Service Manual S88 Level 1-3



Release	Date	Department	Notes to change		
R 1.0 15.02.2006		BenQ Mobile CC S CES	New document		

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 15 16 17 18 19 20 21 22 23 24 	General Testing Information Introduction of Service Repair Documentation Level 3 (basic) – S88 List of available Level 3 (basic) parts Hardware requirements S88 Board Layout SIM Card Problems IO Connector Problems Battery Connector Problems RF Antenna Problems Micro SD Connector Problems	43 49 50 50 51 52 53 54 55 56
 15 16 17 18 19 20 21 22 23 24 25 	General Testing Information Introduction of Service Repair Documentation Level 3 (basic) – S88 List of available Level 3 (basic) parts Hardware requirements S88 Board Layout SIM Card Problems IO Connector Problems Battery Connector Problems RF Antenna Problems Micro SD Connector Problems Camera Connector Problems	43 49 50 51 52 53 54 55 56 57
 15 16 17 18 19 20 21 22 23 24 25 26 	General Testing Information Introduction of Service Repair Documentation Level 3 (basic) – S88 List of available Level 3 (basic) parts Hardware requirements S88 Board Layout SIM Card Problems IO Connector Problems Battery Connector Problems RF Antenna Problems Micro SD Connector Problems Camera Connector Problems	43 49 50 51 52 53 54 55 56 57 58
 15 16 17 18 19 20 21 22 23 24 25 26 27 	General Testing Information Introduction of Service Repair Documentation Level 3 (basic) – S88 List of available Level 3 (basic) parts Hardware requirements S88 Board Layout SIM Card Problems IO Connector Problems Battery Connector Problems RF Antenna Problems Micro SD Connector Problems Camera Connector Problems Display Problems	43 49 50 51 52 53 54 55 56 57 58 59
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1 Key Feature

System	 Tri-band handset (GSM900/DCS1800/PCS1900) or (GSM850/DCS1800/PCS1900) with internal antenna
Battery	 Li – Ion 920mAh battery
Stand – by Time	Up to 200 hours
Talking Time	• 130min~450min
Memory	NOR flash: 128MB
2	NAND flash: 256MB
	Pseudo SRAM: 64MB
	Mobile SDRAM: 128MB
External Memory	Micro SD/Transflash
Display	Display mode: Active Matrix, OLED
. ,	 Active area: 31.152mm x 38.94mm
	• Pixel pitch: 0.177mm x 0.177mm
	Number of Colours: 260K
Keypad	 12 numerical key (including *,#)
	 5-way navigation key
	 Soft keys: Left and Right
	Send key
	End/Power key
Function key	Side keys:
-	 Volume keys
	 Camera/Video mode switch button
	 Camera shutter button
Camera	 2.0 mega pixel; CMOS Auto Focus camera for image and
	video recording
Connectivity	USB 1.1; Bluetooth
FM Radio	Embedded in Mobile Phone
Camcorder	Support MPEG 4/ 3GP
MP3 – Player	Support MP3/AAC
-	Equalizer

2 Unit Description of S88



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3 Exploded View of S88



4 Disassembly of S88

All repairs as well as disassembling and assembling have to be carried out in an ESD protected environment and with ESD protected equipment/tools. For all activities the international ESD regulations have to be considered.

For more details please check information in c - market

https://market.bengmobile.com/SO/welcome.lookup.asp

There you can find the document "ESD Guideline".



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Step 24	
	Remove Camera with Camera Frame by pressing the hooks together.
Step 25	
Step 26	
	Disassemble Camera Frame from Camera.

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5 Assembly of S88

Step 1	Assemble Earpiece by using Tweezers.
Step 2	
	Assemble Camera – Video – Key by using Tweezers.
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Step 12	
	Assemble the Camera into the Camera Frame.
Step 13	
	Fit the Assembled Camera into the cut out of the RF Control Board.
Step 14	
	Frame.

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Step 15	
Step 16	
	Fix the RF Control Board into the Upper Case Shell.
Step 14	
	Connect the Flex Cable with the RF Control Board socket.

