

## Calibration of the LATITUDE<sup>®</sup> Digital Blood Pressure Monitor

### SUMMARY

This article provides an overview of the LATITUDE Digital Blood Pressure Monitor, and explains how to calibrate the unit, should it be necessary.

**CRM Products Referenced**  
LATITUDE Patient Management System, LATITUDE Digital Blood Pressure Monitor

Products referenced herein may not be approved in all geographies. For comprehensive information on device operation and indications for use, reference the appropriate product labeling.

#### CRM Contact Information

##### United States

[www.bostonscientific.com](http://www.bostonscientific.com)

##### Technical Services – U.S. LATITUDE Clinician Support – U.S.

1.800.CARDIAC (227.3422)  
+1.651.582.4000

[tech.services@bsci.com](mailto:tech.services@bsci.com)  
[latitude@bsci.com](mailto:latitude@bsci.com)

##### Patient Services

1.866.484.3268

##### International

[www.bostonscientific-international.com](http://www.bostonscientific-international.com)

##### Technical Services – Europe +32 2 416 7222

[eurtechservice@bsci.com](mailto:eurtechservice@bsci.com)

##### International LATITUDE Customer Support

[www.latitude.bostonscientific-international.com](http://www.latitude.bostonscientific-international.com)

[latitude.international@bsci.com](mailto:latitude.international@bsci.com)

Copyright © 2010 by Boston Scientific Corporation or its affiliates.  
All rights reserved.

Boston Scientific's LATITUDE<sup>®</sup> Patient Management System provides physicians with useful and timely information for assessing the current status of their cardiac patients. Monitoring of blood pressure is one of the optional diagnostic tools available with this system.

### How the LATITUDE Blood Pressure Monitor works

The LATITUDE Blood Pressure Monitor non-invasively measures a patient's blood pressure using a pressure cuff applied to the upper arm/bicep area. After initial inflation to stop arterial blood flow, the cuff gradually deflates. During deflation, blood flow returns and the artery resumes pulsating. Pressure waves generated by the arterial wall push against the cuff and the oscillations are sensed by the monitor's electronic pressure sensor. At the conclusion of the test, two blood pressure values are displayed on the monitor—the higher of the two values is the systolic pressure and the lower is the diastolic pressure.

The blood pressure readings are automatically transmitted wirelessly to the patient's Communicator, which then sends the information to a secure internet server for physician review.

### Calibration of the LATITUDE Blood Pressure Monitor

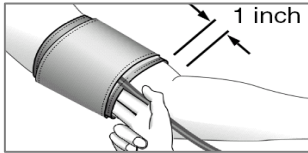
Accuracy of blood pressure measurements is dependent upon the "exhaust velocity", or deflation rate, of the blood pressure cuff. The LATITUDE blood pressure monitor is designed to operate with a deflation rate of 2 to 5 mm of mercury [Hg] per step. Each monitor is factory preset for use with a Medium or Large cuff, and typically requires no further calibration. However, when using a Small cuff (or when switching from a Small to a larger size), it may be necessary to adjust the monitor's exhaust velocity to ensure accurate pressure readings.

Patients using the LATITUDE blood pressure monitor who require a Small cuff are asked to contact their healthcare provider to have their monitor calibrated. If necessary, the healthcare provider can contact Boston Scientific to assist with the adjustment procedure, or follow the calibration steps listed below.

**Steps to check/adjust the exhaust velocity of the blood pressure monitor:**

**NOTE:** Adjusting the exhaust velocity may require repetition of the following steps to ensure it is appropriately set for the cuff size in use.

1. **Place the blood pressure cuff on the patient's arm.**



2. **Press the START button.** The cuff will begin to inflate.



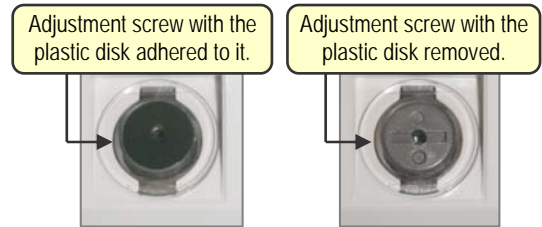
3. **Watch the display screen as the cuff deflates.** When the MEASUREMENT IN PROGRESS (♥) symbol appears, the pressure numbers should decline in increments of 2 to 5 mmHg (for example, 154 ► 151 ► 148).

4. **If the pressure numbers decrease in increments of 2 to 5 mmHg, the blood pressure monitor is calibrated appropriately.** If the increments are not within 2 to 5 mmHg, proceed to **Step 5**.

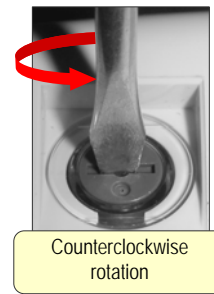
5. **Press the START button to turn the monitor Off.**



6. **Locate the adjustment screw on the underside of the monitor.** If there is a thin black plastic disk adhered to the adjustment screw, peel off the plastic disk using your fingernail.



7. **Adjust the exhaust velocity.** Using a small screwdriver, rotate the adjustment screw about ¼ of a turn (or 90 degrees) counterclockwise to **lower** the exhaust velocity.



**NOTE:** If the blood pressure monitor was previously used with a Small cuff but the patient now requires a larger size cuff, you will need to rotate the adjustment screw clockwise in order to **increase** the exhaust velocity.

8. **Repeat the above steps until the exhaust velocity is appropriately adjusted.** The pressure numbers should decline in increments of 2 to 5 mmHg.