



# Working Instruction, Mechanical

Applicable for W910i and W908c

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# 1 Introduction

W910





## 1.1 Equipment

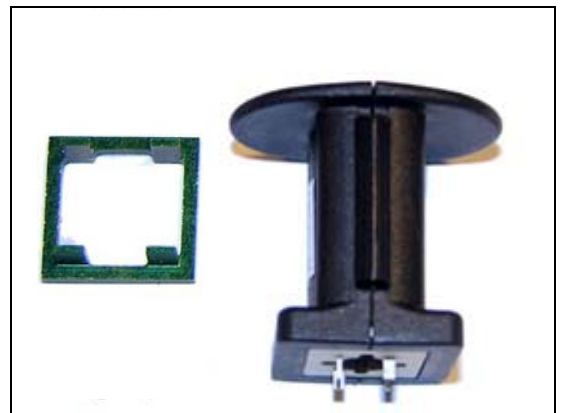
### STANDARD TOOLS

- NTZ 112 459 – Torque Screwdriver
- Style 2A Tweezers
- Dental Hook
- Nylon Pointer
- NTZ 112 590 – Guitar Pick
- NTZ 112 288 – Torx Bit No. 6
- NTZ 112 1052 – JCIS No. 0 Screw Bit



### SPECIAL TOOLS

- NTZ 112 1067– Camera Removal Tool
- NTZ 112 1077 – VGA Camera Tool



### 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:

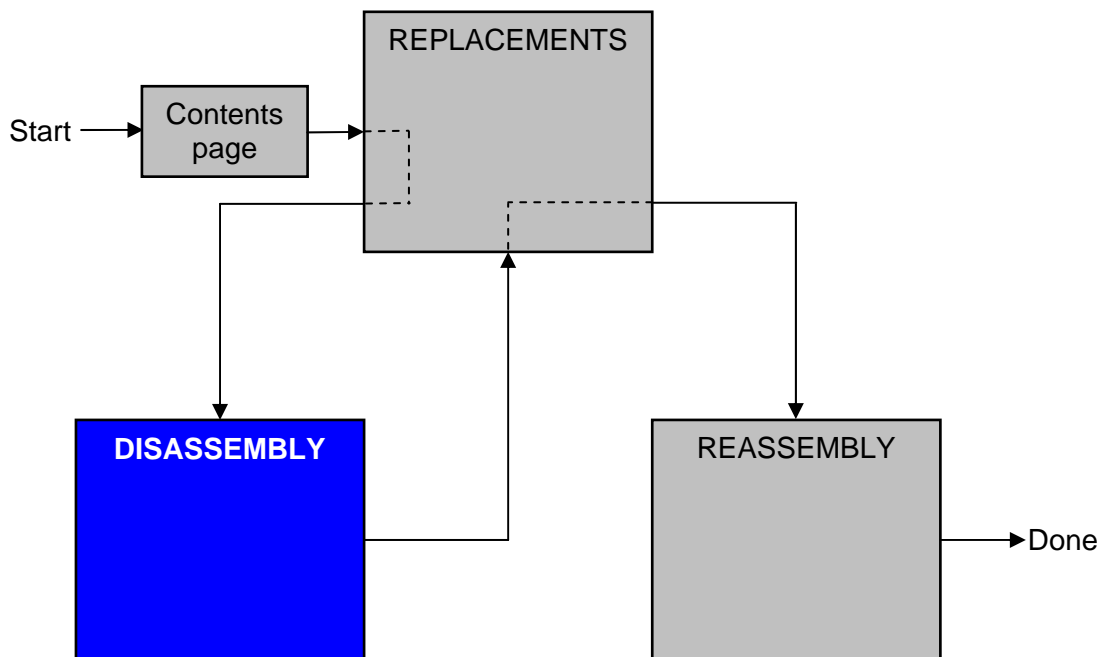
- ***SWITCH OFF THE PHONE AND REMOVE ANY MEMORY STICK BEFORE THE START OF THE DISASSEMBLY!***
- ***KEEP ALL CONTACT SURFACES CLEAN!***
- ***BE CAREFUL WHEN USING TOOLS LIKE THE DENTAL HOOK, TWEEZERS, OPENING TOOLS, GUITAR PICK ETC. TO AVOID SCRATCHES OR DAMAGES TO THE EXTERIOR AND INTERIOR PARTS OF THE 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 Dental 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:

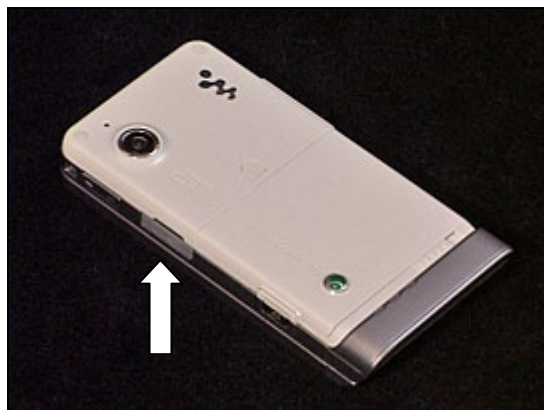
1. M2, Battery Cover and Battery
2. Rear Back Cover
3. Main PCB
4. Front Cover Assembly
5. Navi Key PBA
6. Display



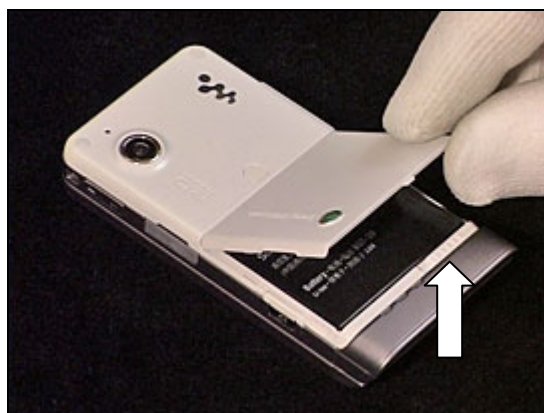


## 2.1.1 M2, Battery Cover and Battery

Open the MemoryStick Cap and remove the M2 MemoryStick.



Unlock the Battery Cover and remove it.



Remove the Battery.

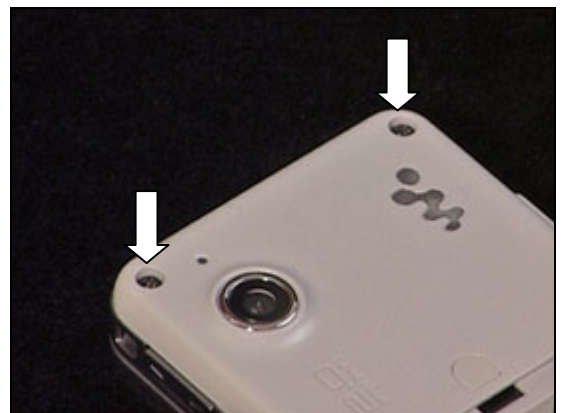


## 2.1.2 Rear Back Cover

Remove the screw Caps using a Dental hook.



