



Dual Frequency Body Composition Monitor  
with integrated Bluetooth technology

innerScan®  
**DUAL**

RD-953

**en** **Instruction Manual**

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







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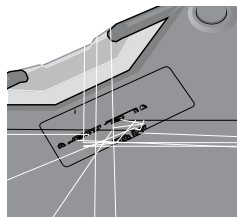
## Preparations before Use

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### Inserting the Batteries

**Note:**

- Be sure that the batteries are inserted in the correct orientation. If the batteries are inserted incorrectly, fluid may leak from the batteries and damage the floor.
- If you do not intend to use this unit for a long period of time, remove the batteries before storage.
- The included batteries from factory may have decreased energy levels over time.













## Body Composition Guide

### Who Can Use a Body Composition Monitor?

This Body Composition Monitor is intended for adults aged 18-99 years. Children aged 5-17 years can use the monitor for weight only; the other features are not applicable to children.

Thanks to major investment in the latest BIA Technology and sports science research, TANITA has upgraded the Athlete Mode function to make measurements more accurate and suitable for a wider range of users.

Who should use Athlete Mode?

Adults aged 18 years and over who either:

- Train or exercise for 12 hours or more a week and have been doing so for at least six months.
- Are body builders.
- Are professional athletes who want to monitor their progress at home.
- Have a lifetime history of fitness and who used to do more than 12 hours a week but do less now.

Pregnant women should only use the weight function.

Other functions are not intended for use when pregnant.

This Body Composition Monitor is intended for home use only. It is not intended for professional use in places such as hospitals or medical or fitness facilities. It is not designed for such heavy usage. Using the monitor in this type of professional environment will invalidate the warranty.

This Body Composition Monitor product provides readings for informational purposes only.

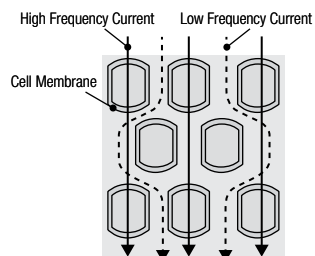
This product is not intended to diagnose or treat any disease or abnormalities. Please consult your physician if you have any questions or concerns related to your health.

### How Does a Body Composition Monitor Work?

Tanita Body Composition Monitors calculate your body composition using Dual Frequency Bioelectrical Impedance Analysis (BIA). Safe, low-level electrical signals are passed through the body via the Tanita foot pads on the monitor platform. The signal can flow easily through fluids in muscles and other body tissue but meets resistance as it passes through body fat, because body fat only contains a small amount of fluid. This resistance is called impedance. The impedance readings are then entered into medically researched mathematical formulas to calculate your body composition.

The Tanita RD-953 incorporates medical grade Dual Frequency BIA technology, allowing you to have the highest body composition accuracy in the comfort of your home.

Research has shown that using two different bioelectrical impedance frequencies, provides essential data of a person's intracellular and extracellular status. This advanced technology allows greater accuracy when calculating body composition measurements.



### When Is the Best Time To Use My Body Composition Monitor?

Your body water levels naturally fluctuate throughout the day and night. Any significant changes in body water may affect your body composition readings. For example, the body tends to be dehydrated after a long night sleep so if you take a reading first thing in the morning your weight will be lower and your body fat percentage higher. Eating large meals, drinking alcohol, menstruation, illness, exercising, and bathing may also cause variations in your hydration levels.

To get the most reliable reading it is important to use your Body Composition Monitor at a consistent time of day under consistent conditions. A good time to take measurements is before your evening meal.

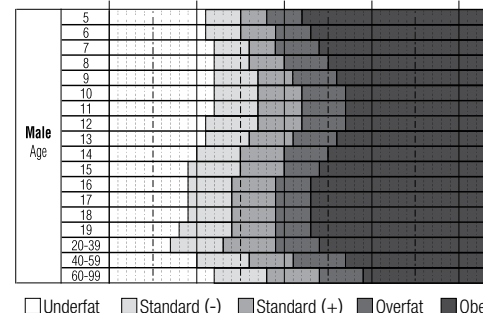
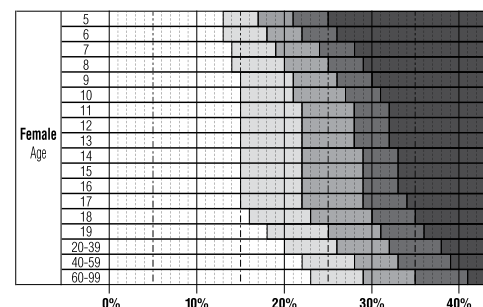
## What Is Body Fat Percentage? (Applicable age 18-99)

**Body fat percentage is the amount of body fat as a proportion of your body weight.**

Reducing excess levels of body fat has shown to reduce the risk of certain conditions such as high blood pressure, heart disease, diabetes and cancer. The chart below shows the healthy ranges for body fat.

