

設置前に必ず内容をご確認ください。 Please read prior to installation.

◆WDTへの電源供給方法について
◆About the WDT Power Supply Method
電源電圧: DC12V/DC24V
電源電圧: AC100 ~ 240V

◆ユニットの取付方法について
◆Unit Attachment Method
本製品の取付方法について
ユニットの取付方法について

PATLITE ワイヤレス・データ通信システム 送信機
WDT-4LR-Z2 / WDT-5LR-Z2 / WDT-6LR-Z2 取扱説明書

お客様へ
このたびは、パトライト製品をお買い上げいただきましてありがとうございます。
このワイヤレス・データ通信システム(以下「本製品」)は、積層信号灯(LR4/LR5/LR6)専用の製品です。

ホームページアドレス
www.patlite.co.jp

設置、施工、取付業者様へ
設置前に本書をよくお読みの上、正しく設置してください。
本書は必ずお客様にお渡しください。

1. はじめにお読みください

1.1. 安全に関する表示について
お使いになる人や他の人への危害、財産への損害を未然に防ぐために、必ずお守りいただくことを、次のように説明しています。

警告 「死亡または重傷などを負う可能性が想定される」内容です。

注意 「傷害を負う可能性または物的損害のみが発生する可能性が想定される」内容です。

Table with 2 columns: Symbol (Warning/Attention) and Description (この絵表示は、してはいけない「禁止」内容です。 / この絵表示は、必ず実行していただく「強制」内容です。)

1.2. 安全上のご注意

警告
このワイヤレス・データ通信システム(以下「本製品」)は、既存の機械・装置の信号灯に設置し、信号灯の動作状況データを通信機から受信機へワイヤレスで転送するものです。
◆工事を行う設置は、必ず専門業者へ依頼してください。

注意
◆本製品は、他の電化製品のそばには取付けないでください。
◆次のような場所では、使用/保管しないでください。
◆電波の性質上、通信可能な距離であってもノイズや周囲環境などにより通信不能に陥る場合があります。

注意
◆本製品は、他の電化製品のそばには取付けないでください。
◆次のような場所では、使用/保管しないでください。
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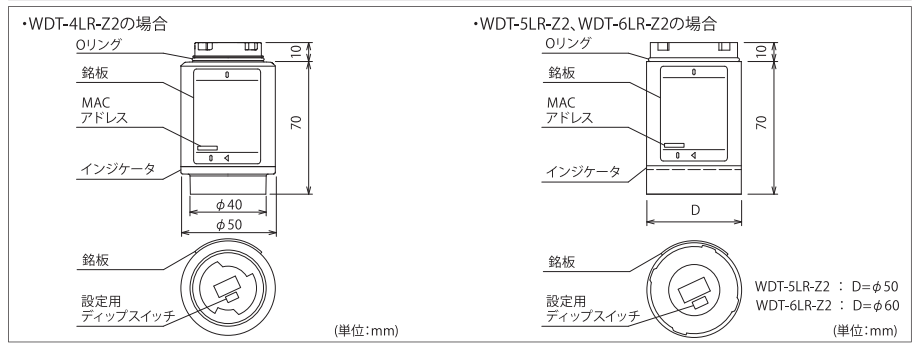
1.3. 電波法について

◆本製品は、日本国内の電波法に基づき設計・製造され、電気通信事業法に基づく端末機器の技術基準適合認定『特定無線設備の種別：第2条第1項第19の無線設備 2.4GHz帯高度化小電力データ通信システム』を取得しています。
◆本製品の改造、ファームウェア変更をおこなうと、電波法に基づいた処罰を受けることがあります。

