

NOKIA 6820

NHL-9



Transceiver Features

- Full messaging keyboard with flip-open design
- Integrated digital camera
- Supports BlackBerry connectivity for corporate email
- 3.5 MB internal shared memory
- Bluetooth
- Infrared
- MMS
- EGSM 900 / GSM 1800 / GSM 1900
- EDGE high-speed data transfer
- High-resolution, passive-matrix color display
- Supports 4096 colors within 128 x 128 pixels
- Display rotates 90 degrees when keyboard is opened
- 5-way joystick navigation
- Video recording and playback

Transceiver with BL-5C Li-ion 850mAh battery pack

Talk time	Standby	Note
Up to 7 hours	Up to 10 days	Depends on network parameters

SERVICE MANUAL

Service Level 1&2

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TABLE OF CONTENT

	Page
1. INTRODUCTION	3
2. GENERAL REPAIR INFORMATION	4
3. PATHFINDER FOR WORKSHOP STAFF	5
4. EXPLODED VIEW AND COMPONENT DISPOSAL	6
5. SPARE PARTS LIST	7
6. SERVICE TOOLS.....	10
7. SW-UPDATE	12
8. DISASSEMBLY INSTRUCTIONS (ALSO SEE THE VIDEO CLIPS ON CARE POINT)	13
9. KEYDOME EXCHANGE INSTRUCTIONS.....	18
10. LEGEND FOR QUICK TROUBLE SHOOTER	19
11. QUICK TROUBLE SHOOTER PART 1	20
12. QUICK TROUBLE SHOOTER PART 2	21
13. QUICK TROUBLE SHOOTER PART 3	22
14. INFRARED AND BLUETOOTH GONOGO TEST	23
15. CAMERA GONOGO TEST.....	24
16. GONOGO TEST	25
17. BATTERY TEST.....	25
18. SERVICE NOTES.....	26
19. FORWARDING OF REPAIRS TO SERVICE LEVEL 3 OR 4 SUPPLIERS.....	27
20. ESD PROTECTION REQUIREMENTS.....	28

CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	17.11.2003	Initial draft
Approved	1.0	19.12.2003	approval

1. INTRODUCTION

The purpose of this document is to help Nokia service levels 1 and 2 workshop technicians to carry out service to Nokia 6820. This Service Manual is to be used **only** by authorized Nokia service partners, and the content of it is **confidential**. Please note that Nokia provides also other guidance documents (e.g. Service Bulletins) for service partners, 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:
<mailto:cc-ts-rc.documentation@nokia.com>

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

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:

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.

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. Ensure solder, wire, or foreign matter does not enter the telephone as damage may result.
4. Use only approved components as specified in the parts list.
5. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment. Ensure all cables and wires are repositioned correctly.
6. All PC's used with NMP Service Software for this produce must be bios and operating system "Year 2000 Compliant".



Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore every Service Supplier has to take care of all precautions, which are mentioned in the service level related "Service Partner Requirements", available on Nokia Partner Web Site. Also see ESD Protection Requirements in this Service Manual.

2. GENERAL REPAIR INFORMATION

IN THIS SECTION THE TECHNICIAN WILL GET SOME GENERAL HINTS HOW TO CARRY OUT REPAIRS:

- To familiarize oneself with Nokia 6820 read the tutorials or user guide on www.nokia.com -->Support--> Phones, by selecting the Phone Model.
- Before starting the repair you must take care of ESD precautions like being in your ESD Protected Area and connecting your wristband.
- Use gloves to avoid corrosion and fingerprints.
- Protect windows and displays with a film to avoid dust and scratches.
- When cleaning the pads you have to use a soft cloth/ESD brush and Isopropanol. It is not allowed to use a glass fiber pencil because it scratches the surface and will lead later on to corrosion.
- Mechanical parts (except shielding lids), which didn't repair the failure, can be reused, if they are not soldered.
- When removing the shielding lids make sure to replace them with new ones, otherwise the high-frequency leakage can have an influence on the device.
- Use always original Nokia spare parts.
- Check the soldering joints of the parts which are concerned regarding the indicated error (e.g. soldered connectors or switches) and resolder them if necessary (Level 2 only).
- Remove redundant soldering flux after repair.
- Meet the torque requirements when assembling the unit (see also the document "torques for transceiver assembly" on Nokia Partner Web Site).
- Always use your own equipment for testing where you are sure that it works. E.g. if the customer complains about charger function, please test the phone with your own charger to be sure if phone or charger causes the malfunction.
- When doing the Faultlogger entries, always note the Item code, which caused the malfunction. Also, fill in the appropriate part code from the assembly, if needed.
- Please be aware that some malfunctions could be software related and solved by an update.

These mention Service Bulletins have to be followed:

General

SB-065	Modified GSM phones
SB-089:	Don't try to repair prototypes (indicated on Type Label).
SB-107:	Be sure that you have minimum hardware requirements in place.
SB-115:	Handling of liquid damages.
SB-121:	Return the defective part, if one of your service tools causes malfunction.
SB-124	Service Policy for packaging serviced products
SB-131:	Check these guidelines when refurbishing products.
SB-135:	Original Nokia Accessories
SB-148:	Improvements to Faultlog Reporting Tool
SB-156:	Packing Material
SB-163:	Service handling of PWBs and PCBs during repair process
SB-164:	New barcode for future products
SB-165:	NMP Global Symptom Codes
SB-167:	NMP Global Fault Codes (Level 1&2)
SB-203:	New structure of General Bulletins

Service Tools

SB-011: NMP Standard Toolkit

Spare Parts



SB-004:	New swap phone cartons
SB-005	Minimum order values for spare part orders

Please check Nokia Partner Web Site (PWS) for latest news and files on a regular basis.

3. PATHFINDER FOR WORKSHOP STAFF

In addition to the information in this Service Manual, there are several instructions and information, which have to be followed.

Main documentation database is [Nokia Partner Website](#), which refers also to [Nokia Care Point](#) with the purpose of serving different multimedia content, like video clips or interactive tutorials.

Nokia Partner Web Site	Nokia Care Point (access through Partner Web Site)
<p>Nokia Partner Web Site for EMEA region is the most important document database for all service suppliers (level 1-4). All service relevant information like e.g. Service Manuals, Service Bulletins or general instructions are available. Content is restricted according your access level. To be kept up-to-date also concerning latest software updates, a daily check of "latest updates in support library" is needed.</p>	<p>Nokia Care Point is repair support and training channel for Nokia service suppliers (mainly for service levels 1 and 2). By providing visual and easy to learn support and training material, such as illustrative repair videos, troubleshooting with pictures, product information and general repair information, Nokia Care Point offers user-friendly channel for service partners to learn technical issues.</p>
	

It is mandatory to watch for latest technical and organizational information on a daily basis to be updated as required (see "**Latest Updates in support Library**"). Every new information has to be processed and implemented as soon as possible.

When logged into PWS you can also find needed information to different headlines respectively tools

