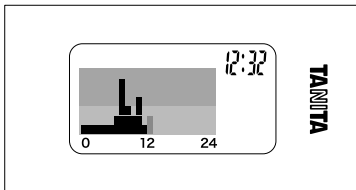


3 Axes/24HR Activity Gauge™ AM-121E



Instruction Manual





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Thank you for purchasing this TANITA 3 Axes/24 HR Activity Gauge. Before use, please read through this instruction manual and store this manual in a safe place for future reference

1. Safety Notes

This instruction manual contains information on how to use this device correctly.

 Warning	Indicates contents “may cause death or serious injury”.
 Caution	Indicates contents “may cause injury or damage to property”
 Prohibited	Indicates contents are “prohibited”
 Must Do	Indicates instructions that must be followed.
Request	Indicates steps you should follow to keep your device in the best possible condition.
Note	Supplementary information related to usage inspections of the device.

Warning



Prohibited

Keep this device and battery out of the reach of children.

Children may swallow small objects by mistake.

Do not burn battery.

Doing so may cause the battery to explode.

Caution



Must Do

If you are not accustomed to exercising on a regular basis, consult your physician or trainer.

It may be unhealthy to suddenly start exercising or to over-exercise.

If you are currently under medical care for an injury or illness, consult your physician or trainer.

It may be unhealthy to suddenly start exercising or to over-exercise.

2. Usage, Storage, and Maintenance

Handling the Device



Prohibited

Do not disassemble the device.

Doing so will damage the device.

Do not subject the device to strong impacts or vibrations.

Doing so will damage the device.



Must Do

Never insert the device into a rear trouser pocket.

Doing so may damage the device and injure the wearer.

Do not use in excessively humid places or places where the device may get wet.

Doing so will damage the device.

Do not swing the device around by the strap

The device may hit someone causing an injury.

Doing so will damage the device.

When using a strap to wear the device around your neck, make sure that the strap does not get pulled or caught on anything.

Pulling the strap in such a way may cause injury.

Storage



Must Do

Do not store the device in excessively humid places, or places where the device may get wet.

Doing so will damage the device.

Maintenance



Must Do

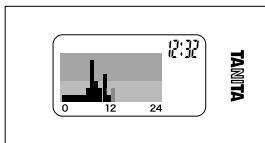
Do not use alcohol, boiling water, thinner or benzene on the device.

Doing so will damage the device.

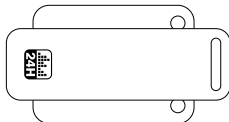
If the device becomes dirty, wipe it clean with a soft cloth.

3. Parts and Accessories

1. 3 Axes/24 HR Activity Gauge



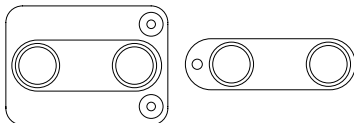
2. Battery cover with clip



3. Strap



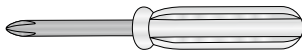
4. Battery cover with magnet & magnet clip



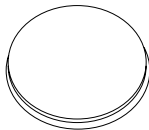
5. Strap for magnet



6. Screwdriver

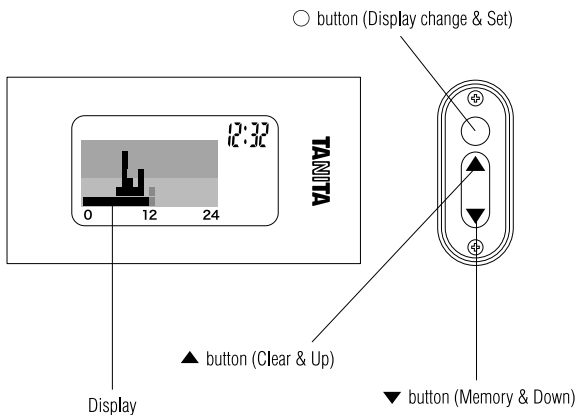


7. Battery (CR2032)

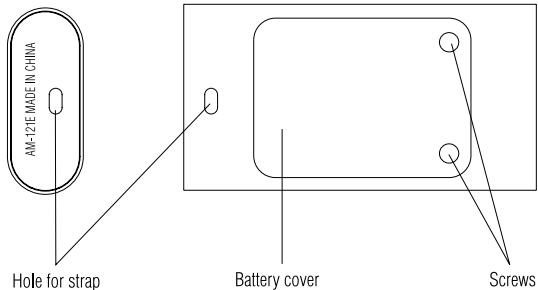


4. Name of Parts

Front



Back



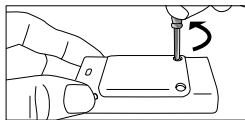
5. Inserting / Replacing Battery

If you are using your 3 Axes/24 HR Activity Gauge for the first time, the first step is to insert the battery.

