

Pokayoke Counter TW-800R-SC

Transmitter TW-800T

INSTRUCTION MANUAL V1.30

Please use this operation manual correctly on reading well.
Please keep it carefully to be able to read immediately, when required.

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■Outline

TW-800R-SC is a receiver with wireless function and a simple counting function.

Receiver[TW-800R-SC] is used one-to-one with various tools equipped with Transmitter[TW-800T].

Once the TW-800T is mounted on the Torque wrench a tool of others with Limit switch (LS), the tightening completion signal of Torque wrench can be transmitted to each series of our TWF-800R.

When receiving a signal from the transmitter, the count will be reduced by one. When the number of tasks completed reaches a specified number, the remaining tasks are counted as "0", and the receiver notifies by sound and display and a PASS output is generated.



Transmitter TW-800T



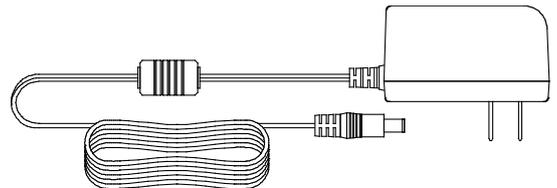
Receiver TW-800R-SC

■Body and Accessories

Receiver TW-800R-SC

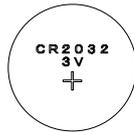
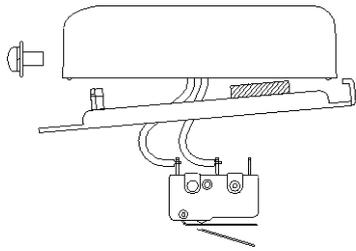


TW-800R-SC body × 1



AC Adapter ADB24050(Cable 1.5m (4.9ft))

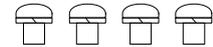
Transmitter TW-800T



Coin battery: CR2032x1



For limit switch
Hexagon socket head bolt M2xL10x2pcs
Flat washer M2 (φ2.2) x2pcs



Mounting screw M4 x L5 x 4pcs

TW-800T body x1

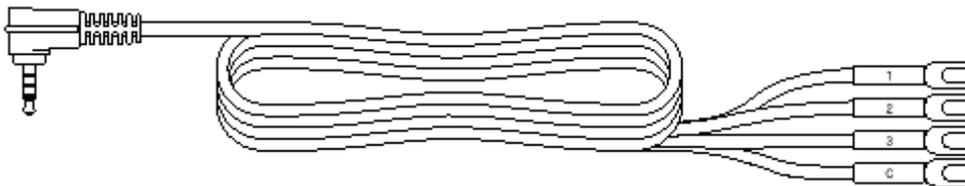
(Body mounting screw M3 x L7 x 1pc, Harness connector with limit switch

TW-800T-HCL x 1pc)

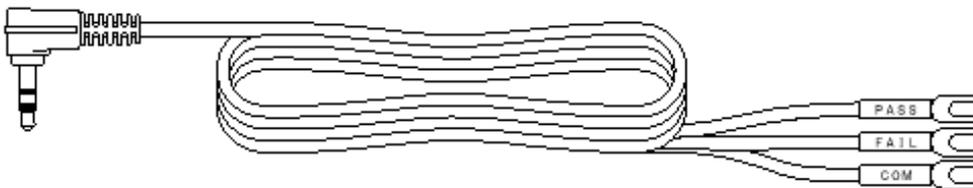
Mounting bracket x 1

Extra cost option

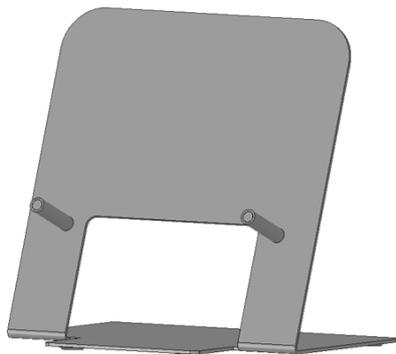
• Input Cable for Work-Select TW-SC24-4(1.8m (5.9ft))



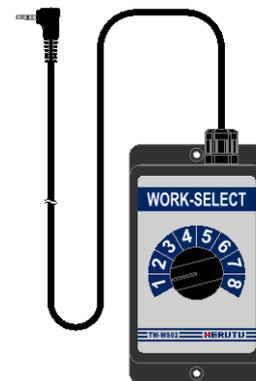
• Output Cable for JUDGE TW-SC35-3(1.8m (5.9ft))



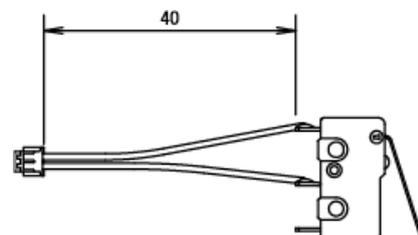
• Desktop Stand TW-SCDS01



• Switch Box for Work-Select TW-WS02(1.5m (4.9ft))



• Harness connector with limit switch TW-800T-HCL
(Please purchase 10pcs/ lot.)



■ Safety Precautions (Be Sure to Read This)

This section describes the matters to be observed in order to prevent harm to the users and other persons and damages to the property.

- The following marks and displays classify and describe the extent of harm and damage caused by failing to observe the display content and using this product wrongly.

 Caution	This display column shows "a failure to do observe it could result in only the personal injury or property damage".
--	---

■ Handling this product

<ul style="list-style-type: none"> • This product is the wireless communication equipment made of precision parts. Do not disassemble or modify it. Or the accident or fault may occur. 	
--	---

■ Use and storage environment

<ul style="list-style-type: none"> • DO NOT USE OR STORE the product in the following places to prevent defects, malfunction, deterioration, fire, and electric shock: <ul style="list-style-type: none"> • Do not use and store it in places exposed to direct sunlight, • Do not use and store it in places where liquids, foreign substances, corrosive gases or combustible gases can enter the product, • Do not use and store it in places with high humidity or where there is abundant oil smoke, dust, sand, etc. , • Do not use it in an unstable place such as a wobbling table or an inclined plane, • Do not use it in a place with vibration. 	
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■ Specific handling of this product

This product is a radio equipment with certification of construction design.

<ul style="list-style-type: none"> • It is prohibited by law to disassemble or modify certified devices. 	
<ul style="list-style-type: none"> • Do not remove the certification label affixed to the case. It is prohibited to use any product without the label. 	
<ul style="list-style-type: none"> • This product is only available in the countries where the certification is acquired. 	

 Warning	This display column shows "a failure to do observe it could result in death or serious personal injury".
--	--

■ Handling this product

<ul style="list-style-type: none"> • Do not use this product for application that requires the extremely high reliability affecting the human life. 	
<ul style="list-style-type: none"> • Do not use this product in the area which the radio wave reaches or not. 	

■ Handling the AC adapter

Be sure to observe the followings in order to prevent the accidents such as heat generation, damage, or ignition of AC adapter.

•Do not place the AC adapter close to fire or insert them into fire. Or they may be burst and ignited, resulting in the accident.	
•Use the AC adapter and main body only at the specified power supply voltage in order to prevent burst and ignition accidents.	
•Do not use main body at the location where they easily get wet. Or the accidents including heat generation, ignition, or electric shock and faults may occur.	
•Do not touch main body, power cord, and power supply terminal base with wet hands. Or the accident such as an electric shock may occur.	
•Do not damage the power cord of the AC adapter. Short-circuit or heat generation may cause fire or electric shock.	
•Do not use the power supply terminal base with dusts attached. Short-circuit or heat generation may cause fire or electric shock.	
•Do not give a strong shock to the AC adapter. Or the accident or fault may occur.	
•If you find a deformation in the AC adapter, do not use it. Or the accident or fault may occur.	
•Do not charge the main body at the location where the flammable gas is generated. Or the ignition accident may occur.	
•Never disassemble main body. Or the accident or fault may occur.	

■ If a problem occurs during use

Remove the power plug from the outlet because it may cause fire and electric shock. Request the dealer or our company to repair it.

