3 - Service Software Instructions

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Quick Guide for Phoenix Service SW Installation



Service requirements

Supported operating systems

- Windows 2000 (service pack 2)
- Windows XP (service pack 1)

Hardware requirements

Minimum

• Processor 300 MHz, RAM memory 64 MB, disk 100 MB.

Recommended for Windows 2000

• Processor 700 MHz, RAM memory 256 MB, disk space 150 MB.

Service software

The service software used is called Phoenix. The Phoenix service software requires a 32-bit operating system and is not compatible with Windows versions 3.X.

Phoenix installation steps in brief

DCT-4 generation test and service software is called "Phoenix".

These are the basic steps to install Phoenix:

- Connect a DK2 dongle or FLS-4S POS flash device.
- Install the Phoenix service SW.
- Install the data package for Phoenix.
- Configure users.
- Manage connection settings (depends on the tools you are using).
- Phoenix is now ready for FLS-4S Point Of Sales flash device use.
- If you use FPS-8:

Update FPS-8 SW. Activate FPS-8. Update JBV-1 docking station SW (only when needed).

• Phoenix is now ready for use also with FPS-8 flash prommer and other tools.

Phoenix service software installation contains:

- Service software support for all phone models included in the package.
- Flash update package files for FPS-8* and FLS-4S programming devices.
- All needed drivers for:

DK2 dongle FLS-4S point of sales flash device USB devices

Separate installation packages for flash update files and drivers are also available, but it is not necessary to use them unless updates appear between Phoenix service SW releases. If separate update packages are used, they should be used after Phoenix and data packages have been installed.

The phone model specific data package includes all product specific data:

- Product software binary files
- Files for type label printing
- · Validation file for the fault log repair data reporting system
- All product specific configuration files for Phoenix software components

Phoenix service SW and phone data packages should only be used as complete installation packages. Uninstallation should be made from Windows's control panel.

Phoenix Service SW

Before installation

- Check that a dongle is attached to the parallel port of your computer.
- Download the installation package (e.g. *phoenix_service_sw_a15_2004_41_5_28.exe*) to your computer (e.g. C:\TEMP).
- Close all other programs.

• Run the application file (e.g. *phoenix_service_sw_a15_2004_41_5_28.exe*) and follow instructions on the screen.

• Administrator rights may be required to be able to install Phoenix depending on the operating system.

• If uninstalling or rebooting is needed at any point, you will be prompted by the Install Shield program.

• If at any point during installation you get this message:

"Dongle is not found and installation cannot continue."

Possible reasons may be a defective or too old PKD-1 dongle (five digit serial number dongle when used with FPS-8 prommer) or that the FLS-4S POS flash dongle is defective or power to it is not supplied by external charger.

First, check the COM /parallel ports used! After correcting the problem, installation can be restarted.

Dongle r	not found 🔀
⚠	Insert Nokia dongle and click Retry to re-detect the dongle or click Cancel to exit the installation.
	<u>R</u> etry Cancel

For more detailed information, please refer to Phoenix Help files. Each feature in Phoenix has its own Help function, which can be activated while running the program. Press the F1 key or the feature's Help button to activate a Help file.

Installing Phoenix

1. To start installation, run the *phoenix_service_sw_a15_2004_41_5_28.exe*.

Install Shield starts.



2. To continue, click "Next" in the Welcome dialog.



3. Read the text carefully:



4. Choose destination folder. It is recommended to use the default folder C:\ProgramFiles\Nokia\Phoenix.

5. To continue, click "Next". You may choose another location by clicking "Browse" (not recommended).



Setup copies the components, progress of the setup is shown. Please wait...



Drivers are installed and updated, please wait. The process may take several minutes to complete.



If the operating system does not require rebooting (Windows 2000, XP), the PC components are registered straight away.



6. Click "Finish". Phoenix is ready for use.



7. **If the operating system used requires restarting your computer**, the Install Shield Wizard notifies you about it. Select "Yes..." to reboot the PC immediately and "No..." to reboot the PC manually afterwards.



After the reboot, components are registered and Phoenix is ready for use. <u>Note that Phoenix</u> <u>does not work, if components are not registered</u>.



Now the installation of Phoenix service SW is ready and it can be used after:

- Installing phone model specific data package for Phoenix
- Configuring users and connections
- FLS-4S can be used straight away
- FPS-8* can be used after updating flash update package files

Updating Phoenix installation

If you already have the Phoenix service SW installed on your computer, you will need to update it when new versions are released.

<u>Always use the latest available versions of both the Phoenix service SW and the phone specific</u> <u>data package</u>. Instructions can be found in phone model specific Technical Bulletins and phone data package readme.txt files (shown during installation).

To update Phoenix, you need to take exactly the same steps as when installing it for the first time.

- 1. Download the installation package to your computer hard disk.
- 2. Close all other programs.
- 3. Run the application file (e.g. *phoenix_service_sw_a15_2004_41_5_28.exe*).
- 4. Newer version of Phoenix is installed.
- 5. Driver versions are checked and if need be, updated.

When you update Phoenix (e.g. *a10_2003_33_5_22* to *a11_2003_41_5_28.exe*), the update takes place automatically without uninstallation.

If you try to update Phoenix with the same version that you already have (e.g. *a15_2004_41_5_28* to *a14_2004_42_6_28*), you are asked if you want to uninstall the current Phoenix version. In this case you can choose between total uninstallation and repair.

If you try to install an older version (e.g. downgrade from *a*15_2004_41_5_28 to *a*14_2004_33_5_22), installation will be interrupted.

Phoenix 9	Service Software Setup
8	You have newer version of the application. If you want to install older version you need to uninstall the current version before.
	Setup will exit.
	ОК

Please always follow the instructions on the screen.

Uninstalling Phoenix

Uninstallation can be done manually from the Windows's control panel.

- 1. Choose Add / Remove Programs -> "Phoenix Service Software".
- 2. To uninstall Phoenix, click "Add/Remove" -> "Remove".

Phoenix Service Software Setup		X
Welcome Repair or remove the program.		
	Welcome to the Phoenix Service Software A Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.	
	Repair Reinstall all program components installed by the previous setup.	
	 <u>Remove</u> Remove all installed components. 	
InstallShield	≺ <u>B</u> ack <u>N</u> ext > Cancel	

Progress of the uninstallation is shown.



3. If the operating system does not require rebooting, click "Finish" to complete.



4. If the operating system requires rebooting, Install Shield Wizard notifies you about it. Select "Yes..." to reboot the PC immediately and "No..." to reboot the PC manually afterwards._



Repairing Phoenix installation

If you experience any problems with service software or suspect that files have been lost, you can use the repair function before completely reinstalling Phoenix. Note that the original installation package (e.g. *phoenix_service_sw_a15_2004_41_5_28.exe*) must be found on your PC when you run the repair setup.

To repair:

- 1. Run Windows Control Panel.
- 2. Choose Add / Remove Programs -> "Phoenix Service Software".
- 3. Click "Add/Remove". In the following view, select "Repair".

tfoloomo		
Repair or remove the program.		
	Welcome to the Phoenix Service Software A Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.	
	Repair Reinstall all program components installed by the previous setup.	
	 Remove Remove all installed components. 	
InstallShield	<back next=""> Cancel</back>	

Phoenix reinstalls the required components and registers them, procedure is the same as in the update installation.

4. To complete, click "Finish".

	Repair installation complete
	InstallShield Wizard has completed the repair installation of Phoenix Service Software A. Click. Finish to exit the wizard.
InstallShield	< <u>B</u> ack Finish Cancel

Data Package for Phoenix (Product Specific)

Phoenix data package overview

Each product has its own data package (DP). The product data package contains all productspecific data files to make the Phoenix Service Software and tools usable with a certain phone model:

- Product software Binary files
- Files for type label printing
- · Validation file for the Faultlog repair data reporting system
- All product-specific configuration files for Phoenix software components

Data files are stored under C:\Program Files\Nokia\Phoenix (default).

Before installation

- Product data package contains all product specific data to make the Phoenix service software and tools usable with a certain phone model.
- Check that the dongle is attached to the parallel port of your computer.
- Install Phoenix service SW.
- Download the installation package (e.g. *RA-2/3_dp_v_1.0_MCUSW3_19.exe*) to your computer (e.g. C:\TEMP).
- Close all other programs.
- Run the application file (e.g. *RA-2/3_dp_v_1.0_MCUSW3_19.exe*) and follow instructions on the screen.

<u>Please note that very often the Phoenix service SW and the phone specific data package for</u> <u>Phoenix come in pairs</u>, meaning that certain version of Phoenix can only be used with certain data package version. Always use the latest available versions. Instructions can be found in phone model specific Technical Bulletins and readme.txt files of the data packages.

Installing Phoenix data package (product specific)

- 1. To start installation, run the application file (e.g. RA-2/
- 3_dp_v_1.0_MCUSW3_19.exe).
- 2. To extract files needed for installation, click "Next".

Please wait...

🐸 Phone Data Package - In	istallShield Wizard	×
Extracting Files The contents of this pa	ckage are being extracted.	A.
Please wait while the In Data Package on your o	stallShield Wizard extracts the files needed to omputer. This may take a few moments.	install Phone
Reading contents of pa	ckage	
Instal Sheld		
	< Back Next :	Cancel

3. To continue, click "Next".



4. From this view, you can see the contents of the data package. **Read the text carefully**. There should be information about the Phoenix version needed with this data package. Click "Next".

