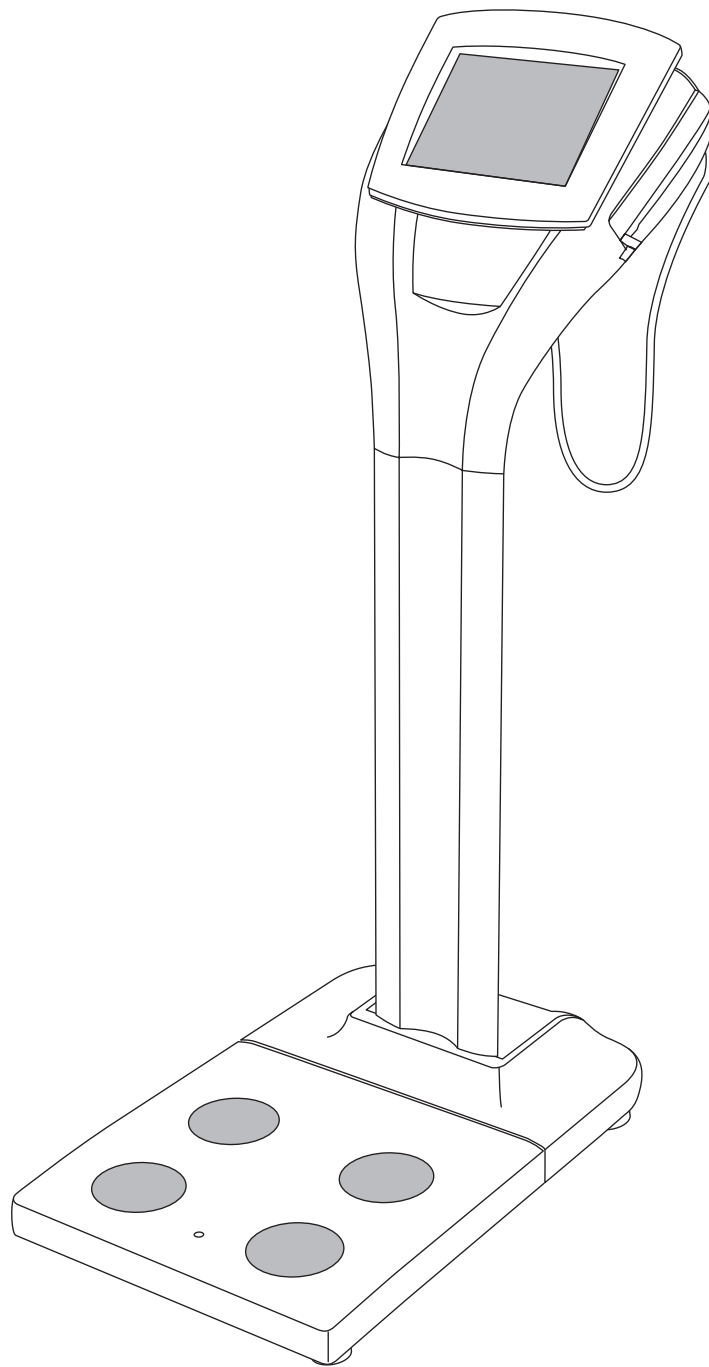


BODY COMPOSITION ANALYZER

MC-980MA

Instruction manual



Please read this Instruction Manual carefully and keep it for future reference.

Contents

Safety Notes	3
Product Assembly and Components	6
Preparation (Setting up the main unit)	8
Various settings (Setting methods)	12
Taking a measurement	16

Disposal






This equipment is an electronic device. Do not dispose of in general waste but follow regional regulations for electrical equipment disposal.

Safety Notes

GB

Caution Symbols

Thank you for purchasing this precision crafted Tanita product. For optimum performance and safety, please familiarize yourself with the Caution Symbols below. These symbols are designed to alert the user to potential hazards when using this equipment. Ignoring these Caution Symbols may result in serious injury, or damage to the product. Please be sure to review before proceeding with the INSTRUCTION MANUAL.

 Warning	This symbol indicates the possibility of serious injury if the product is mishandled or instructions are ignored.
 Caution	This symbol indicates the possibility of physical injury or equipment damage if instructions are ignored.
	This symbol indicates general precautions that should be taken when using this product.

Warning

Individuals with a Pacemaker or Other Internal Medical Devices

- This equipment sends a weak electrical current through the body during measurement. Individuals who have internally implanted medical devices, such as Pacemakers, should not use this equipment due to the risk of malfunction to the device that may be caused by the weak electrical current.
- Inserting and Removing the AC cord**
 - To reduce the risk of electric shock or product damage, never insert or remove the AC cord with wet hands.
 - Do not under any circumstances dismantle or alter the device, as this could result in electric shock or injury as well as adversely affect the precision of measurements.
- To prevent fire hazard**
 - Use only a correctly wired (100-240VAC) outlet, and do not use a multiple outlet extension cable.

Caution

If you connect your computer or peripherals, please use the compliance with IEC60601-1 (EN60601-1). Or if using the compliance with IEC60950 (EN60950), power must be supplied from the medical isolating transformer.

If you ignore this requirement, may cause electrical shock of patients or operator.

Cross Contamination

- The Body Composition Analyzer should be used with bare feet. Ensure the scale platform is cleaned with appropriate disinfectant after each use. Never pour any liquid directly on the scale platform, as it may leak and cause internal damage. Use a soft cloth and appropriate ethyl alcohol to wipe off platform. Do not wipe the platform with strong chemicals.

Interpretation of Results

- The data provided by this machine, as well as any supplementary information such as diet or exercise programs based on this data, should be interpreted by a professional.
- Please make sure you place the Weighing Platform on a level and stable surface to ensure an accurate measurement.

For the MC-980MA; Ensure you use the original AC cord.

- Using the other than the original cord may cause malfunction.
- Do not insert or remove the plug by the cable.

Maintenance

Since this equipment is accurately manufactured and adjusted, please observe the following instructions.

- Never disassemble the equipment as this may cause malfunction. Users must not disassemble or adjust this equipment.
- This should be done by trained maintenance agents or certification offices designated under the NAWI directive.
- Please inspect the equipment in accordance with the regulations in your country.
- Unplug the unit from the wall outlet when it will not be in use for long periods of time.
- Keep the electrodes clean by wiping them with disinfectant.
- Do not drop the unit, and avoid locations with constant vibration.
- Do not put this equipment in direct sunlight, close to heaters or near direct draughts from air conditioners.
- When transferred to any location where there is a difference of more than 20 degrees centigrade (40 degrees Fahrenheit), wait 2 hours before using.
- When disposing of this unit, please do so in accordance with the prevailing regulations in each country.

General Instructions for Accurate Measurement

The MC-980MA estimates the various outputs specified in the Specification Section of this Manual. Keep in mind that there are many factors that can influence the accuracy of these measurements.

This equipment sends out a very weak electric current to measure impedance (electrical resistance) of the body. Therefore, in principle, users need to use this equipment with bare feet. Moreover, since impedance fluctuates in accordance with the distribution of body fluid, please observe the following instructions for accurate measurement.

- To prevent inaccurately measurements and other errors, always hold both arms straight down when taking measurements.
- As changes in body water and body temperature can have an impact on measurements, measurements should be made at the same time of day, under similar conditions (always urinating before taking measurements, etc.)
- Ensure arms are not touching the body and inner thighs are not touching each other during measurements; if necessary, place a dry towel between arm and side and/or between thighs.
- Also, make sure the soles of feet are free of excess dirt, as this may also act as a barrier to the mild current.
- Inaccurate results may be reported after excessive food/fluid intake, or after periods of intense exercise.
- This equipment is designed for the majority of the population leading healthy lives with a regular lifestyle. For people suffering from sickness, or whose lifestyle is very different from the norm, it is recommended that the data from this product should not be used as an absolute value, but rather as a reference to observe the rate change.
- For further details, see the Technical Notes.
- Measurement is sometimes impossible on a surface that is strongly vibrating. In this case, please move the equipment onto a surface with little vibration.
- Do not take measurements while using transmitters, such as mobile phones, which may affect readings.
- Measurement of body composition of pregnant women may result in inaccurate readings.

<Usage Conditions>

Temperature Range for Use : 5°C - 35°C
Relative Humidity : 30% - 80% (without condensation)

<Storage Conditions>

Temperature Range of Environment : -10°C - 50°C
Range of Relative Humidity : 10% - 90% (without condensation)
To avoid malfunctions, avoid storing the equipment where there is direct sunlight, significant temperature changes, the risk of dampness, a large amount of dust, in the vicinity of fires, or where there is the risk of receiving vibrations or shocks.

<Power Source>

	Value Range
Model Number	MC-980MA
Frequency Range	50 / 60Hz
Electric Current Range	0.3A

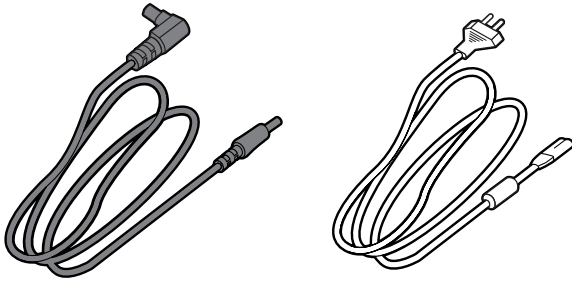
Product Assembly and Components

GB

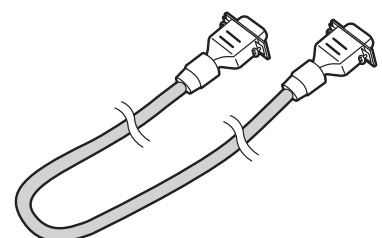
GB

Accessories

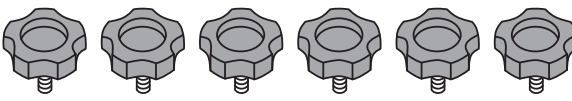
- Instruction manual (This manual)
- Assembling guide



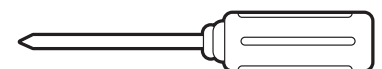
- Power supply cord
- AC cord



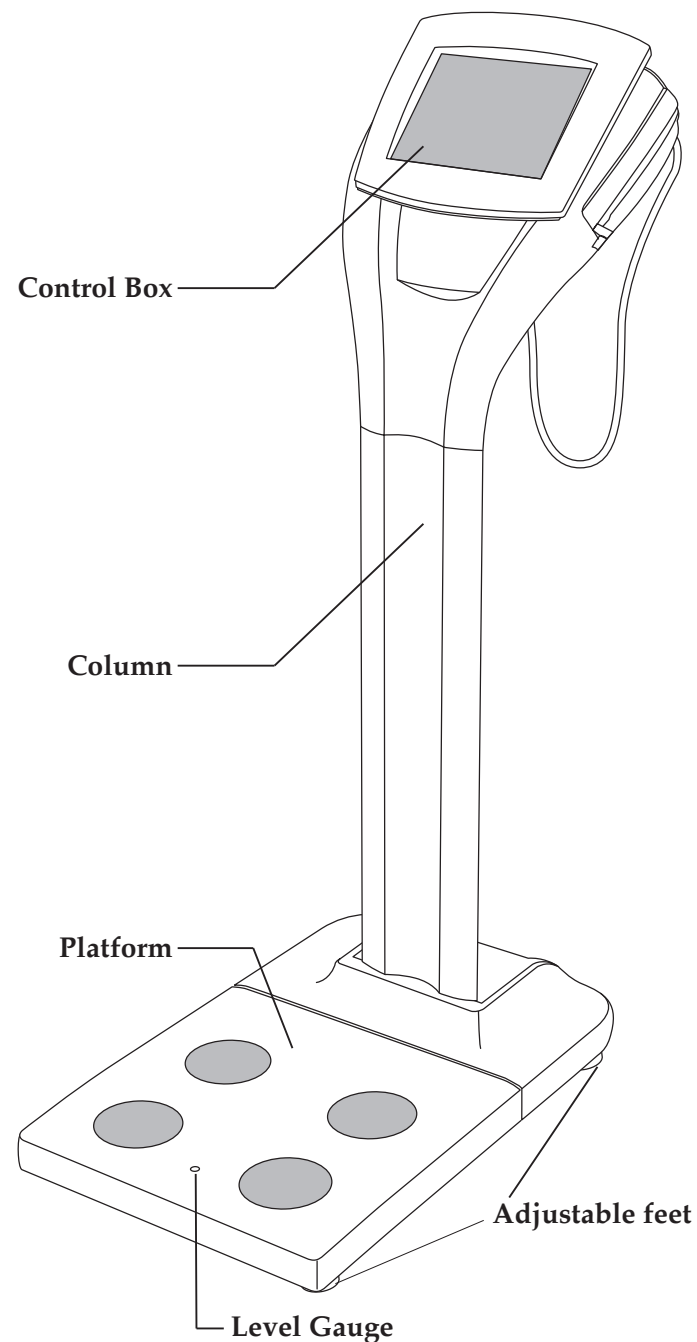
- Communication cable



- Screw (6 item)

