

**Anritsu** Advancing beyond

# AM/FM Transmitter Measurements in the Field with the Field Master™ MS2080A



## RF Spectrum Analysis to 4/6 GHz

The Field Master MS2080A spectrum analyzer is available with frequency versions from 9 kHz to 4 or 6 GHz covering all common commercial AM and FM transmitter frequencies. The fast sweep speed coupled with an excellent Displayed Average Noise Level (DANL) make this an ideal instrument for fully characterizing transmitters in the field. Measure spurious and high order harmonics with the 12 built in markers and automate compliance to ITU-R FM spectrum masks with built in limit lines with Pass/Fail status.

## AM/FM Modulation Analyzer Option

Option 509 AM/FM Modulation Measurement includes a comprehensive analog transmitter measurement suite that delivers results for all common transmitter measurements. Preconfigured settings for AM, including single sideband radios and FM from 6.25 kHz narrow band through stereo broadcast standards, simplify setups and ensure repeatable results.

## Designed for Field Use

The field portable handheld design of the MS2080A with 5 watt damage protection, > 3.5 hours battery life, and large 10-inch high-resolution multitouch display make this ideal for transmitter measurements in the toughest environments.



## Key Features for AM/FM Transmitter Measurements

- 9 kHz to 4/6 GHz Frequency Range
- AM/FM Modulation Measurements (Option 509)
- Amplitude Modulation
  - AM and Single Sideband
  - Percentage Depth
  - Automated Audio SINAD and THD
  - Audio Demodulation
- Frequency Modulation
  - 6.25, 12.5, 25 kHz Presets
  - 75 kHz Stereo Broadcast Analysis
  - FM Deviation Measurement
  - Automated Audio SINAD and THD
- Quad Display of Transmitter
  - RF Spectrum
  - Audio Spectrum
  - Audio Oscilloscope
  - Comprehensive Demodulation Measurements



The fast-sweeping spectrum analyzer is ideal to capture all transmitter activity in the range of interest. In the broadcast FM spectrum, the frequency, deviation, and signal levels quickly identify any transmitter that is off frequency or over deviating and interfering with adjacent channels. The presence of illegal or unlicensed transmitters is a common cause of interference and monitoring the spectrum facilitates their detection.

For closely spaced LMR channels, activating the spectrogram will capture activity on all channels that can be recorded and replayed to monitor channel occupancy.

Use markers to identify up to 12 channels and select an individual channel for analysis.



Over deviation of FM transmitters is used to enhance signal reception, but may result in interference with adjacent channels. National regulators enforce spectral limit masks such as those defined by the ITU to reduce interference. Use the MS2080A limit mask feature with Pass/Fail indication to ensure compliance and prevent adjacent channel interference.

MS2080A fully supports the ITU requirements for user configuration of sweep time, max trace hold, RBW/VBW setting, and total measurement time.



The display of RF spectrum, demodulated audio spectrum, audio oscilloscope, and modulation quality results on a single screen provides a clear and concise overview of the transmitter performance.

For broadcast FM transmitters, the audio spectrum display highlights the level and frequency of the left and right audio channels plus the 19 kHz subcarrier tone and RDS modulation.

By modulating the transmitter with a fixed frequency test tone, typically 1 kHz, the SINAD and THD in the audio channel are automatically calculated and displayed.

A built in speaker provides an audio output of the demodulated transmitter with the ability to record the audio as a WAV file for channel identification where a record is required.

For sales and service, contact your local sales office:  
<https://www.anritsu.com>