TRANSTEK

User Manual

Glass Body Fat Analyzer LS206-E



- Thank you very much for purchasing TRANSTEK Glass Body Fat Analyzer LS206-E
- To assure the correct use of the monitor, please read this manual carefully and thoroughly.
- Please well keep this manualfor future reference.



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.

Portable and mobile RF communications equipment can affect LS206-E.

Warning that the use of accessories, transducers and cables other than those specified with the exception of transducers and cables sold by the manufacturer of the LS206-E as replacement parts for internal components, may result in increased EMISSIONS or decreased IMMUNITY of the LS206-E.

Warning that the LS206-E should not be used adjacent to or stacked with other equipment.

Manufacturer will make available on request circuit

♥ Safety information

The below signs might be in the user manual, labeling or other component. they are the requirement of standard and using.

$\overline{}$				
③	Caution:Consult accompanying documents	†	Type B applied part	
•	Manufacturer		DISPOSAL: Do not dispose this product as unsorted municipal waste. Use	
CE	CE Mark: conforms to essential requirements of the Medical Device Directive 93/42/EEC.	X	separate collection faculties. Contact you local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chair damaging your health and well-being.	
SN	Specifies serial number			

♥ HOW DOES TRANSTEK'S BODY FAT ANALYZER WORK?

This Glass body fat analyzer uses BIA (Bio Impedance Analysis) technology which passes an electrical current through the body to estimate body fat mass, lean mass, total body water and bone mass. The electrical current is small and may not be felt. Contact with the body is made via stainless steel pads on the platform of the scale.

NOTE: This device is a personal monitor and should be used in a consistent manner for the most accurate reading. While readings of this analyzer might be different with that of others (hydro-densitometry or hand held calipers), your changes in body fat percentage shown by this device will be reflected accurately.

While this analyzer will work accurately as a scale for anyone and give accurate body fat readings for a majority of people, it is not intended for being used by pregnant women or children under the age of 18.

♥ BODY FAT-WHAT DOES IT MEAN?

Human body is made up of, amongst other things, a percentage of fat. Body fat is vital for a healthy, functioning body, protects vital organs, helps regulate body temperature, stores vitamins and helps the body sustain itself when food is scarce. However, too much body fat or indeed too little body fat will damage to your health. It is difficult to gauge how much body fat we have in our bodies simply by looking at ourselves in the mirror.

This is why it is important to measure and monitor your body fat percentage. Body fat percentage gives you a better measure of fitness than weight alone—the composition of your weight loss could mean you are losing muscle mass rather than fat-you could still have a high percentage of fat even when a scale indicates normal weight.

♥ BASAL METABOLISM-WHY SHOULD I KNOW IT?

Basal metabolism refers to the life activities do not exercise at a quiet state of the body maintains its own life activities required energy consumption. We recommend that the general energy consumption by basal metabolism + diet process + the required energy of growth or development children or pregnant women+ physical activity. Among them, the basal metabolism accounts for a large part (about 60% -75%). Excessive intake of energy, excess energy will be converted to fat accumulation in the body. Therefore measure your basal metabolism, you can estimate your daily energy consumption is about how much. The normal daily intake of energy, at least not lower than the basal metabolic energy, otherwise there will be life-threatening.

♥ BATTERY INFORMATION AND GENERAL SET-UP PROCEDURE

This scale operates on 4*AAA batteries (installed). Please remove any plastic strips from the battery compartment before continuing with these instructions.

Some models have a static cling label on the lens to prevent scratching. Please remove it before use.

- Remove batteries if the device is not likely to be used for some time.
- The old battery is harmful to the environment, so please disposal with other daily trash.
- Remove the old battery from the device and follow your local recycling guidelines.



Tap to initialize

When the LCD displays "_, replace the batteries with the "+" signs up. Replace both worn batteries at the same time; do not combine old and new batteries.

The scale needs to be initialized before first use or after battery replacement. Press firmly on the scale platform. The display will show a running zeros pattern and automatically turn off. Your scale is now ready for use.

♥ USING YOUR ANALYZER SCALE

In order to measure body fat, you must first enter your height, age, gender and activity level selection. The analyzer uses these parameter to calculate your measurement results.

You must have feet bared to use the analyzer function.

