

# CCS Technical Documentation

## NPL-2 Series Transceivers

### 3 - Service Software

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## Quick Guide for Phoenix Service SW Installation



### Phoenix Installation Steps in Brief

DCT-4 generation Test and Service Software is called "Phoenix"

These are the basic steps to install the Phoenix

- Install the Phoenix Service SW
- Install the Phoenix Data Package (product specific data & flash update package)
- Manage connection settings (depends on the tools you are using)
- Update FPS-8 SW (if you use FPS-8)
- Activate FPS-8
- Update JBV-1 Docking Station SW (only when needed)

The flash update files are delivered with then Phoenix Data Package so unless you want to use certain version of this package, separate installation package is not needed any-more. If you want to use it, it should be installed after connection management, before FPS-8 update.

**Please refer to Service Manual and Technical Bulletins for more information concerning phone model specific service tools and equipment setup.**

## Phoenix Service SW

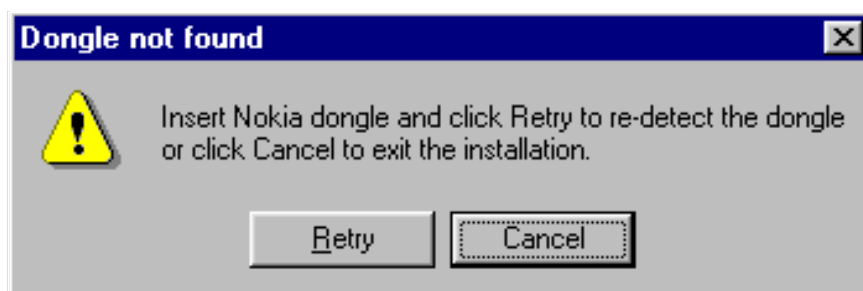
### Before Installation

- Check that a Dongle is attached to the parallel port of your computer.
- Download the installation package to your computer (e.g. C:\TEMP)
- Close all other programs
- Run the application file and follow instructions on the screen
- Administrator rights may be required to be able to install Phoenix depending on the Operating System
- If the dongle driver is installed or updated, you need to reboot your PC before the installation can continue.
- 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 can't continue.

Possible reasons may be defective or too old PKD-1Dongle (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.

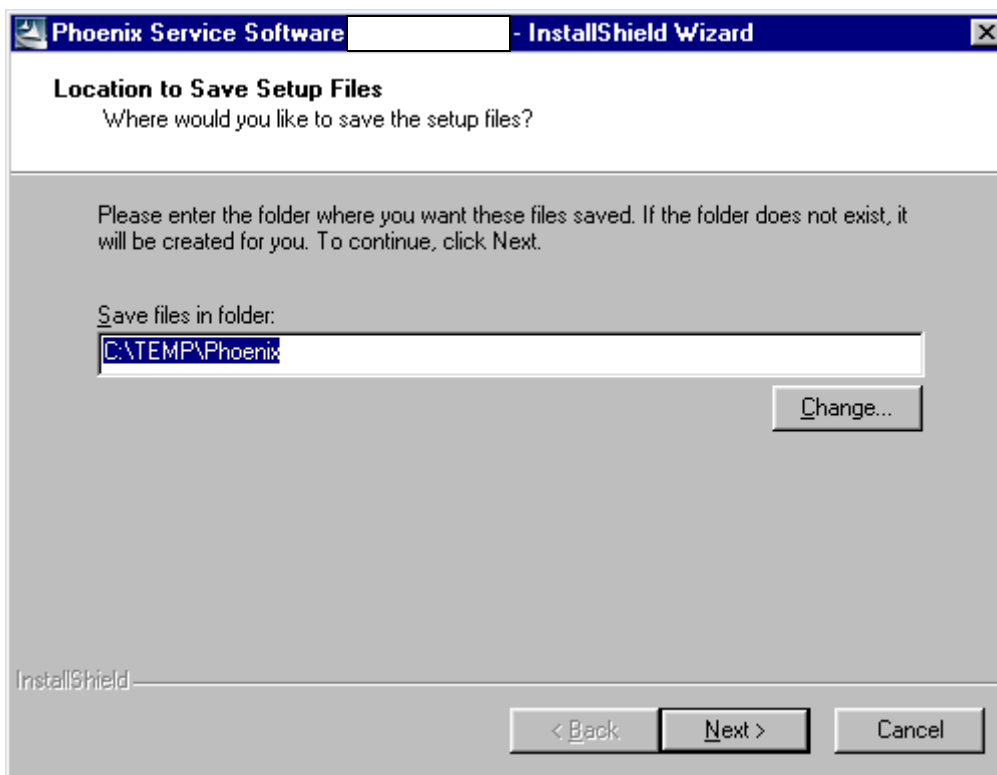
Check the COM /parallel ports used first! After correcting the problem Installation can be restarted.



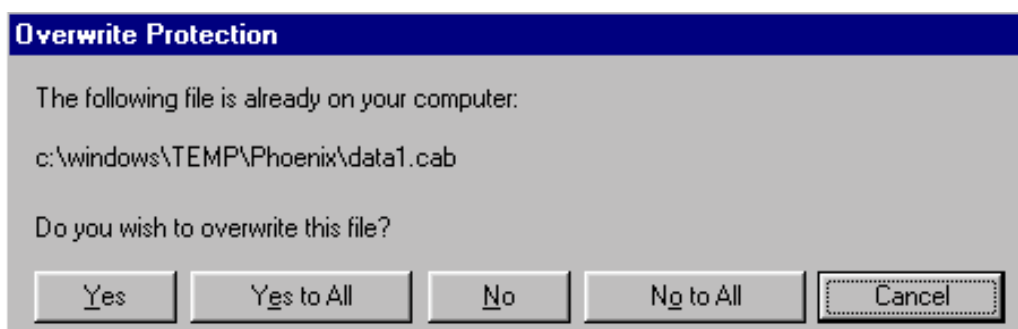
### Startup

Run the application file to start installation.

When you choose "Next" the files needed for installation will be extracted. Kindly wait.

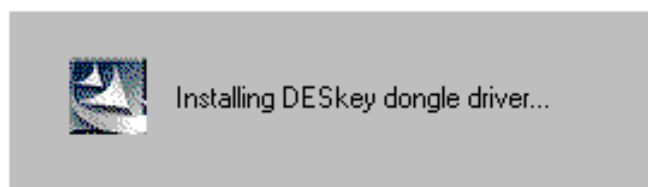


If the setup files are already extracted (left in the file system from previous installation) following dialog appears. Always click "Yes to All" to overwrite the existing setup files.

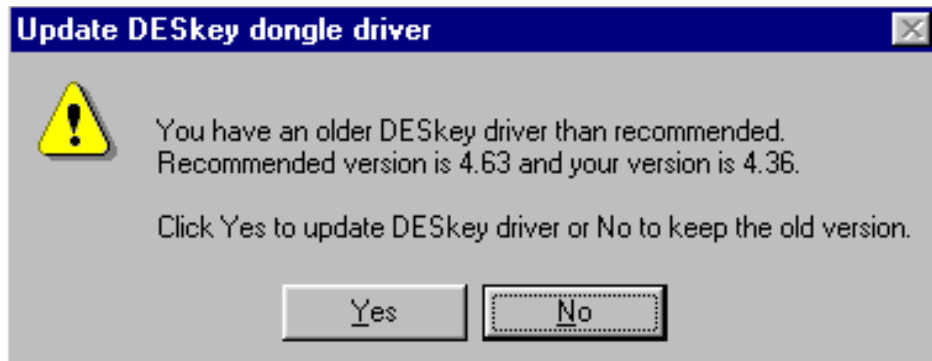


### Dongle Driver Installation and Version Check

If there is no previously installed Dongle driver, installation will take place...

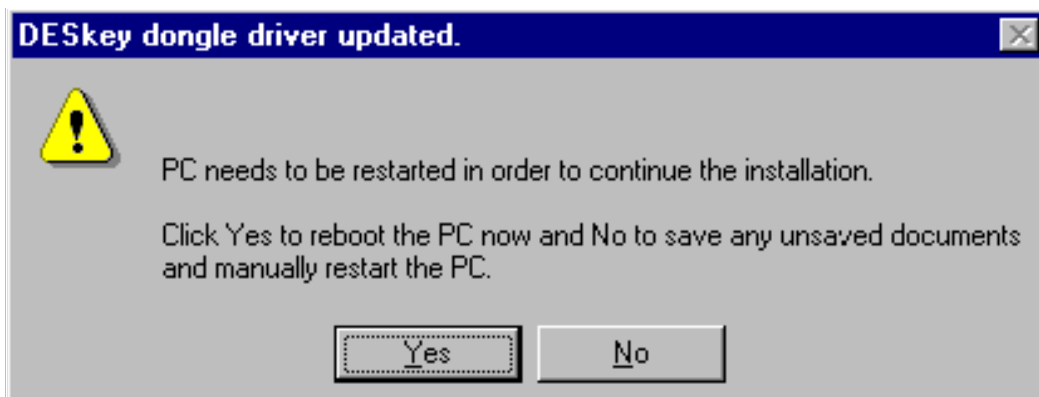


If the Dongle driver is installed and it is older than the latest supported version, the latest version will be installed when you choose "Yes". The latest version is always included in the latest Phoenix installation package.



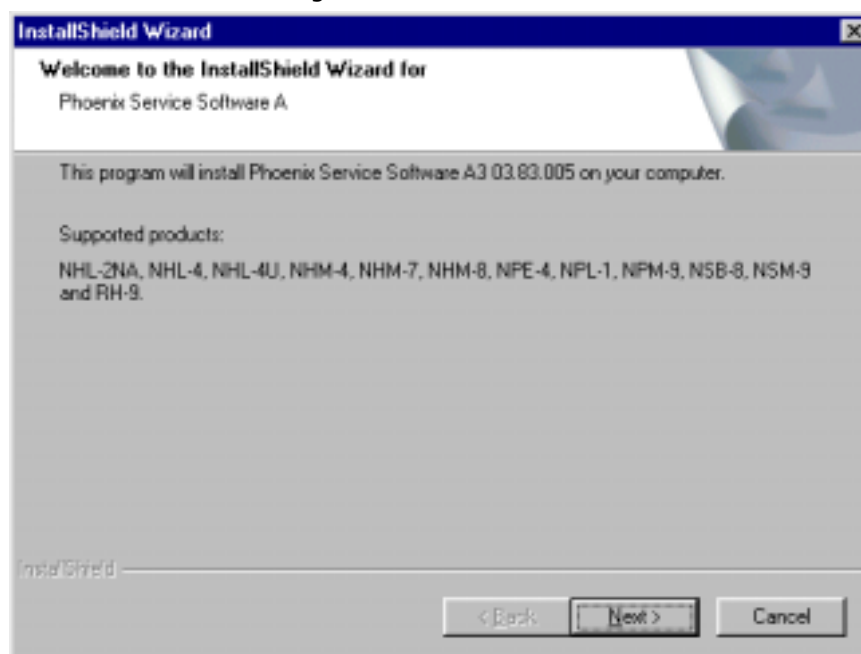
PC needs to be rebooted before installation can continue. Click "Yes" to reboot the PC.

Setup is restarted automatically after reboot.



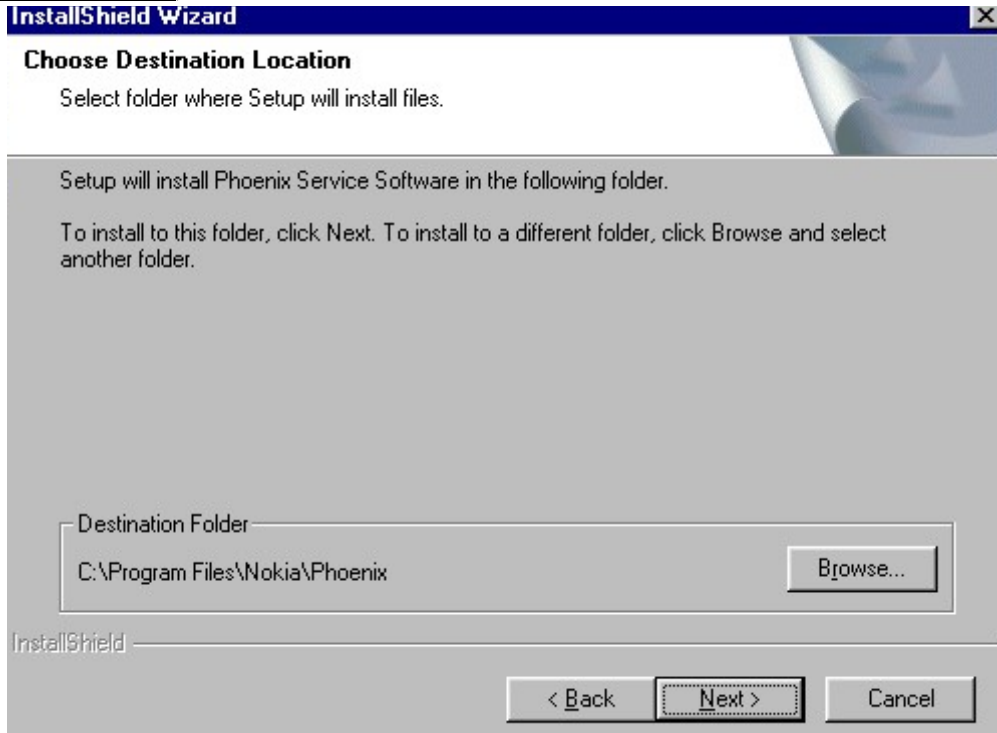
## First Time Installation of Phoenix

After Dongle driver installation / update (if needed) installation continues from this step. Click "Next" in Welcome dialog to continue.



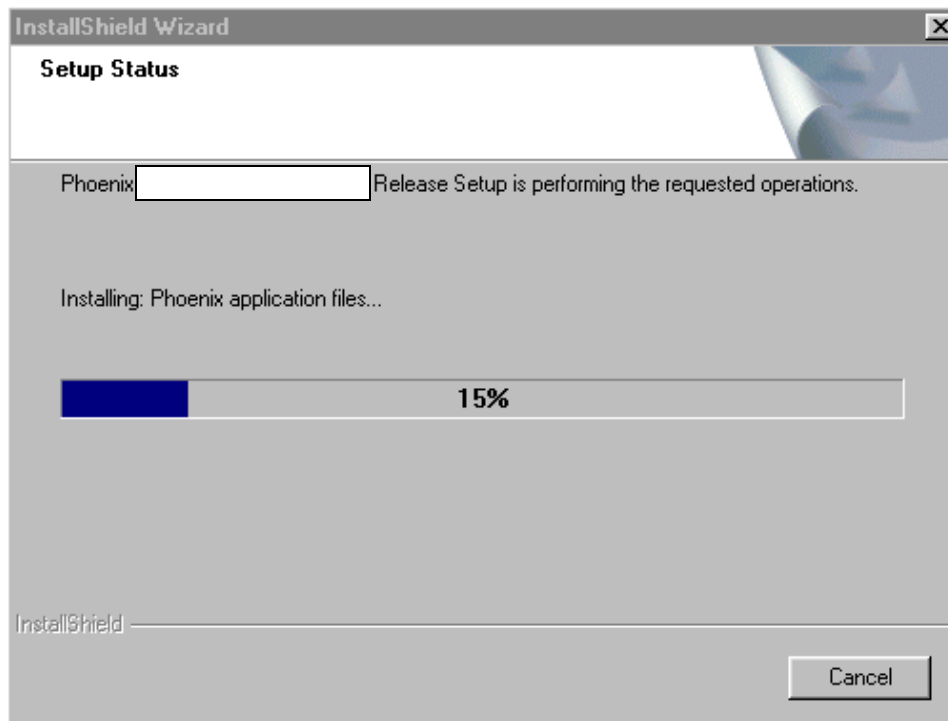
Choose the destination folder, it is recommended to use the default folder **C:\Program-Files\Nokia\Phoenix**.

