



Test Instructions

- mechanical -



Cedar
J108i, J108a



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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

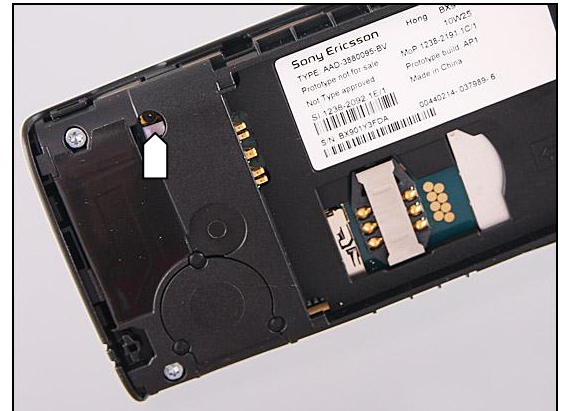
1.1.1 Water indicator inspection

Before starting any tests the liquid intrusion indicator has to be checked.

The indicator is located as shown in this picture after the battery cover is removed.

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

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



Pre-Test Preparations

1.2 Software

1.2.1 Software update

1.2.1.1 Software version verification

Check the software version of the phone for fault verification, you find latest improvements on the support pages under the support news

<http://www.sonyericsson.com/cws/marketingurlportal?pageid=key.SupportZone.Overview>

- **Note: Please make sure the phone is in LOCK mode when pressing these keys to get into the Service menu.**
- Start up the phone and press the Navigation Keypad and Keyboard keys as follows:
⇒ * ⇐ ⇐ * ⇐ *
- 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

Mandatory first repair action!

Use the Micro USB to USB cable for this purpose!

Insert 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 and ensure the phone is powered off
- 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, selected "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

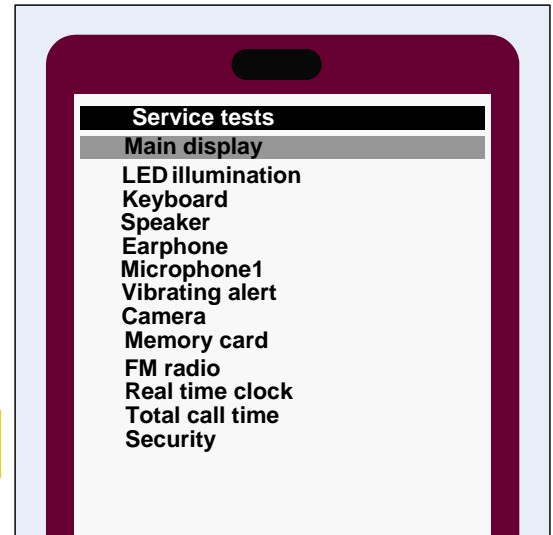
Start up the phone and enter the service menus:

Press the Navi keypad and Keyboard keys as follows:

⇒ * ⇐ ⇐ * ⇐ *

- 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

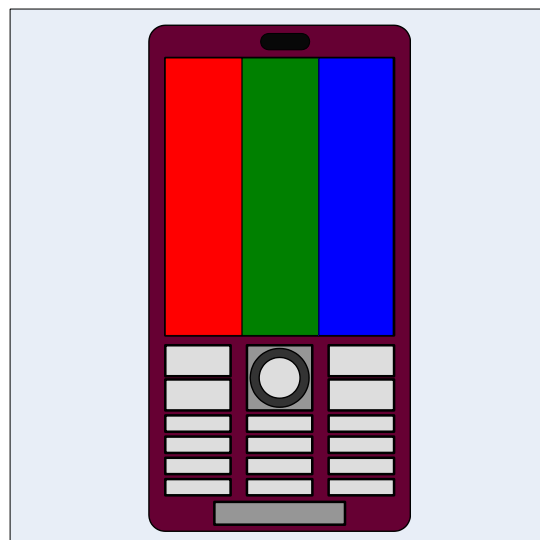
Minor variations in display brightness and colour may occur between phones.

