



Trouble shooting guide, SP/ Mechanical

Applicable for T610, T618

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1 Explanations

1.1 Service functions in the software

The service menu will be accessed with the following key combination. Use the joystick.

⇒*←←*←*

They are as follows:

Service info

Service settings

Service tests

Text labels

The phones software has a built in service functionality that allows you to test some of the phones functions. *(See point 3 above)* It looks like this:

Display

Camera

LED/illumination

Keyboard

Polyphonic

Vibrator

Earphone

Microphone

Real time clock

Total call time

1.1.1 Reset

The phones' software has a possibility to reset the language and themes by pressing the following key combinations:

←0000⇒ (This combination will reset the language to English and sets the themes to default.)

←8888⇒ (This combination will reset the language to automatic and sets the themes to default.)

1.2 Liquid damage

1.2.1 Action

Make a general visual inspection for corrosion or oxidation caused by liquid damage. No further action should be taken for a liquid damaged phone. Handle the unit according to local company or GSP directives.

2 Appearance Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Check the front cover (*Fig. 2.1*), the battery cover (*Fig. 2.2*), the frame, (*Fig.23*) and the antenna cover assy (*Fig. 2.2*), for damage and if the parts fit correctly. Replace faulty components if necessary.
- Check the keyboard (*Fig. 2.4*) for damage, scratches, and if no key number or symbol occurs more than once. Replace it if necessary.
- Check the camera ring (*Fig. 2.5*) for scratches and if it fits correctly. Replace it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.



Fig. 2.1



Fig. 2.2



Fig. 2.3

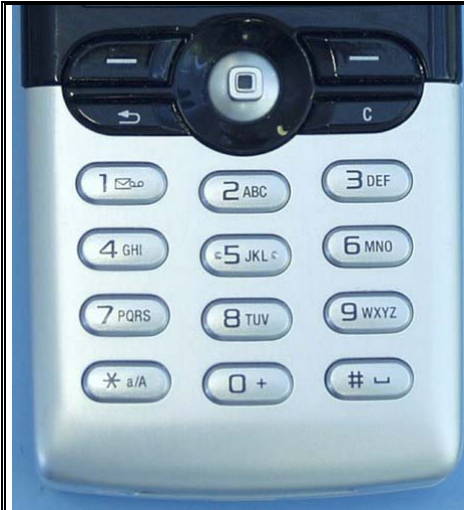


Fig. 2.4



Fig. 2.5

3 Alert Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

3.1 Vibrator

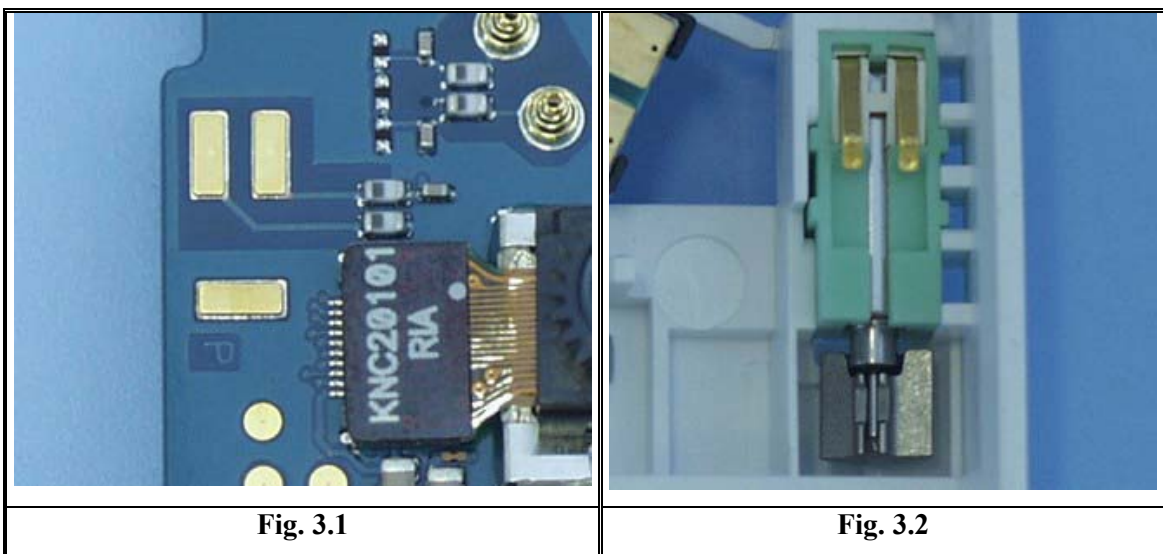
- Turn on the phone. Go to the service test menu; choose “Vibrator”. Press any key to check that the vibrator works properly.
- Check if the vibrator pads (*Fig. 3.1*) are dirty or oxidized. Clean them if necessary.
- Check if the vibrator (*Fig. 3.2*) is mechanically damaged, dirty or oxidized. Replace it if necessary.

