Simulaids

No 600
Blood Pressure
Simulator Arm

Simulaids thanks you for your purchase of the Blood Pressure Training Arm. The use of the Palm Operating System (O/S) offers you a very convenient and portable way to instruct students in the art of blood pressure taking. Please read through these instructions to assist you in understanding the features of your new unit.
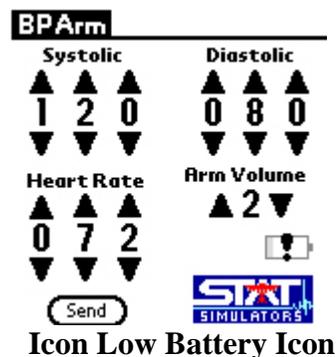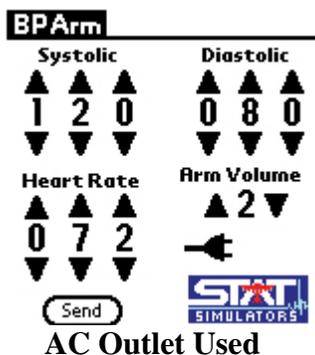
Assembly
You must assemble the arm by placing the arm next to the upright portion of the stand and threading the bolt into the arm. Secure by hand tightening. Once the arm is attached to the stand, plug the black cord with the 4 pin connector into the multi-pin connecting port on the back of the control box. The USB cable for the PDA and the power cord for the a/c inverter are also plugged in to the control box in the appropriate receptacles.

Program Installation for the B/P Arm product:
1. You must install the Palm Desktop software first. If you cannot locate that disc with your product, www.palm.com/us; support; handhelds and select your unit. Download the program associated with the red and blue circular/arrowed icon.
2. Check to see that the PDA is communicating with that program via hot sync by entering a name in the Contact or Addresses file on the Palm Desktop program. Hot sync the PDA and then look for the name on the PDA's contact/address list.
3. Install the B/P arm program.
4. A window will appear named "Select User". Click in the box next to the names of the user(s) who will be using the BP Arm program.
5. When finished, click on the "Install" button. The window will disappear.
6. At the PDA, click on the hotsync icon to perform a hotsync (two clicks, actually). Only one hotsync is necessary to install the BP Arm program.

During installation, a BP Arm icon was also placed on the desktop. It is named "Re-install BP Arm program". Use it to install the BP Arm program on other PDAs after this initial installation or on this PDA if your program ever needs to be reinstalled on the PDA. When you click on it, the "Select User" window will appear. Make the selection and follow the prompts.

AC Outlet Used

Icon Low Battery Icon

Power Supply
The control box has batteries included with the unit for ease of use in the portable mode. To prolong the life of the AA batteries you may plug the 110 volt a/c inverter furnished with the

trainer into a standard a/c outlet and attach the inverter cord to the control box under the "DC" label. When you do so, the "Plug" icon will show up on the PDA Screen indicating that you are not operating on batteries. NOTE: When the unit is operating in "Plug", the AA batteries do not recharge. The "low battery" icon will appear when such is the case.

When the unit is powered up, the default settings of 120 systolic, 80 diastolic and a volume setting of 2 will be active. There will be no pulse until the Palm unit is attached to the control box.

IMPORTANT: if the low battery indicator is on you may experience a freezing up of the PDA. Replace the batteries in the B/P Arm control box to eliminate the freeze ups. To replace the six AA batteries, unscrew the feet of the control box and remove the cover and access the battery pack, which lies within a foam receptacle.
When installing the battery pack be sure to securely position the pack within the foam receptacle in order to prevent damage during movement of the unit.

B/P Cuff
Your trainer comes with a B/P cuff already altered, but you may use any standard sphygmomanometer with the device. The only alteration you must make is to use a different cuff is to cut the tubing and insert the "T" connector so that the three way tubing assembly is available on the replacement cuff. Once you have positioned the cuff on the upper arm, attach the loose end of the assembly to the barbed connector on the control box under the "B/P" label. This must be done so that the pressures exerted by the cuff are translated to the sensing devices inside the control box, otherwise you will not be able to determine variations in settings of the B/P.

