



# Troubleshooting Guide

## - mechanical -



*MT15i*

*MT15a*



## CONTENTS

<b>1</b>	<b>Problem Areas .....</b>	<b>4</b>
1.1	Power .....	4
1.1.1	Will not power on or will switch off randomly.....	4
1.2	Keys .....	6
1.2.1	Menu, Home and Back Keys.....	6
1.2.2	Camera Key.....	7
1.2.3	Volume Key .....	8
1.2.4	On/Off key .....	9
1.3	Touch Screen .....	10
1.3.1	Touch Screen malfunction.....	10
1.4	Display .....	11
1.4.1	Graphics & Illumination .....	11
1.5	LED/Illumination.....	12
1.5.1	LED/Illumination .....	12
1.5.2	Key Illumination .....	12
1.6	Speaker .....	14
1.6.1	Loudspeaker .....	14
1.7	Earphone .....	16
1.7.1	Earphone.....	16
1.8	Microphone.....	17
1.8.1	Microphone .....	17
1.8.2	Secondary Microphone .....	19
1.9	Vibrator .....	20
1.9.1	Vibrator not generating alerts .....	20
1.10	Camera.....	21
1.10.1	Camera defects.....	21
1.11	Flash LED .....	22
1.11.1	Flash LED not flashing.....	22
1.12	Bluetooth and WLAN .....	23
1.12.1	Bluetooth or WLAN connection failure.....	23
1.13	GPS .....	24
1.13.1	GPS malfunctions.....	24
1.14	Compass.....	25
1.14.1	Compass fails .....	25
1.15	Accelerometer .....	26
1.15.1	Accelerometer test fails .....	26
1.16	Ambient Light Sensor .....	27
1.16.1	Light Sensor malfunctions .....	27
1.17	Proximity switch.....	28
1.17.1	Proximity switch malfunctions.....	28
1.18	Real Time Clock .....	29
1.18.1	Real Time Clock test fails .....	29



<b>1.19 Total call time .....</b>	<b>30</b>
1.19.1 Total call time fails .....	30
<b>1.20 External Memory Card .....</b>	<b>31</b>
1.20.1 Memory Card not detected .....	31
<b>1.21 Security.....</b>	<b>32</b>
1.21.1 Security fails .....	32
<b>1.22 FM Radio.....</b>	<b>33</b>
1.22.1 No/Poor FM Radio reception .....	33
<b>1.23 Battery test .....</b>	<b>34</b>
1.23.1 Battery test fails.....	34
<b>1.24 Flip slider counter .....</b>	<b>35</b>
1.24.1 Flip slider counter fails .....	35
<b>1.25 Verify Certificates.....</b>	<b>36</b>
1.25.1 Verify certificates fails.....	36
<b>1.26 IrDA Test .....</b>	<b>37</b>
1.26.1 IrDA test fails .....	37
<b>1.27 HDMI Test .....</b>	<b>38</b>
1.27.1 HDMI test fails.....	38
<b>1.28 Network &amp; Signal.....</b>	<b>39</b>
1.28.1 No/Poor signal .....	39
<b>1.29 SIM .....</b>	<b>41</b>
1.29.1 SIM not detected.....	41
1.29.2 Incorrect SIM indicated .....	41
<b>1.30 Charging .....</b>	<b>42</b>
1.30.1 Battery will not charge .....	42
<b>1.31 HandsFree by Wire.....</b>	<b>43</b>
1.31.1 Connection to Portable HandsFree fails.....	43
<b>1.32 Data Communication .....</b>	<b>44</b>
1.32.1 Data transfer via System Connector fails.....	44
<b>2 Revision History .....</b>	<b>45</b>



# 1 Problem Areas

## 1.1 Power

### 1.1.1 Will not power on or will switch off randomly

**Check:**

Check whether the phone vibrates and the keyboard illuminates after the On/Off 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:**

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 – send to higher level of repair.

