

# Programmes After Market Services NPW-1 Series Transceivers

## Service Tools

## Table of Contents

|   | Page No |
|---|---------|
| Module Jig (MJS-18, 0770299) .....  | 5       |
| Product Code .....  | 5       |
| POS Dongle (FLS-4, 0774263) .....   | 6       |
| Product Code .....  | 6       |
| FPS-8 Flash Prommer for heavy flash (0080321, sales pack) .....                     | 7       |
| Product Code .....  | 7       |
| FPS-8C Flash Prommer for heavy parallel flash (0080396) .....                       | 8       |
| Product Code .....  | 8       |
| Docking Station (JBV-1, 0770298) and Docking Station Adapter (MJF-2, 0770300) ..... | 9       |
| Product Code .....  | 9       |
| Galvanic Contact (GAC-1, 0770301) .....   | 10      |
| Product Code .....  | 10      |
| Coupler (CPL-1, 0770287) .....  | 11      |
| Product Code .....  | 11      |
| Audio box (JBA-8, 0770320) .....  | 12      |
| Product Code .....  | 12      |
| Audio Cable (ADS-4, 0730222) .....  | 13      |
| Product Code .....  | 13      |
| Mbus/Fbus Cable (XCS-4, 0730178) .....  | 14      |
| Product Code .....  | 14      |
| Flash Adapter (FLA-13, 0770297).....  | 15      |
| Product Code .....  | 15      |
| Soldering Jig (MJS-27, 0775287) .....   | 16      |
| Product Code .....  | 16      |
| Printer Cable (AXP-8, 073F000) .....  | 17      |
| Product Code .....  | 17      |
| D9-D9 Cable (AXS-4, 0730090) .....  | 18      |
| Product Code .....  | 18      |
| Audio Cable (ADS-3, 0730197) .....  | 19      |
| Product Code .....  | 19      |
| DC Cable (SCB-3, 0730114) .....   | 20      |
| Product Code .....  | 20      |
| MBUS Cable (DAU-9S, 0730108) .....  | 21      |
| Product Code .....  | 21      |
| Power Cable (PCS-1, 0730012) .....  | 22      |
| Product Code .....  | 22      |
| RF Cable (XRF-1, 0730085) .....   | 23      |
| Product Code .....  | 23      |
| Service Cable (XCS-4, 0730178) .....  | 24      |
| Product Code .....  | 24      |
| Power Pack, (DDC-10, 0670405) .....   | 25      |
| SW Security Device (PKD-1, 0750018) .....   | 26      |
| Product Code .....  | 26      |
| Flashing and Testing Setups .....   | 27      |
| POS flash (FLS-4, 0081482 - Setup 1) .....  | 27      |
| Product Code .....  | 27      |
| Flashing, testing and tuning with covers on (Setups 2a, 2b and 2c) .....            | 28      |

---

|  |    |
|--|----|
| Service tool setup 2a .....                          | 29 |
| Service tool setup 2b .....                          | 29 |
| Service tool setup 2c .....                          | 30 |
| Flashing and testing with covers off (Setup 3) ..... | 31 |
| Parallel Flash (Setup 4) .....                       | 32 |
| Service tool setup 4 .....                           | 32 |
| Warranty and user data transfer (Setup 5) .....      | 33 |
| Service tool setup 5: .....                          | 33 |

Page No

## List of Figures

|   | Page No |
|---|---------|
| Fig 1 View of Module Jig MJS-18 .....                         | 5       |
| Fig 2 View of POS Dongle, FLS-4.....                          | 6       |
| Fig 3 View of Flash Prommer for heavy flash, FPS-8.....       | 7       |
| Fig 4 View of Flash Prommer for heavy parallel flashing ..... | 8       |
| Fig 5 View of Docking Station, JBV-1.....                     | 9       |
| Fig 6 Docking station and docking station adapter.....        | 9       |
| Fig 7 View of Galvanic Contact, GAC-1 .....                   | 10      |
| Fig 8 View of Coupler, CPL-1.....                             | 11      |
| Fig 9 View of Audio Box, JBA-8 .....                          | 12      |
| Fig 10 View of Audio Cable, ADS-4).....                       | 13      |
| Fig 11 View of Mbus/Fbus Cable, XCS-4.....                    | 14      |
| Fig 12 View of Flash Adapter, FLA-13.....                     | 15      |
| Fig 13 View of Soldering Jig, MJS-27 .....                    | 16      |
| Fig 14 View of Printer Cable, AXP-8.....                      | 17      |
| Fig 15 View of D9-D9 Cable AXS-4 .....                        | 18      |
| Fig 16 View of Audio Cable ADS-3 .....                        | 19      |
| Fig 17 View of DC Cable SCB-3 .....                           | 20      |
| Fig 18 View of MBUS Cable DAU-9S .....                        | 21      |
| Fig 19 View of Power Cable PCS-1 .....                        | 22      |
| Fig 20 View of RF Cable XRF-1 .....                           | 23      |
| Fig 21 View of Service Cable XMS-3.....                       | 24      |
| Fig 22 DDC-10 Power Pack .....                                | 25      |
| Fig 23 View of Power Pack, DDC-10 .....                       | 25      |
| Fig 24 View of SW Security Device PKD-1 .....                 | 26      |
| Fig 25 View of POS flash.....                                 | 27      |
| Fig 26 Service tool setup 2a.....                             | 29      |
| Fig 27 Service tool setup 2b .....                            | 29      |
| Fig 28 Service tool setup 2c.....                             | 30      |
| Fig 29 Service tool setup 3 .....                             | 31      |
| Fig 30 Service tool setup 4 .....                             | 32      |
| Fig 31 Service tool setup 5 .....                             | 33      |

**Module Jig (MJS-18, 0770299)**

This jig allows phone PWB -level service and troubleshooting.

Electric circuits have to be protected against over-voltage and over-current.

**Product Code**

MJS-18: 0770299

Figure 1: View of Module Jig MJS-18

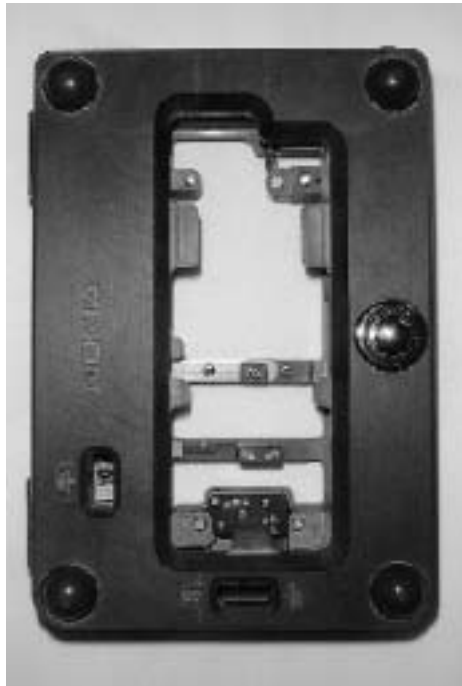


Table 1: Spare parts for MJS-18

| Item | Description               | Type Designation   | Code    | Supplier |
|------|---------------------------|--------------------|---------|----------|
| 1    | Fuse T2A                  | 5x20               |         |          |
| 2    | Test prope                | GSS-19-3.9-G       | 540A007 | IDI      |
| 3    | Test probe                | GKS079 301050A1300 | 540Y001 | INGUN    |
| 4    | RF probe                  | HRC2901-021002     | 978F005 | SMK      |
| 5    | System Connector Assembly |                    | 5460043 | Molex    |

## POS Dongle (FLS-4, 0774263)

The POS flash concept needs the Flash Adapter and cable between the phone and the FLS-4.

