Anritsu envision : ensure

Product Brochure

Site Master™ S331P

Ultraportable Cable & Antenna Analyzer

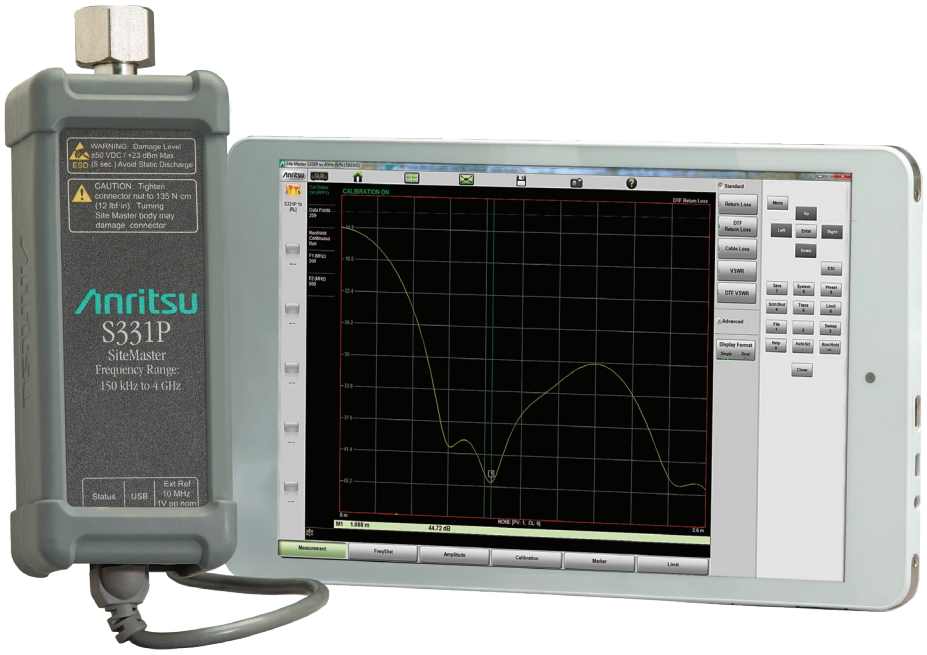
Featuring Classic & Advanced Modes
150 kHz up to 4 or 6 GHz

Site Master S331P Cable & Antenna Analyzer Overview

Site Master is the most trusted, reliable, and preferred cable and antenna analyzer by tower contractors, installation and maintenance contractors, and wireless service providers.

Introduction

The Site Master S331P is the lightest, smallest, and fastest of this family. Addressing the market need for broad frequency coverage and high performance in an extremely compact and economical design, the Site Master S331P provides wireless operators and contractors, DAS installers, and public safety network installers and maintenance professionals with the first pocket-sized headless cable and antenna analyzer that can measure the new LTE-U frequencies.



S331P Site Master Cable and Antenna Analyzer and Windows Tablet

Optimized for field use

- Smallest, lightest, fastest Site Master
- Direct connection to DUTs eliminating the need for phase stable cables
- Powered through USB interface (no battery required)
- Factory default 1-port ReadyCal (automatically applied to all measurements except transmission)
- FlexCal™ Calibration
  - One calibration for all frequencies
- Rugged and reliable
- Impact, dust, and splash resistant

Easy to use

- Same familiar user interface as the Site Master S331L
- Integrated Help function
- Site Master S331D-like Classic Mode
- Site Master S331E-like Advanced Mode
  - Additional markers
  - Customizable shortcuts
  - Full-screen view

Efficient sweep management

- Store multiple file formats
  - Sweeps, setups, screenshots
- Fast preview of stored sweeps
- Line Sweep Tools (LST) Software
  - Edit sweeps, rename, archive
  - Generate PDF or HTML reports
- Standard *.dat sweep file format
- Compatible with HHST
  - Widely accepted by operators
- Compatible with easyTest Tools
  - Reliable and quick creation of test plans
  - Fast and accurate testing
  - Fast and easy report creation

Site Master S331P Cable & Antenna Analyzer Features

Cable & Antenna Analyzer

S331P Site Master is ultraportable, rugged, and splash resistant

Rugged, dust and splash resistant, reliable, lightweight, and portable

The Site Master S331P is field proven and always ready, even if the user is not. At under 0.4 kg (0.9 lbs), it's effortless to carry or store in a pocket whether the user is on level ground, climbing a large tower, or heading through a roof hatch.

