

NIBP lab LAB .01

Name _____ Date _____

OBJECTIVES

At the completion of this experiment, you will be able to:

- Operate Pronk SimCube.
- Set up NIBP test station.
- Verify NIBP operation.

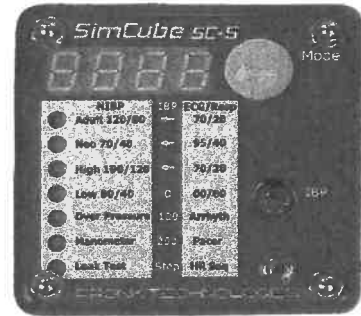


Figure1

INTRODUCTION

According to the manual or facility PM policy on NIBP schedules you will verify proper operation and test the alarms according to the instructions at the NIBP test station.

LAB PROCEDURE: NIBP operation test

With the Pronk Technologies SimCube tester (pictured) and the Dinamap 8100 tester fig 1. Test the simulated blood pressure of 120/80 for three complete cycles noting the results below

Test 1 _____

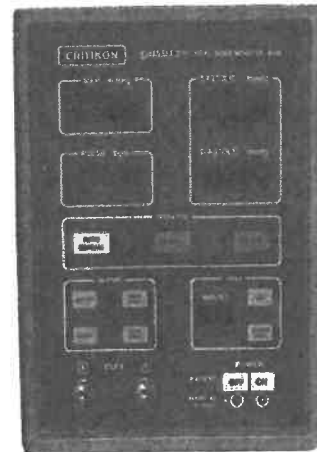
Test 2 _____

Test 3 _____

Alarm test On In the Dinamap menu go to select alarm settings. Enter alarm setting for 130mmHg systolic pressure, set the SimCube for 120/80, press start on the Dinamap. Toggle the SimCube to the High setting and verify the alarm.

High systolic alarm
Pass _____ **Fail** _____

Low diastolic alarm
Pass _____ **Fail** _____



LAB PROCEDURE: Battery test

While running the Dinamap 8100 on battery only check in the auto 3 minute set for battery life. 1 hour is passing.

Start time _____

Alarm time _____

Run time to alarm _____

Pass _____ **Fail** _____
 Getting Started

1. Plug the SimCube power supply into an AC outlet.

Warning: Use only the power supply provided with your SimCube system. The power supply provided is 6VDC, 1.8amp, center positive, 2.1mm jac

2. Connect the power jack into the SimCube power receptacle.

Many power supplies use the same plug, and connecting the SimCube simulator to the wrong power supply may damage it. Be sure the plug has a yellow SimCube flag on it prior to connecting it to the SimCube simulator.

3. Wait for the power-up sequence to complete. When complete, the display will show 000.0 on SimCube models SC-1, SC-2, SC-3 and SC-4 and SC-5 with SW versions up to 4.5. SC-5 SW version 5.0 or higher will display 0.0. During the power-up sequence, the SimCube simulator will zero its pressure, so please remove all connections from the NIBP bulkhead to allow the SimCube to accurately zero to atmosphere. This step may take up to 15 seconds to complete.

4. Select the desired mode by pressing the Yellow Mode button. Each time the **Mode** button is pressed, the mode will be changed and the LED indicating the new mode will be lit. If the

SimCube transitions into sleep mode (after approximately 30 seconds of non-use) to conserve power, the first press of the **Mode** button will illuminate the display and a second press will be required to move to the next mode. The NIBP and, if available, ECG, RESP, and IBP values corresponding to each mode are printed on the front panel next to the LED, horizontally. For more detailed information on each mode, refer to each parameter section in this manual.

5. For dynamic NIBP testing, connect the SimCube simulator in line with the monitor's cuff and hose as shown in Fig. 1. Different monitors will require different adapters. A variety of adapters are available from Pronk Technologies Inc. and each SimCube system comes equipped with at least one. Using a SimCube Cuff Jacket can improve reading capture and consistency. Generally, the smaller cuff jacket sleeve volume is best for most monitors. In Neo mode, be sure to use a small cuff. To use the Cuff Jacket, wrap the cuff as described above and insert into the desired neo or large volume sleeve. If not using the Cuff Jacket, wrap cuff snugly around itself and place in an area safe from accidental motion.