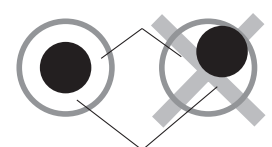


- Screw driver



Level gauge check

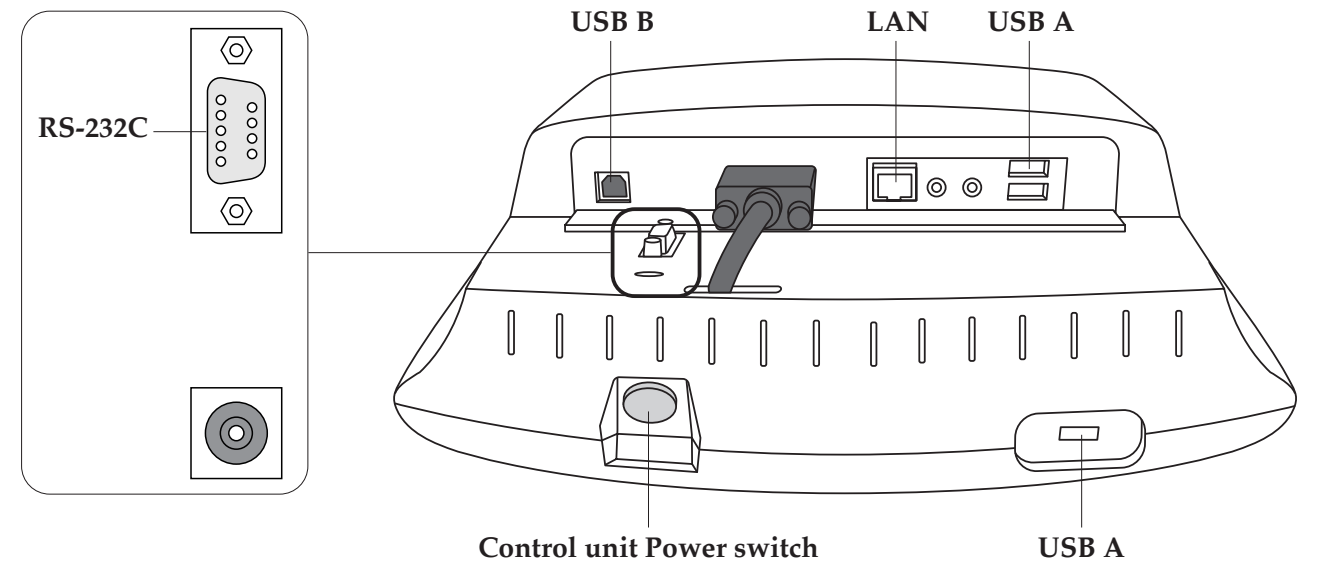
- * For accurate measurement, place the machine as level as possible.
- * Rotate the adjustable feet in 4 positions for adjustment so that the bubbles of the level gauge reach the centre.



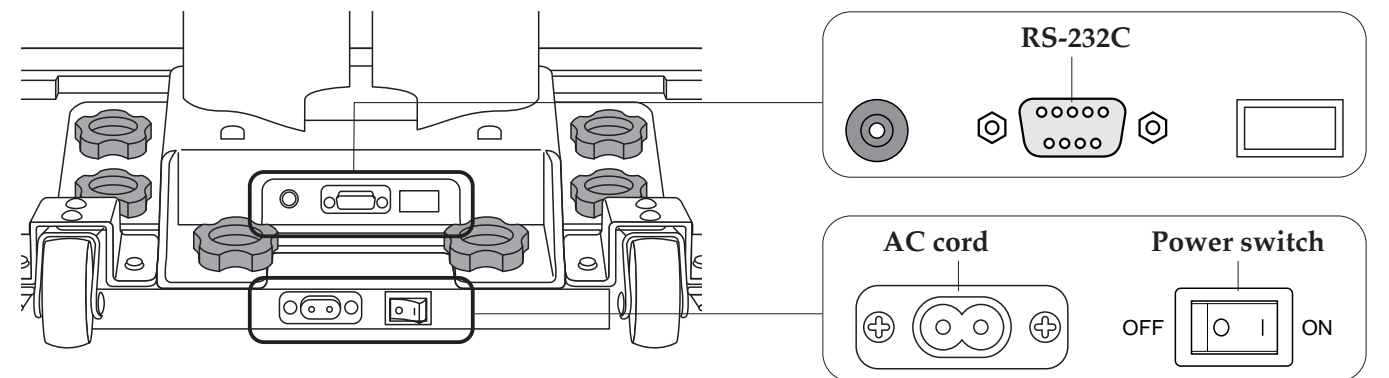
In the state that the level gauge is viewed from the top

Caution Make sure you place the Weighing Platform on a stable, level surface. If the Weighing Platform is not stable because not all the feet are on the surface, for example, there is a risk of stumbling or inaccurate measurement.

Control unit Connection of Plugs



Platform Connection of Plugs

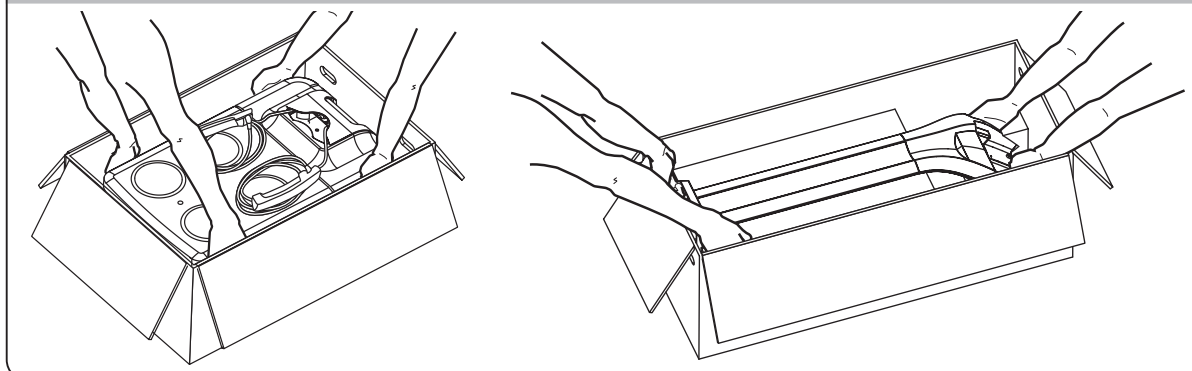


- Warning** • To avoid electric shock, do not insert or remove the plug with wet hands.
- To avoid electric shock, do not use the equipment near water.
- Caution** • To avoid measurement error, do not measure while using equipment that generates radio waves, such as mobile phones.
- Use only the original AC cord.
- Using AC cords other than the original one may cause malfunction, smoke or fire.

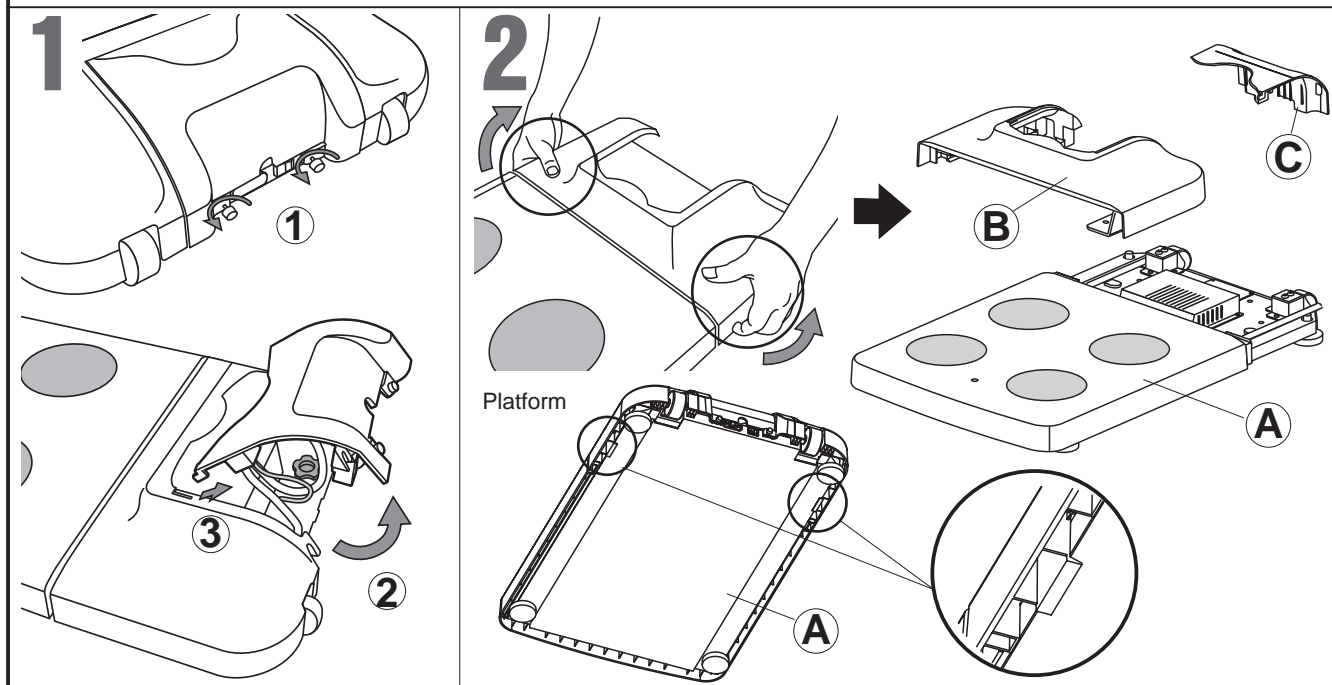
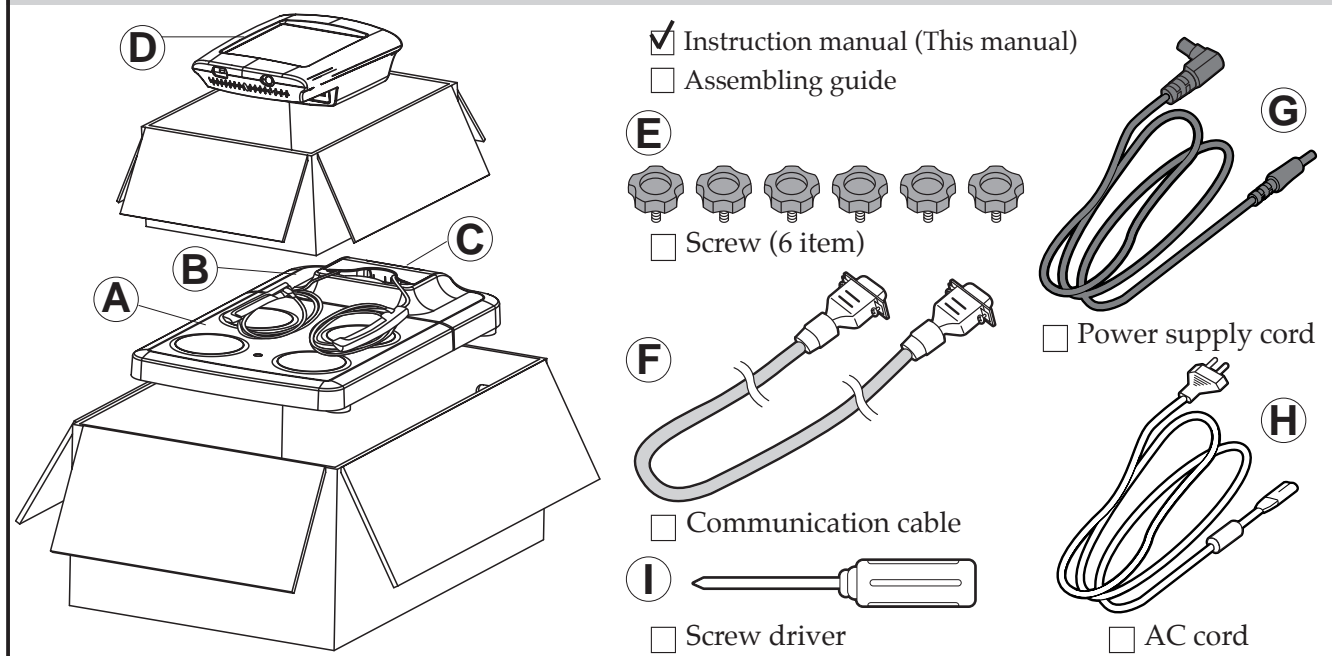
Symbols and their Meanings