Remove your shoes and socks before beginning measurement. In order to get the most accurate and consistent reading, wipe your feet with a damp cloth, leaving them slightly damp before stepping on to the scale.

REMINDER: The scale needs to be initialized after battery installation. The scale may also need to be initialized if it is moved or bumped. **At all other times, you may directly proceed with the following instructions for programming your personal data into the scale.**

To initialize the scale, simply press firmly on the scale platform. The display will show " $\mbox{\it lil}$ " and automatically turn off. Your scale is now ready for use. **NOTE:** Please use the illustrations as guidelines only. Due to continuous product improvements, the illustrations shown in this manual may differ slightly from the actual display.

♥ QUESTIONS AND ANSWERS

How exactly is my body fat being measured?

The TRANSTEK Glass Body Fat Analyzer uses a measurement method known as Bioelectrical Impedance Analysis (BIA). A minute current is sent through your body, via your feet and legs. This current flows easily through the lean muscular tissue, which has a high fluid content, but not easily through fat. Therefore, by measuring your body's impedance (i.e. its resistance to the current), the quantity of muscle can be determined, from which, the quantity of fat can then be estimated.

What is the value of the current passing through me when the measurement is taken? Is it safe?

The current is less than 1mA. You may not be able to feel it. Please note however, that this device should not be used by anyone with an internal electronic medical device, such as a pacemaker, as a precaution against disruption to that device.

▼ TROUBLESHOOTING

- 1. You must have feet bared to take this measurement. In order to get the most accurate and consistent reading, wipe your feet with a damp cloth, leaving them slightly damp before stepping on the scale. Repeat measurement again, maintaining maximum contact between your feet and the metal sensors.
- 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 operating this Analyzer please contact us.

♥ CAUTION

BIA (Bioelectrical Impedance Analysis)method determines your body fat percentage by sending a harmless signal through the body.

This device should not be used by anyone with an internal electronic medical device, such as a pacemaker, as a precaution against disruption to that device.

If in doubt, contact your physician.

This analyzer will give accurate body fat readings for a majority of people, but is not intended for use by the following groups:

Children: Anyone under the age of 18 years

Pregnant Women

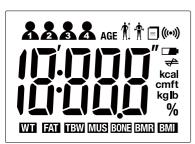
Specifications

- ♦ Weight range and weight display resolution: 5-180kg/0.1kg
- ♦ Weight unit: kg / lb
- → Function key:

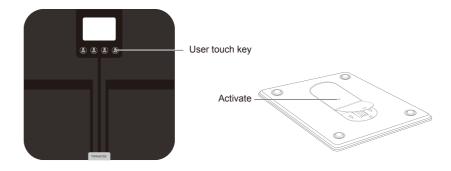
 ♣♣♣♣
- ♦ Display: Blue LCD with white backlight
- ♦ Battery: 4*AAA batteries
- ♦ Device classsification: Battery powered mode: Internally Powered ME Equipment
- ♦ User No.: 4
- ♦ User identification: Identify user automatically according to the last measuring weight
- Auto on and Auto off function
- ♦ Storage & transportation condition: Temperature:-20°C~60°C Relative humidity:10%~90%RH

WARNING: No modification of this equipment is allowed.

LCD display



Symbol	Description
	Data ready for sending
(((*))	Wireless transmit
	Low battery indication
₹	Internet disconnection
/k Ĵ	Height
*	waistline
***	User



- I. Activate product
- 1. The scale should be close to the data bridge within 2m.



2. Press and hold the button on the back of the scale to start the activation.



3. The activation is successful after you see the symbol



Successful activation

III. Measuring(select user manually)

a) Press user symbol on the platform to select user.





b) Please wait until the LCD displays "[[]]".



c) Step onto the platform with bare feet.



d) Stand still and the weight data will be locked automatically.



e) The measuring will start automatically withthe " o " signal moving from left to right.



f) When the measurement is completed, the results appears repeatedly twice.



g) When the measurement is completed, the results appears repeatedly twice.





g) When the measurement is completed, the results appears repeatedly twice.



IV. Measuring(user identification automatically)

a) Please step onto the platform directly with bare feet to turn on.



b) Stand still and the weight data will be locked automatically



c) The measuring will start automatically with the " o " signal moving from left to right.



