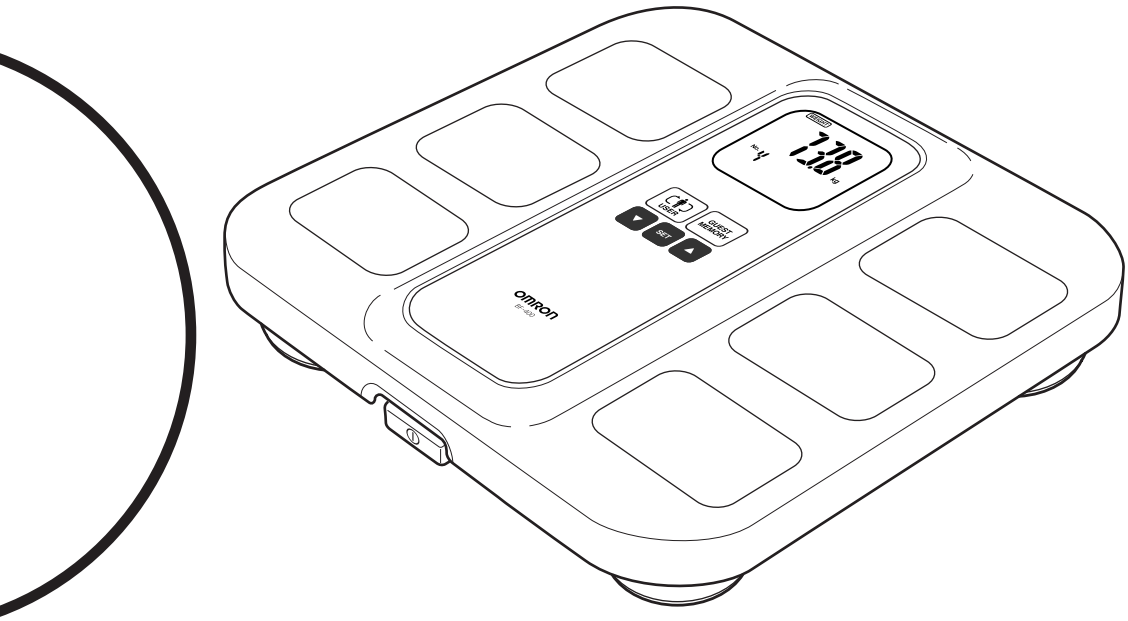
OMRON



BF400

Body Fat Monitor with Scale

- **Instruction Manual**
- **Mode d'emploi**
- **Gebrauchsanweisung**
- **Manuale di istruzioni**
- **Manual de instrucciones**
- **Gebruiksaanwijzing**
- **РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ**

EN FR DE IT ES NL RU

Thank you for purchasing Body Fat Monitor with Scale.
Before using this unit for the first time, please be sure to read this instruction manual carefully and use the unit properly.
Please keep this instruction manual on hand for future reference.

A Good Sense of Health

IM-HBF-400-E-03-08/08
9042756-8C

Contents

Features

Easy-to-Understand Display

This unit calculates and displays the body fat percentage by using the Bioelectrical Impedance (BI) method. The displayed values for body fat and BMI* (Body Mass Index) are indicated in four ranges: "–", "0", "+", "++".

BI method: Bioelectrical Impedance method (full explanation on page 7)

BMI: Body Mass Index.
This Index indicates the ratio between weight and height of a person.
Common standard in the medical profession.

Formula (in metric): weight (kg) / height (m) / height (m).

Measurement is fast and simple.

After entering the data, a measurement can be started by simply pushing the power switch, selecting your personal ID number and stepping onto the measurement platform.

The calculated results are shown in an easy-to-see display.

Body fat percentage and body mass index are shown simultaneously in an easy-to-see large digital display and a bar display that can be read at a glance.

The memory function stores up to 4 personal profiles

The memory function can store individual settings (age, gender, and height) for up to four people.

The memory function also stores the previous measurement results for each ID

A simple press of the GUEST/MEMORY button displays the measurement results from the previous measurement.

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Notes on Safety

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 may cause the above mentioned medical electronic devices to malfunction.

Warning!

- Do not step on the edge of the unit as you may fall or lose your balance.
- Do not jump onto the unit, or hop up and down on the unit.
- Do not drop the unit.
- Do not use the unit on tiles or other surfaces that may be slippery, such as a wet floor.
- Do not use this unit when your body and/or feet are wet, such as after taking a bath.
- People with disabilities, or who are physically frail, should always be assisted by another person when using this unit.
- Never start weight reduction or exercise therapy without the instructions of a doctor or a specialist.
- If battery fluid should get in your eyes, immediately rinse with plenty of clean water. Consult a doctor immediately.

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

Save these instructions for future reference.

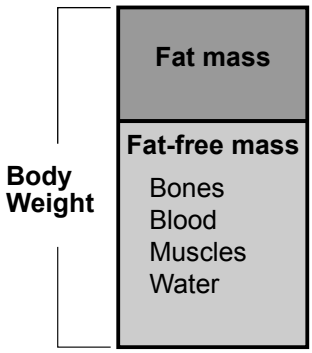
1. What You Should Know When Using This Unit

1.1 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.

This OMRON BF400 will provide your specific body fat percentage and body weight. It is also an excellent tool to estimate your body fat percentage and measure body weight on a continuous schedule.

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



Body fat reading is affected by the change of water content in the body.

A person's hydration level and blood circulation may have an effect on their body fat reading. In the table below are some situations which could affect the reading.