Palm Unit
You are supplied with a Palm handheld device. Included with the unit is a charger and programming which must be loaded onto your choice of computer for hot sync operations. Please note that the handheld unit will require time to charge before you can use the device.

There is also a USB cable that will connect the PDA to the control box. This cable must be attached to both devices in order to utilize the simulator. However, do not start the Blood Pressure Arm program with the PDA connected to the computer. Always open the B/P program only when the PDA is connected to the B/P Arm Control Box. The PDA will freeze up if you open the program when it is connected to the computer.

Connect the large, rectangular plug (USB) to the corresponding connector on the control box marked "USB".

Auxiliary Sound
You may use an external speaker system for amplification of the auscultated sounds associated with blood pressure taking by plugging the universal sound cables into the connection on the control box labeled "EXT SPKR." Use this feature for broadcasting sounds to the entire classroom during initial training exercises.

Auscultation

There is a speaker in the antecubital fosse of the arm that emits the sounds necessary for taking blood pressures. Placing any stethoscope over that speaker allows one to listen for the commencement of sounds, the Ausculatory Gap, if activated, the Korotkoff sound changes, and the cessation of sounds.

Palpation
The radial pulse will activate when the Palm unit is attached to the control box. You may teach systolic B/P via palpation using this feature. Note that when you begin to inflate the B/P cuff, the radial pulse will stop at about 8 mmHg until you are within the systolic/diastolic range of your settings. So, if you go above systolic, you will have no pulse – release the pressure and you'll have a radial pulse once you reach systolic – the pulse stops just short of the diastolic pressure setting so that the auscultation of the sounds at the antecubital fosse are not hindered by the transmission of sound through the forearm skin.

This device is also used to teach taking pulse rates. If you elect to use the Pulseless Electrical Activity feature, you will not hear antecubital speaker sounds, either.
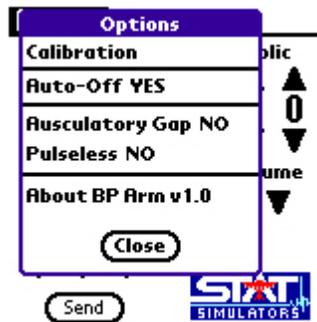
The Program
The screen for the trainer is accessed by turning on the Palm handheld and going to the home screen (small house on the lower left of the PDA permanent display) where all of the installed programming icons are located. Tap on the B/P Arm icon (listed alphabetically) to initiate the program. Simply tap the corresponding arrows to raise or lower the settings desired for your training purposes.

It is likely that the B/P cuff will need to be calibrated to the control box settings. To do so tap the upper left corner of the handheld's screen ("BP Arm" shown in the above graphic) and you will get a drop down list of choices. Pump the B/P cuff until the gauge reads 150 and wait until it stabilizes at 150 mmHg. At that time, tap the "Calibrate" item on the drop down list and the calibration is complete. Release the air in the cuff and the trainer is ready for your next student. The calibration will set the gauge within 2 mm hg of the settings on the Palm unit screen.

It may be necessary to reset the BP Simulator by turning it off and then on again after the Auto Shut-Down. It also may be necessary to exit the BP Program on your Palm Pilot and then reenter the program after the Auto Shut-Down. It is important that you follow this order.

The Auto Off feature will allow you to set the unit to turn off to prolong the battery life of the unit. Again, this is a toggle operation.

Notice the other drop down selections in this menu. The Ausculatory Gap simply toggles from off to on. During the "ON" sequence, the gap occurs. Tap the choice again, and the gap is off. The other icon on the screen is the "Send" button. After changing the digit selections for the B/P and the pulse rate, you must tap the send button in order for the change to take place in the arm. You may use this feature to pre-load the trainer while the student is working on the previous skill set. When you are ready to change, simply tap the button.

Options and Accessories

Other than the carry bag, and the B/P cuff which comes with your B/P Arm simulator, there are no accessories. The Palm units and accessories are available at most electronic outlets. When replacing the Palm units, only Zire 21, Zire 31, or Tungsten E-2 units will be recognized by the programming.

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