

## Troubleshooting Guide

- mechanical -



*Xperia™ tipo*

*ST21i, ST21a, ST21i2, ST21a2*

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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 on/off key is depressed.

**Action:**

If activation of the Vibrator is detected, refer to section 1.4 'Display'.



**Check:**

Inspect the Battery Cover.

**Action:**

If not properly assembled – disassemble and reassemble it.



**Check:**

Inspect the contact pads on the Battery.

**Action:**

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

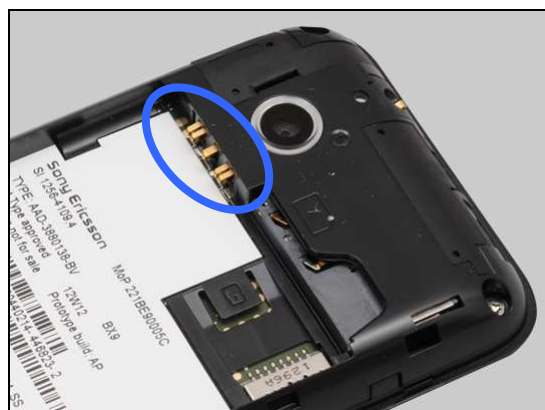


**Check:**

Inspect the Battery Contact pins.

**Action:**

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



## Problem Areas: Power

### Check:

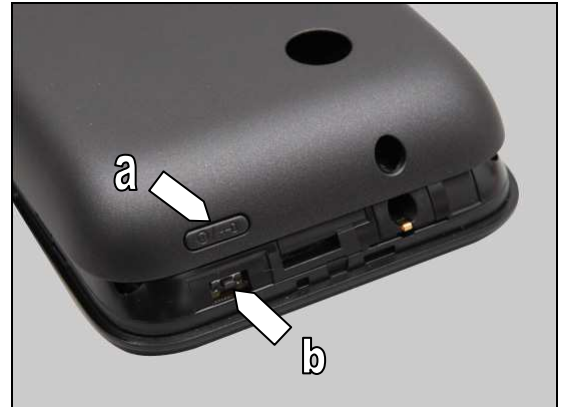
Inspect the on/off key (a) on the Battery Cover and the on/off switch (b) on the PBA.

### Action

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

2. If the on/off key (a) is damaged – replace the Battery Cover.

3. Replace PBA.



## Problem Areas

### 1.2 Keys

#### 1.2.1 Menu, Home and Back Keys

**Check:**

Inspect the touch area of the menu key, home key and back key on the Front Assy.

**Action**

Refer to section 1.3 'Touch Screen'.



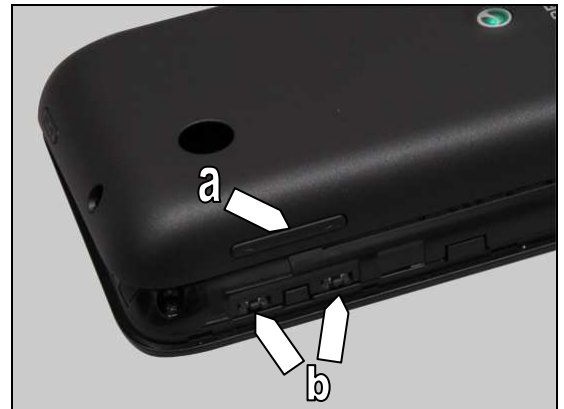
#### 1.2.2 Volume Key

**Check:**

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

**Action:**

1. If the volume key (a) or the volume switches (b) is dirty or clogged – clean them.



2. If the volume key (a) is damaged – replace the Battery Cover.

3. Replace PBA.



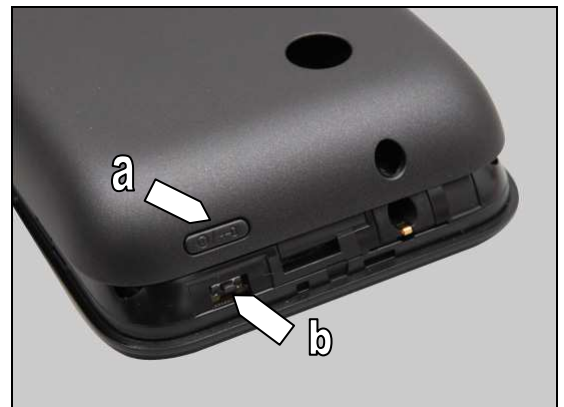
#### 1.2.3 On/Off key

**Check:**

Inspect the on/off key (a) on the Battery Cover and the on/off switch (b) on the PBA.

