

Field Master™ MS2070A

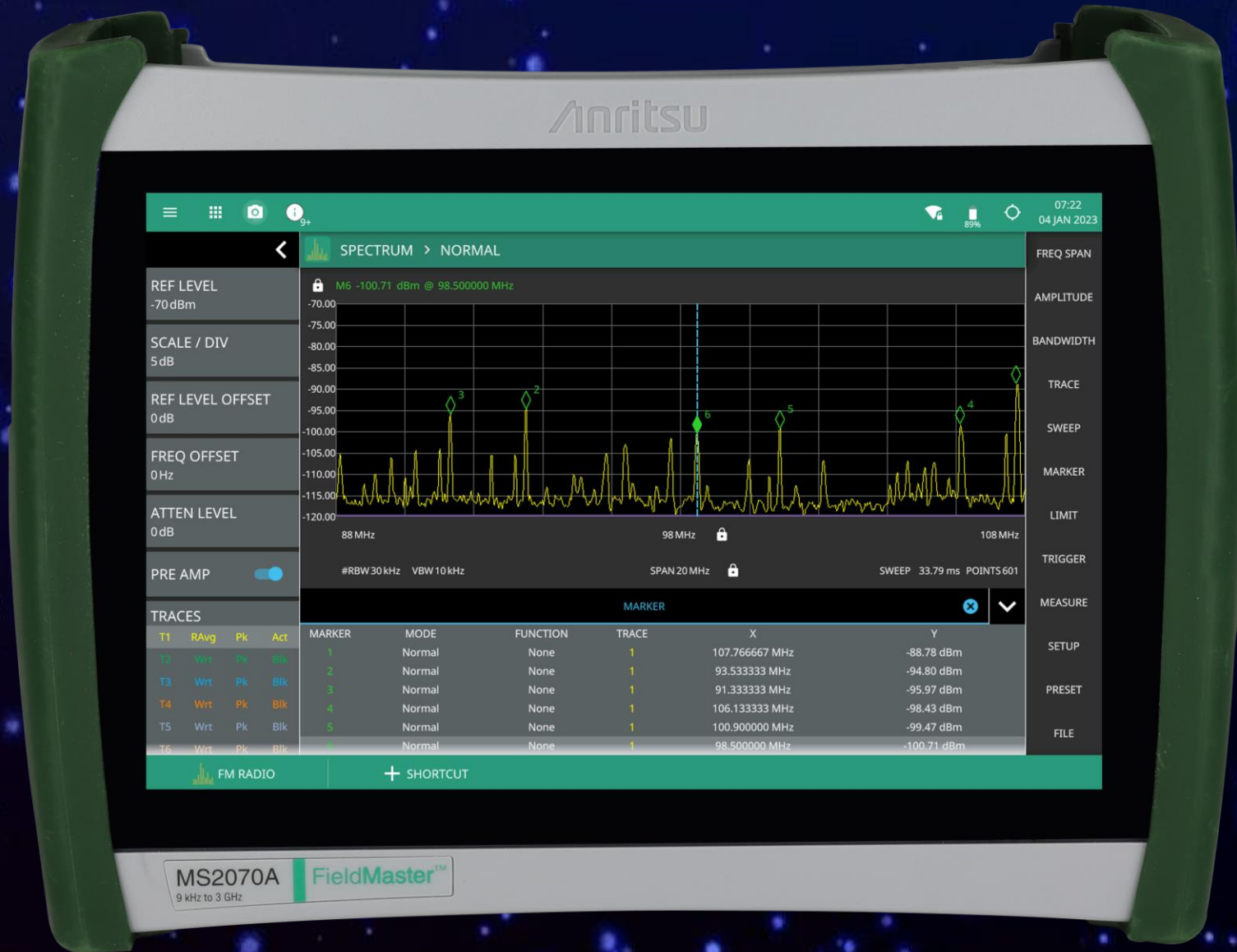
Product Introduction: Features and Applications

January 2023



Overview

Introducing the New MS2070A Field Master



3 GHz



HF – 3 MHz to 30 MHz

Military long range, amateur radio, international broadcasting



VHF – 30 MHz to 300 MHz

Maritime radio, LMR, Public FM broadcast, wireless microphones



UHF – 300 MHz to 3 GHz

LMR, Broadcast TV, 3G/4G cellular, ISM Bluetooth, Wi-Fi

Measurements you can trust



Field Master MS2070A offers the same RF performance to 3 GHz as MS2080A.



All key RF specifications are warranted.

Fully featured – for faster, easier measurements with clear analysis of results



Field Master MS2070A provides all the essential tools to make measurements easier.



