



Troubleshooting Guide

- mechanical -



Xperia™ active

ST17i, ST17a



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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.

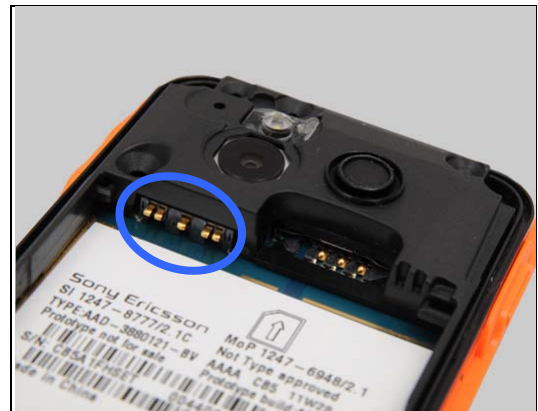


Check:

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 1.2.4 'On/Off key'.
2. Send to higher level of repair.





Problem Areas

1.2 Keys

1.2.1 Back, Home and Menu Keys

Check:

Inspect the Back, Home and Menu keys in the Cover Front.

Action

1. Refer to section 1.3 'Touch Screen'.
2. Send to higher level of repair.



1.2.2 Camera Key

Check:

Inspect the Key Camera in the Deco Belt.



Action:

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



Check:

Inspect the Gasket Camera Key Sealing on the Cover Front.



Problem Areas: Keys

Action:

1. If dirty or clogged – replace it.
2. If it is damaged – replace the Gasket Camera Key Sealing.



3. Check that the Gasket Camera Key Sealing is in correct position.

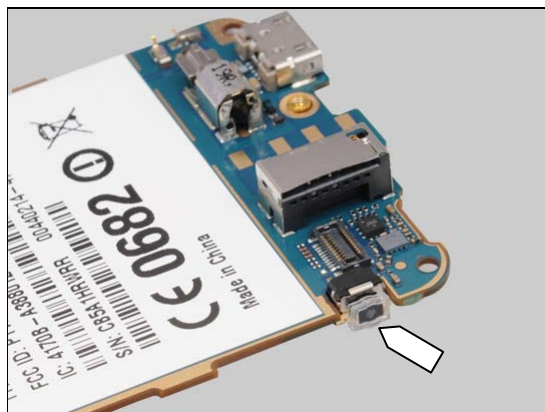


Check:

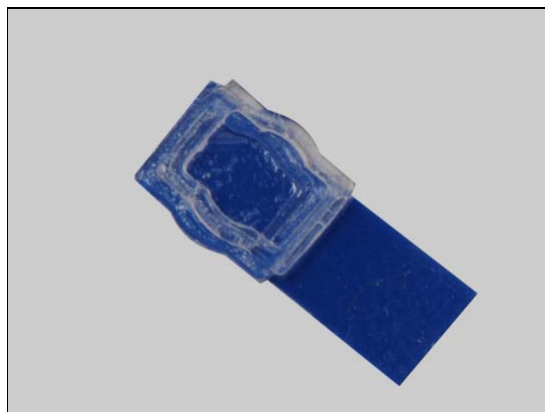
Inspect the PET-film for Camera Switch.

Action:

1. If dirty or clogged – clean it.
2. If not properly assembled – disassembly and reassembly it.



3. If the PET-film for Camera Switch is damaged – replace it.



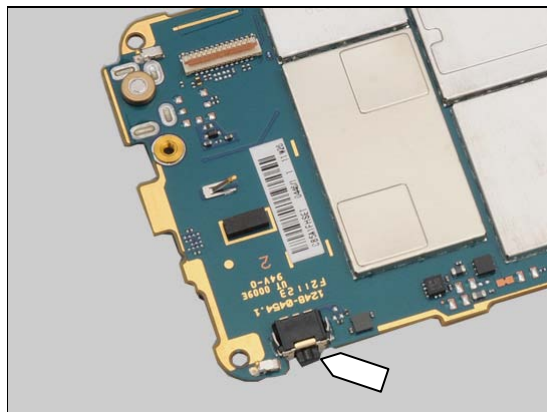
Problem Areas: Keys

Check:

Inspect the camera key switch on the main PBA.

Action:

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



1.2.3 Volume Key

Check:

Inspect the Key Volume in the Deco Belt.



Action:

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



Check:

Inspect the Gasket Key Sealing (a) and (b) on the Cover Front.



Problem Areas: Keys

Action:

1. If (a) or (b) is dirty or clogged – replace the Gasket Key Sealing.
2. If it is damaged – replace the Gasket Key Sealing.



