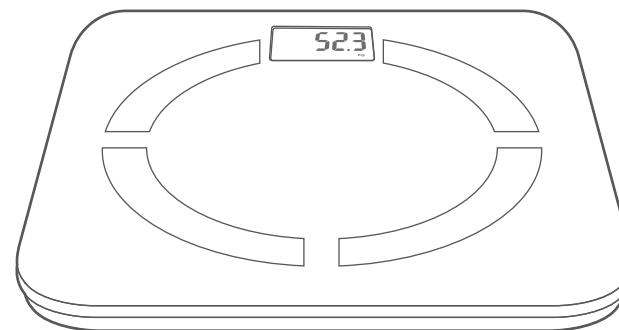


User Manual

Glass Body Fat Analyzer LS203-B



TRANSTEK



Contains FCC ID: OUGAW8001-LS

GUANGDONG TRANSTEK MEDICAL ELECTRONICS CO., LTD
Zone A, 5/F., Investment Building, No. 12, Huizhan East Rd., Torch Development
District, Zhongshan, Guangdong, 528437, China

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









- Thank you very much for selecting the Transtek Glass Body Fat Analyzer LS203-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.

Table of Contents

Safety Information	
Safety and Usage Information	2
Indications For Use	2
Contraindications	3
Your Scale and Its Environment	3
Efficient Use of Your Scale	3
Overview	
Device Components	4
LCD Display	5
Initial Start-Up	
General Instructions	6
Insert the Batteries	6
Install App and Pair-up	7
Start Measuring	
Select Measurement Unit	8
Daily Measurement	8
Manage Your Health	
Data Transmission	9
Troubleshooting	
Error Prompt	10
When Measuring	10-11
When Data Transmitting... ..	12
Specifications	13
Maintenance	14
Warranty	14
FCC Regulations	15
Appendix	
Table of Body Fat Level	16
Table of Body Water Level	16
Health Tips – About Body Fat	17
EMC Guidance	17-21

♥ 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:

	Symbol for "THE OPERATION GUIDE MUST BE READ"		Symbol for "MANUFACTURER"
	Symbol for "TYPE BF APPLIED PARTS"		Symbol for "COMPLIES WITH MDD 93/42/ECC REQUIREMENTS"
SN	Symbol for "SERIAL NUMBER"		Symbol for "INDOOR USE ONLY"
	Symbol for "DIRECT CURRENT"		Symbol for "ENVIRONMENT PROTECTION – Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice"
	The Bluetooth Combination Mark		

 CAUTION

Transtek's Body Fat Analyzer offers you a seamless way to manage your health. Please be aware that this device is designed for adults' self-measuring and self-monitoring body fat level. Any information provided by this device is in no way meant to treat, cure or prevent any disease or illness from happening. This device should not be used by anyone who is acutely or chronically ill, 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.

The device is equipped with automatic 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 the device.

Kindly note that the use of accessories, transducers or cables other than those specified, with the exception of transducers and cables sold by the manufacturer as replacement parts for internal components, may result in increased EMISSIONS or decreased IMMUNITY of the device.

Be aware that misuse of electrical equipments can cause electric shock, burns, fire and other hazards.

The patient is an intended operator. The patient can perform all the operations in the manual, such as measurement, data transmitting, changing batteries.

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 adults 18 years of age or older.
- It is intended for use in the home / domestic setting only.

CONTRAINDICATIONS

1. This device is contraindicated for any female subject who may be suspected of, or is pregnant. Besides provided inaccurate readings, the affects of this device on the fetus are unknown.
2. 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.

