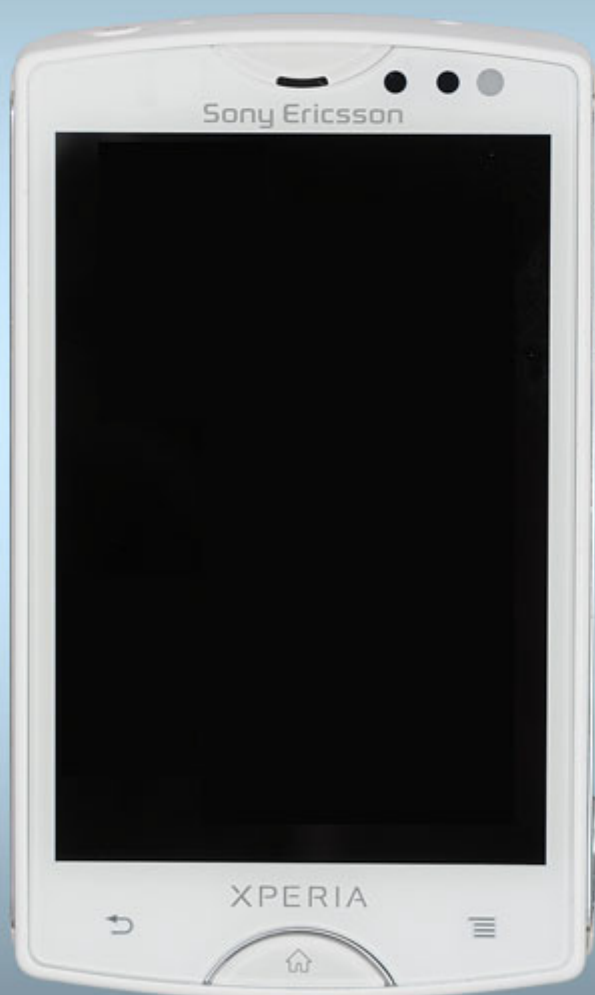




Sony Ericsson

# Troubleshooting Guide

## - mechanical -



*Xperia™ mini*

*ST15i, ST15a, S51SE*



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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 Key On/Off 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.

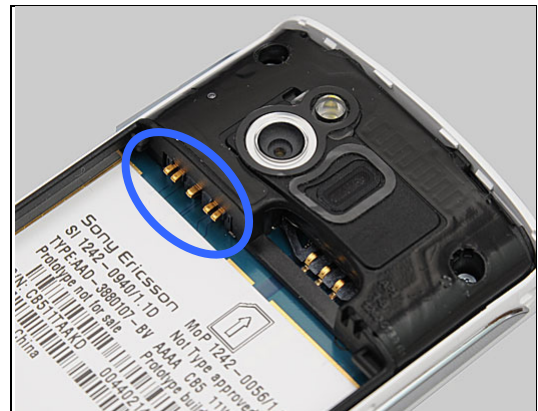


**Check:**

Inspect the Battery Contact pins.

**Action:**

If dirty or oxidized – clean the contact pins.

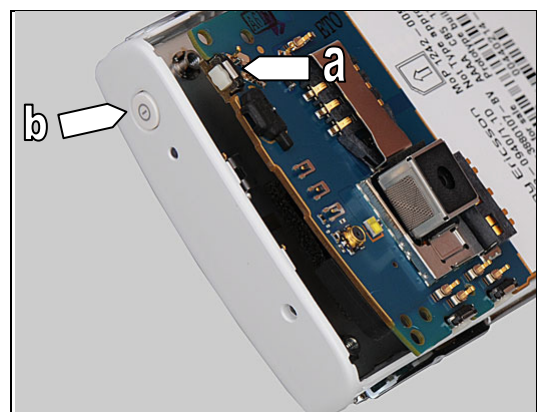


**Check:**

Inspect the Key On/Off

**Action**

1. Refer to section 1.2.5 'On/Off Key'.
2. Send to higher level of repair.





## Problem Areas

### 1.2 Keys

#### 1.2.1 Home Key

**Check:**

Inspect the home key in the Front Cover.

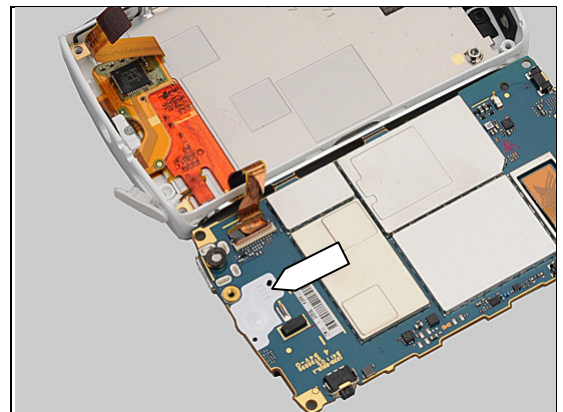
**Action:**

If the home key is clogged – clean it.



**Check:**

Inspect the Dome Sheet on the main PBA.



**Action:**

If damaged – replace the Dome Sheet.



**Check:**

Inspect the home key in the Front Cover.

**Action:**

1. If home key is damaged – replace the Front Cover.
2. Send to higher level of repair.



## Problem Areas: Keys

### 1.2.2 Menu and Back Keys

**Check:**

Inspect the menu and back keys in the Cover Front.

