

PATLITE
 Wireless Data Acquisition System
 Instruction Manual
 TYPE : WD-Z2
 海外向け
 Digest Version

Thank you very much for purchasing our PATLITE products. Read this instruction manual carefully prior to use. This manual is a "Digest Version", containing information to ensure correct use. Reread this manual when maintenance, inspection, repair or other work is required. 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.

- 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.
- Reread this manual when maintenance, inspection, repair or other work is required. 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
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- ◆ To the Contractor
- Read this manual carefully prior to installation.
- 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.

-Safety Precautions-

To prevent from personal injury, injury to others or property damage, the following precautions must be observed.

- ◆ The following symbols classifies the precautions into the following two categories depending on the degree of injury or damage caused by the failure to follow them:

Warning Indicates an imminently dangerous condition: failure to follow the instructions may lead to death or serious injury.

- ◆ 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.

Caution Indicates a potentially dangerous condition: failure to follow the instructions may lead to slight injury or property damage.

- ◆ Use a soft cloth dampened with water to clean the product. (Do not use thinner, benzine, gasoline or oil.)

- ◆ The following symbols used in this manual are explained below:

- ⊘ Indicates something to observe before using this product. The disregard to this indication may lead to product malfunction or failure.
- ⚠ Notice regarding supplementary information or convenient explanation is indicated.

Please Indicates something to observe before using this product. The disregard to this indication may lead to product malfunction or failure.

Note Notice regarding supplementary information or convenient explanation is indicated.

Warning

- Do not disassemble or modify the product. Failure to do so may lead to product malfunction or cause fire or electrocution.
- Do not use the product where condensation can form. Failure to do so may cause fire or electrocution.
- Do not use this product near pacemakers or electric medical equipment, possibility of radio waves affecting these devices and equipment may occur.
- This product is not intended for the purpose of installation of facilities or equipment affecting human lives; including medical equipment, nuclear facilities and equipment, aerospace equipment, and transportation facilities and equipment, and facilities and equipment requiring high reliability. We assume no responsibility for any accident causing injury or death or property damage arising from the use of this product in such facilities, equipment, or control systems.
- Turn this product off while in airplanes, hospitals, or other places where radio waves may affect surrounding equipment or where wireless devices are prohibited.

⚠

- Turn off the product during wiring or installation. Failure to do so may cause fire or electrocution.
- Ensure that the power supply voltage does not exceed the allowable voltage range. Failure to do so may cause smoke, fire or malfunction.
- If the installation of this product involves construction work, have it installed by a professional. Failure to do so may cause fire, electrocution, or falling.
- If smoke, odor, or other abnormalities are present, immediately stop supplying power to this product. Using it under such abnormal conditions may cause fire or electrocution.

Caution

- Ensure that the polarity of the power supply is correct. Incorrect polarity may cause product malfunction.
- Do not use this product near fire, in a hot and humid place, or in a place where corrosive or combustible gas is present. Failure to do so may cause malfunction, preventing the product from operating properly.

We are not liable for any malfunctions arising from failure to observe these warnings or cautions, or from disassembling, any modifications, or even natural disasters. Do not use this product for purposes other than those specified in this manual.

Please

- Do not use or store this product in the following places. Doing so may cause malfunctions.
 - Poorly ventilated places
 - Near equipment that generates an intense electric or ferromagnetic field
 - A place subject to direct sunlight
 - A place subject to shock and vibration
 - A place exposed to a lot of dust or iron powder
 - Near heating devices
 - A place from which the product is likely to fall down
 - A place exposed to salt air
- Pay attention to the following precautions:
 - Because of the nature of radio waves, even with adequate access rage, noise or the casing may make it impossible to establish communication.
 - Do not eat, drink, or smoke near this product. Food, beverages or cigarette ashes may cause malfunction.
 - Do not use chemicals near this product. Some chemicals may cause the product to melt or deform if coming into contact with it.

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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The antenna used for this transmitter is built-in, therefore, the transmitter must provide a separation distance of at least 20 cm from all persons.

Note

- This wireless acquisition data system (henceforth, "Product") is for attachment to machinery with an existing Signal Tower, in which the change of state for the Signal Tower is send via wireless to a receiver which then collects the data. Do not use this product for any other purpose.

1. Model Number Configuration

Individual Unit Type

a) Transmitter

WDT- -Z2

Specifications

6M: For use with the Ø60 Signal Tower LME/LMS
 5E: For use with the Ø50 Signal Tower LE/LES/LEL

