Product Brochure

Anritsu
envision : ensure

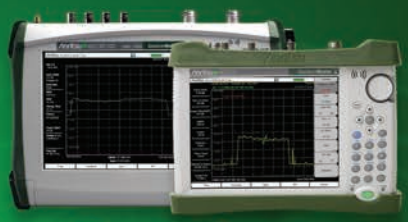
World's Most Trusted Family of RF and Microwave Handheld Analyzers

Now in our tenth generation – field-proven since 1995

Cable and Antenna Analyzers

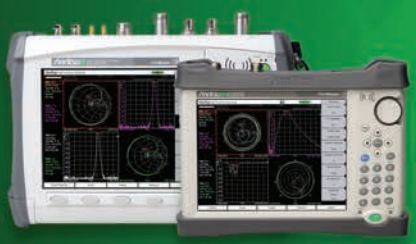
SiteMaster™

Spectrum Analyzers



SpectrumMaster™

Vector Network Analyzers



VNAMaster™

Base Station Analyzers

BTSMaster™ / CellMaster™

PIM Analyzers

PIMMaster™

Land Mobile Radio Analyzers

LMRMaster™

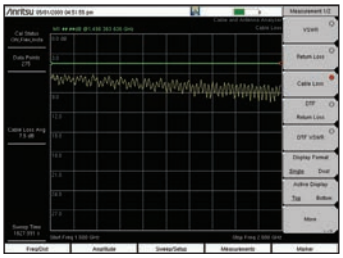
Site Master

Handheld Cable & Antenna Analyzers

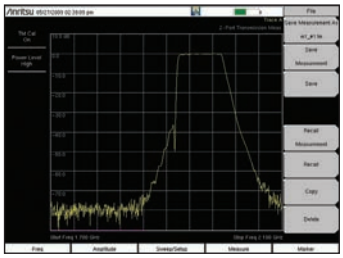
Since 1995, the Site Master™ has been the leader in handheld Cable and Antenna Analyzers for installers, contractors, and wireless service providers worldwide. With its unsurpassed measurement uncertainty and best-in-class sweep speed, the Site Master gives you extremely accurate and fast measurements that you can totally trust, whenever and wherever.

The Site Master family includes seven models to meet a variety of needs. They all can make traditional line sweep measurements such as Return Loss, VSWR, Cable Loss, and Distance-to-Fault (DTF). To increase productivity, the Site Master completes sweeps quickly, performs calibrations quickly with InstaCal™, provides fast trace naming, and comes with automatic report generating capabilities.

The 2-port transmission measurement option with its excellent dynamic range allows you to measure gain, insertion loss, or isolation of critical RF devices including tower mounted amplifiers (TMA), repeaters and passive RF components such as filters and antennas. Models with Spectrum Analyzers can make RF channel measurements and hunt down interference. Get the most trusted name in cable and antenna analyzers – the worldwide standard – the Site Master.



Cable Loss



2-port Transmission Measurement

S820E – Microwave Cable and Antenna Analyzer

FEATURES and OPTIONS (not available on all models)

- Cable & Antenna Analyzer
  - 2 MHz to 4 GHz, S331L
  - 2 MHz to 4/6 GHz, S331E/S361E
  - 1 MHz to 8, 14, 20, 30, or 40 GHz, S820E
- Cable & Antenna Analyzer w/ Spectrum Analyzer
  - 2 MHz to 4 GHz / 9 kHz to 4 GHz, S332E
  - 2 MHz to 6 GHz / 9 kHz to 6 GHz, S362E
- InstaCal™, FlexCal™, OSL, and TOSL, Calibration
- 2-port Transmission Measurement
- 2-port Swept Cable Loss
- Internal Bias Tee
- Internal GPS Receiver
- Internal Power Meter
- High Accuracy Power Meter with Power Sensor
- Interference Analyzer
- Coverage Mapping
- Channel Scanner
- CW Signal Generator
- AM/FM/PM Signal Analyzer
- 250 x 61 x 177 mm, 9.8 x 2.4 x 7.0 in (S331L)
- 273 x 91 x 199 mm, 10.7 x 3.6 x 7.8 in
  [Note: Dimensions are for W x D x H]

