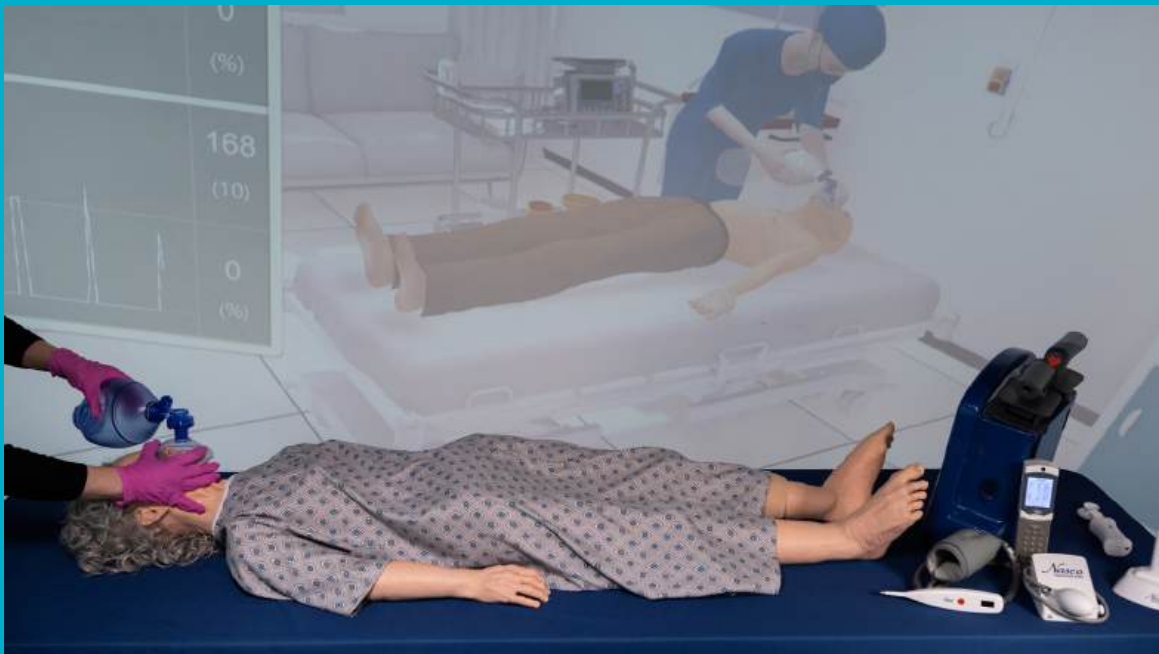


Instruction Manual

Nasco Healthcare Next Gen TERi™ & DANI™ Immersive Experience



LF04603(M) – NextGen TERi™ Immersive Experience

LF04603L(M) – NextGen TERi™ Immersive Experience, Large Room

LF04607(M) – NextGen DANI™ Immersive Experience

LF04607L(M) – NextGen DANI™ Immersive Experience, Large Room

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NextGen TERi™ & DANI™ Immersive prepares learners for real-world patient care with training solutions that evolve from essential skills to advanced clinical procedures. From basic patient care and vital signs to EMS skills such as airway management, ultrasound, and defibrillation practiced in interactive, team-based scenarios, this product supports all kinds of curriculum needs.

Immersive Configurations

TERi™ Versions:

LF04603(M) – NextGen TERi™ Immersive Experience

LF04603L(M) – NextGen TERi™ Immersive Experience, Large Room

DANI™ Versions:

LF04607(M) – NextGen DANI™ Immersive Experience

LF04607L(M) – NextGen DANI™ Immersive Experience, Large Room

Projector Options (sold separately):

LF04629 – Standard Cross-Room Projector Option

LF04630 – Advanced Short-Throw Projector Option

What's Included

Hardware

- TERi™/DANi™ Patient Skills Trainer + integrated sensors
- 14.4" Patient Monitor w/Case
- 12.4" Controller Tablet
- WiFi Router
- 24" Monitor
- USB Keyboard & Mouse
- Speakers
- Server
- Touchscreen Lasers & Cameras
- Standard Cross-Room OR Advanced Short Throw Projectors (purchased separately)

Software (Pre-Installed, 5 yr. License)

- Patient Monitoring System Software
- Controller System Software
- Immersive Software
- Management Software
- Laser Configuration Software

Simulation Devices

- BVM
- ECG Box & Leads
- SP02 Clip
- Thermometer
- BP Cuff & Module
- Stethoscope Module
- Ultrasound Probe
- Percussion Device
- Defibrillation Handles
- Blood Gas Analyzer
- Glucometer

Also included: all required accessories including, but not limited to: remotes, connective cables, charging cables, batteries and power cables.

Contents will be shipped in the following configuration:

- Box 1: Simulation Devices & Patient Monitor Tablet
- Box 2: Simulation Devices, Wi-Fi Router, USB Keyboard and Mouse
- Box 3: Next Gen TERi™/DANi™ Manikin, BVM, Speaker, and Control Tablet + Accessories.
- Box 4: Projectors with relevant accessories
- Box 5: 24" Monitor
- Box 6: Server with relevant accessories
- Box 7: Laser & camera setup with relevant accessories

Patient Care Skills:

- Grooming, bathing, daily living assistance, movement assistance & patient positioning
- Skin care, tracheostomy and wound care
- Pelvic & prostate exams

Airway & Respiratory

- Intubation
- Ventilation with feedback
- CPR with feedback
- Normal & abnormal lung sounds

Vitals Monitoring:

- Blood pressure
- Temperature
- SpO2

Vascular Access & Injections

- ECG placement and monitoring
- Normal & abnormal heart sounds
- Percussion with feedback
- Pulse palpation
- Defibrillation
- Ostomy care, stomas, pericare, and more
- Urinary catheterization
- IV arm
- Intramuscular injections with feedback
- Gastrostomy and NG tube insertion

Diagnostics & Imaging:

- Blood gas analysis
- Blood glucose analysis
- Ultrasound (neck with IV, abdomen, bladder)

Other Features:

- Normal & abnormal bowel sounds
- Palpation with feedback

Scenario Control & Feedback

- Immersive scenarios & environment
- Logs and provides real-time feedback

Pre-Setup Requirements

During the purchase process users are required to select both a projector option and a laser configuration option (through Nasco Healthcare).

Laser setup and configuration are required for touchscreen operation on the walls of the immersive room. Two laser options are available; selection is dependent on room size. For rooms under 15' x 15', the standard laser option is recommended. This option comes with three lasers, three cameras, and all relevant connective cables. For rooms 15' x 15' or larger, the Large Room setup is recommended. This option comes with six lasers, three cameras, and all relevant connective cables. For rooms larger than 20' x 20', consultation is recommended.

The following projector options are made available by Nasco Healthcare:

Description	Projector	Basic Specs
Standard Cross Room Projector	3BenQ AH700ST Projector	1920x1080 DLP 4,000 lumens 1.20:1 zoom 7.3 lbs.
Advanced Short Throw Projector	Hisense L9Q Projector	3840x2160 DLP 5000 lumens 0.18:1 zoom 28.4 lbs

The standard projector option features cross-room projectors positioned opposite the wall they project onto. The short throw utilizes projectors that project down onto the same wall they are mounted on. Both come with 3 projectors as well as mounting equipment and all necessary connective cables. Short throw projectors have the benefit of minimizing shadowing. Both projector options are specially configured to work with the Immersive software and product, and therefore must be purchased through Nasco Healthcare.

Both lasers and projectors will need to be installed and configured to the room prior to further product setup.

Immersive Room Setup

- Unbox the server and plug in to power using included power cable.
- Plug in 24" monitor to power and connect to server via included HDMI cable.
- Connect wireless keyboard and mouse to server via USB plug-in.
- Connect speakers to power with included power cord. Connect to server via included USB cable to activate system sound.
- Ensure all lasers are installed and connected to power; connect all cameras to server via included USB cables.
- Ensure all projectors are connected to power and connect to server via included DisplayPort cables.
- Position the Wi-Fi router where desired, connect to power, and connect to the server via included ethernet cable.
- Power on the server using power button on front of server. Indicator light on front of server should illuminate and monitor should also turn on.
- Turn on projectors individually by using the included projector remotes. Point each remote at its corresponding projector and press the green power button on the top left of the remote. (Note: You may use any of the remotes to turn on any of the projectors). Indicator light on bottom of projectors will turn green immediately and walls will illuminate within 30 seconds, showing extended Windows monitor display on all three walls. Using the mouse you should now be able to drag the cursor from one end of the room to the other without interruption.
- Click the start icon on the monitor's taskbar and go to Settings > System > Display. Select "Identify" to view monitor display order. Display order of monitors should read, from left to right, 4-1-2-3. Display 2 should always be the center wall. Select Display 2 (or whichever Display the center wall identifies as), hit "Multiple Displays" dropdown, and select as primary display. Desktop icons should now appear on center wall.
- For first time users, calibrate touchscreen capability using "Touch Control" app.
- To enable touchscreen functionality and ensure device communication before each use, double click the "TERi-Server" application icon. A window should momentarily appear (less than 1 sec.) but no program will launch. Touch functionality should now be active.
- Double click the "Immersive" application icon to run the Immersive Software. 24" monitor screen will go dark and you should see a loading screen on the middle wall, but won't be able to start the application yet. To do that you will need to start a simulation by selecting "Start Training" on the controller tablet.

Device Charging & Battery Information

Before proceeding to this step, and to ensure full functionality, be sure to complete all battery installations, charge all rechargeable devices, and complete manikin setup according to the following instructions:

Complete battery installation for the following devices (all batteries included):

- Defibrillation paddles (takes 4 AAA batteries)
- SpO2 monitor (takes 2 AAA batteries)
- CPR Feedback Box (takes 6 AAA batteries): Located inside of the manikin. To install batteries, remove genitals, reach into the pelvis and remove the CPR control box which is in place using Velcro, onto the back (interior) side of the pelvis. After installing the batteries, put the box back in on the Velcro pad and re-install the genitals.

Fully charge the following devices via included USB-C cables:

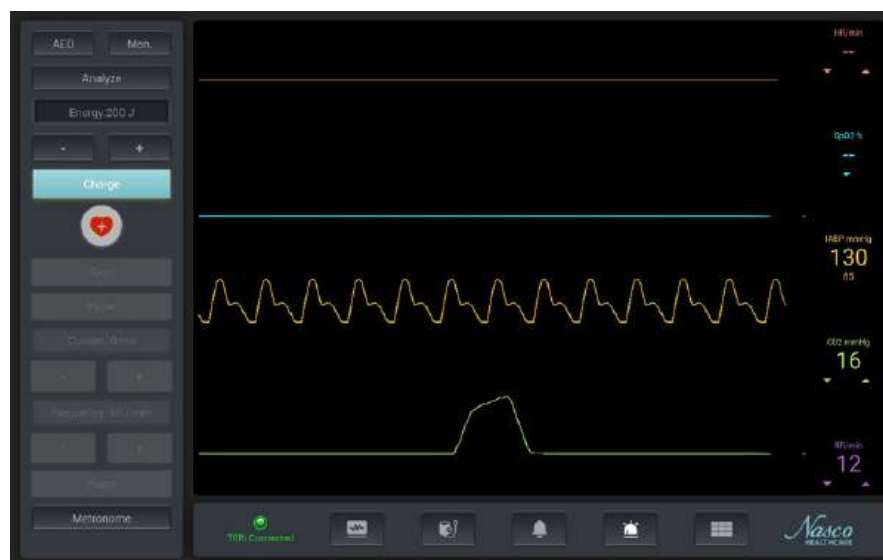
- Stethoscope and ear buds
- Blood Pressure module
- Thermometer
- Glucometer
- Blood Gas Analyzer
- ECG module
- Percussion device
- Ultrasound probe
- Controller tablet
- Patient Monitor tablet

Manikin setup

- Position the manikin as desired and attach the arms and legs, plugging in all electronic connectors.
- Follow standard manikin setup instructions for TERi™ or DANi™. (See manikin instruction manuals at the end)
- Power on the manikin using silver power switch on rear right hip. Green indicator light on the power switch and on the CPR Feedback box (internal) will illuminate to indicate active status.

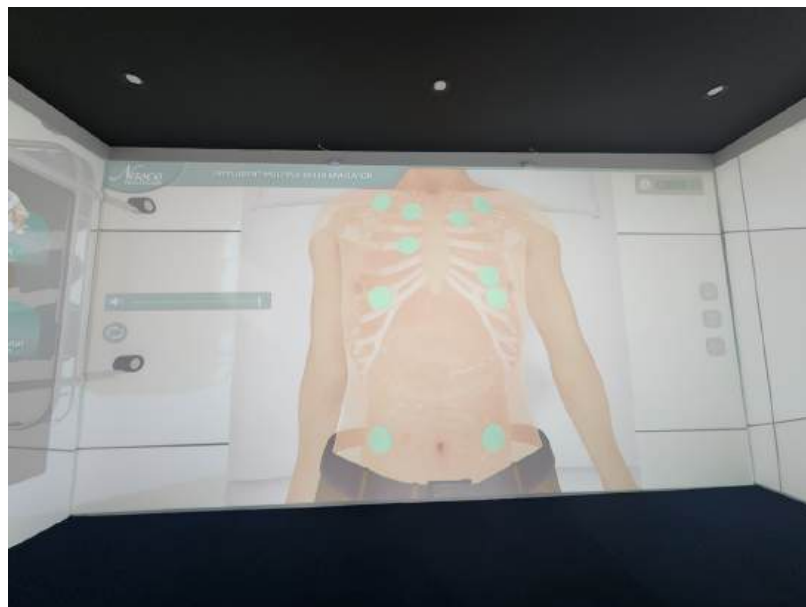
Tablet Setup & Instructions

- Once these steps have been completed, turn on the controller tablet and ensure it is on the same network as the server. Swipe up from bottom of screen in landscape view to view all apps. Find and launch the “Controller” app. Select “Connect Device” in upper right hand corner to view connection status to the server and patient monitor.
- Turn on the Patient Monitor tablet and ensure it is on the same network as the server. Swipe up from bottom of screen in landscape view to view all apps. Find and launch the “Monitor” app. View connection status in lower left corner – it should display “TERi Connected” or “DANi Connected” in green when ready.
- On the Controller tablet, tap “Start Training”. Enter Trainee name and select a case from the dropdown list.
- Hit “Yes” to start the simulation. This will launch the Immersive room environment on all three walls. You are now ready to run a simulation.



Immersive Room Operations Guide

- **Left Side Wall:** After launch, a simulation menu will appear on the left side wall. This menu allows users to select a simulation from the following list: Defibrillation, SpO2, Temperature, Blood Pressure, ECG, Glucometer, Ultrasound, Blood Gas Analysis, Leg palpation, Percussion, Auscultation, CPR, and Intramuscular Injection. Selecting any option from the menu prompts a change in the immersive environment. Selections that have already been selected turn and stay green.
- Users can also swap out the simulation menu on the left screen for the Operations Log by selecting the icon on the left side of the screen. The Operations Log tracks all actions taken by the user during the course of the simulation and is also visible on the controller tablet under Training Log > Operation.
- **Middle Wall:** This wall displays a simulated immersive environment with a patient and provider avatar in-situ. Perspective and devices shown will change depending on which skill is being practiced after selection from the simulation menu. When the student performs a simulation on the physical manikin using any simulated device, this screen will also show the provider avatar carrying out the same actions on the patient avatar. Depending on the action taken the screen may also display a virtual monitor with feedback. To the far right side of the main display, there are also 3 interactive icons:
 - **Top Icon:** Click to display device connection menu on right side wall showing the connection and battery status of all integrated devices.
 - **Middle Icon:** Click to show case information on the patient such as name, age, gender, difficulty and case description.
 - **Bottom Icon:** Use to exit the program at any time (see note below on how to save and stop a simulation).
- **Right Side Wall:** This wall functions as an extension of the immersive environment projected onto the middle screen. It also displays the device connection menu and the Case Overview dialogue box when either is selected from their respective icons on the middle wall.



Feature Overview



Note: only one feature can be run at a time.

Defibrillation

- Tap the “Defibrillation” icon to start. *Please note: Virtual Defibrillator that appears on screen is visual only and is not interactive.*
- There are two ways to simulate defibrillation: using the patient monitor and using the defibrillation paddles.

Using the Patient Monitor:

- Select “Man” on the patient monitor
- Set energy values (in Joules) using +/- buttons on the monitor. Energy values will be reflected on the monitor and the virtual defibrillator.
- Press “Charge” on the monitor and wait for a full charge.
- When fully charged, press the red heart-shaped “Shock” icon to simulate an electrical shock.

Using the Defibrillation Paddles:

- Pick up the Defibrillation paddles. Press and hold the yellow power button on the left side of left paddle to power on.
- Check device connection status on the top right corner of middle screen.
- Set energy values (in Joules) using selection buttons on the side of the paddle. Energy values will be reflected on the virtual defibrillator.
- Charge the paddles by pressing the “Charge” icon on the left side of the patient monitor OR by tapping the yellow button on the paddles.
- When fully charged, place the paddles on the two defibrillation sites on the manikin. Tap the orange buttons on top the paddles simultaneously to simulate electrical shock.
- Defibrillation will result in affected waveforms.
- Run time, impacts, time since last impact, and Joules are all monitored on the Defibrillation tracking bar at the bottom of the patient monitor.



SpO2

- Tap the “SpO2” icon to start. Alternatively, tap SpO2 button on the controller tablet.
- Set SpO2 values on the controller tablet using the sliding blue vertical scale. Press “send”.
- Pick up the SpO2 clip. Press and hold the power button on the top side of the clip until the red interior light illuminates to power on.
- Check device connection status on the top right corner of middle screen.
- Place the clip on any finger of the manikin and wait for the device to read SpO2. SpO2 values will be reflected on the patient monitor tablet and on the immersive display.



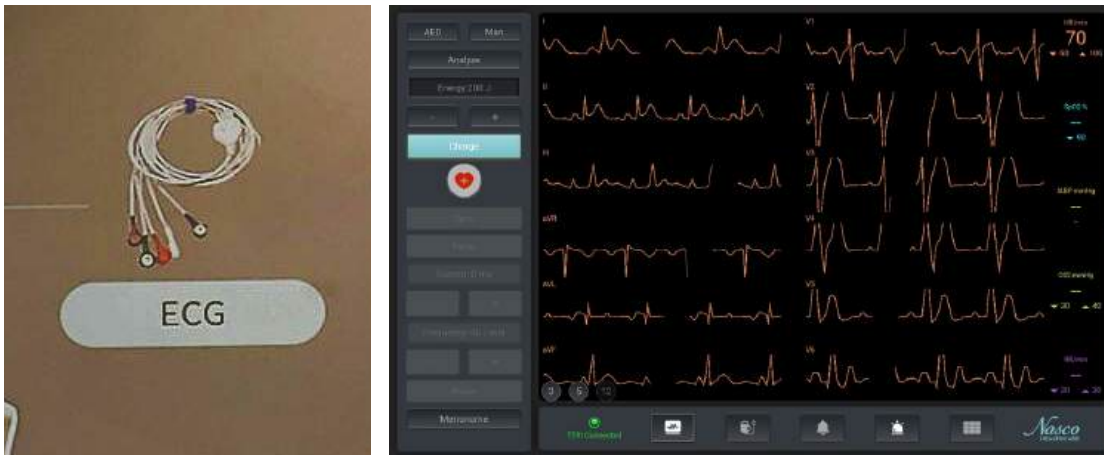
Temperature

- Tap the “Temperature” icon to start. Immersive display will activate accordingly.
- Set temperature by selecting “Temperature” icon on bottom taskbar of the Controller tablet. Input desired temperature and hit “Send”.
- Turn on simulated thermometer by pressing and holding power button. Insert orally into the manikin and tap the orange button to take temperature.
- Values will appear on both the thermometer and Immersive display.



Blood Pressure

- Tap the “Blood Pressure” icon to start.
- Set the blood pressure range on the controller section under “IBP”. Press the IBP button to send to the monitor.
- Press and hold the BP module to turn on and connect.
- Press and hold the stethoscope to turn on and connect.
- Place the BP cuff on the left arm, making sure the black tab is on the inside elbow.
- Place the stethoscope on the inside elbow on top of the black tab.
- On the main screen simulation window, press play on the graph display.
- Begin to pressurize the cuff using the blood pressure inflation bulb and release the pressure using the release valve.
- The real time pressure will appear on the graph and values will appear on the monitor.
- Korotkoff sounds will begin at around 140-150 mmHg.



- ## ECG
- Tap the “ECG” icon to start.
 - **Controller Tablet:**
 - To make sure ECG values (or vital sign values) are being sent from the controller to the patient monitor, ensure that the ECG button on the Controller is selected (highlighted blue). If it is not, values will not display on the patient monitor.
 - Every preset scenario will have its own preset ECG and vital sign values. However these can be customized using the Controller tablet.
 - To change the heart rate, use the sliding scale under “ECG.” This will be reflected on the patient monitor.
 - To customize waveforms, tap the orange text under “ECG”. From here instructors can select from a menu of various waveforms including Sinus Rhythm, Conduction Block, Myocardial Ischemia, Tachycardia, Recovery, and more. They can also customize the waveform display on the patient monitor. Press “Send” on the controller home screen to send updated values to patient monitor.
 - **Patient Monitor:**
 - Students can view ECG waveforms by selecting the ECG icon to the right of the red/green manikin connection status indicator. The monitor also allows students to select the number of visible ECG waveforms.
 - **Manikin ECG Module & Immersive Feedback:**
 - Connect ECG module to manikin ECG cable coming out of the left side of the manikin. Connect the ECG module to the included electrodes.
 - Power on the ECG module by pressing and holding the power button.
 - Place the electrodes on the manikin in the correct sequence using ECG sites. Immersive display will confirm ECG connection.

Waveforms

Sinus Rhythm	Acute Inferior myocardial infraction STEMI1
Sinus Rhythm 2	Acute Inferior myocardial infraction STEMI2
Sinus bradycardia with anorexia nervosa	Large anterior myocardial infraction
Complete right bundle branch block	Lower myocardial infraction
Incomplete right bundle branch block	Ventricular fibrillation 1
Right bundle branch block	Ventricular tachycardia
Left bundle branch block	Ventricular escape rhythm
LAFB	Front Side NSTEMI
Type 1 second degree atrioventricular block	Front STEMI
Type 1 first degree atrioventricular block	Lower part STEMI 2
Type 2 second degree atrioventricular block 2:1	Lower Parts STEMI3
Type 2 second degree atrioventricular block 3:1	STEMI Inferior 4
Type 2 second degree atrioventricular block 4:1	Frequency of atrial border treatment and placement
3rd degree atrioventricular block	Interference with R-segment Process
Bifascicular block	T Terminal Negative
Atrial ventricular rhythm	



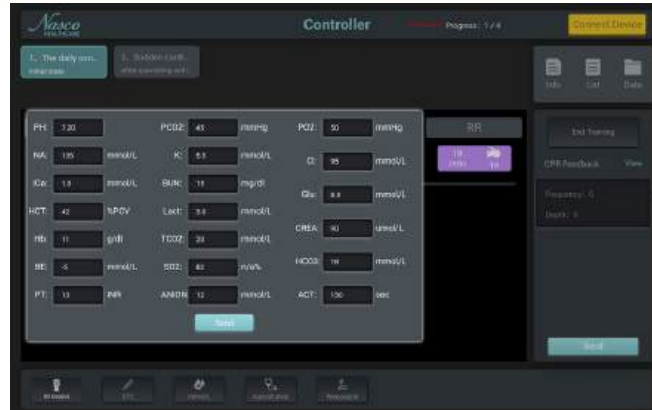
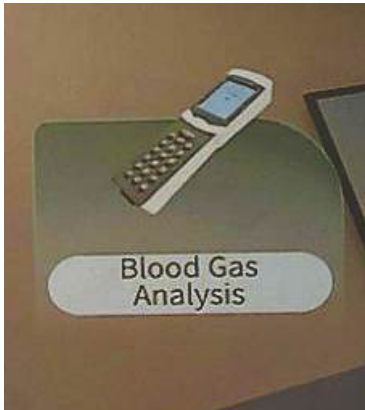
Glucometer

- Tap the “Glucometer” icon to start.
- Set Blood Glucose values by selecting icon “mmol-L” icon on bottom taskbar of the Controller tablet. Input desired values and hit “Send”.
- Turn on simulated Glucometer device by pressing and holding power button.
- Position glucometer on right ring finger and tap orange button to collect blood sugar data. Values will be reflected on both the device display and the Immersive wall display.
- Blood glucose can also be simulated without the device by pressing the spacebar to “take” the patient’s blood sugar. Values will be reflected on the Immersive wall display.



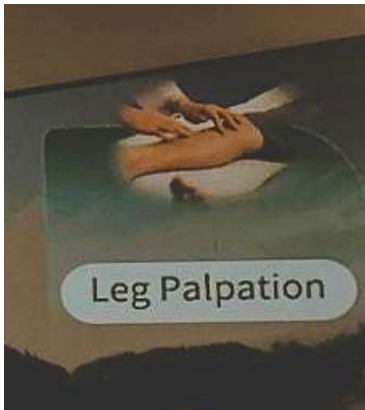
Ultrasound

- Tap the “Ultrasound” icon to start.
- Turn on the ultrasound probe by pressing and holding the power button.
- Position the probe above the desired ultrasound location.
- Visual feedback will be displayed on the immersive display.
- The ultrasound probe needs to be recalibrated between each new site.



Blood Gas Analysis

- Tap "Blood Gas Analysis" icon to start.
- Set Blood Gas values by selecting "BG Analysis" icon on bottom taskbar of the Controller tablet. Input desired values and hit "Send".
- Turn on Blood Gas analysis device by pressing and holding power button. Navigate to "Start Training" on the device and hit "OK".
- Values will appear on both the Blood Gas analyzer device and Immersive display.



