

# Working Instruction, Mechanical

Applicable for T303

## CONTENTS

<b>1</b>	<b>Introduction .....</b>	<b>3</b>
1.1	Equipment .....	4
1.2	General cautions .....	5
1.3	Adhesives .....	5
<b>2</b>	<b>Disassembly .....</b>	<b>6</b>
2.1	Overview .....	6
2.1.1	Battery Cover & Battery .....	7
2.1.2	Antenna Cover .....	8
2.1.3	PCB .....	9
2.1.4	Rear Cover Assy .....	10
2.1.5	Slide Hinge Assy .....	11
2.1.6	Function Key FPC Assy .....	13
2.1.7	Display 128x160 TFT .....	14
2.1.8	Front Cover Assy .....	15
<b>3</b>	<b>Replacements .....</b>	<b>16</b>
3.1	Battery Cover .....	17
3.2	Bottom Cover U-Shape .....	17
3.3	Keyboard .....	17
3.4	Rear Cover Assy .....	17
3.5	Function Key FPC Assy .....	17
3.6	Top Rear Cover .....	17
3.7	Display 128x160 TFT .....	17
3.8	Slide Hinge Assy .....	18
3.9	Hinge FPC Assy .....	18
3.10	Camera 1.3 MPixel CMOS .....	18
3.11	Damper Camera .....	18
3.12	Magnet .....	18
3.13	Battery Connector 5pin & Liquid Intrusion Indicator .....	19
3.14	System Connector BT Antenna & System Connector Sponge .....	20
3.15	Microphone Sponge Dust Net .....	21
3.16	Anti-Friction Block .....	21
3.17	Main Keypad FPC Assy .....	22
3.18	Function Key FPC Assy & Loudspeaker Box 38.5x19 .....	23
3.19	Camera Window .....	24
3.20	Plating Camera Sheet .....	25



3.21 Ear Speaker 11.0x7.0 Rectangular.....	26
3.22 Function Keyboard.....	27
3.23 Magnet.....	28
3.24 Conductive Rubber & Damper Stopper.....	28
3.25 Damper Stopper .....	29
3.26 KRH Label .....	29
<b>4 Reassembly .....</b>	<b>30</b>
<b>4.1 Overview .....</b>	<b>30</b>
4.1.1 Front Cover Assy.....	31
4.1.2 Display 128x160 TFT .....	32
4.1.3 Function Key FPC Assy .....	33
4.1.4 Slide Hinge Assy .....	35
4.1.5 Rear Cover Assy .....	37
4.1.6 PCB.....	38
4.1.7 Antenna Cover .....	39
4.1.8 Battery Cover & Battery.....	41
<b>5 Revision history .....</b>	<b>42</b>

# 1 Introduction

**T303 - Black**



**T303 - Silver**



## 1.1 Equipment

### SPECIAL TOOLS

Special tools can be found in the tool catalogue

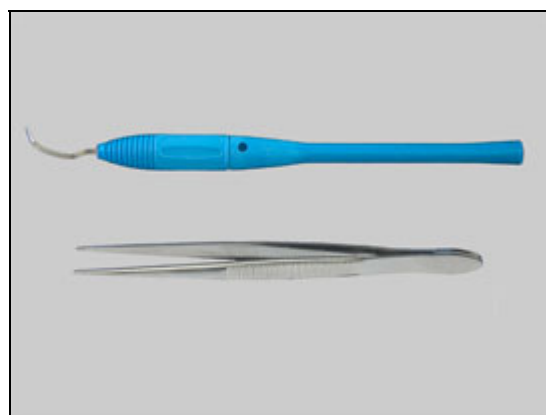
- Screwdriver
- JCIS Bits
- Guitar Pick



### STANDARD TOOLS

Standard tools text:

- Dentist Hook (optional)
- Pair of tweezers



### ESD EQUIPMENT

Protect the phone from ESD damages whenever it has been opened by using:

- ESD-wristband
- ESD-gloves



### LABEL EQUIPMENT

The following special equipment is required when replacing or installing a new label:

- Hot air flow solder station
- Zebra printer connected to computer





## 1.2 General cautions

The following cautions are considered to be generic for all phone models and will not be repeated in the Disassembly, Replacements and Reassembly sections:

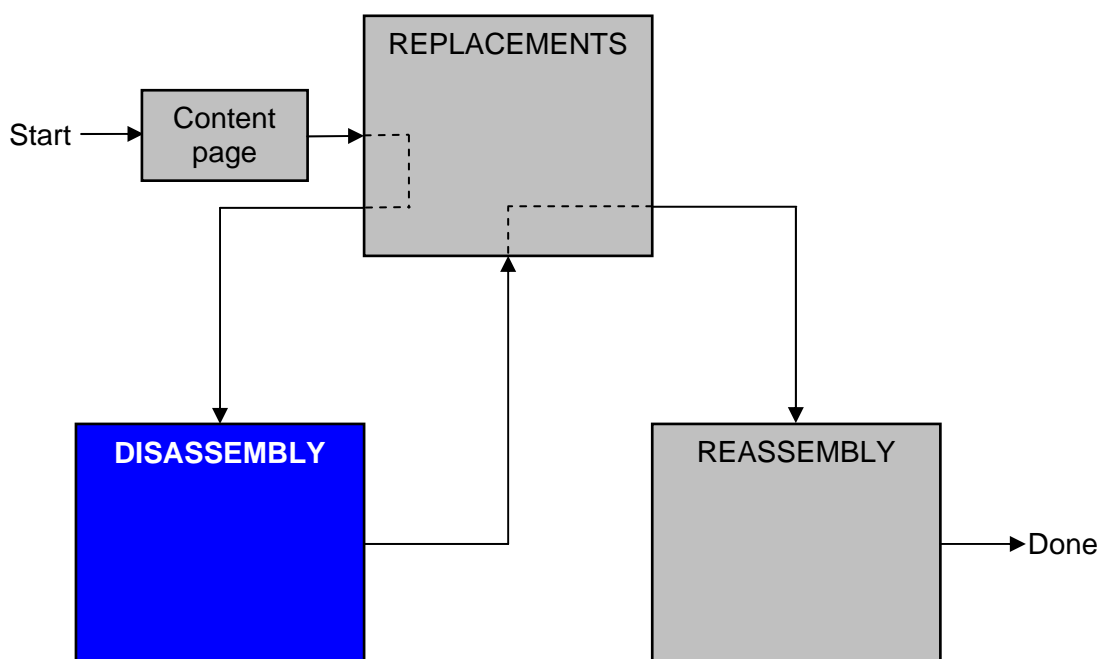
- **SWITCH OFF THE PHONE AND REMOVE ANY MEMORY STICK BEFORE THE START OF THE DISASSEMBLY!**
- **KEEP ALL CONTACT SURFACES CLEAN!**
- **BE CAREFUL WHEN USING TOOLS LIKE THE DENTIST HOOK, TWEEZERS, OPENING TOOLS, GUITAR PICK ETC. TO AVOID SCRATCHES OR DAMAGES TO THE EXTERIOR AND INTERIOR PARTS OF THE PHONE!**
- **BE CAREFUL NOT TO DAMAGE ANY CONTACT SPRINGS!**
- **REMEMBER TO REMOVE THE PROTECTION FOILS ON NEW PARTS SUCH AS THE FRONT COVER AND LCD!**
- **NEVER TOUCH THE DISPLAY GLASS!**
- **USE AIR BLOW EQUIPMENT TO KEEP THE FRONT WINDOW AND DISPLAY MODULE DUST FREE!**

## 1.3 Adhesives

Use a dentist hook and/or the tweezers to remove old adhesives.  
Clean the surface with isopropyl alcohol before attaching new adhesives.