LMR Master

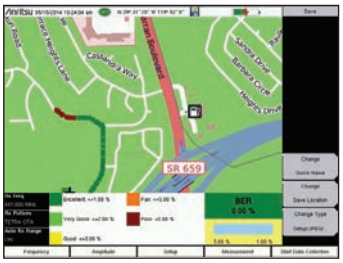
Handheld Land Mobile Radio Analyzer

The LMR Master S412E is a single instrument that combines all of the tools for technicians and engineers required to install, maintain, and certify analog and digital Land Mobile Radio networks in the shop or in the field.

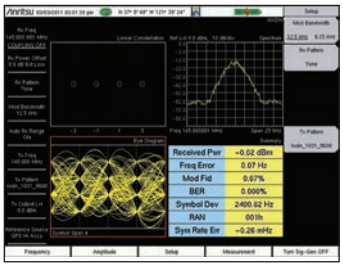
LMR Master combines the functionality of a 100 dB dynamic range VNA-based cable and antenna analyzer, spectrum analyzer, interference analyzer, power meter, and signal analyzers & generators (NBFM, P25 and P25 Phase 2, NXDN™, MotoTRBO™/DMR, TETRA), plus an internal GPS receiver for coverage analysis. All of this in a portable, handheld, battery-operated touchscreen package.

The LMR Master S412E features a built-in signal generator for analysis of analog and digital radio receivers, and support for indoor and outdoor coverage analysis with RSSI/BER// ModFid/EVM measurements tagged by GPS location or indexed to an on-screen floorplan. GPS-tagged information can be exported in KML format for use in popular mapping tools, and in CSV text for custom post-processing. Features a large internal flash memory to store thousands of measurements and quick save/recall of commonly-used setups.

LMR Master is the only handheld LMR signal analyzer which offers an LTE Analyzer to support FirstNet 700 MHz Public Safety broadband.



TETRA Over-the-Air Coverage Mapping



Interference hunting with the S412E and MA2700A

S412E – P25 Tx Signal Analyzer

FEATURES and OPTIONS

- Cable and Antenna Analyzer
  - 500 kHz to 1.6 GHz (6 GHz extension optional)
- Spectrum Analyzer
  - 9 kHz to 1.6 GHz (6 GHz extension optional)
- 1-path 2-port Vector Network Analyzer w/ 100 dB Transmission Dynamic Range and 42 dB Directivity
- Internal Bias Tee
- Internal GPS Receiver
- Internal Power Meter
- High Accuracy Power Meter with Power Sensors
- Interference Analyzer including support for the new MA2700A
- Channel Scanner
- Coverage Mapping
- Distance to Fault
- Spectrum Analyzer w/ -152 dBm DANL and +16 dBm TOI
- Signal Analyzers
  - NBFM
  - P25 (FDMA & Phase 2 TDMA) Analyzer and Talk-out Coverage
  - NXDN™ Analyzer and Talk-out Coverage
  - MotoTRBO™ / DMR Analyzer and Talk-out Coverage
  - FirstNet LTE Analyzer and Quality Analysis
  - IEEE 802.16 Fixed WiMAX, Mobile WiMAX
  - ETSI TETRA
- 273 x 91 x 199 mm, 10.7 x 3.6 x 7.8 in
  [Note: Dimensions are for W x D x H]

Cell Master

Compact Handheld Base Station Analyzer

The Cell Master™ handheld multi-function base station analyzers are the smallest, lightest, and most economical solution for 2/3/4G base station and digital broadcast testing during installation and commissioning, and for maintenance and troubleshooting.

