



Troubleshooting Guide

- mechanical -



Xperia™ X8

E15i, E15a, E16i, E16a



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1 Problem Areas

1.1 Power

1.1.1 Will not power on or will switch off randomly

Check:

Check whether the phone vibrates after the lock/onoff key is depressed.

Action:

If activation of the vibrator is detected, refer to section 1.4 '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 contact pins.

Action:

If dirty or oxidized – clean the contact pins.

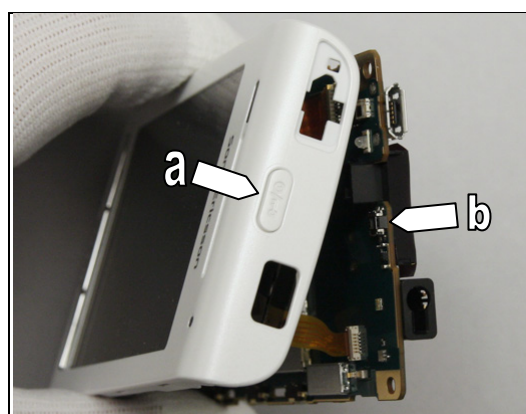


Check:

Inspect the lock/onoff key (a) on the Cover Front assy and the switch (b) on the Main PBA.

Action:

1. If the lock/onoff key (a) or switch (b) is dirty or clogged – clean them.





Problem Areas: Power

2. If the lock/onoff key is damaged – replace the Cover Front assy.
3. Send to higher level of repair.



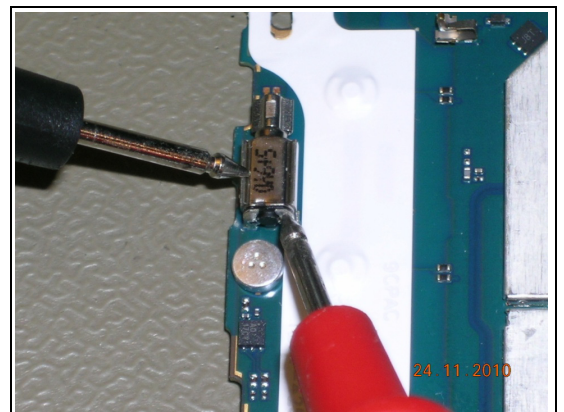
1.1.2 Low battery performance

If the customer complains on low battery performance:
Perform **VBAT measurement** if possible.

VBAT Measurement:

Set the instrument to Ohm(Ω) measurement
Connect the red probe to Vibrator +
Connect the black probe to Vibrator GND.

If less than 20 k Ω the PBA is faulty
Send to higher level of repair.



Problem Areas

1.2 Keys

1.2.1 Front keys

Check:

Inspect the Keys Front in the Cover Front assy.



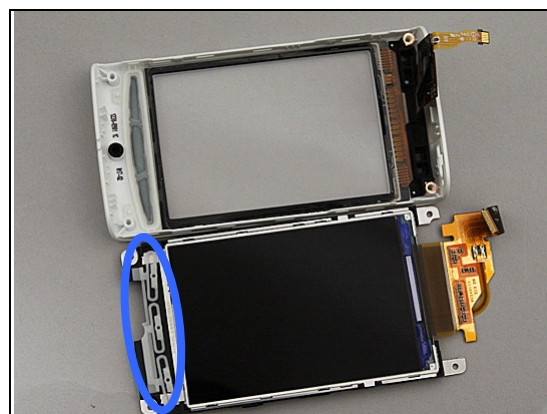
Action:

1. If the Keys Front are clogged – clean them
2. If they are damaged – replace Keys Front.



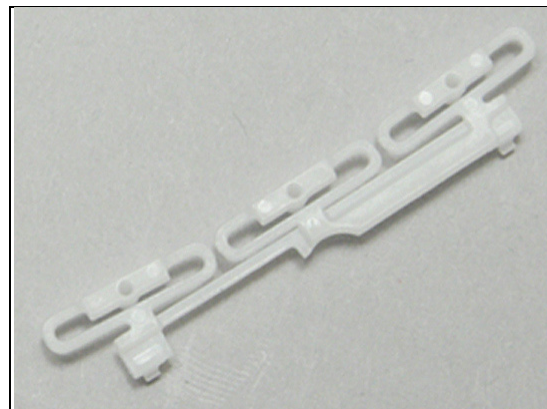
Check:

Inspect the Front Key Activator.



