

Introducing the New Field Master™ MS2080A Spectrum Analyzer

October 2022

11420-00038A



Overview

Introducing the New MS2080A Field Master



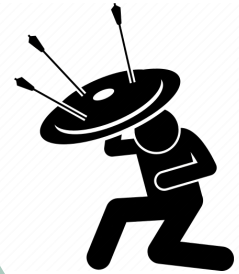
A New Standard for RF Spectrum Analyzers

**45 GHz/
second**

FASTER

BETTER

SMARTER



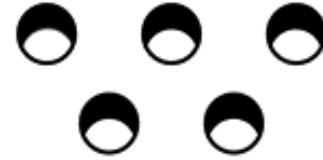
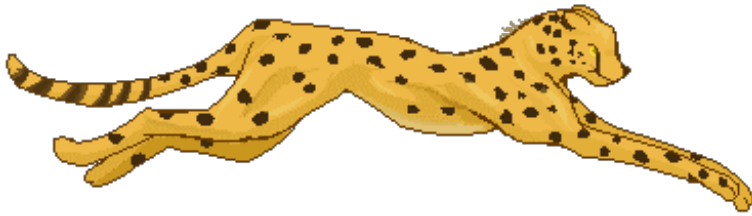
PROTECTION



MEASUREMENTS



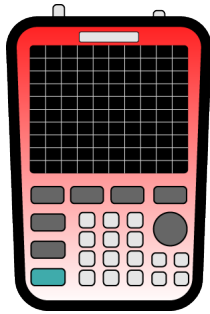
Faster Sweeps to See More Signals



FASTER 45 GHz/second

FASTER sweeps
more **RESPONSIVE**

Better Protection Less Accidental Damage



5 WATTS
TRANSMITTER



Accidental input overload is the main cause of field failures for portable spectrum analyzers.

Designed to Withstand Life in the Field



Field Master MS2080A screen is IK08 rated. Protected against 5 joules of impact. This is the equivalent of a 1.7 kg steal ball being dropped from 300 mm above the product.



Soft Case Provides IP Rating

IP (Ingress Protection) Ratings Guide

SOLIDS		WATER	
1	 Protected against a solid object greater than 50 mm such as a hand.	1	 Protected against vertically falling drops of water. Limited ingress permitted.
2	 Protected against a solid object greater than 12.5 mm such as a finger.	2	 Protected against vertically falling drops of water with enclosure tilted up to 15 degrees from the vertical. Limited ingress permitted.
3	 Protected against a solid object greater than 2.5 mm such as a screwdriver.	3	 Protected against sprays of water up to 60 degrees from the vertical. Limited ingress permitted for three minutes.
4	 Protected against a solid object greater than 1 mm such as a wire.	4	 Protected against water splashed from all directions. Limited ingress permitted.
5	 Dust Protected. Limited ingress of dust permitted. Will not interfere with operation of the equipment. Two to eight hours.	5	 Protected against jets of water. Limited ingress permitted.
6	 Dust tight. No ingress of dust. Two to eight hours.	6	 Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities.
		7	 Protection against the effects of immersion in water between 15 cm and 1 m for 30 minutes.
		8	 Protection against the effects of immersion in water under pressure for long periods.

Rating Example:

