



ATLAS THE ALS SIMULATOR P75

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> PRODUCT INTRODUCTION

Atlas is the ALS simulator by 3B Scientific used for conducting interdisciplinary and interprofessional emergency training. It offers extensive emergency-specific applications for advanced life support in simulation-based training and further training.

> DELIVERY CONTENT



- 1. Consumable bag
- 2. Atlas charger
- 3. Tape
- 4. Lubricant
- 5. Adapter

- 6. IV cannulation pad – forearm
- 7. IV cannulation pad - dorsal
- 8. Humeral IO replacement
- 9. Humeral IO extra fat

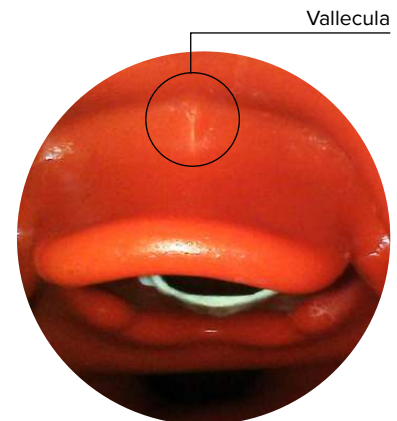
- 10. Quick Start Guide
- 11. Router
- 12. Luer lock pipe
- 13. Carry Bag

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> FEATURES

Atlas features:

- Atlas replicates the anatomy of the airways, complete with tongue, epiglottis, vocal cords, trachea, esophagus and vallecula.
- Airway management - head-tilt/chin-lift or the Esmarch manoeuvre.
- Ability to clear the airway includes simulated aspiration and removing inserted foreign bodies. No fluids.
- The airway of the simulator can accommodate extra-/supra-glottic airway alternatives and oral and nasal intubation.
- Advanced airway, for insertion of oral airways (OPA) and nasal airways (NPA).
- Intraosseous (IO) vascular access via the left proximal humerus.
- Intravenous (IV) vascular access via the right dorsal and antecubital fossa.
- Compatible with mCPR piston-based devices.



Atlas features in combination with REALiTi 360:

Atlas works with REALiTi 360 using Wi-Fi connection. By using on the fly or pre-programmed scenarios, the manikin and the virtual defibrillator interact. The following functions can be shown in combination with REALiTi 360 depending on the monitor interface selected:

- CPR dashboard screen for viewing all relevant parameters and values of cardiopulmonary resuscitation according to the AHA & ERC Guidelines.
- Atlas allows observation and recognition of vital sign such as bilateral carotid pulse.
- Automatic simulation control based on pre-programmed scenarios.
- Compression artifact waveform displayed in the ECG and information of the hand position, compression depth and rate displayed when performing chest compressions.
- Synchronous CO₂ graphs during manual ventilation and information on breathing frequency and inspiratory tidal volume.
- Carotid pulse when using a perfusing rhythm (Systolic >50mmHg).
- Dedicated CPR screen for viewing all relevant parameters and values of cardiopulmonary resuscitation including hands-off time during defibrillation.
- Using dynamic vital signs provided by REALiTi 360, Atlas can simulate different emergency scenarios including cardiac arrest that require a wide range of invasive procedures.
- REALiTi 360 extends the therapy options to defibrillation, cardioversion and pacemaker application on the real or generic monitor. The bilateral carotid pulse feature allows to determine the indication and success of applied intervention.



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> GENERAL HANDLING

Before using Atlas keep in mind these safety instructions



- Wear gloves as required during simulation scenarios.
- Avoid using colored plastic gloves, as they may cause discoloration.



- To maintain Atlas skin, wash hands before use and place Atlas on a clean surface.
- To avoid permanent staining avoid the use of ink pens, felt-tipped markers, acetone, or iodine.
- Avoid placing Atlas on newsprint or colored paper.
- After using Atlas, remove glue residue from Atlas's skin with 70% ethyl alcohol wipes, if necessary.



- Ensure that Atlas is properly secured during transportation to prevent personal injury or damage to the product.
- Always lubricate (silicon oil) the airway device (tracheal tubes, iGel) before inserting it in the airway.



