



**No. 4002 CPR Recording Manikin**  
**Instructions for care, use, and maintenance**

Nov 2010

Product Instructions  
**CPR Recording Manikin**  
**Item No 4002**

The CPR Recording manikin from Simulaids measures compression rate and depth and ventilation peak pressure and peak volume. You may choose to track CPR, compressions, or ventilations. According to recent developments in patient care, ventilation is an extremely important consideration in the survival of a patient in an unconscious state. Over ventilating patients increases their mortality. This manikin offers you appropriate skill development to assist critical patients. The parameters used in these skill sets match AHA standards, but can be adjusted to meet whatever values you want to assign in order to satisfy any worldwide protocol.

The product purchase includes:

- Manikin torso
- Mini-laptop
- Power Cord with 110 a/c or 220 a/c options
- 2 Replacement mouth pieces and 2 replacement lungs
- Instructions



There is no program disc associated with the product. The programming comes installed. If you ever need a copy of the program to reinstall, contact Simulaids at [info@simulaids.com](mailto:info@simulaids.com).

### **Setting up the Manikin**

Since the programming is installed on the mini-laptop when you receive it, you simply connect the mini-laptop to the power source, plug in the USB cable for the Manikin, and power it up. The program will start automatically. You must have the manikin USB connected before starting the laptop.

## Using with a printer

You may need to install the necessary drivers, i.e., printer drivers. You may download your printer's driver from an appropriate website.



Hardware Pop-Up Window

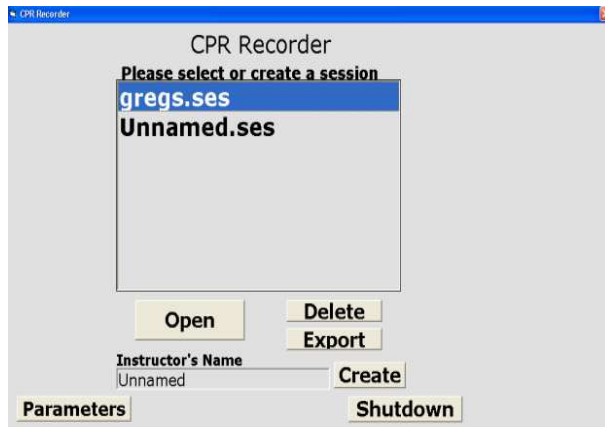
The manikin will function without a printer attached. However, you must have the laptop attached to a printer in order to use the Print function of the manikin.

1. If you have a newer printer, the manikin program may recognize it and automatically install the driver from the “plug and play” feature.
2. If the manikin does not recognize your printer, load the driver for the printer into the manikin by utilizing your printer's manufacturer's website.
3. The installation of the printer driver should happen automatically; follow the prompts. If it does not, find the driver file and open it manually to start the installation.

There are no batteries associated with the CPR Recording Manikin. The Export model comes with a 110-220 V inverter, but the local power cord must be supplied by the user to plug into the inverter.

