



Installation Instruction, Electrical

Applicable for Z520a, Z520c, Z520i, Z525a and Z525i

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1 General

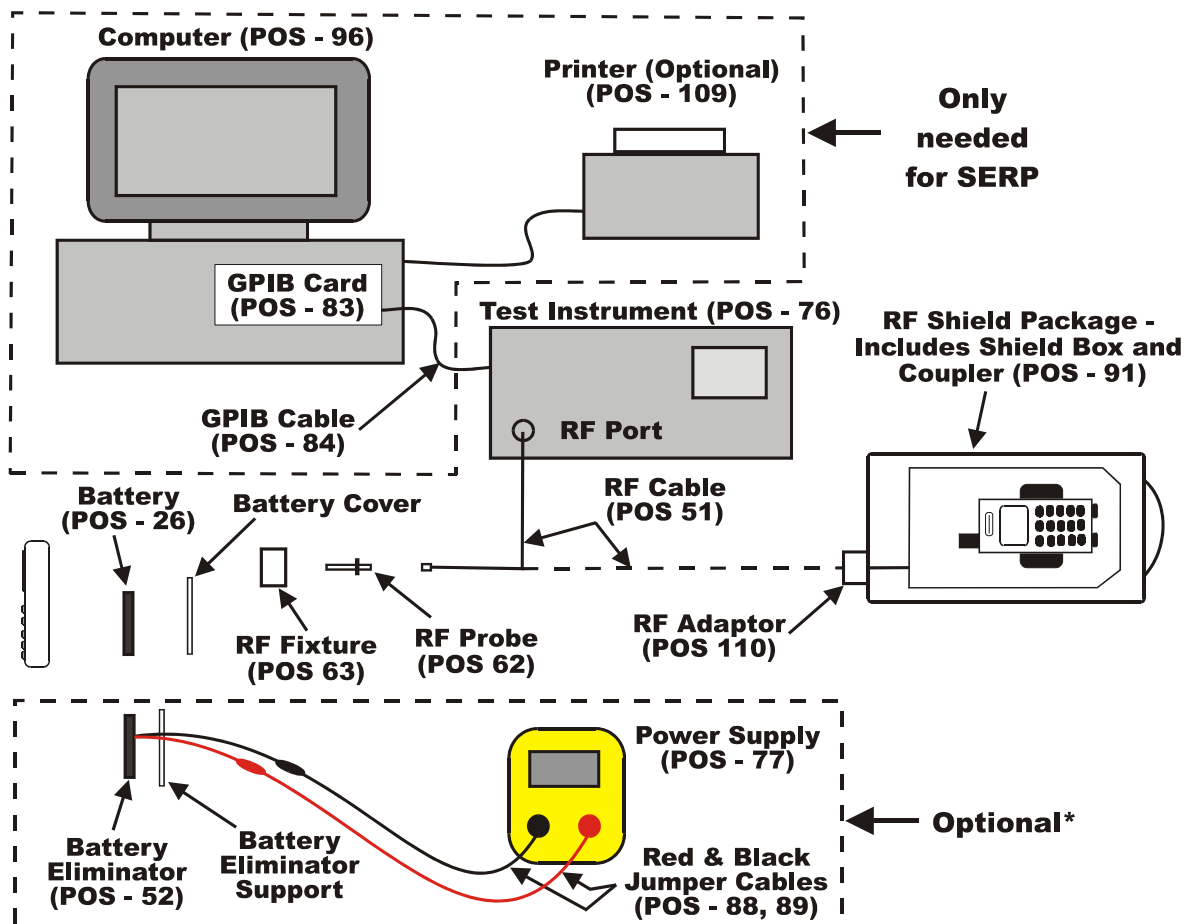
The Electrical Installation Instructions describes the procedures for installing all of the hardware and software needed to perform testing, calibration, and repair activities at an Electrical level for the Sony Ericsson products specified.

2 Go/No Go Testing

There are two options available for making an RF connection to the handset during the Go No/Go test. One option is to use an RF Fixture (Conducted) and the other option is to use a Coupler (Radiated).

2.1 Test Set-Up Diagram

All test hardware necessary for this test set up is documented in the Electrical Equipment List with designated position numbers (POS).





2.2 Hardware

2.2.1 Computer (SERP Only)

Ensure the computer (POS-96) is installed and configured correctly according to the instructions supplied by the manufacturer.

2.2.2 Test Instrument

The test instrument (POS-76) used must be a Sony Ericsson approved instrument with all required software and hardware options installed. Refer to the Z520/Z525 Equipment List, Electrical for the list of approved test instruments.