## 2 Disassembly

When you are going to replace a part being listed in *Replacements*, the instruction of that section usually begins by directing you to this *Disassembly* section with a specification of the instructions you have to carry out in order to disassemble the phone as far as needed before returning to *Replacements* for the actual replacement.



### 2.1 Overview

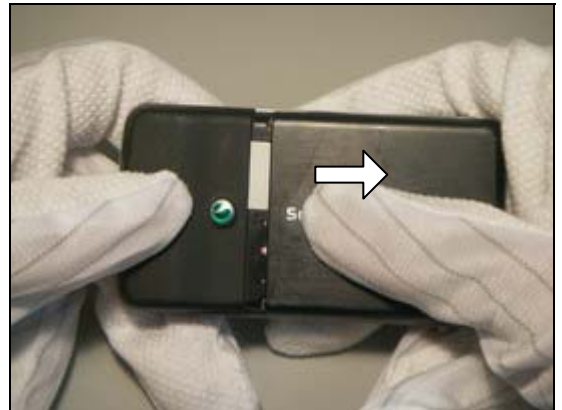
The disassembly is done in the following sequence:

1. Battery Cover (a) & Battery (b)
2. Antenna Cover
3. PCB
4. Rear Cover Assy
5. Slide Hinge Assy
6. Function Key FPC Assy
7. Display 128x160 TFT
8. Front Cover Assy



## 2.1.1 Battery Cover & Battery

Hold the phone and slide off the battery cover.

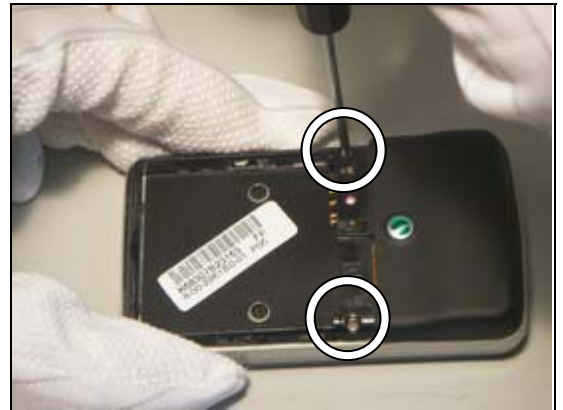


Use your thumb to push up the Battery.



## 2.1.2 Antenna Cover

Release the two screws with a screwdriver



Use a pair of tweezers to remove the Bottom Cover U-Shape and pick up Main keypad.



Release the two screws with a screwdriver.



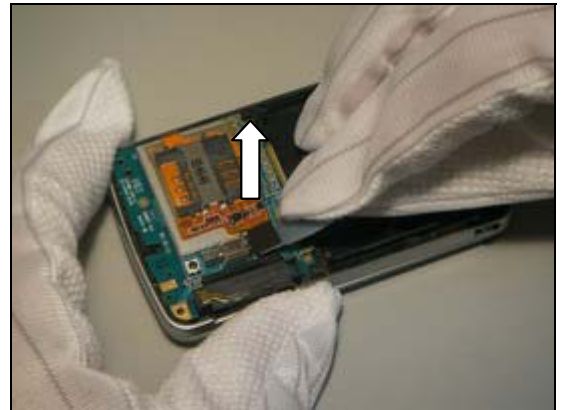
Use your thumb to remove the antenna cover from Rear Cover.



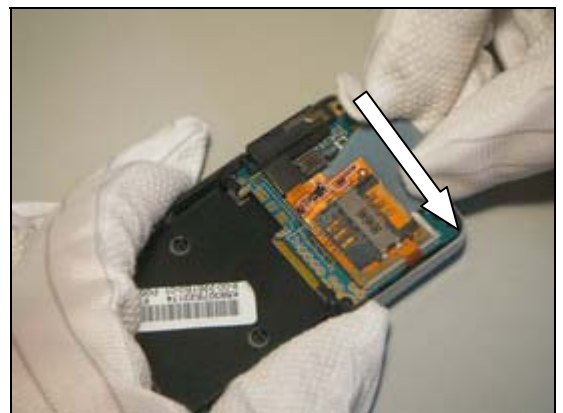


### 2.1.3 PCB

Use the Guitar pick to release the connector for the Main Keyboard FPC assy.



Use the Guitar pick to lift up the Main Keyboard FPC assy.



Use the Guitar pick to lift up and remove main PCB

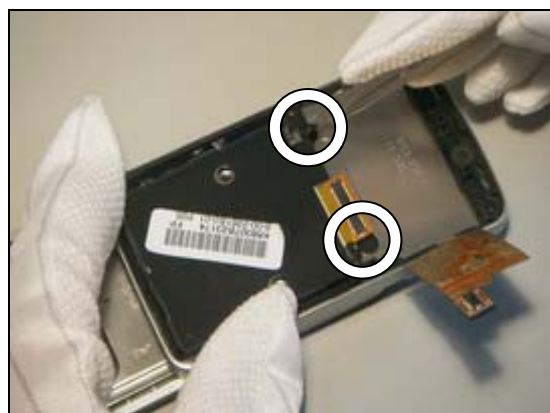


## 2.1.4 Rear Cover Assy

Use a pair of tweezers to remove the Top Rear Cover



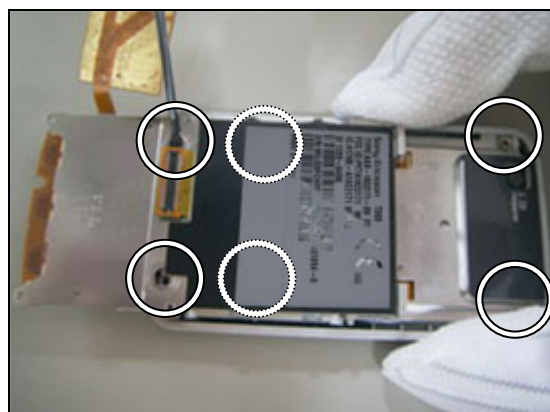
Use a pair of tweezers to remove the screw mylars



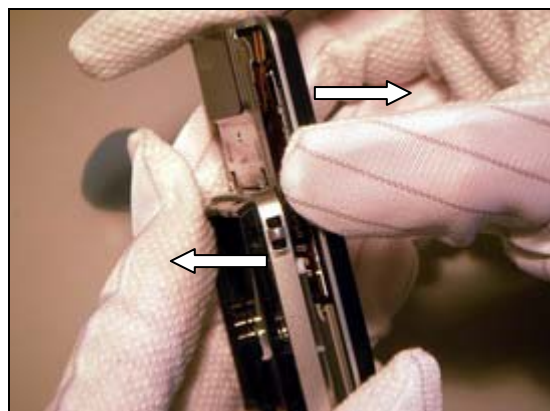
Release the six screws

### NOTE!

You must slide the phone half-ways to access two of the screws



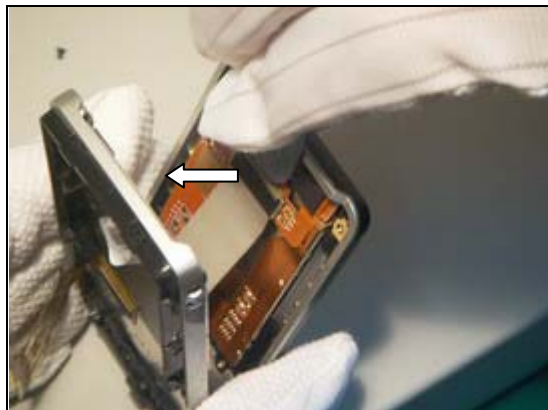
Use your fingers to separate the Front Cover Assy and the Rear Cover Assy.