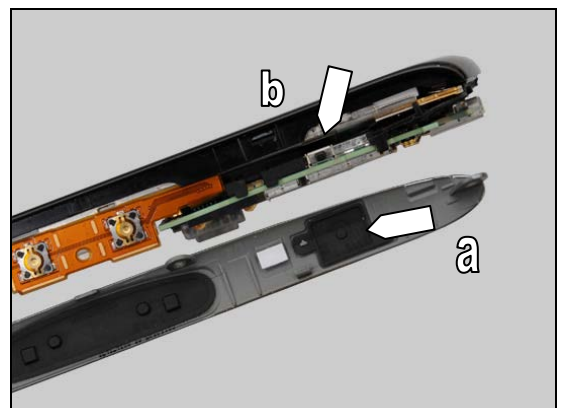


**Check:**

Inspect the On/Off Key (a) on the Cover Right Side panel right assembly and the input switch (b) on the Keyflex.

**Action:**

1. If On/Off Key (a) or input switch (b) is dirty or clogged – clean them.



## Problem Areas: Power

2. If On/Off Key (a) is damaged – replace the On/Off Key.
3. Send to higher level of repair.



## Problem Areas

### 1.2 Keys

#### 1.2.1 Menu, Home and Back Keys

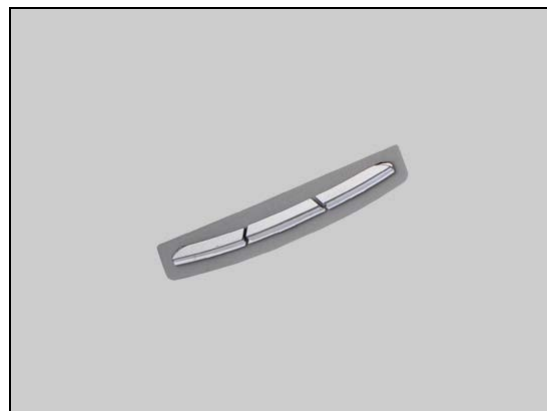
**Check:**

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

**Action:**

1. If the menu, home and back keys are clogged – clean them.

2. If the menu, home and back keys are damaged – replace the Multifunc Front Keys.

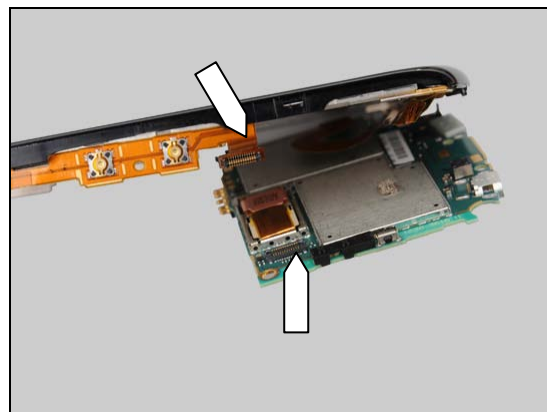


**Check:**

Check the BtB connector of the Keyflex to the PBA.

**Action:**

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

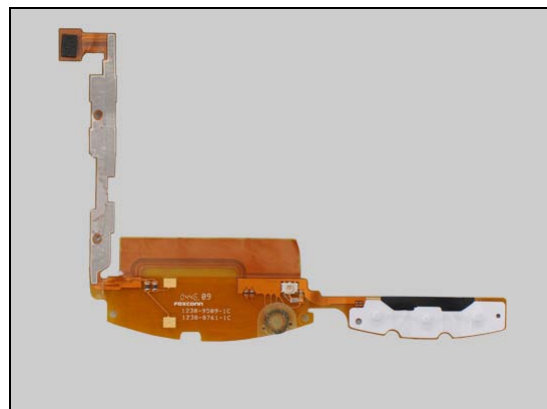


**Check:**

Inspect the Keyflex.

**Action:**

If the Keyflex or its BtB connector is damaged – replace the Keyflex.





## Problem Areas: Keys

### 1.2.2 Camera Key

**Check:**

Inspect the Camera Key on the Cover Right Side panel right assembly.



**Action:**

If the Camera Key is damaged – replace the Camera Key.