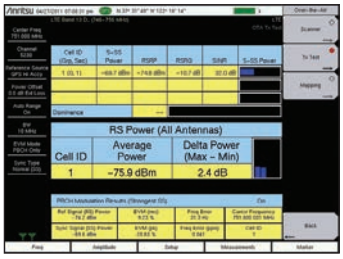
The Cell Master combines the functionality and the capabilities of a Cable and Antenna Analyzer, Spectrum Analyzer, Interference Analyzer, Signal Analyzers, Backhaul Analyzer, and a Power Meter into one instrument making it the most full-featured compact base station analyzer on the market.

This optimal combination of base station test capabilities eases the job of the user by eliminating the need for several independent test instruments, reducing the number of tools the user must carry and learn to operate. Whether it's sweeping cables, making power measurements, finding interference, troubleshooting 2/3/4G base station signal quality, or verifying backhaul performance, the Cell Master MT8212E and MT8213E are the ideal all-in-one instruments.

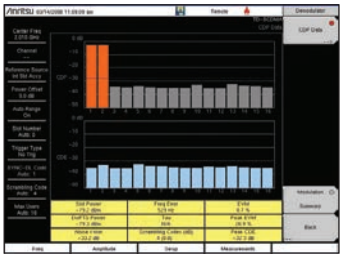
MT8212E - Cell Master

FEATURES and OPTIONS

- Cable and Antenna Analyzer
  - 2 MHz to 4 GHz MT8212E
  - 2 MHz to 6 GHz, MT8213E
- Spectrum Analyzer
  - 9 kHz to 4 GHz MT8212E
  - 9 kHz to 6 GHz, MT8213E
- 2-port Transmission Measurement
- Internal Bias Tee
- Internal GPS Receiver
- Internal Power Meter or High Accuracy with Power Sensor
- Interference Analyzer
- Channel Scanner
- Coverage Mapping
- CW Signal Generator
- Signal Analyzers (up to 20 MHz demodulation)
  - GSM/GPRS/EDGE and W-CDMA/HSPA+
  - TD-SCDMA/HSPA+
  - LTE, TD-LTE
  - CDMA2000 1X and CDMA2000 1xEV-DO
  - Fixed WiMAX, Mobile WiMAX
  - DVB-T/H (SFN, BER), ISDB-T (SFN, BER)
- Backhaul Analyzers – E1, T1, T3/T1
- 273 x 199 x 91 mm, 10.7 x 3.0 x 7.8 in
  [Note: Dimensions are for W x D x H]



LTE Over-the-Air MIMO Measurement



TD-SCDMA Demodulation

BTS Master

High Performance Handheld Base Station Analyzer

The BTS Master™ MT8220T is Anritsu's third generation high-performance handheld base station analyzer that has been specifically developed to advance the support for 4G wireless networks as well as installed 2G, 3G and WiMAX networks.

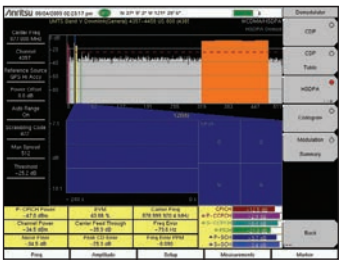
The BTS Master MT8220T Base Station Analyzer is the essential multi-function instrument for senior wireless technicians and RF engineers providing all required capability for field testing of cellular base transceiver stations ensuring key network performance indicators are consistently met.

Utilizing easy-to-use touch-screen technology, the MT8220T includes support for multiple technology standards, comprehensive over-the-air (OTA) testing for remote radio heads (RRH) and MIMO installations, low cost signal analysis providing all necessary measurements for each technology in a single option for convenience and economy, 2-port cable and antenna analysis, sophisticated interference analysis and tracking, all backed by a standard 3-year warranty.

