HERUTU

POKAYOKE (MISTAKE PREVENTION) TOOLS

Check Pen S

CP-**S

Instruction Manual V1.40

Table of Contents

■Overview

“Check Pen S” is a pokayoke (mistake prevention) tool with a compact wireless module HRF-2402 built in for transmitting work confirmation to prevent mistakes in marking and approval marking.
The Check Pen S can communicate with a Pokayoke receiver “TW-800R-***” series.

<Features>

◆Compatible with various brands of pens by changing the pipe of the Check Pen S.

◆We support commercially available stamps.

◆Reliable communication

TW-800 can communicate automatically by selecting the channel from 76ch in 2.4GHz bandwidth.

TW-800 transmits the signal reliably by 2way communication. (You can look see the communication OK/NG by LED lighting and flashing.)

◆Uses a small and lightweight coin battery as a power source.

◆Battery life of about 300,000 uses. (depending on usage conditions)

◆Battery level notification function

A function to notify when the battery level is low (when press with test switch) or when the battery needs to be replaced.

The battery level will be notified by both Check Pen S and receiver LEDs when the battery level is low and will be notified by Check Pen S LED when the battery needs to be replaced.

◆Uses a communication band that is available worldwide.

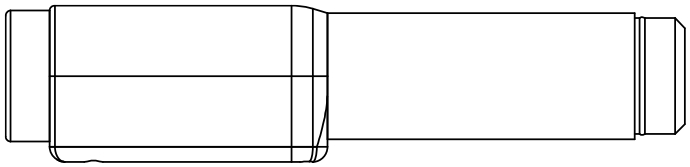
◆The Check Pen S can communicate with a receiver TW-800R-***.

◆Communication distance of approx.30m indoors (varies depending on the operating environment).

◆Available countries：Japan, Canada, USA, Mexico, China, Thailand, Vietnam, Philippines and India.

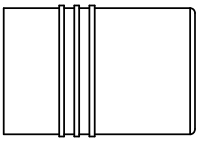
■Main Body and Accessories

Check Pen S CP-S**



CP-**S Main body x 1

(Wireless module built in HRF-2402)



Pen-Cap x 1

* Pen-Caps are included with the CP-02S, CP-11S, and CP-26S, but not included with other models.

Coin battery: CR2032 × 1

*The Check Pen S is delivered with a coin battery installed.

[Pens] *Pens are not included.

Check Pne S Model	Part Number	Pen Manufactures
CP-02S	PX-20	Mitsubishi Pencil
	No.500	Teranishi Chemical Industry
	M-20PM	Pilot Corporation
	MMP20	Pentel
	#600	Alton
CP-05S	PX-21	Mitsubishi Pencil
CP-09S	H-DM	Tombow Pencil
CP-11S	K-177N	Shachihata

[Stamps] *The Check Pen S is delivered with a stamp installed.

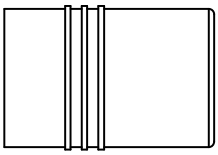
Check Pne S Model	Part Number	Stamp Manufactures
CP-26S	X-BKL	Shachihata

The contents of the stamping face is "OK" and the ink color is red.

Please contact your distributor or our sales department for other contents of stamping face and ink colors.

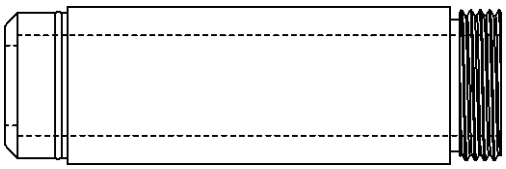
Options

・ **Pen-Cap: CP-S-CA (Common)** For CP-02S, CP-11S and CP-26S.



・ **Pipe: CP-**S-PP**

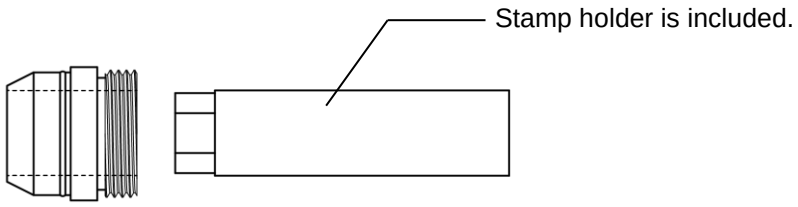
[Pens]



The pipe types vary depending on the type of pen used. Select the applicable type from the list below.

Pipe Type	Part Number	Pen Manufactures
CP-02S-PP	PX-20 No.500 M-20PM MMP20 #600	Mitsubishi Pencil Teranishi Chemical Industry Pilot Corporation Pentel Alton
CP-05S-PP	PX-21	Mitsubishi Pencil
CP-09S-PP	H-DM	Tombow Pencil
CP-11S-PP	K-177N	Shachihata

[Stamps]



Pipe Type	Part Number	Stamp Manufactures
CP-26S-PP	X-BKL	Shachihata

■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

- 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

- DO NOT USE OR STORE the product in the following places to prevent defects, malfunction, deterioration, fire, and electric shock:
  - 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.

■Specific handling of this product

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

- It is prohibited by law to disassemble or modify certified devices.
- Do not remove the certification label affixed to the case. It is prohibited to use any product without the label.
- 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

- Do not use this product for application that requires the extremely high reliability affecting the human life.
- Do not use this product in the area which the radio wave reaches or not.

■If a problem occurs during use

- 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.

■Notes on the Radio Law

〇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.

〇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.

〇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.

〇Do not use this product near any medical equipment. The medical equipment may be disturbed by electromagnetic wave, which may cause risk of life.

〇Do not use this product near any microwave oven. Electromagnetic wave from microwave oven may disturb radio communication.

〇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.

〇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.

〇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.

〇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.

"Check Pen S" is equipped with the built-in wireless module HRF-2402.

Available countries：Japan, Canada, USA, Mexico, China, Thailand, Vietnam, Philippines and India.

■FCC/IC Warning

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 transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment has very low levels of RF energy that is deemed to comply without maximum permissive exposure evaluation (MPE).

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment has very low levels of RF energy that is deemed to comply without testing of specific absorption rate(SAR).

I Information about ISED Standard.

This device complies with Industry Canada's applicable license-exempt RSSs. 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 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;
2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that is deemed to comply without maximum permissive exposure evaluation (MPE).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée comme conforme sans évaluation de l'exposition maximale autorisée (MPE).