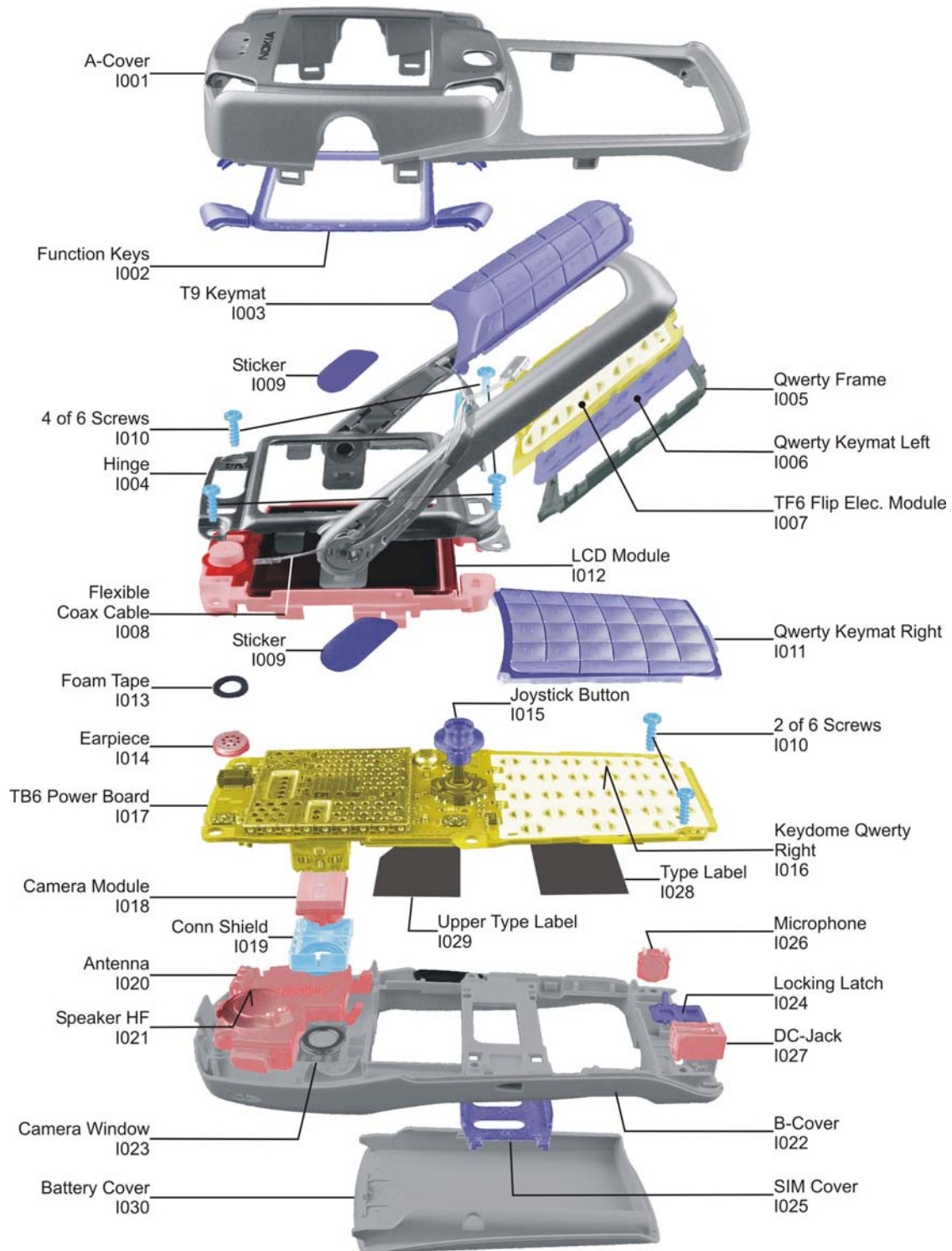
like:

- Downloads
- Support Library
- Accessories
- Battery Tester
- Common Software
- Flashing Tools
- General --> Instructions
- GoNoGo Tester
- Service Tools
- Tester Support
- Wintesa
- Products (Service Manuals, Service Bulletins)

To spare server bandwidth it is recommended to download latest version of huge files like videos, Phoenix packages or Service Manuals only once and distribute it internally for further use.

4. EXPLODED VIEW AND COMPONENT DISPOSAL

Recommendation for the ecologically friendly disposal of components. Colorized components show the different categories.



● Electro ● Silicone ● Metal ● Plastic ● PWB ● Cover

Description: See corresponding ITEM/CIRCUIT REF of the SPL (Spare Parts List)

5. SPARE PARTS LIST

MECHANICAL PARTS

ITEM/ CIRCUIT REF.	QTY	PART NO	PART NAME	NOTE
		9491349	A-COVER ASSY	
I001	1	-	A-COVER	
I002	1	9791241	FUNCTION KEYS	
		0262885	FLIP ASSEMBLY	
I003	1	XXXXXXX	T9 KEYMAT	
I004	1	-	HINGE ASSY	
I005	1	9453316	QWERTY FRAME	
I006	1	XXXXXXX	QWERTY KEYMAT LEFT	
I007	1	-	TF6 FLIP ELEC. MODULE	
I008	1	-	FLEXIBLE COAX CABLE ASSY	
I009	2	9381401	FLIP SIDECOVER STICKER (Left & Right)	
I010	6	6150127	SCREW TORX PLUS 6	
I011	1	9791169	QWERTY KEYMAT RIGHT	
I012	1	4850353	LCD MOD 130X130	
I013		9470283	EARPIECE FOAM TAPE	
I014	1	5140251	EARPIECE	
I015	1	9790984	JOYSTICK BUTTON	
I016	1	9795144	KEYDOME QWERTY RIGHT	
I017	1	-	TB6 POWER BOARD	
I018	1	4858003	CIF CAMERA MODULE	
I019	1	9481013	CONN SHIELD CIF-J	
I020	1	0660300	ANTENNA INTERNAL IHF	
I021	1	-	SPEAKER IHF	
		9491338	B-COVER ASSEMBLY	
I022	1	-	B-COVER	
I023	1	-	CAMERA WINDOW	
I024	1	9453174	LOCKING LATCH	
I025	1	9453175	SIM-COVER	
I026	1	5140205	MICROPHONE	
I027	1	5400243	CONN DC-JACK	
I028	1	-	TYPE LABEL	
I029	1	-	UPPER TYPE LABEL	
I030	1	9459378	BATTERY COVER	

SOLDERING COMPONENTS ONLY FOR LEVEL 2

ITEM/ CIRCUIT REF.	QTY	PART NO	PART NAME	NOTE
G300	1	4700141	CELL CAPACITOR	
V311-V318	8	4864519	LED WHITE	
F100	1	5119019	SM FUSE	

VARIANT PARTS

ITEM/ CIRCUIT REF.	QTY	PART NO	PART NAME	NOTE
	1	9791158	KEYMAT SCANDI LEFT	
	1	9791159	KEYMAT SCANDI RIGHT	
	1	9791168	KEYMAT LATIN LEFT	
	1	9791169	KEYMAT LATIN RIGHT	
	1	9791171	KEYMAT ARABIC LEFT	
	1	9791172	KEYMAT ARABIC RIGHT	
	1	9791173	KEYMAT CRO/SL/SRB RIGHT	
	1	9791174	KEYMAT CRO/SL/SRB LEFT	
	1	9791175	KEYMAT FRENCH LEFT	
	1	9791176	KEYMAT FRENCH RIGHT	
	1	9791177	KEYMAT GREEK LEFT	
	1	9791178	KEYMAT GREEK RIGHT	
	1	9791179	KEYMAT GERMAN/EST LEFT	
	1	9791180	KEYMAT GERMAN/EST RIGHT	
	1	9791181	KEYMAT HEBREW LEFT	
	1	9791182	KEYMAT HEBREW RIGHT	
	1	9791183	KEYMAT HUNGARIAN LEFT	
	1	9791184	KEYMAT HUNGARIAN RIGHT	
	1	9791185	KEYMAT ITAL/SPAN LEFT	
	1	9791186	KEYMAT ITAL/SPAN RIGHT	
	1	9791187	KEYMAT POLISH LEFT	
	1	9791188	KEYMAT POLISH RIGHT	
	1	9791189	KEYMAT RUS/UKR LEFT	
	1	9791190	KEYMAT RUS/UKR RIGHT	
	1	9791296	KEYMAT TURKISH LEFT	
	1	9791297	KEYMAT TURKISH RIGHT	
	1	9791326	KEYMAT SPANISH/PORTUGUESE LEFT	
	1	9791327	KEYMAT SPANISH/PORTUGUESE RIGHT	
	1	9791391	KEYMAT CZCH/SLO/RUM LEFT	
	1	9791392	KEYMAT CZCH/SLO/RUM RIGHT	

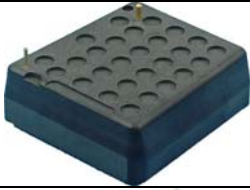
ITEM/ CIRCUIT REF.	QTY	PART NO	PART NAME	NOTE
	1	9791161	KEYMAT T9 SCANDI/LATIN	
	1	9791228	KEYMAT T9 GREEK	
	1	9791229	KEYMAT T9 HEBREW	
	1	9791230	KEYMAT T9 RUSSIAN	
	1	9791231	KEYMAT T9 ARABIC	

SWAP UNITS

	QTY	PART NO	PART NAME	NOTE
	1	0051714	NHL-9 N6820A SWAP ENGINE UK/BENELUX	
	1	0051715	NHL-9 N6820A SWAP ENGINE DE/EST	
	1	0051716	NHL-9 N6820A SWAP ENGINE SCANDI	
	1	0051717	NHL-9 N6820A SWAP ENGINE FRANCE	
	1	0051718	NHL-9 N6820A SWAP ENGINE I/ES/PT	
	1	0051719	NHL-9 N6820A SWAP ENGINE TURKEY	
	1	0051720	NHL-9 N6820A SWAP ENGINE CS/SK/RO	
	1	0051721	NHL-9 N6820A SWAP ENGINE GREECE	
	1	0051722	NHL-9 N6820A SWAP ENGINE HUNGARY	
	1	0051723	NHL-9 N6820A SWAP ENGINE POLAND	
	1	0051724	NHL-9 N6820A SWAP ENGINE RU/LT/LV	
	1	0051725	NHL-9 N6820A SWAP ENGINE HR/SL/SR	
	1	0051726	NHL-9 N6820A SWAP ENGINE S-AFRICA	
	1	0051727	NHL-9 N6820A SWAP ENGINE ARABIC	
	1	0051728	NHL-9 N6820A SWAP ENGINE UKRAINE	