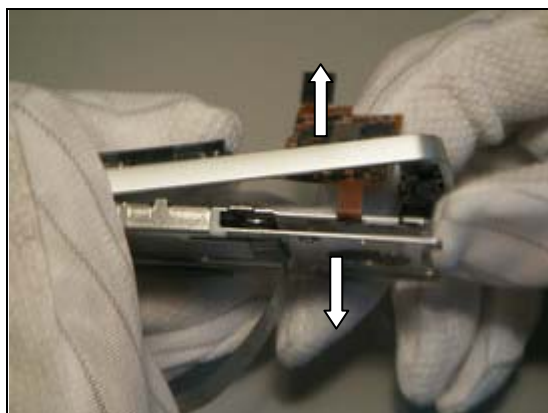
## 2.1.5 Slide Hinge Assy

**DO NOT DAMAGE THE FPC CONNECTOR!**

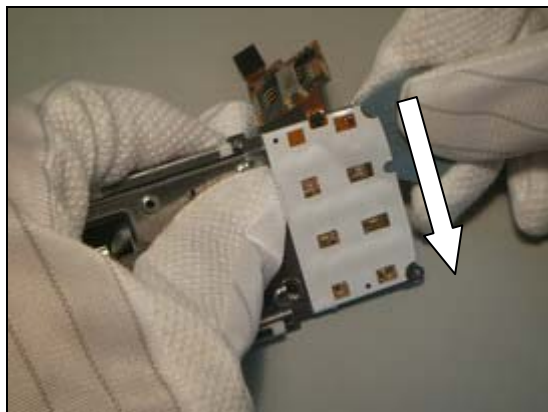
Use the guitar pick to release the connector for the Hinge FPC Assy.



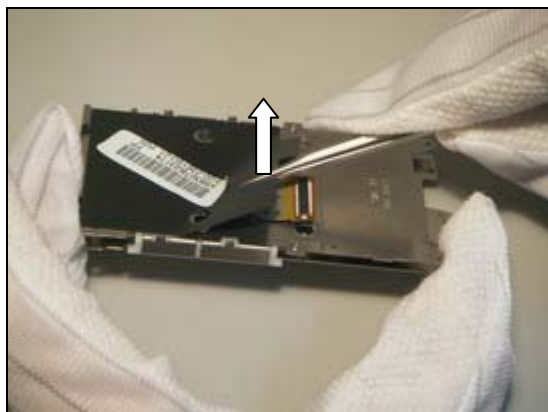
Use your finger to separate Slide Hinge Assy from Rear Cover Assy



Use the guitar pick to remove the main key dome assembly.



Use a pair of tweezers to remove the black cover mylar from the slide hinge module



## Slide Hinge Assy *continued*

Use a pair of tweezers to remove the Mylar Hinge FPC from the Slide Hinge Assy.



***THERE IS ADHESIVE UNDER THE HINGE FPC ASSY!***

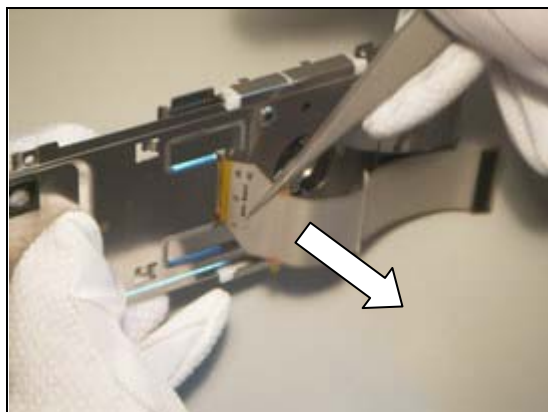
Use a pair of tweezers to separate the hinge FPC.



Use a pair of tweezers to separate the Hinge FPC on the other side.



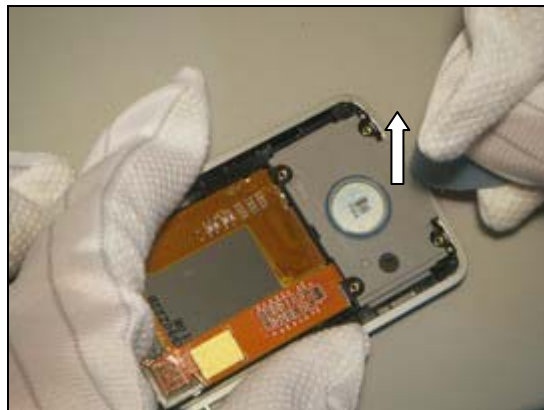
Use a pair of tweezers to pull out the Hinge FPC Assy



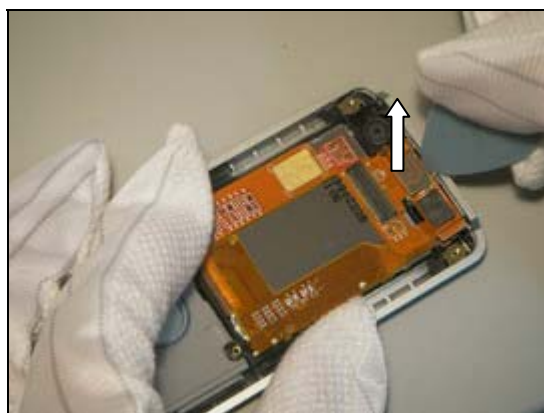


## 2.1.6 Function Key FPC Assy

Use the guitar pick to pick up the Loudspeaker Box from the Front Cover Assy.



Use the guitar pick to release the camera FPC connector from Function Key FPC Assy.



Use the guitar pick to lift up function key FPC from the upper side.



Use the guitar pick to separate the Function Key FPC Assy from the Display and the Front Cover Assy.



## 2.1.7 Display 128x160 TFT

***DO NOT TOUCH THE LCD SURFACE!***

Use a pair of tweezers to remove display module from the Front Cover Assy.



## 2.1.8 Front Cover Assy

**BE CAREFUL WITH THE TWEEZERS NOT TO DAMAGE THE CAMERA SOCKET!**

Use a pair of tweezers to remove the Camera



Remove the Ear Speaker from the cavity.



Use a pair of tweezers to pick up the Function Keyboard from the Front Cover Assy.



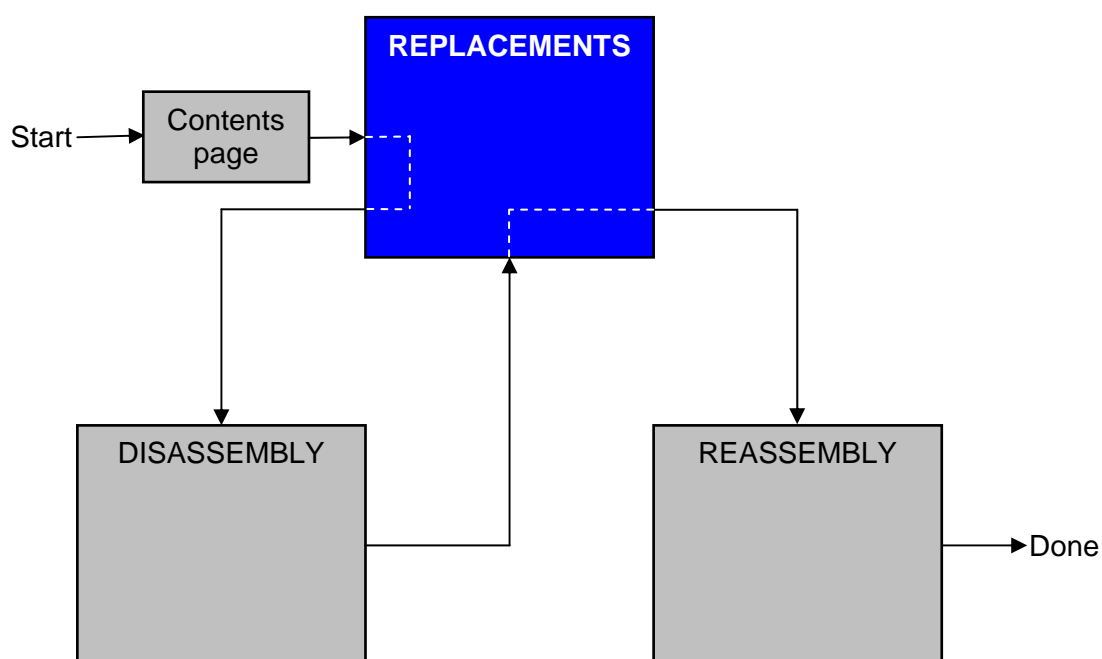
### 3 Replacements

Search for the part to be replaced on the Contents page and go to that instruction to be found in this *Replacements* section.

