

TANITA

BODY COMPOSITION ANALYZER TBF-215 INSTRUCTION MANUAL



CE This device features radio interference suppression in compliance with valid EC Regulation 89/336/EEC.

FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

<Modifications>

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Tanita Corporation may void the user's authority to operate the equipment.

TANITA

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Please read this INSTRUCTION MANUAL carefully and keep it handy for future reference.

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2. Specifications


Model		TBF-215				
Impedance Measurement	Measurement System	Tetrapolar Bioelectrical Impedance Analysis				
	Measurement Frequency	50kHz				
	Measurement Current	500 μ A				
	Electrode Material	Pressure Contact Stainless Steel Foot Pads				
	Measurement Style	Between Both Feet				
Weight Measurement	Measurement Range	150~900 Ω				
	Measurement System	Strain Gauge Load Cell				
	Maximum Capacity	200kg	440lb	31st6lb		
Height Measurement	Minimum Graduation	0.1kg	0.2lb	0.2lb		
	Range of Measurement	90~213cm 1cm increments	3~7ft 0.5in increments			
Input Items	Clothes Weight	0~200kg/0.1kg increments	0~440lb/0.2lb increments	0~9st13.8lb/0.2lb increments		
	Gender	Male/Female				
	Body Type	Standard/Athletic				
	Age	7~99 years old/1 year increments				
	Height	Height Rod	90~213cm/1cm increments	3ft~7ft/0.5in increments		
		Manual Input	90~249cm/1cm increments	3ft~7ft11.5in/0.5in increments		
Target Body Fat %	4~55 %					
Output Items	Display	Target Body Fat %	4~55 %			
		Weight	0~200kg/0.1kg increments	0~440lb/0.2lb increments	0~31st6lb/0.2lb increments	
		Gender	Male/Female			
		Body Type	Standard/Athletic			
		Age	7~99 years old/1 year increments			
		Height	Rod	90~213cm/1cm increments	3ft~7ft/0.5in increments	
			Manual	90~249cm/1cm increments	3ft~7ft11.5in/0.5in increments	
	Fat %	1~75 % / 0.1 % increments				
	Print Out	Body Type	Standard/Athletic			
		Gender	Male/Female			
		Age	7~99 years old/1 year increments			
		Height	Rod	90~213cm/1cm increments	3ft~7ft/0.5in increments	
			Manual	90~249cm/1cm increments	3ft~7ft11.5in/0.5in increments	
		Weight	2~200kg/0.1kg increments	4.4~440lb/0.2lb increments	4.4~31st6lb/0.2lb increments	
BMI		0.1 increments				
BMR		1kJ increments / 1kcal increments				
Impedance		150~900 Ω / 1 Ω increments				
Fat %		1~75 % / 0.1 % increments				
Fat Mass	0.1kg increments	0.2lb increments				
FFM	0.1kg increments	0.2lb increments				
TBW	0.1kg increments	0.2lb increments				
Others	Desirable Range for FAT% and FM (Standard and 20~79 years old ONLY)					
Display	3 Rows, 5Digits LCD					
Cable Length Between Platform and Control Box	2m/6ft6.5in					
Output Data Interface	RS-232C (D -sub 9 pins Male Connector)					
Power Source	AC Adapter (included) Center Minus					
Rated Power	DC5V 3.5A					
Power Consumption	17.5W					
Temperature Range of usage	0~35°C/32~95°F					
Weight of Equipment	Platform	15.6kg / 34.4lb				
	Control Box	0.9kg / 2.0lb				


3. Important Notes for Users


■ Caution Symbols

Thank you for purchasing this precision crafted Tanita product. For optimum performance and safety, please familiarize yourself with the **Caution Symbols** below. These symbols are designed to alert the user to potential hazards when using this equipment. Ignoring these **Caution Symbols** may result in serious injury, or damage to the product. Please be sure to review before proceeding with the INSTRUCTION MANUAL.

	WARNING This symbol indicates the possibility of serious injury if the product is mishandled or instructions are ignored.
	WARNING This symbol indicates the possibility of ELECTRICAL SHOCK. Please pay special attention to sections which bear this mark.
	CAUTION This symbol indicates the possibility of physical injury or equipment damage if instructions are ignored.
	This symbol indicates general precautions that should be taken when using this product.

-  **WARNING**
- **Individuals with a Pacemaker or Other Internal Medical Devices:**
Because Tanita's Body Composition Analyzers send a weak electrical current through the body, **Individuals Who Have a Pacemaker or Other Internal Medical Devices Should Not Use This Product.** The weak electrical signal may cause such internal devices to malfunction.
 - **Cross Contamination**
The Body Composition Analyzer should be used with bare feet. Please be sure to clean the scale platform with appropriate disinfectant after each use. **Never pour any liquid directly on the scale platform**, as it may leak and cause internal damage. Use a soft cloth and appropriate disinfectant or mild cleaners to wipe off platform. Do not wipe the platform with strong chemicals.
 - Please consult your Physician before beginning any weight management program and for help in establishing your target body fat percent. Tanita Corporation is not responsible for establishing individualized target body fat percent values.
 - To reduce the risk of fire hazards or equipment damage, use only the original AC adapter provided by TANITA.

-  **WARNING**
- **Inserting and Removing the Power Cord**
 - To reduce the risk of electric shock or product damage, never insert or remove the power cord with wet hands.
 - To avoid a fire hazard, make sure the wall outlet is functioning properly; avoid using multiple outlet extension cords.

-  **CAUTION**
- To reduce the chance of inaccurate measurement, be sure to place the weighing platform on a flat and stable surface.
 - To reduce risk of injury or equipment malfunction, always step on the platform slowly.
 - When handling printer unit, avoid any sharp edges.
 - To reduce the risk of fire hazards or equipment damage, use only the original AC adapter provided by TANITA.
 - When transferring this product, be sure that it remains in an upright position, and do not carry from the height rod only. Hold the plate underneath the base. Failing to do so may damage the height rod, or the weighing platform.
 - Do not lean against the height rod.

Maintenance

- In order to insure optimum performance of this Body Composition Scale, please observe the following instructions:
- Unplug the unit from the wall outlet when it will not be in use for long periods of time.
 - Always turn the equipment off before unplugging from a wall outlet.
 - Never disassemble the equipment. Always call the nearest Tanita dealer or branch office for instruction.
 - In order to reduce the risk of a short circuit, please keep any liquid or metal objects (paper clips, etc.) away from the printer.
 - Do not drop the unit, and avoid locations with constant vibration.
 - Avoid placing the platform or display in direct sunlight, or too close to a heating unit.
 - Avoid rapid temperature fluctuations.
 - Excessive humidity may damage the equipment.
 - When transferred to any location where there is a difference of more than 20°C(40°F), wait 2 hours before using.

