

FUTREX-6100 Owner's Manual



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Safety Information

To assure correct use of this product, basic safety measures should always be taken including the warning and cautions listed in this section.

SAFETY SYMBOLS USED IN THIS OWNER'S MANUAL	
 WARNING	Indicates a potentially dangerous situation which, if not avoided, could result in severe injury or death.
 CAUTION	Indicates a potentially dangerous situation which, if not avoided, could result in minor injury to the user or patient or damage to the equipment or other property.

Device Operating Cautions and Warnings



Contact your physician for detailed information and advice about your percent body fat. Self-diagnosis and treatment using measurement results may be dangerous. Follow the instructions of a licensed healthcare provider.



The FUTREX-6100 is not intended to be a diagnostic device and is for screening purposes only.



Read all of the information in the Owner's Manual before operating the device.



Operate the FUTREX-6100 only in the manner intended. Do not use this device for any purpose.



Dispose of the device and accessories according to applicable local regulation.



Do not use a mobile device near the instrument. It could result in an operational failure

Care and Maintenance



Do not subject the monitor to strong shocks, such as dropping the device on the floor.



Do not expose the device or any of the components to water or submerge in water.



Store the device and components in a cool, clean, dry, and safe location.



Changes or modifications to the device not approved by the manufacturer will void the warranty. Do not attempt to repair the unit or components or disassemble the unit without expressed permission from Futrex.

Warranty Information

The following warranty card is included with your FUTREX-6100. Please read the card and return it to Futrex. Support is available by calling 301-733-9368 or E-Mailing service@Futrex.com.

Warranty Registration

(Please complete and return within 10 days) — Please Print—

MODEL NO. and/or DESCRIPTION _____ SERIAL NO. _____
DATE PURCHASED _____
NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

DEALER'S NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

 Check box if you desire to receive reprints of scientific papers on the performance of the Futrex Inc. product.
(There is no charge for this.)
OWNER: _____
SIGNATURE _____

1 YEAR LIMITED WARRANTY

Your Futrex Inc. equipment is warranted to be free from defects in material or workmanship for 1 year from date of delivery. Repair (or at our option, replacement) will therefore be made of any unit which proves to be defective during this period, provided the unit is returned properly packed, with all transportation charges prepaid, to Futrex Inc. at the address given below. Any repair approved hereunder will be made without charge to the owner for parts or labor. This limited warranty extends only to the original purchaser, is not transferable, and is limited to the purchase price of equipment. In no event will Futrex Inc. be liable for any incidental damages resulting from the equipment or any defect.

Claims under this limited warranty must be accompanied by the original sales ticket or shipping documents to establish date of purchase.

This limited warranty does not extend to units which have been subjected to misuse, abuse, neglect, accident or to units that have been used in violation of operating instructions. Equipment which, in our judgement, shows evidence of having been altered, modified or serviced without our authorization, or which has had its serial number altered or removed, will be ineligible for service under this limited warranty.

This warranty gives you specific legal rights, and you also may have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you. Return of the enclosed warranty registration is not a condition precedent to warranty coverage and performance.

FUTREX, INC.
130 WESTERN MARYLAND PKWY
HAGERSTOWN MD 21740

Cleaning and Maintaining the FUTREX-6100

If you desire to clean the FUTREX-6100 it is important that you either use a damp soft cloth or alcohol wipes. In the event that harmful materials are used for cleaning, damaged equipment will not be serviced without charges regardless of the warranty period.

If you desire to disinfect the surface of the probe that touches the skin use an alcohol wipe to clean. Also, if you desire, use an alcohol wipe to disinfect the instrument / accessories.

Make sure both cables and accessories are free of dust or contaminants, and wipe them off with a damp soft cloth or alcohol swab. Do not submerge the accessories in any liquid. Also, make sure liquid does not penetrate into the equipment.

Service Requirements

For service within the warranty period or following; please contact Futrex Support and Service at 301-733-9368 or via e-mail, Service@Futrex.com. Futrex is the only authorized service representative for Futrex products.