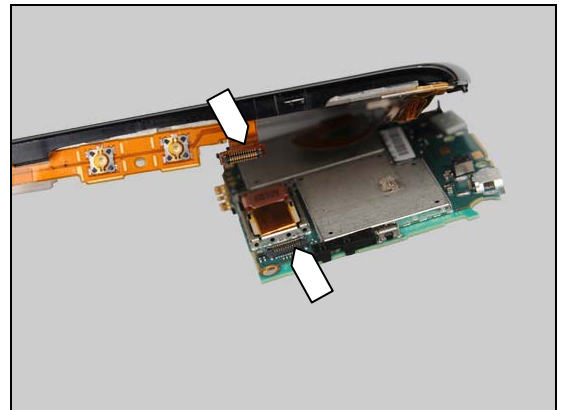


**Check:**

Check the BtB connector of the Keyflex to the PBA.

**Action:**

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

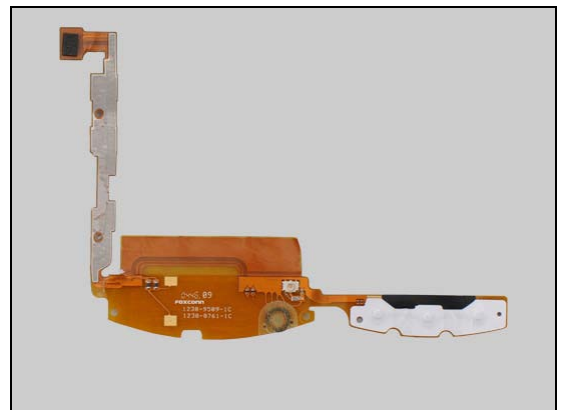


**Check:**

Inspect the Keyflex.

**Action:**

If the Keyflex or its BtB connector is damaged – replace the Keyflex.



## Problem Areas: Keys

### 1.2.3 Volume Key

**Check:**

Inspect the Volume Key on the Cover Right Side panel right assembly.



**Action:**

If the Volume Key is damaged – replace the Volume Key.

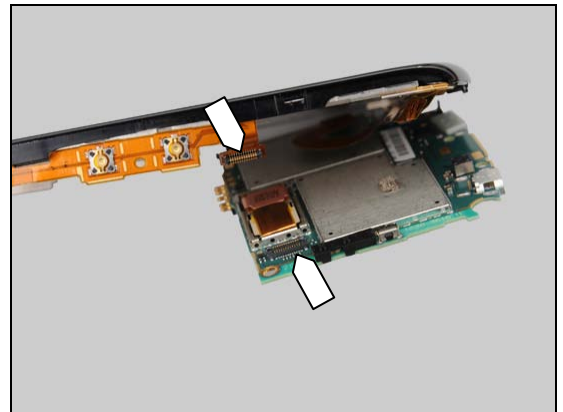


**Check:**

Check the BtB connector of the Keyflex to the PBA.

**Action:**

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

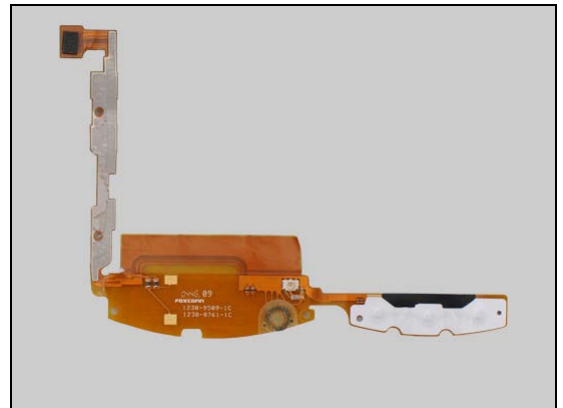


**Check:**

Inspect the Keyflex.

**Action:**

If the Keyflex or its BtB connector is damaged – replace the Keyflex.





