Dedicated to Delivery

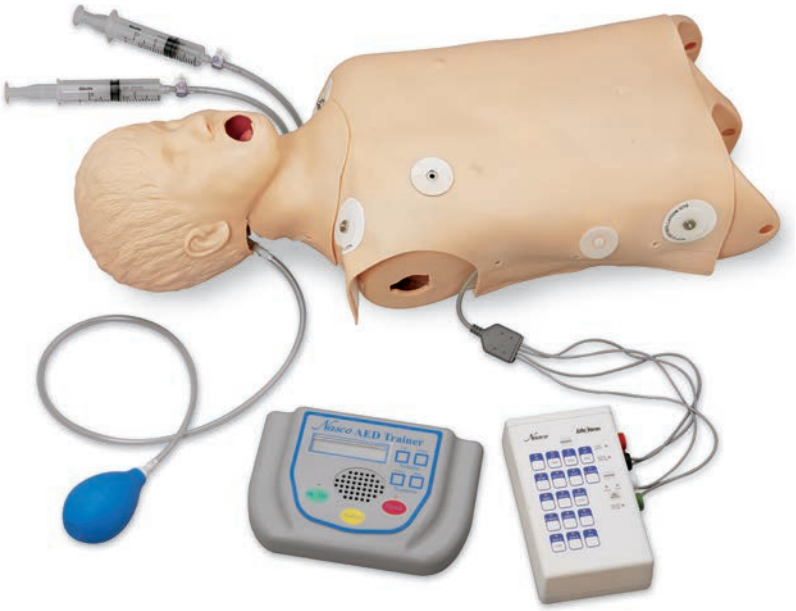
Nasco

Life/form®

Advanced Child *CRiSis*™ Airway Management Torso with Defibrillation, ECG, and AED

LF03764U

Instruction Manual



Life/form® Products by Nasco

About the Simulator

The *Life*/*form*® Advanced Child *CRiSis*™ Airway Management Torso with Defibrillation, ECG, and AED

Present your students with the challenges they may face in the real world. *Life*/*form*® Advanced Child Airway Management Trainers offer tongue swelling and laryngospasm in addition to all the features on the standard models. These *Life*/*form*® advanced airway management trainers are perfect for practicing skills on pediatric patients and represent the size of eight-year-old patients. Practice intubation, ventilation, suction, CPR, and jaw thrust techniques. Realistic anatomy and landmarks include teeth, tongue, oral and nasal pharynx, larynx, epiglottis, arytenoids, false and true vocal cords, trachea, lungs, esophagus, and stomach. The trainers allow you to practice oral, digital, and nasal intubation, as well as E.T., E.O.A., P.T.L., L.M.A., E.G.T.A., and Combitube® insertion. Separate lungs for auscultation. Inflatable stomach bladder indicates esophageal insufflation. With its slightly anterior position, swelling tongue, and vocal cords, the *Life*/*form*® Advanced Child Airway Management Trainer is great for introductory as well as advanced training. Pump spray lubricant included.

Life/*form*® Advanced Child Airway Management Trainer with Defibrillation Chest Skin lets you practice defibrillation using standard manual, automatic, or semiautomatic external monitor defibrillators. An internal load box absorbs the full strength of every shock to protect students and equipment. It is also possible to monitor the manikin just like a real patient, and it is compatible with all standard brands and types of defibrillators, monitors, and patient simulators. Features four ECG sites and two defibrillation sites. This torso is designed to be the foundation of the *Life*/*form*® Child *CRiSis*™ system. Arms and legs can be added later to provide IV access, intraosseous infusions, and blood pressure monitoring. If you do not have an ECG simulator and want to practice ECG recognition, you may want to consider adding the *Life*/*form*® Interactive ECG Simulator to your training. This torso also includes the Interactive ECG Simulator and the AED Trainer.

The *Life*/*form*® Advanced Child Airway Management Trainer allows you to practice oral, digital, and nasal intubation, as well as suction techniques. The simulator was designed to use an uncuffed endotracheal tube measuring up to 5.0 mm I.D. With proper care, our *Life*/*form*® Child Airway Management Trainer will provide years of valuable service. Three-year warranty.

List of Components

- Advanced Child Airway Management Trainer with Torso and Defibrillation Chest Skin
- ECG Simulator
- AED Trainer
- 2 Syringes
- Pump Spray Lubricant
- Case

Set Up

Your Child Airway Management Trainer is ready to use upon delivery. Simply remove from carton and unwrap packaging material.

