

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. For further details for wiring and setting up, etc., download the "User's Manual" from our website. Keep this instruction manual in a safe place. Also read this manual when maintenance, inspection, or repair is needed. If you have any questions, contact your PATLITE sales representatives at the offices listed on the last page.

This document is a digest version of the "User's Manual". Regarding the detailed contents (setup, wiring, etc.) of this product, the "User's Manual" will be available from our office or store.

This device complies with the rules for Title 47 Part 15 of the FCC Code of Federal Regulations. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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

The following symbols used in this manual are explained below:

- No** Indicates something to observe before using this product. The disregard to this indication may lead to product malfunction or failure.
- Notice** 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 or install the receiver (WDR-LE-Z2) near water or other liquids, in a place where oil may spatter, or in a moist or dusty place. Failure to do so may cause fire, electrocution, or malfunction.
- 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

- Do not splash any liquid onto the receiver (WDR-LE-Z2) nor bring it into contact with metal objects. Failure to do so may cause fire or electrocution.
- 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.
 - Poorly ventilated places
 - Near equipment that generates an intense electric or ferromagnetic field
 - A place subject to direct sunlight
 - A place exposed to a lot of dust or iron powder
 - A place from which the product is likely to fall down
 - Doing so may cause malfunctions.
 - Near fire or a hot and humid place
 - A place subject to shock and vibration
 - Near heating devices
 - 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.

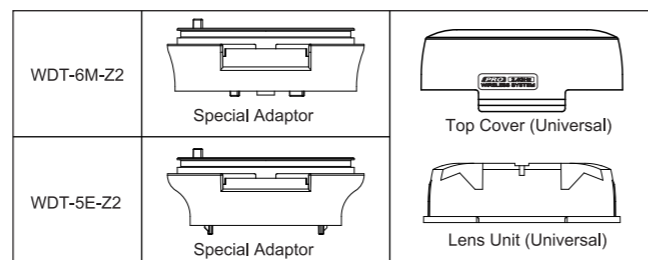
1. Model Number Configuration

Individual Unit Type

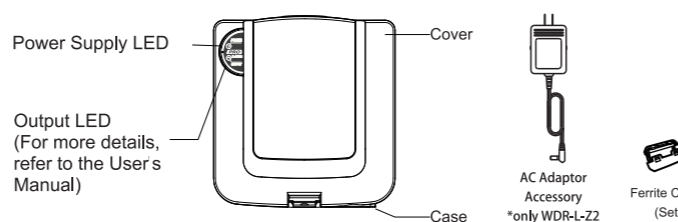
- a) Transmitter
- WDT- -Z2
- Specifications
6M: For use with the Ø60 Signal Tower LME/LMS
5E: For use with the Ø50 Signal Tower LE/LES/LEL
- b) Receiver
- WDR- -Z2
- Specifications
L: LAN/USB Connection Type
LE: LAN/USB Connection Type (Overseas Model)

2. Part Names

a) Transmitter



b) Receiver WDR-LE-Z2



3. Installation and Wiring

Warning

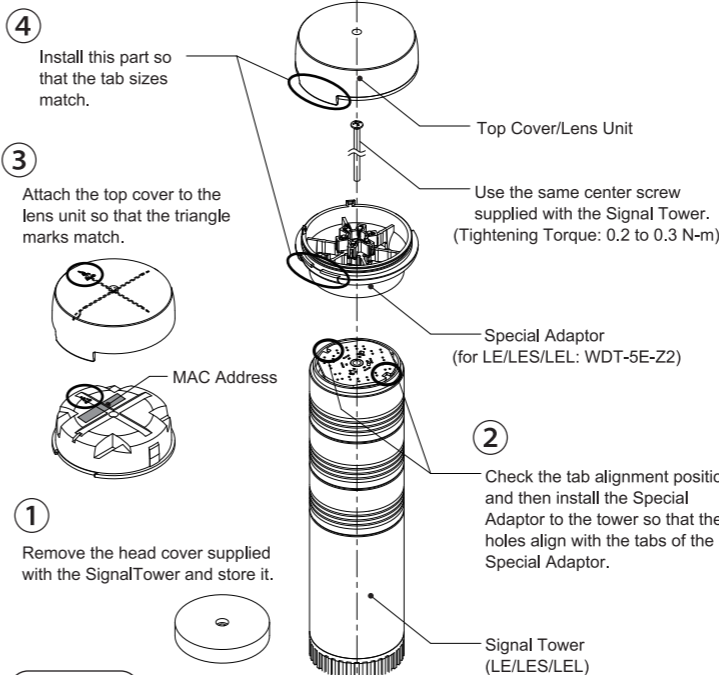
- Turn off the product during wiring or installation. Failure to comply may result in electrocution or product malfunction.
- Be sure to connect the wires correctly. Incorrect wiring may cause internal damage to circuitry, or fire.

