ACCUNIQ

User Manual BC720

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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

SELVAS Healthcare, Inc.
155, Sinseong-ro, Yuseong-gu, Daejeon, 34109 Republic of Korea
TEL: +82 42 879 3000, FAX: +82 42 864 4462

EC REP

Obelis s.a.
Bd. Général Wahis, 53, B-1030, Brussels, Belgium

CONTENTS

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, SLM, SMM, TBW, protein mass, mineral mass, etc. and information regarding BMI, PBF, BMR, abdominal analysis, Target to control, segmental analysis, Body composition change, etc.

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

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

"Notice" indicates important information in order to notify installation, operation or maintenance of this device. "Notice" 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 PRECAUTIONS

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

The following warnings, precautions and notes must be observed for 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 product 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 SELVAS Healthcare or our distributors.

Caution

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

Caution

If you plan to connect any device from other manufacturers electrically or mechanically to the unit, contact SELVAS Healthcare 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°C or exceeds 70°C.
- 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 product 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 product 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 SELVAS Healthcare.

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.

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
	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)
	This symbol is used inside system. Identifies the point where the safety ground of the system is fastened to the chassis.
	Do not open. This is for factory only.
	Alternating current
	Direct current
	Date of manufacture
	Manufacturer
	Non-ionizing radiation

SYMBOL	INFORMATION
CE 0197	CE mark
SN	Serial No.
EC REP	Authorized representative in the European community.
	Keep dry
	This way up
	Fragile
	Use no hooks
	For indoor use only
RoHS 2	RoHS2
MD	Medical Device

Guidance for Electromagnetic compatibility (EMC)

Details about the electromagnetic compatibility (EMC) of the ACCUNIQ BC720 are given below. Before using the ACCUNIQ BC720, be sure to read and understand the following information.

1) Guidance and manufacturer's declaration – electromagnetic emissions

The ACCUNIQ BC720 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 BC720 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 BC720 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 BC720

The ACCUNIQ BC720 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, mineral, 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 body 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 in finding possible health problems. Body composition analysis enables professionals to find obesity or imbalance in body composition at an early stage and helps subjects keep their body healthy.

Waist to hip ratio

Waist to hip ratio (W.H.R.) 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 categorized into and called 'apple' and 'pear' type. Apple type shows 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 Percentage of body fat.

Lipoprotein lipase can be easily activated in visceral fat, and it causes visceral fat to be dissolved easily. Dissolved visceral fat goes into liver through the blood vessel and causes fatty liver or increases 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 based 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 (W.H.R.) is over 0.9 (male) / 0.85 (female)
- the circumference of waist is over 102 cm/45 inches (male) _ 88 cm / 35 inches (female)

Visceral fat increases after 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 visceral fat is higher than that of subcutaneous fat, visceral fat can be easily reduced by exercise or dietary control in case of abdominal obesity. W.H.R. is the ratio of waist to hip circumference and has relation to one's figure.

Segmental Analysis

This device analyzes soft lean mass, body fat mass, total body water and E.C.W./T.B.W. 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.

Age Matched of Body

It is the estimated physical age of the subject considering body composition analysis result, gender, and biological age. This is calculated by comparing the optimal body composition based on the gender and biological age of the subject with the actual analyzed body composition. It can be used to evaluate the subject's health and body development.

Study

It is the provided impedance.

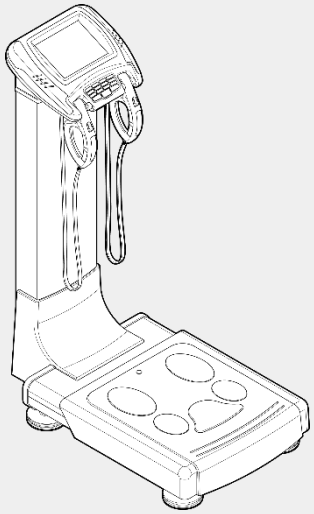
Impedance indicates the segmental impedance of five body parts (left and right arms, left and right legs, and trunk) corresponding to each frequency (1~ 1000 kHz).

TERMS OF EACH PART AND FUNCTION

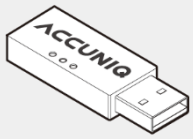
Main Parts

The main system of ACCUNIQ BC720 consists of as follows.

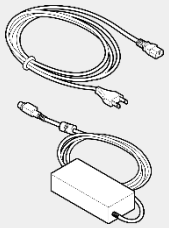
① Main body



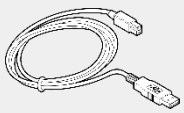
② User manual & Data management program



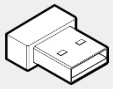
③ Adapter



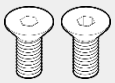
④ USB Cable



⑤ Wi-Fi Dongle

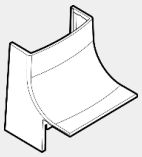


⑥ Bolts

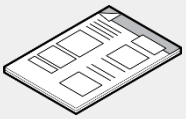


⑦ 5mm L-wrench

⑧ Body Cover



⑨ A4 result sheet

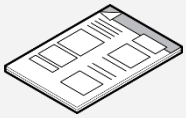


- Model or specification of accessories can be changed according to market supply and demand.

Options

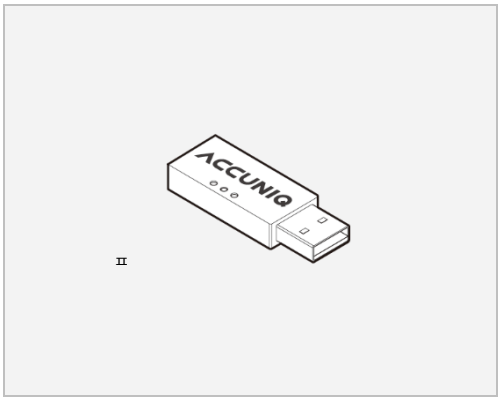
1. A4 result sheet for segmental parts and children

It shows the segmental results and children growth curve to make users easily understand the condition of 5 body parts and the growing state of children.



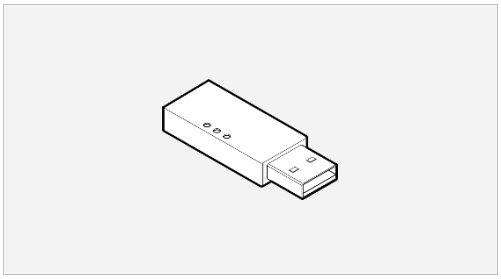
2. Data management program

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.



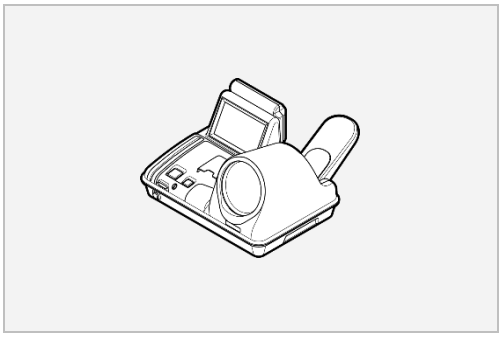
3. Bluetooth Dongle

It allows wireless communication with a PC.



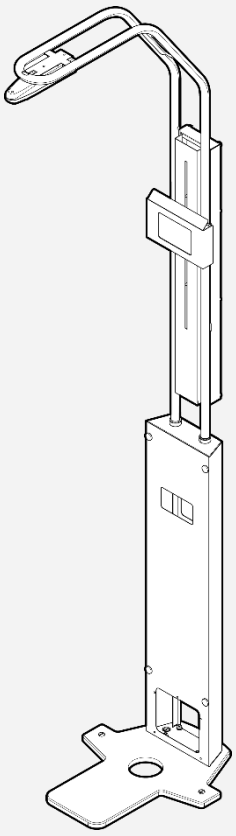
4. Automatic Blood Pressure Monitor

If SELVAS’s automatic blood pressure monitor for hospital is connected to this device, the user can easily check his/her blood pressure. Detecting the patient with hypertension may help better manage his/her blood pressure through weight control.



5. Ultrasonic Height Meter SM103

It is an instrument to measure users' Height more accurately and quickly. It employs standoff determination method using ultrasonic sensor. It combines the technology of artificial intelligence and reflected characteristics of ultrasonic height meter.



<Good point of using SM103 as an option>

1) It automatically measures height.

2) Fast measurement

3) Accurate measurement

4) LCD monitor attached to the column leads the user to measure height in correct way.

<When using SM103>

1) Install it in a place with stable temperature.

2) Do not install it at the location facing the heater and air conditioner.

3) Do not put a sticker or foreign things on body of the SM103.