RM-4 Phone Data Package Setup 🛛 🔀			
Information Please read the following text.			
To start installing the files, click Next.			
RM-4 Phone Data Package 8.00 Installation (mcusw 3.42 Customer Care/Production)			
Note !! VERY IMPORTANT:			
You need to uninstall the previous version of the RM-4 data package before installing this version. It will NOT work correctly if this step is skipped.			
Close Phoenix before starting installation of the Data Package.			
Note! Phoenix release A 2003.33.5.22 or newer is required! earlier versions may work			
InstallShield			
< Back Next > Cancel			

5. To continue, confirm location and click "Next". Install shield checks where the Phoenix application is installed and the directory is shown.

6. To continue, click "Next".	
RM-4 Phone Data Package Setup	×
Choose Destination Location Select folder where setup will install files.	
Setup will install RM-4 Phone Data Package in	n the following folder.
To install to this folder, click Next. To install to another folder.	a different folder, click Browse and select
Destination Folder C:\Program Files\Nokia\Phoenix InstallShield	Browse
	< Back Next > Cancel

7. To start copying the files, click "Next".

InstallShield Wizard			×
Start Copying Files			No.
To start installing the files, click Next.			
Current Settings:			
Installation path: C:\Program Files\Nokia\Pho	enix		<u>~</u>
<u>.</u>			V V
InstallShield			
	< Back	Next >	Cancel

Phone model specific files are installed. please wait.

InstallShield Wizard	×
Setup Status	A A
NHL-9 Phone Data Package Setup is performing the requested operations.	
Installing:	
5%	
Install Chiefed	
Instalioniela	Cancel

8. To complete installation, click "Finish"

You now have all phone model specific files installed in your Phoenix service SW.

Now Phoenix can be used to for example flash phones and print type labels after:

- Configuring users
- Managing connections
- FLS-4S can be used right away
- FPS-8* can be used after updating flash update package files to it

Uninstalling data package

1. To uninstall the data package manually from Windows, choose Control Panel / Add / Remove Programs/ -> RA-2/3 Phone Data Package.

2. If you try to install the same version of Phoenix data package that you already have, you are asked if you want to uninstall the current version. Answer "OK" to uninstall, "Cancel" if you do not want to uninstall.

Uninstall NHL-9 Phone Data Pack	age 🔀
Do you want to completely remove and all of its components?	the NHL-9 Phone Data Package application
ОК	Cancel

Older versions of data packages need not be uninstalled unless instructions to do so are given in the readme.txt of the data package and bulletins concerning the release. Please read all related documents carefully.

3. Once the previously installed data package is uninstalled, click "Finish".



4. To continue installation from the beginning, run the $RA-2/3_dp_v_1.0_MCUSW3_19$.exe again.

Configuring Users

To configure users:

1. Start Phoenix service SW and login.

2. To add new user or edit an existing one, click "Maintain". If a user ID is already configured, choose your own user ID from the list and click "OK".

Login			<u>? ></u>
User name:			
TU (Test Us	er)		•
			Maintain
	Ok	Cancel	Help

3. To add information for the new user, click "New".

М	aintain			? ×
	-User Informa	tion	 	
	User name:			
	Initials:			
	Language:	Default		•
			New	elete
		Ok	Cancel	Help

4. Type in your name and Initials to fields and click "OK".

1aintain			? ×
User Informa	ation		
User name:	Repair Technici	an	
Initials:	RT		
Language:	Default		•
		New	Delete
	Ok	Cancel	Help

5. User has now been created, click "OK". You are now able to login with this username, click "OK"

Login			?	×
User User name: RT (Repair	Technician)		▼ Maintain	
	Ok	Cancel	Help	

Managing Connections

Manage connections feature in Phoenix is for selecting, editing, and deleting existing connections, and creating new ones.

To manage connections:

1. Start Phoenix service SW and login.



2. From the "File" menu, choose "Manage Connections".



3. In this dialog, you can select, edit, delete existing connections and create new ones. You can create a connection either manually or by using a Connection Wizard.

To add new connection, click "Add" and select if you want to create it manually or by using the Wizard.

16 Manage Connection	- 🗆 🗵
Priority list: FPS8 COM1 FBUS FBUS COM3 NO CONNECTION	
<u>A</u> dd Delete <u>E</u> dit Apply <u>C</u> lose <u>H</u>	elp

4. To continue, click "Next".

🏀 Man	age Connections	- I ×	
<u>P</u> riority	list:	Apply	
	DNNECTION	Revert	
		<u>A</u> dd	
		<u>D</u> elete	
	Select mode		×
	Mode Wizard Manual Select mode to use. If your system has a connection wizard installed you can use it to add or modify connection, else you must use manual mode.		
	< <u>B</u> ack <u>N</u> ext > Cance	el Help	

5. In the next dialogs, choose settings for the connection:

Manual settings

A) For FLS-4S POS Flash Device, choose the following connection settings:

Media: FBUS

COM Port: Virtual COM Port used by FLS-4 <u>Please always check this!</u> (To check, go to Windows / Control Panel / FLS Virtual Port / Configuration)



B) For FPS-8 Flash Prommer, choose the following connection settings:

Media: FPS-8 Port Num: COM Port where FPS-8 is connected COMBOX_DEF_MEDIA: FBUS

6. To complete, click "Finish".

7. If you use the Wizard, connect the tools and the phone to your PC and the wizard will automatically try to configure the correct connection.

8. To activate the connection you want to use, click it and use up/down arrows to move it on top of the list.

9. Click "Apply".

The connection is now selected and can be used after closing the "Manage Connections" window.

K Manage Connection	
Priority list: FBUS COM3 NO CONNECTION	
Add Delete Edit Apply Close Help	

The selected connection is shown at the right-hand bottom corner of the screen.

FPS8 COM1 FBUS

10.To use the selected connection, connect the phone to Phoenix with correct service tools, make sure that it is switched on and choose "Scan Product".

🌃 P	hoeni	ix			
<u>F</u> ile	<u>E</u> dit	Product	Flashing	<u>M</u> ain	
<u>1</u>	<u>l</u> ew Pi	rofile			
<u>[</u>	<u>)</u> pen F	Profile			
9	<u>à</u> ave F	rofile			
9	ave F	rofile <u>A</u> s			
<u>h</u>	Manage Connections				
9	ican <u>F</u>	roduct	Ctrl	-R	
<u>C</u> hoose Product					
0	Close Product				
E	Print So	oreen			
E	E <u>x</u> it				

When a product is found, Phoenix loads product support and when everything is ready, the name of the loaded product support module and its version are shown at the bottom of the screen, for example:

V 05.57 , 15-08-02 , NHM-7 , (c) NMP.

Updating Flash Support Files for FPS-8* and FLS-4*

Before installation

- Install Phoenix service SW.
- Install phone model specific data package for Phoenix.
- The flash support files are delivered in the same installation package with Phoenix data packages or newer Phoenix packages beginning from September 2003.

• Normally it is enough to install Phoenix and phone's data package because the Phoenix installation always includes the latest flash update package files for FLS-4S / FPS-8*.

• Separate installation package for flash support files is available, and the files can be updated by following these instructions (if updates appear between Phoenix / data package releases).

Installing flash support files (only separate installation package)

If you are not using a separate installation package, you can skip this section.



1. To start installing, double-click *flash_update_03_13_001.exe*.

If the same version of the flash update package already exists, and you want to reinstall it, the previous package is first uninstalled. Restart installation again after

that.



If you try to downgrade the existing version, the setup will be aborted. However, if you want to downgrade, uninstall newer files manually from the Control Panel and then rerun the installation again.

8	You have newer version of the application. If you want to install older version you need to uninstall the current version before.
	Setup will exit.
	(OK)

If an older version exists on your PC and it needs to be updated, click "Next" to continue installation.



It is **highly** recommended to install the files to the default destination folder *C:\Program Files\Nokia\Phoenix*.

2. To continue, click "Next".

Note! When installing the flash update files for the first time you may choose an-

other location by clicking "Browse"	' (not recommended).
-------------------------------------	----------------------

InstallShield Wizard			×
Choose Destination Location Select folder where Setup will install files.			22
Setup will install Flash Update in the following fol	der.		
To install to this folder, click Next. To install to a manother folder.	different folder	, click Browse ar	nd select
Destination Folder C:\Program Files\Nokia\Phoenix InstallShield	(Deels		Browse
	< Back	Next>	Cancel

The installation continues...

InstallShield Wizard	×
Setup Status	
Flash Update Setup is performing the requested operations.	
Installing: Flash Update files	
C:\Program Files\Nokia\Phoenix\Flash\te_amd.fia	
73%	
InstallShield	
	Cancel

3. To complete the procedure, click "Finish".

FLS-4 can be used right after the flash update package is installed.



FPS-8* flash prommer must be updated by using Phoenix!

Updating FPS-8* flash prommer SW

There are two ways to update the FPS-8 flash prommer software:

Option 1:

- 1. Start Phoenix service software and login.
- 2. Manage connection correctly for the FPS-8* flash prommer.