**Action**

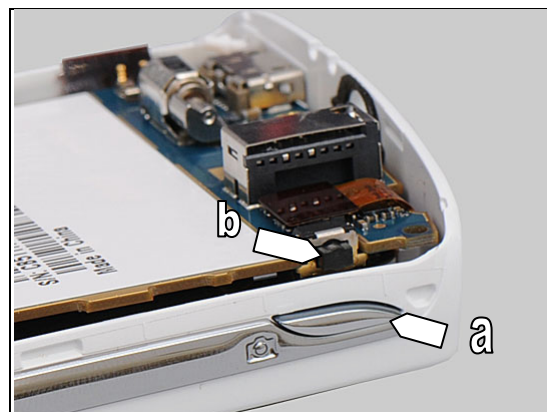
Refer to section 1.3 'Touch Screen'.



### 1.2.3 Camera Key

**Check:**

Inspect the camera key (a) on the Front Cover and the switch (b) on the main PBA.



**Action:**

1. If (a) or (b) is dirty or clogged – clean them.
2. If the camera key is damaged – replace the Front Cover.
3. Send to higher level of repair.



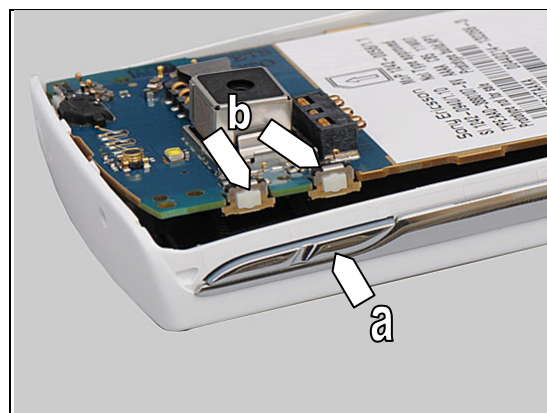


## Problem Areas: Keys

### 1.2.4 Volume Key

**Check:**

Inspect the volume key (a) on the Front Cover and the switches (b) on the main PBA.



**Action:**

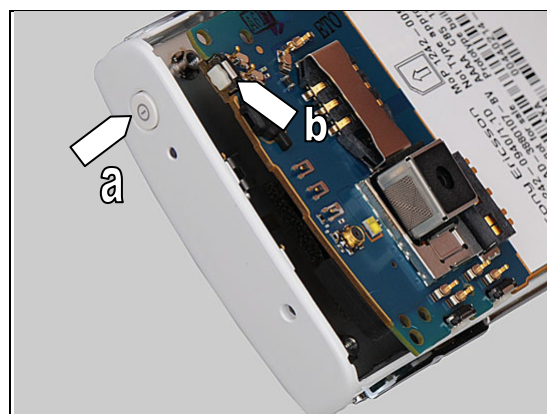
1. If (a) or (b) is dirty or clogged – clean them.
2. If the volume key is damaged – replace the Front Cover.
3. Send to higher level of repair.



### 1.2.5 On/Off Key

**Check:**

Inspect the Key On/Off (a) on the Front Cover and the switch (b) on the main PBA.



**Action:**

1. If (a) or (b) is dirty or clogged – clean them.
2. If Key On/Off is damaged – replace it.
3. Send to higher level of repair.



## Problem Areas

### 1.3 Touch Screen

#### 1.3.1 Touch Screen malfunction

**If:**

The end user has complained about unexpected behavior of the touch screen or the touch keys.

**Action:**

Calibrate the Touch Panel 1257-2706 *Trouble Shooting Application – mechanical*.

**Check:**

Inspect the touch screen and try the function of the two touch keys in the Cover Front.

**Action:** If dirty – clean and wipe it.

**Check:**

Inspect the connection between the touch screen flex film and the main PBA.

**Action:**

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

**Check:**

Inspect the location of the Front Cover's flex films. The placement of these flex films are very delicate.

**Action:**

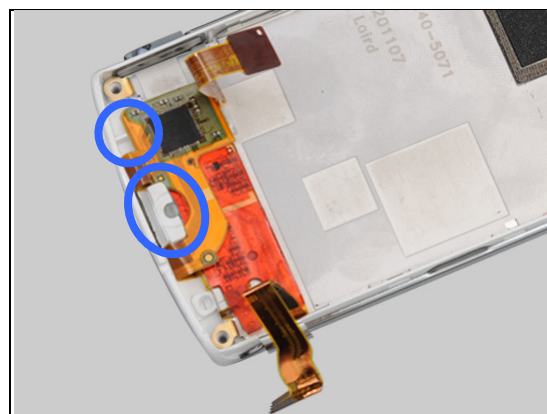
If not properly assembled – disassembly and reassembly.

**Check:**

Inspect the Cover Front.

**Action:**

1. If the Front Cover, flex film of the Touch Screen or the connector is damaged – replace the Front Cover.
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 Key On/Off has been pressed.

**Action:**

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

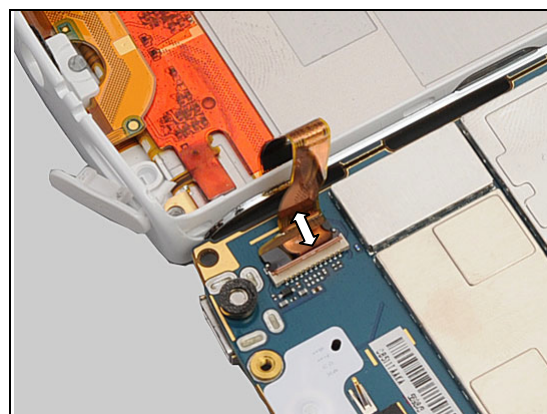


**Check:**

Inspect the connection between the Display 3.0 TFT and the main PBA.

