

# Programmes After Market Services NHM-3 Series Transceivers

## Disassembly Instructions

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## Advanced durable mechanical solutions

### 6250 consists of special mechanical solutions:

- Thick covers of durable plastic
- Internal cushioning of the circuit board
- Dust and water resistance membranes over the microphone, speaker and buzzer
- Ultrasonic welding of display window and keymat to front cover
- Watertight RF-connector and system connector
- Watertight sealing between covers
- Thick display with extra firm circuit board mounting
- Shock-deterrent design details:
  - Embedded infrared window
  - Embedded system connector
  - Embedded display window
- External bumpers

### A-cover consists of following unremovable parts:

- Dust and water resistance membranes over the microphone, speaker and buzzer
- Display window and keymat are ultrasonically welded to front cover

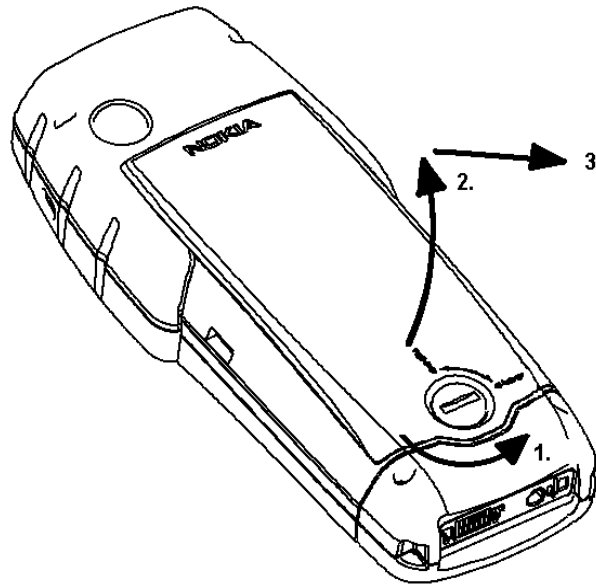
### B-cover consists of following unremovable parts:

- Watertight sealing of cover
- Watertight RF-connector
- Embedded infrared window
- Vibra Frame

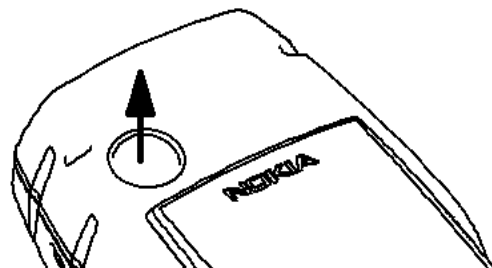
*Note: If any of these unremovable parts is broken the whole cover needs to be changed!*

## Disassembly instructions

### Remove battery cover

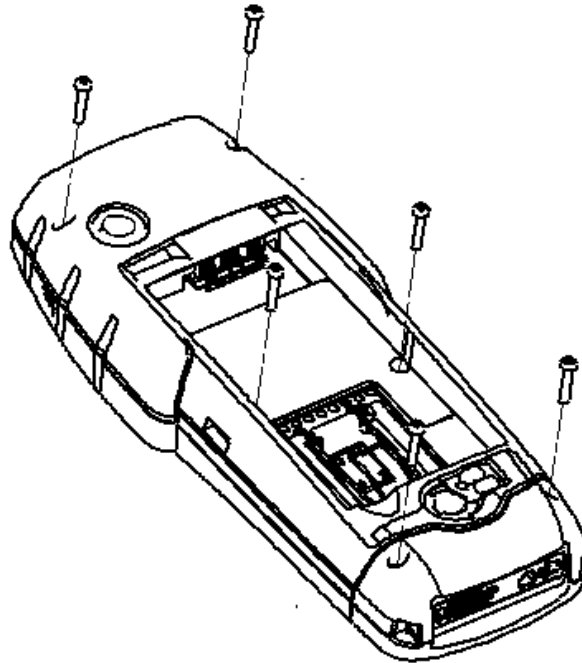


### Remove dust cap



**Remove 6 screws, Torx #6 (2pcs M1.6 screws, 4pcs PT screws)**

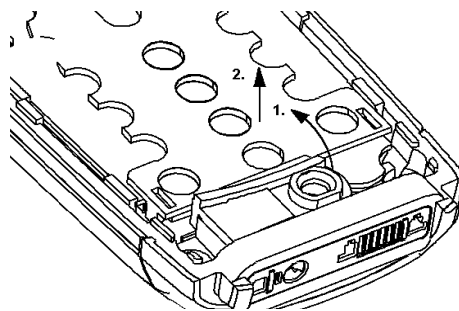
Center screws (2pcs) are hidden under warranty seal that needs to be broken.

