TANITA

Instructions for Use

▐▐▐ BODY COMPOSITION ANALYZER

MC-780MA-N
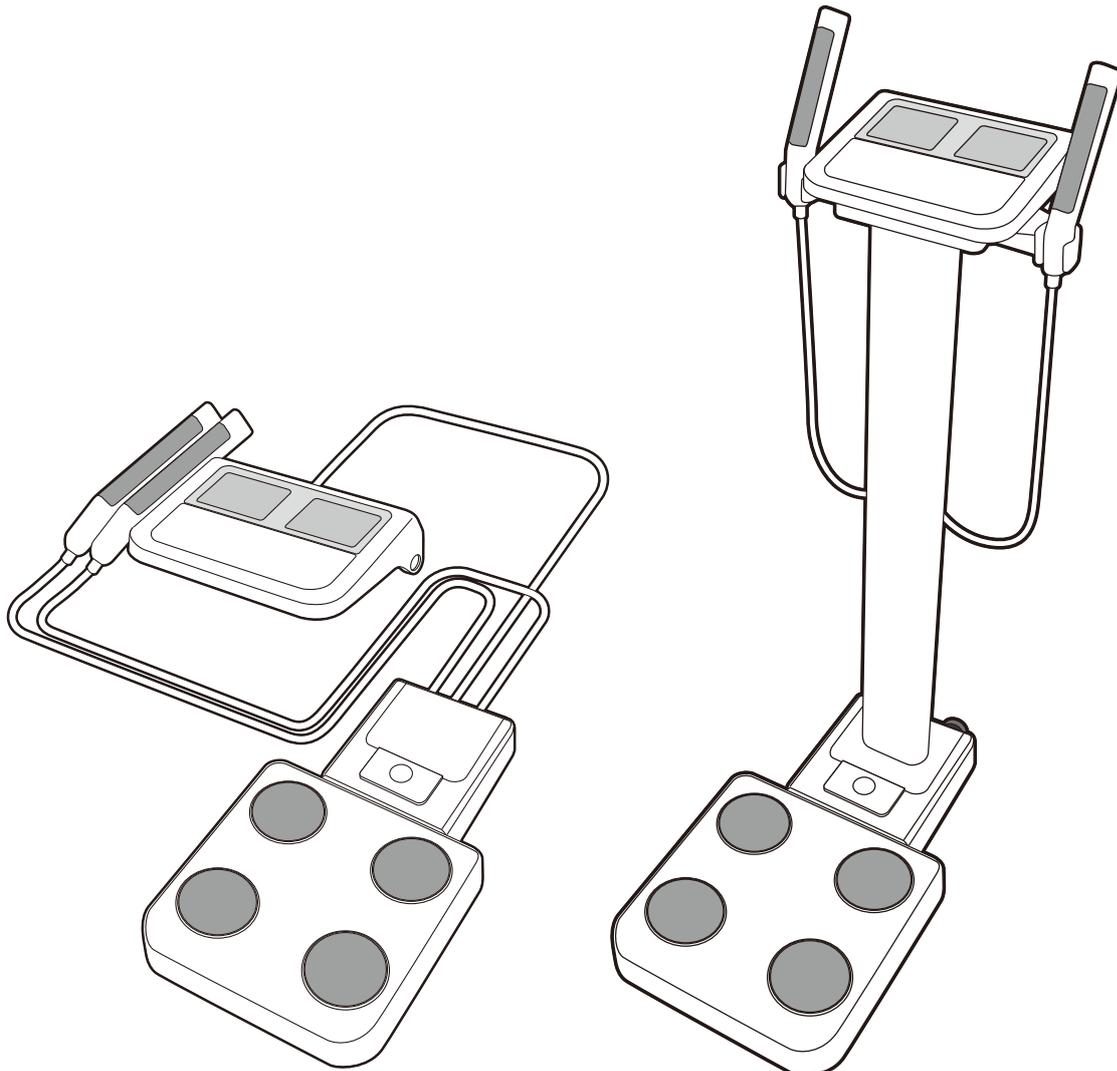
Separate Version   Column Mounted Version

<Usage Conditions>

Temperature	: **5–35°C**
Relative Humidity	: **30–80%**
	(without condensation)
Maximum Altitude	: **2,000m ASL**
Atmospheric Pressure Range	: **86–106kPa**

<Storage Conditions>

Temperature : **-10–50°C**

Relative Humidity : **10–90%** (without condensation)

Atmospheric Pressure Range : **70–106kPa**

To avoid malfunctions, avoid storing the equipment in a place with direct sunlight, significant temperature changes, a risk of dampness, a large amount of dust or a risk of vibration or impact, or in the vicinity of flames.

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

Contents

Symbols and their Meanings

$C\epsilon_{0123}$	Conformity with Medical Device Directive 93/42/EEC	IOIOI	Serial interface
~	Alternating current	---	Direct current
⊕↔	Input, Output	▢	Class II Equipment
▪	Manufacturer	🏃	Type BF applied part - Grips and platform
⚠	Caution Refer to the attached notes.	🗑	WEEE - Waste Electrical and Electronic Equipment Directives
SD™	SD card	⌂	For indoor use only
SN	Serial number	📖	See the instructions