**Action:**

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

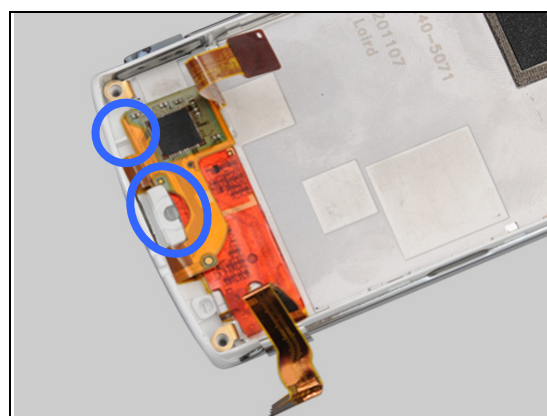


**Check:**

Inspect the location of the Display 3.0 TFT's flex film. The placement of these flex films are very delicate.

**Action:**

If not properly assembled – disassembly and reassembly.

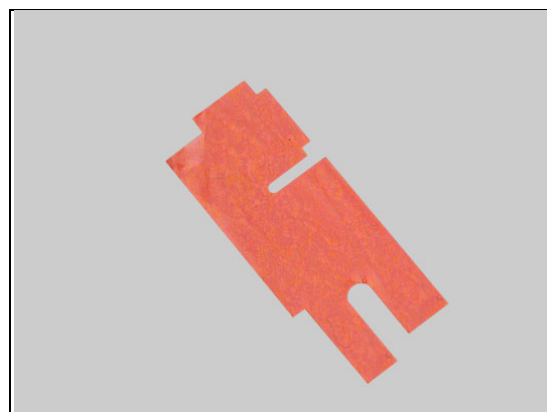


**Check:**

Inspect the Adhesive Irregular and its location.

**Action:**

If damaged or misaligned – replace the Adhesive Irregular.



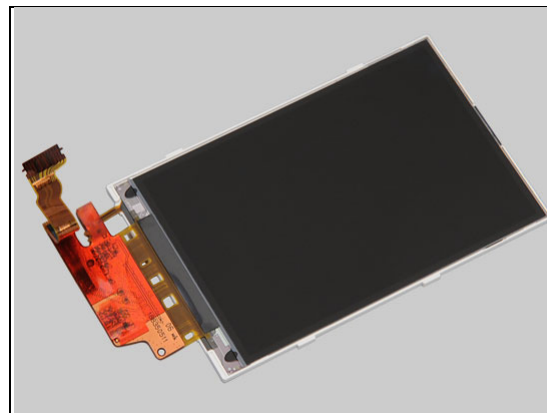
## Problem Areas: Display

**Check:**

Inspect the Display 3.0 TFT.

**Action:**

1. If the Display, the flex film or the ZIF connector of the Display is damaged – replace it.
2. Send to higher level of repair.



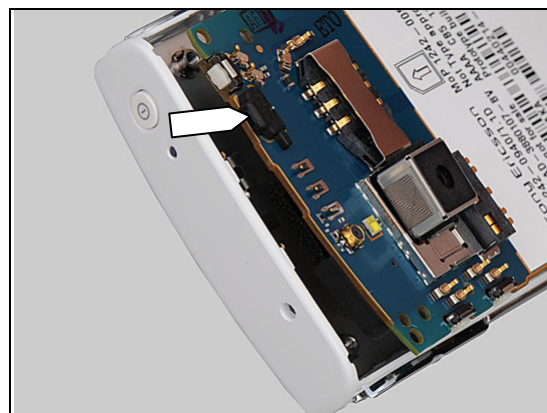
## Problem Areas

### 1.5 LED/Illumination

#### 1.5.1 LED Illumination

**Check:**

Inspect the Gasket RGB LED on the main PBA.



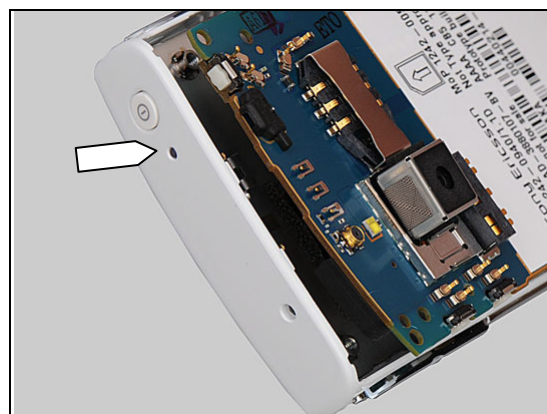
**Action:**

If clogged, misaligned or damaged – replace it.



**Check:**

Inspect the window of LED on the Front Cover.



**Action:**

1. If dirty or clogged – clean it.
2. If the window is damaged – replace the Front Cover.
3. Send to higher level of repair.



## Problem Areas: Illumination

### 1.5.2 Display Illumination

**Check:**

Check whether the phone display illuminates after the Key On/Off has been pressed.

**Action**

If the activation described above is not detected, refer to section 1.4 'Display'.



### 1.5.3 Key Illumination

**Check:**

Inspect the windows for the menu and back keys in the Front Cover.

**Action:**

If dirty – clean them.

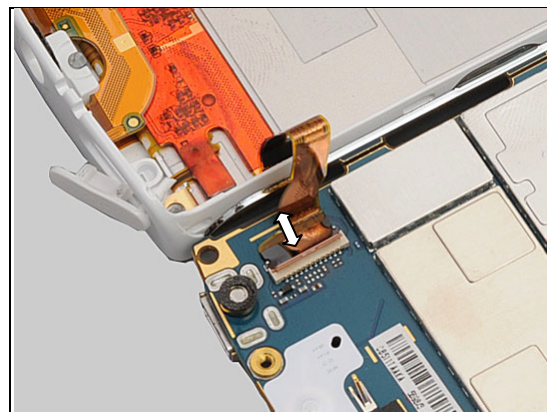


**Check:**

Inspect the connection between the Display 3.0 TFT and the main PBA.