Choose "Next" to continue. You may choose another location by selecting "Browse" (not recommended)



Setup copies the components, please wait.

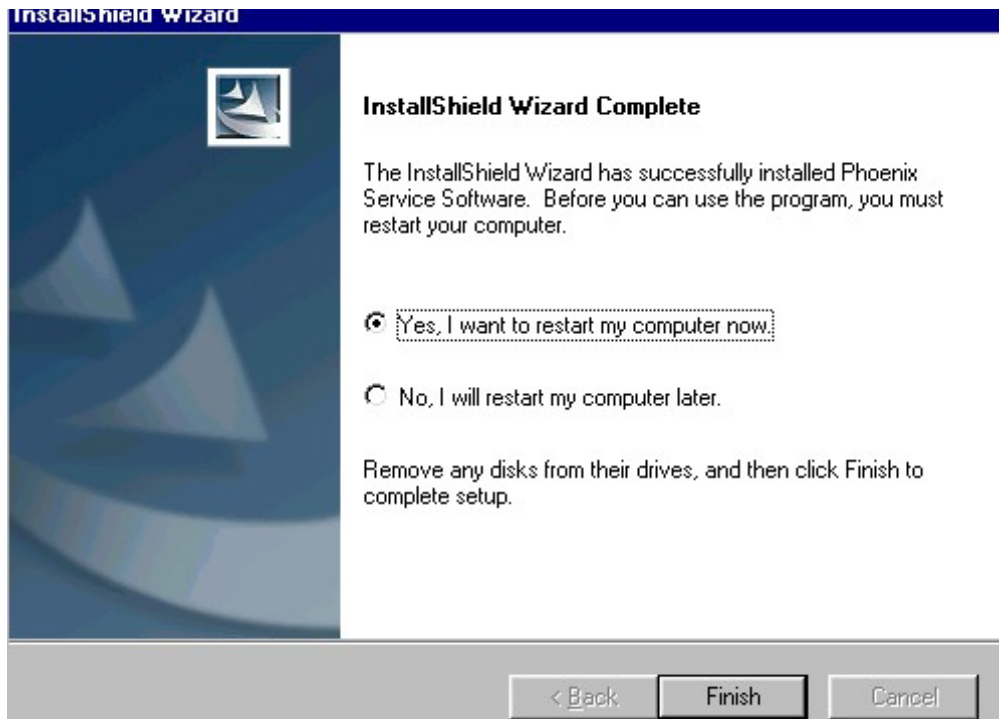
Progress of the setup is shown. Please wait...



If restarting of your computer is needed the InstallShield Wizard will tell you about it.

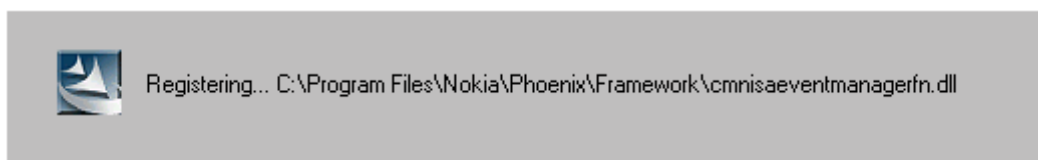
Select "Yes..." to reboot the PC immediately and "No..." to reboot the PC manually.

Note that Phoenix doesn't work, if components are not registered. Click "Finish" to continue.



After the reboot components are registered and Phoenix is ready for use.

If reboot is not needed components are registered after copying them.



If restarting of your computer is not needed, Click "Finish" to exit the setup.

Phoenix is now ready for use.

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

- **Installing Phone model specific Phone Data Package for Phoenix**
- **Configuring the connections**
- **Updating the Flash Update Package files used with FPS-8\* and FLS-4\* tools**



## Update Installation of Phoenix

If you already have the Phoenix Service SW installed on your computer, sooner or later there will be need to update it when new versions are released.

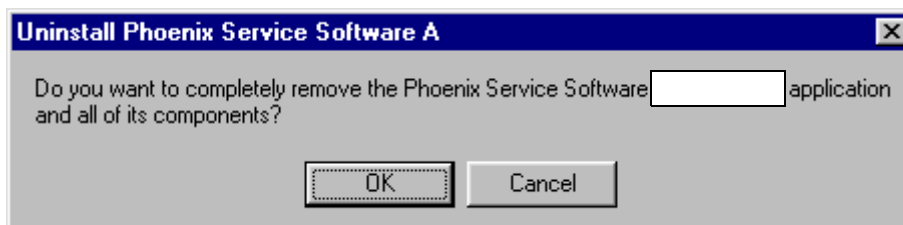
Please note that very often the Phoenix Service SW and the Phone Specific Data Package for Phoenix come in pairs, meaning that certain version of Phoenix can only be used with certain version of Data Package. Always use the latest available versions of both. Instructions can be found in phone model specific Technical Bulletins.

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

- Download the installation package to your computer hard disk
- Close all other programs
- Run the application file (e.g. **phoenix\_service\_sw.....exe**)
- Dongle driver version will be checked and if need be, updated
- After reboot installation starts automatically
- Newer version of Phoenix will be installed

When you update the Phoenix from old to new version (e.g. update from 3.83.005 to 3.83.0055), the update will take place automatically without uninstallation

If you try update the Phoenix with the same version that you already have (e.g. 3.55 to 3.55) you are asked if you want to uninstall the version of Phoenix you have on your PC. Answer "OK" to uninstall Phoenix, "Cancel" if you don't want to uninstall.



If you try to install an older version (e.g. downgrade from 3.83.005 to 3.83.005) installation will be interrupted.

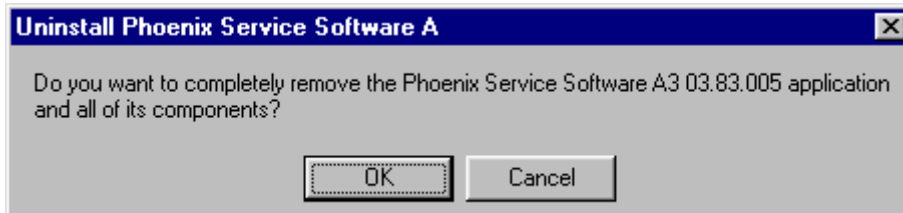
*Always follow the instructions on the screen.*

## How to Uninstall Phoenix

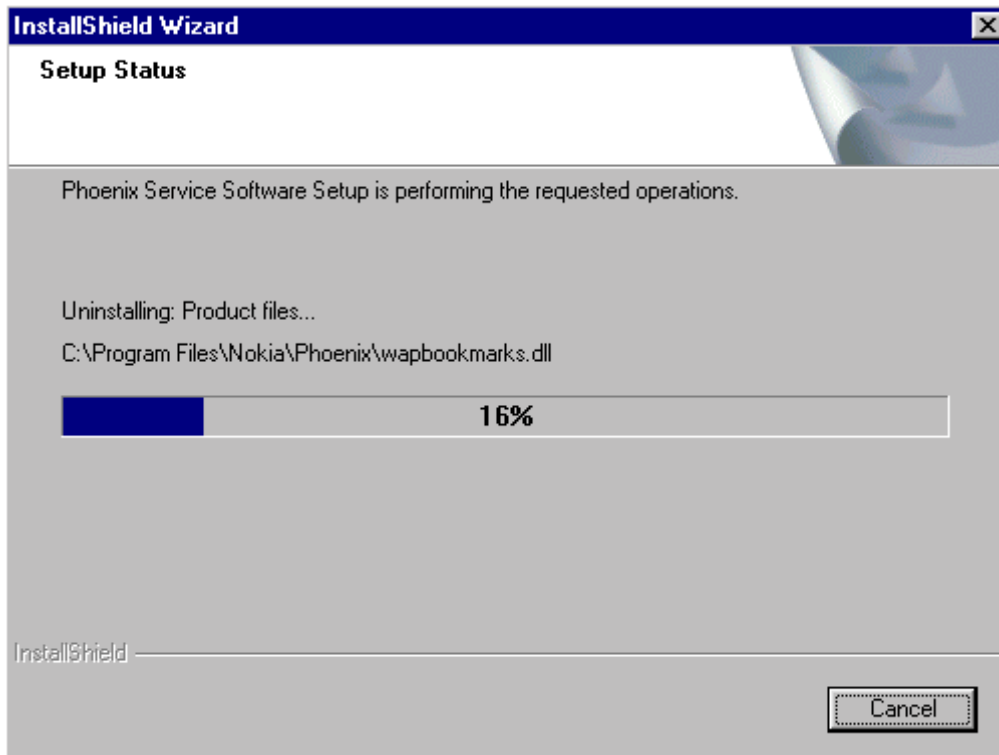
Uninstallation can be done manually from Windows Control Panel – Add / Remove Programs.

Choose "Phoenix Service Software" and click "Add/Remove".

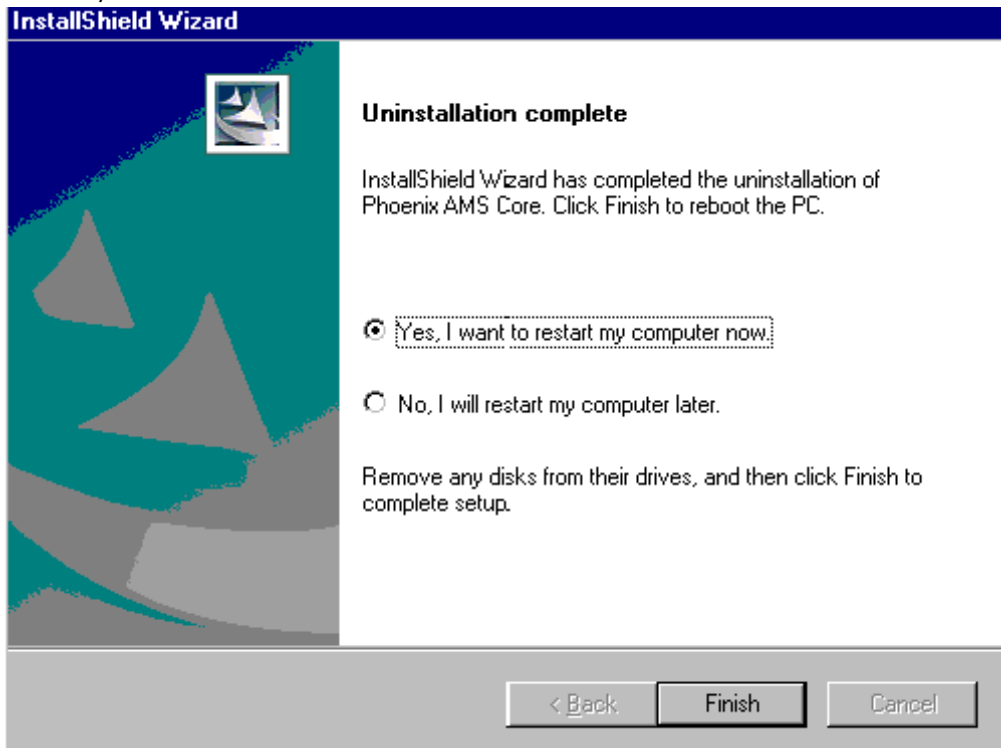
Choose "OK" to uninstall



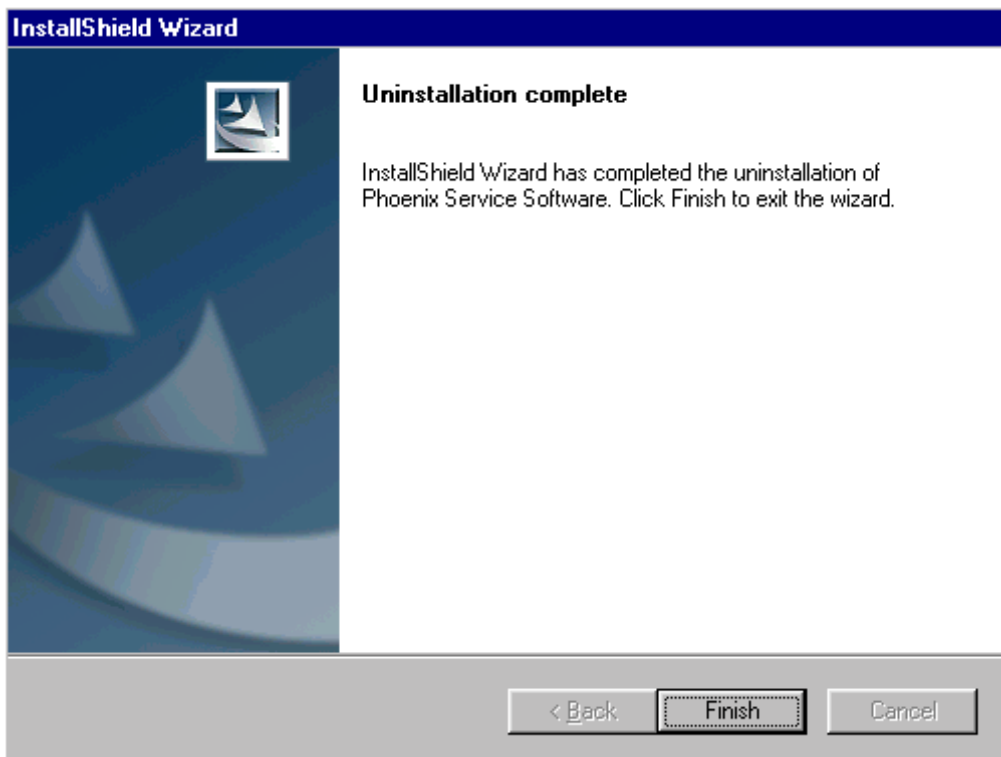
Progress of the uninstallation is shown.



You may have to reboot the PC after uninstallation.



If restarting is not needed, the following dialog will appear:



*Note!* If you have different product packages installed, components are uninstalled only if they are not included in other product packages.

## Data Package for Phoenix (Product Specific)

### Before installation

Product Data Package contains all product specific data to make the Phoenix Service Software and tools usable with a certain phone model.

It also includes the latest version of flash update package for FLS-4\* and FPS-8\*

- Check that the Dongle is attached to the parallel port of your computer.
- Install Phoenix Service SW
- Download the installation package to your computer (e.g. C:\TEMP)
- Close all other programs
- Run the application file and follow instructions on the screen

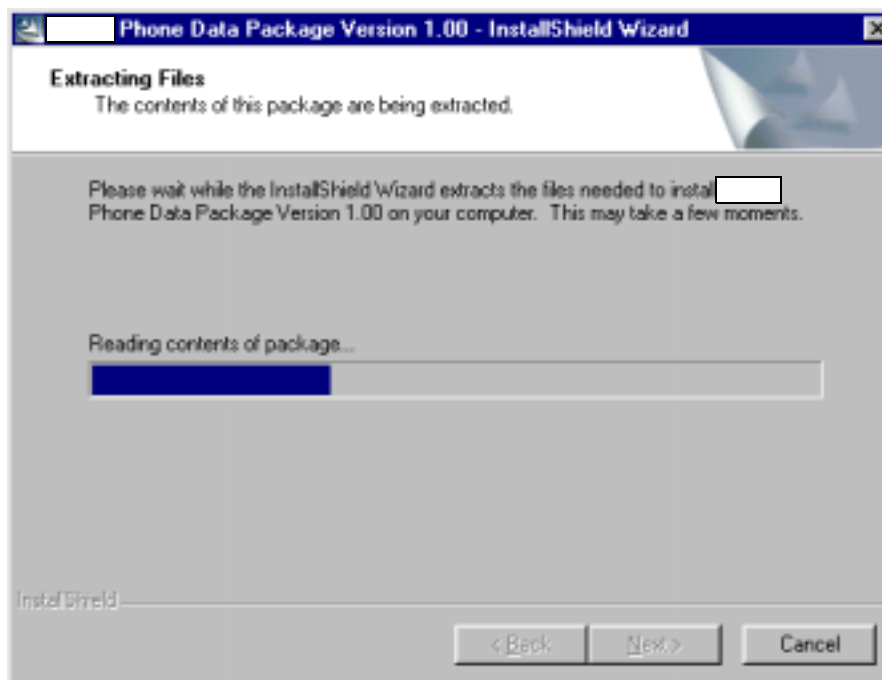
If you already have the Phoenix Service SW installed on your computer, sooner or later there will be need to update it when new versions are released.