2. Part Names

a) Transmitter

WDT-6M-Z2		
WDT-5E-Z2		

3. Installation and Wiring

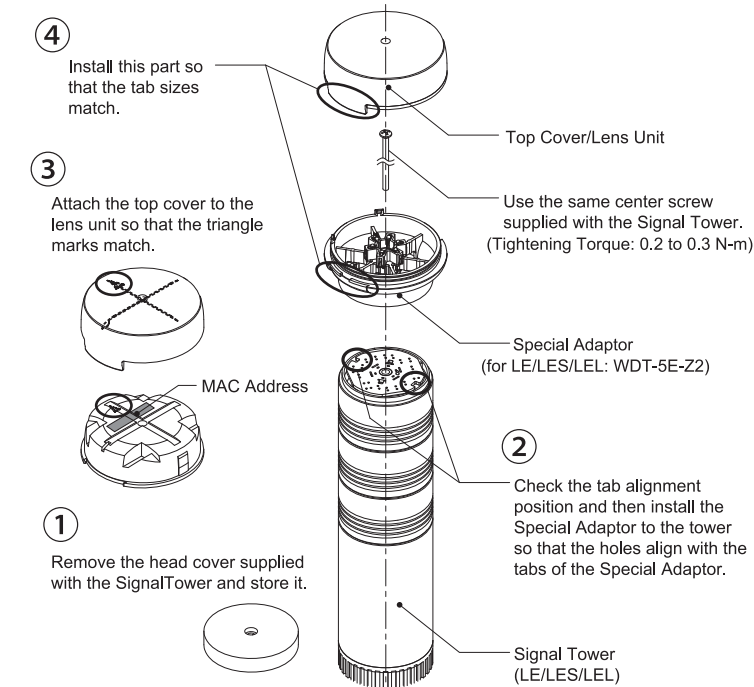
Warning

- Turn off the product during wiring or installation. Failure to comply may result in electrocution or product malfunction.
- Be sure to connect the wires correctly. Incorrect wiring may cause internal damage to circuitry, or fire.

Caution

- Do not install the Special Adaptor in Signal Towers other than those that are compatible. Failure to do so may cause product malfunction.
- Do not leave the product with the center screw loosened or removed. Failure to do so may cause the LED unit, the head cover, and the Special Adaptor to easily unattach, which will lead to falling and breaking.
- When using the flashing function for two or more Signal Towers, please connect the flashing common wire (COM) independently from each other. Do not connect them together, if two or more flashing unit common wires (COM) are tied together and used as one common line, data acquisition may not properly operate.
- Do not use the center screw which oil or other attaches to surface.

a) Transmitter
 Install the transmitter according to the drawing below. This drawing is a reference drawing for the LE/LES/LEL. The LME/LMS uses a separate Special Adaptor.



Note

- The factory default for the power supply of the transmitter is the white signal line of the Signal Tower.
- The transmitter can be powered via other signal lines. For more details, refer to the User's Manual.
- The MAC Address is necessary for identification. Write down the MAC Address prior to installing the Signal Tower.

We provide a setup service (charges required) to ensure that this product can be used properly. For details, contact each sales office or the PATLITE Sales Representative.

4. Specifications

Item	Transmitter Specification	
	WDT-6M-Z2	WDT-5E-Z2
Compatible Signal Tower	LME/LMS Series *	LE/LES/LEL Series *
Rated Voltage	24V DC (Non-polar)	
Operating Voltage Range	21.6V DC to 26.4V DC	
Consumption Current	20mA ± 10mA	
Operating Temperature Range	-10°C to 60°C	
Relative Humidity	85% RH or less (no condensation)	
Storage Temperature Range	-20°C to 70°C (no freezing)	
Installation Direction	Upright Position Only (Indoor Use Only)	
Protective Rating	In compliance with the installed signal tower	
Mass	52g ± 5g	

Item	Wireless Specification	
	IEEE 802.15.4	
Wireless Standard	2405 MHz to 2480MHz (16 channels)	
Frequency Band	ZIGBEE 2007 Conformity (Original Profile Implementation)	
Wireless Transmission Standard	Maximum of 3mW (Depending on Antenna Access Point)	
Wireless Transmission Output	Japan, The United States of America, Europe, China, Taiwan, Thailand ¹ , Philippines, Vietnam	
Radio Law Compliant Areas	*1 This telecommunication equipment conforms to technical standard NTC TS 1012-2551	

- * Refer to the User's Manual for the detailed specifications and Signal Tower compatibility.
- * The specifications are subject to change without prior notice.
- * This Product is not compatible with the 12V DC Model LE Series.

CE

■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 https://www.patlite.com/ce/ld_07539.html to download "EU Declaration of Conformity".

■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:

- orient 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.

- ◆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 China

微功率短距离无线电发射设备 (F 类设备)

- 不得擅自改变使用场景或使用条件、扩大发射频率范围、加大发射功率 (包括额外加装射频功率放大器)。
- 不得擅自更改发射天线；
- 不得对其他合法的无线电台 (站) 产生有害干扰，也不得提出免受有害干扰保护；
- 应当承受辐射射频能量的工业、科学及医疗 (ISM) 应用设备的干扰或其他合法的无线电台 (站) 干扰；
- 如对其他合法的无线电台 (站) 产生有害干扰时，应立即停止使用，并采取措措施消除干扰后方可继续使用；
- 在航空器和依据法律法规、国家有关规定、标准划设的射电天文台、气象雷达站、卫星地球站 (含测控、测距、接收、导航站) 等军民用无线电台 (站)、机场等的电磁环境保护区域内使用微功率设备，应当遵守电磁环境保护及相关行业主管部门的规定；
- 使用微功率短距离无线电发射设备应当符合国家无线电管理有关规定

- The images in this manual may vary in comparison to the actual product and are only for the purpose of illustration.
- Specifications may change without notice due to continual product improvement.
- Despite the cautions and warnings provided in this manual, it is not the responsibility of PATLITE for any failure or damage occurred from mishandling.
- PATLITE, the PATLITE logo are either registered trademarks or trademarks of PATLITE Corporation in JAPAN and/or other countries.

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PATLITE Corporation G2J

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