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NooElec TV28Tv2

Nooelec RTL-SDR USB Stick Set (RTL2832U & R820T) Instruction Manual

This manual provides detailed instructions for the setup, operation, maintenance, and specifications of your Nooelec RTL-SDR USB Stick Set. This device is designed for software-defined radio (SDR) applications, offering a versatile platform for exploring radio frequencies.

1. PRODUCT OVERVIEW

The Nooelec RTL-SDR USB Stick Set is an affordable and powerful device for software-defined radio enthusiasts. It features the RTL2832U and R820T tuner ICs, providing a frequency capability of approximately 27MHz-1700MHz. This device allows users to explore various radio signals, including amateur radio, ADS-B, police and fire scanning, trunking, and satellite images, using compatible SDR software.



Image 1.1: The Nooelec RTL-SDR USB Stick, a compact device for software-defined radio applications.

2. PACKAGE CONTENTS

Your Nooelec RTL-SDR USB Stick Set includes the following components:

- Nooelec USB SDR device (RTL2832U & R820T)
- Antenna with MCX connector



Image 2.1: The included antenna with its cable, designed for use with the RTL-SDR USB stick.

3. SETUP GUIDE

Follow these steps to set up your Nooelec RTL-SDR USB Stick:

1. **Connect the Antenna:** Locate the MCX connector on the SDR device. Carefully screw the antenna cable's MCX connector onto the SDR. Ensure a secure connection.



Image 3.1: Close-up view of the MCX connector on the SDR device.



Image 3.2: The Nooelec RTL-SDR USB stick with the antenna securely connected.

- 2. Connect to Computer:** Insert the USB-A connector of the SDR device into an available USB port on your computer (laptop, desktop, or tablet).



Image 3.3: The Nooelec RTL-SDR USB stick with its protective cap removed, revealing the USB-A connector.

3. **Install Software:** The device requires compatible software to function. Popular options include SDR#, HDSDR, SDR Touch, MATLAB, Planepplotter, CubicSDR, and rtl_433. Refer to the software's documentation for installation and driver setup.

Your browser does not support the video tag.

Video 3.1: This video provides a product overview and demonstrates the physical connection of the antenna to the Nooelec RTL-SDR USB stick.

4. OPERATING INSTRUCTIONS

Once the hardware is connected and software is installed, you can begin operating your SDR device:

1. **Launch SDR Software:** Open your preferred SDR software application on your computer.
2. **Select Device:** In the software settings, select the Nooelec RTL-SDR (often listed as 'Generic RTL2832U OEM' or similar) as your input device.
3. **Tune Frequencies:** Use the software interface to tune to desired frequencies within the 27MHz-1700MHz range. The software will display the spectrum and allow you to demodulate signals.
4. **Adjust Settings:** Experiment with various settings like gain, sample rate, and demodulation modes (FM, AM, LSB, USB, etc.) to optimize signal reception and audio quality.

5. MAINTENANCE

To ensure the longevity and optimal performance of your Nooelec RTL-SDR USB Stick, observe the following maintenance guidelines:

- **Handle with Care:** Avoid dropping the device or subjecting it to excessive force.
- **Protect from ESD:** The device includes a protection diode on the input to guard against Electrostatic Discharge (ESD) damage. However, always handle the device and antenna with care, especially in dry environments, to minimize static buildup.
- **Keep Dry:** Protect the device from moisture and extreme temperatures.
- **Clean Gently:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or solvents.
- **Store Properly:** When not in use, store the SDR and antenna in a clean, dry place, ideally in its original packaging or a protective case.

6. TROUBLESHOOTING

If you encounter issues with your Nooelec RTL-SDR USB Stick, consider the following:

- **No Device Detected:** Ensure the SDR is fully inserted into the USB port. Try a different USB port or

computer. Verify that the necessary drivers are correctly installed for your operating system.

- **Poor Signal Reception:** Check that the antenna is securely connected. Try repositioning the antenna for better reception. Consider using a different or higher-quality antenna for specific frequency ranges. Ensure no strong local interference sources are present.
- **Software Issues:** Confirm that your SDR software is up-to-date. Consult the software's documentation or online communities for specific troubleshooting steps related to the application.
- **Intermittent Connection:** Ensure all connections are firm. Avoid using excessively long or unshielded USB extension cables, which can degrade signal integrity.

7. SPECIFICATIONS

Feature	Specification
Product Dimensions	3.7 x 3.3 x 2.5 inches
Item Weight	0.32 ounces
Model Number	TV28Tv2
Tuner ICs	RTL2832U & R820T
Frequency Capability	Approximately 27MHz-1700MHz
Connector Type	MCX
Connectivity Technology	USB
Compatible Devices	Laptop, Desktop, Tablet
Manufacturer	Nooelec Inc.

8. WARRANTY & SUPPORT

Nooelec provides a **1-year warranty** against manufacturer's defects for this product. For any issues or support inquiries, please refer to the official Nooelec website or contact their customer service directly. Additional protection plans may be available from your retailer.