•When smoke comes or there is a strange smell, immediately stop usage and remove the power plug from the outlet because it may cause fire and electric shock. Request the dealer or our company to repair it.	
•Do not use this product when its AC adapter cable or the power switch of the main unit is damaged. Using the cord damaged continuously may cause fire or electric shock.	

■Notes on the Radio Law

○The wireless device used for this product is certified as a specific radio device for a radio equipment of a low power data communication system based on the Radio Law. Therefore, a radio station license is not required to use this product.

○This product can be used only in Japan or countries where required certification is acquired. In the case that it is used in other countries, this product may be damaged or it may damage other equipment. It also may conflict with the laws of that country. Please contact our sales department for the countries that the product is certified other than Japan.

○Do not use this product near any person using cardiac pacemaker. The cardiac pacemaker may be disturbed by electromagnetic wave, which may cause risk of life.

○Do not use this product near any medical equipment. The medical equipment may be disturbed by electromagnetic wave, which may cause risk of life.

○Do not use this product near any microwave oven. Electromagnetic wave from microwave oven may disturb radio communication.

○The wireless device of this product is certified under the Radio Law, so that DO NOT disassemble or remodel this product.

■Notes on radio interference of 2.4 GHz radio

When communicating with 2.4 GHz band wireless products, pay attention to the following points.

In this product's frequency band not only industrial, scientific and medical equipment such as microwave ovens but also local radio stations for mobile objects identification (which require the license), specified low-power radio stations (license not required), and amateur radio stations (license required) can be in operation.

○Before using this product, make sure that there are no local radio stations for mobile objects identification, specified low-power radio stations and amateur radio stations operating nearby.

○In event that harmful interference occurs to any radio station by the radio wave from this product, stop using it immediately and consult with us about avoiding interference.

○Also contact us in case of any trouble such as harmful radio interference to specified low-power radio stations for mobile objects identification or amateur radio stations.

■FCC/IC Warning (TW-800T, TW-800R Common)

Information about FCC Standard.

FCC CAUTION

Change or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 interface, and (2) This device must accept any interface received, including interface that may cause undesired operation:

Information about FCC Standard and IC standard.

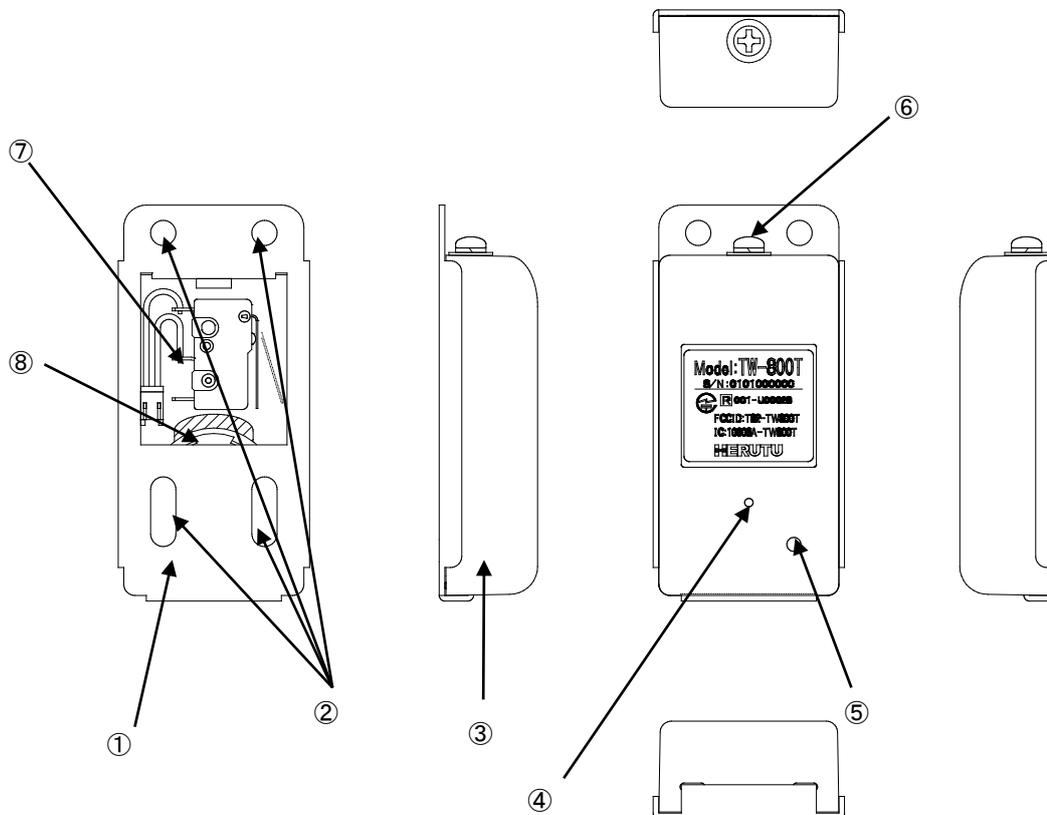
This device complies with Part 15 of FCC Rules and Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux la partie 15des règles de la FCC et CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

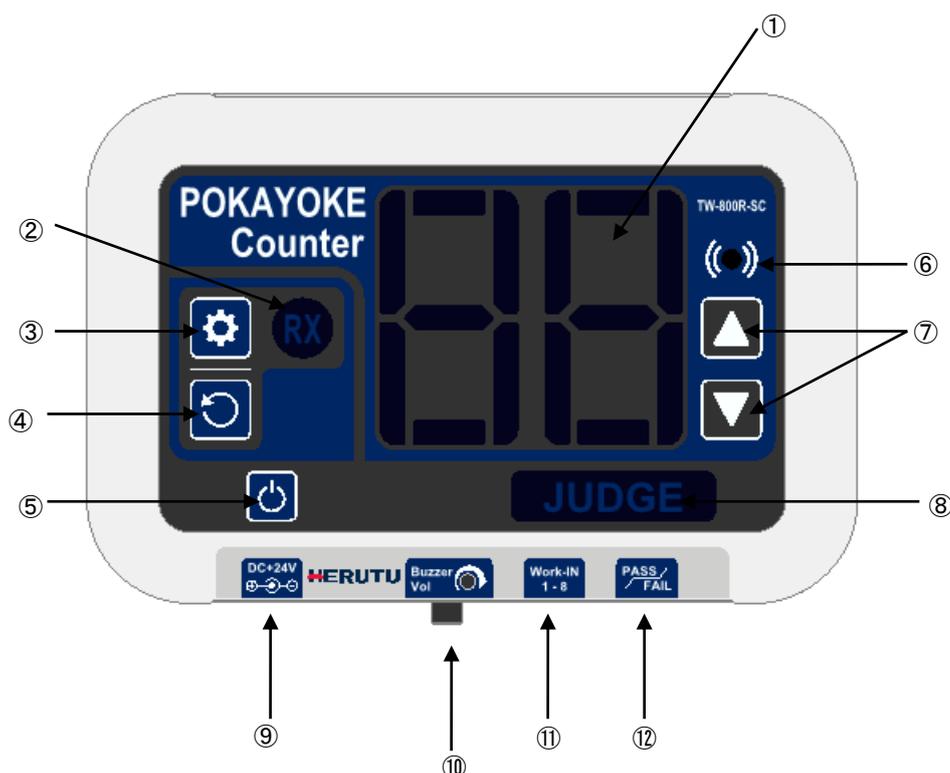
■Name of Each Part

●Transmitter TW-800T



① Mounting bracket	Mounting bracket for mounting on the torque wrench.
② Mounting brackets/ Mounting holes	The hole is for mounting the base of torque wrench of LS type and seat.
③ Body case	The case is constructed from a durable material: polypropylene.
④ LED (Red/ Green)	LED is for confirmation of communication and battery level notification. Depend on the situation, LED is lighting and flashing.
⑤ Test switch (Pairing switch)	For Test switch and pairing switch.
⑥ Body mounting screw	The screw is for mounting main body and mounting bracket.
⑦ Limit switch	Limit switch is for input the signal from torque wrench. It is fixed the mount base of torque wrench by hexagon screw.
⑧ Battery	Battery is coin battery. Type is CR-2032