Cause of Fluctuations	Examples of Fluctuation
Water and food intake	1 to 2 hours after breakfast, lunch or dinner
Changes in blood circulation	After taking a bath or shower, immediately after exercising, in extreme environments (warm or cold), during illness or extreme fatigue

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1.2 Advice for Measurement

If the soles of your feet are dry or the temperature of your feet or the electrodes are extremely cold, it will not be possible to obtain stable measurements, which may lead to display error indication or inaccurate results.

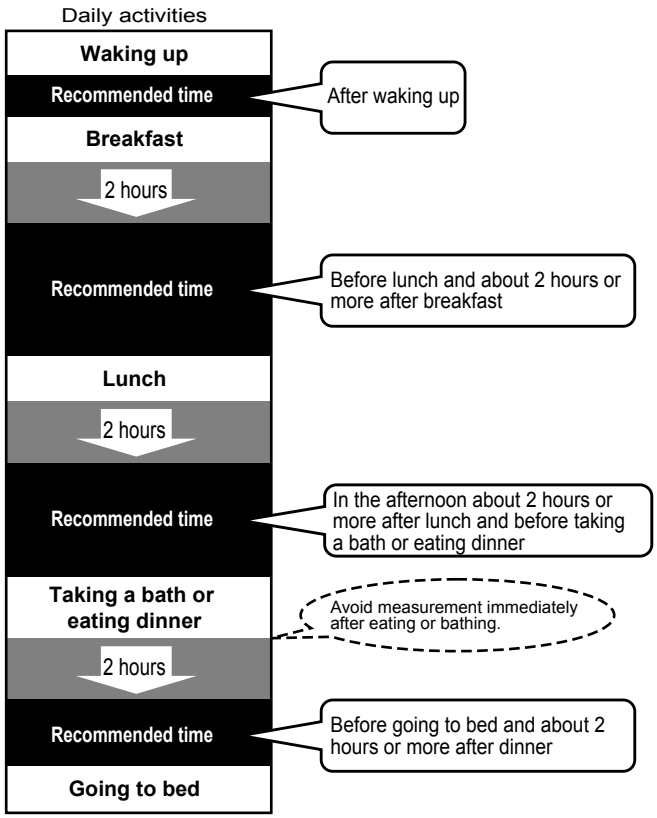
Please pay special attention in winter because the air is dry and/or the temperature is low.

Conditions	Actions
Feet are dry.	Slightly moisten soles of your feet with a wet towel, then measure.
When you step onto the electrodes, they feel cold.	Allow the electrodes to warm by leaving the unit in a warm room for approximately ten minutes.
Your body and feet are cold due to the blood not circulating well.	Warm your feet by immersing in hot water or staying in a warm room. Make sure the feet are dried properly.

Recommended times for measurement

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)

Recommended times for measurement



1.3 Principles of Body Fat Percentage Measurement

The OMRON BF400 estimates the body fat percentage by the Bioelectrical Impedance (BI) method.

What is the Bioelectrical Impedance method?

Muscles, blood vessels and bones are body tissues having a high water content that conduct electricity easily. Body fat is tissue that has little electric conductivity. The BF-400 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 BF400.

The Bioelectrical Impedance Method safely combines the electric resistance with the distance of the electricity conducted. Correct posture and consistent measuring conditions need to be maintained for the best results.

How to estimate the body fat percentage.

DXA (Dual Energy X-Ray Absorptiometry), has been the established method for accurate evaluation of body composition. OMRON has used research information from several hundred people using the DXA method to develop the formula by which the BF-400 works. The body fat mass and body fat percentage is calculated by a formula that includes five factors: electric resistance, height, weight, age and gender.

What is the DXA method?

The DXA method uses two different frequency X-Rays and rates of absorption of the body and determines the value based on the difference between the two.

People who may get erratic results

There are certain conditions, such as with dialysis patients, when significant differences may occur between the estimated and actual body fat values.

These differences may be related to consistently changing ratios of body fluid and/or body composition.

Also refer to: “Avoid Taking Measurements Under the Following Conditions” and “Cases When the Calculated Results May Differ from Actual Body Fat Percentages” in section 5.