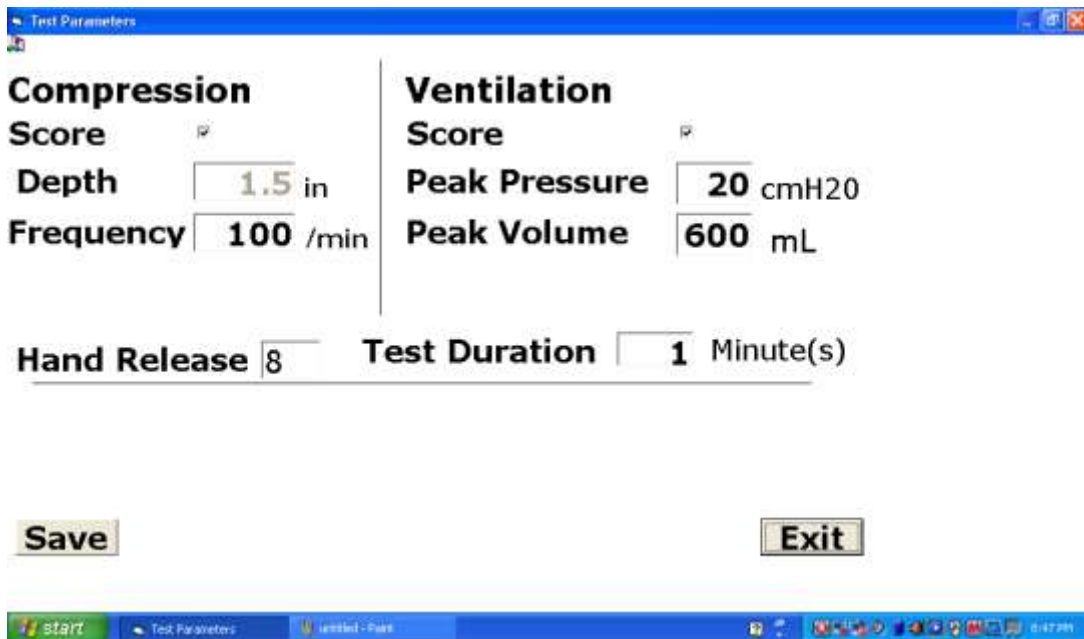
## Selecting the Parameters

When your manikin powers up, the program becomes active and the main screen appears with a “Parameter” button located in the lower left of the screen. See the screen photos below.



Opening Screen

By selecting the “Parameter” button to open that field, you have the following options available.

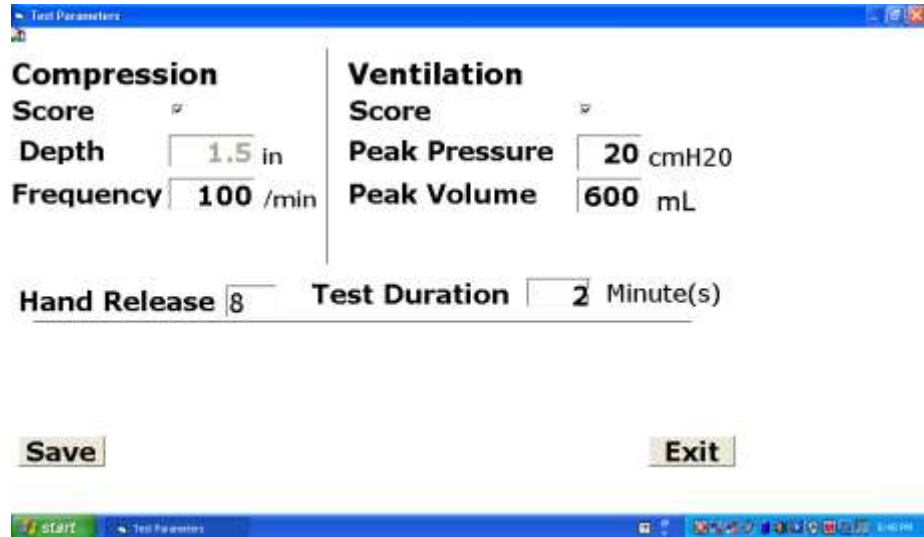


Parameter Screen

Note the check box next to “Score”

A) There are check mark boxes located next to the “Score” lines that allow you to measure either Compressions or Ventilations, or both. Click on the boxes that make the Check Mark visible for the skill(s) you want to measure. Click on the “Save” button of the Parameters screen to save that setting selection. When you do so, you will be taken back to the “Opening Screen.”

B) The setting is for one minute, but you may also set it for two or more minutes. Go back to the parameters screen to change the following options. Since the parameters are pre-set according to American Heart Association (AHA) standards, you do not have to change them unless you have other protocols.



The screenshot shows a software window titled "Test Parameters" with a blue title bar. The window is divided into two columns. The left column is titled "Compression" and contains three rows: "Score" with a dropdown arrow, "Depth" with a text box containing "1.5 in", and "Frequency" with a text box containing "100 /min". The right column is titled "Ventilation" and contains three rows: "Score" with a dropdown arrow, "Peak Pressure" with a text box containing "20 cmH2O", and "Peak Volume" with a text box containing "600 mL". Below these columns are two more rows: "Hand Release" with a text box containing "8" and "Test Duration" with a text box containing "2 Minute(s)". At the bottom of the window are two buttons: "Save" on the left and "Exit" on the right. The Windows taskbar is visible at the bottom of the screenshot, showing the "START" button and the "Test Parameters" window icon.

Two minute test

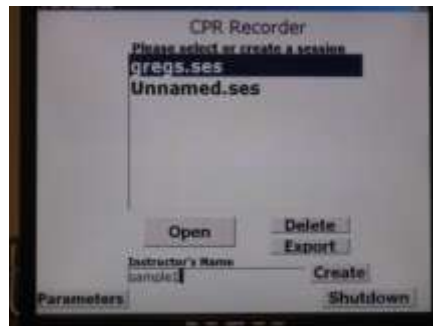
- a. In the instance of doing both Ventilations and Compressions, you do not have to change the parameters for the compressions. The programming will automatically score the ventilations associated with the compressions to give you a total percentage score based upon the performance of both skills.
- b. Click on the “Exit” or “Save” button to go back to the main menu.

