



Caution

Do not mark on the model and its components with a pen or leave printed materials in contact with the model surface. Ink marks on the model are not removable.

MW71

Pediatric Physical Examination Simulator



Instruction Manual

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Introduction

Thank you for purchasing our "Pediatric Physical Examination Simulator".

This is a full-body simulator designed to represent a one-year-old infant that can be used for vital sign measurement and physical examination training.

Features

- Preparation before starting vital sign measurement and physical examination.
- Simulate various situations such as sitting, holding the patient on your lap, etc.
- Can be exposed to cry signals.
- Physical examination items :

Palpation of the osseous portal, observation of the eyelids, observation of the nasal/ear cavity, observation of the oral cavity, auscultation of the heart, auscultation of breath, auscultation of the bowels

● Vital Signs

Respiration measurement, heart rate measurement, body temperature measurement, blood pressure measurement

Do not use this product for any purpose other than its intended use. We are not responsible for any damage or accident caused by using the product in a manner other than that described in the instruction

 Caution

<ul style="list-style-type: none"> ● Do not apply pressure or physically strike equipment or model. Do not physically strike model body or equipment. Doing so may cause damage. 	<ul style="list-style-type: none"> ● The surface may change color over time. The body of the model may become discolored over time. This should not have an effect on its use.
<ul style="list-style-type: none"> ● Do not write on the model with any form of ink (ie: ballpoint pen, marker, etc.). If applied, the ink will absorb and will not disappear. 	<ul style="list-style-type: none"> ● Store out of high temperatures and high humidity. After use, avoid storing product in areas of high temperature, high humidity, or in direct sunlight. Doing so may cause deformation, discoloration, or malfunction.
<ul style="list-style-type: none"> ● Do not place printed materials on the model surface. Do not allow printed matter, etc., to come in direct contact with the model surface. Ink will be absorbed by the resin and will not disappear. 	<ul style="list-style-type: none"> ● Wipe with neutral detergent or alcohol. Wipe the model with water or neutral detergent for stains, or with alcohol if stains are difficult to remove, and keep baby powder applied. Never use organic solvents such as thinner.

Introduction

DOs and DON'Ts

Before using the product, be sure to read the "Safety Precautions" for proper use.

The precautions shown here are important safety information and must be observed.

■ This mark indicates a degree of danger or damage that may result from improper use.

 Warning	Indicates a potentially hazardous situation that could result in burns, injury, fire, or electric shock if the product is handled improperly.
 Caution	Indicates a potentially hazardous situation that may result in deformation or damage to the model or parts if mishandled.

■ This mark indicates the type of matter to be observed.

	Indicates that the following behavior is prohibited with regards to this machine, e.g., the left figure "disassembly is prohibited" is shown.
	This mark indicates "mandatory" items that must be performed. In the left figure, "must be observed" is shown.

<p>● Use the supplied adapter and power cord.</p>  Use of an adapter or power cord other than the supplied one is very dangerous and may cause fire or electric shock. Do not use the supplied AC adapter for other products. Doing so may cause malfunction or fire.	<p>● Do not forcibly bend, twist, or damage the power cord.</p>  Doing so may damage the power cord, resulting in fire or electric shock.
<p>● Unplug the power plug from the outlet when not in use.</p>  Burns, injury, electric shock due to insulation deterioration, and electrical fire may result.	<p>● Do not use the product with a power supply other than the specified power supply.</p>  Failure to do so may cause malfunction or fire.
<p>● Do not plug or unplug the power plug with wet hands.</p>  Doing so may cause electric shock.	<p>● Hold the power plug by the main unit. Pull the power plug out and in securely.</p>  Pulling on the cord may damage the plug or cord, resulting in fire or electric shock.
<p>● Never disassemble or modify the product.</p>  Doing so may cause fire, electric shock, or injury. For repair, contact your dealer or Kyoto Kagaku .	<p>● Keep fire away from the product.</p>  Doing so may cause deformation or discoloration of the main unit, short-circuit in the electrical system, or other fire hazards.
<p>If an abnormality occurs</p> 	<p>If the model main unit, control box, etc. becomes hot or smoke is generated, immediately turn off the power to the main unit and unplug the power plug from the outlet.</p> <p>If you notice any abnormal condition, such as an unusual odor, take immediate action and contact your dealer or Kyoto Kagaku Co.,Ltd</p>

Set contents and names of parts

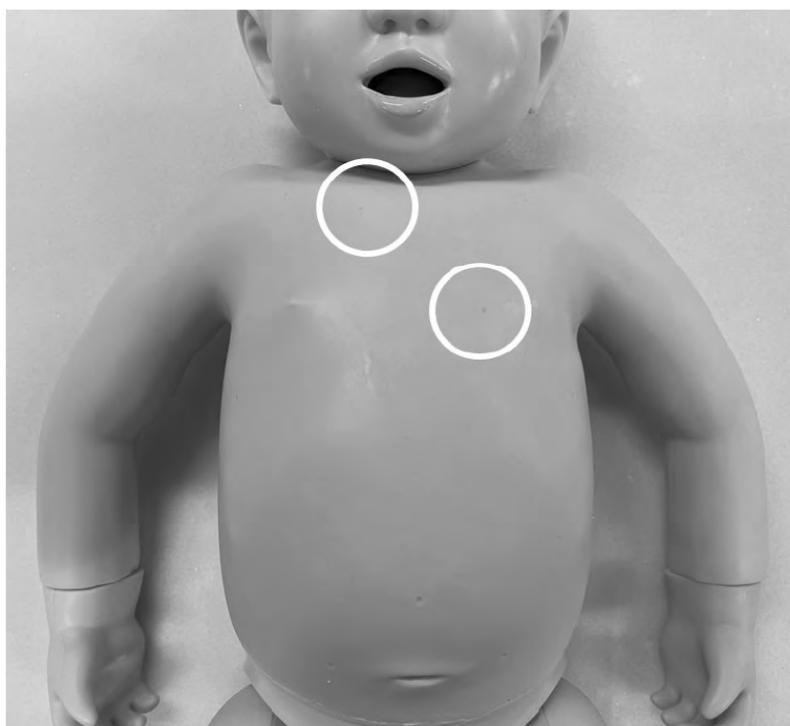
Before use, please check that all components are present.