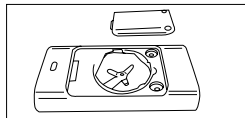
If  is shown on the display, promptly replace with a new battery (CR2032).

Note:

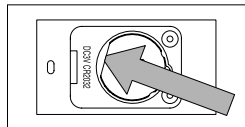
The battery is enclosed by the factory before shipment, battery life may be less than 9 months.



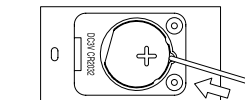
1) Use the included screwdriver or a commercially available small screwdriver to loosen the 2 screws in the battery cover on the back of the device.



2) Open the battery cover.



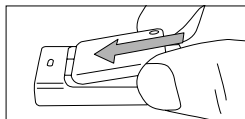
3) Make sure the positive electrode is facing upwards, and insert the edge of the battery in the direction of the arrow shown.



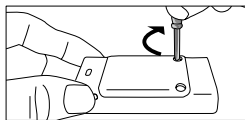
Remove the battery:

Insert a thin stick (Toothpick etc.) into the hole and then remove the battery.

Do not use metallic tweezers or a screwdriver etc.



4) Insert the battery cover in the direction of the arrow.



5) Tighten the battery cover screws firmly

The unit setting (initial setting) display is shown. Refer to initial settings on P9.

Battery Symbol

Flashing

The battery power is low. Replace the old battery with a new CR2032 battery

[Lo] Display

There is no battery power left. The device cannot take measurements.

Replace the old battery with a new CR2032 battery

Attention:



Must Do

Do not replace the battery immediately before or after 0:00AM midnight. If you do, the measurements from the day when the battery was removed will be added to the measurement value of the day when the new battery was inserted. (Data from the day the battery was removed will be treated as data from the same day the new battery was inserted.)

Measurement values are recorded from 00 minutes of every hour. When the battery is replaced, the measurement data from 00 minutes to the time the battery is replaced is erased.

When the battery is removed, the time returns to [0:00]. Reset the time again (See P11). However, all individual settings and measurements other than the initial settings are not erased.

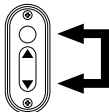
6. Initial Settings / Changing Settings

Initial settings:

After installing the battery, the initial settings display will be shown. Refer to the Setting process below.

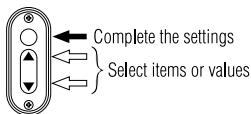
Changing settings:

To change the initial settings, press and hold the ○ and ▼ buttons for 3 seconds while today's measurement values are shown on the display (See fig.1).



Note:

-Button operation (See fig.2):



- If you do not press any buttons within 5 minutes while the initial settings are displayed, the display changes to today's measurements, no changes to the initial settings will have been made.

Start the Initial Setting

1) Setting the Unit

(Refer to P9)

2) Setting the Year

(Refer to P9)

3) Setting the Month

(Refer to P10)

4) Setting the Day

(Refer to P10)

5) Setting the Clock

(Refer to P11)

6) Setting your Birthday

(Refer to P11)

7) Setting your Gender

(Refer to P12)

8) Setting your Height

(Refer to P12)

9) Setting your Weight

(Refer to P13)

10) Setting your Body Fat Percentage

(Refer to P13)

11) Setting your Stride Length

(Refer to P14)

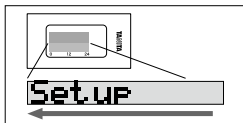
Finish the initial settings

12) Displays your Basal Metabolic Rate (BMR)

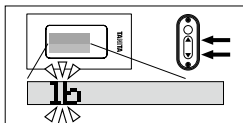
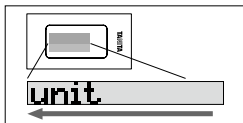
(Refer to P14)

Today's Measurement Display

1) Setting the Unit



1) When battery is inserted, [Set up] and then [Unit] will be displayed.