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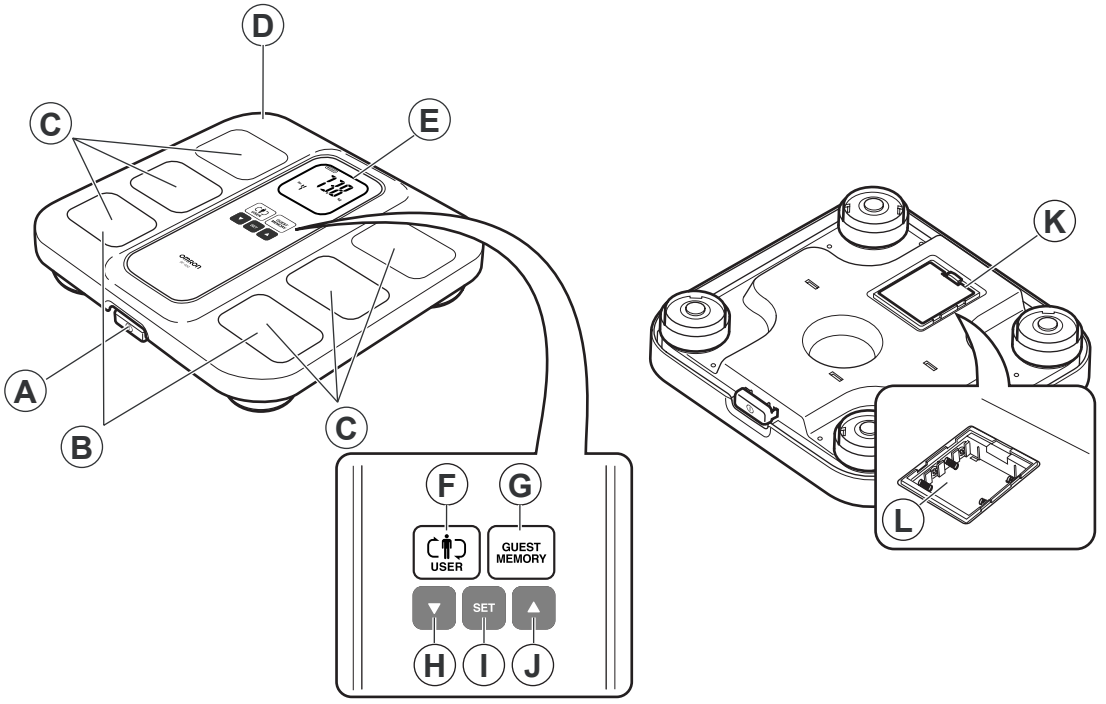
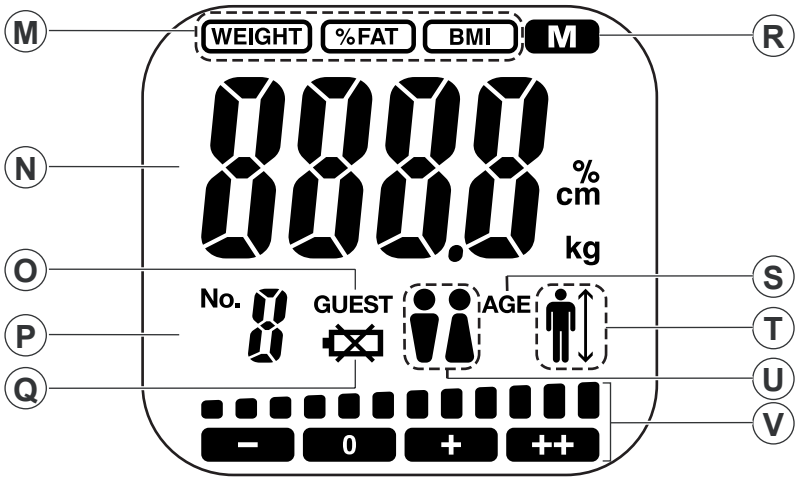
2. Know Your Unit

Main Unit



A. Power Switch
B. Heel Electrodes
C. Electrodes
D. Measurement Platform
E. Display
F. USER Button
G. GUEST/MEMORY Button
H. ▼(Down) Button
I. SET Button
J. ▲(Up) Button
K. Battery Cover
L. Battery Compartment

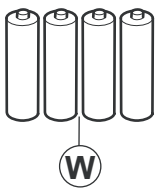
Display



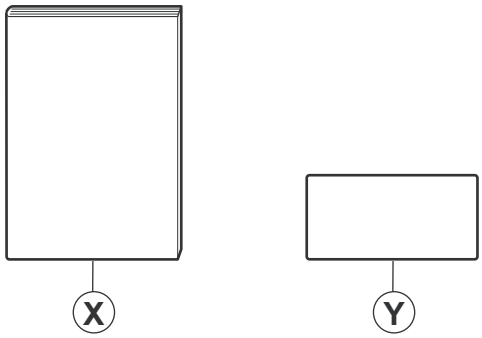
M. Display Mode Indicator
- WEIGHT :Weight
- %FAT :Body Fat Percentage
- BMI :BMI

N. Measurement Results
O. GUEST Indicator
P. Personal ID Number
Q. Battery Low Indicator
R. Memory Indicator
S. Age Indicator
T. Height Indicator
U. Gender Indicator
V. Measurement Progress / Body fat percentage and BMI Classification Bar

Packaging Contents



W. Four AA manganese batteries



X. Instruction Manual (this document)
Y. Warranty Card

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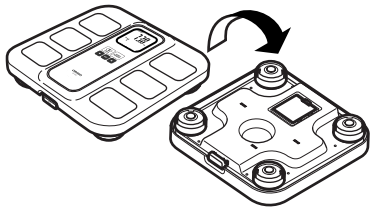
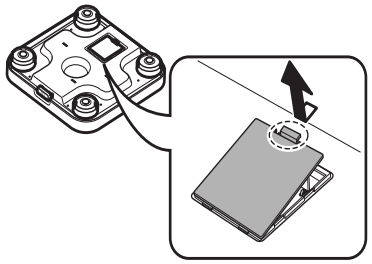
3. Inserting and Replacing the Batteries

1. Turn the unit over.

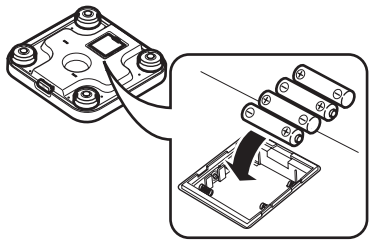


2. Press the tab at the top of the battery cover and lift the cover off the unit.



3. Insert the batteries as indicated.

Make sure that their polarity (+/–) is aligned with the polarity (+/–) indicated in the battery compartment.



4. Put the battery cover back in place.

Note: The unit remembers previous measurement results and personal ID information even when the batteries are replaced.

Battery life and replacement

When the battery low indicator lights, replace all four batteries with new ones.

- Replace the batteries after turning off the power.
- Disposal of used batteries should be carried out in accordance with the national regulations for the disposal of batteries.

Battery life

- Four AA batteries will last approximately 1 year (when measurements are made four times a day).
- Because the supplied batteries are for trial use only, they may have a shorter life.