Leg Palpation

- Tap "Leg Palpation" icon to start.
- Palpation site is on interior lower left leg. Immersive display provides feedback on pressure applied during palpation.



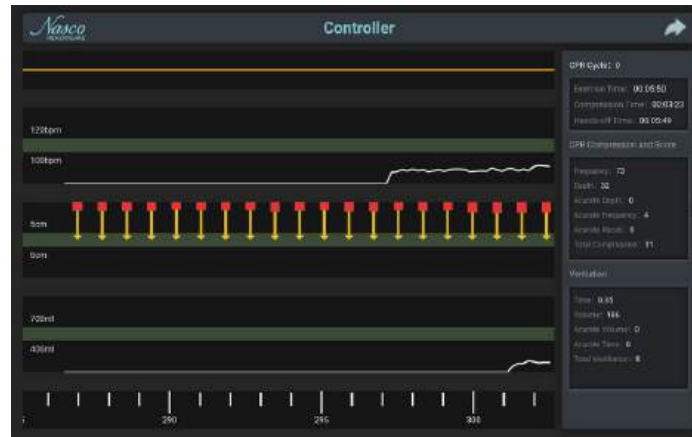
Percussion

- Tap “Percussion” icon to start.
- Ensure wearable percussion device is fully charged and place on the hand using Velcro wrist strap and index finger percussive sleeve. Press and hold power button to turn on the device.
- Perform percussion on the manikin by tapping with index finger on torso while wearing the device. Audio feedback will play through the speaker when percussion is done correctly. The immersive display will act as a site guide if needed.
- Percussion can also be demonstrated by clicking/tapping on any of the 65 percussive sites on the Immersive display.
- Instructors can access customization tools via the “Percussion” icon on the bottom taskbar of the controller tablet. This can be used to select what sound the student hears at each percussion site: Resonance, Flatness, Dullness, or Tympany.
- Instructors can also input session notes and feedback in the “Conclusions” dialogue box.



Auscultation

- Tap the “Auscultation” icon to start.
- Customize auscultation sounds by site by selecting “Auscultation” icon on bottom taskbar of the Controller tablet. From there the instructor can select the sounds the student will hear at each organ group (heart, lung, and bowel). There are 34 heart, 24 lung, and 13 bowel sounds to choose from. Press “send” to ensure sounds are heard during auscultation.
- Turn on simulated stethoscope by pressing and holding power button. Position the stethoscope over desired sites to listen to heart, lung and bowel sounds on the manikin. The immersive display will highlight the sites that are auscultated in real time.
- The manikin includes posterior and anterior auscultation sites. Turn over the manikin to access posterior sites. Use the circular icon under the volume bar on the immersive screen to alternate between front and back views in the software.
- There are two audio options through which students can listen to auscultation sounds:
 - USB Speaker: Plug into server to use.
 - Bluetooth Earbuds: Connect using Bluetooth pairing in computer system settings.
- Volume can be adjusted via the keyboard or volume bar on the Immersive display.



CPR

- Tap "CPR" icon to start.
- Position the manikin on its back and perform CPR/Ventilation.
- Compression and Ventilation feedback will be displayed on the Immersive display. Controller tablet will also display Heart Rate, Ventilation, and Compression feedback. Vital sign changes are also reflected on the Patient Monitor.



Intramuscular Injection

- Tap "Intramuscular Injection" icon to start.
- Position the manikin on her side. Injection pad is on the left hip. Inject the manikin (needles not included).
- Immersive display will provide feedback on correct needle placement and depth.

Ending a Simulation & Shutting off the Immersive Room

- To stop a simulation, exit the immersive software by selecting the “Exit” icon on the bottom right of the middle screen. This will close out the immersive software application.
- On the controller tablet, select “End Training”. The session will be automatically saved. To view all sessions, go to “Training Log”. From there users can view case details such as trainee name, start and end time, duration, status, case logs and basic case information.
- OPTIONAL: Shut down the server by selecting windows icon and clicking power button icon.
- To power off projectors, aim remote at projector and double tap the red “Off” button in top right corner of remote. The projector should respond within 5-10 seconds. Please note that projector remotes mix and match; i.e. any remote can turn any projector On/Off.
- Projectors also include customizable auto shut down capability.

General Product Use Notes/Questions

- Batteries and charging cables are included for all devices.
- It is recommended that users dim or shut off the lights in the immersive room while projectors are active to ensure image clarity.
- The software requires all 4 displays to run properly. Do not attempt to run with only the 24” monitor.
- Users may substitute a larger display for the included 24” monitor if desired without impacting the functionality of the software.
- If either the server, patient monitor, or controller tablet freezes, close out of the simulation and re-start the application. If the server is frozen select Alt+F4 to exit, or select Ctrl + Alt + Delete to pull up Task Manager and “End Task”. From there you can re-start the program.

General Care

- Most cleaning can be done with a soft cloth, mild soap, and warm water. Avoid over washing the painted areas on the manikin.
- Stubborn stains can be treated by using Nasco Cleaner and a soft cloth.
- Stains caused by make-up, ink, and newsprint are indelible and cannot be removed. Avoid contact with these substances and do not apply cosmetics or Betadine® solution to the manikin.
- Follow cleaning, care, storage, and maintenance guidelines in each section of this manual.
- Remove all batteries prior to storing your equipment for future use.

Cautions

Solvents or corrosive materials will damage the simulator. Never place the simulator on any kind of printed paper or plastic. These materials will transfer indelible stains. Ball-point pens will also make indelible stains. Do not store in direct sunlight.

Storage

In order to prepare the manikin for storage perform a normal manikin breakdown procedure by removing all of its limbs and packaging them neatly in its case (preferably in the same packaging offered when first purchased). In addition, be certain to follow these instructions:

- Storage temperature should not exceed 122° F (50° C) or fall below 41° F (5° C) in a (noncondensing) relative humidity free environment.
- If a soft-sided case is being used, the manikin should lie flat.
- The manikin should NEVER be stored or shipped with fluids in the system.

Extension/Upgrade Options

NextGen TERi™ & DANi™ is a modular and scalable product platform. To upgrade from one tier to the next, please contact your sales director to upgrade software and purchase additional required simulated medical devices.

If your software license is due to expire, please contact your sales director to extend your software license.

Warranty/Software License

Item	Warranty
Manikin	5-year warranty on manikin; 2-year warranty on embedded electronics
Patient Monitor Tablet	See manufacturer's warranty (if any)
Patient Monitor Case	2-year warranty
Controller Tablet	See manufacturer's warranty (if any)
WiFi Router	See manufacturer's warranty (if any)
24" Monitor	See manufacturer's warranty (if any)
Keyboard	See manufacturer's warranty (if any)
Mouse	See manufacturer's warranty (if any)
Server	See manufacturer's warranty (if any)
Speakers	See manufacturer's warranty (if any)
Lasers	See manufacturer's warranty (if any)
Projectors (Add-on)	See manufacturer's warranty (if any)
Simulated Medical Devices	2-year warranty

Warranty/Software License

Item	Warranty/License
Patient Monitoring System Software	5-year warranty/perpetual license
Controller System Software	5-year warranty/perpetual license
Immersive Software	5-year warranty/license
Management Software	5-year warranty/license
Laser Configuration Software	5-year warranty/license

Controller Tablet

- 12.4-inch Dynamic AMOLED 2X display
- 1752×2800 resolution
- 120Hz refresh rate
- 12GB RAM and up to 512GB internal storage
- Connectivity: USB-C 3.2
- Wi-Fi 6E
- Bluetooth 5.3
- OS: Android 14

Monitor Tablet

- **Xiaomi:**
 - 14-inch LCD display
 - 2880×1800 resolution
 - 120Hz refresh rate
 - 16GB
 - Connectivity: Wi-Fi 6
 - Bluetooth 5.3
 - USB-C
 - OS: Android 14.
- **Samsung Galaxy S10**
 - 14.1-inch version
 - LCD display
 - 120Hz refresh rate
 - 16GB RAM
 - OS: Android 14

Server

- 4× HDMI output ports
- Operating System: Windows 11
- Memory: 32GB RAM
- Storage: High-capacity SSD
- Dedicated graphics support for multi-display output
- Multiple USB ports for peripherals
- Gigabit Ethernet and Wi-Fi connectivity
- Optimized for simulation software performance

WiFi Router

- Dual-band Wi-Fi 6
- 2.4GHz: 574Mbps; 5GHz: 2402Mbps.
- Qualcomm IPQ5000 dual-core 1.0GHz CPU with dedicated NPU
- 256MB RAM
- WPA3 encryption
- Mesh networking, and app/web management
- Ports: 1× Gigabit WAN, 3× Gigabit LAN.

Projectors

- **BenQ AH700ST - Standard Projectors**
 - 1920×1080 Full HD DLP projection
 - Brightness: 4,000 lumens
 - Zoom ratio: 1.20:1
 - Weight: 7.3 lbs
- **Hisense L9Q - Advanced Short Throw Projectors**
 - 4K Ultra Short Throw projector with TriChroma™ triple-laser light engine
 - Brightness: 5,000 ANSI lumens
 - 3840x2160 DLP
 - Zoom ratio: 0.18:1
 - 28.4 lbs

Laser Touch Control

- Operation method: Fingers or non transparent objects (excluding black)
- System requirements: Windows 10, Windows 11;
- Standard configuration: signal receiver (camera), laser transmitter, USB cable, power adapter, universal bracket.
- Lens Projection Ratio: 0.065, 0.087, 0.13, 0.19, 0.33, 0.48, 0.74, 1.1
- Camera resolution: 960 * 540 (3.0 interface)
- Laser power: Electrical power: 540MW Optical power: 65MW
- Laser band: 808nm
- Laser interface: Type-c
- Laser size: 4.84 * 9.14 * 10.8cm
- Camera size: 4.5 * 5 * 5cm
- Camera interface: Type-b
- Installation distance: 0.25-5 meters
- Touch accuracy: maximum 1mm error
- Touch frame rate: 60FPS
- Touchpoint count: 30 points
- Touch Protocol: Mouse HID、TUIO
- Space interaction: support (requires handheld devices such as laser pens)

INSTRUCTION MANUAL

TERi™

Patient Care Trainer	LF04300/LF04300M
Patient Skills Trainer	LF04301/LF04301M
Auscultation Patient Skills Trainer	LF04299/LF04299M
Patient Simulator	LF04302/LF04302M
Patient Simulator, Export	LF04302EX/LF04302MEX



5-year warranty

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HEALTHCARE

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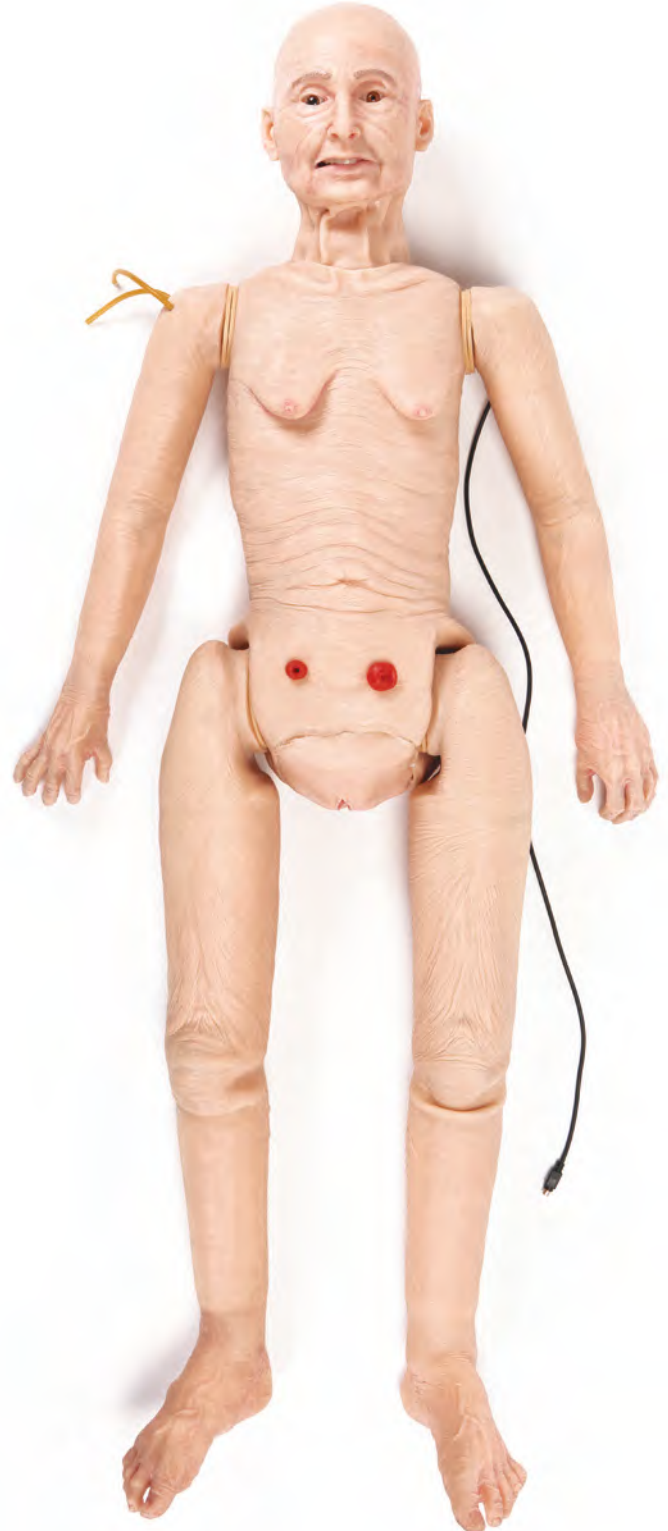
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About the Simulator

Nasco Healthcare TERi™ Androgynous Geriatric Trainer is a comprehensive male/female elderly patient care trainer for medical simulation. Evolving from our GERi™/KERi™ full-body manikins, it has a more realistic look and feel accurately representing the human anatomy. Weight is distributed to represent a real patient for lifting and carrying.

Each version is affordable and durable with upgradable items.

- **Geriatric Patient Care Trainer** – General patient care, daily living assistance simulation platform.
- **Geriatric Patient Skills Trainer** – Physical skills practice simulation platform with injection/IV, catheterization, cardiovascular and respiratory support.
- **Geriatric Auscultation Patient Skills Trainer** – Physical skills practice simulation platform with injection/IV, catheterization, cardiovascular, respiratory support and auscultation.
- **Geriatric Patient Simulator** – Comprehensive and complete simulation platform including patient monitoring capability.



About the Simulator

LF04300/LF04300M:

TERi™ Geriatric Patient Care Trainer

- Superior Range of Motion
- Enhanced Full Body Aesthetics
- Articulating Jaw
- Lightweight: 50 lbs.
- Interchangeable Pupils: normal, constricted, dilated
- Male & Female Options (wig included)
- Soft Male (circumcised and uncircumcised features) and Female Genitalia
- Normal and Cancerous Moles
- Stage 1 Sacral Ulcer
- Reddened Skin Folds
- Bandaging and Wound Dressing (Recommended bandages: Silicone Adhesive Bandages)
- Patient Positioning (fully articulated)
- Clothing Changes
- Bed Baths
- Eye Irrigation & Optic Drops
- Dental Care (including placement and removal)
- Ear Canal Irrigation
- Hearing Aid Included (interchangeable between right and left ears)
- Hair Care
- Pericare
- Ostomy Care (ileostomy and colostomy care)
- Urinary Catheter Care (external care only; supporting bladders not included)
- Stomas (colostomy and ileostomy)
- Standard Arms with Injection Sites (IM injection only)
- Injection Sites (thigh, right side buttocks supporting IM and sub-cutaneous injections)
- Support for Oxygen Administration

LF04301/LF04301M:

TERi™ Geriatric Patient Skills Trainer

LF04299/LF04299M:

TERi™ Geriatric Auscultation Patient Skills Trainer (with heart and lung sounds)

- Superior Range of Motion
- Enhanced Full Body Aesthetics
- Articulating Jaw
- Lightweight: 50 lbs.
- Interchangeable Pupils: normal, constricted, dilated

- Male & Female Options (wig included)
- Soft Male (circumcised and uncircumcised features) and Female Genitalia
- Normal and Cancerous Moles
- Stage 1 Sacral Ulcer
- Reddened Skin Folds
- Bandaging and Wound Dressing (Recommended bandages: Silicone Adhesive Bandages)
- Patient Positioning (fully articulated)
- Clothing Changes
- Bed Baths
- Eye Irrigation & Optic Drops
- Dental Care (including placement and removal)
- Ear Canal Irrigation
- Hearing Aid Included (interchangeable between right and left ears)
- Hair Care
- Pericare
- Ostomy Care (ileostomy and colostomy care)
- Urinary Catheter Care (external care only; supporting bladders not included)
- Stomas (colostomy and ileostomy)
- Support for Oxygen Administration
- Left Blood Pressure Arm with Radial Pulse
- Injection Sites (arms, thigh, right side buttocks supporting IM and sub-cutaneous injections)
- Gastrostomy Procedures (lavage, gavage, tube placement)
- Nasogastric Tube Procedures (lavage, gavage, tube placement, feeding, suctioning)
- Respiratory Support:
 - Tracheostomy Care, Airway/Trach Suctioning (lavage, suctioning)
- Urinary Catheterization
- Suprapubic Catheterization
- Enema Administration (female)
- Pap Smears (female)
- Pelvic Examination (female) – 3 cervix presentations (healthy/normal, pre-cancerous, cancerous)
- Prostate Examination (male) – 5 prostate presentations (1 normal/healthy, 4 cancerous in varied sizes)
- Right IV Arm
- Foot Wound Care
- CPR with Quality Performance Metrics (compressions and ventilation rate & depth; audible and visual feedback)
- Carotid Pulse (manual)
- Intubation
- Ventilation

LF04302/LF04302M:

TERi™ Geriatric Patient Simulator
(includes monitors)

LF04302EX/LF04302MEX:

TERi™ Geriatric Patient Simulator Export
(excludes monitors)

- Superior Range of Motion
- Enhanced Full Body Aesthetics
- Articulating Jaw
- Lightweight: 50 lbs.
- Interchangeable Pupils: normal, constricted, dilated
- Male & Female Options (wig included)
- Soft Male (circumcised and uncircumcised features) and
- Female Genitalia
- Normal and Cancerous Moles
- Stage 1 Sacral Ulcer
- Reddened Skin Folds
- Bandaging and Wound Dressing (Recommended bandages: Silicone Adhesive Bandages)
- Patient Positioning (fully articulated)
- Clothing Changes
- Bed Baths
- Eye Irrigation & Optic Drops
- Dental Care (including placement and removal)
- Ear Canal Irrigation
- Hearing Aid Included (interchangeable between right and left ears)
- Hair Care
- Pericare
- Ostomy Care (ileostomy and colostomy care)
- Urinary Catheter Care (external care only; supporting bladders not included)
- Stomas (colostomy and ileostomy)
- Support for Oxygen Administration
- Left Blood Pressure Arm with Radial Pulse
- Injection Sites (arms, thigh, right side buttocks supporting IM and sub-cutaneous injections)
- Gastrostomy Procedures (lavage, gavage, tube placement)
- Nasogastric Tube Procedures (lavage, gavage, tube placement, feeding, suctioning)
- Respiratory Support:
- Tracheostomy Care, Airway/Trach Suctioning (lavage, suctioning)
- Urinary Catheterization
- Suprapubic Catheterization
- Enema Administration (female)
- Pap Smears (female)
- Pelvic Examination (female) - 3 cervix presentations (healthy/normal, pre-cancerous, cancerous)
- Prostate Examination (male) - 5 prostate presentations (1 normal/healthy, 4 cancerous in varied sizes)
- Right IV Arm
- Foot Wound Care
- CPR with Quality Performance Metrics (compressions and ventilation rate & depth; audible and visual feedback)
- Carotid Pulse (manual)
- Intubation
- Ventilation
- Auscultation (heart and lung sounds)
- Patient Vital Signs and Monitored Signals Simulation Suite (LF04302EX/LF04302MEX does not include monitors/tablets)

Feature Set Capability		Geriatric Patient Care Trainer	Geriatric Patient Skills Trainer	Geriatric Auscultation Patient Skills Trainer	Geriatric Patient Simulator
General	Superior range of motion	✓	✓	✓	✓
	Enhanced full body aesthetics	✓	✓	✓	✓
	Lightweight: 50 lbs.	✓	✓	✓	✓
	Pupils	✓	✓	✓	✓
	Male and female	✓	✓	✓	✓
	Soft male and female genitalia	✓	✓	✓	✓
Skin Care	Normal and cancerous moles	✓	✓	✓	✓
	Stage 1 sacral ulcer	✓	✓	✓	✓
	Reddened skin folds	✓	✓	✓	✓
	Bandaging and wound dressing	✓	✓	✓	✓
Movement Assistance, Fall Prevention and Care	Patient positioning	✓	✓	✓	✓
Bathing	Clothing changes	✓	✓	✓	✓
	Bed baths	✓	✓	✓	✓
Grooming & Daily Living Assistance	Eye irrigation and optic drops	✓	✓	✓	✓
	Dental care	✓	✓	✓	✓
	Ear canal irrigation	✓	✓	✓	✓
	Hearing aid	✓	✓	✓	✓
	Hair care	✓	✓	✓	✓
	Pericare	✓	✓	✓	✓
Nursing Care	Ostomy care	✓	✓	✓	✓
	Urinary catheter care	✓	✓	✓	✓
	Stomas	✓	✓	✓	✓
	Standard arms with injection sites	✓	✓	✓	✓
	Support for oxygen administration	✓	✓	✓	✓
	Left blood pressure arm (with radial pulse)	Option*	✓	✓	✓
	Injections sites	Option*	✓	✓	✓
	Gastrostomy procedures		✓	✓	✓
Advanced Skills	Nasogastric tube procedures		✓	✓	✓
	Respiratory support: tracheostomy care, airway/trach suctioning		✓	✓	✓
	Urinary catheterization		✓	✓	✓
	Enema administration (female)		✓	✓	✓
	Pap smears (female)		✓	✓	✓
	Pelvic examination (female)		✓	✓	✓
	Prostate examination (male)		✓	✓	✓
	Right IV arm trainer	Option*	✓	✓	✓
	IV arm circulation pump	Option*	Option*	Option*	Option*
	Foot wound care		✓	✓	✓
	ACLS/BLS	CPR with quality performance metrics		✓	✓
Carotid pulse			✓	✓	✓
Articulating jaw		✓	✓	✓	✓
Intubation			✓	✓	✓
Ventilation			✓	✓	✓
Advanced Nursing ACLS/BLS	Auscultation (heart and lung sounds)			✓	✓
Monitoring & Therapeutics	Patient vital signs and monitored signals	Option ¹	Option ^{2,3}	✓	✓ ³

List of Components

TERi™ Geriatric Patient Care Trainer LF04300/LF04300M

- Male Genitalia Foreskins, Pack of 3 (LF000843 G/ LF000843M G)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318/LF04318M)
- Female Genitalia (LF04319/LF04319M)
- Hearing Aid (LF04325)
- Wig (LF04326)
- Dentures, Upper & Lower (LF04327)
- Hospital Gown (LF04333)

TERi™ Geriatric Patient Skills Trainer LF04301/LF04301M

- Male Genitalia Foreskins, Pack of 3 (LF000843 G/ LF000843M G)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318/LF04318M)
- Female Genitalia (LF04319/LF04319M)
- Hearing Aid (LF04325)
- Wig (LF04326)
- Dentures, Upper & Lower (LF04327)
- Hospital Gown (LF04333)
- Simulated Blood, Pint
- Blood Pressure Cuff with Sphygmomanometer (LF01073)
- Electronic Blood Pressure Control Unit with Batteries (LF01096)
- Fluid Supply Bag, 500 ml, with Pinch Clamp (LF01130)
- Cervix Kit, Set of 7 (LF01230 C)
- Pump Spray Lubricant (LF03644)
- Foot Wounds, Pressure Injury Stages 1-4 (LF04310/ LF04310M)
- Foot Wound Sleeve (LF04310 A/LF04310M A)
- Deep Tissue Wound (LF04328)
- Enema Bag (LF04316)
- Edema, Set of 5, Stages 1-4 & Non-Pitting (LF04329/ LF04329 M)
- Prostate Kit, Set of 5 (LF04332)
- External Bladder Bag, Urinary & Suprapubic (LF04334)
- Simulated Urine, Quart (PN01037)
- Carotid Pulse Bulb (100-2028)
- Syringe, 20 cc

TERi™ Geriatric Auscultation Patient Skills Trainer LF04299/LF04299M (with auscultation components)

TERi™ Geriatric Patient Simulator

LF04302/LF04302M (includes monitors)

TERi™ Geriatric Patient Simulator Export

LF04302EX/LF04302MEX (excludes monitors)

- Male Genitalia Foreskins, Pack of 3 (LF000843 G/ LF000843M G)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318/LF04318M)
- Female Genitalia (LF04319/LF04319M)
- Hearing Aid (LF04325)
- Wig (LF04326)
- Dentures, Upper & Lower (LF04327)
- Hospital Gown (LF04333)
- Simulated Blood, Pint
- Blood Pressure Cuff with Sphygmomanometer (LF01073)
- Electronic Blood Pressure Control Unit with Batteries (LF01096)
- Fluid Supply Bag, 500 ml, with Pinch Clamp (LF01130)
- Cervix Kit, Set of 7 (LF01230 C)
- Pump Spray Lubricant (LF03644)
- Foot Wounds, Pressure Injury Stages 1-4 (LF04310/ LF04310M)
- Foot Wound Sleeve (LF04310 A/LF04310M A)
- Deep Tissue Wound (LF04328)
- Enema Bag (LF04316)
- Edema, Set of 5, Stages 1-4 & Non-Pitting (LF04329/ LF04329 M)
- Prostate Kit, Set of 5 (LF04332)
- External Bladder Bag, Urinary & Suprapubic (LF04334)
- Simulated Urine, Quart (PN01037)
- Carotid Pulse Bulb (100-2028)
- Syringe, 20 cc
- Auscultation SmartScope™ with Batteries (LF01144, LF04299/LF04299M)
- Auscultation Remote with Batteries (LF01148, LF04299/ LF04299M)
- Patient Vital Signs and Monitored Signals Simulation Suite (LF04302EX/LF04302MEX does not include monitors/tablets)

TERi™ comes packaged with the normal pupils, dentures, female genitalia, lungs, stomach, and other internal reservoir bags installed (features included with LF04301/ LF04301M, LF04302/LF04302M, and LF04302EX/ LF04302MEX).

