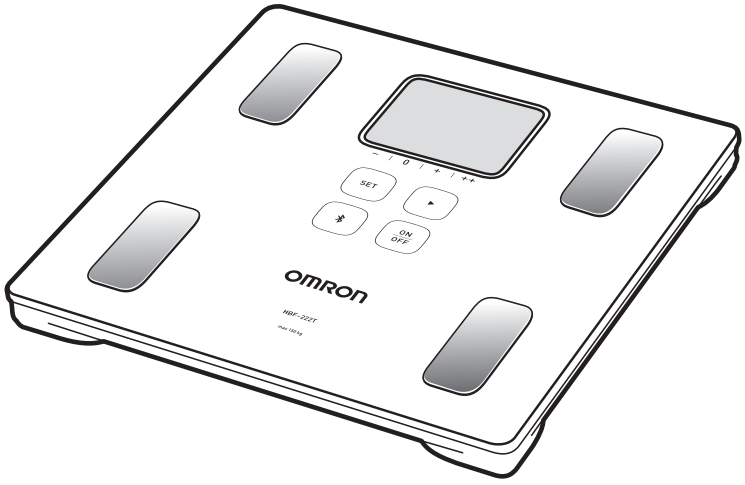
OMRON



Body Composition Monitor

HBF-222T

Thank you for purchasing the OMRON Body Composition Monitor.
Before using this unit, please be sure to read this Instruction Manual carefully to understand the safe and proper use.
Please store this Instruction Manual carefully for future reference.

All for Healthcare

6601970-0A
IM-01-05/2017

HBF-222T
Body Composition Monitor

Intended Use

Thank you for purchasing this OMRON Body Composition Monitor. This unit is intended for measuring and displaying the following body composition parameters.

- Body Weight
- Visceral Fat (up to 30 levels)
- Resting Metabolism (in kcal)
- Body Fat (in %)
- Skeletal Muscle (in %)
- BMI (Body Mass Index)

Note: This device also calculates a Body Age for your reference. This Body Age is an indication only and it is not a medical relevant value.

This unit is intended to be operated by adults who can understand this instruction manual. It is not for professional use in hospitals or other medical facilities, it is intended for home use only.

Please read this instruction manual carefully before use and for further information on the individual functions.

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Before using the unit

Notes on Safety

Symbols and definitions are as follows:

⚠**Danger:**	Improper use may cause danger resulting in death or serious injury.
⚠**Warning:**	Improper use may result in possible death or serious injury.
⚠**Caution:**	Improper use may result in injury or property damage.

⚠Danger:

• Never use this unit in combination with medical electronic devices such as:
(1) Medical electronic implants such as pacemakers.
(2) Electronic life support systems such as an artificial heart/lung.
(3) Portable electronic medical devices such as an electrocardiograph.
This unit could cause these devices to malfunction, posing a considerable health risk to users of these devices.



⚠Warning:

- Keep the unit out of the reach of young children. Contains small parts that may cause a choking hazard if swallowed by infants.
- Do not use the unit on slippery surfaces, such as a wet floor.
- Do not jump onto the unit, or bounce on the unit.
- Do not use this unit when your body and/or feet are wet, such as after taking a bath.
- Stand on the unit bare-footed. Standing on the unit with socks on may cause you to slip and injure yourself.
- Do not step on the edge or display area of the unit.
- People with disabilities, or who are physically frail, should always be assisted by another person when using this unit.
- If battery fluid should get in your eyes, immediately rinse with plenty of clean water. Consult a physician immediately.
- Do not use this product in hospitals, aircrafts or other environments where the use of radio waves is restricted.
- This product emits radio frequencies (RF) in the 2.4 GHz band. Do not use this product in locations where RF is restricted, such as on an aircraft or in hospitals.

⚠Caution:

- Do not disassemble, repair, or remodel the unit.
- Do not begin a weight reduction or exercise program without consulting a physician or healthcare specialist first. Self-diagnosis could injure your health.
- During measurement, make sure that no mobile phone or any other electrical devices that emit electromagnetic fields is within 30cm of this device. This may result in incorrect operation of the device and/or cause an inaccurate reading.
- Use batteries specified for this unit. Do not insert the batteries with the polarities in the wrong direction.
- Replace worn batteries with new ones immediately.
- Do not dispose of batteries in fire.

- If battery fluid should get on your skin or clothing, immediately rinse with plenty of clean water.
- Remove the batteries from this unit when you are not going to use it for a long period of time (approximately three months or more).
- Do not use different types of batteries together.
- Do not use new and worn batteries together.
- Always wash your feet before using the unit. If you are suffering from a foot infection or other skin disease, you may cause infection to other people.
- When the unit will be used by several people, wipe the unit with a damp cloth moistened with mild detergent after using it. Then wipe it dry.
- Do not use this unit for purposes other than described in this manual.
- As this unit is a precision instrument, do not drop, vibrate, or apply strong shock.

Data Transmission

- Do not replace the battery while your measurement result is being transferred to your smart device. This may result in the incorrect operation of your monitor and failure to transfer your measurement result.
- Do not place integrated circuit cards, magnets, metal objects, or other devices that emit electromagnetic fields near this monitor while your measurement result is being transferred to your smart device. This may result in the incorrect operation of your unit and failure to transfer your measurement result.

Read and follow the "Important information regarding Electro Magnetic Compatibility (EMC)" in the Technical Data Section.

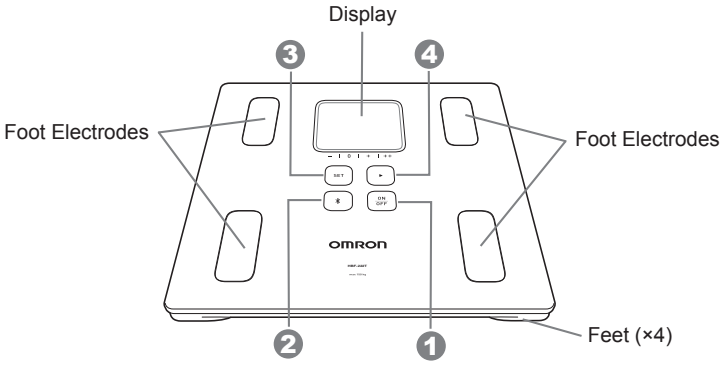
Incorrect Measurement

Incorrect measurement might occur to the following users:
Elderly people (over 81 years old) / People with a fever / Body builders or highly trained athletes / Patients undergoing dialysis / Patients with osteoporosis who have very low bone density / Pregnant women / People with swelling.

