

VR-robot T15B

NIORFNIO 15W FM Transmitter User Manual

Model: T15B | Brand: VR-robot

1. INTRODUCTION

The NIORFNIO 15W FM Transmitter is a versatile device designed for wireless stereo broadcasting across the 87-108MHz frequency range. It is suitable for various applications including churches, cars, shopping malls, lecture halls, and private radio stations. This manual provides detailed instructions for setting up, operating, and maintaining your transmitter to ensure optimal performance.

Key features include:

- Adjustable transmission frequency within 87.0 ~ 108.0MHz.
- 5W / 15W high-low power adjustment for transmission distances of 3-4 km (1.9-2.5 mi) in open air.
- Advanced modulation system with built-in PLL frequency, audio pre-emphasis, limiter, and low-pass filter circuit.
- Efficient heat dissipation via a high-quality dual ball bearing fan and optimized thermal channels.
- PC control capability via micro USB for intelligent broadcasting features like time-scheduled broadcasts.
- Includes a 1/4 wavelength magnetic sucker antenna for flexible placement and effective signal transmission.
- High-fidelity Bluetooth connectivity for wireless audio streaming from mobile devices.



Figure 1.1: Front view of the NIORFNIO 15W FM Transmitter, showing the display and control knobs.

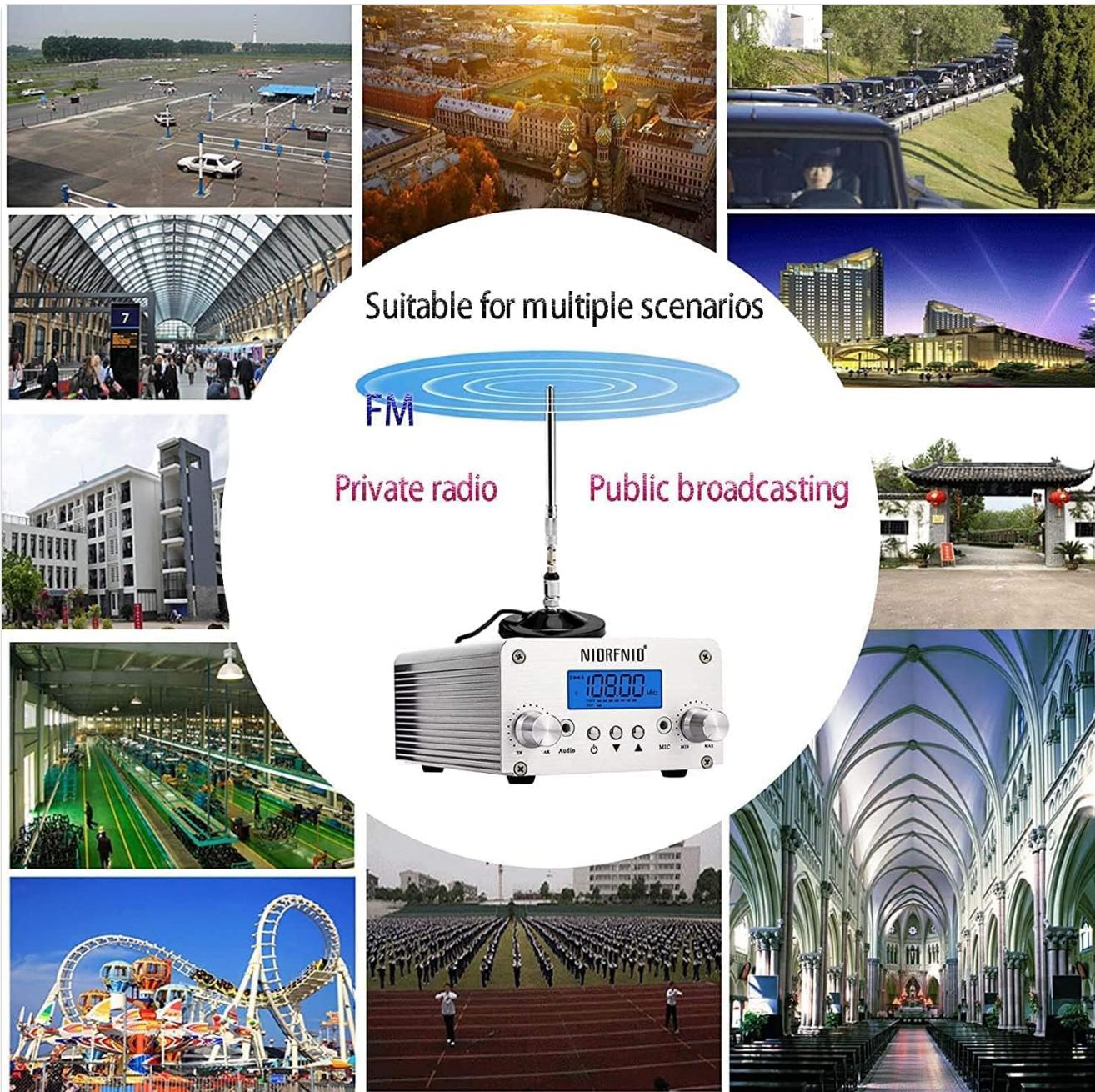


Figure 1.2: The transmitter's versatility for various applications, including private radio and public broadcasting.

2. SETUP GUIDE

Follow these steps to set up your NIORFNIO 15W FM Transmitter:

- 1. Unpack Contents:** Carefully remove all components from the packaging. Ensure you have the transmitter unit, magnetic sucker antenna, power adapter, and any included cables.
- 2. Antenna Connection:** Connect the magnetic sucker antenna to the "RF-OUT" port on the back of the transmitter. Ensure the connection is secure. For optimal performance and to prevent damage, always connect the antenna before powering on the device. Position the antenna on a metal surface (e.g., car roof, balcony railing) to create a ground plane, which enhances signal transmission.
- 3. Power Connection:** Connect the power adapter to the "12V==2A" input port on the back of the transmitter, then plug the adapter into a standard electrical outlet.
- 4. Audio Input:**

- **Via Audio Jack:** Connect your audio source (e.g., MP3 player, computer, mixer) to the "Audio" input jack on the front panel using a 3.5mm audio cable.
