

SERVICE MANUAL Level 1&2

C5-05 RM-815



Transceiver characteristics

Band:

GSM 850/900/1800/1900

Display:

nHD 3.2" 640x360 touch screen with 16M colors

Camera:

2 Mpix

Operating System:

Symbian OS v.9.4

Connections:

3.5 mm AV connector

Micro-B USB connector

Micro SD memory card slot (up to 16 GB)

Bluetooth version 2.0 with EDR

FM radio receiver with RDS

Transceiver with BL-4U battery pack

Talk time	Standby
GSM: Up to 11.5 hours	GSM: Up to 600 hours

Note:

Talk times are dependent on network parameters and phone settings

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CHANGE HISTORY

Status	Version No.	Date	Comments
Approved	1.0	07.10.2011	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:

Nokia Care Academy
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.

1. 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.

2. 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:

2.1 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.

2.2 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

3. 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.

4. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil 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.

5. 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.

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. Shortcircuiting the terminals may damage the battery or the connecting object.

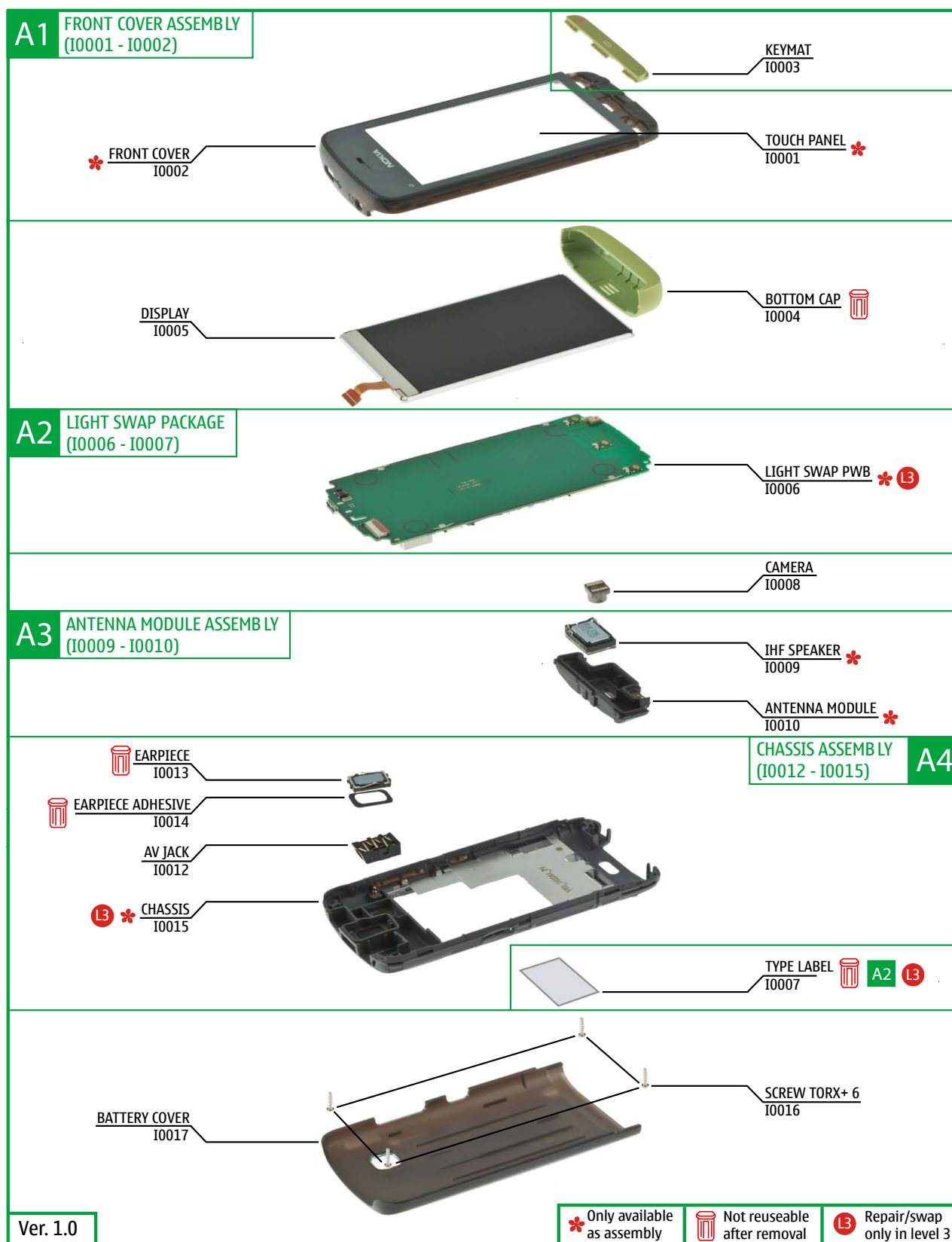
Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

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.

