

**HP 8921A Cell Site Test Set**

- HP 11807B Cell Site Test Software
- HP 83202A Base Station Connection Kit
- HP 83204A TDMA Cellular Adapter
- HP 83205A CDMA Cellular Adapter

Test Solutions for AMPS, TACS, TDMA, CDMA, CDPD and PCS



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# The HP 8921A Cell Site Test Set

**HP** provides customers with a complete solution for cell site test. This solution includes a test set for making measurements, a connection kit enabling the test set to be connected to a particular vendor's base station, and software for automating testing. In addition, hands-on training and other accessories are available. The central component of the solution is the HP 8921A cell site test set.

A cell site test set provides a set of general capabilities. However, since many different vendors supply base stations, test methods will vary depending on the specific base station being tested. HP 8921A software and connection kits provide the necessary customization to turn a generic test set into a solution designed for testing base stations supplied by a particular network equipment manufacturer.

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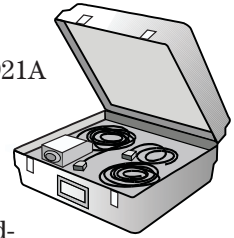
## Software

Software for the HP 8921A consists of memory cards that are plugged into the front of the test set. Each software package is designed to test base stations manufactured by a specific vendor. The software allows the user to specify which tests are to be performed and what pass/fail limits should be used for each test. On-screen connection diagrams guide the user through making the proper connections between the test set and the base station. Test results can be stored on a memory card or laptop, or printed out to a printer. Minimal user measurement experience is required when using the software, since the software determines the accuracy and consistency of the measurements. HP 8921A software is most efficient when used in conjunction with a connection kit that provides all of the correct cables and connectors.



## Connection Kits

Connection kits used with the HP 8921A contain a set of hardware items that are used to connect the test set to the base station being tested. The connection kit includes the cables, connectors, adapters, and other hardware items necessary to connect to a specific vendor's base station. These items are housed in a protective plastic, foam-filled transit case. The kits are best used in conjunction with corresponding software. The software calls out items in the kit needed for particular measurements.



## CDMA

The HP 83205A CDMA cellular adapter adds a complete QPSK/OQPSK signal generator and modulation analyzer to the HP 8921A. This test solution can then be used for test and support of IS-95A/97 CDMA base station equipment. The HP 8921A retains its full capabilities for testing the analog performance of dual-mode CDMA base stations. The HP 83205A CDMA cellular adapter can be ordered as a standalone product which can be added to an existing HP 8921A or, the HP 8921A and HP 83205A can be ordered bundled together as the HP 8921A Option 600. Note: The HP 8921A cannot be configured with both TDMA and CDMA cellular adapters at the same time.

## TDMA

The HP 83204A TDMA cellular adapter adds a complete  $\pi/4$  DQPSK signal generator, modulation analyzer, and BER analyzer to the HP 8921A while maintaining all analog measurements for dual-mode testing. The HP 83204A TDMA cellular adapter can be ordered as a standalone product which can be added to an existing HP 8921A or, the HP 8921A and HP 83204A can be ordered bundled together as the HP 8921A Option 500. Note: The HP 8921A cannot be configured with both TDMA and CDMA cellular adapters at the same time.

## The HP 8921A Cell Site Test Set, *continued*

### CDPD

The HP 8921A has optional Cellular Digital Packet Data (CDPD) test capability for installing and maintaining CDPD Mobile Data Base Station (MDBS) RF equipment. CDPD test capability can be purchased as a standalone product which can be added to an existing HP 8921A in the form of the HP 83204A Option 002 or HP 83205A Option 002, or bundled together with an HP 8921A and either a TDMA cellular adapter (HP 8921A Option 503) or CDMA cellular adapter (HP 8921A Option 603). The CDPD test capability option includes automation software and an MDBS connection kit.

### PCS

The HP 8935 Series of test sets covers the PCS frequency band (PCS coverage previously required the HP 83236B and HP 8921A) in both the cellular and PCS band. Within this series, the HP E6380A is designed for CDMA Cellular and PCS testing and the HP E6381A is designed for TDMA Cellular and PCS testing. Please see the HP 8935 Series Configuration Guide (pn 5967-6041E) or Brochure (pn 5966-4168E) for more information about these products.