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.
- Do not touch PCB when you setup receiver. Failure to do so may cause product malfunction.

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.

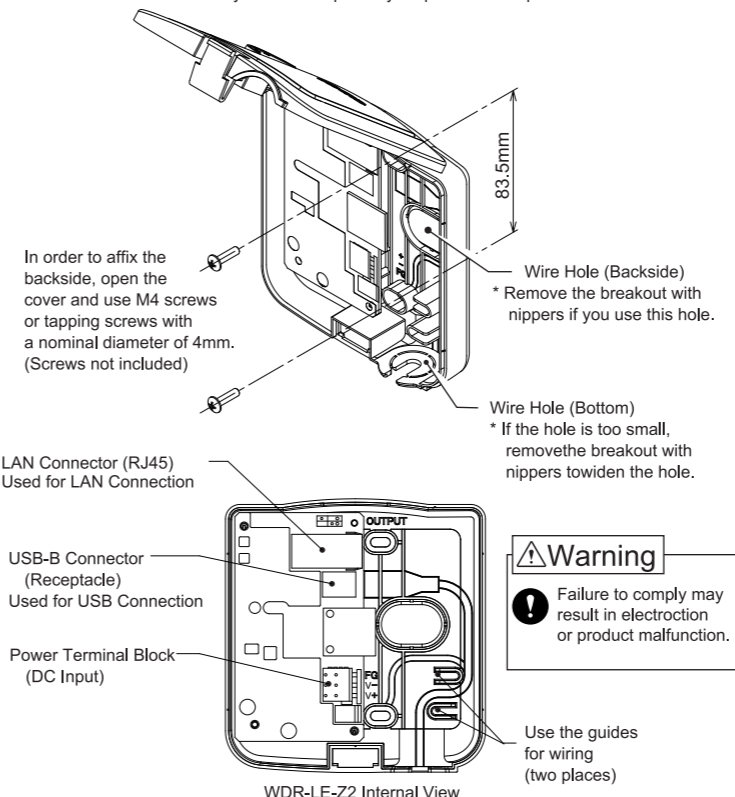


NOTE

- The factory default for the power supply of the transmitter is the white signal line of the Signal Tower. Connect power to the white 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.

b) Receiver

Install and wire the WDR-LE-Z2 according to the diagram below. Connect the WDR-U directly to the USB port of your personal computer.



Warning

- Failure to comply may result in electrocution or product malfunction.

NOTE

- USB hub connections are not supported. Connect the WDR-U directly to the USB port of your personal computer.
- Receiver power must be connected either from the power terminal block or the DC jack.
- Do not let the personal computer go into modes such as suspend, sleep or stand-by. Doing so will disable data communication between the receiver and the personal computer.
- NoLAN communications are available during USB connection. Do not connect any LAN cable.

4. Usage

For proper use, refer to the User's Manual for detailed instructions.

5. Specifications

Item	Transmitter Specification	
Model	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	Receiver Specification	
Model	WDR-L(E)-Z2	
Rated Voltage	24V DC	
Operating Voltage Range	21.6V DC to 26.4V DC	
Current Consumption	65mA ± 15mA	
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 icing)	
Maximum Number of Connected Transmitters	The recommended number is 30. (It differs depending on the installation location and the communication environment.)	
Installation Direction (Indoor Use Only)	Upright Direction (installed onto the wall) Lateral Direction (Horizontal Installation)	
Protective Rating	IP20	
Mass	170g ± 10g	

Item	Wireless Specification
Wireless Standard	IEEE 802.15.4
Frequency Band	2405 MHz to 2480MHz(16 channels)
Wireless Transmission Standard	ZIGBEE 2007 Conformity (Original Profile Implementation)
Wireless Transmission Output	Maximum of 3mW(Depending on Antenna Access Point)
Radio Law Compliant Areas	Japan, The United States of America, Europe, China ² , Indonesia ² , Taiwan ² , Thailand ^{1,2} , Philippines ² , Vietnam ² , Mexico ² ¹ This telecommunication equipment conforms to technical standard NTC TS 1012-2551 ² Excluding WDR-L-Z2

- * 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, Kyutoromachi, 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 http://www.patlite.com/ce/wd_07539.html to download "EU Declaration of Conformity".

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