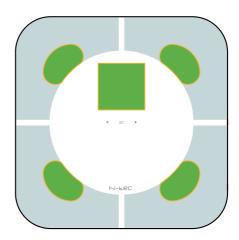
# TRANSTEK

# **User Manual**

Body Fat Analyzer GBF-1406-B









ZHONGSHAN TRANSTEK ELECTRONICS CO., LTD No.23, Jin'an Road, Minzhong, Zhongshan, 528441, Guangdong, China

TEL:86-760-88282982 www.transtek.cn

- Thank you very much for selecting the Transtek Body Fat Analyzer GBF-1406-B.
- Please do read the user manual carefully and thoroughly so as to ensure the safe usage of this product, and keep the manual well for further reference in case you have problems.



# **♥** FCC Regulations

#### **FCC User Guide Information**

#### Radio Frequency Interface Requirements - FCC

Note: 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 / TV technician for help.

#### Radio Transmitters (Part 15)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### **FCC RF Exposure Guidelines**

## **Safety Information**

#### Reducing RF Exposure - Use Properly

Only operate the device in accordance with the instructions supplied.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment.

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Safety Information

# Safety Information

## **♥** Safety and Usage Information

The warning signs and symbols are essential to ensure your correct and safe use of this product and protect you and others from injury. Please kindly find the meanings of the warning signs and symbols, which you may encounter in the label and user manual, as follows:

<b>③</b>	Symbol for "THE OPERATION GUIDE MUST BE READ"	CE	Symbol for "COMPLIES WITH EU REQUIREMENTS"
₿ Bluetooth	The Bluetooth Combination Mark	•	Symbol for "MANUFACTURER"
	Symbol for "MANUFACTURE DATE"	\ <b>A</b>	Symbol for "ENVIRONMENT PROTECTION – Waste electrical
SN	Symbol for "SERIAL NUMBER"		products should not be disposed of with household waste. Please recycle where
==	Symbol for "DIRECT CURRENT"		facilities exist. Check with your local authority or retailer for recycling advice"



Transtek's Body Fat Analyzer GBF-1406-B offers you a seamless way to manage your health. Please be aware that this device is designed for healthy population over 10 years old self-measuring and self-monitoring body compositions. Any information provided by this device is in no way meant to treat, cure or prevent any disease or illness from happening. If in doubt, contact your physician.

This device is contraindicated for any female subject who may be suspected of, or is pregnant. Otherwise, the effects of this device on the fetus are unknown.

This device is contraindicated for any person who is connected to a wearable or implantable electronic device or instrument such as a pacemaker or defibrillator.

This device should not be used for anyone who is acutely or chronically ill because of suffering from a disease or taking medications that affect your water levels. The accuracy of readings for these patients has not been verified. Specific medical advice should be obtained from a physician.

GBF-1406-B is equipped with data transmission function. It may emit electromagnetic energy so as to perform its intended function. Nearby portable and mobile RF communications equipment can affect the performance of GBF-1406-B. And the device can interfere vicinity electrical equipment.

Manufacturer will make available on request circuit diagrams, component parts list, etc.

WARNING:No modifications of this equipment is allowed. This may result in increased EMISSIONS or decreased IMMUNITY of GBF-1406-B.

Please use the device according to the user manual. Any misuse can cause electric shock, burns, fire and other unexpected hazards.

Please use and storage the device under the environment which was provided in the user manual. Don't expose the device to extreme temperatures, direct sunlight, moist or corrosive environment.

Do not step on the scale when your body or feet are wet, especially after bathing or showering to prevent slipping.

Please keep the device out of reach of infants, children or pets, since inhalation or swallowing of small parts is dangerous or even fatal.

Please don't use the device out of lifetime any more because degraded sensors and electrodes, or loosened electrodes can degrade performance or cause other problems.

If you have an allergy to stainless steel, please avoid to contact to the electrodes of the device.

The patient is an intended operator. The patient can measure, transmit data and charge battery under normal circumstances and maintain the device and its accessories according to the user manual.

#### **INDICATIONS FOR USE**

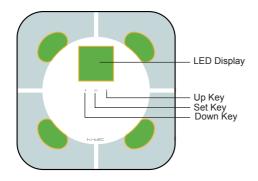
- The Transtek Body Fat Analyzer measures weight and uses bio-electrical impedance analysis (BIA) technology to estimate body fat, total body water percentage, bone mass, and muscle mass in generally healthy children 10-17 years old and healthy adults.
- · It is intended for use in the domestic setting only.