**Remove A-cover**

Hold the phone assembly together and place it into table A-cover upwards. Carefully lift the A-cover upwards.

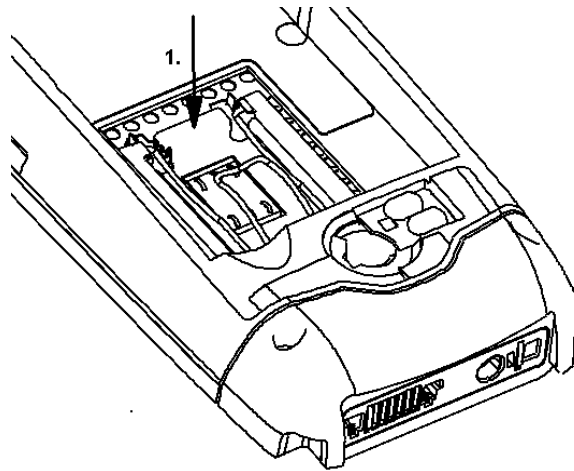
**Remove microphone boot**

Lift from microphone end first and then remove the boot.

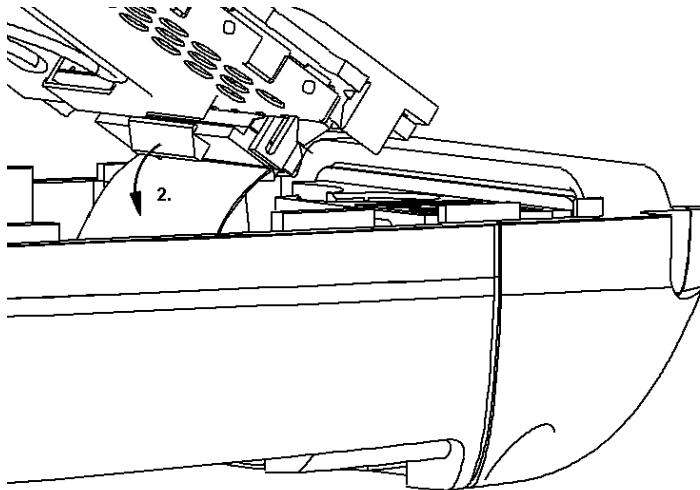


## Remove PWB

Push PWB's system connector end loose from B-cover by gently pushing the shielding can from indicated point. Note that PWB is connected to B-cover / system connector by cable.

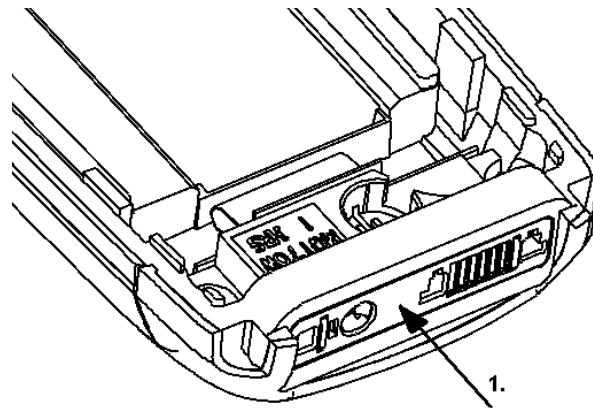


Hold the PWB so that mating connector of system connector cable can be accessed. Mating connector has a "flip lock" that needs to be opened to detach cable.



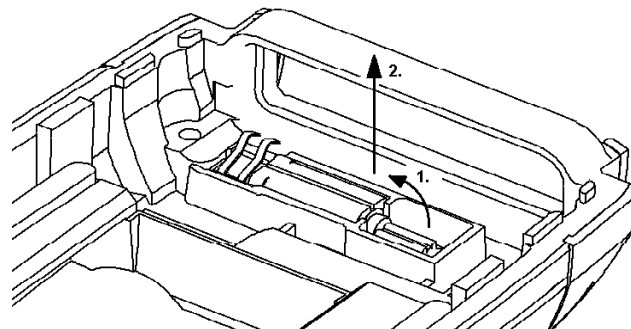
## Remove system connector

Push the connector housing with finger preferably. If a tool is being used it should not be made of hard material nor have sharp edges in order to avoid damages to contacts.



