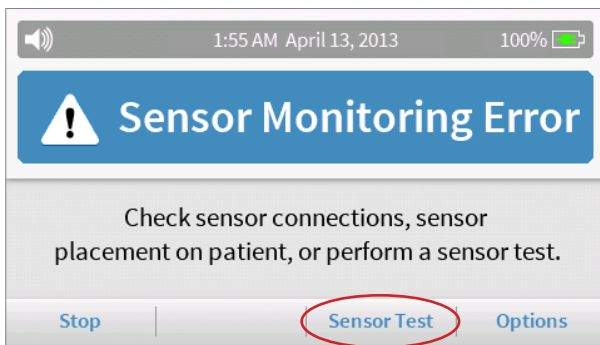


TROUBLESHOOTING

The monitoring system does not require periodic calibration and has no serviceable parts. If it does not appear to be functioning and troubleshooting does not resolve the issue, contact Technical Support at 855-489-2824, Option 2.

TESTING THE SENSOR CABLE

Sensor Cable Test Steps

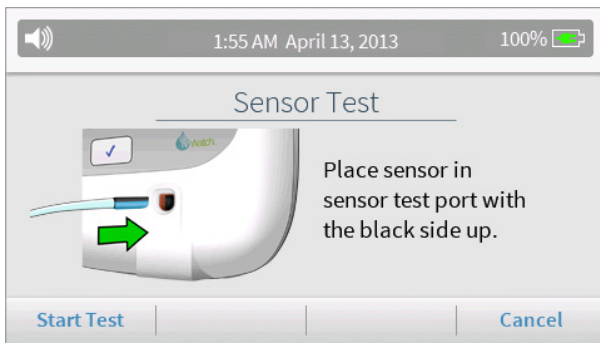


"Sensor Test" key location on monitor screen

To test the sensor cable, complete the following:

1. Ensure that the monitor is on and the sensor cable is connected to the monitor.
2. From the Home screen (or the Sensor Monitoring Error screen), press the "Sensor Test" key.

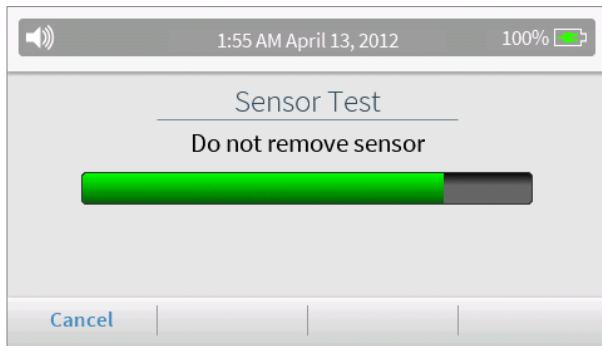
NOTE: A sensor test cannot be performed during a monitoring run unless sensor performance degrades. The system detects the change, and a notification appears on the display.



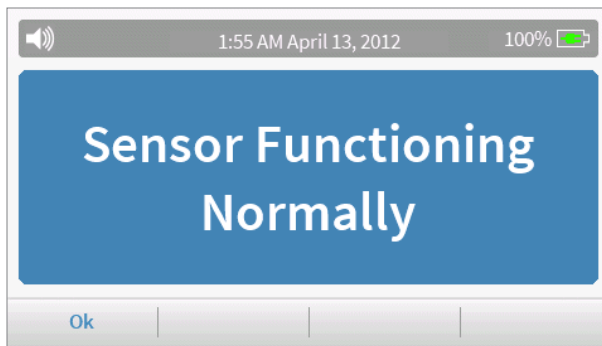
NOTE: Do not remove the sensor during testing.

3. Insert the sensor head into the sensor test port with the black side facing up as shown on the display that appears when the "Sensor Test" key is pressed.
4. To begin the sensor test, press the "Start Test" key.
 - a. Press the Cancel key to end the test and return to the previous screen.