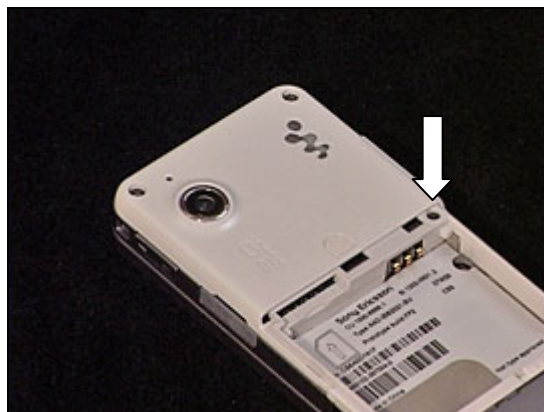
Remove the two screws (Torx T6).





## Rear back Cover *continued*

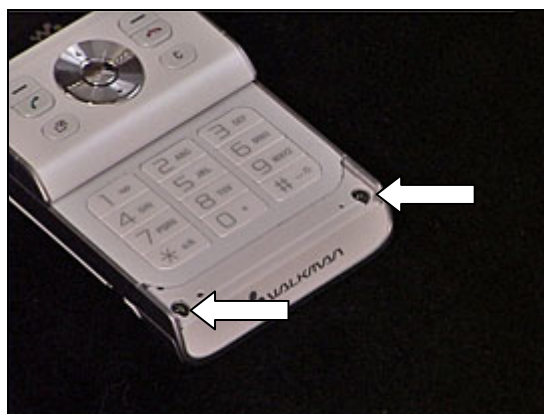
Remove the screw.



Remove the Panel Antenna using a Dental hook.



Remove the two screws (Torx T6).



Release the Rear Back Cover using a guitar pick, carefully sliding it along the side of the Cover Lower Rear.

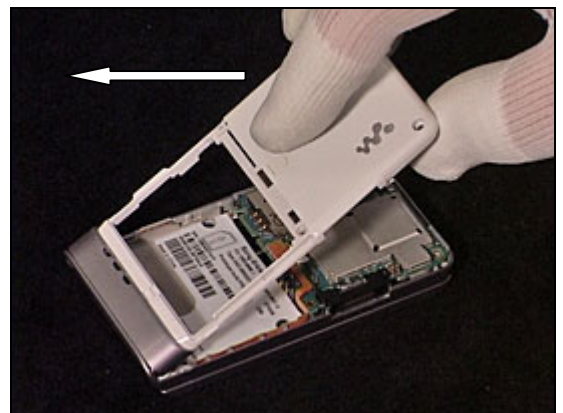


## **Rear Back Cover *continued***

Repeat the previous step on the other side of the phone.



Carefully remove the Rear Back Cover by lifting it 90 degrees from the unit as shown in picture.

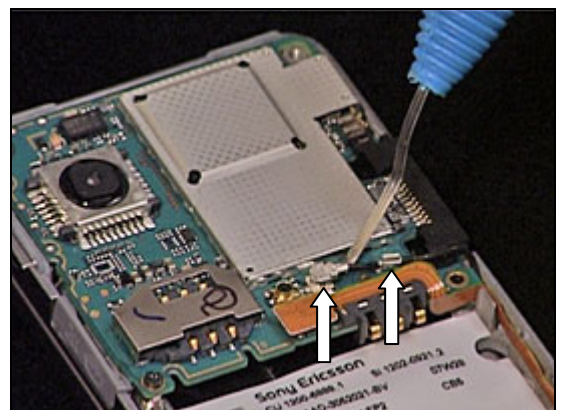


### **2.1.3 Main PCB**

Remove the screw.



Carefully release the Antenna Coax using a Dental hook.



## **Main PCB *continued***

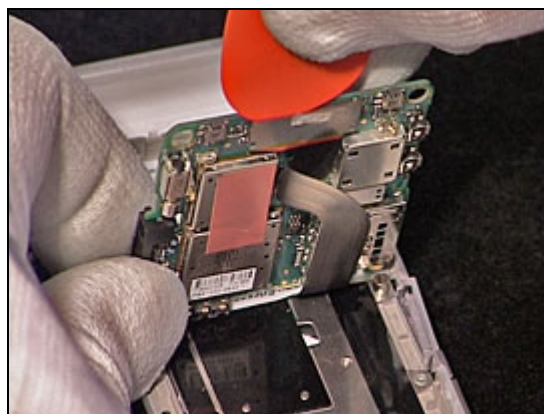
Carefully release the Speaker Flex Board to Board Connector using an orange stick.



Carefully release the Main PCB from the frame using a guitar pick.

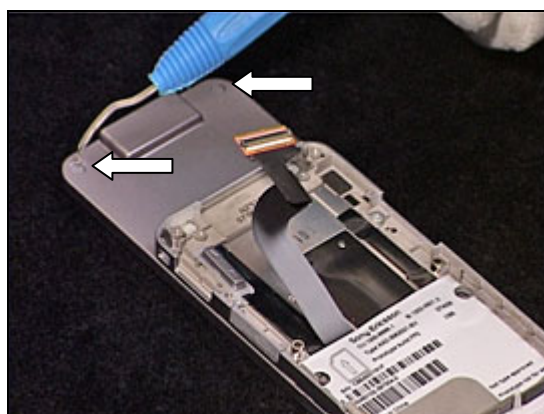


Carefully release the Front Flex Board to Board connector from the Main PCB using a guitar pick.  
Remove the Main PCB.



## **2.1.4 Front Cover Assembly**

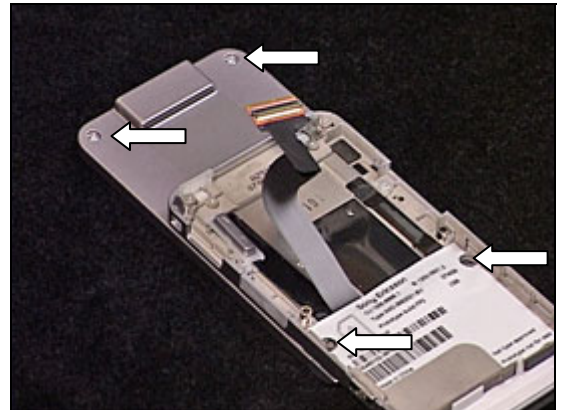
Remove the two screw Caps using a Dental hook.





## Front Cover Assembly *continued*

Remove the two upper screws and the two lower screws (Torx T6).



