



Sony Ericsson

# Test Instructions

- mechanical -



*Sony Ericsson txt*  
*CK13i*



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**For general information about test procedures, refer to  
1220-1333: Generic Repair Manual - mechanical**

# 1 Pre-Test Preparations

## 1.1 Hardware

### 1.1.1 Water Indicator inspection

Before starting any tests the Water Indicator has to be checked.

The indicator is located as shown in this picture after having the Battery Cover Assy removed.



The other indicator is located as shown in this picture after having the Battery Cover Assy, Front Cover Assy and Rear Cover Assy removed.

If not affected by liquid, proceed to the 'Pre-Test Preparations' below.

If affected (red color) - handle the phone according to your local directives.





## Pre-Test Preparations

### 1.2 Software

#### 1.2.1 Software update

##### 1.2.1.1 Software version verification

Check the software versions of the phone to establish whether a software version update is needed:

- start up the phone and press the QWERTY Keypad, and input the order: **\*\*\*#7378423#\*\***
- select 'Service info'
- select 'Software info'
- check the software file revisions and, if needed, update as described below

**For more information, refer to 1220-1333: Generic Repair Manual - mechanical**

##### 1.2.1.2 Software version update

**Use the EC700 Micro USB cable for this purpose!**

**Do not use the SEPI equipment!**

Install a fully charged battery, ensure the phone is powered off and proceed as follows:

- open the Emma application and log in
- press and keep the "C" key down on the phone, connect the phone to the USB cable and when the USB icon appears in the Emma window, release the "C" key
- select the appropriate service and follow the on-screen instructions

#### 1.2.2 Phone lock reset

Install a fully charged battery, ensure the phone is powered off and proceed as follows:

- open the Emma application and log in
- press and keep the "C" key down on the phone, connect the phone to the USB cable and when the USB icon appears in the Emma window, release the "C" key
- when prompted, select 'Phone Lock Reset'
- 'Success' will be displayed on the USB icon when the phone lock code has been reset to '0000'



## 2 Tests

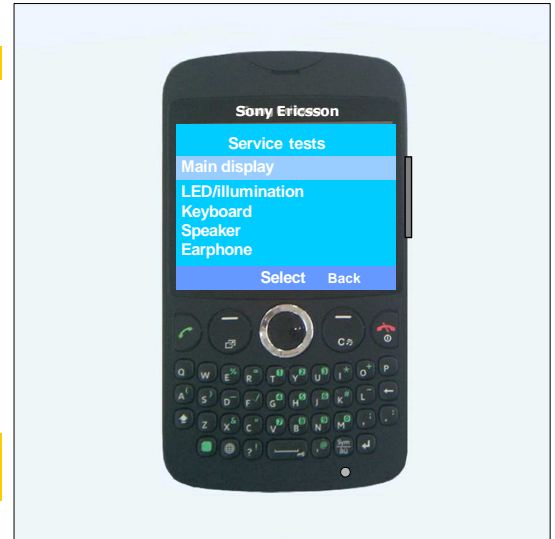
### 2.1 Service Test Mode

**All service tests can be carried out without a SIM card!**

Start up the phone and enter the service menus:

- Press the QWERTY Keypad in the order:  
\*##7378423##\*
- Select 'Service tests'
- Select one of the tests and follow the test instructions as described below
- To stop the test and return to the 'Service tests' menu, press the "Back" key.

**For more information, refer to  
1220-1333: Generic Repair Manual - mechanical**



**The pictures to follow will show a simplified basic phone for a general visualization of the service tests!**



## Tests

### 2.2 Service Tests

#### 2.2.1 Main display

**Minor variations in display brightness and color may occur between phones.**

**There may be tiny bright dots on the display, so called defective pixels and occur when individual dots have malfunctioned and can not be adjusted.**

**Two defective pixels are considered to be acceptable.**

The display will show several test patterns.

Make sure that there are no missing segments and that the colors and contrast are OK.