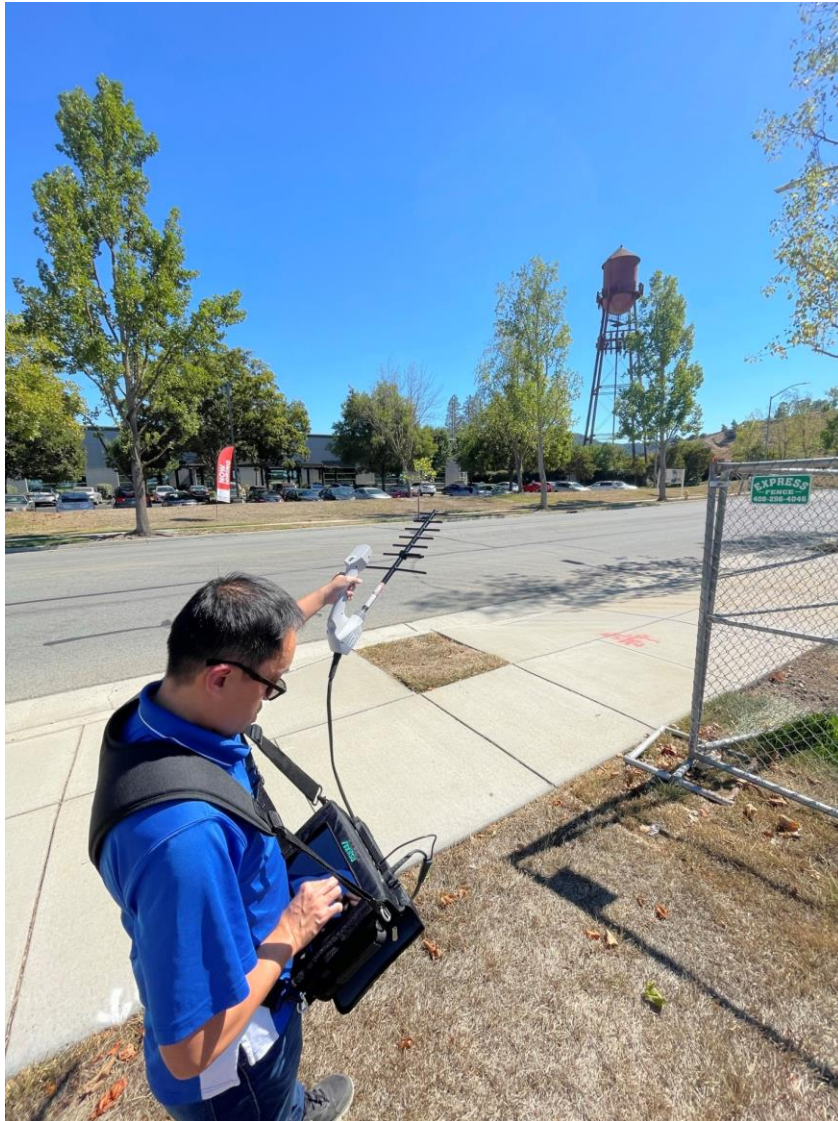
6 Traces, 5 Detectors, Spectrogram, Limit Lines, Smart Measurements, Zero Span, AM/FM Demods, GNSS, Record & Playback, 12 Markers, Ethernet & USBTMC

Markets and Applications



Transmitter quality measurements in the field:

- Harmonics
- Spurious
- OBW
- Channel Power
- Modulation Shape
- Interference



Interference Hunting:

- Great sensitivity
 - Recommend preamplifier option
- Fast sweep speed
- MA2700A support
 - Triangulation
 - Radar plots
- AM/FM demod
- Audio signal strength tone
- Shoulder harness
- Extended battery pack

