ACCUNIQ
BC 310

User Manual

selvas Healthcare

CE 0197

The device bears the CE label in accordance with the provisions of Medical Device Directive 93/42/EEC.

THE PERSONS RESPONSIBLE FOR PLACING DEVICES ON THE EC MARKET UNDER MDD 93/42/EEC.

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INTRODUCTION

You are kindly requested to be familiar with these directions before using this product and always keep it together with the product. In case you are not sure about any directions or problems arising while using the product, please contact with SELVAS Healthcare or its local distributor where is purchased. We will provide you with detailed instructions.

INTENDED USE

This device measures impedance by bioelectrical impedance analysis method and provides lots of information using measured impedance and inputted personal data (height, age, gender, weight).

It shows body composition of MBF, LBM, TBW, etc. and information to BMI, PBF, BMR, abdominal analysis, segmental analysis, etc.

Intended application location is professional healthcare facility environments, not home healthcare environment.

CONTRAINDICATIONS

The device should not be used in following people:

- Anyone who implants metallic materials like a pacemaker, defibrillator, stent, and metal suture in the heart and great vessel etc.
- Anyone who is equipped with the devices injecting electric current such as artificial heart, and heart lung machine.
- Anyone who is connected to liquid-filled catheter and other electronic devices of good conductivity.
- Anyone who use following device can go into danger or cannot reach objective result due to interference with other electric signals.

Using electronic stimulator for various purposes.

- Devices injecting electric current or connecting and operating: ECG, EMG, and EEG.
- Any other person who is diagnosed by the doctor to be influenced even by imperceptible micro-current.

Please consult with doctor before using this device to:

- Any woman with contraceptive devices.
- Any woman in pregnancy.

INTENDED PATIENT POPULATION

- Age: No limit
- Gender: No limit
- Weight: 10 ~ 250 Kg
- Height: 50 ~ 220 cm
- Health: A person who can stand up and maintain the measurement posture required by the machine.

WORD DEFINITIONS

To ensure safe operation and long term performance stability, it is essential that you fully understand the functions, operating and maintenance instructions by reading this manual before operating your unit. Particular attention must be paid to all warnings, cautions and notes incorporated herein.
The following conventions are used throughout the manual to denote information of special emphasis.

Warning

"Warning" indicates important information about the presence of a hazard which may cause severe personal injury, loss of substantial property, damage if the warning is ignored.

Caution

"Caution" indicates important information about the presence of a hazard which may cause minor personal injury or property damage if the caution is ignored.

Note

"Note" indicates important information in order to notify installation, operation or maintenance of this device. "Note" is important but not hazard-related.
Hazard warnings are not included here.

CLASSIFICATION AND COMPLIANCE

1) This device is classified as;
   - Class 1 type-BF against electric shock
   - Ordinary equipment without protection against ingress of water
   - Equipment not suitable for use in presence of a flammable anesthetic mixture by standard of IEC 60601-1:2005/A1:2012 (Basic safety and essential performance of Medical Electrical Equipment)

2) This device is complied with Class A for Noise-Emission, Level B for Noise-immunity, by standard of IEC 60601-1-2:2014(Electromagnetic Compatibility Requirements).

SAFETY SYMBOLS AND INFORMATION

The International Electro-technical Commission (IEC) has established a set of symbols for medical electrical equipment which classify a connection or warning of any potential hazard.

The classifications and symbols are shown below. Save these instructions for your safety.

SYMBOL	INFORMATION
	Degree of protection against electric shock : TYPE BF
	Please observe operating instructions
	General warning sign
	General prohibition sign
	General mandatory action sign
	Caution sign
	Waste Electrical and Electronic Equipment (WEEE) The device could be sent back to the manufacturer for recycling or proper disposal after their useful lives. Alternatively the device shall be disposed in accordance with national laws after their useful lives.
	"OFF" (only for a part of equipment)
	"ON" (only for a part of equipment)
	Direct current

SYMBOL	INFORMATION
	Date of manufacture
	Manufacturer
	CE mark
	Serial No.
	Authorized representative in the European community.
	Keep dry
	This way up
	Fragile
	Do not use blades to open
	Handle with care
	Medical Device

SAFETY PRECAUTIONS

This device is designed and manufactured with consideration of safety of the operator and subject and also to the reliability of the unit.

The following precautions must be observed for additional safety;

Warning

During measurement of the body composition, a microcurrent of 180μA flows through the body. Individuals who have any kind of implanted active medical devices, such as pacemakers, should not use this equipment because the microcurrent can cause malfunction in the implanted device.

Warning

To prevent fire hazard, use only a correctly wired (100–240VAC) outlet, and do not use a MSO(Multiple Socket Outlet) that is not in compliance with IEC 60601–1.

Warning

To reduce the risk of electric shock or device damage, never plug–in or plug–out with wet hands.

Warning

Physically disabled persons should not attempt to take measurements alone, but instead should have their caretakers assist them in using the device.

Caution

The unit must be operated only by, or under supervision of a qualified person with our company or our distributors.

Caution

If you have experienced any trouble with the unit, switch it off immediately, and contact our company or its authorized dealer for assistance.

Caution

If you plan to connect any device from other manufacturers electrically or mechanically to the unit, contact our company or its authorized dealer for instructions before doing so.

When you connect computer or other system to the unit (RS–232C), the attached systems should be those certified by IEC 950 or equivalent standards for data processing equipment.

Configurations shall comply with the system standard IEC 60601–1:2005/A1:2012.

Everybody who connects additional equipment to the signal input part or signal output part configures a medical system by standard IEC 60601–1:2005/A1:2012.

If in doubt, consult the A/S department of local distributor.

Caution

Avoid the following environments for storage;

- Where the ambient temperature falls below –25℃ or exceeds 70℃.
- Where the atmospheric pressure falls below 70kPa (700mbar) or exceeds 106kPa (1060mbar).
- Where the humidity is over 93% non–condensing.
- Where the unit is exposed to spray or splashing water.
- Where the unit is exposed to dust.
- Where the unit is exposed to water vapor.
- Where the unit is exposed to salty atmosphere.
- Where the unit is exposed to explosive gas.
- Where the unit is exposed to excessive shocks or vibrations.
- Where the angle of inclination of mounting surface exceeds 10 degrees.
- Where the unit is exposed to direct sunlight.

Caution

This device needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the ACCOMPANYING DOCUMENTS.

Caution

Cross contamination is possible because this equipment is used with bare hands and feet. Refer to the cleaning and disinfecting methods in this manual.

Caution

Measurements may be impaired if this device is used near televisions, microwave ovens, X-ray equipment or other devices with strong electrical fields. To prevent such interference, use the meter at a sufficient distance from such devices or turn them off.

Prohibition

Do not disassemble or alter the device under any circumstances, as this could result in electric shock or injury as well as adversely affect the precision of measurements. This device is specified as Class 1 type BF unit under the standard IEC 60601-1:2005/A1:2012 (Basic safety and essential performance of Medical Electrical Equipment). Therefore, patients must not touch or handle inner side of the system at any time.

Prohibition

Do not to touch signal input, signal output or other connectors, and the patient simultaneously.

Prohibition

The unit has previously been adjusted in the factory for optimum performance.
Do not attempt to adjust switches or any other things except those specified in this manual for operation.

Prohibition

Never pour any liquid directly on the scale platform, as it may leak and cause internal damage.

Prohibition

Never jump on the Weighing Platform, there may be a risk of stumbling and malfunction of the equipment.

Note

This equipment has been tested and found to comply with the limits for medical devices according to IEC 60601-1-2:2014. These limits are designed to provide reasonable protection against harmful interference in a typical medical installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer or field service technician for help.

Note

Place the Weighing Platform on a level and stable surface.
If the equipment is used when the Weighing Platform is unstable because not all feet are on the surface, there may be a risk of stumbling or inaccurate measurement.

Note

Note that portable and mobile RF communications equipment can affect MEDICAL ELECTRICAL EQUIPMENT.

Note

Consult a physician or a trained health professional for interpretation of measurement results.

Note

In case of patients who have certain diseases, the estimates might be different

Note

Incorrect operation or failure of user to maintain the unit spares the manufacturer or his agent of the responsibility for system's non-compliance with specifications or responsibility for any damage or injury.

This manual is made for informational purposes and this manual and device are not meant to be a substitute for the advice provided by your own physician or other medical expert. You should not use the information contained in the device for diagnosis or treatment of health problems or prescription of medication by yourself. If you have or suspect that you have a medical problem, consult with your physician promptly.

Defective units or accessories must be packed in the replacement cartons to be shipped off from you to our company.

Shipping and insurance costs for return of defective unit must be prepaid by the users.

Warning

Do not modify this equipment without authorization of the manufacturer.

Warning

Connect the earth placed on the backside of this device to terminal plate to prevent any electric shock from leakage current or a potential difference.

Warning

To avoid the risk of electric shock, this equipment must only be connected to supply mains with protective earth.

Caution

Do not put anything other than the main unit and SELVAS's Blood Pressure Monitor within 1.5 m from the patient.

Caution

Do not touch any other devices other than those specified by the manufacturer.

Caution

Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

Guidance for Electromagnetic compatibility (EMC)

Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30cm (12inches) to any part of this equipment, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

Details about the electromagnetic compatibility (EMC) of the ACCUNIQ BC310 are given below.

Before using the ACCUNIQ BC310, be sure to read and understand the following information.

1) Guidance and manufacturer's declaration – electromagnetic emissions

   The ACCUNIQ BC310 is intended for use in the electromagnetic environment specified IEC 60601-1-2:2014 (Fourth Edition).

2) Guidance and manufacturer's declaration – electromagnetic immunity

   The ACCUNIQ BC310 is intended for use in the electromagnetic environment specified IEC 60601-1-2:2014 (Fourth Edition).

3) Guidance and manufacturer's declaration – electromagnetic immunity 2

   The ACCUNIQ BC310 is intended for use in the electromagnetic environment specified IEC 60601-1-2:2014 (Fourth Edition).

4) Recommended separation distances between portable and mobile RF communications equipment and the ACCUNIQ BC310

   The ACCUNIQ BC310 is intended for use in the electromagnetic environment specified IEC 60601-1-2:2014 (Fourth Edition).

ABOUT BODY COMPOSITION

Body Composition

Human body consists of body fat and lean body. Lean body means non fat constituents of human body like body water, muscles, bones, etc.

Body water is divided into intra and extra cellular water and the ratio between them is controlled and maintained within a certain range. Body fat is piled beneath the skin and between abdominal organs. Body fat is hydrolyzed to make energy needed to normal physiological function when energy supply through food intake is not sufficient, but excessive fat in the body itself is a kind of disease and causes lifestyle diseases.