### Product Code

FLS-4: 0774263

Figure 2: View of POS Dongle, FLS-4



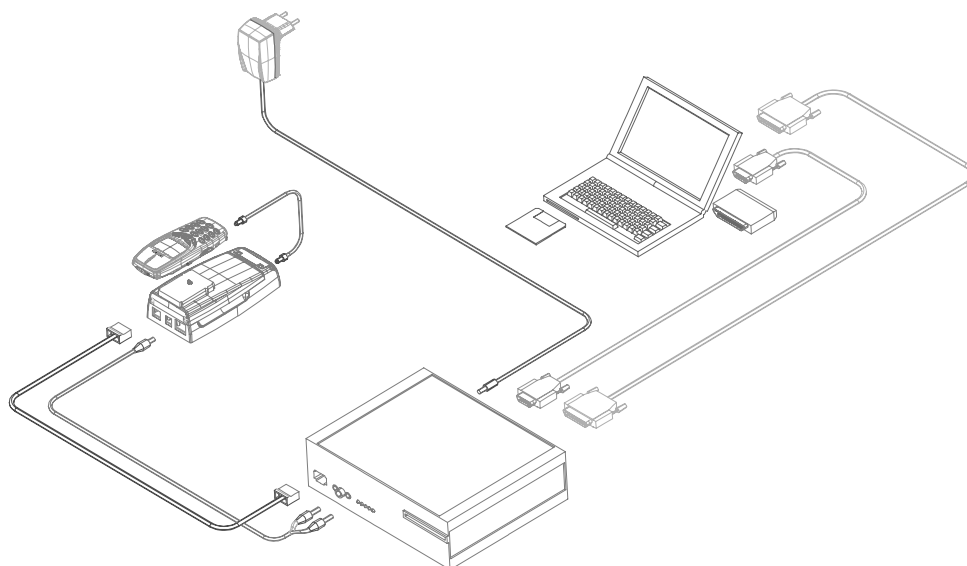
**FPS-8 Flash Prommer for heavy flash (0080321, sales pack)**

The FPS-8 flash prommer is used for heavy flashing.

**Product Code**

FPS-8: 0080321

Figure 3: View of Flash Prommer for heavy flash, FPS-8



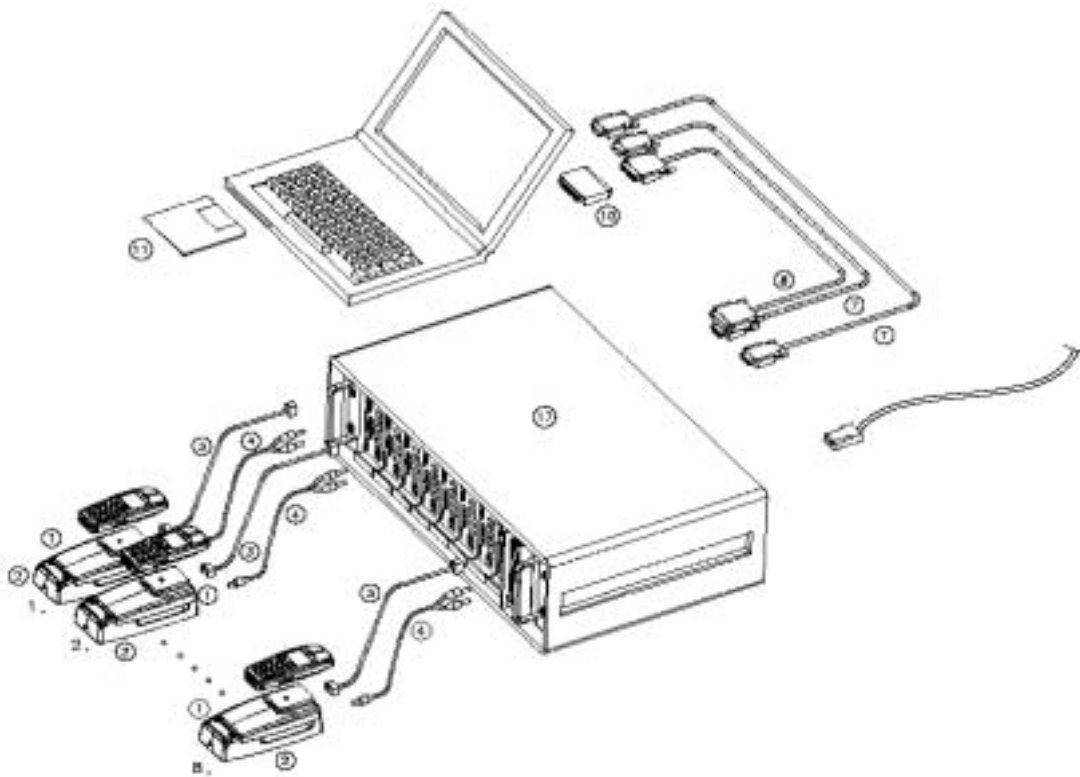
## FPS-8C Flash Prommer for heavy parallel flash (0080396)

The FPS-8C Flash Prommer is used for heavy parallel flashing.

### Product Code

FPS-8C: 0080396

Figure 4: View of Flash Prommer for heavy parallel flashing





## Docking Station (JBV-1, 0770298) and Docking Station Adapter (MJF-2, 0770300)

The Docking Station and Docking Station Adapter are needed for Mbus, Fbus, RF and Audio connections. This setup allows a connection between flash prommers. When the audio box is connected, it has to be connected to the phone's audio connector. The Docking Station can be powered by the FPS-8 or an external power supply.

### Product Code

JBV-1: *0770298*

MJF-2: *0770300*

Spare parts for MJF-2 test pin: *540Y207*(test probe code)

Figure 5: View of Docking Station, JBV-1



Figure 6: Docking station and docking station adapter



## Galvanic Contact (GAC-1, 0770301)

The GAC-1 adapter is needed for the RF connection. The GAC-1 adapter makes galvanic connections to assembled handset RF-switches possible. Via this adapter, the handset is connected to the RF measuring and test equipment.

*Note: Unnecessary usage of the handset's RF-switch must be avoided.*

### Product Code

GAC-1: 0770301

Figure 7: View of Galvanic Contact, GAC-1



## Coupler (CPL-1, 0770287)

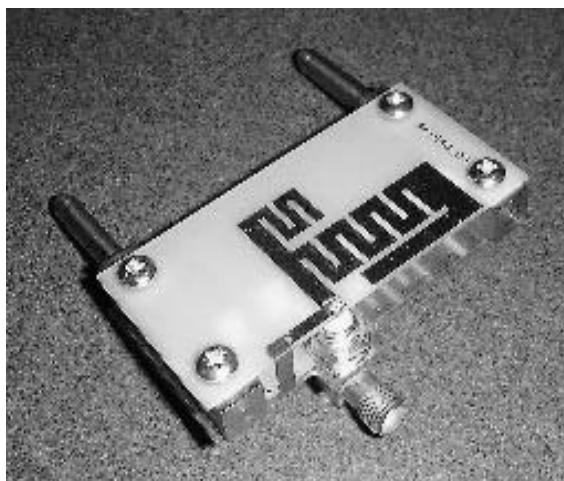
The Coupler has been developed for antennas' go/no go testing.

