

**Nokia Customer Care
3155/3155i (RM-41), 3152 (RM-61)
Mobile Terminal**

Service Tools

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Service Tools

ACF-8

The ACF-8 is a universal power supply for FLS-4S and FPS-8.



CA-51DS Flash Cable

The CA-51DS allows bottom connector flashing using the FLS-4S Flash Device or the FLC-20 Flash Device.



CA-25RS RF Test Cable

The CA-25RS test cable is used for RF engine testing and tuning. This cable is 30 cm long. It snaps directly on the mobile terminal's RF connector and converts the output to an surface mounting assembly connector. Removal of the E-cover is required for CDMA RF testing. This cable is also used for GPS engine testing, but removal of the A-cover is required.



CA-56RS RF Test Cable

The CA-56RS test cable is used with Module Jig (MJ-57) for RF engine testing and tuning. This cable is 10 cm long. It snaps directly on the mobile terminal's RF connector and converts the output to an surface mounting assembly connector.



CA-52PS DC Service Cable

The CA-52 is used together with JBV-1 Docking Station and DA-47 Docking Station Adapter for EM calibrations. This cable is for a smaller Dynamo DC-jack.



DA-47 Docking Station Adapter

The DA-47 works in conjunction with the JBV-1 Docking Station and the FPS-8, FPS-10 Prommer Boxes to allow calibration, tuning, and software flashing of the mobile terminal. It supports the LYNX battery interface, which does not require BTEMP. The DA-47 also has a built-in RUIM card reader.



DAU-9S FBUS/MBUS Cable

The DAU-9S is a general purpose cable that supports FBUS/MBUS communication between a Mod-10 device and a PC.



DKU-2 Flash Cable

The DKU-2 is used for USB flashing. Use this flash cable with the FLC-20 Flashing Device or with the FLS-4S Flashing Device.



FLC-20 Flashing Device

The FLC-20 allows point-of-sale (POS) locations to flash the handset. This device allows bottom Pop-port™ connector flashing.



Note: Requires either the CA-51DS Service Cable or DKU-2 Flash Cable (not included).

Note: The FLC-20 is not supported in the APAC, LTA and China markets.

FLS-4S Flashing Device

The FLS-4S allows point-of-sale (POS) locations to flash the mobile terminal.



FPS-8 Flash Prommer

The FPS-8 is used for mobile terminal flashing at authorized service centers.



FPS-10 Flash Prommer

The FPS-10 replaces the FPS-8 Flash Prommer. The FPS-10 allows the flash code to be pre-loaded into the unit's memory and then can be flashed directly to the mobile terminal at high speeds. A smart card is required when flashing DCT-4 mobile terminal.



JXS-2 Shield Box

The JXS-2 is used to perform RF radiated testing and antenna testing.



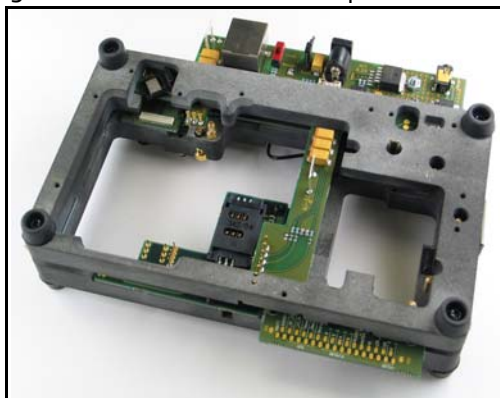
JBV-1 Docking Station

The JBV-1 connects flash prommers. The docking station can be powered by the FPS-8 Flash Prommer or by an external power supply.



MJ-57 Module Jig

The MJ-57 is used as a means to secure the PWBs and displays for troubleshooting with the covers off. The design provides DC power input and a communication port for the service software. In addition, the MJ-57 provides a secure way of connecting RF cables for testing and tuning. The CA-56RS cable is required for RF testing.

