



PDA STAT BABY # 401 Manikin Instruction Manual



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Statement of intended use: PDA STAT Baby manikin is intended to be used for training of emergency medical personnel. All levels of EMS training can be administered to this manikin, including: physicians, nurses, ALS, and BLS.

Warning: Contains Latex IV Veins

Thank you for purchasing Simulaids' PDA STAT Baby scenario trainer. This manikin has been designed for portability and rugged handling.

Environments: WARNING: PDA STAT Baby is not waterproof. Do not use it in the water. However, PDA STAT Baby is made to use in normal life environments, like bedrooms, automobiles, or in the clinical setting. When using the manikin outdoors, dress it like you would expect to find a patient. **WARNING:** Always use a grounded extension cord, and when the weather changes, treat the manikin as if it were human; i.e., cover her to keep moisture away or place her inside a vehicle and/or place her on a stretcher to elevate her out of the moisture collecting around her. It is important to keep the crib out of the water, too!

Do not defibrillate a wet manikin, just as you do not defibrillate a wet victim.

Getting Started:

PDA Set-up:

See instructions enclosed with PDA for setting up your Palm Pilot. You must do this before connecting the PDA to the manikin. It will require about 2 hours of charging time on the PDA before use.

You have been supplied with a CD that contains the programming for your PC. Once the programming is installed you will be able to work on your scenarios on your PC and transfer them back to the PDA via the hot sync feature.

Manikin Set-up:

1. When you open the case you will find the baby nestled in one end and the crib in the other. The two are connected via a permanent umbilical tether that transmits pneumatic and electrical signals to the manikin. Place the manikin on the crib and then lift the two out together. Place the crib on a flat surface.
2. Locate the power service cord at the end of the crib and plug it into your power source. **YOU MUST HAVE A GROUNDED OUTLET AND CORD.**
3. Locate the USB link cable in your PDA box. Install it by plugging the end into the USB port that exits the crib near the power cord connection. Once the connection is secure, attach the PDA to the cable and initialize the STAT Infant program located on your files screen and identified by a Star of Life icon. You are now ready to start choosing items from the pull down menus on the PDA screen. See the “Programming Your PDA” Instructions on the enclosed CD.

To assist you in preparing PDA STAT Baby for student activities we offer the following set up suggestions:

After connecting fluid reservoir bags to the manikin, you should run fluid through the feature you are connected to so that the student’s attempt at that skill will result in fluid being immediately available, otherwise the urinary catheterization tubing or other feature may have air trapped between the fluid bag and the valve in the manikin.

IV Lines: Caution – contains latex.

The veins in the right antecubital fosse, right dorsal hand and antecubital fosse, and the pedal and saphenous veins on the left foot are supplied with blood by attaching the reservoir bags (one with blood, the other empty to receive circulated blood) to the white and blue color coded connectors located on the baby’s left side. It will be important to clamp off the receiving reservoir bag line after the blood has completely filled the veins in order to get the best possible return of flash upon installation of a catheter. Raise the supply reservoir to the highest level possible to increase the

pressure in the veins. Open the receiving reservoir line when infusing so there is room for the extra fluid.



The PICC line placement in the right antecubital fosse will allow you to insert the catheter, receive a flash, and install the heart catheter to the depth of the heart.

Always flush blood lines with warm water until clear before storing the manikin.

See the replacement instructions below for putting new IV sites in place.

I/O Right Leg:

The right leg contains the structure for learning proper intraosseous catheter insertion. The leg is made up of the outer skin, the inner subcutaneous layer, and the bone. The distal end of the bone has a plug with a blood reservoir bag connector.

To charge the right lower leg with blood for I/O needle insertion blood return, first carefully fill the empty interior of the leg and install the clear, top-hat cap (with tubing and connector attached) to seal the leg. The valve will not leak if the reservoir bag is not attached. Push the plug in flush with the end of the I/O leg tubing. Once the leg is filled, attach the red color-coded reservoir filled with blood to allow flow of blood into the leg. It is not necessary to connect the reservoir in order to aspirate the blood. If you are going to titrate flow, attach a partially filled bag and release the clamp so that there is room for the additional fluid to be stored in the reservoir bag.

Always drain and flush the I/O blood reservoir in the right leg before storing the manikin. Flush the leg with the plug and connector withdrawn for best flushing results.