Sensor Cable Test Steps



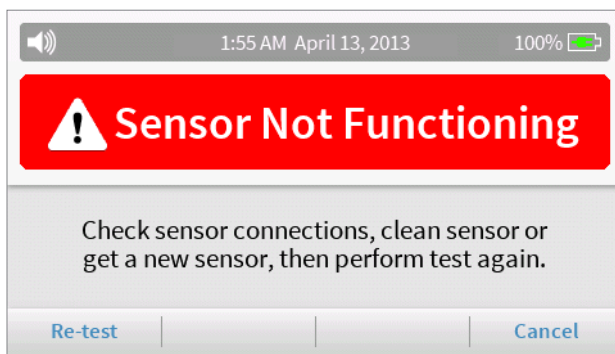
5. Once the "Start Test" key is pressed, the sensor test begins. The display will change to show a progress bar that depicts the sensor test progress.
 - a. Press the "Cancel" key to interrupt the sensor test and return to the Home screen or Sensor Monitoring Error screen.



- b. If the sensor is functioning, the blue "Sensor Functioning Normally" message appears.
 - c. Press the "OK" key to return to the Home screen or Sensor Monitoring Error screen.

NOTE: If the sensor test was initiated from the Sensor Monitoring Error screen, pressing "Ok" will always return the monitor to that error screen along with the audible tone. The state will change to the normal "Monitoring" screen after a short time if the problem was resolved.

If the Sensor Monitoring Error screen continues, the error is likely due to another issue rather than the sensor cable. See the "Troubleshooting Table" on page 34 for additional solutions that may resolve the monitoring error.



- d. If the sensor is not functioning, the red "Sensor Not Functioning" error message appears.
 - e. Follow the instructions on the display prior to re-testing the sensor.
 - f. Press the "Re-test" key to perform the test again, or press "Cancel" to return to the Home screen or Sensor Monitoring Error screen.
 - g. If performing a re-test of the sensor cable results in another "Sensor Not Functioning" error, replace the cable and perform another sensor test to ensure the new cable is functioning properly.

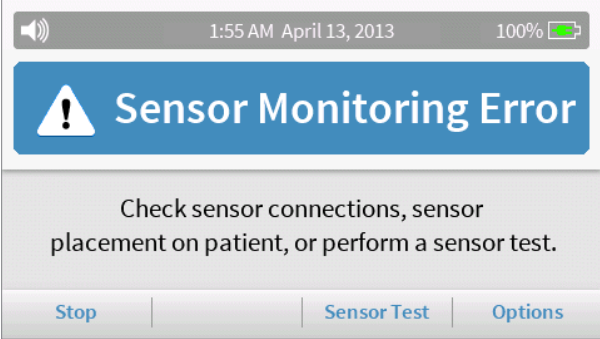
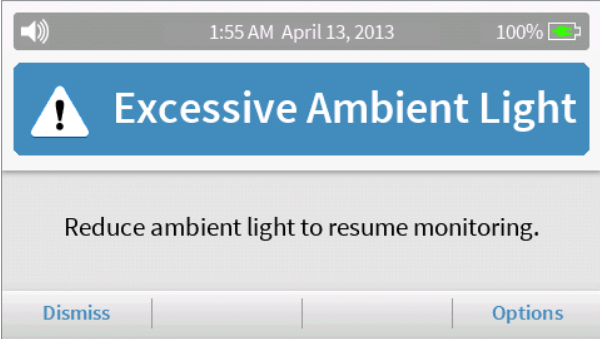
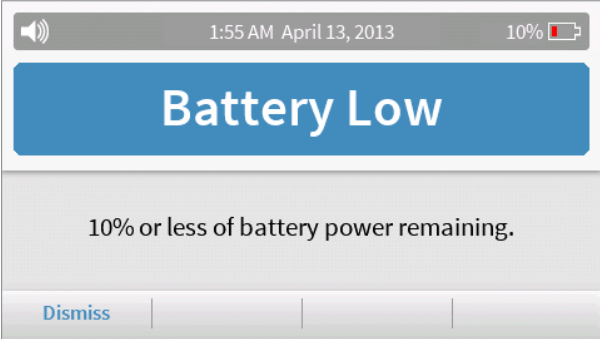
TROUBLESHOOTING TABLE