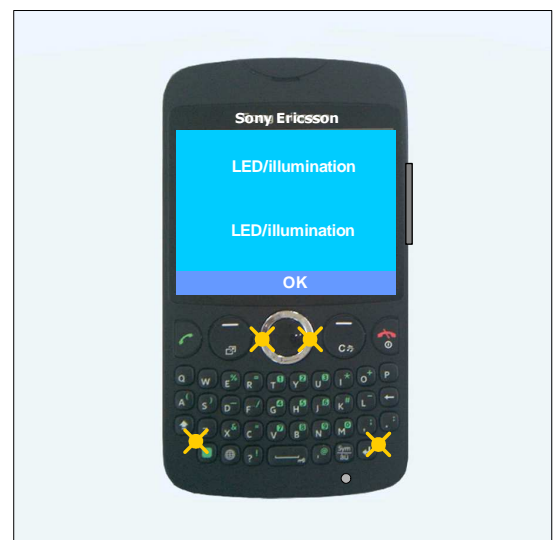


#### 2.2.2 LED/illumination

Check that the:

- LEDs under the QWERTY Keypad are turned on and off
- Display backlight is switched on and off for a short time.

Press the "OK" key return to Service tests menu.



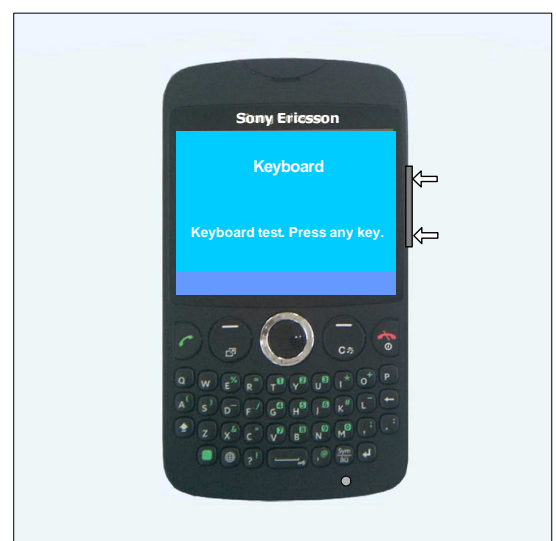
#### 2.2.3 Keyboard

Press all keys on the:

- QWERTY Keypad
- Volume key of the phone

Check that each pressure is confirmed in the display.

If the test stays idle for over 3 seconds, the Keyboard test will stop automatically and the phone will return to "Service tests" menu.



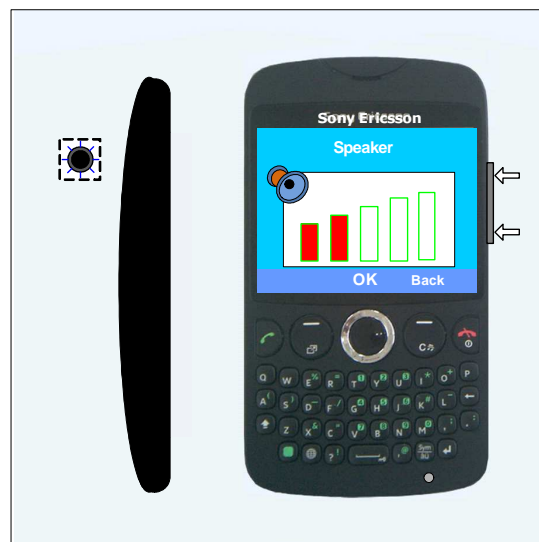
## Tests: Service Tests

### 2.2.4 Speaker

***Do not hold the phone close to your ear during this test!***

Make sure that the sound from the speaker port on the back of the phone is emitted loud and clear and that the test include maximum volume.

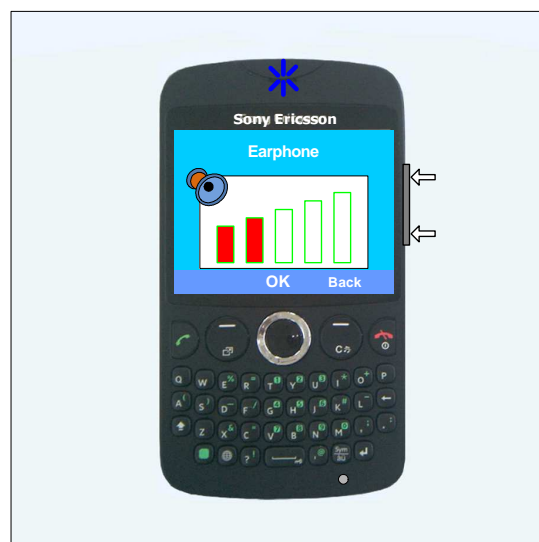
Press the Volume up/down key to adjust speaker volume.



### 2.2.5 Earphone

Make sure that the sound from the Earphone port on the top of the phone is emitted loud and clear and that the test include maximum volume.

Press the Volume up/down key to adjust earphone volume.