IP65

INGRESS PROTECTION



IP52 rated in standard soft case

Smarter Measurements: Greater Productivity

Anritsu
Advancing beyond



Interference Hunting
Polar Plot



Interference Hunting
Geolocation



SEM



Channel Power



Cable &
Antenna Analyzer



AM/FM
Demodulation



Zero Span



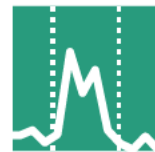
Spectrogram



Limit Lines
Save on Event



ACPR



OBW

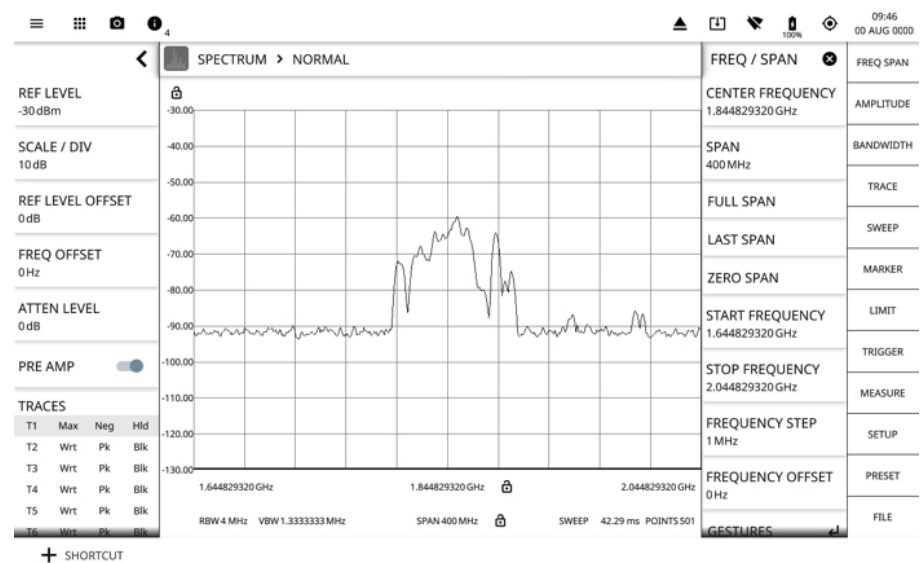
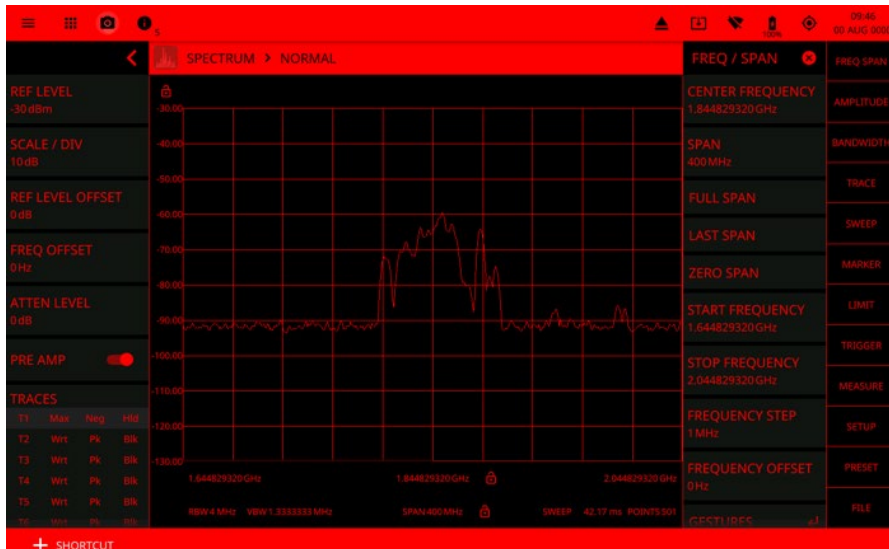
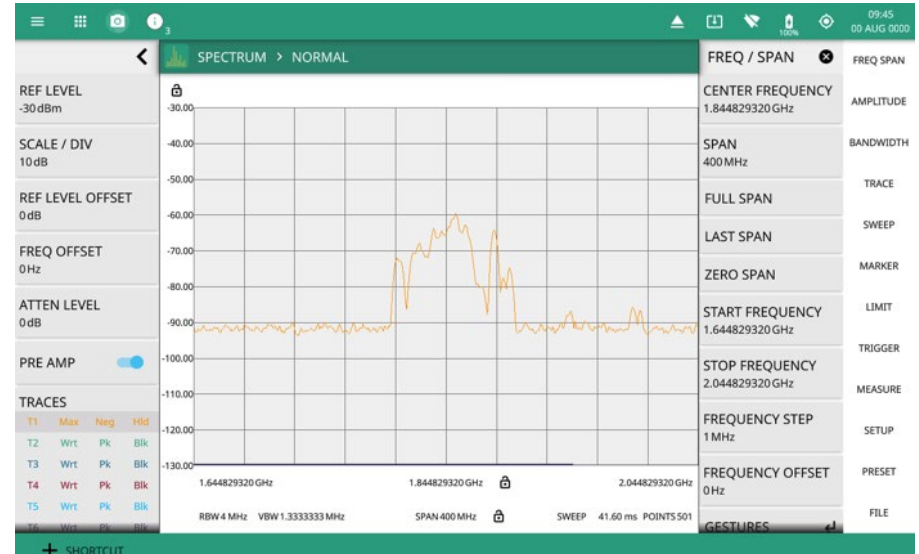
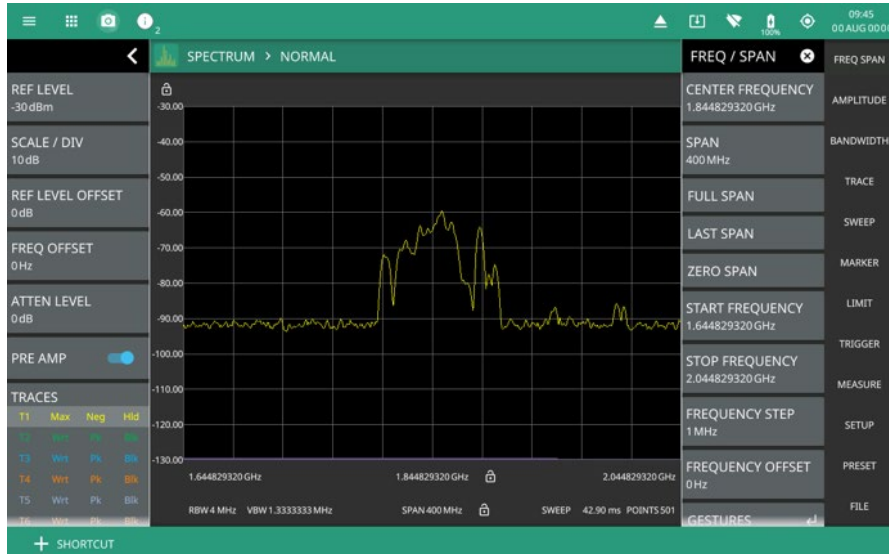


10-Inch Multi-Touch Screen



High resolution 1280 x 800 resolution
Easy to enter data : Easy on the eye

Display Themes to Optimize Viewing Comfort



Flexible Charging Options



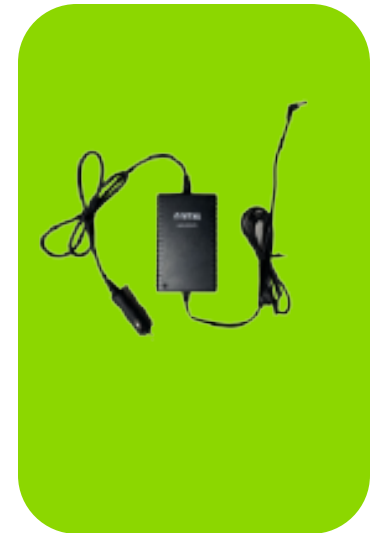
Internal battery
(Standard)



AC power supply
(Standard)