●Receiver TW-800R-SC



①7SEG-LED display (2-digit)	7SEG-LED displays the count value and various setting values.
②Receiver (RX) LED	The LED lights green when the receiver receives the signal from the transmitter. The display varies depending on each mode. <ul style="list-style-type: none"> •Green LED blinks at 50ms intervals: pairing mode •Lit in red: When setting the count value •Lit in blue: When setting the reset time
③REG. key	The key is used to set Count value, Reset time and Over time.
④RESET key	The key resets the count value, count setting and status such as FAIL judgment.
⑤POWER key	Power ON → Press the POWER key for 0.1 seconds or more. Power OFF → Press the POWER key for 2 seconds or more.
⑥Buzzer	The buzzer sounds according to each state. <ul style="list-style-type: none"> •Task in progress: “ping” (1 time 100ms) •PASS: Pi pi pi (3 step melody sound) •FAIL(Over count): bleep bleep bleep...
⑦Setting (UP/DOWN) key	The key is used to set Count value, Reset time and Over count value. Operation of that key will be invalid while in count mode.
⑧JUDGE LED	The LED color changes according to the type of Judge. <ul style="list-style-type: none"> •Lit in blue: PASS •Lit in yellow: Task in progress •Lit in red: FAIL(Over count)
⑨Power jack	Connect the included AC adapter.
⑩Buzzer adjustment volume	Adjust the buzzer volume with the control volume of the receiver.
⑪Work-Select input	This is the input jack for selecting the registered Work. When using the Work-Select input, use the optional switch BOX for Work-Select, TW-WS02 or the input cable for Work Select, TW-SC24-4.
⑫Judge output	This is the output jack for Judge output. For use of the Judge output, use the optional output cable for Judge, TW-SC35-3.

■Installation

Transmitter

Transmitter is used by attaching to various kinds of tools such as torque wrench, plier wrench, check pen, battery tool etc. As plier wrench and check pen are original products of Herutu Electronics, basically it is shipped with transmitter attached.

The torque wrench can be attached to the following manufacturer's products.

TOHNICHI Mfg. Co., Ltd. : LS type (QLLS, QSPLS, etc.)

Nakamura Mfg. Co., Ltd. : MBtype (N-SPK-MB, N-QSPK-MB, etc.)

For other tools installation please contact sales department.

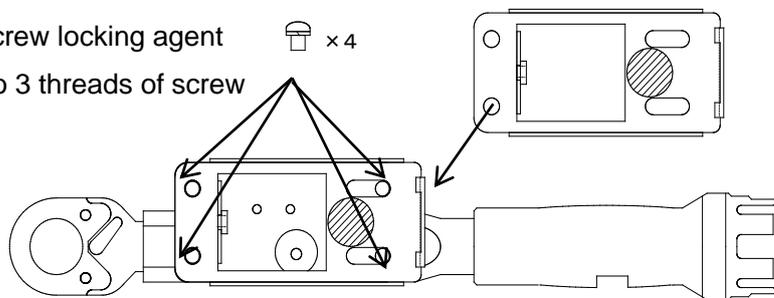
<Installation the transmitter to torque wrench>

①To install the seat

Fix the Seat with four fixing screws.

For the application with heavy oil mist, fill up the caulking agent between Wrench seat and Seat and also between Wrench shaft and Wrench seat to protect the internal board.

Apply the screw locking agent onto the 2 to 3 threads of screw edge.

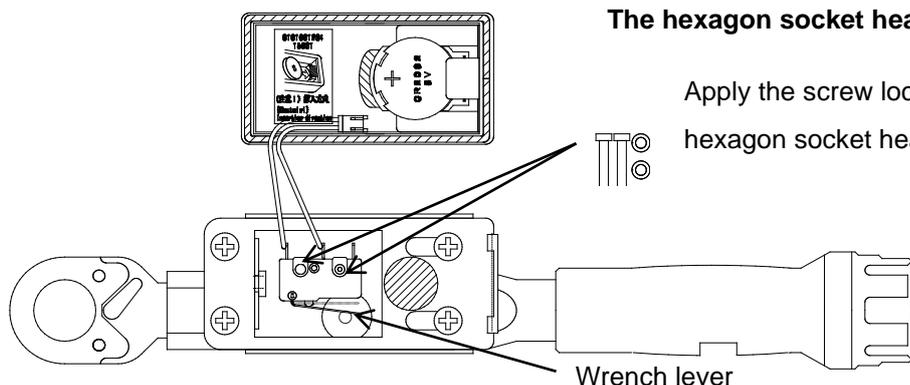


②Fix the Transmitter Limit SW with two hexagon socket head bolts(which was removed).

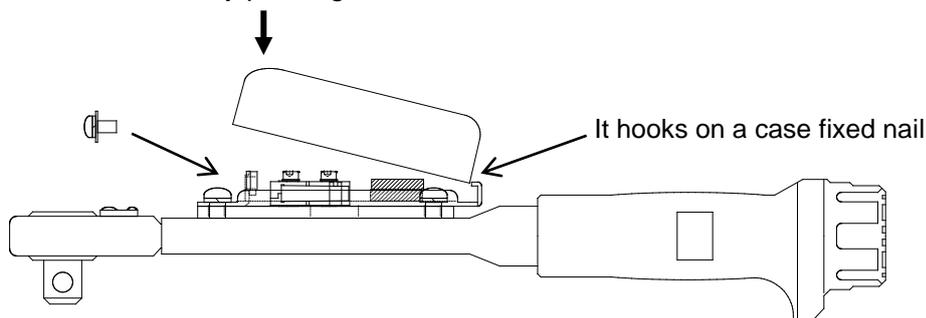
Verify that the moving range of wrench lever is well suited for the movement range of switch during the wrench in movement.

The hexagon socket head bolt requires a washer.

Apply the screw locking agent on 2 to 3 threads of hexagon socket head bolt.



Hook the Transmitter on the Case holder of Seat, set it with an attention being paid not to bite the cord, and fix it with the set screw as firmly pushing the case.



<The attention and the check method on limit switch attachment>

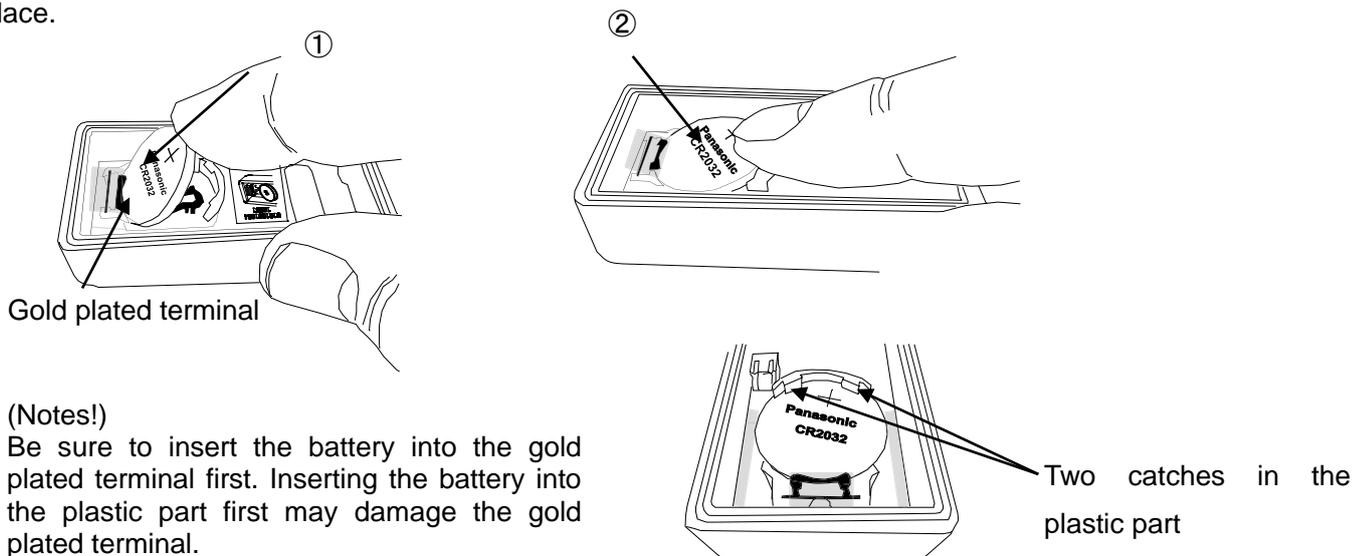
When the lever working range of a torque wrench is small, a limit switch cannot be struck and a transmitter may not send. In limit switch attachment, be careful enough and carry out.