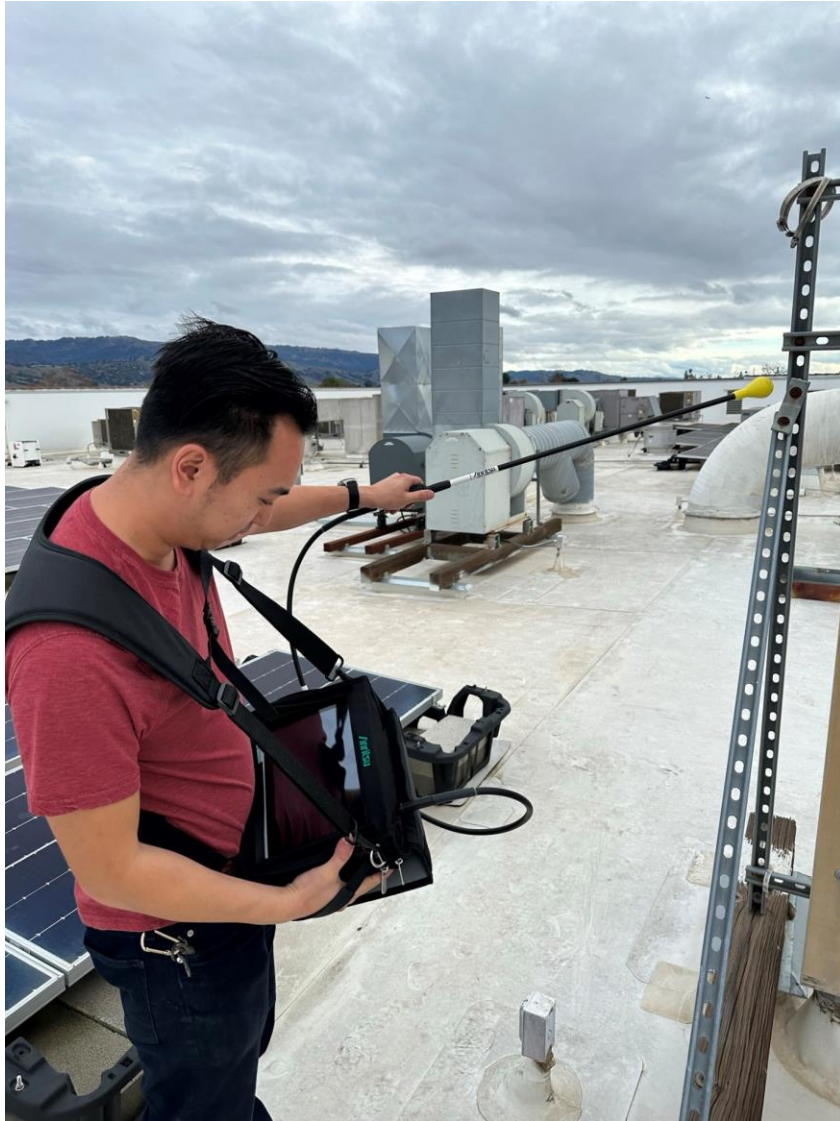
Mobile Interference Hunting



MIH Compatible:

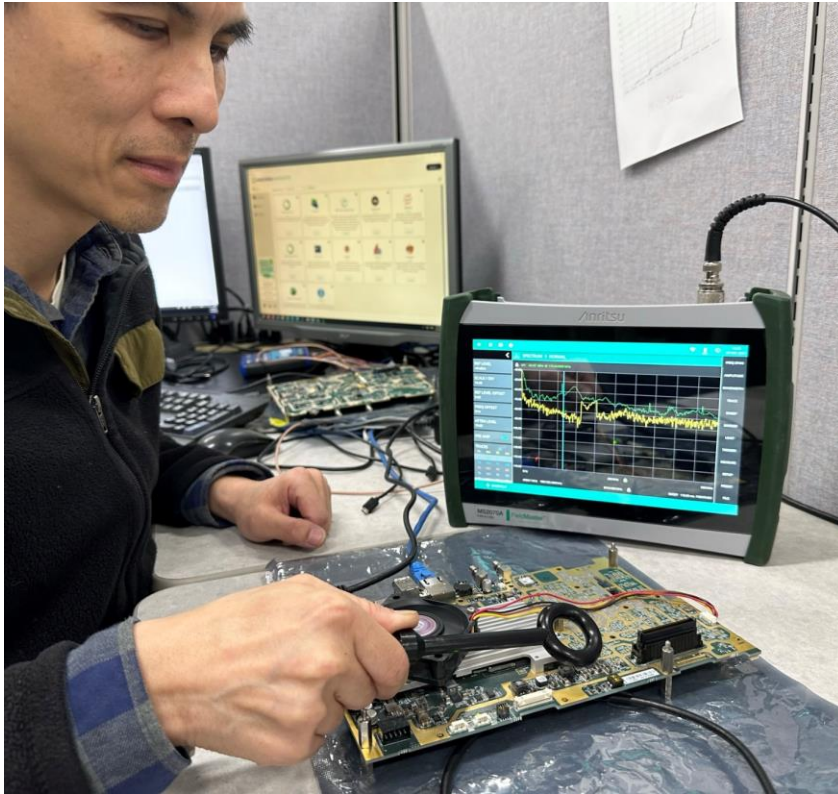
- Add MX280007A MIH PC application for hunting down interferers in the VHF and UHF bands
- Field proven and reliable

Rooftop PIM Hunting



PIM Hunting:

- With accessory 2000-1884-R PIM Hunter
- Set up channel power measurement at suspect frequency
- Fast sweep speed for responsive searches
- Audio tone for precise location of PIM sources



EMC Testing:

- With accessory kit 2000-1689-R EMI Near Field Probe Kit (pictured)
- Gain confidence in product performance before submitting to a test house
- 3 Magnetic (H) and 2 Electric (E) Field Probes in kit
- Fine probe tip resolution for component level signal source identification
- Probe antenna correction factors built into MS2070A software