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6 BenQ Service Equipment User Manual

Introduction

Every LSO repairing BenQ handset must ensure that the quality standards are observed. BenQ has developed an automatic testing system that will perform all necessary measurements. This testing system is known as:

BenQ Mobile Service Equipment

• For disassembling / assembling

Torque – Screwdriver Part Number: F 30032 – P 228 – A1
Opening tool (Case opening without destroying) Part Number: F 30032 – P 38 – A1
Alternative Opening tool Part Number: F30032 – P583 – A1
Tweezers

• For testing

All mobile phones have to be tested with the GRT – Software. The service partner is responsible to ensure that all required hardware is available.

For additional Software and Hardware options as well as the supported GRT equipment, please check the GRT User manual.

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7 Setup of the Software

Download of the required software:

Download the driver, the XCSD software mobile software (core-software and language files) from the Technical Support Page:

https://market.benqmobile.com/so/welcome.lookup.asp

<u>Installation of USB – Serial converter boot cable:</u> Start the "DataCableDrvInstaller.exe" file and follow the instructions of the installer.

Data	Cable Driver Insta	aller			
1. Please remove your USB data cable first.					
2. Click "OK" to install, "Cancel" to abort.					
	ок	Cancel			
	ОК	Cancel			

DataCableDrvInstaller 🛛 🔀				
	Driver installation OK ! Please plug-in the Data Cable to complete the installation.			
	ОК			

Plug in the Data cable and follow the installation instructions to complete the process.

Check the Comport number of the data cable in the device manager. (XCSD tool supports only Comport 1 to 10)

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Installation of XCSD tool:

Start "setup.exe" file and follow the instructions. The installer creates a shortcut in the start menu bar. Start – Programs – XCSDTool_L1 - BenQS



8 Software basic settings

- Start the software (BenQS.exe). The XCSD tool will be shown on the screen
- Select Model:

🤪 BenQ X(SDTool	L1 ¥1.4.10				_	
File Settin	g View	Model Help					
2		P50					
Help		A520 U700		 	 		
Beng		Z2					Ber
Beng		M220					Ber
Benq		M300 M305					Ber
Beng		M315					Ber
Beng		M350					Ber
Beng							Ber
Beng							Ber

Technical Documentation TD_Repair_L2.5L_S88_R1.0.pdf 02/2006 Page 33 of 61 Select Com port (Setting – Com port):

Ö E	BenQ C	SD Tool	L1							_	
File	Setting	View I	Model Help	_							
	Con	n port 🕩	COM1	1							
	a Bau	drate 🕨	COM2								
	Help		COM3								
BK	enq,	веп	COM4 COM5	Beng	Ben						
B		Ben	COM6	Beng							Ben
B		веп	COM7 COM8	Beng							Ben
B		Ben	COM9	Beng							Ben
B		веп	COM10	Beng							Ben

9 Software Download procedure

Select Download Option (View – Download):

🥭 BenQ CS	D Tool L1						_	
File Setting	View Model Help	_						
	✓ BenQ							
	Download							
Help	Write PPF							
Beng	Wap/Network Bkp/Restore Media Center Bkp/Restore	3enq	Beng	Beng	Beng	Beng	Beng	Ben
Beng I	Unlock Tool	3enq						
Beng I	DSC Upgrade Tool Smart Phone OS USB Download	senq,						
Beng I	✓ Status Bar	senq.						
Beng I	✔ Toolbar	senq.						

 Select Prog Land 	gram Code (example: E puage Pack (example F	22 1 11710.mot) and	
			·)	
File Setting View Model Help				
DSW Boot File Mat File UP File OF	File MMP File			
_ Setting	y senq senq senq sen	Function		
Program Code << Non-specifie) Benq Benq Benq Benq d≫ Benq Benq Benq Be	Start		
Language Pack << Non-specifie	d>> seno seno seno se	z sieną seną sen		
sieno seno seno seno		Stop		
Elena Bena Bena Bena		a Elena Bena Ber		
Options : T Always conve	rt mot 🔽 Power-off set defaul	t Set E2p		
Status P: Program	n code L:Language pack S:Set default	Q Beng Beng Ben		
E enq. Benq. Benq. Benq. E enq. Benq. Benq. Benq. E enq. Benq. Benq. Benq.) Beng Beng Beng Beng I Peng Beng Beng Peng Beng Beng Beng Peng	Q BenQ BenQ Ben Q Beno BenQ Ben C Beno Beno Ben	Status ba	ar colour scheme:
Eeno Belle Billio Ind	len Be B B Q In	c ser Beng Ben	vellow	waiting for undate
Eeno Belle Billio Ind	en selo sino in	, ser seno ser	blue	update in progress
Eenq Belle, Billio, Isna	ten se bando sno	aliser i Beng Ben	red	error occurred
Eenq Belle Billio Billio	len Be b Bho Ind	a Berlin Beng Berlin	black	Comport not available
	(len se) s q nq Len se soo on	aser seno sen	green	Update successful
Eeno Bello Bullo Dino		ser Beng Ben		
COM1 COM2 COM3 C	сома сома сома сома с	COM9 COM10		
Ready		M315		

