LTH*PRO
professional equipment

Manual | Wireless DMX Transceiver

Preface

Thank you for choosing LTH PRO.fessional Wireless DMX Transceiver! Wireless DMX transceiver use 2.4G global open ISM band, license-free. Efficient GFSK modulation, 79 channel high-speed frequency hopping (FHSS) communication design, anti-interference ability. It's your reliable wireless DMX solution. Wireless DMX transceiver is now compatible with the world's leading wireless communications protocol. Whether you use the Swedish or the use of wireless transceivers Guangzhou, we are fully compatible with it. Solve your upgrading troubles. Complete instructions and product features, please read this manual.

Attention

- Please keep the product far away from the heat. It should be away from the heat producer. Heat will not only aging the item, it may lead breakdown or even the fire disaster.
- Please shutdown the product at the place where show the slogan of "Explosion Zone", "May Burst Area" and "Turn off the wireless transceiver" or somewhere such as Hospital, Gas Station and Airport.
- It may effect some medical electronic equipment such as hearing-aid and heart pacemaker and so on. Please comply with the warning slogan and the manufacturer's suggestion.
- Please be sure to use the attached power adapter. It might damage the device to use the power adapter without approval.

Statement

- We will keep improving and developing our products. We reserve the right to modify and improve the described item in this document without notice in advance.
- Unless otherwise provided by applicable law, we do not make any type or implied warranties to the accuracy, reliability and content of it, including but not limited to the warranties of merchantability and the purposes of specific application.
- In any case, we do not take responsibility on the loss of data, property and revenue, or any special, incidental, consequential or indirect damages, whether the loss caused by any reason.
- The availability of particular products may vary by region. Please contact your dealer.

Manual | Wireless DMX Transceiver

1. Introduction

1.1 Features
- Wireless DMX transceiver use 2.4G global open ISM band, license-free. Efficient GFSK modulation, 79 channel high-speed frequency hopping (FHSS) communication design, anti-interference ability. It's your reliable wireless DMX solution.
- Global leader adaptive frequency hopping communications (FHSS)
- 32-bit ARM processor, DMA transfer without delay
- Standard DMX512 three-pin, five-pin interface, transceiver
- Built-in Wireless Solution compatibility mode
- You can set 6 groups ID code, with the pairing mode, supports more transmitter universe

1.2 Specifications
- Band: 2.402GHz – 2.480GHz, ISM, 79ch
- Spread spectrum: FHSS, 1100 hops / sec
- Modulation: GFSK
- Maximum transmit power: 23dBm
- Receiver sensitivity: -94dBm
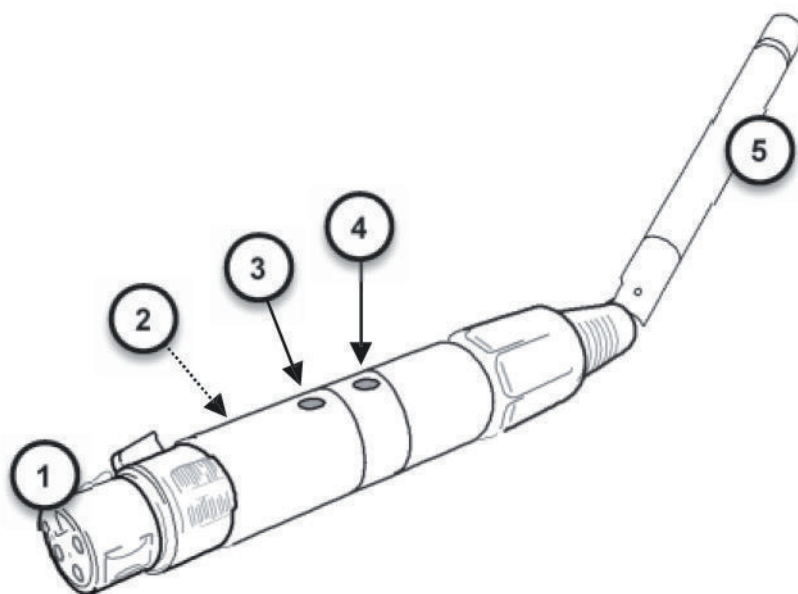- Power: DC 5V $\pm$ 10%
- Size: 212 x 18 x 18mm

