



Working Instruction, Mechanical

Applicable for K550i, K550c, K550im, W610i & W610c

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1 Introduction

1.1 K550



1.2 W610



1.3 Equipment

SPECIAL TOOLS

- NTZ 112 459 Torque screwdriver (or equivalent)
- NTZ 112 288 Torx bit no. 6
- NTZ 112 1052 JCIS BIT
- NTZ 111 077 Camera Tool
- NTZ 112 521 Flex film assembly tool
- NTZ 112 302/2 Front opening tool



STANDARD TOOLS

Standard tools have to be locally purchased

- Dentist hook
- ESD tweezers
- Guitar pick



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



OTHER EQUIPMENT

- ESD-wristband
- ESD-gloves
- Isopropyl alcohol
- Air blower



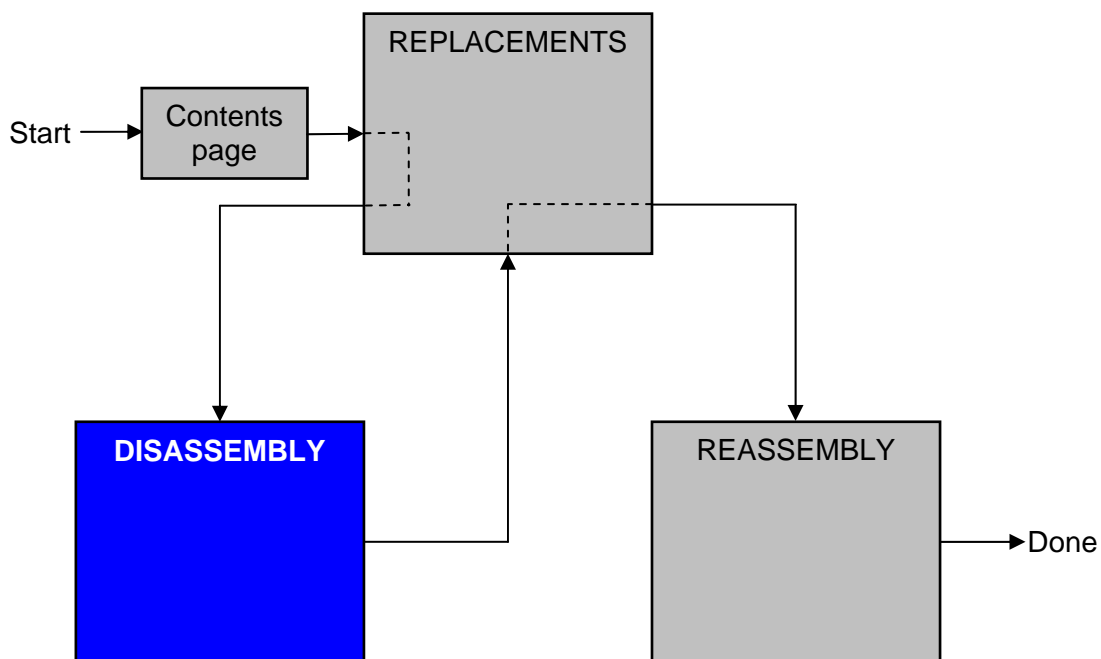
1.4 General cautions

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

- **TURN OFF THE PHONE AND REMOVE THE SIM CARD AND THE M2 MEMORY CARD BEFORE STARTING 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 LCD!**
- **NEVER TOUCH THE DISPLAY GLASS!**
- **USE AIR BLOW EQUIPMENT TO KEEP THE FRONT WINDOW AND DISPLAY MODULE DUST FREE!**

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

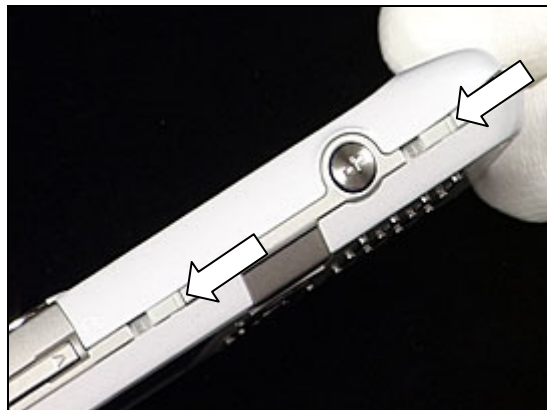
The disassembly is done in the following order:

1. Battery Cover (a) & Battery (b)
2. Speaker Cover
3. Front Cover
4. Keypad
5. PCBA



2.1.1 Battery Cover & Battery K550 Only

Unlock the *battery cover* by opening the side locks in the direction showing in the picture.



Grip the battery cover at the bottom with fingers, and then start lifting upwards from the phone.



Remove *battery cover*.



Raise the battery and remove from phone using Nylon pointer.



Battery Cover & Battery *continued*

Raise and remove *battery*



2.1.2 Battery Cover & Battery W610 Only

Press down on *battery cover* as shown then push away from the phone as shown in picture,



Slide off *battery cover*,

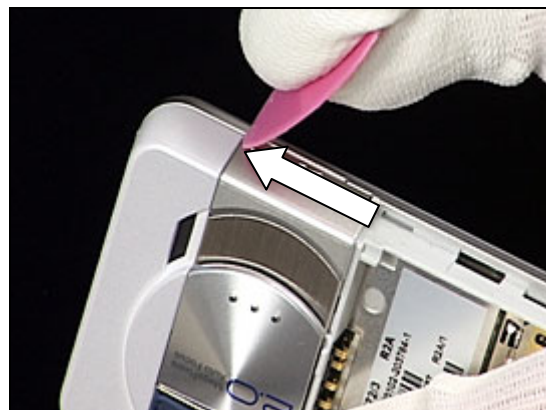


Remove *battery* same way as shown in K550 instruction.



2.1.3 Speaker Cover K550

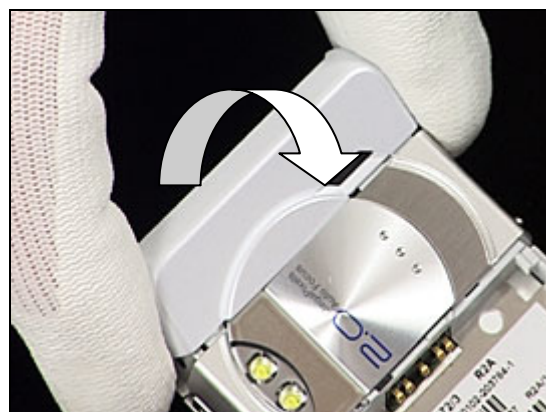
Insert guitar pick as shown in the picture.



Using guitar pick push *speaker cover* outwards from the phone.



Using finger lift *speaker cover* upwards as shown in picture.



2.1.4 Speaker Cover W610

Overview picture.



Insert guitar pick as shown in the picture.

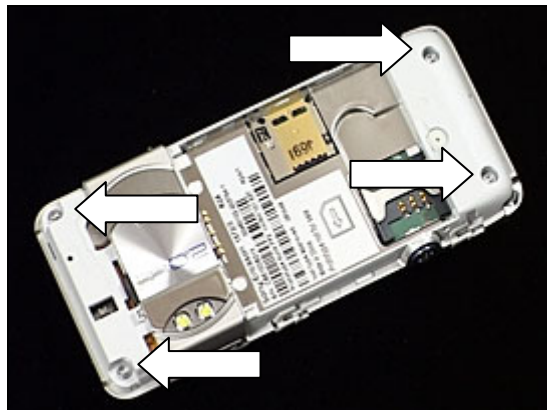


Using guitar pick push *speaker cover* outwards from the phone, the lift off the speaker cover.

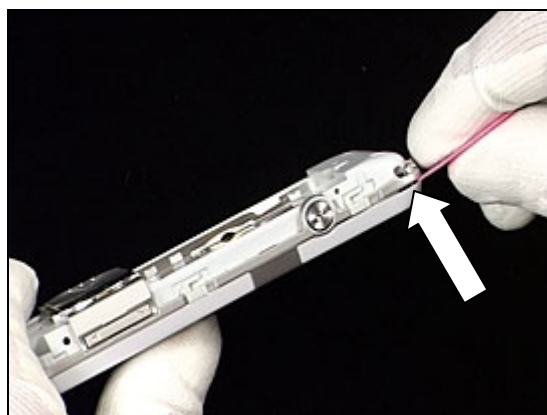


2.1.5 Front Cover

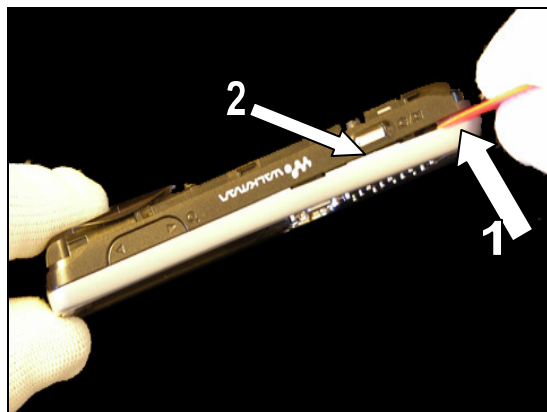
Use torx bit no. 6 to remove these four screws.



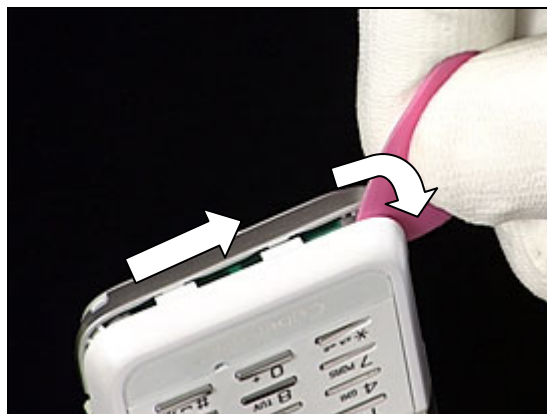
Insert the guitar pick as shown in picture



1. Insert the guitar pick as shown in picture.
2. ***For W610 models pay extra attention at camera key area, do not use force as it will crack the rear cover when loosening front cover!***



Slide the guitar pick along the bottom of the phone to unlatch snap hooks



Front Cover *continued*

Slide guitar pick along the side of the phone then follow round to the other side of phone unlatching all snap hooks as shown in picture.



Grip at the bottom then lift *front cover* upwards from the top end of phone.

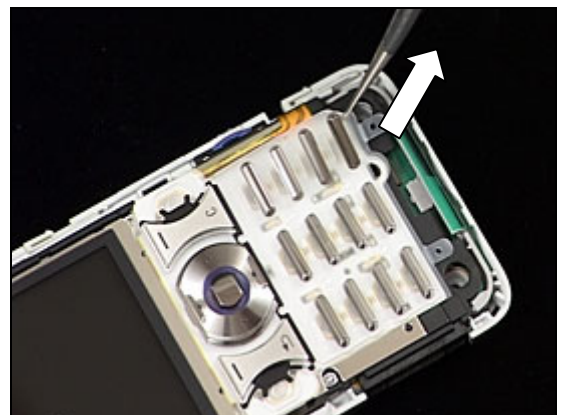


2.1.6 Keypad

Overview of inner part of phone.

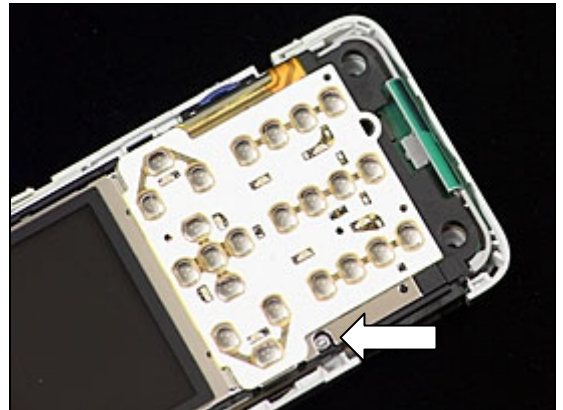


Remove *keypad* by using tweezers.

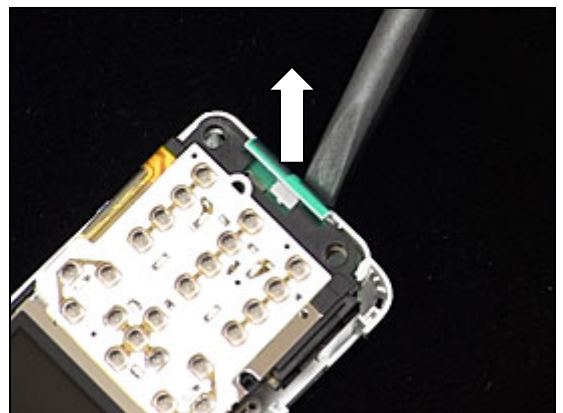


2.1.7 PCBA

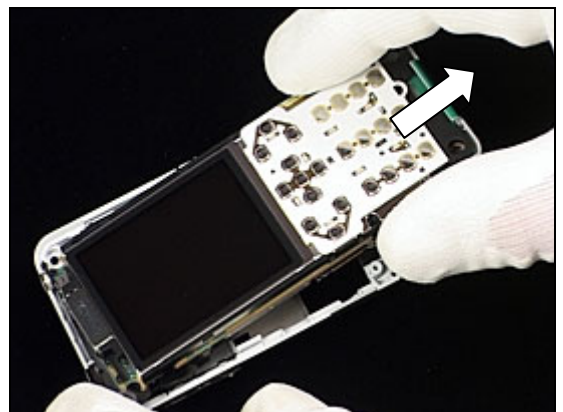
Use JCIS bit no to remove the screw.