- The device may only be stored and charged in dry rooms.
- Operating temperature: -10 °C up to +35 °C
- Storage temperature: -10 °C up to +35 °C
- Air humidity: 15% - 80%



- Only use the charger provided by the manufacturer.
- Charger connection specifications: Input 100-240 V
Output 50-60Hz
12.6V = 1000mA
- Recommendation: Once the battery is fully charged (the light on the charger turns green), take it out of the charger. Getting the manikin overcharged puts more stress on the battery and can shorten the battery life



- Follow the instructions and keep in mind the warnings while using the product.

> SAFETY INSTRUCTIONS

To ensure optimum performance and durability of Atlas, read and follow the user information and warnings:

- ⊘ **DO NOT** perform mouth-to-mouth or mouth-to-nose rescue breathing on Atlas.
- ⊘ **DO NOT** introduce fluids into Atlas with the exception of IV/IO systems built into the arms.
- ⊘ **DO NOT** use electrotherapy or a live defibrillator or AED.
- ⊘ **DO NOT** use sharp objects in the airways.
- ⊘ **DO NOT** create a surgical airway.
- ⊘ **DO NOT** perform a relief puncture or inserting thoracic drains.
- ⊘ **DO NOT** use if there are signs of electrical malfunction, or unusual smell of smoke.
- ⊘ **DO NOT** use oxygen.
- ⊘ **DO NOT** use damaged chargers.
- ⊘ **DO NOT** take the battery apart. Never try to take the battery out of the device.
- ⊘ **DO NOT** try to repair the device yourself.
- ⊘ **DO NOT** use live defibrillators.
- ⊘ **DO NOT** use live cardiac pacing.

> INSTALLATION

Atlas is 1.70 m tall, weighs 13 kg and comes in two different skin tones. It has a battery life of 8 to 10 hours. The charge status is color-coded and shown on the on/off button. Battery status indicator on the power button: white light (100%-50%) green light (49%-15%) red light (14%-5%) red blinking (less than 5%). Atlas is charged via the adapter provided and can be used wirelessly during training sessions.



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> AIRWAY

Atlas replicates the anatomy of the airways, complete with tongue, epiglottis, vocal cords, trachea and esophagus. Use Atlas to practice positioning of the head, manual maneuvers to open the airway and apply compatible aids for realistic airway management.

The airway can be opened by tilting back the head or by using the Esmarch maneuver. Other methods to clear the airway include simulated dry aspiration, removing inserted foreign bodies and inserting Guedel tubes (OPA) or Wendl tubes (NPA).

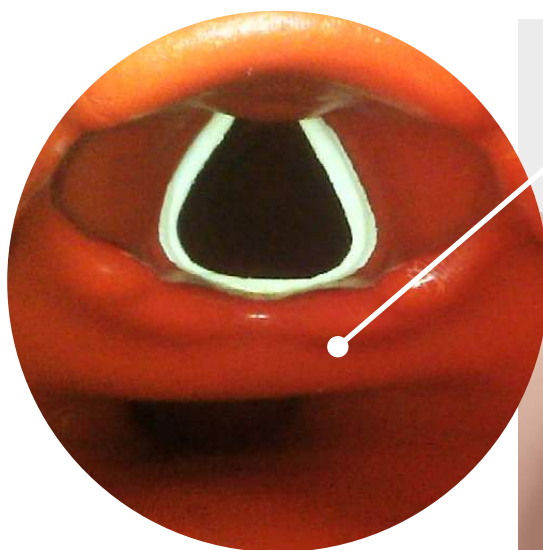
When single-assistant or dual assistant bag mask ventilation (BVM) is performed correctly on Atlas, there is a visible expansion of the thorax.

Nasal or oral intubation can be performed using a size 7.5 endotracheal tube (ET). For optimal intubation, use the improved Jackson position and the BURP maneuver. To intubate use a classic laryngoscopy, or video laryngoscopy.



Recommended tube sizes:

- Oraltracheal tube 7.5
- Nasotracheal tube 6.5 – 7
- iGel 4
- Laryngeal mask 4
- Laryngeal tube 4



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By using auscultation and checking for an excursion in the thoracic region, you can determine whether bag-mask ventilation was performed correctly and if the airway was properly cleared. Likewise incorrect right stem intubations can be confirmed when there is chest excursion and lung sound in the right side. Use auscultation to check for an excursion in the abdomen to determine esophageal intubation.