Set Up

Arms / Joints / Legs / Eyes / Oral Hygiene

Note: All Versions of TERi™ come packaged with the normal eyes, dentures, and female genitalia installed. Geriatric Patient Skills Trainer and Simulator come with lungs, stomach, and other internal reservoir bags installed.

Arms / Joints

TERi™ is packaged with arms and female genitalia attached and legs unattached to prevent damage during shipping. Refer to the following sections for assembly instructions (See Figure 1).



Fig 1.

Leg Assembly

The legs attach to the body at the hips by rotating the legs backward approximately 150° so the feet are near the shoulders and the keyholes are aligned. (See Figure 2).



Fig 2.

Eyes

All versions of TERi™ come with 3 sets of brown eyes. 1 set of normal pupil brown eyes, 1 set of constricted pupil brown eyes and 1 set of dilated pupil brown eyes.

The normal eyes come installed in the head. The eyes can be changed to dilated or constricted by creasing the skin at the outside of each eye and rolling the eye up. (See Figure 3.) Both eyes may be irrigated using water. Eye sockets will hold no more than a few drops of liquid at a time. Following completion of the exercise, follow the above instructions for removing the eye, dry the sockets completely with a soft cloth, and replace the eyes.

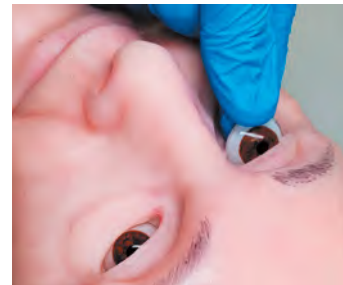


Fig 3.

Oral Hygiene

Tooth brushing should be simulated without water or any cleaning agents to avoid leaking into the head of the manikin and to simplify cleanup. Teeth cannot be flossed. Denture removal is accomplished by grasping the dentures and pulling forward and then down for the upper plate and forward then up for the lower plate. (See Figure 4). Dental adhesive may be used.

Note: To clean adhesive, use mild soap, warm water, and a soft cloth. Allow to dry completely before storing.



Fig 4.

Set Up

Ear Care / Bath & Washing / Tracheostomy Care

Ear Care

Both ears may be irrigated. Using water to perform ear irrigation is recommended. The ear canal will hold up to 1 mL of water.



Fig 5.

To drain, tilt the head sideways and empty into the basin or absorbent cloth. (See Figure 5 & 6).



Fig 6.

Cotton swabs may be used gently in the ear as you would with a real patient. The manikin includes a simulated hearing aid for placement practice. (See Figure 7). The hearing aid is interchangeable between both ears.

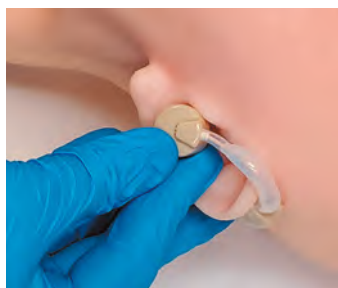


Fig 7.

Bed Baths and Hair Washing

To simplify cleanup, dry bed baths and shampoos are recommended to eliminate the chance of water entering the inside of the manikin. A soft cloth and water can be used for bathing exercises, and a mild shampoo and cool water can be used for hair washing. Avoid scrubbing any painted areas of the manikin. To dry the wig, blot with a soft towel and air dry. Do not brush the hair when wet, and never use a hair dryer or blow dryer on the wig.

Tracheostomy Care

Suctioning, dressing changes, tracheostomy tube placement, and cuff inflation may be practiced on the simulator. The tracheostomy canal is not removable from the body. Any water administered to this site must be suctioned out after completion of the exercise. The tracheostomy canal (See Figure 8) can hold approximately 20 cc of water.

Ensure proper lubrication prior to inserting tubes into the stoma site by using the Pump Spray Lubricant included. The tracheostomy canal is not connected to the oronasal system, and access is provided only through the stoma site. Recommended tracheostomy tube size is 6.0 mm.

Note: Does not support ventilation of lungs through tracheostomy. Supports lavage and saline treatment. Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

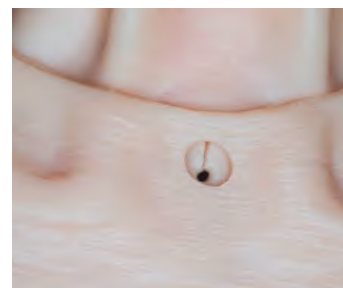


Fig 8.

Set Up

Lavage / Gavage / Suctioning / Nasogastric / Carotid Pulse

Oral and Nasal Lavage, Gavage, and Suctioning

Access to the stomach is provided through the mouth and both nostrils. The internal stomach reservoir bag has a 200 cc capacity. The head should be connected to the stomach reservoir bag (green) and NOT the intubation air bladder bag (yellow). (See Figure 9).



Fig 9.

Lubricate feeding tubes generously prior to inserting through mouth, nose, or nostrils by using the Pump Spray Lubricant included. Only water should be used in tube feeding exercises. Ensure the upper torso of the manikin is slightly elevated to prevent water backflow into the head of the manikin. Introduce water only using standard facility procedures and materials.

Following the procedure, empty the stomach. Water may be removed by suctioning or removing the stomach reservoir bag by disconnecting 2 velcro straps and white disconnect and then draining it into a sink or basin. (See Figure 10).



Fig 10.

Note: Ensure the manikin's torso remains elevated when the stomach reservoir bag contains water to continue to prevent backflow into the head of the manikin. Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.



Fig 11.

To remove the Stomach Reservoir Bag:

1. Remove the head by disconnecting the snaps on the head skin, around the neck, and pulling the head straight back with the head facing forward. (See Figure 11).
2. Gently pull up head to expose four tubes with the stomach reservoir bag connected at the end. (See Figure 12).
3. Unfasten the strap that holds the Stomach Reservoir Bag and esophagus tube together and depress button on the quick disconnect feature of the bag. (See Figure 13).



Fig 12.



Fig 13.

Following completion of the procedures, completely drain the stomach reservoir and allow drying prior to reattaching and storing inside the manikin. Wipe any residual lubricant with warm water and a soft cloth.

Carotid Pulse

Attach pump bulb to Carotid tube exiting the rear neck. (See Figure 14). Pump bulb to simulate pulse at the pulse points of the Carotid (See Figure 15). Pulse points are present on both sides.



Fig 14.

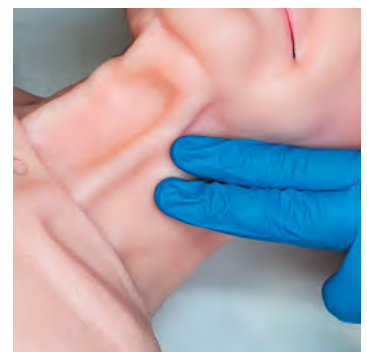


Fig 15.

Set Up

Lavage / Gavage / Suctioning / Nasogastric

Nasogastric

This section pertains to TERi™ Geriatric Patient Skills Trainer (LF04301/LF04301M), TERi™ Geriatric Auscultation Patient Skills Trainer (LF04299/LF04299M) and TERi™ Geriatric Patient Simulator (LF04302/LF04302M, LF04302EX, LF04302MEX). The simulator can be connected for nasogastric suctioning or airway intubation with stomach rise. The airway includes a sinus passage to the back of the throat through the nostrils. The esophagus leads to a stomach reservoir bag located in the lower end of the torso. This stomach reservoir bag is accessible by the user for maintenance. Air insertion will cause a visual stomach rise only when the head is connected to the airway intubation stomach reservoir. Supported procedures include nasal trumpet and nasogastric tube insertion. Lavage and gavage are also supported.

1. Ensure the nasogastric tubing is connected to the nasogastric stomach reservoir via the (green, yellow) coded tubes. Ensure tubing is well attached and adhere the tubes with the hook and loop. Insert the tubes back into the torso of the manikin and replace the head on the torso. (See Figure 16).



Fig 16.

2. Lubricate nasogastric devices and supplies being used with the Pump Spray Lubricant provided (See Figure 17). NG tubes should be well lubricated and force should not be used when placing the tube through the



Fig 17.

sinus canal.

3. Fluids should be drained and the reservoir bags emptied after every use.

Accessing Lung Bag and Stomach Bag for Cleaning or Replacement

1. To remove lung bags disconnect four snaps on the neck skin and pull neck skin away from two rivets in front of neck. Roll the skin down from the neck to change the lung bags (See Figure 18).
2. To remove the stomach reservoir. Remove legs. Roll the skin up from the pelvis (See Figures 19 and 20). Ensure the bag is clean and dry prior to storing it back inside the torso.
3. Wipe any residual lubricant from the site with warm water and a soft cloth prior to storing the manikin.



Fig 18.



Fig 19.



Fig 20.

Note: Use Nasco Healthcare's Pump Spray Lubricant to lubricate airway devices before use.

Set Up Intubatable Head

Intubatable Head

There are individual inflatable lung bags for both left and right lungs and a separate stomach bag. Each bag will cause visual chest rise in the correct anatomical location to indicate effective and ineffective intubation styles. Jaw thrust is supported. A manual pulse bulb is included to simulate a carotid pulse. Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

The unit is not designed for use with mouth-to-mouth techniques and may contaminate the mouth and airway. Airway devices are recommended and the supported devices are listed.

Before using the simulator for airway management, lubricate both the simulator and supplies being used with the Pump Spray Lubricant provided. (See Figures 21 & 22).



Fig 21.

Extreme care should be exercised when using a laryngoscope blade. As with a real human, (See Figure 23), damage can be caused if improper forces and techniques are used. It is not recommended to intubate with dentures installed. Damaged caused by improper use will void the warranty



Fig 22.

Note: There is no cricoid.



Fig 23.

NG Tube, Nasal

Size 16FR Preferred

Note: Use Nasco Healthcare's Pump Spray Lubricant to lubricate airway devices before use.

Laryngoscope Blades

Miller Blades: Size 3

Macintosh Blades: Size 4

Nasal Trumpet

Size 6 (24FR) Preferred

Size 7 (28FR) Supported

BVM - Bag Valve Mask

Adult Size

King Airway

Size 3 Supported

Size 4 Preferred

Size 5 Supported

Oropharyngeal Airway

110 Preferred

100 Smallest acceptable

NG Tube, Nasal

Size 16FR Preferred

Endotracheal Tube

7.0mm Preferred

6.5mm Supported

7.5mm Supported

NG Tube, Oral

Size 16 Preferred

Size 14 Supported

Size 18 Supported

Combitube

37FR Preferred

41FR Supported

Tracheostomy

Intubation

Uncuffed 6.0mm Preferred

7.0mm Preferred

Cuffed 6.0mm Preferred

7.0mm Preferred

LMA Supreme and iGel

Size 3 Supported

Size 4 Preferred

Size 5 Supported

Set Up

Ostomy Care

Ostomy Care

Colostomy and ileostomy care can be practiced on all TERI™ models, including stoma dilation, cleaning, and ostomy bag changing procedures. Irrigation can be practiced. Irrigation tubes should be well lubricated prior to insertion. After completion of the exercises, the stomas can be rinsed with warm water to remove any residual lubricant. The stoma reservoirs have a 20 cc fluid capacity.

Removal of the internal stoma reservoirs (See Figure 24):

1. Remove the genitalia and reach through the genital cavity. It is recommended to suction the fluid from the bag prior to removal to prevent spillage when removing for cleaning.
2. The reservoir bags are attached to the underside of the stomas. To remove push in on the L-shaped button pull the reservoir fittings down and disconnect from the stomas.
3. Pull the reservoir bags from the hook-and-loop attachments. (See Figures 25 and 26). Rinse with water to clean.
4. Reverse the procedure to reattach the internal stoma reservoirs. Ensure reservoirs are clean and dry prior to reattaching for storage.



Fig 24.



Fig 25.



Fig 26.

Set Up

Gastrostomy Care Lavage and Gavage

Gastrostomy Care Lavage and Gavage

A flanged hole simulating an abdominal incision for the insertion of a feeding tube is included on the upper torso for performing lavage and gavage. (See Figure 27).



Fig 27.

Inside the upper torso is a reservoir bag with a maximum capacity of 200 cc, which is attached to the underside of the gastrostomy opening with a two-part coupler. Access the bag by:

1. Reaching through the genital opening in the pelvis, on the left side of the torso.
2. Remove the bag by pushing in on the L-shaped button and pulling it straight away. (See Figure 28 and inset).

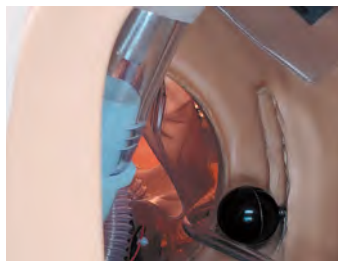


Fig 28.

Note: In some models, the waist pin will need to be removed for easier access. Not easy to remove the waist connection, it no longer a pin but two individual attachment points



To attach the bag:

1. Push the coupler body (with bag attached) onto the coupler insert (part with the black O-ring) that is protruding from the underside of the gastrostomy inside the upper torso of the manikin. You will hear a slight snap when the connection is complete.

2. Test the connection by gently pulling on the coupler body to ensure it is locked.

Note: The gastrostomy feature is designed for use with a 16 French Gastrostomy Tube. It is recommended that the tip of the feeding tube is well lubricated before inserting.

3. Ensure the reservoir is straight and flat before attempting to simulate feeding with water.

Note: Water only should be used to perform feeding procedures.

4. Lubricate the end of the feeding tube and gently insert through the flanged hole.
5. Upon completion of the exercise, remove genitals, remove the reservoir, drain the liquid from the reservoir bag, and rinse the bag.
6. Ensure the bag is clean and dry prior to storing it back inside the torso. Wipe any residual lubricant with warm water and a soft cloth prior to storing the manikin.

Set Up

Male Catheterization

Male Catheterization & Prostate Examination

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

The male genital insert can represent an uncircumcised or circumcised adult male, with the addition of the included foreskin. To change genitals in the simulator, simply press to fit into the open genital area of the pelvis. (See Figure 29).



Fig 29.

The urinary catheterization reservoir is interchangeable between male and female genitals. Female Genitals come installed with the simulator.

Note: To apply the foreskin, apply the included pump spray lubricant to the glans and slide the foreskin in place. To prepare for catheterization exercises:

1. The urinary reservoir is installed on the back side, make sure the urinary reservoir is firmly in place. (See Figure 30).



Fig 30.

2. Close the clamp on the Fluid Supply Bag (See Figure 31) and fill with water or included simulated urine. Recommended amount of fluid to fill the Fluid Supply Bag is between 100 and 250 mL.



Fig 31.

3. Hang the filled Fluid Supply Bag. Attach the tubing quick connect on end of Fluid Supply Bag to the quick connect on the left lower side of the simulator's torso. Open Clamp on fluid supply bag (See Figure 32).

Note: The Fluid Supply Stand is not included. Use distilled water or follow instructions on the Simulated Urine.

4. Lubricate the catheter being used with the Pump Spray Lubricant provided (See Figure 33). The catheter should be well lubricated and force should not be used when placing the tube.



Fig 32.

Note: Special care should be taken when using a Foley catheter. Nasco recommends use of 16 French Foley catheters. Use of this size will avoid the possibility of leakage. Cuff inflation should only be attempted when the catheter is in the proper position inside the bladder. The cuff must also be completely deflated before the catheter is removed. The catheter should not be left inserted in the simulator for an extended period of time. Improper use of a Foley catheter may result in damage to the simulator and void the warranty.



Fig 33.

5. After completion of the exercise, close the clamp on the Fluid Supply Bag tubing and remove the male genital insert by reversing the assembly instructions. Disconnect the urinary catheter reservoir tubing via the quick disconnect, remove the reservoir from the male genitalia insert, and drain the reservoir thoroughly (See Figure 30).

6. Rinse the reservoir and the outside of the male genitalia to remove any residual lubricant.

Fluids should be drained and the reservoir emptied after every use. Ensure the reservoir is clean and dry prior to storing.

Set Up

Foreskin Application / Prostate Examination

Foreskin Application

Place the foreskin over the gland by lubricating the gland with baby powder and placing the foreskin over the gland. The placement of the foreskin can be placed higher or lower depending on how much skin needed. (See Figures 34 and 35).



Fig 34



Fig 35.

Prostate Examination

There are five prostates included with your simulator.

- 1 normal size,
- 2 normal size with hard nodule,
- 3 enlarged on one side,
- 4 enlarged across the midway with hard nodule, and
- 5 enlarged with hard irregular surface (See Figure 36).

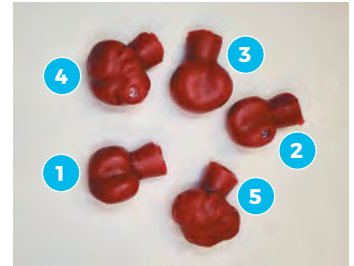


Fig 36.



Fig 37.

Insert chosen prostate via the backside of the male genitalia in the bottom cavity (See Figure 37).

Use included Pump Spray Lubricant to practice prostate examination. Following the procedure, rinse the rectum with warm water and allow to dry prior to storing.

Note: The male genital insert does not have the capacity for enema administration. Must use female genital insert for enema administration practice.

Set Up

Female Catheterization

Female Catheterization, Enema Insertion & Cervical Examination

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.



Fig 38.

To change genitals in the simulator, simply press to fit into the open genital area of the pelvis. (See Figure 38).

The urinary catheterization reservoir is interchangeable between male and female genitals. Female Genitals come installed with the simulator.

To prepare for catheterization exercises:

1. The urinary reservoir is installed on the back side, make sure the urinary reservoir is firmly in place. (See Figure 39).



Fig 39.

2. Close the clamp on the Fluid Supply Bag (See Figure 40) and fill with water or included simulated urine. Recommended amount of fluid to fill the Fluid Supply Bag is between 100 and 250 mL.



Fig 40.

3. Hang the filled Fluid Supply Bag. Attach the tubing quick connect on end of Fluid Supply Bag to the quick connect on the left lower side of the simulator's torso. Open clamp on fluid supply bag (See Figure 41).



Fig 41.

Note: The Fluid Supply Stand is not included. Use distilled water or follow instructions on the Simulated Urine.

4. Lubricate the catheter being used with the Pump Spray Lubricant provided (See Figure 42). The catheter should be well lubricated and force should not be used when placing the tube.



Fig 42.

Note: Special care should be taken when using a Foley catheter. Nasco recommends use of 16 French Foley catheters. Use of this size will avoid the possibility of leakage. Cuff inflation should only be attempted when the catheter is in the proper position inside the bladder. The cuff must also be completely deflated before the catheter is removed. The catheter should not be left inserted in the simulator for an extended period of time. Improper use of a Foley catheter may result in damage to the simulator and void the warranty.

5. After completion of the exercise, close the clamp on the Fluid Supply Bag tubing and remove the female genital insert by reversing the assembly instructions. Disconnect the urinary catheter reservoir tubing via the quick disconnect, remove the reservoir from the female genitalia insert, and drain the reservoir thoroughly.
6. Rinse the reservoir and the outside of the female genitalia to remove any residual lubricant.

Fluids should be drained and the reservoir emptied after every use. Ensure the reservoir is clean and dry prior to storing.

Set Up Enema Administration

Enema Administration

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

Enema Administration can only be practiced on the female genital insert.

To prepare the simulator for enema administration:

1. Remove the female genital insert the simulator, and ensure the enema reservoir is inserted into the inside of the rectum (See Figure 43).
2. Press the female genital insert into the pelvis of the simulator. Position the simulator. Using a facility supplied enema kit, lubricate the applicator liberally with the included Pump Spray Lubricant and gently insert through the anus.
3. After completion of the exercise, remove the female genital insert by reversing the assembly instructions.
4. Remove the enema from the female genitalia insert and drain the reservoir thoroughly. Rinse the reservoir and the outside of the female rectum to remove any residual lubricant.
5. Drain the reservoir and dry thoroughly after every use. Ensure the reservoir is clean and dry prior to storing.

Note: Use water ONLY when administering an enema. The enema reservoir holds up to 200cc of fluid.

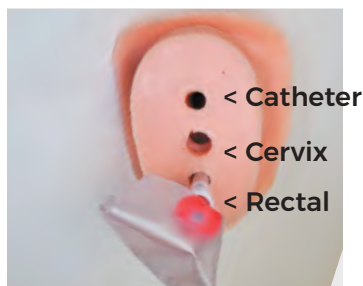


Fig 43.

Set Up Female Cervical Exam

Female Cervical Examination

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

The female genital insert allows for douching. Only water should be used as a douching agent. Pap smear procedures and visual inspection of the vagina and cervix may also be demonstrated. Seven cervical conditions are included: 1 normal, 2 early pregnancy, 3 polyp, 4 early cancer, 5 late cancer, 6 inflammation, and 7 dysplasia (See Figure 44).

To prepare the simulator for cervical examination:

1. Insert the chosen cervix via the backside of the female genitalia in the center cavity (See Figure 45).
2. To perform procedures, generously lubricate the instrument of insertion using the included Pump Spray Lubricant and use the smallest possible speculum for Pap smear and visual inspection exercises. Avoid exerting too much pressure on the vaginal walls.

Following completion of the exercises:

1. Remove the female genital insert by reversing the assembly instructions.
2. Rinse the vagina with warm water to remove any residual lubricant.
3. Allow to dry before reassembling into the simulator.



Fig 44.



Fig 45.

Set Up

Suprapubic and Urinary Catheterization

Suprapubic Catheterization

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

To prepare the simulator for suprapubic catheterization:

1. Attach the suprapubic stoma/bladder reservoir to the twist lock quick connect located in the abdomen of the simulator (See Figure 46).
2. Lubricate the suprapubic stoma/bladder reservoir using the included Pump Spray Lubricant.
3. Insert the suprapubic stoma/bladder reservoir through the pelvis and into the abdomen (See Figure 47). See Inset for exterior view.

Note: The suprapubic bladder will come installed in the simulator. Insert the male or female genitalia.

4. Close the clamp on the Fluid Supply Bag (See Figure 48) and fill with water or included simulated urine. Recommended amount of fluid to fill the Fluid Supply Bag is between 100 and 250 ML.
5. Hang the filled Fluid Supply Bag.
6. Attach the tubing quick connect on the end of Fluid Supply Bag to the quick connect on the left lower side of the simulator's torso. (See Figure 49).



Fig 46.

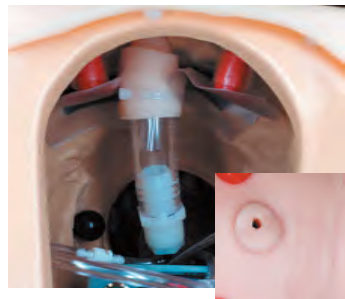


Fig 47.



Fig 48.



Fig 49.

Note: Use distilled water or follow instructions on the Simulated Urine.

7. Lubricate the catheter being used with the Pump Spray Lubricant provided. The catheter should be well lubricated and force should not be used when placing the tube.

After completion of the exercise:

1. Close the clamp on the fluid supply bag tubing and remove the suprapubic insert by reversing the assembly instructions.
2. Disconnect the fluid supply bag via the quick disconnect on the left side of the simulator.
3. Drain the bag and tubing thoroughly.
4. Rinse the reservoir and the suprapubic stoma to remove any residual lubricant.

Fluids should be drained and the reservoir emptied after every use. Ensure the reservoir is clean and dry prior to storing.

Urinary Catheterization and Suprapubic Valve Maintenance

To keep the urinary catheterization features of this simulator operating efficiently, maintenance is required at the beginning of catheterization training for both the urinary catheterization and suprapubic reservoirs, with the included silicone lubricant.

Before training:

1. Remove the urinary or suprapubic reservoir from the torso or genitalia.
2. Apply a generous amount of silicone lubricant onto the end of a cotton swab. Deposit grease between the valve membranes. (See Figure 50).



Fig 50.

Set Up Blood Pressure Arm

Blood Pressure Arm

Features included with LF04301/ LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

Installing the Batteries

1. Take the Blood Pressure Electronic Control Unit out of the box and turn it over, placing it face down onto a padded work surface. Locate the "Open" compartment on the back of the panel where the batteries are to be installed. Place your thumb or index finger on the "Open" compartment and push up. (See Figure 51).
2. Install 6 "AA" batteries as indicated by the orientation diagram embossed in the bottom of the bracket. After the batteries have been properly installed, reassemble the Electronic Control Unit by reversing the disassembly procedures.



Fig 51.

Turning the Electronic Control Unit On

1. Place the unit face up on the padded work surface.
2. Press the power button on the top right of the unit. (See Figure 52).
3. Observe the display and verify that a readable display is present.

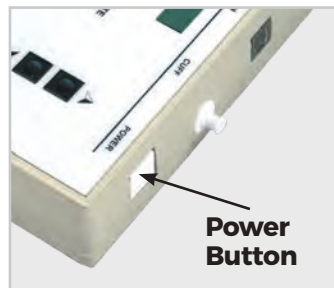


Fig 52.

Connecting the Arm, Electronic Control Unit, and Sphygmomanometer

1. Locate the end of the pressure line attached to the sphygmomanometer that is assembled with a male luer fitting.

2. Attach this end of the pressure line to the female luer fitting assembled at the top of the electronic control unit marked CUFF. (See Figure 53).