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

Two defective pixels are considered to be acceptable.

The display will show five test patterns.

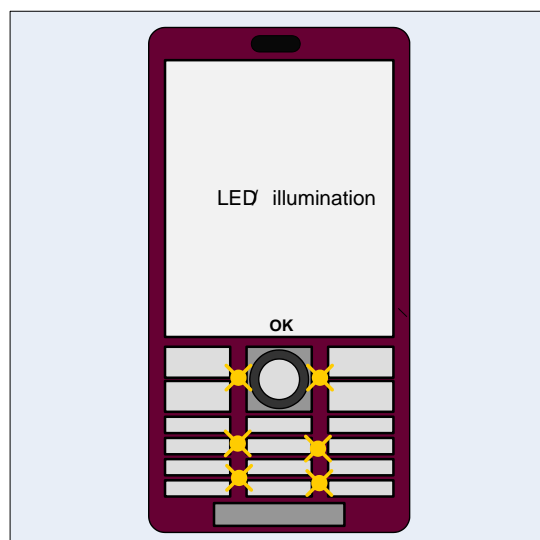
Make sure that there are no missing segments and that the colors and contrast are OK.



2.2.2 LED/Illumination

Check that the:

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



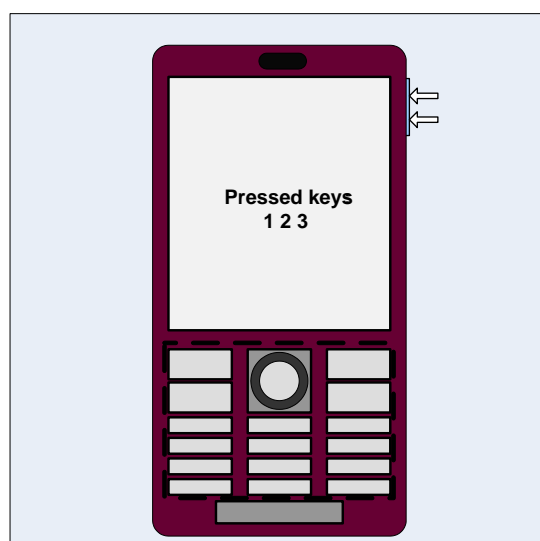
Press OK key to return to Service Test Menu.

2.2.3 Keyboard

Press all keys on the:

- Keyboard
- Side key of the phone

Check that each pressure is confirmed in the display.



Tests: Service Tests

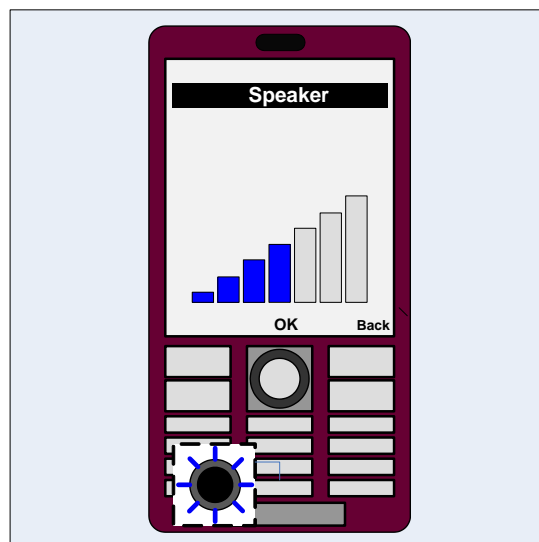
2.2.4 Speaker

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

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

Press Volume up/down key to adjust speaker volume.

Press OK key to return to Service Test Menu.