- Because the body composition such as body water might greatly deviate from the average value.

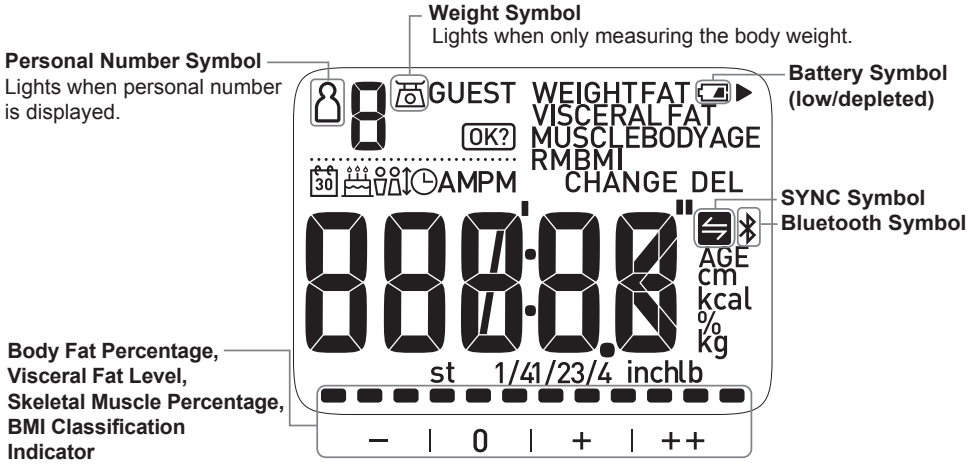
1. Know Your Unit

Main Unit



❶	ON/OFF	**ON/OFF Button** • Press this button to turn on the power. • Press this button (2 seconds or longer) to turn off the power.
❷	ᛒ	**Bluetooth Button** • Press this button to transfer the data manually. • Press this button (2 seconds or longer) to pair the unit with your smart device. ※ This button is also usable when the power is off.
❸	SET	**SET Button** • Press this button to set or confirm the data.
❹	▶	**Advance Button** • Press this button to advance. • Press and hold this button to advance rapidly during setting the date, time and height.

Display

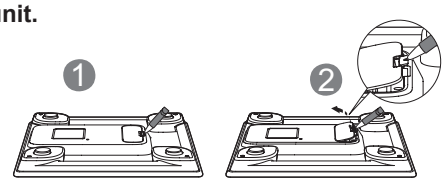


2. Insert and Replace the Batteries

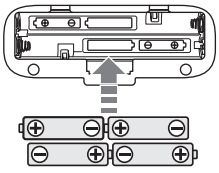
1. **Open the battery cover on the back of the unit.**

A hard object like a pen could be used.





2. **Install the batteries in correct polarity as marked inside the battery compartment.**



3. **Close the battery cover.**

Battery Life and Replacement

■ **Approximately 6 months (When AAA alkaline batteries are used in four measurements, four data transfers and four persons a day at a room temperature of 23°C)**
- The supplied batteries are for trial use only, they may have a shorter life.

■ **When the depleted battery symbol appears on the display, replace all four batteries with new ones.**
- Replace all four batteries with new ones (same type) at the same time.
- When the low battery symbol blinks, recommend to replace the batteries with new ones ahead of time.

Depleted Battery symbol



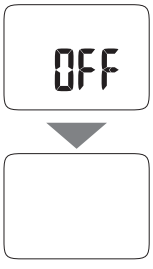
■ **Replace the batteries after turning off the power.**
- Personal data stored in the unit are retained even if the batteries are removed.
- Disposal of used batteries should be carried out in accordance with the national regulations for the disposal of batteries.

■ **When the batteries are replaced, you need to reset the date and time. (Refer to Section 4.)**
- If you have already paired with the "OMRON connect" app, press the button to communicate with this app, then the date and time and personal data will be set automatically.

About the Power OFF Function

■ **Press the ON/OFF button (2 seconds or longer) to turn off the power.**

■ **The power automatically turns off in the following conditions.**
- 10 seconds after "Err" is displayed.
- The unit is not used for 1 minute when "0.0 kg" is displayed.
- The unit is not used for 3 minutes.



3. Pair the Unit with Your Smart Device

1. **Turn on the Bluetooth of your smart device.**

2. **Download and install the "OMRON connect" app onto your smart device.**

You can choose one of the following 2 methods.

■ **Scan the QR code to get access to the following address.**

QR code

www.omronconnect.com/setup

■ **Search the "OMRON connect" app from "App Store" or "Google Play".**

Download on the App Store

GET IT ON Google Play

connect OMRON

3. **Open the app on your smart device and follow set-up and pairing instructions.**

If you already have the OMRON connect app, go to: Menu>Device>Add Device

NOTES

- One smart device manages the data of one user.
- If an app other than "OMRON connect" is used, data might not be transferred correctly.
- Please read the utilization method and usage instruction within the app for details.

4. Set the Date and Time

Setting the date and time is necessary before taking a measurement for the first time or after replacing the batteries.

- Date and time can be set from "OMRON connect" app as well.

1. Press the (ON/OFF) button to turn on the power

The year blinks on the display.

2. Select and confirm the year.

Press the (▶) button to select the year and press the (SET) button to confirm.

- Setting range of year: 2017 to 2045.



Year

3. Set the unit to the correct date and time.

Press the (▶) button to adjust and press the (SET) button to confirm.

- Time is 12-hour system.
- During setting the year, date, hour and minute, hold down the (▶) button to advance rapidly in increments of 10.



Month



Day





After all the settings for the year, month, day, hour and minute are displayed in that sequence, the power automatically turns off.

