TWELVE LEAD TASK TRAINER

Directions for Use
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laerdal Recommends</td>
<td>4</td>
</tr>
<tr>
<td>Items Included</td>
<td>5</td>
</tr>
<tr>
<td>Skills Taught</td>
<td>5</td>
</tr>
<tr>
<td>Features</td>
<td>6</td>
</tr>
<tr>
<td>Overview</td>
<td>7</td>
</tr>
<tr>
<td>Operation</td>
<td>7</td>
</tr>
<tr>
<td>Running Scenarios</td>
<td>12</td>
</tr>
<tr>
<td>Battery Replacement</td>
<td>13</td>
</tr>
<tr>
<td>Replacement Parts</td>
<td>14</td>
</tr>
</tbody>
</table>
The **Twelve Lead Task Trainer** (260-20001) is a torso lifelike manikin designed to realistically simulate airway management scenarios and train students in the proper utilization of 12 lead ECG devices, including the proper connection of patient cable, acquisition and interpretation of 12 lead ECG, and understanding and utilizing the AMI algorithm and local protocols relating to treatment of suspected or confirmed AMI.

The manufacturing excellence and ease of replacing trainer individual parts should provide many sessions of training when reasonable care and maintenance is practiced.

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**Laerdal Recommendations:**

7.5 ET Tube  
Use Manikin Lubricant prior to training sessions

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**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.
**Items Included:**
- (1) Adult Manikin Torso with Electronics
- (1) Wired Remote Control
- (2) “C” Cell Batteries
- (1) Manikin Lubricant
- (1) Tank Top
- (1) Carry Case
- (1) Laerdal Global Warranty Booklet
- (1) Directions for Use

**Skills Taught:**

**Airway Management:**
- Oral/nasal/digital intubation
- Right mainstem intubation
- Oropharyngeal/Nasopharyngeal airway insertion
- Bag-Valve Mask ventilation
- Suctioning techniques
- Abdominal thrust
- Combitube insertion and ventilation

**Cardiac Related Skills:**
- Carotid pulse palpation, manually generated
- Closed chest compressions
- Connection sites for four limb leads and V1 through V6
- Compatible with 12-lead defibrillator/monitors
- Defibrillation via hands free cables or paddles
- Pacing with option to capture or fail to capture
- Closed chest compressions

**Training in:**
- Proper connection of patient leads
- Operation of 12 lead ECG devices
- Acquisition and interpretation of 12 lead ECG
- Understanding and utilization of current treatment algorithms
- Understanding and utilization of local protocols relating to and treatment of suspected or confirmed electrical abnormalities
Features:

- Scenarios of up to nine (9) ECG choices may be programmed.
- System is capable of being shocked at 360 joules and receiving fifteen (15) sets of three (3) shocks per set.
- Operates on DC current from a replaceable battery contained in the manikin torso and will accommodate an AC adapter.
- Battery can operate the system for 40 hours of normal operation.
- When using battery, system will turn “off” after fifteen (15) minutes of inactivity.

- Excluding remote, operating system is contained within the manikin.
- Complete system weighs no more than forty (40) pounds.
- Meets FCC and CE requirements
Overview –
The AST-12 unit is used in a teaching environment to display 12 lead signals on an ECG monitor. The unit is capable of storing up to nine (9) training scenarios. Each one can contain as many as nine (9) steps each. The unit supports defibrillation and pacing training and allows for advancement to next waveform in a scenario on a defib pulse. The unit incorporates a two (2) line by 16 character LCD to display current waveform information, as well as the current scenario status.

The unit may be powered through a 12VDC 100mA AC adapter or by two (2) ‘C’ cell batteries. When on battery power, the unit will automatically shut off after 15 minutes of inactivity.

Operation –
This operational section assumes that unit is in default configuration with no scenarios programmed into the unit.

When unit is powered “On,” it will begin an initialization routine. During this time, the remote control unit will display the model name on top line and version number on bottom line.

After a brief delay, unit will initialize to waveform mode ‘WFM’ with pacing disabled ‘N’ and set to waveform #21 ‘Normal Sinus’. At this point, the unit will output 12 lead waveform data.

Using the remote control unit as a guide, and starting at the top left, the displayed items are:
- Current mode (MOD)
- Current scenario # (SCEN)
- Current scenario step # (STEP)
- Scenario defib step advance (DFIB)
- Pacing mode (PACE)
- Scenario step timer (TMR)

On the bottom of remote control are the waveform number (#) (WAVEFORM) and waveform name.
Waveform mode –
While in waveform mode, the unit will display the current mode and pacing status on the top line and the current waveform # and name on the bottom line. The unit will output 12 lead waveform data for the currently selected waveform. Waveform mode also allows waveform pacing.

To enable pacing:
Press the ‘Pace’ button while in waveform mode. When waveform pacing is enabled, the top line of the LCD will display the letter ‘Y.’ This is located under the ‘PACE’ text on the remote. The letter ‘N’ will be displayed when pacing is not enabled. When enabled (‘Y’), the manikin can receive pacing output from a pacer unit. Once the pacer unit output reaches approximately 80 – 90 mA, the AST-12 allows electrical capture.

Pacing enabled – ‘Y’
Pacing not enabled – ‘N’

Program mode:
To enter program mode, press ‘Prog>’ button. This is where all scenario program editing is done. The unit allows for storage of up to nine (9) scenarios having nine (9) steps each. During editing, the user may use any of the digits on the numeric keypad or the ‘+’ and ‘-’ buttons.