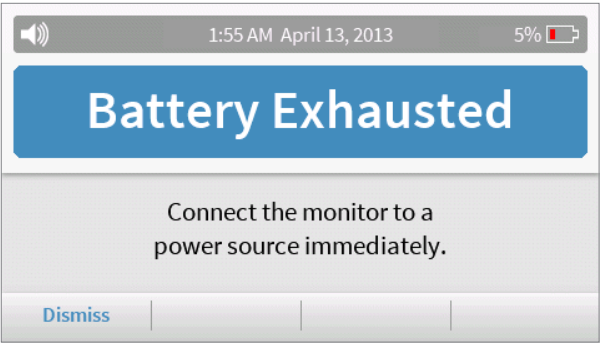
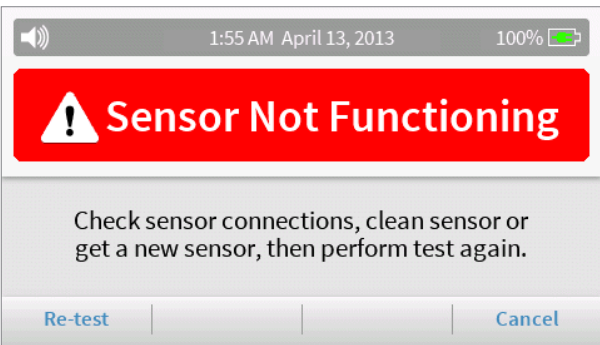
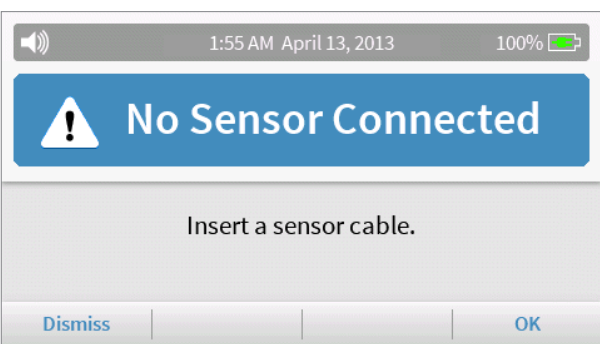
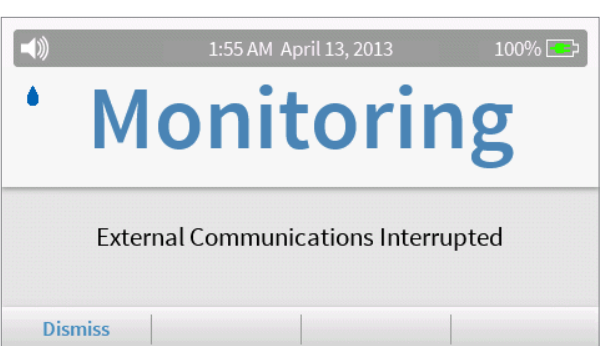
The Troubleshooting Table describes possible device issues and how to resolve them.