♥ Your Scale and Its Environment

To ensure your safety as well as the service life of your scale, please avoid using the scale under the following circumstances:

- Concurrent use of this device and implantable medical electronic instruments, e.g. Cardiac Pacemaker
- Concurrent use of this device and wearable medical electronic instruments, e.g. electrocardiograph
- Concurrent use of this device and other medical electronic instruments for life support, e.g. mechanical heart
- Slippery floor such as tile floor
- Jumping onto the platform immediately after bath or with wet hands
- Near a cell phone or microwave oven

Avoid storage in the following locations:

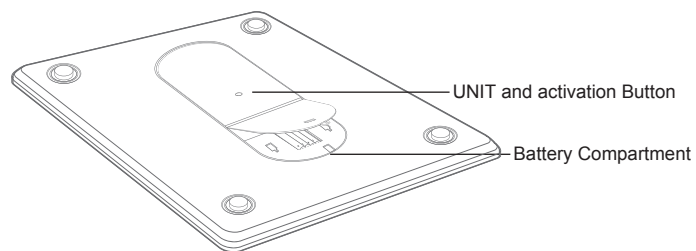
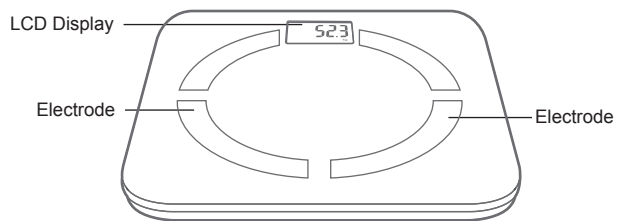
- Where there is water
- Where the device may be exposed to extreme temperatures, humidity, moisture, direct sunlight, dust, or salt air
- Where there is risk of shock or drop
- Where you store chemicals or full of corrosive gases
- Where in reach of the infants or children

♥ Efficient Use of Your Scale

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.

♥ Device Components






♥ List

1. Glass Body Fat Analyzer LS203-B
2. Four AAA-size Alkaline Batteries (1.5V each)
3. User Manual

♥ LCD Display



<i>kg</i>	Kilogram		Data transmitting
<i>st</i>	Stone		Pending to transmit to wireless wellness system
<i>lb</i>	Pound		Low Battery
BIA	Bioelectrical Impedance Analysis		

♥ General Instructions

Transtek Glass Body Fat Analyzer LS203-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. 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 1mA. 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 adult's indoor use only.

♥ Insert the Batteries

- Open the battery door in the back of the scale.
- Insert the batteries (4 x 1.5V AAA) into the battery compartment according to the polarity indications marked inside the compartment.


* The digits "8888" will be shown on the LCD.



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



CAUTION

- When the symbol  appears, the device will power off in four seconds. Then you shall replace with a new set of batteries. Please replace all four batteries in 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.
- To remove primary batteries when the equipment is not likely to be used for some time. Not touch the patient and battery output simultaneously.

♥ 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.

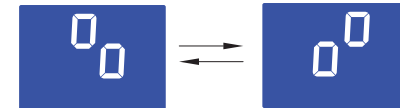
Just simply install the specially-designed app and pair up your scale with your mobile or portable equipments. Then you may enjoy the comprehensive health solution provided by Transtek.

- The App is now available in App Store 

You may search and install the app in your iPhone.

- Turn on Bluetooth and 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  and symbol  will be shown on the LCD alternatively, indicating pair-up is proceeding.



If SUCCEED, symbol  will be shown on the LCD.

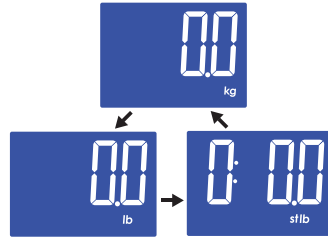


If FAIL, symbol "E1" will be shown on the LCD.



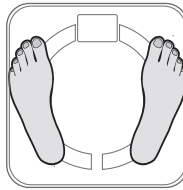
♥ Select Measurement Unit

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.

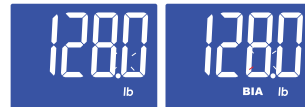


♥ Daily Measurement

• With original SENSE ON patent technology, the scale will automatically switch on as you step on the platform barefooted.



