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Resusci Anne® Simulator with SimPad®

FAQ

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Frequently Asked Questions

Resusci Anne® Simulator with SimPad®

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Resusci Anne® Simulator with SimPad®

What is the Resusci Anne® Simulator with SimPad®?

Resusci Anne® Simulator with SimPad® is a realistic manikin designed to meet the learning objectives of basic healthcare and intermediate life support. The simulator supports training for CPR, defibrillation, vital sign recognition and supraglottic airway management procedures. The new upgrade to the SimPad® platform incorporates the same functionality with the following additions:

- *SimPad will control patient simulator auxiliary functions, e.g., chest rise*
- *Real-time graphical feedback on CPR compressions and ventilations*
- *Improved CPR performance summaries via a user-friendly interface*

1. I have just received my Resusci Anne® Simulator. What contents are included?

Items included:

Please check that all listed contents below are included.

Torso including:

- Airway Management Head
- Pelvis
- Blood Pressure Arm with Cuff
- IV Arm
- Extrication / Rescue Legs
- SimPad (Link Box with lithium-ion battery installed in manikin) SimPad Wrist Strap and Sleeve
- 2 AC Adapters
- USB Cable
- Manual Defibrillation Plates
- Full Body Soft Pack
- Resusci Anne Simulator Eye Set (normal, constricted, dilated pupils)
- Air Pump
- Track Suit including Jacket and Pants
- 1 Bottle Simulated Blood
- 1 Can Lubricant
- User Guide
- Important Product Information Booklet
- 1.5.1 Software Update Information
- SimPad DFU

2. I received an AC power adapter with the Resusci Anne® Simulator. Do I have to use AC power to operate the simulator?

No. The power adapter is provided to allow the user this option if he or she chooses not to run the simulator via battery operation and to charge the battery inside the torso

3. How long can I run the simulator on a fully charged battery?

SimPad battery life, 3 – 4 hours operating time with general settings

4. I currently have a Resusci Anne® Simulator, do I need to replace my manikin?

Customers wishing to upgrade an existing manikin should contact our Customer Service Department to schedule a Return for Service.

Upgrade part numbers are: 150-00001BUPG and 150-00001BBUNDLE

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Resusci Anne® Simulator with SimPad®

5. What selections of heart, lung and vocal sounds are available with the Resusci Anne® Simulator?

The following sounds are available with the Resusci Anne Simulator and can be controlled/introduced via the SimPad Control Unit:

HEART SOUNDS

(Synchronized with programmable ECG)

- Aortic Stenosis
- Friction Rub
- Austin Flint Murmur
- Diastolic Murmur
- Systolic Murmur
- Mitral Valve Prolapse
- Opening Snap 70ms
- Normal

LUNG SOUNDS

(Synchronized with breathing rate, 0 – 60 breaths per minute with individual lung or bilateral sound selection)

- Normal
- Crackles
- Pneumonia
- Stridor
- Wheezes
- Rhonchi
- No sound

VOCAL SOUNDS

(Computer-generated sounds, mixed with live voice input via headset – sold separately)

- Cough
- Vomit
- Moan
- Scream
- SOB Breathing
- Yes
- No

6. How do the heart, lung and vocal sounds work?

The Resusci Anne Simulator is equipped with four lung speakers located under the chest skin on its front side. These speakers have been specifically located at the midaxillary and midclavicular lines for accurate breath sound auscultation. The heart sound speaker is also located under the chest skin to allow for proper auscultation of the heart. A voice speaker is located inside the Resusci Anne Simulator's airway head and emits prerecorded or live sounds. Separate right and left lung sounds, heart sounds and voice response sounds, including volume, may be individually selected from the various sound menus included in the SimPad Control Unit.

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7. I would like to introduce live voice responses during a training session. Can the simulator be used with an external microphone?

Yes. The user may choose to utilize a corded or wireless microphone. Please reference the Resusci Anne Simulator's User Guide for instructions on how to connect an external microphone accessory.

