

## SERVICE MANUAL Level 1&2

# NOKIA 5630 XPRESSMUSIC



### Transceiver characteristics

#### Band:

RM-431: GSM/EGPRS 850/900/1800/1900  
WCDMA 2100/900 and HSDPA/HSUPA  
RM-432: GSM/GPRS/EGPRS 850/900/1800/1900

#### Display:

QVGA display (320 x 240 pixels) 2.2"/ active  
area 33.5 mm x 44.6 mm colour display,  
Up to 16M colors

#### Camera:

3.2 Mpix EDOF with flash

#### Operating System:

S60 3rd Edition, Feature Pack 2

#### Connections:

Bluetooth 2.0 +EDR, 3.5 mm AV connector, Micro  
USB, MicroSD card up to 16 GB, WLAN (RM-431  
only)

#### Transceiver with BL-4CT battery pack

Talk time	Standby	Note
Up to 7 h (GSM) Up to 4 h (WCDMA)	Up to 400 h (GSM) Up to 400 h (WCDMA)	Depends on network parameters and phone settings

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## 1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	24.11.2008	First draft
Approved	1.0	13.2.2009	First approved version

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

**CMO Operation & Logistics**  
**Training and Vendor Development**  
**Multimedia Creation & Support**  
<mailto:Service.Manuals@nokia.com>

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

## 2. COPYRIGHT

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The availability of particular products may vary by region.

### **IMPORTANT**

This document is intended for use by qualified service personnel only.

### 3. WARNINGS AND CAUTIONS

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

#### 3.1 Warnings

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

#### 3.2 Cautions

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly.

#### 4. ESD PROTECTION



Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.

Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.

To replace the covers ESD protection must be applied.

All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.

All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).

Every repair action involving opening the product or handling the product components must be done under ESD protection.

ESD protected spare part packages **MUST NOT** be opened/closed out of an ESD Protected Area.

For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.

## 5. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfill any warranty obligations and to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
- Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
- Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications or attachments could damage the phone and may violate regulations governing radio devices.

All of the above suggestions apply equally to the product, battery, charger or any accessory.

## 6. BATTERY INFORMATION

Note: A new battery's full performance is achieved only after two or three complete charge and discharge cycles! The battery can be charged and discharged hundreds of times but it will eventually wear out.

When the operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery. Use only batteries approved by the phone manufacturer and recharge the battery only with the chargers approved by the manufacturer.

Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime.

If left unused a fully charged battery will discharge itself over time. Temperature extremes can affect the ability of your battery to charge.

For good operation times with Ni-Cd/NiMh batteries, discharge the battery from time to time by leaving the product switched on until it turns itself off (or by using the battery discharge facility of any approved accessory available for the product).

Do not attempt to discharge the battery by any other means. Use the battery only for its intended purpose.

Never use any charger or battery which is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

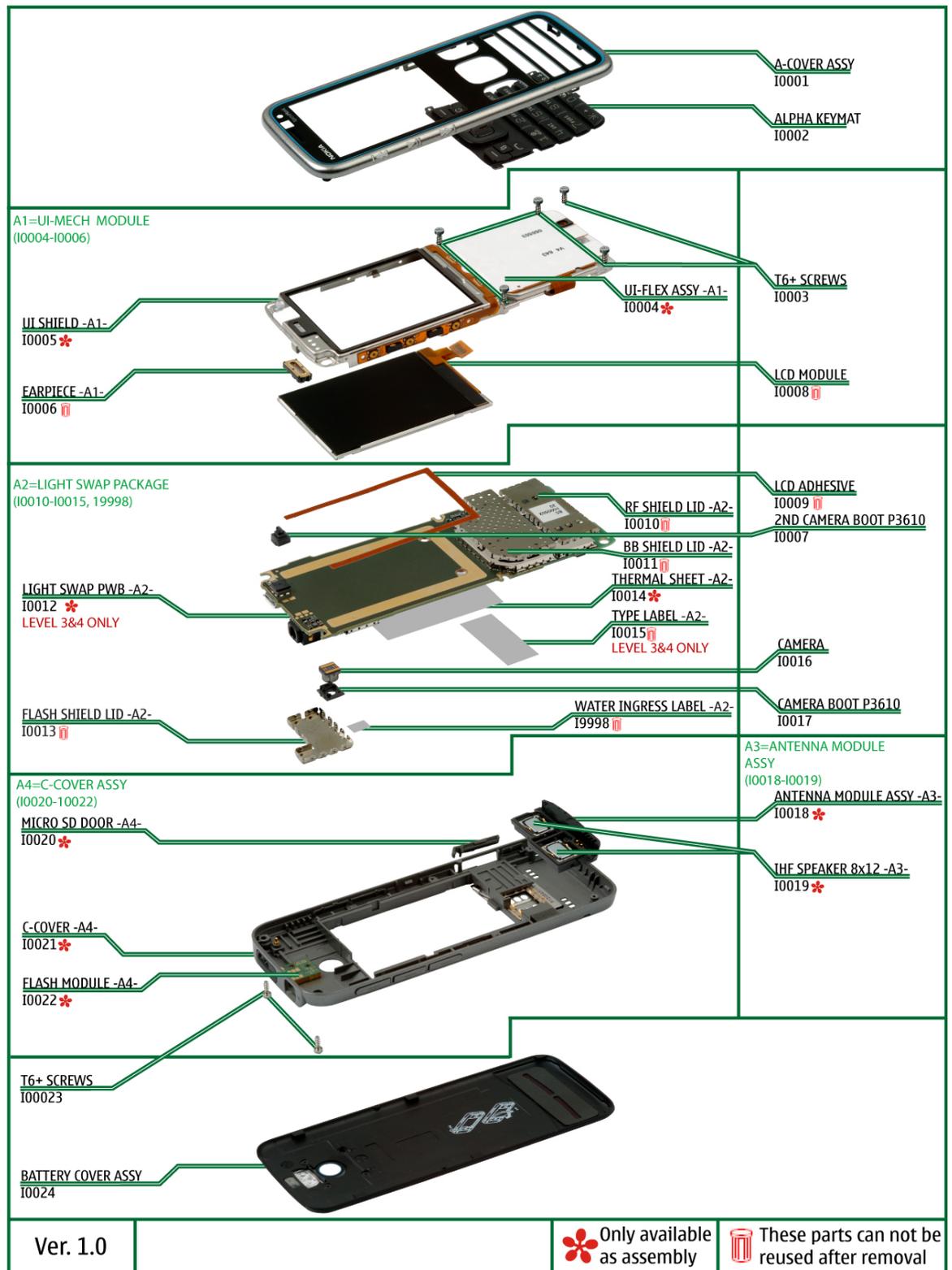
Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling).