- d) If there is only one user whose last weight data is close to the current one, it will be selected automatically. The results will be shown repeatedly twice and transmitted.
- e) If there are more than one user whose last weight data are close to the current one, they would be shown on the LCD.



- f) Please press the user symbol on the platform to select the user to continue.
- g) Note: If there is no operation, the scale will display the weight only then turn off.
- h) When the measurement is completed, the results appears repeatedly twice and then the results will be transmitted.

♥ WARNING INDICATORS



to = Low battery warning. Replace the batteries. Always replace all the worn batteries at the same time; do not combine old and new batteries.



•••• = Overload Warning. The maximum weighing capacity of the scale has been exceeded. Remove the weight immediately; otherwise, permanent damage to the scale will occur.

Professional medical guidance should always be sought before embarking on diet and exercise programmes.

PREGNANT WOMEN SHOULD CONSULT THE DOCTOR BEFORE USE.

♥ FCC REGULATIONS

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.

♥ CARE AND MAINTERANCE

Clean exposed parts with a soft, slightly damp cloth. To remove stains, use a mild soap. Never use detergents, excess water, treated cloths, harsh cleaning agents, or sprays. Do not immerse the scale in water.

Treat your scale with care. It contains sensitive electronic parts. Avoid rough treatment. Do not jump on, drop or kick the scale. Treat it with care to ensure the best performance. Do not store the scale where you store cleaning chemicals. The vapors from some household preducts may affect the electronic components of your scale.

Do not attempt to lubricate, disassemble, or open the scale casing as this will void your warranty.

Always weigh yourself on the same scale placed on the same floor surface.

Do not compare weight readings from one scale to another as some differences will exist due to manufacturing tolerances.

Placing your scale on a hard, even floor will ensure the greatest accuracy and consistency.

It is recommended that you measure at the same time of the day, preferably early evening before a meal for the most consistent results.

Your scale rounds up or down to the nearest increment.

If you weigh yourself twice and get two different readings, your weight lies between the two.

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.

♥ FIVE YEAR WARRANTY

This scale is warranted against defects in materials of workmanship for five years for the original purchaser from date of retail purchase. It does not cover damages or wear resulting from accident, misuse, abuse, commercial use, or unauthorized adjustment and/or repair.

Do not return to retailer. Should this scale require service (or replacement at our option) while under warranty, please pack the item in the original packaging and return it prepaid, along with store receipt showing date of purchase and a note explaining reason for return to:

ZHONGSHAN TRANSTEK ELECTRONICS CO., LTD

Jin'an Road, Minzhong, Zhongshan, 528441,Guangdong, China TEL:86-760-88282982 www.transtek.cn

There are no express warranties except as listed above. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

If service is required, do not return to retailer. For service contact us.

Classfication

EQUITMENT and its APPLIED PARTS shall be classified by marking and /or identification as described in Clause 6. This includes:

- 5.1 According to the type of protection against electric shock:
 - a) EQUIPMENT energized from an external electrical power source:
 - CLASS I EQUIPMENT:
 - CLASS II EQUIPMENT.
 - b) INTERNALLY POWERED EQUIPMENT.
- 5.2 According to the degree of protection against electric shock:
 - TYPE B APPLIED PART:
 - TYPE BF APPLIED PART:
 - TYPE CF APPLIED PART.
- 5.3 According to the degree of protection against ingress of water as detailed in the current edition of IEC 529[see 6.1 1)].
- 5.4 According to the method(s) of sterilization or disinfection recommended by the manufacturer.
- 5.5 According to the degree of safety of application in the presence of a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE:
- EQUIPMENT not suitable for use in the presence of a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE;
 - CATEGORY AP EQUIPMENT:
 - CATEGORY APG EQUIPMENT.
- 5.5 According to the mode of operation:
 - CONTINUOUS OPERATION:
 - SHORT-TIME OPERATION:
 - INTERMITTENT OPERATION:
 - CONTINUOUS OPERATION WITH SHORT-TIME LOADING:
 - CONTINUOUS OPERATION WITH INTERMITTENT LOADING.

6.8 ACCOMPANYING DOCUMENTS

6 8 1 *General

EQUIPMENT shall be accompanied by documents containing at least instructions for use, a technical description and an address to which the USER can refer. The ACCOMPANYING DOCUMENTS shall be regarded as a component part of EQUIPMENT.

