- 9. The A1 and A3 mono monitors must operate for at least 4 hours before they automatically power down due to low battery condition. The A3 color monitor must operate for at least 3 hours before the monitor automatically powers down due to low battery condition.
- 10. Verify that the low battery alarm occurs 15-30 minutes before the battery fully discharges.
- 11. Allow the monitor to operate until it automatically powers down due to low battery condition. Verify that the audible alarm sounds when the monitor automatically shuts down. Press the Alarm Silence button to terminate this audible alarm.
- 12. If monitor passes this test, immediately recharge the battery. (See "Battery Charge" on page 11).

Power-On Self-Test

- Connect the monitor to an AC power source. For the A1, use the PS-120V or PS-240V power supply and power cord. For the A3, use the proper power cord supplied.
- 2. For the A1, verify that the **EXTERNAL POWER** indicator lit.



- 3. Do not connect any input cables to the monitor.
- 4. Observe the monitor front panel. With the monitor off, press the **ON**/

STANDBY button %. The monitor must perform the following sequence:

- The A1 emits a beep.
 The A3 emits three consecutively higher pitched beeps.
- b. A few seconds later, the display backlight illuminates, but the display is blank.
- c. The version numbers of the boot and operational software display in the lower left corner of the display.
- d. A beep signals the end of the power-on self-test. Power-on self-test takes approximately 10 seconds to complete.
- e. Upon successful completion of the power-on self-test, the display is in normal monitoring screen configuration. No vital-sign numeric values or waveforms are displayed.

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Hardware and Software Tests

Hardware and software testing includes the following tests applicable to the indicated models in the series:

Test	Applies to Model(s)
SpO ₂ Testing	A1, A3 - all models
Operation with an ECG Simulator	A1 - M3923A, M3924A A3 - all models
Operation with a Respiration Simulator	A3 - all models
Verification of Pneumatic System	A1, A3 - all models
Operation with a Temperature Simulator	A1 - M3922A, M3924A A3 - all models
General Operation	A1, A3 - all models

SpO₂ Testing

SpO₂ testing includes the following tests:

- Alarms and Alarm Silence
- Heart Rate Tone Volume Control
- Dynamic Operating Range
- LED Excitation Test

Alarms and Alarm Silence

- 1. Connect the SRC-2 pulse oximeter tester to the M4787A sensor cable and connect the cable to the monitor.
- 2. Set SRC-2 as follows:

SWITCH	POSITION
RATE	38
LIGHT	LOW
MODULATION	OFF
RCAL/MODE	RCAL 63/LOCAL

- 3. Press the **ON/STANDBY** (%) button to turn the monitor on.
- 4. After the normal power-up sequence, verify that the SpO₂% display initially

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