3. From the "Flashing" menu, choose "FPS-8 Maintenance"

🌠 P	hoen	ix					
<u>F</u> ile	<u>E</u> dit	<u>P</u> roduct	Flashing	<u>T</u> ools	$\underline{W}\text{indow}$	<u>H</u> elp	
	6		EPS-8) Flash			
			FP3-6	<u>ic</u> Flash			
			FPS-8	37 FPS-6	BC <u>M</u> ainter	ance	

4. When a new FPS-8 flash update package is installed to your computer, you are asked to update the files to your FPS-8 Prommer. To update files, click "Yes".

Prommer SW Update	×
New version of prommer software is available! Do you want to update?	
Version 03.05.001	
Do not show this dialog again	
Yes No	

The update procedure takes a couple of minutes, please wait until you are notified that the update has been successful.

5. Click "OK" and close the "FPS-8 Maintenance" window.



View after successful prommer software update.

100000			ridsh DUX Files					
57N	70939		File name	Туре	File ID	Version	Size	<u> </u>
18-2	SE11_09		t2_amd_b.fia	Algo	1	004.024.001		
ΠW	Joi 11700		te_amd_b.tia	Algo	2	004.024.001		
Flash Size	80MB		s3_amo_b.ria s2_amd_b.fia	Algo	3 1	004.024.001		
			w2 and b fia	Algo	4	004.024.001		
Free Flash (b)	83886080		t2 int b fia	Δlao	6	004.024.001		
00444.01			te int b.fia	Algo	7	004.024.001		
SHAM Size	JOZINID		w2_amd_b.fia	Algo	8	004.024.001		
Free SBAM (b)	33554432		t2_amd.fia	Algo	9	004.024.001		
			te_amd.fia	Algo	10	004.024.001		
Boot SW	B0.09		s3_int_b.fia	Algo	11	004.024.001		
	K		s2_int_b.fia	Algo	12	004.024.001		
FPGA	jrpgaU313.bin		w3_amd.fia	Algo	13	004.024.001		
Application SU/	43.05		w2_amd.ha	Algo	14	004.024.001		-
Application 5 W			j tz intei.ria	Algo	15	004.024.001		-
Selftest Status	TEST OK		📕 Log File Write					
^o rogress Info								
FLASH size:80	MB.							
SRAM size:32M	4B,							_
Serial nbr:7093	9,							
SRAM memory	used 0 of 335544	32.33	3554432 bytes left					
FLASH memory	v used U of 83886L	80.8	3886080 bytes left.					····· 🔽

Option 2:

1. Click the "Update" button.

2. Select the appropriate **fps8upd.ini** file under the *C:\Program Files\Wo-kia\Phoenix*\Flash directory

Open			? ×
Look jn: 🔁	Flash	- 🗈 💆	
📓 (fps8upd.in	l		
File <u>n</u> ame:	fps8upd.ini		<u>O</u> pen
Files of <u>type</u> :	Ini files (*.ini)	•	Cancel

3. All files can be loaded separately to FPS-8. To do this, press the right mouse button in the "Flash box files" window and select the desired file type. More information and help can be found from the "Help" dialog.

Activating and Deactivating FPS-8

Before the FPS-8 can be successfully used for phone programming, it must be first activated.

If there is a need to send the FPS-8 box to somewhere, e.g. for repair, the box must be first <u>deactivated.</u>

Activating FPS-8

1. Fill in the "FPS-8 activation request" sheet included in the FPS-8 sales package and follow the instructions given in the sheet.

2. When the activation file is received (e.g. 00000.in), copy it to *C:\Program-Files\Nokia\Phoenix\BoxActivation* directory (this directory is created when Phoenix is installed).

- 3. Start Phoenix service software.
- 4. From the Flashing menu, choose "FPS-8 Maintenance".



FPS-8 Info S/N 70939 HW SF11_09 File name Type File ID Version Size P Plash Size 80MB File Algo 1 004.024.001 te_amd_b.fia Algo 2 004.024.001 Free Flash (b) 83886080 Size 3 004.024.001 s2_amd_b.fia Algo 3 004.024.001 SRAM Size 32MB Firee SRAM (b) 33554432 Algo 6 004.024.001 te_int_b.fia Algo 6 004.024.001 V2_amd_b.fia Algo 6 004.024.001 te_int_b.fia Algo 7 004.024.001 SRAM Size 32554432 Algo 10 004.024.001 te_amd.fia Algo 10 004.024.001 V2_amd_fia Algo 10 004.024.001 s2_int_b.fia Algo 13 004.024.001 V2_amd.fia Algo 11 004.024.001 s2_int_b.fia Algo 13 004.024.001 w2_amd.fia Algo 13 004.024.001 w2_amd.fia Algo 15 004.024.001 w2	🔏 FPS-8 Maintei	nance							_ [
S/N 70939 HW SF11_09 Flash Size 80MB Free Flash (b) 83886080 Free Flash (b) 83886080 SRAM Size 32MB Free SRAM (b) 335554432 Boot SW 80.09 FPGA fpga0313.bin Application SW A3.05 Selftest Status TEST OK Progress Info Log File Write	- FPS-8 Info			Flash Box Files					
HW SF11_09 Flash Size 80MB Free Flash (b) 83886080 SRAM Size 32MB Free Flash (b) 83886080 SRAM Size 32MB Free SRAM (b) 33554432 Boot SW B0.09 FPGA Ipga0313.bin Application SW A3.05 Selftest Status TEST OK	S/N	70939		File name	Туре	File ID	Version	Size	
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FLASH memory used 0 of 33554432, 33554432 bytes left	Serial nbr: 7093	19, 10 / 00 - 51/10							
Lindata Delata Deset Deset Desetivata Dese	SHAM memory	used U of 3355443	12.33 on o	3554432 bytes left					
	Pro-Asin memory	V 4520 0 01 0 0000	JU. 0						·····i 🔽
Underte Delate Desert Desert Astronom Desertion Desert	1								
Update Delete Report Reset Activate Deactivate Details Llose Help	Update	Delete Repo	rt I	Reset Activ	ate Deactiv	vate Die	tails Clos	e	Help

5. In the "FPS-8 Maintenance" window, click "Activate.".

The activation file you saved to C:\ProgramFiles\Nokia\Phoenix\BoxActivation is displayed (e.g. 00000.in), check that it is correct.

Open			? ×
Look <u>i</u> n: 🔁	BoxActivation	- 🗈 💆	
L			
File <u>n</u> ame:			<u>O</u> pen
Files of <u>type</u> :	Supported files (.in)	•	Cancel

- 6. To activate the box, click "Open".
- 7. To complete the activation, turn FPS-8 power off and on.

Deactivating FPS-8

- 1. Start Phoenix service software.
- 2. From the "Flashing" menu, choose "FPS-8 Maintenance".
- 3. In the "FPS-8 Maintenance" window, click "Deactivate".
- 4. To confirm deactivation, click "Yes".

WARNIN	G WARNING 🛛 🕅
?	Do you really want to deactivate selected card? Card can not be used before activated with a proper activation file again! Deactivate?
	<u>Yes</u> <u>N</u> o

The box is deactivated.

5. To complete deactivation, turn FPS-8 power off and on.
JBV-1 Docking Station SW

The JBV-1 docking station is a common tool for all DCT-4 generation products. In order to make the JBV-1 usable with different phone models, a phone specific docking station adapter is used for different service functions.

The JBV-1 docking station contains software (firmware) which can be updated.

You need the following equipment to be able to update JBV-1 software:

- PC with USB connection
- Operating System supporting USB (Not Win 95 or NT)
- USB cable (can be purchased from shops or suppliers providing PC hardware and accessories)
- JBV-1 docking station
- External power supply 11-16V

Before installation

- Download the *Jbv1_18_update.zip* file to your computer (e.g. C:\TEMP) from your download web site.
- Close all other programs.
- Follow instructions on the screen.

Installing SW needed for the JBV-1 SW update

Note: DO NOT CONNECT THE USB CABLE / JBV-1 TO YOUR COMPUTER YET!

1. To run the Jbv1_18_update.zip file and start SW installation, double click "Set-up.exe".

Files needed for JBV-1 package setup program are extracted.

Install	? ×
WinZip will extract all files to a temporary folder and run the SETUP EXE program	ОК
	Cancel
· · · · · · · · · · · · · · · · · · ·	<u>H</u> elp

Installation begins, please read the information displayed.

2. To continue, click "Next".



3. Use the destination folder suggested which JBV-1 SW package is installed to and click "Next" to continue.

Choose Destination Loca	tion	×
	Setup will install JBV-1 Firmware Update in the following folder. To install to this folder, click Next. To install to a different folder, click Browse and select another folder. You can choose not to install JBV-1 Firmware Update by clickin Cancel to exit Setup.	g
Irristol	Destination Folder C:\\Nokia\JBV-1 Firmware Update Browse	
	< Back Next > Cancel	

4. To continue, select "Full" and click "Next".



The program folder is created.

5. To continue, click "Next".

Software files are installed.