### RF Tools

When any HP 11807B software package for the HP 8921A is ordered, a copy of the HP 11807B Option 100 software is included. This software performs several general RF measurements. These measurements include: swept gain, swept insertion loss, swept return loss, and distance to cable fault. The software guides the user through the process of making these measurements with step-by-step instructions and connection diagrams. In order to make these measurements, certain hardware elements are required. These elements include a VSWR bridge, resistive splitter, termination, short, cables, adapters, and attenuators. There are two methods for purchasing these parts. For a version of parts which are capable of measurements up to 1 GHz, order HP 11807A Option K16. For a version of the parts which are capable of measurements up to 2 GHz, order the HP E6554A.

### Hands-On Training

Hands-on base station training provides wireless communications technicians with real-world experience in the testing of base stations. The student learns how to install and troubleshoot using the HP 8921A and software that is designed specifically for each of three manufacturers; Nortel, Lucent, and Ericsson. These 2 or 3-day courses are delivered at the customer site and provide insight into measurement specifications and techniques for testing AMPS, TDMA, and CDMA technologies.

## Motorola

### HDII, LD AMPS/NAMPS

#### Test Set Requirements

**HP 8921A** Cell Site Test Set

**HP 8921A Option 020** Radio Interface Card  
Controls RF and audio switches that route signals from the base station to the HP 8921A.

#### Base Station Test Software

**HP 11807B Option 040** Motorola Cell Site Test Software

#### Base Station Connection Kit

**HP 83202A Option 040** Motorola Connection Kit<sup>1</sup>  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

### TACS/ETACS/UTACS/EUTACS

#### Test Set Requirements

**HP 8921A** Cell Site Test Set

**HP 8921A Option 020** Radio Interface Card  
Controls RF and audio switches that route signals from the base station to the HP 8921A.

**HP 8921A Option 011** CCITT Weighting Filter<sup>2</sup>

#### Base Station Test Software

**HP 11807B Option 050** Motorola TACS/ETACS/UTACS/  
EUTACS Cell Site Software

#### Base Station Connection Kit

**HP 83202A Option 040** Motorola Connection Kit<sup>1</sup>  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

### Super Cell SC-9600 CDMA (800 MHz)

#### Test Set Requirements

**HP 8921A Option 600** CDMA Option

Includes an HP 83205A Option 001 CDMA cellular adapter and an HP 8921A test set.

**OR**

**HP 8921A Option 603** CDMA/CDPD Option

Includes an HP 83205A Option 003 CDMA/CDPD cellular adapter and an HP 8921A test set.

#### Sample Order:

*HDII AMPS/NAMPS cell site test including 5-year return repair service.*

##### Hardware

**HP 8921A** Cell Site Test Set ..... qty 1

**Opt. 020** Radio Interface Card ..... qty 1

**Opt. W50** 5-year

Return Repair Service ..... qty 1

##### Software & Connection Kit

**HP 11807B Opt. 040** Motorola AMPS/NAMPS

Test Software ..... qty 1

**HP 83202A Opt. 040** Motorola

Connection Kit ..... qty 1

<sup>1</sup> The HP 83202A Option 040 is configured for a site with two receive antennas and two harmonic filter outputs. Contact your HP sales representative about the HP 8921A Option K03 for other site configurations.

<sup>2</sup> Replaces AMPS C-Message Weighting Filter.

# HP 8921A Cell Site Test Set Configurations

## General Electric

### RCU Analog, Extended Frequency Analog, and Compact RCU AMPS Base Stations

#### Test Set Requirements

HP 8921A Cell Site Test Set

HP 8921A **Option 020** Radio Interface Card  
Controls RF and audio switches that route signals from the base station to the HP 8921A.

#### Base Station Test Software

HP 11807B **Option 041** G.E. AMPS Test Software

#### Base Station Connection Kit

HP 83202A **Option 044** Northern Telecom and G.E. Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

#### Sample Order:

*General Electric cell site test including 5-year return repair service, 5-year calibration service, and padded carrying case.*

#### Hardware

HP 8921A Cell Site Test Set ..... qty 1  
**Opt. W50** 5-year  
Return Repair Service ..... qty 1  
**Opt. W52** 5-year  
Calibration Service ..... qty 1  
**Opt. 1540-1130**  
Padded Carrying Case ..... qty 1

#### Software & Connection Kit

HP 11807B **Opt. 041** G.E. AMPS  
Test Software ..... qty 1  
HP 83202A **Opt. 044** Northern Telecom and  
G.E. Connection Kit ..... qty 1

## Hughes

### GMH 2000 AMPS

#### Test Set Requirements

HP 8921A Cell Site Test Set

#### Base Station Test Software

HP 11807B **Option 045** Hughes AMPS Test Software

### GMH 2000 TDMA (800 MHz)

#### Test Set Requirements

HP 8921A **Option 500** TDMA Option  
Includes an HP 83204A Option 001  
CDPD- ready TDMA cellular adapter and  
an HP 8921A test set.

