



Troubleshooting Guide

- electrical -



R800i, R800a, R800x, R800at, Z1



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*For general information about troubleshooting, refer to
1220-1336: Generic Repair Manual - electrical*



1 Troubleshooting Flow

1.1 Display

Symptom:	Display problem	
Replace:	X4300 , if damaged Z4300, Z4301 or Z4302	vision check pin A4, A6, A7, A9 and B2-3, B5-6, B8-9



Troubleshooting Flow

1.2 Illumination

Symptom:	No Display illumination
Replace:	X4300 , if damaged vision check pin A2 and A3 L5600 or L5601 , if more than 1 Ω C5606 or C5613 , if short circuit V5600 N5600

Symptom:	No Flash LED
Replace:	V4400 N4400

Symptom:	R G B MMI LED s
Replace:	V4802 N5600



Troubleshooting Flow

1.3 Keys & Sensors

Symptom: On / Off key problems

Replace: **S4807**
N4800

Symptom: PSN key problems

Replace: **S4810**
N4800

Symptom: Directional Control (Left pad) **Right** key problems

Replace: **S5000**
N4800

Symptom: Directional Control (Left pad) **Left** key problems

Replace: **S5001**
N4800

Symptom: Directional Control (Left pad) **Down** key problems

Replace: **S5002**
N4800

Symptom: Directional Control (Left pad) **Up** key problems

Replace: **S5003**
N4800

Symptom: Select key problems

Replace: **S4805**
N4801

Symptom: Start key problems

Replace: **S4806**
N4801

Symptom: Function Control (Right pad) **A** key problems

Replace: **S5007**
N4801

Symptom: Function Control (Right pad) **B** key problems

Replace: **S5004**
N4801

Symptom: Function Control (Right pad) **C** key problems

Replace: **S5006**
N4801



Symptom: Replace	Function Control (Right pad) D key problems S5005 N4801
Symptom: Replace	Left key problems S4808
Symptom: Replace	Right key problems S4809
Symptom: Replace:	Back, Menu ,Home or Search problems X4300 , if damaged vision check pin B31 ,B30 ,A28 and A24 N4802
Symptom: Replace:	Touch Pad problems X5000 , if damaged vision check all pins
Symptom: Replace:	Display Touch Sensor problems X4300 , if damaged vision check pin A25 - A27, A31 and B26 - B29
Symptom: Replace:	Volume Up key problems S4803
Symptom: Replace:	Volume Down key problems S4804
Symptom: Replace:	Volume Up and Down key problems N4802
Symptom: Replace:	Slide Sensor – Phone Closed not detected B5002
Symptom: Replace:	Slide Sensor - Phone Open not detected B5003
Symptom: Replace:	Proximity sensor problems X4300 , if damaged vision check pin A21, A31 and B23
Symptom: Replace:	Light Sensor problems X4300 , if damaged vision check pin A2 ,A3 , A5 and A10
Symptom: Replace:	Compass problems N5701



Troubleshooting Flow

1.4 Alert

Symptom:	Vibrator problems
Replace:	<i>V5000, if short circuit</i> <i>B5000</i>

**Troubleshooting Flow****1.5 Audio**

Symptom:	No audio
Replace:	L3902 ,if more than 1 Ω
Symptom:	Microphone 1 (Right)
Replace:	L5506, L5507 or L5508 ,if more than 3 Ω B5501 N1200
Symptom:	Microphone 2 (Left)
Replace:	L5503, L5504 or L5505 ,if more than 3 Ω B5500 N1200
Symptom:	No or bad Earphone / Ear speaker
Replace:	X4300 , if damaged vision check pin A14 and A15 V5500 , if TP 5500 or TP 5501 is short circuit to GND N5500 N1200
Symptom:	No or bad Left Speaker
Replace:	V5300 , if X5300_M or X5300_P (Left speaker pads) is short circuit to GND N5300 N1200
Symptom:	No or bad Right Speaker
Replace:	V5301 , if X5301_M or X5301_P (Right speaker pads) is short circuit to GND N5301 N1200
Symptom:	No or bad Hands-free (PHF) Microphone
Replace:	X5401 , if damaged vision check pin 1 ,4 and 5 N5400 N1200
Symptom:	No or bad Hands-free (PHF) Aux Earphone / Ear speaker
Replace:	X5401 , if damaged vision check pin 2 ,3 and 4 L5402 or L5403 if more than 2 Ω N5400 N1200
Symptom:	No Hands-free (PHF) Microphone – Phone not recognizes PHF set
Replace:	X5401 , if damaged vision check pin 1 ,4 and 5 N5400