Grip

Control Unit

Casters x 2

🏃 **Electrode x 8**

**Level Gauge**

Adjustable feet x 4

Platform
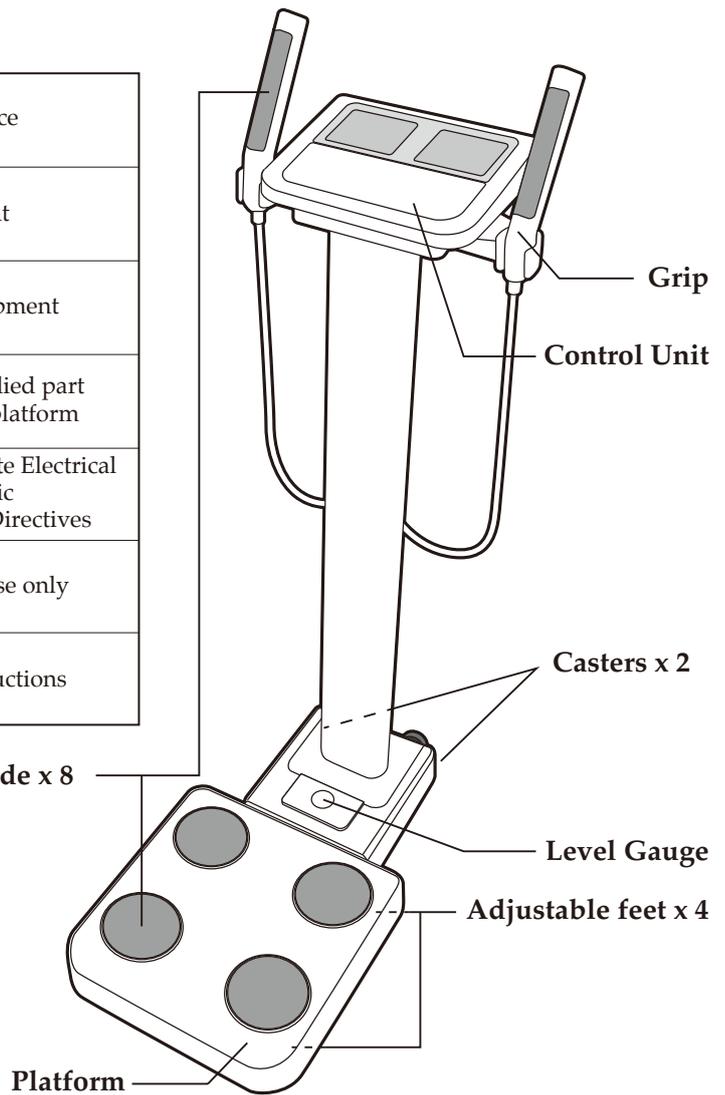
Checking the level

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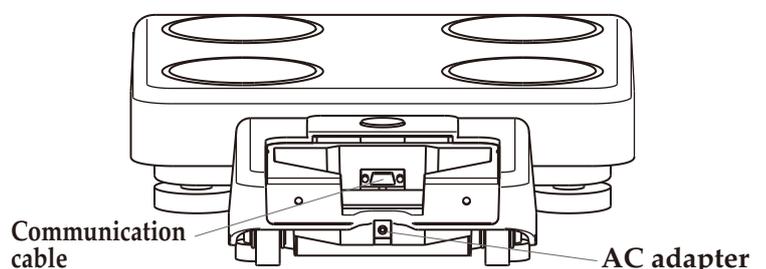* Rotate the adjustable feet in 4 positions for adjustment so that the bubbles of the level gauge reach the centre.

black ring

✓   ✗

air bubble
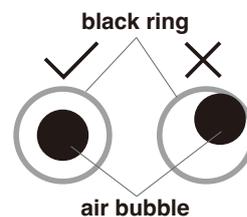
Status when the level gauge is viewed from above

Control unit Connection of Plugs

RS-232C   USB B   USB A   SD card slot
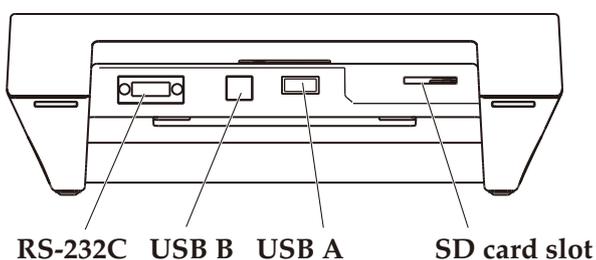
Platform Connection of Plugs