MT8220T - BTS Master

FEATURES and OPTIONS

- Cable and Antenna Analyzer
  - 400 MHz to 6 GHz
- Spectrum Analyzer
  - 150 kHz to 7.1 GHz
- Internal Bias Tee
- Standard Internal GPS Receiver with Miniature Antenna
- Internal Power Meter or High Accuracy with Power Sensor
- Interference Analyzer
- Channel Scanner
- Gated Sweep
- Vector Signal Generator
- Zero-Span IF Output
- I/Q Waveform Capture
- Signal Analyzers (up to 20 MHz demodulation)
  - GSM/GPRS/EDGE
  - W-CDMA/HSPA+
  - TD-SCDMA/HSPA+
  - LTE FDD/TDD
  - CDMA/1xEV-DO
  - Fixed WiMAX, and Mobile WiMAX
- 315 x 77 x 211 mm, 12.4 x 3.0 x 8.3 in
  [Note: Dimensions are for W x D x H]



W-CDMA/HSPA+ Demodulation - EVM

LTE Over-the-Air On-screen Mapping

RF & Microwave Handheld Analyzers Solutions

	Models	Cable and Antenna Analyzers				Base Station A	
		Site Master™				LMR Master™	Cell Master
Options (See Specifications for a complete list of measurements)	Option Numbers	Value	Compact		High Perfomance	Compact	
		S331L	S331E S361E	S332E S362E	S820E	S412E	MT8212E MT8213E
Cable & Antenna Analyzer							
Frequency Range		2 MHz to 4 GHz	2 MHz to 4 / 6 GHz	2 MHz to 4 / 6 GHz	1 MHz to 40 GHz see Frequency Opt.	500 kHz to 1.6 GHz see Frequency Opt.	2 MHz to 4 / 6 GHz
1-port Measurements		Standard	Standard	Standard	Standard	Standard	Standard
2-port 1-path Measurements					Standard	Standard	
2-port Transmission Measurement	0021		•	•	Standard		•
2-port Swept Cable Loss Measurement (external USB sensor required)					Standard		
Spectrum Analyzer							
Frequency Range				9 kHz to 4 / 6 GHz		9 kHz to 1.6 GHz see Frequency Opt.	9 kHz to 4 / 6 GHz
Internal Atomic Clock	0001						
Preamplifier	0008			Standard		Standard	Standard
Interference Analyzer / Channel Scanner	0025 / 0027			•		•	•
Coverage Mapping / AM/FM/PM Measurements	0431 / 0509			•		•	•
Gated Sweep	0090			•			•
Zero Span / IF Output/IQ Waveform Capture	0089 / 0024					I/Q only Standard	
Vector Network Analyzer							
Frequency Range						500 kHz to 1.6 GHz see Frequency Opt.	
S-Parameters						S_{11}, S_{21}	
Vector Voltmeter	0015					Standard	
Time Domain and Distance Domain	0002						
Distance Domain only	0501					•	
Balanced/Differential S-Parameters, 1-port	0077						
Frequency Options							
6 GHz (for Spectrum Analyzer Mode)	0006					•	
6 GHz (for Cable and Antenna and VNA Analyzer Mode)	0016					•	
8 GHz	0708				•		
9 GHz	0709						
13 GHz	0713						
14 GHz	0714				•		
20 GHz	0720				•		
30 GHz	0730				•		
32 GHz	0732						
40 GHz	0740				•		
43 GHz	0743						
Signal Generators							
Tracking Generator (TG) 3, 4, or 6 GHz	0020						
Tracking Generator (TG) 9 GHz	0809						
Tracking Generator (TG) 13 GHz	0813						
Tracking Generator (TG) 20 GHz	0820						
CW Generator	0028			•		Standard	•
Vector Signal Generator (VSG)	0023						
Power Meters							
Power Meter	0029	Standard		•		Standard	Standard
High Accuracy Power Meter Support (requires USB power sensor)	0019	Standard	•	•	Standard	•	•

