Level 2.5
Repair
Documentation for XELIBRI

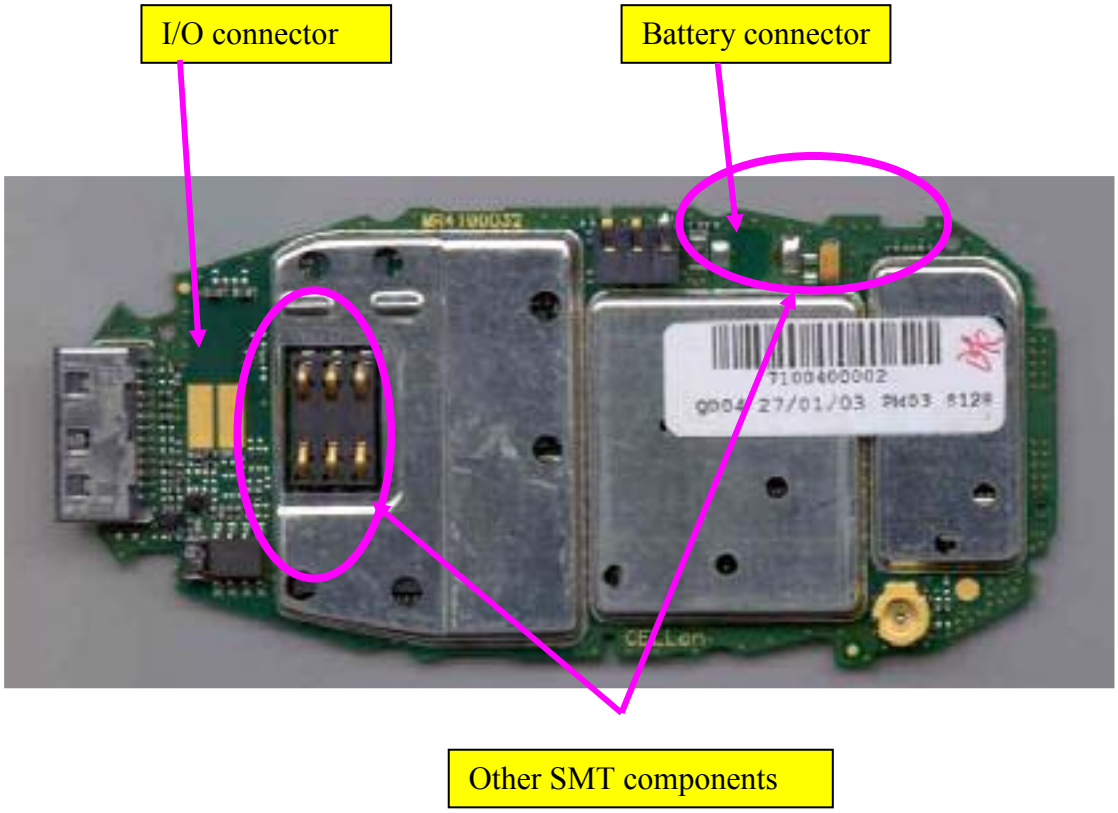
X2 & X4

Issue	Date	Author	Description
0.9	15.04.03	Noblet	First release
1.0	22.05.03	Lerner	Layout update and 1st official release

Table of Contents:

1 XELIBRI Level2.5 Repair Location Code

Single side product



2 BATTERY CONNECTOR

2.1 Affected Units

2.1.1 Type: **Xelibri**
2.1.2 Affected IMEIs/Date Codes: **All/All**
2.1.3 Affected SW-versions: **All**
2.1.4 Fault Code for LSO reporting: **NA**