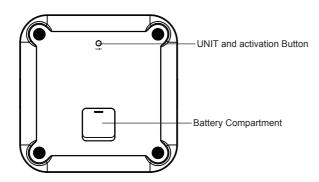
## **♥** Tips

To ensure the accuracy of measurement, please follow below instructions when you start measurement.

- Place the scale on a flat, hard surface. Soft surface such as carpet will affect the performance of the scale.
- Step onto the platform with bare feet. Stand still and keep full contact with the electrodes until the measurement is complete.
- · Start measurement at least two hours after Getting up or Dinning.
- Avoid measurement immediately after strenuous exercise, sauna or bath, drinking, and dinning.
- Always start measurement in the same time slot and on the same scale located on the same flat, hard surface.
- For maximum accuracy and repeatability, it is recommended that you should use the device in the same time of the day and on the same location.
- The condition of the skin on the bottom of your feet can affect the reading. The natural effects of aging or activity can make this skin hard. Take the reading with clean, slightly damp feet for best accuracy. If you are having a problem on operating this scale please contact customer service.
- Body fat percentage estimates will vary with the amount of water in the body, and can be affected by dehydration or over-hydration due to such factors as alcohol consumption, menstruation, illness, intense exercise, etc.

# **♥** Device Components





# **♥** List

- 1. Body Fat Analyzer GBF-1406-B
- 2. Four AAA-size Batteries (1.5V per each)
- 3. User Manual

# **♥** LED Display



FAT	Body Fat Analysis Result	%	Percentage
TBW	Total Body Water Analysis Result		Male
MUS	Muscle Mass Analysis Result	# ×	Male Athlete
BONE	Bone Mass Analysis Result	*	Female
age	Age	**	Female Athlete
ft	Foot	P8	User ID (Range from P1 to P8)
st Ib	I Stone		Body Fat Level: Underfat
lb	Pound	0	Body Fat Level: Healthy
cm	Centimeter	+	Body Fat Level: Overfat
kg	Kilogram	++	Body Fat Level: Obese
*	Successful Bluetooth Connection		Data transmitting / pending to transmit to wireless wellness system

#### **♥** General Instructions

Transtek Body Fat Analyzer GBF-1406-B applies BIA (Bio-impedance Analysis) technology. A small amount of weak current flows through the human body so as to detect the bio-impedance and estimate body fat, body water, muscle mass and bone mass. The electrical current is small and may not be felt.

This BIA technology is cheap, safe, non-invasive, toxic-free and harmless. It also possesses the characteristics of simple operation and abundant information.

The current mentioned above is less than 0.5mA. However, please be aware that anyone with an wearable or implantable medical electronic instrument, such as a pacemaker, must avoid using this device.

The intended use of this device is for healthy children 10-17 years old and healthy adults.

#### Insert the Batteries

- · Open the battery door in the back of the scale.
- Remove insulating strip from beneath the battery (if fitted) or insert batteries (4 x 1.5V AAA) observing the polarity signs (+ and -) inside the battery compartment.
   \* The digits "8888" will be shown on the LED.



 Close the battery door and wait until the digits "0.0kg" are shown on the LED.





#### CAUTION

- When the symbol "Lo" appears, the device will power off after about 4s. Then you shall replace with a new set of batteries. Please replace all four batteries at the same time. Do NOT mix the old batteries with the new one.
- · Worn batteries are hazardous waste. Do NOT dispose of them together with the household garbage.
- Please refer to the local ordinances and recycling instructions regarding disposal of the worn batteries and scrapped device.
- If you do not intend to use this unit for a prolonged period of time, it is advisable to remove the batteries before storing.

# ♥ Install App and Pair-Up

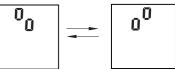
With the advanced Bluetooth 4.0 technology applied, the mobile or portable equipments, which are equipped with Bluetooth function in line with BLE Technical Specifications as well as BLP Protocol established by global organization Bluetooth SIG, are capable to receive your personal health data.

Just simply install the specially-designed app and pair up your scale with your mobile or portable equipments. Then you may enjoy the comprehensive health solution provided by Transtek.

Note: It is only available for the device which supports Bluetooth 4.0 technology.

- Our App "Medm Health" could be freely downloaded at App Store and Google Play, you
  may search and install it in your smartphone.
- · Turn on Bluetooth and the App. Make sure both are ON when pair-up is proceeding.
- · Press and hold "UNIT" button in the back of the scale to start pair-up.

