
# DMX-WIRBA

## Portable Wireless DMX512 Receiver

Compact Wireless 2.4GHz DMX Receiver with Built-In Rechargeable Battery

## USER MANUAL

# 1. Technical Specifications

| | |
|---|---|
| **Input Voltage (Charging)** | 5V DC, 500mA minimum |
| **Battery** | 3.7V 16340 rechargeable lithium, 650mAh |
| **Charge Time** | Approx. 2 hours (full charge) |
| **Battery Life** | Approx. 10 hours (fully charged) |
| **DMX Connector** | 3-pin female XLR |
| **Frequency Band** | 2.4GHz ISM Band |
| **RF Channels** | 126 (automatic frequency-hopping) |
| **Communication Distance** | Up to 500m (line of sight) |
| **ID Groups** | 7 (user-selectable) |
| **LED Indicators** | Tri-colour status LED, charge status LED |

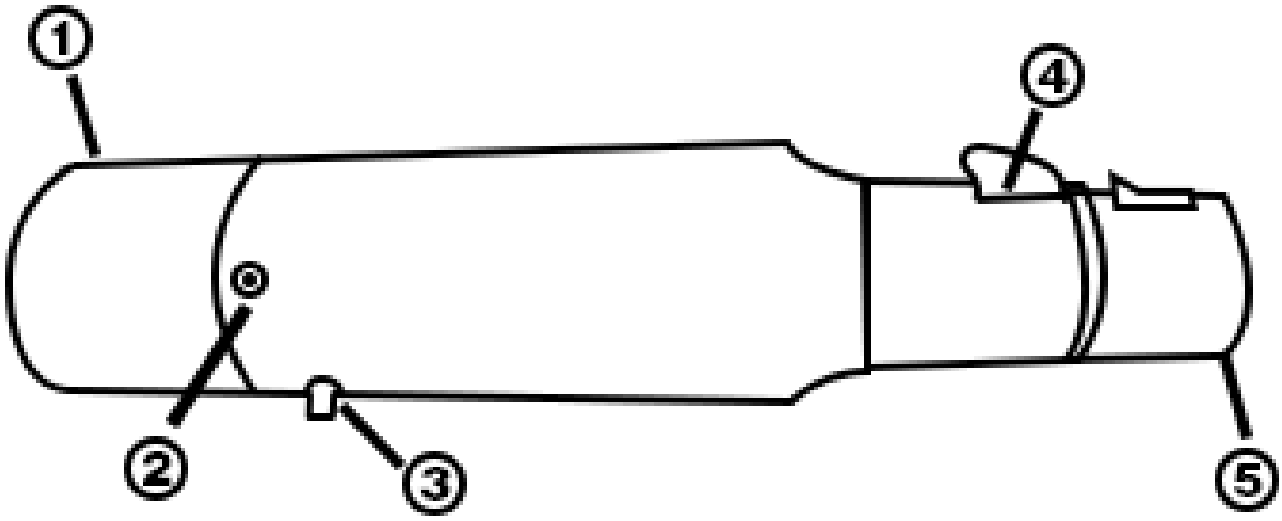
# 2. Product Overview

The DMX-WIRBA is a compact battery-powered 2.4GHz wireless DMX512 receiver. It receives a wireless DMX512 signal broadcast by a paired DMX-WIT transmitter and outputs standard wired DMX512 directly to the connected fixture — enabling fully cable-free lighting control with no perceptible signal delay.

Unlike the standard DMX-WIR, this unit includes a built-in rechargeable lithium battery, allowing it to operate independently without drawing power from the connected fixture. The unit can also be used while charging.

## 2.1 Controls & Indicators

# 3. Controls & Connections




| Ref | Component | Description |
|---|---|---|
| **1** | Antenna Cap / Tri-Colour LED | Houses the antenna. The tri-colour LED on this end displays the current ID group colour and operating status. See Section 3.3 for LED status reference. |
| **2** | Charging Port | Recessed DC 5V input for charging the internal battery. Use the supplied charger (5V, 500mA minimum). |
| **3** | Power Switch | Slide switch — ON/OFF. Controls power to the unit from the internal battery. |
| **4** | KEY Button | Press to cycle through ID groups 1–7. Each press increments the ID value by 1. |
| **5** | DMX Output (XLR) | 3-pin female XLR connector. Connect to the DMX input of the fixture or the next device in the DMX chain. |

## 3.1 Setting the ID Group

The DMX-WIRBA and its paired AVE wireless DMX transmitter must be set to the same ID group before they can communicate. There are 7 available groups, allowing up to 7 independent wireless networks to operate simultaneously in the same location without interference.

1. Slide the power switch to ON. The tri-colour LED will illuminate in the colour corresponding to the current ID group.
2. Press the KEY button once to enter ID-setting mode.
3. Press the KEY button again to increment the ID value by 1. The LED colour changes with each press to indicate the selected group.
4. Repeat until the desired ID is selected. The unit saves the ID automatically.
5. Repeat this process on the paired DMX-WIT transmitter and ensure both units are set to the same ID.