Warning!

If battery fluid should get in your eyes, immediately rinse with plenty of clean water. Consult a doctor immediately.

Caution!

- Do not use batteries not 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 batteries of a different kind together.
- Do not use new and worn batteries together.

4. Setting and Adjusting Personal Data

1. Push the power switch to turn on the unit.

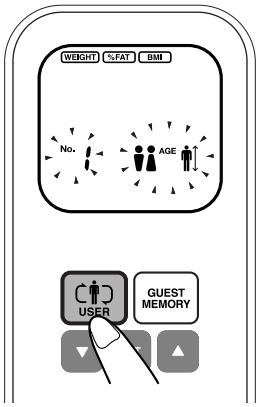
"CAL" blinks on the display, then the display changes to 0.0 kg.
Wait until 0.0 kg appears on the display.

2. Press the USER button to select a personal ID number.

The ID number changes with each press of the USER button as follows.

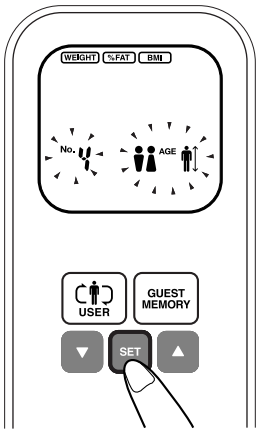
If no information has been entered for a personal ID number, the personal ID number and the three icons for gender, age, and height blink, as shown in the illustration.

If information has already been entered, only the personal ID number blinks.



3. Press the SET button to confirm your selection.

The default setting for the age setting appears on the display.



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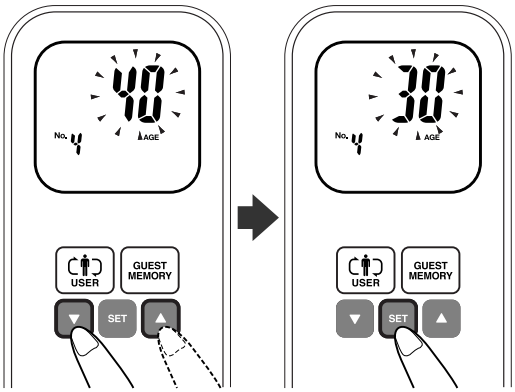
4. Set your age, gender, and height.

Age

1) Press the ▲ or ▼ button to adjust the age setting to the desired age.

2) Press the SET button to confirm the setting.

The age setting is set, and the gender icons blink on the display.

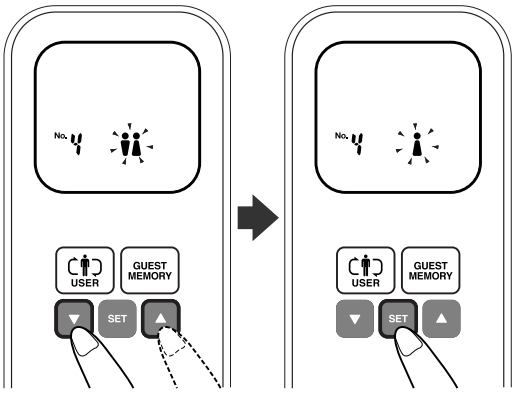


Gender

3) Press the ▲ or ▼ button to adjust the gender setting to the desired gender.

4) Press the SET button to confirm the setting.

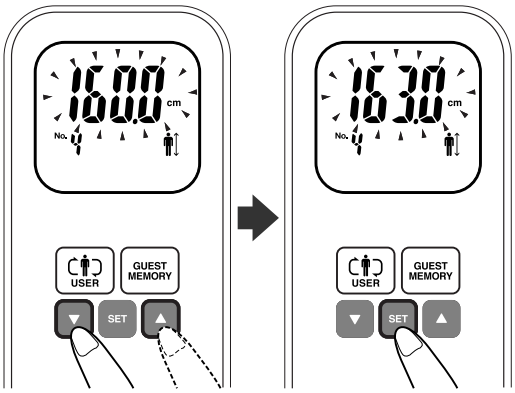
The gender setting is set, and the default height setting blinks on the display.



Height

5) Press the ▲ or ▼ button to adjust the height setting to the desired height.

6) Press the SET button to confirm the setting.



After you confirm the setting for height, the unit displays the settings for all three settings then 0.0 kg appears on the display.

You can now start taking measurements. (Proceed to Step 3 in “5.1 Taking a Measurement” on page 15.)

Changing the Information for a Personal ID Number

If the personal information stored for any of the personal ID numbers (1-4) changes, the settings for that ID will need to be adjusted.

1. Repeat steps 1 to 2 in the procedure above.

2. Press the SET button to confirm your selection.

3. Press the SET button.

The age setting appears on the display and the age setting blinks.

4. Adjust the information for your age, gender, and/or height.

Press the ▲ and ▼ buttons to adjust the settings for each category and then press the SET button to confirm each setting.

Then you can now start taking measurements. (Process to Step 3 in “5.1 Taking a Measurement” on page 15.)

