



Sony Ericsson

Troubleshooting Guide

- mechanical -



Aspen
M1i, M1a

CONTENTS

1	Problem Areas	3
1.1	Power.....	3
1.1.1	Will not power on or will switch off randomly.....	3
1.2	Keys.....	4
1.2.1	Keyboard.....	4
1.2.2	Power Key	4
1.2.3	Volume Key	5
1.3	Display.....	6
1.3.1	Graphics & Illumination	6
1.3.2	Touch Screen malfunction.....	6
1.4	Key Illumination.....	8
1.4.1	Keyboard.....	8
1.5	Audio	9
1.5.1	Microphone	9
1.5.2	Receiver.....	10
1.5.3	Loudspeaker	11
1.6	Vibrator.....	12
1.6.1	Vibrator not generating alerts	12
1.7	Camera	13
1.7.1	Camera defects.....	13
1.8	SIM.....	14
1.8.1	SIM not detected.....	14
1.8.2	Incorrect SIM indicated	14
1.9	Memory Card	15
1.9.1	Memory Card not detected	15
1.10	Real Time Clock.....	16
1.10.1	Real Time Clock test fails	16
1.11	Charging.....	17
1.11.1	Battery will not charge	17
1.12	Data Communication	18
1.12.1	Data transfer via Micro USB Connector fails	18
1.13	HandsFree by Wire.....	19
1.13.1	Connection to Portable HandsFree fails.....	19
1.14	Bluetooth, W-LAN, GPS	20
1.14.1	Bluetooth, W-LAN, GPS malfunctions	20
1.15	FM Radio	21
1.15.1	No/Poor FM Radio reception	21
1.16	Network & Signal.....	22
2	Revision History	23

1 Problem Areas

1.1 Power

1.1.1 Will not power on or will switch off randomly

Check:

Check whether the phone Vibrates and the Keyboard illuminates after the power key is depressed

Action:

If activation of the Vibrator and Keyboard illumination is detected, refer to section 1.3 'Display'



Check:

Inspect the contact pads on the Battery.

Action:

1. If dirty or oxidized – clean the pads
2. If damaged – replace the Battery.



Check:

Inspect the Battery Connector

Action:

1. If dirty or oxidized – clean the connector
2. If adhesive is detected on the contact pins, use an eraser to gently rub off the adhesive.
3. If damaged – send to higher level of repair



Problem Areas

1.2 Keys

1.2.1 Keyboard

Check:

Inspect the Keyboard

Action:

1. If clogged – clean it.

2. If damaged – replace it.



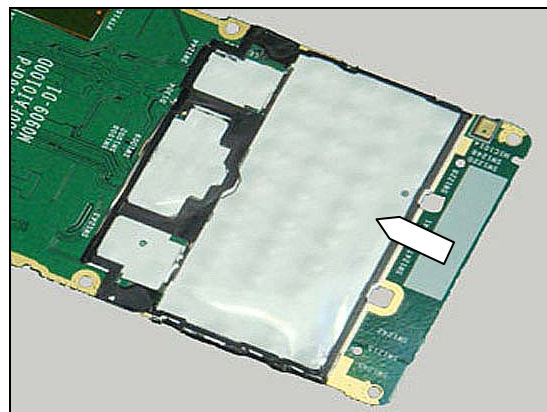
Check:

Inspect the Dome Sheet

Action:

1. If clogged – clean it.

2. If damaged – replace it.



1.2.2 Power Key

Check:

Inspect the Power Key

Action:

1. If dirty – clean it.



Problem Areas

2. If damaged – replace it.
3. Send to the higher level of repair.



1.2.3 Volume Key

Check:

Inspect the Volume Key

Action:

1. If dirty– clean it.



2. If damaged – replace it.
3. Send to the higher level of repair.



Problem Areas

1.3 Display

1.3.1 Graphics & Illumination

Check:

Check whether the phone vibrates and the Keyboard illuminates after the power key has been pressed

Action:

If activation of the Vibrator and the Keyboard illumination is not detected, refer to section 1.1 'Power'.