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that is deemed to comply without testing of specific absorption rate (SAR).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée comme conforme sans évaluation du débit d'absorption spécifique (DAS).

This radio transmitter (10608A-HRF2402) identify the device by certification number or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.
Antenna type:1/4λ Dipole antenna (chip antenna) Gain: 3dBi
Antenna type:1/2λ Dipole antenna Gain: 2dBi
Antenna type:1/2λ Dipole antenna Magnet Base Gain: 2dBi

Le présent émetteur radio (10608A-HRF2402) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.
Type d'antenne:1/4λ Dipole antenna (chip antenna) Gain: 3dBi
Type d'antenne:1/2λ Dipole antenna Gain: 2dBi
Type d'antenne:1/2λ Dipole antenna Magnet Base Gain: 2dBi

■Thailand Radio Law (SDoC)

This telecommunication equipment is in compliance with NBTC requirements.

■Information about IFETEL(Mexico)

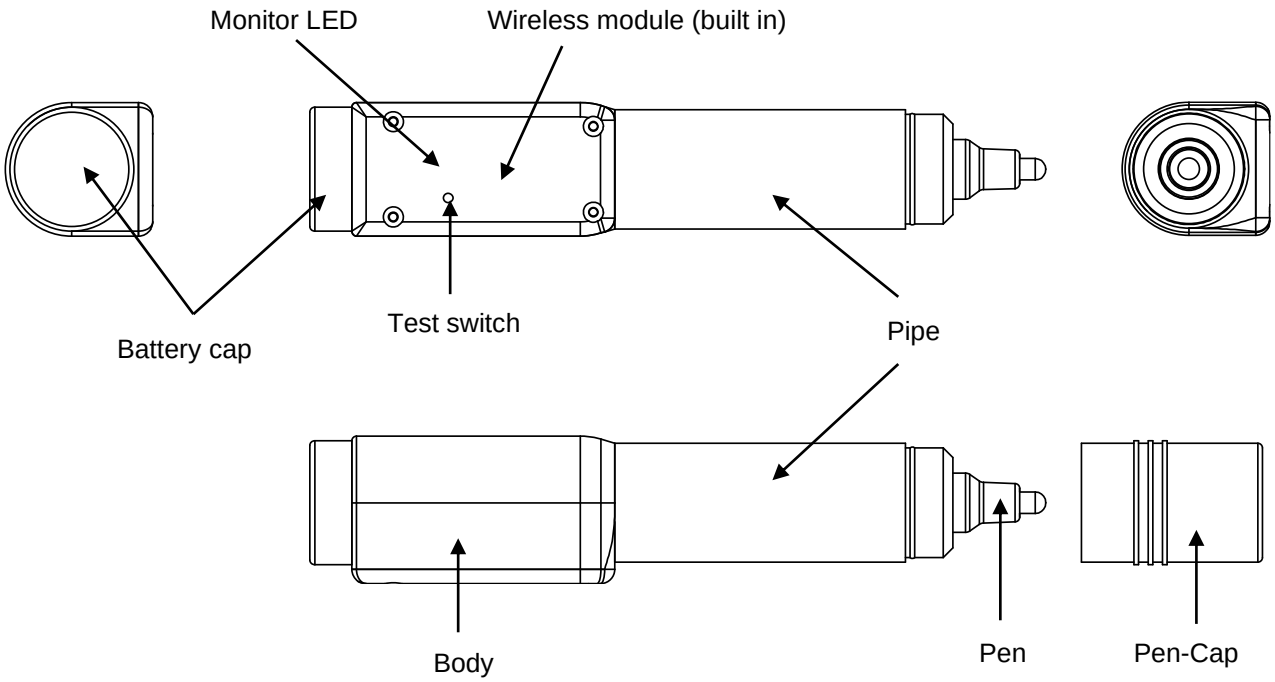
IFETEL RCPHEHR19-1206
HERUTU
HRF-2402

NOM NYCE

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipoo dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

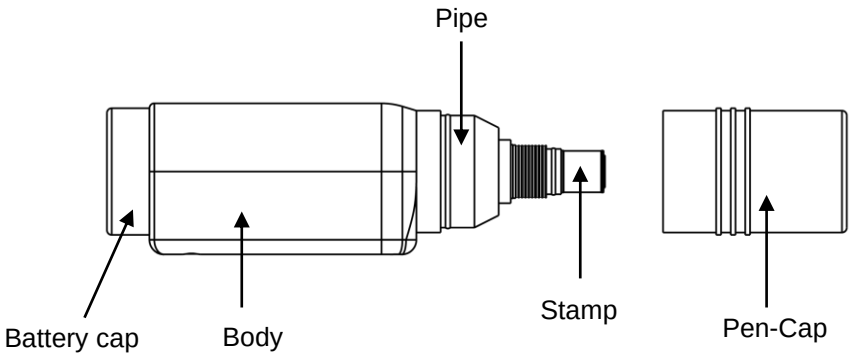
■Name and Function of Each Part

[Pens]



*Pens are not included.

[Stamps]