Urinary Catheterization:

To charge the bladder with fluid for response to proper catheterization, fill the reservoir with the gray color coded connector tip with water. Connect the tubing of the reservoir bag to the gray tubing connector exiting the left side of the torso. Open the tubing clamp. Proper 5 FR catheter installations will result in fluid flow through the catheter.

Always drain and rinse the urinary tract before storing the manikin. Do so by disconnecting the reservoir bag and then inserting a catheter into the manikin to fully drain the tubing.

Chest Tube Insertion:

The chest tube feature will allow for simulated drainage. Fill a reservoir bag with water and hang it on an IV pole or elevated perch next to the manikin. Attach the tubing to the gray tubing connector on the baby's right side. Release the tube clamp. Insert a chest tube in the left chest wall, midaxillary line in the hole provided at the 5th intercostals space until the chest tube contacts the valve inside the chest. Have a cup ready to catch the flow of water as the air is displaced inside the manikin. Stop the flow of water by pulling the chest tube back away from the interior valve. You are now ready to challenge the student.

To drain the chest tube system, first close off the water supply bag. Insert a chest tube into the left chest wall until it contacts the fluid valve. Expect water flow and have a container handy to catch the evacuated fluid. Elevate the feet slightly. Disconnect the fluid supply bag and tubing. Inserting the urinary catheter will assist in eliminating the water from the system because they are commonly fed by the gray tubing.

This feature is not a procedure trainer, rather it is available for insertion of the catheter for demonstration that the procedure is necessary during treatment and also for the act of securing and caring for the tube.

Pulses:

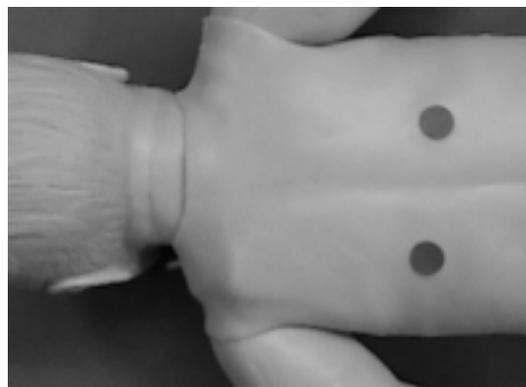
There are six pulse points activated by plugging in the extension cord to the manikin crib. Bilateral locations of the carotid, femoral and brachial pulses will activate.

Pneumothorax:

To create air pressure in the chest there is a function on the PDA in the “Lung” screen. Insertion of a needle catheter into the appropriate mid-clavicular, third intercostals space where the replaceable skin section resides will result in a discharge of the air during the use of this function, indicating successful placement of the catheter. To obtain another discharge of air during catheterization, initialize the feature on the PDA screen again. There is no damage done to the interior of the manikin and no disassembly or other labor is required to replace the pads. Simply lift the old units out of the torso overlay holes and insert a new pad.

Heart and Lung Sounds:

You may auscultate sounds by placing a stethoscope over the speaker locations specific to the organ to which you want to listen. The heart sounds are heard at the distal side of the xiphoid process. The lung sounds are heard at the bases in the mid-clavicular line at a point just below the bottom rib. Setting the lung volume (amplitude of the speaker sounds), lung sounds, breathing rate, and pneumothorax features are done on the “Lung” screen of the PDA. See programming information below or consult your Operators Manual for specific directions.



ECG Monitoring and Defibrillation:

ECG Monitoring: Four ECG limb lead connectors, or snaps, are located on the chest skin. **WARNING:** Defibrillating through the ECG snaps may damage electrical components or may put the user at risk of electrical shock. To view limb lead ECG waveforms, attach your 3- or 4-lead ECG cable to the ECG snaps at the following locations:

RA (right arm): right shoulder snap

LA (left arm): left shoulder snap

LL (left leg): left waist snap
RL (right leg): right waist snap

Defibrillation: Two defibrillation sites are located on the chest skin. If you are using a defibrillator with hands-free therapy cable, you will need the chest posts adapters included with the manikin and training cables. To order the training cable, contact your distributor or Simulaids; you will need to know the make and model of your defibrillator. The chest post adapters are two threaded parts which are included with the manikin. You must screw these into the two defibrillation sites and then attach the training cable to them. If you are using a defibrillator with hand-held paddles, use the manual adapters that are included with your manikin. If you do not have the adapters, you will need to order a pair of Manual Defib Adapters No. 053 from your distributor or Simulaids. To deliver defibrillation or pacer pulses, and to view the PADS ECG waveform, attach the training cable (or hold paddles) at the following locations:

Apex: left side of chest, lower rib area
Sternum: right side of chest, middle rib area

PDA STAT MANIKIN TECHNICAL SPECIFICATIONS

MAINS SUPPLY

Model	Input Voltage	Frequency	Input Current
400	120VAC	60 Hz	250mA
400X	240VAC	50 Hz	125mA

DEFIBRILLATOR ENERGY Max. Energy Delivered Min. Time Between Discharges Max. No. of 360J Discharges 360 Joules 10 seconds 15 over a five minute period

ELECTROSTATIC DISCHARGE In the event of an electrostatic discharge, the manikin may change states. User intervention may be required to bring it back to normal operation. User intervention may include re-transmitting selections from the PDA, or cycling power off and on.

Warning: always disconnect the electrical components prior to storage or cleaning the manikin.

Advanced Airway:

You will find all the anatomical landmarks necessary to teach nasal or oral intubation techniques, including all applicable field use adjuncts like LMA's and ET's. We recommend LMA size 1, and ET tubes up to 3.5 mm (Brozelow Tape Pink/Red guidelines). You may also perform a Sellick's maneuver while intubating.

Always lubricate any devices inserted into the mouth. Difficulty in inserting your tools will result if you do not, and forcing objects may damage the manikin. A vegetable oil based lubricant is recommended. Do not use petroleum based products; it will void your warranty.

To inflate the tongue, or to spasm the larynx, go to the "Airway" screen on the PDA to activate those choices.

It is recommended that you occasionally swab the throat of the manikin with a wet, small gauze pad to remove a build up of lubricant residue. Using a hemostat will allow you to reach far enough to clean, but not damage the throat. Do not perform rescue breathing with this ALS device, as you will contaminate the interior structure and only replacement of parts will eliminate the contamination.

Injection Sites:

An intramuscular injection site is available at the top of the left thigh.

A subcutaneous injection site is available on the left triceps.

In both instances, you may remove the pad and squeeze it dry to avoid bacterial growth when storing the manikin. To remove the pad, displace the torso skin and unhook the arm or leg skin from the torso buttons and slip the limb skin off from the buttons. Always dry the pads before storing the manikin.

Gastric Tube Placement:

You may insert a gastric tube to the level of the stomach for the purpose of demonstrating the procedure. Because the stomach is concealed under the torso skin, and it is not easily replaced it is not recommended that actual fluid procedures for gavages or lavages are practiced.

Rectal Medications:

You will find an aperture for the insertion of a rectal medication syringe. There is no reservoir to hold medications.

PDA STAT Baby features and how to use them: for more specific PDA program instructions, refer to the enclosed PDA program manual.

AIRWAY:

Tongue Edema:

Select the Airway menu on the Palm unit by contacting the screen with the stylus on the small square box in the upper right corner marked with an "A." The options shown will lead you to the drop down menus for the airway maintenance features. By touching Tongue, you will have the options exposed. Select one with the stylus and then tap OK and the tongue will react accordingly. You can return the tongue to normal by going back to the menu and selecting normal, and tapping OK. The same goes for any other option available in any menu.

Laryngospasm:

Find the airway menu and select the Larynx option. Select a choice from the dropdown menu and tap OK. The larynx reacts as indicated. You can return the larynx to normal by choosing that option. This is the same pattern used throughout the rest of the menus (and capnography in this section) on the PDA unit for the PDA STAT baby features.

Heart & Lung Sounds Speaker Positions

Heart: This programming contains 17 rhythms with rate variation, selection of running rhythm, and the opportunity to select a waiting rhythm to convert to after defibrillation. Install your choice of defibrillation adapters in the defibrillation sites on the chest. You may need to order a training cable to effectively use your hands free defib capability. You can then choose to convert or not to convert with the touch of the PDA screen. You can also pace by setting the level of capture on the appropriate PDA screen. Once the capture level has been set, the manikin's rhythm will be adjusted to coincide with the operation of the pacing feature on your monitor/ defibrillator.

You may also set the choice of heart sounds. There is 1 site to auscultate. There are 4 choices: normal, systolic murmur, diastolic murmur, and friction rub. The amplitude of the heart sounds may also be varied to four levels.