## Identifying the Instructor

To begin using the program you must identify the instructor. This option allows you to create different groups of students. You may list instructors as individual people, organizations, or any other identifier you choose. Enter your instructor name in the box.



Opening Screen with Instructor name highlighted



Sample 1 instructor name entered

Click the “Create” button to establish that folder. You will be taken to the “Student Test” screen and can immediately enter a student name for testing, or quit that screen to follow the rest of these instructions.

When multiple instructors are given folders, simply click on the instructor’s name in order to select that folder. Once you select that name, you may choose to delete that folder (WARNING: it is not retrievable!) or export it to another computer.



The “Delete” confirmation screen so you don’t lose important information.

If you have chosen to delete an instructor file, a “Delete” dialog box appears. Either confirm or cancel the operation to close the dialog box. Remember, it is not retrievable!

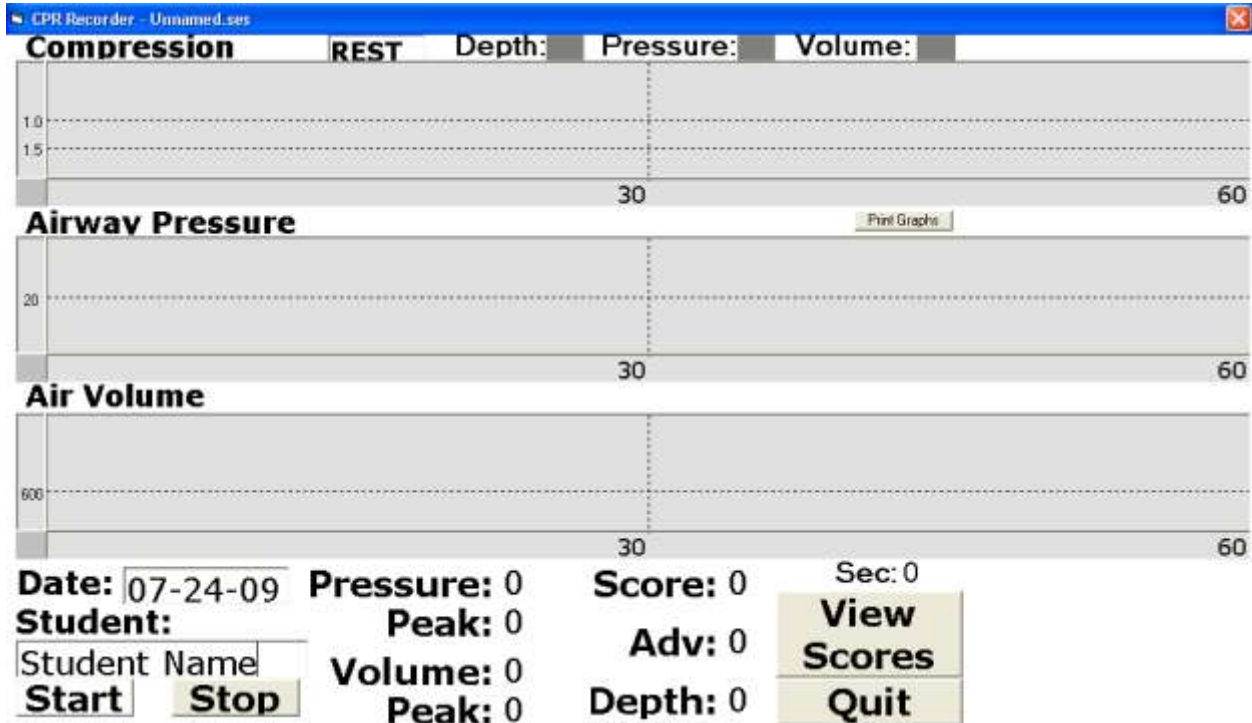
### You may transfer files to Excel

Once you have chosen the Instructor file and exported it to a known location on your computer by using the Export button, you can transfer that file to other faculty or staff. Open Excel, open the folder with your instructor name, and follow the prompts for converting the comma delimited file into an Excel format. Here is a sample of text transferred and its corresponding Excel file chart.

```
"07-20-2007","<none>","3","3","900","30","1","N/A","Comment1"
"08-13-07","<none>","0","0"," 900","0","1"," 25",""
"08-13-07","<none>","0","0"," 0","0","1"," 0",""
"08-14-07","unnamed","0","0"," 900","0","1"," 25",""
"08-14-07","Mike Smith","0","0"," 900","0","1"," 25",""
"09-21-07","unnamed","0","0"," 900","0","1"," 25%",""
"12-27-07","unnamed","0","0"," 603","25","1"," 100%",""
"12-28-07","unnamed","47","83"," 900","39","1"," 47%","Breath Count = 36"
```

