



Infant Auscultation Trainer and SmartScope™ LF01201U Instruction Manual



Caution: Product Contains Dry Natural Rubber

Life/form® Products by Nasco



The **Life/form**® Infant Auscultation Trainer allows you to simulate resuscitation, along with the ability to check for a pulse and practice airway management skills, including intubation and suctioning. You can also practice umbilical clamping, cutting, and cannulation.

Note: Perform resuscitation with plain chest skin only. Using the auscultation chest skin may damage components and cause auscultation sounds to stop working properly.

Cleaning the Simulator

Normal soil can be removed with mild soapy water. Nasco Cleaner (LF09919U) will remove stubborn stains. Simply apply Nasco Cleaner to the soiled area and wipe clean with a soft cloth or paper towel.

Note: Avoid using cleaner around the mouth and nose area if students will be applying direct mouth-to-mouth resuscitation techniques, as the cleaner may be toxic if ingested.

NEVER place the trainer on any kind of printed paper or plastic. These materials, as well as ball-point pens, will transfer indelible stains. Do not use any cosmetics.

List of Components

- Basic Infant **CRiSis**™ Manikin Chest Skin
- Infant Auscultation Chest Skin
- 6 Umbilical Cords
- 6 Umbilical Cord Clamps
- 1 IV Bag with Clamp
- 1 Quart of **Life/form**® Blood
- 1 Bottle of Pump Spray Lubricant
- 8 Towels
- Infant Remote
- Infant SmartScope™
- Infant Auscultation Dual Headset



Figure 1

The Infant Airway Management Trainer Head

About the Simulator

The **Life/form**® Infant Airway Management Trainer is the most realistic simulator available for the training of intubation skills. Nasco has taken great care to create an airway management trainer that is anatomically correct in respect to both size and detail. (See **figure 1.**)

Landmarks include gum line, tongue, oral and nasal pharynx, larynx, epiglottis, arytenoids, false and true vocal cords, cricoid ring, tracheal rings, trachea, and esophagus. Nasco's Infant Airway Management Trainer allows you to practice oral intubation. Suction techniques can also be performed and evaluated. The simulator was designed to use an uncuffed endotracheal tube measuring up to 4.0 mm I.D.

Lubrication

Before using the Infant Airway Management Trainer, lubricate both the oral cavity and the endotracheal tube you plan to use with the pump spray lubricant provided. (See **figure 2.**)

Note: Nasco recommends the use of the provided lubricant or a similar vegetable-based lubricant for the Infant Airway Management Trainer. The use of a silicone-based or similar lubricant may cause damage to the simulator, thus voiding Nasco's warranty on the trainer.



Figure 2

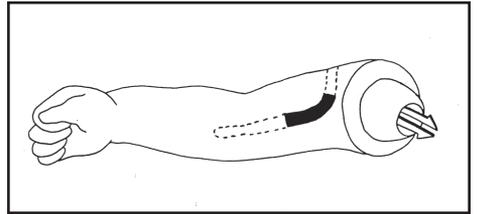


Figure 3

The Infant Brachial Pulse Arm

The **Life/form**® Infant Brachial Pulse Arm is an exciting training aid for taking newborn pulses. A series of contractions on the squeeze bulb will create a pulse in the antecubital region. With practice, a very realistic pulse can be created.

Note: This arm is not designed for injections and should not be penetrated by a needle. The above diagram shows the position of the tubing embedded in the arm to simulate an artery. (See **figure 3.**)

Supplies/Replacement Parts for the Infant Airway Management Trainer

LF03644U Pump Spray Lubricant

LF09919U Nasco Cleaner



Figure 4

Infant Chest Skin with Umbilicus (See figure 4.)

About the Simulator

The **Life/form**® Infant Chest Skin with Injectable Umbilicus is an exciting training aid for practicing and demonstrating umbilical clamping, cutting, and cannulation of the newborn. Visual and tactile realism are combined in this simulator to provide students with the most realistic training possible. The umbilicus allows students to practice clamping, cutting, and aspirating “blood,” making the use of the **Life/form**® Infant Chest Skin with Umbilicus Simulator a realistic training exercise.