	Display Unit On.		Serial interface		Positive polarity		Direct current
	Input / Output		Computer network		Headphones		Handheld microphone
	WEEE - Waste Electrical and Electronic Equipment Directives		Type BF applied part		Class II equipment		Caution, Refer to the attached information

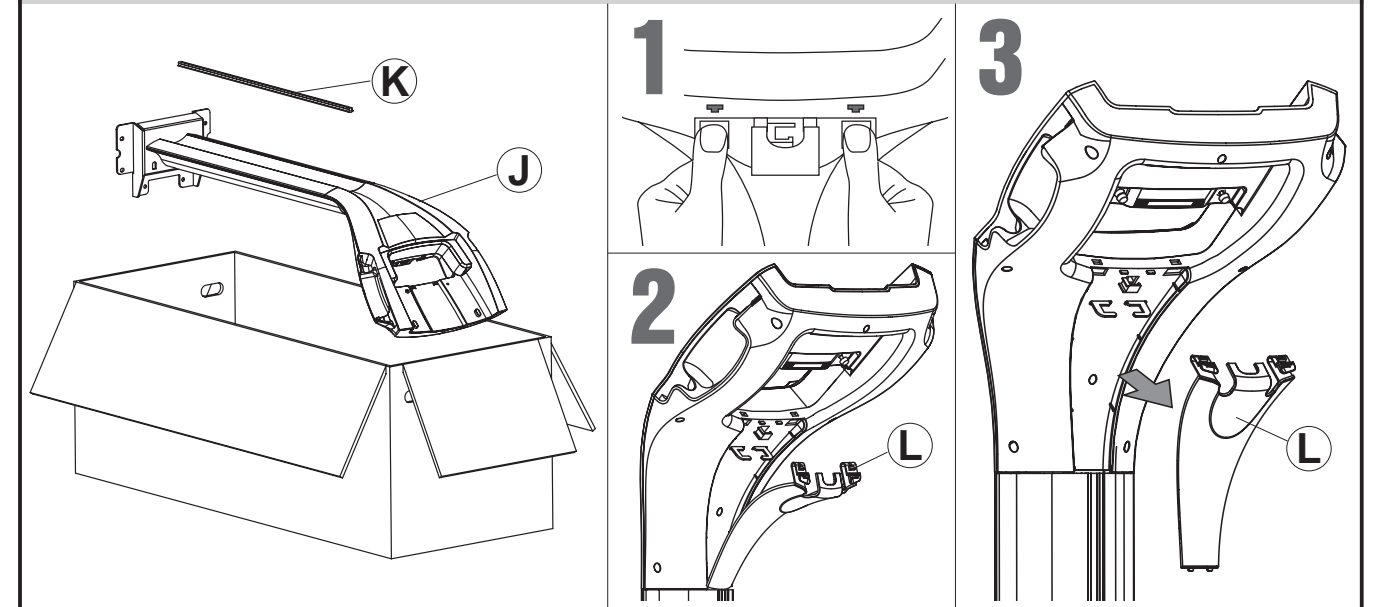
⚠ Caution 2 people should unpack the unit