1.3 Packing List
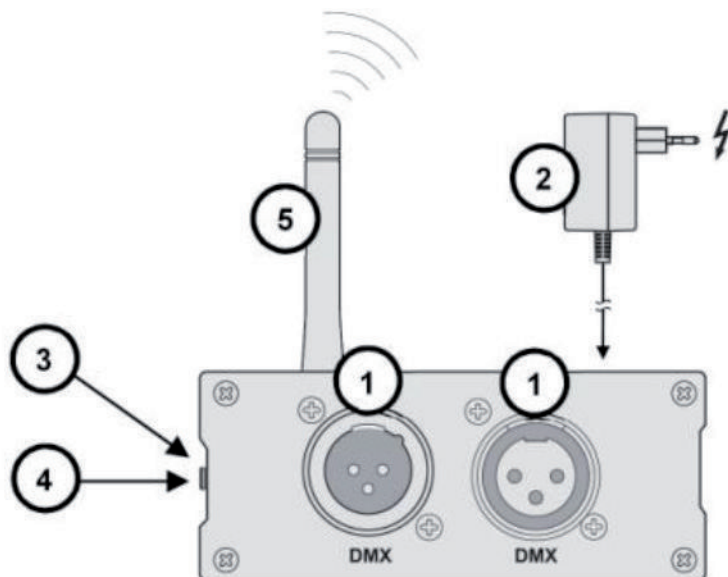Delivery includes:
      1) 1pcs Host
      2) 1pcs Power Adapter
      3) 1pcs User Manual

Manual | Wireless DMX Transceiver

1.4 Interface

1. DMX512 three-pin or five-pin male or female Caron

2. External power supply input

3. Status indicator

4. Key switch

5. Antenna

Manual | Wireless DMX Transceiver

2. Operating Guide

2.1 Operating mode

Wireless transceiver has two operating modes:

configuration mode and run mode

1. Configuration mode: Press button before power up, when you see the white LED, then release the button to enter configuration mode. In this mode you can select air protocol. Each time you press the button, to switch the order of color in the table, choose a protocol, long press (> 3S), see the white release the button to enter the run mode.

Note: The wireless transceiver will remember the current air protocol and grouping, no need repeat configuration.

Color	Protocol
Red	WIDMX
Green	W-DMX Receive
Blue	W-DMX G3 Transmit
Yellow	W-DMX G4 Transmit Guangzhou Protocol

Manual | Wireless DMX Transceiver

2.2 Run mode:

a) Powered directly into the run mode;

b) In the configuration mode, long press (> 3S), see the white release the button to enter the run mode.

Protocol	Action	Status Description
WIDMX or GZ Protocol	Red, Green, bBlue, Yellow, Cyan,bPurple	Wireless Groups
	Red Flashing	Transmitting DMX
	Green Flashing	Receiving DMX
W-DMX Receive	White	not connected to Transmitter
	Red	Deleting Con.
	Red flash	Transmitter connected missing
	Green flash	Connecting Transmitter
	Green slow flash	Connected, no DMX
	Green	Connected, DMX OK
W-DMX Transmit	Red	Deleting Receiver
	Blue flash	connecting the receiver
	Blue Slow flashing	no DMX
	Blue	DMX OK

Note:

1. Flashing: > 20ms ON + <180ms OFF (Depending on the refresh rate of the DMX signal)

2. Flash: 100ms ON + 100ms OFF

3. Slow flashing: 900ms ON + 100ms OFF

Manual | Wireless DMX Transceiver

2.3 Select Wireless Group

Each time you press the button, The group switch. Only the same group transceivers can communicate with each other.

NOTE: If you are sending or receiving radio signals, the first press to view current group, then press switch the group.

WIDMX mode supports 6 groups (FHSS, 1100 hops / sec)

1:	RED	----------------------	Red
2:	GREEN	----------------------	Green
3:	BLUE	----------------------	Blue
4:	RED + GREED	----------------------	Yellow
5:	GREEN + BLUE	----------------------	Cyan
6:	RED + BLUE	----------------------	Purple

GZ protocol supports 7 groups (Frequency Agile)

1:	RED	----------------------	Red
2:	GREEN	----------------------	Green
3:	RED + GREED	----------------------	Yellow
4:	BLUE	----------------------	Blue
5:	RED + BLUE	----------------------	Purple
6:	GREEN + BLUE	----------------------	Cyan
7:	RED+GREED+BLUE	--------------------	White

2.4 Restore factory settings

Long press (> 1S) release button at WIDMX or Guangzhou protocol operation mode, the system will restore the factory settings and restart, then saw „red - green - blue", then red, indicating that restore factory settings success. The default group is red.

2.5 Connection and Delete Connection

In the W-DMX G3 or G4 mode press button can be connected to all powered receiver is not connected within the coverage area. Long press (> 3S), see red then release will delete all receivers connected to it within range. In the W-DMX receive mode, long press (> 3S), see white then release will remove the receiver's current connection.

NOTE: in order to connect with the new transmitter only after deleting the old connection.

