

# BWA 2.0S

## User's Manual



## 1. Intended Use

The InBody is mainly used for healthy and acutely or chronically ill populations in hospitals, medical practices and inpatient care facilities in accordance with national regulations. It can be used to assist in the assessment of nutritional status, obesity and muscle balance. Body composition analysis is important in preventive medicine since it provides the basis of appropriate physical activity and dietary habits for improving personal daily routines. It can also be usefully applied to follow-up studies of patients treated for various diseases.

## 2. Medical Indication

- **Medical Check-up:** Four body composition analysis can be identified for the risk of developing diseases that are highly related to body composition imbalance like obesity, malnutrition, fluid imbalance and osteoporosis for medical check-up.
- **Obesity:** Percent body fat has been recommended rather than BMI to ensure proper weight loss and improvements in long-term health, tracking changes for adjusting/developing customized treatments.
- **Pediatric Obesity:** Body composition measurement is an essential part of health assessments for children and adolescents. Percent Body fat is better than the indicators of weight status to identify children and adolescents with unfavorable lipid profile.
- **Sarcopenia:** InBody provides a quick, easy to perform test that provides a calculation for skeletal muscle index (SMI), the sum of the lean mass in the arms and legs, normalized for height. This marker is useful in identifying low muscle in the appendages, which increases frailty risk.
- **Diabetes & Endocrinology:** Diabetes is often associated with excess fat; however, having insufficient muscle mass is just as detrimental and increases diabetes risk. And visceral fat plays a key role in the development of metabolic and cardiovascular disease.
- **Edema:** Over-hydration as assessed by ECW Ratio (ECW/TBW) is prevalent in dialysis patients, and is associated with loss of residual renal function, inflammation, malnutrition and hypertension. Monitoring the ECW Ratio (ECW/TBW) provides an assessment of fluid accumulation in the extracellular space resulting from compromised cardiovascular function. The patients who did not have ascites originally but had higher ECW/TBW had a higher incidence of ascites in liver cirrhosis.
- **Segmental Fluid Retention:** InBody objectively measures each region of the body separately and provides segmental ECW ratio measures for each of the arms, legs and the trunk, and these measures can be used to detect fluid imbalances resulting from the development or progression of lymphedema.
- **Nutrition:** The four primary components of the nutritional assessment are summarized by the mnemonic ABCD, with A standing for anthropometric measurements including stature, body weight, BMI and body composition. Body composition analysis can reveal changes in body composition (body water, protein, minerals and body fat) that cannot be known by changes in body weight.
- **Fitness:** Strength training greatly stimulates muscle growth, exercise burn the calories strengthens cardiorespiratory capacity, which reduce the risk of diabetes, heart disease, and other health concerns and result in the various changes in body composition. Body composition analysis shows skeletal muscle mass and lean in each segment of body, it helps focusing on building more muscle or correct imbalance.
- The InBody device is not a diagnostic device. To make an accurate diagnosis, the physician needs to commission thorough examinations and take their results into account in addition to the results of the InBody.
- The InBody device is not used in the home healthcare environment.

### 3. Contraindication

Individuals with medical implant devices such as pacemakers, or essential support devices such as patient monitoring systems, must not use this equipment. Safe, low-level currents will flow through the body during the test, which may cause malfunctioning of the device or endanger lives. Individuals with known metal allergies against stainless steel materials shall not use the equipment.

### 4. Intended User Profile

**1. Education:**

- At least, the user needs to be able to understand the explanation of words on the screen.

**2. Knowledge:**

- At least, the user needs to be able to understand the explanation of words on the screen.
- No maximum.

**3. Language Understanding:**

- Basic language: English
- Languages are supported as specified in the marketing need.

**4. Experience:**

- None required.

### 5. Intended Patient Population and User Profile

**1. Age:** 3+ years

**2. Weight:** 2 - 250 kg (4.4 - 551.2 lb)

**3. Health:** The examinee needs to be able to stand for 1 - 2 minutes.

**4. Condition:** Individuals with medical implant devices such as pacemakers, or essential support devices such as patient monitoring systems, must not use this equipment. The currents will flow through the body during the test, which may cause malfunctioning of the device or endanger lives.

**5. Nationality:** Multiple

**6. Patient state:** Woken up, mentally healthy

**7. Height:** 95 - 220 cm (3 ft 1.4 in - 7 ft 2.6 in)

## InBody User's Manual for Measurement Guide and Setup

Thank you for purchasing the InBody.  
This user's manual describes all the features of the InBody.  
Please read before use and keep it in a safe place.  
By following the manual instructions, you will be able to use the InBody more safely and effectively.

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# 1 Safety

## 1.1 Safety Symbols Used in the User's Manual



### Warning

Failure to comply with safety warnings and regulations can cause serious injury or death.



### Caution

Failure to comply with safety cautions and regulations can cause injury or property damage.



### Note

LookinBody applies the same as LookinBody120.

## 1.2 Precautions for Use



### Warning

- Individuals with medical implant devices such as pacemakers, or essential support devices such as patient monitoring systems, must not use this device. Although the micro alternative currents flowing through the body during the test are relatively safe, they can potentially cause external devices to malfunction, which can endanger lives. InBody Co., Ltd., shall not be liable for any damages to an individual or the device that occurred by not complying with the content above.
- The Bioelectrical Impedance Analysis (BIA) method does not harm the human body because it uses micro alternative currents. However, if you are pregnant, please consult your doctor or specialist.
- Individuals with a contagious or infectious disease are not recommended to use the device. If an individual has any kind of contagious disease or infection tests on the InBody, use an alcohol-based disinfectant (e.g., 70 % ethanol) to clean the device.
- Do not pour liquid cleaner directly onto the device. If liquid cleaner flows into the device, it may cause malfunction or an electric shock due to a short circuit.
- Do not use this device for any purpose other than body composition analysis or weight measurement.
- This device is not a diagnostic device. To make an accurate diagnosis, consult your doctor.
- Failure to follow these instructions may result in the user suffering serious injuries.
- Failure to comply with safety warnings and regulations may result in the user's death or serious injury.
- When not in use for an extended period, please disconnect the power plug from the outlet.
- Please do not apply excessive force when removing the power plug.



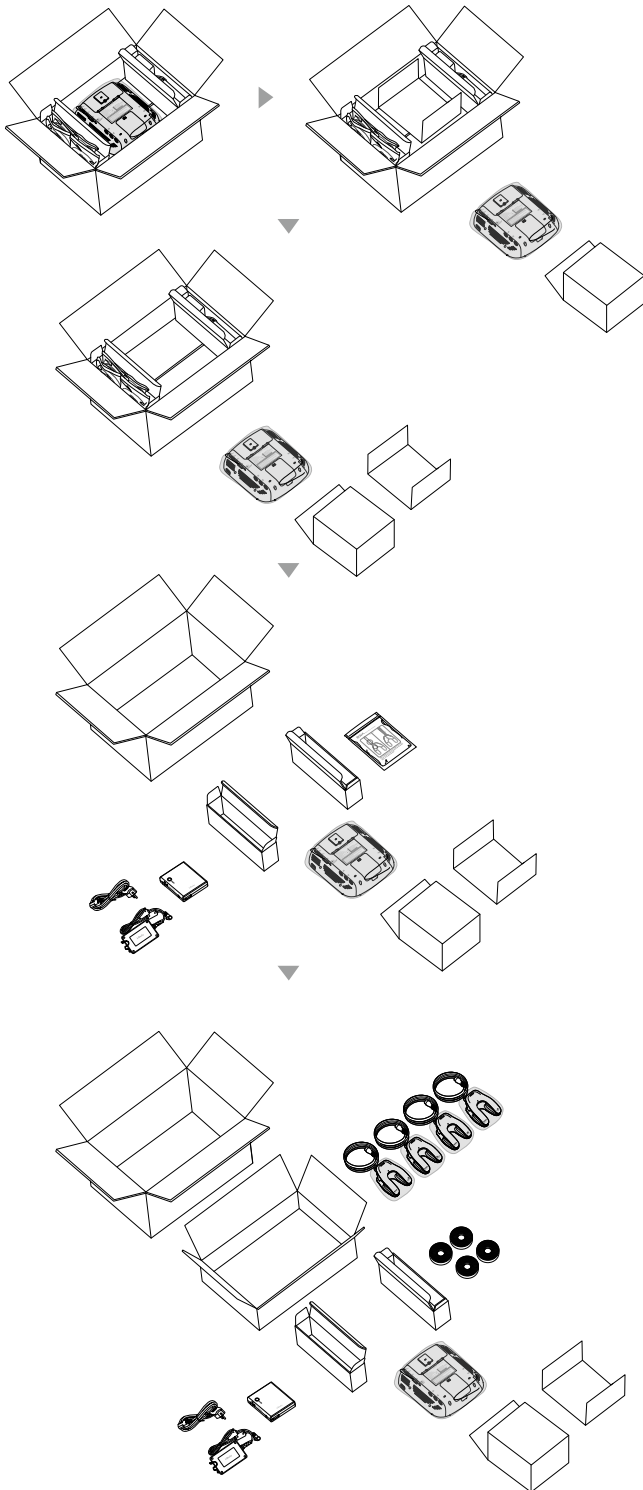
### Caution

- This is a sensitive device that precisely measures the body composition. If you test near electronic devices such as refrigerators, TVs or right under fluorescent lights, the test results may be inaccurate. Please use the device away from electronic devices.
- Do not use the device in a humid space such as a bathroom, as excessively high or low temperature, humidity, and pressure may affect the operation of the device. Use in the installation environment specified in the devices specifications.
- Do not allow any liquid substances to contact the device directly. Keep food and drinks away from the device. Substances getting inside the device can cause critical damage to the electronic components.
- Do not disassemble or modify the device including internal parts without written consent from the manufacturer. This may cause electric shock or injury, device malfunction, inaccurate test results, and will void the manufacturer's warranty.
- Children or people with restricted mobility should be tested with the help of an instructor or assistant.
- When storing the device for a long period of time, store it on a flat surface after turning off the device, unplugging the adapter, and packing the device.
- Dispose of the device and its batteries in accordance with the relevant local laws and regulations.
- Repairs and inspections can only be performed by InBody's technician. For repairs and inspections, contact the customer service.
- Do not support yourself with the device when stepping up or down from the footplate.
- Please be careful not to trip or get your foot caught in the footplate.
- Failure to follow these instructions may result in device damage or inaccurate test results.
- Failure to comply with safety precautions and regulations may result in the user suffering injuries or incurring property damage.

## 2 Device Overview

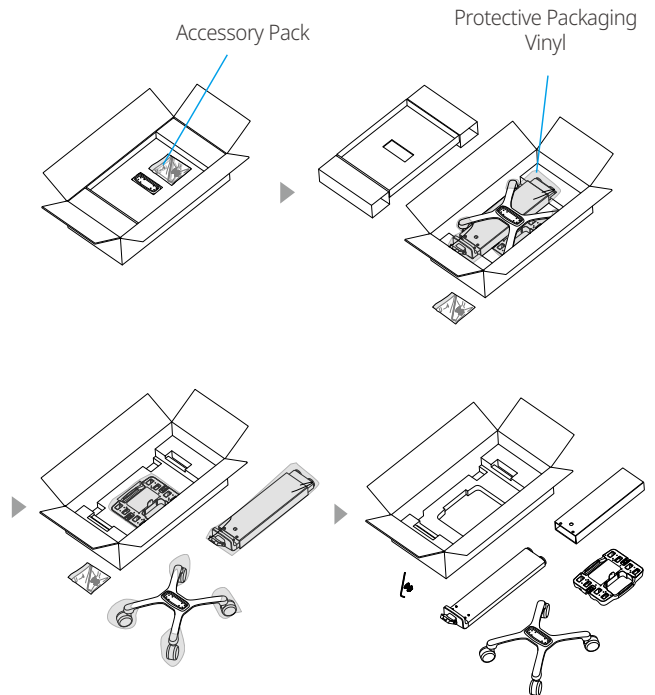
### 2.1 Unpacking

Open the packing box of the main unit and remove the packing pad. Take out the device's main body, clamp electrodes and batteries from the box. Then remove the protective packaging material from the main unit and the electrodes.



### 2.2 Cart Unpacking

Open the packing box of the cart and remove the inner material. In this order, remove the lower, stand, and basket from the box.



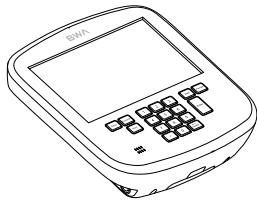
#### Caution

- For repackaging the device at a later time, the supplied packing materials should be kept. Other wastes should be disposed of according to relevant local laws and regulations.
- Be careful not to get your hands or feet caught by the packing box.
- Be careful for children not to enter the packing box.
- Do not put packing box vinyl on your face.

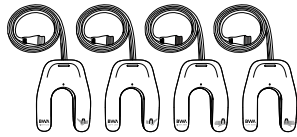
### 2.3 Device Components

The device consists of the following components. Make sure all of the following components are present.

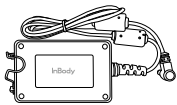
\* Please check if the device has any damage prior to installation.



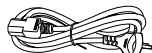
BWA2.0S Main Unit



Clamp Electrode 4EA



Power Adapter



Power Cable



User's Manual



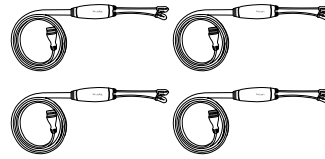
Battery (IB Battery 220)  
1 EA



InBody USB



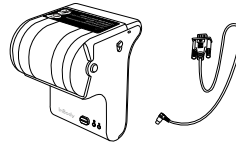
Cable Clamp  
Cover



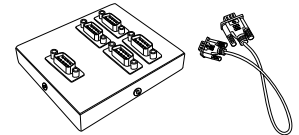
Adhesive Type Electrode 4 EA



Disposable Electrode  
(BWA-ES100)



Thermal Printer (TP100)



Serial Distributor (SD400)



8 Bolts



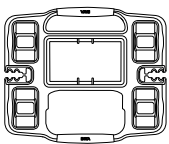
Hex Key Wrench



#### Note

- The Main Unit can be mounted on the cart or put in the portable case, which is available for purchase.

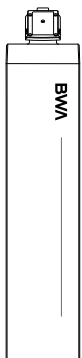
### 2.4 Optional Device



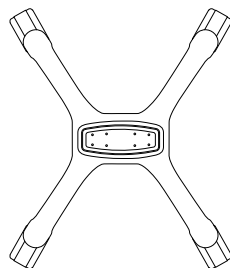
BWA2.0S Cart Basket



BWA2.0S Portable Case



BWA2.0S Cart Stand



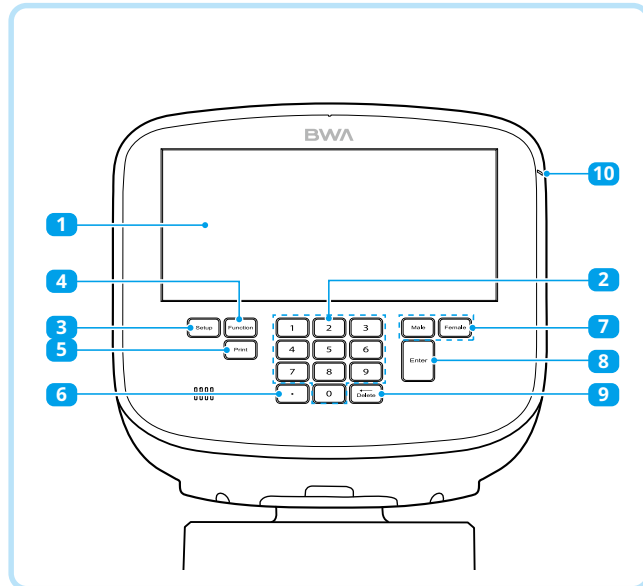
Lower

## 2.5 Name of Each Part

### Front View

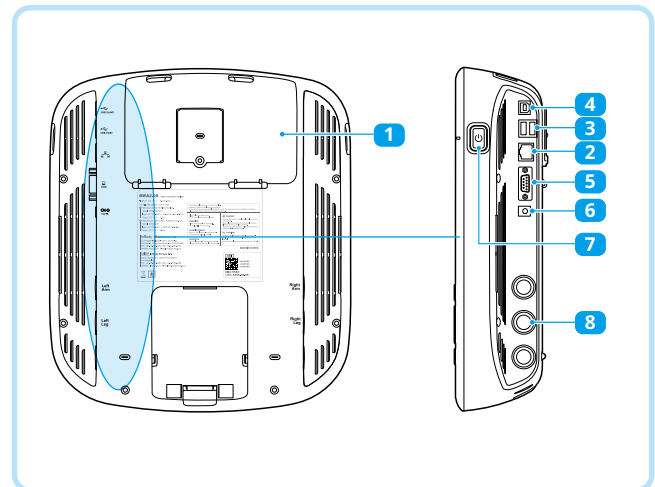
The names and functions of each part of the device are as follows.

