

**Course Name:** Broadband Line Sweep Principles

**Course Overview:**

This course focuses on RF and Microwave line sweep measurements using the Broadband Anritsu Site Master S810D/S820D, or the Site Master S810C/S820C. Topics include understanding differences and similarities of waveguide and coaxial cable in usage, instrument calibration, and line sweep measurements (Return Loss/VSWR, Insertion Loss, and Distance to Fault). This is a non-certified class.

**Course Length:** 1 Day

**Who should Attend:**

- Wireless Carriers
- Base Station OEMs
- Waveguide and coaxial cable installers
- Field Engineers
- Service Technicians
- Site Managers

**You will Learn:**

- Understand the technical aspects of line sweeping
- Learn how to set up a line sweep measurement
- Understand the effects of waveguide length, type and system components on sweeps
- Understand the effect of sweep rates and frequencies
- Learn how to identify, locate, document and resolve cable line transmission faults

**Prerequisites:** None

**Customizable:** No

**Course Content:**

Introduction to Line Sweeping

- What is a Line Sweep?
- What affects the Quality of your System and Line Sweeping?
- Different Methods of Line Sweeping
- Four Different Tests and What They Accomplish
- Comparison of Waveguide and Coaxial Cable

Line Sweeping Fundamentals

- Information Needed to Conduct a Line Sweep
- Sweeping the Cable or Waveguide Assembly



- Sweeping the Antenna
- Calibration Components

#### Line Sweeping Operations

- Instrument Calibration
- Operation
- Application
- Instrument Functions

#### Sample Traces

- Return Loss
- Cable Loss
- Distance to Fault

#### Lab 1: Line Sweep and Troubleshooting Techniques

- Instrument Familiarization
- Line Sweep Setup
- Understand Insertion Loss, Return Loss and Distance-to-Fault Testing
- Antenna Measurements

#### Lab 2: Troubleshooting

- Diagnose Line Sweep Problems
- Interpret Results