Symbol  $_0^{-0}$  and symbol  $^0_{-0}$  will be shown on the LED alternatively, indicating pair-up is proceeding.



If SUCCEED, symbol [ ] will be shown on the LED.

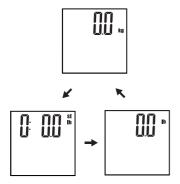


If FAIL, symbol "E1" will be shown on the LED.



#### **♥** Select Measurement Unit

With batteries correctly installed, press "UNIT" button in the back of the scale to select measurement unit. The default measurement unit is "kg". You may press "UNIT" button to choose among kilogram, stone and pound.



## **♥** Initialising Your Scale

- 1. Press the platform centre and remove your foot.
- 2. "0.0" will be displayed.



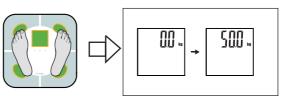
3. The scale will switch off and is now ready for use. This initialisation process must be repeated if the scale is moved. At all other times step straight on the scale.

## **♥** Weight Only Operation

Your TRANSTEK Body Fat Analyzer will operate as a conventional weight - reading scale. No special programming steps are required.

Once the scale is initialized, as previously described, you may simply step on the scale to measure your current weight. For only weight reading.

- Position the scale on a flat, hard surface. Carpeted or uneven floors may affect accuracy.
- 2. Step onto the scale platform and remain still while the scale computes your weight.
- 3. The scale will display your weight value.



4. The scale will automatically turn off after a few seconds.

Note: The weight value won't be saved in the scale, and won't be transmitted to the APP.

# **♥** Set Up Your Profile

The body fat analyzer GBF-1406-B supports multiple users (Up to 8). You may follow below instructions to assign User ID and set up your own profile, including Gender, Stature, and Age.

#### 1.Assigning User ID

- With batteries correctly installed, press "SET" key to enter setting mode when the scale is off. Or when the LED displays 0.0, press and hold "SET" key to enter setting mode.
- The system will request User ID selection first. As pictured below, "P1" blinks.
   The operator may press the function key 

  or 

  to select User ID among P1 to P8.
- · Press "SET" key to confirm User ID.

## 2.Setting Gender

- · After confirming User ID, the system will divert to Gender setting automatically.
- As pictured below, the portrait 🖷 blinks. The operator may press the function key
- or ▶ to select Gender.( Male/Female/Male Athlete/ Female Athlete).
- · Press "SET" key to confirm Gender.

#### Athlete Mode:

An athlete is considered as a person who does 10 hours or more per week of aerobic activity and has a resting heart rate of 60 beats per minute. These individuals should select Athlete Mode for the most accurate measurement results. The body fat analyzer are not calibrated for professional athletes or body builders.



#### 3.Setting Stature

- · After confirming Gender, the system will divert to Stature setting automatically.
- · As pictured below, the digits " 165 " blinks. The operator may press the function key
- You may press and hold the function key 

  or 

  for fast changing the numeral.
- · Press "SET" key to confirm Stature.



## 4.Setting Age

- After confirming Stature, the system will divert to Age setting.
- As pictured below, the digits "30" blinks. The operator may press the function key ◀or ► to increase or decrease the numeral (Range for normal mode: 10-85 years old, Range for athlete mode:15-85 years old).
- You may press and hold the function key 

  or 

  for fast changing the numeral.
- · Press "SET" key to confirm Age.



• After confirming Age, the LED will show all the settings you have done one by one and then display "0.0kg"+"User ID"+ "Gender", you can start measuring.



#### **♥** First Measurement

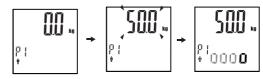
• Please process the user setting before your first measurement. (Refer to Set Up Your Profile for more details)

**STEP 1:** Step on the platform barefooted when the LED displays "0.0".

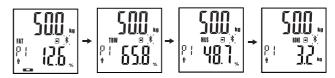


STEP2: Stand still and the weight data will be locked with the numeral blinks twice.

Keep full contact with the scale until the LED stop displaying moving " o ".



STEP 3: Then the measuring results will be displayed sequentially three times: Body Fat, Total Body Water, Muscle Mass, Bone Mass.



\* When the body fat percentage is displayed, the body fat level also appears on the LCD. it ranges from Underfat to Obese.



\* If it fails to complete the analysis, the LED will display the icon "Err".

(To find out the solutions, please refer to <u>Troubleshooting</u> for more details.)

 When your scale is successfully paired with your smartphone and the Bluetooth is ON, GBF-1406-B will process data transmission instead.