**Action:**

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



## Problem Areas: Keys

2. If the on/off key (a) is damaged – replace the Battery Cover.
3. Replace PBA.



## Problem Areas

### 1.3 Touch Screen

#### 1.3.1 Touch Screen malfunction

**Make sure that the Software Version is the latest!**

**Check:**

Inspect the touch screen.

**Action:**

If dirty – clean it.

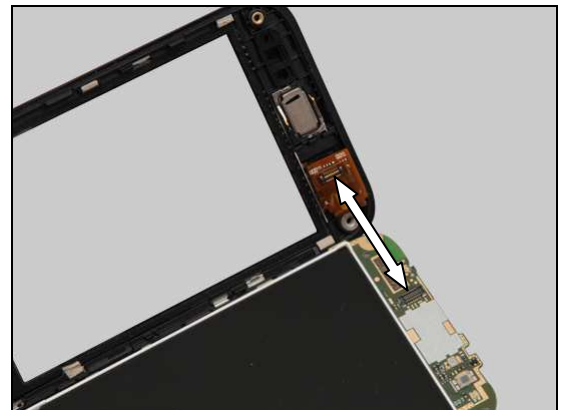


**Check:**

Inspect the BtB connector of the Front Assy to the PBA.

**Action:**

1. If not properly connected – disconnect and reconnect.
2. If dirty or oxidized – clean it.



**Check:**

Inspect the FPC of the Front Assy.

**Action:**

1. If the FPC or the touch screen is damaged – replace the Front Assy.
2. Replace PBA.





## Problem Areas

### 1.4 Display

#### 1.4.1 Graphics & Illumination

**Check:**

Check whether the phone vibrates after the on/off key has been pressed.

**Action:**

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

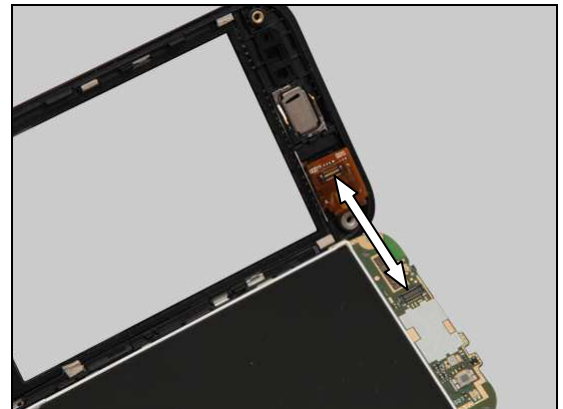


**Check:**

Inspect the BtB connector of the Front Assy to the PBA.

**Action:**

1. If not properly connected – disconnect and reconnect.
2. If dirty or oxidized – clean it.



**Check:**

Inspect the FPC of the Front Assy.

**Action:**

1. If the FPC or the touch screen is damaged – replace the Front Assy.
2. Replace PBA.

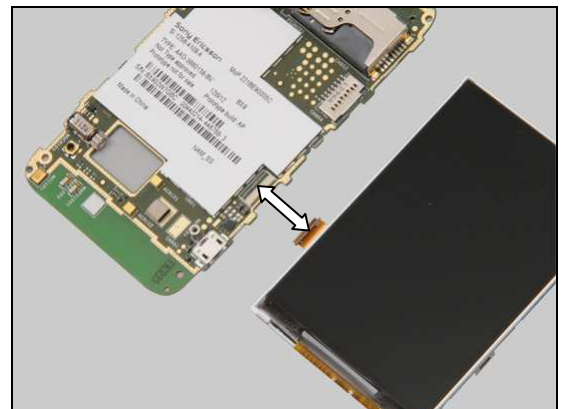


**Check:**

Inspect the both sides of the ZIF connector on the Main PBA and the LCD FPC.