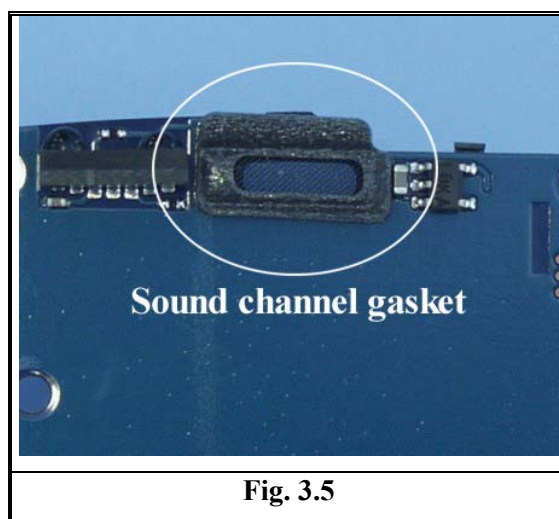
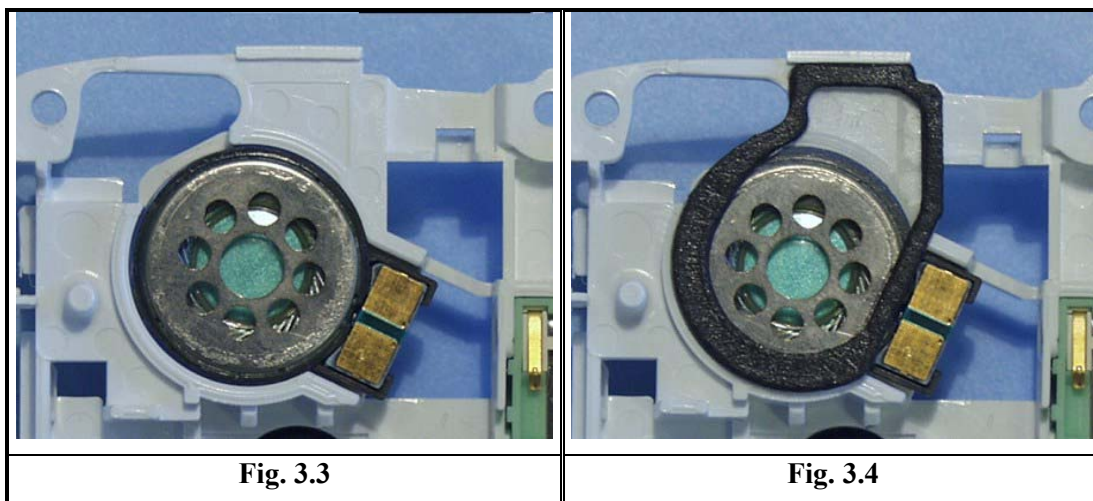
If the fault still occurs, handle the unit according to the local company or the GSP directives.

3.2 Polyphonic

- Turn on the phone. Go to the service test menu; choose “Polyphonic”. Press any key to check if the polyphonic ring signal works properly.
- Check if the speaker (*Fig. 3.3*) is mechanically damaged, dirty or oxidized. Replace it if necessary.
- Check if the speaker gasket (*Fig. 3.4*) is mechanically damaged or dirty. Replace it if necessary.
- Check if the sound channel gasket (*Fig. 3.5*) is mechanical damaged or dirty. Replace it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.