Do not dispose as household waste.

**7. EXPLODED VIEW**

See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.

**5630 RM-431 EXPLODED VIEW**



8. SERVICE DEVICES

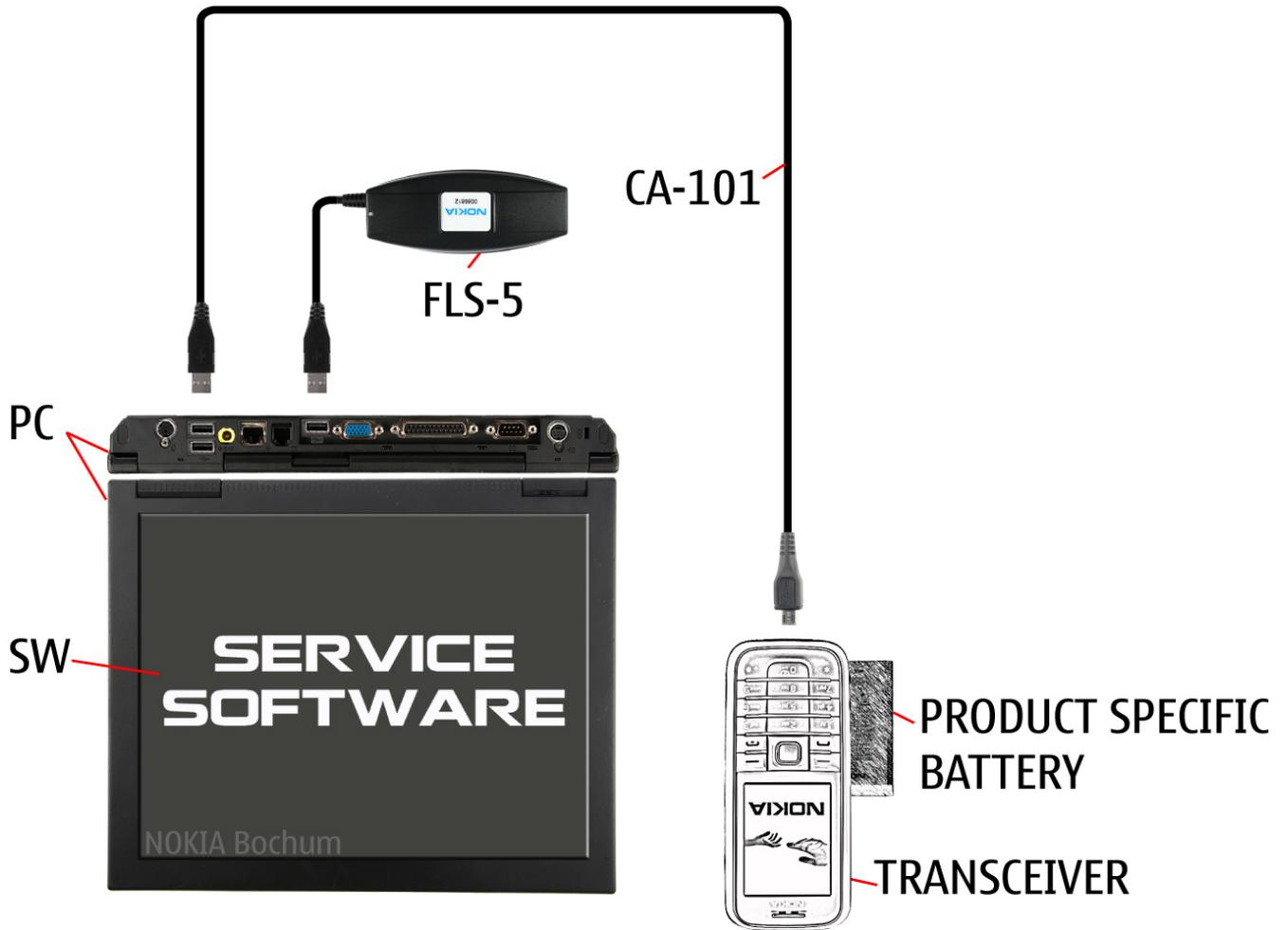
 <p>FLS-5</p> <p>FLS-5 Flash device</p>	 <p>RJ-230</p> <p>RJ-230 Universal Soldering Jig</p>	 <p>BL-4CT</p> <p>BP-4CT internal battery</p>
 <p>CA-101 100cm</p> <p>CA-101 Service cable</p>	 <p>AC-10 charger</p>	 <p>NOKIA Standard Toolkit V2</p> <p>NMP standard toolkit (v2)</p> <p>For more information, refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in "Recommended service equipment" document on NOKIA Online.</p>

## 9. SW-UPDATE

### Flash concept – (Point of Sales)

To use the FLS-5 Flash Dongle, you have to follow the user guide inside the sales package.

Please check always for the latest version of flash software which is available on Nokia Online.



**10. DISASSEMBLY INSTRUCTIONS**

1



Slide the BATTERY COVER back.

2



Remove the BATTERY COVER and remove the battery.

3



Unscrew the two T6+ screws.

4



Use the tweezers to remove the screws.

5



Carefully wedge the SRT-6 tool under the edge of the A-COVER and work carefully around the cover to release the 7 clips. **Note:** Be careful with the clips, they break easily.

6



Pull the C-COVER outwards around the cover with the SRT-6 tool when opening the A-COVER.

7



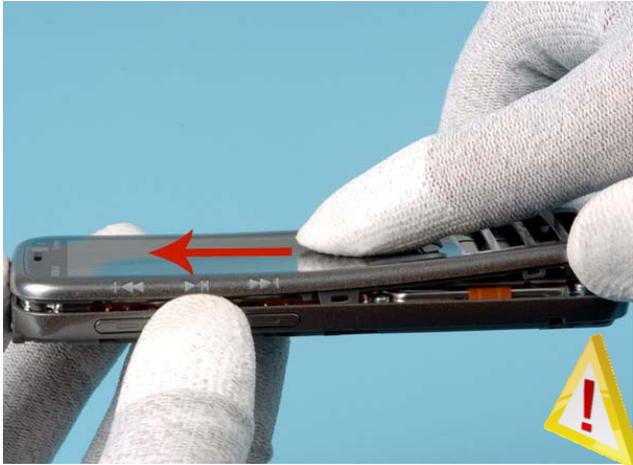
Pull the C-COVER outwards to carefully release the lower side clips.