Action:

1. If the Front Key Activator is dirty or clogged – clean it
2. If it is damaged – replace the Front Key Activator.

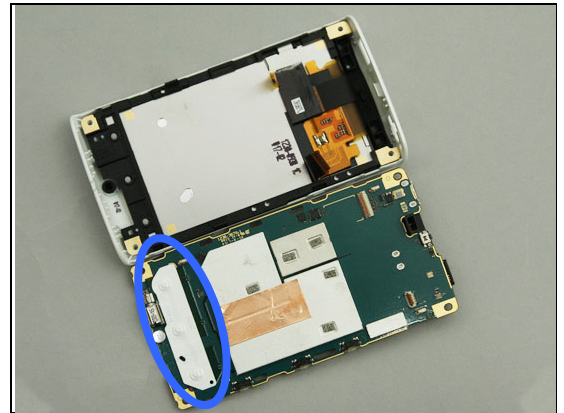




Problem Areas: Keys

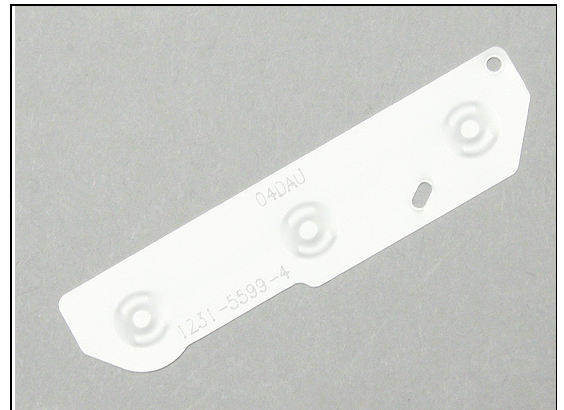
Check:

Inspect the Dome Sheet on the Main PBA.



Action:

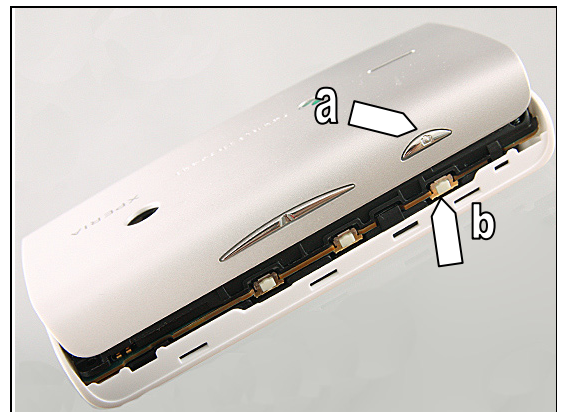
1. If the Dome Sheet is damaged – replace it.
3. Send to higher level of repair.



1.2.2 Camera key

Check:

Inspect the camera key (a) on the Cover Rear and the switch (b) on the Main PBA.



Action:

1. If they are dirty or clogged – clean the Key Side and the switch.
2. If the camera key is damaged – replace the Keys Side.
3. Send to higher level of repair

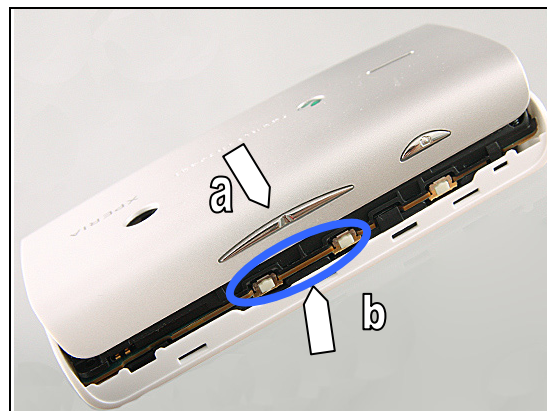


Problem Areas: Keys

1.2.3 Volume key

Check:

Inspect the volume key (a) on the Cover Rear and the switches (b) on the Main PBA.



Action:

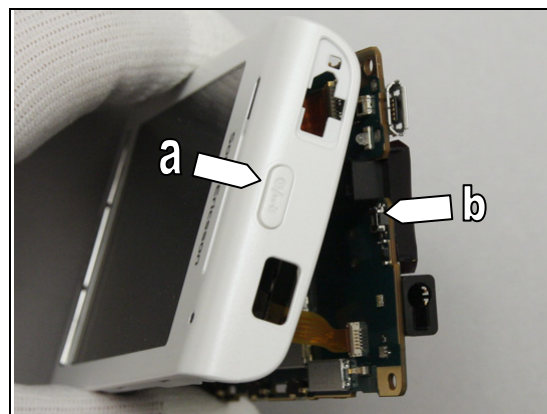
1. If they are dirty or clogged – clean the Key Side and the switches.
2. If the volume key is damaged – replace the Keys Side.
3. Send to higher level of repair



1.2.4 Lock/onoff key

Check:

Inspect the lock/onoff key (a) on the Cover Front assy and the switch (b) on the Main PBA.



Action:

1. If they are dirty or clogged – clean the key and the switch.
2. If the lock/onoff key is damaged – replace the Cover Front assy.
3. Send to higher level of repair.





Problem Areas

1.3 Touch Screen

1.3.1 Touch screen malfunction

Check:

Inspect the touch screen of the Cover Front assy.



Action:

1. If dirty – clean it
2. If the touch screen is damaged – replace the Cover Front assy.

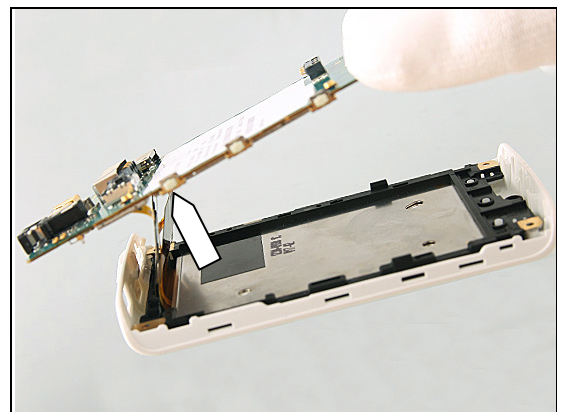


Check:

Inspect the ZIF connector of the Cover Front assy to the Main PBA.