8. What ECG Rhythms are available with the SimPad® System?

Basic Rhythms	Rates Adult and Child	Rates Infants	Extra Systoles
Sinus	20-200	20-240	PVC
WPW	20-200	20-240	PVC RonT
Hyperkalemia	20-200	20-240	Couplet PVC
Long QT	20-200	20-240	PAC/PJC
Ischemia	20-200	20-240	
Inferior AML, ST Elevation	20-200	20-240	
L888	20-200	20-240	
R888	20-200	20-240	
Atrial Tachycardia	140-260	90-320	
SVT	140-260	90-320	
Atrial Flutter	75, 100, 150	75, 100, 150	
Atrial Fibrillation	50-240	50-240	
Junctional	40-220	40-220	
1° AV Block	20-135	20-135	PVC PVC RonT Couplet PVC PAC/PJC
2° AV Block type #1	3:2, 4:3, 5:4	3:2, 4:3, 5:4	PVC
2° AV Block type #2	4:3, 3:2, 2:1	4:3, 3:2, 2:1	PVC RonT Couplet PVC
3° AV Block	10-50	20-100	
Ventricular Tachycardia (VT)	120-240	120-320	
Torsade de pointes	180	180	
Idioventricular	10-100	14-100	
V. Fib	0.1-1 mV	0.1-1 mV	
Asystole			
Ventricular Standstill			
Ventricular Pacemaker	50-150	50-150	

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9. How does the spontaneous breathing chest rise-and-fall work?

The spontaneous chest rise-and-fall feature is produced from a compressed air container located in the pelvis of the simulator. An electronic valve system controls the frequency and release of the air to a small bladder held in position on the chest compression plate underneath the lung foil.

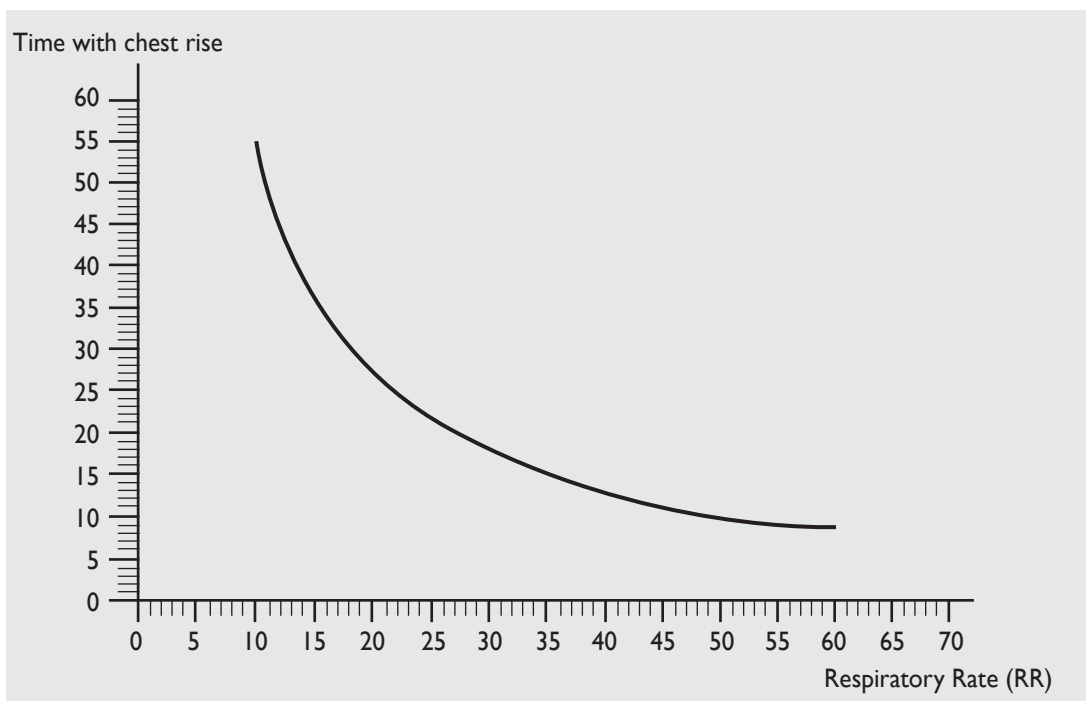
10. How much pressure can the air container in the Resusci Anne® Simulator hold?