*Note: Tuning is not allowed with the CPL-1.*

### Product Code

CPL-1: 0770287

Figure 8: View of Coupler, CPL-1



## Audio box (JBA-8, 0770320)

The Audio Box is needed for audio connections. The box must support DCT4 Janette audios.

Service Audio box JBA-8. The Service Audio box provides an interconnection between the phone's system connector (XEAR, XMIC) through a fixed audio cable and Audio tester with a BNC-BNC coax. The connection to a PC can be made with the service battery, through a DAU-9 cable. The Service Audio Box JBA-8 is used for service purposes.

### Product Code

JBA-8: 0770320

Figure 9: View of Audio Box, JBA-8



**Audio Cable (ADS-4, 0730222)**

The Service Cable between the phone and the Service Audio Box.

**Product Code**

ADS-4: 0730222

Figure 10: View of Audio Cable, ADS-4)



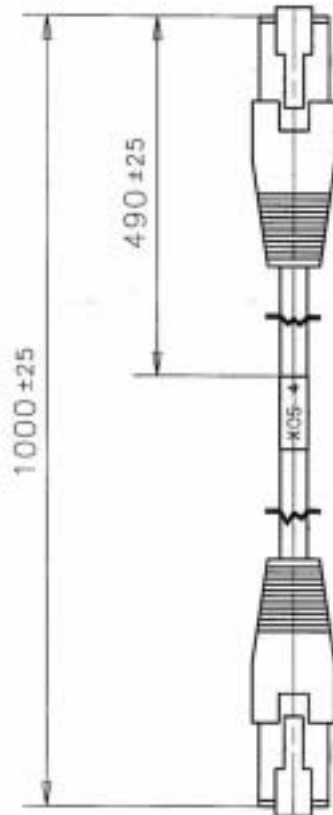
## Mbus/Fbus Cable (XCS-4, 0730178)

The Mbus/Fbus cable connects the phone and the flash box.

### Product Code

XCS-4: 0730178

Figure 11: View of Mbus/Fbus Cable, XCS-4



**Flash Adapter (FLA-13, 0770297)**

The Flash Adapter allows a continuous maximum power supply for the phone from an external power supply: the ACP-8. The service battery allows Mbus/Fbus connections. The Flash Adapter must be protected against over-voltage, over-current and cross-connections. The Flash Adapter has to be regulated.

*Note: The Flash Adapter is not to be used for handset testing, and is only meant for flashing*

**Product Code**

FLA-13: 0770297

Spare parts for FLA-13 test pin: 540Y207 (test probe)

Figure 12: View of Flash Adapter, FLA-13



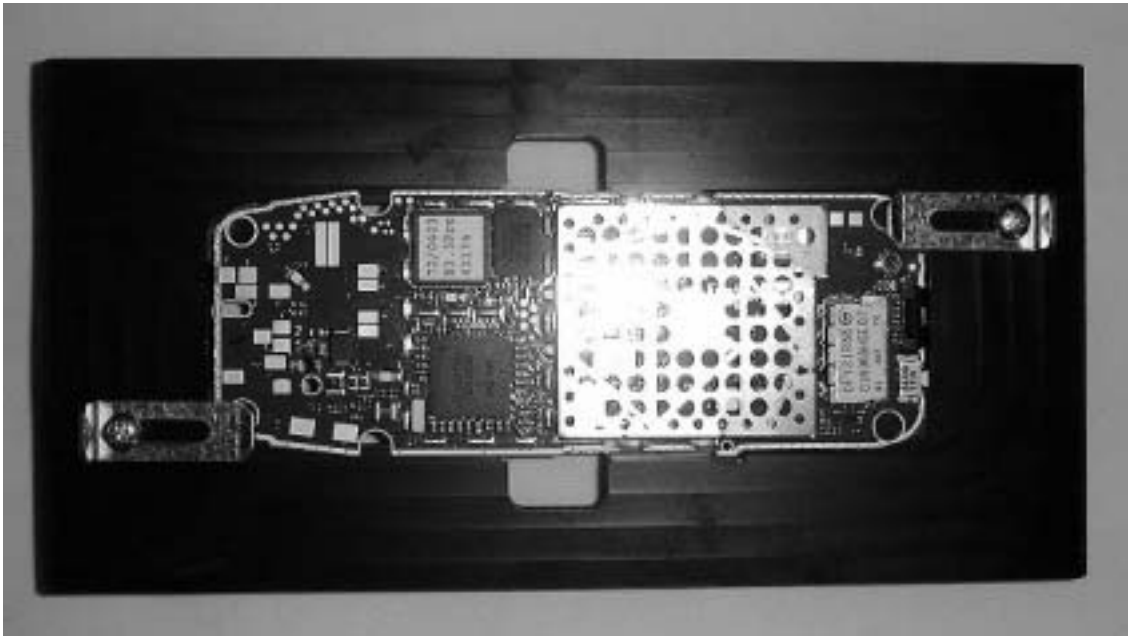
## Soldering Jig (MJS-27, 0775287)

The Soldering Jig is used to hold the PWB during repair and troubleshooting.

### Product Code

MJS-27: 0775287

Figure 13: View of Soldering Jig, MJS-27





**Printer Cable (AXP-8, 073F000)**

The Parallel Printer Cable connects the parallel connector of the PC and the "PARALLEL INPUT" of FPS-8 or FPS-8C.

**Product Code**

*AXP-8: 073F000*

Figure 14: View of Printer Cable, AXP-8



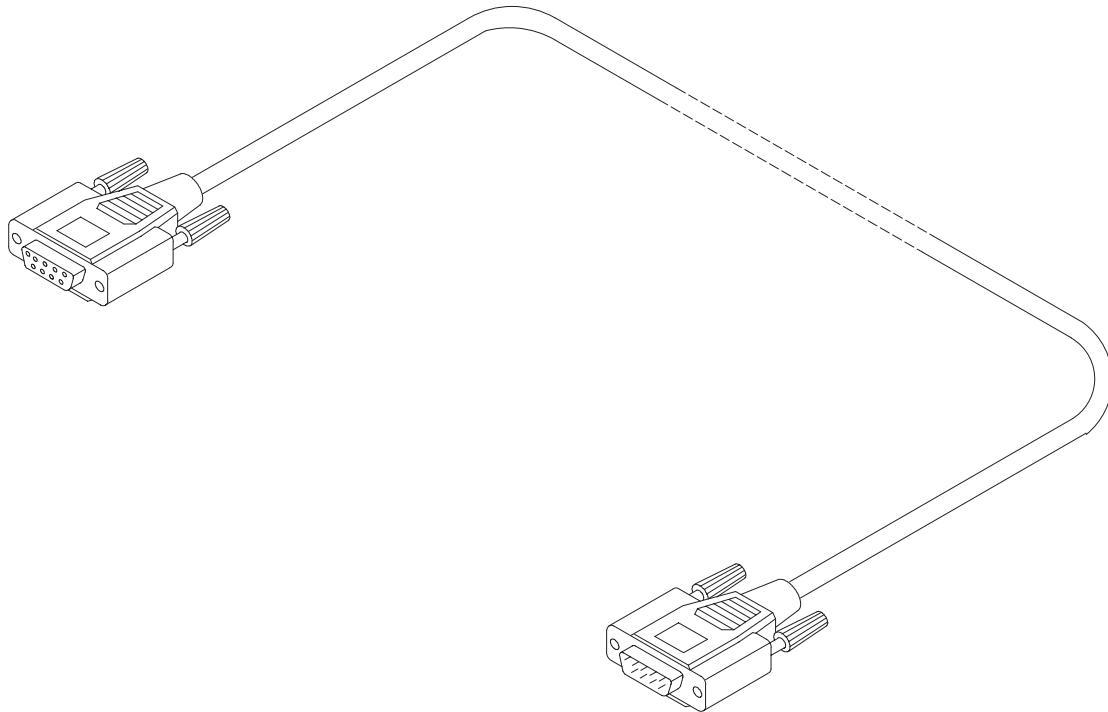
### D9-D9 Cable (AXS-4, 0730090)