- | | | | |
|--|---|------------------------------|---|
| a. Body | 1 | h. Adjustment screwdriver | 1 |
| b. Simulated stethoscope | 1 | i. Wig | 1 |
| c. Designated AC adapter | 1 | j. Clothing (top and bottom) | 1 |
| d. Designated blood pressure cuff | 1 | k. hat | 1 |
| e. Designated Simulated Sphygmomanometer | 1 | Instruction manual | 1 |
| f. Designated Simulated Stethoscope | 1 | | |
| g. Designated Simulated Thermometer | 1 | | |

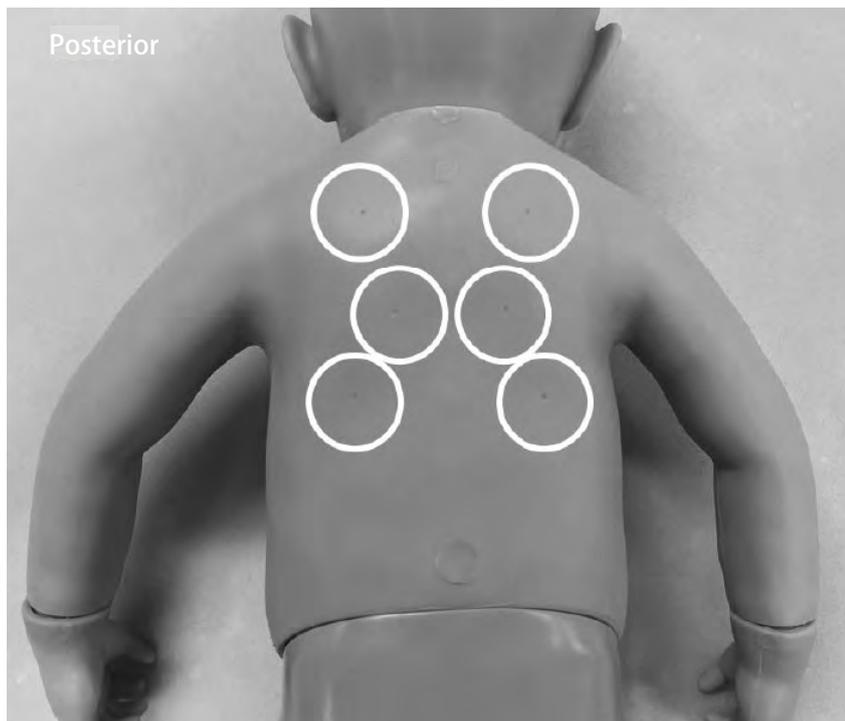
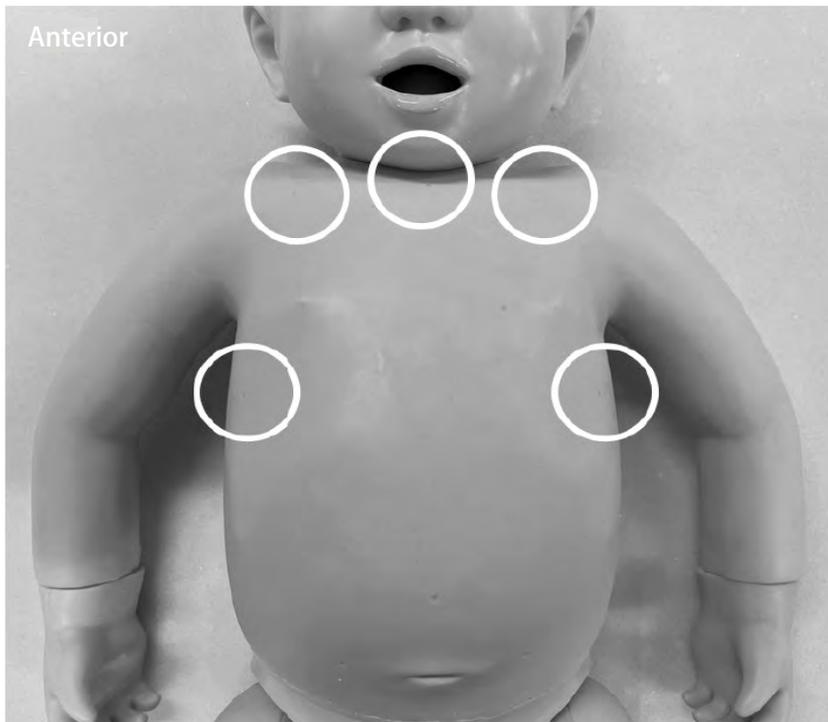
Auscultation site (heart sound)

Using a simulated stethoscope, the heart sounds can be auscultated in the following positions.



Auscultation site (lung sound)

Using a simulated stethoscope, the lung sounds can be auscultated in the following positions.



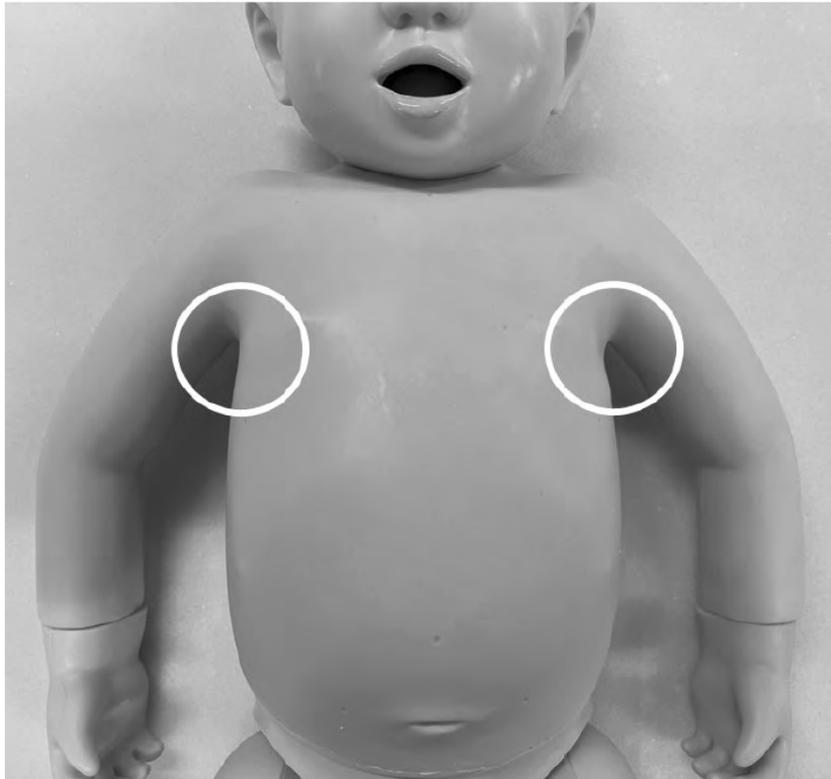
Auscultation site (bowel sounds)

Using a simulated stethoscope, the bowel sounds can be auscultated in the following positions.