\* Please check each component for damage prior to installation.



- 1** Display: It displays each step of the test, the guide, and the test result. Users can input test data, set the test environment, and view results on the touchscreen.
- 2** Number Button: Enter numeric data such as age and height.
- 3** Setup Button: Enter the 'Setup' in the Administrator Menu from the test standby screen.
- 4** Function Button: Enter the 'FAQ' screen directly from the test standby screen.
- 5** Print Button: Reprint test results.
- 6** Decimal Point Button: Enter the decimal point in ID, height, age, and weight.
- 7** Gender Button: Select the gender. (Male, Female)
- 8** Enter Button: Used when input is completed, or changes are saved in the Administrator Menu.
- 9** Delete Button: Delete the entered data.
- 10** Power LED: LED to indicate power on/off status.

### Rear Panel



- 1** Battery Cover: Used when replacing the batteries.
- 2** LAN Port (10/100T-Base): Connect the device to the Internet or LookinBody installed on the PC via a wired connection.  
\* You can connect the device to LookinBody installed on the PC if at least only one of **2**, **4**, **5** ports is connected.
- 3** USB HOST Port: Connect printer, InBody USB and barcode reader.
- 4** USB SLAVE Port: Connect the device to the Internet or LookinBody installed on the PC via a wired connection.  
\* You can connect the device to LookinBody installed on the PC if at least only one of **2**, **4**, **5** ports is connected.
- 5** PC 9-pin Serial Terminal (Female, RS-232C): You can set the port according to '26 Serial Connect' in the Administrator Menu- COM: Used to connect the device to a stadiometer, blood pressure monitor, or LookinBody installed on the PC.  
\* Make sure to connect only to the Stadiometer and Blood Pressure Monitor of InBody.  
\* You can connect the device to LookinBody installed on the PC if at least only one of **2**, **4**, **5** ports is connected.
- 6** Power Jack: Connect a power adapter.  
\* Use the adapter provided by only InBody.
- 7** Power Switch: Turn the device on and off.
- 8** Electrode Cable Inlet: Connect the electrode cable to the circuit inside the main unit.



### Caution

- Be careful not to let foreign objects such as food, drinks or liquid cleaners into the control and connections. Any foreign objects that enter the device can cause serious damage to electronic components.
- Be sure to connect the power adapter provided by InBody to the power jack.



### Note

- When you are connecting the power adapter cable to the main unit, insert the power adapter cable firmly into the power jack.
- Peripheral devices, including accessories connected to the device, must be provided by InBody.

## 2.6 Using and Charging the Battery

The battery (IB Battery 220) is designed to connect the device. Do not use the battery for purposes other than connecting it to the device.

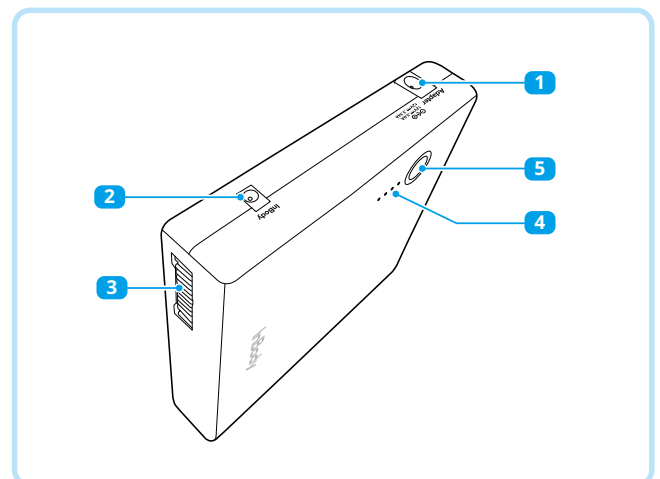
If you are connecting the battery between the device and the adapter, the device will not be turned off even if the power cable is disconnected.



### Caution

- It is recommended to use the battery at room temperature that is not too humid because the battery lifespan is affected by the environment.

## Functions



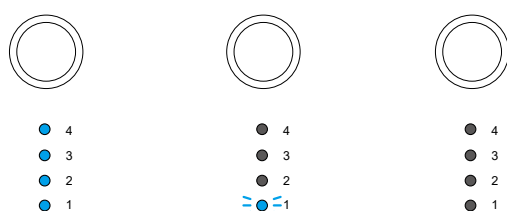
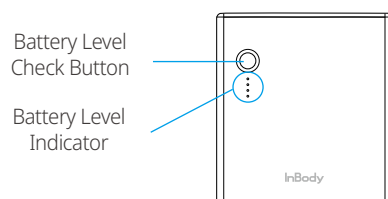
- 1** Power Adapter Connection Socket: This socket is used to connect the adapter when the battery is charged alone.
- 2** Device External Connection Socket: This socket is used to connect the device to the battery with an external cable.
- 3** Device Connector: Used to directly connect the device to the battery.
- 4** Battery Level Indicator LED: This LED shows the remaining level in the battery.
- 5** Battery Level Check Button: Press and hold the button on the battery until it sounds "Beep." "Beep" sounds and the 4 LEDs display the remaining level after about three seconds.

## Battery Operation

- 1 On First Use
  - : Check the battery level. Press and hold the Battery level check button until it produces a "Beep" sound. "Beep" sounds, and the 4 LEDs display the remaining level after about three seconds.
- 2 While Charging
  - : The battery level indicator LED blinks while the adapter is connected and is charging. If all four LEDs light up and stop flashing, charging is complete.
- 3 When to charge
  - : The percentage value and battery level are displayed on the upper right when you are charging the battery by connecting it to the device main unit. If the following error screen appears or if the battery level drops below 20 %, please charge it again.



- 4 Checking the Battery Level
  - : Press and hold the button on the battery until it produces a "Beep" sound. "Beep" sounds, and the remaining battery level is displayed through four LEDs after about 3 seconds. Before the battery runs out, the last remaining LED level indicator blinks and it sounds alarm. If you hear the alarm sound, please charge the battery.



The battery is sufficient.

The battery will soon be exhausted. (LED indicator blinks.)

The battery is completely exhausted.


## How to Charge the Battery

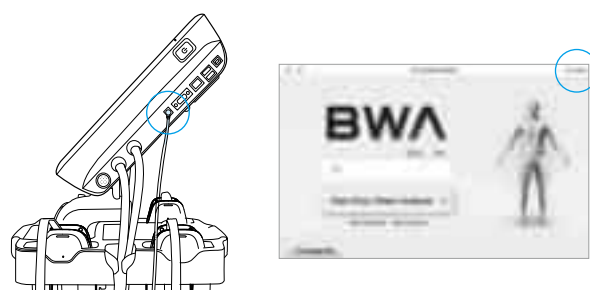
The charging method of the battery can be selected. There are two ways of charging the device battery. While the battery is inserted inside the main unit, or charging the battery alone.

- 1 The battery is inserted inside the main unit.
  - : On the upper right corner of the screen, the % and remaining battery are displayed.

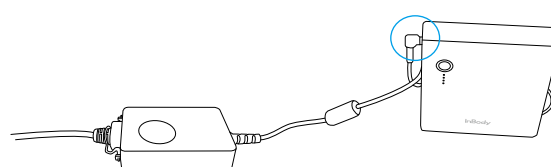
 : The battery is sufficient.

 : The battery will soon be exhausted.

 : The battery is completely exhausted. Charge the battery.



- 2 Charging the battery alone. (Fast Charging)
  - : The battery may be charged with the device adapter provided by InBody. The state of charge (charge level) can be checked by the LED light; the LED blinks while charging.



○ 4  
○ 3  
● 2  
● 1

The battery is charging.

● 4  
● 3  
● 2  
● 1

The battery is completely charged.

### Caution

- Be sure to use the device adapter provided by InBody to charge the device.

# 3 Installation

## 3.1 Installation Environment

Check the environment before installing the device. This device is suitable for indoor use. If installing the device outdoors, the following requirements must be fulfilled.

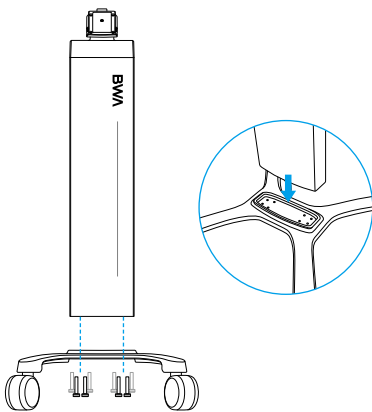
Temperature Range	10 - 40 °C (50 - 104 °F)
Relative Humidity	30 - 75 % RH (No Condensation)
Atmospheric Pressure	70 - 106 kPa

## 3.2 Installation for Cart User

### Caution

- For repackaging the device at a later time, the supplied packing materials should be kept. Other wastes should be disposed of according to relevant local laws and regulations.
- Be careful not to get your hands or feet caught by the packing box.
- Be careful for children not to enter the packaging box.
- Do not put packing box vinyl on your face.

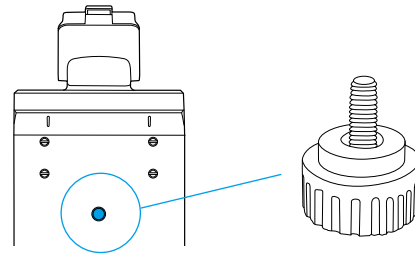
- 1 After aligning the eight bolt positions of the stand and the lower, turn the bolt clockwise to fix them. When aligning the stand to the lower, pay attention to the direction of the stand so that the stand properly fits into the shape of the lower.



### Caution

- When turning the bolt, be careful not to get your hands or other body parts caught.
- One person of a team of two people should hold the upper side of the stand while the other person removes the bolts at the lower side.

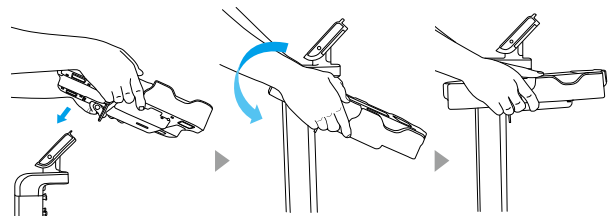
- 2 Turn the knob counterclockwise on the back of the stand to remove it.



### Note

- When removing the knob, keep it well, so as not to lose it.

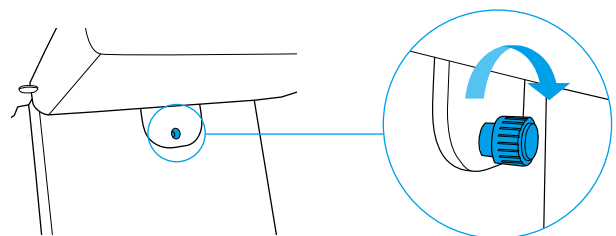
- 3 Tilt the basket and insert it into the top of the stand as shown below. Hang it by aligning the four grooves with the four knob positions on the back of the stand.



### Caution

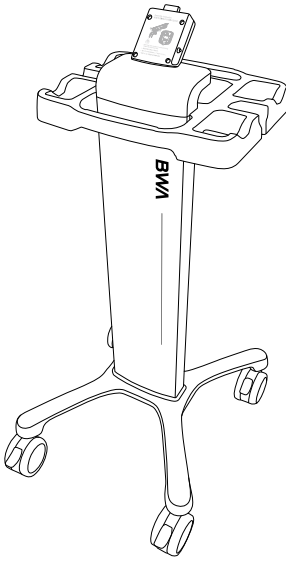
- When hanging the basket on the top of the stand, be careful not to get your hands or other body parts caught.

- 4 Align the knob, which was removed in Step 2, with its position, then turn it clockwise to secure it.

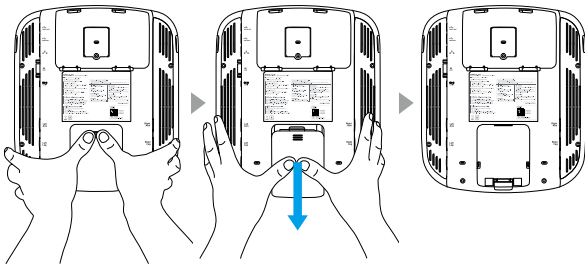




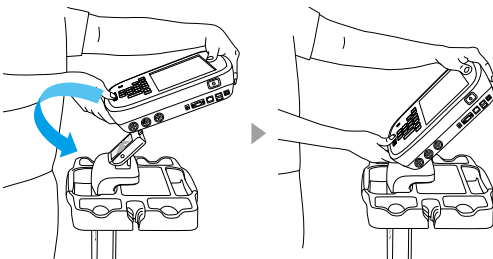
- 5 Refer to the figure below after completing the assembly of the device cart.



- 6 Press the cover located on the back of the main unit and pull it down to remove the cover. (Store the cover separately.)



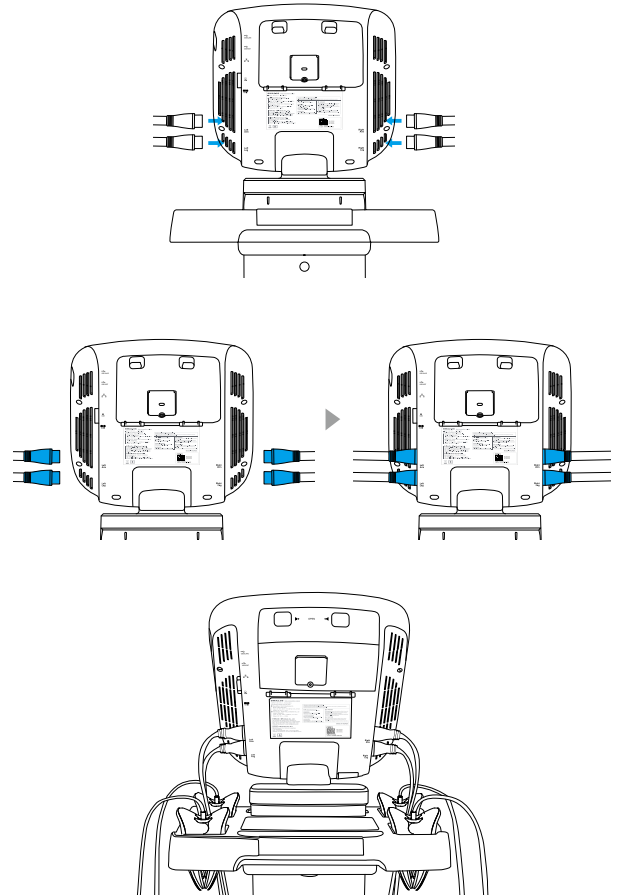
- 7 Align the main unit into the mounting part of the cart, and then lower the main body downward to insert it.