<Installing and removing the battery>

●Installing the battery

First, with the “positive (+) terminal” of the coin battery (CR2032) facing up, insert the battery into the gold plated terminal of the battery holder , as shown in Fig. 1 below.

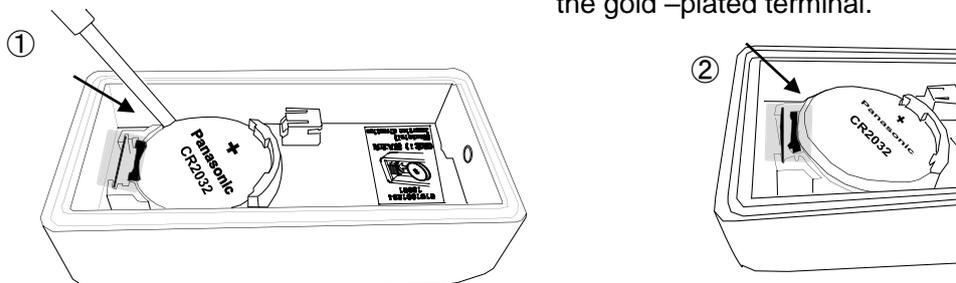
Push the battery so that it is secured by two catches in the plastic part of the battery holder until the battery snaps into place.



●Removing the battery

When removing the coin battery for replacement or other reasons, slide a not sharp-edged object between the battery and battery holder and gently lift the bottom of the battery, as shown in Fig. 1 below. As shown in Fig. 2 below, the battery can be slid out of the battery holder through the tab of the gold –plated terminal.

The battery is slid out of the holder through the tab of the gold –plated terminal.

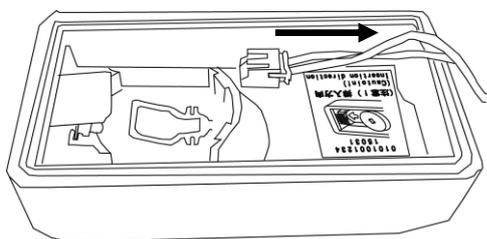


(Notes!)
Care should be taken not to disconnect the limit switch cable of TW-800T while installing or removing the battery. It is advised to remove the limit switch cable from the connector before installing or removing the battery.

< Replacing the harness connector with limit switch (TW-800T-HCL) >

When replacing the harness connector with limit switch, remove the coin battery and perform the replacement procedure, as shown below.

①

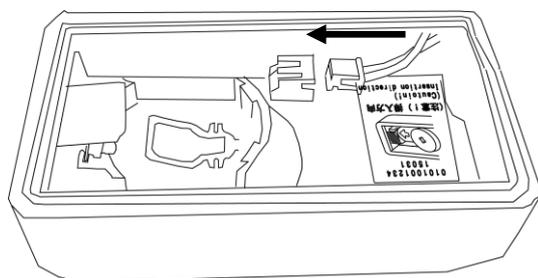


Pull the cable portion near the connector horizontally to let the connector mating portion come off from the connector.

(Notes)

Remove the cable from the connector carefully. Pulling the cable up may distort the connector mounted on the substrate and result in damage to the connector.

②



Push the white connector portion of a new harness connector with limit switch using the tip of the fingernail and insert it into the TW-800T connector. Push in the connector firmly until it snaps into place. Make sure the direction of the connector is correct before inserting the connector.

(Notes)

Do not attempt to apply excessive force to the cable when connecting the connector.

Installing the receiver

- ① Install the receiver in a location where it can be seen well from the transmitter and can receive radio waves stably.
- ② Connect the AC adapter plug to the power jack.
- ③ As necessary, connect a signal line to “Judge output” or “Work-Select input”.

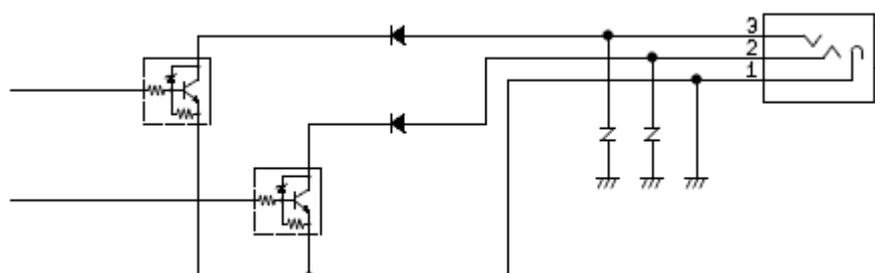
● Judge output(PASS/FAIL output)

The PASS /FAIL output is an open collector output. When the output turns ON, a short circuit occurs between each terminal.

Be aware that the internal circuit may be damaged when the contact rated load is exceeded.

For use of the Judge output, use the optional output cable for Judge, TW-SC35-3.

Rated load voltage:	DC 24V
Rated load current:	0.1A
Contact structure/configuration:	Open collector
Connector:	Small signal-head plug; diameter 3.5mm (0.14"), 3-pole type



3: PASS output
2: FAIL output
1: GND

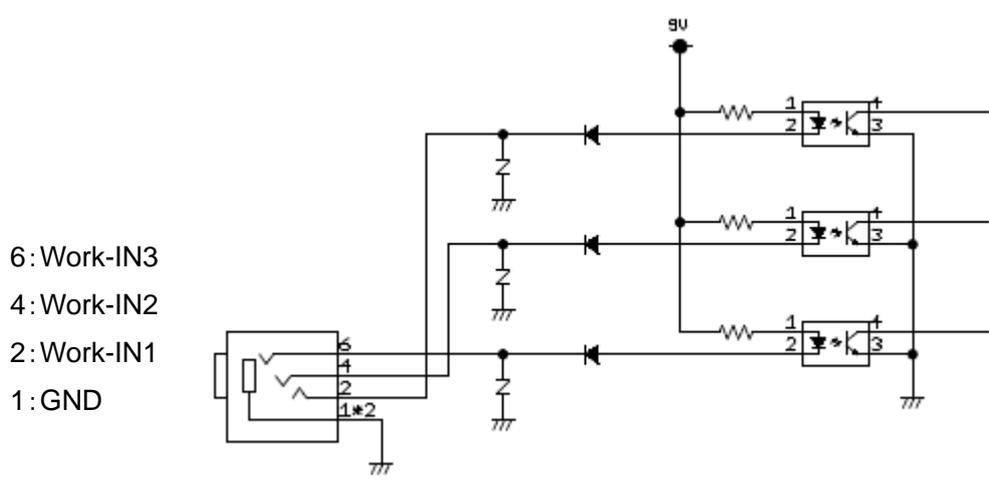
●Work-Select input

The input type is a non-voltage contact input. Connect the input signal to the low chattering switch for turning ON/OFF DC9V/10mA stably or PLC.

When using the Work-Select input, use the optional switch BOX for Work-Select, TW-WS02 or the input cable for Work Select, TW-SC24-4.

* For controlling Work-Select using a PLC (programmable logic controller), it is recommended to use the input cable for Work Select, TW-SC24-4.

Non-voltage Contact-inputs: 3Bit+COM
(Photo coupler input)
Contact rating: DC 9V /10mA or more
Connector: Very small signal-head plug; diameter 2.5mm (0.1"), 4-pole type



Selected work	Input Cable for Work-Select TW-SC24-4 (Terminal number)		
	1	2	3
Work1	OFF	OFF	OFF
Work2	ON	OFF	OFF
Work3	OFF	ON	OFF
Work4	ON	ON	OFF
Work5	OFF	OFF	ON
Work6	ON	OFF	ON
Work7	OFF	ON	ON
Work8	ON	ON	ON

■ Setting/Registering

The transmitter and the receiver need to be paired before use.

By pairing them, they recognize an identification signal from each other and communicate with each other.