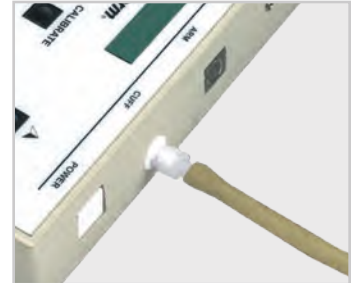


Fig 53.

3. Locate the cable that extends from the blood pressure simulator arm and plug into the top of the Electronic Control Unit using the jack labeled ARM. (See Figure 54).



Fig 54.

At this point, the blood pressure simulator is ready for use. The unit has been factory calibrated for use with accessories included. No further calibration adjustments are necessary at this time. If the unit is to be used with a sphygmomanometer other than the one supplied, or when recalibration is necessary, see the section titled Calibration Procedures.

Electronic Control Unit Function

1. Press the power button on the top right of the unit. (See Figure 55). Observe the display and verify that a readable display is present.

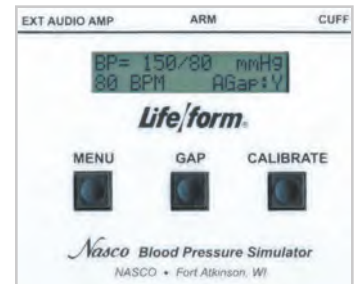


Fig 55.

Note: The control box has a battery saving feature that will turn the unit off after approximately 8-10 minutes if no keys are used within that period of time.

2. Under the display window are three buttons: Menu, Gap, and Calibrate.

Set Up Blood Pressure Arm

Setting Systolic and Diastolic Pressure

1. Press the Menu Key once.
2. The “Set SYSTOLIC” pressure menu will display in the Electronic Control Unit window. (See Figure 56.).

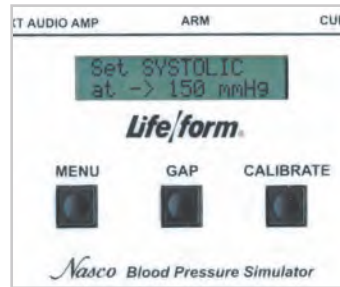


Fig 56.

3. Use the up or down arrow keys, located to the right of the menu button, to adjust the systolic pressure.

4. Press the Menu key a second time.

5. The “Set DIASTOLIC” pressure menu will display in the Electronic Control Unit window. (See Figure 57).

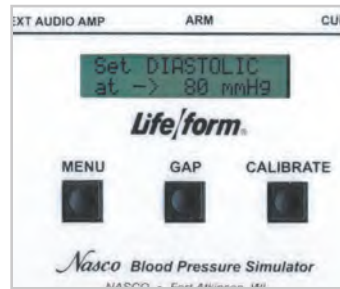


Fig 57.

6. Use the up or down arrow keys located to the right of the menu button to adjust the diastolic pressure.

Note: The systolic and diastolic pressures can be set anywhere from 0-300 mmHg.

Setting the Heart Rate

1. Press the Menu Key a third time.
2. The “Set HEARTRATE” menu will display in the Electronic Control Unit window. (See Figure 58).

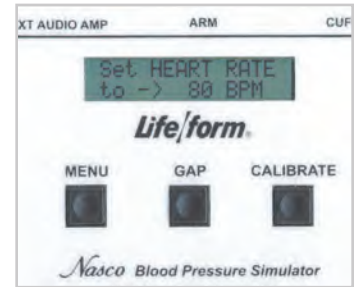


Fig 58.

3. Use the up or down keys located to the right of the menu button to adjust the heart rate. The heart rate can be set from 0-300 beats per minute.

Set Up

Blood Pressure Arm

Setting the Palpable Pulse

The palpable pulse is found at the radial location. (See Figure 59). Palpations can be felt upon start-up of the unit or after blood pressure and heart rate settings have been made. The palpable pulse is delicate and should be palpated lightly. Pressing too hard will damage the pulse feature.



Fig 59.

1. Press the Menu key a fourth time.
2. The “Set PALPATION” menu will display in the Electronic Control Unit window.
3. “Pulse ON” is defaulted.
4. Use the down arrow key to the right of the menu key to set palpation to “pulseless.”

Note: The palpation can be set to either on or pulseless. When the pulseless setting is used, the diastolic and systolic pressures will automatically be set to 0.

5. Use the up arrow key to the right of the menu key to set palpation as “Pulse ON.” (See Figure 60).

Note: During an actual blood pressure reading, the palpable pulse will automatically turn off when the cuff is inflated and surpasses the systolic set point. It will turn on when the cuff is deflated 20 mmHg below the diastolic set point. This function allows students to clearly hear Korotkoff sounds.

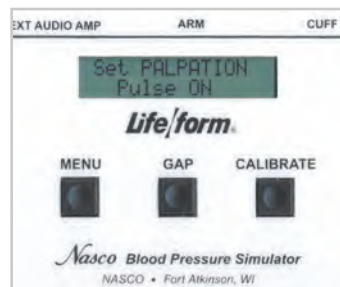


Fig 60.

Setting the Auscultatory Gap

This function is included to simulate the gap that is sometimes present between phases 1 and 2 in which no audible sound is noted.

1. Locate the GAP Key to the right of the MENU Key.
2. Press the GAP Key to set the function on (Y=Yes) or off (N=No).
3. When the key is pressed, a message will briefly appear that the auscultatory gap is enabled or disabled.
4. The Main display will show AGap:Y (or ON) (See Figure 61) or AGap:N (or OFF).



Fig 61.

Setting the Volume

The arrow keys also control the volume of the sounds present in the arm.

1. From the main menu, press the up arrow key to increase the volume.
2. Press the down arrow key to decrease the volume.

The volume levels can be adjusted from level 1 (the lowest volume) to level 7 (the highest volume).

Set Up Blood Pressure Arm

Performing a Blood Pressure

1. Verify the pressure line tubing from the sphygmomanometer and the audio line from the arm are properly connected to the electronic control unit. (See above connection instructions)
2. Apply the sphygmomanometer cuff and gauge to the arm according to facility procedures.
3. Place the stethoscope to the arm according to facility procedures.
4. Set the systolic and diastolic pressure to the desired levels.
5. Select the auscultatory gap.
6. Select the heart rate to the desired setting.

Note: The electronic control unit will default to the last levels previously set. It is important to go through all menus and program the electronic control unit with each training session as desired. A standard stethoscope will work with the blood pressure simulator, one is not provided.

Low Battery Indicator

When the battery supply diminishes to a level near the point the unit will no longer function properly, a “low batt” message will display on the systolic pressure menu when the systolic pressure reaches above 20 mmHg. At this point, the batteries should be replaced as soon as possible to ensure proper operation of the unit. Refer to the section “Installing the Batteries” for more information.

Calibration Procedures

1. Follow the setup procedures.
2. Apply the cuff to the simulated arm.
3. Set the electronic control unit systolic pressure to 150 mmHg and set the diastolic pressure to 70 mmHg.
4. Proceed with performing the blood pressure and note the differences between the gauge and what was set on the electronic control unit.
5. Set the systolic correction by pressing and holding the CALIBRATE key to the right of the GAP key. (See Figure 62).



Fig 62.

6. Using the arrow keys, set the correction. For example, if the blood pressure reading for systolic pressure was 148 mmHg, the systolic correction would be +2 and the up arrow key would be pressed until +2 would display in the window.

7. Press the MENU key from the Systolic Correction window to change to the Diastolic Correction window. (See Figure 63).



Fig 63.

8. Using the arrow keys, set the correction. For example, if the blood pressure reading for diastolic pressure was 72 mmHg, the diastolic correction would be -2 and the down arrow would be pressed until -2 would display in the window.
9. Press the MENU key. The “CALIBRATION COMPLETE” message will appear and the main menu window will be displayed.

Set Up Blood Pressure Arm

Preparing Your Sphygmomanometer for Use with Blood Pressure Simulator

In the event the supplied sphygmomanometer would cease to operate, any standard sphygmomanometer can be adapted for use with the blood pressure simulator. It is recommended that a child size cuff continue to be used.

1. Disconnect the sphygmomanometer from the pressure line connected to the electronic control unit. The pressure line can be left connected to the electronic control unit.
2. Remove the T-fitting included with the assembled sphygmomanometer.
3. Obtain a new sphygmomanometer.
4. Using a scissors, carefully cut the tube of the sphygmomanometer about 2" from the gauge. (See Figure 64).
5. Take the T-fitting and insert the horizontal ends in-between the two ends of the cut tubing of the new sphygmomanometer. (See Figure 65).
6. Assemble the free end of the pressure line tubing, still connected to the electronic control unit, to the free end of the T-fitting. (See Figure 66).
7. Connect the newly modified sphygmomanometer to the child-size cuff.
8. Follow the calibration instructions to calibrate with the electronic control unit and blood pressure simulator.



Fig 64.



Fig 65.



Fig 66.

Set Up

IV and Injection Arm

IV and Injection Arm

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

TERi™ has skin texture realistic to touch thanks to modern plastics technology. The following adhesives will alleviate challenges in adhesion: 3M Kind Removal Adhesive Tape, Safe N Simple Silicone Adhesive Tape, Curad Silicone Band-Aid, Safe N Simple Simpurity IV Derm Silicone (Tegaderm equivalent).

Internal and External Structure

The outer skin is easily peeled off, revealing the “core” and veins. The skin and veins can be readily replaced when needed. Using smaller gauge needles will prolong the life of the original skin and veins. Replacement parts are available and listed at the end of this manual. The internal vascular structure begins at the shoulder and continues under the arm, crosses the antecubital fossa forearm, makes a loop in the back of the hand, and then returns to the underarm. This venous system is constructed of special, natural dry rubber, with the lumen being the approximate size of an adult human vein (See Figure 67). This vascular structure has inlet and outlet tubing at the shoulder. It is via these tubes that synthetic blood is infiltrated.

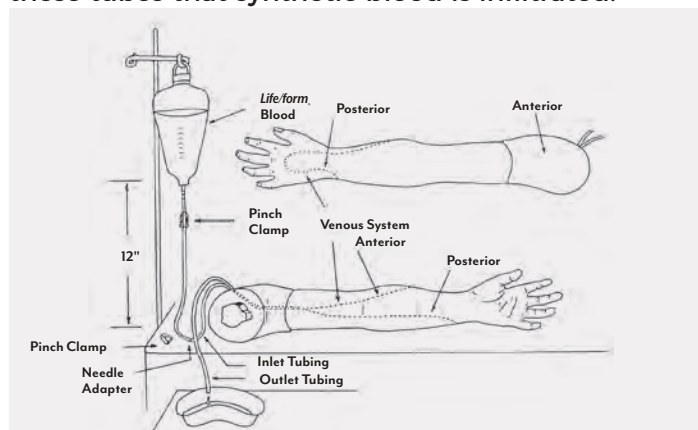


Fig 67

Filling the Venous System and Preparing the Arm for Blood Draws

1. Prepare the synthetic blood by filling the pint bottle containing the synthetic blood concentrate with distilled water.

2. Close the clamp on the IV tubing and pour the synthetic blood into one of the provided fluid supply bags. This will be IV Bag A. Fill to 500 cc maximum.
3. Hang IV Bag A no more than 18" (45.72 cm) above the level of the arm. Fluid Supply stand shown sold separately.
4. Attach the tubing on IV Bag A to one of the shoulder tubes. Since this is a single tube loop system it does not matter which tube you use. This will now be the inlet tube.
5. Use the second shoulder tube for draining; this will be the outlet tube. With the outlet shoulder tube in a basin, a sink, or attached to the second IV Bag or IV Bag B, make sure the clamp on the drain tube is open. If using IV Bag B, ensure the clamp on IV Bag B is also open. Flush the vascular system with synthetic blood by slowly opening the clamp on IV Bag A. Allow the system to flush with synthetic blood until the air bubbles are no longer passing through the outlet shoulder tubing into the basin, sink, or IV Bag B. (See Figure 68).



Fig 68.

6. Close the clamp on the outlet shoulder tube and, if using IV Bag B to close off the blood outlet, the system is now filled and pressurized. Be sure to leave the clamp on IV Bag A open.

The arm is ready to practice drawing blood. Synthetic blood can be drawn anywhere along the pathway of the vein.

Set Up Injectable Arm

Preparing the Arm for Intravenous Infusions

1. Start with an “empty” unpressurized arm. Close the clamp at the end of IV Bag A and then fill with distilled water, 500 cc maximum. Hang IV Bag A not more than 18” (45.72 cm) above the arm.
2. Ensure one of the tubes leading from the shoulder of the Injectable Training Arm is fitted with a clamp. Attach fitting end of IV Bag A to the shoulder tubing with the clamp. Attach the fitting end of IV Bag B to the remaining shoulder tube.
3. With IV Bag B laying on the surface and IV Bag A hanging, open the clamps on both bags and the arm tube. Allow fluid to flow through the Injectable Training Arm until air bubbles are no longer seen flowing into IV Bag B. Close the clamp on IV Bag B, the system is now pressurized. (See Figure 69).

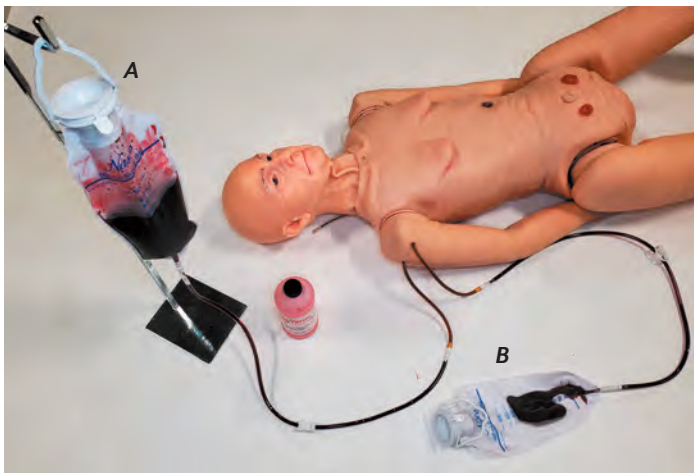


Fig 69.

4. Insert IV needle in vein. “Flashback” will indicate proper insertion.
5. After IV Bag A empties, close the clamp on IV Bag A and the clamp on the arm tube. Disconnect IV Bag A from the shoulder tubing. You may now use IV Bag A as the infusion supply.
6. Cleanse the IV site with distilled water and insert IV needle or butterfly.
7. To start the IV flow, open the clamps on both IV Bags A and B.

Proof of proper procedure will be evidenced by the flow of fluid from IV Bag A. Control flow rate with the clamp on IV Bag A. A third IV Bag (not supplied) can be used for the infusion of fluid. This will enable bags A and B to remain attached to the arm.

If a more realistic experience is desired, with “blood flashback” instead of water when inserting the butterfly into the lumen of the vein, use the following procedure, C.

Recommended Procedure for Simultaneous IV Infusions and Drawing Blood

1. Follow the procedure for setting up your IV Arm to draw blood, Procedure A, and using IV Bag B as the drain bag.
2. Once the arm is pressurized and full of blood, open the clamps on IV Bags A and B.
3. Obtain a third IV Bag (not supplied), IV Bag C, and ensure the clamp is closed and fill with distilled water. Hang IV Bag C according to your desired flow rate.
4. Cleanse the IV site with distilled water and insert IV needle or butterfly. A realistic blood flashback will be evidenced with proper insertion.
5. Connect IV Bag C to the IV needle or butterfly with the latex connector and open the clamp to IV Bag C. (See Figure 70).
6. IV Bag B, when full, may be easily switched with A.

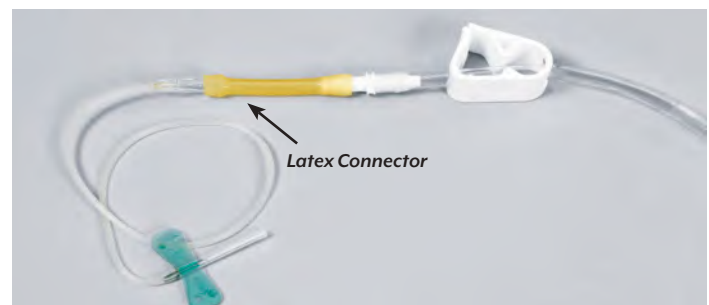


Fig 70.

Set Up Injectable Arm

User Help Guide for the Injectable Training Arm

1. Follow procedures and ensure clamps are open on appropriate fluid supply/IV bags and/or shoulder tubes.
2. Look over your equipment prior to use. IV tubes will kink at the clamp site with repeated use. Routinely move clamps up or down the tube to reduce the probability of kinks. When kink occurs, slide the clamp to a new position and, with fingers, massage tubing at pinched site to restore lumen. Replacement fluid bags are available. Removing clamps prior to storage is recommended.
3. Check to ensure hanging bags are hung to the appropriate height. Hanging the supply bags slightly higher for bags not producing enough pressure can create just enough gravitational force on the fluid to facilitate flow.
4. If a venous system clog is suspected, try using a large 50 cc syringe to force distilled water through the tubing.
5. Check the venous system tubing for kinks. First, lubricate the outside of the arm skin generously with mild liquid soap. Peel the skin back to the knuckles, being careful NOT to remove the skin from the fingers. Examine all the tubing for possible kinks. Replace the skin and infiltrate the system again.

Care and Maintenance

After each use of the Injectable Training Arm, follow these procedures:

1. Disconnect IV bags, remove infusion needles, and flush the venous system using distilled water and 12 cc syringe.
2. Simulated blood can be returned to its bottle and reused.
3. Rinse IV bag containing simulated blood with distilled water, flushing through tubing into a sink or basin.
4. Remove pinch clamps from IV bags and injectable training arm shoulder tubing.
5. Wash the outside of the injectable training arm with mild liquid soap. Stubborn stains may be washed with Nasco cleaner. Dispense Nasco cleaner on clean, soft, dry cloth and gently wipe soiled area.
6. Remove excess water from the venous system by raising the hand, lowering the shoulder, and draining it into a sink or basin.
7. Allow the arm to dry completely before storing.

Set Up Injectable Arm

To prevent causing harm to the Injectable Training Arm:

1. Use distilled water rather than alcohol, Betadine®, or other skin preparing substances to simulate preparing the puncture site.
2. Small diameter needles, 20-gauge to 25-gauge, should be used to extend the life of the skin and veins. The skin and veins will hold up to several hundred sticks if smaller needles are used as recommended and all available sites are used.
3. Synthetic blood will stain the soft skin of the injectable training arm, clothes, most soft surfaces, and some hard surfaces. Please use caution.
4. Ink and newsprint will cause an indelible stain to the injectable training arm. DO NOT place the injectable training arm on printed surfaces or plastic.
5. Follow Care and Maintenance instructions carefully.

Arm Skin Replacement

1. Remove the eight screws retaining the shoulder joint to the arm.
2. Peel the skin down and remove from arm (See Figure 71).

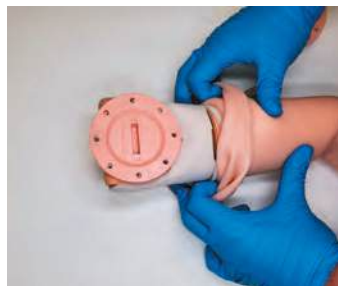


Fig 71.

3. Apply baby powder to the interior of the replacement skin and pull onto the arm.
4. The key feature needs to point to the L or R depending on which leg skin is being replaced (See Figure 72).
5. Install the eight screws, being careful not to over tighten the screws.



Fig 72.

6. Reattach arm to simulator torso.

Leg Skin Replacement

1. Remove the eight screws retaining the hip joint to the leg. (See Figure 73).
2. Peel the skin down and remove from leg (See Figure 74).
3. Apply baby powder to the interior of the replacement skin and pull onto the leg. (See Figure 75).



Fig 73.



Fig 74.

4. The key feature needs to point to the L or R depending on which leg skin is being replaced (See Figure 76). This feature plugs into the R or L area of the hip joint depending on which leg skin is being replaced.



Fig 75.

5. Install the eight screws, being careful not to over tighten the screws.
6. Reattach leg to simulator torso.



Fig 76.

Set Up Injectable Arm

Intramuscular Injections

Intramuscular injections may be performed in inserts at the left hip, right thigh, at both deltoids of the standard arms, and left deltoid of the injectable training arm. Inject AIR ONLY as the inserts cannot be drained in the standard arms, injection training arm, and thigh.

To remove the inserts on standard arms and thigh:

1. Remove the eight screws retaining the shoulder or hip joints to the arm or leg.
2. Roll skin down to expose inserts prior to removing and replacing them (See Figures 77, thigh & 78, Shoulder).
3. Compress them sideways and pull out.
4. Reverse procedure to replace.

Note: Avoid using alcohol or similar substances to prep the injection site. Use distilled water to simulate this procedure.



Fig 77.



Fig 78.

Cautions

1. This synthetic blood is specially formulated to be compatible with the self-sealing veins and plastics used in manufacturing the injectable training arm.
2. NEVER use synthetic blood for intramuscular injection.
3. DO NOT use dull or burred needles, these will cause leaks in the system. Burred needles will cause permanent damage.
4. DO NOT allow synthetic blood to dry on the simulator – it may stain the skin.
5. Use only 500 cc of infusion fluid. Larger amounts will increase the pressure of the venous system, resulting in leaks.
6. DO NOT clean the simulator with solvents or corrosive materials, as they will damage it.
7. DO NOT use for subcutaneous injection. Nasco's Intradermal Injection Simulator (LF01008U) is specifically designed for intradermal injection training and practice.

Set Up

Auscultation

Auscultation

Features included with LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

The auscultation feature duplicates heart and lung conditions selected by the instructor via wireless remote control with LCD Display. Palpation is required to correctly identify the auscultation locations.

Heart

Sounds are detected at 6 anterior locations with 12 heart conditions:

01 Normal	07 S3 Gallop
02 Aortic Regurgitation	08 S4 Gallop
03 Pulmonary Stenosis	09 Systolic Click
04 Mitral Stenosis	10 Atrial Septal Defect
05 Holosystolic	11 PDA
06 Mid-systolic	12 VSD

Lungs

Sounds are detected at 5 anterior, 6 upper posterior, 4 lower posterior, and 2 mid-axillary locations. With 16 lung conditions:

01 Normal Lungs	09 Cavernous
02 Normal Vesicular	10 Bronchovesicular
03 Wheezes	11 Bronchial
04 Mono Wheeze	12 Pulmonary Edema
05 Fine Crackle	13 Infant
06 Coarse Crackle	14 Friction Rub
07 Rhonchi Crackle	15 Egophony
08 Stridor	16 Pectoriloquy

1. Locate your SmartScope™ and Remote Control with LCD display.
2. Locate included “AA” and “AAA” batteries.

3. Install 2 “AA” batteries into SmartScope™ and 2 “AAA” batteries into the remote control. The compartments are marked as to the positions of the batteries “+” or “-”.
4. Press the red power button on the remote control. This turns on the remote control and sends a signal to activate the SmartScope™.
5. After the unit is activated, the LCD display on the remote control will be in the “status” mode, displaying the current menu settings for the heart and lung conditions.

Note: Powering on one remote control will activate and control all SmartScopes™ and manikins simultaneously within a 100-foot range. Multiple remotes operating within this range will cause complications and signal confusion.

Selecting New Heart and Lung Conditions

1. Activate remote control and SmartScope™ using instructions above.
2. Press either the heart or lung button. This will put the display into menu mode.
3. Select a condition by using the number buttons or the scroll button to view the conditions in sequence.
4. When the desired condition is viewed on the LCD display, press the enter button to activate.
5. Heart and lung sounds are heard simultaneously. Check the main screen to ensure the desired sounds are being heard. For example, when hearing normal heart sounds and normal lung sounds, the LCD display will read: HS= (01) LS= (01).

Set Up Auscultation

Listening to Selected Heart and Lung Sounds

1. Follow the instructions above to activate remote control, SmartScope™, and select desired sounds.
2. Place the earpieces of the SmartScope™ in ears angled in a forward position.
3. Place the diaphragm of the SmartScope™ over the appropriate sites on the manikin.
4. Use included laminated key cards for location instruction.
5. For additional location instruction, use the green color-coded stickers for lung sites found and the blue color-coded stickers for the heart sites found.
6. Correct placement of the SmartScope™ is required to hear the sounds. Moving the SmartScope™ slowly across the area will help locate the sensor in the torso so that the sounds can be heard.

Note: The SmartScope™ is only for use with the Auscultation feature. It is not a standard stethoscope. (See Figure A)



Fig A.

Using the Amplified Speaker (purchased separately LF01189U)

1. Locate the SmartScope™ and speaker cord included with the 30-watt amplifier/speaker.
2. Plug the speaker cord into the speaker jack on top of the SmartScope™ box.
3. Plug the amplifier/speaker into the 110V (or 220V) power source.
4. When the speaker is connected, the SmartScope™ earpieces will not work; sounds will only be amplified through the speaker.
5. Select the desired heart and lung sounds following the instructions above.
6. Place the diaphragm of the SmartScope™ over the appropriate sites on the manikin.

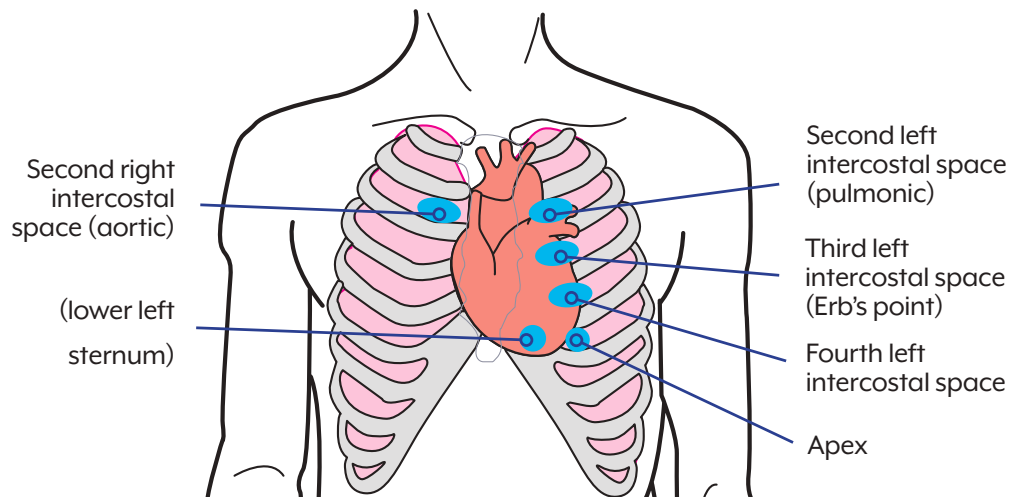
Note: The remote has a battery saver mode that shuts the unit down after eight minutes if the remote is left on the same setting. To prevent this shutdown, select a different heart or lung sound within the eight-minute time period.

