

# InBody s10

## User's Manual

### **InBody S10 User's Manual for Measurement Guide and Setup**

Thank you for purchasing the InBody S10. This user's manual describes all the features of the InBody S10. Please read before use and keep it in a safe place. By following the manual instructions, you will be able to use the InBody S10 more safely and effectively.

## 1. Intended use

InBody S10 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 routine. It can be also usefully applied to follow-up studies of patients treated for various diseases.

## 2. Indications for Use

- 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 have 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 S10 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 S10.
- \* The InBody S10 is not used in 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 explanation of words on screen.
2. Knowledge:
  - At least, the user needs to be able to understand explanation of words on screen.
  - No maximum.
3. Language understanding:
  - Basic language: English
  - Languages are supported as specified in the marketing need.
4. Experience:
  - No minimum and maximum.

### **5. Intended patient population and user profile**

1. Age: 3+ years
2. Weight: 2 - 250 kg (4.4 - 551.2 lb)
3. Health: Examinee need to be able to stand for 1 - 2minutes.
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)

## Please note the important information below before reading this 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

Referring to notes can help improve equipment use.

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Visit our website (inbody.com) to view and download further information about the functions of the InBody S10, the explanation of results output, and more. InBody Co., Ltd. reserves the right to modify the appearance, specifications, and etc. of the InBody S10 to improve the quality of the product, without prior notice for reasons of performance improvement.

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# InBody s10

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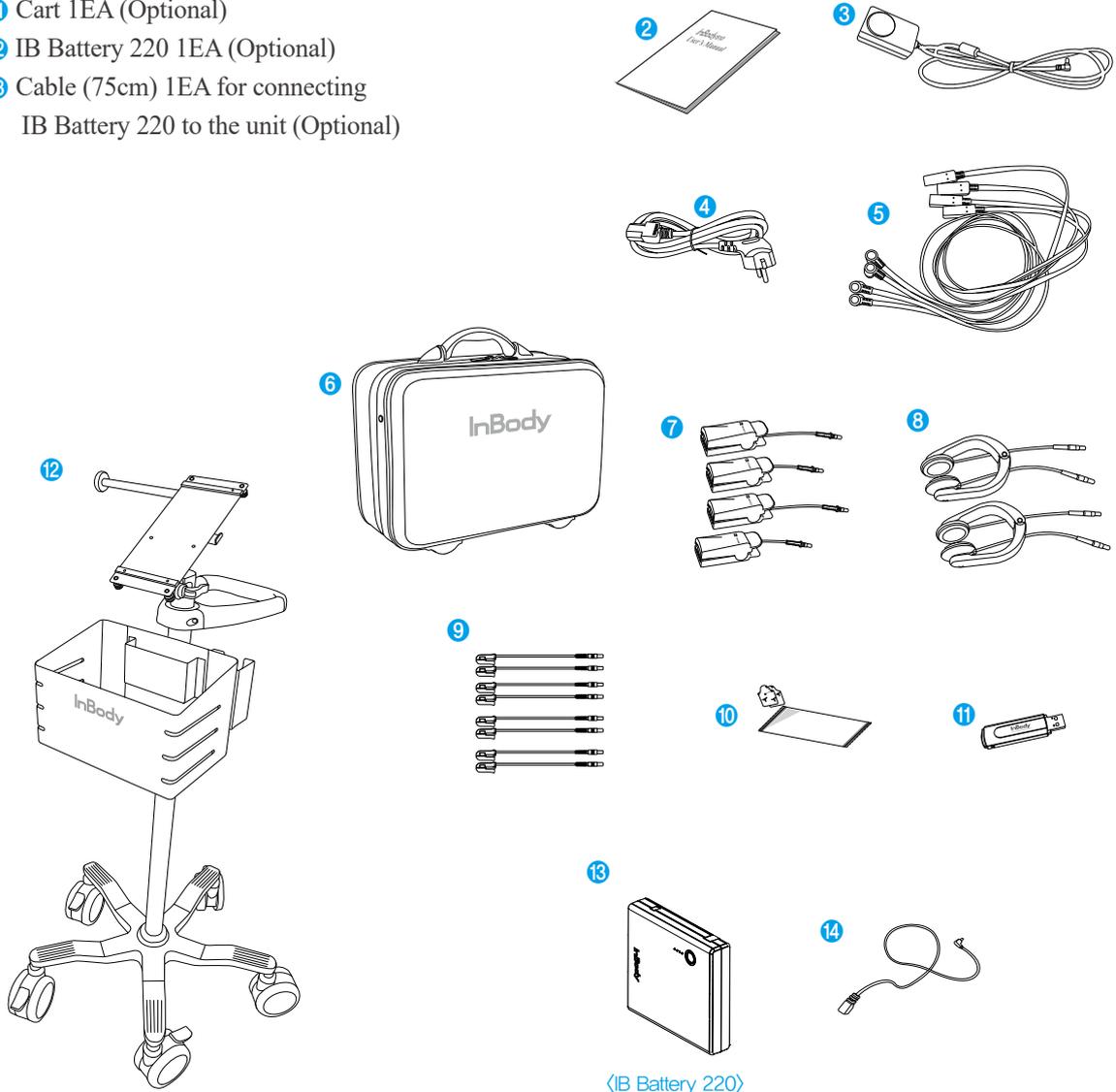
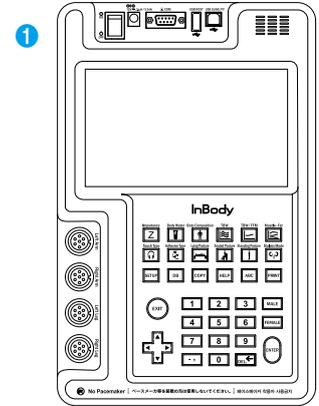
# I. Installation & Maintenance

## A. Contents of the Box

When opening the box, make sure all of the following items are inside:

### 1. Included Items

- ① InBody S10 1EA
- ② User's Manual 1EA
- ③ Adapter (12V, 3.4A/3.34A) 1EA
- ④ Power Cord (AC 125V, 10A, 1.8m) 1EA
- ⑤ Electrode Cable 4EA
- ⑥ InBody Carrying Bag 1EA
- ⑦ Touch Type hand electrode 4 units
- ⑧ Touch Type foot electrode 2 units
- ⑨ Adhesive Type electrode 8 units
- ⑩ EKG Adhesives
- ⑪ USB Thumb Drive
- ⑫ Cart 1EA (Optional)
- ⑬ IB Battery 220 1EA (Optional)
- ⑭ Cable (75cm) 1EA for connecting IB Battery 220 to the unit (Optional)



 **Caution**

- To prevent physical shock, use InBody's packing material when shipping or transporting the equipment. Refer to this Chapter I, Section D: "Transportation."

 **Note**

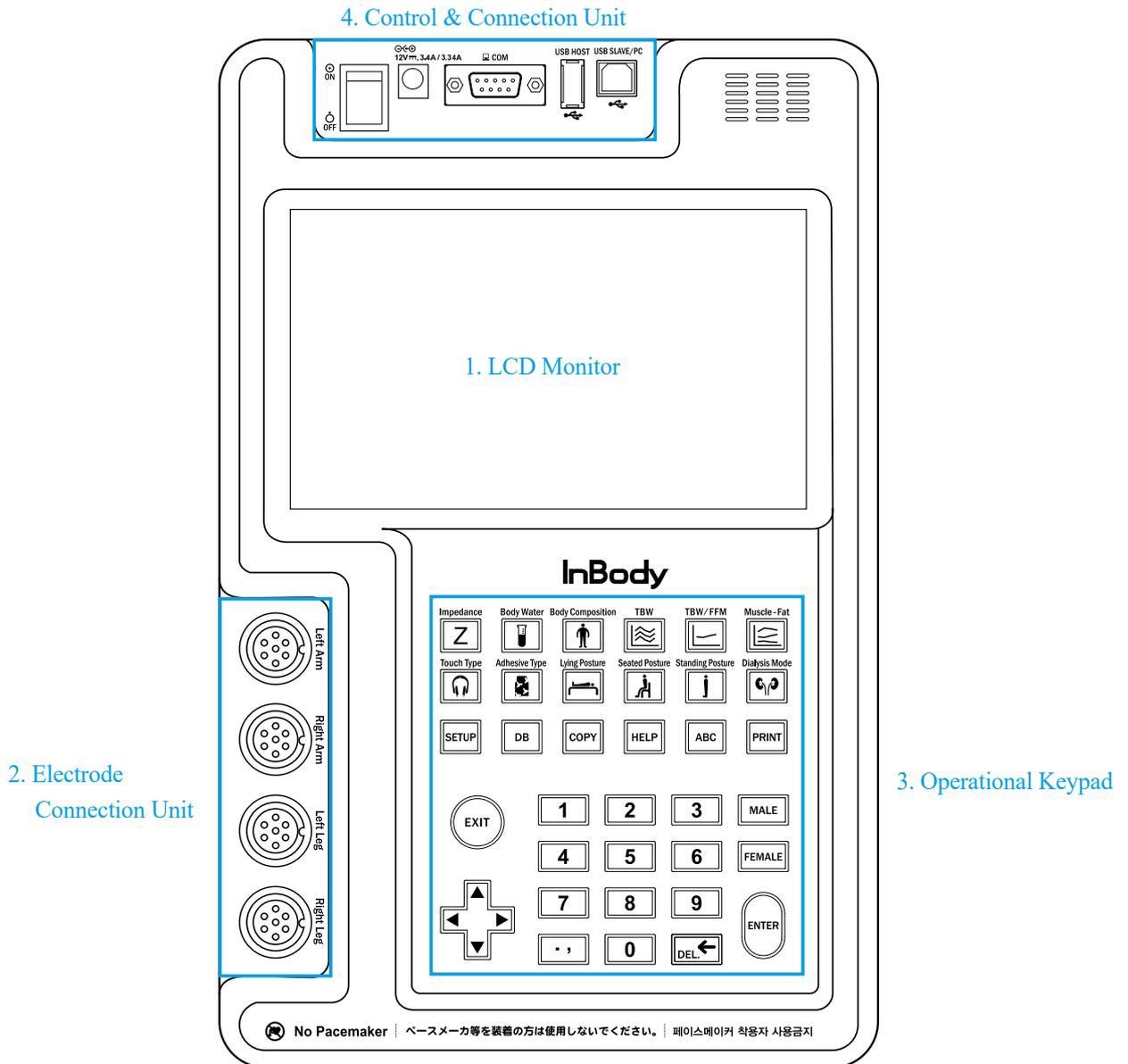
- Save the wrapping material after unpacking in the event of relocation.

## B. Exterior & Functions

Individual part identification and functions with schematic sketches are provided below.

Please inspect each component of the InBody S10 before installation to ensure there are no scratches or damage.

1. LCD Monitor
2. Electrode Connection Unit
3. Operational Keypad
4. Control & Connection Unit



### Warning

- Do not dismantle the equipment or open the back cover. Internal parts are not for customer use and may cause electric shock. If the equipment is dismantled, the warranty is void, and service costs will be charged.

### 1. LCD Monitor

Touch-screen LCD. This displays the analysis procedure, messages and results.

### 2. Electrode Connection Unit

Connects electrode cables into the InBody S10's internal circuit.

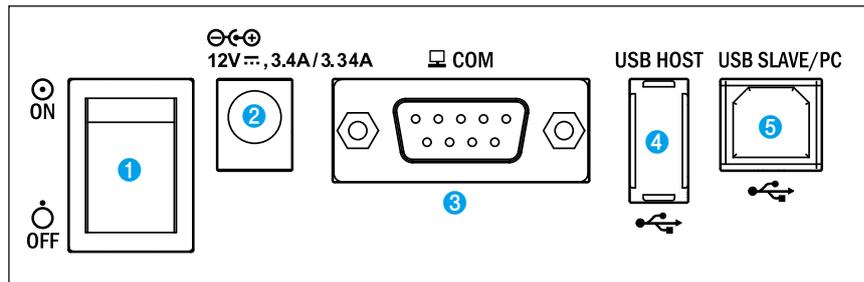
### 3. Operational Keypad

The keypad is divisible into input buttons and function buttons.

The buttons are used to input data required for body composition analysis, set up the operating environment or to print out test results.

### 4. Control & Connection Unit

Connects to peripherals such as a PC or a printer for data transmission.



#### 1 Power Switch

Powers the InBody S10 on/off.

#### 2 Power Input Port

Use to connect the power adapter.

#### 3 9 Pin Serial Port, Female (RS-232C)

Use to connect optional devices.

SD400(Serial Distributor) provided by InBody is for the connection of several optional devices.

#### 4 USB Host Port

Use to interface with a USB printer or a USB storage device.

#### 5 USB Slave Port

Use to connect with a PC.

### Warning

- Do not drop any food or liquid on the equipment. It may affect the electrical parts in the equipment or cause damage.
- Only use the adapter provided by InBody.

### Note

- When you use the adapter cable, insert the adapter cable tightly into the InBody S10.
- Including the optional equipment, only the peripherals provided by InBody can be connected to the InBody S10. For any inquiry about peripherals, contact InBody.

## C. Installation Instructions

### 1. Workplace Requirements

Location: Indoors only.

Any outdoor area where the equipment is to be located should meet all the conditions below.

#### (1) Operation Condition

|                            |                          |
|----------------------------|--------------------------|
| Temperature range          | 10 - 40 °C (50 - 104 °F) |
| Relative humidity          | 30 - 75%                 |
| Atmospheric pressure range | 70 - 106kPa              |

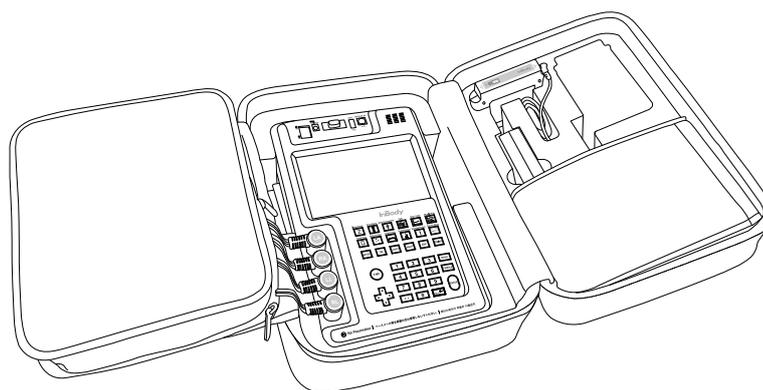
#### (2) Adapter

|              |  |                                |
|--------------|--|--------------------------------|
| Manufacturer | BridgePower Corp.                      | Mean Well Co, Ltd              |
| Model        | BPM040S12F07                           | GSM 40A12-P11R                 |
| Power Input  | AC 100 - 240V, 50/60Hz, 1.2A(12A-0.6A) | AC 100-240V, 50/60Hz, 1.0-0.5A |
| Power Output | DC 12V, 3.4A                           | DC 12V, 3.34A                  |

- (3) Connect it to an outlet with a grounding terminal. Equipment may be damaged or malfunction due to electrical shock, which may result in inaccurate test results.
- (4) If InBody S10 experiences electrical interference, the test results may be inaccurate. Do not install near fluorescent lamps, large AC motor equipment (running machines, refrigerators, air conditioners, compressors), high-frequency thermal therapy devices, and electric heaters.
- (5) Do not connect multiple peripherals to the same outlet. If it is plugged into a power outlet such as an electrical appliance, disconnect it and plug it into a different power outlet.

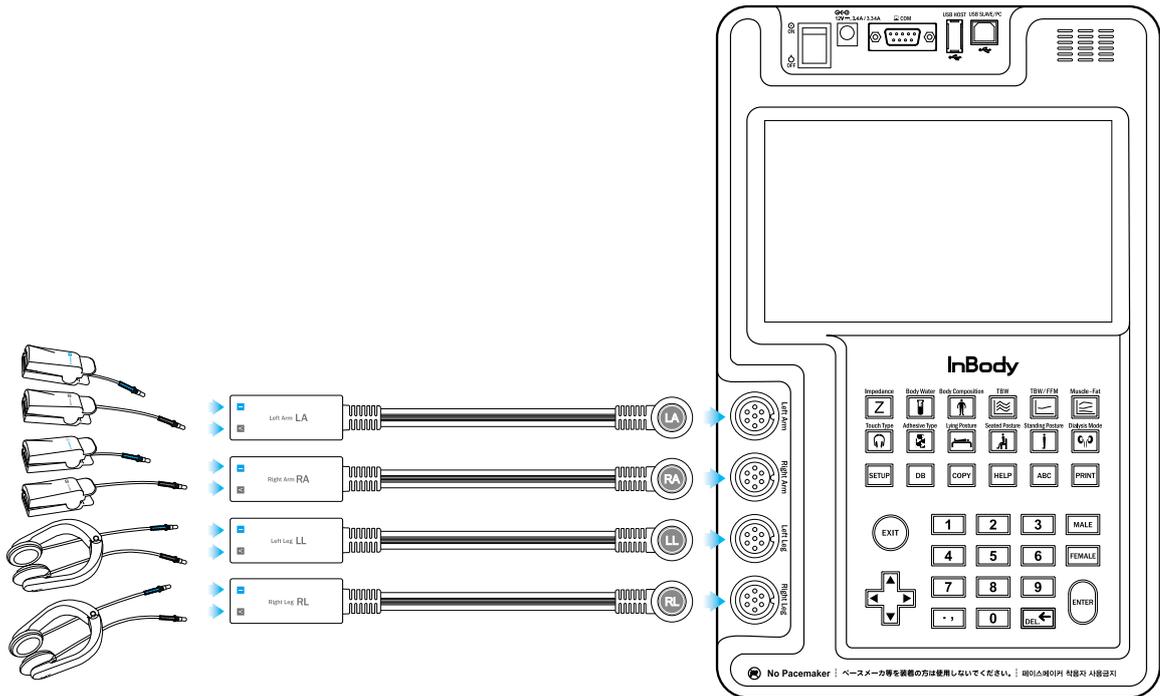
### 2. For InBody Carrying Bag Users

- (1) When opening the box, check to make sure all the following items are inside.