Supra-glottic airway alternatives like iGel, Laryngeal Masks (LMA) and Laryngeal Tubes (LT) can be used in accordance with manufacturers' instructions. Moreover a gastric probe can be inserted. Second generation airway options make it possible to insert a gastric probe.

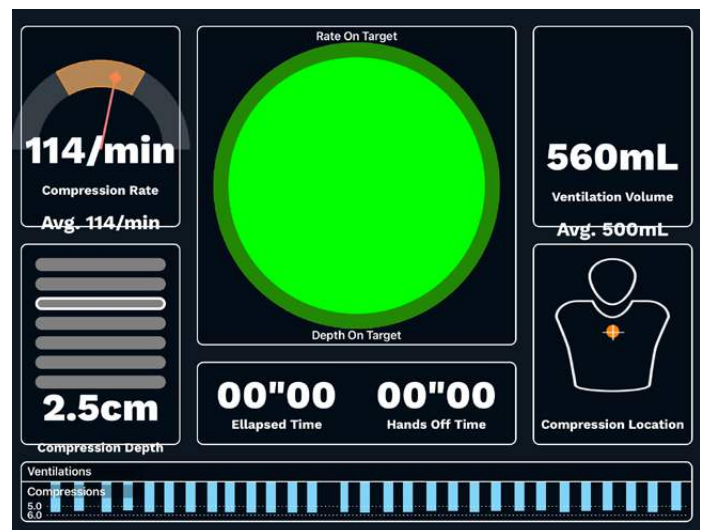


Note:

Prior to using airway adjuncts, apply a small amount of silicon airway lubricant to the equipment.



In order to see the inspiratory tidal volume, use the quality CPR Dashboard and generic defibrillator screen from REALITI 360.



Lung Specification

- Max tidal volume: 1300 mL
- Max airway pressure: 100 cm H₂O

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> CPR

Atlas replicates the anatomy of a rib cage and enables thoracic compressions to be carried out in accordance with the resuscitation guidelines.

Thoracic compressions can be performed intermittently or continuously with bag-mask ventilation providing a realistic resistance of the chest during CPR.

Atlas is compatible with mechanical resuscitation aids. Practice applying the mechanical resuscitation aid while carrying out manual thoracic compressions and continuing resuscitation measures.

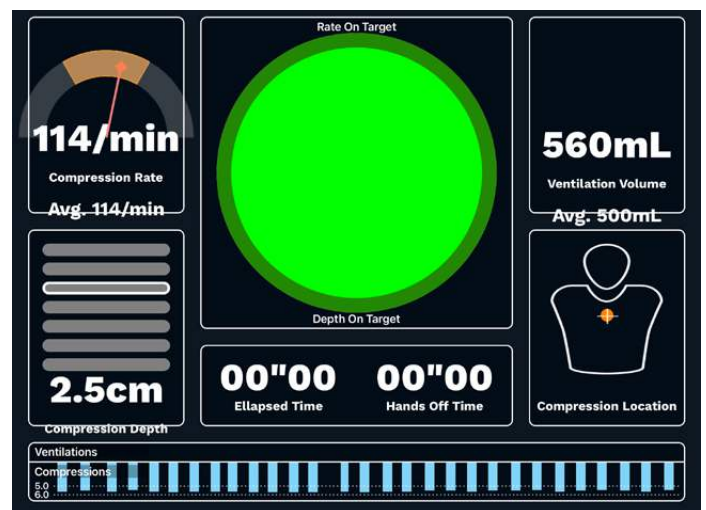
The CPR dashboard screen and Generic Defibrillator gives you feedback on the hand position.



With the use of REALTi 360 resuscitation artifact displays on the ECG tracing, in addition to the compression rate and depth being displayed on the monitor.

The CPR Dashboard screen and Generic Defibrillator allows:

- ✓ Compressions that generate ECG artifacts
- ✓ Realistic compression depth and resistance
- ✓ Detection of depth, release, and frequency of compressions
- ✓ Real-time view of Quality of CPR on the CPR Dashboard
- ✓ Use of mCPR piston-based devices
- ✓ Detection of hand position
- ✓ Compliant with ILCOR resuscitation



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> CIRCULATION

Atlas has two IV pads on the forearm and dorsal side of the hand back of the right hand. We recommend 18G cannulas or smaller for ideal usage times. Atlas has one IO insert at the top of the Atlas's left arm. We recommend the use of drilling systems for this procedure.