Optional accessory
power pack



Optional 12 volt
vehicle supply

You Already Know How to Use it



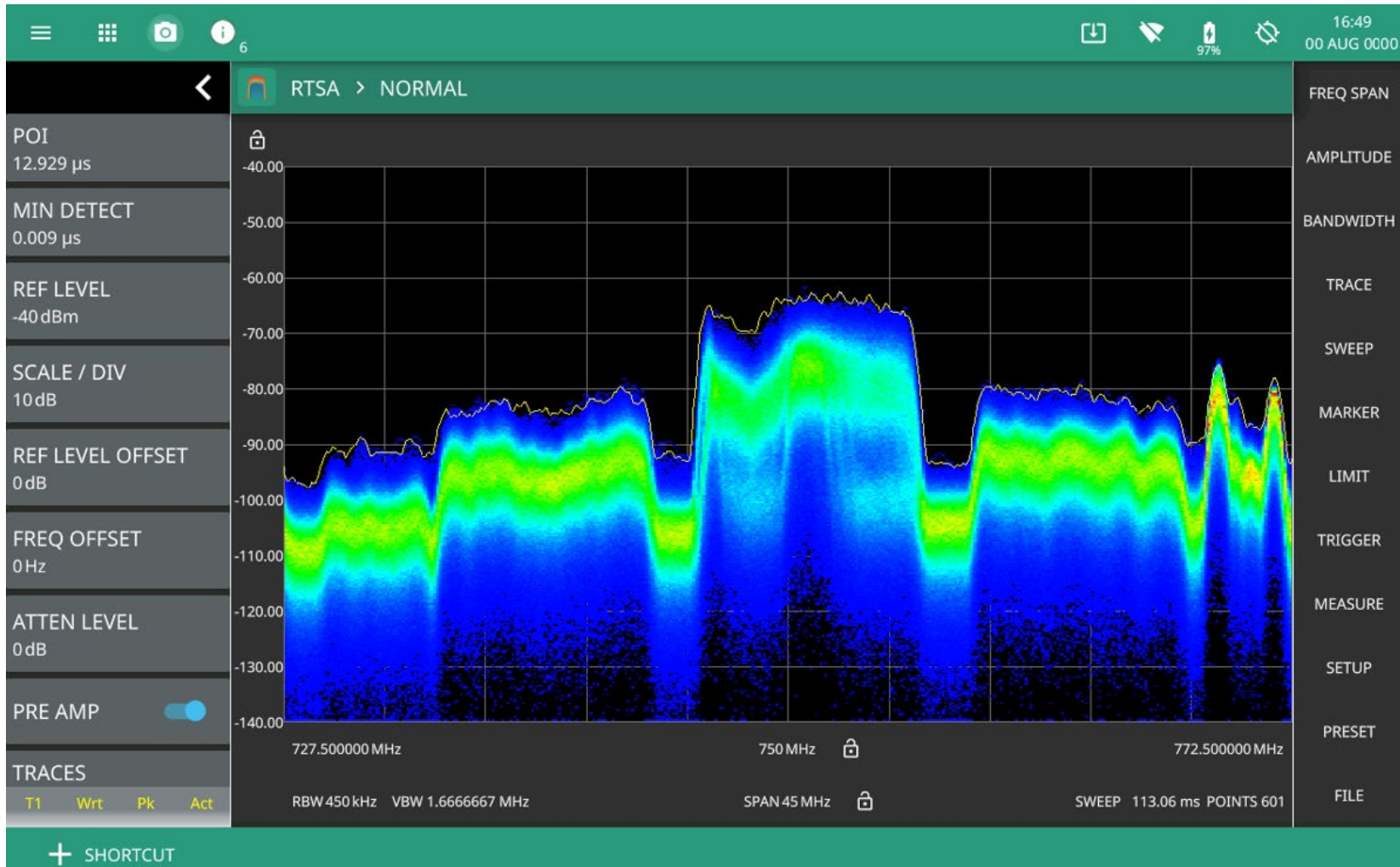
Field Master MS2080A shares the same user interface as
Field Master Pro™ MS2090A

Cable & Antenna Analyzer Support



Test feeder cables and antennas on-site
factory calibration speeds set up – No need for test port cables

40 MHz RTSA



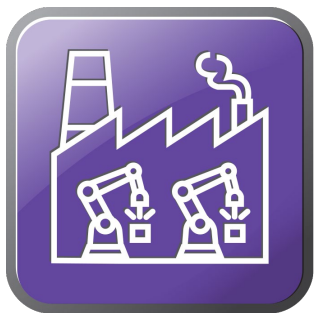
View spectrum in real-time to capture interferers

Applications



Interference Hunting

Main Cause of Network Degradation – RF Interference



Heavy Industry



Cellular Radios



Repeater



Arc Welding



Radars



LMR Radios



Consumer Goods

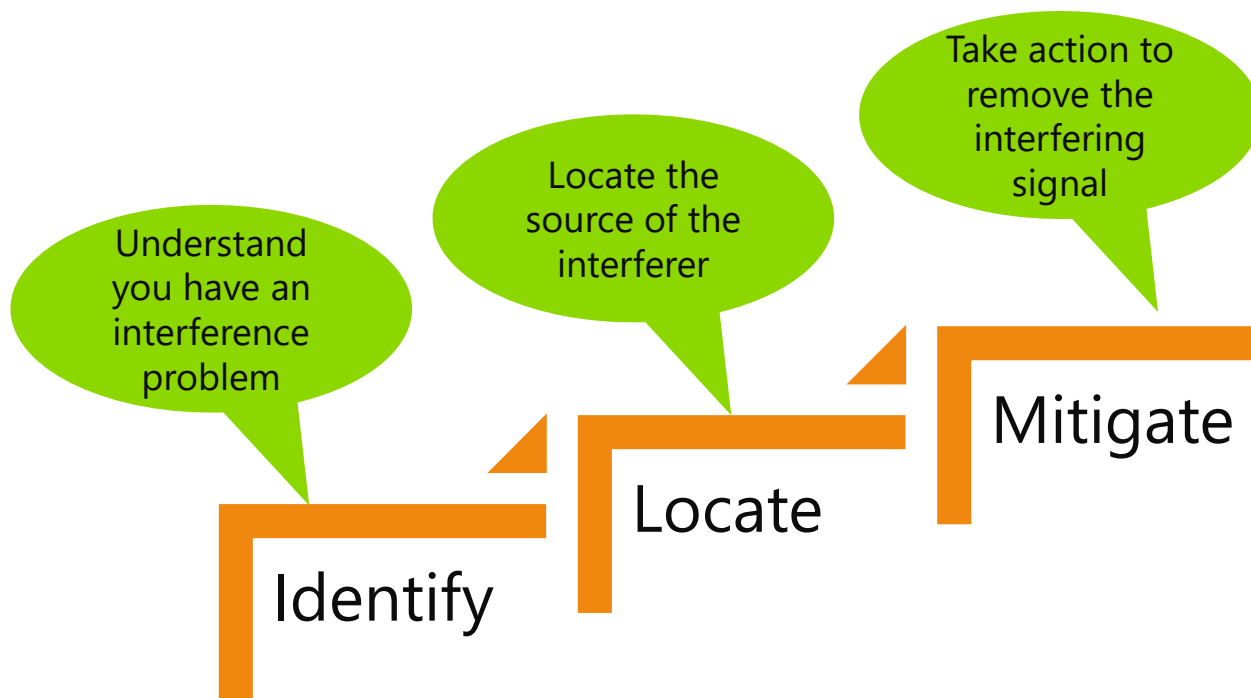


Microwave Ovens



Radio Links

The Interference Hunting Process



IDENTIFY you have an interfering signal with the fast sweeping full span spectrum analyzer and Real Time Spectrum Analyzer

LOCATE the source of the interferer with the tools in the interference hunting option and MA2700A direction finding antenna

MITIGATE the interferer and confirm the absence of additional sources

InterferenceHunter option is available in Swept Spectrum and RTSA mode (if the RTSA option is installed)



1. Use InterferenceHunter swept spectrum mode when wide frequency sweeps are required



2. If the instrument has InterferenceHunter option and RTSA option and the frequency of the signal-of-interest has already been identified, the RTSA mode offers faster measurement response