Care and Maintenance for Auscultation Feature

1. Prior to storing equipment, ensure the batteries in the remote control and SmartScope™ are removed.
2. Adhesive remaining on the manikin from use of the blue and green location stickers can be removed using Nasco cleaner. Apply Nasco Cleaner to a clean, soft, dry cloth and wipe residual adhesive. Be cautious not to over-wipe painted areas.
3. Newsprint, ballpoint pen, and printed plastics will leave an indelible mark.
4. Alcohol prep pads are included to sterilize SmartScope™ earpieces between users.

Set Up

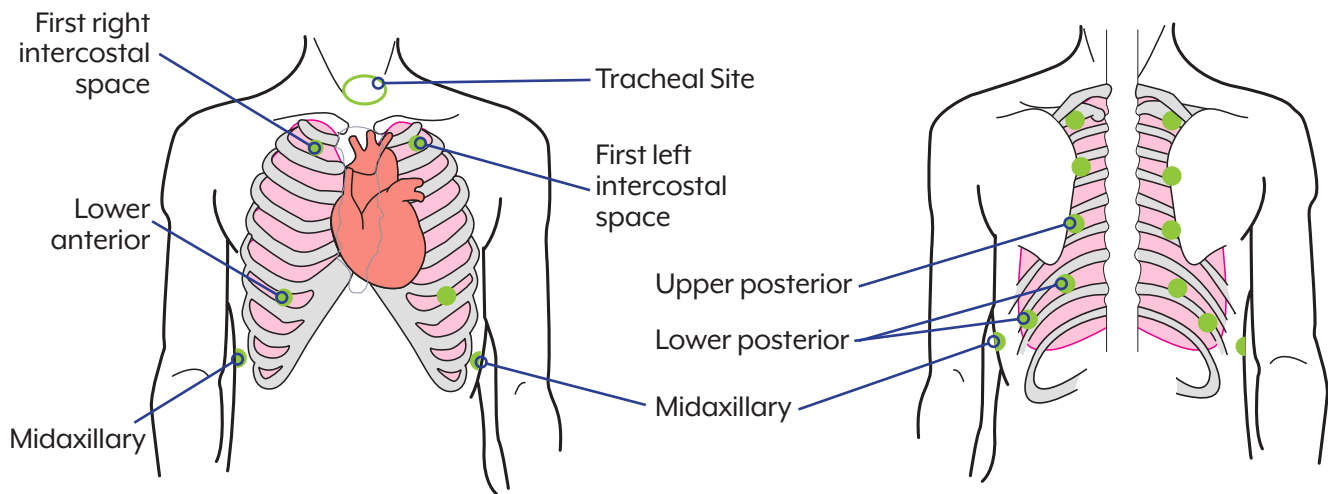
Anterior Heart Sites



	Aortic Second Right Intercostal Space	Pulmonic Second Left Intercostal Space	Erb's Point Third Left Intercostal Space	Fourth Left Intercostal Space	Lower Left Sternum	Apex
1. Normal	Normal, S2 Accentuated	Normal, S2 Accentuated	Normal, S2 Accentuated	Normal	Normal	Normal
2. Aortic Regurgitation	Ejection Sound, Loud Mid systolic & soft early diastolic murmur	Ejection sound, mild systolic murmur, early diastolic blowing murmur			Normal	Normal
3. Pulmonary Stenosis	Normal	Moderate 4th sound, harsh late peaking systolic murmur, soft late pulmonic 2nd sound	Normal	Normal	Normal	Normal
4. Mitral Stenosis	Normal	Normal	Severe held expiration, tachycardia: opening snap .03 seconds after loud 2nd sound	Constrictive Pericarditis/ knock. Inspiratory augmentation indicates a gallop of right ventricular origin	Normal	Held expiration, tachycardia: opening snap, mid diastolic & presystolic murmurs, loud 1st sound
5. Holosystolic Murmur	Normal	Normal	Normal	Normal	Patient has mitral regurgitation & frequent premature ventricular contractions. Murmur is crescendo-decrescendo with late peaking. Soft S3 in mid diastole.	
6. Midsystolic Murmur	Normal	Normal	Normal	Normal	Patient with hypertrophic cardiomyopathy has a murmur that begins after S1 and ends before S2	
7. S3 Gallop	Normal	Normal	Normal	Normal	Patient has a readily heard third heart sound. S3 occurs later in diastole than the opening snap.	
8. S4 Gallop	Normal	Normal	Normal	Normal	Patient with left ventricular hypertrophy has a fourth sound (S4) that is not heard on every cycle. The sound is presystolic about .1 second before S1.	
9. Midsystolic Click	Normal	Normal	Normal	Normal	Patient has mitral prolapse which produces a mid systolic click heard during inspiration.	
10. Atrial Septal Defect	Normal	Respiration: mid systolic murmur, fixed split 2nd, soft 3rd, breath sounds with inspiration	Normal	Respiration: mid systolic murmur, fixed split 2nd, mid diastolic murmur	Normal	Normal
11. Patent Ductus Arteriosus	Normal	Continuous murmur	Normal	Continuous murmur	Normal	Normal
12. Ventricular Septal Defect	Normal	Normal	Holosystolic murmur with late crescendo		Normal	Normal

Set Up

Anterior / Posterior Lung Sites



	Tracheal Site	First Left & Right Intercostal Sites	Upper Posterior Lung Sites	Lower Posterior Lung Sites Two Midaxillary Sites 2 Lower Anterior Sites
1. Normal Lung	Tracheal	Bronchovesicular	Normal Vesicular	Normal Vesicular
2. Normal Vesicular	Tracheal	Bronchovesicular	Normal Vesicular	Normal Vesicular
3. Wheezes	Wheeze	Wheeze	Wheeze	Wheeze Lower Volume
4. Mono Wheeze	Mono Wheeze	Mono Wheeze	Mono Wheeze	Mono Wheeze Lower Volume
5. Fine Crackle	Fine Crackle	Fine Crackle	Fine Crackle	Fine Crackle
6. Coarse Crackle	Coarse Crackle	Coarse Crackle	Coarse Crackle	Coarse Crackle
7. Ronchi	Ronchi	Ronchi	Ronchi	Ronchi
8. Stridor	Stridor	Stridor	Stridor Lower Volume	Stridor Lower Volume
9. Cavernous	Cavernous	Cavernous	Cavernous	Cavernous
10. Bronchovesicular	Tracheal	Bronchovesicular	Normal Vesicular	Normal Vesicular
11. Bronchial	Bronchial	Bronchial	Normal Vesicular	Normal Vesicular
12. Pulmonary Edema	Pulmonary Edema	Pulmonary Edema	Pulmonary Edema	Pulmonary Edema
13. Infant	Infant	Infant	Infant	Infant
14. Friction Rub	Tracheal	Bronchovesicular	Friction Rub	Friction Rub
15. Egophony	Egophony	Egophony	Egophony	Egophony
16. Pectoriloquy	Pectoriloquy	Pectoriloquy	Pectoriloquy	Pectoriloquy

Set Up Pressure Injury Wounds

Set Up Edema

Pressure Injury Wounds

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

Pressure wound identification and care may be performed by using the included foot wound sleeve. Five wounds are included: Stages 1-4 and a deep tissue wound.

Inserting Wounds into Foot Sleeve:

1. Slide foot sleeve over either left or right foot. Inside the sleeve is an indication for bottom. (See Figure 79.)
2. Select wound stage (See Figure 80) and press into the inside of the chosen opening on the foot sleeve (See Figure 81).

Proper Application Shown. (See Figure 82).



Fig 79.



Fig 80.



Fig 81.



Fig 82.

Edema

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

Edema identification may be performed by using one of the included foot edema sleeves. Edema included are Stages 1-4 and non-pitting.

Inserting Edema onto Foot:

1. Select edema stage and slide foot sleeve either left or right foot (Figure 83).

Proper Application Shown. (See Figure 84).



Fig 83.



Fig 84.

Care and Maintenance of Edema

1. Wash with warm water and mild soap.
2. Allow to air dry.
3. Coat lightly with baby powder to remove any tacky feel.

Set Up

CPR Measuring

CPR Measuring

Features included with LF04301/LF04301M, LF04299/LF04299M, LF04302/LF04302M and LF04302EX/LF04302MEX.

Apple or Android device

The CPR Plus application enables accurate and effective training using CPR Add-on Student or Instructor applications that can be downloaded to either an Apple or Android device. Student and instructor applications provided real-time feedback and feature adult capabilities, as well as a realistic interface.

Follow these links to download the CPR Add-On Kit instructor and student applications.

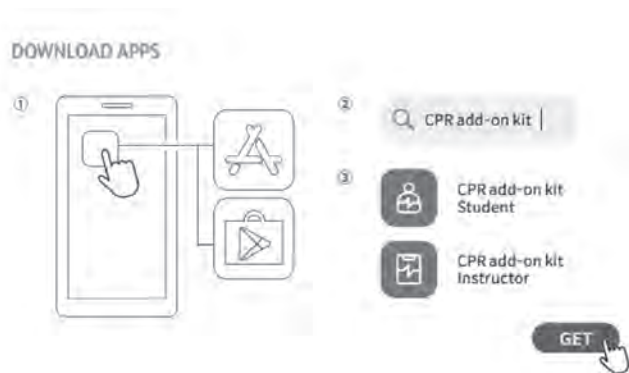
Android

<https://play.google.com/store/apps/details?id=heartisensestudent.android.imlabworld.com.heartisensestudent>

<https://play.google.com/store/apps/details?id=com.imlabworld.android.testing.fw.imlab.heartisenseinstructor>

<https://apps.apple.com/us/app/cpr-add-on-kit-instructor/id1203164623>

<https://apps.apple.com/us/app/cpr-add-on-kit-student/id1400115591>



Powering on CPR Monitoring Feature

1. To power on the CPR monitoring feature, access the “ON/OFF” button through the genital opening in the pelvis (See Figure 85).
2. Press the “ON/OFF” button.

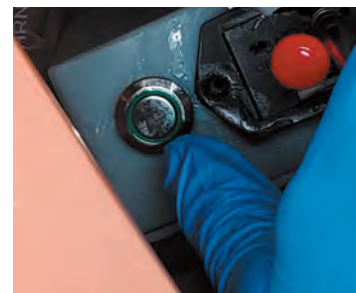


Fig 85.

Changing the Battery

The CPR monitoring feature is powered by a 9V battery (included).

1. To change the battery, access the battery compartment through the genital opening in the pelvis.
2. Pull the compartment out and up to remove the battery drawer (See Figure 86).



Fig 86.

3. Reverse instructions once a new battery is installed.

Patient Monitoring

Features included with LF04302/LF04302M, and LF04302EX/LF04302MEX.

Instructions for setup and use of your (Patient Vitals, Pre-Hospital or In-Hospital) Patient Monitoring suite are included with the packaging of the monitoring products.

Set Up Consumables



Set Up Consumables

- | | | | | |
|----|------------|---|--|--|
| 1 | 100-2028 | Carotid Pulse Bulb | | |
| 2 | HC53411 | Release Compound for Urinary Cath | | |
| 3 | LF00843 G | Male Genitalia Foreskins, Pack of 3, Light | | |
| | LF00843M G | Medium | | |
| 4 | LF00845 | Simulated Blood, Quart | | |
| 5 | LF01073 | Blood Pressure Cuff/Sphygmomanometer | | |
| 6 | LF01096 | Electronic Control Unit (BP) | | |
| 7 | LF01130 | Fluid Supply Bag, 500 ml | | |
| 8 | LF01144 | Auscultation SmartScope™ with Batteries | | |
| 9 | LF01148 | Auscultation Remote Control with Batteries | | |
| 10 | LF01230 C | Cervix Kit | | |
| 11 | LF03644 | Pump Spray Lubricant | | |
| 12 | LF04089 | Stoma Replacement | | |
| 13 | LF04099 | Stoma Reservoir | | |
| 14 | LF04303 | IV Arm, Light (LF04303M, Med.) | | |
| 15 | LF04304 | BP Arm, Light (LF04304M, Med.) | | |
| 16 | LF04305 | IV Arm Skin Replacement, Light | | |
| | LF04305M | Medium | | |
| 17 | LF04307 | IV Arm IM Pad Replacement | | |
| 18 | LF04308 | IM Pad, Thigh | | |
| 19 | LF04309 | IM Pad, Buttock, Light (LF04309M, Med.) | | |
| 20 | LF04310 | Foot Wounds, Pressure Injury Stages 1-4 | | |
| | LF04310M | and Deep Tissue Wound), Light | | |
| | | Medium | | |
| 21 | LF04310 A | Foot Wound Sleeve, Light (LF04310M A, Med.) | | |
| 22 | LF04311 | Urinary Catheter Bladder Reservoir | | |
| 23 | LF04312 | Lungs | | |
| 24 | LF04313 | Stomach Reservoir | | |
| 25 | LF04314 | Enema Reservoir | | |
| 26 | LF04315 | Gastrostomy Reservoir | | |
| 27 | LF04316 | Enema Bag | | |
| 28 | LF04317 A | Pupils, Normal, Set of 2 | | |
| 29 | LF04317 B | Pupils, Constricted, Set of 2 | | |
| 30 | LF04317 C | Pupils, Dilated, Set of 2 | | |
| 31 | LF04318 | Male Genitalia, Peri-care and Catheterization | | |
| | | included with LF04301/LF04301M, | | |
| | | LF04299/LF04299M, LF04302/LF04302M | | |
| | | and LF0302EX/LF0302MEX. | | |
| 32 | LF04319 | Female Genitalia, Peri-care and | | |
| | | Catheterization included with | | |
| | | LF04301/LF04301M, LF04299/LF04299M, | | |
| | | LF04302/LF04302M and LF0302EX/
LF0302MEX. | | |
| 33 | LF04320 | Right Leg Skin, Light (LF04320M, Med.) | | |
| 34 | LF04321 | Left Leg Skin, Light (LF04321M, Med.) | | |
| 35 | LF04322 | Right Arm Skin, Light (LF04322M, Med.) | | |
| 36 | LF04323 | Left Arm Skin, Light (LF04323M, Med.) | | |
| 37 | LF04324 | Torso Skin, Light (LF04324M, Med.) | | |
| 38 | LF04325 | Hearing Aid Replacement | | |
| 39 | LF04326 | Wig, Female | | |
| 40 | LF04327 | Dentures (Upper & Lower) | | |
| 41 | LF04329 | Edema (5) - Stages 1-4 & Non-Pitting, Light | | |
| | LF04329M | Medium | | |
| 42 | LF04330 | Suprapubic Stoma, Light (LF04330M, Med.) | | |
| 43 | LF04331 | Suprapubic Bladder | | |
| 44 | LF04332 | Prostate Kit | | |
| 45 | LF04333 | NHC Hospital Gown | | |
| 46 | LF04335 | Male Genitalia, Peri-care, Light | | |
| | LF04335M | Medium | | |
| 47 | LF04336 | Female Genitalia, Peri-care, Light | | |
| | LF04336M | Medium | | |
| 48 | PN01037 | Simulated Urine, Quart | | |
| 49 | LF04337 | Lavage/Gavage Bag | | |
| 50 | LF04334 | External Bladder for Urinary & Suprapubic | | |

Additional Consumables

- | | |
|---------|--|
| LF00846 | Simulated Blood, Gallon |
| LF01022 | Fluid Supply Stand, 5"x 8" |
| LF01127 | Foley Catheter, 16 FR, 5cc |
| LF01128 | Foley Catheter, 16 FR, 5cc, Pack of 10 |
| LF01170 | Adult Tracheostomy Tube |
| LF01279 | Silicone Skin Sealant |
| LF03468 | Carry Case, Soft |
| LF04306 | IV Arm Vein Replacement |

Set Up

Care and Maintenance

Overall Care and Maintenance

General Care

1. Most cleaning can be done with a soft cloth, mild soap, and warm water. Avoid over washing the painted areas on the manikin.
2. Stubborn stains can be treated by using Nasco Cleaner and a soft cloth.
3. Stains caused by make-up, ink, and newsprint are indelible and cannot be removed. Avoid contact with these substances and do not apply cosmetics or Betadine® solution to the manikin.
4. Follow cleaning, care, storage, and maintenance guidelines in each section of this manual.
5. Remove all batteries prior to storing your equipment for future use.

Cautions

Solvents or corrosive materials will damage the simulator. Never place the simulator on any kind of printed paper or plastic. These materials will transfer indelible stains. Ball-point pens will also make indelible stains. Do not store in direct sunlight.

Storage

In order to prepare TERi for storage perform a normal manikin breakdown procedure by removing all of its limbs and packaging them neatly in its case (preferably in the same packaging offered when first purchased). In addition, be certain to follow these instructions:

- Storage temperature should not exceed 122° F (50° C) or fall below 41° F (5° C) on a (non-condensing) relative humidity free environment.
- If a soft-sided case is being used, the manikin should lie flat.
- The manikin should NEVER be stored or shipped with fluids in the system.



5-year warranty



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INSTRUCTION MANUAL

DANi

Patient Care Trainer

Patient Skills Trainer

Auscultation Patient Skills Trainer

Patient Simulator

Patient Simulator, Export

LF04500/LF04500M

LF04502/LF04502M

LF0503/LF0503M

LF04504/LF04504M

LF04504EX/LF04504MEX



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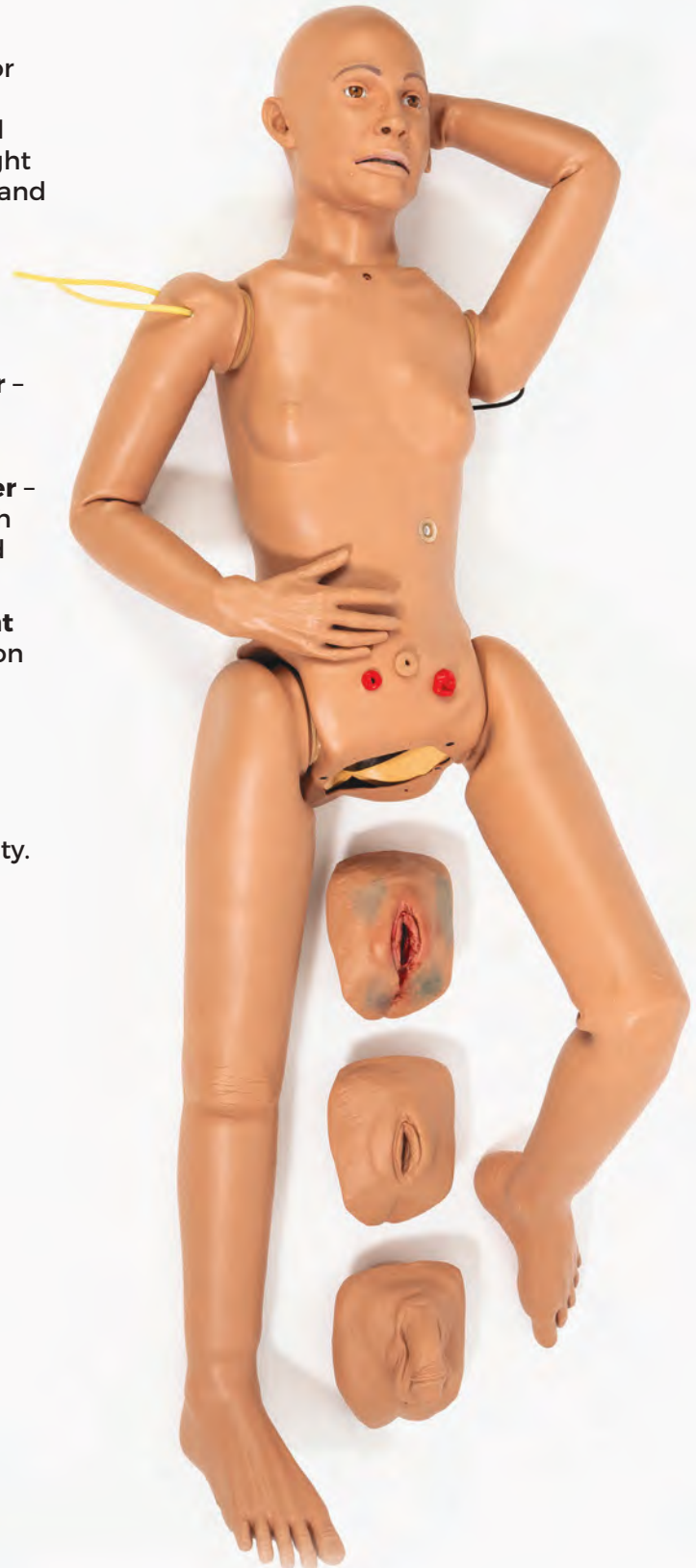
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About the Simulator

Nasco Healthcare DANi Teen & Young Adult is a comprehensive male/female patient care trainer for medical simulation. Evolving from our KERI™ full-body manikins, it has a more realistic look and feel accurately representing the human anatomy. Weight is distributed to represent a real patient for lifting and carrying.

Each version is affordable and durable with upgradable items.

- **DANi Teen & Young Adult Patient Care Trainer** – General patient care, daily living assistance simulation platform.
- **DANi Teen & Young Adult Patient Skills Trainer** – Physical skills practice simulation platform with injection/IV, catheterization, cardiovascular and respiratory support.
- **DANi Teen & Young Adult Auscultation Patient Skills Trainer** – Physical skills practice simulation platform with injection/IV, catheterization, cardiovascular, respiratory support and auscultation.
- **DANi Teen & Young Adult Patient Simulator** – Comprehensive and complete simulation platform including patient monitoring capability.