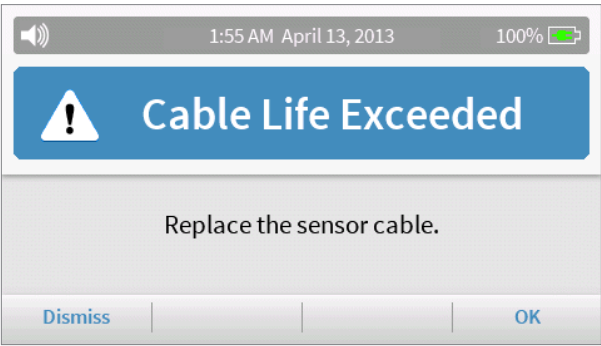

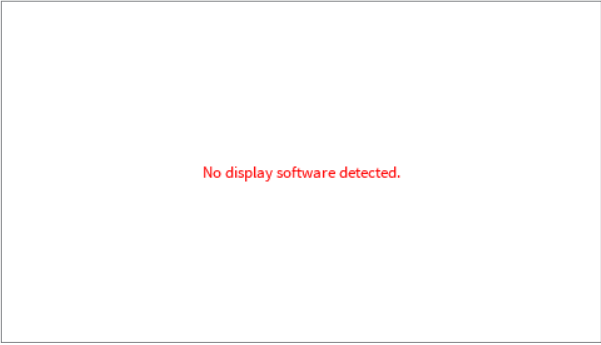
Problem	Possible Cause	Possible Solution
<p>The monitor will not turn on.</p> <p>The monitor display remains blank.</p>	<ul style="list-style-type: none"> The power supply is not connected. The monitor may be turned off. The battery may be depleted. The display or the monitor is not functioning. 	<ul style="list-style-type: none"> Confirm that the monitor's electrical plug is in a grounded wall outlet. Press Power to confirm that the monitor is on. Replace the monitor.
<p>The display is too bright or is difficult to see.</p>	<p>The screen brightness setting is too low or too high.</p>	<p>Select Options >> Brightness to adjust the display brightness.</p>
<p>The volume is too quiet or too loud.</p>	<p>The volume setting is too low or too high.</p>	<p>Select Options >> Volume to adjust the volume.</p>
<p>A Sensor Monitoring Error or a Sensor Not Functioning error message appears. (See the Error Message Table).</p>	<ul style="list-style-type: none"> The sensor is not properly connected to the monitor or to the sensor receptacle on the patient. The sensor is not functioning properly. The sensor receptacle is not properly attached. The patient is moving excessively. The sensor is fouled/dirty. 	<ul style="list-style-type: none"> Verify that there are no kinks, bends, or breaks in the sensor cable and that the patient is not lying on the cable. Verify that the sensor cable is correctly inserted into the port in the monitor, and the sensor into the sensor receptacle. Verify that the sensor port and connector are clear of obstructions. Verify that the sensor receptacle is properly attached. Verify that the sensor is clean. Perform a sensor test Replace the sensor cable.
<p>A Sensor Cable Life Exceeded error message appears (See the "Error Message Table" on page 35).</p>	<p>The sensor cable has been used for monitoring in excess of 10 line days (or 240 hours).</p>	<p>Replace the sensor cable.</p>
<p>Errors occur during data transfer.</p>	<ul style="list-style-type: none"> The USB drive is not inserted. The USB drive does not have enough space to save the data. 	<p>Verify that the USB drive is properly connected and that there is sufficient free space on the drive.</p>
<p>External Communications Interrupted message appears and/or the sync icon is blinking with an "X" icon.</p>	<ul style="list-style-type: none"> The serial communications adapter is not connected or has become disconnected. The partner device has lost connection or has been turned off. 	<ul style="list-style-type: none"> Verify that the cables are connected and the partner device is on.
<p>Redness, itching, inflammation, or a similar reaction has occurred on the skin under or near the sensor receptacle.</p>	<p>The patient has had an allergic or irritant reaction to the adhesive used on the sensor receptacle.</p>	<ul style="list-style-type: none"> Remove the sensor receptacle and discontinue monitoring. Follow the facility protocol for allergic reactions.


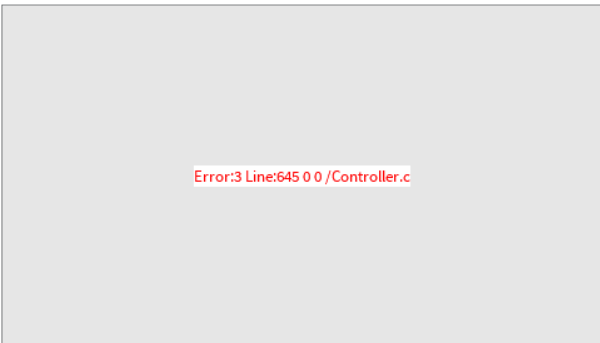
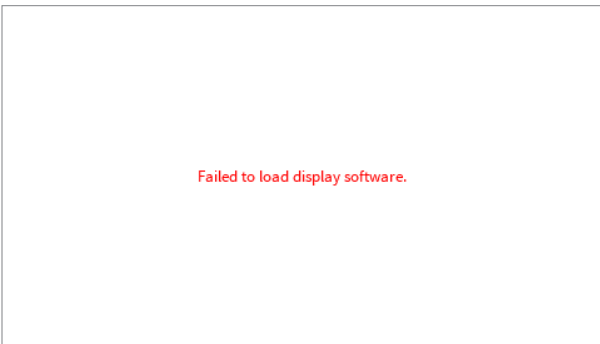
ERROR MESSAGE TABLE

The Error Message Table shows common error screens and describes how to resolve them.