Please note that very often the Phoenix Service SW and the Phone Specific Data Package for Phoenix come in pairs, meaning that certain version of Phoenix can only be used with certain version of Data Package. Always use the latest available versions of both. Instructions can be found in phone model specific Technical Bulletins.

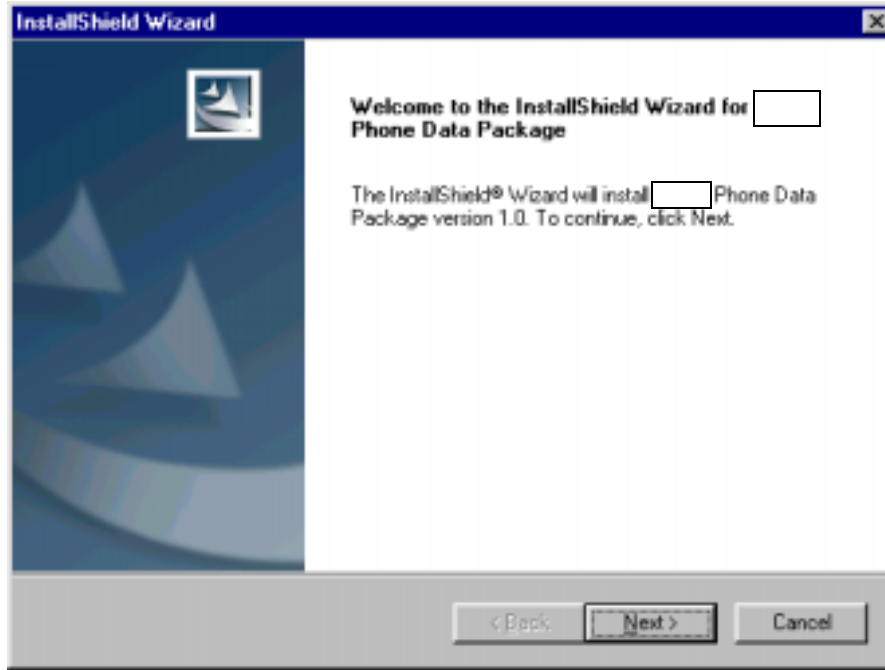
### Installation of Phoenix Data Package (Product Specific)

Run the application file to start installation.

When you choose "Next" the files needed for installation will be extracted. Please wait...



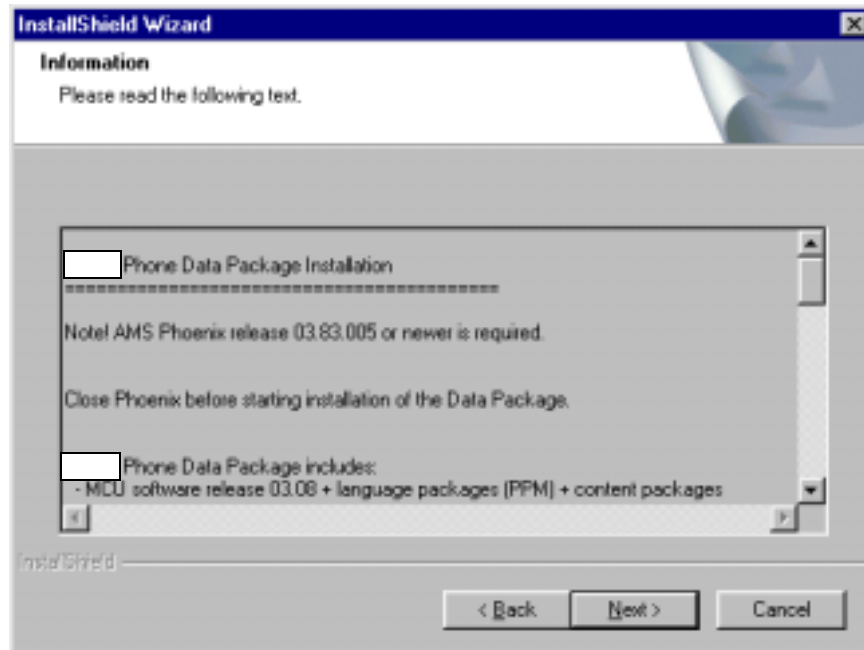
Choose "Next" to continue.



From this view you can see the contents of the Data Package.

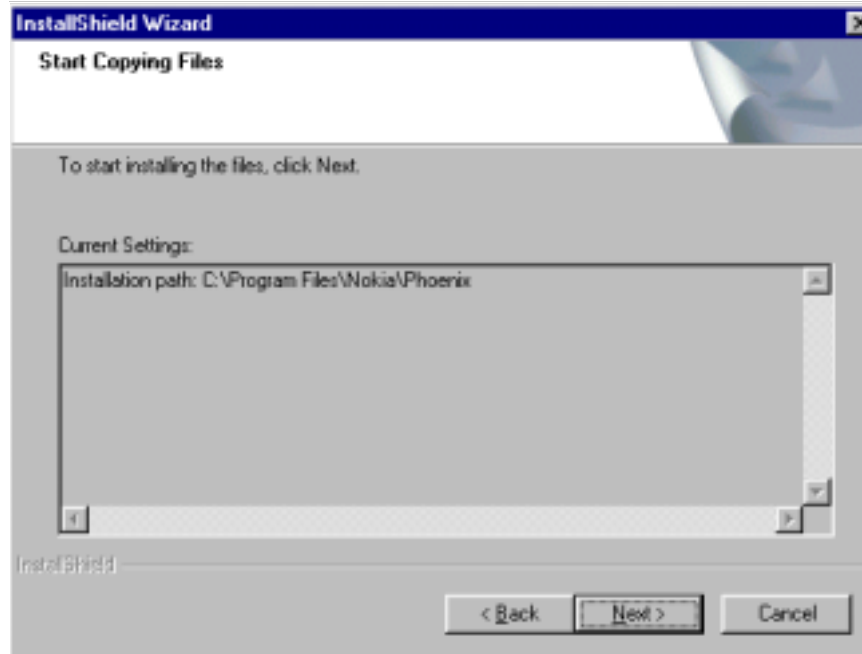
**Read the text carefully.**

There should be information about the Phoenix version needed with this data package. Choose "Next".

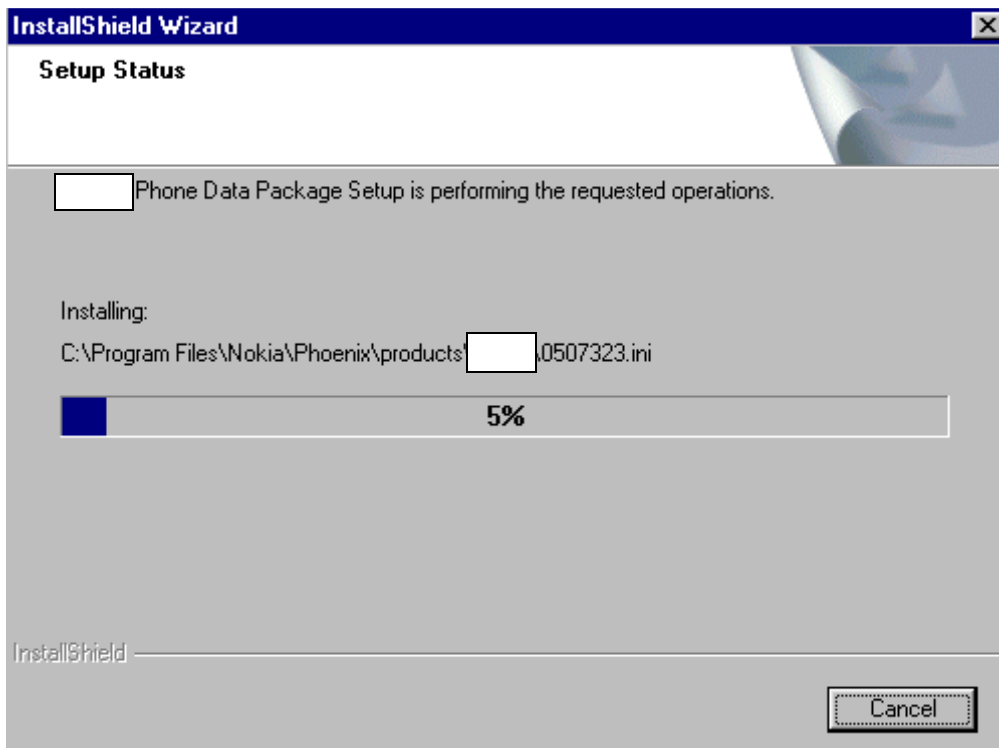


Confirm location and choose "Next" to continue.

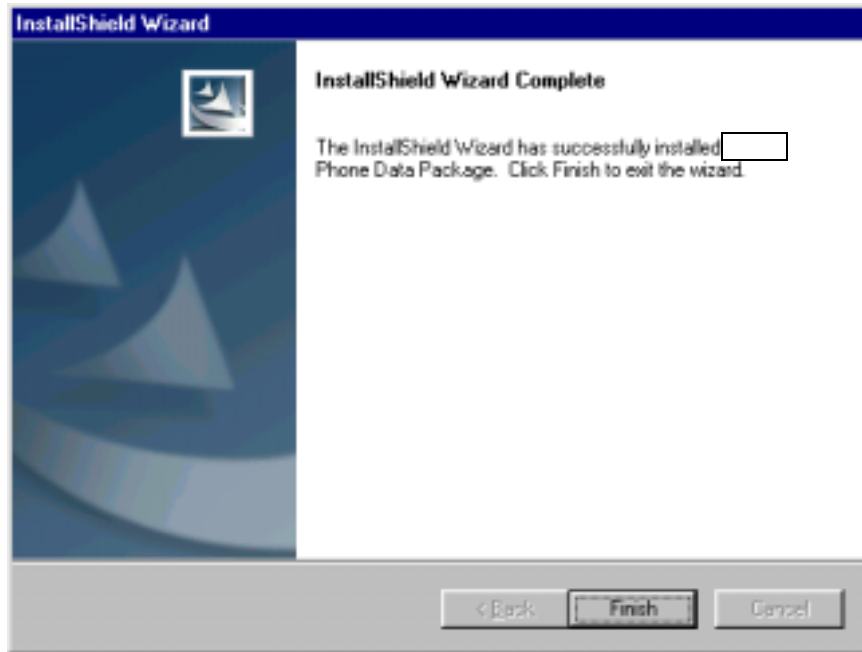
Install Shield checks where the Phoenix application is installed and the directory is shown. Choose "Next" to continue.



Phone model specific files will be installed... please wait.



Choose "Finish" to complete installation.

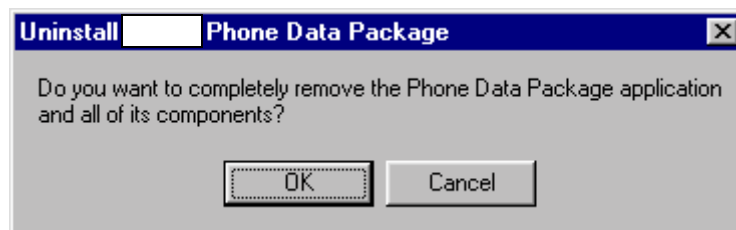


You now have all phone model specific files installed in your Phoenix Service SW.

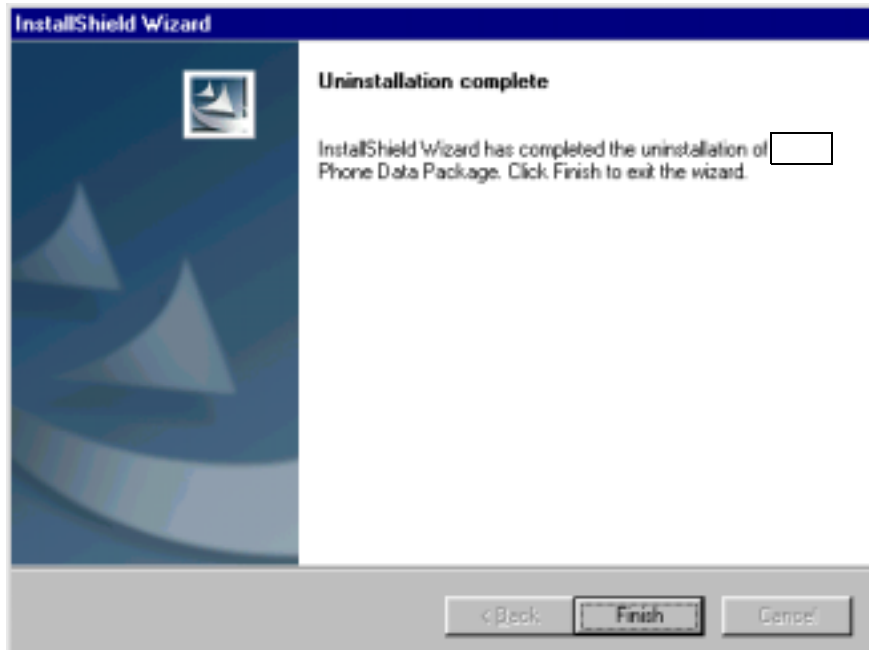
### How to Uninstall Data Package

Uninstallation can also be done manually from Windows Control Panel / Add / Remove Programs/ ".....: Phone Data Package".

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 version you have on your PC. Answer "OK" to uninstall, "Cancel" if you don't want to uninstall. Older versions of data packages do not need to be uninstalled.



Once the previously installed Data package is uninstalled, choose "Finish".



Run the application file again to continue installation from the beginning.

## How to Manage Connections

Start Phoenix Service SW and Login.



Choose "Manage Connections" From "File" – Menu

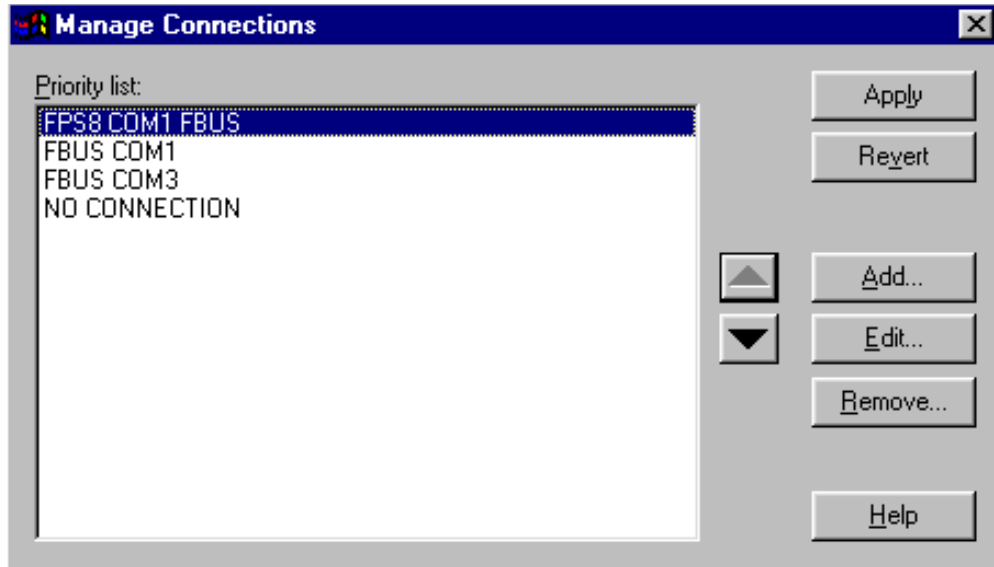


Existing connections can be selected, edited, deleted and new ones created by using this dialog.