8



To release the middle clip, first lift the top of the A-COVER.

9



Then slide the A-COVER to the direction shown in the picture to release the middle clip.

10



Before removing the A-COVER, make sure that you have released all 7 clips.

11



Remove the A-COVER.

12



Remove the ALPHA KEYMAT.

13



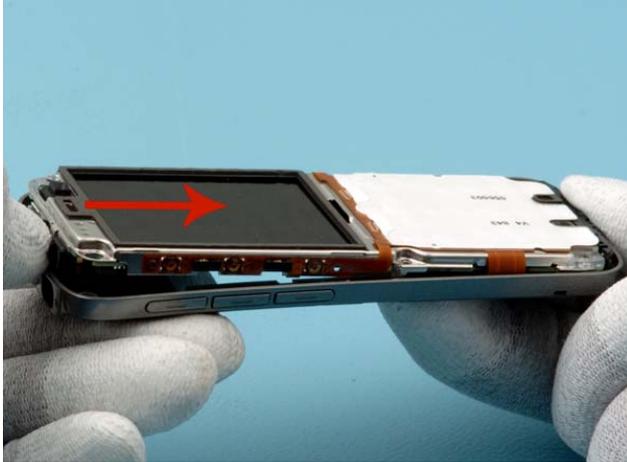
Unscrew the four T6+ screws.

14



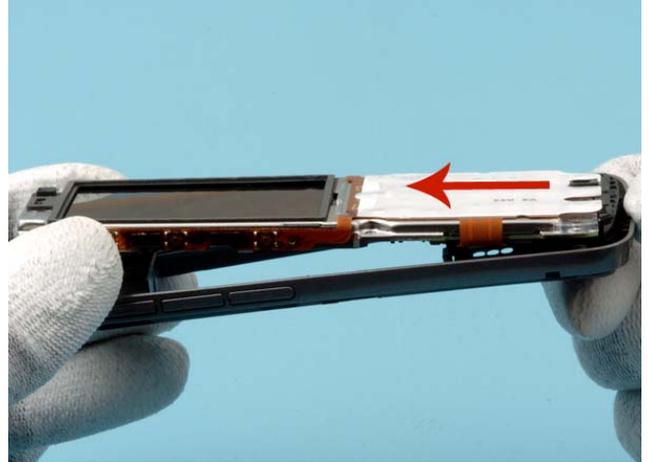
Use the tweezers to remove the screws.

15



To remove the assembly, stretch the C-COVER outwards over the audio connector.

16



Stretch the C-cover outwards to release the clip which holds the assembly in place.

17



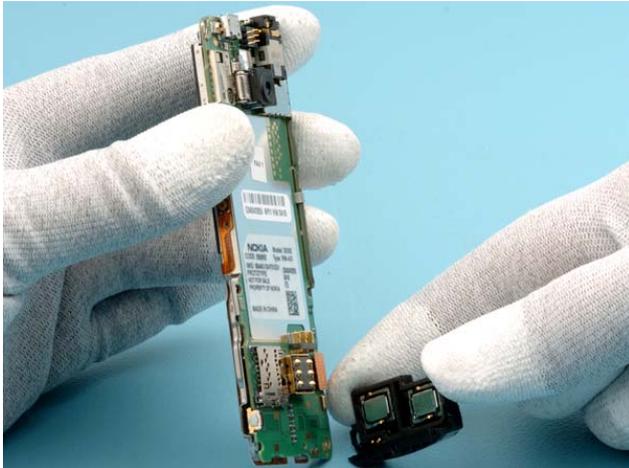
The cover and the assembly have now been separated.

18



Unscrew the T6+ screw to remove the antenna.

19



Remove the antenna. **Note:** The IHF speakers are inside the ANTENNA MODULE and are not changeable spare parts.

20



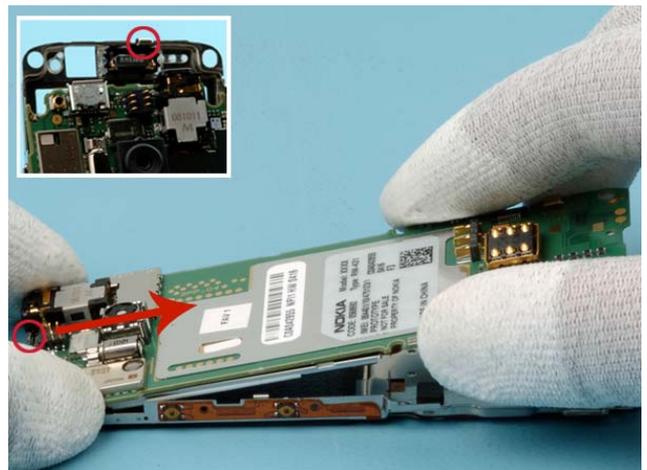
Use the SS-93 tool to release the connector of the UI.

21



Release the clips on both sides of the PWB.

22



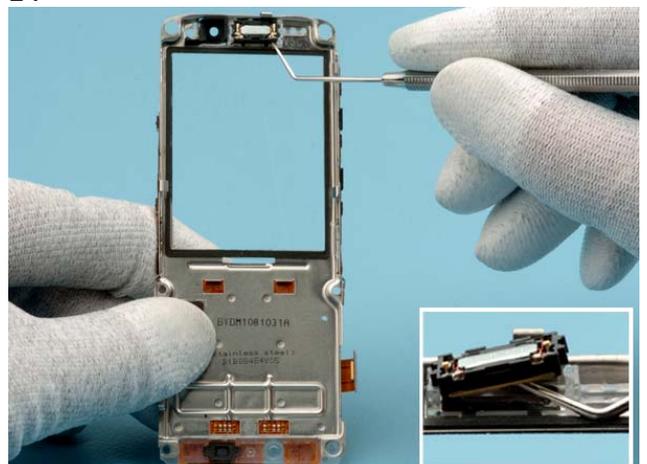
Slide the PWB out of the UI SHIELD. Make sure the third clip is also open.

23



Remove the PWB.

