



Sony Ericsson

Test & Calibration

- electrical -



Zylo
W20, W20i



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1 Go/NoGo Testing

This Go/NoGo testing can be carried out in two alternative ways, with an:

- Antenna Coupler
- Direct Line

For more information on Antenna Coupler and Direct Line testing, refer to 1220-1336: Generic Repair Manual – electrical, section ‘Setup Go/NoGo Test’!

For part no’s on the equipment below, refer to the ‘Tools Catalogue/Matrix’!

1.1 Antenna Coupler

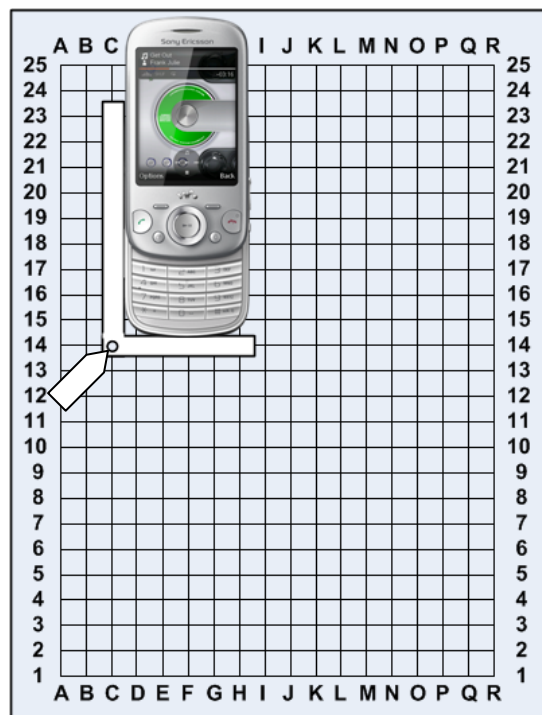
The following equipment has to be used:

- Rohde & Schwartz RF Shield Package
 - Rohde & Schwartz RF Shield Box
 - Rohde & Schwartz RF Coupler
 - Grid Positioning Holder
- RF Test Cable Flexible 1M
- RF Adapter for RF Shield Box

GSM-850/900/1800/1900

WCDMA-900/2100

Put the grid positioning holder with its reference point in position **C14** and place the phone as shown in the adjacent picture.





Go/NoGo Testing

1.2 Direct Line

The following equipment has to be used:

- RF Test Cable Flexible 1M
- RF Probe
- Dummy Battery with external power supply and cables (if not using a fully charged battery)

Connect the RF Probe as shown in the adjacent picture.

To get access to the RF connector on the PBA, refer to 1240-7779: W20 and W20i Working Instructions, section 3.1!





Go/NoGo Testing

Follow the directions stated in 'Go/NoGo Test Script Parameters' to be found in 1220-1336: Generic Repair Manual – electrical, together with the 'Attenuation Factors' below!

This phone is available as two versions, W20 and W20i, including the following bands:

W20:

GSM-850/900/1800/1900

WCDMA-2100

W20i:

GSM-850/900/1800/1900

WCDMA-900/2100



1.3 Attenuation Factors

The attenuation values listed below in 1.3.1 and 1.3.2 are valid only when the equipment listed on the previous pages is being used!

1.3.1 Loss Values – Antenna Coupler

Band	Channel	Attenuation			
		W20		W20i	
		Rx	Tx	Rx	Tx
GSM 850	Low	6.50	10.80	6.50	10.80
	Mid	4.00	9.20	4.00	9.20
	High	4.00	7.66	4.00	7.66
GSM 900	Low	6.50	5.08	6.50	5.08
	Mid	7.00	4.90	7.00	4.90
	High	6.00	6.10	6.00	6.10
GSM 1800	Low	12.00	15.22	12.00	15.22
	Mid	13.00	13.17	13.00	13.17
	High	13.00	12.93	13.00	12.93
GSM 1900	Low	12.50	12.71	12.50	12.71
	Mid	13.00	12.21	13.00	12.21
	High	14.00	12.22	14.00	12.22
WCDMA 900	Low	-	-	6.00	6.65
	Mid	-	-	6.50	6.36
	High	-	-	6.50	5.99
WCDMA 2100	Low	15.50	12.09	15.50	12.09
	Mid	14.50	12.50	14.50	12.50
	High	16.00	13.24	16.00	13.24