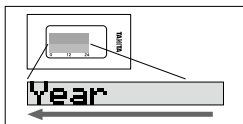
2) Press and release the ▼ or ▲ button to set the unit.

("lb" → "kg" → "st.lb")



3) Press and release the ○ button to set the unit.

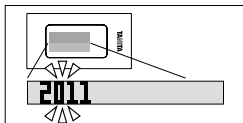
2) Setting the Year



1) After setting the unit, [Year] will be displayed.

2) Press and release the ▼ or ▲ button to set the year.

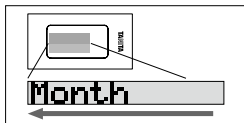
Press and hold to advance the setting rapidly.



3) Press and release the ○ button to set the year



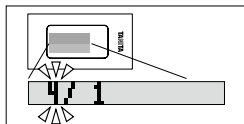
3) Setting the Month



1) After setting the year, [Month] will be displayed.

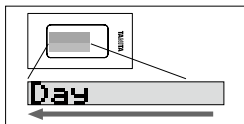
2) Press and release the ▼ or ▲ button to set the month.

Press and hold to advance the setting rapidly.



3) Press and release the ○ button to set the month.

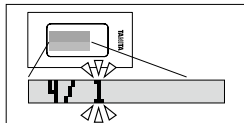
4) Setting the Day



1) After setting the month, [Day] will be displayed.

2) Press and release the ▼ or ▲ button to set the day.

Press and hold to advance the setting rapidly.

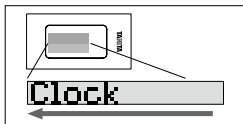


※ Change the flashing mark to the day position (not month)

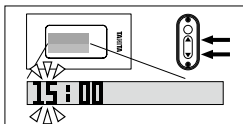


3) Press and release the ○ button to set day.

5) Setting the Clock



1) After setting the date, [Clock] will be displayed.



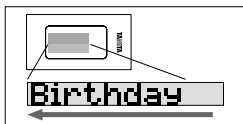
2) Press and release the ▼ or ▲ button to set the hour and minute.

Press and hold to advance the setting rapidly.

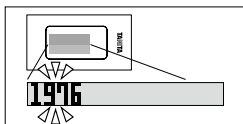


3) Press and release the ○ button to set the clock.

6) Setting your Birthday



1) After setting the clock, [Birthday] will be displayed.



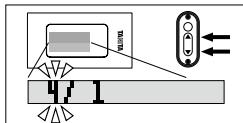
2) Press and release the ▼ or ▲ button to set the year.

Press and hold to advance the settings rapidly.

The setting range: 1900 – 2050

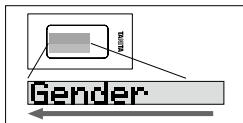


3) Press and release the ○ button to set the year.

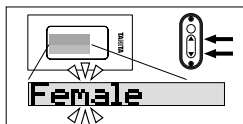


4) After setting the year, press and release the ▼ or ▲ button to set the month and day.

7) Setting your Gender



1) After setting your birthday, [Gender] will be displayed.

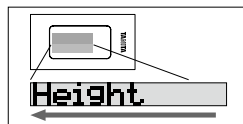


2) Press and release the ▼ or ▲ button to select either Female or Male.

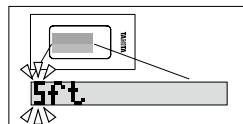


3) Press and release the ○ button to set your gender.

8) Setting your Height



1) After setting your gender, [Height] will be displayed.



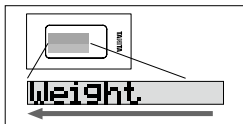
2) Press and release the ▼ or ▲ button to set your height.

Press and hold to advance the settings rapidly.
The setting range: 3ft0in-7ft 11in (90cm-240cm)

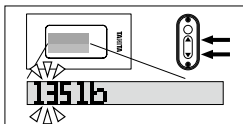


3) Press and release the ○ button to set your height.

9) Setting your Weight



1) After setting your height, [Weight] will be displayed.



2) Press and release the ▼ or ▲ button to set your weight.

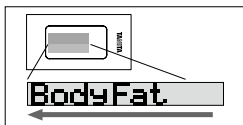
Press and hold to advance the settings rapidly.

The setting range: 45 lb-440 lb (20kg-200kg / 3st0lb-30st13lb)



3) Press and release the ○ button to set your weight.