Healthy people maintain the balance of body composition in a steady proportion but unhealthy people persons fail to keep this balance. When the balance in body composition is broken, diseases like obesity, malnutrition, osteoporosis, etc. can be caused.

Obesity

Various methods can be used to assess obesity but the key factor in obesity assessment is the amount of fat accumulated in the body.

In general, obesity is defined as the state of not only excessive weight compared with height (visible obese)but also excessive b ody fat compared with weight (invisible or visible obese).

Strictly speaking obesity is the state that body fat occupies considerably high ratio to weight.

Necessity of Body Composition Analysis

Body Composition Analysis is a good indicator to find possible health problems.
Body composition analysis enables professionals to find obesity or imbalance in body composition at early stage and helps subjects keep their body healthy.
Body composition analyzer is a useful preventive diagnostic device.

Waist to hip ratio

Waist to hip ratio (WHR) shows the distribution of fat stored in one's abdomen and hip.
It is simple but useful to assess body fat distribution. Body fat is stored in two distinct ways.
They are often called 'apple' and 'pear' type. Apple type sho ws bigger girth of waist than hip and pear type has bigger girth of hip than waist. If body fat in abdomen increases more, the risk to cardiovascular diseases, diabetes, etc. becomes higher.

Abdominal Fatness

Body fat is divided into subcutaneous fat and visceral fat. Visceral obesity is considered to be a critical risk factor along with Percent of body fat.

Lipoprotein lipase can be easily activated in visceral fat, and it cause visceral fat to be dissolved easily. Dissolved visceral fat goes into liver th rough the vessel and it cause fatty liver or increasing lipid in the blood. It also elevates the risk of hyperinsulinemia, hypertension, and cardiovascular disease.

Visceral fat generally occupies 10 ~ 20 % of body fat, and visceral obesity is assessed bas ed on the indicators below.

- the cross sectional fat area between L4 ~ L5 is 100 cm^2 and over
- the visceral fat to subcutaneous fat ratio is 0.4 and over
- the waist to hip ratio (WHR) is over 0.9 (male) / 0.85 (female)
- the circumference of waist is over 102 cm (male) / 88 cm (female)

Visceral fat increases after their 30s in men and after Menopause in women. It is more common in men than women and the old than the young. Visceral fat tends to increase with aging.
Because the combustion rate per minute of vi sceral fat is higher than that of subcutaneous fat, visceral fat can be easily reduced by exercise or dietary control in case of abdominal obesity.
WHR is the ratio of waist to hip circumference and has relation to one s figure.

Segmental Analysis

This device analyzes soft lean mass of five body parts; trunk, right arm, left arm, right leg, and left leg. This function can be used as an assessment tool to evaluate the result of exercise or rehabilitation treatment.

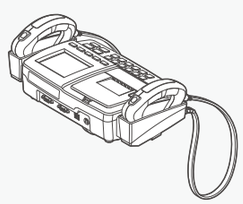
NAME AND FUNCTION OF EACH PART

Basic Package

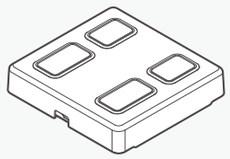
ACCUNIQ BC310 (For whole body)

① Head Part ② Weight scale ③ Column ④ Body Fixing Bracket ⑤ Body Cover
⑥ Level Gauge ⑦ Rubber Feet ⑧ User manual & Data management program
⑨ Serial cable ⑩ USB cable ⑪ Power cable and adapter ⑫ Thermal printer
⑬ Roller ⑭ User manual

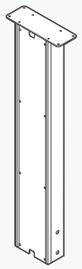
① Head Part



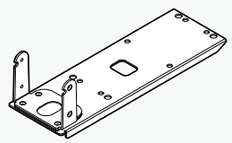
② Weight scale



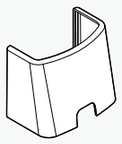
③ Column



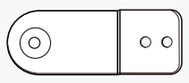
④ Body Fixing Bracket



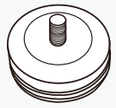
⑤ Body Cover



⑥ Level Gauge



⑦ Rubber Feet



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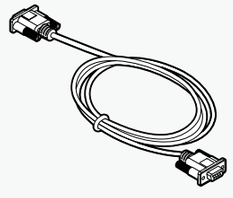
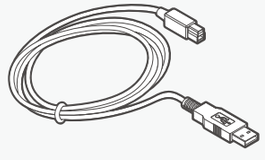
⑧ User manual & Data management program

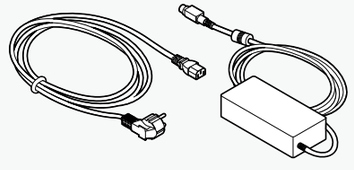
⑨ Serial cable



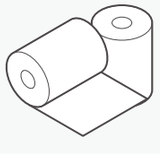
⑩ USB cable



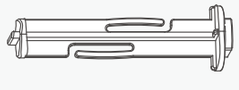
⑪ Power cable and adapter



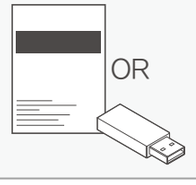
⑫ Thermal printer



⑬ Roller



⑭ User manual



OR

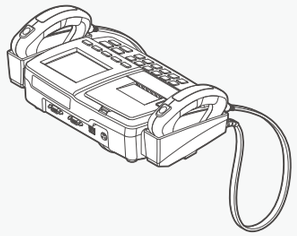
※ Please understand that it is subject to change without notice to improve the appearance and function of the device.

※ The user guide can be provided as a printed document or on a USB.

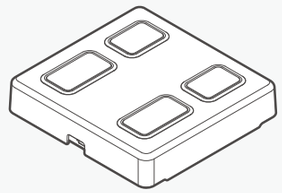
ACCUNIQ BC310 (For upper body)

① Head Part ② Weight scale (Base part) ③ Level Gauge ④ Rubber Feet
⑤ User manual & Data management program ⑥ USB cable ⑦ Serial cable
⑧ Power cable and adapter ⑨ Thermal printer ⑩ Roller ⑪ User manual

① Head Part

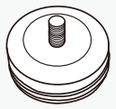


② Weight scale (Base part)



③ Level Gauge

④ Rubber Feet



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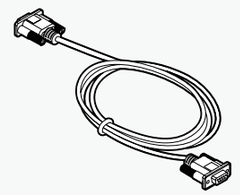
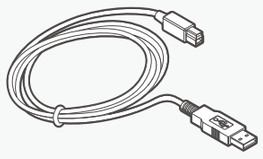
⑤ User manual & Data management program

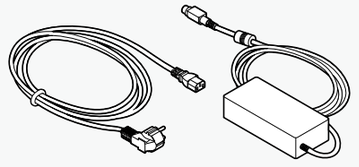
⑥ Serial cable



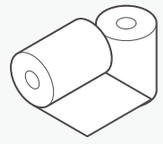
⑦ USB cable



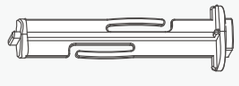
⑧ Power cable and adapter



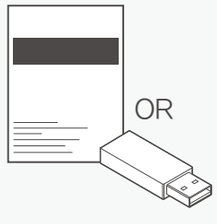
⑨ Thermal printer



⑩ Roller



⑪ User manual



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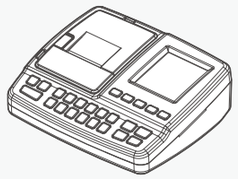
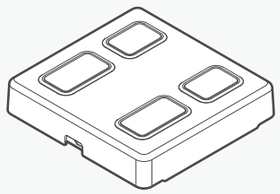
ACCUNIQ BC310 (For lower body)

① Head Part ② Weight scale (Base part) ③ Level Gauge ④ Rubber Feet
⑤ User manual & Data management program ⑥ Serial cable ⑦ USBI cable
⑧ Power cable and adapter ⑨ Thermal printer ⑩ Roller ⑪ User manual

① Head Part

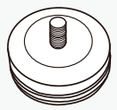


② Weight scale



③ Level Gauge

④ Rubber Feet



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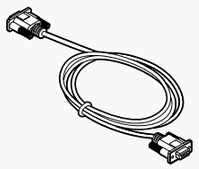
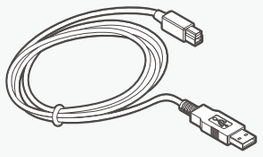
⑤ User manual &
Data management program

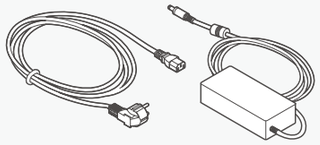
⑥ Serial cable



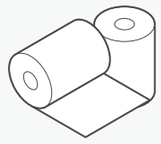
⑦ USB cable



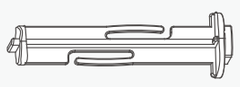
⑧ Power cable and adapter



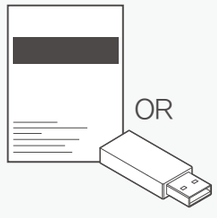
⑨ Thermal printer



⑩ Roller



⑪ User manual



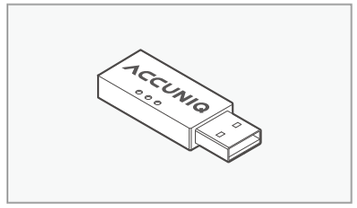
※ Please understand that it is subject to change without notice to improve the appearance and function of the device.

※ The user guide can be provided as a printed document or on a USB.

Options

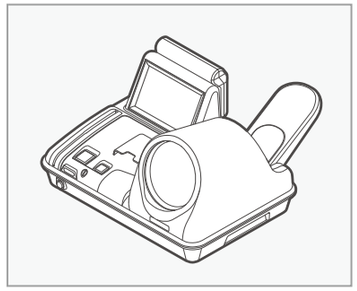
1. Data management program

This program helps managing body composition easily and systematically. It shows the core items needed to control body composition. The items include measured body composition, dietary control plan, exercise plan, etc. If the device is connected to blood pressure monitor, it also indicates the measurer's blood pressure.



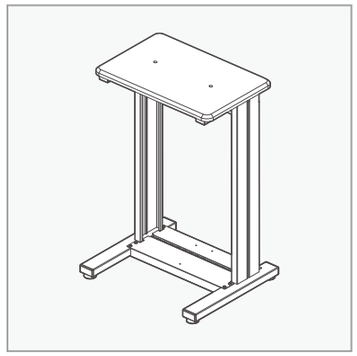
2. Automatic Blood Pressure Monitor

If SELVAS's automatic blood pressure monitor for hospital is connected to this device, the measurer can easily checkhis/her blood pressure. Especially the patient with the hy pertension can manage his/her blood pressure efficiently through body weight control.