**Action:**

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

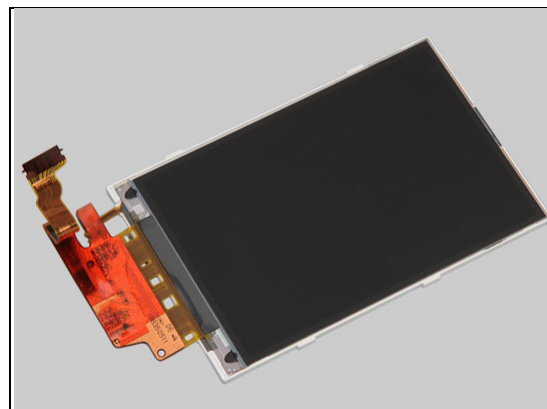


**Check:**

Inspect the Display 3.0 TFT.

**Action:**

1. If the Display, the flex film or the ZIF connector of the Display is damaged – replace it.
2. Send to higher level of repair.





## Problem Areas

### 1.6 Speaker

#### 1.6.1 Loudspeaker

**Check:**

Inspect the Loudspeaker's external port on the Battery Cover.

**Action:**

1. If clogged – clean the speaker port on the Battery Cover.
2. If damaged – replace the Battery Cover.



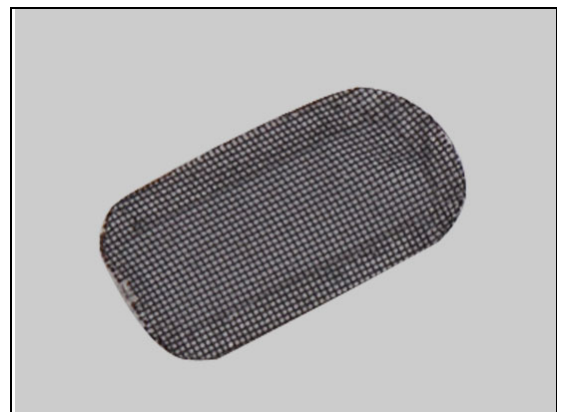
**Check:**

Inspect the Net Loudspeaker mesh on the Inner Frame.



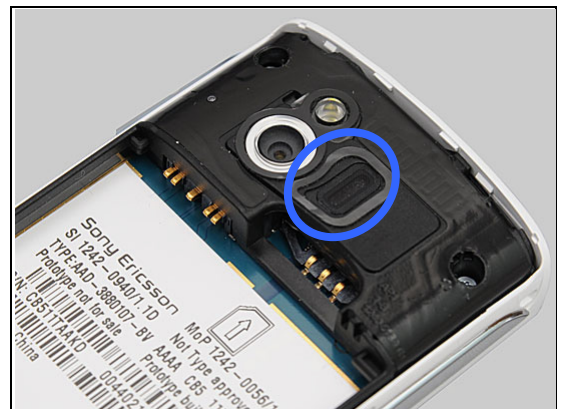
**Action:**

If the mesh is clogged or damaged – replace the Net Loudspeaker mesh.



**Check:**

Inspect the Gasket Loudspeaker on the Inner Frame.







## Problem Areas: Speaker

**Action:**

If the gasket is damaged – replace the Gasket Loudspeaker.



**Check:**

Inspect the Loudspeaker's pads on the Inner Frame and the pins on the main PBA.

**Action:**

1. If dirty – clean them.
2. If the pads of the Loudspeaker are damaged – replace the Inner Frame.



**Check:**

Inspect the Loudspeaker in the Inner Frame.

**Action:**

1. If the Loudspeaker is damaged or malfunctioned – replace the Inner Frame.
2. Send to higher level of repair.







## Problem Areas

### 1.7 Earphone

#### 1.7.1 Earphone

**Check:**

Inspect the Ear Speaker's external port on the Front Cover.

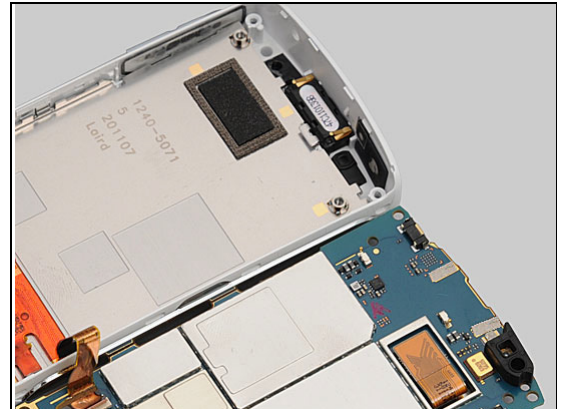
**Action:**

1. If clogged – clean it.



**Check:**

Inspect the Ear Speaker pins and the Adhesive Conductive 5 x 2 on the main PBA.

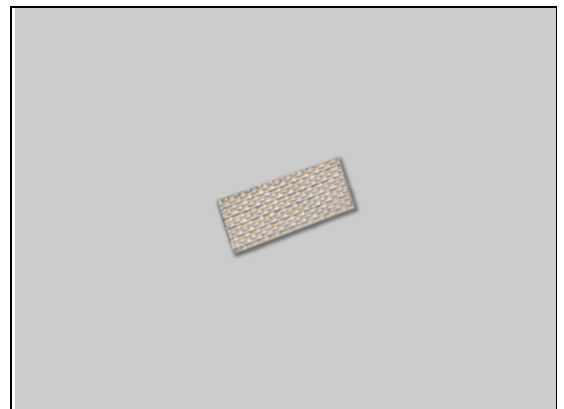


**Action:**

1. If the Ear Speaker pins are dirty – clean it.



2. If the Adhesive Conductive 5 x 2 is damaged – clean the contact pads and replace the Adhesive Conductive 5 x 2.



## Problem Areas: Earphone

**Check:**

Inspect the Earspeaker.