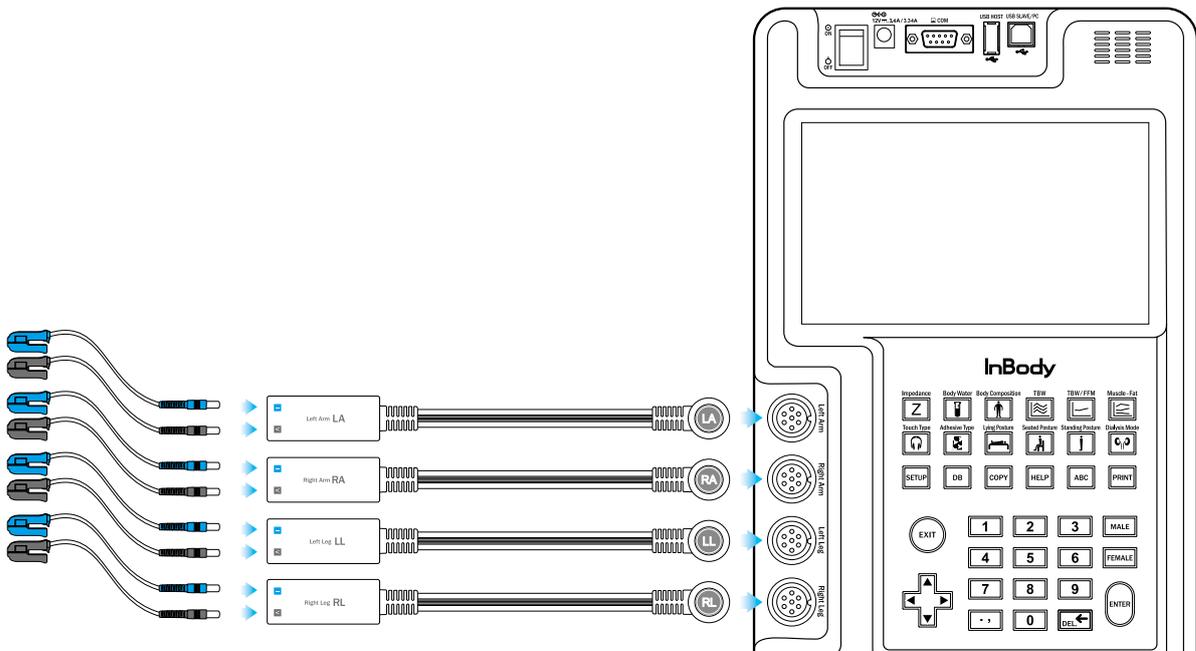


- (2) Connect the electrode cables to the InBody S10.  
Connect electrodes of RA(Right Arm), LA(Left Arm), RL(Right Leg), LL(Left Leg) to each corresponding part of the InBody S10. InBody S10 offers two types of electrodes: the Touch Type electrodes and Adhesive Type electrodes.

## Installing Touch Type Electrodes:

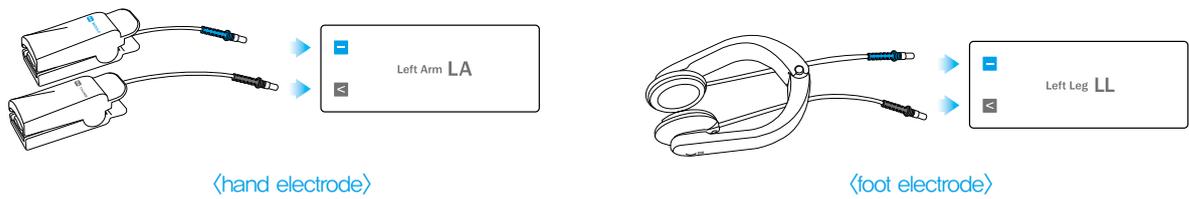


## Installing Adhesive Type Electrodes:



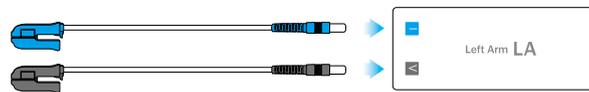
### 1 Touch Type

Connect the black cable to the black port(V) of the electrode module, and connect the red cable to the red port(I) of the electrode module.



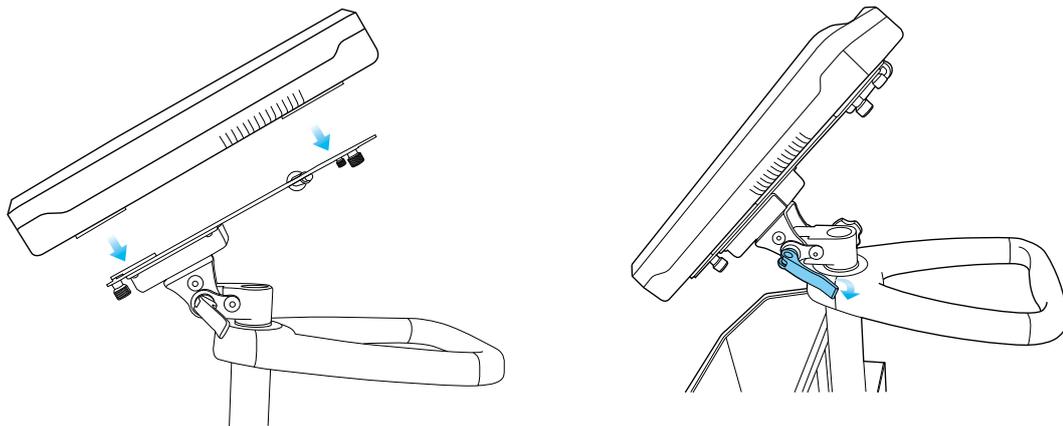
### 2 Adhesive Type

Connect the black cable to the black port(V) of the electrode module, and connect the red cable to the red port(I) of the electrode module.

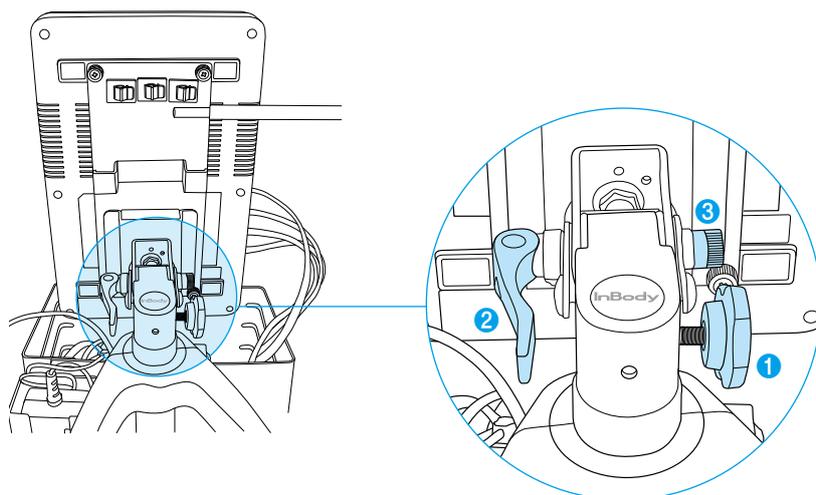
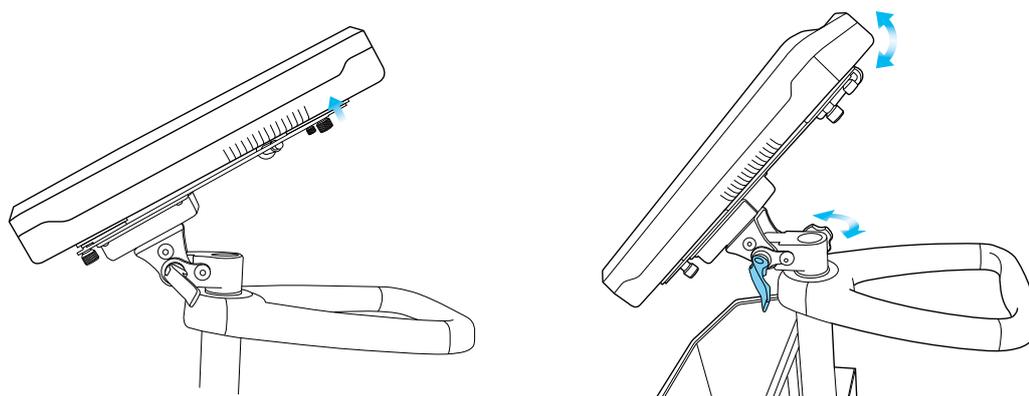


## 3. How to Install the InBody S10 Cart

(1) Please place the InBody S10 on the cart. Align the InBody S10's 4 screws on the rear side of the unit to the cart's 4 grooves on the head unit. Screw them to fasten the InBody S10 onto the cart.



(2) As shown below, adjust the direction and angle as desired.



\* **HELP**

- ① For left/right control

Loosen the screw by twisting left. Fasten the screw by twisting right.

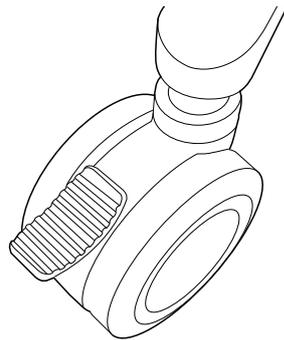
- ② For up/down control

Loosen ② and adjust the angle degree. Fasten ② again.

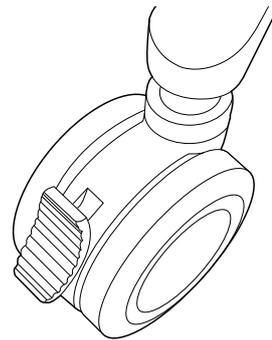
- ③ When ② is too tight or loose

If unscrewed, ② becomes loose. If screwed, ② becomes tight.

(3) After installation, you can lock the wheels by pushing down the locking lever(as illustrated below).



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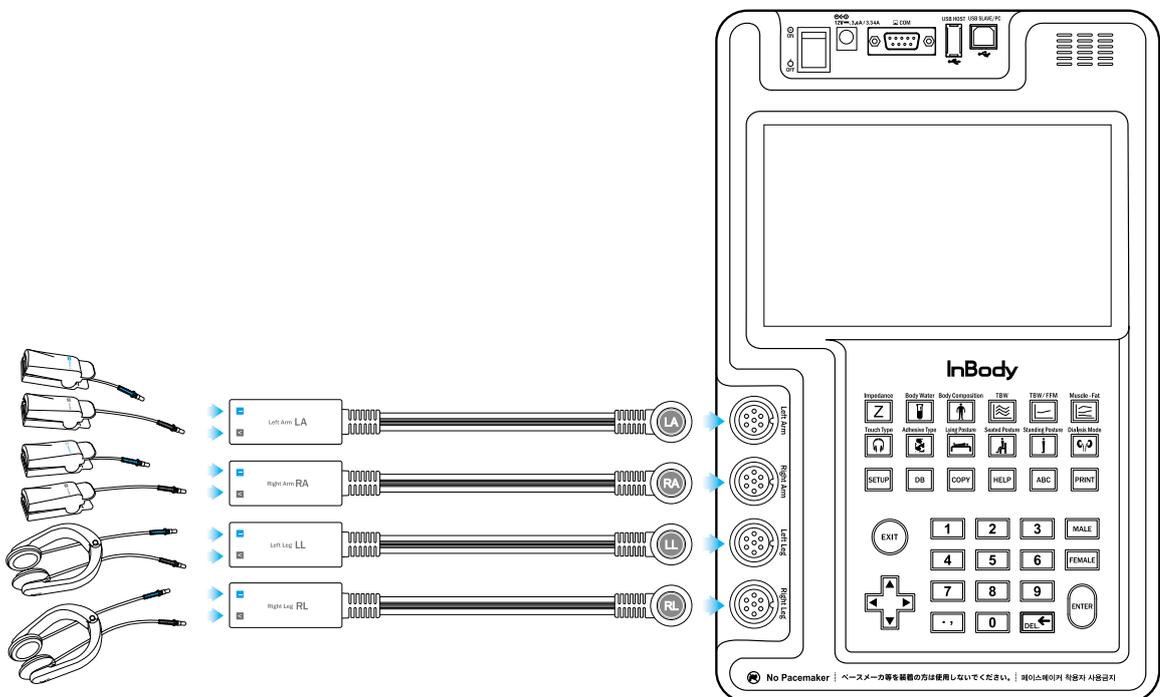


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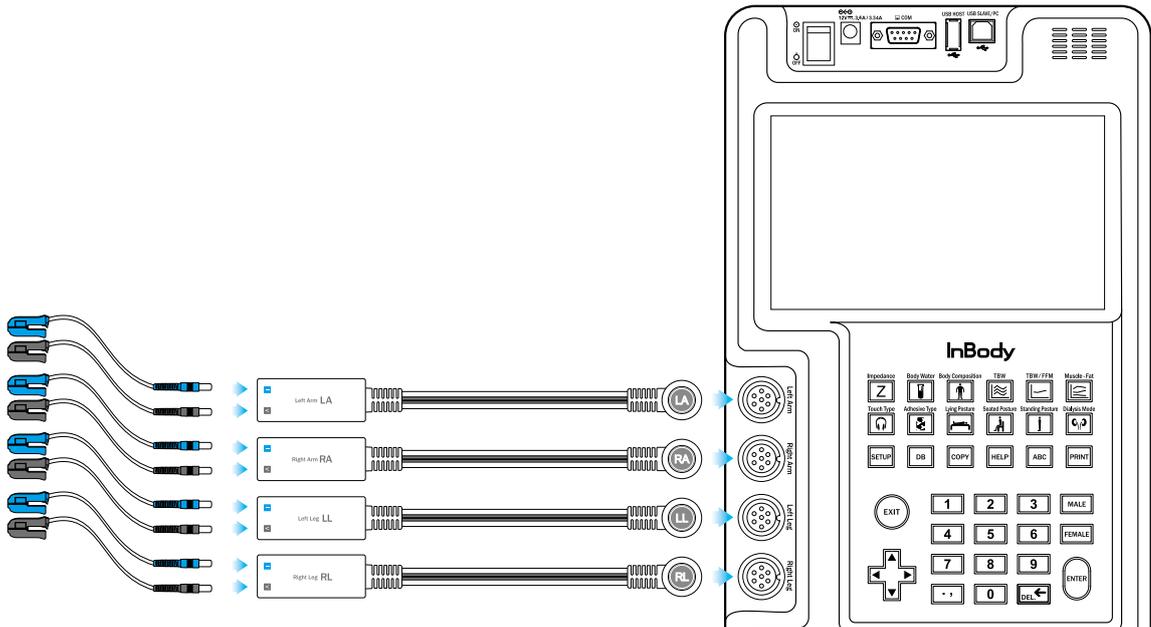
(4) Connect the electrode cables to the InBody S10.

Connect the RA(Right Arm), LA(Left Arm), RL(Right Leg), LL(Left Leg) electrodes to each corresponding part of the InBody S10. The InBody S10 offers two types of electrodes: the Touch Type electrodes and Adhesive Type electrodes.