## Problem Areas: Keys

### 1.2.4 On/Off key

**Check:**

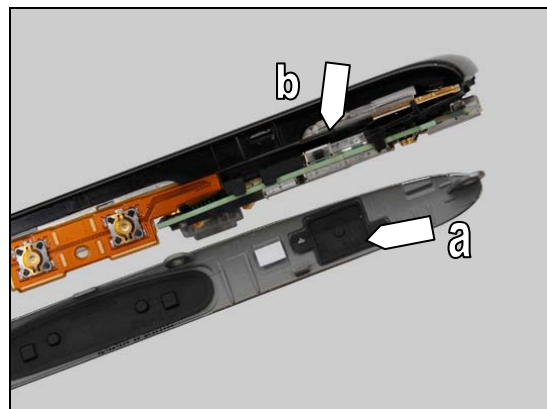
Inspect the On/Off Key (a) on the Cover Right Side panel right assembly and the input switch (b) on the PBA.

**Action:**

1. If (a) or (b) is dirty or clogged – clean them.

2. If (a) is damaged – replace the On/Off Key.

3. Send to higher level of repair.





## Problem Areas

### 1.3 Touch Screen

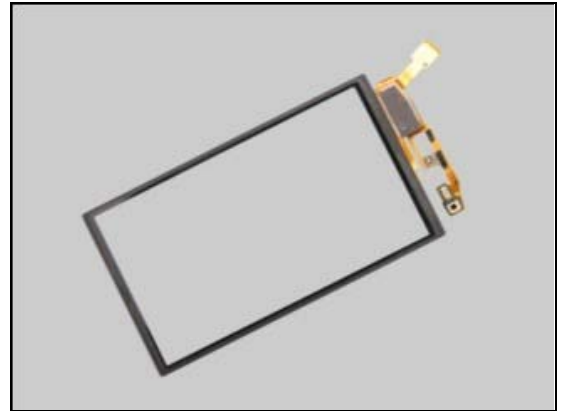
#### 1.3.1 Touch Screen malfunction

**Check:**

Inspect the Touch Panel.

**Action:**

If damaged, replace the Touch Panel.



**Check:**

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

**Action:**

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



3. If damaged, replace the Touch Panel.



**Check:**

Inspect the BtB connector of the Display to the PBA.

**Action:**

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





## 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 Display to the PBA.

**Action:**

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

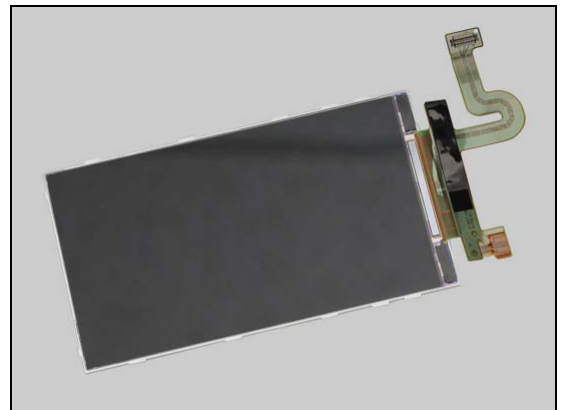


**Check:**

Inspect the Display.

**Action:**

If damaged – replace the Display.



## Problem Areas

### 1.5 LED/Illumination

#### 1.5.1 LED/Illumination

**Check:**

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

**Action:**

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean both sides of the BtB connector.
3. If the Cover Front Assy or its BtB connector is damaged – replace the Cover Front Assy.
4. Send to higher level of repair.



#### 1.5.2 Key Illumination

**Check:**

Inspect the Multifunc Front Keys on the Cover Front Assy.

**Action:**

1. If dirty – clean it.
2. If damaged – replace the Multifunc Front Keys.



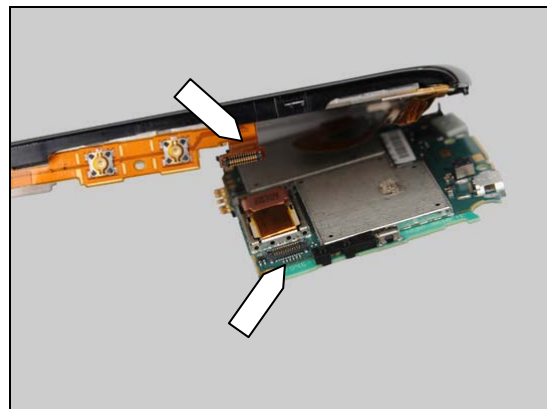
## Problem Areas: Illumination

### Check:

Check the BtB connector of the Keyflex to the PBA.

