

Class: Mastering the Spectrum Analyzer

The only class of its kind offered in the U.S., *Mastering the Spectrum Analyzer* will train you in the techniques that SILENT has distilled over fifty years of combined troubleshooting experience. TWO instructors will assist students in making specific EMC measurements including conducted, radiated, near-field, and conducted RF power.

Content emphasizes instrument settings, pitfalls, and tips rather than "button-pushing to run a test". Course attendees are encouraged to bring a spectrum analyzer or test receiver to class, and four different machines including the Rohde & Schwarz ESPI-3, ESL-3, Agilent E7405, and HP 8591EM will be available for class exercises.

Section 1: Jump Start

1. Preparing the instrument
2. Recalling and creating saved set-ups
3. Oops keys
4. Controlling vertical and horizontal & common mistakes
5. How to create excellent screen shots
6. Quick radiated and conducted emissions measurements
7. How to (not) damage the instrument

Section 2: Mastering Measurements

1. Amplitude settings & how to get maximum dynamic range
2. Optimizing the vertical and horizontal axis
3. Detectors
4. Demodulators
5. Bargraph displays
6. Lines, markers, and factors
7. Receiver versus spectrum analyzer mode. Scan tables
8. Real-time quasi peak for troubleshooting and source identification

Section 3: Advanced Techniques 1

1. Screen A and Screen B, min/max, A to C
2. Impact of Bandwidth. Distinguishing signals
3. Limit lines
4. Preselection
5. Input protection
6. Probing accessories
7. Broadband and narrowband measurements
8. Interpreting units
 - a. current measurements
 - b. field measurements
 - c. conducted emissions measurements
9. Must-have accessories

Section 4: Advanced Techniques 2 (time permitting)

1. Scalar network analysis