Use the Nylon pointer and insert at the bottom and raise the *PCBA* upwards as shown in picture.



Grip at the side and lift the *PCBA* away from the phone.



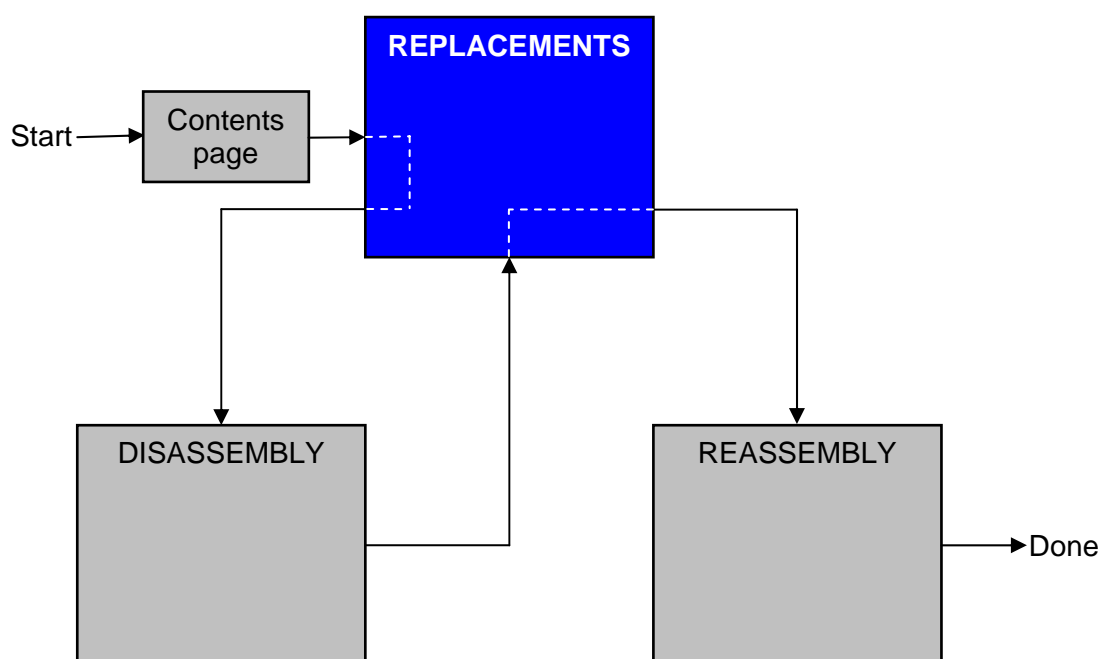
3 Replacements

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 4.1.5 Reassembly instructions!

3.2 Speaker Cover

Follow the 2.1.2 Disassembly instructions!

Prepare the new *speaker cover*.

Follow the 4.1.4 Reassembly instructions!

3.3 Front Cover

Follow the 2.1.1 – 2.1.3 Disassembly instructions!

Prepare the new *front cover*.

Follow the 4.1.3 – 4.1.5 Reassembly instructions!

3.4 Keypad

Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Prepare the new *keypad*.

Follow the 4.1.2 – 4.1.5 Reassembly instructions!

3.5 PCBA

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Prepare the new *PCBA*.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!

3.6 Back Cover

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Prepare the new *back cover*.

Install the *vibrator, music, camera, volume & power keys*.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!

3.7 Co-brand Label

REMOVAL

Use dentist hook to loosen the *co-brand label*.



Lift *co-brand* off with tweezers.



Remove any glue found in *co-brand* area of the phone.



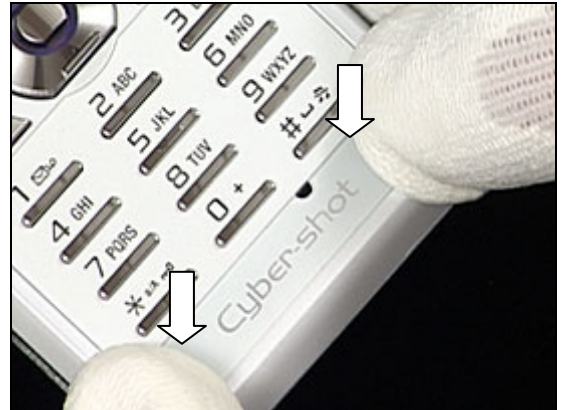
INSTALLATION

1. Position *co-brand* into place using the corner as placement guide.
2. Using tweezers place the *co-brand* label onto the phone.



Co-brand Label *continued*

Use fingers to secure the *co-brand* label.



It should look like this.

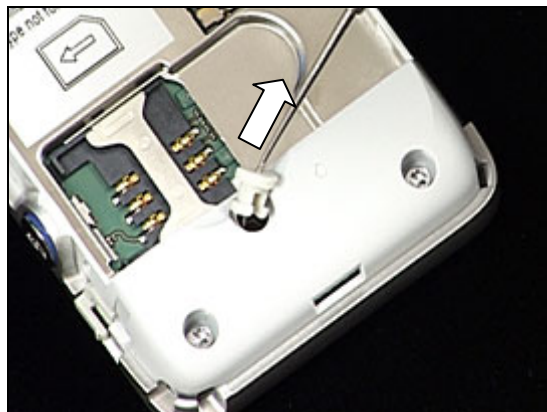


3.8 RF Cap

REMOVAL

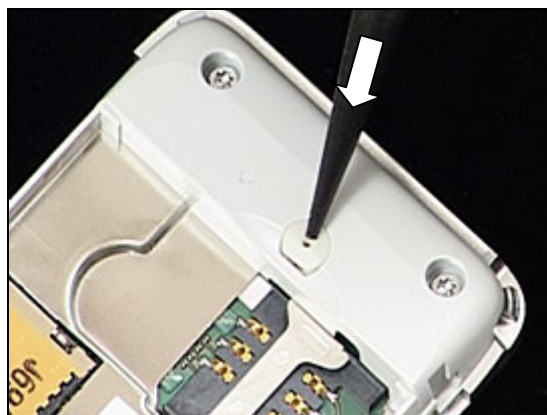
Follow the 2.1.1 Disassembly instructions!

Use dentist hook to remove *RF Cap*.



INSTALLATION

Use nylon pointer to position the *RF Cap* back into place.



Check alignment of the *RF Cap*.

Follow the 4.1.5 Reassembly instructions!



3.9 Vibrator

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Remove with tweezers gripping the side avoiding metal contacts.



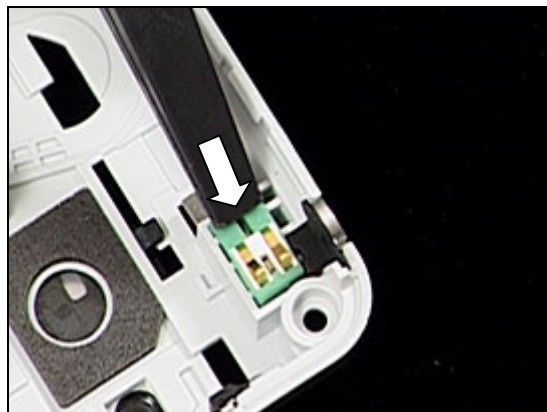
INSTALLATION

Place the *vibrator* in the cavity,



Use nylon pointer to position into place

Follow the 4.1.1 – 4.1.5 Reassembly instructions!

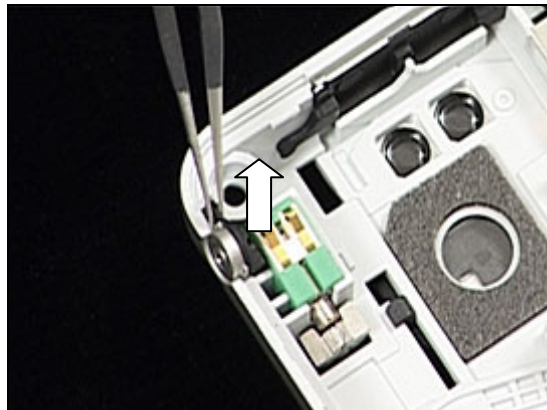


3.10 Power Key

REMOVAL

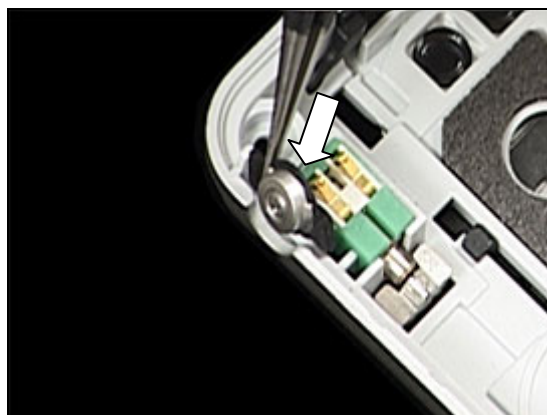
Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Remove using tweezers.



INSTALLATION

Position into place with tweezers.



Check placement with Nylon pointer.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!

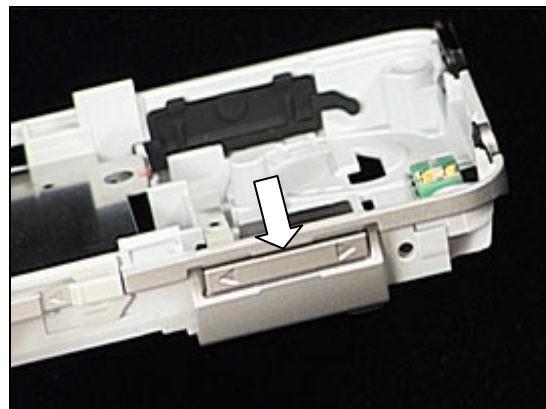


3.11 Volume Key

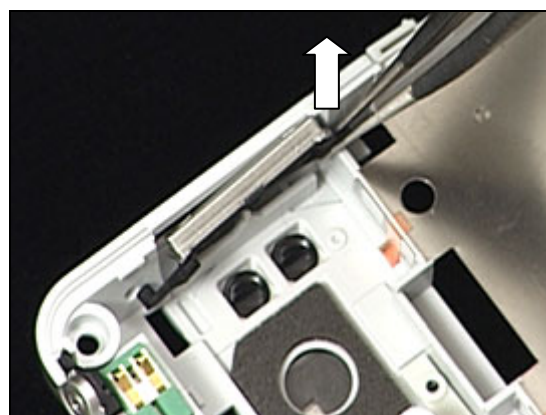
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Overview picture.



Remove using tweezers

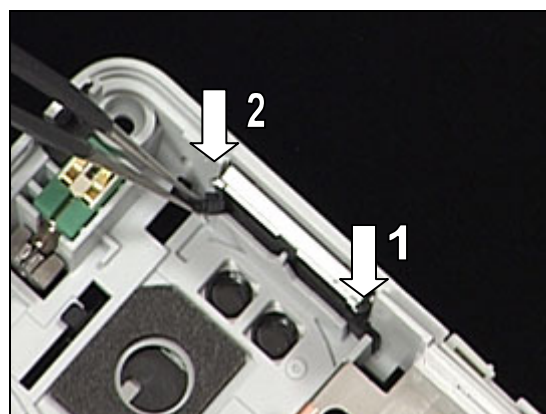


INSTALLATION

Overview picture.

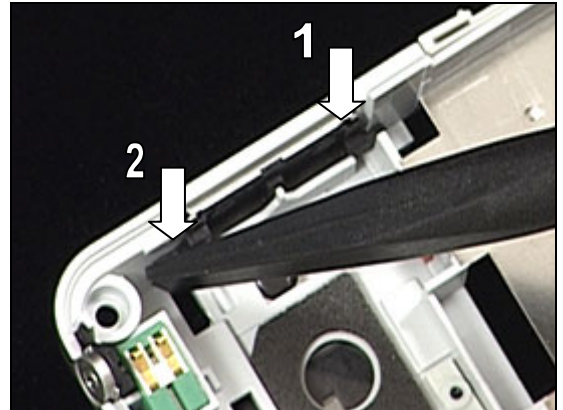


1. Place into position first.
2. Position other side second.



Volume Key *continued*

1. Check placement and secure using nylon pointer.
2. Repeat same action for other side



Should look like this.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.12 Music Key

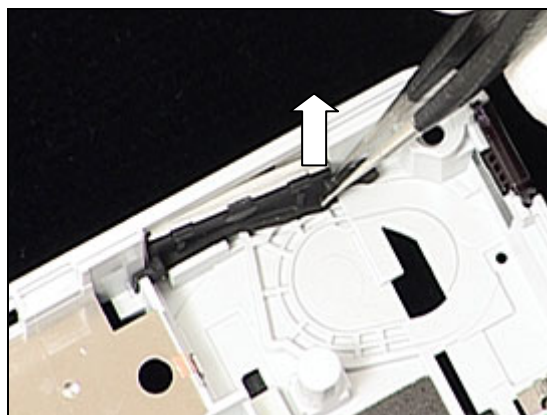
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Overview picture.