The instruction usually begins by directing you to the *Disassembly* section with a specification of the instructions you have to carry out in order to disassemble the phone as far as needed before the actual replacement.

Go back to this *Replacements* section and carry out the instruction.

The instruction usually ends by directing you to the *Reassembly* section with a specification of the instructions you have to carry out in order to reassemble the phone.





### **3.1 Battery Cover**

*Follow the 2.1.1 Disassembly instructions!*

Prepare the new Battery Cover.

*Follow the 4.1.8 Reassembly instructions!*

### **3.2 Bottom Cover U-Shape**

*Follow the 2.1.2 Disassembly instructions!*

Prepare the new Bottom Cover U-Shape

*Follow the 4.1.7 – 4.1.8 Reassembly instructions!*

### **3.3 Keyboard**

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare a new Keyboard

*Follow the 4.1.7 – 4.1.8 Reassembly instructions!*

### **3.4 Rear Cover Assy**

*Follow the 2.1.1 – 2.1.4 Disassembly instructions!*

Prepare a new Rear Cover Assy

*Follow the 4.1.5 – 4.1.8 Reassembly instructions!*

### **3.5 Function Key FPC Assy**

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Prepare a new Function Key FPC Assy

*Follow the 4.1.3– 4.1.8 Reassembly instructions!*

### **3.6 Top Rear Cover**

*Follow the 2.1.5 Disassembly instructions!*

Prepare a new Top Rear Cover

*Follow the 4.1.7 Reassembly instructions!*

### **3.7 Display 128x160 TFT**

*Follow the 2.1.1 – 2.1.6 Disassembly instructions!*

Prepare a new Display

*Follow the 4.1.2 – 4.1.8 Reassembly instructions!*

### **3.8 Slide Hinge Assy**

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Prepare a new Slide Hinge Assy

*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*

### **3.9 Hinge FPC Assy**

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Prepare a new Hinge FPC Assy

*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*

### **3.10 Camera 1.3 MPixel CMOS**

*Follow the 2.1.1 – 2.1.8 Disassembly instructions!*

Prepare a new Camera 1.3 MPixel CMOS

*Follow the 4.1.1 – 4.1.8 Reassembly instructions!*

### **3.11 Damper Camera**

*Follow the 2.1.1 – 2.1.8 Disassembly instructions!*

Prepare a new Damper Camera

*Follow the 4.1.1 – 4.1.8 Reassembly instructions!*

### **3.12 Magnet**

*Follow the 2.1.1 – 2.1.8 Disassembly instructions!*

Prepare a new Magnet

*Follow the 4.1.1 – 4.1.8 Reassembly instructions!*

### 3.13 Battery Connector 5pin & Liquid Intrusion Indicator

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Use a pair of tweezers to remove Battery Connector & Liquid Intrusion Indicator from Antenna cover.



***DO NOT REUSE THE LIQUID INTRUSION INDICATOR!***

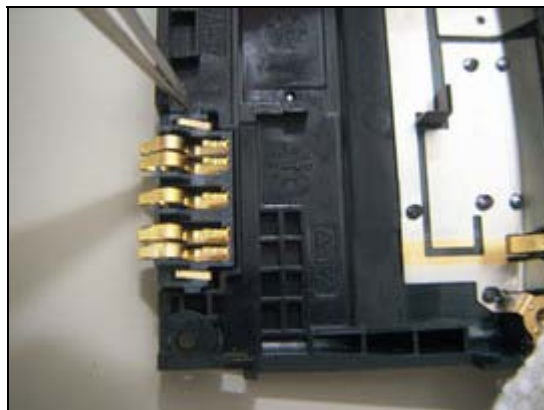
Prepare the new Battery Connector & Liquid Intrusion Indicator.



Assemble the new Battery Connector & Liquid Intrusion Indicator into the antenna cover Assy cavity by using a pair of tweezers.

Press the connector to the bottom of the cavity.

*Follow the 4.1.7 – 4.1.8 Reassembly instructions!*



## 3.14 System Connector BT Antenna & System Connector Sponge

*Follow the 2.1.1 – 2.1.3 Disassembly instructions!*

Use your fingers to pull out the System Connector BT Antenna from main PCB.

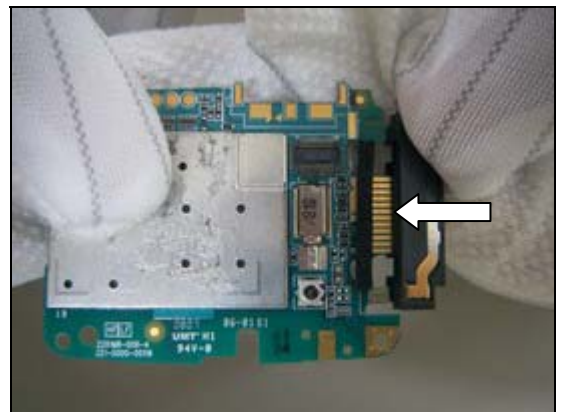
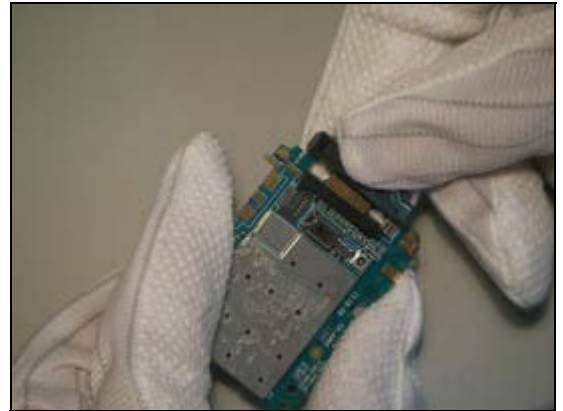
Remove the System Connector Sponge using a pair of tweezers.

Prepare the new System Connector BT Antenna & System Connector Sponge.

Use a pair of tweezers to assemble the System Connector sponge.

Use your fingers to assemble the System Connector BT Antenna.

*Follow the 4.1.6 – 4.1.8 Reassembly instructions!*



### 3.15 Microphone Sponge Dust Net

*Follow the 2.1.1 – 2.1.3 Disassembly instructions!*

Use a pair of tweezers to tear off the Microphone Sponge Dust Net.

Prepare the new Microphone Sponge Dust Net.

*Follow the 4.1.6 – 4.1.8 Reassembly instructions!*



### 3.16 Anti-Friction Block

*Follow the 2.1.1 – 2.1.3 Disassembly instructions!*

Use a pair of tweezers to remove the Anti-Friction from the rear cover according to indicate by the arrows of the picture.