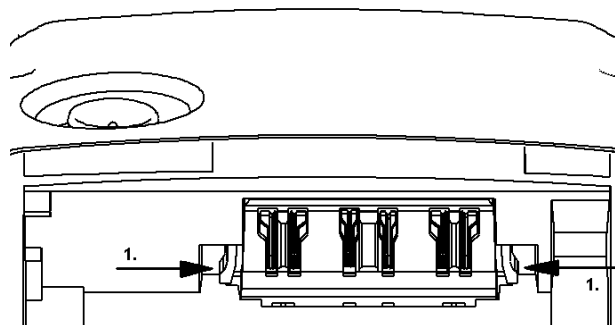
**Remove vibrating motor**

Lift the counterweight end of motor first and then pull the motor upwards.

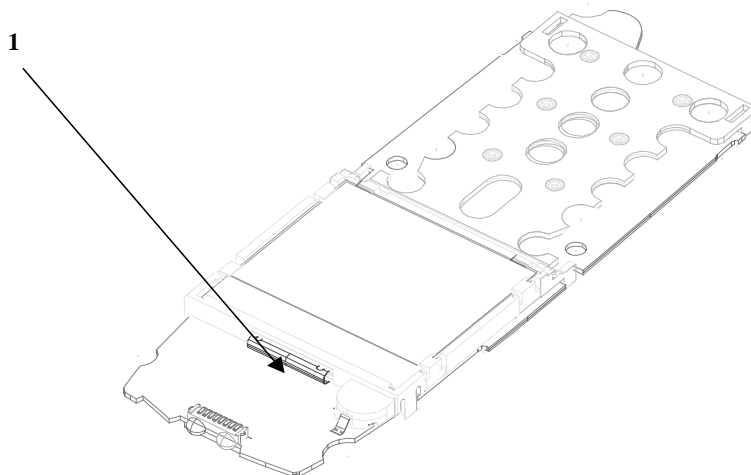


**Removing of battery connector**

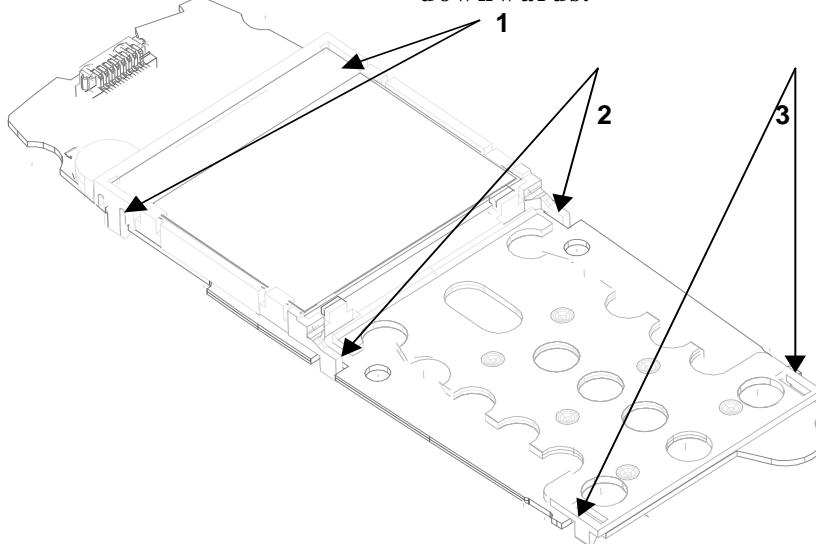
Squeeze the snap hooks simultaneously with tweezers and remove connector.



**Loosen the foil by heating the pads (1) on pcb and lift the Lightguide up.**



**lighguide 180 degrees. So that LCD is downwards.**





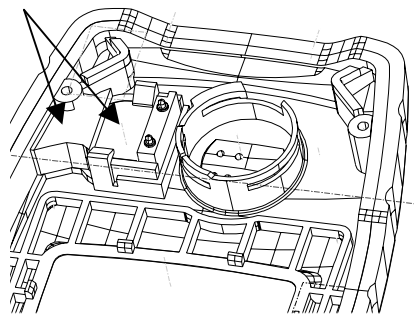
## A-COVER

### Disassembly of buzzer and rubber for buzzer:

Pick buzzer from rubber for buzzer. Use pair of tweezers to pick up buzzer. Pick from plastic part. **NOTE!** Try to avoid touch contact pins (poco pins). Bending of the contact pins is not allowed!

Pick rubber for buzzer from A-cover. Do not touch to waterproof gasket inside the A-cover.

Rubber for buzzer and buzzer.