Figure 5

General Instructions for Use

A. Preparing the Synthetic Blood

Concentrated blood colorant is provided. Fill the 16-oz. container with tap water for the proper dilution. (See figure 5.)

B. Hanging the IV Bag

Hang the bag no higher than 18".



Figure 6

C. Filling the IV Supply Bag

Pour the diluted **Life/form**® Blood into the IV bag. (See figure 6.) Distilled water can be used in place of synthetic blood. Be certain the clamp on the tubing is closed before filling.

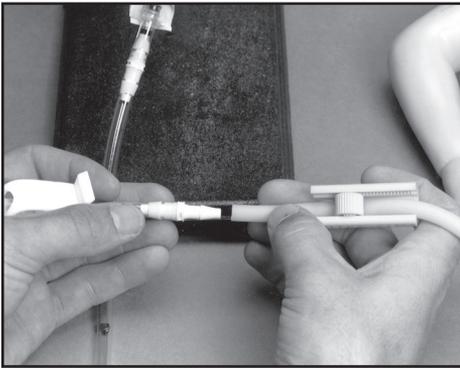


Figure 7

D. Connecting the IV Bag to the Umbilicus

The umbilicus is supplied with a special connector that fits the umbilicus tubing and the IV bag. (See figure 7.) Insert the connector from the IV bag into the tubing coming from the umbilicus as shown.

E. Filling the Umbilicus System

1. Hold a towel or container near the open end of the umbilicus.
2. Carefully open the clamp and allow the liquid to slowly flow through the system until a steady stream exits all three holes at the umbilicus end.

Note: Careful adjustment of the ramp clamp is needed to supply a steady stream of “blood” during the aspiration procedures. (See figure 8.)



Figure 8

Procedures That Can Be Performed on This Simulator

A. “Blood” Aspiration

The **Life/form**® Infant Chest Skin with Umbilicus is now ready for aspiration practice. The “blood” flow is controlled by careful adjustment of the ramp clamp.

B. Cutting and Clamping the Umbilicus

The **Life/form**® Infant Chest Skin with Umbilicus Simulator allows the student to practice clamping and cutting the umbilicus. The umbilicus may be drawn out of the body to the desired length for trimming and is perfect for practicing umbilicus clamping and clamp removal.

Note: When the umbilici are used up, order the Umbilical Cannulation Replacement Cords (LF03642U).

Causes for Failure in Function

IV infusion may not flow if the IV bag isn’t high enough, if the clamp isn’t open, or if the latex tubing is kinked or pinched.

A. If “Blood” Cannot Be Aspirated During the “Blood” Drawing Procedure

1. The clamp on the IV bag may not be open.
2. Air could be trapped in the umbilicus system. Simply flush the system slowly, draining some “blood” or distilled water, whichever you are using, until all the air bubbles are eliminated.
3. Check for possible kinks in the system.

Installing a New Umbilicus

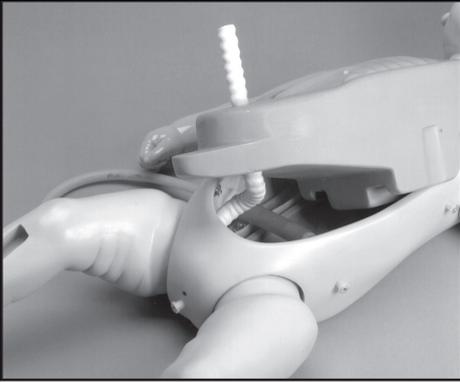


Figure 9

The simulator comes with an umbilicus installed. When necessary, replace it using the following instructions.

Remove the chest skin by unhooking it at the buttons. Lift out the lung plate and chest foam assembly.

Once the lung plate and chest foam assembly has been removed, take out the old umbilicus and discard it. Thread the new umbilicus up through the chest foam assembly so only 2" are protruding. **(See figure 9.)**

Next, connect the umbilicus to the latex adapter and coil the extra umbilicus under the chest foam assembly.