- **Via Bluetooth:** Power on the transmitter. On your audio device, search for Bluetooth devices and select "NIORFNIO" to pair.
- **Via Microphone:** Connect a microphone to the "MIC" input jack on the front panel.

5. **PC Control (Optional):** To use PC control features, connect a micro USB cable from the "PC Control" port on the back of the transmitter to your computer. You may need to install specific drivers and software, which can typically be obtained from the manufacturer's support website.



Figure 2.1: Detailed diagram of the transmitter's front and back panels, indicating ports and controls.

3. OPERATING INSTRUCTIONS

Once set up, operate your transmitter using the following guidelines:

1. **Power On/Off:** Press the "Power On/off" button (circular button with power symbol) on the front panel to turn the unit on or off. The display will illuminate.

2. **Adjust Frequency:** Use the "Up" (triangle pointing up) and "Down" (triangle pointing down) buttons to adjust the transmission frequency. The current frequency will be displayed on the LCD screen. Select a clear frequency not currently in use in your area to avoid interference.
3. **Adjust Audio Volume:** Rotate the "Audio volume adjustment" knob (leftmost knob) to control the input audio level. Adjust this to prevent distortion while ensuring sufficient signal strength.
4. **Adjust Microphone Volume:** If a microphone is connected, rotate the "Microphone volume adjustment" knob (rightmost knob) to control its input level.
5. **Power Output Adjustment:** The transmitter supports 5W and 15W power output modes. Refer to the device's menu or PC control software for instructions on switching between these power levels. Higher power provides greater range but consumes more energy and generates more heat.
6. **Channel Switching (Stereo/Mono):** The device supports switchable stereo and mono channels. This setting can typically be adjusted via the device's menu or PC control software. Stereo mode provides higher fidelity for music, while mono mode can improve clarity for voice broadcasts over long distances.
7. **Bluetooth Operation:** After pairing, ensure your audio device's volume is set appropriately. The transmitter will broadcast the audio received via Bluetooth.
8. **PC Control Software:** If using the PC control software, launch the application on your computer. This software allows for advanced settings, including frequency control, power output adjustment, and scheduling of broadcasts. Ensure the transmitter is connected via USB and recognized by the software.