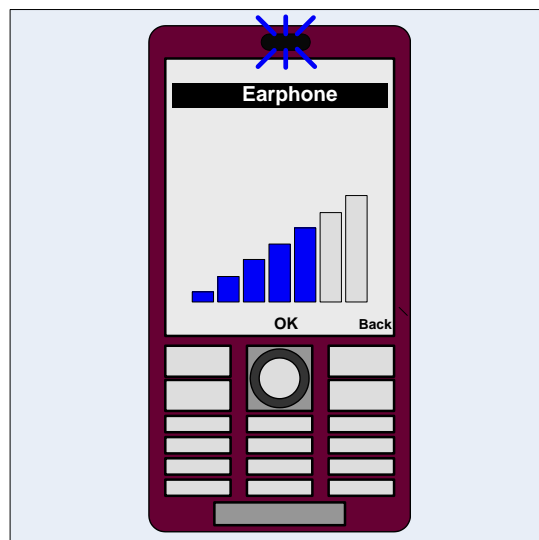
2.2.5 Earphone

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

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

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

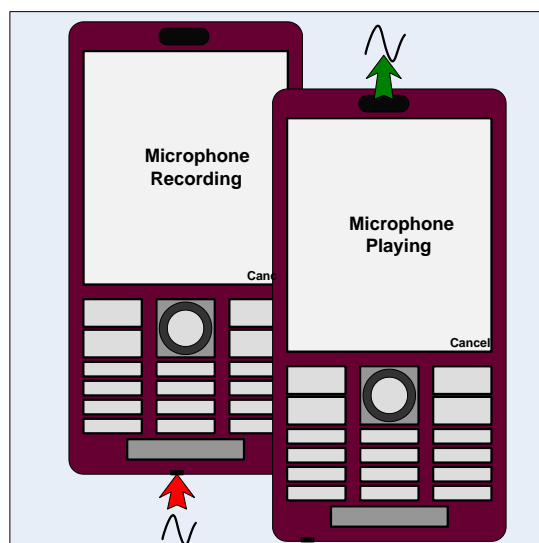
Press OK key to return to Service Test Menu.



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 ten seconds the sound is played back through the Earphone during the 'Microphone Recording' phase.



Tests: Service Tests

2.2.7 Vibrating Alert

Press any key and the vibrator gets activated three times.

Press OK key to return to Service Test Menu.

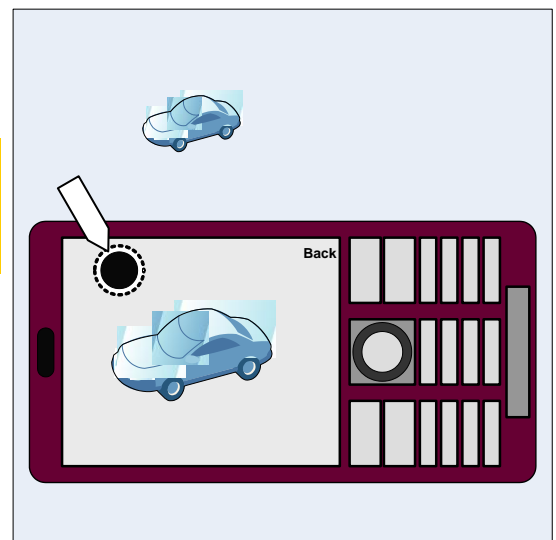


2.2.8 Camera

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.

Press Back key to return to Service Test Menu.



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 removed!

The phone should detect that the memory card is inserted.

Press OK key to return to Service Test Menu.



Tests: Service Tests

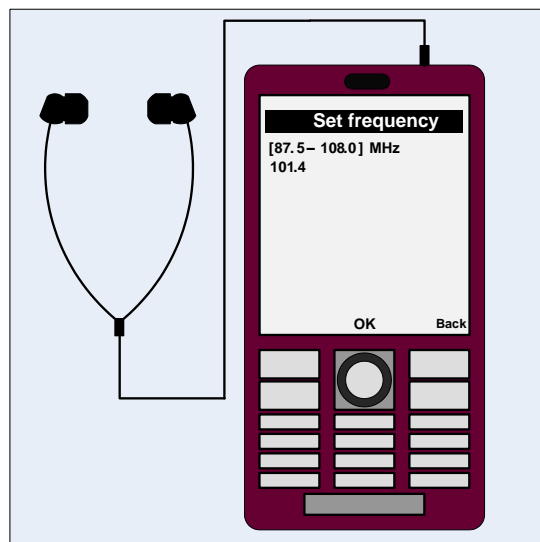
2.2.10 FM Radio

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

Note: Please make sure a SIM card is inserted.