General Instructions for Accurate Measurement

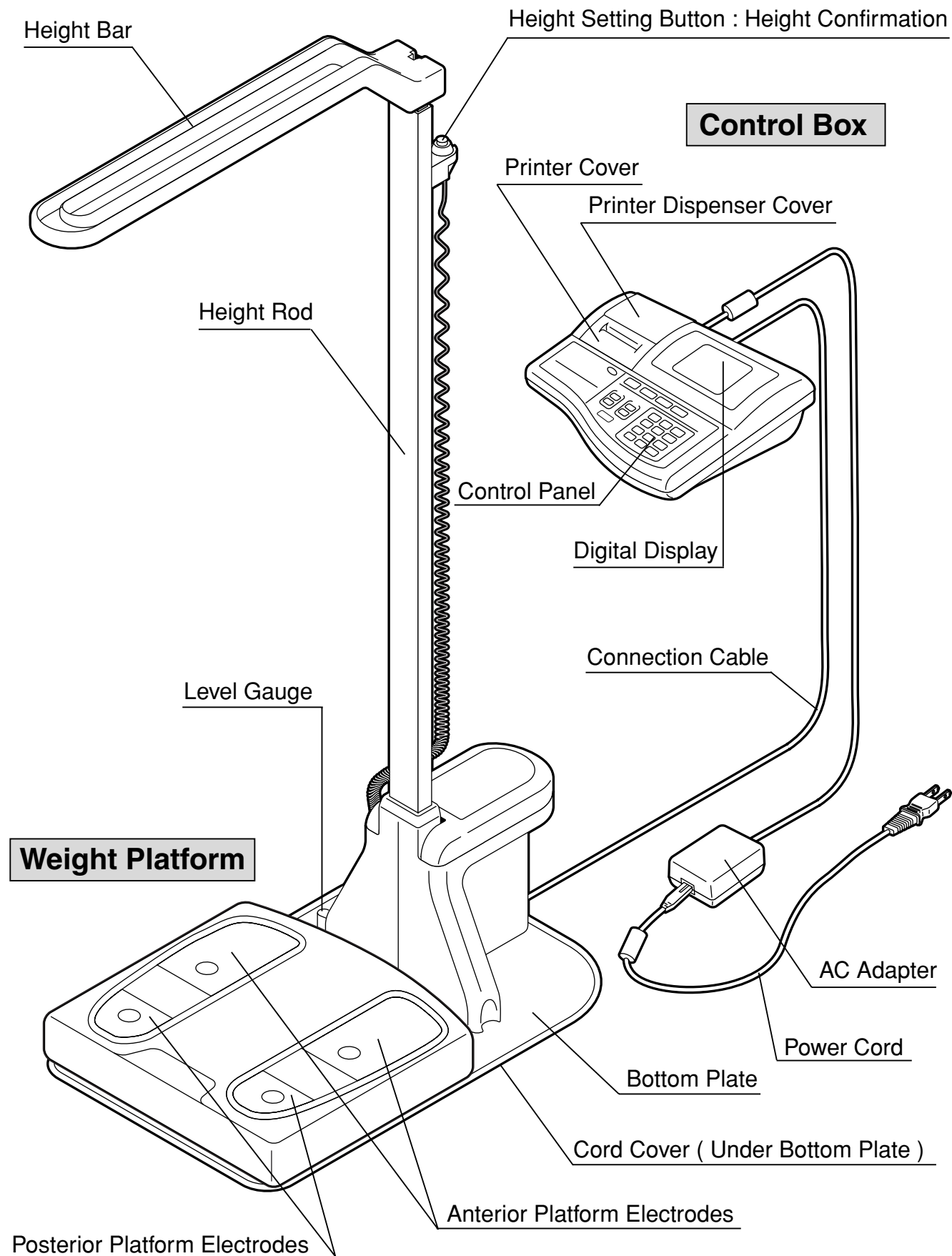
The body composition analyzer is designed for standard and athletic individuals. However, certain individuals may not receive accurate results, as they fall outside the population for which Tanita equations were developed.

- Because this body composition analyzer uses a minor electric current to measure impedance (electrical resistance), best results will be observed when measurement is taken in bare feet.
- If there are calluses on the soles of the feet, or a client is wearing thin nylons, accurate measurement may still be possible. Place 0.5 ml of saline or water in the center of each electrode. This will act as a conductant, and may allow the current to pass freely through a thin barrier.
- Poor contact between the feet and electrodes may produce an error message. Heels should be placed directly on top of the posterior electrodes, while the front part of the foot needs to be in contact with the anterior electrodes. Also, make sure the soles of feet are free of excess dirt, as this may also act as a barrier to the mild current.
- Keep the electrodes clean by wiping them with disinfectant.
- False results may be reported after excessive food/fluid intake, or after periods of intense exercise.
- **Interpretation of Results**
The data provided by this machine, as well as any supplementary information such as diet or exercise programs based on this data, should be interpreted by a licensed professional.

For more information regarding Accurate Measurement, please refer to the **Technical Notes** booklet.

4. Components

Overview



Control Panel Functions

Feed Key

Advances the print paper

Clothes Key

To specify clothes weight

Weight Only Key

Measures body weight only

Kg/Lb./(st.lb) Key

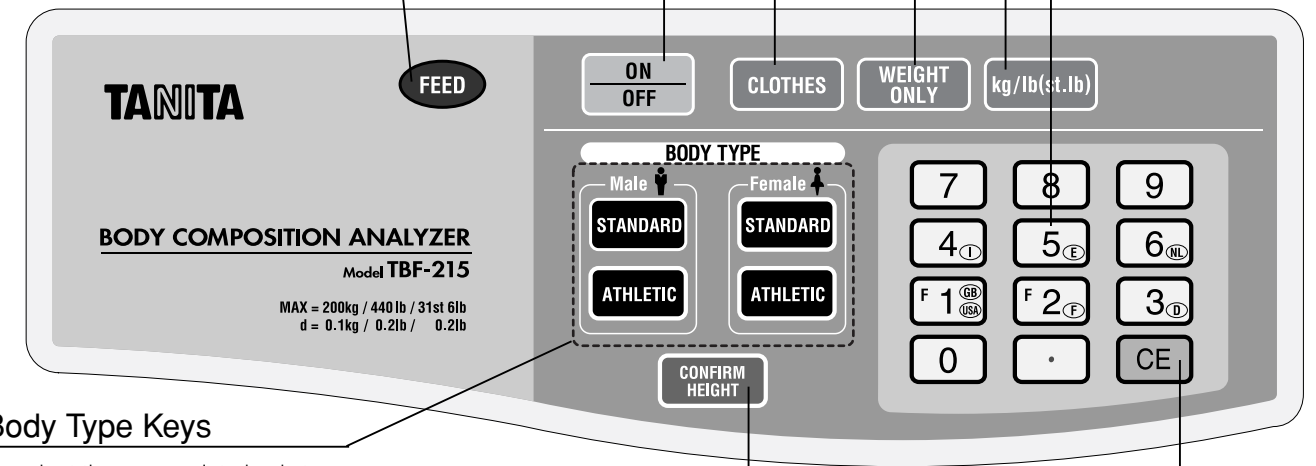
Changes measurement unit

Numerical Key Pad

Number Entry Keys

ON/OFF Key

Turns the power on or off



Body Type Keys

To select the appropriate body type

Tanita defines "athlete" as a person involved in intense physical activity of at least 10 hours per week and who has a resting heart rate of approximately 60 beats per minute or less. Tanita's athlete definition includes "lifetime of fitness" individuals who have been fit for years but currently exercise less than 10 hours per week.

Tanita's athlete definition does not include "enthusiastic beginners" who are making a real commitment to exercising at least 10 hours per week but whose bodies have not yet changed to require the Athlete mode.

Please see Technical Notes booklet for further explanation.