**Action:**

1. If not properly connected – disconnect and reconnect.
2. If dirty or oxidized – clean it.



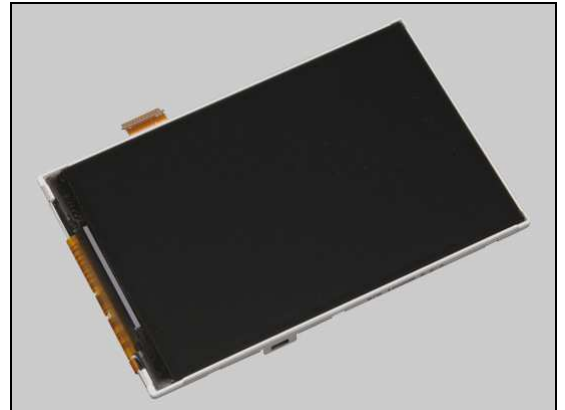
## Problem Areas: Display

**Check:**

Inspect the LCD TFT 3.2Inch and its FPC.

**Action:**

1. If dirty – clean it.
2. If the LCD TFT 3.2Inch or its FPC is damaged – replace the LCD TFT 3.2Inch.
3. Replace PBA.



## Problem Areas:

### 1.5 LED/Illumination

#### 1.5.1 LED/Illumination

**Check:**

Inspect the external window area of the RGB LED on the Front Assy.

**Action:**

1. If dirty – clean it.

2. If the external window area is damaged – replace the Front Assy.

**Check:**

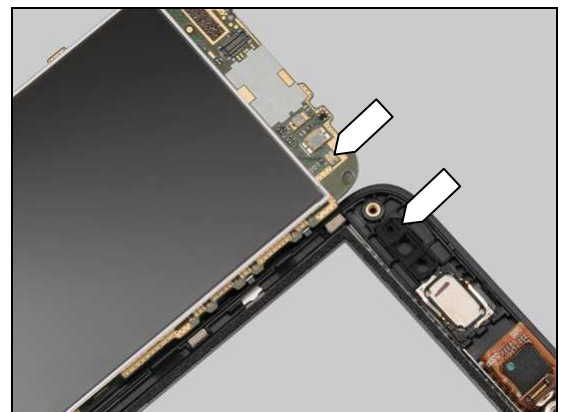
Inspect the RGB LED on the PBA and the Rubber Indicator on the Front Assy.

**Action:**

1. If dirty or clogged – clean them.

2. If the Rubber Indicator is damaged – replace the Rubber Indicator.

3. Replace PBA.



## Problem Areas: Illumination

### 1.5.2 Menu key, Home key and Back key Illumination

**Check:**

Inspect the illumination window of the menu key, home key and back key on the Front Assy.

**Action:**

If dirty – clean them.

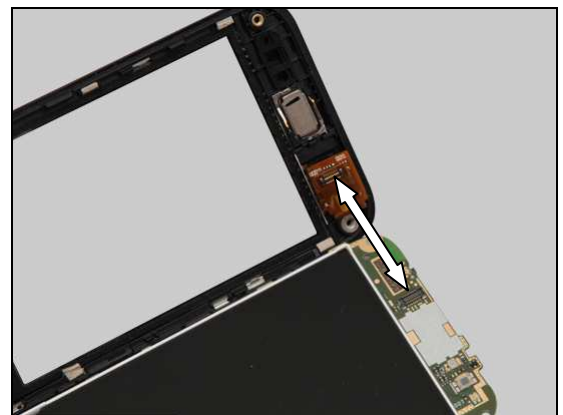


**Check:**

Inspect the BtB connector of the Front Assy to the PBA.

**Action:**

1. If not properly connected – disconnect and reconnect.
2. If dirty or oxidized – clean it.



3. If the illumination window or the FPC of the Front Assy is damaged – replace the Front Assy.
4. Replace PBA.



## Problem Areas

### 1.6 Speaker

#### 1.6.1 Speaker

**Check:**

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

**Action:**

1. If clogged – clean the Speaker port.

2. If the Speaker port is damaged – replace the Battery Cover.

**Check:**

Inspect the cavity of the Speaker.