2.2 Fault Description

2.2.1 Fault Symptoms for customers:

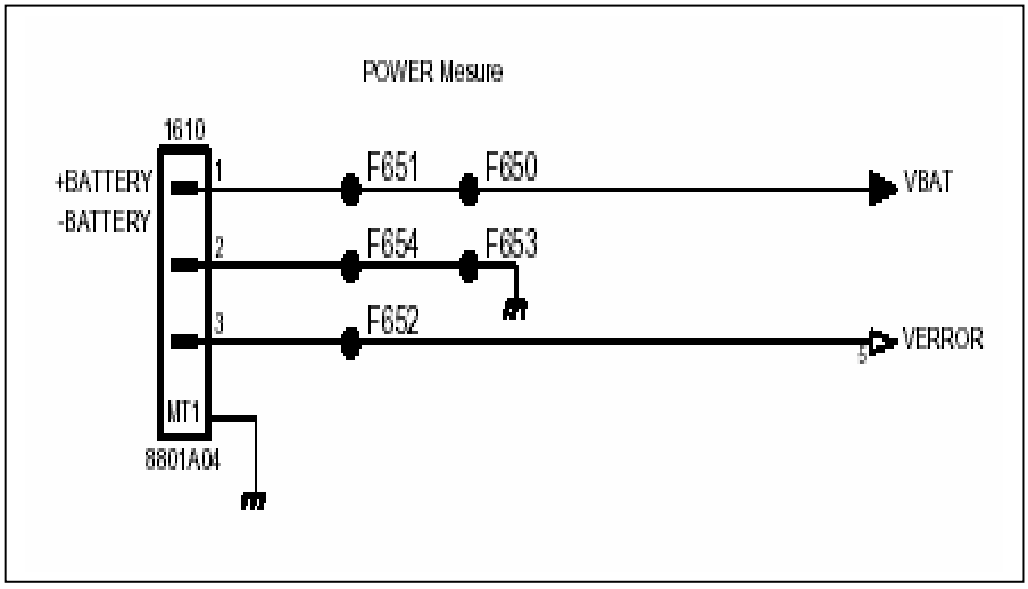
Can't power on under normal opertion
Can't charge this handset when power off

2.2.2 Fault Symptom on GSM tester:

This fault can not be detected with a GSM-Tester

2.2.3 Component Information

The connector (1610) is the battery connector with 3 contacts.
During power on, 3.5V to 4.2V is supplied to the handset via VBat.
VERROR is provided to the Battery, goes into the Power Management Unit control charge.



2.3. Priority:

☐…….Mandatory
■…….Repair
☐…….Optional
☐…….Not Yet Defined

2.4. Repair document

2.4.1 Description of procedure

2.4.1.1 Diagnosis

Visually check pins for oxidation or deformity.
Measure pins to test points (Vbat, GND, Verror) with a multimeter to check for continuity.

2.4.1.2 Repair by component change

1. Use a hot air nozzle to remove the defective connector.
   Do not apply exessive heat and flow to avoid to destroy the adjoining solder joints.
2. Level the solder joint on the pads (eventually add solder).
3. Secure new connector on the PCBA.
4. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the connector's pins.

2.4.1.3 Repair by SW-booting

Not possible !

2.4.1.4 Test

Switch on the handset after repair

2.4.2 List of material

2.4.2.1 Components

Battery connector
Part-Number: Not yet defined !

2.4.2.2 Jigs and Tools

Hot air Blower
Soldering Iron

2.4.2.3 Special tools

Multimeter

2.4.2.4 Working materials

Solder wire

2.4.3 Drawing

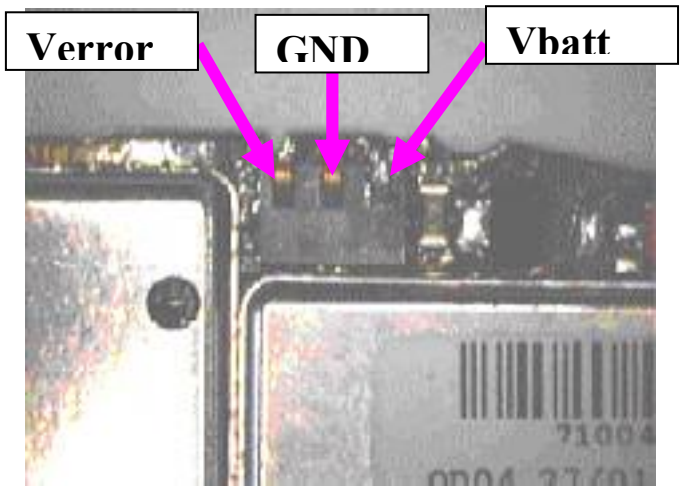


Figure 1: XELIBRI Board Battery Connector Placement

3 I/O CONNECTOR

3.1 Affected Units

3.1.1 Type: **Xelibri**
3.1.2 Affected IMEIs/Date Codes: **All/All**
3.1.3 Affected SW-versions: **All**
3.1.4 Fault Code for LSO reporting: **NA**