### Disassembly of speaker, speaker gasket and speaker adapter:

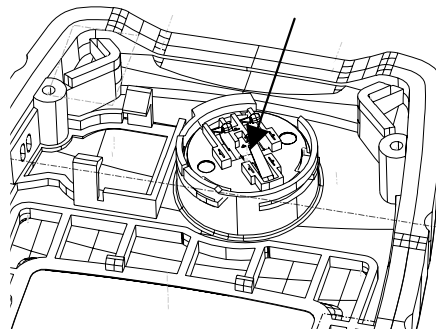
Push speaker adapter slightly against A-cover and same time turn adapter clockwise until upper rib from the adapter is in sight. Flip adapter slightly from rib and pick adapter from A-cover.

Pick speaker element from A-cover.

*NOTE! Do not bend speaker element contact springs!*

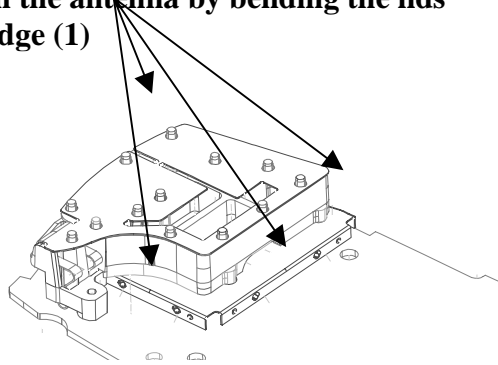
Pick speaker gasket from A-cover. **NOTE!** Do not touch waterproof gasket in the A-cover!

Speaker, speaker gasket and speaker adapter.



## Antenna

**First unscrew the fastening screw of PIFA.  
Loosen the antenna by bending the lids  
each edge (1)**



## Re-Assembly instructions

Connect grounding wristband and use ESD-gloves.

### A-cover assembly:

Check visually that membranes in A-cover are in good condition.

Place buzzer gasket into A-cover. See special assembly method shown below .  
Place buzzer inside the buzzer gasket. Notice the right assembly direction shown below.

*Note: Do not bend the springs of buzzer.*

Place the left part of buzzer gasket first against A-cover side and keep it in place.

Then place other parts of the gasket into the right position

Make sure that both buzzer and gaskets are properly under the bracket



**Buzzer Gasket**

Place buzzer inside buzzer gasket from right to left direction

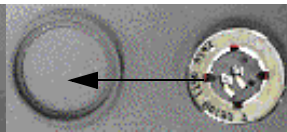


**Buzzer**

Place speaker inside gasket ring. Then place speaker into A-cover, springs upwards, see below.



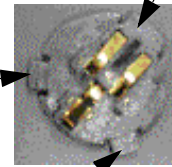
**Speaker**



Speaker and Gasket ring  
Fit together and place in A-cover

2. Pull adapter to the right against right side of the speaker foxhole and slide this overhang into speaker foxhole.

**Speaker Adapter**



1. Slide this overhang into groove of speaker foxhole, the widest overhang is in one o'clock position.

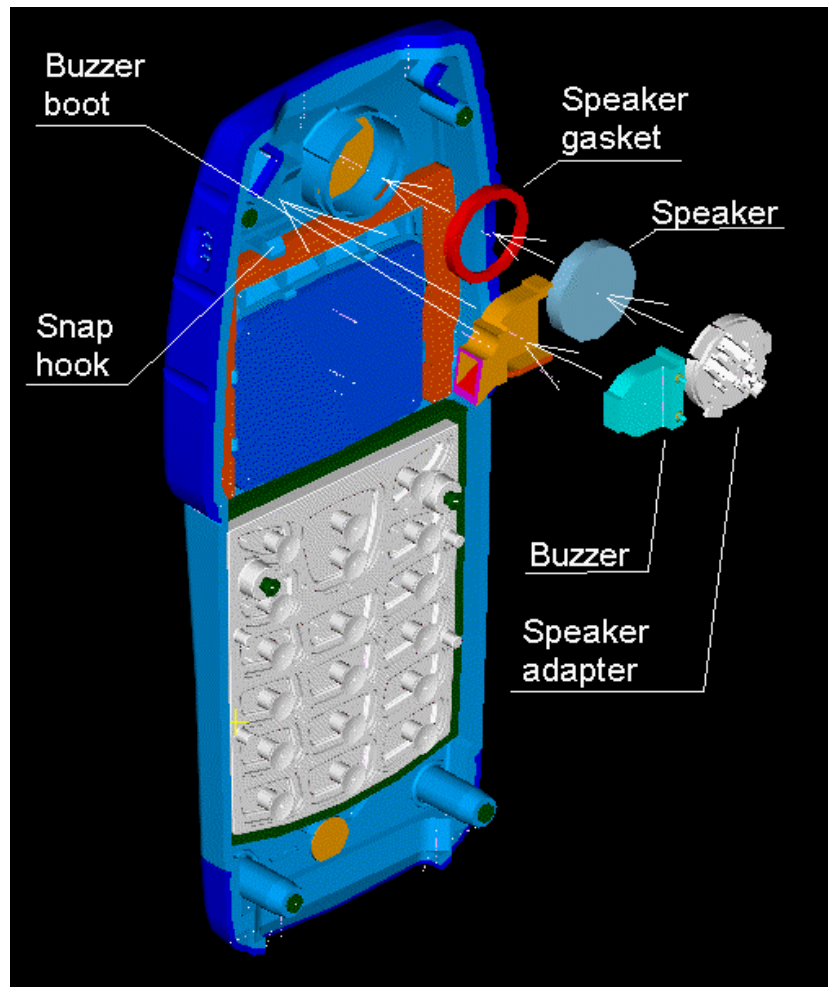
3. Press adapter lightly down and turn adapter to the left until this overhang is in eleven o'clock position.