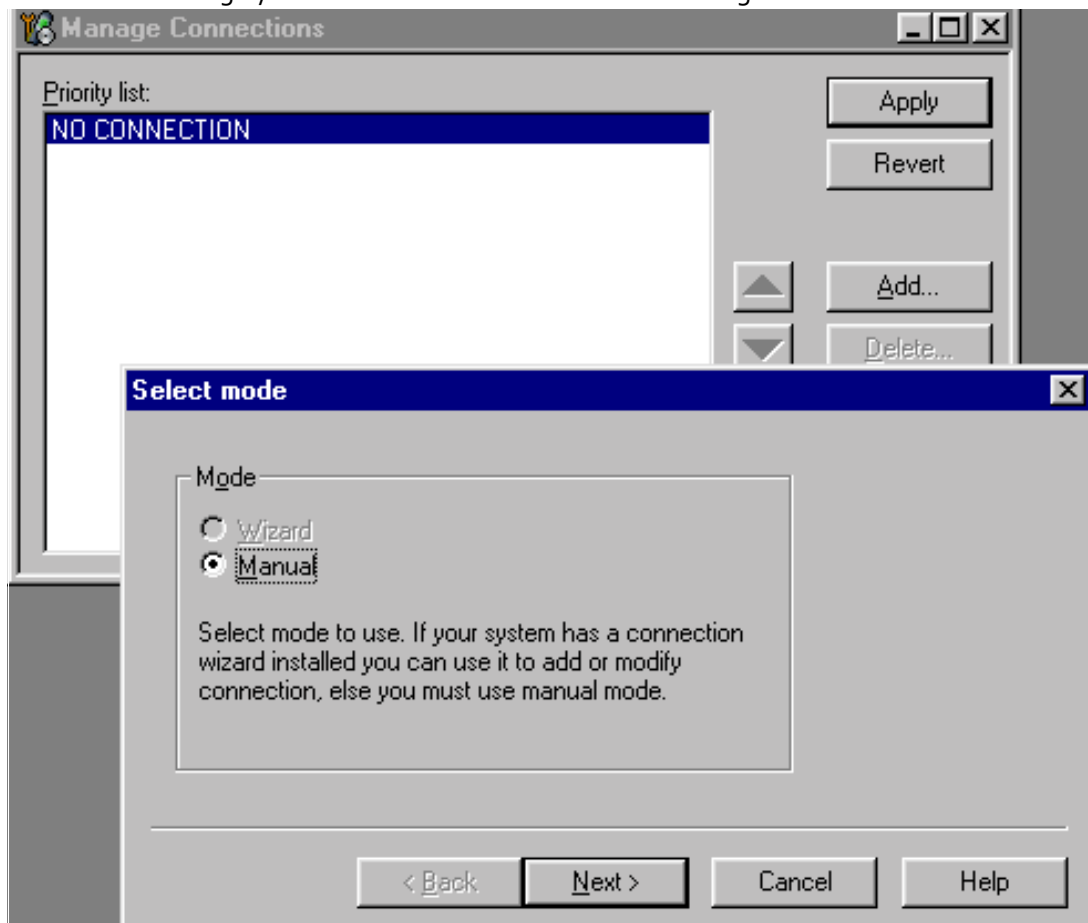
A connection can be created either manually or by using a Connection Wizard.

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



Choose "Next" to continue.

In the next dialogs you will be asked to select some settings for the connection



### Manual Settings

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

**Media:** FBUS

**COM Port:** Virtual COM Port used by FLS-4 **Please check this always!**

(To check please go to Windows / Control Panel / FLS Virtual Port / Configuration)

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

**Media:** FPS-8

**Port Num:** COM Port where FPS-8 is connected

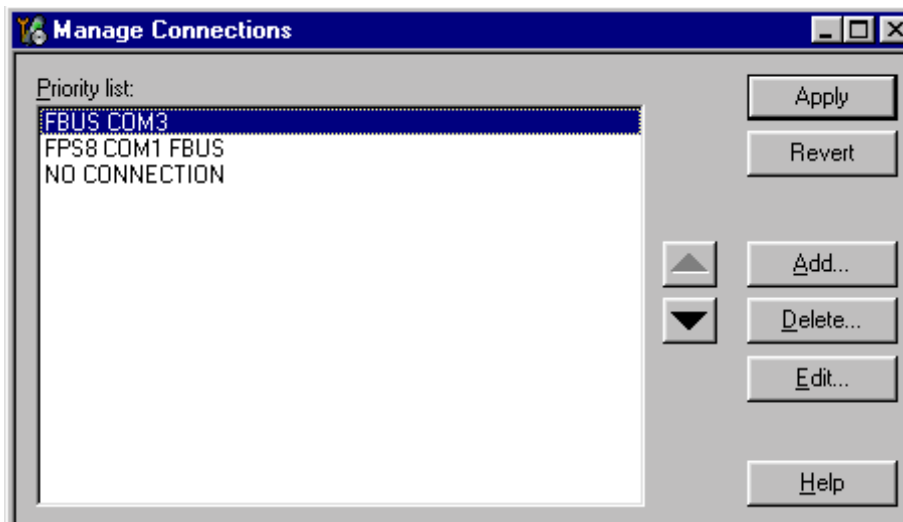
**COMBOX\_DEF\_MEDIA:** FBUS

Choose "Finish" to complete.

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

Activate the connection you want to use by clicking it and use up/down arrows to move it on top of the list. Choose "Apply".

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

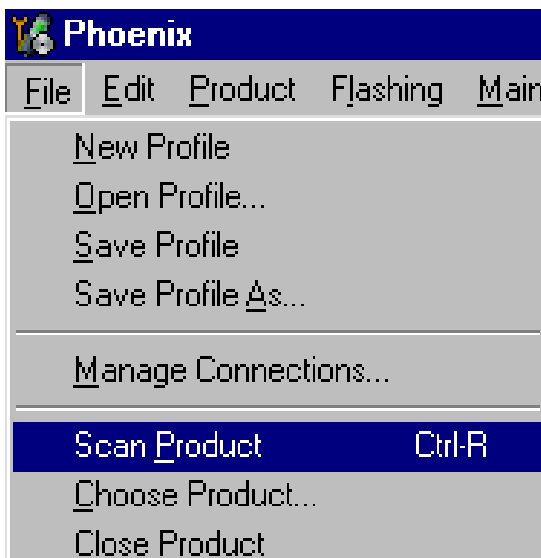


Selected connection will be shown on the right hand bottom corner of the screen.



To use the selected connection, connect the phone to Phoenix with correct service tools,

make sure that it is switched on and select "Scan Product".



When the Product is found, Phoenix will load product support and when everything is ready, name of the loaded product support module and its version will be shown on the bottom of the screen.



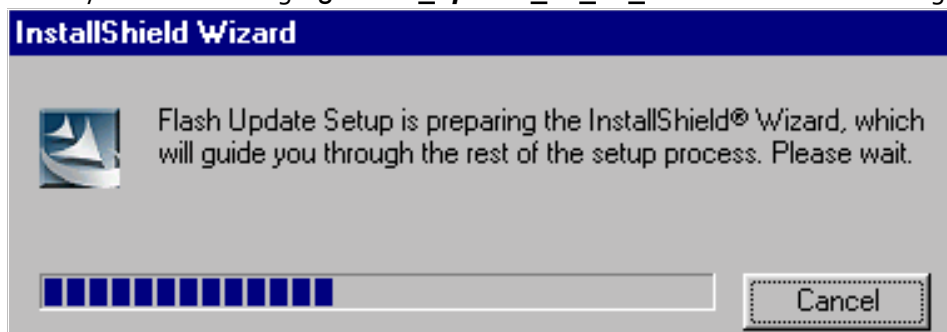
## How to Update Flash Support Files for FPS-8\* and FLS-4\*

### Before Installation

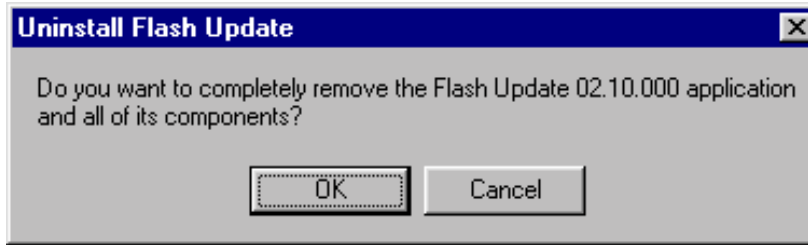
- Install Phoenix Service SW and Phoenix data package.
- Install the phone model Specific Datapackage for Phoenix
- The flash support files are delivered in the same installation package with Phoenix data package.
- Normally it is enough to install the data package only before updating the FPS-8.
- Separate installation package is for flash support files are available, and the files can be updated according to this instruction.

### Installing the Flash Support Files

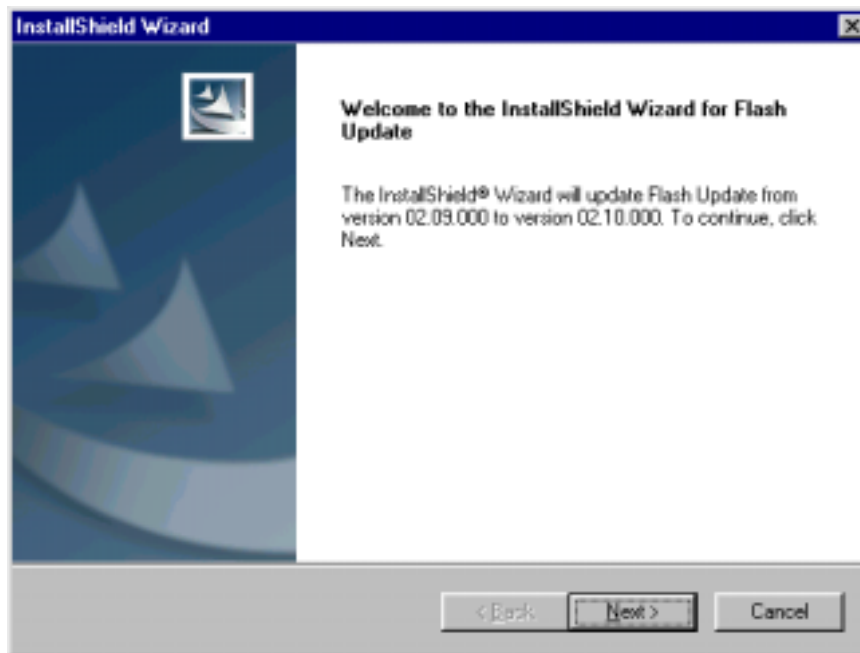
Start by double clicking eg. *flash\_update\_02\_10\_00.exe*. Installation begins.



If you already have the same Flash Update package files installed, you need to confirm if you want them to be reinstalled.

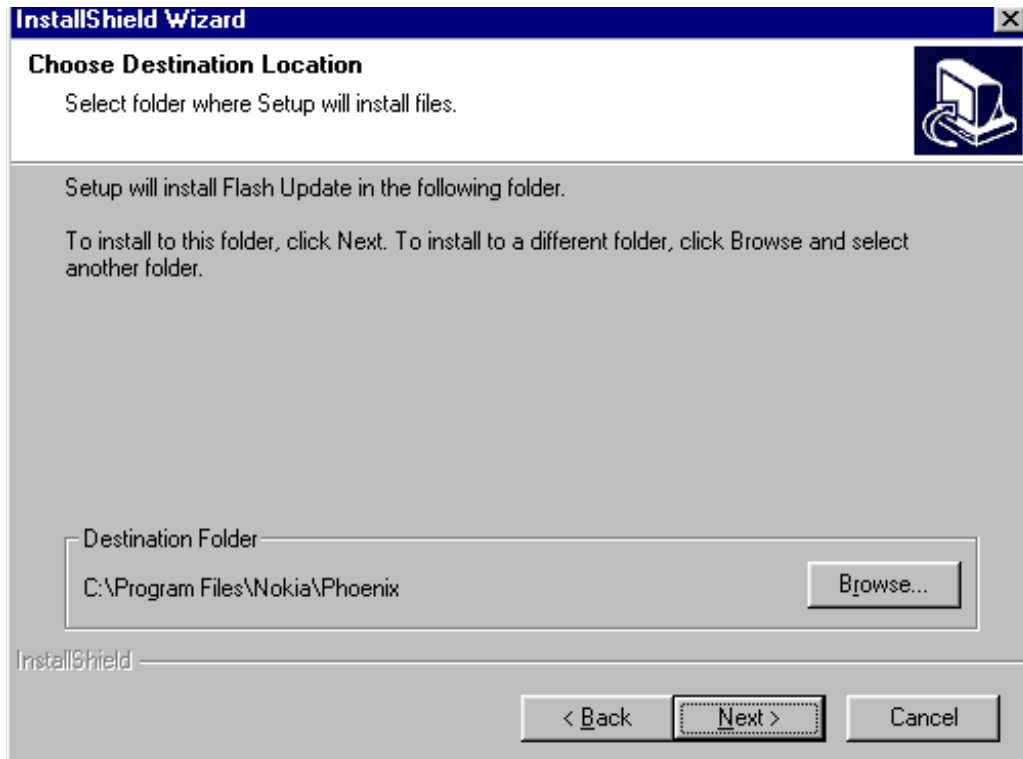


Choose "Next" to continue installation

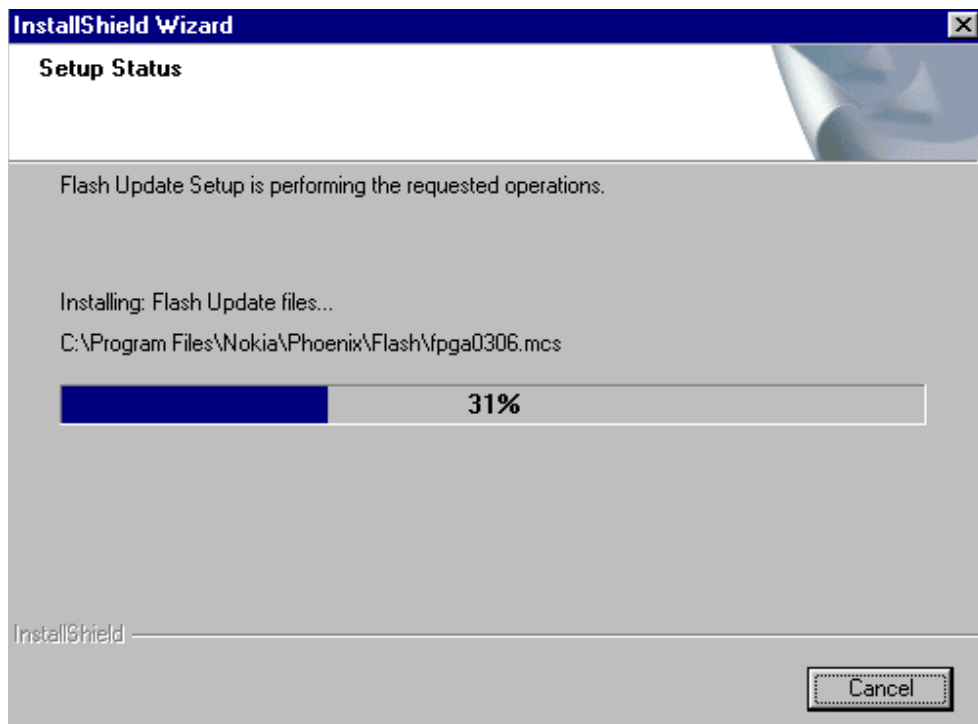


It is **highly** recommended to install the files to the default destination folder *C:\Program Files\Nokia\Phoenix*.