**Action:**

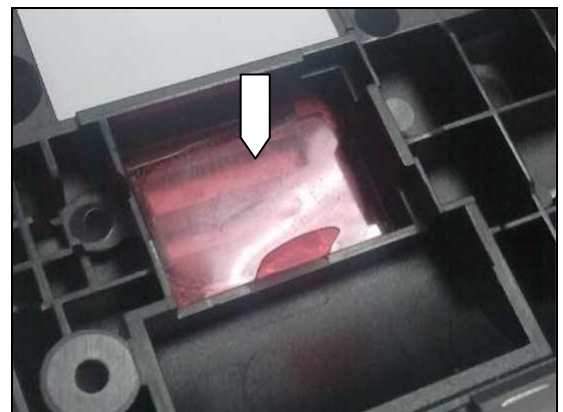
If the protective film of the Speaker is attached – remove it.

**Check:**

Inspect the Speaker Mesh on the Frame Antenna Assy.

**Action:**

1. If dirty – clean it.



## Problem Areas: Speaker

2. If the Speaker Mesh is damaged – replace it.

### Check:

Inspect the Speaker Gasket on the PBA.

***Make sure that the Speaker Gasket is attached on its correct position as shown!***

### Action:

If damaged – replace it.

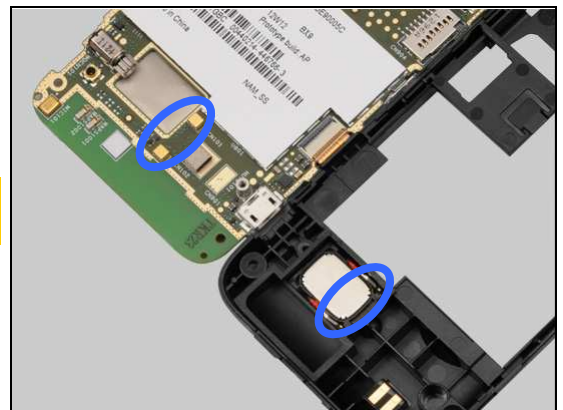
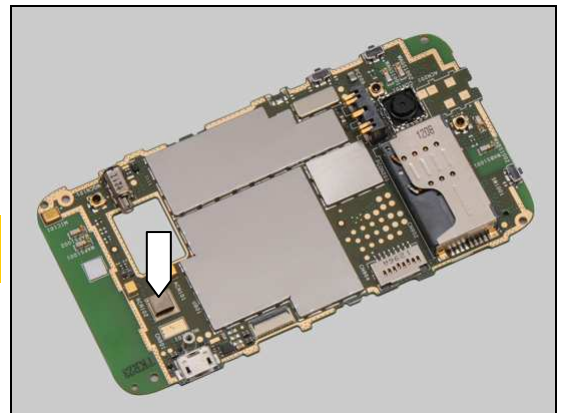
### Check:

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

***Note the orientation of the Speaker to be installed as shown!***

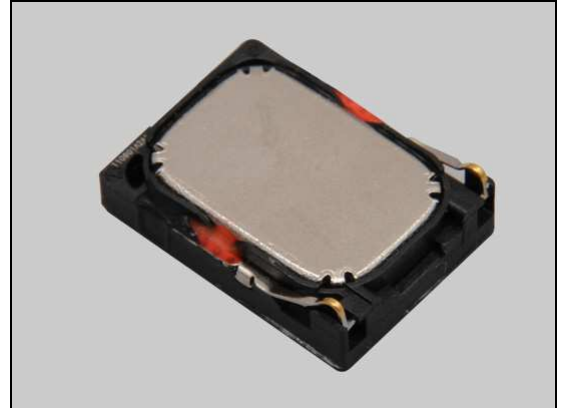
### Action:

1. If dirty – clean them.



## **Problem Areas: Speaker**

2. If the pins of the Speaker are damaged – replace the Speaker.
3. Replace PBA.





## Problem Areas

### 1.7 Earphone

#### 1.7.1 Earphone

**Check:**

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

**Action:**

1. If clogged – clean it.

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

**Check:**

Inspect the cavity of the Ear Speaker.