DO NOT attempt to repair equipment without Futrex's expressed approval. This will void of warranty.

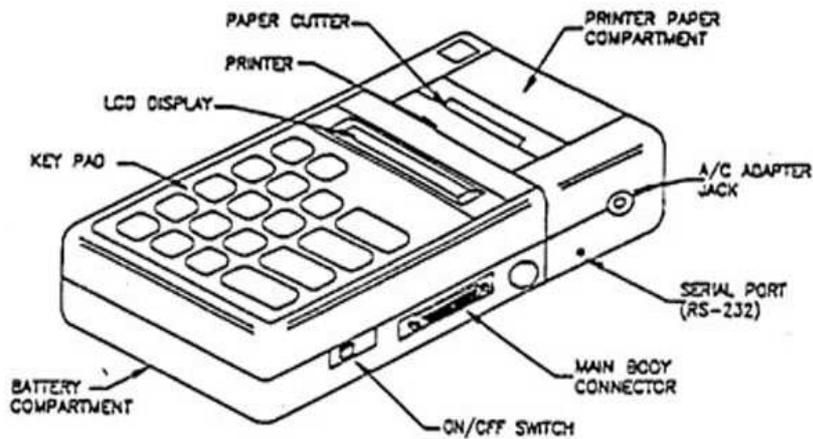
Failure to follow the cleaning and maintaining requirements outlined on the previous page may result in failure of the equipment and possible health hazards. If there are any problems with the equipment, please take the following steps.

1. Gather the instrument model, serial number, date of purchase, and a description of the problem.
2. Call Futrex Service at 301-733-9368 or e-mail the information to Service@Futrex.com.

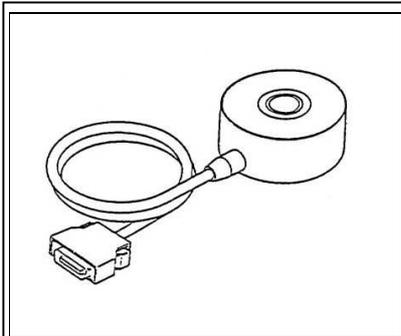
If necessary, Futrex will issue a Return Materials Authorization (RMA) number which you will need to include with your instrument if it requires to be sent back for service. More information will be provided to you about this process during your call to Futrex Service.

Appearance and Part Names

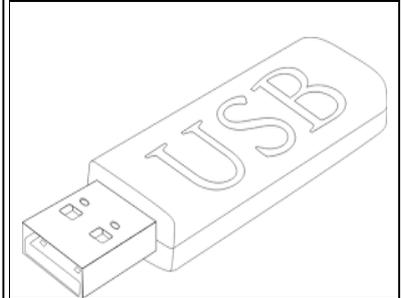
The FUTREX-6100 consists of the following items:



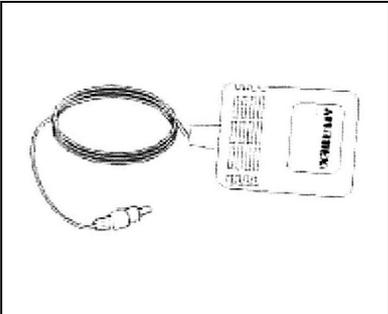
1. Main Device Chasis / Interface Box



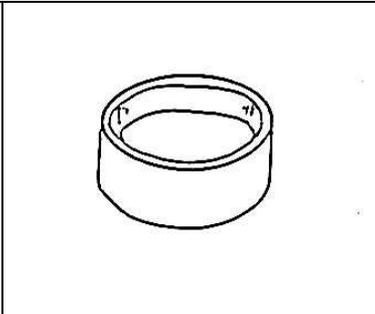
2. Light Wand



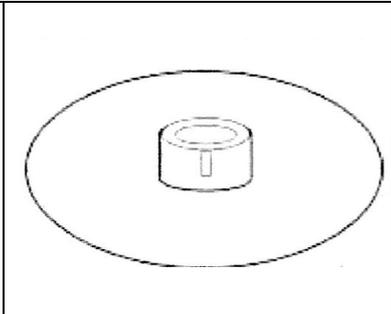
3. FUTREX-6100 Software



4. AC Adapter



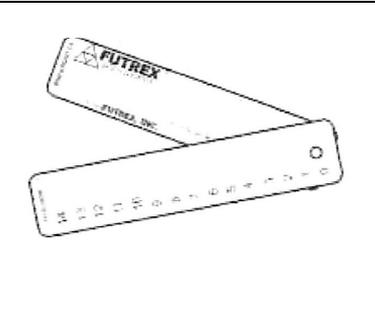
5. Optical Standard



6. Light Shield



7. USB Cable



8. Biceps Locator



9. Fitness Wheel

Setting Up the FUTREX-6100

Once you have verified that all of the components of the FUTREX-6100 have been included in the box, the following steps should be taken to setup the instrument. Ensure you have sufficient table space to complete the assembly.

1. Battery Installation

Insert six 1.5 "AA" size batteries into the battery compartment located on the rear of the main body. Be sure the batteries are oriented as indicated in the battery compartment.

2. Connecting the Light Wand

Ensure the Light Wand Connector is attached to the Main Body Connector.

NOTE: Futrex recommends always leaving the Light Wand attached to the Main Body.

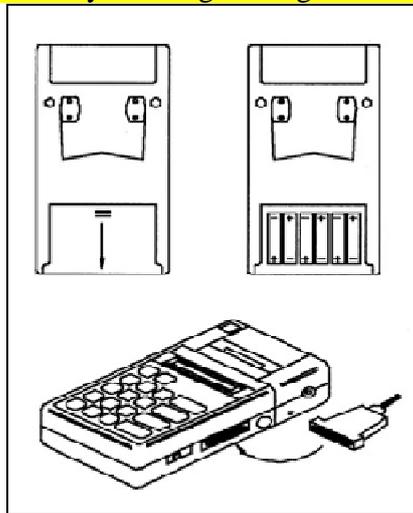


Figure 1 – Battery Installation and Light Wand Connection

3. Printer Paper Installation

Remove the clear plastic cover from the printer. Ensure the display reads "READY" or "ZERO ADJUST". Start feeding the paper into the slit inside the Paper Roll Compartment by pressing the PAPER FEED key.

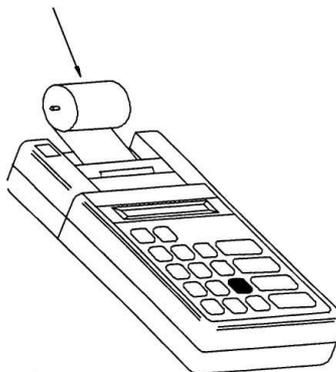


Figure 2 – Printer Paper Installation

Body Fat Measuring Procedure in 'Stand-Alone' Mode

1. Turn Power Switch ON. The display will read "FUTREX-6100/XL", followed by the software identification number, then "Advanced Body Composition Analyzer".
2. **The FUTREX-6100/XL must be Zero Adjusted.**
 - a. Insert Light Wand into Optical Standard.
 - b. Press the ZERO ADJUST key. The display will flash "Reading...". Once the zero adjustment has been completed, the display will read "READY".
 - c. Remove the Light Wand from the Optical Standard. Then install the Light Shield on the Light Wand (allow the Light Wand to protrude from the edge of the shield by about 1/4 of an inch). Line up the silver stripe on the Light Wand with the silver stripe on the Optical Standard.