Direct connection to DUTs

Direct connection to DUT without the need for expensive phase stable cables

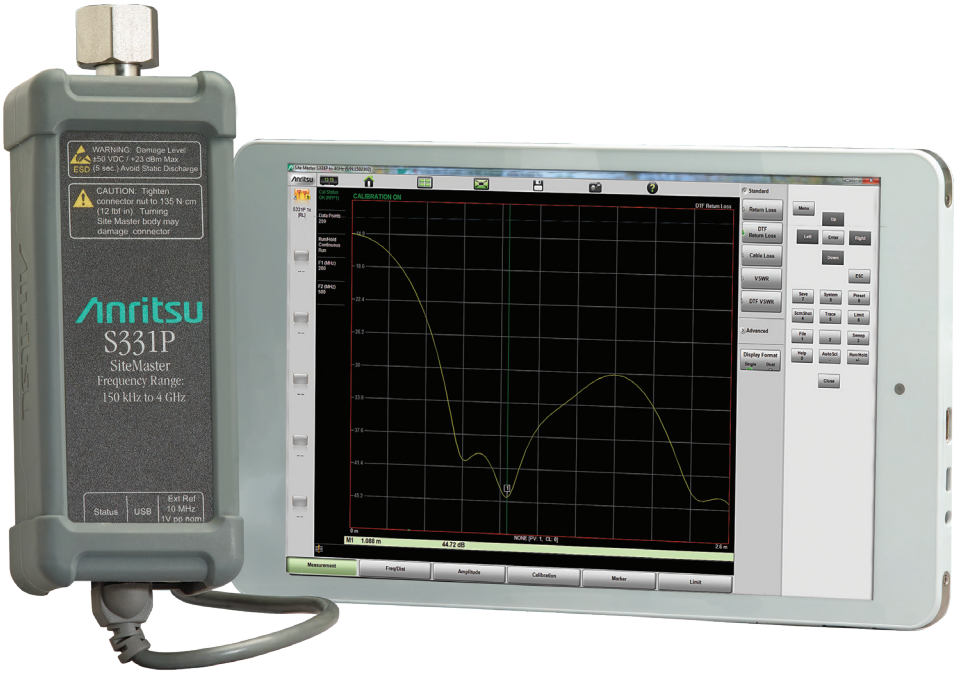
The Site Master S331P is designed to connect directly to test devices without the need for expensive phase stable cables that could introduce measurement errors and uncertainties.

Site Master S331P Cable & Antenna Analyzer Features

Cable & Antenna Analyzer

Use any Windows device to power and control the S331P

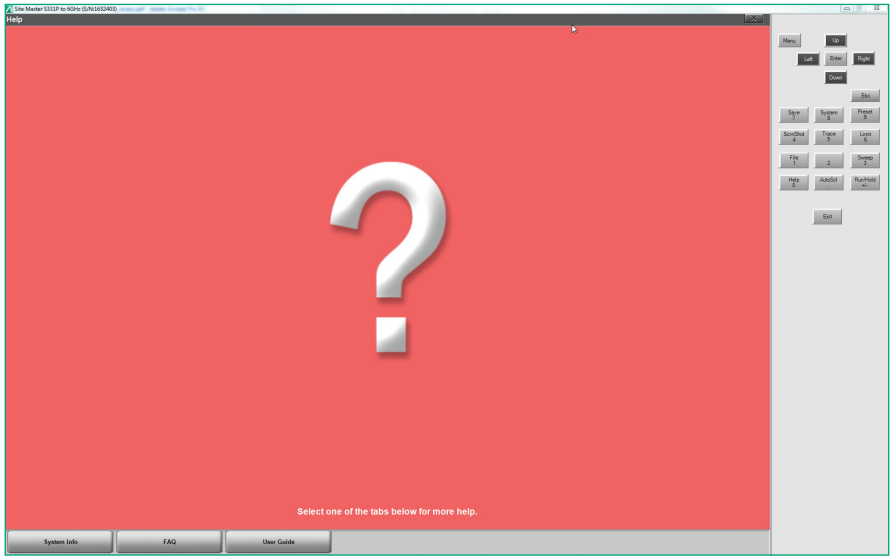
The Site Master S331P is powered and controlled by a wide variety of Windows devices including tablets, laptops and desktop PCs. All that is required is Windows 7, 8, or 10 and one available USB 2.0 port.



