



Sony Ericsson

# Troubleshooting Guide

## - electrical -



*ELM*  
*J10, J10i2*



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# 1 Troubleshooting Flow

**For information about troubleshooting and optional troubleshooting equipment, refer to the 'Generic Repair Manual – electrical', section 'Troubleshooting Directions'!**

## 1.1 Display

<b>Symptom:</b>	Display problem
<b>Replace:</b>	<b>X4200</b> if damaged      visual check all pins

## 1.2 Illumination

<b>Symptom:</b>	No Display illumination
<b>Replace:</b>	<b>X4200</b> if damaged      visual check B10-B11 <b>L4201</b> if more than 1 Ohm <b>C4200</b> or <b>C4203</b> if short circuit <b>N4200</b>

<b>Symptom:</b>	No Navigation keyboard illumination
<b>Replace:</b>	<b>V7010</b> if left part missing <b>V7011</b> if right part missing

<b>Symptom:</b>	No Numeric keyboard illumination
<b>Replace:</b>	<b>V7012</b> if right upper part missing <b>V7013</b> if left upper part missing <b>V7017</b> if left lower part missing <b>V7018</b> if right lower part missing

<b>Symptom:</b>	Flash LED`s problems
<b>Replace:</b>	<b>X1203</b> if damaged      visual check pin 32 <b>V2203</b> <b>N4406</b>

## Troubleshooting Flow

### 1.3 Keys and Sensors

<b>Symptom:</b>	Off key problems
<b>Replace:</b>	<b>V2475</b>
<b>Symptom:</b>	Camera problems
<b>Replace:</b>	<b>X1202</b> if damaged      visual check all pins
<b>Symptom:</b>	Volume Up problems
<b>Replace:</b>	<b>S7030</b>
<b>Symptom:</b>	Volume Down problems
<b>Replace:</b>	<b>S7029</b>
<b>Symptom:</b>	Opto Sensor problems
<b>Replace:</b>	<b>N1201</b>
<b>Symptom:</b>	Accelerometer problems
<b>Replace:</b>	<b>N2411</b>

### 1.4 Alert / RTC

<b>Symptom:</b>	Vibrator problems
<b>Replace:</b>	<b>L1003</b> or <b>L1005</b> if more than 2 Ohm
<b>Symptom:</b>	The clock gain or lose time. SERP calibrating is performed
<b>Replace:</b>	<b>B2100</b>



## Troubleshooting Flow

### 1.5 Audio

<b>Symptom:</b>	No Main Microphone
<b>Replace:</b>	<b>B3110</b>
<b>Symptom:</b>	No secondary Microphone / Digital Microphone Module
<b>Replace:</b>	<b>L3100</b> or <b>L3109</b> if more than 1 Ohm <b>B3100</b> <b>N1202</b> <b>N1204</b>
<b>Symptom:</b>	No Earphone
<b>Replace:</b>	<b>X1201</b> if damaged visual check Pin 1, 2 and 3 <b>L3103</b> or <b>L3104</b> if more than 1 Ohm
<b>Symptom:</b>	No or bad Loudspeaker
<b>Replace:</b>	<b>X1205</b> or <b>X1206</b> if damaged <b>V3101</b> if X1205 or X1206 are short circuit to GND <b>L3101</b> , <b>L3102</b> , <b>L3105</b> or <b>L3106</b> if more than 1 Ohm <b>N3100</b>
<b>Symptom:</b>	No Hands-free (PHF) Aux Microphone
<b>Replace:</b>	<b>X2405</b> if damaged visual check Pin 9 (3) and 10 (4) <b>L2401</b> or <b>L2402</b> if more than 2 Ohm <b>N3101</b>
<b>Symptom:</b>	No Hands-free (PHF) Aux Earphone
<b>Replace:</b>	<b>X2405</b> if damaged visual check Pin 11 (2) ,8 (5) and 7 (6) <b>L2403</b> , <b>L2404</b> or <b>L2406</b> if more than 2 Ohm <b>N3101</b>
<b>Symptom:</b>	No Microphone and no Earphone .Phone stuck in PHF mode when PHF is not attached
<b>Replace:</b>	<b>V2417</b> if short circuit
<b>Symptom:</b>	No Hands-free (PHF) audio .Phone not recognizes PHF set
<b>Replace:</b>	<b>X2405</b> if damaged visual check Pin 5 (8) and 4 (9)



<b>Symptom:</b>	No or bad FM Radio	
<b>Replace:</b>	<b>X2405</b> if damaged	visual check Pin 11 (2) ,5 (8) and 4 (9)
	<b>N1300</b>	