6. EXPLODED VIEW



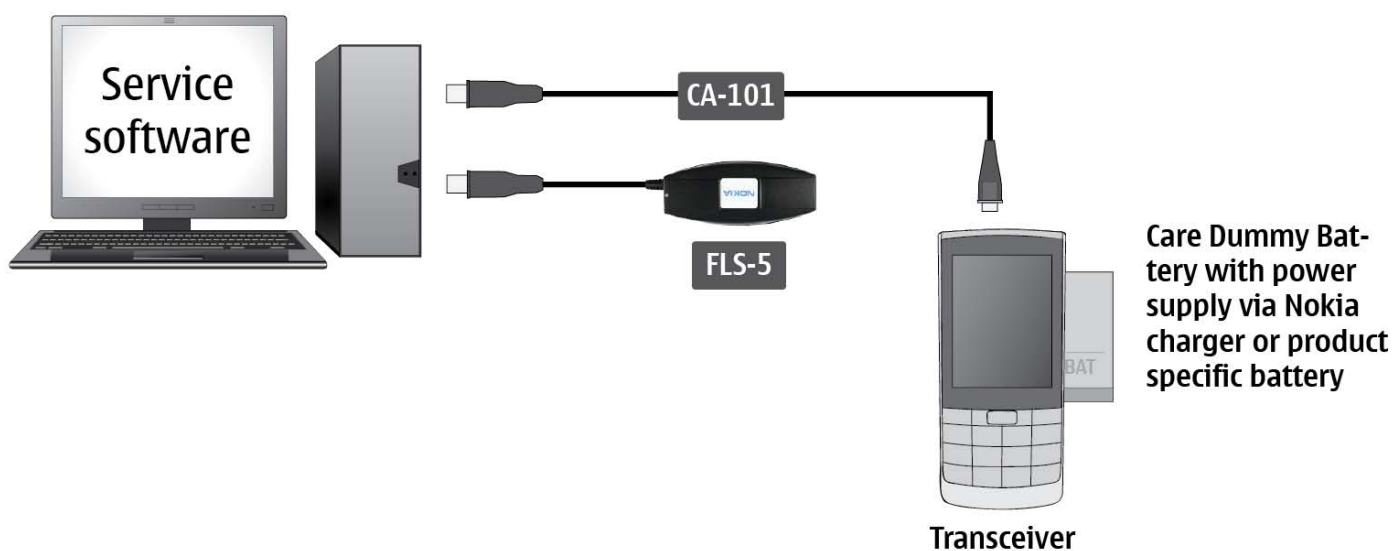
7. SERVICE DEVICES

 <p>BL-4U Battery</p>	 <p>CA-101D</p>	 <p>AC-10 Travel Charger</p>
 <p>SS-88 Camera Removal tool</p>	 <p>Nokia Standard Toolkit (v2) 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>	

8. SOFTWARE UPDATE

Flash concept (Point of Sale)

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



9. DISASSEMBLY INSTRUCTIONS



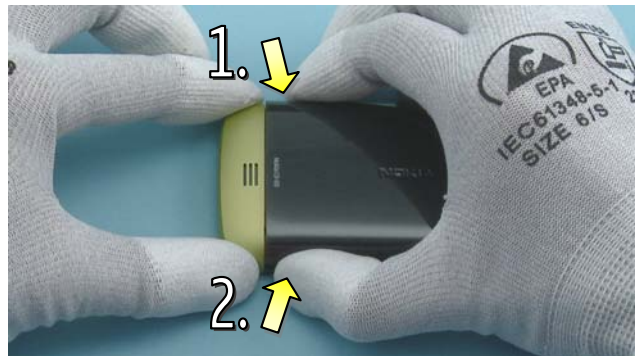
1. Nokia C5-05 disassembly.



2. For disassembling you need the Nokia Standard Toolkit version 2, the camera removal tool SS-88 and an AV plug.



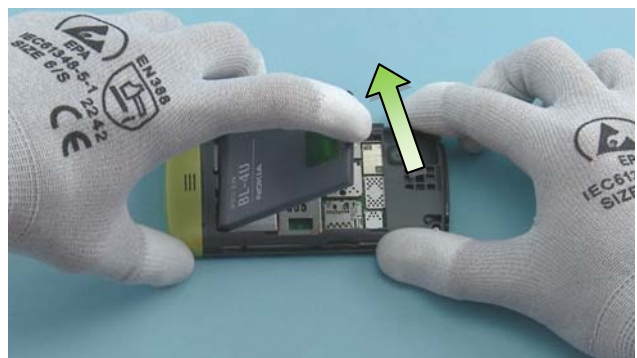
3. Protect the TOUCH PANEL with protective film.



4. Lift up the BATTERY COVER from the release notches to detach it.



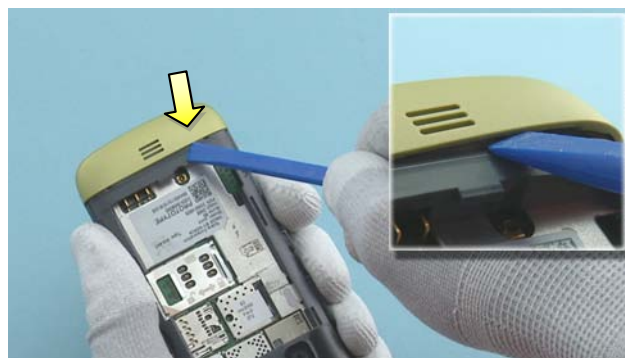
5. Remove the BATTERY COVER.