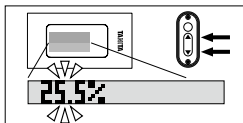
10) Setting your Body Fat Percentage



1) After setting your weight, [Body Fat] will be displayed.

Note:

If you do not know your body fat percentage, just press and release the ○ button. The unit will automatically estimate according to your personal information.



2) Press and release the ▼ or ▲ button to set your body fat percentage.

Press and hold to advance the settings rapidly.

The setting range: 5.0 % – 75.0 %

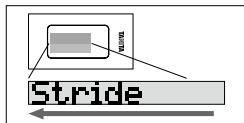


3) Press and release the ○ button to set your body fat percentage.

Recommendation:

We recommend using a Tanita Body Composition Monitor to calculate your body fat percentage accurately. Visit www.tanita.com for more details.

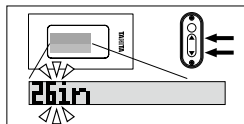
11) Setting your Stride Length



1) After setting your body fat percentage, [Stride] will be displayed.

2) Press and release the ▼ or ▲ button to set your stride length.

Press and hold to advance the setting rapidly.
Setting range: 10 in – 60 in (20 cm – 150 cm)

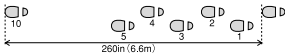


3) Press and release the ○ button to complete all of the initial settings.

Note:

The stride length is taken as the distance between the toes on one foot and the toes on the other foot. To accurately find your average stride length, walk for 10 steps and then divide the total walked distance by 10.

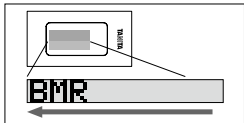
E.g. If you walked 260 in (6.6 meters) in 10 steps,
 $260 / 10 \text{ (steps)} = 26 \text{ inches}$
 $6.6 / 10 \text{ (steps)} = 0.66 \text{ meters} = 66 \text{ cm}$



Note:

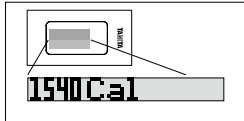
If you do not know your stride length, just press and release the ○ button. The unit will automatically estimate according to your personal information.

12) Check your Basal Metabolic Rate (BMR)

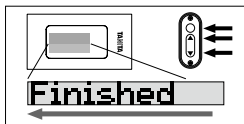


1) After completion of the initial setting, the display shows your calculated Basal Metabolic Rate.

The Basal Metabolic Rate (BMR) is the number of calories the body needs when at rest. BMR decreases as one grows older. Children have a higher BMR than adults due to the required energy to fabricate human tissue



2) The display shows [Finished] after pressing any button while your basal metabolic rate is shown, and then the "Today's Measurement Value" will be displayed.



7. Wearing the 3 Axes/24 HR Activity Gauge

This device uses 3-Axes accelerometer technology to accurately measure motion in the X, Y, and Z axes. This allows you to carry the device in a purse, pocket, or around your neck instead of the traditional belt clip-on, improving convenience while offering the ability to comfortably conceal it, without compromising accuracy



Recommendation

In order to accurately measure your physical activity based on upper body movement, we recommend wearing the device near your chest. For example, in a shirt-pocket etc.



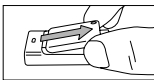
In a pocket

We recommend using the safety strap and attaching the clip to the edge of the pocket.

Note:

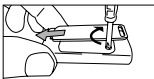
Do not place the device into the back pocket of trousers. Doing so may damage the device and cause injury to the wearer

1) Using the Clip Battery Cover



1) Remove the battery cover.

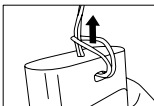
Loosen the 2 screws, and remove the battery cover (See P6).



2) Attach the battery cover with clip.

Insert in the direction shown by the arrow, and securely tighten the 2 screws.

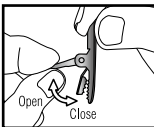
2) Using the Safety Strap



Attaching the strap

Note:

Do not pull the strap sharply. Doing so may cause the strap to stretch or break.



Opening/Closing the clip

Note:

Do not pull the strap sharply when the clip is closed. Doing so may damage the fabric that the clip is attached to.

3) Using the magnet clip

Warning



Prohibited

Magnet Clip should not be used by persons with electronic medical implants such as a pacemaker, it may interfere with its operation.