4) Nothing should be placed within a radius of 60cm

Note

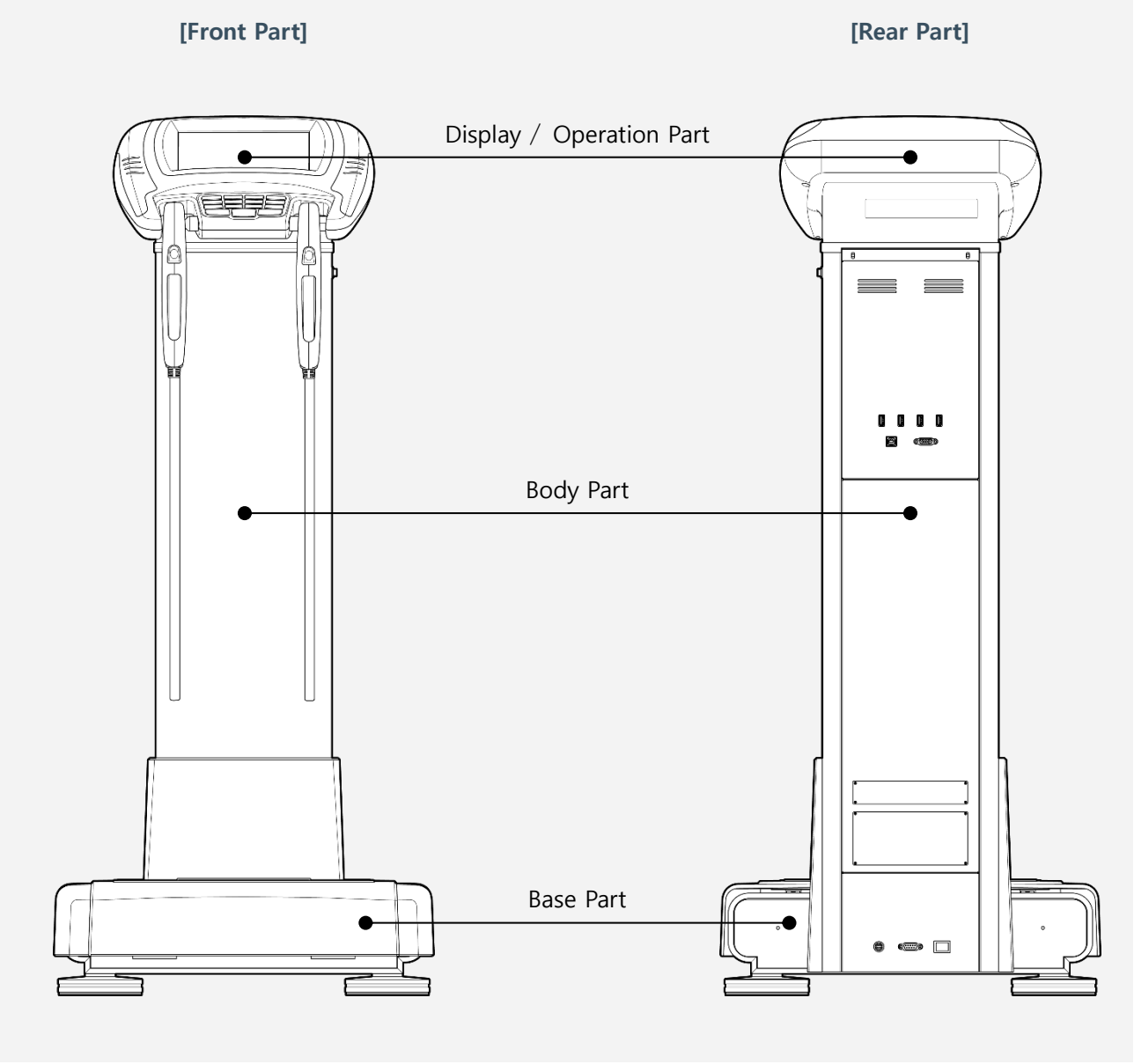
Measuring height in the morning is even average 1~2cm higher than in the evening, because vertebral cartilage is pressed maximum in the evening by owns weight.

- Model or specification of accessories can be changed according to market supply and demand.

Appearance of the device

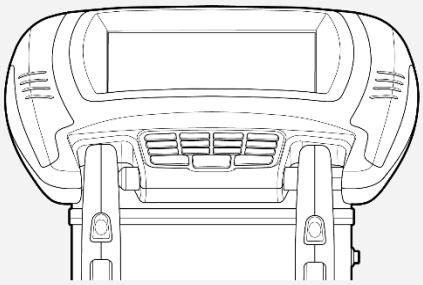
Front Part

The front and back of ACCUNIQ BC720 looks as below.



Term of each parts and its function

Display Operation Part



- **Large LCD (Color TFT)**

  It indicates the data the measurer input.

  It also shows measuring process in messages and graphic display.

- **Key pad**

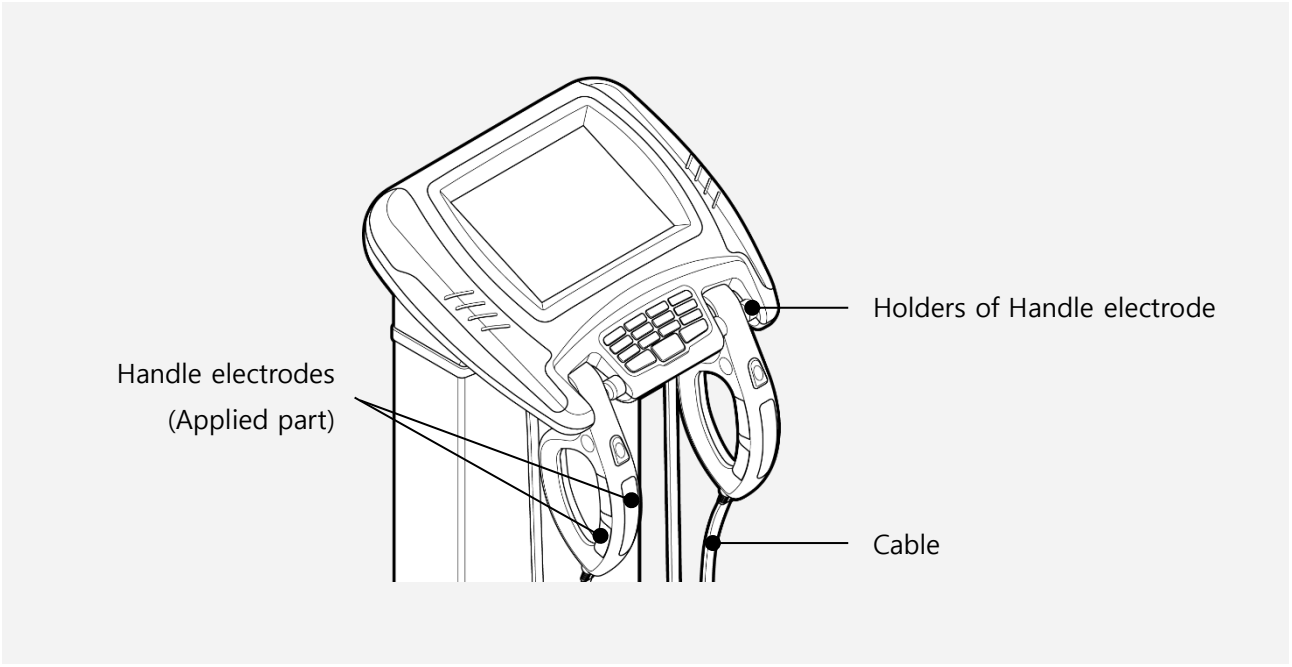
  There is a keypad in ACCUNIQ BC720. The function of each button is same as the touch screen.

- **Touch panel**

  LCD (Liquid Crystal Display) panel as touch screen

  It is easy to input data.

Body Part



- **Holders of Handle electrode**

  Handle electrodes are rested on the holder when they are not used.

- **Handle electrodes (Applied part)**

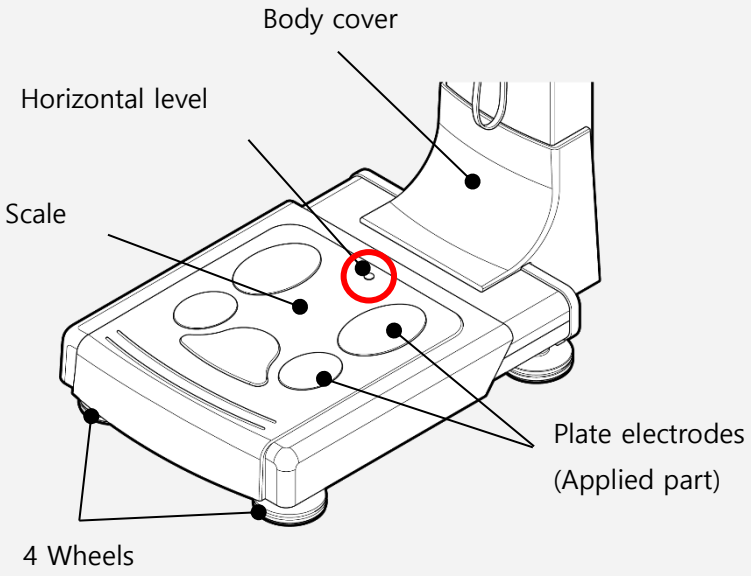
  It measures the resistance of body.

  Hold them with both hands during measurement.

- **Cable**

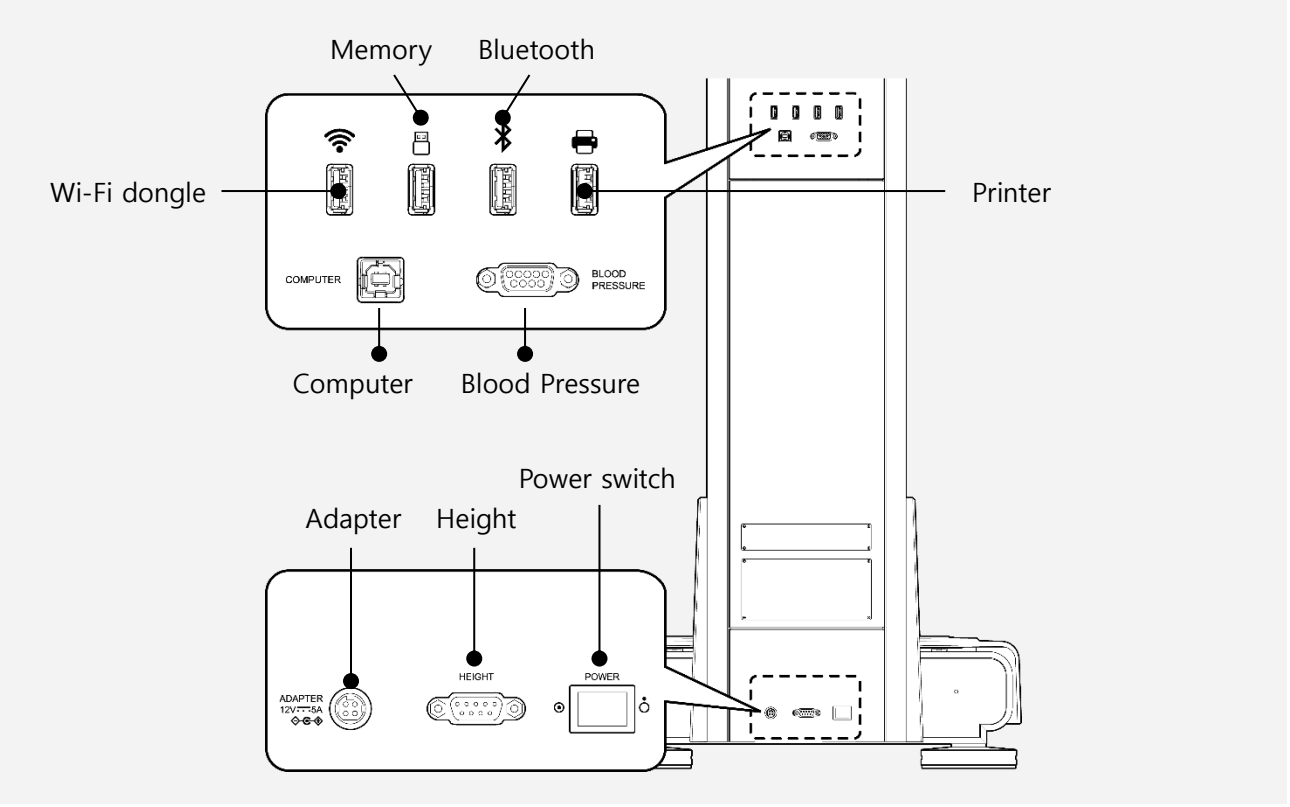
  It connects the handle electrodes from the Circuit Board.