6. SERVICE TOOLS

	<p>0080541 FLS-4S sales pack incl. Driver/User Guide is a dongle and flash device incorporated into one package, developed specifically for POS use.</p>
	<p>0680032 ACF-8 Universal Power Supply is used to power FLS-4S.</p>
	<p>0273558 Internal Battery BL-5C sales pack Inserted under the C-Cover, this Li-ion battery provides power in a lightweight package.</p>
	<p>0272169 Travel Charger ACP-8E (EURO) sales pack 0272172 Travel Charger/ACP-8X (UK) sales pack Lightweight multi-voltage charger for charging your phone battery.</p>
	<p>0694093 HDS-3 Small and lightweight stereo headset for handsfree functionality and listening to FM radio.</p>
	<p>0770652 SF-5 POS Flash Adapter is used in POS (Point of Sales) environment for software updating. It provides controlled supply voltage and necessary connections between the phone and the Flash Device. It substitutes for the phone's standard battery during the software update.</p>
	<p>0730218 XCS-1 Service Cable is used to connect FLS-4S to SF-5.</p>
	<p>0770654 RJ-4 Soldering Jig (for Level 2 or higher service level supplier).</p>



0770729 SS-14
Domesheet Assembly Jig indispensable for Keydome exchange.



0770556 SRT-10
Camera removal tool. One side is for disassembly, the other side for assembly.



0770450 New Test Pins (10pcs.)
for POS Flash Adapter SF-5.



- 0772040 Nokia Standard Toolkit**
- Nokia opening tool SRT-6 Nokia No. 0770431
 - Tonichi torque driver Nokia No. 6901525
 - [Hoya](#) micro fibre cloth MX304
 - [Dastex](#) gloves S, M, XL
 - [Artilux](#) goggles AH166
 - [Wera](#) bit T5 867/4TX 5x50
 - [Wera](#) bit T6 867/4TX 6x50
 - [Wera](#) bit T6 PLUS® 867/4TX 6IP
 - [Facom](#) side cutter 416E
 - Facom T5 driver SP.14032
 - Facom T6 driver SP.14033
 - Facom slot screwdriver AEF. 2x35.E
 - [Wetec](#) tweezers 7abb SA-ESD
 - [Wetec](#) tweezers 22 SA-ESD
 - [Wetec](#) tweezers 13 SA-SMD ESD
 - [Wetec](#) tweezers PSF SA-ESD
 - [Wetec](#) ESD brush E1211
 - [Kaiser Fototechnik](#) airbrush 6315
 - [Wetec](#) dental tool DEM83266/0
 - [RS Components](#) Scissors 323-5732

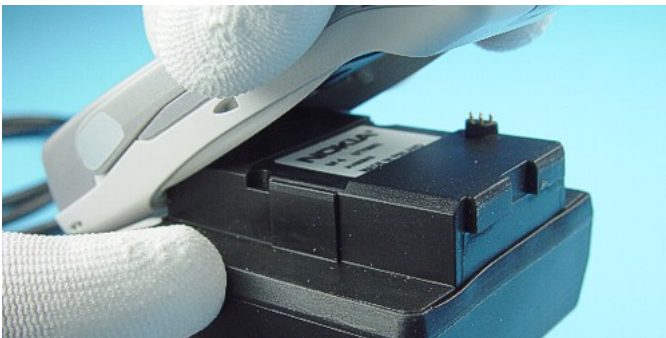
7. SW-UPDATE

To use FLS-4S Flash Dongle you have to follow the user guide inside the sales package. Please check always the latest version of flash software, which is available on Nokia Partner Web Site.

Flash Concept - (Point of Sales)



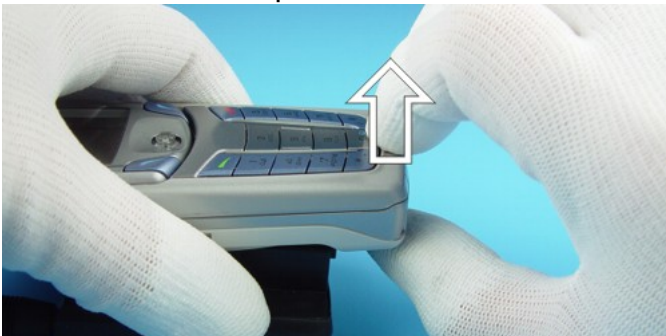
It is very important to follow this insertion and removal procedure, otherwise the contact pins of Flash Adapter will be damaged. Also it has to make sure that all contacts are clean and in proper condition.



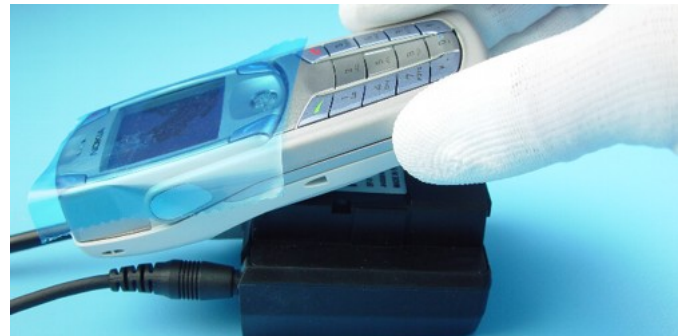
Insert the Flash Adapter SF-5 like a battery, start at the Battery Connector side. Be careful not to destroy the sensitive flash contact pins.



Push down the bottom side of the unit as far as it will go.



After flashing procedure, remove the unit from bottom side on.

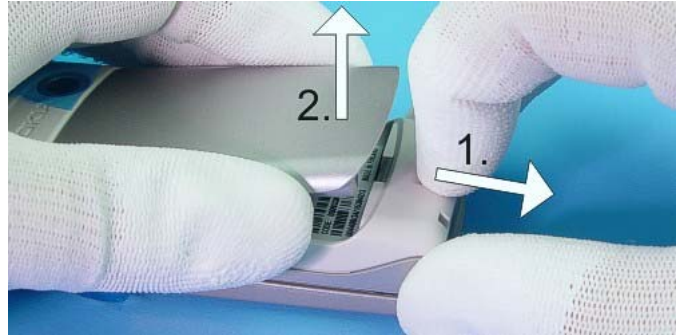


Now, take the away the unit.

8. DISASSEMBLY INSTRUCTIONS (ALSO SEE THE VIDEO CLIPS ON CARE POINT)



Check the condition of Window Protect the Window with a film.



Pull Locking Latch and remove the Battery Cover.



Remove Battery from Battery Cover as shown.



To remove the A-Cover, release the clip first by using SRT-6.



Then open the Flip uprightly.



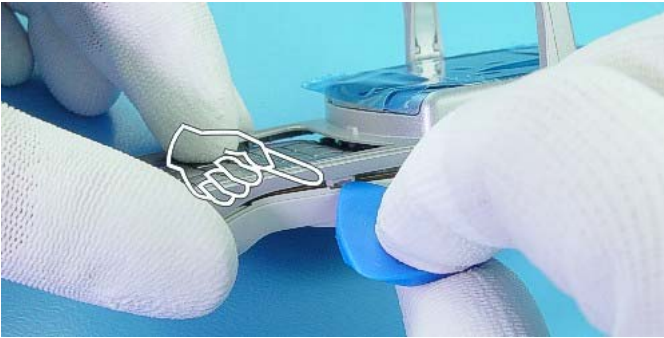
Now, open the other side clips with SRT-6. Start with the clip as shown in the picture above.



Now, open the opposite side.



Lift the topside of the A-Cover a bit and open the bottom clip.



Now, open the clip on the other side.



Open the Flip completely.



First lift the topside of the A-Cover then move the A-Cover forward.



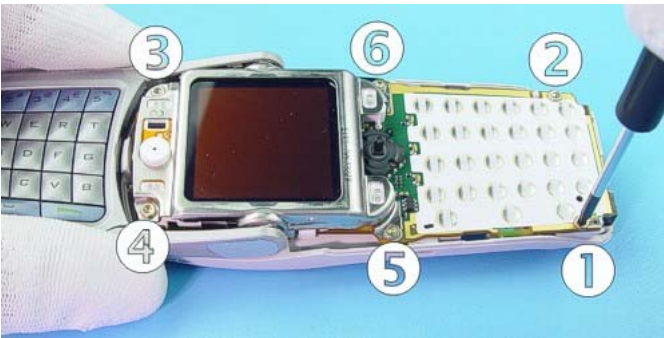
Press down the Function Keys as shown in the picture above to remove it.