**OR**

HP 8921A **Option 503** TDMA/CDPD Option  
Includes an HP 83204A Option 003  
TDMA/CDPD cellular adapter and an  
HP 8921A test set.

#### Sample Order:

*Hughes GMH 2000 TDMA cell site test including 3-year return repair service.*

#### Hardware

HP 8921A **Opt. 500** TDMA Option ..... qty 1  
**Opt. W30** 3-year  
Return Repair Service ..... qty 1  
HP 83204A **Opt. W30** 3-year  
Return Repair Service for  
TDMA cellular adapter ..... qty 1

# HP 8921A Cell Site Test Set Configurations

## Ericsson

### 882, 882M AMPS, Microcell

#### Test Set Requirements

HP 8921A Cell Site Test Set

#### Base Station Test Software

HP 11807B **Option 042** Ericsson TDMA/AMPS Test Software

#### Base Station Connection Kit

HP 83202A **Option 042** Ericsson Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

### 883, 883M TACS

#### Test Set Requirements

HP 8921A Cell Site Test Set

HP 8921A **Option 011** CCITT Weighting Filter<sup>2</sup>

#### Base Station Test Software

HP 11807B **Option 052** Ericsson TACS/ETACS Test Software

#### Base Station Connection Kit

HP 83202A **Option 042** Ericsson Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

### 882D TDMA (800 MHz)

#### Test Set Requirements

HP 8921A **Option 042** Ericsson PCM Reference (for bench test of TDMA radios)

HP 8921A **Option 500** TDMA Option  
Includes an HP 83204A Option 001 CDPD-ready TDMA cellular adapter and an HP 8921A test set.

**OR**

HP 8921A **Option 503** TDMA/CDPD Option  
Includes an HP 83204A Option 003 TDMA/CDPD cellular adapter and an HP 8921A test set.

#### Base Station Test Software

HP 11807B **Option 042** Ericsson TDMA/AMPS Test Software

#### Base Station Connection Kit

HP 83202A **Option 042** Ericsson Base Station Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

### 884 AMPS, TDMA (800 MHz)

#### AMPS

#### Test Set Requirements

HP 8921A Cell Site Test Set

#### Base Station Test Software

HP 11807B **Option 032** Ericsson 884 TDMA/AMPS Test Software

#### Base Station Connection Kit

HP 83202A **Option 032** Ericsson 884 Base Station Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

<sup>2</sup> Replaces AMPS C-Message Weighting Filter.

# HP 8921A Cell Site Test Set Configurations

## Ericsson, *continued*

### TDMA (800 MHz)

#### Test Set Requirements

**HP 8921A Option 500** TDMA Option  
Includes an HP 83204A Option 001  
CDPD-ready TDMA cellular adapter and  
an HP 8921A test set.

**OR**

**HP 8921A Option 503** TDMA/CDPD Option  
Includes an HP 83204A Option 003  
TDMA/CDPD cellular adapter and an  
HP 8921A test set.

#### Base Station Test Software

**HP 11807B Option 032** Ericsson 884 TDMA/AMPS  
Test Software

#### Base Station Connection Kit

**HP 83202A Option 032** Ericsson 884 Base Station  
Connection Kit  
Contains necessary cables, connectors, and  
interface/switch box (where required) to  
automate base station testing.

