

# **Service Manual**

## **Gigaset 4010 Micro**

**up to Level 2.5**



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## **2 Foreword**

This document will only explain the differences to the Comfort handset and Comfort base station (board of Micro base station is exactly the board of the Comfort base station (the only difference is the charging section)).

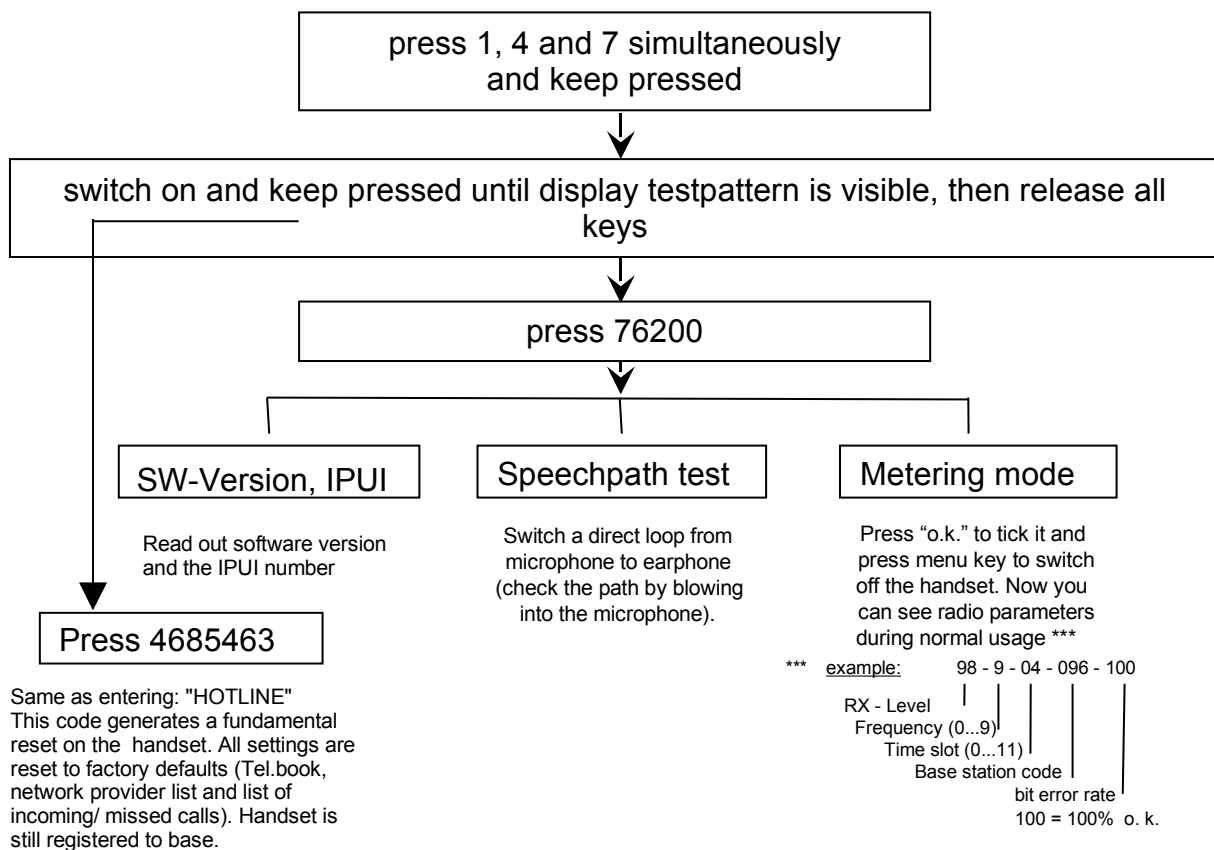
The Gigaset 4010 Comfort is described in the G4010/15 Service Manual.

### 3 Service procedures

#### 3.1 Service procedures for Gigaset 4000 micro

Note: The service procedures are confidential.

Reset, Displaytest, Software-Version & IPUI, Speechpath test and Metering mode:



The items QS-Data, Batt mode and DSP parameters have been implemented for development and production purposes and are not needed in service.

#### 3.2 Service procedures for Gigaset 4010/ 15 Micro base station

Note: For parameters X, Y, option see table below.