2. 型式構成

WDT-4LR-Z2 : LR4型積層信号灯専用
WDT-5LR-Z2 : LR5型積層信号灯専用
WDT-6LR-Z2 : LR6型積層信号灯専用

3. 各部の名称と寸法



4. 配線、製品の取付け

本製品の取付け、取外しに伴うLR積層信号灯の各ユニット(LEDユニット、ブザーユニット等)の脱着をおこなう場合は必ず下記の事項に従って行ってください。

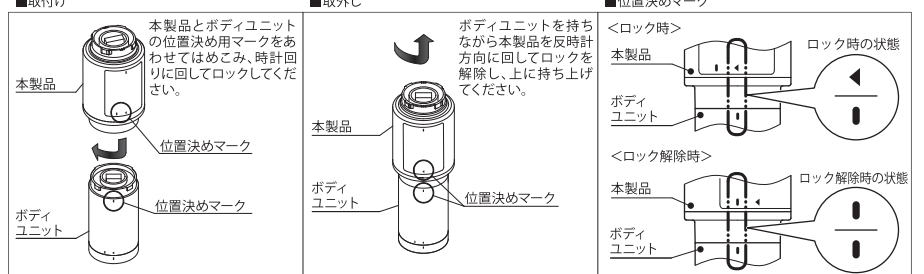
警告
◆作業をおこなう際は、必ず非通電状態にしてください。
◆配線は間違いないように注意してください。

お願い
◆設置、配線作業の前には総合取扱説明書(弊社ホームページよりダウンロード)を必ず一読の上、作業をおこなってください。
◆積層信号灯一台あたりの最大組み付けユニット数は、本製品1個+LEDユニット5個+ブザーユニットです。

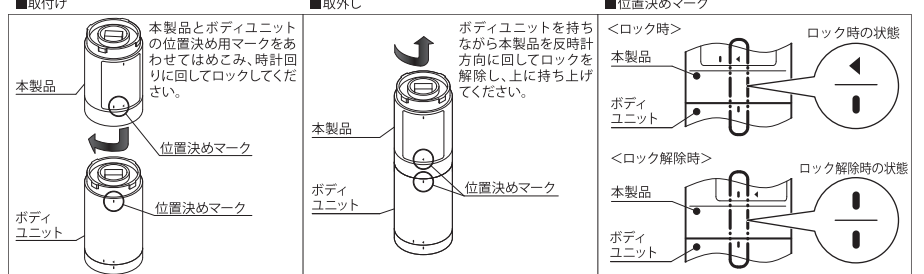
注意

◆本製品はボディユニットの直上部に取り付けてください。
◆各ユニットやボディユニットに無理な力を加えないでください。
◆取り付け時、各ユニットは確実にロックしてください。

WDT-4LR-Z2の場合



WDT-5LR-Z2, WDT-6LR-Z2の場合



5. 仕様

Table with 4 columns: Model (WDT-4LR-Z2, WDT-5LR-Z2, WDT-6LR-Z2) and various specifications (Type, Voltage, Power, Temperature, etc.).

※1 本製品本体の仕様です。 ※2 電波の特性上、設置場所や通信環境によって異なります。

世界中に「安心・安全・楽々」をお届けする
株式会社 パトライト
www.patlite.co.jp
(受付)月～金 9:00～17:00
●技術・修理相談窓口(無料)：0120-497-090

**Notice to Customers**

Thank you very much for purchasing our PATLITE products. Store this manual for future reference.  
 - This Transmitter (henceforth "this product") is a product that is part of the Wireless Data Acquisition System. It is compatible with the LR4/LR5/LR6 Series Signal Towers.  
 - This product requires installation, wiring and other setup work. Always have installation work performed by a professional contractor.  
 - Prior to installation, read this manual thoroughly before using this product to ensure correct use. In addition, please store this manual for future reference when performing maintenance, repairs or inspections.  
 - If there are any questions concerning this product, refer to the contact information at the end of this document and contact your nearest PATLITE Sales Representative.  
 - For more details on installation, settings or wiring, download the **Complete Instruction Manual from our homepage**.

Homepage address: [www.patlite.com](http://www.patlite.com)

- To the Contractor
- Read this manual carefully prior to installation.
- Be sure to return this manual to the customer.

**1. Before you begin**

**1.1. About Safety Symbols**

In order to prevent any damage to the user and other personnel or to assets, note the following  
 ♦ The degree of harm and damage that will occur when misuse is made by ignoring the contents of the icons indicated is explained below.

