



# Trouble Shooting Guide, Electrical

Applicable for W760

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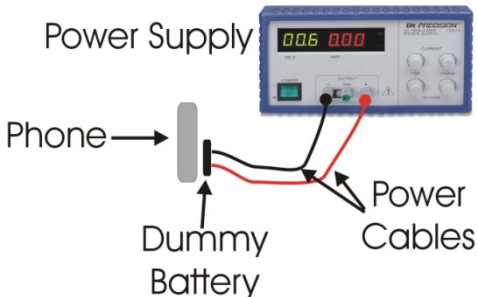


# 1 General

The purpose of this document is to indicate the electrical level repair actions associated with the different failure symptoms.

For symptoms that have multiple repair actions, the repair actions are listed in order of their probability of creating a successful repair. The first action has the highest probability, and subsequent actions have lower probabilities. The intention is for the repair technician to implement the first repair action and then retest the phone. If the phone continues to fail the same test, then the technician should continue to the second repair action. If the phone continues to fail the same test after all of the repair actions are exhausted, then the phone will be considered not repairable at this level.

This document should be used only after the actions from the Mechanical Trouble Shooting Guide have been exhausted for the specific symptom.

Voltage, current, and resistance information may be provided for some symptoms to enable faster repairs. Purchasing this equipment and performing these measurements is optional but recommended.

<p>Measure Current in Milliamps (mA)</p> 	<p>Perform current measurements using a dummy battery and power supply with digital current display. The phone should be fully assembled.</p>
<p>Measure Diode Voltage (VDC →)</p>  <p>Multimeter</p>	<p>Perform voltage measurements with a multimeter.</p>
<p>Measure Resistance in Ohms (<math>\Omega</math>)</p>  <p>Multimeter</p>	<p>Perform resistance measurements with a multimeter.</p>



## 2 Repair Actions for Manual Test Failures

Failure	Failure Symptom	Repair Action
2.1 Power On / Off	Hangs during power up	• B2100
	Other symptoms	• X2200 if damaged • X4200 if damaged
2.2 Software Flash		• X2400 if damaged • N2401 • D2404 • N2420
2.3 Charging	Charging from power outlet	• X2400 if damaged • V2421 if short circuit
	Charging from computer via USB – see flash	• X2400 if damaged • D2404 • N2420
	Other	• X2200 if damaged
2.4 Hands-Free connection (PHF)	Phone not recognize PHF set or no audio	• X2400 if damaged • N3101
	Phone stuck in PHF mode when PHF is not inserted	• N2400
2.5 SIM		• X2410 if damaged
2.6 Main Display		• X4200 if damaged
2.7 Display Illumination		• X4200 if damaged
2.8 Flip Sensor		• B2400
2.9 Main Keypad Illumination		• N4201
2.10 Main Keypad Keys		• X4200 if damaged
2.11 Side Keys		• X4100 if damaged
2.12 Side Key LEDs		• X4100 if damaged
2.13 Vibrator		• X4200 if damaged
2.14 Earphone (Receiver)		• X4200 if damaged
2.15 Polyphonic Speaker (Loudspeaker)		• X4200 if damaged • N3100 – Left Speaker • N3103 – Right Speaker
2.16 Microphone		• X4200 if damaged
2.17 Real Time Clock		• B2100
2.18 Camera		• X4200 if damaged • N4302
2.19 Bluetooth		• X1502 if damaged • N1400 • D2105
2.20 Memory Card Reader		• X4200 if damaged
2.21 FM Radio		• V2425 if short circuit • N1400
2.22 Light Sensor		• X4200 if damaged • N4210
2.23 Accelerometer		• N2450

## 3 Repair Actions for Go/No Go Test Failures

### 3.1 Network Connection

Phone fails to lock on to network during radiated (wireless) Go / No Go test	<ul style="list-style-type: none"> <li>• Use RF probe and fixture to perform conducted Go / No Go test</li> </ul>
Phone fails conducted (RF probe) Go / No Go test	<ul style="list-style-type: none"> <li>• Run Calibration Routine</li> </ul>
Phone passes conducted (RF cable) Go / No Go test	<ul style="list-style-type: none"> <li>• Check C1504,L1503 and L1504 and replace if damaged or missing. Note from PCB Rev 2 and upwards.</li> <li>• Replace Antenna and repeat radiated test</li> </ul>
Phone still fails radiated (wireless) Go / No Go test	<ul style="list-style-type: none"> <li>• Replace X1501 and repeat radiated test</li> </ul>
Phone still fails radiated (wireless) Go / No Go test	<ul style="list-style-type: none"> <li>• Replace X1200 and repeat radiated test</li> </ul>

### 3.2 Other Failures

Phone fails any other portion of Go/No Go testing	<ul style="list-style-type: none"> <li>• Run Calibration Routine</li> </ul>
Phone that failed Go/No Go test passes calibration	<ul style="list-style-type: none"> <li>• Repeat radiated (wireless) Go/No Go test</li> </ul>

## 4 Repair Actions for Calibration Routine Failures

### 4.1 EDGE

Routine	Repair Action
	<ul style="list-style-type: none"> <li>• N1200</li> </ul>

### 4.2 WCDMA

Routine	Repair Action
W760i	<ul style="list-style-type: none"> <li>• N1210</li> </ul>

## 5 Revision History

Rev.	Date	Changes / Comments
1	2008-May-26	Initial Release
2	2009-03-19	N4302 added to Camera
3	2009-06-12	N4210 added to Light Sensor problems C1504,L1503 and L1504 added to Go/No Go Failures
4	2009-06-15	N2400 added to 2.4 Hands-Free connection (PHF)
5	2009-10-09	V2421 added to charging problems V2425 added to Fm radio problems