About the Simulator

LF04500/LF04500M: DANi Teen & Young Adult Patient Care Trainer

- Superior Range of Motion
- Enhanced Full Body Aesthetics
- Articulating Jaw
- Lightweight: 50 lbs.
- Interchangeable Pupils: normal, constricted, dilated
- Male & Female Options (wigs included)
- Soft Male and Female Genitalia
- Normal and Cancerous Moles
- Stage 1 Sacral Ulcer
- Bandaging and Wound Dressing (Recommended bandages: Silicone Adhesive Bandages)
- Patient Positioning (fully articulated)
- Clothing Changes
- Bed Baths
- Eye Irrigation & Optic Drops
- Dental Care
- Ear Canal Irrigation
- Hair Care
- Pericare
- Ostomy Care (ileostomy and colostomy care)
- Urinary Catheter Care (external care only; supporting bladders not included)
- Stomas (colostomy and ileostomy)
- Standard Arms with Injection Sites (IM injection only)
- Injection Sites (thigh, right side buttocks supporting IM and sub-cutaneous injections)
- Support for Oxygen Administration
- Clothing Changes
- Bed Baths
- Eye Irrigation & Optic Drops
- Dental Care
- Ear Canal Irrigation
- Hair Care
- Pericare
- Ostomy Care (ileostomy and colostomy care)
- Urinary Catheter Care (external care only; supporting bladders not included)
- Stomas (colostomy and ileostomy)
- Support for Oxygen Administration
- Left Blood Pressure Arm with Radial Pulse
- Injection Sites (arms, thigh, right side buttocks supporting IM and sub-cutaneous injections)
- Gastrostomy Procedures (lavage, gavage, tube placement)
- Nasogastric Tube Procedures (lavage, gavage, tube placement, feeding, suctioning)
- Respiratory Support – Tracheostomy Care, Airway/Trach Suctioning (lavage, suctioning)
- Urinary Catheterization
- Suprapubic Catheterization
- Enema Administration (female)
- Pap Smears (female)
- Pelvic Examination (female) – 7 cervix presentations (normal, pregnancy, dysplasia, polyp, early cancer, late cancer, inflammation)
- Prostate Examination (male) – 5 prostate presentations (1 normal/healthy, 4 cancerous in varied sizes)
- Right IV Arm
- Foot Wound Care
- CPR with Quality Performance Metrics (compressions and ventilation rate & depth; audible and visual feedback)
- Carotid Pulse (manual)
- Intubation
- Ventilation

LF04502/LF04502M: DANi Teen & Young Adult Patient Skills Trainer

- Superior Range of Motion
- Enhanced Full Body Aesthetics
- Articulating Jaw
- Lightweight: 50 lbs.
- Interchangeable Pupils: normal, constricted, dilated
- Male & Female Options (wigs included)
- Soft Male and Female Genitalia
- Normal and Cancerous Moles
- Stage 1 Sacral Ulcer
- Bandaging and Wound Dressing (Recommended bandages: Silicone Adhesive Bandages)
- Patient Positioning (fully articulated)

LF0503/LF0503M: DANi Teen & Young Adult Auscultation Patient Skills Trainer (includes all the features of LF04502 plus auscultation)

LF04504/LF04504M: DANi Teen & Young Adult Patient Simulator (includes monitors)

LF04504EX/LF04504MEX: DANi Teen & Young Adult Patient Simulator, Export (excludes monitors)

- Superior Range of Motion
- Enhanced Full Body Aesthetics
- Articulating Jaw
- Lightweight: 50 lbs.
- Interchangeable Pupils: normal, constricted, dilated
- Male & Female Options (wigs included)
- Soft Male and Female Genitalia
- Normal and Cancerous Moles
- Stage 1 Sacral Ulcer
- Bandaging and Wound Dressing (Recommended bandages: Silicone Adhesive Bandages)
- Patient Positioning (fully articulated)
- Clothing Changes
- Bed Baths
- Eye Irrigation & Optic Drops
- Dental Care
- Ear Canal Irrigation
- Hair Care
- Pericare
- Ostomy Care (ileostomy and colostomy care)
- Urinary Catheter Care
- Stomas (colostomy and ileostomy)
- Support for Oxygen Administration
- Left Blood Pressure Arm with Radial Pulse
- Injection Sites (arms, thigh, right side buttocks supporting IM and sub-cutaneous injections)
- Gastrostomy Procedures (lavage, gavage, tube placement)
- Nasogastric Tube Procedures (lavage, gavage, tube placement, feeding, suctioning)
- Respiratory Support – Tracheostomy Care, Airway/Trach Suctioning (lavage, suctioning)
- Urinary Catheterization
- Suprapubic Catheterization
- Enema Administration (female)
- Pap Smears (female)
- Pelvic Examination (female) – 7 cervix presentations (normal, pregnancy, dysplasia, polyp, early cancer, late cancer, inflammation)
- Prostate Examination (male) – 5 prostate presentations (1 normal/healthy, 4 cancerous in varied sizes)
- Right IV Arm
- Foot Wound Care
- CPR with Quality Performance Metrics (compressions and ventilation rate & depth; audible and visual feedback)
- Carotid Pulse (manual)
- Intubation
- Ventilation
- Auscultation (heart and lung sounds)
- Patient Simulation Suite (LF04504EX/LF04504MEX does not include monitors/tablets)

DANi Teen & Young Adult Training Solution

Model	LF04500 / LF04500M	LF04502 / LF04502M	LF0503 / LF0503M	LF04504/EX LF04504M / LF04504MX
Feature Set Capability	Advanced Patient Care Trainer	Advanced Patient Skills Trainer	Auscultation Patient Skills Trainer	Advanced Patient Simulator
General				
Superior Range of Motion	✓	✓	✓	✓
Enhanced Aesthetics	✓	✓	✓	✓
Multiple Skin Tones	✓	✓	✓	✓
Lightweight: 50lbs	✓	✓	✓	✓
Pupils	✓	✓	✓	✓
Acne	✓	✓	✓	✓
Gender	✓	✓	✓	✓
Soft Female & Male Genitalia	✓	✓	✓	✓
Skin Care				
Normal and Cancerous Moles	✓	✓	✓	✓
Stage I Sacral Ulcer	✓	✓	✓	✓
Bandaging and Wound Dressing	✓	✓	✓	✓
Movement Assistance, Fall Prevention and Care				
Patient Positioning	✓	✓	✓	✓
Bathing				
Clothing Changes	✓	✓	✓	✓
Bed Baths	✓	✓	✓	✓
Grooming & Daily Living Assistance				
Eye Irrigation & Optic Drops	✓	✓	✓	✓
Dental Care	✓	✓	✓	✓
Ear Canal Irrigation	✓	✓	✓	✓
Hair Care	✓	✓	✓	✓
Nursing Care				
Pericare	✓	✓	✓	✓
Ostomy Care	✓	✓	✓	✓
Urinary Catheter Care	✓ No aux equipment	✓	✓	✓
Stomas	✓	✓	✓	✓
Standard Arms with Injection Sites	✓	✓	✓	✓
Support for Oxygen Administration	✓	✓	✓	✓
Left Blood Pressure Arm	Option	✓	✓	✓
Advanced Skills				
Injections Sites		✓	✓	✓
Gastrostomy Procedures		✓	✓	✓
Nasogastric Tube Procedures		✓	✓	✓
Respiratory Support: Tracheostomy Care, Airway/Trach Suctioning		✓	✓	✓
Urinary Catheterization		✓	✓	✓
Enema Administration (Female)		✓	✓	✓
Pap Smears (Female)		✓	✓	✓
Pelvic Examination (Female)		✓	✓	✓
Prostate Examination (Male)		✓	✓	✓
Right IV Arm Trainer	Option	✓	✓	✓
Vaginal Sexual Assault Evidence Collection	✓	✓	✓	✓
Foot Wound Care		✓	✓	✓
ACLS/BLS				
CPR with Quality Performance Metrics		✓	✓	✓
Carotid Pulse		✓	✓	✓
Articulating jaw	✓	✓	✓	✓
Intubation		✓	✓	✓
Advanced Nursing ACLS/BLS				
Auscultation (Heart & Lung Sounds)			✓	✓
Monitoring & Therapeutics				
Patient Vital Signs & Monitored Signals				✓
Accessories				
Sexual Assault Female Genitalia	✓ No aux equipment	✓	✓	✓
Short Black Wig/Long Brown Wig	✓	✓	✓	✓
Dyed Hair Wig	✓	✓	✓	✓
Drug Use Moulage	✓	✓	✓	✓
Self Harm Moulage	✓	✓	✓	✓
Piercings	✓	✓	✓	✓
Tattoo Sleeve	✓	✓	✓	✓

List of Components

DANi Teen & Young Adult Patient Care Trainer LF04500/LF04500M

- Male Genitalia Foreskins, Pack of 3 (LF000843 G, Light/LF00842 G, Medium)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318, Light/LF04318M, Medium)
- Female Genitalia (LF04319, Light/LF04319M, Medium)
- Wigs, Set of 3 (LF04522, Multicolored/LF04525, Brown/LF04523, Black)
- Hospital Gown (LF04333)
- Tattoo Sleeve
- Wounds: Cutting/Self-Harm (LF04527), Bruising/Drug Use (LF04526)
- Female Genitalia, SANE (LF04514, Light/LF04514M, Medium)

DANi Teen & Young Adult Patient Skills Trainer LF04502/LF04502M

- Male Genitalia Foreskins, Pack of 3 (LF000843 G, Light/LF00842 G, Medium)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318, Light/LF04318M, Medium)
- Female Genitalia (LF04319, Light/LF04319M, Medium)
- Wigs, Set of 3 (LF04522, Multicolored/LF04525, Brown/LF04523, Black)
- Hospital Gown (LF04333)
- Simulated Blood, Pint
- Blood Pressure Cuff with Sphygmomanometer (LF01073)
- Electronic Blood Pressure Control Unit with Batteries (LF01096)
- Fluid Supply Bag, 500 ml, with Pinch Clamp (LF01130)
- Cervix Kit, Set of 7 (LF01230 C)
- Pump Spray Lubricant (LF03644)
- Foot Wounds, Pressure Injury Stages 1-4 (LF04310, Light/LF04310M, Medium)
- Foot Wound Sleeve (LF04513, Light/LF04513M, Medium)
- Deep Tissue Wound (LF04328)
- Enema Bag (LF04316)
- Edema, Set of 5, Stages 1-4 & Non-Pitting (LF04528, Light/LF04525M, Medium)
- Prostate Kit, Set of 5 (LF04332)
- External Bladder Bag, Urinary & Suprapubic (LF04334)
- Simulated Urine, Quart (PN01037)
- Carotid Pulse Bulb (100-2028)
- Syringe, 20 cc
- Tattoo Sleeve
- Wounds: Cutting/Self-Harm (LF04527), Bruising/Drug Use (LF04526)
- Female Genitalia, SANE (LF04514, Light/LF04514M, Medium)

DANi Teen & Young Adult Auscultation Patient Skills Trainer LF0503/LF0503M (plus auscultation components)

DANi Teen & Young Adult Patient Simulator LF04504/LF04504M (includes monitors)

DANi Teen & Young Adult Patient Simulator, Export LF04504EX/LF04504MEX (excludes monitors)

- Male Genitalia Foreskins, Pack of 3 (LF000843 G, Light/LF00842 G, Medium)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318, Light/LF04318M, Medium)
- Female Genitalia (LF04319, Light/LF04319M, Medium)
- Wigs, Set of 3 (LF04522, Multicolored/LF04525, Brown/LF04523, Black)
- Hospital Gown (LF04333)
- Simulated Blood, Pint
- Blood Pressure Cuff with Sphygmomanometer (LF01073)
- Electronic Blood Pressure Control Unit with Batteries (LF01096)
- Fluid Supply Bag, 500 ml, with Pinch Clamp (LF01130)
- Cervix Kit, Set of 7 (LF01230 C)
- Pump Spray Lubricant (LF03644)
- Foot Wounds, Pressure Injury Stages 1-4 (LF04310, Light/LF04310M, Medium)
- Foot Wound Sleeve (LF04513, Light/LF04513M, Medium)
- Deep Tissue Wound (LF04328)
- Enema Bag (LF04316)
- Edema, Set of 5, Stages 1-4 & Non-Pitting (LF04528, Light/LF04525M, Medium)
- Prostate Kit, Set of 5 (LF04332)
- External Bladder Bag, Urinary & Suprapubic (LF04334)
- Simulated Urine, Quart (PN01037)
- Carotid Pulse Bulb (100-2028)
- Syringe, 20 cc
- Auscultation SmartScope™ with Batteries (LF01144, LF0503/LF0503M)
- Auscultation Remote with Batteries (LF01148, LF0503/LF0503M)
- Patient Monitoring Simulation Bundle (LF04504EX & LF04504MEX does not include monitors/tablets)
- Tattoo Sleeve
- Wounds: Cutting/Self-Harm (LF04527), Bruising/Drug Use (LF04526)
- Female Genitalia, SANE (LF04514, Light/LF04514M, Medium)

DANi comes packaged with the normal pupils, teeth, female genitalia, lungs, stomach, and other internal reservoir bags installed (features included with LF04502/LF04502M, LF04503/LF04503M, LF04504/LF04504M, and LF04504EX/LF04504MEX).

Set Up

Arms / Joints / Legs / Eyes / Oral Hygiene

Note: All Versions of DANi come packaged with the normal eyes, and female genitalia installed. The Patient Skills Trainer and Simulator come with lungs, stomach, and other internal reservoir bags installed.

Arms / Joints

DANi is packaged with arms and female genitalia attached and legs unattached to prevent damage during shipping. Refer to the following sections for assembly instructions (See Figure 1).



Fig1.

Leg Assembly

The legs attach to the body at the hips by rotating the legs backward approximately 150° so the feet are near the shoulders and the keyholes are aligned. (See Figure 2).

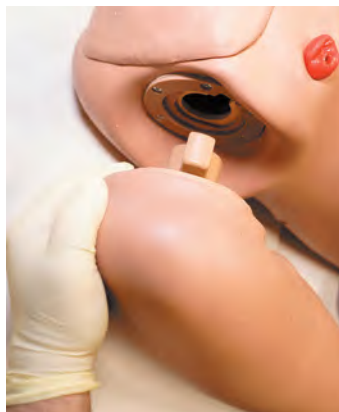


Fig2.

Eyes

All versions of DANi come with 3 sets of brown eyes. 1 set of normal pupil brown eyes, 1 set of constricted pupil brown eyes and 1 set of dilated pupil brown eyes.



Fig 3.

The normal eyes come installed in the head. The eyes can be changed to dilated or constricted by creasing the skin at the outside of each eye and rolling the eye up. (See Figure 3.) Both eyes may be irrigated using water. Eye sockets will hold no more than a few drops of liquid at a time. Following completion of the exercise, follow the above instructions for removing the eye, dry the sockets completely with a soft cloth, and replace the eyes.

Oral Hygiene

Tooth brushing should be simulated without water or any cleaning agents to avoid leaking into the head of the manikin and to simplify cleanup. Teeth cannot be flossed.

Set Up

Ear Care / Bath & Washing / Tracheostomy Care

Ear Care

Both ears may be irrigated. Using water to perform ear irrigation is recommended. The ear canal will hold up to 1 mL of water.



Fig 4.

To drain, tilt the head sideways and empty into the basin or absorbent cloth. (See Figure 4 & 5).



Fig 5.

Cotton swabs may be used gently in the ear as you would with a real patient.

Bed Baths and Hair Washing

To simplify cleanup, dry bed baths and shampoos are recommended to eliminate the chance of water entering the inside of the manikin. A soft cloth and water can be used for bathing exercises, and a mild shampoo and cool water can be used for hair washing. Avoid scrubbing any painted areas of the manikin. To dry the wigs, blot with a soft towel and air dry. Do not brush the hair when wet, and never use a hair dryer or blow dryer on the wigs.

Tracheostomy Care

Suctioning, dressing changes, tracheostomy tube placement, and cuff inflation may be practiced on the simulator. The tracheostomy canal is not removable from the body. Any water administered to this site must be suctioned out after completion of the exercise. The tracheostomy canal (See Figure 6) can hold approximately 20 cc of water.

Ensure proper lubrication prior to inserting tubes into the stoma site by using the Pump Spray Lubricant included. The tracheostomy canal is not connected to the oronasal system, and access is provided only through the stoma site. Recommended tracheostomy tube size is 6.0 mm.

Note: Does not support ventilation of lungs through tracheostomy. Supports lavage and saline treatment. Features included with LF04502/LF04502M, LF04504/LF04504M, LF0503/LF0503M and LF04504EX/LF04504MEX.



Fig 6.

Set Up

Lavage / Gavage / Suctioning / Nasogastric / Carotid Pulse

Oral and Nasal Lavage, Gavage, and Suctioning

Access to the stomach is provided through the mouth and both nostrils. The internal stomach reservoir bag has a 200 cc capacity. The head should be connected to the stomach reservoir bag (green) and NOT the intubation air bladder bag (yellow). (See Figure 7).



Fig 7.

Lubricate feeding tubes generously prior to inserting through mouth, nose, or nostrils by using the Pump Spray Lubricant included. Only water should be used in tube feeding exercises. Ensure the upper torso of the manikin is slightly elevated to prevent water backflow into the head of the manikin. Introduce water only using standard facility procedures and materials.

Following the procedure, empty the stomach. Water may be removed by suctioning or removing the stomach reservoir bag by disconnecting 2 VELCRO® straps and white disconnect and then draining it into a sink or basin. (See Figure 8).



Fig 8.

Note: Ensure the manikin's torso remains elevated when the stomach reservoir bag contains water to continue to prevent backflow into the head of the manikin. Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.



Fig 9.

To remove the Stomach Reservoir Bag:

1. Remove the head by disconnecting the snaps on the head skin, around the neck, rotating the head 45 degrees, and aligning the head with the notch on the neck ring and pulling the head up (See Figure 9).
2. Gently pull up head to expose four tubes with the stomach reservoir bag connected at the end. (See Figure 10).
3. Unfasten the strap that holds the Stomach Reservoir Bag and esophagus tube together and depress button on the quick disconnect feature of the bag. (See Figure 11).



Fig 10.



Fig 11.

Following completion of the procedures, completely drain the stomach reservoir and allow drying prior to reattaching and storing inside the manikin. Wipe any residual lubricant with warm water and a soft cloth.

Carotid Pulse

Attach pump bulb to Carotid tube exiting the rear neck. (See Figure 12). Pump bulb to simulate pulse at the pulse points of the Carotid (See Figure 13). Pulse points are present on both sides.

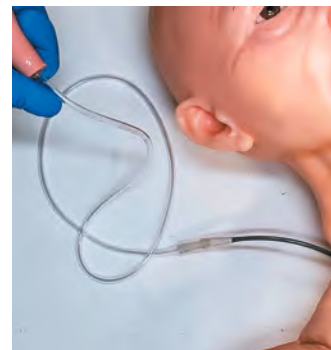


Fig 12.



Fig 13.

Set Up

Lavage / Gavage / Suctioning / Nasogastric

Nasogastric

This section pertains to DANi Patient Skills Trainer (LF04502/LF04502M), DANi Auscultation Patient Skills Trainer (LF0503/LF0503M) and DANi Patient Simulator (LF04504/LF04504M, LF04504EX, LF04504MEX). The simulator can be connected for nasogastric (NG) suctioning or airway intubation with stomach rise. The airway includes a sinus passage to the back of the throat through the nostrils. The esophagus leads to a stomach reservoir bag located in the lower end of the torso. This stomach reservoir bag is accessible by the user for maintenance. Air insertion will cause a visual stomach rise only when the head is connected to the airway intubation stomach reservoir. Supported procedures include nasal trumpet and nasogastric tube insertion. Lavage and gavage are also supported.

1. Ensure the nasogastric tubing is connected to the nasogastric stomach reservoir via the (green, yellow) coded tubes. Ensure tubing is well attached and adhere the tubes with the hook and loop. Insert the tubes back into the torso of the manikin and replace the head on the torso. (See Figure 14).



Fig 14.

2. Lubricate nasogastric devices and supplies being used with the Pump Spray Lubricant provided (See Figure 15). NG tubes should be well lubricated and force should not be used when placing the tube through the sinus canal.



Fig 15.

3. Fluids should be drained and the reservoir bags emptied after every use.

Accessing Lung Bag and Stomach Bag for Cleaning or Replacement

1. To remove lung bags disconnect four snaps on the neck skin and pull neck skin away from two rivets in front of neck. Roll the skin down from the neck to change the lung bags (See Figure 16).
2. To remove the stomach reservoir. Remove legs. Roll the skin up from the pelvis (See Figures 17 and 18). Ensure the bag is clean and dry prior to storing it back inside the torso.

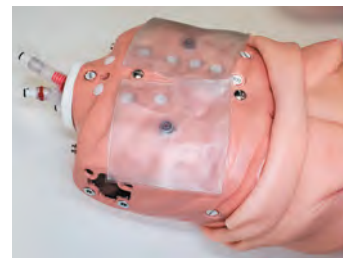


Fig 16.



Fig 17.



Fig 18.

3. Wipe any residual lubricant from the site with warm water and a soft cloth prior to storing the manikin.

Note: Use Nasco Healthcare's Pump Spray Lubricant to lubricate airway devices before use.

Set Up Intubatable Head

Intubatable Head

There are individual inflatable lung bags for both left and right lungs and a separate stomach bag. Each bag will cause visual chest rise in the correct anatomical location to indicate effective and ineffective intubation styles. Jaw thrust is supported. A manual pulse bulb is included to simulate a carotid pulse. Features included with LF04502/LF04502M, LF04504/LF04504M, LF0503/LF0503M, LF04504EX and LF04504MEX.

The unit is not designed for use with mouth-to-mouth techniques and may contaminate the mouth and airway. Airway devices are recommended and the supported devices are listed.

Before using the simulator for airway management, lubricate both the simulator and supplies being used with the Pump Spray Lubricant provided. (See Figures 19 & 20).



Fig 19.

Extreme care should be exercised when using a laryngoscope blade. As with a real human, (See Figure 21), damage can be caused if improper forces and techniques are used. Damaged caused by improper use will void the warranty



Fig 20.

Note: There is no cricoid.



Fig 21.

NG Tube, Nasal

Size 16FR Preferred

Note: Use Nasco Healthcare's Pump Spray Lubricant to lubricate airway devices before use.

Laryngoscope Blades

Miller Blades: Size 3

Macintosh Blades: Size 4

Nasal Trumpet

Size 6 (24FR) Preferred

Size 7 (28FR) Supported

BVM - Bag Valve Mask

Adult Size

King Airway

Size 3 Supported

Size 4 Preferred

Size 5 Supported

Oropharyngeal Airway

110 Preferred

100 Smallest acceptable

NG Tube, Nasal

Size 16FR Preferred

Endotracheal Tube

7.0mm Preferred

6.5mm Supported

7.5mm Supported

NG Tube, Oral

Size 16 Preferred

Size 14 Supported

Size 18 Supported

Combitube

37FR Preferred

41FR Supported

Tracheostomy

Intubation

Uncuffed 6.0mm Preferred

7.0mm Preferred

Cuffed 6.0mm Preferred

7.0mm Preferred

LMA Supreme and iGel

Size 3 Supported

Size 4 Preferred

Size 5 Supported

Set Up

Ostomy Care

Ostomy Care

Colostomy and ileostomy care can be practiced on all DANi models, including stoma dilation, cleaning, and ostomy bag changing procedures. Irrigation can be practiced. Irrigation tubes should be well lubricated prior to insertion. After completion of the exercises, the stomas can be rinsed with warm water to remove any residual lubricant. The stoma reservoirs have a 20 cc fluid capacity.

Removal of the internal stoma reservoirs (See Figure 22) :

1. Remove the genitalia and reach through the genital cavity. It is recommended to suction the fluid from the bag prior to removal to prevent spillage when removing for cleaning.
2. The reservoir bags are attached to the underside of the stomas. To remove push in on the L-shaped button pull the reservoir fittings down and disconnect from the stomas.
3. Pull the reservoir bags from the hook-and-loop attachments. (See Figures 23 and 24). Rinse with water to clean.
4. Reverse the procedure to reattach the internal stoma reservoirs. Ensure reservoirs are clean and dry prior to reattaching for storage.



Fig 22.



Fig 23.



Fig 24.

Set Up

Gastrostomy Care Lavage and Gavage

Gastrostomy Care Lavage and Gavage

A flanged hole simulating an abdominal incision for the insertion of a feeding tube is included on the upper torso for performing lavage and gavage. (See Figure 25).



Fig 25.

Inside the upper torso is a reservoir bag with a maximum capacity of 200 cc, which is attached to the underside of the gastrostomy opening with a two-part coupler. Access the bag by:

1. Reaching through the genital opening in the pelvis, on the left side of the torso.
2. Remove the bag by pushing in on the L-shaped button and pulling it straight away. (See Figure 26 and inset).

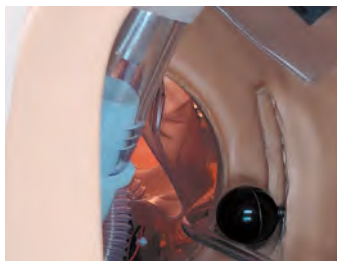


Fig 26.

Note: In some models, the waist pin will need to be removed for easier access. Not easy to remove the waist connection, it no longer a pin but two individual attachment points



To attach the bag:

1. Push the coupler body (with bag attached) onto the coupler insert (part with the black O-ring) that is protruding from the underside of the gastrostomy inside the upper torso of the manikin. You will hear a slight snap when the connection is complete.

2. Test the connection by gently pulling on the coupler body to ensure it is locked.

Note: The gastrostomy feature is designed for use with a 16 French Gastrostomy Tube. It is recommended that the tip of the feeding tube is well lubricated before inserting.

3. Ensure the reservoir is straight and flat before attempting to simulate feeding with water.

Note: Water only should be used to perform feeding procedures.

4. Lubricate the end of the feeding tube and gently insert through the flanged hole.
5. Upon completion of the exercise, remove genitals, remove the reservoir, drain the liquid from the reservoir bag, and rinse the bag.
6. Ensure the bag is clean and dry prior to storing it back inside the torso. Wipe any residual lubricant with warm water and a soft cloth prior to storing the manikin.

Set Up

Male Catheterization

Male Catheterization & Prostate Examination

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

The male genital insert can represent an uncircumcised or circumcised adult male, with the addition of the included foreskin. To change genitals in the simulator, simply press to fit into the open genital area of the pelvis. (See Figure 29).



Fig 27.

The urinary catheterization reservoir is interchangeable between male and female genitals. Female Genitals come installed with the simulator.

Note: To apply the foreskin, apply the included pump spray lubricant to the glans and slide the foreskin in place. To prepare for catheterization exercises:

1. The urinary reservoir is installed on the back side, make sure the urinary reservoir is firmly in place. (See Figure 28).



Fig 28.

2. Close the clamp on the Fluid Supply Bag (See Figure 29) and fill with water or included simulated urine. Recommended amount of fluid to fill the Fluid Supply Bag is between 100 and 250 mL.



Fig 29.

3. Hang the filled Fluid Supply Bag. Attach the tubing quick connect on end of Fluid Supply Bag to the quick connect on the left lower side of the simulator's torso. Open Clamp on fluid supply bag (See Figure 30).

Note: The Fluid Supply Stand is not included. Use distilled water or follow instructions on the Simulated Urine.

4. Lubricate the catheter being used with the Pump Spray Lubricant provided (See Figure 31). The catheter should be well lubricated and force should not be used when placing the tube.



Fig 30.

Note: Special care should be taken when using a Foley catheter. Nasco Healthcare recommends use of

16 French Foley catheters. Use of this size will avoid the possibility of leakage. Cuff inflation should only be attempted when the catheter is in the proper position inside the bladder. The cuff must also be completely deflated before the catheter is removed. The catheter should not be left inserted in the simulator for an extended period of time. Improper use of a Foley catheter may result in damage to the simulator and void the warranty.



Fig 31.

5. After completion of the exercise, close the clamp on the Fluid Supply Bag tubing and remove the male genital insert by reversing the assembly instructions. Disconnect the urinary catheter reservoir tubing via the quick disconnect, remove the reservoir from the male genitalia insert, and drain the reservoir thoroughly (See Figure 28).
6. Rinse the reservoir and the outside of the male genitalia to remove any residual lubricant.

Fluids should be drained and the reservoir emptied after every use. Ensure the reservoir is clean and dry prior to storing.

Set Up

Foreskin Application / Prostate Examination

Foreskin Application

Place the foreskin over the gland by lubricating the gland with baby powder and placing the foreskin over the glans. The placement of the foreskin can be placed higher or lower depending on how much skin needed. (See Figures 32 and 33).



Fig 32.



Fig 33.

Prostate Examination

There are five prostates included with your simulator.

- 1 normal size,
- 2 normal size with hard nodule,
- 3 enlarged on one side,
- 4 enlarged across the midway with hard nodule, and
- 5 enlarged with hard irregular surface (See Figure 34).

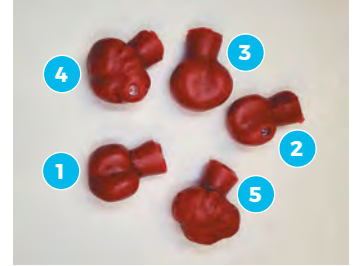


Fig 34.



Fig 35.