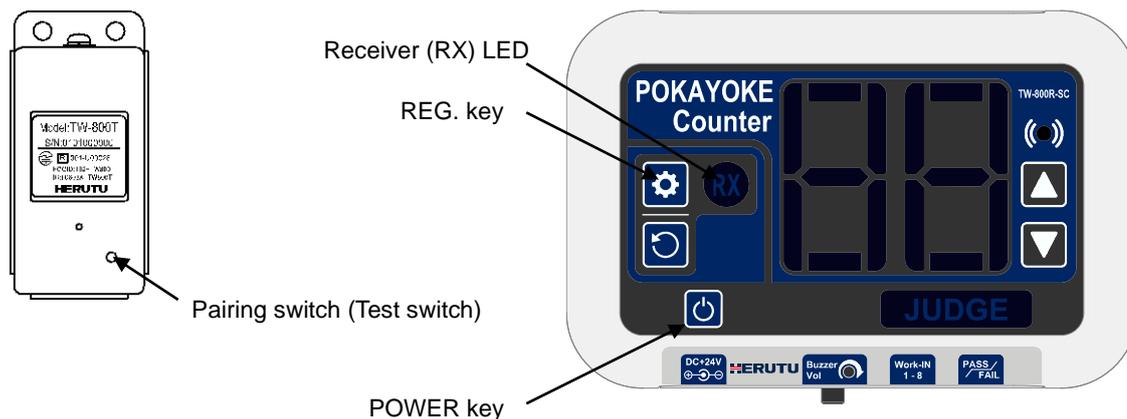
Pairing (Registration) - pairing mode

① With the receiver turned off, **press the [POWER] key while pressing and holding the [REG.] key** of the receiver.

Release the keys shortly after pressing them.

The Receiver LED blinks in green and the receiver enters the **pairing mode for 10 seconds**.

*Be aware that pressing the [REG.] key too long prevents entry into the pairing mode.



② **Long press the pairing switch** of the transmitter **for 3 seconds or more**.

③ When the Receiver LED turns off blinking (green) and the receiver enters the count mode, the pairing is completed.

When the Receiver LED stops blinking (green) and lights up (green), this indicates that the pairing has failed. Turn OFF the receiver power and start the procedure again.

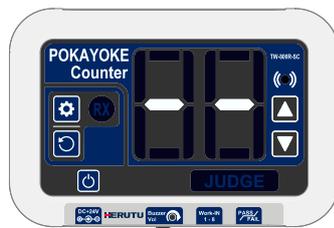
● Reset pairing

① With the receiver turned off, **Press the [POWER] key while pressing and holding the [REG.] key** of the receiver.

Release the [POWER] key only immediately.

② When **long pressing the [REG.] key for 2 seconds or more**, the Receiver LED stops blinking (green) and lights up (green) and the transmitter registered for pairing is deleted from the receiver.

*When the transmitter is not registered in the receiver, turning ON the power displays “-” instead of a numerical value, as shown below. (Count mode)



◆ Notes

● A long press on the pairing switch of transmitter (3 seconds or more) when the receiver is not in the pairing mode resets the pairing with the receiver and prevents communication with the registered receiver. When pairing is reset by mistake, perform the pairing procedure again.

Registering Work in the receiver—Setting change mode

Register Count/ Reset time/ Over count as a “Work” in advance. Up to 8 types of Work can be pre-registered.

Count: A signal received from the transmitter is counted as 1 count.

Reset time: Indicates the time when the count returns from “0 (zero)” to the original value after counting is completed.

Over count: Selection to judge FAIL for the signal received from the transmitter when the count is “0”.

Work registration details

Count	1 – 99 counts
Reset time	0 – 99 seconds
Over count	Valid/ Invalid

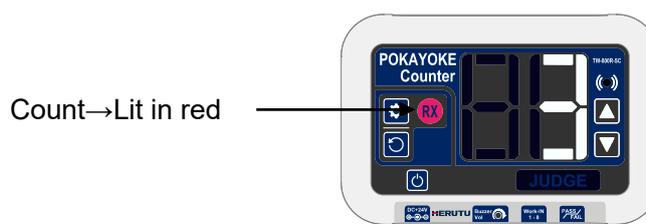
① Long press the [REG.] key in the count mode for 3 seconds or more.

(The receiver cannot enter the setting change mode during a task.)

② The Receiver (RX) LED lights up in red.

Set the counter to the desired count using the setting [UP/DOWN] keys.

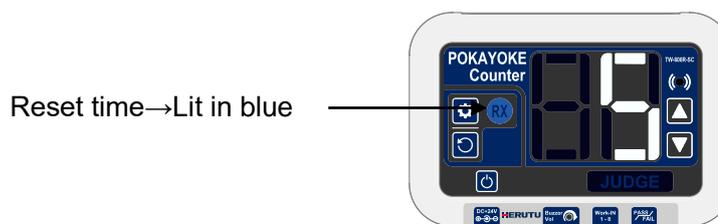
Count: 1~99



③ When the [REG.] key is pressed, the Receiver (RX) LED lights up in blue.

Set the counter to the desired reset time using the setting [UP/DOWN] keys.

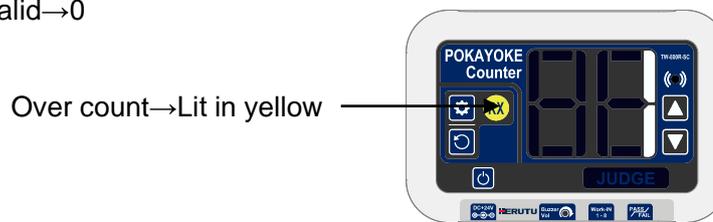
Reset time: 0~99



④ When the [REG.] key is pressed, the Receiver (RX) LED lights up in yellow.

Set the counter to the over count value using the setting [UP/DOWN] keys.

Over count Valid→1 / Invalid→0



⑤ Finally, press the [REG.] key, and the registration is completed.

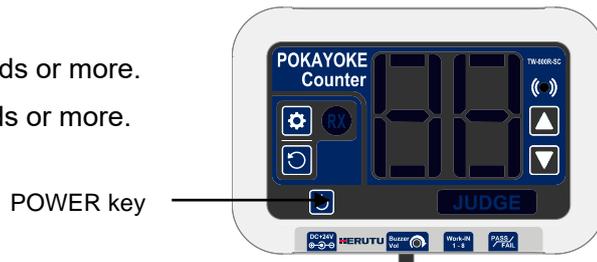
Up to 8 types of Work can be registered. Switch to the Work to be registered in Work-Select, and perform the same procedure as described above.