**BE CAREFUL NOT TO SCRATCH THE LCD OR DAMAGE THE NAVIGATION KEY FPC**

Carefully lift the lower end of the Front Cover Assembly.



**BE CAREFUL NOT TO SCRATCH THE LCD OR DAMAGE THE NAVIGATION KEY FPC**

Carefully insert the orange stick between the Front Cover Assembly and the Navigation Key FPC. By carefully pushing the orange stick towards the right side and the top of the phone, the Front Cover will release.



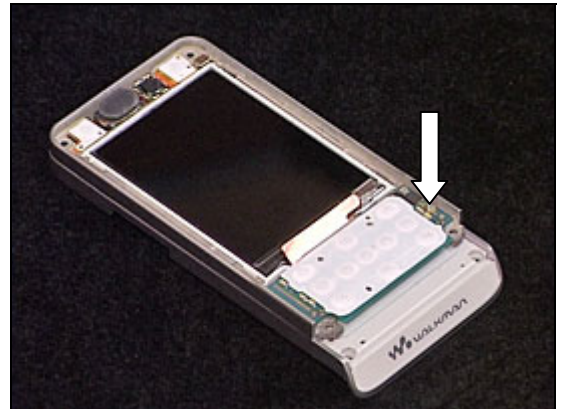
**BE CAREFUL NOT TO SCRATCH THE LCD OR DAMAGE THE NAVIGATION KEY FPC**

Repeat previous step to release the left side of the Front Cover as well.

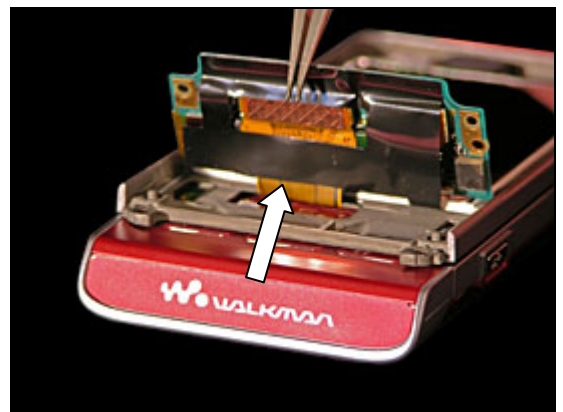


## 2.1.5 Navi Key PBA, MComp Sheet (R Center and R LCD)

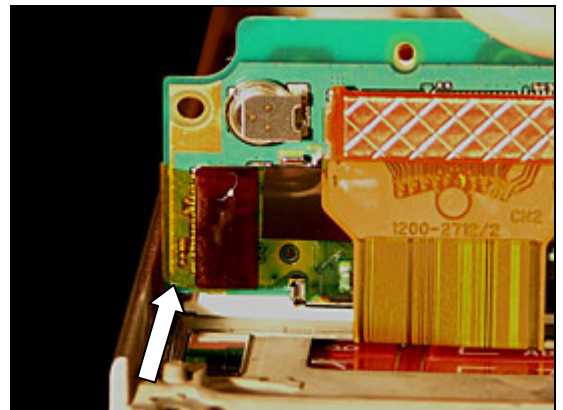
Release the screw.



Remove the MComp Sheet (R Center).

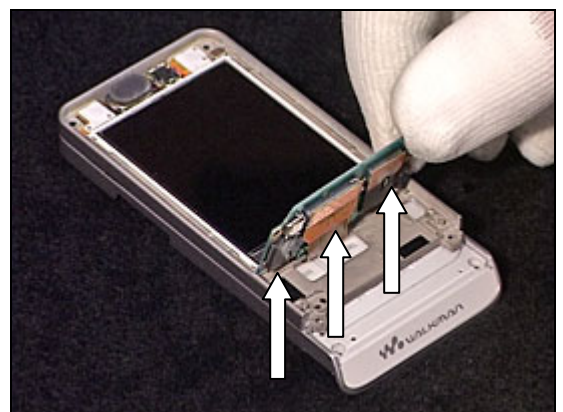


Remove the MComp Sheet (R LCD).

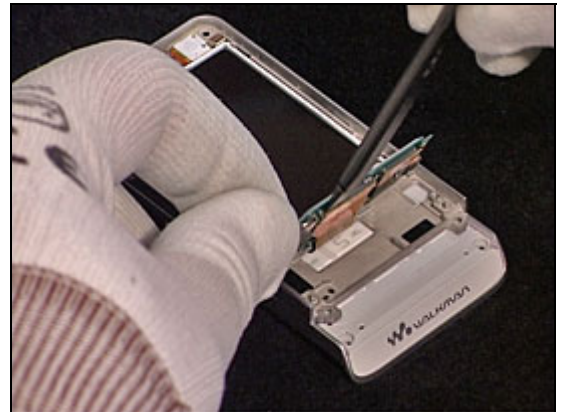


### **BE CAREFUL NOT TO DAMAGE THE BTB CONNECTORS**

Carefully disconnect the three Board to Board connectors from the Navi Key PBA using the orange stick.



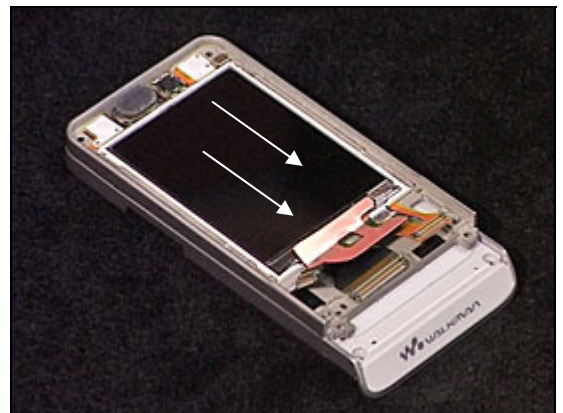
When all BtB connectors have been released, remove the Navi Key PBA.



## 2.1.6 Display

***BE CAREFUL NOT TO DAMAGE THE DISPLAY***

Carefully slide the Display towards the bottom of the phone. Remove the Display.





