celonix ATOOLL1755141

celonix PortaPack H2 and HackRF One SDR Radio Kit User Manual

Model: ATOOLL1755141

1. Introduction

This manual provides essential information for the proper setup, operation, and maintenance of your celonix PortaPack H2 and HackRF One Software Defined Radio (SDR) Kit. This device is designed for exploring the radio spectrum, offering half-duplex operation across a wide frequency range. Please read these instructions carefully before use.

2. Package Contents

Verify that all items listed below are included in your package:

- 1 x SDR Radio Unit (PortaPack H2 + HackRF One)
- 1 x Data Cable (USB Cable)
- 5 x Antennas (various types for different frequency ranges)



Image 1: The celonix PortaPack H2 and HackRF One SDR Radio Unit.

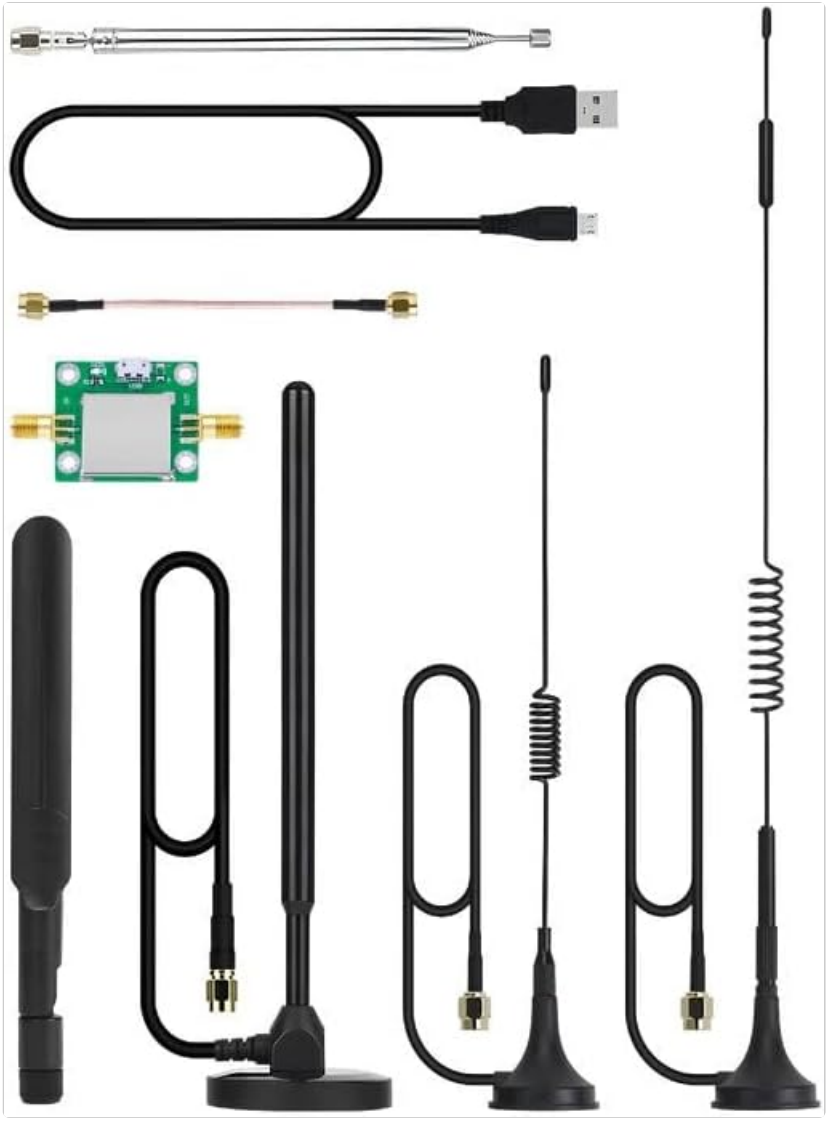


Image 2: Included antennas and USB cable for the SDR kit.

3. Setup

Follow these steps for initial setup of your SDR Radio Kit:

1. **Charge the Device:** The PortaPack H2 has a built-in rechargeable lithium battery. Connect the provided USB cable to the device and a power source (e.g., computer USB port, USB wall adapter) to charge it before first use.
2. **Connect Antennas:** Select an appropriate antenna for your desired frequency range and screw it securely into the ANTENNA port on the HackRF One unit. Ensure a firm connection to optimize signal reception.
3. **Power On:** Press and hold the power button (if available) or connect the USB cable to a computer to power on the device. The 3.2-inch LCD screen will illuminate.
4. **Software Compatibility:** The PortaPack is compatible with the HackRF One Unio design. It is not compatible with the original HackRF Jawbreake design. If an RF shield is installed on your HackRF, the PortaPack should function correctly.