• Stand still and keep full contact with the electrodes until the LCD stops blinking "BIA".



• When your scale is successfully paired with your iPhone and the Bluetooth is ON, it will process data transmission automatically.

(Please refer to [Data Transmission](#) for more details.)




CAUTION


- The normal measuring time cannot over 1 minute.
- After the measurement, please don't stand on the scale for a long time.
- Continuous to use the scale for a long time, the surface temperature may exceed 41 °C, this will cause burns.



♥ Data Transmission

• With the scale successfully pair-up with your iPhone, the measurement data will be automatically transmitted to your mobile via Bluetooth.



• The symbol  will disappear after successful data transmission, and you may check your personal health data stored in your iPhone.


• If the data transmission fails, the symbol  will remain. The pending measurement data will be temporarily kept in the scale and transmitted to your iPhone when next measurement is complete.

	Data transmitting
	Data ready to transmit to the App: -If SUCCEED, the symbol disappears; -If FAIL, the symbol remains.

Bluetooth Module No.: AW8001
RF Frequency Range: 2402MHz to 2480 MHz
Output Power Range: 4 dBm
Supply Voltage: 3V to 3.6V






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 end at 2.4 GHz.

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 in four seconds.	Stop using this scale for measurement.
	Low Battery. The device will power off in four seconds.	Replace all four batteries in the same time. Please purchase the authorized batteries for replacement.
	Failure of pairing up your scale with your iPhone.	Please check below items: -Bluetooth is ON. -App is ON. -Both devices are within the transmission distance of Bluetooth.

♥ When Measuring ...

Problem	Root Cause	Solution
Abnormal measuring results: - Too high; OR - Too low; OR - Huge difference between two recent measurement.	Incorrect posture	Please step on the platform barefooted and stand still.
	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.
	Cold body that may results in bad blood circulation.	Warm up your hands and feet to resume blood circulation and then measure again.

Problem	Root Cause	Solution
Abnormal measuring results: - Too high; OR - Too low; OR - Huge difference between two recent measurement.	Cold Electrodes.	Place the device in a warm room for a while and then measure again.
	Either your hands or your feet are too dry.	Wipe your feet with a damp cloth, keeping them slightly damp when starting measurement.
No display on LCD when the device powers on.	Batteries not yet installed.	Install the batteries. (Please refer to Insert the Batteries)
	Worn batteries.	Replace all four batteries in the same time. Please purchase the authorized batteries for replacement.
CANNOT proceed to analyze body fat	Step onto the platform wearing socks or shoes.	Please keep barefooted during the measurement, and keep full contact with the electrodes as well.
The device powers off automatically.	Low battery.	Replace all four batteries in the same time. Please purchase the authorized batteries for replacement.

♥ When Data Transmitting ...

Problem	Root Cause	Solution
Data transmission failed.	Bluetooth is OFF.	Turn ON the Bluetooth via "Setting >> General >> Bluetooth".
	App is OFF.	Press the icon to turn ON your app.
	Out of range of Bluetooth transmission.	Place your iPhone closer to the scale.

♥ Specifications

Product Name	Glass Body Fat Analyzer (LS203-B)		
Dimension	Scale: 321x321x23.5mm		
	Panel: 321x321x6mm		
Net Weight	Approximately 2kg (Excluding the dry cells)		
Display	Blue LCD with White Backlight V.A.: 74x53mm		
Measurement Unit	Kilogram / Stone / Pound		
Measurement Range	5kg to 200kg / 0st: 11lb to 31st: 7lb / 11lb to 441lb		
Division	0.1kg / 0.2lb		
Accuracy	0-50kg: ±0.3kg; 50-100kg: ±0.4kg; 100-150kg: ±0.5kg; 150-200kg: ±0.7kg		
Working Environment	Temperature: 0 °C to 40 °C Humidity: ≤90% RH Pressure: 80kPa to 105kPa		
Storage Environment	Temperature: -20 °C to 60 °C Humidity: 10%RH to 93% RH		
Power Source	6V (Four AAA-size Alkaline Batteries)		
Auto-ON	SENSE ON technology		
Auto-OFF	About 10 seconds while showing 0.0 About 15 seconds after the weight data is locked		
Accessories	1. Four AAA-size Alkaline Batteries 2. User Manual		
Mode of Operation	Continuous Operation	Protection Against Ingress of Water	IPX0
Protection against electric shock	Internally powered ME equipment	Software Version	1.0
Applied part	Type BF applied part, including the whole top surface		
Note: Not intended to be sterilized. Not for use in an oxygen rich environment.			