Base Part



- **Scale:** Measure weight.
- **Plate electrodes (Applied part):** The user should step them in bare feet.
- **Horizontal level:** A level to regulate horizontality of the analyzer.
- **Body cover:** It covers the joint between the base and body parts.
- **4 Wheels:** support the analyzer. Regulate the level of the analyzer by driving the wheels either left or right.

Rear Part



- **Wi-Fi dongle:** Connect the Wi-Fi Dongle.
- **Memory:** Connect a USB drive.
- **Bluetooth:** Connecting the Bluetooth (Optional)
- **Printer**: A port to connect printer.
- **Computer:** A port to connect computer with USB Cable.
- **Blood Pressure:** A port to connect blood pressure monitor manufactured by SELVAS Healthcare, Inc.
- **Adapter:** Connecting the adapter.
- **Height:** A port to connect ultrasonic height meter.
- **Power switch:** It can be used to turn on/off the power.

Caution

A window in the rear part of this analyzer is designed to be opened by an authorized technician to check the inside of the unit, so users cannot open it themselves. The manufacturer and its agent will not bear any responsibility for problems or damages caused by the user opening it by force.

Caution

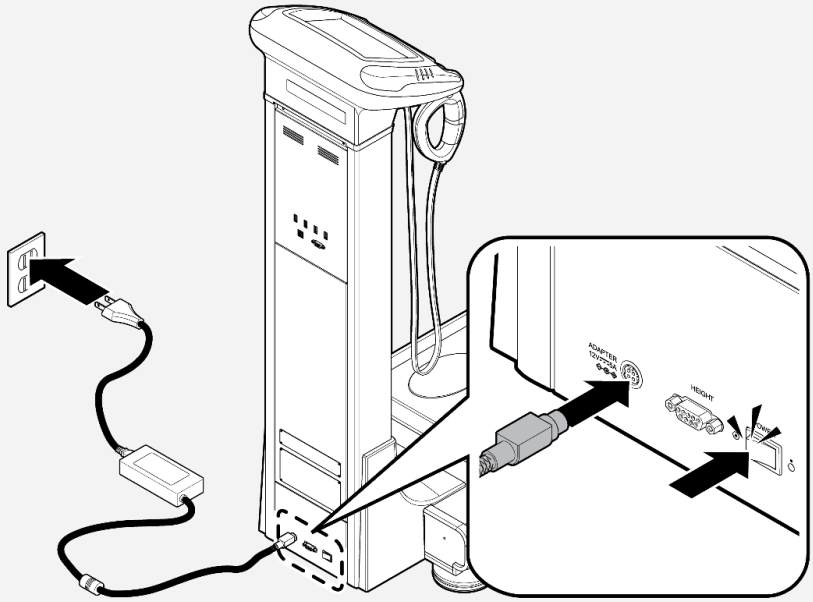
Do not touch the patient while operating the rear panel.

INSTALLATION

Power Supply

Connect the power cable to the 'ADAPTER' placed on the lower back panel of the device.

Connect the cable. Turn on the power switch placed next to Power input, then after moment initial screen animation is displayed automatically.



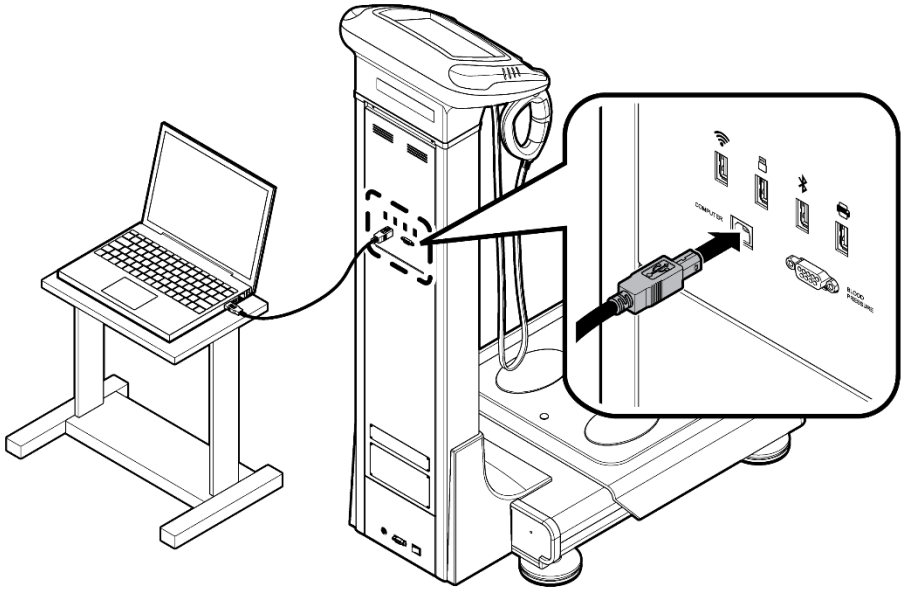
Caution

1. Before connecting a peripheral device to the device, the power should be turned off. Otherwise the devices can be damaged by electric shock or malfunction.
2. When the device and the peripheral devices are connected each other, the order of turning of the devices should start from the device to keep the functions and safe of the device.
3. This device should be only powered through the cable provided by SELVAS HEALTHCARE.
4. Be careful not to touch the base part of the scale when switching on the device. If at turning on the switch loads any weight on plate electrode, a measuring error might occur with the scale's zero point.
5. Do not install the equipment where power can not be disconnected.

Peripheral Device Installation

Connecting Computer

Connect the “COMPUTER” port placed on the rear panel of this device to the computer with USB cable. Or it can be connected through Bluetooth.



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 supplied USB memory.

Note

1. In order to save, search and retrieve the users’ data, the user should connect the analyzer to the computer installed data management software offered free. Printing is done through computer in this case.
2. The professional consulting software optionally provides various printouts. In case of using the software, the pre-printed result sheet is not used.
3. Please refer to the software user manual in the supplied USB memory.

Caution

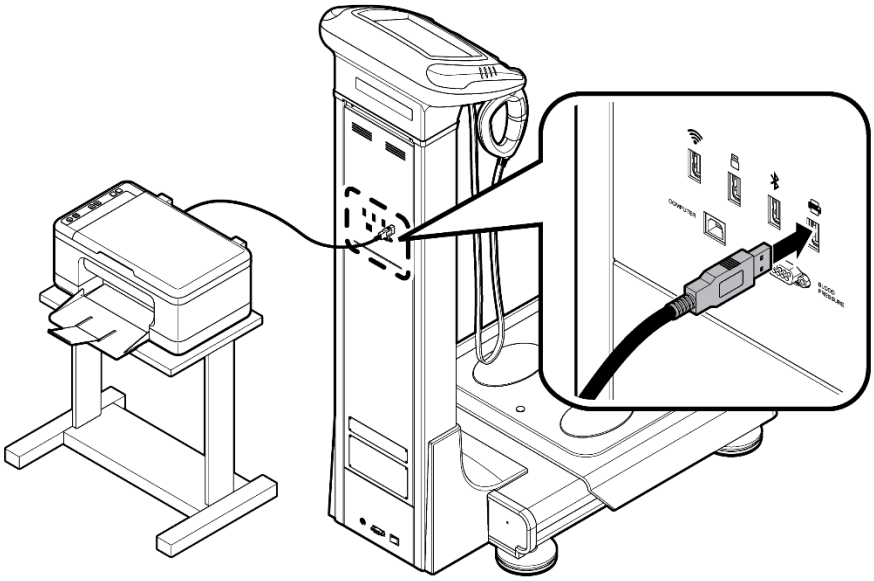
The PC that connects to the device must comply with IEC60950-1.

Connecting Printer

Connect A4 Printer to the ' ' port placed on the back with USB cable. There are two ways to connect printer.