Action:

1. If not properly connected – disconnect and reconnect
2. If dirty or oxidized – clean the ZIF connector.

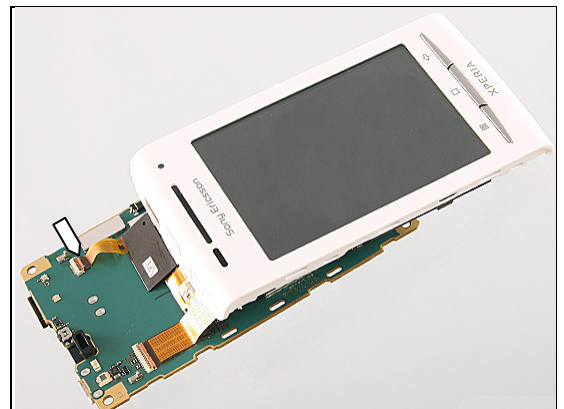


Check:

Inspect the flex film for the touch screen on the Cover Front assy.

Action:

1. If the flex film for the touch screen is damaged – replace the Cover Front assy.
2. Send to higher level of repair.





Problem Areas

1.4 Display

1.4.1 Graphics & Illumination

Check:

Check whether the phone vibrates after the lock/onoff key has been pressed.

Action:

If the activation described above is not detected, refer to section 1.1 'Power'.

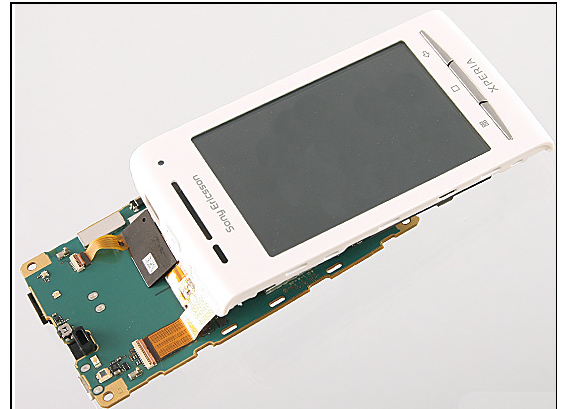


Check:

Inspect the ZIF connector of the Display 3.0 TFT to the Main PBA.

Action:

1. If not properly connected – disconnect and reconnect
2. If dirty or oxidized – clean the ZIF connector.

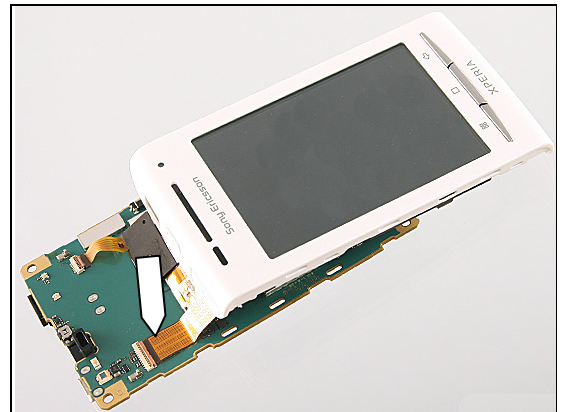


Check:

Inspect the flex film and the Display 3.0 TFT.

Action:

1. If the flex film or the Display is damaged – replace the Display 3.0 TFT.
2. Send to higher level of repair.



Problem Areas

1.5 LED/Illumination

1.5.1 LED/Illumination

Check:

Inspect the external port of LED red/green/blue on the Cover Front Assy.

Action:

1. If dirty – clean it.
2. If the external port is damaged – replace the Cover Front Assy.
3. If the LED is damaged – send to higher level of repair.





Problem Areas

1.6 Speaker

1.6.1 Speaker

Check:

Inspect the Speaker's external port on the Cover Rear.

Action:

If clogged or damaged – clean the speaker port or replace the Cover Rear.



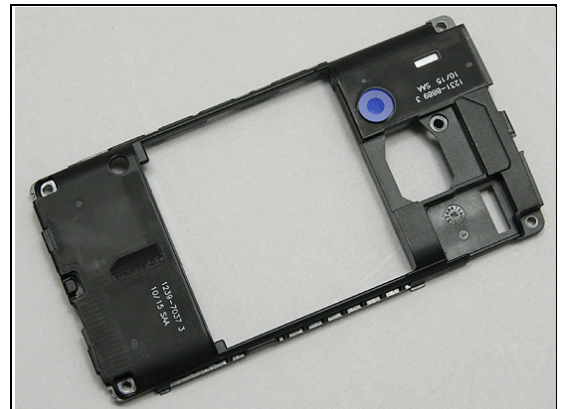
Check:

Inspect the Speaker's mesh on the Inner Frame.



