



Sony Ericsson

Troubleshooting Guide

- electrical -



Satio
U1a,U1i,U_1

CONTENTS

1	Troubleshooting Flow.....	3
1.1	Display	3
1.2	Illumination	4
1.3	Keys and Sensors	5
1.4	Alert and RTC	6
1.5	Audio	7
1.6	On/Off	8
1.7	Charging/Capacity	9
1.8	SIM.....	10
1.9	Camera.....	10
1.10	Data Communication	11
1.11	Memory Stick / Memory Card.....	11
1.12	Network/Signal	12
2	Revision History	13



1 Troubleshooting Flow

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

1.1 Display

Symptom:	Display problem
Replace:	X2900 if damaged vision check all pins Z2500, Z2501, Z2502, Z2503, Z2504, Z2505, Z2506 or Z2507 N2631, N2632, N2633 or N2636 N2630

Troubleshooting Flow

1.2 Illumination

Symptom: Replace:	No Display and Key illumination L4010 if more than 1 Ohm V4180 N4180
Symptom: Replace:	No Display illumination X2900 if damaged vision check A23 and B23 N4180
Symptom: Replace:	No keys illumination V4121 or V4122 N4180
Symptom: Replace:	No Camera Key Blue LED X2902 if damaged vision check B5-B7 N4180
Symptom: Replace:	No Torch LED (White LED as autofocus assistant and movie recording assistant light source) X2842 if damaged vision check A6-A8 and A10-A11 N4180
Symptom: Replace:	No Camera Cover Blue LEDs (3 blue ornament LEDs) X2842 if damaged vision check A1-A3 and A13-A15 N4180
Symptom: Replace:	No Tally LED (Red tally LED for video recording indication and self-timer indication) X2842 if damaged vision check A1-A3 and A16 N4180
Symptom: Replace:	No Flash LED (Xenon flash) X1018 if damaged X2842 if damaged vision check B1-B9 and B11-B13 X2820 if damaged vision check A9 and A13 N2802 V2802 N2803
Symptom: Replace:	No Red LEDs and Green LED on Receiver FCP (Trickle Charge LED and Charger LEDs) X2821 if damaged vision check A13-A17

Troubleshooting Flow

1.3 Keys and Sensors

Symptom:	Power On keys problems
Replace:	X2821 if damaged vision check A2 and B1-B3
Symptom:	Touch Screen problems
Replace:	X2821 if damaged vision check B14-B17
Symptom:	Volume Down key problems
Replace:	X2902 if damaged vision check B2 and B4
Symptom:	Volume Up key problems
Replace:	X2902 if damaged vision check A2 and B3
Symptom:	Mode Select key problems
Replace:	X2902 if damaged vision check A4 and A6
Symptom:	Play / view key problems
Replace:	X2902 if damaged vision check A5 and B4
Symptom:	Auto focus and Camera shutter problems
Replace:	X2902 if damaged vision check A2,A6 and B3
Symptom:	Lock key problems
Replace:	S2500
Symptom:	Light Sensor problems (no changes in display illuminations when covering light sensors)
Replace:	X2821 if damaged vision check B12-B13 N4180
Symptom:	Proximity Sensor problems (Display Illuminations does not turn off in a call when the sensor are covered)
Replace:	X2821 if damaged vision check B18-B25
Symptom:	Accelerometer problems
Replace:	N2800
Symptom:	Camera cover detect problems
Replace:	X2842 if damaged vision check B1-B3 and B10

Troubleshooting Flow

1.4 Alert / RTC

Symptom:	Vibrator problems
Replace:	B4000
Symptom:	The clock gain or lose time. SERP calibrating is performed
Replace:	B2000
Symptom:	The clock has to be set after the battery has been detached
Replace:	C4036

