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

Now in our eighth generation – field-proven since 1995
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.

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.
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 eight models to choose from to meet a variety of needs.

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, signal ID and interference mapping for efficient interference monitoring, detection and location.

Compact models start at 3 GHz and high performance models go to 20 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.

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 digital Land Mobile Radio networks in the shop or in the field.

In a single, lightweight, handheld, battery-operated package, the LMR Master combines the functionality of a cable and antenna analyzer, spectrum analyzer, interference analyzer, power meter, channel scanner, transmitter analyzer (P25, NXDN, and DMR Tier 2), transmission measurements for 2-port devices (built-in RF source), and a GPS receiver.

The LMR Master S412E features a built-in vector signal generator for analysis of digital radio receivers and measurements to support coverage mapping with RSSI/BER/EVM measurements tagged by GPS location/time. Displays can be automatically stored, providing up to 8 hours of internally stored data. Master Software Tools can be used to convert stored traces to comma delimited ASCII files containing GPS location/time, RSSI/BER/EVM for exporting to popular mapping tools.

In addition the LMR Master builds on Anritsu’s cellular industry leadership by offering an FDD LTE Analyzer to support industry efforts to deploy broadband data networks in the newly-defined 700 MHz Public Safety bands.
The Cell Master™ handheld multi-function base station analyzers are the smallest, lightest, and most economical solution for 2/3/4G and WiMAX base station 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.

The BTS Master™ Base Station Analyzer has been specifically developed to support emerging 4G standards as well as installed 2G/3G networks. The BTS Master platform provides 20 MHz demodulation capability for wideband signals like LTE and a Vector Signal Generator (VSG) option with the flexibility to generate two modulated signals for comprehensive receiver testing.

The MT8221B and MT8222B feature a full 2-port Cable and Antenna Analyzer designed to work in the harshest RF environments, an ultra sensitive Spectrum Analyzer for finding low level interference, and a platform for transmitter and receiver testing of 4G base stations. It is the most advanced base station analyzer available for installation, commissioning, maintenance and troubleshooting.

When key performance indicators (KPIs) such as call drop, call denial, or call blocking rates degrade due to a malfunction at the cell site or due to interference, the BTS Master is the definitive all-in-one tool that cell site technicians and RF engineers can rely on for accurate diagnostic measurements leading to quick problem resolution.
Line Sweep Tools and Master Software Tools

The Power Behind the Master Handheld Family

Line Sweep Tools
Line Sweep Tool increases productivity for people who deal with dozens of Cable and Antenna traces, or Passive Inter-Modulation (PIM) traces, every day.

User Interface
Line Sweep has a user interface that will be familiar to users of Anritsu’s Hand Held Software Tools. This will lead to a short learning curve.

Marker and Limit Line Presets
Presets make applying markers and a limit line to similar traces, as well as validating traces, a quick task.

Renaming Grid
A renaming grid makes changing file names, trace titles, and trace subtitles from field values to those required for a report much quicker than manual typing and is less prone to error.

Report Generator
The report generator will generated a professional looking PDF of all open traces with additional information such as contractor logos and contact information.

Master Software Tools
Master Software Tools (MST) is a powerful PC software post-processing tool designed to enhance the productivity of technicians in data analysis and testing automation.

Folder Spectrogram
Folder Spectrogram – creates a composite file of up to 15,000 multiple traces for quick review, also create:

- Peak Power, Total Power, and Peak Frequency plotted over time
- Histogram – filter data and plot number of occurrences over time
- Minimum, Maximum, and Average Power plotted over frequency
- Movie playback – playback data in the familiar frequency domain view
- 3D Spectrogram – for in-depth analysis with 3-axis rotation viewing control

Script Master™
Script Master is an automation tool which allows the user to embed the operator’s test procedure inside the Cell Master for GSM/EDGE and WCDMA/HSDPA. This feature is available for GSM/EDGE and WCDMA/HSDPA applications.

Using Channel Scanner Script Master, the user can create a list of up to 1200 channels and let the Cell Master sequence through the channels 20 at a time, automatically making measurements.

FEATURES (not available with all models)