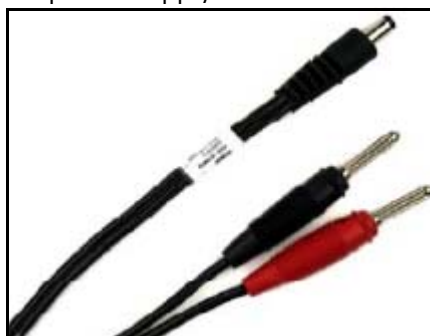


Note: The MJ-57 Module Jig's flex PWB is sold as a separate spare part.

Note: The CA-56RS cable is not included in the MJ-57 sales package. When the cable is attached to the MJ-57 jig and the PWB is inserted, make sure to press the PWB into place to ensure good contact with the cable.

PCS-1 Power Cable

The PCS-1 is used to connect the service tools (e.g., JBV-1 Docking Station, MJ-57 Service Jig) to an external power supply.



PKD-1 Software Security Dongle

The PKD-1 is a hardware dongle that, when connected to the parallel (LPT) port of the PC, enables the use of the service software. It is not possible to use the service software without the dongle. Printers or other peripheral devices can be connected to the PC through the dongle, if needed.

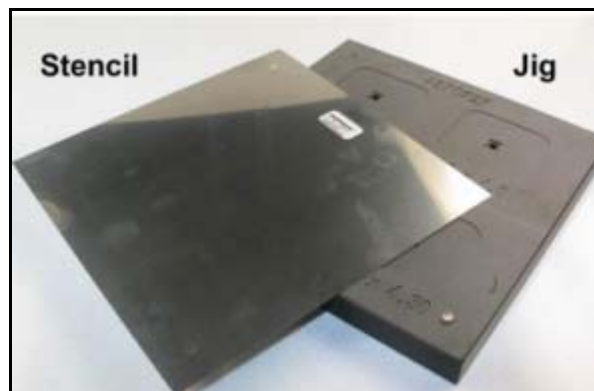


Caution: Make sure that you have switched off the PC and the printer before making connections.

Caution: Do not connect the PKD-1 to the serial port. You may damage your PKD-1 and/or your PC.

RJ-18 Power Amp LGA Rework Jig and ST-16 PA Stencil

The ST-16 stencil allows rework on LGA-type components that do not have pre-tinned pads. Both power amps require the use of this stencil. The stencil is designed to specifically fit the PA pad configuration and dimensions. The RJ-18 fits the physical dimension of the PAs.



Note: Used in conjunction with the SPS-1 Paste Spreader.

RJ-61 Soldering Jig

The RJ-61 serves as a mechanical holder for desoldering and soldering of components. It provides a convenient means to replace components on the PWB when they are changed during service repairs at authorized AMS locations. The RJ-61 allows soldering of the engine PWB as well as the UI-PWB.



RJ-64 LNA LGA Rework Jig and ST-24 Stencil

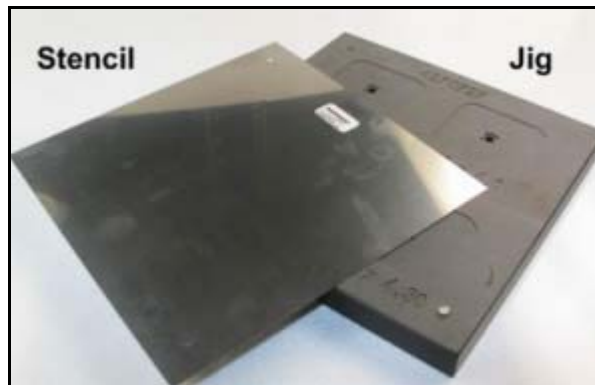
The ST-24 stencil allows rework on LGA-type components that do not have pre-tinned pads. The LNA requires the use of this stencil. The stencil is designed to specifically fit the pad configuration and dimensions while the rework jig fits the physical dimension of the LNA.