Delete a Personal ID Number

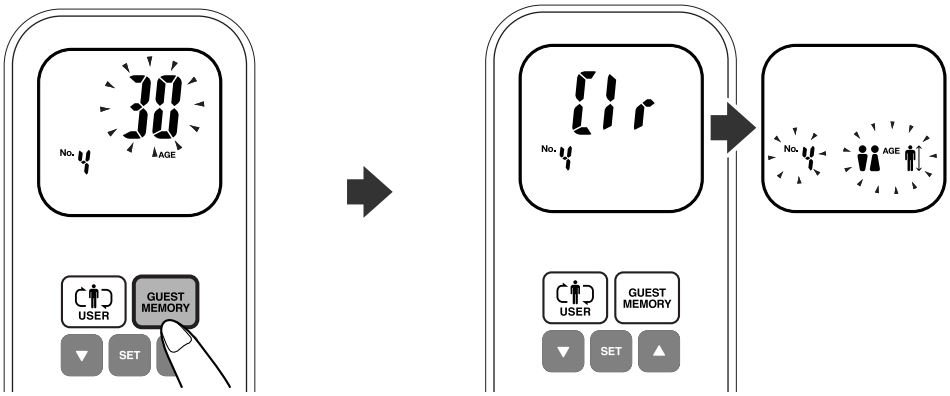
1. Repeat steps 1 to 2 in section “4. Setting and Adjusting Personal Data” on page 11.

2. Press the SET button to confirm your selection.

3. Press the SET button.

The age setting appears on the display and the age setting blinks.

4. Press the GUEST/MEMORY button for two seconds.



“Clr” will appear in the display and the registered information is deleted from memory.

Note: The stored results for the previous measurement will also be deleted.

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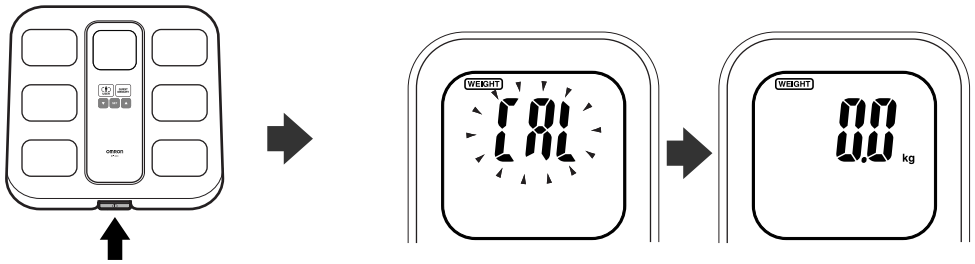
5. Using the Unit

5.1 Taking a Measurement

1. Push the power switch to turn on the unit.

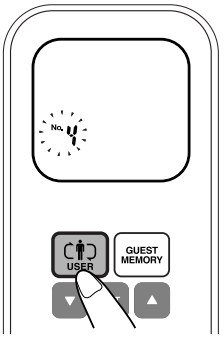


"CAL" blinks on the display, then the display changes to 0.0 kg.
Wait until 0.0 kg appears on the display.

2. Select Personal ID or Guest mode.

If you have a personal profile (Personal ID) registered on the unit:

1. Press the USER button until the ID number for the personal ID containing your personal profile blinks on the display.



Notes:

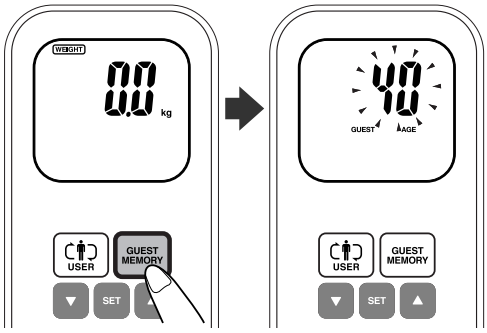
- If an error occurred for the body fat percentage measurement during the previous measurement, "– – –" will be displayed for %FAT.
- If you want to check the last measurement results, press the GUEST/MEMORY button while your personal profile blinks on the display. The memory indicator is displayed. After you check the last measurement results (refer to p. 15), push the power switch to turn off the unit.

2. Press the SET button.

"CAL" blinks on the display, then the display changes to 0.0 kg.
Wait until 0.0 kg appears on the display.

If you do not have a personal profile registered on the unit (Guest mode):

1. Press the GUEST/MEMORY button.



The GUEST indicator appears on the display and the age setting blinks.

2. Enter the information for your age, gender and height. (Step 4 in "4. Setting and Adjusting Personal Data" on page 12)

Press the ▲ or ▼ buttons to adjust the settings for each category and then press the SET button to confirm each setting.

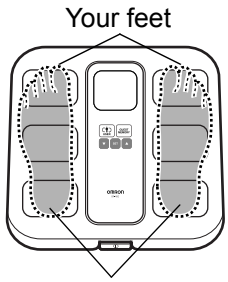
After you confirm the setting for height, the unit displays the settings for all three settings then 0.0 kg appears on the display.

3. Step onto the measurement platform.

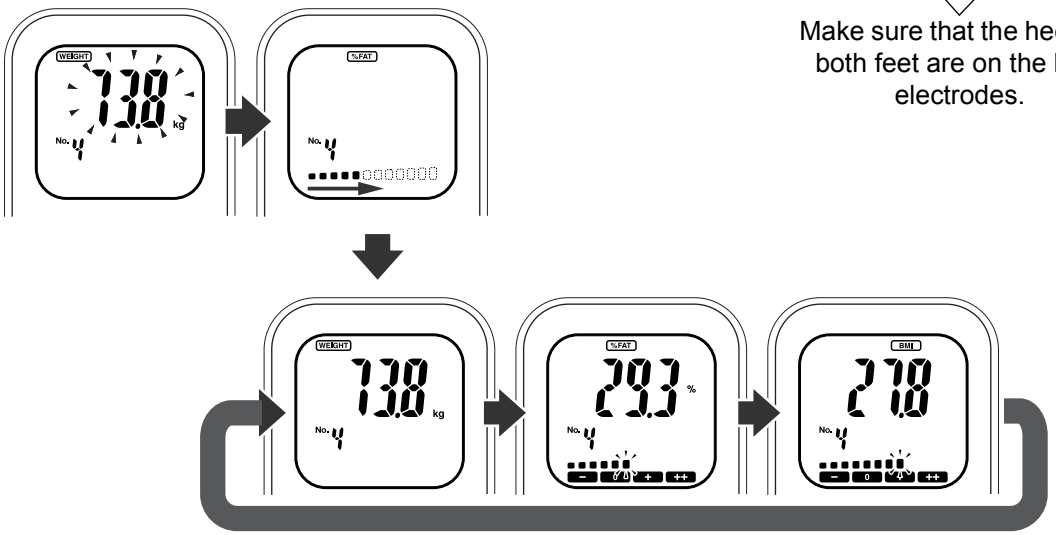
Make sure that you are bare foot and that the soles of your feet are clean.