Action:

1. If clogged – clean the speaker mesh.
2. If the mesh is damaged – replace the Inner Frame.



Check:

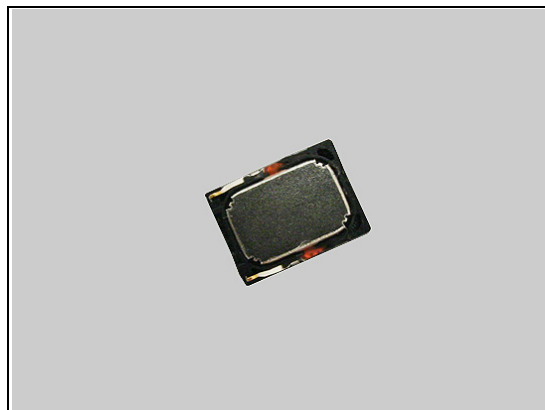
Inspect the Speaker's pins and the pads on the Main PBA.



Problem Areas: Speaker

Action:

1. If dirty – clean them.
2. If the Speaker or its pins are damaged – replace the Speaker.
3. Send to higher level of repair.



Problem Areas

1.7 Earphone

1.7.1 Earphone

Check:

Inspect the Earspeaker's external port and mesh on the Cover Front Assy.



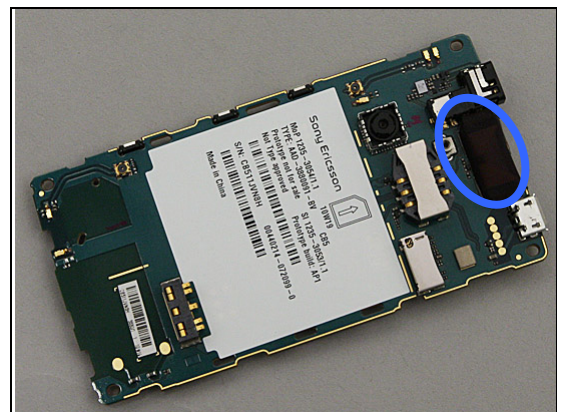
Action:

1. If clogged – clean it.
2. If the mesh is damaged – replace the Cover Front Assy.



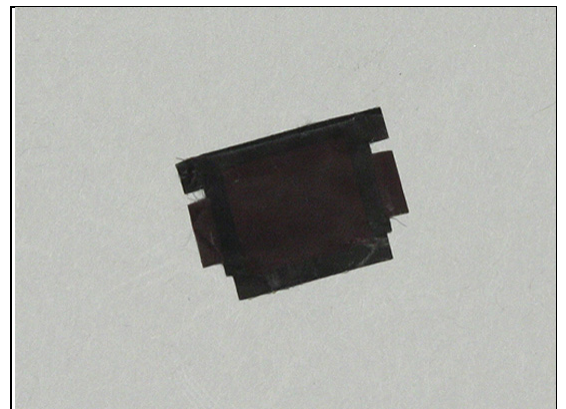
Check:

Inspect the Mesh Earspeaker on the Main PBA.



Action:

If it is clogged or damaged – replace the Mesh Earspeaker.



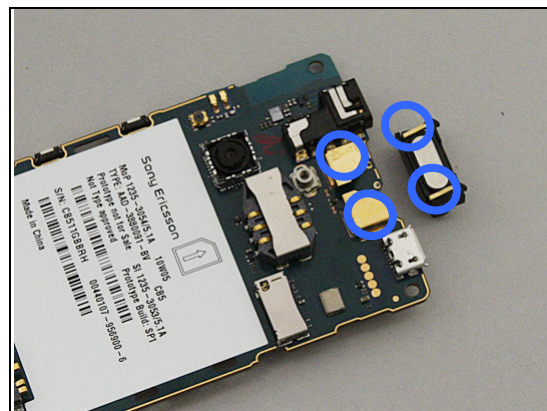
Problem Areas: Earphone

Check:

Inspect the Earspeaker pins and the clips on the Main PBA.

Action:

If dirty – clean them.

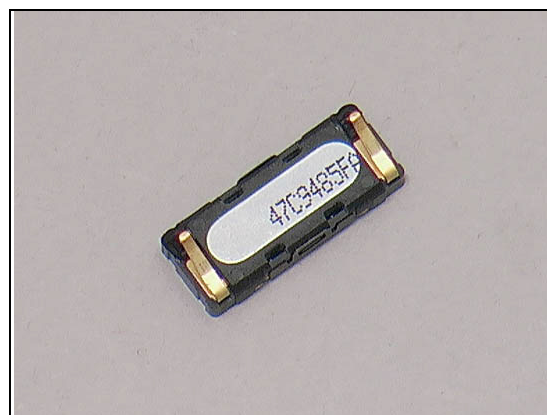


Check:

Inspect the Earspeaker.