Note: Used in conjunction with the SPS-1 Paste Spreader.

RJ-65 TX IC LGA Rework Jig and ST-25 Stencil

The ST-25 stencil allows rework on LGA-type components that do not have pre-tinned pads. The Tx RF IC requires the use of this stencil. The stencil is designed to specifically fit the IC pad configuration and dimensions while the rework jig fits the physical dimension of the IC.



Note: Used in conjunction with the SPS-1 Paste Spreader.

RJ-100 Rework Jig and ST-34 Stencil

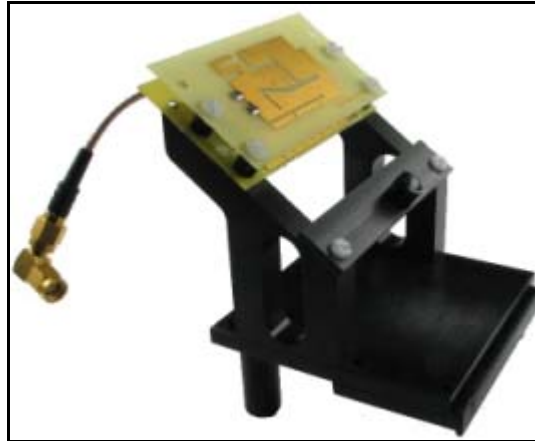
The ST-34 stencil allows rework on LGA-type components that do not have pre-tinned pads. The stencil is designed to specifically fit the N7200 pad configuration and dimensions. The RJ-100 fits the physical dimension of the N7200.



Note: Used in conjunction with the SPS-1 Paste Spreader.

SA-51 GPS Antenna Coupler

The SA-51 works in conjunction with the DA-47 Docking Station Adapter to allow testing for antenna connections. The DA-47 and coupler assembly fit in the JXS-2 Shield Box. The SA-51 requires the SS-79 Flip Module Rest for the RF coupler.



SA-54 RF Calibration Adapter

The SA-54 adapter is used to replicate the mobile terminal's RF when calculating cable path losses.



SRT-6 Opening Tool

The SRT-6 is used to open and remove parts during disassembly of the mobile terminal.



SS-13 Tuning Docking Station

The SS-13 is used with the MJF-x/DA-x Docking Station Adapters for CDMA RF autotuning.



SS-50 Domesheet Alignment Jig

The SS-50 is used to replace the domesheet on the PWB engine.



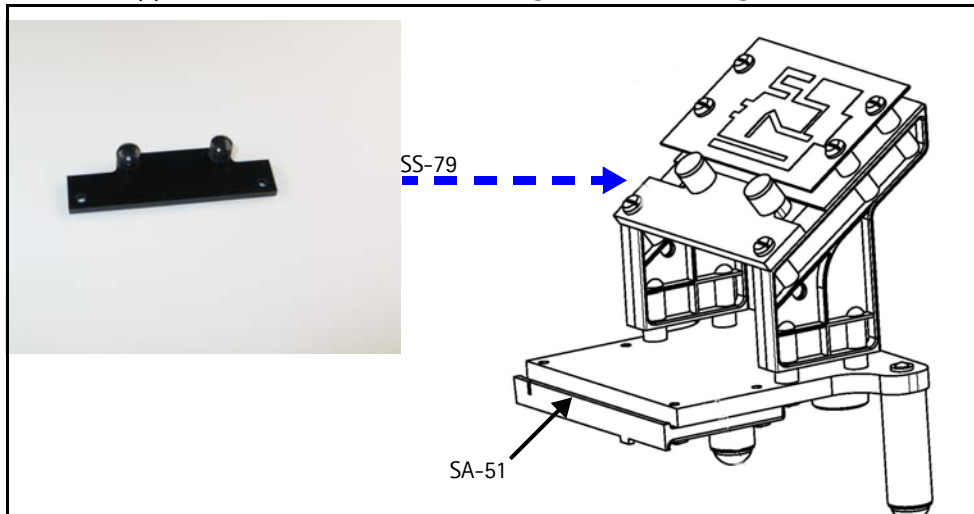
SS-64 Opening Tool

The SS-64 is used to disassemble the hinge components.



