INSTRUCTION MANUAL

TERi™

Patient Care Trainer	LF04300
Patient Skills Trainer	LF04301
Patient Simulator	LF04302
Patient Simulator, Export	LF04302EX

5 Year Warranty

Nasco HEALTHCARE

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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 Patient Simulator** – Comprehensive and complete simulation platform including patient monitoring capability.

About the Simulator

LF4300: **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

LF4301: **TERi™ Geriatric Patient Skills 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)
- 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

LF4302: **TERi™ Geriatric Patient Simulator** (includes monitors)

LF4302EX: **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 does not include monitors/tablets)

	Feature Set Capability	Geriatric Patient Care Trainer	Geriatric 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	✓	✓	✓
Nursing Care	Pericare	✓	✓	✓
	Ostomy care	✓	✓	✓
	Urinary catheter care	✓	✓	✓
	Stomas	✓	✓	✓
	Standard arms with injection sites	✓	✓	✓
	Support for oxygen administration	✓	✓	✓
	Left blood pressure arm (with radial pulse)	Option*	✓	✓
Advanced Skills	Injections sites	Option*	✓	✓
	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*	✓	✓
	IV arm circulation pump	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 LF4300

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

TERi™ Geriatric Patient Skills Trainer LF4301

- Male Genitalia Foreskins, Pack of 3 (LF000843 G)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318)
- Female Genitalia (LF04319)
- 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)
- Foot Wound Sleeve (LF04310 A)
- Deep Tissue Wound (LF04328)
- Enema Bag (LF04316)
- Edema, Set of 5, Stages 1-4 & Non-Pitting (LF04329)
- 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 Patient Simulator LF4302 (includes monitors)

TERi™ Geriatric Patient Simulator Export LF4302EX (excludes monitors)

- Male Genitalia Foreskins, Pack of 3 (LF000843 G)
- Pupils, Constricted, Set of 2 (LF04317 B)
- Pupils, Dilated, Set of 2 (LF04317 C)
- Male Genitalia (LF04318)
- Female Genitalia (LF04319)
- 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)
- Foot Wound Sleeve (LF04310 A)
- Deep Tissue Wound (LF04328)
- Enema Bag (LF04316)
- Edema, Set of 5, Stages 1-4 & Non-Pitting (LF04329)
- 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)
- Auscultation Remote with Batteries (LF01148)
- Patient Vital Signs and Monitored Signals Simulation Suite (LF04302EX 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, LF04302, and LF04302EX).

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 (LF04301, LF04302, LF04302EX) 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

Fig 3.

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.

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 ventalation of lungs through tracheostomy. Supports lavage and saline treatment. Features included with LF04301, LF04302, and LF04302EX.

Fig 8.

Set Up
Lavage / Gavage / Suctioning / Nasogastric / Carotid Pulse

Oral and Nasal Lavage, Gavage, and Suctioning

Fig 9.

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).

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 diconnect 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, LF04302, and LF04302EX.

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).

Fig 12.

2. Gently pull up head to expose four tubes with the stomach reservoir bag connected at the end. (See Figure 12).

Fig 13.

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).

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) and TERi™ Geriatric Patient Simulator (LF04302, LF04302EX). 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 sinus canal.

Fig 17.

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

Accessing Lung Bag and Stomach Bag for Cleaning or Replacement

Fig 18.

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).

Fig 19.

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.

Fig 20.

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 LF04301, LF04302, and LF04302EX.

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.

Fig 22.

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 23.

Note: There is no cricoid.

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

BVM – Bag Valve Mask
Adult Size

Oropharyngeal Airway
110 Preferred
100 Smallest acceptable

Endotracheal Tube
7.0mm Preferred
6.5mm Supported
7.5mm Supported

Combitube
37FR Preferred
41FR Supported

LMA Supreme and iGel
Size 3 Supported
Size 4 Preferred
Size 5 Supported

Nasal Trumpet
Size 6 (24FR) Preferred
Size 7 (28FR) Supported

King Airway
Size 3 Supported
Size 4 Preferred
Size 5 Supported

NG Tube, Nasal
Size 16FR Preferred

NG Tube, Oral
Size 16 Preferred
Size 14 Supported
Size 18 Supported

Trachesotomy Intubation
Uncuffed 6.0mm Preferred
7.0mm Preferred
Cuffed 6.0mm Preferred
7.0mm Preferred

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, LF04302, and LF04302EX.

Fig 29.

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).

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 resevoir is installed on the back side, make sure the urinary resevoir 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.

Fig 32.

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 33.

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 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).