Make sure that your feet are correctly positioned on the electrodes and that you are standing with your weight evenly distributed on the platform.

Remain still and do not move until the measurement is complete.



Make sure that the heels of both feet are on the heel electrodes.



The display will show your weight and then the weight result will blink. The indicators in the measurement progress bar at the bottom of the display will gradually appear, from left to right.

After measurement completes, your weight is displayed again. At this point you may step off the measurement platform.

After three seconds have passed since your weight was displayed, the three measurement results are automatically displayed repeatedly in the following order:
WEIGHT -> %FAT -> BMI -> WEIGHT (again).

Refer to section 5.3 on how to interpret the %FAT and BMI results.

Note: Although the age setting can be set to between 18 and 80 years, the %FAT reading will only be displayed for ages between 20 and 79 years.

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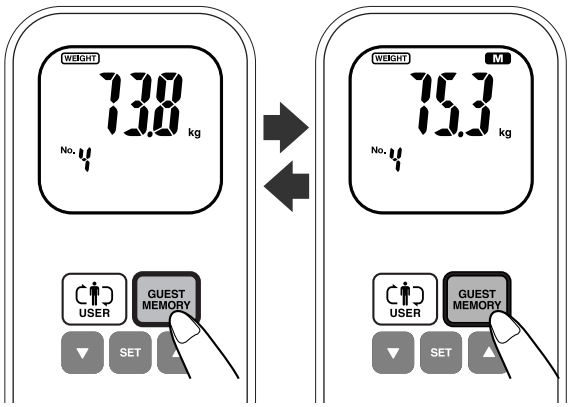
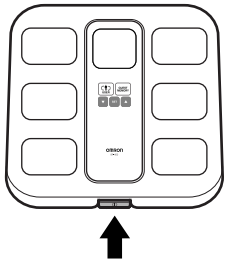
Notes on Viewing Measurement Results

- If you press the GUEST/MEMORY button, the previous measurement results are displayed and the memory indicator is displayed. To display the current measurement results, press the GUEST/MEMORY button again.
- If you press the ▲ button while the three measurement results are being displayed automatically, the display mode changes to show the results with each press of the ▲ button.
- If you do not press any button within five minutes of the measurement results appearing on the display, the unit will automatically turn itself off.



4. Push the power switch to turn off the unit.



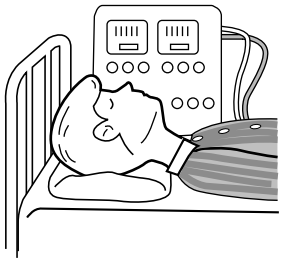
Avoid Taking Measurements Under the Following Conditions

If a measurement is made under the following physical conditions, the estimated body fat percentage may differ significantly from the actual one because the water content in the body is changing.

Immediately after vigorous exercise 	Immediately after a bath or sauna 
After drinking alcohol 	After drinking a large amount of water or after a meal (1 to 2 hours) 

Cases When the Calculated Results May Differ from Actual Body Fat Percentages

Calculated results for the following groups of people may vary due to consistently changing amounts of water and tissue density within their bodies.

Growing children 	Elderly people and post-menopausal women 	People with a fever 
Patients with osteoporosis who have very low bone density 	Body builders or professional athletes 	Patients undergoing dialysis 
Pregnant women 	People with swelling 	

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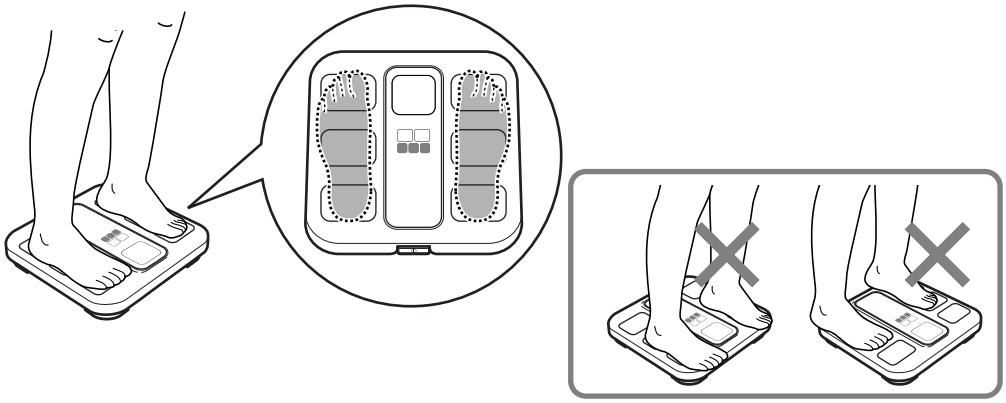
5.2 How to Obtain Reliable Results

To help ensure reliable results, please observe the following points when taking a measurement.

- Stand upright on the measurement platform with your weight evenly distributed over the electrodes. Do not stand on or near the edge of the platform.

