



**Mobile Height-Adjustable Aneroid  
Sphygmomanometer Model 223B  
User Manual**

**⚠ CAUTION:** This product contains natural rubber latex, which may cause allergic reactions.

**Read this manual before operating the Mobile Height-Adjustable Aneroid Sphygmomanometer.**

**Save this manual for future reference.**

*The latest version of this manual can be found at [www.grahamfield.com](http://www.grahamfield.com).*

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*Tools needed for assembly: Phillips screwdriver, 9/16" wrench*

*Info: A stethoscope is necessary to perform the auditory component of blood pressure readings.*

## **SAFETY GUIDELINES - PLEASE READ BEFORE USE**

- ⚠ Important! Read and understand these instructions before installing or using the Labtron Mobile Height-Adjustable Aneroid Sphygmomanometer. If you do not understand any part of these instructions, contact your medical professional or Graham-Field dealer for direction in the use of this product.**
- ⚠ WARNING: If components are damaged or missing, contact your Graham-Field dealer immediately. DO NOT use substitute parts.**
- ⚠ WARNING: Notice for California Customers- California Proposition 65 WARNING: This product contains a chemical known to the State of California to cause cancer and reproductive or developmental harm.**
- ⚠ WARNING: GF Health Products, Inc. assumes no responsibility for any damage or injury caused by improper installation or use of this product.**

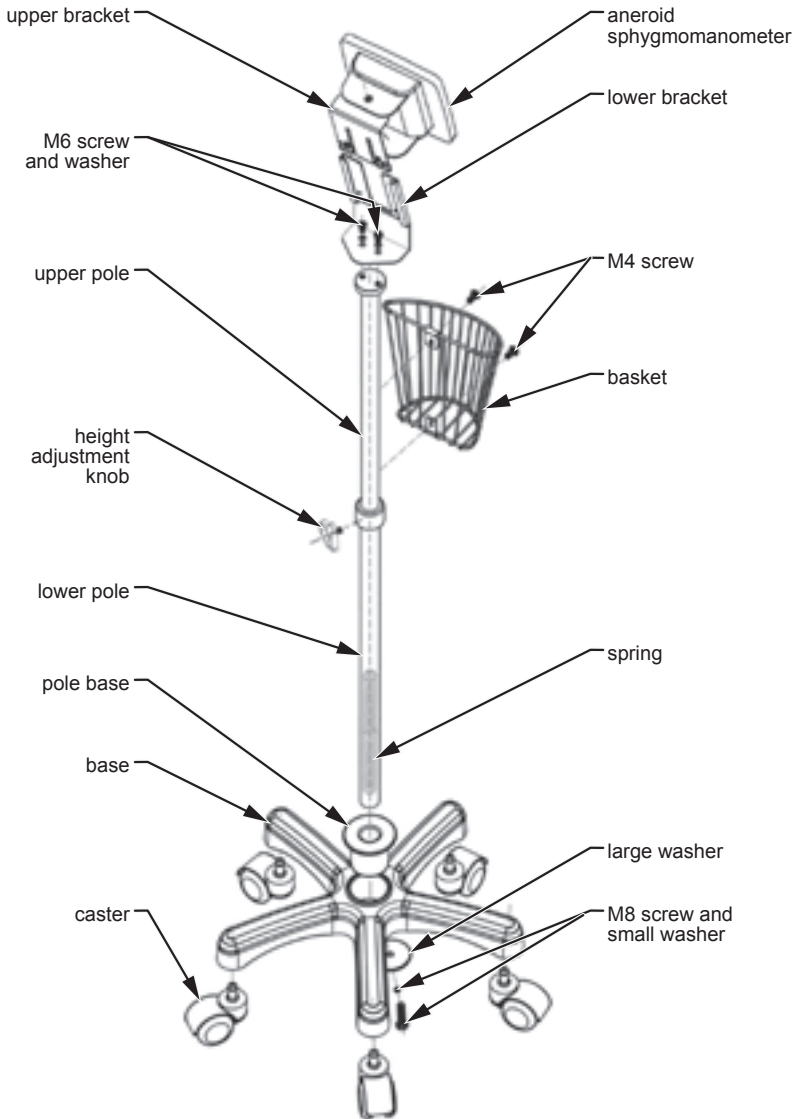
## **INTENDED USE**

The Labtron Aneroid Sphygmomanometer, shown on the front cover, is intended to measure arterial blood pressure.

## **ASSEMBLY**

Refer to the picture on the next page to assemble the Mobile Height-Adjustable Aneroid Sphygmomanometer.