Select Program Folder		×
	Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.	
	Program Folders: JBV-1 Firmware Update Existing Folders:]
Instal Ishiald	Adobe Citrix ICA Client CoreIDRAW 10 FaultLog File Processing FLS-X License Update Utilities iGrafx InterVideo WinDVD Jasc Software JBV-1 Firmware Update	
	< Back Next > Cancel	-



6. After a successful installation, click "Finish" to complete.

YOU CAN NOW CONNECT THE USB CABLE / JBV-1 TO YOUR COMPUTER.

7. Connect power to JBV-1 (11-16V DC) from external power supply, then connect USB cable between JBV-1 USB connector and PC.

8. Install or update the JBV-1 USB drivers which are delivered with the JBV-1 SW installation package. They can be found in folder:

C:\Program Files\Nokia\ JBV-1 Firmware Update\JBV-1USB driver

If there is no previously installed JBV-1 firmware update package installed on your computer, Windows detects the connected USB cable and drivers for the new HW. Please follow the instructions and allow Windows to search and install the best drivers available.

If there is a previously installed JBV-1 firmware update package (v 17 or older) on your computer, please update the JBV-1 USB driver. Please see the *re-adme.txt* file under:

C:\Program Files\Nokia\ JBV-1 Firmware Update\JBV-1USB driver – folder for instructions on how to update the JBV-1 USB Driver.

After you have installed or updated the JBV-1 USB driver, the actual JBV-1 SW update begins.

9. Go to folder C:\Program Files\Nokia\JBV-1 Firmware Update\JBV-1 Firmware Update.

10. To start the JBV-1 SW update, double click fwup.exe.

JBV-1 firmware update starts and shows the current status of the connected JBV-1.

11.If the firmware version read from your JBV-1 is not the latest one available (v. 17 or older), it needs to be updated to version 18. To do this, click "Update Firmware".

If you simply want to check the SW version, click "Refresh Status".

🚹 JBY-1 Firmware Update	
Device Status	
JBV-1 Connected	
External powersupply connected	
Firmware version 17	
Serial number 0PKC02390011	
	Update Firmware

12.To update your JBV-1 to the latest version 18, choose file *JBV1v18.CDE* and "Open".

Please wait, it takes a while until you can hear a "click" from the JBV-1.

The older sw file JBV1v17.CDE is visible in this view only if the previous JBV-1 SW package has been installed on your computer.

Select Firmware File	<u>?</u> ×
Look in: 🔁 JBV-1 Firmware Update 💽 🖛 🛍 🖝	
JBV1V17.CDE	
JBV1V18.CDE	
in resi2357.cde	
File name: Oper	
Files of type: JBV-1 Firmware File Canc	

	Success	×	
	JBV-1 firmware succesful	ly updated	
	OK		
🚹 JBY-1 Fir	mware Update	_	
Device Statu	15		
JBV-1 Conr	nected		

13.After a successful update, click "OK" and the current JBV-1 status is displayed.

You have now updated the JBV-1 software and it is ready for use.

If you have several docking stations you need to update, disconnect the power & USB cables from the previous one and connect them to the next docking station.

Update Firmware

14.To see the current SW version, click "Refresh Status".

15.To update the SW, click "Update Firmware".

External powersupply connected

Serial number 0PKC02390011

Refresh Status

Firmware version 18

16.After you have updated all docking stations, close the "JBV-1 Firmware Update" dialog.

RF Tuning: Quick Guide for Tuning with Phoenix



General remarks

- RF tunings must be performed in the same order as shown in this document. The order of the corresponding menu items in the service software may be different.
- If baseband tunings are needed, they should be completed before the RF tunings.
- Avoid unnecessary tuning. Factory tuning values are always the most accurate ones.
- Screenshots described in this document may change as the service software is developed.
- Kindly refer to the Phoenix help files, the phone model specific service manual and bulletins for help.

NOTE! RF tunings need to be done ONLY if any RF block component or UEM (or D3000 FLASH) is replaced. However, RF tunings are also recommended if tuning values have disappeared for some reason.

Service Tool Concept for RF Tuning Operations

- All RF tuning operations must be carried out in the MJ-19 module jig.
- Power to MJ-19 must be supplied from an external DC power supply, <u>not from the</u> FPS-8 prommer.
- MJ-19 input voltages:

Maximum + 12 VDC

Nominal input for RF tunings is +? V DC

Minimum + 4V DC

• Remember the cable attenuation when setting required RF levels

Figure 1: RF tuning setup



ltem	Service accessory	Туре	Product code
1	Module jig	MJ-19	0780372
2	DC power cable	PCS-1	0730012
3	Modular cable	XRF-1	0730085
4	Service Mbus cable	DAU-9S	0730108
5	Software protection key	PKD-1	0750018
6	Service SW	CD-ROM	

Autotuning

Autotune feature is designed to align product's RF part easier and faster. By this autotune component the product is tuned automatically. The user only needs to press 'Tune' and the product's RF is tuned and results are shown to the user. Component controls all the needed RF equipment (RF generator and TX measuring device) except voltage supplier.

NOTE! Automatic tuning is ALWAYS the primary tuning mode. Manual tuning is not recommended.

The following diagram describes where the autotune component is located in the TSS architecture:



Figure 2: Autotune component in TSS architecture

Autotune is a pair of two different components. One is User Interface and the other is FunctioNal. UI does not contain any functionality. MTI takes care of phonet messages.

The Autotune component is located in the Tuning menu:

Figure 3: Autotune menu in Phoenix

🌃 Pl	🌾 Phoenix									
File	Edit	Product	Flashing	Testing	Tuning	Tools	RD	Window	Help	
	Ê	n 🛛 🗖	onnections	EPS8.0	Auto	tune				
				1.1000	Set L	OSS				
					Enor			opt Colibro	tion	

Note! This menu is not visible with PKD-1 and PKD-1P dongles.

	Figure 4. Autotune menu - KA/TA menu						
🌃 Auto Tune							
RX		<u>I</u> une <u>H</u> elp ^V					

Figure 4: Autotune menu - PX/TX menu

Set Loss



Set Loss is the component for saving RF-losses (of cables and jigs) to file. These loss values are needed when you tune the phone with Phoenix (using the Autotune component). When you measure the losses you have to be very careful, because these values affect directly how well the phone is tuned.

NOTE! This component is only for Autotune uses.

Cable Jig Product Load Frequency Loss 5.00 800000000 <u>S</u>ave 851000000 5.10 853000000 5.70 <u>H</u>elp 5.50 857000000 5.60 858000000 5.30 854000000

Figure 6: Loss values

Environment

Hardware requirements:

PC with Windows 2000/XP.

Power supply

Product specific module jig

RF-splitter and -cables

RF equipment (only one of each is needed)

TX/RX:

CMU200

TX:

Agilent E4406 (VSA series transmitter tester)

Agilent E4445 (PSA series transmitter tester)

Rohde&Schwarz, FSE-family of Signal Analyzers

Rohde&Schwarz, FSIQ-family of Signal Analyzers

RX:

Agilent ESG family of RF Signal Generators

Rohde&Schwarz, SME-family of Signal Generators



Figure 7: Preferred setup environment





GPIB addresses are not defined. Component finds the addresses and uses them automatically.

If several TX tuning devices are connected, this component uses Agilent (VSA or PSA). In RX side, Agilent has highest priority.

Protection

Components are protected by PKD-1CS, PKD-1NS, PKD-1 and PKD-1P dongles using standard TSS protection procedure. Autotuning itself is possible with all these dongles but with PKD-1P and PKD-1 dongles user is not able to set the loss.

Receiver Manual Tuning

Rx Channel Select Filter Calibration

- Extra equipment / external RF signal is not needed.
- Must be done before other Rx calibrations.
- Rx channel select filter is tuned only in one band = single calibration for all bands.

To start calibrating:

1. From the Tuning menu, choose "Rx Channel Select Filter Calibration".



The "Rx Channel Select Filter Calibration" window appears.

K	Rx Channel Select Filter Calibrat	tion				
	Register					Start
	DTOS I Address		Rc	10	🔽 Save to Phone	Tune
	DTOS Q Address		Rc	9		Stop
	BBF I Address BIQUAD I R	9	BIQUAD I C	21		Help
	BBF Q Address BIQUAD Q R	8	BIQUAD Q C	19		
	Notch			28		

2. If you do not want the values to be saved to phone (e.g. testing), uncheck "Save to Phone".

"Save to Phone" is checked by default.

3. To start tuning, click Tune.

Tuning values must be 0...31

- 4. If values shown are within limits, click Stop.
- 5. To end tuning, close the "Rx Channel Select Filter Calibration" window.

The values are saved to phone.

3 - Service Software Instructions

Rx Calibration

- RF generator is needed.
- This tuning performs Rx calibration.
- Must be done separately on each band.

• Calibration is automatically performed at GSM850/EGSM900 bands, then at the GSM1800 band and finally at the GSM1900 band. If tuning is successful, it continues to the next band.

- AFC tuning is done while GSM850 band Rx calibration is performed.
- Remember to take jig and cable attenuations into account!