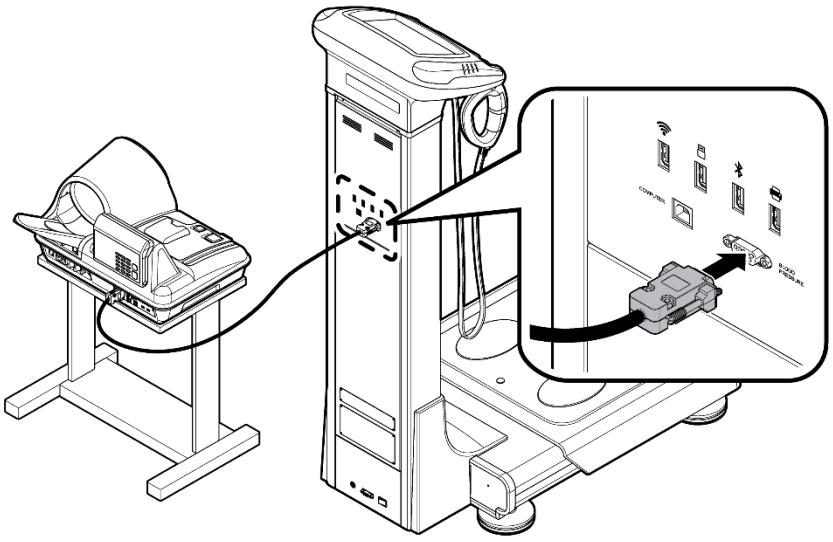
1) Unit-Printer interface directly.

2) Unit-Computer-Printer connecting.



Connecting Blood Pressure Monitor

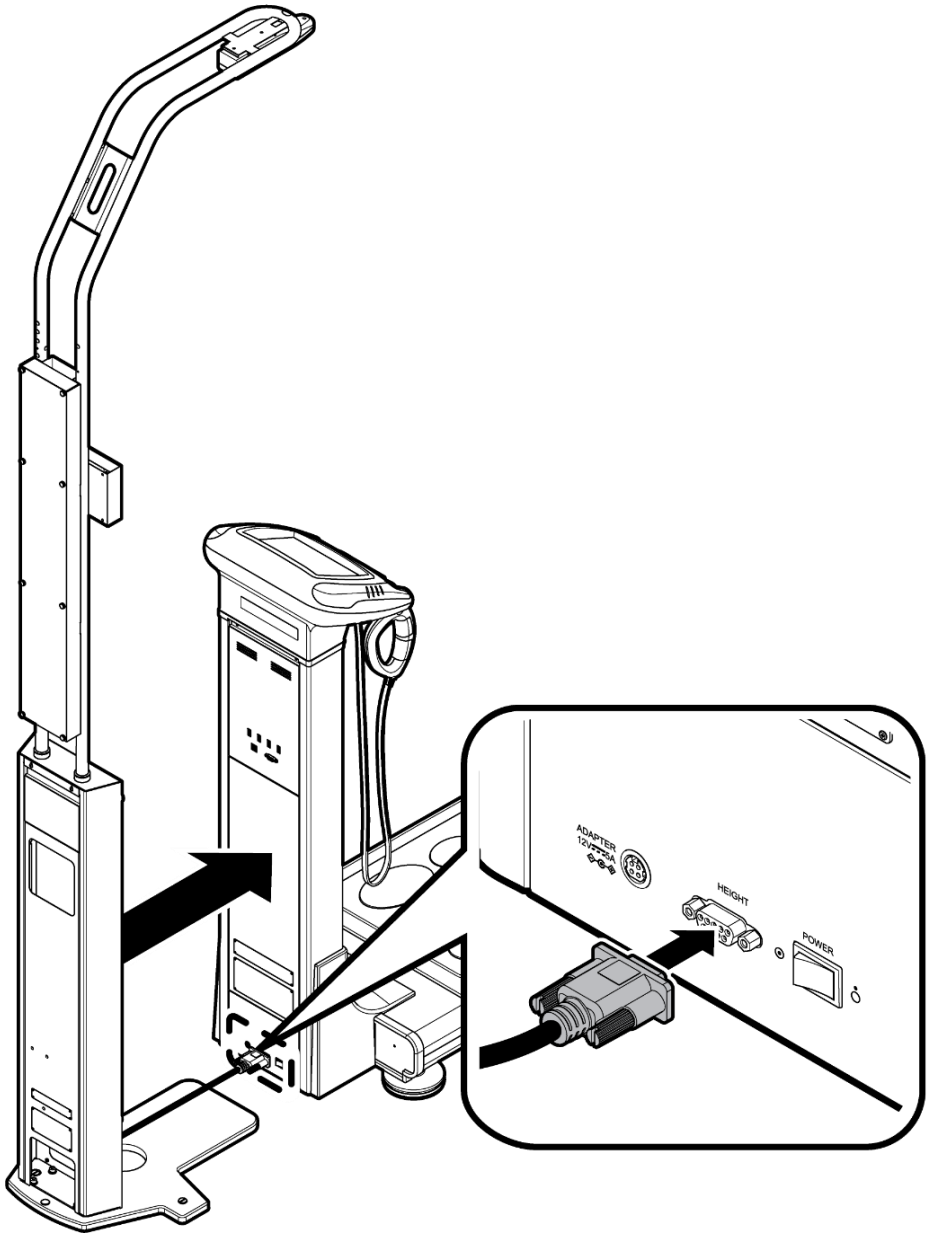
Connect blood pressure monitor to 'BLOOD PRESSURE' port placed on the rear panel of the main unit with RS-232 cable (See following figure)



Ultrasonic Height meter SM103

For assembly, push the lower board of the ultrasonic height meter into the bottom back of ACCUNIQ BC720. Fix the left and right parts firmly using hinge and screw.

Connect RS-232 cable to the 'HEIGHT ' port placed on the rear panel of ACCUNIQ BC720.



SYSTEM SETUP

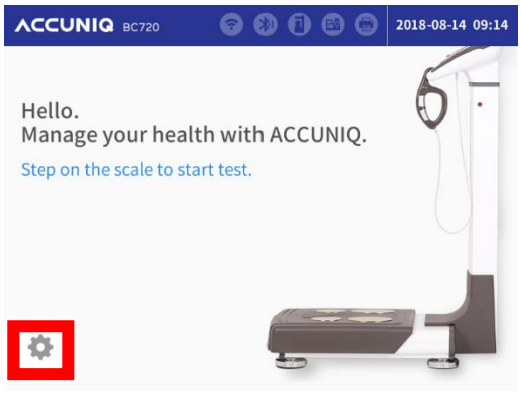
'SYSTEM SETUP' allows the users to change the setting of operational parameters.

> **Note**
>
> For the purpose of improvement, the contents in SYSTEM SETUP can be changed.

Entering SYSTEM SETUP

On the initial screen, press the " " icon at the left bottom and enter the password '0-0-0-0'.

The entering password can be changed in "Basic setting – Password".



Menu in SYSTEM SETUP

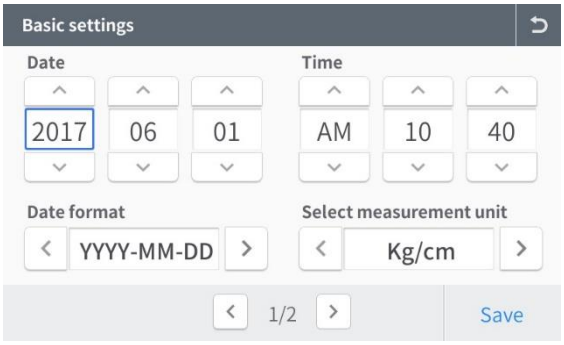
Menu items are displayed. The function of each icon is as follows.

	Menu	Setting Item
1	Basic Setting	Date / Time
		Date Type
		Unit change
		Language
		Volume
		Password
2	Data Management	Data Check/Print/Delete
		Copy data to Excel file
		Data Backup/Restore
3	Printer	Printer connection
		Select printer type

		Automatic print settings and Number of auto prints
		Print Position
4	Result Sheet	Result sheet setting
		Logo
		BCA / SEG/CHD. result sheet setting
		Abdominal analysis result setting
5	Communication	WiFi connection
		Bluetooth
6	Weight/Height	Weight Measurement or Input
		Weight Calibration
		Height Calibration
7	Option Management	Optional equipment (Height meter / blood pressure monitor)
8	Display	Touch Calibration
9	Customer center	Problem solving
		Remote control
		Information

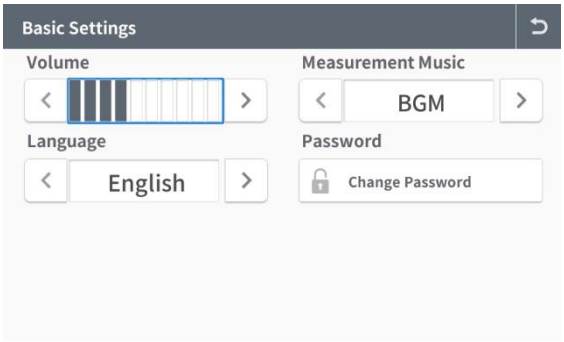
Setup

Basic setting



- Date/Time: Use the ∧, ∨ buttons to set the current date and time.

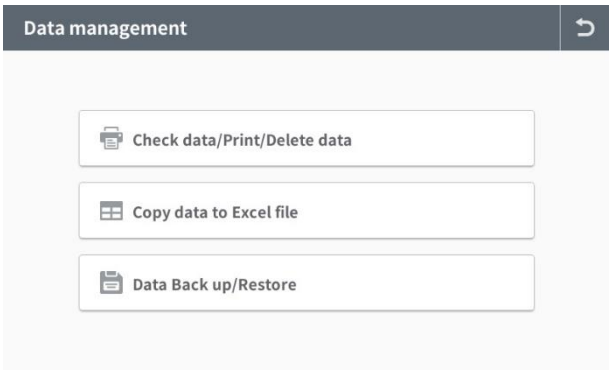
- Date Type: Use the <, > buttons to select the desired date format: YYYY-MM-DD, MM-DD-YYYY or DD-MM-YYYY.
- Unit change: Select the units for weight and height in kg / cm or lb / ft.



- Language: Set the language of menus and prompts.
- Volume: Set the volume of the announcement voice. (from 1 to 10)
- Password: Set password to be entered when entering user settings. The factory default password is set to '0000'. Please note that if you forget your password after changing it, there is no way to recover it.

> **Note**
>
> If you press the 'Save Settings' button in the middle of setting your options, the options you have set thus far will be entered. If you press the '↩' button, you will exit to the previous screen. To cancel changing the settings, press the ' ↩' button. The original settings are retained.