 Connect mobile phone with data cable. Phone must be switched off. Click on "Start" button and press the power on button on the handset to start the download. During download process status bar shows the state of the process of P = Program code, L = Language file and S = Set default (if activated). After successful SW download, the status bar of the used Com port is changed to green.

Erase of customer data:

Select the "Power-off set default" option to erase all customer data of the phone during the download process.

• Click the "Set E2p" to erase the customer data without software update.

SW files naming rules:

Program Code E22111710 Language Pack E22L11711

E22 Project name 117 Program Code L Language Pack 117 Version 1.17 10/11 Program Code ID

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10 Download PPF (Handset configuration)

Select write PPF option (View – Write PPF):

芝 Write PP	F file	—		
File Setting	View	Model Help		
(h)	Be Do	nQ wnload		
Setting G:\09	Wa Me Un DS Sm	ap/Network Bkp/Restore edia Center Bkp/Restore lock Tool IC Upgrade Tool art Phone OS USB Download	ct Information M315 AP75\M315_FW_V1.1	Database File
G:\09	✓ Sta	atus Bar olbar	ict Information M315 AP75\M315_FW_V1.1	PPF File

Select Database File (example: E22111710.bin) and PPF File (example benq_m315_twn.ppf)

🥭 Write PPF file		
File Setting View Model Help		
Database Connect Disconnect		
- Setting Files	iq benq benq benq be	riq benq benq ben
C:\M315_FW_V1.17_Taiwan_)ut\E22111710.bin	Database File
C:\M315_FW_V1.17_Taiwan\b	:nq_m315_twn.ppf	PPF File
		Function
	NE BUNE BUNE BUNE BU	With Network Lock
	Don't activate	Write PPF

 Connect mobile phone with data cable. Phone must be switched on. Click to "Write PPF" button to start the process.

• Confirmation about successful write of PPF appears after process is completed.

File Setting View Model Help **C** Setting Files C:\M315_FW_V1.17_Taiwan_Out\E22111710.bin Database File C:\M315_FW_V1.17_Taiwan\benq_m315_twn.ppf PPF File Log Function With **Network Lock** Msg(com4):WritePFilePpfFile(): Write MML ES ID DS EMERGENCY success Msg(com4):WritePFilePpfFile(): Write BenQS success Error: Write PPF Msg(com4):WritePFilePpfFile(): Write Error:0 Msg(com4):WritePFilePpfFile(): Write success Error Write PPF Success Msg(com4):WritePFilePpfFile(): Write success Erro Msg(com4):WritePFilePpfFile(): Write BACK success Msg(com4):WritePFilePpfFile(): Write BACK succes. OK Msg(com4):WritePFilePpfFile(): Write Msg(com4):WritePFilePpfFile(): Write MMI_FS_ID_MEDIA_LIB_CANNED_MES. Msg(com4):WritePFilePpfFile(): Write MMI_FS_ID_MSG_SETTINGS_FILE succ Msg(com4):WritePFilePpfFile(): Write MMI_FS_ID_UA_MODEL_ID success Err Msg(com4):WritePFilePpfFile(): Write MMI_FS_ID_BAND_SETTING success E Msg(com4):WritePFilePpfFile(): Write MMI_FS_ID_CLUB_BENQ_URL success Msg(com4):WritePFilePpfFile(): Write all the PFiles Success! Error:0 Msg: Completed (8.01 sec). > < Ready M315