Date	Name	Cycles Completed	Cycles Score	ML Volume	Peak Pressure	Test Duration	Score	Comments
7/20/2007	<none>	3	3	900	30	1	N/A	Comment1
8/13/2007	<none>	0	0	900	0	1	25	
8/13/2007	<none>	0	0	0	0	1	0	
8/14/2007	unnamed	0	0	900	0	1	25	
8/14/2007	Mike Smith	0	0	900	0	1	25	
9/21/2007	unnamed	0	0	900	0	1	25%	
12/27/2007	unnamed	0	0	603	25	1	100%	
12/28/2007	unnamed	47	83	900	39	1	47%	Breath Count = 36

Now that you have identified the instructor file that you want to work with, you may “Open” that file and type the name of a student in the box at the lower left corner of the “Student Record” screen. “Student Name” appears in this box when you open the file.



Student Name entry box

### Starting Individual Testing

The program for testing the individual, whose name you entered as instructed above, begins when you click the “Start” button once. Note: the Start button location in the screens shown above is at the lower left corner.

This initializes the program and adds color to the small boxes at the top of the chart that indicate which testing features are active.



The Depth box at the top of the chart is now green.

The measurements of the chosen parameters start as soon as the individual begins their compressions (in the case of CPR or compressions). If you have selected ventilations, the program begins recording at the time of the first ventilation. NOTE: if you use a BVM rather than rescue breathing, you will not have to change the lung system. However, if you use rescue breathing, the lung will be contaminated and you must change it at the end of the day. See the changing instructions later in the manual.

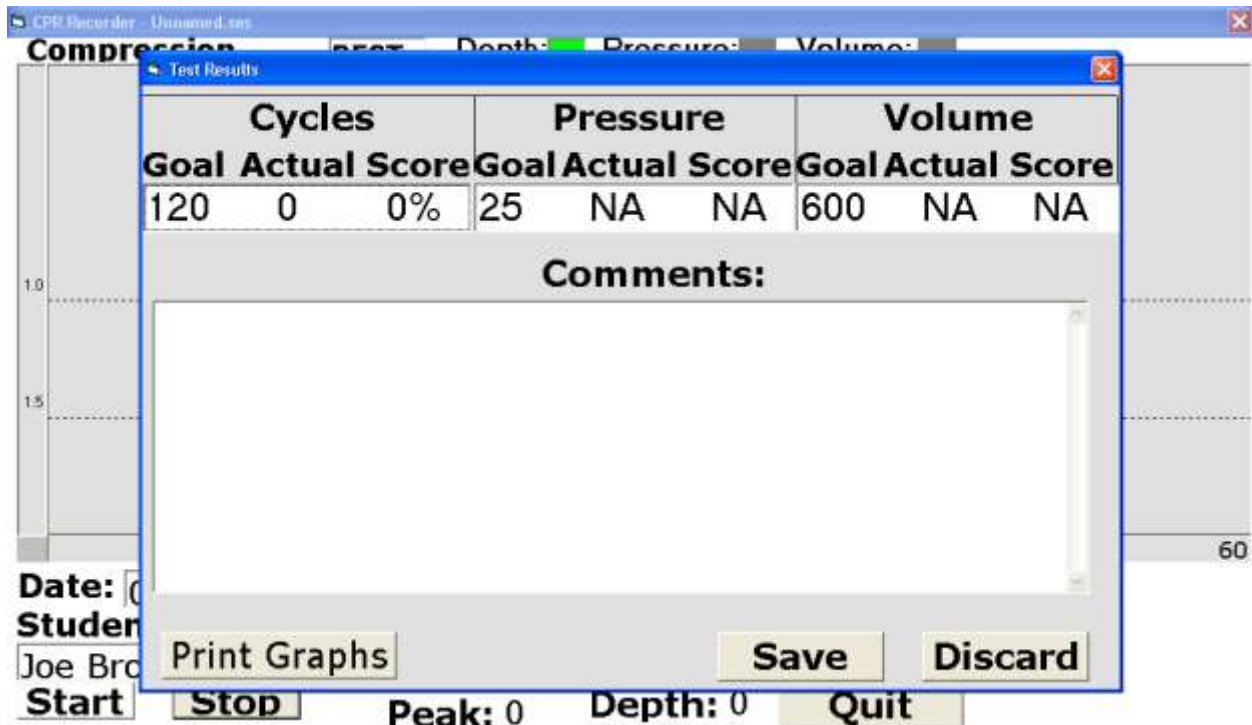
The individual must continue their skill applications until the time allotted ends. In other words, if you use the one-minute setting, the CPR must be performed for at least one minute so that the skill is adequately recorded over a minute's time.