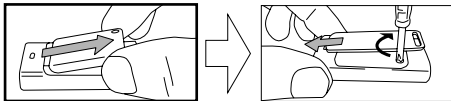
Caution



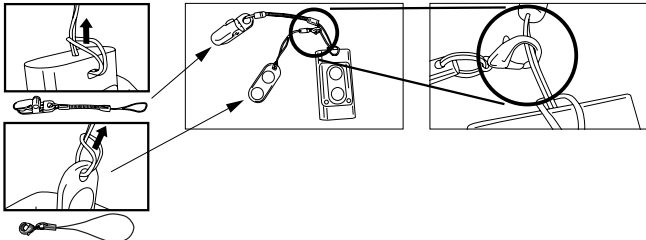
Must Do

Magnet clip should not be closer than 6 in (15 cm) of device affected by magnetism (clock, magnetic card, watches, cellular phone, personal computer, etc.).
Damage to the device may occur due to strong magnetism.

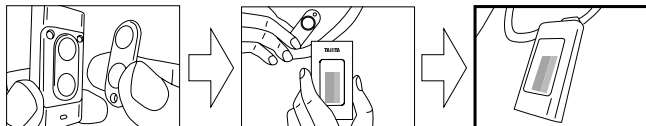
1) Replace to the battery cover with magnet.



2) Attach the straps and joint each strap.



3) Wearing the 3 Axes/24 HR Activity Gauge



8. Measuring your Total Energy Expenditure (calories burned)

You are now ready to start using your 3 Axes/24 HR Activity Gauge!

You can measure your total energy expenditure for a full day simply by wearing this device.

Unlike pedometers, the daily activity monitor measures the energy expenditure you consume during normal daily physical activity in addition to the number of steps.

Measuring the number of steps, walking distance, and walking time

Tips on getting the most accurate reading

Note:

If a certain motion continues for 7 seconds or more the unit judges the motion to be walking and measures from that time.

Note:

Information other than the number of steps, walking distance and walking time are continually measured.

Note:

Even if this device does not detect movement, the total energy expenditure value increases. Even when resting without any physical exercise, the energy consumed by our bodies while resting has been incorporated into the device programming.

Note:

This device is equipped with an energy saving mode. If it does not detect movement for approximately 3 minutes, the display will become blank. Information is displayed again when movement is detected, or when one of the buttons is pressed, activity is continually measured.

9. Using the 3 Axes/24 HR Activity Gauge Correctly

In the following cases, total energy expenditure may not be measured correctly. However, this will not interfere with the total energy expenditure if it does not continue for a long time.

When riding in a vehicle

- When riding in a car, bus, or on a motorbike.
- When riding a bicycle.

Activities involving vertical movements

- Climbing up or down stairs.
- Climbing up or down steep slopes.

Sports other than walking

- Jogging or jumping exercise, playing sports (A reference value for total energy expenditure can be measured).

When this device is subjected to irregular movements

- If this device is shaken around inside a pocket etc.
- If the area where this device is worn moves irregularly.

In the following situations, the number of steps, walking distance and walking time may not be measured correctly.


When walking irregularly

- When sliding your feet to walk (on snowy/icy surfaces etc.).
- When walking in shoes such as sandals or slippers.
- When walking through crowded areas such as busy city center streets.

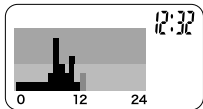
Sports other than walking

- Jogging or jumping exercise, playing sports (Measurement can be made, but should be taken as a reference value).

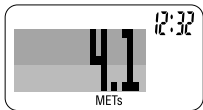
1) Viewing the Today's Measurement Value

Press and release the  button to change the different display information

24-Hour Activity Graph / Clock
(Refer to P20)



Metabolic Equivalent (MET) / Clock
(Refer to P20)



Walking Time / Clock
(Refer to P20)



Total energy expenditure (TEE) / Clock
(Refer to P20)



Activity-Related Energy Expenditure (AEE) / Clock
(Refer to P20)



Number of Steps / Clock
(Refer to P20)



Walking Distance / Clock
(Refer to P20)

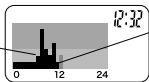


Time

Shows the present time (24-hour clock display).

24-Hour Activity Graph

Line indicating 2.0 times the resting energy expenditure.