Take speaker adapter with adapter tool and place the adapter into A-cover as shown below. Care should be taken not to damage the springs.



Earphone adapter in position in the A-cover

**Earphone adapter**



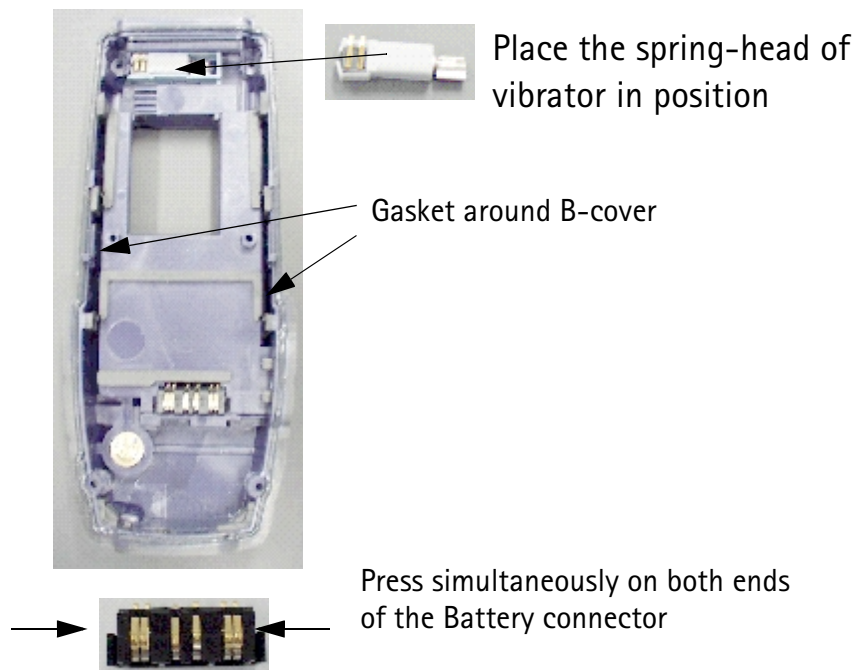
Exploded view of A-cover assembly.

### B-cover assembly:

Check that silicone gasket around B-cover is in good condition (burs, cuts etc.). **Do not press the gasket!** See below.

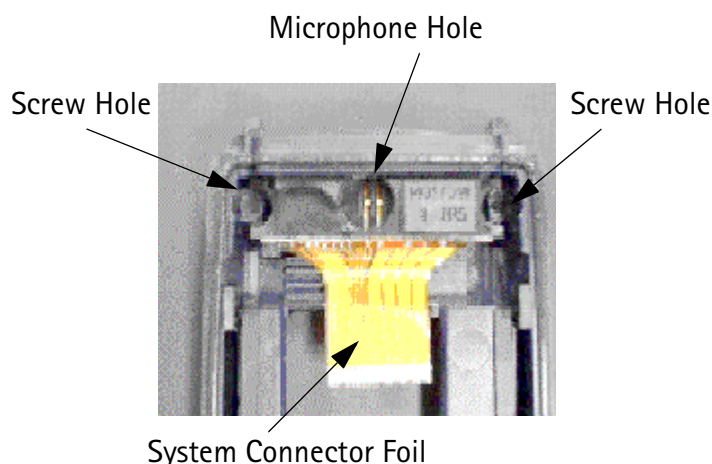
Place battery connector into B-cover, see below. Press simultaneously both ends of battery connector into position. **Do not bend the springs of battery connector!** Battery connector makes a click sound when correctly placed.