Action:

1. If it is damaged – replace the Earspeaker.
2. Send to higher level of repair.





Problem Areas

1.8 Microphone

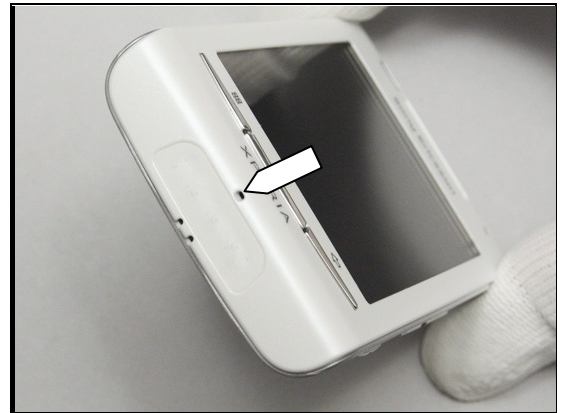
1.8.1 Microphone

Check:

Inspect the Microphone's external port on the Cover Front assy.

Action:

1. If clogged – clean the port.



Check:

Inspect the Grommet Mic inside the Cover Front assy.

Action:

1. If it is clogged or damaged – replace the Grommet Mic.



2. If the front is damaged – replace the Cover Front assy.
3. Send to higher level of repair.



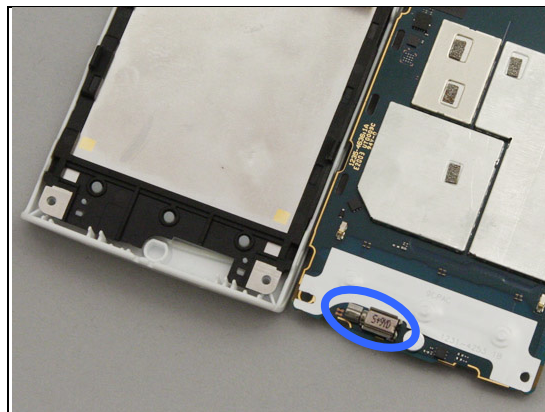
Problem Areas

1.9 Vibrator

1.9.1 Vibrator not generating alerts

Action:

Send to higher level of repair.



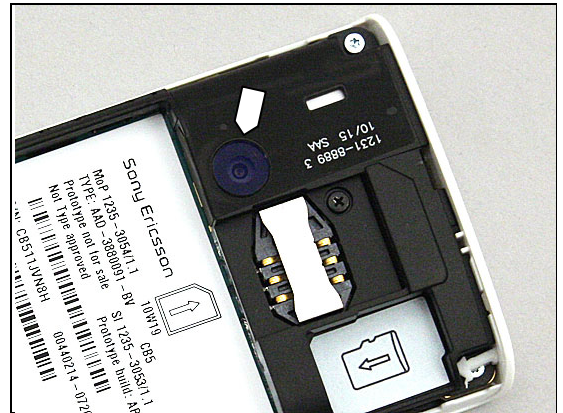
Problem Areas

1.10 Camera

1.10.1 Camera defects

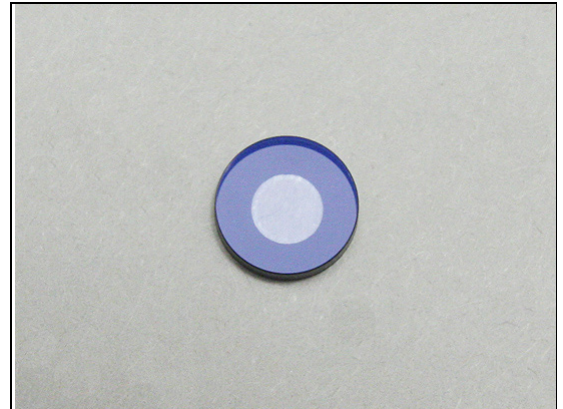
Check:

Inspect the Window Camera on the Inner Frame.



Action:

1. If dirty – clean the Window Camera.
2. If scratched or damaged – replace the Window Camera and the Adhesive Camera Window.

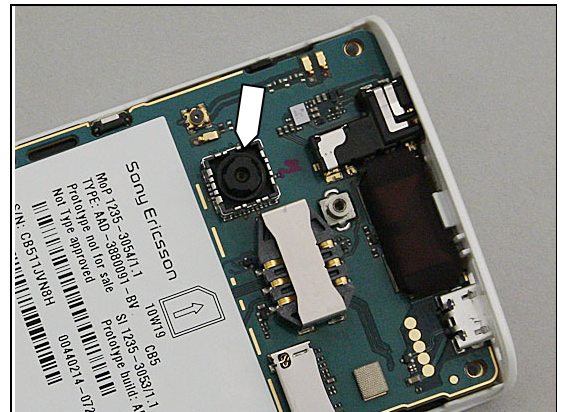


Check:

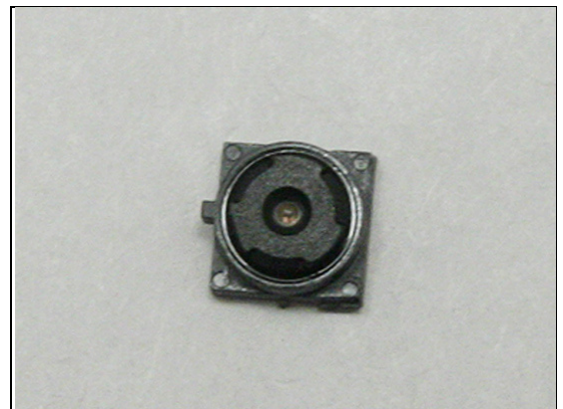
Inspect the Camera 3 MPixel and the camera socket on the Main PBA.