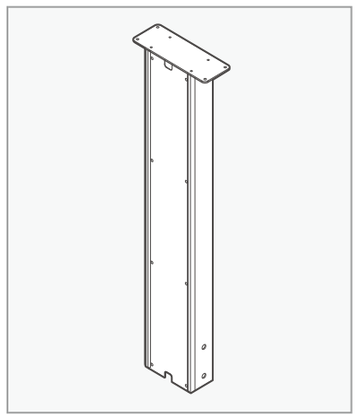
3. Cart for Blood Pressure Monitor

Cart is provided to place a blood pressure monitor. Assembly manual is supplied with this cart.



4. Column (For upper body & For lower body)

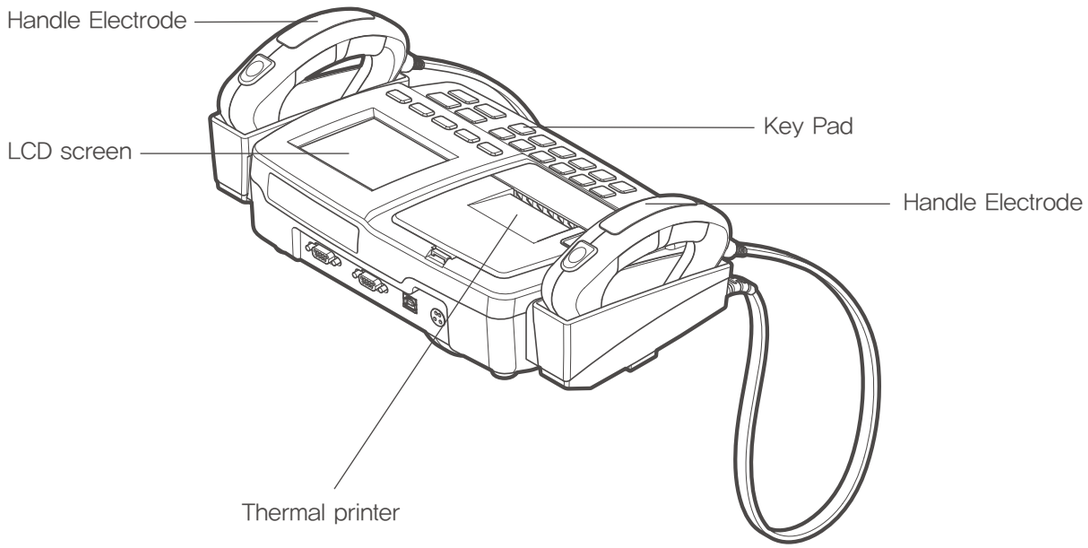
It attaches to the head part with base part.



Main Body

Front Part

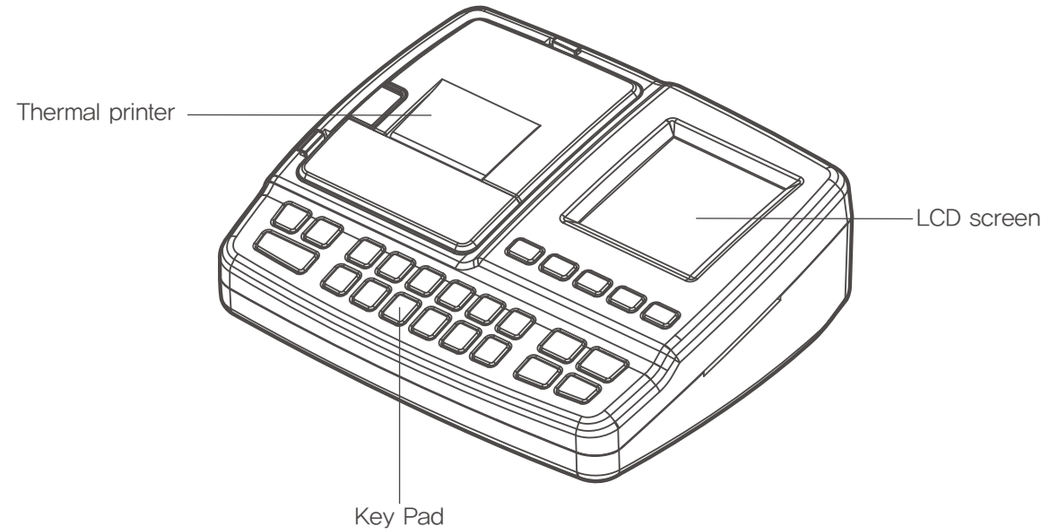
ACCUNIQ BC310 (For whole body / upper body)



Handle Electrode measure the impedance by sending harmless electric current to the body.
Hold them with the hands during measurement.

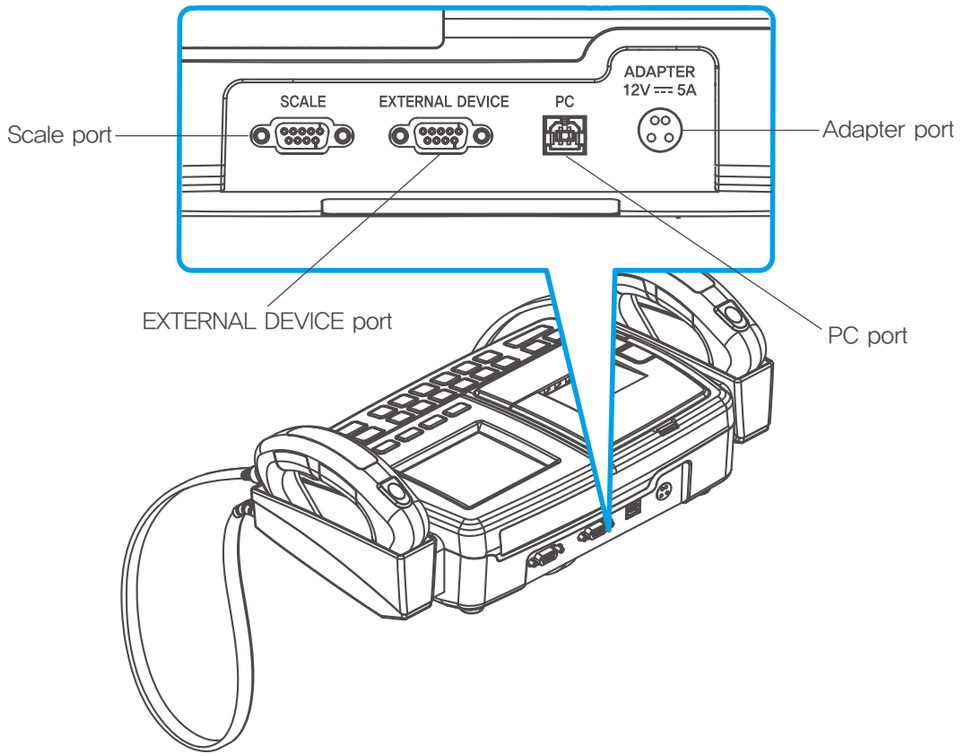
- **LCD screen:** It displays the procedure and results.
- **Handle Electrode:** Handle Electrode measure the impedance by sending harmless electric current to the body. Hold them with the hands during measurement.
- **Key pad:** The keypad consists of the function keys ‘ZERO RESET’, ‘CLOTH WEIGHT’, ‘WEIGHT ONLY’, ‘kg/lb’, ‘ON/OFF’, 0 to 9, Alphabet, ‘MALE’, ‘FEMALE’, ‘Print’, ‘●’, ‘CE’, ‘◀’, ‘▶’, ‘BACK’, ‘NEXT’ and the numeric button.
- **Thermal Printer:** In-built printer allows the speedy and convenient printing.

ACCUNIQ BC310 (For lower body)



- **LCD screen:** It displays the procedure and results.
- **Key pad:** The keypad consists of the fun ction keys ‘ZERO RESET’, ‘CLOTH WEIGHT WEIGHT ONLY’, ‘kg/lb’, ‘ON/OFF’, 0 to 9, Alphabet, ‘MALE’, ‘FEMALE’, ‘Print’, ‘●’, ‘CE’, ‘◀’, ‘▶’, ‘BACK’, ‘NEXT’ and the numeric button.
- **Thermal Printer:** In-built printer allows the speedy and convenient printing.

Rear Part

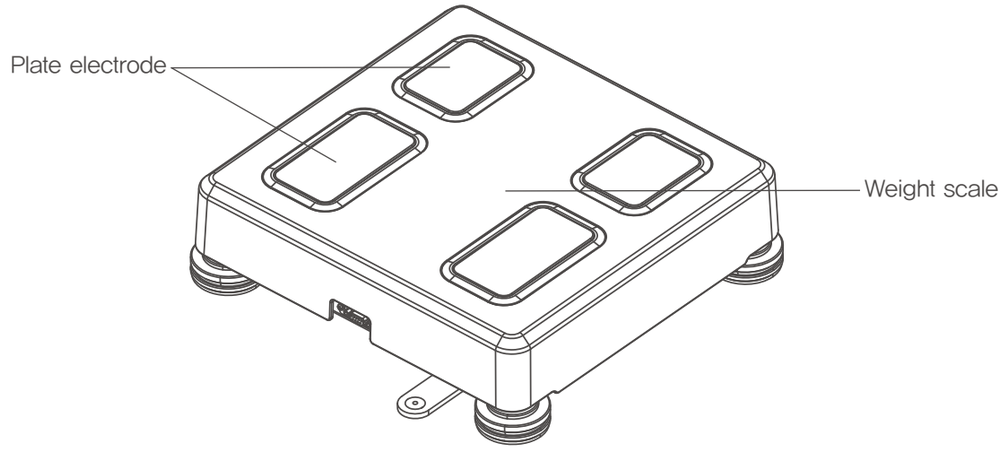


- **SCLAE port: :** Connecting the scale.
- **EXTERNAL DEVICE port :** Connecting External device manufactured by SELVAS Healthcare, Inc.
- **PC port :** Connecting a computer.
- **ADAPTER port :** Connecting the adapter.