Wireless Signal Measurements	RF	Mod.	OTA	ALL					RF, MOD, OTA	
Demodulation Hardware	0009								Standard	Standard
GSM/GPRS/EDGE Measurements	0040	0041		0880						•
W-CDMA/HSPA+ Measurements	0044	0065	0035	0881						•
TD-SCDMA/HSPA+ Measurements	0060	0061	0038	0882						•
LTE Measurements	0541	0542	0546	0883					•	•
TD-LTE Measurements	0551	0552	0556							•
CDMA2000 1X Measurements	0042	0043	0033	0884						•
CDMA2000 1xEV-DO Measurements	0062	0063	0034							•
Fixed WiMAX Measurements	0046	0047		0885					•	•
Mobile WiMAX Measurements	0066	0067	0037						•	•
Digital TV Signal Measurements	**Analyzer**	**SFN**	**BER**							
DVB-T/H Measurements	0064	0078	0057							•
ISDB-T Measurements	0030	0032	0079							•
Land Mobile Radio Measurements	**Analyzer**	**Coverage**								
NBFM Measurements									Standard	
P25 and P25 Phase 2 Measurements	0521	0522							•	
NXDN Measurements	0531	0532							•	
DMR2 Measurements	0591	0592							•	
PTC Measurements	0721	0722							•	
TETRA Measurements	0581	0582							•	
Backhaul Analyzer Measurements	**T1**	**E1**	**T3/T1**							
T1 , E1, T3/T1 (Mutually Exclusive)	0051	0052	0053							•
General Options										
GPS Receiver	0031				2000-1723-R	•	•	2000-1723-R	•	•
Bias Tee (built-in)	0010					•	•		•	•
Secure Data Operation	0007									
Ethernet Connectivity	0411					•	•	Standard		
K Test Port Connectors	0011							Standard ≥ 20 GHz		
Standard / Premium Calibration	0098 / 0099				•	•	•	•	•	•

Analyzers		Spectrum Analyzers			Vector Network Analyzers				PIM Analyzers		
r™	BTS Master™	Spectrum Master™			VNA Master™				PIM Master™		
	High Performance	Value	Compact	High Performance	Compact		High Performance		High Perfomance		
	MT8220T	MS2711E	MS2712E MS2713E	MS2720T	MS2024B MS2025B	MS2034B MS2035B	MS2026C MS2027C MS2028C	MS2036C MS2037C MS2038C	MW82119A		
	400 MHz to 6 GHz				500 kHz to 4 / 6 GHz	500 kHz to 4 / 6 GHz					
	Standard				Standard	Standard					
	Standard				Standard	Standard					
		In Option 0020	In Option 0020	In TG Option							
	150 kHz to 7.1 GHz	9 kHz to 3 GHz	9 kHz to 4 / 6 GHz	9 kHz to 43 GHz see Frequency Opt.		100 kHz to 4 / 6 GHz		9 kHz to 9 / 15 / 20 GHz			
				•							
	Standard	•	Standard	Standard		Standard		Standard			
	•	•	•	•		•		•			
	•	AM/FM/PM only	•	•		•					
	•		•	•							
	•			•							
					500 kHz to 4 / 6 GHz	500 kHz to 4 / 6 GHz	5 kHz to 6 / 15 / 20 GHz	5 kHz to 6 / 15 / 20 GHz			
					S_{11}, S_{21}		S_{11}, S_{21}, S_{12}, S_{22}				
					•	•	•	•			
							•	•			
					•	•	•	•			
							•	•			
									LTE Bands	Name	Option
									12, 13, 14, 17	LTE 700	0700
									20	LTE 800	0800
									5	Cellular 850	0850
				•					8	E-GSM 900	0900
				•					3	DCS 1800	0180
									2,4	AWS/PCS 1900/2100	0193
				•							
									1	UMTS 2100	0210
				•					7	LTE 2600	0260
				•							
		•	•								
				•							
				•							
				•							
	In VSG Option	In TG Option	In TG Option	In TG Option							
	•										
	Standard	•	•								
	•	•	•	•	•	•	•	•		•	
	ALL		RF, MOD, OTA	ALL							
	Standard		•	•							
	•		•	•							
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			•								
	Standard	•	•	•	•	•	•	•		•	
	•		•		•	•	•	•			
				•			•	•			
	Standard		•	Standard	•	•	Standard	Standard		Standard	
				Standard ≥ 32 GHz			Optional ≥ 15 GHz	Optional ≥ 15 GHz			
	•	•	•	•	•	•	•	•		•	