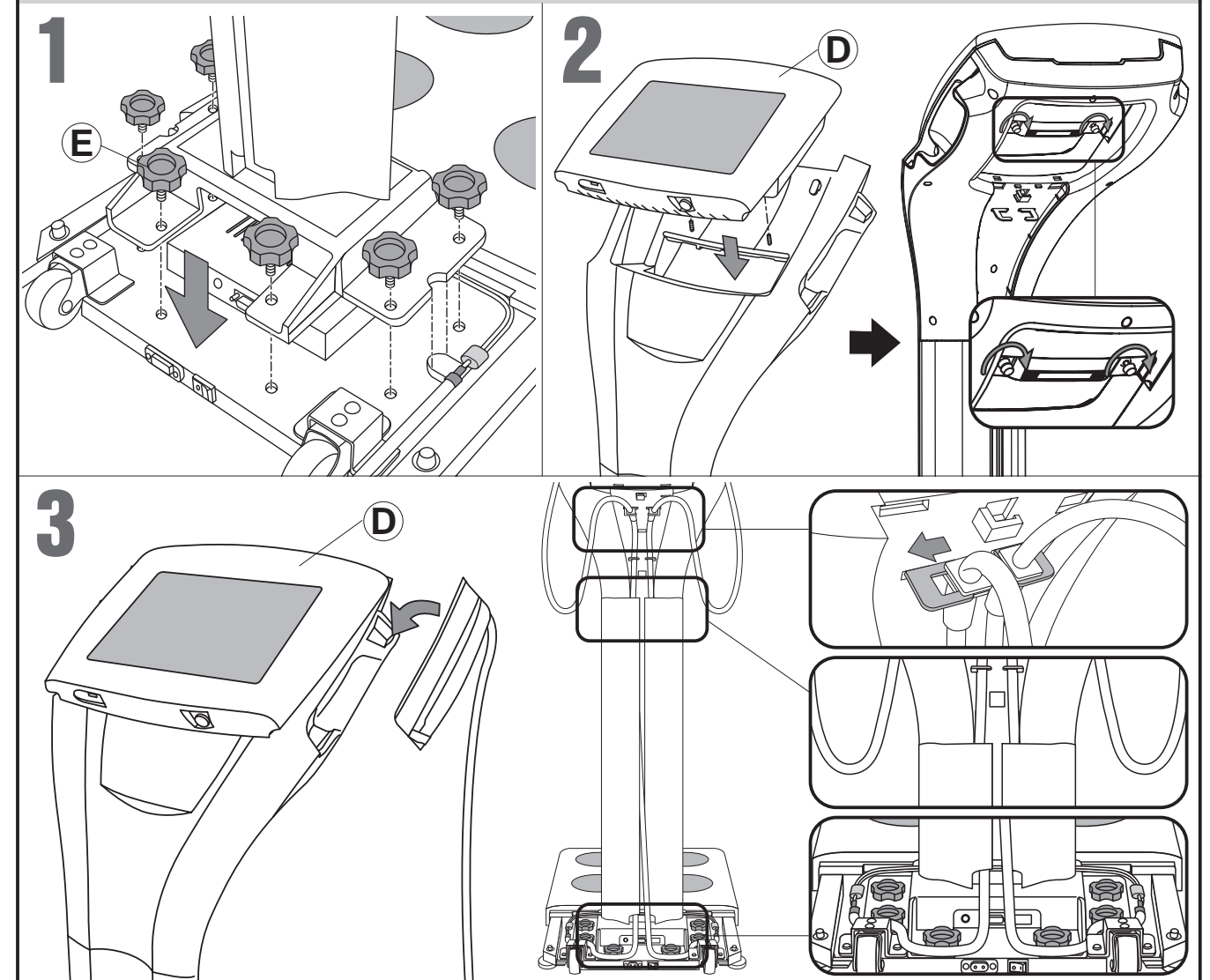
Platform / Control Box

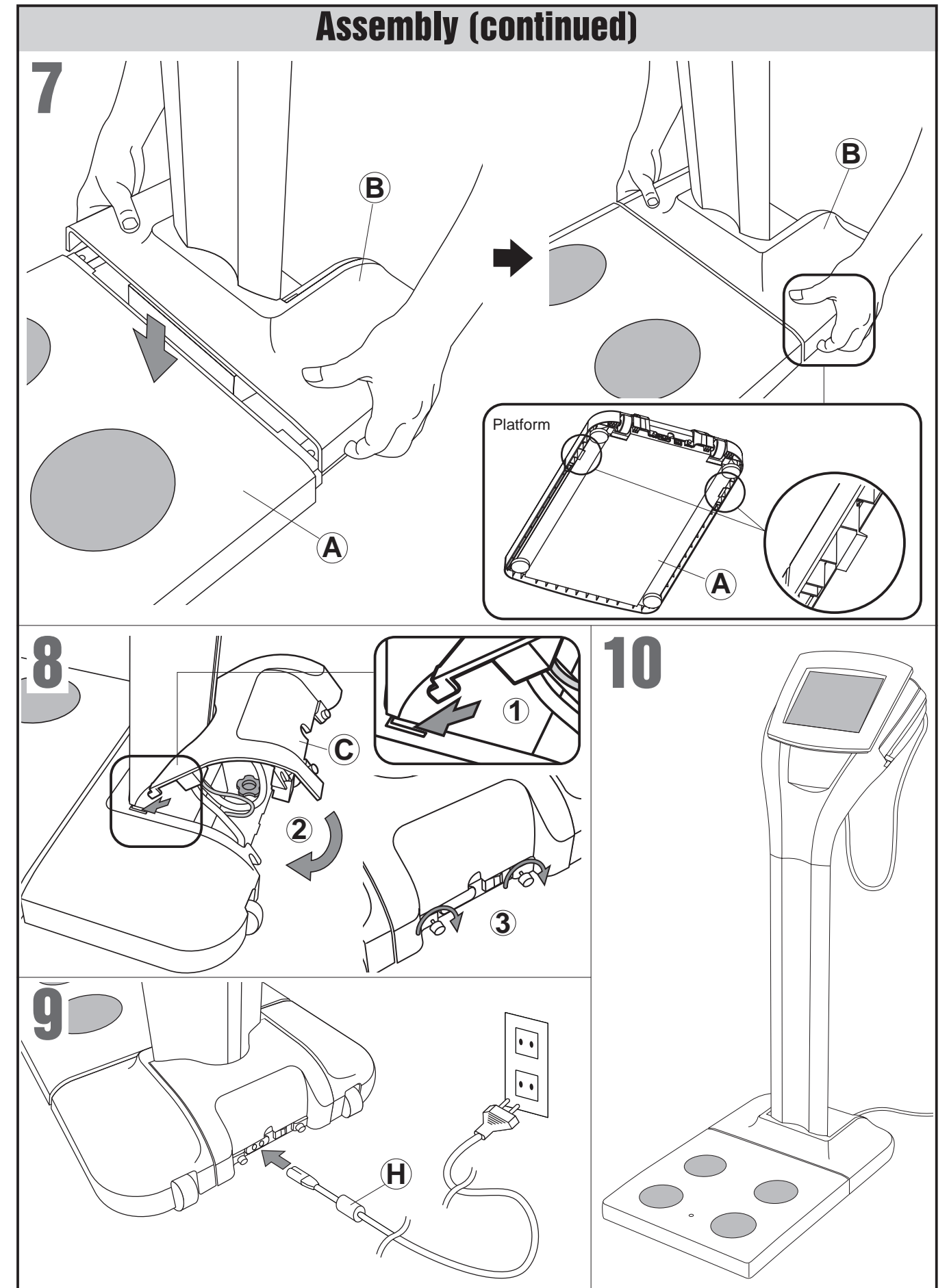
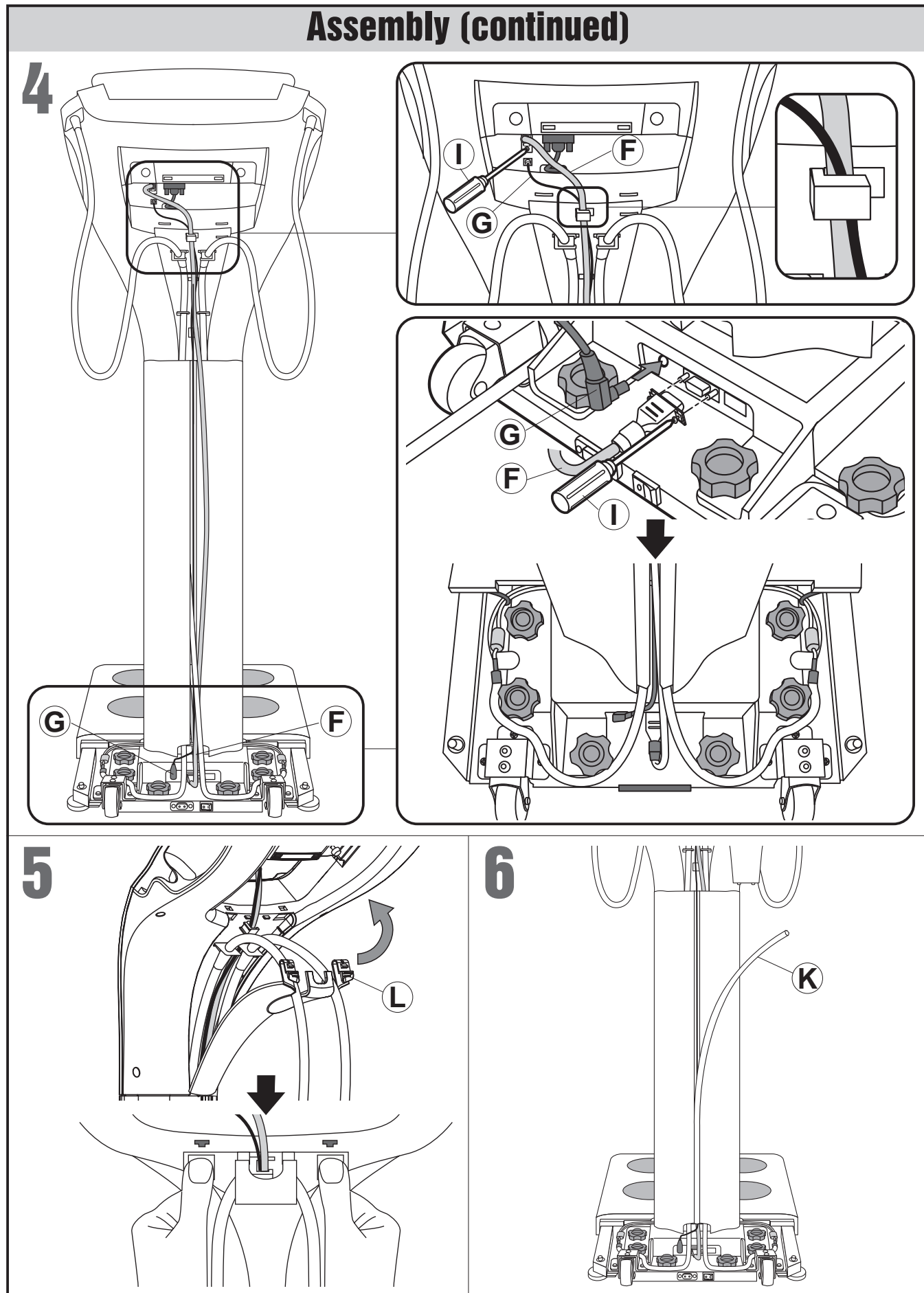


Column Unit



Assembly

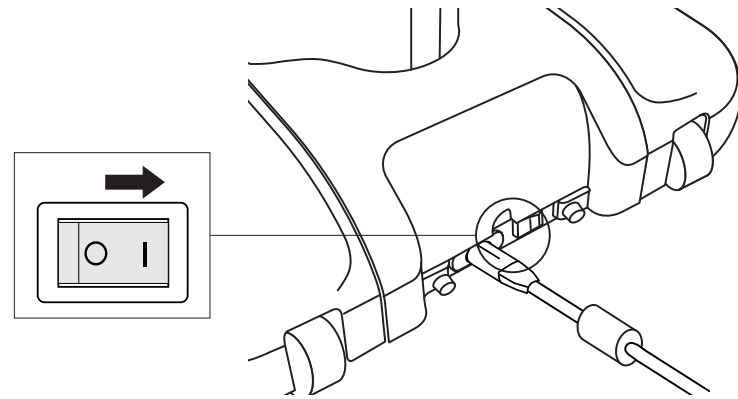




Turn on the power

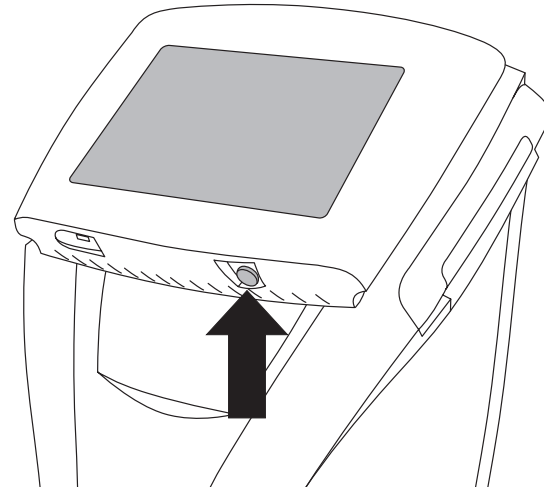
GB

1 [Platform]
Turn on the power.



or
[Control Box]
Turn on the power.

* If the Platform power is switched on.



2 The initial screen is displayed

(Initial screen)



Initial settings. (☞ page 15)
Various settings. (☞ page 16)
Database Management Settings. (☞ page 20)

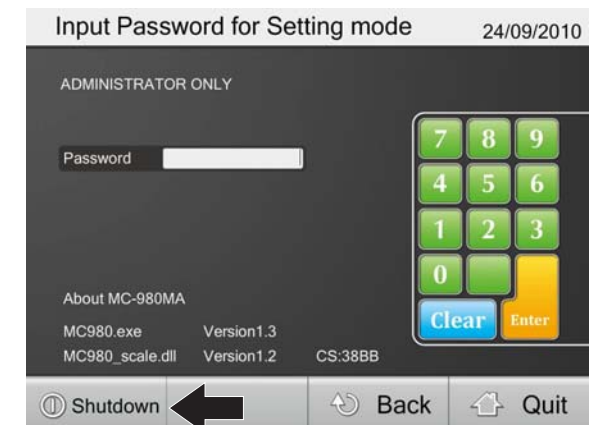
Turn off the power

GB

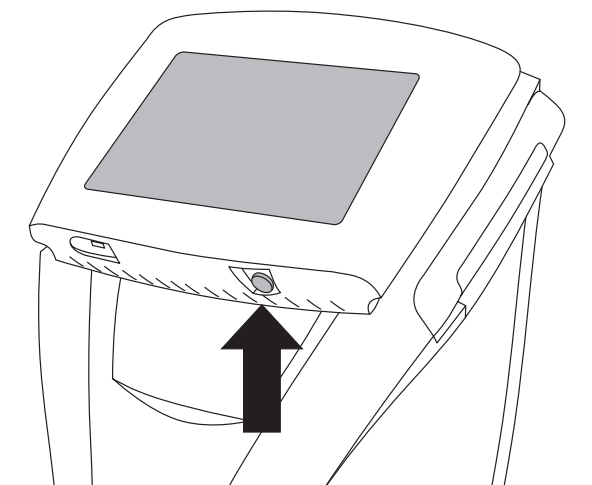
1 [Control Box]
Select "Setup"



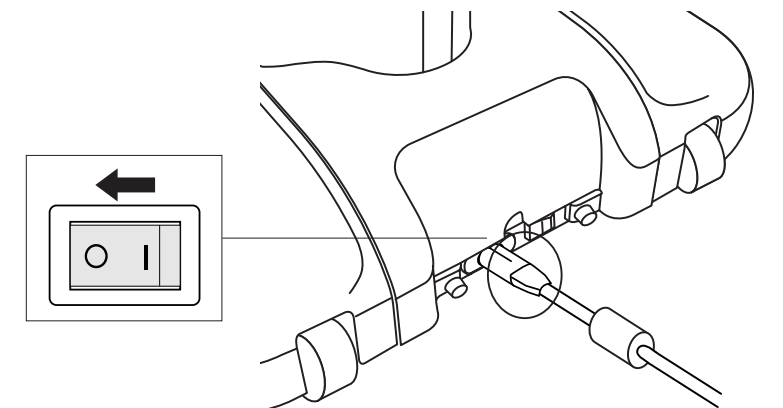
2 Select
"Shutdown MC-980MA"

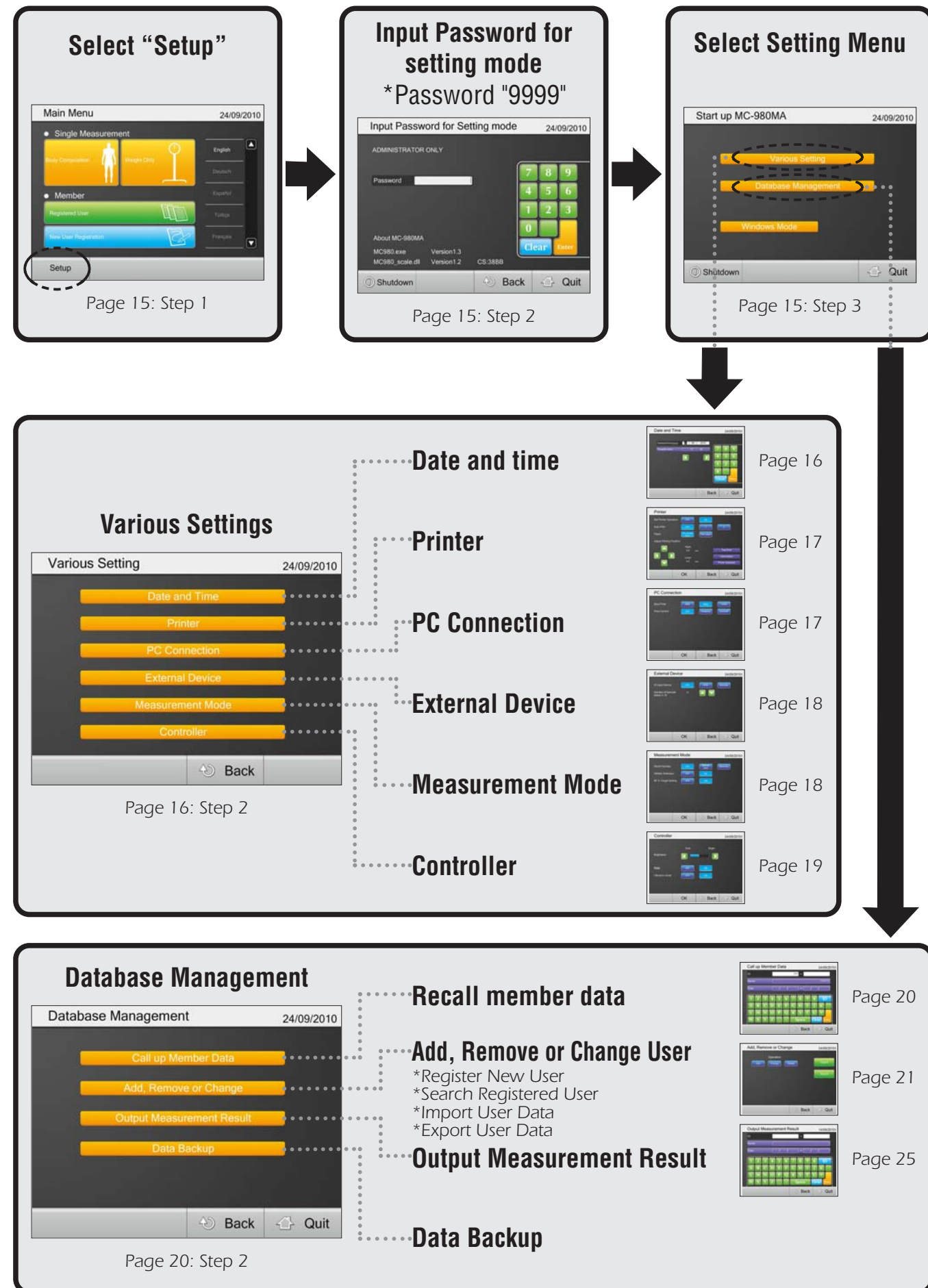


or turn off the power.