Communication cable

AC adapter
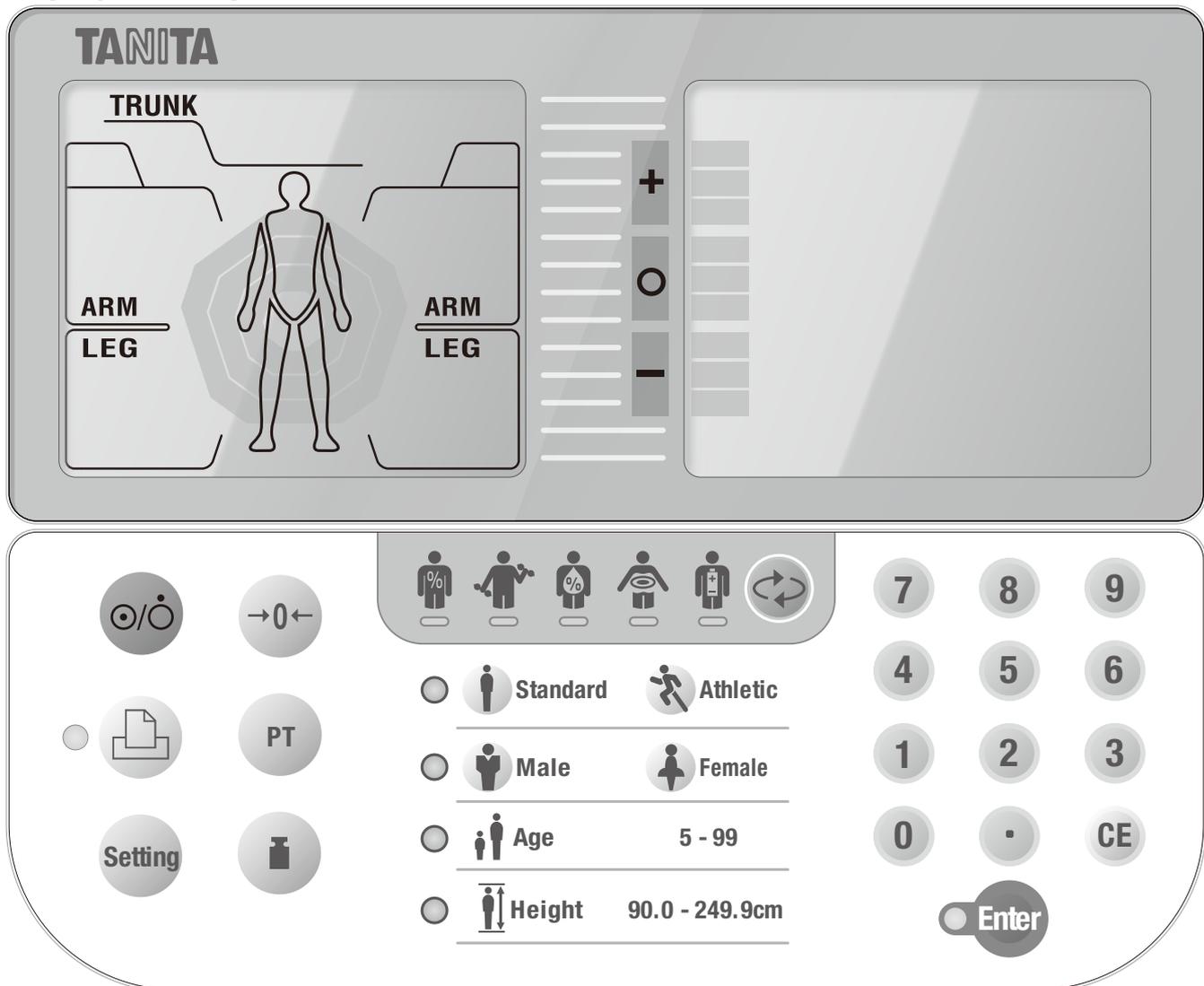
Display and Keys

Meanings of the LED Indicators and Keys

⊙/Ò		Turn ON / OFF the power
○ 🖨		Printout result
Setting		Set various functions
→0←		Reset zero point
PT		Set preset value (Clothes weight)
🏋		Select measurement mode

%👤	Display Body Fat (percentage and mass) *Not measured value but calculated value		
💪	Display Body Muscle (percentage and mass) *Not measured value but calculated value		
%👤	Display Body Water (percentage and mass) *Not measured value but calculated value		
👁	Display Visceral Fat Rating	👤+	Display Basal Metabolic Rate

○ 👤 Standard	🏃 Athletic	Indicates whether "Standard mode or Athletic mode" is selected as the body type.	
○ 👨 Male	👩 Female	Indicates whether "Male or Female" is selected as the gender	
○ 👤 Age	5 - 99	Enter the age between "5–99 years old"	
○ 👤 Height	90.0 - 249.9cm	Enter the height between "90.0–249.9 cm"	

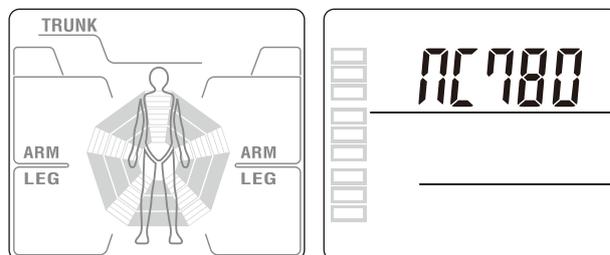|	
● Enter	Confirms the entered numerical value.

Power Supply

Turning the Main Power ON/OFF
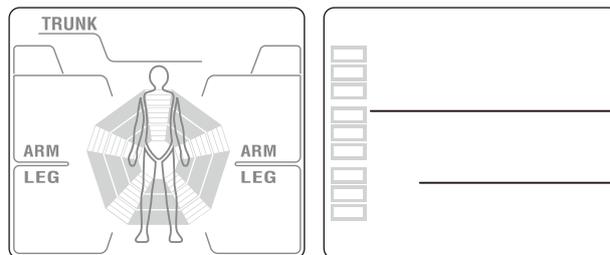
Turning the main power ON.

Press the ⊚/⚲ key to turn on the power.
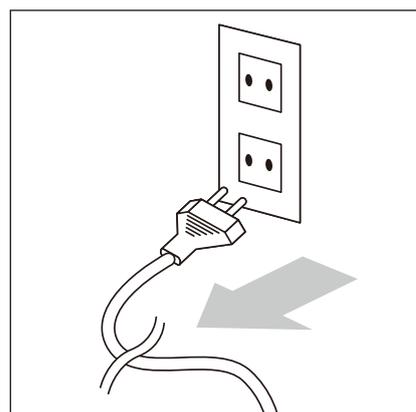
The initial screen is displayed.

Turning the main power OFF.

Press the ⊚/⚲ key to turn the power off.

Emergency Shut Down

Keep the area around the plug socket clear during operation of the equipment in case of an emergency.
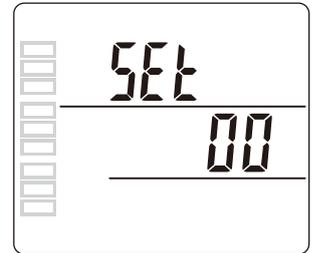
Settings

1 Press the [Setting] key to change the mode.

The setting screen is displayed.

```
SEt
   00
```

Note

• The [Setting] key cannot be used when the scale is measuring weight or impedance.