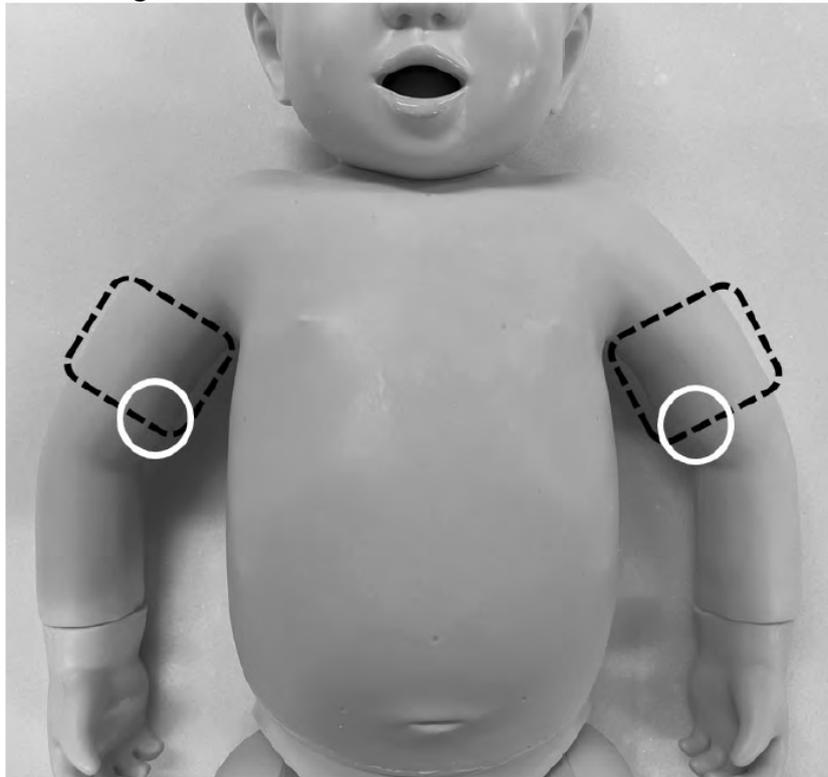
TP Measurement

Temperature measurement can be taken in the following positions using a simulated thermometer.



Auscultation site Korotkoff

Using a simulated sphygmomanometer, blood pressure can be measured and Korotkoff sounds can be auscultated at the following locations.



Name of each part of the dedicated controller

Connector for Designated Simulated Sphygmomanometer

Connector for Designated Simulated Stethoscope

Internal Speaker

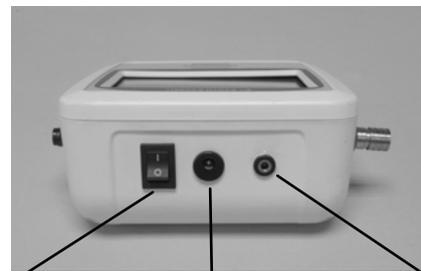
Touch Screen



Power Switch

Power Jack

Output for External Speaker



Connection method

● Designated Simulated Stethoscope

Connect the cable of the stethoscope to the connector on the side of the designated controller. Align the ▲ mark on the connector on the side of the designated controller with the ➡ mark on the cable connection of the designated stethoscope and insert the cable.



● Designated Simulated Sphygmomanometer

Insert the fitting at the end of the tube leading to the designated cuff into the connector on the side of the designated controller until it clicks into place.

*Only the simulated stethoscope can be connected.



Connection method

- Designated Simulated Sphygmomanometer

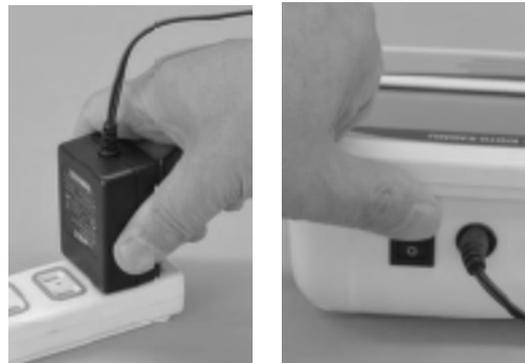
Twist the connection at the end of the tubing leading from the designated cuff to the connector at the top of the designated blood pressure cuff.



- Connect the dedicated AC adapter to the power jack on the back of the designated controller.



- Plug the designated AC adapter into an outlet and press the power switch on the back of the designated controller.

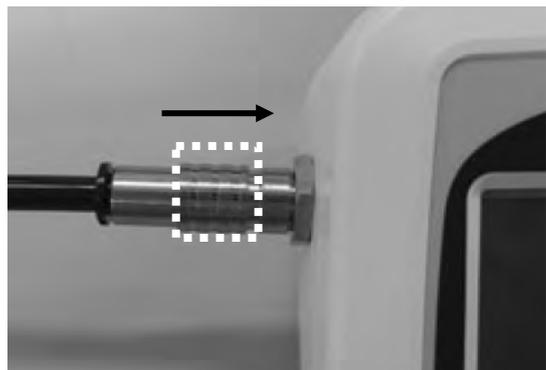


How to disconnect

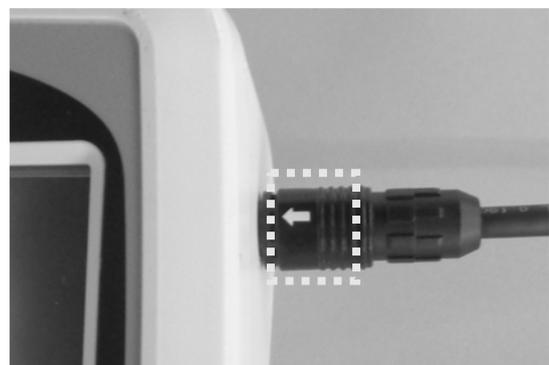
● Turn the power switch OFF.
Remove the power jack from the back of the designated controller.



● Removing the Designated Duplicate Sphygmomanometer
Hold the metal part (inside the □ mark) and push it in the direction of the arrow to disconnect.



● Removing the special stethoscope
Hold the cable connection of the designated stethoscope near the ← mark (inside the □ mark) and pull it toward the cable to disconnect it.