Now install your lung and chest plate assembly back into the body. **(See figure 10.)**

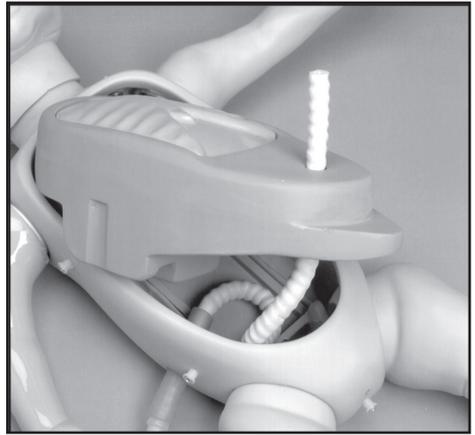


Figure 10

Finally, reattach the chest skin onto the manikin using the four buttons on the torso, thread the umbilicus through the hole in the chest skin, and finish attaching the skin. Push the umbilicus down so only about 1" is protruding. **(See figure 11.)**



Figure 11

Care of the Simulator

This training simulator has been designed to provide the greatest possible durability and lowest maintenance without compromising the realism of use. Following are some suggestions for helping you yield the maximum life from this unique simulator.

A. Before Storing the Chest Skin with Umbilicus

1. Drain the umbilicus by raising the body over the height of the IV bag and then opening the ramp clamp. Allow the “blood” to flow back past the bag clamp, then close the clamp.
2. Disconnect the IV bag and pour the fluid back into the container.
3. If synthetic blood was used, flush out both the bag and umbilicus with clean water and allow them to dry.

Supplies/Replacement Parts for the Infant Chest Skin with Umbilicus

LF00845U *Life/form*® Venous Blood,
1 quart

LF00846U *Life/form*® Venous Blood,
1 gallon

LF01022U Fluid Supply Stand

LF01130U Fluid Bag Supply

LF03642U Umbilical Cannulation
Replacement Cords
(10 pk.)

LF09919U Nasco Cleaner

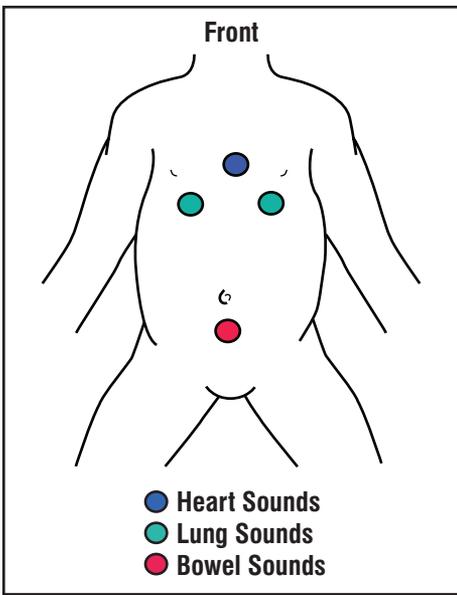


Figure 12

Infant Auscultation Trainer About the Simulator

The **Life/form**® Infant Auscultation Trainer duplicates heart, bowel, and lung conditions selected by the instructor by wireless remote control. The student should palpate to identify the correct auscultation sites and will hear different heart, bowel, and lung sounds as the SmartScope™ is moved from site to site. The simulator duplicates human conditions as closely as modern plastics and electronic technology allows — it's almost the real thing. Care and treatment should be the same as with a patient.

Note: Do not use the auscultation chest skin to simulate resuscitation. Doing so may damage components and cause trainer to stop working properly.

The simulator has one heart, one bowel, and two lung sites on the anterior surface and two lung sites on the posterior surface. (See figures 12 and 13.) The remote control can select from 11 different heart conditions, four bowel conditions, and nine