**Action:**

If the Earspeaker is damaged – replace it.

**Check:**

Inspect the Ear Speaker's external port on the Front Cover.

1. If the port is damaged – replace the Front Cover.
2. Send to higher level of repair.



## Problem Areas

### 1.8 Microphone

#### 1.8.1 Microphone

**Check:**

Inspect the Gasket Mic and Mic on the main PBA.

**Action:**

1. If dirty or oxidized – clean them.

2. If the Gasket Mic is damaged – replace the Gasket Mic.

**Check:**

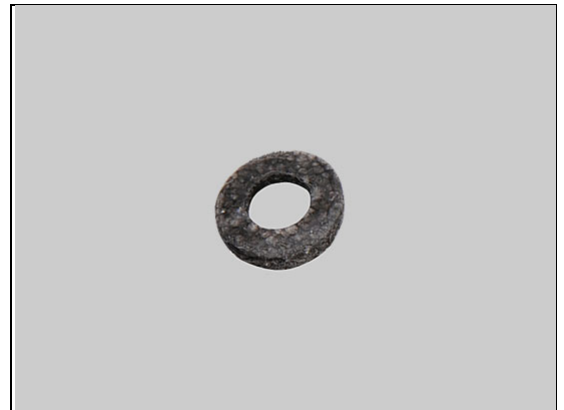
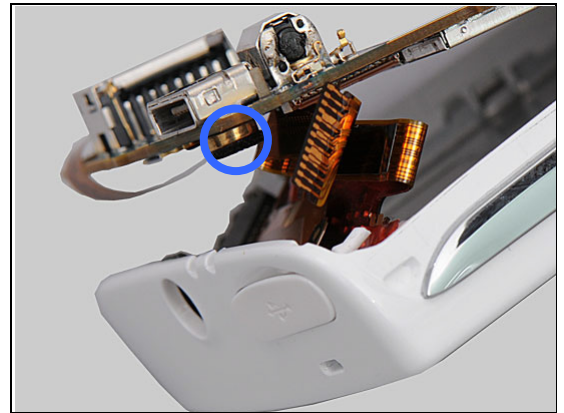
Inspect the Microphone's external port on the Front Cover.

**Action:**

1. If clogged – clean the port.

2. If the port is damaged – replace the Front Cover.

3. Send to higher level of repair.



## Problem Areas: Microphone

### 1.8.2 Secondary Microphone

**Check:**

Inspect the Microphone's external port on the Cover Battery.

**Action:**

1. If clogged – clean the port.



2. If the port is damaged – replace the Front Cover.

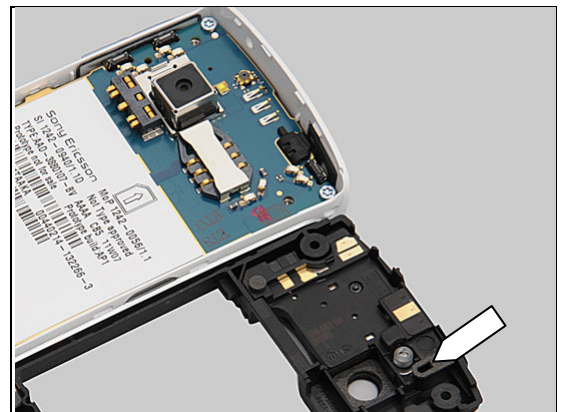


**Check:**

Inspect the Gasket 8 x 3 semicircular on the Inner Frame.

**Action:**

1. If dirty or clogged – clean the port.



2. If the Gasket 8 x 3 semicircular is damaged – replace the Gasket 8 x 3 semicircular.



## Problem Areas: Microphone

**Check:**

Inspect the Gasket Net Mic on the Inner Frame.

**Action:**

1. If clogged – clean the port.
2. If the Gasket Net Mic is damaged – replace the Gasket Net Mic.
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.



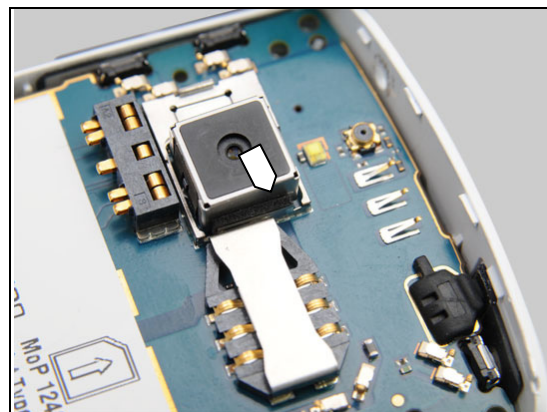
**Action:**

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



**Check:**

Inspect the Gasket 7,3 x 1,5 on the camera.



**Action:**

If misaligned or damaged – replace the Gasket 7,3 x 1,5.

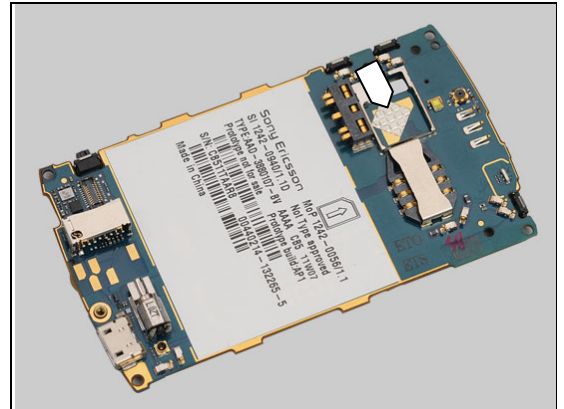




## Problem Areas: Camera

### Check:

Inspect the Foil Grounding Camera on the main PBA.