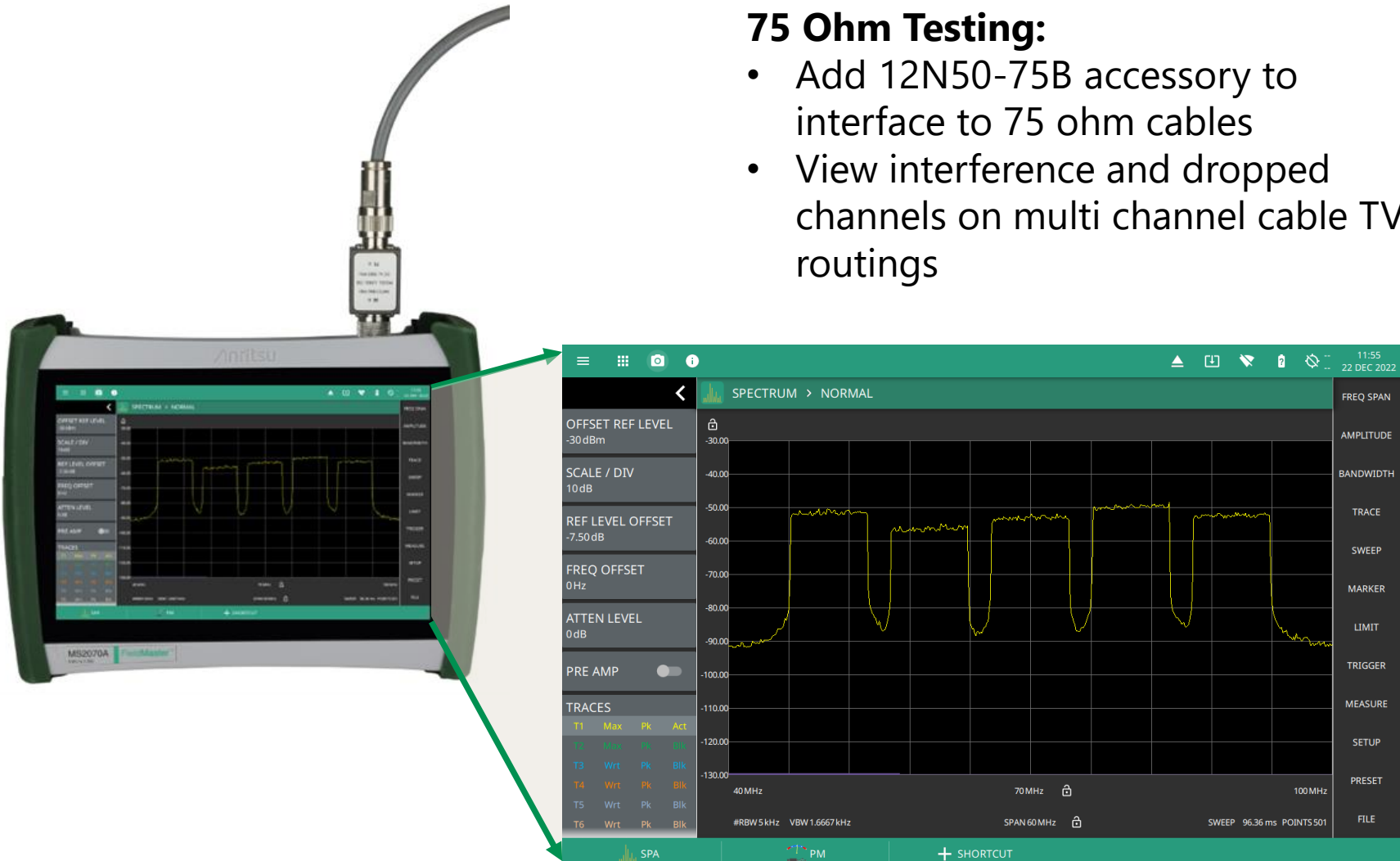
Add more spectrum analyzers to your lab:

- Viewing signals is a basic requirement of all RF engineers
- Complement large bench top analyzers with more portable lower cost instruments for common tasks such as LO validation