Action:

1. Remove the old Camera.
2. If the socket or the camera pads are dirty or dusty – blow or clean them.
3. Reinstall the **old** Camera.
4. Press the Camera to secure its position.



5. Test if the old camera now is working ...
6. If not – replace the Camera 3 MPixel with a new one.
7. Send to higher level of repair.



Problem Areas

1.11 Flash LED

1.11.1 Flash LED not flashing

Not Applicable. This product does not have a Flash LED.



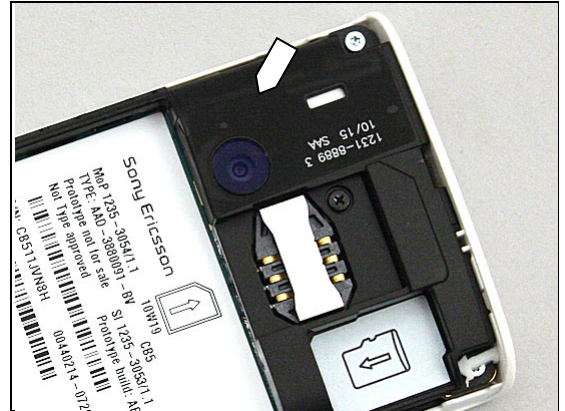
Problem Areas

1.12 Bluetooth and WLAN

1.12.1 Bluetooth, WLAN or GPS connection failure

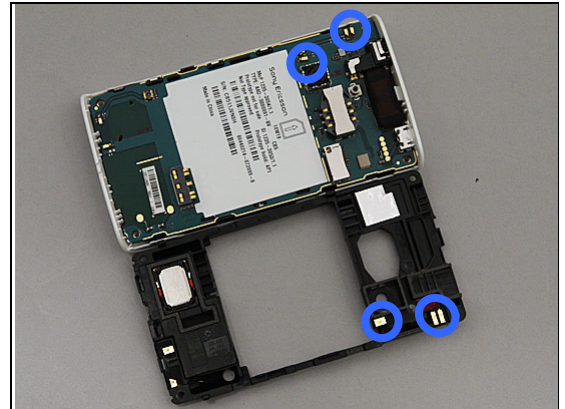
Check:

Inspect the Bluetooth /WLAN/GPS antenna on the Inner Frame.



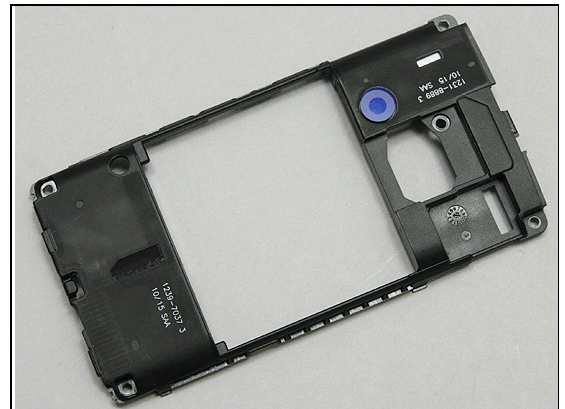
Check:

Inspect the Bluetooth /WLAN/GPS antenna contact pads on the Inner Frame and the contact pins on the Main PBA.



Action:

1. If dirty or oxidized – clean the pads and pins.
2. If the pads are damaged – replace the Inner Frame.
3. Send to higher level of repair.



Problem Areas

1.13 Compass

1.13.1 Compass fails

Action:

Send to higher level of repair.

Problem Areas

1.14 Accelerometer

1.14.1 Accelerometer test fails

Action:

Send to higher level of repair.

Problem Areas

1.15 Proximity switch

1.15.1 Proximity malfunctions

Check:

Inspect the Proximity external port on the Cover Front assy.

Action:

1. If clogged – clean external port.
2. If scratched or damaged – replace the Cover Front assy.

3. If the Proximity sensor is damaged – send to higher level of repair.



Problem Areas

1.16 Real Time Clock

1.16.1 Real Time Clock test fails

Action:

Send to higher level of repair.



Problem Areas

1.17 Total call time

1.17.1 Total call time fails

Action:

Send to higher level of repair.