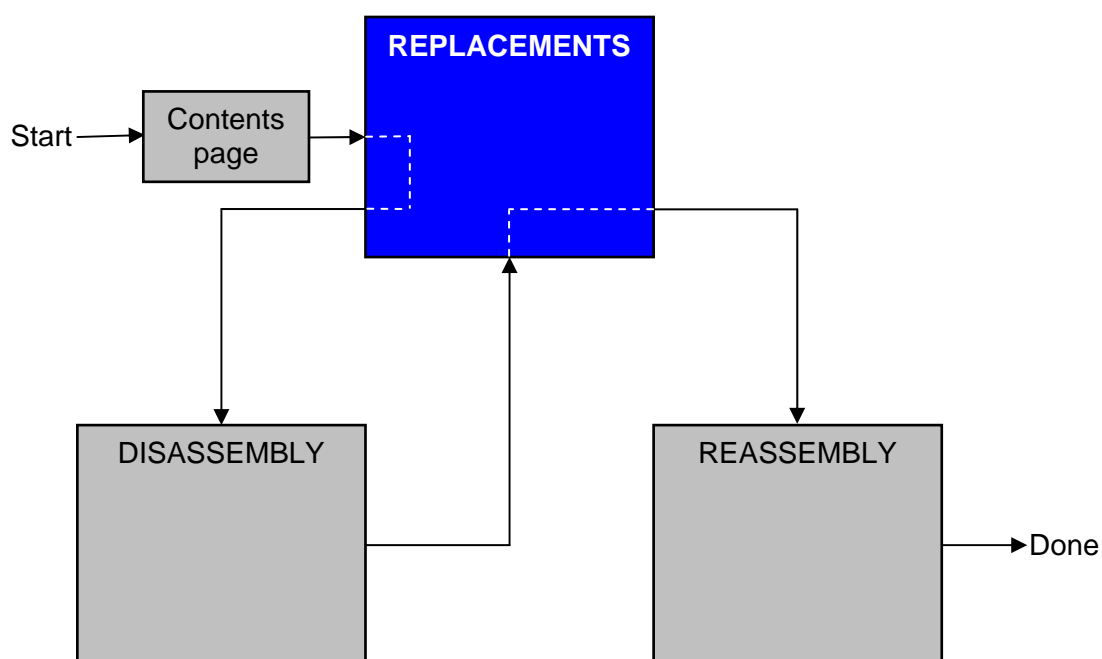
### 3 Replacements

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 4.1.6 Reassembly instructions!*

### 3.2 Battery

*Follow the 2.1.1 Disassembly instructions!*

Prepare the new Battery.

*Follow the 4.1.6 Reassembly instructions!*

### 3.3 RF Cap

Remove the RF Cap with a pair of tweezers or a Dental hook.

Prepare the new RF Cap.

### 3.4 Label Co-Brand Inlay

**BE CAREFUL NOT TO DAMAGE THE PLASTICS**

Remove the old Label using a Dental hook. Prepare the new Label.



### 3.5 Keyboard Main

*Follow the 2.1.1 - 2.1.2 Disassembly instructions to remove the Antenna Panel!*

**BE CAREFUL NOT TO DAMAGE THE PLASTICS**

Remove the old Keyboard using a pair of tweezers. Prepare the new Keyboard.

*Follow the 4.1.5 - 4.1.6 Reassembly instructions!*



## 3.6 Liquid Intrusion Indicator

*Follow the 2.1.1 Disassembly instructions!*

Remove the activated Indicator using a Dental hook and a pair of tweezers. Prepare the new Liquid Intrusion Indicator.

*Follow the 4.1.6 Reassembly instructions!*



## 3.7 Panel Antenna

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare the new Panel Antenna.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!!*

## 3.8 Rear Back Cover

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare the new Rear Back Cover.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!*

## 3.9 Key, On/Off

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare the new Key.

*Follow the 4.15 – 4.1.6 Reassembly instructions!*

## 3.10 Key, Volume

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare the new Key.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!*

## 3.11 Key, Camera

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare the new Key.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!*

### 3.12 Key, Music

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare the new Key.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!*

### 3.13 Cap, MemoryStick

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Prepare the new Cap.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!*

### 3.14 Camera 2.0 MPixel CMOS

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

1. Remove the Shield Can Lid from the Camera using a Dental hook and a pair of tweezers.
2. Remove the camera using the Camera Removal Tool.
3. Prepare the new Camera and Shield Can Lid.
4. Insert the new Camera into its socket.
5. Mount a new Shield Can Lid on top of the Camera.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!*

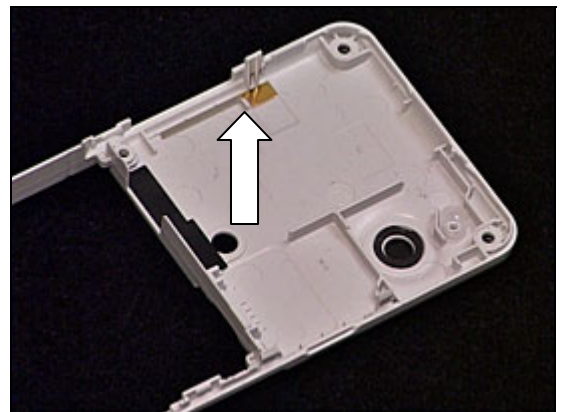


### 3.15 BT Antenna Assy

*Follow the 2.1.1 – 2.1.2 Disassembly instructions!*

Remove the BT Antenna using a Dental hook and a pair of tweezers. Prepare the new BT Antenna Assy.

*Follow the 4.1.5 – 4.1.6 Reassembly instructions!*



## 3.16 Front Cover Assembly

*Follow the 2.1.1 – 2.1.4 Disassembly instructions!*

Prepare the new Front Cover Assembly

*Follow the 4.1.3 – 4.1.6 Reassembly instructions!*

## 3.17 Key, Game

*Follow the 2.1.1 – 2.1.4 Disassembly instructions!*

Prepare the new Key.

*Follow the 4.1.3 – 4.1.6 Reassembly instructions!*

## 3.18 Key, Navi

*Follow the 2.1.1 – 2.1.4 Disassembly instructions!*

Prepare the new Key.

*Follow the 4.1.3 – 4.1.6 Reassembly instructions!*

## 3.19 Navi Key PBA

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!*

Prepare the new Navi Key PBA.

*Follow the 4.1.2 – 4.1.6 Reassembly instructions!*

## 3.20 Display

*Follow the 2.1.1 – 2.1.6 Disassembly instructions!*

Prepare the new Display.