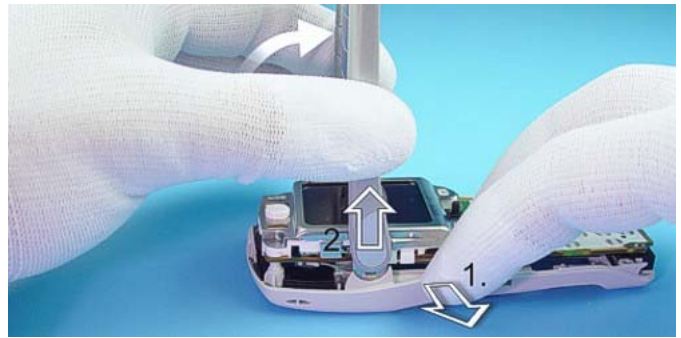
Remove the Joystick Button.



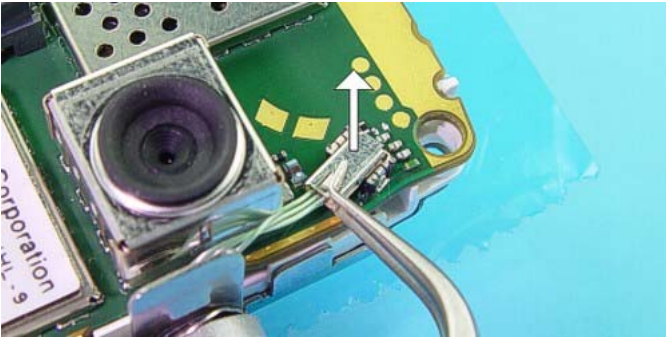
The Bottom side of the Keymat is glued to the Keydome therefore move up the Keymat with SRT-6 carefully. Mind the underneath LEDs.



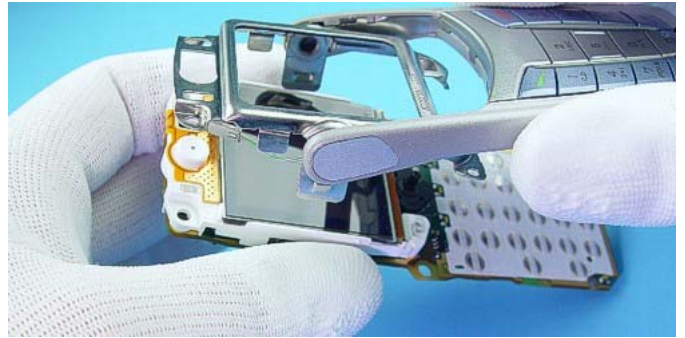
Unscrew the six TORX PLUS® size 6 screws, using the order shown. **For assembly, the reverse order and a torque of 19Ncm have to be used.**



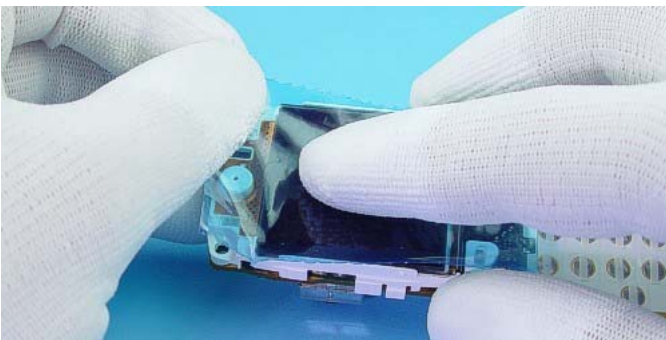
Pull the Flip to remove Engine from B-Cover.



Carefully remove coax connector with tweezers while taking care not to cant the connector.



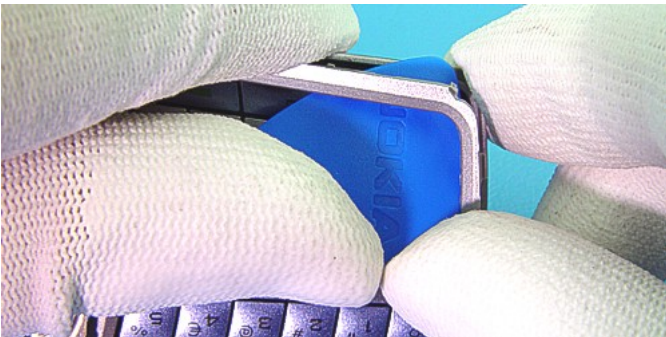
Now, the modules can be separate.



Protect LCD with a film.



Carefully place SRT-6 between Qwerty Frame and Flip.



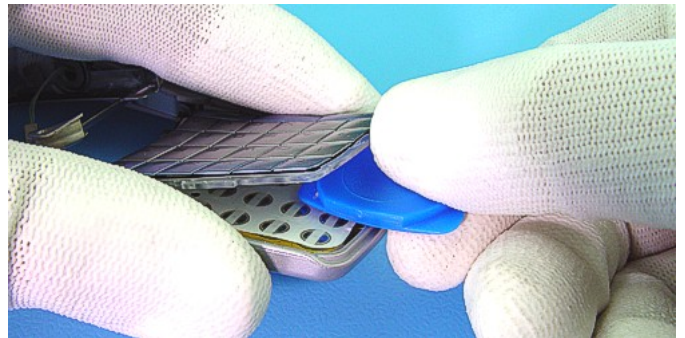
Move on along the edge.



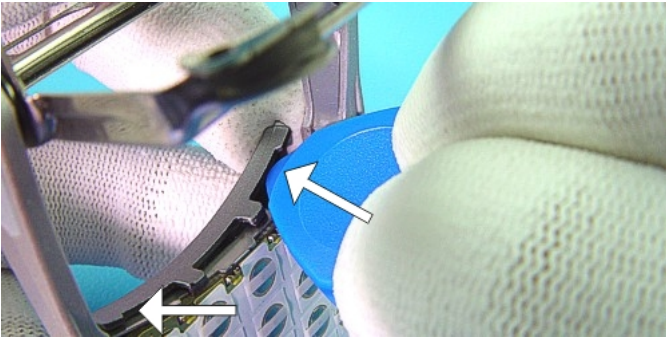
Use fingers to grip the Qwerty Frame and release the leaving snaps.



Now, Qwerty Frame is loose. Always use a new Frame during assembly



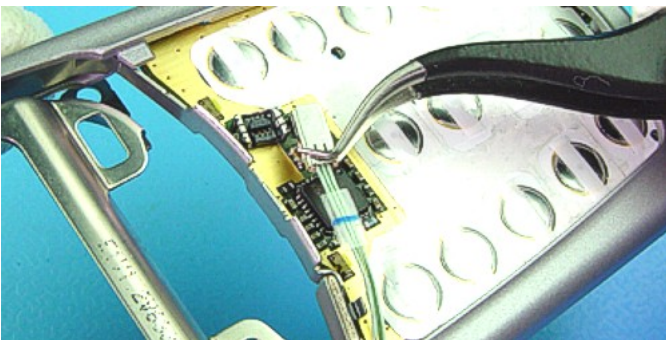
Carefully detach the Keymat from Domesheet, starting at the middle position.



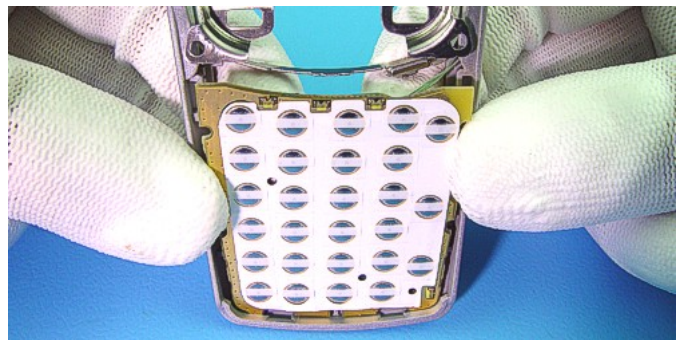
Unlock two snaps of T9 Keymat with SRT-6.