**Action:**

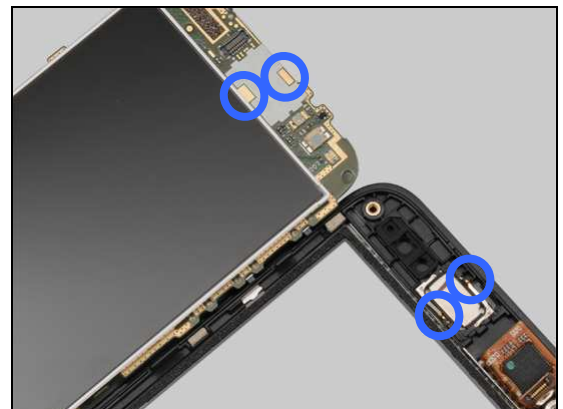
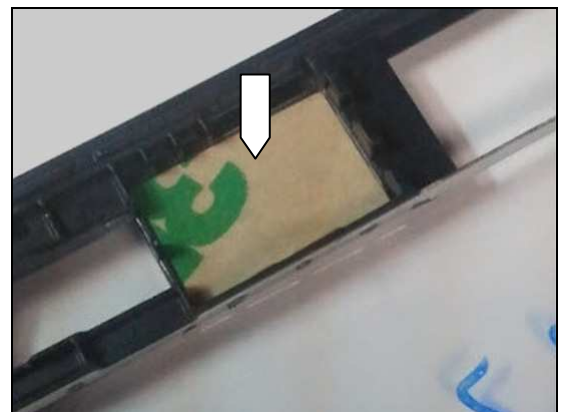
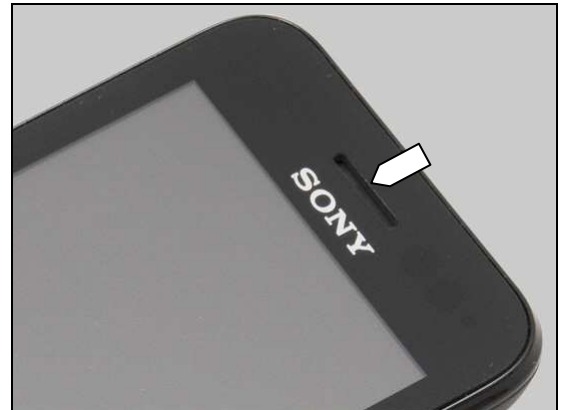
If the protective film of the Ear Speaker is attached – remove it.

**Check:**

Inspect the Ear Speaker pins and the pads on the PBA.

**Action:**

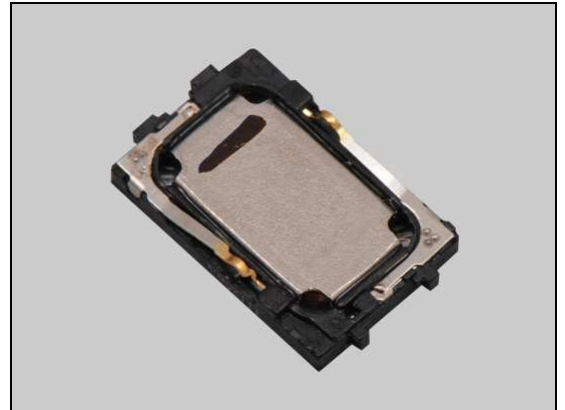
1. If the Ear Speaker pins or the pads are dirty – clean them.





## Problem Areas: Earphone

2. If the Ear Speaker or its pins are damaged – replace the Ear Speaker.
3. Replace PBA.



## Problem Areas

### 1.8 Microphone

#### 1.8.1 Microphone

**Check:**

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

**Action:**

1. If clogged – clean the port.

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

**Check:**

Inspect the Microphone on the PBA and the rubber on the Front Assy.