To start calibrating at the GSM850 band:



2. To start tuning, click Start

16 R	к Calibration	
F	'M values:	<u>Start</u> Save & <u>C</u> ontinue <u>H</u> elp
3. Set	RF generator to required GSM850 frequency =	> OK.
	Tuning step 1 of 3 - Rx Calibration with band GSM850 Set the Rf signal generator:	×
	Power level: -60 dBm	
	Input signal frequency: 881.667710 MHz	
	Press OK to tune, press Cancel or ESC to exit tuning process	
	OK Cancel	

GSM850	Typical value	Low limit	High limit
Afc value:	70	-350	350
Afc slope:	135	90	300
Rssi 0:	65	60	70
Rssi 1:	71	66	76
Rssi 2:	77	72	82
Rssi 3:	83	78	88
Rssi 4:	89	84	94
Rssi 5:	94	89	99
Rssi 6:	100	95	105
Rssi 7:	106	101	111
Rssi 8:	112	107	117
Rssi 9:	118	113	123
Rssi 10:	124	119	129
Rssi 11:	130	125	135
Rssi 12:	136	131	141
Rssi 13:	142	137	147
Rssi 14:	148	143	153

Table 1: Typical values and limits in GSM850 RX Calibration

4. Set RF generator to required EGSM900 frequency => OK.

Tuning step 1 of 3 - Rx Calibration with band EGSM900	×
Set the Rf signal generator:	
Power level: -60 dBm	
Input signal frequency: 942.467710 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

3 - Service Software Instructions

GSM900	Typical value	Low limit	High limit
Afc slope:	135	90	300
Rssi 0:	67	62	72
Rssi 1:	73	68	78
Rssi 2:	79	74	84
Rssi 3:	85	80	90
Rssi 4:	91	86	96
Rssi 5:	96	91	101
Rssi 6:	102	97	107
Rssi 7:	108	103	113
Rssi 8:	114	109	119
Rssi 9:	120	115	125
Rssi 10:	126	121	131
Rssi 11:	132	127	137
Rssi 12:	138	133	143
Rssi 13:	144	139	149
Rssi 14:	150	145	155
Afc slope:	135	90	300

Table 2: Typical values and limits in GSM900 Rx Calibration

5. Set RF generator to required GSM1800 frequency => OK.

Tuning step 2 of 3 - Rx Calibration with band GSM1800	X
Set the Rf signal generator:	
Power level: -60 dBm	
Input signal frequency: 1842.867710 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

GSM1800	Typical value	Low limit	High limit
Rssi 0:	65	60	70
Rssi 1:	71	66	76
Rssi 2:	77	72	82
Rssi 3:	83	78	88
Rssi 4:	89	84	94
Rssi 5:	95	90	100
Rssi 6:	101	96	106
Rssi 7:	107	102	112
Rssi 8:	113	108	118
Rssi 9:	119	114	124
Rssi 10:	125	120	130
Rssi 11:	131	126	136
Rssi 12:	137	132	142
Rssi 13:	143	138	148
Rssi 14:	149	144	154

Table 3: Typical values and limits in (GSM1800) Rx Calibration

6. Set the RF generator to required GSM1900 frequency => OK.

Tuning step 3 of 3 - Rx Calibration with band GSM1	900 X
Set the Rf signal generator:	
Power level: -60 dBm	
Input signal frequency: 1960.067710 MHz	
Press OK to tune, press Cancel or ESC to exit tuning pro	cess.
OK Cancel	

Table 4: Typical values and limits in (GSM1900) Rx Calibration

GSM1900	Typical value	Low limit	High limit
Rssi 0:	66	61	71
Rssi 1:	72	67	77

GSM1900	Typical value	Low limit	High limit
Rssi 2:	78	73	83
Rssi 3:	84	79	89
Rssi 4:	90	85	95
Rssi 5:	94	89	99
Rssi 6:	100	95	105
Rssi 7:	106	101	111
Rssi 8:	112	107	117
Rssi 9:	118	113	123
Rssi 10:	124	119	129
Rssi 11:	130	125	135
Rssi 12:	136	131	141
Rssi 13:	142	137	147
Rssi 14:	148	143	153

If values are within limits, they are saved to the phone after successful tuning of each band.

7. To end tuning, close the "Rx Calibration" window.

RX Band Filter Response Compensation

- RF generator is needed.
- This operation must be done separately on each band!
- Start Rx Calibration at GSM850/EGSM900 bands, then continue at the GSM1800 band and finally at the GSM1900 band

NOTE! Remember to do Rx Calibration before doing Rx Band Filter Response Compensation and remember to take jig and cable attenuations into account!

To start tuning:

1. From the Tuning menu, choose "Rx Band Filter Response Compensation".

🌃 Phoenix	
File Edit Product Flashing Testing	Tuning Tools Window Help
📄 🖙 🔚 🗍 Operating mode: 🛛 Loca	Autotune Energy Management Calibration R× Channel Select Filter Calibration R× Calibration R× Band Filter Response Compensation
	Rx Am Suppression Rx DtoS Balance Calibration Tx Power Level Tuning

2. Select Manual Tuning mode and click Start.

16	Rx Band Filt	er Response Compensatior	ı		>
1	nput Signal Le	evel (dBm): 🚺 🛨			<u>S</u> tart
[Channel	Input Frequency (MHz)	Measured Level Difference (dB)	-	Save & <u>C</u> ontinue
					<u>H</u> elp
				Tuning mode	
				C <u>A</u> utomatic	
				• <u>M</u> anual	

You are asked to supply 9 different RF frequencies to the phone.

The tuning begins from the GSM850/EGSM900 band and continues the same way for GSM1800 and GSM1900 bands

3. Set the first required frequency (GSM850) and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for GSM850	X
Manual Tuning - stage 1 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 867.26771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

4. Set the 2nd required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for GSM850	×
Manual Tuning - stage 2 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 869.26771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

5. Set the 3rd required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for G5M850	×
Manual Tuning - stage 3 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 871.66771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

6. Set the 4th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for GSM850	X
Manual Tuning - stage 4 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 878.06771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

7. Set the 5th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for GSM850	×
Manual Tuning - stage 5 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 881.66771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

8. Set the 6th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for GSM850	×
Manual Tuning - stage 6 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 887.06771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

3 - Service Software Instructions

9. Set the 7th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for GSM850	×
Manual Tuning - stage 7 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 891.86771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

10.Set the 8th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for GSM850	X
Manual Tuning - stage 8 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 893.86771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

11.Set 9th required frequency and level => OK.



Channel	Input Frequency (MHz)	Typical value	Low limit (dB)	High limit (dB)
118	863.26771	-0.44	-10	3.5
128	869.26771	-0.53	-3.5	3.5
140	871.66771	-0.36	-3.5	3.5
172	878.06771	0.50	-3.5	3.5
190	881.66771	-0.08	-3.5	3.5
217	887.06771	0.28	-3.5	3.5
241	891.86771	0.14	-3.5	3.5
251	893.86771	0.15	-3.5	3.5
261	895.86771	-0.03	-10	3.5

Table 5: Typical values and limits in Rx Band Filter Response Compensation (GSM850):

12.Set the first required frequency (EGSM900) and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EGSM900	×
Manual Tuning - stage 1 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 923.26771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

13.Set the 2nd required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EGSM900	×
Manual Tuning - stage 2 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 925.26771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

14.3	Set the	3rd re	quired	freque	ency and	l level =>	OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EGSM900	×
Manual Tuning - stage 3 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 927.66771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

15.Set the 4th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EG5M900	×
Manual Tuning - stage 4 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 932.06771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

16.Set the 5th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EGSM900	×
Manual Tuning - stage 5 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 942.46771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

17.Set the 6th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EGSM900	×
Manual Tuning - stage 6 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 953.06771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

18.Set the 7th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EGSM900	×
Manual Tuning - stage 7 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 957.86771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

19.Set the 8th required frequency and level => OK.

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EGSM900	×
Manual Tuning - stage 8 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 959.86771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

Tuning step 1 of 3 - Rx Band Filter Response Compensation for EG5M900	×
Manual Tuning - stage 9 of 9.	
Set the Rf signal generator:	
Power level: -60 dBm + cable attenuation	
Input signal frequency: 962.26771 MHz	
Press OK to tune, press Cancel or ESC to exit tuning process.	
OK Cancel	

Table 6: Typical values and limits in Rx Band Filter Response Compensation (GSM900):

Channel	Input Frequency (MHz)	Typical value	Low limit (dB)	High limit (dB)
965	923.26771	-1.70	-10	3.5
975	925.26771	-1.01	-3.5	3.5
987	927.66771	-0.45	-3.5	3.5
1009	932.06771	-0.52	-3.5	3.5
37	924.46771	-0.02	-3.5	3.5
90	953.06771	-0.24	-3.5	3.5
114	957.86771	-0.61	-3.5	3.5
124	959.86771	-0.77	-3.5	3.5
136	962.26771	-1.20	-10	3.5

21.If the values shown are within limits, click "Save & Continue" to save values to the phone.



Continue tuning from GSM1800

22.Repeat the same steps as for the GSM850/EGSM900 bands above.