### Caution

- When inserting the main unit into the mounting part of the cart, be careful not to get your hands or other body parts caught.

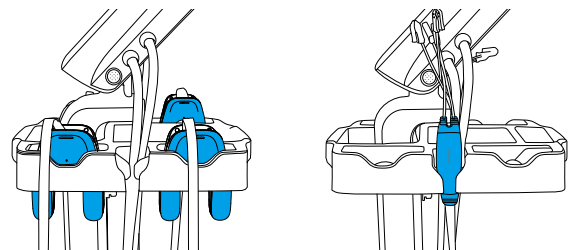
- 8 Connect the electrode cables to the main unit. Connect the electrode cables labeled Right Arm (black), Left Arm (red), Right Leg (yellow), and Left Leg (blue) to each position of the main unit according to the color.



### Caution

- When connecting or disconnecting the cable, grasp the connector part and not the cable. Otherwise, the cable may be damaged.

- 9 Mount the electrodes into the electrode-mounting groove on the cart basket, as shown below.



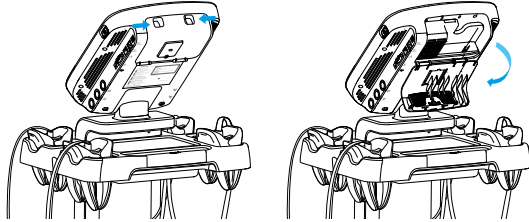
When mounting Clamp Electrodes

When mounting Adhesive Electrodes

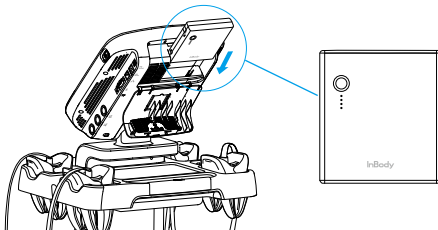
## Installation

### 10 Insert battery.

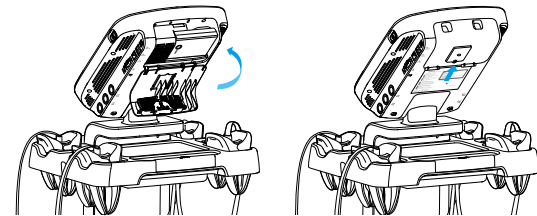
- a** Place your fingers on both sides of the OPEN mark on the rear of the main unit. Press the buttons in the direction of the arrows and then pull the cover down to open.



- b** With the battery button facing outward, push the battery into the main unit until it clicks into place.



- c** Lift the cover and press the cover inward until it clicks. If the cover does not close, make sure that the battery is inserted properly.



### Warning

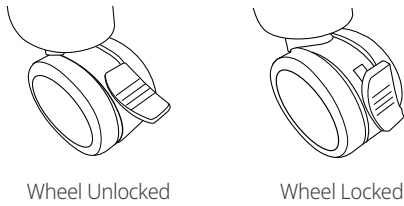
Read carefully the following items. Improper usage of the components may lead to battery leakage, explosion, or combustion.

- Do not drop or throw batteries into water.
- Do not use or store the battery near a heat source (e.g., fire or heater, above 60 °C).
- When charging, please use the adapter provided by InBody.
- Do not connect the battery directly to a wall outlet or socket in a vehicle.
- Do not burn or heat up the batteries.
- Do not short-circuit the terminals of the battery with conductors or other metallic objects, and do not carry or store the batteries along with other metallic objects, such as necklaces.
- Do not apply shock or mechanical vibration to the battery.
- Do not crush or hammer the battery.
- Do not touch fingernails or other sharp objects to batteries, and avoid tapping or hitting it with a hammer.
- Do not weld the battery terminals directly.
- Do not attempt to disassemble the battery in any way.
- Do not charge the battery in a fire or extremely high temperatures.
- Do not place batteries in microwave ovens.
- Do not use the batteries when they smell, heat up, deform, discolor or have other abnormalities. Take batteries out of the device or charger to stop using them if they are in use or charging.
- Keep the batteries away from children.
- Remove the battery from the machine immediately if there is a leakage or foreign smell.
- A fire or explosion may occur from a leaked electrolyte.
- Do not rub your eyes if the leaked electrolyte gets into your eyes. Immediately wash them with running water. Then, consult a physician immediately. The eyes may be further damaged if not properly treated.

### Caution

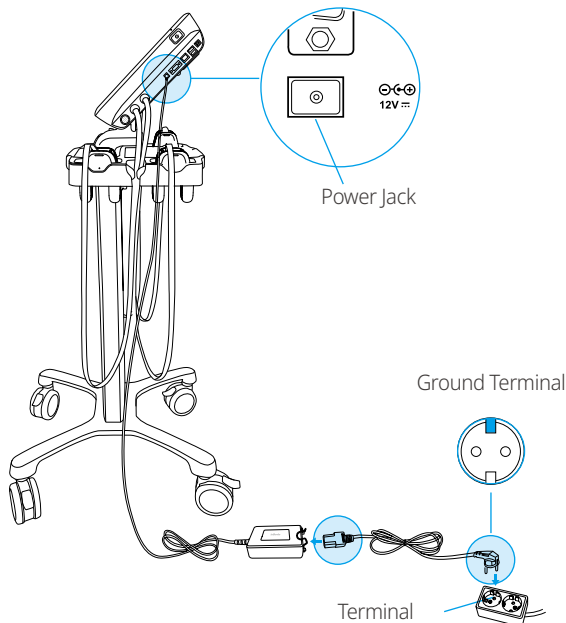
- If the terminals of the battery get dirty, clean the battery before using it. Otherwise, power loss or charging failure may occur due to a loose battery contact.
- Do not use the battery if there are any abnormalities such as smell, deformation, discoloration, etc.
- If the battery goes underwater, it may malfunction. Do not use that battery.
- Do not place the battery over heated materials (Over 60 °C).
- Dispose of the batteries according to local regulations and guidelines.
- Improper use of batteries may cause performance degradation or a fire that could damage the device.
- Do not install batteries with wet hands.
- Do not use the batteries for other purposes except the BWA2.0 operation.
- Remove the batteries from the battery compartment when not in use for a long period.
- Do not touch any leakage. If it gets on your skin or clothes, wash it off with running water.

- 11** The cart has wheels for easy transport. The wheels can be locked/unlocked as shown below.



- 12** Connect the power adapter to the power inlet on the right-side port of the device. Connect the power cable to the power adapter. Plug in the power cable to a 3-terminal outlet with a ground terminal.

\* The device can be connected to optional test devices and PC programs such as the Stadiometer series, Blood Pressure Monitor series, and LookinBody. For steps to connect, please refer to '5 Connecting Compatible Device'.



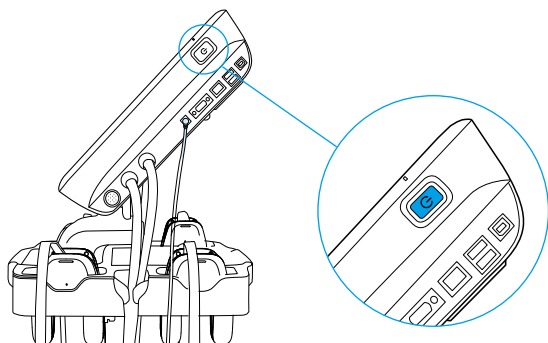
## Warning

- Do not pull the power cord violently.
- Do not plug or disconnect the power cable with wet hands. Otherwise, it may cause an electric shock.
- Always use an outlet supplied to the right power supply (AC 100 - 240 V). Using other power-rated outlets may result in fire or malfunction.
- When using a power surge protector, make sure that the outlet or the extension cable has adequate power capacity.
- Do not disassemble or modify the device including internal parts without written consent from the manufacturer. This may cause electric shock or injury, device malfunction, inaccurate results, and will void the manufacturer's warranty.
- Avoid direct contact between the BWA2.0S and other electronic devices while it is on.
- If you have not been using the device for a long time, unplug the power cord.

## Caution

- Using the device in a dry environment or on a carpet may result in static electricity and damage to the device. Use an antistatic mat if you need to install it in environment with static electricity.
- Install the device on a flat and vibration-free floor. If the device is installed where the floor is not flat, it may topple during a test or the test results may be inaccurate.
- Do not clean the foot electrode and the hand electrode with detergent. If liquid cleaner flows into the device, it may cause corrosion and malfunction. To clean the device, use an Alcohol-based disinfectant (e.g., 70% ethanol).
- The device may get damaged or malfunctioned due to the electric if plugging into an ungrounded outlet. Or the test results may be inaccurate.
- If the device is subjected to electrical interference, the test results may be inaccurate. Do not install the device in close proximity with fluorescent lights, the device with a large AC motors such as treadmills, vibrating platform refrigerators, air conditioners, compressors, etc., high-frequency heat treatment devices, and heating devices that cause electrical interference. Unplug and plug them into different power outlets when the device and a device that causes electrical interference are connected to the same power outlet.
- If you are connecting the device to other device then turn on the other device first. On the contrary, turn off the power of the device. first, and then turn off the power of the other device when turning off the power. This can minimize the electric shock to the device.
- Use the adapter provided by InBody. The device may malfunction when using other adapters.
- If you are operating the device in a place where the altitude is 2,000m (6562 ft.) or higher, the weight measurement may be affected.
- Do not use the device near heat sources such as heating appliances. It may cause deformation, breakdown or fire by heat.
- Use the device in a location where it is not exposed to direct sunlight. It may cause discoloration or damage to the device.
- Be careful not to pull the cables connected to the device. Otherwise, it may cause a weight measurement error.

- 13** Press the power button on the right side of the device to turn it on.



**a** How to turn the Power On/Off

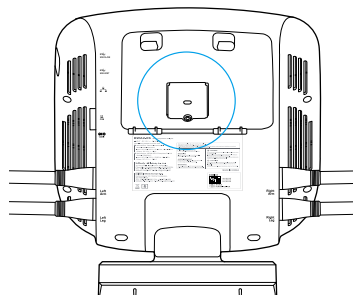
- Power On  
: Press the power button briefly if the device has been turned off.
- Power Off  
: Press and hold the power button for about three seconds if the device has been turned on.

**b** Operation status according to the LED color of the Power Button

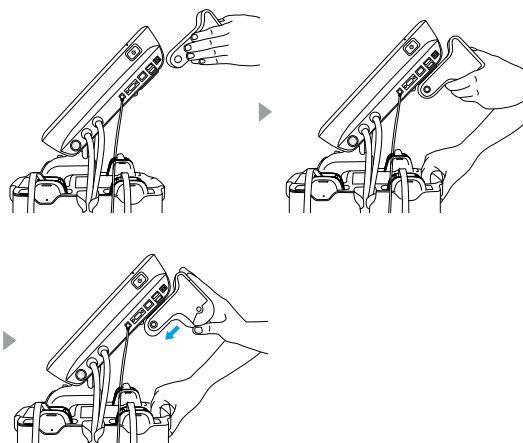
LED Color of the Power Button	Operation Status
Blue	The device is turning on.
Red	The battery is plugged into the device with the power turned off, and the battery is being charged with the adapter connected.
Green	The battery is plugged into the device with the power turned off, and the battery is completely charged with the adapter connected.

## 3.3 How to Install the Thermal Printer

- 1** There is a part that connects the thermal printer to the rear of the device.



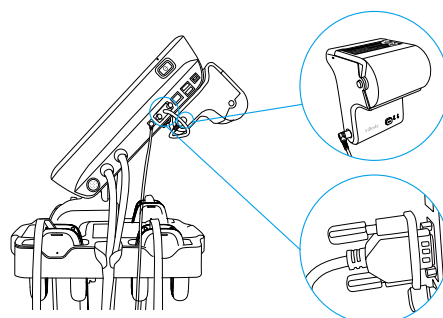
- 2** Insert the thermal printer into the groove on the rear of the device and slide it down. Hold the cart with one hand and push the thermal printer into the part to be fixed.



**! Caution**

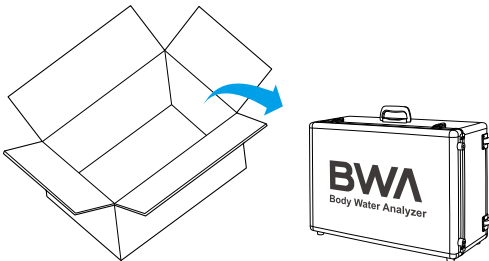
- When you insert the thermal printer to the device, do not place your hands or other body parts on the main unit and the thermal printer fastening area. There is a risk of getting the hand or other body parts caught.
- The thermal printer is available for purchase separately.

- 3** Connect the device to the thermal printer with a thermal printer cable.

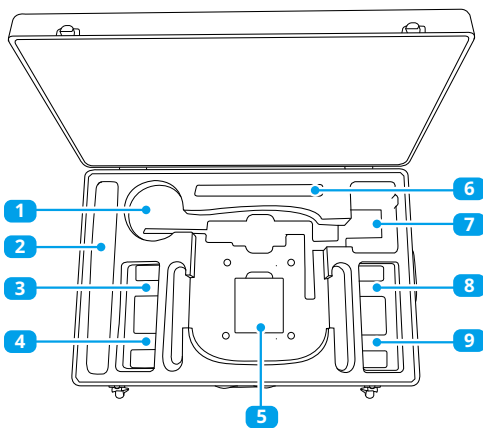


### 3.4 How to Install the Device Portable Case

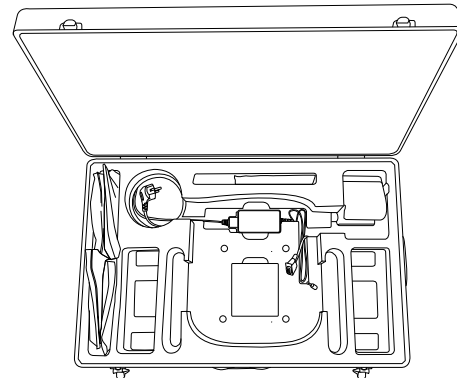
- 1 Open the box and take out the case.



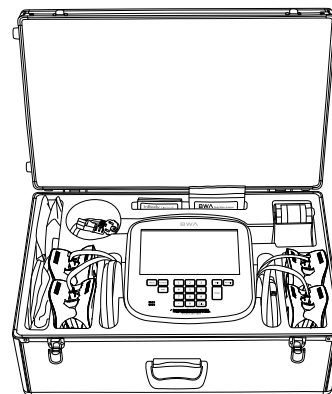
- 2 Put the device, four clamp (or adhesive) electrodes, two batteries, power cable, power adapter, thermal printer, disposable electrode, and electrolyte tissue into the portable case.