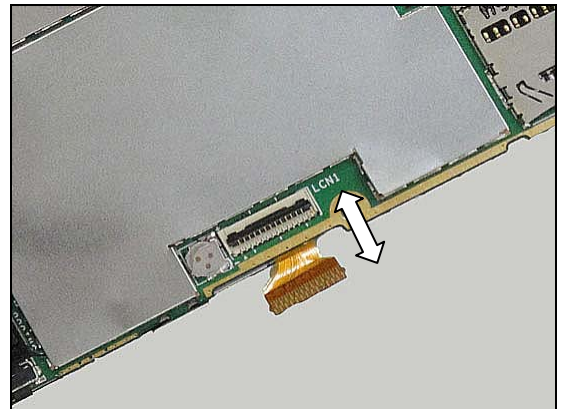


Check:

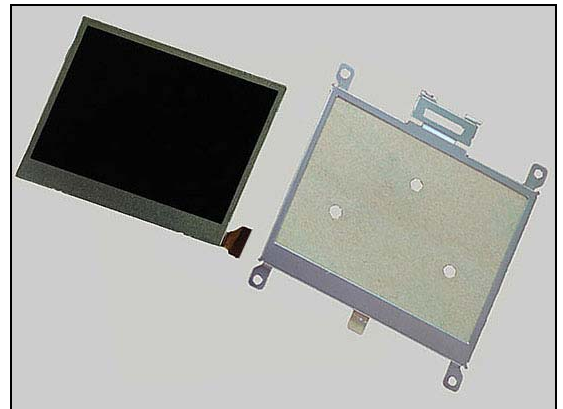
The connection between Display and PCBA.

Action:

1. If not properly connected – Disconnect and reconnect.
2. If dirty or oxidized – Clean the FPC pads.



3. If the FPC damaged – Replace the LCD and LCM shielding together.
4. Send to higher level of repair.



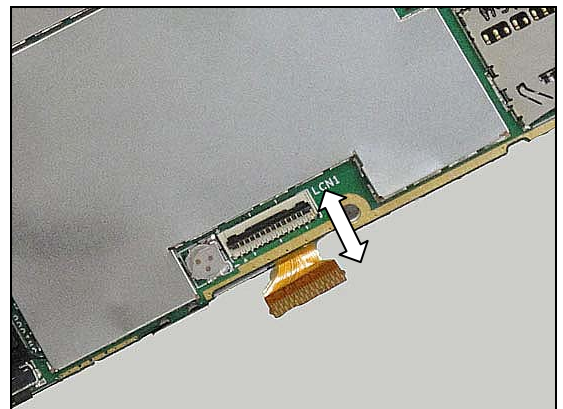
1.3.2 Touch Screen malfunction

Check:

Check the connection between Display and Main PCBA.

Action:

1. If not properly connected – Disconnect and reconnect.
2. If dirty or oxidized – Clean the FPC pads.



Problem Areas

Check:

Inspect the Front Cover Assy.

Action:

1. If damaged – Replace it.
2. Send to higher level of repair.



Problem Areas

1.4 Key Illumination

1.4.1 Keyboard

Check:

Inspect the Keyboard

Action:

1. If clogged – clean it.

2. If damaged – replace it.

Check:

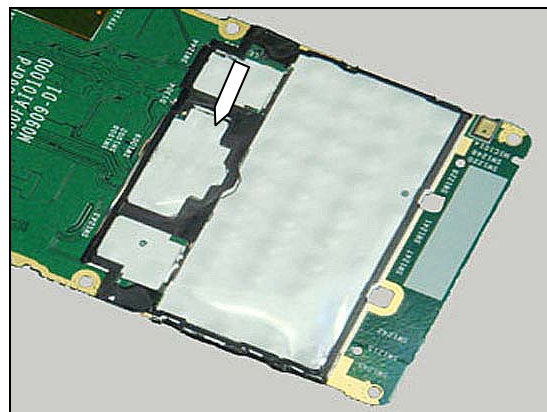
Inspect the Dome Sheet

Action:

1. If clogged – clean it.

2. If damaged – replace it.

3. Send to higher level of repair.



Problem Areas

1.5 Audio

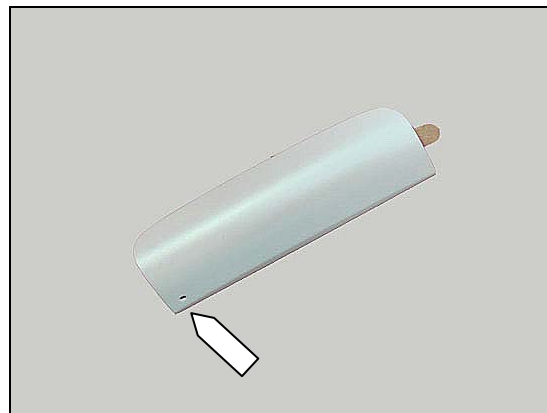
1.5.1 Microphone

Check:

Inspect the Microphone's external from outside.