The block for the current time flashes

Shows the amount of activity for the day from midnight until the present time as a graph. The amount of activity is shown in hour blocks for every hour on a scale of 7. Each scale is based on the Basal Metabolic Rate for one hour, and shows the amount of activity as a multiple of this base value.

7th scale mark: More than 3.5 times the resting energy expenditure

6th scale mark: More than 3.0 times, less than 3.5 times the resting energy expenditure.

5th scale mark: More than 2.5 times, less than 3.0 times the resting energy expenditure.

4th scale mark: More than 2.0 times, less than 2.5 times the resting energy expenditure.

3rd scale mark: More than 1.5 times, less than 2.0 times the resting energy expenditure.

2nd scale mark: More than 1.1 times, less than 1.5 times the resting energy expenditure.

1st scale mark: Less than 1.1 times the resting energy expenditure (almost entirely resting)

Total Energy Expenditure (TEE)

Shows the accumulated total of burned calories for the day from midnight until the present time (The maximum display for 1 day is 999999 calories. The display stops changing if this value is exceeded).

Activity-related Energy Expenditure (AEE)

Shows the total number of calories burned through the physical activity for the day between midnight and the current time. Physical activity means all activities that burn more calories than Basal Metabolic Rate (when resting).

Number of Steps

Shows the number of steps walked (The maximum display for 1 day is 999999 steps. The display stops changing if this value is exceeded).

Walking Distance

Shows the walking distance, which is calculated by multiplying the number of steps taken by your stride length (The maximum display for 1 day is 946.96 miles (999.99 km). The display stops changing if this value is exceeded).

Walking Time

The walking time as steps are taken is measured, and the walking time is calculated and shown.

Metabolic Equivalent (MET)

This unit is used to show the intensity of physical activity. 1 MET is taken as the intensity of physical activity in the seated, relaxed state; other activities are measured as a multiple of this value. Regular walking is measured as approximately 3 METS. This means that walking is approximately 3 times more intense than sitting down.

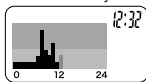
This value is calculated from the intensity of physical activity for the previous 1 minute.

2) 14 days Memory Operation

Today's Measurement Values

Press and release \circ button: To scroll readings

24-Hour Activity



Total energy expenditure (TEE)



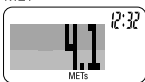
Activity-Related Energy Expenditure (AEE)



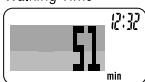
Number of Steps



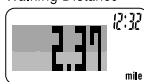
MET



Walking Time



Walking Distance

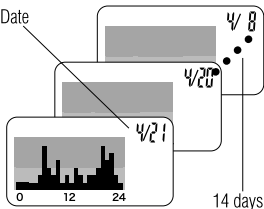


Press and release \blacktriangledown button:

Press and release \blacktriangle button:

14 Days Memory

Date



Press and release the \circ button:
To scroll readings.

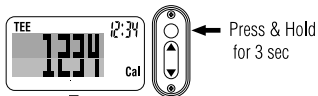
Press and release \blacktriangledown button:
Viewing 1day ago through 14days ago and Today's Measurement.

Press and release \blacktriangle button:
Quick return to Today's Measurement.

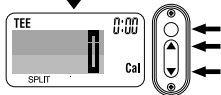
Note:

The [----] is shown on the display if there is no stored data. Pressing the \blacktriangledown or \blacktriangle button will show the Today's Measurement Value.

10. Split Mode



- 1) Press and hold the ○ button for 3 seconds while the today's measurement are on the display, [SPLIT] will be displayed. The split mode is ready to use.



2) Button operations

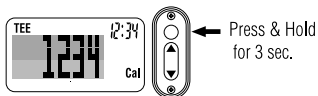
Start and Stop: Press and release the ▼ button.

Reset: Press and hold the ▲ button for 3 seconds.

Select the split readings:

Press and release the ○ button to show the applicable split readings;

- Total Energy Expenditure (TEE)
- Activity-related Energy Expenditure (AEE)
- Number of Steps Walking Distance
- Walking Time
- METs



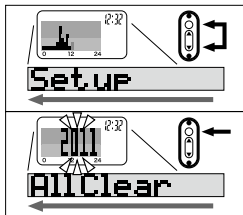
3) Return to the Today's Measurement

Press and hold the ○ button for 3 seconds during the split mode.

