

CAEJuno™

User Guide



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End of End User License Agreement

CAUTIONS/WARNINGS

Please read and understand these cautions and warnings before you begin using the Juno system.



USE OF THIS EQUIPMENT IN AN UNSPECIFIED MANNER MAY IMPAIR DESIGNED PROTECTION.

Your safety is in your hands. Be sure to follow the instructions on the proper setup, breakdown and use of the Juno system.



SHOCK HAZARD

Electrical Safety

- This product must be connected to an electrical outlet that is properly grounded. Precautions should be taken so that grounding or polarization is not defeated.
- Always use the supplied power cords. Do not substitute
- Always use the supplied power adapter to run the simulator from AC
- Operate the system from a power source with the following rating:
 - - 115VAC, 50/60 hertz (cycles per second) (e.g., North America, Japan)
 - - 230VAC, 50/60 hertz (cycles per second) (e.g., Europe)
- Do not allow excess fluids to flow on or into electronic parts
- Do not attempt to disassemble the simulator or service any of the electrical components without first receiving instructions from Customer Service

Please refer to the Materials Safety Data Sheet for safe handling and transportation information.

General Use Warnings

Electrical System

- Operate the system from a power source with the following rating: 115VAC, 50/60 hertz (cycles per second) (e.g. North America, Japan), and 230VAC, 50/60 hertz (cycles per second) (e.g. Europe)
- Do not operate Juno in rain. Apply water to the manikin only in accordance with the supported clinical procedures identified in this User Guide
- Do not allow excess fluids to flow on or into electronic parts

Fluids System

- DO NOT modify the reservoirs or any assembly component
- ALWAYS protect your eyes, skin and clothing against accidental exposure

Manikin

- Do not disassemble factory-assembled parts of the manikin without first receiving instructions from customer service
- Do not clean the manikin with chemical solvents. Use water and a light soap solution only
- Make sure that manikin is set up on a stable, sturdy work surface to avoid collapsing and causing injury to users
- Juno should be operated in ambient temperatures below 104° F (40° C)
- Do not introduce foreign substances into the airway - with the exception of small amounts of approved lubricant. Only perform invasive procedures supported by the system as described in the applicable sections of the User Guide.
- Do not pick the manikin up by the limbs - support head and leverage weight with torso. It may be necessary to have the help of a second person to lift and move Juno.

Latex Warning

Certain components of the simulator, such as vein tubing, contain latex. Users with latex sensitivity should use caution when working with these components or during maintenance with exposure to latex on the simulator.

Battery

General Warnings

Juno uses Li-ion batteries. Li-ion batteries have special requirements during handling to avoid hazardous situations.



- The Polymer Li-ion Battery pack should be stored indoors and be kept far from fire and high temperatures
- Do not store batteries with hairpins, coins, screws or other similar objects
- Do not heat the battery
- Do not throw the battery into a fire
- Do not use or leave the battery close to heat or flame
- Do not use the battery inside of a car where temperature may exceed 80°C (176°F). Also do not charge/discharge the battery in such conditions.
- Do not short-circuit the positive (+) and negative (-) terminals with other metals
- Do not place the battery in a device with the positive (+) and negative (-) terminals in the incorrect positions
- Do not strike the battery with force
- Do not step on, throw or drop or drop the battery to cause strong shock
- Do not disassemble or modify the battery
- Do not solder a battery directly
- Do not use a battery that has been damaged or deformed

Additional Warnings



- When leakage or foul odor is detected, do not use and keep away from heat or flame
- Immediately wash thoroughly with fresh water if liquid leaks onto your skin or clothes
- If liquid leaking from the battery gets into your eyes, do not rub your eyes. Immediately wash eyes completely with clean water and seek medical attention
- If the amount of time the battery is able to power the equipment diminishes significantly, the battery life is at an end. Contact Customer Service regarding the replacement of the battery. For safety, it must be an approved make and model.
- Immediately remove a battery whose life cycle has expired from the equipment
- When the battery is thrown away, apply vinyl tape to the positive (+) and negative (-) terminals to avoid short circuits
- In all instances, keep the battery away from objects or materials with static electric charges
- The battery can be used within the following temperature range. Do not exceed this range:

Charge temperature range: 0° C (32° F) to 45° (113° F)

SAFETY INFORMATION

NOTE: This IS NOT the Safety Data Sheet.

The following is provided for your convenience and is an excerpt from "MSDS_RRC2054_Li-ion_battery_15Mar2016_v1.0.docx".

For the entire Safety Data Sheet and additional information please visit the battery manufacturer's website at: http://www.rrc-ps.com/fileadmin/Dokumente/Batteriepacks/DS_RRC2054_D.pdf.

Commercial product name

RRC2054

Use of the substance/preparation

Lithium-Ion battery

Manufacturer

RRC power solutions GmbH

Technologiepark 1, D-66424 Homburg-Saar, Germany

Mail: info@rrc-ps.de

Emergency phone number

Tel. +49 6841 9809-0 (8.00 – 16.00, MEZ)

Or contact your National poison information center.

Further Information

Battery-System: Lithium-Ion (Li-ion)

Nominal Voltage: 15.0 V

Rated Capacity: 3.2 Ah

Wh rating: 48 Wh

Anode (negative electrode): based on intercalation graphite

Cathode (positive electrode): based on lithiated metal oxide (Cobalt, Nickel, Manganese)

Hazards Identification

Classification of the substance or mixture

Preparation Hazards and Classification: The product is a Lithium ion cell or battery and is therefore classified as an article and is not hazardous when used according to the recommendations of the

manufacturer. The hazard is associated with the contents of the cell or battery. Under recommended use conditions, the electrode materials and liquid electrolyte are non-reactive provided that the cell or battery integrity remains and the seals remain intact. The potential for exposure should not exist unless the cell or battery leaks, is exposed to high temperatures or is mechanically, electrically or physically abused/damaged. If the cell or battery is compromised and starts to leak, based upon the battery

ingredients, the contents are classified as hazardous.

Hazard Summary

Physical hazards: Not classified for physical hazards.

Health hazards: Not classified for health hazards.

Environmental hazards: Not classified for hazards to the environment.

Specific hazards: Exposure to contents of an open or damaged cell or battery:

contact with this material will cause burns to the skin, eyes and mucous membranes.

May cause sensitization by skin contact.

Main Symptoms: Symptoms include itching, burning, redness and tearing.

Hazardous Materials Information Label (HMIS)

Health: 0

Flammability: 1

Physical Hazard: 0

NFPA Hazard Ratings

Health: 0

Flammability: 1

Reactivity: 0

For the entire Safety Data Sheet and additional information please visit the battery manufacturer's website at: http://www.rrc-ps.com/fileadmin/Dokumente/Batteriepacks/DS_RRC2054_D.pdf.

Other Hazards

Appearance, Color and Odor: Solid object with no odor.

Primary Routes(s) of Exposure: These chemicals are contained in a sealed enclosure. Risk of exposure occurs only if the cell or pack is mechanically, thermally, electrically or physically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by inhalation, ingestion, eye contact and skin contact.

Potential Health Effect(s):

Acute (short term): In the event that this cell or pack has been ruptured, the electrolyte solution contained within the cell would be corrosive and can cause burns to skin and eyes.

Inhalation: Inhalation of materials from a sealed cell is not an expected route of exposure. Vapors or mists from a ruptured cell may cause respiratory irritation.

Ingestion: Swallowing of materials from a sealed cell is not an expected route of exposure. Swallowing the contents of an open cell can cause serious chemical burns to mouth, esophagus, and gastrointestinal tract.

Skin: Contact between the cell and skin will not cause any harm. Skin contact with the contents of an open cell can cause severe irritation or burns to the skin.

Eye: Contact between the cell and the eye will not cause any harm. Eye contact with the contents of an open cell can cause severe irritation or burns to the eye. CHRONIC (long term): see Section 11 for additional toxicological data.

Interactions with other chemicals: Immersion in high conductivity liquids may cause corrosion and breaching of the cell or battery enclosure. The electrolyte solution inside of the cells may react with alkaline (basic) materials and present a flammability hazard.

First Aid Measures

Description of first aid measures

The hazardous components of this cell or battery are contained within a sealed unit. The following measures are only applicable if exposure has occurred to components when a cell or battery leaks, is exposed to high temperatures or is mechanically, electrically or physically abused/damaged. The hazardous contents are caustic alkaline electrolytes contained in cells with lithium metal oxide cathodes, graphite and carbon anodes and Polyvinylidene fluoride binders.

Ingestion: Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Quickly transport victim to an emergency care facility.

Eye: If eye contact with contents of an open cell occurs, immediately flush the contaminated eye(s) with water. Quickly transport victim to an emergency care facility.

Skin Contact: Immediately flush with water. If irritation or pain persists, seek medical attention.

Inhalation: Remove the patient from exposure into fresh air, seek medical attention.

For the entire Safety Data Sheet and additional information please visit the battery manufacturer's website at: http://www.rrc-ps.com/fileadmin/Dokumente/Batteriepacks/DS_RRC2054_D.pdf.

Transport Information

With regard to transport, the following regulations are cited and considered:

- UN No. 3480
- UN proper shipping name: Lithium Ion Batteries.
- Transport hazard class: 9
- The International Civil Aviation Organization (ICAO) Technical Instructions, Packing Instruction 965, Section I B or II
- The International Air Transport Association (IATA) Dangerous Goods Regulations, Packing Instruction 965, Section I B or II
- The International Maritime Dangerous Goods (IMDG) Code [Special provision 188, 230]
- US Hazardous Materials Regulations 49 CFR (Code of Federal Regulations) Sections 173.185 Lithium batteries and cells
- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries, Revision 3, Amendment 1 or any subsequent revision and amendment applicable at the date of the type

If those lithium-ion batteries are packed with or contained in an equipment, then it is the responsibility of the shipper to ensure that the consignment are packed in compliance to the latest edition of the IATA Dangerous Goods Regulations section ? of either Packing Instruction 966 or 967 in order for that consignment to be declared as NOT RESTRICTED (non-hazardous/non-Dangerous). If those lithium-ion batteries are packed with or contained in an equipment, UN No. is UN34

Note: For the entire Material Safety Data Sheet and additional information please visit the battery manufacturer's website at: http://www.rrc-ps.com/fileadmin/Dokumente/Batteriepacks/DS_RRC2054_D.pdf.

SPECIFICATIONS

All hardware and software needed for the operation of the simulator are supplied. If you wish to extend the Instructor tablet to other manikins or computers, contact CAE Healthcare.

Size

Manikin/Simulator: 69" H x 22" W x 15" D (175cm x 56cm x 38cm)

Instructor tablet: 9.34" H x 6.65" W x 0.24" D (2.4cm x 32.5cm x 22.7cm)

Weight

Manikin/Simulator: 48.5lbs (22 kg)

Instructor Tablet: 15.1oz (429g)

Environmental Requirements

Ambient Temperature Range

Manikin/Simulator

Operation: 40°F to 104°F (4°C to 40°C)

Storage: 40°F to 122°F (4°C to 50°C)

Relative Humidity: 0% to 90% non-condensing

Instructor Tablet

Operation: 50°F to 95°F (10°C to 35°C)

Storage: -13°F to 113°F (-24°C to 45°C)

Relative Humidity: 0% to 90% non-condensing

Maximum Altitude

Instructor Tablet

Maximum operating altitude: 10,000 ft

Maximum storage altitude: 15,000 ft

Maximum shipping altitude: 35,000 ft

Power

Power Adapter

AC Input: AC 100 – 240VAC, 50/60Hz

Consumption: Maximum 60W (Charging), 25W (charged), Typical 13W

Internal Batteries: 15.0V 3.2Ah 48-watt-hour lithium-ion, rechargeable

Run Time: 3 hours (Typical)

Manikin/Simulator:

DC input: 19Vdc

Instructor Tablet

DAC Input: 5V

Non-removable Battery: 6000 mAh battery

Run Time: 2 to 4 hours (Typical)

TouchPro Computer

Please see the product's user guide for power specifications.

Communications

Simulator Network

Wired: 10/100 Ethernet or

Wireless: IEEE 802.11g

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System Requirements

Minimum Hardware Requirements

Any computer (Instructor tablet) used to operate Maestro™ or TouchPro must meet the following **minimum** hardware requirements.

Any computer NOT associated with a simulator (SCE Development Workstation) used to operate Maestro™ or TouchPro must also meet the following minimal requirements, apart from Ethernet/network connectivity.

Windows® Operating System

Software

Windows 7 SP1

Chrome version 60 or higher

Hardware:

Intel Core 2 Duo, 2.0 GHz, 4 GB DDR3 RAM

32 GB Hard Drive space available

1366x768 screen resolution

USB 2.0

Wireless 802.11b/g/n Ethernet card 100BASE-T Ethernet Adapter

Mac® Operating System

Software:

Mac OS X 10.12 (Sierra)

Chrome version 60 or higher

Hardware:

Intel Core 2 Duo, 2.0 GHz, 4 GB DDR3 RAM

32 GB Hard Drive space available

1024x768 screen resolution USB 2.0

Wireless 802.11b/g/n Ethernet card 100BASE-T Ethernet Adapter

Optimal System Requirements

Any computer (Instructor Tablet) used to operate Maestro™ or TouchPro should meet the following hardware requirements for optimal performance.

Any computer NOT associated with a simulator (SCE Development Workstation) used to operate Maestro™ or TouchPro should also meet the following optimal requirements, apart from Ethernet/network connectivity.

Windows® Operating System

Software:

Windows 10

Chrome version 62 or higher

Hardware:

Intel Core 2Duo, 2.0 GHz

8 GB DDR3 RAM

32 GB Hard Drive space available

1366x768 screen resolution

USB Port

Wireless 802.11b/g/n Ethernet card 100BASE-T Ethernet Adapter

Mac® Operating System

Software:

Mac OS X 10.13 (High Sierra)

Chrome version 62 or higher

Hardware:

Intel Core i5 CPU, 4 GB DDR3 RAM

32 GB Hard Drive space available

1920x1080 screen resolution

USB Port

Wireless 802.11b/g/n Ethernet card 100BASE-T Ethernet Adapter

NOTE: Mac is a registered trademark of Apple Inc. Windows and Internet Explorer are registered trademarks of the Microsoft Corporation in the United States and/or other countries. Chrome is a registered trademark of the Google Inc.

Approved Tablets

Make/Model:

Samsung Galaxy Tab 3 / SM-T820

Operating System**Software:**

Android version 7.0

Chrome version 60 or higher

Hardware:

2.15 GHz Quad-Core, 4 GB LPDDR4 RAM

10 GB Hard Drive space available

2048 x 1536 screen resolution

USB (Multipurpose) Port

Wireless 802.11 a/b/g/n/ac

MEET JUNO

Meet Juno, the latest member of CAE Healthcare's family of patient simulators.



CAEJuno

Juno offers a comprehensive, realistic training solution for a realistic training solution for essential clinical skills competency prior to clinical placement. Juno is mobile, light weight, easy to use, and is anatomically accurate for better skills proficiency and clinical assessment.

Female and Male

Juno comes with male and female chest skin, wigs and genitalia, giving you two patient simulators in one, which saves you cost and space.



Configure Juno as Either Male or Female

Note: Juno ships configured as female.

Configurations that Grow With Your Needs

The Base Skills module can be updated to the electronic package at any time. This upgrade comes with the electronic box, software, and NIBP and pulse arm.

With the upgrade package, additional features include:

- Breath sounds
- Heart sounds
- Bowel sounds
- Vocal sounds
- Two way communication between the manikin and facilitator
- Radial and brachial pulses on right arm
- Audible Korotkoff sounds generated with NIBP
- 4 lead ECG and cardiac rhythms

Note: Optional kits are available for extended post-operative, or wound care.

Unpacking and Assembly

Juno comes in a specially designed carton with cutouts in the internal foam that provide for placement of all parts (legs, arms, etc.) and accessories (skin, hospital gown, tools, etc.).

When unpacking Juno for the first time, careful use of a box cutter protects both the packaging and the product. A Quick Start Guide, included with Juno, covers these same steps in abbreviated fashion.

Note: Keep all original shipping materials, including boxes.

Note: Use caution when opening the Juno shipping carton, as this is Juno's preferred storage container. Damage to the container could result in an inability to store Juno properly, leading to damage of Juno's skin, body parts, and accessories.

It is recommended that you reserve a space approximately 2 feet (24 inches) by 6 feet (72 inches) into which you can place the contents of Juno's shipping carton. Remove each item in the carton and verify, on the shipping paperwork, that it is the correct part.

Setup

Follow these steps to prepare for your simulation experience.

Setting Up The Juno Simulator	
1	Place Manikin in the Work Area
2	Prepare Juno for Legs
3	Attach Juno's Legs
4	Prepare Juno for Arms
5	Attach Juno's Arms
6	Place Juno's Wig

Before Beginning Setup

Proper operation of the simulator requires correct configuration. Before setting up the system, keep in mind these basic guidelines:

- Read and understand the Cautions and Warnings located in the beginning of the Juno User Guide
- Follow the sequence of the steps carefully
- Complete all steps in order
- Do not power on any components until instructed in the text
- Keep all original shipping materials, including boxes. Warranty and repair items must be returned and shipped in their original packaging.
- When unpacking the mannequin for the first time, careful use of box cutters protects both the packaging and the product

Juno Configurations

Juno is available in 3 configurations:

Juno Basic:

- 1 Articulated Arm
- 1 IV Arm
- Male and Female Genitalia, Chest Skins, and 2 Wigs

Juno Live:

- Juno Basic Features plus:
 - Live Electronics Box
 - CAEMaestro Command and Control Software
 - NIBP Arm

Juno Complete:

- Juno Basic and Live Features plus:
 - Instructor Tablet

Step 1: Place Juno in the Work Area

Select a work area with enough room for all equipment, providing ample space for easy access to the simulator. At least a 10' x 12' (3 m x 4 m) work area is recommended for movement of learners and positioning of components around the simulator.



The Juno Simulator

With Juno Live and Complete configurations, Juno and the Instructor tablet may be operated from their batteries, allowing for full wireless use.

When working with Juno in either Live or Complete configurations, make sure that a multi-plug AC power outlet exists within the workspace to recharge the simulator and its powered components.

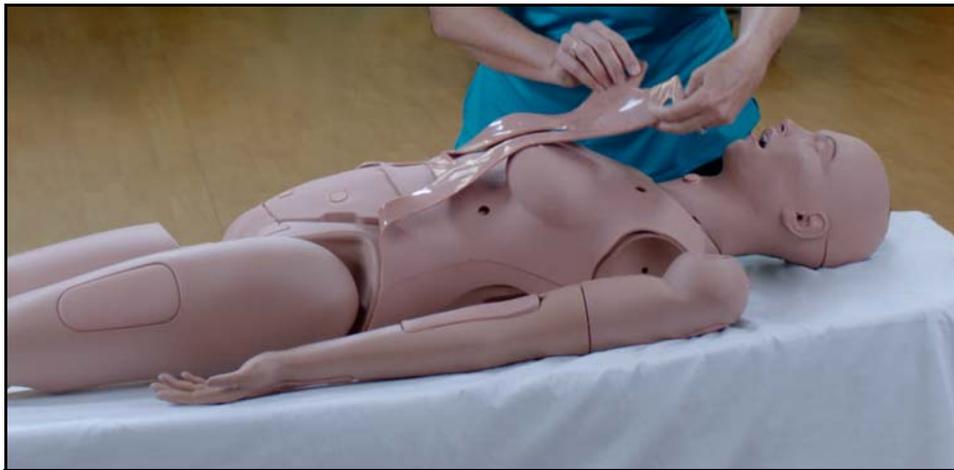
Before placing the simulator on a surface, be certain that surface can easily support 100 pounds, or 45.4 kilograms.

Note: NEVER lift the simulator by the limbs. Leverage the torso of the simulator and support the head while lifting.

Step 2: Prepare Juno for Legs

Detach Juno's Lower Skin

- Reach under Juno and pull the torso skin away from the skin attachment pegs
There are 2 skin attachment tabs on each peg.
- Pull the top tab from each peg, leaving the lower tab in place
- Fold the skin over the upper torso



The Lower Skin Folded Over the Upper Torso

Remove Juno's Abdominal Plate

- Remove Juno's abdominal plate by placing your fingers into the access cutaways and pulling up
- Leave all hoses attached and set it aside



Removing the Abdominal Plate

Remove Juno's Genitalia

- Remove Juno's genitalia by lifting it straight up
- Leave all hoses attached and set it aside



Removing the Genitalia

Step 3: Attach Juno's Legs

You will need (included):

- 4 washers
- 2 springs
- 2 knurled nuts



Attaching Juno's Legs

- Insert the leg screw into the hip joint hole
- Remove 1 washer from the bag and place it on the leg screw followed by 1 spring and a second washer
- Fasten the assembly to the torso using the thumb screw with the knurled portion towards the outside
- Tighten until the screw is flush with the nut
- Ensure the leg moves freely



The Leg Hardware Configuration

- Repeat for the second leg

Reattach Removed Items

Genitalia, Abdominal Plate, and Skin

Step 4: Prepare Juno for Arms

- Remove the IM pads from Juno's arms and set them aside

Insert Screws into Joint Spheres

You will need (included):

- Phillips Screw Driver
- 2 Arm screws
- 2 Joint Spheres



The Screw in the Flat side of the Joint Sphere

- Insert a screw into the flat side of both Joint Spheres
- Insert a Joint Sphere and screw assembly into the mounting hole in each arm

Step 5: Attach Juno's Arms

You will need:

- Phillips Screw Driver (included)



The Arm Attached

- Attach the mounting screw to the top hole in the shoulder mount
- Use the screw driver (included) to tighten the mounting screw until it is snug and the arm moves freely
- Repeat for the other arm
- Reinsert the IM Pads into the arms



Reinserting the IM Pads

Step 6: Place Juno's Wig

- Place the wig on Juno's head



Placing the Wig

Wig Adjustment

To adjust the snugness of Juno's wig:

- Remove the wig from the packaging
- Remove all packing materials
- Turn the wig hair side down
- Locate the adjustment strip
- Locate the adjustment hooks towards both ends of the adjustment strip
- Use the adjustment hooks to pull the wig tighter by inserting them into loops closer to the center



Tightening Juno's Wig

- Loosen the wig by moving the adjustment hooks to loops further from the center



Loosening Juno's Wig

Juno Live

Install the NIBP Arm

You will need:

- #2 Phillips Screw Driver (Included)
- NIBP Arm
- 1 Arm Screw (Included)
- 1 Joint Sphere (Included)



The NIBP Arm Electronics Tether Connection

- Remove the IM Puck from Juno's NIBP arm and set it aside
- Insert a screw into the flat side of the Joint Sphere
- Insert the Joint Sphere and screw assembly into the mounting hole in the NIBP arm
- Attach the mounting screw to the top hole in the shoulder mount
- Use the screw driver to tighten the mounting screw until it is snug and the arm moves freely
- Reinsert the IM Puck into Juno's NIBBP arm
- Connect the electronics tether from the NIBP arm to the Arm connection on Juno's right side, aligning the arrows

Power on Juno

Connect Juno's power supply to the DC IN connection on Juno's right side then plug it into a grounded outlet.

Press the ON/OFF button on Juno's right side and hold it for 3 seconds. This will begin the boot-up process. When Juno is ready for operation she will say "Hello". This will occur within approximately three minutes of pressing the On/Off button.

Connect to Juno's WiFi Network

You will need:

- CAE or Self provided laptop, tablet, or computer with wireless network adapter
- Minimum computer requirements:
 - Intel Core 2 Duo, 2.0 GHz
 - 8Gb RAM
 - Windows 7 OR MacOS X 10.12 Sierra

Note: The performance of customer provided equipment may vary and cannot be guaranteed or supported by CAEHealthcare.

A workstation (tablet or laptop) can be connected to the manikin and run from an approximate distance of 20 meters/65 feet with direct line of sight. Connection quality will vary depending on any interference from surrounding WiFi or physical obstructions.

When updating software on the workstation, it is recommended that the manikin be placed as close as possible beside the workstation.



Select **Connect Automatically** then click **Connect**.

The JNE000XX WiFi Network

- Connect Juno's WiFi network by opening the network connections on your laptop or computer
- Connecting to the network named JNE0000XX (where XX is the last 2 digits of Juno's serial number)
- Enter a password of "**caadmin**"
- Click **OK**



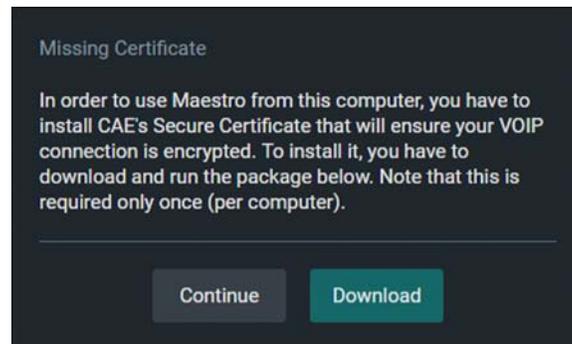
Enter a password of **caadmin** then click **OK**.

The WiFi Password Screen

Connect to Juno

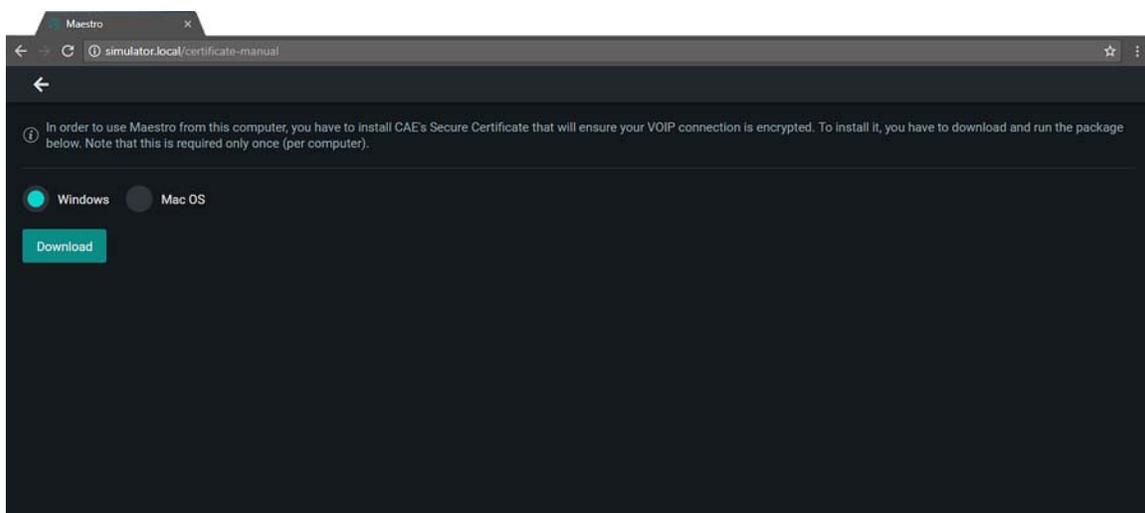
1. Launch a **Chrome** browser (version 60 or higher) on a tablet connected to Juno's WiFi network
2. Enter: **"http://simulator.local/"** in the address bar

The application will detect whether the CAE SSL Certificate is installed on your computer. If it is not, you will be prompted to download an installation package that will install the SSL Certificate.



Certificate Installation Prompt

1. Select **Download**
You will be prompted to choose the appropriate certificate installer package for your computer.
2. Select either Windows or Mac OS and tap **Download**



Operating System Selection Window

The certificate is either downloaded to your web browser’s default download location, or you will be prompted for the location where the installer should be downloaded. Once the download is finished (a **.msi** installation file for Windows or **.dmg** package for Mac OS).