2 Select the setting item from the list below. Enter numerical values and Press the [Enter] key.

**Setting item List**   [Enter] → Save changes and return   [Setting] → Return without saving

No.	Setting Item	Default	Page
0	Check the software version	–	–
1	Date and time	–	P.6
2	Number to be printed automatically (body composition mode) 0-2 sheet(s)	0	P.16
3	Number to be printed automatically (scale mode and weight lock mode) 0-2 sheet(s)	0	P.16
4	Select printing paper 0: pre printed paper 1: plain paper	1	–
5	Beep sound 0: off 1: on	1	–
6	ID number (manual input) 0: off 1: on	0	P.8
7	ID number (automatic count up) 0: off 1: on	0	P.8
8	Measurement flow 0: two step flow (measure body weight first) 1: one step flow (enter personal information first)	0	P.8
9	Body type selection (athletic mode) 0: off 1: on	0	P.8

No.	Setting Item	Default	Page
10	Height input unit 0: 0.1cm increments 1: 1cm increments	0	P.9
11	Automatic determination time of input information 0-9 second(s) * 0: disables this function	0	–
18	Target body fat ratio input 0: off 1: on	0	P.9
19	Printout language 1: English, 2: French, 3: German, 4: Italian, 5: Spanish	1	–
20	Adjust printing position 2: ↓, 4: ←, 6: →, 8: ↑	–	–
21	Timeout function of result display 0: disable 1: enable	0	–
30	Data output format to PC 0: default format 1: BC-418 format	0	P.15
31	Display direction 0: default 1: reversal position	0	–
32	BMI desirable range 0: 18.5–24.9 1: 18.5–22.9 2: 18.5–23.9	0	–
60	Reading stored measurement result	–	P.16

Note

Enter the year, month, day, hour and minute.
The date format is "yyyy mm dd hh:mm"

```
2024
0924
18:47
```

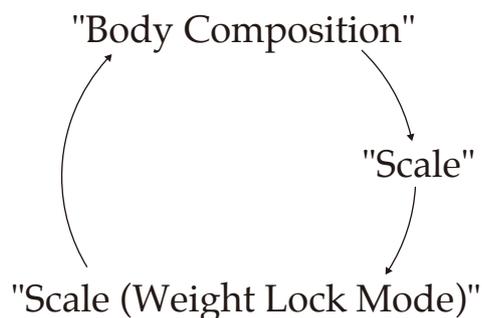**Example** 6:47 pm, 24th September, 2024
         "2024" "09 24" "18:47"
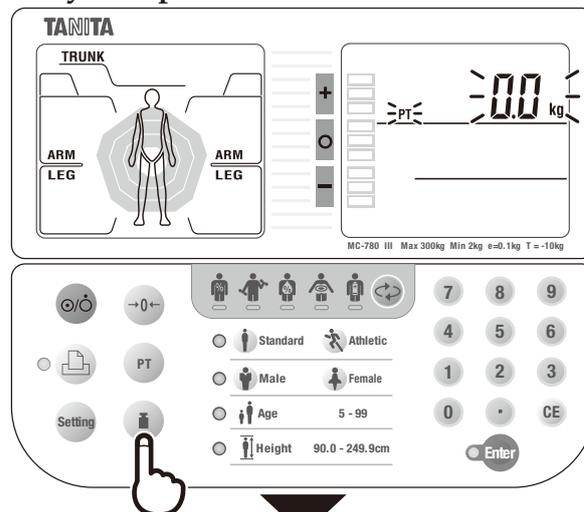To enter a number with 1 digit (0–9), press "0" first.
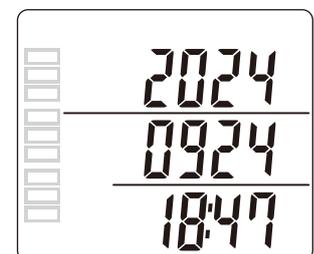
Select the Measurement Mode

Select the measurement mode by pressing the ⬛ key.

The measurement mode is switched in the following order when the ⬛ key is pressed:
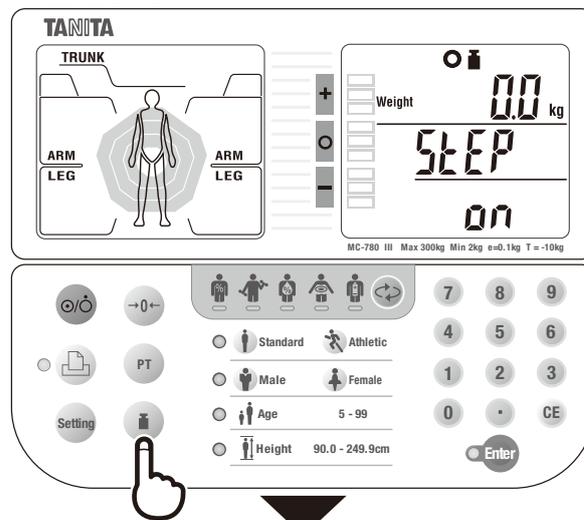
"Body Composition"

"Scale"

"Scale (Weight Lock Mode)"

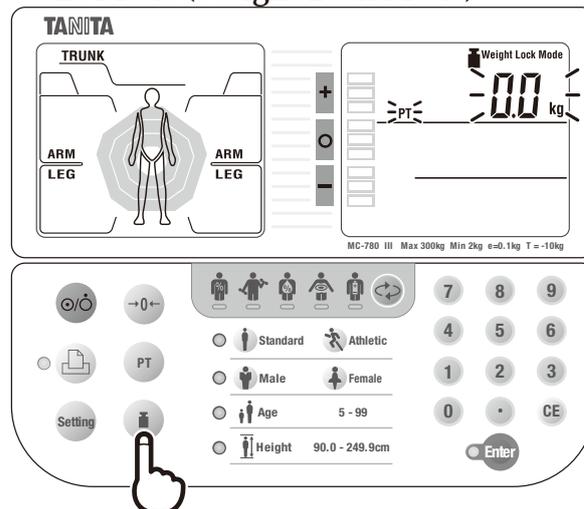The "⬛" mark is displayed when the scale mode is selected.