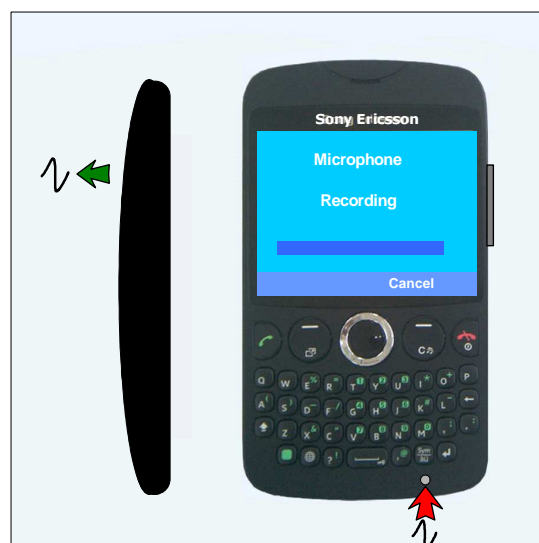
### 2.2.6 Microphone

***The previous test, 'Speaker', should have been successfully carried out before doing this test!***

The phone will start to record and after approximately seven seconds the sound is played back in the Speaker. Speak into the microphone during the 'Microphone Recording' phase.

Check the quality by listening to the recording from the speaker during the 'Microphone Playing' phase.

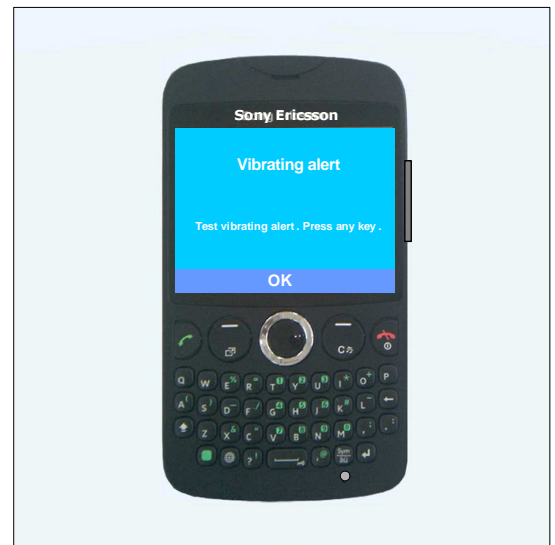
After the test finishes, it will return to Service tests menu automatically.



## Tests: Service Tests

### 2.2.7 Vibrating alert

Press any key and the vibrator gets activated three times.  
Press the "OK" key return to Service tests menu.

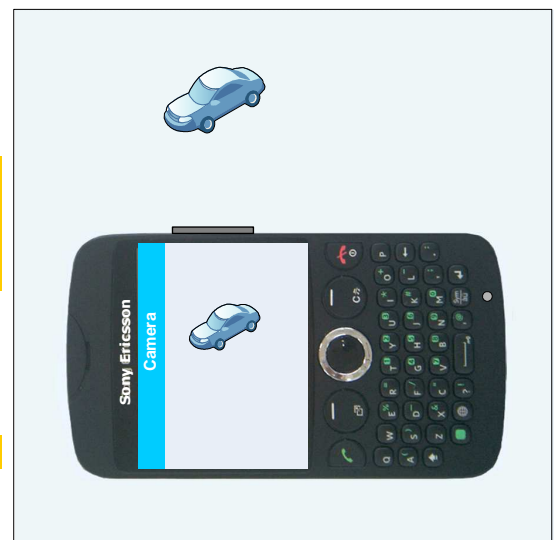


### 2.2.8 Camera

**Minor variations in image appearance may occur between phones, but is not uncommon and should not be regarded as an indication of a defective camera module!**

Aim the camera (located back of the phone) at an object and check the quality of the image shown in the display.

**Photos cannot be taken during this test!**

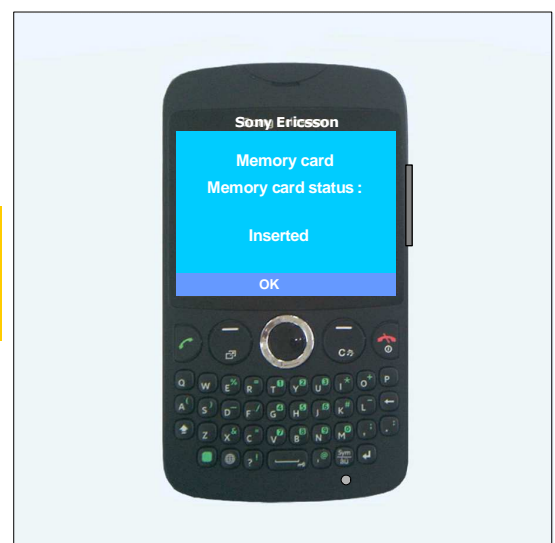


### 2.2.9 Memory card

**A memory card should be inserted in the phone before the start of this test!**

**The memory card holder is accessible after having the Battery Cover Assy removed!**

The phone should detect that the memory card is inserted  
Press the "OK" key return to Service tests menu.