When performing administration of medication via the IV pad and /or IO access site, use a drain bag which should be connected to the Luer lock adapter. Atlas has one IO drain at the top of the Atlas' left arm and one at the top of the IV.



Recommended puncture sizes

- IV: $\leq 18G$
- IO: drilling system

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To change the IV pads and the IO insert, remove them from their original position and disconnect them from the drainage system. Then connect the replacement to the drainage system and place the new training pad in the slot. At the end of the training session, we recommend drying, removing the cannulas, and taking the drainage system apart.

When the day's sessions are done, flush the IV and IO sites with air to remove any fluid/liquid in the system. Connect a syringe filled with air to the IV/IO catheter and flush the IV pads/IO insert with air until only air exits the overflow tube.



Replacement of IV sites



Replacement of IO site

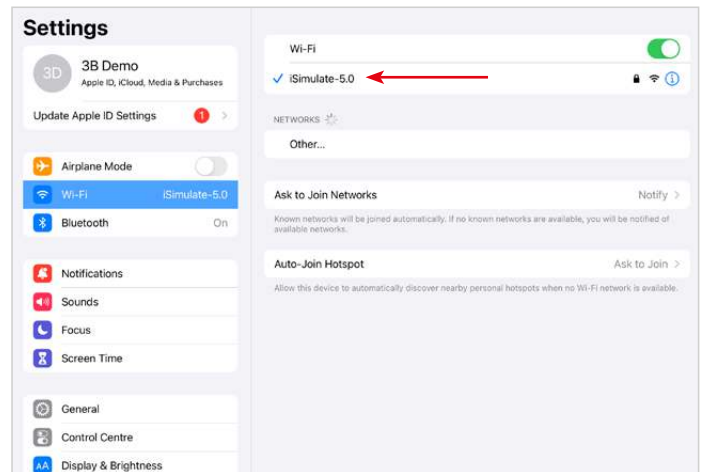
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➤ NETWORK/ROUTER SETTINGS

➤ HOW TO CONNECT ATLAS WITH REALITI 360?

1. Power on the mini router PIX-Link provided in the delivery content of Atlas. *
2. Connect the REALITI Monitor iPad Pro and the Control iPad to the Wi-Fi network. Both iPads must be on the same Wi-Fi network: iSimulate-5.0

* If the mini router PIX-Link is not included in the delivery content, set up the Wi-Fi network with the REALITI router as below > Name: iSimulate-5.0 > Password: iSimulate2012



3. Turn on Atlas. Atlas connects to the Wi-Fi network of your REALITI router automatically. The power button is located on the right side of the manikin.