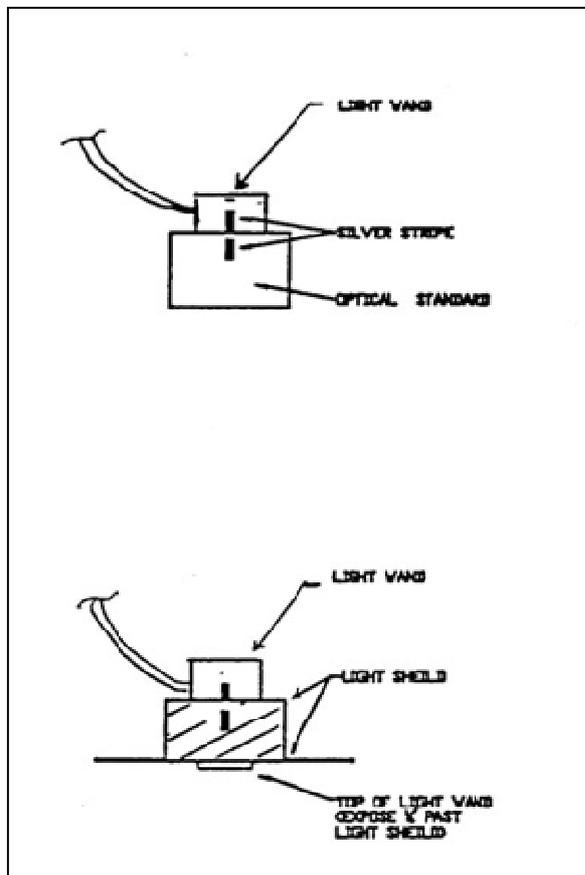


Figure 3

NOTE: It is important to line the silver colored stripe on the Optical Standard with the silver stripe on the Light Wand. These alignment marks ensure that the Optical Standard is read exactly the same each time.

NOTE: The Light Shield is provided to prohibit external light from interfering with the estimations of percent body fat. Therefore, this shield must always be used when making a measurement.

3. To start the measurement sequence, press ENTER. The instrument will then request an ID number – this is only needed for field testing the calibration of the devices and is used infrequently. Simply press ENTER again to continue.
4. Enter sex, date of birth (MM/DD/YY), height in inches, and weight. The display will then say "Ready to Read"

5. Place the Light Wand on the center of biceps of dominant arm (the arm you write with). Press firmly; use enough force to leave a slight ring on the arm when the Light Wand is removed.

NOTE: It is important to:

1. Aim the silver stripe on the Light Wand directly toward the shoulder.
2. Keep the arm relaxed (do not permit the subject to flex his/her muscles). A relaxed biceps can be achieved by having the subject seated while resting his arm (elbow bent) on a table. The hand should be open with the palm facing up.
3. Use the Light Shield to block the external light. Avoid measurements under strong lights (e.g. direct sunlight).

6. Press the Measurement Button on the Light Wand. The display will flash "Reading..." during the optical measurement. When the measurement has been completed, the display will read "Remove & Replace".
7. When "Remove & Replace" is displayed, remove the Light Wand and then replace it on the same point on the biceps for a second measurement.
8. Press the Measurement Button. The display will again flash "Reading..."
9. Percent body fat will then be printed and displayed.
10. Press CLEAR to perform another measurement
11. When finished, turn power switch to OFF.

CAUTION: Do not move the Light Wand while the word "Reading" is displayed.

Locating the Biceps Measuring Site -- The estimation must always be performed at the same site on the arm -- the midpoint of the biceps.

1. Unfold the Biceps Locator into a straight ruler. Place the edge of the Biceps Locator labeled TO UNDERARM at the lower edge of the crease of the underarm (i.e. the anterior axillary crease of the dominant arm).
2. Measure the length of the arm between the underarm crease and the center of the elbow crease (i.e. the acromion), using the scale printed on the Biceps Locator.
3. Locate this same number on the ruler starting from the UNDERARM end. This estimate represents half way between the armpit and the elbow (i.e. "belly" of the biceps muscle). More technically stated: Measure along the anterior line of the biceps halfway between the antecubital fossa and the acromion.
4. Using a highlighter, place a line on the side of the arm adjacent to the Biceps Locator. This is the site where FUTREX-6100/XL measurements should always be made.