- 1 Power Cable and Power Adapter
- 2 Adhesive Electrode
- 3 Clamp Electrode (Right Arm)
- 4 Clamp Electrode (Right Leg)
- 5 Battery
- 6 Disposable Electrode and Electrolyte Tissue
- 7 Thermal Printer
- 8 Clamp Electrode (Left Arm)
- 9 Clamp Electrode (Left Leg)

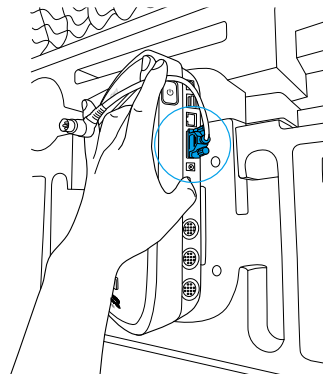


Main Unit and Clamp Electrodes Not Included



All Components Included

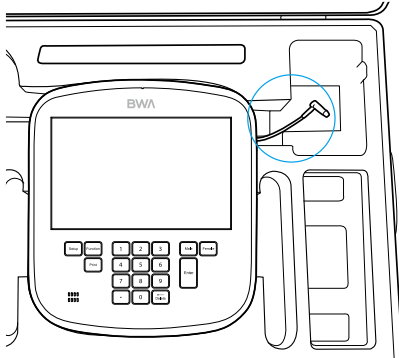
- 3 Connect the clamp (or adhesive) electrode to the cable and the device. Connect the electrode cables labeled Right Arm (black), Left Arm (red), Right Leg (yellow), and Left Leg (blue) to the device according to the cable color marked on the sides of the device. Make sure the cables are plugged firmly into each location.
- 4 Connect the thermal printer to the COM port on the device using the thermal printer cable. Gently lift the side of the device and connect the thermal printer cable to the COM port on the device first.



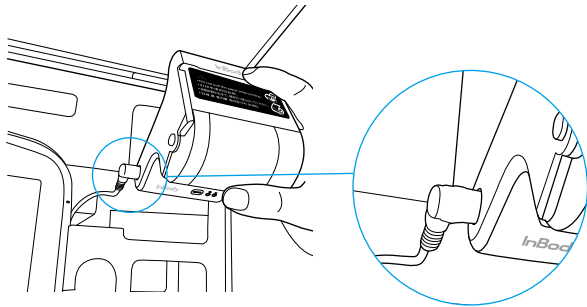
## Installation

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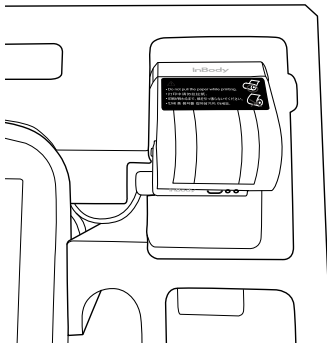
- Place the device in the original position and put the cable into the cable groove.



- Connect the thermal printer cable to the thermal printer.



- Make sure the 'InBody' logo of the thermal printer is visible from above and that the thermal printer cable fits into the groove.



### Note

- The thermal printer is an optional item.
-

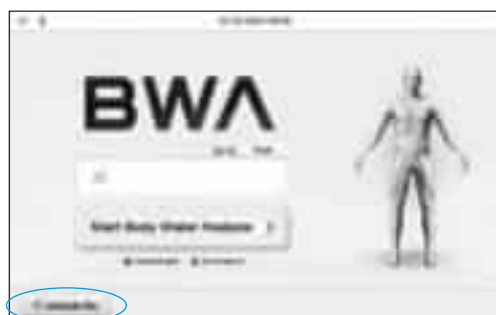
# 4 Setting

## 4.1 Initial Setup

- 1 The device automatically starts booting when it is turned on.



- 2 Press the [Administrator Menu] on the test standby screen.



Administrator Menu Button

- 3 Enter the administrator password to set the password. This screen will appear only once for the initial password setup.



\* Be careful not to forget the password you set. If you have forgotten your password, please contact InBody Customer Service.

- 4 You will see 'Setup' and 'FAQ' when you enter the Administrator Menu.



Setup



FAQ

## Setup

Configure settings and manage data according to the test environment.

### 01 Date/Date Format/Time/Units/Password/Volume/Country/Language

: Modify the device's basic settings.

### 02 Medical Mode or Research Mode

: This option allows switching between the Medical Mode, which is the basic test mode of the device, and Research Mode, which provides additional impedance (You can check additional impedance by setting the Research Mode when using clamp electrode).

### 03 Installation Location/Test Posture

: This option allows selecting and saving the location where the device is installed. The data shown on the results screen varies depending on the installation location selected after completing the test.

- Nephrology: Body Water Result screen
- Intensive care unit: Impedance Result screen
- Rehabilitation Medicine: Muscle, Fat Result screen
- Others: Body Water Result screen
- Depending on the measurement environment, you can select the test posture (lying posture, seated posture, and standing posture).



### 04 Cloud Service

: This is a service that can be used after agreeing to the privacy policy and allows to send the results to the cloud so that members can check and manage the device results themselves.

\* Cloud service is a paid service.

### 05 Bypass Age/Gender

: The subject can bypass inputting their age or gender if the test environment is designed for testing only a specific age group or gender.

### 06 View/Print/Delete Data

: This option allows checking, printing or deleting the test result saved in the device.

### 07 Export Data as Excel

: This option allows for the copying of the test result saved in the device to InBody USB in Excel file format.

### 08 Data Backup/Restore/Combine

: This option allows the test results to be saved to InBody USB for backup or restores the test results to the device. If you are using multiple devices, the data can be merged together.

### 09 Printer Setup

: This option allows the printer to connect to the device. Connect the printer to the device to print your Result Sheet.

### 10 Result Sheet Types

: This option allows you to set and select which Result Sheet to print. (Body Composition Result Sheet, Body Water Result Sheet, Evaluation Result Sheet, Research Result Sheet, Comparison Result Sheet, Body Composition Result Sheet for Children, Thermal Result Sheet)

### 11 Automatic Printing Options

: This option allows setting the Result Sheet to be printed automatically after completing the test. You can print up to two Result Sheets per type of Result Sheet at one time.

### 12 Paper Types

: This option allows you to set and select which Result Sheet to print.

### 13 Outputs/Interpretations for Result Sheet

: This option allows setting the parameters or explanations that appear on the right side of the Body Composition Result Sheet, Body Composition Result Sheet for Children, and Body Water Result Sheet, and Thermal Result Sheet.

### 14 Result Sheet Custom Logo

: You can preview the logo printed on the upper right of the Result Sheet.

\* Please contact Customer Service for help with uploading or modifying a logo.

### 15 Printing Alignment

: This option allows for the adjustment of the result to be printed on the Result Sheet.

### 16 Internet Options

: Connect the device to the Internet via Wi-Fi or LAN. Once the device is connected to the Internet, the InBody Test results can be sent to the cloud or the LookinBody, which can be connected remotely.

### 17 Bluetooth

: This option allows setting up the Bluetooth so that the device can connect to LookinBody, or to other compatible devices such as BSM Stadiometer series, BPBIO Blood Pressure Monitor series.

\* For details on connecting Bluetooth, please refer to '5 Connecting Compatible Device' in this User's Manual.

### 18 N/A

### 19 N/A

### 20 Normal Range

: This option allows setting the normal range of BMI, Percent Body Fat, and Waist-Hip Ratio.

\* The ideal value of BMI may also be set.

### 21 N/A

### 22 Standard Child Growth Curve

: Set the type of standard child growth curve to use on the Body Composition Result Sheet for children.

### 23 Touchscreen Alignment

: This option allows for the accuracy of the touch screen to be calibrated.

### 24 Customer Service Information

: Save the Customer Service contact information. Please refer to the customer service information if you have any inquiries regarding the InBody Test, or problems that cannot be resolved through the 'FAQ' menu.

### 25 Auto-Lock

: This option allows setting the time before the screen is locked and the corresponding password to restrict using the device.

### 26 Serial Connect

: This function allows setting for the device to connect to the LookinBody, data management program or other devices through a serial connection.



**27 Serial Connect**

: This function allows setting for the device to connect to the LookinBody, data management program or other devices through a serial connection.

**FAQ**

Refer to additional information on how to use the device.  
Refer to FAQ checklist when there are problems that occur while using the device.

**01 Customer Service Information**

: Refer to the customer service contact information in 'Setup' under '24 Customer Service Information'. Please contact customer service if your problem cannot be resolved through the 'FAQ' or if you have further inquiries regarding the InBody Test.

**02 Result sheet does not print**

: View the FAQ checklist when the result sheet does not print.

**03 N/A****04 N/A****05 The InBody Test has stopped**

: View the FAQ checklist when the InBody Test has stopped.

**06 Test results seem to be inaccurate**

: View the FAQ checklist when the test results seem to be inaccurate.

## 4.2 IT Security Measures

InBody would like to clarify that the user access to the InBody is only granted for the authorized users, who have appropriately registered the password in the system setting menu of InBody. The steps for registering access passwords, which restrict access to authorized users, are illustrated below.



# 5 Connecting Compatible Device

To connect a compatible device to the device, check the communication method of the compatible device.

There are two ways of communication: wired connection, such as USB or RS-232C (9-pin serial terminal, Female), and wireless connection (Bluetooth).

## 5.1 Printer

The Result Sheet can be printed when the printer is connected to the device.

- 1 Turn off the device.
  - \* When the device is already turned on, the printer might not properly connect.
- 2 Connect the USB cable supplied with the printer to the USB HOST printer terminal on the rear of the device. Connect the other end of the USB cable to the printer's USB connection terminal.
- 3 Turn on the printer.
- 4 Connect the printer according to the instructions on '5.1 Printer' on Setup in the Administrator Menu.
- 5 You can set the result sheet-related settings from '10 Result Sheet Types' to '15 Printing Alignment' in the Administrator Menu.

## 5.2 Thermal printer

The Thermal Result Sheet can be printed when the thermal printer is connected to the device.

- 1 Turn off the device.
  - \* When the device is already turned on, the stadiometer might not properly connect.
- 2 Connect the thermal printer cable supplied with the thermal printer to the thermal printer 9-pin serial terminal on the rear of the device. Connect the other end of the cable to the serial terminal of the thermal printer.
- 3 Turn on the thermal printer.
- 4 Turn on the device. Set up the thermal printer at '26 Serial Connect' on Setup in the Administrator Menu.
- 5 You can set the result sheet-related settings from '10 Result Sheet Types' to '15 Printing Alignment' in the Administrator Menu.

## 5.3 Stadiometer

The height values measured by the stadiometer are sent to the device when it is connected to the device.

\* Make sure to connect only the BSM Stadiometer series from InBody.

- 1 Turn off the device.
  - \* When the device is already turned on, the stadiometer might not properly connect.
- 2 Connect the serial cable supplied with the stadiometer to the COM 9-pin serial terminal on the right-side port of the device. Connect the other end of the cable to the serial terminal of the stadiometer.
- 3 Turn on the stadiometer.
- 4 Turn on the device. When the stadiometer is connected, the (📏) icon will be displayed in the upper left of the test standby screen.

## 5.4 Blood Pressure Monitor

The blood pressure values measured by the blood pressure monitor are sent to the device when it is connected to the device.

\* Please make sure to connect only the BPBIO Blood Pressure Monitor series from InBody.


\* If you select the type of Results Sheet at '14 Result Sheet Custom Logo' on Setup in the Administrator Menu and select blood pressure in the sub-options, then you can print the blood pressure value on the device Result Sheet.

- 1 Turn off the device.
  - \* When the device is already turned on, the blood pressure monitor might not properly connect.
- 2 Connect the serial cable supplied with the blood pressure monitor to the COM 9-pin serial terminal on the right-side port of the device. Connect the other end of the cable to the serial terminal of the blood pressure monitor.
- 3 Turn on the blood pressure monitor.
- 4 Turn on the device. When the blood pressure monitor is connected, the (🩺) icon will be displayed in the upper left of the test standby screen.

## 5.5 Barcode Reader



The ID will be inputted automatically if a barcode reader is connected to the device.

\* If the barcode reader is not recognized, please contact InBody Customer Service.

- 1 Turn off the device.
  - \* When the device is already turned on, the barcode reader might not properly connect.
- 2 Connect the USB cable of the barcode reader to the USB HOST port on the right-side port of the device.
- 3 Turn on the device. When the barcode reader is connected, the (  ) icon will be displayed in the upper left of the test standby screen.

## 5.6 Serial Distributor (SD400)

You can connect a Stadiometer and a Blood Pressure Monitor at the same time if you connect a serial distributor to the device.

- 1 Turn off the device.
  - \* When the device is already turned on, the Stadiometer and Blood Pressure Monitor might not properly connect.
- 2 Connect the serial cable supplied with SD400 to the COM 9-pin serial terminal on the right-side port of the device. Connect the other end of the cable to the serial terminal of the SD400.
- 3 Connect each device (Stadiometer and Blood Pressure Monitor) via serial cable to each SD400 port and turn on each device.
- 4 Turn on the device. Set the SD400 at '26 Serial Connect' on Setup in Administrator Menu, and set the device connected to each port of the SD400. When each device is connected, (   ) icon will be displayed in the upper left of the test standby screen.

## 5.7 LookinBody

By connecting LookinBody to the device, you can manage your device data.

\* If LookinBody is not recognized, please contact InBody Customer Service.

- 1 Turn off the device.
  - \* When the device is already turned on, LookinBody might not properly connect.
- 2 If the PC has a serial port, connect the serial cable provided with LookinBody to the COM 9-pin serial terminal on the right-side port of the device, and connect the other end of the serial cable to your PC.
 

If there is no serial port on your PC, you can connect a normal USB-AB type cable to the USB SLAVE port on the right-side port of the device instead, and connect the other end of the USB cable to the USB port of the PC.
- 3 Turn on the device. Then launch LookinBody , which is installed on your PC and follow its instructions to connect to the device.



### Caution

- When you are connecting the cable to the device, be careful not to move or pull the device. It may cause a weight measurement error.
- Avoid laying cables connecting to compatible devices where people frequently pass. This may cause individuals to trip over or become injured.
- Do not connect compatible devices that are not specified by InBody to the device. Otherwise, it may cause malfunction.

### 5.8 Connecting Bluetooth

#### Requirements

- The compatible device must support Bluetooth for connection.
- Bluetooth may not operate normally if the compatible device is more than 10m away from the device.
- There should be no obstacles, such as walls between the device and the compatible device.

#### Connecting Stadiometer / Blood Pressure Monitor / InGrip

- 1 Press the [Administrator Menu] on the test standby screen.
- 2 Enter the password to enter the Administrator Menu.
- 3 Go to the '17 Bluetooth' in Setup.
- 4 If "O" is selected on 'Connect via Bluetooth?', you can select 'LookinBody' or 'Compatible device'. Then, please select 'Compatible device' to connect the devices.
  - \* LookinBody and the device are connected via Bluetooth; selecting a compatible device will disconnect them.



- 5 Turn on one of the InBody recommended compatible devices and check the device name and serial number on the nameplate attached to the compatible device.

- 6 Choose the compatible device to be connected and then press [Next].



- 7 The compatible device's Bluetooth ID consists of 'Device Name-Serial Number', and select the Bluetooth ID of the device to be paired and press [Connect].

\* If the Bluetooth ID does not appear or the connection is not good, please contact InBody Customer Service.



- 8 If the compatible device is paired properly, the Bluetooth ID of the device connected to the device will appear, as shown below.



- 9 Press [Exit] to return to the test standby screen, and the Bluetooth (B) icon and the corresponding device icon will be displayed on the upper left corner screen.

\* The screen below shows the stadiometer connected.



## 5.9 Connecting Internet

Once the device is connected to the Internet, you can use it to connect to the Cloud Services or LookinBody Web.

\* If the Cloud Service does not work or if LookinBody Web is not recognized, please contact InBody Customer Service.

### Connecting LAN

- 1 Press the [Administrator Menu] on the test standby screen.
- 2 Enter the password to enter the Administrator Menu.
- 3 Go to '16 Internet Options' in Setup.
- 4 Press LAN and then press [Next]
  - \* You may need to enter the IP address or DNS address manually depending on the service area. In this case, press the corresponding ( ) button to use.



- 5 Connect the LAN cable to the ( ) shape port on the right-side port of the device.
  - \* LAN cable should be connected to a device terminal with internet service or to a connector on the wall.



- 6 You can connect to LookinBody Web or use the Cloud Service through LAN after completing an internet connection.