**Press: "menu-key", 8, 9, X, 76200 (only if X=3 or 4), Y, select option, o.k.**

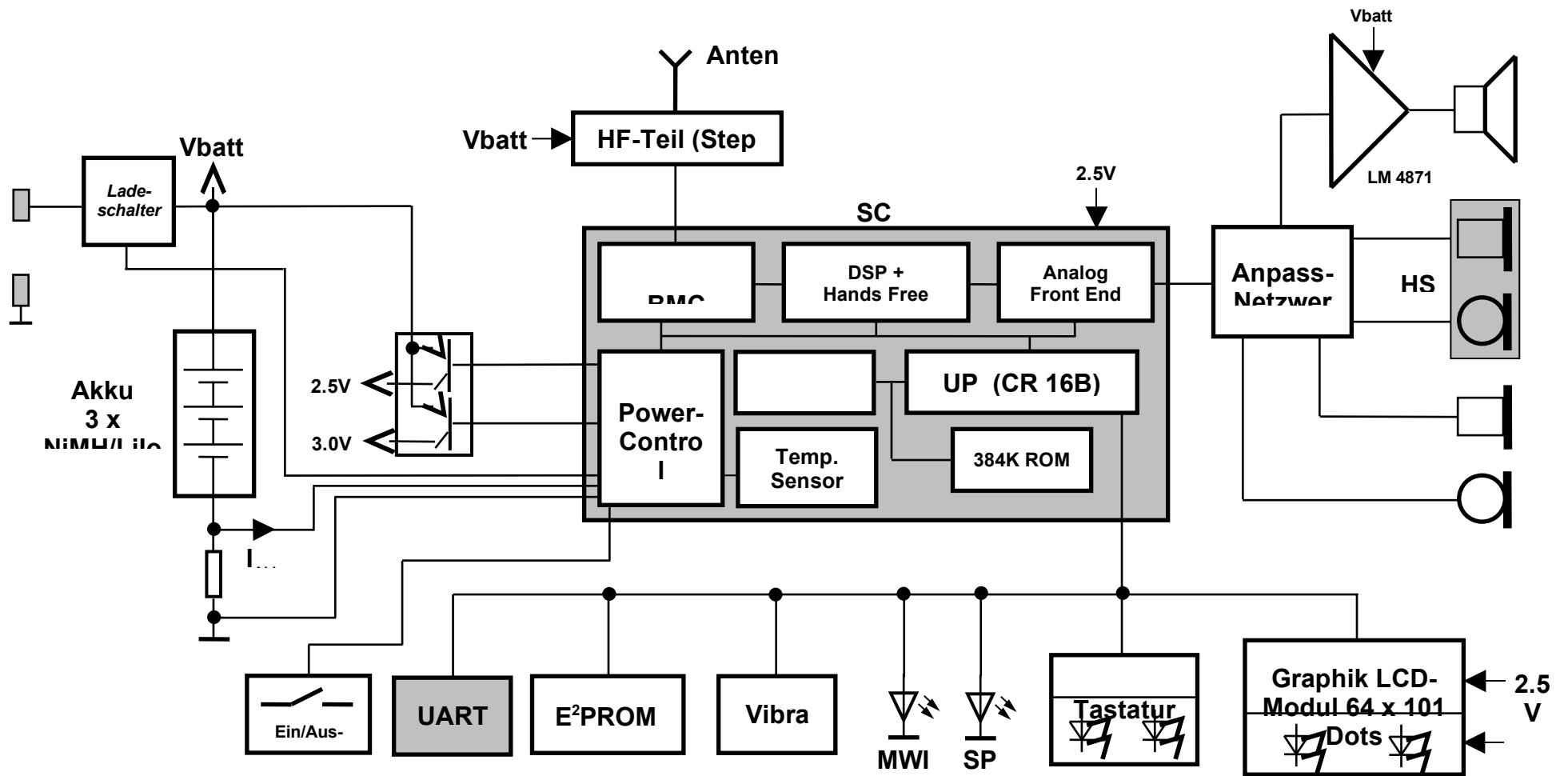
A pos. acknowledge (rising sequence of notes) indicates that the procedure has been accepted.

Feature	X	76200	Y	Option
Pause after signal-key	1	-	2	1 = 800 ms 2 = 1600 ms 3 = 3200 ms
Automatic attenuation correction (dependant on country)	1	-	3	0 = off 1 = on
Time for end of call identification (to distinguish between 2 ringing pulses of one call with long pauses between pulses and 2 separate calls)	1	-	4	0 = 4 sec. 1 = 5.5 sec. 2 = 7 sec. 3 = 11 sec.
Hook-flash-prevention (cradle switch identification) (short press on cradle switch- key is extended by SW to prevent that it is interpreted as a press on the flash-key)	1	-	5	0 = 800 ms 1 = 2000 ms
Pause after line seizure	1	-	6	1 = 1 sec. 2 = 3 sec. 3 = 7 sec. 4 = 2.5 sec.
System PIN reset	3	76200	-	-
Programming data on an address	4	76200	1	Specific code needed
Read out SW-version	4	76200	2	Example: 01002_..... 01 = SW-variant 002 = SW-version
Range of ringing frequency recognition	4	76200	3	0 = 23- 54 Hz 1 = 20- 60 Hz 2 = 15-75 Hz
Dial pulsing: pulse pause ratio	4	76200	4	0 = 1.5 : 1 1 = 2 : 1
CLIP activation	4	76200	5	Select 0 (on) or 1 (off)
Off-hook CLIP activation	4	76200	6	Select 0 (on) or 1 (off)
Approval test	6	76200	6	-