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11 Backup and Restore of Wap and Network Setting

 Select Back and Restore of Wap and Network Settings option (View – Wap/Network Bkp/Restore):

۱ 🍯	Nap/Net	work	settiną	g backup	and resto	ore									
File	Setting	View	Model	Help											
	tabase Setting C:\M3	Bei Do Wr Wa Me Un DS Sm	nQ wnload ite PPF dia Cent dia Cent c Upgrad art Phon	ork Bkp/Res er Bkp/Res I de Tool de Tool ne OS USB D	iore ore ownload	2.2	eno B 111710.bi	eno eno n Ber	Ben Ren 1Q, I	IQ B Beng	enc enc 2 B	ence	Databas	no e File	Ben Ben Ben
ER	C:\M3	✓ Sta ✓ Tor	itus Bar olbar			ic	kup_M315	i.ntk	10	Beng) B	ende	Setting	File	

Select

Database File (example: E22111710.bin) and

Setting File (create new txt file and rename it to ntk file for settings backup)

Wap/Network setting backup and restore	_ = 🛛
File Setting View Model Help	
Database Connect Disconnect	
Setting Files	Beng Beng Ben
C:\M315_FW_V1.17_Taiwan_Out\E22111710.bin	Database File
C:\M315_FW_V1.17_Taiwan_Out\Backup_M315.ntk	Setting File
reno seno seno ^L og _{tano} seno seno seno seno seno seno seno seno	Function
	BACKUP
	RESTORE

- Connect mobile phone with data cable. Phone must be switched off.
- Click to "Backup" button to start the transfer the settings into the selected file.
- Click to "Restore" button to start the transfer from selected file into handset.

12 Backup and Restore of Media Center content

Select Back and Restore of Media center (View – Media center Bkp/Restore):



• Select Media File (create new txt file and rename it to mmd file)

Dedia center backup and restore	
File Setting View Model Help	
Database Connect Disconnect	
- Setting File	enq Benq Ber 2ng Beng Ber
_{e e} Benq Benq Benq Benq Benq Benq Benq Benq	Database File
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd	Media File
Press Bang Bang Bang Log	Function
	BACKUP
	RESTORE

- Connect mobile phone with data cable. Phone must be switched on.
- Click to "Backup" button to start the transfer the settings into the selected file.
- Click to "Restore" button to start the transfer from selected file into handset.

13 Unlock Tool

Select Unlock tool function (View – Unlock Tool):

🕽 Unlock 1	ool	
File Setting	View Model Help	
Database	BenQ Download Write PPF Wap/Network Bkp/Restore Media Center Bkp/Restore	Senq Benq Benq Benq Benq B
seno se Ber	DSC Upgrade Tool Smart Phone OS USB Download	Database File
E <u>eno</u> Beno	✓ Status Bar ✓ Toolbar	<u>seno Beno Beno Beno Beno Beno B</u>

Select Database File (example: E22111710.bin)

🥭 Unlock tool	
File Setting View Model Help	
Database Connect Disconnect	
Beng Beng Beng Bei	Beng Beng Beng Beng Beng Beng Ben
Eenq Beng Beng Bei	Beng Beng Beng Beng Beng Beng B
C:\M315_FW_V1.17_Taiwan_0	22111710.bin Database File
Eeno Beno Beno Bei	Beng Beng Beng Beng Beng Beng Beng

- Click to "Show PW" button to get the codes.
- Unlock the codes in the mobile phone menu.
- Click to "Hide PW" button to hide the codes.

🥭 Unlock tool	
File Setting View Model Help	
Database Connect Disconnect	
Beng Beng Beng Beng Beng Beng Beng B	seno, seno, ser
C:\M315_FW_V1.17_Taiwan_Out\E22111710.bin	Database File
Beno Beno Beno Password Beno Beno Beno B teno Beno Beno Beno Beno Beno Beno B	Function
Phone Unlock Code: 1234	Show PW
Sim Unlock Code: 1234	
Screen Unlock Code: 1234	Hide PW
Fenq Benq Benq Benq Benq Benq Benq B	seno beno ben

14 International Mobile Equipment Identity, IMEI

The mobile equipment is uniquely identified by the International Mobile Equipment Identity, IMEI, which consists of 15 digits. Type approval granted to a type of mobile is allocated 6 digits. The final assembly code is used to identify the final assembly plant and is assigned with 2 digits. 6 digits have been allocated for the equipment serial number for manufacturer and the last digit is spare.