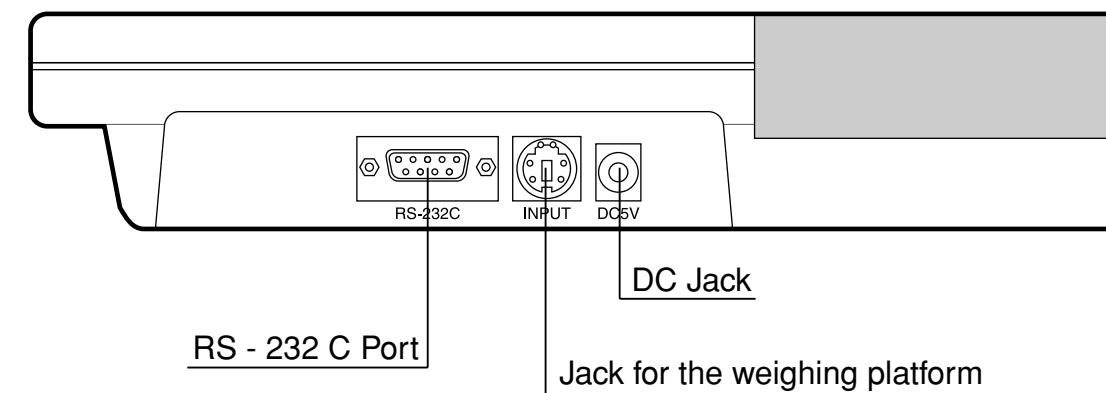
CE Key

Clear Entry key

Confirm Height Key

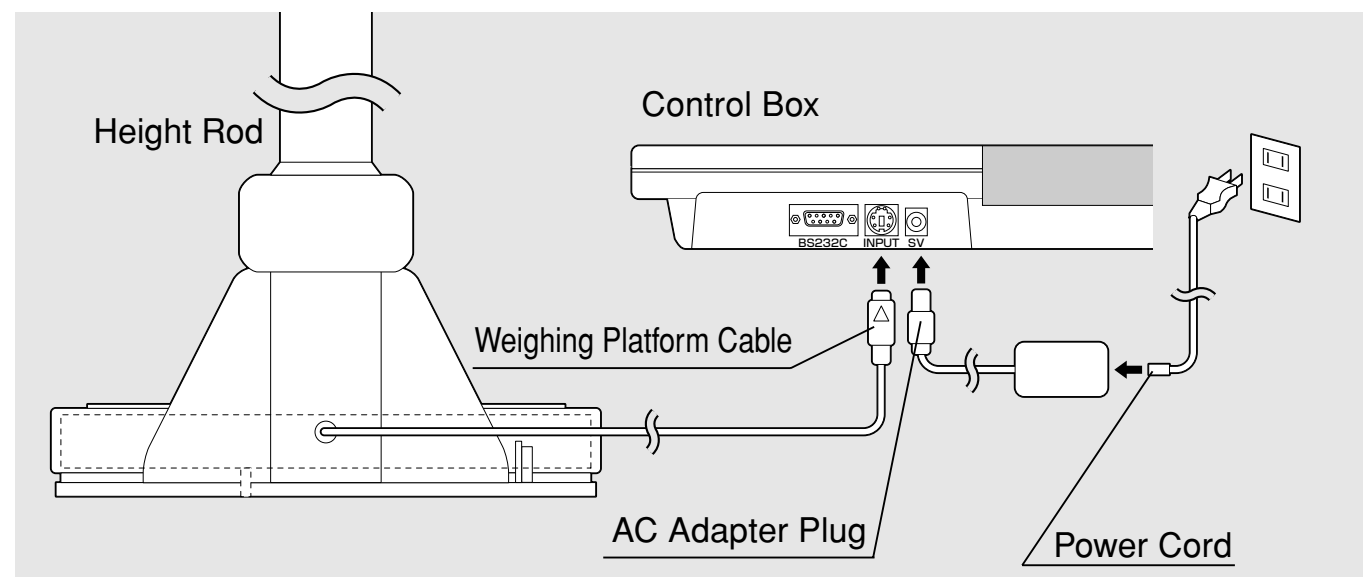
Height Entry

Rear View of Control Panel



5. Set Up

■ Assembly



Connecting the Weighing Platform to the Control Box

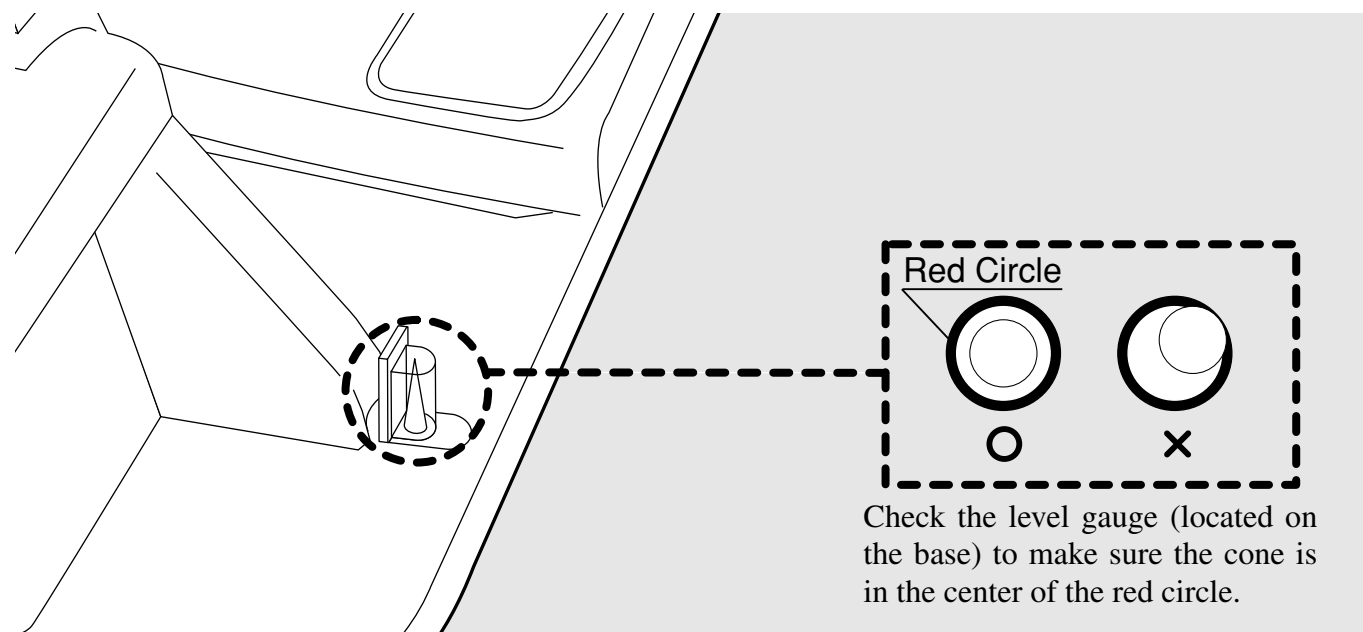
1. Connect the cable from the weighing platform to the jack located on the back of the control box. The ▲ on the plug should be facing up when inserted.
2. Connect the plug of AC adapter to the DC jack located on the back of the control box.
3. Insert the power cord to the AC adapter, and plug it into a power outlet.

WARNING

In order to reduce the risk of electric shock, never insert or remove the power cord with wet hands. Use only the Tanita AC adapter provided with the unit. Place the platform on a flat, level surface.

Leveling the Weighing Platform

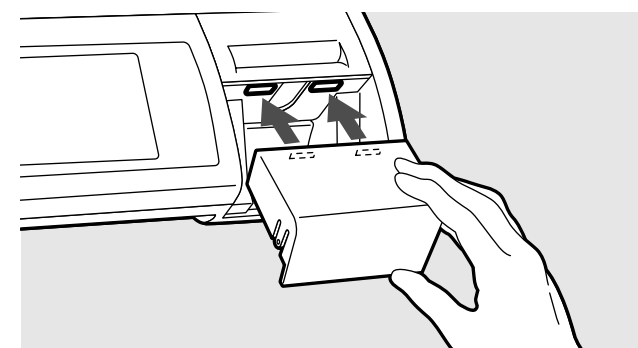
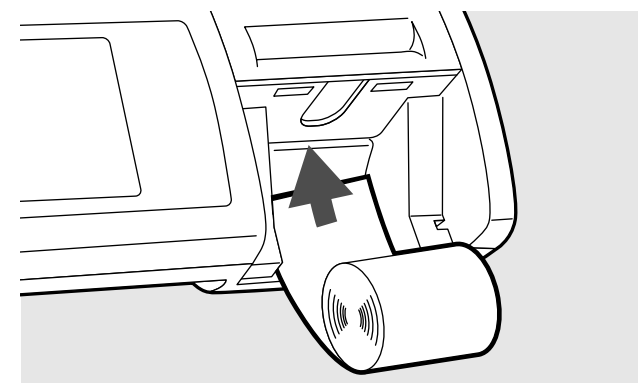
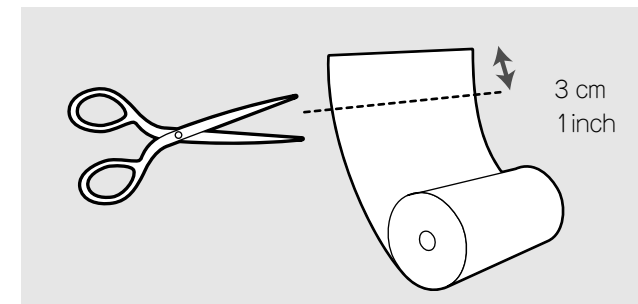
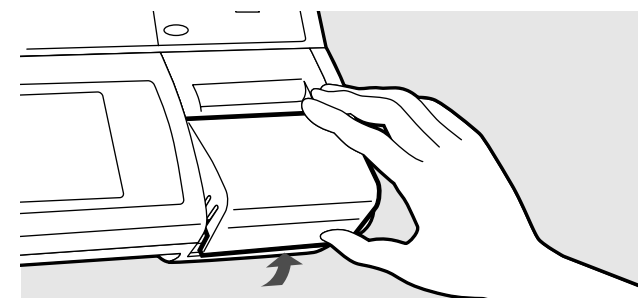
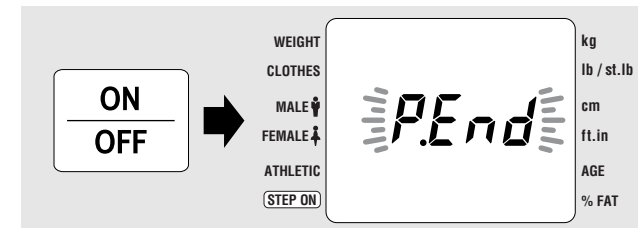
- For optimum accuracy, place the unit on a flat and level surface.
- Check the level gauge (located on the base) to make sure the cone is in the center of the red circle.
- The weighing platform has adjustable feet to ensure a level and stable weighing surface. If the cone is not in the center of the red circle, it can be centered by turning the feet counter-clockwise.