6. If there is a battery inserted, remove it also.



7. If there is a MicroSD card inserted, remove it also.



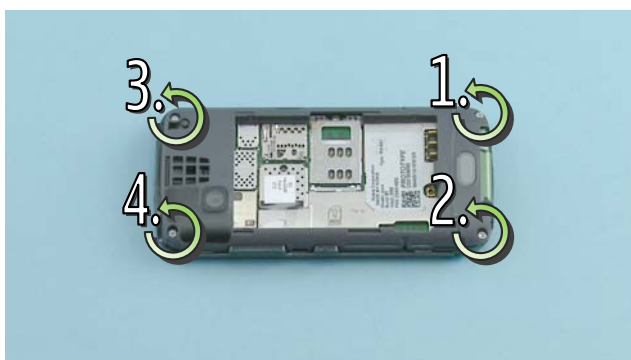
8. Use the SS-93 to detach the shown clip of the BOTTOM CAP.



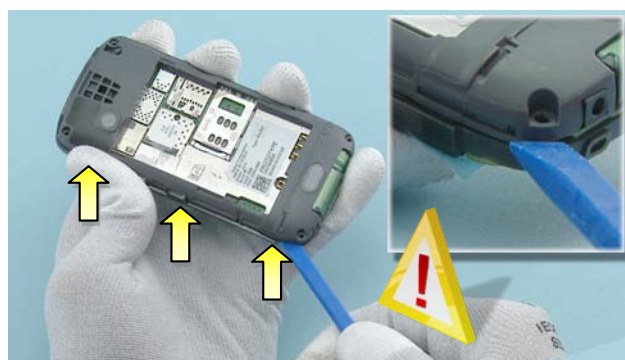
9. Repeat the procedure on the other side.



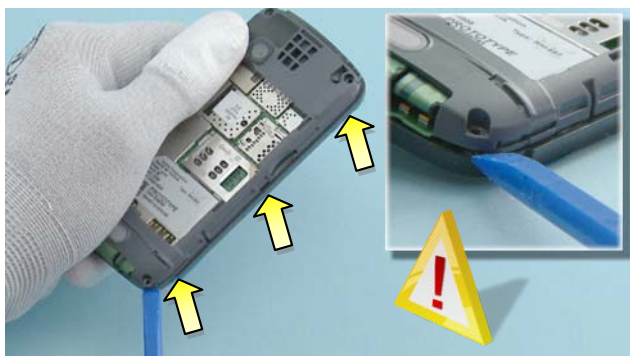
10. Remove the BOTTOM CAP. Do not use it again. Discard it.



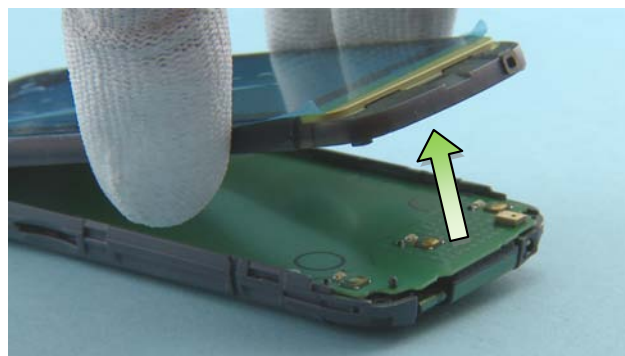
11. Unscrew the four TORX+ size 6 screws in the order shown.



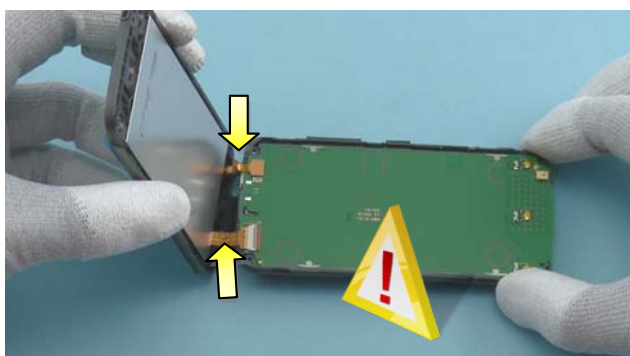
12. Use the SS-93 to detach the three shown clips of the FRONT COVER ASSEMBLY. Be careful not to damage any nearby components.



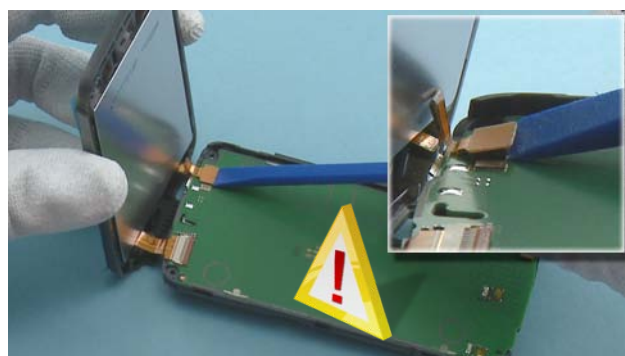
13. Detach also the clips on the other side, as shown.