3. access the package and trigger the installation by selecting **Run** on the installer prompt



Certificate Installation

4. at the next installation prompt, accept the license agreement and follow the installation steps until completion of the installation process



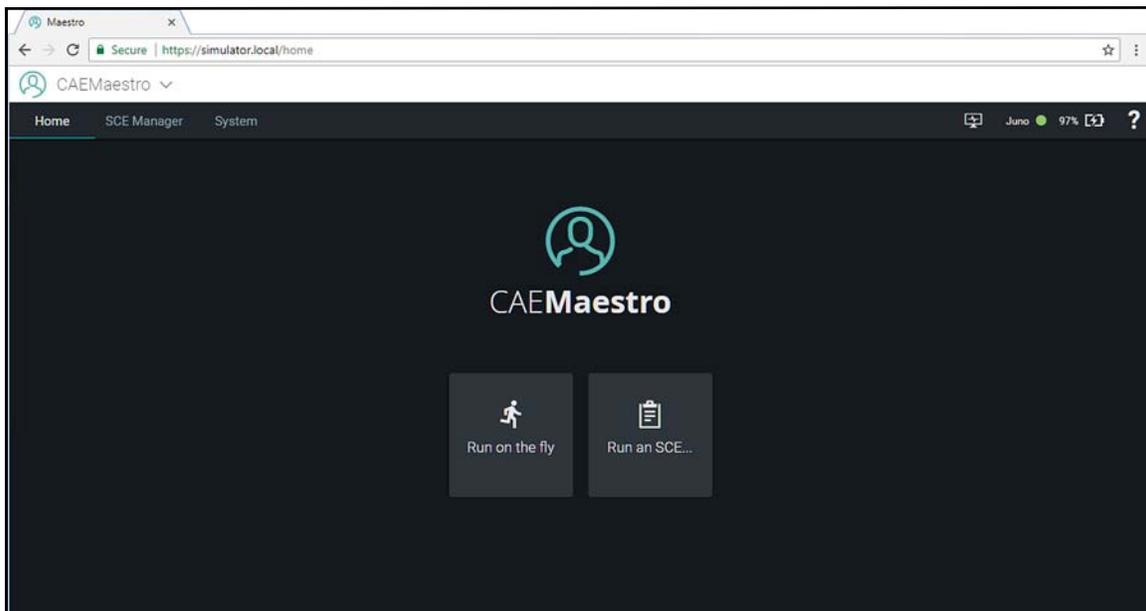
Certificate Installation Wizard

5. Launch a **Chrome** browser (version 60 or higher) on a tablet connected to Juno’s WiFi network
6. Enter: **“http://simulator.local/”** in the address bar

The Maestro home screen opens.

From here you have access to all of Maestro's functions including the ability to:

- Run a simulation on the fly
- Run SCEs
- Create and Manage Simulated Clinical Experience (SCE)



The Maestro Home Page

Juno Complete

Install Juno's NIBP Arm

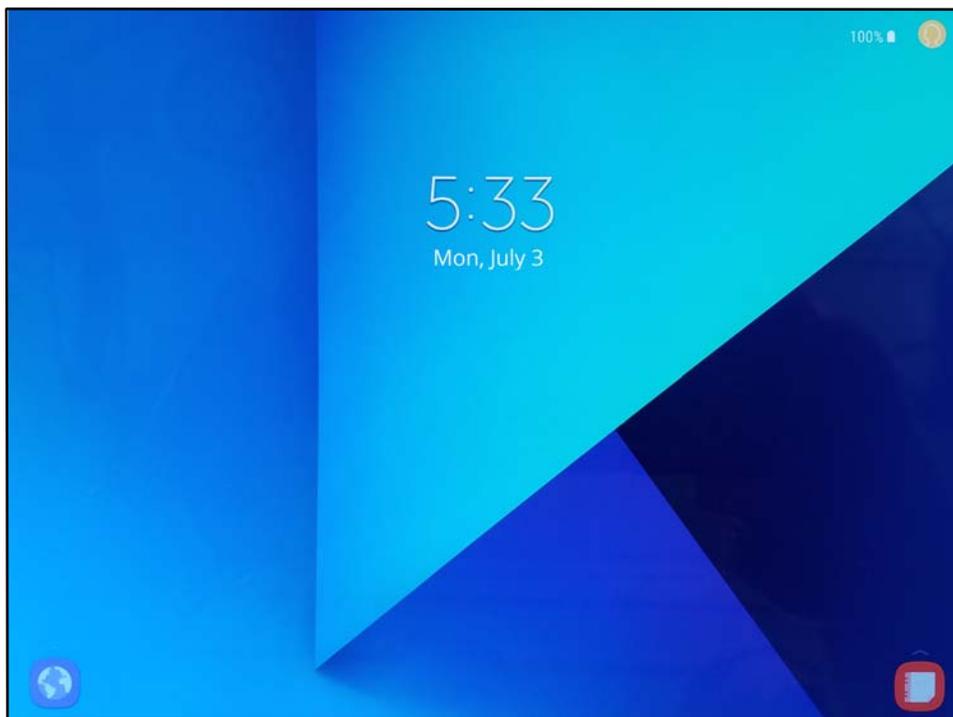
Install Juno's NIBP arm according to the instructions provided in the Juno Live Setup instructions.

Connect the Instructor Tablet

You will need:

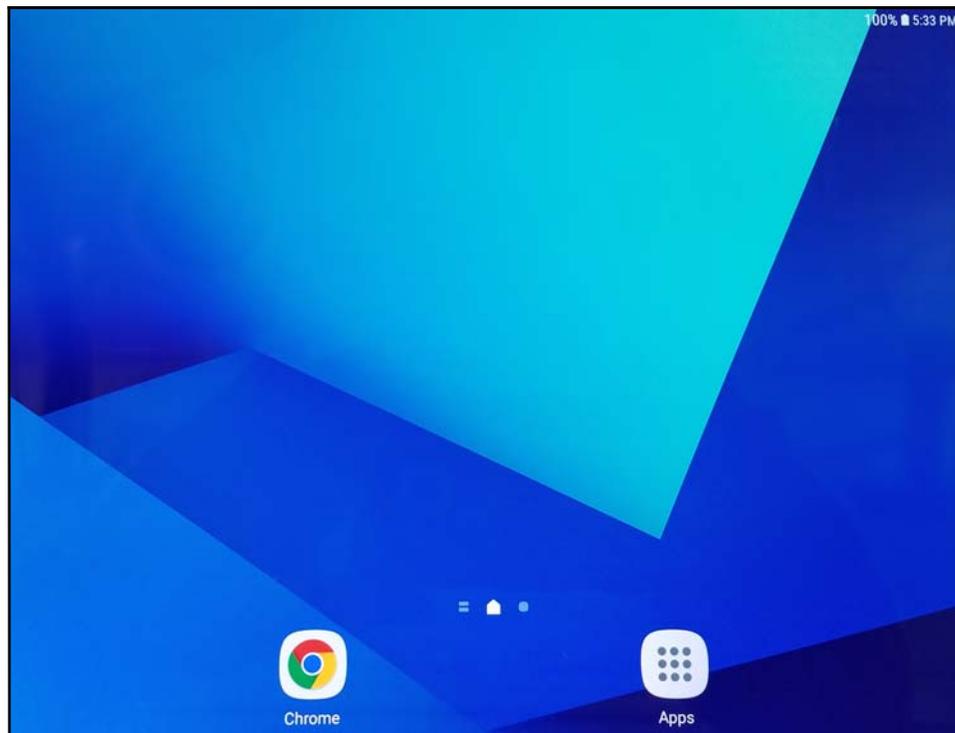
- Juno's Instructor Tablet (Included)

The tablet that comes with the Juno Complete configuration will automatically connect to Juno at boot up. Simply turn on the tablet and allow it to boot. Once it has booted and the Start Screen opens, swipe the screen.



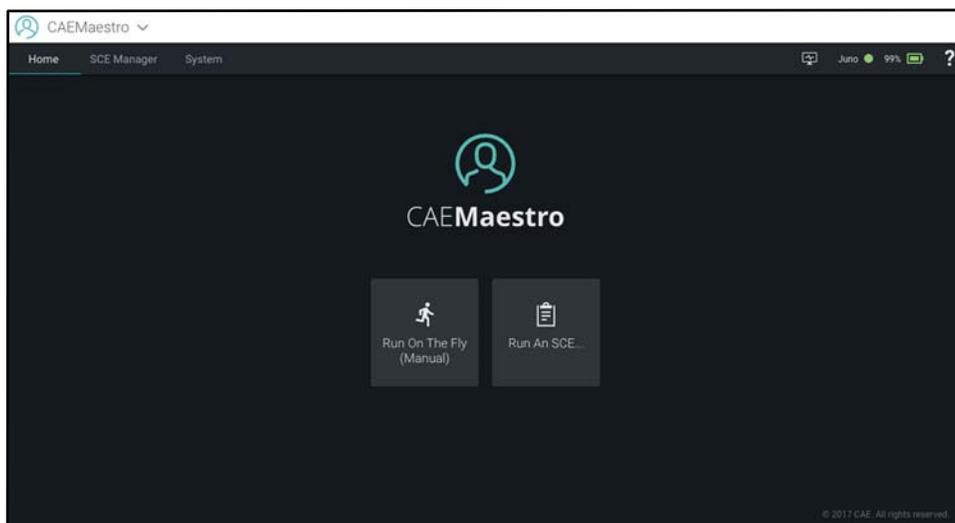
The Tablet Start Screen

When the tablet Home Screen appears tap the Chrome icon.



The Tablet Home Screen

Tap either the **CAEMaestro** or **CAETouchpro** icon on the desktop to launch either software package. If you are taken to a login page the user name and password are both **admin** all lower case.



The Juno Tablet Desktop

JUNO BASIC FEATURES

All the features included with Juno Basic are also included with Juno Live and Juno Complete.

Eyes

- Juno's eye lids may be opened for examination
- Juno's eyes are sealed and may be flushed with water

Note: The Juno's pupils **do not** react to light.



The Eyes

Ears

- Juno's ears may be irrigated with water



The Ear

Nose

- Both nasal passages are open to Juno's gastrointestinal reservoir allowing for the insertion of a nasal gastric tube into the stomach
- Juno also accommodates:
 - A nasal pharyngeal airway using either nostril
 - A nasal cannula placement
 - Nasal Packing



The Nose

Mouth

- Juno's bottom dentures are removable to allow for denture care and replacement
- Juno accommodates an Oral Pharyngeal Airway
- Juno accommodates an Endotracheal Tube
- Juno accommodates manual Bag Mask Ventilation that demonstrates chest rise and fall



The Mouth

Neck

Juno includes a realistic Tracheostomy site that allows for Tracheostomy tube placement, care, and procedural suctioning with real fluids. Juno accommodates oxygen delivery methods with realistic chest rise with use of Tracheostomy tube as well as Bag Valve Mask (BVM) via face mask, or endotracheal tube.

- Juno accommodates bilateral Carotid Pulse that is actuated manually

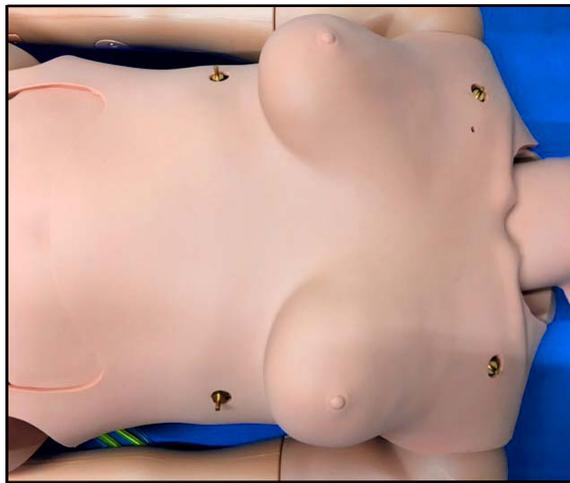


The Tracheostomy Opening

Chest

Juno's chest includes:

- 4 ECG connections
- Subclavian catheter injection site
- Bilateral chest tube insertion sites
- 4 Heart sound speakers (activated with Juno Live and Complete)
- 4 Breath sound speakers (activated with Juno Live and Complete)
- Vocal speaker at right shoulder (activated with Juno Live and Complete)



The 4 ECG Connections

Abdomen

Juno's abdomen includes:

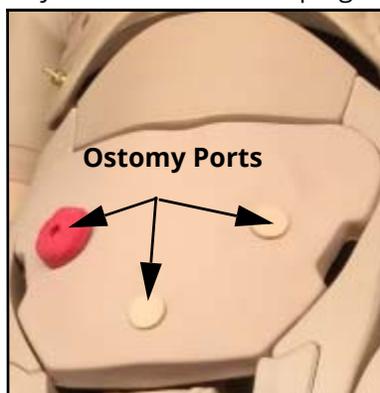
- 4 Speakers for bowel sounds (activated with Juno live and Complete)
 - 1 Upper left
 - 1 Upper right
 - 1 Lower left
 - 1 Lower right



The 4 ECG Connections

- 3 sites for Stoma placement care and irrigation
 - Colostomy (Large Intestine)
 - Ileostomy (Small Intestine)
 - Cystostomy (Urine)

Note: Stoma may be positioned at any of the 3 sites and a plug should be placed in any unused sites.

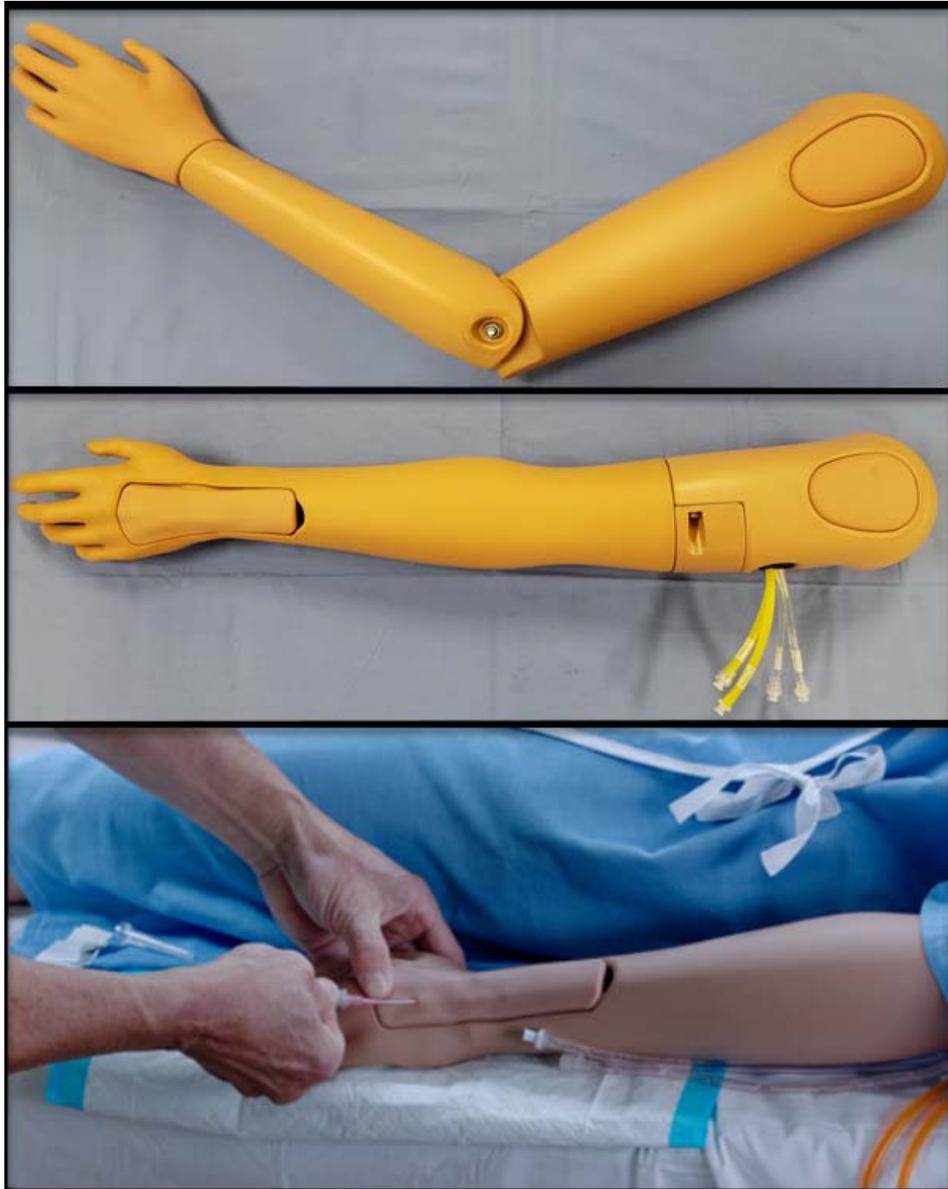


The 3 Ostomy Ports

Arms

Basic CAE Juno comes with:

- 1 Articulated Arm (right)
- 1 IV arm that allows for IV placement in 2 sites:
 - Antecubital Fossa
 - Dorsum of the hand



Juno's Articulated and IV Arms

Gender

Juno Basic comes with interchangeable male and female genitalia. This also includes gender specific torso skins, breasts, and wigs.



The Female and Male Genitalia and Torso Skins

Injection Sites

Basic CAEJuno accommodates 6 injection sites:

- Bilateral Vastus Lateralis
- Bilateral Deltoid
- 1 Ventrogluteal site
- 1 Dorsogluteal site

The thigh, dorsal, and ventral injection sites may be switched out for wound modules.

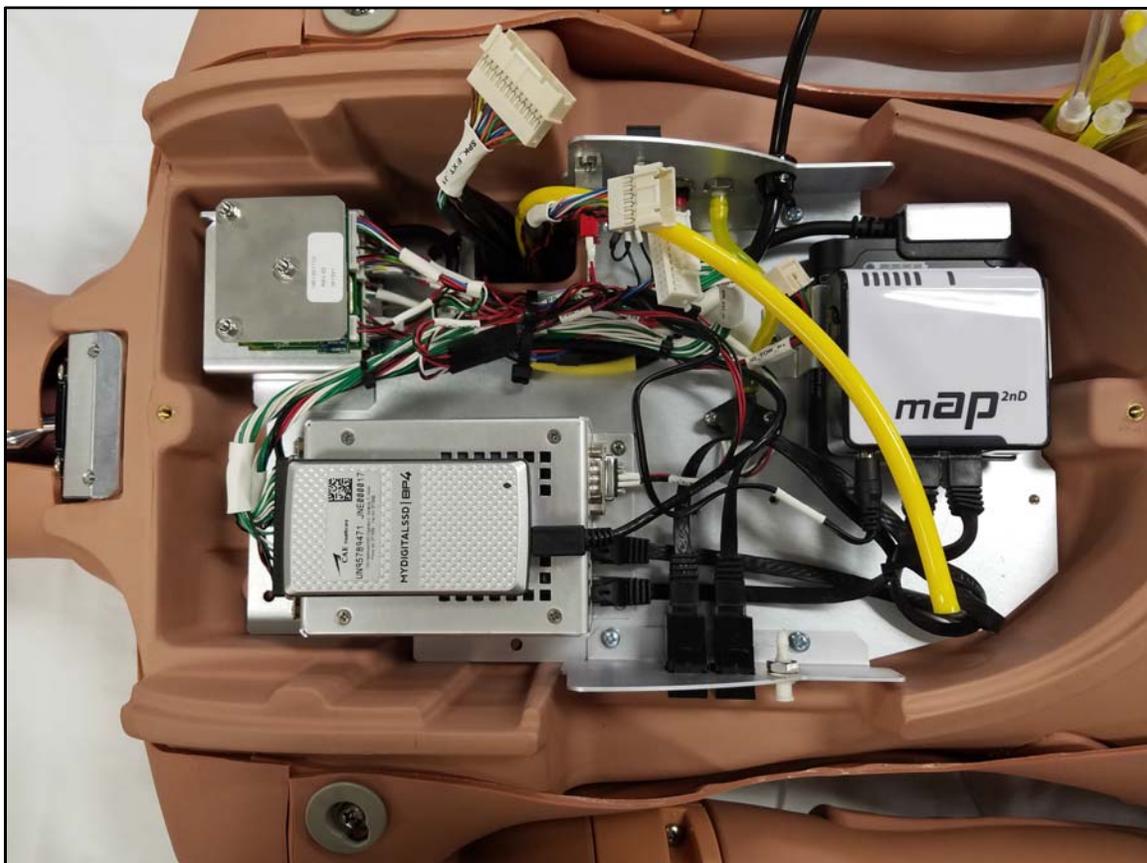
JUNO LIVE FEATURES

Juno Live adds the following features to Juno Basic:

- Live Box
- NIPB Arm
- CAEMaestro Command and Control Software (via Chrome and **customer provided computing device**)
 - Upload/Download content
 - Perform Updates
 - Run SCE's

Live Box

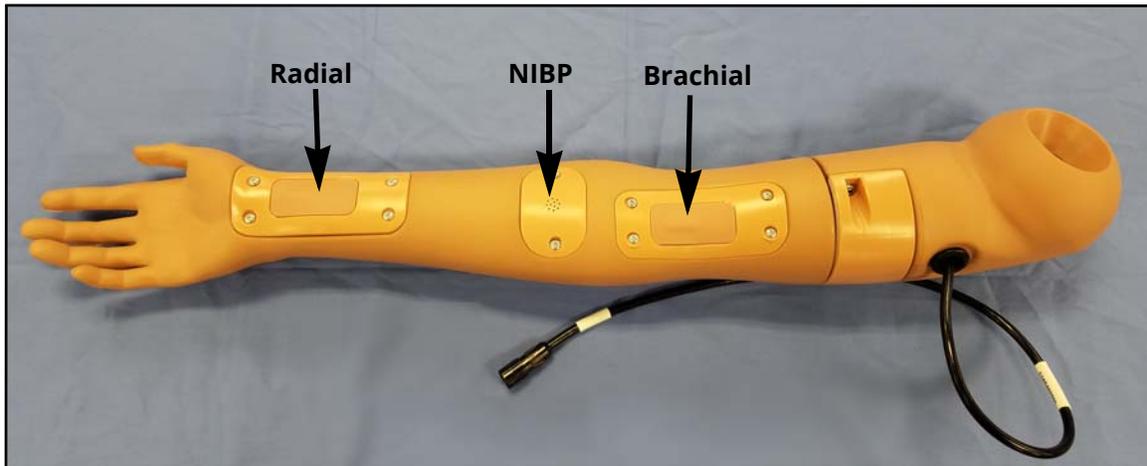
Juno Live's electronics module (Live Box) allows you to run SCEs, monitor the patient, apply sounds, and practice NIBP monitoring using Juno's Live right NIBP arm.



The Live Box Installed

NIBP Arm

Juno's Live NIBP arm gives you the ability to practice Non-Invasive Blood Pressure monitoring using a modified blood pressure cuff to monitor electronically generated brachial and radial pulses.



The NIBP Arm

JUNO COMPLETE FEATURES

Juno Complete adds the following feature:

- Instructor Tablet

Instructor Tablet

With Juno Complete an Instructor Tablet is added for the purpose of running the CAE**Maestro** command and control software. The Instructor tablet provided by CAE provides the ability to run SCE's. The Instructor Tablet is a Samsung S3 Tab 9.7" with stylus.



The Instructor Tablet

Note: Upload and download of content and the installation of updates is performed using a tablet.

UPGRADING TO JUNO LIVE

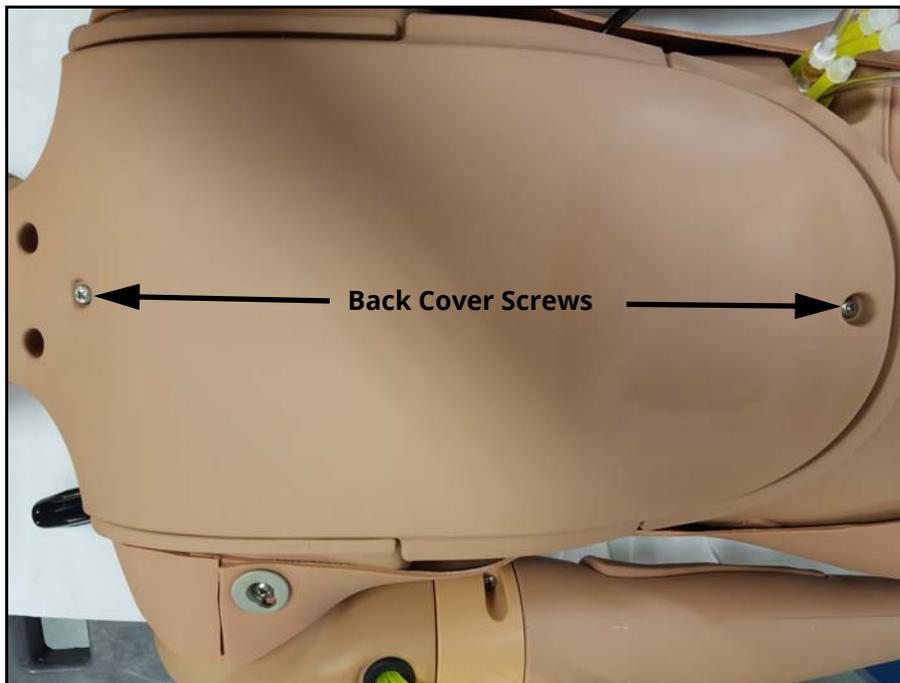
Juno Live adds an electronics module and NIBP Arm. The steps to upgrade from Juno Basic to Juno Live follow.

Installing the Juno Live Box

The Juno Live box allows you to run SCEs, monitor the patient, apply sounds, and practice NIBP monitoring using Juno Live's right NIBP arm.

You will need:

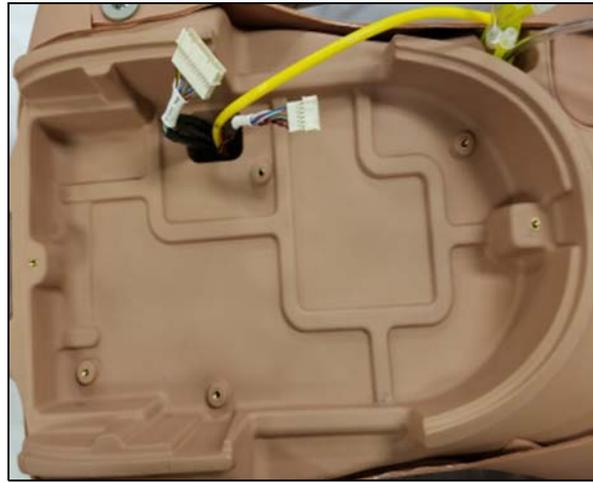
- #2 Phillips Screwdriver (included)
- Live Box and power supply



The Back Cover Screws

Make sure Juno is in the prone position and locate the two screws on the back cover.

1. Using a screwdriver from the Juno's inventory kit, remove the two Phillips screws from the cover
2. Lift the cover off and place it and the screws in a secure location



The Juno Back Cavity

3. Align and place the Live Box into the back of Juno

Note: Take care with the electrical cables and Carotid Pulse line to avoid any pinching as the box is placed.