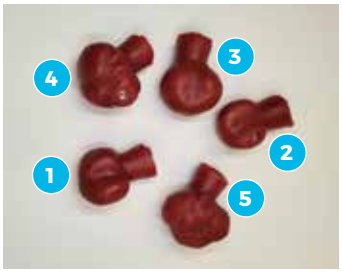


Fig 36.

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, LF04302, and LF04302EX.

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 resevoir is installed on the back side, make sure the urinary resevoir 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, LF04302, and LF04302EX.

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.

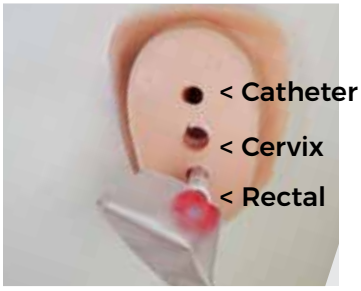


Fig 43.

Set Up
Female Cervical Exam

Female Cervical Examination
Features included with LF04301, LF04302, and LF04302EX.

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, LF04302, and LF04302EX.

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.

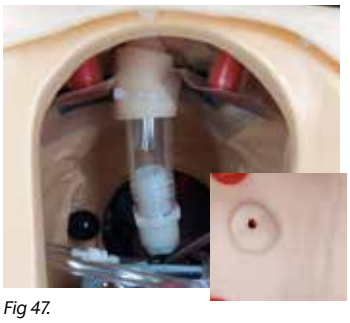


Fig 47.

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 catherization 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 cotten swab. Deposit grease between the valve membranes. (See Figure 50).

Fig 50.

Set Up
Blood Pressure Arm

Blood Pressure Arm
Features included with LF04301, LF04302, and LF04302EX.


Fig 51.

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.

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.

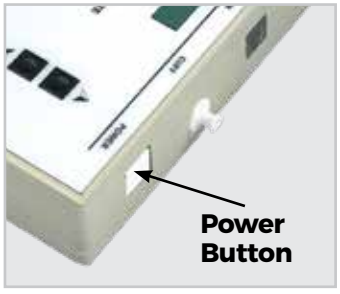


Fig 52.

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).

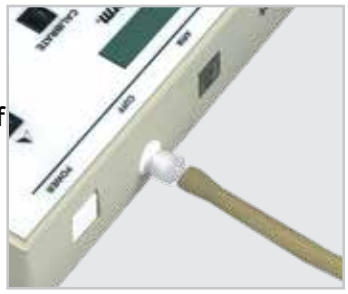


Fig 53.

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).

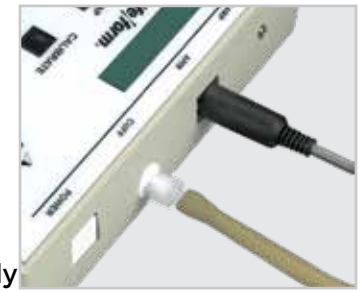


Fig 54.

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).

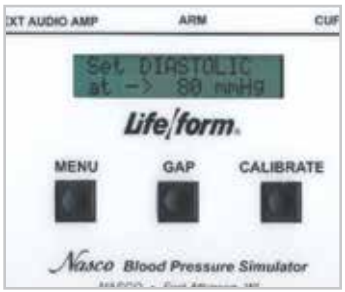


Fig 57.

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).

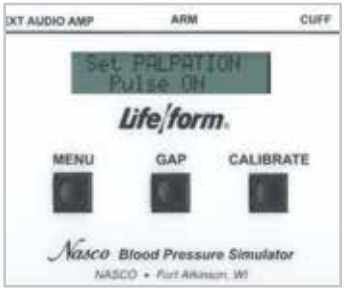


Fig 60.

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.

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).

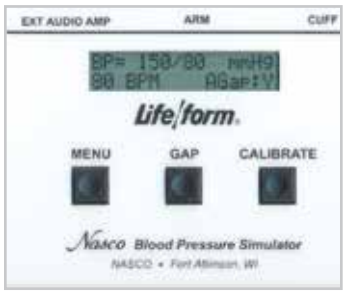


Fig 61.

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, LF04302, and LF04302EX.

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.