3. Check that the Gasket Sealing Key is in correct position.

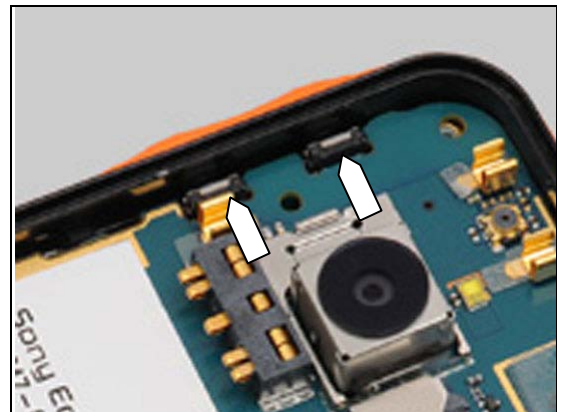


Check:

Inspect the volume key switches on the main PBA.

Action:

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



1.2.4 On/Off key

Check:

Inspect the Key On/Off in the Deco Belt.





Problem Areas: Keys

Action:

1. If Key On/Off is dirty or clogged – clean them.
2. If it is damaged – replace the Key On/Off.



Check:

Inspect the Gasket Key Sealing on the Cover Front.



Action:

1. If dirty or clogged – replace the Gasket Key Sealing.
2. If it is damaged – replace the Gasket Key Sealing.



3. Check that the Gasket Key Sealing is in correct position.





Problem Areas: Keys

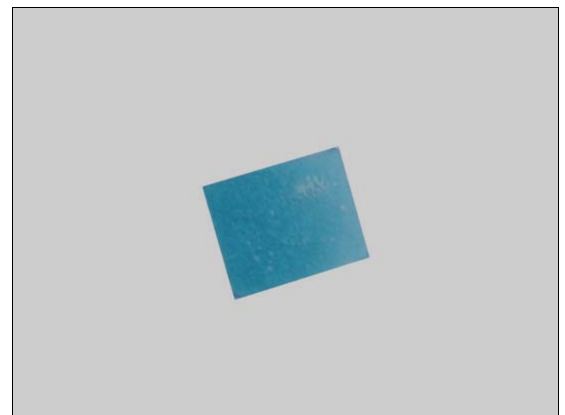
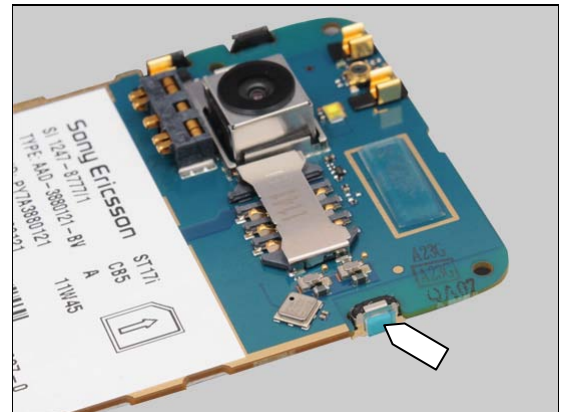
Check:

Inspect the Sheet for On/Off Switch.

Action:

1. If not properly assembled – disassembly and replace it.

2. If the Sheet for On/Off Switch is damaged – replace it.



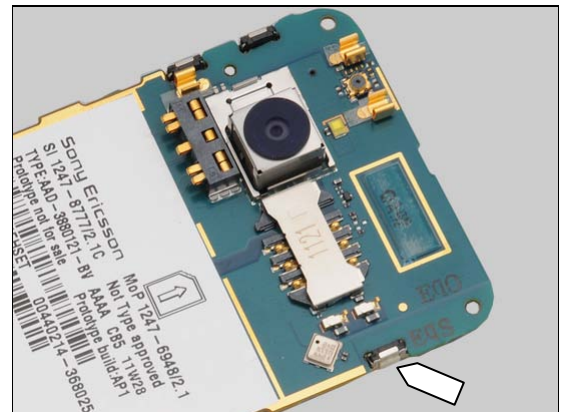
Check:

Inspect the on/off key switch on the main PBA.

Action:

1. If the switch is dirty or clogged – clean it.

2. Send to higher level of repair.





Problem Areas

1.3 Touch Screen

1.3.1 Touch Screen malfunction

Note:

The touch screen will temporarily turn off when there is too much water on the front window.

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 three touch keys in the Cover Front.

Action: If dirty or wet – 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:

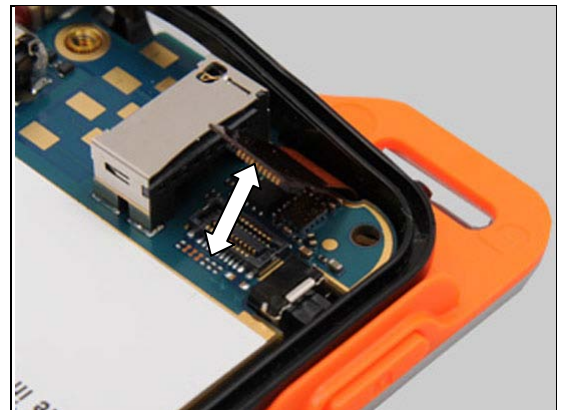
If not properly assembled – disassembly and reassembly.