Body Composition Mode

Scale Mode

Scale Mode (Weight Lock Mode)

Taking a Measurement
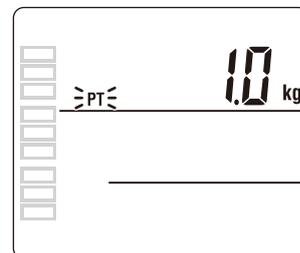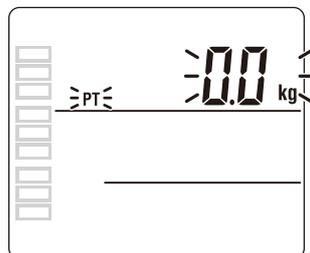
How to Use

Body Composition Mode (Two step flow / Measure body weight first)

1 **Enter the preset tare value (clothes weight) and press [Enter] key**

Turn the power on, and check that the "**PT**" mark flashes.
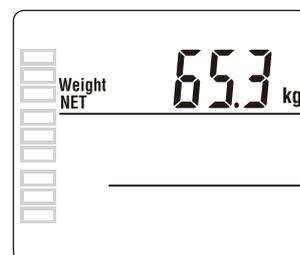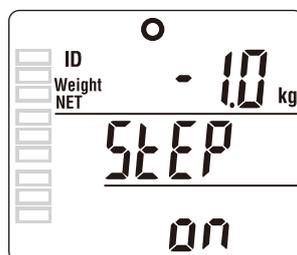Enter the preset tare value (clothes weight)
The tare value range is 0.0–10.0kg.

2 **Measure body weight**

Step onto the scale, after "**StEP on**" is displayed.
"**NET**" is displayed when you have entered a tare value (clothes weight).

> **Note**

When the One step flow is selected, enter personal information first. → P.6 Setting 8

If the scale does not detect a load, press [Clothes Weight (PT)] to switch to "Input tare value".

If the scale detects the load, press [Clothes Weight (PT)] to display the entered tare value.

3 **Enter ID number**

If the ID number function is set to OFF, the scale switches directly to "Select body type" without requesting an ID number.
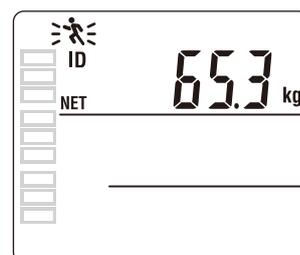
The ID number range : 0–9999999999999999
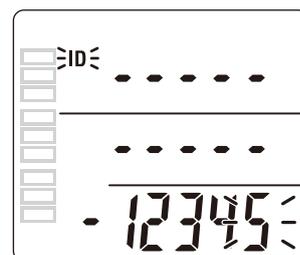
4 **Select body type** [Standard] [Athletic]

If the body type selection (Athletic mode) is set to OFF, the scale switches directly to "Select gender" without requesting a body type.

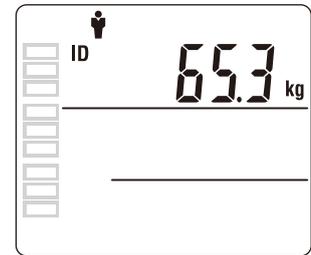The "🏃" mark is displayed when the Athletic mode is selected.

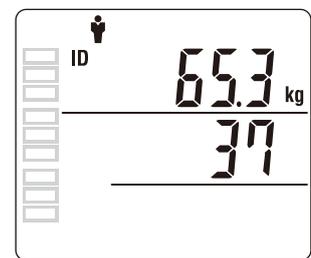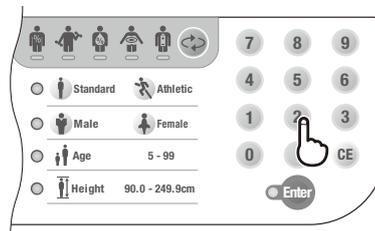> **Note** Athletic mode setting → P.6 Setting 9
> Athlete condition → P.14

Body Composition Mode

5 Select gender

Male   Female

ID   65.3 kg

---

6 Enter age and press Enter key

The age range : 5–99

ID   65.3 kg
37

---

7 Enter height and press Enter key
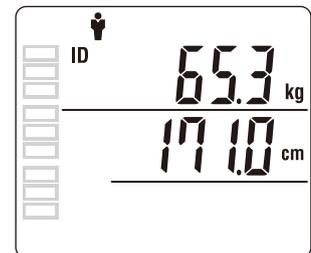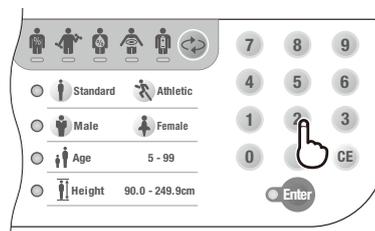
The height range : 90.0–249.9 cm
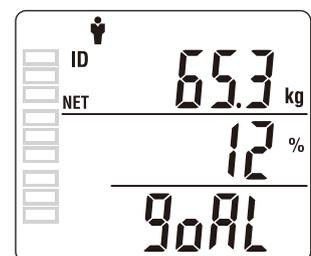
ID   65.3 kg
171.0 cm

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8 Set target body fat ratio

If the target body fat ratio function is set to OFF, the scale switches directly to "Measuring body composition" without entering the target value.
The body fat ratio range: 4–55 %

Note

Target Body Fat Ratio setting → P.6 Setting 18

ID   NET   65.3 kg
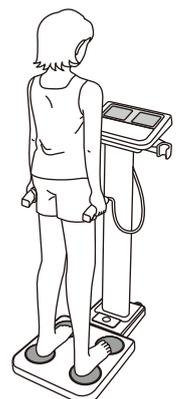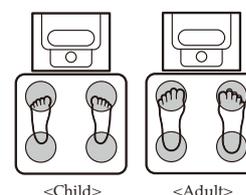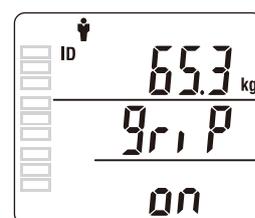12 %
GoAL

---

9 Measuring body composition

Hold the grip, when "**grip on**" is displayed.