The D9-D9 cable AXS-4 is used to connect two 9 pin D connectors, for example, between a PC and a TDF-4 security box.

#### Product Code

D9-D9 Cable AXS-4: *0730090*

Figure 15: View of D9-D9 Cable AXS-4



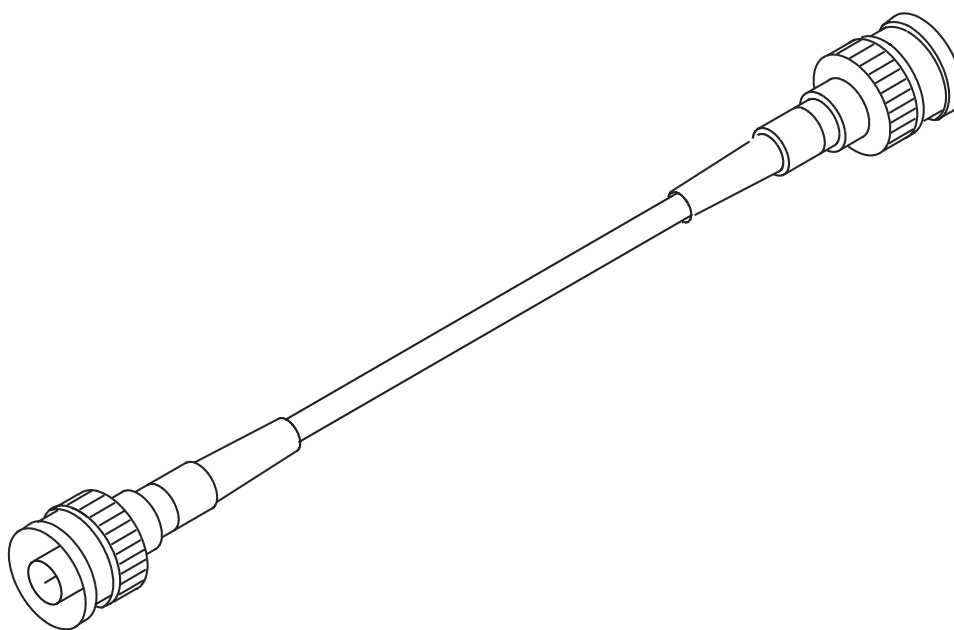
**Audio Cable (ADS-3, 0730197)**

The Audio Cable connects to the Audio box JBA-6.

**Product Code**

Audio Cable ADS-3: *0730197*

Figure 16: View of Audio Cable ADS-3



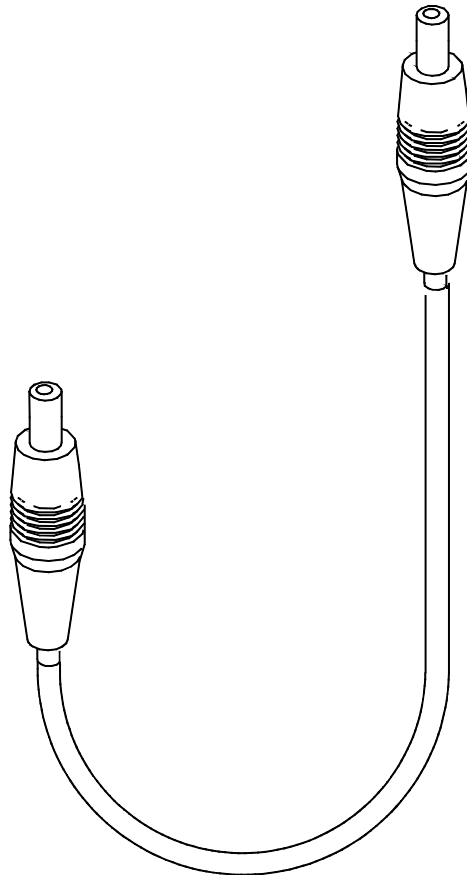
## DC Cable (SCB-3, 0730114)

The DC Cable SCB-3 is used to connect the Service Battery to the charger connection Vin of the phone when doing the charger calibration service procedure.

### Product Code

DC Cable SCB-3: *0730114*

Figure 17: View of DC Cable SCB-3



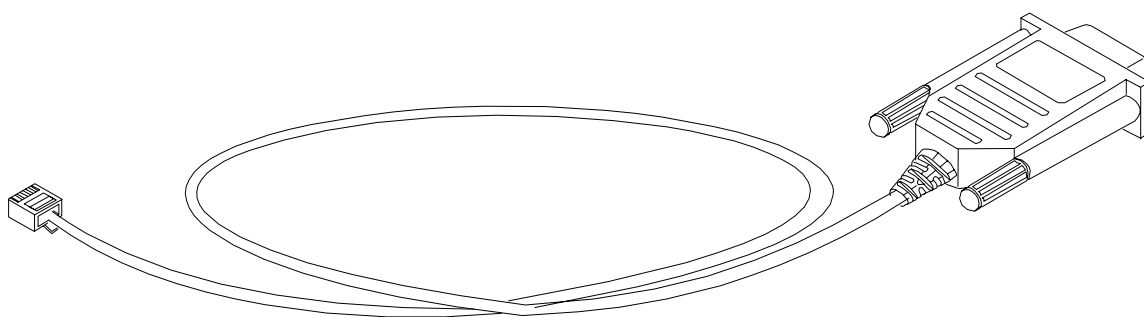
**MBUS Cable (DAU-9S, 0730108)**

The MBUS Cable DAU-9S has a modular connector, and is used with the service Audio Box JBA-4 or a modular T-adapter.