3.2 Fault Description

3.2.1 Fault Symptoms for customers:

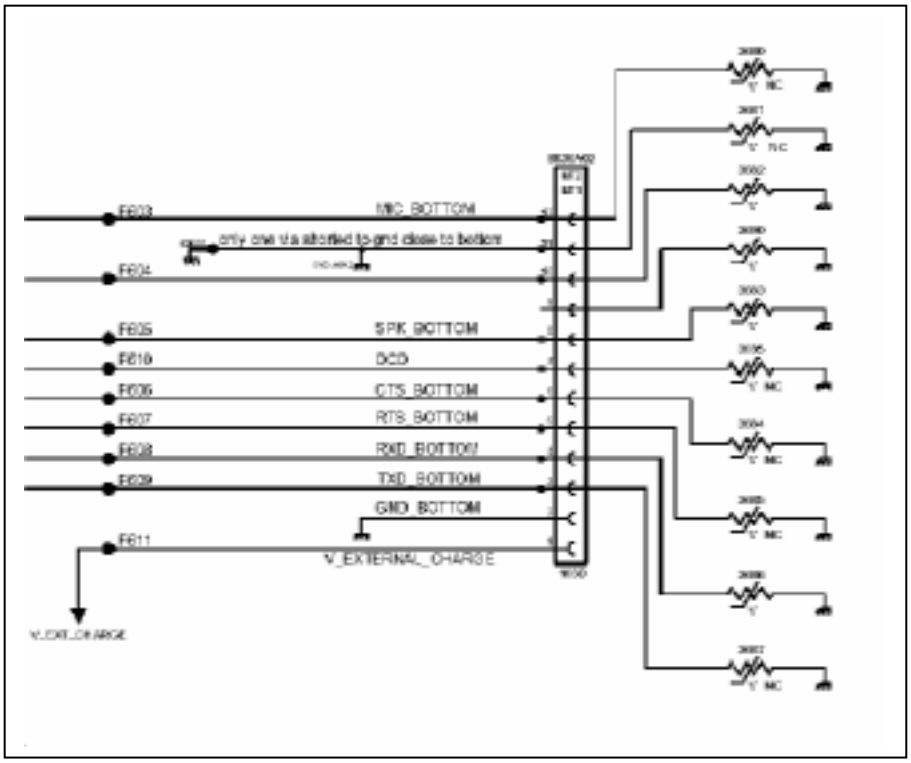
Can not charge the handset

3.2.2 Fault Symptom on GSM tester:

This fault can not be detected with a GSM-Tester

3.2.3 Component Information

The connector (1660) is I/O connector (12 contacts) used the adapter charger.
The adapter charger uses the PIN1 for V_EXTERNAL _Charge and PIN2 GND BOTTOM



3.3 Priority:

☐…….Mandatory
■…….Repair
☐…….Optional
☐…….Not Yet Defined

3.4 Repair document

3.4.1 Description of procedure

3.4.1.1 Diagnosis

Visually check pins for oxidation or deformity.
Visual inspection of the fittings and I/O pads solder joints (short circuit, leak, poor brightness).
Measure pins to test points (Vexternal charge, GND) with a multimeter to check for continuity

3.4.1.2 Repair by component change

1. Use a hot air nozzle to remove the defective connector.
   Do not apply exessive heat and flow to avoid to destroy the adjoining solder joints.
2. Level the solder joint on the pads (eventually add solder).
3. Secure new connector on the PCBA.
4. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on th the connector's pins.

3.4.1.3 Repair by SW-booting

Not possible!

3.4.1.4 Test

Plug the adapter charger and check if there is a signal on test point F611 (V_EXT_CHARGE)

3.4.2 List of material

3.4.2.1 Components

I/O connector
Part-Number: Not yet defined !

3.4.3 Jigs and Tools

Hot air Blower
Soldering Iron

3.4.4 Special tools

Multimeter

3.4.5 Working materials

Solder wire

3.4.6 Drawing

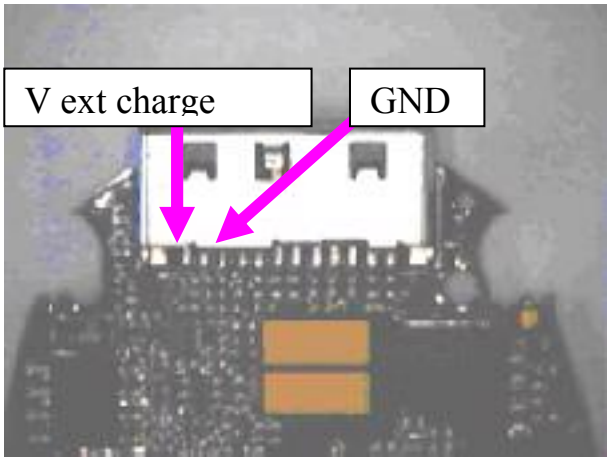


Figure 2: XELIBRI Board Battery Connector Placement

4 Other SMT components

4.1 Affected Units

4.1.1 Type: **Xelibri**
4.1.2 Affected IMEIs/Date Codes: **All/All**
4.1.3 Affected SW-versions: **All**
4.1.4 Fault Code for LSO reporting: **NA**

4.2 Fault Description

4.2.1 Fault Symptoms for customers:

Normaly no special complain from customer. Desoldered or damaged components during a connector rework.