Setting the language to display

● Language Selection

When you turn on the power, the screen on the right will appear.

Select the language you will be using.

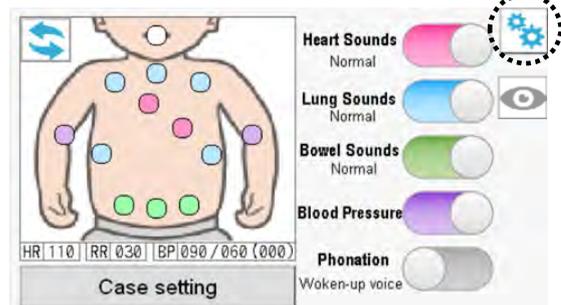
*Settings will take effect upon reboot.



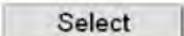
Language reconfiguration

● To change the set language, press the  button to display the device setting screen.

*Please refer to p.13 for the function of each button.



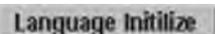
● In the device settings screen, press the Language

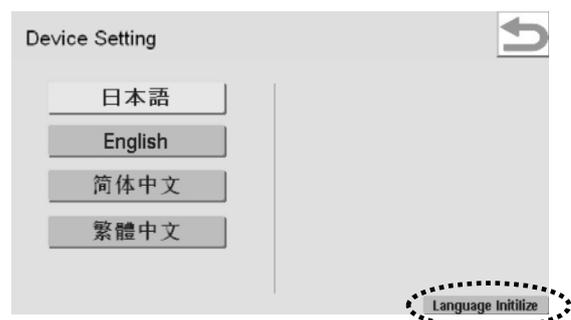
 button on the device setting screen.

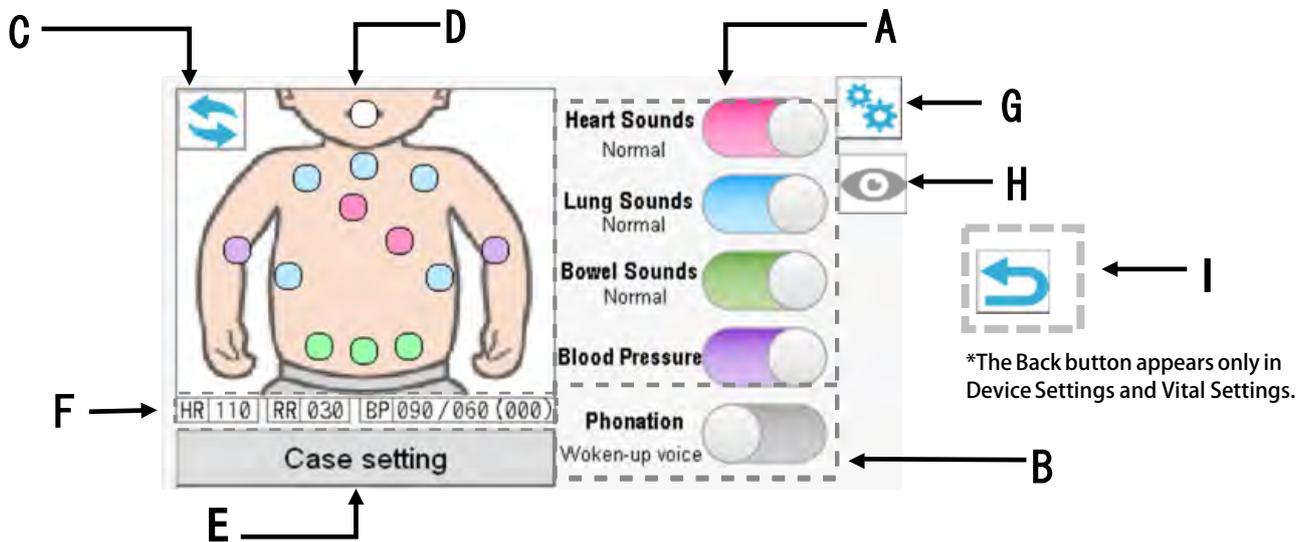
button on the device setting screen.



● Press the desired language to reset the language. Settings will take effect upon reboot.

※if you make a mistake in the language setting, press  to set the language again.



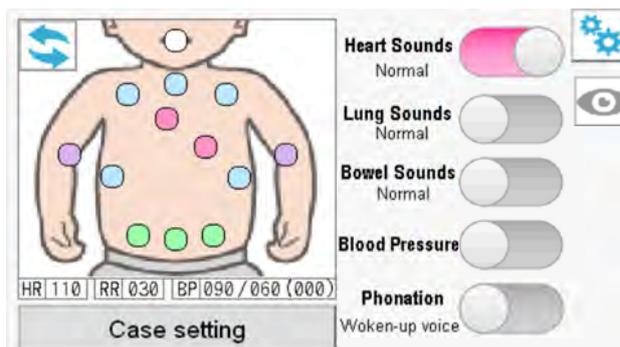


Symbol	Name	Description
A	Playback Sound Selection Button	Selects the type of sound to be played. The selected sound is played by placing the stethoscope over the corresponding auscultation site. The case set to the left of the playback sound selection button is displayed.
B	Vocalization button	Play the selected Vocalization case. While the button is ON, the case is repeatedly played back.
C	Front/Rear Switch Button	Switches between front and rear view of the body.
D	Auscultation site	The auscultation site lights up in different colors (heart sound: red, lung sound: blue, blood pressure: green, bowel sound: purple).
E	Case Settings button	Moves to the Case Settings screen. You can change the case, heart rate, blood pressure, volume, etc.
F	Vital set value display	Displays the currently set vital values.
G	Device Settings button	Moves to the device settings screen. Used when calibration of blood pressure values and touch screen is required.
H	Vital set value Display/Hide Button	Press the button to hide the displayed vital settings. Press the button again to display the vital settings.
I	Back button	Returns to the previous screen. The Back button is only displayed in Device Settings and Vital Settings.

To auscultate the heart sound

A heart sound can be auscultated by placing the stethoscope on the auscultation site where the color lights up.

The auscultation site on the screen lights up red.