> **Note**
> - Rear port is same for all three machines : whole body / upper body / lower body

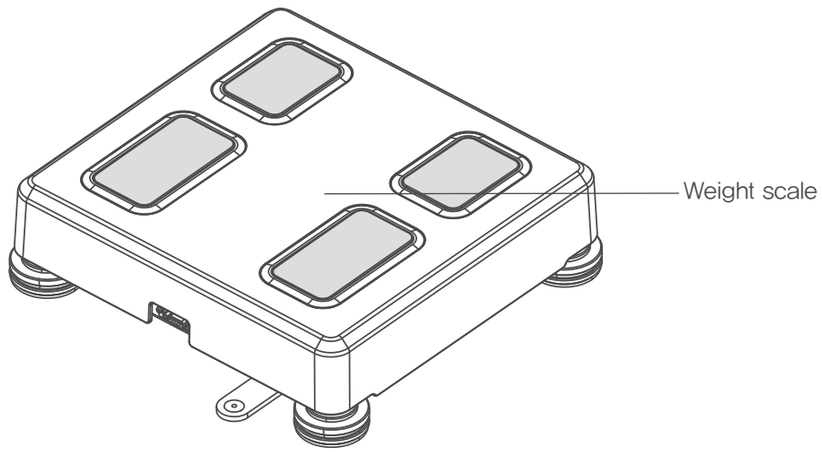
Base Part

ACCUNIQ BC310 (For whole body / lower body)



- **Weight scale :** It consists of four plate electrodes and it measures weight.
- **Plate electrode :** It measures the impedance. The user should step it in bare feet.

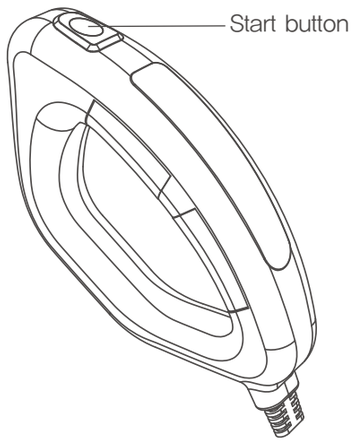
ACCUNIQ BC310 (For upper body)



- **Weight scale :** It consists of four plate electrodes and it measures weight.

Handle electrode

It measures the impedance of body by flowing harmless electric current.
Hold them with hands during measurement.



• **Start button:** Start button after input of personal data

Keypad–1

• **ZERO RESET :** It adjusts the scale to 0 point.

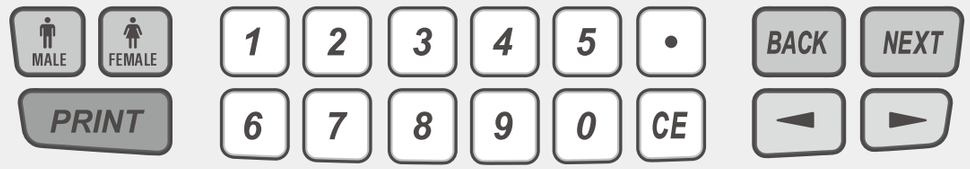
• **CLOTHES WEIGHT :** The user can input t he weight of the clothes. (0~5.5 kg / 0~9.9lbs)

• **WEIGHT ONLY :** It allows the device to operate in scale.
Press the button for 2sec.It will be displayed BCA or SCALE on the screen.

• **kg/lb :** The capacity graduation of weight is either in kg or lb.

• **ON/OFF :** It can be used to turn on/off the power.

Keypad–2



• **MALE/FEMALE :** Select gender.

• **PRINT :** It prints the result.

• **Numeric Keys & CE button :** Numeric Keys are used for entering personal data (Height, Age). The input data can be deleted by CE button.

• **BACK/NEXT :** It moves forward/backward to the next/previous step during the System setting or during the measurement.

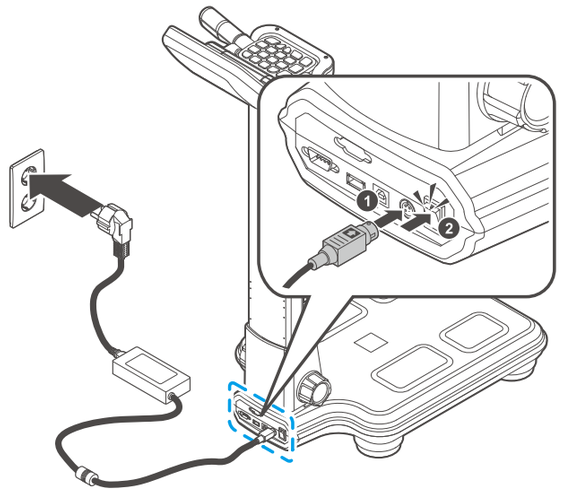
• **◄ ► :** It can be used to move forward / backward to the next step during the System setting.

INSTALLATION

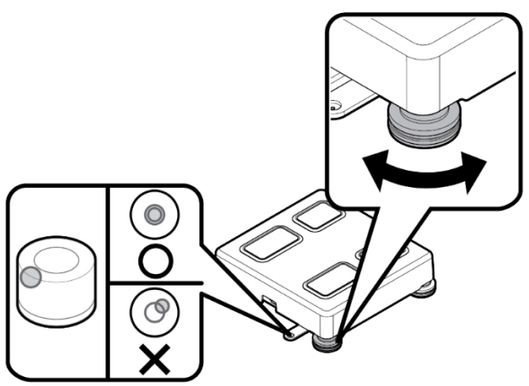
Basic Installation of product

Connecting the power supply and the scale cable

Connect the adapter to the adapter port placed on the rear panel of this device.
After the cables are connected to each port, turn on the power switch on the keypad.



Leveling



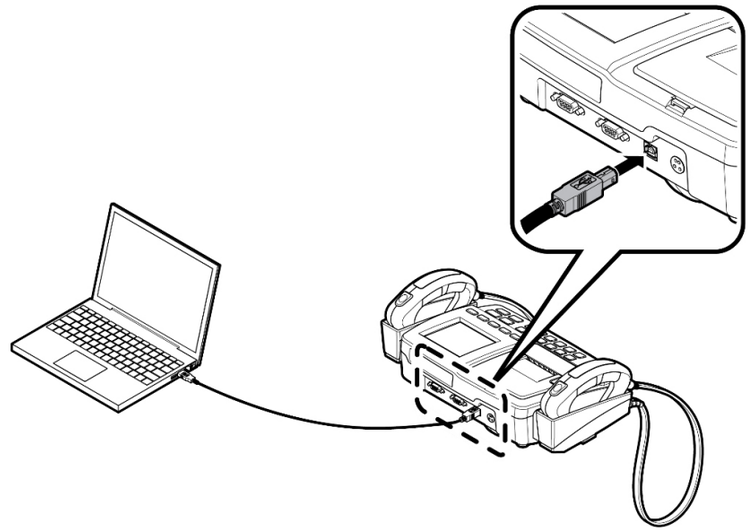
• Make sure that the scale is placed on a flat and level surface.

• Ensure a level by turning a wheel.

Peripheral Device Installation

Connecting PC

Connect the device to PC with USB cable.



Note

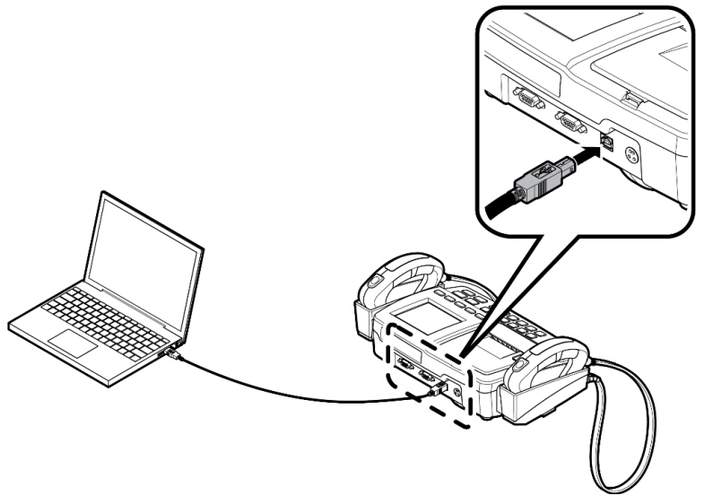
1. If use USB port, the cable should be connected to the computer port.
2. When use computer port, USB driver should be installed at first.
   For more information, please refer to the software user manual in the suppl ied USB memory.
3. In order to save, search and retrieve the users data, the user should connect the BCA to a computer with our free data management software installed.
   Printing is done via the computer in this case.
4. The professional consulting soft ware provides various options for printouts.
   When using the software, the pre printed result sheet is not used.
5. Please refer to the software user manual in the supplied USB memory.

Caution

The PC that connects to the device must comply with IEC60950–1.

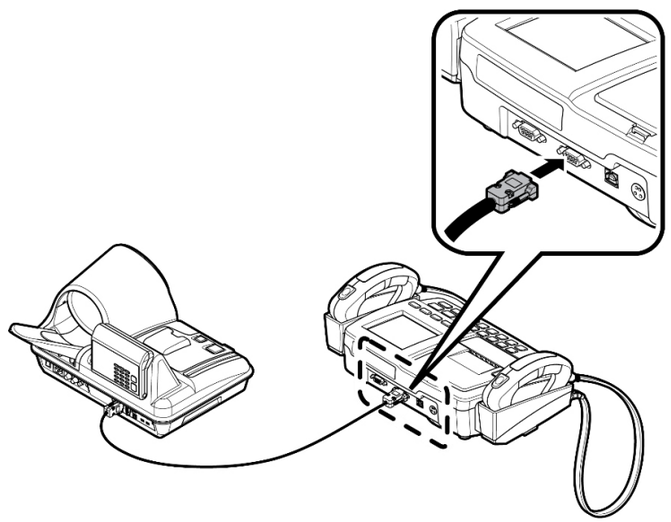
Connecting Printer (Option)

Connect the device, PC, and the printer.
Connect the device to PC with USB cable. The USB port is placed on the rear panel of the device.
Connect the printer to the PC with printer cable. The result sheet can be printed out from the printer.