NOTES

- If any mistake is made during the setting, press the (ON/OFF) button to turn off the power and start from "Step 1" again.
- The power turns off if the unit is not used for 3 minutes. Set the date and time anew.
- To modify the date or time, remove the batteries and wait for at least 20 seconds. Then insert the batteries and reset again.

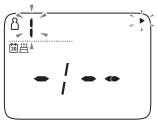
5. Register the Personal Data

For the measurement of body composition, it is necessary to register your personal data (birth date, gender, height). The registered data can be stored for up to 4 persons.

- The personal data can be registered from "OMRON connect" app as well.

1. Press the ON/OFF button to turn on the power.

The power turns on. Personal number "1" blinks. Birth date (- - / - - / - -) is displayed.



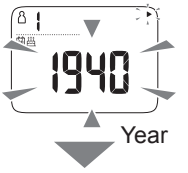
2. Select and confirm your personal number.

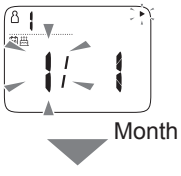
Press the ▶ button to select your personal number and press the SET button to confirm.

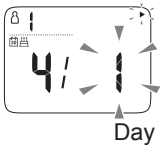
3. Set the birth date.

Press the ▶ button to set the birth date and press the SET button to confirm.

- Setting range of year:1900 to 2045
- During setting the year and date, hold down the ▶ button to advance rapidly in increments of 10.

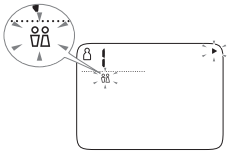






4. Set the gender

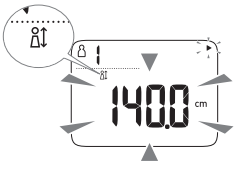
Press the ▶ button to set the gender ♂ (MALE) or ♀ (FEMALE) and press the SET button to confirm.



5. Set the height.

Press the ▶ button to adjust the height and press the SET button to confirm.

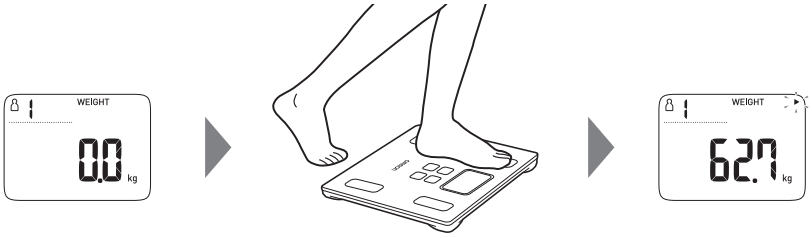
- Press continuously to rapidly advance in increments of 10 cm.
- After all the settings are displayed for your confirmation, "0.0 kg" appears on the display.



6. Step onto the unit to take a measurement when "0.0 kg" is displayed.

The data of body weight and body composition are recorded in the unit to support automatic recognition.

After a while, the measurement results are indicated as follows.



7. Step off the unit after the measurement results are displayed.

The personal data registration is completed.

8. Press the ON/OFF button (2 seconds or longer) to turn off the power.

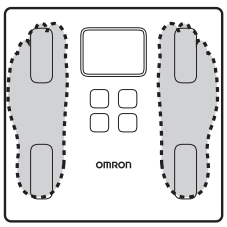
To add new personal data, start from the "Step 1".

Operating instructions

6. How to Take a Measurement Accurately

6.1 Correct postures during the measurement

Step onto the unit with your bare feet.
Place the arches of your feet onto the center of the unit.



Note

- Stepping onto the unit with socks or footwear on will result in an inaccurate measurement.



Do not bend your knees during measurement.

Take a measurement on a hard and flat floor.

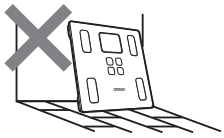
Note

- A cushioned floor surface, such as a mat or carpet, may result in an inaccurate measurement.

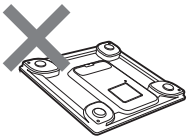
6.2 About the "0 kg correction" (Caution for storing)

The unit regularly corrects accuracy automatically when it is not in use.

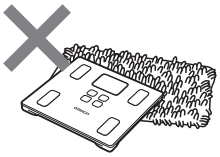
- If the unit is placed as shown below this accuracy correction function does not work, implement the "0 kg correction" before taking the measurement.



The unit is leaning against the wall or other objects



The unit is placed upside down

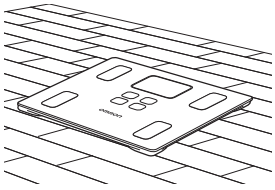


The unit is placed on an object



An object is placed on the unit

6.3 How to implement the "0 kg correction"



1. **Place the unit on a hard and flat floor.**

2. **Press the ON/OFF button to turn on the power.**

3. **Select your personal number or "0".**

Select your personal number or "0" with the ▶ button and then press the SET button to confirm.

4. **When the "0.0 kg" is displayed, press the ON/OFF button (2 seconds or longer) to turn off the power.**

This completes the "0 kg correction". Wait for 5 seconds, and then take a measurement.

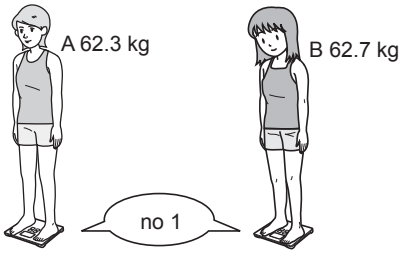
Operating instructions

7. Take a Measurement

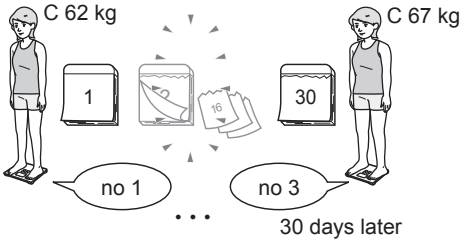
When person steps onto the unit, it will be powered on to recognize the personal number automatically and start the measurement.

Wrong personal number may be displayed in the following cases.

- Users of similar body type and body weight are measured.