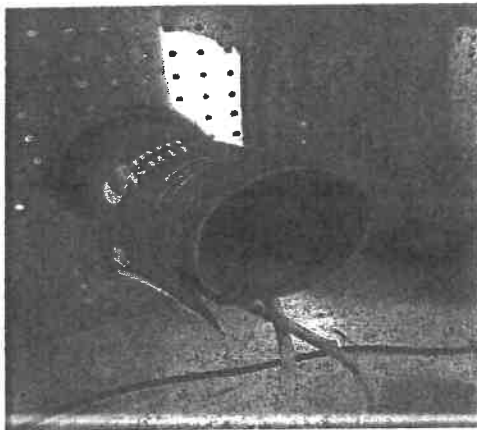
NIBP Monitor

Fig. 1

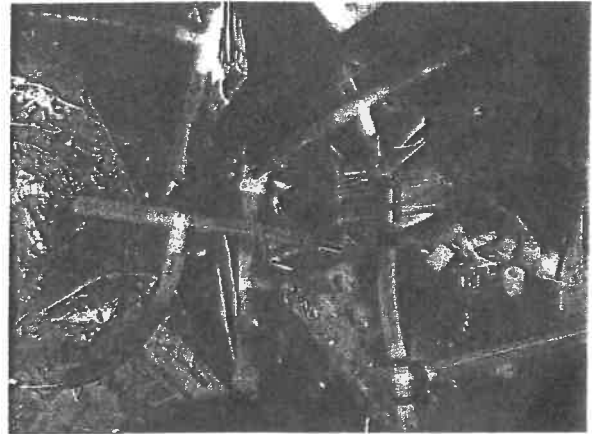
6. Start the NIBP reading on the unit under test and wait for the reading to complete.

7. For static calibration, over pressure testing, and leak testing, connect the SimCube simulator and a manual pump bulb in line with the monitor's cuff and hose as shown in Fig. 2. All SimCube models include a manometer for performing static calibration. Some models include an Over Pressure (peak detect) mode for performing over pressure testing and some models include a Leak Test mode for performing leak tests.

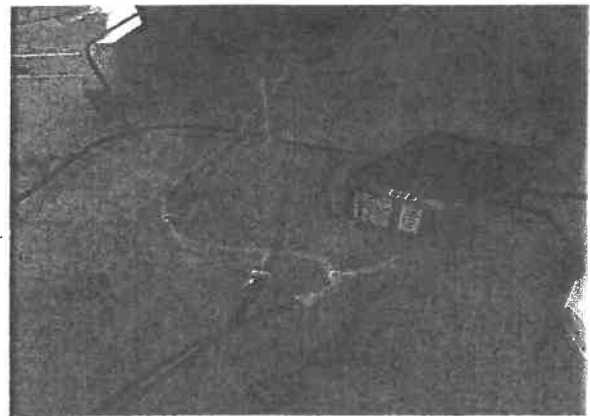
Test mandrel



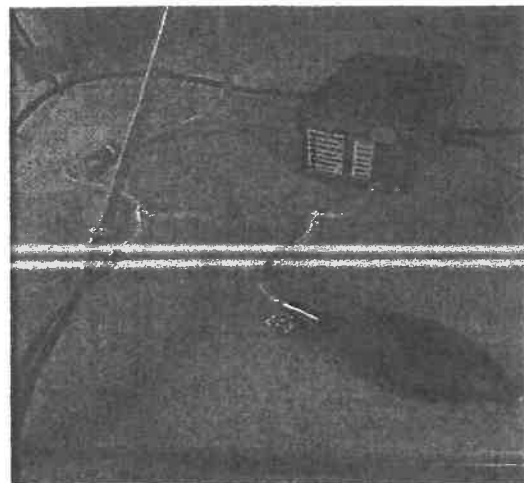
Tubing adapters and fittings



Sample test circuit



Sample pressure test circuit



NIBP lab LAB .02

Name _____ Date _____

OBJECTIVES

At the completion of this experiment, you will be able to:

- Verify NIBP operation.
- Verify alarm operation.
- Verify battery condition..

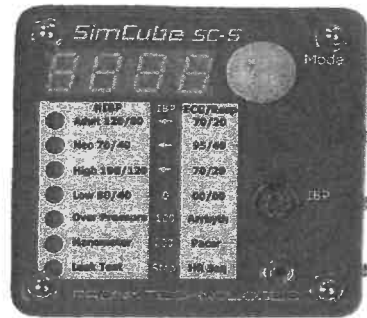


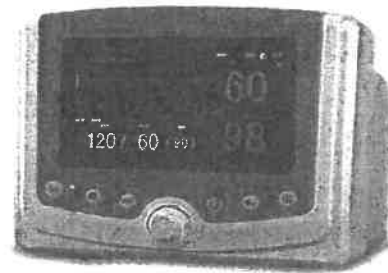
Figure1

INTRODUCTION

According to the service manual or facility PM policy on NIBP schedules you will verify proper operation and test the alarms according to the instructions at the NIBP test station.