The test instrument installation and operation should be in accordance with the manufacturer's instructions.

2.2.3 GPIB Card and Cable (SERP Only)

1. Install the GPIB card (POS-83) in the computer according to the instructions supplied by the manufacturer.
2. Use the GPIB cable (POS-84) to connect the GPIB card (POS-83) to the test instrument (POS-76).

2.2.4 RF Cable

1. Connect the RF Cable's (POS-51) N-type connector to the RF port of the Test Instrument (POS-76).

2.2.5 RF Probe (Conducted Test Method)

1. Connect the RF Probe (POS-62) to the RF cable's (POS-51) SMA type connector.

2.2.6 Battery Eliminator, Jumper cables and Power Supply (optional)

Refer to Section 4 of this document for installation instructions for the Power Supply.

NOTE! It is preferred that a standard fully charged battery be used to power the phone during the GNG test. However, a second option is to use the Battery Eliminator (Dummy Battery) with a power supply that meets the requirements documented in the Electrical Equipment List.

2.2.7 RF Shield Box (Radiated Test Method)

1. Connect the RF adapter (POS-110) to the RF shield box (POS-91).
2. Connect the RF cable's (POS-51) SMA type connector to the RF adapter (POS-110).



2.3 Software

2.3.1 Willtek 420x Go/No-Go Test Script

An approved Sony Ericsson Test Script must be installed in the Test Instrument. The Willtek 420x script can be downloaded from CSPN. The Test Script is located on CSPN under **Repair Instructions / Standard**. You can also “**Search the Archives**” on CSPN using reference number 10274-33673 for more details about the script.

The FEA number for the 420x test script is 11/03162-FEA 209 544/701 x when using the R&S Coupler or the RF Fixture.

NOTE! The “x” in the FEA number refers to the revision of the Test Script. Ensure the latest revision script posted to CSPN is installed.

Install the Test Script according to the Instrument Manufacturer’s Instructions.