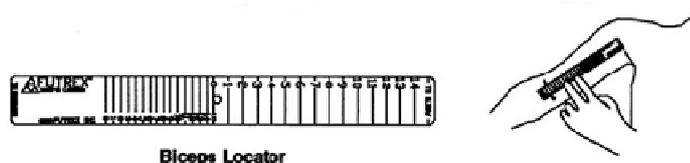


Figure 4 – Biceps Locator

Futrex Connect Advanced Software

The Futrex Connect software provided with your FUTREX-6100 software allows you to connect the FUTREX-6100 to a Windows PC via the USB port on the instrument to store clients, view graphs with changes over time, see full two page color reports, and other features.

In addition to this manual, you will find three supplement “Instructions for Use” documents included with your instrument:

1. Futrex Connect Software Set-Up Guide
2. FUTREX-6100 Futrex Connect Software Manual
3. FUTREX-6100 Instructions for Host Mode

A digital copy of these Instructions for Use (as well as this document) are available on the USB drive that was included with the instrument. Should you have questions during the set-up of the Futrex Connect software do not hesitate to contact Futrex Tech, Inc.

Admin Functions on the Stand-Alone FUTREX-6100

There are a few back-end functions on the FUTREX-6100 that can be adjusted, depending on the region the device is being used in, or the mode it is to be used in. These will be used infrequently.

Function Mode Options

F1 - Selection of English or Metric units.

F2 - Not used.

F3 - Not used.

F4 - Not used.

F5 - Selection of Warning Signal that two minutes have passed without any key pressed.

F6 - Not used.

F7 – Selection of Host Mode or Stand Alone Mode (See IFU “Instructions for Host Mode).

F8 - Not Used.

Entering into the Function Mode

1. Turn Power Switch ON.
2. Press the SELECT PROGRAM Key.
3. Press the F-MODE Key.
4. The Letter "F_" will appear on the screen.

F1 – Selection of English or Metric Units

The subject's height and weight values can be printed in English (lbs/in), or (Kg/cm) units. After entering the Function Modem and "F" is displayed, type "1". The display will either show "English" or "Metric".If you desire to change, press the SELECT PROGRAM pushbutton. Then press "CLEAR".

F5 - Two Minute Warning Beeper

A beeper will sound if no key has been pressed for two minutes. The purpose of the beeper is to alert the user that the instrument is still turned on. This "beeper alert" can be turned off by the following procedure:

- a. When "F" is displayed, type 5.
- b. Display will show whether or not the warning is on.
- c. If you desire to change the beeper warning from ON to OFF, or from OFF to ON, press the SELECT PROGRAM pushbutton.
- d. Then press CLEAR.
- e. The display will read "READY". The FUTREX-6100/XL is ready to measure.

F7 – Host Mode / Stand Alone Mode

For complete instructions on toggling between Host Mode and Stand Alone mode, reference the "Instructions for Host Mode" document.

Date /Time (DATE) Key

The DATE Key or Date/Time key allows the user to change:

- a. Date
- b. Time
- c. Numeric Settings

Date -- To change the **date format** stored within the FUTREX-6100/XL:

- a. Press the SELECT PROGRAMS Key.
- b. Press the DATE Key and step to the DATE selection. Press ENTER and the current date will be displayed.
- c. To change displayed format press the "-" key and step through the valid formats: MMDDYY, DDMMYY, YYMMDD.
- d. To change the delimiters (separators) between month, day and year press the "." key and step through the valid delimiters: "/", "-" and ".".

To change the date - Example: 08/16/92 or MMDDYY:

- a. Press "1" to change the month.
- b. Press "2" to change the day.
- c. Press "3" to change the year.

To store the selected date and date format, press ENTER.

Time -- To change the **time format** stored with the FUTREX-6100/XL:

- a. Press the SELECT PROGRAMS Key.
- b. Repetitively press the DATE key Time selection. Press ENTER and the current time will be displayed.
- c. To change displayed time format, press the "-" key and step through the valid formats: 12 hour (AM, PM) and 24 hour clock.
- d. To change the delimiters between hour, minutes and seconds, press the "." key and step through the valid delimiters: ":", " ", and " ,".