Field Master MS2080A option 0024 InterferenceHunter includes features specifically designed to help in the Locate phase of an interference hunt:



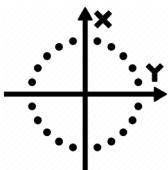
1. Fast audio tone (the Wooooo sound)
 - Tone changes in pitch relative to channel power signal strength



2. AM/FM audio demodulation
 - Listen to sound of interfering signal



3. Interference mapping (triangulation)
 - Geolocate source of interfering signal



4. Polar diagrams
 - Identify location of multiple sources of interference

Field Master MS2080A – Interference Hunting

**2000-14XX-R
Yagi antenna**

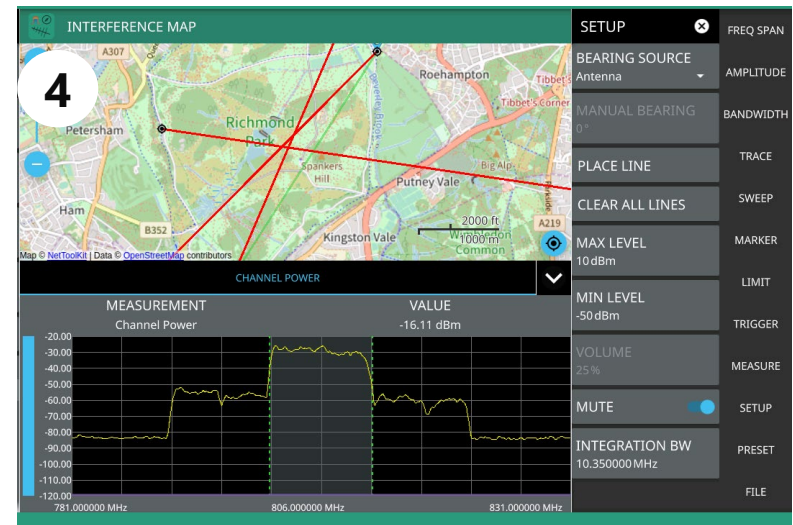
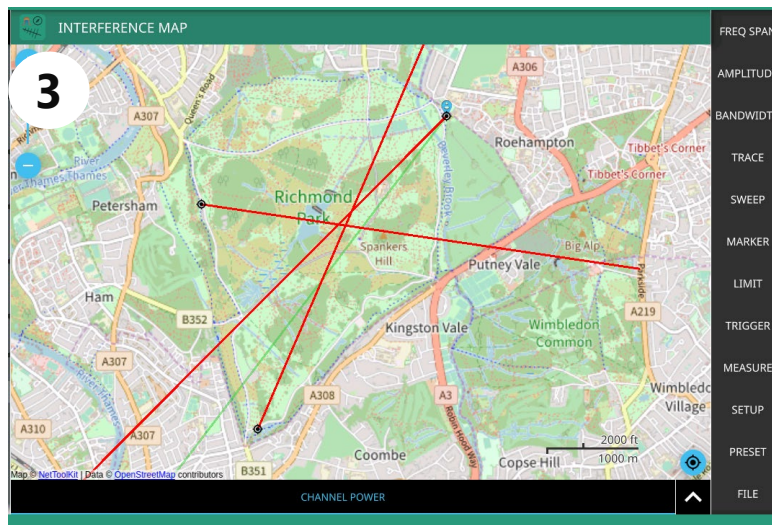
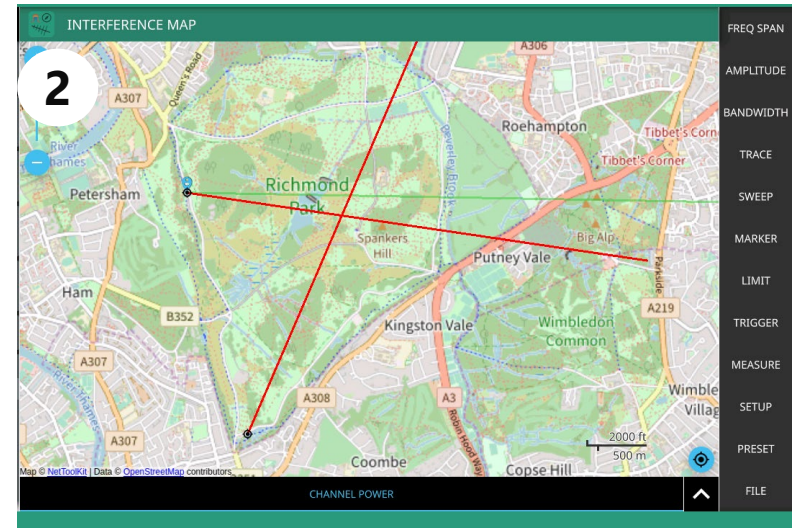
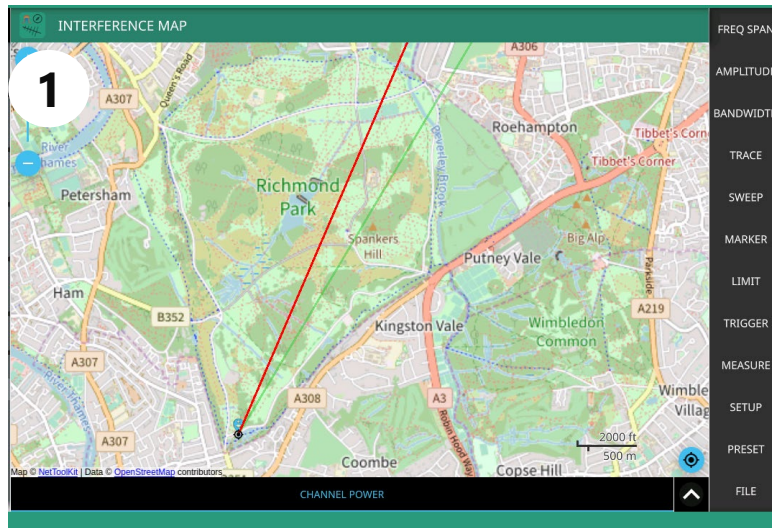
**MA2700A
InterferenceHunter**

