

# Equipment List, Electrical

Applicable for Z310

## Contents

<b>1</b>	<b>General .....</b>	<b>2</b>
<b>2</b>	<b>Column Definitions.....</b>	<b>2</b>
<b>3</b>	<b>Repair Equipment.....</b>	<b>3</b>
3.1	Sony Ericsson Provided Repair Equipment.....	4
3.2	Pictures of equipments .....	5
3.3	Equipment Provided by Other Supplier .....	6
<b>4</b>	<b>Revision History .....</b>	<b>12</b>

# 1 General

This document describes the minimum required equipments for the Electrical Repair Process of the Z310 mobile phone.

Equipment listed without a part number is not orderable from Sony Ericsson and must be bought locally.

# 2 Column Definitions

The matrix in the end of the equipment tables describe where the actual equipment is needed (marked with an X) or may be needed/optional (marked with a Z).

Flash upgrade: Equipment for downloading software to the unit, both signalling and test-program.

Manual test: Equipment necessary to perform a manual test.

Repair: Equipment necessary for replacing components.

Go/No Go test: Equipment necessary for Go/No Go test.

Calibration with SERP: Equipment necessary to perform a calibration with SERP. Calibration can only be done by authorized repair centers.

The column that assist a specifying and/or clarifying the equipment needed are considered description type columns.

- Description The name of the equipment
- Part Number The Sony Ericsson part number to use when ordering from Sony Ericsson.
- Description Additional information that helps to specify the equipment.



## **3 Repair Equipment**

Some of the required equipment will be provided by Sony Ericsson and some equipment has to be sourced locally. This chapter will separate these equipments.

### 3.1 Sony Ericsson Provided Repair Equipment

Description	Part Number	Comments	Flash Upgrade	Go/No Go Test	Manual Test	Repair
USB Service Card Reader	LZY 213 1191	Software Package/CD+USB Reader	X			
Service Card	LZY 213 595		X			
SonyEricsson programming interface - SEPI	LTN 214 1484	USB/Interface Box+CD	X			
SonyEricsson programming interface cable – SEPI	KRY101 1119	SEPI A1 cable	X			
DCU-60/USB Cable	KRY 101 1413	Interface cable between PC and phone for SW loading.	X			
Torque Screwdriver *	NTZ 112 459	Torque set to 11 Ncm $\pm$ 6%				X
Front opening tool	NTZ 112 302/2	Opening tool				X
Flex film assemble tool	NTZ 112 521					
Dummy Battery	NTZ 112 542	Battery Eliminator	Z			
Rework fixture	LTD 260 273	For PBA (Printed Board Assembly)				X
RF Probe assembly	RPM 119 854/1			X		
RF Test Cable Flexible 1M	RPM 119 855			X		

\*Any screwdriver that fulfils the torque and bit demand can be used.

Note: The matrices describe where the actual equipment is needed (marked with an X) or may be needed/optional (marked with a Z).

## 3.2 Pictures of equipments

			
LTN 214 1484	LZY 213 1191	LZY 213 595	KRY 101 1119
			
NTZ 112 302/2	NTZ 112 459	NTZ 112 521	NTZ 112 542
			
LTD 260 273	RPM 119 854/1	RPM 119 855	

### 3.3 Equipment Provided by Other Supplier

This is the list of equipments provided by other suppliers than Sony Ericsson

		Flash Upgrade	Go/No Go Test	Manual Test	Calibration in SERP	Repair
Description	Comments					
RF Shield Package  <b>Rohde&amp;Schwarz RF Shield Package</b> <ul style="list-style-type: none"> <li>CMU-Z10 – Antenna Coupler (Partnr: 1150.0801.10)</li> <li>CMU-Z11 – RF Shield Cover (Partnr. 1150.1008.02)</li> </ul>	Using an RF shield package is one of the options for testing the applicable product(s). Testing of the applicable product(s) can also be preformed by using the combination of an RF Probe and an RF cable.  <i>Spare parts for mobile phone fixation for R&amp;S CMU-Z10 are available for purchase from Rohde&amp;Schwarz:</i> <ul style="list-style-type: none"> <li>Grid Positioning Plate – 1158.9789.00</li> <li>L-shaped bracket – 1158.9808.00</li> <li>Stabilizing pieces – 1158.9820.00</li> </ul> <p><b>NOTE:</b> The Rohde &amp; Schwarz package will require the use of a precision N-type male to SMA female RF adapter to mate with the SEMC RF cable.</p> <p><b>NOTE:</b> If you are using a different RF Shield Package than Rohde &amp; Schwartz, special attenuation factors for Go/No-Go test are required.</p>		X			
Battery	BKB 193 199/1	X	X	X		
- Battery Charger	Standard SonyEricsson charger			X		

		Flash Upgrade	Go/No Go Test	Manual Test	Calibration in SERP	Repair
Description	Comments					
Computer	Minimum Pentium III 500 Mhz 128 Mb RAM or better. At least 2 USB ports	X	Z		X	
USB-PC Cable	Type A-B Plug-Plug Cable	X			X	
Tweezers	ESD-safe					X
Dentist hook	To be used when removing adhesives.					X
Bits	Spare part to screwdriver					X
Isopropyl Alcohol	To be used when removing glue.					X
Cotton Gloves	ESD-safe					X
Zebra Printer	90xi, 90xi II or 4000 deluxe					Z
Printer Cable	Standard RS 232 serial printer cable [referred to Zebra printer manual]					Z
Hot Air Flow Repair Station, Medium.	To be used when removing phone label (if needed) Temperature range 360-380° C. Air-flow up to 9 l/min					X
Soldering Iron	Temperature range 340-370° C.					X
Soldering Iron Tip Lead free	Temperature range 340-370° C.					X
Flux	RMA, No-clean flux					X
Solder-wire	Lead free : SN 96%, Ag 3,5% and Cu 0,5%					X
Solder-paste	Lead free : SN 96%, Ag 3,5% and Cu 0,5%					X
Microscope	Minimum 10x magnification					X
- RF Shield Package Rohde&Schwarz	CMU Z11		X			
Test SIM-card	According to your Instrument supplier.		X			
Operator SIM-card	To be used when making a landline call.			X		
IR-device	To be used to make connection between the phone and the device			X		