The spontaneous chest rise and fall's compressed air container can accept up to 145 PSI (10 Bar) of compressed air. If the user exceeds this pressure when filling the container a release valve is activated to allow the excess pressure to escape so that no more than 140 PSI (10 Bar) of compressed air is in the container at any time. This safety valve resets itself automatically.

11. How long will the Resusci Anne® Simulator's spontaneous chest rise-and-fall (last breath) before the compressed air tank needs to be refilled?

The following table provides details on the length of time you can expect from the spontaneous breathing feature.

Maximum tank pressure: 10 Bar/145 PSI.



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12. How far away can I stand with the SimPad® Control Unit and still be able to run the Resusci Anne® Simulator?

Approximately 100 feet (30 meters). If there are walls between the units, the distance may go down dramatically. The distance is also dependent on how other units are placed in the same network.

13. How many simulators can I control with one SimPad® Control Unit?

Each Resusci Anne Simulator must be operated with its own SimPad Control Unit.

14. What happens if more than one simulator is in the room and I am using the SimPad® Control Unit?

Each Simulator will need a SimPad control unit for individual operation. The SimPad Control Unit will identify each RA Simulator; RA 1, RA 2 etc. The instructor simply needs to choose which unit they are using.

15. Can I use my existing Resusci Anne® Simulator scenarios with the new SimPad® conversion?

Yes, existing Resusci Anne Simulator scenarios can be converted and able to run on SimPad using the SimDesigner software program.

16. What Resusci Anne® Simulator pulses are controlled by SimPad®?

- Controls carotid, brachial and radial, (available pulses vary depending on manikin)
- Pulses only active when palpated
- Pulses synchronized with ECG
- Pulse strengths dependent or independently set.
- Brachial pulse off when BP cuff pressure is above 20 mmHg
- Radial pulse off when BP cuff pressure is above Systolic BP level

17. What Resusci Anne® Simulator BP readings are controlled by SimPad®?

- Auscultated and palpated blood pressure simulation
- Korotkoff sounds synchronized with programmable ECG
- Korotkoff sounds volume control in 10 steps, 0-9
- Systolic and Diastolic pressure may be set individually in steps of 2 mmHg
- Systolic 0-300 mmHg, Diastolic 0-300 mmHg
- Auscultative gap, with on/off feature
- Pressure accuracy +/- 2 mmHg
- Calibrate function to adjust pressure sensor and cuff gauge

Frequently Asked Questions

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18. Can the Resusci Anne® Simulator be upgraded with wound modules for first aid training?

Yes. The Resusci Anne Simulator is delivered with articulating extrication legs, an IV arm and a blood pressure arm. The user may purchase accessory first aid legs to be attached to the simulator for additional first aid training. The items numbers for ordering these legs are as follows:

First Aid/Trauma legs

312052 Leg assembly left with wounds

312053 Leg assembly right with wounds

19. Why did I receive a manual air pump with the simulator?

The manual air pump is provided for the user to fill the spontaneous breathing compressed air container located in the simulator's pelvis. A small intake valve is located on the right side of the simulator's torso. Connect the air pump and inflate the tank to its maximum pressure of 10 Bar/145 PSI.

20. Do I have to use the manual air pump to fill the simulator's spontaneous breathing compressed air container?

No. The user may choose to utilize a powered air compressor to fill the container. The valve is a standard size and should accommodate most air compressor fittings.

21. Can I use the SimMan® or SimNewB® compressor with the Resusci Anne® Simulator instead of the manual pump?

No, the SimMan and SimNewB compressors have set internal regulators (~16 psi) and fixed air outputs. They can not be used to fill the Resusci Anne Simulator air container to 145 psi.