Insert chosen prostate via the backside of the male genitalia in the bottom cavity (See Figure 35).

Use included Pump Spray Lubricant to practice prostate examination. Following the procedure, rinse the rectum with warm water and allow to dry prior to storing.

Note: The male genital insert does not have the capacity for enema administration. Must use female genital insert for enema administration practice.

Set Up

Female Catheterization

Female Catheterization, Enema Insertion & Cervical Examination

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.



Fig 36.

To change genitals in the simulator, simply press to fit into the open genital area of the pelvis. (See Figure 36).

The urinary catheterization reservoir is interchangeable between male and female genitals. Female Genitals come installed with the simulator.

To prepare for catheterization exercises:

1. The urinary reservoir is installed on the back side, make sure the urinary reservoir is firmly in place. (See Figure 37).
- 2.. Close the clamp on the Fluid Supply Bag (See Figure 38) and fill with water or included simulated urine. Recommended amount of fluid to fill the Fluid Supply Bag is between 100 and 250 ML.
3. Hang the filled Fluid Supply Bag. Attach the tubing quick connect on end of Fluid Supply Bag to the quick connect on the left lower side of the simulator's torso. Open clamp on fluid supply bag (See Figure 39).



Fig 37.



Fig 38.



Fig 39.

Note: The Fluid Supply Stand is not included. Use distilled water or follow instructions on the Simulated Urine.

4. Lubricate the catheter being used with the Pump Spray Lubricant provided (See Figure 40). The catheter should be well lubricated and force should not be used when placing the tube.



Fig 40.

Note: Special care should be taken when using a Foley catheter. Nasco Healthcare recommends use of 16 French Foley catheters. use of this size will avoid the possibility of leakage. Cuff inflation should only be attempted when the catheter is in the proper position inside the bladder. The cuff must also be completely deflated before the catheter is removed. The catheter should not be left inserted in the simulator for an extended period of time. Improper use of a Foley catheter may result in damage to the simulator and void the warranty.

5. After completion of the exercise, close the clamp on the Fluid Supply Bag tubing and remove the female genital insert by reversing the assembly instructions. Disconnect the urinary catheter reservoir tubing via the quick disconnect, remove the reservoir from the female genitalia insert, and drain the reservoir thoroughly.
6. Rinse the reservoir and the outside of the female genitalia to remove any residual lubricant.

Fluids should be drained and the reservoir emptied after every use. Ensure the reservoir is clean and dry prior to storing.

Set Up Enema Administration

Enema Administration

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

Enema Administration can only be practiced on the female genital insert.

To prepare the simulator for enema administration:

1. Remove the female genital insert the simulator, and ensure the enema reservoir is inserted into the inside of the rectum (See Figure 41).
2. Press the female genital insert into the pelvis of the simulator. Position the simulator. Using a facility supplied enema kit, lubricate the applicator liberally with the included Pump Spray Lubricant and gently insert through the anus.
3. After completion of the exercise, remove the female genital insert by reversing the assembly instructions.
4. Remove the enema from the female genitalia insert and drain the reservoir thoroughly. Rinse the reservoir and the outside of the female rectum to remove any residual lubricant.
5. Drain the reservoir and dry thoroughly after every use. Ensure the reservoir is clean and dry prior to storing.

Note: Use water ONLY when administering an enema. The enema reservoir holds up to 200cc of fluid.

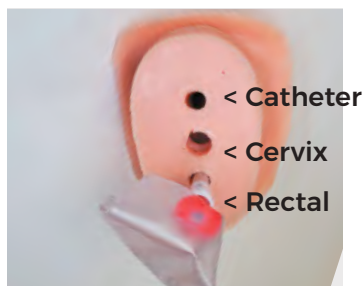


Fig 41.

Set Up Female Cervical Exam

Female Cervical Examination

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

The female genital insert allows for douching. Only water should be used as a douching agent. Pap smear procedures and visual inspection of the vagina and cervix may also be demonstrated. Seven cervical conditions are included: 1 normal, 2 early pregnancy, 3 polyp, 4 early cancer, 5 late cancer, 6 inflammation, and 7 dysplasia (See Figure 42).

To prepare the simulator for cervical examination:

1. Insert the chosen cervix via the backside of the female genitalia in the center cavity (See Figure 43).
2. To perform procedures, generously lubricate the instrument of insertion using the included Pump Spray Lubricant and use the smallest possible speculum for Pap smear and visual inspection exercises. Avoid exerting too much pressure on the vaginal walls.

Following completion of the exercises:

1. Remove the female genital insert by reversing the assembly instructions.
2. Rinse the vagina with warm water to remove any residual lubricant.
3. Allow to dry before reassembling into the simulator.



Fig 42.



Fig 43.

Set Up

Suprapubic and Urinary Catheterization

Suprapubic Catheterization

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

To prepare the simulator for suprapubic catheterization:

1. Attach the suprapubic stoma/bladder reservoir to the twist lock quick connect located in the abdomen of the simulator (See Figure 44).
2. Lubricate the suprapubic stoma/bladder reservoir using the included Pump Spray Lubricant.
3. Insert the suprapubic stoma/bladder reservoir through the pelvis and into the abdomen (See Figure 45). See Inset for exterior view.

Note: The suprapubic bladder will come installed in the simulator. Insert the male or female genitalia.

4. Close the clamp on the Fluid Supply Bag (See Figure 46) and fill with water or included simulated urine. Recommended amount of fluid to fill the Fluid Supply Bag is between 100 and 250 ML.
5. Hang the filled Fluid Supply Bag.
6. Attach the tubing quick connect on the end of Fluid Supply Bag to the quick connect on the left lower side of the simulator's torso. (See Figure 47).



Fig 44.



Fig 45.



Fig 46.



Fig 47.

Note: Use distilled water or follow instructions on the Simulated Urine.

7. Lubricate the catheter being used with the Pump Spray Lubricant provided. The catheter should be well lubricated and force should not be used when placing the tube.

After completion of the exercise:

1. Close the clamp on the fluid supply bag tubing and remove the suprapubic insert by reversing the assembly instructions.
2. Disconnect the fluid supply bag via the quick disconnect on the left side of the simulator.
3. Drain the bag and tubing thoroughly.
4. Rinse the reservoir and the suprapubic stoma to remove any residual lubricant.

Fluids should be drained and the reservoir emptied after every use. Ensure the reservoir is clean and dry prior to storing.

Urinary Catheterization and Suprapubic Valve Maintenance

To keep the urinary catheterization features of this simulator operating efficiently, maintenance is required at the beginning of catheterization training for both the urinary catheterization and suprapubic reservoirs, with the included silicone lubricant.

Before training:

1. Remove the urinary or suprapubic reservoir from the torso or genitalia.
2. Apply a generous amount of silicone lubricant onto the end of a cotton swab. Deposit grease between the valve membranes. (See Figure 48).



Fig 48.

Set Up Blood Pressure Arm

Blood Pressure Arm

Features included with LF04502/
LF04502M, LF0503/LF0503M,
LF04504/LF04504M and
LF04504EX/LF04504MEX.

Installing the Batteries

1. Take the Blood Pressure Electronic Control Unit out of the box and turn it over, placing it face down onto a padded work surface. Locate the “Open” compartment on the back of the panel where the batteries are to be installed. Place your thumb or index finger on the “Open” compartment and push up. (See Figure 49).
2. Install 6 “AA” batteries as indicated by the orientation diagram embossed in the bottom of the bracket. After the batteries have been properly installed, reassemble the Electronic Control Unit by reversing the disassembly procedures.



Fig 49.

Turning the Electronic Control Unit On

1. Place the unit face up on the padded work surface.
2. Press the power button on the top right of the unit. (See Figure 50).
3. Observe the display and verify that a readable display is present.

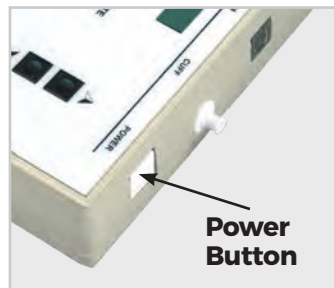


Fig 50.

Connecting the Arm, Electronic Control Unit, and Sphygmomanometer

1. Locate the end of the pressure line attached to the sphygmomanometer that is assembled with a male luer fitting.

2. Attach this end of the pressure line to the female luer fitting assembled at the top of the electronic control unit marked CUFF. (See Figure 51).

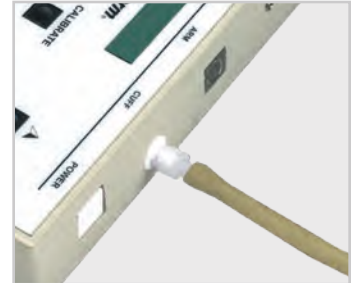


Fig 51.

3. Locate the cable that extends from the blood pressure simulator arm and plug into the top of the Electronic Control Unit using the jack labeled ARM. (See Figure 52).



Fig 52.

At this point, the blood pressure simulator is ready for use. The unit has been factory calibrated for use with accessories included. No further calibration adjustments are necessary at this time. If the unit is to be used with a sphygmomanometer other than the one supplied, or when recalibration is necessary, see the section titled Calibration Procedures.

Electronic Control Unit Function

1. Press the power button on the top right of the unit. (See Figure 53). Observe the display and verify that a readable display is present.

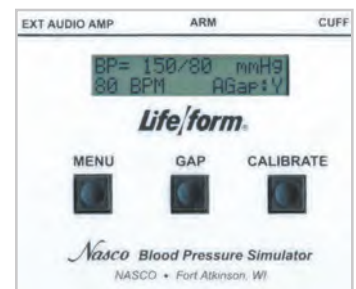


Fig 53.

Note: The control box has a battery saving feature that will turn the unit off after approximately 8-10 minutes if no keys are used within that period of time.

2. Under the display window are three buttons: Menu, Gap, and Calibrate.

Set Up Blood Pressure Arm

Setting Systolic and Diastolic Pressure

1. Press the Menu Key once.
2. The “Set SYSTOLIC” pressure menu will display in the Electronic Control Unit window. (See Figure 54).

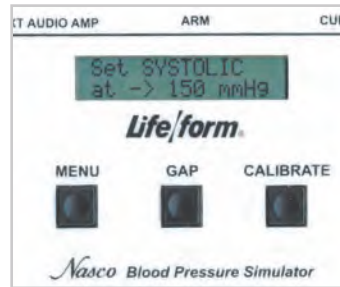


Fig 54.

3. Use the up or down arrow keys, located to the right of the menu button, to adjust the systolic pressure.

4. Press the Menu key a second time.

5. The “Set DIASTOLIC” pressure menu will display in the Electronic Control Unit window. (See Figure 55).

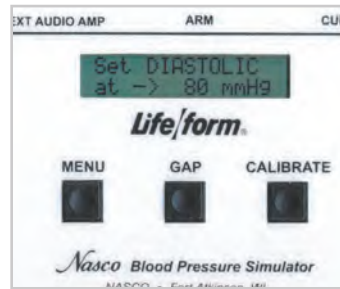


Fig 55.

6. Use the up or down arrow keys located to the right of the menu button to adjust the diastolic pressure.

Note: The systolic and diastolic pressures can be set anywhere from 0-300 mmHg.

Setting the Heart Rate

1. Press the Menu Key a third time.
2. The “Set HEARTRATE” menu will display in the Electronic Control Unit window. (See Figure 56).

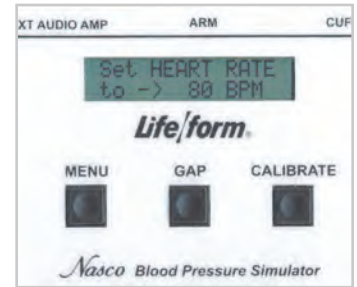


Fig 56.

3. Use the up or down keys located to the right of the menu button to adjust the heart rate. The heart rate can be set from 0-300 beats per minute.

Set Up

Blood Pressure Arm

Setting the Palpable Pulse

The palpable pulse is found at the radial location. (See Figure 57). Palpations can be felt upon start-up of the unit or after blood pressure and heart rate settings have been made. The palpable pulse is delicate and should be palpated lightly. Pressing too hard will damage the pulse feature.



Fig 57.

1. Press the Menu key a fourth time.
2. The "Set PALPATION" menu will display in the Electronic Control Unit window.
3. "Pulse ON" is defaulted.
4. Use the down arrow key to the right of the menu key to set palpation to "pulseless."

Note: The palpation can be set to either on or pulseless. When the pulseless setting is used, the diastolic and systolic pressures will automatically be set to 0.

5. Use the up arrow key to the right of the menu key to set palpation as "Pulse ON." (See Figure 58).

Note: During an actual blood pressure reading, the palpable pulse will automatically turn off when the cuff is inflated and surpasses the systolic set point. It will turn on when the cuff is deflated 20 mmHg below the diastolic set point. This function allows students to clearly hear Korotkoff sounds.

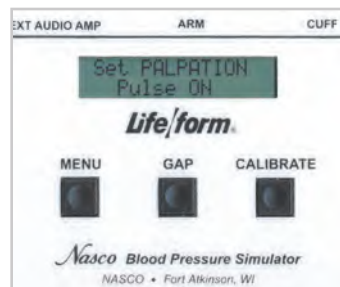


Fig 58.

Setting the Auscultatory Gap

This function is included to simulate the gap that is sometimes present between phases 1 and 2 in which no audible sound is noted.

1. Locate the GAP Key to the right of the MENU Key.
2. Press the GAP Key to set the function on (Y=Yes) or off (N=No).
3. When the key is pressed, a message will briefly appear that the auscultatory gap is enabled or disabled.
4. The Main display will show AGap:Y (or ON) (See Figure 59) or AGap:N (or OFF).



Fig 59.

Setting the Volume

The arrow keys also control the volume of the sounds present in the arm.

1. From the main menu, press the up arrow key to increase the volume.
2. Press the down arrow key to decrease the volume.

The volume levels can be adjusted from level 1 (the lowest volume) to level 7 (the highest volume).

Set Up Blood Pressure Arm

Performing a Blood Pressure

1. Verify the pressure line tubing from the sphygmomanometer and the audio line from the arm are properly connected to the electronic control unit. (See above connection instructions)
2. Apply the sphygmomanometer cuff and gauge to the arm according to facility procedures.
3. Place the stethoscope to the arm according to facility procedures.
4. Set the systolic and diastolic pressure to the desired levels.
5. Select the auscultatory gap.
6. Select the heart rate to the desired setting.

Note: The electronic control unit will default to the last levels previously set. It is important to go through all menus and program the electronic control unit with each training session as desired. A standard stethoscope will work with the blood pressure simulator, one is not provided. **Low Battery Indicator**

When the battery supply diminishes to a level near the point the unit will no longer function properly, a “low batt” message will display on the systolic pressure menu when the systolic pressure reaches above 20 mmHg. At this point, the batteries should be replaced as soon as possible to ensure proper operation of the unit. Refer to the section “Installing the Batteries” for more information.

Calibration Procedures

1. Follow the setup procedures.
2. Apply the cuff to the simulated arm.
3. Set the electronic control unit systolic pressure to 150 mmHg and set the diastolic pressure to 70 mmHg.
4. Proceed with performing the blood pressure and note the differences between the gauge and what was set on the electronic control unit.
5. Set the systolic correction by pressing and holding the CALIBRATE key to the right of the GAP key. (See Figure 60).



Fig 60.

6. Using the arrow keys, set the correction. For example, if the blood pressure reading for systolic pressure was 148 mmHg, the systolic correction would be +2 and the up arrow key would be pressed until +2 would display in the window.
7. Press the MENU key from the Systolic Correction window to change to the Diastolic Correction window. (See Figure 61).
8. Using the arrow keys, set the correction. For example, if the blood pressure reading for diastolic pressure was 72 mmHg, the diastolic correction would be -2 and the down arrow would be pressed until -2 would display in the window.
9. Press the MENU key. The “CALIBRATION COMPLETE” message will appear and the main menu window will be displayed.



Fig 61.

Set Up

Blood Pressure Arm

Preparing Your Sphygmomanometer for Use with Blood Pressure Simulator

In the event the supplied sphygmomanometer would cease to operate, any standard sphygmomanometer can be adapted for use with the blood pressure simulator. It is recommended that a child size cuff continue to be used.

1. Disconnect the sphygmomanometer from the pressure line connected to the electronic control unit. The pressure line can be left connected to the electronic control unit.
2. Remove the T-fitting included with the assembled sphygmomanometer.
3. Obtain a new sphygmomanometer.
4. Using a scissors, carefully cut the tube of the sphygmomanometer about 2" from the gauge. (See Figure 62).
5. Take the T-fitting and insert the horizontal ends in-between the two ends of the cut tubing of the new sphygmomanometer. (See Figure 63).
6. Assemble the free end of the pressure line tubing, still connected to the electronic control unit, to the free end of the T-fitting. (See Figure 64).
7. Connect the newly modified sphygmomanometer to the child-size cuff.
8. Follow the calibration instructions to calibrate with the electronic control unit and blood pressure simulator.



Fig 62.



Fig 63.



Fig 64.

Set Up

IV and Injection Arm

IV and Injection Arm

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

DANi has skin texture realistic to touch thanks to modern plastics technology. The following adhesives will alleviate challenges in adhesion: 3M Kind Removal Adhesive Tape, Safe N Simple Silicone Adhesive Tape, Curad Silicone Band-Aid, Safe N Simple Simpurity IV Derm Silicone (Tegaderm equivalent).

Internal and External Structure

The outer skin is easily peeled off, revealing the “core” and veins. The skin and veins can be readily replaced when needed. Using smaller gauge needles will prolong the life of the original skin and veins. Replacement parts are available and listed at the end of this manual. The internal vascular structure begins at the shoulder and continues under the arm, crosses the antecubital fossa forearm, makes a loop in the back of the hand, and then returns to the underarm. This venous system is constructed of special, natural dry rubber, with the lumen being the approximate size of an adult human vein (See Figure 65). This vascular structure has inlet and outlet tubing at the shoulder. It is via these tubes that synthetic blood is infiltrated.

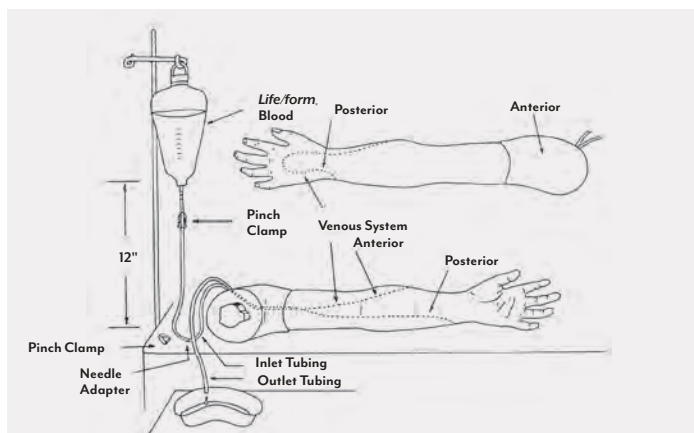


Fig 65.

Filling the Venous System and Preparing the Arm for Blood Draws

1. Prepare the synthetic blood by filling the pint bottle containing the synthetic blood concentrate with distilled water.

2. Close the clamp on the IV tubing and pour the synthetic blood into one of the provided fluid supply bags. This will be IV Bag A. Fill to 500 cc maximum.
3. Hang IV Bag A no more than 18" (45.72 cm) above the level of the arm. Fluid Supply stand shown sold separately.
4. Attach the tubing on IV Bag A to one of the shoulder tubes. Since this is a single tube loop system it does not matter which tube you use. This will now be the inlet tube.
5. Use the second shoulder tube for draining; this will be the outlet tube. With the outlet shoulder tube in a basin, a sink, or attached to the second IV Bag or IV Bag B, make sure the clamp on the drain tube is open. If using IV Bag B, ensure the clamp on IV Bag B is also open. Flush the vascular system with synthetic blood by slowly opening the clamp on IV Bag A. Allow the system to flush with synthetic blood until the air bubbles are no longer passing through the outlet shoulder tubing into the basin, sink, or IV Bag B. (See Figure 66).



Fig 66.

6. Close the clamp on the outlet shoulder tube and, if using IV Bag B to close off the blood outlet, the system is now filled and pressurized. Be sure to leave the clamp on IV Bag A open.

The arm is ready to practice drawing blood. Synthetic blood can be drawn anywhere along the pathway of the vein.

Set Up Injectable Arm

Preparing the Arm for Intravenous Infusions

1. Start with an “empty” unpressurized arm. Close the clamp at the end of IV Bag A and then fill with distilled water, 500 cc maximum. Hang IV Bag A not more than 18” (45.72 cm) above the arm.
2. Ensure one of the tubes leading from the shoulder of the Injectable Training Arm is fitted with a clamp. Attach fitting end of IV Bag A to the shoulder tubing with the clamp. Attach the fitting end of IV Bag B to the remaining shoulder tube.
3. With IV Bag B laying on the surface and IV Bag A hanging, open the clamps on both bags and the arm tube. Allow fluid to flow through the Injectable Training Arm until air bubbles are no longer seen flowing into IV Bag B. Close the clamp on IV Bag B, the system is now pressurized. (See Figure 67).

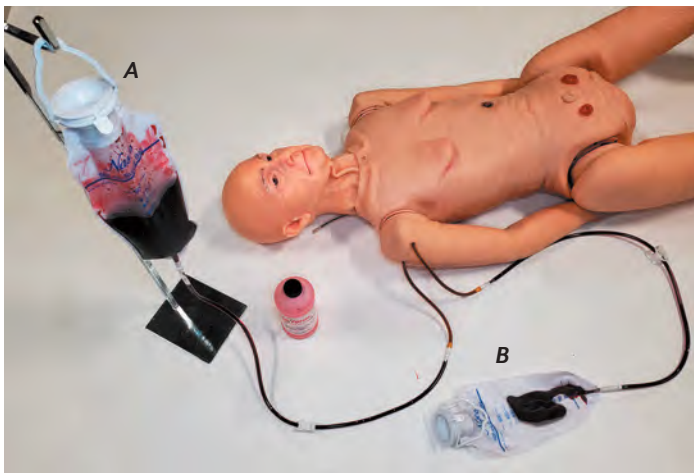


Fig 67.

4. Insert IV needle in vein. “Flashback” will indicate proper insertion.
5. After IV Bag A empties, close the clamp on IV Bag A and the clamp on the arm tube. Disconnect IV Bag A from the shoulder tubing. You may now use IV Bag A as the infusion supply.
6. Cleanse the IV site with distilled water and insert IV needle or butterfly.
7. To start the IV flow, open the clamps on both IV Bags A and B.

Proof of proper procedure will be evidenced by the flow of fluid from IV Bag A. Control flow rate with the clamp on IV Bag A. A third IV Bag (not supplied) can be used for the infusion of fluid. This will enable bags A and B to remain attached to the arm.

If a more realistic experience is desired, with “blood flashback” instead of water when inserting the butterfly into the lumen of the vein, use the following procedure, C.

Recommended Procedure for Simultaneous IV Infusions and Drawing Blood

1. Follow the procedure for setting up your IV Arm to draw blood, Procedure A, and using IV Bag B as the drain bag.
2. Once the arm is pressurized and full of blood, open the clamps on IV Bags A and B.
3. Obtain a third IV Bag (not supplied), IV Bag C, and ensure the clamp is closed and fill with distilled water. Hang IV Bag C according to your desired flow rate.
4. Cleanse the IV site with distilled water and insert IV needle or butterfly. A realistic blood flashback will be evidenced with proper insertion.
5. Connect IV Bag C to the IV needle or butterfly with the latex connector and open the clamp to IV Bag C. (See Figure 68).
6. IV Bag B, when full, may be easily switched with A.

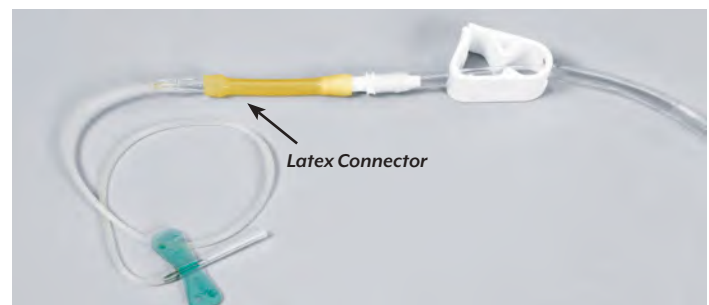


Fig 68.

Set Up Injectable Arm

User Help Guide for the Injectable Training Arm

1. Follow procedures and ensure clamps are open on appropriate fluid supply/IV bags and/or shoulder tubes.
2. Look over your equipment prior to use. IV tubes will kink at the clamp site with repeated use. Routinely move clamps up or down the tube to reduce the probability of kinks. When kink occurs, slide the clamp to a new position and, with fingers, massage tubing at pinched site to restore lumen. Replacement fluid bags are available. Removing clamps prior to storage is recommended.
3. Check to ensure hanging bags are hung to the appropriate height. Hanging the supply bags slightly higher for bags not producing enough pressure can create just enough gravitational force on the fluid to facilitate flow.
4. If a venous system clog is suspected, try using a large 50 cc syringe to force distilled water through the tubing.
5. Check the venous system tubing for kinks. First, lubricate the outside of the arm skin generously with mild liquid soap. Peel the skin back to the knuckles, being careful NOT to remove the skin from the fingers. Examine all the tubing for possible kinks. Replace the skin and infiltrate the system again.

Care and Maintenance

After each use of the Injectable Training Arm, follow these procedures:

1. Disconnect IV bags, remove infusion needles, and flush the venous system using distilled water and 12 cc syringe.
2. Simulated blood can be returned to its bottle and reused.
3. Rinse IV bag containing simulated blood with distilled water, flushing through tubing into a sink or basin.
4. Remove pinch clamps from IV bags and injectable training arm shoulder tubing.
5. Wash the outside of the injectable training arm with mild liquid soap. Stubborn stains may be washed with Nasco cleaner. Dispense Nasco cleaner on clean, soft, dry cloth and gently wipe soiled area.
6. Remove excess water from the venous system by raising the hand, lowering the shoulder, and draining it into a sink or basin.
7. Allow the arm to dry completely before storing.