### Connecting Wi-Fi

- 1 Press the [Administrator Menu] on the test standby screen.
- 2 Enter the password to enter the Administrator Menu.
- 3 Go to '16 Internet Options' in Setup.
- 4 Press Wi-Fi and press [Next]
  - \* Depending on the service area, you may need to enter the IP address or DNS address manually.



- 5 Select the Wi-Fi to be connected.



## Connecting Compatible Device

- 6 Enter the Wi-Fi password if needed.



- 7 You can connect to LookinBody Web or use the Cloud Service through Wi-Fi after completing an internet connection.



# 6 InBody Test

## 6.1 Precautions for Test

### Warning

- Individuals with medical implant devices such as pacemakers, or essential support devices such as patient monitoring systems, must not use these devices. Safe, micro alternative currents will flow through the body during the test, which may cause malfunctioning of the device or endanger lives.
- The Bioelectrical Impedance Analysis (BIA) method does not harm the human body because it uses micro alternative current. However, if you are pregnant, please consult your doctor or specialist.
- Children or people with restricted mobility should be tested with the help of an instructor or assistant.
- If you have an infectious disease or open cut, do not touch or use the device.

### Caution

- Stay at least 10 - 15 minutes in the posture you want to measure before measuring. Body fluid can shift during the InBody Test and affect the results if you stand, lie down, or sit for a long time.
- Test on an empty stomach. Food intake affects your weight and is considered part of the body composition, which may affect your test results.
- Test after using the bathroom. Food in your stomach affects your weight and is considered part of the body composition, which may affect your test results.
- Test before exercising. Even light exercise can temporarily change body composition.
- Avoid using the sauna or bath before measuring.
- Make sure that no conductive objects, such as steel structures, touch your body while measuring.
- Measure at room temperature (20 °C - 25 °C). The human body remains stable at room temperature, but the body composition may change temporarily in cold or hot conditions.
- Test in the morning if possible. In the afternoon, body water tends to be driven to your lower body, which can affect your test results.
- If your wrists and ankles are dry or if you have a lot of dead skin cells, the test may not work well due to poor electrical contact between the electrode and the body. Wipe your wrists and ankles with an alcohol-based disinfectant (e.g., 70 % ethanol) before measuring.

## 6.2 Test Instructions

- 1 Make sure that the battery is sufficiently charged in the main unit. At least 20 % or more should be charged for measurement.
- 2 Stay at least 10 - 15 minutes in the posture you want to measure before measuring so that the body fluid distribution can be stable.



If the following error screen appears, the measurement will not proceed.

Replace the battery with a charged one, or charge using the dedicated AC adapter.



- 3 Enter your ID for measurement.



- 4 Enter your age, weight, and height, and select a gender.



- 5 Press the [Clinical notes] to select information for underlying diseases such as hemodialysis, lymphedema, paralysis region, and amputation status.

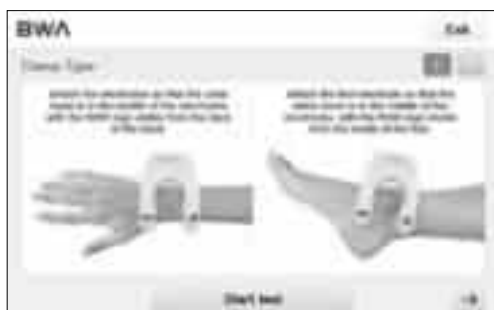


- 6 Press the [Accept Privacy Policy] section, and then the 'Privacy Policy' screen will appear as shown below. Read the contents of InBody's privacy policy.





- 7 Make sure that the electrodes are properly attached in the correct positions after entering the personal information. The guide screen for the electrode attachment position and measurement posture appears as shown below. When you are ready for measuring, press the [Start] as shown below to start the InBody Test.



If the measurement cannot proceed due to dry skin, an error screen will appear as shown below. Wipe the contact surface of the electrode well with the electrolyte tissue provided by InBody and press the [Enter] to re-measure.

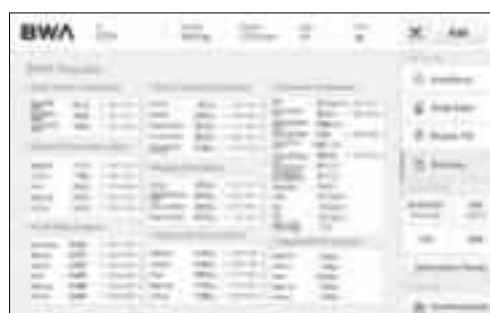
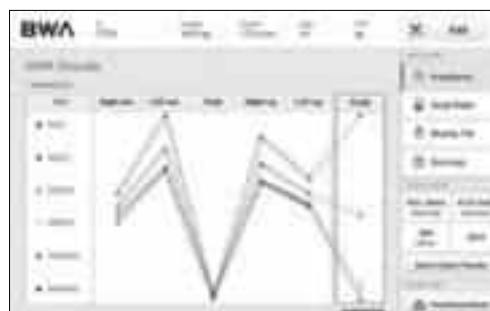


- 8 The InBody Testing screen appears as follows when the test starts.



- 9 The measurement result screen appears as shown below after the InBody Test is completed. If a printer is connected to the device, you can check the result according to the selected type of result sheet.

\* You can set the result sheet-related settings from '07 Export Data as Excel' to '07 Export Data as Excel' in the Administrator Menu.

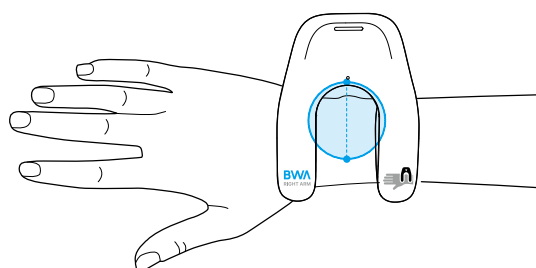


## 6.3 Electrode Connection Method

### 1 Clamp Electrodes

- Wrist

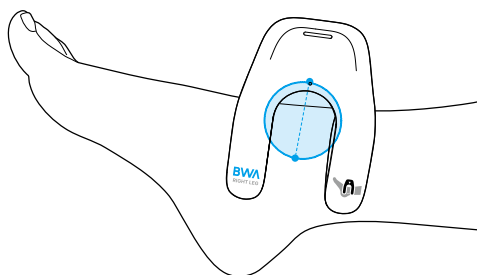
: Place the Left Arm Clamp onto the left wrist and place the Right Arm Clamp onto the right wrist. Insert the electrode into the center of the wrist so that the side marked the device in red faces the back of the hand and the unmarked side faces the palm.



Wrist with an Electrode Attached

- Ankle

: Place the Left Leg Clamp to the left ankle and place the Right Leg Clamp to the right ankle. Clamp the foot electrode so that the ankle bone is positioned in the center of the electrode, and that the electrode touches the wide area of ankle as much as possible. Position the side marked the device in red so that it faces inwards from the ankle, and the unmarked side faces outwards from the ankle.



Ankle with Electrode Attached

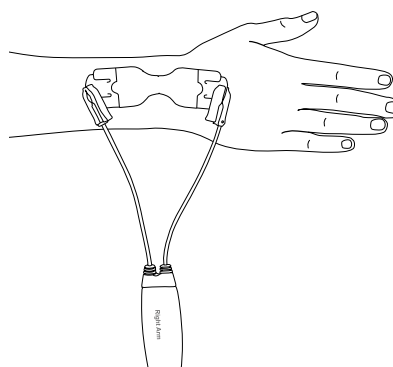
#### Note

- Make sure that the red side marked the device is facing inside the ankle.
- It may be difficult to attach the clamp electrode to the ankle due to anatomical structures, so please be careful to properly attach the foot electrode.
- If you have a dry skin, you may not be able to measure well, or the test may not be accurate. Wipe the electrode contact area with an electrolyte tissue and then measure.

### 2 Adhesive Electrodes

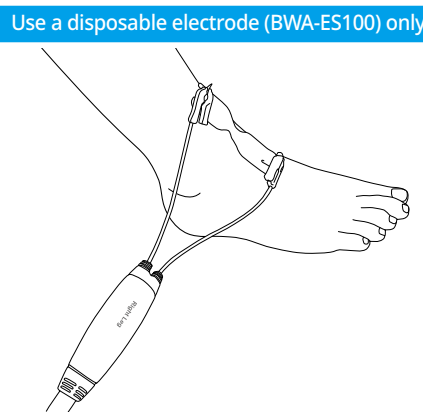
- Wrist

: Attach the disposable electrode (BWA-ES100) so that the wrist bone is centered, as shown in the picture below. Connect the electrodes with the black electrode toward your hand.



- Ankle

: Attach the disposable electrode (BWA-ES100) so that the ankle bone is centered, as shown in the picture below. Connect the electrodes with the black electrode toward your foot.



#### Note

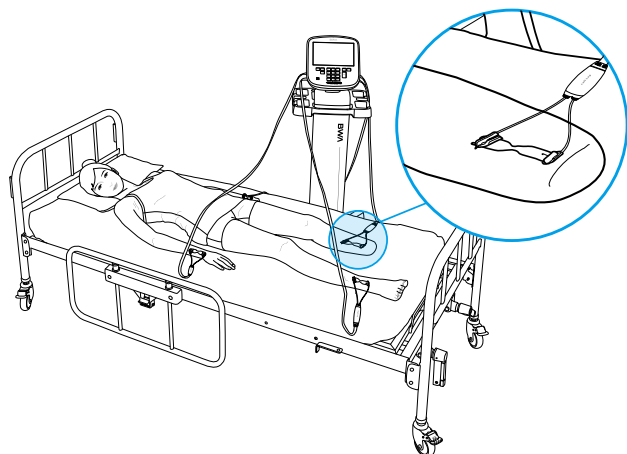
- Four electrodes of the same type must be connected to proceed with the test.
- When attaching electrodes to the amputated area, attach the electrodes to the end as much as possible.
- However, a certain distance is required between the two electrodes, so refer to the image below for the correct attachment method.

## 6.4 Test Posture

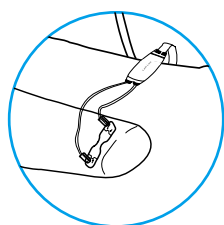
In order to use the device correctly, it is necessary to understand the correct measuring posture.

Maintain consistent measurement posture for high reproducibility and reliable results.

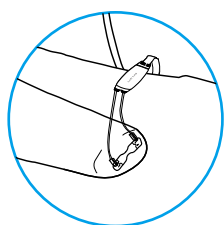
### Lying Posture



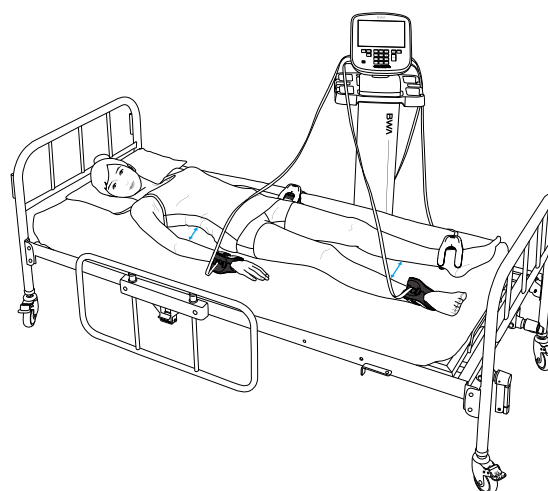
<Correct Attachment>



<Incorrect Attachment 1>



<Incorrect Attachment 2>



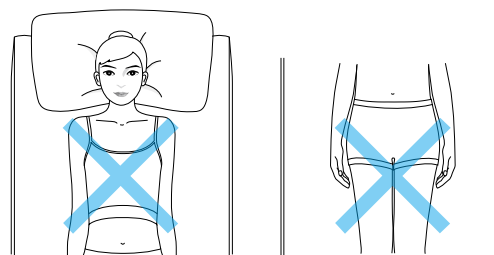
Accurate Posture

#### Measurement Posture

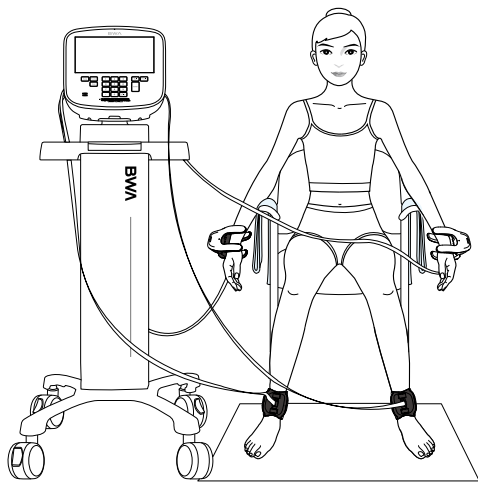
- The device must be located next to the patient's knee as shown above.
- Slightly open your arms about 15 degrees or more to keep your arms and trunk from touching each other.
- Keep your legs slightly open to shoulder width to prevent thighs from touching.
- Lay down for at least 10 - 15 minutes and start your measurement.

#### Note

- Be careful not to touch the electrode cable and body parts with the frame when measuring on an iron bed frame.
- If there is a heating mat (electric blanket) on the floor or mat, make sure to turn it off and unplug the power cable if possible.
- Disposable electrodes (BWA-ES100) may come off due to the weight of the electrode cable.



### Seated Posture



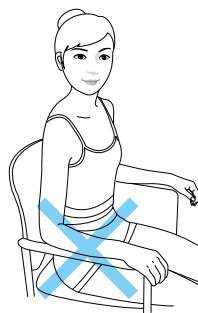
Accurate Posture

#### Measurement Posture

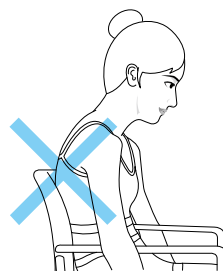
- Sit on a chair with your back straight against the backrest.
- Put a cushion behind your back.
- Relax your arms naturally as if standing.
- Spread your legs wide enough to keep your thighs from touching each other.
- Do not set your legs up at right angles but spread them slightly as in the illustration.

#### Note

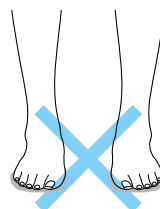
- Hold the sitting position for at least 10 - 15 minutes before measuring.
- Test after checking the seated posture correctly.
- Do not measure with the chair set directly on the floor. The measurement value may be inaccurate if your bare feet touch the floor directly. Therefore, place a mat (at least 3 cm) on the floor.
- Cover or lay insulation such as a blanket over the area touching the steel structure.
- When measurement is taken on a chair or a wheelchair with any conductive materials on the frame, any exposed frame should be covered by an insulating material such as blankets.
- Do not allow bare feet to touch the floor or the steel structure of the chair.
- Disposable electrode (BWA-ES100) may come off due to the weight of the electrode cable.



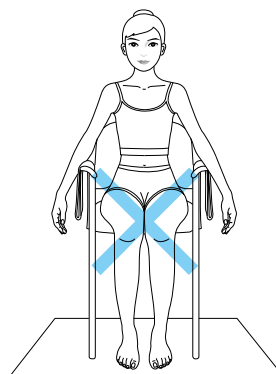
Do not put your arm on the armrest.



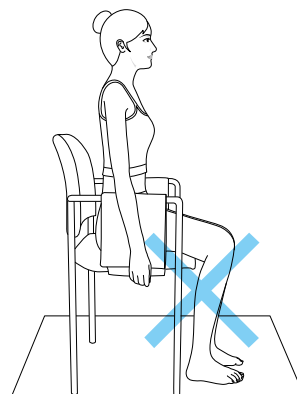
Do not bend your waist.