■Operation

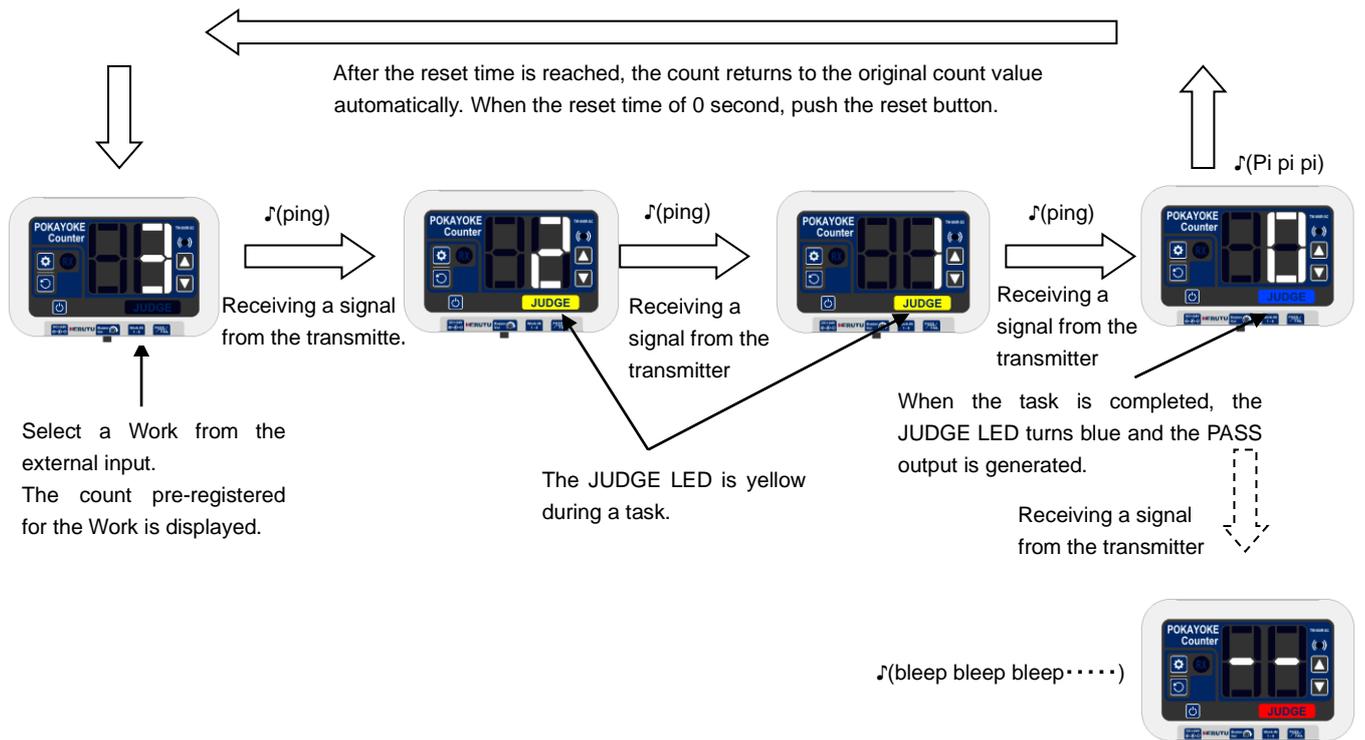
●Power ON/OFF

Power ON → Press the POWER key for 0.1 seconds or more.

Power OFF → Press the POWER key for 2 seconds or more.



●Work flow (count mode)



< Over counting is valid >
 The JUDGE LED turns red and FAIL output is generated.
 This can be reset only by pressing the reset button.

State	JUDGE LED	Buzzer	PASS output	FAIL output
Before the task	OFF	-	-	-
Task in progress	Yellow	Each time a signal is received, the sound "ping" is generated.	-	-
PASS	Blue	Pi pi pi	100ms output	-
FAIL	Red	bleep bleep bleep Synchronize with JUDGE LED	-	100ms output

●Buzzer volume adjustment

Adjust the buzzer volume with the control volume of the receiver.

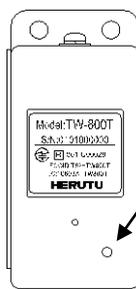


Buzzer adjustment volume

●Test switch (pairing switch)

The transmitter is equipped with a test switch for communication and battery voltage checks. The Receiver (RX) LED is triggered by a signal from the test switch, but countdown and output is not executed. When the test switch is pressed, the transmitter checks the battery remaining capacity. The result is indicated by the Transmitter LED or the Receiver LED.

The test switch also can be used as a pairing switch. A long press on the test switch (3 seconds or more) resets the pairing with the receiver and prevents communication with the registered receiver. When pairing is reset by mistake, perform the pairing procedure again.



Test switch (pairing switch)

	Transmitter	Receiver
Communication check	OK: Green LED blinks 1 time NG: Red LED blinks 10 times	Receiver(RX) LED blinks 1 time
Battery level low	Red LED: Lighting for 1 second	Receiver(RX) LED blinks 2 times

*After display of the communication check result (Communication OK/ NG), the transmitter indicates battery level low.

- Battery level notification function

The battery level notification function notifies the battery level status in two stages.

①Notification of low battery level with test switch: It is possible to check the battery level with the test switch.

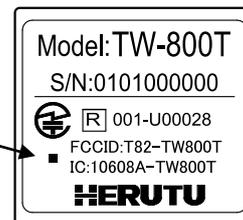
When the battery is low, the red LED will light for 1 second.

②Battery replacement notice: If the battery level is lower than in ① and the battery needs to be replaced, the green LED flashing after transmission will change to an orange LED flashing.

When the orange LED blinks, please replace it with a new battery immediately.

When you replace the battery with a new one, the LED on the transmitter will return to green from the second and subsequent transmissions.

For transmitters that support the battery level notification function(battery replacement notice), ■ is printed on the sticker.



■ Specifications

●TW-800 Common specification

Item	Specifications
Compliance Standards	2.4GHz Low Power Data Communication System Radio Equipment of Certification Regulation Article 2, Paragraph 1 Item 19 Radio Equipment Regulations Article 20 of 49 Paragraph 1
Radio format	F1D
Frequency Band	2,403MHz~2,478MHz
Number of Channels	76CH
Modulation Method	GFSK
Communication Method	Simplex
Antenna Power	2.1mW

●Transmitter TW-800T

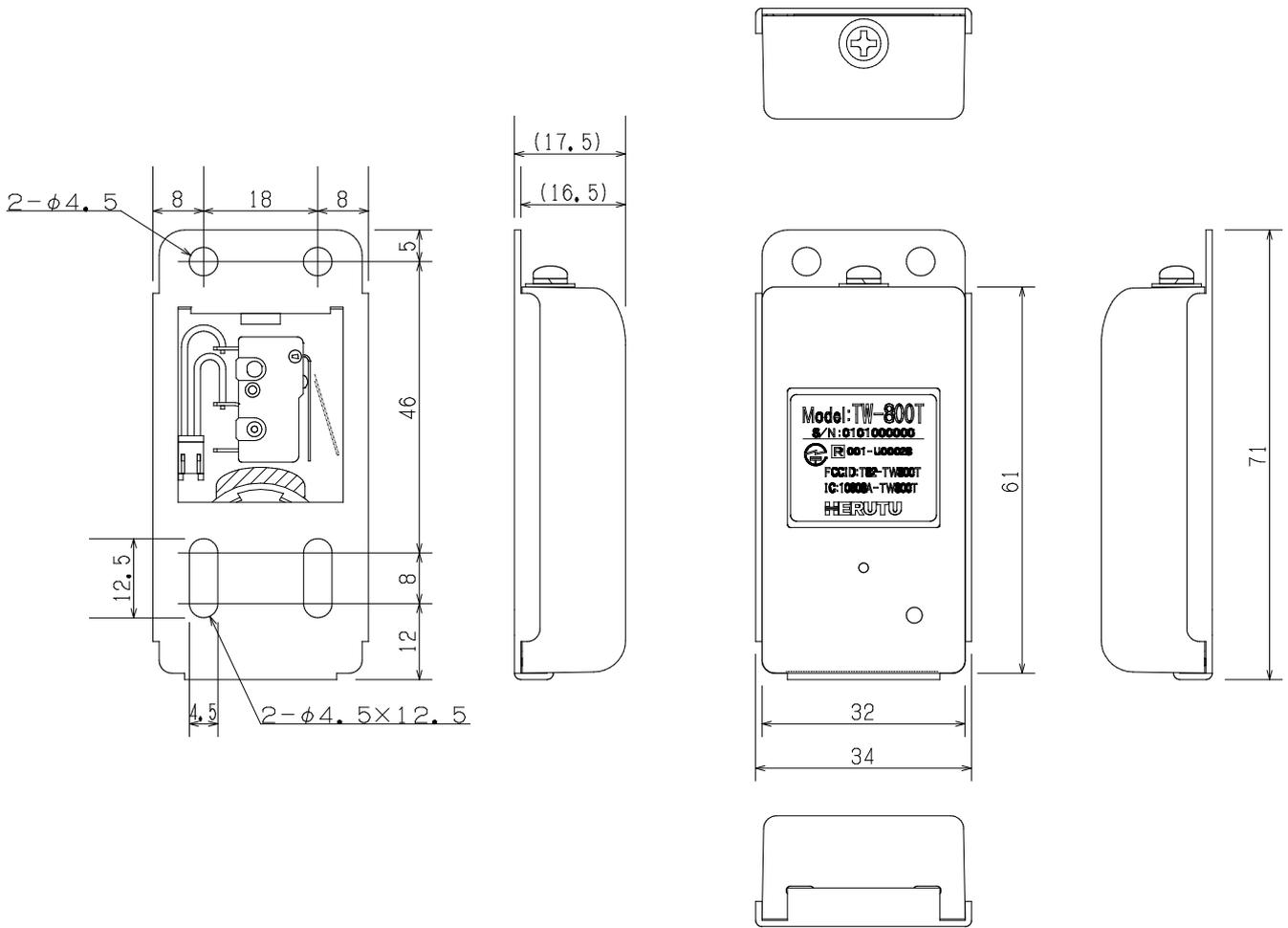
Item	Specifications
Input(s)	1 Limit Switch 1 Test Switch
Display	1 LED (Red/Green)
Power Source	1 Coin Battery (CR2032)
Operating Environment	Temperature: 0-50°C (32-122°F) Humidity: 80% or less (without condensation)
External Dimensions (W x H x D)	34 x 71 x 17.5 mm (1.3 x 2.8 x 0.7") (excluding protrusions)
Weight	Approx. 40 g (1.4 oz)
Antenna	PCB Antenna
Battery Life	Approx. 300,000 uses (depending on usage conditions)