**Liquid is not allowed!**

**Action:**

1. If dirty or clogged – clean them.

2. If the rubber of microphone is damaged – replace the Front Assy.

3. If the microphone is damaged – replace PBA.



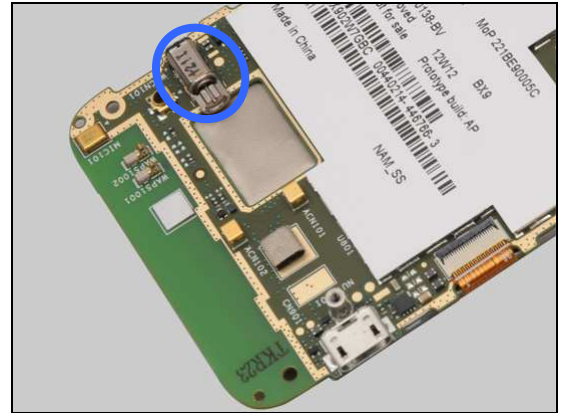
## Problem Areas

### 1.9 Vibrator

#### 1.9.1 Vibrator not generating alerts

**Action:**

Replace PBA.



## Problem Areas

### 1.10 Camera

#### 1.10.1 Camera defects

**Check:**

Inspect the Camera Lens on the Frame Antenna Assy.

**Action:**

1. If dirty – clean it.

2. If the Camera Lens is scratched or damaged – replace it.

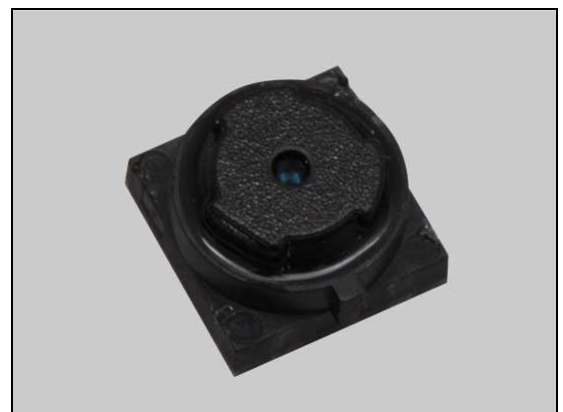
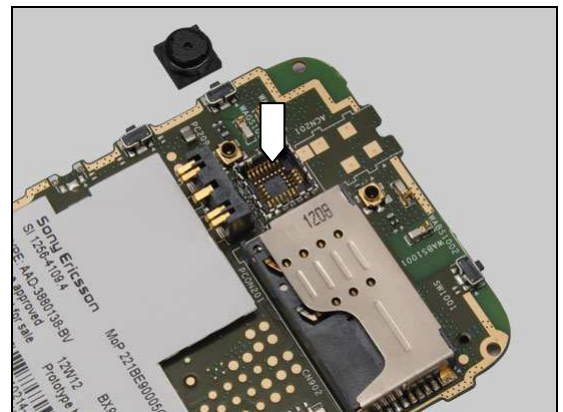
**Check:**

Inspect the Camera and the pins of the camera socket.

**Action:**

1. If the Camera is damaged – replace it.

2. If the camera socket or its pins are damaged – Replace PBA.



## Problem Areas

### 1.11 Flash LED

#### 1.11.1 Flash LED not flashing

**Action:**

N/A. No Flash LED in this product.

## Problem Areas

### 1.12 Bluetooth and WLAN

#### 1.12.1 Bluetooth or WLAN connection failure

**Check:**

Inspect the WLAN and Bluetooth antenna on the Frame Antenna Assy.

**Check:**

Inspect the WLAN and Bluetooth antenna contact pads on the Frame Antenna Assy and the contact pins on the PBA.

**Action:**

1. If dirty or oxidized – clean the pads and pins.
2. If the pads are damaged – replace the Frame Antenna Assy.
3. Replace PBA.



## Problem Areas

### 1.13 GPS

#### 1.13.1 GPS malfunctions

**Check:**

Inspect the GPS antenna on the Rear Cover.



**Check:**

Inspect the GPS antenna contact pads on the Frame Antenna Assy and the contact pins on the PBA.

**Action:**

1. If dirty or oxidized – clean the pads and pins.



2. If the pads are damaged – replace the Frame Antenna Assy.

3. Replace PBA.



## Problem Areas

### 1.14 Accelerometer

#### 1.14.1 Accelerometer test fails

**Action:**

Replace PBA.



## Problem Areas

### 1.15 Ambient Light Sensor

#### 1.15.1 Light Sensor malfunctions

**Action:**

N/A. No Ambient Light Sensor in this product.