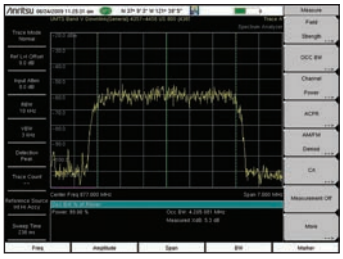
Spectrum **Master**

Handheld Spectrum Analyzers

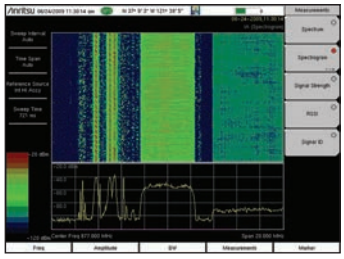
Anritsu's Spectrum Master™ handheld spectrum analyzers provide excellent flexibility in field environments for locating, identifying, recording, and solving communication systems problems without sacrificing measurement accuracy. There are four models to choose from to meet a variety of needs. Some models include Burst Detect to see bursty signals that are 200 µs or wider.

All models have dedicated routines for simple one-button measurements for field strength, channel power, occupied bandwidth, Adjacent Channel Power Ratio (ACPR), Carrier-to-Interference ratio (C/I), and AM/FM/SSB demodulator. Interference Analyzers feature spectrogram, RSSI, signal strength, and interference mapping for efficient interference monitoring, detection and location.

Compact models include 3, 4 and 6 GHz models and high performance models go to 43 GHz offering benchtop quality measurements in dynamic range, sensitivity, and phase noise. With advanced marker and limit line capabilities, the flexibility and the power is available to meet all types of field measurement needs. Whether it is for spectrum monitoring, interference analysis, RF and microwave measurements, broadcast proofing, or Wi-Fi and wireless network measurements, the Spectrum Master is the ideal instrument for making fast and reliable measurements, anytime or anywhere.



Occupied Bandwidth



Spectrogram

MS2720T – Spectrum Analyzer

FEATURES and OPTIONS (not available on all models)

- Spectrum Analyzer
  - 9 kHz to 3/4/6/9/13/20/32/43 GHz
- Burst Detect Full Band preamplifier
- Internal Atomic Clock
- Internal Bias Tee for MS2712E and MS2713E
- Internal GPS Receiver
- Internal Power Meter or High Accuracy with Power Sensor
- Interference Analyzer
- Channel Scanner
- Coverage Mapping
- Tracking Generator
- Zero Span IF Output
- I/Q Waveform Capture
- Signal Analyzers (up to 20 MHz demodulation)
  - GSM/GPRS/EDGE and W-CDMA/HSPA+
  - TD-SCDMA/HSPA+
  - LTE, TD-LTE
  - CDMA2000 1X and CDMA2000 1xEV-DO
  - Fixed WiMAX, Mobile WiMAX
  - DVB-T/H (SFN, BER), ISDB-T (SFN, BER)
  - AM/FM/PM
- 273 x 91 x 199 mm, 10.7 x 3.6 x 7.8 in (MS271xE)
- 315 mm x 211 mm x 77 mm (12.4 in x 8.3 in x 3.0 in) (MS2720T) [Note: Dimensions are for W x D x H]