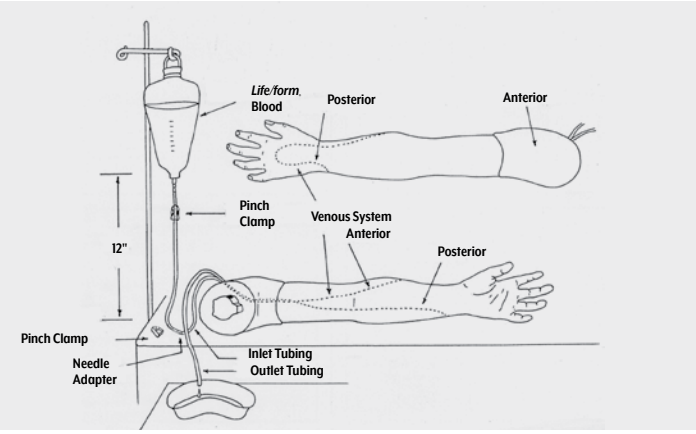


Fig 67

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).

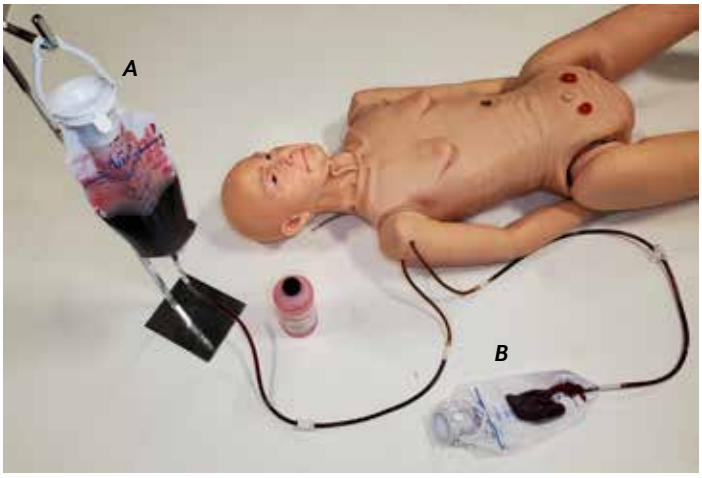


Fig 69.

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.

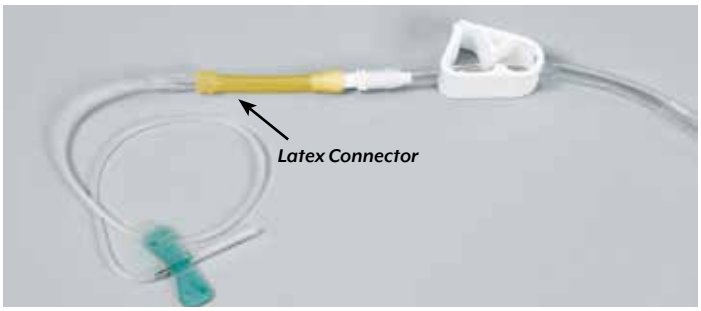


Fig 70.

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 recommneded and all available sites arre 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).

3. Apply baby powder to the interior of the replacement skin and pull onto the arm.

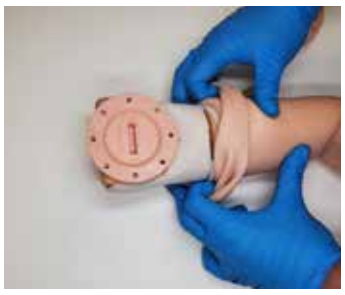


Fig 71.

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.

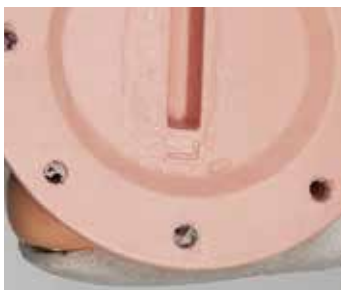


Fig 72.

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.

5. Install the eight screws, being careful not to over tighten the screws.

6. Reattach leg to simulator torso.

Fig 75.

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.

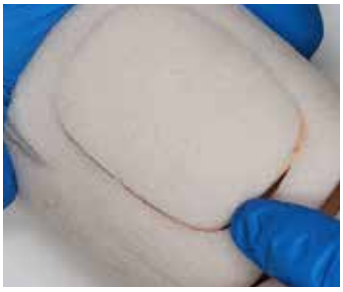


Fig 78.

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 LF04302, and LF04302EX.