1. Assemble casters and base.
2. Insert pole base into base.
3. Insert lower pole into pole base.
4. Assemble M8 screw, small washer, and large washer as shown on next page. Install from the bottom through base into pole base. Use 9/16" wrench to tighten.
5. Insert spring into lower pole.
6. Insert upper pole into lower pole.
7. Install height adjustment knob in upper pole. Adjust upper pole to desired height. Turn knob clockwise to tighten.



**223B Mobile Height-Adjustable  
Aneroid Sphygmomanometer**

8. Install basket on upper pole; insert two M4 screws to secure it as shown above. Use Phillips screwdriver to tighten screws.
9. Install lower bracket on upper pole; insert two M6 screws and washers to secure it as shown above. Use Phillips screwdriver to tighten screws.

10. Slide sphygmomanometer's upper bracket into lower bracket.

**⚠ WARNING: Ensure that sphygmomanometer is assembled as described and that all components are securely fastened before use.**

**Adjust height:** Turn the height adjustment knob counter-clockwise to loosen it, move upper pole to desired height, then turn knob clockwise to tighten.

## **BLOOD PRESSURE**

**Blood Pressure** is a measure of the blood's pressure in the circulatory system, which changes constantly during the course of the cardiac cycle. Blood pressure readings report two values. The higher reading (**systolic pressure**) shows the highest pressure in the arteries occurring when the heart contracts. The lower reading (**diastolic pressure**) shows the lowest pressure in the arteries, which occurs right before the heart contracts. Blood pressure readings are written with the highest value first, then the lowest value. Readings of 120/80 are considered to be normal, with high blood pressure being defined as a systolic pressure which is 140mmHg or more at rest and a diastolic pressure which is 90mmHg or more at rest. Only a patient's physician is qualified to determine whether the readings obtained are normal for that person.

**Measuring blood pressure:** Have the patient, while relaxed and in a sitting position, extend the arm from which the blood pressure will be taken to the front or laterally with the palm of the hand up.

**Attach the cuff and diaphragm:** Hold the end of the cuff containing the inflation bag firmly against the inside of the bare upper arm with the artery symbol positioned over the brachial artery. **Never place the cuff over clothing.** Pull the opposite end of the cuff snugly around the arm and secure the hook and loop fastener strips. The range lines, indicated by the arrows, show the correct cuff size when the cuff is placed on the arm. If the index line on the end of the cuff falls between the two range lines, the cuff is the proper size. If the index line falls outside the range lines, a larger or smaller cuff should be used. The cuff should be snug, but not

too tight. If one or two fingers can fit between the cuff and the arm, the cuff is properly secured. Place the diaphragm of the stethoscope over the brachial artery inferior to the cuff.

**Inflating the cuff:** Close the bulb's air valve by turning the air release valve clockwise. Squeeze the inflation bulb at a steady rate until the gauge's needle points at approximately 30mmHg above the individual's normal systolic pressure value. If the individual's normal blood pressure is not known, it is recommended to inflate to 200mmHg.

**Systolic blood pressure reading:** Open the air release valve slowly by turning it counter-clockwise while holding the diaphragm of the stethoscope over the brachial artery. Proper deflation rate is vital for an accurate reading. The recommended deflation rate is 2-3mmHg per second, or a drop of one to two marks on the pressure gauge with each heartbeat. **Do not keep the cuff inflated any longer than necessary.** As the cuff begins to deflate, listen carefully with the stethoscope. Note the reading on the gauge as soon as a faint, rhythmic tapping or thumping sound is heard. The first sound is the systolic pressure reading. Always check with your health care provider to ensure readings are performed correctly.

**Diastolic blood pressure reading:** Allow the pressure to continue dropping at the same deflation rate. Note the reading on the gauge when the last audible thumping, swishing, or blowing sound is heard; this is the diastolic blood pressure reading. After a few seconds have passed and no audible thumping, swishing, or blowing sounds are heard, deflate the cuff using the air release valve completely. Remove the cuff and stethoscope from the arm.

Record the systolic and diastolic readings. Repeat the measurement two or more times to ensure accuracy. Only a patient's physician is qualified to analyze blood pressure.