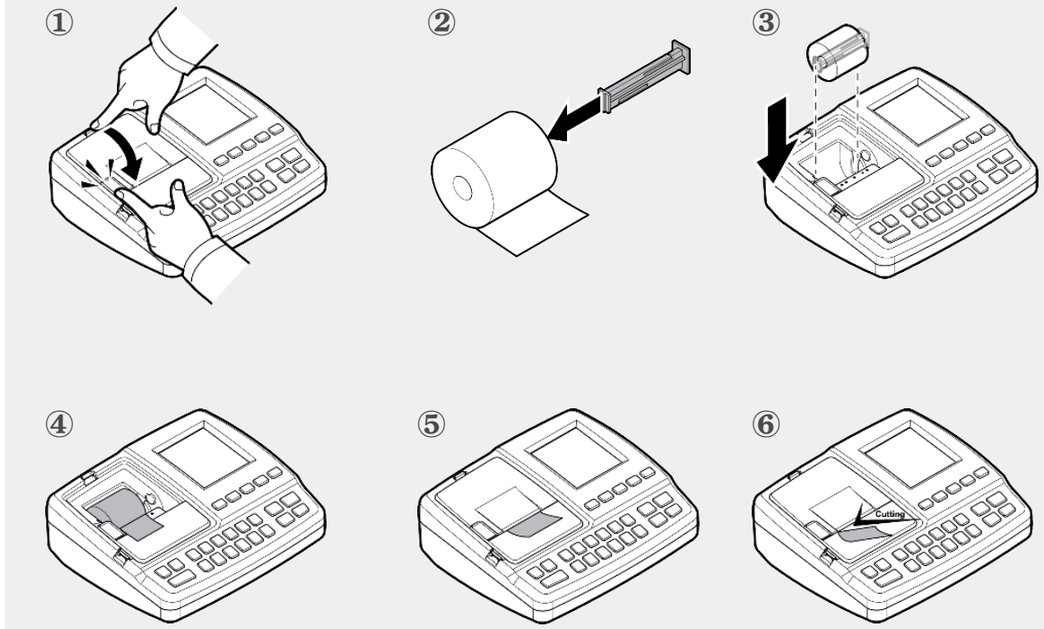
Connecting EXTERNAL DEVICE

EXTERNAL DEVICE can be connected to the device. (Option)
Connect a blood pressure monitor to EXTERNAL DEVICE port placed on the rear panel of the device with blood pressure monitor cable.



Replacing Thermal Paper

1) Replace thermal paper while the power is on.



2) Pull the Top button up. Then press the Side button. Open the upper printer cover.

3) Put the roller into the center hole of the thermal paper.

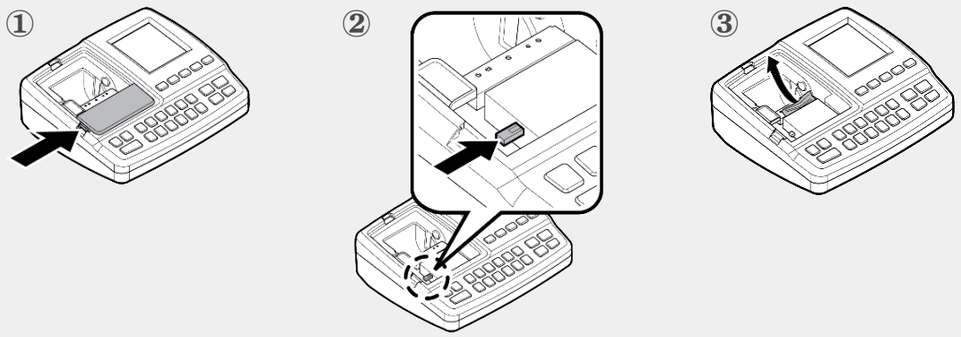
4) Insert the thermal paper with the rol ler into the holder as shown in the picture.

5) Take the edge of the paper out.

6) Close the cover.

7) It automatically cuts the paper.

The trouble shooting when the thermal paper is jammed



1) Pull the lower printer cover up as shown in the picture.

2) Press the Jam button located inside the printer.

3) Remove the jammed paper.

SYSTEM SETUP

'SYSTEM SETUP' allows the users to change the setting of operational parameters.

Note

The contents in SYSTEM SETUP of this device can be changed for improvement.

Entering SYSTEM SETUP

At initial display, press '◀ → 1 → 2 → 3 → 4 → ▶' button in keypad to enter 'SYSTEM SETUP' screen.

Menu in SYSTEM SETUP

The function of each menu item is as follows.

1) DATE /TIME

2) VOLUME

3) CONTRAST

4) BACKLIGHT

5) ABDOMINAL

6) DATE TYPE

7) GOAL SETTER
(ACCUNIQ BC310 F ONLY)

8) KEY SOUND

9) THERMAL PRINTER

10) THERMAL LOGO

Selecting a Menu in SYSTEM SETUP

Select the menu by pressing'◀ and '▶ button and press NEXT button in keypad.
(BACK button act as CLOSE button in SYSTEM SETUP and NEXT button act as SET button.)

Moving to SYSTEM SETUP

Press BACK button on selected item. SYSTEM SETUP screen appears.

Exiting SYSTEM SETUP

Press BACK button on SYSTEM SETUP screen. The initial screen appears.

Setup

DATE/TIME

This is to set date and time (year, month, day, hour, and minute).

- Select DATE / TIME on SYSTEM SETUP screen by pressing '◀' and '▶' button. Once it is selected, press NEXT button in keypad.
- Pre set : The date of the device released from the manufacturer's factory.
- Set the number with '◀' and '▶' button in keypad.
- Choose MONTH by pressing NEXT in keypad . Set correct date and time in the same.
- Press NEXT button in keypad to save date and time.
- Return to SYSTEM SETUP screen by pressing BACK button in keypad.

Note

1. If NEXT button is pressed before finishing setup of date and time, the date and time inputted at that time is saved and SYSTEM SETUP screen appears.
   To cancel any changes attempted, press BACK button.
   The device returns to the previous setting and SYSTEM SETUP screen appears.
2. When manager program is used in data management, measured date is automatically saved as the date set in this device.
   Therefore the date and time set in the device should be checked before use.

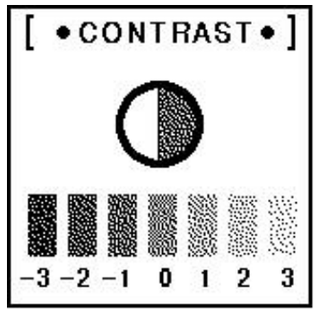
VOLUME

It adjusts the volume of voice guidance.

- Select VOLUME on SYSTEM SETUP screen by pressing '◀' and '▶' button, and press NEXT button in keypad.
- Pre-set: 3
- Range: 0 ~ 9
- Adjust the volume with'◀' and '▶' button in keypad.
- Press NEXT button in keypad to save the setting.
- Return to SYSTEM SETUP screen by pressing BACK button in keypad.

CONTRAST

It adjusts the brightness of the screen.



- Default Setting: 0
- Range: 3 ~ +3
- Adjust the brightness by pressing '◀' and '▶' on the screen.
- Press NEXT button to save the setting.
- Press BACK button to return to SYSTEM SETUP screen.

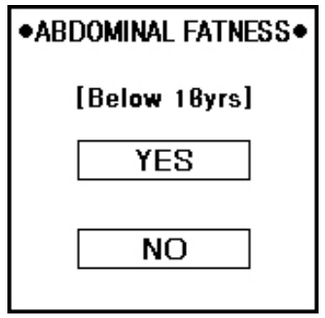
CONTRAST

It adjusts the backlight of the screen.

- Default Setting: 0
- Range: 3 ~ +3
- Adjust the brightness by pressing '◀' and '▶' on the screen.
- Press NEXT button to save the setting.
- Press BACK button to return to SYSTEM SETUP screen.

ABDOMINAL

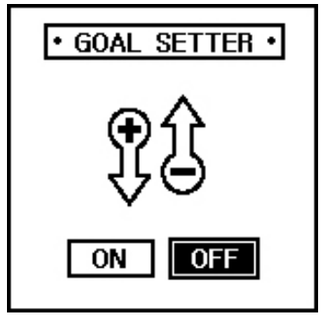
It sets the analysis of abdominal fatness under 18yrs.



- Select abdominal fatness on SYSTEM SETUP screen by pressing '◀' and '▶' button. Press NEXT button in keypad.
- Pre set: NO
- Choose YES or NO by pressing '◀' and '▶' button in keypad.
- If YES is chosen, abdominal analysis is displayed to all age.
- If NO is chosen, abdominal analysis is not displayed to the patients below 18 years old.
- Press NEXT button to save the change.
- Return to SYSTEM SETUP screen by pressing BACK button in keypad.

GOAL SETTER

It choose whether using GOAL SETTER MODE

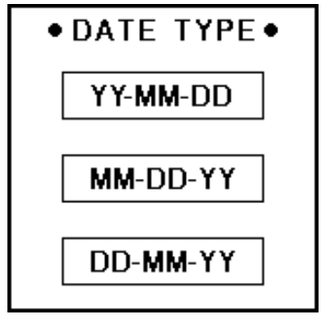


- Select GOAL SETTER MODE on SYSTEM SETUP screen by pressing '◀' and '▶' button. Press NEXT button in keypad.
- Pre-set: ON
- Choose ON or OFF by pressing '◀' and '▶' button in keypad.
- Press NEXT button to save the change.
- Return to SYSTEM SETUP screen by pressing BACK button in keypad.

> **Note**
>
> It has no 'Goal setter' in the ACCUNIQ BC310 (For upper body /lower body).

DATE TYPE

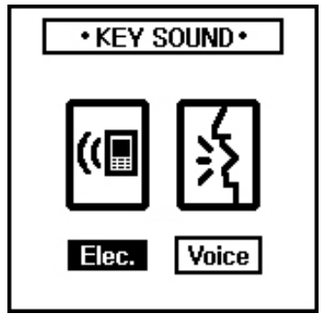
This is to set the format of the date.



- Select DATE TYPE on SYSTEM SETUP screen by pressing '◀' and '▶' button. Once it is selected, press NEXT button in keypad.
- Pre-set: YY-MM-DD
- Choose one by pressing '◀' and '▶' button in keypad.
- Press NEXT button in keypad to save it.
- Return to SYSTEM SETUP screen by pressing BACK button in keypad.

KEY SOUND

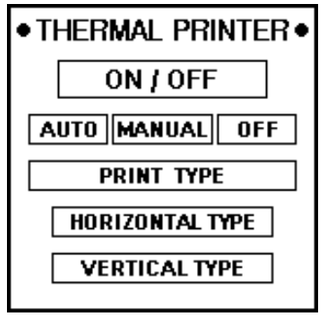
It choose the sound of keys when the data is input.



- Select SOUND on SYSTEM SETUP screen by pressing '◀' and '▶' button, and press NEXT button in keypad.
- ELEC is electronic sounds, VOICE is human sounds.
- Choose the sound with '◀' and '▶' button on keypad.
- Press NEXT button in ke ypad to save selected value.
- Return to SYSTEM SETUP screen by pressing BACK button in keypad.

THERMAL PRINT

It selects the printing mode of thermal printer. (Thermal printer is an option.)



- Select THERMAL PRINT on SYSTEM SETUP screen by pressing '◀' and '▶' button. Press NEXT button in keypad.
- Pre–set: OFF
- ON/OFF: Select either ON or OFF by pressing '1' in keypad.
- Choose 'AUTO', 'MANUAL' or 'OFF' by pressing '◀' and '▶' button.
- PRINT TYPE: Choose PRINT TYPE by pressing '2'.
- Select the paper format either HORIZONTAL TYPE or VERTICAL TYPE.