### Action:

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

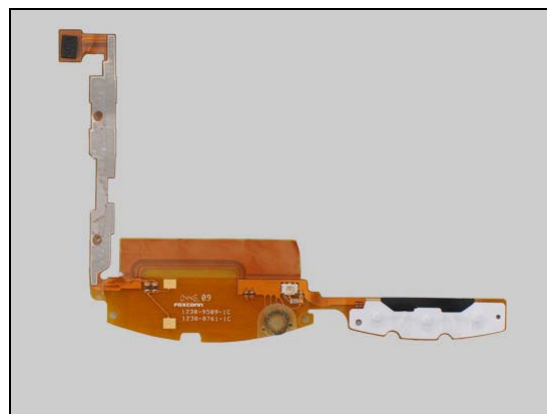


### Check:

Inspect the Keyflex.

### Action:

1. If the Keyflex or its BtB connector is damaged – replace the Keyflex.
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:**

If clogged – clean the speaker port or replace the Battery Cover.



**Check:**

Inspect the Loudspeaker's mesh on the Carrier Inner frame assembly.

**Action:**

1. If clogged – clean the speaker mesh.



2. If the mesh is damaged – replace the Carrier Inner frame assembly.



**Check:**

Inspect the loudspeaker's pads on the Keyflex and the pins on the Lower Speaker.

**Action:**

1. If dirty – clean them.



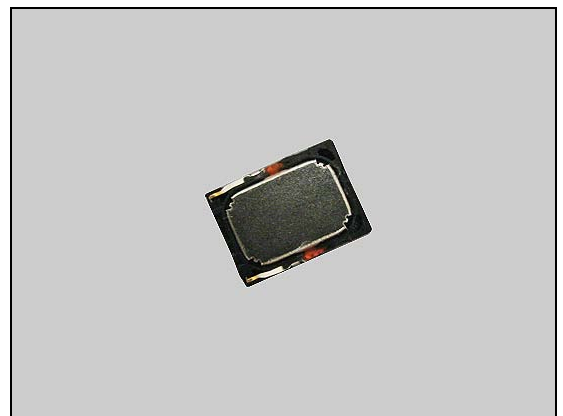


## Problem Areas: Speaker

2. If the pads on the Keyflex are damaged – replace the Keyflex.



3. If the pins on the Speaker are damaged – replace the Speaker.

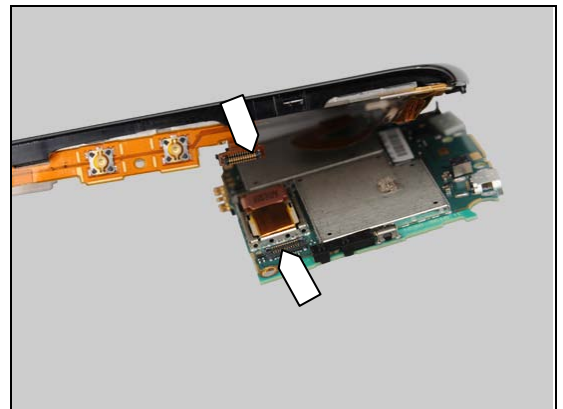


### Check:

Check the BtB connector of the Keyflex to the PBA.

### Action:

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

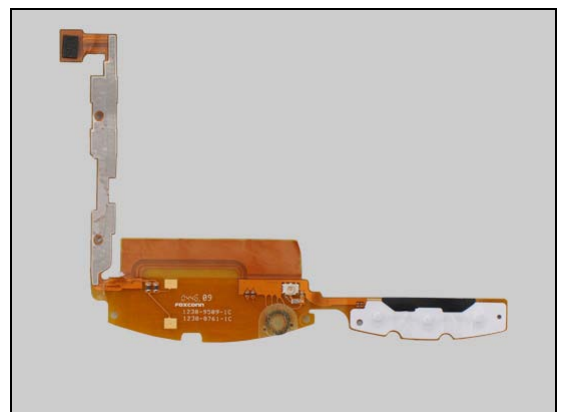


### Check:

Inspect the Keyflex.

