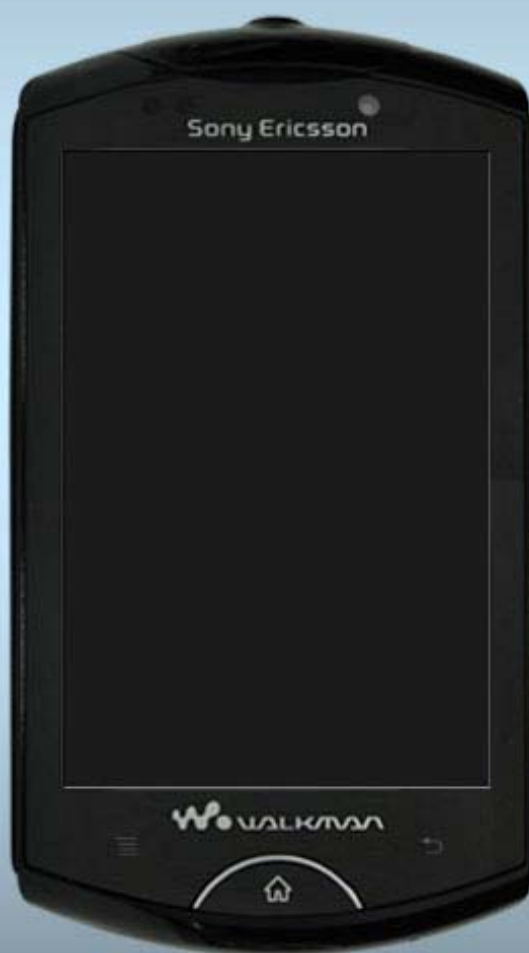




Sony Ericsson

Test Instruction

- mechanical -



WT18i

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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 removed.

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

If not affected (white color) - start SW inspecting as the step shows in next page.



Pre-Test Preparations

1.2 Software

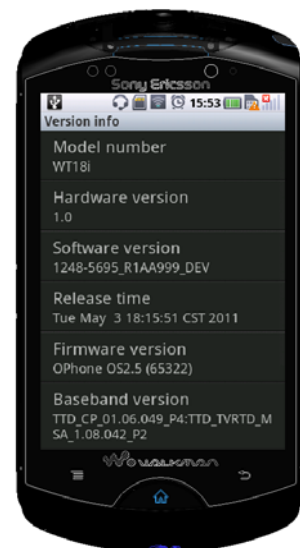
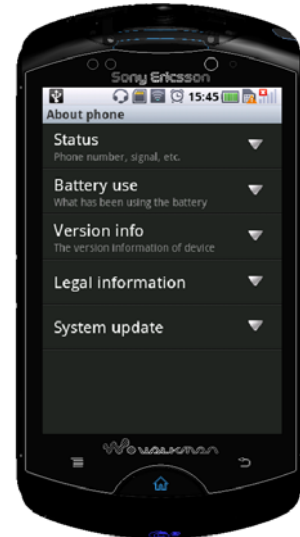
1.2.1 Software update

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
- Settings⇒About phone⇒Version info
- Check the software 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 EC700 Micro USB to USB cable for this purpose!

Do not use the SEPI equipment!

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

- Open the EMMA tool
- Remove the battery
- Press and keep the 'Home' key down on the phone, connect the phone to the USB cable, install the battery, when the EMMA tool detects the phone, release 'Home' key.

Select the appropriate service and follow the on-screen instructions.

2 Tests

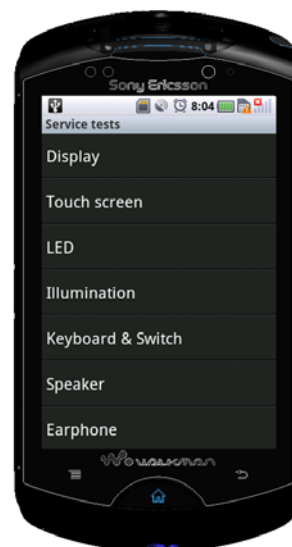
2.1 Service Tests Mode

All service tests can be carried out without SIM card!