Prepare the new Anti-Friction.

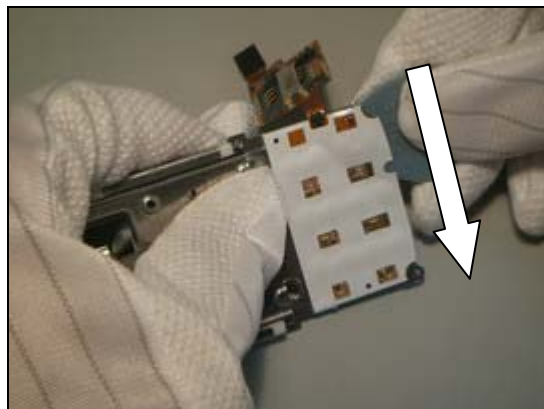
*Follow the 4.1.6 – 4.1.8 Reassembly instructions!*



## 3.17 Main Keypad FPC Assy

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Use the guitar pick to remove the old Main Keypad FPC Assy.



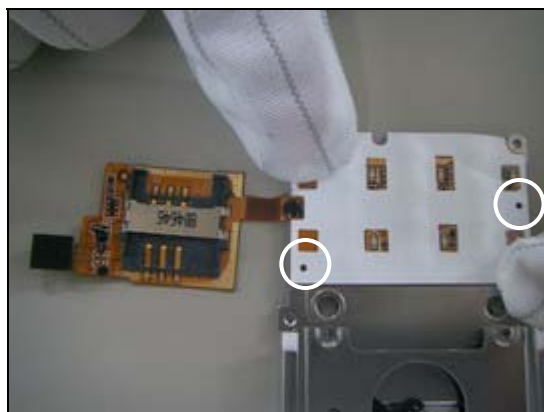
Prepare the new Main Keypad FPC Assy.



***USE THE LOCATION HOLES TO ALIGN THE DOME SHEET!***

Use your fingers to paste the new Main Keypad FPC Assy.

*Follow the 4.1.6 – 4.1.8 Reassembly instructions!*





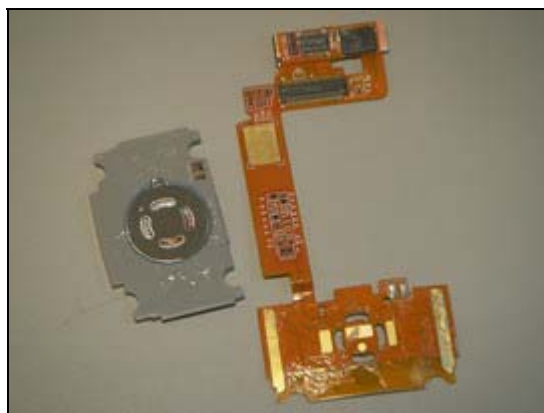
## 3.18 Function Key FPC Assy & Loudspeaker Box 38.5x19

*Follow the 2.1.1 – 2.1.6 Disassembly instructions!*

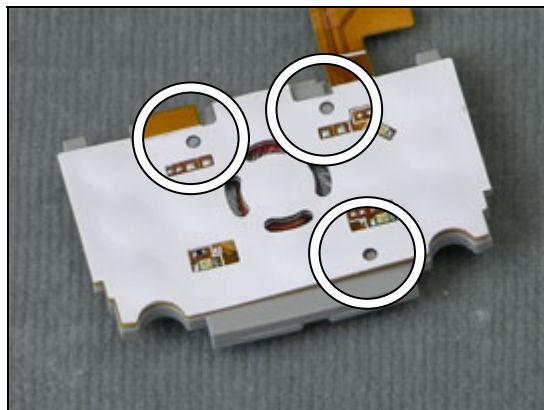
Use the guitar pick to slide off the function key metal dome from speaker box FPC.



Prepare a new Function Key FPC Assy and/or Loudspeaker Box

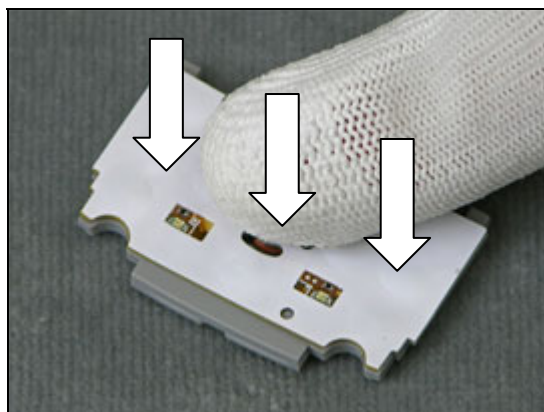


Align the position holes for the Function Key dome sheet with the Loudspeaker Box



Press down the Function Key dome sheet to fixate the adhesive.

*Follow the 4.1.3 – 4.1.8 Reassembly instructions!*



## 3.19 Camera Window

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Use a pair of tweezers to remove the camera window and clean surface from adhesive.

Prepare the new Camera window and Camera Lens adhesive.

***YOU MUST USE NEW CAMERA LENS ADHESIVE!***

Mount the camera lens adhesive and then press down the Camera Window.

*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*





## 3.20 Plating Camera Sheet

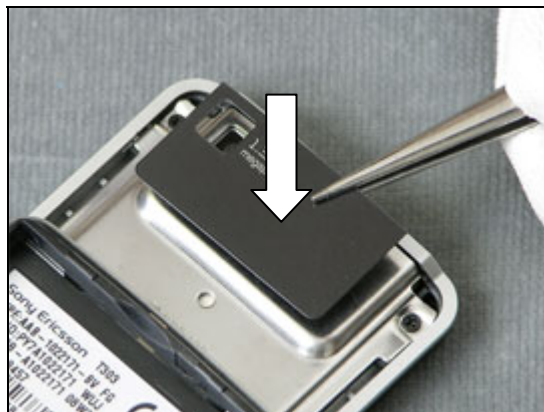
Use a pair of tweezers to remove the Top Rear Cover



Remove the Plating Camera Sheet and clean all adhesive residues from the Slide Hinge Assy



Prepare a new Plating Camera Sheet and mount it onto the Slide Hinge Assy



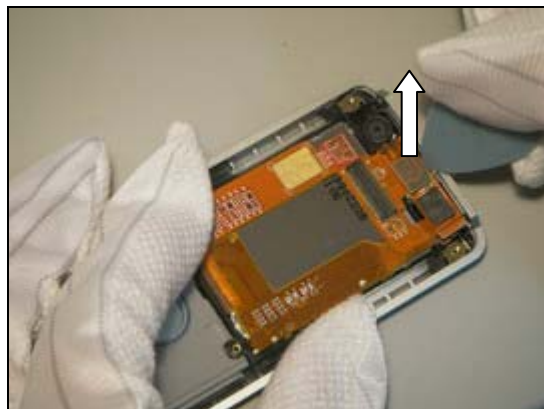
Align the Top Rear Cover to the upper Hinge Slide Assy and press it gently until it is mounted properly.



## 3.21 Ear Speaker 11.0x7.0 Rectangular

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Use the guitar pick to release the camera FPC connector from Function Key FPC Assy.



Use a pair of tweezers to lift up and remove the old Earphone Speaker.

Prepare the new Ear Speaker.



***DON'T TOUCH THE CONTACT SPRINGS!***

Gently press down the Earphone Speaker to the bottom of the cavity.