24



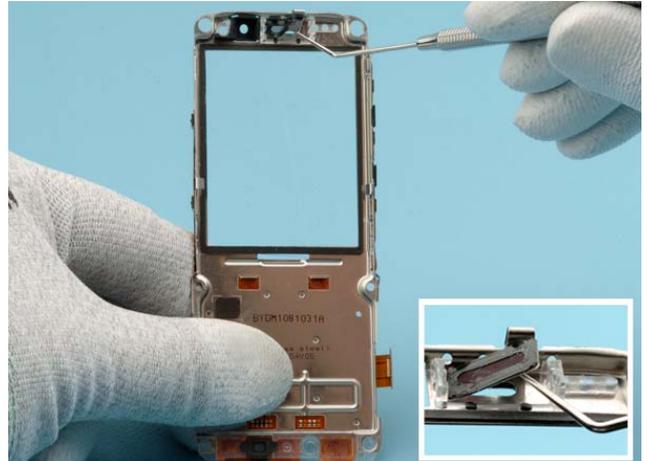
Use the dental tool to release the EARPIECE.

25



Remove the EARPIECE with the tweezers.

26



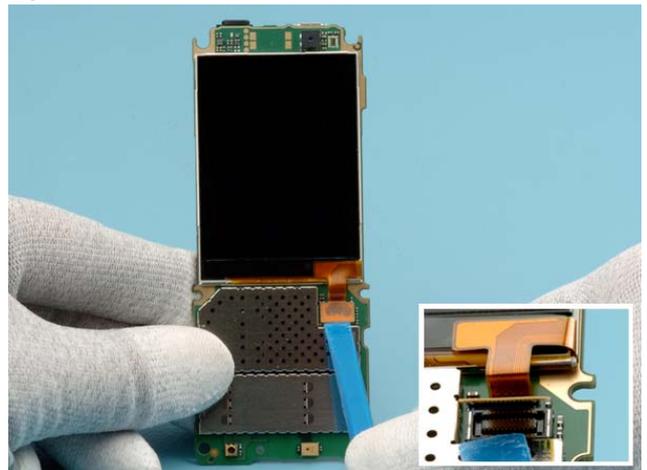
Use the dental tool to lift and release the adhesive net.

27



Use the tweezers to remove the adhesive net and clear all adhesive residuals.

28



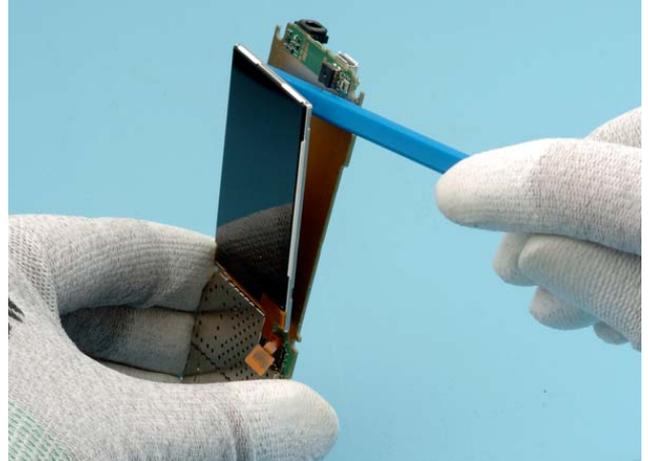
Use the SS-93 tool to open the connector of the LCD.

29



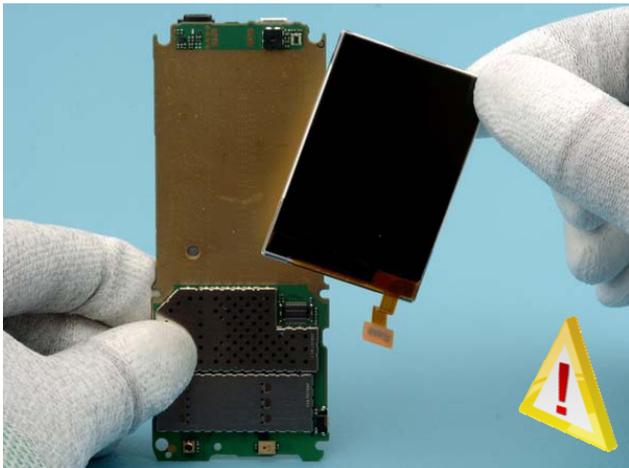
Carefully wedge the SS-93 tool under the LCD MODULE and gently work the tool around the LCD MODULE.

30



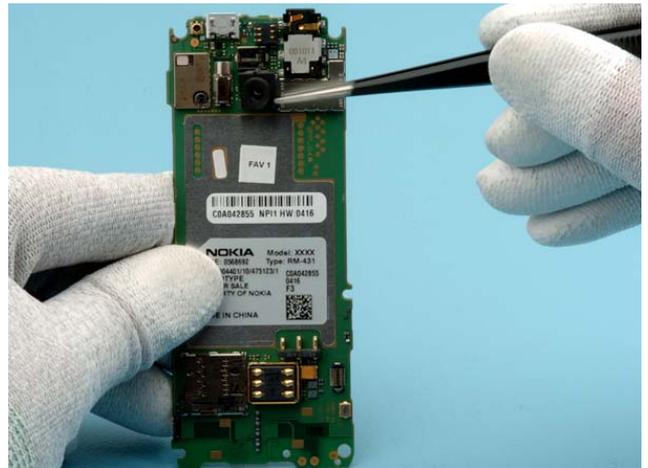
Use the SS-93 tool to release the LCD MODULE. Note! The LCD MODULE is glued on the PWB.

31



Separate the LCD MODULE from the PWB. Note: Only remove the LCD MODULE if it is damaged. It cannot be used again after it has been removed.

32



Use the tweezers to release the CAMERA BOOT.

33



Remove the CAMERA BOOT.

34



Use the SS-88 tool to release the CAMERA.

35



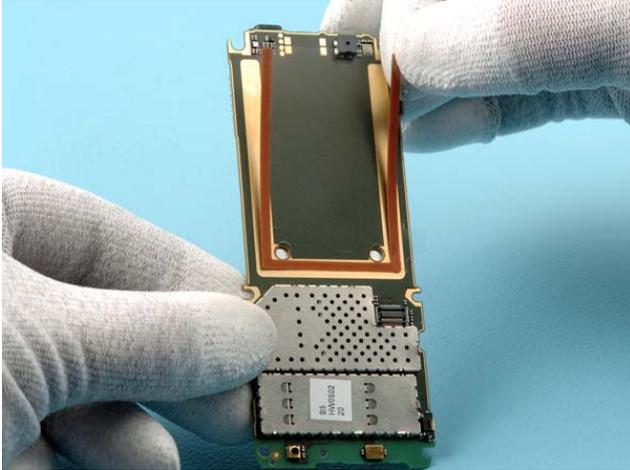
Remove the CAMERA.