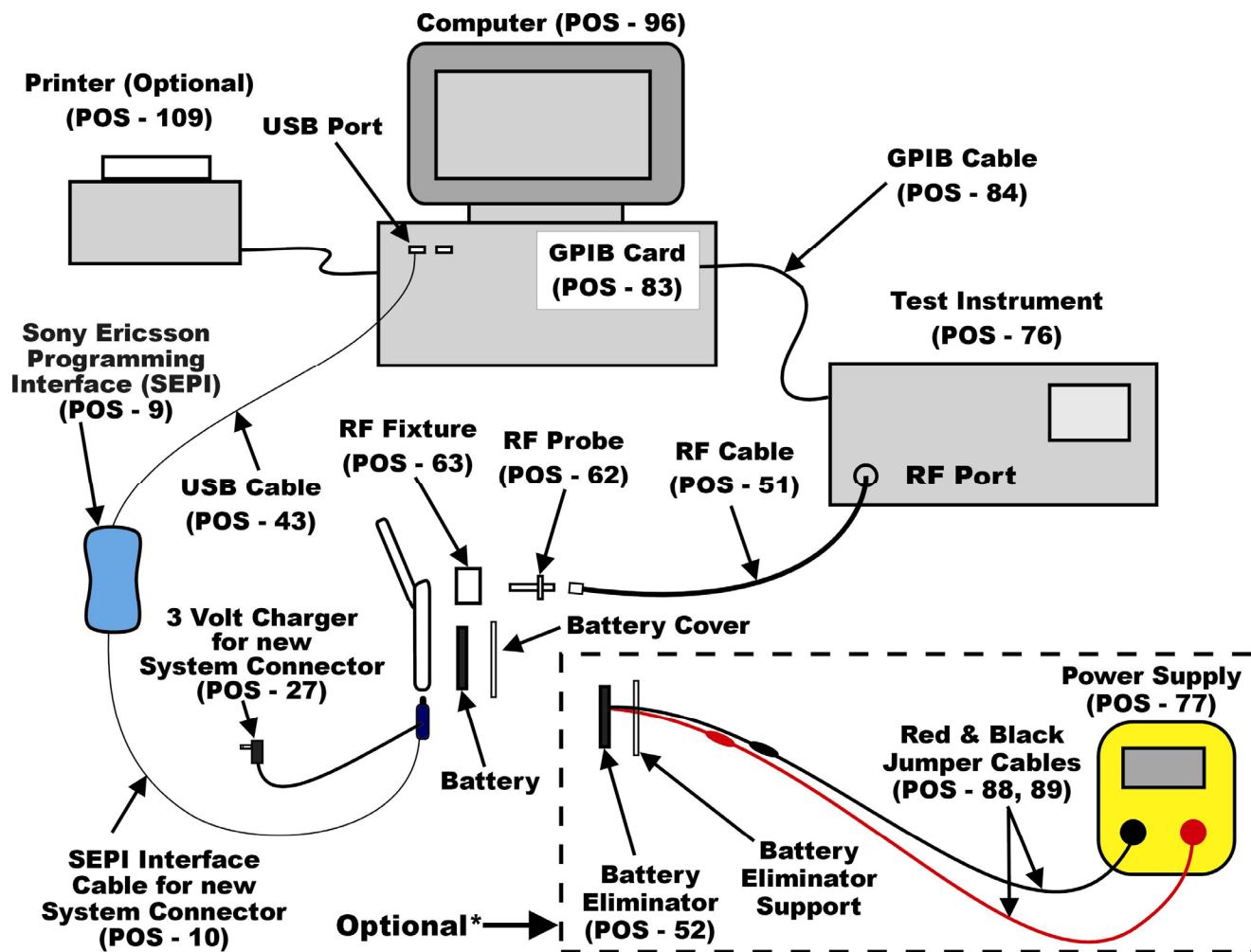
2.3.2 SERP Go/No Go Test Script

SERP stands for “Sony Ericsson Repair Platform”. It is an application used for testing, calibrating and repairing Sony Ericsson mobile phones.

1. Download the latest revision of the SERP application from CSPN (**Repair Instructions/Standard/SERP Install Package**) or through the use of the SERP Online Update Tool (OUT).
2. Unzip the file and open the file “SERP_Installation.doc” for installation instructions.
3. After SERP is installed a file titled “SERPINFO.htm” will be placed on the Windows Desktop. This file contains numerous documents including:
 - SERP Users Manual – This document contains system requirements, release notes, fault reporting instructions, supported test instruments, installation procedures and detailed operating instructions.
 - SERP Troubleshooting Guide – This document contains a few troubleshooting steps that should be reviewed before reporting issues to Sony Ericsson.
 - SERP Trouble Report Form – This form should be filled out when reporting SERP issues to the regional support team.
 - SERP OUT Quick Guide – This document contains system requirements, registration information and general user guidelines for the OUT application.

3 Calibration

3.1 Calibration Set-Up Diagram



3.2 Hardware

3.2.1 Computer

Ensure the computer (POS-96) is installed and configured correctly according to the instructions supplied by the manufacturer.



3.2.2 Sony Ericsson Programming Interface – SEPI

The Sony Ericsson Programming Interface (SEPI) (9) is delivered with the necessary software and instructions for installation.

3.2.3 Sony Ericsson Programming Interface (SEPI) Cable

The Sony Ericsson Programming Interface Cable (10) is the interface between the Sony Ericsson Programming Interface (SEPI) (9) and the phone.

1. Connect this cable between the Sony Ericsson Programming Interface (SEPI) and the phone.

3.2.4 Battery Charger

A battery charger must be connected to the Sony Ericsson Programming Interface Cable during calibration.

1. Connect the plug of the battery charger (POS-27) into the plug of the Sony Ericsson Programming Interface Cable (POS-10).
2. Ensure the battery charger (POS-27) is connected to the line voltage.

3.2.5 USB cable

The USB A-B Plug-Plug cable (43) is the interface between the computer and the Sony Ericsson Programming Interface.

1. Connect this cable between the Sony Ericsson Programming Interface (SEPI) (9) and the computer (96).

3.2.6 Test Instrument

The test instrument (POS-76) used for SERP must be a Sony Ericsson approved instrument with all required software and hardware options installed. Refer to the Z520/Z525 Equipment List, Electrical for the list of approved test instruments.

The test instrument installation and operation should be in accordance with the manufacturer's instructions.

3.2.7 GPIB Card and Cable

1. Install the GPIB card (POS-83) in the computer according to the instructions supplied by the manufacturer.
2. Use the GPIB cable (POS-84) to connect the GPIB card (POS-83) to the test instrument (POS-76).



3.2.8 RF Cable

Connect the RF Cable's (POS-51) N-type connector to the RF port of the Test Instrument (POS-76).

3.2.9 RF Probe

Connect the RF Probe (POS-62) to the RF cable's (POS-51) SMA type connector.