### Hands-on Training for the HP 8921A

**H7210 Option 246** TDMA/AMPS Ericsson 884  
Hands-on Base Station Training  
2-day course at customer site for 6 students

**H7210 Option 247** TDMA/AMPS Ericsson 882  
Hands-on Base Station Training  
3-day course at customer site for 6 students

#### Sample Order:

*Ericsson 884 TDMA/AMPS cell site test including  
transit case, hands-on training, and 12 months of  
software update service.*

##### Hardware

**HP 8921A Opt. 500** Cell Site Test Set ..... qty 1

##### **Opt. 08920-90141**

Hardshell Transit Case ..... qty 1

##### Software & Connection Kit

**HP 11807B Opt. 032** Ericsson 884 TDMA/AMPS  
Test Software ..... qty 1

##### **Opt. +SAJ** Software

Update Service ..... qty 12

**HP 83202A Opt. 032** Ericsson 884 Base Station  
Connection Kit ..... qty 1

##### Hands-on Training

**7210 Opt. 246** TDMA/AMPS Ericsson 884  
Hands-on Base Station Training ..... qty 1

## Lucent

### Autoplex Series II

AMPS, LMT, Universal Microcell

#### Test Set Requirements

**HP 8921A** Cell Site Test Set

#### Base Station Test Software

**HP 11807B Option 043** Lucent TDMA/AMPS Test Software

#### Base Station Connection Kit

**HP 83202A Option 043** Lucent Base Station Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

### Autoplex Series II TDMA (800 MHz)

#### Test Set Requirements

**HP 8921A Option 500** TDMA Option  
Includes an HP 83204A Option 001 CDPD-ready TDMA cellular adapter and an HP 8921A test set.

**OR**

**HP 8921A Option 503** TDMA/CDPD Option  
Includes an HP 83204A Option 003 TDMA/CDPD cellular adapter and an HP 8921A test set.

#### Base Station Test Software

**HP 11807B Option 043** Lucent TDMA/AMPS Test Software

#### Base Station Connection Kit

**HP 83202A Option 043** Lucent Base Station Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

### Autoplex Series II CDMA (800 MHz)

#### Test Set Requirements

**HP 8921A Option 600** CDMA Option  
Includes an HP 83205A Option 001 CDPD-ready CDMA cellular adapter and an HP 8921A test set.

**OR**

**HP 8921A Option 603** CDMA/CDPD Option  
Includes an HP 83205A Option 003 CDMA/CDPD cellular adapter and an HP 8921A test set.

#### Base Station Test Software

**HP 11807B Option 023** Lucent CDMA Test Software

#### Base Station Connection Kit

**HP 83202A Option 083** Lucent CDMA/TDMA Base Station Connection Kit  
Contains necessary cables, connectors, and interface/switch box (where required) to automate base station testing.

## HP 8921A Cell Site Test Set Configurations

### Lucent, *continued*

#### **Hands-on Training for the HP 8921A**

- H7210**    **Option 208** CDMA Lucent  
Hands-on Base Station Training  
2-day course at customer site for 6 students
- H7210**    **Option 249** TDMA/AMPS Lucent  
Hands-on Base Station Training  
3-day course at customer site for 6 students

#### **Sample Order:**

*Lucent TDMA/AMPS/CDPD cell site test including hands-on training, call analysis software, 12 months of software update service, 5-year return repair service, and 5-year calibration service.*

#### **Hardware**

- HP 8921A**    **Opt. 503** Cell Site Test Set ..... qty 1
- HP 8921A**    **Opt. W50** 5-year Return  
Repair Service ..... qty 1
- Opt. W52** 5-year Calibration  
Service ..... qty 1
- HP 83204A** **Opt. W50** 5-year Return  
Repair Service ..... qty 1
- Opt. W52** 5-year Calibration  
Service ..... qty 1

#### **Software & Connection Kit**

- HP 11807B** **Opt. 043** Lucent TDMA/AMPS  
Test Software ..... qty 1
- Opt. 120** Call Analysis Software ..... qty 1
- Opt. +SAJ** Software Update  
Service ..... qty 12
- HP 83202A** **Opt. 043** Lucent Base Station  
Connection Kit ..... qty 1

#### **Hands-on Training**

- 7210**        **Opt. 249** TDMA/AMPS Hands-on  
Base Station Training ..... qty 1

# HP 8921A Cell Site Test Set Configurations

## Nortel

### P-Series AMPS

#### Test Set Requirements

**HP 8921A** Cell Site Test Set

**HP 8921A Option 020** Radio Interface Card  
Controls RF and audio switches that route signals from the base station to the HP 8921A connectors.

#### Base Station Test Software

**HP 11807B Option 044** Nortel Test Software

#### Base Station Connection Kit

**HP 83202A Option 044** Nortel and G.E. Connection Kit

### TRU TDMA (800 MHz)

#### Test Set Requirements

**HP 8921A Option 020** Radio Interface Card  
Controls RF and audio switches that route signals from the base station to the HP 8921A connectors.