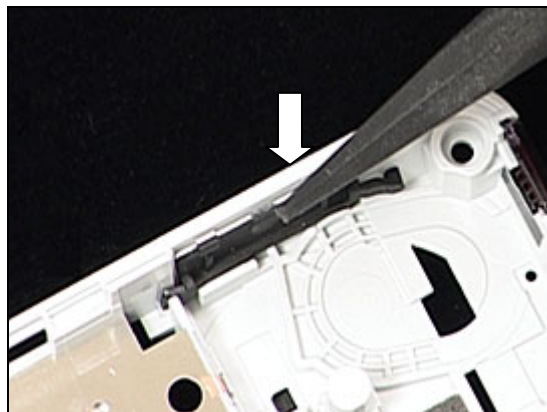


Remove using tweezers

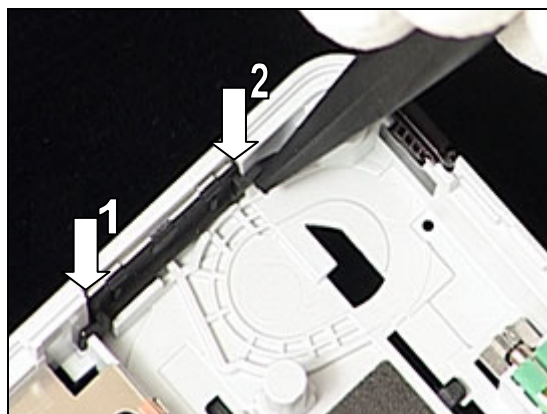


INSTALLATION

Use Nylon pointer to position *Music key*.

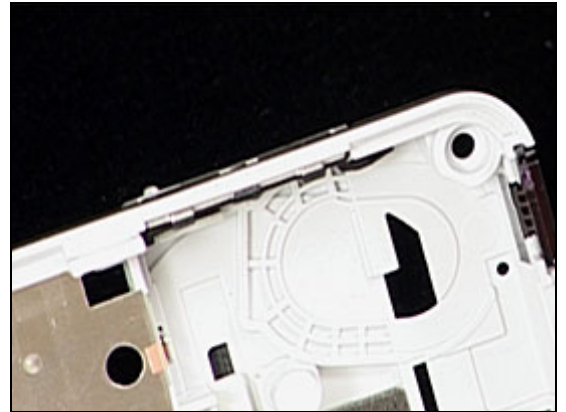


1. Check placement and secure using nylon pointer.
2. Repeat same action for other side



Music Key *continued*

Should look like this.

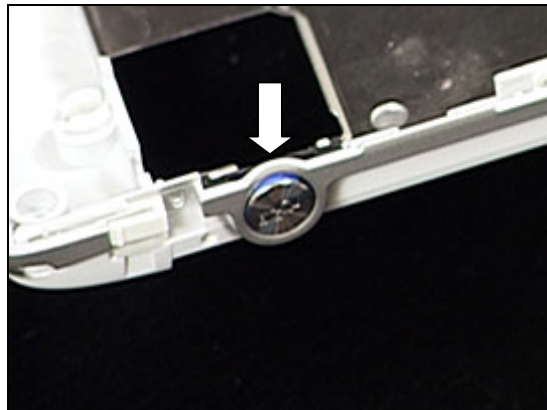


3.13 Camera Key

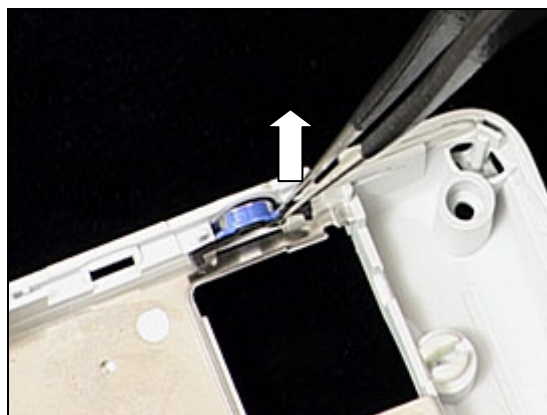
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Overview picture.



Remove with tweezers.

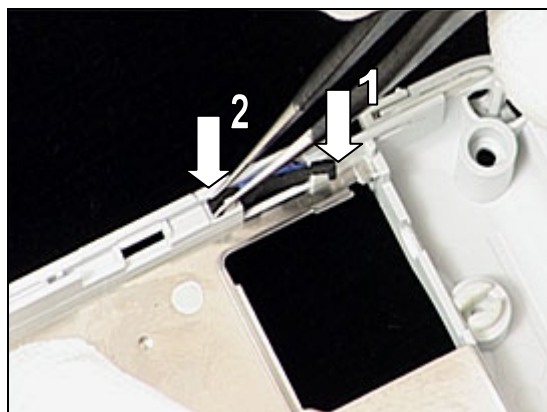


INSTALLATION

Overview picture.



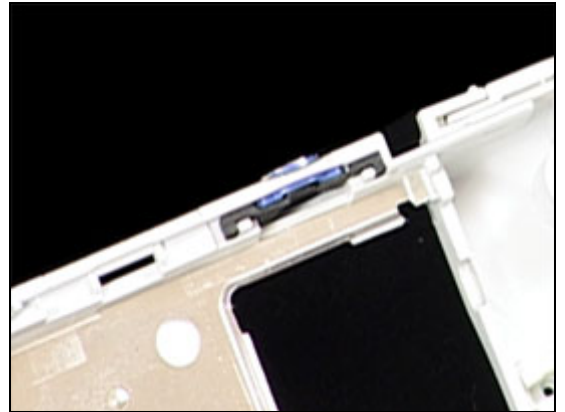
1. Place into position first.
2. Position other side second.



Camera Key *continued*

Should look like this.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.14 Ear Speaker" Receiver" Tape

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Remove with tweezers.

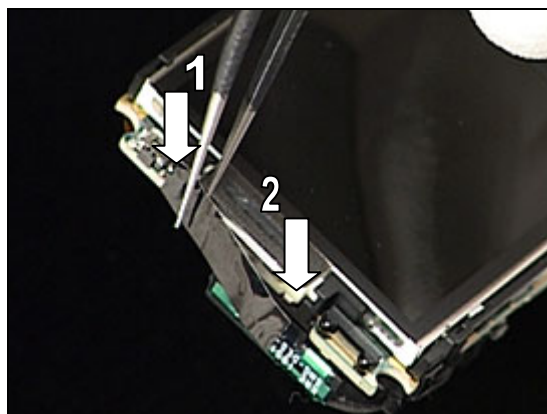
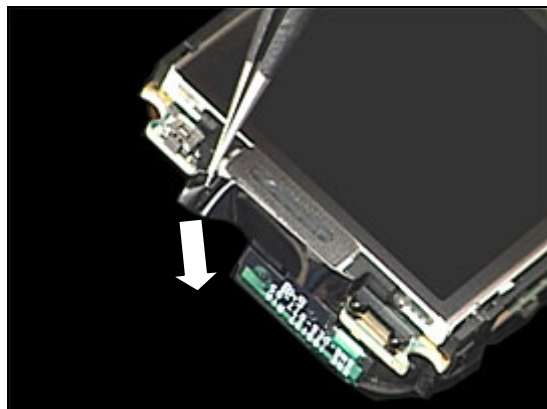
Overview picture

INSTALLATION

1. Place into position first.
2. Position other side second.

Should look like this.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.15 Ear Speaker “Receiver”

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Follow the 3.15 Removal instructions!

Use tweezers and remove outwards from PCBA as shown in picture.

Lift away from the PCBA.

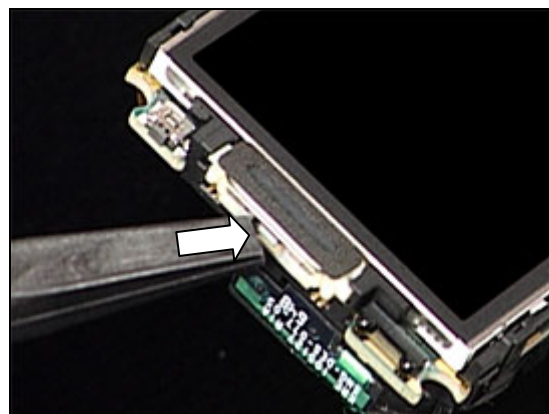
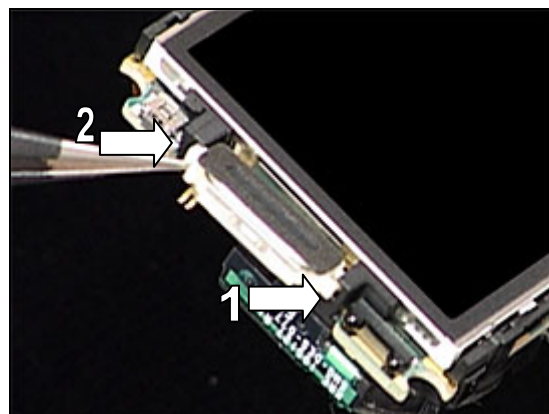
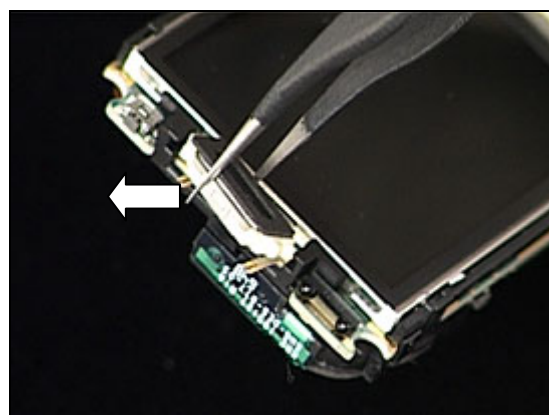
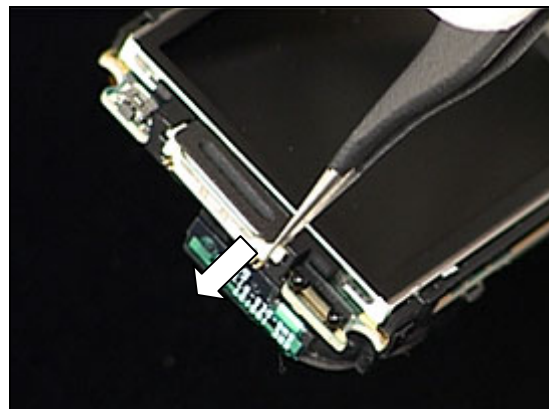
INSTALLATION

1. Place into position first.
2. Position other side second.

Use nylon pointer to place into position.

Follow the 3.15 Installation instruction!

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.16 LCD

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

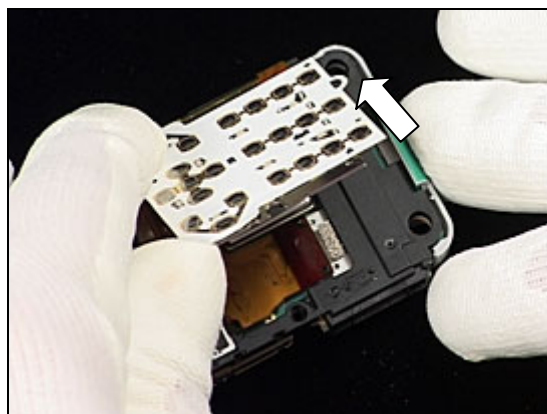
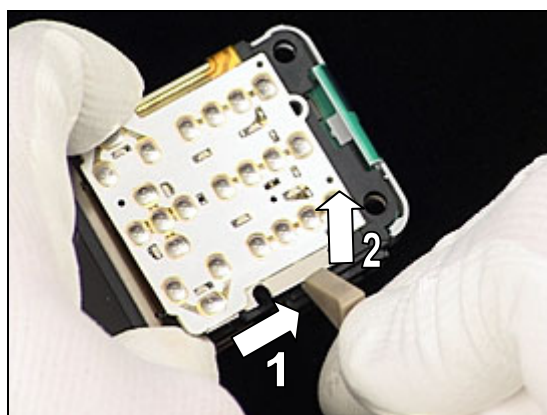
Insert front opening tool as shown in picture.

1. Slide tool down then lift upwards at the bottom of *dome assy*.
2. Lift upwards with side opening tool.

Lift *dome assy* upwards

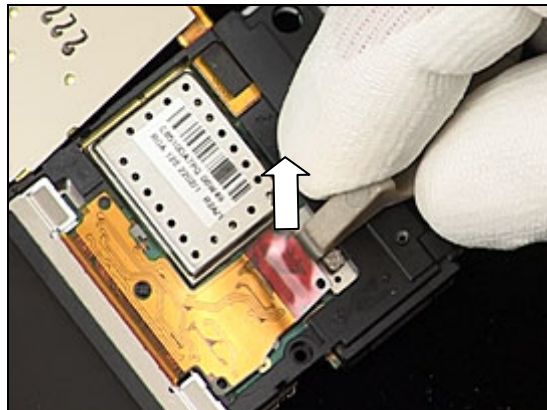
Lift over until *dome assy* is fully open as shown in position.

Be-careful not to twist *dome assy* flex!