Do not measure directly on the floor barefoot. Measure on a mat where the current does not flow.

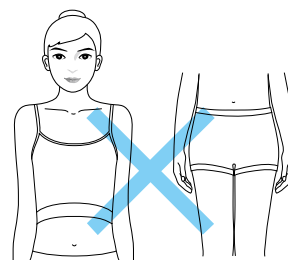
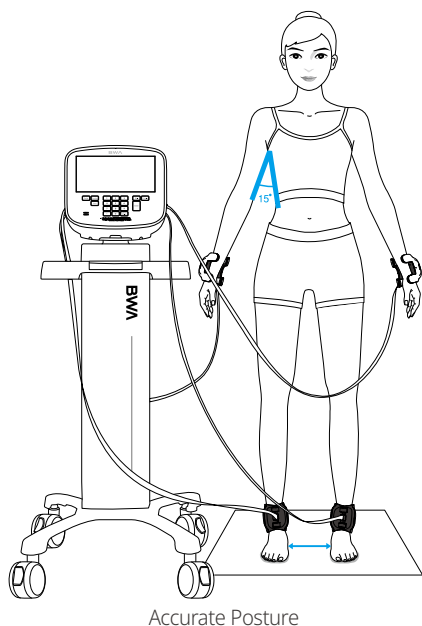


Keep thighs from touching each other.

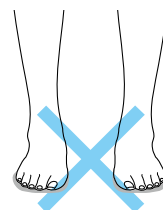


Spread legs forward as possible rather than bending them at right angles.

## Standing Posture



Keep your arms and trunk separate, and ensure your thighs do not touch each other.



Do not measure directly on the floor barefoot. Measure on a mat where the current does not flow.

### Measurement Posture

- Measure after standing for at least 10 - 15 minutes.
- Stand up facing the back side of the device.
- Step up on a mat where the current does not flow out of your bare feet onto the floor.
- Relax your arms and open them beyond 15 degrees to keep your arms and trunk from touching.
- Keep your legs slightly open to shoulder width to prevent thighs from touching.

### Note

- Do not measure with the chair set directly on the floor. The measurement value may be inaccurate if your bare feet touch the floor directly. Therefore, place a mat on the floor.
- When you are using a clamp electrode, please note that the electrode may be difficult to attach because the malleolus is raised or the ankle is too thin.
- If you have dry skin, you may not be able to measure well, or the test may not be accurate. Wipe the electrode contact area with an electrolyte tissue and measure.
- A disposable electrode may detach due to the weight of the electrode cable.
- Make sure that the electrode cables do not touch the floor when you are connecting the electrodes. Hang the cables on the cart basket.
- Hang the electrodes so they do not drag on the floor.

# 7 Maintenance and Storage

## 7.1 Precautions for Maintenance



### Caution

- Be careful not to pull the electrode cable by force.
- Always be careful not to drop or drag the electrode cable on the floor.
- Do not apply excessive force to the device.
- Be careful not to get injured by your feet when they are caught in the wheels of the device.
- Turn off the device if you have not been using it for a day or longer.
- For long-term storage, unplug the power cable from the wall outlet.
- When moving the device with the power on, be careful not to damage it.
- Do not allow any liquid substances to contact the device directly. Keep food and drinks away from the device. Substances getting inside the device can cause critical damage to the electronic components.
- Clean the exterior of the device gently with a lint-free cloth once a week. Be especially careful not to scratch the LCD screen while cleaning the device.
- Packing material and other wastes should be disposed of according to the relevant laws and regulations.
- Turn off the device first. Then turn off other devices. It can minimize electric shock to the device.
- Be careful not to drop the clamp (or adhesive) electrode on the floor. This can cause serious damage to electronic components inside the electrode.
- Do not clean the clamp (or adhesive) electrode with detergent. If liquid cleaner runs into the electrode, it may cause corrosion and device failure. Wipe the electrode gently with an alcohol-based disinfectant (e.g., 70 % ethanol) containing alcohol or saline solution.
- If you have an infectious disease or open cut, do not touch or use the device.

## 7.2 Cleaning

Use an alcohol-based disinfectant (e.g., 70 % ethanol) for 1 minute to clean the surfaces of the device.

## 7.3 Disinfecting

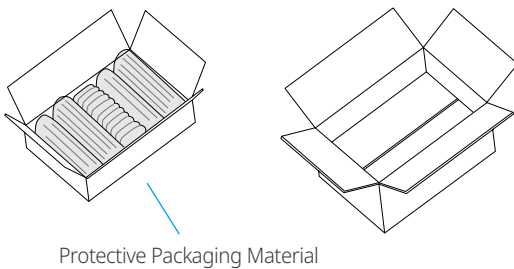
- 1 Use the alcohol-based disinfectant (e.g., 70 % ethanol).
- 2 Follow the instructions on the disinfectant.
- 3 Disinfect the device: Comply with the intervals specified in the below table.

Interval	Component
Before every measurement	Hand electrodes and Foot electrodes
After every measurement	Hand electrodes and Foot electrodes

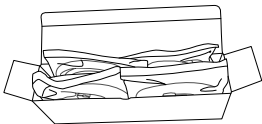
## 7.4 Repacking Instructions

Once the device is installed, avoid transporting the device. If it must be transported, and repacked it in the following sequence.

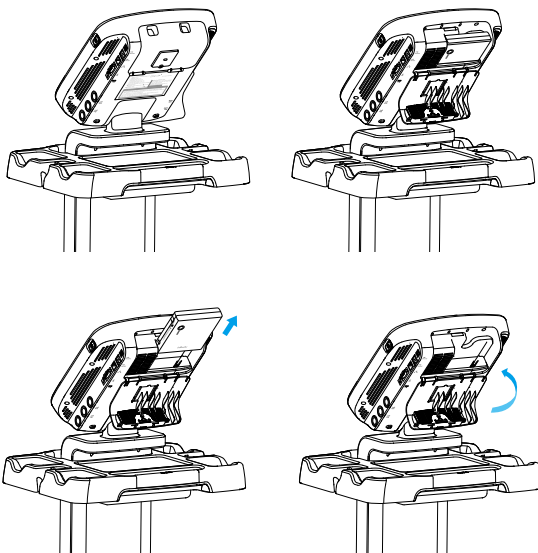
- 1 Turn off the device.
- 2 Remove the electrode cable connected.
  - For clamp electrodes, put them in the packing box and place them at the bottom of the main unit packing box.
  - For the adhesive electrode, put the empty box with PE foam on the bottom of the main unit box.



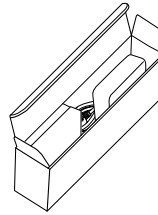
- For adhesive electrode, roll up the cable and put it in the vinyl package and then place it in the accessory box (For clamp electrode, put the empty box in the main unit box).



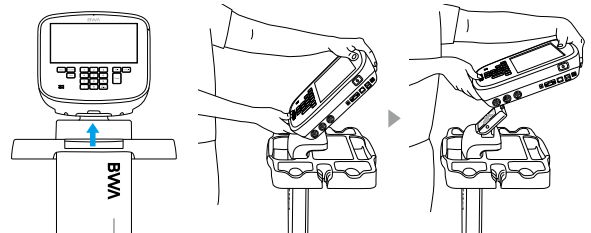
- 3 Remove the power adapter and battery.



- Put the removed power adapter, power cable, and batteries in the accessory box.



- 4 With one hand grasping the 'device' logo on the top of the device head, tilt the main unit slightly back by pressing the button on the bottom of the main unit and lift it up. (Please refer to the illustration).
- \* Be careful not to drop the main unit when you are tilting it slightly.

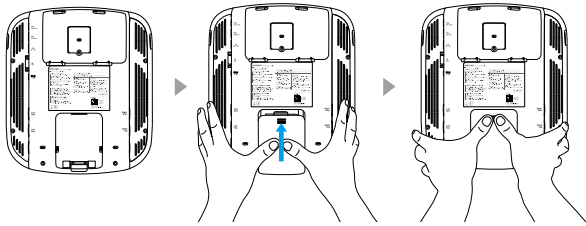


### Caution

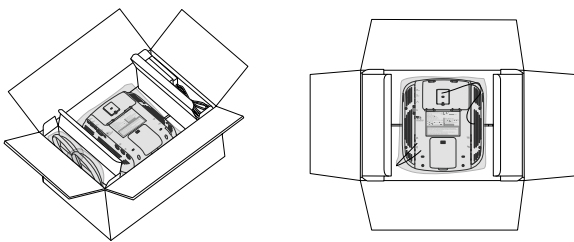
Be careful not to get your hands or other body parts caught when you are removing the main unit from the cart mount.

## Maintenance and Storage

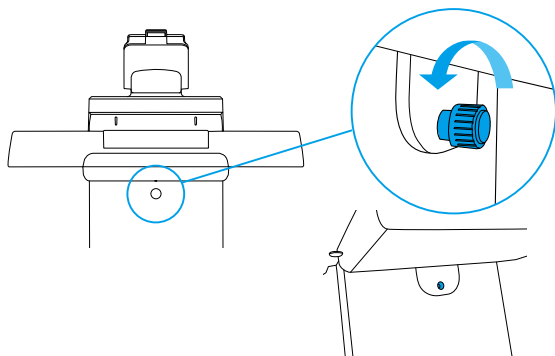
- 5 Place the separately stored cover on the cart connection part and slide it up to close it.



- 6 Wrap the device in protective vinyl and place it along with the two accessory boxes over the box containing the clamp electrodes after placing them in the air cell, and seal them as shown below.

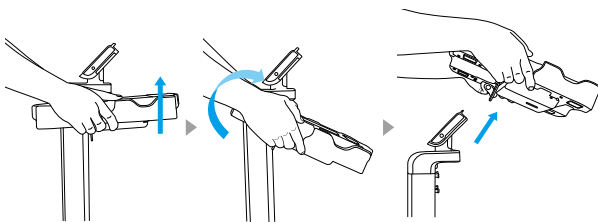


- 7 Turn the knob on the lower part of the device cart basket counterclockwise to remove it.



- 8 Hold the basket with both hands as shown below, lift the basket about 20 mm in the vertical direction of the floor, and tilt it backward to remove it so that it does not hit the top of the stand.

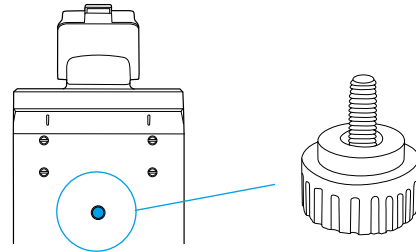
\* The removed basket should be wrapped in the protective vinyl.



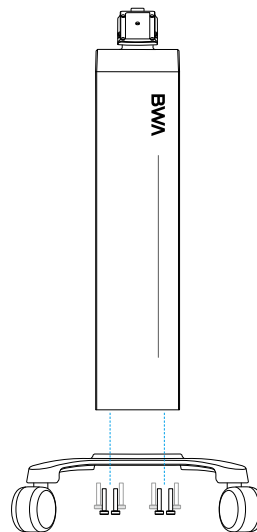
### Caution

Be careful not to get your hands or other body parts caught when you are removing the basket from the cart's upper part.

- 9 Tighten the knob that has been removed from the lower part of the cart basket by turning it clockwise on the back of the stand to keep it safe.



- 10 Turn the eight bolts counterclockwise to remove them from the lower.

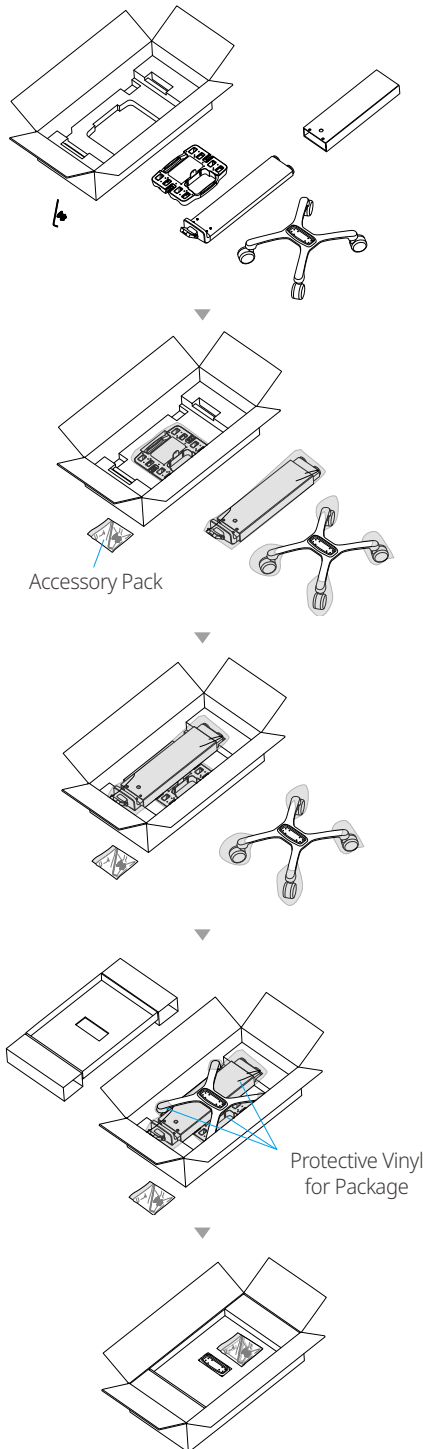


### Caution

Be careful not to get your hands or other body parts caught when you are removing the bolts. One person should hold the upper side of the stand while the other person removes the bolts at the lower side.



- 11 Put the removed lower, stand, and basket in the packaging box as shown below.



## Caution

When repacking the device, the protective packing materials provided by InBody must be used.

## 7.5 Cautions during Transportation

To transport the device safely, two people should keep the device horizontal as follows.



## 7.6 Storage Environment

The device should be transported or stored under the following conditions.

Temperature Range	-10 - 70 °C (14 - 158 °F)
Relative Humidity	10 - 80 % RH (No Condensation)
Atmospheric Pressure	50 - 106 kPa

# 8 Frequently Asked Questions (FAQ)

This section includes frequently asked questions and answers for the device.

If a problem persists even after checking below, please contact the Customer Service. For contact information, please check '01 Customer Service Information' at 'FAQ' in the Administrator Menu of the device.

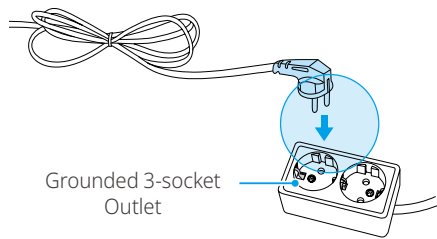
## 8.1 Regarding the Device

If a problem arises with the device, you may first attempt to check the 'FAQ' in the Administrator Menu. The device can help you diagnose and solve some problems. If your problem cannot be resolved through the 'FAQ', please refer to the possible solutions below.

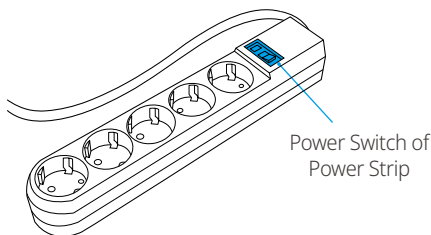
**Question:** The power does not turn on.

**Answer:**

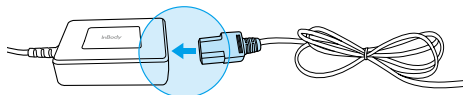
- Insert the power plug completely into a grounded 3-socket outlet.



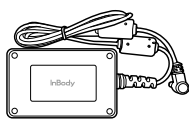
- When using a power strip, the power will not turn on when the power switch of the power strip is turned off. Check the power strip with the power cable connected.