### Body Fat Ranges for Standard Children <sup>1,2</sup>

### Body Fat Ranges for Standard Adults <sup>3,4</sup>



□ Underfat □ Standard (-) □ Standard (+) □ Overfat □ Obese

Your Body Composition Monitor automatically compares your body fat percentage reading to the Healthy Body Fat Range chart.

Underfat: below the healthy body fat range. Increased risk for health problems.

Standard (-)/Standard (+): within the healthy body fat percentage range for your age/gender.

Overfat: above the healthy range. Increased risk for health problems.

Obese: high above the healthy body fat range. Greatly increased risk of obesity-related health problems.

## What Is Total Body Water Percentage? (Applicable age 18-99)

Total Body Water Percentage is the total amount of fluid in a person's body expressed as a percentage of their total weight. Water plays a vital role in many of the body's processes and is found in every cell, tissue and organ. Maintaining a healthy total body water percentage ensures the body functions efficiently and reduces the risk of developing associated health problems.

Your body water levels naturally fluctuate throughout the day and night. Your body tends to be dehydrated after a long night's sleep and there are differences in fluid distribution between day and night. Eating large meals, drinking alcohol, menstruation, illness, exercising and bathing may cause variations in your hydration levels.

Your body water percentage reading should be used as a guide and should not be used to specifically determine your recommended total body water percentage. It is important to look for long-term changes in total body water percentage and maintain a consistent, healthy total body water percentage.

Drinking a large quantity of water in one sitting will not instantly change your body water level. In fact, it will increase your body fat reading due to the additional weight gain. Please monitor all readings over time to track relative changes.

Every individual is different, but as a guide the average total body water percentage ranges for a healthy adult are:

Female: 45 to 60%

Male: 50 to 65%

Source: Tanita Research

Note: The total body water percentage will tend to decrease as the percentage of body fat increases. A person with a high percentage of body fat may fall below the average body water percentage. As you lose body fat, the total body water percentage should gradually move towards the typical range given above.

## What Is Visceral Fat Rating? (Applicable age 18-99)

This function indicates the amount of visceral fat in your body.

Visceral fat is the fat that is in the internal abdominal cavity, surrounding the vital organs in the abdominal area. Research shows that even if your weight and body fat remains constant, as you get older the distribution of fat changes and is more likely to shift to the abdominal area especially post menopause. Ensuring you have healthy levels of visceral fat may reduce the risk of certain diseases such as heart disease, high blood pressure, and the onset of type 2 diabetes.

The Tanita Body Composition Monitor provides you with a visceral fat rating from 1 – 59.

Rating 1 - 12.5

Indicates you have a healthy amount of visceral fat. Continue monitoring your rating to ensure that it stays within this healthy range.

Rating 13 - 59

Indicates you have an excess amount of visceral fat. Consider making changes in your lifestyle by changing your diet or exercising more.

Source : Data from Columbia University (New York) & Tanita Institute (Tokyo)

Note: You may have a high visceral fat level even if you have a low body fat rate.

- Consult a physician for an accurate medical diagnosis.

## What Is Basal Metabolic Rate (BMR)? (Applicable age 18-99)

Your Basal Metabolic Rate (BMR) is the minimum level of energy your body needs when at rest to function effectively. This includes the functioning of your respiratory and circulatory organs, neural system, liver, kidneys, and other organs. You continue to burn calories even when sleeping.

About 70% of the calories your body uses every day are used by your basal metabolism. In addition, energy is used when doing any kind of activity. The more vigorous the activity, the more calories are burned. This is because skeletal muscle (which accounts for approximately 40% of your body weight) acts as your metabolic engine and uses a large amount of energy. Your basal metabolism is greatly affected by the amount of muscle you have, so increasing your muscle mass helps increase your basal metabolism.

By studying healthy individuals, scientists have found that people's metabolic rate change as they age. Basal metabolism rises as a child grows. After peaking at the age of around 16 or 17, it typically starts to gradually decrease.

Having a higher basal metabolism increases the number of calories used and helps decrease the amount of body fat. A low basal metabolic rate makes it harder to lose body fat and overall weight.

How Does a Tanita Body Composition Monitor Calculate BMR?