Installing the Touch Type Electrodes:

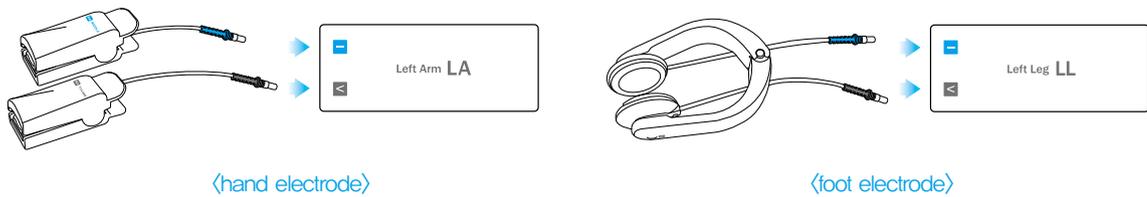


## Installing the Adhesive Type Electrodes:



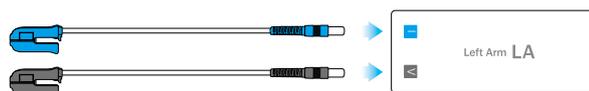
### 1 Touch Type

Connect the black cable to the black port(V) of the electrode module, and connect the red cable to the red port(I) of the electrode module.



### 2 Adhesive Type electrode

Connect the black cable to the black port(V) of the electrode module, and connect the red cable to the red port(I) of the electrode module.



### **Warning**

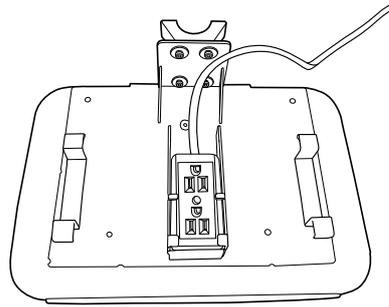
- Do not pull the power cord violently.
- Do not place the InBody S10 in a location making it difficult to disconnect the power cord.
- Do not plug in or pull out the power cord with wet hands. There is a risk of an electric shock.
- Always use an outlet with a voltage range of 100 - 240.  
Using outlets outside this range 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 equipment, including internal parts, without written consent from the manufacturer.  
This may cause electric shock or injury, product malfunction, inaccurate results, and will void the manufacturer's warranty.
- If this equipment is modified,  
appropriate inspection and testing must be conducted to ensure continued safe use of equipment.
- Do not directly contact the InBody S10 with any other electronic device when the InBody S10 is on.  
This may result in an electric shock.
- If you are not using the InBody S10 for a long time, unplug the power code.

### **Caution**

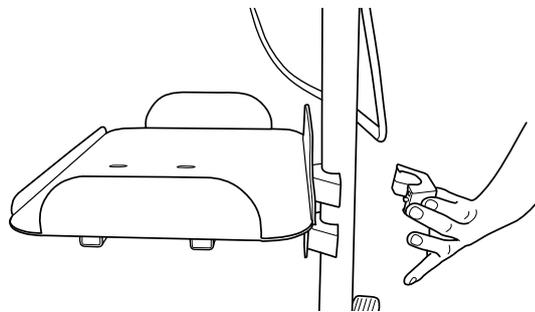
- If you have any problems installing your InBody S10, please contact InBody for assistance.
- If the InBody S10 is not plugged into a grounded outlet,  
damage due to electric surges or product malfunctions may occur. This may affect the test results.
- The test results may be inaccurate if the InBody S10 is under electrical interference. Do not install the InBody S10 near products that generate electrical interference such as fluorescent lights, large AC motor equipment (treadmill, vibration plate, refrigerator, air-conditioner, compressor, etc.), high-frequency thermal therapy equipment, or heating appliances.  
Do not share the power source of the InBody S10 with other electrical devices. This may affect the test results.
- When connecting the InBody S10 with other test equipment, turn on the other equipment first. When turning off other equipment, turn off the InBody S10 first. This is necessary to minimize electrical surges to the InBody S10.
- Always use the specified adapter provided by InBody, as it is a part of the InBody S10.  
Using other adapters may result in a malfunction of the InBody S10.
- Operation of the InBody S10 2,000m above sea level may affect the weight measurement.
- Adapter must be arranged so the power may easily be cut off when a problem occurs in the InBody S10.

\* Installing the Printer onto the Cart

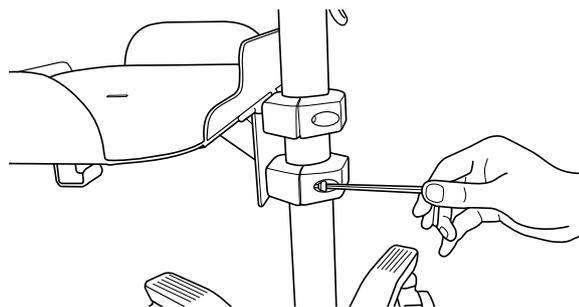
- 1 Insert a power strip in the slot provided under the printer platform.



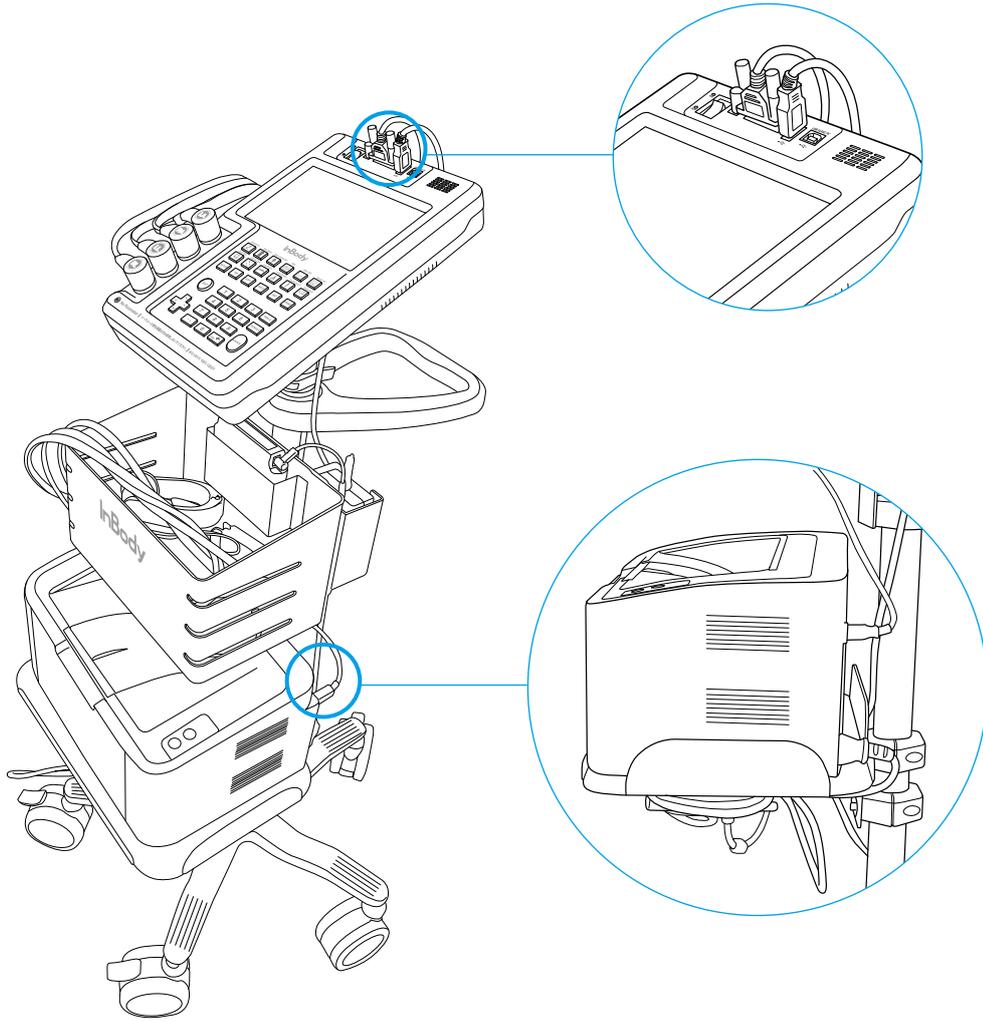
- 2 Install the printer platform on the cart pole.



- 3 Use a hex key to fasten the printer platform into place.



- 4 Use the USB cable to connect the printer to the unit.



## D. Transportation

If it must be transported, be extra careful to ensure safe handling.

The following are some tips for safely transporting the InBody S10.

- Before transporting the InBody S10, turn off the power switch and unplug the adapter.
- Be careful not to damage the hand module.
- Be careful not to damage the electric cables.

### 1. Environmental Requirements

Storage environment

|                            |                               |
|----------------------------|-------------------------------|
| Temperature range          | -20 - 70 °C (-4 - 158 °F)     |
| Relative humidity          | 10 - 95% RH (No Condensation) |
| Atmospheric pressure range | 50 - 106kPa                   |

### 2. Transporting Before Installation

Before installation, the InBody S10 will be shipped in a box designed by InBody.

#### **Warning**

- Severe physical impact can cause damage. Be careful not to drop or shake the InBody S10.

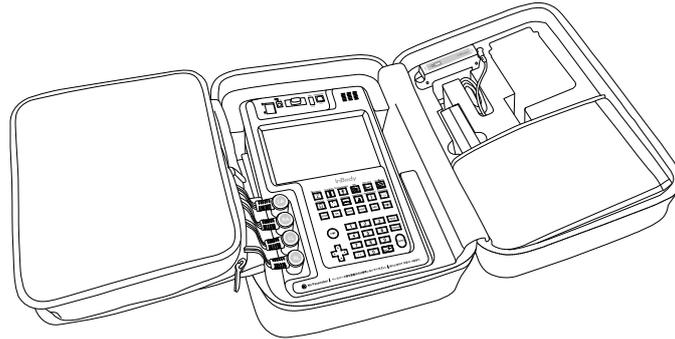
### 3. Transporting After Installation

To prevent physical shock, use InBody's packing material when shipping or transporting the equipment.

## E. Repacking

Be sure to turn off the power switch and unplug the power cable before repacking. Be careful to avoid severe physical shock, jarring or other damage while repacking, especially with regard to the electrode cables and touch type hand/foot electrodes.

- (1) Turn off the power switch.
- (2) Remove all cables connected to the InBody S10.
- (3) Put the separated units in the provided Carrying Bag.



- (4) You can carry the machine easily with the Carrying Bag.



## F. IT security measures

InBody would like to clarify that the user access to the InBody S10 is only granted for the authorized users, who have appropriately registered the passcode in the system setting menu of the InBody S10. The actual steps for registering the access passcodes which is implemented to grant the access to only the authorized users are illustrated with the images of the passcode set ups as shown below:



## G. Maintenance

### Caution

- Do not apply excessive force on the equipment.
- Turn off the equipment if you are not using it for a day or more.
- Do not allow any liquid substances to contact the equipment directly. Keep food and drinks away from the equipment. Substances getting inside the equipment can cause critical damage to the electronic components.
- Use a lint-free cloth to gently wipe the external surface of the equipment about once every week. Be careful not to scratch the LCD screen.
- The InBody S10 does not need regular maintenance. If problems occur while operating the device, please contact InBody. We do not take any responsibility for problems or damage caused by unlicensed repairs not performed by InBody.
- Do not pull the electrode cables by force. Treat them with care.
- Do not drag the electrode cables on the floor or drag them on the ground.
- Turn off the InBody S10's power switch then turn off any other electrical devices. Minimize any possible electrical shock to InBody S10.
- Be careful not to drop the hand electrode and the food electrode on the floor. Impacts can cause severe damage to electronic components inside the electrode.
- Do not wipe the hands and foot electrode with a cleaning solution. If the liquid in cleaning solution enters the electrode, corrosion may occur and the equipment may fail. To clean the electrode, use an alcohol-based disinfectant (e.g., 70% ethanol) containing alcohol or physiological saline and wipe lightly.
- Use a disposable electrode (EKG) if your patient has wounds or contagious diseases.

### Warning

- Do not modify this equipment without the authorization of the manufacturer.
- If the equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of equipment.

## II. Management & Results Description

### A. Cautions before Measurement

#### **Warning**

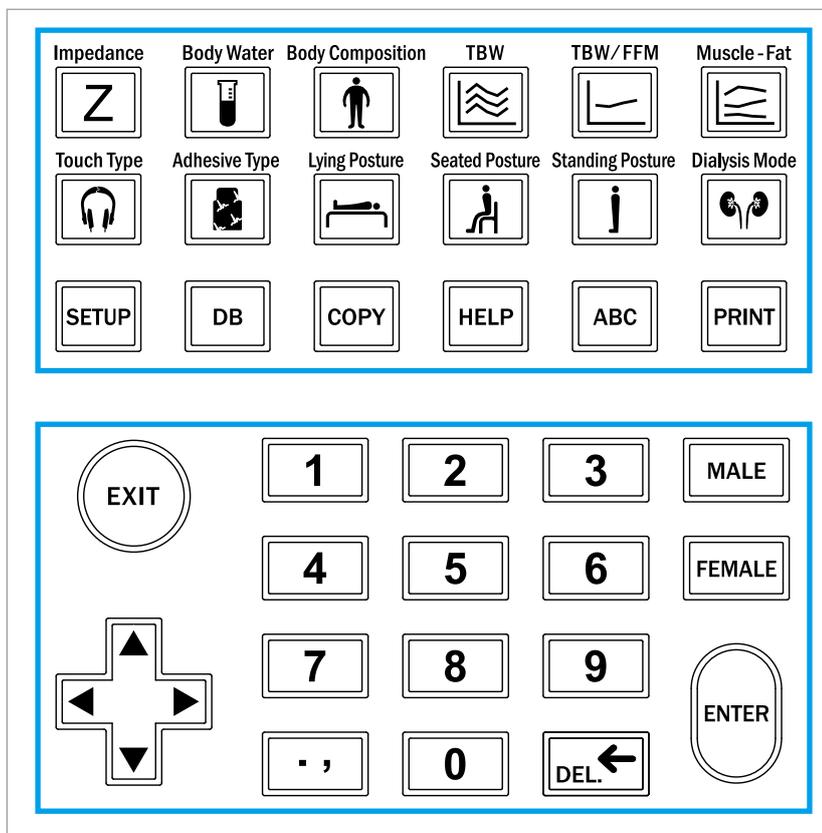
- Individuals with medical implant devices such as pacemakers, or essential support devices such as patient monitoring systems, must not use this equipment. Safe, low-level currents will flow through the body during the test, which may cause a malfunction of the device or endanger lives.
- Children and people with limited mobility should be supervised or assisted when attempting to test on the InBody S10.
- After an individual with any kind of contagious disease or infection tests on the InBody S10, use an alcohol-based disinfectant (e.g., 70% ethanol) to clean the equipment.

#### **Caution**

- Stand upright for about 5 minutes before testing. Taking the test immediately after lying in bed or sitting for a long period of time might result in a slight change in the test results. This is because body water tends to move to the lower body as soon as the person stands or gets up.
- Do not eat before testing. In cases where the examinee has already eaten, the test should be put off for at least two hours after the meal. This is because food mass is included in the examinee's weight and thus, may result in measurement errors.
- Use the bathroom before testing. Waste is not included in the body's compositional elements, but the volume of urine and excrement is included in the weight measurement, which may affect the accuracy of the test results.
- Do not exercise before testing. Strenuous exercise or sharp movements can cause temporary changes in body composition. Even light exercise can change your body composition temporarily.
- Take the test in the morning, if possible. Body water tends to gravitate towards the lower body throughout the day, affecting the accuracy of the test results.
- Thoroughly wipe the palms and soles with an alcohol-based disinfectant (e.g., 70% ethanol) before testing. Testing may be difficult if the examinee's palms and soles are too dry or if the examinee has too many calluses.
- Avoid contact with the examinee during testing. Contact may lead to interference that may affect the test results.
- Make sure that the body does not make any contact with conductive materials such as steel structures during measurement. Secure enough space for arms to be spread out.
- Administrator or guardian should assist Children or patients with reduced mobility to take the measurement. Be sure not to make any physical contact during measurement.

## B. Exterior and Functions of Keypad

The InBody S10 has a keypad for data input. To input all information, press the relevant buttons on the keypad. The keypad is located below the LCD Monitor. It can be divided into two categories based on button function:



1. Function Buttons

2. Input Buttons

### 1. Function Buttons

(1) Check test results

①  button

You can check the impedance analysis results.

②  button

You can check body water analysis results.

③  button

You can check body composition analysis results.

④  button

You can check accumulated analysis results of ICW(Intracellular Water), ECW(Extracellular Water) and TBW(Total Body Water).

- 5  button

You can check the accumulated analysis results of TBW/FFM(Ratio of Total Body Water to Fat Free Mass).

- 6  button

You can check the accumulated analysis results of Weight to Muscle Mass to Percent Body Fat.

## (2) Select electrode connection type

- 1  button

Use when using Touch Type electrodes.

- 2  button

Use when using Adhesive EKG electrodes.

## (3) Select posture

- 1  button

Set for examinees who are lying down.

- 2  button

Set for examinees who are sitting down.

- 3  button

Set for examinees who are standing up.

