

DollaTek b3fd9a60-7d36-4f7b-82a9-9f948bc5cc26

DollaTek Wireless 76MHz-108MHz Stereo FM Radio Receiver Module PCB DIY Electronic Kits User Manual

INTRODUCTION

This document provides comprehensive instructions for the assembly, operation, and maintenance of the DollaTek Wireless 76MHz-108MHz Stereo FM Radio Receiver Module PCB DIY Electronic Kit. Designed for electronic enthusiasts and students, this kit offers a hands-on experience in building a functional FM radio receiver. It features a specialized 16-pin dual flat package integrated circuit (IC) that operates within a voltage range of 1.8-3.6V, integrating all necessary functionalities from antenna input to audio signal output. The circuit utilizes a 70KHz intermediate frequency (IF), eliminating the need for an external IF transformer.

SAFETY INFORMATION

Please read and understand all safety precautions before beginning assembly or operation. Failure to follow these guidelines may result in injury or damage to the product.

- Always ensure that the power source is disconnected before performing any assembly, modification, or maintenance on the circuit board.
- Wear appropriate personal protective equipment, such as safety glasses, to protect your eyes from solder splatter or component fragments.
- Work in a well-ventilated area to avoid inhaling solder fumes.
- Handle electronic components with care to prevent damage from electrostatic discharge (ESD). Consider using an anti-static mat and wrist strap.
- Keep small components out of reach of children to prevent choking hazards.

PACKAGE CONTENTS

Verify that all components listed below are present in your kit before starting assembly.

- 1 x Wireless 76MHz-108MHz Stereo FM Radio Receiver Module PCB
- Assorted electronic components including resistors, capacitors, inductors, diodes, integrated circuits, headphone jack, and control buttons.



Image: All components of the DollaTek Wireless FM Radio Receiver Kit laid out, including the PCB, various resistors, capacitors, the main IC, and other small parts.

SETUP AND ASSEMBLY

This kit requires soldering and is recommended for individuals with prior experience in electronics assembly. Precision and attention to detail are crucial for successful operation.

1. **Component Identification:** Carefully identify all components and their corresponding locations on the Printed Circuit Board (PCB) using the silkscreen markings.
2. **Surface-Mount IC Soldering:** Begin by soldering the surface-mount integrated circuit (IC). This step requires a fine-tipped soldering iron and precision. Ensure the IC is correctly oriented and all pins are properly aligned before soldering. Solder one corner pin first, then verify alignment before soldering the remaining pins.
3. **Through-Hole Component Soldering:** Proceed to solder the remaining through-hole components, such as resistors, capacitors, diodes, inductors, the headphone jack, and control buttons. Pay close attention to the polarity of components like diodes and electrolytic capacitors, ensuring they are inserted in the correct direction as indicated on the PCB.
4. **Coiled Coil Assembly:** If the kit includes a separate coiled coil, assemble it according to any specific instructions or diagrams and integrate it into the circuit as indicated on the PCB.
5. **Solder Joint Inspection:** After all components are soldered, thoroughly inspect all solder joints. Ensure they are clean, shiny, and free from bridges (solder connecting adjacent pads) or cold joints (dull, grainy, or cracked solder).
6. **Power Connection:** Connect a suitable DC power source (1.8-3.6V) to the designated power input terminals on the PCB. Ensure correct polarity.