LAB PROCEDURE: NIBP operation test

With the Pronk Technologies SimCube tester (pictured) and the BLT monitor tester fig 1. Test the simulated blood pressure of 120/80 for three complete cycles noting the results below



Test 1 _____

Test 2 _____

Test 3 _____

Alarm test On In the Dinamap menu go to select alarm settings. Enter alarm setting for 130mm systolic pressure, set the SimCube for 120/80, press start on the Dinamap. Toggle the SimCube to the High setting and verify the alarm.
High systolic alarm
Pass _____ **Fail** _____

Low diastolic alarm
Pass _____ **Fail** _____

LAB PROCEDURE: Battery test

While running the BLT Biolight on battery only check in the auto 3 minute set for battery life. 1 hour is passing.

Start time _____

Alarm time _____

Run time to alarm _____

Pass ___ **Fail** _____

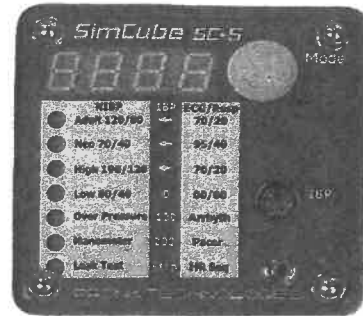
NIBP lab LAB .03

Name _____ Date _____

OBJECTIVES

At the completion of this experiment, you will be able to:

- Verify NIBP operation.
- Verify alarm operation.
- Verify battery condition..



INTRODUCTION

According to the service manual or facility PM policy on NIBP schedules you will verify proper operation and test the alarms according to the instructions at the NIBP test station.

LAB PROCEDURE: NIBP operation test

With the Pronk Technologies SimCube tester (pictured) and the Colon Press-mate tester fig 1. Test the simulated blood pressure of 120/80 for three complete cycles noting the results below

Test 1 _____

Test 2 _____

Test 3 _____

Alarm test On In the Dinamap menu go to select alarm settings. Enter alarm setting for 130mm systolic pressure, set the SimCube for 120/80, press start on the Dinamap. Toggle the SimCube to the High setting and verify the alarm. High systolic alarm

Pass _____ Fail _____

Low diastolic alarm

Pass _____ Fail _____

Figure1



LAB PROCEDURE: Battery test

While running the Colon Press-Mate on battery only check in the auto 3 minute set for battery life. 1 hour is passing.

Start time _____

Alarm time _____

Run time to alarm _____

Pass ___ Fail _____

NIBP lab LAB .04

Name _____ Date _____

OBJECTIVES

At the completion of this experiment, you will be able to:

- Verify NIBP operation.
- Verify alarm operation.
- Verify battery condition..

INTRODUCTION

According to the service manual or facility PM policy on NIBP schedules you will verify proper operation and test the alarms according to the instructions at the NIBP test station.

LAB PROCEDURE: NIBP operation test

With the Pronk Technologies SimCube tester (pictured) and the Datascope Accutorr Plus tester fig 1. Test the simulated blood pressure of 120/80 for three complete cycles noting the results below

Test 1 _____

Test 2 _____

Test 3 _____

Alarm test On In the Dinamap menu go to select alarm settings. Enter alarm setting for 130mm systolic pressure, set the SimCube for 120/80, press start on the Dinamap. Toggle the SimCube to the High setting and verify the alarm. High systolic alarm

Pass _____ Fail _____

Low diastolic alarm

Pass _____ Fail _____

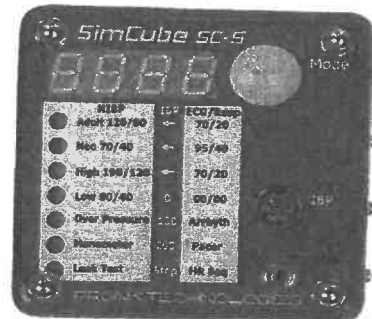
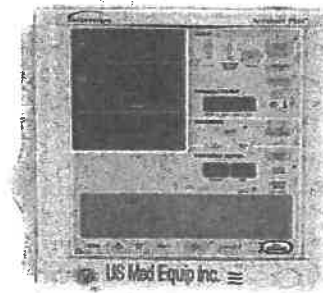


Figure1



LAB PROCEDURE: Battery test

While running the Datascope Accutorr Plus on battery only check in the auto 3 minute set for battery life. 1 hour is passing.

Start time _____

Alarm time _____

Run time to alarm _____

Pass ___ Fail _____