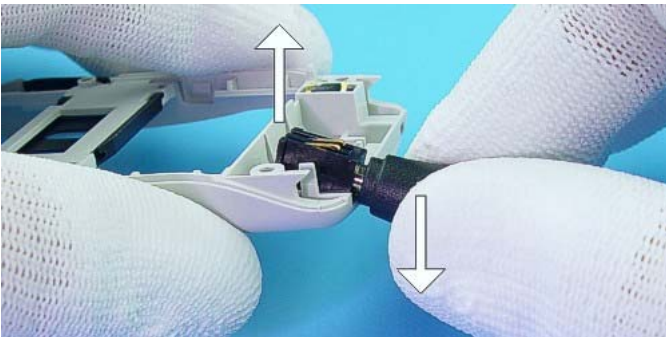
Now, T9 Keymat can be removed



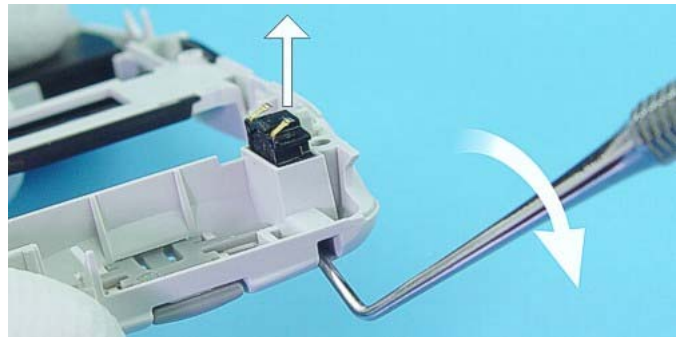
Carefully remove coax connector with angled tweezers while taking care not to cant the connector.



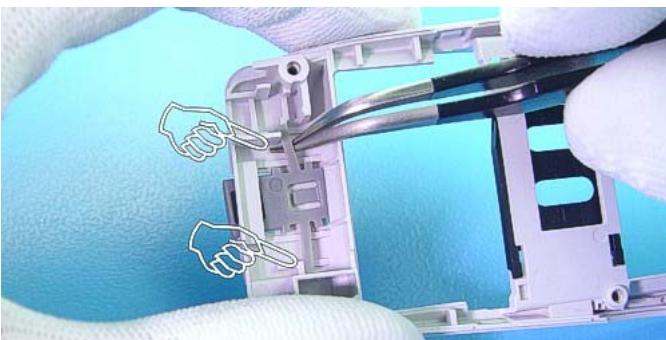
Push out Flip Electric Module from the backside to the front.



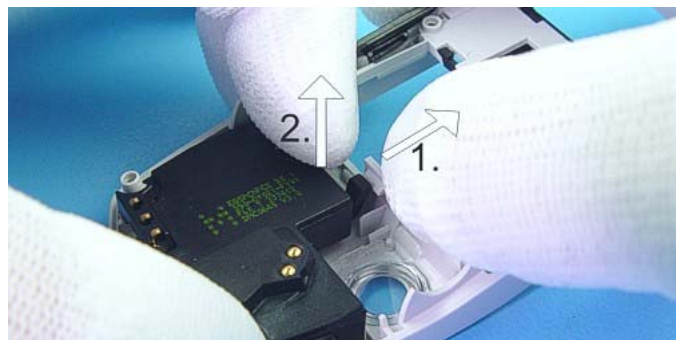
A DC plug can be used to remove DC-Jack.



Put in the spike of dental tool into Microphone opening and lever up the Microphone.



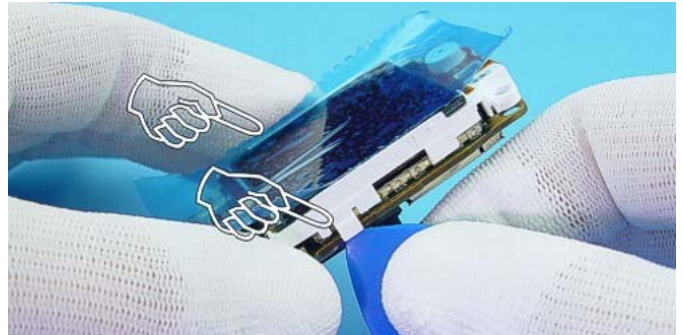
Unlock plastic clips of Locking Latch.



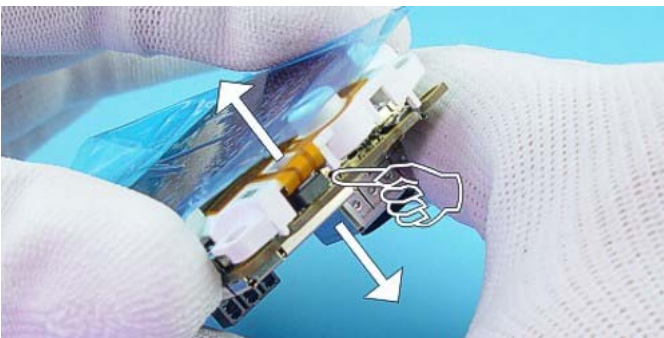
To remove Antenna bend the B-Cover's clip a bit. Lift up the bottom side of Antenna and take care not to damage the spring contacts of Antenna.



Remove SIM Cover.



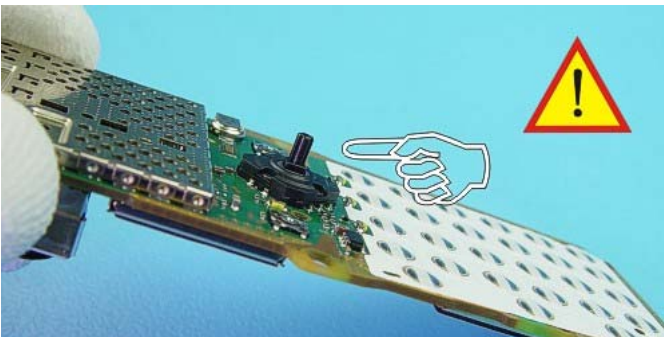
Open Display clips on both sides.



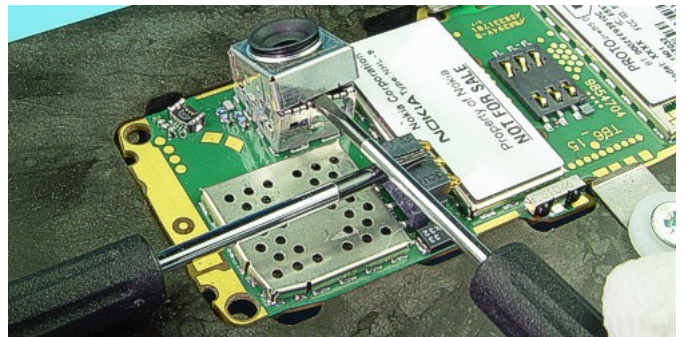
Unplug the display connector by pulling the modules apart very carefully.



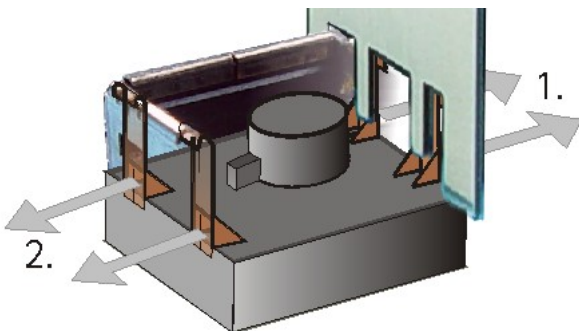
The Earpiece is attached with double-sided adhesive Foam Tape. Always use a new tape when mounting the Earpiece.



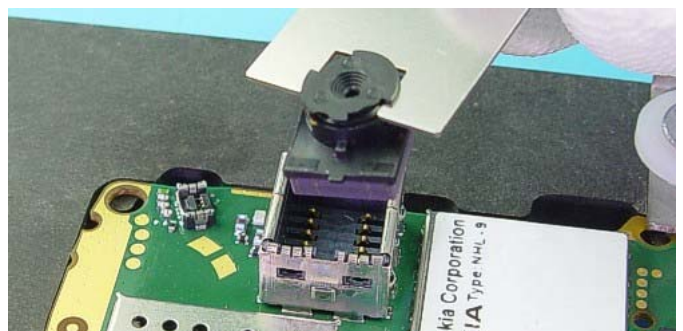
Take care not to damage the Joystick when placing the module upside down on the desk. Use the soldering jig instead when repairing.



Use Battery Connector as base and lever up Connector Shield.

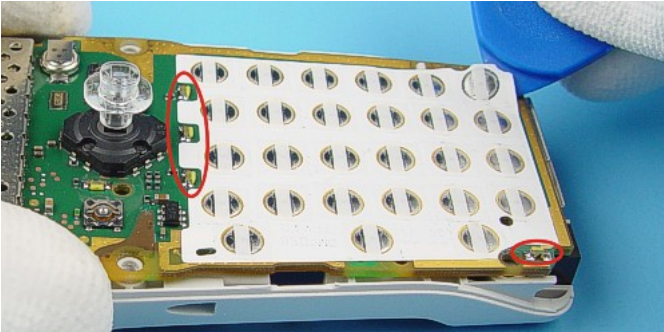


Camera Module is attached with four snaps into its guidance. Place SRT-10 as shown in the picture and unlock the snaps on both sides. Note releasing order.