SS-79 Flip Module Rest for RF coupler

The SS-79 is used in conjunction with the SA-51 GPS Antenna coupler. It screws onto the SA-51 to support the mobile terminal during antenna testing.



SX-4 Smart Card

The SX-4 is used with the FPS-10 Flash Prommer for DCT4 flashing security.



XCS-4 MBUS/FBUS Cable

The XCS-4 is a general purpose cable for flashing and communicating with the mobile terminal. It is used to connect the FPS-8 Flash Prommer to the docking station adapter or the service jig.



XRS-6 RF Cable

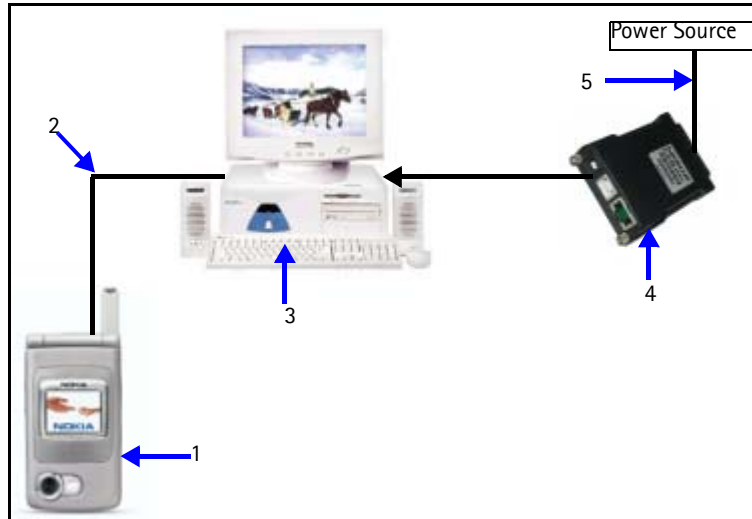
The XRS-6 is used to connect service tools to RF measuring equipment.



Service Configurations

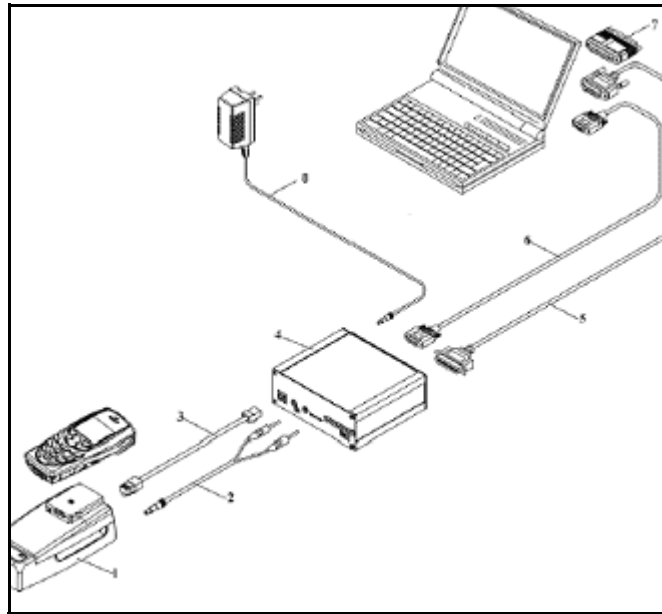
Service Setup1: POS Flashing

This is a configuration used at the POS locations that use Diego or Phoenix software and an FLS-4S POS Flash Adapter. This setup allows easy software upgrades and minor handset configuration.