Gigaset 4015 Micro (country specific (e.g. Switzerland)):

Feature	X	76200	Y	Option
Select speech 1 for AM phrases (tones)	2	-	1	-
Select speech 2 for AM phrases	2	-	2	-
Select speech 3 for AM phrases	2	-	3	-
Select speech 4 for AM phrases	2	-	4	-

#### 4 Block diagram G4000 Micro



## 5 Repair

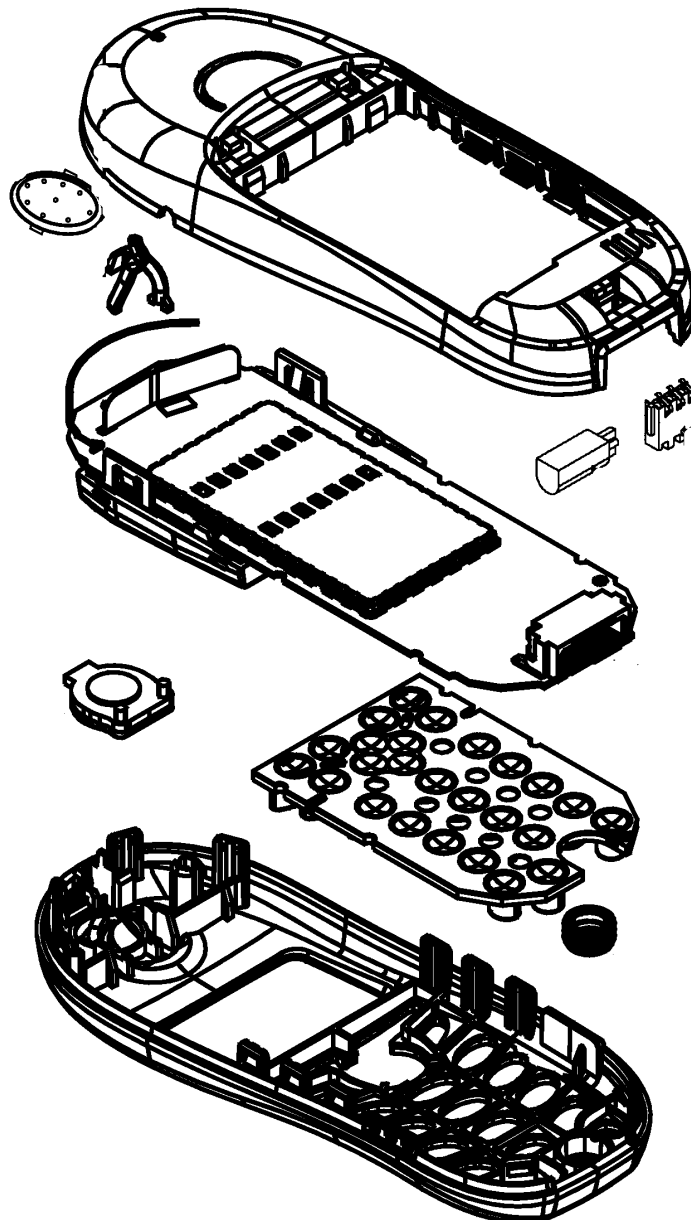
### 5.1 Special equipment

Case opener SL45: order no. F30032-P85-A1

Tip of the tool looks like this:



#### 5.1.1 Exploded view G4000 Micro



### 5.1.2 Disassembling of handset

**ESD regulations have to be followed!**

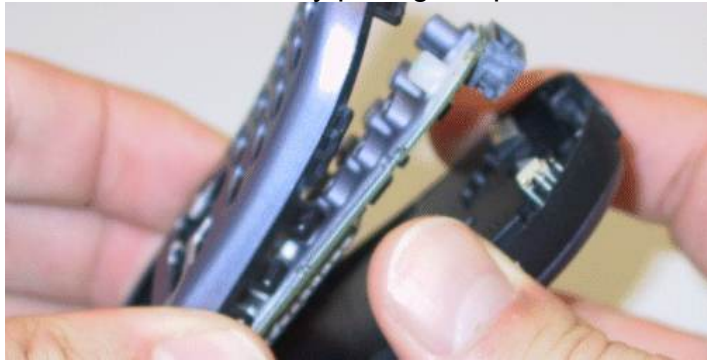
**Use a new housing when destroyed!**

Open battery cover and remove battery before opening.

