Introductions

, Laerdal Field Service, America’s

, Laerdal Technical Support, America’s
Basic Manikin Trouble shooting

ASSEMBLY & DISASSEMBLY
Basic Manikin Assembly/Disassembly

- Review of
  - Parts that can wear out:
    - Compressor
    - Airway
    - Bladders
    - O Rings and bands
    - Switches and sensors
  - The proper assembly/disassembly technique, preventing issues
    - Cables and connectors
Bags, Bladders and Bands

212-11050
Chest Rise Bladders 4 pack

212-24550
Lung Compliance O-Ring 10 pack

212-11150
Lung Bags 2 Pack

212-24150
Pneumothorax Bladder Set pack of 2
Key points for Right Leg Assembly

- Do not pull or tug on tubing & cables when feeding them through the hip opening.
- Avoid twisting the tubing and cables, especially when tightening connector.

This illustration shows the slide slot for inserting cables and tubes.
Right Leg Assembly Continued

Connect the corresponding leg tubing & cables as labeled. Push connector together and turn clockwise (away from you) until you feel a click.

- Green to Green

Be sure all colors match
Key points for Right Leg Removal

Unscrew leg nut; be careful not to catch tubing and cable.

Keep pulling leg outward as you unscrew the nut.

Locate slot in nut and slip tubing and cable through to remove nut.
You’ll have to unzip the torso skin, and move stomach foam to the side, taking care NOT to disconnect any of those tubes, or wires.

Unplug BOTH battery packs before proceeding.

Check these cables are securely fastened if you experience left leg pulse issues.

<table>
<thead>
<tr>
<th>Name/Label</th>
<th>Tube/Cable Color</th>
<th>Connector Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Pedal</td>
<td>Grey cable</td>
<td>black with silver coloured connector</td>
</tr>
<tr>
<td>Popliteal</td>
<td>Grey cable</td>
<td>black with silver coloured connector</td>
</tr>
</tbody>
</table>
Key points for Left Arm Removal/Assembly

If your Jaw RFID tags are not being read, check this connection.

Right Arm to Torso – Cable and Tube Descriptions

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<thead>
<tr>
<th>Name/Label</th>
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<th>Connector Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Arm</td>
<td>Black harness cable</td>
<td>Black rectangular connector, 4 lead</td>
</tr>
<tr>
<td>Jaw Ant</td>
<td>Co-ax copper metallic</td>
<td>Round silver connector</td>
</tr>
<tr>
<td>To LA Conv</td>
<td>Black, insulation</td>
<td>Black rectangular connector, 8 lead</td>
</tr>
</tbody>
</table>
Keys to replacing the IV Arm Port

- Always use a #2 Philips screwdriver
  - If using a power driver or drill take care not to strip screws
- Remove screw and keep in safe place once loosened
- Use a precision Philips screwdriver for the two mounting screws
  - #0 Philips works best
- Be sure tubing is seated firmly into new IV port to prevent leaks
- Caution as to not over tighten arm screws during reassembly
SIMMAN 3G RIGHT LEG FILL PANEL
The right leg fill panel is located at the top of the right leg near the pelvis. The fill panel contains connectors for filling the blood and fluid reservoirs.

Note: Make sure the manikin power is on.

Fill Manikin Fluid Reservoir

1. Roll the right leg skin down to expose the fill panel.
2. Connect fluid fill unit tubes to the fluid and air connectors in the right leg panel.
3. Push the fill button on the panel. The button will light up and fluid will flow into the manikin.
4. When the flow stops, disconnect the fill unit.
5. Push the fill button on the panel. The light will go out.

Note: Disconnect tubes from the manikin before pushing the fill button. Pushing the button before disconnecting the tubes will initiate draining of the tank.
Stomach Distention Bladder

- If your Stomach bladder stops working, either inflating or deflating you may only need reset the valve switch located on the underside of the Stomach assembly.