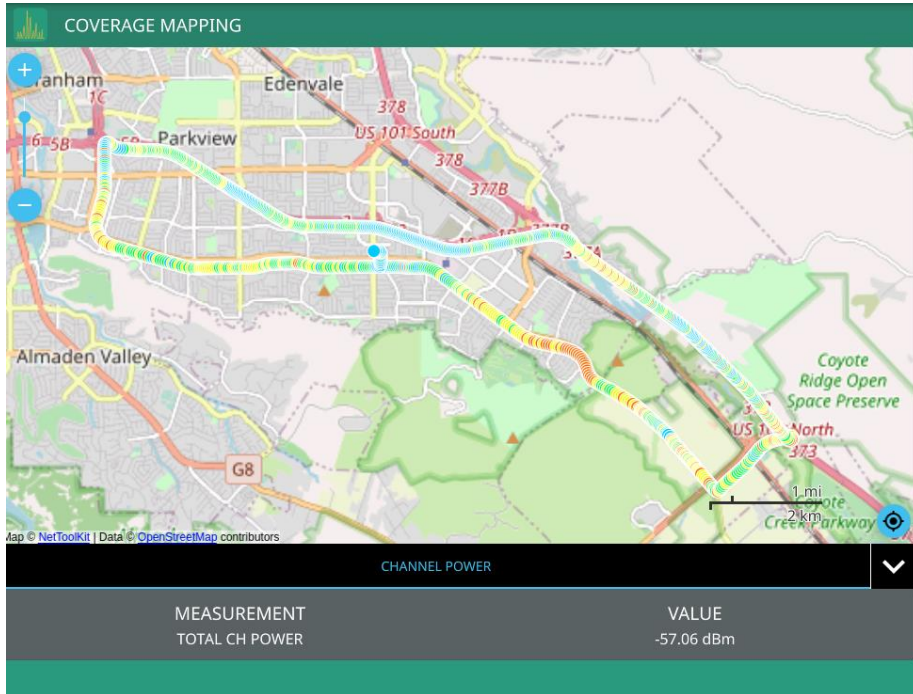
75 Ohm Cable TV Testing

75 Ohm Testing:

- Add 12N50-75B accessory to interface to 75 ohm cables
- View interference and dropped channels on multi channel cable TV routings



Channel Power and RSSI Coverage Mapping



Coverage Mapping Option:

- Use channel power or RSSI to map transmitter site coverage

Key Features and Specifications

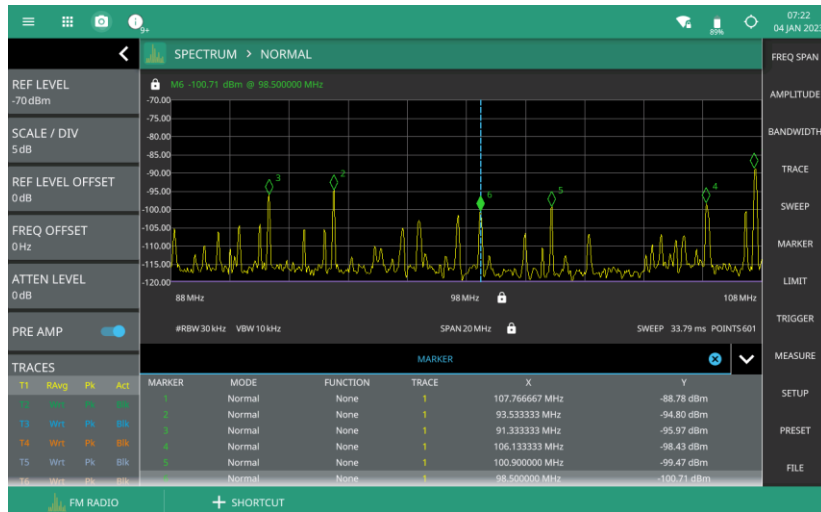
MS2070A Key Features

Key Feature	Benefit
Swept Spectrum Analysis from 9 kHz to 3 GHz	Covers all common HF, VHF, and UHF frequency bands used for LMR and commercial communications
Sweep Speed of 32 GHz/s	Fast sweep speed captures intermittent signals and provides positive response
DANL: < -160 dBm with optional preamp	Find low-level interferers
Amplitude Accuracy: ± 1 dB	For accurate level measurements
Damage Level: 5 Watts	Protection from accidental overload in the field
Spectrogram	To capture and record intermittent and drifting signals
AM/FM Audio Demodulation	To identify signals of interest
Smart Measurements: Channel Power, Occupied Bandwidth, Adjacent Channel Power, Spectral Emissions, and Field Strength	Quick and repeatable setup of common measurements
Spectrum Record and Playback	Record traces and play back at slow speed to track all spectrum activity
USB Power Sensor Support	For precision power measurements of transmitters
Zero Span	For pulse measurements
Quasi Peak Detector	For CISPR compliant interference measurements
Interference Hunting	With directional antenna and MA2700A eCompass handle
10-Inch Multitouch Display	Provides quick and easy configuration and results presentation
Connectivity: Ethernet, USBTMC	Multiple control options
Option Wi-Fi	For wireless connectivity
Option GNSS: GPS, Galileo, GLONASS, BeiDou	For use in all continents