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'.

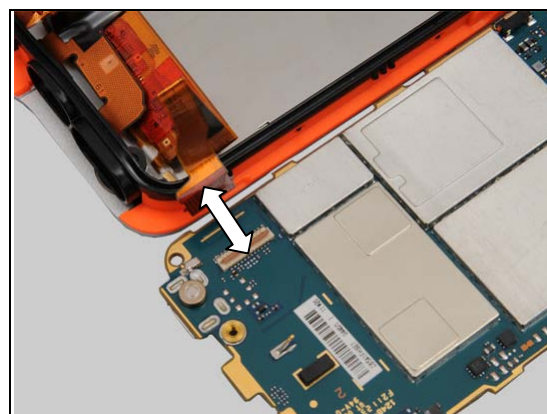


Check:

Inspect the connection between the display 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 Front Cover's flex films. The placement of these flex films are very delicate and will be damaged if they are squeezed between the shielding cans and the front's LCD support.

Action:

If not properly assembled – disassembly, check for cracks in bend area and reassembly/replace if needed.



Check:

Inspect the Cover Front.

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.



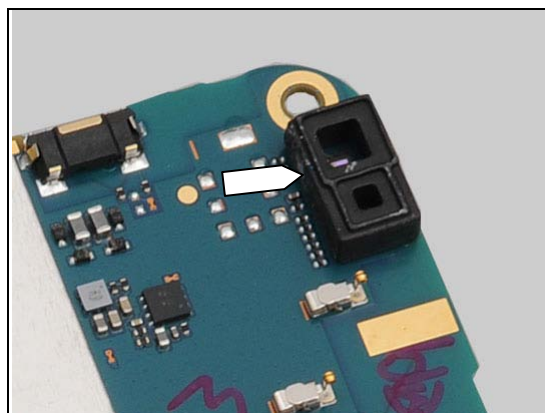
Problem Areas

1.5 LED / Illumination

1.5.1 LED / Illumination

Check:

Inspect the Gasket RGB on the main PBA.



Action:

1. If clogged – clean it.
2. If misaligned or damaged – replace the Gasket RGB.



Check:

Inspect the window of LED on the Cover Front.



Action:

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



Problem Areas: Illumination

1.5.2 Key Illumination

Check:

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

Action:

If dirty – clean it.

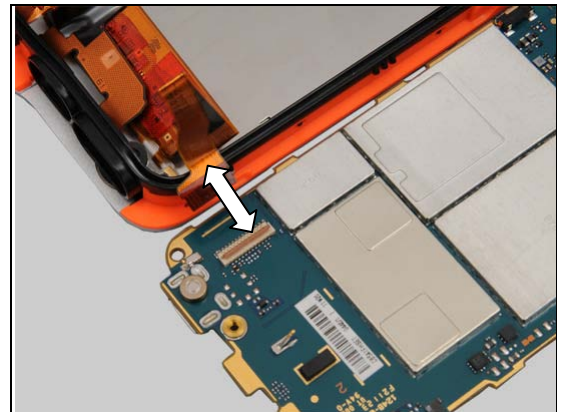


Check:

Inspect the connection between the display 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 Front Cover's flex films. The placement of these flex films are very delicate and will be damaged if they are squeezed between the shielding cans and the front's LCD support.

Action:

If not properly assembled – disassembly, check for cracks in bend area and reassembly/replace if needed.



Check:

Inspect the Cover Front.

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

Note:

The sound may be a bit distorted when the unit has been submerged into water.

Action:

Shake the phone to ensure that no water remains in the speaker or microphone channels.



Check:

Inspect the Loudspeaker's external port on the Cover Back. (Note: Test Loudspeaker without Cover back and Cover battery on to exclude problem)

Action:

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



Check:

Inspect the Loudspeaker's mesh and Loudspeaker on the Inner Frame.



Action:

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

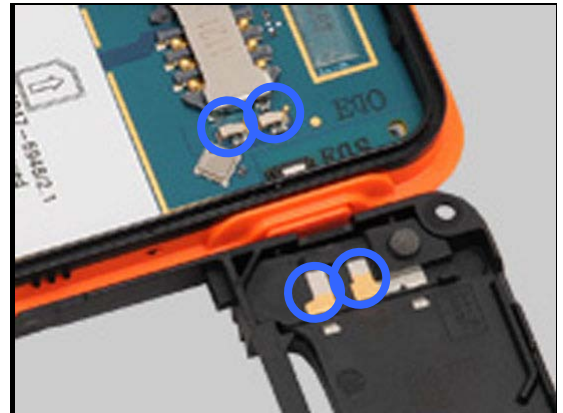




Problem Areas: Speaker

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 for the Loudspeaker are damaged – replace the Inner Frame.
3. Send to higher level of repair.