### Assembly of vibrator and battery connector



**Assembly of Vibrator and Battery**

## Assembly of system connector



### Assembly of system connector

Place vibrator into vibrator frame springs upwards and springhead first almost vertically, see above. When the springhead is in position, then press vibrator fully inside vibrator frame. Check that vibrator boot fits properly.

**Note:** Do not touch springs of vibrator with fingers!

Mount system connector module after checking its gasket (look for cuts, burs etc.). First hold the connector so that microphone hole is upwards, then press firmly the both ends of FP-cable housing with your thumbs. Holes for screws need to be fully visible. **Do not fold/ break the flex of the connector!**

Integrate microphone and microphone boot, contacts of microphone must be visible. Mount microphone boot with microphone to the system connector. Microphone boot is also used for positioning the PWB and must fit properly! See below.

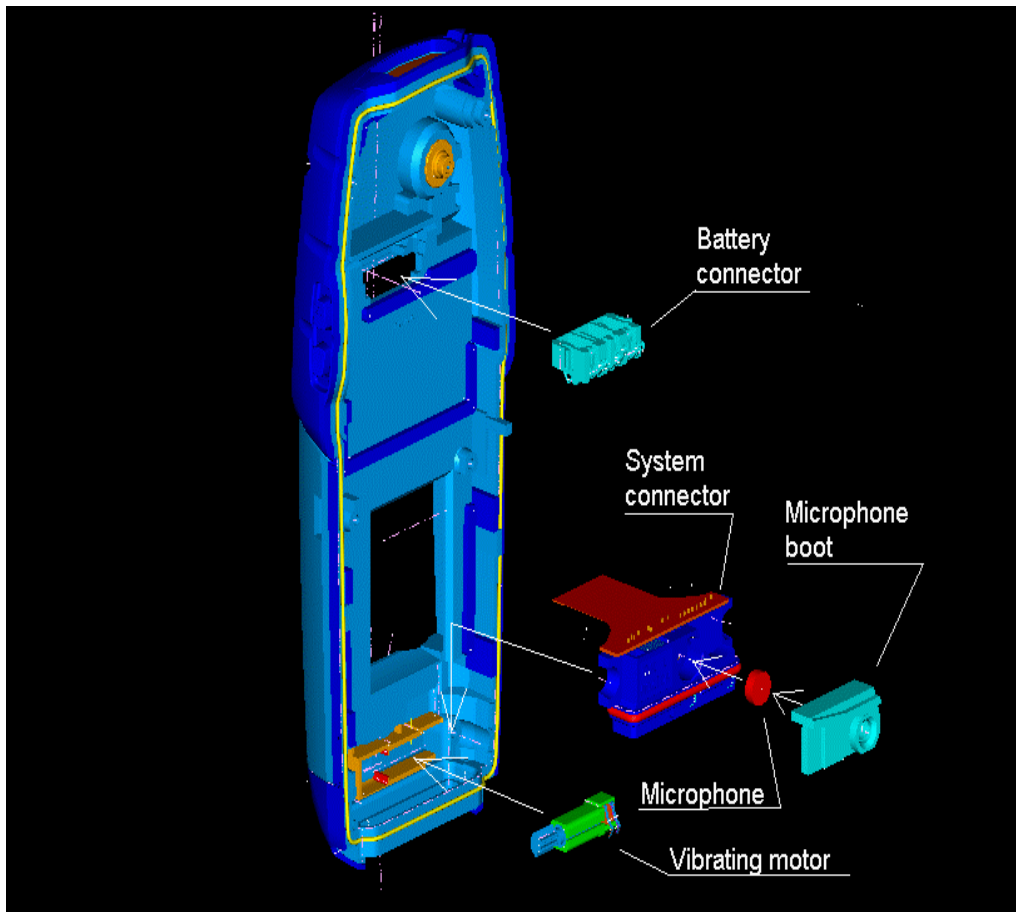
### Placement of microphone in microphone boot

Place the microphone into the microphone rubber with assembly tweezers ensuring the contact surfaces are visible.



Turn the microphone boot around and place it into the system connector hole.