**MS2080A with
Option -0024**

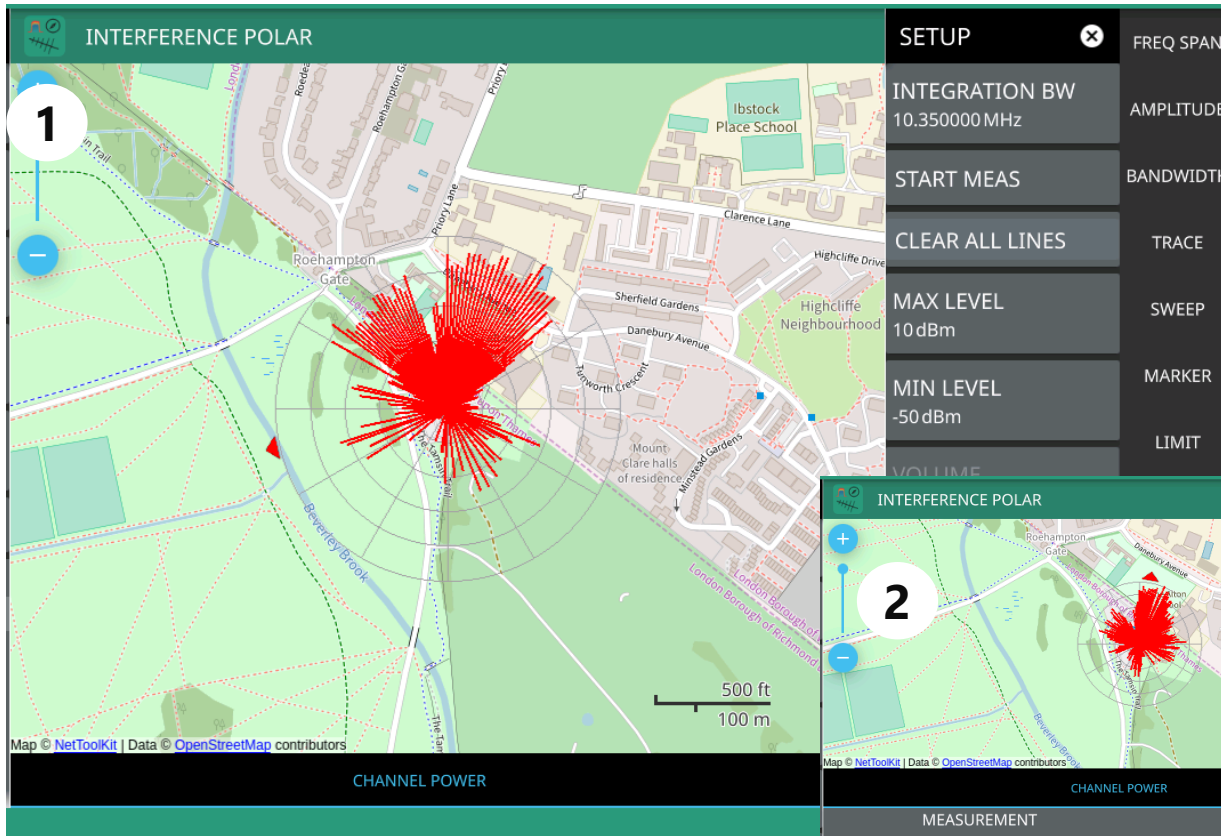
**2000-2053-R
Shoulder harness**



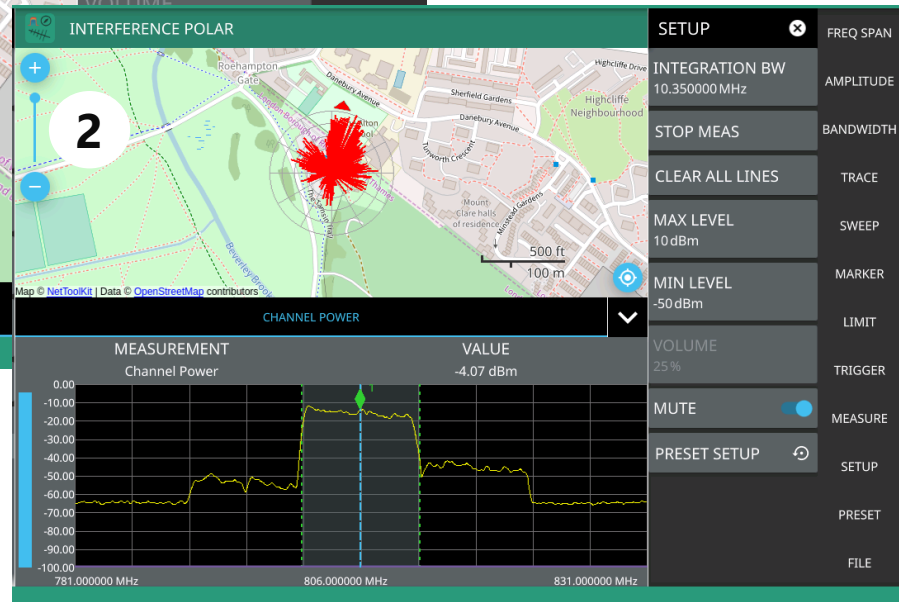
Field Master MS2080A – Interference Mapping



Field Master MS2080A – Polar Plot



Polar plot highlights the presence of two transmitters in different directions



Use the split screen to view channel power and confirm frequency of transmitter under investigation



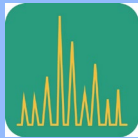
Compatible with Mobile Interference Hunter software for active drive location of interfering signals over a wide area

5G NR and LTE Network Optimization



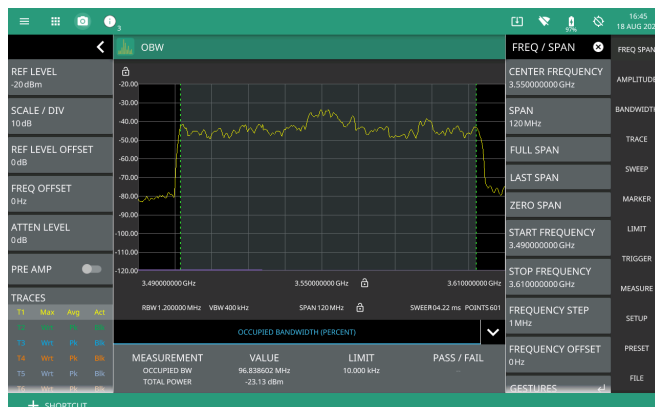
Courtesy of MIT

Transmitter Quality



Spectrum Based Measurements

Channel Power
Adjacent Channel Power
Occupied Bandwidth
Spectral Emission Mask
EIRP