**HP 8921A Option 500** TDMA Option  
Includes an HP 83204A Option 001 CDPD-ready TDMA cellular adapter and an HP 8921A test set.

**OR**

**HP 8921A Option 503** TDMA/CDPD Option  
Includes an HP 83204A Option 003 TDMA/CDPD cellular adapter and an HP 8921A test set.

#### Base Station Test Software

**HP 11807B Option 044** Nortel Test Software

#### Base Station Connection Kit

**HP 83202A Option 044** Nortel and G.E. Connection Kit

### BTS CDMA (800 MHz)

#### Test Set Requirements

**HP 8921A Option 600** CDMA Option  
Includes an HP 83205A Option 001 CDPD-ready CDMA cellular adapter and an HP 8921A test set.

**OR**

**HP 8921A Option 603** CDMA/CDPD Option  
Includes an HP 83205A Option 003 CDMA/CDPD cellular adapter and an HP 8921A test set.

### Hands-on Training for the HP 8921A

**H7210 Option 215** CDMA/AMPS Cellular Nortel Hands-on Base Station Training  
3-day course at customer site for 6 students

#### Sample Order:

*Nortel TRU TDMA/AMPS cell site test including 3-year calibration service and transit case.*

#### Hardware

**HP 8921A Opt. 500** Cell Site Test Set ..... qty 1  
**Opt. W32** 3-year  
Calibration Service ..... qty 1  
**Opt. 08920-90033** Hardshell  
Transit Case ..... qty 1

**HP 83204A Opt. W32** 3-year  
Calibration Service ..... qty 1

#### Software & Connection Kit

**HP 11807B Opt. 044** Nortel Test Software ..... qty 1

**HP 83202A Opt. 044** Nortel and G.E.  
Connection Kit ..... qty 1

# General Software

## HP 11807A Options

AMPS/NAMPS/EAMPS Cellular Phone Test (for use with HP 8921A) .....	Option 004
TACS/ETACS Cellular Phone Test (for use with HP 8921A Option 011) .....	Option 005
JTACS/NTACS Cellular Phone Test (for use with HP 8921A Option 011) .....	Option 007
TDMA/NADC Dual-Mode Cellular Phone Test, (IS-54) Using TIA Adapter (for use with HP 8921A Option 500 or 503) .....	Option 008
AMPS/EAMPS/NAMPS/TDMA/NADC (IS-54) Cellular Phone Test .....	Option 009
System Support Test – Automated VSWR and cable fault measurements .....	Option 100

## HP 11807B Options

AMPS Call Analysis, Logging and Monitoring Software (800 MHz) .....	Option 120
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### For Creating or Modifying Base Station Test Programs

HP 83224 IBASIC Development Tools .....	HP 83224A
IBASIC Development Tool Kit (includes software, HP-IB interface, and cable) .....	Option 001
IBASIC Development Tool Kit (software only) .....	Option 002

**For extra copies of CDPD MDDBS Cell Site Test Software<sup>3</sup> .....** 83204-10001

**For extra copies of HP 83236B PCS Interface Utility Software (Epson format) .....** 83236-85201

# Software Support

## HP 11807B Option

For Start-up Assistance .....	Option +36H
To receive revisions to HP 11807B code as they occur <sup>4</sup> .....	Option +SAJ

## HP 83204A Option

To order one-time updates for HP 83204A or HP 83205A CDPD Software (CDPD software is shipped with all CDPD hardware orders) .....	Option R99
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<sup>3</sup> CDPD Cell Site Test Software is included as a standard part of each CDPD cellular adapter.

<sup>4</sup> For a 12-month HP 11807B update contract, order Option +SAJ, quantity 12. See examples on page 9.

## Hardware Support<sup>5</sup>

### HP 8921A, HP 83204A and HP 83205A Options

3-year Return Repair Service <sup>8</sup> .....	Option W30
5-year Return Repair Service <sup>9</sup> .....	Option W50
3-year Return Calibration Service .....	Option W32
5-year Return Calibration Service .....	Option W52
3-year Return Standards Compliant Calibration Service .....	Option W34
5-year Return Standards Compliant Calibration Service .....	Option W54

## Printers<sup>6</sup>

(Used for screen and test printouts)

HP DeskJet 340C Printer .....	C2655A
HP DeskJet 400 Printer .....	C2642A

## Memory Cards (for data storage)

Each HP 11807B software package ships with one 128 KB SRAM card<sup>7</sup> and battery as standard equipment. If data collection to an SRAM card is desired, additional SRAM card memory is recommended.