The scale starts measuring impedance after you have entered all of the personal information.
The segmental impedance values are measured in order.

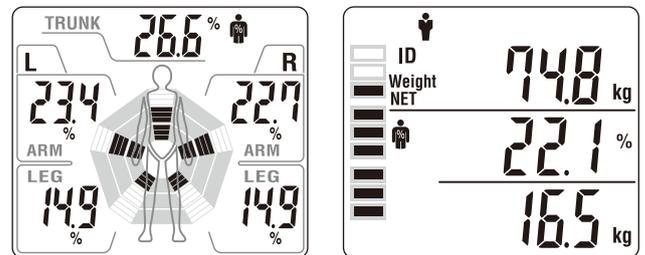The scale displays the measurement results after measuring the whole body impedance and segmental impedance.

ID   65.3 kg
GriP
on

<Child>   <Adult>

Measurement Results (Body Composition Mode)

Output Measurement Results (Body Composition Mode)

The measurement results are displayed on the LCD after measurement is completed.
The results are output to the PC immediately after measurement is completed.

Press the ⟳ key to select the measurement display.
The measurement display is switched in the following order by pressing the ⟳ key.
"Body Fat" → "Muscle" → "Body Water" → "Visceral fat rating" → "Basal metabolic rate" → "BMI"

🧍Body Fat

Fat icon

Segmental fat %
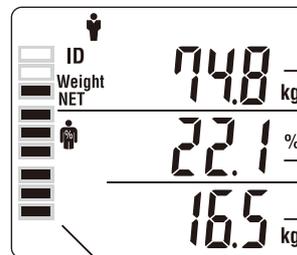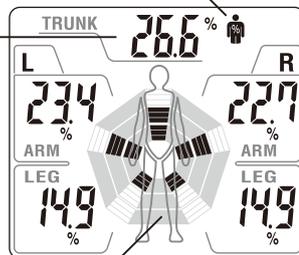
Body weight (kg)

Body fat %

Body fat mass (kg)

Evaluation of your results compared to average values.

Fat rating

🧍Muscle

Muscle icon

Segmental Muscle Mass
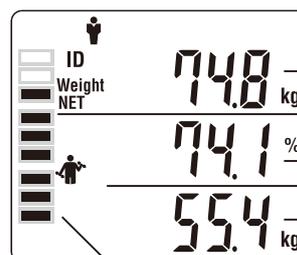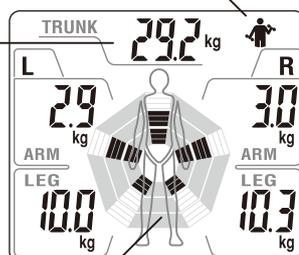
Body weight (kg)

Body muscle %

Body muscle mass (kg)

Evaluation of your results compared to average values.

Muscle mass rating

Measurement Results (Body Composition Mode)

🧍Body Water

- Body weight (kg)
- Body water %
- Body water (kg)
- Body water icon

🧍Visceral Fat Rating

Visceral fat rating

- Body weight (kg)
- Visceral fat rating
- VFR icon

🧍Basal Metabolic Rate (BMR)

BMR rating

- Body weight (kg)
- BMR (kJ)
- BMR (kcal)
- BMR icon

Body Mass Index (BMI)

- Body weight (kg)
- BMI
- BMI icon

Note

"○" flashes if measuring posture is incorrect. The results can only be used as reference data.

11

Taking a Measurement (continued)

Scale Mode

The "⊠" icon is displayed when the scale mode is selected.

1 Enter the ID number

If the ID number function is set to OFF, the scale starts measuring weight immediately.

Enter the ID number.
The ID number range is from 0–9999999999999999.

Press (PT) to enter tare value (clothes weight).
The tare value range is 0.0–10.0kg .
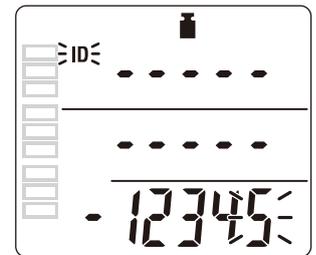
2 Measure body weight

" NET " is displayed when you have entered a tare value (clothes weight).

Step onto the scale, after
"**STEP ON**" flashes .

The "Stabilised" icon (◯) appears when the load is stable.
The "Stabilised" icon (◯) disappears when the load is unstable.

When the load is stable, the measurement results are output via the USB port and stored on an SD card.

Weight Lock Mode

The "⬛" icon and "Weight Lock Mode" are displayed when the weight lock mode is selected.

Enter the preset tare value (clothes weight)

Enter the preset tare value (clothes weight)
The tare value range is 0.0–10.0kg.
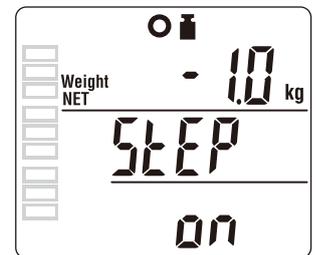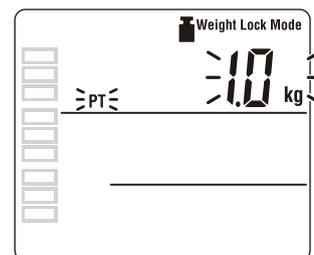
Enter the ID number

If the ID number function is set to OFF, the scale starts measuring weight immediately.