Choose "Next" to continue. You may choose another location by selecting "Browse" (not recommended).

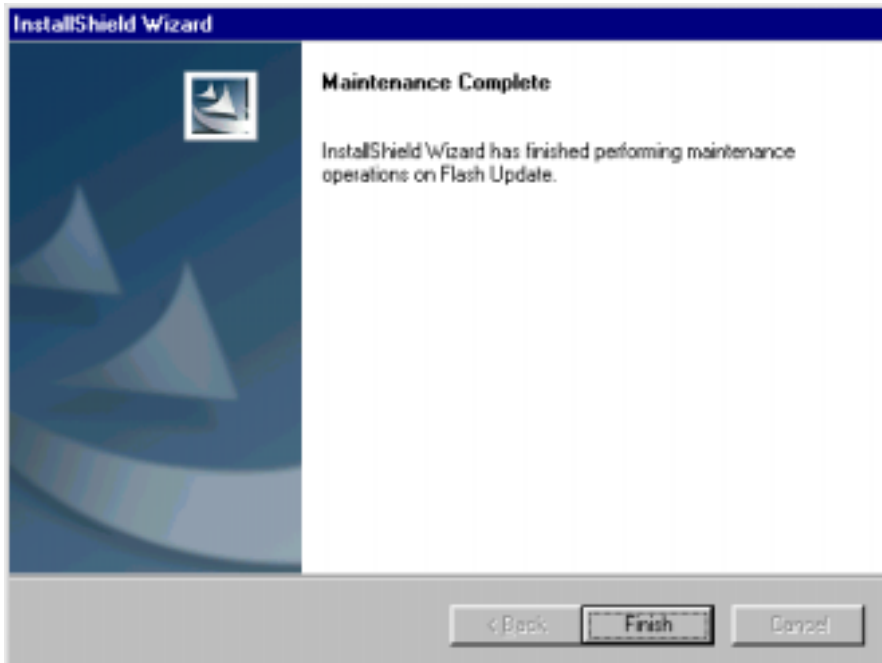


Installation continues...



Choose "Finish" to complete procedure.

- **FLS-4 can be used right after Flash Update Package is installed.**
- **FPS-8\* must be updated by using Phoenix!**

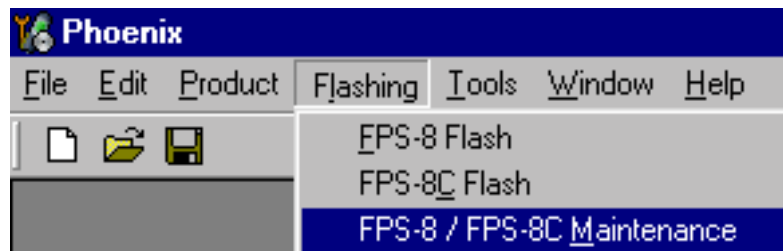


### How to Update The FPS-8\* Flash Prommer SW

Start Phoenix Service Software



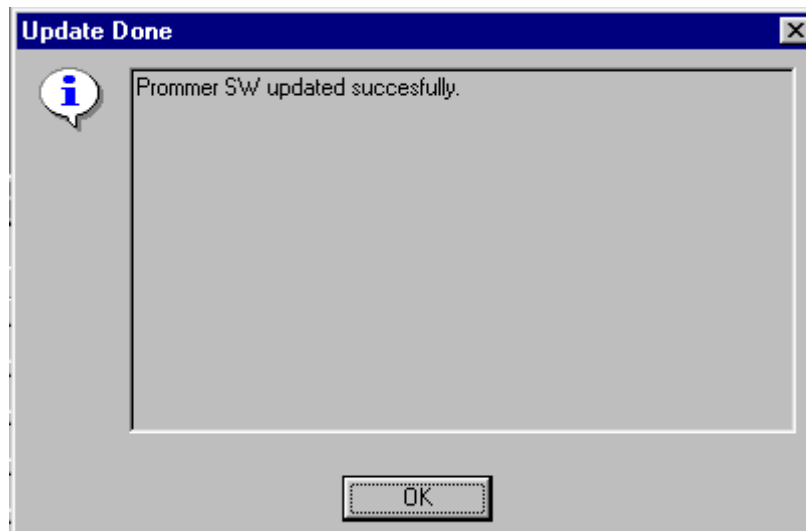
Select "FPS-8 / FPS-8C maintenance" from "Flashing" menu.

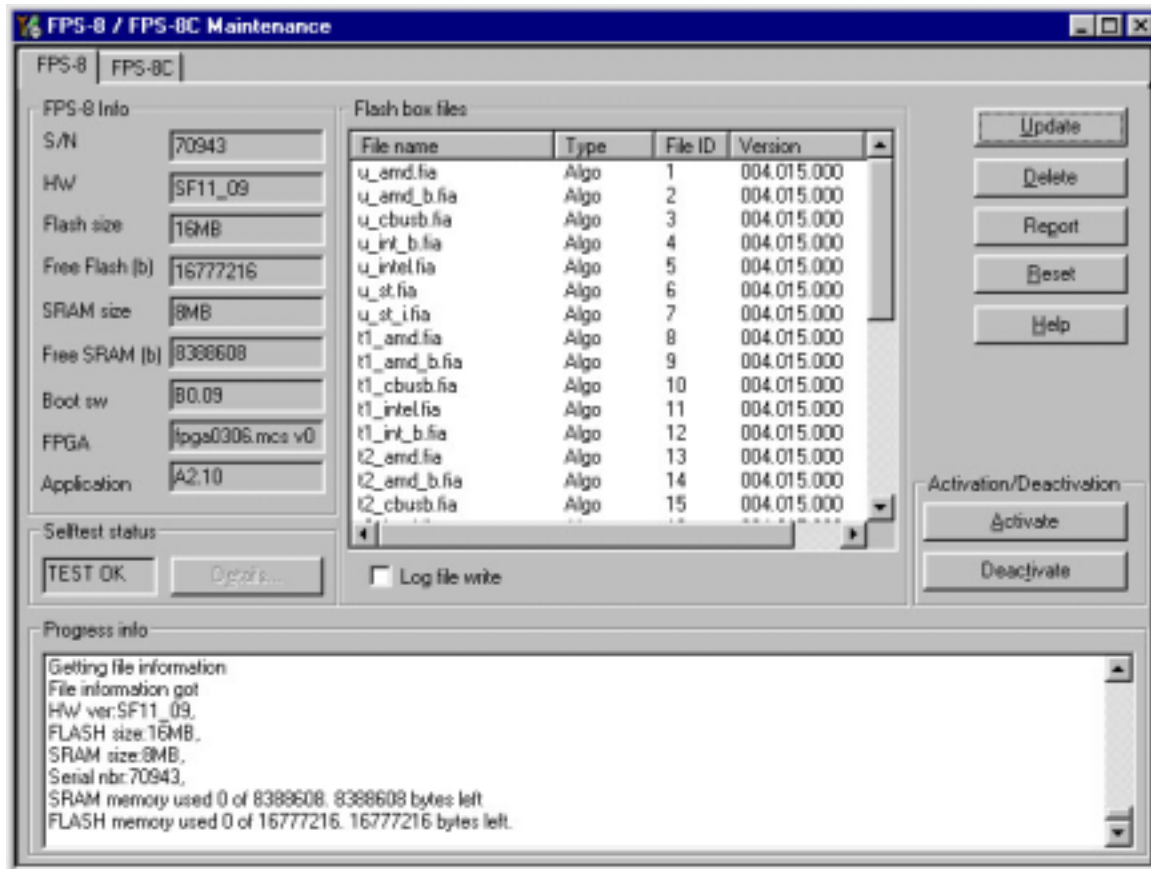


When new FPS-8 flash update package is installed to computer you will be asked to update the files to your FPS-8 Prommer. Select "Yes" to update files..

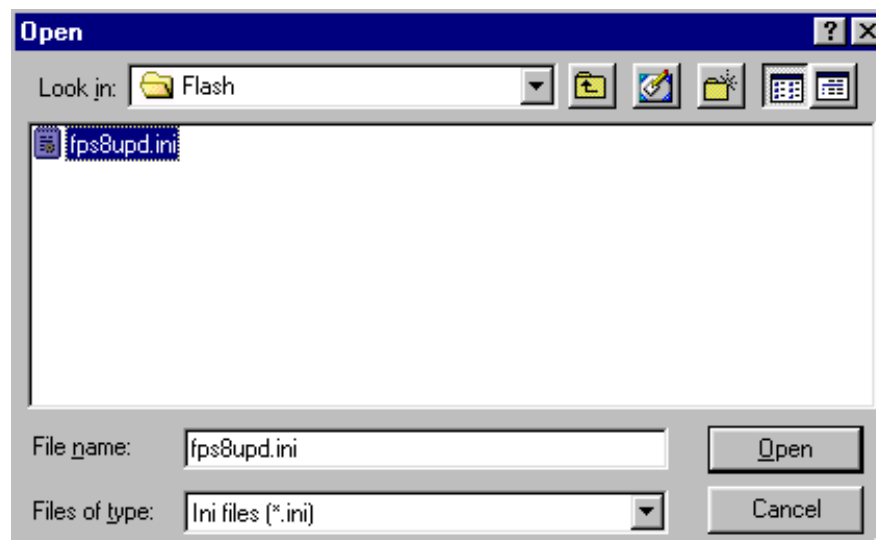


Update procedure takes a couple of minutes.





FPS-8 sw can also be updated by pressing "Update" button and selecting appropriate **fps8upd.ini** file under **C:\Program Files\Nokia\Phoenix\Flash** - directory



All files can be loaded separately to FPS-8. To do this, just press right mouse button in "Flash box files" window and select file type to be loaded.

More information and help can be found from the "Help" dialog.



## FPS-8 Activation and Deactivation

- Before the FPS-8 can be successfully used for phone programming, it must be first activated.
- If there is a need to send FPS-8 box to somewhere e.g. for repair, box must be first deactivated.

### Activation

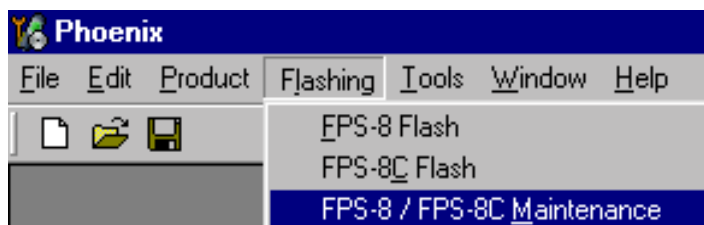
Before FPS-8 can be successfully used for phone programming, it must be first activated.

Fill in first "FPS-8 activation request" sheet, in the FPS-8 sales package and follow the instructions in the sheet.

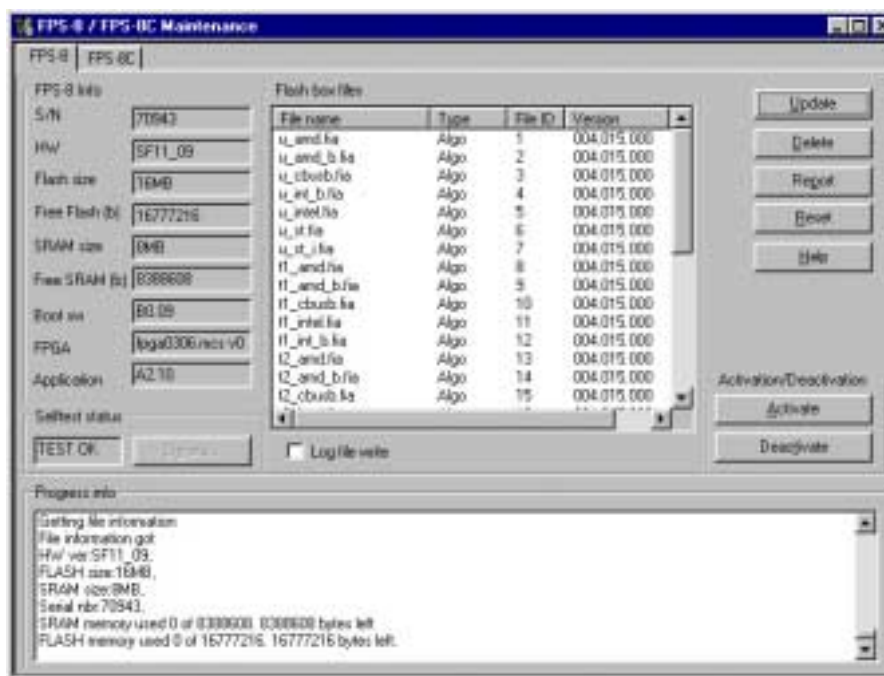
When activation file is received (e.g. 00000.in), copy it to **C:\Program-Files\Nokia\Phoenix\BoxActivation** - Directory on your computer (This directory is created when Phoenix is installed).

Start Phoenix Service Software.

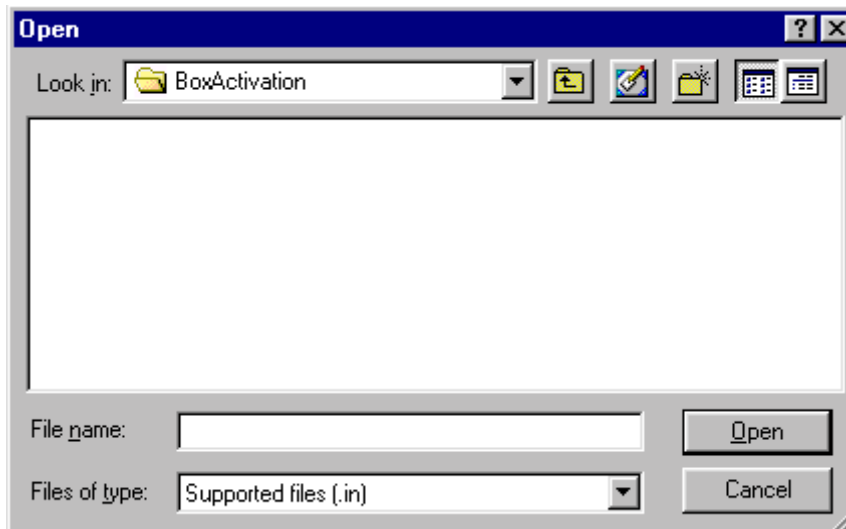
Select "FPS-8 / FPS-8C maintenance" from "Flashing" menu.



Select "Activate" from the "FPS8/8C Maintenance" – UI.



The activation file you saved to *C:\ProgramFiles\Nokia\Phoenix\BoxActivation* - directory will be shown (e.g. 00000.in), check that it is correct.



Box will be activated when you choose "Open"

Turn FPS-8 power off and on to complete activation

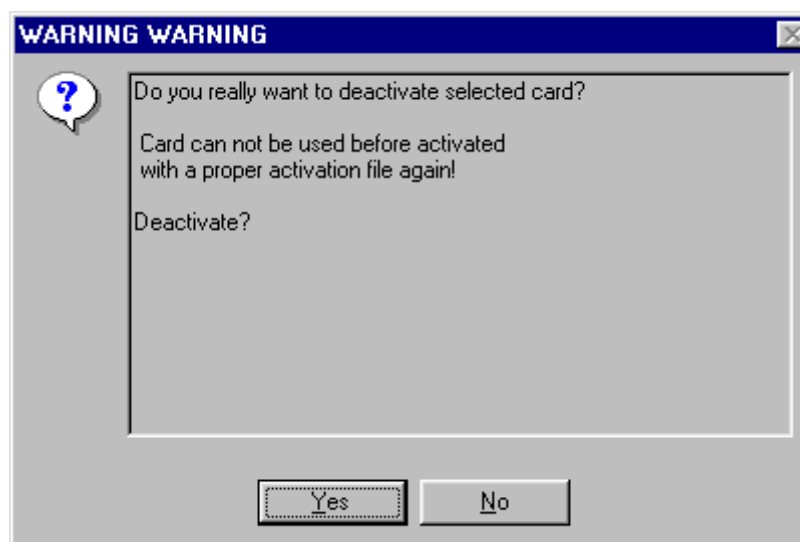
## Deactivation

Start Phoenix Service Software.