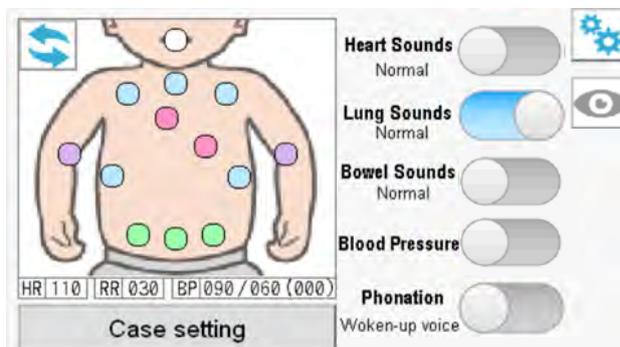


To auscultate the lung sound

A lung sound can be auscultated by placing the stethoscope on the auscultation site where the color lights up.

The auscultation site on the screen lights up blue.

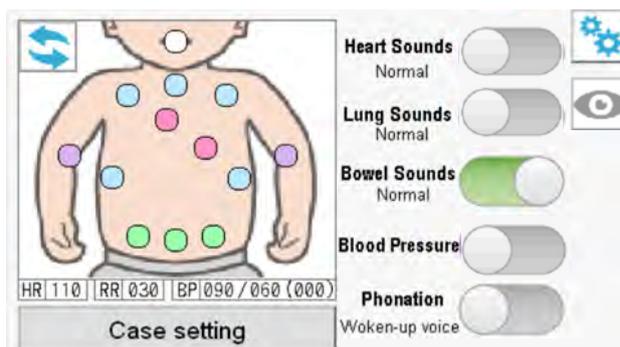
Press the  button, change to the rear display.



To auscultate the bowel sound

A bowel sound can be auscultated by placing the stethoscope on the auscultation site where the color lights up.

The auscultation site on the screen lights up

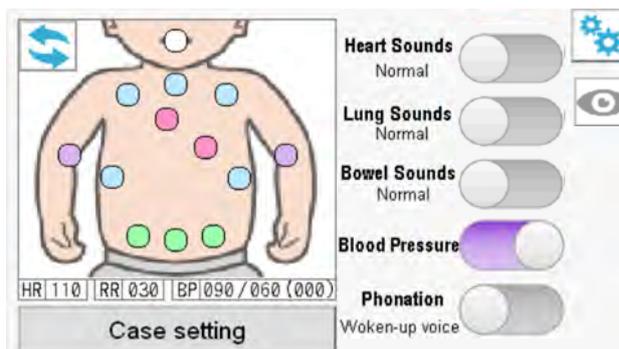


To auscultate Korotkov's sounds

Auscultate the Korotkov's sound by applying the stethoscope to the auscultation site where the color lights up.

*The auscultation site on the screen lights up purple.

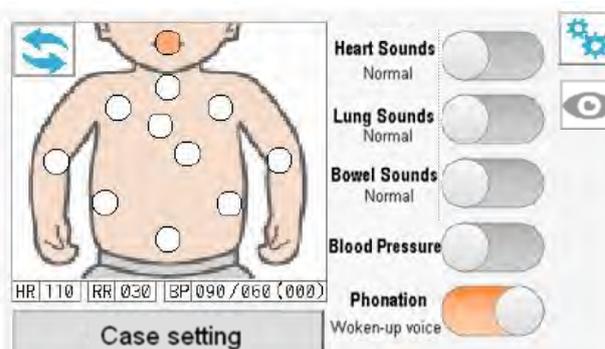
*Please do this while the designated blood pressure cuff is attached to the main unit of the model and connected to the designated simulated stethoscope.



To listen to Vocalization

Press the Vocalization button to listen to Vocalization .

*The Vocalization area on the screen lights up orange.



About Audio Playback

- When external speakers are connected to the external speaker output jack on the back of the controller, multiple people can listen to the sound during auscultation. →(Refer to the figure on p. 9 for the connection instructions).
- Vocalization cannot be heard through the external speaker.

Press "Vital Settings" on the TOP screen to change the case. The volume can be changed. However, the changed setting values are not saved. All values will return to their default settings when the power is turned off.

Change of heart sound cases

HR (heart rate) can be changed within the following range :

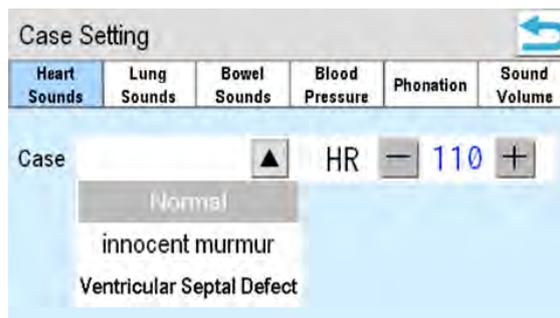
80 to 150 *Default setting: 110

*The set value can be changed in units of 20.

*HR (heart rate) is linked to the pulse rate of blood pressure measurement.

Heartbeat cases can be selected from the following.

- ◆ Normal
- ◆ Functional Murmur
- ◆ Ventricular septal defect



Change of lung sound cases

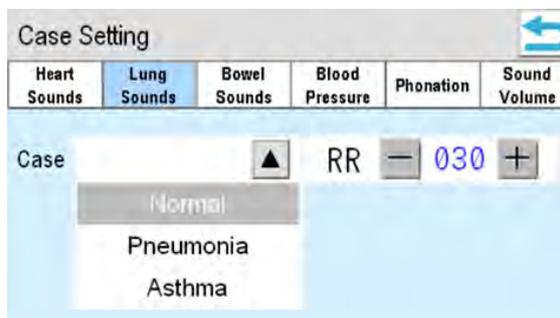
PR (respiratory rate) can be changed within the following range:

20 to 40 *Default setting: 30

*The setting value can be changed in units of 10.

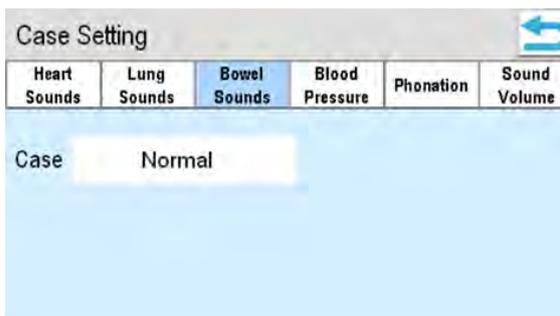
Lung sound cases can be selected from the following.

- ◆ Normal
- ◆ Pneumonia: coarse crackle
- ◆ Asthma: Wheeze



Bowel sound case

Bowel sounds are "normal" only.