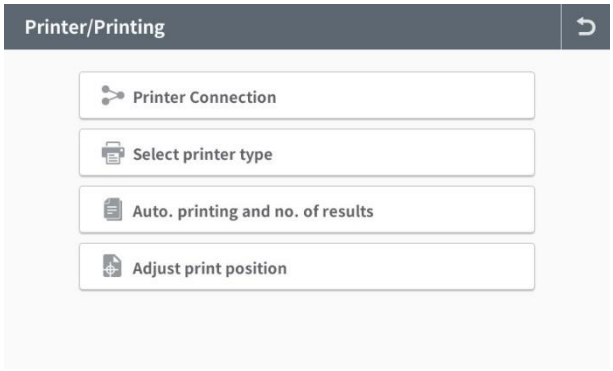
Data Management



- Data Check/Print/Delete: You can view, print or delete data stored on the device.

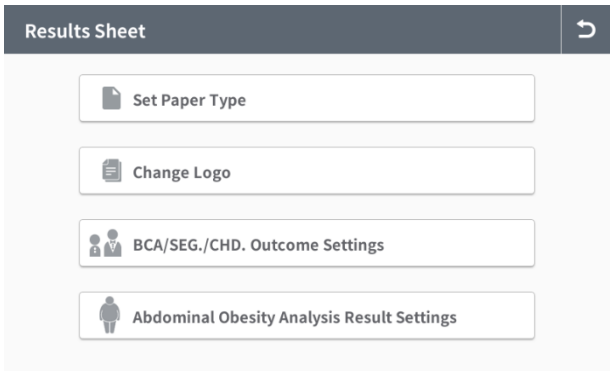
- Copy data to Excel file: Export all or part of saved data to an Excel file.
- Data Backup/Restore: export data to a USB drive, or load data from a USB drive into the device.

Printer



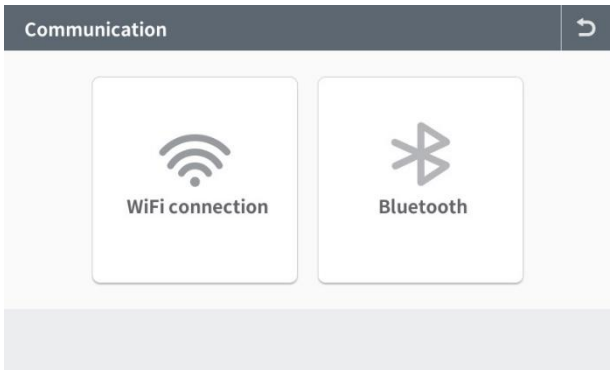
- Printer connection: Connect a printer.
- Select printer type: Select the type of printer to connect to.
- Automatic print settings and Number of auto prints: Select whether the printing is automatic or manual and the number of prints.
- Print Position: Adjusts the printing position.

Result Sheet



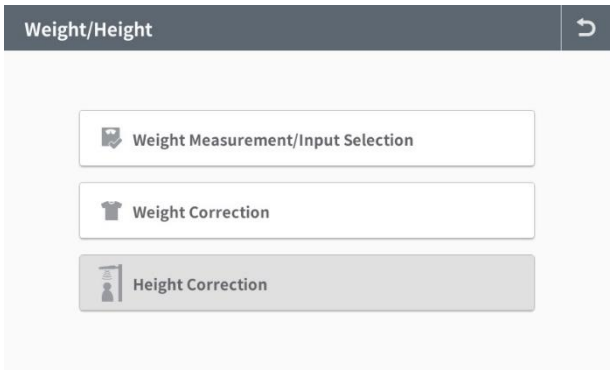
- Result sheet setting: Select whether to print on pre-printed paper or A4 paper.
- Logo: Change the logo displayed at the top right of the result sheet.
- BCA / SEG./CHD. result sheet setting: Select adult results or child result sheet (optional).
- Abdominal analysis result setting: Sets the analysis of abdominal fatness under 18yrs.

Communication



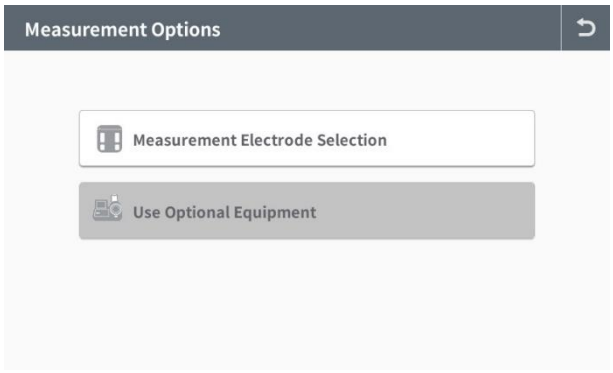
- WiFi connection
- Bluetooth

Weight/Height



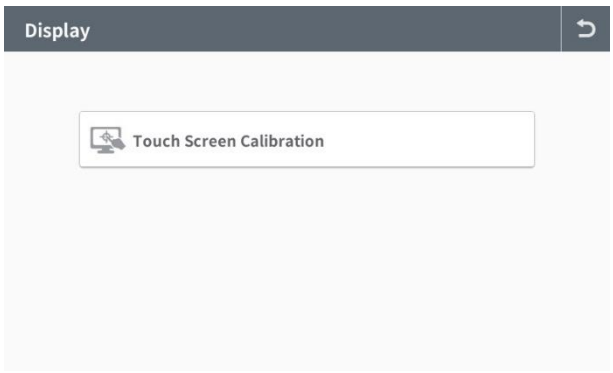
- Weight Measurement or Input: You can measure or input your weight.
- Weight Calibration: Calibrate the weight value.
- Height Calibration: Calibrate the height value.

Option Management



- Measurement electrode (foot electrode / ankle electrode): You can select which electrode to use.
- Optional equipment (Height meter / blood pressure monitor): You can select whether to use these optional devices.

Display



- Touch Calibration: Calibrate the touch position of the touch screen.

Customer center

- Problem solving: See the cause of common problems and how to fix them.
- Remote check: The product can be remotely inspected by a SELVAS technician if a problem occurs.
- Information: Check the software version of the device.

MEASURING AND ANALYZING

Precaution 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 conditions. 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 empty 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 sweats a lot.
- Or measure before these actions.

3) Avoid drinking alcohol 24 hours before the measurement

4) Wear clothes as light as possible.

5) Once the subject is on the scale, avoid sudden movement from sitting to standing position. Body fluid goes down to the lower body and affects the results. Thus subjects should be measured after maintaining standing position for 5 minutes.

6) Clean both the electrodes and measuring body parts.

7) Changes in room temperature may affect the results. Measurement should be done in a temperature around 20 °C.

8) Body composition and weight varies even during a day. Therefore, the measurement should be performed at the same time 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 bathroom before measurement.

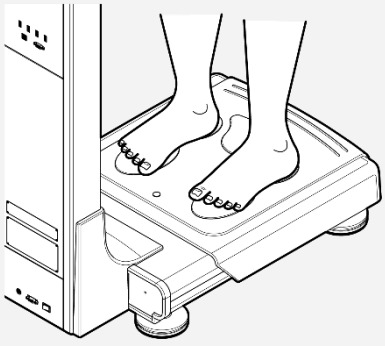
10) Maintain correct position and posture during the measurement.

In order to keep one's health and the balance of body composition, check the changes of body composition through continuous analysis and compare the results. Make sure that the body composition should are 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, sauna, 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.

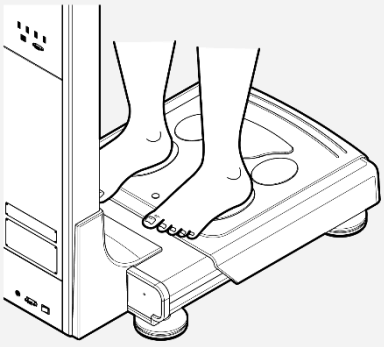
Correct position to measure

How to touch electrodes

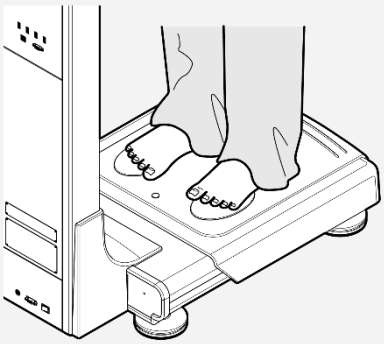
- Make sure that the plate electrodes are clean.
- Take off the socks or stockings then, stand on the plate electrodes.
- Remove sweat or foreign matters on the soles.
- Fairly place the bare feet on the plate electrodes. Make sure that the clothes are not between the soles and the plate electrodes.



(O) Correct stand

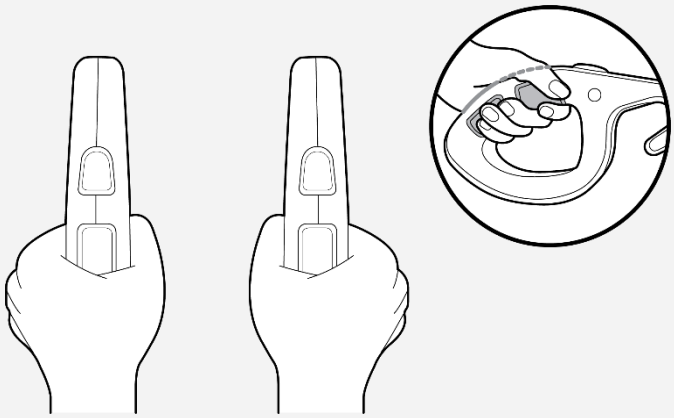


(X) Imbalanced touch



(X) Foreign matters

- Grip the handle electrodes using your fingers and palms.
- The 4 electrodes should be touched equally.
- Stretch both arms and spread them 30° from the body.