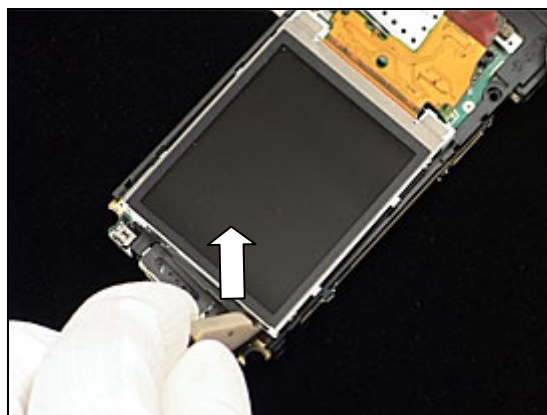


LCD continued

Lift connector & release using side opening tool.

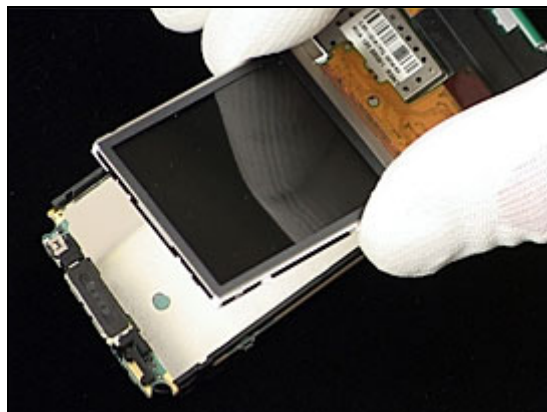


Lift *LCD* from frame using side opening tool as shown in picture.



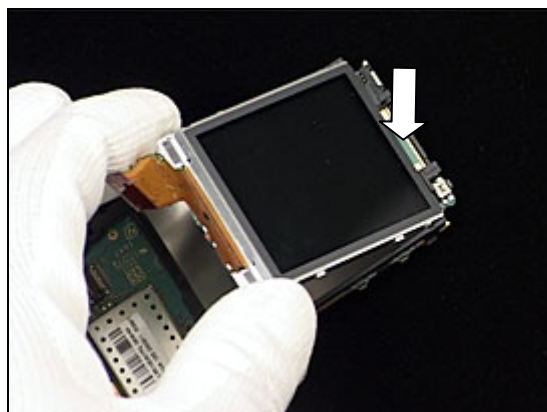
Grip at both sides and remove *LCD* from *frame*.

DO NOT TOUCH LCD GLASS WINDOW!



INSTALLATION

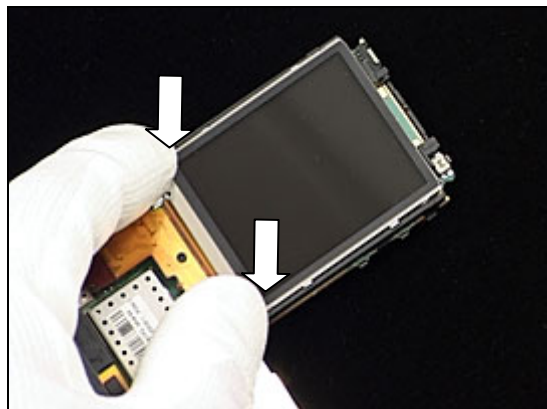
Insert *LCD* as shown in picture.



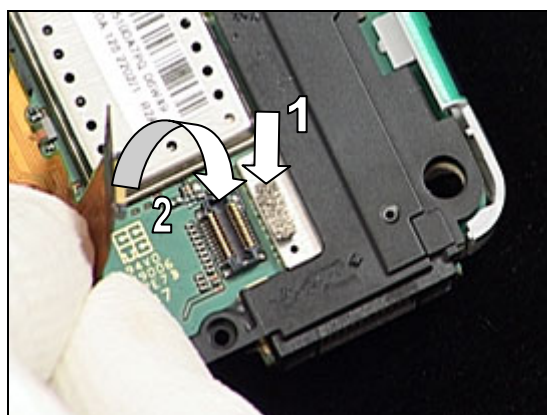
LCD continued

Press to secure its position.

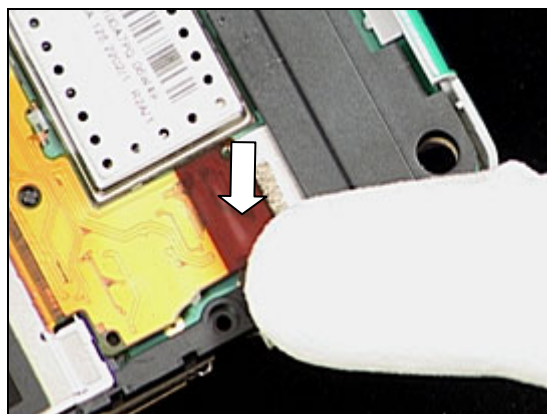
DO NOT TOUCH LCD GLASS WINDOW!



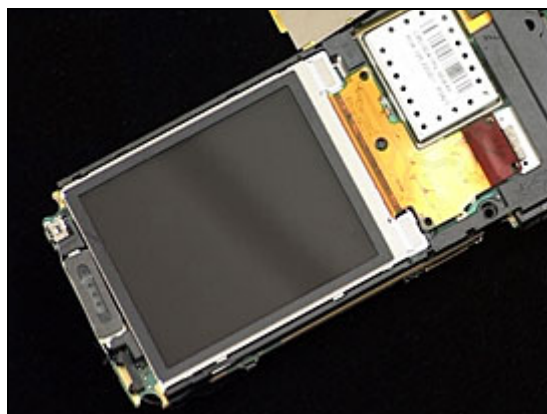
Connect the board-to-board connector.



Press on the top of board-to-board connector.

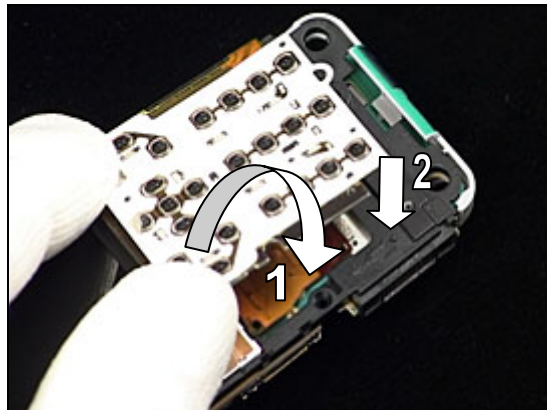


Like this.

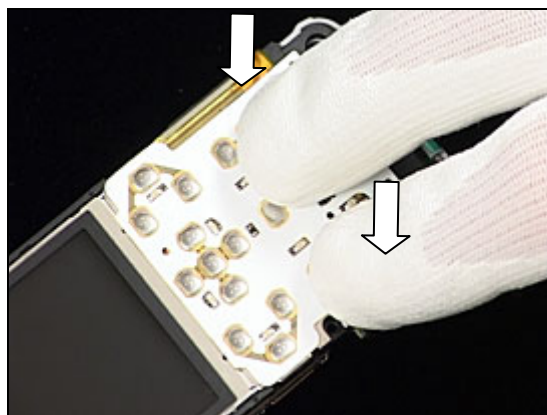


LCD continued

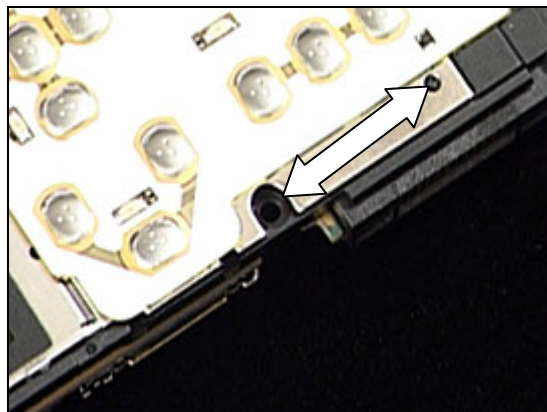
1. Fold over the *dome* assy into position.
2. locate the alignment pin



Use fingers to secure the *dome* assy's position & alignment.

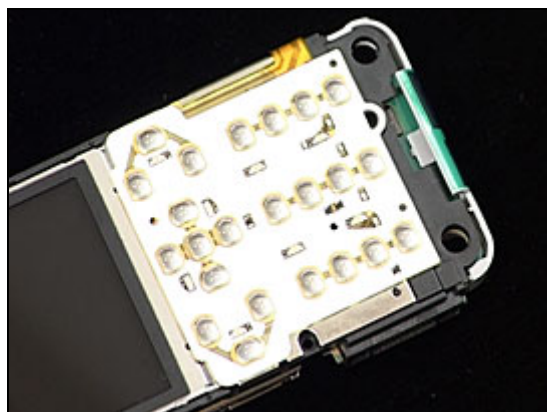


Check the alignment as shown in picture.



It should look like this.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!

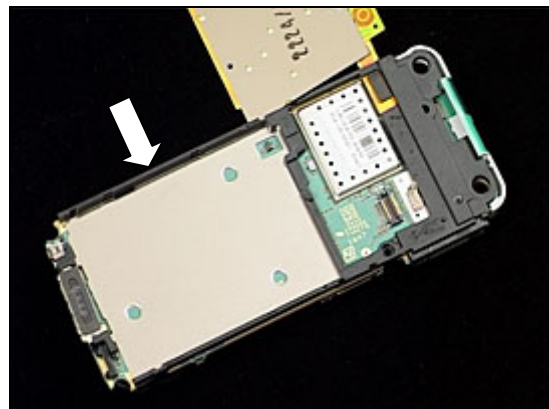


3.17 Frame

REMOVAL

*Follow the 2.1.1 – 2.1.5 Disassembly instructions!
Follow the 3.16 Removal instruction!*

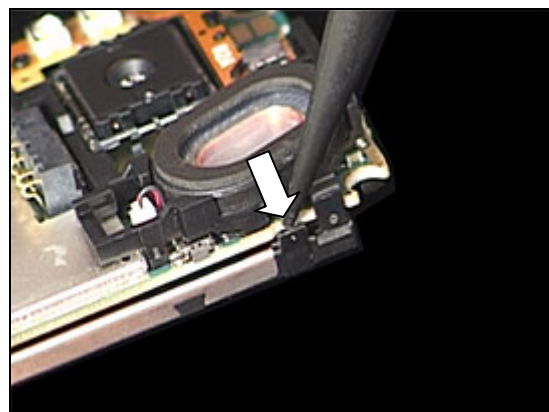
Overview picture.



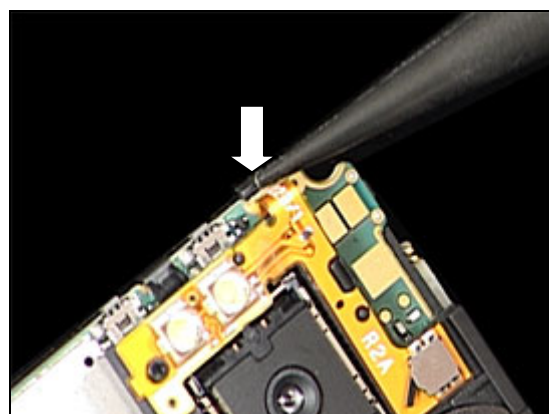
Unlatch bottom snap hook



Unlatch side snap hooks,

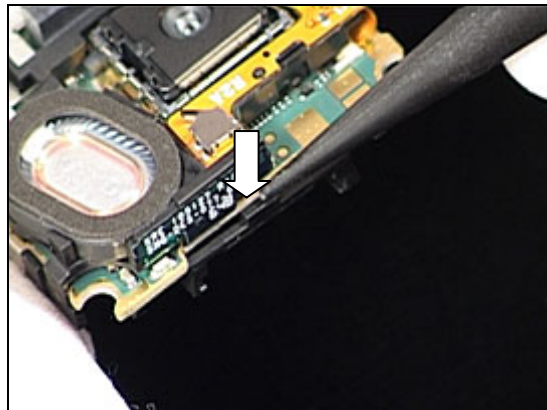


Then the other side.

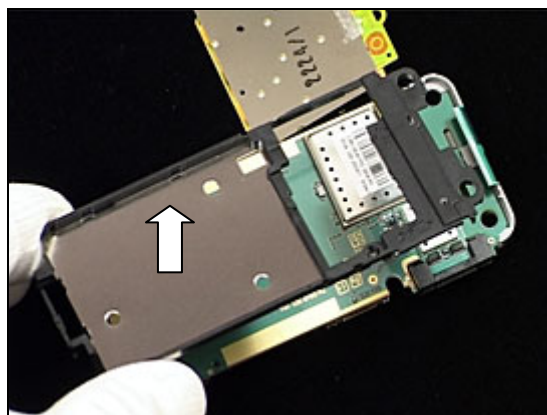


Frame *continued*

Unlatch top snap hooks.

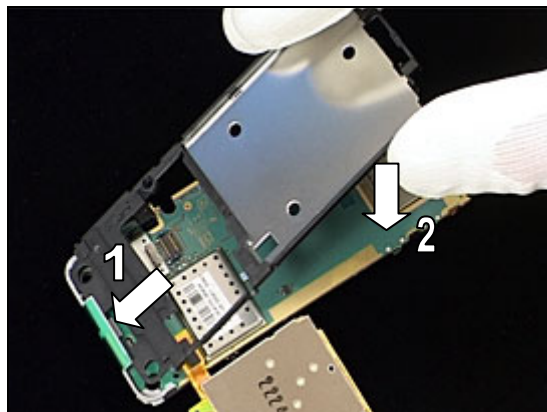


Lift off *frame*



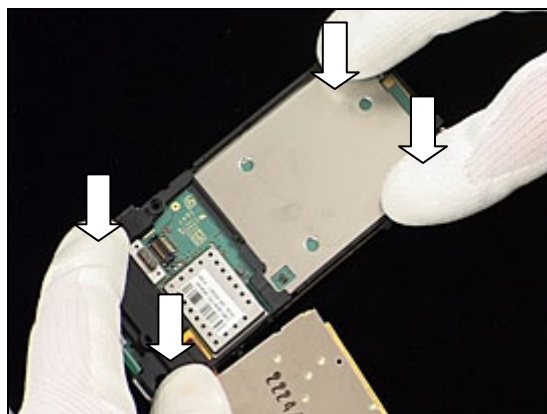
INSTALLATION

1. Fix into bottom position first.
2. The lower top section second.



Use fingers to secure all snap hooks.