**Product Code**

MBUS Cable DAU-9S: *0730108*

Figure 18: View of MBUS Cable DAU-9S



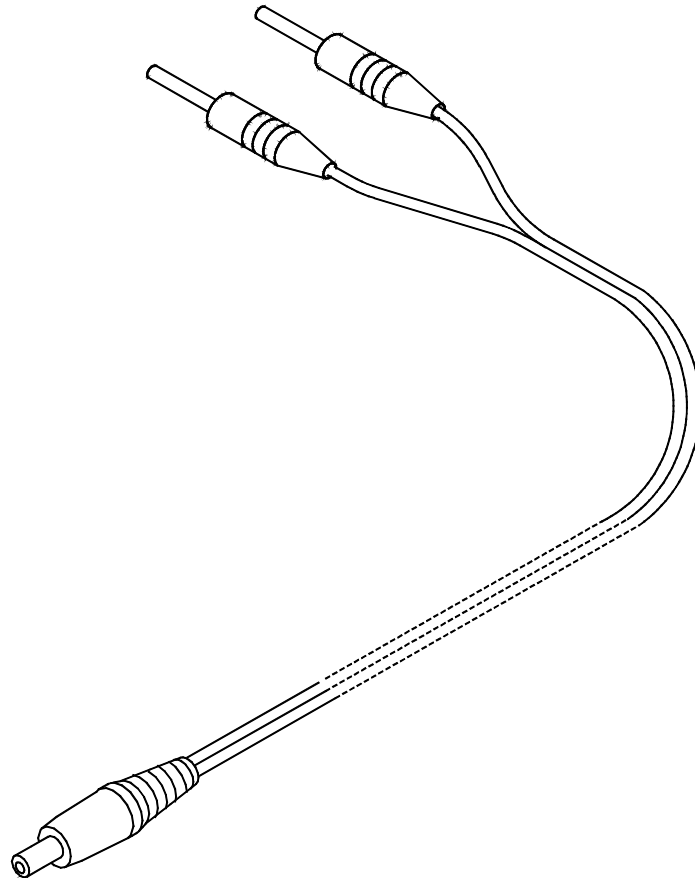
## Power Cable (PCS-1, 0730012)

The Power Cable PCS-1 is used to connect the JBT-1 and JBS-19 module jigs to an external power supply. It can also be used with FPS-4.

### Product Code

Power Cable PCS-1: *0730012*

Figure 19: View of Power Cable PCS-1



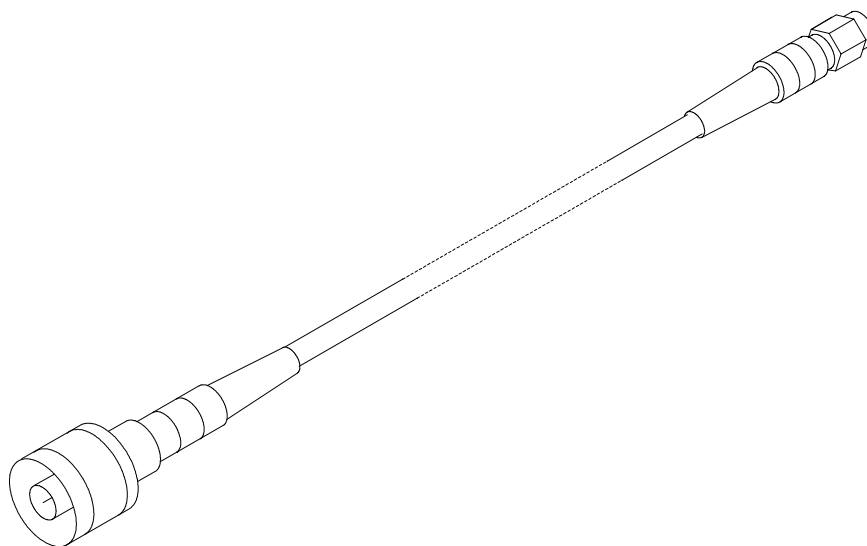
**RF Cable (XRF-1, 0730085)**

The XRF-1 RF cable is used to connect the MJS-9 Test frame to the RF measurement equipment.

**Product Code**

RF Cable XRF-1: *0730085*

Figure 20: View of RF Cable XRF-1



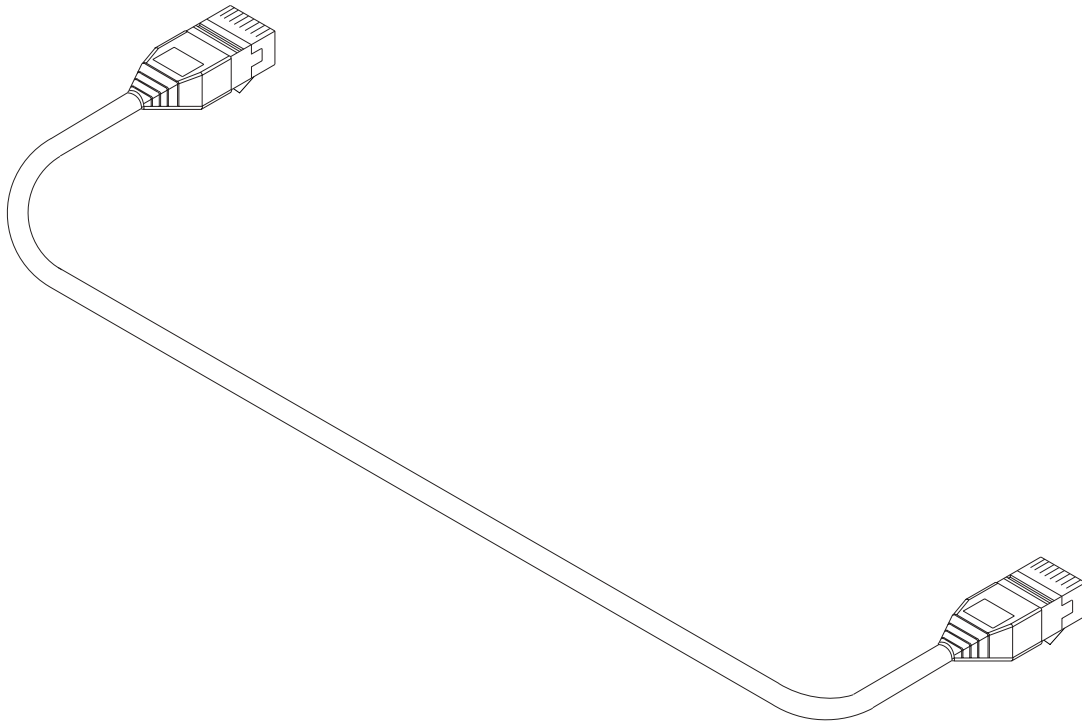
## Service Cable (XCS-4, 0730178)

The XCS-4 Service Cable is a modular cable for flashing DCT4 products.

### Product Code

Service Cable XCS-4: *0703178*

Figure 21: View of Service Cable XMS-3





**Power Pack, (DDC-10, 0670405)**

The Power Pack is designed to provide the phone with power via FLA-13. The phone's own battery can be used in DDC-10.