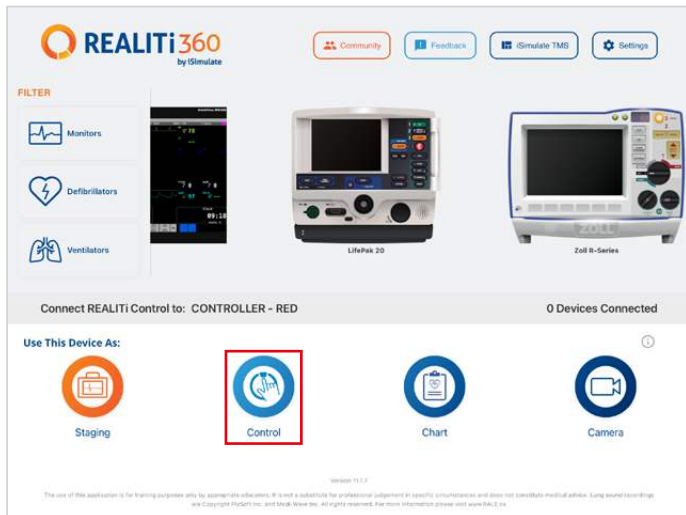


4. On the Monitor iPad Pro, start the REALITI application and select the "Staging" button:

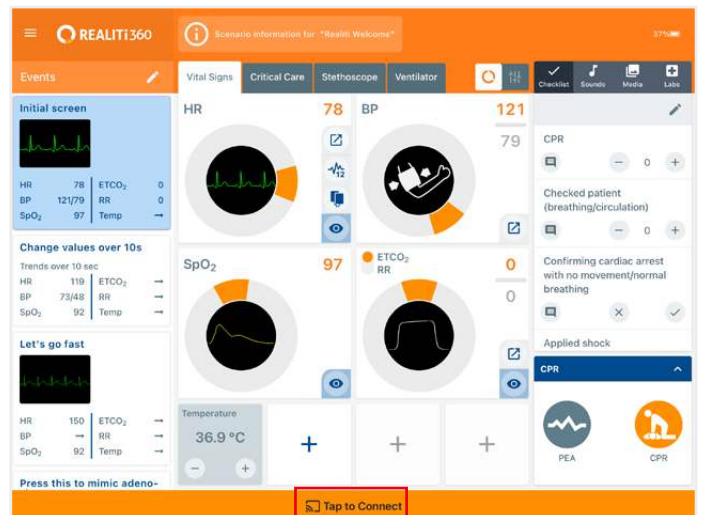


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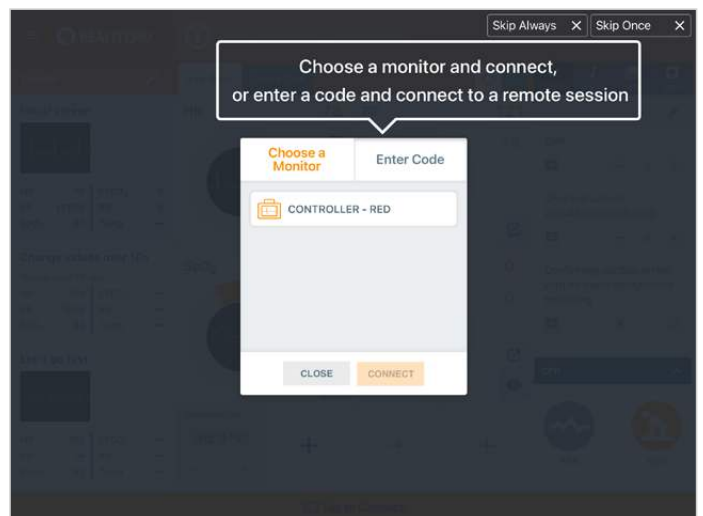
- On the Control iPad Pro, start the REALITi application and select the “Control” button:



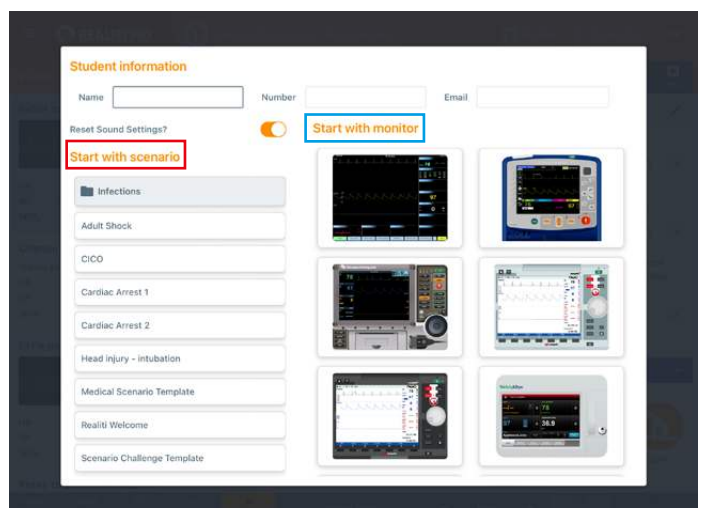
- On the Control iPad, press “Tap to Connect” at the bottom of the screen:



- In the window that appears, select the corresponding REALITi monitor to your REALITi ecosystem. If the monitor does not appear in the list, check that the Control iPad and the Monitor iPad Pro are both connected to the Wi-Fi network of your REALITi router: iSimulate-5.0 (both iPads must be on the same Wi-Fi network).