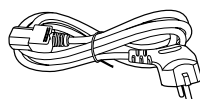
- The problem may occur if the power cord is not completely plugged into the adapter. Insert the power cord completely into the adapter.



- The problem may occur if you are using a power adapter that is not provided by InBody. Always connect a power adapter (DC 12 V, 5.0 A/3.34 A) provided by InBody.



Power Adapter



Power Cord

**Question:** The touch screen does not work well.

**Answer:**

- Calibrate the touchscreen under Settings of the Administrator Menu '23 Touchscreen Alignment'.  
\* Press firmly to optimize touchscreen response.

**Question:** How to connect with the compatible devices.

**Answer:**

- Please refer '5 Connecting Compatible Device' in this User's Manual.

## 8.2 Regarding Serious Incidents

If you are aware of a serious incident involving your device, you must report this as quickly as possible to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

The set deadlines in accordance with the MDR (EU) 2017/745 are:

**Question:** What should I do when an accident occurs when using the device?

**Answer:**

- No later than 15 calendar days after you have been informed of a serious incident.
- No later than 2 calendar days after you have been informed of a serious incident which implies a serious threat to public health.
- No later than 10 calendar days after you have been informed of a serious incident which has led to a death, or a serious deterioration in someone's state of health.

You must report a serious incident before taking corrective action to eliminate the risk, except in an emergency, in which case you must immediately carry out a field safety corrective action.

### 8.3 Regarding the InBody Test

The questions and answers regarding the InBody Test are as follows.

**Question:** Do I have to remove my socks or stockings?

**Answer:** If the test is carried out while wearing socks or stockings, the current will not flow smoothly, and the test may not be performed correctly. The skin must be in direct contact with the electrode for testing.

**Question:** Is it OK to test, wearing accessories or metallic materials?

**Answer:** If accessories or metallic objects do not touch the electrodes, they will not have a significant effect on the test result. However, it is not recommended to wear it for accurate test results.

**Question:** Are there any cases where I should not take the InBody Test?

**Answer:**

- A person who is equipped with a medical device that is essential for life support, such as a pacemaker or a patient monitoring device must not take the InBody Test. Electronic medical devices may malfunction due to the current flowing through the human body during the test.

**Question:** Can a person with metal implants in the body take the InBody Test?

**Answer:**

- A person who has a metallic material inserted in the body may have different conductivity that may affect the results of the test.

**Question:** I have limited mobility and cannot maintain proper posture for the InBody Test. How can I still be tested?

**Answer:** The test is available, but the test result may be inaccurate due to poor contacting to the electrode surface. InBody has a line of devices that conduct body composition analysis in lying posture that allow the patients to stay in bed. For more information, please contact InBody.

**Question:** Is the current flowing in the test harmless to the human body?

**Answer:** The InBody does not harm the human body because it uses micro alternative electric current. The safety of the InBody has been proven and is being used by many medical institutions because the InBody has already obtained the national and European medical certificate.

**Question:** How often should I take the InBody Test?

**Answer:**

- Testing every other week or once a month can effectively track InBody Test results for exercise prescriptions, hormonal prescriptions, obesity, and rehabilitation.
- Body composition changes can be seen on the InBody result screen and the InBody Result Sheet.
- It's good to check up often, but it's also important to keep track of your body composition changes over time.

**Question:** What are the precautionary steps to ensure the accuracy of the InBody Test?

**Answer:** Please refer to '6.1 Precautions for Test' in section '6 InBody Test' in this User's Manual.

### 8.4 Residual Risks and Undesirable Side Effects

Undesirable side effects have been identified as general allergies that can be associated with the skin contact with a metal surface during the clinical use of the device. As part of a comprehensive risk management protocol, the stainless steel coming into contact with the patient has been evaluated per ISO-10993 biocompatibility testing standards, with a focus on skin sensitization testing, and has had favorable biocompatibility test results. In addition, the following contraindication statement has been added to this IFU: Individuals with known metal allergies against stainless steel materials shall not use the device.

# 9 Classifications and Specifications

## 9.1 Classifications

Classifications	Body Composition Analyzer of Direct Segmental Multi-frequency Bioelectrical Impedance Analysis Method	
	Type of protection against electric shock	Class I
	Type of the applied parts	BF Type
	EMC Emission	Class B
	Degree of protection against water infiltration	IPX0

## 9.2 Specifications

Bioelectrical Impedance Analysis (BIA) Items	Bioelectrical Impedance (Z)	30 Impedance Measurements by Using 6 Different Frequencies (5 kHz, 50 kHz, 250 kHz, 500 kHz, 1 MHz, 3 MHz) at Each of the 5 Segments (Right Arm, Left Arm, Trunk, Right Leg, and Left Leg)
	Phase Angle ( $\emptyset$ )	15 Phase Angle Measurements by Using 3 Different Frequencies (5 kHz, 50 kHz, 250 kHz) at Each of 5 Segments (Right Arm, Left Arm, Trunk, Right Leg, and Left Leg)
	$Z_0, Z_{\infty}$	At zero frequency, current does not pass through the cell membrane, so the impedance at zero frequency can be considered to reflect extracellular water, and at infinite frequency, the current can be seen to reflect both intracellular and extracellular water.
Electrode Method	16-Point Clamp Electrodes	
Measurement Method	Direct Segmental Multi-Frequency Bioelectrical Impedance Analysis (DSM-BIA) Simultaneous Multi-Frequency Bioelectrical Impedance Analysis (SMF-BIA)	
Body Composition Calculation	No Empirical Estimation (Age and Gender does not affect the result)	

Outputs (Body Composition Result Sheet)	Result Parameters and Result Interpretation
	<ul style="list-style-type: none"> <li>Body Composition Analysis (Total Body Water, Protein, Mineral, Body Fat Mass, Fat Free Mass, Soft Lean Mass, Weight)</li> <li>Muscle-Fat Analysis (Weight, Skeletal Muscle Mass, Soft Lean Mass, Body Fat Mass)</li> <li>Obesity Analysis (Body Mass Index, Percent Body Fat)</li> <li>Segmental Lean Analysis</li> <li>ECW Ratio Analysis</li> <li>Body Composition History (Weight, Skeletal Muscle Mass, Percent Body Fat, ECW Ratio)</li> <li>InBody Score</li> <li>Whole Body Phase Angle (History)</li> <li>SMI (History)</li> <li>Visceral Fat Area (Graph)</li> <li>Body Type</li> <li>Weight Control (Target Weight, Weight Control, Fat Control, Muscle Control)</li> <li>Nutrition Evaluation (Protein, Minerals, Body Fat)</li> <li>Obesity Evaluation (BMI, Percent Body Fat)</li> <li>Body Balance Evaluation (Upper, Lower, Upper-Lower)</li> <li>Segmental Fat Analysis (Graph)</li> <li>Segmental Fat Analysis</li> <li>Body Water Composition (Total Body Water, Intracellular Water, Extracellular Water)</li> <li>Segmental Body Water Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>Segmental ICW Analysis</li> <li>Segmental ECW Analysis</li> <li>Body Composition Analysis (Total Body Water, Protein, Mineral, Body Fat Mass, Fat Free Mass, Soft Lean Mass, Weight)</li> <li>Muscle-Fat Analysis (Weight, Skeletal Muscle Mass, Body Fat Mass)</li> <li>Obesity Analysis (Body Mass Index, Percent Body Fat)</li> <li>Segmental Circumference</li> <li>Waist-Hip Ratio (Graph)</li> <li>Visceral Fat Level (Graph)</li> <li>Research Parameters (Intracellular Water, Extracellular Water, Skeletal Muscle Mass, Fat Free Mass, Basal Metabolic Rate, Waist-Hip Ratio, Waist Circumference, Visceral Fat Level, Visceral Fat Area, Obesity Degree, Bone Mineral Content, Body Cell Mass, Arm Circumference, Arm Muscle Circumference, TBW/FFM, FFMI, FMI, SMI, SMM/WT, ECM/BCM, TBW/WT, Recommended Calorie Intake per day)</li> <li>Calorie Expenditure of Exercise</li> <li>Sarcopenia Parameters (SMI, HGS)</li> <li>Blood Pressure (Systolic, Diastolic, Pulse, Mean Artery Pressure, Pulse, Rate Pressure Device)</li> <li>QR code</li> <li>Results Interpretation QR code</li> <li>Whole Body ECW Ratio</li> <li>Segmental ECW Ratio</li> <li>Whole Body Phase Angle (50 kHz)</li> <li>Segmental Body Phase Angle</li> <li>Bioelectrical Impedance Vector Analysis</li> <li>Impedance(<math>Z_0, Z_{\infty}</math>)</li> <li>Impedance (Each segment and each frequency)</li> </ul>

<b>Outputs (Body Composition Result Sheet for Children)</b>	<p>Result Parameters and Result Interpretation</p> <ul style="list-style-type: none"> <li>• Body Composition Analysis (Total Body Water, Protein, Mineral, Body Fat Mass, Weight)</li> <li>• Muscle-Fat Analysis (Weight, Skeletal Muscle Mass, Body Fat Mass)</li> <li>• Obesity Analysis (Body Mass Index, Percent Body Fat)</li> <li>• Growth Graph (Height, Weight, BMI)</li> <li>• Body Composition History (Height, Weight, Skeletal Muscle Mass, Percent Body Fat)</li> <li>• Whole Body Phase Angle (History)</li> <li>• SMI (History)</li> <li>• Growth Score</li> <li>• Weight Control (Target Weight, Weight Control, Fat Control, Muscle Control)</li> <li>• Nutrition Evaluation (Protein, Minerals, Body Fat)</li> <li>• Obesity Evaluation (BMI, Percent Body Fat)</li> <li>• Body Balance Evaluation (Upper, Lower, Upper-Lower)</li> <li>• Segmental Lean Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Segmental Body Water Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Research Parameters (Intracellular Water, Extracellular Water, Skeletal Muscle Mass, Fat Free Mass, Basal Metabolic Rate, Child Obesity Degree, Bone Mineral Content, Body Cell Mass, FFMI, FMI, SMI, SMM/WT, ECM/BCM, TBW/WT)</li> <li>• Sarcopenia Parameters (SMI, HGS)</li> <li>• Blood Pressure (Systolic, Diastolic, Pulse, Mean Artery Pressure, Pulse, Rate Pressure Device)</li> <li>• QR code</li> <li>• Results Interpretation QR code</li> <li>• Whole Body Phase Angle (50 kHz)</li> <li>• Segmental Phase Angle (5 kHz, 50 kHz, 250 kHz: Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Impedance Graph (Each segment and each frequency)</li> </ul>	<p><b>Outputs (Body Water Result Sheet)</b></p> <p>Results and Interpretations</p> <ul style="list-style-type: none"> <li>• Body Water Composition (Total Body Water, Intracellular Water, Extracellular Water)</li> <li>• ECW Ratio Analysis (ECW Ratio)</li> <li>• Segmental Body Water (Graph, Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Segmental ECW Ratio Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Body Water Composition History (Weight, Total Body Water, Intracellular Water, Extracellular Water, ECW Ratio)</li> <li>• InBody Score</li> <li>• Whole Body Phase Angle (History)</li> <li>• SMI (History)</li> <li>• Visceral Fat Area (Graph)</li> <li>• Body Type (Graph)</li> <li>• Weight Control</li> <li>• Nutrition Evaluation</li> <li>• Obesity Evaluation (BMI, Percent Body Fat)</li> <li>• Body Balance Evaluation</li> <li>• Segmental Fat Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Body Water Composition (Total Body Water, Intracellular Water, Extracellular Water)</li> <li>• Segmental Body Water Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Segmental ICW Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Segmental ECW Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Body Composition Analysis (Protein, Minerals, Body Fat Mass, Fat Free Mass, Bone Mineral Content)</li> <li>• Muscle-Fat Analysis (Weight, Skeletal Muscle Mass, Soft Lean Mass, Body Fat Mass)</li> <li>• Obesity Analysis (Body Mass Index, Percent Body Fat)</li> <li>• Segmental Circumference (Neck, Chest, Abdomen, Hip, Right Arm, Left Arm, Right Thigh, Left Thigh)</li> <li>• Waist-Hip Ratio (Graph)</li> <li>• Visceral Fat Level (Graph)</li> <li>• Research Parameters (Intracellular Water, Extracellular Water, Skeletal Muscle Mass, Fat Free Mass, Basal Metabolic Rate, Waist-Hip Ratio, Waist Circumference, Visceral Fat Level, Visceral Fat Area, Obesity Degree, Bone Mineral Content, Body Cell Mass, Arm Circumference, Arm Muscle Circumference, TBW/FFM, FFMI, FMI, SMI, SMM/WT, ECM/BCM, TBW/WT, Adjusted FFM, Adjusted SMI, Recommended calorie intake per day)</li> <li>• Calorie Expenditure of Exercise</li> <li>• Sarcopenia Parameters (SMI, HGS)</li> <li>• Blood Pressure (Systolic, Diastolic, Pulse, Mean Artery Pressure, Pulse, Rate Pressure Device)</li> <li>• QR code</li> <li>• Results Interpretation QR code</li> <li>• Whole Body Phase Angle (50 kHz)</li> <li>• Segmental Phase Angle (5 kHz, 50 kHz, 250 kHz: Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• BIVA (Bioelectrical Impedance Vector Analysis)</li> <li>• Impedance (<math>Z_0</math>, <math>Z_{\infty}</math>)</li> <li>• Impedance (Each segment and each frequency)</li> </ul>
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## Classifications and Specifications