3 [Platform]
Turn off the power.





1 Select "Setup"



2 Input Password for setting mode

*Password "9999"



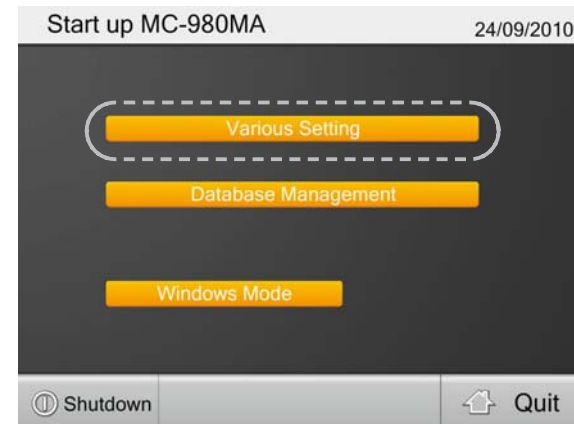
3 Select Setting Menu



Various Settings. (☞ page 16)
Database Management (☞ page 20)
Windows Mode (☞ Go Windows XP)

• **Quit** ⇨ Main Menu. • **OK** ⇨ Save changes and return. • **Back** ⇨ Return without saving

1 Select "Various Settings"



2 Select Setting Menu



3 1. Select "Date and Time"

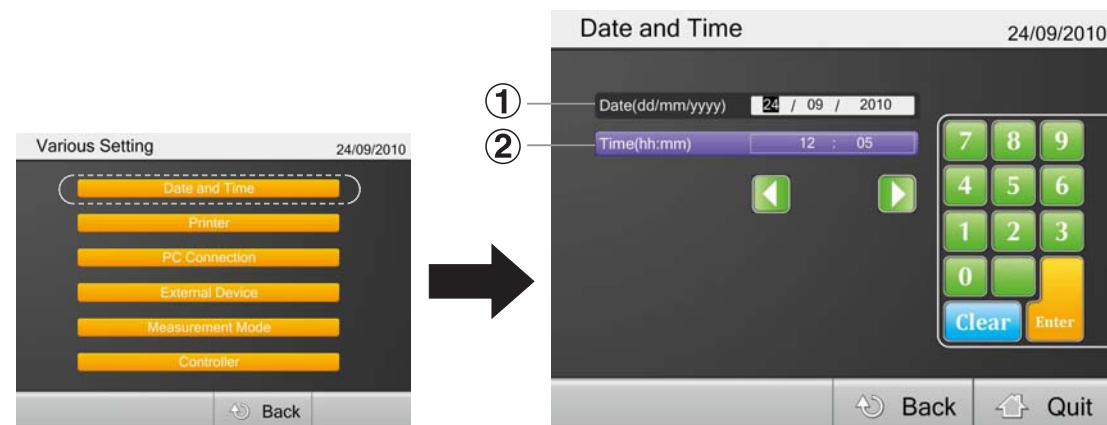
Set date and time.

① Date (dd/mm/yyyy) : Input date in "day / month / year" format

Example September 24th, 2010
24 09 2010

② Time (hh:mm) : Input time in "hh : mm" format

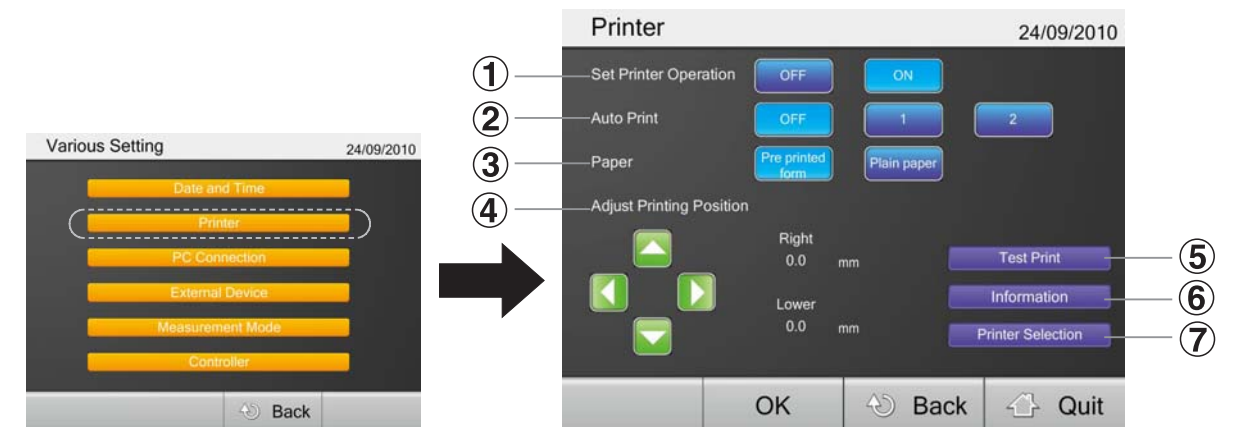
Example 6:05 pm
18 05 **Enter**



2. Select "Printer"

- ① Set Printer Operation : Select ON / OFF the printing function.
- ② Auto Print : Set the number of sheets to print.
- ③ Paper : Select printing paper. Pre printed form or Plain paper.
- ④ Adjust Printing Position.
- ⑤ Test print : Check printer operation and printing position.
- ⑥ Information : Enter your address to print.
- ⑦ Printer Selection : Select your printer.

After inputting all items, press OK.

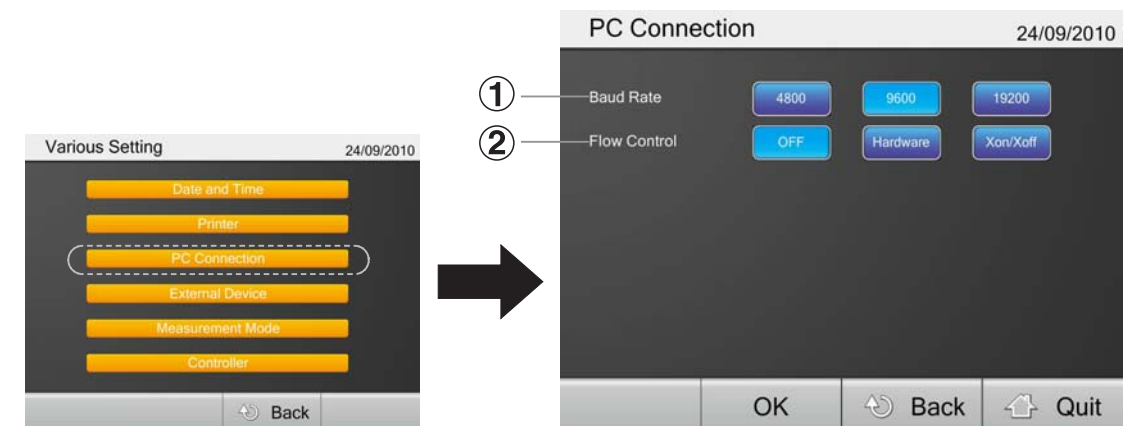


3. Select "PC Connection"

① Baud Rate : Select baud rate.

② Flow Control : Select flow control.

After inputting all items, press OK.



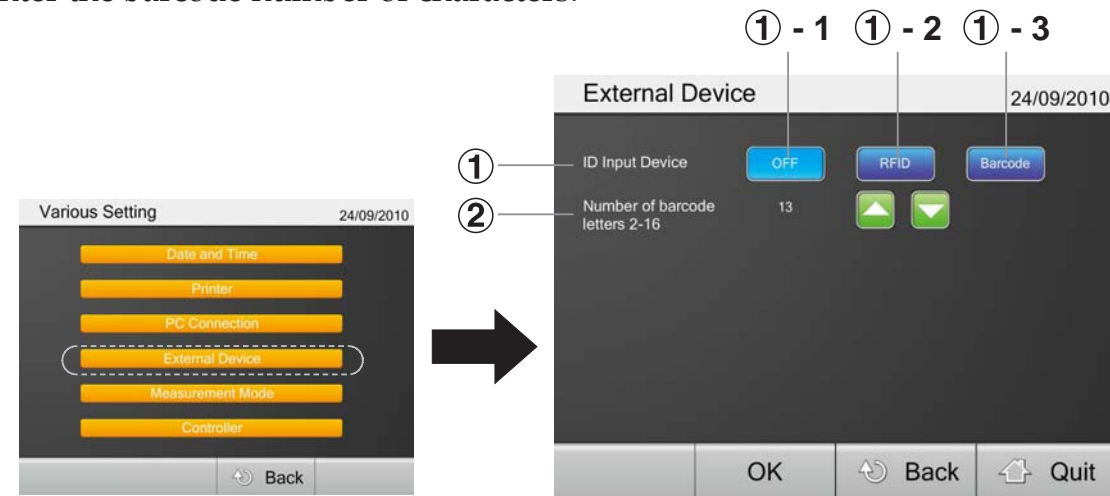
• **Quit** ⇨ Main Menu. • **OK** ⇨ Save changes and return. • **Back** ⇨ Return without saving

4. Select "External Device"

- ① Input Device : Select type of card reader.
- ① - 1 OFF : Input ID from the touch screen.
- ① - 2 RFID : Using RFID reader. *Optional function.
- ① - 3 Barcode : Using barcode reader. *Optional function.

After inputting all items, press OK.

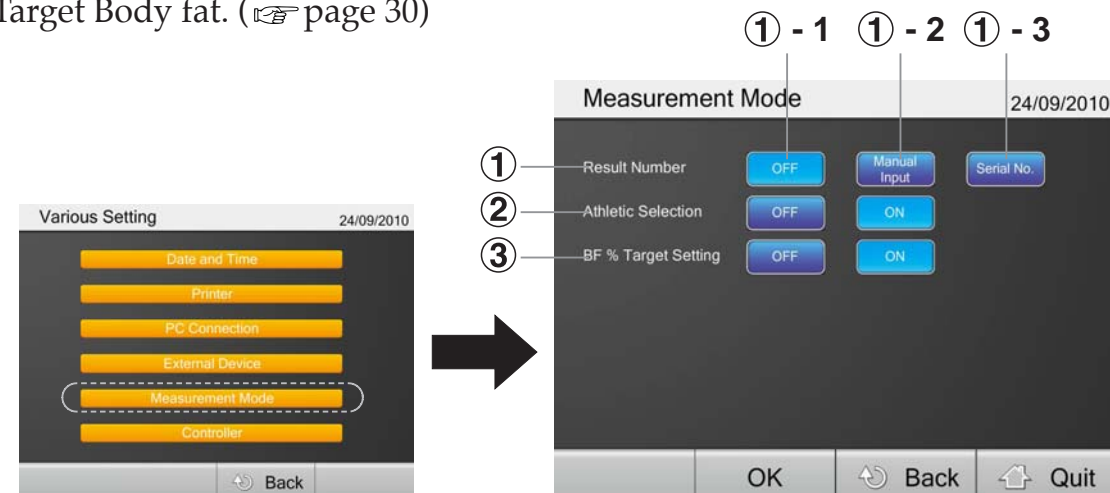
- ② Enter the barcode number of characters.