*Follow the 4.1.1 – 4.1.6 Reassembly instructions!*

## 3.21 Slider Flex Module

*Follow the 2.1.1 – 2.1.6 Disassembly instructions!*

Prepare the new Slider Flex Module

*Follow the 4.1.1 – 4.1.6 Reassembly instructions!*

## 3.22 Slider Sub Assembly

*Follow the 2.1.1 – 2.1.6 Disassembly instructions!*

Prepare the new Slider Sub Assembly

*Follow the 4.1.1 – 4.1.6 Reassembly instructions!*



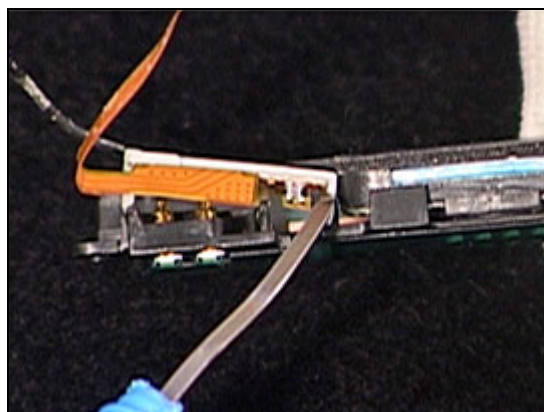
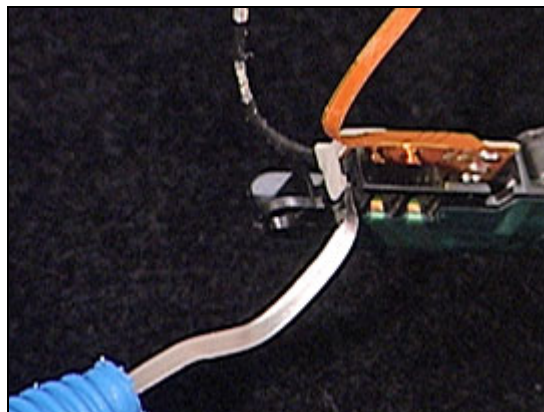
## 3.23 Main Antenna

### REMOVAL

*Follow the 2.1.1 – 2.1.3 Disassembly instructions!*

**BE CAREFULL NOT TO DAMAGE THE COAX CABLE AND SPEAKER FLEX**

1. Carefully release the speaker flex using a Dental hook.
2. Carefully release the coax cable from the frame using a Dental hook.
3. Carefully remove the Main Antenna from the cavity in the Antenna Cover using a Dental hook.
4. Carefully release the Holder Antenna from the Main Antenna.
5. Repeat the previous step on the other side of the Holder Antenna.





## Main Antenna *continued*

6. Carefully release the speaker from the Main Antenna using a Dental hook.



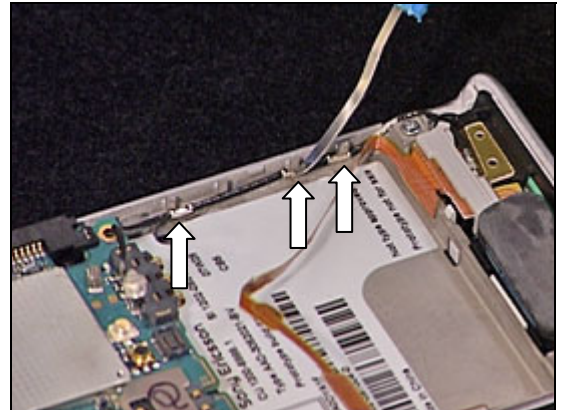
## INSTALLATION

1. Insert the new Main Antenna into the Antenna Cover.
2. Position the Speaker Flex Module inside the Main Antenna.
3. Carefully press the Speaker Flex Module into position. Make sure the Holder Antenna Sub Assy clicks into position and the adhesive fixates to the Main Antenna and the frame.



## Main Antenna *continued*

4. Attach the coax cable from the Speaker Flex Module underneath the 3 hooks in the frame using a Dental hook.



5. Mount the Speaker Flex onto the frame. Make sure the adhesive sticks to the frame.

*Follow the 4.1.4 – 4.1.6 Reassembly instructions!*



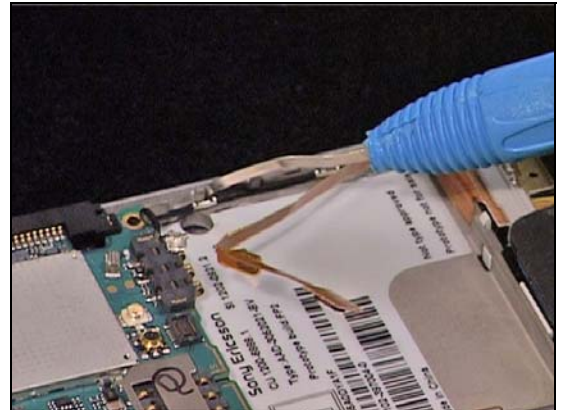
## 3.24 Speaker Flex Module

### REMOVAL

*Follow the 2.1.1 – 2.1.3 Disassembly instructions!*

**BE CAREFULL NOT TO DAMAGE THE COAX CABLE AND SPEAKER FLEX**

1. Carefully release the speaker flex using a Dental hook.
2. Carefully release the coax cable from the frame using a Dental hook.
3. Carefully release the Holder Antenna from the Main Antenna.
4. Repeat the previous step on the other side of the Holder Antenna.
5. Carefully release the speaker from the Main Antenna using a Dental hook.

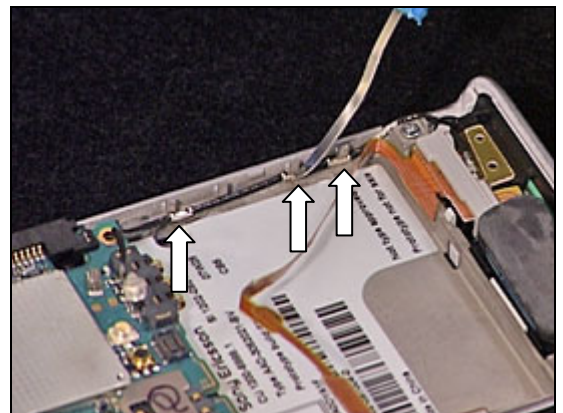


## Speaker Flex Module *continued*

### INSTALLATION

1. Position the Speaker Flex Module inside the Main Antenna.
2. Carefully press the Speaker Flex Module into position. Make sure the Holder Antenna Sub Assy clicks into position and the adhesive fixates to the Main Antenna and the frame.
3. Attach the coax cable from the Speaker Flex Module underneath the 3 hooks in the frame using a Dental hook.
4. Mount the Speaker Flex onto the frame. Make sure the adhesive sticks to the frame.

*Follow the 4.1.4 – 4.1.6 Reassembly instructions!*



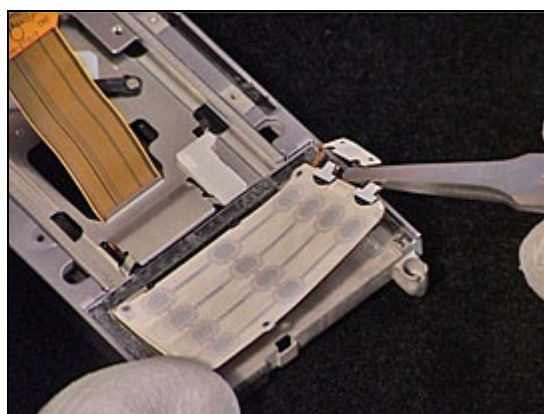
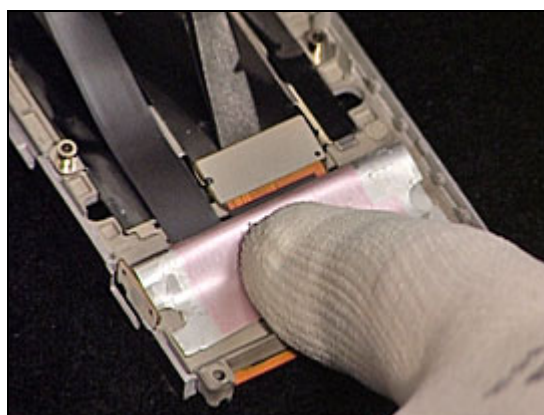