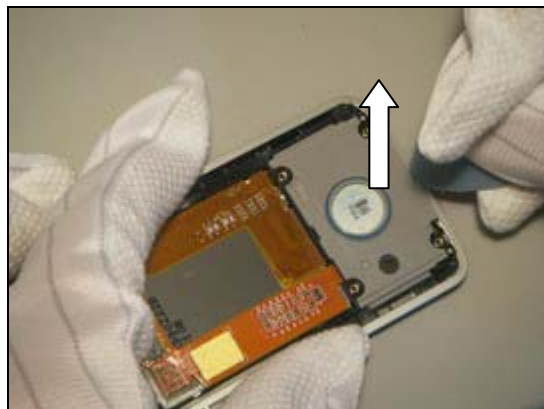
*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*



## 3.22 Function Keyboard

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Use the guitar pick to pick up the Loudspeaker Box from the Front Cover Assy.



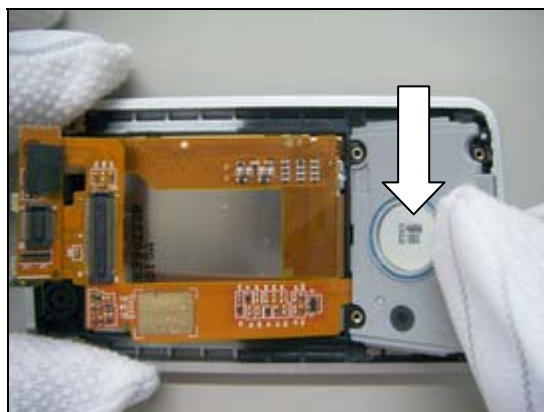
Use a pair of tweezers to pick up Function Keyboard from the Front Cover Assy.

Prepare the new Function Keyboard.



Use your fingers to assemble the Loudspeaker Box into the front cover Assy. Make sure it fits properly.

*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*



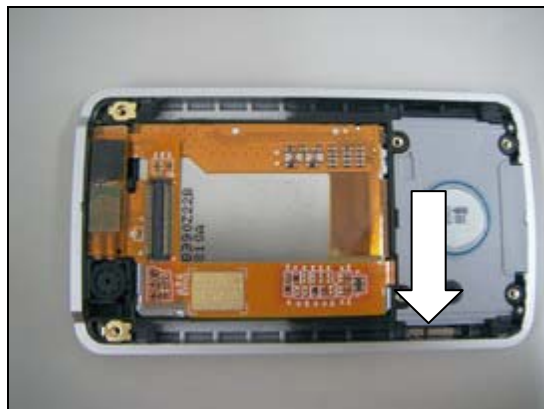
### 3.23 Magnet

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Use a pair of tweezers to remove the magnet from the front cover.

Prepare the new magnet and insert it into the groove.

*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*



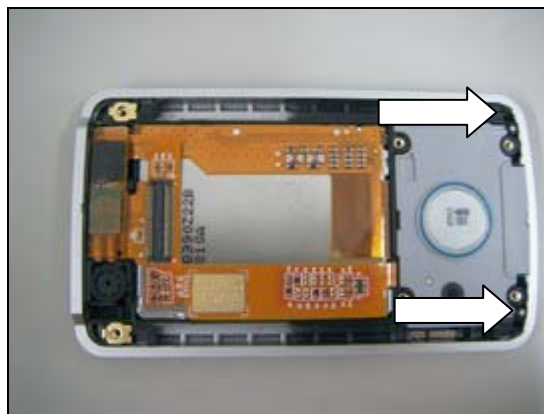
### 3.24 Conductive Rubber & Damper Stopper

*Follow the 2.1.5 – 2.1.8 Disassembly instructions!*

Use a pair of tweezers to pick up Conductive Rubbers

Prepare new conductive rubbers and insert them into the cavities

*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*



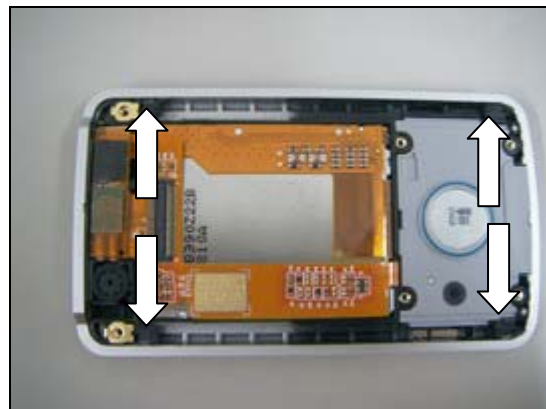
## 3.25 Damper Stopper

*Follow the 2.1.5 – 2.1.8 Disassembly instructions!*

Use a pair of tweezers to pick up Damper Stoppers.

Prepare new Damper Stoppers and insert them into the cavities

*Follow the 4.1.4 – 4.1.8 Reassembly instructions!*



## 3.26 KRH Label

*Follow the 2.1.1 Disassembly instructions!*

Read the old label and/or write the information into the “Label make” program before removal

Note the position of the label before removal

Heat up the label by using hot air, if needed.

Carefully remove the label without causing scratches

If there still are residues, clean the surface with isopropyl alcohol

Check that the proper label format is loaded in the Zebra printer.

Write a new label by using the program “Label make” and check that the printing is OK.

Take the new label and place it onto the frame as in the adjacent picture.

**ONE LABEL ONLY IS ALLOWED!**

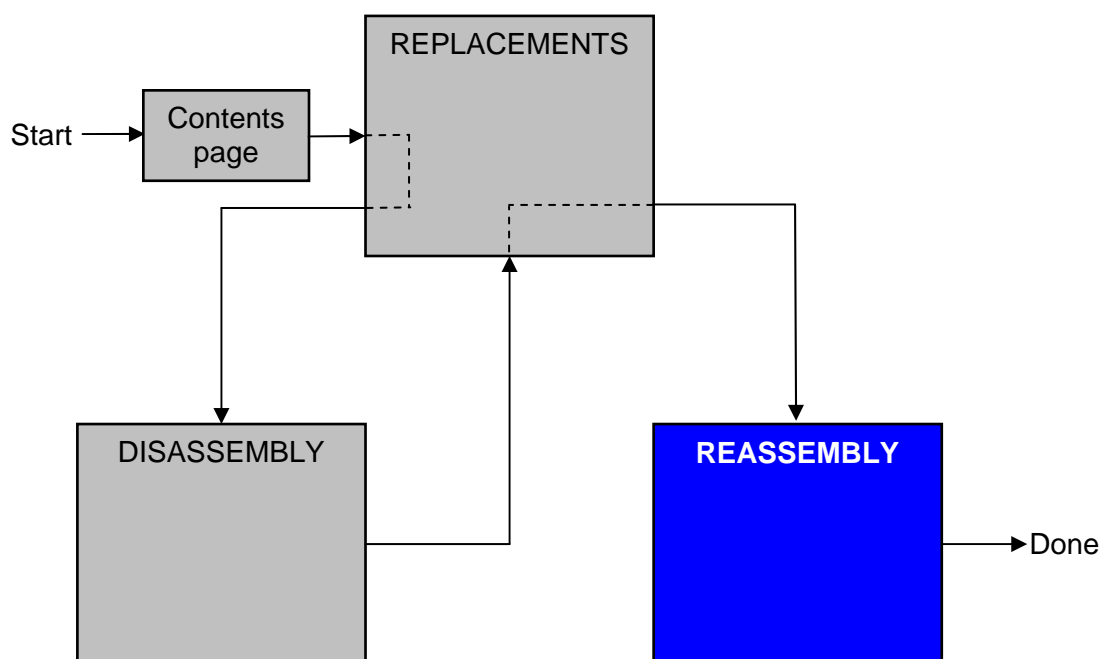
*Follow the 4.1.8 Reassembly instructions!*





## 4 Reassembly

After replacing a part being listed in Replacements, the instruction of that section usually ends by directing you to this Reassembly section with a specification of the instructions you have to carry out in order to reassemble the phone.