Error Message	Possible Solution
	<p>Sensor Monitoring Error <i>A sensor error was detected during a monitoring run.</i></p> <p>Verify that there are no kinks, bends, or breaks in the sensor cable and that the patient is not lying on the cable.</p> <p>Verify that the sensor cable is connected to the patient monitor.</p> <p>Verify that sensor receptacle is securely attached to the patient's skin.</p> <p>Verify that the proximal and distal ends of the sensor cable are clean.</p> <p>Perform a sensor test. Replace the sensor cable.</p> <p>If the error persists with new cable, contact ivWatch customer support at 855-489-2824, Option 2.</p>
	<p>Excessive Ambient Light</p> <p>Reduce the light, or cover the area around the sensor receptacle.</p> <p>Verify that no bright light sources are illuminating the IV insertion site.</p>
	<p>Battery Low</p> <p>Plug the monitor into a power source or shut down the monitoring run within 30 minutes.</p>

Error Message	Possible Solution
	<p>Battery Exhausted</p> <p>Plug the monitor into a power source or shut down the monitoring run within 15 minutes.</p>
	<p>Sensor Not Functioning <i>A sensor error was detected during a sensor test.</i></p> <p>Verify that there are no kinks, bends, or breaks in the sensor cable and that the patient is not lying on the cable.</p> <p>Verify that the proximal and distal ends of the sensor cable are clean.</p> <p>Replace the sensor cable. If the error persists with new cable, contact ivWatch customer support at 855-489-2824, Option 2.</p>
	<p>No Sensor Connected</p> <p>Insert a sensor cable.</p>
	<p>External Communications interruption</p> <p>External Communications have been interrupted and a signal has been lost..</p> <p>Verify that the ivWatch Serial Adapter cable is connected to the back of the patient monitor, and that all steps have been taken in the "Setting Up External Communications" section on page 43.</p> <p>If the error persists, continue monitoring without external communication if necessary, and contact ivWatch customer support at 855-489-2824, Option 2.</p>

Error Message	Possible Solution
	<p>Sensor Cable Life Exceeded <i>Sensor usage has exceeded 10 line days (or 240 hours).</i></p> <p>Replace the sensor cable.</p>
	<p>Invalid Factory Settings Error <i>This message indicates that the monitor failed to verify the required factory settings during start up.</i></p> <p>Press and hold the power button for 20 seconds to power down the monitor, then press the power button to power the device on again.</p> <p>If the same error message is displayed, replace the monitor and/or contact ivWatch customer support at 855-489-2824, Option 2.</p>
	<p>Missing Display Software Error <i>This message indicates that the monitor could not locate the required display software during start up.</i></p> <p>Press and hold the power button for 20 seconds to power down the monitor, then press the power button to power the device on again.</p> <p>If the same error message is displayed, replace the monitor and/or contact ivWatch customer support at 855-489-2824, Option 2.</p>

Error Message	Possible Solution
 <p>Invalid display version detected: 111 vs 110</p>	<p>Invalid Display Software Version Error <i>A message in this format indicates that the monitor detected a discrepancy between the version of the display software currently on the monitor and the version which was expected.</i></p> <p>Press and hold the power button for 20 seconds to power down the monitor, then press the power button to power the device on again.</p> <p>If the same error message is displayed, replace the monitor and/or contact ivWatch customer support at 855-489-2824, Option 2.</p>
 <p>Error:3 Line:645 0 0 /Controller.c</p>	<p>Device Firmware Error <i>A message in this format (red text displayed on a grey screen) indicates that the monitor encountered a problem (on start up, or during normal operation).</i></p> <p>Press and hold the power button for 20 seconds to power down the monitor, then press the power button to power the device on again.</p> <p>If the same error message is displayed, replace the monitor and/or contact ivWatch customer support at 855-489-2824, Option 2.</p>
 <p>Failed to load display software.</p>	<p>“Failed to load” Error <i>This message indicates that the monitor failed to load the required display software during start up.</i></p> <p>Press and hold the power button for 20 seconds to power down the monitor, then press the power button to power the device on again.</p> <p>If the same error message is displayed, replace the monitor and/or contact ivWatch customer support at 855-489-2824, Option 2.</p>