for any warranty claims. Specific warranty terms and conditions may apply.

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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