22. Will I damage the compressed air container if I over fill it with a pressure above 10 Bar / 145 PSI?

The compressed air container has an automatic release valve that opens if the pressure exceeds the maximum level. If this occurs, the pressure in the container will release to approximately 10 Bar/145 PSI.

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23. The Resusci Anne® Simulator comes with an airway management head. What airway techniques can I perform?

- Bag-Valve-Mask ventilation
- Oropharyngeal Airway insertion
- Nasopharyngeal Airway insertion
- Laryngeal Mask Airway insertion and ventilation
- Laryngeal Tube Airway insertion and ventilation
- Combitube insertion and ventilation
- Sellick Manuever (cricoid pressure)
- Spontaneous breathing with realistic chest rise and fall
 - On/Off and rate controlled via SimPad
 - SpO₂ and etCO₂ settings
- "Chin Lift", "Jaw Thrust" and "Head Tilt" sensors including tongue fall back
- Airway closing mechanism (located in torso)
 - Overrides an open airway to simulate an obstruction at any time
 - Open or closed airway status operated via SimPad Control unit

24. What airway devices can be used with Resusci Anne® Simulator?

- | | |
|------------------------------|---------------|
| • LMA Classic | Size 5 |
| • LMA Unique | 5 |
| • LMA ProSeal | 4 |
| • CombiTube | 4 I F (large) |
| • Laryngeal Tube (LTS & LTD) | 5 |

25. Are there any special lubrication recommendations when performing airway techniques on the simulator?

As stated in the product's Directions for Use, lubricate the oral and nasal airways liberally with the lubricant provided prior to inserting any instrument or tube into the airway. Additionally, instruments and tubes should also be lubricated prior to use.

26. Can I intubate the manikin?

The Resusci Anne Simulator's airway head was specifically designed to teach supraglottic airway techniques or those techniques down to, but not past, the vocal cords. The airway does not include a bifurcation at the carina and does not allow a right stem only intubation to be simulated. Therefore, it is not recommended to use the Resusci Anne Simulator's airway head to teach oral or nasal intubation.

27. Can I perform mouth-to-mouth or mouth-to-mask ventilations on the Resusci Anne® Simulator?

These techniques are not recommended as there is no way to disinfect the airway and head.

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28. What is the Eye Set for?

The Resusci Anne Simulator is delivered with eyes simulating normal pupil size. This Eye Set offers normal, constricted and dilated eyes that may be manually changed by the user prior to the start of a training session in order to simulate different physiological conditions during training.

29. One of the features of the Resusci Anne® Simulator is the ability to introduce an obstructed airway during training. How does the airway obstruction feature work?

The Resusci Anne Simulator offers an airway feature that allows the user to introduce an obstruction. Activated air flow to the lungs is completely blocked by a “pinching” mechanism that clamps the airway tubing to the lung. The simulator is delivered from the manufacturer with a default setting of “Manual” mode. Below is a detailed explanation for the three settings available to the user.

Airway Is Open—

When the simulator is set to this mode the airway is always in the open position. It is up to the educator/instructor to manually close the airway from the remote control.

Airway is Closed-

When the simulator is set to this mode the airway is in the closed position until it is manually opened. At any time the user may override the setting by manually changing this parameter.

Tongue fall back-

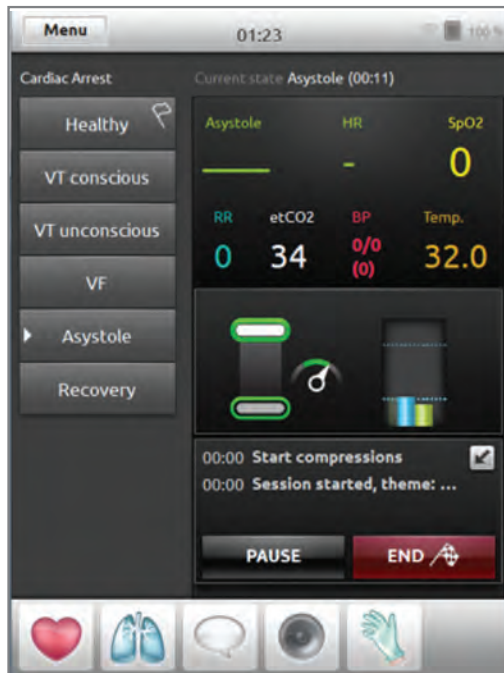
When the simulator is set to this mode the airway is in the closed position until proper head tilt/chin lift or jaw thrust maneuvers are performed correctly. The airway will automatically open and close in this setting. If the head and chin is pressed downward against the chest, or in the “flexed” position, the airway will automatically close. At any time the user may override the Bag-Mask Only mode by manually changing this parameter.