This shows the beginning of Joe Brown's CPR test.



Test result shown at end of performance



The same result form showing no activity.

At the end of the allotted time, the product stops recording and automatically posts the percentage of success compared to the protocol settings. The photos above show where you also have the option of typing any comments you may wish to make concerning the student's performance. For instance, if you are running a test of compressions for one minute and the individual did 100 compressions during that minute at 1-3/4 inches of depth, then they will be assigned a 100% score. If their depth of compressions remains between 1-1/2 and 2", but their rate equals 95, their score will be 95%.

In Joe's case the parameters were set for CPR (compressions and ventilations), but Joe only did the compressions. This shows that Joe's compression rate, done at 100 per minute and stopped for 10 seconds during the two (2) "ventilation" phases, equaled 84. You could enter a comment to clarify Joe's activity.

This would also be a place where you can enter the expected skill level, i.e., 80% is passing. This value is to be determined by the instructor and their curriculum guidelines.

### **Saving and Printing**

**NOTE:** You must print the CPR strip at the time when the strip is visible on your monitor screen. Even though you may save the recording, only the data is saved. The recorded compression/ventilation strip is not saved. Once you exit that screen, the strip information is lost. In order to print the strip, you must use the program's "Print Graph" button located on the compression chart to the right side. You must do the following procedure to print the strip:

- 1) Minimize, exit or "click and drag" the report/score chart screen to the bottom of the screen to view the latest strip
- 2) While the strip is viewed on the screen, click the "Print graph" button on the upper right side of the chart.
- 3) If your printer is connected and your printer driver is installed, you should be printing at this point.

This student's test may be saved or discarded and another recording for this student initiated by simply clicking on the Start button again. Or, if you like, enter another student name.

Cycles			Pressure			Volume		
Goal	Actual	Score	Goal	Actual	Score	Goal	Actual	Score
120	0	0%	25	NA	NA	600	NA	NA

**Comments:**

Print Graphs      Save      Discard

Start   Stop   Peak: 0   Depth: 0   Quit

Save, Discard, or Start another student recording.

The recorded data shows up on the chart as indicated by the above screen view.

#	Date	Student	Cyl	%	MI	Peak	Mins	%	Comments
1	07-24-09	Joe Brown	0	0%	NA	NA	1	%	

Start  - Stop  - Next   Print   Exit

Sample of a student record chart.

You may print the chart by clicking on the “Print” button. If all of the data does not show up (comment column isn’t all visible) you may export the file and utilize the Excel program on any PC to format the columns so that the comments will print from there.

Inserting another student’s name will allow the next student to be recorded under that instructor’s name. Simply enter the name and click on the “Start” button. Multiple attempts will be recorded in the chronological order in which they are performed by individuals within that group. You may always create another instructor’s name to segregate your groups of students in order to assist you in locating their recording.

Once you have saved a recording or discarded it, simply click on the “Start” button again and that same student has another opportunity to record an attempt. The more students who perform recordings under an instructor, the more lines of data will appear on the chart shown above. At the bottom left of the chart you will see the boxes labeled “Start” and “Stop” with a number in each. Changing the numbers in each box will allow you to show only those students identified by the lines on which their record resides between the two numbers; i.e., from 4 to 7, or the four student records on those lines. If you have more than one page of student records charted, clicking the “Next” button shows the next page of records available for the current instructor.

To use a chart of students’ activities, Export the files by selecting the instructor name and clicking the “Export” button. Save in a file on the laptop or transfer to another computer. Open Windows Excel™. Open the folder that allows you access the files and select the instructor name you wish to utilize. Follow the prompts for a comma delimited file.

## Shutting Down

When you complete the recording activity for the day, close the CPR Recording Manikin program by using the “Shutdown” button at the bottom of the Instructor screen. Or you may exit normally through Windows, which is active behind your CPR Recording Manikin screen view.