**Exploded View of B-cover.**



**View of B-cover**



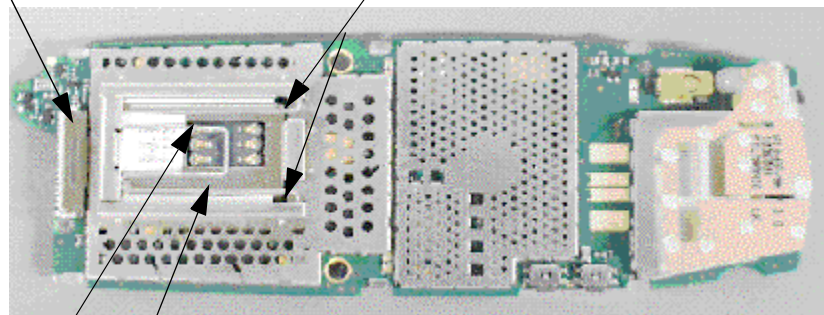
**PWB assembly:**

Press internal antenna smoothly and vertically on PA can frame, do not touch Irda with antenna. Make sure all snap fixings are locked and antenna springs are in correct position. Be careful not to bend springs during mounting. Fasten the antenna by screw (code 6290023), (head of screwdriver: Torx 6, moment: 10 Ncm). Screw vertically to screw hole.

Mount SIM-card locking wire on BB-can lid, see figure 9. Notice assembly direction of SIM-card locking wire, see below.

**Mounting and locking of SIM spring**

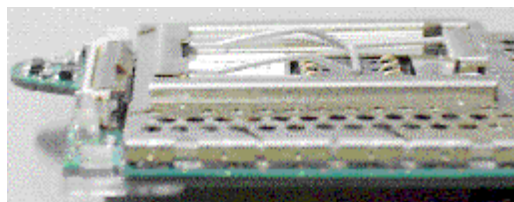
Flap lock of Flex. connector      Thread the heads of SIM spring to these holes of BB-can



Lock SIM spring under BB-can lid flanges by pressing together the middle wires.

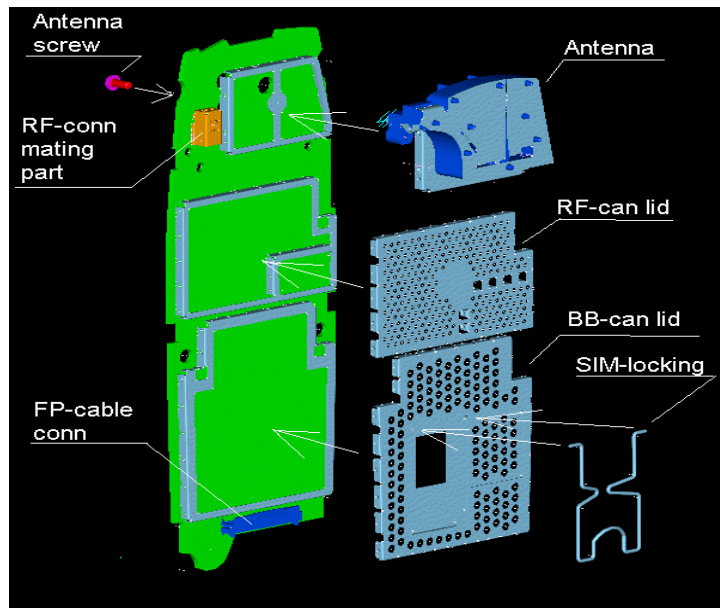
**Mounting and locking of SIM spring**

**Position of SIM card locking spring**



Position of SIM card locking spring

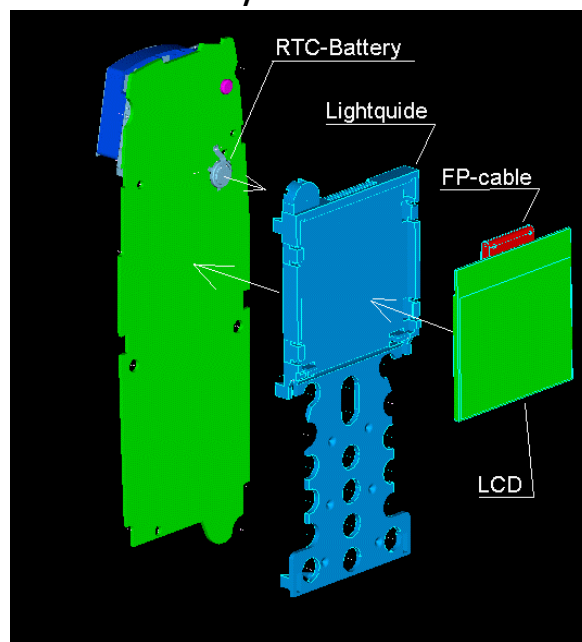
### Exploded view of PWB assembly



### LCD module assembly:

LCD module is fixed to PWB by snap fixings (6 pcs) and by soldering of flexible printed cable (FP-cable).

### Exploded view of LCD module assembly



#### **Exploded view of LCD-module assembly.**

Open flap lock of flex connector (system connector), Place the connector in . Connect system connector's flex to connector slot and lock the connector by pressing plastic flap 90 degrees.