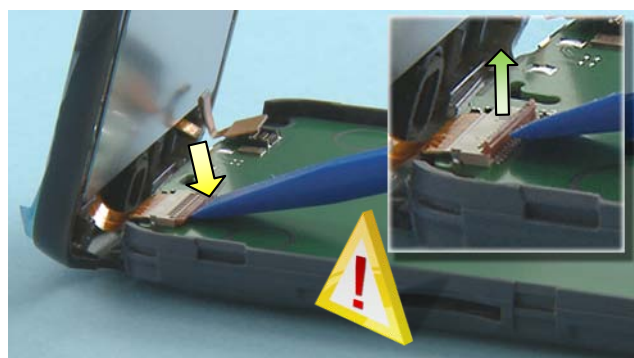
14. Lift the FRONT COVER ASSEMBLY from the bottom side as shown.



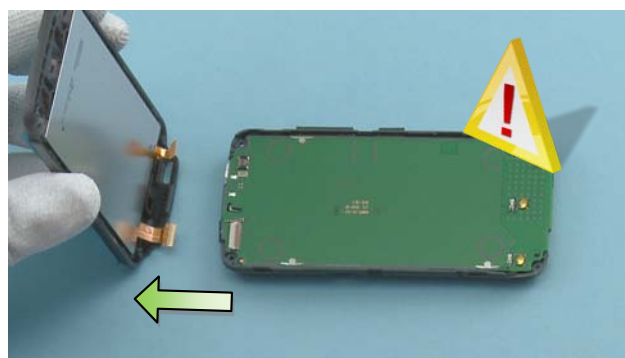
15. Hold the FRONT COVER ASSEMBLY as shown. Be careful not to damage the flexes.



16. Disconnect the TOUCH PANEL connector with the SS-93. Be careful not to damage any nearby components.



17. Open the lock of the DISPLAY connector with the SS-93 as shown. Be careful not to damage any nearby components.



18. Carefully move the FRONT COVER ASSEMBLY away from the CHASSIS so that the DISPLAY connector is disconnected. Be careful not to damage the flex.



19. Use the SS-93 to carefully detach the DISPLAY from all sides.



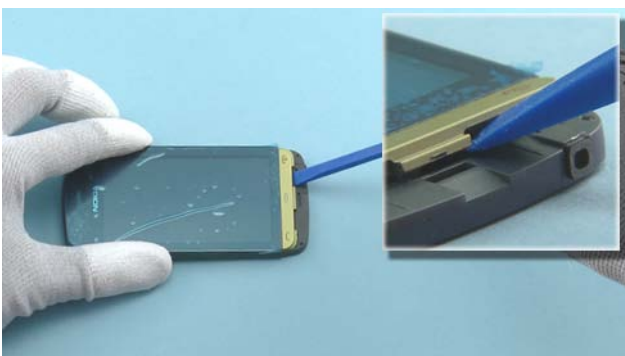
20. Lift the DISPLAY away from the FRONT COVER ASSEMBLY.



21. Protect the DISPLAY with protective film.



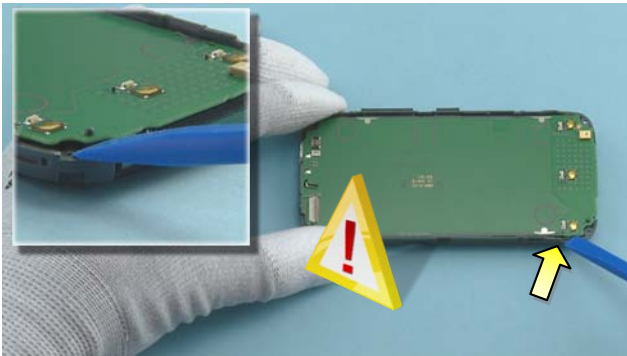
22. Protect also the TOUCH PANEL from the inside with protective film.



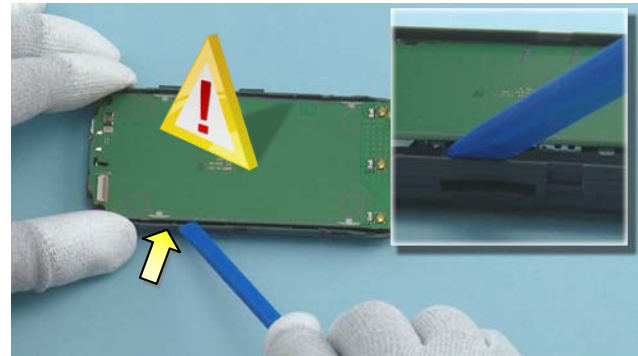
23. Use the SS-93 to detach the KEYMAT.



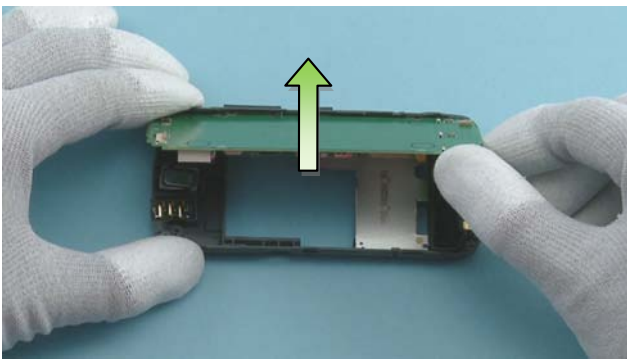
24. Remove the KEYMAT with the tweezers.