**Warning** Indicates, "Failure to follow the instructions may lead to death or serious injury."

**Caution** Indicates, "Failure to follow the instructions may lead to injury or property damage."

♦ The following symbols explain the types of precautions that need to be followed.

⊘	This symbol identifies "Prohibited" operations that should never be carried out.
!	This symbol identifies "Mandatory" instructions that should always be carried out.

**1.2. Safety Precautions**

**Warning**

- This product is intended to be installed onto a compatible PATLITE signal tower for the purpose of wireless data transmission. Do not use this product for any other purpose.
- Please do not use a heart pace pay car and other medical-application electrical machinery and apparatus nearby. Do not use cardiac pacemakers or other medical electrical equipment nearby. Radio waves may have an adverse affect on medical electrical equipment.
- To prevent accidents or injuries, use this product only for its intended purpose, and be sure to follow the guidelines outlined in this User's Manual.
- This product is not intended for use in applications where life is at risk, such as medical equipment, atomic energy equipment and machinery, aviation and aerospace, transportation, and control of other equipment. If this system is used for these applications, we cannot be held responsible in the event of injury, death, or property damage.
- Do not modify or disassemble the product. Failure to comply may result in fire or electric shock.
- Do not use the product where condensation may form. Failure to comply may result in fire or electric shock.
- Request the installation and wiring to be accompanied by a professional contractor. If installation is done improperly, it may result in fire, electric shock, falling, or malfunction.
- Before installing and wiring this product, be sure that it is disconnected from the power source. Failure to comply may result in fire, electrocution or product malfunction.
- Be sure that the power source is within the voltage tolerance of this product. If not, fire or product damage may occur.
- Turn this product off while in airplanes, hospitals, or other places where radio waves may interfere with surrounding equipment or where wireless devices are prohibited.
- PATLITE can not predict all circumstances of hazards while using this product. Therefore, not all safety hazards are listed in this manual. In order to prevent accidents that may not be mentioned in this manual, please be sure to follow the provided guidelines while performing maintenance or operating this product.
- If you notice smoke, odor, or other abnormalities while this product is in operation, immediately stop supplying power to this product. Continuing to use this product under such conditions may result in fire or electric shock.

**Caution**

- Do not install this product near other electrical appliances. If you install this product near a facsimile, personal computer, television, microwave oven, or equipment using a motor, this product may not operate properly.
- Do not use or store this product in the following locations. Failure to follow this instruction could result in product malfunction or failure.
  - Environments with poor breathability and ventilation
  - Near equipment that generates strong electrical or magnetic fields
  - Places exposed to direct sunlight
  - Locations subject to shock and vibration
  - Near heating appliances
  - Environments where dust or iron powder is present
  - Places near fire or environments with high temperatures and humidity
  - Locations from where the product may fall off
  - Locations exposed to salty sea air
- Do not use this product near chemicals. This product could melt or become deformed if exposed to chemicals.
- Even with proper radio reception, faulty communication may occur from surrounding noise or environmental conditions, etc.
- In order to maintain this product's IP rating, be sure to attach each unit and head cover onto the signal tower properly.
- Do not operate this product with the O-ring removed. Waterproof performance will drop and may damage the product.
- To prevent static shock, make sure your body is discharged of static electricity. (You can discharge static electricity by touching grounded metal objects.)
- Use a soft cloth, etc., dampened with water to wipe the product. Do not use cleaners containing thinner benzene gasoline, oil, chemicals, etc., to wipe with. It may result in discoloration and deterioration.

**1.3. About Radio Law**

For Customers in U.S.A.  
 ● FCC notation requirement  
 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.

