

Service Manual Level 1-2 for Beng.mobile EF71



Release	Date	Department	Notes to change
R 1.0	12.09.2006	BenQ Mobile CC S CES	New document

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1 Key Feature

System	• Tri-Band GSM 900/1800/1900
Battery	Li-Ion 750 mAh
Stand – by Time	• Up to 225h
Talking Time	Up to 3 h
Antenna	Integrated
Main Display	 262, 144 TFT, 176x220 pixels, 2.2 inches
Sub - Display	White OLED, 128 x 64 pixels
Storage	• 24 MB
Camera	 2.0 megapixel, 3 x linear digital zoom
Connectivity	 USB 1.1, Bluetooth: Object Push Profile, Object Exchange, Handsfree Profile, Headset Profile
Memory Slot	MicroSD
Processor	• TI





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2 Spare Part Overview of EF71

Overview Upper Parts



No.	Description CM	Order Number
1.	Lower Base Case Shell	Tbd.
2.	Upper Base Case Shell	Tbd.
3.	Battery Cover	Tbd.
4.	Battery	Tbd.
5.	Transflash card holder	Tbd.
6.	Base Screws	Tbd.
7.	Screw Cover	Tbd.
8.	Side Key Left	Tbd.
9.	Screw Cover	Tbd.
10.	Screw caps	Tbd.
11.	Keypad	Tbd.
12.	RF Control Board	Tbd.
13.	Side Key PCB	Tbd.
14.	Rubber gasket	Tbd.
15.	Vibra Alert	Tbd.

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Overview Lower Parts



No.	Description CM	Order Number
16.	Lift Case Cap	Tbd.
17.	Upper Lift Case Shell	Tbd.
18.	Display Module	Tbd.
19.	Camera Module	Tbd.
20.	Earpiece	Tbd.
21.	???	Tbd.
22.	Lift Screws	Tbd.
23.	Screw Cover	Tbd.
24.	Flex Cable	Tbd.
25.	Hinge	Tbd.

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3 Disassembly of EF71

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 6	
	Remove Lower Base Case Shell with the Alternative Opening Tool carefully.
Step 7	
	Use Tweezers to disconnect the Flex Cable from the RF Control Board socket.
Step 8	
	Remove rubber gasket from ringer.

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Stop 12	
	Remove the antenna PCB.
Step 13	
	Remove the Side Key .
Step 14	
	Remove Transflash card holder

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Step 21	
	It is mandatory to place a Protection Foil onto the Display.
Step 22	
	Disconnect the Flex Cable.
Step 23	
	Remove the Camera Module by disconnecting it from the socket.

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Step 24	
Step 25	
	It is mandatory to place a Protection Foil onto the Display to avoid scratches.
Step 26	
	Remove Vibra carefully by using tweezers

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Step 32



Step 33



Remove the Ringer by using Tweezers carefully.

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4 Assembly of EF71









Step 7	
	Assemble Screw Cover by using Tweezers.
Step 8	
Step 9	
	Assemble the vibra.

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Step 13	
	Assemble the Camera Module by connecting it to the socket.
Step 14	
	Remove Display Foil.
Step 15	
	Assemble Upper Lift Case and Lower Lift Case.

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<section-header></section-header>	Connect flex cable connector.
οιeh τα	
	Assemble the Lower Base Case Shell.
Step 30	
	Place screws with Torque – Screwdriver T5+.
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5 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 SW UPDATE



Torque – Screwdriver Part Number: F 30032 – P 228 – A1

• 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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6 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

Installation of USB - Serial converter boot cable:

Start the "DataCableDrvInstaller.exe" file and follow the instructions of the installer.