■ Loading Printer Paper



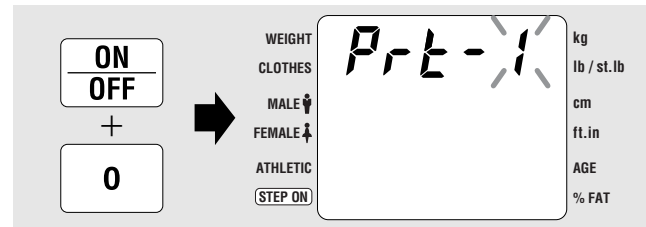
Please change paper when red lines appear along the sides of the paper.



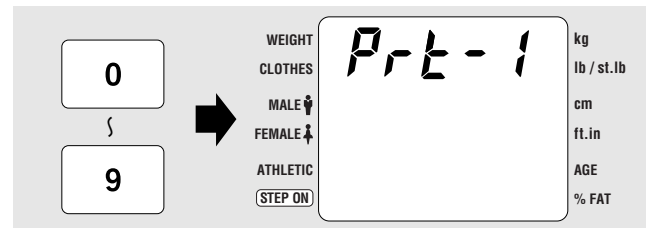
1. Turn the unit on
Please lower the height rod to the resting position, and turn the unit on by pressing the **ON/OFF** key. "P-End" will flash on the middle of the LCD. If "E-15" is shown, please lower the height rod to the resting position. The error message will disappear. If you do not want to use paper, press the **CE** key to continue measurement with no paper. When there is no "P-End" message, but the printer fails to print, the chosen number of print outs may be "0". Select the number of print outs greater than "0". (See p.10 "Pre-Set Printer Function")
 2. Remove the Paper Dispenser Cover by lifting it up from the back.
 3. In a straight line, cut approximately 1 inch (3 cm) off of the paper roll, this will ensure smooth feeding.
 4. Insert the paper in the holder as displayed. Be sure to feed the paper straight into the automatic feeder. As the front edge of the paper enters the appropriate slot, it will automatically feed. Once the paper feeds, it will exit the paper feed slot located on the printer cover, and be cut. Remove excess paper from the Printer Cover. Press the **FEED** key when paper needs to be advanced.
 5. Replace the Paper Dispenser Cover as displayed. Please refer to P. 19 for **Trouble Shooting The Printer**.
- !** Only use Tanita thermal paper. Tanita can not guarantee the performance of the printer if paper supplied from outside sources is used.

■ Pre-Set Printer Functions

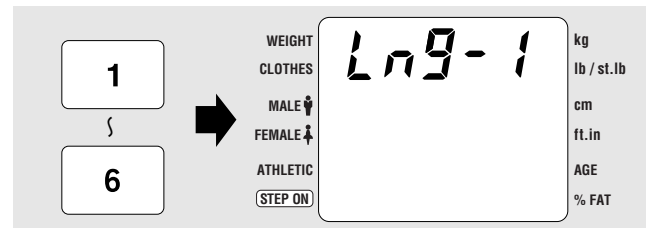
 All units come factory pre-set to print 1 copy in the English language. If change is necessary, please follow these instructions:




1. Press and **hold** the key, and press the key once. Release the key after "Prt-1" is displayed on the screen.



2. Select the desired number of print outs. Using the number keys, enter the quantity of print outs desired. As many as nine are possible
 - : **Quantity of print outs**
 : **No print out**



3. Language Selection
 **If "0" has been selected for the number of print outs in Step 2 above, it will not be possible to preset this item.**

The LCD will automatically advance to the Language Selection Screen. The current language selection will be displayed as a numerical value.

Example: (LNG-1) denotes English as the selected language.

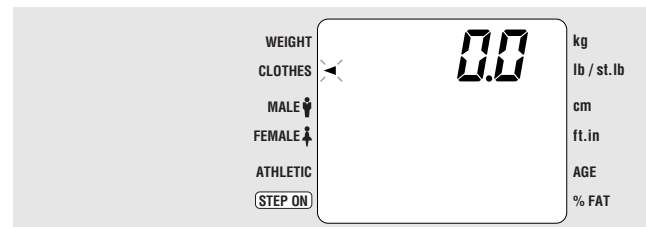
Select a preferred language by pressing the corresponding number on the key pad.

- : English
- : French
- : German
- : Italian
- : Spanish
- : Dutch

4. The display will automatically change to the initial entry screen after this procedure is finished.

If "E-15" is shown, please lower the height rod to the resting position. The error message will disappear.

Normal functions may now be resumed. If further change to Pre-Set Printer Functions is desired, please turn off the unit, and refer to steps 1-3 above.



Sample

TANITA BODY COMPOSITION ANALYZER TBF-215	
BODY TYPE	STANDARD
GENDER	MALE
AGE	32
HEIGHT	175 cm
WEIGHT	73.3 kg
BMI	23.9
BMR	7266 kJ
	1737 kcal
IMPEDANCE	464 Ω
FAT%	16.0 %
FAT MASS	11.7 kg
FFM	61.6 kg
TBW	45.1 kg
DESIRABLE RANGE	
FAT%	8-20 %
FAT MASS	5.5-15.7 kg

TARGET BF% is :	10 %
Predicted weight :	68.4 kg
Predicted fat mass :	6.8 kg
FAT TO LOSE:	4.9 kg
Consult your physician before beginning any weight management program. Tanita is not responsible for determining your target BF%.	

1

This section prints the both the body type and body composition data of the current user.

2

This section calculates the amount of fat that should be lost or gained to achieve the Target BF% (preset by the user and health care professional).

<Goal Setter Mode>

Target Function	Input	Print Out
ON [1]	STANDARD	<input type="text" value="1"/> <input type="text" value="2"/>
	ATHLETIC	<input type="text" value="1"/> <input type="text" value="2"/>
	TARGET BF 00%	<input type="text" value="1"/>
OFF [0]	STANDARD	<input type="text" value="1"/>
	ATHLETIC	<input type="text" value="1"/>

For this Goal Setter Mode, please refer to the page 12.

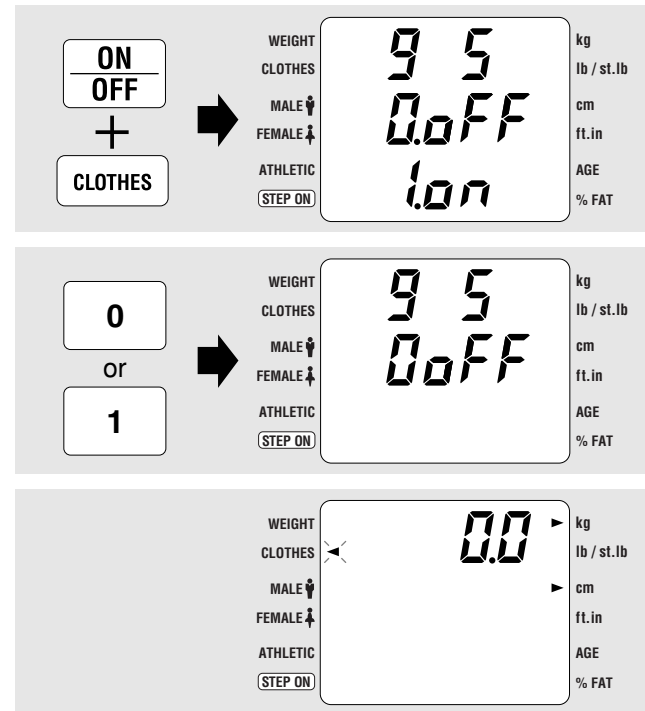
6. Operating Instructions

Setting the Original Mode

This process is utilized to select whether or not you use the target body fat ratio function. (See the printout sample on page 18.)