End of disassembly.

## 11. ASSEMBLY HINTS

### 11.1 Assembling the LCD FLEX

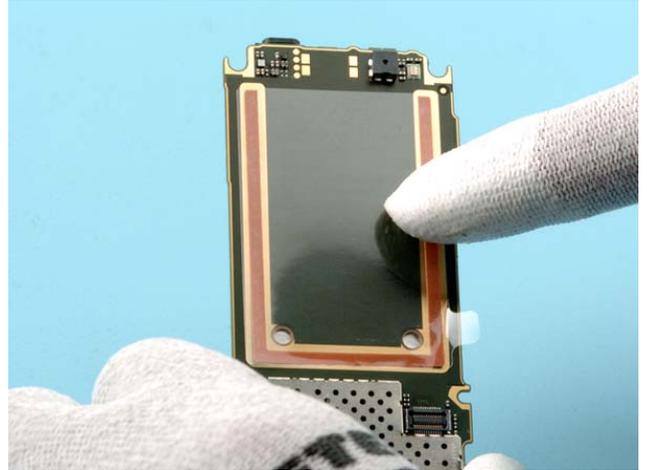
1



Position the holes in the protective foil of the LCD ADHESIVE into the holes on the PWB and then place the U-shaped LCD ADHESIVE on the U-shaped copper area of the PWB.

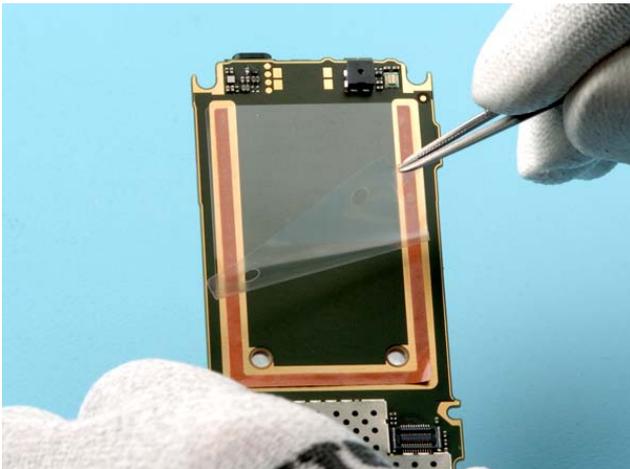
Note that the liner of the LCD ADHESIVE can be used as a guide when aligning and placing the LCD ADHESIVE on the PWB.

2



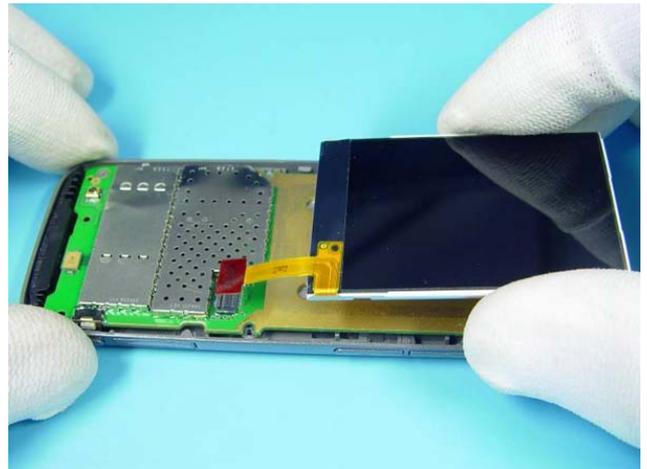
Make sure that the LCD ADHESIVE is glued to the PWB.

3



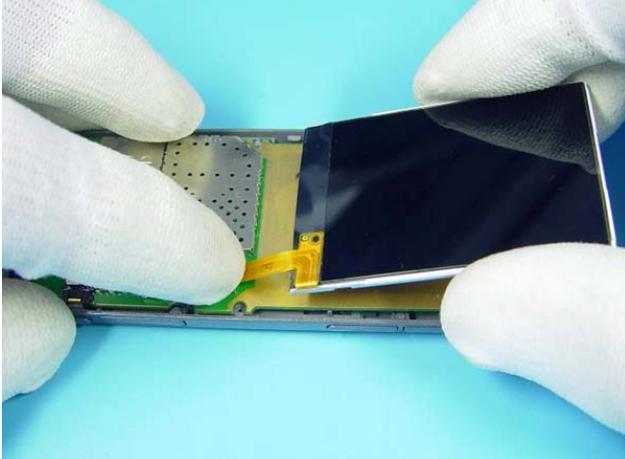
Remove the protective foil with tweezers.

4a



Attach the LCD connector (part 1).

4b



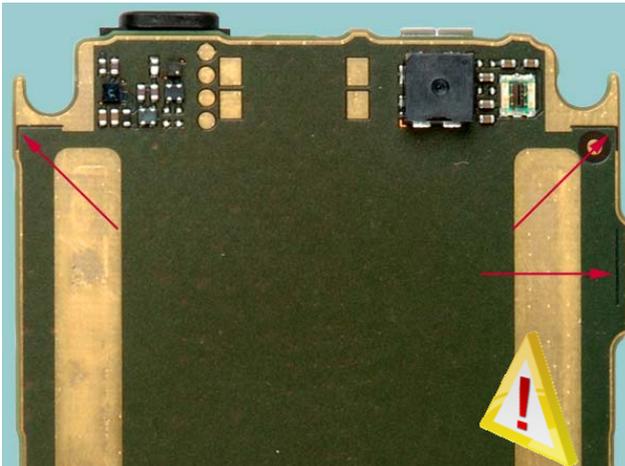
Attach the LCD connector (part 2).

5a



Place the LCD MODULE into the correct position.

5b

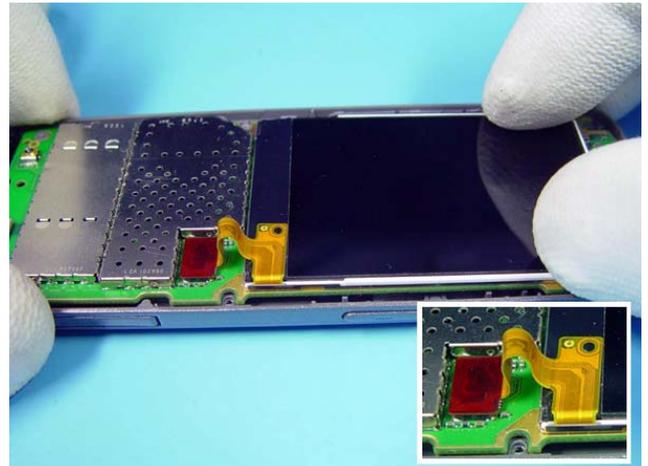


There are thin black corner and right side marking lines (as shown in the picture) on the PWB for LCD alignment. The LCD MODULE should be next to the markings but it should not cover the lines.