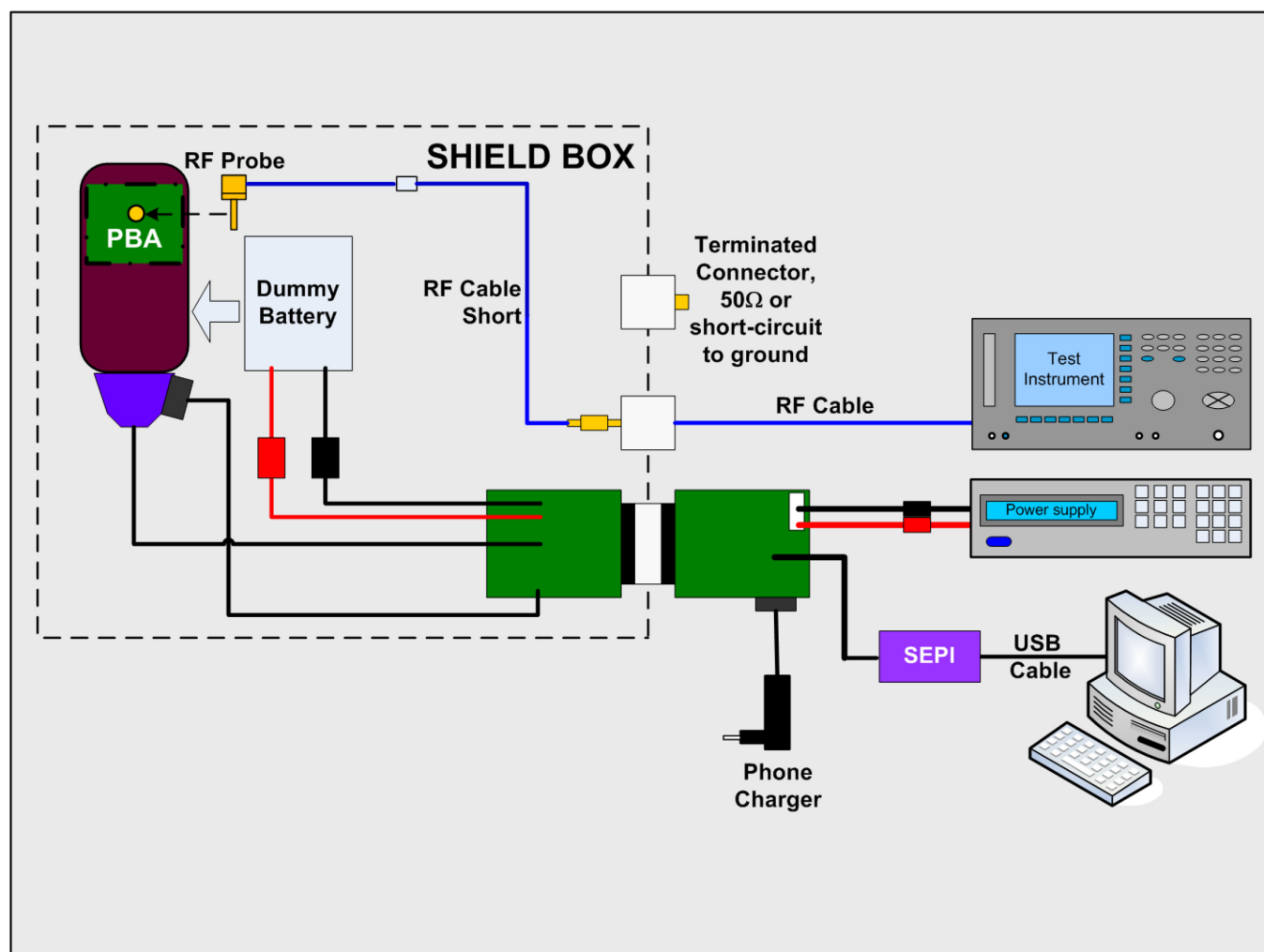
Go/NoGo Testing: Attenuation Factors

1.3.2 Loss Values – Direct Line

Band	Channel	Attenuation	
		Rx	Tx
GSM 850	All	0.8	0.8
GSM 900	All	0.8	0.8
GSM 1800	All	1.3	1.3
GSM 1900	All	1.3	1.3
WCMA 900	All	0.8	0.8
WCDMA 2100	All	1.5	1.5

2 SERP Calibration

2.1 UMTS & GSM Calibration Setup



For authorized centers only!

Due to the sensitivity of the phone from outside interference during GSM/ WCDMA calibration, a Shield Box and Service Tool Set Interface are required for GSM/WCDMA calibration.

Connect and set-up in accordance with the picture above!

Connect the RF Probe to the phone's PBA by following the instructions of section 1.2!

For part no's on the equipment above, refer to the 'Tools Catalogue/Matrix'!



SERP Calibration

2.2 Calibration Procedure

A test program must be loaded into the phone before starting the calibration procedure!

After completed calibration the phone must be re-customized with signalling software!

2.2.1 Test Program (ETP) Flashing

The ETP flashing into the phone is done as follows:

1. Attach a fully charged battery to the phone.
2. Open the Emma application and log in.
3. Check that the phone is powered off.
4. Press and hold the 'C' key down and connect the phone to the USB flash cable.
Release the 'C' key when the USB icon appears on the Emma screen.
5. Select the 'W20 ETS' protocol and follow the on-screen instructions.

The display of the phone will usually become blank when the ETP is installed.



SERP Calibration

2.2.2 Calibration Instructions

Start the SERP II program by double-clicking on the **SERP II.exe** icon on the desktop:

1. Click on the **Repair Manager Tab** and enter (or scan) the IMEI number of the phone to be calibrated into the **IMEI** box.
2. Select test: **Calibration**, and **Cable in Shield Box** in the Coupler drop down box
3. Check the **Settings tab** verify that the test instrument, GPIB address and the COM port matches the SERP settings. DUT address is here the SEPI address as old SERP.

4. Connect the phone to the test instrument as shown in the *Calibration Setup*.
5. Click on the **Start Test** button in the main window to start the calibration.
6. After some time a notification pop up. Follow the instructions.
7. Monitor the progress of the calibration by viewing the information presented in the **Result tab**.

If the calibration fails, troubleshoot according to the 1240-7785: *Troubleshooting Guide – electrical*.

2.2.3 Re-Customization

To be able to use the phone after completed calibration the appropriate signalling code for the desired operator has to be reloaded.

If applicable, a Content Refresh has to be done

Refer to 1240-7791: *W20 Customization* for more details on Customization.

3 Revision History

Rev.	Date	Changes / Comments
1	2010-Aug-20	Initial release
2	2012-Jan-19	Updated to use SERPII