Site Master S331P running on a Windows 10 tablet

One Button Help

An intelligent, useful help menu launches with the press of the Help key.

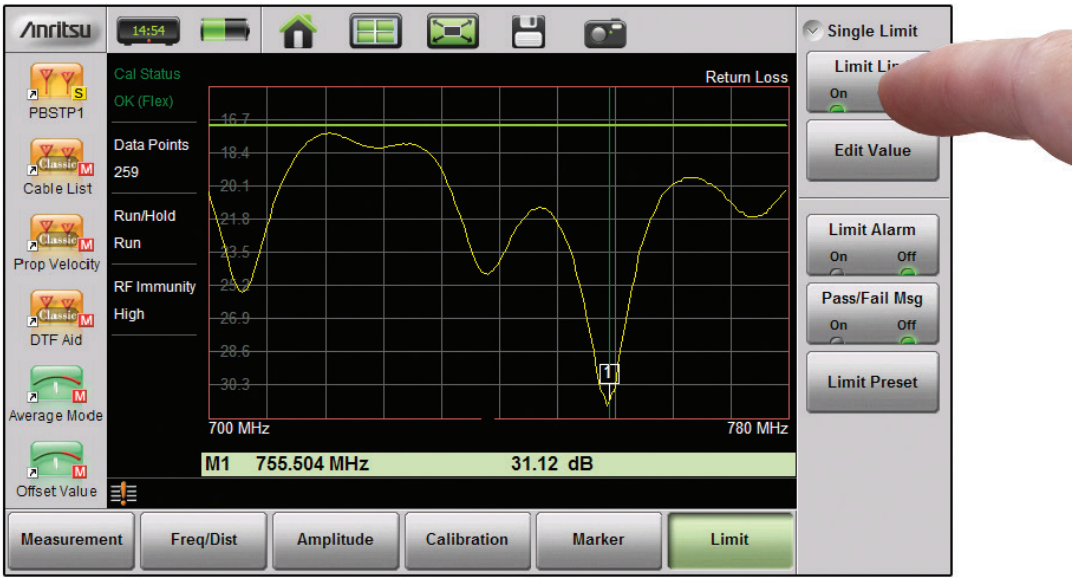


On-screen Help Menu

Cable & Antenna Analyzer

Markers & Limits

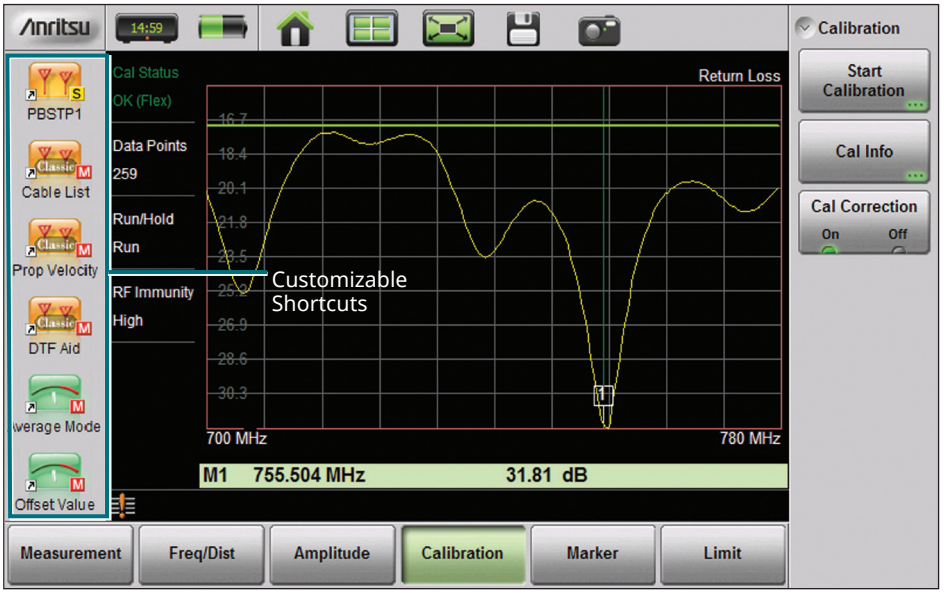
Using a mouse or finger on a touchscreen, users can drag or place markers and limits anywhere on the measurement screen. Values can also be entered with a real keyboard or soft keyboard. There are several easy and convenient ways to place markers and limits where you want them, or use the auto search max/min peak functions if you prefer.



Dragging markers and limits with finger is really easy and convenient

Convenient Shortcuts

User-defined shortcuts can be created for one-button access to commonly used functions (Advanced Mode only).



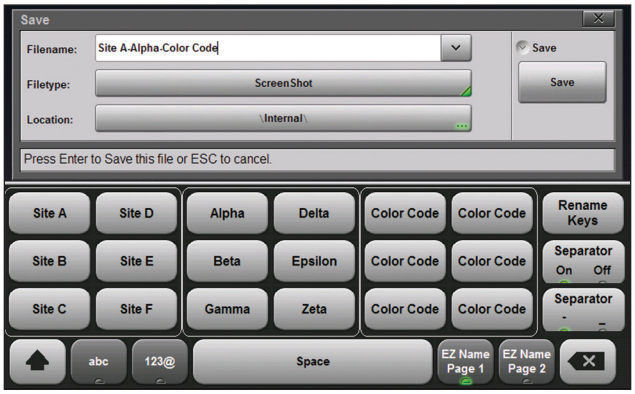
User-definable shortcuts for frequently used functions