S88 series IMEI label is accessible by removing the battery.

Re – use of IMEI label is possible by using a hair – dryer to remove the IMEI label.

Date code is shown on IMEI label: Detailed description on how to read date code is given in Annex 2.

To display the IMEI number, exit code and SW/HW version, key: * # 300 # Code *#301# activates self diagnosis.

15 General Testing Information

General Information

The technical instruction for testing GSM mobile phones is to ensure the best repair quality.

Validity

This procedure is to apply for all from Siemens AG authorized level 2 up to 2.5e workshops.

Procedure

All following checks and measurements have to be carried out in an ESD protected environment and with ESD protected equipment/tools. For all activities the international ESD regulations have to be considered.

Get delivery:

- Ensure that every required information like fault description, customer data a.s.o. is available.
- > Ensure that the packing of the defective items is according to packing requirements.
- Ensure that there is a description available, how to unpack the defective items and what to do with them.

Enter data into your database:

(Depends on your application system)

- Ensure that every data, which is required for the IRIS-Reporting is available in your database.
- > Ensure that there is a description available for the employees how to enter the data.

Incoming check and check after assembling:

!! Verify the customers fault description!!

- After a successful verification pass the defective item to the responsible troubleshooting group.
- If the fault description can not be verified, perform additional tests to save time and to improve repair quality.
 - Switch on the device and enter PIN code if necessary unblock phone.
 - Check the <u>function</u> of all **keys** including **side keys**.
 - Check the display for error in line and row, and for illumination.
 - Check the **ringer/loudspeaker** acoustics by individual validation.
 - Perform a **GSM Test** as described on page 36.

Check the storage capability:

- > Check internal resistance and capacity of the battery.
- > Check battery charging capability of the mobile phone.
- > Check charging capability of the power supply.
- > Check current consumption of the mobile phone in different mode.

Visual inspection:

- > Check the entire board for liquid damages.
- > Check the entire board for electrical damages.
- > Check the housing of the mobile phone for damages.

SW update:

Carry out a software update and data reset according to the master tables and operator/customer requirements.

Repairs:

The disassembling as well as the assembling of a mobile phone has to be carried out by considering the rules mentioned in the dedicated manuals. If special equipment is required the service partner has to use it and to ensure the correct function of the tools.

If components and especially soldered components have to be replaced all rules mentioned in dedicated manuals or additional information e.g. service information have to be considered

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GSM Test:

With the availability of the GRT Test /Alignment software, this tool has to be used to perform the outgoing test!

>Connect the mobile/board via internal antenna (antenna coupler) and external antenna

(car cradle/universal antenna clip) to a GSM tester

>Use a Test SIM

For Triple Band phones use a separate test case, if the test software allows only one handover.

Skip the GSM Band test cases if not performed by the mobile phone

Example:	1. Test file	Band 1 = GSM900 / Band 2 = G	SM1800
	2. Test file	Band 1 = GSM1900	

Internal Antenna				
Test	case	Parameter	Measurements	Limits
1	Location Update	• GSM Band 1 • BS Power = -55 dBm • middle BCCH	Display check	• individual check
2	Call from BS	 low TCH highest PCL BS Power = -75 dBm middle BCCH 	 Ringer/Loudspeaker check 	• individual check
3	TX GSM Band 1	 low TCH highest PCL BS Power = -75 dBm middle BCCH 	 Frequency Error Phase Error RMS Phase Error Peak Average Power Power Time Template 	GSM Spec.
4	Handover to GSM Band 2 Including Handover Check			
5	TX GSM Band 2	 low TCH highest PCL0 BS Power = -75 dBm middle BCCH 	 Frequency Error Phase Error RMS Phase Error Peak Average Power Power Time Template 	• GSM Spec.
6	Call release from BS			