Transmit Distance of 1.9-2.5 mi in The Open Air



Figure 3.1: Illustration of the transmitter's effective range in an open-air environment.



76~108 MHz Frequency

Meet your different Broadcast Channel Requirement

Figure 3.2: The transmitter supports a broad frequency range from 76 to 108 MHz.

4. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your FM transmitter:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Do not use liquid cleaners or abrasive materials, as they may damage the finish or internal components.
- **Ventilation:** Ensure the ventilation openings on the unit are not blocked. The transmitter uses a dual ball bearing fan for heat dissipation; proper airflow is crucial to prevent overheating.
- **Antenna Care:** Keep the antenna clean and free from obstructions. Periodically check the antenna connection for tightness.
- **Storage:** When not in use for extended periods, store the transmitter in a cool, dry place away from direct sunlight and extreme temperatures.
- **Cable Management:** Avoid kinking or sharply bending power and audio cables to prevent internal wire damage.

5. TROUBLESHOOTING

If you encounter issues with your transmitter, refer to the following table for common problems and solutions:

| Problem | Possible Cause / Solution |
|--|--|
| No power / Unit does not turn on. | <p>Check if the power adapter is securely connected to both the transmitter and the power outlet.</p> <p>Verify the power outlet is functional.</p> <p>Ensure the power button is pressed firmly.</p> |
| No audio output / Weak signal. | <p>Ensure the antenna is properly connected to the "RF-OUT" port and positioned correctly (e.g., on a metal surface for ground plane).</p> <p>Check the audio input cable connection from your source to the transmitter's "Audio" jack.</p> <p>Adjust the "Audio volume adjustment" knob on the transmitter.</p> <p>Increase the volume on your audio source device.</p> <p>Select a clear frequency with no existing broadcasts.</p> <p>Ensure the receiving FM radio is tuned to the correct frequency.</p> |
| Poor Bluetooth audio quality / Low volume. | <p>Ensure the Bluetooth device is within range of the transmitter.</p> <p>Adjust the volume on both the Bluetooth source device and the transmitter.</p> <p>Try re-pairing the Bluetooth device.</p> <p>Consider using a wired audio connection if Bluetooth performance remains unsatisfactory.</p> |
| Interference or static. | <p>Change the transmission frequency to one that is less congested.</p> <p>Ensure the antenna is properly installed and has a good ground plane.</p> <p>Keep the transmitter away from other electronic devices that may cause interference.</p> |
| Unit gets hot during operation. | <p>This is normal, especially at higher power settings. Ensure adequate ventilation around the unit.</p> <p>Do not block the fan or ventilation openings.</p> <p>If overheating persists or the unit shuts down, reduce the power output or allow it to cool.</p> |

6. SPECIFICATIONS

| Feature | Detail |
|--------------|--------|
| Model Number | T15B |

| Feature | Detail |
|------------------------------|---|
| Brand | VR-robot |
| Transmission Frequency Range | 87.0 ~ 108.0 MHz |
| Power Output | 5W / 15W (adjustable) |
| Transmission Distance | 3-4 km (1.9-2.5 mi) in open air |
| Connectivity Technology | Bluetooth, USB |
| Audio Output Mode | Stereo, Mono |
| Special Feature | Built-In Bluetooth, PC Control |
| Dimensions (Package) | 11.85 x 7.95 x 3.11 inches |
| Item Weight | 3.52 pounds |
| Manufacturer | Baile/Guangzhou Liannuo Electronic Technology Co., Ltd. |

7. WARRANTY INFORMATION

This product is covered by a standard manufacturer's warranty. For specific details regarding warranty duration, coverage, and claims procedures, please refer to the documentation included with your purchase or contact the manufacturer directly. Keep your proof of purchase for warranty validation.

Protection plans may also be available for extended coverage. Please check with your retailer for options such as 2-Year or 3-Year Protection Plans.

8. SUPPORT

For technical assistance, product inquiries, or customer service, please contact VR-robot support through their official channels. You can often find support information on the product packaging, the manufacturer's website, or the retailer's product page.

For additional resources and product information, you may visit the [VR-robot Store on Amazon](#).