Your browser does not support the video tag.

Video 1: An overview of the PortaPack H4M+ HackRF Kit, demonstrating unboxing and initial device interaction. This video provides a general visual guide for similar HackRF PortaPack setups.

4. Operating Instructions

The PortaPack H2 offers various functions accessible via its interface:

- **Navigation:** Use the four-way arrow buttons, rotary wheel, and select button to navigate through the menus on the 3.2-inch LCD screen.
- **HackRF Mode:** To use the device with computer-based SDR software, activate "HackRF mode" on the PortaPack. This allows your computer to interface directly with the HackRF One.
- **Reception Modes:** The device supports SSB, AM, narrowband FM, and broadband FM audio reception. You can also view signals using the cascade spectrum and perform broadband (18MHz) spectrum and cascade analysis.
- **Monitoring:** The kit is capable of monitoring various signals, including boat (AIS), automobile (TPMS), and E-utility counter transponder (ITRON ERT) data.
- **PPM Calibration:** Utilize the PPM calibration feature for more accurate tuning of frequencies.
- **Sleep Mode:** To conserve battery life, the device features a sleep mode that turns off the display while maintaining essential functions.

5. Features

Key features of the celonix PortaPack H2 and HackRF One SDR Radio Kit include:

- **Display:** 3.2-inch TFT 240 x 320 RGB LCD with a resistive touch panel for interactive control.
- **Controls:** Intuitive four-way arrow buttons, a rotary wheel, and a select button for easy navigation.
- **Internal Clock:** A coin battery preserves settings and date/time.
- **Storage:** Micro SD card slot for data logging and code storage.
- **Frequency Range:** Half-duplex operation in the range from 1 MHz to 6 GHz.
- **Bandwidth:** Instantaneous bandwidth capability of 20 MHz.
- **Power:** Equipped with a built-in rechargeable lithium battery for portable use.
- **Compatibility:** Designed for use with HackRF One Unio and various SDR host computer software applications.

6. Specifications

Specification	Detail
Compatible Devices	HackRF One Unio, Computers (running HackRF software)
Connector Type	USB, 3.5 mm Audio Jack
Brand	celonix
Connectivity Technology	DC 2.1
Color	Transparent
Antenna Description	Radio
Tuner Type	AM FM Broadband
UPC	635412729296
Manufacturer	Wnew
Model Number	ATOOLL1755141
Item Weight	360 Grams

7. Maintenance

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

- **Cleaning:** Gently wipe the device with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** Recharge the built-in lithium battery regularly, even if the device is not in frequent use, to maintain battery health. Avoid fully discharging the battery for extended periods.
- **Antenna Care:** Handle antennas with care to prevent bending or damage. Ensure connections are clean and secure.

8. Troubleshooting

If you encounter issues with your SDR Radio Kit, refer to the following common problems and solutions:

- **Device Not Powering On:**
  - Ensure the battery is charged. Connect the USB cable to a reliable power source.
  - Verify the USB cable is securely connected to both the device and the power source.
- **No Signal Reception:**
  - Check that an antenna is properly connected to the ANTENNA port.
  - Ensure the correct antenna type is being used for the frequency range you are trying to receive.
  - Verify that the device is not in "HackRF mode" if you intend to use its standalone reception capabilities.
- **Issues with Computer Software:**
  - Confirm the device is in "HackRF mode" when connecting to computer-based SDR software.
  - Ensure your computer has the necessary drivers installed for the HackRF One.
  - Check the USB connection between the device and your computer.

For more complex issues, consult online resources or community forums dedicated to HackRF One and PortaPack devices.

9. Warranty & Support

Your celonix PortaPack H2 and HackRF One SDR Radio Kit may be eligible for extended protection plans:

- **2-Year Protection Plan:** Available for purchase.
- **3-Year Protection Plan:** Available for purchase.
- **Complete Protect:** A monthly plan covering eligible past and future purchases.

A 30-day return policy is typically offered for this product.
For additional support or to explore other products, please visit the celonix Store.

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