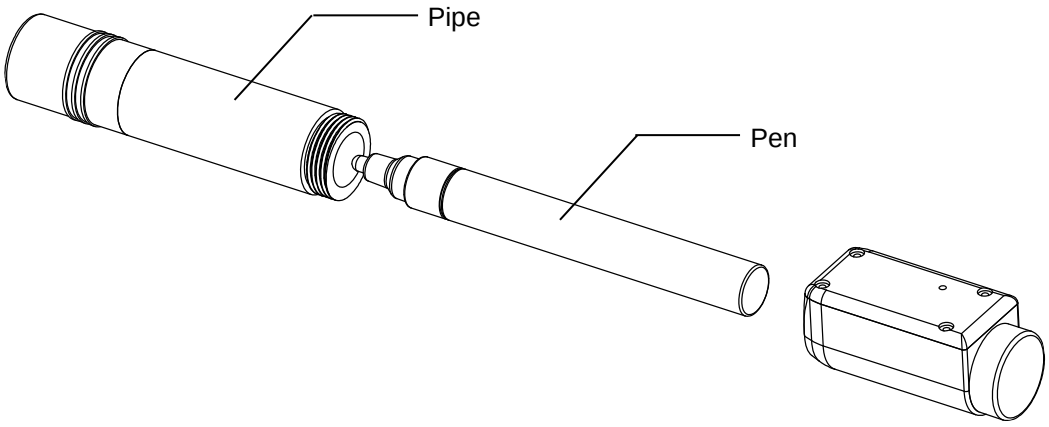


Wireless module (built in)	With “HRF-2402” pokayoke wireless module built in.
Pipe	Install a pipe compatible with the pen or stamp used. The Check Pen S can be used with various pens or stamps by changing the pipe.
Battery cap	Install a coin battery CR2032. The Check Pen S is delivered with a coin battery installed.
Pen-Cap	The pen-cap is common to the Check Pen S series.
Pen / Stamp	Commercially available pens and stamps are used. * Pens are not included.
Test switch	A switch for the remaining battery indication and communication test. It is also used as a pairing switch for pairing the Check Pen S with a receiver.
Monitor LED	An LED for communication confirmation /battery check. It lights up /blinks red/green according to the communication result.
Body	A main part with a wireless module, coin battery, etc. installed.

■How to Install

<How to install a pen>

Turn the pipe to remove it, and insert a pen. Turn the pipe to close it tightly.

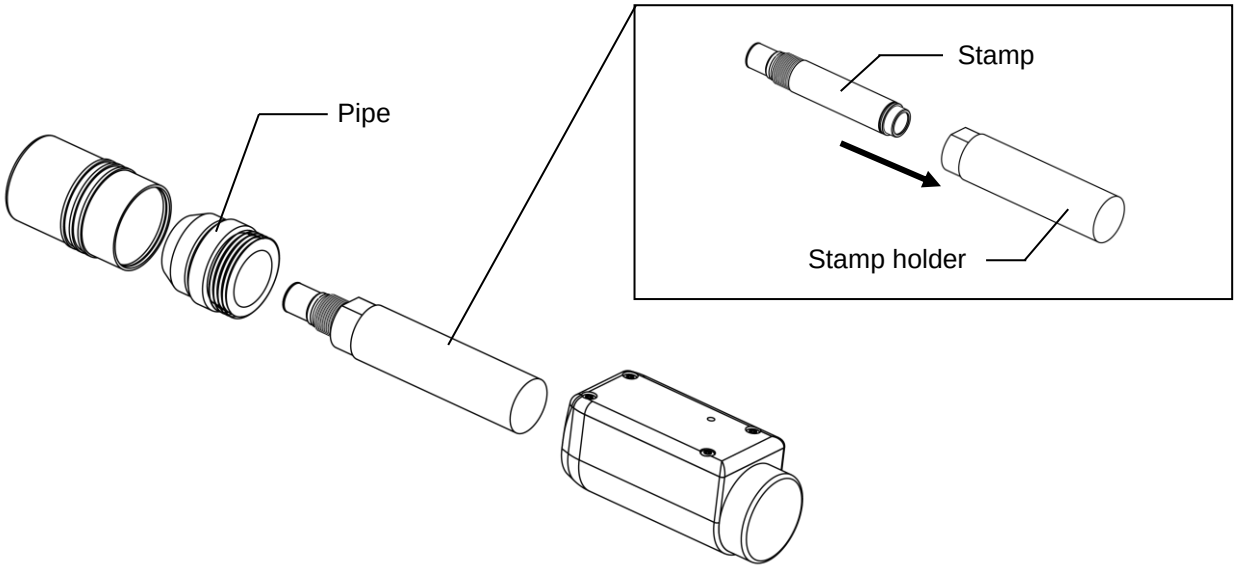


<How to install a stamp>

*The Check Pen S is delivered with a stamp installed.

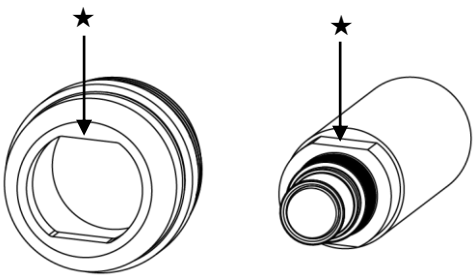
Turn the pipe to remove it, and insert a stamp into the stamp holder.

(Push in until the stamp does not rotate in the stamp holder.)



Insert a stamp into the pipe, and turn the pipe to close it tightly.

*Match the flat part (★) of the pipe and the stamp holder, when inserting a stamp into the pipe.

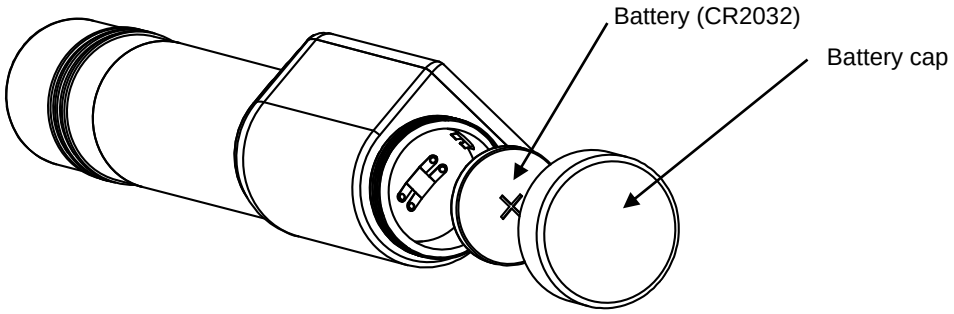


<Installation/removal of battery>

Remove the battery cap by rotating it and install or remove the coin battery.

Close the battery cap tightly. Loose battery cap may cause a poor contact.

Be careful to install the coin battery in the correct direction (polarity).