Use the keyboard 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 OK key to return to Service Test Menu.



2.2.11 Real Time Clock

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

Press OK key to return to Service Test Menu.



2.2.12 Total Call Time

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

Press OK key to return to Service Test Menu.





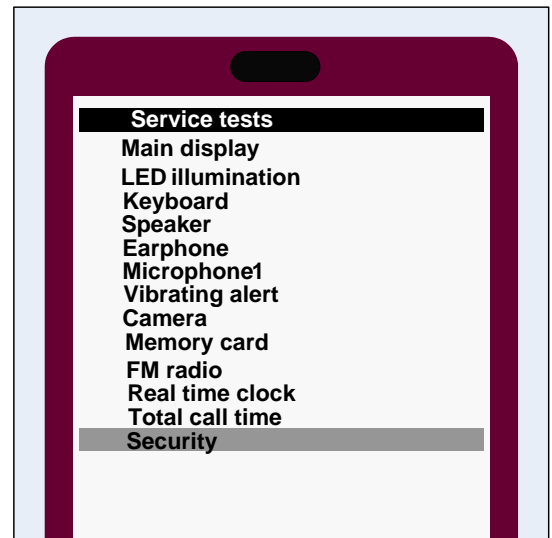
Tests: Service Tests

2.2.13 Security

To verify that the Device Key test is working:

- Select "Security" from the "Service Tests" menu.
- Select "DRM Key test" from the menu, and you will get information regarding DRM Key test, make sure the status is "Key ok".

Press the "central navi" OK key and then press "right soft-back" key to go back to the 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 Card' will be displayed

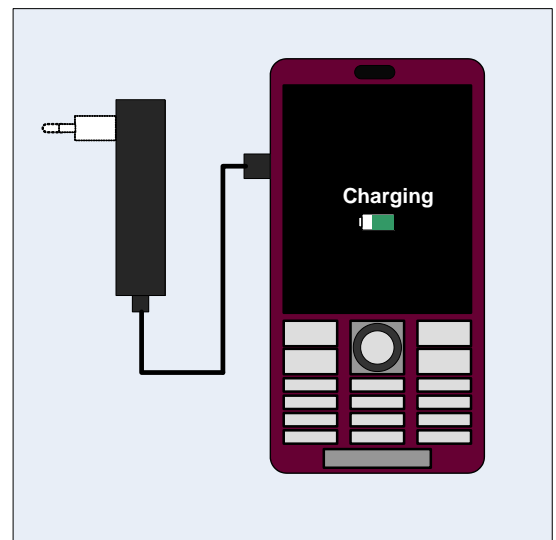


2.3.2 Battery charging

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 USB connector
- Verify that the display shows that the phone is being charged
- Remove the charger from the USB connector and verify that the display no longer indicates charging

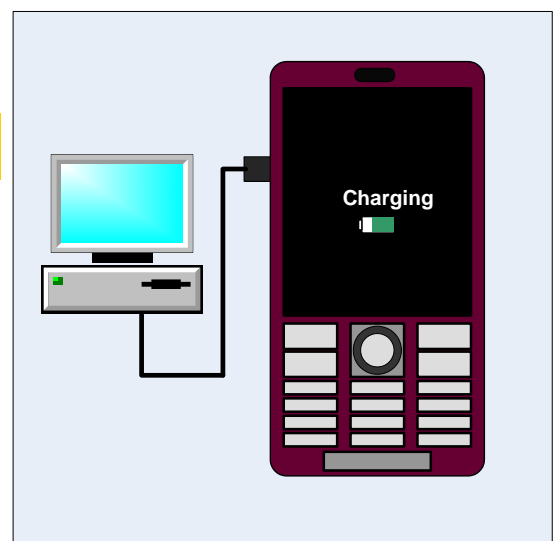


2.3.2.2 Charging via USB

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, active the USB charging by entering the Service menu: Service setting⇒charging on
- Install a battery but do not start the phone
- Connect a USB cable from a computer to the USB connector
- Verify that the display shows that the phone is being charged
- Remove the USB cable from the USB connector and verify that the display no longer indicates charging