All applicable classifications specified in Clause 5 shall be included in both the instructions for use and the technical description, if separable.

All markings specified in Sub-clause 6.1 shall be included in full in the ACCOMPANYING DOCUMENTS if they have not been permanently affixed to EQUIPMENT by the manufacturer. See also Sub-clause 6.1 d).

Warning statements and the explanation of warning symbols (marked on the EQUIP-MENT) shall be provided in the ACCOMPANYING DOCUMENTS.

6.8.2 Instructions for use

a) *General information

- Instructions for use shall state the function and intended application of the EQUIPMENT.
- Instructions for use shall contain all information necessary to operate the EQUIPMENT in accordance with its specification. This shall include explanation of the function of controls, displays and signals, the sequence of operation, connection and disconnection of detachable parts and ACCESSORIES, replacement of material which is consumed during operation.
- Instructions for use shall provide the USER or OPERATOR with information regarding potential electromagnetic or other interference between the EQUIPMENT and other devices together with advice regarding avoidance of such interference.
- Instructions for use shall include indications on recognized ACCESSORIES, detachable parts and materials, if the use of other parts or materials can degrade minimum safety.
- Instructions for use shall instruct the USER or OPERATOR in sufficient detail concerning cleaning, preventive inspection and maintenance to be performed by him, including the frequency of such maintenance.

Such instructions shall provide information for the safe performance of routine maintenance. Additionally, instructions for use shall identify the parts on which preventive inspection and maintenance shall be performed by other persons, including the periods to be applied, but not necessarily including details about the actual performance of such maintenance.

- the meaning of figures, symbols, warning statements and abbreviations on EQUIPMENT shall be explained in the instructions for use.
 - b) *Responsibility of the manufacturer Not used (see Appendix A).
 - c) SIGNAL OUTPUT and SIGNAL INPUT PARTS

If a SIGNAL OUTPUT or SIGNAL INPUT PART is intended only for connection to specified EQUIPMENT complying with the requirements of this Standard, this shall be stated in the instructions for use

d) Cleaning, disinfection and sterilization of parts in contact with the PATIENT For EQUIPMENT parts which come into contact with the PATIENT during NORMAL USE, instructions for use shall contain details about cleaning or disinfection or sterilization methods that may be used (see also Sub-clause 44.7) or, where necessary, identify suitable sterilization agents, and list the temperature, pressure, humidity and time limits which such EQUIPMENT parts can tolerate.

e) Mains operated EQUIPMENT with additional power source

Instructions for use of mains operated EQUIPMENT containing an additional power source not automatically maintained in a fully usable condition shall contain a warning statement referring to the necessity for periodical checking or replacement of such an additional power source. If CLASS I EQUIPMENT is specified for operation connected to a SUPPLY MAINS and alternatively using an INTERNAL ELECTRICAL POWER SOURCE,

instructions for use shall contain a statement saying that where the integrity of the external protective conductor in the installation or its arrangement is in doubt, EQUIP-MENT shall be operated from its INTERNAL ELECTRICAL POWER SOURCE.

f) Removal of primary batteries

Instructions for use of EQUIPMENT containing primary batteries shall contain a warning to remove these batteries if EQUIPMENT is not likely to be used for some time, unless there is no risk of a SAFETY HAZARD arising.

g) Rechargeable batteries

Instructions for use of EQUIPMENT containing rechargeable batteries shall contain instructions to ensure safe use and adequate maintenance.

h) EQUIPMENT with a specified power supply or battery charger

Instructions for use shall identify power supplies or battery chargers necessary to ensure compliance with the requirements of this Standard.

j) Environmental protection

Instructions for use shall:

- identify any risks associated with the disposal of waste products, residues, etc. and of the EQUIPMENT and ACCESSORIES at the end of their useful lives;
 - provide advice on minimizing these risks.
- 6.8.3 Technical description
 - a) *General

The technical description shall provide all data, which is essential for safe operation. This shall include:

- data mentioned in subclause 6.1;
- all characteristics of the EQUIPMENT, including range(s), accuracy, and precision of the displayed values or an indication where they can be found. In addition to details required to be included in instructions for use, the technical description shall state whether particular measures or particular conditions are to be observed for installing EQUIPMENT and bringing EQUIPMENT into use.
 - b) Replacement of fuses and other parts
- If the type and rating of fuses utilized in the mains supply circuit external to PERMANENTLY INSTALLED EQUIPMENT is not apparent from the information concerning RATED current and mode of operation of EQUIPMENT, the required type and rating of fuses shall be indicated in at least thetechnical description.
- The technical description shall contain instructions for replacement of interchangeable and/or detachable parts which are subject to deterioration during NORMAL USE.
 - c) Circuit diagrams, component part lists, etc.