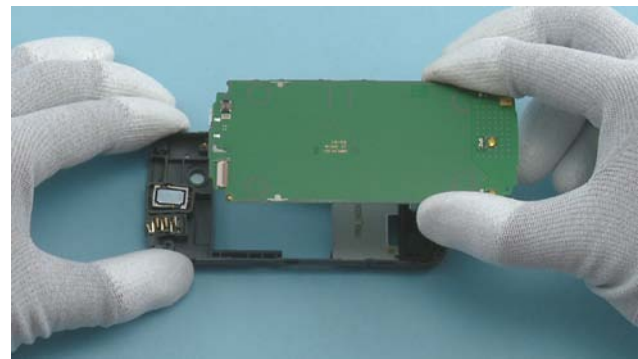
25. Use the SS-93 to open the first ENGINE BOARD clip. Be careful not to damage any nearby components.



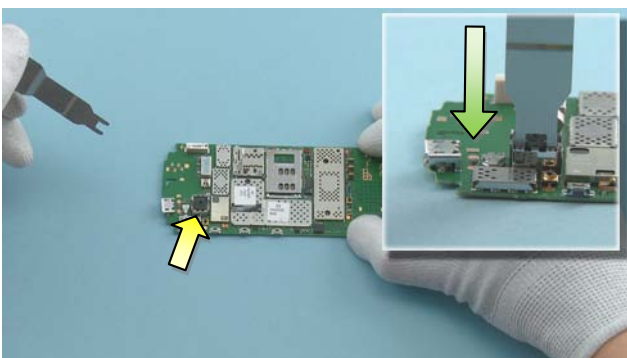
26. Repeat the procedure on the second clip.



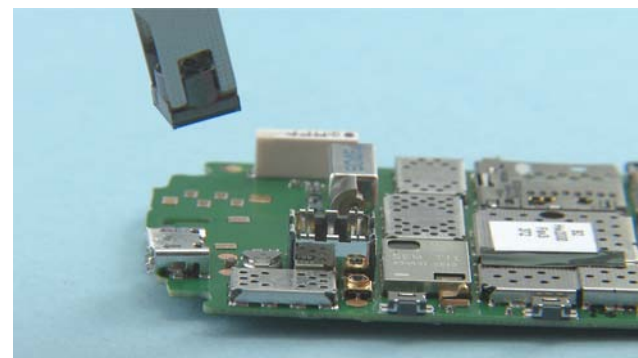
27. Lift the ENGINE BOARD from the detached side to protect the side keys.



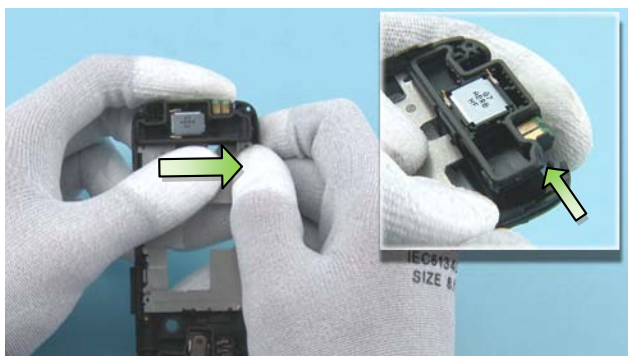
28. Remove the ENGINE BOARD.



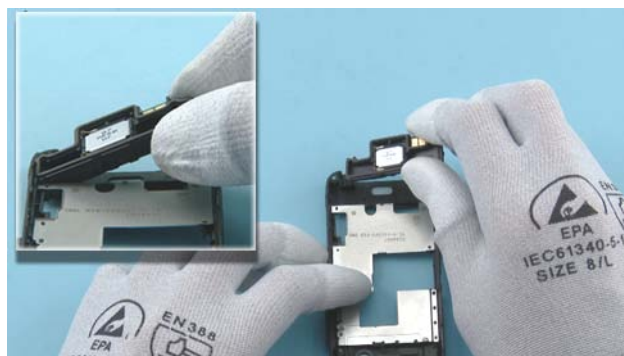
29. Position the SS-88 camera removal tool on top of the CAMERA and press it down.



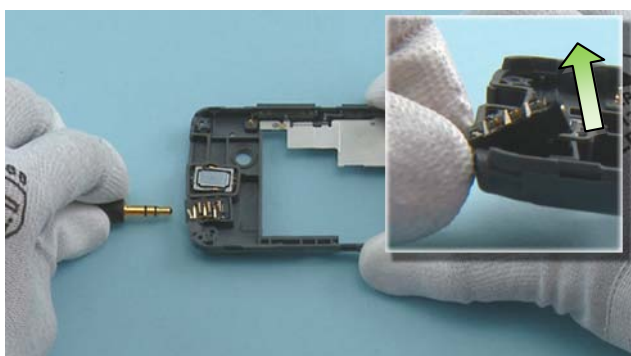
30. Lift up the SS-88 with the CAMERA and remove the CAMERA.



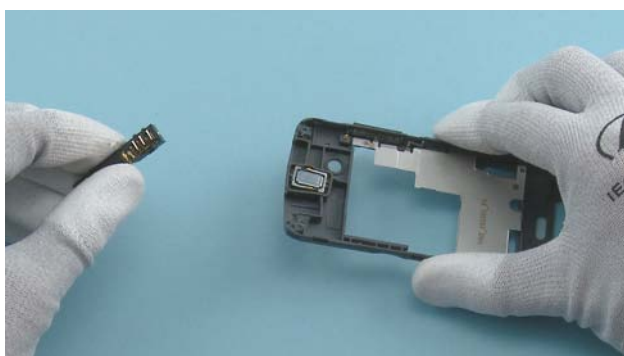
31. Carefully bend the shown side of the CHASSIS and push the ANTENNA MODULE ASSEMBLY up from the back side.