- 4  button

If examinees are receiving kidney dialysis, make sure to set the equipment to Dialysis Mode. At I.D. input, check the measurement time (before/during/after dialysis), access position, and examinee's paralysis location. The information will be stored in the equipment and can be viewed categorically by before/during/after dialysis in the history graph.

#### (4) Others

- ①  button

Use the SETUP button when setting up the InBody S10.

- ②  button

The DB button is to check, delete, print, and copy the results as well as copy them to or from a USB storage device.

- ③  button

The COPY button will copy all data from the equipment to a USB storage device. Insert the USB storage device into the InBody S10 and press the COPY button. Do not remove the USB storage device before the process is complete.

- ④  button

This button provides guidelines.

- ⑤  button

Press the ABC button when entering I.D. information into the InBody S10. A keyboard will appear on the screen.

- ⑥  button

Use the PRINT button to print the results of the last user. This button is also used when printing the results shown on the screen.

#### 2. Input Buttons

- ①  button

The EXIT button is used to stop the process that is in progress or to go back to the previous process.

- ②  button

The directional buttons consist of up, down, left and right.

- ③ Numerical Buttons (0~9)

The input buttons are used to enter alpha-numeric data such as the examinee's age, height and I.D.

4  button

This button is used to enter a decimal point or comma for height, age, I.D., and weight.

5  button

Used to delete entered data.

6   button

These buttons are used for gender input when entering a personal profile.

7  button

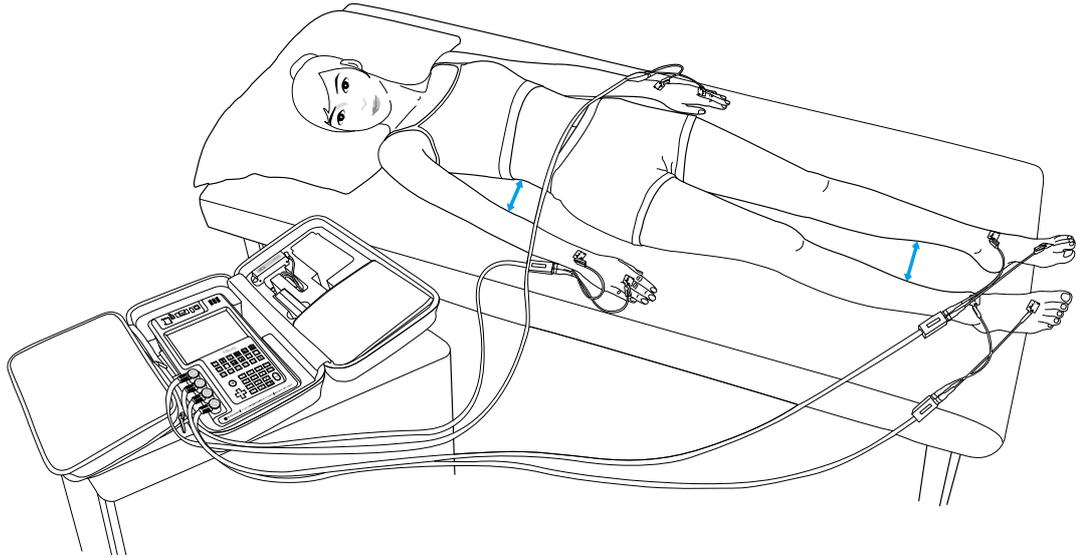
This button is used when data input is finished or to move on to the next item.

## C. Measurement Posture

Maintaining the right posture during the test is essential to achieve reliable results and accuracy. It's important for an examinee to maintain their posture for 10-15 minutes so that impedance can be measured accurately.

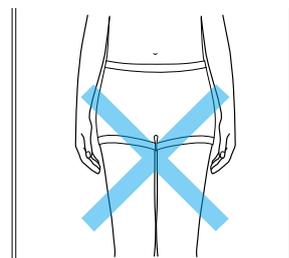
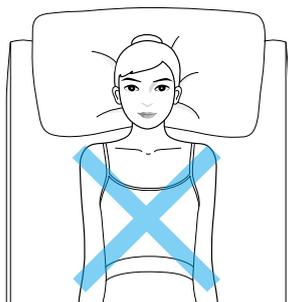
### 1. Lying Posture

- (1) It is recommended that the examinee lie down for about 10~15 minutes before the test, so that body water may be dispersed evenly inside the body.
- (2) Make sure the arms do not touch the torso. Spread them naturally to a 15 degree angle away from trunk.
- (3) Make sure thighs do not touch each other, and spread legs shoulder-width apart.



### Attention

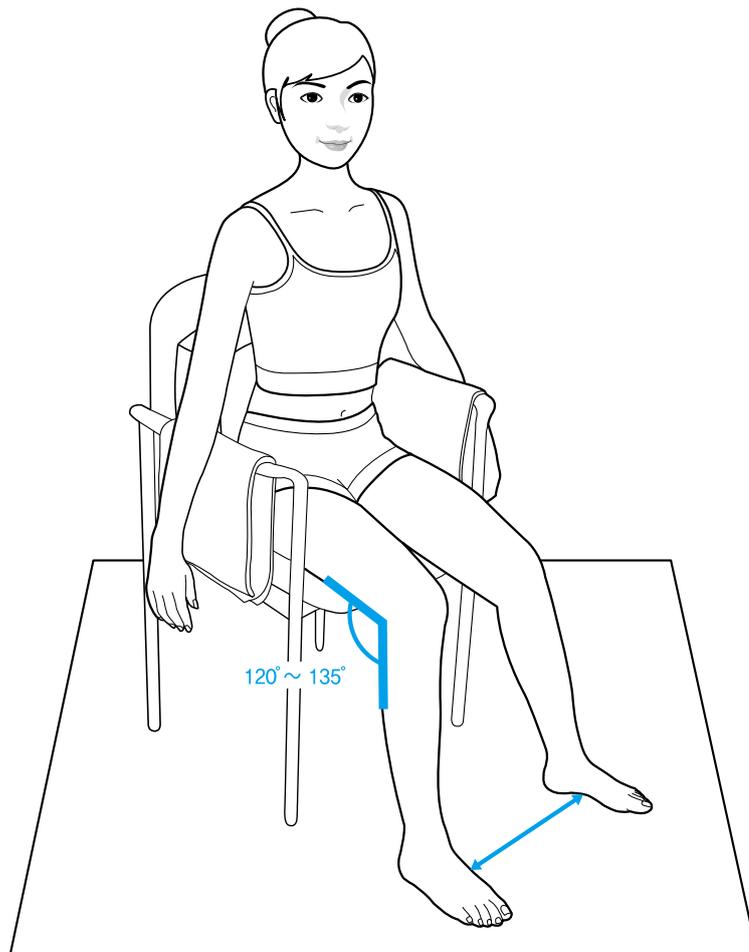
- It is recommended that the examinee stays in the testing posture for about 10~15 minutes.
  - Make sure the arms do not touch the torso. Spread them naturally to a 15 degree angle away from trunk.
  - Make sure thighs do not touch each other, and spread legs shoulder-width apart.
  - Precaution must be taken to make sure electrode cables or tester's body parts are not making any contact with steel frames.
  - If there is a heating mat (electric blanket) on the floor or mat, be sure to turn off the power and unplug the power plug when possible.
- ※ Since InBody S10 is shielded between cable and cable cover, it is not affected by interference between electrode cables and contact with steel structure of electrode cable. However, in order to obtain more stable measurement value, take precaution to prevent any contact with steel structure.



Make sure arms do not touch the torso.  
Make sure thighs do not touch each other.

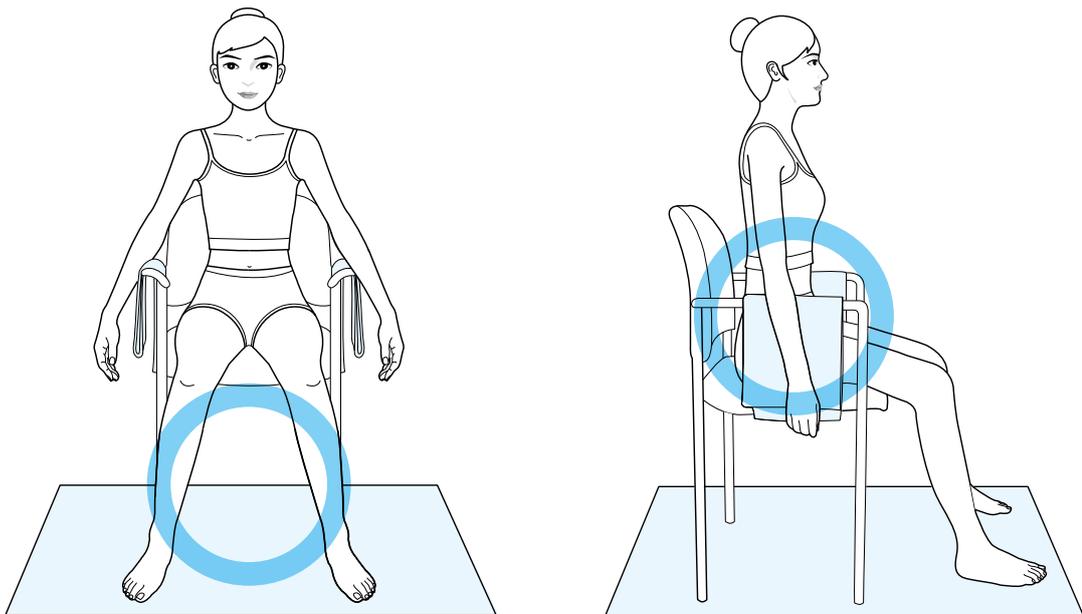
## 2. Seated Posture

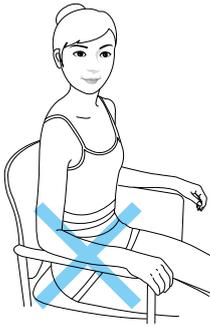
- (1) It is recommended that the examinee sits in the testing posture for about 10~15 minutes before the test, so that body water may be dispersed evenly inside the body.
- (2) Make sure that the examinee's back is not touching the chair and is sitting straight.
- (3) Use a cushion to support the examinee's back.
- (4) Arms should be lowered naturally as in the standing posture.  
Spread them 15 degrees away from trunk part of body.
- (5) Make sure that the examinee's thighs do not touch each other, and spread them shoulder-width apart.
- (6) Spread legs to the front and do not maintain a 90 degree angle.



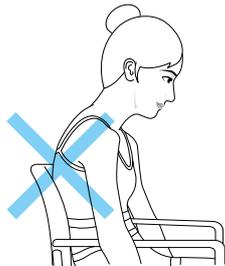
## Attention

- Make sure that the examinee maintains a straight sitting position during the test.
  - It is recommended that the examinee maintain a seated posture for about 10~15 minutes prior to testing.
  - When measurement is taken on a chair or a wheelchair with any conductive materials on frame, any exposed frame should be covered by an insulating materials such as blankets.
  - Make sure that the examinee's bare feet are not in direct contact with the metallic part of the chair or the floor.
  - Due to the weight of the cables, the EKG electrodes might fall off when you try to attach it to the examinee's body. Make sure that the EKG electrodes are attached securely to your examinee's body.
  - Spread legs to the front; do not maintain a 90 degree angle. If the examinee is measuring barefoot, make sure the feet do not touch the floor by placing a mat under the examinee's feet.
- ※ Since InBody S10 is shielded between cable and cable cover, it is not affected by interference between electrode cables and contact with steel structure of electrode cable. However, in order to obtain more stable measurement value, take precaution to prevent any contact with steel structure.

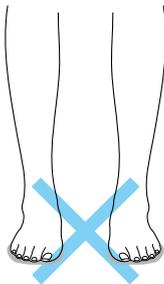




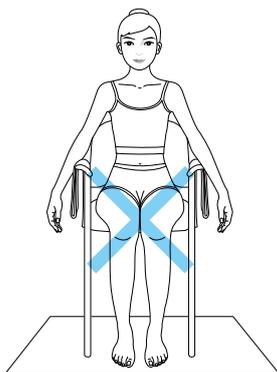
The examinee should not rest his/her arm on the arm rest of the chair.



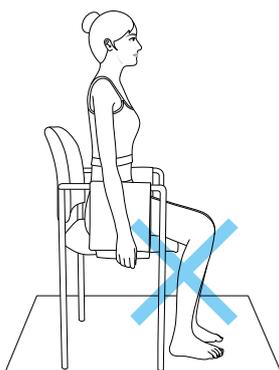
The examinee should not slouch.



Make sure bare feet do not touch the floor.  
Use a mat that does not conduct electricity.



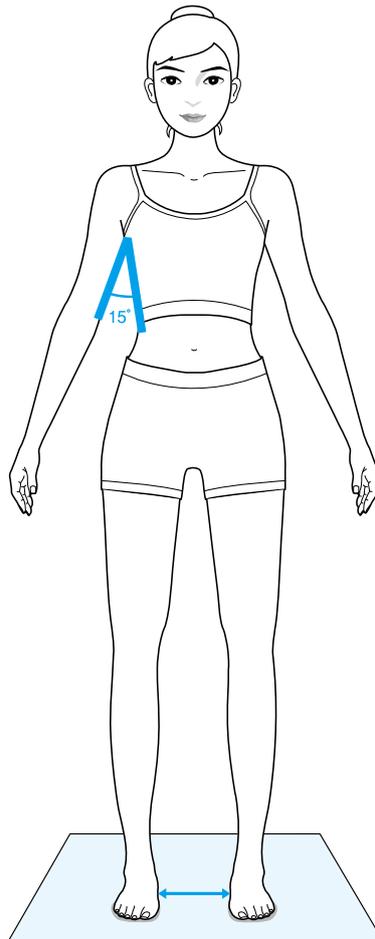
Make sure thighs do not touch each other.



Do not position the examinee's legs at a 90 degree angle,  
but stretch them slightly to the front.

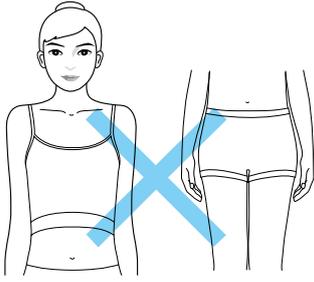
### 3. Standing Posture

- (1) It is recommended that the examinee stand for about 10~15 minutes before the test so that body water may be dispersed evenly inside the body.
- (2) Make sure bare feet do not touch the floor. Use a mat that does not conduct electricity.
- (3) Make sure arms do not touch the torso. Spread them naturally to a 15 degree angle away from trunk.
- (4) Arms should be extended naturally.
- (5) Make sure thighs do not touch each other, and spread legs shoulder-width apart.

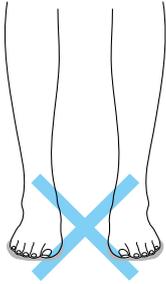


#### Attention

- It is recommended that the examinee stand for about 10~15 minutes.
- Make sure bare feet do not touch the floor. Use a mat that does not conduct electricity.
- For an examinee with high foot arches feet, the foot electrodes might not attach properly when using the Touch Type electrodes. Make sure to attach them as best as possible.
- If examinees have dry hands and feet, wipe the equipment with an alcohol-based disinfectant (e.g., 70% ethanol) before testing.
- Due to the weight of the cable, it is easy for the Adhesive Type electrodes to fall off during the test. Please be careful and make sure that the electrodes are attached properly.



Make sure arms do not touch the torso and that the legs do not touch each other.



Make sure bare feet do not touch the floor.  
Use a mat that does not conduct electricity.

## D. Connecting the Electrodes

InBody S10 offers two types of electrodes: the Touch Type electrodes and the Adhesive Type electrodes.

Check the RA, LA, RL, LL. (RA: Right Arm, LA: Left Arm, RL: Right Leg, LL: Left Leg)

Check on the electrode part that will come into contact with examinee's hands and feet.

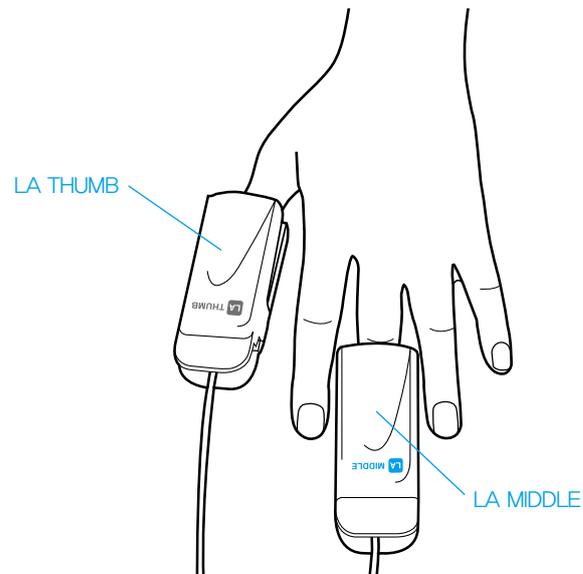
### 1. Touch Type

#### (1) Hand electrodes

LA: connects to Left Arm.