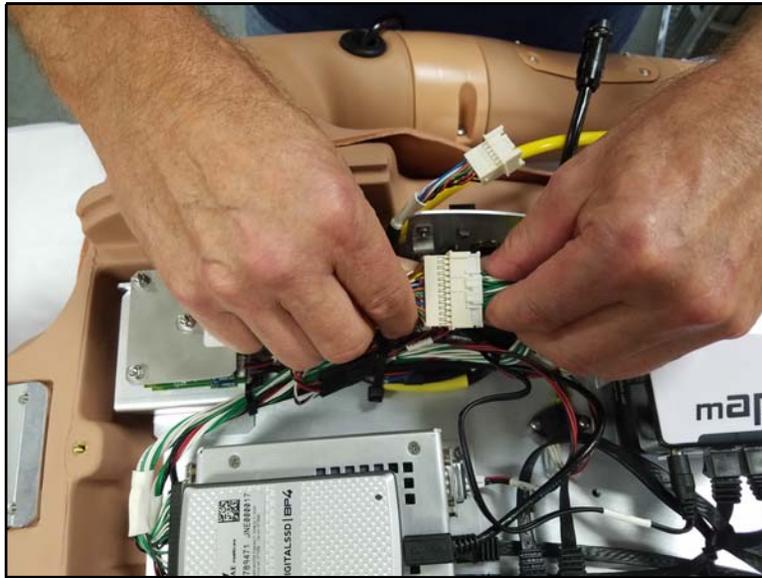


The Live Box installed

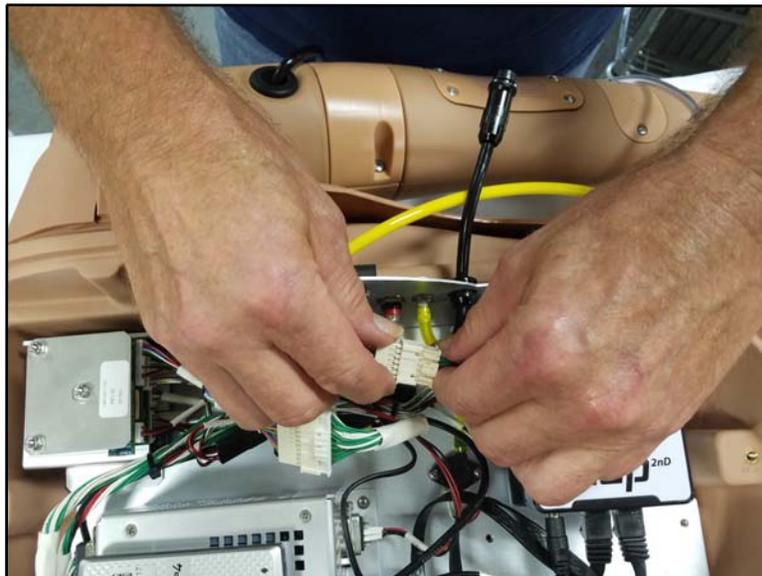
4. Locate the four mounting screws and install them into the plate at the designated locations

Note: Do not tighten the screws all the way until they are all partially installed.

- Connect the two Live box electrical connectors, applying pressure until you hear them click

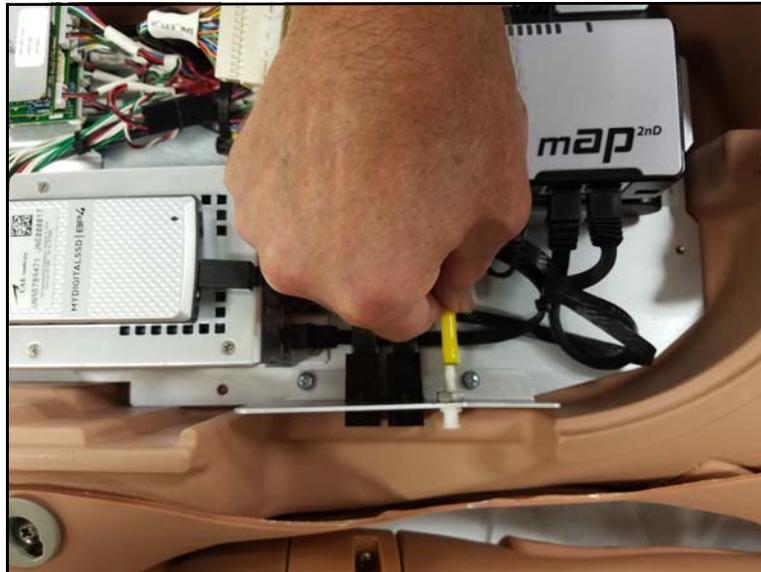


Electrical Connection 1



Electrical Connection 2

- Connect the Carotid Pulse line to the connector mate in the Live Box



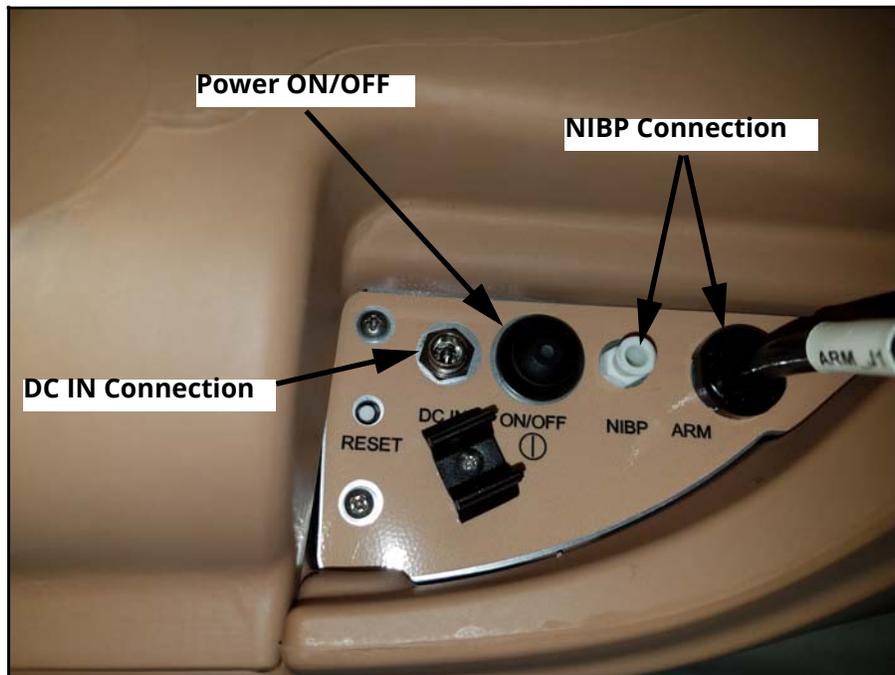
The Carotid Pulse Connection

- Retrieve the Back Cover and the two mounting screws and install cover back on Juno
- Return Juno to supine position
- Locate the Carotid Pulse Syringe assembly and attach to Juno's Left Side panel connector marked **Carotid Pulse**



The Carotid Pulse Syringe

- Connect the Power Adapter to Juno's right side panel labeled DC IN
- Press the ON/OFF button to start Juno



Juno's Right Side Panel

Remove The Articulated Arm

When upgrading Juno from the Basic manikin configuration to the Live configuration you will start by removing Juno's right articulated arm

- Remove the IM puck and place it aside
- Unscrew the arm screw and Joint Sphere assembly and place it aside
- Place the right articulated arm aside

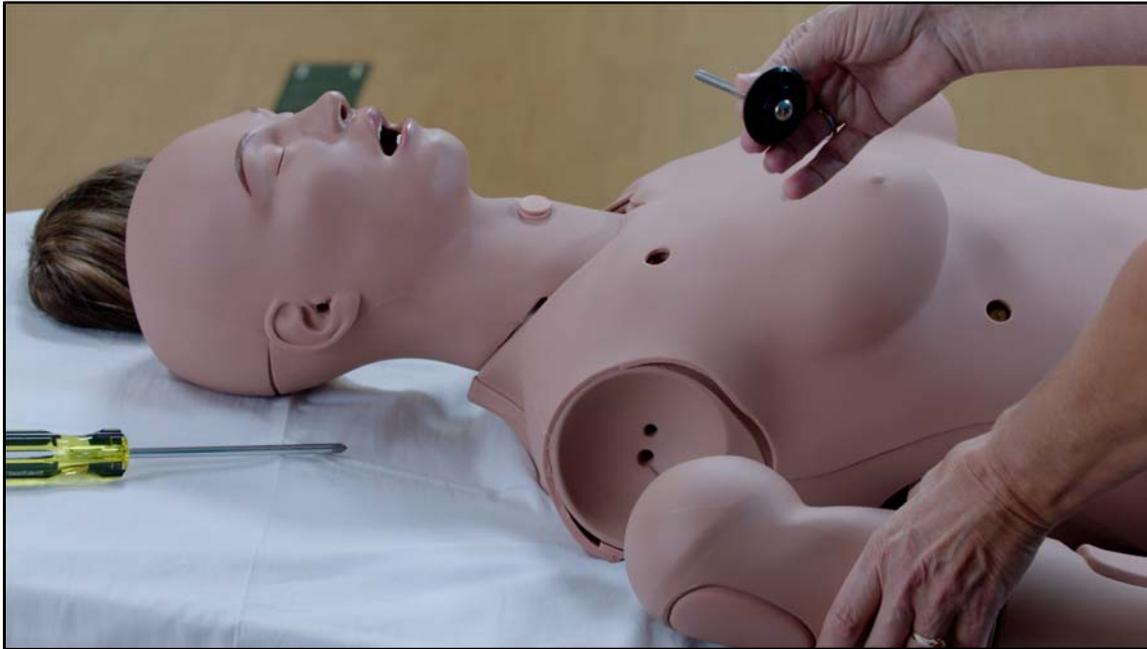


Juno's Articulated Arm

Install The NIBP Arm

You will need:

- #2 Phillips Screw Driver (Included)
- NIBP Arm
- 1 Arm Screw (Included)
- 1 Joint Sphere (Included)



The Shoulder Screw and Joint Sphere Assembly and Articulated arm Removed

- Remove the IM Pad from Juno's NIBP arm and set it aside
- Insert a screw into the flat side of the Joint Sphere
- Remove the IM Pad from the NIBP arm and set it aside



The NIBP Arm IM Pad Removed and NIBP Arm Ready for Installation

- Insert the Joint Sphere and screw assembly into the mounting hole in the NIBP arm
- Attach the mounting screw to the top hole in the shoulder mount
- Use the screw driver (included) to tighten the mounting screw until it is snug and the arm moves freely



The NIBP Arm Attached and Ready for Pad Installation

- Reinsert the IM Pad into Juno's NIBP arm

- Connect the electronics tether from the NIBP arm to the Arm connection on Juno's right side, aligning the arrows



Connecting the NIBP Arm Electronics Tether



The NIBP Connections

Modify the Blood Pressure Cuff

You can take Juno's blood pressure using non-invasive monitoring techniques, but you will need to modify a standard blood pressure cuff:

You will need:

- 1 Standard Adult Blood Pressure Cuff
- Sharp Scissors
- T-shaped blood pressure adapter (included)
- Cable Ties (Included)



The Modified Blood Pressure Cuff

- Cut the tubing attached to the gauge approximately 9 cm from the cuff
- Locate the T-shaped blood pressure adapter
- Insert the barbed connectors into the cut ends of the blood pressure cuff tubing
- Secure the tubing connectors with cable ties
- Use the scissors to trim the cable ties
- Connect the extension from the long end of the T-shaped blood pressure adapter to the NIBP port on Juno's right side
- Attach the blood pressure cuff to the manikin's arm
- Now you can auscultate the blood pressure with a stethoscope

Power on Juno

Connect Juno’s power supply to the DC IN connection on Juno’s right side then plug it into a grounded outlet.

Press the ON/OFF button on Juno’s right side and hold it for 3 seconds. This will begin the boot-up process. When Juno is ready for operation she will say “Hello”. This will occur within approximately three minutes of pressing the On/Off button.

Connect to Juno’s WiFi Network

You will need:

- CAE or Self provided laptop, tablet, or computer with wireless network adapter per specifications listed earlier in this User Guide

Note: The performance of customer provided equipment may vary and cannot be guaranteed or supported by CAEHealthcare.

A workstation (tablet or laptop) can be connected to the manikin and run from an approximate distance of 20 meters/65 feet with direct line of sight. Connection quality will vary depending on any interference from surrounding WiFi or physical obstructions.

When updating software on the workstation, it is recommended that the manikin be placed as close as possible beside the workstation.



Select **Connect Automatically** then click **Connect**.

The JNE0000XX WiFi Network

- Connect Juno's WiFi network by opening the network connections on your laptop or computer
- Connecting to the network named JNE0000XX (where XX is the last 2 digits of Juno's serial number)
- Enter a password of "**caadmin**"
- Click **OK**



Enter a password of **caadmin** then click **OK**.

The WiFi Password Screen

Connect to Juno via Tablet

If the Juno Complete Samsung S3 Tablet has the Maestro App installed on the desktop, tap it to launch a connection to Juno. The default login is:

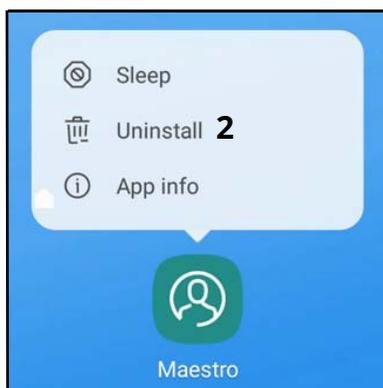
- **User name:** admin
- **Password:** admin

Remove an Existing Maestro App

If the tablet currently has a Maestro App installed it will need to be un-installed prior to installing a newer version.

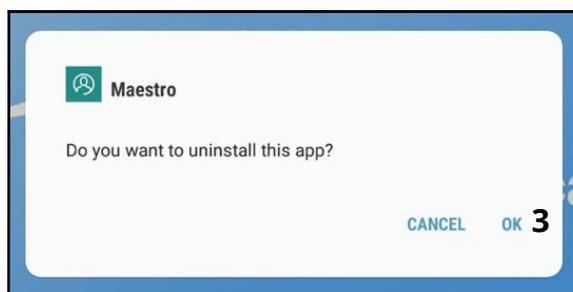
Note: These instructions **ONLY** apply when you are performing an update to the Maestro App.

1. Tap and hold the Maestro icon until the following dialog box appears



Un-install Dialog

2. Tap **Uninstall**
3. Tap **OK** when the following popup opens

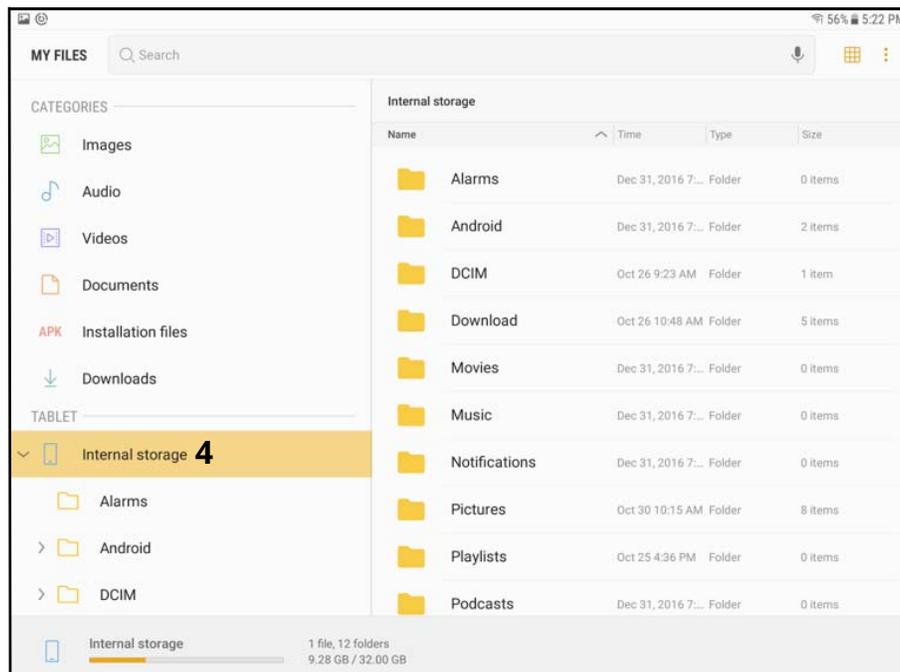


Tap OK

Install the Maestro App

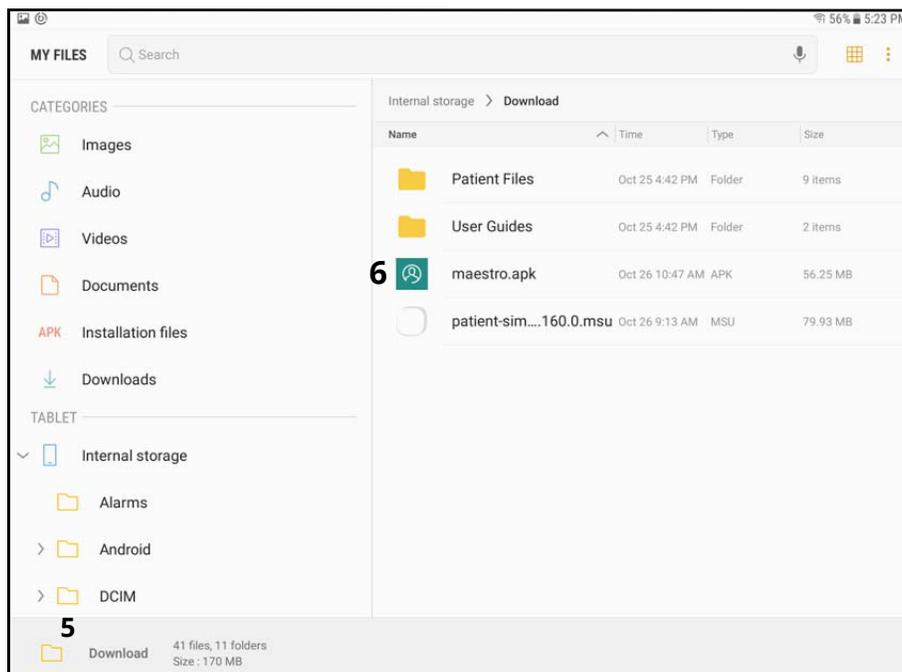
If the Juno Complete Samsung S3 Tablet does not have the Maestro App installed on the desktop, or it needs to be updated:

1. Connect to a non-Juno WiFi network that provides Internet connectivity
2. Navigate to <https://caehealthcare.com/support/software-updates>
3. Download the following file:
 - maestro-1.x.xx.x.apk
4. Locate and tap the **Internal Storage** folder on the tablet



Tablet Internal Storage

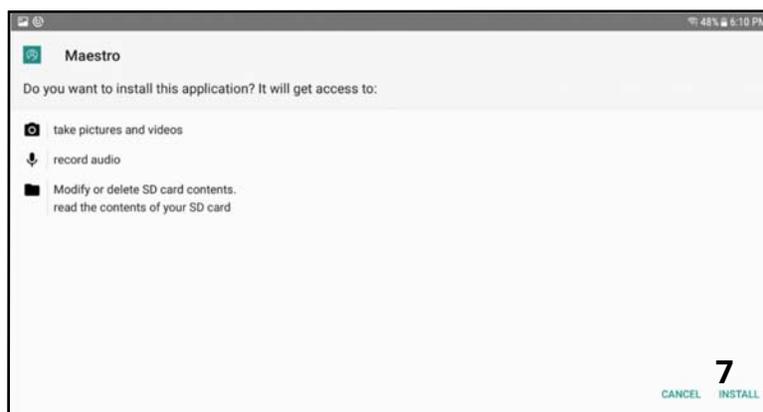
5. Locate and tap the **Download** folder on the tablet



Tablet Downloads Folder

6. Tap the **maestro.apk** file to initiate installation

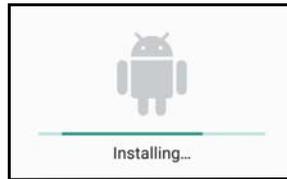
The following window opens:



Maestro App Installation Screen

7. Tap **Install** in the lower right of the window

The new App begins installing.



App Installing...

Note: It will take a few minutes for the installation to complete DO NOT turn the tablet off.

When the installation completes the following window appears:



App Installation Complete

8. Press the **Home** button in the lower right corner of the tablet to return to the Home Screen
9. Tap on **Apps** icon to view installed applications



Installed Apps

10. Create a shortcut by tapping and holding the Maestro icon then drag it toward the bottom of the screen



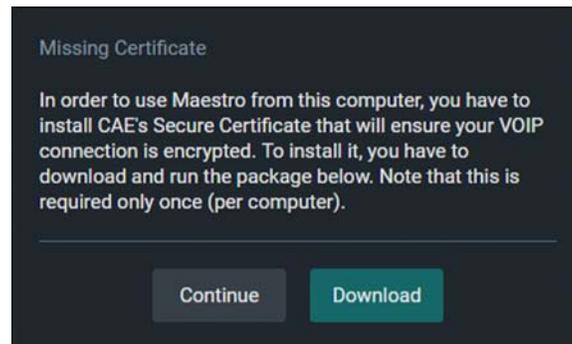
App Shortcut

Connect to Juno via Laptop (WiFi)

11. Launch a **Chrome** browser (version 60 or higher) on a laptop connected to Juno's WiFi network
12. Enter: **"http://simulator.local/"** in the address bar

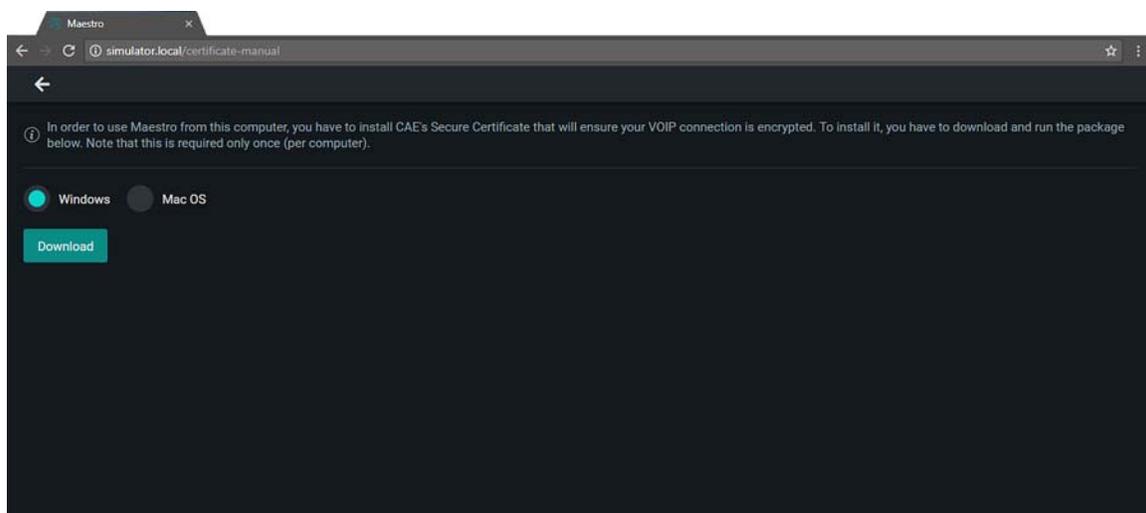
The application will detect whether the CAE SSL Certificate is installed on your computer. If it is not, you will be prompted to download an installation package that will install the SSL Certificate.

Note: This is a one-time process.



Certificate Installation Prompt

1. Select **Download**
You will be prompted to choose the appropriate certificate installer package for your computer.
2. Select either Windows or Mac OS and tap **Download**



Operating System Selection Window

The certificate is either downloaded to your web browser's default download location, or you will be prompted for the location where the installer should be downloaded. Once the download is finished (a **.msi** installation file for Windows or **.dmg** package for Mac OS).

3. access the package and trigger the installation by selecting **Run** on the installer prompt



Certificate Installation

4. at the next installation prompt, accept the license agreement and follow the installation steps until completion of the installation process



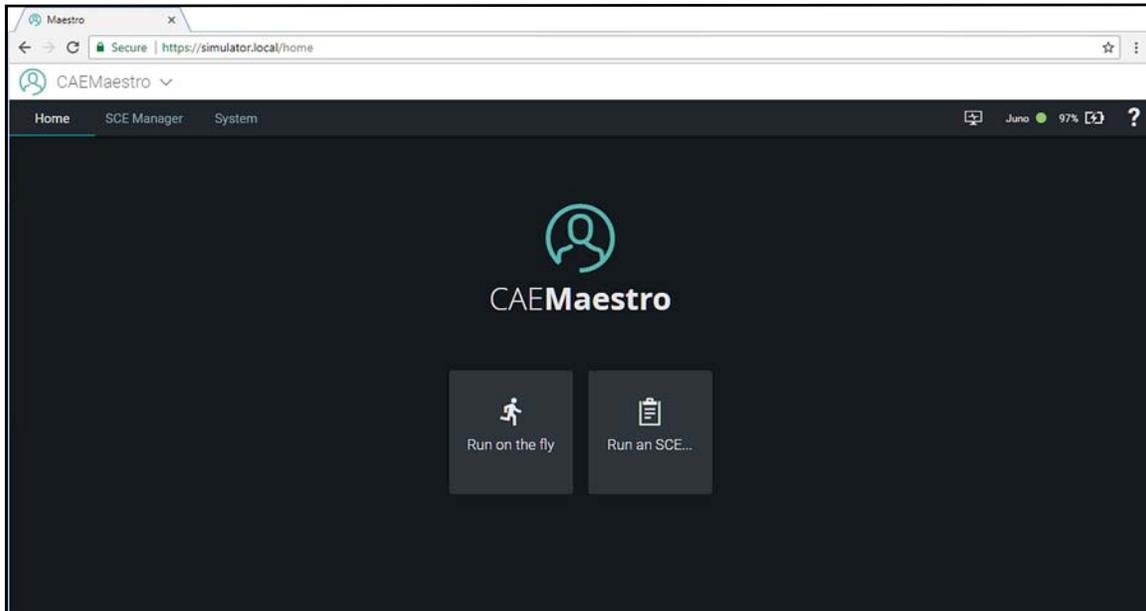
Certificate Installation Wizard

5. Launch a **Chrome** browser (version 60 or higher) on a laptop connected to Juno's WiFi network
6. Enter: **"http://simulator.local/"** in the address bar

The Maestro home screen opens.