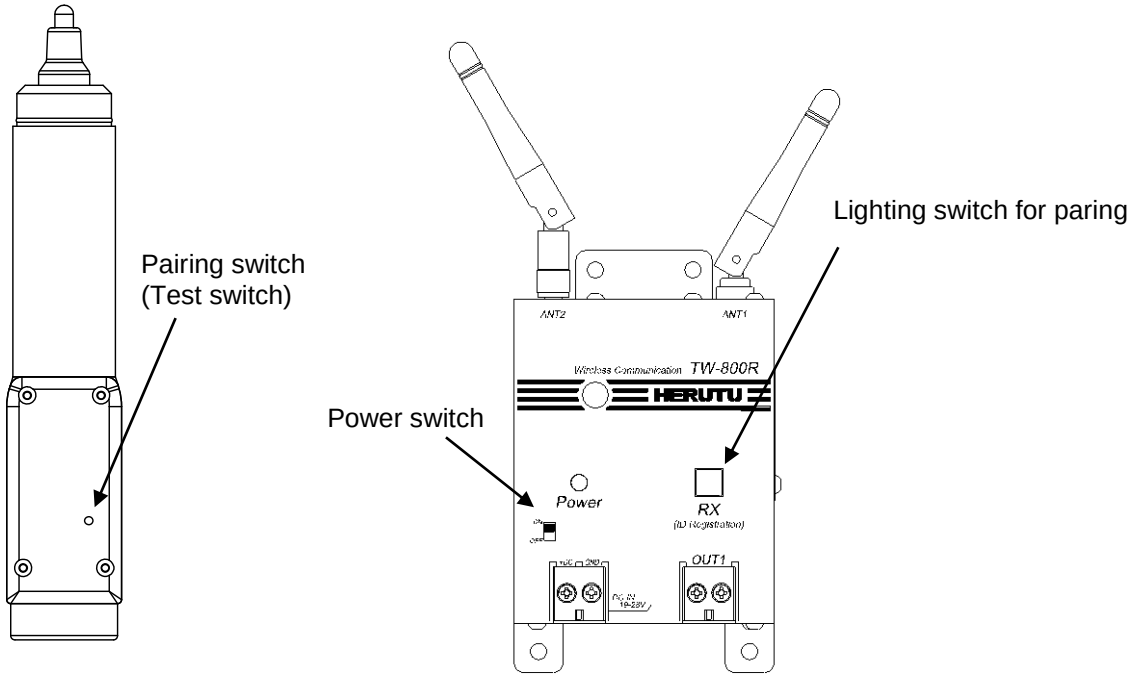


■Setting

The Check Pen S and a Pokayoke receiver TW-800R-*** need to be paired before use.
By pairing them, they recognize an identification signal from each other and communicate with each other.
This manual describes how to pair the Check Pen S with the receiver TW-800R.
For pairing with a receiver other than TW-800R, see the instruction manual of each receiver.

● Pairing (registration)

①**Press the lighting switch for paring** of the receiver, **and turn ON the power switch** at the same time.
The lighting switch for paring blinks and the receiver enters **the pairing mode for 10 seconds**.



②Long press **the pairing switch** of the Check Pen S for **3 seconds or longer.**

③**The lighting switch for paring of the receiver goes out** and pairing is complete.
When the lighting switch for paring stops blinking and lights up, this indicates that the pairing has failed. Turn OFF the receiver power and start the procedure again.

④**Turn OFF the power** of the receiver once and **turn it ON again**, and the receiver can communicate with the paired Check Pen S .

● Reset pairing

①**Press the lighting switch for paring** of the receiver, and **turn ON the power switch** at the same time.
The lighting switch for paring blinks and the receiver enters **the pairing mode for 10 seconds**.
Long press the lighting switch for paring for **2 seconds or longer**, and the **lighting switch for paring lights up** and the paired (registered) data of the Check Pen S is deleted.

◆Notes

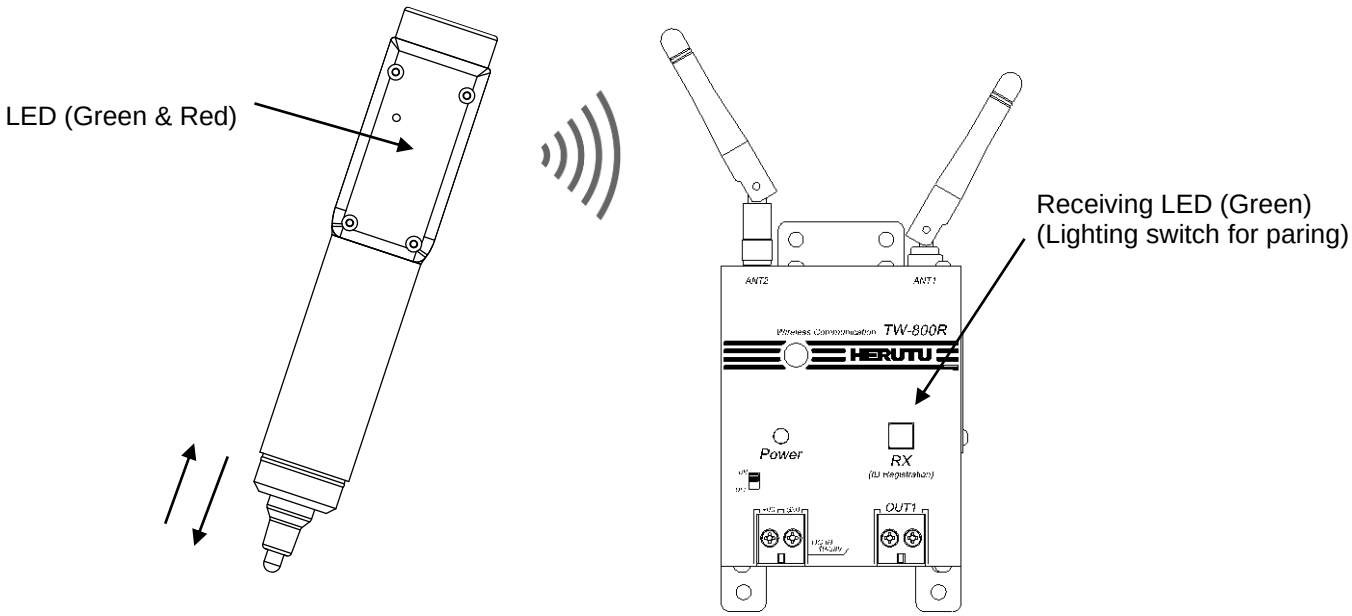
A long press on the pairing switch of the Check Pen S (3 seconds or more) when the receiver is not in the pairing mode resets the pairing with the receiver and prevents communication with the registered receiver. When pairing is reset by mistake, perform the pairing procedure again.

■How to Use the Check Pen S

①Turn ON the power switch of the receiver.

Make sure the receiving LED is OFF.

When the receiving LED lights up, the Check Pen S is not paired. Pair the receiver and Check Pen S.