- After selecting the monitor name on the Control iPad, it will automatically switch to the options of starting with a scenario (red outline) or a monitor (blue outline):

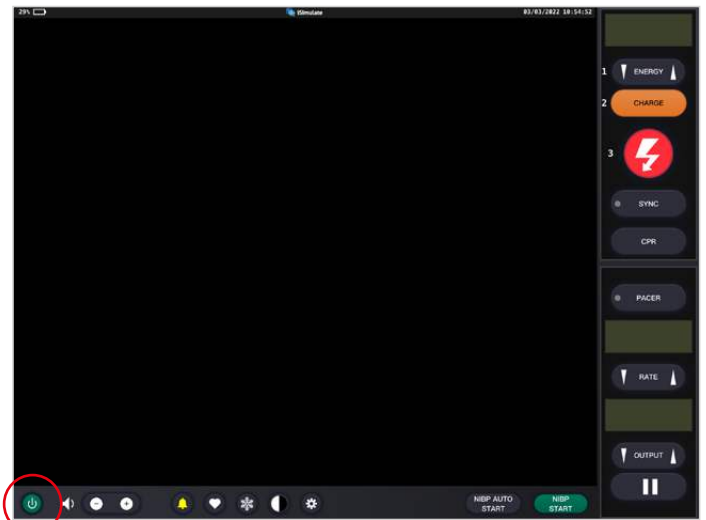


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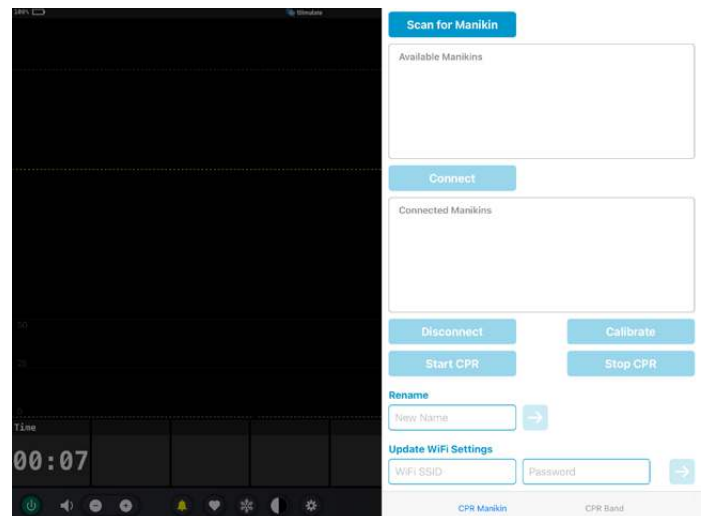
- Tap the "start" button. Launch the Defibrillator from the main menu on the Monitor iPad:



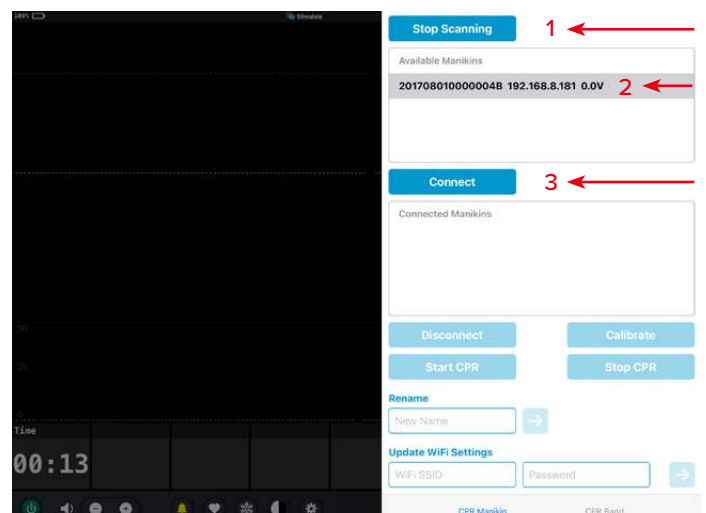
- On the Monitor iPad Pro, the monitor selected from step 9 should appear. Start the defibrillator.