Follow the 3.16 Installation instruction!
Follow the 4.1.1 – 4.1.5 Reassembly instructions!

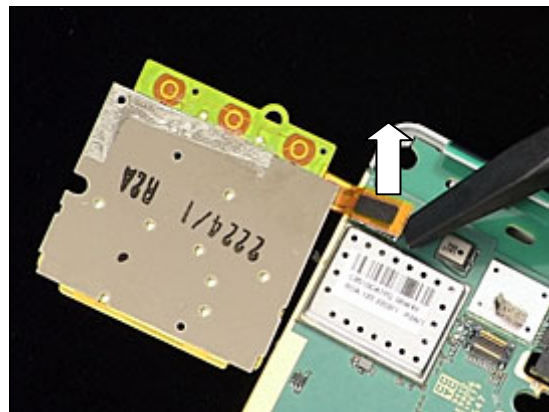


3.18 Dome Assy

REMOVAL

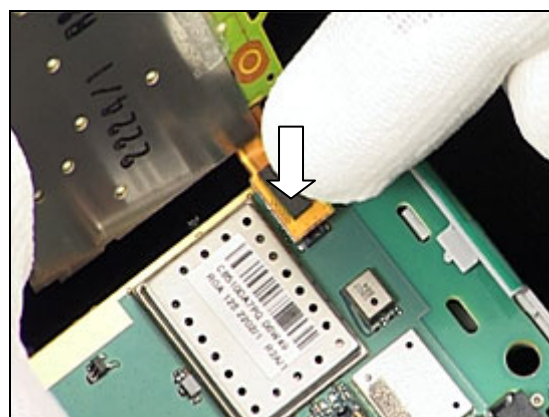
*Follow the 2.1.1 – 2.1.5 Disassembly instructions!
Follow the 3.16 – 3.17 Removal instructions!*

Use nylon pointer to unlatch board-to-board connector.



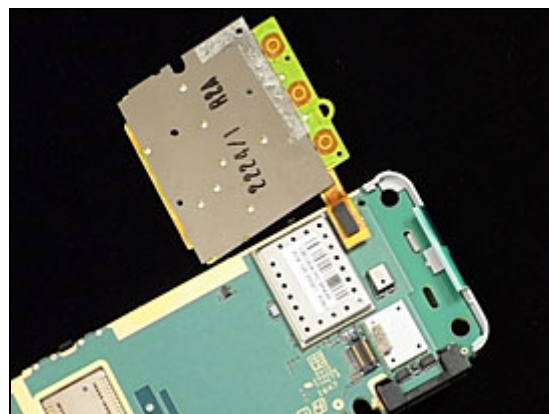
INSTALLATION

Connect the board-to-board connector,



Like this.

*Follow the 3.17 – 3.16 Installation instructions!
Follow the 4.1.1 – 4.1.5 Reassembly instructions!*

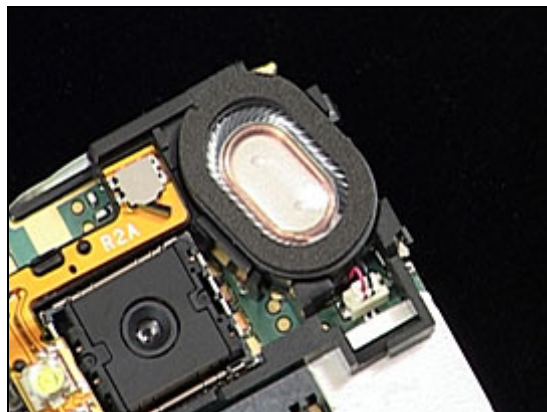


3.19 Loudspeaker

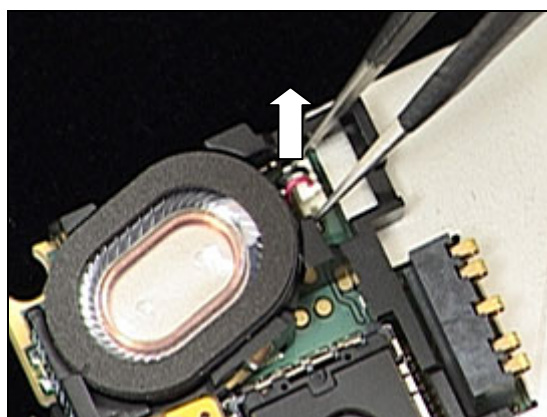
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Overview picture.



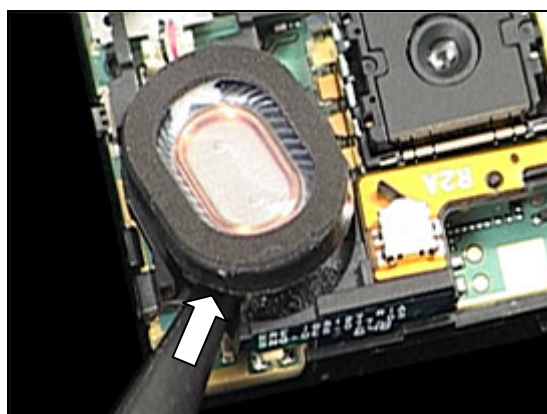
Use tweezers to unlock connector.



Lift up until connector is loose.

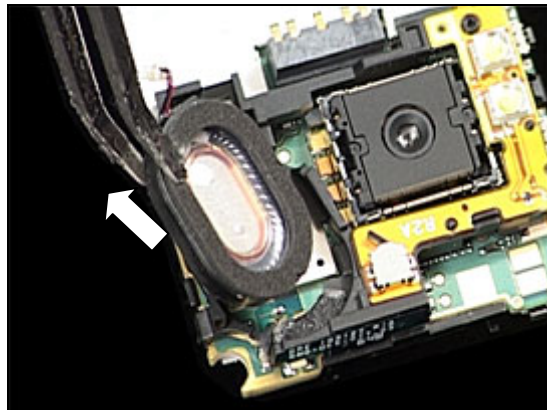


Use nylon pointer to unlatch *loud speaker*.



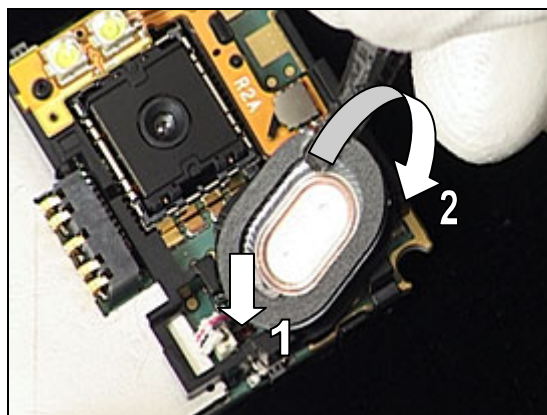
Loudspeaker *continued*

Use flat tweezers to remove *loud speaker*.

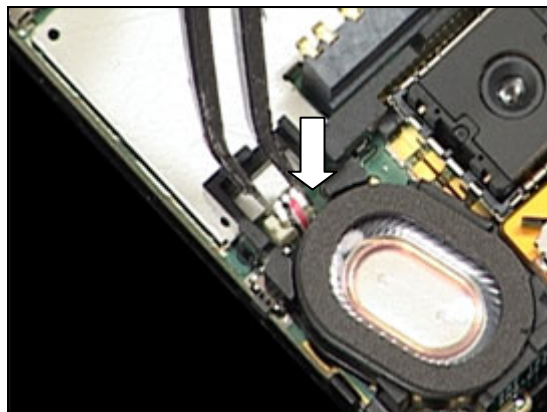


INSTALLATION

1. Position first.
2. Lower other end into position and secure.

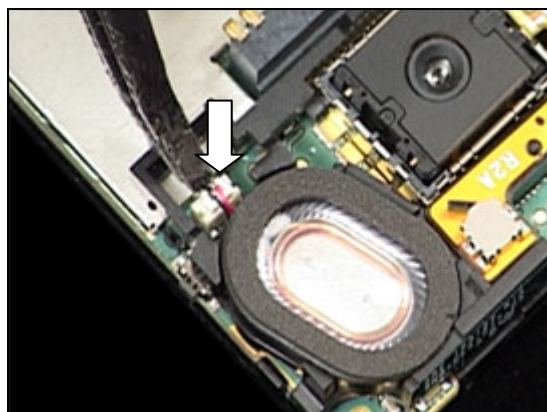


Use tweezers to secure connector.



Press on top to secure connector.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.20 Flash LED / BT Antenna Frame

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

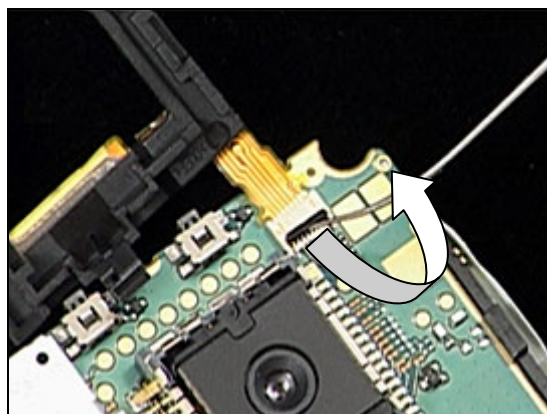
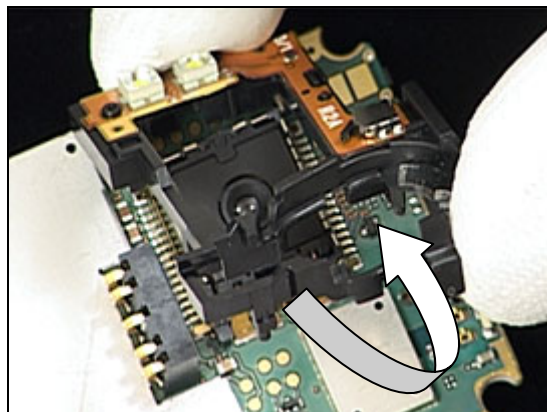
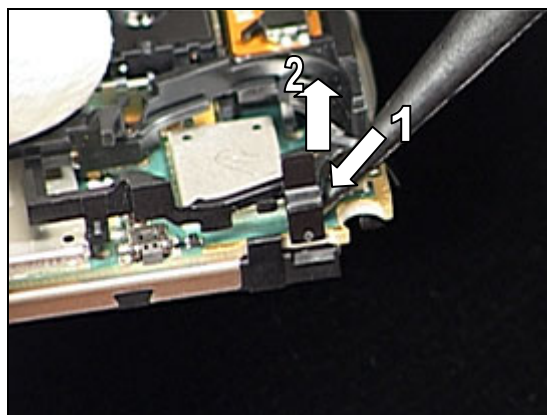
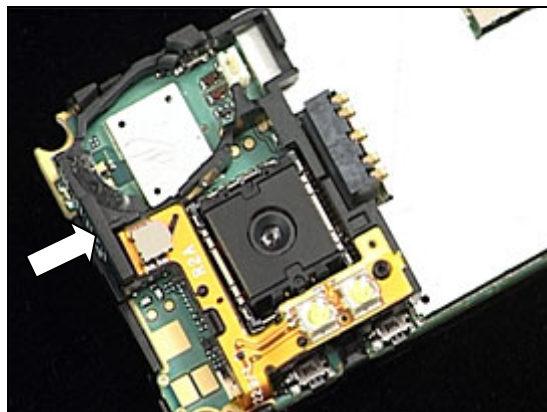
Follow the 3.19 Removal instruction!

Overview picture.

1. Unlatch snap hooks,
2. lift frame upwards,

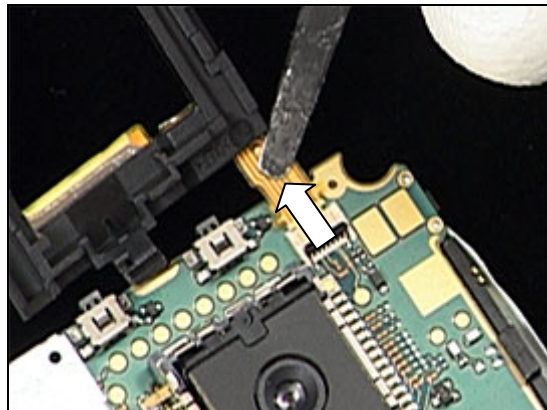
Then lift over the frame.

Use dentist hook to unlatch connector.