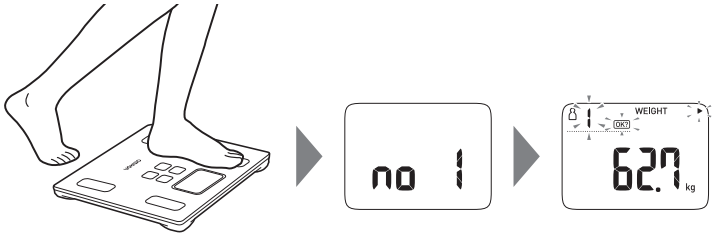
- Your body weight has changed since last measurement.



If inaccurate recognition continues, select your personal number to take a measurement. (Refer to Section 9.)

1. Take a measurement when the power of the unit is off.

When you step onto the unit, the power automatically turns on.



2. When personal number and measurement results are displayed, the measurement is completed.

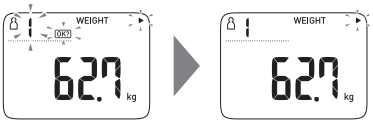
Step off the unit.

3. Confirm your personal number.

■ If your personal number is correct…

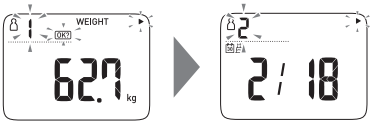
Press the SET button to confirm your personal number. OK? disappears.

Even if you turn off the power with OK? blinking, the results are recorded on the unit as the measurement value linked to the displayed personal number.



■ If your personal number is incorrect…

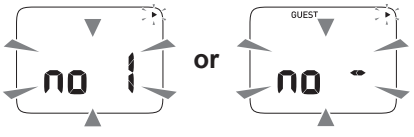
Before the power turns off, select your personal number with the ▶ button, and then press the SET button to confirm.



■ If you confirmed your personal number incorrectly…

Before the power turns off, press the SET button so that you can select your personal number again.

If "no 1" to "no 4" blinks on the display, or GUEST is displayed, your personal data has not been registered in the unit.
Register your personal data.
You can use Guest Mode as well.



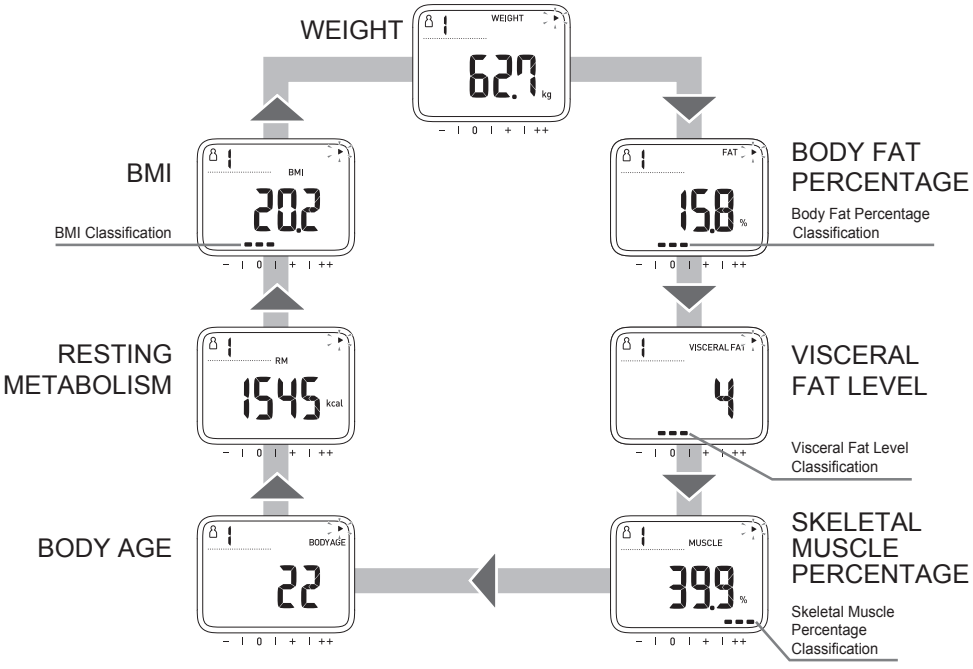
4. Check the measurement results.

The results display rotates automatically as shown below.

Once you confirm your personal number, you can switch it to a measurement result you want to view with the ▶ button.

Note

- Use Body Fat Percentage, Visceral Fat Level, Skeletal Muscle Percentage, and BMI classification indicator as a guide to measurement.
- To better understand your measurement results, refer to the information and diagrams in Section 17 and 18.



5. Press the ON/OFF button (2 seconds or longer) to turn off the power.

The power turns off if the unit is not used for 3 minutes.

Use the Memory Function

8. View the Measurement Results on Your Smart Device

Follow the instructions from the "OMRON connect" app to view your measurement results.

Then you can confirm the variation of your weight and body composition parameters on your smart device.

Note

- The "OMRON connect" app must be installed on your smart device.(Refer to Section 3.)

When necessary

9. Select Your Personal Number and Take a Measurement

If your personal number is not recognized frequently, you can select your personal number and take the measurement as follows.

1. Press the ON/OFF button to turn on the power.

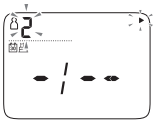
The power turns on. Personal number "1" blinks.



2. Select your personal number.

Select your personal number with the ▶ button.

> **When the birth date (- / - -) is displayed,**
> **Your personal data has not been registered in your personal number.**
> Register your personal data. (Refer to Section 5.)



3. Press the SET button to confirm your personal number.

"0.0 kg" is displayed.

4. Take a measurement when "0.0 kg" is displayed.

Step onto the unit.



5. Check the measurement results.

The results display rotates automatically.

6. Press the ON/OFF button (2 seconds or longer) to turn off the power.

The power turns off if the unit is not used for 3 minutes.

When necessary

10. Guest Mode (Unrecorded Mode)

When this mode is used, your measurement results will not be recorded.

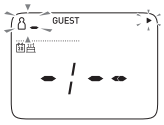
1. Press the ON/OFF button to turn on the power.

The power turns on. Personal number "1" blinks.



2. Select and confirm "GUEST".

Select "GUEST" with the ▶ button, and then press the SET button to confirm.