4 Audio Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

4.1 Earphone problems

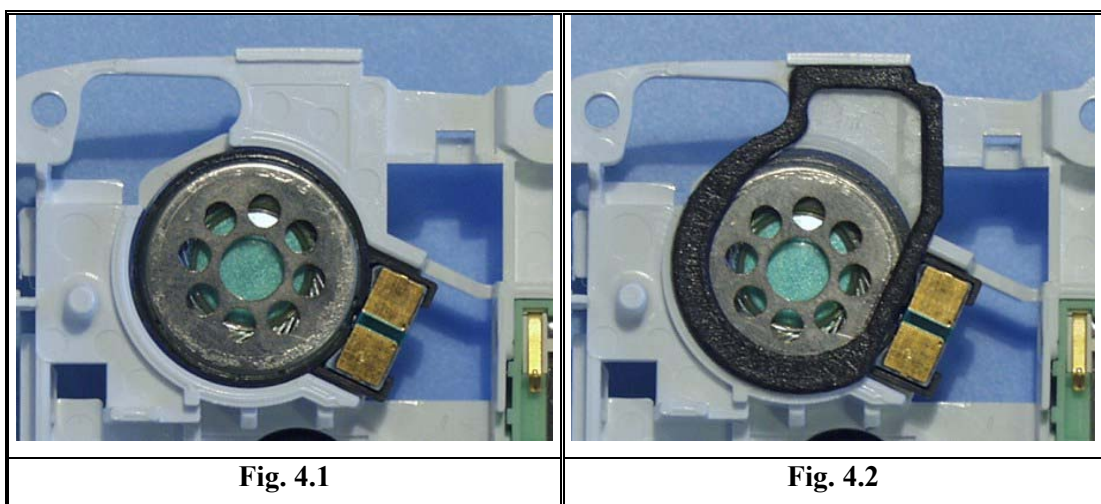
- Turn on the phone. Go to the service test menu; choose “Earphone” press any key to check if the speaker works properly.
- Check if the speaker (*Fig 4.1*) is mechanically damaged, dirty or oxidized. Replace it if necessary.
- Check if the speaker gasket (*Fig 4.2*) is mechanically damaged or dirty. Replace it if necessary.
- Check if the sound channel gasket (*Fig 4.3*) is mechanically damaged or dirty. Replace it if necessary.
- If the customer complains about echo-problems or high background noise (If the microphone picks up too much surrounding noise). Download SW “T610 TxPGA TRIMMING” from EMMA II, then run the microphone test in the service menu to verify that the microphone is working OK.

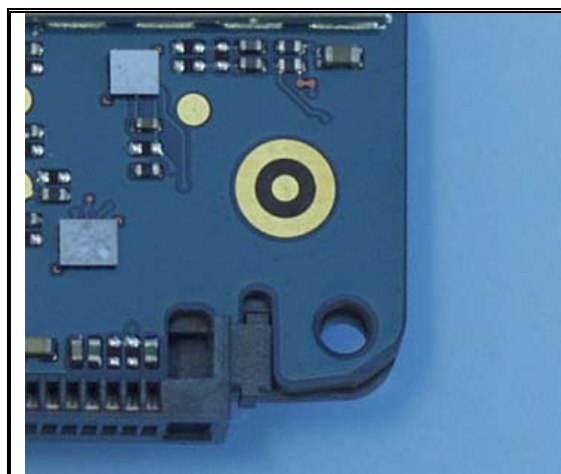
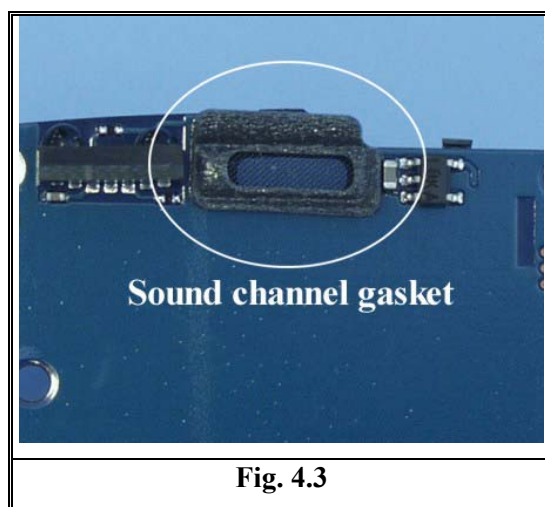
If the failure still occurs, handle the unit according to the local company or the GSP directives.