### 4.1 Overview

The reassembly is done in the following sequence:

1. Front Cover Assy
2. Display 128x160 TFT
3. Function Key FPC Assy
4. Slide Hinge Assy
5. Rear Cover Assy
6. PCB
7. Antenna Cover
8. Battery Cover (a) & Battery (b)



### 4.1.1 Front Cover Assy

Insert the magnet into the front cover.



Assemble the function keyboard to the front cover.



Insert the Ear speaker to the cavity.



Mount the Camera 1.3 MPixel CMOS and Damper Camera



## 4.1.2 Display 128x160 TFT

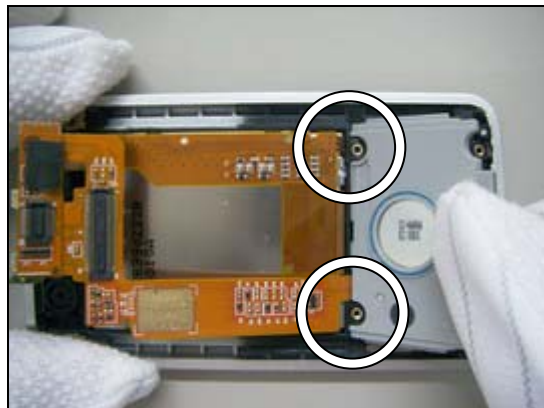
Assemble the display 128x160 TFT.



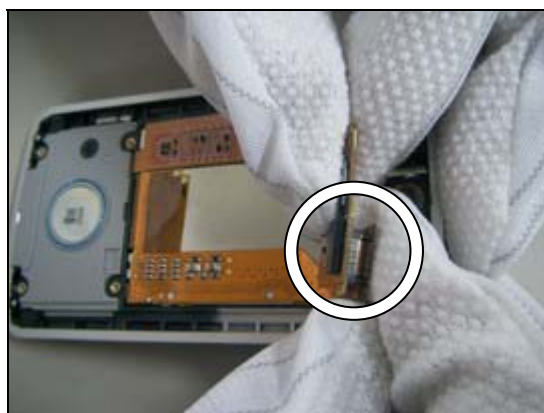


### 4.1.3 Function Key FPC Assy

Use your fingers to assemble the Loudspeaker Box into the front cover Assy. Make sure it fits properly.



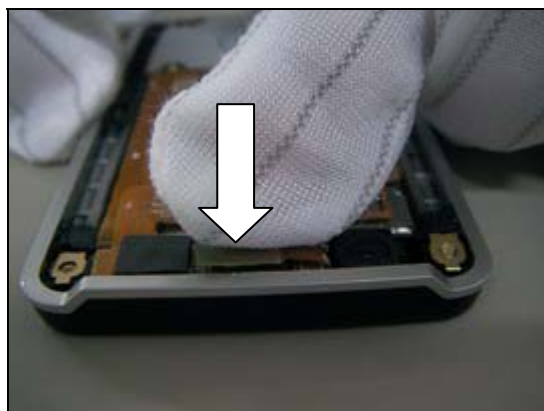
Use your fingers to press down the connector.



Use your fingers to press down the Function Key FPC into cavity properly.



Use your fingers to press down the camera FPC into connector properly.



## Function Key FPC Assy *continued*

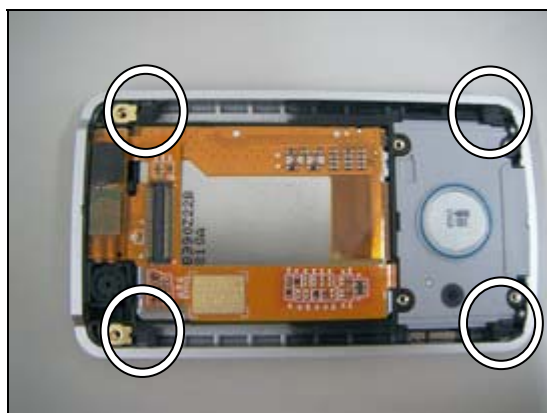
### NOTE!

Make sure that the two conductive rubbers are mounted before you continue.



### NOTE!

Make sure that the four damper rubbers are mounted before you continue.



### NOTE!

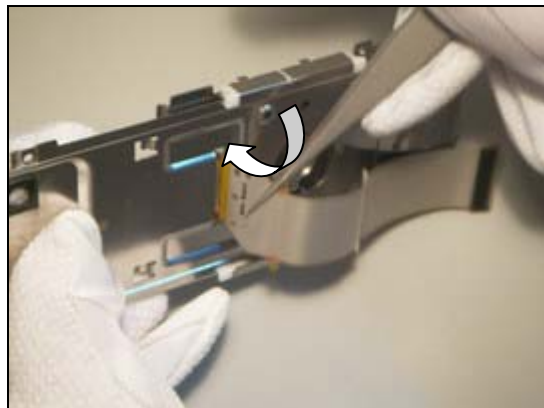
Make sure that the magnet is mounted before you continue.  
The mark line should be visible.



## 4.1.4 Slide Hinge Assy

***PAY CAREFUL ATTENTION TO THE DIRECTION OF HINGE FPC.***

Use a pair of tweezers to assemble the hinge FPC into the Slide hinge assy.



***PAY ATTENTION TO ALIGN THE POSITION POINTS!***

Use a pair of tweezers to paste the hinge FPC onto the Slide hinge assy with adhesive.



***PAY ATTENTION TO ALIGN THE POSITION POINTS!***

Use a pair of tweezers to paste the hinge FPC onto the back slide hinge assy with adhesive.



Use a pair of tweezers to mount the Mylar Hinge FPC.



## Slide Hinge Assy *continued*

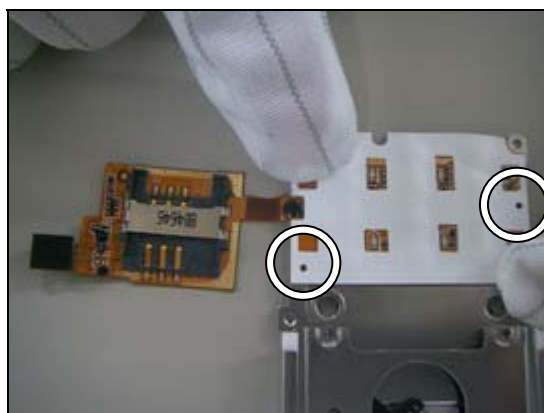
### **USE A NEW MYLAR BATTERY LABEL!**

Use a pair of tweezers to mount the Mylar Battery Label.

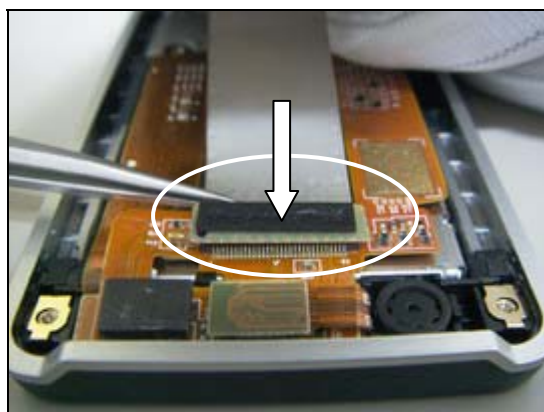


### **PAY ATTENTION TO ALIGN THE POSITION POINTS!**

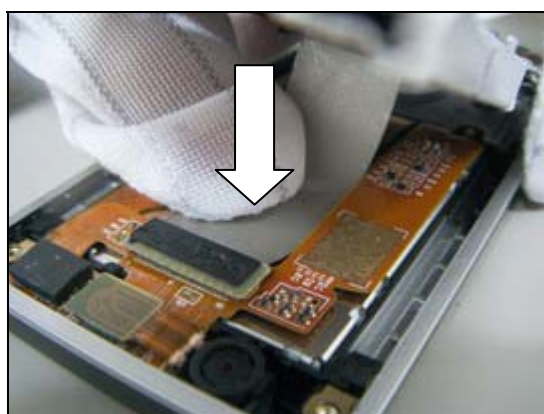
Use your fingers to paste the main keypad FPC Assy.