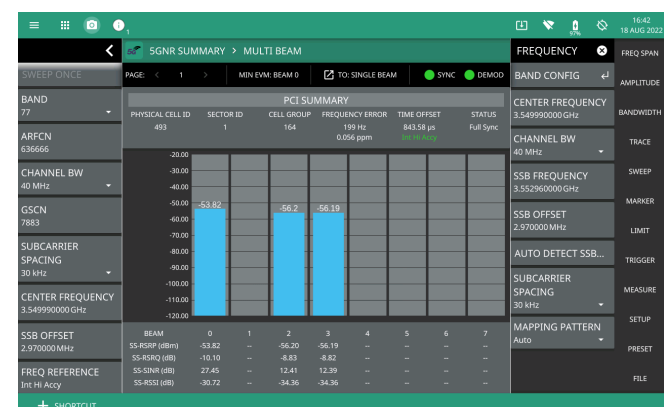


Modulation Quality



Vector Signal Analyzer Based Measurements

PCI
Frequency Error
Time Offset
RSRP/RSRQ/SINR/RSSI
Constellation
Error Vector Magnitude

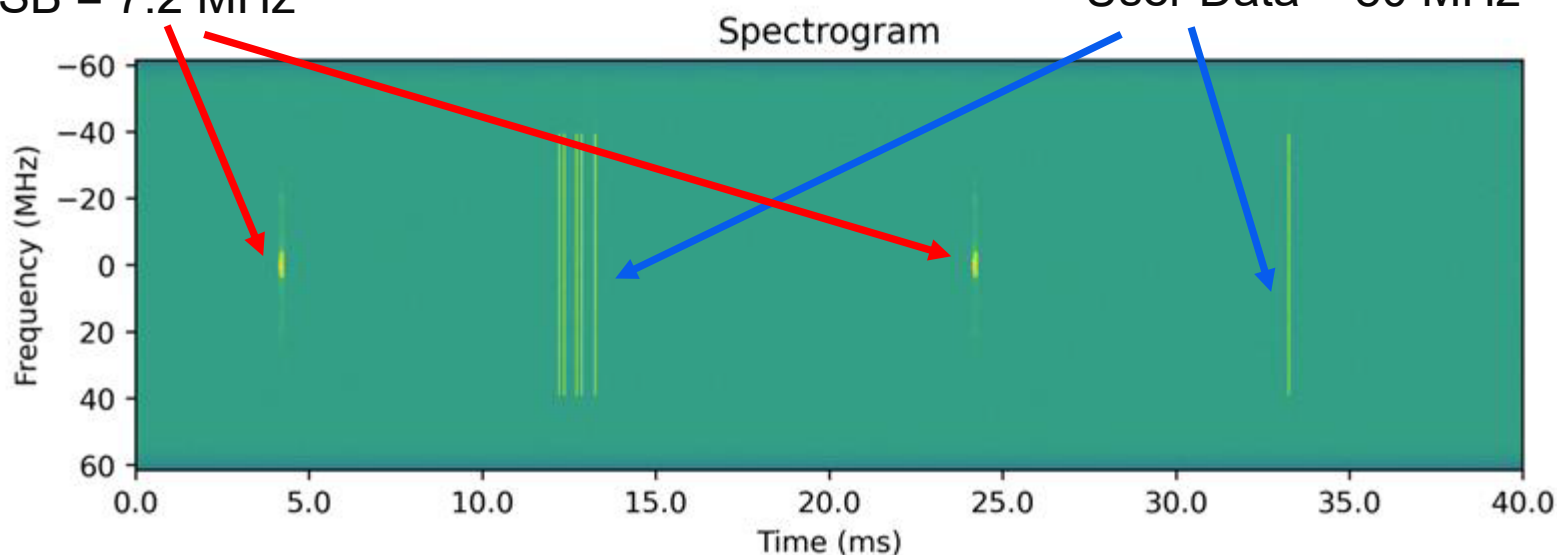


5G Sync Signal Block (SSB) Definition

Frequency	SCS	# Subcarriers	SSB Bandwidth
FR1	15 kHz	240	3.6 MHz
	30 kHz	240	7.2 MHz
FR2	120 kHz	240	28.8 MHz
	240 kHz	240	57.6 MHz