## Problem Areas

### 1.16 Proximity switch

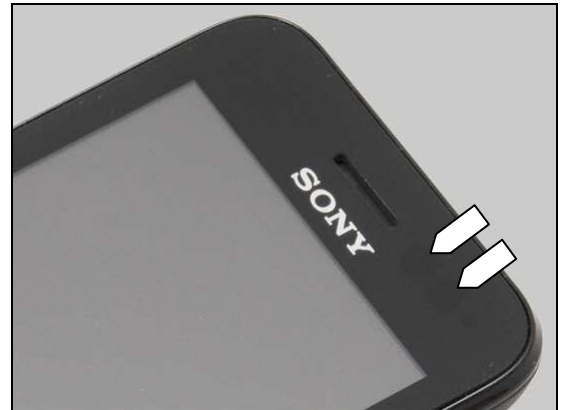
#### 1.16.1 Proximity switch malfunctions

**Check:**

Inspect the Proximity switch window area and the Proximity sensor window area on the Front Assy.

**Action:**

1. If dirty – clean it.
2. If not proper assembled – disassemble and reassemble it.



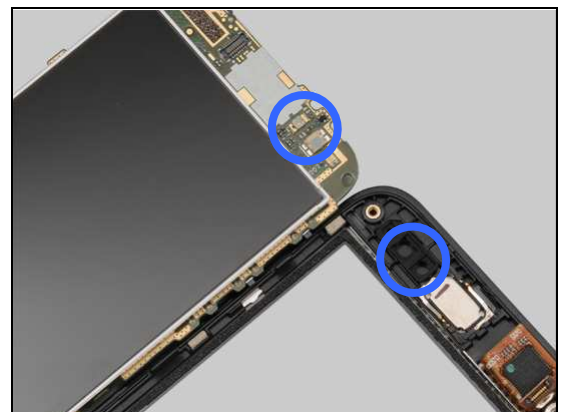
3. If scratched or damaged – replace the Front Assy.

**Check:**

Inspect the Rubber Indicator on the Front Cover and the proximity switch and proximity sensor on the PBA.

**Action:**

1. If dirty or clogged – clean them.



2. If the Rubber Indicator is damaged – replace it.
3. Replace PBA.



## Problem Areas

### 1.17 Water Proof

#### 1.17.1 Water Proof fails

**Action:**

N/A. No water proof function in the phone.

## Problem Areas

### 1.18 Real Time Clock

#### 1.18.1 Real Time Clock test fails

**Action:**

Replace PBA.

## Problem Areas

### 1.19 Total call time

#### 1.19.1 Total call time fails

**Action:**

Replace PBA.

## Problem Areas

### 1.20 External Memory

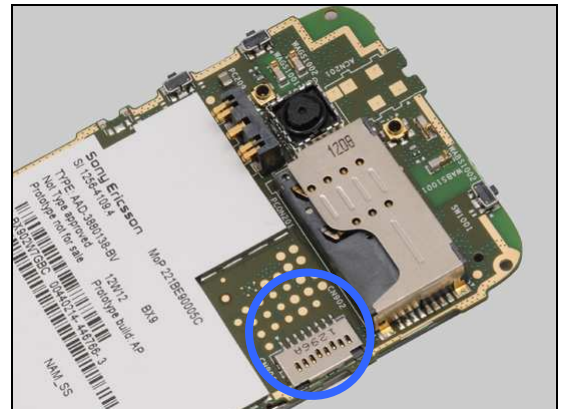
#### 1.20.1 Memory Card not detected

**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. Replace PBA.



## Problem Areas

### 1.21 Security

#### 1.21.1 Security fails

**Action:**

Replace PBA.

## Problem Areas

### 1.22 FM Radio

#### 1.22.1 No/Poor FM Radio reception

**Use a CTIA type headset to do the test!**

**Check:**

Inspect the Audio Jack.

**Action:**

If dirty or oxidized – clean it.