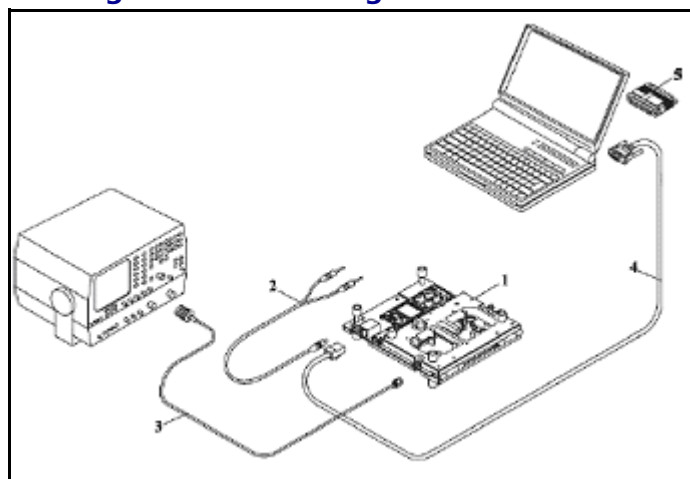
Item	Name	Type	Notes
1	Handset	RM-41, RM-61	3155, 3155i, 3152
2	POS Flash Cable	DKU-2	Connects to the USB port on the PC.
3	Point of sales software	N/A	Diego, Phoenix
4	POS Flash Adapter	FLS-4S	Connects to the parallel port or USB port on the PC.
5	Power supply	ACF-8	Connects to the FLS-4S.

Service Setup 2: Flashing with Docking Station



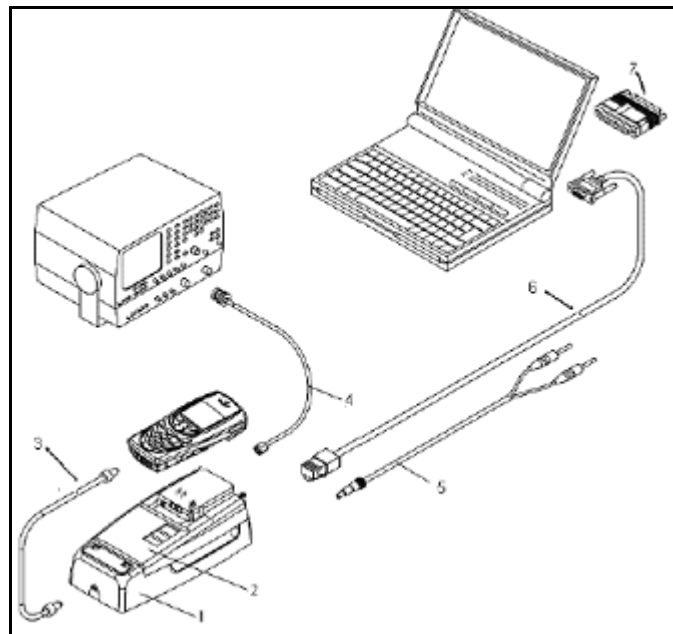
Item	Name	Type
	Docking Station	JBV-1
1	Docking Station Adapter	DA-47
2	DC Power Cable	PCS-1
3	Modular Cable	XCS-4
4	Flash Prommer Box	FPS-8 or FPS-10
5	Printer Cable (included with FPS-8)	CA-10DS
6	D9-D9 Cable (included with FPS-8)	AXS-4
7	SW Protection Key	PKD-1
8	AC Charger	ACF-8