From here you have access to all of Maestro's functions including the ability to:

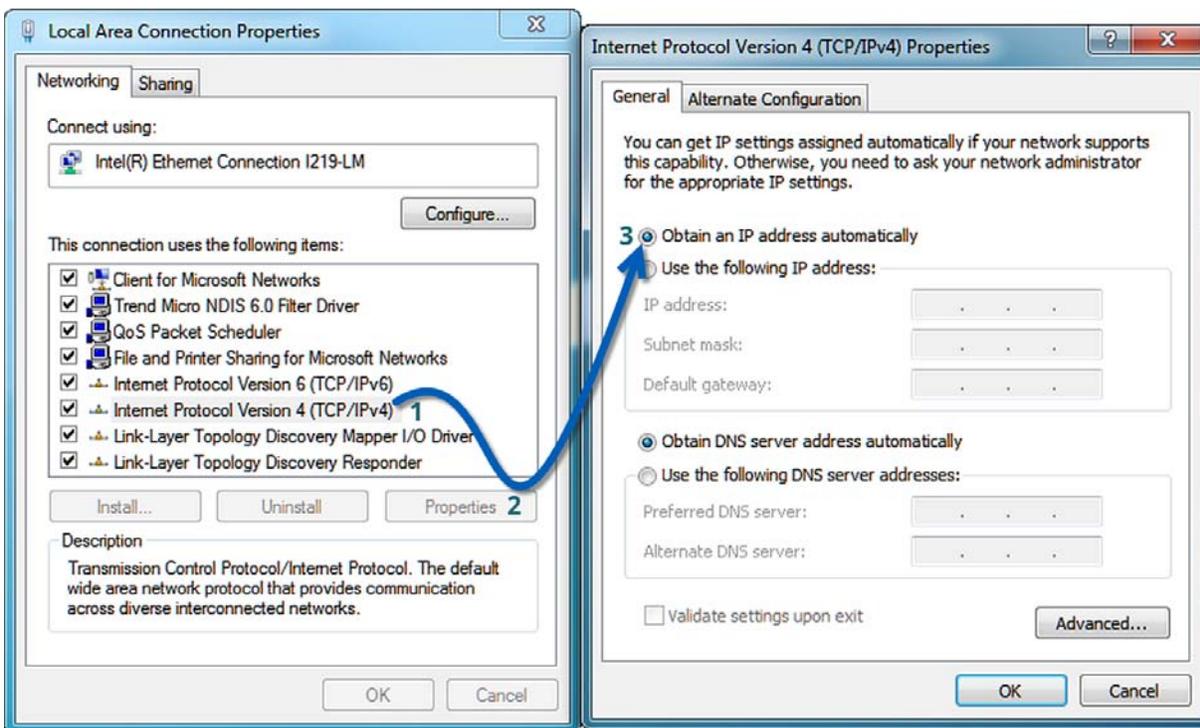
- Run a simulation on the fly
- Run SCEs
- Create and Manage Simulated Clinical Experience (SCE)



The Maestro Home Page

Connect to Juno via Laptop (Ethernet)

- Turn on simulator
- Connect an Ethernet cable between your laptop and Juno’s LAN port.
 - Note:** Juno has two network ports, one is LAN, the other is WAN. Make sure you connect to the one labeled LAN (closest to Juno’s head).
- Open the Network and Sharing Center on the laptop
 - You will see a simulator LAN connection icon (Junoxxxxxx).
- Right click the simulator LAN connection
- Verify your windows laptop’s TCP/IPv4 setting is set to DHCP
 - Select properties >TCP/IPv4
 - select the **Obtain IP address automatically** radio button

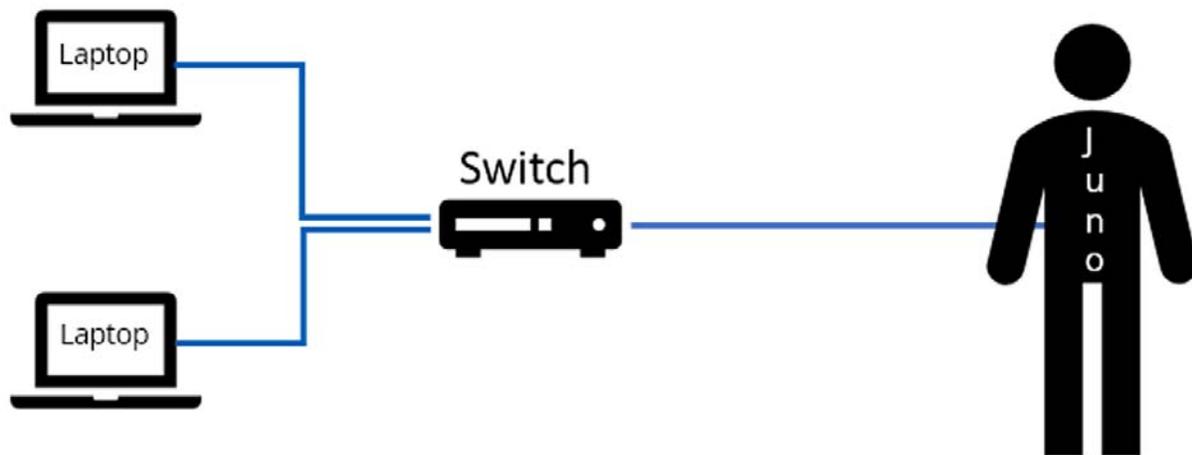


DHCP Selected

- Open a Chrome browser
- Enter: <https://simulator.local> and press enter
 - Note:** If your laptop has no certification installed, a message will pop asking you to install VoIP certificate. Follow the on screen steps to download and install the certificate.
 - If your laptop already has VoIP installed, you will see Maestro home page.

Connect Multiple Laptops to Juno (Ethernet)

- You need an Ethernet switch.
- Power on your Ethernet switch
- Connect the Ethernet Switch to Juno's LAN port using an Ethernet cable
- Ensure the laptops are set to DHCP
- Connect the laptops to the Ethernet switch using an Ethernet cable
- Open a Chrome browser on each laptop
- Enter: `https://simulator.local` and press enter



Multiple Laptops

USING JUNO

Once Juno has been assembled, the simulator is ready for instructor and learners to practice a selection of manual competencies including:

- Airway Suctioning
- Care of oral airways and care of endotracheal tubes
- Catheter Care and Maintenance (right subclavian and bilateral chest tubes)
- Ear and Eye Irrigation
- Enema Procedures
- IM Injections and Medication Administration
- IV Administration
- Manually Controlled Carotid Pulse
- Nasal Packing
- Nasogastric / Orogastric Tube Placement for Lavage and Gavage
- Non-Invasive Blood Pressure Monitoring (requires Juno Live manikin configuration)
- Ostomy Care and Irrigation
- Tracheostomy site care and tube placement
- Urinary catheterization
- Ventilation

Ear Irrigation

Both of Juno's ears can be used to practice irrigation techniques.

You will need:

- Standard ear irrigation device
- Reservoir to catch irrigation fluid
- Towels to wipe up excess fluid

Practicing Ear Irrigation Techniques

To irrigate Juno's ears:

- Use a standard ear irrigation device filled with distilled water
- Place a towel under the Juno's head
- Place the tip of the device at the entrance of the ear canal and irrigate
- Use the towel to dry Juno's ear and the adjacent area



Ear Irrigation

Eye Irrigation

Both of Juno's eyes can be used to practice irrigation techniques.

You will need:

- Standard eye irrigation device
- Reservoir to catch irrigation fluid
- Towels to wipe up excess fluid

Practicing Eye Irrigation Techniques

To irrigate Juno's eyes:

- Place a towel under the Juno's head
- Separate the eye lids
- Use a standard eye irrigation device to irrigate the eye(s)
- Use the towel to dry the area adjacent to Juno's eye(s)



Eye Irrigation

Nasogastric Tube Usage

If you are practicing gastric gavage, there is no need to prime/fill the gastric reservoir. However, if you want gastric secretions to be aspirated/suctioned back, you will need to fill the gastric reservoir.

You will need:

- Syringe filled with distilled water or distilled water with food coloring to simulate gastric fluids
- A 14-French Nasogastric/Salem sump tube
- Catheter tip syringe
- Suction canister and tubing
- Silicon spray from Juno's inventory kit
- Receptacle

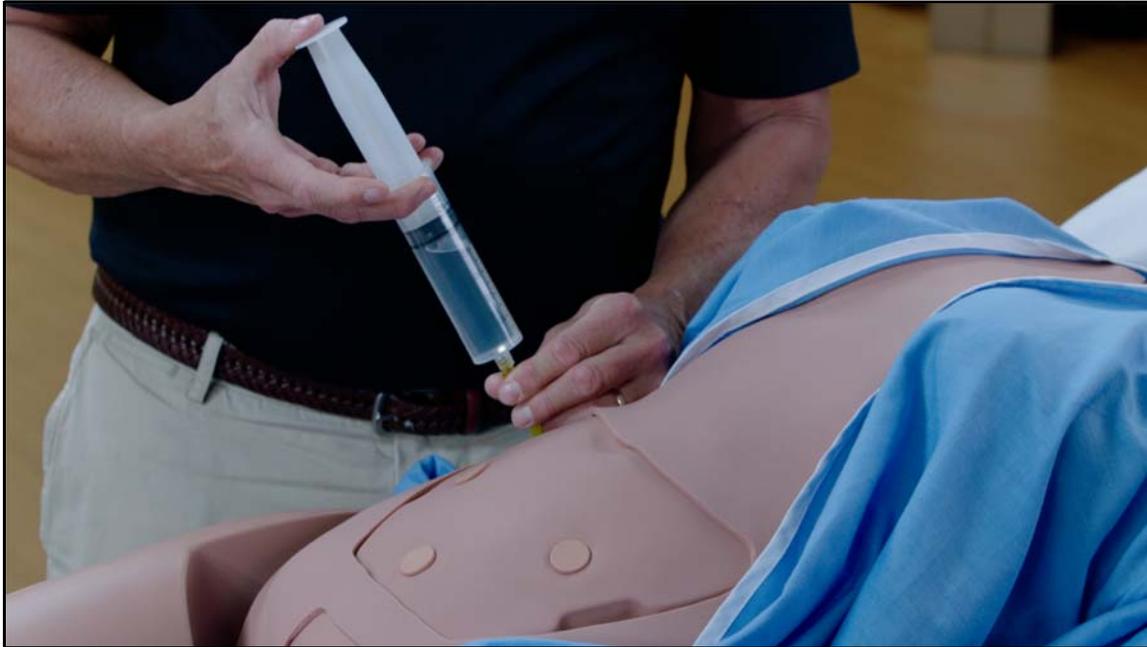
Practicing Gavage Lavage Techniques

The gastric reservoir is located in Juno's abdominal cavity. Attach a syringe filled with water to the gastric fill port located on Juno's right side.



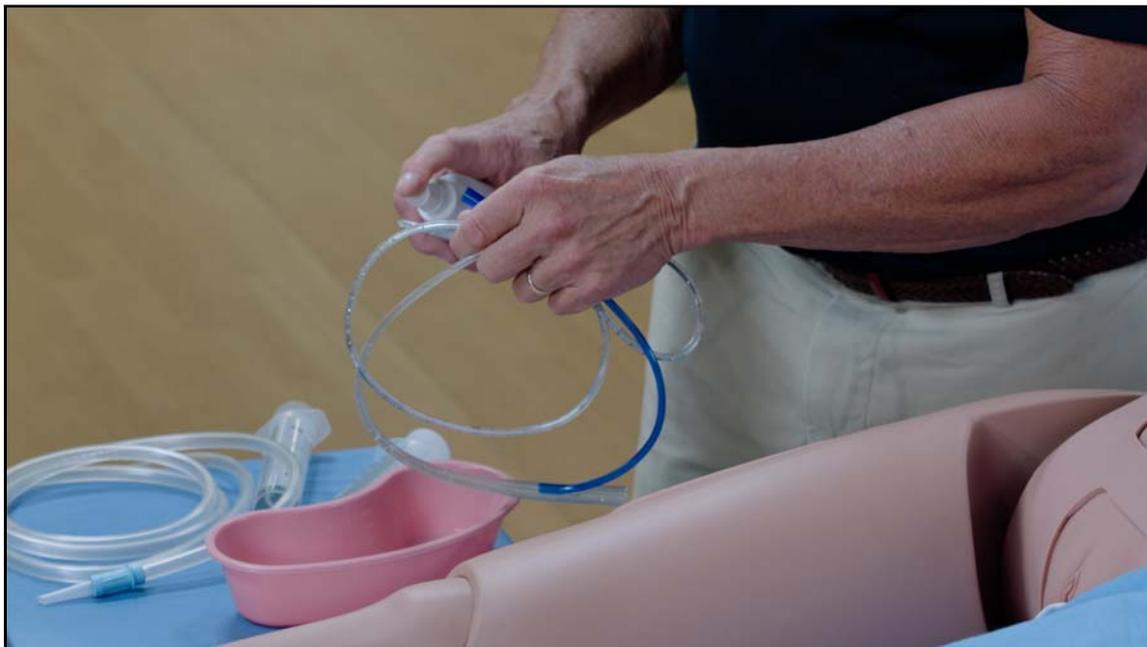
The Gastric Fill Port

- Instill not more than 150 mL of fluid into reservoir



Instilling Fluid

- Spray the NG tube with silicone spray



Spray the NG Tube with Silicone Lubricant

- Do an appropriate length measurement for NG tube placement by measuring from the earlobe to the nose, then to the sternum



Do an Appropriate Length Measurement

- Insert the tube and secure



Insert and Secure the NG Tube

You are now able to:

- Aspirate back fluids
- Instill Fluids
- Connect to suction and empty the stomach

To empty the gastric reservoir:

- Attach an empty 140 mL syringe to the gastric reservoir drain line on Juno's right side
- Aspirate fluid back until the reservoir is empty

Endotracheal Tube Placement

For simplicity and protection of Juno's airway endotracheal tubes should be inserted through the Tracheostomy site.

Note: The methodology described below is intended to provide adequate Endotracheal tube placement to enable the practicing of endotracheal tube care and maintenance. The Endotracheal tube placement described here has no correlation to real life patient care.

1. Wrap the inflatable cuff tubing around the endotracheal tube and insert the end fitting into the endotracheal tube



The Endotracheal Tube

2. Lubricate the Endotracheal tube with silicone spray

3. Remove Juno's Tracheostomy plug



Remove the Endotracheal Plug

4. Remove Juno's bottom dentures



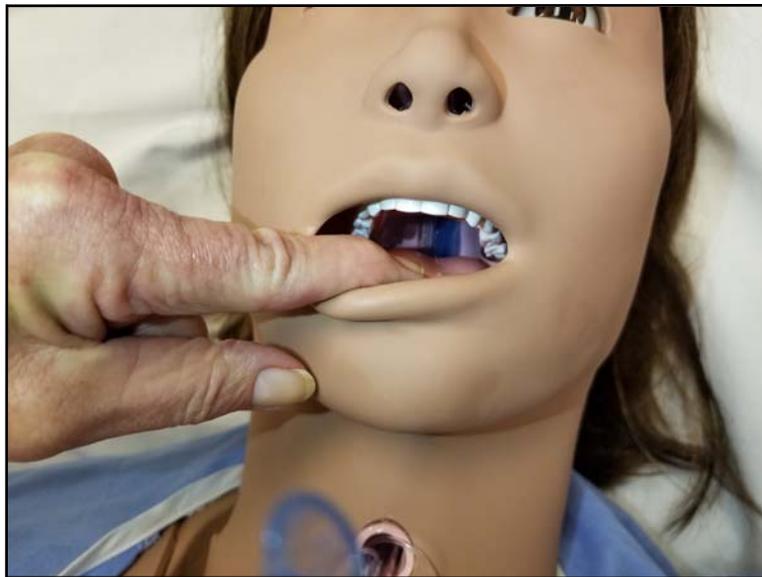
Remove Juno's Bottom Dentures

5. Insert the end of the Endotracheal tube with the inflatable cuff through Juno's Tracheostomy port



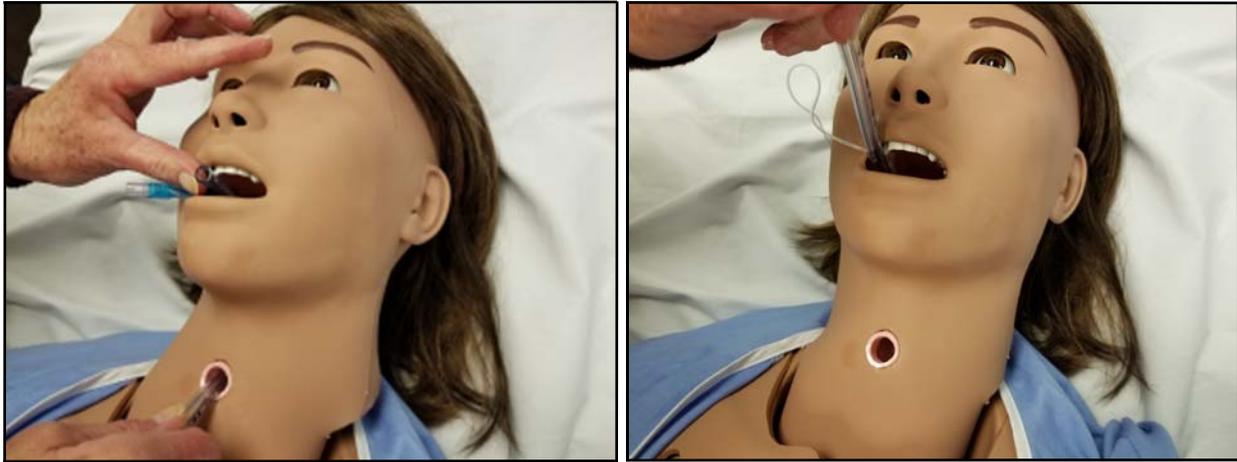
Insert the Endotracheal Tube

6. Insert until the end of the Endotracheal tube can be seen at the back of Juno's throat



The Endotracheal Tube Visible at the Back of the Throat

7. Pull the endotracheal tube through Juno's mouth until the distal end enters the Tracheostomy port



8. Replace the Tracheostomy plug
9. Fill the Endotracheal cuff and secure the Endotracheal tube
10. Replace the bottom dentures

Tracheostomy Usage

The Tracheostomy site is closed with a plug. Before the simulation, remove the plug and place a Tracheostomy tube and secure in place. Learners can:

- Clean the Tracheostomy site
- Replace the tube
- Perform airway suction

You will need:

- A 6 mm Tracheostomy tube
- Trach ties to secure
- 3 mL Syringe
- Suction Catheter
- Suction Canister and Tubing
- Lubricant

Practicing Tracheostomy Techniques

To prime the airway reservoir:

- Detach chest skin from upper skin attachment pegs and pull down to abdomen
- Remove chest plate and set aside
- Attach 30 mL syringe filled with distilled water to the prime port on the airway reservoir and instill the fluids

Note: Food coloring or soap may be added to the distilled water to simulate colored or frothy secretions.

- Detach syringe from airway reservoir
- Replace chest plate and chest skin

After the simulation any remaining fluid in the reservoir can be suctioned out via the Tracheostomy tube. Remove the Tracheostomy tube and replace the plug.



Tracheostomy

Carotid Pulse Usage

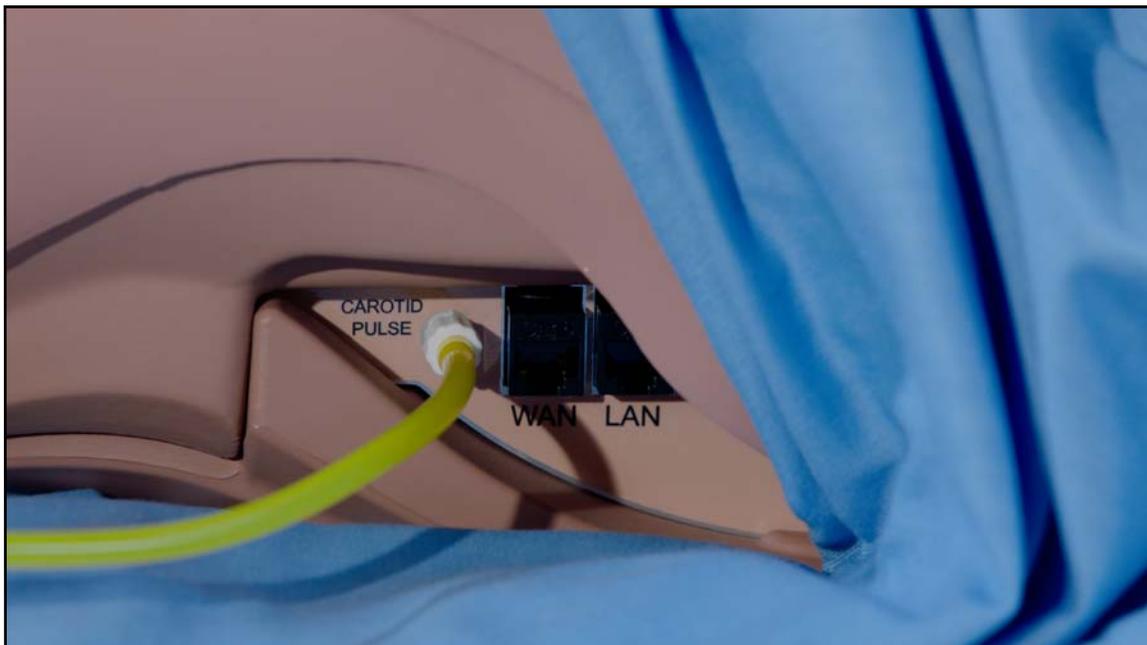
Juno has bilateral carotid pulses that are manually operated.

You will need:

- Carotid Syringe and tubing

Practicing Carotid Pulse Techniques

Fill the syringe with 6 mL of air and attached to the yellow tubing. Attached the carotid pulse assembly (yellow tubing and syringe) to the carotid pulse port on the left side of the manikin.



The Carotid Pulse Assembly Connection

Note: With the basic manikin configuration the syringe will be attached to tubing that connects to the carotid pulse mechanism.

As the plunger is pressed, the carotid pulses can be felt.

Pulses can be adjusted to be thready or bounding based on the volume of air put into the syringe.



The carotid pulse is felt as the plunger is pressed

Ostomy Care and Irrigation

There are three stoma sites on Juno's abdominal plate:

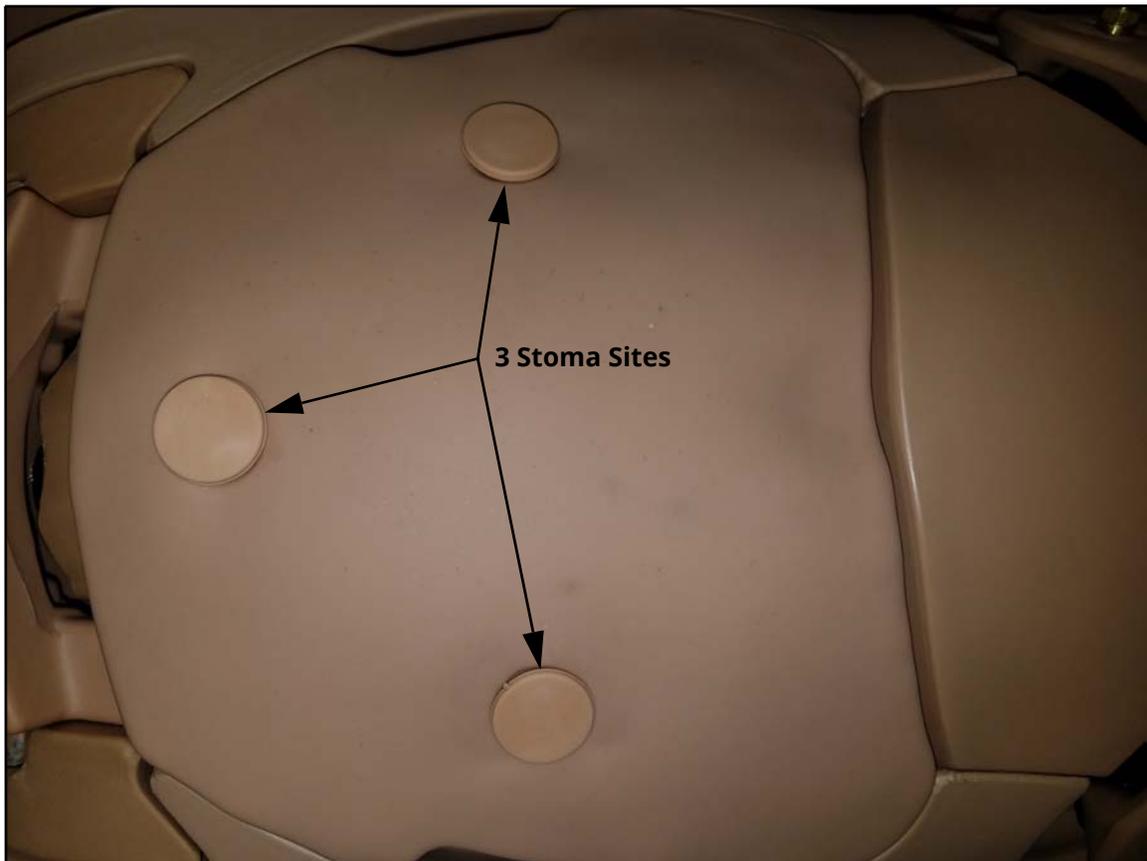
- Colostomy
- Ileostomy
- Cystostomy

You will need:

- Stoma insert from Juno's inventory kit
- Standard ostomy irrigation device with water
- Receptacle

Practicing Ostomy Care and Irrigation Techniques

All sites are closed with a plug.



The Ostomy Sites

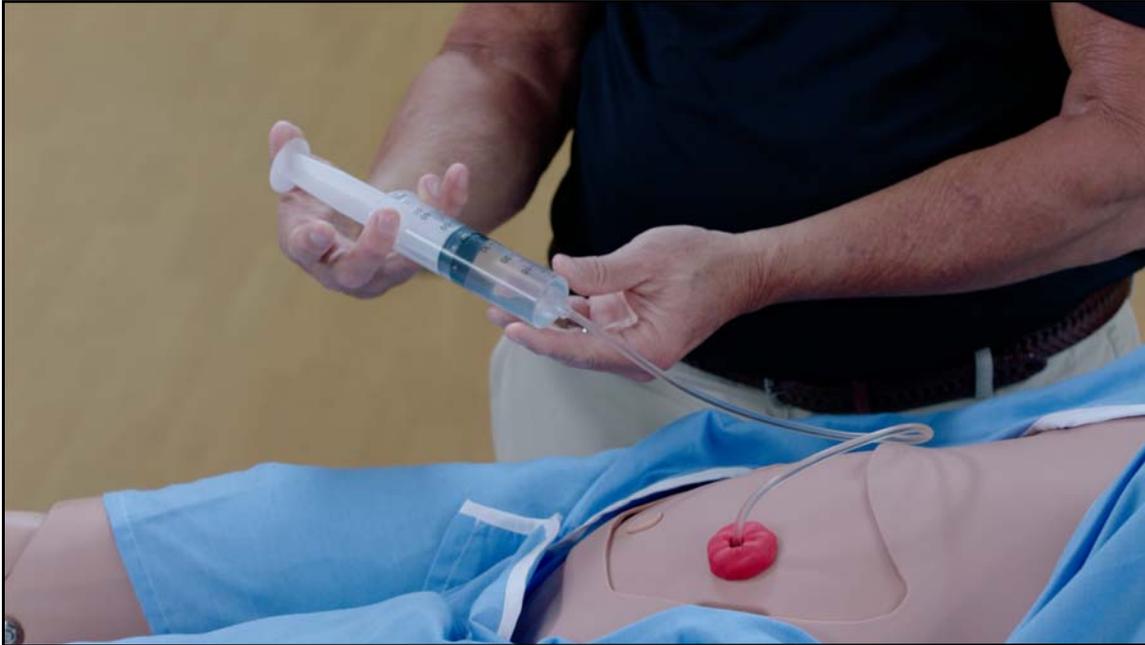
- Find the site you need for your simulation and remove the plug
- Place a stoma insert into the colostomy site and prepare as necessary for the simulation



The Stoma Insert

- Learners can irrigate the Stomas with 200 mL fluid maximum
Fluid from site irrigation is collected in the internal abdominal reservoir.

Note: Do not overturn abdominal plate once Stoma has been irrigated, as fluid will come out of the Stoma opening.



Stoma Irrigation

- After the simulation, remove the Stoma insert and replace the plug
- If the site was irrigated, you need to empty the internal reservoir
 - Remove the abdominal plate
 - Unscrew black cap and empty the reservoir
 - Replace the abdominal plate

Urinary Catheterization

To perform catheterization exercises Juno's urine reservoir must first be filled. This is done using the urinary prime port.

You will need:

- The 140 mL syringe with Luer-lock extension filled with recommended amount of distilled water
- Yellow food coloring if you would like to make simulated urine
- A 16-French urinary catheter with or without bag
- Syringe to inflate catheter balloon
- Silicon spray from Juno's inventory kit
- Receptacle

Practicing Urinary Catheterization Techniques

- If desired mix food coloring with distilled water in syringe to simulate urine

Note: For the best performance and easier catheter insertion an administrator may prime Juno by inserting a catheter and instilling fluids through the fill port until flow is observed through the catheter tubing. The catheter can then be removed prior to learner participation.