Problem Areas

1.18 External Memory

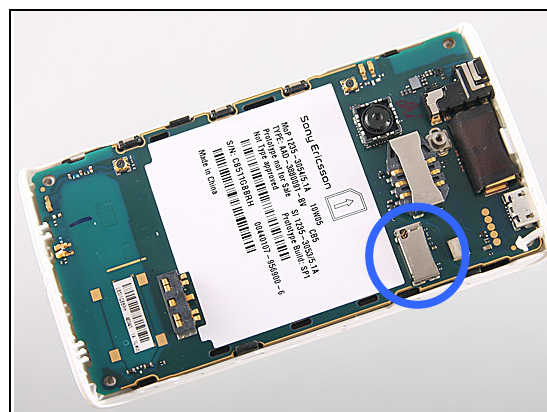
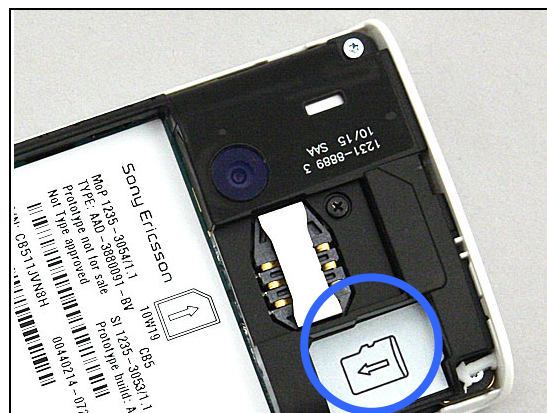
1.18.1 Memory Card not detected

Check:

Inspect the Memory Card holder and check if a memory card can be properly inserted.

Action:

1. If dirty or clogged – clean the holder.
2. Send to higher level of repair.



Problem Areas

1.19 Security

1.19.1 Security fails

Action:

Send to higher level of repair.

Problem Areas

1.20 FM Radio

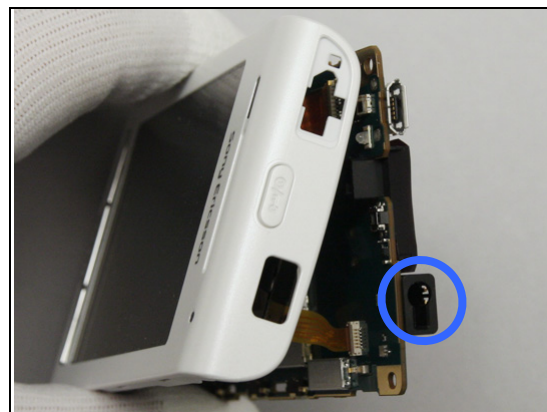
1.20.1 No/Poor FM Radio reception

Check:

Inspect the audio jack.

Action:

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



Problem Areas

1.21 Battery Test

1.21.1 Battery Test fails

Not Applicable

Problem Areas

1.22 Flip slider counter

1.22.1 Flip slider counter fails

Not Applicable. This isn't a slider phone.

Problem Areas

1.23 Network & Signal

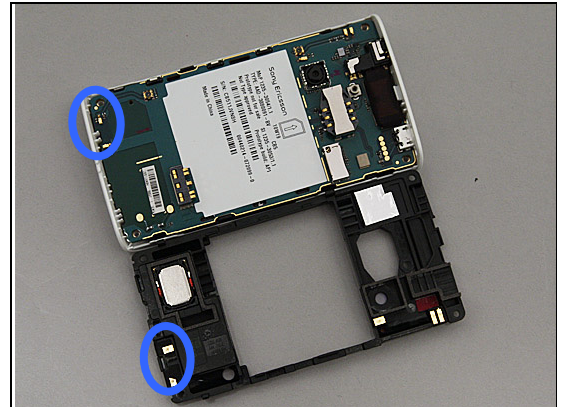
1.23.1 No/Poor signal

Check:

Inspect the Main Antenna on the Inner Frame.



Inspect the Main Antenna contact pads on the Inner Frame and the contact pins on the Main PBA.



Action:

1. If dirty or oxidized – clean the pads and pins.
2. If the antenna or the pads are damaged – replace the Inner Frame.
3. Send to higher level of repair.



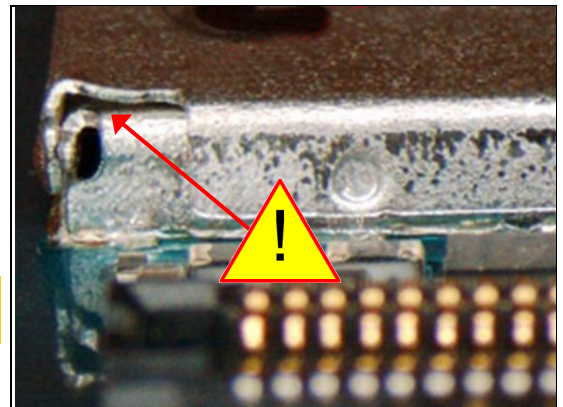
Check:

Inspect the shielding can lids and secure that all sides are completely sealed and that there aren't any gaps.

Action:

1. If there is a gap on any side, replace the shield can lid.

If you remove a shield can lid you must always replace the lid with a new lid.



Problem Areas: Network & Signal

Perform **VBAT measurement** if possible.

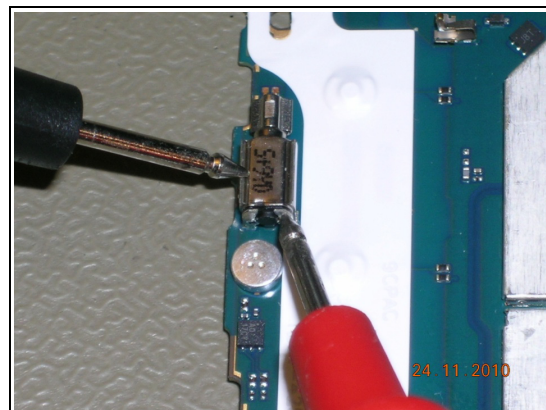
Set the instrument to Ohm(Ω) measurement

Connect the red probe to Vibrator +

Connect the black probe to Vibrator GND.