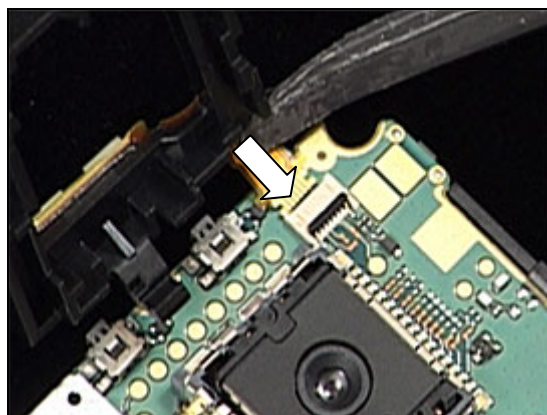
Flash LED / BT Antenna Frame *continued*

Use flat tweezers to remove flex.

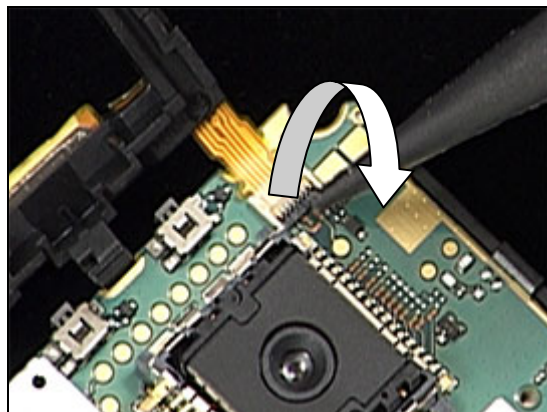


INSTALLATION

Use flat tweezers to insert flex-to-connector.

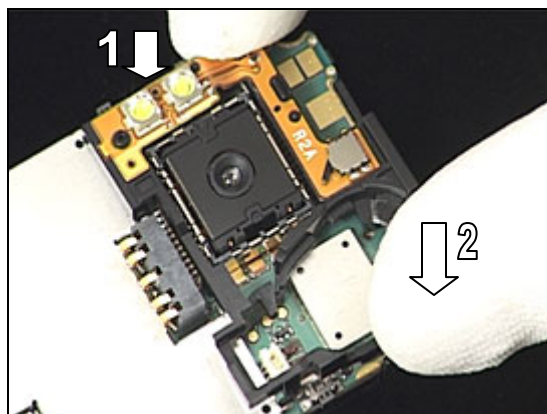


Use nylon pointer to secure connector.



1. Fix into position first.
2. lower other side and secure snap hooks.

Follow the 3.19 Installation instruction!
Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.21 Flash LED

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Follow the 3.19 Removal instruction!

Remove *Flash LED* ROA with tweezers

Overview picture



INSTALLATION

Take new *Flash LED* ROA and place onto *Flash LED /BT* Frame.

Should look like this.

Follow the 3.19 Installation instruction!
Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.22 BT Antenna

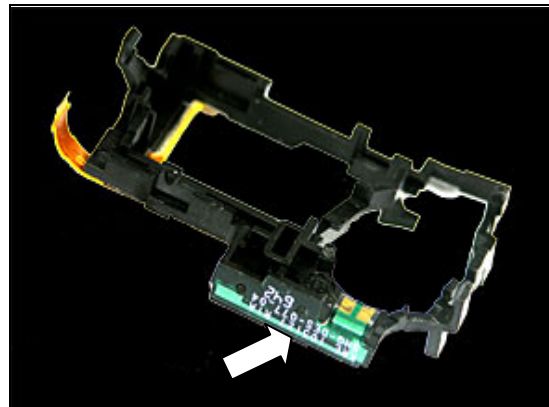
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Follow the 3.19 Removal instruction!

Remove *BT Antenna* with tweezers

Overview picture

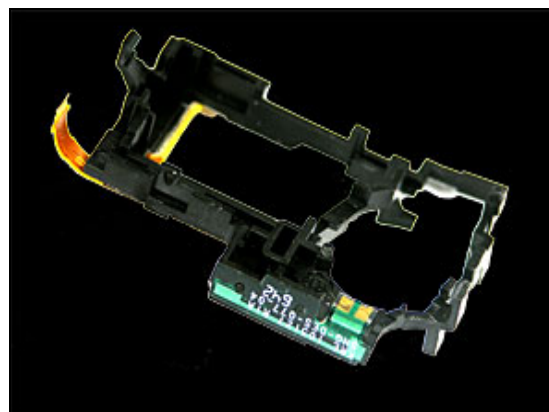
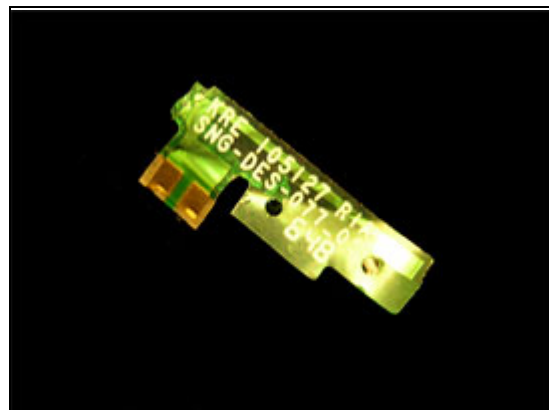


INSTALLATION

Take new *BT Antenna* and place onto *Flash LED /BT Frame*.

Should look like this.

Follow the 3.19 Installation instruction!
Follow the 4.1.1 – 4.1.5 Reassembly instructions!



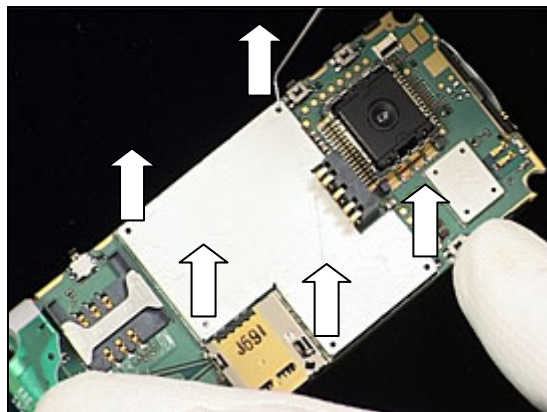
3.23 Shield Lid Main BB

REMOVAL

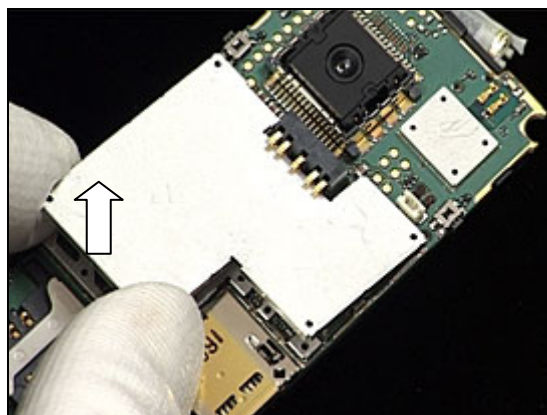
Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Follow the 3.19 – 3.20 Removal instructions!

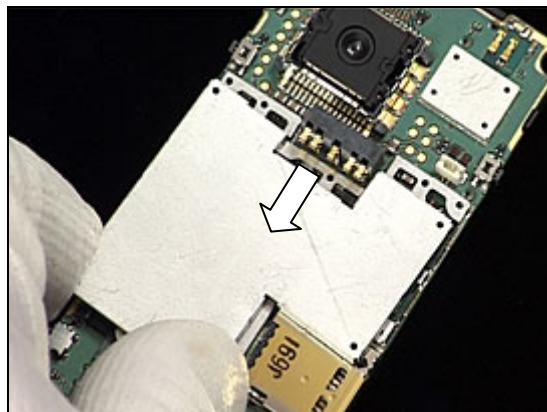
Use dentist hook to loosen *shield lid BB* at each arrow point as shown in picture,



Then lift upwards slightly,



Pull *shield can lid BB* to avoid battery connector pins.



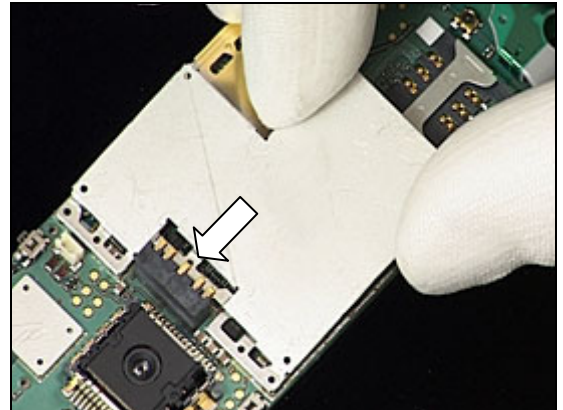
INSTALLATION

Overview picture.

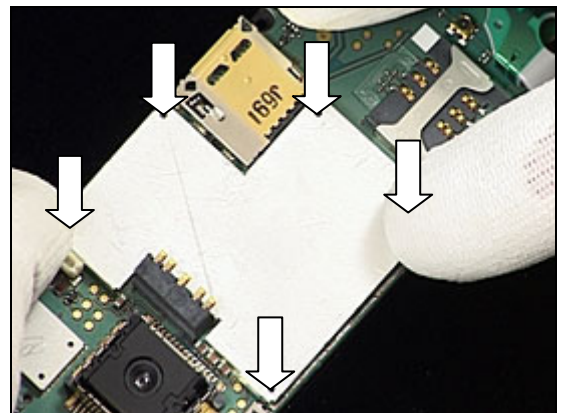


Shield Lid Main BB *continued*

Position *shield can lid BB* avoiding battery pins.

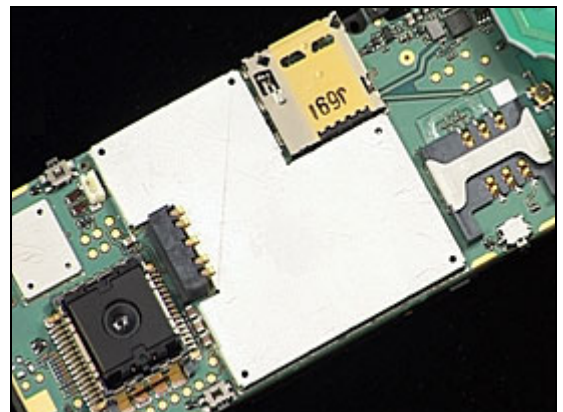


Secure *shield can lid BB* as shown in picture,



Look like this.

Follow the 3.20 – 3.19 Installation instructions!
Follow the 4.1.1 – 4.1.5 Reassembly instructions!

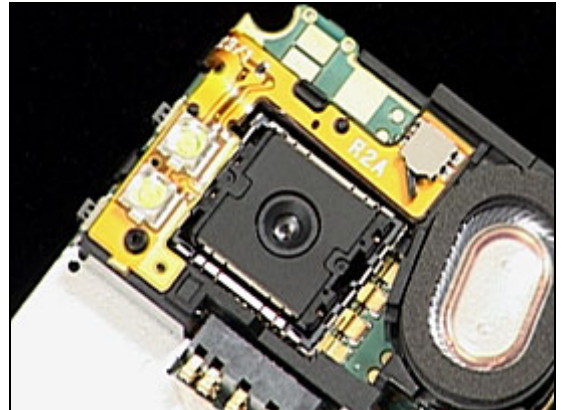


3.24 Camera

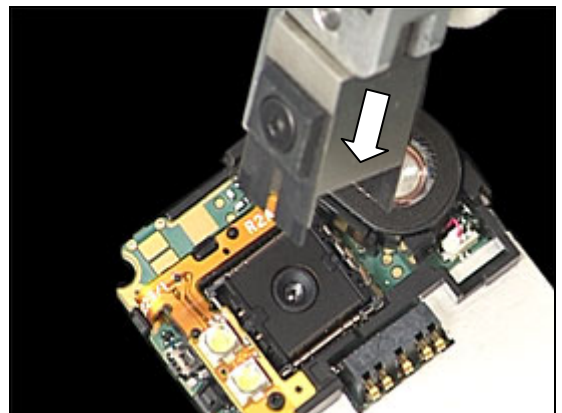
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

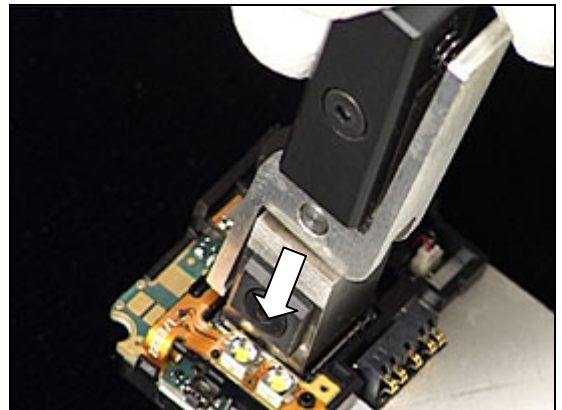
Overview picture.