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

DataCab	leDrvinstaller 🛛 🔀
	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



7 Software basic settings

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

🤪 BenQ	XCSDTool	L1 ¥1.4.10				_	. 🗆 🗙
File Sett	ing View	Model Help					
2		P50					
Help		A520 U700					
Bend		Z2					Ber
Bend		M220					Ber
вепо		M300 M305					веп
Bend		M315					Ber
вепо		M350					вег
Bend		C DGIN					Ber
Bend							Ber

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Select Com port (Setting – Com port):

ÖB	enQ C	SD Tool	L1							_	
File (Setting	View	Model Help								
	Com	port 🕨	COM1								
	Bau	drate 🕨	COM2 COM3								
86		Ben	COM4 COM5	Beng	вепо	Benq	Beng	Benq	Benq	Benq.	sen
Be			COM6	Beng							
Be			COM7 COM8	Benq							
Be			COM9	Beng							
Be			COM10	Beng							

8 Software Download procedure

Select Download Option (View – Download):

🍓 BenQ CS	D Tool L1						_	
File Setting	View Model Help	_						
	✓ BenQ							
\triangleleft	Download							
Help	Write PPF							
Beng	Wap/Network Bkp/Restore Media Center Bkp/Restore	3enq	Benq	Benq	Beng	Beng	Beng	Ber
Beno	Unlock Tool	senq.						
Beng	DSC Upgrade Tool Smart Phone OS USB Download	senq.						
Beng	- A Shahur Bay	senq						
Beng	 ✓ Toolbar 	3enq						

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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 CodeE22111710Language PackE22L11711

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

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9 Download PPF (Handset configuration)

Select write PPF option (View – Write PPF):



Select Database File (example: E22111710.bin) and PPF File (example beng_m315_twn.ppf)

🦥 Write PPF file	
File Setting View Model Help	
Database Connect Disconnect	
┌ Setting Files	ng beng beng beng beng beng beng ben
C:\M315_FW_V1.17_Taiwan_	Out(E22111710.bin Database File
E Bing, Dang, Dang, Da	
C:\M315_FW_V1.17_Taiwan\b	enq_m315_twn.ppf PPF File
Beno Beno Beno Be	
Eleno, Beno, Beno, Be	LogFunction
E	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.

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File Setting View Model Help	io Reno Rel
Setting Files C:\M315_FW_V1.17_Taiwan_Out\E22111710.bin C:\M315_FW_V1.17_Taiwan\benq_m315_twn.ppf	Database File PPF File
Log Msg(com4):WritePFilePpfFile(): Write MML FS_ID_DS_FMEBGENCY success Msg(com4):WritePFilePpfFile(): Write Msg(com4):WritePFilePpfFile(): Write Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WritePFilePpfFile(): Msg(com4):WriteP	Function With Network Lock Write PPF
	iq beng bel
Beng Beng Beng Beng Beng Beng Beng Beng	IQ BENQ BEI IQ BENQ BEI

Global Customer Care

10 Backup and Restore of Wap and Network Setting

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

🍋 Wap/Ne	twork	setting	g backup and	restor	e							_ D >	<
File Setting	View	Model	Help										
Database	Bei Do Wr	nQ wnload rite PPF											
	🗸 Wa	ap/Netwo	ork Bkp/Restore		2000	Beno	Ben	n Be	no	Bar	o Ber	D BO	
_ Setting	Me	dia Centi	er Bkp/Restore		seng	Deriv	. Dern						
С:\М3	Un DS Sm	lock Tool C Upgrac art Phon	de Tool e OS USB Downle	pad	2111710	0.bin	enq B	n Re Ienq	Bei	nder	Database	File	
C:\M3	r ✓ Sta ✓ To	atus Bar olbar			ickup_M	1315.ntk	ing E	enq	Bei	nder Jer	Setting	File	

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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	
C:\M315_FW_V1.17_Taiwan_Out\E22111710.bin	Database File
C:\M315_FW_V1.17_Taiwan_Out\Backup_M315.ntk	Setting File
Beng Beng Beng Beng Beng Beng Beng Beng	Function
	BACKUP
	Ben <u>o, Beno, B</u> en Beno, Beno, Ben
	RESTORE
	Beng Beng Ber

- 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.

11 Backup and Restore of Media Center content

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

ile Setting	View Model Help		
Database	BenQ Download Write PPF Wap/Network Bkp/Restore	3enq Benq Benq Benq B	enq benq b
enn Ber	Unlock Tool DSC Upgrade Tool Smart Phone OS USB Download	Q BENQ BENQ BENQ BENQ	Database File
C:\M3	🗸 Status Bar	:dia Backup_M315.mmd	Media File

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

Media center backup and restore	
e Setting View Model Help	
latabase Connect Disconnect	
-Setting File	Benq Benq B
eno seno seno seno seno seno seno seno s	Database File
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd	Media File
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd	Media File
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd Log	Function
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd Log	Function BACKUP
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd Log	Function BACKUP
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd Log	Media File Function BACKUP
C:\M315_FW_V1.17_Taiwan_Out\Media Backup_M315.mmd Log	Media File 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.