SSB = 7.2 MHz

User Data = 80 MHz

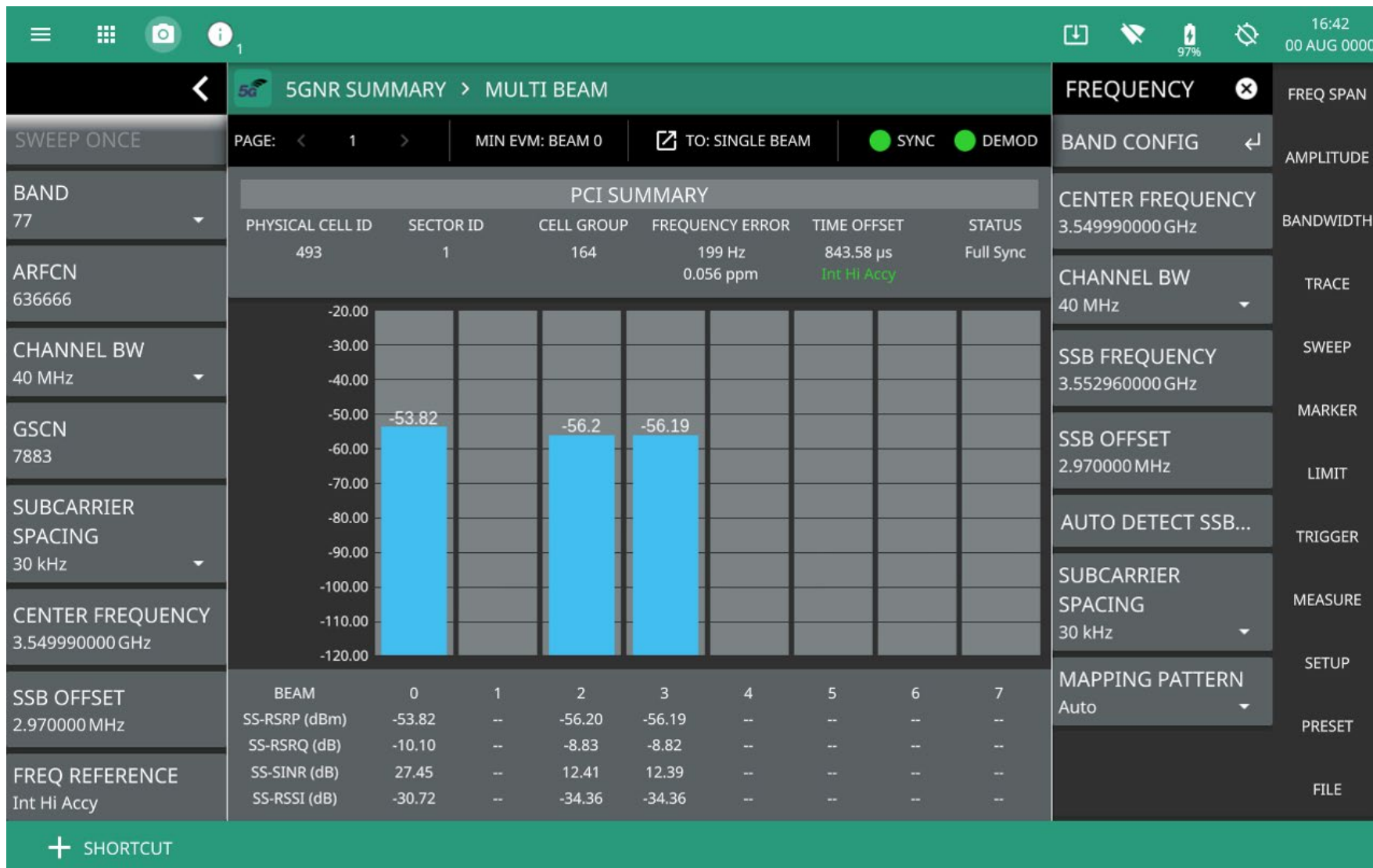


40 ms = 4 Frames

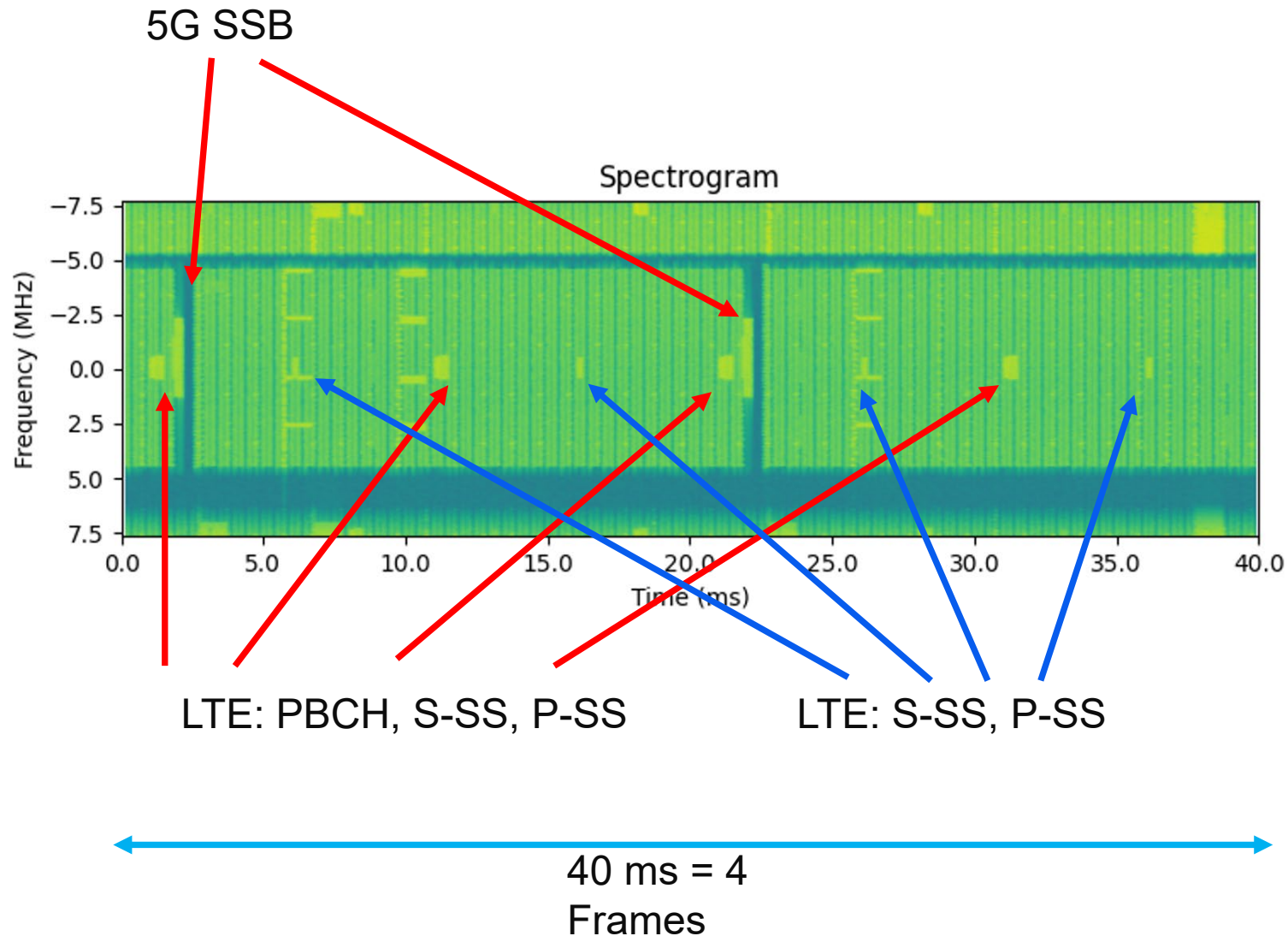
5G Transmitter Quality – 100 MHz Channel Power