32. Lift up the ANTENNA MODULE ASSEMBLY from the other side and remove it.



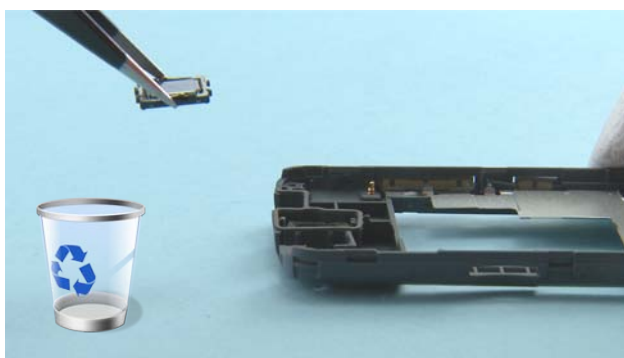
33. Lever up the AV JACK with the AV plug as shown.



34. Remove the AV JACK.



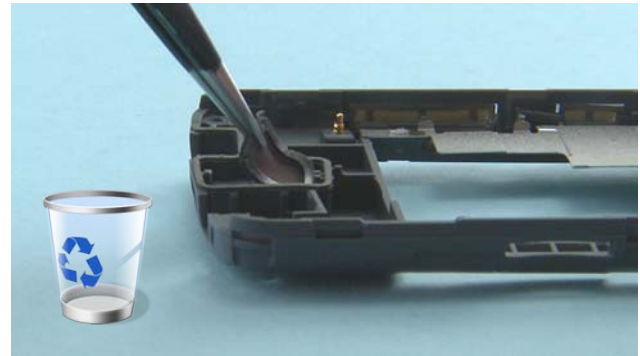
35. Use the dental tool to detach the EARPICE. Be careful not to injure yourself with the sharp end of the dental tool!



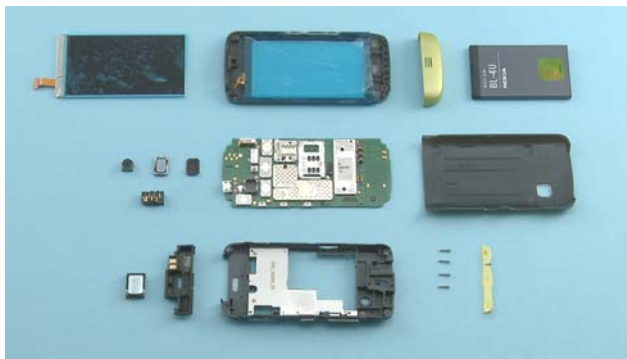
36. Remove the EARPICE with the tweezers. Discard it.



37. Loosen the EARPIECE ADHESIVE with the dental tool.



38. Detach the EARPIECE MESH with the tweezers, and remove it. Do not use it again.



39. Nokia C5-05 disassembly is now complete.

-END OF DISASSEMBLY-

10. ASSEMBLY



1. Nokia C5-05 assembly.



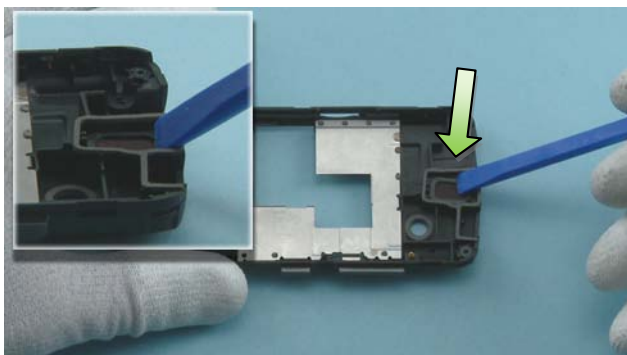
2. For assembling you need the Nokia Standard Toolkit version 2.



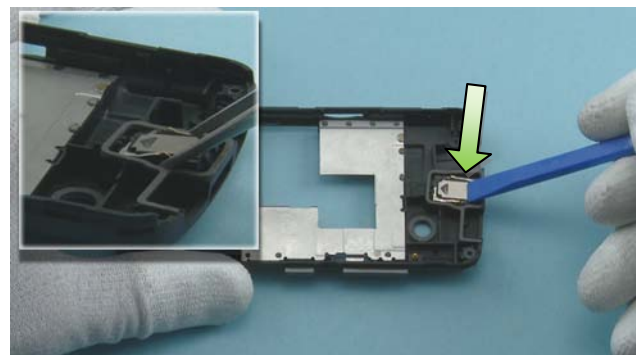
3. Remove the protective film from the EARPIECE ADHESIVE.