●Receiver TW-800R-SC

Item	Specifications
Output(s)	Small signal-head plug; diameter 3.5mm (0.14"), 3-pole type 2 Power Transistor Outputs (1 PASS / 1 FAIL) Rated Load DC 24V / 0.1A
Input(s)	Very small signal-head plug; diameter 2.5mm (0.1"), 4-pole type (3bit+COM) Photo coupler input 3 Non-voltage Contact-inputs (for Work-Select)
Switches	5 Touch Keys; Power / REG. / RESET / ▲(UP) / ▼(DOWN)
Buzzer	Piezo Buzzer 95dB (at 0.1 m (3.9"))
Display	7-Segment LED 2-Digit ((W x H) 27 x 50 mm (1.1 x 2.0") per digit) JUDGE LED : Red/Blue/Yellow Receiver LED : Red/Blue/Yellow
Power Source	AC 100-240 V (using included AC Adapter)
Current Consumption	120mA or less
Operating Environment	Temperature: 0-50°C (32-122°F) Humidity: 80% or less (without condensation)
External Dimensions (W x H x D)	150 x 100 x 30 mm (5.9 x 3.9 x 1.2") (excluding protrusions)
Weight	Approx. 250 g (8.8 oz)
Antenna	Chip Antenna

■Dimensions Drawing

●Transmitter TW-800T

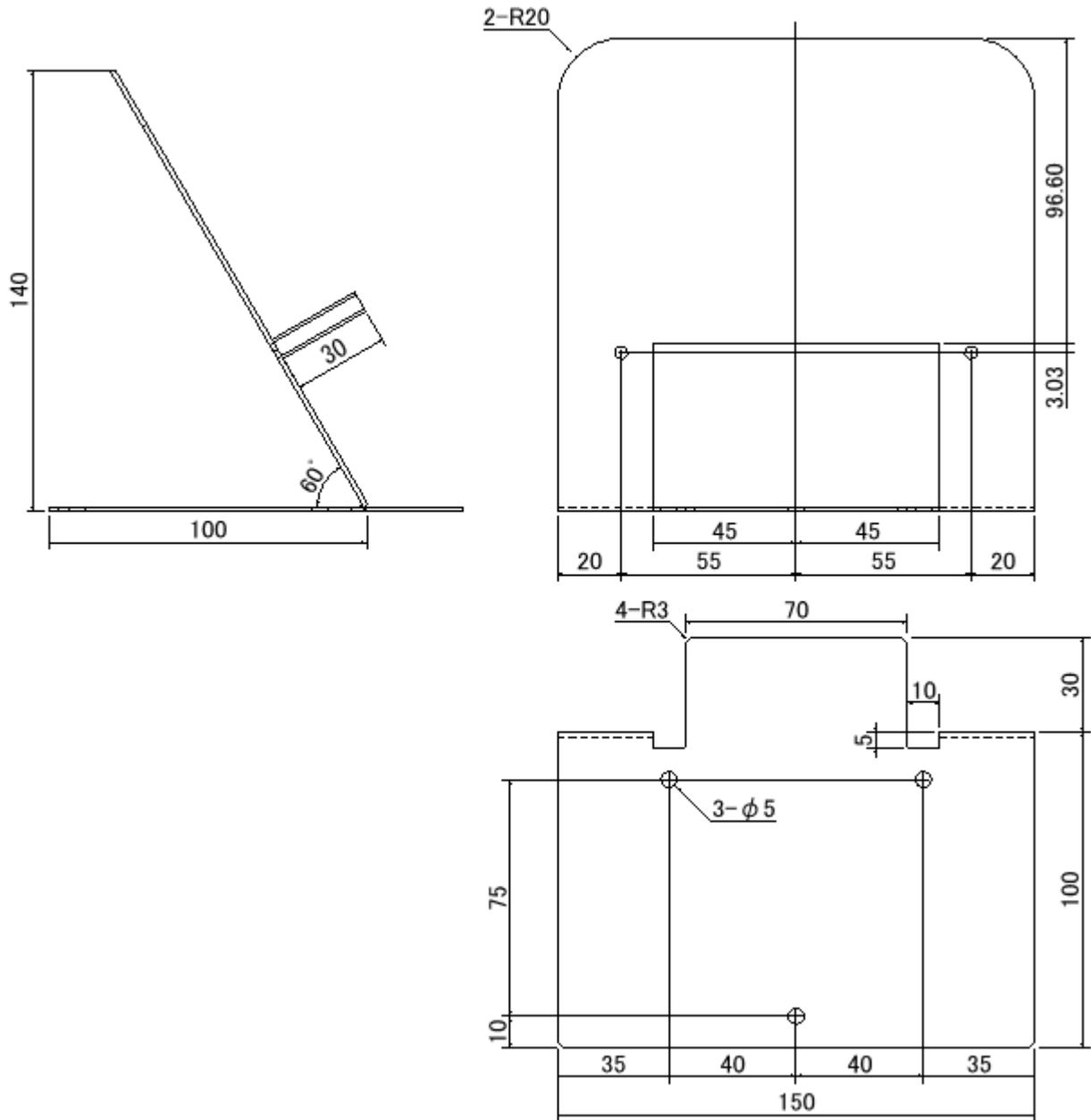


●Receiver TW-800R-SC



<Options>

- Desktop Stand TW-SCDS01



■ Before Determining Fault

TW-800T (Transmitter)

Phenomenon	Cause and remedy
The transmitter does not transmit LED (red or green) does not light up	Battery capacity is low. →Please replace the battery (CR2032).
	The limit switch signal is not connected. →Make sure the connector of the transmitter board and the limit switch connector are securely connected.
	The limit switch is not hit. →Adjust the installation position of the limit switch on the torque wrench body and check if the limit switch is hit.
The red LED blinks 3 times after transmitting.	Pairing is not done. (not registered) →Perform pairing with the receiver to communicate with the transmitter.
The red LED blinks 10 times after transmitting.	The power of the receiver is not ON. →Make sure the power of the receiver to communicate with the transmitter is ON.
	The communication distance is too far. →The distance is beyond the maximum communication distance of the machine. Install the transmitter in a location where it can communicate with a receiver.
	Communication cannot be done due to external factors. →Use of a product using the same frequency band (2.4GHz band) as this product may prevent communication. Please contact our Sales Department with your product information.
The red LED lights up after transmission	Battery capacity is decreasing. →Please replace the battery (CR2032).
Pairing cannot be done	The receiver is not in the pairing mode. →Set the receiver to the pairing mode and press the pairing switch of the transmitter for 3 seconds or more.

TW-800R-SC (Receiver)

Phenomenon	Cause and remedy
No LED lights up	The power of the receiver is not ON. →Make sure the power of the receiver to communicate with the transmitter is ON.
The receiver does not receive a signal from the transmitter	Pairing is not done. (not registered) →Perform pairing with the receiver to communicate with the transmitter.
The buzzer does not sound	The buzzer volume is turned down. →Adjust the buzzer volume.