Channel	Input Frequency (MHz)	Typical value	Low limit (dB)	High limit (dB)
497	1802.26771	-1.95	-10	3.5
512	1805.26771	-1.20	-3.5	3.5
535	1809.86771	-0.49	-3.5	3.5
606	1824.06771	0.09	-3.5	3.5
700	1842.86771	-0.02	-3.5	3.5
791	1861.06771	-0.33	-3.5	3.5
870	1876.86771	-0.44	-3.5	3.5
885	1879.86771	-0.64	-3.5	3.5
908	1884.46771	-1.22	-10	3.5

Table 7: Typical values and limits in Rx Band Filter Response Compensation(GSM1800):

23.If the values shown are within limits, click "Save & Continue" to save values to the phone.



Continue tuning from GSM1900

24. Repeat the same steps as for the GSM850/EGSM900 and GSM1800 bands above.

Table 8: Typical values and limits in Rx Band Filter Response Compensation(GSM1900):

Channel	Input Frequency (MHz)	Typical value	Low limit (dB)	High limit (dB)
496	1927.06771	-1.57	-10	3.5
512	1930.26771	-1.24	-3.5	3.5
537	1935.26771	-0.84	-3.5	3.5

Channel	Input Frequency (MHz)	Typical value	Low limit (dB)	High limit (dB)
586	1945.06771	-0.77	-3.5	3.5
661	1960.06771	-0.03	-3.5	3.5
736	1975.06771	-0.52	-3.5	3.5
794	1986.66771	-1.41	-3.5	3.5
810	1989.86771	-1.33	-3.5	3.5
835	1994.86771	-2.34	-10	3.5

25.If the values shown are within limits, click "Save & Continue" to save values to the phone.

26.To end tuning, click OK and close the "Rx Band Filter Response Compensation" window.

🐮 🖪 R 🛪 Ba	nd Filter Response Compensation	×
•	Rx Band Filter Response Compensation tuning was completed successfully.	
	ОК	

Rx DtoS balance calibration

- Rx DtoS balance calibration is used for calibrating DSP control word values.
- Calibration must be done separately on each band.

• Start Rx DtoS balance calibration at GSM850/EGSM900, then continue at GSM1800 band and finally at the GSM1900 band.

· Remember to take jig and cable attenuations into account!

To start Rx DtoS balance calibration:

1. From the Tuning menu, choose "Rx DtoS Balance Calibration"..



2. Click OK and Start.

Tuning begins automatically at the GSM850 band.







4. Click Calibrate.

🌃 Rx DtoS Bal	ance Calibration	
DtoS I Sign	bits #1410- 31	<u>S</u> tart
		S <u>t</u> op
DtoS Q Sign	bits #2016— 9	<u>C</u> alibrate
		<u>H</u> elp

- 5. If values shown are within limits, click Stop.
- 6. To save values to the phone, click Yes.

Tune en	ding 🛛 🕅 🕅
?	Do you want to save values to phone?
	<u>Y</u> es <u>N</u> o

- 7. From the Tuning menu, choose "Rx DtoS Balance Calibration".
- 8. Click OK and Start.

Tuning begins automatically at the GSM900 band.

Please r	emember!	х
£	No RF-input is allowed to feed into Phone while calibrating	
	(OK]	

9. To start tuning with values already saved to the phone, click OK.

Start parameter	×
C Default values	ОК
C Zero values	Cancel
• PM values	

10. Click Calibrate.

KRx DtoS Balance Calibration		
DtoS I Sign	bits #1410- 31	<u>S</u> tart
	,	S <u>t</u> op
- DtoS Q Sign	bits #2016— 9	<u>C</u> alibrate
		Help

11.If values shown are within limits, click Stop..

Tune en	ding 🛛 🔀
?	Do you want to save values to phone?
	Yes <u>N</u> o

12. To save values to the phone, click Yes.

Continue tuning from GSM1800 band

13. From the Band dropdown menu, choose the correct band.

🔀 Phoenix	
File Edit Product Flashing Testing Tuning Too	ols Window Help
🗋 🖻 🖨 📕 Operating mode: 🛛 🔽 📕	Read 🛛 🗍 Band: GSM 850 💌
	GSM 850
	GSM 1800
	GSM 1900

14.Repeat the same steps as for the GSM850/EGSM900 bands.

15.If values shown are within limits, click Yes to save values to the phone.

Continue tuning from GSM1900 band

16.Repeat the same steps as for the GSM850/EGSM900 and GSM1800 bands.

- 17. From the Band dropdown menu, choose the correct band.
- 18.If values shown are within limits, click Yes to save values to the phone.
- 19.To end receiver tuning, close the "Rx DtoS Balance Calibration" window.

Transmitter Manual Tuning

Tx Power Level Tuning

- Power meter or spectrum analyzer is needed.
- With Tx Power Level Tuning, the coefficients are adjusted for each power level.
- Start power level tuning at GSM850, GSM900/EDGE, then continue at GSM1800/ EDGE band and finally at the GSM1900/EDGE band.

To start Tx power level tuning at the GSM850 band:

1. From the Tuning menu, choose "Tx Power Level Tuning".



2. Click Start.

🏀 Tx Power Level Tuning	
	<u>Start</u>
Press Start to begin Tx Power Level Tuning	Band: Tx PA mode:

- 3 Service Software Instructions
 - Edge OFF tuning X Frequency: 836,6 MHz i. Resolution Band Width 3 kHz Video Band Width 3 kHz Video Trig Free Run Sweep Time Зs Span 200 kHz Detector: Max Peak ÖK

3. Set up spectrum analyzer accordingly. Remember to take the jig and cable attenuations into account!

The coefficient table lists the power level, coefficient, target dBm and DAC value for each power level.

4. To choose the tuned power level, use up and down arrows or mouse.

The current power level is shown with inverse colours.

The tuning value can be adjusted with "-" and "+" keys.

	Coefficient	Target dBm	Start
5	0.6589	32.5	
6	0.5886	31.0	Save & C <u>o</u> ntinue
7	0.4988	29.0	
8	0.4205	27.0	
9	0.3540	25.0	
10	0.3020	23.0	
11	0.2598	21.0	Rand: GSM 850
12	0.2259	19.0	
13	0.2004	17.0	Tx PA mode: High
14	0.1794	15.0	
15	0.1639	13.0	
16	0.1512	11.0	
17	0.1414	9.0	
18	0.1338	7.0	
19	0.1280	5.0	
Base 📗	0.1018	-10.0	
Test	0.1095		
Tx chann Frequenc	el: 190 ar 836 60 MHz		Help

5. Tune <u>Base level</u> and power levels <u>19</u>, <u>15</u> and <u>5</u> to target level.

Table 9: Typical values: GSM850

Power level	Coefficient Typical value
5	0,65
15	0,16
19	0,12
Base	0,10

Note! 'Typical values' above are shown as a guideline only. Slight variation from unit to unit is normal.'

6. Click Save & Continue.

Tuning values are calculated and saved to phone's memory.

<u>S</u> tart	
Save & C <u>o</u> ntinue	

Tuning continues at EDGE850

7. Set up spectrum analyzer accordingly.

Edge ON	tuning		×
(i)	Frequency:	836,6 MHz	
~	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
	, 	OK	

). Tune a	Il power levels to	target level.	
🔏 Tx Pow	er Level Tuning		<u>×</u>
	Coefficient	Target dBm	Start
8	0.8123	27.0	
9	0.6968	25.0	Save & C <u>o</u> ntinue
10	0.6116	23.0	Stops Tx power level tuping
11	0.5475	21.0	Dops it power lever carling
12	0.5165	19.0	
13	0.4702	17.0	
14	0.4356	15.0	Band: GSM 850
15	0.4076	13.0	Tu Dà sua day III I
16	0.4394	11.0	TX FA mode. High
17	0.4112	9.0	
18	0.3890	7.0	
19	0.3697	5.0	
Base	0.2307	-15.0	
Test	0.2307		

10.To save the tuning values to phone's memory, click Save & Continue.

<u>H</u>elp



Tx channel: 190

Frequency: 836.60 MHz
11. From the Tuning menu, choose Tx Power Level Tuning (EGSM900).



12.Click Start.

Tuning begins at the GSM900 band.

🔀 Tx Power Level Tuning	<u> </u>
Press Start to begin Tx Power Level Tuning	<u>Start</u> <u>Stop</u> Band: Tx PA mode:

13.Set up spectrum analyzer accordingly. Remember to take the jig and cable attenuations into account!

pectrur	n Analyzer Settings: Edg	e OFF tuning	×
•	Frequency:	897,4 MHz	
7	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
		ОК	

5 6	0.6599	32.5	
6	0.6029		
_	0.0020	31.0	Save & C <u>o</u> ntinue
7	0.4881	29.0	
8	0.4237	27.0	
9	0.3564	25.0	
10	0.3019	23.0	
11	0.2574	21.0	Band GSM 900
12	0.2210	19.0	
13	0.1933	17.0	Tx PA mode: High
14	0.1705	15.0	
15	0.1604	13.0	
16	0.1396	11.0	
17	0.1291	9.0	
18	0.1216	7.0	
19	0.1203	5.0	
Base 📕	0.1007	-10.0	
Test	0.1008		

The coefficient table lists the power level, coefficient, target dBm and DAC value for each power level.

14.To choose the tuned power level, use up and down arrows or mouse.

The current power level is shown with inverse colours.

The tuning value can be adjusted with "-" and "+" keys.