<b>Outputs (Evaluation Result Sheet)</b>	<ul style="list-style-type: none"> <li>• Bioelectrical Impedance Vector Analysis (BIVA)</li> <li>• Whole Body Phase Angle_50 kHz (PhA, Ø) (M ± SD, Percentile Graph)</li> <li>• Segmental Phase Angle_50 kHz (PhA, Ø) Balance</li> <li>• Whole Body ECW Ratio (ECW/TBW) (M ± SD, Percentile Graph)</li> <li>• ECW Ratio Balance (ECW/TBW)</li> <li>• TBW/WT (%) (M ± SD, Percentile Graph)</li> <li>• Percent Body Fat (PBF, %) (M ± SD, Percentile Graph)</li> <li>• Skeletal Muscle Mass and ECW Ratio (SMM, % &amp; ECW/TBW)</li> <li>• Skeletal Muscle mass Index and ECW Ratio (SMI, kg/m<sup>2</sup> &amp; ECW/TBW)</li> <li>• Skeletal Muscle mass Index (SMI, kg/m<sup>2</sup>) (M ± SD, Percentile Graph)</li> <li>• Fat Free Mass Index (FFMI, kg/m<sup>2</sup>) (M ± SD, Percentile Graph)</li> <li>• Lean Mass (LM) Balance</li> <li>• Fat Mass Index (FMI, kg/m<sup>2</sup>) (M ± SD, Percentile Graph)</li> <li>• Skeletal Muscle Mass divided by WT (SMM/WT, %) (M ± SD, Percentile Graph)</li> <li>• Visceral Fat Area (VFA, cm<sup>2</sup>) (M ± SD, Percentile Graph)</li> <li>• Waist Hip Ratio (WHR) (M ± SD, Percentile Graph)</li> <li>• Weight (kg) (M ± SD, Percentile Graph)</li> <li>• Body Mass Index (BMI, kg/m<sup>2</sup>) (M ± SD, Percentile Graph)</li> <li>• Body Cell Mass (BCM, kg) (M ± SD, Percentile Graph)</li> <li>• ECM/BCM (M ± SD, Percentile Graph)</li> <li>• Outer Circumference (cm)</li> </ul>	<b>Outputs (Comparison Result Sheet)</b> <ul style="list-style-type: none"> <li>• Weight, Skeletal Muscle Mass, Body Fat Mass, ECW Ratio, Phase Angle: Whole Body (Today, Recent, Difference)</li> <li>• Lean Mass, ECW Ratio, Phase Angle: Right Arm, Left Arm, Trunk, Right Leg, Left Leg (Today, Recent, Difference)</li> <li>• Cole-Cole Plot (Standard median curve, Today's Results, Previous Results)</li> </ul>
<b>Outputs (Research Result Sheet)</b>	<ul style="list-style-type: none"> <li>• Body Composition Summary (Fat Free Mass, Fat Mass, Intracellular Water, Extracellular Water, Total Body Water, ECW/TBW: Whole Body, Right Arm, Left Arm, Trunk, Right Leg, Left Leg, Whole Body Weight)</li> <li>• Body Composition Analysis (Lean Mass, ICW, ECW, Fat Mass, ECW/TBW): Whole Body, Right Arm, Left Arm, Trunk, Right Leg, Left Leg</li> <li>• Research Parameters (BMI, Percent Body Fat, Skeletal Muscle Mass, Soft Lean Mass, Protein, Minerals, Bone Mineral Content, Basal Metabolic Rate, Waist-Hip Ratio, Waist Circumference, Visceral Fat Area, Obesity Degree, Body Cell Mass, Arm Circumference, Arm Muscle Circumference, TBW/FFM, FFMI, FMI, SMI)</li> <li>• Whole Body Phase Angle (50 kHz)</li> <li>• Segmental Phase Angle (5 kHz, 50 kHz, 250 kHz: Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Impedance Graph (Each segment and each frequency)</li> </ul>	<b>Outputs (Thermal Result Sheet)</b> <ul style="list-style-type: none"> <li>• Personal Information</li> <li>• Muscle, Fat Analysis (Weight, Skeletal Muscle Mass, Soft Lean Mass, Body Fat Mass)</li> <li>• Obesity Analysis (BMI, Percent Body Fat)</li> <li>• Segmental Lean Analysis</li> <li>• Segmental ECW Ratio Analysis</li> <li>• Body Water Composition (Total Body Water, Intracellular Water, Extracellular Water)</li> <li>• Body Composition Analysis (Protein, Minerals, Body Fat Mass, Fat Free Mass, Bone Mineral Content)</li> <li>• Segmental Body Water Analysis</li> <li>• Segmental Fat Analysis</li> <li>• Segmental Lean &amp; ECW Ratio Analysis (Assessment)</li> <li>• Water Control</li> <li>• Research Parameters (Intracellular Water, Extracellular Water, Wholebody ECW Ratio, Skeletal Muscle Mass, Protein, Mineral, Bone Mineral Content, Body Cell Mass, Waist-Hip Ratio, Waist Circumference, Visceral Fat Area, Obesity Degree, Basal Metabolic Rate, Arm Circumference, Arm Muscle Circumference, FFMI, FMI, SMI, SMM/WT, TBW/FFM, ECM/BCM, TBW/WT)</li> <li>• Whole Body Phase Angle (50 kHz: Right side of the body)</li> <li>• Segmental Body Phase Angle (5 kHz, 50 kHz, 250 kHz: Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Impedance (Each segment and each frequency)</li> </ul>

## Functional Specifications

Optional Items	Stadiometer, Blood pressure monitor, Thermal Printer (TP100), Serial Distributor (SD400), InGrip, BWA2.0S Portable Case, BWA2.0S Adhesive Electrodes and Tape and BWA2.0S Battery Pack from InBody
Logo Display	Name, Address and Content Information can be shown on the Result Sheet
Digital Results	LCD Screen, LookinBody Web, LookinBody
Types of Result Sheets	Body Water Result Sheet, Body Composition Result Sheet, Evaluation Result Sheet, Research Result Sheet, Comparison Result Sheet, Body Composition Result Sheet for Children, and Thermal Result Sheet
Voice Guidance	Audible guidance for test in progress and test complete
Data Storage	Saves up to 100,000 measurements (When the ID is entered)
Administrator Menu	Setup: Configure settings and manage data FAQ: Additional information to help use the device
USB Thumb Drive	Copy, backup, or restore the LookinBody test data (data can be viewed on Excel or LookinBody)
Barcode Reader	Member ID will be automatically inputted when the Barcode is scanned
InBodyBAND Series Recognition Function	Recognizes the InBodyBAND series of the subject and automatically inputs personal information to the device
Fingerprint Recognition Function	Recognizes the fingerprint of the measurer and automatically inputs personal information to the device
Backup data	Backup data from the device with an InBody USB
QR code	By scanning QR codes, you can send and verify the InBody results.

\* QR code is a registered trademark of DENSO WAVE INCORPORATED.

## Other Specifications

Applied Rating Current	300 $\mu$ A ( $\pm$ 30 $\mu$ A)		
Adapter	DELTA	Power Input	AC 100 - 240 V, 50 - 60 Hz, 1.5 - 0.75A
		Power Output	DC 12 V $\approx$ , 5.0 A
	Mean Well	Power Input	AC 100 - 240 V, 50 / 60 Hz, 1.0 - 0.5A
		Power Output	DC 12 V $\approx$ , 3.34 A
Display Type	1280 x 800 10.1inch Color TFT LCD		
Internal Interface	Touchscreen, Keypad		
External Interface	RS-232C 4 EA, USB Host 2 EA, USB Slave 1 EA, LAN (10/100 T) 1 EA, Bluetooth 1 EA, Wi-Fi (2.4 G/5 G) 1 EA		
Compatible Printer	Laser/Inkjet PCL 3 or above and SPL		
Dimension	322 (W) $\times$ 282 (L) $\times$ 81.5 (H): mm 12.7 (W) $\times$ 11.1 (L) $\times$ 3.2 (H): in		
Device Weight	2.8 kg (6.17 lb, BWA2.0S only)		
Test Duration	About 30 seconds for Medical Mode, about 60 seconds for Research Mode		
Operation Environment	10 - 40 $^{\circ}$ C (50 - 104 $^{\circ}$ F), 30 - 75 % RH, 70 - 106 kPa		
Storage Environment	-10 - 70 $^{\circ}$ C (14 - 158 $^{\circ}$ F), 10 - 80 % RH, 50 - 106kPa (No Condensation)		
Weight Range	2 - 250 kg (4.4 - 551.2 lb)		
Age Range	3+ years		
Height Range	95 - 220 cm (3 ft 1.4 in - 7 ft 2.6 in)		




\* Specifications are subject to change without prior notice.

\* This device is a medical device. Please read the WARNINGS and PRECAUTIONS before you use it.









### 9.3 Symbols Used on the Device







#### Indicators

	9-pin Serial Port (Female, RS-232C)
	LAN Port (10/100T Base)
	USB Port (HOST, SLAVE)

#### Safety Symbols

	High Voltage
	Warning, Caution
	BF Type Device
	Power Adapter
	Power On
	Power Off

#### Etc., Symbols

	Manufacturer
	Authorized Representative in the European Community
	Serial Number
	Direct Current
	Unique Device Identification
	Do Not Disassemble, Adjust, or Repair the Product Arbitrarily



#### Caution

- This device is a Class B electromagnetic wave-compatible device and can be used in all areas.
- There is a possibility of radio interference during the operation of the radio device, and it may not be used in areas where safety is of concern.
- Bluetooth uses the same frequency band as many electronic devices, which can cause radio interference between the devices.
- The user should be responsible for illegal use or data transmission problems caused by using Bluetooth.



Disposal of old Electrical & Electronic Devices (Application in the European Union and other European countries with separate collection system.) This symbol indicates that this device shall not be treated as household waste. Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic devices. By ensuring this device is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this device. For more detailed information about recycling this device. Please refer to local governing ordinances and recycling plans.



## 9.4 Guidance and Manufacturer's Declaration

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should ensure that it is used in such an environment.

### Electromagnetic Emissions

Emissions Test	Compliance	Electromagnetic Environment
RF emissions CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic device.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Class A	The device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

### Electromagnetic Immunity

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Electrostatic discharge IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	Floors should be made of wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 % is recommended.
Electrical fast transient/ burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	The main power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 0.5 kV, ± 1 kV differential mode ± 0.5 kV, ± 1 kV, ± 2 kV common mode	± 0.5 kV, ± 1 kV differential mode ± 0.5 kV, ± 1 kV, ± 2 kV common mode	The main power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % $U_T$ (100 % dip in $U_T$ ) for 0.5/1 cycles 70 % $U_T$ (30 % dip in $U_T$ ) for 25/30 cycles 0 % $U_T$ (100 % dip in $U_T$ ) for 250/300 cycles	0 % $U_T$ (100 % dip in $U_T$ ) for 0.5/1 cycles 70 % $U_T$ (30 % dip in $U_T$ ) for 25/30 cycles 0 % $U_T$ (100 % dip in $U_T$ ) for 250/300 cycles	The main power quality should be that of a typical commercial or hospital environment. If the user of this device requires continued operation during power mains interruptions, it is recommended that this device be powered from an uninterruptible power supply or a battery.
Power frequency (50 / 60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a commercial or hospital environment.

### Recommended Separation Distances between Portable and Mobile Communication Devices

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication devices (transmitters) and the device, as recommended below, according to the maximum output power of the communication devices.


Rated maximum output power of the transmitter [W]	Separation distance according to frequency of transmitter [m]	
	IEC 60601-1-2: 2014	
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 2.7 GHz $d = 2.0\sqrt{P}$
0.01	0.12	0.20
0.1	0.38	0.63
1	1.2	2.0
10	3.8	6.3
100	12	20

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

## Electromagnetic Immunity

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Conducted RF IEC 61000-4-6	3 V 150 kHz to 80 MHz	3 V	Portable and mobile RF communications device should not be used closer to any part of the Ultrasound System, including cables, than the recommended separation distance. This is calculated using the equation applicable to the frequency of the transmitter.
	6 Vrms 150 kHz – 80 MHz In ISM bands <sup>1</sup> amateur radio bands Bands <sup>2</sup>	6 V	Recommended separation distance $d = 1.2 \sqrt{P}$
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	IEC 60601-1-2:2014 $d = 2.0 \sqrt{P}$ 80 MHz to 2.7 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, <sup>3</sup> should be less than the compliance level in each frequency range. <sup>4</sup> Interference may occur in the vicinity of the device marked with the following symbol:
			

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations, Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

1. The ISM (Industrial, Scientific and Medical) bands between 150 kHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz.
2. The amateur radio bands between 0.15 MHz and 80 MHz are 1.8 MHz to 2.0 MHz, 3.5 MHz to 4.0 MHz, 5.3 MHz to 5.4 MHz, 7 MHz to 7.3 MHz, 10.1 MHz to 10.15 MHz, 14 MHz to 14.2 MHz, 18.07 MHz to 18.17 MHz, 21.0 MHz to 21.4 MHz, 24.89 MHz to 24.99 MHz, 28.0 MHz to 29.7 MHz and 50.0 MHz to 54.0 MHz.
3. Field strength from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcasts, and TV broadcasts, cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the device.
4. When the frequency range exceeds 150 kHz - 80 MHz, the electric field strength should be not higher than 3 V/m.

## Classifications and Specifications

### Electromagnetic Emissions

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. A portable RF communications device should be used no closer than 30 cm (12 inches) to any part of the device. Otherwise, the performance of the device could be impaired.

Immunity Test	Band	Service <sup>5</sup>	Modulation <sup>6</sup>	IEC60601 Test Level	Compliance Level
Proximity fields from RF wireless Communications IEC61000-4-3	380 - 390 MHz	TETRA 400	Pulse modulation 18 Hz	27 V/m	27 V/m
	430 - 470 MHz	GMRS 460 FRS 460	FM <sup>7</sup> $\pm$ 5 kHz deviation 1 kHz sine	28 V/m	28 V/m
	704 - 787 MHz	LTE Band 13, 17	Pulse modulation 217 Hz	9 V/m	9 V/m
	800 - 960 MHz	GSM800:900 TETRA 800 iDEN 820 CDMA 850 LTE Band 5	Pulse modulation 18 Hz	28 V/m	28 V/m
	1700 - 1990 MHz	GSM 1800 CDMA 1900 GSM 1900 DECT LTE Band 1,2,4,25 UMTS	Pulse modulation 217 Hz	28 V/m	28 V/m
	2400 - 2570 MHz	Bluetooth WLAN 802.11b/g/n RFID 2450 LTE Band	Pulse modulation 217 Hz	28 V/m	28 V/m
	5100 - 5800 MHz	WLAN 802.11a/n	Pulse modulation 217 Hz	9 V/m	9 V/m
NOTE	If it is necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1m. The 1m test distance is permitted by IEC 61000-4-3.				

5. For some services, only the uplink frequencies are included.

6. The carrier shall be modulated using a 50 % duty cycle square wave signal.

7. As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be the worst case.



Follow the instruction for use

*Suivez les instructions d'utilisation*



### WARNING

- Electric shock hazard – Do not dismantle.
- Dismantling will void the warranty.
- Do not touch signal input, signal output or other connectors, and the patient simultaneously.
- External devices intended for connection to signal input, signal output, or other connectors shall comply with relevant IEC Standards (e.g., IEC60950 for IT devices and IEC60601-1 series for medical electrical devices). In addition, all such combination-system shall comply with the standard IEC60601-1 and/or IEC60601-1-1 harmonized national standards or the combination. If, in doubt, contact a qualified technician or your local representative.
- Do not position so that it is difficult to operate the disconnection device.



### AVERTISSEMENT

- *Risque de choc électrique - ne pas démonter.*
- *Le démontage annulera la garantie.*
- *Ne touchez pas l'entrée de signal, la sortie de signal ou d'autres connecteurs et le patient simultanément.*
- *L'équipement externe destiné à être connecté à l'entrée de signal, à la sortie de signal ou à d'autres connecteurs doit être conforme à la norme IEC pertinente (par exemple, IEC60950 pour les équipements informatiques et la série IEC60601-1 pour les équipements électriques médicaux). De plus, tous ces systèmes combinés doivent être conformes à la norme nationale harmonisée IEC60601-1 et/ou IEC60601-1-1 ou à la combinaison. En cas de doute, contactez un technicien qualifié ou votre représentant local.*
- *Ne pas positionner de telle sorte qu'il soit difficile d'actionner le dispositif de déconnexion.*



### DANGER

- Do not use this device with an electrical medical device such as a pacemaker.
- *Ne pas utiliser cet équipement avec des appareils médicaux électriques comme un stimulateur cardiaque.*



### CAUTION

- Do not spray any liquid substance directly onto the device.
- *Ne pulvérisez aucune substance liquide directement sur l'appareil.*



### CAUTION

- No excessive force on the shoulder joint.
- *Ne pas appliquer de force excessive sur les bars articulés.*

## 9.5 Key Performance of the Device

The key performance of the device has been established as the correlation coefficient ratio (R) of Fat Free Mass (FFM), which is numerically defined as the R value shall be  $\geq 0.80$  (80 %).

### Clinical Benefit

Using the device with the probability of harm occurring is more beneficial than the severe harm that might occur from not using the Body Composition Analyzer of the device. The Body Composition Analyzer of the device provides clinical benefits to support the aforementioned intended use, as the device is mainly used for healthy and acute or chronically ill populations in hospitals, medical practices, and inpatient care facilities in accordance with national regulations. It can be used to assist in the assessment of nutritional status, obesity and muscle balance. Body composition analysis is important in preventive medicine since it provides the basis of appropriate physical activity and dietary habits for improving personal daily routines. It can also be usefully applied to follow-up studies of patients treated for various diseases.

Inaccurate measurements of the Fat Free Mass (FFM) could have a negative impact on further use of the body composition analysis data gathered from the clinical use of the device.