**FCC CAUTION**  
 Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.  
 Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:  
 - Reorient or relocate the receiving antenna.  
 - Increase the separation between the equipment and receiver.  
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.  
 - Consult the dealer or an experienced radio/TV technician for help.  
 (Responsible party in U.S.A.): PATLITE U.S.A. Corporation, R20130 S. Western Ave. Torrance, CA90501, U.S.A. [www.patlite.com](http://www.patlite.com)

For Customers in Europe  
 ● EU Declaration of Conformity  
 We PATLITE Corporation, 4-1-3, Kyutaromachi, Chuo-ku, Osaka-shi, Osaka 541-0056 JAPAN declare under our sole responsibility that the product described below is in compliance the following directives.  
 - Product Name: Wireless Data Acquisition System  
 - Company Logo: **PATLITE**  
 - Directive: Electromagnetic Compatibility Directive(EMC): 2014/30/EU  
 RoHS Directive: 2011/65/EU  
 Radio Equipment Directive: 2014/53/EU  
 Low Voltage Directive (LVD): 2014/35/EU  
 Visit our homepage at [www.patlite.com/ce/lwd\\_07539.html](http://www.patlite.com/ce/lwd_07539.html) to download "EU Declaration of Conformity".

For Customers in Taiwan  
 ♦ 第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。  
 ♦ 第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

For Customers in Canada  
**Canada, Innovation, Science and Economic Development Canada (ISED) Notices**  
 This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:  
 (1) This device may not cause interference.  
 (2) This device must accept any interference, including interference that may cause undesired operation of the device.

**Radio Frequency (RF) Exposure Information**  
 The radiated output power of the Wireless Device is below the Innovation, Science and Economic Development Canada (ISED) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.  
 This device has also been evaluated and shown compliant with the ISED RF Exposure limits under mobile exposure conditions. (antennas are greater than 20cm from a person's body).

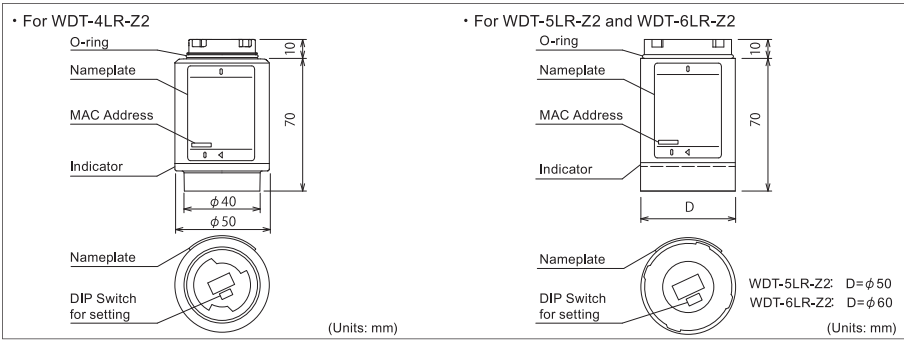
For Customers in Thailand  
 This telecommunication equipment conforms to the technical standards or requirements of NBTC.

For Customers in Singapore  
 Complies with IMDA Standards DA106138

**2. Model Number Configuration**

- WDT - 4LR - Z 2 : Transmitter for LR4 Series Signal Tower
- WDT - 5LR - Z 2 : Transmitter for LR5 Series Signal Tower
- WDT - 6LR - Z 2 : Transmitter for LR6 Series Signal Tower

**3. Part Names and Dimensions**



**4. Product Assembly and Wiring**

When attaching and detaching each unit (LED units and buzzer unit) of the LR Signal Tower, be sure to follow the below guidelines.

**Warning**

- Before installing and wiring this product, be sure that it is disconnected from the power source.
- Failure to comply may result in fire, electrocution or product malfunction.