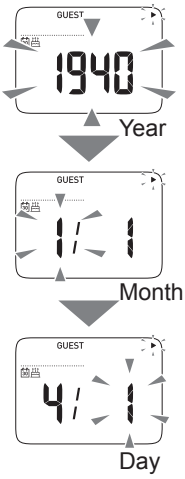


3. Enter personal data.

3.1 Set the birth date

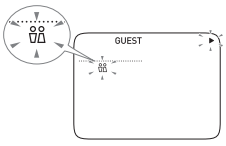
Press the ▶ button to set the birth date and press the SET button to confirm.

- Setting range of year: 1900 to 2045
- During setting the year and date, hold down the ▶ button to advance rapidly in increments of 10.



3.2 Set the gender

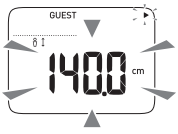
Press the ▶ button to set the gender ♂ (MALE) or ♀ (FEMALE) and press the SET button to confirm.



3.3 Set the height

Press the ▶ button to set the height and press the SET button to confirm.

- Press continuously to rapidly advance in increments of 10 cm.

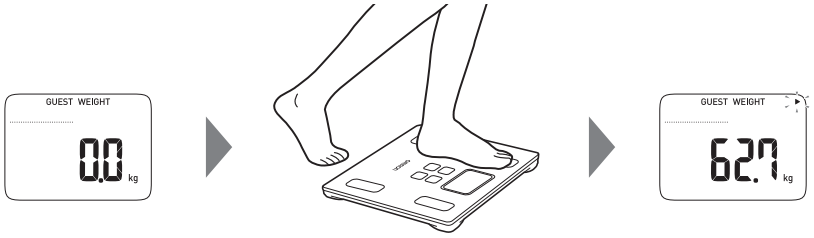


After all the settings are displayed for your confirmation, "0.0 kg" appears on the display.

The power turns off if the unit is not used for 1 minute after "0.0 kg" is displayed.

4. Start Measurement when "0.0 kg" is displayed.

Step onto the unit.



5. Check the measurement results.

The results display rotates automatically.

6. Press the ON/OFF button (2 seconds or longer) to turn off the power.

The power turns off if the unit is not used for 3 minutes.

When necessary

11. Measure Weight Only

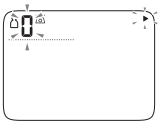
When this mode is used, your measurement result will not be recorded.

1. Press the ON/OFF button to turn on the power.

The power turns on. Personal number "1" blinks.

2. Select and confirm "".

Select "" with the ▶ button, and then press the SET button to confirm.



3. When the "0.0 kg" is displayed, step onto the unit.



4. Check the measurement result.

Your weight is displayed and blinks to indicate that measurement is completed.

5. Press the ON/OFF button (2 seconds or longer) to turn off the power.

The power turns off if the unit is not used for 3 minutes.

When necessary

12. Change or Delete Your Personal Data

1. Press the (ON/OFF) button to turn on the power.
The power turns on. Personal number "1" blinks.

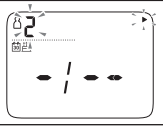


2. Select your personal number
Press the (▶) button to select the personal number.

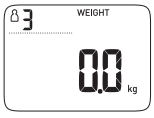


When the birth date (- / - -) is displayed,

Your personal data is not registered in your personal number.
Register your personal data. (Refer to Section 5.)



3. Press the (SET) button to confirm the personal number.
"0.0 kg" is displayed.



4. Press the (SET) button.
"CHANGE" and "DEL" blink.

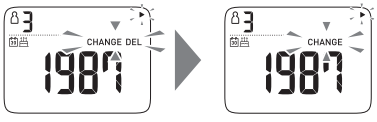


5. Select "CHANGE" or "DELETE" the personal data

- Even if the personal data are changed, the measurement results will not be changed or deleted. When using the personal number which has been used by another person, delete the personal data and then register the personal data again.

Change your personal data
(The measurement results won't be deleted)

1. Press the (▶) button to select "CHANGE"



2. Press the (SET) button
The year blinks.

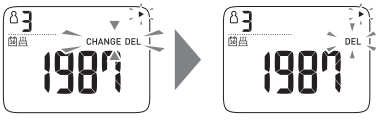


3. Change "birth date", "gender" and "height" with reference to Step 3 ~Step 5 of Section 5.

- To stop any change halfway, press the (ON/OFF) button (2 seconds or longer) to turn off the power.
- The untransferred measurement results will not be changed.

Delete your personal data
(The measurement results will also be deleted)

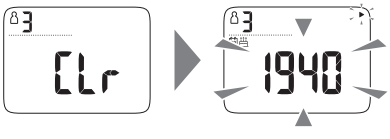
1. Press the (▶) button to select "DEL"



2. Press the (SET) button
OK? blinks.



3. Press the (SET) button again



When necessary

13. Delete the Communication Setting

If you want to stop the use of the "OMRON connect" app or delete the communication settings from your smart device, please operate as follows. All the communication settings recorded in the unit will be deleted.

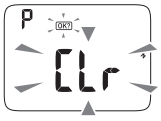
1. **Press and hold the (Bluetooth) button more than 2 seconds.**

" P " and the Bluetooth symbol blink.



2. **Press and hold the (Bluetooth) button more than 2 seconds again.**

" OK? " and "CLr" blink.



3. **Press the SET button to confirm.**

The power turns off if the unit is not used for 10 seconds after "CLr" is displayed.



When necessary

14. Maintenance and Storage

How to Clean the Unit

- Always keep the unit clean before use.
- Wipe the unit with a soft dry cloth. If necessary, use a cloth moistened with water or detergent and squeeze it well before wiping the unit, then wipe off with a dry cloth.
- Do not use benzene or thinner, or other volatile solvents to clean the unit.
- Do not wash the unit with water.