The basic method of calculating Basal Metabolic Rate (BMR) is a standard equation that uses weight and age.

Tanita has conducted in-depth clinical research into the relationship of BMR and body composition resulting in a much more accurate and personalized reading for the user based on impedance measurements. This method has been medically validated using indirect calorimetry (measuring breath composition).\*

\*Reliability of the equation for Basal Metabolic Rate: At 2002 Nutrition Week: Scientific and Clinical Forum and Exposition

Title: International Comparison: Resting Energy Expenditure Prediction Models:

The American Journal of Clinical Nutrition.

## What Is Metabolic Age? (Applicable age 18-99)

This function calculates your BMR and indicates the average age associated with the type of metabolism.

If your metabolic age is higher than your actual age, it is an indication that you need to improve your metabolic rate. Increased exercise builds healthy muscle tissue, which improves your metabolic age.

The reading is shown as a number between 12 and 90. Values under 12 are displayed as "12" and over 90 are displayed as "90".

## What Is Muscle Mass? (Applicable age 18-99)

This function indicates the weight of muscle in your body. The muscle mass displayed includes skeletal muscle, smooth muscle (such as cardiac and digestive muscle) and the water contained in these muscles.

Muscles play an important role as they act as an engine that consumes energy. As your muscle mass increases, your energy consumption increases helping you reduce excess body fat levels and lose weight in a healthy way.

The muscle mass is judged for persons aged 18 and over.

Muscle mass is judged by calculating the amount of muscle mass against the person's height, and then the amount is classified. The My Tanita app that links with this device displays the muscle mass judgement as a muscle score, as shown below. The larger the number, the more muscle the person has.

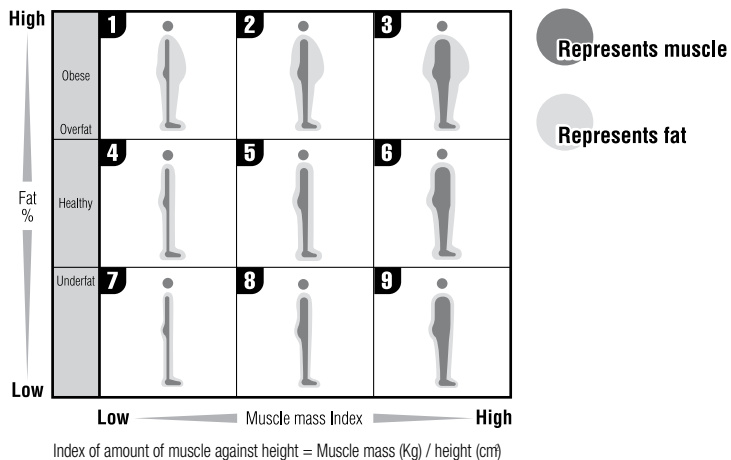
Low			Average			High		
-4	-3	-2	-1	0	+1	+2	+3	+4

## What Is Physique Rating? (Applicable age 18-99)

This feature assesses your physique according to the ratio of body fat and muscle mass in your body. As you become more active and reduce the amount of body fat, your physique rating also changes accordingly. Even if your weight does not change, your muscle mass and body fat levels may be changing to make you healthier and reduce your risk of certain diseases. Each person should set their own goal of which physique they want to achieve, and follow a diet and fitness program to meet that goal.

Result	Physique Rating	Explanation of Physique Rating Results
1	Hidden Obese	<b>Small Frame Obese</b> This person seems to have a healthy body type based on physical appearance. However, they have a high body fat percentage with low muscle mass level.
		<b>Medium Frame Obese</b> This person seems to have a healthy body type based on physical appearance. However, they have a high body fat percentage with low muscle mass level.
2	Obese	<b>Large Frame Obese</b> This person has both a high body fat percentage and a high muscle mass.
		<b>Low Muscle and Average Body Fat Percentage</b> This person has an average body fat percentage and a less than average muscle mass level.
3	Solidly-built	<b>Ave. Muscle &amp; Ave. Body Fat Percentage</b> This person has average levels of both body fat and muscle mass.
		<b>High Muscle &amp; Ave. Body Fat Percentage (Athlete)</b> This person has an average body fat percentage and higher muscle mass level than average.
4	Under exercised	<b>Low Muscle &amp; Low Fat</b> Both body fat percentage and muscle mass are lower than average.
		<b>Thin and muscular (Athlete)</b> This person has a lower than average body fat percentage while having adequate muscle mass.
5	Standard	<b>Very Muscular (Athlete)</b> This person has a lower than average body fat percentage while having above-average muscle mass.
6	Standard Muscular	
7	Thin	
8	Thin and muscular	
9	Very Muscular	