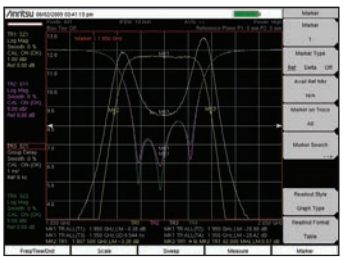
VNA **Master**

Handheld Vector Network Analyzers

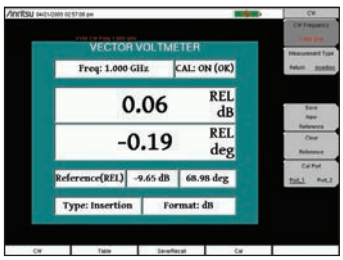
The VNA Master™ MS202xC/3xC models are advanced full-reversing 2-path 2-port Vector Network Analyzers for demanding wireless backhaul, aerospace, defense and general purpose applications. With frequency coverage from 5 kHz to 20 GHz, VNA Master is a cable and antenna analyzer that specializes in S-parameter measurements of isolators, circulators, filters, and phase matched cables. The MS203xC models add a powerful spectrum analyzer up to 20 GHz with industry-leading low noise floor for accurate small signal measurements. The MS202xB/3xB models are compact value 1-path, 2-port VNAs. MS203xB models add integrated spectrum analysis up to 6 GHz.

The MS202xC/3xC series models are true 2-port VNAs which can measure and display all four S-parameters simultaneously at 350 µsec/point sweep speeds. Ideally suited for the field, the VNA Master is also an attractive low-cost solution for passive measurements in manufacturing and R&D lab environments.

The VNA Master is a viable alternative to obsolete vector voltmeters, scalar tracking generators, and laboratory-grade vector network analyzers. With battery powered operation, field personnel can do on-site analysis and maintenance tasks which used to require returning the component to depot or lab. This freedom enables swift and precise measurements to phase match cables, troubleshoot critical system faults, and perform routine installation and maintenance tasks anytime, anywhere.



Overlay 4 S-parameters of Filters



Phase match cables using Vector Voltmeter

MS2038C – Quad-Trace View

FEATURES and OPTIONS

- Vector Network Analyzer
  - 500 kHz to 4/6 GHz, MS202xB
  - 5 kHz to 6/15/20 GHz, MS202xC
- Vector Network Analyzer + Spectrum Analyzer
  - 500 kHz to 4/6 GHz, MS203xB - VNA
    100 kHz to 4/6 GHz, MS203xB - SPA
  - 5 kHz to 6/15/20 GHz, MS203xC - VNA
    9 kHz to 9/15/20 GHz, MS203xC - SPA
- Distance Domain for Distance to Fault (All models)
- Time Domain (MS202xC/3xC only)
- Secure Data (MS202xC/3xC only)
- Balanced/Differential S-Parameters (MS202xC/3xC only)
- Vector Voltmeter
- Internal Bias Tee
- Internal GPS Receiver
- Internal Power Meter
- High Accuracy Power Meter with USB Power Sensor
- Coverage Mapping
- Interference Analyzer
- Channel Scanner
- AM/FM/PM Modulation Analyzer
- 273 x 91 x 199 mm, 10.7 x 3.6 x 7.8 in (MS202xB/3xB)
- 315 x 79 x 211 mm, 12.4 x 3.1 x 8.3 in (MS202xC)
- 315 x 97 x 211 mm, 12.4 x 3.8 x 8.3 in (MS203xC) [Note: Dimensions are for W x D x H]