RA: connects to Right Arm.

The hand electrodes are marked **THUMB** for the thumb and **MIDDLE** for the middle finger.



## (2) Foot electrodes

LL: connects to Left Leg.

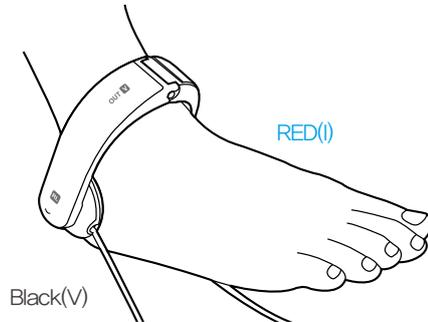
RL: connects to Right Leg.

The foot electrodes should be positioned between examinee's ankle bone and heel.

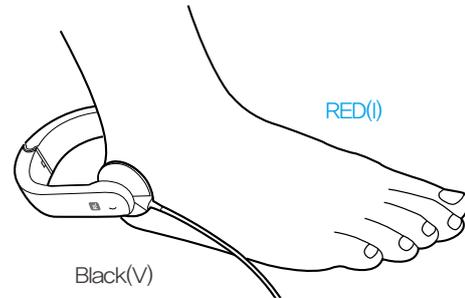
Try to have the electrodes in contact with as much surface area as possible.

The part marked in red should be positioned on the inner ankle.

If the examinee's ankles are too thick to attach the electrodes across the top of the foot, place them behind the heel.



<When electrodes are attached across the top of the foot>



<When electrodes are attached behind the heel>

### Attention

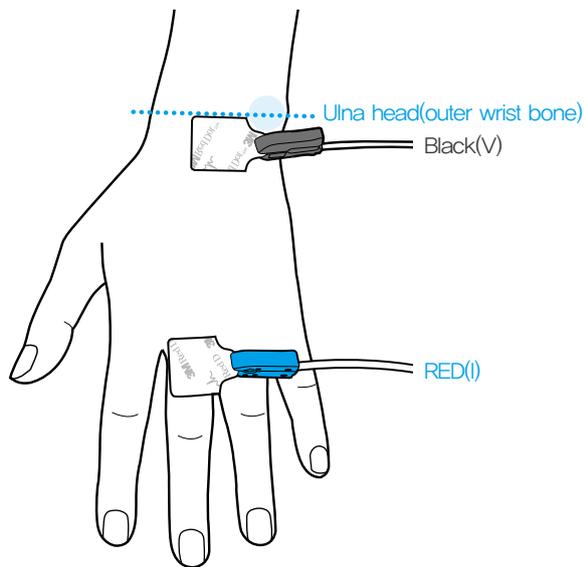
- If the examinee's ankles are too thick to place the electrodes across the top of the foot, place them behind the heel.
- Make sure that the part labeled (I) is placed on the inner side of the feet.
- For an examinee with high arches, the foot electrodes might not attach properly when using the Touch Type electrodes. Make sure to attach them as best as possible.
- The test might not work properly or the results might be inaccurate if the examinee has dry hands/feet. Wipe the examinee's hands and feet with an alcohol-based disinfectant (e.g., 70% ethanol) before testing.

## 2. Adhesive Type

Attach the EKG electrodes to the examinee's hands and feet as shown below.  
Then, connect the adhesive electrodes to the EKG electrodes.

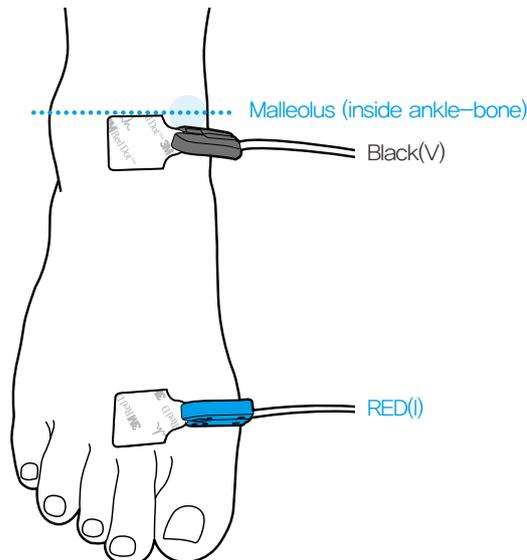
### (1) Hand electrodes

Find the ulna head(outer wrist bone) by feeling the wrist joint. Imagine or draw a line bisecting the ulna head, perpendicular to the arm. Place the electrode on this line(on the back of the hand), with the tab of the electrode pointing away from the body. The other electrode should be wrapped around the middle finger, with the tab facing away from the body.



### (2) Foot electrodes

The black electrode should be attached to the medial malleolus (inside ankle bone) in the same way the black electrode is attached to the ulna head on the hand. The red electrode should be placed at the base of the second toe.

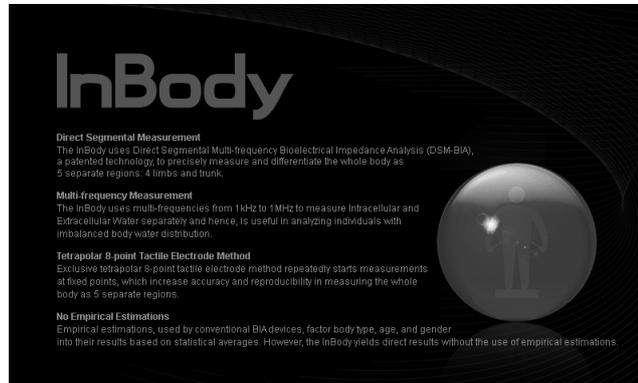


### Note

- Once used, the EKG electrodes should be discarded.  
Reuse may cause contamination through indirect physical contact.
- As EKG electrodes will be in direct contact with the body of the examinee, only use products with CE certification. We officially recommend 2330 Red Dot Resting Electrode-Tab Style of 3M and RT34 Tab-Electrodes for resting ECG of SKINTACT for the InBody S10.

## E. Power Connection & Getting Started

- (1) Connect the adapter cable to the power input port.
- (2) When the system switch is turned on, the screen shown below will be displayed and the device will begin warming up automatically.



- (3) While warming up, the InBody S10 will proceed to self-test itself and make any necessary adjustments to the internal circuits.

### **Warning**

- When connecting peripherals (printers and other optional devices) to the InBody S10, turn on the power of peripherals before turning on the InBody S10. When turning the power off, turn off the InBody S10 first before turning off the peripherals. This process will minimize harm to the equipment caused by electric shock.

## F. Home Screen

The InBody S10 has a touch screen function for data input.

Press the buttons on the LCD screen or use the keypad buttons to enter information.

The home screen of the InBody S10 has numerous options for both the user's and the examinee's convenience.



### (1) Personal Information Screen

This is for I.D., weight , height , age and gender.

### (2) Information Screen

This screen displays help, status, and error messages for each step.

### (3) Analysis Result Screen

Before printing out the results, you can check the key figures on the screen.

All figures shown on the screen are printed on the results sheet.

### (4) State Screen

This screen displays the electrode type, posture type, dialysis mode, testing date, and testing time.

## Warning

- Please do not poke the touch screen with sharp objects. This could cause damage to the touch screen.

## G. Measurement Settings

### 1. Select electrode connection type



Use when using Touch Type electrodes.



Use when using Adhesive EKG electrodes.

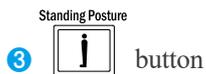
### 2. Select posture



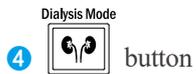
Set for examinees who are lying down.



Set for examinees who are sitting down.



Set for examinees who are standing up.



If examinees are receiving kidney dialysis, make sure to set the equipment to Dialysis Mode.

At I.D. input, set the measurement time (before/during/after dialysis), access position, and the examinee's paralysis location. The information will be stored in the equipment and can be viewed categorically before/during/after dialysis in the history graph.

## H. Personal Profile

Weight and height are essential information for body composition analysis, and to provide a frame of reference for the data, age and gender are used to provide standard ranges. The InBody S10 analyzes the measurement results based on the input data. To reduce errors and acquire more reliable results, input examinee data after reading the following carefully:

| I.D. | Weight | Height | Age | Gender |
|------|--------|--------|-----|--------|
|------|--------|--------|-----|--------|

(1) I.D. (Permitted range: 14 Characters)

You can use the number buttons on the keypad when inputting numbers.

If you are entering letters, press the ABC button on the keypad.

This will cause the LCD screen to turn to both letters and numbers.

(2) Weight (Recommended input range: 2 - 250 kg (4.4 - 551.2 lb))

Use the keypad to enter weight.

(3) Height (Recommended input range: 95 - 220 cm (3 ft 1.4 in - 7 ft 2.6 in))

Use the keypad to enter height. Height can have one digit after the decimal point.

(4) Age (Recommended input range: 3+ years)

Use the keypad to enter age.

For optimal accuracy, for examinees under the age of 18, you may include a decimal point when inputting their age.

Example: 13 and 6 months years old = 13 years + 6 months/12 months = 13.5

(5) Gender

You can select the gender by using the Male or Female buttons.

**In case of the discovery of typos and misspelled words, you can make changes through the following:**

1. If you find an error, use the left/right button to move to the incorrect item.  
Use the DEL. button to delete the data, and enter in the correct information.
2. If you press the EXIT button during the InBody S10 test, you can re-enter your data.  
If you press EXIT one more time, you will be transferred to the home screen.

## I. How to Operate the Equipment

- (1) Please select the electrode type. (Touch Type, Adhesive Type).
- (2) Please select the examinee's posture type.  
(Lying Posture, Seated Posture, Standing Posture)
- (3) Please select whether you will be using 'Dialysis Mode' or not. (Enable, Disable)  
If examinees are receiving kidney dialysis, make sure to set the equipment to 'Dialysis Mode'.  
Set the measurement time (before/during/after dialysis), access position, and paralysis location.
- (4) Before the test,  
the examinee must maintain his/her posture for 10 minutes in order to reposition his/her body water level.
- (5) Please refer to Chapter D.  
Connecting the Electrodes for guidelines and attach the electrodes to the examinee's hands and feet.
- (6) Input I.D., weight, height, age, and gender.

### Note

- If you enter information that is out of range, the above error will appear on the screen. Please re-enter the personal information.



- (7) Check that the electrodes are attached securely and press the 'Enter' button. If you did not attach the electrodes to the examinee's body, please do so now. After attaching the electrodes, please check again to ensure that the examinee's posture is correct and that the electrodes are connected securely. Once everything has been properly set, press the 'Enter' button to start the test. Please make sure that the examinee maintains his/her position during the test.

| I.D.                  | Weight   | Height | Age | Gender |    |    |
|-----------------------|----------|--------|-----|--------|----|----|
| 112503                | 40.5 kg  | 145 cm | 48  | Female |    |    |
| <b>Z(ω)</b>           | 1 kHz    | RA     | LA  | TR     | RL | LL |
|                       | 5 kHz    |        |     |        |    |    |
|                       | 50 kHz   |        |     |        |    |    |
|                       | 250 kHz  |        |     |        |    |    |
|                       | 500 kHz  |        |     |        |    |    |
|                       | 1000 kHz |        |     |        |    |    |
| <b>Xc(ω)</b>          | 5 kHz    |        |     |        |    |    |
|                       | 50 kHz   |        |     |        |    |    |
|                       | 250 kHz  |        |     |        |    |    |
| <b>Phase Angle(φ)</b> | 5 kHz    |        |     |        |    |    |
|                       | 50 kHz   |        |     |        |    |    |
|                       | 250 kHz  |        |     |        |    |    |

**InBody**

Select gender and press ENTER.

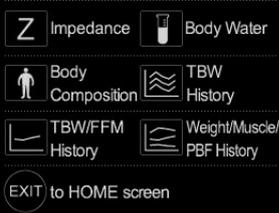
**Female**

· Electrode | Touch Type  
 · Posture | Lying Posture  
 · Dialysis Mode | Enable  
 · 2009/12/10 15:27:20 PM

- (8) During the test, the LCD information screen will display the testing status and the analysis results screen will display impedance, reactance and phase angles. If you want to modify the examinee's personal information during the test, please press the EXIT button. Move to the item you want to modify by using the direction button. After modifying the information, press the ENTER button to start the test again.
- (9) After the test is completed, a "Test Complete" message will appear on the information screen. If you entered the examinee's I.D. for the test, the InBody S10 will automatically save all results in the system. If the printer is connected and there are results sheets in the printer, the printer will automatically print the results on the results sheet.

| I.D.<br>112503        |          | Weight<br>40.5 kg | Height<br>145 cm | Age<br>48 | Gender<br>Female | InBody<br>Analyzing 100% |   |  |  |  |  |  |
|-----------------------|----------|-------------------|------------------|-----------|------------------|--------------------------|---|--|--|--|--|--|
|                       |          | RA                | LA               | TR        | RL               | LL                       |   |  |  |  |  |  |
| <b>Z(Ω)</b>           | 1 kHz    | 408.7             | 408.5            | 33.4      | 324.3            | 322.6                    | <ul style="list-style-type: none"> <li>· Electrode   Touch Type</li> <li>· Posture   Lying Posture</li> <li>· Dialysis Mode   Enable</li> <li>· 2009/12/10 15:29:59 PM</li> </ul> |  |  |  |  |  |
|                       | 5 kHz    | 407.0             | 406.8            | 33.3      | 323.4            | 321.8                    |   |  |  |  |  |  |
|                       | 50 kHz   | 346.4             | 345.9            | 28.7      | 281.2            | 282.1                    |   |  |  |  |  |  |
|                       | 250 kHz  | 313.6             | 313.4            | 25.2      | 246.7            | 246.1                    |   |  |  |  |  |  |
|                       | 500 kHz  | 312.0             | 311.7            | 25.1      | 244.8            | 243.9                    |   |  |  |  |  |  |
|                       | 1000 kHz | 312.0             | 311.2            | 25.0      | 244.5            | 242.7                    |   |  |  |  |  |  |
| <b>Xc(Ω)</b>          | 5 kHz    | 13.6              | 13.7             | 1.0       | 8.7              | 8.2                      | <ul style="list-style-type: none"> <li>· Electrode   Touch Type</li> <li>· Posture   Lying Posture</li> <li>· Dialysis Mode   Enable</li> <li>· 2009/12/10 15:29:59 PM</li> </ul> |  |  |  |  |  |
|                       | 50 kHz   | 44.6              | 44.9             | 4.1       | 38.7             | 39.1                     |   |  |  |  |  |  |
|                       | 250 kHz  | 10.1              | 12.1             | 1.3       | 11.5             | 14.6                     |   |  |  |  |  |  |
| <b>Phase Angle(°)</b> | 5 kHz    | 1.9               | 1.9              | 1.7       | 1.5              | 1.5                      | <ul style="list-style-type: none"> <li>· Electrode   Touch Type</li> <li>· Posture   Lying Posture</li> <li>· Dialysis Mode   Enable</li> <li>· 2009/12/10 15:29:59 PM</li> </ul> |  |  |  |  |  |
|                       | 50 kHz   | 7.4               | 7.5              | 8.3       | 7.9              | 8.0                      |   |  |  |  |  |  |
|                       | 250 kHz  | 1.9               | 2.2              | 3.0       | 2.7              | 3.4                      |   |  |  |  |  |  |

- (10) After the measurement process is completed, the impedance results will appear on the screen. The Help section of the information screen will advise you which items you should choose to check a certain result. You can check the results as well as the cumulative results on the LCD screen. Press the 'Exit' button to close the results screen and return to the home screen.

