

# MegaCode Kid Advanced ECG Kid



ENGLISH

Directions for Use





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### Items Included

- (1) Full-body Pediatric Manikin
- (1) IV Bag Set
- (1) Manikin Lubricant
- (1) Set of Defibrillation Posts
- (1) Jacket
- (1) Pants
- (1) Carry Case
- (1) Direction for Use
- (1) Laerdal Global Warranty Booklet

### Skills Taught

#### Airway Management Skills:

- Oral intubation
- Nasal intubation
- Digital intubation
- Bag/Valve Mask Ventilation

#### Cardiac Related Skills:

- Closed chest compressions
- 3-4 lead ECG, pacing and defibrillation

#### IV Drug Administration:

- IV insertion into the peripheral veins of forearm, hand and antecubital area - Accessible veins include: median, basilic and cephalic
- Intraosseous infusion at both Tibial Tuberosity and Medial Malleolus sites

#### Multi-Sounds Auscultation and Recognition Skills:

- Seven auscultation sites for auscultation and recognition of heart, breath and bowel sounds.

## Introduction

MegaCode Kid is a full-body, lifelike manikin, which realistically simulates a 6-year-old patient. It is specifically designed for training professionals in the practice of emergency care, patient handling and the transportation of the sick and injured.

As a result of quality construction and the ease of replacing individual parts, this simulator should provide many sessions of training when reasonable care and maintenance are practiced.

### Laerdal Recommends

Endotracheal Stylet  
 Endotracheal tube - Size 5.0 to 5.5  
 Manikin Lubricant  
 Laryngoscope blade - Miller Size 1 or Mac Size 2  
 IV Injection - 22-gauge needle or smaller



#### Caution: Latex

This product contains **Natural Rubber** latex which may cause allergic reactions when in contact with humans.



The product, when carrying the CE-mark, is in compliance with essential CE requirements and other relevant provisions of council directive 1999/5/EC.

## Intubation

For intubation of the MegaCode Kid, the following equipment is recommended:

- Endotracheal stylet
- Endotracheal tube - size 5.0 to 5.5
- Manikin lubricant or liquid soap
- Laryngoscope blade - Miller size 1 or Mac size 2

Prior to airway insertion, all intubation devices and airway passages must be sprayed with manikin lubricant or liquid soap.

## SimPad Connection

1. Connect MegaCode Kid to Link Box, via cable located on back of manikin. For some manikins the adapter cable supplied with SimPad may have to be used.



Photo 1

## Cardiac Related Skills

1. Compressions on MegaCode Kid can be performed with one or two hands, according to AHA guidelines on patient age.

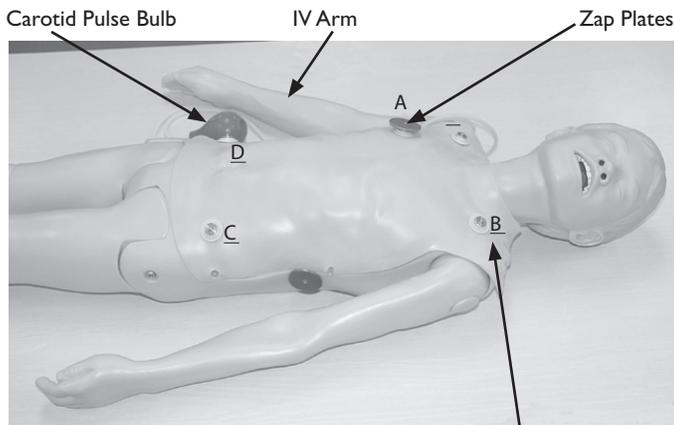
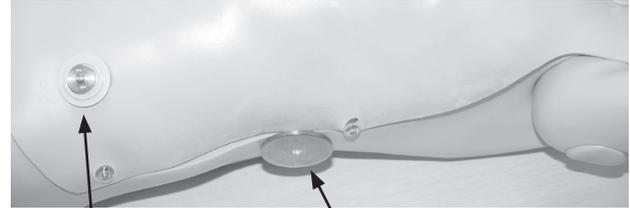


Photo 2

ECG Leads

**Caution:** Follow defibrillation protocol by avoiding contact between the paddle and any of the electrode sites while defibrillating. A load of up to 300 joules can be delivered.