Select "FPS-8 / FPS-8C maintenance" from "Flashing" menu

Select "Deactivate" from the "FPS8/8C Maintenance" - UI.

Confirm Deactivation by choosing "Yes", Box will be deactivated.



Turn FPS-8 power off and on to complete deactivation

## 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

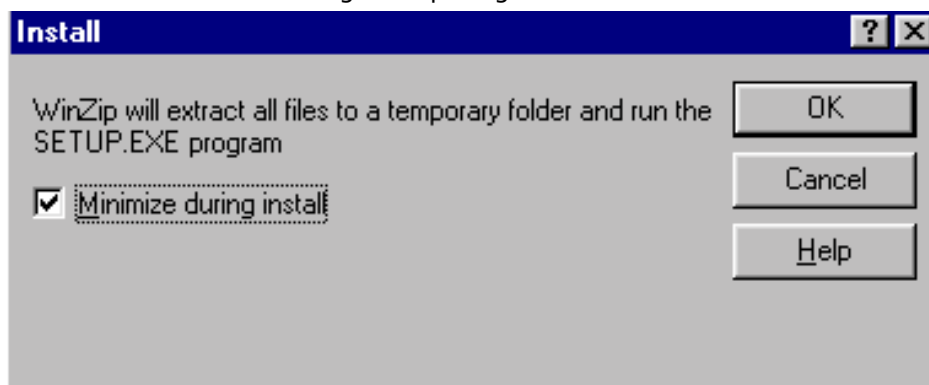
- Download *Jbv1\_update.zip* – file to your computer (e.g. C:\TEMP) from your download web site.
- Close all other programs
- Follow instructions on the screen

## Installing SW Needed for the JBV-1 SW Update

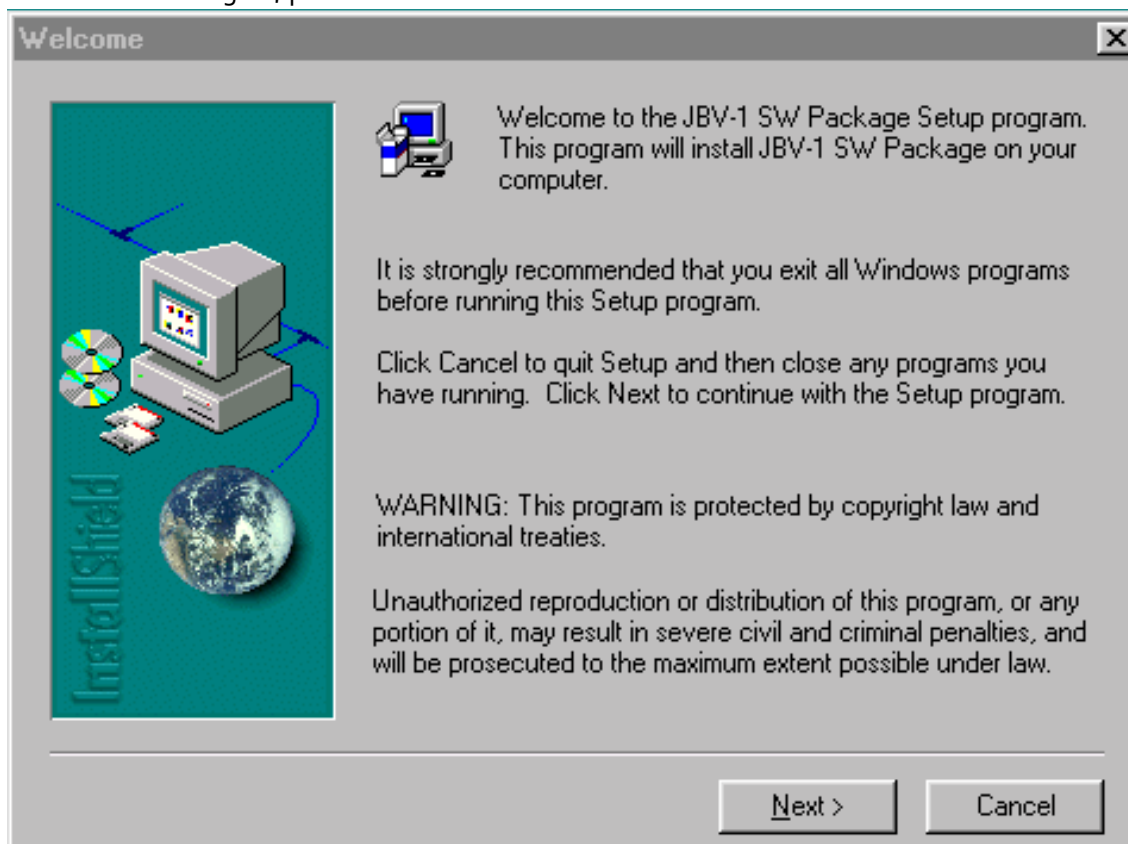
Note: DO NOT CONNECT THE USB CABLE / JBV-1 TO YOUR COMPUTER YET!

Run *Jbv1\_update.zip* file and start SW Installation by double clicking *Setup.exe*.

Files needed for JBV-1 Package setup Program will be extracted.

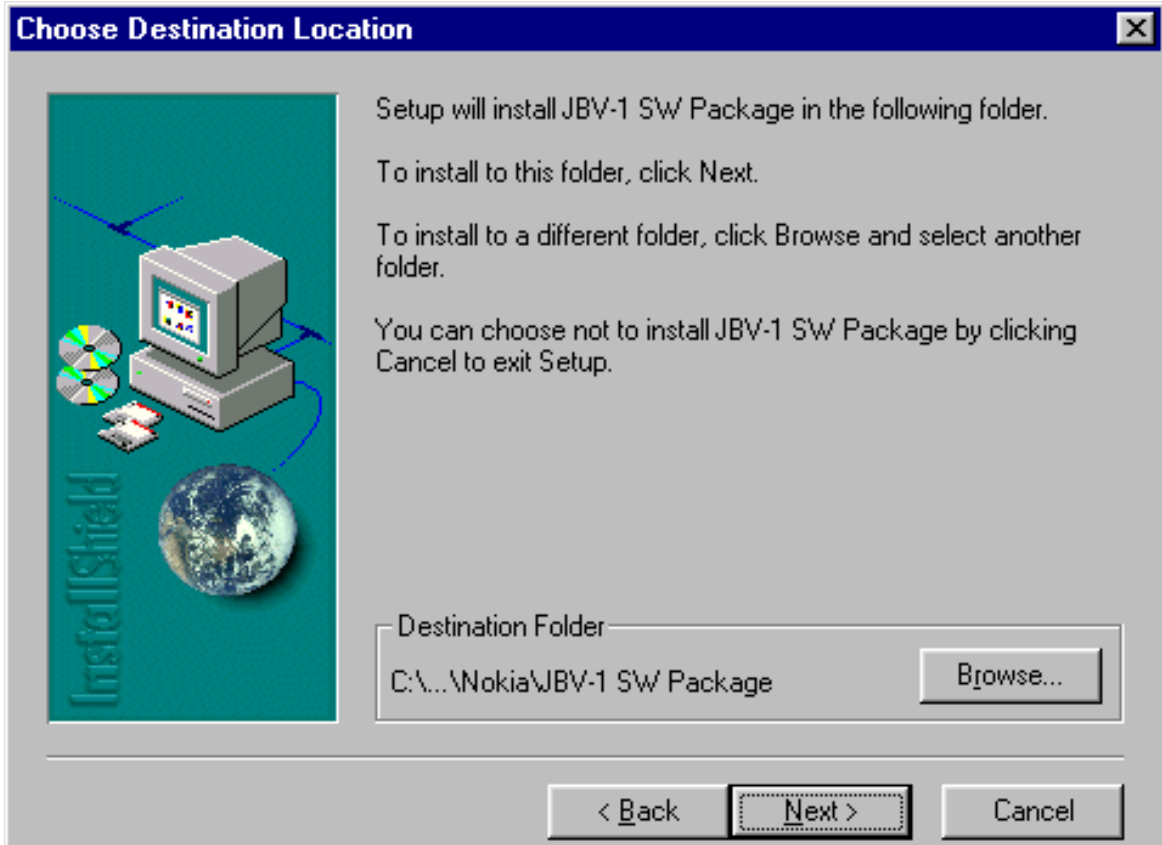


Installation begins, please read the information shown and Choose "Next" to continue.

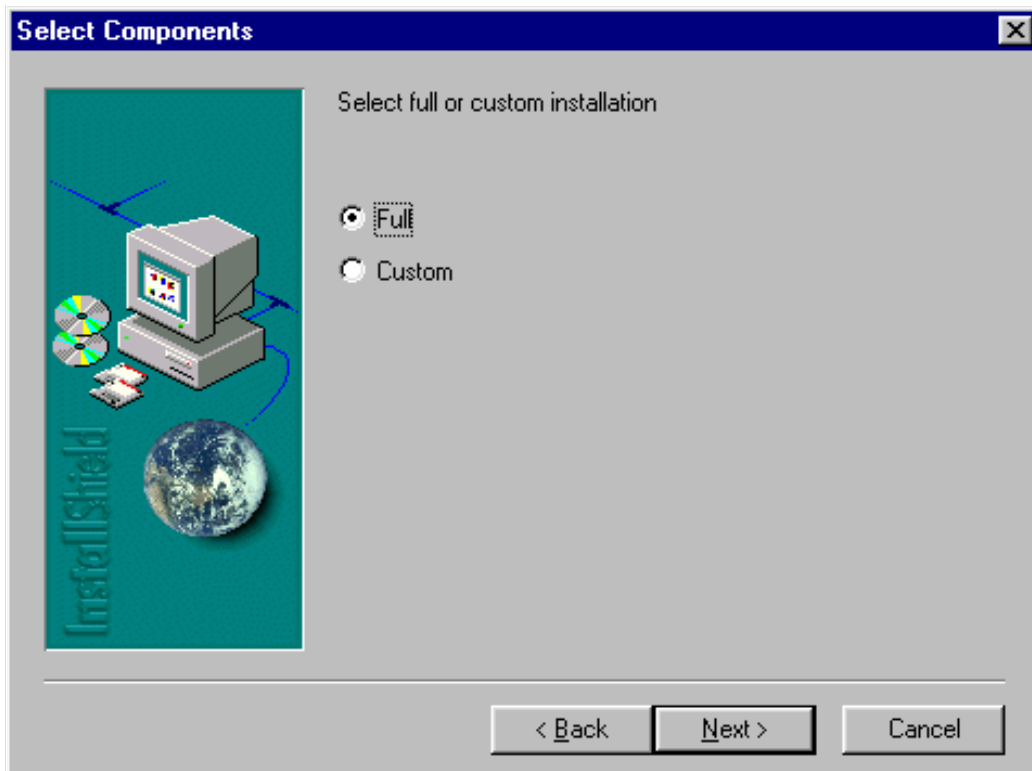


Use suggested destination folder where JBV-1 SW Package will be installed and choose

"Next" to continue.

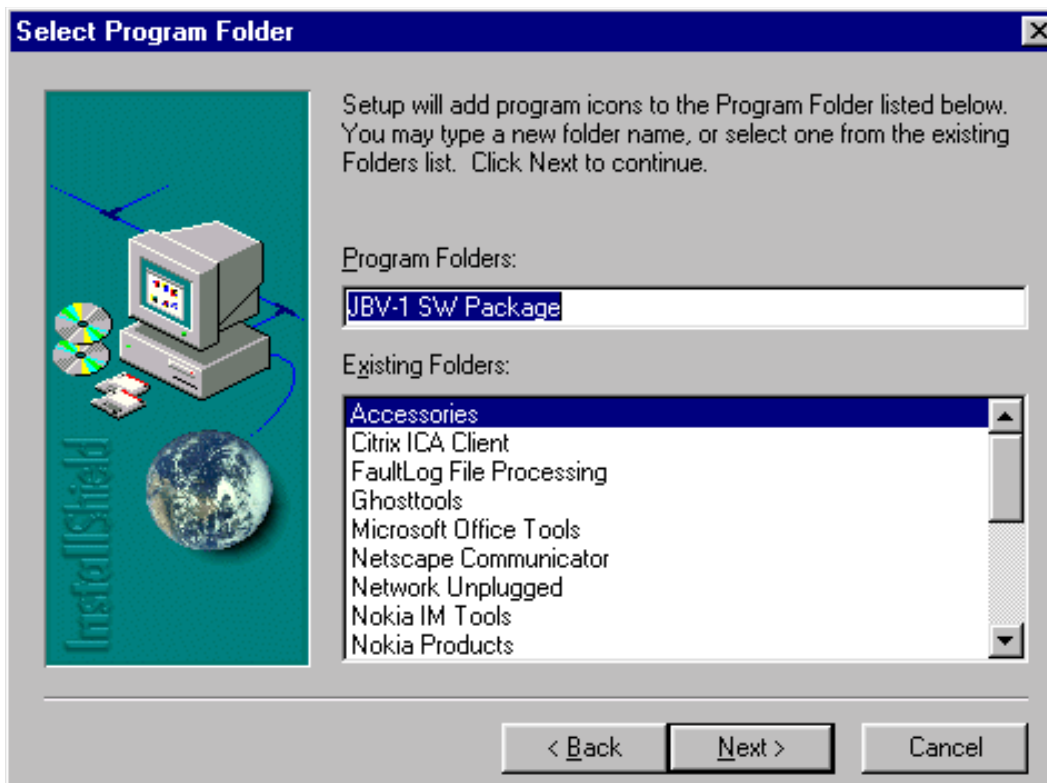


Select "Full" Installation and choose "Next" to continue

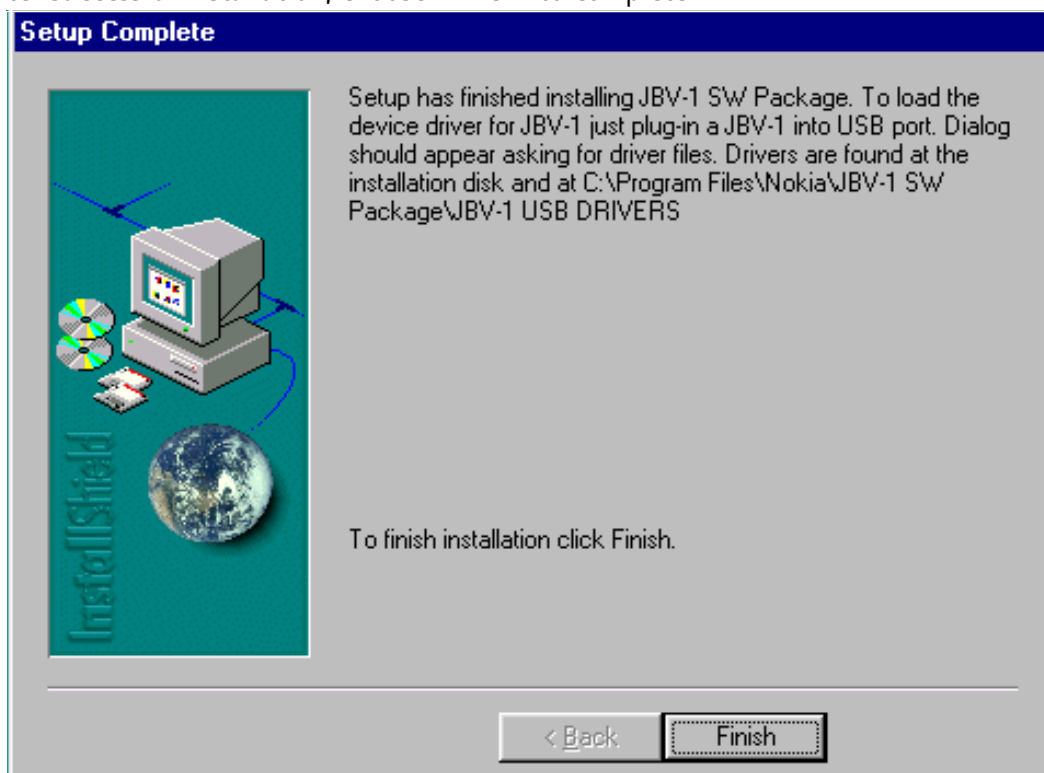


Program Folder will be created. Choose "Next" to continue, Software files will be

installed.