Blood pressure cases

SBP (systolic blood pressure) can be changed within the following range:

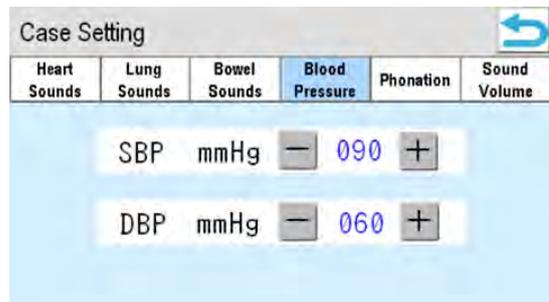
80 to 110 *Default setting: 90

*The setting value can be changed in units of 10.

DBP (diastolic blood pressure) can be changed within the following range:

40 to 70 *Default setting: 60

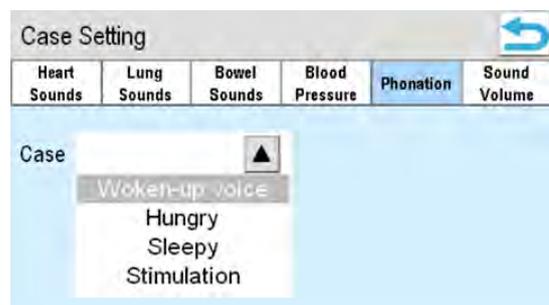
*The setting value can be changed in units of 10.



Types of Vocalizations

Vocalizations can be selected from the following:

- ◆ Woken-up voice
- ◆ Hungry
- ◆ Sleepy
- ◆ Stimulation/Excitement



Volume setting

This controller changes the volume of the internal speaker of the main unit and has the following range:

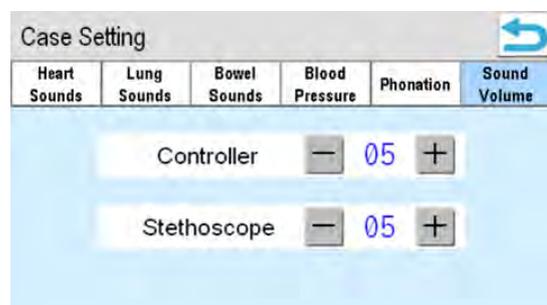
0 to 10 *Default setting: 5

*The set value can be changed in units of 1.

Simulated stethoscope changes the volume of the simulated stethoscope and has the following range:

0 to 10 *Default setting: 5

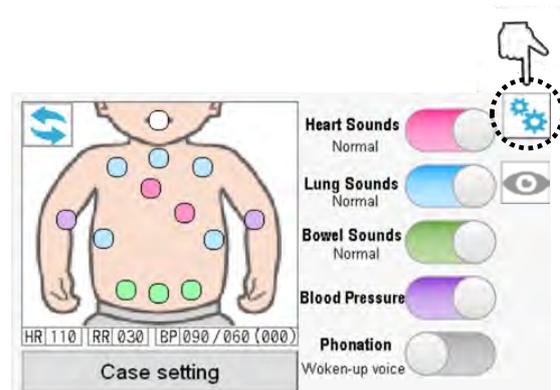
*The set value can be changed in units of 1.



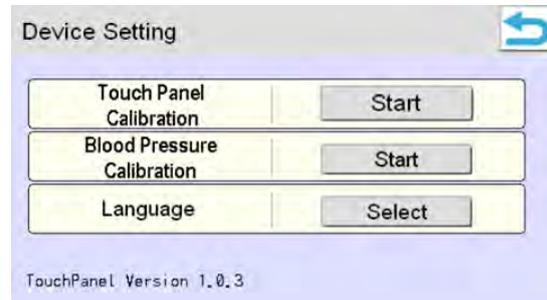
Calibration

Device settings allow you to change the calibration and language of the touch screen and sphygmomanometer.

- Press the Device Settings button on the TOP screen.



- Select the item to be changed.



- Touch Panel Calibration

Used when there is a discrepancy in the response position of the touch panel. ⇒See p.19

- Blood Pressure Calibration

This is used when there is a discrepancy between the pressure gauge of the sphygmomanometer and the set value. ⇒See p.20

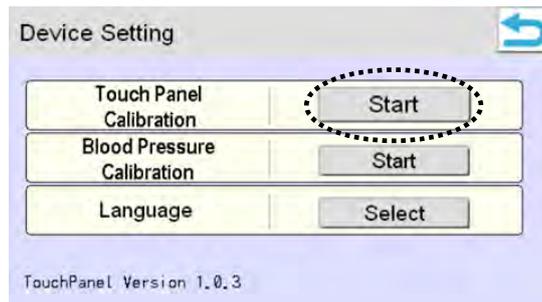
- Language

Used to switch the selected language to another language. ⇒See p.12

Touch Panel Calibration

Touch panel calibration is performed when the touch panel does not respond to touch, or when the response position is misaligned.

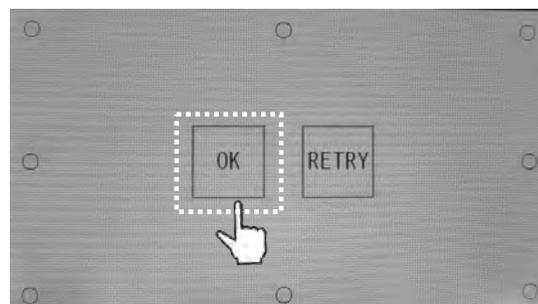
- Select "Start."



- Touch the four touch points that appear sequentially on the screen.



- When all points are touched, a confirmation screen will appear, To complete → Press "OK". To adjust again → Press "RETRY" and Start over from the device setting screen.



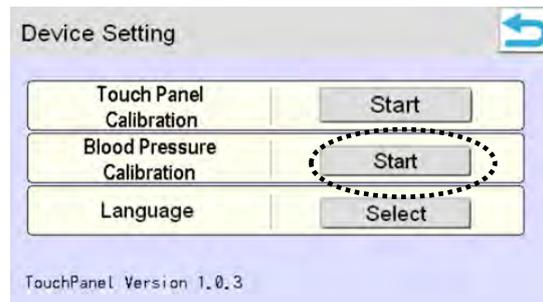
Blood Pressure Calibration

Calibration of the dedicated simulated sphygmomanometer should be performed in the following circumstances:

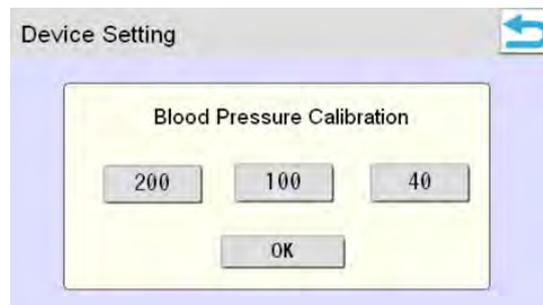
- The auscultation site is lit purple on the touch panel, but the Korotkoff sound cannot be auscultated.
- The Korotkoff sound can be auscultated, but there is a large deviation from the set value.