5. Select "Measurement Mode"

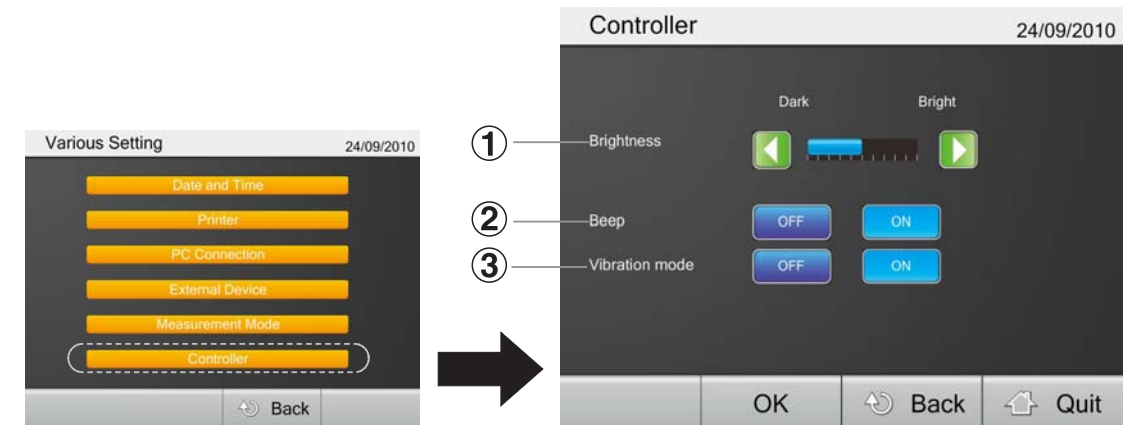
Serial number function

- ① Result Number : Select result data number function.
- ① - 1 OFF : Invalid numbering function.
- ① - 2 Manual input : Result number can be input within 16 digits.
- ① - 3 Serial No. : After measurement, automatically count up.
- ② Athletic Selection : Set ON / OFF athletic mode.
- *Athletic mode (☞ page 30)
- ③ BF % Target Setting : Set ON / OFF target body fat %.
- *Target Body fat. (☞ page 30)



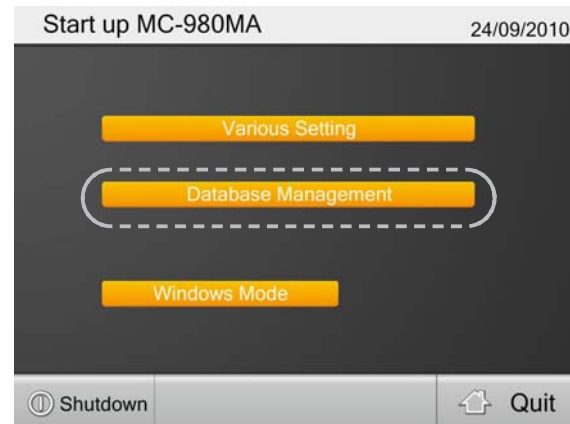
6. Select "Controller"

- ① Brightness : Adjust brightness of monitor.
- ② Beep : Set ON / OFF beep sound.
- ③ Vibration mode : Set ON / OFF touch panel vibration mode.



• **Quit** ⇨ Main Menu. • **OK** ⇨ Save changes and return. • **Back** ⇨ Return without saving

1 Select "Database Management"



2 Select Setting Menu



3 1. Select "Call up Member Data"

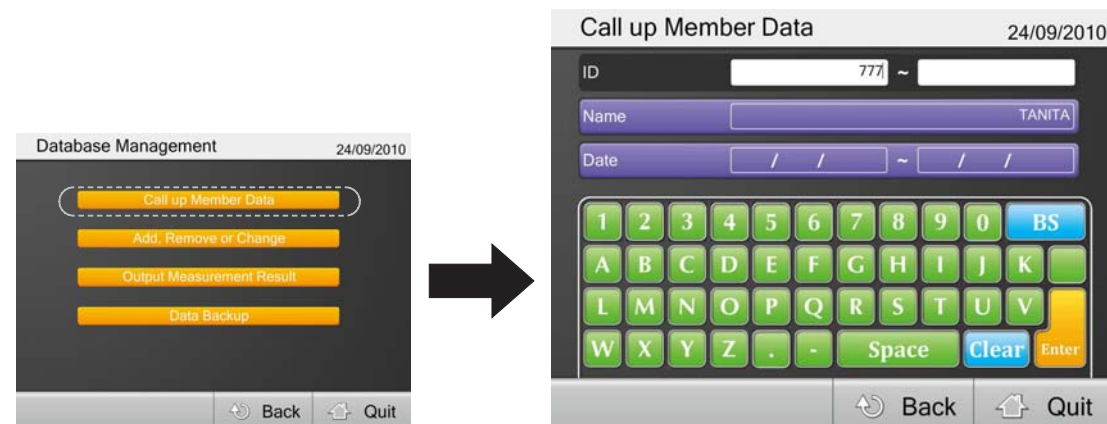
Recall stored measurement result data.

Input user ID, name or measurement date and press "Search"

*If you search without inputting any data, all stored measurement results are displayed.

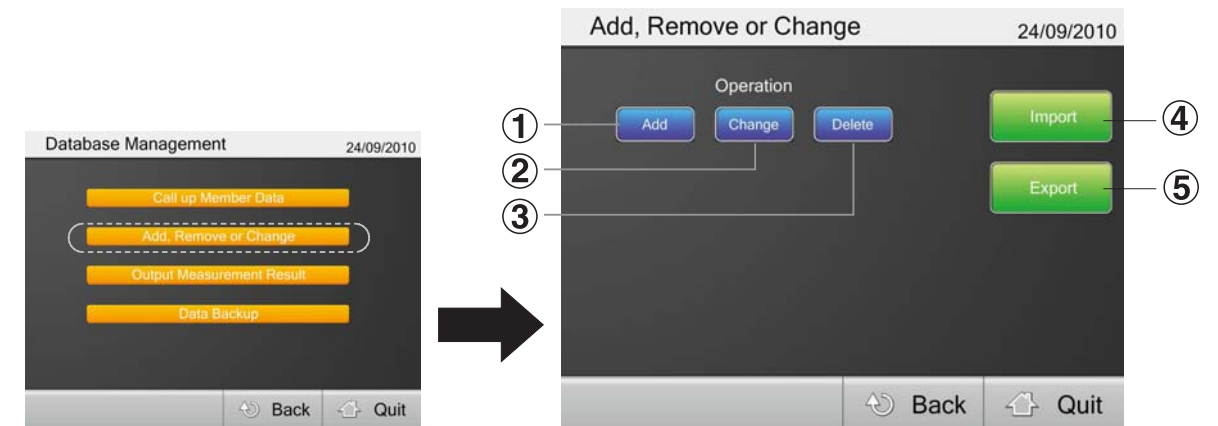
*If you enter multiple criteria, the data is displayed to meet all search requests.

After selecting the data, press "View"



2. Select "Add, Remove or Change"

- ① Add : Register new user data. (⇨ page 21)
- ② Change : Change the registered user data. (⇨ page 22)
- ③ Delete : Delete the registered user data. (⇨ page 22)
- ④ Import : Import user data from external file. (⇨ page 23)
- ⑤ Export : Export user data. (⇨ page 24)



2-1. Select "Add"

Register new user to the database.

Input User ID, name and all personal information and press "Register"

- ① ID : Enter maximum of 16 alphanumeric characters.
Note Duplicate ID numbers are not acceptable.
- ② Name : Enter maximum of 16 alphanumeric characters.
- ③ Date of Birth : **Note** Input date of birth in "day / month / year" format.
Example September 24th, 1973
24 09 2010
- ④ Gender : Select gender.
- ⑤ Body Type : Select Standard mode / Athletic mode. *Athletic mode. (⇨ page 30)
- ⑥ Height : Acceptable Range 90.0-249.9cm.
- ⑦ Password : Enter maximum of 10 digit number. *Password is optional.

After entering all items, press "Register".



• **Quit** ⇨ Main Menu. • **OK** ⇨ Save changes and return. • **Back** ⇨ Return without saving

2-2. Select "Change" or "Delete"

Remove / Change the registered user data.

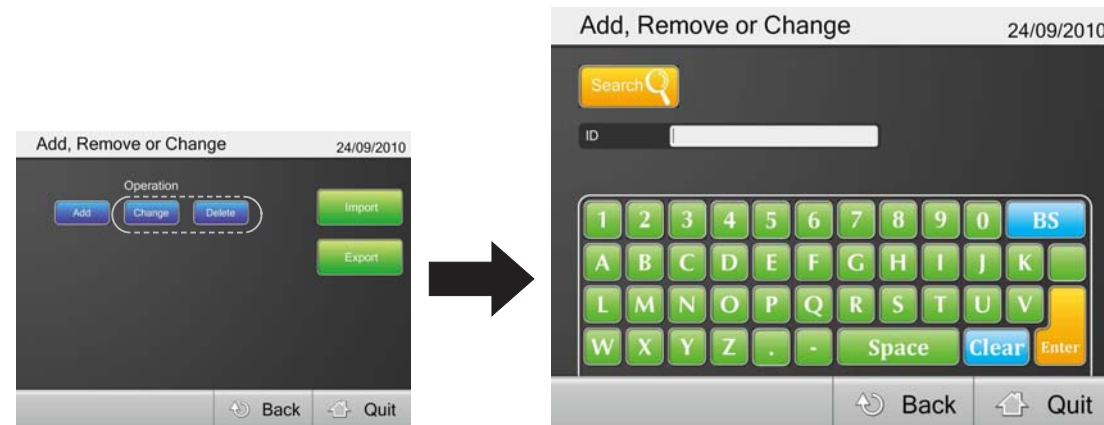
Input user ID, user name or measurement date and press "Search"

*If you search without inputting anything, all stored measurement results are displayed.

*If you enter multiple criteria, the data is displayed to meet all search requests.

In case of "Delete": After recalling the registered user details, press "Delete".

In case of "Change": After recalling the registered user details, re-enter personal data and press "Change".



2-3. Select "Import"

Import the user data from external file. (⇨ page 24)

Select the csv file where the user data is preserved.

*About Data formats, refer to "Export" section.

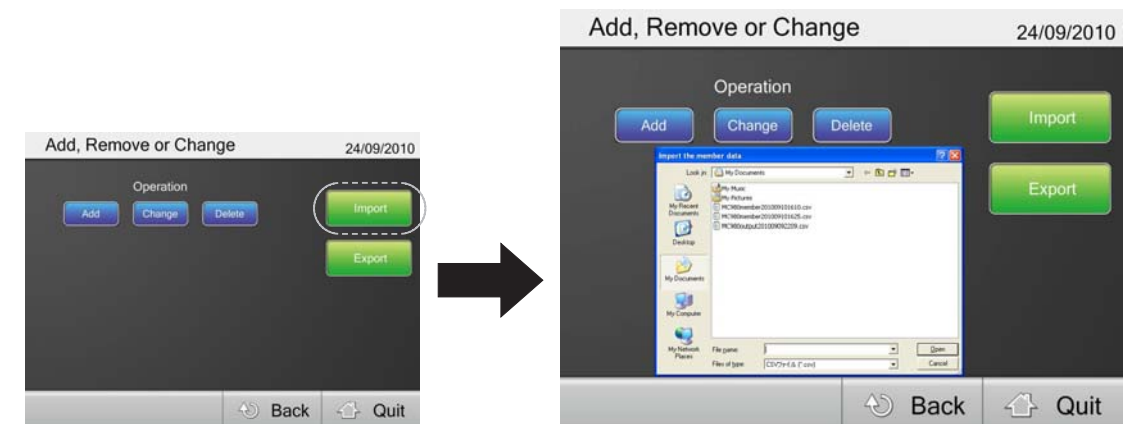
Import user data format is as follows.