Put the LCD connector first in place and then align the upper corners of the LCD and the right side using the lines as a guide.

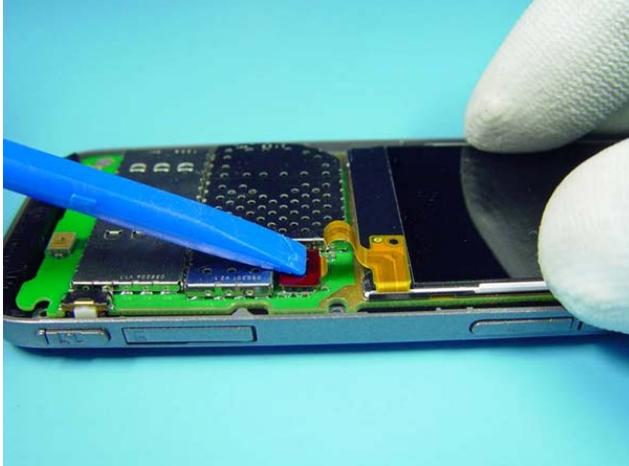
Note that the LCD should not touch the 2<sup>ND</sup> CAMERA BOOT or cover the alignment marking lines after it is placed on the PWB

5c



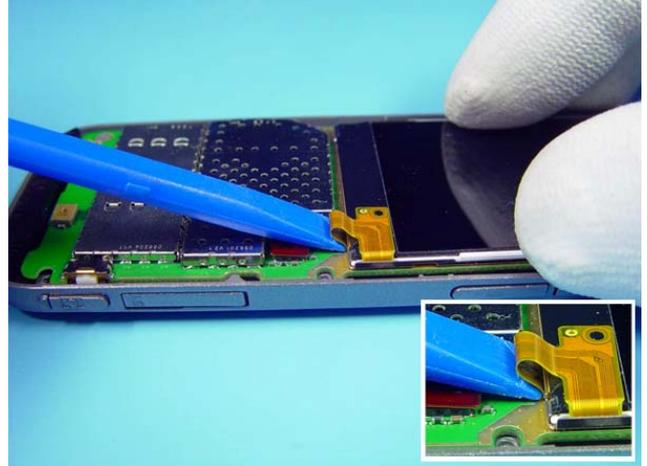
This is the position of the LCD FLEX when the LCD is in its place.

6



Use the SS-93 tool for pre-bending the LCD FLEX.

7



Slide the SS-93 along the FLEX to the LCD.

8a



Carefully press the LCD FLEX down.

8b



Do not press the LCD FLEX down too hard because it can cause sharp curves and break it.

9



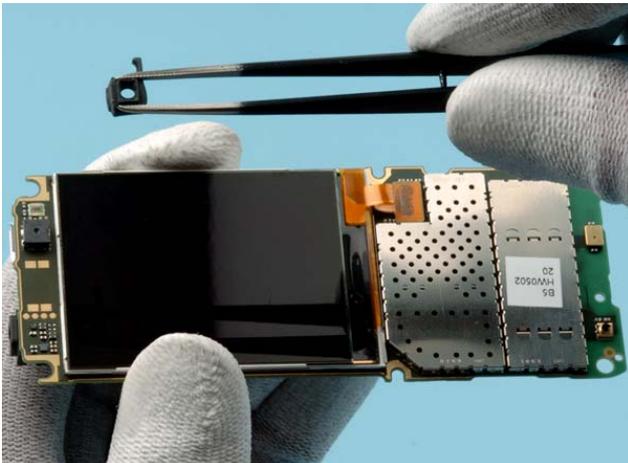
This is the position of the LCD FLEX after the pre-bending procedure. Make sure the connector is secure by pressing it.

## 11.2 Assembling the EARPIECE

When you are assembling the EARPIECE, you need to first remove the protective tape from the EARPIECE. Use tweezers to assemble the EARPIECE and be careful of the strings.

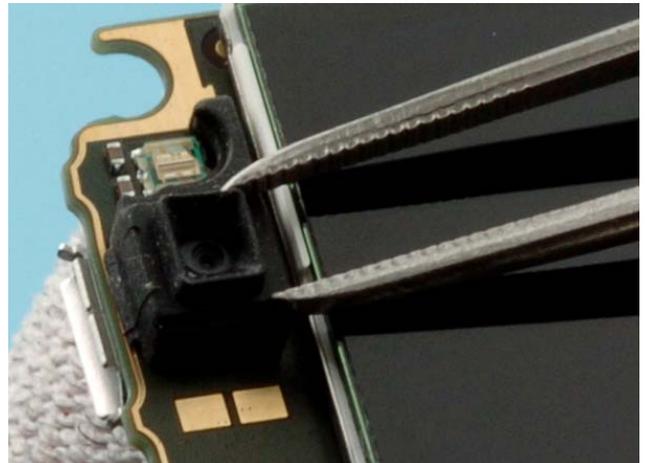
## 11.3 Assembling the 2<sup>ND</sup> CAMERA BOOT

1



Assemble the 2<sup>ND</sup> CAMERA BOOT on top of the CAMERA before assembling the UI SHIELD.

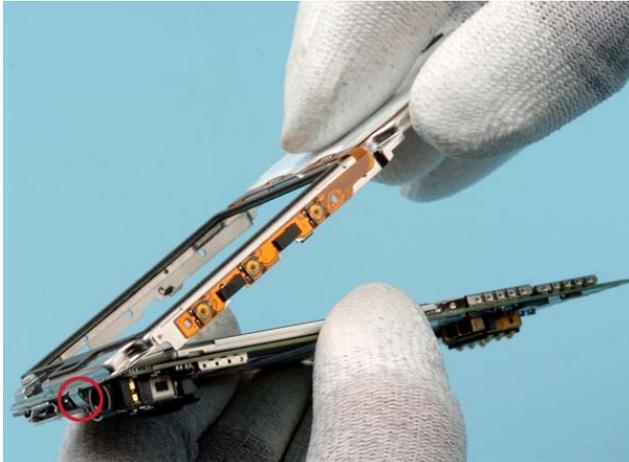
2



This is the position of the 2<sup>ND</sup> CAMERA BOOT in place.