<HINT!>

The target body fat ratio function is deactivated when this product is shipped from factory.



1. While pressing the **CLOTHES** or **P T** key, switch on the power.

[0]: The target body fat ratio function is deactivated

[1]: The target body fat ratio function is activated

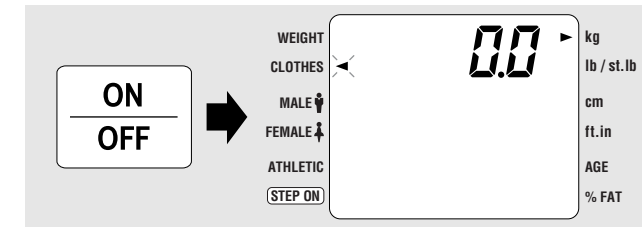
! If the number of print outs is set to "0" during the process of "Setting the Number of Print Outs and Language" on page 18, you cannot preset this item.

2. After the input is completed, the display will automatically change to the measurement screen.

! The equipment will start up with these settings next time you use it.

Body Composition Analysis

! Do Not Step On The Weighing Platform Until All Data Has Been Entered, And The Flashing Arrow Appears Next To [STEP ON].



1. Press the **ON/OFF** key to turn on the Power after confirming the height rod is at the resting position.

After a momentary automatic display check, the ▲ mark and "0.0" will flash on the LCD.

If "E-15" is shown, please lower the height rod to the resting position. The error message will disappear.

If measuring units need to be changed, do so at this time by pressing the **kg/lb (st.lb)** key. An arrow on the LCD will follow the selection of weighing units.

Throughout data entry, mistakes may be corrected by pressing the **CE** key. Follow the flashing arrow on the LCD for proper sequence.

2. **Enter Clothes Weight (Optional)**

This function will automatically subtract the chosen amount of clothes weight. Press the **0-9** keys.

Example : 2.0kg = Press the [2] [.] [0] keys.

: 4.0lb = Press the [4] [.] [0] keys.

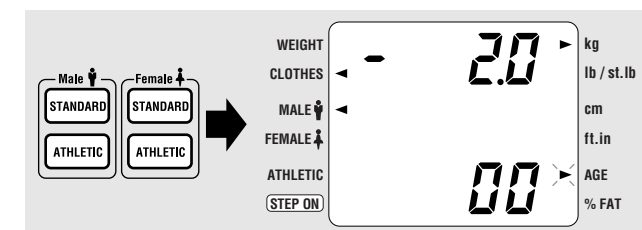
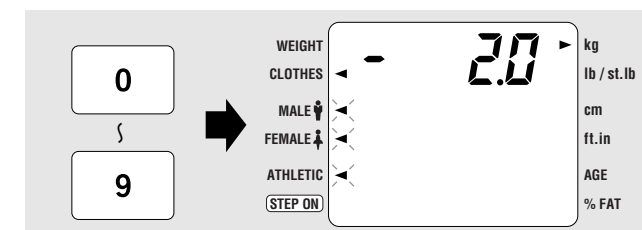
Clothes weight can be entered by 0.1kg/0.2lb increments .
Note :st.lb. is not available when entering clothes weight , please use only lb. units.

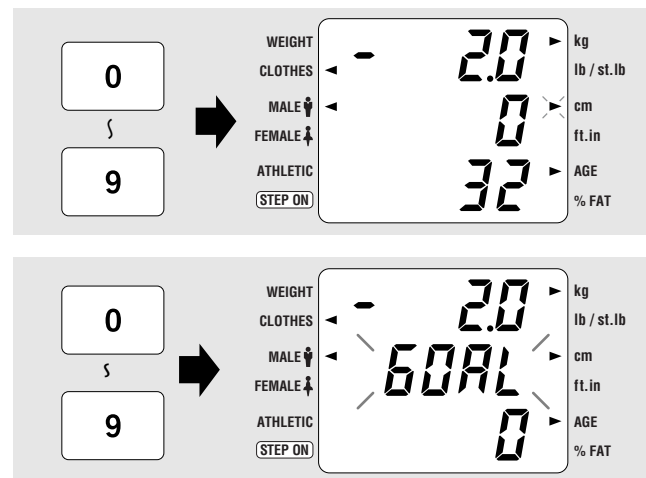
After entering the last digit, the flashing arrow on the LCD will automatically appear next to the Male Icon, Female Icon, and Athletic on the LCD.

3. **Select the Body Type.**

Select the Body Type from Standard Male, Standard Female, Athletic Male and Athletic Female. Please use the Athletic key when the user is 17 years or older and also meets the following criteria.

For Tanita's definition of "Athlete" see page 7.





4. Enter Age

- * If the user is 32 years old or younger.
e. g., Press [3] and [2].
- * If the user is 9 years old or younger
Example: press [0] and [9].
- * If ages 16 or less are entered, even if Athletic is selected for the Body Type, it will be automatically changed to Standard.

5. Set the Target Body Fat Ratio.

After you input the height, "GOAL" will automatically flash on the display. Input the target body fat ratio desired using the numerical keys.

Example: 16% = Press [1] and [6].

9% = Press [0] and [9].

- * If the number of print outs is set to "0", nothing will be displayed.
- * If the target body fat ratio is set to OFF, the target body fat ratio will not be printed out.



● **Before you start a body weight management program and set the appropriate personal body fat ratio, please consult your doctor. Tanita is not responsible for setting the appropriate target body fat ratio for specific individuals.**

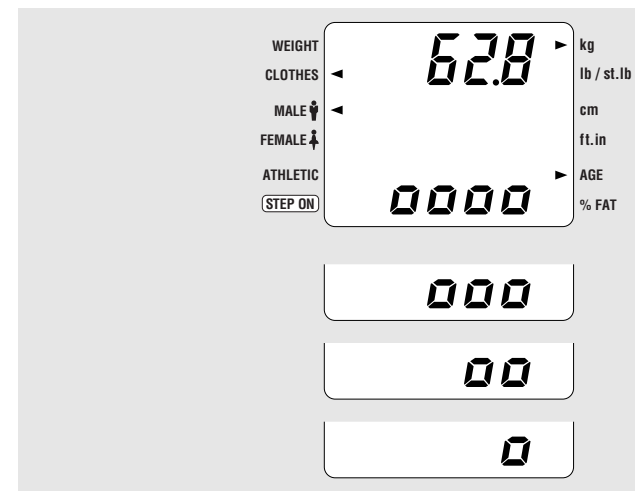
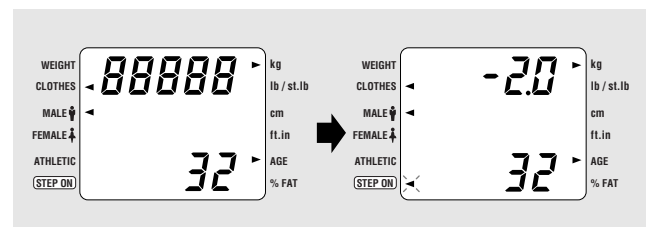
● **For details of the desirable body fat percentage, please refer to the Technical Notes. Male athletes may wish to select a single digit body fat percentage as their target. However, this is not recommended for Standard Adults, in particular women, who should avoid becoming excessively lean. Always consult a doctor about the target body fat percentage most suitable for your body type.**



● **Do not step on the Weighing Platform until the target body fat ratio setting has been completed because the power may be automatically turned off or the measurement may be inaccurate.**

- * If you want to change the settings, please press the [CE] key and the procedure will go back to the former step. Please re-enter the data.