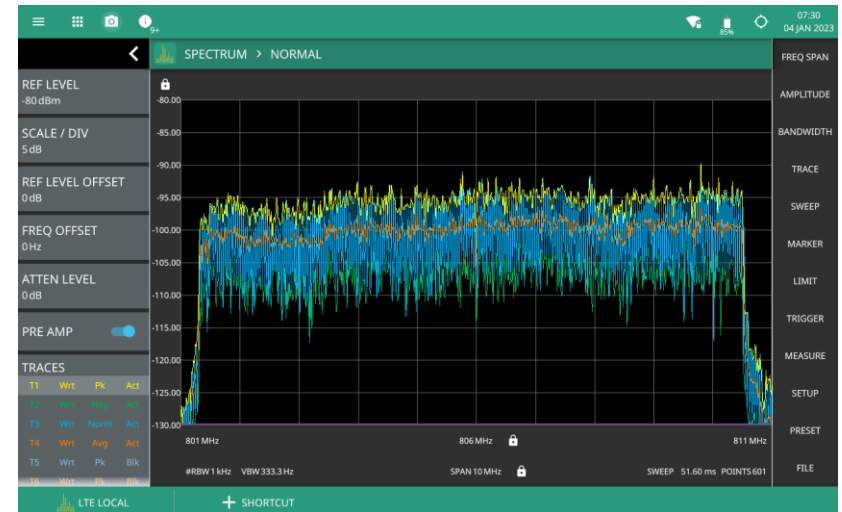
MS2070A Key Specifications

Specification	
Sweep speed	32 GHz/s
Phase noise	-97 dBc/Hz typical @ 100 kHz offset
DANL	Preamp off -150 typical Preamp on -167 typical (Preamp is an option on MS2070A)
Maximum input signal	+30 dBm
Dynamic range	105 dB typical
Input damage level	+37 dBm (5 watts)
Amplitude accuracy	± 1 dB
Resolution bandwidth in sweep mode	1 Hz to 3 MHz
Resolution bandwidth in zero span	1 Hz to 5 MHz
Frequency accuracy	Aging: $\pm 1.0 \times 10^{-6}$ per year Accuracy: $\pm 2.8 \times 10^{-7}$ (-10 °C $\pm$ 55°C) plus aging

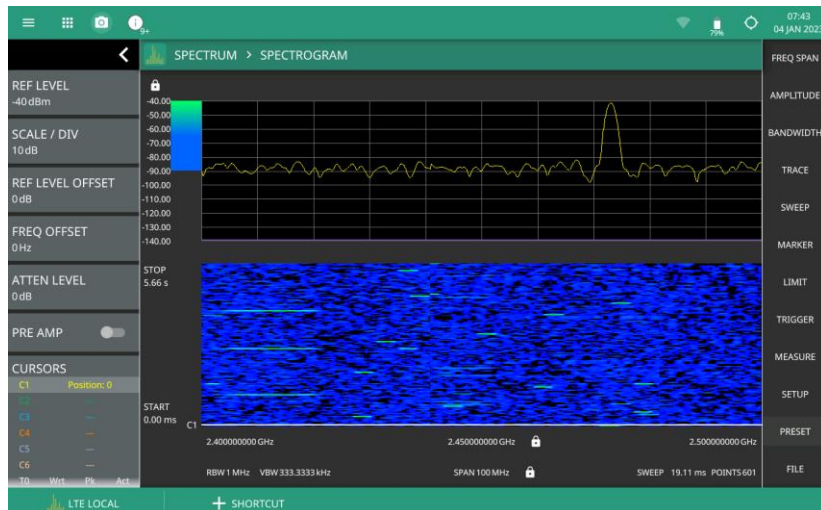
Fully Featured



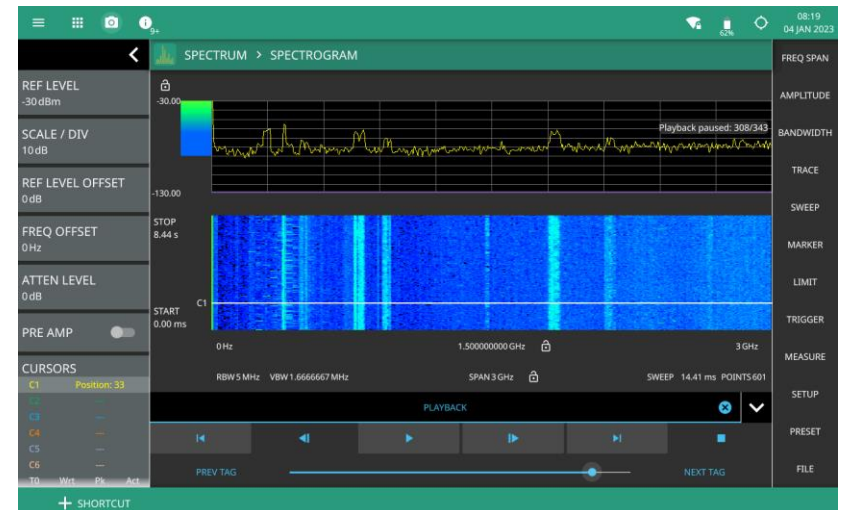
12 Markers, Counter, Noise Bandwidth, Quasi Peak