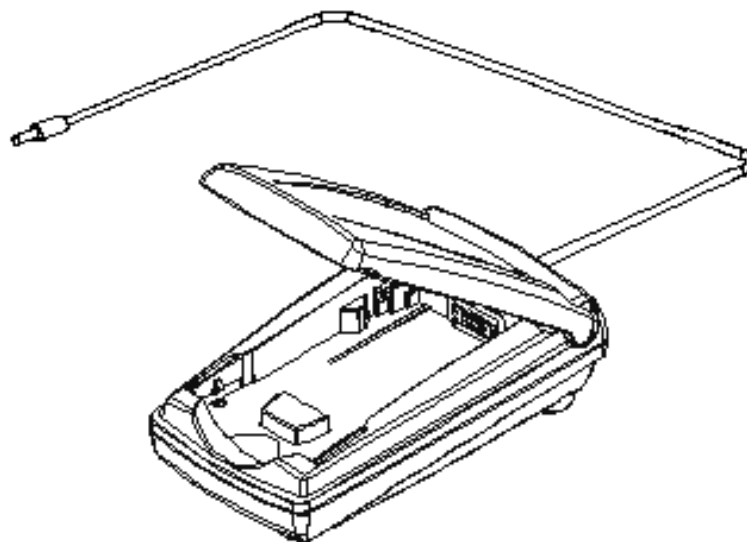
*Note: DDC-10 allows battery charging. When it is used as a charger, the power pack need to be disconnected.*

*Note: When DDC-10 is used as a Power Pack, battery charging is not allowed!*

Figure 22: DDC-10 Power Pack



Figure 23: View of Power Pack, DDC-10



*Note: Do not plug in cable in charger receptacle.*

## SW Security Device (PKD-1, 0750018)

The SW security device is a piece of hardware enabling the use of the service software when connected to the parallel (LPT) port of a PC. Without the dongle present it is not possible to use the service software. A printer or any such device can be connected to the PC through the dongle, if needed.

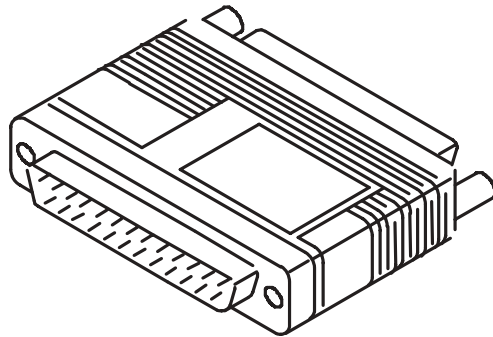
*Caution: Make sure that you have switched off the PC and the printer before making connections.*

*Caution: Do not connect the PKD-1 to the serial port. You may damage your PKD-1.*

### Product Code

SW Security Device PKD-1: 0750018

Figure 24: View of SW Security Device PKD-1



## Flashing and Testing Setups

### POS flash (FLS-4, 0081482 - Setup 1)

This setup is made for the Point-of-Sale but it can also be used in service centers. The purpose of this is to make flashing as easy as possible at the POS's and prevent the unnecessary handset flow to service.

#### Product Code

POS Dongle, FLS-4 (US): 0081482

POS Dongle, FLS-4 (APAC): 0081481

POS Dongle, FLS-4 (E/A): 0081483

Figure 25: View of POS flash

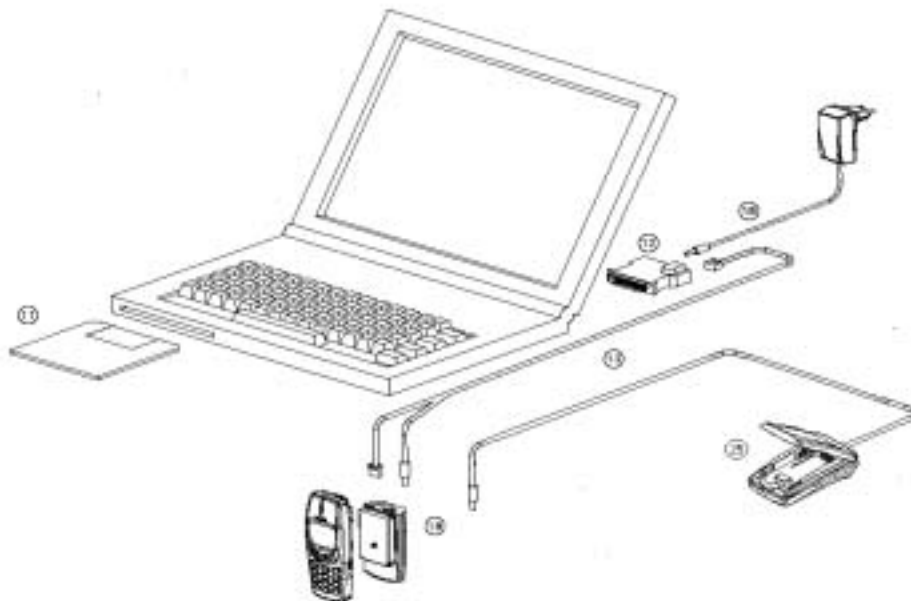


Table 2: Service tool setup 1

| Item | Name                        | Type         | Code    |
|------|-----------------------------|--------------|---------|
| 11   | Service SW CD-ROM for NPW-1 |              | 8406941 |
| 12.  | POS dongle (US)             | FLS-4 (US)   | 0081482 |
|      | POS dongle (APAC)           | FLS-4 (APAC) | 0081481 |
|      | POS dongle (E/A)            | FLS-4 (E/A)  | 0081483 |
| 13.  | Service cable               | XCS-1        | 0730218 |
| 18.  | Travel charger              | ACP-8U       | 0675196 |
| 19.  | Flash Adapter               | FLA-13       | 0770297 |
| 25   | Power Pack                  | DDC-10       | 0670405 |

## Flashing, testing and tuning with covers on (Setups 2a, 2b and 2c)

Tightened performance specifications require more precise equipment and methods for testing and alignment. Manual tuning cannot provide accurate results for NPW-1 products, which means that this task has to be automated.

These setups are intended to be used with either Phoenix or Darium SW. With the Phoenix SW it is possible to do manual testing and automated tuning. With Darium, it is possible to do automated testing and tuning.

Table 3: Service tools setup 2a, 2b and 2c

| ITEM | NAME                        | TYPE   | CODE    |
|------|-----------------------------|--|---------|
| 1.   | Docking Station             | JBV-1  | 0770298 |
| 2.   | Docking Station Adapter     | MJF-2  | 0770300 |
| 3.   | Service cable               | XCS-4  | 0730178 |
| 4.   | DC cable                    | PCS-1  | 0730012 |
| 5.   | DC cable                    | SCB-3  | 0730114 |
| 6.   | Flash loading adapter       | FPS-8  | 0080321 |
| 7.   | D9-D9 Cable                 | AXS-4 (included in FPS-8 sales pack)                           | 0730090 |
| 8.   | Printer cable               | IEEE1284 Parallel Cable, AXP-8 (included in FPS-8C sales pack) | 073F000 |
| 9.   | AC charger                  | ACF-8 (included in FPS-8 sales pack)                           | 0680032 |
| 10.  | Software protection key     | PKD-1  | 0750018 |
| 11.  | Service SW CD-ROM for NPW-1 |  | 8406941 |
| 14.  | RF cable                    | XRF-1  | 0730085 |
| 16.  | Audio box                   | JBA-8  | 0770320 |
| 20.  | RF probe                    | GAC-1  | 0770301 |
| 21.  | RF coupler                  | CPL-1  | 0770287 |
| 22.  | Security Box                | TDS-6  | 0770181 |
| 24.  | Audio Cable                 | ADS-4  | 0730222 |

