



# Troubleshooting Guide

## - electrical -



*Vivaz Pro*

*U8i, U8a*

# CONTENTS

<b>1</b>	<b>Troubleshooting Flow.....</b>	<b>3</b>
1.1	Display .....	3
1.2	Illumination .....	4
1.3	Keys and Sensors .....	5
1.4	Alert / RTC .....	6
1.5	Audio .....	7
1.6	On/Off .....	8
1.7	Charging/Capacity .....	8
1.8	SIM .....	9
1.9	Camera .....	9
1.10	Data Communication .....	10
1.11	Memory Stick / Memory Card .....	10
1.12	Network/Signal .....	11
<b>2</b>	<b>Revision History .....</b>	<b>12</b>

# 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>	X2900 if damaged N4153	vision check pin A7-A23 and B7-B20

## Troubleshooting Flow

### 1.2 Illumination

<b>Symptom:</b>	No Display and Key illumination	
<b>Replace:</b>	<b>L4010</b> if more than 2 Ohm <b>V4180</b> <b>N4180</b>	
<b>Symptom:</b>	No Display illumination	
<b>Replace:</b>	<b>X2900</b> if damaged      vision check Pin B19-B20 <b>N4180</b>	
<b>Symptom:</b>	No Qwerty keys illumination	
<b>Replace:</b>	<b>V2610</b> or <b>V2611</b> <b>N4180</b>	
<b>Symptom:</b>	No Upper keys illumination	
<b>Replace:</b>	<b>X2900</b> if damaged      vision check Pin B20 and B23 <b>N4180</b>	
<b>Symptom:</b>	No Side LEDs illumination	
<b>Replace:</b>	<b>X2900</b> if damaged      vision check Pin A24 and B20 <b>N4180</b>	
<b>Symptom:</b>	No Torch LED ( White LED as autofocus assistant and movie recording assistant light source)	
<b>Replace:</b>	<b>X2100</b> if damaged      vision check Pin B3-B4 <b>N4180</b>	
<b>Symptom:</b>	No Tally LED (Red tally LED for video recording indication and self-timer indication)	
<b>Replace:</b>	<b>X2100</b> if damaged      vision check Pin B1-B2 <b>N4180</b>	
<b>Symptom:</b>	No Red Charger LED or Green Charger LED	
<b>Replace:</b>	<b>V2806</b>	

## Troubleshooting Flow

### 1.3 Keys and Sensors

<b>Symptom:</b>	Power On keys problems
<b>Replace:</b>	<b>X2100</b> if damaged      vision check Pin A16-A17
<b>Symptom:</b>	Touch Screen problems
<b>Replace:</b>	<b>X2900</b> if damaged      vision check Pin B2-B5 <b>N2620</b>
<b>Symptom:</b>	Volume Down key problems
<b>Replace:</b>	<b>X2901</b> if damaged      vision check Pin 14 and 16
<b>Symptom:</b>	Volume Up key problems
<b>Replace:</b>	<b>X2901</b> if damaged      vision check Pin 14 and 15
<b>Symptom:</b>	Auto focus and Camera key problems
<b>Replace:</b>	<b>X2901</b> if damaged      vision check Pin 12,13 and 14
<b>Symptom:</b>	Video key problems
<b>Replace:</b>	<b>X2901</b> if damaged      vision check Pin 11 and 14
<b>Symptom:</b>	Keypad Red problems
<b>Replace:</b>	<b>X2900</b> if damaged      vision check Pin A26 and B25
<b>Symptom:</b>	Keypad Green problems
<b>Replace:</b>	<b>X2900</b> if damaged      vision check pin A25 and B25
<b>Symptom:</b>	Keypad Multi problems
<b>Replace:</b>	<b>X2900</b> if damaged      vision check pin B25 and B26
<b>Symptom:</b>	Light Sensor problems (no changes in display illuminations when covering light sensors)
<b>Replace:</b>	<b>X2900</b> if damaged      vision check Pin A1-A2 and B6 <b>N4180</b>
<b>Symptom:</b>	Accelerometer problems
<b>Replace:</b>	<b>X2100</b> if damaged      vision check Pin A2 -A6
<b>Symptom:</b>	Slide Sensor problems
<b>Replace:</b>	<b>N2800</b>