(Please refer to <u>Data Transmission</u> for more details.)

# **♥** Daily Measurement

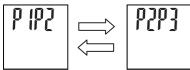
- · With original SENSE ON patent technology, GBF-1406-B will switch on as you step on the platform barefooted.
- · Stand still and keep full contact with the scale until the LED stops displaying movina "o".



- · After the weight is locked, the system will automatically identify the possible User ID with most similar history records.
- If it identifies one user, it will skip the step about user selection, then display the Body Fat, Total Body Water, Muscle Mass and Bone Mass data sequentially three times and turn off.



If it identifies two or more users, for example, P1, P2 and P3, The LCD will display these choose the right User ID. The measuring results will then be sorted into the User ID you selected and displayed sequentially three times. If you don't choose the user, it will display the weight again and turn off after a few seconds.



- · If it fails to identify the possible User ID, the LED will only display the weight data. (*To find out the solutions, please refer to Troubleshooting for more details.*)
- · When your scale is successfully paired with your smartphone and the Bluetooth is ON, GBF-1406-B will process data transmission instead.

(Please refer to Data Transmission for more details.)

# Backlight Indicator

The indicator backlight will light with different color when the measuring results are shown on the LED.

Compared with the last record of the same user ID, when the current weight is increased over 0.5kg, the red backlight lights; when it is reduced over 0.5kg, the green backlight lights; when it is the same(in the range of +/-0.5kg), the blue backlight lights.

Note: when it is the first measurement for a User ID, the system default backlight is blue.

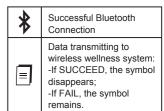
#### ♥ Data Transmission

 Once the Body Fat Analyzer GBF-1406-B is successfully paired-up with your smartphone, please open the "Medm Health" App and turn on your Bluetooth. Keep smartphone and scale in transmission distance. Step on the scale and take a measurement. Once the measurement is finished the data is automatically transferred to the app.



- · ONLY when the measuring results are attached to a specific User ID will it be transmitted to your mobile after measurement.
- · The symbol 

  will disappear after successful data transmission, and you may check your personal health data stored in your smartphone.
- remain. The pending measurement data will be temporarily kept in the scale and transmitted to your smartphone when next measurement is complete.





# CAUTION \_\_\_\_

- Interference may occur in the vicinity of equipment marked with the following symbol ((\*\*)). And the Analyzer may interfere vicinity electrical equipment.
- To enable the data transmission function, this product should be paired to a Bluetooth 4.0 end.

#### How to mitigate possible interference?

- 1. The range between the Analyzer and the Bluetooth end should be reasonably close, from 1 meter to 10 meters. Please ensure no obstacles between the Analyzer and the Bluetooth end so as to obtain quality connection.
- 2. To avoid interference, other electronic devices (particularly those with Bluetooth transmission / Transmitter) should be kept at least 1 meter away from the Analyzer.

# **♥** Error Prompt

Error	Description	Solution
	Overload. The device will power off.	Stop using this scale for measurement.
Lo	Low Battery. The device will power off after about 4s.	Replace all four batteries in the same time. Please purchase the authorized batteries for replacement.
[ [ ]	Failure of pairing up your scale with your smartphone.	Please check below items: -Bluetooth is ONApp Collector is ONBoth devices are within the transmission distance of Bluetooth.
Err	The user profile set up and the scale fails to complete the analysis.     The weight is unstable.	Step off the platform, and measure again.

# **♥** When Measuring ...

Problem	Root Cause	Solution
Abnormal measuring results: - Too high; OR	Incorrect posture	Please step on the platform barefooted and stand still.
- Too low; OR - Huge difference between two recent measurement.	The device is located on the soft ground such as a carpet OR on a rugged surface.	Please place the device on a flat, hard surface.

Problem	Root Cause	Solution
Abnormal measuring results: - Too high; OR - Too low; OR - Huge difference between two recent measurement.	Your feet are too dry.	Wipe your feet with a damp cloth, keeping them slightly damp when starting measurement.
No display on	Batteries not yet installed.	Install the batteries. (Please refer to <u>Insert the</u> <u>Batteries</u> )
LED when the device powers on.	Worn batteries.	Replace all four batteries at the same time. Please purchase the authorized batteries for replacement.
	Step onto the platform wearing socks or shoes.	Please keep barefooted during the measurement, and keep full contact with the scale as well.
CANNOT proceed to analyze body fat, total body water, muscle mass and bone mass.	The system cannot identify the possible User ID with most similar data.	Please assign a User ID following the instruction in <u>Set Up</u> Your Profile.
	The user fails to select the User ID from what the system found.	Please assign a User ID following the instruction in <u>Set Up</u> Your Profile.
The device powers off.	Low battery.	Replace all four batteries at the same time. Please purchase the authorized batteries for replacement.