4.2 Microphone problems

- Turn on the phone. Go to the service test menu; choose “Microphone” (*an audio loop is activated*) check if the microphone works properly.
- Check if the microphone pads (*Fig. 4.4*) are dirty or oxidized. Clean them if necessary.
- Check if the microphone (*Fig. 4.5*) is mechanically damaged, dirty or oxidized. Replace it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.





5 Charging/Capacity

- Make a general visual inspection for corrosion or oxidation caused by liquid damage according to point 1.2

5.1 Charging

- Insert a working battery and connect a working charger to the phone. If the battery voltage is too low the phone will charge the battery without turning on the phone (this will usually take less than 10 minutes) and when the battery voltage is high enough the phone will be able to turn on and show charging in the LCD.
- Check if the system connector (*Fig. 5.1*) is mechanically damaged, dirty or oxidized. Replace it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

5.2 Capacity

- The standby time will be reduced if the light is turned on all the time, the bluetooth is turned on, or if the infrared is turned on.

6 Data Communication Problems

- Make a general visual inspection for corrosion or oxidation caused by liquid damage according to point 1.2
- If there is a problem with the communication through the system connector, for example if it is not possible to synchronize with MS Outlook, check if the system connector (*Fig. 5.1*) is mechanically damaged, dirty or oxidized. Replace it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

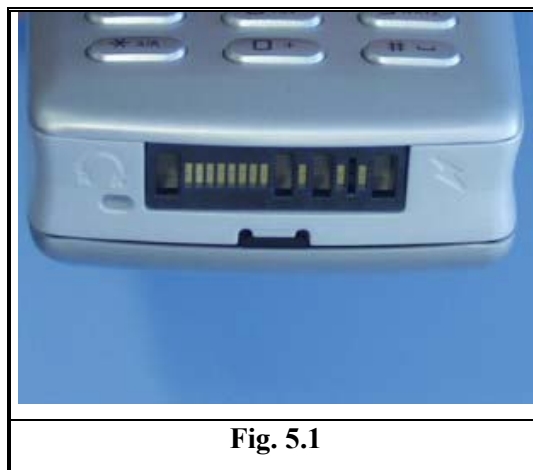


Fig. 5.1

7 Key problem

- Make a general visual inspection for corrosion or oxidation caused by liquid damage according to point 1.2

7.1 Side keys

- Turn on the phone. Go to the service test menu; choose “Keyboard”. Press all the side keys. The pressed key will be indicated in the LCD and a click is heard (no click is heard for the volume keys).
- Check if the volume keys (*Fig. 7.1*), the camera key (*Fig. 7.1*), the Internet-access key (*Fig. 7.2*), and the on/off key (*Fig. 7.3*) work properly and if the mechanical response feels normal. Replace the volume keys, the camera key, the Internet access key or the on/off key if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

7.2 Keyboard

- Turn on the phone. Go to the service test menu; choose “Keyboard”. Press all the keys. The pressed key will be indicated in the LCD and a click is heard.
- Check if the mechanical response feels normal and that all the keys have been showed in the LCD.
- Check if the dome foil assy (*Fig. 7.4*) is mechanically damaged, dirty or oxidized. Replace it if necessary.
- Check if the keyboard flex-film is fitted correctly into the FPC connector (*Fig. 7.5*) and check if the FPC connector is closed.
- Check if the keyboard (*Fig. 7.6*) is mechanically damaged or dirty. Replace it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

7.3 Joystick

- Turn on the phone. Go to the service test menu; choose “Keyboard”. Move the joystick in all directions (*do not forget to press it downwards*). The moved direction will be indicated in the LCD and a click is heard.
- Check if the mechanical response feels normal and that all directions have been indicated in the LCD.
- Check if the joystick button (*Fig. 7.7*) is mechanical damaged or dirty. Replace it if necessary.

Note: When replacing the joystick button remember to replace the joystick dust gasket as well.

If the failure still occurs, handle the unit according to the local company or the GSP directives.