15.Tune <u>Base level</u> and power levels <u>19</u>, <u>15</u> and <u>5</u> to target level.

 Table 10: Typical values: GSM900

Power level	Coefficient Typical value
5	0,65
15	0,16
19	0,12
Base	0,10

Note! 'Typical values' above are shown as a guideline only. Slight variation from unit to unit is normal.

16.Click Save & Continue.

Tuning values are calculated and saved to phone's memory.



Tuning continues at EDGE900

17.Set up spectrum analyzer accordingly.

Edge ON	tuning		×
(i)	Frequency:	897,4 MHz	
~	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
		ОК	

18.To start tuning, click OK.

🔏 Τχ Ροι	wer Level Tuning		
	Coefficient	Target dBm	Start
8	0.8129	27.0	
9	0.7003	25.0	Save & C <u>o</u> ntinue
10	0.6129	23.0	
11	0.5461	21.0	Stops Tx power level tuning
12	0.5058	19.0	
13	0.4607	17.0	
14	0.4255	15.0	Band: GSM 900
15	0.3977	13.0	
16	0.4019	11.0	Tx PA mode: High
17	0.3789	9.0	
18	0.3596	7.0	
19	0.3434	5.0	
Base	0.2248	-15.0	
Test	0.2248		
Tx char	inel: 37		Halp
Frequer	icy: 897.40 MHz		<u> </u>

19.Tune all power levels to target level.

20. To save the tuning values to phone's memory, click Save & Continue.



Tuning continues at GSM1800 band

21.Set up spectrum analyzer accordingly.

Remember to take the jig and cable attenuations into account!

22.Click OK.

Edge OFF	tuning		×
(i)	Frequency:	1747,8 MHz	
~	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
		OK	

23..Tune <u>Base level</u> and power levels <u>15,11</u> and <u>0</u> to target level.

	Coefficient	Target dBm	<u>S</u> tart
0	0.5690	29.5	
1	0.5181	27.5	Save & C <u>o</u> ntinue
2	0.4660	26.0	
3	0.4097	24.0	
4	0.3627	22.0	
5	0.3209	20.0	
6	0.2885	18.0	Band [,] GSM 1800
7	0.2617	16.0	
8	0.2334	14.0	Tx PA mode: High
9	0.2135	12.0	
10	0.2006	10.5	
11	0.1976	9.0	
12	0.1748	7.0	
13	0.1663	5.5	
14	0.1580	4.0	
15	0.1487	2.0	
Base	0.0969	-30.0	
- .	0.0969		

Table 11: Typical values GSM1800

Power level	Coefficient Typical value
0	0,56
11	0,20

Power level	Coefficient Typical value
15	0,15
Base	0,10

Note! 'Typical values' above are shown as a guideline only. Slight variation from unit to unit is normal.

24.Click Save & Continue.

Tuning values are calculated and saved to phone's memory.



Tuning continues at EDGE1800

25.Set up spectrum analyzer accordingly.

-	• •	••	
Edge ON	tuning		×
i	Frequency:	1747,8 MHz	
	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
		OK)	

26.Click OK.

	Coefficient	Target dBm	Start
2	0.8104	25.5	<u></u>
3	0.7241	24.0	Save & C <u>o</u> ntinue
4	0.6316	22.0	
5	0.5618	20.0	Stops Tx power level tuning
6	0.5276	18.0	
7	0.4784	16.0	
8	0.4400	14.0	Band: GSM 1800
9	0.4113	12.0	
10	0.3929	10.5	TX PA mode: High
11	0.3772	9.0	
12	0.3769	7.0	
13	0.3575	5.0	
14	0.3401	3.0	
15	0.3257	1.0	
Base	0.2444	-15.0	
Test	0.2444		

27. Tune all power levels to target level.

28.To save the tuning values to phone's memory, click Save & Continue.



Tuning continues at GSM1900 band

29.Set up spectrum analyzer accordingly.

```
Remember to take the jig and cable attenuations into account!
```

Edge OFF	tuning		×
(i)	Frequency:	1880,0 MHz	_
~	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
(COK			

30.Click OK.

0 1 2 3	0.5768 0.4610	29.5 27.5	Save & Continue
1 2 3	0.4610	27.5	Save & C <u>o</u> ntinue
2	0.4020		4
3	0.4020	26.0	
9	0.3434	24.0	
4	0.3048	22.0	
5	0.2712	20.0	
6	0.2447	18.0	Band: GSM 1900
7	0.2267	16.0	
8	0.2096	14.0	Tx PA mode: High
9	0.1951	12.0	
10	0.1847	10.5	
11	0.1682	9.0	
12	0.1664	7.0	
13	0.1589	5.5	
14	0.1524	4.0	
15	0.1445	2.0	
Base 📕	0.0959	-30.0	
Test	0.0969		

31. Tune Base level and power levels 15, 11 and 0 to target level.

Note! For **RA-3** only. Use the following tuning targets:

- power level $0 = 29,7 \, dBm$
- power level $1 = 27,7 \, dBm$
- power level 13 = 5,0 dBm
- power level 14 = 3,5 dBm
- power level $15 = 1,5 \, dBm$.

Other targets are as shown in the picture above.

Power level	Coefficient Typical value
0	0,57
11	0,16
15	0,14
Base	0,10

Note! 'Typical values' above are shown as a guideline only. Slight variation from unit to unit is normal.

32.Click Save & Continue.

Tuning values are calculated and saved to phone's memory



Tuning continues at EDGE1900

33.Set up spectrum analyzer accordingly.

Edge ON I	tuning		×
(i)	Frequency:	1880,0 MHz	
	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
		OK]	

34.Click OK.

O TX PU	ver Level running		
	Coefficient	Target dBm	<u>S</u> tart
2	0.7619	26.0	
3	0.6605	24.0	Save & C <u>o</u> ntinue
4	0.5869	22.0	
5	0.5288	20.0	Stops Tx power level tuning
6	0.4896	18.0	
7	0.4481	16.0	
8	0.4153	14.0	Band: GSM 1900
9	0.3898	12.0	Tu DA mades 1111
10	0.3736	10.5	TX PA mode: High
11	0.3595	9.0	
12	0.3599	7.0	
13	0.3422	5.0	
14	0.3272	3.0	
15	0.3139	1.0	
Base	0.2346	-15.0	
Test	0.2346		
Tx chan	nel: 661		Help

35..Tune all power levels to target level.

36.To save the tuning values to phone's memory, click Save & Continue.



TX Power Level Tuning is now completed.

TX I/Q Tuning

• Spectrum analyzer is needed.

• Tx IQ Tuning allows changing the Tx I DC Offset, Tx Q DC Offset, Amplitude difference and Phase difference.

• Must be done separately on all bands!

To start tuning at the GSM850 band:

1. From the Tuning menu, choose "Tx IQ Tuning".



Tx IQ Tuning window appears.

🌾 Tx IQ Tuning	×
Mode: Manual Edge: Band:	
-10% -5% 0% 5% 10% TX1DC offset	ſ
-10 % -5 % 0 % 5 % 10 % TX Q DC offset:]
-6.0 6.0]
27.0 0 153.0 0 Phase diff:]
VBatt DAC: Next	
<u>Start</u> <u>Einish</u> <u>Close</u> <u>H</u> elp	

2. To begin tuning, click Start.

3. Adjust spectrum analyzer accordingly.

Edge OFF	tuning. Set the spectru	m analyzer.	×
•	Frequency: Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	836,6 MHz 3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
		OK	

- 4. Click OK.
- 5. Set each of the sliders to the desired value.

🌾 Tx IQ Tuning
Mode: Manual 💌 Edge: Off Band: GSM 850
-10%; -5% 0% 5% 10%; TX1DC offset:
-10%; -5% 0% 5% 10%; TXQDC offset:
-6.0 6.0 -6.0
27.0 153.0 Phase diff: 89.5
VBatt DAC: 768
Start <u>Finish</u> <u>Close</u> <u>H</u> elp

The order of tuning should be the same as the order of the sliders, that is, the Tx I DC Offset is tuned first and Phase difference is tuned last.

Use <= , =>, PgUp or PgDn keys.

6. Tune LO leakage to minimum with TXI/TXQ DC Offset control (f0 on spectrum analyzer screen).









Tuning limits are the same for all bands (GSM/EDGE850, GSM/EDGE1800 and GSM/EDGE1900):

Tuning limits	Value
I DC Offset	-6+6

Tuning limits	Value
Q DC Offset	-6+6
Amplitude difference	-1+1
Phase difference	- 80°…100°

8. When the IQ spectrum is balanced, click Next to continue EDGE850 Tx IQ tuning.

Spectrum analyzer settings are the same as for GSM850 Tx IQ tuning.





9. When the IQ spectrum is balanced, click Next to continue GSM1800 Tx IQ tuning.



🌾 Tx IQ Tuning	
Mode: Manual Edge: Band:	
-10%; -5% 0% 5% 10%; TXIDC offset:	
-10% -5% 0% 5% 10% TXQDC offset:	
-6.0 6.0 	
Phase diff:	
VBatt DAC: Next	
<u>Start</u> <u>Finish</u> <u>C</u> lose <u>H</u> elp	p

11.Click Start.