### Action:

If the Keyflex or its BtB connector is damaged – replace the Keyflex.





## Problem Areas

### 1.7 Earphone

#### 1.7.1 Earphone

**Check:**

Inspect the Speaker's external port.

**Action:**

1. If clogged – clean it.



2. If the net receiver is damaged – replace the Cover Front Assy.



**Check:**

Inspect the Speaker pins and the pads on the PBA.

**Action:**

If dirty – clean them.



**Check:**

Inspect the Speaker.

**Action:**

If the Speaker is damaged – replace the Speaker.







## Problem Areas

### 1.8 Microphone

#### 1.8.1 Microphone

**Check:**

Inspect the microphone's external port on Cover Front Assy.

**Action:**

1. If clogged – clean the port.

2. If damaged – replace the Cover Front Assy.



**Check:**

Inspect the Microphone Net on the Carrier Metal LCM Carrier Assembly.

**Action:**

1. If clogged – clean it.

2. If damaged, replace the Microphone Net.



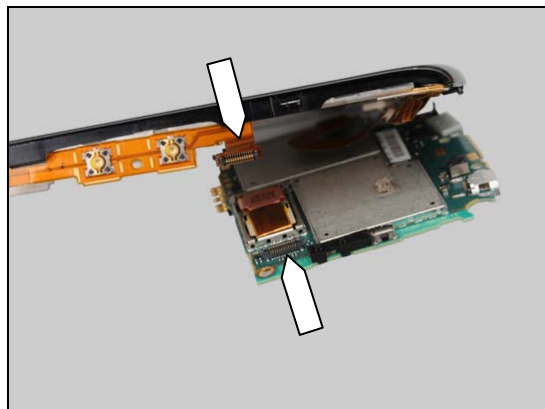
## Problem Areas: Microphone

**Check:**

Check the BtB connector of the Keyflex to the PBA.

**Action:**

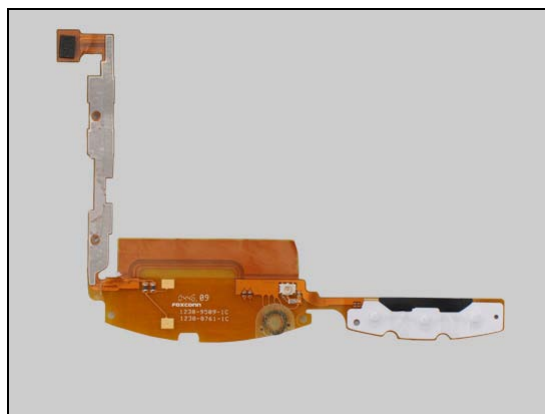
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean both sides of the BtB connector.

**Check:**

Inspect the Keyflex.

**Action:**

1. If the Keyflex or its BtB connector is damaged – replace the Keyflex.



## 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 damaged – replace Cover Battery.



**Check:**

Inspect the second microphone's net on the Carrier Inner frame assembly.

**Action:**

1. If clogged – clean it.

2. If the second microphone's net is damaged – replace the Carrier Inner frame assembly.

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

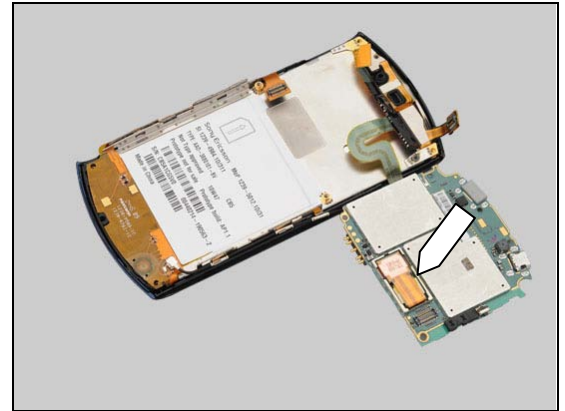
#### 1.10.1 Camera defects

**Check:**

Inspect the BtB connector of the Main Camera to the PBA.

