



Defibrillator/Pacing Test with Hands-Free Therapy Electrodes

Note: If a low battery message appears during any of this testing, the battery is close to depletion and should be replaced or recharged.

Warning! Keep hands, fingers, and other conductive materials away from paddle electrode plates when discharging the defibrillator, or pacing.

	Function	Response
1	Connect the external AC adapter to a working AC outlet and to the X Series rear panel.	Verify that the green Auxiliary Power LED illuminates on the X Series front panel.
2	Insert a battery into the unit (if a battery is not already in the slot).	Verify that the Battery Charge LED on the X Series front panel illuminates yellow. When the battery pack has been fully charged, the battery status indicator light is green.
3	Press the unit's power on switch.	<p>Verify the unit issues two audio beeps and that the red, yellow, and green Visual Alarm indicators illuminate for 2 to 3 seconds.</p> <p>Note: The yellow LED may remain lit after the unit powers on.</p> <p>The X Series unit performs a number of power on self tests.</p> <p>Verify that the unit displays <i>SELF TEST PASSED</i>.</p> <p>If the message <i>SELF TEST FAILED</i> appears on the display, contact the appropriate technical personnel or the ZOLL Technical Service Department.</p>
4	Disconnect the external AC adapter from the X Series rear panel.	<p>Verify that the unit continues to operate without interruption on battery power and that the displayed battery icon indicates that a fully charged battery is installed.</p> <p>Verify that no error messages are displayed.</p>
5	With no ECG cables attached to the unit, select Lead I, II, or III as the waveform display source.	Verify that a <i>LEAD FAULT</i> message displays in the waveform window.
6	Select Pads as the waveform display source and connect the multifunction cable to the unit. (Do not connect the test connector to the MFC.)	Verify that a <i>CHECK THERAPY ELECTRODES</i> message displays in the waveform window.
7	Connect the multi-function cable (MFC) to the test connector.	Verify that the <i>CHECK THERAPY ELECTRODES</i> message is replaced by a <i>SHORT DETECTED</i> message.

	Function	Response
8	Press the Select Energy arrow (up or down).	Verify that the defibrillation window displays and the following message appears: <i>PADS SHORT DETECTED</i> <i>SELECT 30J TO TEST</i>
9	Press the Select Energy arrow (up or down) to select 30 Joules on the X Series unit.	Verify that the defibrillator window shows 30 J as the selected energy.
10	Press the CHARGE button on the front panel.	Verify that a periodic tone sounds while the defibrillator is charging. At the completion of the charge cycle, the tone is continuous. The charge time should be less than 7 seconds. Verify that the SHOCK button () on the front panel illuminates when the defibrillator is charged.
11	Press and hold  on the front panel until the unit discharges.	Verify that the defibrillator discharges and that a <i>DEFIB SHORT TEST PASSED</i> message displays. If the message <i>DEFIB SHORT TEST FAILED</i> displays, contact the appropriate technical personnel or the ZOLL Technical Service Department.
12	After the defibrillator display panel closes, press the PACER button on the front panel to display the Pacer Settings dialog box.	Verify that the Pacer Settings dialog displays with the pacer status bar behind it.
13	Perform the following steps: <ul style="list-style-type: none"> • Set the Pacer mode to Fixed. • Set the Pacer Rate to 60 ppm. • Set the Output to 100 mA. • Select the Start Pacer button. 	Verify that the green pace indicator on the pacer status bar flashes once each second. Verify that pace markers are printed every 25 mm on the chart recorder printout. Note: If a printout does not automatically begin after starting the pacer, select the Print quick access key to start a continuous printout. Press the Print quick access key again to stop the printout.
14	Press the PACER button on the front panel button again to close the Pacer Settings dialog box.	Verify that the pacer status bar indicates <i>PACING: SHORT DETECTED</i> . Verify that the green pace indicator continues to flash once each second. Verify that no pacer-related error messages display.
15	Disconnect the test connector from the MFC.	Verify that the pacer status bar displays: <i>PACING: CHECK THERAPY ELECTRODES</i>
16	Press the PACER button on the front panel to display the Pacer Settings dialog. Select Turn Pacer Off to turn off the pacer.	Verify that the Pacer Settings dialog is closed and that the pacer status bar is removed from the display.
17	Reconnect the external AC Adapter to the X Series rear panel.	Verify that the green Auxiliary Power indicator light on the X Series front panel is illuminated.