Source: Data from Columbia University (New York) & Tanita Institute (Tokyo)



## What Is Muscle Quality Score? (Applicable age 18 - 99)

Muscle quality score indicates the "quality (state) of muscle" which changes according to factors such as age and fitness. The muscles of young people or those who exercise regularly is normally in a good state, but the state of muscles deteriorates in elderly people or those who do not get enough exercise. Inner Scan Dual Body Composition Analyzer uses 2 different frequencies to measure Bioelectrical Impedance, and these results are used to evaluate the muscle state using the Muscle Quality Score.

### Muscle Quality Judgement Chart

Male	18 – 29	30s	40s	50s	60s	70s	80 and over
High	74 and higher	73 and higher	70 and higher	64 and higher	56 and higher	46 and higher	39 and higher
Average	49 – 73	47 – 72	44 – 69	39 – 63	33 – 55	25 – 45	21 – 38
Low	48 or less	46 or less	43 or less	38 or less	32 or less	24 or less	20 or less

Female	18 – 29	30s	40s	50s	60s	70s	80 and over
High	68 and higher	70 and higher	69 and higher	67 and higher	61 and higher	54 and higher	50 and higher
Average	48 – 67	48 – 69	45 – 68	41 – 66	34 – 60	26 – 53	22 – 49
Low	47 or less	47 or less	44 or less	40 or less	33 or less	25 or less	21 or less

\*Muscle Quality Score may not be accurately evaluated if there are abnormalities in the state of body water, such as in the following conditions:  
 - If the body fatigued or swollen.  
 - If the person is dehydrated or suffering from reduced blood flow.

It is important to maintain a good balance between muscle mass and quality.

**Note:**  
 More ★ indicates a better state of muscle.  
 (Max. ★★★★★)

### Balance Between Muscle Mass and Muscle Quality

Muscle Quality Judgement	High	★★	★★★★	★★★★★
	Average	★★	★★★★	★★★★★
	Low	★	★	★★
		Low	Average	High
Muscle Mass Judgement				

## What Is Bone Mass? (Applicable age 18-99)

This function indicates the amount of bone (bone mineral level, calcium or other minerals) in the body.

Research has shown that exercise and the development of muscle tissue are related to stronger, healthier bones. While it is unlikely that there will be noticeable changes in bone structure over short periods, it is important that you develop and maintain healthy bones by having a balanced diet and plenty of exercise. People worried about bone disease should consult their physician. People who suffer from osteoporosis or low bone density due to age (young or old), pregnancy, hormonal treatment or other causes may not get accurate bone mass readings.

Below is the result of estimated bone masses of persons aged 20 to 40, who are said to have the largest amounts of bone mass by weight. (Source: Tanita Body Weight Science Institute)

Please use the charts below as a guide for comparing your bone mass readings.

**Women:** Average of estimated bone mass

Weight (lb)		
Less than 110 lb	110 lb – 165 lb	165 lb and up
4.3 lb	5.3 lb	6.5 lb

Weight (kg)		
Less than 50 kg	50 kg – 75 kg	75 kg and up
1.95 kg	2.40 kg	2.95 kg

**Men:** Average of estimated bone mass

Weight (lb)		
Less than 143 lb	143 lb – 209 lb	209 lb and up
5.9 lb	7.3 lb	8.1 lb

Weight (kg)		
Less than 65 kg	65 kg – 95 kg	95 kg and up
2.66 kg	3.29 kg	3.69 kg

\*lb is the estimation calculated based on kg.

### Note:

- Persons described below may obtain varying readings and should take the values given for reference purposes only.
    - Elderly persons
    - Women during or after menopause
    - People receiving hormone therapy
  - “Estimated bone mass” is a value estimated statistically based on its correlation with the fat-free amount (tissues other than the fat). “Estimated bone mass” does not give a direct judgment on the hardness or strength of the bones or the risks of bone fractures.
- If you have concerns over your bones, you are recommended to consult a specialist physician.

## What Is Body Mass Index (BMI)? (Applicable age 18-99)

This function indicates the relationship between height and weight.

The World Health Organization (WHO) considers an index of 18.5 to 25 as optimal.

## Troubleshooting

If the following problems occur, follow the instructions below.

### “Lo” appears on the display.

Check the orientation of the batteries, and insert them correctly.

The batteries are running low. Replace the batteries promptly.

Refer to page 6.

