



Trouble Shooting Guide Repair Instruction Additional Soldering Process/, Electrical

Applicable for C702, C702a & C702c

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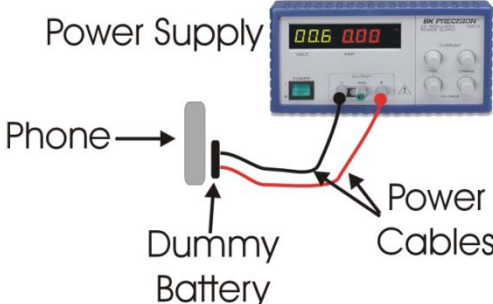


1 General

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 is provided for some symptoms to enable faster repairs. Perform current measurements using a dummy battery and power supply with digital current display. The phone should be fully assembled. Perform voltage and resistance measurements with a multimeter. Purchasing this equipment and performing these measurements is optional but recommended.

<p>Measure Current in Milliamps (mA)</p>  <p>Power Supply</p> <p>Phone</p> <p>Dummy Battery</p> <p>Power Cables</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 (Ω)</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	<i>Current draw greater than 300 mAmps</i>	<ul style="list-style-type: none"> • N1200 • N1210
	<i>Current draw when powered off</i>	<ul style="list-style-type: none"> • N1200 • N1210
	<i>Hangs at gray display. Constant vibration. Will not power off</i>	<ul style="list-style-type: none"> • B2101
	<i>Using no current when On/Off button is pressed and will not start</i>	<ul style="list-style-type: none"> • S2504
	<i>Other symptoms</i>	<ul style="list-style-type: none"> • X2200 if damaged
2.2 Software Flash / USB		<ul style="list-style-type: none"> • X2300 if damaged • N2402 if not charging via USB • D2404
2.3 Charging	<i>Charging from power outlet</i>	<ul style="list-style-type: none"> • X2300 if damaged • V2421 if short circuit • V2202
	<i>Charging from computer via USB</i>	<ul style="list-style-type: none"> • X2300 if damaged • N2402
2.4 Hands-Free connection	<i>Phone stuck in PHF mode when PHF is not attached</i>	<ul style="list-style-type: none"> • V2420 if short circuit • V2405 • N2400
	<i>Phone not recognize PHF set</i>	<ul style="list-style-type: none"> • X2300 if damaged • L2405
2.5 SIM		<ul style="list-style-type: none"> • X2403 if damaged
2.6 Main Display		<ul style="list-style-type: none"> • X4202 if damaged
2.7 Main LCD LEDs		<ul style="list-style-type: none"> • X4202 if damaged
2.8 Keypad LEDs		<ul style="list-style-type: none"> • X2402 if damaged
2.9 Flash LED		<ul style="list-style-type: none"> • X4201 if damaged
2.10 Keypad Keys		<ul style="list-style-type: none"> • X2402 if damaged
2.11 Volume Up Key		<ul style="list-style-type: none"> • S2503 if damaged.



Failure	Failure Symptom	Repair Action
2.12 Volume Down Key		<ul style="list-style-type: none"> • S2502 if damaged
2.13 Real Time clock	<i>The clock has to be set after the battery has been detached</i>	<ul style="list-style-type: none"> • C2217
	<i>The clock gain or lose time SERP calibrating is performed</i>	<ul style="list-style-type: none"> • B2101
2.14 Polyphonic Speaker (Loudspeaker)		<ul style="list-style-type: none"> • V3105 if short circuit • V3106 if short circuit • N3100
2.15 Earphone		<ul style="list-style-type: none"> • L3103 if more than 1 Ohm • L3104 if more than 1 Ohm • V3101 if short circuit • V3102 if short circuit
2.16 Hands-Free (PHF) Aux Earphone		<ul style="list-style-type: none"> • X2300 if damaged • L2403 if more than 1 Ohm • L2404 if more than 1 Ohm • L2408 if more than 1 Ohm • N3101
2.17 Microphone		<ul style="list-style-type: none"> • B3100
2.18 Hands-Free (PHF) Aux Microphone		<ul style="list-style-type: none"> • X2300 if damaged • L2401 if more than 1 Ohm • L2402 if more than 1 Ohm • C3113 if short circuit • C3120 if short circuit • N3101
2.19 Camera		<ul style="list-style-type: none"> • X4301 if damaged • N2209 • N2206
2.20 VGA Camera		<ul style="list-style-type: none"> • X4300 if damaged
2.21 Memory Card		<ul style="list-style-type: none"> • X2490 if damaged
2.22 Bluetooth		<ul style="list-style-type: none"> • X1301 if damaged • X1302 if damaged • N1400 • D2105



Failure	Failure Symptom	Repair Action
2.23 FM Radio		<ul style="list-style-type: none">• <i>X2300 if damaged</i>• <i>N1400</i>• <i>C3145</i>• <i>C3146</i>• <i>V2425 if bad signal</i>
2.24 AGPS		<ul style="list-style-type: none">• <i>X1430 if damaged</i>• <i>X1431 if damaged</i>• <i>N1430</i>



3 Repair Actions for Go/No Go Test Failures

Failure	Repair Action
<i>Fails any part of Go/No Go testing</i>	<ul style="list-style-type: none">• Run the calibration routine
<i>Fails Go/No Go test, but passes calibration</i>	<ul style="list-style-type: none">• Check X1200 for damage and replace it necessary• Replace Antenna• Replace X1201, X1202, X1203 if damaged• Return the phone through Go/No Go testing
<i>Fails Go/No Go test after passing calibration</i>	<ul style="list-style-type: none">• Change X1200 and retest• Check LCM gasket is missing or not.

4 Repair Actions for Calibration Routine Failures

Failure	Repair Action
<i>Fails any part of the calibration routine</i>	<ul style="list-style-type: none">• Replace X1200 if damaged• N1210 UMTS – Approved Centers Only• N2205 UMTS• N1200 GSM – Approved Centers Only



5 Revision History

Rev.	Date	Changes / Comments
1	2008-05-22	First release
2	2008-06-10	N1430, N2205 deleted
3	2008-07-25	No Change
4	2008-07-25	SW Flash update
5	2008-08-26	X4201, V2425, L2405, L2408, N2206, N2209, N1430 and N2205 added.
6	2009-11-23	L3103, L3104, V3101 and V3102 added to 2.15 Earphone