4. Place the EARPIECE ADHESIVE to its place with the tweezers.



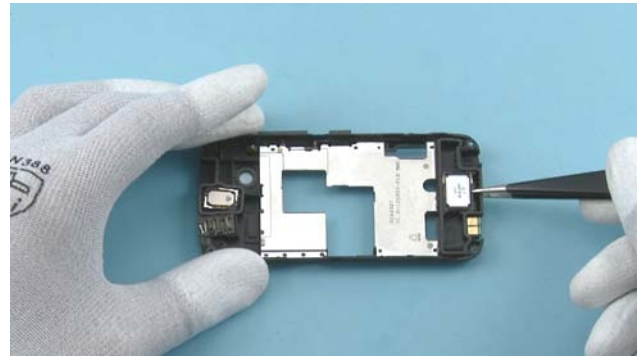
5. Press down with the SS-93 to activate the EARPIECE ADHESIVE.



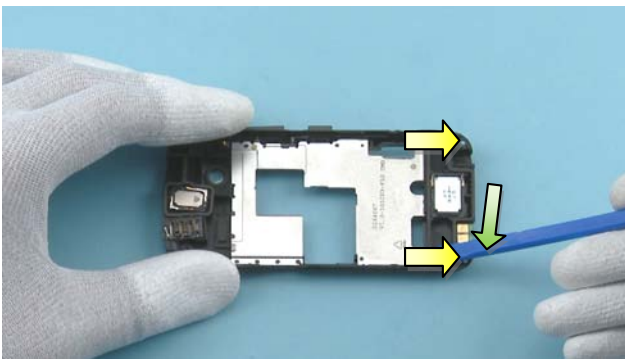
6. Place the EARPIECE with the tweezers and push it down with the SS-93 to activate the adhesive.



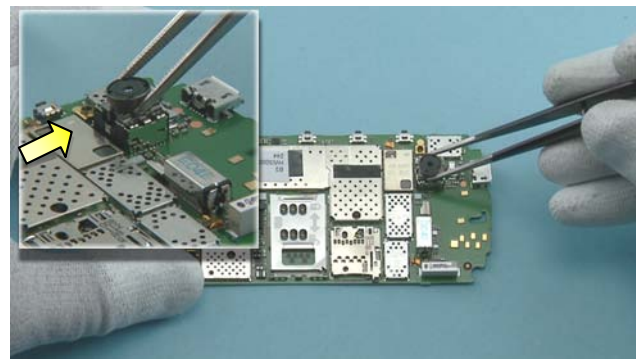
7. Place the AV JACK with the tweezers to its place and push it down with the SS-93 to lock it in its place.



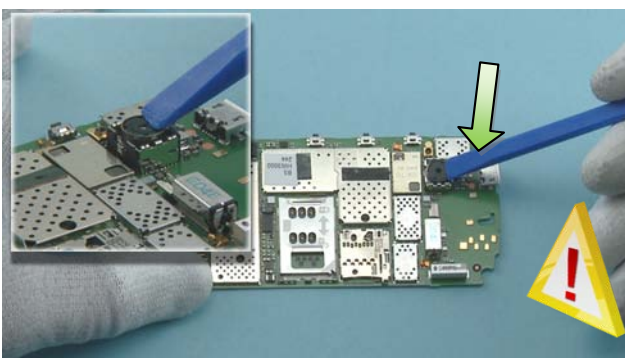
8. Place the ANTENNA MODULE with the tweezers.



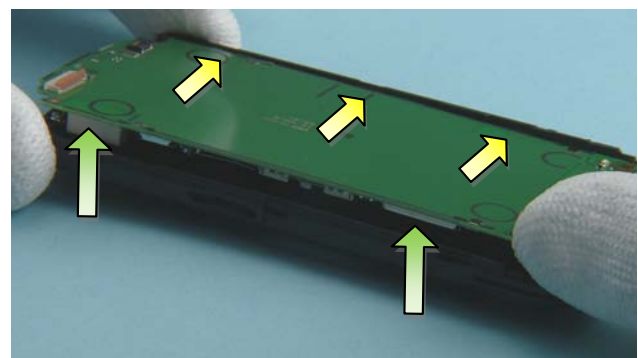
9. Press the ANTENNA MODULE down from the shown places with the SS-93 to lock up the clips.



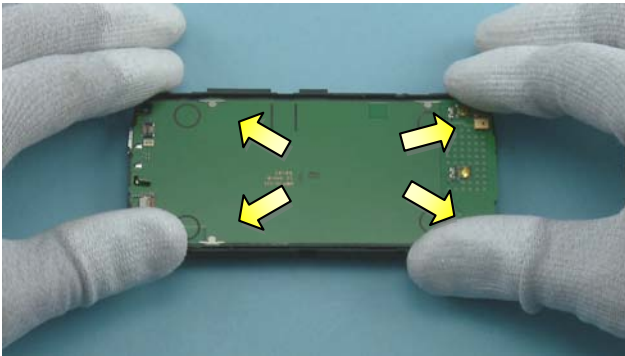
10. Place the CAMERA MODULE with the tweezers. Make sure that the guiding notch is correctly placed.



11. Press the CAMERA MODULE down with the SS-93. Be careful not to damage the lens.



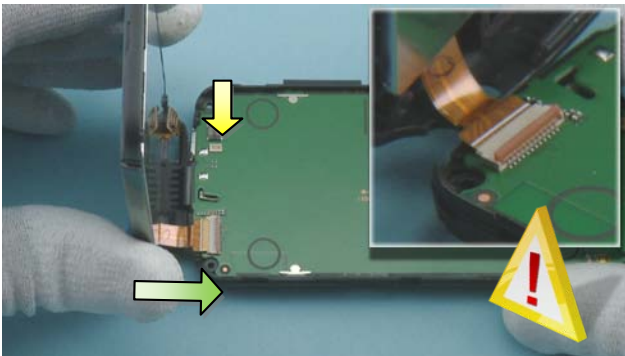
12. Remove the CAMERA opening protective film. Tilt and place the ENGINE BOARD to its place VOLUME KEY side first.