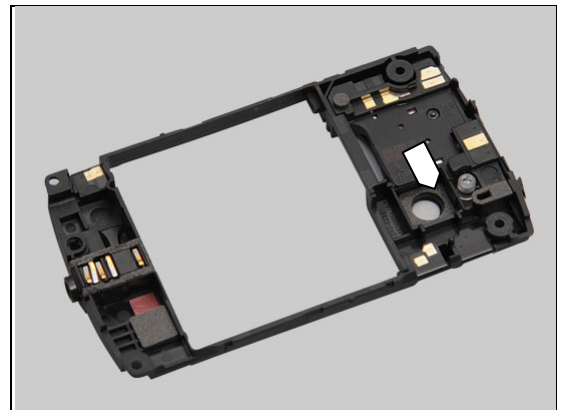
### Action:

1. If dirty – clean it.
2. If loose, misaligned or damaged – replace the Foil Grounding Camera.



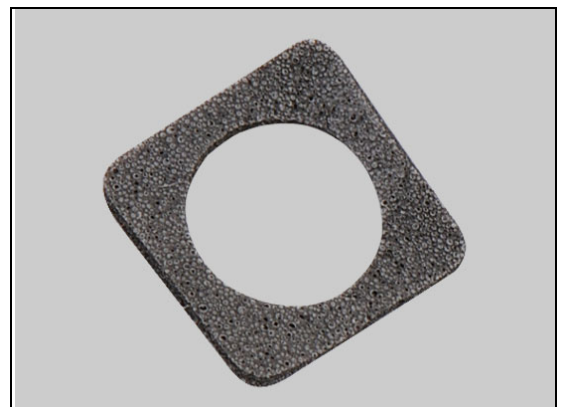
### Check:

Inspect the Gasket Camera on the Inner Frame.



### Action:

If damaged – replace the Gasket Camera.



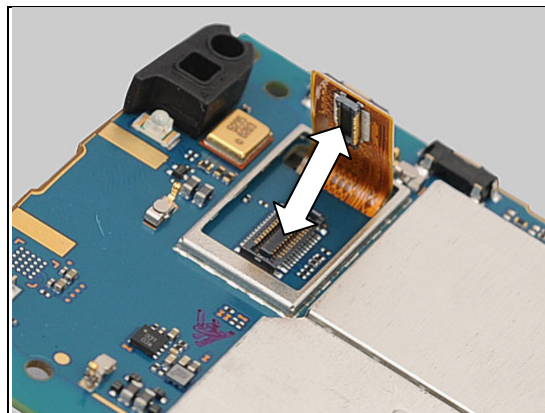
## Problem Areas: Camera

**Check:**

Inspect the connection between the Camera 5 MPixel and the main PBA.

**Action:**

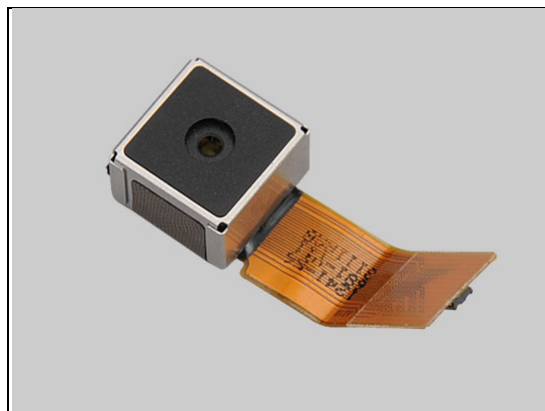
1. If not properly connected – disconnect and reconnect
2. If dirty or oxidized – clean the BtB connector.

**Check:**

Inspect Camera 5 MPixel.

**Action:**

1. If damaged – replace the Camera 5 MPixel.
2. Send to higher level of repair.



## Problem Areas

### 1.11 Flash LED

#### 1.11.1 Flash LED not flashing

**Check:**

Inspect Flash Lens Window on Inner Frame.

**Action:**

1. If dirty – clean the window.
2. If damaged – replace the Inner Frame.
3. Send to higher level of repair.





## Problem Areas

### 1.12 Bluetooth and WLAN

#### 1.12.1 Bluetooth or WLAN connection failure

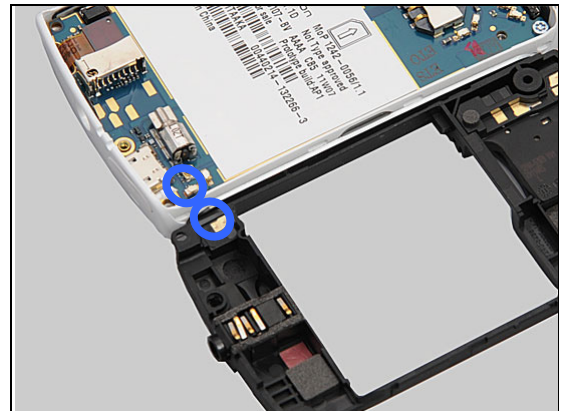
**Check:**

Inspect the WLAN and Bluetooth antenna on the Inner Frame.



**Check:**

Inspect the WLAN and Bluetooth 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 or the antenna are damaged – replace the Inner Frame.
3. Send to higher level of repair.