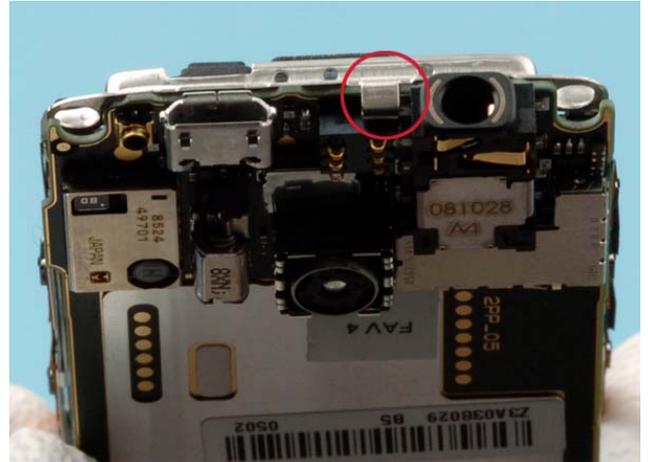
### 11.4 Assembling the UI SHIELD

1



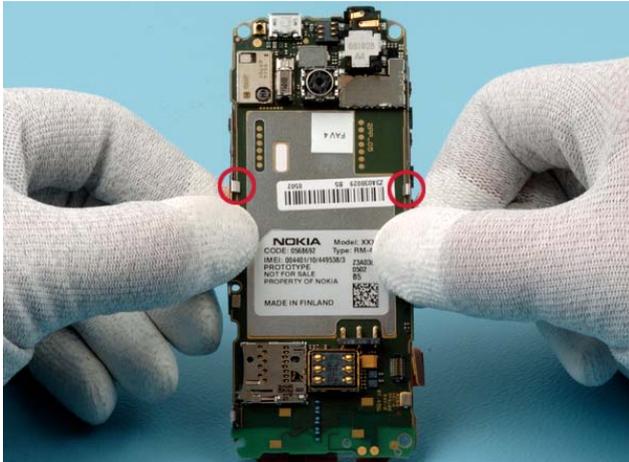
Assemble the UI SHIELD first from the top. Make sure the upper clip goes under the assembly.

2



This is the position of the upper clip in place.

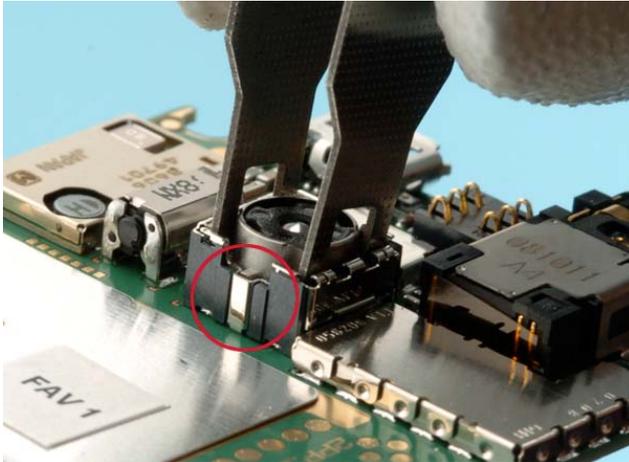
3



Also close the side clips of the UI SHIELD.

## 11.5 Assembling the CAMERA

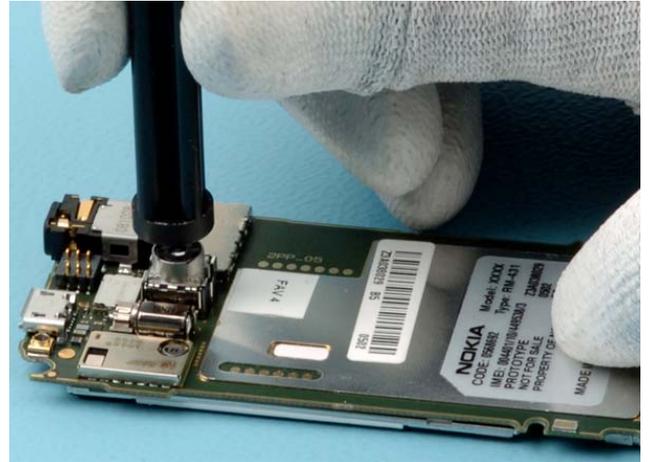
1



Place the new CAMERA to the socket. Make sure its orientation feature is aligned with the slot in the socket.

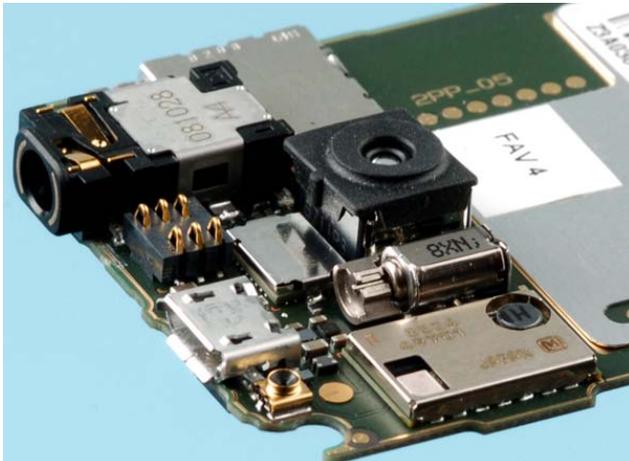
**Note:** The CAMERA does not go to the socket if it is not placed the correct way.

2



Turn the camera removal tool upside down and use its other end to push the CAMERA until you hear a “click” sound.

3



This is the position of the CAMERA and CAMERA BOOT in place.

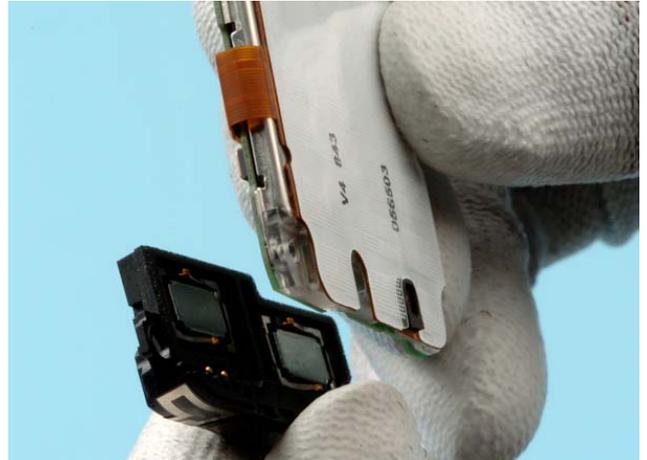
## 11.6 Assembling the antenna

1



Use the guiding pin in the ANTENNA MODULE and the hole in the PWB when assembling the ANTENNA MODULE.