Acoustic feedback: See Microphone/Gasket Mic with Membrane





Problem Areas

1.7 Earphone

1.7.1 Earphone

Note:

The sound may be a bit distorted when the unit has been submerged into water.

Action:

Shake the phone to ensure that no water remains in the speaker or microphone channels.

Check:

Inspect the Earspeaker pins and the Cushion Earspeaker and the contact pads on the main PBA.

Action:

1. If the pins or the pads are dirty or oxidized – clean them.
2. If the Earspeaker is damaged – replace it and the Cushion Earspeaker.

Check:

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

Action:

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

Acoustic feedback: See Microphone/Gasket Mic with Membrane



Problem Areas

1.8 Microphone

1.8.1 Microphone

Note:

The sound may be a bit distorted when the unit has been submerged into water.

Action:

Shake the phone to ensure that no water remains in the speaker or microphone channels.

Check:

Inspect microphone mesh on the Cover Front.

Action:

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

Check:

Inspect the primary microphone's external port in the Cover Front.

Action:

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



Problem Areas: Microphone

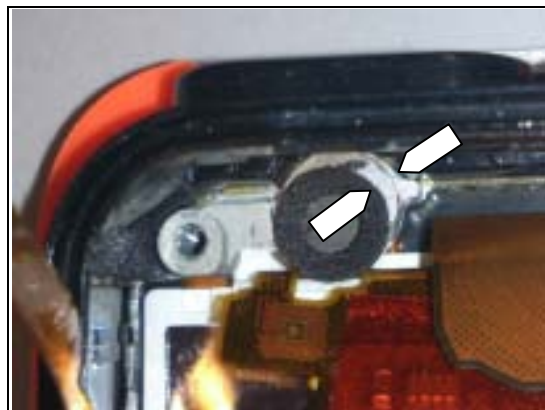
1.8.2 Acoustic feedback in Earspeaker or Loudspeaker

Check:

If Gasket Mic with Membrane is off center in the Cover Front.

Action:

Replace Gasket Mic with Membrane.



Problem Areas: Microphone

1.8.3 Secondary Microphone

Note:

The sound may be a bit distorted when the unit has been submerged into water.

Action:

Shake the phone to ensure that no water remains in the speaker or microphone channels.

Check:

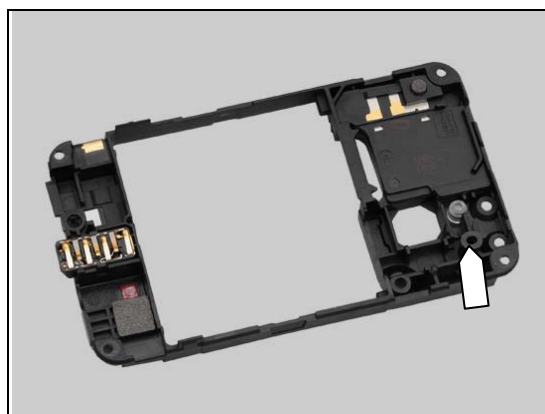
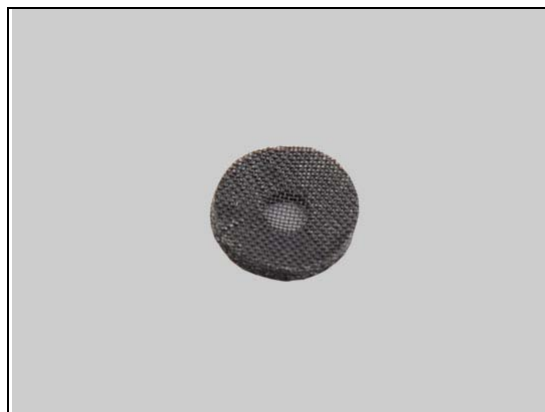
Inspect the Gasket 2nd Mic for Cover Battery.

Action:

If it is clogged or damaged – replace the Gasket 2nd Mic for Battery Cover.

Check:

Inspect the Gasket 2nd Mic for Inner Frame.



Problem Areas: Microphone

Action:

If it is clogged or damaged – replace the Gasket 2nd Mic for Inner Frame.



Check:

Inspect the secondary microphone's external port on the Cover Back.



Action:

1. If clogged – clean the port.
2. If the Cover Back is damaged – replace it.
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 camera window on the Cover Battery.