## MAINTENANCE

▲ **NOTICE:** To prevent product damage, please follow these recommended care and maintenance instructions:

Do not drop or pull excessively on the sphygmomanometer components.	
Never inflate beyond 300mmHg.	
Do not expose the cuff to direct sunlight.	
Do not put the sphygmomanometer in contact with sharp objects which could pierce the material and cause damage.	
Do not dismantle or disassemble sphygmomanometer component.	
Cleaning	Wipe off manometer, bulb, poles, basket and base with a clean, damp cloth. Wash cuff with soap and cold water, rinse and air dry. Do not iron cuff.
Sterilization	Do not use steam, heat or liquid disinfectants to sterilize cuff, inflation system, or manometer. Gas sterilization may be used <u>on cuff only</u> , if necessary.
Storage	Always deflate the cuff completely before storage.

# LIMITED WARRANTY

## SCOPE OF WARRANTY

GF Health Products, Inc. ("GF") warrants to the original purchaser only that it will replace or repair components, at GF's sole discretion, that are defective in material or workmanship under normal use and service. All warranties are conditioned upon the proper use of the products strictly in accordance with good commercial practice and applicable GF instructions and manuals, including proper use and maintenance. To the extent that a component is warranted by a third party, GF conveys all of its rights under that warranty to the original purchaser, to the extent permitted. This limited warranty shall only apply to defects that are reported to GF's customer service team within the applicable warranty period and which, upon examination by GF or its authorized representative, prove to be a warranty item. This limited warranty is not transferable. Within the guidelines set forth in this document, this product is warranted for one (1) year. The applicable warranty period shall commence from date of shipment to the original customer, unless there is an expiration date on the component in which case the warranty shall expire on the earlier of warranty period or the expiration date.

## OBTAINING WARRANTY SERVICE

This limited warranty shall only apply to defects that are reported to the Distributor from whom the Customer purchased the product within the applicable warranty period. If there is not a Distributor, you must contact GF directly by calling 770-368-4700, sending a fax request to 770-368-2386, or by e-mailing a request to [cs@grahamfield.com](mailto:cs@grahamfield.com). Specific directions will be provided by the Customer Service Representative. Failure to abide by the specific directions will result in denial of the warranty claim.

## EXCLUSIONS

The warranty does not cover and GF shall not be liable for the following:

- 1) Defects, damage, or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, tampering or failure to seek and obtain repair or replacement in a timely manner;
- 2) Products which are not installed, used, or properly cleaned and maintained as required in the official manual for the applicable product;
- 3) Products considered to be of a non-durable nature including, but not limited to: casters, filters, fuses, gaskets, lubricants, and charts;
- 4) Accessories or parts not provided by GF;
- 5) Charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing, in advance, by GF;
- 6) Any labor or shipping charges incurred in the replacement part installation or repair;
- 7) Costs and expenses of regular maintenance and cleaning; and
- 8) Representations and warranties made by any person or entity other than GF.

## ENTIRE WARRANTY, EXCLUSIVE REMEDY AND CONSEQUENTIAL DAMAGES DISCLAIMER

THIS WARRANTY IS GF'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. GF MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IF ANY MODEL OR SAMPLE WAS SHOWN TO THE CUSTOMER, SUCH MODEL OR SAMPLE WAS USED MERELY TO ILLUSTRATE THE GENERAL TYPE AND QUALITY OF THE PRODUCT AND NOT TO REPRESENT THAT THE PRODUCT WOULD NECESSARILY CONFORM TO THE MODEL OR SAMPLE IN ALL RESPECTS. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PARTS. GF SHALL NOT BE LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO: DAMAGES FOR LOSS OF PROFITS OR INCOME, LOSS OF USE, DOWNTIME, COVER, OR EMPLOYEE OR INDEPENDENT CONTRACTOR WAGES, PAYMENTS AND BENEFITS.

The warranties contained herein contain all the representations and warranties with respect to the subject matter of this document, and supersede all prior negotiations, agreements and understandings with respect thereto. The recipient of this document hereby acknowledges and represents that it has not relied on any representation, assertion, guarantee, warranty, collateral contract or other assurance, except those set out in this document.

For additional information on this product or this warranty, please contact a GF Customer Service Representative.

## NOTES:

- 1) Additional terms and conditions may apply.
- 2) Freight claims must be notated on the appropriate shipping documents and must be made with immediacy. International, federal and state regulations govern specific requirements for freight claims. Failure to abide by those regulations may result in a denial of the freight claim. GF will assist you in filing the freight claim.
- 3) Claims for any short shipment must be made within three (3) days of the invoice date.



**1.770.368.4700**

Information contained herein is subject to change.

The most current and complete product information can be found on our website.

**[www.grahamfield.com](http://www.grahamfield.com)**

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