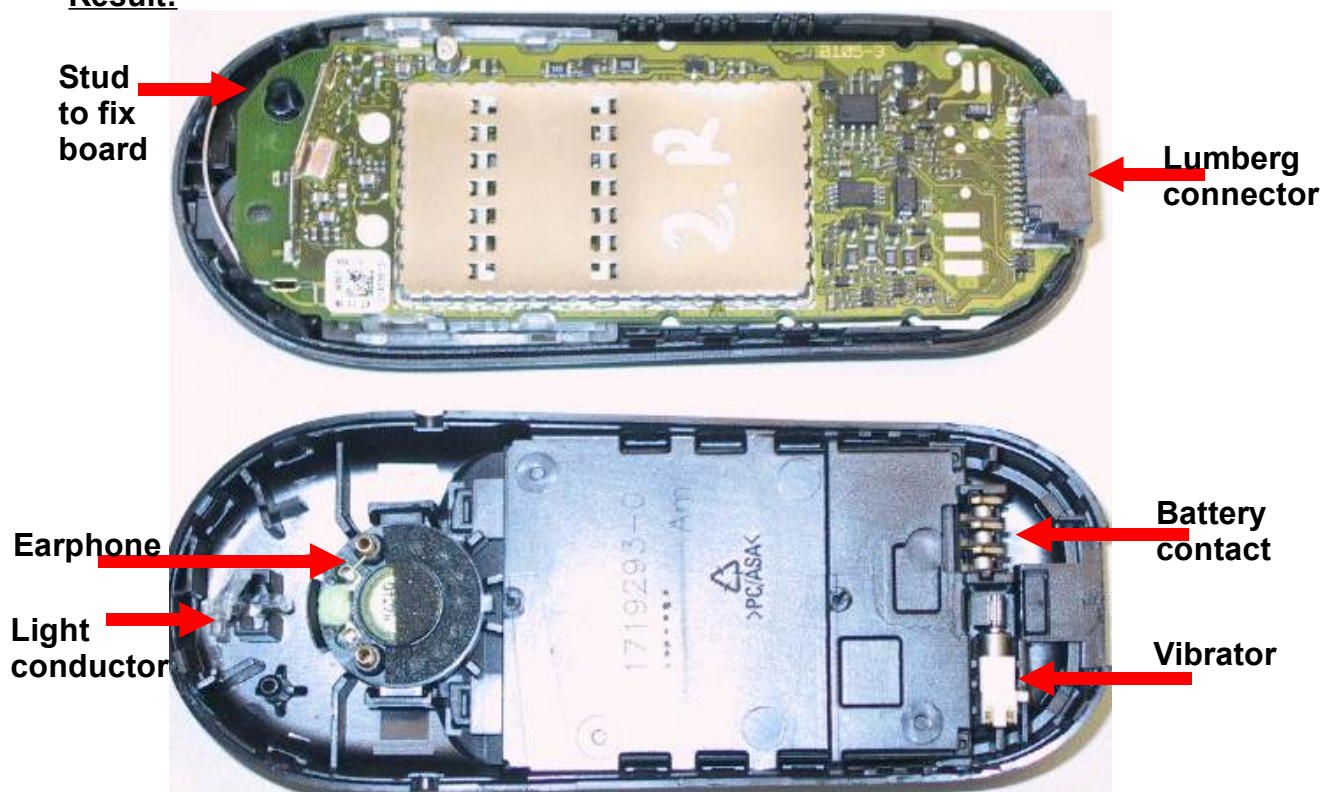
Insert the case opener SL45 (pictures show G3000 opening tool instead) in the Lumberg connector hole and press to open the lower part of the case.



Lift lower case shell by pulling the part close to the connector.



**Result:**





### 5.1.3 Repair of handset:

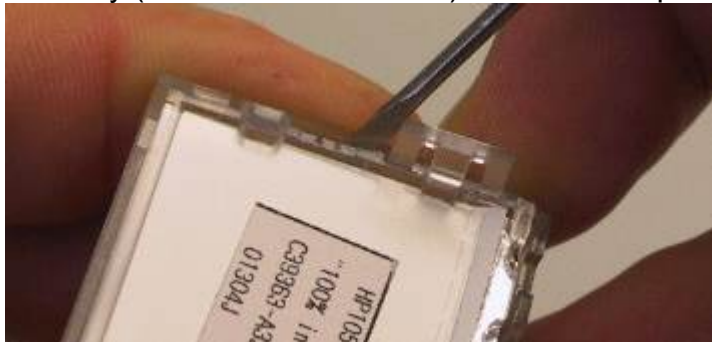
**Do not touch the contacts when handling the following parts!!!**