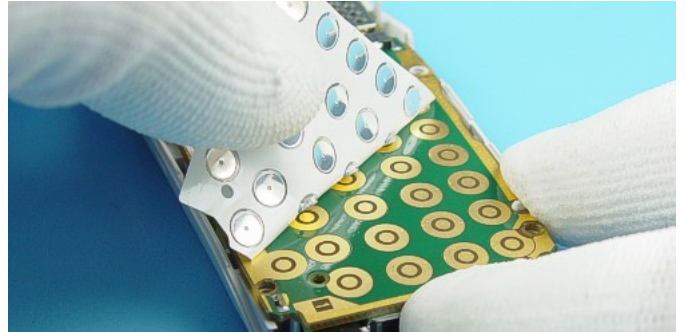


Do not touch contacts and camera lens. Use always SRT-10 for assembly and disassembly.

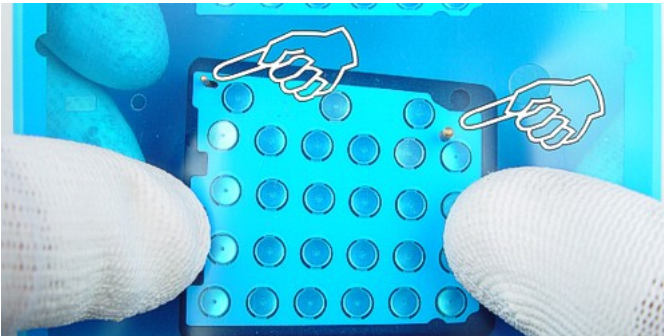
9. KEYDOME EXCHANGE INSTRUCTIONS



Use SRT-6 to loosen the corner of the Keydome. Note to not damage the LEDs, B-cover or Soldering Jig can be used to fix the Power Board.



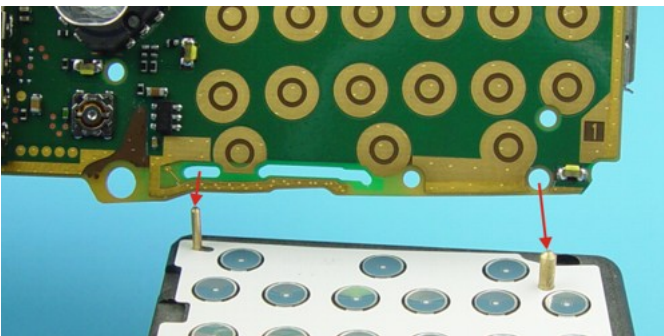
Tear off Keydome in diagonal direction to avoid remains of glue. Check pads for cleanliness.



Place a new Keydome on to the Assembly Jig. Note the guiding pins.



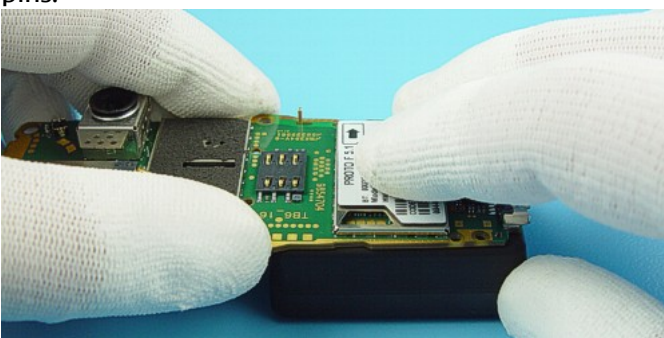
Remove the protection foil. Do not touch the Keydome from adhesive side.



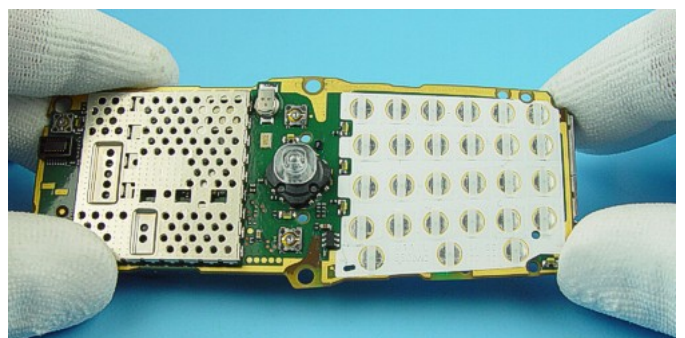
Place the Power Board on the Jig. Note the guiding pins.



This is the correct position of the Assembly Jig.









Carefully press-on the Power Board to the Keydome.



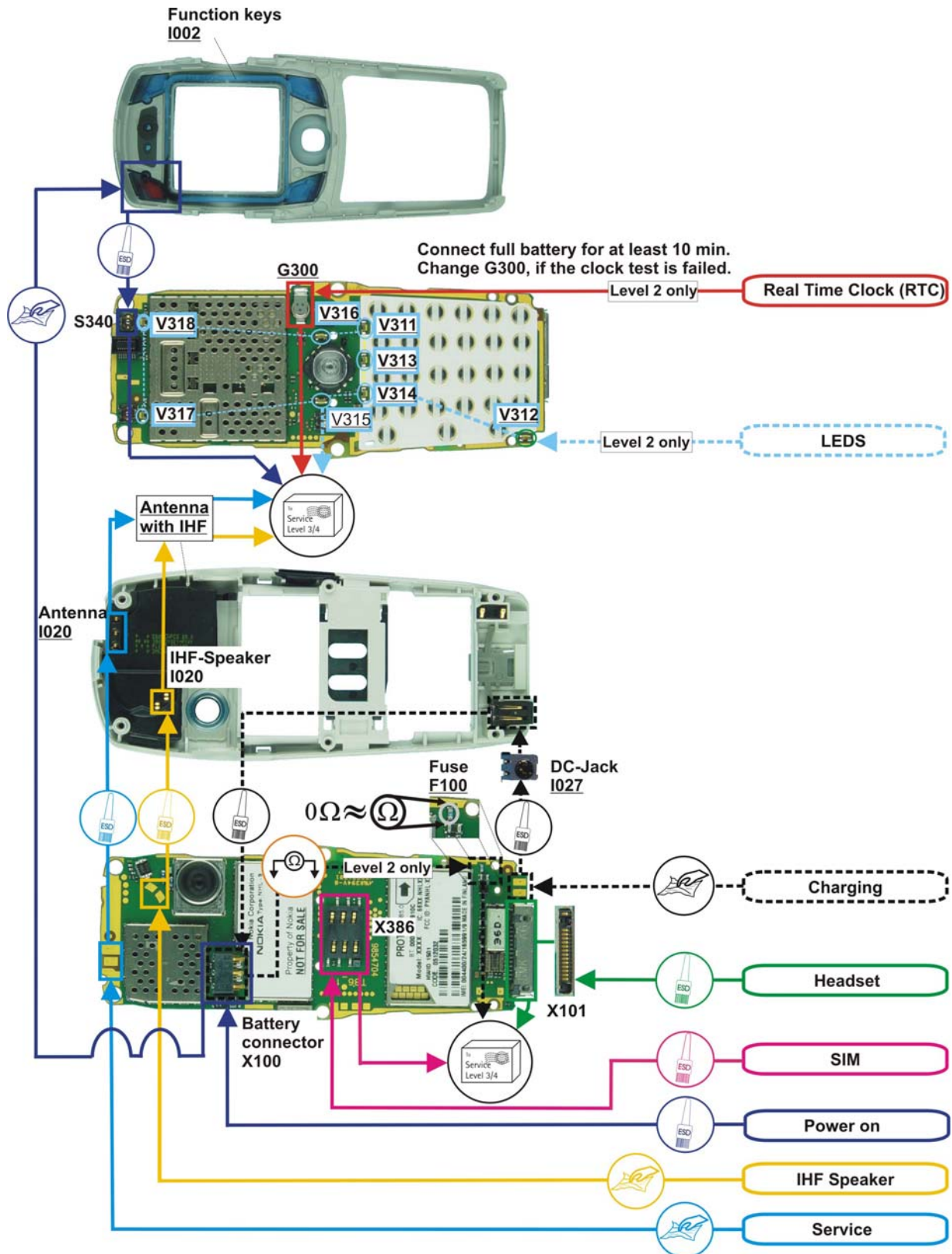
Check that the Keydome is correctly stuck to the Power Board.