Line Sweep Features
► Presets
  ► 7 sets of 6 markers and 1 limit line
  ► Next trace capability
► File Types
  ► Input: HHST DAT, VNA Measurements: Return Loss (VSWR), Cable Loss, DTF-RL, DTF-VSWR, PIM
  ► Output: LS DAT, VNA, CSV, PNG, BMP, JPG, PDF
► Report Generator
  ► Logo, title, company name, customer name, location, date and time, filename, PDF, HTML, all open traces
► Tools
  ► Cable Editor
  ► Distance to Fault
  ► Measurement calculator
  ► Signal Standard Editor
  ► Renaming Grid
► Interfaces
  ► Serial, Ethernet, USB
  ► Capture Plots
    ► Screen, Database, DAT files, JPEG, Instrument
► Data Analysis
  ► Trace Math and Smoothing
  ► Data Converter
  ► Measurement Calculator
► Mapping (GPS Required)
  ► Spectrum Analyzer Mode
  ► Mobile WiMAX OTA Option
  ► TS-SCDMA OTA Option
  ► LTE, both FDD and TDD Options
► Folder Spectrogram
  ► Folder Spectrogram – 2D View
  ► Video Folder Spectrogram – 2D View
  ► Folder Spectrogram – 3D View
► List/Parameter Editors
  ► Traces
  ► Antennas, Cables, Signal Standards
  ► Product Updates
  ► Firmware Upload
  ► Pass/Fail
  ► VSG Pattern Converter
  ► Languages
  ► Mobile WiMAX
  ► Display
► Script Master™
  ► Channel Scanner Mode
  ► GSM/GPRS/EDGE Mode
  ► W-CDMA/HSDPA Mode
► Connectivity
  ► Serial, Ethernet, USB
  ► Download measurements and live traces
  ► Upload Lists/Parameters and VSG Patterns
  ► Firmware Updates
  ► Remote Access Tool over the Internet
Power Sensors
Accuracy Where It Counts

Anritsu offers a built-in Power Meter on most instruments and an optional High Accuracy Power Meter (Option 19) requiring external power sensors. Anritsu’s family of high accuracy power sensors is an economical alternative to traditional benchtop meters. These instruments can be connected to the instrument via USB (some with RS232C) or be driven directly by a PC with our PowerXpert™ application software included with every sensor.

Setting base station power correctly is a critical parameter for optimal network performance. A power setting error of ±1.5 dB means an approximate 15% change in coverage, either creating island cells with gaps in coverage or overlapping cells causing self interference. Anritsu’s power sensors have measurement uncertainty of ≤ ± 0.18 dB.

These sensors make true RMS power measurements over a wide dynamic range enabling users to make benchtop accurate measurements in the field for both CW and digitally modulated signals such as GSM/EDGE, W-CDMA/HSDPA, TD-SCDMA/HSDPA, CDMA/EV-DO, WiMAX, ISDB-T, and DVB-T/H.

![Built-in Power Meter](image1)

![High Accuracy Power Meter](image2)

**HIGH ACCURACY POWER SENSORS**
- **PSN50 High Accuracy Power Sensor**
  - 50 MHz to 6 GHz
  - -30 dBm to +20 dBm dynamic range (.001 mW to 100 mW)
- **MA24104A Inline High Power Sensor**
  - 600 MHz to 4 GHz
  - +3 dBm to 51.76 dBm dynamic range (2 mW to 150 W)
- **MA24106A High Accuracy RF Power Sensor**
  - 50 MHz to 6 GHz
  - -40 dBm to +23 dBm dynamic range (0.1 µW to 200 mW)
- **MA24108A Microwave USB Power Sensor**
  - 10 MHz to 26 GHz
  - -40 dBm to +20 dBm dynamic range (0.1 µW to 100 mW)

![True-RMS Power Sensors](image3)
Training and Service
Getting the Most Out of Your Instrument

Anritsu has designed a variety of eLearning and Hands-on Courses that focus on the practical aspects of getting the job done. Our Hands-on Courses typically include about a 50/50 split between lectures and labs. The labs are simulations based on real life applications to enhance the learning experience.

Anritsu offers the only line sweeping certification training program in the industry. Everyone who passes the Site Master Line Sweep Certification Exam will receive a Site Master Certificate of Completion, along with a photo ID card, which demonstrates that you have acquired the necessary skills and knowledge of Site Master operation and RF line sweep training.

Anritsu is committed to delivering superior customer support. We achieve this through a global network of customer service centers that are registered to ISO 9001:2000 quality system compliance and staffed by factory trained professionals who provide accurate, reliable, high quality repair and calibration services. When you entrust your Anritsu products to us, you get the expertise and quality you would expect from an industry leader and the fast turnaround time you demand.

Site Master Line Sweep Web-Based eLearning Course

WEB-BASED eLEARNING COURSES
► Site Master Line Sweep (English, Chinese)
► Line Sweep Trace Interpretation
► Protecting Performance
► Site Master TMA Measurements
► Introduction to Spectrum Analysis
► Handheld Software Tools (HHST)
► Master Software Tools (MST)
The Master Users Group is an organization dedicated to providing training, technical support, networking opportunities and links to Master product development teams. As a member you will receive the Insite Quarterly Newsletter with user stories, measurement tips, new product news and more. Visit us to register today: www.anritsu.com/MUG

Training at Anritsu
Anritsu has designed courses to help you stay up to date with technologies important to your job. For available training courses visit: www.anritsu.com/training

To receive a quote to purchase a product or order accessories visit our online ordering site: www.ShopAnritsu.com

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