5G Modulation Quality – SSB Measurement



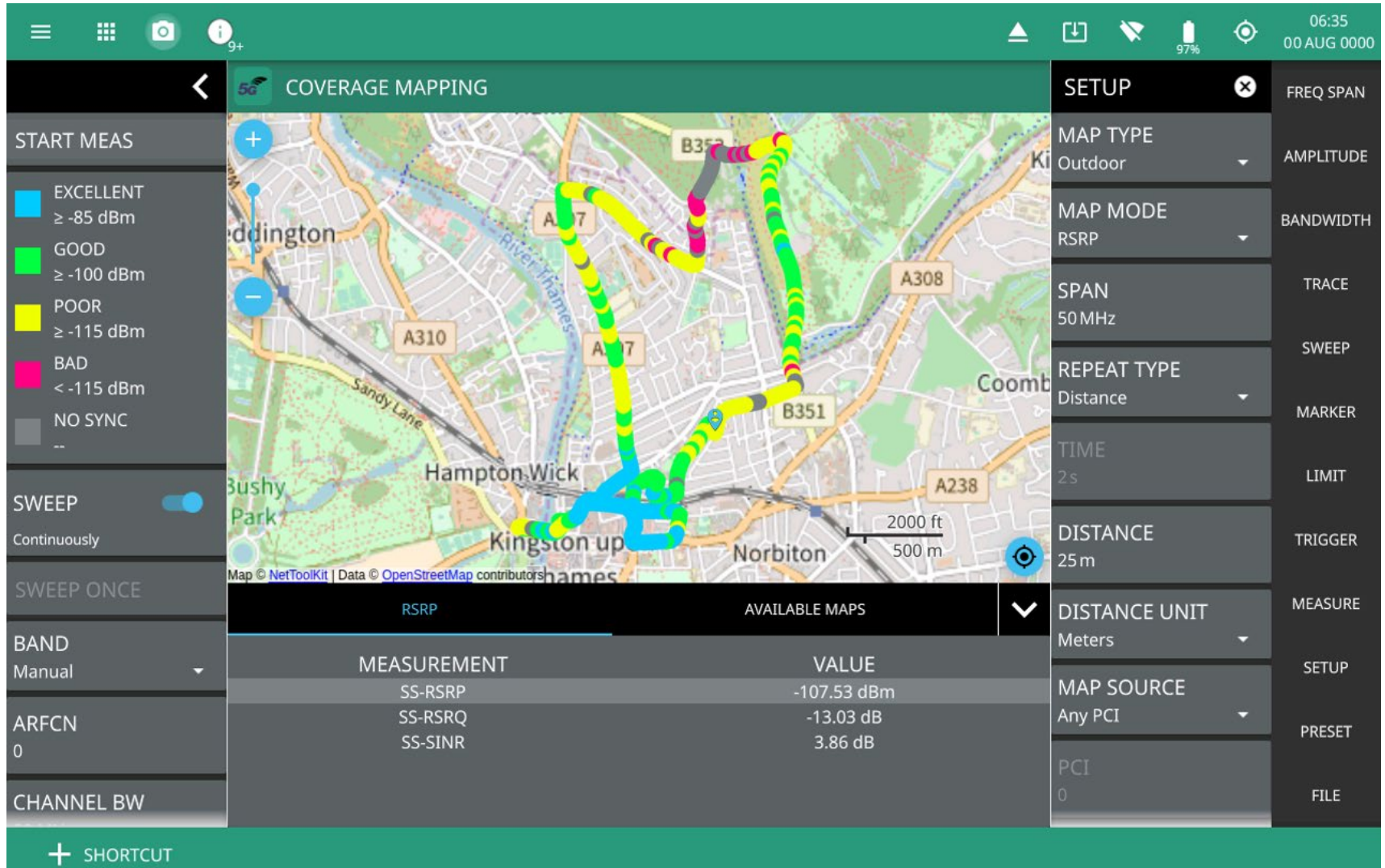
Example LTE/5G Dynamic Spectrum Sharing Frame





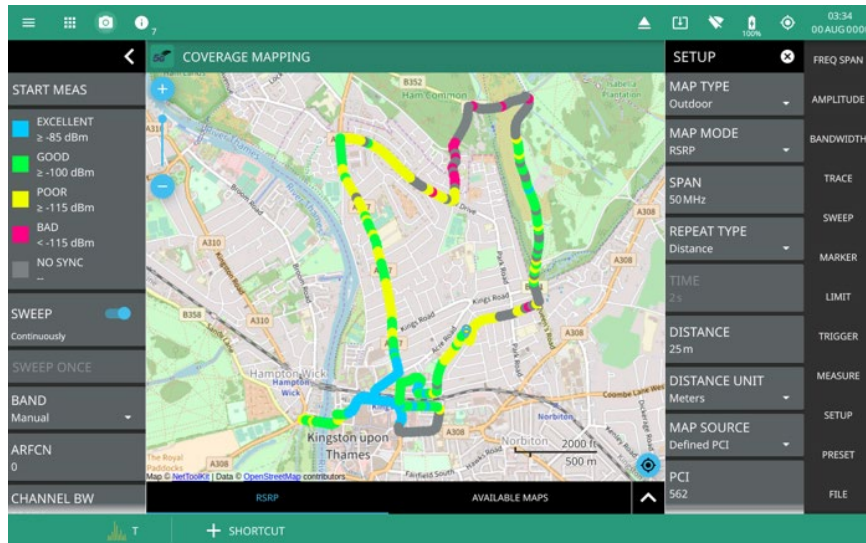
In LTE mode the Field Master MS2080A can auto detect if frames support DSS

LTE/5G Coverage Mapping

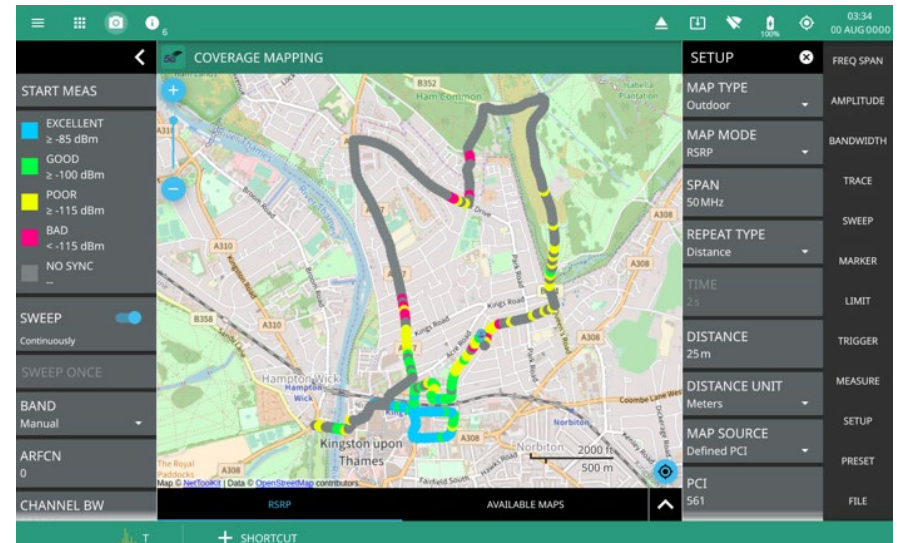


In LTE mode the Field Master MS2080A can auto detect if frames support DSS

LTE/5G Coverage Mapping – PCI Filter



Filter on PCI = 561



Filter on PCI = 562

Filter by individual PCI even on a saved file.

Anritsu
Advancing beyond



Field Master™

MS2080A

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/ms2080a>