## Problem Areas

### 1.13 GPS

#### 1.13.1 GPS malfunctions

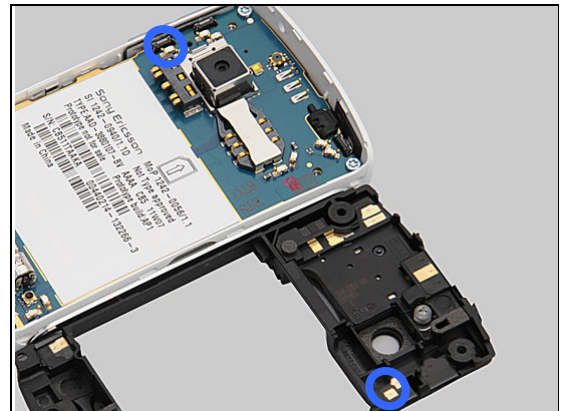
**Check:**

Inspect the GPS antenna on the Inner Frame.



**Check:**

Inspect the 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 or the antenna are damaged – replace the Inner Frame.
3. Send to higher level of repair.





## **Problem Areas**

### **1.14 Compass**

#### **1.14.1 Compass fails**

**Action:**

Send to higher level of repair.

## **Problem Areas**

### **1.15 Accelerometer**

#### **1.15.1 Accelerometer test fails**

**Action:**

Send to higher level of repair.

## Problem Areas

### 1.16 Ambient Light Sensor

#### 1.16.1 Light Sensor malfunctions

**Check:**

Inspect the Gasket Proxy on the main PBA.



**Action:**

1. If clogged – clean it.
2. If not properly assembled or damaged – replace it.



**Check:**

Inspect the Light Sensor window on the Front Cover.



**Action:**

1. If dirty – clean it.
2. If damaged – replace the Cover Front.
3. Send to higher level of repair.



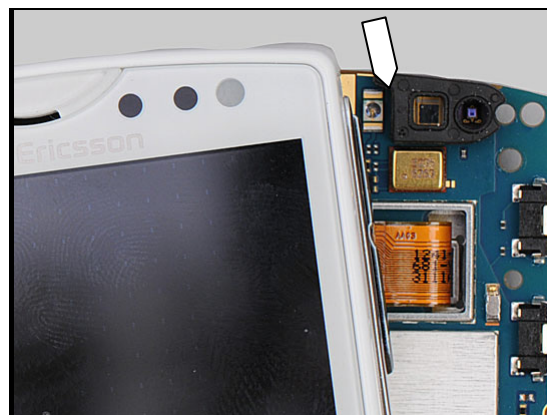
## Problem Areas

### 1.17 Proximity switch

#### 1.17.1 Proximity switch malfunctions

**Check:**

Inspect the Gasket Proxy on the main PBA.



**Action:**

1. If clogged – clean it.
2. If not properly assembled or damaged – replace it.



**Note:** The Tape Proximity reflective shall only be mounted in units with a black Front Cover, **never** in a unit with a white Front Cover.

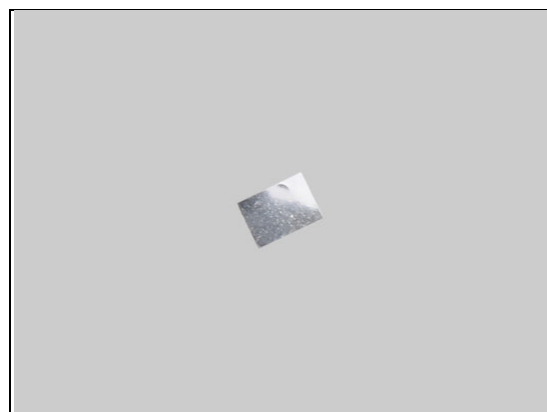
**Check:**

Inspect the Tape Proximity Reflective on the Earspeaker.



**Action:**

If it is misalign or damaged – replace it.



## Problem Areas: Proximity Switch

**Check:**

Inspect the Proximity switch windows on the Front Cover.

**Action:**

1. If dirty – clean it.
2. If damaged – replace the Cover Front.
3. Send to higher level of repair.





## **Problem Areas**

### **1.18 Real Time Clock**

#### **1.18.1 Real Time Clock test fails**

**Action:**

Send to higher level of repair.



## **Problem Areas**

### **1.19 Total call time**

#### **1.19.1 Total call time fails**

**Action:**

Send to higher level of repair.

## Problem Areas

### 1.20 External Memory

#### 1.20.1 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**

### **1.21 Security**

#### **1.21.1 Security fails**

**Action:**

Send to higher level of repair.

## Problem Areas

### 1.22 FM Radio

#### 1.22.1 No/Poor FM Radio reception

**Check:**

Inspect the Audio Jack Connector.

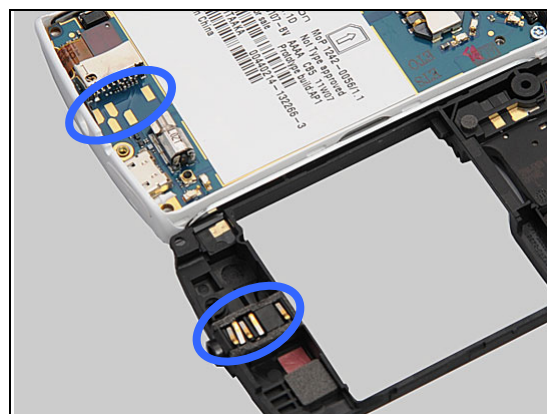
**Action:**

If dirty or oxidized – clean the connector.



**Check:**

Inspect the contact pins on the Audio Jack Connector and the contact pads on the main PBA.



**Action:**

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



## **Problem Areas**

### **1.23 Battery test**

#### **1.23.1 Battery test fails**

Not Applicable.