**Note:** If running multiple independent wireless networks in the same venue, assign each transmitter/receiver pair a unique ID group to prevent cross-talk.

## 3.2 ID Group & LED Colour Reference

| ID Group | LED Colour | LED Colour Mix |
|---|---|---|
| **1** | Red | Red |
| **2** | Green | Green |
| **3** | Yellow | Red + Green |
| **4** | Blue | Blue |
| **5** | Purple | Red + Blue |
| **6** | Cyan | Green + Blue |
| **7** | White | Red + Green + Blue |

## 3.3 LED Status Indicators

| LED Behaviour | Status |
|---|---|
| **Constant (solid) — any colour** | Unit powered on. No wireless signal detected. |
| **Red flashing** | Transmitting — DMX data is being broadcast wirelessly. |
| **Green flashing** | Receiving — a wireless DMX signal is being received and output to the connected fixture. |

## 3.4 Establishing Communication

1. Plug the DMX-WIRBA into the DMX input of the target light fixture, or connect it via a 3-pin XLR cable.
2. Slide the power switch to ON.
3. Press the KEY button on both the DMX-WIRBA and the paired AVE wireless DMX transmitter to set them to the same ID group.
4. Once both units share the same ID, the transmitter will begin broadcasting as soon as DMX data is detected.
5. The DMX-WIRBA's green LED will flash once it has locked onto the transmitter's signal on a clear frequency channel, confirming the link is established.
6. The faster the LED flashes, the higher the incoming DMX data rate.
7. Communication is now established. The DMX-WIRBA outputs standard wired DMX512 to the connected fixture.

**Note:** The DMX-WIRBA automatically scans and locks onto the clearest available frequency within the 126-channel band. Within a 500m range and on the same ID, there is no restriction on the number of receivers that can be paired to a single AVE wireless DMX transmitter.

## 3.5 Charging the Battery

1. Connect the supplied charger (DC 5V, 500mA minimum) to the USB charging port on the unit.
2. The charge status LED will flash green while charging.
3. When charging is complete, the charge status LED will turn solid green.
4. A full charge takes approximately 2 hours and provides approximately 10 hours of continuous use.

The unit can be used while charging.

**Partial Charge Reference:**

| Charge Time | Approximate Battery Life |
|---|---|
| **30 minutes** | ~3.5 hours |
| **1 hour** | ~7 hours |
| **2 hours (full)** | ~10 hours |

## 3.6 Battery Notes

- Always use the original charger or a compatible 5V DC supply rated at 500mA or higher.
- The battery can be recharged approximately 500 times.
- It is normal for the unit to generate some warmth during charging.
- If the remaining battery capacity is unknown and the unit is needed immediately, refer to the partial charge reference above.
- Do not leave the unit connected to the charger for extended periods after the battery is fully charged.

# 4. Battery Replacement

The internal battery is user-replaceable but requires careful handling. If you are not comfortable performing this procedure, have it done by a qualified technician.

**Battery type:** 3.7V 16340 rechargeable lithium, 650mAh

**Procedure:**

1. Power off the unit and disconnect the charger.
2. Unscrew the plastic cap at the tail end of the unit.
3. Unscrew the plastic connecting ring.
4. Gently pull out the circuit board. Apply even force and avoid bending or twisting.
5. Set the power switch to the OFF position.
6. Using a soldering iron, desolder the negative wire from the old battery, then desolder the positive wire. Remove the old battery.
7. Solder the positive wire to the new battery first, then the negative wire. Observe correct polarity — refer to the markings on the battery.
8. Reinstall the circuit board into the housing. Ensure the antenna does not contact other electronic components.
9. Replace the connecting ring and screw on the plastic cap.

**Important:** Only use a replacement battery of the same type and rating (3.7V 16340, 650mAh). Incorrect battery replacement can damage the unit or create a safety hazard.

# 5. Safety & Operational Notes

## 5.1 Important Notices

- If the unit requires service beyond battery replacement, contact your nearest authorised dealer.
- This unit is intended for indoor use only.
- After unpacking, inspect the unit for any damage incurred during shipping. If in doubt, do not use it — contact your authorised dealer.
- Keep all packaging materials (plastic bags, foam, etc.) out of reach of children.
- If serious operational issues arise, stop use immediately and contact your dealer.
- Do not disassemble or modify this unit beyond the battery replacement procedure described in Section 4.
- The unit must not be covered or obstructed. Keep it free of dust by cleaning periodically.

## 5.2 Safety Tips

- To reduce the risk of electric shock or fire, do not expose this unit to rain or moisture.
- Retain the original packaging in case the unit needs to be returned for service.
- Do not spill liquids on or into the unit.
- Do not operate the power switch rapidly or repeatedly.
- This unit is not intended for home use.
- This unit should be operated by adults only. Keep out of reach of children.
- Do not operate under the following conditions:
    - Environments with excessive humidity
    - Environments subject to excessive vibration or physical shock
    - Temperatures above 45°C (113°F) or below −20°C (−4°F)