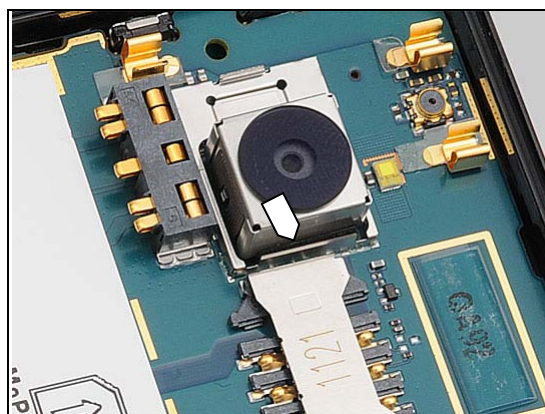
Action:

1. If dirty – clean the window.
2. If scratched or damaged – replace the Cover Battery.



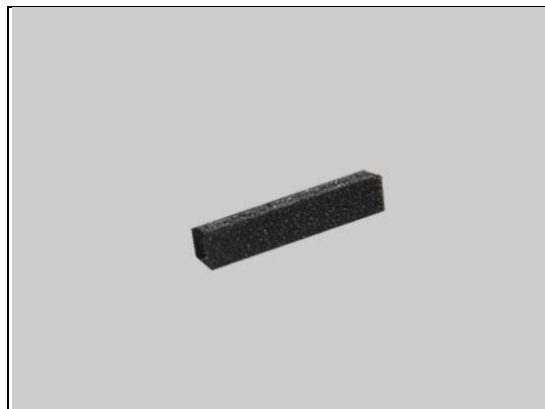
Check:

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



Action:

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

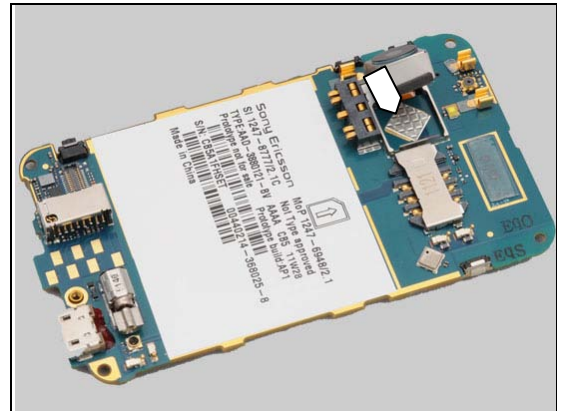




Problem Areas: Camera

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.

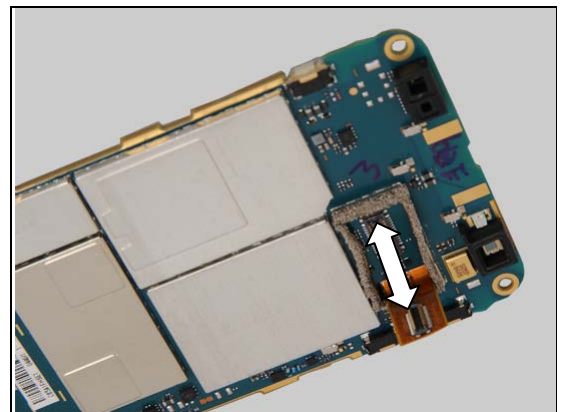


Check:

Inspect the 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.

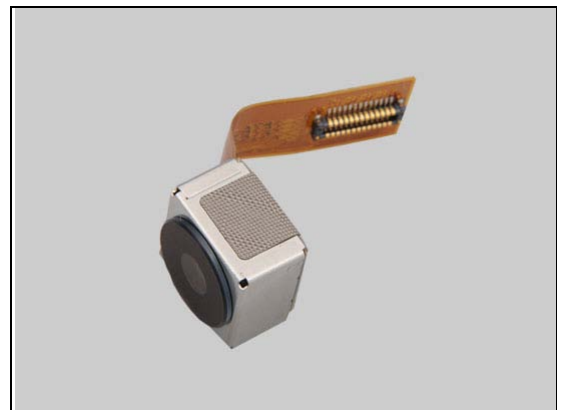


Check:

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 Cover Battery.



Action:

1. If dirty – clean the window.
2. If damaged – replace the Cover Battery.



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 Cover Battery.



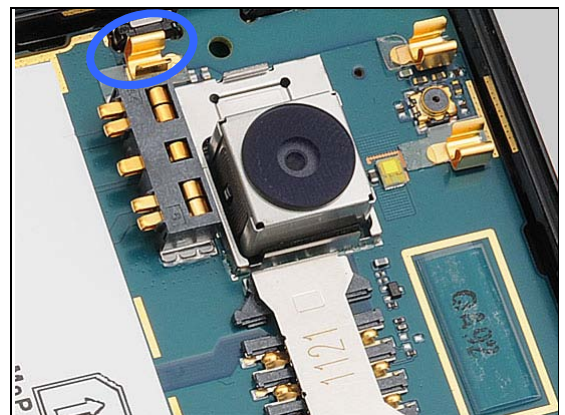
Check:

Inspect the GPS antenna contact pin on the Cover Battery.



Check:

Inspect the connector for the GPS antenna on the main PBA.



Action:

1. If dirty or oxidized – clean the pin and connector.
2. If the pin or the antenna is damaged – replace the Cover Battery.
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.