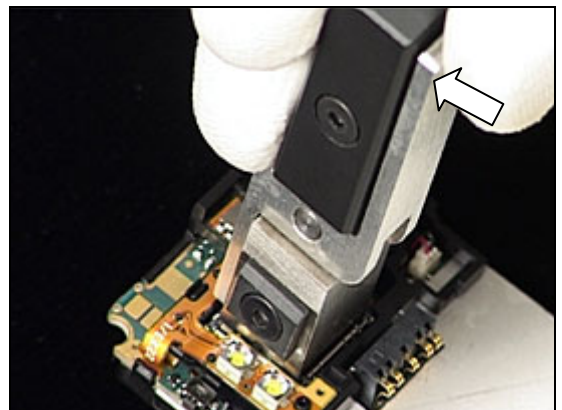
Use camera removal tool and lower into position,



Insert into camera socket as shown in picture,

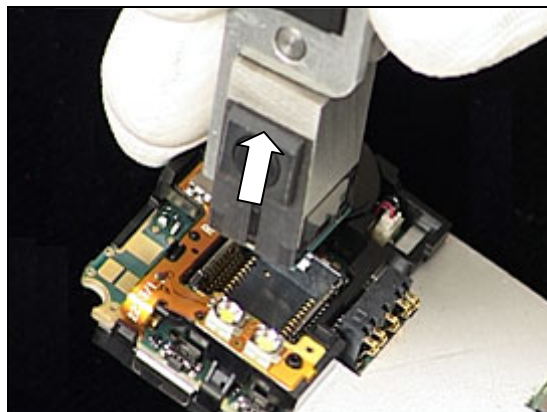


Then press the lever.

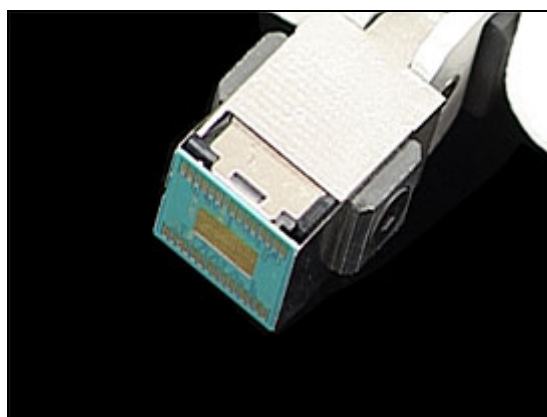


Camera *continued*

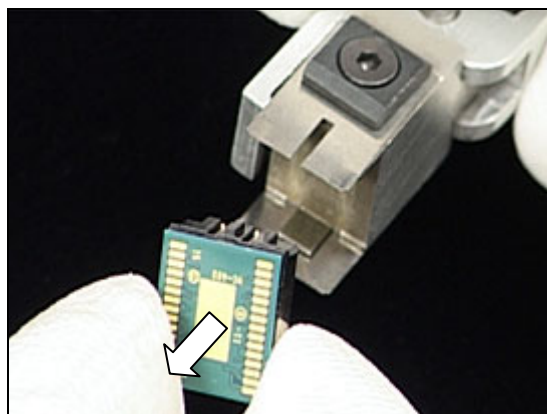
Lift upwards holding the lever closed.



Camera overview picture

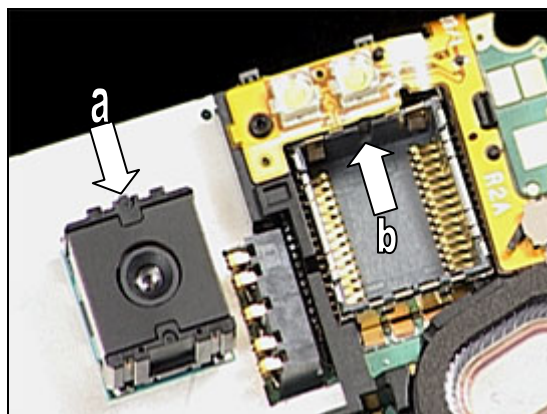


Grip at side of *camera* and remove from tool.



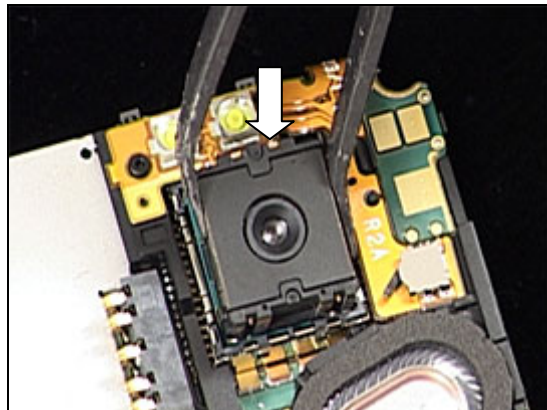
INSTALLATION

- a. Camera alignment pin.
- b. Socket alignment slot.



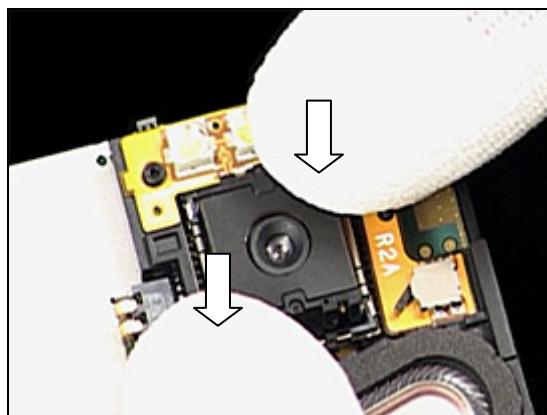
Camera *continued*

Use flat tweezers to position *camera*

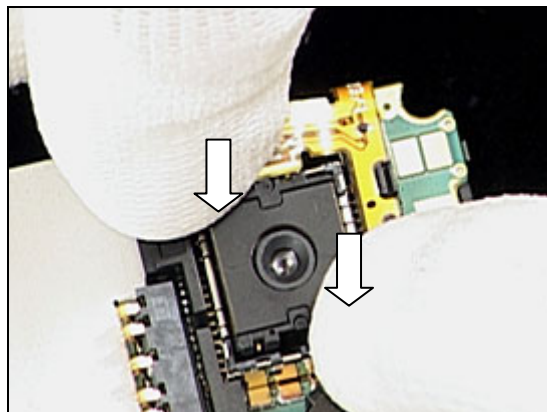


Use fingers to secure at both corners.

DO NOT TOUCH THE LENS!

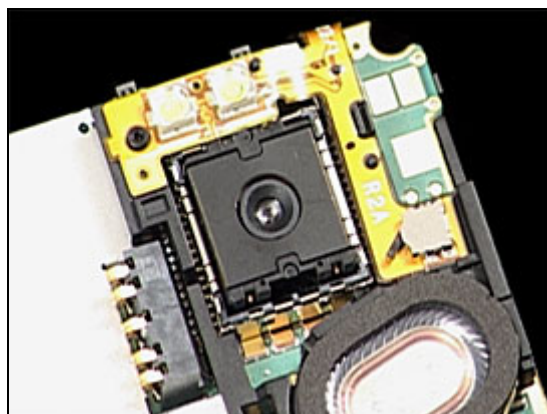


Repeat this action for other corners



Look like this.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!

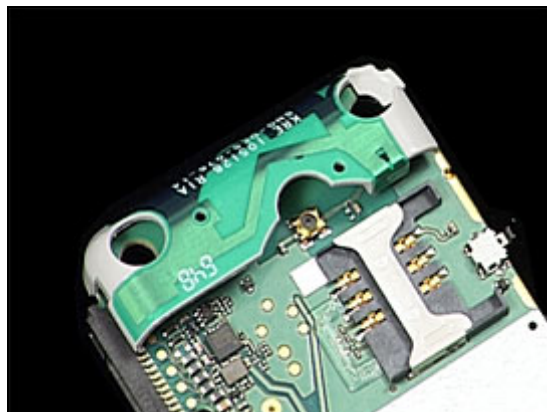


3.25 Antenna

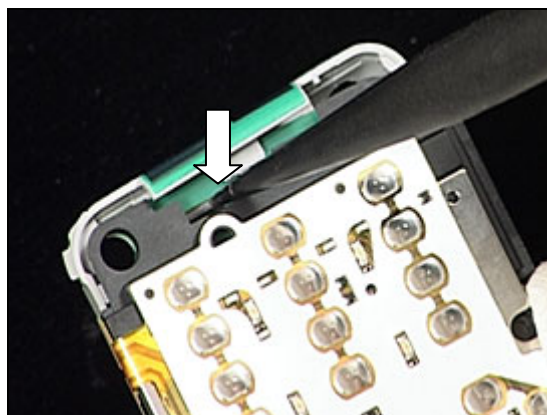
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

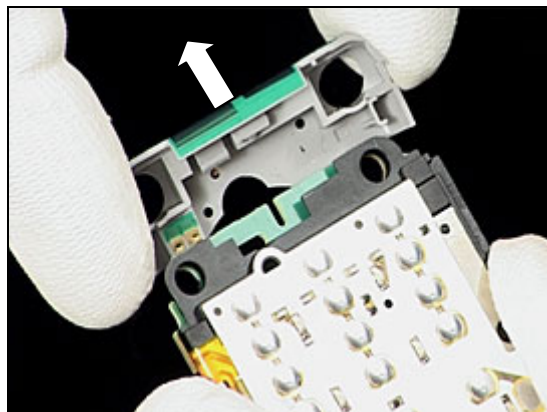
Overview picture.



Use nylon pointer to unlatch *antenna* snap hook

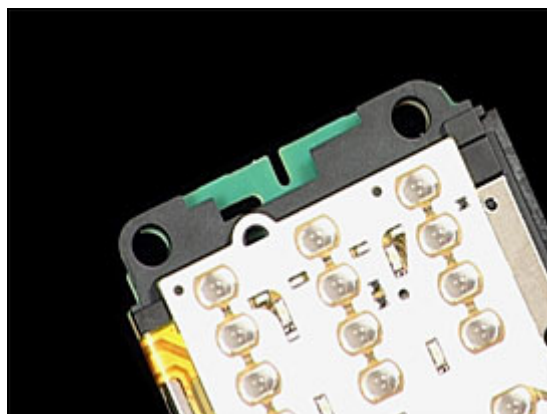


Grip at both sides and remove as shown in picture.



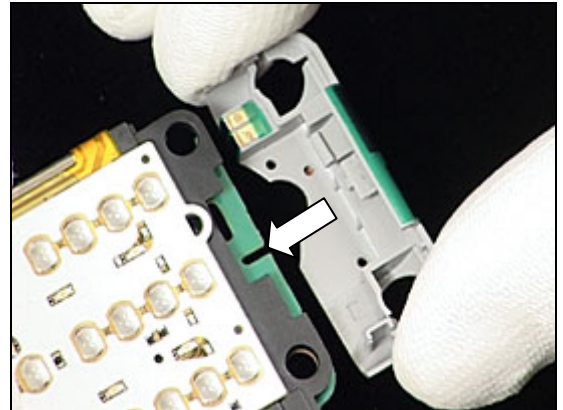
INSTALLATION

Overview picture.



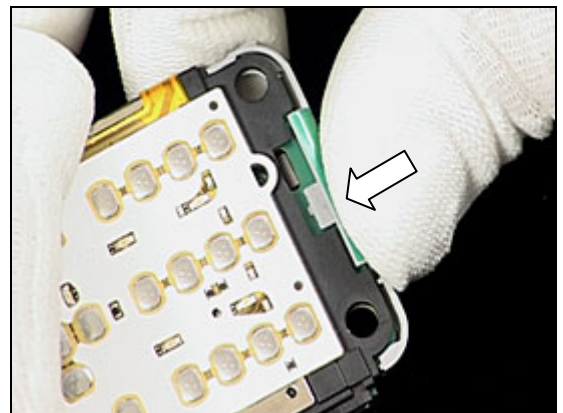
Antenna *continued*

Insert as shown in picture.



Press on the bottom to secure.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



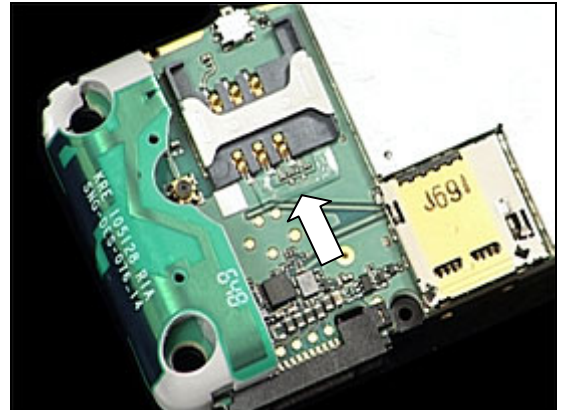
3.26 SIM Tape

PRE-ASSEMBLY CHECK

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Instruction text

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



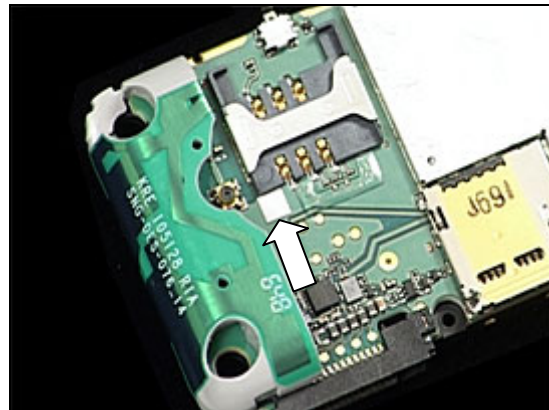
3.27 Liquid Intrusion Indicator

INSPECTION

There is one Liquid Intrusion Indicators located on the PCBA.