Service Setup 3: Testing with Module Jig



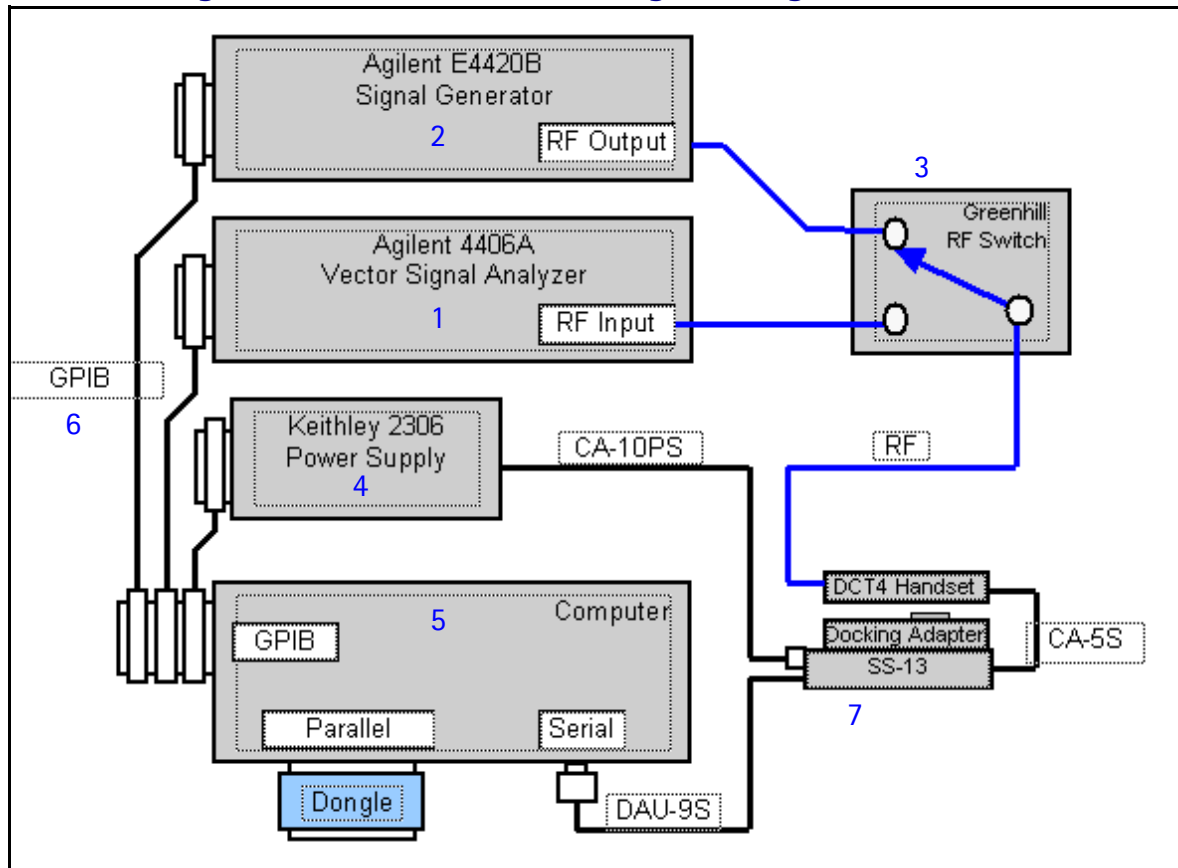
Item	Name	Type
1	Module Jig	MJ-57 + CA-56 RS
2	DC Power Cable	PCS-1
3	RF Antenna Cable	XRS-6
4	Service MBUS Cable	DAU-9S
5	SW Protection Key	PKD-1

Service Setup 4: EM Calibration



Item	Name	Type
1	Docking Station	JBV-1
2	Docking Station Adapter	DA-47
3	DC Service Cable	CA-52PS
4	RF Antenna Cable	XRS-6
5	DC Power Cable	PCS-1
6	Service MBUS Cable	DAU-9S
7	SW Protection Key	PKD-1