LL ECG Lead

Apex Zap Plate

Photo 3

### Caution:

Safety precautions should be exercised in using SimPad around water. Use same caution as with any defibrillation exercise.

See SimPad DFU for complete cardiac operating instructions.

### Safety Precautions used during Defibrillation of a Patient/Trainer

1. Read and follow all safety and operating instructions provided with your defibrillator and associated equipment.
2. This trainer can be shocked with actual voltages and current used on a live patient. All precautions and safety measures must be used during the defibrillation and pacing phases of training. Failure to follow safety measures could result in injury or death to operators, students or onlookers not heeding these warnings.

## Auscultation of Heart, Breath and Bowel Sounds

See SimPad DFU for complete Heart, Breath, and Bowel Sound Auscultation.

### Carotid Pulse

Carotid Pulse is manually generated with a red bulb. Pulse rate is controlled by squeezing bulb.

2. For monitoring purposes, lead placement snaps are located on manikin as follows: (Photo 2) (A, B, C, D)

3. Two Zap Plates (discs) have been designed for use with external paddles. Screw discs into post sockets located on apex and sternum of manikin. Rhythm may be read from monitor by applying paddles to discs with firm pressure. (Do not use gel.)
4. For manual defibrillation, place external paddles on zap plates and press down firmly for good contact.

## IV Infusion Skills

Pediatric IV Arm is designed for practicing venipuncture and injection techniques.

We recommend nothing larger than a 22-gauge needle to extend life of arm. Spray catheter with manikin lubricant for easier insertion.

### Equipment Needed:

- 500cc fluid bag
- Simulated blood or food coloring with water
- Administration Set
- IV catheter

### Instructions for Use:

1. Add simulated blood or a few drops of red food coloring mixed with water to fluid bag.
2. Attach administration set.
3. Attach end of IV Arm tubing to end of administration set.
4. Place other end of IV Arm tubing in a container and allow fluid to flow through entire tubing until all air bubbles are flushed.
5. Clamp or tie second tubing and remove from container.
6. Insert catheter into vein. There should be a flashback if catheter has actually entered a vein.
7. Open clamp of administration set.
8. To infuse fluid, second tubing of IV arm must be unclamped and the fluid allowed to flow.

**Before Storing:** Drain, clean and dry all material prior to storing. Tubing can be sanitized by flushing with 50cc of water mixed with household bleach.

## Multi-Venous IV Arm

Multiple Venipuncture Sites:

- Dorsal Veins of Hand (3)
  - Cephalic Vein
  - Median Vein
  - Basilic Vein

### Instructions for Use:

1. Attach IV Bag to IV tubing.
2. Attach IV tubing to either latex vein.
3. Allow fluid to flow through arm and out other latex vein.
4. Clamp off flow of water.

The arm is now ready to practice venipuncture.

## Replacing Skin and Veins

When excessive leaking occurs at puncture sites, either a new multi-vein system or skin should be installed to reduce loss of fluid. We recommend working at a sink.

### To replace skin and veins:

1. Cut off skin. This can be done with a sharp knife or scalpel. (Figure 1)
2. Discard skin.

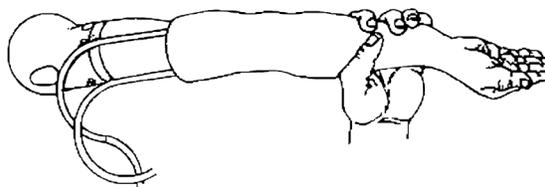


Figure 1

### Replacing veins: (Keeping skin)

1. Lubricate inside of skin with liquid detergent; let it flow down into the finger area.
2. Begin at top of arm and slowly pull skin down and off of arm. Do not roll, as that will cause skin to bind.
3. Remove tubing from track in mandrel. Glue may need to be scraped away to allow removal.
4. Rinse and dry vein grooves well and swab with alcohol. Be sure to remove any excess glue.
5. Place new veins along grooves, (Figure 2) spot gluing as needed. (We recommend a fast-drying glue.)