After successful installation, choose "Finish" to complete.



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

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

Windows will detect connected USB cable and detect drivers for new HW.

Follow the instructions and allow Windows to search and install the best drivers available. After this procedure the actual JBV-1 SW update can begin.

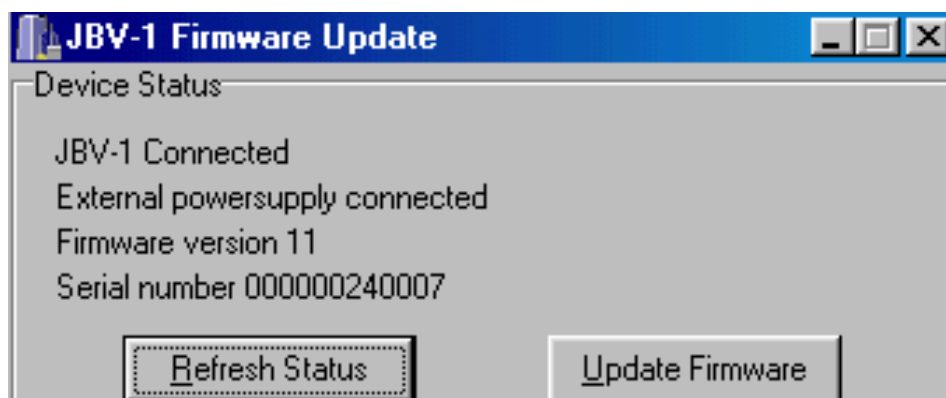


### Updating the JBV-1 Docking Station Software

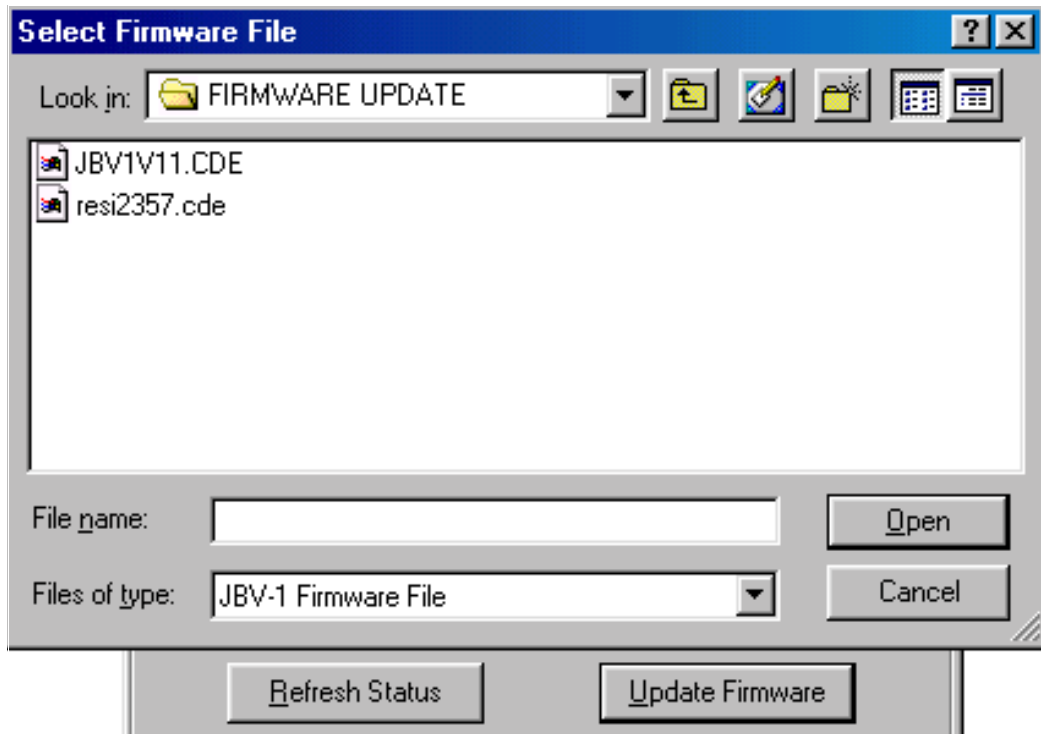
Go to folder *C:\Program Files\Nokia\JBV-1 SW Package\FIRMWARE UPDATE* and start JBV-1 Update SW by double clicking *fwup.exe*.

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

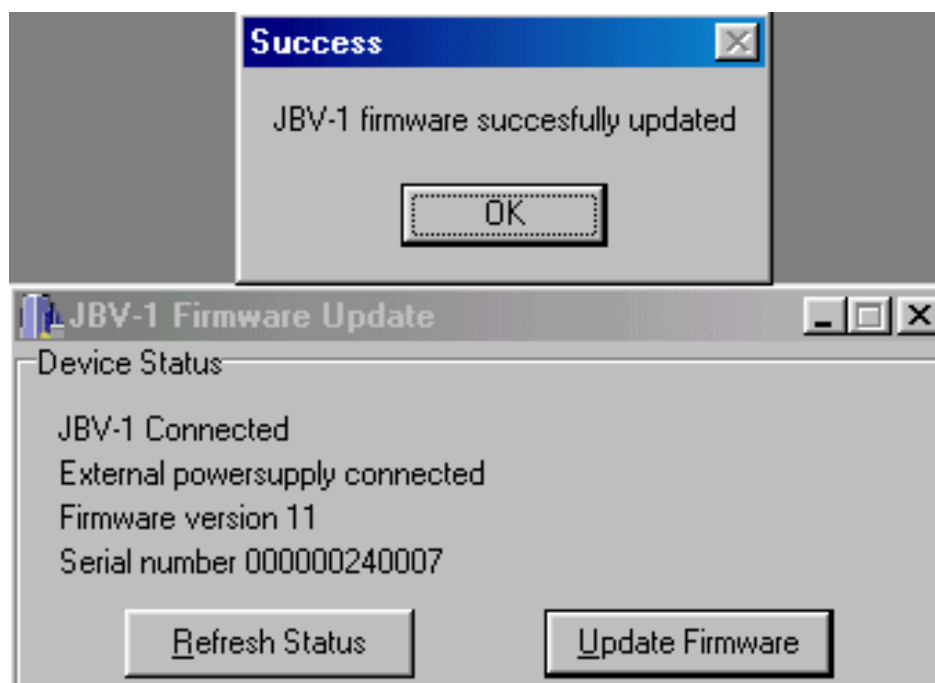
If firmware version read from your JBV-1 is not the latest one available, it needs to be updated by choosing "Update Firmware".



Choose file *JBV1v11.CDE* (example used here is for v 11) and "Open" to update your JBV-1.



After Successful update, current JBV-1 status will be shown. You have now updated the software of your JBV-1 docking station and it is ready for use.





## Receiver 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 Phoenix Service SW 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.

Screen shots 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.

## Service Tool Concept for RF Tuning Operations

For RF tuning and detailed failure analysis or NPL-2 module function testing, MJS-52 repair jig is available. This environment is designed to support good quality and reproducibility RF connections, as well as complete function testing.

For more details about the MJS-52, configuration and power supply characteristics, please refer to the service tools section.

For RF calibration, please consider the attenuation values noted on MJS-52 and the attenuation of the used RF cable. The proposed RF cable to use is XRS-6 (NMP code 0730231), but XRF-1 (NMP code 0730085) is possible, too.

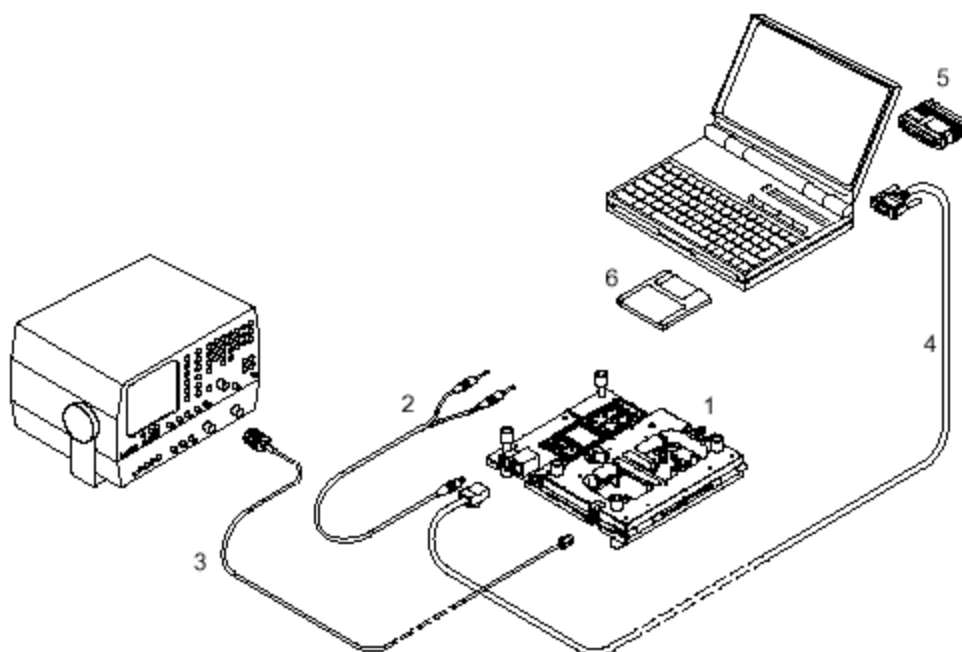


Figure 1: RF tuning setup

Item:	Service accessory:	Type:	Product code:
1	Module jig	MJS-52	0770476
2	DC power cable	PCS-1	0730012
3	Modular cable	XRS-6	0730231
4	Service Mbus cable	DAU-9S	0730108
5	Software protection key	PKD-1,	0750018
10	Phoenix Service SW		8409031
11	Phoenix Service SW	CD-ROM	0774286

### Receiver Tuning

Refer to Section 7 RF Description and Trouble Shooting.

## Service Tool Concept For Baseband Tuning Operations

EM calibrations should be carried out in JBV-1 Docking Station equipped with MJF-17 Docking Station Adapter

Note: RF tunings must be carried out in MJS-52 module jig, JBV-1

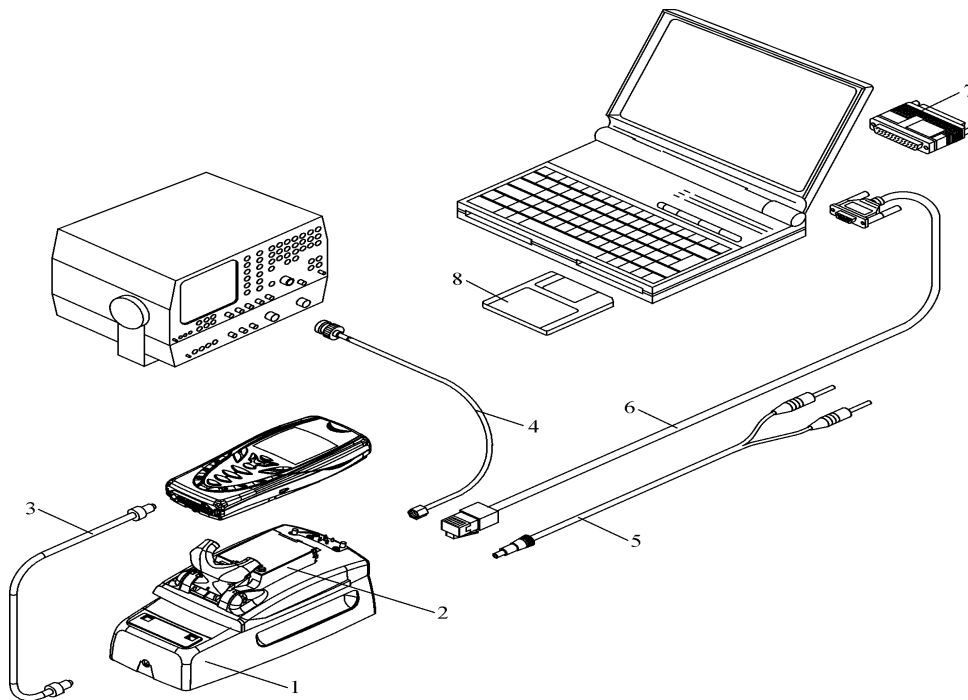
Docking Station Adapter can only be used for RF testing purposes

Power to JBV-1 should be supplied from an external DC power supply, not FPS-8 prommer

JBV-1 input voltages:

Maximum + 16 VDC

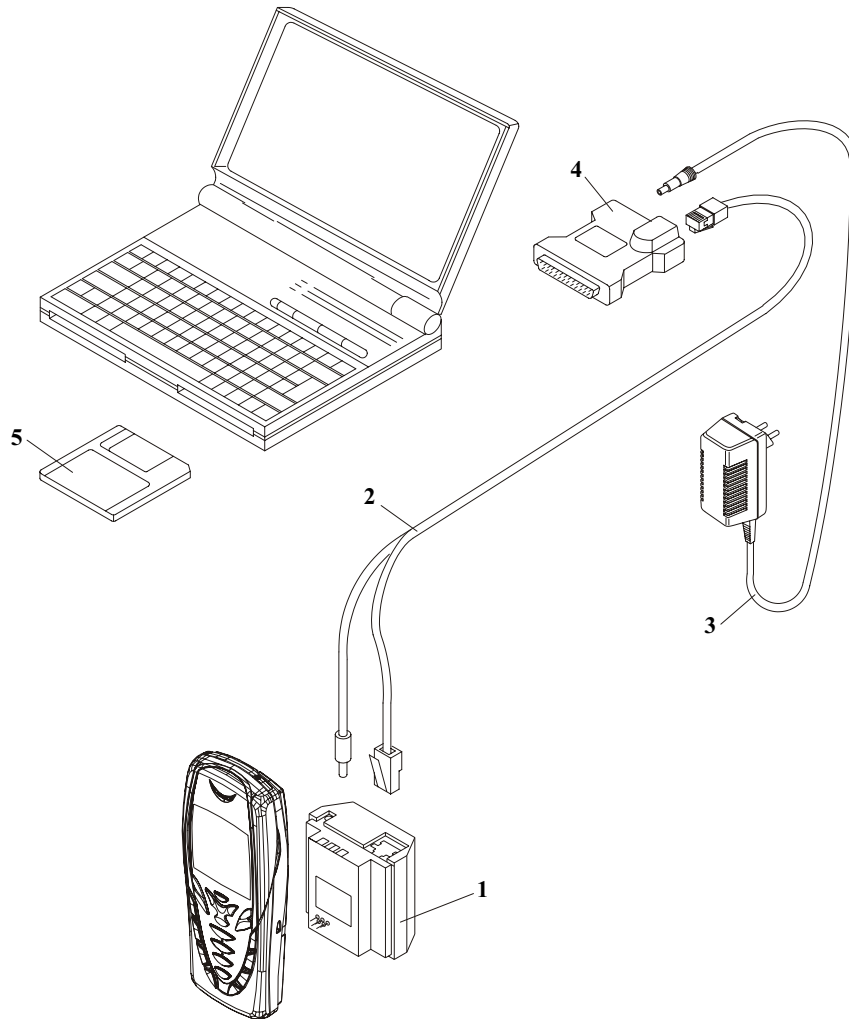
Nominal input for RF tunings is +12 V DC.