#### 5.1.3.1 Display cover/ Display

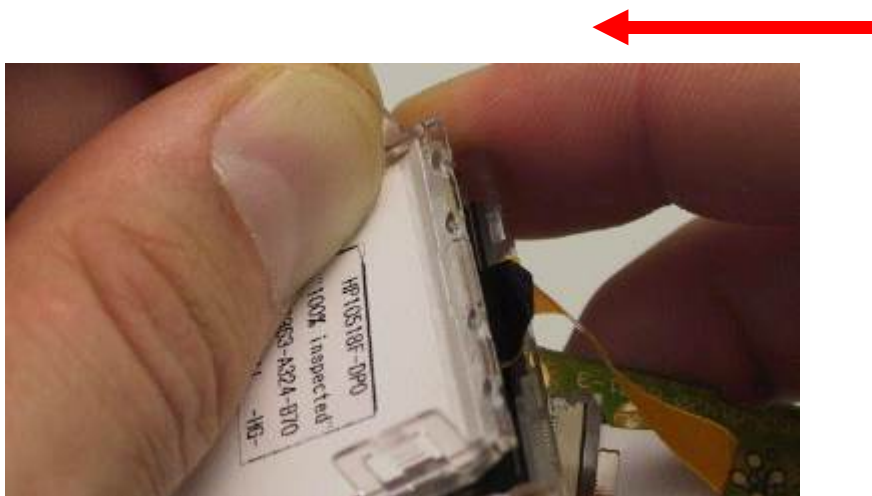
**ESD regulations have to be followed !**

Needed material: pliers, small screw driver

Insert a small screw driver between both plastic parts of the cover and turn it carefully (do not touch the LCD) in order to separate the parts.



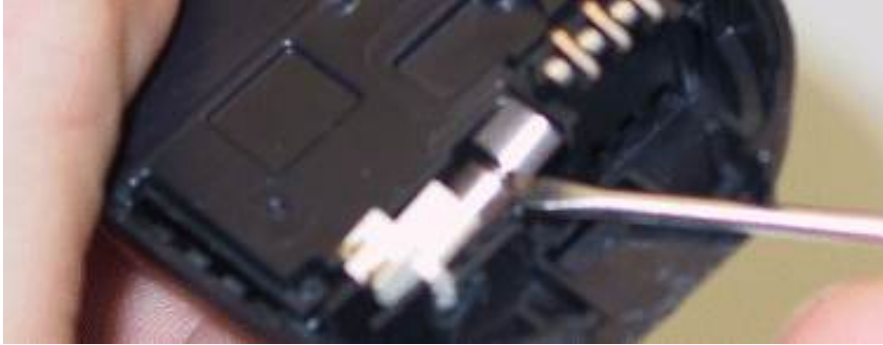
Then pull the display display cover part as described in the picture below.



To replace the complete display open the connector carefully by lifting the brown jig (see red arrow in picture above). Release the display foil and replace the display. Insert the foil of the new display and close the brown jig.

#### **5.1.3.2 Vibrator**

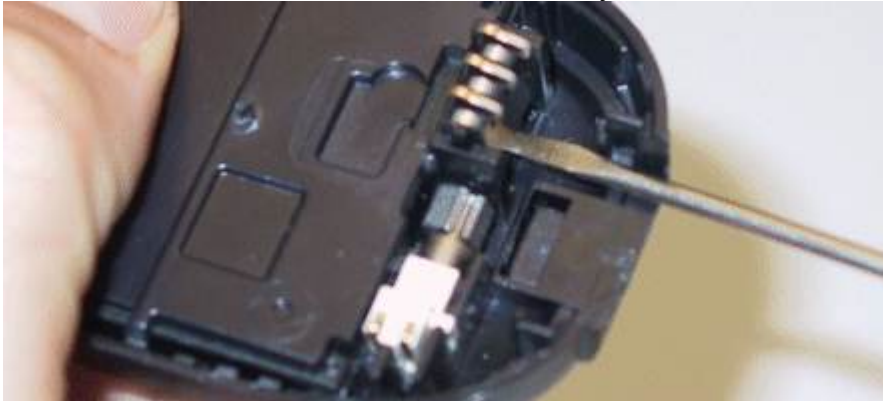
Insert a small screw driver between vibrator and case shell and turn it carefully.



When inserting the vibrator make sure that you press only on the plastic part.