30. What CPR functionality do I have with my SimPad® Control unit?

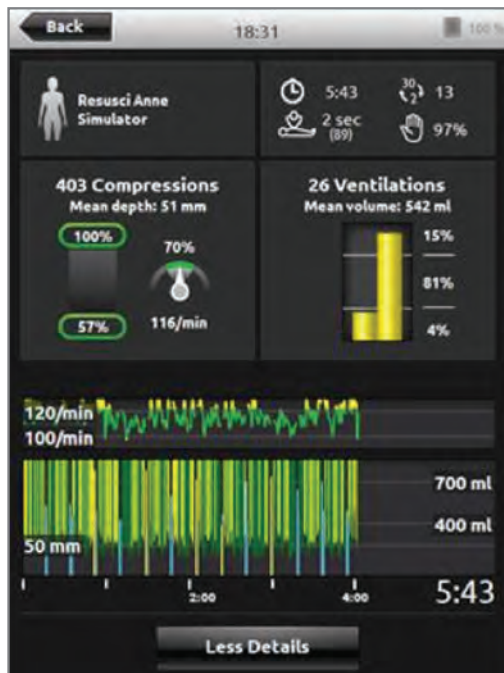
CPR Live View when performing CPR in both automatic mode and manual mode. Detailed information including chest compression, compression rate, ventilation volume and combined graphical display can be viewed.

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- Screen appears when starting compressions or ventilations
- Depth of compression and ventilation volume is measured



Overall Performance

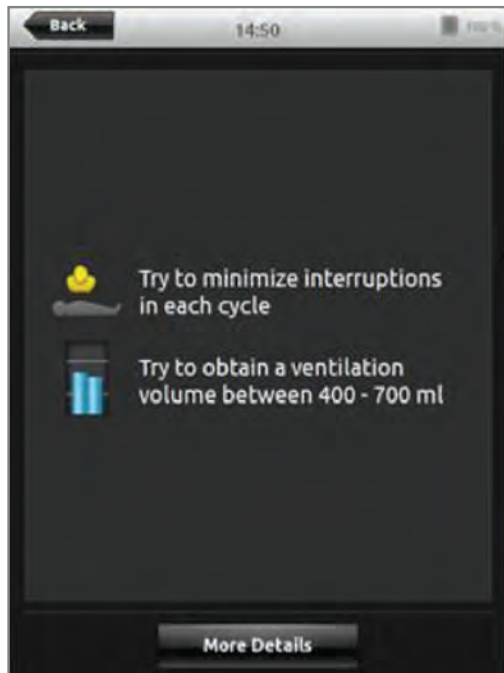
- Will display: score, hand placement, ventilations, compressions and rates

CPR Summary

- Total time of the session
- Total number of cycles 30:2
- No flow time
- Compressions with correct hand position

