



Sony Ericsson

# Troubleshooting Guide

## - electrical -



**Zylo**  
**W20, W20i**



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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>X2404</b> if damaged      visual check A16-A23 and B14-B22 <b>Z4000, Z4001 or Z4002</b>

## 1.2 Illumination

<b>Symptom:</b>	No Display illumination
<b>Replace:</b>	<b>X2404</b> if damaged      visual check B11-B12 <b>L4200</b> if more than 1 Ohm <b>C4006 or C4007</b> if short circuit <b>N4000</b>

<b>Symptom:</b>	No Numeric illumination
<b>Replace:</b>	<b>X2402</b> if damaged      visual check B2-B4

<b>Symptom:</b>	No Navigation keyboard illumination
<b>Replace:</b>	<b>X2404</b> if damaged      visual check A6-A9



## Troubleshooting Flow

### 1.3 Keys and Sensors

<b>Symptom:</b>	On / Off key problems	Phone starts when charger is inserted
<b>Replace:</b>	<b>X2404</b> if damaged	visual check A1 and A11
<b>Symptom:</b>	Off key problems	
<b>Replace:</b>	<b>V2410</b>	
<b>Symptom:</b>	Numeric keyboard problems	
<b>Replace:</b>	<b>X2402</b> if damaged	visual check A1 – A10
<b>Symptom:</b>	Navigation keys problems	
<b>Replace:</b>	<b>X2404</b> if damaged	visual check A12-A14 and B4-B8
<b>Symptom:</b>	Camera Shutter problems	
<b>Replace:</b>	<b>X2403</b> if damaged	visual check A8-A9
<b>Symptom:</b>	Volume Up and Down problems	
<b>Replace:</b>	<b>X2403</b> if damaged	visual check A1, A9 and A10
<b>Symptom:</b>	Slide Sensor problems	
<b>Replace:</b>	<b>X2402</b> if damaged	visual check B6-B8
<b>Symptom:</b>	Accelerometer problems	
<b>Replace:</b>	<b>N2411</b>	

### 1.4 Alert / RTC

<b>Symptom:</b>	Vibrator problems	
<b>Replace:</b>	<b>X2403</b> if damaged	visual check A1 and B7
<b>Symptom:</b>	The clock gain or lose time.	
<b>Action:</b>	<b>B2100</b> SERP calibrating are performed	



## Troubleshooting Flow

### 1.5 Audio

**Symptom:** No Microphone

**Replace:** **L3100** if more than 2 Ohm  
**B3101**

**Symptom:** No Earphone

**Replace:** **X2404** if damaged visual check A3 and A4  
**L3502** or **L3503** if more than 2 Ohm

**Symptom:** No or bad Loudspeaker

**Replace:** **X3100** or **X3101** if damaged  
**V3102** if X3100 or X3101 are short circuit to GND  
**L3500**, **L3501**, **L3504**, or **L3505** if more than 2 Ohm  
**N3100**

**Symptom:** No Hands-free (PHF) Aux Microphone

**Replace:** **X2400** if damaged visual check Pin 3 and 4  
**L2401** or **L2403** if more than 2 Ohm  
**N3101**

**Symptom:** No Hands-free (PHF) Aux Earphone

**Replace:** **X2400** if damaged visual check Pin 2 ,5 and 6  
**L2404**, **L2405** or **L3302** if more than 2 Ohm  
**N3101**

**Symptom:** No Microphone and no Earphone .Phone stuck in PHF mode when PHF is not attached

**Replace:** **V2417** if short circuit  
**N2422**

**Symptom:** No Hands-free (PHF) audio .Phone not recognizes PHF set

**Replace:** **X2400** if damaged visual check Pin 8 and 9  
**N2422**

**Symptom:** No or bad FM Radio

**Replace:** **X2400** if damaged visual check Pin 2 ,8 and 9  
**L3301** if more than 2 Ohm  
**N1300**



## 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>C4007</b> if short circuit <b>C2246</b> if short circuit <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>X3601</b> if damaged
<b>Symptom:</b>	Using no current when On/Off key is pressed and will not start. Starts when charger is inserted
<b>Replace:</b>	<b>X2404</b> if damaged      visual check A1 and A11
<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>C4006</b> if short circuit <b>N2207</b> <b>B2100</b> <b>N1211</b> <b>N1200</b>

### 1.7 Charging/Capacity

<b>Symptom:</b>	No Charging from power outlet
<b>Replace:</b>	<b>X2400</b> if damaged      visual check Pin 9 and 12 <b>X3601</b> if damaged <b>C2228</b> or <b>V2404</b> if short circuit <b>V2200</b> if short circuit <b>V2403</b>
<b>Symptom:</b>	No Charging from computer via USB
<b>Replace:</b>	<b>X2400</b> if damaged      visual check Pin 1 and 9 <b>C2225</b> if short circuit <b>N2401</b>



## Troubleshooting Flow

### 1.8 SIM

Symptom:	SIM not detected	visual check all pins
Replace:	<b>X2420</b> if damaged	

### 1.9 Camera

Symptom:	Main Camera problems	
Replace:	<b>X2403</b> if damaged <b>N4300</b> or <b>N4301</b>	visual check A1-A7 , A11-A14 and B1-B14



## 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>X2400</b> if damaged      visual check Pin 10 and 11 <b>V2415</b> if pin11 at X2400 system connector are short circuit to GND <b>V2416</b> if pin10 at X2400 system connector are short circuit to GND <b>Z2400</b> <b>N2420</b>

Symptom:	No or bad Bluetooth connection
Replace:	<b>X1301</b> or <b>X1302</b> if damaged <b>Z1300</b> <b>N1300</b>

### 1.11 Memory Stick

Symptom:	Memory stick not detected
Replace:	<b>X2401</b> if damaged      visual check all pins <b>N3000</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>X1201</b> and <b>X1202</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:	X1200 if damaged <b>N1211</b> or <b>N1200</b> if GSM fault <b>L1200</b> if UMTS fault and L1200 is more than 1 Ohm <b>N1210</b> or <b>N1200</b> if UMTS fault



## 2 Revision History

Rev.	Date	Changes / Comments
1	2010-Jun-21	Initial release
2	2010-07-05	No update
3	2011-09-20	Added C2246
4	2011-09-20	No update