#### **5.1.3.3 Battery contacts**

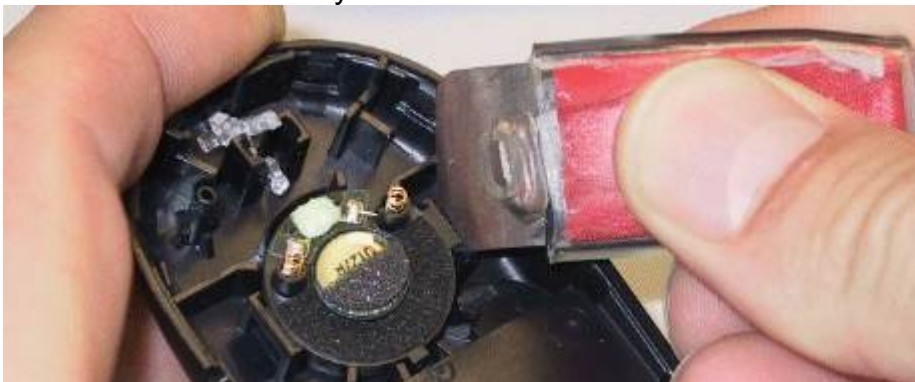
Insert a small screw driver between battery contacts and case and turn it carefully.



When inserting the battery contacts make sure that you press only on the plastic part.

#### **5.1.3.4 Loudspeaker**

Insert a small screw driver or opening tool G2000 between loudspeaker and case shell and turn it carefully.



Do not press the contacts when inserting the loudspeaker.

#### **5.1.3.5 Separating the board from the case shell**

Press the stud that fixes the board with tweezers or pliers while lifting the board.



#### **5.1.3.6 Microphone**

The Microphone can be removed by using tweezers with a narrow tip that fits in the small gap on the side of the microphone-frame on the case shell. Insert tweezers in the gap, grip the microphone and lift it.



#### **5.1.3.7 Earphone**

The Earphone can be removed by using tweezers.



#### 5.1.4 Assembling of handset

Insert microphone, earphone and keypad.

Fix the board and press it down in the area of the stud (red arrow) until it engages.

Insert light conductor as shown in the picture below (white arrow).



Insert battery connector, vibrator, loudspeaker and close the housing.

Pay attention on the light conductor while closing. It must fit exactly in the hole.





## 5.1.6 Possible faults on handset

### 5.1.6.1 Mobile unit faulty due to humidity

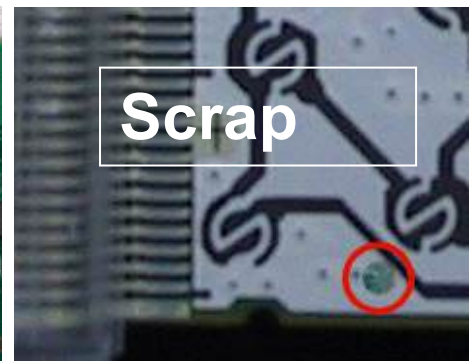
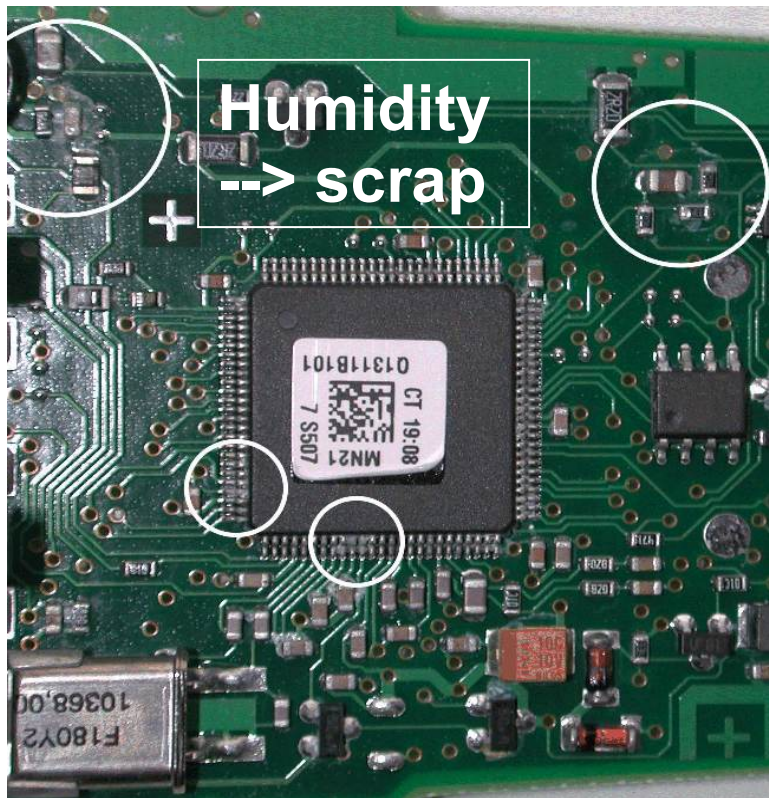
**Note:** Most humidity damages on the front side under the keypad. Look at all electronic components on the back side.

Remaining flux on the component side could look similar to a humidity damage (white deposits) but it will disappear when heating it up with a hot air blower.

**Recommendation:**

When you are not sure whether deposit is humidity or flux, heat the area concerned with a hot air blower and scrap the unit only when deposit doesn't disappear.