To change the time - Example 16:24:14 (24 hour clock):

- Press "1" to change the hour.
- Press "2" to change the minutes.
- Press "3" to reset the seconds to zero.
- To store the selected time and time format, press ENTER.

Numeric Settings -- To change the numeric settings:

- Press the SELECT PROGRAMS Key.
- Press the DT Key and step to the time selection. Press ENTER and the current numeric setting will be displayed.
- To change the displayed numeric setting, press the "." key to toggle between the valid decimal delimiters and thousands separators: "9,999.99" and "9.999,99", respectively.

IMPORTANT

Please set-up your Futrex Connect software NOW, using the supplemental Instructions for Use and USB drive included with your FUTREX-6100. It will give you the ability to save clients to a database, track changes in results over time, and print/e-mail two-page PDF reports, like the samples below. The Futrex Connect software allows for great reports and tracing – the FUTREX-6100 gives you extreme portability in stand-alone situations and still the features of the Futrex Connect software.

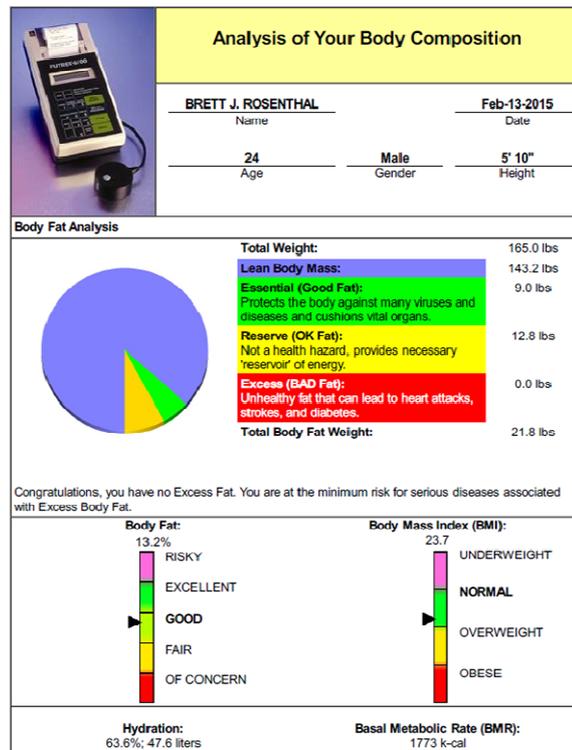
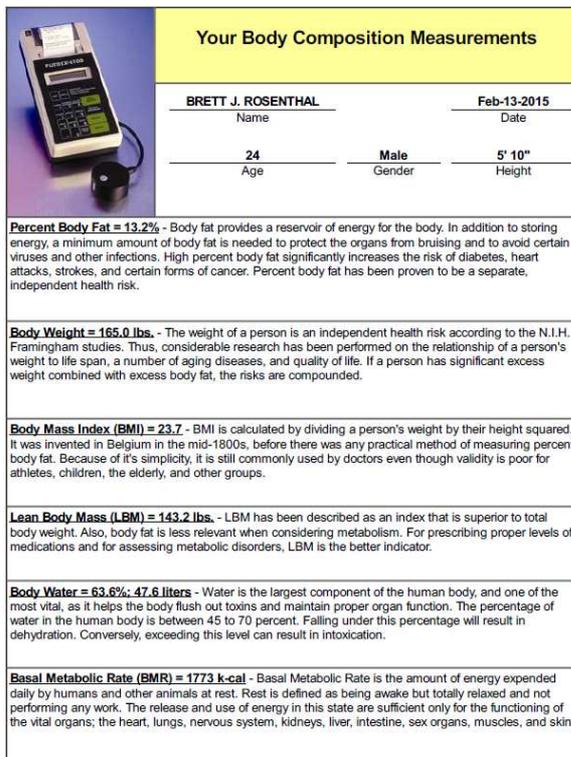