Figure 1

Figure 2

Lubrication

Before intubating the Child Airway Management Trainer, lubricate both the simulator and tube with the pump spray lubricant provided. ***(See figures 1 & 2.)***

Figure 3

Figure 4

Laryngospasm

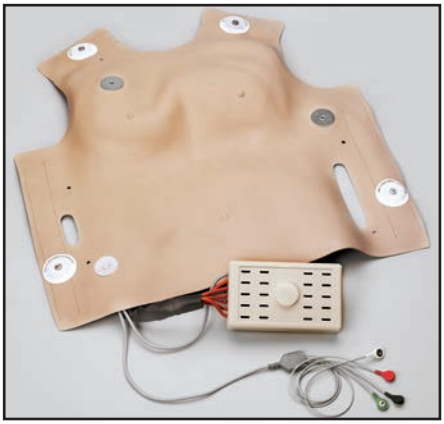
Pull back the plunger of a 20 cc syringe and attach it to the red stopcock. ***(See figure 3.)*** Depress the plunger to force 1-5 cc of air into the system. Close the tubing port at the stopcock to maintain the pressure within the larynx. The syringe may be removed at this point.

Tongue Swelling

Pull back the plunger of a 20 cc syringe and attach it to the yellow stopcock. ***(See figure 4.)*** Depress the plunger to force approximately 10 cc of air into the system. Close the tubing port at the stopcock to maintain the pressure. The syringe may be removed at this point.

Caution: Do not overinflate! Excessive pressure may rupture the system. Stop inflation when resistance is felt or the larynx is observed to close. Always release the pressure when finished training by opening the tubing port at the stopcock.

The Defibrillation Chest Skin



About the Simulator

The ***Life/form***® Advanced Child Defibrillation Chest Skin has been designed for the Advanced Child ***CRiSis™*** manikin to enable you, the customer, to safely practice defibrillation.

The Child Defibrillation Chest Skin has been designed to absorb a maximum of 360 joules of energy*. Although capable of absorbing 360 joules, we recommend that the smallest energy level possible be used while training with the skin.

The Advanced Child Defibrillation Chest Skin will enable you to practice defibrillation using manual, semi-automatic, and automatic external defibrillators (AEDs). When using any one of these types of defibrillators in training, always follow the recommended operating procedures for that particular defibrillator.

List of Components

- Defibrillation Chest Skin with Load Box and Four-Lead Snap Cable Connector

***Note:** 360 joules is the maximum energy level that Nasco recommends administering to the defibrillation chest skin. Energy levels in excess of 360 joules may cause irreparable damage to the chest skin, circuitry, and patient simulator being used — thus voiding Nasco's warranty and endangering your equipment. Nasco assumes no liability for damage or injury that may be caused by the use and/or misuse of this equipment. All normal safety precautions for defibrillation training should be followed, and energy levels should be minimized. Nasco did not design nor intend this defibrillation chest skin to be used as anything other than a training apparatus for defibrillation.

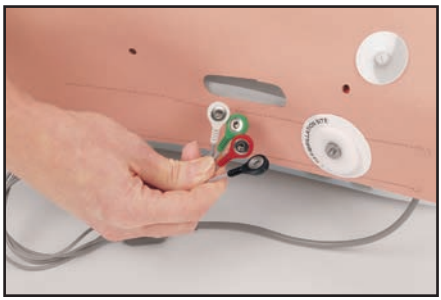


Figure 5

Connecting Your Patient Simulator

Connect the four-lead snap cable to your patient simulator.

Nasco has designed the Advanced Child ***CRiSis™*** System to be compatible with a variety of patient simulators. This is possible via the standard four-lead snap cable. ***(See figure 5.)*** If your patient simulator has only two output posts, the red and black leads must be connected to the patient simulator.

If you want to connect the manikin to the simulator that came with your defibrillator, it is necessary to purchase the corresponding adapters from Nasco separately, if the patient simulator doesn't have the standard snap connectors. (Please see accessories at the end of this section). Once your manikin is connected to your patient simulator, you will be able to pick up the ECG waves either through the monitor hook-ups on the skin or through the two disks attached to the skin on the defibrillation sites.

These disks will enable you to pick up the ECG waves using either the “Quick Look” paddle option or directly through gel pads, just like on a real patient.