Note:

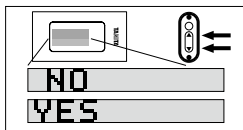
The split model will be stopped when the display is returned to the Today's Measurement display, and the split results are memorized. You can restart the previous values when you start the split mode again.

11. Resetting System



1) Press and hold the ○ and ▼ buttons for 3 seconds while the today's value is shown on the display, the [Set up] will be displayed.

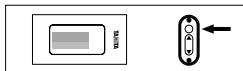
2) Press and hold the ○ button for more than 5 seconds while the unit is shown on the display, the [All Clear] will be displayed.



3) Press and release the ▼ or ▲ button to select "NO" or "YES".

[YES]: The system will be reset. You cannot restore any of the values or initial settings.

[NO]: The display returns to the setting display. And then the completion initial setting process is needed.




4) Press and release the ○ button to complete the resetting system.

The initial settings display will be shown after resetting system. Refer to the initial settings procedure on P9

12. Specifications

Detection Method		Triaxial Acceleration Sensor
Display Method		LCD Display
Setting Contents	Unit	lb, kg, st. lb
	Year	2011 -2050
	Date	1/1 - 12/31
	Clock	24-Hour Display
	Birthday	1900 - 2050
	Gender	Female / Male
	Height	3 ft 0 in - 7 ft 11 in / 90cm - 240cm
	Weight	45 lb - 440 lb / 20 kg - 200 kg / 3 st 0 lb - 30 st 131b
	Body Fat Percentage	5.0 % - 75.0 %
	Stride length	10 in - 60 in / 20 cm - 150 cm
Display Contents	24-Hour Activity Graph	Min: 1 Scale mark Max: 7 Scale marks Shows the amount of activity for each hour.
	Total Energy Expenditure (TEE)	Min: 1 kcal / 1 Cal Max: 999999 kcal / 999999 Cal
	Activity-related Energy Expenditure (AEE)	Min: 0.1 kcal / 0.1 Cal Max: 9999.9 kcal / 9999.9 Cal
	Number of Step	Min: 1 step Max: 999999 steps
	Distance	Min: 0.01 miles / 0.01 km Max: 946.96 miles / 999.99 km
	Walking Time	Min: 1 min. Max: 999999 min.
	MET	Min: 1.0 METs Max: 18.0 METs
	Memory	14 days
	Split Mode	
Clock	24-Hour Display	
Accuracy of Number of Steps	±5% (depending on vibration testing machine)	
Clock accuracy	Within ±30 seconds of the average month	
Power Supply	DC 3.0 V (1 x CR2032 battery)	
Battery Life	Approx. >6 months (when used for approximately 16 hours per day)	
Temperature Range	32 °F to 104 °F / 0 °C to 40 °C	
Dimensions	0.5 in D x 2.2 in W x 1.1 in H D11.8 x W55 x H29 mm	
Weight	Approx. 0.8 oz / 23 g (including battery)	

13. Troubleshooting

 is flashing	The battery power is low. Replace them promptly with new battery (CR2032). Refer to P6.
[Lo] is displayed	There is no battery power. Measurements cannot be taken. Replace with new battery (CR2032). Refer to P6.
Batteries are fitted but nothing is displayed	Are the batteries positioned correctly? Check the "+" and "-" sides of the battery. Refer to P6.
	The batteries have run down. Replace them promptly with new battery (CR2032). Refer to P6.
The measured value is too small/large	Is the device attached correctly? Refer to P15.
	Are the settings correct? Check the contents of the settings. Refer to P8.
	Refer to "Using the 3 Axes/24 HR Activity Gauge Correctly" on P18 to ensure you are using the device correctly.
[Err01 or Err02] is displayed	Re-insert the battery. Refer to P6. If there are problems with the past memory after re-inserting the battery, reset the system. Refer to P23.



Notice:

These marks can be found on contaminant-containing Batteries:

Pb Pb = Battery contains lead,

Cd Cd = Battery contains cadmium,

Hg Hg = Battery contains mercury



Not allowed to mix batteries with consumer waste!

As a consumer you are **legally** bound to return used or discharged batteries. You can deposit your old batteries at **public collection points** in your town, or wherever the corresponding batteries are sold and specifically marked **collecting boxes** have been set up. In case of scrapping the apparatus, the batteries should be removed from it and deposited at **collection points** as well.



The device features radio interference suppression in compliance with EC regulation 2004/108/EC

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