3.2.10 Battery Eliminator, Jumper cables and Power Supply (optional)

Refer to Section 4 of this document for installation instructions.

NOTE! It is preferred that a standard fully charged battery be used to power the phone during the calibration routine. However, a second option is to use the battery eliminator (dummy battery) with a power supply that meets the requirements documented in the Electrical Equipment List.

3.2.11 Printer (optional)

Install the printer (POS-109) according to the instructions supplied by the manufacturer.

3.3 Software

3.3.1 SERP Calibration Routines

SERP stands for “Sony Ericsson Repair Platform”. It is an application used for testing, calibrating and repairing Sony Ericsson mobile phones.

4. Download the latest revision of the SERP application from CSPN (**Repair Instructions/Standard/SERP Install Package**) or through the use of the SERP Online Update Tool (OUT).
5. Unzip the file and open the file “SERP_Installation.doc” for installation instructions.
6. After SERP is installed a file titled “SERPINFO.htm” will be placed on the Windows Desktop. This file contains numerous documents including:
 - SERP Users Manual – This document contains system requirements, release notes, fault reporting instructions, supported test instruments, installation procedures and detailed operating instructions.
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 - SERP OUT Quick Guide – This document contains system requirements, registration information and general user guidelines for the OUT application.

4 Power Supply and Jumper Cables (optional)

1. Install the power supply (POS-77) according to the manufacturer's instructions.
2. Connect the jumper cables to the power supply's (POS-77) output terminals. Red (POS-88) to the positive output terminal and black (POS-89) to the negative output terminal.
3. Connect the banana plugs of the red and black jumper cables to the battery eliminator's (POS-52) red and black connectors.
4. Set the output of the Power Supply as follows:
 - Voltage: 3.8Vdc
 - Current: 2.0 amps

5 Lead-Free Electrical Repair

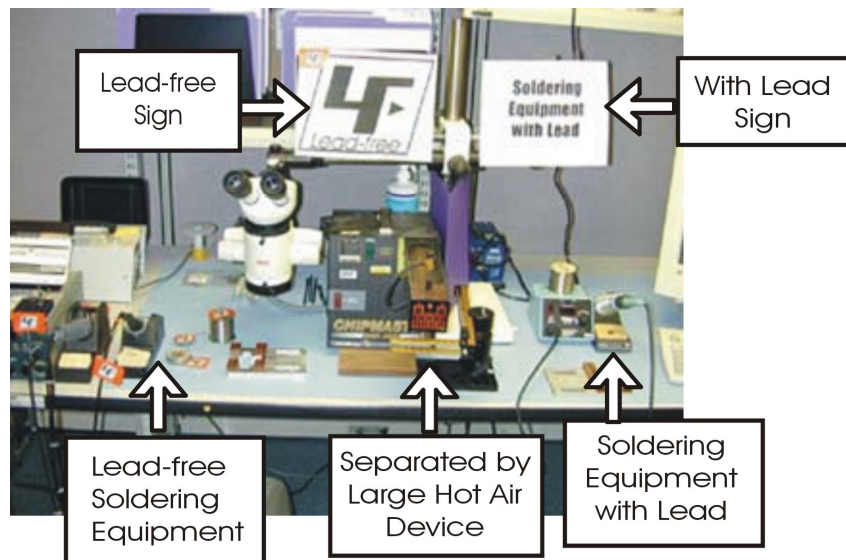
This product is manufactured with lead-free solder and lead-free components. During electrical repair, it is critical to make sure that no lead is introduced into the product. For this reason, certain repair materials and equipment must be designated as lead-free and labelled accordingly. A lead-free work area must be setup that is completely separated from work areas that are used to make leaded repairs. The lead-free work area must also be clearly labelled as shown in the figure below. Certain items must be designated for lead-free work only. Some of the items that need to be clearly labelled in this way are listed in the table below. Note that any item that contacts the solder must be labelled and used for lead-free work only.

Soldering Tips	Wicking Tape	Tip Cleaner (steel wool)
Solder	Tip Tinner	Soldering Iron





Because of cost and space limitations, some repair centers may not be able to assign a full bench to lead-free repairs. In this case, both lead-free and leaded repair setups can share the same bench, but they must be clearly marked with signs and separated by a physical divider. In the figure below, the large hot air device functions as the divider.



6 Revision History

Rev.	Date	Changes / Comments
A	2005-08-15	Initial Release
B	2006-04-17	Added support for the Z525a.
C	2006-06-21	Added support for the Z525i.