②Pressing the point of the Check Pen S with a certain force or more will generate a signal.

When the communication is executed normally, the receiver generates a relay output and the buzzer is activated according to the settings.

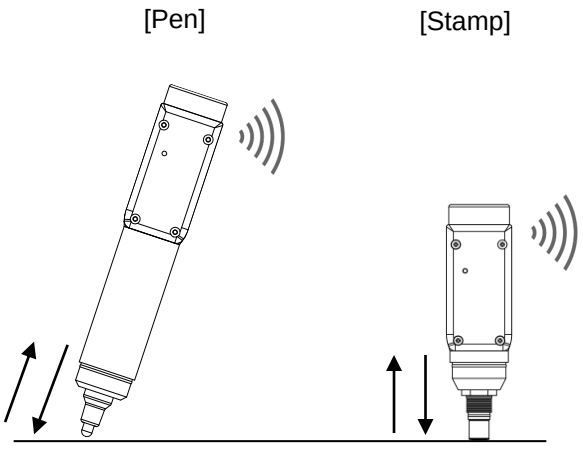
The green LED of the Check Pen S blinks once.

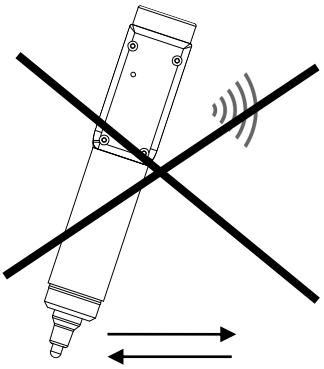
When the communication is not executed normally, the receiver is not activated.

The red LED of the Check Pen S blinks 10 times.

When the point of the Check Pen S is pressed, the built-in switch is pressed and a signal is generated.

No signal is generated by shaking the pen left and right instead of pressing it.





No signal is generated by not pressing the point of the pen, and even by shaking the pen left and right.

While the receiver is generating a relay output or preventing a double count, the receiver returns a BUSY signal to the Check Pen S. Upon receiving the BUSY signal, the green LED of the Check Pen S blinks 4 times.

	Check Pen S	Receiver
Communication OK	Green LED blinks 1 time	Receiving LED blinks 1 time.
Communication Failed	Red LED blinks 10 times	—
BUSY	Green LED blinks 4 times	—

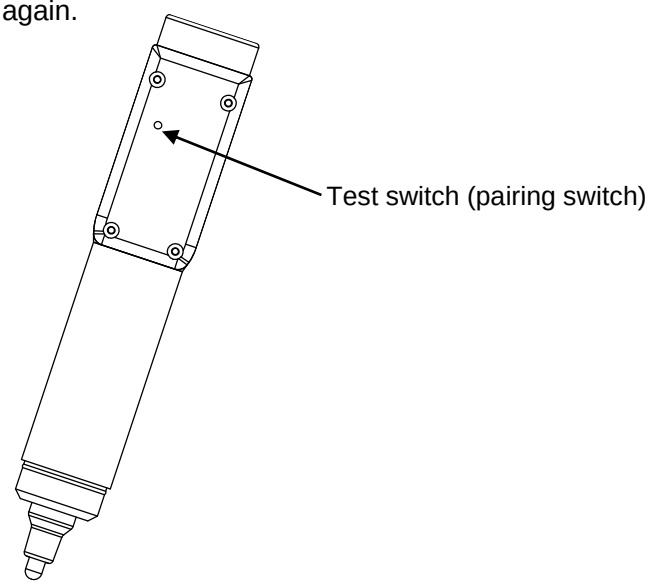
The buzzer sounding time of the receiver is normally 100 msec. Only when the relay output time is set to 50 msec. and the double count prevention time is set to 10 msec., the buzzer sounding time is 50 msec.

*When an unpaired the Check Pen S transmits a signal, the red LED blinks 3 times.

●Test switch (pairing switch)

The Check Pen S is equipped with a test switch for communication and battery voltage checks. The Receiver LED is triggered by a signal from the test switch, but a relay output is not generated. When the test switch is pressed, the Check Pen S checks the battery remaining capacity. The result is indicated by the Check Pen S 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.



	Check Pen S	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 Check Pen S indicates battery level low.

●Battery level notification function

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

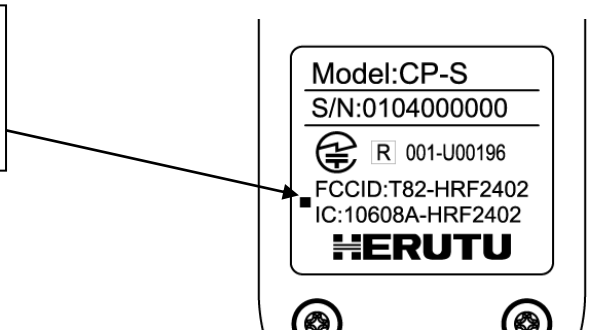
①Notification of low battery level with test switch: It is possible to check the battery level with the test switch. When the battery is low, the red LED will light for 1 second.

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 Check Pen S will return to green from the second and subsequent transmissions.