Fig. 7.1



Fig. 7.2



Fig. 7.3



Fig. 7.4

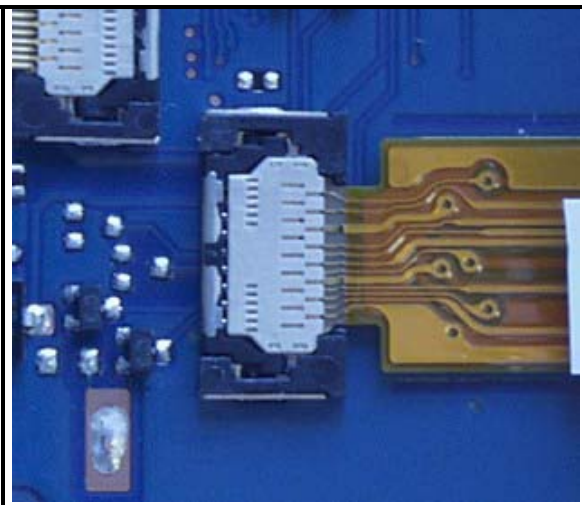


Fig. 7.5

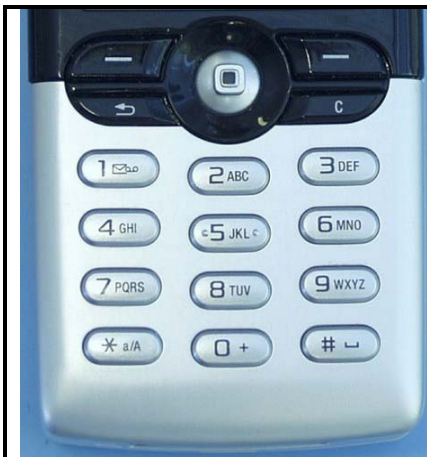


Fig. 7.6

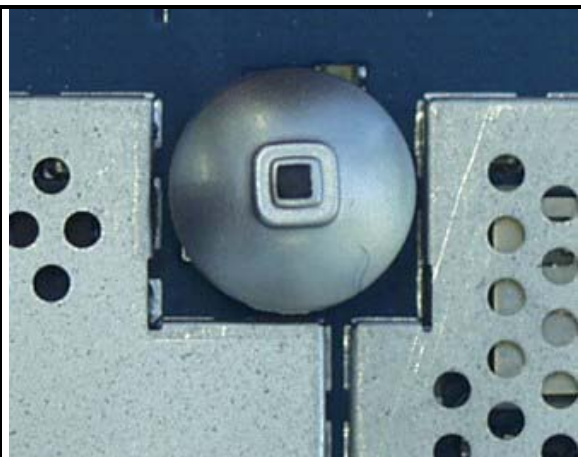


Fig. 7.7

8 LCD/Illumination

- Make a general visual inspection for corrosion or oxidation caused by liquid damage according to point 1.2

8.1 LCD

- Turn on the phone. Go to service test menu; choose “Display”. You should see a colour pattern.
- Check if the LCD works properly and if there are missing lines or discolouring. Replace it if necessary.
- Check if the LCD flex-film fits correctly into the FPC connector (*Fig. 8.1*) and check if the FPC connector is closed.

Note: When replacing the LCD the contrast must be checked. If necessary, adjust the contrast in the service settings menu. Remember to store the setting with “SAVE”.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

8.2 Illumination

- Turn on the phone. Go to service test menu; choose “LED/Illumination”. The illumination should start flashing (~1Hz).
- Check if the LCD is lighting up properly. Replace the LCD if necessary.
- Check if the entire 8 key LED’s (*Fig. 8.2*) light up at the same strength. Replace the dome foil assy if necessary.
- Check if the keyboard flex-film fits correctly into the FPC connector (*Fig. 8.3*) and check if the FPC connector is closed.