It is possible to use AED gel pads with the cable connectors built into the gel — the same ones you use on patients. In an effort to help you save money, Nasco offers a set of training buttons that will correspond to your particular AED unit. These buttons are sold separately, and can be used over and over again. They come as a set with the patient simulator adapters. (See accessories at the end of this section.)

Troubleshooting

Problem ECG wave is not being picked up from the manikin.

Solution

1. Check your connections on the patient simulator; one or more may be disconnected.
2. Check to make sure your patient simulator is plugged in and working properly.

Problem ECG wave is inverted.

Solution

Recheck the position of the red and black lead snaps on the patient simulator.

Note: If the defibrillation chest skin is not functioning or wiring comes undone, please contact us to repair or replace the unit. Failure to do so, or unauthorized repair, may void the warranty or cause further harm or damage to you or your equipment.

Cautions

Nasco recommends the use of the enclosed aerosol lubricant or a similar vegetable-based lubricant for use with our Advanced Child Airway Management Trainer.

DO NOT use a silicone-based or similar lubricant. This will cause your simulator to dry and crack, and will automatically void Nasco’s warranty on the trainer.

Never place the trainer on any kind of printed paper or plastic. These materials will transfer indelible stains. Ball-point pens will also make indelible stains.

Cleaning

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

Note: Do not use Nasco Cleaner around the mouth and nostrils of head, as the residue of cleaner could be toxic.

Nasco *Life*/*form*® Interactive ECG Simulator

The *Life*/*form*® Interactive ECG Simulator is an easy-to-use training tool that allows you to practice defibrillation and pacing procedures with or without a defib manikin. For arrhythmia recognition, you can select fibrillations, tachycardias, and bradycardias in either adult or pediatric format.

ON-OFF

Press to power-on and to power-off.

LOW BATT

Red indicator illuminates when battery needs replacement.

DEFIB DISCHG

Green indicator illuminates for two seconds when defib discharge is sensed. If defibrillating Nasco manikin, set defib to 2J or more. If defibrillating directly into simulator, set defib to 50J or more.

convert

Simulate cardioversion by activating convert feature. Simulator responds to defib discharge.

Adult Ped

Yellow indicators tell which rhythm set is being simulated — adult or pediatric.

age group

Press to select adult rhythm set or pediatric rhythm set.

PACER PULSE

Green indicator flashes when external pacer pulse is sensed. (Captured beat is simulated, too.) Sensing occurs when external pacer current set to 60mA - 70mA or more.

convert

The convert feature allows you to convert automatically from one rhythm (running rhythm) to another rhythm (waiting rhythm) when a defib discharge is sensed. If defibrillating into Nasco manikin, set defib energy to 2J or more. If defibrillating directly into simulator, set defib energy to 50J or more.

To perform convert operation:

1. Press **convert** key. Indicator of running rhythm pulses brighter.
2. Press key of rhythm to be simulated immediately after defib discharge. Indicator of this (waiting) rhythm blinks on and off.
3. Discharge defibrillator. The waiting rhythm becomes the running rhythm.

To cancel convert operation before it's completed, either press convert key again or press key of running rhythm. If convert operation is started, but a discharge is not sensed within two minutes, the convert operation cancels automatically.

age group

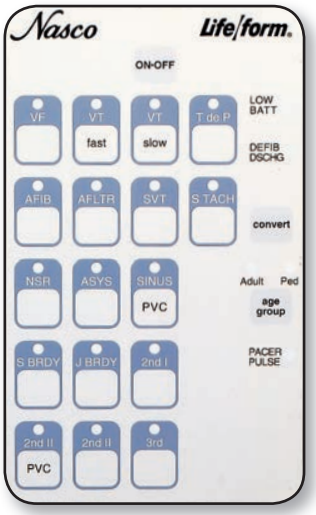
The age group feature allows you to simulate either adult or pediatric rhythms. In general, P wave amplitudes, PR intervals, QRS durations, QRS axes, and ventricular rates are representative of the age group selected.

Adult and **Ped** indicators tell you which rhythm set is selected. To switch from one set of rhythms to the other, press age group key, then key of rhythm you wish to simulate. If age group key is pressed, but a rhythm key is not pressed, the age group changes within two seconds. At power-on, adult age group is selected automatically.