10. LEGEND FOR QUICK TROUBLE SHOOTER

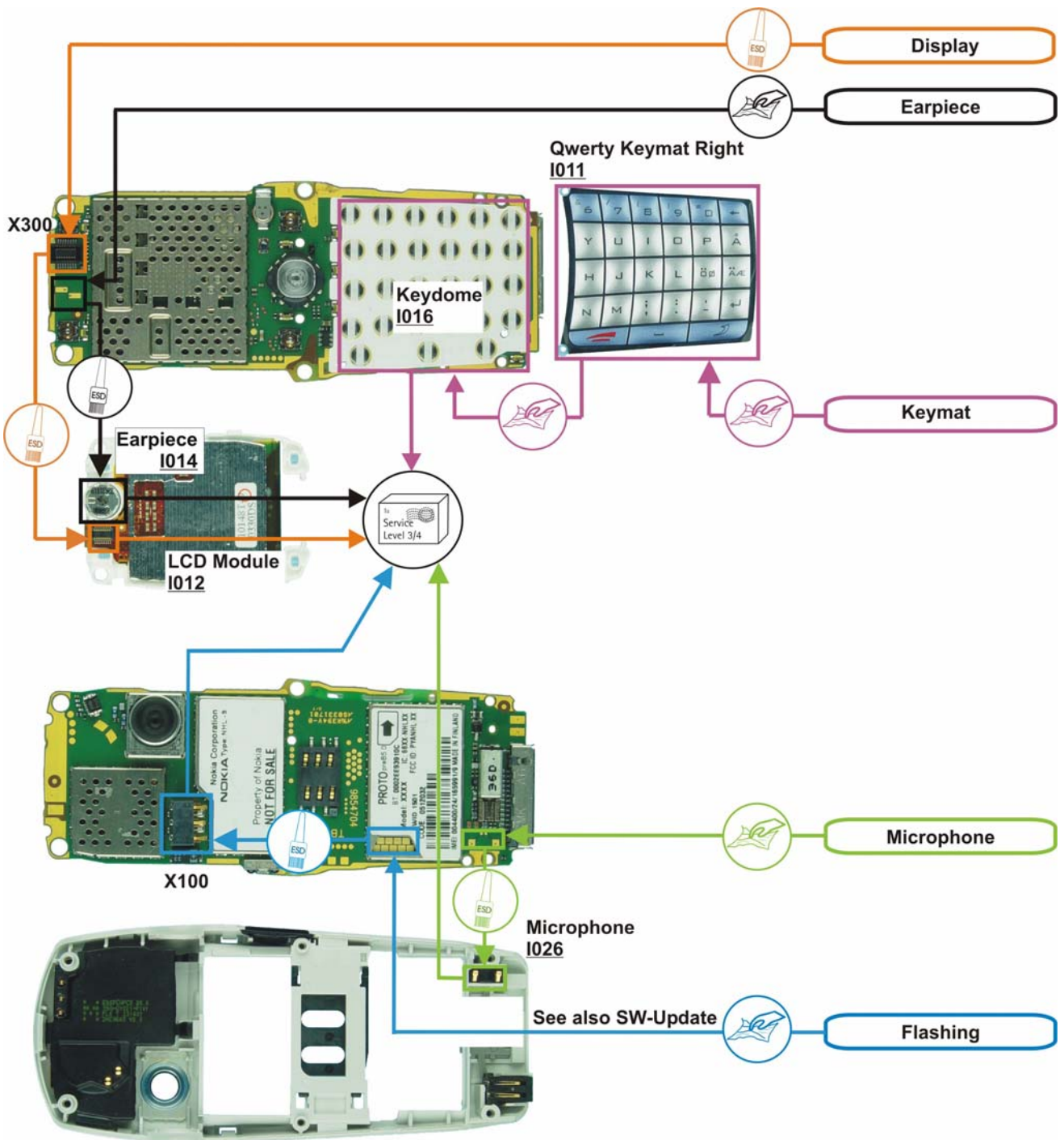
This legend is valid for all parts of the **Quick Trouble Shooter**

<p>Follow the steps until the problem is solved. If this doesn't help, you are not authorized to go forward. Only underlined components (e.g. <u>1002</u>) can be changed.</p>	
	<p>The start point of repair activities regarding the appeared fault symptoms.</p>
	<p>Follow the arrows step by step</p>
	<p>Pads or contacts: Check optical and mechanical condition particularly regarding to corrosion. Clean if necessary.</p>
	<p>Measure component for electrical functionality and change, if needed. (Level 2 only)</p>
	<p>Pads or contacts: Check optical and mechanical condition particularly regarding to corrosion. Clean with ESD brush only, if necessary.</p>
	<p>No more actions possible send product to the appropriate service partner with higher service level.</p>

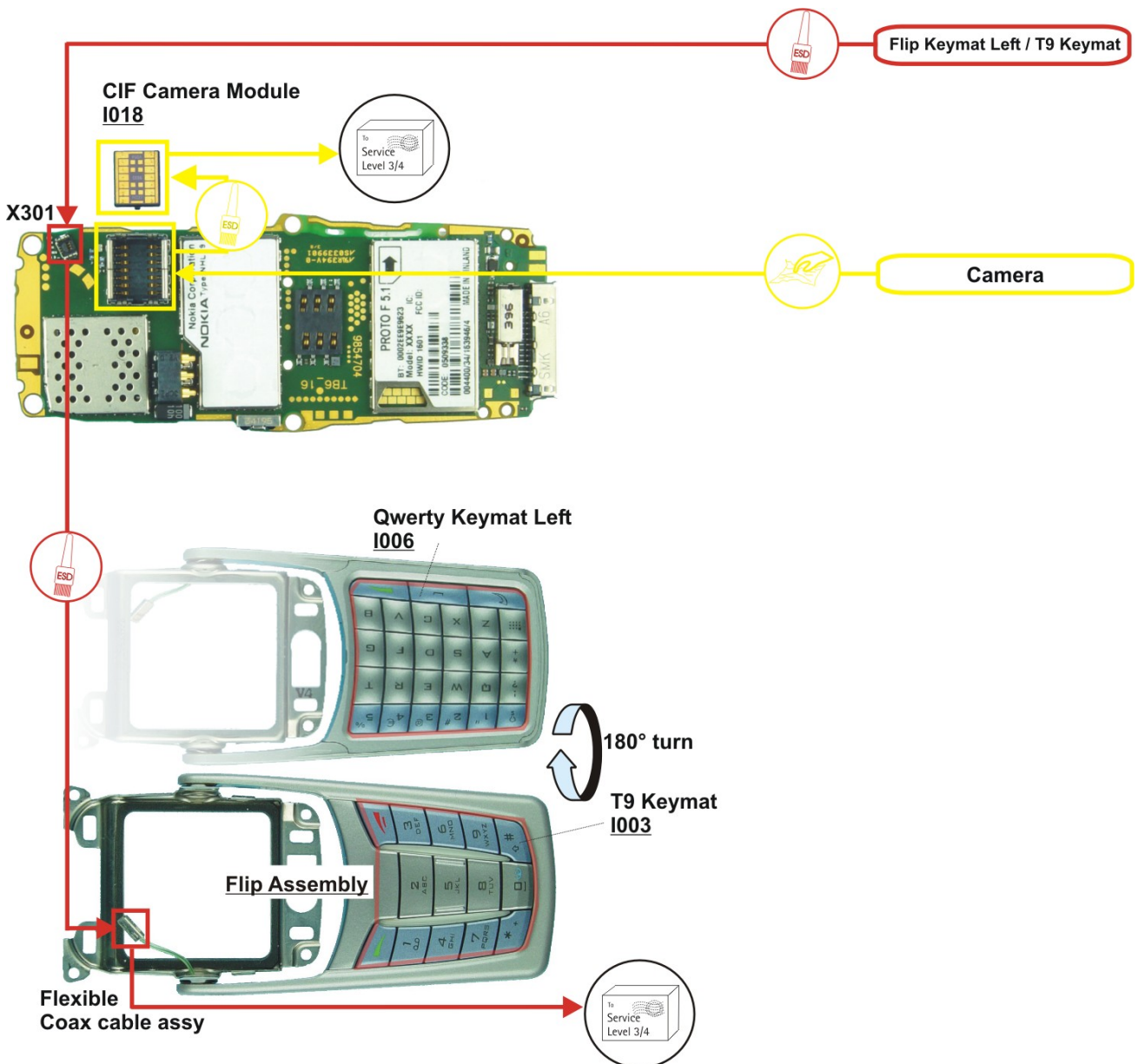
11. QUICK TROUBLE SHOOTER PART 1



12. QUICK TROUBLE SHOOTER PART 2



13. QUICK TROUBLE SHOOTER PART 3



14. INFRARED AND BLUETOOTH GONOGO TEST

You need another infrared device (e.g. 6310i) to do a GoNoGo test. The infrared windows of the devices must be directed to each other and should have a distance of approximate 15 cm. Make sure that infrared is activated in receiver device.

Warning: Do not point the IR (infrared) beam at anyone's eye or allow it to interfere with other IR devices. This device is a Class 1 Laser product.