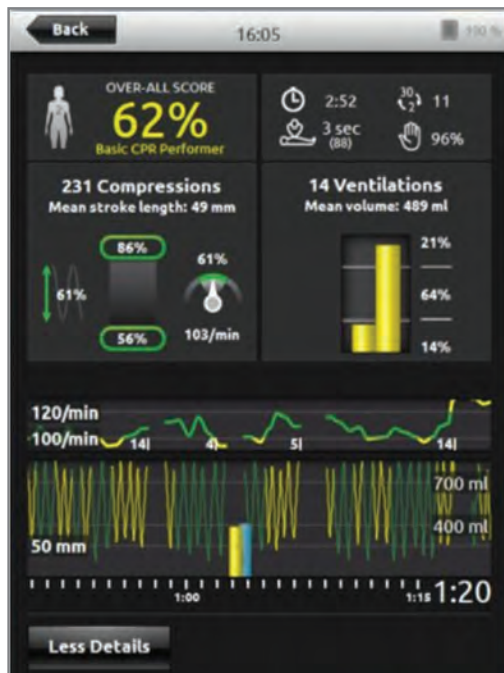
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More Details Screen

- Allows the user to view the CPR Session in detail over the 2 minute session by clicking the “More Details” bar at the bottom of the screen. Indicates what was done well and what needs further practice



Debriefing Screen

- Summary
- Compression Analysis
- Ventilation Analysis
- CPR Analysis over time

Frequently Asked Questions

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31. What Circulation features can I expect with the new Resusci Anne® Simulator?

- Eyes for pupil assessment
Normal - Dilated - Constricted
- Automatically generated carotid pulses synchronized with ECG
Bilateral carotid, brachial and radial pulses
Pulse strengths dependent on BP or set individually
Brachial pulse off when BP cuff pressure is above 20 mmHg
Radial pulse off when BP cuff pressure is above Systolic BP level
- Auscultated and palpated blood pressure simulation
Korotkoff sounds synchronized with ECG
Systolic and diastolic pressure may be set individually in steps of 2 mmHg
Systolic 0-300 mmHg, Diastolic 0-200 mmHg
Auscultative gap, with on/off feature
Pressure accuracy +/- 4 mmHg
Brachial and radial pulse control, palpated BP function
- Defibrillation capabilities (25-360j)
4 - Lead ECG monitoring
Synchronized variable rate, rhythm, abnormalities, and duration
Pacing – threshold 20 to 200 mA
Connect to SimPad Patient Monitor (optional)

32. If the airway should ever tear, does the entire head need to be replaced or can the airway be replaced as a separate part?

The airway can be repaired without the need for replacing the entire airway head.
Contact Laerdal Customer Service for assistance.

33. How do I clean the simulator?

Periodically wash all skin parts that are not regularly sanitized during and after each class, using warm soapy water or manikin wipes. Note: Pigments from lipstick and pens may be impossible to remove. Avoid using colored plastic gloves when handling the manikin as they may cause discoloration.

Clothes

Hand or machine wash with soap or laundry detergent in warm water, max. 40°C (100°F). Iron with warm iron. May be dry-cleaned. Please note that hot air dryer may cause garment shrinkage.

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34. Specifications

Li-ion Battery	
Battery	Li-ion, 4 cells
Cell Type	LIC18650-22PC
Voltage	7.2V nominal
Capacity	4.4 Ah typical (32Wh)
Size	98 x 78 x 28.1 mm (3.86" x 3.07" x 1.11")
Weight	.6 lb. (270 g) approximately

Resusci Anne Simulator (REF 150-200XX)	
Dimensions	69.7" x 20.5" x 9.8" (177 cm x 52 cm x 25 cm)
Weight	79.2 Lbs. (36Kg)
Blood Pressure Accuracy	+/- 4 mmHg
Defibrillation	Average of 360J max
Operation Temperature	32°F to 95°F, (0°C to +35°C) Humidity 5 – 90% RH, non-condensing
Storage Temperature	-4°F to +140°F (0°C to + 60°C)

IV Arm Contains Multiple Venipuncture Sites Including
Dorsal Veins of Hand (3)
Antecubital Veins
Cephalic Vein

35. Does the Resusci Anne® Simulator contain latex?

Yes, there is latex present in the internal tubing of the IV Arm.

36. What is the warranty on the product?

The Resusci Anne Simulator will have the standard Laerdal Limited Warranty, and the "Laerdal Global Warranty" (doc5527) letter will be included in the packaging of the product. For more information, please visit the Laerdal Global Warranty web page.