Note

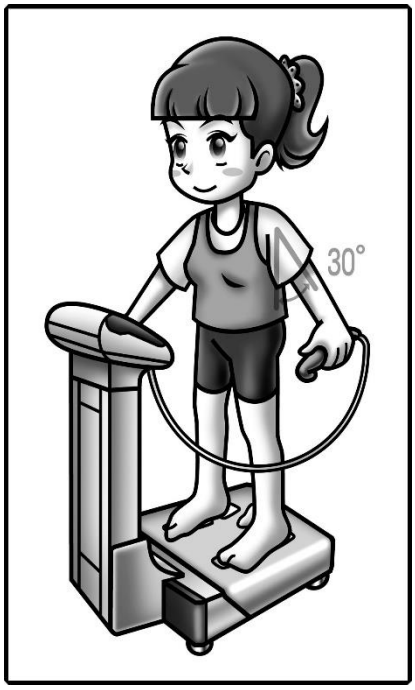
If 8 electrodes are not perfectly touched during the measurement, the result is not reliable or the device quits the measurement.

Note

1. When the subject has hands or feet that are too small to cover all electrodes sufficiently for measurement, please pay attention to touch all electrodes fairly. How one touches electrodes will affect the reliability of the analyzed value.
2. During measurement the subject should not be touched by another person or by conductive materials.
3. If 8 electrodes are not perfectly touched during measurement, measuring is quit or the data is not reliable.

Measurement Posture

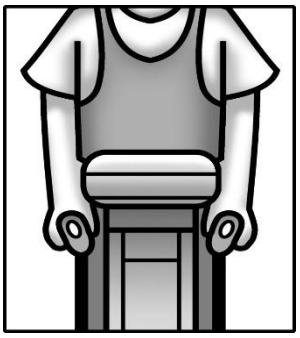
- Step on the scale with bare feet.
- Hold the hand electrodes using all fingers. Stretch both arms and spread them 30° from the body. Once it starts, hold the same posture until the measurement is over.
- Do not speak or move the body until the measurement is completed.
- Do not bend or shake the arms until the measurement is completed.
- The measurement will be stopped if all eight electrodes are not fairly touched.



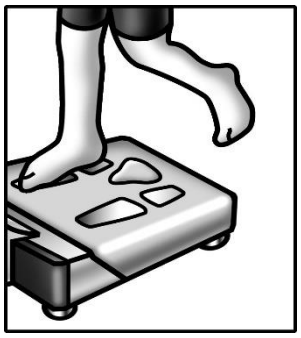
Don’t move and the arms
Open about 30 degrees

Do not bend the arm

Do not move.



Open arms about 30 degrees



Keep touching
all electrodes

(O) Correct posture

(X) Incorrect posture

Measurement

Basic analysis

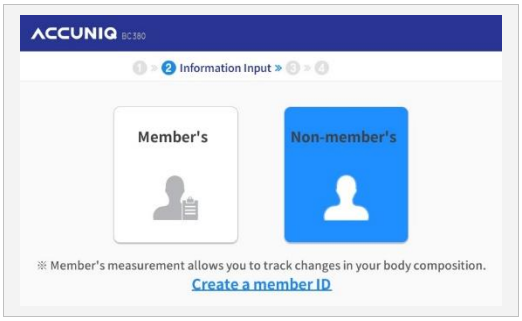
Measurement

If you want to start measurement, step on the scale of the product.

1) Weight measurement

- When the subject steps on the scale, the screen changes, and a chime is heard.
- Do not move or speak until the measurement is complete.
- The measured weight is displayed on the screen.

2) When the weight measurement is complete, the measurement result is displayed. Select member measurement or non-member measurement.



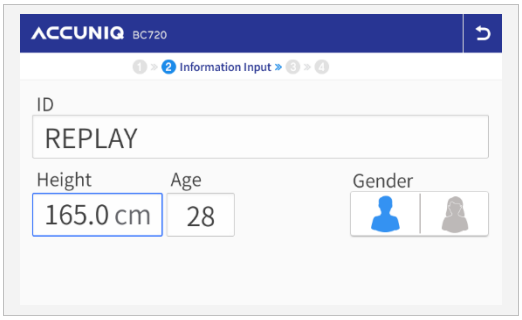
3) Personal data input

Input the following information in a order; ID, height, age and gender.

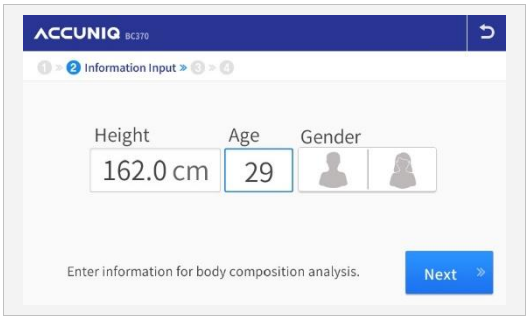
- Input ID (member measurement)
  - Input your ID.
  - ID can be created using up to 20 characters including English letters and numbers.

- Input height
  - Input the subject's height using the numerical buttons on the key pad.

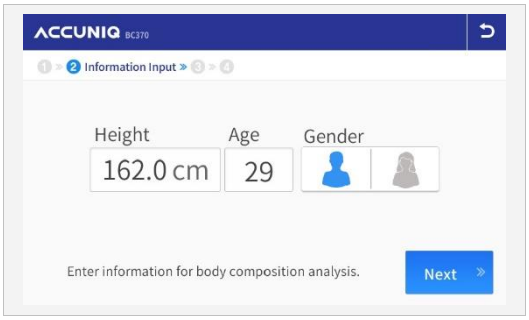
  Analysis can not be performed if the user's height exceeds the input range.



- Input age
  - Input the subject's age using the numbers buttons on the key pad.



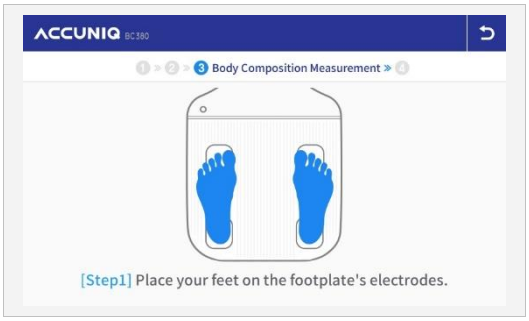
- Select gender
  - Select either MALE or FEMALE on the touch pad or key pad.
  - Press the 'NEXT' button on the touch pad.



4) Measurement posture 1

After inputting the subject's personal data, the screen changes as shown in the picture.

- Place your feet precisely on the plate electrodes.



5) Measurement posture 2

Grip the electrode handles correctly.

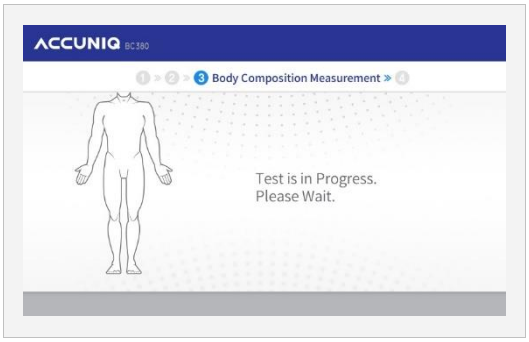
6) Measurement posture 3

Stretch both arms and spread them 30° from the body.

7) Starting measurement

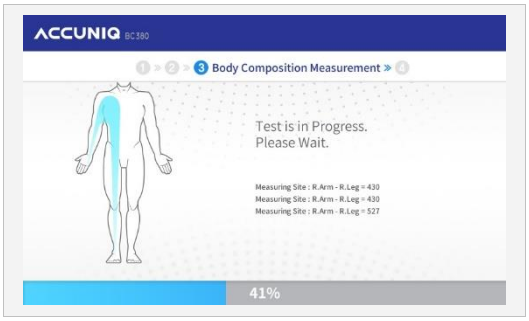
When the measurement preparation is complete, the following message is displayed on the screen.

"Starting measurement. Don't move or speak, please."



8) Measuring

During the measurement, the following screen appears.



Note

When the measurement produces an error,

- An Error message appears on the screen.
- To measure again, hold the handle electrodes and press the start buttons with your thumbs.

- If the measurement fails three times in a row, the following message appears. "The measurement can not complete due to the continuous errors. Step down from the scale for the initialization.
- Refer to the ERROR & REPAIR section for additional detail.

Result screen

1) After analysis is complete, the result is displayed on the screen.

2) Scanning QR code

Press the ‘QR code’ on the device screen to enlarge the icon and scan the ‘QR code’ with a mobile device to save the data in the server.

After scanning the ‘QR code’, you can check the measurement data with your mobile device and manage it at will from the server in which it is saved.

Note

Scan the QR code with a QR code reader on a smart phone or tablet.

3) Restarting

- Once the result is displayed on the screen, it can be printed out on a pre-printed result sheet.
- After confirming the analyzed result, press ‘Initial view’ to restart.
- The device returns to the initial screen after one minute.

Using Ultrasonic Height Meter

An Ultrasonic Height Meter is an optional part. When height meter is connected to ACCUNIQ BC720, it measures the user's height in accurate way.

[Measuring procedure]

1) Connect ACCUNIQ BC720 to ultrasonic Height Meter.

2) Turn on the device and height meter. After the voice guidance, "To start measuring weight", step on the scale.