6. After "88888" is displayed on the upper portion of the screen, a flashing arrow will appear next to Step On.



7. Measure Weight and Impedance

When the arrow next to "STEP ON" flashes, slide the height rod into approximate position, and then step on the weighing platform with bare feet.

Make sure heels are placed on the posterior electrodes, and the front part of the feet are in contact with the anterior electrodes. To ensure the most accurate measurement, stand up straight, and remain stable throughout the procedure.

Caution: Do not lean against the height rod.

After weight stabilizes and is fixed on the screen, impedance measurement is taken. This is denoted by four "bubbles" 0000 which appear on the bottom portion of the LCD. As the measurement is being taken, the bubbles will begin to disappear one by one. Actual measurement is finished when all bubbles disappear, and the display emits a beeping sound.



● **Do not step off from the weighing platform until the final bubble has disappeared, or the display will automatically return to 0000**

● **Measure the Impedance.**

After the weight measurement stabilizes, "0000" is displayed on the lower portion of the screen and an impedance measurement is taken.

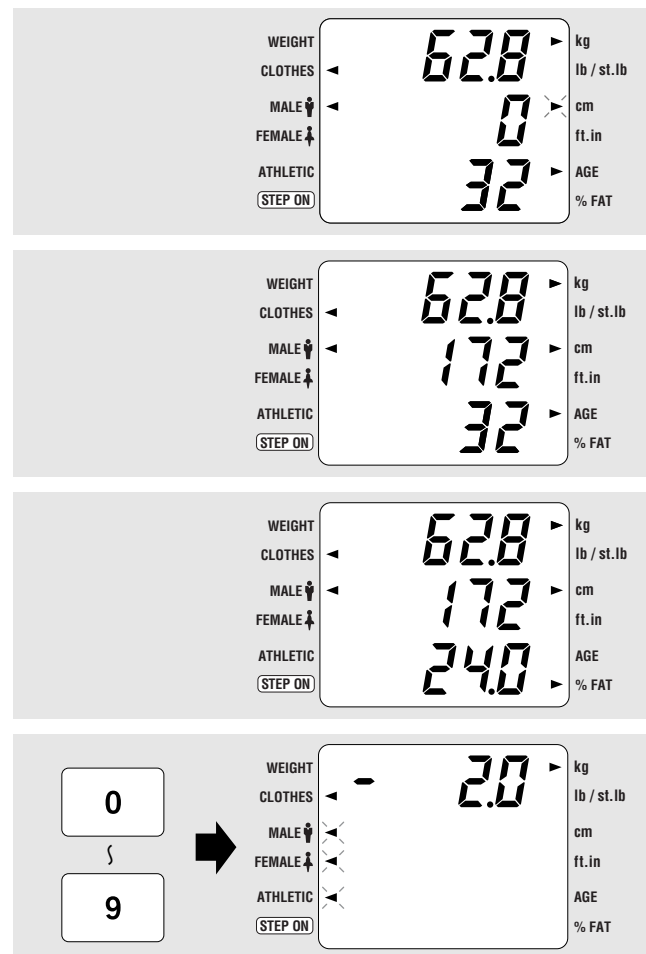
As the measurement is being taken, the "0000" symbols disappear one by one.



● **Do not step off the Weighing Platform until the "0000" symbols disappear completely.**

● **In cases when measurements of the body fat ratio or the quantity of fat are abnormally small or the error message (E01) is shown on the screen, the probable reason is that the soles of the feet and the electrodes are not in full contact. Make sure you step on the Weighing Platform so there is contact between the electrodes and the soles of your feet. If the problem is not solved this way, it is possible that the soles of the feet have calluses and the resistance is too great. Therefore, place about 0.5 ml of water on each of the four electrodes where the feet touch before measurement.**

● **Remain still on the platform during measurement. The unit may report an error message "E-11" if constant movement does not allow weight to lock in. The unit may automatically turn off after an "E-11" error message.**



8. Measuring Height

When the arrow next to “Height” flashes, move the height rod into place over the subject’s head. At this point, the height data may be entered in one of two ways :

- Enter the height data by pressing the Height Confirm Button located on the back of the Height Rod.
- Press the **CONFIRM HEIGHT** key, which is located on the control box.

9. Measurement Is Completed.

Weight and body fat results are shown on the screen after the display emits a beep. Step off the weighting platform.

If more than “0” print outs have been selected, results will automatically print out after the final beep.

If you have chosen to have no print out (pre-set printer functions are set to “0”), the Results screen will remain for about 30 seconds and then automatically return to Gender and Body Type (Step 3) after a short beep. Press the **CE** key to erase results and proceed directly to Gender and Body Type.

Throughout data entry, mistakes may be corrected by pressing the **CE** key.

Follow the flashing arrow on the LCD for proper sequence. If measuring units need to be changed, do so at the initial screen by pressing the **kg/lb (st.lb)** key. An arrow on the LCD will follow the selection of weighing units.

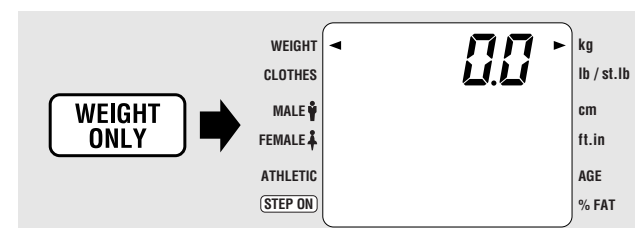
Results will not print out when the number of print outs chosen is “0”.

10. If all measuring is complete, press the **ON/OFF** key to turn off the power.

Weight Only Function



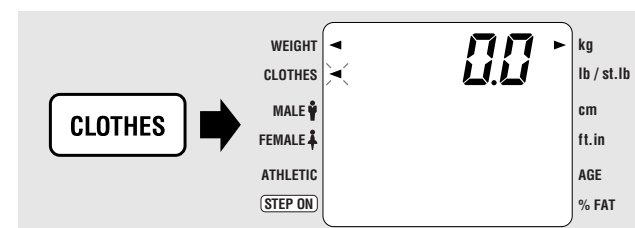
Do not step on the platform while wearing shoes, as this may scratch the electrodes.



1. After turning on the unit, press the **WEIGHT ONLY** key.

After a momentary display check, “0.0” will appear on the LCD.

If measuring units need to be changed, do so at this time by pressing the **kg/lb (st.lb)** key. An arrow on the LCD will follow the selection of weighing units.



2. Enter Clothes Weight (Optional)

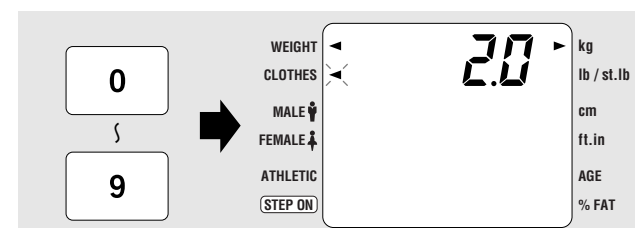
This function will automatically subtract the chosen amount of clothes weight.

- Press the **CLOTHES** key. The flashing arrow will appear next to “Clothes”.
- Enter the clothes weight. Press the **0**-**9** keys.

Example : 2.0kg = Press the 2 . 0 keys.

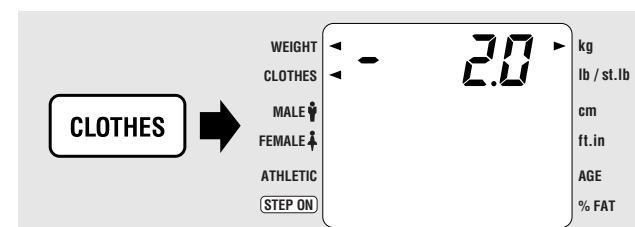
: 4.0lb = Press the 4 . 0 keys.

Clothes weight can be entered by 0.1kg/0.2lb increments. Remember to enter Clothes Weight to the first decimal place, or the flashing arrow will not advance.