## 3.25 Key Foil Assy

### REMOVAL

*Follow the 2.1.1 – 2.1.3 Disassembly instructions!*

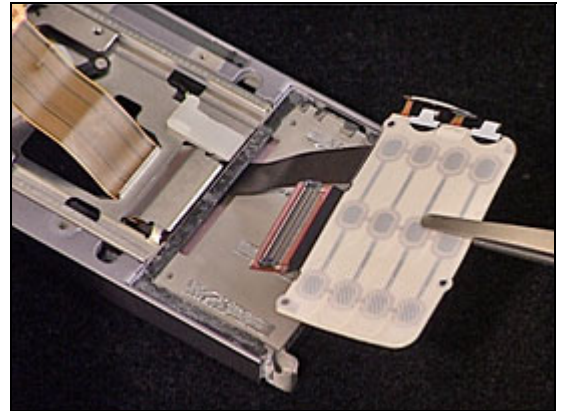
1. Carefully lift the Label using a pair of tweezers, to be able to access the Key Foil Assy Board to Board connector.
2. Release the Key Foil Assy Board to Board connector using the orange stick.
3. Release the Camera Switch from the Slider Assembly using a pair of tweezers.
4. Release the Key Foil Assy from the Slider Assembly using a pair of tweezers.





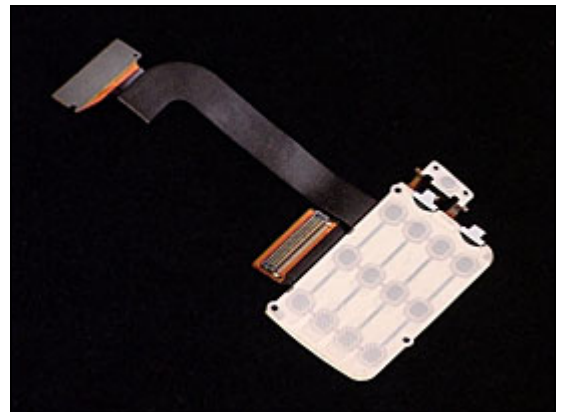
## Key Foil Assy *continued*

5. Remove the Key Foil Assy using a pair of tweezers.

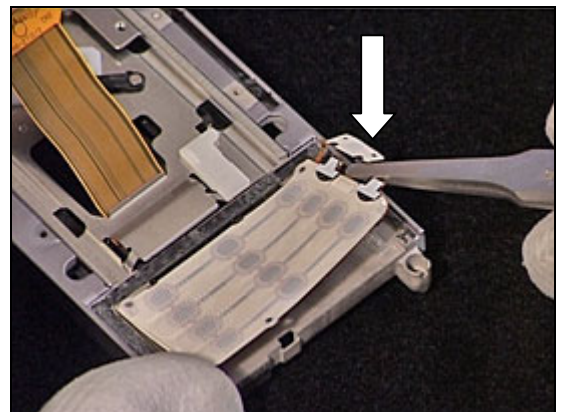


## INSTALLATION

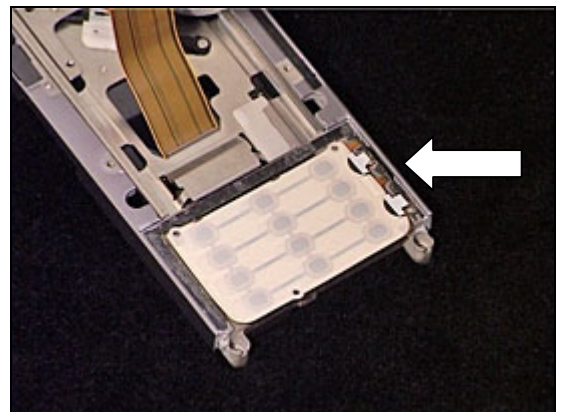
1. Prepare the new Key Foil Assy.



2. Insert the new Key Foil Assy into the Slider Sub Assembly using a pair of tweezers. Make sure you position the Camera Key correct into the Slider Sub Assembly.



3. Make sure you position the Camera Key correct into the Slider Sub Assembly.



*Follow the 4.1.4 – 4.1.6 Reassembly instructions!*



## 3.26 Camera QCIF MPixel CMOS

*Follow the 2.1.1 – 2.1.6 Disassembly instructions!*

Remove the Video Camera using the Camera Removal Tool. Prepare the new Camera.

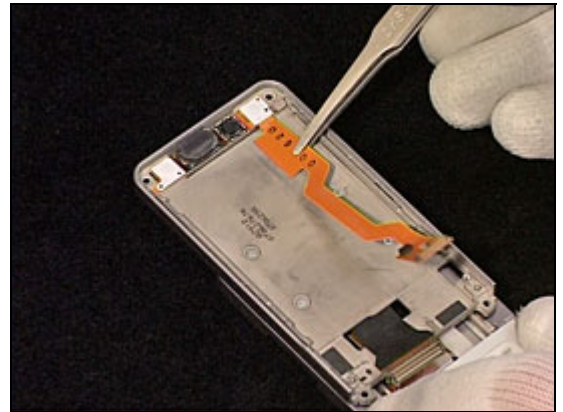
*Follow the 4.1.1 – 4.1.6 Reassembly instructions!*

## 3.27 Receiver Flex Module

### REMOVAL

*Follow the 2.1.1 – 2.1.6 Disassembly instructions!*

Release the Receiver flex from the Slider Assembly using a pair of tweezers.



Release the upper part of the Receiver flex using a Dental hook.



### INSTALLATION

Position the new Receiver Flex Module into the cavity of the Slider Assembly. Carefully press it into place and make sure the adhesive sticks to the Slider Assembly.

*Follow the 4.1.1 – 4.1.6 Reassembly instructions!*



## 3.28 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 4.1.6 Reassembly instructions!*



## 3.29 Boarder Swap - Replacement

### REMOVAL

*Follow the 2.1.1 - 2.1.3 and 3.14 Disassembly instructions.*

### REPLACE

Replace with a swap board.