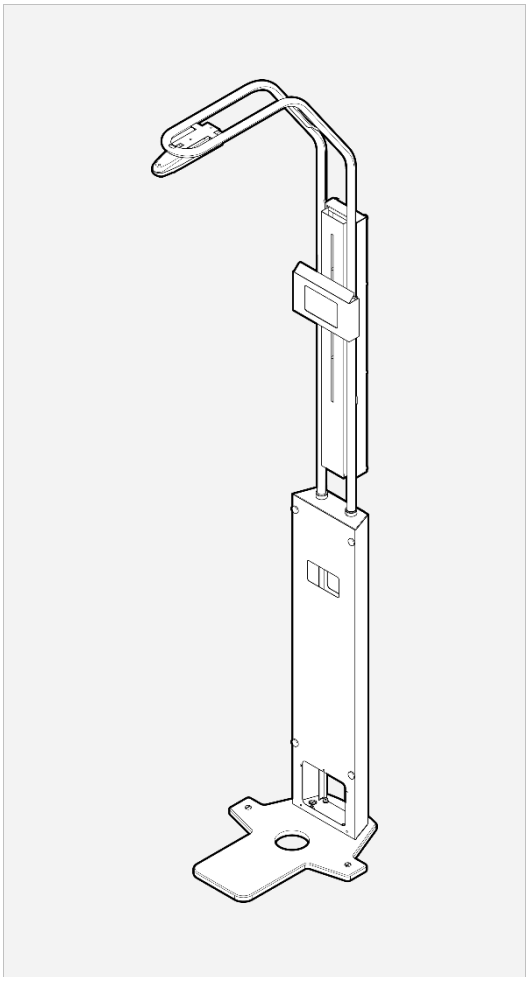
3) The LCD monitor of height meter moves to the height of the user with a message, "Measuring height."

4) Fix your eyes on the LCD approximately 5 seconds. Measurement starts with message 'Look at LCD'.

5) When the measurement completed, it displays the result of weight and height on the LCD.

6) With chime bell, you can start inputting the person data.

7) The rest of the procedure is same as the basic procedure.

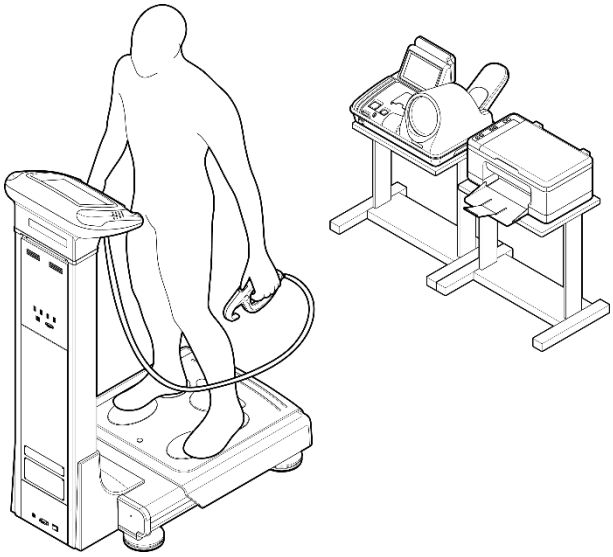


Note

1. The LCD in ultrasonic height meter (SM103) leads the user to measure height in correct posture. It reduces the measuring error which can be occurred due to the incorrect posture such as head-down.
2. It starts measuring impedance when the user is in correct posture.
3. During the measurement, the user should straighten the back and fix the eyes on the monitor of height meter.

Procedure using Blood Pressure Monitor

When ACCUNIQ BC720 is connected to Blood Pressure Monitor. Both blood pressure and body composition can be measured. Blood Pressure Monitor should be selected from one of the models from SELVAS Healthcare, Inc.



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 procedure is as follows.

1) Connect a Blood Pressure Monitor to the device.

2) Connect the device to a computer.

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 an ID which is 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.

RESULT INTERPRETATION

ACCUNIQ BC720 indicates the synthetic analysis including edema assessment, prediction of abdominal fatness, segmental analysis, etc. Explanation of each item is as follows.

(1) Personal Data

The subject's ID / name, date, height, weight, age and gender are indicated on the result sheet.

(2) Company Logo

The measurer can input a customized LOGO such as the name of a hospital, sports center, or obesity clinic, telephone number, address, contact person, etc.

Refer to the software manual for logo insertion.

(3) Body Composition Analysis

The body composition analysis is indicated in the ratio based on the subject's weight.

Total weight is a combination of bone, ligament, tendon, organs, fluids, muscle and fat. When a person loses weight by the optimal fitness programs or gains weight, the components of the weight will probably change, as well as the ratio of these components to one another.

Body composition table provides the analyzed result and normal range based on the standard value of weight components.

- Body Weight = Lean Body Mass + Mass of Body Fat
- Lean Body Mass = Soft Lean Mass + Mineral Mass
- Soft Lean Mass = Total Body Water + Protein Mass
- Total Body Water = ECW (Extra Cellular Water) + ICW (Intra Cellular Water)

The sum of intra cellular water and extra cellular water is the total amount of body water. Soft lean mass consists of total body water and protein mass. Lean body mass consists of soft lean mass and mineral mass. Ultimately, the sum of Lean body mass and Fat mass is weight.

1) Weight: Subject's body weight

Std. wt. (Standard weight): height (m) 2 X 22(BMI)

2) L.B.M. (Lean Body Mass): It is calculated by subtracting mass of body fat from body weight. Lean body mass consists of fat free mass of body such as muscle, organs, blood and water.

3) Mass of Body Fat: It is calculated by subtracting lean body mass from weight.

Subcutaneous Fat: It exists under our skin and when pulsing with visceral fat, it becomes the total mass of body fat.

4) S.L.M. (Soft Lean Mass): It consists of total body water and protein and some internal organs such as heart, stomach and bowels etc.

S.M.M. (Skeletal Muscle Mass): Skeletal muscle is also called "voluntary" muscle because one can move this muscle voluntarily unlike visceral muscle. Skeletal muscle enables people to walk and perform other voluntary activities.

5) Mineral: Composed of bone and electrolyte.

6) Protein: Major component which consists of soft lean mass and body water.

7) T.B.W. (Total Body Water): The weight of body water.

8) I.C.W. (Intra Cellular Water): Water existing in inner cell.

9) E.C.W. (Extra Cellular Water): Water existing in outer cell membrane like plasma and ISF, etc.

Other than measured data, additional evaluation and normal range based on standard weight are also indicated. For example,

Weight/ Normal	Weight
61.6	Normal: It evaluates measurer's condition based on the standard weight.
[58.4~71.3]	61.6: It is the subject's actual weight.
	[58.4~71.3]: This is normal range according to subject's personal information.

(4) Obesity Assessment

This assessment helps the subject to control body composition and weight. The body composition analysis result is compared with the ideal body composition for the age and gender of the subject. The result is displayed in a bar graph. Nornal range of weight and soft lean mass is calculated on the basis of standard weight.

1) Percent of Body Fat [%]: for Adults

	low fat	normal	overweight	obese	severe obese
Male	less than 15	15 ~ ≤20	20 ~ ≤25	25 ~ ≤30	over 30
Female	less than 20	20 ~ ≤30	30 ~ ≤35	35 ~ ≤40	over 40

2) Body Mass Index (kg/m^2): for Adults

- EAST ASIA

thin	normal	overweight	obese
< 18.5	18.5 ~ < 23	23 ~ < 25	over 25

- EU and etc.

thin	normal	overweight	obese
< 18.5	18.5 ~ < 25	25 ~ < 30	over 30

(5) Abdominal Analysis

Abdominal fatness is divided into subcutaneous type and visceral type. When it comes to body fat, experts say that not only the amount of fat is important but also its distribution. If visceral fat area is over 100 cm^2, it is classified as "visceral obesity" regardless of P.B.F., W.H.R. or Body weight.

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

1) W.H.R. (Waist to Hip Ratio)

W.H.R. is calculated by dividing waist girth by hip girth. When W.H.R. is below 0.9 (male) / 0.85 (female), the risk of visceral obesity is low.

2) Visceral Fat Level: The degree of visceral obesity is displayed in a level.

- Level 1~ 4 corresponds to subcutaneous fat type
- Level 5~ 8 corresponds to balanced type that subcutaneous and visceral fat is balanced.
- Level 9~10 corresponds to borderline type.

  If subjects maintain current lifestyle, they will proceed to visceral fat type.
- Level 11~15 corresponds to visceral fat type Ⅰ.
- Level 16~20 corresponds to visceral fat type Ⅱ.

3) V.F.A. (Visceral Fat Area): The normal range is 50 ~ 100 cm^2 (male), 40 ~ 80 cm^2 (female).

4) V.F.M. (Visceral Fat Mass): V.F.M. is indicated in 'kg' unit.

(6) Prediction of Abdominal Fat

It is the graph of V.F.A. If the user doesn't exercise and just keep the current life style, the graph indicates how V.F.A increases and how BMR decreases every 5 years.

This graph gives motivation to manage daily life style.

(7) Segmental Analysis

Soft lean mass and edema index of five body parts (left and right arms, left and right legs, and trunk) are analyzed.

1) Segmental S.L.M.

It evaluates segmental S.L.M. of 5 body parts (arms, legs and trunk) in 'kg' and 'percentage'.

Dual bar graph of soft lean mass makes it possible to distinguish muscular-looking body type from actual muscular body type.

2) Segmental edema index

Segmental edema index to 5 body parts is indicated with the ratio of extra-cellular water and total body water and the ratio of extra-cellular fluid and total body fluid.

(8) Body Composition Change

Check to change of body fat, soft lean mass and weight for 8 times.

(9) Body Type

Body type is determined by B.M.I and P.B.F. Body type is classified as 1 of 20 types; Underweight low-fat, Underweight, Lack of muscle, Skinny fat class 1, Skinny fat class 2, Skinny fat class 3, Muscluar, Muscluar overweight level 1, Overweight, Pre-obesity, Obesity class 1, Obesity class 2, Obesity class 3, Pre-obesity, Musclular overweight level 2, Athlete.

(10) Assessment of E.C.W./T.B.W.

Edema is the unbalanced state of intra and extra cellular water. Edema can be increased by salty food, malnutrition, postpartum, exercise, temporary fatigue etc. It is divided into 3 steps; Normal, Borderline, Over.

(11) B.C.M.(Body Cell Mass)

It consists of intra cellular water and protein.

(12) Energy Expenditure

1) B.M.R. (Basal Metabolic Rate)

B.M.R. refers to the calories required to maintain human body's basic function such as movement of heart, brain, neural transmission, regulating body temperature and so on. B.M.R. is in proportion to S.L.M. because body fat stores energy while muscle consumes energy. Therefore, even if the weight is same between persons, the person with more muscle has greater B.M.R.