Ext	External Antenna				
7	Call from MS	 GSM900 high TCH second highest PCL BS Power = -75 dBm middle BCCH 	Keyboard check	• individual check	
8	TX GSM Band 1	 high TCH second highest PCL BS Power = -75 dBm middle BCCH 	 Frequency Error Phase Error RMS Phase Error Peak Average Power Power Time Template 	GSM Spec.	
9	RX GSM Band 1	 high TCH BS Power = -102 dBm 50 Frames middle BCCH 	RX Level RX Qual BER Class lb BER Class II BER Erased Frames	GSM Spec.	
10	Handover to GSM Band 2 Including Handover Check				
11	TX GSM Band 2	 high TCH second highest PCL BS Power = -75 dBm middle BCCH 	 Frequency Error Phase Error RMS Phase Error Peak Average Power Power Time Template 	GSM Spec.	
12	RX GSM Band2	 high TCH BS Power = -102 dBm 50 Frames middle BCCH 	RX Level RX Qual BER Class Ib BER Class II BER Erased Frames	GSM Spec.	
13	Call release from MS				

Final Inspection:

The final inspection contains:

- 1) A 100% network test (location update, and set up call).
- 2) Refer to point 3.3.
- 3) A random sample checks of:
 - Data reset (if required)
 - Optical appearance
 - complete function
- 4) Check if PIN-Code is activated (delete the PIN-Code if necessary).

Basis is the international standard of **DIN ISO 2859**.

Use Normal Sample Plan Level II and the Quality Border 0,4 for LSO.

Remark: All sample checks must be documented.

Technical Documentation

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Annex 1

Test SIM Card

There are two different "Test SIM Cards" in use:

1) Test SIM Card from the company "ORGA"

Pin 1 number:	0000
PUK 1 :	12345678
Pin 2 number:	0000
PUK 2 :	23456789

2) Test SIM Card from the company "T-D1"

Pin 1 number:	1234
PUK :	76543210
Pin 2 number:	5678
PUK 2 :	98765432

Annex 2

Device Date Code overview

GSN rule: (ex: GS11500001TG0)

<u>GS</u>	<u>1</u>	<u>9</u>	<u>5</u>	<u>00001</u>	<u>TG0</u>
Big class	Date	Month	Year	S/N	Factory

Code	Meaning	Content
D	Date	1~9, A=10, B=11, C=12, D=13, E=14, F=15, G=16, H=17, J=18, K=19, L=20, M=21, N=22, P=23, R=24, S=25, T=26, V=27, W=28, X=29, Y=30, Z=31 (Don't use: 0, I, O, Q, U)
М	Month	1=Jan, 2=Feb, 3=Mar, 4=Apr, 5=May, 6=Jun, 7=Jul, 8=Aug, 9=Sep, A=Oct., B=Nov, C=Dec
Y	Year	Last digit of Year (Christian era) ex. Year 2004 → "4"

Based on the definition above, GSC55... below means 2005/05/12.



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16 Introduction of Service Repair Documentation Level 3 (basic) – S88

16.1 Purpose

This part of Service Repair Documentation is intended to carry out repairs on BenQ Mobile repair level 3basic (only for workshops without level 3 equipment (special agreement required). The described failures shall be repaired in BenQ authorized local workshops only.

The level 3basic partners are obliged to send exchanged boards (SWAP) to the next higher Service Repair Partner.

All repairs have to be carried out in an ESD protected environment and with ESD protected equipment/tools. For all activities the international ESD regulations have to be considered.

Assembling/disassembling has to be done according to the latest S88 Level 1-3 repair documentation.

The Service Partner has to ensure that every repaired mobile Phone is checked according to the latest released General Test Instruction document (both documents are available in the Technical Support section of the C-market).

Check at least weekly C-market for updates and consider all S88 related Customer Care Information

The part number for the S88 is S88 where the last for letters specify the housing and software variant.

Scrap Handling: All Scrap information given in this manual are related to the SCRAP-Rules and instructions.

Attention: Consider the new "LEAD-FREE" soldering rules (available in the communication market), avoid excessive heat.

16.2 Scope

This document is the reference document for all BenQ mobile authorised Service Partners which are released to repair BenQ mobile phones up to level 2.5 light.