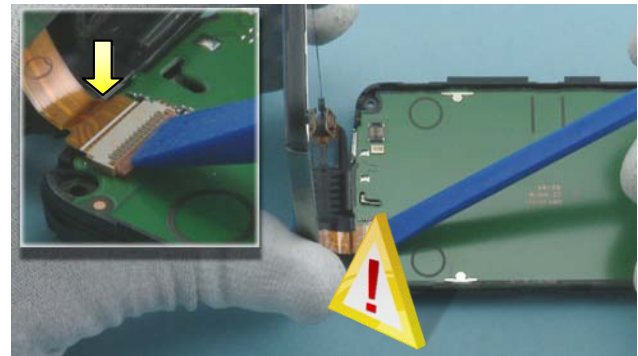
13. Carefully press it down from the shown places to lock it up.



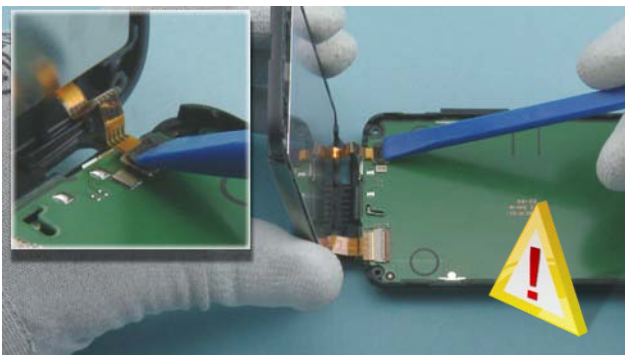
14. Remove the protective films from the DISPLAY and the FRONT COVER. Place the DISPLAY to the FRONT COVER and make sure that it is correctly aligned.



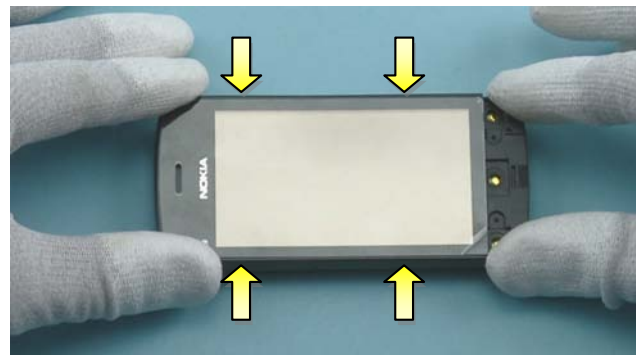
15. Make sure the connector isn't locked and push the DISPLAY connector to its place. Be careful not to damage the connector or any nearby components.



16. While holding the FRONT COVER up, lock the connector by pressing the lever down with the SS-93. Be careful not to damage the connector or any nearby components.



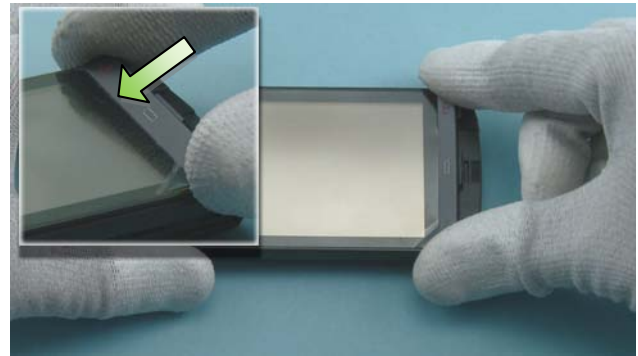
17. Connect the TOUCH PANEL connector with the SS-93. Be careful not to damage the connector or any nearby components.



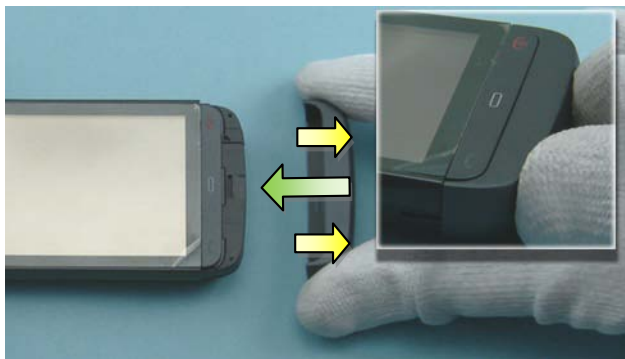
18. Lower down the FRONT COVER and press it firmly down to lock up the shown clips.



19. Tighten the four TORX+ size 6 screws to the torque of 14 Ncm in the order shown.



20. Place the KEYMAT to its place and make sure its correctly placed.



21. Push the BOTTOM CAP to its place. Make sure that the shown clips are locked up correctly.



22. Insert the BATTERY and place the BATTERY COVER to its place. Press it gently to lock up the clips.



23. Nokia C5-05 assembly is now complete.

-END OF ASSEMBLY-

11. SOLDER COMPONENTS