- ① User ID : maximum of 16 alphanumeric characters
- ② Name : maximum of 16 alphanumeric characters
- ③ Password : maximum of 10 digits (optional)
- ④ Date of Birth : yyyy/mm/dd format

Example September 24th, 1973
1973/09/24

Note The date format is different than the format listed on page 21

- ⑤ Gender : 1.Male 2.Female
- ⑥ Body type : 0 : Standard mode 2 : Athletic mode
- ⑦ Height (cm) : 90-249.9



• **Quit** ⇨ Main Menu. • **OK** ⇨ Save changes and return. • **Back** ⇨ Return without saving

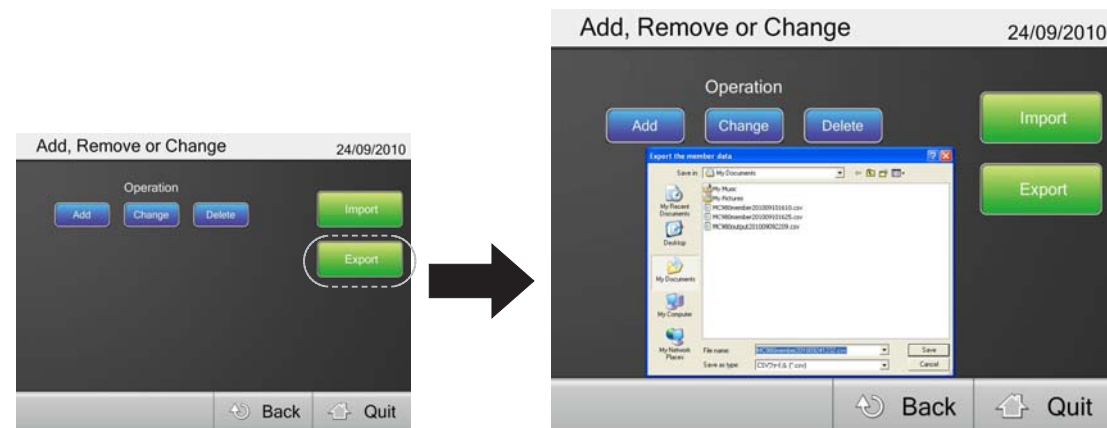
2-4. Select "Export"

Export the user data.

Select a destination file for the user data.

Export user data format is as follows.

- ① User ID
- ② Name
- ③ Password
Blank when not registered
- ④ Date of Birth: yyyy/mm/dd format
Example September 24th, 1973
1973/09/24
- ⑤ Gender : 1.Male 2.Female
- ⑥ Body type: 0.Standard mode 2.Athletic mode
- ⑦ Height (cm) : 90-249.9



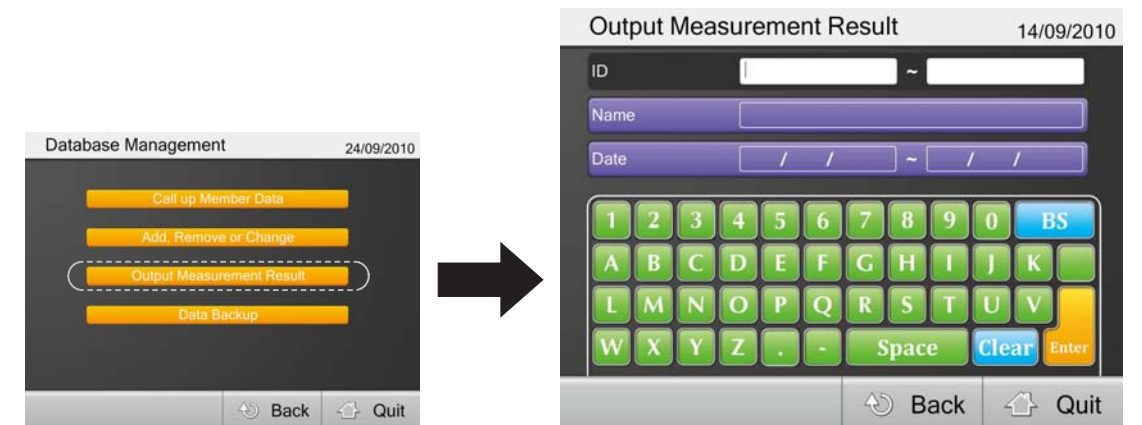
3. Select "Output Measurement Result"

Input user ID, user name or measurement date and press "Search".

*If you search without inputting any data, all stored measurement results are displayed.

*If you enter multiple criteria, the data is displayed to meet all search requests.

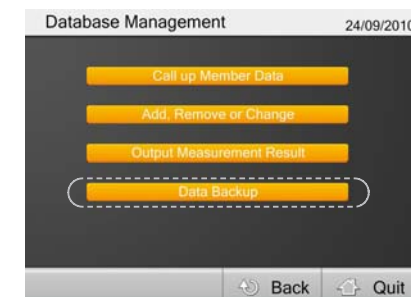
After selecting the data, press "CSV Output".



4. Select "Data Backup"

Backup all data.

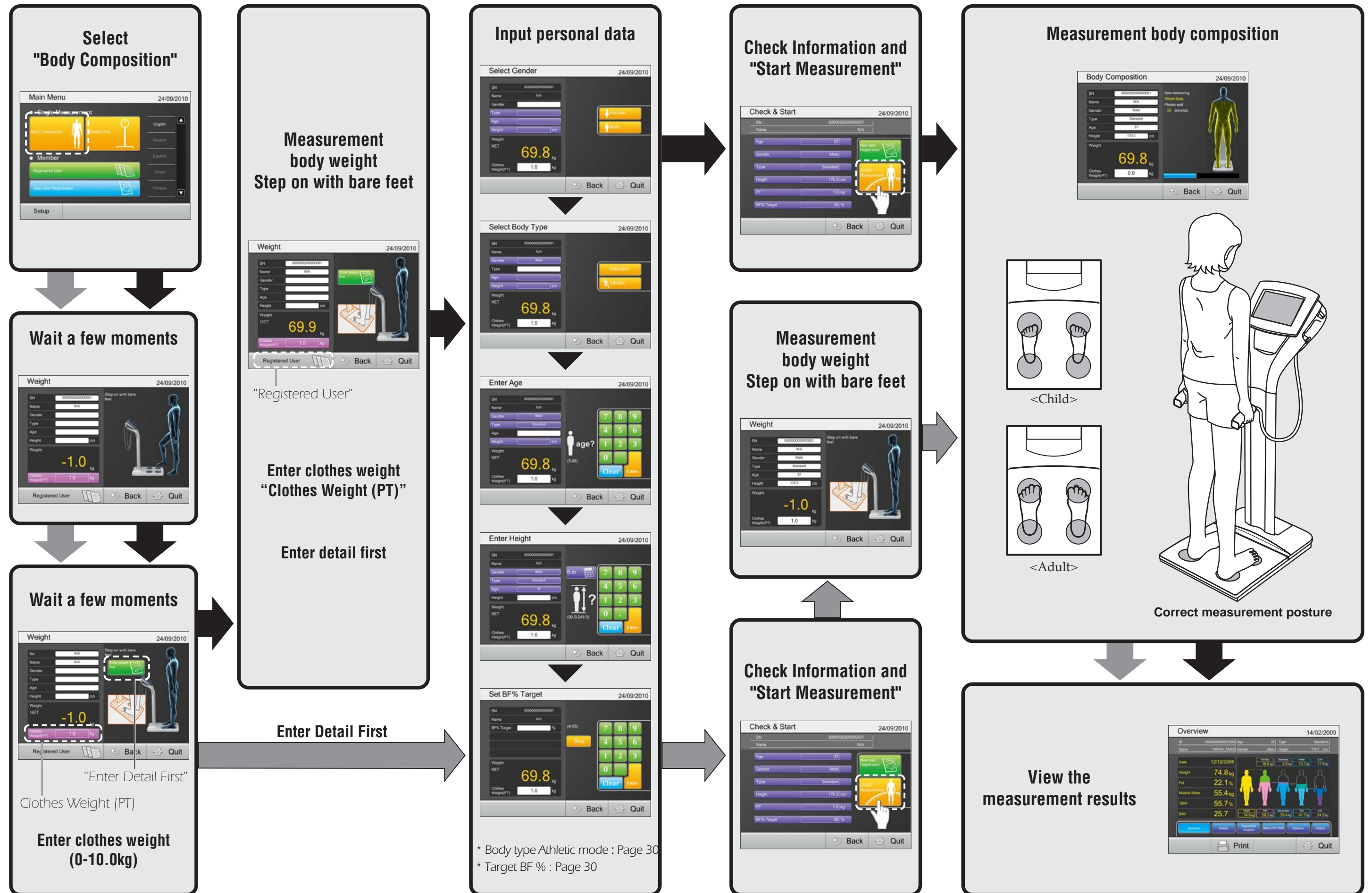
Select a destination file for backup.



Taking a measurement

Single Measurement

→(Gray Arrow) : One step flow (Enter detail first) →(Black Arrow) : Two step flow (Measure body weight first)



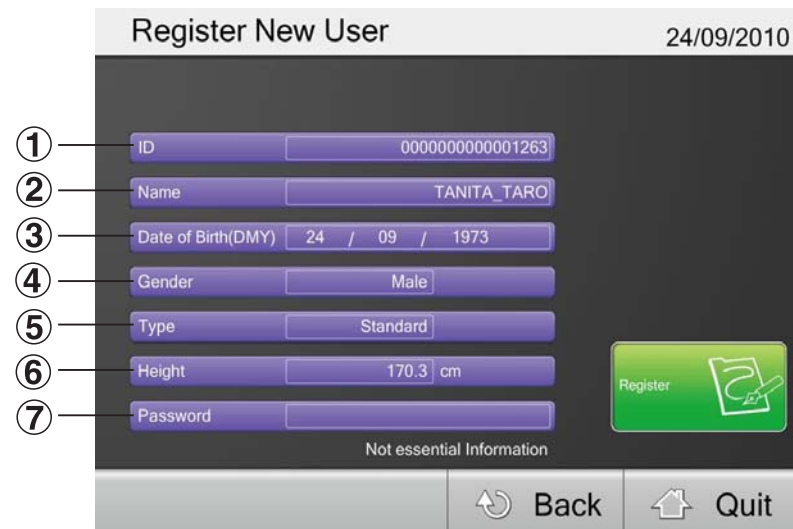
1 Select "New User Registration"



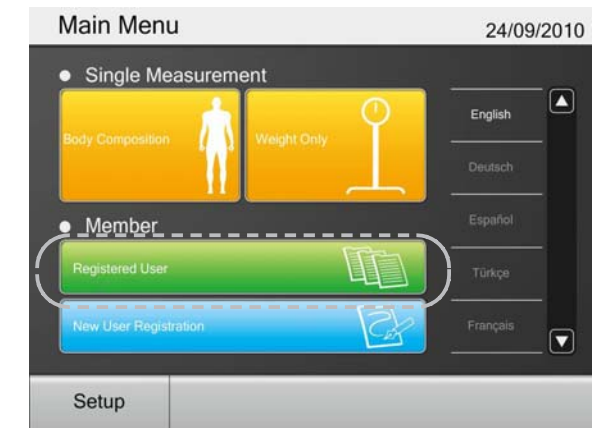
2 Input User ID, name and all personal information and press "Register"

- ① ID : Enter a maximum of 16 alphanumeric characters.
 (Note) Duplicate ID numbers are not acceptable.
- ② Name : Enter a maximum of 16 alphanumeric characters.
- ③ Date of Birth : Input date of birth in "day / month / year" format.
 (Example) September 24th, 1973
 24 09 2010
 (Note) Date of birth can be registered after 1900.
 (Note) User 100 years old or older is measured as 99 year old.
- ④ Gender : Select gender.
- ⑤ Body Type : Select Standard mode / Athletic mode.
 *Athletic mode (page 30)
- ⑥ Height : Acceptable Range 90.0-249.9cm.
- ⑦ Password : Enter a maximum of 10 digit number.
 (Note) Password is optional.