Start up the phone and enter the service menus:

- Go to dialer⇒enter ‘*##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



Tests

2.2 Service Tests

2.2.1 Display

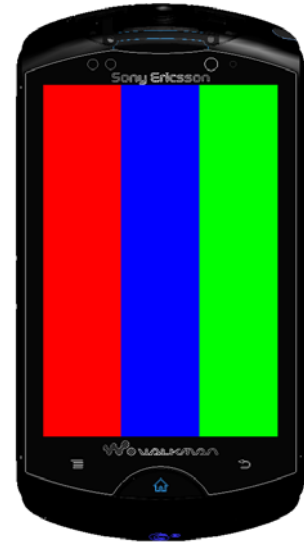
Minor variations in display color may occur between phones.

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

Two defective pixels are considered to be acceptable.

- The display will show test patterns.
- Make sure that there are no missing segments and the colors and contrast are OK.

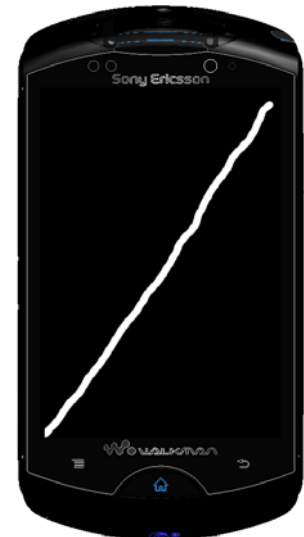
To stop the test and return to the 'Service tests' menu, press 'Back' key.



2.2.2 Touch screen

- During touch screen test, it needs user to draw the line on the black screen to verify touch screen function.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.3 LED

Check the followings:

- Tap 1st Button on, Notification LED (a) will flash red.
- Tap 2nd Button on, Notification LED (a) will flash green.
- Tap 3rd Button on, Home LED (b,c) will flash light.
- Tap 4th Button on, Walkman LED (d) will flash light.

To stop the test and return to the 'Service tests' menu, press 'Back' key.

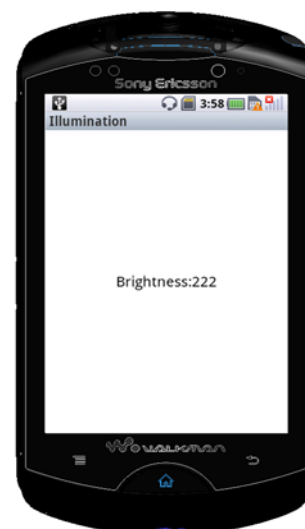


2.2.4 Illumination

Check that the:

- Display Illumination will automatically changes with different brightness value set.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.5 Keyboard & Switch

'Home' key and 'On/off' key are not included in this test.

• Press following keys to verify its function:

- Menu key
- Back key
- Walkman key
- Volume up/down key
- Camera key

To stop the test and return to the 'Service tests' menu, press any place on the screen and select 'Yes' button.



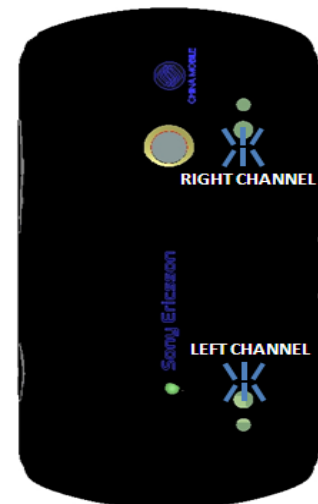
Tests: Service Tests

2.2.6 Speaker

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

- Left and right Speaker can be test separately by pressing button 'Left' and 'Right'.
- Adjust the volume and make sure that the sound from the speaker port on the back of the phone is emitted loud and clear.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



2.2.7 Earphone

- Adjust the volume and make sure that the sound from the earphone port on top of the phone is emitted loud and clear.