6 Traces with Independent Detectors

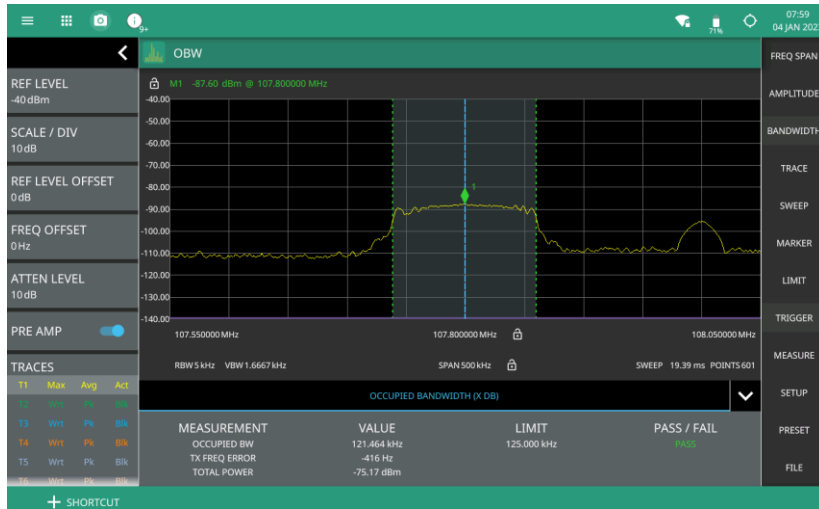


Spectrogram

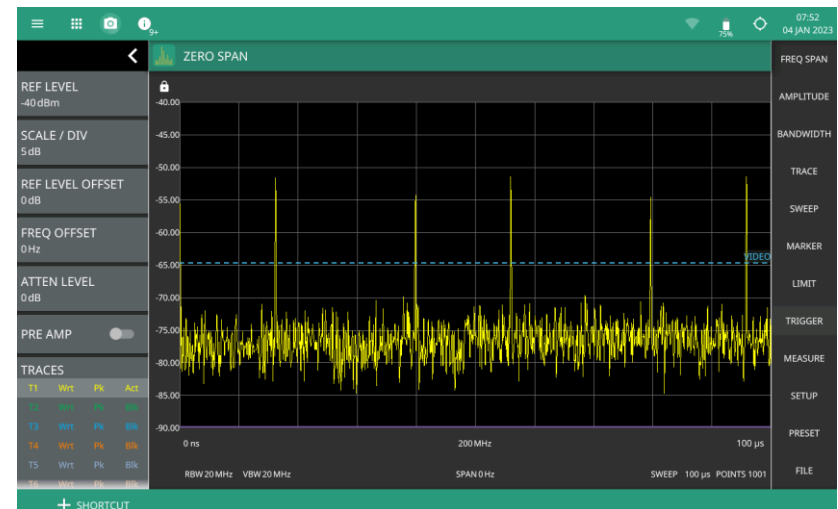


Trace Record & Playback

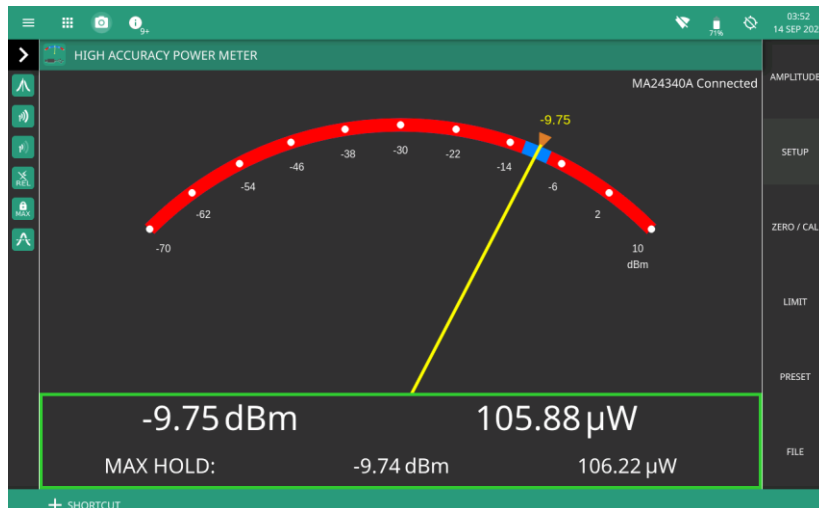
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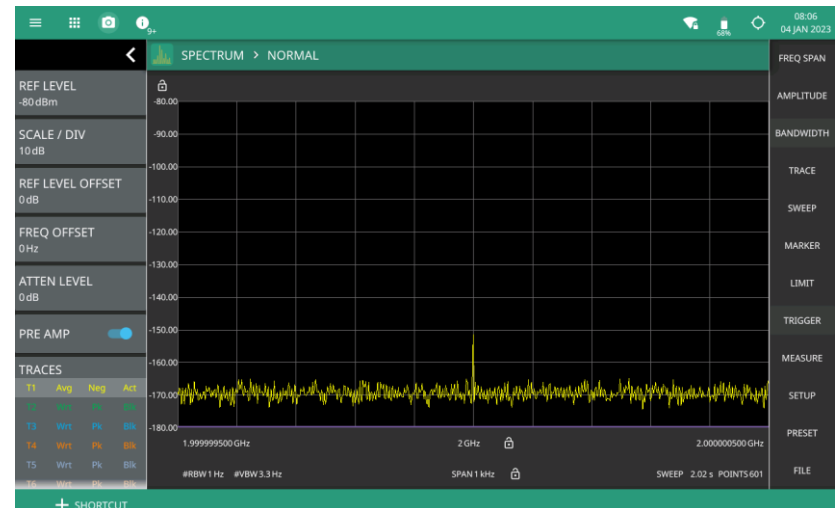
Smart Measurements: CP, OBW, ACP, SEM