12 Unlock Tool

Select Unlock tool function (View – Unlock Tool):

🍣 Unlock t	ool	
File Setting	View Model Help	
Database	BenQ Download Write PPF Wap/Network Bkp/Restore Media Center Bkp/Restore	Benq Benq Benq Benq Benq Benq Ben
Eeno I Ee Ben	✓ Unlock Tool DSC Upgrade Tool Smart Phone OS USB Download	Seno Beno Beno Beno Beno Beno Beno Beno B
Beng I	✔ Status Bar ✔ Toolbar	<u>3eno Beno Beno Beno Beno Beno Beno</u> Beno Beno Beno Beno Beno Beno Beno Beno

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Database File (example: E22111710.bin) Select

					_	
iq benq	, Benq	Beng	вепо	Beng	Beng	веп
iq Benq	Benq	Beng	вепо	вере	Beng	
ut\E2211171	0.bin Be			Da	ntabase File	
				Beno	Etemo	
	Put(E2211171	ut\E22111710.bin	La Beno Beno Beno Beno Beno Put\E22111710.bin Beno Beno Beno	lo Beno Beno Beno Beno Dut(E22111710.bin Beno Beno Beno Beno Beno Beno Beno	utţE22111710.bin	Put\E22111710.bin

- 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	
Benq Benq Benq Benq Benq Benq Benq Be	enq benq ben
Eenq Benq Benq Benq Benq Benq Benq Benq B	en <u>o Beno B</u> en
C:\M315_FW_V1.17_Taiwan_Out\E22111710.bin	Database File
E <mark>enq Benq Benq Benq Benq Benq Benq Benq B</mark>	enq Benq Be
Beng Beng Beng Beng Beng Beng Beng Beng	Function
Phone Unlock Code: 1234	Show PW
Sim Unlock Code: 1234	in <u>o Beno B</u> in
Screen Unlock Code: 1234	Hide PW

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13 JPICS (Java based Product Information Controlling System)



Overview

The following functions are available for the LSO:

- General mobile information
- Generate PINCODE
- Generate SIMLOCK UNLOCK Code
- Print IMEI labels

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🗿 JPICS PICS intern	et porta	l Microsoft I	nternet	Explo	er bereit	gestellt von	BenQ mobile Kam	p-Lintfort		
	Ben	IQ mobile	View	Extra	Window	Help		Global Home	My-BenQ	E-Mail
Beno mobile	KLFS1D00 Version: J	D PICS_V5				Mask Username	SparkaJP			16.11.2005 15:20
Mobile info										
IMEI label printing										
Masterphone codes										
Simlock unlock co										
BFBus - Status										
					Choo	e e e e	unction			
										connected

The access to the JPICS server which is located in Kamp – Lintfort is protected by chip card and in addition using secure socket layer (SSL) connection.

The JPICS server is only available for authorized users with a specially coded smart card. These smart cards and the administration of the JPICS web server and the PICS database – server can only be provided by the JPICS – TRUST – Center of the responsible department in Kamp – Lintfort.

In case of any questions or requests concerning smart cards or administration of the databases please ask your responsible BenQ Customer Care Manager.

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Installation overview

The following installation description assumes that a web browser is already installed. JPICS is tested with the following browsers:

- 1. Internet Explorer Version 5.5 and higher
- 2. Netscape Version 6 and higher

For further information regarding supported browsers, browser version and supported operating systems, see the <u>Sun FAQ's</u>.

Here is a step by step instruction to install all the required components:

It is necessary to follow this order!

- 1. Smart Card Reader (Omnikey: Cardman 2020 USB or Cardman 3121 USB)
- 2. CardOS interface (Siemens Version 3.0 B)
- 3. Java Runtime Environment (Sun)
- 4. Java additional components

Every user is responsible for a proper installation matching the license agreements.

For installation and further access you need the following:

- 1. The JPICS Installation CD
- 2. The Smart Card JPICS.