GETTING STARTED

Using Simulator with Defib Manikin

1. Connect manikin's ECG cable to simulator's color-coded ECG snaps. ***(See figure 1.)*** This is the only cable needed for connecting simulator to manikin.
2. Connect defibrillation cable to manikin's defibrillation sites. (If you have a separate pacer cable, attach it to defibrillation sites for pacing.)
3. Connect monitor's ECG cable to manikin's ECG snaps. If monitor ECG cable has right leg lead, but manikin does not have right leg ECG snap, connect right leg lead to simulator's green-labeled ECG snap.
4. Press **ON-OFF** key to power-on simulator. Observe that **NSR** and **Adult** indicators are illuminated. Power-on monitor/defibrillator. Observe that NSR at 72 bpm is displayed.



Using Simulator Without Defib Manikin

1. Connect monitor's ECG cable to simulator's ECG snaps. ***(See figure 1.)***
2. Using your pad adapters or pad adapter cable, connect cable to simulator's defib cable receptacles. ***(See figure 2.)***
3. Press **ON-OFF** key to power-on simulator. Observe that **NSR** and **Adult** indicators are illuminated. Power-on monitor/defibrillator. Observe that NSR at 72 bpm is displayed.

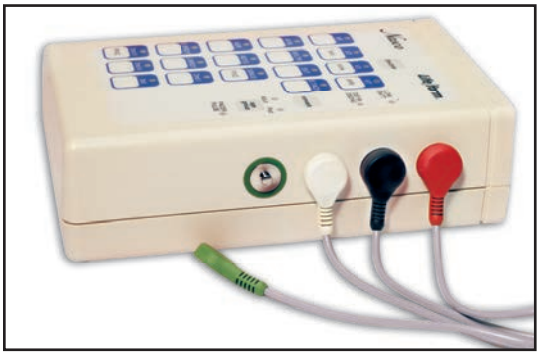


Figure 1

Press ECG cable connectors onto simulator snaps (match colors). Left to right: green (RL), white (RA), black (LA), red (LL).

ECG signal is obtained with either 3- or 4-lead ECG cable.

Figure 2

Insert pad adapters, or pad adapter cable, into adapter receptacles. Connect defibrillation cable — APEX to left, STERNUM to right.

WARNING: SHOCK HAZARD!
Be sure defibrillation cable is securely attached to simulator.

ADULT

FOR DEFIBRILLATOR TRAINING

VF	*Ventricular Fibrillation.*
VT fast	*Ventricular Tachycardia. Wide QRS. Rate: 185.*
VT slow	*Ventricular Tachycardia. Wide QRS. Rate: 140.*
VT poly	*Ventricular Tachycardia. Fluctuating QRS axis.*
AFIB	*Atrial Fibrillation. Ventricular rate: 120 to 160.*
AFLTR	*Atrial Flutter (2:1). Ventricular rate: 150.*
SVT	*SVT alternates with NSR, then remains in SVT. SVT rate: 216.*
S TACH	*Sinus Tachycardia. Rate: 120.*
NSR	*Normal Sinus Rhythm. Rate: 72.*
ASYS	*Asystole.*
SINUS PVC	*Sinus Rhythm with PVCs. Sinus rate: 72.*

FOR EXTERNAL PACER TRAINING

S BRDY	*Sinus Bradycardia. Rate: 40.*
J BRDY	*Junctional Bradycardia. Rate: 42.*
2nd I	*2nd deg. type I AV Block (4:3). Atrial rate: 60.*
2nd II PVC	*2nd deg. type II AV Block (4:3). PVCs. Wide QRS. Atrial rate: 60.*
2nd II	*2nd deg. type II AV Block (4:3). Wide QRS. Atrial rate: 60.*
3rd	*3rd deg. AV Block. Wide QRS. Ventricular rate: 37.*

PEDIATRIC

FOR DEFIBRILLATOR TRAINING

VF	*Ventricular Fibrillation.*
VT fast	*Ventricular Tachycardia. Wide QRS. Visible P wave. Rate: 180.*
VT slow	*Ventricular Tachycardia. Wide QRS. Rate: 148.*
VT poly	*Ventricular Tachycardia. Fluctuating QRS axis. Short runs.*
AFIB	*Atrial Fibrillation. Small R waves. Ventricular rate: 135 to 160.*
AFLTR	*Atrial Flutter (2:1). Ventricular rate: 150.*
SVT	*Supraventricular Tachycardia. Inverted P follows QRS. Rate: 240.*
S TACH	*Sinus Tachycardia. Rate: 165.*
NSR	*Normal Sinus Rhythm. Rate: 90.*
ASYS	*Asystole.*
SINUS PVC	*Sinus Rhythm with PVCs. Sinus rate: 90.*