4.2.2 Fault Symptom on GSM tester:

This fault can not be detected with a GSM-Tester

4.2.3 Component Information

Position	Component Type	Order No.	Value / Labelling
2012	Capacitor	Not defined yet	TAJA226K010S
7600	Charge Chip	Not defined yet	ST3S01PHD-TR
3632	Resistor	Not defined yet	RL1206JR-070R24
3642	Resistor	Not defined yet	RC0402JR-07330K
3643	Resistor	Not defined yet	RC0402JR-07220K
3655	Resistor	Not defined yet	RC0402JR-07330K
3656	Resistor	Not defined yet	RC0402JR-07220K
3540	Resistor	Not defined yet	RC0402JR-07120R
6630	Diode	Not defined yet	BZD27-C15

4.3 Priority:

☐…….Mandatory
■…….Repair
☐…….Optional
☐…….Not Yet Defined

4.4 Repair document

4.4.1 Description of procedure

4.4.1.1 Diagnosis

Visual inspection of the solder joints (bad soldering, poor brightness, no joint, bad placement, no component).

4.4.1.2 Repair by component change

1. Use a hot air nozzle to remove the charge chip (pos. 7600) and the zener diode (pos. 6630) and a fine-tipped soldering iron for the other components.
2. Level the solder joint on the pads (eventually add solder).
3. Peplace a new component on the pads.
4. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the contacts (eventually add solder with a solder wire).

4.4.1.3 Repair by SW-booting

Not possible!

4.4.1.4 Test

Measure the electrical value by applying a multimeter on the pads.
Or the charge chip, plug the charger and check the stoke running on the LCD.

4.4.2 List of material

4.4.2.1 Components

See above.

4.4.2.2 Jigs and Tools

Hot air Blower
Soldering Iron

4.4.3 Special tools

Multimeter

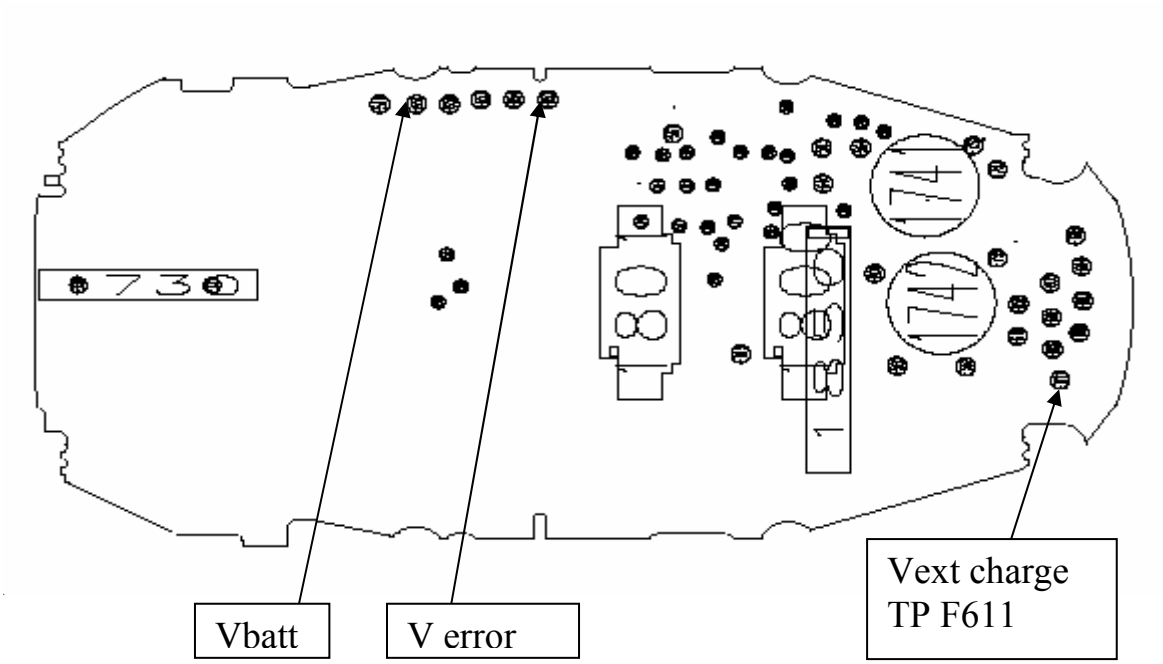
4.4.4 Working materials

Solder wire

4.4.5 Drawing

See chapter 6. PCB overview.

5 TEST POINTS LOCATION



6 PCB OVERVIEW