

IS GY21353-2

ICSTATION Portable FM Radio Kit Instruction Manual

Model: GY21353-2

PRODUCT OVERVIEW

This ICSTATION Portable FM Radio Kit is designed for electronics enthusiasts and educational purposes, offering a hands-on soldering experience to build a functional FM radio. It features an innovative two-piece acrylic case for simplified assembly, automatic station scanning, and dual power supply options. The kit provides clear sound quality with a 3W speaker and a 3.5MM headphone jack, making it suitable for various listening environments.



Image: The fully assembled ICSTATION Portable FM Radio Kit, showcasing its clear acrylic casing, red PCB, LED display, and telescopic antenna.

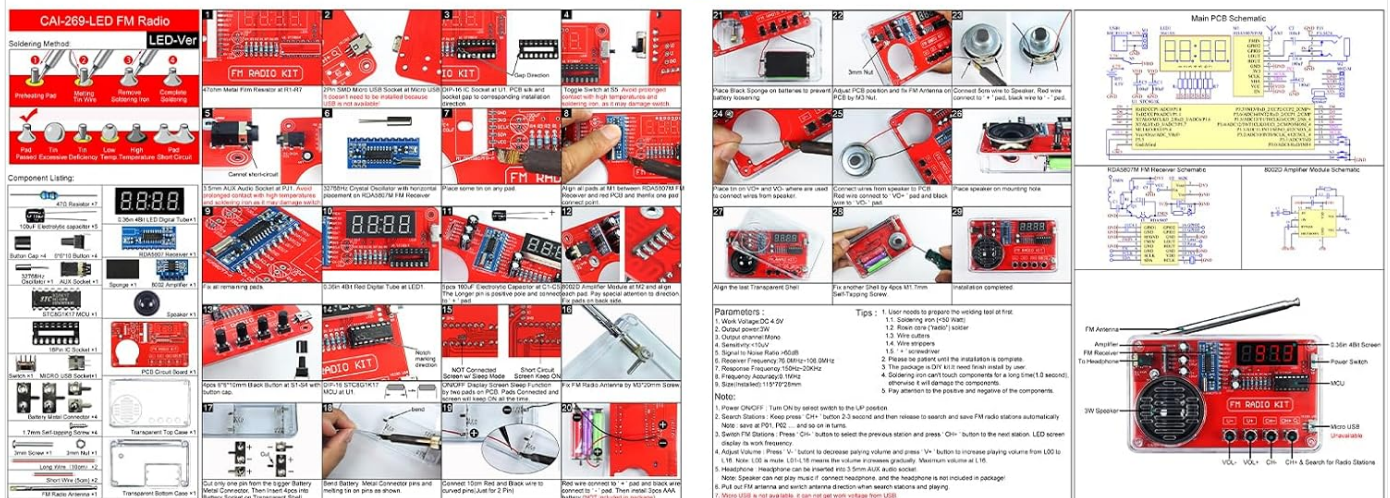
WHAT'S IN THE BOX

The package includes all necessary components to assemble your FM radio kit:

- All electronic components for the FM radio circuit board.
- Two-piece rounded acrylic cases for enclosure.

- Telescopic antenna.
- Power cable (USB).
- Detailed step-by-step soldering guide.

What's in the package?



Come With Procedure Instruction

Image: An overhead view displaying all components included in the kit, such as the PCB, acrylic case parts, speaker, various electronic components, and the instruction manual.

SETUP AND ASSEMBLY

This kit requires soldering. Follow the included step-by-step soldering guide carefully. Ensure you have appropriate soldering tools (soldering iron, solder, safety glasses, etc.) before beginning assembly.

1. **Prepare Components:** Unpack all components and identify them using the provided guide.
2. **Solder Components to PCB:** Systematically solder each component onto the designated pads on the Printed Circuit Board (PCB). Pay close attention to component polarity where applicable (e.g., diodes, electrolytic capacitors, ICs).