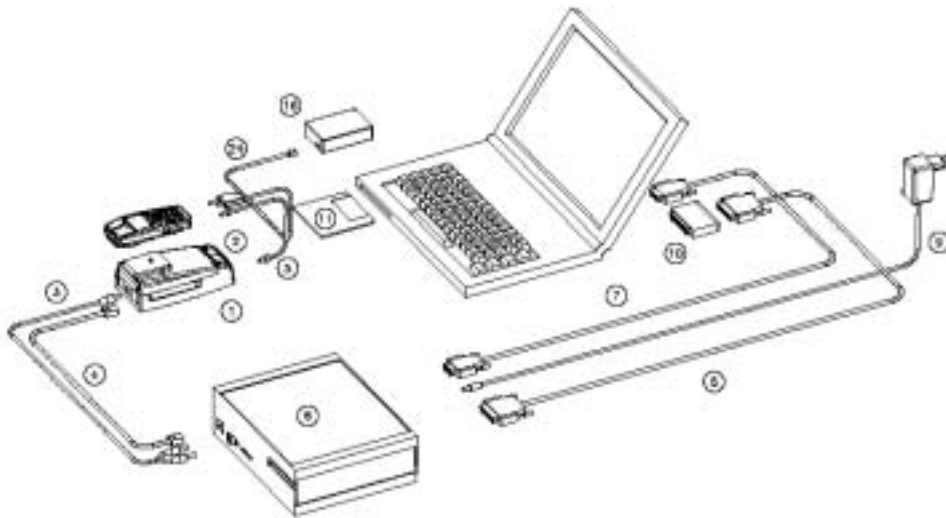
Tuning and call testing need an external power supply.

**Service tool setup 2a**

This setup is for testing and tuning (RF testing and tuning is not possible) and EM (Energy Management) calibration.

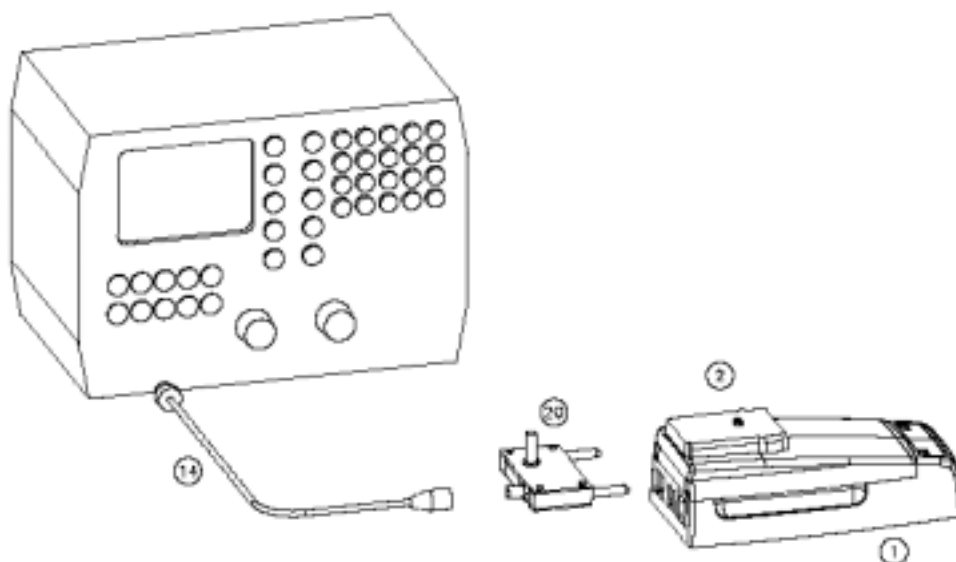
When EM calibration is being done, the JBV-1 needs to be powered by 12V from an external power supply. EM calibration can also be done by connecting the JBV-1 to a PC using a DAU-9S cable.

Figure 26: Service tool setup 2a

**Service tool setup 2b**

With this setup, RF testing and tuning is possible.

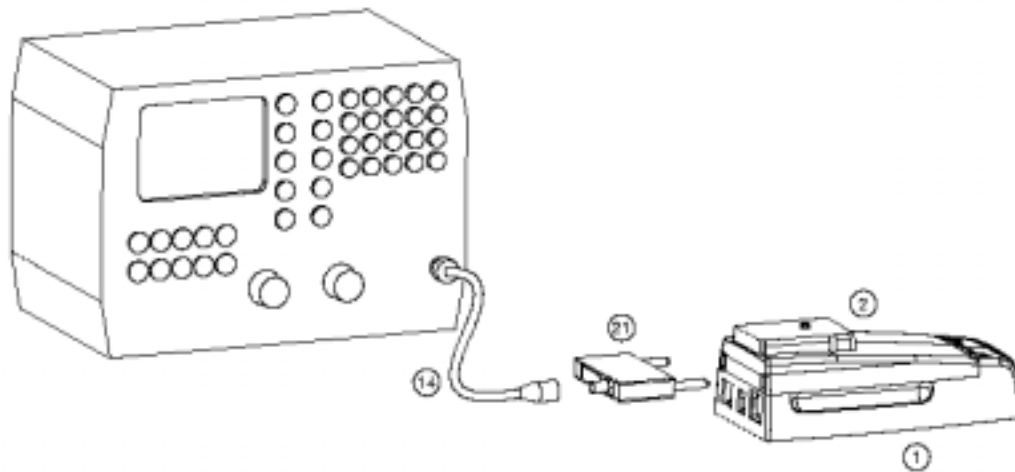
Figure 27: Service tool setup 2b



### Service tool setup 2c

This setup makes antenna go/no go testing possible.

Figure 28: Service tool setup 2c

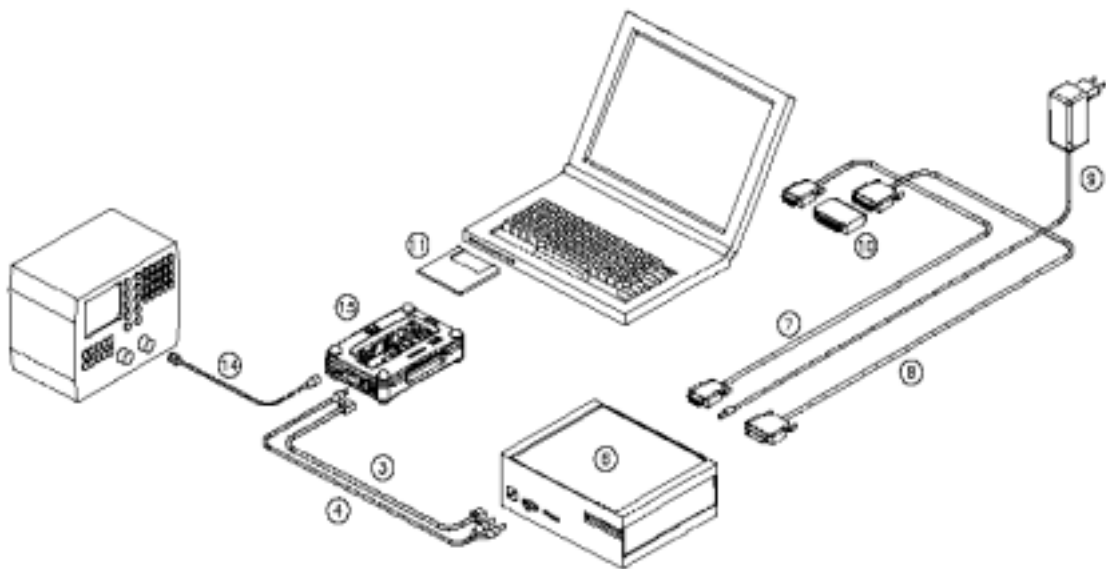


## Flashing and testing with covers off (Setup 3)

Table 4: Service Tool setup 3

| ITEM | NAME                                   | TYPE                                  | CODE    |
|------|--|---------------------------------------|---------|
| 3.   | Service cable                          | XCS-4                                 | 0730178 |
| 4.   | DC cable                               | PCS-1                                 | 0730012 |
| 6.   | Flash loading adapter                  | FPS-8                                 | 0080321 |
| 7.   | D9–D9 Cable                            | AXS-4, (included in FPS-8C sales pack | 0730090 |
| 8.   | Printer cable, IEEE1284 Parallel Cable | AXP-8 (included in FPS-8C sales pack) | 073F000 |
| 9.   | AC charger                             | ACF-8 (included in FPS-8 sales pack)  | 0680032 |
| 10.  | Software protection key                | PKD-1                                 | 0750018 |
| 11.  | Service SW CD-ROM for NPW-1            |                                       | 8406941 |
| 15.  | Module Jig                             | MJS-18                                | 0770299 |
| 16.  | Audio box                              | JBA-8                                 | 0770320 |

