DMX-WIR

2.4GHz Wireless DMX512 Receiver

Compact Inline Wireless DMX Receiver for Cable-Free Lighting Control

USER MANUAL

1. Technical Specifications

Input Voltage	5V DC, 500mA minimum
DMX Connector	3-pin female XLR
Frequency Band	2.4GHz ISM Band
RF Channels	126 (automatic frequency-hopping)
Communication Distance	Up to 700m (line of sight)
Receiver Sensitivity	−106 dBm
ID Groups	7 (user-selectable)
LED Indicator	Single tri-colour status LED
Operating Temperature	−20°C to +45°C
Humidity	10% – 90% RH (non-condensing)

2. Product Overview

The DMX-WIR is a compact 2.4GHz wireless DMX512 receiver designed to eliminate the need for signal cables between your DMX controller and lighting fixtures. 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.

2.2 Controls & Indicators

Component	Description
KEY Button	Press once to enter ID-setting mode. Each subsequent press increments the ID value (1–7).
Tri-Colour LED	Displays the current operating status. See Section 3.2 for LED status reference.
Pin-Hole Adjuster	Use a 2.5mm pin or needle to fine-adjust the radio frequency ID group.
DMX Output (XLR)	3-pin female XLR connector. Connect to the DMX input of the fixture or the next device in the DMX chain.
Metal Contact	Internal contact used to draw +5V power from compatible fixtures (e.g. lamps fitted with an A1117 or LM7805 voltage regulator).

3. Operating Instructions

3.1 Setting the ID Group

The DMX-WIR and its paired DMX-WIT 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. Power on the unit. The 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 DMX-WIT/DMX-WIR 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 DMX input signal detected or no wireless signal present.
Red flashing	Transmitting — DMX signal is being received and broadcast wirelessly (applicable when used as a transmitter).
Green flashing	Receiving — a wireless DMX signal is being received and output to the connected fixture.

3.4 Establishing Communication

1. Plug the DMX-WIR into the DMX input of the target light fixture, or connect it via a 3-pin XLR cable.
2. The unit will draw +5V power from the fixture if it is equipped with an A1117 or LM7805 internal regulator (see Section 2.2), or connect an external +5V supply if required.
3. Press the KEY button on both the DMX-WIR and the paired DMX-WIT transmitter to set them to the same ID group.
4. Once both units share the same ID, the DMX-WIT will begin broadcasting as soon as DMX data is detected.
5. The DMX-WIR'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-WIR outputs standard wired DMX512 to the connected fixture.

Note: The DMX-WIR automatically scans and locks onto the clearest available frequency within the 126-channel band. Within a 700m range and on the same ID, there is no restriction on the number of DMX-WIR receivers that can be paired to a single DMX-WIT transmitter.

4. Safety & Operational Notes

4.1 Important Notices

- There are no user-serviceable parts inside this unit. Do not attempt repairs yourself
- If the unit requires service, 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 in any way.
- The unit must not be covered or obstructed. Keep it free of dust by cleaning periodically.

4.2 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.
- 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)