Enter the ID number.
The ID number range is from 0–9999999999999999.
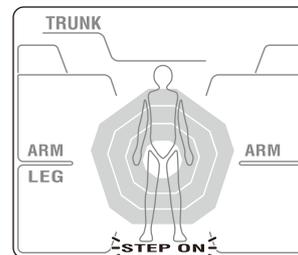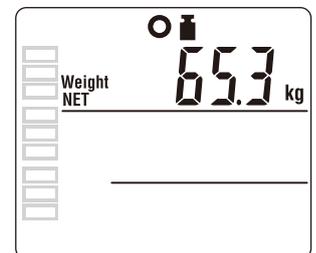
Measure body weight

"NET" is displayed when you have entered a tare value (clothes weight).

Step onto the scale, after "StEP on" flashes .

The "Stabilised" icon (⭕) appears when the load is stable.
The "Stabilised" icon (⭕) disappears when the load is unstable.

When the load is stable, the measurement results are output via the USB port and stored on an SD card.

How to Use

General Instructions for Body Composition Measurement

Athletic Mode

•Recommended for those who are 18 years or older and meet the following conditions.

- People who carry out 12 hours or more of cardiovascular exercise 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

•A target body fat % should be set by a professional only. Tanita is not responsible for setting the appropriate target body fat % for specific individuals.

Attention

•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 or older.

 •Contact condition
- If your inner thighs are touching or your arms make skin-to-skin contact, the results can only be used as reference data.

Note

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

Output and Storage of Measurement Results

Data Output

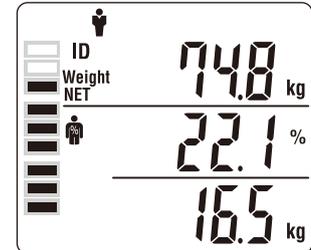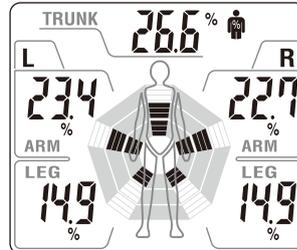### Outputting measurement results via the USB or RS-232C port

The results are output to the PC immediately after measurement is completed.

Data is output in CSV format.

- USB-B port is located on the back of the control box.
*communication cable is not included in the product.
- You must install the necessary driver onto your PC, available download from https://www.tanita.eu/

Data Storage

Data storage of measurement results

The results are saved to the SD card immediately after measurement is completed.

The ⑊ icon is displayed when a valid SD card is installed.

A new file is created on the SD card for each day.

The file is created using the measurement date and time as the file name, as shown below. "YYYYMMDD" (year, month and date)

If "error 12" is shown in the display, this indicates that there is not enough free space left on the SD card.

You can store approximately 10,000 measurement results (weight only mode) on a 2GB SD card.

- Do not remove the SD card when it is storing or reading data.
- Do not turn off the main power when the SD card is storing or reading data.
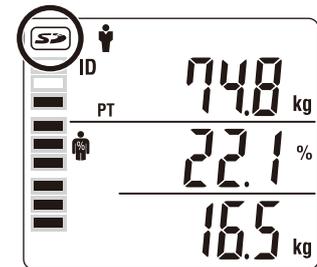
Printing Data

Printing Measurement Results

The results are printed from the printer immediately after measurement is completed. The number of sheets that are printed is set in (Mode Setting).

Press the key to print additional copies.
You can print out the result if is lighted.

How to Use

Reading Stored Measurement Result Data

Reading stored measurement result data (→P.6 Setting 60)

Select the file that you want to load using the 👤 or 🏃 key and 👤 or 👤 key and press **Enter** .

Displaying stored data

Date and time when the displayed data was measured

Year, Month and date
Hour, Minute and Second

Month and date ── Year
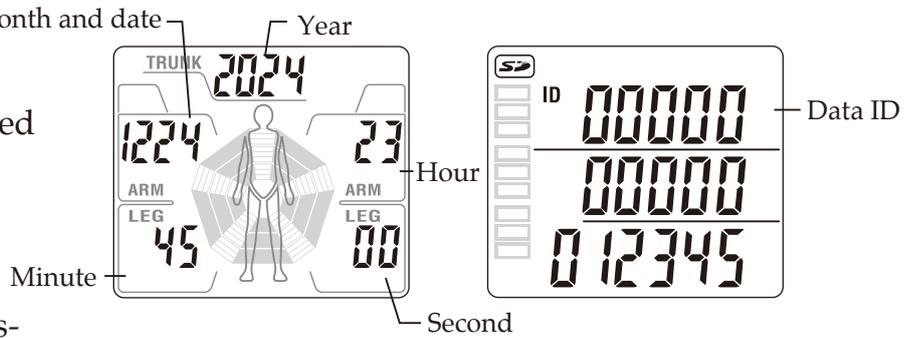
Switch the display by pressing the ⟳ key.

🖨 → Print

Enter → Next data

CE → Exit

Minute

Second

Hour

Data ID

Body weight (kg)

Body fat %

Preset tare (kg)

Troubleshooting

Please check the following before requesting repair.