Use a pair of tweezers to fix the slide hinge FPC, and then press slide hinge FPC into Function key connector with your fingers.



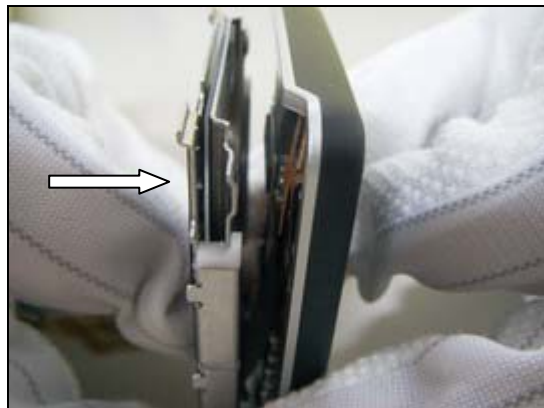
Press and paste adhesive of the slide hinge onto display back surface





## 4.1.5 Rear Cover Assy

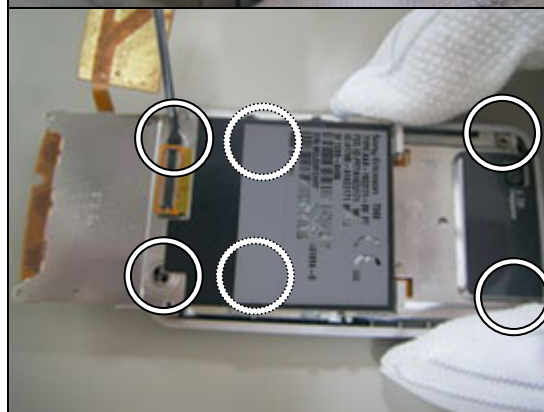
Assemble the Slide Hinge Assy with the Front Cover Assy together.



Use Torque screwdriver to tighten the 6 screws

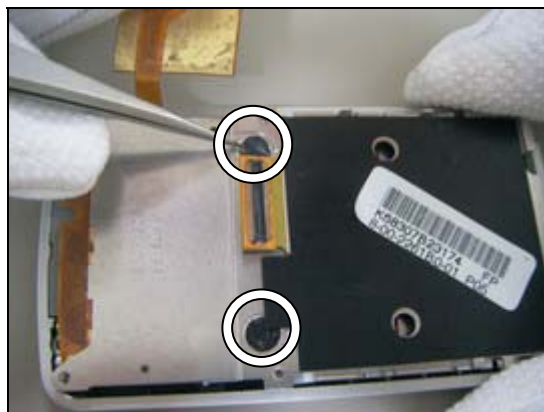
**NOTE!**

Screw torque set to 9 Ncm



**USE NEW SCREW HINGE MYLARS!**

Use a pair of tweezers to mount the Screw Mylars.



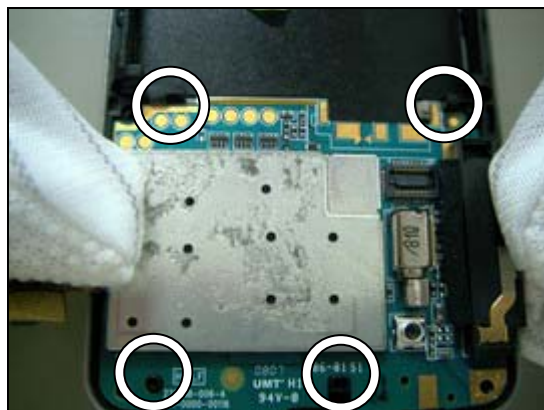
Assemble the Rear cover Assy with the slide hinge Assy together.



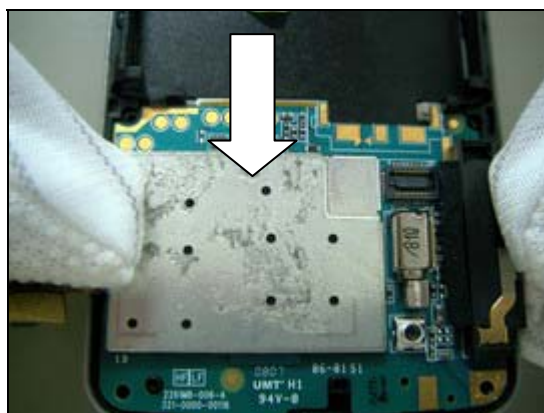
## 4.1.6 PCB

**ATTENTION 4 POSITION HOLES FOR LOCATING AND MAKE SURE THEY FIT PROPERLY!**

Use your fingers to press main PCB into the rear cover Assy.

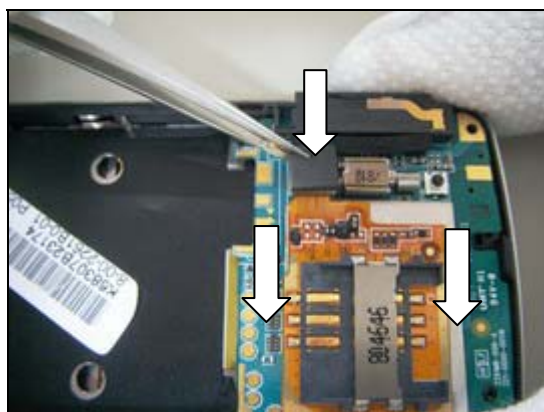


Press down to connect the PCB with the Hinge FPC Assy



Gently assemble the main key FPC connector to main PCB

Press down the Main keypad FPC Assy connector.



## 4.1.7 Antenna Cover

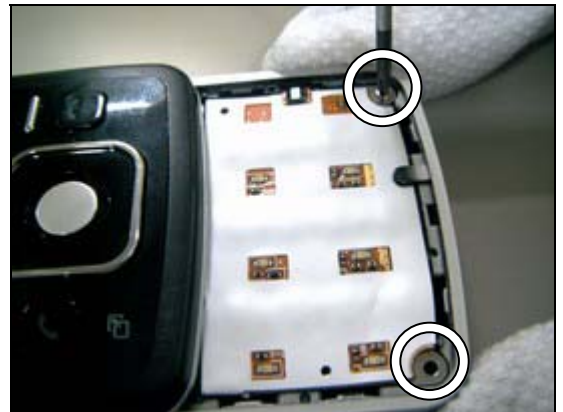
Use your fingers to assemble the Antenna Cover.



Use Torque screwdriver to tighten the two screws

**NOTE!**

Torque set to 10 Ncm



Use Torque screwdriver to tighten the two screws

**NOTE!**

Torque set to 10 Ncm



Assemble Top Rear Cover to Slide hinge Assy.



## **Antenna Cover *continued***

Press down Top Rear Cover and make sure it fit properly.



Align the Main keypad using position holes and press gently.



Assemble Bottom Cover U-Shape and make sure there are no gaps





## 4.1.8 Battery Cover & Battery

Install the battery.



Install the battery cover.



## 5 Revision history

Rev.	Date	Changes / Comments
1	2008-07-10	1 <sup>st</sup> release
2	2008-07-15	Due to system problem. No changes in content.