2



Place the ANTENNA MODULE and PWB against each other.

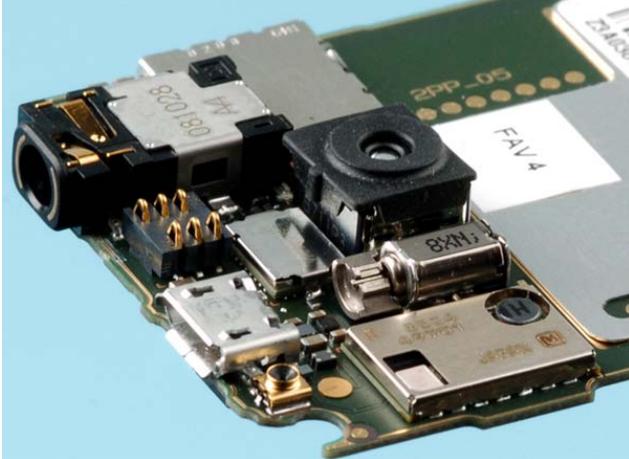
3



Tighten the screw to the torque of 13 Ncm.

### 11.7 Assembling the C-COVER

1



When assembling the C-COVER, check that the CAMERA BOOT is in the correct position.

2



Start assembling the C-COVER from the audio connector.

3



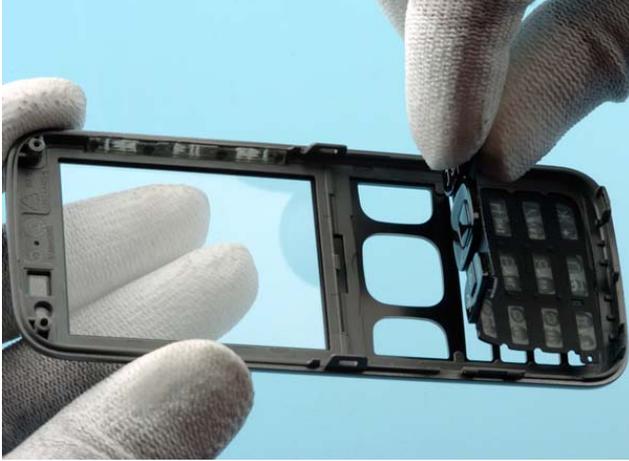
Note that the C-COVER has a clip that you need to press in place from the top of the left speaker.

4



### 11.8 Assembling the A-COVER

1



Drop the keymat into the A-COVER.

2



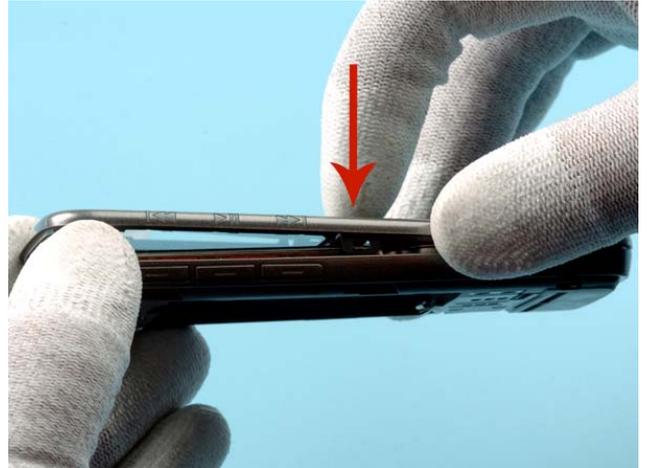
First assemble the lower clips of the A-COVER.

3



Close the clips by pressing the cover down.

4



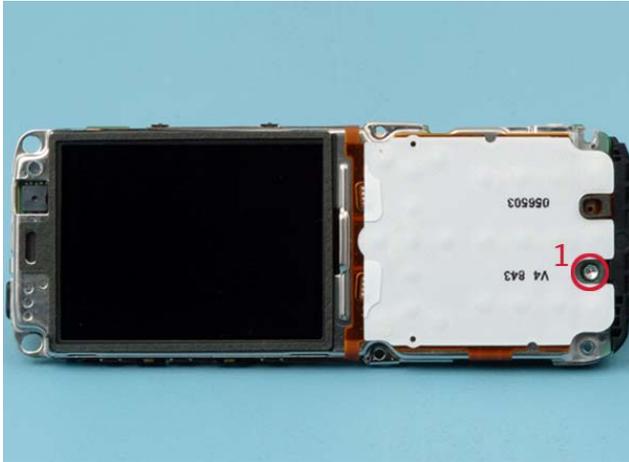
Then close the middle clip of the A-COVER.

5

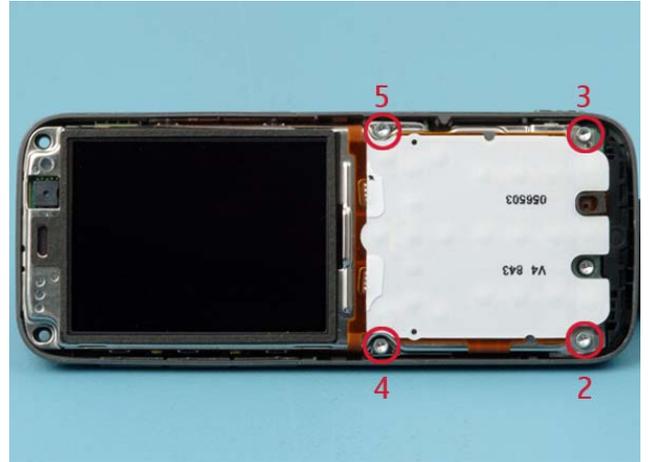


Check that the A-COVER has been closed properly before you tighten the screws.

### 11.9 Torque information



Tighten the screw to the torque of 13 Ncm in the order shown.



Tighten the four screws to the torque of 13 Ncm in the order shown.



Tighten the two screws to the torque of 13 Ncm in the order shown.

Screw	Torque
T6+	13 Ncm

12. SOLDER COMPONENTS

Solder components only for Level 2