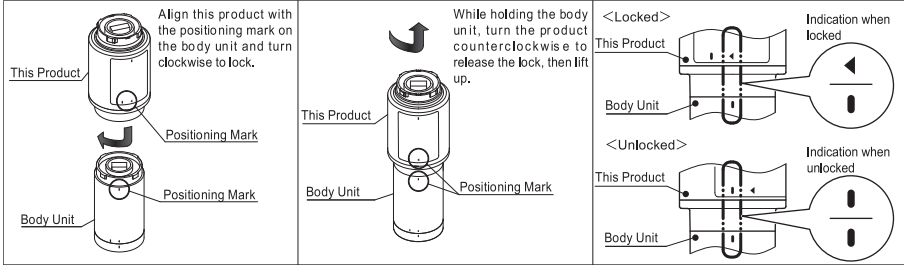
**Notice**

- Be sure to read the WEB version of the instruction manual (downloadable from our website) before installing or wiring this product.
- The maximum number of attachment units per Signal Tower is: 5 LED units + 1 buzzer unit + this product (transmitter unit). Do not exceed this maximum.
- If you are having difficulty attaching / detaching the units, try with the body unit of the LR Signal Tower secured, or with work gloves on.
- In order to maintain waterproofing, the WDT-4LR-Z2 is designed to be tightly secured onto the Signal Tower. Be sure to tightly lock each unit into place.

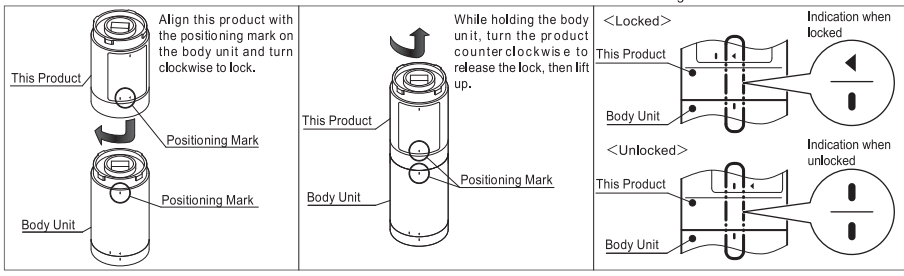
**Caution**

- This product is to be installed right above the body unit of the LR Signal Tower. If it is installed above the LED units, it will be difficult to see the indicator lights on the transmitter.
- Do not apply excessive force onto this product or the body unit. Doing so may damage the product.
- Do not touch the connectors of the units, or the LED bulbs on the LED unit. Doing so may damage the product.
- During assembly, be sure to securely lock each unit into place. If any units are loose, it may result in product damage.
- Be sure to attach and detach the units one unit at a time. Manipulating multiple units at once may damage the product.

**For WDT-4LR-Z2**



**For WDT-5LR-Z2 and WDT-6LR-Z2**



**5. Specification**

Model	WDT-4LR-Z2	WDT-5LR-Z2	WDT-6LR-Z2
Connected Model	LR4 Series Signal Tower Body unit top attachment	LR5 Series Signal Tower Body unit top attachment	LR6 Series Signal Tower Body unit top attachment
Rated Voltage *1	24V DC		
Operating Voltage Range *1	19.0V DC to 26.4V DC		
Rated Current Consumption *1	max 55mA		
Operating Ambient Temperature	-10°C to +50°C		
Operating Ambient Humidity	85%RH or less, no condensation		
Storage Ambient Temperature	-20°C to +60°C		
Storage Ambient Humidity	85%RH or less, no freezing		
Mounting Location	Indoor Only		
Mounting Method	Upright		
Protection Rating	IP65 (IEC 60529), NEMA TYPE 4X, 13		
Mass	70g±10g	74g±10g	85g±10g
Telecommunication Protocols	IEEE-802.15.4 (Wireless Communications)		
Communication Frequency	2405MHz - 2480MHz(16 channel)		
Transmitter Output	No more than 3mW(Depending on Antenna Access Point)		
Communication Distance	About 30m from source *2		
External Contact Input / Number of Contacts	Control Signal Input/6 points (red, amber, green, blue, white, buzzer)		
Input Reaction Time	100msec or more		
Display Unit	Indicator for Monitoring the status		
Operation Unit	DIP switch for Settings		

\*1 These values are specifications for the Transmitter Unit.  
 \*2 Because of the characteristics of radio waves, the actual number may vary depending on the installation location and communication environment.

**PATLITE Corporation** G2J

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