Troubleshooting Flow

1.5 Audio

Symptom:	No Microphone
Replace:	D5500
Symptom:	No Earphone / Ear speaker
Replace:	X2821 if damaged Vision check A23-A24
Symptom:	No or bad Loudspeaker
Replace:	L5506 or L5507 if more than 2 Ohm V5500 N5506
Symptom:	No Hands-free (PHF) Aux Microphone
Replace:	X3000 if damaged Vision check 3-4 L3000 or L3002 if more than 2 Ohm N5502
Symptom:	No Hands-free (PHF) Aux Earphone / Aux Ear speaker
Replace:	X3000 if damaged Vision check 2 and 5-6 L3001 , L3003 or L3004 if more than 2 Ohm N5502 N5500
Symptom:	No Microphone and no Earphone / Ear speaker. Phone stuck in PHF mode when PHF is not attached
Replace:	V3001 if short circuit N3000
Symptom:	No Hands-free (PHF) audio .Phone not recognizes PHF set
Replace:	X3000 if damaged Vision check 8-9 N3000
Symptom:	No FM Radio (PHF)
Replace:	X3000 if damaged N1403 N1400

Troubleshooting Flow

1.6 On/Off	
Symptom:	Current draw greater than 300 mAmps
Replace:	N1001 if module getting hot
Symptom:	Current draw when powered off
Replace:	N1001
Symptom:	Using no current when On/Off key is pressed and will not start. Starts when charger is inserted
Replace:	X2821 if damaged vision check A2 and B1-B3
Symptom:	Draws current when On/Off key is pressed, returns to zero
Replace:	L4000 , L4002 or L4005 if more than 1 Ohm L4130 or L4131 if more than 2 Ohm N4000 N4003 N4004 B2000 N1001
Symptom:	Will no power off
Replace:	V2101
Symptom:	Other
Replace:	X4000 if damaged



Troubleshooting Flow

1.7 Charging/Capacity

Symptom:	No Charging from power outlet
Replace:	X3000 or X4000 if damaged C3013 if short circuit V4001

Symptom:	No Charging from computer via USB
Replace:	X3000 if damaged C3011 if short circuit N3005

Symptom:	The clock has to be set after the battery has been detached
Replace:	C4036

Troubleshooting Flow

1.8 SIM

Symptom:	SIM not detected	
Replace:	X2842 if damaged	Vision check A19-A20 and B15-B20

1.9 Camera

Symptom:	Main and VGA / VT Camera problems	
Replace:	L4132 if more than 2 Ohm L4101 if more than 2 Ohm N4150 N4152	
Symptom:	Main Camera problems	
Replace:	X2820 if damaged	vision check all pins
Symptom:	VGA / VT Camera problems	
Replace:	X2821 if damaged	vision check A4-A13 ,A18-A21, B4-B11

Troubleshooting Flow

1.10 Data Communication

Symptom:	No communication via the System Connector
Replace:	X3000 if damaged Vision check 1 and 9-11 N3005 and C3011 if not charging via USB N3002 if pin10 or pin 11 at X3000 is short circuit to GND or VBAT. Z3000
Symptom:	Bad Bluetooth and Wlan connection
Replace:	X1401 if damaged L1404 if more than 1 Ohm N1401
Symptom:	No Bluetooth or Wlan connection
Replace:	N1403 N1400
Symptom:	No GPS connection
Replace:	L1502 if more than 1 Ohm Z1500 B1500 N1500
Symptom:	No or bad TV out
Replace:	X3000 if damaged Vision check 7-9 V3002 if short circuit N3006

1.11 Memory Stick / Memory Card

Symptom:	Memory stick / Memory Card (Micro SD) not detected
Replace:	X2600 if damaged

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:	X1010, X1011, X1012, X1013, X1014, X1015, X1016 and X1017 for damage and replace if necessary
Check:	X1000 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:	X1000 if damaged N4003 or N1001 if GSM fault N1000 or N1001 if UMTS fault



2 Revision History

Rev.	Date	Changes / Comments
1	2009-Okt-14	Initial release
2	2009-Okt-16	Template changes