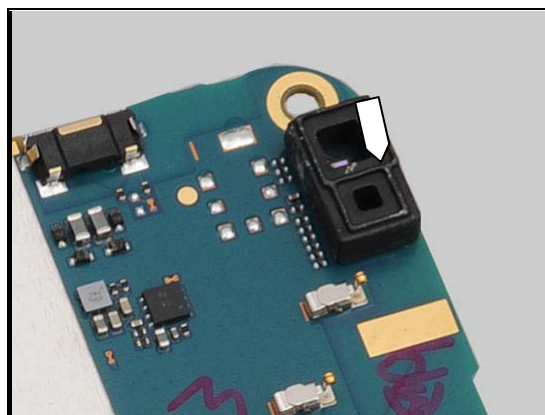
Problem Areas

1.16 Ambient Light Sensor

1.16.1 Light Sensor malfunctions

Check:

Inspect the Gasket RGB 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 Cover Front.



Action:

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



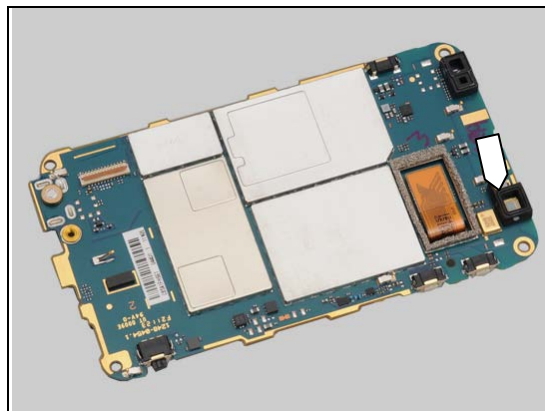
Problem Areas

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.



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 Pressure Sensor

1.18.1 Pressure sensor test fails

Action:

Send to higher level of repair.

Problem Areas

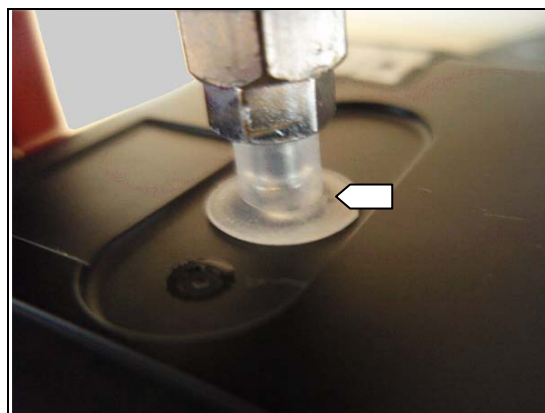
1.19 Water Proof test

1.19.1 Water Proof test fails

Check:

Inspect that the Vacuum Cup is correctly mounted to ventilation hole. It should be a dark circle if it is correctly placed.

Run the Test again!



Check:

Inspect that the primary microphone is properly sealed with tack-it.



Check:

Inspect that the secondary microphone is properly sealed with tape.

Action:

Reseal the openings with tape and with tack-it.

Run the Water Proof Test again!



Check:

Inspect the equipment:

Check the connections between the tube and houses.

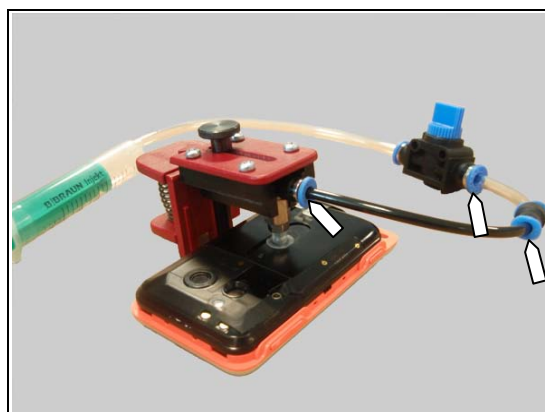
Check the Vacuum Cup sealing area and the syringe.

Check for dirt, cracks, damages.

Check direction on the valve.

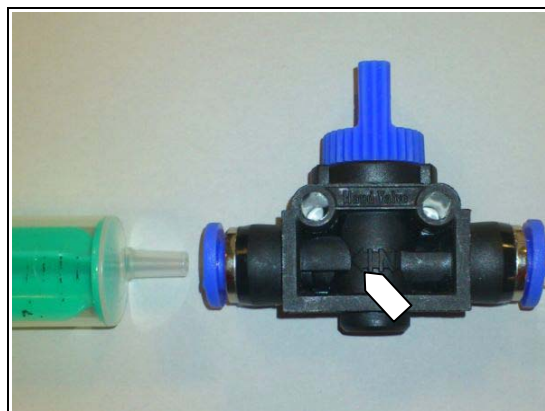
Action:

1. If any bad connection – remount the equipment.
2. If damaged – replace the equipment.



Problem Areas: Water Proof test

3. If the arrow on the valve is not pointing to the tube connected to syringe, reconnect it in the correct direction.



Check:

Inspect the sealings of the Cap Audio and the Cap USB.
No dirt or damage is allowed.
Inspect that the red gaskets are correct assembled.