THERMAL LOGO

It choose whether using thermal logo.

- Select THERMAL LOGO on SYSTEM SETUP screen by pressing '◀' and '▶' button. Press NEXT button in keypad.
- Choose ON or OFF by pressing '◀' and '▶' button in keypad.
- Press NEXT button to save the change.
- Return to SYSTEM SETUP screen by pressing BACK button in keypad.

MEASUREMENT AND ANALYSIS

Precautions for Measurement

The reliability of the results can be assessed by its accuracy.
The "Accuracy" of the device is determined by comparing the actual body composition and the results from Body Composition Analyzer. The "Reproducibility" is determined when the device gives the identical results under the same condition. In order to maintain the accuracy of the results, the following guidelines should be kept.

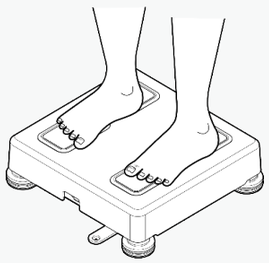
1. Water volume increases after a meal. Therefore, measure on an emp ty stomach.
   - Measure 3 ~ 4 hours after a meal.
   - Avoid beverages containing caffeine or beverages functioning as diuretics 4 hours before measurement.
   - Drink 2 cups of water 2 hours before the measurement.
2. Before measurement, the subject should be in a stable condition.
   - Measure 3 ~ 4 hours after a bath, a sauna, exercise or activity that causes a lot of sweating.
   - Or measure before these activities.
3. Avoid drinking alcohol 24 hours before the measurement.
4. Wear clothes as light as possible.
5. Once the subject is o n the scale, avoid sudden movements from sitting to standing position etc. Body fluid moves to the lower extremities and affects the results. Thus subjects should be measured after maintaining a standing position for 5 minutes.
6. Clean both the electrodes an d the skin contact points.
7. Changes in room temperature may affect the results. Measurement should be done in a temperature around 20℃.
8. Body composition and weight varies even throughout a day. Therefore, the measurement should be performed at the same ti me every day. For a person who stands for a long period of time during the day, it is advised to measure in the morning.
9. Go to the bathroom before measurement.
10. Maintain correct position and posture during the measurement.
11. Dry hands and feet might affect th e results. In case your hands and feet are dry, please wipe them with wet wipes before measuring for enhanced electrical conductivity.

In order to keep one's health and the balance of body composition, check the changes of body composition through the con tinuous analysis and compare the results. Make sure that the body composition should be measured under the same physical and environmental conditions.
If the condition before the measurement such as volume of a meal, meal time, and activities (exercise, sa una, drinking lots of beverage, urination, etc.) are kept same, the reproducibility of a device is obtained. Therefore, the data can be used to evaluate the change of body composition.

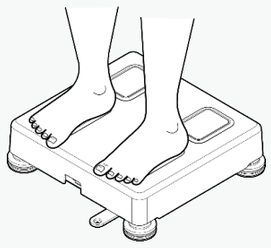
Correct Posture

How to Touch Plate Electrodes

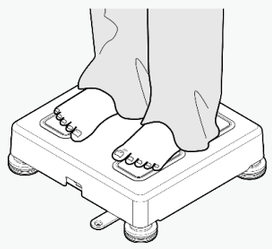
- Make sure that the plate electrodes are clean.
- Take off the socks or stockings then, stand on the plate electrodes.
- Remove sweat or foreign matters on the soles.
- Fairly place the bare feet on the plate electrodes.
  Make sure that the clothes are not between the soles and the plate electrodes.



(O) Correct stand



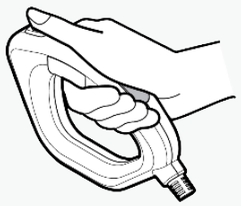
(X) Imbalanced touch



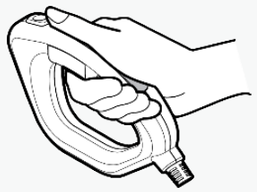
(X) Foreign matters

How to Touch Handle Electrodes

- Grip handle electrodes with fingers and palms.
- 4 electrodes should be touched impartially.
- Stretch both arms and spread them 30˚ from the body.



(O) Correct stand



(X) Imbalanced touch

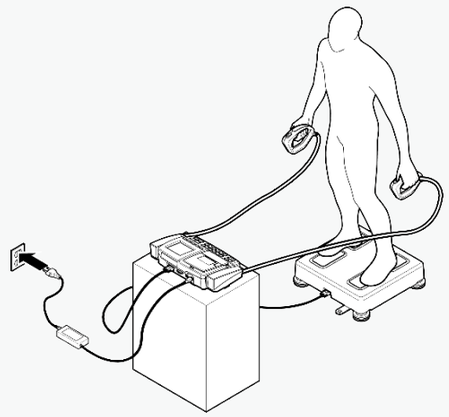
(X) Grip with only palm

Note

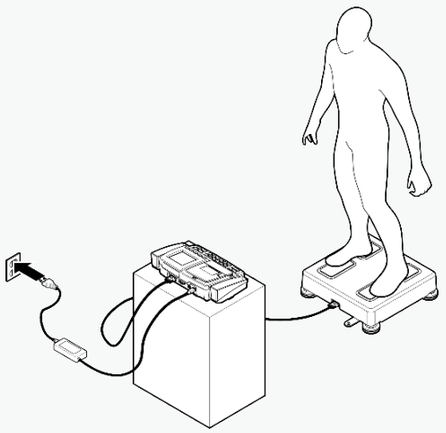
1. When a subject has small hands or feet and cannot cover all electrodes sufficiently, please pay attention to touch all electrodes fairly.
   The way to touch the electrodes will affect the reliability of the results.
2. During the measurement, the subject should not be touched by others or conductive materials.
3. If all eight electrodes are not perfectly touched during measurement, measurement will be stopped or the result is not reliable.

Measuring Posture

- Step the scale in the bare feet. Stretch both arms and spread them 30˚ from the body.
- Press start buttons with thumbs for 2 ~ 3 seconds to start the measurement.
  Once it starts, release the start button and hold the same posture until the measurement is over.
- Do not speak or move the body until the measurement is completed.
- Do not bend or shake the arms until the measurement is completed.
- The measurement will be stopped if all eight electrodes are not fairly touched.



〈Measuring posture for Whole and Upper body〉



〈Measuring posture for lower body〉

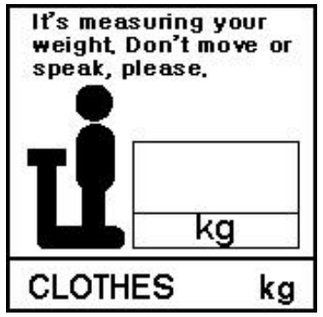
Measuring Procedure

Basic Analysis

ACCUNIQ BC310 (For whole body)

1) Weight measurement

- W hen the subject steps on the scale, the screen changes with a chime bell.
- Do not move or speak until the measurement is completed.
- The measured weight is displayed on the screen.

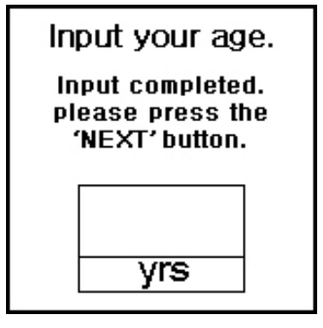


2) After the weight measurement, input the personal data.

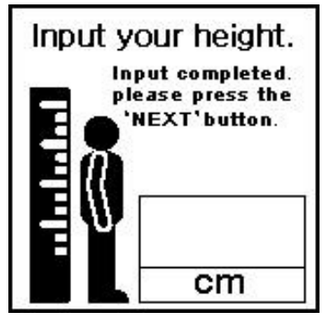
3) Personal information
Input the following information in a order gender, age, and height. Confirm input data.
Press NEXT button to the next step.

- Select gender
  - The following message appears. Select your gender.
  - Select either MALE or FEMALE from the keypad.

- Input age
  - The following message appears. Input your age.
  - Input age using the numerical buttons on the keypad.
  - Press NEXT button.



- Input height
  - The following message appears. Select your gender.
  - Select either MALE or FEMALE from the keypad.



- Input goal Body fat%
  - The following message appears. "Input goal P.B.F."
  - Input goal P.B.F. using the numerical buttons on the keypad.
  - The possible input range is 3~30%.
  - Press the 'NEXT' button

Note

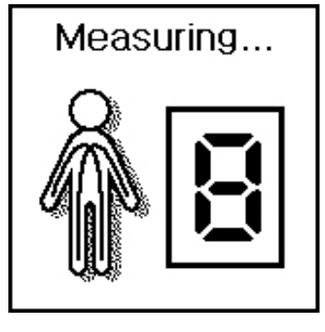
When you set OFF 'Goal setter', this screen will not be displayed.

4) Measurement posture

Once the input is completed, the screen appears as shown in the picture.

- Hold the handle electrodes and stand up rightly.
- Press the start button to start.
- Do not move or speak during the measurement.

5) During the measurement, the screen appears as shown in the picture.



> **Note**
>
> 1. Do not move or bend the arms until the measurement is completed.
>   Measuring time is within 1 minute.
> 2. When the measurement is wrong,
>   • Error message appears on the screen.
>   • Refer to ERROR & REPAIR part for the detail.

6) Result screen

- After measurement is completed, the result is displayed on the screen.
- The result is presented in graph and numerical value.
- Check the results and press PRINT or NEXT button.

7) Print the results and Restart

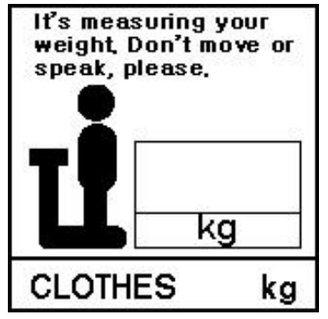
- Once the result is displayed on the display, it can be printed out in pre-printed result sheet.
- After confirming the result, press NEXT button if you want to measure again.
- The device returns to the initial screen after one minute.

> **Note**
>
> 1. If Automatic printing is selected at SYSTEM SETUP, the result sheet is automatically printed after the measurement.
>   If 'PRINT' button is pressed, the same result sheet can be printed more.
> 2. When the program is installed in a computer connected to the device, the result can be viewed at PC, and it can be printed.
>   Please refer to the software user manual in the supplied USB memory.

ACCUNIQ BC310 (For upper body)

1) Weight measurement

- W hen the subject steps on the scale, the screen changes with a chime bell.
- Do not move or speak until the measurement is completed.
- The measured weight is displayed on the screen.