Service Configuration 5: Automated Tuning and Alignment

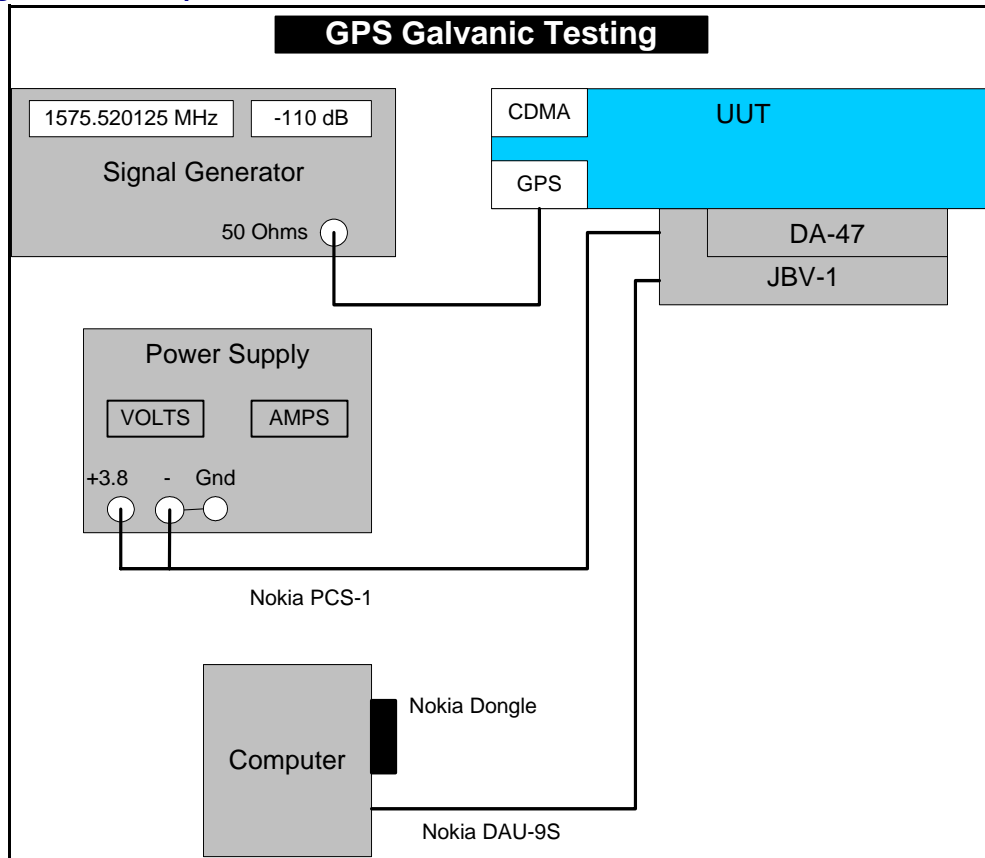


Item	Name	MFR	Model #	QTY	Comment
1	Vector Signal Analyzer	Agilent	E4406A	1	B78, CDMA 2000 measurements
2	Signal Generator	Agilent	E4421B	1	Digital signal generator with high-stability oscillator and high-spectral purity
3	RF Switch	GreenHill	TVI9901	1	RF switch with GPIB control
4	Power Supply	Keithly	K2306	2	Programmable with sense wire
5	Win2000 PC			1	Dell with Pentium III or above, network card, 256M RAM, 20GB HD, CD-ROM, etc.
6	GPIB Interface	NI	GPIB-USB-A	2	USB to GPIB adapter (184983G-01)
7	Docking Station	Nokia	SS-13	1	For DCT4 handset tuning.
8	10dB Attenuator				
9	Security Key (Dongle)	Nokia	PDK-1		

Service Configuration 6: GPS Engine Testing

Use this setup for testing the GPS engine at Nokia Authorized Service Centers. Both galvanic and radiated tests are supported. The **GPS Test** component in Phoenix provides functionality to perform these tests. (See the *Baseband Description and Troubleshooting* chapter for more information about GPS testing.)