If less than 20 k Ω the PBA is faulty.

Send to higher level of repair.



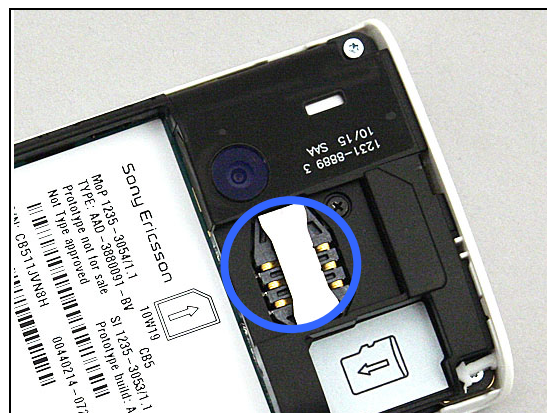
Problem Areas

1.24 SIM

1.24.1 SIM not detected

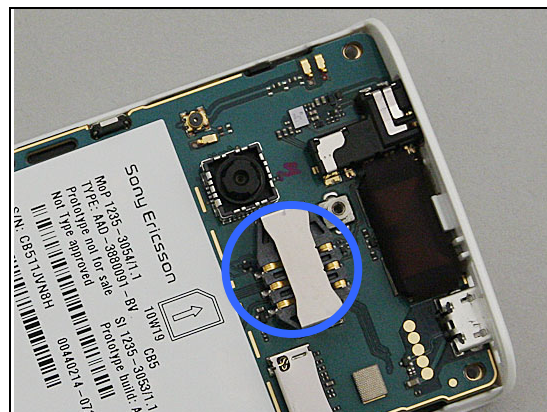
Check:

Inspect the SIM holder and check if a SIM card can be properly inserted.



Action:

1. If dirty or clogged – clean the holder.
2. Send to higher level of repair.



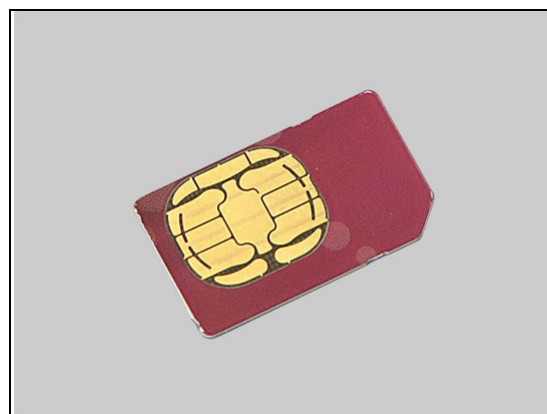
1.24.2 Incorrect SIM indicated

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

1.25 Charging

1.25.1 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 Battery contact pins.

Action:

If dirty or oxidized – clean the contact pins.



Check:

Inspect the USB connector.

Action:

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



Problem Areas

1.26 HandsFree by Wire

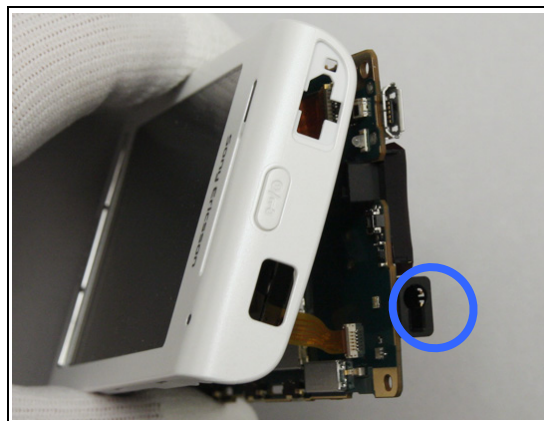
1.26.1 Connection to Portable HandsFree fails

Check:

Inspect the audio jack.

Action:

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



Problem Areas

1.27 Data Communication

1.27.1 Data transfer via System Connector fails

Check:

Inspect the USB connector.

Action:

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



Problem Areas

1.28 Sensors

1.28.1 Light Sensor malfunctions

Check:

Inspect the Light Sensor external port on the Cover Front assy.

Action:

1. If clogged – clean it.
2. If damaged – replace the Cover Front assy.

3. If the light sensor is damaged – send to higher level of repair.





2 Revision History

Rev.	Date	Changes / Comments
1	2010-Sept-27	Initial release
2	2010-Nov-11	Instruction regarding shield can lids added to Network & Signal
3	2010-Dec -01	Added instruction regarding VBAT measurement in the chapter <i>Power</i> Added instruction regarding VBAT measurement in the chapter <i>Network & Signal</i>
4	2011-May-16	Two new commercial models included - E16i and E16a Added chapter <i>Flash LED</i> and <i>Flip slider counter</i> . Abduced the Battery test. Updated the instruction the chapter Camera.