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)

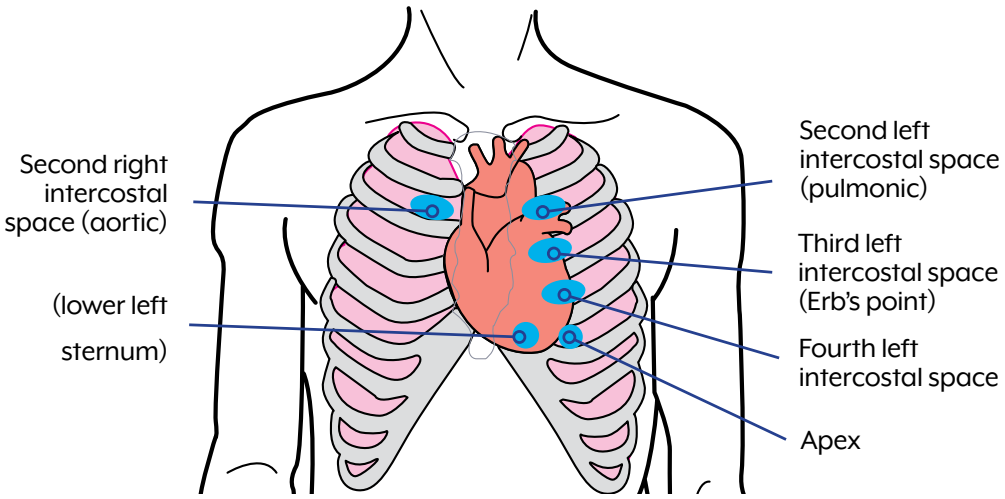
1. Locate the SmartScope™ and speaker cord included with the 30-watt amplifier/speaker.
2. Plug the speaker cord into the speaker jack on top of the SmartScope™ box.
3. Plug the amplifier/speaker into the 110V (or 220V) power source.
4. When the speaker is connected, the SmartScope™ earpieces will not 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

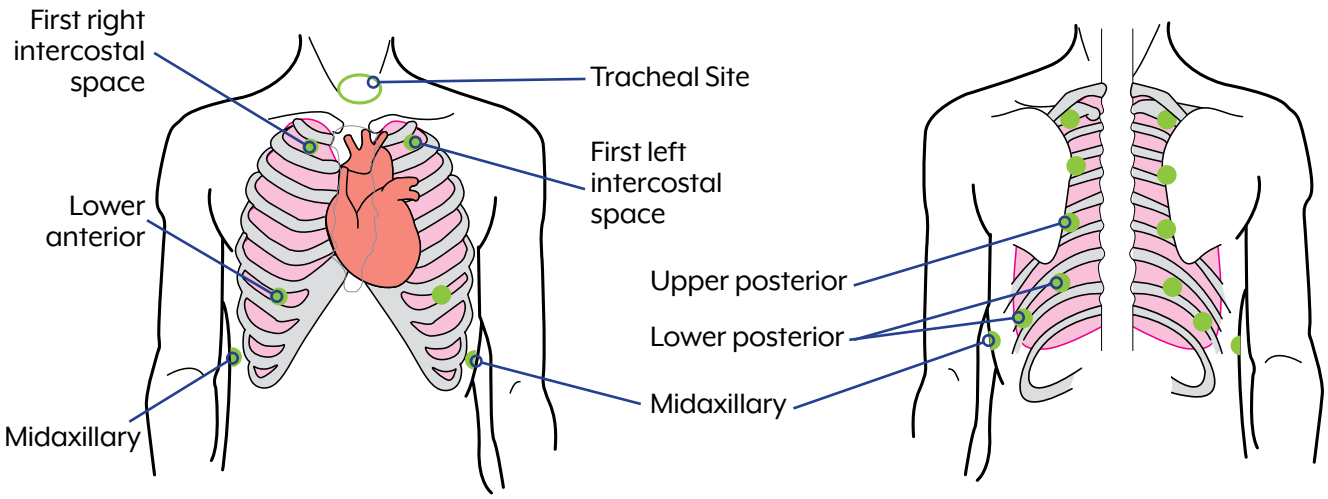
1. Prior to storing equipment, ensure the batteries in the remote control and SmartScope™ are removed.
2. Adhesive remaining on the manikin from use of the blue and green location stickers can be removed using Nasco cleaner. Apply Nasco Cleaner to a clean, soft, dry cloth and wipe residual adhesive. 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 Regurgataion	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-decresendo 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

Pressure Injury Wounds
Features included with LF04301, LF04302, and LF04302EX.

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.

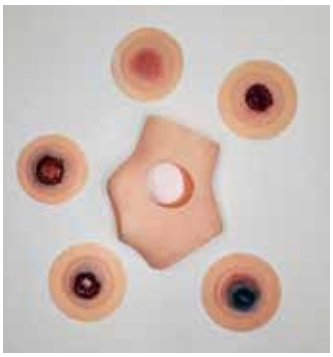


Fig 80.