Zero Span



USB Power Sensor Support (option)



Preamplifier for Small Signal Detection (option)



5 Watts Overpower Protection



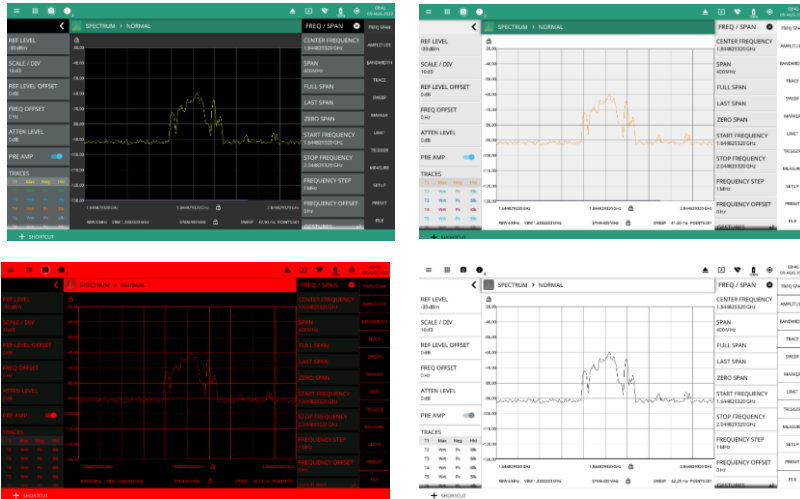
IP52 Rated in Soft Case



Toughened IK08 Rated Display



Ever Ready
Soft Case Included



Four Display Themes
for Optimized Viewing Comfort



4 Charging Options for
Full Day's Use



Shoulder Harness
for All Day Comfort



-10°C to +55 °C
Operational Range

The Anritsu Field Master™ Portfolio

Anritsu Handheld Spectrum Analyzer Portfolio

	Field Master™ MS2070A	Field Master™ MS2080A	Field Master Pro™ MS2090A
Spectrum Analyzer frequency range	9 kHz to 3 GHz	9 kHz to 4 GHz	9 kHz to 54 GHz Option dependent
RTSA	N/A	40 MHz bandwidth	110 MHz bandwidth
5G measurements	N/A	FR1 only	FR1 and FR2
LTE	N/A	Yes	Yes
Interference hunting	Yes	Yes	Yes
Coverage mapping	Yes, Power only	Yes, Power and demod	Yes, Power and demod
USB Power Sensor support	Yes	Yes	Yes
Line Sweep with S331P	N/A	Yes	Yes
Pulse Analyzer option	N/A	N/A	Yes
IQ Capture and Streaming	N/A	N/A	Yes
EMF measurements	N/A	N/A	Yes
Display	Common GUI with 10-inch, high-resolution multitouch screen		

Building the Field Master Range

Field Master Pro MS2090A: Performance and Features to 54 GHz



Field Master MS2070A: Basic Spectrum Analysis to 3 GHz

Field Master MS2080A: Spectrum Analysis to 4 GHz with RTSA and Cellular Demod Options

Field Master™

MS2070A

Handheld field portable RF spectrum analyzer 4 GHz frequency range with optional real-time spectrum analyzer and cable and antenna analyzer. For interference hunting and 5G/LTE base station testing

REQUEST QUOTE

DOWNLOADS



OVERVIEW

APPLICATIONS

SPECIFICATIONS

OPTIONS

Description

Features

Industries

Technologies

The MS2080A builds on Anritsu's pioneering history of developing reliable and dependable instruments for the world's most demanding RF measurements in the toughest environments. Weighing less than 9 pounds (4 kg), the MS2080A is small, compact, and easy to carry.

When hunting for interfering RF signals in the field, MS2080A offers a wide range of features to identify and locate the source. A fast sweep speed of 30 GHz/s coupled with AM/FM demod and RF source geolocation help pinpoint the position of interfering signals fast. The optional real-time spectrum analyzer captures even the shortest of bursted or TDD signals and the addition of the S331P Site Master enables cable and antenna line sweep measurements on the same instrument.

LTE and 5G base station measurement options support operators and contractors perform the essential measurements when installing or optimizing the network.

For use on the bench, the hard case with rubberized easy grip bumpers and integrated kick stand makes the MS2080A an ideal instrument for general purpose lab measurements where portability and space are at a premium.

IMAGES



For more information including brochures and data sheets visit:

<https://www.anritsu.com/en-us/test-measurement/products/ms2070a>