Note: When replacing the LCD the contrast must be checked. If necessary, adjust the contrast in the service settings menu. Remember to store the setting with “SAVE”.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

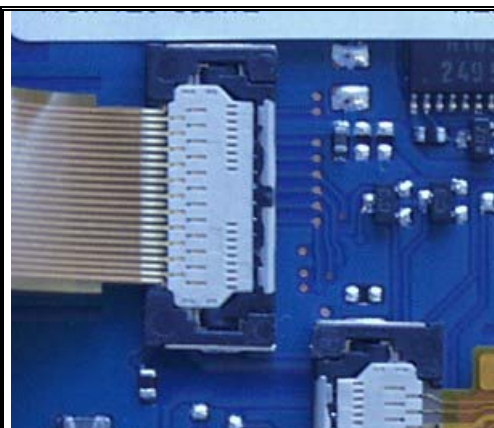


Fig. 8.1



Fig. 8.2

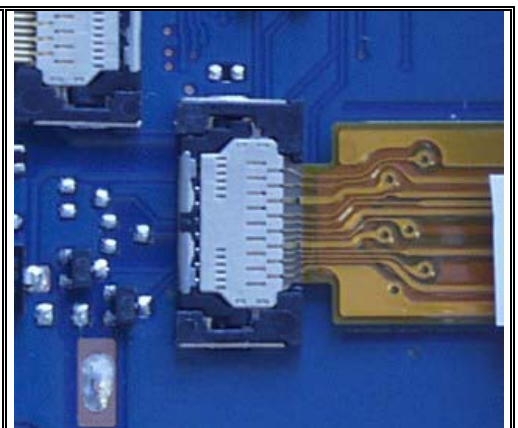
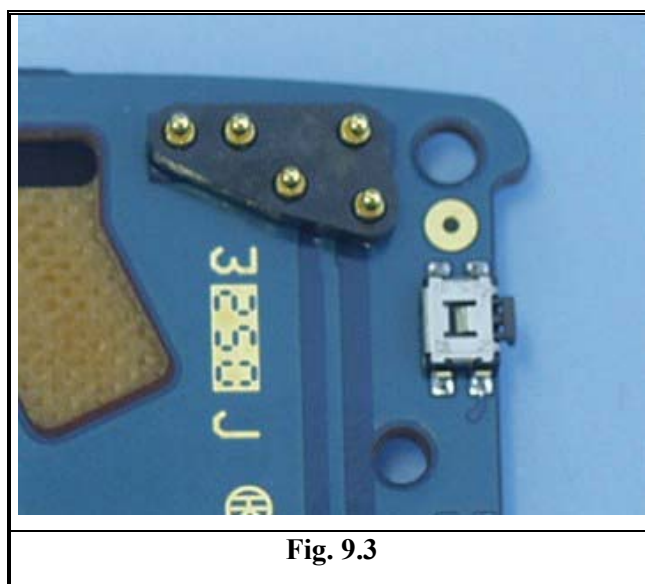
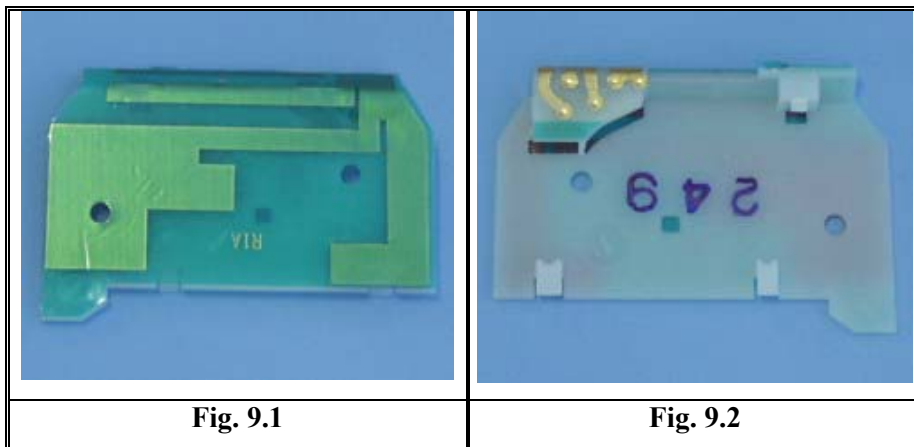


Fig. 8.3

9 Network

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Insert a correctly working SIM-card in the phone and turn it on. Check if the phone gets service and if the signal strength indicator shows a correct value on the display. Compare the value with a working phone.
- Check if the antenna assy (*Fig. 9.1-9.2*) is mechanically damaged, dirty or oxidized. Replace it if necessary.
- Check if the antenna connector (*Fig. 9.3*) is dirty or oxidized. Clean it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.