To stop the test and return to the 'Service tests' menu, press 'Back' key.

Tests: Service Tests

2.2.8 Microphone

The previous test, 'Earphone', should have been successfully carried out before this test!

Insert Micro SD card before test!

Follow the instruction on display. All operations are on 'Touch screen'.

- Speak into the microphone during the 'Recording sound'
- Check the quality by listening to the recording from the earphone during the 'Playing sound' phase.

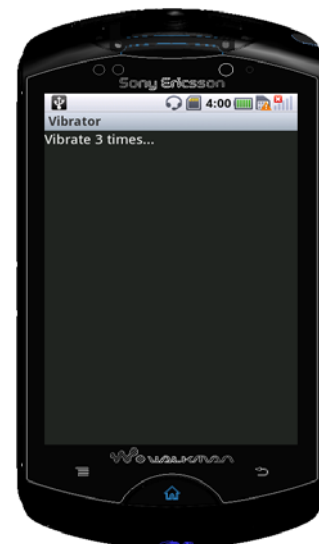
To stop the test and return to the 'Service tests' menu, press 'Back' key.



2.2.9 Vibrator

- The vibrator gets activated three times.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.10 Camera

It can be tested without a Micro SD card.

- Tap 'Preview' button and aim the camera (located back of the phone) at an object and check the quality of the image shown in the display;
- Tap 'Capture' button to capture the picture;
- Tap 'Delete' button to delete the picture;
- Tap 'Turn off' button to exit camera test;

To stop the test and return to the 'Service tests' menu, press 'Back' key.



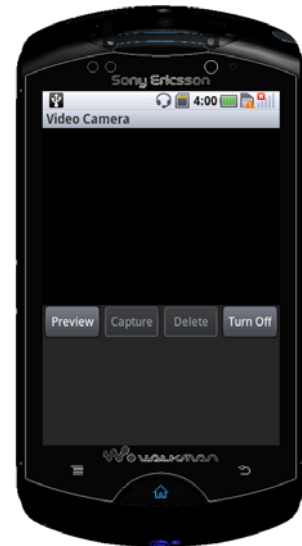
Tests: Service Tests

2.2.11 Video Camera

It can be tested without a Micro SD card.

- Tap 'Preview' button and check the quality of the image shown in the display.
- Tap 'Capture' button to capture the picture,
- Tap 'Delete' button to delete the picture
- Tap 'Turn off' button to exit camera test

To stop the test and return to the 'Service tests' menu, press 'Back' key.

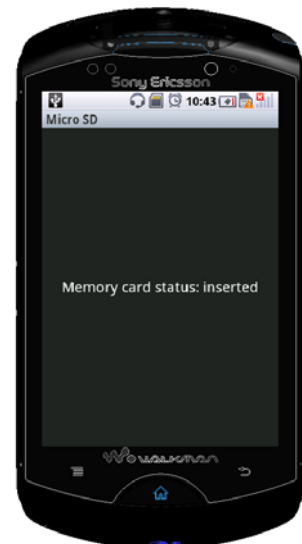


2.2.12 External Memory

Micro SD card should be inserted before this test!

- The phone should detect that the Micro SD card is available.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.13 FM radio

A Portable Hands-Free (PHF) has to be inserted into audio Jack before this test!

- 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.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



2.2.14 Real time clock (RTC)

- Press the button '4 seconds start', It will take 4 seconds to finish the progress. Then a dialog 'Real time clock Complete' will be shown.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.15 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!

- Activate the Bluetooth function:
Bluetooth test ⇒ select Turn on Bluetooth and check Make this device visible to other devices
- Set up a Bluetooth link between the phone and the other Bluetooth device:
Bluetooth test ⇒ Scan for devices
After a list of Bluetooth devices shown up, choose a device to link

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

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.16 GPS

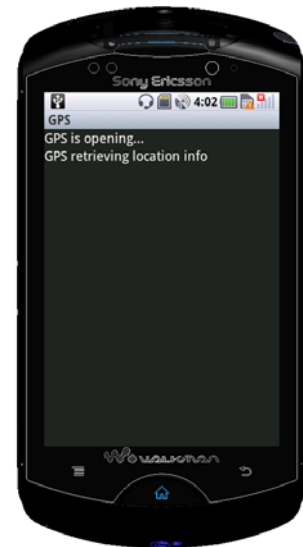
Verify that the GPS functions properly:

Go outdoor and make sure there are GPS signal.