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



■Specifications

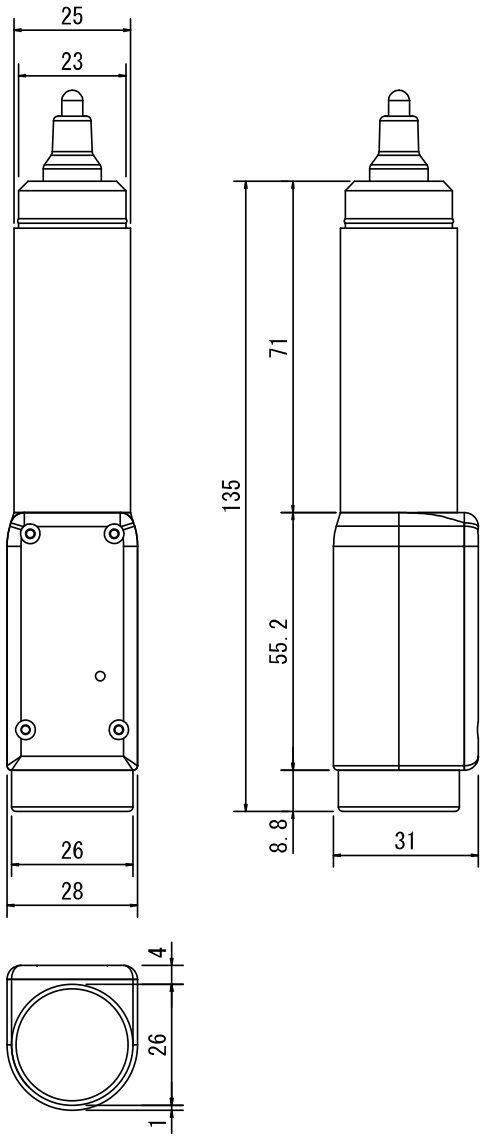
●Check Pen S

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
Input(s)	1 Test Switch
Display	1 LED (Red/Green)
Power Source	1 Coin Battery (CR2032)
Operating Environment	Temperature: 0-50 ℃ (32-122 ℉) Humidity: 80% or less (without condensation)
External Dimensions (W x H x D)	Refer to “Dimensions Drawing”
Weight	Refer to “Dimensions Drawing”
Antenna	PCB Antenna (The antenna is mounted on the built-in wireless module HRF-2402)
Battery Life	Approx. 300,000 uses (depending on usage conditions)

■Dimensions Drawing

- Check Pen S

CP-02S

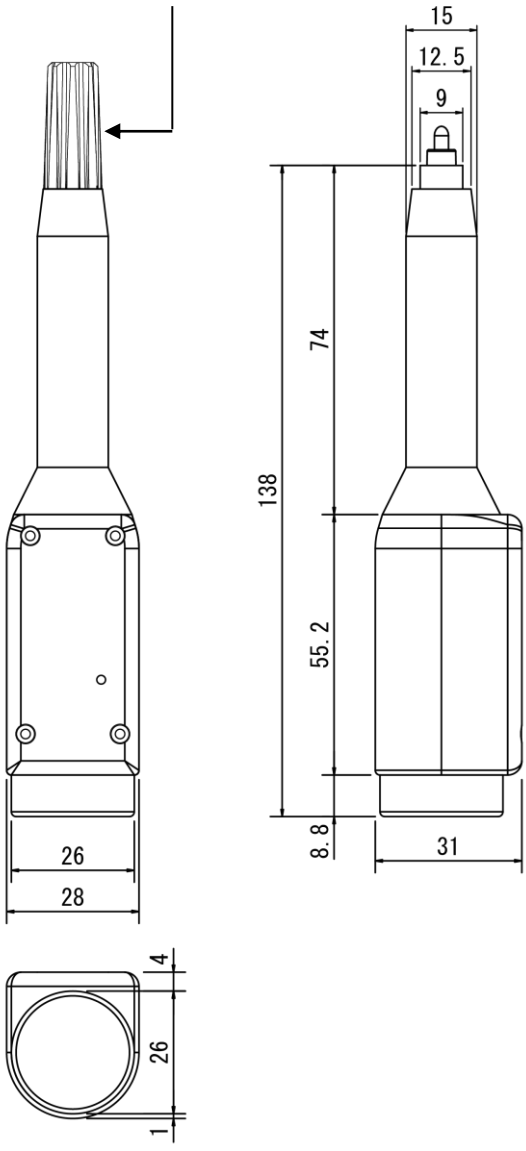


Weight* approx. 80g (2.8 oz)

*Pen excluded

CP-05S

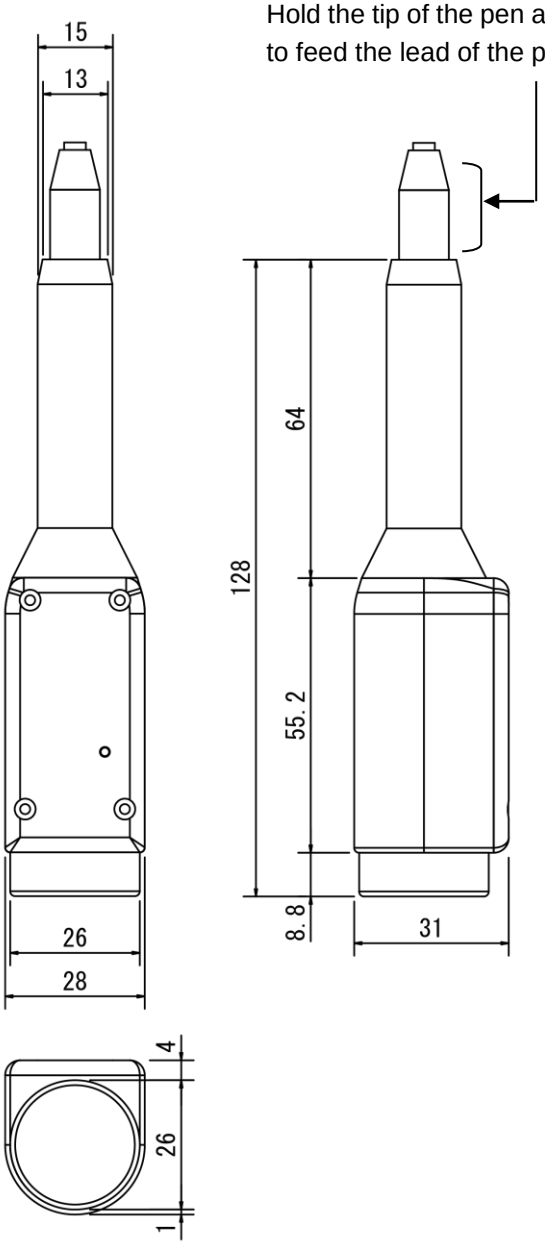
Use the commercially available pen cap.