Manual | Wireless DMX Transceiver

3. Applications
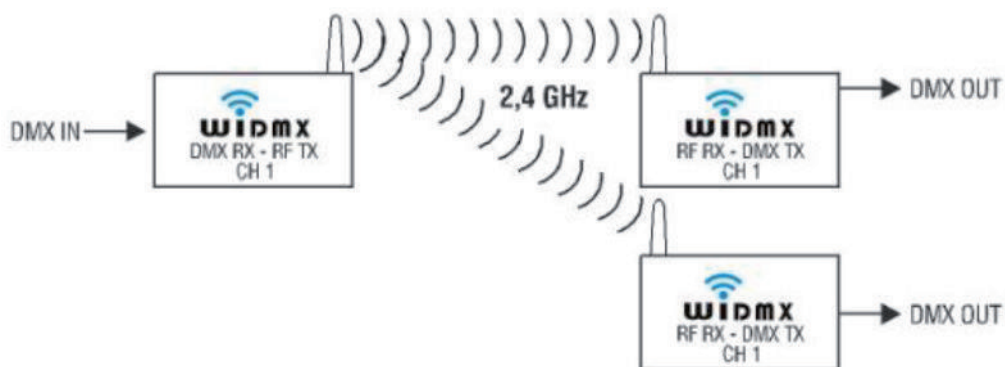
3.1 One transmitter one receiver

DMX signal input of a wireless transmitter output DMX signal from another of the same group or
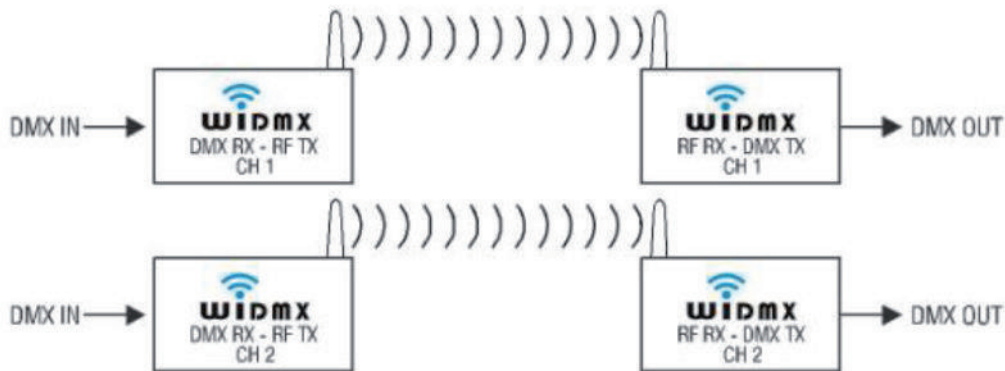

wireless receiver connected.

3.2 One transmitter to multiple receivers

DMX signal input of a wireless transmitter DMX signal output from the same grouping or the other wireless receiver connected.

Manual | Wireless DMX Transceiver

3.3 Multiple transmitters to multiple receivers

Plural sets of radio transmitters can be operated simultaneously, without disturbing each other.

3.4 Relay Mode

Receiver and transmitter connected directly, and working with different grouping or connection, can act as a repeater or amplifier, can increase the effective working distance.

Manual | Wireless DMX Transceiver

4. Maintenance

- Please storage and use the device within required temperature. Device may damage if the temperature is too high or too low.

- The device do not support Water-proof function.

- Please keep the item and accessories dry.

- Please do not use it in bathroom or other place with high humidity. Do not let water or other liquid seep into the device, or it may be damaged.

- Do not place and use the device in dusty place.

- Please use the soft slightly damp cloth clean the shell. Do not use alcohol, acetone and other similar diluents solution to wipe the shell.

- Please do not open the shell to repair the device. If the device can't work well, please contact with the dealer as soon as possible.

Federal Communications Commission (FCC) Statement
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications made to this device not expressly approved by LTH GmbH may void the FCC authorization to operate this device.

Note: The manufacturer is not responsible for any radio or tv interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

EU Konformitätserklärung

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller LTH – Das Lichttechnikhaus Vertriebs GmbH

LTH PROfessional Wireless DMX512 Transceivcer PEN (LTH pro LC-512X/F/M)

Der oben beschriebene Gegenstand der Erklärung erfüllt die Vorschriften der Richtlinie(n):
Richtlinie 2004/108/EG des Europäischen Parlamentes und des Rates vom 15. Dezember 2004 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit und zur Aufhebung der Richtlinie 89/336/EWG.

Richtlinie 2006/95/EG des Europäischen Parlaments und des Rates vom 12. Dezember 2006 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen (konsolidierte Fassung).

Richtlinie 2011/65/EU des Europäischen Parlaments und des Rates vom 8. Juni 2011 zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten.

Richtlinie 1999/5/EG des Europäischen Parlaments und des Rates vom 9. März 1999 über Funkanlagen und Telekommunikationsendeinrichtungen und die gegenseitige Anerkennung ihrer Konformität.

Auszug der berücksichtigten Normen:

EMV	ETSI EN 301489-1 V1.9.2: 2011-09
	ETSI EN 301489-17V2.1.1:2009-05
LVD	DIN EN 60950-1:2011-01
RoHS	DIN EN 50581:2013-02
R&TTE	DIN EN 300328 V1.7.1: 2006-10

Unterzeichnet für und im Namen der LTH – Das Lichttechnikhaus Vertriebs GmbH
Günzburg, den 21.04.2015

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