Tuning begins at the GSM900 band.

12.Adjust spectrum analyzer accordingly.

Edge OFF	tuning. Set the spectrun	ı analyzer.	×		
•	Frequency: Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	897,4 MHz 3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak			
ОК					

13.Click OK.

14.Set each of the sliders to the desired value.

🌾 Tx IQ Tuning
Mode: Manual 💌 Edge: Off Band: GSM 900
-10%; -5% 0% 5% 10%; TX1DC offset: -10%; -5% 0% 5% 10%; -10%; -5% 0% 5% 10%; TXQ DC offset: 0.300
-6.0 6.0 6.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0
Phase diff: 90.0
VBatt DAC: 768
Start Einish Lep

The order of tuning should be the same as the order of the sliders, that is, the Tx I DC Offset is tuned first and Phase difference is tuned last.

Use <= , =>, PgUp or PgDn keys.

15.Tune LO leakage to minimum with TXI/TXQ DC Offset control (f0 on spectrum analyzer screen).





Tuning limits are the same for all bands (GSM/EDGE900, GSM/EDGE1800 and GSM/EDGE1900):

Tuning limits	Value
I DC Offset	-6+6
Q DC Offset	-6+6
Amplitude difference	-1+1
Phase difference	- 80°…100°

17. When the IQ spectrum is balanced, click Next to continue EDGE900 Tx IQ tuning.

Spectrum analyzer settings are the same as for GSM900 IQ tuning. NOTE! In EDGE-mode, the undesired sideband is located at 50.8kHz from f0.

18. When the IQ spectrum is balanced, click Next to continue GSM1800 Tx IQ tuning.

Continue tuning at GSM/EDGE1800 band

in requeries.	1747,8 MHZ
Resolution Band Width	3 kHz
Video Band Width	3 kHz
Video Trig	Free Run
Sweep Time	3 s
Span	200 kHz
Detector:	Max Peak

19.Adjust spectrum analyzer accordingly.

Both GSM and EDGE 1800 use the same settings.

Continue tuning at GSM/EDGE1900 band

20.Adjust spectrum analyzer accordingly.

Edge OFF	tuning. Set the spectrum	n analyzer.	x
(i)	Frequency:	1880,0 MHz	
~	Resolution Band Width Video Band Width Video Trig Sweep Time Span Detector:	3 kHz 3 kHz Free Run 3 s 200 kHz Max Peak	
		<u>OK</u>	

Both GSM and EDGE 1900 use the same settings.

21.When GSM and EDGE 1900 are tuned, click Finish and then close the window.

	Next
<u>Start</u> <u>Einish</u> <u>C</u> lose	<u>H</u> elp

Service Tool Concept for Baseband Tuning Operations

EM calibrations should be carried out in the JBV-1 docking station equipped with the DA-14 docking station adapter.

Note: RF tunings must be carried out in the MJ-19 module jig.

Power to JBV-1 should be supplied from an external DC power supply, <u>not</u> from the FPS-8 prommer.

JBV-1 input voltages:

- Maximum +16 VDC
- Nominal input for RF tunings is +12 V DC



ltem	Accessory type	Service Accessory	Product code
1	JBV-1	Docking station	0770298
2	DA-14	Docking station adapter (Americas)	0780366
3	SA-28	RF coupler	0770676
4	PCS-1	DC power cable	0730012
5	DAU-9S	Service FBUS cable	0730108
6	PKD-1	Software protection key	0750018
7	Service SW	CD-ROM	
8	XRF-1	RF cable	0730085

Baseband Tuning Operations

Energy Management Calibration

External power supply is needed.

Energy Management (EM) Calibration is used for calibrating the battery and charger settings of the phone.

Preparation for EM Calibration:

- Connect the DC Cable CA-5S between JBV-1 and Vin of the phone for charger calibration.
- Connect 12...15 V from the power supply to JBV-1.

NOTE! Check that the connection is FBUS (does not work with MBUS).

To start tuning:

1. From the Tuning menu, choose "Energy Management Calibration".



Energy management values to be calibrated are checked.

2. To show the current values in the phone memory and to check that the communication with the phone works, click Read From Phone.

- 🔏 Energy Management Calibration _ 🗆 × Calibrated Phone Values ADC Offset [mV] ADC Gain Calibrate [0.0001 mV/bit] BSI Gain [100 Ohm] Battery Size Save To Phone Registery Temperature BTEMP Gain Read From Phone SCAL Offset [mV] Battery Voltage SCAL Gain Help VCHAR Gain 🔽 Charger Voltage Charge Current ICHAR Gain Status:
- 3. To run the selected calibrations, click Calibrate.

 Table 13: Limits for Energy Management Calibration

Parameter	Min.	Max	Note
ADC gain	25400	29000	VBatt, BSI, BTemp
DC offset	-50	50	ADC voltage offset
BSI gain	970	1100	ADC BSI calibration gain
BTEMP gain	2075	2275	ADC BTEMP calibration gain
VBAT gain	10000	11000	ADC VBATT Voltage gain
VBAT offset	2300	2900	ADC VBATT Voltage offset scale
VCHAR	58000	62000	Charge voltage
ICHAR	4050	4800	charge current

4. If values shown are within limits, click Save To Phone to save the values to the phone.

NOTE! Only the values of the checked tunings (Battery size, Battery Temperature etc...) are saved.

- 5. To end tuning, close the "Energy Management Calibration" window.
- 6. After exiting the dialog, switch the phone on.

Flashing Setup Instructions

POS (Point of Sale) flash concept



ltem	Туре	Description	Code
1	SF-14	Point of sales flash adapter	0780368
2	CA-28DS	Service data cable	0730319
3	ACF-8	Universal power supply	0680032
4	FLS-4S	FLS-4S sales package E&A	0080541
	FLS-4S,	FLS-4S sales package APAC	0080542
	FLS-4S,	FLS-4S sales package US	0080543
5		Standard USB cable	
6		Service SW CD-ROM	

3 - Service Software Instructions

Software update with FLS-4S

It is very important to follow this insertion and removal procedure, otherwise the contact pins of the flash adapter can be damaged.

1. Insert the Flash Adapter SF-14 like a battery, start at the Battery Connector side.



2. Carefully push down the phone.



3. First unlock the FLASH ADAPTER and then lift the bottom side of the device.



4. Remove the unit from the flash adapter.



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ltem	Туре	Description	Code
1	SF-14	Point of sales flash adapter	0780368
2	XCS-4	Modular cable	0730178
3	FLC-2	Power cable	0730185
4	FPS-8	Flash prommer box	0080321

ltem	Туре	Description	Code
4	FPS-10	Flash prommer box	
5		Centronics (printer) cable, incl in FPS-8 sales package	0730029
6	AXS-4	RS-232 (D9-D9) cable, incl in FPS-8 sales package	0730090
7	PKD-1	Software protection key	0750018
8		Service SW CD-ROM	
9	ACF-8	AC charger, incl in FPS-8 sales package	0680032
10	DKU-2	Connectivity cable	0730238

3 - Service Software Instructions

MJ-19 module jig concepts





ltem	Туре	Description	Code
1	MJ-19	Module jig	0780372
2	PCS-1	DC power cable	0730012
3	XRF-1	RF antenna cable	0730085
4	DAU-9S	Service FBUS cable	0730108
5	PKD-1	Software protection key	0750018
6		Service SW CD-ROM	

JBV-1 flash concept with FPS-8



Item	Туре	Description	Code
1	JBV-1	Docking station	0770298
2	DA-14	Docking station adapter	0780366
3	PCS-1	DC power cable	0730012
4	XCS-4	Modular cable	0730178
5	FPS-8	Flash prommer box	0080321
6	DKU-2	Connectivity cable	0730238
7	AXS-4	D9 – D9 cable, incl. in FPS-8 sales pack	0730090
8	PKD-1	Software protection key	0750018
9		Service SW CD-ROM	
10	ACF-8	AC charger, incl. in FPS-8 sales pack	0680032

3 - Service Software Instructions



Note! RF tuning not allowed with RF coupler SA-49!

ltem	Туре	Description	Code
1	JBV-1	Docking station	0770298
2	DA-14	Docking station adapter	0780366
3	SA-49	RF-coupler	0770866
4	PCS-1	DC power cable	0730012
5	DAU-9S	Service FBUS cable	0730108
6	PKD-1	Software protection key	0750018
7		Service SW CD-ROM	
8	XRF-1	RF cable	0730085

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Item	Туре	Description	Code
1	RA-2/3	Transceiver unit	
2	DA-14	Docking station adapter	0780366
3	XCS-4	Modular cable	0730178
4	FPS-11	Multiprommer	0770758
5		Standard USB cable	
6	PKD-1	Software protection key	0750018
7		Service SW CD-ROM	
8		FPS-11 power cable	

3 - Service Software Instructions



ltem	Туре	Description	Code
1	SF-14	Point of sales flash adapter	0780368
2	DAU-9S	Service FBUS cable	0730108
3	PKD-1	Software protection key	0750018
4		Service SW CD-ROM	
5	JBT-9	Bluetooth test box	0081490
6	ACP-8E (for Europe) ACP-8U (for U.S.)	Charger for JBT-9	0675195 0675196