Weight* approx. 50g (1.8 oz)

*Pen excluded

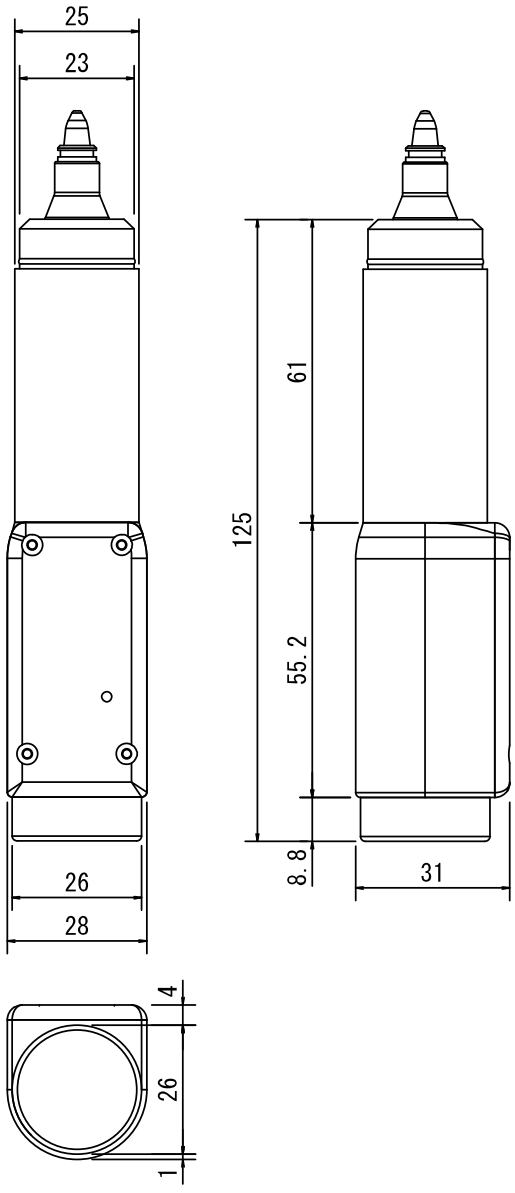
CP-09S



Weight* approx. 60g (2.1 oz)

*Pen excluded

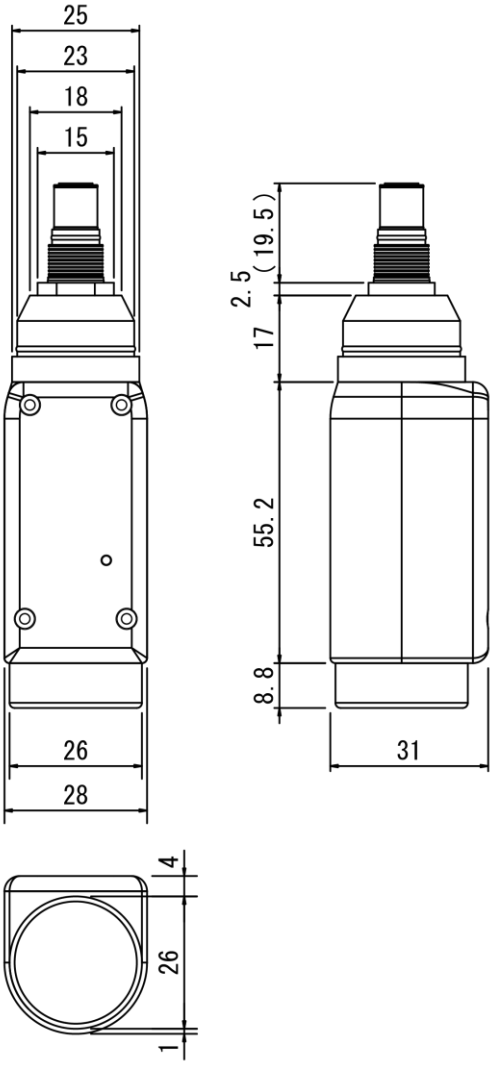
CP-11S



Weight* approx. 70g (2.5 oz)

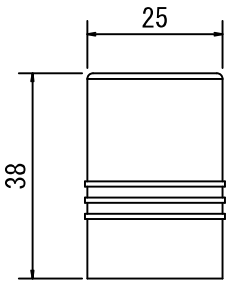
*Pen excluded

CP-26S



Pen-Cap　CP-S-CA

（Common）

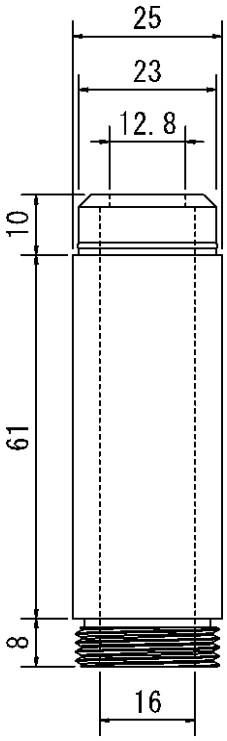


Weight* approx. 65g (2.3 oz)

*Stamp excluded

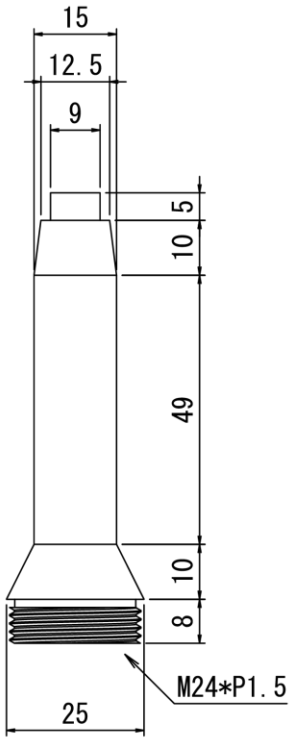
Pipe (For CP-02S)

CP-02S-PP



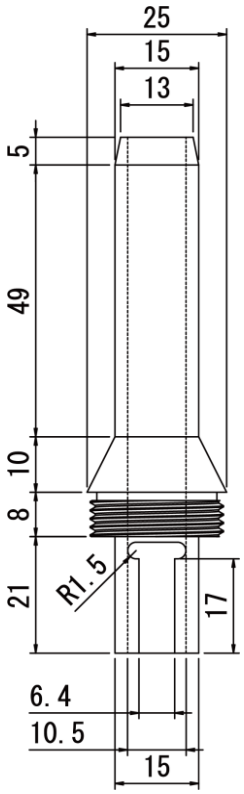
Pipe (For CP-05S)

CP-05S-PP



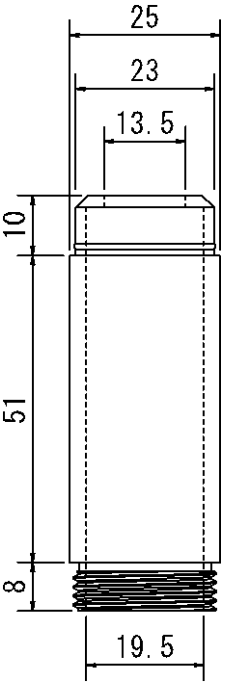
Pipe (For CP-09S)