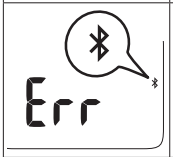
Care and Storage

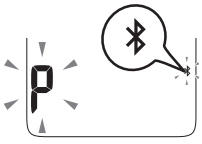
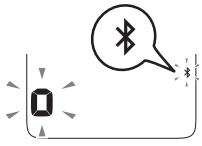
- Do not store the unit in the following conditions:
  - Humidity, where moisture or water may get into the unit
  - High temperatures, direct sunlight or dusty places
  - Places with the risk of sudden shocks or vibrations
  - In places where chemicals are stored or where corrosive gas is present.
- Do not carry out repairs of any kind by yourself. This product is calibrated at the time of manufacture. If at any time you question the accuracy of measurements, please contact your authorized OMRON distributor. In general it is recommended to have the device inspected every 2 years to ensure correct functioning and accuracy.

When necessary

15. Troubleshooting

In case of any of the below problems occur during the measurement, first check that no other electrical device is within 30cm. If the problem persists, refer to the table below.

Error Display	Cause	Correction
Err 1	You stepped off the unit during a measurement of body composition.	Do not step off the unit until the measurement of body composition is completed. (Refer to Section 6.)
	Your soles are not in firm contact with the electrodes.	Make sure that you are standing on the unit correctly by placing your soles firmly on the electrodes when taking a measurement. (Refer to Section 6.)
Err2	The posture for measurement is incorrect, your soles are not in firm contact with the electrodes or your soles were dry.	Stand with your knees and back straight. Keep your feet firmly placed on the electrodes and do not move your feet when taking a measurement. (Refer to Section 6.) Slightly moisten your soles with a wet towel and try again.
Err5	Device error.	Turn on the power again and then take a measurement. If this error continues to display, consult the OMRON service representative.
Err6	Communication failure.	Turn off the power and try to communicate again. If this error is displayed again, contact the OMRON service representative.
Err	You moved during a measurement.	Stand still during a measurement.
	Your body weight was out of the measurable range.	
	Communication failure.	Confirm the display of your smart device and follow the instructions in "OMRON connect" app. Refer to "Help" from "OMRON connect" app.
	Batteries are low.	Recommend to replace the batteries with new ones ahead of time. (Refer to Section 2.)
	Batteries are depleted.	Replace the batteries. (Refer to Section 2.)

Problem	Cause	Correction
 blinks	24-29 sets of measurements results have been stored.	Transfer the measurement results to "OMRON connect" app, then the symbol will disappear.
	30 sets of measurements results have been stored.	If the number exceeds 30, the oldest results are deleted.Transfer the measurement results to "OMRON connect" app, then the symbol will disappear.
	You pressed and held the button more than 2 seconds.	This is displayed when you pair your unit with your smart device. Follow the instructions on the "OMRON connect" app. Press the ON/OFF button (2 seconds or longer) to stop the pairing.
	You pressed the button.	This is displayed when the data is transferred to your smart device. Follow the instructions on the "OMRON connect" app. Press the ON/OFF button (2 seconds or longer) to stop the transmission.
	You pressed and held the button more than 2 seconds when "P" and the Bluetooth symbol were blinking.	This is displayed when you delete the communication setting. (Refer to Section 13.) Press the ON/OFF button (2 seconds or longer) to stop the operation.
Even if you turn on the power, nothing is displayed. Even if you step onto the unit, nothing is displayed.	No batteries are inserted.	Insert the batteries.
	The batteries are inserted in the wrong direction.	Insert the batteries in the correct direction.
	The batteries are worn out.	Replace all four batteries with new ones.
After replacing the batteries, nothing is displayed when stepping onto the unit.	You didn't set the date and time after replacing the batteries.	Set the date and time. (Refer to Section 4.)
	Your body weight is too low. (Less than 12 kg.)	Select personal number before taking a measurement.
"- - - - -" is displayed for some results.	The registered data or body composition values were out of the measurable range.	Check whether the settings of birth date, gender, and height are correct. Even if these settings are correct, "- - - - -" is displayed if they are out of the displayable or supported age range.

Problem	Cause	Correction
The measurement result is higher or lower than the actual result. The result varies widely for each measurement.	Your posture is wrong during a measurement.	Take a measurement with a correct posture.
	You take a measurement on a carpet or cushioned floor surface, or an uneven floor.	Take a measurement on a hard and flat floor.
	Your soles and body are cold, impairing blood circulation.	Warm your body to get blood circulation back to normal before taking a measurement.
	The foot electrodes are very cold.	Leave the unit in a warm room for a while before taking a measurement.
	Your soles are dry.	Slightly moisten your soles with a wet towel before taking a measurement.
	The "0 kg correction" was not implemented correctly.	Implement the "0 kg correction". (Refer to Section 6.3.)
You are not recognized correctly.	Your body weight has changed widely since the last measurement.	Select personal number before taking a measurement. (Refer to Section 9.)
	Your body type is similar to another registered person.	
	The measurement results of another user has been registered.	
You want to measure the body composition, but only the body weight is displayed.	Personal number or GUEST is not selected. (Personal number or GUEST is not displayed.)	Select personal number or GUEST before taking a measurement.
A button does not respond.	You pressed a button when you stood on the unit.	Step off the unit, and then press a button.
	The button is wet or contaminated.	Wipe off the water or stain before taking a measurement.
	You pressed two or more buttons simultaneously.	Press one button at a time.
Even if you do nothing, the power turns off.	Refer to "About the Power OFF Function". (Refer to Section 2.)	
Failure to send data	Refer to "Help" in "OMRON connect" app.	