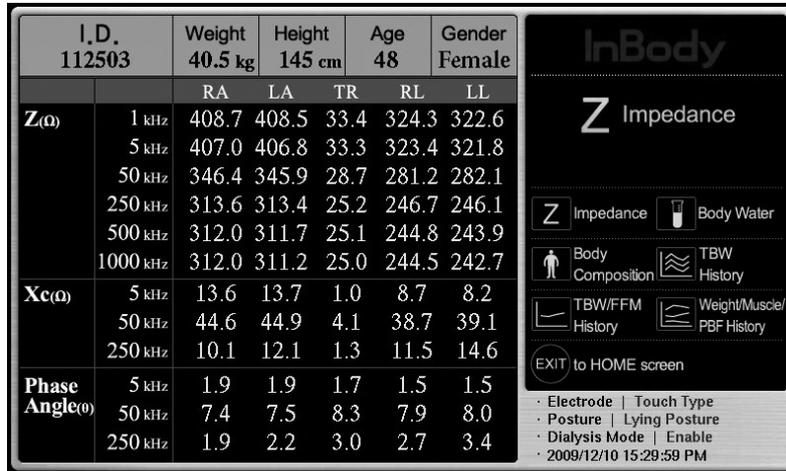
| I.D.<br>112503        |          | Weight<br>40.5 kg | Height<br>145 cm | Age<br>48 | Gender<br>Female | InBody<br>Z Impedance |   |  |  |  |  |  |
|-----------------------|----------|-------------------|------------------|-----------|------------------|-----------------------|---|--|--|--|--|--|
|                       |          | RA                | LA               | TR        | RL               | LL                    |   |  |  |  |  |  |
| <b>Z(Ω)</b>           | 1 kHz    | 408.7             | 408.5            | 33.4      | 324.3            | 322.6                 | <ul style="list-style-type: none"> <li>· Electrode   Touch Type</li> <li>· Posture   Lying Posture</li> <li>· Dialysis Mode   Enable</li> <li>· 2009/12/10 15:29:59 PM</li> </ul> |  |  |  |  |  |
|                       | 5 kHz    | 407.0             | 406.8            | 33.3      | 323.4            | 321.8                 |   |  |  |  |  |  |
|                       | 50 kHz   | 346.4             | 345.9            | 28.7      | 281.2            | 282.1                 |   |  |  |  |  |  |
|                       | 250 kHz  | 313.6             | 313.4            | 25.2      | 246.7            | 246.1                 |   |  |  |  |  |  |
|                       | 500 kHz  | 312.0             | 311.7            | 25.1      | 244.8            | 243.9                 |   |  |  |  |  |  |
|                       | 1000 kHz | 312.0             | 311.2            | 25.0      | 244.5            | 242.7                 |   |  |  |  |  |  |
| <b>Xc(Ω)</b>          | 5 kHz    | 13.6              | 13.7             | 1.0       | 8.7              | 8.2                   | <ul style="list-style-type: none"> <li>· Electrode   Touch Type</li> <li>· Posture   Lying Posture</li> <li>· Dialysis Mode   Enable</li> <li>· 2009/12/10 15:29:59 PM</li> </ul> |  |  |  |  |  |
|                       | 50 kHz   | 44.6              | 44.9             | 4.1       | 38.7             | 39.1                  |   |  |  |  |  |  |
|                       | 250 kHz  | 10.1              | 12.1             | 1.3       | 11.5             | 14.6                  |   |  |  |  |  |  |
| <b>Phase Angle(°)</b> | 5 kHz    | 1.9               | 1.9              | 1.7       | 1.5              | 1.5                   | <ul style="list-style-type: none"> <li>· Electrode   Touch Type</li> <li>· Posture   Lying Posture</li> <li>· Dialysis Mode   Enable</li> <li>· 2009/12/10 15:29:59 PM</li> </ul> |  |  |  |  |  |
|                       | 50 kHz   | 7.4               | 7.5              | 8.3       | 7.9              | 8.0                   |   |  |  |  |  |  |
|                       | 250 kHz  | 1.9               | 2.2              | 3.0       | 2.7              | 3.4                   |   |  |  |  |  |  |

## J. Results

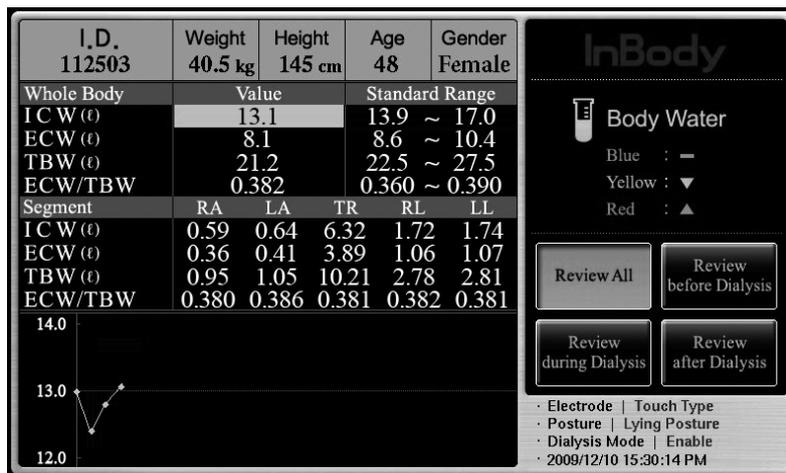
### 1. Result Screen

You can check the impedance results first. If you want to check other results, such as body water level, body composition, cumulative body water level, cumulative TBW/FFM, and cumulative weight/muscle/percent fat, press the relevant keypad button. Please refer to the help section of the information screen.

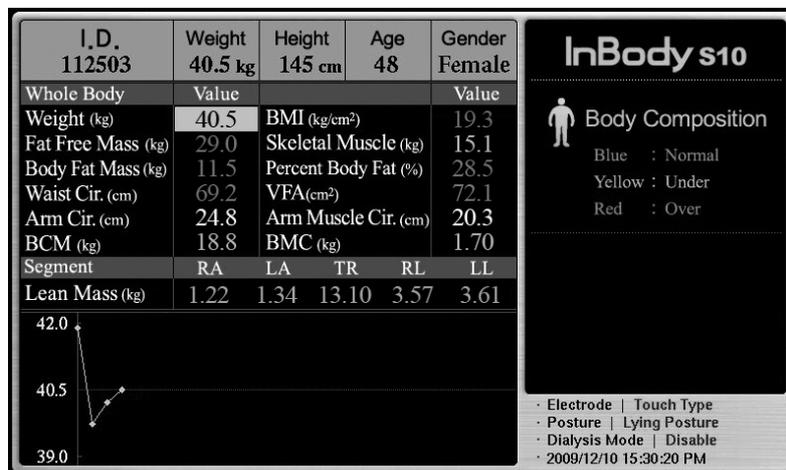
(1) Impedance(Z)/ Reactance(Xc)/ Phase angle( $\theta$ )



(2) Body Water



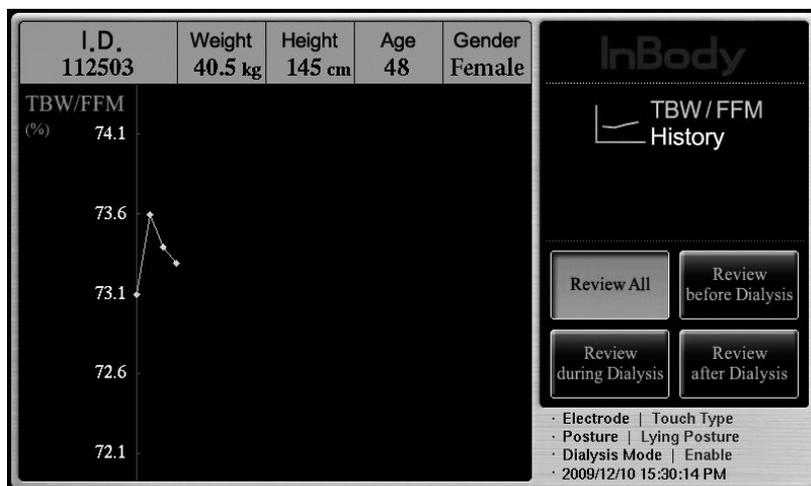
(3) Body Composition



(4) TBW, ICW, ECW History



(5) TBW/FFM History



(6) Weight/Muscle/PBF History

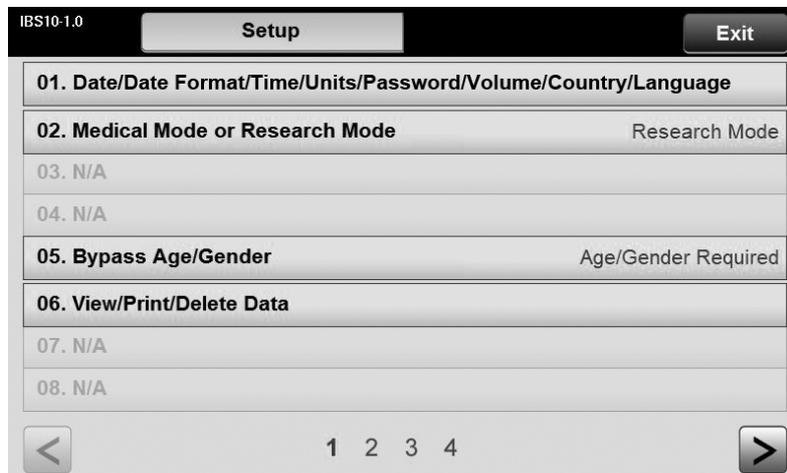


## III. Setup Establishment

### A. Setup

The InBody S10 has a setup menu to modify the settings for the user's preference.

The setup menu is shown below.



- (1) Select the category that you wish to access.
- (2) In your selected category, choose the item you wish to modify.
- (3) Press the 'ENTER' button after the revision, and the revision will be saved automatically. If the 'ENTER' button is not pressed, the revised content will not be saved.
- (4) Press the 'EXIT' button to return to the home screen.

#### **Warning**

- Please do not poke the touch screen with sharp objects. This could cause damage to the touch screen.

## B. Setup Menu

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

: Change or modify the InBody'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 InBody S10, and Research Mode, which provides additional impedance.

(You can check reactance by setting the study mode.)

\* When selecting the research mode, it measures and provides reactance.

### 03. N/A

### 04. N/A

### 05. Bypass Age/Gender

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

### 06. View/Print/Delete Data

: User may delete or print the saved result data that is identified with an ID or a personal mobile number.

\* Users can copy/backup/restore the data or test results.

\* **Export Data as Excel:** You can export saved data from the InBody device to USB flash drive and check them on your PC.

\* **Data Backup/Restoration:** You can back up the data from InBody device to USB flash drive and also restore backed up data from the USB flash drive to the InBody device.

### 07. N/A

### 08. N/A

### 09. Printer Setup

: Connect the printer to the InBody to print your InBody Result sheet.

### 10. Results Sheet Types

: "Type1" and "Type2" are available for selection. "Type1" prints the traditional InBody Result Sheet, while "Type 2" prints a new InBody Result Sheet version for Body Water Results with additional explanations for optional parameters.

\* Type1: Body Composition Results Sheet, Body Water Results Sheet (I/II)

\* Type2: Body Composition Results Sheet, Body Water Results Sheet

\* When selecting the "Type2" report, "13. Report Items/Explanation" is activated. This allows you to select the parameters on the right side of the report.

### 11. Automatic Printing Options

: Print applicable results sheets automatically after each completed test.

The InBody can print up to 2 copies after every test.

### 12. Paper Types

: Select the type of paper you would like to use to print the result sheet. You may choose between an A4 paper or InBody Result Sheet.

### 13. Outputs/Interpretations for Results Sheet

: If the users selects Type2 Result Sheet, the user will be able to select the parameters on the right side of the result sheet.

\* If "Type1" is selected, the right side of the result sheet is not available.

\* If "Type2" is selected, the right side of the result sheet is available.

### 14. Results Sheet Custom Logo

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

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

### 15. Printing Alignment

: Adjust the alignment of where the results will be printed on the results sheets.

### 16. N/A

### 17. Bluetooth

: Connect the InBody to data management software LookinBody120, via Bluetooth connection.

### 18. N/A

### 19. N/A

### 20. Normal Range

: Set the normal range for BMI, Percent Body Fat, and Waist-Hip Ratio.

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

### 21. N/A

### 22. N/A

### 23. Touchscreen Alignment

: Adjust the alignment of the touchscreen.

### 24. N/A

### 25. Auto-Lock

: Set a password or screen lock (auto-lock) time to secure the InBody usage.

### 26. Serial Connect

: This option allows you to connect InBody with LookinBody member management program for PC or with other devices over serial connection.

## C. Database

Press 'Database' on the home screen to open the database.

Press the Database key () on the keypad to bring up the database screen as shown below.

If you have created a personal I.D., your data is automatically saved.

Data saved in the database is available to search, print, or delete. You can also view the results of the InBody Test, as well as backup/recover data. The InBody S10 can save up to a maximum of 100,000 entries.

\* You can also access the DATABASE through setup #6



### 1. Data Search

In the Database screen, all the data saved in the system will be automatically saved.

To search for specific data, use I.D. and date search.

(1) I.D. search: Touch  button and input the letters or numbers included in the I.D.

Touch  button. If you leave this field blank, then all data in the database will be displayed.

(2) Date search: Input the period you want to search for.

Input the starting date in 'From' and the last date of each in 'To'.

Touch  to view the search result. If the date is marked in dark gray, date search is not available.

### Note

- The default date is the current date.

## 2. Database Menu

You may choose Print, Copy, or Delete by pressing their respective buttons on the database screen. Select the desired data and touch the corresponding button.

### (1) VIEW:

To view a past result, choose the data that you would like to see and touch the button. However, if you click on more than one data entry, only the results for the data placed at the top will be displayed.

### (2) EXIT: Click Exit to return to the home screen.

### (3) Select All: Click Select All to select or cancel all data entries.

### (4) Print: Click Print to print a results sheet based on the selected data.

### (5) Delete: Click Delete to delete the selected data.

### (6) Copy: Click Copy to move the selected data to a USB storage device.

The file will be saved as a csv/LIB form in the 'InBody' file. You may open the result in Excel (csv file).

### (7) Backup: Click Backup to back up all measurement results from the InBody S10 to a USB storage device.

### (8) Restore: Click Restore to import previously backed up InBody S10 data from a USB storage device.

### (9) Combine:

Click <<Combine>> to import previously backed up InBody S10 data from a USB storage device.

Data currently stored in InBody S10 is retained and measurements from the USB storage are merged.

### **Note**

- Restoring data from a USB storage device will replace any and all data currently stored on the InBody S10.

### **Warning**

- When saving data on a USB storage device, do not remove the USB storage device or turn the equipment off during the procedure.

### **Note**

- When you restore data from a USB storage device, the InBody S10's existing database will be replaced by the data in the USB storage device. Please ensure that you have backed up any data you wish to save from InBody S10's database before using this feature.
- Please contact InBody for information on which USB storage devices can be used with the InBody S10.

## IV. Problems & Solutions

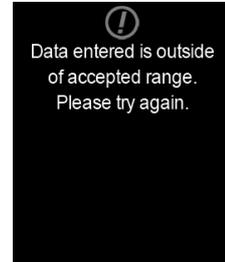
### A. Error Messages

The InBody S10 displays the following error messages to warn the user of the problems encountered during operation and to guide the users in solving them. The following are the most common error messages and the steps to handle the corresponding errors:

1. “Data entered is outside of accepted range. Please RE-ENTER.”

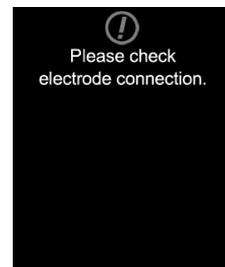
This message appears when the value for age or height of the examinee is out of the permissible range. Check your entry again.

For the permissible recommended input range for the data, refer to “Chapter II, Section H: Personal Profile.”



2. “Please check electrode connection.”

This message appears when the posture of the examinee is not appropriate or the examinee’s palms or soles are too dry or have too much hard skin, making it impossible to start the test. Correct the posture of examinee or wipe examinee’s hands and feet with an electrolyte tissue before testing again.



### B. Troubleshooting

This section explains out the order of steps to be taken in the event of malfunction, with the assumption that you have some basic knowledge about how to operate the equipment. If you still have a problem after taking the following steps, contact InBody.

1. **The equipment does not seem to run, even after the power is on.**

(In a normal situation, a signal sounds and the LCD is turned on.)

Cause 1: The plug is not pushed all the way into the electrical outlet.

Action 1: Push the plug all the way into the electrical outlet.

Cause 2: Extension is not turned on (when using a surge protector) or the power does not flow into extension.

Action 2: Check if the power flows into the extension and the electrical outlet where the extension is connected.

Cause 3: An adapter other than the one provided by InBody is being used.

Action 3: Use the adapter provided by InBody only.

Cause 4: Adapter is not tightly inserted into the InBody S10.

Action 4: Insert the adapter into the power input port tightly.

## 2. Impedance is not measured.

Cause 1: The electrodes are not properly connected.

Action 1: Please make sure electrodes are properly connected.

Cause 2: The examinee's hands and feet are too dry.

Action 2: Electric currents will not flow well if examinee has dry hands and feet.

Wipe examinee's hands and feet with an alcohol-based disinfectant (e.g., 70% ethanol) before re-measuring impedance.

Cause 3: Another cause not addressed in Cause 1 or Cause 2.

Action 3: There's a chance that the cable wire is disconnected due to external impact. Please try again. If it still doesn't work after 1 and 2 are checked, please contact Customer Service.

## 3. The analysis results are unexpected or unusual.

(It is not common to observe unexpected values.

All analyzed values should not be outside pre-determined ranges.)

Cause 1: The examinee is in the wrong position or the electrodes are improperly connected.

Action 1: Please make sure the examinee's actual electrodes type/test posture matches the settings selected on the InBody S10.

Cause 2: Personal information has been entered incorrectly.

Action 2: Check if personal information has been entered correctly.