## Tests: Service Tests

### 2.2.10 FM radio

**A Portable Hands-Free (PHF) has to be connected to the Audio Jack prior to this test!**

Use the QWERTY Keypad to enter the frequency of an FM station known to be good regarding reception.

Listen to the FM station and verify that the sound quality is as good as can be expected.

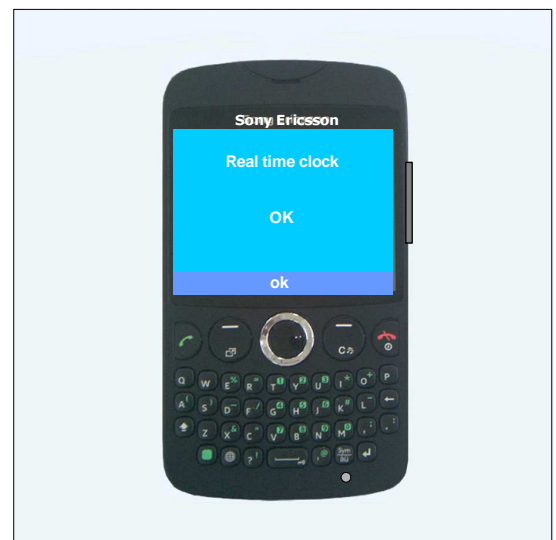
Press the "OK" key return to Service tests menu.



### 2.2.11 Real time clock

During the actual test the text 'Please wait' is displayed, then followed by a message stating whether the test was OK or not.

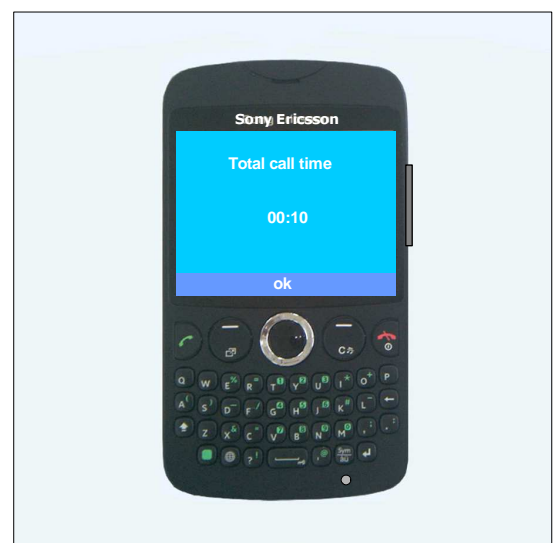
Press the "OK" key return to Service tests menu.



### 2.2.12 Total call time

The total call time is displayed in the format MM:SS (minutes: seconds).

Press the "OK" key return to Service tests menu.



## Tests: Service Tests

### 2.2.13 Bluetooth

**During this test, the distance between the phone and the target Bluetooth device must be 1.5 to 5 meters!**

**Make sure the target Bluetooth device is enabled and visible always!**

The Bluetooth test will be done in following sequences:

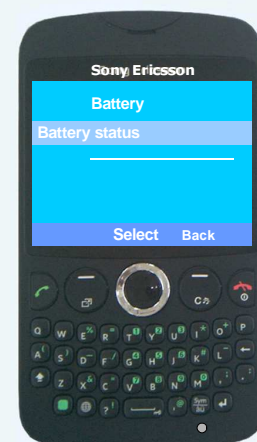
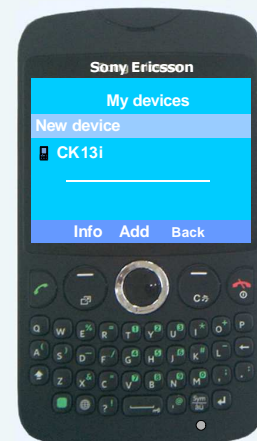
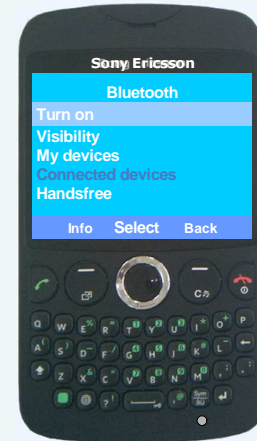
- Step 1: Select "Turn on" to turn on the Bluetooth;
- Step 2: Select "My devices" and then select "New device" to search new devices;
- Step 3: Select the Target Bluetooth Device to set up a link;