3. **Connect Speaker:** Connect the speaker wires to the appropriate terminals on the PCB.
4. **Assemble Acrylic Case:** Once all soldering is complete and verified, carefully place the assembled PCB into the two-piece rounded acrylic case. Secure the case using the provided screws.
5. **Attach Antenna:** Screw the telescopic antenna into its designated port on the case.

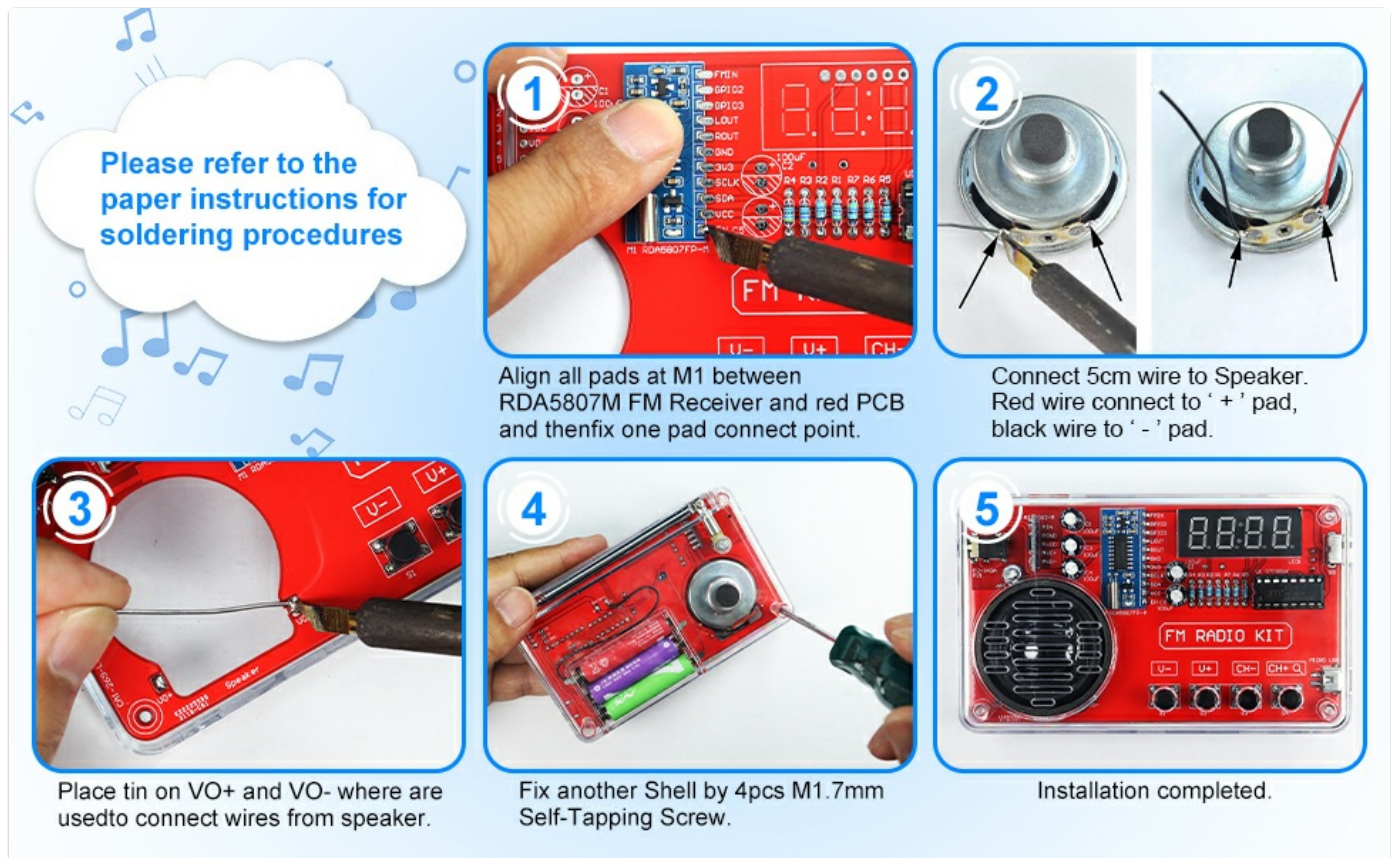


Image: A visual guide showing key assembly steps, including soldering components, connecting the speaker, and securing the PCB within the acrylic case.



