
PCS Base Station Technology & Testing

Technical Data

Class Overview

This course is specifically designed and constructed to meet the needs of the cell site technicians working on the Sprint Spectrum network. It includes in depth and fundamental information on Radio Frequency (RF) technology, Code Division Multiple Access (CDMA), T1 digital transmission and Signaling System Number 7 (SS7). Class includes the operation and field applications in order to maximize the PCS/ RF technicians productivity.

Course Features

- RF Fundamentals
- Digital RF system basics
- Concepts of CDMA Spectrum Analyzer Operation
- Network Analyzer Operation
- Spectrum Monitoring and Channel Quality Measurement
- Loading and Using Auto Test Software
- Antenna Sweeps
- Power Meter Operation
- Digital Transmission Fundamentals
T1 Framing, Formatting
- T1 In/Out Service Testing

- SS7 Protocol Basics
- HP 8921 Operation
- HP 8753 & 8594 Operation
- HP 37741/156MTS Operation
- HP 37900 Operation

Specifications

Course Length
4 days

Audience
RF network & switch technicians and/or engineers involved with the installation, maintenance and servicing of PCS networks and network elements.

Prerequisites
General Knowledge of RF communications networks and related digital transmission technology.

Delivery Method
Dedicated

Format
Course content is 60% lecture and 40% hands-on labs to familiarize the students with the technology, test equipment and its applications.

**HP Education Services:
Your Key to Higher
Productivity**

Classroom Training Benefits

Experienced HP Instructors
Learn from an experienced HP instructor who is a specialist in using and applying test instrumentation to optimize and troubleshoot cellular and PCS networks.

Presented at Your Site
Classes suitcased to your location. This reduces travel time and expenses for the students and takes advantage of the available facilities.

Extensive Hands-on Practice
HP classroom training is characterized by extensive hands-on experience and interactive class discussion. HP classroom training pays off immediately because it is geared to real-world solutions.

Comprehensive Student Materials
Copies of course materials for each student are provided for future reference on the job.

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Course Agenda

Days 1&2

- Basic Network Architecture overview
- PCS/Digital RF Communications System Concepts
- Channel Structure
- Basic Call Processing Overview
- Concepts of CDMA
- **HP 8921 User Interface**
- Front Panel Interface Review
- Rear Panel Interface Review
- Instrument Configuration
- Printer Operation
- Monitor Operation

Day 3

Spectrum Analyzer Operation

- RF Fundamentals
- RF Spectrum & Power Measurement Basics
- Spectrum Analyzer Personality Operation
- Operation of HP 8594 Spectrum Analyzer, with hands on lab

Power Meter Operation

- Operation of HP 437B Power Meter

Network Analyzer Operation

- Operation of HP 8753 Network Analyzer, with hands on lab

Antenna/Cable Sweeps

- Manual Antenna Sweeps
- Insertion Loss
- Return Loss
- Swept Gain
- Channel Return Loss
- Cable Fault Test
- Hands on Lab

Day 4

- T1 Transmission Fundamentals
- Operation of HP 37741 T1 Tester
- Operation of 156MTS SONET Tester
- SS7 Protocol Fundamentals
- Operation of HP 37900 Hh

Ordering Information

To order PCS Base Station Technology & Testing (H7210B opt. 206) course, in the U.S. call 1-800-HPCLASS (800-472-5277).

HP's Customer Registration Center can provide you with price, scheduling and enrollment information about dedicated delivery or customizing a course for your specific needs.

Outside the U.S., contact your nearest local HP sales office.

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Printed in USA 1/97

Publication Number 5965-6741E