The pictures below are taken from G2000 and 3000 handsets.



### **5.1.6.2 Display problems**

Fault code: D 4

Affected unit: Gigaset 4000 Micro handset

Components:

Display, display connector

Needed equipment:

soldering iron

Working material:

solder, flux

Diagnosis:

Missing lines or columns are a symptom for an electrically faulty display.

When the display doesn't show any sign there can be different reasons.

First check if only the display is faulty by pressing some keys (confirmation tone).

Possible causes:

- Cold soldered pins on display connector. → resolder connector

- Display foil not properly connected. → open, insert foil and close connector

If that didn't help replace the display.

If afterwards the display still doesn't work, send the handset to WSC.

Repair by component exchange:

The display is connected via zero craft connector. It is available as a spare part.

Open the snap hooks of the display and lift it.

Use a thin screwdriver and insert it carefully between foil cable and connector snap hook. Lift the screw driver upwards in order to snap the hook open.

Take a new display and insert the foil in the connector and snap hook into place.

Fix the display on the board.

Test:

Make a display test using the procedure described in the service procedures.

### **5.1.6.3 SLR (microphone-path faulty)**

Fault code: D 19

Affected unit: Gigaset 4000 Micro handset

Components:  
Microphone

Needed equipment:  
tweezers

Working material:  
none

Diagnosis:

The diaphragm of the microphone is affected by humidity or nicotine with increasing age or the microphone could be electrically faulty. There will be a higher attenuation when measuring SLR (sending loudness rating). In most cases the microphone is defective or the connection via contact springs is poor.

Repair by component exchange:

Remove the microphone and replace it by a new one. Do not bend the springs when inserting the microphone.

Test:

Put the repaired board in a housing.

Make a sidetone check by blowing into the microphone and checking the volume of the noise on the earphone.



#### **5.1.6.4 RLR (earphone-path faulty)**

Fault code: D 20

Affected unit: Gigaset 4000 Micro handset

Components:

Earphone

Needed equipment:

Multimeter

Working material:

none

Diagnosis:

The diaphragm of the earphone could be affected by deposits with increasing age. There will be a higher attenuation when measuring RLR (receiving loudness rating). In most cases the earphone is defective.

If there is no noise audible on the earphone when making a sidetone check it's also possible that the wire of the coil is cut off.

Check the resistance of the coil with a multimeter.

If you measure a nearly infinitely high resistance, the wire may be cut off.

Repair by component exchange:

Use new earphone capsule.

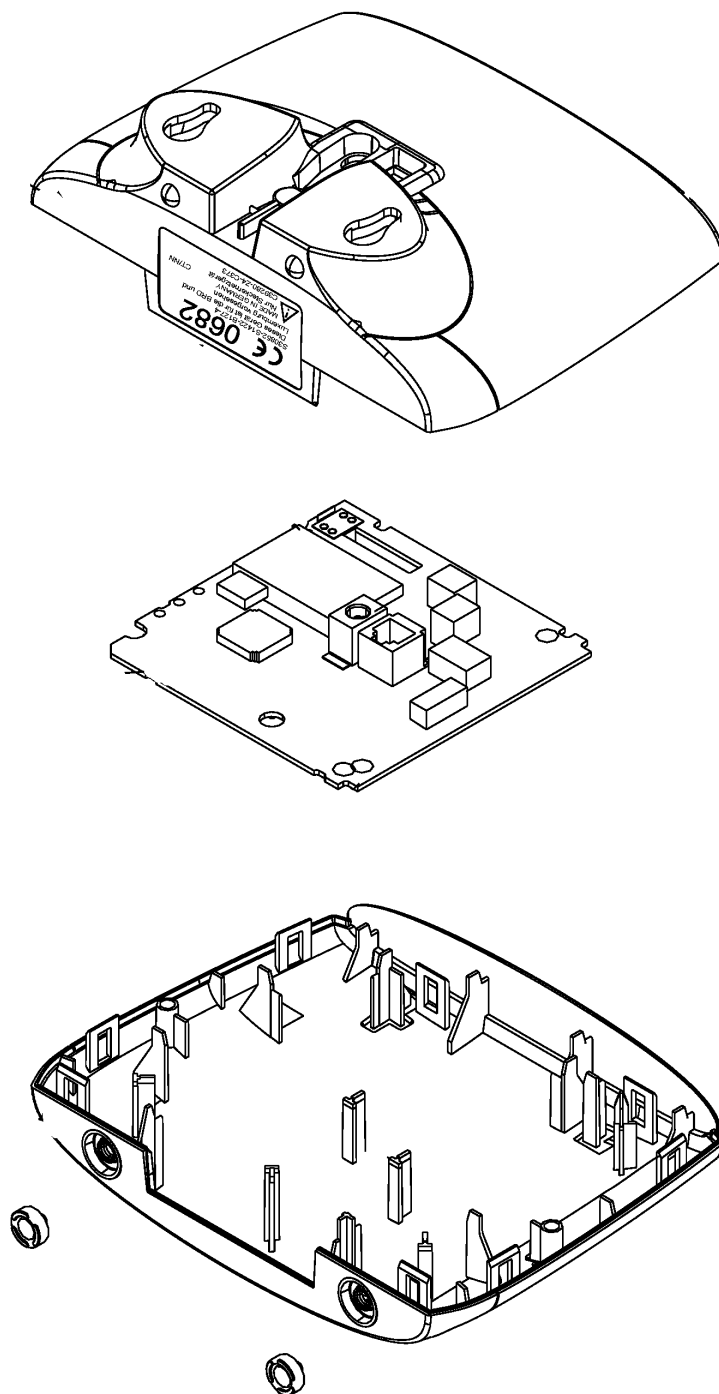
Test:

Put the repaired board in a housing.

Make a sidetone check by blowing into the microphone and checking the volume of the noise on the earphone.

### 5.1.7 Repair of basestation Gigaset 4010 Micro (modified Comfort base)

#### 5.1.8 Exploded view



### 5.1.9 Disassembling

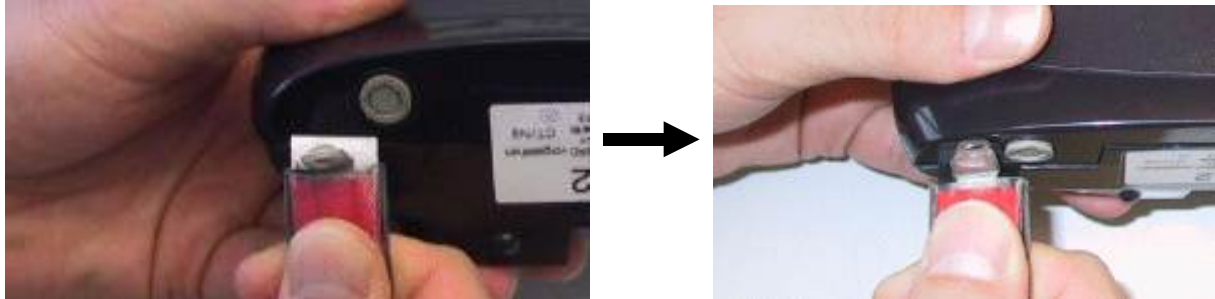
#### **ESD regulations have to be followed !**

##### Needed material:

- Case opener SL45: order no. F30032-P85-A1 (see handset)
- Opening tool G2000

The base station is fixed by snap hooks.

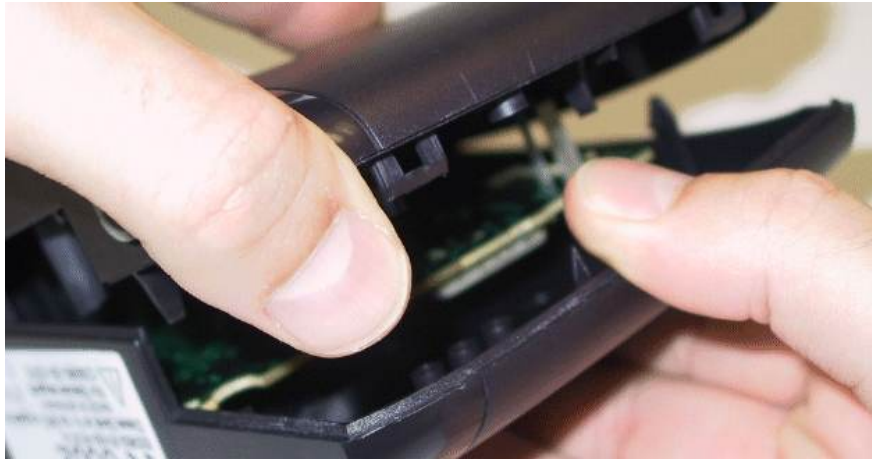
At first insert opening tool G2000 as described in the following picture and turn it.



Use the case opener SL 45 to snap the remaining hooks open (pictures show G3000 opening tool instead).



Now the complete side is opened. Open the remaining hooks by spreading the case shells as shown in the next picture.



### **5.1.10 Assembling**

**ESD regulations have to be followed !**

Needed material: none

Insert board into back case shell (where the sockets are).

It is inserted correctly when you see the 3 silver pads of the I2C bus under the 3 holes in the back of the case shell.

Press both case shells until hooks snap into place.



### 5.1.12 Base station faulty due to lightning stroke

The pictures are taken from a Gigaset 2010 base station.

Inspect the board with your eyes.

The components on the photos have been damaged by lightning stroke.