Step 4: Identify the same pairing passcode is displayed on both phone and Target Bluetooth Device, then select "Yes" on both of them to establish a link;

Step 5: If a link can be established, the Bluetooth function is regarded to be fully functional;

Step 6: Press the "Back" key and then select "Turn off" to turn off the Bluetooth.

Press the "Back" key return to Service tests menu.



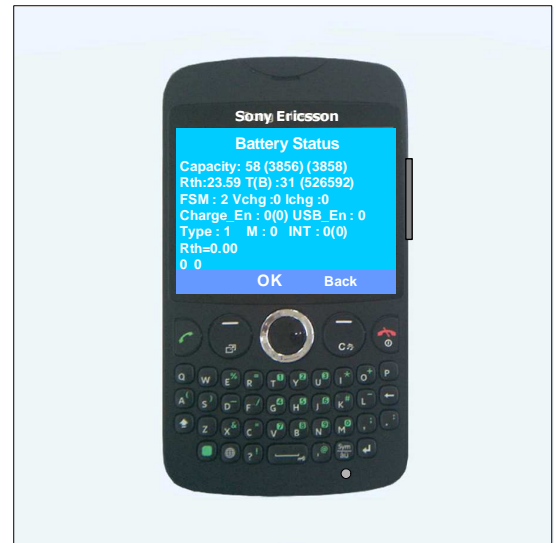
### 2.2.14 Battery

Select 'Battery'

Select 'Battery status'

## Tests: Service Tests

The display will show battery status.

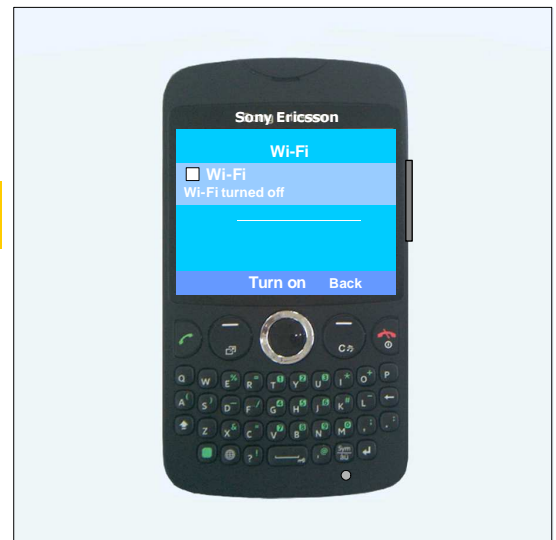


### 2.2.15 Wi-Fi

**Make sure there is WLAN network before performing this test.**

The Wi-Fi test will be done in following sequences:

- Step 1: Select "Wi-Fi" to turn on the Wi-Fi;
- Step 2: Available WLAN networks will be found and listed;
- Step 3: Connect to the Target WLAN network;

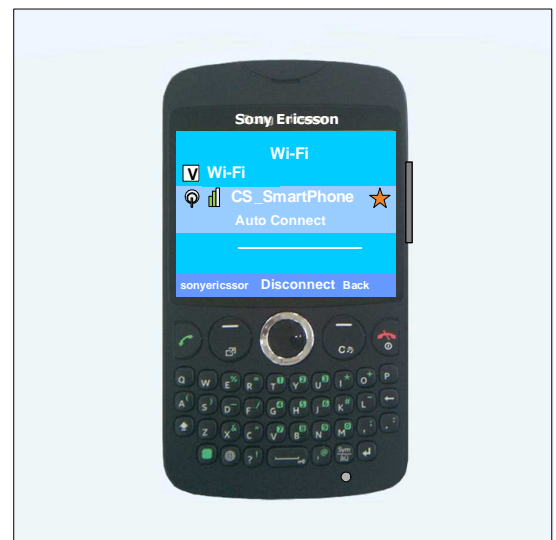


Step 4: Select the "sonyericsson" to connect to "www.sonyericsson.com";

Step 5: When connection succeeded, the Wi-Fi function is regarded to be fully functional;

Step 6: Disconnect the Target WLAN network, and turn off the Wi-Fi;

Press the "Back" key return to Service tests menu.