**Action:**

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

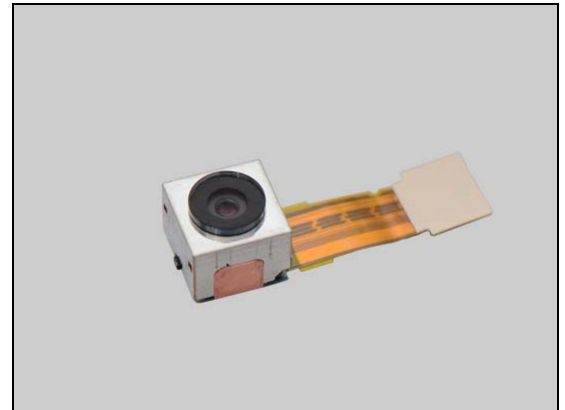


**Check:**

Inspect the Main Camera on the PBA.

**Action:**

1. If damaged – replace the Main Camera.
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 Carrier Inner frame assembly.

**Action:**

1. If scratched or damaged – replace the Light Guide Flash Lens.
2. Send to higher level of repair.



## Problem Areas

### 1.12 Bluetooth and WLAN

#### 1.12.1 Bluetooth or WLAN connection failure

**Check:**

Inspect the contact pins on the Carrier Inner frame assembly and contact pads on the PBA.

**Action:**

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





## Problem Areas

### 1.13 GPS

#### 1.13.1 GPS malfunctions

**Check:**

Inspect the contact pins on the Carrier Inner frame assembly and contact pads on the PBA.

**Action:**

1. If dirty or oxidized – clean the contact pads and the contact pins.
2. If the contact pins on the Carrier Inner frame assembly are damaged – replace the Carrier Inner frame assembly.
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 light sensor window on the Cover Front Assy.

**Action:**

1. If clogged – clean it.

2. If scratched or damaged – replace the Cover Front Assy.

**Check:**

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

**Action:**

1. If not properly connected – disconnect and reconnect it.

2. If dirty or oxidized – clean both side of the BtB connector.

3. If damaged, replace the Cover Front Assy.

4. Send to higher level of repair.



## Problem Areas

### 1.17 Proximity switch

#### 1.17.1 Proximity switch malfunctions

**Check:**

Inspect the proximity switch window on the Cover Front Assy.

**Action:**

1. If clogged – clean it.

2. If scratched or damaged – replace the Cover Front Assy.

**Check:**

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

**Action:**

1. If not properly connected – disconnect and reconnect.

2. If dirty or oxidized – clean both side of the BtB connector.

3. If damaged, replace the Cover Front Assy.

4. 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 Card

#### 1.20.1 Memory Card not detected

**Check:**

Inspect the memory card holder.

**Action:**

1. If dirty or oxidized – 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:**

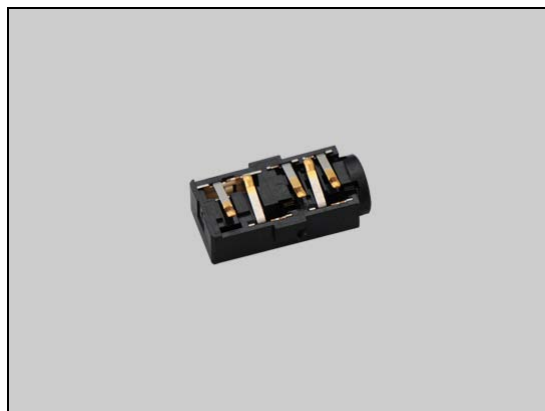
Inspect the Conn Op.

**Action:**

1. If dirty or oxidized – clean the connector.

2. If damaged, replace the Conn Op.

3. Send to higher level of repair.



## **Problem Areas**

### **1.23 Battery test**

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

**Action:**

Send to higher level of repair.

## **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:**

Send to higher level of repair.

## **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

**Check:**

Inspect the HDMI connector.