Refer to the recommended input ranges in 'Management & Results Description > H. Personal Profile'.

## 4. The results sheet is not printing from the printer.

(In a normal situation, the results sheet automatically prints out after the measurement.)

Cause 1: The printer cable is unplugged.

Action 1: Ensure the cable is connected tightly to the InBody S10. Occasionally, this may occur as a result of a bad cable. In this case, you must replace the cable.

Cause 2: The paper tray is empty.

Action 2: Check if there is an indicator light or message on the printer. If the tray is empty, refill it with results sheet. Be sure to place the paper properly in the tray (proper direction and surface orientation).

Cause 3: The printer setup is not properly configured.

Action 3: Press 'SETUP > 11. Automatic Printing Options' button.

Select "O" to activate Auto Print function and set the number of copies to 1 or 2.

Cause 4: There is an issue with printer status.

Action 4: Set the proper printer in 'SETUP > 09. Printer Setup'.

## 5. The results sheets are not printing properly.

Cause 1: Printed InBody Result Sheet is not aligned

Action 1: Adjust the X and Y axis positions in 'SETUP > 15. Printing Alignment'.

Cause 2: The option selected in "Result Sheet Option" is not the appropriate selection.

Action 2: If you have selected "Blank Paper" in the Setup menu, please ensure that you are using standard 8 1/2" × 11" paper.

Cause 3: The results are printed on the back of the result sheet.

Action 3: Ensure that the results paper is properly set in the appropriate direction for your printer.

Cause 4: The results sheet appears faded.

Action 4: The printer has insufficient ink or toner. Please replace the ink or toner cartridge.

### Note

- A problem arises when the orientation setting in the printer's settings doesn't correspond with that of the InBody S10. Refer to the user's manual of the printer to change the orientation of the printer. The standard printing orientation for the InBody S10 is portrait.
- As error messages, misprints, and burnt-out fuses are items that technical service representatives can examine in the process of troubleshooting, keep them in a safe spot or keep records of them.

## C. Frequently Asked Questions (FAQ)

Even if no problems arise from the equipment, users may still have many questions, especially regarding clinical procedures. Below are a few of the more common questions with answers. If additional questions or more clarification is desired, e-mail your inquiries to [info@inbody.com](mailto:info@inbody.com).

| Question   | Answer   |
|--|--|
| <ul style="list-style-type: none"> <li>• Must socks or stockings be removed from the feet for analysis?</li> </ul>   | <ul style="list-style-type: none"> <li>• Yes. Bare skin contact is essential for analysis using the BIA method. Socks or stockings may cause a certain amount of distortion in the results. Socks and stocking must be removed to obtain accurate data.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• What are the circumstances where an analysis cannot be performed?</li> </ul>  | <ul style="list-style-type: none"> <li>• Examinees who have a pacemaker or other internal electronic medical devices should never use the InBody S10.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Is the electrical current applied to a human body through electrodes safe?</li> </ul>   | <ul style="list-style-type: none"> <li>• Yes. The BIA method uses an electrical current, but is harmless. The InBody S10 has acquired the CE and other certifications that assure the safety of the medical equipment.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Do accessories (jewelry, watches, rings, etc.) or any other metal objects worn by an examinee affect the analysis?</li> </ul> | <ul style="list-style-type: none"> <li>• The ideal condition for the analysis is simply standing with no clothes (naked) and wearing no accessories. However, this may not always be possible. Therefore, we recommend that the examinee remove as many clothing items and accessories that may affect weight as possible.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• How often does the examinee perform the analysis?</li> </ul>  | <ul style="list-style-type: none"> <li>• Body composition will change according to diet, exercise, medical treatment, etc. We recommend that you test on the InBody S10 once every two to four weeks to reliably see the changes.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Do I have to use an alcohol-based disinfectant (e.g., 70% ethanol)? Can I just use a wet cloth?</li> </ul>                    | <ul style="list-style-type: none"> <li>• Alcohol-based disinfectant (e.g., 70% ethanol)s are specifically designed for optimal testing, as opposed to a wet cloth. Always use an alcohol-based disinfectant (e.g., 70% ethanol) for accurate testing.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• How should the examinee prepare his/herself for accurate analysis?</li> </ul>   | <ul style="list-style-type: none"> <li>• For accurate analysis, InBody recommends the following: <ul style="list-style-type: none"> <li>- Measure with an empty stomach.</li> <li>- Measure 2 hours after a meal or on an empty stomach.</li> <li>- Measure after urination and excretion.</li> <li>- Remove heavy clothes or accessories.</li> <li>- Do not exercise or take a shower before measurement.</li> <li>- Make sure to maintain measurement posture for 10-15 minutes before measuring.</li> <li>- Do not measure after abruptly standing up.</li> <li>- Do not measure while taking a diuretic.</li> <li>- For females, avoid testing during the menstrual period as total body water will be higher than normal.</li> <li>- Input accurate weight and height.</li> <li>- Keep room temperature at 20 - 25 °C (68 - 77 °F).<br/>Warm yourself up for 20 minutes before a test performed in winter.</li> </ul> </li> </ul> |

## D. Regarding of Serious Incidents

If you are aware of a serious incident involving your product, or communicate a corrective action to you clients, 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  | Answer   |
|---|--|
| <ul style="list-style-type: none"><li>• When an accident occurs</li></ul> | <ul style="list-style-type: none"><li>• No later than within 15 calendar days after you have been informed of a serious incident.</li><li>• No later than within 2 calendar days after you have been informed of a serious incident which implies a serious threat to public health.</li><li>• No later than within 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.</li></ul> <p>You must report a serious incident before the corrective action to eliminate the risk is taken, except in an emergency, in which case you must immediately carry out a field safety corrective action.</p> |

## E. Residual Risks and Undesirable Side Effects

Undesirable side effects have been identified as general allergies that can be associated with the skin contact of the metal surface during the clinical use of the InBody S10. Upon the comprehensive risk management, the metal patient contacting material of the stainless steel has been evaluated with ISO-10993 biocompatibility testing, particularly with the skin sensitization testing, which has resulted in the 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 equipment.

## V. Other

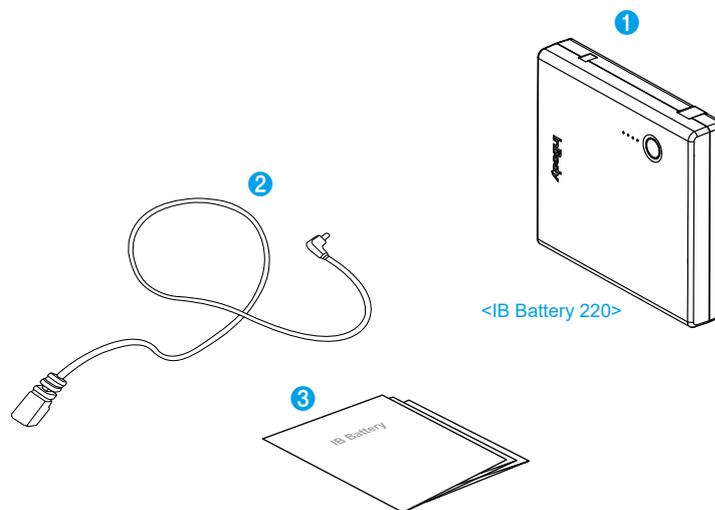
### A. Accessories

InBody provides optional devices to make the operation of the InBody S10 more efficient and convenient. For more information, contact InBody.

#### IB Battery 220

The IB Battery 220 was made to be used in connection with the InBody S10. Please do not use the IB Battery 220 for purposes other than connecting with the InBody S10. The IB Battery 220 allows the InBody S10 to be conveniently transported and carried indoors. Even if the power cable adapter is taken out, the InBody S10 will not turn off.(1) Product Components

- 1 IB Battery 220
- 2 Connection Cable (75cm / 29.5in)
- 3 User Manual



#### Note

- Because battery life is affected by its environment, it is best to use it in a dry room temperature environment.

## (2) How to Use IB Battery 220

### 1) Function of Parts

**1** Power adapter connection socket

This socket is used to connect the adapter when the battery is in stand-alone charge mode.

**2** External connection socket for the InBody S10's device

This socket is used to connect the InBody S10's device and battery with the battery cable.

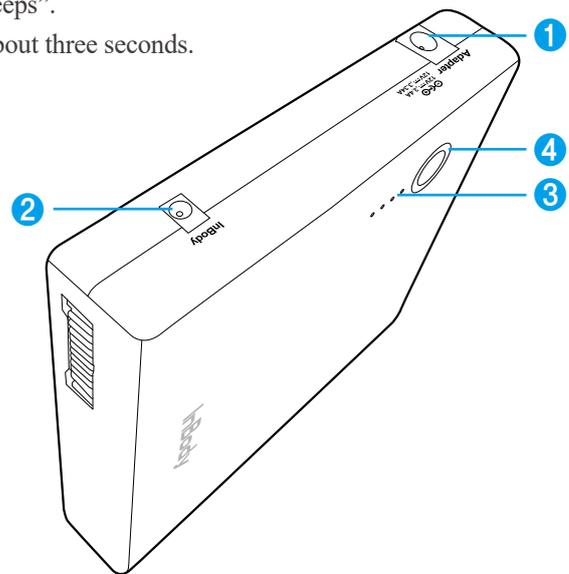
**3** Battery level indicator (LED)

This LEDs show the remaining level of the battery.

**4** Battery level check button

Press and hold the button on the battery until it “beeps”.

The four LEDs display the remaining level after about three seconds.



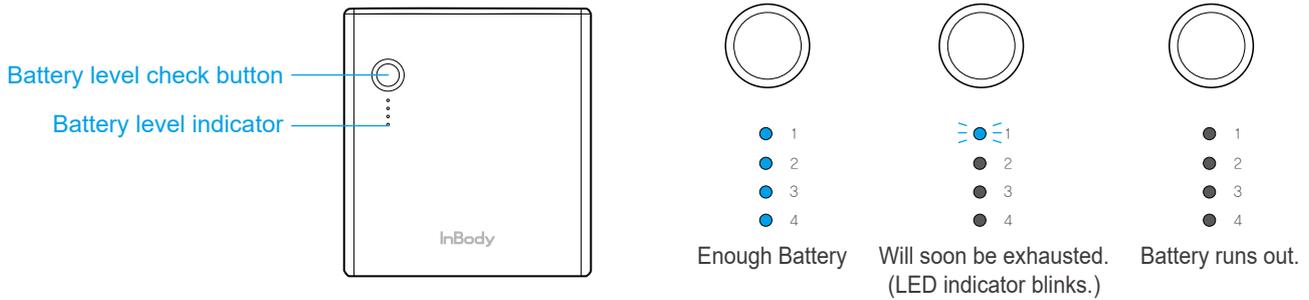
## 2) How to Operate IB Battery 220

### ① On charging

The Battery level indicator(LED) blinks while the adapter is connected and charging.  
When all four LEDs light up and stop flashing, charging is complete.

### ② Checking the remaining battery level and charging time.

Press and hold the button on the battery until it “beeps”. The four LEDs display the remaining battery level after about three seconds. Before the battery runs out, the last remaining LED blinks and an alarm sounds "beep-beep-" every minute. If that occurs, please charge the battery.



### ③ Battery level indicator On / Off

The LEDs light up when you press the battery level check button,  
while charging or while connected to InBody's devices.

The LEDs turn off when the battery is low.

### Caution

- Please recharge using the adapter provided by InBody.
- The battery level check button is for checking the remaining battery charge.  
The IB Battery 220 does not have a power on/off feature.

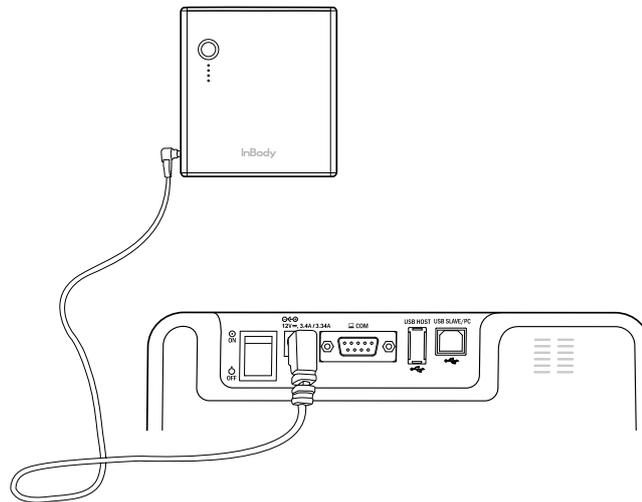
### 3) Installing and Using the InBody S10

It is recommended to connect the InBody S10 to the IB Battery 220, and then use it while the adapter is connected to the IB Battery 220.

- 1 Connect the connection cable to InBody S10 and IB Battery 220.

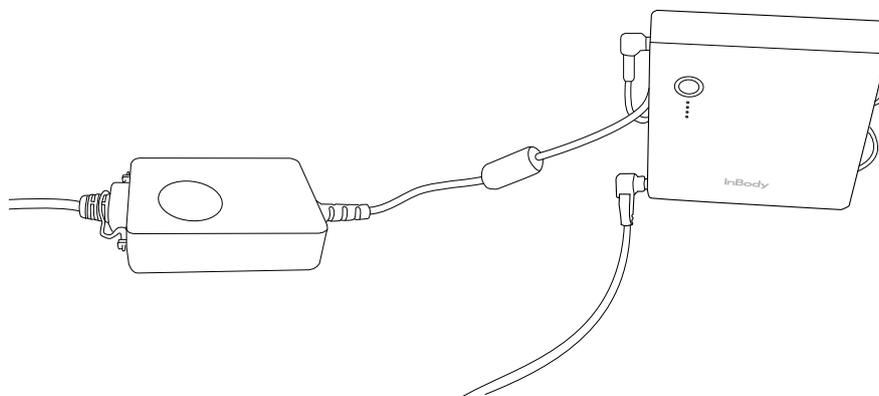
The connection cable has connection plugs on both sides, but the sizes are different.

Connect the big plug to InBody S10 and the small plug to the side labeled “InBody” on the IB Battery 220.



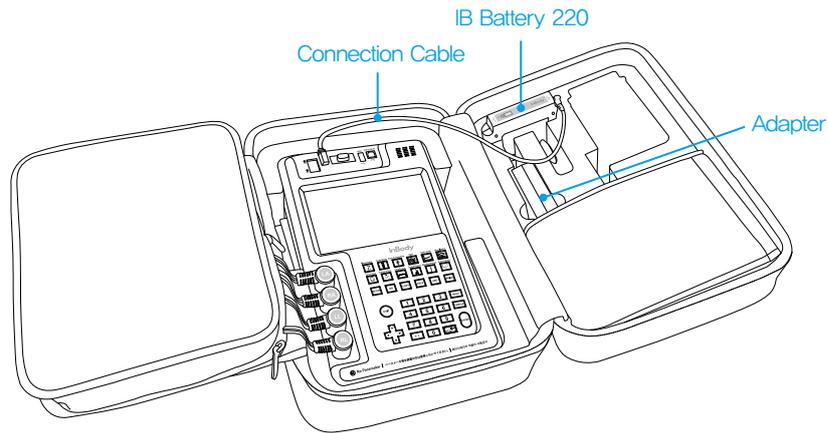
- 2 Connect the adapter of the InBody S10 to the IB Battery 220.

Connect the adapter cable to the side labeled “Adapter” on the IB Battery 220, and connect the power cable to the power.

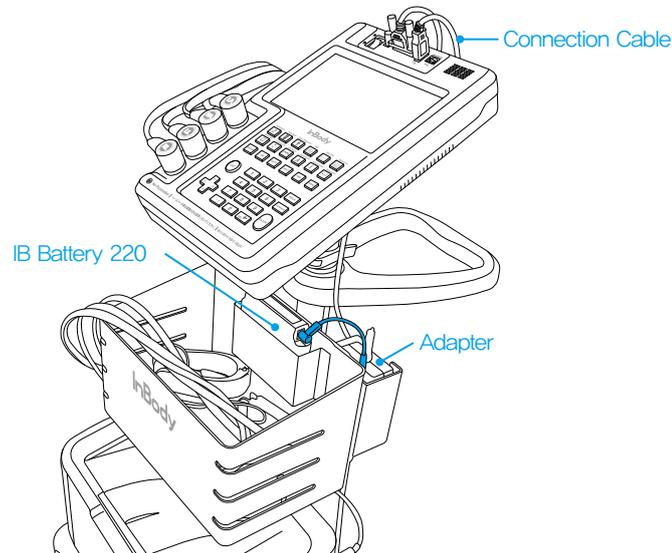


- 3 Once the IB Battery 220 is properly connected, the power cable may be safely removed from the InBody S10, and the device may be carried around. Because the IB Battery 220 is connected, the InBody S10 will not shut off when the cable is removed.