10 On/Off

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

10.1 Battery

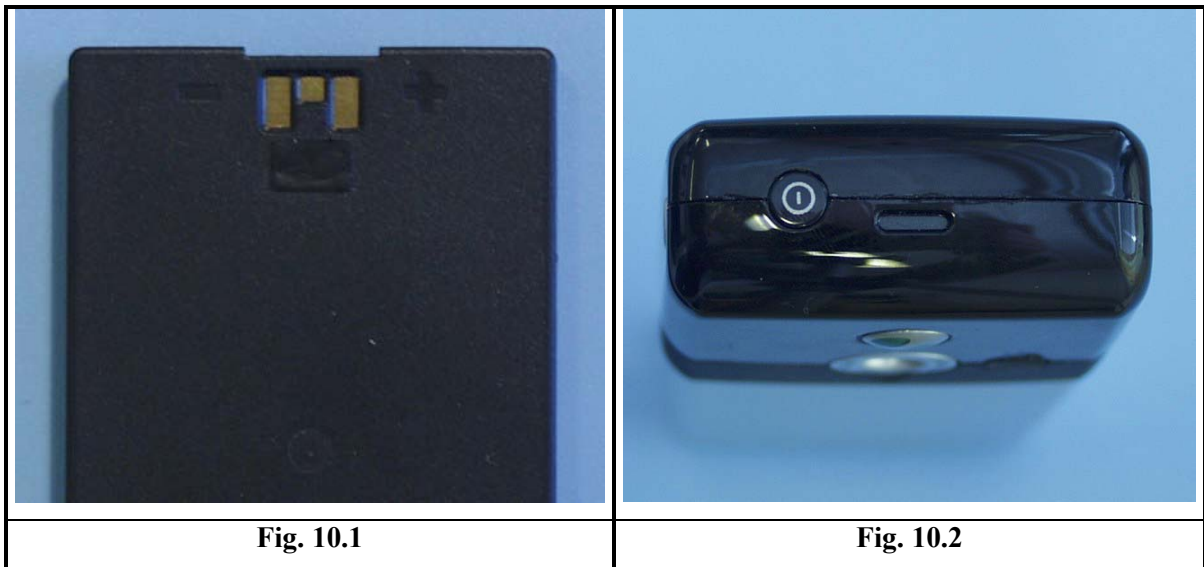
- Insert a working battery and connect a working charger to the phone. If the battery voltage is too low the phone will charge the battery without turning on the phone (this will usually take less than 10 minutes) and when the battery voltage is high enough the phone will be able to turn on and show charging in the LCD.
- Check if the battery pads (*Fig. 10.1*) are mechanically damaged, dirty or oxidized. Replace the battery if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

10.2 On/Off key

- Insert a fully charge battery, turn the phone on. If it fails;
- Check if the Power on/off key (*Fig. 10.2*) is mechanically damaged or dirty. Replace it if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.



11 SIM-Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Insert a functioning SIM card. If the display shows “Insert card”, there is a SIM problem, if it shows “Insert correct card”, the phone might be SIM locked in this case try to use a test SIM card.
- Check if the SIM-lock lid (*Fig. 11.1*) is mechanically damaged, dirty or oxidized. Replace it if necessary.
- Check if the SIM-reader (*Fig. 11.2*) is dirty or oxidized. Clean it if necessary.