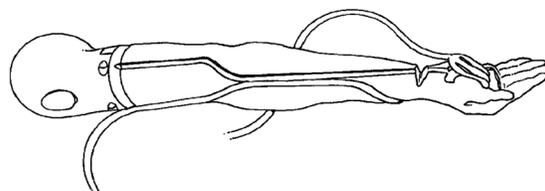


Figure 2

6. Generously lather arm mandrel with liquid soap.
7. Slide hand into skin.

Heat arms skins before replacing on mandrel.  
This can be done with a blow-dryer.

8. Work skin over fingers, as with a glove.
9. Work arm skin up, over mandrel. (Figure 3)

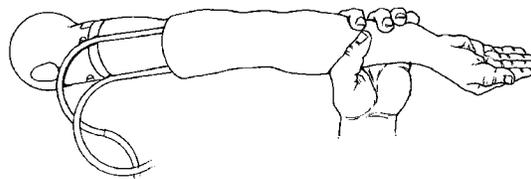


Figure 3

## Intraosseous (IO) Infusion Skills

Pediatric IO Leg is designed for perfecting skills required in successful intraosseous infusion. Anatomy of IO Leg includes knee, tibia, tibial tuberosity site and medial malleolus site. IO Leg is provided with one IV tubing and one IV bag for use as reservoir during infusion.

Additional equipment needed:

- IV bag
- IV administration set
- Simulated blood concentrate
- 35cc syringe
- Jem Shidi needle

**Instructions for Use:**

1. Attach tubing connector to IV bag. (Use valve to open or close line as needed in order to relieve pressure build-up as fluids are being infused.)
2. Turn leg upside down.
3. Remove plug from heel.
4. With a syringe, fill the bone with approximately 120cc of simulated blood.
5. Attach tubing and reservoir bag.
6. Close off tubing that runs into reservoir bag so that simulated blood will remain in bone for aspiration.
7. When reservoir bag is filled, discontinue infusion and replace with empty bag. (This will help decrease amount of fluid in leg and minimize leakage.)

**Before Storing:** Detach IV line and reservoir at bottom of the foot. Allow all fluid to drain. Leg may be squeezed to evacuate as much fluid as possible. Store leg unplugged to allow it to air dry.

Do not use saline solution. It leads to deterioration of leg.

**Care and Maintenance**

1. Clean with mild soap and water; do not submerge in cleaning fluids or water.
2. Use only on clean surface. Avoid felt tipped markers, ink pens, acetone, iodine or other staining products and avoid placing the manikin on newsprint or inked lines of any kind.
3. To ensure longevity, each manikin and module should be cleaned after each training session and a general inspection should be conducted regularly.
4. Modules and all other parts should be drained and air-dried thoroughly before storage and disinfected when needed. After use of injection pads (use water only), accumulated water should be squeezed out. Do not store wet foam pads in the skin. To prevent mildew or mold, pads can be soaked in a mild solution of disinfectant and water or bleach and water. Squeeze excess solution from pads, allow them to dry, then store or reinsert in manikin.
5. Articulating parts will benefit from a light application of talcum powder prior to training sessions.
6. Store properly between teaching sessions.

**Replacement Parts**

Product Number:	Description:
380410.....	Post Set, ECG/Defib
231-00101.....	Leg, Pediatric-Intraosseous
231-00250.....	Head Assembly, MegaCode Kid
231-00350.....	Lung Bag, MegaCode Kid Intubation Head
231-00450.....	Arm Assembly, Pediatric Left 1 Piece
231-00550.....	Skin, Torso MegaCode Kid
231-00650.....	Insert Assembly, MegaCode Kid
231-00750.....	Leg Assembly, Pediatric-Right W/ Intraosseous Leg
231-00850.....	Leg Assembly, Pediatric-Left
231-00950.....	Jacket, Pediatric
231-01050.....	Pants, Pediatric
231-01150.....	Case, Carry-Pediatric Full Body
231-01250.....	Plug, Arm-Pediatric
250-21050.....	Airway Lubricant
300-00750.....	Blood, Concentrate-4 oz Red
375-70150.....	Kit, Skin Assembly Vein-Pediatric IV Arm
375-71001.....	Arm, Pediatric Multi-Venous Training

**Please contact Laerdal Customer Service  
for more information on Replacement Parts in other skin tones.**





**Laerdal**  
*helping save lives*