

## Other Available *Life/form*® Simulators

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

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*Nasco*  
**Life/form**®



# Diagnostic and Procedural Ear Trainer LF01090U Instruction Manual



*Life/form*® Products by Nasco





### About the Simulator . . .

Now with one exciting trainer, students, residents, and practicing physicians can master the skills needed to examine the human ear using visual cues, correctly diagnose common diseases, clean the ear canal, remove a foreign body, and perform a myringotomy with ear tube insertion. The **Life/form**<sup>®</sup> Diagnostic and Procedural Ear Trainer is anatomically correct. Lifelike right and left ears teach diagnostic and procedural techniques and are removable for easy maintenance and storage. For the ultimate in realism, the middle ear can be filled with various fluids. The instructor controls the color and consistency of the fluids. Another feature that brings this trainer as close to life as possible is the inclusion of nine diagnostic cartridges with full-color photo prints illustrating:

- Normal tympanic membrane
- Otitis media with effusion
- Serous otitis media
- Chronic otitis media with small and large tympanic membrane perforations
- Two views of attic cholesteatoma
- Retracted tympanic membrane
- Tympanosclerosis

Trainer comes complete with two ears, approximately 100 pre-cut eardrums, specially formulated ear wax, three standard middle ear cartridges with syringe, adjustable stand, and a hard carry case. Otoscope, ventilation tubes, and surgical instruments are not provided.

The Nasco **Life/form**<sup>®</sup> Diagnostic and Procedural Ear Trainer is a unique training tool that will help students master the skills of ear examination and diagnosis, ear wax removal, and the insertion of ventilation tubes (myringotomy).

### To Assemble the Stand:

1. Screw the steel rod firmly into the base.
2. Slide the two-way clamp onto the rod and tighten securely at the desired height. Fasten the ring stem into the clamp and adjust so that the ring is directly above the base.
3. Fit the head onto the ring and tighten the thumbscrews to secure. (Do not overtighten.) The head can be tilted to either side by adjusting the clamp.
4. The trainer may also be used without the stand. The die-cut foam piece may be used to steady the trainer when used in the supine position.

### For Myringotomy or Fluid Simulation:

1. Place a pre-cut eardrum over the opening of the standard middle ear cartridge. Roll an O-ring over the cartridge, down to the flange, securing the eardrum in place. **(See Figure 1.)** Be careful not to damage the plastic film. Distribute excess material evenly around the flange to minimize potential leakage.



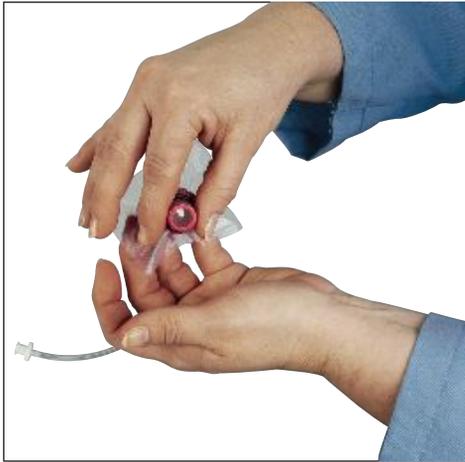


Figure 1

2. Insert the cartridge into the back of either ear by aligning the marks. Feed the tubing with the luer fitting into the head and out the hole in the back of the neck. (See Figure 2.)
3. Fill the syringe with fluid, if desired, and attach to the tubing. Use plain water for thin secretions and easy clean-up, or add methyl cellulose thickener. Pull back on the plunger slightly to withdraw air from the system, allowing the bubbles to rise up the barrel of the syringe. Carefully inject a small amount of fluid into the ear to simulate the desired condition. Avoid excessive pressure that may cause rupture or leakage. The syringe may also be used to withdraw air from the middle ear, retracting the eardrum.
4. Snap the outer ear into the head, making sure all three tabs are fully seated in the slots. (See figure 3.)

### Diagnostic Cartridges

The cartridges representing various disease conditions are designed to be inserted into the left ear. They are for diagnostic teaching purposes only.



Figure 2



Figure 3

Do not attempt to perform any other procedures with these cartridges in place.

### Ear Wax

Ear wax may be placed into the ear canal as desired. Then, install the eardrum and cartridge as described above. At the completion of training, remove the cartridge and clean the ear canal with warm water and a cotton swab. Mild liquid soap or detergent may be used if needed. Dry the ear thoroughly.

### Care of the Trainer:

1. Avoid leaving any part of the trainer, especially the ears, in prolonged contact with inks, printed materials, or varnished surfaces.
2. Exposure to excessive heat may damage the trainer.
3. Normal soil can be removed by washing the trainer with warm water and mild soap or detergent. Allow to dry completely before storing.
4. Remove the eardrum and drain fluid from the tubing system when the training session is finished.
5. Remove the ears from the head before storage.

### Life/form® Pneumatic Otoscopy Kit LF01085U

Partnering with the University of Virginia, Nasco offers an exciting additional feature for the **Life/form®** Diagnostic and Procedural Ear trainer. While pneumatic otoscopy is indispensable for examination of the ear, studies have shown that most are performed incorrectly! Now with the valuable feedback offered by this kit, students, residents, and practicing physicians can learn how to generate the correct amount of air pressure needed to perform accurate pneumatic otoscopy to test for tympanic membrane mobility.

Examiners should learn to generate appropriate pressure as markedly abnormal tympanic membranes will move if enough pressure is applied and may result in erroneous diagnoses and patient discomfort. The Ear Trainer can simulate normal and abnormal tympanic membranes. Fluid can be inserted into the middle ear cartridge with the attached syringe to simulate a bulging tympanic membrane or an air-fluid level. Additionally the examiner can pull back on the syringe to simulate a retracted tympanic membrane.

Kit includes a pneumatic pressure gauge, two pneumatic ears with pressure tubing, and a package of approximately 100 eardrums.

### Available Supplies:

- LF01076U** Pneumatic Ear Replacements, set of 2
- LF01077U** Manometer for Pneumatic Ears
- LF01086U** Diagnostic Cartridges, set of 9
- LF01088U** Diseases of the Ear Projection Slides, set of 9
- LF01089U** Replacement Ears, set of 2
- LF01091U** Replacement Eardrums, pkg. of 100
- LF01092U** Jar of Ear Wax
- LF01094U** Replacement Standard Cartridge