32 KB SRAM Card and Battery .....	HP 85700A
128 KB SRAM Card and Battery .....	HP 85702A
256 KB SRAM Card and Battery .....	HP 85704A
512 KB SRAM Card and Battery .....	HP 85705A
SRAM Lithium Battery .....	1420-0383

## Rack Mount

### For HP 8921A Systems

### HP Part Number

HP 8921A Rack Mount Kit without Handles .....	5061-4846
HP 8921A Option 500, 600 Rack Mount Kit .....	08921-61037

<sup>5</sup> When ordering service options for an HP 8921A Option 500, 502, 503, 600, 602 or 603 the service option must be ordered for the HP 8921A as well as either the HP 83204A or HP 83205A. Example: For 5-year return calibration service on an HP 8921A Option 603 order HP 8921A Option W52 and HP 83205A Option W52.

<sup>6</sup> Supported printers include those printers that emulate the Epson FX80 and LQ850, as well as the HP DeskJet, LaserJet, ThinkJet, and QuietJet printers.

<sup>7</sup> Lucent HP 11807B Option 043 ships with a 256 KB SRAM card.

<sup>8</sup> One year of return repair service is standard. Option W30 adds two additional years.

<sup>9</sup> One year of return repair service is standard. Option W50 adds two additional years.

## Accessories

	<u>HP Part Number</u>
CRT Sunshade .....	08920-61051
Antenna .....	08920-61060
Microphone for HP 8921A .....	08920-1059
DC Battery Pack for standard HP 8921A only (24 V) .....	08920-80027
Battery Charger .....	08920-80028
Power Splitter (DC to 3 GHz) .....	HP 11850C

## Transit Cases

	<u>HP Part Number</u>
HP 8921A Soft Carrying Bag .....	1540-1130
HP 8921A Hardshell Transit Case .....	08920-90033
HP 8921A Option 500 or 600 Padded Carrying Bag .....	HP 8921A K38
HP 8921A Hardshell Option 500 or 600 Transit Case .....	08920-90141
HP 83236B Hardshell Transit Case .....	83236-60001

## Manuals

<b>HP 8921A</b>	<u>HP Part Number</u>
HP 8921A User's Guide .....	08921-90022
HP 8921A Programmer's Guide .....	08920-90204
HP 8921A Assembly Level Repair Manual .....	08920-90168
<b>HP 83204A</b>	
HP 83204A User's Guide .....	83204-90009
HP 83204A Assembly Level Repair Manual .....	83204-90018
CDPD Software User's Guide .....	83204-90014
<b>HP 83205A</b>	
HP 83205A User's Guide .....	83205-90008
HP 83205A Assembly Level Repair Manual .....	83205-90009
CDPD Software User's Guide .....	83204-90014
<b>HP 83236B</b>	
HP 83236B Operating Manual .....	83236-90101
HP 83236B CDMA/PCS Base Station Test Software User's Guide .....	83236-90121

# Upgrades and Retrofits

## Upgrades of existing HP 8921As for TDMA, CDMA, CDPD, and PCS

Includes all necessary firmware and hardware unless otherwise noted.

### TDMA Upgrade

Order HP 83204A - TDMA Cellular Adapter (option required) .....	HP 83204A
TDMA Only .....	Option 001
TDMA and CDPD .....	Option 003

### CDMA Upgrade<sup>10</sup>

Order HP 83205A - CDMA Cellular Adapter (option required) .....	HP 83205A
CDMA Only .....	Option 001
CDMA and CDPD .....	Option 003

### CDPD Upgrade

#### TDMA

Order HP 83204A - TDMA Cellular Adapter (option required) .....	HP 83204A
CDPD Only (TDMA-ready) .....	Option 002
CDPD and TDMA .....	Option 003

#### CDMA<sup>10</sup>

Order HP 83205A - CDMA Cellular Adapter (option required) .....	HP 83205A
CDPD Only (CDMA-ready) .....	Option 002
CDPD and CDMA .....	Option 003

### PCS Upgrade

Add the HP 83236B PCS Interface to HP 8921A configurations for AMPS/TACS, TDMA, and CDMA to translate measurements to/from the 1710 to 1990 MHz PCS band.