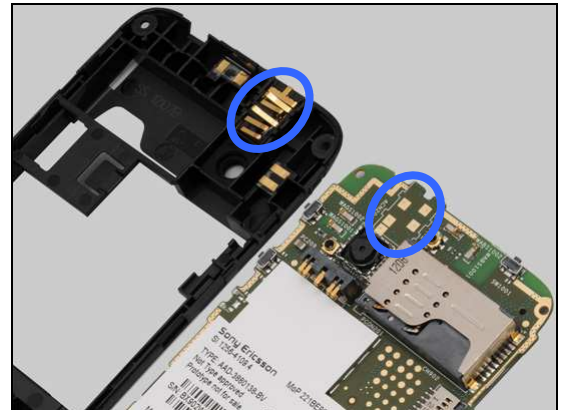


**Check:**

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

**Action:**

1. If dirty or oxidized – clean the pads and pins.



2. If the pins are damaged – replace the Audio Jack.

3. Replace PBA.





## Problem Areas

### 1.23 Battery test

#### 1.23.1 Battery test fails

**Action:**

N/A. No embedded battery in this product.

## Problem Areas

### 1.24 Flip slider counter

#### 1.24.1 Flip slider counter fails

**Action:**

N/A. No slider phone.

## Problem Areas

### 1.25 Verify Certificates

#### 1.25.1 Verify certificates fails

**Action:**

Replace PBA.

## Problem Areas

### 1.26 IrDA Test

#### 1.26.1 IrDA test fails

**Action:**

N/A. No IrDA in the phone.

## Problem Areas

### 1.27 HDMI Test

#### 1.27.1 HDMI test fails

**Action:**

N/A. No HDMI in the phone.

## Problem Areas

### 1.28 Connector Ground Test

#### 1.28.1 Connector ground test fails

**Action:**

N/A. This test is not applicable for this product.

## Problem Areas

### 1.29 Network & Signal

#### 1.29.1 No/Poor signal

**Check:**

Inspect the main antenna on the Frame Antenna Assy.

**Check:**

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

**Action:**

1. If dirty or oxidized – clean the pads and pins.
2. If the pads are damaged – replace Frame Antenna Assy.
3. Replace PBA.



## Problem Areas

### 1.30 SIM

#### 1.30.1 SIM not detected

Check the SIM card holder.

**Check:**

Inspect the SIM card holder.

**Action:**

1. If dirty or oxidized – clean the holder.
2. Replace PBA.



#### 1.30.2 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. Replace PBA.





## Problem Areas

### 1.31 Charging

#### 1.31.1 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:**

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



**Check:**

Inspect the USB connector.

**Action:**

1. If dirty or oxidized – clean the connector.
2. Replace PBA.



## Problem Areas

### 1.32 HandsFree by Wire

#### 1.32.1 Connection to Portable HandsFree fails

**Use a CITA type headset to do the test!**

**Check:**

Inspect the Audio Jack.

**Action:**

If dirty or oxidized – clean it.

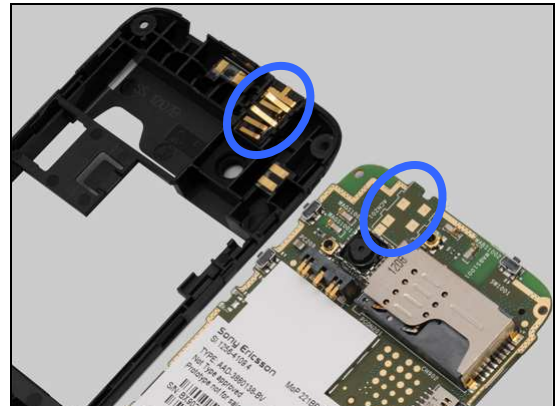


**Check:**

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

**Action:**

1. If dirty or oxidized – clean the pads and pins.



2. If the pins are damaged – replace the Audio Jack.

3. Replace PBA.



## Problem Areas

### 1.33 Data Communication

#### 1.33.1 Data transfer via System Connector fails

**Check:**

Inspect the USB connector.

**Action:**

1. If dirty or oxidized – clean the connector.
2. Replace PBA.



## 2 Revision History

Rev.	Date	Changes / Comments
1	2012-Jul-20	Released
2	2012-Jul-23	No Change
3	2012-Jul-24	Chapter 1.22 text update
4	2012-Aug-24	ST21i2 & ST21a2 added