When necessary

16. Technical Data

Product Category	**Body Composition Analyzers**	
Product Description	**Body Composition Monitor**	
Model (code)	**HBF-222T (HBF-222T-APW/HBF-222T-INW)**	
Display*	**Body Weight:**	2.0 to 150.0 kg with an increment of 0.1 kg
	Body Fat percentage:	5.0 to 50.0% with an increment of 0.1%
	Skeletal Muscle percentage:	5.0 to 60.0% with an increment of 0.1%
	BMI:	2.5 to 90.0 with an increment of 0.1
	Resting Metabolism:	385 to 3999 kcal with an increment of 1 kcal
	Body Age:	18 to 80 years old with an increment of 1 year
	Visceral Fat Level:	30 levels with an increment of 1 level
	Body fat percentage, Skeletal muscle percentage and BMI classification: – (Low) / 0 (Normal) / + (High) / ++ (Very High) 4 levels	
	Visceral fat level classification: 0 (Normal) / + (High) / ++ (Very High) 3 levels * The age range for the Body Fat percentage, Body fat percentage classification, Skeletal Muscle percentage, Skeletal Muscle percentage classification, Resting Metabolism is 6 to 80 years old. * The age range for the Visceral Fat level, Visceral Fat level classification and Body Age is 18 to 80 years old.	
Transmission Protocol	**Bluetooth®** low energy technology	
Wireless communication	**Frequency range:**	2.4 GHz (2400 - 2483.5 MHz)
	Modulation:	GFSK
	Effective radiated power:	<20 dBm
Setting Items*	The following information can be stored for up to 4 persons.	
	Measurement unit	kg&cm
	Birth date	January 1st, 1900 to December 31st, 2045
	Gender	Male / Female
	Height	100.0 to 199.5 cm with an increment of 0.5 cm
	* When the height of a person is less than 100.0 cm or more than 199.5 cm, BMI and body composition measurement results are for reference.	
Weight Accuracy	2.0 kg to 40.0 kg: ± 0.4 kg	
	40.0 kg to 150.0 kg: ± 1%	
Accuracy (S.E.E.)	**Body Fat percentage:**	3%
	Skeletal Muscle percentage:	3.5%
	Visceral Fat Level:	2 levels
Durable Period	5 years	
IP Classification	IP21	
Power Supply	4 AAA alkaline batteries (LR03)	

Battery Life	Approximately 6 months (When AAA alkaline batteries are used in four measurements, four data transfers and four persons a day at a room temperature of 23°C)
Operating Temperature/ Humidity/Air Pressure	+5°C to +40°C, 30% to 85% RH (no-condensing), 860 hPa - 1060 hPa
Storage and Transport Temperature/Humidity/ Air Pressure	-20°C to +60°C, 10% to 95% RH (no-condensing), 860 hPa - 1060 hPa
Weight	Approximately 1.6 kg (including batteries)
External Dimensions	Approx. 285(W)×28(H)×280(D) mm (Approx. 11 1/5"(W)×1 1/10"(H)×11"(D))
Contents	Body composition monitor, 4 AAA alkaline batteries (LR03), setup instructions, instruction manual, caution sheet

Note • Subject to technical modification without prior notice.

CE 0197

This device fulfils the provisions of EC directive 93/42/EEC (Medical Device Directive).

This Product operates in the unlicensed ISM band at 2.4GHz. In case this Product is used around the other wireless devices including microwave and wireless LAN, which operate same frequency band of this Product, there is a possibility that interference occurs between this Product and such other devices. If such interference occurs, please stop the operation of other devices or relocate this Product before using this Product or do not use this Product around the other wireless devices.

Bluetooth®

The **Bluetooth®** word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by OMRON HEALTHCARE Co., Ltd. is under license.

Hereby, OMRON HEALTHCARE Co., Ltd., declares that the radio equipment type is in compliance with Directive 2014/53/EU.
Apple and the Apple logo are trademarks of Apple Inc., registered in the U.S. and other countries.
App Store is a service mark of Apple Inc.
Android, the Google Play logo are trademarks of Google Inc.

Important information regarding Electro Magnetic Compatibility (EMC)

This device manufactured by OMRON HEALTHCARE Co., Ltd. conforms to EN60601-1-2:2015 Electro Magnetic Compatibility (EMC) standard.
Further documentation in accordance with this EMC standard is available at OMRON HEALTHCARE EUROPE at the address mentioned in this instruction manual or at www.omron-healthcare.com

Correct Disposal of this Product
(Waste Electrical & Electronic Equipment)



This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

This product does not contain any hazardous substances.
Disposal of used batteries should be carried out in accordance with the national regulations for the disposal of batteries.

Description of symbols that, depending on a model, can be found on the product itself, product sales package or IM.			
	Applied part - Type BF Degree of protection against electric shock (leakage current)	SN	Serial number
IP XX	Ingress protection degree provided by IEC 60529		Temperature limitation
CE	CE Marking		Humidity limitation
	GOST-R symbol		Atmospheric pressure limitation
EAC	Symbol of Eurasian Conformity	⎓	Direct current
	Need for the user to consult the instructions for use		This product should not be used by persons with medical implants, e.g. heart pacemakers, artificial heart, lung or other electronic life support systems.
Product production date is integrated in a Serial number, which is placed on the sales package: the first 4 digits mean year of production, the next 2 digits - month of production.			

17. Information on Body Composition

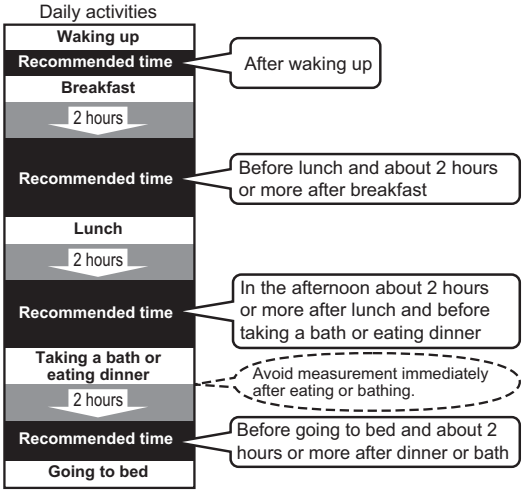
Principle of body composition calculation

Body fat has low electric conductivity

HBF-222T measures the body fat percentage by the Bioelectrical Impedance (BI) method. Muscles, blood vessels and bones are body tissues with a high water content that conducts electricity easily. Body fat is tissue that has little electric conductivity. The unit sends an extremely weak electrical current of 50 kHz and less than 500 μA through your body to determine the amount of fat tissue. This weak electrical current is not felt while operating the unit.
In order for the scale to determine your body composition, it uses the electrical impedance, along with your height, weight, age and gender information to generate results based on OMRON's data of body composition.

Recommended measurement times

Understanding the normal changes in your body fat percentage can help you in preventing or reducing obesity. Being aware of the times when the body fat percentages shift within your own daily schedule will assist you in obtaining an accurate trending of your body fat. It is recommended to use this unit in the same environment and daily circumstances. (See chart)



Avoid Taking Measurements Under the Following Conditions:

- Immediately after vigorous exercise, after a bath or sauna.
- After drinking alcohol or a large amount of water, after a meal (about 2 hours).