About the Accuracy of This Product

- 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.

♥ 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)

♥ 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 GUANGDONG TRANSTEK MEDICAL 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.

GUANGDONG TRANSTEK MEDICAL ELECTRONICS CO., LTD
 Zone A, 5/F., Investment Building, No. 12 Huizhan East Rd., Torch Development District,
 Zhongshan, 528437, Guangdong, China
 Tel: 86-760-88282982
 Website: <http://www.transtek.cn>

♥ 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.

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

Age	Man / Sportsman				Woman / Sportswoman			
	Low	Normal	High	V. High	Low	Normal	High	V. High
20-29	<13	13.1-20	20.1-23	>23	<19	19.1-28	28.1-31	>31
30-39	<14	14.1-21	21.1-24	>24	<20	20.1-29	29.1-32	>32
40-49	<16	16.1-23	23.1-26	>26	<22	22.1-30	30.1-33	>33
50-59	<17	17.1-24	24.1-27	>27	<23	23.1-31	31.1-34	>34
60+	<18	18.1-25	25.1-28	>28	<24	24.1-32	32.1-35	>35

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

Gender	Body Fat Percentage Range	Optimal Total Body Water Percentage Range
Men	4-14	70-63
	15-21	63-57
	22-24	57-55
	≥25	55-37
Women	4-20	70-58
	21-29	58-52
	30-32	52-49
	≥33	49-37

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

♥ **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 LS203-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.

♥ **EMC Guidance**


Table 1 – Guidance and MANUFACTURER'S declaration – ELECTROMAGNETIC EMISSIONS – for all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacturer's declaration – electromagnetic emissions		
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment – guidance
RF emission CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emission CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

Table 2 – Guidance and MANUFACTURER'S declaration – electromagnetic IMMUNITY – for all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacture's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines	Not applicable	
Surge IEC 61000-4-5	±1 kV line(s) to line(s)	Not applicable	
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT (>95% dip in UT) for 0.5 cycle	Not applicable	
	40% UT (60% dip in UT) for 5 cycles		
	70% UT (30% dip in UT) for 25 cycles		
	<5% UT (>95% dip in UT) for 5 sec		
Power frequency (50Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE UT is the a.c. mains voltage prior to application of the test level.			

Table 4 Guidance and manufacture's declaration – electromagnetic immunity – for ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacture's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 V _{rms} 150 kHz to 80 MHz	3 V _{rms}	Portable and mobile RF communications equipment should be used no closer to any part of the device including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.167 \sqrt{P}$ $d = 1.167 \sqrt{P}$ 80 MHz to 800 MHz $d = 2.333 \sqrt{P}$ 800 MHz to 2.5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol: 
			Radiated RF IEC 61000-4-3

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.
 NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.
- b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Table 6 – Recommended separation distances between portable and mobile RF communications equipment and the ME EQUIPMENT or ME SYSTEM – for ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment at the LS203-B			
The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = 1.167 \sqrt{P}$	80 MHz to 800 MHz $d = 1.167 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.333 \sqrt{P}$
0.01	N/A	0.117	0.233
0.1	N/A	0.369	0.738
1	N/A	1.167	2.333
10	N/A	3.690	7.377
100	N/A	11.67	23.33
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			