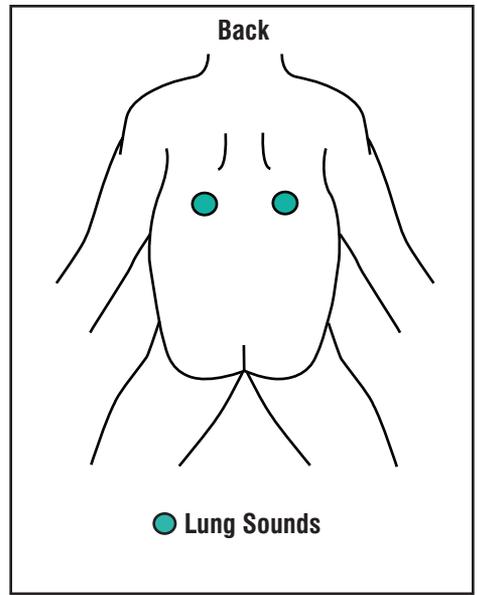


Figure 13

lung conditions. The instructor can select any condition, then switch to another condition quickly and easily so the student can compare sounds and make a diagnosis.

The remote control does not have to be pointed directly at the manikin or SmartScope™ to operate. One remote control will operate multiple sets of SmartScopes™ and manikins simultaneously. The range of the remote control is up to 100 feet.

Note: Infant remote and SmartScope™ are not compatible with any **Life/form**® Adult Auscultation Trainers.

The remote control can be programmed to these heart conditions:

- 01 VSD
- 02 Venous Hum
- 03 Stills Murmur
- 04 S2 Split
- 05 Pulmonary Stenosis
- 06 Newborn Heart
- 07 Mitral Regurgitation
- 08 ASD
- 09 Aortic Stenosis
- 10 7-Month Heart
- 11 1-Year Heart

The remote control can be programmed to these bowel sounds:

- 01 Norm Newborn
- 02 Norm 1 YO
- 03 Hyper 2 YO
- 04 Borborygmus

The remote control can be programmed to these lung conditions:

- 01 Wheezing
- 02 Stridor
- 03 Rhonchi
- 04 Pneumonia
- 05 Newborn Breath
- 06 Newborn Stridor
- 07 Asthma
- 08 9-Month Stridor
- 09 9-Month Breath

Using the SmartScope™

Place the earpieces in the ears, angled forward. Place the diaphragm of the SmartScope™ over one of the appropriate sites on the manikin.

As an alternative, the Amplifier/Speaker System (LF01189U) can be used, allowing an entire classroom to hear at the same time. To connect the speaker, plug the speaker cord into the jack on the top of the SmartScope™ box. When the speaker is connected to the SmartScope™, the earpieces will not work. Place the diaphragm of the SmartScope™ over the appropriate sites on the manikin.

To begin training, press the red power button. This turns on the remote control and sends a signal to activate the SmartScope™. After the unit is activated, the display will be in status mode, displaying the current menu settings for the heart, bowel, and lung conditions.

To select a new condition, press either the heart, bowel, or lung button. This will put the display into the menu mode. You can select a condition by

either using the number buttons or by viewing the conditions in sequence using the scroll button. After the condition is selected, press the enter button to activate. Pressing the heart, bowel, or lung button at any time will display the name of the condition selected:

For example, press

- Heart 1 (or scroll) enter
- Bowel 2 (or scroll) enter
- Lung 3 (or scroll) enter

The display should read H:01, B:02, L:03. The SmartScope™ will now pick up the VSD, Norm 1 YO, and Rhonchi sounds at the appropriate sites.

Troubleshooting

- Make sure batteries in both the SmartScope™ and the remote are fully charged and properly installed.

Please note: When you replace batteries in the SmartScope™, turn off the remote. Once the batteries are in place, turn the remote back on. If you find there still is no sound, please turn the remote off again and turn back on. The unit needs a few moments to reset.

- The remote has a battery saver that shuts the unit down after eight minutes if the remote is left on the same setting. To prevent it from shutting down, select a different heart or lung sound within the eight-minute period of time.
- Correct head placement of the SmartScope™ is required to hear the sounds. Moving the SmartScope™ head slowly across the area will help locate the sensor in the torso so that the sounds can be heard.

- If you are sure you have the SmartScope™ head in the proper position and you still cannot hear any sounds, restart the unit by turning the power off and on, and select a different heart or lung sound. Verify the ear tips are facing forward in your ear canal. Also, an external speaker, if available, can be plugged into the SmartScope™ to verify sound and proper head placement.