		Flash Upgrade	Go/No Go Test	Manual Test	Calibration in SERP	Repair
Description	Comments					
Bluetooth-device	To be used to make connection between the phone and the device			X		
Hands free equipment	To be used to verify connection in the system connector. Applicable for W850i.			X		
GPIB Card – National GPIB Card – Keithley	Either National or Keithley can be used.				X	
GPIB Cable					X	
<b>Anritsu MT 8801B</b> Required Components: <ul style="list-style-type: none"> <li>• MT8801B (Radio Com. Analyser)</li> <li>• MT8801B-02 (SG-local)</li> <li>• MX880115A (GSM Measurement Software)</li> </ul> Required Software: <ul style="list-style-type: none"> <li>• Main 4.02</li> <li>• System 4.05</li> </ul>	<b>Note: It is strongly recommended that the instrument vendor be contacted before ordering this setup to ensure that the options stated are still valid or that no part numbers have changed.</b>		X			



		Flash Upgrade	Go/No Go Test	Manual Test	Calibration in SERP	Repair
Description	Comments					
<b>Anritsu MT 8801C</b> Required Components: <ul style="list-style-type: none"> <li>• MT8801C (Radio Com. Analyser)</li> <li>• MX880115A (GSM Measurement Software)</li> </ul> Required Software: <ul style="list-style-type: none"> <li>• Main 4.02</li> <li>• System 4.05</li> </ul>	<b>Note:</b> It is strongly recommended that the instrument vendor be contacted before ordering this setup to ensure that the options stated are still valid or that no part numbers have changed.		X			
<b>Anritsu MT 8802A</b> Required Components: <ul style="list-style-type: none"> <li>• MT8802A (Radio Com. Analyser)</li> <li>• MX880215A (GSM Measurement Software)</li> </ul> Required Software: <ul style="list-style-type: none"> <li>• Main 1.11</li> <li>• System 2.07</li> </ul>	<b>Note:</b> It is strongly recommended that the instrument vendor be contacted before ordering this setup to ensure that the options stated are still valid or that no part numbers have changed.		X			

		Flash Upgrade	Go/No Go Test	Manual Test	Calibration in SERP	Repair
Description	Comments					
<b>Agilent 8960</b> Required Components: <ul style="list-style-type: none"> <li>E5515C (8960 Series 10 Mainframe)</li> <li>Option E5515C-002 (2<sup>nd</sup> RF source)</li> </ul> Required Software <ul style="list-style-type: none"> <li>E1968A-202 GSM/GPRS/EGPRS Test Application A.04.18 or later.</li> </ul>	Some older versions of the 8960 Series 10 mainframes may need to have a hardware upgrade in order to have WCDMA capabilities. See your local Agilent representative for details. <i>Note: It is strongly recommended that the instrument vendor be contacted before ordering this setup to ensure that the options stated are still valid or that no part numbers have changed.</i>		X		X	
<b>Willtek 4403/4405/4407</b> Required Components: <ul style="list-style-type: none"> <li>Option 4460 (GSM System)</li> <li>Option 4468 (Edge System)</li> <li>Option 4477 (OCXO)</li> <li>Firmware 4.24 or greater</li> </ul> Note: The 4403 instrument needs to have option # M897163 installed.	<i>Note: It is strongly recommended that the instrument vendor be contacted before ordering this setup to ensure that the options stated are still valid or that no part numbers have changed.</i>		X		X	

		Flash Upgrade	Go/No Go Test	Manual Test	Calibration in SERP	Repair
Description	Comments					
<b>Rohde &amp; Schwarz CMU200</b> Required Components: <ul style="list-style-type: none"> <li>• CMU200 mainframe (Base Unit)</li> <li>• Options CMU-B11, CMU-B21, CMU-B52, CMU-B54.</li> <li>• Required SW package: CMU-PK20</li> </ul>	<b>Note:</b> It is strongly recommended that the instrument vendor be contacted before ordering this setup to ensure that the options stated are still valid or that no part numbers have changed.		X		X	
Power supply <b>NOTE!</b> If using the Power Supply in conjunction with the (Dummy Battery) to power the phone during the GNG test or Calibration routine a high quality DC source that meets the following requirements <u>must</u> be used.	<b>NOTE:</b> Only necessary if using the Battery Eliminator.  Output Voltage: 0-5 volt minimum. Output Current: 0-2 amps minimum Transient response time: < 100 $\mu$ s	Z	Z		X	
Power cables Red & Black	Minimum cross sectional area of conductor: 1.2 mm <sup>2</sup> Maximum length: 1.5 m	Z	Z		X	

## 4 Revision History

Rev.	Date	Changes / Comments
A	2007-02-14	First release
B	2007-04-25	Sepi cable updated with new part number
C	2007-09-11	Cabel DCU-60/USB added