Fig 81.

Fig 82.

Set Up
Edema

Edema
Features included with LF04301, LF04302, and LF04302EX.

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, LF04302, and LF04302EX.

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.

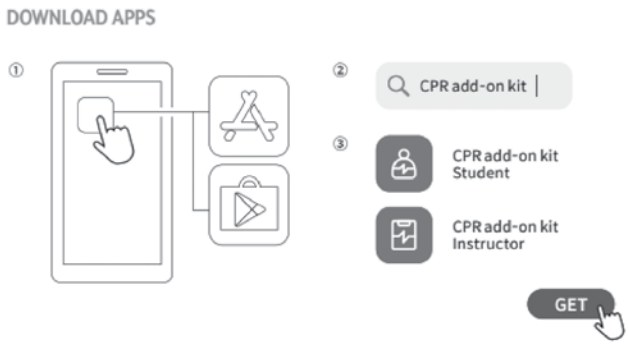
Android

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, 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
Consumables

Set Up
Consumables

Consumables

1. 100-2028 Carotid Pulse Bulb
2. HC53411 Release Compound for Urinary Cath
3. LF00843G Male Genitalia Foreskins, Pack of 3, Light
4. LF00845 Simulated Blood, Quart
5. LF00846 Simulated Blood, Gallon
6. LF01022 Fluid Supply Stand, 5”x 8”
7. LF01073 Blood Pressure Cuff/ Sphygmomanometer
8. LF01096 Electronic Control Unit (BP)
9. LF01127 Foley Catheter, 16 FR, 5cc
10. LF01128 Foley Catheter, 16 FR, 5cc, Pack of 10
11. LF01130 Fluid Supply Bag, 500 ml
12. LF01144 Auscultation SmartScope™ with Batteries
13. LF01148 Auscultation Remote Control with Batteries
14. LF01170 Adult Tracheostomy Tube
15. LF01230C Cervix Kit
16. LF01279 Silicone Skin Sealant
17. LF03468 Carry Case, Soft
18. LF03644 Pump Spray Lubricant
19. LF04089 Stoma Replacement
20. LF04099 Stoma Reservoir
21. LF04303 IV Arm, Light
22. LF04304 BP Arm, Light
23. LF04305 IV Arm Skin Replacement, Light
24. LF04306 IV Arm Vein Replacement
25. LF04307 IV Arm IM Pad Replacement
26. LF04308 IM Pad, Thigh
27. LF04309 IM Pad, Buttock
28. LF04310 Foot Wounds, Pressure Injury Stages 1-4 and Deep Tissue Wound), Light
29. LF04310A Foot Wound Sleeve, Light
30. LF04311 Urinary Catheter Bladder Reservoir
31. LF04312 Lungs
32. LF04313 Stomach Reservoir
33. LF04314 Enema Reservoir
34. LF04315 Gastrostomy Reservoir
35. LF04316 Enema Bag
36. LF04317A Pupils, Normal, Set of 2
37. LF04317B Pupils, Constricted, Set of 2
38. LF04317C Pupils, Dilated, Set of 2
39. LF04318 Male Genitalia, Peri-care and Catheterization, Light, included with LF04301, LF04302 and LF0302EX
40. LF04319 Female Genitalia, Peri-care and Catheterization, Light, included with LF04301, LF04302 and LF0302EX
41. LF04320 Right Leg Skin, Light
42. LF04321 Left Leg Skin, Light
43. LF04322 Right Arm Skin, Light
44. LF04323 Left Arm Skin, Light
45. LF04324 Torso Skin, Light
46. LF04325 Hearing Aid Replacement
47. LF04326 Wig, Female
48. LF04327 Dentures (Upper & Lower)
49. LF04329 Edema (5) - Stages 1-4 & Non-Pitting
50. LF04330 Suprapubic Stoma, Light
51. LF04331 Suprapubic Bladder
52. LF04332 Prostate Kit
53. LF04333 NHC Hospital Gown
54. LF04334 External Bladder, Urinary & Suprapubic
55. LF04335 Male Genitalia, Peri-care, Light, included with LF04300
56. LF04336 Female Genitalia, Peri-care, Light, included with LF04300
57. PN01037 Simulated Urine, Quart
58. LF04099 Stoma Reservoir
59. LF04307 Arm IM Pad Replacement
60. LF04308 Thigh IM Pad Replacement
61. LF04309 Buttock IM Pad Replacement
62. LF04334 External Bladder for Urinary & Suprapubic
63. LF04337 Lavage/Gavage Bag

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 it 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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IM - 601006 - 10/20