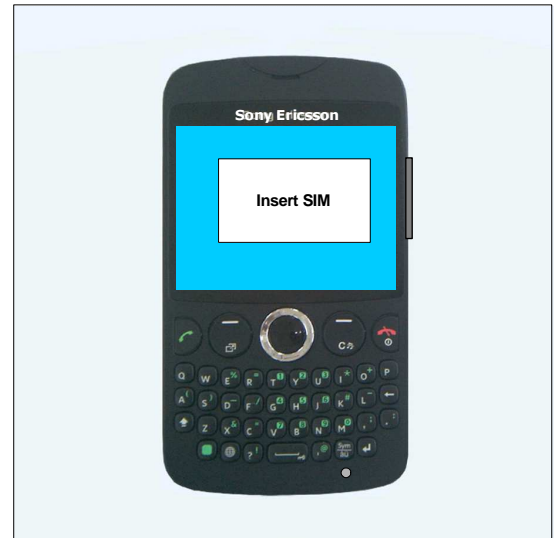
## Tests

### 2.3 Manual Tests

#### 2.3.1 SIM

Verify that the phone can detect a SIM card:

- insert a SIM card, install a battery and start the phone
- if the SIM card is detected by the phone, the start-up procedure will continue
- if not detected, the message 'Insert SIM' will be displayed

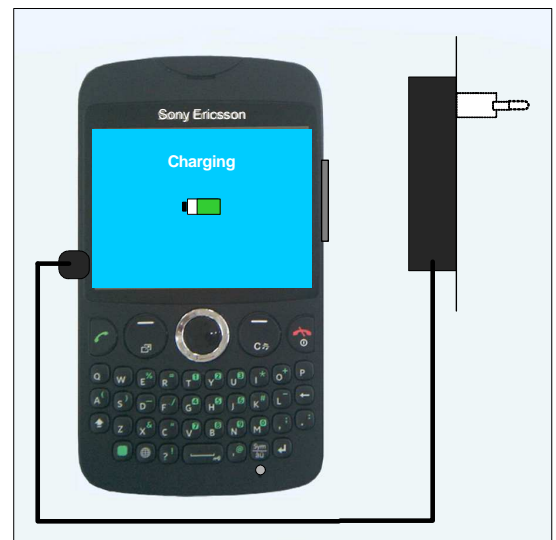


#### 2.3.2 Battery charging

##### 2.3.2.1 Charging by wall charger

Verify that charging of the phone functions properly:

- install a battery but do not start the phone
- connect a wall charger to the Micro USB Connector
- verify that the display shows that the phone is being charged
- remove the charger from the Micro USB Connector and verify that the display no longer indicates charging



##### 2.3.2.2 Charging via USB

Verify that the phone can charge the battery via a USB port:

**Ensure that no computer application, such as PC Suite or Emma, is active!**

- check and, if necessary, activate the USB charging by entering the Service menu: *Service settings* ⇒ *USB Charging on*
- install a battery but do not start the phone
- connect a USB cable from a computer to the Micro USB connector
- verify that the display shows that the phone is being charged
- remove the USB cable from the Micro USB connector and verify that the display no longer indicates charging





## Tests: Manual Tests

### 2.3.2.3 Pre-Charging test

If the battery voltage becomes such low as below around 3.0v, the Pre-charge LED at left side of the earphone port will flicker when the charger inserted, which shows the battery is being charged even though the display does not start up to indicate charging.

The Pre-charge LED will turn off once the battery voltage increase to start up the phone and the display indicate charging.





## Tests

### 2.4 Network Test

***This test can only be performed if the phone has got an activated SIM/USIM card (no Test SIM/USIM) and an available network signal!***

***There are two versions of the test depending on whether a UMTS network is available or not!***

***If a UMTS network is available, the network test has to be done separately for GSM and UMTS!***

#### 2.4.1 On-the-air call to mobile (no UMTS network available)

To verify the radio functions (GSM) of the phone, follow the '2.4.1.1 Procedure' below

##### 2.4.1.1 Procedure

1. Set up a call from a landline phone (PSTN)
2. Check that the ring signal goes on
3. Check that the display backlight illuminates
4. Answer the call and check the sound quality in both phones
5. Adjust the volume up and down with the side key and verify that the sound level is altered
6. End the call and check that the elapsed time is displayed and that the termination is done in a proper way





### 3 Revision History

Rev.	Date	Changes / Comments
1	2011-Sept -09	Initial release