### INSTALLATION

*Follow the 3.14 and 4.1.4 – 4.1.6 Reassembly instructions.*



## 3.30 Boarder Swap - Change Label

### CHANGE LABEL

*Follow the instructions in the Generic Repair Manual –  
Build swap for change of label.*

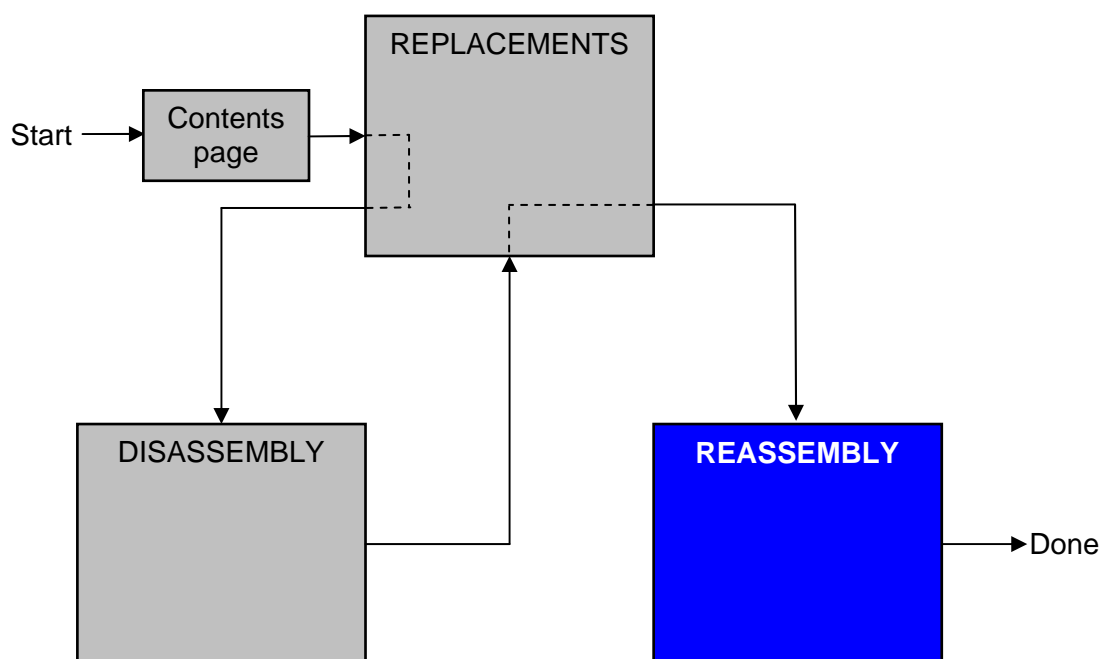
## 3.31 Boarder Swap - Customize of Software

### CUSTOMIZE OF SOFTWARE

*Follow the instructions in the Generic Repair Manual –  
Build swap for customization of the software.*

## 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. Display
2. Navi key PBA
3. Front Cover Assembly
4. Main PCB
5. Rear Back Cover
6. Battery, Battery Cover and M2





## 4.1.1 Display

Position the Display into the Cover Upper Rear and slide it into position.

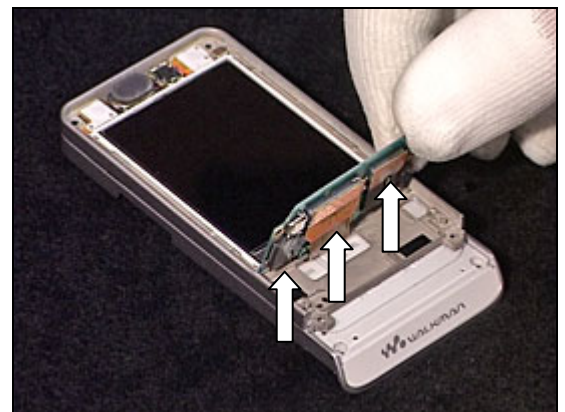


## 4.1.2 Navi Key PBA, MComp Sheet (R Center and R LCD)

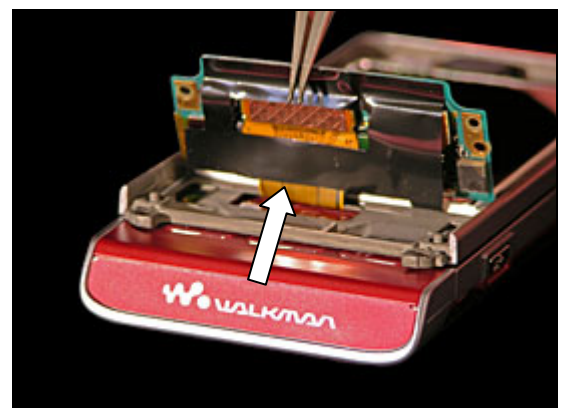
Position the Navi Key PBA as shown in picture.



Carefully connect the 3 Board to Board connectors.



Position the MComp Sheet (R Center).



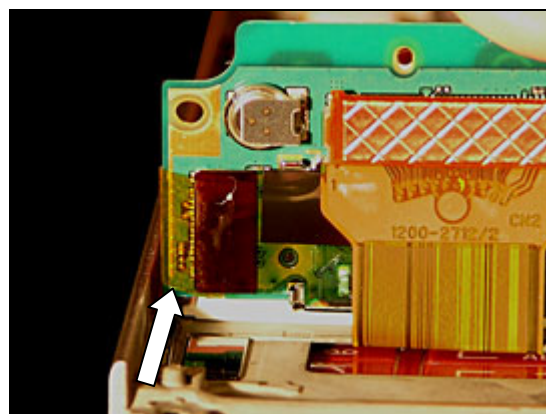


**MAKE SURE THE DISPLAY IS IN CORRECT POSITION**

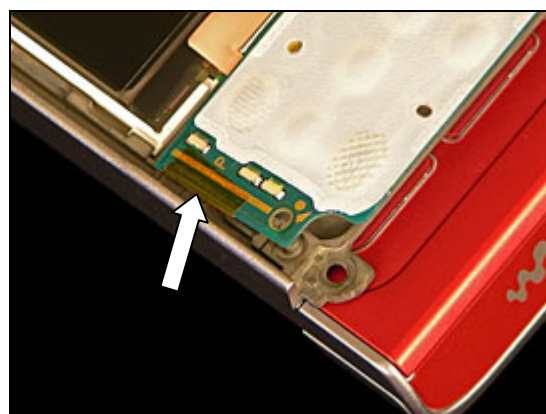
Carefully fold down the Navi Key PBA into position.  
Insert and tighten the screw (JCIS 10Ncm).



Position the MComp Sheet (R LCD).



Position the MComp Sheet (R LCD).