Set Up Injectable Arm

To prevent causing harm to the Injectable Training Arm:

1. Use distilled water rather than alcohol, Betadine®, or other skin preparing substances to simulate preparing the puncture site.
2. Small diameter needles, 20-gauge to 25-gauge, should be used to extend the life of the skin and veins. The skin and veins will hold up to several hundred sticks if smaller needles are used as recommended and all available sites are used.
3. Synthetic blood will stain the soft skin of the injectable training arm, clothes, most soft surfaces, and some hard surfaces. Please use caution.
4. Ink and newsprint will cause an indelible stain to the injectable training arm. DO NOT place the injectable training arm on printed surfaces or plastic.
5. Follow Care and Maintenance instructions carefully.

Arm Skin Replacement

1. Remove the eight screws retaining the shoulder joint to the arm.
2. Peel the skin down and remove from arm (See Figure 69).

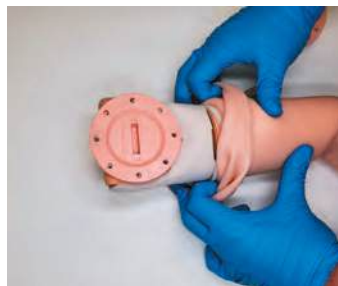


Fig 69.

3. Apply baby powder to the interior of the replacement skin and pull onto the arm.
4. The key feature needs to point to the L or R depending on which leg skin is being replaced (See Figure 70).
5. Install the eight screws, being careful not to over tighten the screws.



Fig 70.

6. Reattach arm to simulator torso.

Leg Skin Replacement

1. Remove the eight screws retaining the hip joint to the leg. (See Figure 71).
2. Peel the skin down and remove from leg (See Figure 72).
3. Apply baby powder to the interior of the replacement skin and pull onto the leg (See Figure 73).



Fig 71.



Fig 72.

4. The key feature needs to point to the L or R depending on which leg skin is being replaced (See Figure 74). This feature plugs into the R or L area of the hip joint depending on which leg skin is being replaced.



Fig 73.

5. Install the eight screws, being careful not to over tighten the screws.
6. Reattach leg to simulator torso.



Fig 74.

Set Up Injectable Arm

Moulage

DANi comes with self-adhesive moulage that simulates self-harm wounds. Also, included are foot wounds in various stages of severity (See Figure 75-77).



Fig 75.

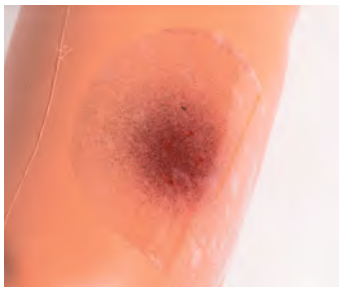


Fig 76.



Fig 77.

Intramuscular Injections Precautions

1. This synthetic blood is specially formulated to be compatible with the self-sealing veins and plastics used in manufacturing the injectable training arm.
2. NEVER use synthetic blood for intramuscular injection.
3. DO NOT use dull or burred needles, these will cause leaks in the system. Burred needles will cause permanent damage.
4. DO NOT allow synthetic blood to dry on the simulator – it may stain the skin.
5. Use only 500 cc of infusion fluid. Larger amounts will increase the pressure of the venous system, resulting in leaks.
6. DO NOT clean the simulator with solvents or corrosive materials, as they will damage it.
7. DO NOT use for subcutaneous injection. Intradermal Injection Simulator (LF01008U) is specifically designed for intradermal injection training and practice.

Intramuscular Injections

Intramuscular injections may be performed in inserts at the left hip, right thigh, at both deltoids of the standard arms, and left deltoid of the injectable training arm. Inject AIR ONLY as the inserts cannot be drained in the standard arms, injection training arm, and thigh.

To remove the inserts on standard arms and thigh:

1. Remove the eight screws retaining the shoulder or hip joints to the arm or leg.
2. Roll skin down to expose inserts prior to removing and replacing them (See Figures 78, thigh & 79, Shoulder).
3. Compress them sideways and pull out.
4. Reverse procedure to replace.

Note: Avoid using alcohol or similar substances to prep the injection site. Use distilled water to simulate this procedure.



Fig 78.



Fig 79.

Set Up

Auscultation

Auscultation

Features included with LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

The auscultation feature duplicates heart and lung conditions selected by the instructor via wireless remote control with LCD Display. Palpation is required to correctly identify the auscultation locations.

Heart

Sounds are detected at 6 anterior locations with 12 heart conditions:

01 Normal	07 S3 Gallop
02 Aortic Regurgitation	08 S4 Gallop
03 Pulmonary Stenosis	09 Systolic Click
04 Mitral Stenosis	10 Atrial Septal Defect
05 Holosystolic	11 PDA
06 Mid-systolic	12 VSD

Lungs

Sounds are detected at 5 anterior, 6 upper posterior, 4 lower posterior, and 2 mid-axillary locations. With 16 lung conditions:

01 Normal Lungs	09 Cavernous
02 Normal Vesicular	10 Bronchovesicular
03 Wheezes	11 Bronchial
04 Mono Wheeze	12 Pulmonary Edema
05 Fine Crackle	13 Infant
06 Coarse Crackle	14 Friction Rub
07 Rhonchi Crackle	15 Egophony
08 Stridor	16 Pectoriloquy

1. Locate your SmartScope™ and Remote Control with LCD display.
2. Locate included “AA” and “AAA” batteries.
3. Install 2 “AA” batteries into SmartScope™ and 2 “AAA” batteries into the remote control. The compartments are marked as to the positions of the batteries “+” or “-”.
4. Press the red power button on the remote control. This turns on the remote control and sends a signal to activate the SmartScope™.
5. After the unit is activated, the LCD display on the remote control will be in the “status” mode, displaying the current menu settings for the heart and lung conditions.

Note: Powering on one remote control will activate and control all SmartScopes™ and manikins simultaneously within a 100-foot range. Multiple remotes operating within this range will cause complications and signal confusion.

Selecting New Heart and Lung Conditions

1. Activate remote control and SmartScope™ using instructions above.
2. Press either the heart or lung button. This will put the display into menu mode.
3. Select a condition by using the number buttons or the scroll button to view the conditions in sequence.
4. When the desired condition is viewed on the LCD display, press the enter button to activate.
5. Heart and lung sounds are heard simultaneously. Check the main screen to ensure the desired sounds are being heard. For example, when hearing normal heart sounds and normal lung sounds, the LCD display will read: HS= (01) LS= (01).

Set Up Auscultation

Listening to Selected Heart and Lung Sounds

1. Follow the instructions above to activate remote control, SmartScope™, and select desired sounds.
2. Place the earpieces of the SmartScope™ in ears angled in a forward position.
3. Place the diaphragm of the SmartScope™ over the appropriate sites on the manikin.
4. Use included laminated key cards for location instruction.
5. For additional location instruction, use the green color-coded stickers for lung sites found and the blue color-coded stickers for the heart sites found.
6. Correct placement of the SmartScope™ is required to hear the sounds. Moving the SmartScope™ slowly across the area will help locate the sensor in the torso so that the sounds can be heard.

Note: The SmartScope™ is only for use with the Auscultation feature. It is not a standard stethoscope. (See Figure 80)



Fig 80.

Using the Amplified Speaker (purchased separately LF01189U)

1. Locate the SmartScope™ and speaker cord included with the 30-watt amplifier/speaker.
2. Plug the speaker cord into the speaker jack on top of the SmartScope™ box.
3. Plug the amplifier/speaker into the 110V (or 220V) power source.
4. When the speaker is connected, the SmartScope™ earpieces will not work; sounds will only be amplified through the speaker.
5. Select the desired heart and lung sounds following the instructions above.
6. Place the diaphragm of the SmartScope™ over the appropriate sites on the manikin.

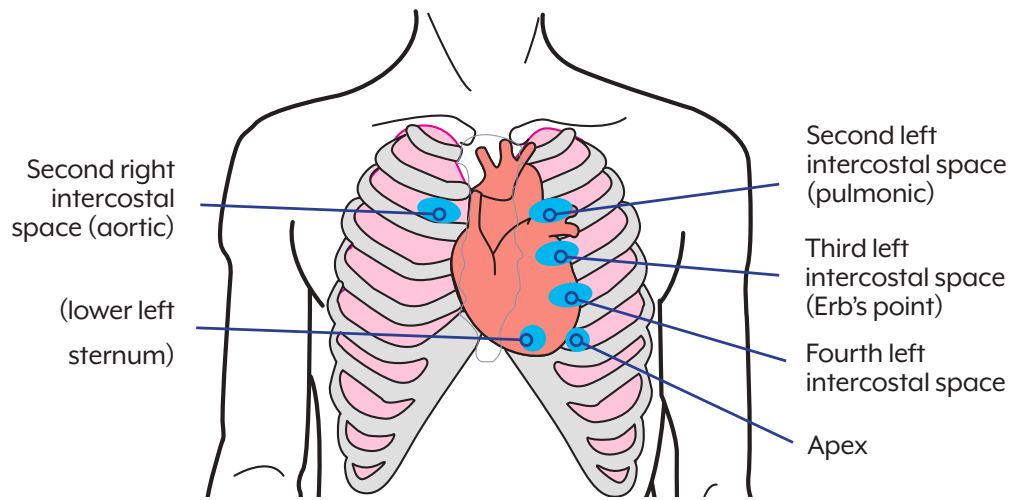
Note: The remote has a battery saver mode that shuts the unit down after eight minutes if the remote is left on the same setting. To prevent this shutdown, select a different heart or lung sound within the eight-minute time period.

Care and Maintenance for Auscultation Feature

1. Prior to storing equipment, ensure the batteries in the remote control and SmartScope™ are removed.
2. Adhesive remaining on the manikin from use of the blue and green location stickers can be removed using Nasco cleaner. Apply Nasco Cleaner to a clean, soft, dry cloth and wipe residual adhesive. Be cautious not to over-wipe painted areas.
3. Newsprint, ballpoint pen, and printed plastics will leave an indelible mark.
4. Alcohol prep pads are included to sterilize SmartScope™ earpieces between users.

Set Up

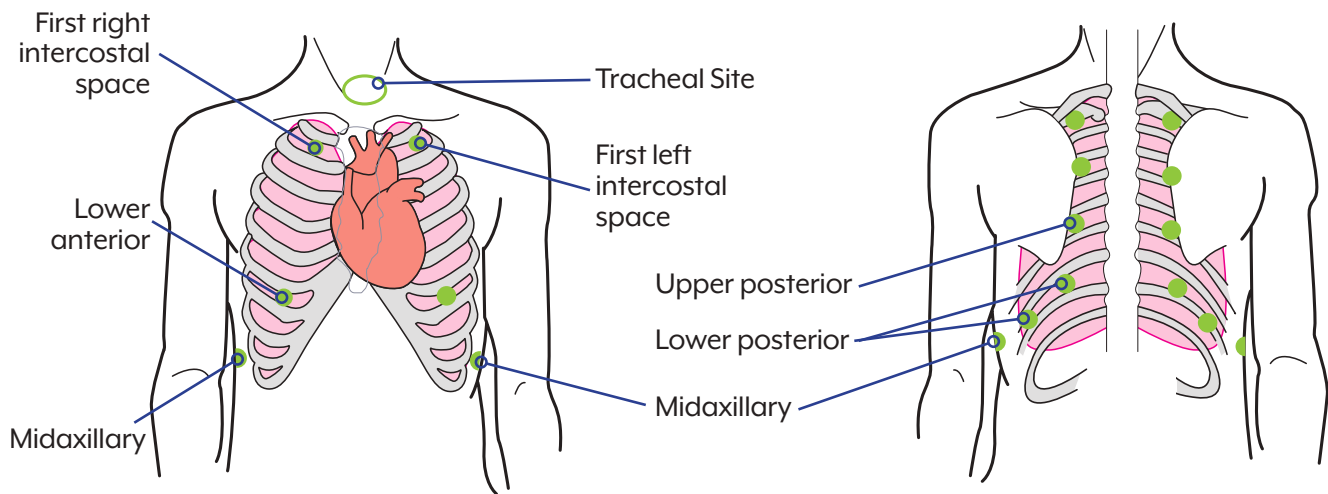
Anterior Heart Sites



	Aortic Second Right Intercostal Space	Pulmonic Second Left Intercostal Space	Erb's Point Third Left Intercostal Space	Fourth Left Intercostal Space	Lower Left Sternum	Apex
1. Normal	Normal, S2 Accentuated	Normal, S2 Accentuated	Normal, S2 Accentuated	Normal	Normal	Normal
2. Aortic Regurgitation	Ejection Sound, Loud Mid systolic & soft early diastolic murmur	Ejection sound, mild systolic murmur, early diastolic blowing murmur			Normal	Normal
3. Pulmonary Stenosis	Normal	Moderate 4th sound, harsh late peaking systolic murmur, soft late pulmonic 2nd sound	Normal	Normal	Normal	Normal
4. Mitral Stenosis	Normal	Normal	Severe held expiration, tachycardia: opening snap .03 seconds after loud 2nd sound	Constrictive Pericarditis/ knock. Inspiratory augmentation indicates a gallop of right ventricular origin	Normal	Held expiration, tachycardia: opening snap, mid diastolic & presystolic murmurs, loud 1st sound
5. Holosystolic Murmur	Normal	Normal	Normal	Normal	Patient has mitral regurgitation & frequent premature ventricular contractions. Murmur is crescendo-decrescendo with late peaking. Soft S3 in mid diastole.	
6. Midsystolic Murmur	Normal	Normal	Normal	Normal	Patient with hypertrophic cardiomyopathy has a murmur that begins after S1 and ends before S2	
7. S3 Gallop	Normal	Normal	Normal	Normal	Patient has a readily heard third heart sound. S3 occurs later in diastole than the opening snap.	
8. S4 Gallop	Normal	Normal	Normal	Normal	Patient with left ventricular hypertrophy has a fourth sound (S4) that is not heard on every cycle. The sound is presystolic about .1 second before S1.	
9. Midsystolic Click	Normal	Normal	Normal	Normal	Patient has mitral prolapse which produces a mid systolic click heard during inspiration.	
10. Atrial Septal Defect	Normal	Respiration: mid systolic murmur, fixed split 2nd, soft 3rd, breath sounds with inspiration	Normal	Respiration: mid systolic murmur, fixed split 2nd, mid diastolic murmur	Normal	Normal
11. Patent Ductus Arteriosus	Normal	Continuous murmur	Normal	Continuous murmur	Normal	Normal
12. Ventricular Septal Defect	Normal	Normal	Holosystolic murmur with late crescendo		Normal	Normal

Set Up

Anterior / Posterior Lung Sites



	Tracheal Site	First Left & Right Intercostal Sites	Upper Posterior Lung Sites	Lower Posterior Lung Sites Two Midaxillary Sites 2 Lower Anterior Sites
1. Normal Lung	Tracheal	Bronchovesicular	Normal Vesicular	Normal Vesicular
2. Normal Vesicular	Tracheal	Bronchovesicular	Normal Vesicular	Normal Vesicular
3. Wheezes	Wheeze	Wheeze	Wheeze	Wheeze Lower Volume
4. Mono Wheeze	Mono Wheeze	Mono Wheeze	Mono Wheeze	Mono Wheeze Lower Volume
5. Fine Crackle	Fine Crackle	Fine Crackle	Fine Crackle	Fine Crackle
6. Coarse Crackle	Coarse Crackle	Coarse Crackle	Coarse Crackle	Coarse Crackle
7. Ronchi	Ronchi	Ronchi	Ronchi	Ronchi
8. Stridor	Stridor	Stridor	Stridor Lower Volume	Stridor Lower Volume
9. Cavernous	Cavernous	Cavernous	Cavernous	Cavernous
10. Bronchovesicular	Tracheal	Bronchovesicular	Normal Vesicular	Normal Vesicular
11. Bronchial	Bronchial	Bronchial	Normal Vesicular	Normal Vesicular
12. Pulmonary Edema	Pulmonary Edema	Pulmonary Edema	Pulmonary Edema	Pulmonary Edema
13. Infant	Infant	Infant	Infant	Infant
14. Friction Rub	Tracheal	Bronchovesicular	Friction Rub	Friction Rub
15. Egophony	Egophony	Egophony	Egophony	Egophony
16. Pectoriloquy	Pectoriloquy	Pectoriloquy	Pectoriloquy	Pectoriloquy

Set Up Pressure Injury Wounds

Set Up Edema

Pressure Injury Wounds

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

Pressure wound identification and care may be performed by using the included foot wound sleeve. Five wounds are included: Stages 1-4 and a deep tissue wound.

Inserting Wounds into Foot Sleeve:

1. Slide foot sleeve over either left or right foot. Inside the sleeve is an indication for bottom. (See Figure 81.)
2. Select wound stage (See Figure 82) and press into the inside of the chosen opening on the foot sleeve (See Figure 83).

Proper Application Shown. (See Figure 84).



Fig 81.



Fig 82.



Fig 83.



Fig 84.

Edema

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

Edema identification may be performed by using one of the included foot edema sleeves. Edema included are Stages 1-4 and non-pitting.

Inserting Edema onto Foot:

1. Select edema stage and slide foot sleeve either left or right foot (Figure 85).

Proper Application Shown. (See Figure 86).



Fig 85.



Fig 86.

Care and Maintenance of Edema

1. Wash with warm water and mild soap.
2. Allow to air dry.
3. Coat lightly with baby powder to remove any tacky feel.

Set Up CPR Measuring

CPR Measuring

Features included with LF04502/LF04502M, LF0503/LF0503M, LF04504/LF04504M and LF04504EX/LF04504MEX.

Apple or Android Device

The CPR Plus application enables accurate and effective training using CPR Add-on Student or Instructor applications that can be downloaded to either an Apple or Android device. Student and instructor applications provided real-time feedback and feature adult capabilities, as well as a realistic interface.

Follow these links to download the CPR Add-On Kit instructor and student applications.

Android Devices

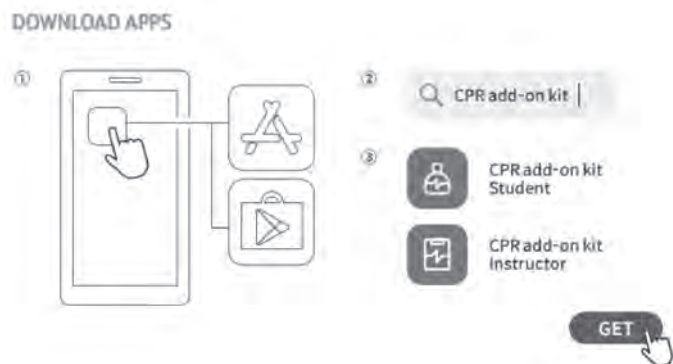
<https://play.google.com/store/apps/details?id=com.imlabworld.android.testing.fw.imlab.heartisenseinstructor>

https://play.google.com/store/apps/details?id=heartisense_student.android.imlabworld.com.heartisensestudent

Apple Device

<https://apps.apple.com/us/app/cpr-add-on-kitinstructor/id1203164623>

<https://apps.apple.com/us/app/cpr-add-on-kitstudent/id1400115591>



Powering on CPR Monitoring Feature

1. To power on the CPR monitoring feature, access the "ON/OFF" button through the genital opening in the pelvis (See Figure 87).
2. Press the "ON/OFF" button.

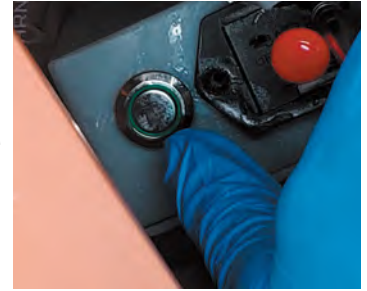


Fig 87.

Changing the Battery

The CPR monitoring feature is powered by a 9V battery (included).

1. To change the battery, access the battery compartment through the genital opening in the pelvis.
2. Pull the compartment out and up to remove the battery drawer (See Figure 88).



Fig 88.

3. Reverse instructions once a new battery is installed.

Patient Monitoring

Features included with LF04302, and LF04302EX.

Instructions for setup and use of your (Patient Vitals, Pre-Hospital or In-Hospital) Patient Monitoring suite are included with the packaging of the monitoring products.

Set Up

Identifying Parts and Consumables



Set Up

Identifying Parts and Consumables

- 1 Tattoo Sleeve
 - 2 LF04527 Wound, Cut
 - 3 LF04526 Wound, Bruise
 - 4 Earrings
 - 5 LF00843 G Male Genitalia Foreskins, Pack of 3, Light
LF00842 G Male Genitalia Foreskins, Pack of 3, Medium
 - 6 LF04506 IV Arm, Light
LF04506M IV Arm, Medium
 - 7 LF04511 IV Arm Skin Replacement, Light
LF04511M IV Arm Skin Replacement, Medium
 - 8 LF04510 IM Injection Pad, Buttock, Light
LF04510M IM Injection Pad, Buttock, Medium
 - 9 LF04529 Foot Wounds, Pressure Injury Stages 1-4 and Deep Tissue Wound, Light
LF04529M Foot Wounds, Pressure Injury Stages 1-4 and Deep Tissue Wound, Medium
 - 10 LF04513 Foot Wound Sleeve, Light
LF04513M Foot Wound Sleeve, Medium
 - 11 LF04318 Male Genitalia, Peri-Care and Catheterization, Light, included with LF04502, LF0503, LF04504 and LF04504EX
LF04318M Male Genitalia, Peri-Care and Catheterization, Medium, included with LF04502M, LF0503M, LF04504M and LF04504MEX
 - 12 LF04319 Female Genitalia, Peri-Care and Catheterization, Light, included with LF04502, LF0503, LF04504 and LF04504EX
LF04319M Female Genitalia, Peri-Care and Catheterization, Medium, included with LF04502M, LF0503M, LF04504M and LF04504MEX
 - 13 LF04514 Female Genitalia, SA, Light, included with LF04500
LF04514M Female Genitalia, SA, Medium, included with LF04500M
 - 14 LF04516 Right Leg Skin, Light
LF04516M Right Leg Skin, Medium
 - 15 LF04517 Left Leg Skin, Light
LF04517M Left Leg Skin, Medium
 - 16 LF04518 Right Arm Skin, Light
LF04518M Right Arm Skin, Medium
 - 17 LF04519 Left Arm Skin, Light
LF04519M Left Arm Skin, Medium
 - 18 LF04521 Torso Skin, Light
LF04521M Torso Skin, Medium
 - 19 LF04522 Wig, Multicolored
 - 20 LF04523 Wig, Black
 - 21 LF04525 Wig, Brown
 - 22 LF04528 Edema, Light, Stages 1-4 & Non-Pitting
LF04528M Edema, Medium, Stages 1-4 & Non-Pitting
 - 23 LF04330 Suprapubic Stoma, Light
LF04330M Suprapubic Stoma, Medium
 - 24 LF04317 A Pupils, Normal, Set of 2
 - 25 LF04317 B Pupils, Constricted, Set of 2
 - 26 LF04317 C Pupils, Dilated, Set of 2
 - 27 LF04332 Prostate Kit
 - 28 LF01230 C Cervix Kit
 - 29 29 LF01130 Fluid Supply Bag
 - 30 LF01096 Electronic Control Unit, Blood Pressure
 - 31 LF01073 Blood Pressure Cuff/Sphygmomanometer
 - 32 Moulage Adhesive
 - 33 LF04311 Urinary Catheter Bladder Reservoir
 - 34 LF04334 External Bladder for Urinary & Suprapubic
 - 35 9v Battery
 - 36 LF01144 Auscultation SmartScope™
 - 37 LF01148 Auscultation Remote
 - 38 LF04337 Lavage/Gavage Bag
 - 39 LF04099 Stoma Reservoir
 - 40 100-2028 Carotid Pulse Bulb
 - 41 LF00845 Simulated Blood, Quart
 - 42 PN01037 Simulated Urine, Quart
 - 43 LF03644 Pump Spray Lubricant
 - 44 HC53411 Release Compound for Urinary Cath
 - 45 Syringe
 - 46 LF04333 NHC Hospital Gown
- Additional consumables available:**
LF04335 Male Genitalia, Basic, Light
LF04335M Male Genitalia, Basic, Medium
LF04336 Female Genitalia, Basic, Light
LF04336M Female Genitalia, Basic, Medium
LF04510 IM Pad, Buttock, Light
LF04510M IM Pad, Buttock, Light

Set Up

Care and Maintenance

Overall Care and Maintenance

General Care

1. Most cleaning can be done with a soft cloth, mild soap, and warm water. Avoid over washing the painted areas on the manikin.
2. Stubborn stains can be treated by using Nasco Cleaner and a soft cloth.
3. Stains caused by make-up, ink, and newsprint are indelible and cannot be removed. Avoid contact with these substances and do not apply cosmetics or Betadine® solution to the manikin.
4. Follow cleaning, care, storage, and maintenance guidelines in each section of this manual.
5. Remove all batteries prior to storing your equipment for future use.

Cautions

Solvents or corrosive materials will damage the simulator. Never place the simulator on any kind of printed paper or plastic. These materials will transfer indelible stains. Ball-point pens will also make indelible stains. Do not store in direct sunlight.

Storage

In order to prepare DANi for storage perform a normal manikin breakdown procedure by removing all of its limbs and packaging them neatly in its case (preferably in the same packaging offered when first purchased). In addition, be certain to follow these instructions:

- Storage temperature should not exceed 122°F (50°C) or fall below 41°F (5°C) on a (non-condensing) relative humidity free environment.
- If a soft-sided case is being used, the manikin should lie flat.
- The manikin should NEVER be stored or shipped with fluids in the system.



Up to 5-years warranty



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