CP-09S-PP



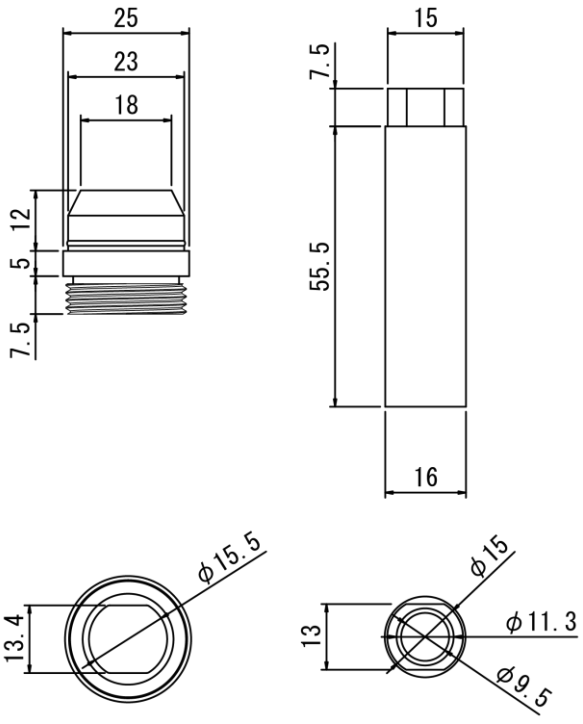
Pipe (For CP-11S)

CP-11S-PP



Pipe (For CP-26S)

CP-26S-PP



■Before Determining Fault

Phenomenon	Cause and remedy
The Check Pen S does not transmit LED (red or green) does not light up	Battery capacity is low. →Please replace the battery (CR2032）.
The red LED blinks 3 times after transmitting.	Pairing is not done. (not registered) →Perform pairing with the receiver to communicate with the Check Pen S. (See P.11)
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 Check Pen S is ON.
	The communication distance is too far. →The distance is beyond the maximum communication distance of the machine. Install the Check Pen S in a location where it can communicate with a receiver.
	The antenna installation status of the receiver is not good. →Check whether or not the receiver's antenna is surrounded by obstacles blocking radio waves or placed in the control panel (iron), and improve the installation status of the antenna. Also, consider using an external antenna.
	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 green LED blinks 3 times after transmitting.	The receiver is busy. → The receiver is generating a relay output or preventing a double count. For the settings, refer to the instruction manual of the receiver.
Red LED lights up for 1 second after pressing the test switch.	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 Check Pen S for 3 seconds or more. (See P.11)

■When something is wrong

If the problem persists even after a remedy action is taken or if it is unclear which remedy action should be taken, then contact the dealer where the product was purchased or our Sales Department with the following information:

Product name / Serial No. / Service environment,
External equipment connected,
Operating sequence to error initiation, and
Specific description of error, etc.

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

The Company sets forth the Warranty Terms and Conditions herein for the benefit of customer to ensure product assurance after shipment. In case of failure, the Company will remedy the defect by repair or replacement.

■ **Warranty Period**

Unless otherwise specified, the warranty period is 13 months after shipment of products from the Company. During the Warranty Period, the Company remedy defect free of charge in accordance with the terms of this Warranty. If you have any questions concerning remedy and after-sales services during the Warranty Period, please contact your dealer or our Sales Department.

■ **Scope of Warranty**

In case any failure occurs attributable to the Company during the Warranty Period, the defect will be remedied free of charge either by repair or replacement with a substitution. To obtain warranty service, contact your dealer or our Sales Department. The Warranty Period after repair or replacement is 13 months from the date of initial shipment of the relevant product or 6 months from the date of shipment of the substitution, whichever period of time is greater.
Only the hardware part of the Product is covered.
The Warranty does not apply to the following, even during the Warranty Period.

1. Failure or damage caused by in appropriate handling on the part of customer, such as drop, shock etc. during transportation or move.
2. Failure caused by disassembly or modification of the main unit by customer.
3. Failure or damage caused by natural disaster, such as fire, earthquake, flood etc. and abnormal voltage.
4. Failure caused by malfunction of devices connected to the Product other than those designated by the Company.
5. The Warranty does not cover accessories such as an AC adopter, an antenna, a connecting cable, etc.
6. The Product that has been repaired, adjusted or modified by a third party.
7. Replacement of consumables or limited-life goods (including batteries).
   Consumables and limited-life goods include the following:
   ①Switches (limit switch, button switch etc.)
   ②Battery cells, batteries (dry cell, button battery etc.)
   ③Other goods considered to be consumables or limited-life goods by usage.
8. Failure caused by not using the Product in accordance with the User Guide

■ **Initial Defect**

The Warranty for initial defect is valid for 30 days from the date of shipment of the Product. In case an initial defect is found, the defective product should be shipped to your dealer or our Sales Department within the period mentioned above. Upon confirmation of the initial defect, the defect will be remedied free of charge either by repair or replacement with a new one. The shipping costs for the initial defect will be borne by the Company. However, this shall apply only within Japan. The payer of overseas shipping costs including insurance fee, custom duty etc. for a customer who purchased the Product outside Japan shall be determined on mutual consultation.

■ **Disclaimer**

The Company will not be responsible for any direct or indirect damage and financial loss caused by malfunction or failure of the Product or its use.

■ **Period for Charged Repair**

After the Warranty Period expires, the Company will repair the Product for a fee on customer's request during a 5 year-period after termination of the Product on the condition that spare parts are available in stock at the Company. However, in case of unavoidable reasons such as elimination of parts, alternative parts or a substitution may be supplied.

■ **Other**

- Regardless of the Warranty Period, repair shall only be performed in principle at the Company for purposes of using measurement equipment etc. for adjustment. The shipping costs incurred at the time of shipment shall be borne by customer. Visiting repair service or a substitution during the Warranty Period are available on request for a fee. Please contact your dealer or our Sales Department.
- If our Technical Department finds it difficult to reproduce failure of the Product received for repair, repair service or replacement may not be performed. Also, technical investigation expenses for failure reproduction may be charged separately.
- Note that any information about the Product on our website, catalogues, manuals, technical materials and other materials is subject to change without notice.

HERUTU

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