- Confirm the selection by pressing the **CLOTHES** key.

After confirming the clothes weight, the scale will self-calibrate, and the subtracted clothes weight will appear on the LCD with a “-” sign in front of it.



3. Weight Measurement

After sliding the height rod into approximate position, step on the weighting platform. Weight will be displayed on the LCD.

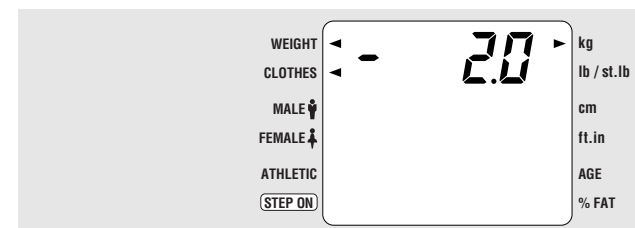
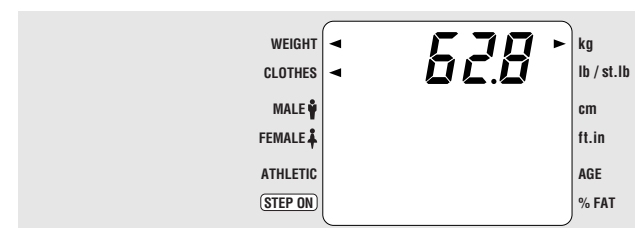
When measuring is complete, Step off the weighting platform. and press the **ON/OFF** key to turn off the power.

Caution: Do not lean against the height rod.

No printer is available when measuring weight only.

***Important Note:** There is no automatic weight lock function.

If body composition analysis is desired, turn the unit off and then on, using the **ON/OFF** key.



7. Explanation of the Print Out (Printer Model Only)

Sample

TANITA BODY COMPOSITION ANALYZER TBF-215	
BODY TYPE	STANDARD
GENDER	MALE
AGE	32
HEIGHT	175 cm
WEIGHT	73.3 kg
BMI	23.9
BMR	7266 kJ
	1737 kcal
IMPEDANCE	464 Ω
FAT%	16.0 %
FAT MASS	11.7 kg
FFM	61.6 kg
TBW	45.1 kg
DESIRABLE RANGE	
FAT%	8-20 %
FAT MASS	5.5-15.7 kg
TARGET BF% is :	10 %
Predicted weight :	68.4 kg
Predicted fat mass :	6.8 kg
FAT TO LOSE:	4.9 kg
Consult your physician before beginning any weight management program. Tanita is not responsible for determining your target BF%.	

IMPEDANCE: Impedance reflects the body's inherent resistance to an electrical current. Muscle acts as a conductor of the electrical current, adipose tissue acts as a resistor.

FAT%: The percentage of total body weight that is fat.

FFM: Fat Free Mass is comprised of muscle, bone, tissue, water, and all other fat free mass in the body.

TBW: Total Body Water is the amount of water (expressed as lb, kg, or st.lb) retained in the body. TBW is said to comprise between 50% - 70% of total body weight. Generally, men tend to have higher water weight than women due to a greater amount of muscle.

Predicted Weight PW: Calculated weight for the given Target BF%.

FAT TO LOSE/GAIN: Calculated fat mass to lose or gain to achieve the Predicted Weight.

BMI: Body Mass Index is a height to weight ratio, and is calculated by the following formula:

$$\frac{\text{Weight (kg)}}{\text{Height (m)}^2}$$
 Desirable Range 18.5 - 24.9

BMR: Basal Metabolic Rate represents the total energy expended by the body to maintain normal functions at rest such as respiration and circulation.

FAT MASS: Total weight of fat mass (in kg, lb) in the body.

Predicted Fat Mass: PFM
 Calculated fat mass for the given Target BF%.

Body type keys
 To select the appropriate body type

NOTE: Please refer to the Technical Notes for details.

Athletic Mode is designed for individuals who meet the following criteria:

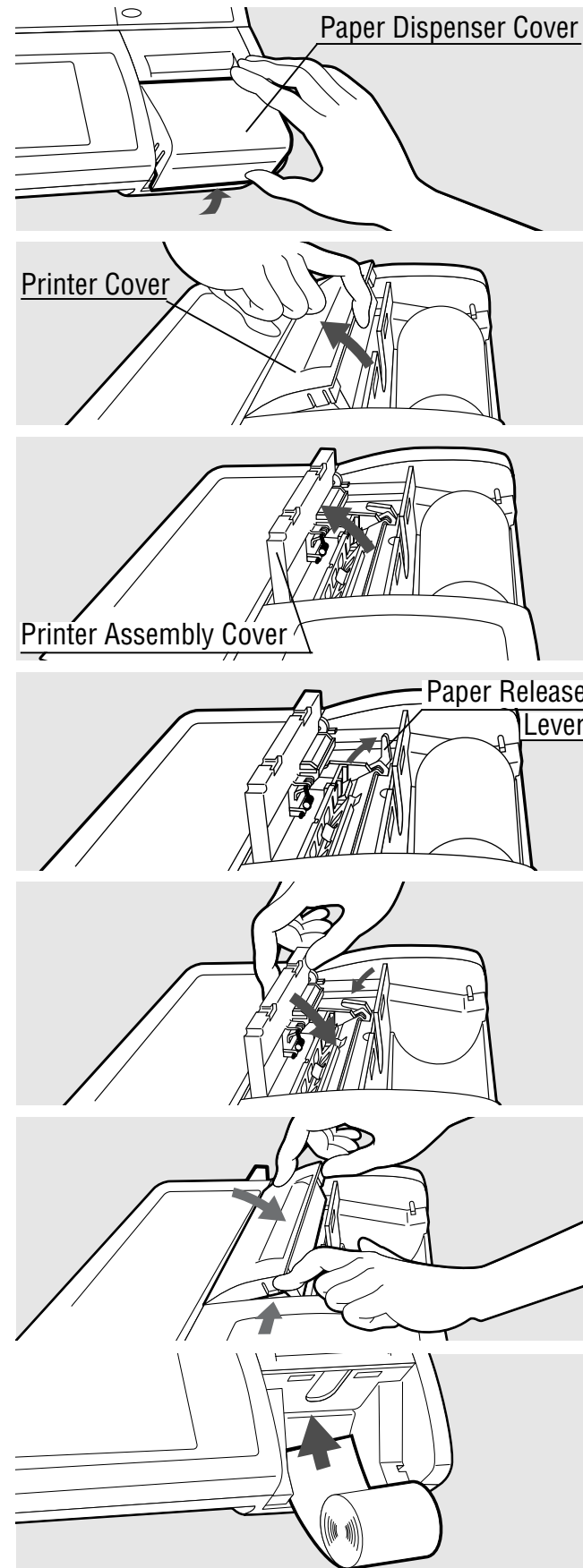
- At least 17 years of age
- Involved in intense aerobic exercise for ten (10) hours per week, for a minimum of 6 months
- Have a resting pulse rate of 60 beats per minute or less.

Please see **Technical Notes** booklet for further explanation

8. Trouble Shooting the Printer

CAUTION When handling the printer unit, please avoid any sharp edges.

Please follow these instructions to clear any paper jams from the printer assembly; be sure to turn off the unit and unplug it from the wall outlet before beginning :



1. Remove the Paper Dispenser Cover by lifting up from the back side.
2. Remove the Printer Cover as displayed. Apply light pressure with one finger to the printer cover and lift up as displayed.
3. Raise the printer Assembly Cover as displayed. Using the pointer finger, gently lift one end of the automatic paper cutter, it will remain upright until returned to the normal horizontal position. Do not attempt to remove the Printer Assembly Cover.
4. Paper Release Lever. Lift the small black lever located on the side of the printer assembly. This will facilitate the clearing of any paper jams that may have occurred. The roll of printer paper must be removed at this time. Clear any scraps of paper from the printer assembly, as this may cause jamming in the future.
5. Be sure to return the Paper Release Lever to its proper position. Next, carefully move the Printer Assembly Cover to its proper position. Replace the Printer Cover by gently pressing in on the side tabs of the cover as it slides into position.