Automatic Search Station Function

Long press 'CH+' to automatically search for all local stations



Restart the radio, automatically listen to the previous station

Image: A close-up view of the two-piece acrylic shell, demonstrating how it encloses the radio's circuit board for a secure and comfortable grip.

OPERATING INSTRUCTIONS

Powering the Radio

The radio offers two power supply options:

- **AAA Batteries:** Insert 3 AAA batteries (not included) into the battery compartment.
- **USB Power:** Connect the provided power cable to the Micro USB port on the radio and a compatible USB power source.

Use the power switch to turn the radio ON or OFF.

Automatic Station Search

To automatically search for and save available FM stations:

- Press and hold the **CH+** button. The radio will scan the frequency band and automatically store found stations.

- To navigate through saved stations, briefly press the **CH+** or **CH-** buttons.

Headphone Jack and Clear Sound

- ✓ 3.5MM Headphone Jack
- ✓ 3W High Quality Speakers
- ✓ 8002D Amplifier IC
- ✓ RDA5078 Radio IC

**3 AAA Batteries Powered
(Note: Batteries are not included in the package)**



Image: The radio's front panel highlighting the control buttons (U-, U+, CH-, CH+) and the LED display, illustrating the automatic station search feature.

Volume Control

Adjust the volume using the **U+** (Volume Up) and **U-** (Volume Down) buttons.

Headphone Use

For private listening, plug 3.5MM headphones into the headphone jack located on the side of the radio.



Image: A person listening to the radio with headphones, emphasizing the clear sound quality and the convenience of the 3.5mm headphone jack.

MAINTENANCE

To ensure the longevity and optimal performance of your ICSTATION Portable FM Radio Kit:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the radio. Avoid using harsh chemicals or abrasive materials.
- **Battery Replacement:** If using AAA batteries, replace them when the radio's performance diminishes or it fails to power on. Note that accessing the battery compartment requires partial disassembly of the case.
- **Storage:** Store the radio in a cool, dry place away from direct sunlight and extreme temperatures.
- **Antenna Care:** Handle the telescopic antenna gently to prevent bending or breaking.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Radio does not power on.	Batteries are dead or incorrectly inserted. USB power source is not providing power. Soldering error during assembly.	Replace batteries or ensure correct polarity. Check USB cable and power adapter. Review soldering connections, especially power-related ones.
Poor reception or static.	Antenna not fully extended. Weak signal in current location. Soldering error on antenna connection or radio IC.	Fully extend the telescopic antenna. Move to a location with better FM signal. Inspect soldering for the antenna and RDA5078 radio IC.
No sound from speaker/headphones.	Volume is too low. Speaker/headphone connection issue. Soldering error on amplifier IC or speaker connections.	Increase volume using the U+ button. Ensure speaker wires are securely connected or headphones are fully plugged in. Check soldering for the 8002D amplifier IC and speaker terminals.

SPECIFICATIONS

- **Model Number:** GY21353-2
- **Tuner Technology:** FM (87-108MHz)
- **Speaker Output:** 3W
- **Audio ICs:** 8002D amplifier IC, RDA5078 radio IC
- **Display:** LED
- **Power Source:** 3 x AAA batteries (not included) or USB power
- **Connectivity:** 3.5MM Headphone Jack
- **Product Dimensions:** 4.52"L x 1.1"W x 2.75"H
- **Item Weight:** 5.3 ounces

WARRANTY INFORMATION

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. Please retain your proof of purchase for warranty claims. For specific warranty terms and conditions, refer to the documentation included with your purchase or contact ICSTATION customer support.

CUSTOMER SUPPORT

For technical assistance, troubleshooting, or any questions regarding your ICSTATION Portable FM Radio Kit, please contact our customer support team. Our experienced technicians are available to provide guidance and support to ensure a rewarding learning and usage experience. Refer to the contact information provided in your product packaging or visit the official ICSTATION website for support details.