- Go to Service Tests ⇒ *GPS test*
- The phone will be searching for available satellites and in 'Position Getting' status in 5 minutes.
- The GPS Data (Longitude, Latitude, Altitude, Acquired Time, Satellites Used, Pseudorandom Noise(PRN) code and Signal to Noise Ratio(SNR)) could be shown if GPS test works successfully.

If the positioning time is over 5 minutes and does not get location info, the test is failed.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.17 WLAN

Verify that the Wi-Fi communication functions properly:

- Activate the Wireless function: Go to Service Tests ⇒ *WLAN test* ⇒ *Turn on WLAN*
- The phone will be searching for any available Wi-Fi, a.k.a. WLAN (Wireless Local Area Network)
- The networks found are listed, with icons indicating network quality and type as described in the adjacent picture
- Select the desired network and press 'Connect'
- Input the password in 'Configure Network Authentication' phase

If the phone is able to scan, detect and connect to a network, the Wi-Fi function is regarded to be fully functional.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.18 Compass

Test the Compass functionality, the result shall be shown on the screen.

- Go to Service Tests ⇒ *Compass test*
- *Rotate the phone*

To stop the test and return to the 'Service tests' menu, press 'Back' key.

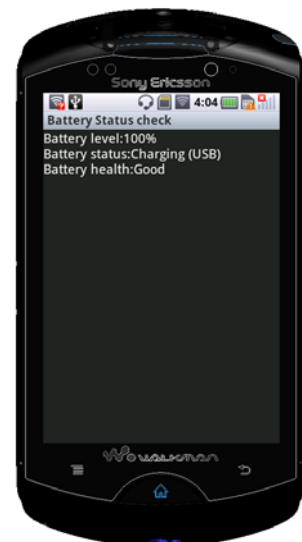


2.2.19 Battery Status check

Verify that charging of the battery functions properly:

- Go to Service Tests ⇒ *Battery Status check*
- Connect a wall charger or via USB to the system connector. Verify that the display shows the phone is charging and also the info about battery health and battery level
- Remove the charger from the system connector and verify that the display shows the phone is discharged and also the info about the battery health and battery level

To stop the test and return to the 'Service tests' menu, press 'Back' key.



Tests: Service Tests

2.2.20 Mobile TV

- The mobile TV application should be opened.
Check if it works.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



2.2.21 Accelerometer

Test the accelerometer function, the result shall be shown on the screen

- Go to Service Tests ⇒ *Accelerometer test*
- *Move the phone*

To stop the test and return to the 'Service tests' menu, press 'Back' key.



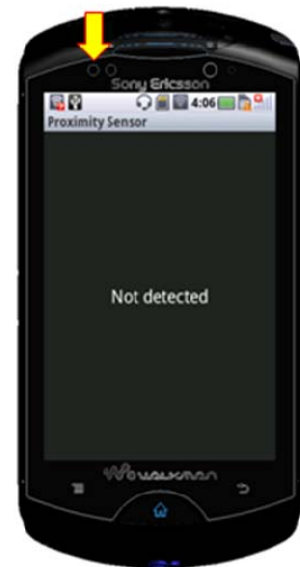
Tests: Service Tests

2.2.22 Proximity Sensor

Test the proximity sensor, the result shall be shown on the screen.