### “OL” appears on the display during use

The maximum weight (weighing capacity) 200kg is exceeded. (Measurements cannot be taken)

### “Err” appears on the display after measurement

Are the personal data settings correct?

Did you select the wrong personal data number?

Measurement items have exceeded the measurement range. (Measurements cannot be taken)

### Cannot measure body composition even though personal data is set

The personal data settings are not complete. You need to measure body composition once immediately after entering the personal data.

### Cannot connect my smartphone to the Body Composition Monitor

#### “Err pair” or “Err DATA” appears on the display

Are batteries inserted correctly in the Body Composition Monitor?

Are the batteries running low?

Are the smartphone and body composition meter within communication range?

The communication range for The Body Composition Monitor is 5m in an unobstructed location.

Is the “Bluetooth” setting in the smartphone “Settings” turned on?

#### “Err pair” appears repeatedly.

Delete the pairing information from “Settings” > “Bluetooth” on the smartphone, and pair the smartphone with the Body Composition Monitor again.

#### “Err UUID” appears repeatedly.

Delete the pairing information from “Settings” > “Bluetooth” on the smartphone, and pair the smartphone with the Body Composition Monitor again.

#### “Err c9” appears on the display

Remove and replace the batteries from the body composition meter, and set the date and time again.

#### The date and time settings have been changed

When using the Body Composition Monitor linked with an smartphone, the date and time settings on the Body Composition Monitor are overwritten with those from the smartphone.

#### The “Input Data” button in the app does not work

Is the “Bluetooth” setting in the smartphone “Settings” turned on?

Linking between the app and the Body Composition Monitor is only enabled when the Body Composition Monitor is turned off.

Check that the power of the Body Composition Monitor is turned off and try again.

## Specifications

RD-953

### Weight Capacity

200 kg (440 lb)(31st 6 lb)

### Weight Increments

0-100 kg/0.05 kg 100-200 kg/0.1 kg

0-200 lb/0.1 lb 200-440 lb/0.2 lb 0-31st 6 lb/1 lb

### Body Fat %

18-99 years old

### Body Mass Index

18-99 years old

### Muscle Mass

18-99 years old

### Muscle Quality Score

18-99 years old

### Physique Rating

18-99 years old

### Bone Mass

18-99 years old

### Visceral Fat

18-99 years old

### Basal Metabolic Rate

18-99 years old

### Metabolic Age

18-99 years old

### Body Water %

18-99 years old

### Personal Data

4 memories

### Power Supply

4×AA Alkaline batteries(included)

### Power Consumption

250mA maximum

### Measuring Current

50kHz, 6.25 kHz, 100μA

### Communication Method

Bluetooth version 4.0 (Low Energy support)

## Disposal



This is an electronic device.

Please dispose of it as an electronic device, not as general household waste. Please follow the regulations in your local region when disposing of this device.



### ⚠ Not allowed to mix batteries with consumer wastes!

As consumer you are legally bound to return used or discharged batteries. You can deposit your old batteries at the public collecting 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 the collecting points as well.



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### Manufacturer TANITA Corporation

1-14-2 Maeno-cho, Itabashi-ku,  
Tokyo 174-8630 Japan  
TEL: +81-(0)3-3968-7048  
www.tanita.co.jp

### EU Representative TANITA Europe B.V.

Hoogoorddreef 56-E, 1101 BE  
Amsterdam, the Netherlands  
TEL: +31-(0)20-560-2970  
FAX: +31-(0)20-560-2988  
www.tanita.eu

### TANITA Corporation of America, Inc.

2625 South Clearbrook Drive,  
Arlington Heights, Illinois 60005  
U.S.A.  
TEL: +1-847-640-9241  
FAX: +1-847-640-9261  
www.tanita.com

### TANITA Health Equipment H.K. Ltd.

Unit 301-303, Wing On Plaza, 3/F., 62 Mody  
Road,  
Tsimshatsui East, Kowloon, Hong Kong  
TEL: +852-2834-3917  
FAX: +852-2838-8667  
www.tanita.asia

### TANITA (Shanghai) Trading Co., Ltd.

Room 8005, 877 Huai Hai Zhong Lu,  
Shanghai,  
The People's Republic of China  
TEL: +86-21-6474-6803  
FAX: +86-21-6474-7901

### TANITA India Private Limited

A-502, Mittal Commercia,  
Off. M.V. Road (Antheri Kuria Road),  
Marol, Andheri-East, Mumbai 400059,  
Maharashtra, India  
TEL: +91-771-801-1511  
FAX: +852-2838-8667  
www.tanita.co.in