The technical description shall contain a statement that the supplier will make available on request circuit diagrams, component part lists, descriptions, calibration instructions, or other information which will assist the USER's appropriately qualified technical personnel to repair those parts of EQUIPMENT which are designated by the manufacturer as repairable.

d) Environmental conditions for transport and storage

The technical description shall contain a specification of the permissible environmental conditions for transport and storage which shall be repeated on the outside of the packaging of the EQUIPMENT

[see Sub-clause 6.1 v)]

6.8.4 Not used.

6.8.5 Not used.

Compliance with the requirements of Sub-clause 6.8 is checked by inspection of the ACCOMPANYING DOCUMENTS.

Guidance and manufacturer's declaration – electromagnetic emissions

The LS206-E is intended for use in the electromagnetic environment specified below. The customer or the user of the LS206-E should assure that it is used in such an environment

Emissions	Compliance	Electromagnetic environment guidance
Harmonic emissions IEC 61000-3-2	Not applicable	The LS206-E are suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	
RF emissions CISPR 11	Complies	The LS206-E are not suitable for interconnection with other equipment.

Guidance and manufacturer's declaration - electromagnetic immunity

The LS206-E are intended for use in the electromagnetic environment specified below. The customer or the user of the LS206-E should assure that it is used in such an environment.

Immunity test	EN 60601 test level	Compliance level	Electromagnetic environmentguidance
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 floors 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	Not applicable
Surge IEC 61000-4-5	±1 kV line(s) and neutral	Not applicable	Not applicable
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	$ \begin{array}{c} <5 \% \ U_T \\ (>95 \% \ dip \ in \ U_T) \\ for \ 0.5 \ cycle \\ 40 \% \ U_T \\ (60 \% \ dip \ in \ U_T) \\ for \ 5 \ cycles \\ 70 \% \ U_T \\ (30 \% \ dip \ in \ U_T) \\ for \ 25 \ cycles \\ <5 \% \ U_T \\ (>95 \% \ dip \ in \ U_T) \\ for \ 5s \end{array} $	Not applicable	Not applicable
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	Not applicable prior to application of th	Not applicable

Guidance and manufacturer's declaration - electromagnetic immunity

The LS206-E is intended for use in the electromagnetic environment specified below. The customer or the user of the LS206-E should assure that it is used in such an environment.

customer of the user of the L3200-L should assure that it is used in such an environment.				
Immunity test	IEC 60601	Compliance	Electromagnetic environment – guidance	
	test level	level		
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	Not applicable	Portable and mobile RF communications equipment should be used no closer to any part of the LS206-E, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance	
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	$d = 1,2\sqrt{P} \\ d = 1,2\sqrt{P} \\ 80 \text{ MHz to } 800 \text{ MHz} \\ d = 2,3\sqrt{P} \\ 800 \text{ MHz to } 2,5 \text{ GHz} \\ \text{where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation Distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range.b Interference may occur in the vicinity of equipment marked with the following symbol: ((\mathbf{p}))$	

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 LS206-E is used exceeds the applicable RF compliance level above, the LS206-E should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the LS206-E.
- b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the LS206-E

The LS206-E is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the LS206-E can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the LS206-E as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power	Separation distance according to frequency of transmitter m				
of transmitter					
w	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz		
VV	$d = 1,2\sqrt{P}$	$d = 1,2\sqrt{P}$	$d = 2,3\sqrt{P}$		
0.01	0.12	0.12	0.23		
0.1	0.38	0.38	0.73		
1	1.2	1.2	2.3		
10	3.8	3.8	7.3		
100	12	12	23		

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (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.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.