<u>Remark:</u> We recommend using Cardman 2020 USB or Cardman 3121 USB. Serial card readers are not supported!!!

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Generate Codes

In the JPICS application you can choose to generate:

- Masterphone codes
- Simlock Unlock Codes

Masterphone codes

The Masterphone code is used to unlock blocked mobiles.

Masterphone codes can only be supplied for mobiles which have been delivered in a regular manner.

🗿 JPICS PICS interne	et portal Microsoft Interi	net Explorer bereitgestel	lt von BenQ mobile Kamp	-Lintfort	
	Beng mobile	u Eutra Mindou Uola		Global Home	My-BenQ E-Mail
770000	Action JPICS user menu vie	w Extra window neip			
Benq.mobile	KLFS1D0C Version: 1.0	Mask Username	Masterphone-Code* SparkaJP		16.11.2005 15:22
	Troubleshooting Masterphone-Code	•			
Mobile info	Input				
IMEI label printing	IMEI 351630000011691	Execute DB-Location	Kamp-Lintfort		
Masterphone codes	Mobile data				
	Producttype SL55	Deliverypartnumber	L36880-N4910-A150-31		No.
Simlock unlock co	SW version 000	Partnumber	530880-54910-A100-53		
BFBus - Status	Warranty	Status	Normal		51.55
	Delivery information				
	Deliverynote LC00001579	Delive	erydate 15.09.05		
	Mobile codes				
	Mobile unlock code *#0003*40158	8737#			
					-(D)- connected

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Simlock – Unlock – Code

The **Simlock – Unlock – Codes** can only be generated if the following conditions are given:

- Mobile must have an active **Simlock** inside.
- The user must be given the authorization to obtain **Simlock Unlock Codes** for the variant of the operator to which the mobile was delivered last time.

JPICS PICS internet	et portal Microsoft Internet Explorer bereitgestellt von BenQ mobile Kar	np-Lintfort
	BENQ mobile Action JPICS user menu View Extra Window Help	Global Home My-BenQ E-Mail
Beng mobile	KLFS1D0C Mask Simlock-Unlock-Code Version: 1.0 Username SparkaJP	16.11.2005 15:23
Mobile info	Simlock-Unlock-Code Get information for given IMEI IMEI 350673547180612 Execute DB-Location Kamp-Lintfort	
Masterphone codes	Mobile data Producttype C45 Deliverypartnumber L36880-55100-X139-15	
Simlock unlock co BFBus - Status	SW version 049 Partnumber 530880-55100-A139-14 Warranty 21.08.05 Status Normal	
	Delivery information Delivery note 0066015319 Delivery date 22.08.03	
	Mobile codes Network Mastercode	
	S. Providercode S. Provider Mastercode SIM-Reeanablecode	
	Corporate Corporate Mastercode Corporate Mastercode Network Subnet Code Network Subnet Mastercode	*
	/	

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Printing IMEI label

The module "**printing IMEI label**" offers the possibility to re-print IMEI labels for mobiles again.

🗿 JPICS PICS interne	et portal Microsoft Internet Explorer bereitgestellt von BenQ mobile Kamp-Lintfo	ort 🔳 🗖	×
	Beng mobile Globa Action JPICS user menu View Extra Window Help	al Home My-BenQ E-Ma	nil
Benq.mobile	KLFS1D0C Mask Reprint IMEI Label Version: 1.4 Username SparkaJP	16.11.20 15	005 (24
Mobile info IMEI label printing	Reprint IMEI Label	rt	
Masterphone codes Simlock unlock co	Print test label(s)		
BFBus - Status			
			ted

You are able to print 1 label in just one step.

To prevent that misaligned labels are being printed, the setting "Print test labels = \checkmark " is activated by default. After having printed a well aligned test label you can uncheck the setting and print the correct label.

Hint:

For correct printing of IMEI labels you must have a **Zebra – label printer** with special material that fits for label printing. This printer has to be connected to local LPT1 printer port

(also see Installation of IMPRINT) and MUST feature a printing resolution of 300dpi.

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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.

CF61 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.

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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.

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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 = GSM	11800
	2. Test file	Band 1 = GSM1900	

Inte	rnal 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			

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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 Ib 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.

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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

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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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