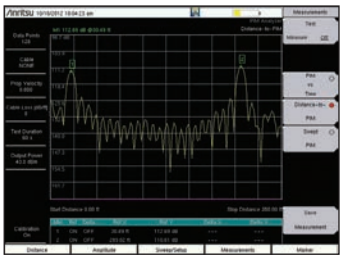
PIM Master

40 Watts Battery-operated Passive Intermodulation Analyzer

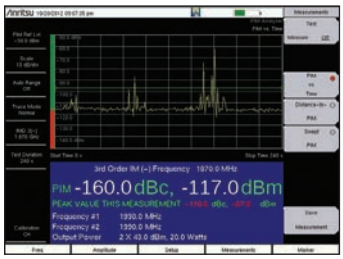
Anritsu Company introduces the first battery-operated high power Passive Intermodulation (PIM) testing solution for the major wireless standards in use around the world. PIM is a form of interference generated by passive components that are normally thought of as linear such as connectors, cable assemblies, filters and antennas. However, when subject to high RF power levels found in cellular systems, these devices can generate spurious signals that increase the receiver noise floor and reduce site performance.

The PIM Master accurately measures PIM performance by injecting two CW test tones into the antenna feed network and recording the magnitude of the 3rd, 5th, or 7th order intermodulation products falling in the receive band of the system. The MW82119A is able to perform the following measurements enabling test technicians to quickly find and eliminate PIM problems found at the cell site:

- PIM versus Time
- Noise Floor
- Swept PIM
- Distance-to-PIM™ (DTP)



Distance-to-PIM (DTP)
PIM Level (dBm) vs. Distance (meter)



PIM vs. Time
PIM Level (dBm) vs. Time (second)

MW82119A PIM Master™

FEATURES and OPTIONS

- Features
  - 3.0 Hour Battery Operation
  - 25 dBm to 46 dBm Power Output
  - 3rd, 5th, 7th IMD detection if in-band
  - Wireless Remote Access
- Measurements
  - PIM vs. TIME
  - Noise Floor
  - Distance-to-PIM™
  - Swept PIM
- • Frequency Options
  - LTE 700 (Upper and Lower band)
  - LTE 800
  - Cellular 850
  - E-GSM 900
  - DCS 1800
  - PCS/AWS 1900/2100 (for dual band systems)
  - UMTS 2100
  - LTE 2600
- Options
  - GPS
  - High Accuracy Power Meter
  - PIM Master Certified PIM Measurement Training Course

Training and Service

Knowledge is Power – Anritsu Gives YOU the Power

Anritsu training is the fast track to doing the job right. World-class experts lead in-person courses in which half the class time is hands-on with the instrument. See what the instrument can do, then do it yourself. Pass our rigorous assessments and earn a Site Master, PIM Master or Interference Analysis Certification and photo ID, proving you have the training to perform the most sought-after RF tests from major network carriers. Attend public training sessions in your area or ask about private, on-site training. Contact us at us-training@anritsu.com.

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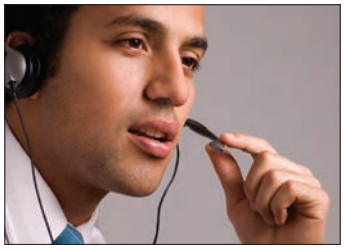

INSTRUCTOR-LED CLASSROOM TRAINING

- Line Sweeping
  - Site Master Certified Line Sweep
- PIM Master Certified PIM Measurement
- Base Station Measurements
  - W-CDMA/HSPA+ and LTE RF Measurements
- Interference Analysis Certification
- Introduction to RF & Microwave Spectrum Analysis

WEB-BASED eLEARNING COURSES

- Site Master Line Sweep (English, Chinese)
- Line Sweep Trace Interpretation
- Protecting Performance
- RF Fundamentals - Modules 1–4
- Site Master TMA Measurements
- PIM Master eLearning
- Handheld Software Tools (HHST)
- Master Software Tools (MST)
- LTE Measurements using BTS Master
- Introduction to Spectrum Analysis - Modules 1–6
- Introduction to W-CDMA - Modules 1-4
- Transitioning to the new S331L Site Master
- Waveguide Line Sweeping
- Line Sweep Tools

Anritsu envision : ensure

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