- Swipe in from the right screen edge of the monitor iPad show the CPR connection dialog on the Defibrillator:

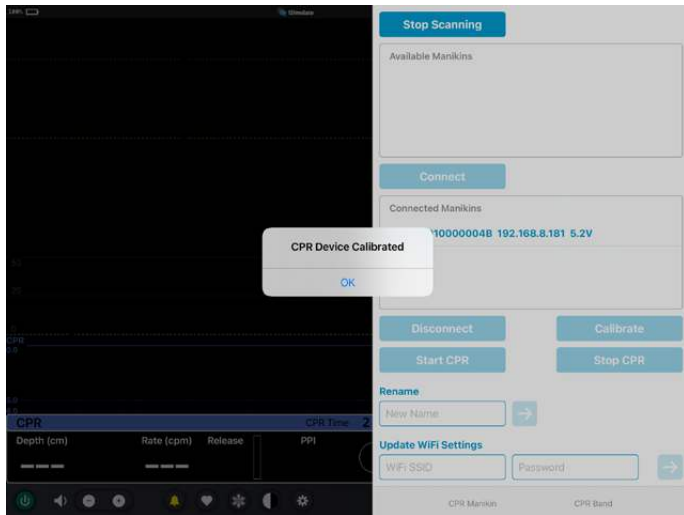


- Tap "Scan for Manikin". Select the manikin appearing in the "Available Manikin" table and tap "Connect."



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13. The connected manikin will be calibrated automatically:



14. Compress the manikin. You should be able to see the CPR compressions in the ECG waveform and the bar graph.



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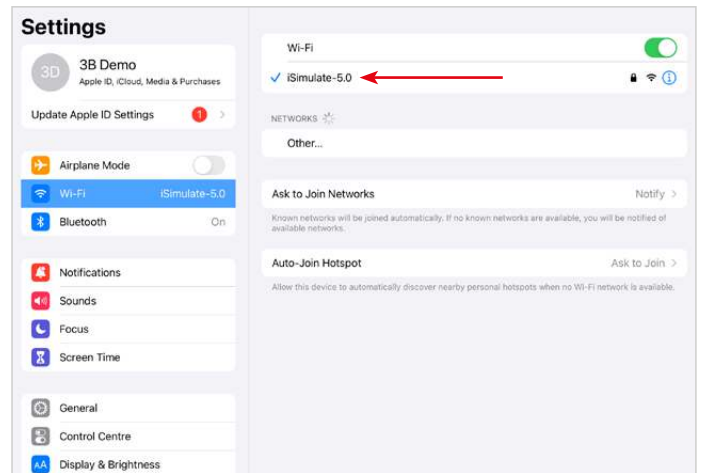
➤ NETWORK/ROUTER SETTINGS

➤ HOW TO CHANGE THE WI-FI SETTING ON ATLAS

Only follow the steps below if you need to match Atlas with your existing network setting

1. Power on the mini router PIX-Link provided in the delivery content of Atlas. *
2. Connect the REALITi Monitor iPad Pro to the Wi-Fi network: iSimulate-5.0

* If the mini router PIX-Link is not included in the delivery content, set up the Wi-Fi network with the REALITi router as below > Name: iSimulate-5.0 > Password: iSimulate2012



3. Turn on Atlas. Atlas connects to the Wi-Fi network iSimulate-5.0 automatically. The power button is located on the right side of the manikin.