- Connect the syringe to the Luer-lock connector on the fill port
- Remove the cap from the urinary drain port
- Slowly inject 100 mL of distilled water into the urine reservoir

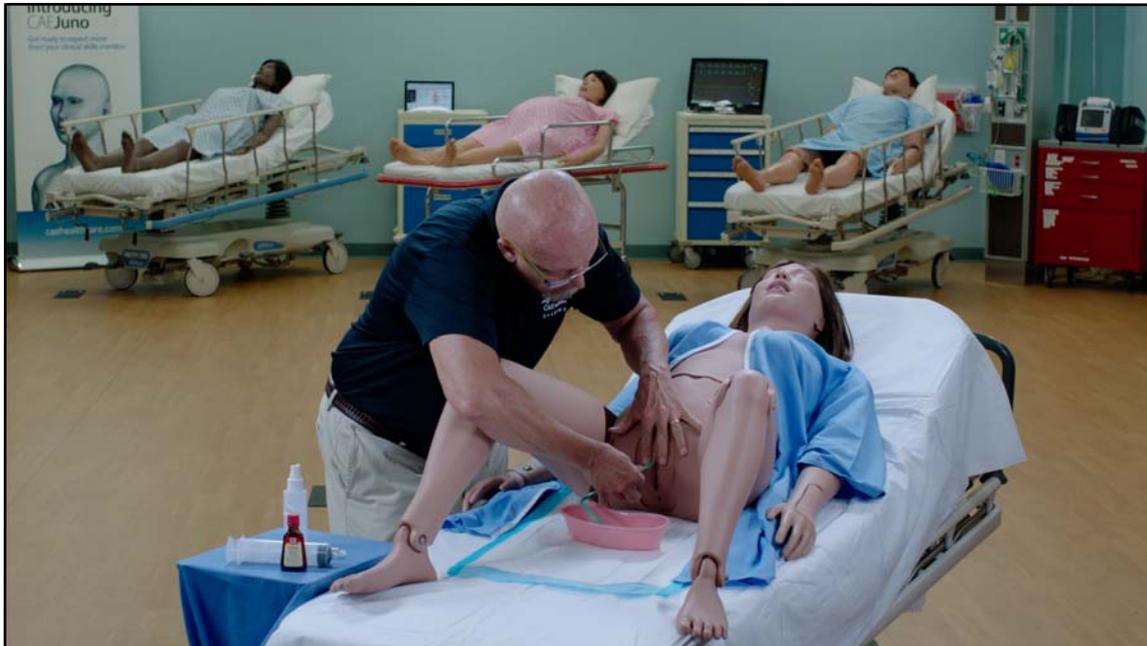


Filling the Urinary Reservoir

- Replace the cap on drain port
- Instill 80 mL of air into urinary reservoir
- Remove the syringe

Note: If continuous urine output is desired, you may attach an IV bag with distilled water and tubing to the urinary reservoir fill port after above fill procedure. Urine output is regulated with roller clamp on IV tubing.

Catheterize Juno using a 16-French urinary catheter lubricated with silicone spray. Both female and male genitalia can be catheterized.



Inserting the 16Fr Catheter

To drain the urine reservoir:

- Leave urinary catheter in place
- Connect a syringe to the fill port
- Fill with air
- Instill air through system until air exits urinary catheter
- Remove urinary catheter

If colored water was used:

- First prime urinary system with clear fluids until clear fluid exits the urinary catheter
- Instill air through system until air exits urinary catheter

Enema Usage

Juno provides the ability to practice enema procedures with real fluids.

You will need:

- An Enema bag and tubing or enema bottle
- Silicone Spray
- Distilled Water

Practicing Enema Techniques

- Fill the enema bag with 200 mL distilled water maximum

Note: If more input is desired, attach IV tubing and an empty IV bag to the enema overflow port.

- Locate the anus on the manikin
- Lubricate the tip of enema tubing with silicone spray
- Insert the tip of the tubing or bottle 3 inches
- Perform the enema as per procedure

After the simulation, drain the enema reservoir. Attach syringe to enema drain port on Juno's right side and aspirate back fluids.

Note: To ensure complete emptying of reservoir, place Juno in an upright 90° sitting position and aspirate back any additional fluids.



Performing Enema Procedures

IM Injection Usage

Juno supports IM injection at six sites:

- Bilateral Deltoid
- Bilateral Vastus Lateralis
- Ventrogluteal
- Dorsogluteal

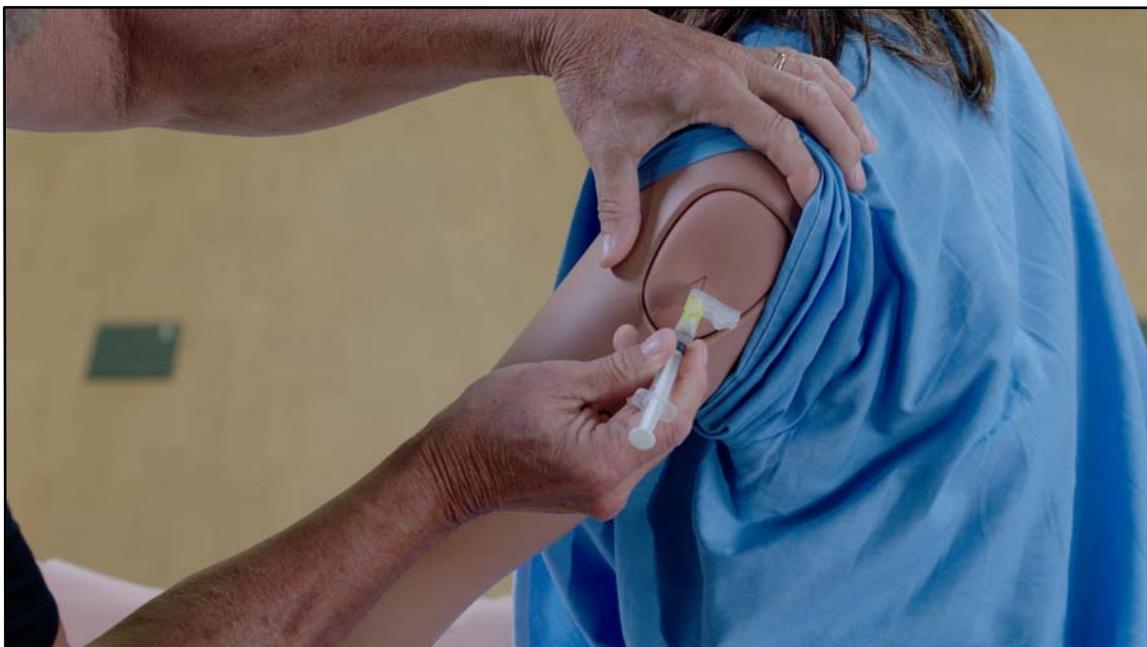
You will need:

- IM injection puck from Juno's inventory kit
- Standard IM injection device (3 mL syringe with 22 gauge x 1.5" needle)
- Alcohol pads
- Sharps container
- Receptacle

Practicing IM Injection Techniques

To prepare the IM injection site:

- Insert an IM injection pad
- Deliver the IM injection following protocol



The IM Injection

After the Simulation:

- Remove the pad from the injection site
- Remove the sponge from inside the pad



Remove the Sponge from the IM Pad

- Squeeze all the fluid from the sponge and let air dry
- When dry, replace sponge back inside pad
- Replace the pad into the injection site



Squeezing Fluids from the Sponge

IV Administration

There are two IV sites on Juno's left arm, Dorsum of the hand, and Antecubital Fossa. Each IV site has an insert with a loop of tubing. The sites are filled and drained through tubing running from the IV site up to the left shoulder.



The Dorsum of the Hand IV Site



The Antecubital IV Site

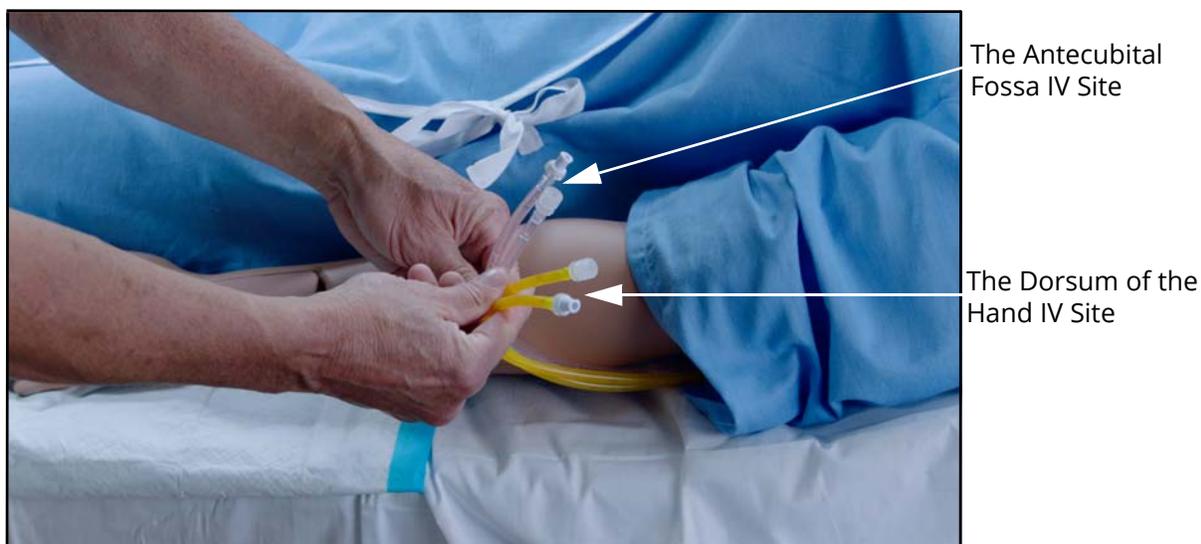
You will need:

- An empty IV bag with IV tubing connected
- Red food coloring if you want to make simulated blood
- A 20 gauge IV catheter
- Alcohol swab
- IV Dressing
- Extension tubing
- A full IV bag with distilled water with IV tubing connected
- An IV pole
- Full IV bag with red distilled water with IV tubing connected to simulate blood

Practicing IV Administration Techniques

To prepare the IV site for aspiration and flashback, identify the ports that prime and drain the chosen IV site on the left side of the manikin. One tube will be for priming, the other for drainage.

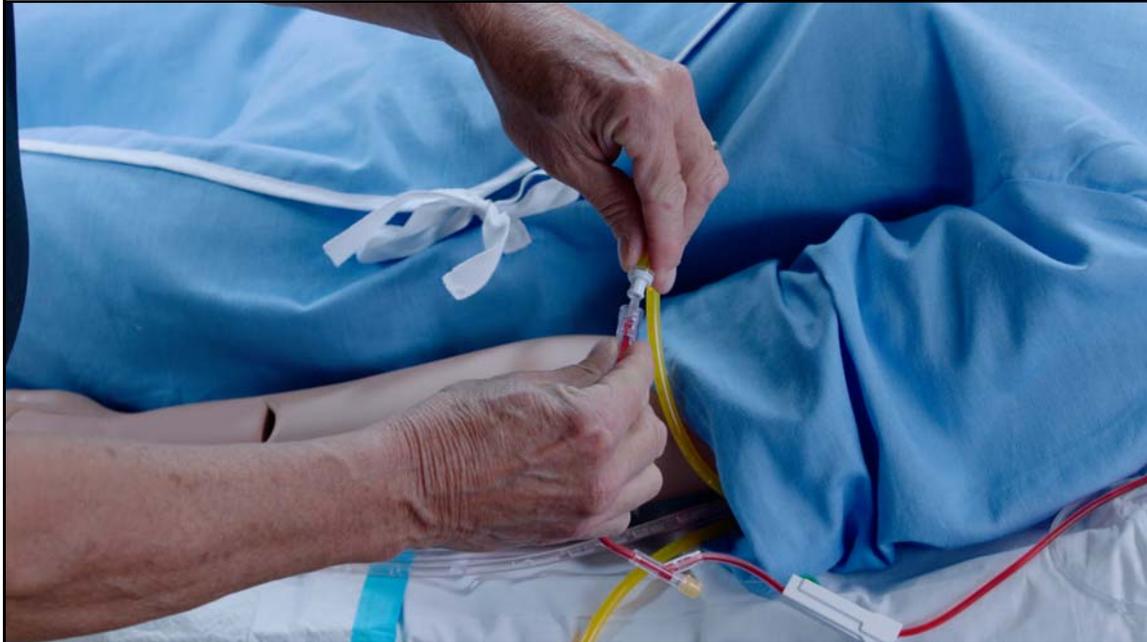
The yellow tubing is for the Dorsum IV site, and the clear tubing is for the Antecubital IV site.



The IV Tubing

- Connect the end of the drain port tubing to the IV tubing and an empty IV bag
- Open the clamp on the IV tubing
- Fill an IV bag with water, or with water mixed with food coloring to simulate blood
- Hang the filled IV bag from an IV pole near Juno's shoulder

- Connect the IV tubing from the filled IV bag to the appropriate prime port in Juno's left shoulder



Connecting to Dorsum of the Hand IV Site

- Infuse fluid until the fluid comes out of the drain tubing. This will prime that IV site for flashback and venipuncture.
- Close the clamp on the drain tubing
- Perform venipuncture and confirm flashback. Additional red color fluid can be aspirated back from the IV site if desired.
- Close the clamp on the IV tubing of the prime fluids
- Connect IV fluids / medications to the IV site to be infused
- Open the clamp on the IV fluids to be infused
- Open the IV drain tubing clamp

After the Simulation:

- Drain the remaining fluid from the IV tubes in the left arm
- If you used simulated blood, flushing the tubes with clear distilled water is recommend
- Fill a syringe with clear distilled water
- Attach the syringe to the appropriate IV prime port
- Infuse until clear fluid flows from the IV drain tubing



Flushing the IV Fill/Drain Tubing

- Disconnect the syringe and fill the syringe with air
- Flush the IV prime port with air until air flows from the IV drain tubing
- Disconnect syringe from IV prime port
- Disconnect the IV tubing and bag from the IV drain port
- Empty the IV bag
- Reconnect the IV tubing and empty IV bag to the drain port

Gender Conversion

Juno can be easily converted from female to male or male to female. Juno is shipped with both sets of genitalia, both chest skins and 2 wigs to accommodate these conversions.

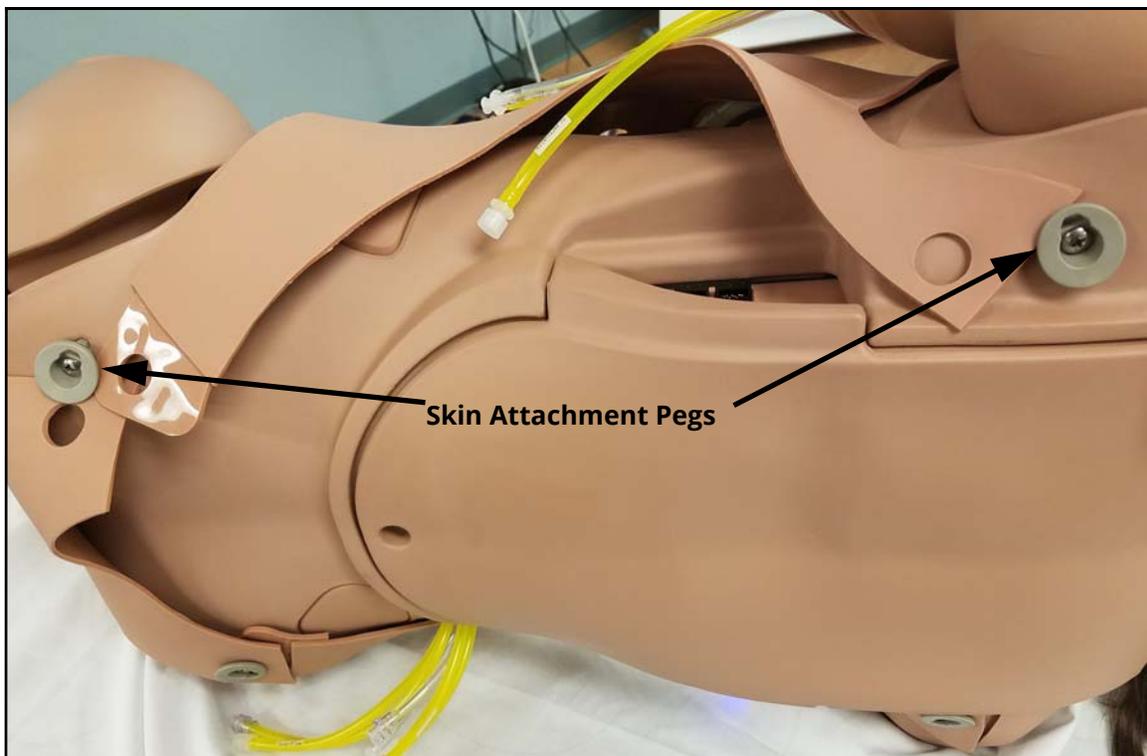
Note: Juno is shipped in female configuration.

You will need (included):

- Genital Insert
- Chest Skin
- Wig

To change the genitalia:

- Roll Juno onto her side and detach the skin from both lower torso skin attachment pegs by gently pulling the skin tabs up and over the attachment pegs
- Repeat the procedure for both upper skin attachment pegs



The Left Skin Detached From Attachment Pegs

- Roll Juno onto her back
- Gently remove the chest skin by lifting it off Juno

- Remove the abdominal plate and set it aside



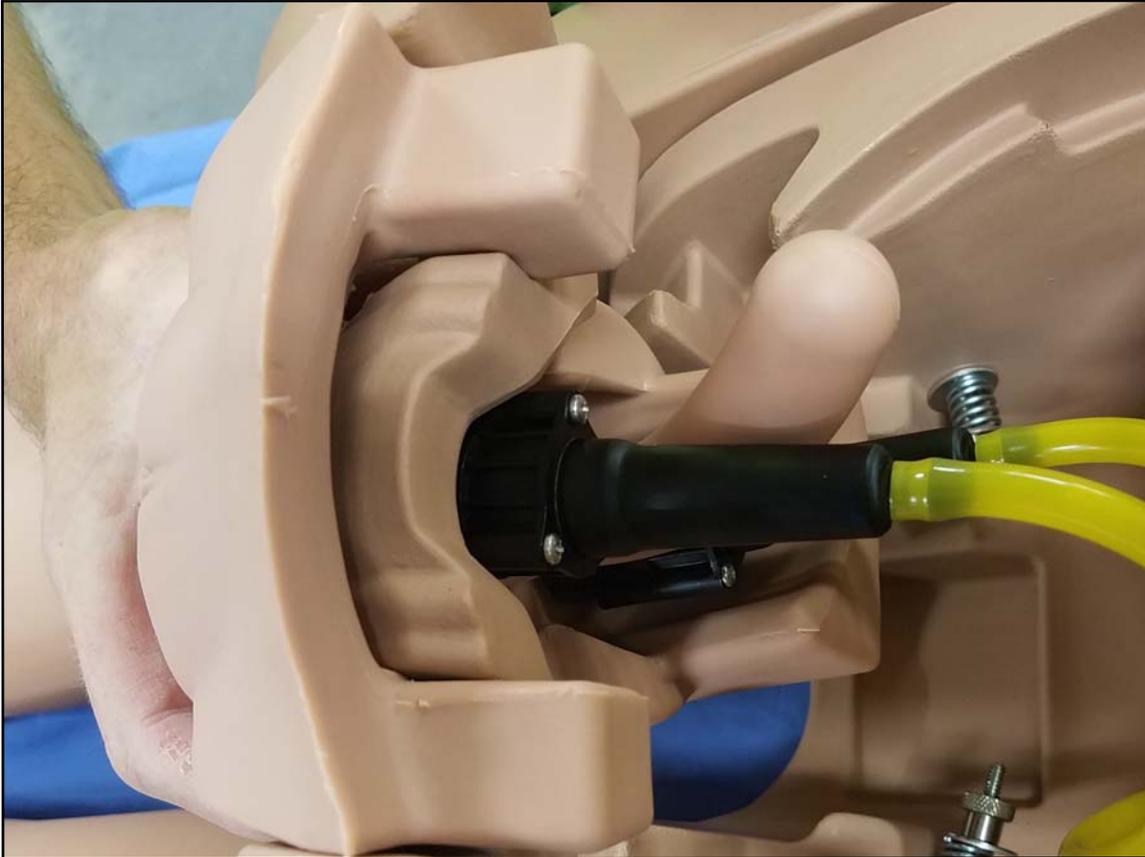
The Abdominal Plate Detached

- Pull the current genital insert gently upward to remove it from Juno
- Locate the tubing connecting the genital insert to the urine reservoir and the enema reservoir and disconnect them by turning the connectors counter-clockwise
- Remove the genital from the pubic bone by gently pushing downward
- Attach new genitalia to the pubic bone



Attaching the New Genitalia to the Pubic Bone

- Re-connect the urine reservoir connector to the upper port by turning the black connectors clockwise
- Re-connect the enema reservoir connector to the lower port by turning the black connector clockwise



The Urine and Enema Reservoirs Attached

- Place the new genital insert into position by gently pushing downward
- Replace the abdominal plate

To attach the alternate chest skin:

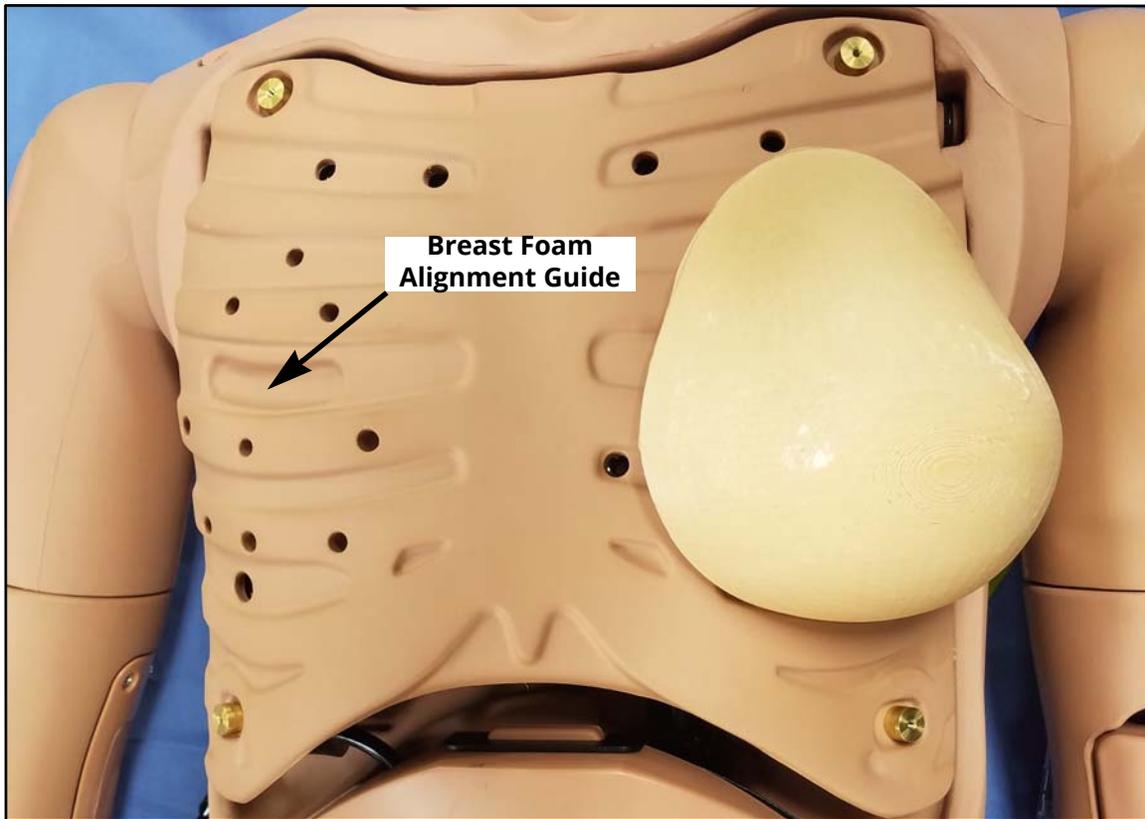
- Position the new chest skin on Juno
- Align the ECG holes



Aligning the ECG Holes

- Attach the upper skin tabs to the upper skin anchors

Note: If converting from male to female place and align the breast foam inserts on Juno's chest prior to placing the chest skin. Use the Breast Foam Alignment Guides to assist with proper placement.



The Breast Foam Alignment Guide

- Attach the lower skin tabs to the lower skin anchors
- If desired remove and replace Juno's wig

CARE AND MAINTENANCE

Maintaining the simulator requires careful treatment of the electronic and mechanical components. Each time the simulator is assembled or disassembled, make sure all components are properly handled and correctly removed or placed into storage.

Note: Certain hardware components within the simulator and Instructor tablet are not user serviceable. Consult CAE Healthcare Customer Service to address any hardware maintenance concerns.

General Simulator Care

Avoid the use of writing instruments and sharp objects near the patient simulator to prevent unattractive markings on or tears in the skin.

Lubricate airway adjuncts, urinary catheters, nasogastric tubes, and enema tubes with silicone spray prior to insertion. **DO NOT** use water-based lubricant.

A mild detergent and warm water will remove most marks and stains. Gently rub the soiled area with a soft cloth. **DO NOT** use solvents or abrasive pads.

Prior to using moulage of any kind, CAE Healthcare suggests the application of a very light coating of petroleum jelly, followed by a light dusting of baby powder, to the simulator's skin. This application makes cleaning the skin easier.

If any of Juno's fluid systems have been used, flush out the simulator as described in the following pages in the User Guide. Failure to flush the systems may cause damage to the simulator.

Once a month, it is advised to flush the system with a mix of 50% distilled water and 50% white vinegar to keep mineral and algae buildup to a minimum. Always perform the steps for Flushing the Simulator afterward to remove vinegar.

Recommended Sizes for Clinical Supplies

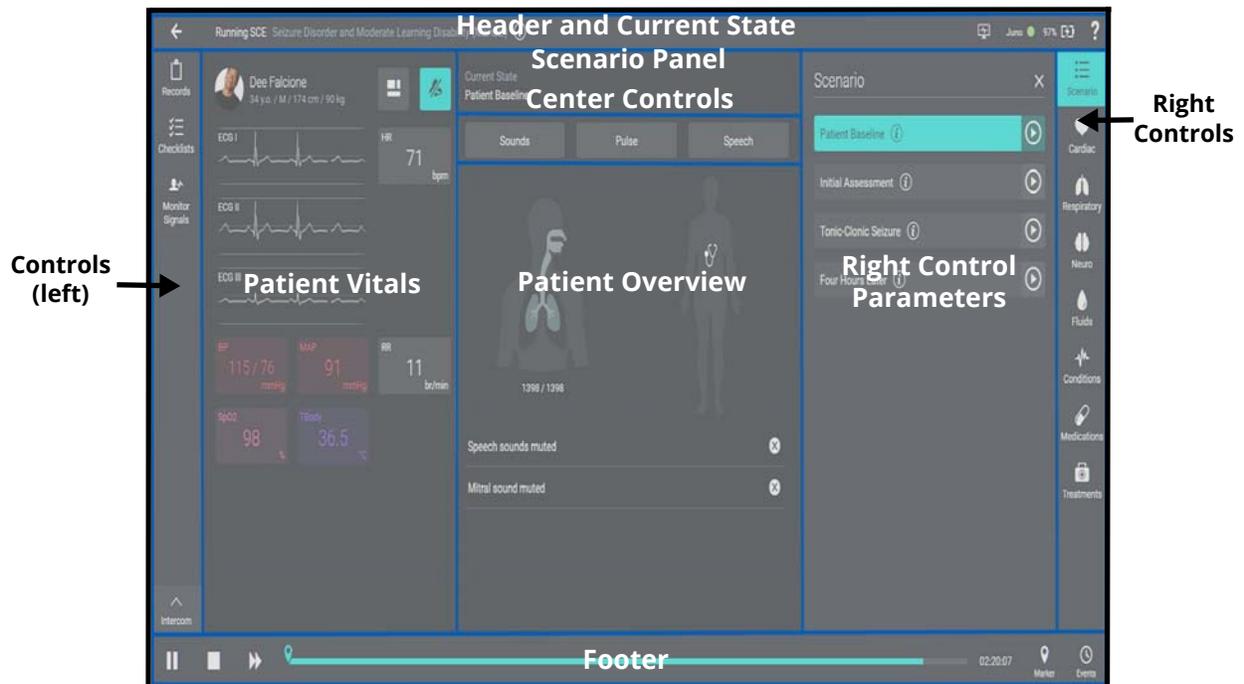
Item	Recommended Size
Urinary Catheter	16 Fr-Female 14 Fr-Male
Nasogastric Tube Insertion	14 Fr*
Gastric Lavage / Gavage	14 Fr*
Airway Suctioning	14 Fr*
ETT	7 mm
Oropharyngeal Airway	100 mm
Nasal-Pharyngeal Airway	24 Fr
Tracheostomy Tube	6 mm
IV Cannula	20 g
Chest Tube	28 Fr

* With fluid return

MAESTRO LEARNER INTERVENTIONS

Juno Live and Complete Manikin Configurations include the CAEMAestro software. The Maestro software allows students and educators to conduct a myriad of interventions.