### 4.1.3 Front Cover Assembly

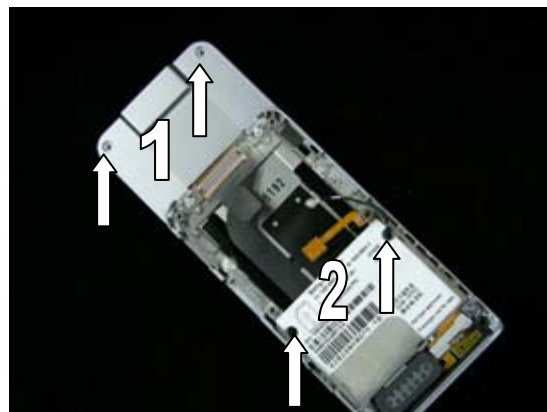
Position the Front Cover Assembly on top of the Display as shown in picture. Carefully press down and make sure it snaps into position.



Insert and tighten the 4 screws. Insert two new Screw Caps (Upper).

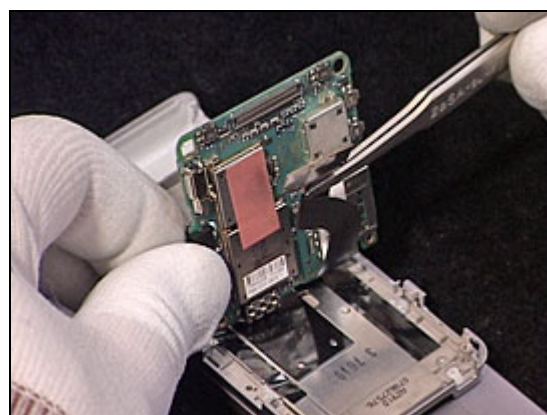
1 – JCIS 10Ncm

2 – Torx T6 10Ncm

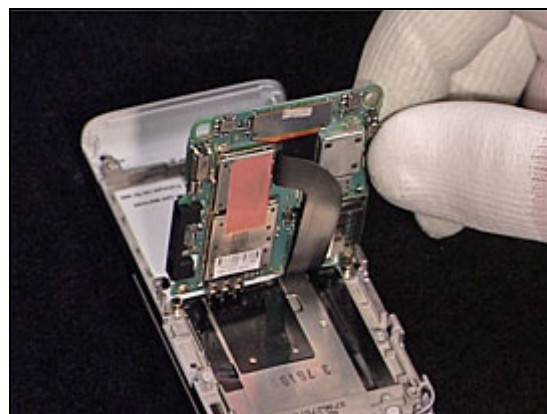


#### 4.1.4 Main PCB

Connect the Slider Flex to the Main PCB using a pair of tweezers.

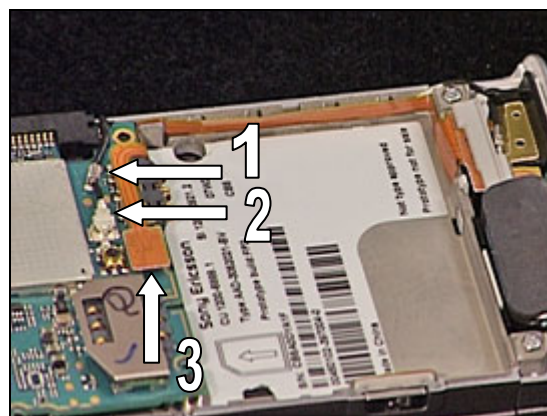


Fold down the Main PCB into position.



#### Main PCB *continued*

Connect the Antenna Coax (1 & 2) and the Speaker Flex BtB (3) to the Main PCB.



Insert and tighten the screw (JCIS 10Ncm).



## 4.1.5 Rear Back Cover

Position the Rear Back Cover as shown in picture. Fold it down into position.



Carefully press all four sides of the Rear Back Cover and make sure it snaps into position.

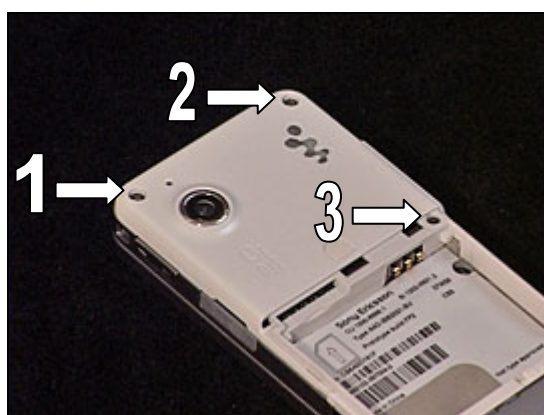


## Rear Back Cover *continued*

Insert and tighten the three screws.

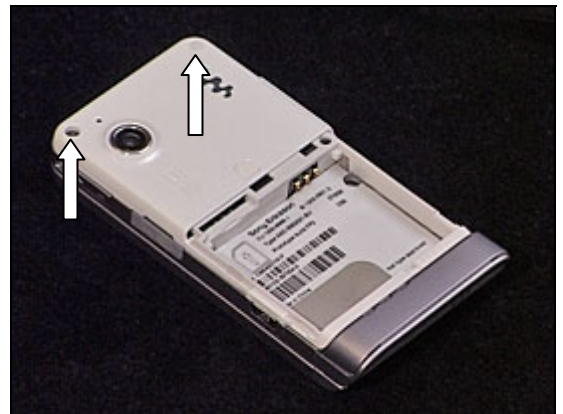
1, 2 – Torx T6 14Ncm

3 – JCIS 10Ncm





Insert the two screw Caps.



Insert and tighten the two screws (Torx T6 14Ncm).



Position and put the Panel Antenna in place.



#### 4.1.6 Battery, Battery Cover and M2

Insert the Battery.

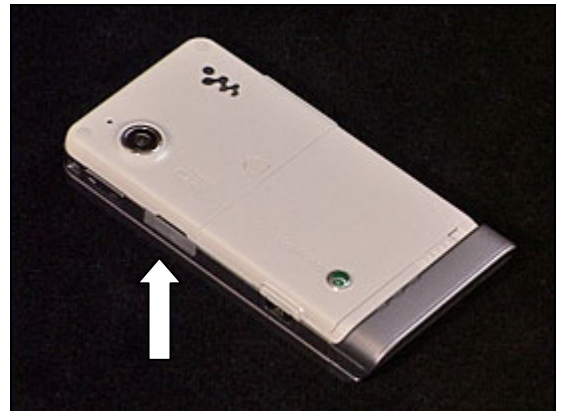




Place the Battery Cover into position and lock it.



Insert the M2 MemoryStick.



## 5 Revision history

Rev.	Date	Changes / Comments
1	2007-10-09	Initial release
2	2008-01-14	Added W908c
3	2008-02-01	New picture of the Camera Removal tool.
4	2008-03-03	Due to error in the system
5	2008-03-03	Chapter 2.1.5 and 4.1.2 updated with instructions
6	2009-07-09	Added chapter 3.29 -3.31 regarding Board Swap
7	2009-07-10	Updated chapter 3.29