Note: When listening to sounds through an external speaker, no sounds will be heard through the headsets.

- When using multiple Smart-Scopes™ in a classroom, one remote will operate all units within a range of 100 feet. If you have multiple remotes controlling multiple manikins in the same room, they may interfere with each other, giving you different sounds than selected or no sounds at all.

Note: If you have tried all of the suggestions above and are still experiencing difficulties, please feel free to contact a customer service representative at **1-800-558-9595**. They can direct you to our technical department for assistance. Thank you for your business.

Available Supplies

LF01202U Additional Infant Auscultation Trainer Body

LF01189U Amplifier/Speaker System
Additional Remote and SmartScope™ available upon request.

Other Available *Life/form*® Simulators

- LF00698U** Adult Injectable Arm (White)
LF00855U Male Catheterization
LF00856U Female Catheterization
LF00901U Prostate Examination
LF00906U Ostomy Care
LF00929U Surgical Bandaging
LF00957U Enema Administration
LF00958U Pediatric Injectable Arm
LF00961U Intramuscular Injection
LF00984U Breast Examination
LF00995U Arterial Puncture Arm
LF00999U Pediatric Injectable Head
LF01005U First Aid Arm
LF01008U Intradermal Injection Arm
LF01012U Heart Catheterization (TPN)
LF01019U Ear Examination
LF01027U Peritoneal Dialysis
LF01028U Suture Practice Arm
LF01034U Suture Practice Leg
LF01036U Spinal Injection
LF01037U Hemodialysis Practice Arm
LF01038U Episiotomy Suturing Set
LF01042U Suture Kit
LF01062U Pelvic, Normal & Abnormal
LF01063U Stump Bandaging, Upper
LF01064U Stump Bandaging, Lower
LF01069U Cervical Effacement
LF01070U Birthing Station
LF01082U Cricothyrotomy
LF01083U Tracheostomy Care
LF01084U Sigmoidoscopic Examination
LF01087U Central Venous Cannulation
LF01095U Blood Pressure Arm
LF01108U Infant Intraosseous Infusion
LF01121U Advanced IV Arm
LF01131U Venipuncture and Injection Arm
LF01139U Advanced IV Hand
LF01142U Auscultation Trainer
LF01143U Testicular Exam
LF01152U Male & Female Catheter
LF01155U Advanced CPR Dog
LF01162U Venatech IV Trainer
LF01174U NG Tube & Trach Skills
LF01184U Venatech IM & Sub Q
LF01193U Special Needs Baby
LF03000U **CPARLENE**® Series
LF03601U Adult Airway Management Trainer with Stand
LF03602U Adult Airway Management Manikin
LF03609U Child Airway Management Trainer with Stand
LF03616U Child **CRISIS**™ Manikin
LF03617U Deluxe Child **CRISIS**™ Manikin with Arrhythmia Tutor
LF03620U PALS Update Kit
LF03623U Infant Airway Management Trainer with Stand
LF03632U Child Intraosseous Infusion/Femoral Access Leg on a Stand
LF03633U Child Airway Management Trainer Torso
LF03693U **Basic Buddy**® CPR Manikin
LF03699U "Airway Larry" Airway Management Trainer
LF03709U Infant **CRISIS**™ Manikin
LF03720U **Baby Buddy**™ Infant CPR Manikin
LF03750U Fat Old Fred
LF03760U Airway Management/Cricoid Pressure Trainer
LF03770U Chest Tube
LF03953U **CRISIS**™ Manikin, Complete
LF03955U Deluxe **CRISIS**™ Manikin
LF03956U Deluxe "Plus" **CRISIS**™ Manikin
LF03965U Adult **CRISIS**™ Auscultation Manikin
LF03966U Adult **CRISIS**™ Auscultation Manikin with ECG Simulator
LF04000U **GERI**™/**KERI**™ Manikin Series
LF04200U Adult Sternal Intraosseous Infusion
LF06001U CPR Prompt® Adult/Child Manikin
LF06012U CPR Prompt® Infant Manikin
LF06200U CPR Prompt® Keychain Rescue Aid
LF06204U CPR Prompt® Rescue and Practice Aid

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