An additional feature is the PEA button. Tapping the PEA button will cease all pulses during any rhythm. Tapping it again will restore all pulses active for other selections.

Retraction:

To demonstrate severe respiratory distress in the manikin, use the Retraction feature by turning it on with a tap on the screen. The chest will see-saw at the respiratory rate you have set on the Lung screen. Tapping it again will turn off the retraction.

Pulses:

There are 6 pulse points palpable on PDA STAT Baby: bilateral at carotid, femoral, and brachial.

When the systolic pressure falls below 70mm, the distal pulses cease.

Blood Pressure:

The blood pressure arm will work with any B/P cuff. However, one is furnished with the manikin because the tubing must be altered to connect it to the barbed tube on the left shoulder of the manikin. Placing the B/P cuff on the arm first will allow you to determine the best route to get the tubing to the barbed connector. Once connected, pump the cuff up to 150 mmHg. It will fluctuate some while the arm components compresses. When the pressure reading stabilizes, connect the PDA to the manikin via the USB cable and go to the “airway” screen. Tap the “Menu” bar in the upper left corner of the screen, then tap “Calibrate 150.” Recheck that the pressure is correct on the cuff gauge, and confirm by tapping the “OK” button. The gauge will now read within 2 mmHg of the settings selected on the “heart” screen where you may set the systolic and diastolic pressures independently. Take a blood pressure at any time, just as you would on a patient.

Lung:

The lung sounds can be auscultated in 2 locations anteriorly. These sounds: *normal, rhonchi, crackles, stridor, and wheeze* can be heard. You may also create a tension pneumothorax by selecting the left or right side. The drop down menu offers you *partial or complete*. By selecting *partial* you will reduce the amplitude of the sounds by half in the affected lung and initiate a pressure build up. If the student doesn't catch the problem, you can go to *complete* and the lung sounds and chest rise will disappear on that side and the pressure will maximize. When the student treats the ailment, you can restore lung sounds and chest expansion on that side and stop producing air pressure in the chest.

Events:

Two categories are available here. One category addresses the physical activities that the student may elect to do during patient assessment and treatment. The other is the medication list.

In the Action drop down menu you will find a list of items like 12 lead ECG; Combitube, IV Line, and oxygen administered. In the Session mode, described later, these activity selections appear in chronological order when you confirm the selection by tapping the OK button. The same holds true for the Medication list. These 40, alphabetized, AHA-protocol drugs allow you the opportunity to determine if the selected drug is given in the correct, too little, or too much dosage by tapping the box with the -, +, or = signs

Sessions:

You may keep track of each student or group of students while they perform skills by utilizing the Session feature. Tapping the Menu box reveals the Record choice, which allows you to Start a student session. You must select the student from a list you have already hot sync'd into the PDA or you may start a new student record by typing in a name on the PDA when prompted. You may track a group of students by giving that session a group name. Once you tap the OK button to confirm your choice of student the session has begun. From this point on all of the choices you make on the PDA by tapping the OK button, whether it is a challenge you initiate or a response by the student in assessment or treatment in the events log, will show up

chronologically on the session log and print out from the Manikin Data Editor on your PC.

At any time during a session you may go back to the Menu drop down list and select an option for the session, including Pause, View, and Stop. If you Pause, you will then see the Resume choice highlighted so that you may go forward with the Session.

Scenarios:

Once you are familiar with the location of the features you can set up your own scenario, or start from a pre-arranged one from the Scenario section. The basic premise is that for each scenario you start at a base time of zero. You may then add physiologic settings that are to be present when the student approaches the manikin, i.e., normal sinus rhythm, pulse 130, B/P 80/60, respirations 20, normal heart and lung sounds (start up default settings on the manikin). Check out the list of pre-set scenarios for examples of starting points for your scenarios. You may then build and save your own choices in the Scenario files. Set the onset times in the Scenario file for the complications you choose. You can also add complications during the exercises. Keep in mind that if you pull the PDA from the cable during a session, you may change any of the features on the PDA and then reinsert the PDA into the cable, tap the Sessions tab, and tap "Update Manikin." All of those changes you made while disconnected are now communicated to the manikin and it will demonstrate those new settings.