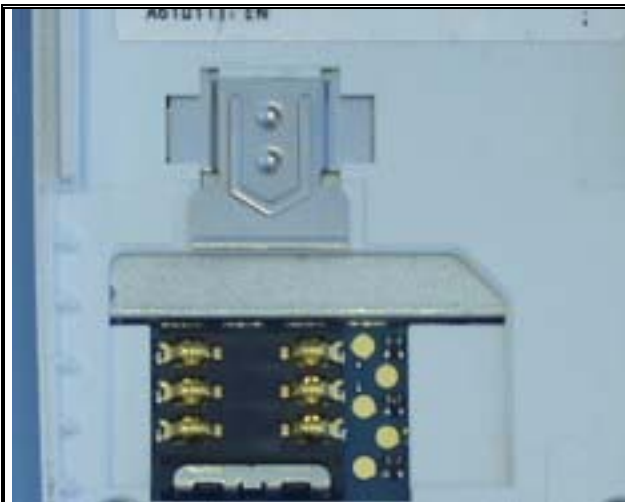


Fig. 11.1

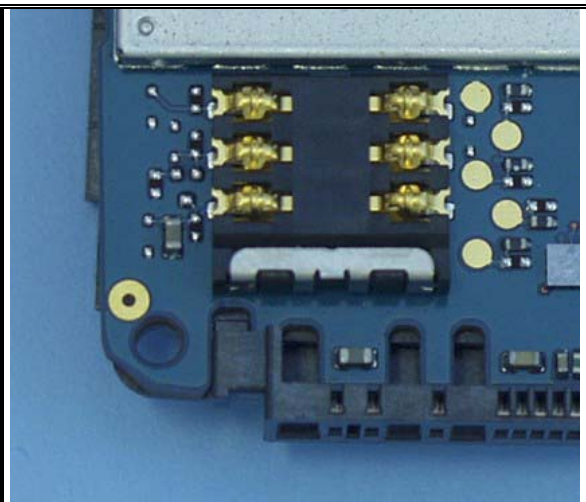


Fig. 11.2

12 Other

12.1 Camera Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Turn on the phone. Go to the service test menu; choose “Camera”. The viewfinder will be visible in the LCD.
- Check if the camera module (*Fig. 12.1*) is working properly; verify the viewfinder functionality in the LCD. Check if there are black spots and if the picture is in focus. Replace the camera module if necessary.

Note: When replacing the camera module, check if the camera module gasket (*Fig. 12.2*) is damaged in any way. Replace it if necessary.

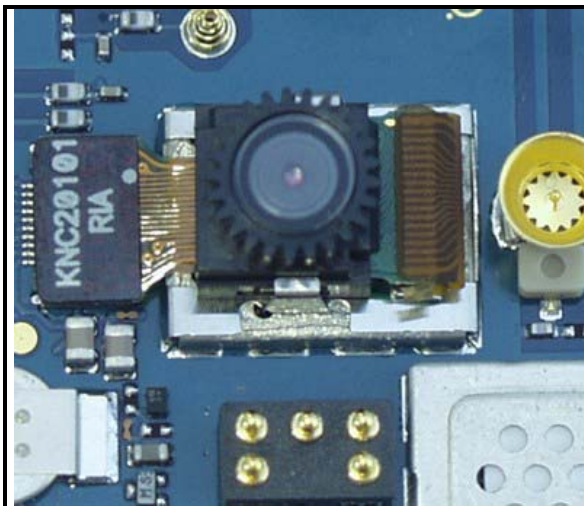


Fig. 12.1

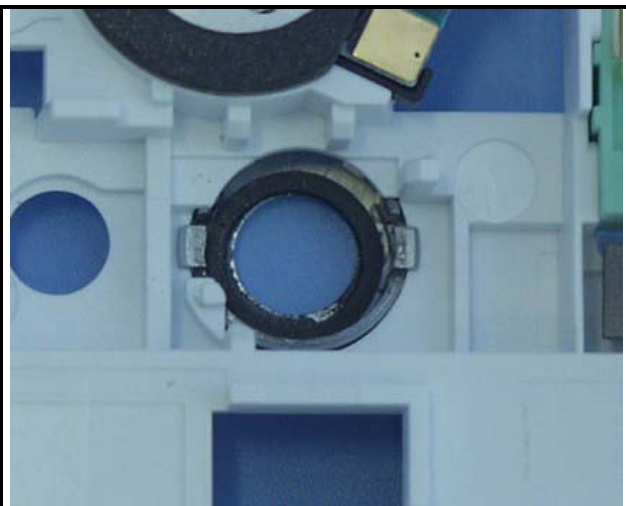


Fig. 12.2



13 Software Problems

- If there are problems with the response of the keypad commands or spelling errors in the menu and the failure is not related to mechanical damage, make a master reset and flash the phone with the latest software from EMMA II.
- Checking the software revision can be done in the Service info, see chapter *Service functions in the software*.
Choose: Service info / SW information.
The Software revision and date will be indicated in the display.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

14 Revision History

Rev.	Date	Changes / Comments
A	2003-04-24	First release
B	2003-07-28	Updated chapter 4.1 Earphone problems