If a measurement is taken under these physical conditions, the calculated body composition may differ significantly from the actual one because the water content in the body is changing.

What is BMI (Body Mass Index)?

BMI uses the following simple formula to indicate the ratio between weight and height of a person.

BMI = weight (kg) / height (m) / height (m)

The OMRON HBF-222T uses the height information stored in your personal number or when entering information in the Guest Mode to calculate your BMI classification.
If the fat level revealed by BMI is higher than the international standard, there is an increased likelihood of common diseases. However, not all types of fat can be revealed by BMI.

What is Body Fat Percentage?

Body fat percentage refers to the amount of body fat mass in regards to the total body weight expressed as a percentage.

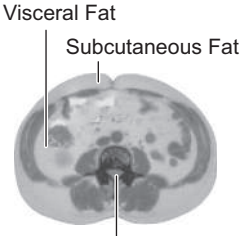
Body fat percentage (%) = {Body fat mass (kg) / Body weight (kg)} × 100

HBF-222T uses the BI method to estimate your body fat percentage.
Depending on where the fat is distributed in the body, it is classified as visceral fat or subcutaneous fat.

What is Visceral Fat Level?

Visceral fat = fat surrounding internal organs

Too much visceral fat is thought to be closely linked to increased levels of fat in the bloodstream, which can lead to common diseases such as hyperlipidemia and diabetes, which impairs the ability of insulin to transfer energy from the bloodstream and using it in cells. In order to prevent or improve conditions of common diseases, it is important to try and reduce visceral fat levels to an acceptable level. People with high visceral fat levels tend to have large stomachs. However, this is not always the case and high visceral fat levels can lead to metabolic obesity. Metabolic obesity (visceral obesity with normal weight) represents fat levels that are higher than average, even if a person's weight is at or below the standard for their height.

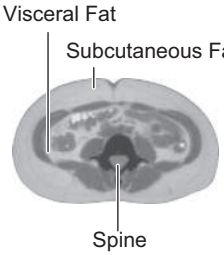


Sample Visceral Fat
(MRI image)

What is Subcutaneous Fat?

Subcutaneous fat = fat below the skin

Subcutaneous fat not only accumulates around the stomach but also around the upper arms, hips and thighs, and can cause a distortion of the body's proportions. Although not directly linked to increased risk of disease, it is thought to increase pressure on the heart and other complications. Subcutaneous fat is not displayed in this unit, but is included in the body fat percentage.



Sample Subcutaneous Fat
(MRI image)

What is Skeletal Muscle?

Muscle is divided into two types, muscle in internal organs, such as the heart, and skeletal muscle attached to bones that is used to move the body. Skeletal muscle can be increased through exercise and other activity. Increasing the ratio of skeletal muscle means that body can burn energy more easily, which means that it is less likely to turn to fat, and makes it easier to lead an energetic lifestyle.

What is Resting Metabolism?

Regardless of your activity level, a minimum level of caloric intake is required to sustain the body's everyday functions. Known as the resting metabolism, this indicates how many calories you need to ingest in order to provide enough energy for your body to function.

What is Body Age?

Body age is based on your resting metabolism. Body age is calculated for you as a guide that indicates whether your overall body composition profile (based on weight, body fat percentage and skeletal muscle percentage) is above or below the average for your actual age. To know your body age is useful to improve your health condition.

18. Measurement Results Interpretation Diagrams

Interpreting the Body Fat Percentage Result

Body Fat Percentage		Classification
Male	**Female**	**4 Level**
5.0 ~ 9.9%	5.0 ~ 19.9 %	- (Low)
10.0 ~ 19.9 %	20.0 ~ 29.9 %	0 (Normal)
20.0 ~ 24.9 %	30.0 ~ 34.9 %	+ (High)
25.0 ~ 50.0 %	35.0 ~ 50.0 %	++ (Very High)

Based on the obesity values proposed by Lohman (1986) and Nagamine (1972).

Interpreting the BMI

BMI	BMI (Designation by the WHO)
2.5 - 18.4	- (Underweight)
18.5 - 24.9	0 (Normal)
25 - 29.9	+ (Overweight)
30.0 - 90.0	++ (Obese)

Interpreting the Visceral Fat Level Result

Visceral Fat Level	Level Classification
1 - 9	0 (Normal)
10 - 14	+ (High)
15 - 30	++ (Very High)

According to OMRON HEALTHCARE figures

Interpreting the Skeletal Muscle Percentage Result

Gender	– (Low)	0 (Normal)	+ (High)	++ (Very High)
Female	5.0-25.8	25.9-27.9	28.0-29.0	29.1-60.0
Male	5.0-32.8	32.9-35.7	35.8-37.3	37.4-60.0

According to OMRON HEALTHCARE figures

Interpreting the BMI Result

AGE (Years old)	**Male**			**Female**		
	Resting Metabolism Base Value (kcal/kg Body Weight/Day)	**Reference Body Weight** (kg)	**Resting Metabolism** (kcal/Day)	**Resting Metabolism Base Value** (kcal/kg Body Weight/Day)	**Reference Body Weight** (kg)	**Resting Metabolism** (kcal/Day)
1~2	61.0	11.5	700	59.7	11.0	660
3~5	54.8	16.5	900	52.2	16.1	840
6~7	44.3	22.2	980	41.9	21.9	920
8~9	40.8	28.0	1,140	38.3	27.4	1,050
10~11	37.4	35.6	1,330	34.8	36.3	1,260
12~14	31.0	49.0	1,520	29.6	47.5	1,410
15~17	27.0	59.7	1,610	25.3	51.9	1,310
18~29	24.0	63.2	1,520	22.1	50.0	1,110
30~49	22.3	68.5	1,530	21.7	53.1	1,1150
50~69	21.5	65.3	1,400	20.7	53.0	1,100
70	21.5	60.0	1,290	20.7	49.5	1,020

* Ministry of Health, Labor and Welfare: Dietary Reference Intakes of Japanese people (2015 version)

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