# **♥** When Data Transmitting ...

Problem	Root Cause	Solution	
	Bluetooth is OFF.	Turn ON the Bluetooth via setting function of your smartphone.	
Data transmission failed.	The App is OFF.	Press the icon to run your App.	
	Out of range of Bluetooth transmission.	Place your smartphone closer to the scale.	
	None of the user ID is assigned.	Please assign a User ID following the instruction in Set Up Your Profile.	

# **♥** Specifications

Product Name	Body Fat Analyzer		
Dimension	Scale: 307x307x24mm (Approximately)		
Net Weight	Approximately 1.82kg ( Including the dry cells)		
Display	Digital LED		
Measurement Unit	Kilogram / Stone/ Pound		
Measurement Range	5kg to 180kg / 0st: 11lb to 28st: 5lb / 11lb to 397lb		
Division	0.1kg / 0.2lb / st:0.2lb/1lb (≥20st)		
Accuracy	50kg: ±0.3kg; 100kg: ±0.4kg; 150kg: ±0.5kg; 180kg: ±0.7kg		
Working Environment	Temperature: 5 ℃ to 40 ℃ Relative Humidity: ≤90% RH Atmospheric pressure: 86kPa to 106kPa		
Storage Environment	Temperature: -20 ℃ to 60 ℃ Relative Humidity: ≤90% RH Atmospheric pressure: 50kPa to 106kPa		
Power Source	6V (Four AAA-size Batteries)		
Auto-ON	SENSE ON technology		
Auto-OFF	About 10s after the LED display "0.0"; About 15s when the weight value is unstable.		
Accessories	Four AAA Size Batteries     User Manual		
Mode of Operation	Continuous Operation		
BT Frequency Range	2402MHz to 2480MHz		
BT Output Power	Less than 5dBm		
Bluetooth Module No	AW2540		
BT Supply Voltage	1.8-3.6V		
Software Version	B08		
Protection Against Ingress of Water	IP21		

#### About the Accuracy of This Product

<sup>•</sup> This product passes strict inspection before delivery and therefore its accuracy is guaranteed by the manufacturer. Please refer to the above table for the descriptions on accuracy.

This product is specially designed for body fat analysis as well as weight measurement. It should NOT be used by anyone during the process of transaction for verification of goods' weight.

# **Appendix**

#### **♥** Maintenance

When carrying out usual maintenance, please ensure practice of the following Do's and Don'ts:

- DO use a dry soft cloth to wipe the dust.
- DO use a wet soft cloth, dipped into water and wrung out, to wipe the dirt. Then use a dry soft cloth to dry up the device.
- DON'T wash the device with water or immerse it in water.
- DON'T use propellant, abrasive or other chemicals to wipe the dirt in avoidance of discolor or malfunction.
- DON'T disassemble this device. If you have any problems, please contact Transtek. (*Please refer to Warranty for contact information*)
- Do not dispose of batteries in fire. Batteries may explode or leak. Remove the batteries if the scale will not be used for a long period.

## **♥** Warranty

- Transtek warrants its products free of defects in materials and workmanship in normal use for a period of TWO years from the date of retail purchase.
- This warranty does NOT cover damages caused by misuse or abuse, including but not limited to:

Failure caused by unauthorized repairs or modifications;

Damage caused by shock or drop during transportation;

Failure caused by improper operation inconsistent with the instructions stated in this user manual:

Malfunction or damage from failure to provide the recommended maintenance; Damage caused by improper use of power supply.

 Should this device require maintenance (or replacement at our option) under warranty, please deliver the original package to ZHONGSHAN TRANSTEK ELECTRONICS CO., LTD prepaid. Please return the store receipt (with the retail purchase date) and a note with reasons to return on it as well.