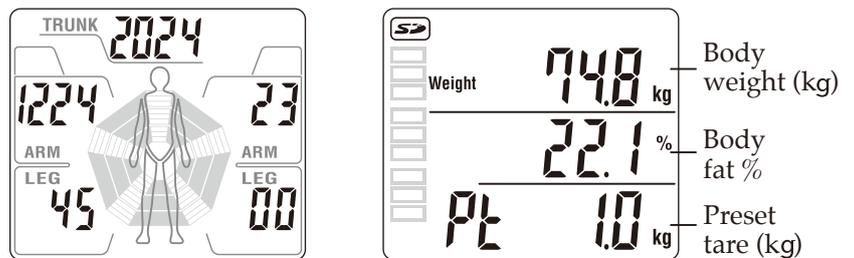| Problem	Solution
Measurement	
Error with impedance measurement	• Hold the handgrips and electrodes firmly with fingers and palms. • Stand barefoot on the platform for measurement. • If the soles of the feet are dry, use a dropper to apply about 0.5 mL of water before measurement. • Check the input details.
Error with zeroing	• Turn off the power and remove anything on the platform, then turn on the power and try measuring again.
The weight value does not stabilize.	• Is the equipment placed on a vibrating surface? • Is the measuring platform tilted? • Is something blocking the gap in the measuring platform? • Remove any inserted objects.
Display	
Nothing is displayed, even when the power is turned on.	• Confirm that the power is connected correctly.
"------" is displayed.	• The measured weight exceeds weighing capacity.
" ⭕ " flashes.	• " ⭕ " flashes if measuring posture is incorrect. The results can only be used as reference data.

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Specifications

If Necessary

Model Number	MC-780MA-N
Classification	MDD: CLASS IIa
	NAWI: CLASS III
Power Source	100−240V AC
Rated Power	36VA
Impedance Measurement — Measurement System	Multi-frequency 8 electrodes
Impedance Measurement — Measurement Frequency	5kHz/50kHz/250kHz
Impedance Measurement — Measurement Current	90µA or less
Impedance Measurement — Electrode Materials	Feet: Stainless steel/Handgrips: plated
Impedance Measurement — Measurement Part	Whole body/Right arm/Left arm/Right leg/Left leg
Impedance Measurement — Measurement Range	75.0−1,500.0Ω (0.1Ωincrements)
Impedance Measurement — Accuracy at First Calibration	± 2%
Weight Measurement — Measurement System	Strain gauge load cell
Weight Measurement — Maximum Capacity	270kg (including preset tare value)
Weight Measurement — Minimum Graduation	0.1kg
Weight Measurement — Accuracy at First Calibration	± 0.2kg
Display	Dual LCD screen
Interface	USB Type-B port (device)
	RS-232C
	USB Type-A port (for USB printer)
	SD card
Product Weight	Column mounted version: 15.5kg/Separate version: 11.1kg
Product Size — Platform	Platform size: 360 x 360mm Height: 94mm
Product Size — Height (Column Mounted Version)	1165mm
Time accuracy	Within ±1 minute per month (+18−+28°C)

Input items	Clothes Weight	0—10.0kg (0.1kg increments)	
	Serial No.	Within 16 digits	
	Gender	Female/Male	
	Body Type	Standard/Athletic*¹	
	Age	5—99 years old	
	Height	90.0—249.9cm (0.1cm increments)	
	Target Body fat %	4—55% (1% increments)	
Output items*³	ID	16 digits	
	Gender	Female/Male	
	Body Type	Standard/Athletic*¹	
	Age	5—99 years old	
	Height	90.0—249.9cm (0.1cm increments)	
	Clothes Weight	0—10.0kg (0.1kg increments)	

Output items*³	Whole Body Analysis	Weight	2.0—270.0kg (0.1kg increments)	5—99 years old
		Fat %	3.0—75.0% (0.1% increments)	
		Fat Mass	0.1kg increments	
		FFM	0.1kg increments	
		Fat Rating	-4—+4 (1 increments)	
		Muscle Mass	0.1kg increments	
		Muscle Mass Rating	-4—+4 (1 increments)	18—99 years old
		BMI	0.1 increments	5—99 years old
		Bone Mass	0.1kg increments	
		Metabolic Age	1 increments	18—99 years old
		Basal Metabolic Rate	1kcal/1kJ increments	5—99 years old
		Visceral Fat Rating	1—59 (1 increments)	18—99 years old
		TBW	0.1kg increments	5—99 years old
		TBW %	0.1% increments	
		ECW	0.1kg increments	18—99 years old
		ICW	0.1kg increments	
		ECW / TBW	0.1% increments	
	Segmental Analysis	Muscle Mass	0.1kg increments	5—99 years old
		Muscle Mass Rating	-4—+4 (1 increments)	18—99 years old
		Fat %	0.1% increments	5—99 years old
		Fat Mass	0.1kg increments	
		FFM	0.1kg increments	
		Fat Rating	-4—+4 (1 increments)	18—99 years old
	Body Balance Evaluation	Physique Rating		
		Muscle Mass Balance		
		Leg Muscle Score		
	Others	MM/H²	Whole body Muscle Mass (kg)/Height (m)²	5—99 years old
		MM/BW	Whole body Muscle Mass (kg)/Body Weight (kg)	
		SMI*	Total muscle mass value of Right arm, Left arm, Right leg and Left leg (kg)/Height (m)²	
		ASM**/BW	Total muscle mass value of Right arm, Left arm, Right leg and Left leg (kg)/Body Weight (kg)	
		Bioelectrical data	Reactance/Resistance/Phase Angle	
		Contact Condition*²		

*1 Athletic mode can be selected only for ages 18—99.
*2 The results can only be used as reference data. → P.11

*SMI: Skeletal Muscle Mass Index
**ASM: Appendicular Skeletal Muscle Mass

Note Compatible with SD and SDHC memory cards.
Not compatible with SDXC memory cards.

Disposal

This product is an electronic device. Please dispose of this product appropriately, not as general household waste. Be sure to follow the regulations in your area when disposing of this product.

· The product design and specifications may be changed at any time without prior notice.
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