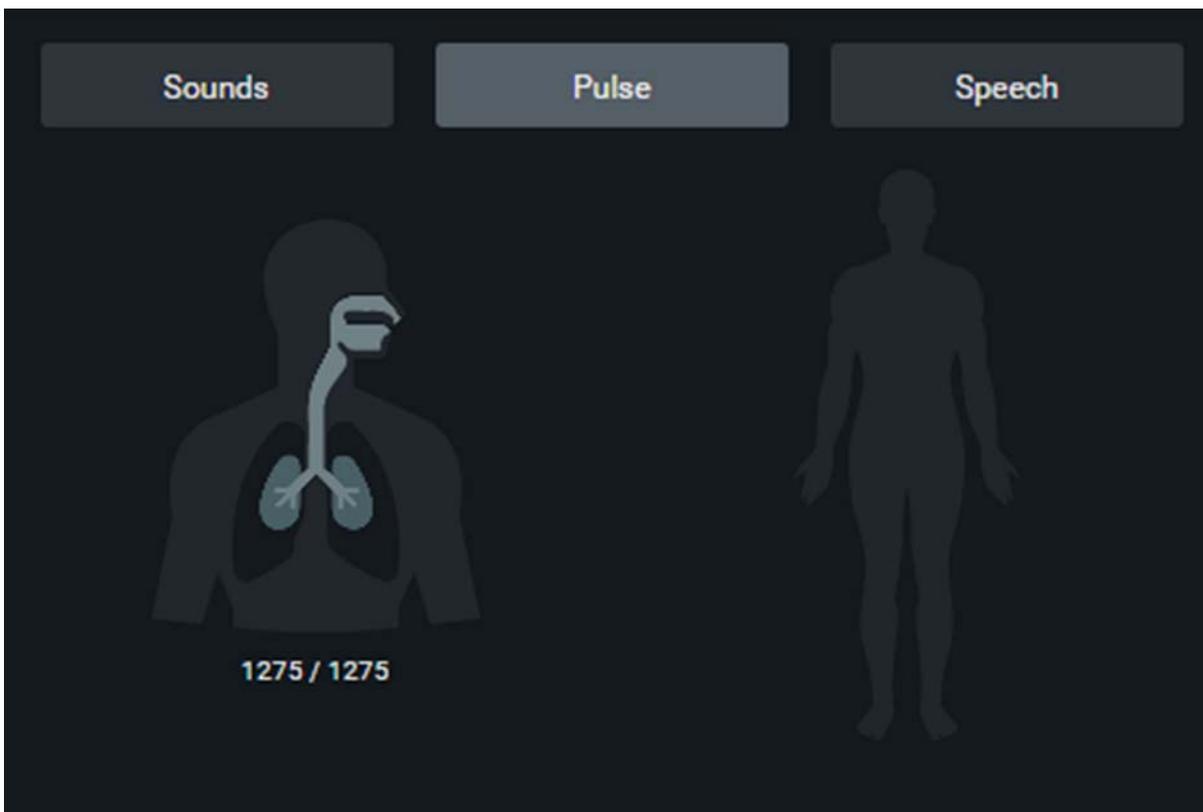
From the Run screen, parameter controls are broken down into the following categories: Cardiac, Respiratory, Neuro, Fluids, Conditions, Medications, and Treatments.



The Maestro Software Interface

Controls - Center

Tap any of the 3 center control buttons to open an associated popup containing that button's sound settings.

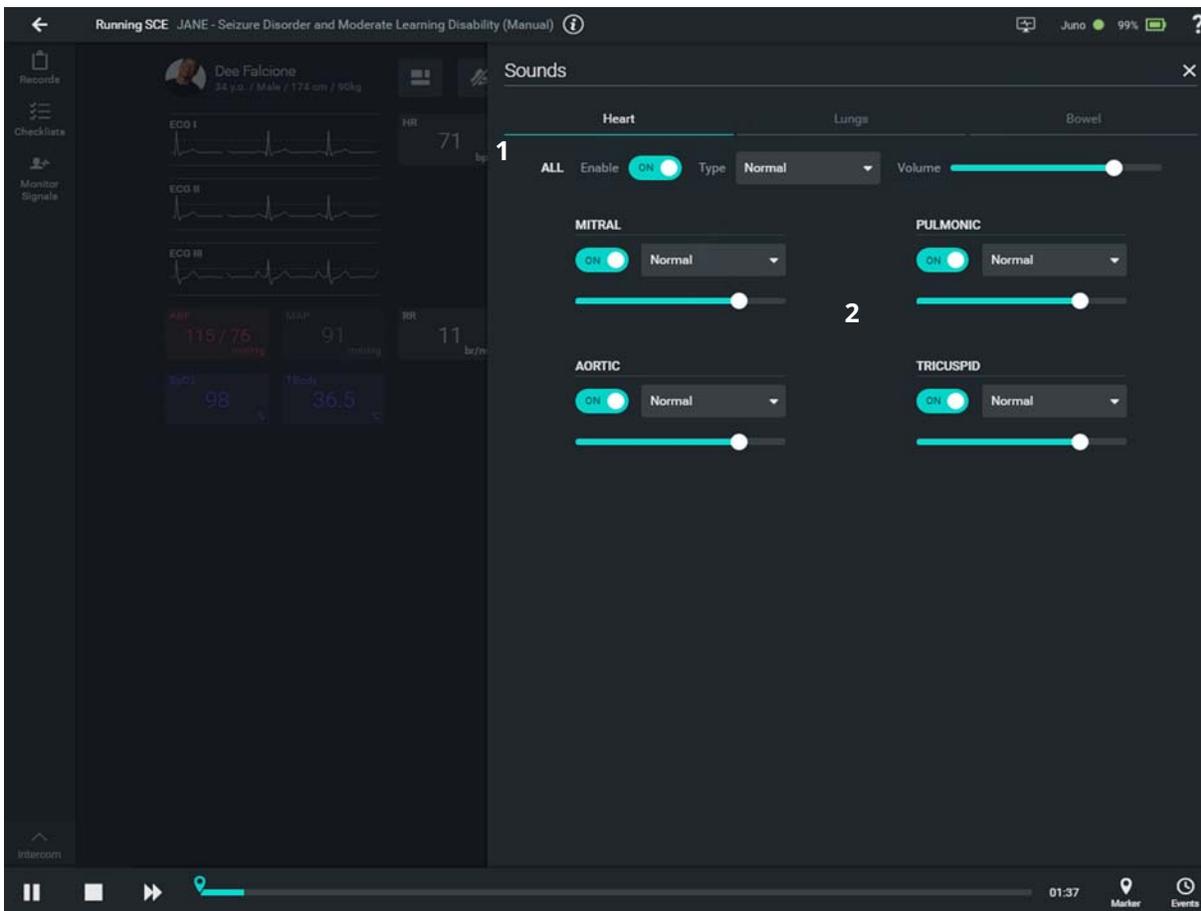


Controls - Center

Controls - Center - Sounds

Controls - Center - Sounds - Heart

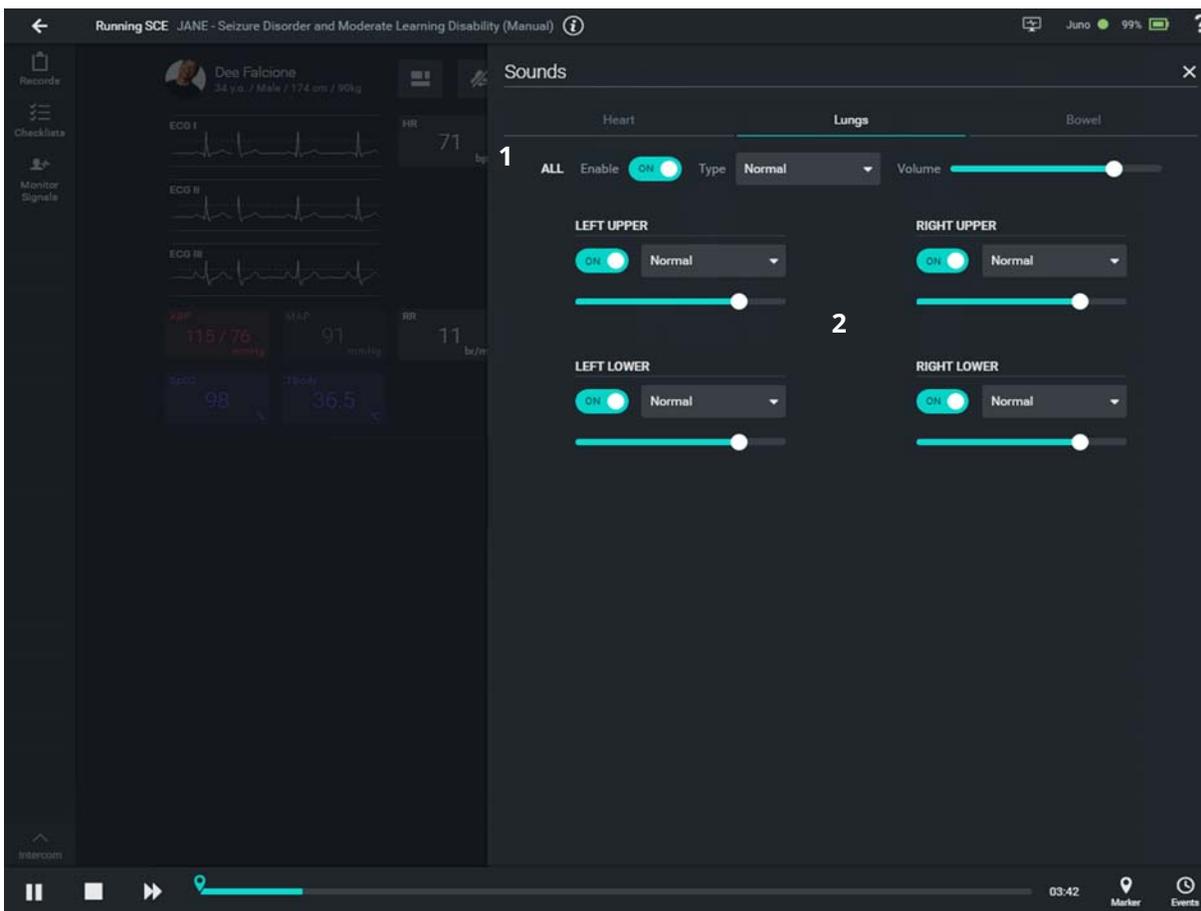
1. Use the Master Controls to to:
 - Enable/Disable ALL Heart sounds
 - Select the Type (Normal, S3, S4, S3 and S4, Early Systolic Murmur, Late Systolic Murmur, Pan Systolic Murmur, Late Diastolic Murmur)
 - Adjust the Volume
2. Use the On/Off toggles, Type dropdowns, and volume sliders to adjust sounds in each quadrant (Mitral, Pulmonic, Aortic, Tricuspid)



Controls - Center - Sounds - Heart

Controls - Center - Sounds - Lungs

1. Use the Master Controls to:
 - Enable/Disable ALL lung sounds
 - Select the Type (Normal, Crackles, Diminished, Gurgling, Pleural rub, Rhonchi, Wheezing)
 - Adjust the Volume
2. Use the **On/Off** toggles, Type dropdowns, and volume sliders to adjust sounds in each quadrant

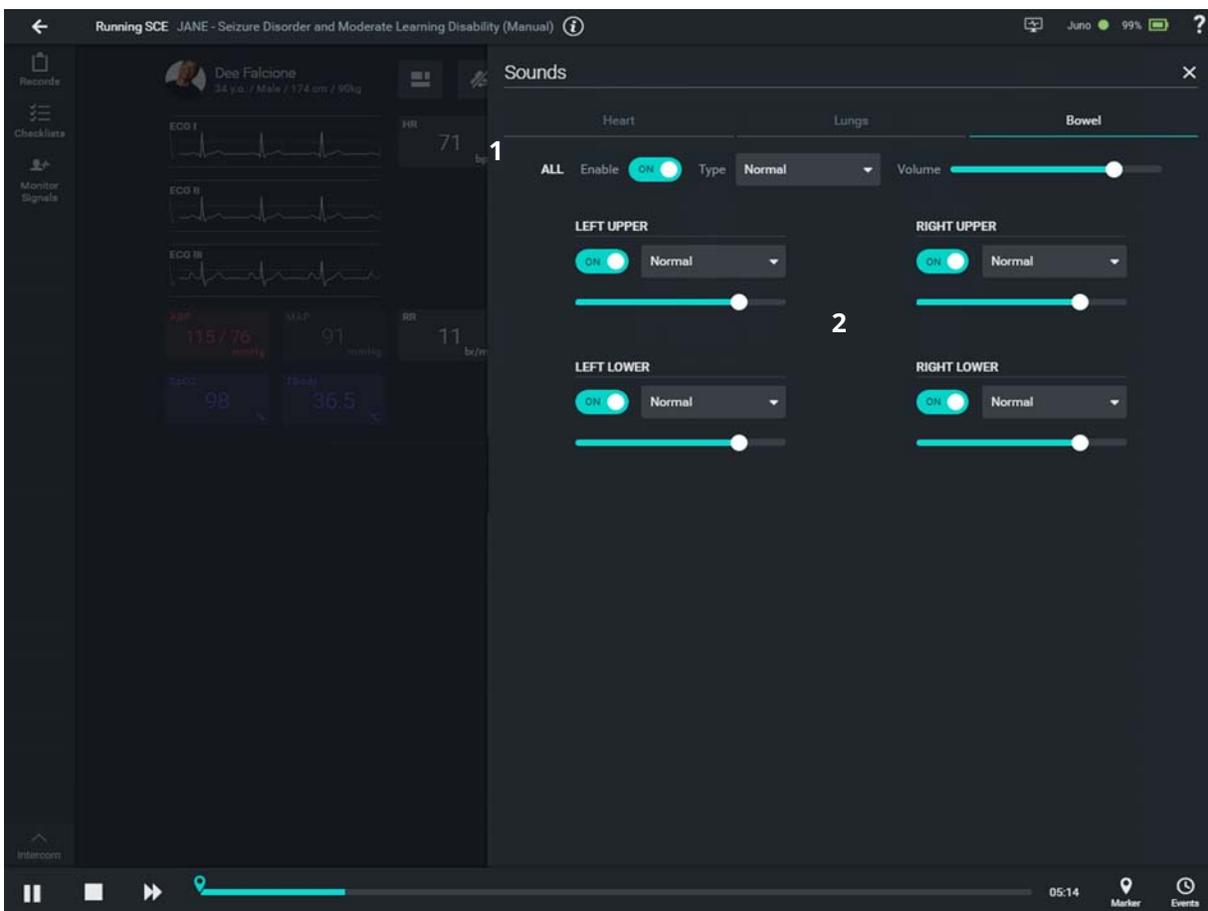


Controls - Center - Sounds - Lungs

Controls - Center - Sounds - Bowel

When the sounds popup is opened the Bowel tab is selected by default. The tabs available are Bowel, Lungs, and Heart.

1. Use the Master Controls to:
 - Enable/Disable ALL bowel sounds
 - Select the Type (Normal, Hypoactive, Hyperactive)
 - Adjust the Volume
2. Use the **On/Off** toggles, Type dropdowns, and volume sliders to adjust sounds in each quadrant

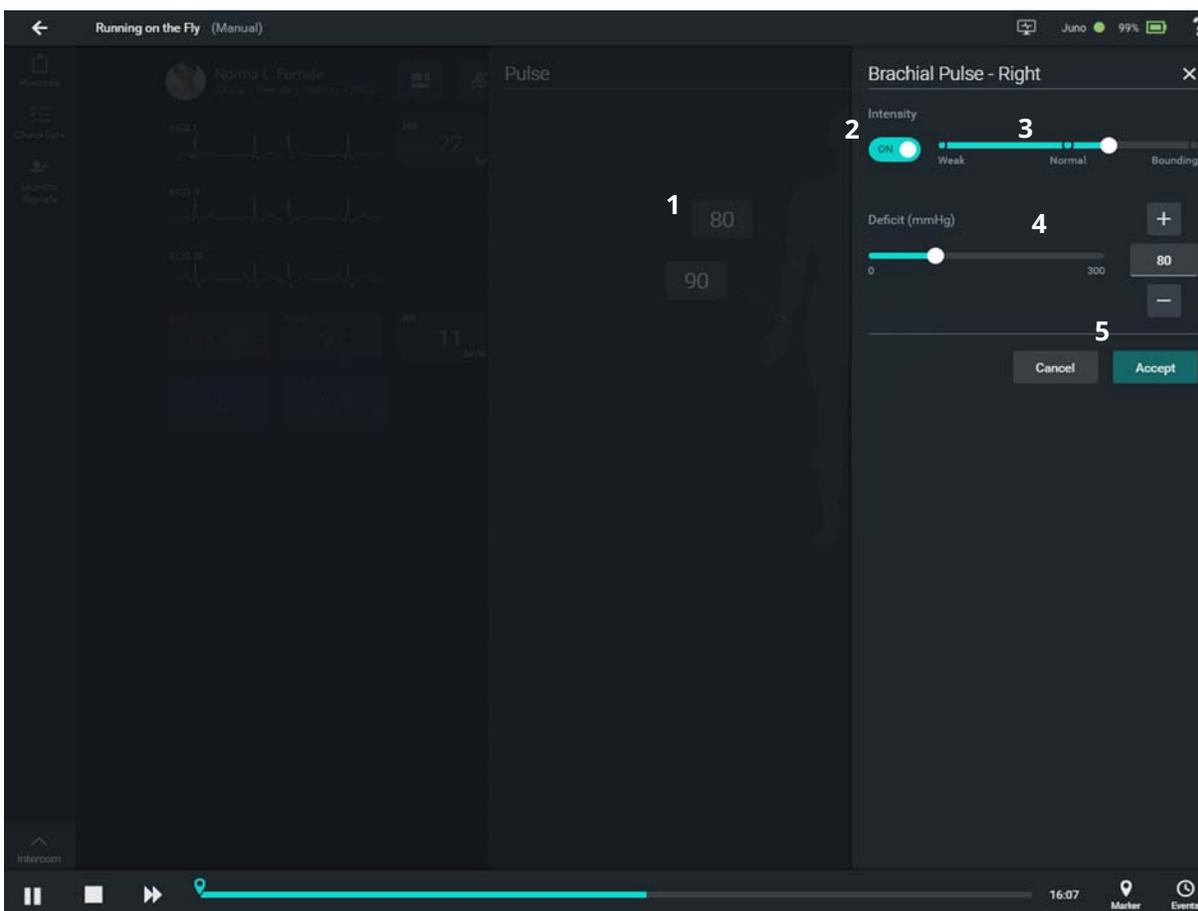


Controls - Center - Sounds - Bowel

Controls - Center - Pulse

When the Pulse popup is opened the patient's NIBP arm pulses are displayed.

1. Tap a pulse to open a pulse specific popup that allows you to view and adjust all of its current parameters
2. Use the **On/Off toggle** to toggle the pulse between on and off
3. Use the slider to adjust the pulse Intensity
4. Use either the slider or numeric controls to adjust the Deficit parameter
5. Tap **Accept** to apply your selections

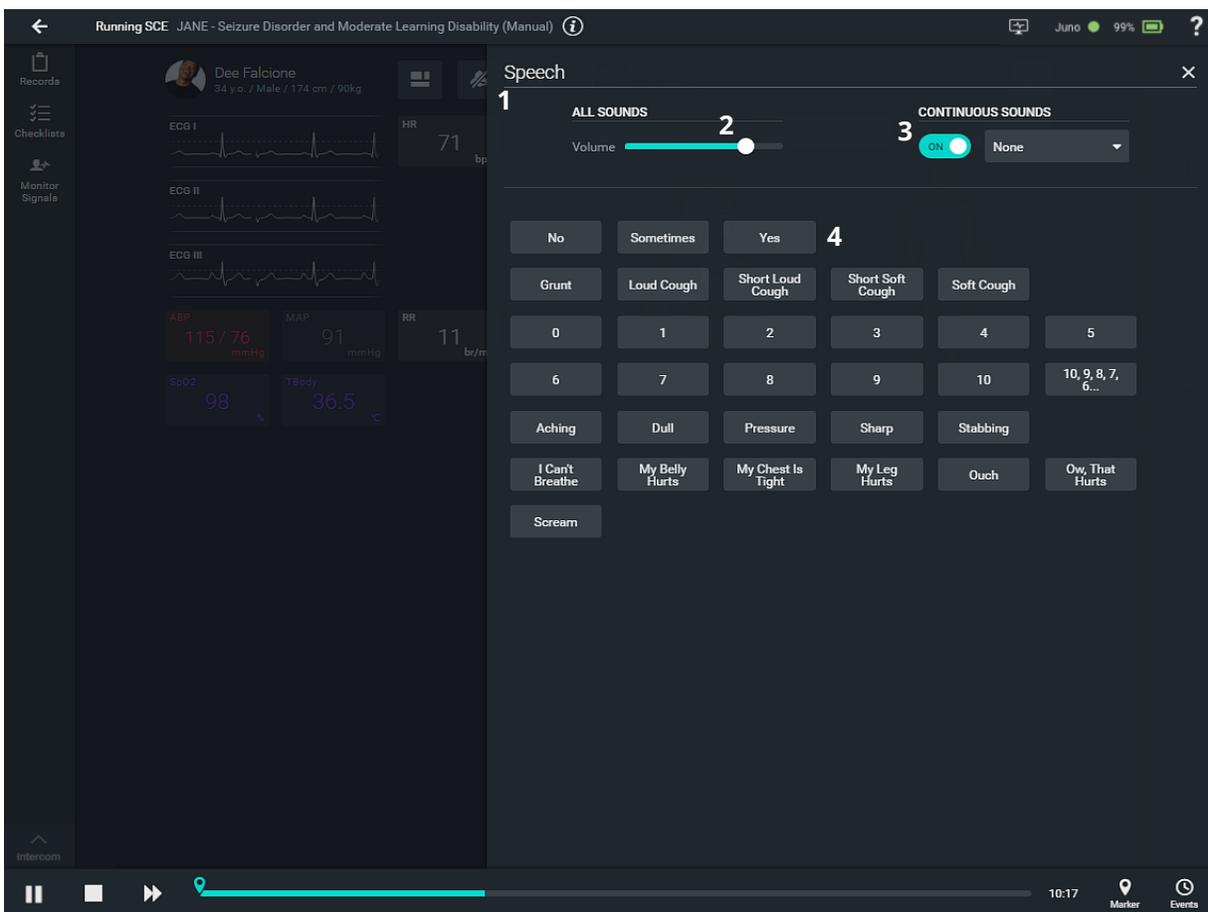


Controls - Center - Pulse

Controls - Center - Speech

The Speech popup includes all of the sounds that can be heard without an stethoscope. This includes the continuous sounds and throat sounds.

1. The Speech tab contains all default/custom, continuous sounds, and one-time speech
2. Use the Volume slider to adjust the volume for all continuous and one-time sounds on the tab
 Throat sounds have their own volume adjustment.
3. Use the On/Off toggle to toggle all sounds on the tab on and off
4. Tap a speech sound to play that sound once

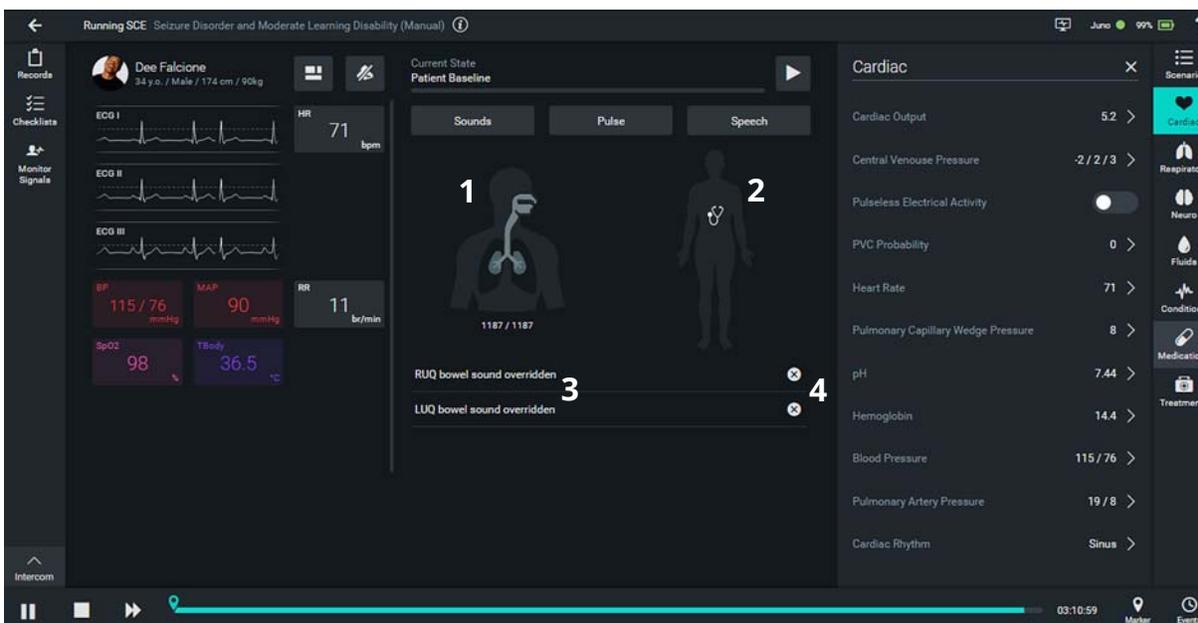


Controls - Center - Speech

Controls - Center - Patient Overview

The Patient Overview section of the Maestro interface displays an overview of the patient's current condition.