Action:

If clogged – clean the port

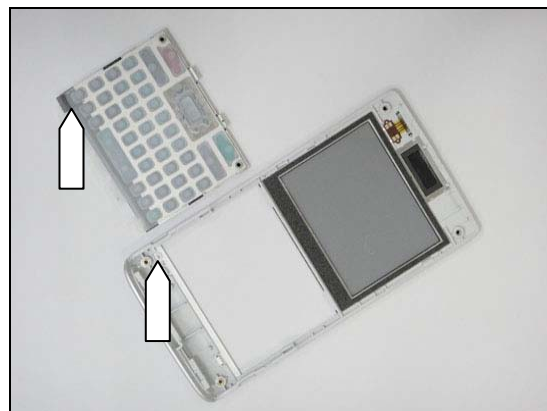


Check:

Inspect the MIC Mesh.

Action:

If damaged – replace the MIC Mesh.

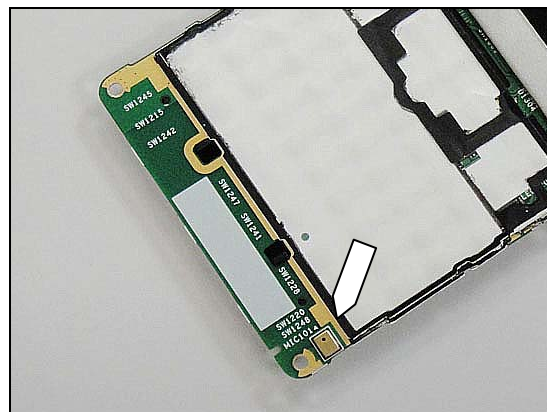


Check:

Inspect the Microphone on the PCBA.

Action:

1. If dirty or oxidized – clean it.
2. Send to higher level of repair.



Problem Areas

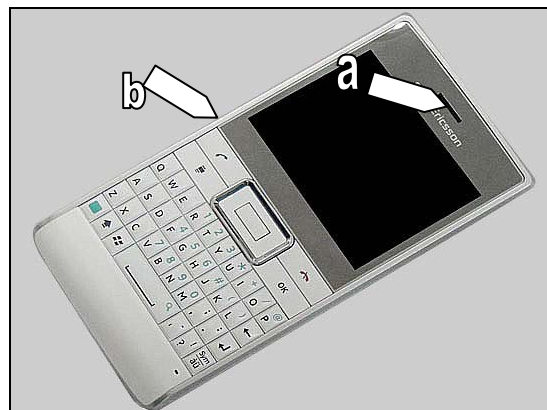
1.5.2 Receiver

Check:

Inspect the Receiver's external port (a)

Action:

1. If clogged – clean it or replace the Front Cover Assy(b)

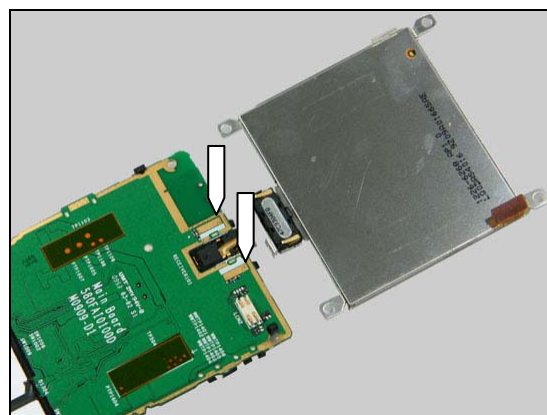


Check:

Inspect the PCB pads

Action:

1. If dirty or oxidized – Clean the pads on PCBA.

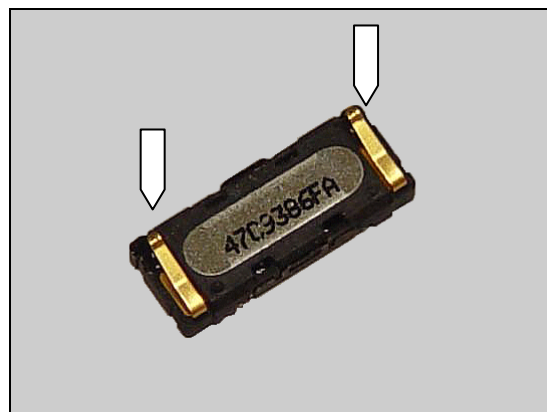


Check:

Inspect the Pins of Receiver

Action:

1. If dirty or oxidized – Clean the pins of Receiver.
2. If damaged – replace it.



Problem Areas

1.5.3 Loudspeaker

Check:

Inspect the Loudspeaker's external port

Action:

1. If clogged – clean the speaker port.
2. Replace the Rear Cover.

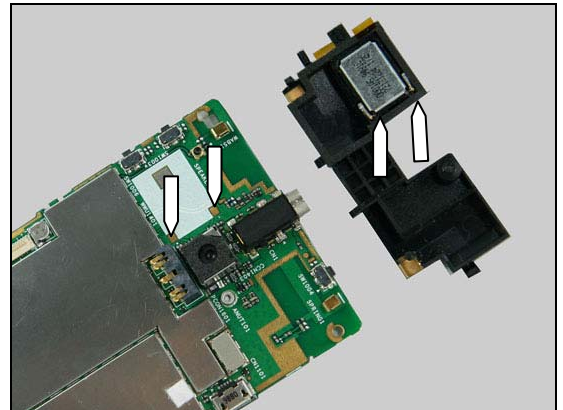


Check:

Inspect the pads of PCBA and the pins on Speaker

Action:

1. If dirty or oxidized – Clean the pads on PCBA and pins on speaker.
2. If speaker damaged –Replace the Speaker.
3. Send to higher level of repair



Problem Areas

1.6 Vibrator

1.6.1 Vibrator not generating alerts

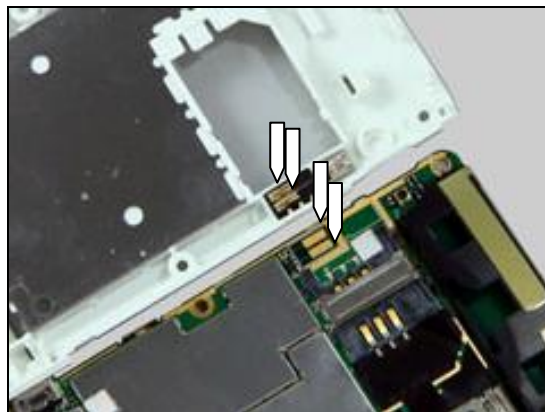
Check:

Inspect the pins of Vibrator and pads on PCBA and pins on Vibrator.

Action:

1. If dirty or oxidized – Clean the pads on PCBA and pins on Vibrator.

2. If Vibrator damaged – Replace the vibrator.



Problem Areas

1.7 Camera

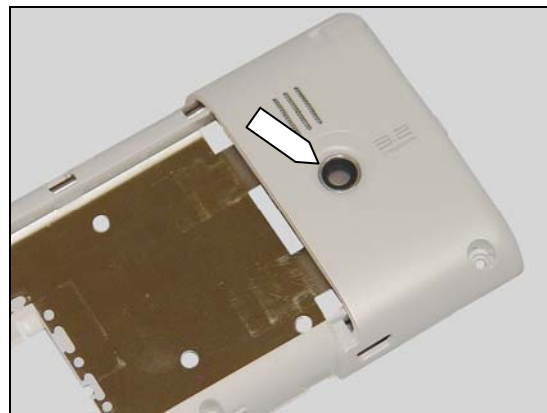
1.7.1 Camera defects

Check:

Inspect the camera window

Action:

1. If dirty – clean the window

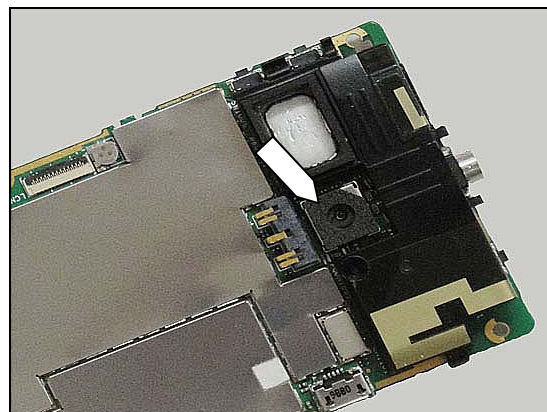


2. If scratched or damaged – replace the Rear Cover



3. If Camera damaged – Replace the Camera

4. Send to higher level of repair



Problem Areas

1.8 SIM

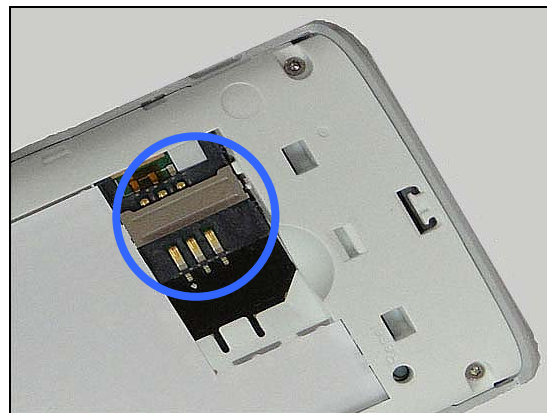
1.8.1 SIM not detected

Check:

Inspect the SIM Card holder

Action:

1. If dirty or oxidized – clean the holder
2. If adhesive is detected – use an eraser to gently rub off the adhesive.
3. Send to higher level of repair



1.8.2 Incorrect SIM indicated

Check:

Check whether the phone is locked to a particular operator and whether the correct operator SIM is being used

Action:

1. Use a proper operator SIM or test SIM
2. Send to higher level of repair



Problem Areas

1.9 Memory Card

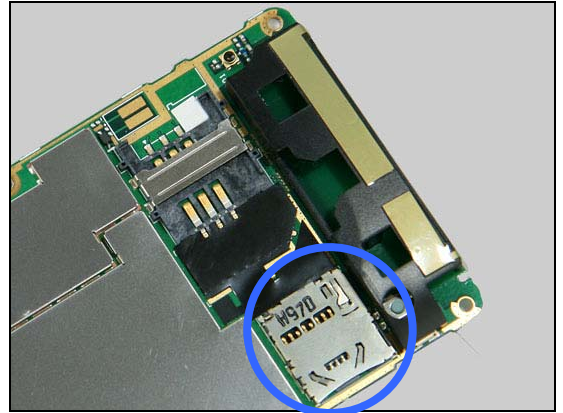
1.9.1 Memory Card not detected

Check:

Inspect the Memory Card holder

Action:

1. If dirty or oxidized – clean the holder
2. If adhesive is detected – use an eraser to gently rub off the adhesive.
3. Send to higher level of repair



Problem Areas

1.10 Real Time Clock

1.10.1 Real Time Clock test fails

Action:

Send to higher level of repair.

Problem Areas

1.11 Charging

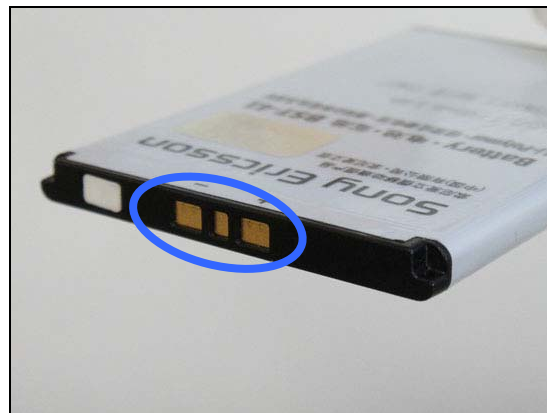
1.11.1 Battery will not charge

Check:

Inspect the contact pads of the Battery

Action:

1. If dirty or oxidized – clean the pads
2. If damaged – replace the Battery



Check:

Inspect the Micro USB connector

Action:

1. If dirty or oxidized – clean the connector
2. If adhesive is detected on the contact pins, use an eraser to gently rub off the adhesive



Check:

Inspect the Battery Connector

Action:

1. If dirty or oxidized – clean the connector
2. If adhesive is detected on the contact pins, use an eraser to gently rub off the adhesive
3. If damaged – send to higher level of repair.