Action:

1. If dirty – clean the sealings.
2. If damaged – replace the Caps.

Run the Test again!



If the test still fails

Check:

Inspect the seals running faces in the Cover Front.

Action:

If dirty – remove dirt from the seals running faces.

Run test again!



Check:

Inspect that the Cover Battery is properly assembled.
The red sealing around the Cover Battery shouldn't be visible.

Action:

1. If not properly assembled – reassembly and press until the red gasket isn't visible.

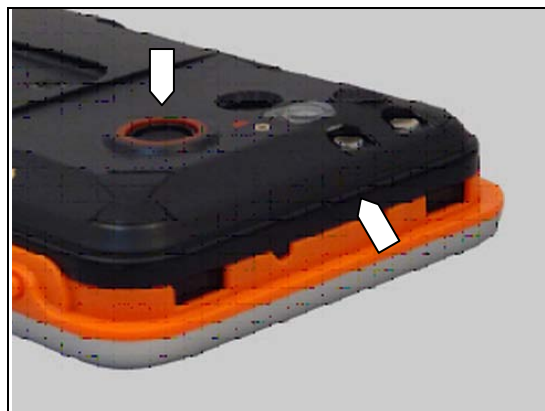


Problem Areas: Water Proof test

2. Press also around the camera and the secondary microphone.

A correct assembled Cover Battery.

Run test again!



If the test fails

Check:

Inspect the sealings of the Cover Battery:

- red sealing around the edges
- red sealing around the loudspeaker
- red sealing around the flash LED
- gasket and membrane by the secondary microphone
- membrane by the ventilation hole



Action:

1. If they are dirty – clean the sealings.
2. If damaged – replace the Cover Battery.

Check:

Inspect that the Cover Battery isn't damaged.

Action:

If damaged – replace the Cover Battery.

Assembly the Cover Battery correctly and run the test again.



Check:

Leakage from the Earspeaker.

Action:

Seal the Earspeaker with tape and run the test again.

If the test now is passed – then replace the Earspeaker and the Adhesive Earspeaker.

Run the test again to verify the solution.



Problem Areas: Water Proof test

Check:

Inspect the location of the Deco Belt and the three Gasket Key Sealings and the Gasket Camera Key Sealing.



Action:

1. If not properly assembled – remove the Deco belt.
2. Inspect the Gasket Key Sealings and the Gasket Camera Key Sealing.
3. If misaligned – reassembly them.



4. If damaged – replace the Gasket Key Sealings or the Gasket Camera Key Sealing.
5. Assembly a new Deco Belt.

Run the test again!



Check:

Inspect the Cover Front.

Action:

1. If gap – replace the Cover Front.

Run the test again!

If the test fails -

handle the unit according to your local instruction.



Problem Areas

1.20 Real Time Clock

1.20.1 Real Time Clock test fails

Action:

Send to higher level of repair.



Problem Areas

1.21 Total call time

1.21.1 Total call time fails

Action:

Send to higher level of repair.

Problem Areas

1.22 External Memory

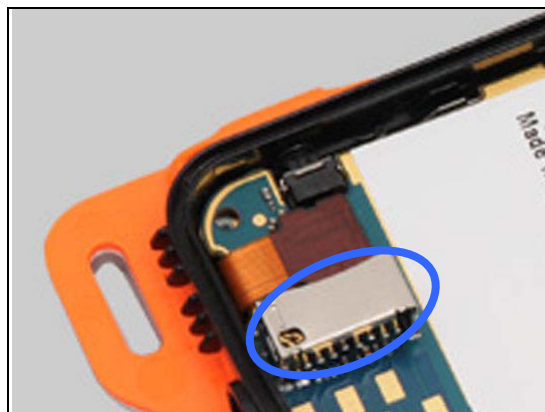
1.22.1 Memory Card not detected

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

1.23 Security

1.23.1 Security fails

Action:

Send to higher level of repair.



Problem Areas

1.24 FM Radio

1.24.1 No/Poor FM Radio reception

Check:

Inspect the Audio Jack.

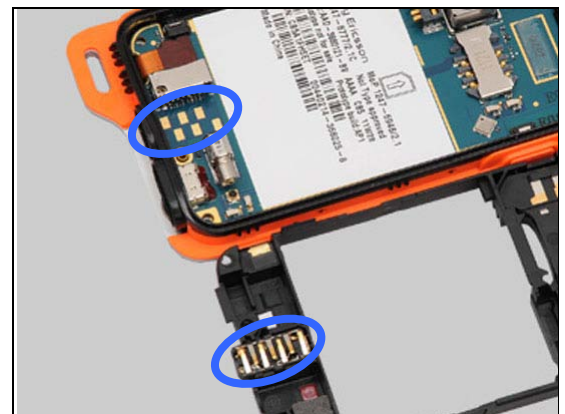
Action:

If clogged – clean it.