Step 1 – expose the Stomach assembly

Step 2 – turn stomach assy. over to expose the valve switch

Step 2 – locate and depress reset button
Tap on the blood valves

- Tap away
Fluid issue? Flush the fluid system with Isopropyl alcohol and replace in line filters, also check the fluid adjustment blocks.
Things you should know

- Chest Plate- CPR spring and meter aligned properly
- Pulses and resetting them
- Genitalia and the crossover cable
- IV Ports US vs Int’l catheters
- SimMan IV arm adaptor
System diagnostics

TEST UTILITY
• Connect Lan cable between manikin and computer (plug directly into docking station if applicable).
• Hover over the manikin during the startup of the instructor application to obtain the current IP address
SimMan 3G Test Utility

- Access Remote desktop from Windows Start menu
- Accessories > Remote Desktop
- Enter IP Address of manikin
The manikin desktop will appear
Find the icon “Stop Update Service” and click on it
Find icon “SimMan3G Test Utility” and click on that
  • Enter IP address: 192.168.168.1
Testing SimMan 3G

- **Leg Tab** - The Compressor fill test
  - High reading
  - Low reading
  - Time to refill

- **Test Tab** - IV Flow meter
  - Initialize flow Sensor
  - Calibrate flow sensor

- **Head Tab** – Eyes
  - Calibrate iris from ambient light
  - Jaw Thrust

- **Sounds Tab** - Head speaker test
  - Calibrate any sounds in the manikin

- **Pulses Tab**
  - Check status of any pulse on the manikin

- **Status Tab**
  - Check status of any board on the manikin as well as vital manikin statistics.

- **Valve Tab**
  - Calibrate and troubleshoot fluids and blood
  - Airway complications
  - Stomach calibration
Eyes hands on activity

Common known issues with Eye Modules

• Constant fluttering of eye
• Eye will not close, or blink
• Pupils not the same size

• Troubleshooting Eye Issues
• Peel the head skin forward from the back of the neck to the bridge of the nose
• Swap out the eye modules, and see if the issues follows the modules, or with the socket.
Frequently Asked Questions (FAQ)

- Where is the zipper located on the simulator?
- Where is the serial number located on the Manikin?
- The serial number is vital for Technical Support to be able to keep a valid record of any issues regarding a specific manikin.
Proper cleaning techniques and materials

KEYS TO KEEPING HIM CLEAN
Keys to keeping him clean

- Skin, use mild soap and water
- Isopropyl 70% can remove stains
- Baby Powder rub down
SimMan3G Batteries

- The Average life of the batteries is 200 charge cycles
- It is recommended to store the batteries in a refrigerator if possible.
- Never store batteries fully charged for over a month
- The manikin will automatically shut down if the temperature is above 140 degrees or if the remaining charge falls below 6% on one of the 2 batteries.
- Never attempt to run on a single battery
- Utilize your power panel for the electrical status of your manikin.
- What to do in the event of an overheating error message
• FAQ:

• How do I remove the batteries?
Basic SimMan 3G Network Settings
## Networking basics

### Access Point Mode
- Manikin as the Access Point
  - Firewalls on the manikin, and each device are turned off.
  - DHCP addresses should be assigned on all devices
  - Manikin settings can be accessed through the network configuration utility
  - Manikins internal router set to Access Point mode

### Client Mode
- Manikin connecting to external network
  - When using Client mode always be sure to document settings for easier troubleshooting later
  - Manikins internal router should be switched to Client Mode
• Application layer:
  • My manikin is not showing up

• Physical layer:
  • The computer's wireless card is turned off
What do I do if my manikin is not showing up and cannot immediately call Technical Support?

- If the Instructor PC is not connecting is the Patient monitor?
- Is my wireless toggle switched to the on position? (check for wi-fi lights)
- What network is my computer currently connected to?
- Are all of my cables properly attached to the router?
- Try reseating the LAN cables attached to the router to verify a firm connection
- Is my internal router currently in Access Point or Client mode?
- If all else fails connect a LAN cable from the docking station of your computer into your manikin until you can call us.
Tips And Tricks

➢ You can use too much airway lubricant
➢ Think you have a leak but can’t hear or feel it? Use a stethoscope
➢ Fluid issue? Flush the fluid system with Isopropyl alcohol and replace in line filters, also check the fluid adjustment blocks.
➢ Power problem? What does the power panel say?
➢ Do you want to show the path of how you got to a specific issue? Go to start and search for files and folders and type “problem steps” click on the program that shows up and click start recording or for 3G specifically C:\Program Files\Laerdal Medical\SimMan3G\Auxiliary Tools\Misc\report Wizard
➢ Difficulty with skin? Use more baby powder
How to get help

Call our technical support team between the hours of 8a-8p EST Monday - Saturday

We’re able to provide the most help when you have the following:

- Some time to troubleshoot the issue with us
- Have access to the manikin, and the computers
Questions
Thank You!

Your feedback is valuable, please be sure to let us know what we can add, or change for next time!