Problem Areas

1.12 Data Communication

1.12.1 Data transfer via Micro USB Connector fails

Make sure the settings parameter is correct firstly!

Check:

Inspect the Micro USB connector

Action:

1. If dirty or oxidized – clean the connector.
2. If damaged – Send to higher level of repair.



Problem Areas

1.13 HandsFree by Wire

1.13.1 Connection to Portable HandsFree fails

Check:

Inspect the Audio Jack Connector

Action:

1. If dirty or oxidized – clean the connector.
2. Send to higher level of repair.



Problem Areas

1.14 Bluetooth, W-LAN, GPS

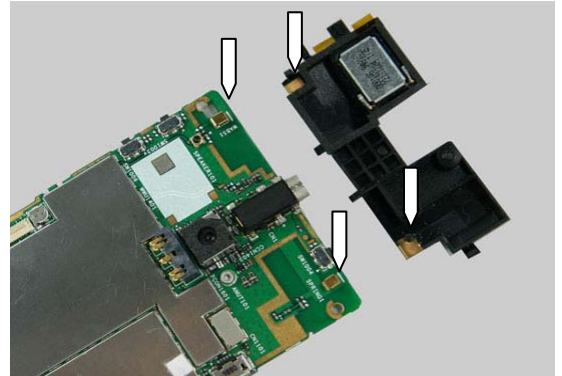
1.14.1 Bluetooth, W-LAN, GPS malfunctions

Check:

Inspect the antenna contact pad/pin on the Main PCBA and the Speaker Box Assy.

Action:

1. If dirty or oxidized – clean the pads on PCBA and pins of Speaker Box Assy.
2. If damaged – Replace the Speaker Box Assy
3. Send to higher level of repair.



Problem Areas

1.15 FM Radio

1.15.1 No/Poor FM Radio reception

Check:

Inspect the Audio Jack

Action:

1. If dirty or oxidized – clean Audio Jack
2. Send to higher level of repair



Problem Areas

1.16 Network & Signal

1.16.1 No/Poor signal

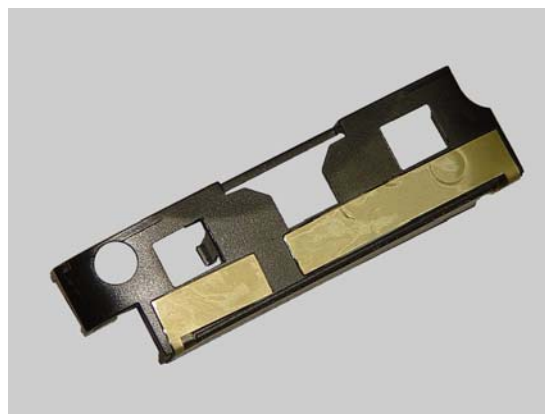
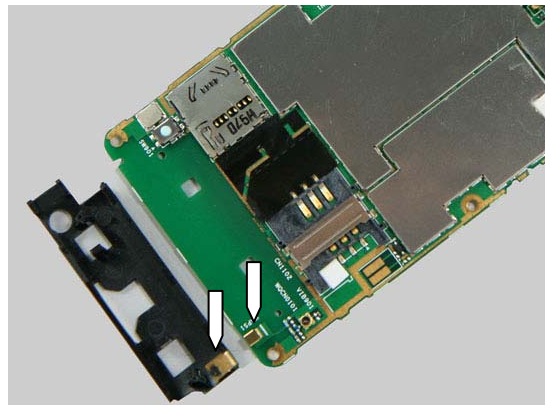
Check:

Ensure that a correct SIM is installed

Inspect the contact pads/pins on the Antenna.

Action:

1. If dirty or oxidized – clean the contact pads/pins on the Antenna.
2. If damaged – Replace the Antenna.
3. Send to higher level of repair.





2 Revision History

Rev.	Date	Changes / Comments
1	2010-Jun-14	Initial release
2	2010-Jun-22	No Update
3	2010-Sep-07	Delete the sentence “Send to the higher level of repair” in Keyboard failure, Receiver failure and Vibrator failure