! Calibration should be performed with the dedicated simulated sphygmomanometer attached to the model body and connected to the dedicated simulated stethoscope.

● Select "Start."



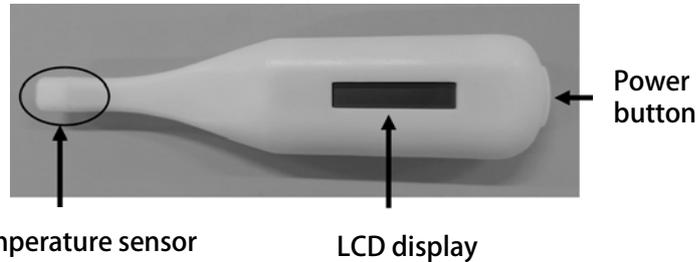
● Follow steps (1) through (4) below to calibrate the simulated sphygmomanometer.



Calibration Procedure

1. Once the cuff pressure is pressurized to about 220 Hg.
↓
2. Decompress the cuff pressure to 200 mmHg and press "200" on the screen while maintaining 200 mmHg.
↓
3. Decompress the cuff pressure to 100 mmHg, and press "100" on the screen while maintaining 100 mmHg.
↓
4. Decompress the cuff pressure to 40 mmHg, and while maintaining 40 mmHg, press "40" on the screen.
↓
5. When steps ① through ④ are completed, press "OK" to complete the adjustment.

● Explanation and operation of each part



Power button : When pressed, the thermometer will turn on and "UN1" will appear on the LCD display. The power will be turned off.

LCD display : Displays body temperature and the status of the thermometer.

Temperature Sensor : When the thermometer is properly attached to the model body (in the axillary region), the body temperature measurement will begin.
Default setting: 20 seconds to display final body temperature

Final temperature 36.8° C

The time until final temperature display and final temperature display settings can be changed.

"UN1"	The power is turned on.
"-L-"	The temperature sensor is attached to the axillary area and measurement has started.
" (number) °C"	When the number is rising, the temperature sensor is attached to the axillary area and measurement is in progress. When measurement is completed, the final temperature is displayed and a buzzer sounds.
"ERR"	The temperature sensor is not properly attached to the axillary area. If the incorrect installation continues for more than 10 seconds, the ERR is displayed with a buzzer. However, if the temperature sensor is correctly attached again before the ERR is displayed, the measurement display will start.
"Low"	It is displayed when the built-in battery is getting very low.

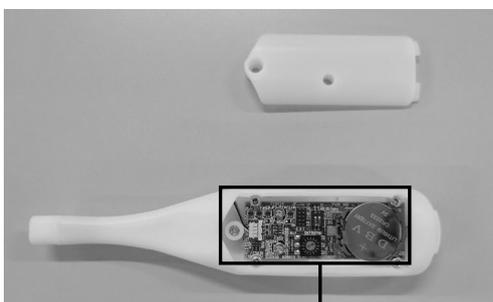
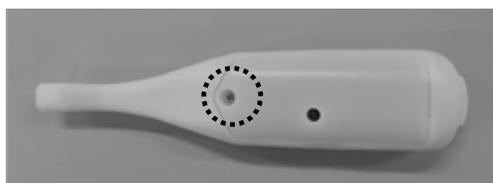
● Others

If no action is taken for 60 seconds after the power is turned on, "Power Off" will be automatically selected. After "- L-" is displayed, "ERR" will be displayed if the thermometer is not properly attached to the model for more than 10 seconds. When "ERR" is displayed, press the power button again to take the measurement.

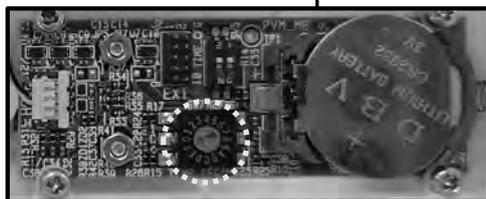
How to change the temperature setting

To change the set value of the last displayed body temperature, follow the procedure below.

- Loosen the screws marked with zeros in the photo on the right with a screwdriver and remove the lid.



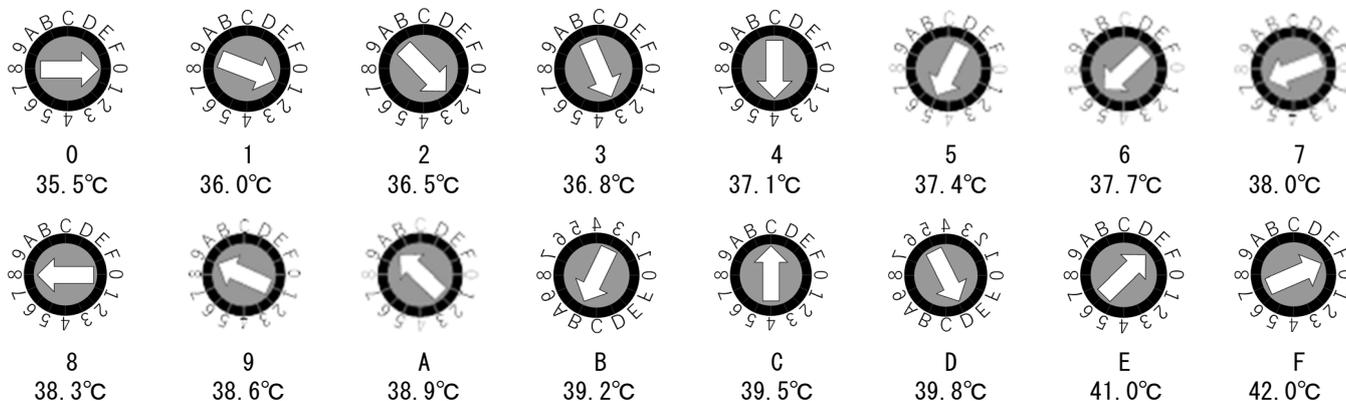
- Use the supplied special screwdriver to turn the "temperature setting switch" (marked with a circle in the photo on the right) to change the temperature displayed on the display.



Refer to the figure below for the relationship between the set value and the number.