Tests: Manual Tests

2.3.3 Bluetooth

Verify that the Bluetooth communication functions properly:

During this test, the distance between the phone and the other Bluetooth device must be 1.5 to 5 meters.

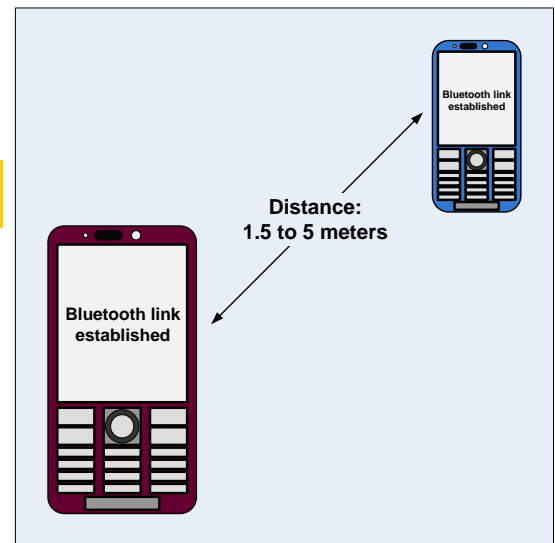
Insert a SIM card, install a battery and start the phone

Active the Bluetooth function via the phone menu:

Settings ⇒ *Connectivity* ⇒ *Bluetooth* ⇒ select *Turn on*

Set up a Bluetooth link between the phone and the other Bluetooth device.

If a link can be established, the Bluetooth function is regarded to be fully functional



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!

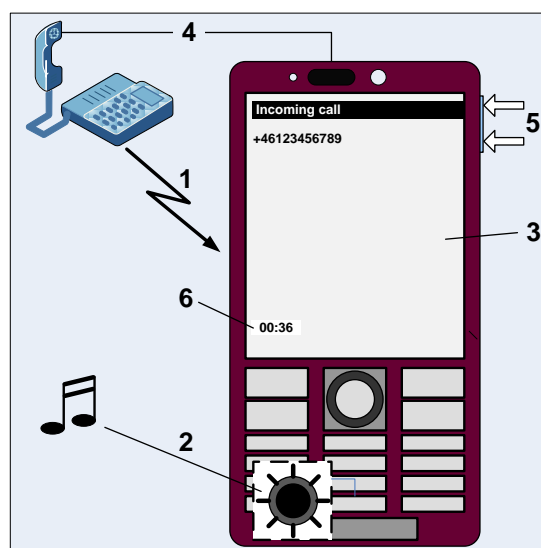
If a UMTS network is available, the network test has to be done separately for GSM and UMTS!

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 there is a ring signal.
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 keys 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.



2.4.2 On-the-air call to mobile (UMTS network available)

GSM

Go to the phone menu and set:

Press Menu key → *Settings* ⇒ *Wireless controls* ⇒ *Mobile Networks* ⇒ *Network mode* ⇒ *GSM only*

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

UMTS

Go to the phone menu and set:

Press Menu key → *Settings* ⇒ *Wireless controls* ⇒ *Mobile Networks* ⇒ *Network mode* ⇒ *WCDMA only*

Switch off the phone and then start it up again to enable search for an available UMTS signal.

Ensure that the UMTS/3G icon now is visible at the top of the display.

To verify the radio functions (UMTS) of the phone, follow the '2.4.1.1 Procedure' above.



3 Revision History

Rev.	Date	Changes / Comments
1	2010-Sep-24	Initial release
2	2010-Oct-27	Fix converting problem