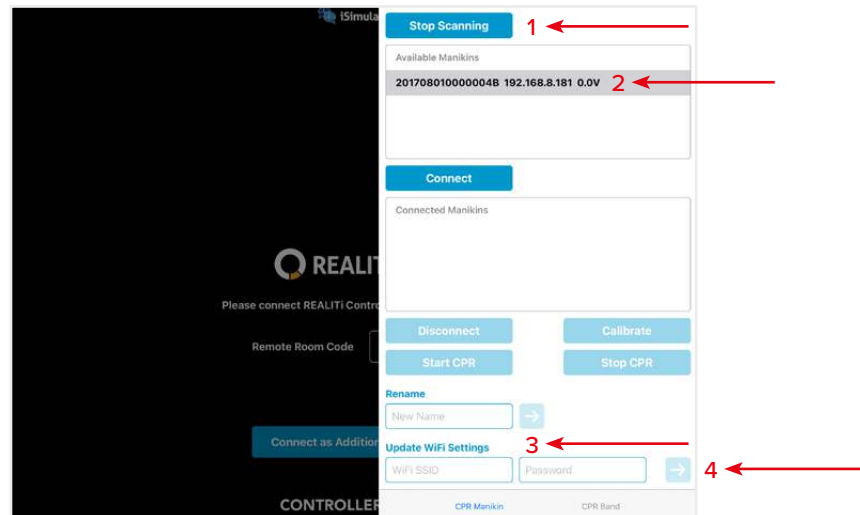


4. On the Monitor iPad Pro, start the REALITi application and select the "Staging" button:



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5. Swipe in from the right screen in order to see the available manikins. Tap "Scan for Manikin". Select the manikin appeared in the "Available Manikin" table.
6. Update Wi-Fi settings to match the router of your choice. Press the arrow button to save. Please wait for 30 seconds. Turn off the manikin and then power on again. Now, connect both iPads to the Wi-Fi network of your choice. The mini router PIX-Link is not required any more.



NOTE: Atlas connects to 2.4 GHz frequency. We recommend to set up the networks, 2.4GHz & 5.0GHz to the same SSID and password to ensure efficiency in your training.

NOTE: Maximum character length of 19 characters for username and password.

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> FAQ

My Atlas is unable to connect to REALITi?

Cause	Solution
Incorrect Wi-Fi Network selected	<ul style="list-style-type: none">• Connect to the correct Wi-Fi on both iPads NOTE: Default SSID Wi-Fi “iSimulate-5.0” Default password is “iSimulate2012”• If operating more than one Atlas, ensure that each simulator has its own unique SSID name. If operating more than one Atlas, ensure each simulator has its own router/network to connect to. NOTE: After 15 minutes of not being able to connect, Atlas will temporarily revert to the default SSID and Password to allow you to rename the connection Wi-Fi and Password. NOTE: Follow the procedure from the Quick Start Guide (How to connect Atlas with REALITi360?)
REALITi 360 App is not updated	Go to the App Store on both your iPads and update the REALITi 360 app to the latest version available
Atlas not turned on	Turn Atlas off and on again
Atlas battery low	Charge Atlas
Atlas too far from Wi-Fi	Move your network and REALITi system closer to Atlas

My connection with REALITi and Atlas is lost?

Multiple network connections may interfere with transmissions between REALITi and Atlas.

Forget other networks on both your iPads beside the network required to connect with Atlas. Default network is “iSimulate-5.0”

How to change the Wi-Fi setting on Atlas?

Refer to the 'Additional Information (How to change the Wi-Fi setting on Atlas?)'

NOTE: The steps are also available on page 15 of the Atlas manual.

Atlas airways have become contaminated from mouth-to-mouth resuscitation

DO NOT perform mouth-to-mouth on Atlas. If damage is reported:

- Clean the outside of Atlas with manikin wipes.
- Clean the inside of the oral cavity with manikin wipes.
- Change the lung bag.

No chest rise visible on Atlas

- If chest-rise is unilateral, ETT may be inserted into the right main stem bronchus. Correct the insertion of the ETT.
- Lung bag is leaking or tubing to lung is twisted, kinked, or disconnected for which the lung bag will need to be replaced.
- Seal the airway.
- Check air tubing for leakage.
- Check that all connections are intact.
- Replace tubing if necessary.

Atlas carotid pulse can not be felt

The following may be the cause:

- The blood pressure is set below 50mmHg Systolic.
- The connection is lost between the REALITi 360 system and Atlas.
- Non-perfusing cardiac rhythm
- PEA rhythm

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> REPLACEMENT PARTS

Consumables		Item No.
Chest skin spare part	light skin	1024055
	dark skin	1024346
Humeral IO replacement	light skin	1024050
	dark skin	1024347
IV cannulation pad – forearm	light skin	1024047
	dark skin	1024345
IV cannulation pad – hand	light skin	1024048
	dark skin	1024344
Lung bag		1024056
Stomach bag		1024057
Carry Bag		1024318
Foam leg (right)		1024053
Foam leg (left)		1024051
Right arm (w/o IV pad)	light skin	1024046
	dark skin	1024395
Left arm (w/o IO insert)	light skin	1024049
	dark skin	1024395
Right foot	light skin	1024054
	dark skin	1024398
Left foot	light skin	1024052
	dark skin	1024397
Battery charge		1024326

> TECHNICAL DATA

Operating temperature: -10 °C up to +35 °C
Storage temperature: -10 °C up to +35 °C
Air humidity: 15% - 80%

> CONTACT INFORMATION



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