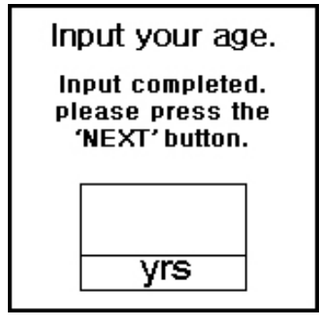


2) After the weight measurement, input the personal data.

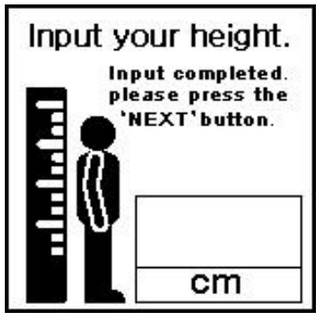
3) Personal information
Input the following information in a order gender, age, and height. Confirm input data.
Press NEXT button to the next step.

- Select gender
  - The following message appears. "Select your gender."
  - Select either MALE or FEMALE from the keypad.

- Input age
  - The following message appears. "Input your age."
  - Input age using the numerical buttons on the keypad.
  - Press 'NEXT' button.



- Input height
  - The following message appears. “Input your height.”
  - Input height using the numerical buttons on the keypad
  - Press the ‘NEXT’ button.

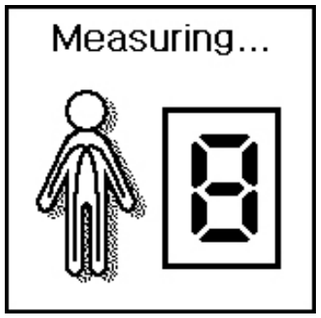


4) Measurement posture

Once the input is completed, the screen appears as shown in the picture.

- Hold the handle electrodes and stand up rightly.
- Press the start button to start.
- Do not move or speak during the measurement.

5) During the measurement, the screen appears as shown in the picture.

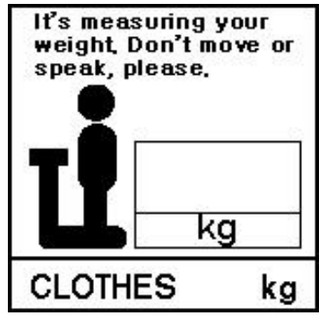


6) Result screen

- After measurement is completed, the result is displayed on the screen.
- The result is presented in graph and numerical value.
- Check the results and press PRINT or NEXT button.

ACCUNIQ BC310 (For lower body)

1) Weight measurement
   - W hen the subject steps on the scale, the screen changes with a chime bell.
   - Do not move or speak until the measurement is completed.
   - The measured weight is displayed on the screen.



2) After the weight measurement, input the personal data.

3) Personal information
Input the following information in a order gender, age, and height. Confirm input data.
Press NEXT button to the next step.

- Select gender
  - The following message appears. “Select your gender.”
  - Select either MALE or FEMALE from the keypad.

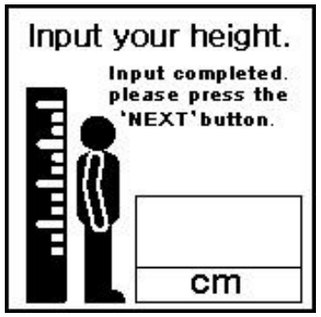
- Input age
  - The following message appears. “Input your age.”
  - Input age using the numerical buttons on the keypad.
  - Press ‘NEXT’ button.

• Input height

  • The following message appears. “Input your height.”

  • Input height using the numerical buttons on the keypad

  • Press the ‘NEXT’ button.

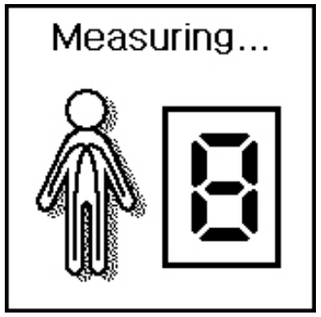


4) During the measurement, the screen appears as shown in the picture.

  • Stand up rightly.

  • Measuring impedance is start.

  • Do not move or speak during the measurement.



5) Result screen

  • After measurement is completed, the result is displayed on the screen.

  • The result is presented in graph and numerical value.

  • Check the results and press PRINT or NEXT button.

Analysis Using Blood Pressure Monitor/Software Program

The blood pressure monitor from SELVAS Healthcare, Inc. can be connected to the device as an option.

In this way, the blood pressure can be monitored together with weight control.
It helps to manage the body fat while checking the blood pressure simultaneously.
The measuring proced ure is as follows.

1) Connect a Blood Pressure Monitor to the device.

2) Connect the device to a computer in which manager program is installed.

3) Turn on the power of BPM and the computer. Turn on the device.

4) Input personal data to create a new ID or input ID whi ch already registered.

5) Measure blood pressure first.

6) Measure body composition.

7) The results of blood pressure and body composition are immediately displayed on the computer screen after the completion of body composition analysis.

8) Save the data or print it out.

Note

1. Blood pressure should be measured before body composition analysis.
   Refer to the user manual of blood pressure monitor for more detail.
2. The result of blood pressure can be printed on the result sheet or reviewed at the program.

STORAGE AND MAINTENANCE

Pay attention to the allowable current value of the power supply.

Do not store in a place with direct sunlight, moisture, dust, dark oil or salt, or in locations subject to extreme temperature changes.

Do not install or store in a place where chemicals or gas are stored or where gas is generated.

Do not use in an unstable place, or in a place subject to vibration or impact.

Connect the equipotential terminal on the rear side of the device to the grounding wire in the room to prevent electric shock due to leakage current or potential difference.

Do not place objects on this device, drop it, or give strong impact to it.

Do not disassemble or modify the main body arbitrarily.

When reusing a device that has not been used for a long time, check whether there is no abnormality in the appearance or function of the device before using it.

Do not spill liquids or insert foreign substances into this device.

Be sure to get inspection service before using the device that has foreign substances or has been exposed to a special environment.

Be sure to use the power cable or adapter provided by the manufacturer.

At this time, first check whether there are no defects in the wire sheath, plug connection status, and other inspection items.

- RS 232C cable
- USB terminal
- Adapter

Turn off the power first, then pull out the plug by holding the plug properly.

If this device is used near a television, microwave-based device, X-ray or other devices that generate a strong electric field, the reliability of the measurements can be maintained only when keeping a sufficient distance or turning off the other devices, and electric shock due to leakage current or potential difference ca be prevented.

Storage environment: Temperature -25℃~70℃, relative humidity less than 93% (non condensing)

Operating environment: Temperature 5℃~40℃, relative humidity less than 15~93% (non condensing)

Do not store or use in places where the atmospheric pressure is less than 70 kPa (700 mbar) or higher than 106 kPa (1060 mbar).

Cleaning & Disinfection

- Cleaning: When cleaning, use a soft cloth but do not use volatile solvent like benzene and alcohol or a wet cloth. Wipe out minute dust once per 2 ~ 3 days with a dry cloth.
- Disinfection: Spray alcoholic water of glutaraldehyde disinfect solution.
  Then, wipe the enclosure with a soft lint. Please refer to and abide by the "SAFETY PRECAUTIONS."

Caution

Users must be sure to use sterile safety equipment such as gloves when in contact with or cleaning electrodes.

SELVAS Healthcare is not responsible for safety accidents caused by users' carelessness.

PROBLEM SOLVING

Error Occurrence and Actions

Error	Cause	Action
Out of range of impedance	• When the subject s body impedance deviates from the limit • Insufficient touch to electrodes • Impedance is out of range • Measurement range: 100~950Ω	• Clean the measuring parts (the electrodes, palms, and soles) and try again. • Mea sure again with correct posture. • Do not move during measur ement. • If the same error is repeated, please contact SELVAS Healthcare or its local distributor from where this device is purchased.
Out of range of body fat	• When the subject's P.B.F. deviates from the limit • Incorrect input of personal data • P.B.F. is out of range	• Clean the electrode holders and try again. • After checking that there is neither something with wrong input of personal data (age, gender) nor with measuring error of weight and impedance, try again. • It can't measur e if the P.B.F. is out of range. • When the same error occurs even after remeasurement, please contact SELVAS Healthcare or its local distributor from where the device was purchased.
Out of range of measurement	• When the subject s fatness is deviated from the limit • Mechanical error	• Input height correctly or if installe d height already, measure again. • Confirm to measure weight and try again correctly. • It can't me asure if the fatness is out of range. • When the same error is occurred even remeasurement, please contact with SELVAS Healthcare or its local distributor where is purchased.
Can't input the height	• When the subject's height is deviated from the limit • Inco rrect input of height	• Input height correctly. If the subject s height is out of range, height can't be entered
Can't measure the weight	• When the subject s weight deviates from the limit • Measuring error • Moving during the measurement	• Measure the weight again. Don't m ove or speak during measurement. • It can't measure if the weight is out of range. • When the same error occurs even after remeasurement, please contact SELVAS Healthcare or its local distributor from where device is purchased.
No printing paper	• Ther e is no thermal paper	• Insert the thermal paper.
Printer cover is opened	• Printer cover is opened	• Check the cover is firmly closed.
Problem is dete cted in Auto cut of the printer	• Auto-cut blade is shown outward	• Open the cover of Printer Cut Turn the plastic Phillips head screws clockwise and push the blade back. • If the problem remains, please contact SELVAS Healthcare or its local distributor where the device is purchased.
Problem is detected in the printer	• Thermal printer has some problems	• Power is automati c ally turned off by safety unit. • Turn the power after few minutes. If the problem remains, please contact SELVAS Healthcare or its local distributor where the device is purchased.

Error occurrence & Repair

Error	Cause	Action
P.B.F. is measured too low or too high	• Measure in unstable condition such as right after the exercise, bath, sweat, or drinking lots of water	• Measure again in a stable condition with the correct posture
	• Moving or speaking during the measurement	• Do not move or speak during the measureme nt
	• Handle electrodes or measuring parts are dirty	• Clean handle electrodes with soft gauze and try again • Clean hands and soles and try again • Make sure there are no foreign substances between electrodes and measuring body parts
It does not work even when start buttons are correctly pressed	• Defective cable between the head and the scale • Start buttons are defective	• Contact SELVAS Healthcare or its local distributor where this device is purchased
	• Bad connection between the head and the scale • Handle electrod es are defective	• Check whether the handle electrodes are connected tightly to the head • If the same error is repeated, please contact SELVAS Healthcare or its local distributor where this device is purchased

AFTER SERVICE

AFTER SERVICE

If there is any problem with the unit, please follow the steps below;

- Contact SELVAS Healthcare's Overseas Service Department immediately.
  After gathering the model name, Serial Number, date of purchase and description of the problem, contact SELVAS Healthcare with information shown below.
- Try to solve the problem over the phone with the personnel of local service department.
  If the problem cannot be solved over the phone, just return to service department directly.
- SELVAS Healthcare or local distributor will make available on–request circuit diagrams, component part list, descriptions, calibration or other information which will assist your appropriately qualified technical personnel to repair those parts of unit which are designated by SELVAS Healthcare as repairable.