The Shutdown button

You will soon have the standard Windows™ message that indicates that it is safe for you to shut off your computer. After shutting off the computer you may pull the power cord plug.

## **Manikin care and cleaning**

Your CPR Recording Manikin from Simulaids is an electrical/mechanical measuring device. Handle it with care; do not expose it to moisture. Simply wipe the skin with a damp sponge or cloth utilizing a water soluble cleaning agent. Avoid any contact with printed material against the skin because it may cause a permanent stain. A product called Oxy10 has been known to remove ink, but we do not guarantee it. If at anytime you have difficulty with your manikin's performance, please call Simulaids technical support at 800-431-4310.

## **Mouthpieces and airway**

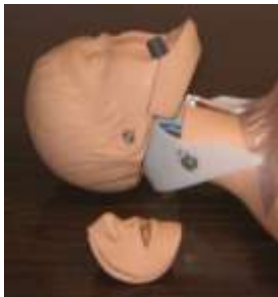
You have received two mouthpieces with the product, but you may purchase more of them in 10 packs by ordering item number 2023 (2023Export). The lung may be replaced when contaminated, but using a Bag-Valve-Mask (BVM) for airway ventilations will cancel the need for that. If you do need replacement lungs, place your order for part number 2805 (Brad lung).

The face pieces are removed by simply pulling the nose section away from the manikin. Insertion of another face piece is done by placing the nose bridge of the face piece into position and pushing the lower "chin" section into the manikin's head.

To remove a contaminated lung system, perform the following procedure:

1. Remove the chest overlay skin by loosening the Velcro straps located on the back of the manikin.
2. Remove the face piece
3. Pull the clear plastic retainer away from the manikin head. Take care to not damage the air tube attached to the retainer.
4. Gently lift the chin of the manikin to access the one-way-valve that is connected to the proximal end of the lung system. Pull the one-way-valve assembly out of the head.
5. Remove the air tube assembly connector from the small port on the one-way-valve assembly.

6. Discard the contaminated lung.
7. Place a new lung system on the chest of the manikin being sure to turn the one-way-valve so that the port opposite the lung system is oriented toward the back of the manikin; this leaves the active side of the airway system toward the face of the manikin.
8. Reattach the air tubing connector to the vacant small port on the one-way-valve. A slight twisting motion will assist in making the connection.
9. Insert the new one-way-valve into the hole in the manikin's face.
10. Reinstall the face side retainer over the protruding one-way-valve port.
11. Install a clean face piece.
12. Replace the chest overlay.



All of the components of the CPR Recording Manikin are replaceable. A full list of parts and their cost is available via email from Simulaids at [info@simulaids.com](mailto:info@simulaids.com).

**WARRANTY:** Simulaids warrants this product to be free from defects in materials and/or workmanship for a period of one year from the date of purchase, as evidenced by the date on the invoice of the product shipment to the end user. This warranty expressly does not cover exterior vendor electrical products, abuse, accidental or purposeful damage, or any form of modification to the product. Only products manufactured at the Simulaids plant in Saugerties, NY receive this limited warranty status. All other products sold through Simulaids, but manufactured elsewhere, are subject to the warranties supplied by the product manufacturer.

These warranties may differ from the Simulaids' warranty. See the additional Extended Warranty product offering included with this unit.

**EXTENDED WARRANTY:** Item number 4000W

This extended warranty offer must be purchased within 2 months of the date of your delivery invoice. Call your Simulaids distributor to purchase the product. The Extended Warranty covers all of the issues as the Factory Warranty described above for an additional two years, totaling three.

**RETURN POLICY:** Simulaids reserves the right to either repair or replace affected parts or the entire unit, at their sole discretion, after investigating and reviewing the actual product and the damage. In most instances, a digital photo of the product in question showing the damage will help qualify a product for return to the factory. At no time will any product be accepted without proper return authorization issued by Simulaids. Please contact our Customer Service Department to arrange a return and obtain a RGA number. Freight and Shipping charges are the sole responsibility of the end user. No product will be received with shipping charges due. Serial number and invoice number from the agency through whom the product was purchased must be provided for warranty repairs. No return authorization number will be provided without this information. Should you have any questions or wish further information on any product we manufacture call or write our Customer Service Department.



 Simulaids



 Simulaids

**16 Simulaids Drive  
Saugerties New York 12477  
(845)-679-2475 Toll Free: (800)-431-4310  
Fax: (845)-679-8996  
[www.simulaids.com](http://www.simulaids.com)**