**Action:**

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





## Problem Areas

### 1.28 Network & Signal

#### 1.28.1 No/Poor signal

**Check:**

Inspect the main antenna on Carrier Inner frame assembly.



**Check:**

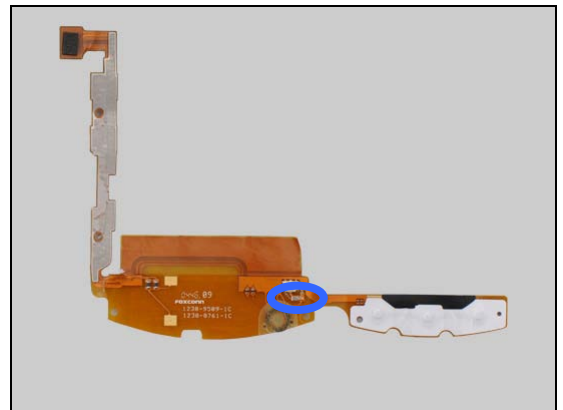
Inspect the main antenna contact pins on Carrier Inner frame assembly and contact pads on the Keyflex.

**Action:**

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



2. If the pins are damaged – replace the Keyflex.



3. If the pads are damaged – replace Carrier Inner frame assembly.





## Problem Areas

### Check:

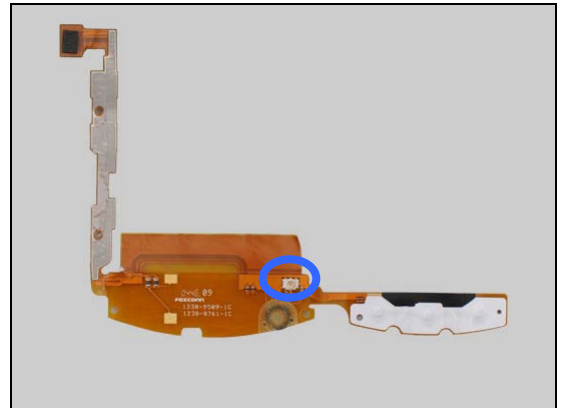
Inspect the connector of Cable Coax on Keyflex and Main PBA.

### Action:

1. If not properly connected to the antenna – disconnect and reconnect it.

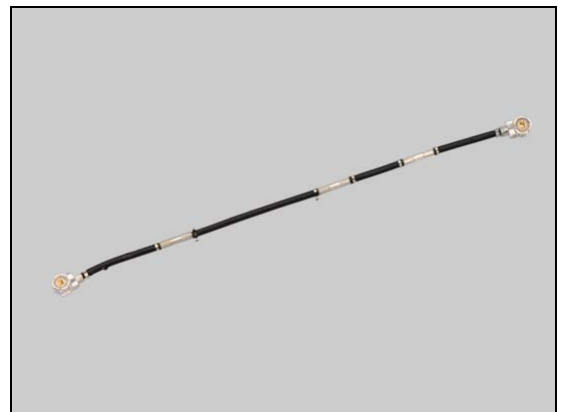


2. If the connector on Keyflex damaged – replace the Keyflex.



3. If the connector on Cable Coax damaged – replace the Cable Coax.

4. Send to higher level of repair.





## Problem Areas

### 1.29 SIM

#### 1.29.1 SIM not detected

**Check:**

Inspect the SIM holder.

**Action:**

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



#### 1.29.2 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

### 1.30 Charging

#### 1.30.1 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. Send to higher level of repair.



## Problem Areas

### 1.31 HandsFree by Wire

#### 1.31.1 Connection to Portable HandsFree fails

**Check:**

Inspect the audio jack.

**Action:**

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



## Problem Areas

### 1.32 Data Communication

#### 1.32.1 Data transfer via System Connector fails

**Check:**

Inspect the USB connector.

**Action:**

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





## 2 Revision History

Rev.	Date	Changes / Comments
1	2011-Mar-23	Initial release
2	2011-Oct-24	Updated Chapter 1.3 Touch Screen
3	2012-April-11	Updated Chapter 1.3 Touch Screen with Touch Panel