The program also has storage facilities for many students' attempts at treatment. If scenario attempts are thirty minutes in duration, the programming offers approximately 2000 students' records stored within the PDA unit. Any time you choose after saving the students' activities, you can download the records to your PC for chronological printouts in Word document format. These logged sessions are reported in a minutes: seconds (XX:YY) format. Prior to printing, use the edit feature on your PC to make comments to assist in reviews. Use these printouts for personal review with the students, or for self-critique by comparing between the expected results of teaching objectives and demonstrated skill levels.

Parts Replacement:

I/O right leg skins and IV therapy skins on the arms and left leg are replaceable when they have too many damaged areas to suit your needs. The proximal ends of these skins are held in place by buttons located under the torso skin. Simply find the button locations and remove the skins.

To replace the I/O leg bones, remove the right leg skin and remove the next layer of subcutaneous material from the lower leg. The I/O leg bone simply snaps into the knee joint. Hold the knee joint and pop loose the leg bone. Reinstallation of the new bone only requires you to pop the knee joint together and replace the subq material and then the skin. All of the skeletal parts are pop-together assembly. If there are excessive forces applied to a joint, it may well come apart. Simply realign the parts and pop them back together.

IV sites are replaced by accessing the areas by removing the appropriate skin. The latex tubing that accepts the catheters is only about 2” long. Pull the old tubing off from the more durable vein tubing, cut a piece of replacement latex, and connect it to the ends of the vein tubing from which you just removed the old tubing. It is not necessary to remove the subq material to accomplish this, and the subq material at these sites is not made to come off. Reinstall the skin and you are ready to continue IV training.

The Pneumothorax pads are also replaceable.

Contact your Simulaids distributor for current pricing.

PDA STAT Baby Replacement Parts

Description	Item #	Included with purchase
Manual Defib adapters	53	x
Defib adapters, set of 4 (Simulaids, Physio, Marquette, Laerdal)	54	x
Simulated Blood Powder - 2	225	x
IV Replacement Vein Kit	427	x
Leg replacement skins – 2	428	x
Arm Replacement Skins - Set	429	x

Pneumothorax Pads (4 Pk)	430	x
I/O leg bones – replacement pack 12	431	x
Injection Site Pads(4 Pk) Thigh	432	x
Injection Site Pads(4 Pk) Arm	433	x
Carry Case	(PP5225)	x
Reservoir Bag - 3	(SA655)	x
Lubricant	LF03644U	x
Palm Zire 31		x
USB cable		x

Latex Warning: IV Sites Contain Latex Tubing.

Warranty Information:

Cleaning and Storage: This manikin is not waterproof. NOTE: Keep printed material off the skin. Although the new skin is resistant to stain and dirt, storing the manikin with printed material touching the skin may transfer the print to the baby. Your PDA STAT Baby can be cleaned with any water-soluble household cleaner from the grocery store. Do not immerse the manikin! Do not flush the manikin! It's electric! Simply spray the cleaner on the surface and scrub off the dirt. More light cleanings will prevent arduous major work to remove ground in grime.

Store your PDA STAT baby lying down, either covered on the crib or inside the carry box for better protection. Keep in mind that the umbilical cable must be placed in the cut-out section of the storage box in order to eliminate damage to the cord when the box top is closed. The storage box must remain flat to ensure that the manikin does not deform and the crib components aren't damaged during storage. Storage temperature should be at or near human comfort levels. Storing in conditions that are too warm or too cold temperatures will affect the flexibility of the manikin and can lead to unexpected damage while handling the manikin. Short periods of temperature extremes for training will not cause problems. In short, treat your PDA STAT like a patient.

Warranty:

Simulaids warrants their products to be free from defects in materials and/or workmanship for a period of three years from the date of purchase, as

evidenced by the date on the invoice of the product shipment to the end user. This warranty expressly does not cover abuse, accidental or purposeful damage, or any form of modification to the product. This warranty does not cover mouldage products. Only products manufactured at the Simulaids plant in Saugerties, NY receive this limited warranty status.