ZHONGSHAN TRANSTEK ELECTRONICS CO., LTD

No.23, Jin'an Road, Minzhong, Zhongshan, 528441, Guangdong, China

Tel: 86-760-88282982

Website: http://www.transtek.cn

## **♥** Table of Body Fat Level (Unit: %)

a) The body fat percentage (%): 5%-60%/0.1%

#### Standard for Men

#### Standard for Women

Rating	Age			Rating			Age				
	20-29	30-39	40-49	50-59	60+		20-29	30-39	40-49	50-59	60+
low	<13	<14	<16	<17	<18	low	<19	<20	<21	<22	<23
Normal	13-20	14-21	16-23	17-24	18-25	Normal	19-28	20-29	21-30	22-31	23-32
Moderately High	20.1-23	21.1-24	23.1-26	24.1-27	25.1-28	Moderately High	28.1-31	29.1-32	30.1-33	31.1-34	32.1-35
High	>23	>24	>26	>27	>28	High	>31	>32	>33	>34	>35

Source: University of Illinois Department of Food Science and Human Nutrition. Body Fat Percentage Calculator.

# **♥** Table of Body Water Level (Unit: %)

b) The body water percentage (%): 43%-73%/0.1%

Source: Derived from Wang & Deurenberg: "Hydration of fat-free body mass". American Journal Clin Nutr 1999 69833-841

	BF % RANGE	OPTIMAL TBW % RANGE
	4 to 14%	70 to 63%
	15 to 21%	63 to 57%
Men	22 to 24%	57 to 55%
	25 and over	55 to 37%
	4 to 20%	70 to 58%
Women	21 to 29%	58 to 52%
vvoilleii	30 to 32%	52 to 49%
	33 and over	49 to 37%

# **♥** Muscle Mass Percentage

(Source: International Commission on Radiological Protection,1975)

Men	Approximately 40% of total body weight
Women	Approximately 30% of total body weight

# **♥** Bone Mass Percentage

(Source: Rico et al.1993)

The average bone mass percentage for both men and women is between 4 to 5%.

## ♥ Health Tips - About Body Fat

Fat is essential for human body. It can not only store energy and protect viscera, but also regulate body temperature and maintain normal physiological function of human body. However, too much body fat is harmful to human body. It is always accompanied by Fatty Liver, diabetes, coronary heart disease, etc.

Therefore self-measuring and self-monitoring body fat level are beneficial to your health. Since we can't judge body fat level simply by our weight, this body fat analyzer GBF-1406-B, with BIA (Bio-impedance Analysis) technology applied, is an accurate device that offers a quick and comfortable way to obtain your body fat level.

## **♥** Warning

- Don't near active HF SURGICAL EQUIPMENT and the RF shielded room of an ME SYSTEM for magnetic resonance imaging, where the intensity of EM DISTURBANCES is high.
- Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the model GBF-1719-B, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

# Guidance and manufacturer's declaration-electromagnetic emissions and Immunity

Table 1

Guidance and manufacturer's declaration - electromagnetic emissions		
Emissions test	Compliance	
RF emissions CISPR 11	Group 1	
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Not application	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not application	

Table 2

IMMUNITY test	IEC 60601-1-2 test level	Compliance level  ±8 kV contact  ±2 kV, ±4 kV, ±8 kV, ±15 kV		
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air			
Electrical fast transient/burst IEC 61000-4-4	Not application	Not application		
Surge IEC 61000-4-5	Not application	Not application		
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Not application	Not application		
Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz		
Conduced RF IEC61000-4-6	Not application	Not application		
Radiated RF IEC61000-4-3	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz		

Table 3

Guidance and manufacturer's declaration - electromagnetic Immunity									
Radiated RF IEC61000-4-3 (Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment)	Test Frequency (MHz)	Band (MHz)	Service	Modulation	Modulation (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)		
	385	380 -390	TETRA 400	Pulse modulation 18 Hz	1,8	0.3	27		
	450	380 -390	GMRS 460, FRS 460	FM ± 5 kHz deviation 1 kHz sine	2	0.3	28		
	710	- 704 -787	LTE Band 13,17	Pulse modulation 217 Hz	0.2	0.3	9		
	745								
	780								
	810	800 -960	GSM 800/ 900,TETRA 800,iDEN 820,CDMA 850,LTE Band 5	Pulse modulation 18 Hz	2	0.3	28		
	870								
	930								
	1720	1700 -1990	GSM 1800; CDMA1900; GSM 1900; DECT; LTE Band 1, 3,4, 25; UMTS	modulation	2	0.3	28		
	1845								
	1970								
	2450	2400 -2570	Bluetooth, WLAN, 802.11 b/g/n,RFID 2450,LTE Band 7	Pulse modulation 217 Hz	2	0.3	28		
	5240	5100 -5800	WLAN 802.11 a/n	Pulse modulation 217 Hz	0.2	0.3	9		
	5240								
	5785								