Test unit



Reference unit

Settings on the test unit:

- From Home Menu, press  key. This displays Phonebook entries. If phone and SIM memory is empty, create one new entry.
- Choose one phonebook entry and select **Details**
- Select **Options**
- Select **Send bus. card**
- Select **Via infrared**
- If sending of business card fails make sure again, that infrared windows are directed to each other and infrared is activated in reference device Then try again sending.
- Test was successful, if you get a message on receiver device.
You will **not** get a confirmation on sender device.
- Press red receiver button for Home Menu


15. CAMERA GONOGO TEST

Before starting the GoNoGo test, check that camera window is clean. If not, clean the window with cloth.

Check cleanness of camera lens and clean if necessary.

Exchange of Camera Module does not improve picture quality!



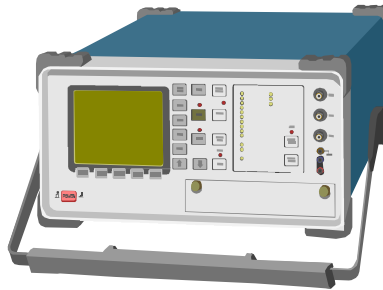
- From Home Menu, press up the Joystick 
- To take a picture press the Joystick (**Capture**)
- This Image will be saved to Gallery into the Photos folder automatically.
- Test was successful, if the Image appears on your Display. The camera is ok.
- Select **Delete**
- Select **Yes**
- Select **EXIT** for Home Menu
- If the test is failed see Quick Trouble Shooter.

16. GONOGO TEST

After the optical check a GoNoGo test has to be carried out if the unit has been unscrewed to guarantee the functionality of the phone.

Please refer to the actual information on Partner Web Site and Nokia Care Point. When using delivered tester support files, take care of the right setup according to the tester type and product type.

Please refer to “Recommended Service Equipment” on Nokia Partner Web Site.



Mobile Phone Tester

17. BATTERY TEST

A battery tester lets you test the capacity of Nokia batteries.

Please refer to the actual information on Partner Web Site.



<http://www.astratec.co.uk/>



<http://www.cadex.com/>

18. SERVICE NOTES

We recommend using Service Notes when shipping phones to other Service Partners. It prevents the product from scratches, it is ESD-neutral and has the possibility to give valuable feedback of the fault symptom through a structured form. Please refer to the document [Service Notes for faulty NMP transceiver](#) on Partner Web Site to get further information.

Sender <u>Repair Center</u>		Our Ref. <u>4711</u>
Handled by _____		Product Code <u>050381</u>
Serial n.o.: <u>449333/20/975406/2</u>		Date <u>10.07.01</u>
Yes <input checked="" type="checkbox"/> Warranty Case <input type="checkbox"/> No		Inst <input type="checkbox"/> Instant Service <input type="checkbox"/> DOA

<input checked="" type="checkbox"/> R Repair	<input type="checkbox"/> RR Repair and Refurbishment
<input type="checkbox"/> RO Refurbishment only	<input type="checkbox"/> SW Software update
<input type="checkbox"/> A Analysis	<input type="checkbox"/> C Claim
<input type="checkbox"/> 24h 24 h Service	<input checked="" type="checkbox"/> SR Special Request <u>Save User data</u>

A) EXISTENCE OF FAULT

1. <input checked="" type="checkbox"/> Continuous fault	2. <input type="checkbox"/> Intermittent fault	3. <input type="checkbox"/> Temperature
4. <input type="checkbox"/> By shock or vibration	5. <input type="checkbox"/> No clear fault	6. <input type="checkbox"/> Only as portable
7. <input type="checkbox"/> Only in a car	8. <input type="checkbox"/> Only in desktop	

B) SYMPTOM OF THE FAULT ON CMT-PART - Symptom Code _____


1. <input type="checkbox"/> Totally dead	2. <input type="checkbox"/> Selftest failure	3. <input type="checkbox"/> SIM Fail
4. <input checked="" type="checkbox"/> No service	5. <input type="checkbox"/> No calls in	6. <input type="checkbox"/> No calls out
7. <input type="checkbox"/> Keypad failure	8. <input type="checkbox"/> Display failure	9. <input type="checkbox"/> Audio failure
10. <input type="checkbox"/> Doesn't charge	11. <input type="checkbox"/> Overcharging	12. <input type="checkbox"/> Hand-free failure
13. <input type="checkbox"/> Burns fuses	14. <input type="checkbox"/> Accessory fail, which _____	
15. <input type="checkbox"/> Switches off	16. <input type="checkbox"/> Other _____	

C) OBSERVED OR MEASURED FAULT

1. <input checked="" type="checkbox"/> TX Power
2. <input type="checkbox"/> TX Phase error
3. <input type="checkbox"/> Bit Error Rate
4. <input type="checkbox"/> Burst Template
5. <input type="checkbox"/> Ramping spectra
6. <input type="checkbox"/> RX Quality
7. <input type="checkbox"/> RSSI
8. <input type="checkbox"/> Other _____

D) SYMPTOM OF THE FAULT ON PDA-PART - Symptom Code _____

1. <input type="checkbox"/> PDA doesn't start
2. <input type="checkbox"/> Internal error
3. <input type="checkbox"/> Keypad failure
4. <input type="checkbox"/> Display failure



19. FORWARDING OF REPAIRS TO SERVICE LEVEL 3 OR 4 SUPPLIERS

We recommend using the offered swap phone cartons as described in Spare Parts SB-004.



Always Protect the window with a protection film.



Put the unit under the stretch film.



Add repair documentation e.g. filled-in service note into the swap carton.



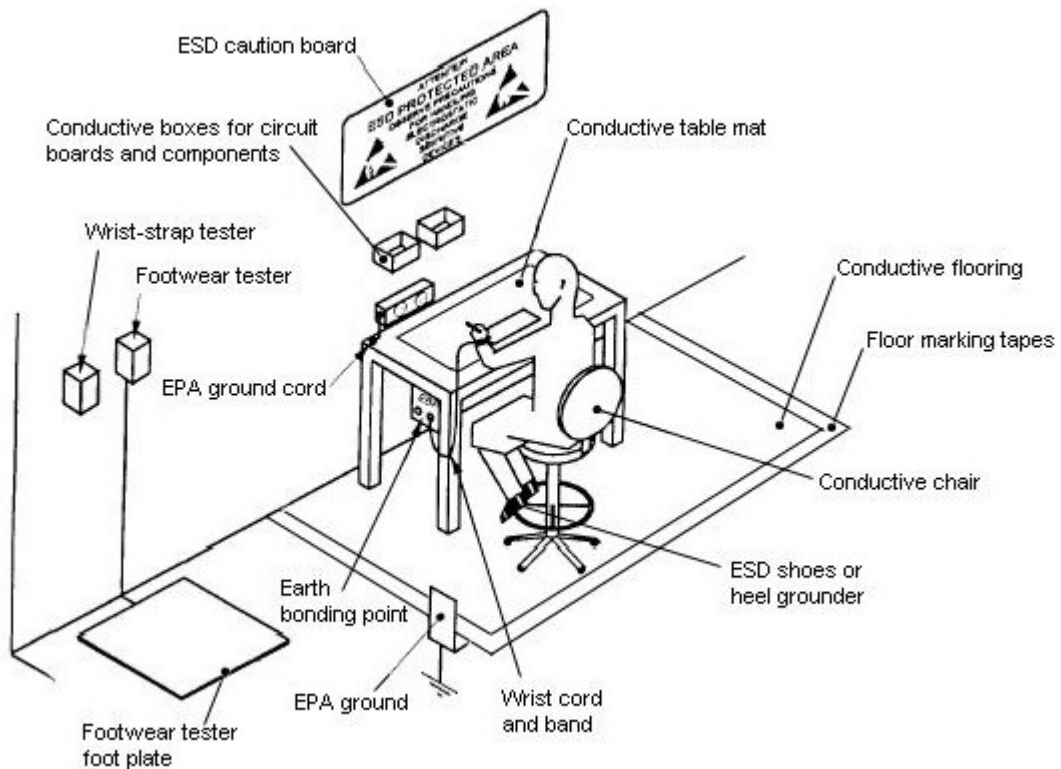
Fold the swap carton as shown in Spare Parts SB-004.



There are two different sizes of swap cartons for common mobile phones.

20. ESD PROTECTION REQUIREMENTS

Please refer to the Partner Web Site document [Service Partner Requirements](#) in folder General instructions.



- USE** Conductive bags and boxes
- USE** ESD compatible service tools
- USE** Conductive wastebaskets
- USE** ESD gloves when handling PWBs/PCBs
- USE** Cleaning material without changing el. Characteristics
- USE** Grounded service equipment, i.e. soldering station
- USE** ESD clothes such as coat or frock

- NO** Smoking
- NO** Drinking
- NO** Eating
- NO** Dust
- NO** Useless Items
- NO** Normal pressured air for cleaning modules/displays