Troubleshooting Flow

1.6 On/Off

Symptom:	Current draw greater than 300 mA
Replace:	V3801 , if short circuit N1800 , if getting hot N1700 ,N1600 or N1701 , if getting hot
Symptom:	Current draw when powered off
Replace:	V3801 , if short circuit N1800 , if getting hot N1700 ,N1600 or N1701 , if getting hot
Symptom:	Using no current when On/Off key is pressed and will not start.
Replace:	S4807 N4800
Symptom:	Draws current when On/Off key is pressed, returns to zero
Replace:	L3900, L3903 , L3904 or L4001 , if more than 1 Ω N4003
Symptom:	Other
Replace:	X3801 , if damaged vision check all pins



Troubleshooting Flow

1.7 Charging & Capacity

Symptom:	No or bad Charging from USB
Replace:	X5200 , if damaged vision check pin 1 and 5 C5200 , if X5200 pin 1 is short circuit to GND X3801 , if damaged V3802 , if short circuit N3803 , V3803

Symptom:	Wrong Battery indicator
Replace:	N3802



Troubleshooting Flow

1.8 SIM

Symptom:	SIM not detected	
Replace:	X5100 , if damaged	vision check all pins
	V5100 , if short circuit	



Troubleshooting Flow

1.9 Camera

Symptom: Main and Sub Camera problems

Replace: **L3901**, if more than 1 Ω
N4500

Symptom: Main Camera problems

Replace: **X4500**, if damaged vision check all pins
N4401 or **N4402**

Symptom: Sub Camera problems

Replace: **X4300**, if damaged vision check pin A11-A13, A17-A20, B16-B21 and B24-B25
N4700



Troubleshooting Flow

1.10 Data Communication

Symptom:	No communication via the USB Connector, charging via USB connector is working
Replace:	X5200 , if damaged vision check pin 2 and 3 N5200 , if X5200 pin 2 or 3 is short circuit to GND Z5200 , if more than 4 Ω between pin 1-2 and pin 3-4

Symptom:	Bad Bluetooth and WLAN connection
Replace:	X2501 , if damaged X2500 , if more than 1 Ω between term A and C Z2500

Symptom:	No Bluetooth or WLAN connection
Replace:	N2501 N2500 N1200

Symptom:	No GPS connection
Replace:	W2100 , if damaged Z2101 N2100 Z2100 N1200



Troubleshooting Flow

1.11 Memory Stick / Card

Symptom:	Memory stick / Card (micro SD) not detected
Replace:	X5101 , if damaged vision check pin all pins V5102

**Troubleshooting Flow****1.12 Network & Signal**

Symptom:	Phone passes conducted (RF cable) Go / No Go test but fails radiated (wireless) Go / No Go test
Check:	X1901 for damage and replace, if necessary X1900 for damage and replace, if more than 1 Ω between A and C term
Replace:	Ant Main FPC
Action:	Rerun the phone through radiated (wireless) Go / No Go testing

Symptom:	Phone fails conducted (RF probe) Go / No Go test
Action:	Run the calibration routine

Symptom:	Fails conducted (RF probe) Go/No Go test, but passes calibration
Action:	Rerun the phone through Go/No Go testing

Symptom:	Fails any part of the calibration routine
Check:	X1900 for damage and replace, if more than 1 Ω between RF probe and C term or A and C term is short circuit then the probe is inserted.
Replace:	N1902 or N1200 , if GSM ,WCDMA or CDMA-2000 Rx fault N1800 , N1902 or N1200 , if GSM Tx fault N1600 , N1902 or N1200 ,if WCDMA Tx band 5 or 8 or CDMA-2000 Tx band Class 0 fault N1700 , N1902 or N1200 ,if WCDMA Tx band 1 fault N1701 , N1902 or N1200 ,if WCDMA Tx band 2 or 4 or CDMA-2000 Tx band Class 14 fault



2 Revision History

Rev.	Date	Changes / Comments
1	2011-03-09	Initial Release