▶ When using the InBody S10 Carrying Bag



▶ When using the InBody S10 cart



 **Warning**

- Do not touch signal input, signal output or other connectors, and the patient simultaneously.
- External equipment intended for connection to signal input, signal output or other connectors, shall comply with relevant IEC Standard(e.g., IEC60950 for IT equipment and IEC60601-1 series for medical electrical equipment).

In addition, all such combination-system shall comply with the standard IEC60601-1 and/or IEC60601-1-1 harmonized national standard or the combination. If in doubt, contact a qualified technician or your local representative.

## B. Safety Information

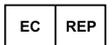
### Indicators

|   |                                     |
|---|-------------------------------------|
|  | 9-pin serial port (Female, RS-232C) |
|  | LAN port (Ethernet, 10T Base)       |
|  | USB port                            |

### Safety Symbols

|  |                        |
|--|------------------------|
|                           | Dangerous High Voltage |
|                           | Warning, Caution       |
|                           | BF Type Equipment      |
| <br>12V = , 3.4A / 3.34A | Adapter                |
|                         | Power On               |
|                         | Power Off              |

### Etc. Symbols

|  |   |  |   |
|--|---|--|---|
|  1639 | European Conformity                                 |   | Serial number                               |
|       | Manufacturer  |   | Direct current                              |
|       | Authorized representative in the EUROPEAN COMMUNITY |   | Operating instructions                      |
|       | Medical Device                                      |   | Unique Device Identifier                    |
|       | Catalogue number                                    |   | Importer                                    |
|       | Country of manufacture                              |  | Do not disassemble the product arbitrarily. |



**Disposal of old Electrical & Electronic Equipment**

(Application in the European Union and other European countries with separate collection system.)

This symbol indicates that this product 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 equipment. By ensuring this product 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 product. For more detailed information about recycling this product, please refer to local governing ordinances and recycling plans.



**WARNING**

Electric shock hazard – do not dismantle.  
Dismantling will void the warranty.



**DANGER**

Do not use this equipment with 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 substances liquids directement sur l'appareil.



**CAUTION**

No excessive force on shoulder joint

Ne pas appliquer de force excessive sur les bars articulés.

**B-1. Cleaning**

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

**B-2. 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 |

## C. Classification

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
- Degree of protection against water infiltration: IPX0
- EMC Emission: Level B
- Equipment is not suitable for use in the presence of flammable mixtures.

## D. Specifications

|  |  |  |
|--|--|--|
| Bioelectrical Impedance Analysis (BIA) Measurement Items | Bioelectrical Impedance (Z)  | 30 Impedance Measurements by Using 6 Different Frequencies (1kHz, 5kHz, 50kHz, 250kHz, 500kHz, 1000kHz) at Each of 5 Segments (Right Arm, Left Arm, Trunk, Right Leg and Left Leg) |
|  | Reactance (Xc)   | 15 Impedance Measurements by Using 3 Different Frequencies (5kHz, 50kHz, 250kHz,) at Each of 5 Segments (Right Arm, Left Arm, Trunk, Right Leg, and Left Leg)                      |
| Electrode Method   | Touch Type / Adhesive Electrode System   |  |
| Measurement Method                                       | Direct Segmental Multi-frequency Bioelectrical Impedance Analysis Method, DSM-BIA method   |  |
| Body Composition Calculation Method                      | No use of Empirical Estimation   |  |
| Type 1 Outputs (Body Water Results Sheet (I/II))         | <p>Results and Interpretations</p> <ul style="list-style-type: none"> <li>• Body Water Analysis (Intercellular Water, Extracellular Water, Total Body Water)</li> <li>• Segmental Water Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• ECW/TBW</li> <li>• Body Water History (Weight, Total Body Water, Intracellular Water, Extracellular Water, ECW/TBW, TBW/FFM)</li> <li>• Muscle-Fat Analysis (Body Fat Mass, Weight, Skeletal Muscle Mass, Body Mass Index, Percent Body Fat)</li> <li>• Body Composition Analysis (Soft Lean Mass, Fat Free Mass)</li> <li>• Segmental Lean Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Protein</li> <li>• Mineral</li> <li>• Nutrition Index (Body Cell Mass, Bone Mineral Content, Arm Circumference, Arm Muscle Circumference, Waist Circumference, Visceral Fat Area, Basal Metabolic Rate, TBW/FFMI, SMI)</li> <li>• Research Item (BMI, Percent Body Fat, BMR, SMI, BCM, BMC, FFM, AC, AMC, TBW/FFM)</li> <li>• Segmental ECW/TBW Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Reactance (5kHz, 50kHz, 250kHz)</li> <li>• Whole Body Phase Angle (50kHz, Right side of the body)</li> <li>• Segmental Phase Angle (50kHz, Right Arm, Left Arm, Trunk, Right Leg, Left Leg) Impedance (Each segment and each frequency)</li> </ul> |  |

|  |  |
|--|--|
| <p>Type 1<br/>Outputs<br/>(Body Composition<br/>Results Sheet)</p> | <p>Results and Interpretations</p> <ul style="list-style-type: none"> <li>• Body Composition Analysis (Intercellular Water, Extracellular Water, Protein Mass, Mineral mass, Body Fat Mass, Total Body Water, Soft Lean Mass, Fat Free Mass, Weight)</li> <li>• Muscle-Fat Analysis (Weight, Skeletal Muscle Mass, Body Fat Mass, Percent Body Fat, Body Mass Index)</li> <li>• Segmental Lean Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Segmental ECW/TBW Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• ECW/TBW (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Segmental Water Analysis (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Nutrition Index (Body Cell Mass, Bone Mineral Content, Arm Circumference, Arm Muscle Circumference, Waist Circumference, Visceral Fat Area, Basal Metabolic Rate, TBW/FFMI, SMI)</li> <li>• Weight Control (Weight Control, Fat Control, Muscle Control)</li> <li>• Body Water History (Weight, Total Body Water, Intracellular Water, Extracellular Water, ECW/TBW, TBW/FFM)</li> <li>• Reactance (5kHz, 50kHz, 250kHz)</li> <li>• Whole Body Phase Angle (50kHz, Right side of the body)</li> </ul> <p>Impedance (Each segment and each frequency)</p>   |
| <p>Type 2<br/>Outputs<br/>(Body Water<br/>Results Sheet)</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 Analysis (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>• 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 Mass)</li> <li>• Obesity Evaluation (BMI, Percent Body Fat)</li> <li>• Body Balance Evaluation (Upper, Lower, Upper-Lower)</li> <li>• Segmental Fat 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>• 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, Soft Lean Mass, Bone Mineral Content)</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 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 (Intercellular 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, Recommended calorie intake)</li> <li>• Calorie Expenditure of Exercise</li> <li>• Reactance (5 kHz, 50 kHz, 250 kHz)</li> <li>• Whole Body Phase Angle (50 kHz)</li> <li>• Segmental Phase Angle (50 kHz: Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Bioelectrical Impedance Vector Analysis</li> </ul> <p>Impedance (Each segment and each frequency)</p> |

|  |   |
|--|---|
| <p>Type 2<br/>Outputs<br/>(Body Composition<br/>Results Sheet)</p> | <p>Results and Interpretations</p> <ul style="list-style-type: none"> <li>• Body Composition Analysis (Total Body Water, Protein, Soft Lean Mass, Minerals, Fat Free Mass, 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>• Segmental Lean Analysis (Based on ideal weight/Based on current weight: Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• ECW Ratio Analysis (ECW Ratio)</li> <li>• Body Composition History (Weight, Skeletal Muscle Mass, Percent Body Fat, ECW Ratio)</li> <li>• InBody Score</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 Mass)</li> <li>• Obesity Evaluation (BMI, Percent Body Fat)</li> <li>• Body Balance Evaluation (Upper, Lower, Upper-Lower)</li> <li>• Segmental Fat 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>• 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>• Segmental Circumference (Neck, Chest, Abdomen, Hip, Right Arm, Left Arm, Right Thigh, Left Thigh)</li> <li>• Body Water Composition (Total Body Water, Intracellular Water, Extracellular Water)</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, Recommended calorie intake)</li> <li>• Calorie Expenditure of Exercise</li> <li>• Results Interpretation</li> <li>• Reactance (5 kHz, 50 kHz, 250 kHz)</li> <li>• Whole Body Phase Angle (50 kHz)</li> <li>• Segmental Phase Angle (50 kHz, Right Arm, Left Arm, Trunk, Right Leg, Left Leg)</li> <li>• Bioelectrical Impedance Vector Analysis</li> </ul> <p>Impedance (Each segment and each frequency)</p> |
| <p>Logo Display</p>  | <p>Possible to input name of the user's place, address and contact number</p>   |
| <p>Type of<br/>Result Sheets</p>                                   | <p>Body Water Results Sheet, Body Composition Results Sheet</p>   |
| <p>Portability</p>   | <p>Indoors - with own cart, Outdoors - with own Carrying Bag.</p>   |
| <p>Posture</p>   | <p>Lying Posture, Seated Posture, Standing Posture</p>  |
| <p>Electrode Type</p>  | <p>Touch Type, Adhesive Type</p>  |
| <p>Setting of Dialysis<br/>Mode</p>                                | <p>Measurement time (before/during/after dialysis), Access position, Paralyzed position set available</p>   |
| <p>Data Storage</p>  | <p>Possible to save the results when ID is entered (Up to 100,000 measurements)</p>   |
| <p>Internal Interface</p>  | <p>Touch screen and key pad</p>   |
| <p>Use of USB<br/>Storage Device</p>                               | <p>Possible to backup and transfer data to USB storage device (compatible with Excel and LookinBody software)<br/>It is recommended to use the USB storage device provided by InBody.</p>   |

|                        |  |              |   |
|------------------------|--|--------------|---|
| Data Back-Up           | Possible to backup data through USB storage device and to restore the data to the InBody       |              |   |
| Printer Connection     | USB port   |              |   |
| Applied Rating Current | Under 100 $\mu$ A(1kHz), 500 $\mu$ A(over 5kHz)  |              |   |
| Power Consumption      | 50VA   |              |   |
| Adapter                | Bridgepower<br>(BPM040S12F07)  | Power Input  | AC 100 - 240V, 50 - 60Hz, 1.2A(1.2A - 0.6A) |
|                        |  | Power Output | DC 12V $\equiv$ , 3.4A                      |
|                        | Mean Well<br>(GSM 40A12)   | Power Input  | AC 100 - 240V, 50/60Hz, 1.0 - 0.5A          |
|                        |  | Power Output | DC 12V $\equiv$ , 3.34A                     |
| Display Type           | 800 $\times$ 480 Touch Color LCD   |              |   |
| External Interface     | RS-232C 1EA, USB Slave 1EA, USB Host 1EA   |              |   |
| Compatible Printer     | Laser/Inkjet PCL 3 or above and SPL  |              |   |
| Dimension              | 202 (W) $\times$ 322 (L) $\times$ 53 (H): mm<br>8 (W) $\times$ 12.7 (L) $\times$ 2.1 (H): inch |              |   |
| Equipment Weight       | 2 kg (4.4 lb)  |              |   |
| Test Duration          | 90 to 130 seconds  |              |   |
| Operation Environment  | 10 - 40 $^{\circ}$ C (50 - 104 $^{\circ}$ F), 30 - 75% RH, 70 - 106 kPa                        |              |   |
| Storage Environment    | -20 - 70 $^{\circ}$ C (-4 - 158 $^{\circ}$ F), 10 - 95% RH, 50 - 106 kPa (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 can be changed without prior notice.

## E. Guidance and Manufacturer's Declaration

The InBody device is intended for use in the electromagnetic environment specified below. The customer or the user of the InBody 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 InBody 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 equipment.   |
| RF emissions CISPR 11                                 | Class B    | The InBody 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. |
| Harmonic emissions IEC 61000-3-2                      | Class A    |  |
| 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<br>± 2 kV, ± 4 kV,<br>± 8 kV, ± 15 kV air  | ± 8 kV contact<br>± 2 kV, ± 4 kV,<br>± 8 kV, ± 15 kV air  | Floors should be 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<br>± 1 kV for input/output lines  | ± 2 kV for power supply lines<br>± 1 kV for input/output lines  | Mains power quality should be that of a typical commercial or hospital environment.  |
| Surge IEC 61000-4-5   | ± 0.5 kV, ± 1 kV differential mode<br>± 0.5 kV, ± 1 kV, ± 2 kV common mode  | ± 0.5 kV, ± 1 kV differential mode<br>± 0.5 kV, ± 1 kV, ± 2 kV common mode  | Mains 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 % $U_T$<br>(100 % dip in $U_T$ ) for 0.5/1 cycles<br>70 % $U_T$<br>(30 % dip in $U_T$ ) for 25/30 cycles<br>0 % $U_T$<br>(100 % dip in $U_T$ ) for 250/300 cycles | 0 % $U_T$<br>(100 % dip in $U_T$ ) for 0.5/1 cycles<br>70 % $U_T$<br>(30 % dip in $U_T$ ) for 25/30 cycles<br>0 % $U_T$<br>(100 % dip in $U_T$ ) for 250/300 cycles | Mains power quality should be that of a typical commercial or hospital environment. If the user of this product requires continued operation during power mains interruptions, it is recommended that this product 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 equipment and InBody device**

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

| Rated maximum output power of transmitter [W] | Separation distance according to frequency of transmitter [m] |  |
|---|---|--|
|   | IEC 60601-1-2: 2014   |  |
|   | 150 kHz to 80 MHz<br>$d = 1.2\sqrt{P}$                        | 80 MHz to 2.7 GHz<br>$d = 2.0\sqrt{P}$ |
| 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<br>IEC 61000-4-6 | 3 V<br>150 kHz to 80 MHz   | 3 V               | Portable and mobile RF communications equipment 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.  |
| Radiated RF<br>IEC 61000-4-3  | 6 Vrms<br>150 kHz - 80 MHz<br>In ISM bands <sup>1</sup><br>amateur radio bands Bands <sup>2</sup><br><br>10 V/m<br>80 MHz to 2.7 GHz | 6 V<br><br>10 V/m | <p>Recommended separation distance<br/><math>d = 1.2\sqrt{P}</math></p> <p>IEC 60601-1-2:2014<br/><math>d = 2.0 \sqrt{80 \text{ MHz to } 2.7 \text{ GHz}}</math><br/>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).<br/>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><br/>Interference may occur in the vicinity of equipment marked with following symbol:</p> <div style="text-align: center;">  </div> |

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.

1. The ISM (Industrial, Scientific and Medical) bands between 150 kHz and 80 MHz are 6.765 MHz to 6.795MHz; 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 broadcast and TV broadcast 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 InBody device is used exceeds the applicable RF compliance level above, the InBody device should be observed to verify normal operation. If abnormal performance is observed, additional measures maybe necessary, such as re-orienting or relocating the InBody device.
4. When the frequency range exceeds 150 kHz - 80 MHz, the electric field strength should be not higher than 3 V/m.

## Electromagnetic emissions

The InBody device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. Portable RF communications equipment should be used no closer than 30 cm (12 inches) to any part of the InBody device. Otherwise, the performance of this equipment 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<br>18 Hz                          | 27 V/m              | 27 V/m           |
|   | 430 - 470 MHz   | GMRS 460<br>FRS 460  | FM <sup>7</sup><br>± 5 kHz deviation<br>1 kHz sine | 28 V/m              | 28 V/m           |
|   | 704 - 787 MHz   | LTE<br>Band13, 17  | Pulse modulation<br>217 Hz                         | Band                | Band             |
|   | 800 - 960 MHz   | GSM800:900<br>TETRA 800<br>iDEN 820<br>CDMA 850<br>LTE Band 5          | Pulse modulation<br>18 Hz                          | 28 V/m              | 28 V/m           |
|   | 1700 - 1990 MHz | GSM 1800<br>CDMA 1900<br>GSM 1900<br>DECT<br>LTE Band 1,2,4,25<br>UMTS | Pulse modulation<br>217 Hz                         | 28 V/m              | 28 V/m           |
|   | 2400 - 2570 MHz | Bluetooth<br>WLAN<br>802.11b/g/n<br>RFID 2450<br>LTE Band              | Pulse modulation<br>217 Hz                         | 28 V/m              | 28 V/m           |
|   | 5100 - 5800 MHz | WLAN 802.11a/n   | Pulse modulation<br>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.

## **F. Key Performance Claims of InBody S10**

The key performance claims of InBody S10 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 InBody S10 with the probability of harm occurring is more beneficial when compared to the severe harm that might occur from not using the Body Composition Analyzer of InBody (Models: InBody S10). The Body Composition Analyzer of InBody (Models: InBody S10) provides clinical benefits to support the aforementioned intended use, as the of InBody (Models: InBody S10) in 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 routine. It can be also usefully applied to follow-up studies of patients treated for various diseases.

The key performance claims of InBody S10 have 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%). 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 InBody S10.

inbody.com

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