After entering all items, press "Register"



1 Select "Registered User"



2 Input user ID and Password

(Note) Password is optional.



3 Check Information and "Start Measurement"



Step on with bare feet.



- ⚠ When the equipment has been transferred to any location where there is a temperature difference of 20°C or more, wait for at least two hours before taking a measurement.

Athletic Mode

- **Recommended for those who are 18 years old or older and meet the following conditions to select "Athletic Mode".**
 - People who carry out 12 hours or more of cardio vascular exercise a week exercise for 12 hours or more per a week.
 - People who belong to a sport team or a sport organization with the aim of participation in competition, etc.
 - People who are professional athletes.

Target Body Fat

- **Before you start a weight management program and set the appropriate personal body fat %, please consult your doctor. Tanita is not responsible for setting the appropriate target body fat % for specific individuals.**

Attention

- **The posture when measuring**
 - Stand with both feet parallel on the electrodes.
 - Stand without bending knees.
- **The age input range is 5 – 99 years old.**
Input age 99 for those who are 100 years old or older.

Note

- Inaccurate results may be reported after excessive food/fluid intake, or after periods of intense exercise.
- When Clothes weight is input, Clothes weight is subtracted from the weight measurements.

Overview

The components of the body composition

Weight	Measured weight
Fat mass	Total weight of fat mass in the body
FFM	Fat Free Mass is comprised of muscle, bone, tissue, water, and all other fat free mass in the body
Bone mass *	Bone mineral amount included in the entire bone
Muscle mass	Bone free lean tissue mass (LTM)
Protein **	Muscle contains many proteins
Total Body Water (TBW)	Total Body Water is the amount of water retained in the body
Extracellular Water (ECW)	This water outside the cells, mainly composed of interstitial fluid and blood plasma.
Intracellular Water (ICW)	This is the water located inside of the cell

* 18 - 99 years only estimated value

** Protein and the rest estimated value



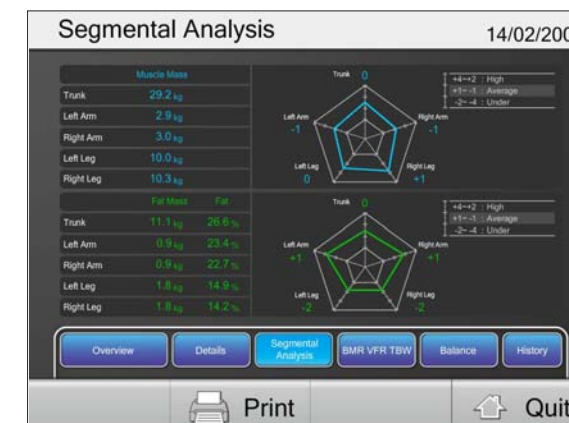
Detail

Measurement results are compared with the following value

Desirable	The standard value is for the Standard mode. In the case of the Athletic mode, the standard value is just a reference
Target *	Predicted weight and fat mass are displayed according to set target BF %
Previous **	Displays difference between the previous result
Initial **	Displays difference between the very first result

* This is available only if you set the target BF %

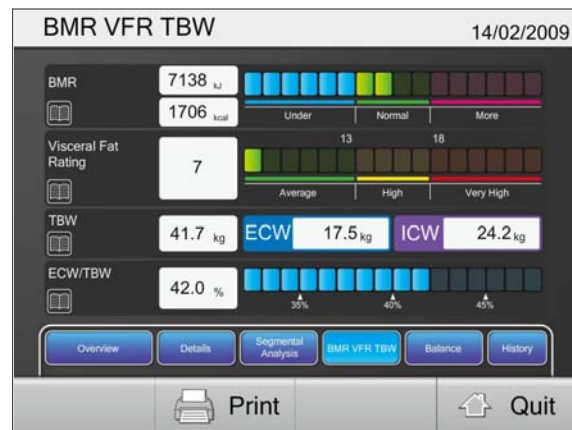
** This is available only "Registered User" measurement



Segmental Analysis

Segmental measurement results are compared with the average value

* 18 - 99 years only



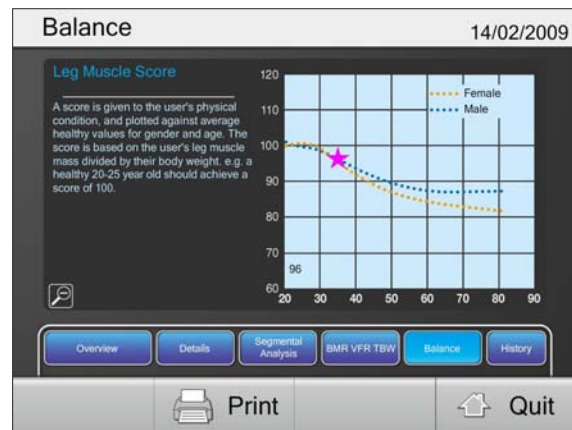
BMR / VFR / TBW

BMR	Basal Metabolic Rate (BMR) is the amount of energy the body consumes in a 24 hour period, when at total rest.
Visceral fat rating	Harmful fat that collects in the internal abdominal cavity, surrounding the vital organs.
Total Body Water	Total Body Water (TBW) is the amount of water retained in the body
ECW / TBW	The percentage of extracellular water in relation to the total body water.



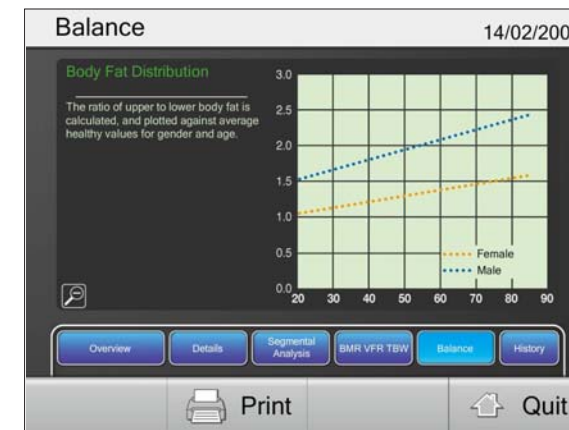
Body Balance [Leg Muscle Score]

A score is given to the user's physical condition, and plotted against average healthy values for gender and age. The score is based on the user's leg muscle mass divided by their body weight. e.g. a healthy 20-25 year old should achieve a score of 100.



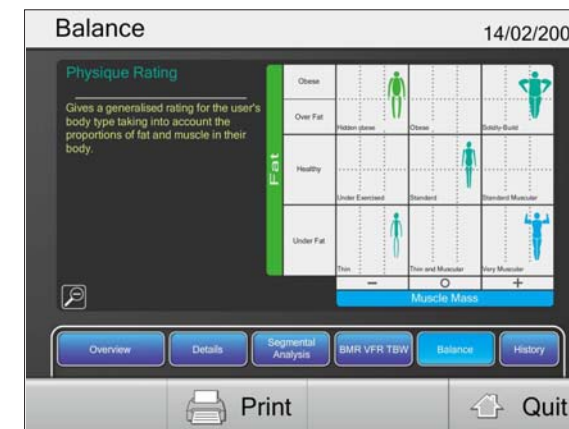
Body Balance [Muscle Mass Balance]

Compares muscle mass in the left side of the body with that in the right side.



Body Balance [Body Fat Distribution]

The ratio of upper to lower body fat is calculated, and plotted against average healthy values for gender and age.



Body Balance [Physique Rating]

Gives a rating for the user's body type taking into account the proportions of fat and muscle in their body.



Result History

Displays the measurement result trends.

View	The selected data is displayed
Delete	The selected data is deleted

* This is available only "Registered User" measurement

Product Specification

GB

Model number		MC-980MA	
Accuracy Grade		MDD : CLASS IIa NAWI : CLASS III	
Power source		230V AC (50/60Hz)	
Electric current range		0.3A	
Impedance measurement	Measurement System	Multi-Frequency 8 Electrode	
	Measurement Frequency	1kHz/5kHz/50kHz/250kHz/500kHz /1000kHz	
	Measurement Current	90µA or less	
	Electrode Materials	Feet : Stainless steel / Handgrips : plated	
	Measurement Part	Whole body/Right arm/Left arm/Right leg/Left leg	
	Measurement Range	75.0 - 1,500.0Ω(0.1Ωincrements)	
Accuracy at First Calibration		± 2%	
Weight measurement	Measurement System	Strain Gauge Load Cell	
	Maximum Capacity	300kg (Including Preset tare value)	
	Minimum Graduation	0.1kg	
	Accuracy at First Calibration	± 0.2kg	
Display		10.4" TFT color LCD touch panel	
Interface		USB A-type connector (USB host) x3	
		USB B-type connector (Device) x1	
		LAN Port x1	
		Audio Plug (Mic-in, Line-out)	
Usage conditions	Temperature range	5 – 35°C	
	Relative humidity	30-80% (without condensation)	
Product weight		33kg	
Product size	Platform	Platform size: 450 x 490 Height 65 mm	
	Product	Height 1240 mm	
Input items	Single measurement	Clothes Weight	0 - 10.0kg (0.1kg increments)
		Serial No.	maximum 16 digits
		Gender	Female / Male
		Body Type	Standard / Athletic*1
		Age	5 - 99 years
		Height	90.0 - 249.9cm (0.1cm increments)
		Target Body fat %	4-55%(1% increment)
	Registered user	Clothes Weight	0 - 10.0kg (0.1kg increments)
		User ID	maximum 16 alphanumeric characters
		Name	maximum 16 alphanumeric characters
		Date of Birth	After 1900 (dd / mm / yyyy format)
		Gender	Female / Male
		Body Type	Standard / Athletic *1
		Height	90.0 - 249.9cm (0.1cm increments)
Target Body fat %	4-55%(1% increments)		
Password	within 10 digits		

GB

Model number		MC-980MA		
Output items	Serial Number	maximum 16 alphanumeric characters		
	Name	maximum 16 alphanumeric characters		
	Gender	Female / Male		
	Body Type	Standard / Athletic *1		
	Age	5 - 99 years		
	Height	90.0 - 249.9cm (0.1cm increments)		
	Clothes Weight	0 - 10.0kg (0.1kg increments)		
	Date and Time	(dd / mm / yyyy hh:mm format)		
	Whole Body Analysis	Weight	0 - 300.0kg (0.1kg increments)	
		Fat %	1.0 - 75.0% (0.1% increments)	
		Fat Mass	(0.1kg increments)	
		FFM	(0.1kg increments)	
		Muscle Mass	(0.1kg increments)	
		BMI	(0.1 increments)	
		Bone Mass	(0.1kg increments)	
		Protein (estimated)	(0.1kg increments)	
		Metabolic Age*2	12 - 90	
		Basal Metabolic Rate	(1kcal / 1kJ increments)	
		BMR graph*2		
		Visceral Fat Rating*2	1 - 59 (1 increments)	
		Visceral Fat graph*2		
		TBW	(0.1kg increments)	
		TBW %	(0.1% increments)	
		ECW*2	(0.1kg increments)	
		ICW*2	(0.1kg increments)	
	ECW / TBW*2	(0.1% increments)		
	ECW / TBW graph*2			
	Segmental Analysis	Muscle Mass	(0.1kg increments)	
		Muscle Mass Rating*2	-4 - +4 (1 increments)	
		Fat %	(0.1% increments)	
		Fat Mass	(0.1kg increments)	
	Body Balance Evaluation	Fat Rating*2	-4 - +4 (1 increments)	
		Physique Rating*2		
		Muscle Mass Balance*2		
Others	Leg Muscle Score*2			
	Body Fat Distribution*2			
Result History				
Others	Bioelectrical data	Reactance / Resistance / Phase Angle		

*1 Athletic mode can be selected only 18-99 years old

*2 18-99 years

CE 0122 This product meets the following requirements ;
0123 1. Non-Automatic Weighing Instruments (2009/23/EC)
2. Medical Device Directive (93/42/EEC)
Safety Standard : EN60601-1
IEC60601-1
EMC Standard : EN60601-1-2
IEC60601-1-2

<EU representative>

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