All other products sold through Simulaids, but manufactured elsewhere, are subject to the warranties supplied by the product manufacturer. These warranties may differ from the Simulaids' warranty. **RETURN POLICY:** Simulaids reserves the right to either repair or replace affected parts or the entire unit, at their sole discretion, after investigating and reviewing the actual product and the damage. In most instances, a digital photo of the product in question showing the damage will help qualify a product for return to the factory. At no time will any product be accepted without proper return authorization issued by Simulaids. Please contact our Customer Service Department to arrange a return and obtain a RGA number. Freight and Shipping charges are the sole responsibility of the end user. No product will be received with shipping charges due. Serial number and invoice number from the agency through whom the product was purchased must be provided for warranty repairs. No return authorization number will be provided without this information. Should you have any questions or wish further information on any product we manufacture call or write our Customer Service Department.

PDA STAT TROUBLE SHOOTING GUIDE

PDA Tips:

To *check the battery level* of the PDA, tap the “house” icon in the lower left of the PDA. This will bring up a list of all of the files on the PDA, and show you a battery in the top margin of the screen. The colored line indicates how much life is left in the battery. If it is below 1/3 life, recharge the batteries now. Following these steps should ensure that you will have sufficient power to operate the PDA while using the manikin. If the manikin becomes slow in responding to your commands on the PDA, check the battery life again. It is the only reason why the manikin should falter during use. If the battery dies, you will have to recharge the battery, re-install the PDA STAT Baby programming (icon on your desktop), and hot sync the PDA again.

No Response From The Air Compressor:

If it is not running, make sure that the electrical connections are tight and properly mated. (Export models, recheck the converter plug for appropriate direction, type and service.) If it still is not running, unplug the power supply and check the fuse located on the crib exterior wall surface next to the power supply cord. To access the fuse, release the fuse from the holder by depressing the disk and turning it counter-clockwise. Replace the fuse and reinstall it. If all of these things are correct, you should be able to feel the compressor vibrating in the crib. If not, call the tech support hot line.



Pulses:

If no pulses, check that the air compressor is running (you can feel the vibration in the crib if it is operational). If it is not running, make sure that the electrical connections are tight and properly mated, then check the fuse

as noted above. Replace the fuse if necessary. If all of these things are correct, you should be able to feel the compressor vibrating in the crib. If not, call the tech support hot line. If you have *very weak, or no pulses*, start at the PDA and make sure the blood pressure is above 100 systolic, and the diastolic pressure is less. There should be no reason for this, but check the umbilical cord to be sure it is not pinched or kinked. If you still do not have pulses, call the tech support hot line.

B/P Arm:

If you cannot get a blood pressure, first check to make sure that the B/P tubing is attached to the sphygmomanometer, by way of the T barbed connector, and the manikin's left-shoulder, lateral port. Once that is connected, go to the PDA that is attached to the manikin's USB cable. Access the heart screen and set the B/P volume to level four and the B/P systolic pressure above 100 mmHg.

If that does not restore the blood pressure features, call the tech hot line.

Heart and Lung Sounds:

If you cannot hear either heart or lung sounds at the speaker positions, start at the PDA with it connected to the manikin's USB cable. Click the PEA button and listen for sounds and check for pulses. If you have neither, click the PEA button again and check for sounds and pulses. The PEA button must not be darkened in order to have pulses and sounds. If there are still no sounds, then go to both the heart and lung screens and make sure the volume controls are set at level four, and check to see that the manikin is not in VF or Asystole. Listen again for sounds at the speaker sites. If you still have no sounds, unplug the manikin and plug it back in. If you still have no heart or lung sounds, use the PDA and go to the session drop down list and choose update manikin. If you still do not have heart or lung sounds, call the tech support hot line. If you have one set of sounds, but not the other after these steps, call the tech support hot line.

There is No Response to Rescue Ventilation When Manikin isn't spontaneously breathing:

If your manikin is not spontaneously breathing, you should be able to ventilate the unit with a BVM and see the chest rise and hear lung sounds. Both of these responses to ventilation occur when sufficient pressure builds

up in the airway. Make sure your seal is good around the mouth when ventilating with a mask. If you are intubating, you may not assist the patient's spontaneous rate. The manikin must be in apnea in order to detect chest rise and lung sounds when using a BVM.

If you expect the manikin to be spontaneously breathing and it is not, go to the Lung screen and make sure that the breathing rate is set above zero and then go to the Heart screen and make sure the manikin is not in VF or Asystole. If you still don't have spontaneous breathing, unplug the manikin and plug it back in. This will reset the unit to default conditions. Check for spontaneous breathing and lung sounds. If you still don't have sounds and chest movement, call the tech support hotline.



 Simulaids



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