Figure 29: Service tool setup 3



## Parallel Flash (Setup 4)

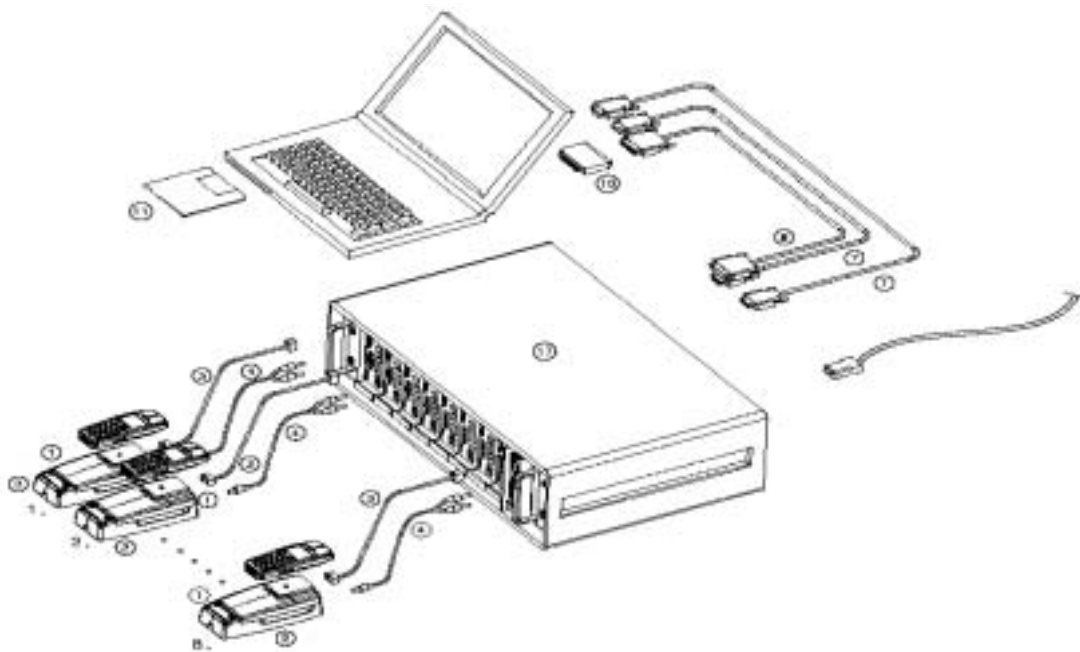
The Parallel Flash setup allows flashing eight individual handsets at the same time. This requires the PC to fulfil the following requirements: the PC has to have two physical serial ports (COM1 and COM2).

### Service tool setup 4

Table 5: Service tool setup 4

| ITEM | NAME                                   | TYPE                                   | CODE    |
|------|--|--|---------|
| 1.   | Docking Station                        | JBV-1                                  | 0770298 |
| 2.   | Docking Station Adapter                | MJF-2                                  | 0770300 |
| 3.   | Service cable                          | XCS-4                                  | 0730178 |
| 4.   | DC cable                               | PCS-1                                  | 0730012 |
| 7.   | 2 x D9-D9 Cable                        | AXS-4, (included in FPS-8C sales pack) | 0730090 |
| 8.   | Printer cable, IEEE1284 Parallel Cable | AXP-8 (included in FPS-8C sales pack)  | 073F000 |
| 10.  | Software protection key                | PKD-1                                  | 0750018 |
| 11.  | Service SW CD-ROM                      |  | 8406941 |
| 17.  | FPS-8C                                 | FPS-8C                                 | 0080396 |

Figure 30: Service tool setup 4





### Warranty and user data transfer (Setup 5)

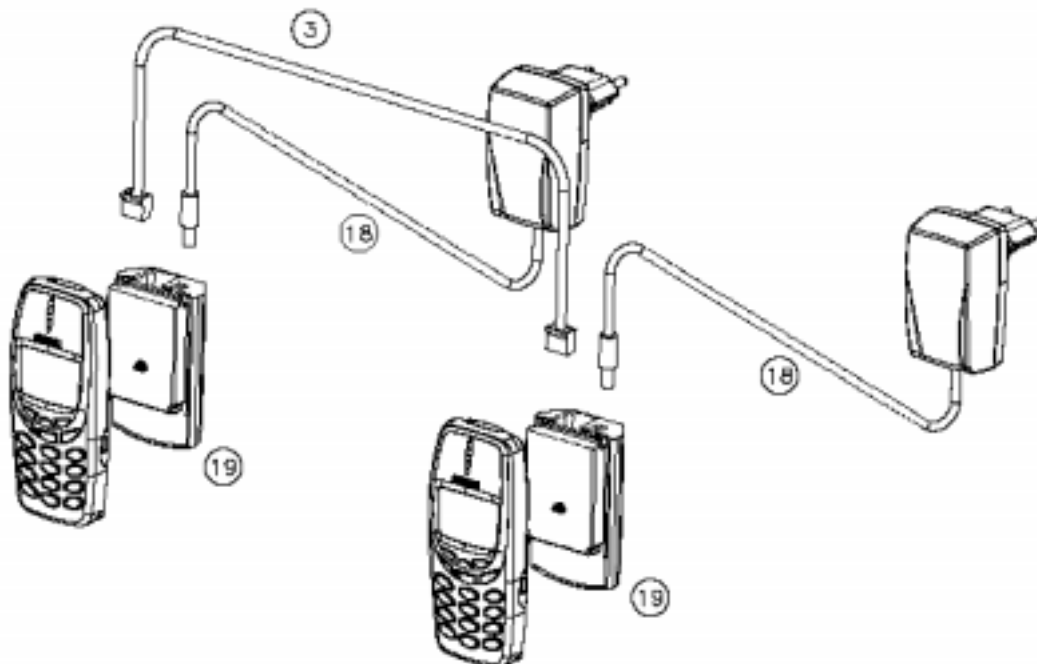
This setup is for Warranty Data and User Data transfer from phone to phone.

### Service tool setup 5:

Table 6: Service tool setup 5

| ITEM | NAME           | TYPE         | CODE    |
|------|----------------|--------------|---------|
| 3.   | Service cable  | XCS-4        | 0730178 |
| 18.  | Travel charger | ACP-8U (two) | 0675196 |
| 19.  | Flash Adapter  | FLA-13 (two) | 0770297 |

Figure 31: Service tool setup 5



This page intentionally left blank.