■ After Service and Warranty

If something is wrong. If you should find anything wrong with the machine when using it under normal conditions, check the warranty and repair regulations and contact the outlet store through which you purchased the product or our Sales Office. The latest warranty and repair regulations can be found on our website.

The user is prohibited by law from disassembling or making modification to the unit or otherwise may be subject to punishment.

[Warranty Regulation]

This regulation (hereinafter referred to as the "Regulation") is for post-shipment warranty provided by HERUTU ELECTRONICS CORPORATION (hereinafter referred to as the "Company") so that you can use the Company's product you have purchased with confidence. The Regulation does not apply to special order products (custom products). In addition, purchased products shall be subject to the relevant manufacturer's warranty regulations, and the Regulation shall not apply.

Please note that in the event that the product you purchased comes with an instruction manual that describes the Company's old repair regulation, the latest Regulation will still apply.

1. Warranty period

Unless otherwise specified, the warranty period shall be "up to thirteen months from the date of shipment of the product by the Company". During the warranty period, the Company will replace the product with a new one or repair it free of charge in accordance with the provisions of the Regulation.

In addition, if a failure occurs during the warranty period due to the Company's responsibility and the product with the failure (hereinafter referred to as the "Product") is replaced with a new one or repaired free of charge, the warranty period of the Product will be "thirteen months from the date of initial shipment of the Product, or six months from the date of shipment of the Product that has been replaced or repaired, whichever comes later".

The warranty period for paid repairs shall be in accordance with the provisions of the Company's repair regulation.

2. Warranty scope

If a failure occurs during the warranty period due to the Company's responsibility, the Company will replace the product with a new one or repair it free of charge.

Even within the warranty period, the warranty does not apply in the following cases:

- A) In the event of failure or damage caused by improper handling by the customer, such as dropping or impact during transportation or movement by the customer
- B) In case of failure due to disassembly or modification of the main unit by the customer
- C) In case of natural disasters such as fires, earthquakes, floods, and in case of failure or damage due to abnormal voltage
- D) In case of failure caused by failure of equipment other than the Company's designated equipment connected to the Product
- E) In case of failure of the Product's accessories (AC adapter, antenna, connection cable, etc.)
- F) If damage is caused by the failure of consumables or limited-life parts included in the Product:
 1. Consumables: Batteries (rechargeable, batteries, dry batteries, button batteries, etc.), recording media

(SD cards, etc.)

2. Limited-life parts: Various switches (limit switches, push button switches, etc.) and various sensors
3. Other items that are worn out or have a service life due to use

If consumables or limited-life parts fail, we will replace or repair the parts for a fee.

- G) In case of failure caused by handling contrary to the usage and precautions described in the instruction manual of the Product
- H) If repaired, adjusted, or improved by elsewhere other than the Company
- I) If the Company is unable to reproduce the failure

3. About repair of the Product

Please note that repairing the Product requires equipment such as measuring instruments and tools, so the Company will handle it as a pick-up repair service at the Company.

4. About the shipping cost for replacement or repair of the Product

Shipping charges for sending the Product to the Company or a distributor, as well as shipping charges for sending the Product that has been replaced or repaired by the Company or the distributor to the customer, will be borne by the Company or the distributor.

5. Disclaimer

The Company is not responsible for any direct or indirect damages or monetary loss caused by failure of the Product or its use.

6. Additional notes

Please note in advance that the information of the Product described on the Company's website and in the catalogs, instruction manuals, technical materials, and other materials provided by the Company are subject to change without notice to customers.

[Repair Regulation]

This regulation (hereinafter referred to as the "Regulation") shall be applied to paid repair service (hereinafter referred to as the "Service") provided by HERUTU ELECTRONICS CORPORATION (hereinafter referred to as the "Company"). The Regulation does not apply to special order products (custom products). In addition, purchased products shall be subject to relevant manufacturer's repair regulations, and the Regulation shall not apply.

Please note that in the event that the product you purchased comes with an instruction manual that describes the Company's old repair regulation, the latest Regulation will still apply.

1. Subject of the Regulation

The Service is provided for the Company's products that are "beyond the scope of the warranty specified in the warranty regulation" and "from the sales start date to the end date of the repair period (seven years from the production end date)". However, please note that the end date of the repair implementation period may be earlier depending on the availability and procurement status of repair parts.

2. Establishment of contract

The contract shall be established when the customer approves the quotation presented by the Company and issues an order form before the end of the repair implementation period.

3. Purpose of the Service

The Company will provide the Service for the purpose of repairing the function and performance of the Company's product used by the customer if it fails beyond the scope of the warranty specified in the warranty regulation. Please note that the Service requires equipment such as measuring instruments and tools, so the Company will handle it as a pick-up repair service at the Company.

4. Usage fee for the Service

The usage fee for the Service shall be the total of the following fees:

A) Repair service fee

The repair service fee is the total amount of technical fees, parts costs, other expenses incurred, and applicable taxes associated with repairing the Company's product (hereinafter referred to as the "Product for repair") that the customer wishes to repair.

B) Shipping fee (including the cost of packaging boxes)

The Company kindly asks that customers bear the shipping costs for sending the Product for repair to the Company and for returning it from the Company. However, in the event that the Product for repair is sent by payment on delivery by the customer, the shipping cost will be included in the Service charge.

5. Warranty period and scope of the Product for repair

The warranty period for the Product for repair is "up to six months from the date of repair completion". However, please note that failures other than the repaired parts (repaired places or replaced parts) are not covered by the warranty of the Product for repair. In addition, if a failure occurs due to the Company's responsibility within the warranty period, the Company will again repair the product free of charge.

6. Handling of repair parts

A) In order to provide the Service stably for a long time and to promote environmental protection, etc., the Company may use recycled parts or alternative parts at the time of repair at its discretion.

B) The Company may, at its own discretion, collect the removed parts for the purpose of recycling or analysis at the time of parts replacement through the regulation of the Service. Please note that the collected parts are the property of the Company and will be recycled, used or discarded at its discretion.

7. Estimate for the Service

The estimate for the Service is basically free of charge. However, if the Company is unable to reproduce the failure, it will not be able to carry out repairs and will not provide an estimate. If a technical investigation is required to reproduce the failure, the Company will estimate the cost of reproducing the failure.

8. Return of unrepaired product

If the Company does not estimate the cost of the Service due to reasons such as being unable to reproduce the failure, it will return the Product for repair to the customer.

In addition, if the customer does not place an order within three months from the date of creation of the quotation, or if the customer does not accept the quotation and the customer expresses an intention not to carry out the repair, the Company will assume that the customer has canceled the request for the Service, and the Company will return the Product for repair to the customer without carrying out the repair.

In addition, if a shipping fee is incurred for returning the product, it will be borne by the customer.

9. Handling of personal information

The Company will properly handle personal information such as names and addresses being provided in accordance with the privacy policy posted on the Company's website.

10. Compensation for damages

- A) The responsibility of the Company for providing the Service shall be limited to the matters and contents specified in the repair regulation, and shall not include any damages incurred by the customer due to special circumstances (including loss of profits of the customer and damages based on claims for compensation made by third parties against the customer) and damages caused by the customer being unable to use the product due to a failure or defect of the Product for repair. However, this does not apply if the damage was caused by the Company's willful misconduct or gross negligence.
- B) Even if the Company is liable to the customer for damages in connection with the regulation of the Service, the Company's liability shall not exceed the amount equivalent to the value of the Product for repair, except in cases of willful misconduct or gross negligence on the part of the Company. The value of the Product for repair shall be calculated based on the residual value after depreciation or the price of products with equivalent performance sold in the market at the time of damage.

11. Additional notes

- A) The Company cannot restore stickers, LCD protective sheets, and coloring applied to the outer casing parts that you have attached yourself. In addition, if advertisement stickers were affixed at the time of sale, they cannot be newly prepared as repair parts when replacing the outer casing parts. After replacing the outer casing parts, the advertisement stickers will be returned without being affixed.
- B) Please note in advance that the information of the Product on the Company's website and in the catalogs, instruction manuals, technical materials, and other materials provided by the Company are subject to change without notice to customers.



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