How to contact SELVAS Healthcare

Write us at:

SELVAS Healthcare, Inc.

155, sinseong–ro, Yuseong–gu, Daejeon, 34109 Republic of Korea

TEL: +82 42 879 3000

FAX: +82 42 864 4462

(You can also contact the following representative or your local distributor)

Packing and Transportation

We have packed this device in the most suitable way to transport it safely. Moving or transporting in a manner other than this packaging method may result in damage to the device itself.
For packaging and transportation of the device, you must handle it with care so that the device is not subject to shocks while in its packaging.

If this device needs to be transported while in use, repack it in the following order:

1) Turn off the power to this device.

2) If peripheral devices are connected, power off and disconnect each device.

3) Disassemble the device in the reverse order of assembling it.

4) Repack it using the stored packaging material of this device.

5) Transport the device with the utmost care to avoid shocks.

Problems in use

If there is a problem with the device, please follow the steps below:

1) Please check again according to the measurement inspection items.
   If the problem persists, please contact us or a designated vendor.

2) When contacting us or a designated vendor, please briefly write down the model name, serial number, date of purchase, and description of operational defect.

3) We are committed to meeting the needs of our consumers.
   For devices we manufacture, we have trainedand skilled after-sales service technology, and if there is a problem with the device, we will promptly solve it with the best service.

Note

For our address and contact information, please refer to the back of the user manual.

SPECIFICATION

Item	Explanation		
Model	ACCUNIQ BC310		
Measuring method	BIA via tetra-polar electrode method using 8 touch electrodes.		
Frequency range	5, 50, 250 kHz		
Measurement area	ACCUNIQ BC310 (for whole body)	ACCUNIQ BC310 (for upper body)	ACCUNIQ BC310 (for lower body)
Result item	ACCUNIQ BC310 (for whole body)	ACCUNIQ BC310 (For upper/lower body)	
	Weight, Standard weight, Mass of Body Fat, Lean Body Mass, Total Body Water, Intra Cellular Water, Extra Cellular Water, Body Mass Index, Percent of Body Fat, Waist to Hip Ratio, Segmental analysis (lean body mass of arms, legs, and trunk), Body Type, Ratio of E.C.W./T.B.W., Basal Metabolic Rate, Impedance, Target PBF(%), Predicted weight, predicted MBF& Control	Weight, Standard weight, Mass of Body Fat, Lean Body Mass, Total Body Water, Intra Cellular Water, Extra Cellular Water, Body Mass Index, Percent of Body Fat, Body Type, Basal Metabolic Rate, Impedance, Target PBF(%), Predicted weight, predicted MBF& Control	
Measured current	Less than 280μA		
Power supply	Input-AC 100~240V, 50-60Hz, 1.5A, Output-DC 12V, 5A, 60VA ADAPTER		
Display method	4.5 Inch Graphic LCD (160 × 160 pixel)		
Input device	Keypad, PC remote control		
Transmission device	USB port, RS-232 Cable		
Printing device	Thermal print		
Size	Head: 350 × 605 × 870 mm (W × D × H, ± 10 mm) ※Included column	Head: 350 × 216.5 × 125 mm (W × D × H, ± 10 mm)	Head: 267 × 216.5 × 90 mm (W × D × H, ± 10 mm)
	Weight scale: 371 x 355 x 105 mm (W × D × H, ± 10 mm)		
Weight	About 13.5kg (Included column)	About 11.5kg	About 11kg

※ The appearance and specifications of this device and options are subject to change without notice for quality improvement.

SPECIFICATION

Item	Explanation
Measuring range	100 ~ 950 Ω
Measurement time	Within 1 minute
Input height	50~220 cm
Measuring weight	10~200 kg
Applicable age	1 ~ 99 years old
Operation ambient	Temperature: 5~40℃, Humidity: 15~93% (non condensing)
Storage ambient	Temperature: −25~70℃, Humidity: lower than 93% (non condensing)

※ The appearance and specifications of this device and options are subject to change without notice for quality improvement.

Blood Pressure Monitor

This device can be connected to the below Automatic Blood Pressure Monitors from SELVAS Healthcare.

BP500

Item	Specifications
Manufacturer	SELVAS Healthcare, Inc.
Model	BP500
Measuring method	Oscillometric
Result Contents	Systolic/Diastolic/Mean blood pressure, Pulse pressure, Pulse, Blood pressure assessment, Pulse wave pattern
Result item	Systolic Pressure: 60 to 280 mmHg, Diastolic Pressure: 30 to 200 mmHg Pulse rate: 30 to 240 beat/minute
Accuracy	Pressure ±2mmHg, Pulse ±1.5%
Resolution	1mmHg

※ The appearance and specifications of this device and options are subject to change without notice for quality improvement.

ACCUNIQ BP210

Item	Specifications
Manufacturer	SELVAS Healthcare, Inc.
Model	ACCUNIQ BP210
Measuring method	Oscillometric
Result Contents	Systolic/Diastolic/Mean blood pressure, Pulse pressure, Pulse, Blood pressure assessment, Pulse wave pattern
Result item	Pressure: 30 to 300 mmHg, Pulse rate: 30 to 200 beat/minute
Accuracy	Pressure ±3mmHg or ±3%, Pulse ±3%
Resolution	1mmHg

※ The appearance and specifications of this device and options are subject to change without notice for quality improvement.

ACCUNIQ BP250

Item	Specifications
Manufacturer	SELVAS Healthcare, Inc.
Model	ACCUNIQ BP250
Measuring method	Oscillometric
Result Contents	Systolic/Diastolic/Mean blood pressure, Pulse pressure, Pulse, Blood pressure assessment, Pulse wave pattern
Result item	Pressure: 30 to 300 mmHg, Pulse rate: 30 to 200 beat/minute
Accuracy	Pressure ±3mmHg or ±3%, Pulse ±3%
Resolution	1mmHg

※ The appearance and specifications of this device and options are subject to change without notice for quality improvement.

List of supported printers

Samsung SL-M2020, SL-M2026, SL-M2035, SL-M2035W, SL-M2620ND, SL-M3320ND, SL-C1810W,
Brother HL-L2360DN, HL-L2365DW, HL-L2370DW, HL-L2375DW, HP M2030D2, 107W
Depending on the region and whether the product is discontinued, the supported printers may vary slightly.

PC specification

- CPU: Intel Quad-core 3.30GHz or higher
- RAM: 8GB or higher is recommended
- Disk space: 256GB or greater recommended
- Network card: Dual Ethernet 100/1000Mbps
- OS: Windows 7/8.1/10 (32/64bit)
- Resolution: 1280 x 800 or higher is recommended
- Others: USB ports or CD ROM

Expected Service Life

The ACCUNIQ BC310 is designed for a service life of approximately 5 Years.

WARRANTY

Name of device	Body Composition Analyzer	
Name of model	ACCUNIQ BC310	
Serial number		
Period of warranty / Date of purchase	Within 1 years from the date of manufacture	
Customer	Add.	Name Tel.
Dealer (market)	Add.	Name Tel.

Note

- When you receive this warranty, make sure that the name of the dealer and the month, day and year of purchase are all completed.
- This warranty will not be reissued, please keep it in a safe place.

Periodic Check List

Management No.

Item	No	Inspection Subject	Requirements	Judgment	Remarks
Visual Check					
Mainframe	1	Enclosure	No scratch, crack, deformation and rust	Pass/Fail	
	2	Labels and panels	No peeling and dust	Pass/Fail	
	3	LCD	No damage	Pass/Fail	
	4	Electrode	No scratch and damage	Pass/Fail	
Accessories	1	Power cord	No scratch and damage	Pass/Fail	
	2	User manual	Kept in proper place	Pass/Fail	
Mechanical Check					
Mainframe	1	Keys	Smooth operation	Pass/Fail	
	2	Recorder	Smooth operation with no abnormal sound	Pass/Fail	
	3	Touch Screen	Smooth operation	Pass/Fail	
Accessories	1	Power cord	Smooth operation and removal	Pass/Fail	
Electrical Check					
Performance	1	Power supply	Screen display upon power-on	Pass/Fail	
	2	Display	No abnormality and flickering	Pass/Fail	
	3	Printing	printing possible	Pass/Fail	
	4	Measurement	Proper measurement	Pass/Fail	
General Judgment				Pass/Fail	
Model		ACCUNIQ BC310		Serial No.	
Installation place				Date of purchase	
Check date		Checked by		Approved by	

Copy this sheet for use.
If repair is required, write down so in the Remarks column.

Daily Check List

Management No.

Item	No	Inspection Subject	Requirements	Judgment	Remarks
Visual Check					
Mainframe	1	Enclosure	No scratch, crack, deformation and rust	Pass/Fail	
	2	Labels and panels	No peeling and dust	Pass/Fail	
	3	LCD	No damage	Pass/Fail	
	4	Electrode	No scratch and damage	Pass/Fail	
Accessories	1	Power cord	No scratch and damage	Pass/Fail	
	2	User manual	Kept in proper place	Pass/Fail	
Mechanical Check					
Mainframe	1	Touch Screen	Smooth operation	Pass/Fail	
	2	Recorder	Smooth operation with no abnormal sound	Pass/Fail	
Accessories	1	Power cord	Smooth operation and removal	Pass/Fail	
Electrical Check					
Performance	1	Power supply	Screen display upon power-on	Pass/Fail	
	2	Display	No abnormality and flickering	Pass/Fail	
	3	Printing	printing possible	Pass/Fail	
	4	Measurement	Proper measurement	Pass/Fail	
Other	1	Clock	Present date/time	Pass/Fail	
General Judgment				Pass/Fail	
Model		ACCUNIQ BC310		Serial No.	
Installation place				Date of purchase	
Check date		Checked by		Approved by	

Copy this sheet for use.
If repair is required, write down so in the Remarks column.

SELVAS Healthcare, Inc.

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When reporting a failure, check the user manual first, and after checking the problem, please inform us the model name, failure status, address, name, phone number, and location, and it would be convenient to know the affiliation and name of the recipient.

※Please understand that it is subject to change without notice to improve the appearance and function of the device.

Service Center	Tel +82 42 879 3000

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