## **Problem Areas**

### **1.24 Battery Health test**

#### **1.24.1 Battery Health test fails**

Not Applicable.

## **Problem Areas**

### **1.25 Flip slider counter**

#### **1.25.1 Flip slider counter fails**

Not Applicable. This isn't a slider phone.



## **Problem Areas**

### **1.26 Verify Certificates**

#### **1.26.1 Verify certificates fails**

Not Applicable.

## **Problem Areas**

### **1.27 IrDA Test**

#### **1.27.1 IrDA test fails**

Not Applicable. No IrDA in this product.

## **Problem Areas**

### **1.28 HDMI Test**

#### **1.28.1 HDMI test fails**

Not Applicable. No HDMI in this product.

## **Problem Areas**

### **1.29 Connector Ground Test**

#### **1.29.1 Connector ground test fails**

Not Applicable.



## Problem Areas

### 1.30 Network & Signal

#### 1.30.1 No/Poor signal

**Check:**

Inspect the main antenna on the Inner Frame.



**Check:**

Inspect the main antenna contact pads on the Inner Frame and contact pins on the main PBA.



**Action:**

1. If dirty or oxidized – clean the pads and pins.
2. If the pads or the antenna are damaged – replace Inner Frame.



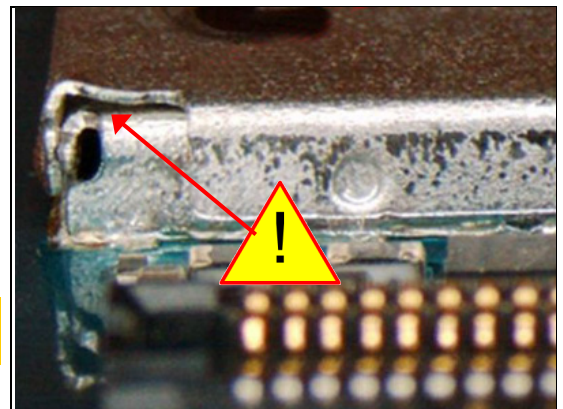
**Check:**

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.
2. Send to higher level of repair.

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



## Problem Areas

### 1.31 SIM

#### 1.31.1 SIM not detected

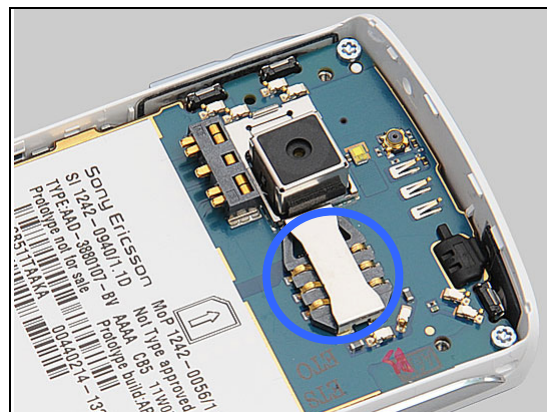
**Check:**

Inspect the SIM holder.



**Action:**

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



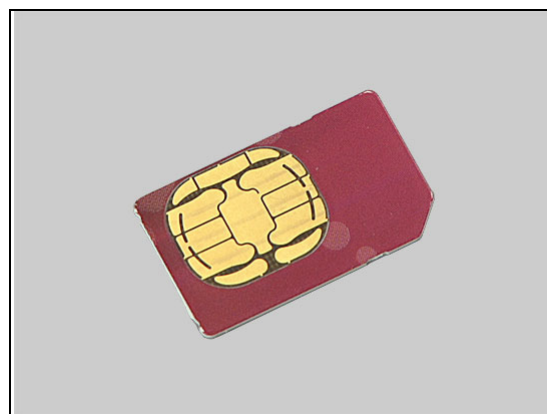
#### 1.31.2 Incorrect SIM indicated

**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

### 1.32 Charging

#### 1.32.1 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 clogged – clean the connector.
2. Send to higher level of repair.







## Problem Areas

### 1.33 HandsFree by Wire

#### 1.33.1 Connection to Portable HandsFree fails

**Check:**

Inspect the Audio Jack Connector.

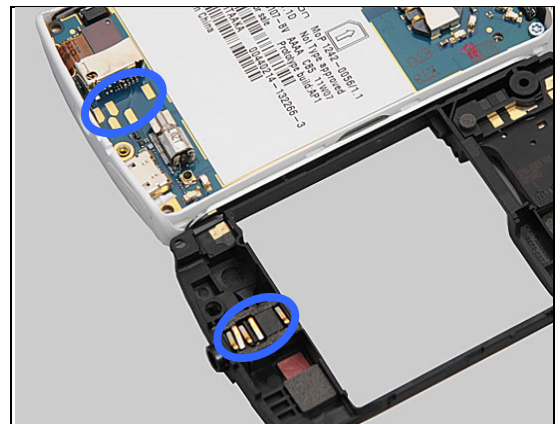
**Action:**

If clogged – clean the connector.



**Check:**

Inspect the contact pins on the Audio Jack Connector and the contact pads on the main PBA.



**Action:**

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



## Problem Areas

### 1.34 Data Communication

#### 1.34.1 Data transfer via System Connector fails

**Check:**

Inspect the USB connector.

**Action:**

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





## 2 Revision History

Rev.	Date	Changes / Comments
1	2011-Jun-27	Initial release
2	2011-Sept-30	General adjustment to improve the quality.
3	2011-Oct-13	Added note to 1.3 Touch Screen <i>Note units produced before w1135 needs to be Touch Panel calibrated.</i>
4	2011-Nov-22	One new commercial model included – S51SE Updated the instruction for malfunction of the Touch Screen.