## Troubleshooting Flow

### 1.4 Alert / RTC

<b>Symptom:</b>	Vibrator problems
<b>Replace:</b>	<b>B4000</b>

<b>Symptom:</b>	The clock gain or lose time. SERP calibrating is performed
<b>Replace:</b>	<b>B2000</b>



## Troubleshooting Flow

### 1.5 Audio

<b>Symptom:</b>	No Microphone
<b>Replace:</b>	<b>L5510</b> , <b>L5511</b> or <b>L5512</b> if more than 2 Ohm <b>B5500</b>

<b>Symptom:</b>	No Earphone / Ear speaker
<b>Replace:</b>	<b>X2900</b> if damaged      Vision check Pin A3-A6

<b>Symptom:</b>	No or bad Loudspeaker
<b>Replace:</b>	<b>X2901</b> if damaged      Vision check Pin 1-8 <b>N5506</b>

<b>Symptom:</b>	No Hands-free (PHF) Aux Microphone
<b>Replace:</b>	<b>L3000</b> if more than 2 Ohm <b>N3004</b>

<b>Symptom:</b>	No Hands-free (PHF) Aux Earphone / Aux Ear speaker
<b>Replace:</b>	<b>L3000</b> , <b>L3003</b> , <b>L3004</b> , <b>L3006</b> or <b>L3007</b> if more than 2 Ohm

<b>Symptom:</b>	No or bad FM Radio (PHF)
<b>Replace:</b>	<b>V3011</b>

## Troubleshooting Flow

### 1.6 On/Off

<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>X2100</b> if damaged      vision check Pin A16-A17
<b>Symptom:</b>	Draws current when On/Off key is pressed, returns to zero
<b>Replace:</b>	<b>L4000</b> and <b>L4002</b> if more than 1 Ohm <b>N4003</b> <b>B2000</b>
<b>Symptom:</b>	Other
<b>Replace:</b>	<b>X4000</b> if damaged

### 1.7 Charging/Capacity

<b>Symptom:</b>	No Charging via USB
<b>Replace:</b>	<b>X3001</b> if damaged      Vision check pin 1 and 5 <b>X4000</b> if damaged      Vision check all pins <b>L3005</b> if more than 2 Ohm <b>C3011</b> if short circuit <b>N3005</b>



## Troubleshooting Flow

### 1.8 SIM

Symptom:	SIM not detected	
Replace:	<b>X2100</b> if damaged	Vision check Pin A8-A15

### 1.9 Camera

Symptom:	Main Camera problems	
Replace:	<b>X2820</b> if damaged	vision check all pins

## Troubleshooting Flow

### 1.10 Data Communication

Symptom:	No communication via USB, charging via USB is working
Replace:	<b>X3001</b> if damaged      Vision check pin 2 ,3 and 5 <b>V3012</b> or <b>V3013</b> if short circuit to GND. <b>Z3000</b>
Symptom:	Bad Bluetooth and Wlan connection
Replace:	<b>Z1402</b> <b>N1401</b>
Symptom:	No Bluetooth or Wlan connection
Replace:	<b>N1403</b>
Symptom:	No GPS connection
Replace:	<b>L1501</b> if more than 10Ohm <b>Z1500</b> <b>Z1501</b> <b>N1500</b>

### 1.11 Memory Stick / Memory Card

Symptom:	Memory stick / Memory Card (Micro SD) not detected
Replace:	<b>X2100</b> if damaged      Vision check Pin B6-B17

## 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>X1090</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>N4003</b> if GSM fault <b>L1000</b> if more than 1 Ohm and UMTS fault <b>N1000</b> if UMTS fault



## 2 Revision History

Rev.	Date	Changes / Comments
1	2010-05-20	1 <sup>st</sup> version
2	2010-08-04	Add L1501, L4002 and update with non-available components