- Go to Service Tests ⇒ *Proximity Sensor test*
- *Cover the top left corner of phone, screen should show 'Detected'*
- *Uncover the top left corner of phone, screen should show 'Not detected'*

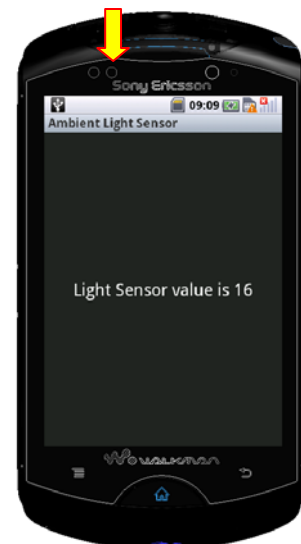
To stop the test and return to the 'Service tests' menu, press 'Back' key.



2.2.23 Ambient Light Sensor

- The light sensor value should be shown on the screen.
- The value will change according to the brightness of the ambient light. The value will increase if the ambient light is brighter, and the value will decrease if the ambient light is weaker.

To stop the test and return to the 'Service tests' menu, press 'Back' key.



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, after finishing boot procedure, the phone will be in Lock Screen or Home Screen and could operate properly.
- If not detected, the message 'No SIM card.' will be displayed on Lock Screen.



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 system connector
- Verify that the display shows that the phone is being charged
- Remove the charger from the system 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:

- Install a battery but do not start the phone
- Connect a USB cable from a computer to the system connector
- Verify that the display shows that the phone is being charged
- Remove the USB cable from the system connector and verify that the display no longer indicates charging
- Ensure that no computer application, such as PC Suite or Emma, is active!



2.3.3 'Home' key and 'On/off' key

- 'Home' key test
Power on the phone ⇒ Enter Dialer ⇒ Press 'Home' key
Phone should go back to idle
- 'Power on/off' key test
Power on the phone ⇒ Press 'Power' key alternately
Phone should turn on/off the screen according to each pressing



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 TDS-CDMA network is available or not!

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

2.4.1 On-the-air call to mobile (no TDS-CDMA 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.



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

GSM

Go to the phone menu and set:

Settings ⇒ Wireless&networks ⇒ Mobile networks ⇒ Network mode ⇒ GSM only, TD only, GSM preferred, TD preferred ⇒ choose GSM only

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

TDS-CDMA

Go to the phone menu and set:

Settings ⇒ Wireless&networks ⇒ Mobile networks ⇒ Network mode ⇒ GSM only, TD only, GSM preferred, TD preferred ⇒ choose TD only

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

Ensure that the TDS-CDMA/3G icon now is visible at the top of the display

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

Tests

2.5 Master Reset

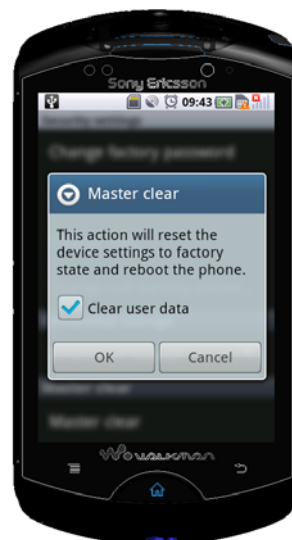
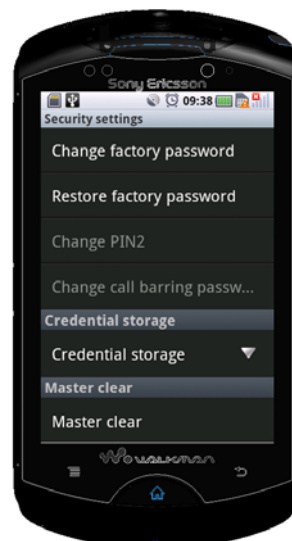
Master Reset is the function to reset your device to factory default settings. Apply master reset when tests were done and the device will return to factory default settings

Procedure

Go to Settings ⇒ Security ⇒ Master clear

Check on 'Clear user data', and click 'OK', input password '1234', then click 'OK'

Phone will restart and it will delete all your personal data and reset all settings to factory default.





3 Revision History

Rev.	Date	Changes / Comments
1	2011-07-12	Initial Release