Check:

Inspect the contact pins on the Audio Jack 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.
3. Send to higher level of repair.



Problem Areas

1.25 Battery test

1.25.1 Battery test fails

Not Applicable.

Problem Areas

1.26 Battery Health test

1.26.1 Battery Health test fails

Not Applicable.

Problem Areas

1.27 Flip slider counter

1.27.1 Flip slider counter fails

Not Applicable. This isn't a slider phone.

Problem Areas

1.28 Verify Certificates

1.28.1 Verify certificates fails

Not Applicable.

Problem Areas

1.29 IrDA Test

1.29.1 IrDA test fails

Not Applicable. No IrDA in this product.

Problem Areas

1.30 HDMI Test

1.30.1 HDMI test fails

Not Applicable. No HDMI in this product.

Problem Areas

1.31 Connector Ground Test

1.31.1 Connector ground test fails

Not Applicable.



Problem Areas

1.32 Network & Signal

1.32.1 No/Poor signal

Check:

Inspect the main antenna on the Cover Battery.



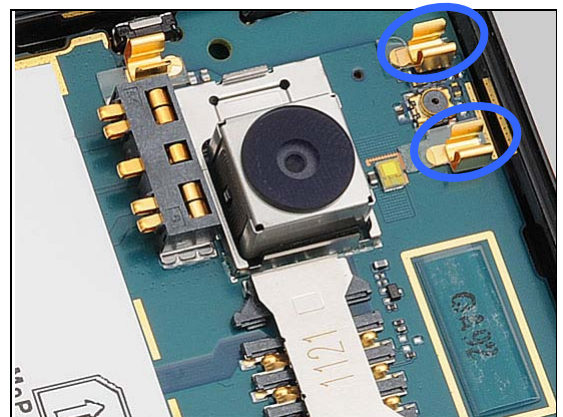
Check:

Inspect the main antenna contact pins on the Cover Battery.



Check:

Inspect the connectors for the GPS antenna on the main PBA.



Action:

1. If dirty or oxidized – clean the pins and connectors.
2. If the pins or the antenna are damaged – replace the Cover Battery.



Problem Areas: Network & Signal

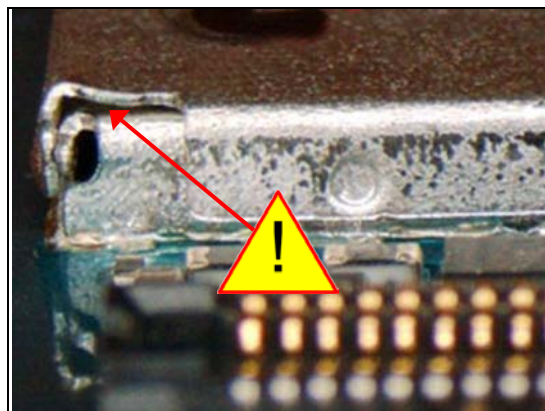
Check:

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.



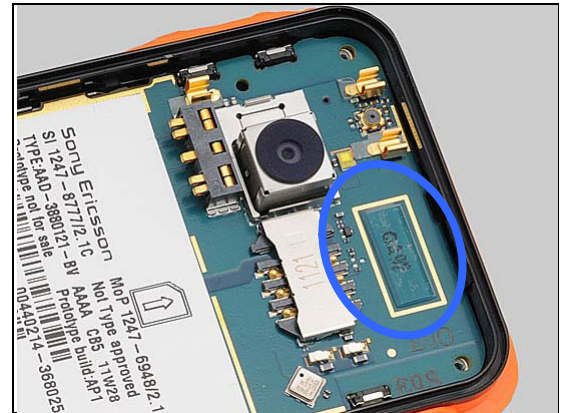
Problem Areas

1.33 SIM

1.33.1 SIM not detected

Check:

Inspect the position of Spacer for SIM card on Main PBA.



Action:

If misaligned or damaged – replace the Spacer for SIM card.



Check:

Inspect the SIM holder.

Action:

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



1.33.2 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

1.34 Charging

1.34.1 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

1.35 HandsFree by Wire

1.35.1 Connection to Portable HandsFree fails

Check:

Inspect the Audio Jack.

Action:

If clogged – clean it.



Check:

Inspect the contact pins on the Audio Jack 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.
3. Send to higher level of repair.



Problem Areas

1.36 Data Communication

1.36.1 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-Sep-26	Initial release
2	2011-Sep-30	Moved WRT process flow to the Test Instruction. Merged chapter 2.37 and 2.19 in Rev1 to chapter 1.19 in Rev 2.
3	2011-Nov-25	Added instruction about calibration for malfunction of the Touch Screen.
4	2012-Jan-4	Added instruction in the chapter of Camera Key, On/Off Key, Earphone and Water Proof Test.
5	2012-Nov-6	Microphone / Acoustic feedback - Gasket Mic with Membrane