2) T.E.E. (Total Energy Expenditure)

It is the sum of basal metabolic rate and calories needed for daily activity. Generally it is calculated by multiplying B.M.R. by PAL (Physical Activity Level).

(13) A.M.B.(Age Matched of Body)

It is the estimated physical age of the subject considering body composition analysis result, gender, and biological age. This is calculated by comparing the optimal body composition based on the gender and biological age of the subject with the actual analyzed body composition. It can be used to evaluate the subject's health and body development.

(14) Total score

It is a physical total score which is evaluated considering a subject's body composition analysis result and biological age. On the basis of 100 points, the people in the balanced standard body type get scores around 80. The more the subject is healthy and has soft lean mass, the higher the score is.

(15) Study

Impedance

It indicates the segmental impedance of five body parts (left and right arms, left and right legs, and trunk) corresponding to each frequency (1~ 1000 kHz).

(16) Blood Pressure

When the blood pressure monitor supplied from SELVAS Healthcare, Inc. is connected to the device, blood pressure can be measured and the result can be printed out. Systolic blood pressure, diastolic blood pressure, and pulse are printed on result sheet. It helps to recognize hypertension assessment related to obesity.

(17) QR code

Scan the QR code with a smart phone to see the result on the website.

STORAGE & MAINTENANCE

1) Pay attention to the allowable value of the electric current.
2) Avoid direct sunlight, humidity, dust, thick oil, salty air or extreme changes in temperature.
3) **Do not install or store the device in a place where chemicals or gas are stored.**
4) **Do not use the device in unstable environments with a high amount of vibrations or heavy impacts.**
5) Connect the ground located on the backside of this device to the terminal plate to prevent any electric shock from power surges or other electrical current changes.
6) **Do not place heavy objects on or drop anything on to the device, and avoid strong impacts.**
7) **Do not disassemble or modify the device.**
8) If the unit has not been used for an extended period, confirm with an expert that all functions and physical mechanisms are in good condition before use.
9) **Do not introduce any liquid on to the device or insert any foreign substances.**
10) If foreign substances are introduced, or if the device is exposed to harmful environments, the unit must be examined by a qualified technician before use.
11) Use only the power cable, adapter, and fuses provided by SELVAS Healthcare.
12) Please confirm the covering of the cable, the state of the adapter connection, and other safety checks as below:
    - RS-232C cable
    - USB port
    - Adapter
13) When disconnecting the power cable, turn off the power switch first then unplug the unit.
14) Store the unit in an environment with an ambient Temperature -25 ~ 70 °C, Humidity lower than 93 % (non condensing)
15) The operating environment should have an ambient Temperature 5 ~ 40 °C, Humidity 15 ~ 93 % (non condensing)
16) **Do not store or use this device in environments under 70 kPa (700 mbar) or over 106 kPa (1060 mbar) of atmospheric pressure.**
17) 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.

18) 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.

ERROR & REPAIR

Kinds of Error & Repair

Error	Cause	Repair

Out of range of impedance	• When the subject's body impedance deviates from the limit
	  • Insufficient touch to electrodes
	  • Impedance is out of range
	  • Range: 100 ~ 950 Ω
		• Clean the measuring parts (the electrodes, palms, and soles) and try again
		• Measure again with correct posture
		• Do not move during measurement
		• 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 measure if the P.B.F. is out of range
		• When the same error occurs even after re-measurement, 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 installed height already, measure again • Confirm to measure weight and try again correctly • It can't measure if the fatness is out of range • When the same error is occurred even re-measurement, 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 • - Incorrect input of height	• Input height correctly. If the subject's height is out of range, height can't be entered

Error	Cause	Repair

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 move or speak during measurement
		• It can't measure if the weight is out of range.
		• When the same error occurs even after re-measurement, please contact SELVAS Healthcare or its local distributor from where device is purchased

Error occurrence & Repair

Error code	Cause	Repair
38001	• Electrode and measuring parts are not detected or dirty • Faulty in impedance measuring	• Try to measure again after cleaning the electrode holders with soft gauze • Try again after cleaning the hands and soles • Check if foreign materials are between electrodes and measuring parts • Try again in correct posture and hold the electrodes according to the measuring method
38002	• Ankle electrode and measuring parts are not detected	• Try to measure again after cleaning the ankle electrode with soft gauze • Try again after cleaning the ankle electrode
38003	• There is an error in measured impedance by external influence.	• Check installation condition (AC cord or around equipment • Contact SELVAS Healthcare or distributor
38004	• Out of measurement range of impedance • range: 100~950Ω	• Try again after cleaning the hands and soles • Check if foreign materials are between electrodes and measuring parts • It can't measure if the impedance is out of range

38005	• Out of measurement range of PBF • range: Under 75%	• Try again after cleaning the hands and soles • It can't measure if the PBF is out of range
38006	• Continuous error for 3 times	• Step off and try again • Contact SELVAS Healthcare or distributor
38007	• Disconnect Color board and Main board	• Contact SELVAS Healthcare or distributor

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, return the unit directly to service department.

- 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 the 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 TRANSPORT

SELVAS Healthcare wraps this device up with the most suitable method to protect it from any impact or damage during shipping and transporting. This device can be damaged during delivery if it is packed in other ways except the one SELVAS Healthcare uses. Please handle this device carefully without any impact in packing and delivery.

If this device needs to be transported wrap this device up again and transport it as follows.

1) Turn off the power.

2) Turn off the power of the peripheral devices and disconnect all cables.

3) Disassemble the device in reverse order of assembly.

4) Pack the device with the original packing materials.

5) Transport it carefully.

SPECIFICATION

DIVISION	SPECIFICATION
Model	ACCUNIQ BC720
Measuring method	BIA via tetra-polar electrode method using 8~12 touch electrodes
Range of frequency	1, 5, 50, 250, 550,1000 kHz
Measuring site	Whole body and segmental measurement (arms, legs and trunk)
Result contents	**[Result for Body Composition Analysis]** Body Composition Analysis (Weight, LBM, Body fat, SLM, Protein, Mineral, TBW), Muscle/Fat analysis (Weight, SMM, Fat mass), Obesity analysis (BMI and assessment, PBF and assessment, Obesity degree, AC), Abdominal analysis (WHR, VFL, VFA, VFM, SFM, Predicted abdominal obesity), segmental(Left arm, Right arm, Left leg, Right leg, Trunk) Lean Analysis (Dual Graph) and Segmental ECW ratio, Body water analysis (ICW, ECW, Ratio of ECW), Comprehensive evaluation (Body type, Biological age, BMR, TEE, BCM), Balance assessment (Upper body L/R, Lower body L/R), Control guide (Target weight, Weight control, Muscle control, Fat control), Impedance (Segmental&Frequency), Blood pressure (when connected with blood pressure monitor of SELVAS Healthcare), QR code **[Result for Segmental]** Segmental lean mass and assessment, Segmental fat mass and assessment, Segmental ratio of ECW and assessment, History (Weight, SMM, Fat mass, PBF, BMI, WHR, ECW ratio), Body type (20 types), Segmental Body water, Segmental ICW, Segmental ECW, Impedance (Segmental&Frequency), QR code **[Result for Child and Youth (optional)]** Body Composition Analysis (Weight, LBM, Body fat, SLM, Protein, Mineral, TBW), Muscle/Fat analysis (Weight, SMM, Fat mass), Obesity analysis (BMI, PBF, WHR), Child growth curve (height, weight), Comprehensive evaluation (Body type, BMR, TEE, BCM, Obesity degree), Balance assessment (Upper body L/R, Lower body L/R), Control guide (Target weight, Weight control, Muscle control, Fat control), Segmental(Left arm, Right arm, Left leg, Right leg, Trunk) Fat mass/Lean mass, Impedance (Segmental&Frequency), QR code
Current	About 180μA ± 15
Power supply	Input-AC 100~240V~, 50/60Hz, 1.5A

DIVISION	SPECIFICATION
	Output-DC 12V, 5A, 60W ADAPTER
Display	8.4inch wide color LCD
Input device	Key pad, Touch screen, PC remote control
Transmission device	USB port, RS-232C, Wi-Fi, Bluetooth (Option)
Printing device	USB port
Dimension	496 x 820 x 1150mm (W x D x H)
Weight	About 42kg (main unit)
Measuring range	100 ~ 950 Ω
Measuring time	Totally within 1 minute
Applicable height	50 ~ 220 cm / 1ft 7.7in ~ 7ft 2.6in
Measuring weight	10 ~ 270 kg / 22.1lb ~ 594lb
Applicable age	1 ~ 99 years old
Operation ambient	Ambient temperature range +5 to +40 °C Relative humidity range 15 to 93 % (non-condensing) Atmospheric pressure range 70 kPa (700 mbar) to 106 kPa (1060 mbar)
Storage ambient	Ambient temperature range -25 to +70 °C Relative humidity range lower than 93 % RH Atmospheric pressure range 70 kPa (700 mbar) to 106 kPa (1060 mbar)
Software name and version	Name: BC720, Version: BC720.K.1.0.00

- For purpose of improvement, specifications and design are subject to change without notice.

WARRANTY

Name of product	Body composition analyzer		
Name of model	ACCUNIQ BC720		
Serial number			
Period of warranty / Date of purchase	Within 1 year 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		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 BC720		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		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	Waveform printing possible	Pass/Fail	
	4	Measurement	Proper measurement	Pass/Fail	
Other	1	Clock	Present date/time	Pass/Fail	
General Judgment				Pass/Fail	
Model		ACCUNIQ BC720		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.

HEADQUARTERS 155, Sinseong-ro, Yuseong-gu, Daejeon, 34109 Republic of Korea **Tel** +82 42 879 3000 **Fax** +82 42 864 4462

If the problems continue, call the service center. When you ask for service, the manufacturer's label, serial number, date of original purchase and explanation of malfunction will be required.

Service center Tel +82 42 879 3000

* For purpose of improvement, specifications and design are subject to change without notice.