IMPORTANT NOTE:
 Failure to return the **Paper Release Lever** to its proper position will result in continuous feeding of the printer paper. If this occurs, turn off the unit by pressing the **ON/OFF** key, and follow steps 1 - 5 above.

After completing steps 1 - 5, printer paper can be reloaded. See "Loading Printer Paper" on P.9 for details. Replace the Paper Dispenser Cover.

9. General Trouble Shooting

Listed below are common problems and simple solutions.

Trouble	Solution
The Unit Does Not Turn On when the ON/OFF key is pressed	<ul style="list-style-type: none"> Please confirm that the AC adapter is properly connected to the unit. Make sure the AC adapter is plugged into a functioning wall outlet Make sure only the original Tanita AC adapter is being used.
"E-01" is Shown	<ul style="list-style-type: none"> E - 01 is displayed when impedance shows abnormal value as compared to height and weight. Do not step off the platform until all of the bubbles disappear, and the control box emits a short beep. Please make sure the subject was measured with bare feet, and the feet were in contact with the electrodes. If the subject is wearing thin nylons or has thick calluses, place 0.5 ml of conductant (saline, water) in the center of each electrode. Thick nylons or socks will produce an E- 01 reading. They must be removed. Check the personal data for accuracy.
"E-11" is Shown	<ul style="list-style-type: none"> E - 11 is displayed when there is a loose connection between the control box and the weighing platform. Please confirm that none of connections between the scale and control box are loose or unplugged. There may be excessive vibration which will disturb the measurement process.
"E-12/13/14" are Shown	<ul style="list-style-type: none"> E-12/13/14 are shown when an internal malfunction has occurred. Please call your nearest Tanita office or dealer.
"E-15" is Shown	<ul style="list-style-type: none"> When turning the unit on, the height rod may not be at its resting position. Lower the height rod into its resting position (all the way down), and the error message will disappear. The [Confirm Height] key on the Control Box or the Confirm Height Button on the Height Rod may not have been pressed, or pressed at the wrong time. Please check that proper height was entered.
"E-16" is Shown	<ul style="list-style-type: none"> Please do not step off the platform until all of the "bubbles" disappear, and the control box emits a small beep.
No Print Out	<ul style="list-style-type: none"> Please confirm number of print outs chosen is more than "0". (see P. 10) Please confirm that the correct brand of paper is being used. Please confirm that the paper is being fed in the proper direction. Thermal paper will only make an impression on one specially treated side. Please confirm that the printer is not jammed.
"P-End" is Shown	<ul style="list-style-type: none"> This means that the thermal paper has run out. Either press the CE key to continue with no print out, or put another roll in the paper dispenser. (see P.9). Please confirm that the print paper is being fed properly. Please check the Paper Release Lever to make sure it is in the correct "Down" position.(see P.19)
"-----" is Shown	<ul style="list-style-type: none"> The maximum weight capacity has been exceeded.
"UUU" is Shown	<ul style="list-style-type: none"> Do not stand on the platform while entering personal data. Stand on the platform only after the flashing arrow appears next to "Step On".
FEED Key is Not Functioning	<p>Please confirm the following:</p> <ul style="list-style-type: none"> The number of copies selected is more than "0" There is no paper jam in the printer assembly. FEED key is inoperative in the "Weight Only" function. Use "Body Composition Measurement" if a printout is desired.

10. RS-232 C Interface Instructions

This instruction is for RS-232 C interface connecting the TBF-215 to a Personal Computer (PC) or printer.

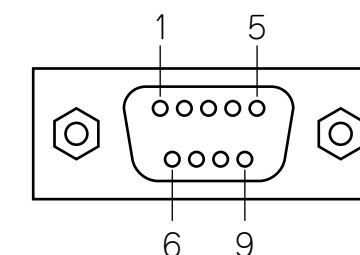
 RS-232C Interface is data OUTPUT ONLY. The TBF-215 is not capable of receiving instructions from a PC.

Specifications

Communication Standard	EIA RS-232C Compatible
Communication Method	Asynchronous
Baud Rate	2400bps
Data Length	7bits
Parity	EVEN
Stop Bit	1bit

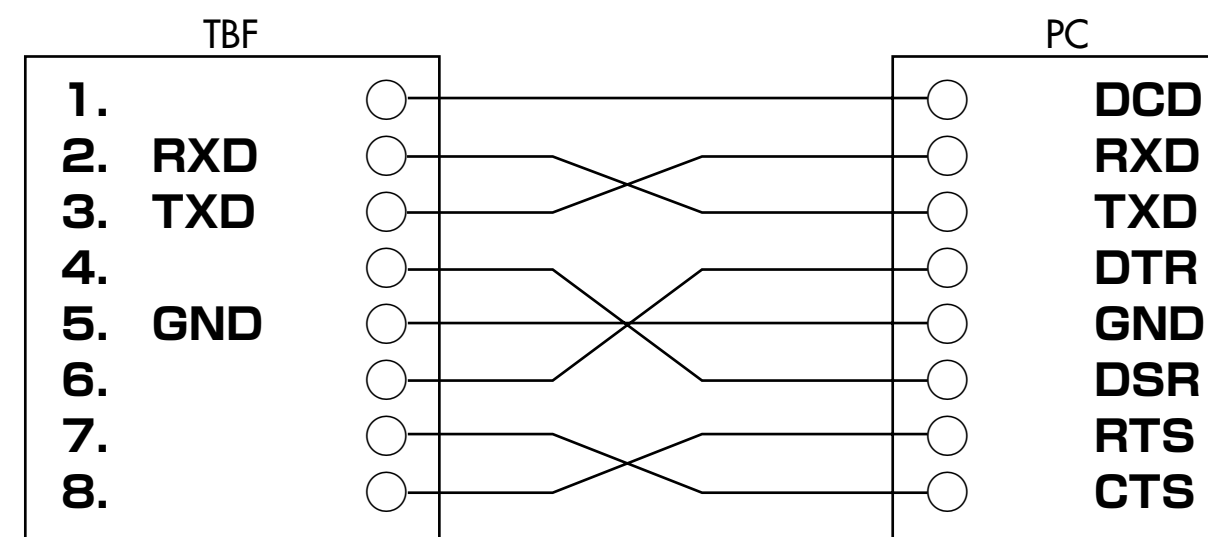
Signal Names and Connections


Terminal Number	Signal Name
1	※ 1
2	RXD
3	TXD
4	※ 1
5	GND
6	※ 1
7	※ 2
8	※ 2
9	No Connection



※ 1 : Pins No.1,4 and 6 are internal connection.

※ 2 : Pin No.7 and 8 are internal connection.



 **Note** ● A Reverse Cable must be used to connect to a PC.
● A Modem Cable can not be used.

Transmission data

Note The receiving PC or printer must be ready to accept output data immediately after measurement is complete.

Output Data

	kg and st.lb mode	lb mode	Byte Length
Body Type	0:Standard or 2:Athletic	0:Standard or 2:Athletic	1
Gender	1:Male or 2:Female	1:Male or 2:Female	1
Height	xxx (cm)	xxx.x (inch)	2 ~ 5
Weight	xxx.x (kg)	xxx.x (lb)	3 ~ 5
Impedance	xxx (Ω)	xxx (Ω)	3
Fat %	xx.x (%)	xx.x (%)	3 ~ 4
Fat Mass	xxx.x (kg)	xxx.x (lb)	3 ~ 5
FFM	xxx.x (kg)	xxx.x (lb)	3 ~ 5
TBW	xxx.x (kg)	xxx.x (lb)	3 ~ 5
Age	xx	xx	1 ~ 2
BMI	xx.x	xx.x	3 ~ 4
BMR	xxxxx (kJ)	xxxxx (kJ)	3 ~ 5

- When measurement is taken in kg or st.lb, the data will automatically be transmitted in kg and cm.
- When measurement is taken in lb the data will automatically be transmitted in lb and inch.
- When using [Weight Only] mode, data can not be transferred via the RS-232C port.
- BMR Conversion Formula : 1kcal = 4.184kJ

Output Data format

- Data is comma delimited.
- Terminal data are CR (ASCII format : 0DH), LF (ASCII format : 0AH)
- Measurement data will be sent in the following format :