*Changes in settings will take effect upon restart.

Setting the Displayed Body Temperature

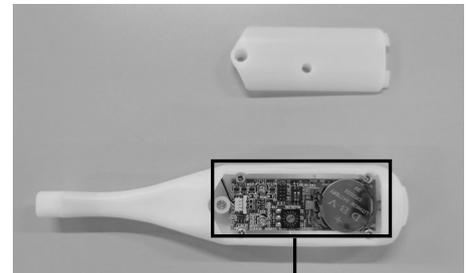
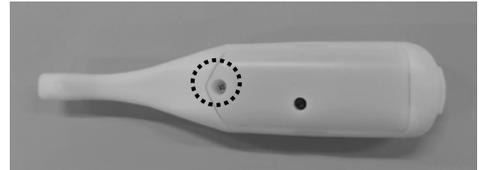


If you have difficulty in setting up, please consult your dealer or Kyoto Kagaku Co., Ltd

How to change the setting

To change the time until the final display temperature is displayed, follow the procedure below.

● Loosen the screws marked with zeros in the right photo with a screwdriver and remove the lid.

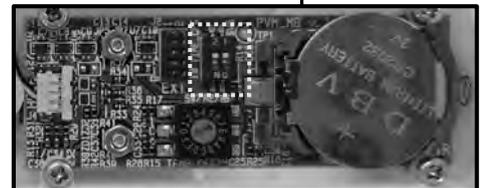


● Use the supplied special screwdriver to change the time by sliding the "time setting switch" in the square on the right picture.

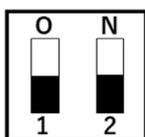
Refer to the figure below for the relationship between the setting value and the switch.

* The change of the setting becomes effective when the driver is rebooted.

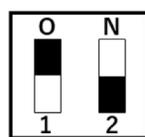
● After changing the setting, attach the lid and tighten the screws to return the driver to its original state.



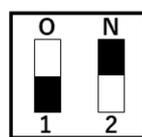
Set time till display



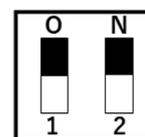
Time till display
20sec.



Time till display
40sec.



Time till display
60sec.



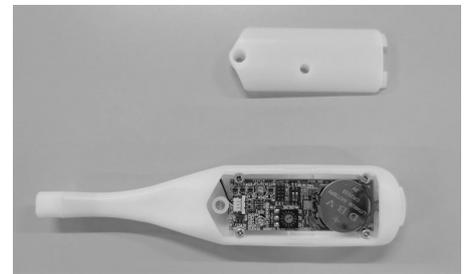
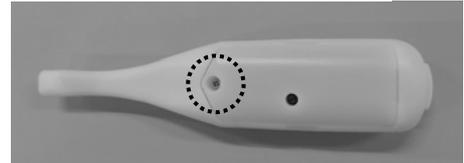
Time till display
120sec.

If you have difficulty in setting up, please consult your dealer or Kyoto Kagaku Co., Ltd

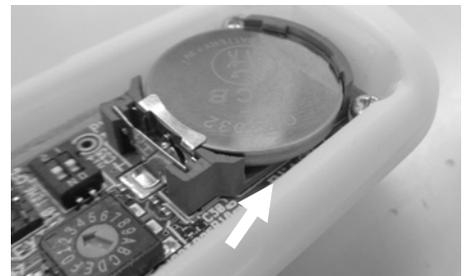
How to replace batteries

To replace the battery, follow the procedure below. The model number of the coin cell battery to be used is CR2032.

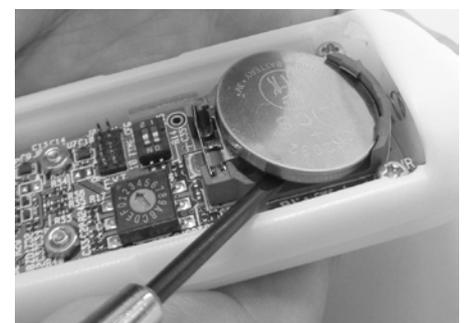
- Loosen the screws marked with zeros in the right photo with a screwdriver and remove the lid.



- Insert the tip of a tool such as a flat-blade screwdriver into the position shown in the photo (→) and remove the battery by pulling it up.



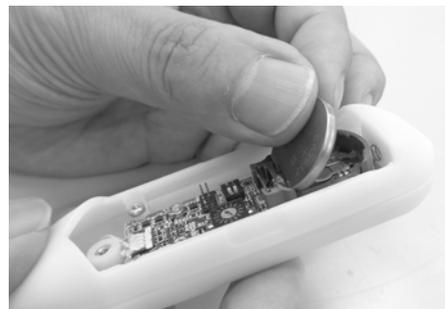
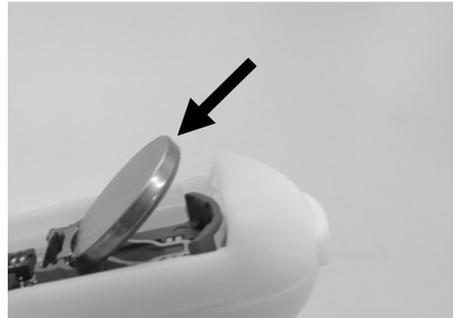
Please be careful not to damage the metal parts used to fix the battery.



How to replace batteries

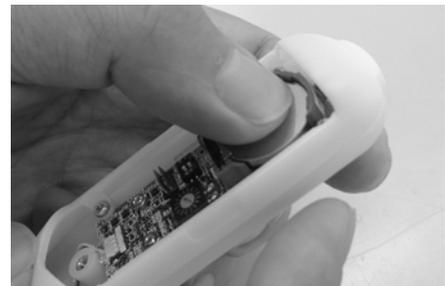
- **Insert new batteries.**

Insert batteries into the battery folder from an angle.
The positive side of the battery should be on the top.



- **Push the battery in.**

Push the battery in firmly until it stops.



- **After replacing the battery, attach the lid and tighten the screws to return the watch to its original condition.**

If you have difficulty in setting up, please consult your dealer or Kyoto Kagaku Co., Ltd



Caution

Do not allow printed matter or other objects to come in direct contact with the model surface.

Ink will be absorbed by the resin surface and will not disappear.

If you have any questions or problems with this product, please contact your local distributor or Kyoto Kagaku Co.Ltd.

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Please contact manufacturer with any discrepancies, typos, or mistakes in this manual or product feedback. Your cooperation is greatly appreciated.