1. Current patient respiration is indicated
2. Overridden patient sounds are indicated by a stethoscope
3. Overridden parameters are listed in the lower portion of the panel
4. Tap the X associated with a parameter to remove the override

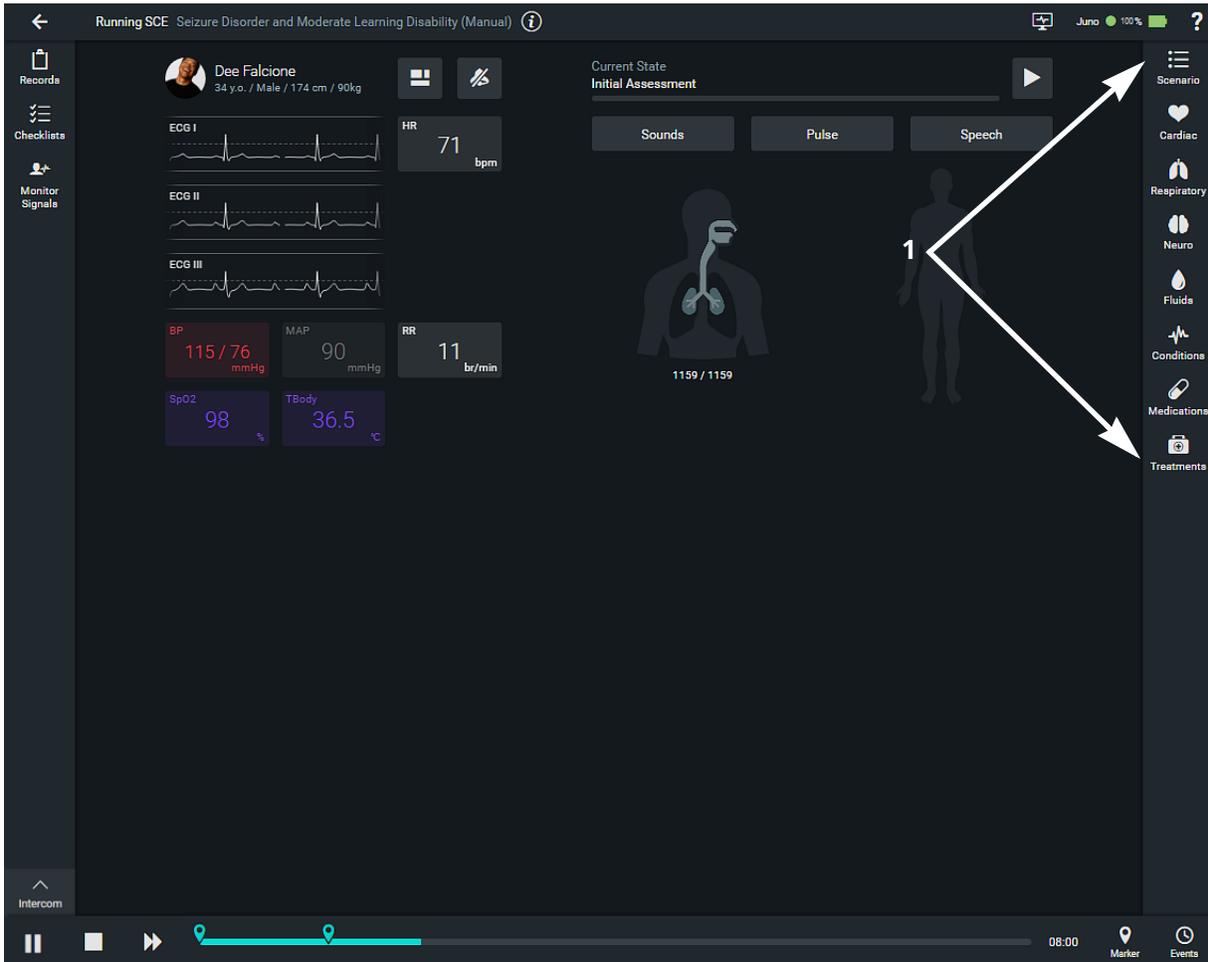


Controls - Center - Patient Overview

Controls - Right

1. Tap any of the right side control buttons to open a popup containing options for the selected control

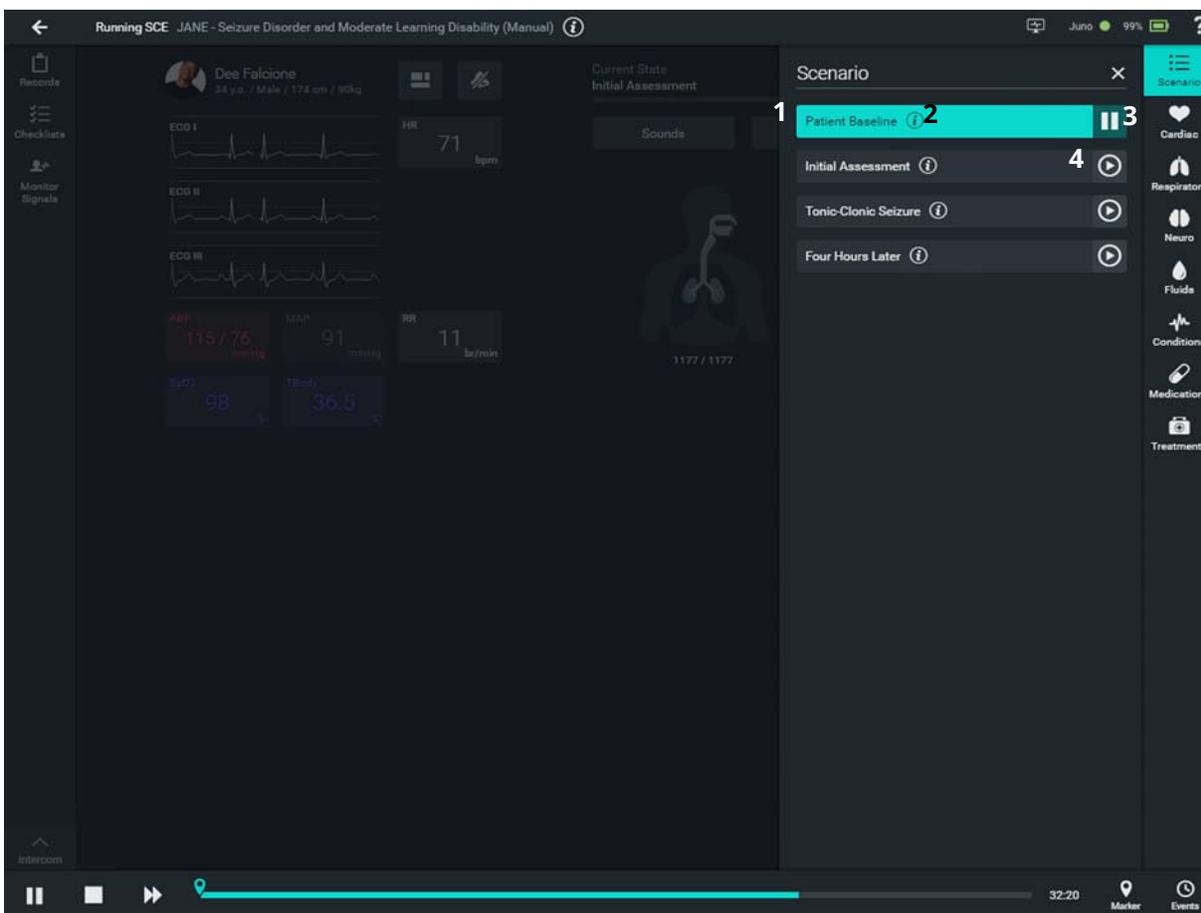
Close the popup by tapping the **X** or anywhere to the left of the popup.



Patient Vitals - Controls - Right

Controls - Right - Scenario

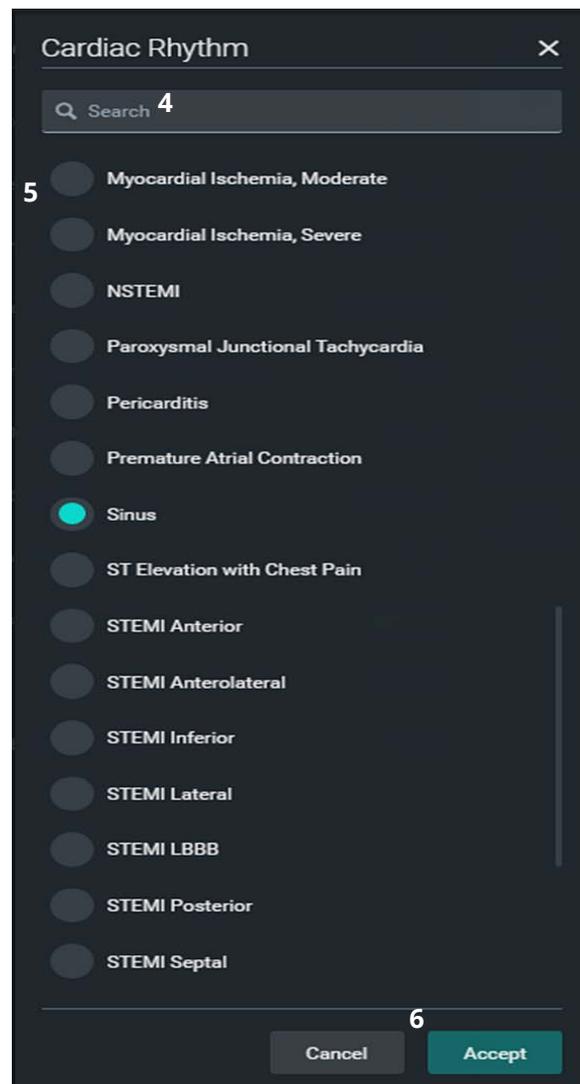
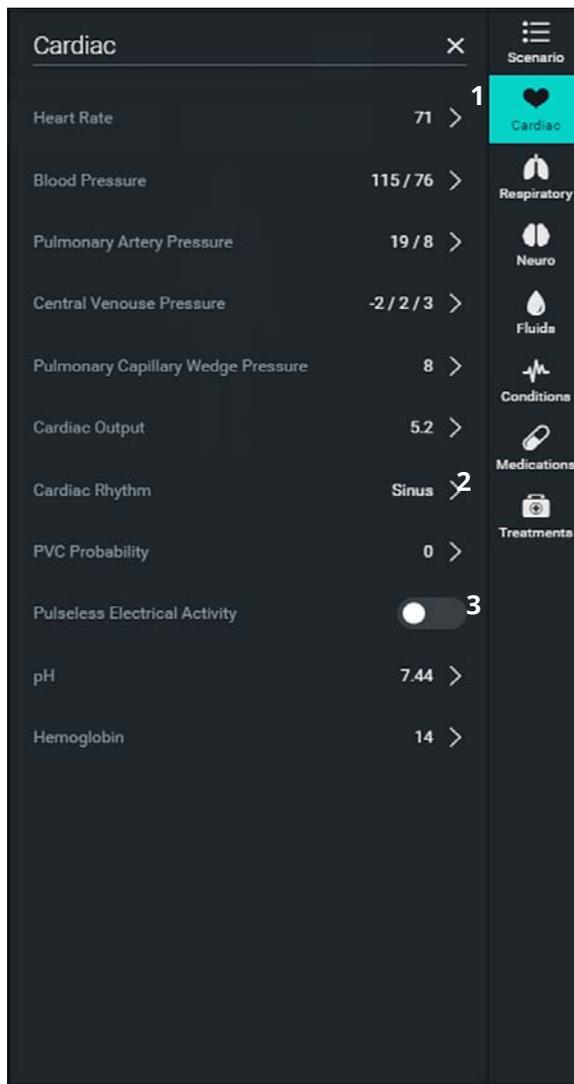
1. The patient's Current State is always highlighted
 When running an SCE the patient will always start on the Patient Baseline. You must manually transition to state 1.
2. Tap the **(i)** icon to view more information on the state
3. Tap the **Pause** icon to pause the current state
4. Tap **Next State** to move the scenario to that state



Controls - Right - Scenario

Controls - Right - Cardiac

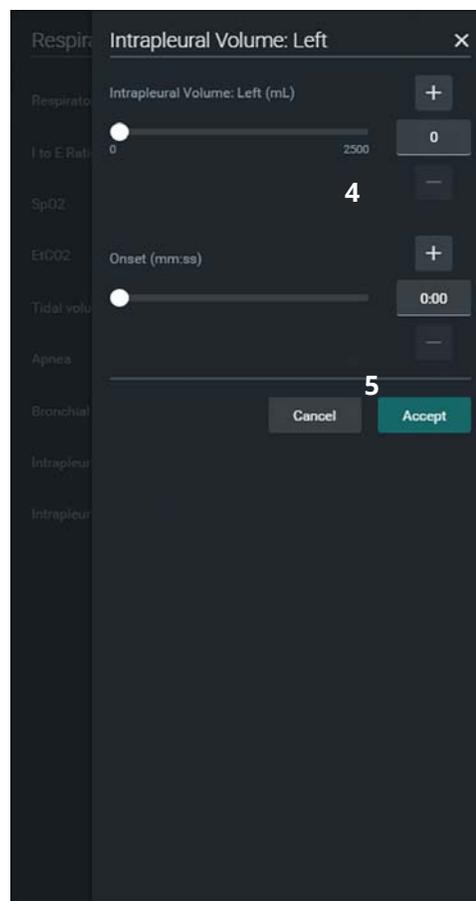
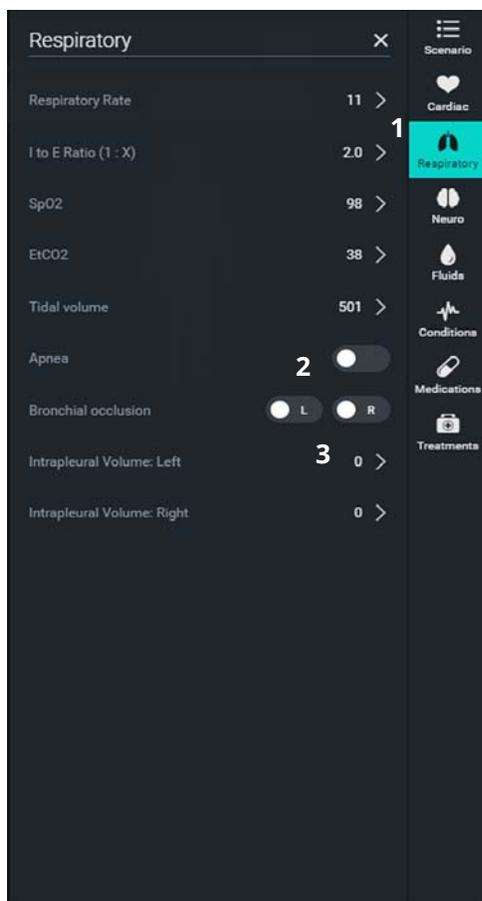
1. Tap **Cardiac** in the Right Controls to open the Cardiac popup
2. Tap the > to edit a parameter's settings
3. Use the **On/Off** toggles to turn cardiac parameters On or Off
4. Use the **Search** box to search for a specific parameter setting
5. Use the radio buttons to select a parameter setting
6. Tap **Accept** to apply the selection to the patient



Controls - Right - Cardiac

Controls - Right - Respiratory

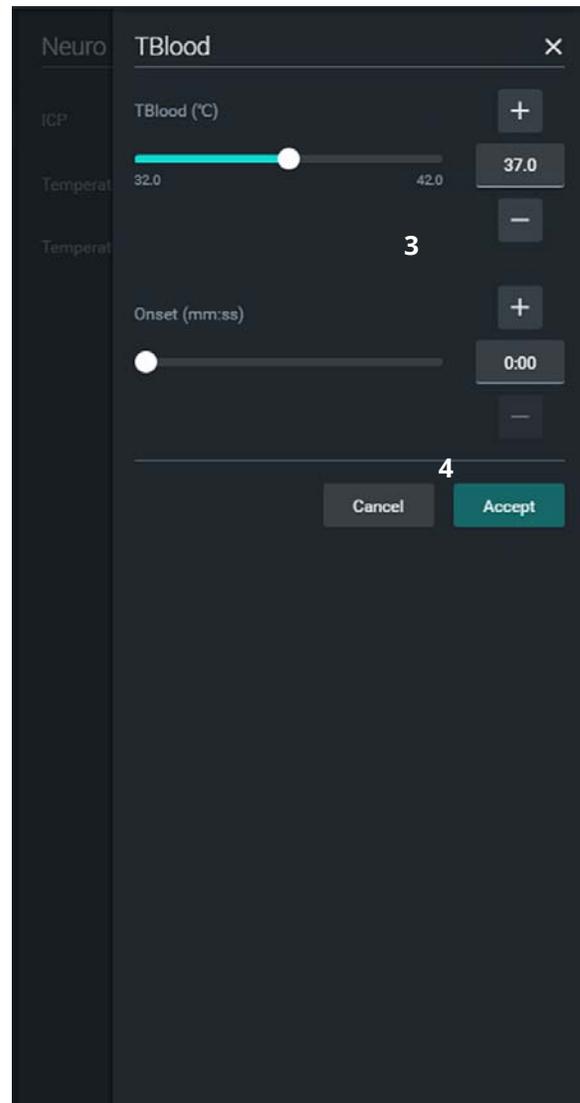
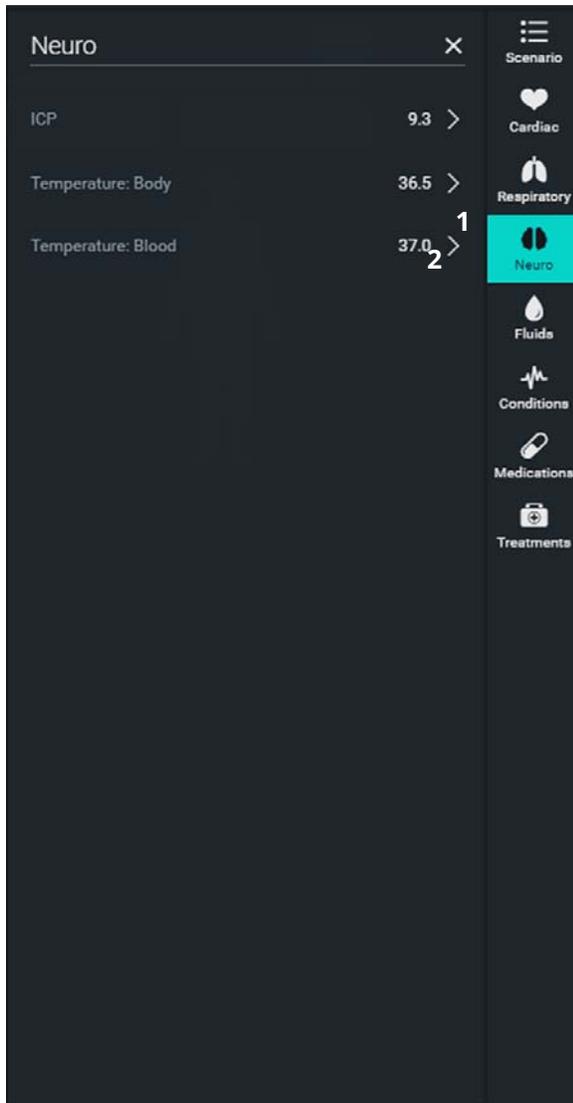
1. Tap **Respiratory** in the Right Controls to open the Respiratory popup
2. Use the **On/Off** toggles to turn respiratory parameters On or Off
3. Tap the > to edit a parameter's settings
4. Use the sliders or numeric controls to adjust parameter settings
5. Tap **Accept** to accept your adjustments and apply them to the patient



Controls - Right - Respiratory

Controls - Right - Neuro

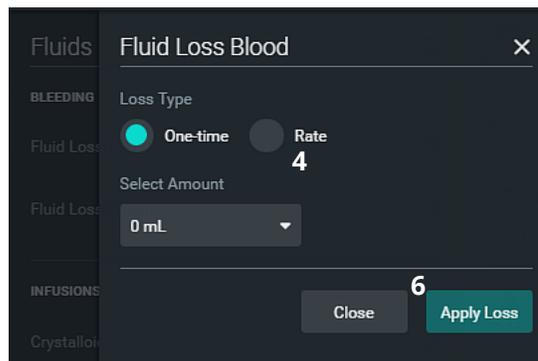
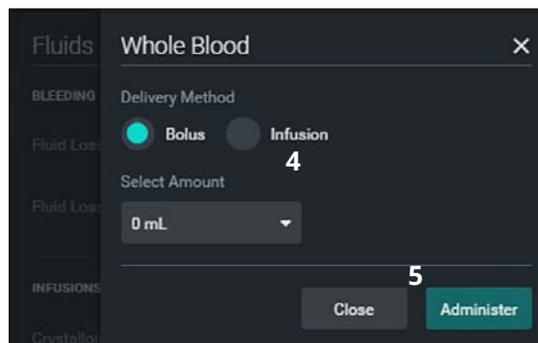
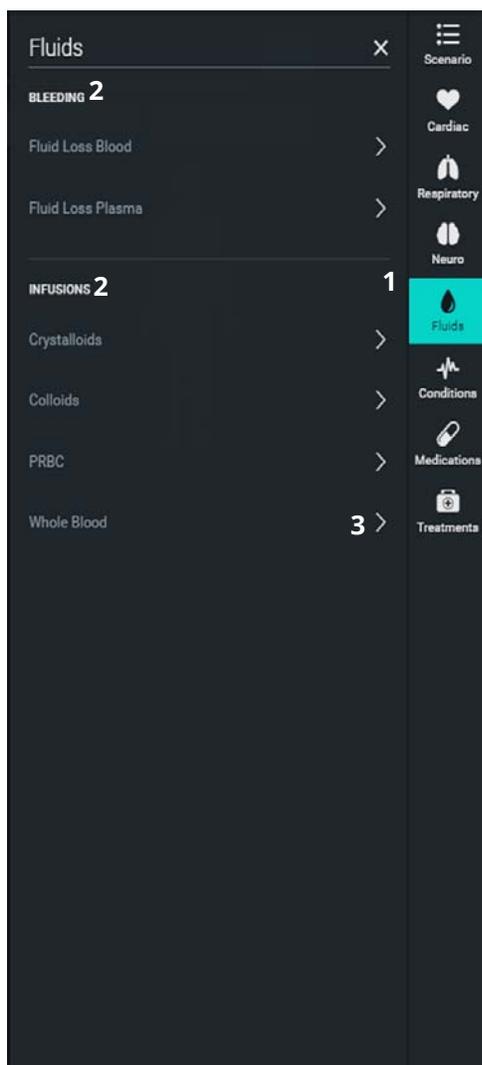
1. Tap **Neuro** in the Right Controls to open the Neuro popup
2. Tap the > to edit a parameter's settings
3. Use the sliders and numeric controls to adjust parameters
4. Tap **Accept**



Controls - Right - Neuro

Controls - Right - Fluids

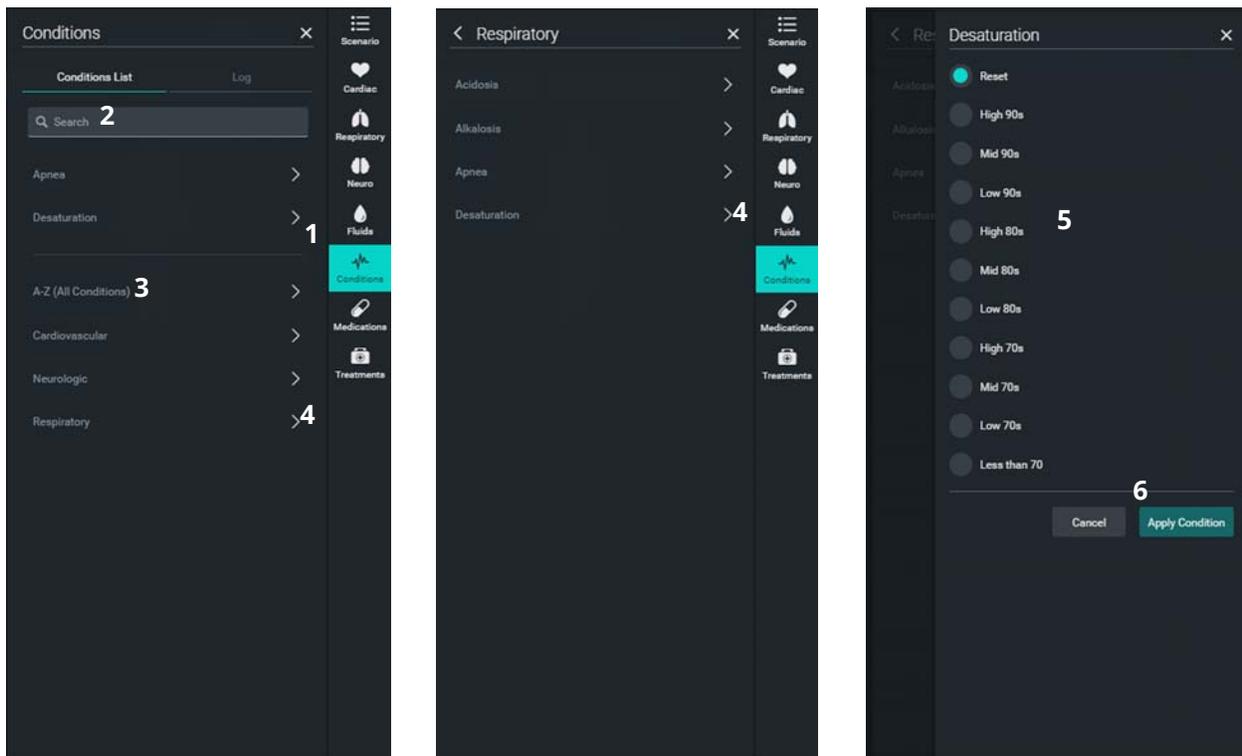
1. Tap **Fluids** in the Right Controls to open the Fluids popup
 2. The sections available on the Fluids tab are Bleeding and Infusions:
 3. Tap the > to set options for Bleeding or Infusion parameters
 4. Use the controls on the parameter popup to adjust options
 5. Tap **Administer** to infuse blood
 6. Tap **Apply Loss** to initiate blood loss
- Tap **Administer** or **Apply Loss** again to repeat treatment or Blood Loss.