FOR EXTERNAL PACER TRAINING

S BRDY	*Sinus Bradycardia. Rate: 50.*
J BRDY	*Junctional Bradycardia. Rate: 60.*
2nd I	*2nd deg. type I AV Block (5:4). Atrial rate: 60.*
2nd II PVC	*2nd deg. type II AV Block (5:4). PVCs. Atrial rate: 60.*
2nd II	*2nd deg. type II AV Block (5:4). Atrial rate: 60.*
3rd	*3rd deg. AV Block. Ventricular rate: 60.*

Life/*form*® AED Trainer General Operating Instructions

The *Life*/*form*® AED Trainer is programmed with eight interactive scenarios. Prompts are communicated by sound through an internal speaker and visually on an LCD module.

The first four scenarios correspond to automatic defibrillators with an "analyze" button, and the second set of four correspond to automatic defibrillators without an "analyze" button. Stickers to cover the "analyze" button on the AED Trainer for these scenarios are included. Each set of scenarios are for AED training.

To start a scenario, push the "on/off" button and toggle through the various scenarios by pushing the "select" button. When the appropriate scenario is selected, push the "run" button to begin the scenario. Once a scenario is started, there is no way to stop it without powering the unit off.

Scenarios #2 and #6 will pause after the second time there are instructions to "check the pads." This allows time for the student to simulate shaving the chest. Press the "select" button at this time to resume the scenario.

Near the beginning of each scenario, there is an instruction to plug in the electrodes if they are not already plugged in. All of the scenarios will lock up at this point until the electrodes are plugged in.

Volume can be increased or decreased by pushing the appropriate "Up" or "Down" button.

The battery can be changed by opening the battery drawer, removing the dead battery, and replacing it with a new 9-volt battery. The polarity is marked on the bottom of the drawer.

There is a 10-second delay when powering the unit off. During these 10 seconds, you can reverse this action by pushing the "ON/OFF" button again, in which case it will revert to the beginning of the last scenario used.

If the AED Trainer is left on without any buttons being pushed for eight minutes, it will automatically shut off to conserve battery power. When approximately 80% of the battery is used, a visual low battery indication will be displayed on the LCD module.

Instructor Guide for Scenarios

Note: *S*cenarios 1-4 simulate defibrillators with an "analyze" button. Scenarios 5-8 simulate defibrillators without an "analyze" button. If using scenarios 5-8, use the included gray stickers to cover "analyze" button.

Scenarios 1 and 5: Normal rhythm returns after one shock.

Scenarios 2 and 6: Unit will pause after the second time there are instructions to "check pads." This allows time for the student to simulate shaving the chest. After the student simulates shaving the chest and reattaches the pads, push the "select" button to resume the scenario. After one shock, victim remains in non-shockable cardiac arrest. Continue CPR for one minute. The AED Trainer will analyze the rhythm again.

Scenarios 3 and 7: Victim is in VF (ventricular fibrillation). No shock advised after four shocks. Victim does not have normal breathing, but signs of circulation return.

Scenarios 4 and 8: Victim has a medicine patch (simulate by taping a piece of paper with the word "medicine" on the manikin where the pad will be placed) and is in VF (ventricular fibrillation). Normal rhythm returns after one shock.

Available Supplies

LF03644U Pump Spray Lubricant

LF03627U Replacement Lungs

LF03628U Replacement Stomach

LF09919U Nasco Cleaner

Add-On Components

LF03612U Left Arm — IV Training

LF03613U Right Arm — Blood Pressure Monitoring

LF03614U Right Leg — Intraosseous Infusion/Femoral Access

LF03634U Left Leg (Nonfunctioning)

Accessories for Defibrillation Chest Skin

LF03656U Physio Control Training Pad Adapters and Patient Simulator Adapters for LifePak 10 and LifePak 20

LF03657U Marquette Electronics Training Pad Adapters and Patient Simulator Adapters

LF03658U SpaceLabs/Laerdal/ Heartstart/First Medic Training Pad Adapters and Patient Simulator Adapters

LF03961U Zoll Training Cables with Adapters

LF03962U Physio Control Training Cables with Adapters for LifePak 12

Note: If you need help selecting the training pad adapters that correspond to your AED unit, please feel free to call us at 1-800-558-9595 for assistance.

Replacement Parts/Supplies for the *Life/form*® AED Trainer

LF03743U Adult Replacement Training Pads

LF03744U Pediatric AED Training Pads

LF03745U Electrode Harness

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

Nasco **Fort Atkinson**