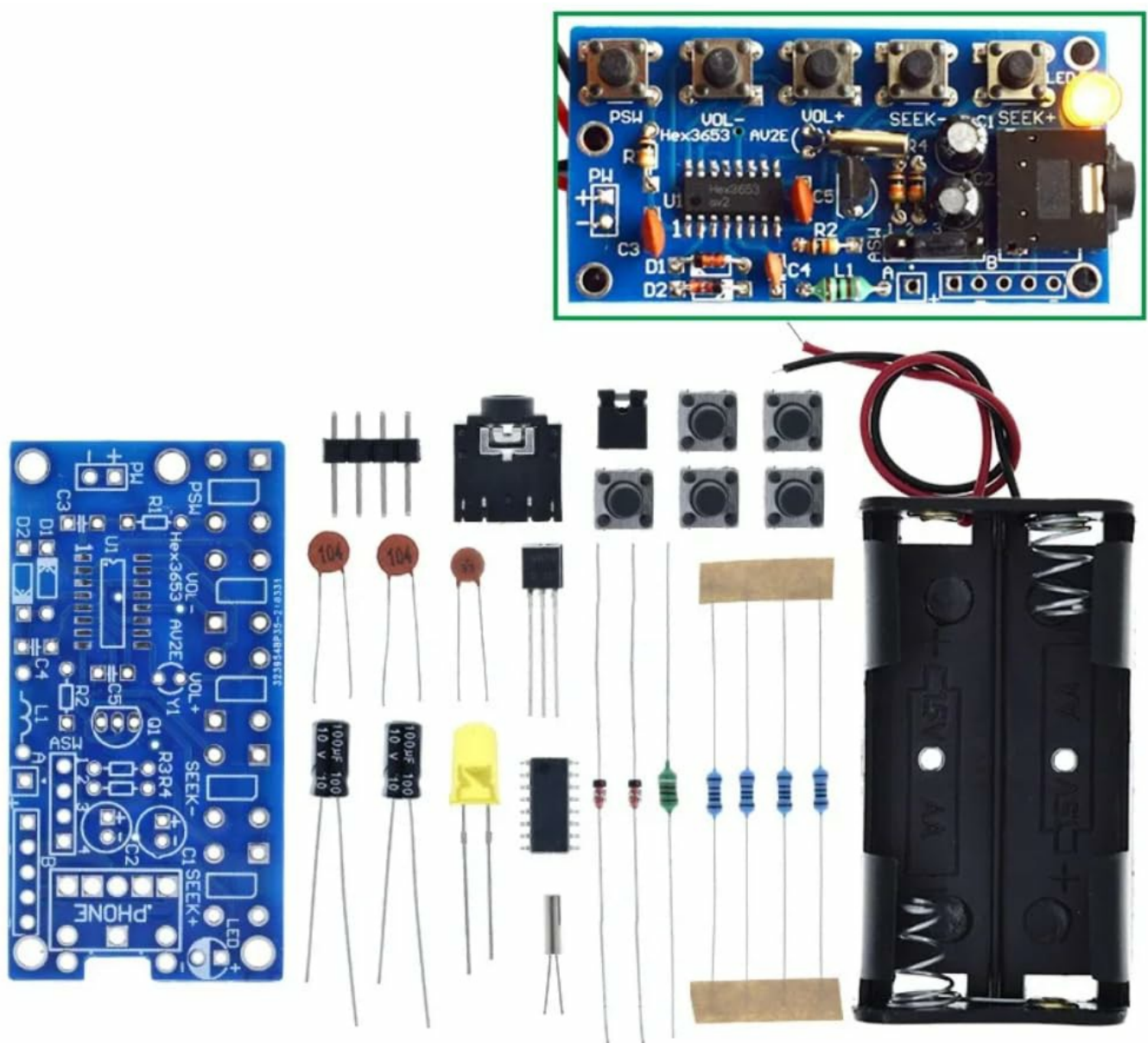


Image: A fully assembled DollaTek Wireless FM Radio Receiver Module PCB, showing all components soldered onto the board.

Once assembled and powered, follow these steps to operate your FM radio receiver module.

continue the search.

5. **Frequency Range:** The radio operates within the 76-108MHz frequency range, allowing reception of both universal FM and campus radio stations.
6. **Volume Control:** Use the **VOL+** button to increase the volume and the **VOL-** button to decrease it.



Image: Close-up view of the DollaTek FM Radio Receiver Module, highlighting the control buttons for power, seek, and volume.



Image: Close-up view of the DollaTek FM Radio Receiver Module, showing the 3.5mm headphone jack, which also functions as the antenna input.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your radio receiver module.

- **Cleaning:** Keep the assembled module clean and free from dust, dirt, and moisture. Use a soft, dry cloth for cleaning. Avoid using liquid cleaners directly on the circuit board.
- **Environmental Conditions:** Avoid exposing the circuit to extreme temperatures, high humidity, or direct sunlight. Store it in a cool, dry place.
- **Inspection:** Periodically inspect all solder joints and components for any signs of wear, corrosion, or damage. Re-solder any loose connections if necessary.
- **Battery Management:** If using batteries, ensure they are correctly inserted and replaced when depleted. Remove batteries if the module will not be used for an extended period to prevent leakage.

TROUBLESHOOTING

If you encounter issues with your DollaTek FM Radio Receiver Module, refer to the following troubleshooting guide.

- **No Power/LED Not Lighting Up:**
 - Check the power source connections and ensure correct polarity.
 - Verify that the power button (PW) is functioning correctly and making proper contact.
 - Confirm the battery voltage is within the specified 1.8-3.6V range.
- **No Sound or Poor Reception:**
 - Ensure headphones are securely plugged into the 3.5mm jack. The headphone wire acts as the antenna.
 - Check the **ASW** jumper setting; it should be on the middle two pins for headphone antenna use.
 - Inspect all solder joints, especially those for the IC, headphone jack, and antenna coil, for any cold joints or bridges.
 - Test the module in different locations to rule out local radio interference or weak signal areas.
- **Cannot Find Any Stations:**
 - Confirm that FM radio broadcasts are available in your current location within the 76-108MHz frequency range.
 - When using the **SEEK+** or **SEEK-** buttons, press them briefly and allow the automatic search function to

complete. Repeated or long presses may interfere with the tuning process.

- Ensure the main IC is correctly soldered and functional.

• **Distorted Audio:**

- Check the volume level; excessively high volume can cause distortion.
- Ensure the power supply is stable and within the recommended voltage range.
- Inspect capacitor solder joints, as faulty capacitors can lead to audio issues.

SPECIFICATIONS

Feature	Specification
Brand	DollaTek
Model Number	b3fd9a60-7d36-4f7b-82a9-9f948bc5cc26
UPC	725835034753
Frequency Range	FM 76-108MHz
Working Voltage	1.8-3.6V
IF Frequency	70KHz
Connectivity Technology	Auxiliary
Tuner Technology	FM
Power Source	Battery Powered
Recommended Use	Electronics Education
Country of Origin	China

WARRANTY INFORMATION

As a DIY electronic kit, specific warranty coverage may vary. Please refer to the retailer or manufacturer for detailed information regarding individual components or the kit as a whole. It is generally understood that DIY kits require user assembly, and warranty may not cover issues arising from incorrect assembly or handling.

SUPPORT

For technical assistance, inquiries, or further support, please contact DollaTek customer service or the retailer from whom you purchased this kit. Additionally, online resources and community forums dedicated to DIY electronics can provide valuable assistance and shared knowledge for troubleshooting and project enhancement.

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