Note: Do not fold/ break the flex!

**Final assembly:**

Place the phone module on B-cover between shock absorption rubbers, overhangs in both side of the module must snuggle properly inside the rubbers. Place first right side slightly diagonally inside right side rubber and then press the module vertically down until left side overhang is inside left side rubber, see below. Battery & antenna connectors can be damaged during PWB placing if done carelessly. Make sure that the volume keys and the power keys in B-cover take contact to keys in module!

**Phone module assembly**

Ensure that the microphone with microphone boot is correctly located.

Blow dust and dirt etc. away by using an ionising pneumatic air when necessary

**Note:** Don't blow directly to earphone and buzzer!

Make sure that the module is properly in position in B-cover between the shock absorption rubbers.

Module must not lay on the microphone rubber !

Turn the A-cover against the B-cover and place the covers vertically together.

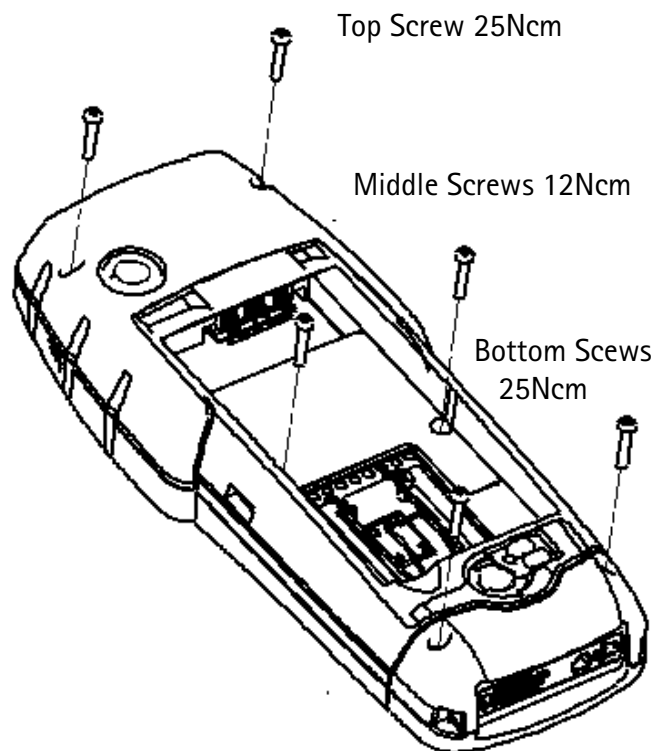
## Re- Assembly of A and B Covers

When assembling the A and B covers the following must be observed:

- All traces of previous screw seal should be removed before inserting new sealed screws.
- Once removed a sealed screw must not be re-used.
- Ensure screw are screwed vertically into screw holes.
- When using a powered screw driver the speed must be in the range 400-600rpm.

## Order of Tightening Screws

- Middle Screw (9480595) Torque setting : 12Ncm.
- Top Screws (6290111) Torque setting : 25Ncm.
- Bottom Screws (6290111) Torque setting : 25Ncm.



Final Assembly

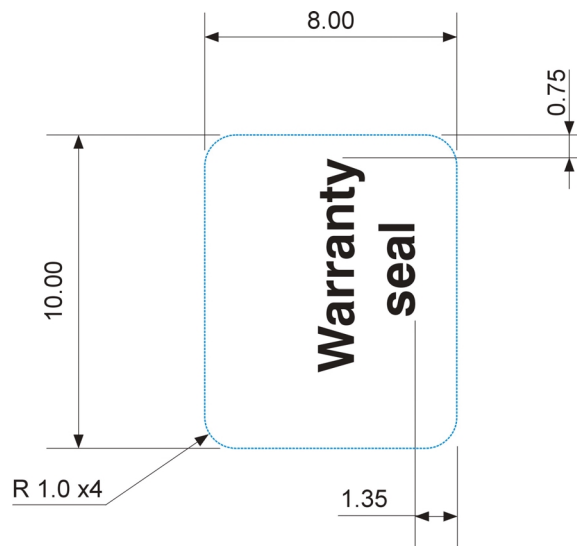
**Note:** Ensure the screws tighten up properly.

The A-Cover can be re-screwed approximately three times.

## Warranty Seal

Warranty seal (code: 9370554 SERVICE LABEL DMP05023 NHM-3)

It is recommended that the seal is placed on top of the right middle screw to deter customers from tampering with the screws and thus invalidating any warranty or jepodising the phone's water and dustproof integrity.



Warranty Seal



Example of warranty seal (9370554) placement