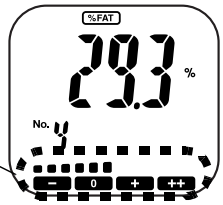


- Try to take measurements at the same time each day.
- Avoid eating, drinking (especially alcohol), sport/exercise or taking a bath/sauna before measuring.
- When a stable measurement value cannot be displayed, slightly moisten the soles of your feet with a damp towel and try again.

5.3 How to Interpret the Measured Results

Body fat percentage

Displays the body fat mass as the percentage of body weight.



Body fat percentage classification
Displays “–”, “0”, “+”, “++”

Gender	Age	– (Low) (BMI < 18.5)	0 (Normal) (BMI 18.5 - 24.9)	+ (High) (BMI 25.0 - 29.9)	++ (Very High) (BMI ≧ 30.0)
Female	**20-39**	< 21.0	21.0 - 32.9	33.0 - 38.9	≧ 39.0
	40-59	< 23.0	23.0 - 33.9	34.0 - 39.9	≧ 40.0
	60-79	< 24.0	24.0 - 35.9	36.0 - 41.9	≧ 42.0
Male	**20-39**	< 8.0	8.0 - 19.9	20.0 - 24.9	≧ 25.0
	40-59	< 11.0	11.0 - 21.9	22.0 - 27.9	≧ 28.0
	60-79	< 13.0	13.0 - 24.9	25.0 - 29.9	≧ 30.0

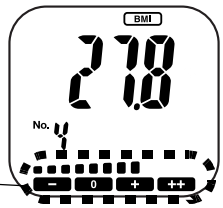
Based on NIH/WHO guidelines for BMI
Based on Gallagher et al., American Journal of Clinical Nutrition, Vol. 72, Sept. 2000

BMI

BMI is an internationally used index to show the body condition by checking the balance between the height and the weight.

It is calculated by the following formula:

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



BMI classification
Displays “–”, “0”, “+”, “++”

BMI	BMI (Designation by the WHO)	BMI Classification Bar	BMI Rating
Less than 18.5	- (Underweight)		7.0 - 10.7 10.8 - 14.5 14.6 - 18.4
18.5 or more and less than 25	0 (Normal)		18.5 - 20.5 20.6 - 22.7 22.8 - 24.9
25 or more and less than 30	+ (Pre-obese)		25.0 - 26.5 26.6 - 28.2 28.3 - 29.9
30 or more	++ (Obese)		30.0 - 34.9 35.0 - 39.9 40.0 - 90.0

The above-mentioned indices refer to the values for obesity judgment proposed by the WHO, the World Health Organization.

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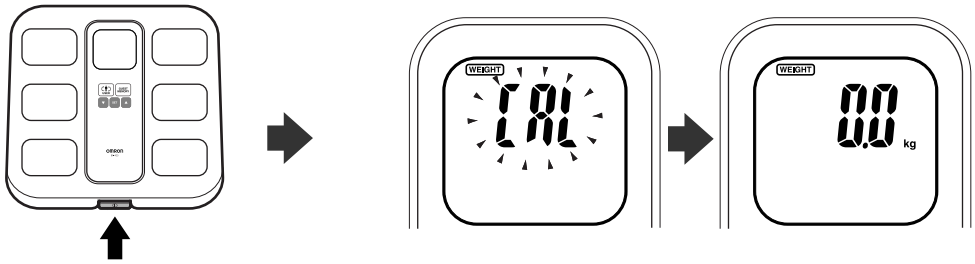
5.4 Measuring Weight Only

1. Push the power switch to turn on the unit.



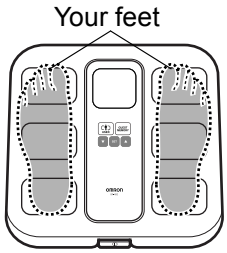
"CAL" blinks on the display, then the display changes to 0.0 kg.
Wait until 0.0 kg appears on the display.

2. Step onto the measurement platform.

Make sure that you are standing with your weight evenly distributed on the platform.

Remain still and do not move until the measurement is complete.

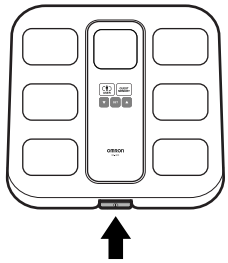
If you do not step onto the measurement platform within five minutes of 0.0 kg appearing on the display, the unit will automatically turn itself off.



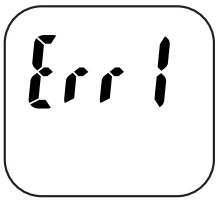
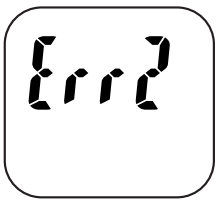
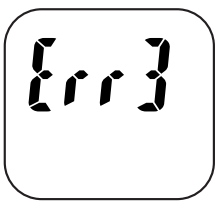
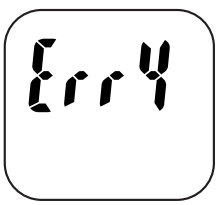
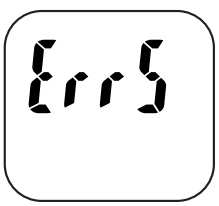
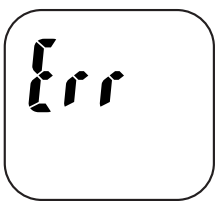
3. Your weight is displayed on the display and blinks briefly to indicate that measurement is complete.

At this point you may step off the measurement platform.