Controls - Right - Fluids

Controls - Right - Conditions

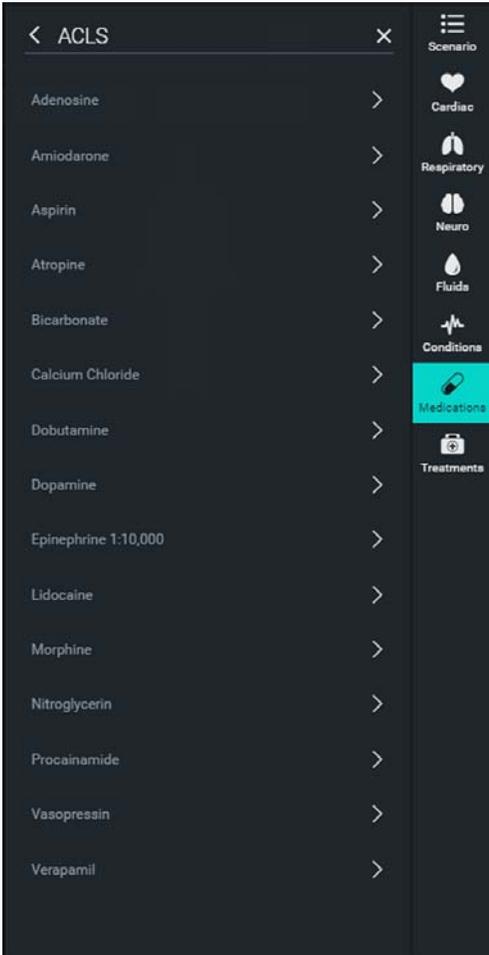
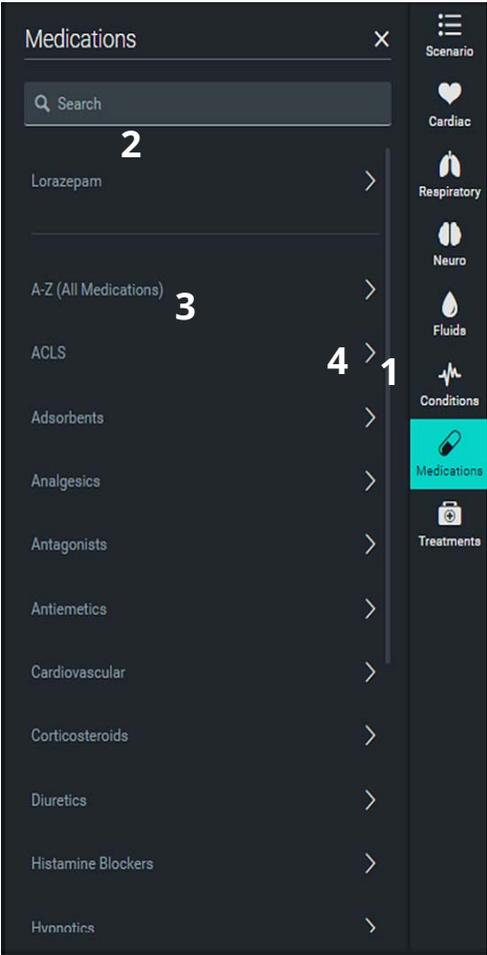
1. Tap **Conditions** in the Right Controls to open the Conditions popup
2. Tap the **Search** box to search for a specific condition
Maestro searches as you type.
3. **A-Z (All Conditions)** contains a listing of all conditions and condition categories
4. Tap the > for a parameter to adjust its options
5. Use the controls available to adjust parameter settings
6. Tap **Apply Condition**



Controls - Right - Conditions

Controls - Right - Medications

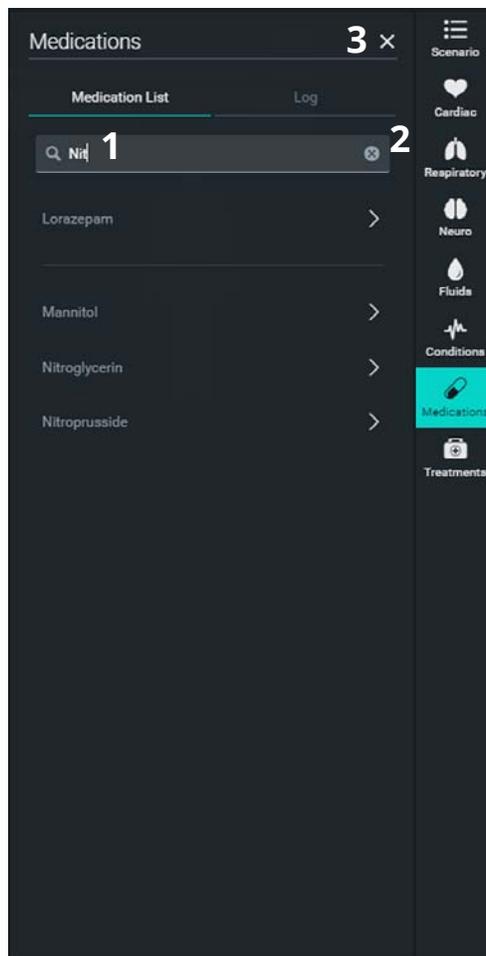
- 1. Tap Medications in the right controls to open the Medications popup
- 2. Use the **Search** tool to search for medications and medication categories
- 3. Tap the **A-Z (All Medications)** arrow to view all medications programmed into Maestro
- 4. Tap the **ACLS** arrow to view a listing of all ACLS Medications programmed into Maestro



Controls - Right - Medications

Controls - Right - Medications - Search

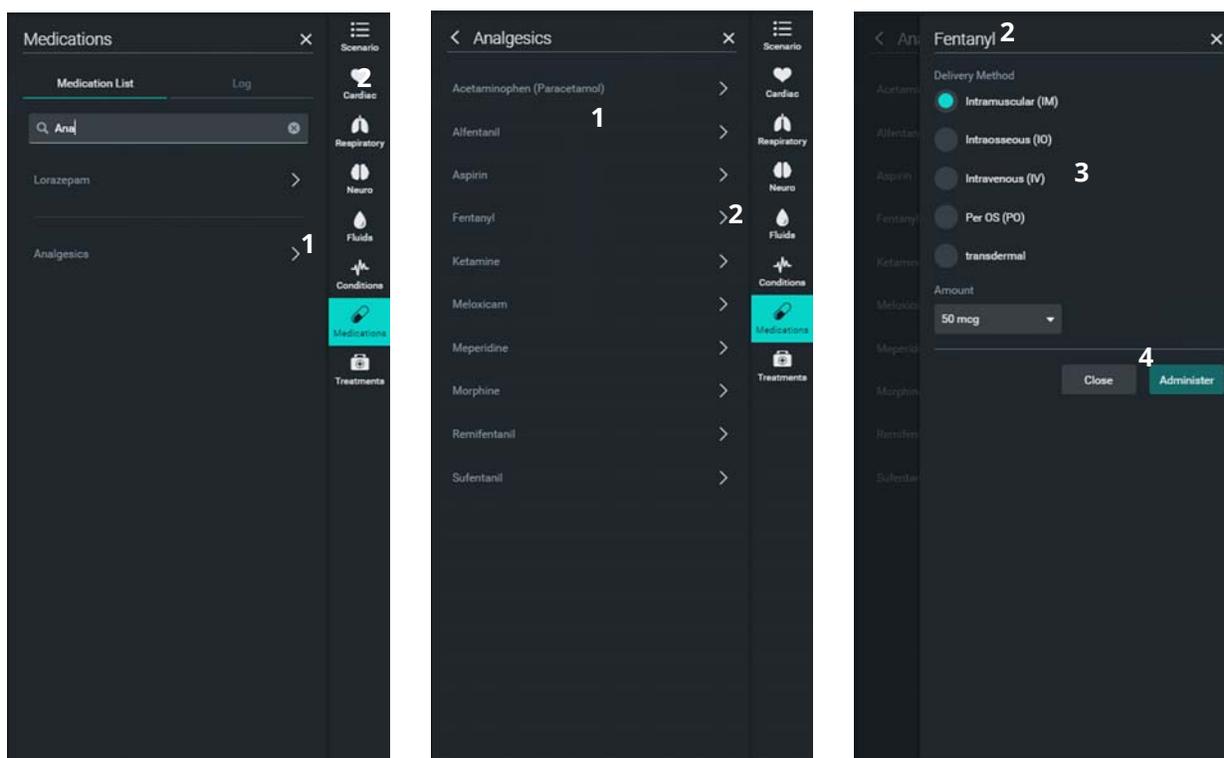
1. Tap in the the **Search** box to activate the search
As you enter text in the Search box, Maestro will display medications that contain the characters you entered.
2. Tap the **X** in the Search Box to stop the search and clear the contents of the search box
3. Tap the **X** in the upper right to close the popup



Controls - Right - Medications - Search

Controls - Right - Medications - Category

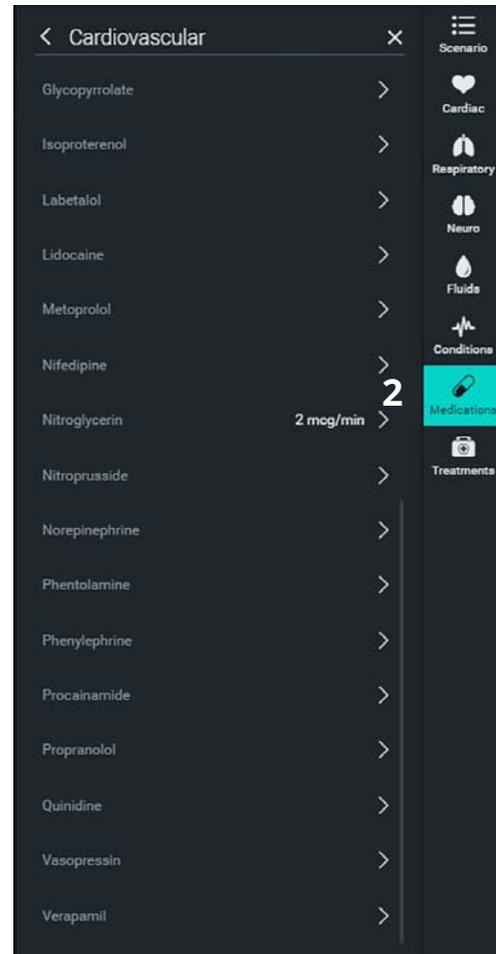
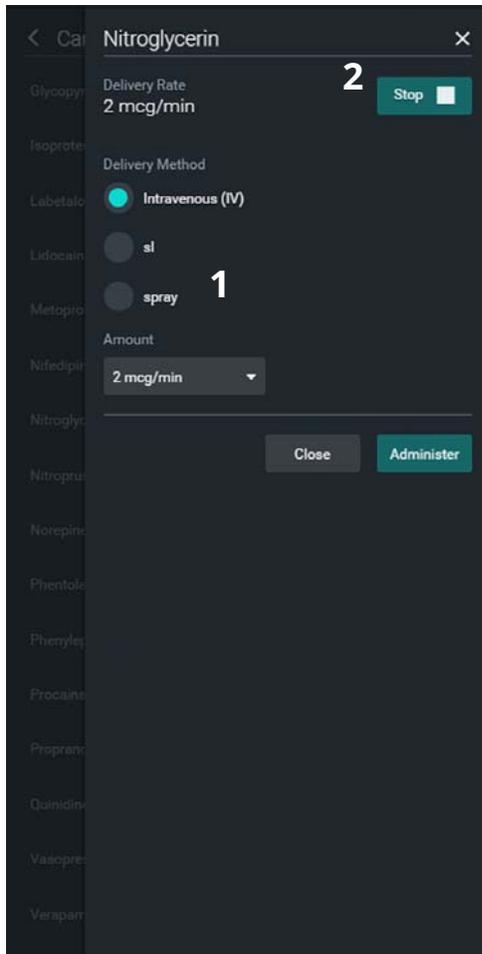
1. Tap the arrow next to a **Category** name to view an alphabetical listing of all medications in that category
 2. Tap the > next to a medication to adjust its administration settings
 3. Use the controls to adjust the administration settings for the medication
 4. Tap Administer to administer the medication
- The selected medication will be administered according to the selected parameters each time the Administer button is tapped.



Controls - Right - Medications - Category

Controls - Right - Medications - Active Medication

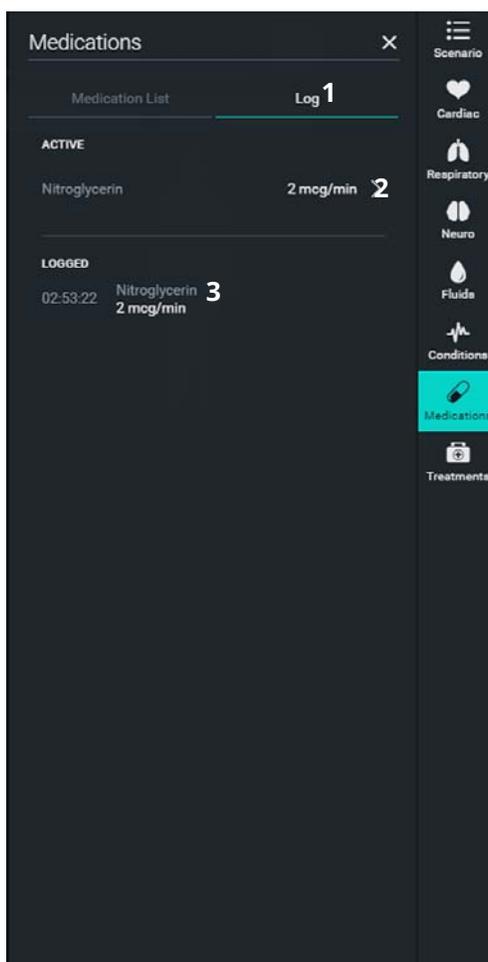
1. The active delivery rate is displayed on the medication popup, and the concentration amount is displayed
 2. Tap **Stop** to stop the delivery
- When a delivery method that has a rate has been selected, the rate appears in the medication list while it is active



Controls - Right - Medications - Active Medication

Controls - Right - Medications - Log

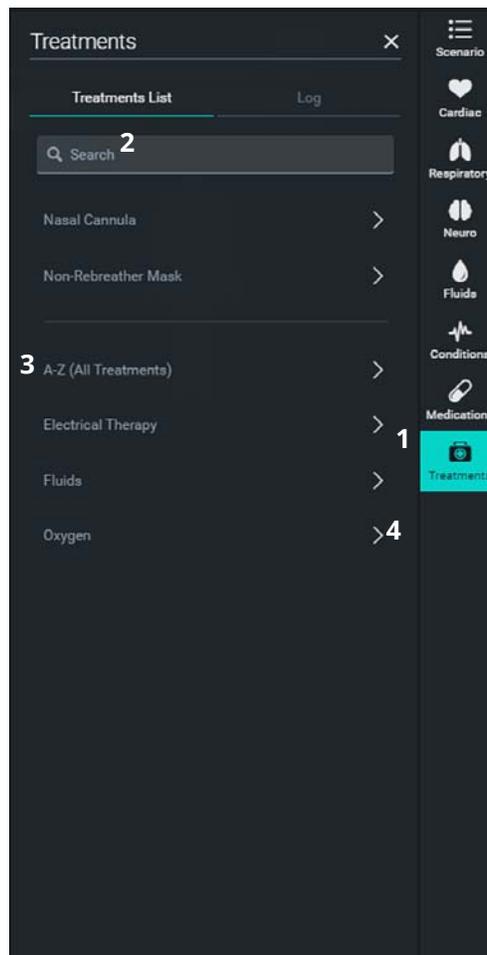
1. Access the medication log by tapping the **Log** tab at the top of the Medication tab
2. Tap a **Medication** to open the edit popup and make change to the rate, or administer more
3. The Medication Log contains:
 - **Timestamp**
 - **Name** of the medication
 - Description: **Amount** of medication (**Delivery Method**) or, delivery **Stopped**



Controls - Right - Medications - Log

Controls - Right - Treatments

1. Tap **Treatments** in the Right Controls to open the Treatments popup
2. Tap the **Search** box and begin typing to have Maestro search for a specific treatment or treatment category
3. **A-Z (All Treatments)** contains a list of all treatments and treatment categories in Maestro
4. Open a popup containing the settings for a treatment by tapping the arrow (>) for that treatment

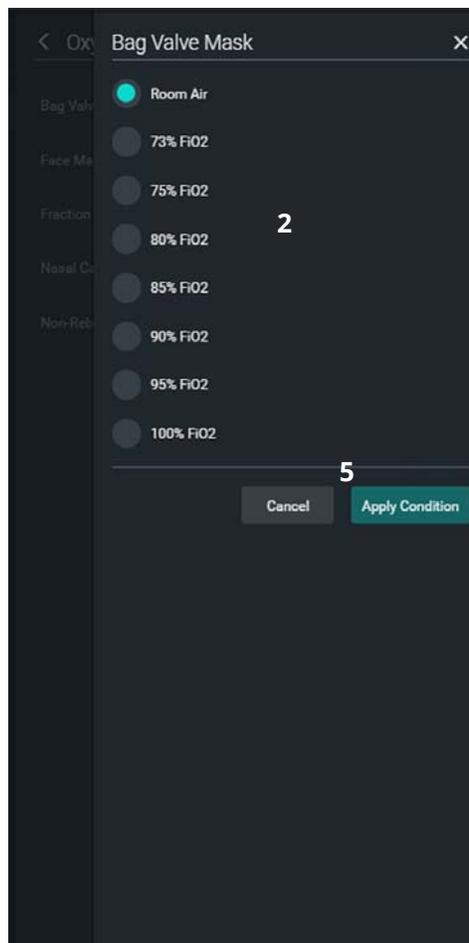
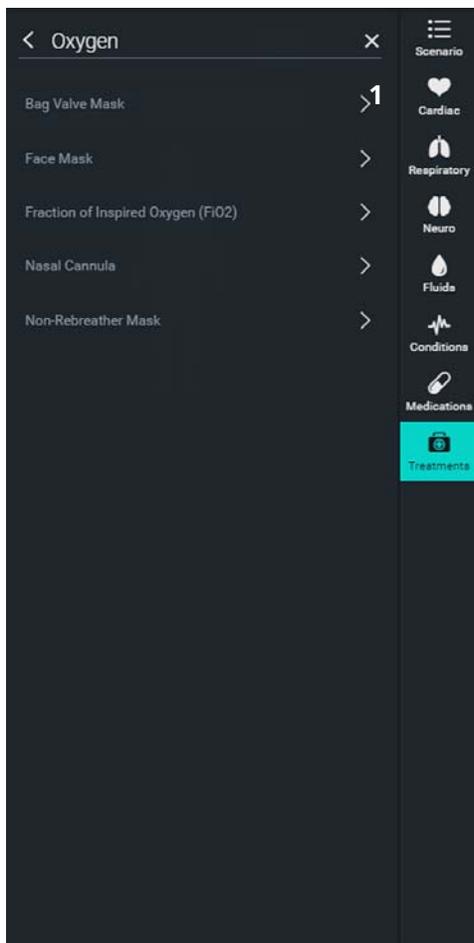


Controls - Right - Treatments

Controls - Right - Treatments - Oxygen

All Oxygen treatments simply modify the current Fraction of Inspired Oxygen Value.

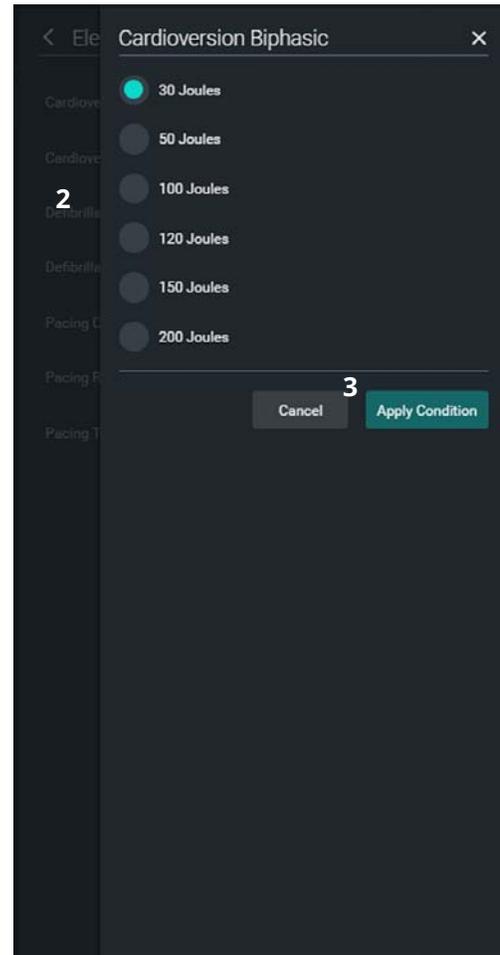
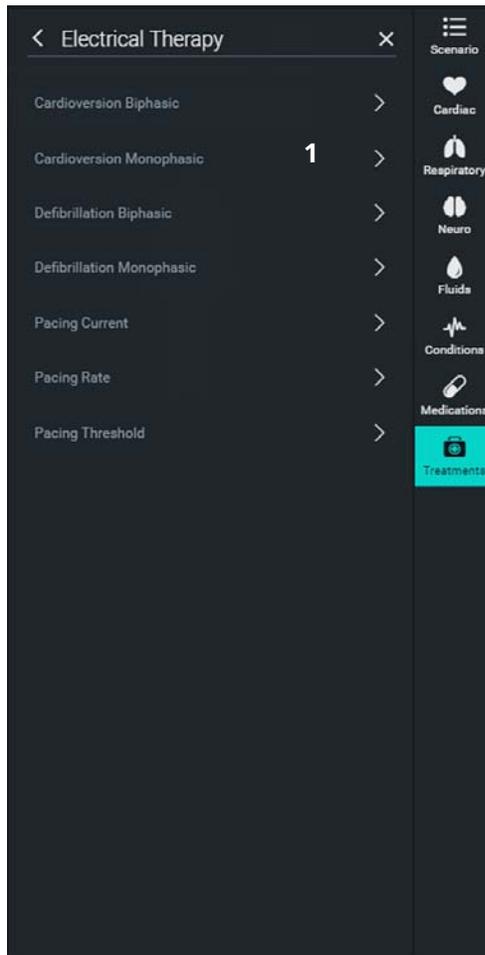
1. Tap a treatment's > arrow to open a popup containing that treatment's settings
2. Make selections on the popup
3. Tap Apply Condition to apply the treatment using the selected parameters



Controls - Right - Treatments (Oxygen)

Controls - Right - Treatments - Electrical Therapy

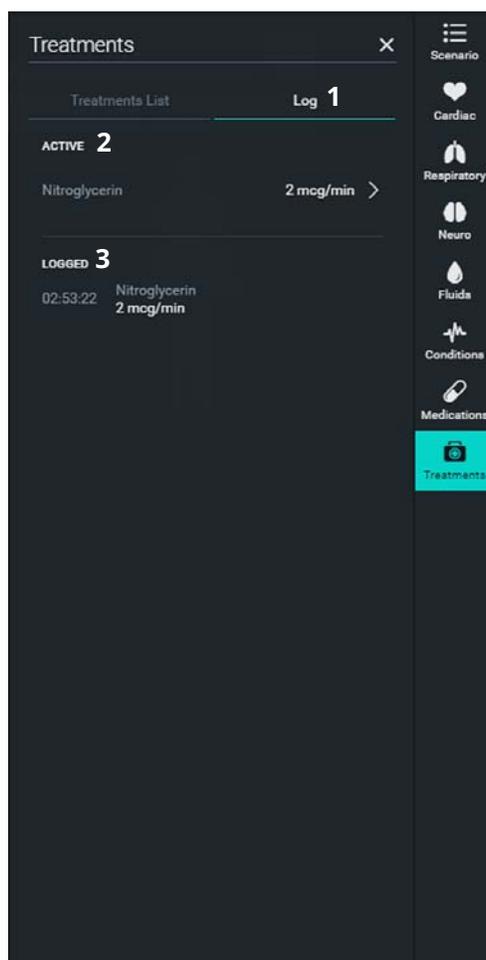
1. Tap the > next to a treatment to adjust treatment settings
2. Use the controls to adjust treatment options
3. Tap Apply Condition to apply the treatment using the selected options



Controls - Right - Treatments (Electrical Therapy)

Controls - Right - Treatments - Log

1. Access the treatment log by tapping the Log tab at the top
2. The Active section lists all active treatments
3. The Logged section includes:
 - Timestamp
 - Name of Treatment
 - Description: Parameter Setting, or Amount + Duration, or Type of treatment and Setting



Controls - Right - Treatments (Log)

CAE HEALTHCARE ASSURANCE PROGRAMS

General Information

CAE Healthcare patient simulator products come with a one-year Assurance support and maintenance plan. All plans begin at the date of shipment or CAE Healthcare installation. You may upgrade your first-year plan to an enhanced plan and receive remedial and planned maintenance. To prevent equipment downtime and delays after the plan expires, CAE Healthcare encourages customers to purchase extended Assurance plans for all subsequent years.

Units Out of Plan

For units no longer under an Assurance plan that require repairs, the Time and Materials service plan applies. For more information, see *Time and Materials* section of this Care and Maintenance section.

To place an out-of-plan unit under a support and maintenance plan, CAE Healthcare reserves the right to have the patient simulator inspected by a CAE Healthcare-approved technician at the customer's expense. If necessary, the unit would have to be repaired at the customer's expense prior to issuance of a plan.

The repairs required as the result of the examination will be quoted on a time and material basis.

Plan Period

Assurance plans are not ordinarily offered for periods of less than one year. However, multiple-year plans may be arranged for up to an additional three years. Discounts are available for purchase of multiple-year plans.

Limitations of Plan

Your exclusive remedy for any defective patient simulators is limited to the repair or replacement of the defective patient simulator.

CAE Healthcare may elect which remedy or combination of remedies to provide at its sole discretion. CAE Healthcare shall have a reasonable time after determining that a defective material exists to repair or replace the identified defective material. CAE Healthcare's replacement material will be manufactured from new and/or serviceable parts. CAE Healthcare's Assurance plan applies to repaired or replaced materials for the balance of the applicable period of the original support and maintenance plan or ninety days from the date of shipment of a repaired or replaced material, whichever is longer. CAE Healthcare warrants its labor for 30 days or the balance at the applicable period of the original support and maintenance plan, whichever is greater.

CAE Healthcare shall not be liable under this Assurance plan for incidental or consequential damages, or in the event of any unauthorized repairs or modifications have been made or attempted, or when the product, or any part thereof, has been damaged by accident, misuse or abuse. This plan does not cover normal wear or tear, staining, discoloration or other cosmetic irregularities that do not impede or degrade product performance. Any damage or malfunction as a

result of the installation of software or hardware, not authorized by CAE Healthcare, will be repaired under the Time and Materials service plan (see *Time and Materials* section).

CAE Healthcare's Assurance plans do not cover products that have been received improperly packaged, altered or physically damaged. Products will be inspected upon receipt.

Some states in the USA do not allow the exclusion or limitations of incidental or consequential damages, so the limitations above may not apply to you. The Assurance plan gives you specific legal rights and you may also have other rights, which vary from state to state.

Return Materials Authorization (RMA)

No product may be returned directly to CAE Healthcare without first contacting CAE Healthcare for an RMA number. If it is determined that the product may be defective, the customer will be given an RMA number and instructions for returning the product. An unauthorized return (e.g., one for which an RMA number has not been issued) will be returned at the customer's expense. Authorized shipments are to be shipped prepaid to the address on the RMA. The original box and packaging materials should be kept for storing or shipping your product. To request an RMA, please contact Customer Service.

Time and Materials

For those systems not under a support and maintenance plan, service will be provided as required on a Time and Materials basis:

The principal period of on-site support (customer's local time) is:

- Monday through Friday, 8:00 AM to 5:00 PM (customer's time zone)
- Holiday and non-business days excluded
- Support outside principal period is billed at the premium rate (hourly rate x 1.5)

A minimum of 48 hours notice is required for scheduling an on-site support call. Urgent on-site support with less than 48 hours notice will be charged at the premium hourly rate.

On-site time is described as the time period commencing from arrival at customer site through departure from customer site.

System Software Upgrade Support

Customers with current support and maintenance plans are entitled to receive updates and upgrades to applications software previously purchased. Installation of the system software is the user's responsibility.

The System Software Upgrade Support includes software upgrades for base software and purchased optional learning modules.

NOTE: *This does not apply for major upgrades or technological enhancements.*

Time and Materials

For those systems not under a support and maintenance plan, service will be provided as required on a Time and Materials basis:

The principal period of on-site support (customer's local time) is:

- Monday through Friday, 8:00 AM to 5:00 PM (customer's time zone)
- Holiday and non-business days excluded

Support outside principal period is billed at the premium rate (hourly rate x 1.5)

A minimum of 48 hours notice is required for scheduling an on-site support call. Urgent on-site support with less than 48 hours notice will be charged at the premium hourly rate.

On-site time is described as the time period commencing from arrival at customer site through departure from customer site.

How to Contact Customer Service and Training

For customer service, please contact CAE Healthcare.

CAE Healthcare Customer Service Headquarters - United States and Latin America

Monday - Friday from 7:00 a.m. to 6:00 p.m. ET
Toll Free:+1 (866) 462-7920
24-hour Hotline:+1 (941) 342-5605
Fax:+1 (941) 342-5600
Email:customerservice@caehealthcare.com
Website: www.caehealthcare.com

CAE Healthcare Customer Service - Canada

Monday - Friday from 8:00 a.m. to 5:00 p.m. ET
Toll Free:+1 (877) 223-6273
Email:can.service@caehealthcare.com

CAE Healthcare Customer Service - Europe, Middle East and Africa

Monday - Friday from 8:00 a.m. to 5:00 p.m. CET
Phone:+49-(0) 6131 4950354
Fax:+49 (0) 6131 4950351
Email:international.service@caehealthcare.com

CAE Healthcare Customer Service - United Kingdom and Ireland

Monday - Friday from 9:00 a.m. to 5:00 p.m. GMT
Phone:+44(0)800-917-1851
Email:uk.service@caehealthcare.com

Principal hours of operation exclude holidays and non-business days.

IMPORTANT: *Technical and clinical phone support are available ONLY for products with active support and maintenance plans.*



For more information about CAE Healthcare products,
contact your regional sales manager

or the CAE Healthcare distributor in your country, or
visit caehealthcare.com.

Tel +1 941-377-5562 or 866-233-6384

For customer service, please contact CAE Healthcare.

**Customer Service Headquarters - United States and
Latin America**

Monday - Friday from 7:00 a.m. to 6:00 p.m. ET

Phone 1-866-462-7920

Email: customerservice@caehealthcare.com

Customer Service - Canada

Monday - Friday from 8:00 a.m. to 5:00 p.m. ET

Phone 1-877-223-6273

Email: can.service@caehealthcare.com

**Customer Service - Europe, Middle East,
Africa, India, Asia and Australia**

Monday - Friday from 8:00 a.m. to 5:00 p.m. CET

Phone +49 (0) 6131 4950354

Email: international.service@caehealthcare.com

Customer Service - United Kingdom and Ireland

Monday - Friday from 9:00 a.m. to 5:00 p.m. GMT

Phone +44 (0)800-917-1851

Email: uk.service@caehealthcare.com