Item	Service Accessory	Accessory type	Product code
1	Docking Station	JBV-1	0770298
2	Docking Station adapter	MJF-17	0774282
	With Coupler	CPL-10	0770548
3	DC-DC Cable	SCB-3	0730114
4			
5	DC power cable	PCS-1	0730012
6	service MBUS cable	DAU-9S	0730108
7	Software protection key	PKD-1	0750018
8	Phoenix service SW		8408031
8	Phoenix service SW	CD-ROM	0774286

# Flashing Setup Instructions

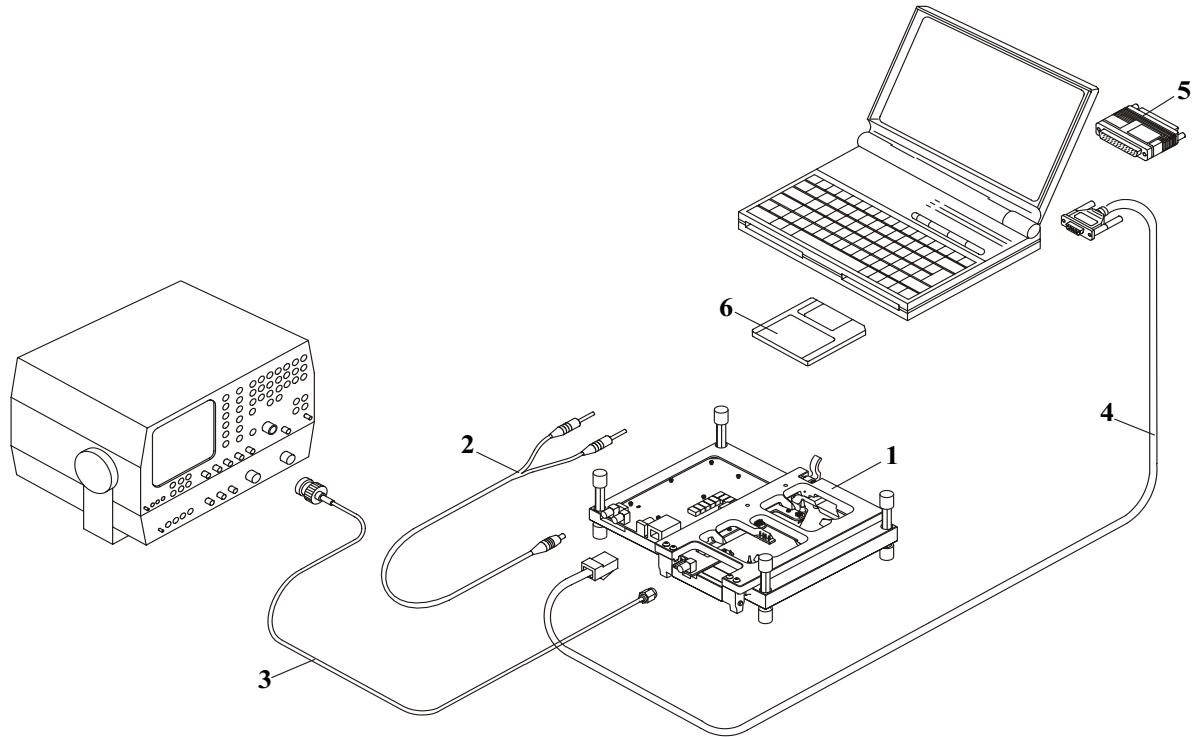
## POS (Point of Sale) Flash Concept



**Figure 2: POS flash**

Item	Type	Description	Code
1	FLA-30	Point Of sales flash loading adapter	0770472
2	XCS-1	service cable	0730218
3	ACP-8	AC Charger	0675***
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	00805431
5	SW		

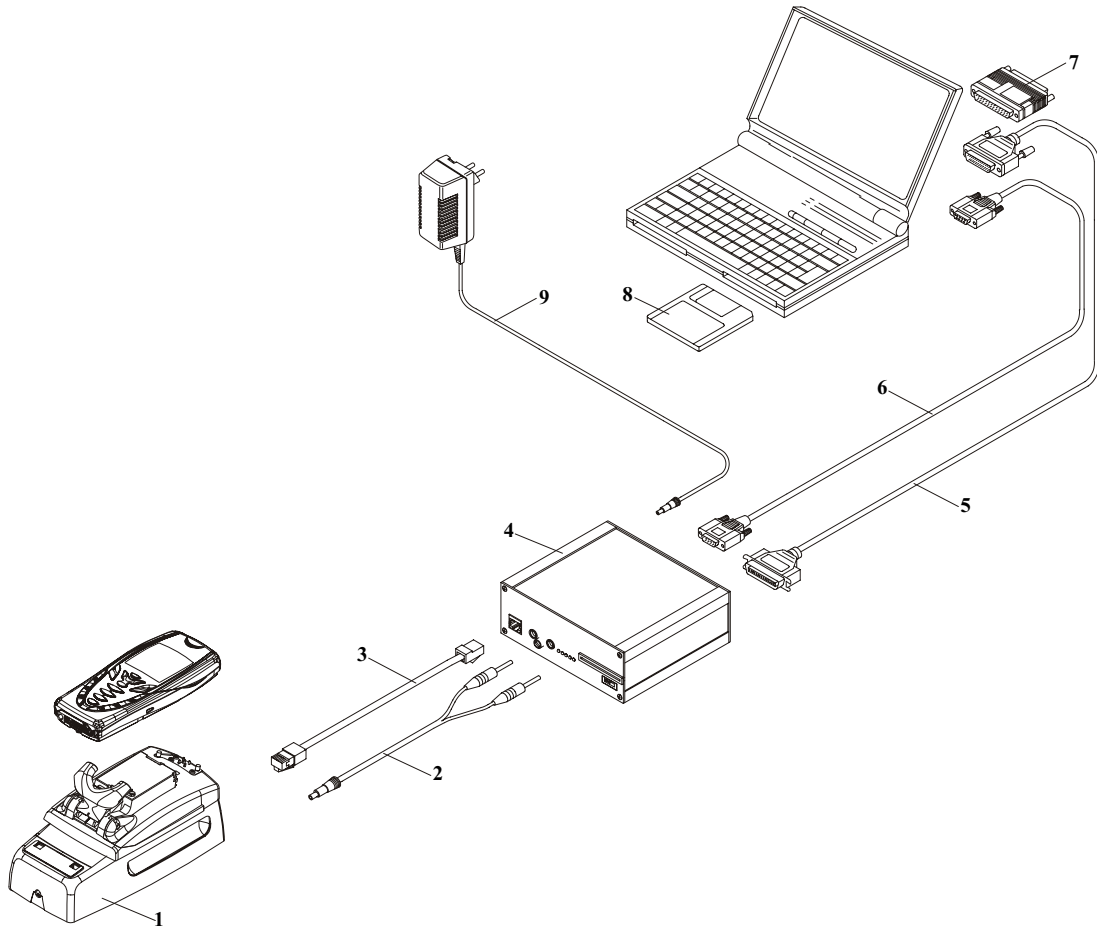
### Module Jig Concept



**Figure 3: Module jig concept**

Item	Type	Description	Code
1	MJS-52	Module jig	0770476
2	PCS-1	DC power cable	0730012
3	XRS-6	RF antenna cable	0730231
4	DAU-9S	Service MBUS cable	0730108
5	PKD-1	Software protection key	0750018
	SW	Phoenix	0774286

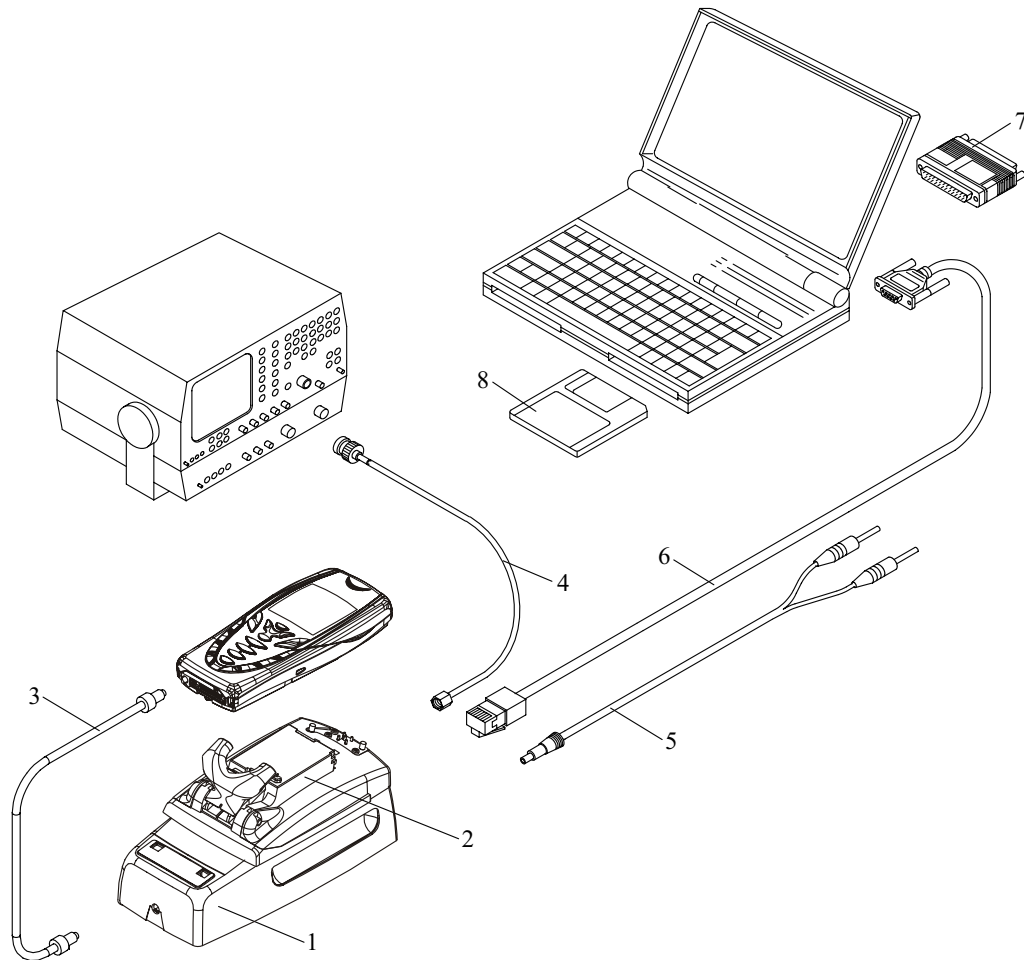
### JBV-1 Flash Concept



**Figure 4: JBV-1 Flash concept**

Item	Type	Description	Code
1	JBV-1	Docking station	0770298
	MJF-17	Docking station adapter	0774282
2	PCS-1	DC power cable	0730012
3	XCS-4	Modular cable	0730178
4	FPS-8	Flash prommer box	0080321
5	Printer cable	incl. in FPS-8 sales pack	0730029
6	AXS-4	D9 – D9 cable, incl. in FPS-8 sales pack	0730090
7	PKD-1	Software protection key	0750018
8	Service SW	Phoenix	0774286
9	AC Charger	incl. in FPS-8 sales pack	0680032

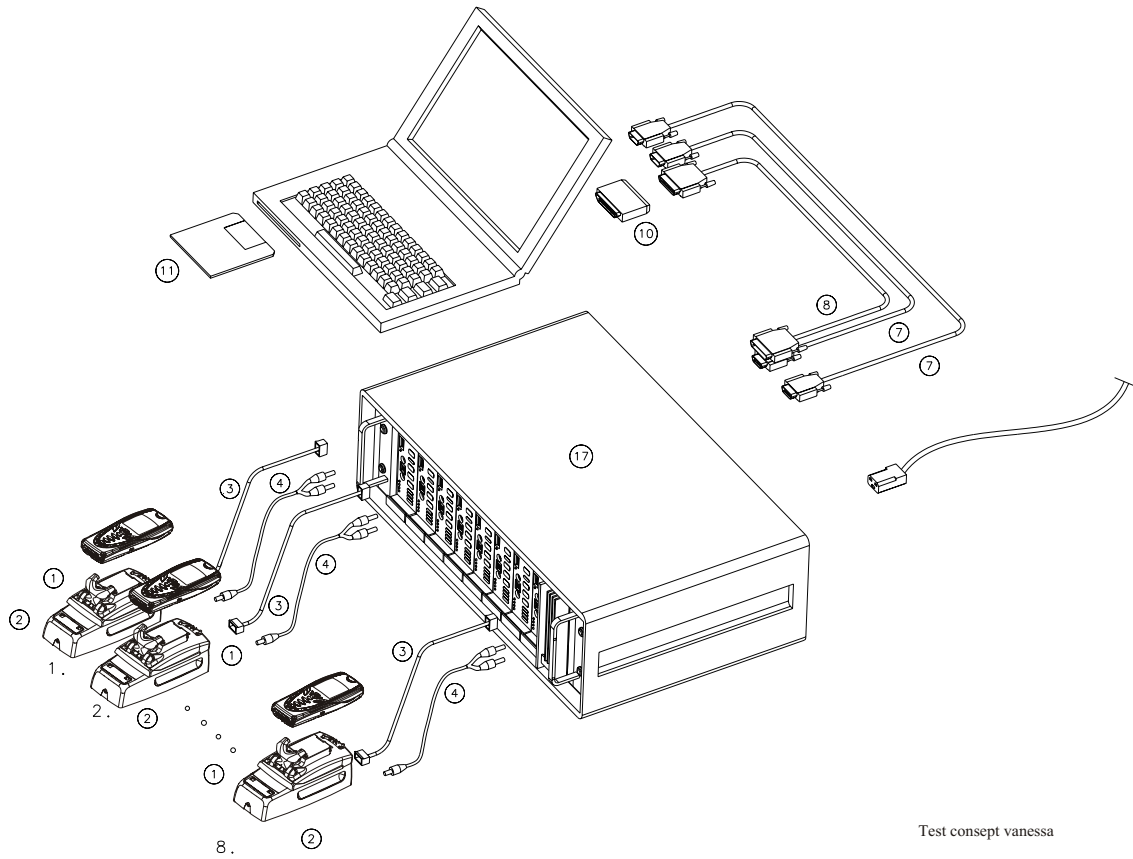
**Service Concept**



**Figure 5: Service Concept**

Item:	Service accessory:	Type:	Product code:
1	Docking station	JBV-1	0770298
2	Docking station adapter	MJF-17	0774282
	With Coupler	CPL-10	0770548
4	DC-DC cable	SCB-3	0730114
5	RF antenna cable	XRS-6	0730231
6	DC power cable	PCS-1	0730012
7	Service MBUS cable	DAU-9S	0730108
8	Software protection key	PKD-1	0750018
9	Phoenix Service SW		0774286
	Phoenix Service SW	CD-ROM	0775311

### Parallel Flash concept



Test concept vanessa  
VP 02-06-18

**Figure 6: Parallel flash concept**

Item	Type	Description	Code
1	MJF-17	Docking station adapter	0774282
2	JBV-1	Docking station	0770298
3	XCS-4	Modular cable	0730178
4	PCS-1	DC power cable	0730012
7	AXS-4	D9 – D9 cable, incl. in FPS-8C sales pack	0730090
8	Printer cable	Incl. in FPS-8C sales pack	0730029
10	PKD-1	Software protection key	0750018
11	SW,	Software (PC SW + SF11C SW)	
17	FPS-8C		0080396