16.3 Terms and Abbreviations

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17 List of available Level 3 (basic) parts

Product	Order Number	Description CM
S88	L50634-Z97-C553	CONN DC PWR PA05302-QNJ
S88	L50634-Z97-C633	CONN AXK7L20227
S88	L50634-Z97-C634	CONN AXK7L30227
S88	L50634-Z97-C635	CONN AXK734245
S88	L50634-Z97-C636	CONN BF1-0115
S88	L50634-Z97-C554	CONN ANT RF05301-PG
S88	L50634-Z97-C556	CONN BAT3PD2.5AB303Y-C0G1
S88	L50634-Z97-C558	CONN I/O 10P P0.5
S88	L50634-Z97-C637	CONN SIM BM05306-D18
S88	L50634-Z97-C638	CONN MEMORY 11TFC-001
S88	L50615-Z77-C287	SWI RF ANTENNA MS-147

18 Hardware requirements

(According to General soldering information V1.3 - check C-market for updates)

Jigs, Tools and working materials for all described repairs:

- hot air blower
- soldering gun
- tweezers
- flux
- solder

19 S88 Board Layout



20 SIM Card Problems





Connector SIM Card Reader

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L50634-Z97-C637
E-commerce order name:	CONN SIM BM05306-D18
Soldering temperature:	~ 360°C TIP Temp.

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21 **IO Connector Problems**



Connector IO Jack

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L50634-Z97-C558
E-commerce order name:	CONN I/O 10P P0.5

Soldering temperature: ~ 360°C TIP Temp.

IRIS Diagnose C	ode:
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47300 Interface/Data Interface/Mechanical Damage 4B100 Interface/Headset Connector/Mechanical Damage

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22 Battery Connector Problems





Connector BATTERY

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L50634-Z97-C556
E-Commerce name:	CONN BAT3PD2.5AB303Y-C0G1

Soldering temperature: 240 - 255°C

IRIS Diagnose Code: 13000 Battery/Mechanical Damage

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23 RF Antenna Problems





Connector RF

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number: E-commerce name: E-commerce order number: E-commerce name:	L50634-Z97-C554 CONN ANT RF0530 L50615-Z77-C287 SWI RF ANTENNA M	1-PG //S-147
Soldering temperature:	240 - 255°C	
IRIS Diagnose Code:		
81100 Radio / No Contact / Int. Antenna		81200 Radio / No Contact / Ext. Antenna
82100 Radio / Low Receiving Signal / Int. Antenna		82200 Radio / Low Receiving Signal / Ext. Antenna
83100 Radio / Dropped Calls / Int. Antenna		83200 Radio / Dropped Calls / Ext. Antenna
84100 Radios / Call Setup / Int. Antenna		84200 Radio / Call Setup / Ext. Antenna
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24 Micro SD Connector Problems



Connector MMC

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L50634-Z97-C638
E-commerce order name:	CONN MEMORY 11TFC-001

Soldering temperature: ~ 360°C TIP Temp.

IRIS Diagnose Code: 4E000 Interfaces/ Memory Card Rerader

25 Camera Connector Problems





Connector CAMERA

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

L50634-Z97-C634 CONN AXK7L30227
~ 360°C TIP Temp.
BA000 Accessories / Camera

26 Display Problems





Connector DISPLAY

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L50634-Z97-C635
E-commerce order name:	CONN AXK734245
Soldering temperature:	~ 360°C TIP Temp.

IRIS Diagnose Code: 21000 Display / Performance 22000 Display / Background Illumination

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27 Charger Problems

Fault Symptoms	
Customer:	GRT:
Charger Problems	Tbd.



IRIS Diagnose Code: 46100 Interface/Charging Connector/Mechanical Damage

28 Keypad Problems





E-commerce order number: E-commerce order name:	L50634-Z97-C633 CONN AXK7L20227
Soldering temperature:	~ 360°C TIP Temp.
IRIS Diagnose Code:	21000 Display / Performance 22000 Display / Background Illumination

29 Flash light Problems





E-commerce order number: E-commerce order name:	L50634-Z97-C636 CONN BF1-0115
Soldering temperature:	~ 360°C TIP Temp.
IRIS Diagnose Code:	21000 Display / Performance 22000 Display / Background Illumination