While in program mode, the unit will display on the top line:
- Current mode
- Current scenario #
- Current scenario step number
- Defib step advance
- Step timer status

The bottom line will display the waveform # and name for the indicated scenario and step.
Assuming there are no scenarios currently programmed, the display will look like this:

**PRG 1 1 N 0:00**

**000 END SCENARIO**

Starting at the top left:

**PRG** – Current mode – programming mode

**1** – Current scenario number

**1** – Current scenario step number.

**N** – Scenario will not advance to the next step with a defib pulse.

**0:00** – Timer is disabled for this step

And the bottom line:

**000** – indicates this step is the last step of the scenario

**NOTE:** Waveform 000 (END SCENARIO) will end a scenario with fewer than nine (9) steps, and a timer value of 0:00 will disable the timer for the current step.

**Programming the unit** –

**NOTE:** If you hold the ‘Prog>’ button down for more than 5 seconds, the scenarios data will be updated and saved.

To move cursor while in programming mode, press the ‘Prog>’ button. When you reach the end of the bottom line, the cursor will go back to the front of the top line.

1. Move the cursor to the ‘SCEN’ position
2. Select the scenario number (1 through 9) you want to edit by pressing a number or the +/- buttons on the keypad
3. Move the cursor to ‘STEP’ position
4. Select the step number (1 through 9) you want to edit by pressing a number or the +/- buttons on the keypad
5. Move the cursor to the ‘DFIB’ position
6. Select whether or not you want your scenario to advance (Y or N) to the following step when it detects a defib pulse by pressing the +/- buttons on the keypad.
7. Move the cursor to the ‘TMR’ position
8. Select the amount of time (0 thru 9:59) this step
will run before advancing to the next step by
pressing numbers or the +/- buttons on the
keypad. (To DISABLE the timer for this
step, set the timer to 0:00.)

NOTE: If ‘DFIB’ is set to ‘N’ and ‘TMR’ is set to 0:00,
the scenario will not automatically advance to the
next step from this step. This will allow you to decide
when to advance to the next step manually by pressing
the ‘+’ button on the keypad.

To end a running scenario, either repeatedly press
the ‘+’ button to advance through each step or press the
‘Run’ button to end it immediately.

9. Move the cursor to the ‘WAVEFORM’ position
10. Select the waveform number (0 through 80) to
use for this scenario step.

To END SCENARIO, select waveform 0.

NOTE: Be sure to end each scenario with waveform 000.
If ‘END SCENARIO’ is selected as step number 1, the
scenario will not appear to run, since this waveform will
tell it to end as soon as it starts.

If you have five (5) steps in your scenario, and want to
change it to a three (3) step scenario, and you do not
select ‘END SCENARIO’ as the waveform for step 4,
instead of stopping after step 3, the scenario will
continue with step 4 since it was not changed to ‘END
SCENARIO.’ It will then finish step 4 and continue on
with step 5, since the data was not removed from the
scenario.

11. Either press and hold the ‘PROG>’ button for five
(5) seconds to save your changes or start the
process again by selecting a different scenario or
step number. Before saving, the unit will prompt
the user to verify the edits should be saved (+ for
yes and – for no).
Any waveform is paceable except “END SCENARIO”.

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<th>Line</th>
<th>Description</th>
<th>Line</th>
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<td>End Scenario</td>
<td>040</td>
<td>SR74_Couplet</td>
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<td>SR_78</td>
<td>041</td>
<td>ST_120_PAC</td>
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<td>SR_76</td>
<td>042</td>
<td>ST100_MulPVC</td>
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<td>SR_92</td>
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<td>080</td>
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Running scenarios –

To run a scenario:
1. Start in the waveform (WFM) mode
2. Press the 'RUN' button and the display will switch to selection 'SEL' mode and prompt the user to select a scenario number
3. Select the scenario by pressing a number or the +/- buttons on the keypad. The rest of the top line of the display will show the "DFIB" status and "TMR" status of the first step of the current scenario.
4. Once you have selected the scenario you want to run, press the 'Run' button again to start the scenario.

The text under ‘MOD’ will animate the word ‘RUN’ to indicate a scenario is running.

The number under ‘SCEN’ indicates the currently running scenario number.

The number under ‘STEP’ indicates the currently running step number.

The letter under ‘DFIB’ indicates whether or not defib advance is enabled for the current step.

The number under ‘TMR’ indicates the time remaining before the scenario will advance to the next step. The bottom line displays the currently used waveform number and name.
To manually advance to the next step, press ‘+.’
To manually end the scenario, press ‘Run.’

When the scenario has been completed, the unit will revert back to waveform mode using the waveform from the last scenario step.

**Battery Replacement**
There are two “C” cell batteries located on the trainer’s right side.

To replace these batteries:

Lift skin from the shoulder of the torso and pull down toward the bowel. An insert module will be exposed on the right side of the manikin torso. The upper module is removed to expose the battery compartment.

Replace the batteries as needed.

In the event this trainer is stored for more than a few weeks, remove the batteries to keep possible battery leakage from damaging the battery holder.
**Replacement Parts:**
For latest version of Spare Parts and Accessories, visit www.laerdal.com

**Global Warranty:**
See the Laerdal Global Warranty Booklet, or www.laerdal.com

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⚠️ **Cautions and Warnings**

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