4. Push the power switch to turn off the unit.



6. Error Displays

Error Display	Cause	Correction
	Your feet were not positioned over the electrodes.	Make sure that you are standing on the measurement platform correctly and try again.
	The measurement position was not stable or your feet were not placed correctly.	Remain still and do not move during measurement.
	Feet are too dry.	Slightly moisten the soles of your feet with a damp towel and try again.
	The body fat percentage and BMI values are outside the measurement range noted in the specifications on page 23.	Check that the registered settings for height, age and gender are correct. If this error still appears and the height, age, and gender settings are correct, measurements cannot be taken.
	Your feet were not positioned over the electrodes.	Make sure that you are standing on the measurement platform correctly and try again.
	An operating error has occurred.	Remove the batteries then reinsert them after waiting for at least one minute. Push the power switch to turn the unit on, and repeat the measurement. If this error still occurs, consult your OMRON service representative.
	You stepped onto the measurement platform before 0.0 kg was displayed.	Wait until 0.0 kg is displayed before stepping onto the measurement platform.
	The unit was moved before 0.0 kg was displayed.	Do not move the unit until 0.0 kg is displayed.
	Movement during measurement.	Do not move till measurement is complete.
	Your weight is over 150.0 kg.	This unit can only be used by people weighing less than 150.0 kg.

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7. Troubleshooting

Problem	Cause	Correction
Nothing is displayed when the power switch is pushed.	Are the batteries worn out?	Replace all four “AA” batteries with new ones.
	Are the batteries correctly aligned?	Insert the batteries correctly.
An error message (Err1 to Err) is displayed and measurements cannot be taken.	Refer to “6. Error Displays” on page 21.	
The weight values vary widely for each measurement.	Is the unit placed on a carpet or other soft flooring?	Place the unit on a hard, level floor.
	Is the floor surface is uneven?	
The battery low indicator appears.	The battery power is low.	Replace all four “AA” batteries with new ones.
The %Fat value displayed is abnormally high or low.	Refer to “Avoid Taking Measurements Under the Following Conditions” and “Cases When the Calculated Results May Differ from Actual Body Fat Percentages” on pages 16 to 17.	
Other conditions.	Remove the batteries, then reinsert them after waiting for at least one minute.	

8. Maintenance and Storage

To protect your unit from damage, please observe the following:

- Do not wipe the unit with benzene, gasoline, paint thinner, alcohol, or other volatile solvents.
- Do not subject the unit to extreme temperatures, humidity, dust, moisture or direct sunlight.
- Do not subject the unit to strong shocks, vibrations (for example, dropping the unit on the floor), or uneven surfaces.
- Do not use the unit where it will be exposed to chemicals or corrosive vapors.

Caution!

- Always store the unit where unsupervised young children will not be able to access it.
- Do not disassemble the unit. You may be injured or damage the unit.
- 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).

9. Technical Data

Name	**BF400**
Product	Body Fat Monitor with Scale
Model	**HBF-400-E**
Display	Weight: 0.0 to 150.0 with 100g increments **Body fat percentage:** 5.0 to 60.0% **BMI:** 7.0 to 90.0 **Body fat percentage / BMI classification:** – (Low/Underweight) / 0 (Normal) / + (High/Pre-obese) / ++ (Very High/ Obese) 12 levels of Bar display *The age range for the body fat percentage classification is 20 to 79 years old.
Weight Accuracy	0.0 kg to 40.0 kg: ± 400 g 40.1 kg to 150.0 kg: ± 1%
Body Fat Percentage Accuracy	SEE ± 4%
Set Ranges	**Height:** 100 to 199.5 cm **Age:** 18 to 80 years old **Gender:** Male/Female *Although the age setting can be set to between 18 and 80 years, the body fat percentage reading will only be displayed for ages between 20 and 79 years.
Power Supply	4 AA batteries (You may also use 4 AA alkaline batteries)
Battery Life	Approximately 1 year (when used four times a day)
Operating Temperature and Humidity	10°C to 40°C, 30% to 85% RH
Storage Temperature and Humidity	-20°C to 60°C, 10% to 95% RH
External Dimensions	Approximately 310 (w) x 303 (h) x 58 (d) mm
Weight	Approximately 2.1 kg (including batteries)
Package Contents	4 AA manganese batteries, instruction manual, warranty card

Note: Subject to technical modification without prior notice.

 = Type BF CE 0197

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

Please read the instruction manual carefully before using the device.

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.

Important information regarding Electro Magnetic Compatibility (EMC)

With the increased number of electronic devices such as PC.s and mobile (cellular) telephones, medical devices in use may be susceptible to electromagnetic interference from other devices. Electromagnetic interference may result in incorrect operation of the medical device and create a potentially unsafe situation.

Medical devices should also not interfere with other devices.

In order to regulate the requirements for EMC (Electro Magnetic Compatibility) with the aim to prevent unsafe product situations, the EN60601-1-2 standard has been implemented. This standard defines the levels of immunity to electromagnetic interferences as well as maximum levels of electromagnetic emissions for medical devices.

This medical device manufactured by OMRON Healthcare conforms to this EN60601-1-2:2001 standard for both immunity and emissions.

Nevertheless, special precautions need to be observed:

- Do not use mobile (cellular) telephones and other devices, which generate strong electrical or electromagnetic fields, near the medical device. This may result in incorrect operation of the unit and create a potentially unsafe situation. Recommendation is to keep a minimum distance of 7 m. Verify correct operation of the device in case the distance is shorter.

Further documentation in accordance with EN60601-1-2:2001 is available at OMRON Healthcare Europe at the address mentioned in this instruction manual.

Documentation is also available at www.omron-healthcare.com.

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