PCS Interface .....	HP 83236B
Rack Flange Kit without Handles (for HP 83236B only) .....	Option AX4

# Retrofit Kits for HP 8921A Options

### HP 8921A Option 011 CCITT Weighting Filter:

### HP 8921ART Option

Order HP 8921A Option R11 .....	Option R11
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### HP 8921A Option 020 Radio Interface Card:<sup>11</sup>

Order HP 8921A Option R20 .....	Option R20
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### HP 8921A Option 042 Ericsson PCM Reference:<sup>11</sup>

Order HP 8921A Option R42 .....	Option R42
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### Latest Firmware for HP 8921A:

For HP 8921A with S/N <3546A - Order HP 8921A Option R40 .....	Option R40
For HP 8921A with S/N <sup>3</sup> 3546A - Order HP 8921A Option R98 .....	Option R98

<sup>10</sup> For average power capabilities on HP 8921As with a serial prefix less than or equal to "3501A" order HP 8921A Option G21.

<sup>11</sup> Cannot combine options 020 and 042.

# Retrofit Kits for HP 83204A and HP 83205A

## HP 83204A Option 003:

- To retrofit Option 001 to Option 003 (add CDPD)..... Option R13
- To retrofit Option 002 to Option 003 (add TDMA) ..... Option R23

## HP 83204ART Option

## HP 83205A Option 003:

- To retrofit Option 001 to Option 003 (add CDPD)..... Option R13
- To retrofit Option 002 to Option 003 (add CDMA) ..... Option R23

## HP 83205ART Option



Expanding Possibilities

**For additional HP 8921A Cell Site Test Set information, refer to the following literature:**

Brochure .....	5965-1579E
Technical Specifications .....	5965-7062E
Price List .....	5966-2248EUS

**Warranty Information**

This Hewlett-Packard instrument product is warranted against defects in material and workmanship for a period of one year from date of shipment. During the warranty period, Hewlett-Packard Company will at its option, either repair or replace products which prove to be defective.

For warranty service or repair, this product must be returned to a service facility designated by HP. Buyer shall prepay shipping charges to HP and HP shall pay shipping charges, duties, and taxes for products returned to HP from another country.

HP warrants that its software and firmware designated by HP for use with an instrument will execute its programming instructions when properly installed on that instrument. HP does not warrant that the operation of the instrument, or software, or firmware will be uninterrupted or error free.

**Limitation Of Warranty**

The foregoing warranty shall not apply to defects resulting from improper or inadequate maintenance by buyer, buyer-supplied software or interfacing, unauthorized modification or misuse, operation outside of the environmental specifications for the product, or improper site preparation or maintenance. No other warranty is expressed or implied. Hewlett-Packard specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

For more information about Hewlett-Packard test and measurement products, applications, services, and a current sales office listing, visit our web site at:

<http://www.hp.com/go/tmdir>

You can also contact one of the following centers and ask for a test and measurement sales representative.

**United States:**

Hewlett-Packard Company  
Test and Measurement Call Center  
P.O. Box 4026  
Englewood, CO 80155-4026  
(tel) 1 800 452 4844

**Canada:**

Hewlett-Packard Canada Ltd.  
5150 Spectrum Way  
Mississauga, Ontario  
L4W 5G1  
(tel) (905) 206 4725

**Europe:**

Hewlett-Packard Company  
European Marketing Organisation  
P.O. Box 999  
1180 AZ Amstelveen  
The Netherlands  
(tel) (31 20) 547 9999

**Japan:**

Hewlett-Packard Japan Ltd.  
Measurement Assistance Center  
9-1, Takakura-Cho, Hachioji-Shi,  
Tokyo 192-8510, Japan  
(tel) (81) 426 56 7832  
(fax) (81) 426 56 7840

**Latin America:**

Hewlett-Packard  
Latin American Region Headquarters  
5200 Blue Lagoon Drive, 9th Floor  
Miami, Florida 33126 U.S.A.  
(tel) (305) 267-4245  
(tel) (305) 267-4220  
(fax) (305) 267-4288

**Australia/New Zealand:**

Hewlett-Packard Australia Ltd.  
31-41 Joseph Street  
Blackburn, Victoria 3130  
Australia  
(tel) 1 800 629 485 (Australia)  
(tel) 0800 738 378 (New Zealand)  
(fax) (61 3) 9210 5489

**Asia Pacific:**

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