Interference Hunting: 4 Steps to Success
Once possible interference issues have been identified, it’s time to go to the nearest affected base station. Checking the base station receive signal, typically at an RX test port, is a good place to start. Interfering signals will often be obvious at this point. Once spotted, it is important to decide if the interfering signal is being produced by a base station fault or is from an external source.

If it is coming from the base station, Anritsu has an array of test equipment to identify faults. Passive intermodulation, bad transmitters, and damaged feedlines or antenna can all contribute to interference. Anritsu offers a full portfolio of base station test and measurement equipment for maintenance and optimization.

If the interference is coming from outside of the base station, a spectrum analyzer allows you to see the spectrum and better identify what type of interferer you are looking for based on the frequency, spectrum shape, time of day, and spectrum analyzer setup.

The results of your testing should give you an initial estimate of the emitter location, at least identifying the sector.
DRIVE TO INITIAL ESTIMATE

Traditional methods for locating sources of interference include manually making numerous measurements from multiple locations using a directional antenna. Triangulation is then used to approximate the signal location. This process is then iterated a number of times until the interferer is precisely located. Unfortunately, this is often labor-intensive and time consuming.

The Anritsu Mobile InterferenceHunter™ MX280007A software automates the interference hunting process. Using an off-the-shelf magnetic mount omnidirectional antenna, a Windows®-based tablet, and a spectrum analyzer, multiple measurements are automatically taken and processed by the software. Directions and voice prompts are provided to guide the driver closer and closer to the source of interference.

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Once the user gets close enough to the interferer location, the Anritsu handheld spectrum analyzer with a Yagi or other directional antenna can then be used to pinpoint the emitter. It is highly recommended that the Anritsu Handheld InterferenceHunter MA2700A device be used as part of this pinpointing operation. Anritsu offers a variety of antennas, filters, and accessories to aid in this process.

Types of Interferers Found

- Low power
- Narrowband, wideband
- Modulated
- Pulsed signals (similar to radar)
- Signals hidden in LTE uplink channels
- Pirate TV/radio stations and BTS cellular equipment operating illegally