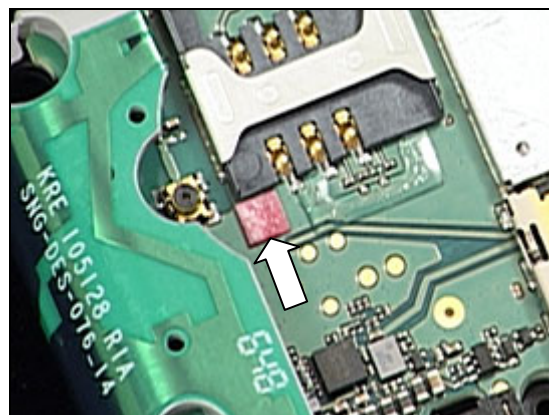
To get access to and to inspect the indicators:

Follow 2.1.1 – 2.1.5 Disassembly instructions!



REMOVAL

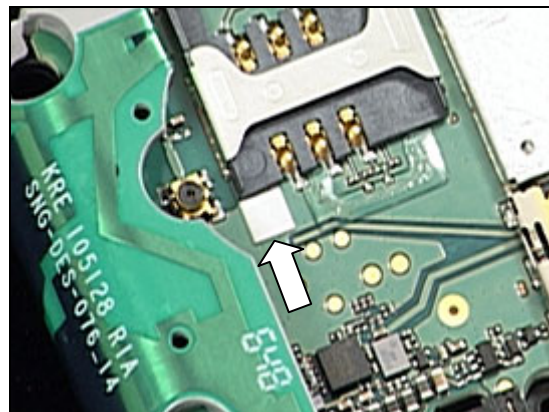
Remove the activated *liquid intrusion indicator* with the dentist hook and the tweezers.



INSTALLATION

Attach the new *liquid intrusion indicator* with the tweezers and the dentist hook.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.28 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

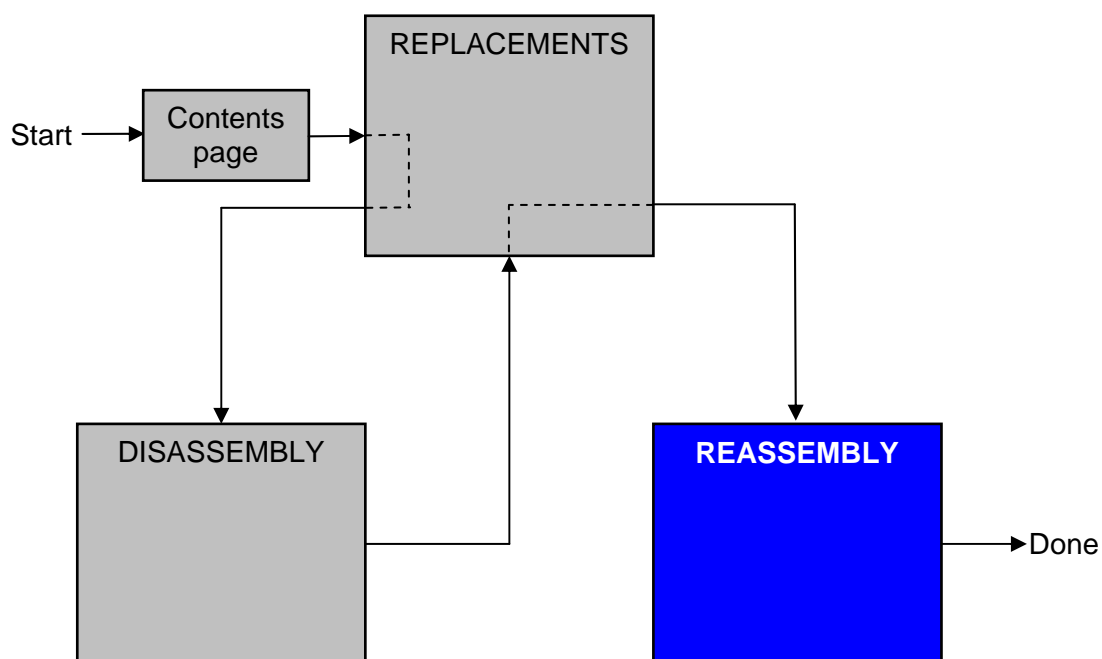
ONE LABEL ONLY IS ALLOWED!

Follow the 4.1.5 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

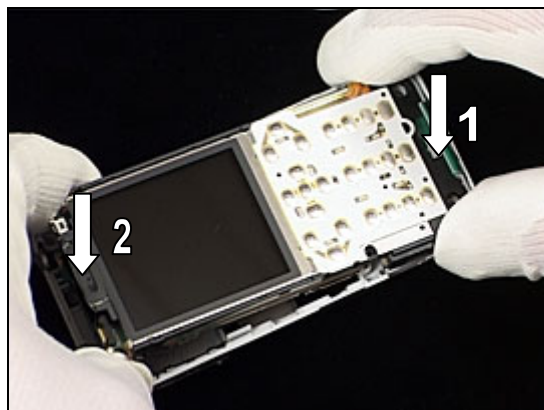
The reassembly is done in the following order:

1. PCBA
2. Keypad
3. Front Cover
4. Speaker Cover
5. Battery (a) & Battery Cover (b)



4.1.1 PCBA

1. Place *PCBA* into bottom position first.
2. Lower top end of *PCBA* into *back cover*.

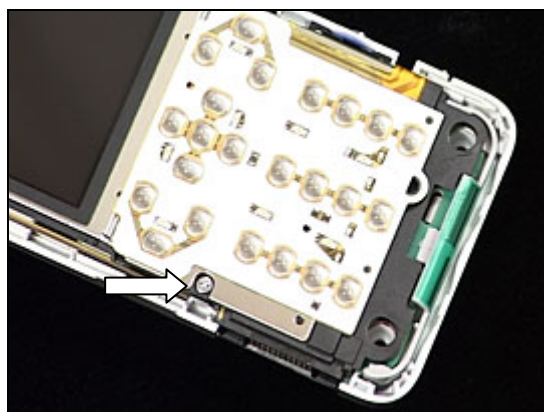


Secure *PCBA* like this.

AVOID TOUCHING LCD GLASS!

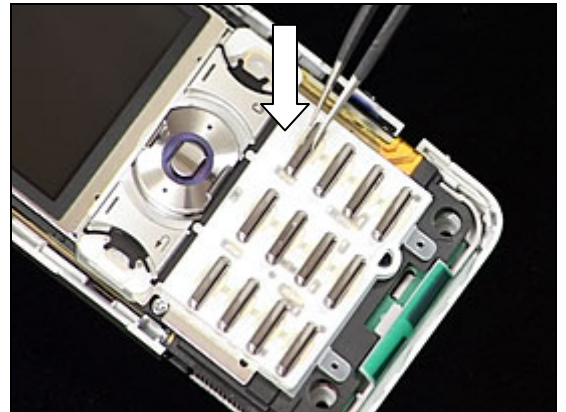


Use **18 Ncm** torque to tighten the screw with torx JCIS bit.



4.1.2 Keypad

Use tweezers to place *keypad* into position.



4.1.3 Front Cover

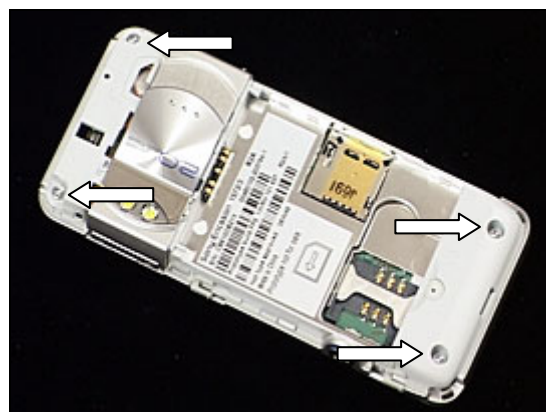
1. Fix into position at bottom first.
2. Lower top end of *front cover* second.



Press down on *front cover* to secure snap hooks as shown in picture.

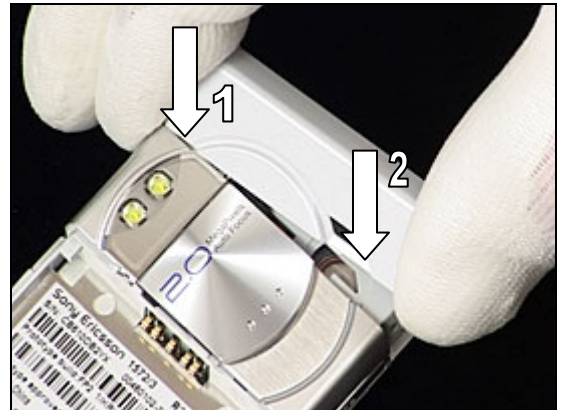


Use **24 Ncm** torque to tighten the four screws with torx bit no. 6.



4.1.4 Speaker Cover

1. Bring *speaker cover* into position first.
2. Lower downwards



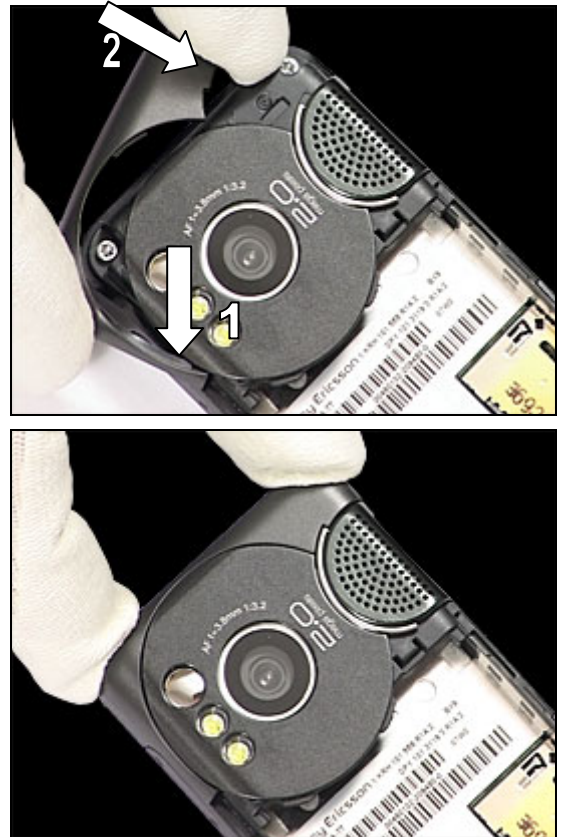
Press on top of *speaker cover* to secure snap hooks



4.1.5 Speaker Cover

1. Bring *speaker cover* into position first,
2. Then position the other section of *speaker cover*.

Using fingers secure speaker cover, like this.



4.1.6 Battery & Battery Cover K550 Only

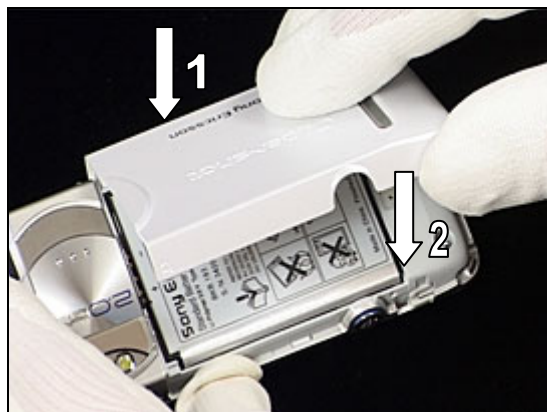
Place *battery* into position against battery contacts.



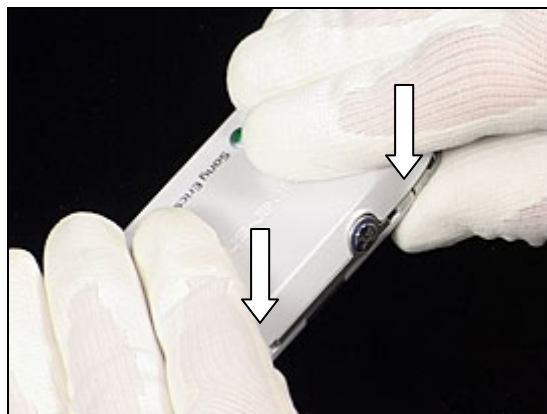
Lower and secure.



1. Position *battery cover* first like this.
2. Lower *battery cover* as shown.

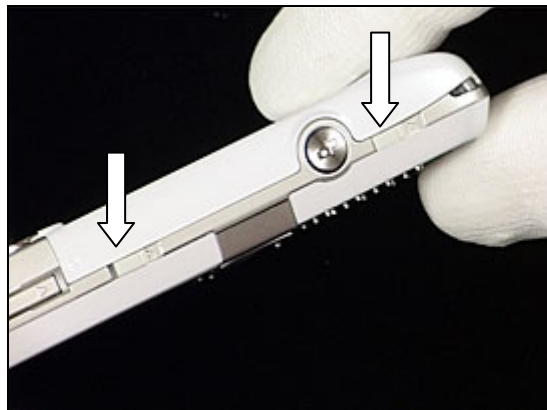


Use fingers to close *battery cover*.



Battery & Battery Cover *continued*

Battery cover locks will be in open position as shown in picture.



Slide locks to bottom direction of the phone to secure.



Overview picture.



4.1.7 Battery & Battery Cover W610 Only

Place *battery* into position against battery contacts as shown in K550 instruction.

Slide on *battery cover* as shown.



Secure *battery cover*, like this.



5 Revision history

Rev.	Date	Changes / Comments
A	2007-02-19	1 st Release
B	2007-02-23	W610 Added
C	2007-08-06	W610 instruction page 14 update