## Troubleshooting Flow

### 1.6 On/Off

<b>Symptom:</b>	Current draw greater than 300 mAmps	
<b>Replace:</b>	<b>N1200</b> if module getting hot	
	<b>N2420</b> if getting hot	
<b>Symptom:</b>	Current draw when powered off	
<b>Replace:</b>	<b>N1200</b>	
	<b>N2420</b>	
<b>Symptom:</b>	Using no current when On/Off key is pressed and will not start.	
<b>Replace:</b>	<b>X2201</b> if damaged	
<b>Symptom:</b>	Draws current when On/Off key is pressed, returns to zero	
<b>Replace:</b>	<b>L2200</b> or <b>L2202</b> if more than 1 Ohm	
	<b>N2207</b>	
	<b>N1211</b>	
	<b>N1200</b>	

### 1.7 Charging/Capacity

<b>Symptom:</b>	No Charging from power outlet	
<b>Replace:</b>	<b>X2405</b> if damaged	visual check Pin 4 (9) and 1 (12)
	<b>X2201</b> if damaged	
	<b>C2440</b> , <b>C2441</b> or <b>V2412</b> if short circuit	
	<b>V2200</b> if short circuit	
	<b>V2202</b>	
<b>Symptom:</b>	No Charging from computer via USB	
<b>Replace:</b>	<b>X2405</b> if damaged	visual check Pin 12 (1) and 4 (9)
	<b>C2439</b> if short circuit	
	<b>N2421</b>	

## Troubleshooting Flow

### 1.8 SIM

Symptom:	SIM not detected	
Replace:	<b>X4215</b> if damaged	visual check all pins

### 1.9 Camera

Symptom:	Main Camera problems	
Replace:	<b>X1203</b> if damaged	visual check all pins
	<b>N2205</b>	

Symptom:	VGA Camera problems <b>Only J10</b>	
Replace:	<b>X1503</b>	



## Troubleshooting Flow

### 1.10 Data Communication

Symptom:	No communication via the System Connector
Action:	if not charging via USB go to Charging problems
Replace:	<b>X2405</b> if damaged      visual check Pin 3 (10) and 2 (11) <b>V2415</b> if pin 3 (10) at <b>X2405</b> system connector are short circuit to GND <b>V2416</b> if pin 2 (11) at <b>X2405</b> system connector are short circuit to GND <b>Z2400</b> <b>N2420</b>
Symptom:	No or bad Bluetooth connection
Replace:	<b>W1000</b> if damaged <b>X1500</b> <b>Z1501</b> Only J10 <b>N1510</b> Only J10i2 <b>W1300</b> <b>N1300</b>
Symptom:	No or bad WLAN connection Only J10i2
Replace:	<b>W1000</b> if damaged <b>X1500</b> <b>N1510</b> <b>N1501</b> <b>N2300</b>
Symptom:	No or bad GPS connection Only J10i2
Replace:	<b>W1001</b> if damaged <b>Z1401</b> <b>B1401</b> <b>N1400</b>

### 1.11 Micro SD

Symptom:	Memory stick not detected
Replace:	<b>X4210</b> if damaged      visual check all pins <b>N4010</b>





**Troubleshooting Flow****1.12 Network/Signal**

Symptom:	Phone fails to lock on to network during radiated (wireless) Go / No Go test
Action:	Use RF probe to perform conducted Go / No Go test
Symptom:	Phone passes conducted (RF cable) Go / No Go test but fails radiated (wireless) Go / No Go test
Check:	<b>X1210</b> , <b>X1211</b> and <b>X1212</b> for damage and replace if necessary
Check:	<b>X1200</b> for damage and replace if necessary
Replace:	Antenna
Action:	Rerun the phone through radiated (wireless) Go/No Go testing
Symptom:	Phone fails conducted (RF probe) Go / No Go test
Replace:	Run the calibration routine
Symptom:	Fails conducted (RF probe) Go/No Go test, but passes calibration
Replace:	Rerun the phone through Go/No Go testing
Symptom:	Fails any part of the calibration routine
Replace:	<b>X1200</b> if damaged <b>N1211</b> or <b>N1200</b> if GSM fault <b>L1200</b> if UMTS fault and <b>L1200</b> is more than 1 Ohm <b>N1210</b> or <b>N1200</b> if UMTS fault



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## Revision History

Rev.	Date	Changes / Comments
PA1	2010-02-01	1 <sup>st</sup> release