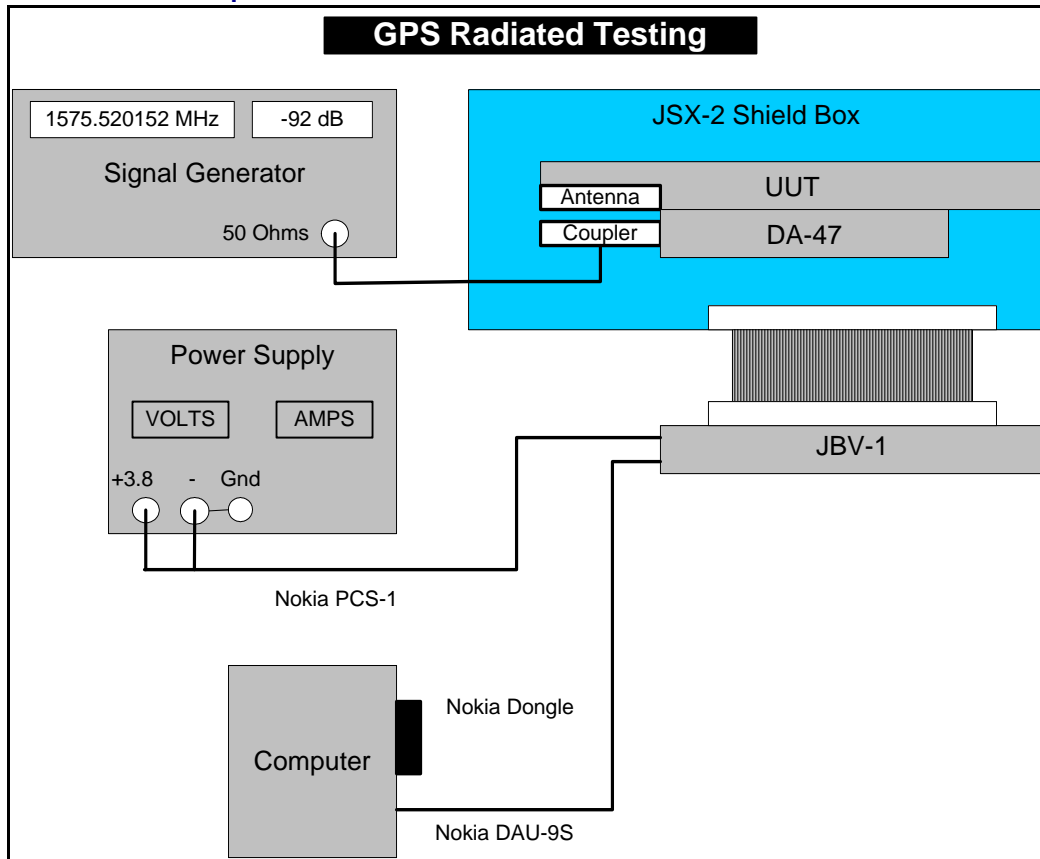
GPS Engine Test Setup



Following is a list of equipment needed for galvanic GPS engine testing:

- Power supply
- Signal generator
- Computer (Pentium 3+, Windows 2000)
- JBV-1 Docking Station
- DA-47 Docking Station Adapter
- PCS-1 DC Power Cable
- DAU-9S MBUS/FBUS Cable
- PKD-1 Dongle
- XRS-6 RF Test Cable
- CA-25RS
- Misc RF Cable

GPS Antenna Test Setup



Following is a list of equipment needed for radiated GPS antenna testing:

- 4VDC power supply
- Signal generator
- Computer (Pentium 3+, Windows 2000)
- JBV-1 Docking Station
- DA-47 Docking Station Adapter
- PCS-1 DC Power Cable
- DAU-9S MBUS/FBUS Cable
- PKD-1 Dongle
- SA-51 + SS79 or CPL-8 Antenna Coupler (with closed mobile terminal)
- XRS-6 RF Test Cable
- JSX-2 Shield Box or JSX-1 if CPL-8 Antenna Coupler is used

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