Figure 5 and Figure 6 – Futrex Connect – Sample Results Printouts

General Specifications

Body Composition Accuracy	Comparable to Hydrostatic Weighing, universally considered the “Gold Standard” in Body Composition Analysis.
Measurement Ranges	Percent Body Fat: 2.5% to 45%
Age Ranges	XL Model: 18 and up A/ZL Model: 5 and up
Body Composition Measurement Method	Near Infrared Interactance
Evaluation Time	Typically less than one minute
Storage Temperature / Humidity Range:	Temperature: -4° F to 131° F (-20° C to 55° C) Humidity: 15% to 90% RH (non condensing)
Operating Temperature / Humidity / Barometric Pressure Range	Temperature: 50° F to 104° F (10° C to 40° C) Humidity: 15% - 90% RH (non condensing) Barometric Pressure: 105kPa to 80 kPa (790 – 600 mmHg)
Table-top Unit Dimensions	Height: 2 inches Width: 9 inches Depth: 5 inches Weight: approx. 1 lbs.
Power Source	9V DC Power Supply
Warranty	1 Year Parts and Labor Warranty. Extended warranties available by contacting Futrex Service at 301-733-9368
Minimum PC Requirements	<ul style="list-style-type: none"> • Operating System: Windows XP or newer • Available RAM: 128 mb • Available Hard Drive Space: 128 mb • 1x USB 2.0 Port • Internet Access Required to E-Mail Results • Connected Printer Required to Print Results

Troubleshooting

Problem	Probable Cause(s)	Corrective Measures
Instrument does not turn on after plugging in the AC adapter.	a) The AC cord is not plugged into a wall outlet. b) Batteries are in the device	a) Connect the AC adapter to a grounded AC wall outlet. b) Remove batteries. NEVER store the FUTREX-6100 with batteries inside.
The FUTREX-6100 will not turn on.	The power switch is in the 'OFF' position.	Turn the power switch to the 'ON' position on the side of the instrument.
Error "DEVICE NOT FOUND" when beginning a measurement.	The light wand is not fully plugged into the FUTREX-6100.	Depress the tabs on the side of the light wand connector and attach it to the corresponding connector on the FUTREX-6100 enclosure.
The percent body fat results are not accurate.	a) The measurement was performed incorrectly. b) The light wand needs to be cleaned. c) There is a black tattoo on the measurement site. d) A zero adjust has not been performed recently.	a) Review the "Taking Repeatable, Accurate Measurements" document. b) Use an alcohol swab to gently clean the light wand. c) Take the measurement on the other bicep (if possible). d) Ensure that the probe is fully seated in the optical standard with the silver stripes aligned and perform a zero adjust in the "Software Settings" menu.
Unusually high body fat readings (40-50%) or IRED dark error.	a) The light wand was not fully seated in the optical standard during zero adjust. b) Light was let in to the probe during the measurement.	a) Ensure that the probe is fully seated in the optical standard with the silver stripes aligned and perform a zero adjust in the "Software Settings" menu. b) Always use the light shield to ensure no external light gets into the probe during the measurement.
The results pages will not print.	The printer that is being used is not set as the default printer.	Check the name of the printer that shows at the top of the print preview window. Select the appropriate printer.
The results pages will not E-Mail.	The PC operating the FUTREX-6100 has no internet connection.	Ensure that the internet connection is working and the PC operating the FUTREX-6100 is connected to the correct network.

FCC Statement

Note:

POTENTIAL FOR RADIO/TELEVISION INTERFERENCE (for U.S.A. only)

This product 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. The product 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 the product does cause harmful interference to radio or television reception, which can be determined by turning the product on and off, 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 product and the receiver.
- Connect the product 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.

POTENTIAL FOR RADIO/TELEVISION INTERFERENCE (for Canada only)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Canadian Department of Communications.

Futrex Spotcheck, Inc.

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