Site Master S331P Cable & Antenna Analyzer Features

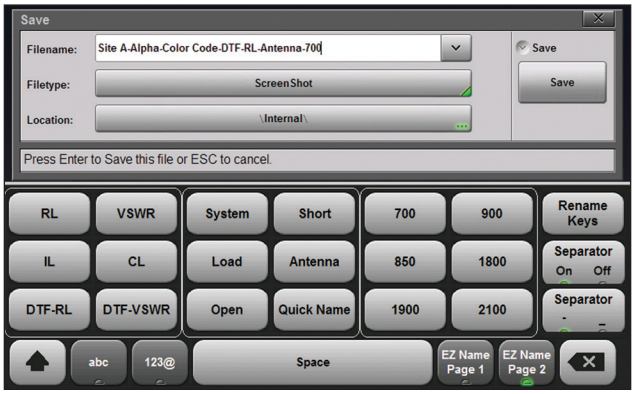
Cable & Antenna Analyzer

EZ Name Quick Naming Matrix saves valuable time

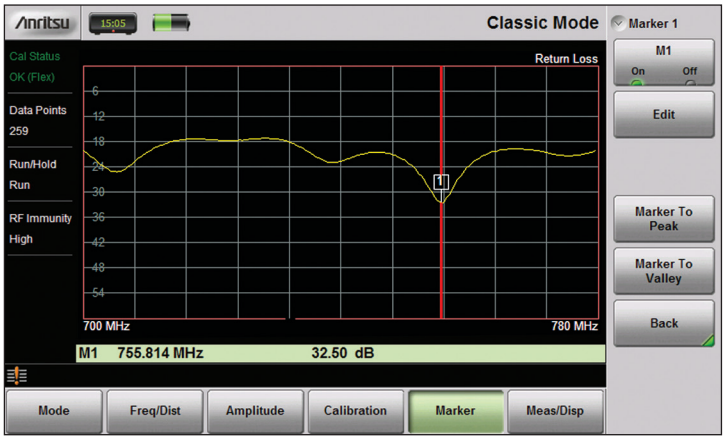
Unique to Anritsu, the customizable EZ Name Quick Naming Matrix saves valuable time. Users can preset up to 36 commonly used names. The resulting time saved is immediately beneficial. You can save file names labeled with site ID, sector, color code, measurement type, termination, and frequency in less than 5 seconds. Now you can label the traces of the entire site in minutes instead of hours.



Most common site name requirements are preprogrammed into the EZ Name Matrix. Page 1 of 2 shown.



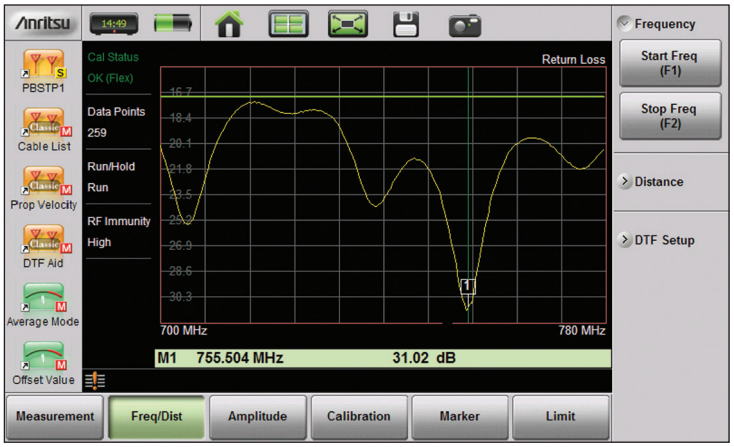
18 additional customizable EZ Name buttons available on page 2.



Classic mode can reduce or eliminate training for experienced Site Master users.

Classic Mode

The Site Master S331P offers a convenient Classic Mode that's easy to use. If you have used a Site Master model before, you'll find this Classic Mode familiar and easy to use. Complex file names are no longer limited to 16 characters. There's plenty of characters available to suit any file name you might require.



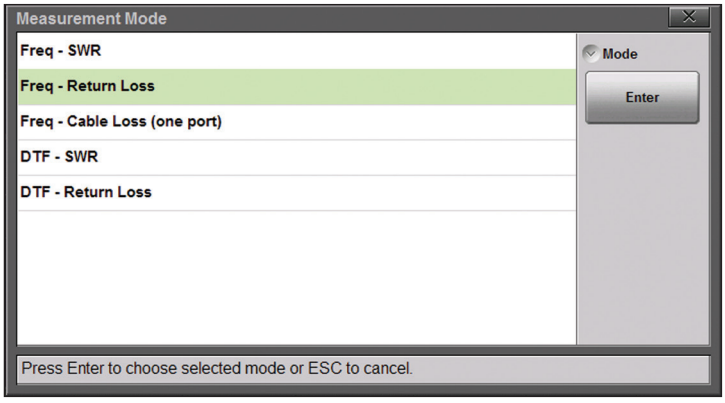
Advanced mode contains several powerful new features not available in Classic mode.

Advanced Mode

The Site Master S331P also offers a mode with more capability called Advanced Mode. Advanced Mode has a much more modern look and feel to it, and many users will immediately appreciate the new Advanced Mode GUI and button layout/function. With Advanced Mode you also get some extra capabilities such as 8 markers instead of 6. There are 6 customizable touch screen icons for quick recalling of regularly used setups, making operation easier and more efficient.

Site Master S331P Cable & Antenna Analyzer Features

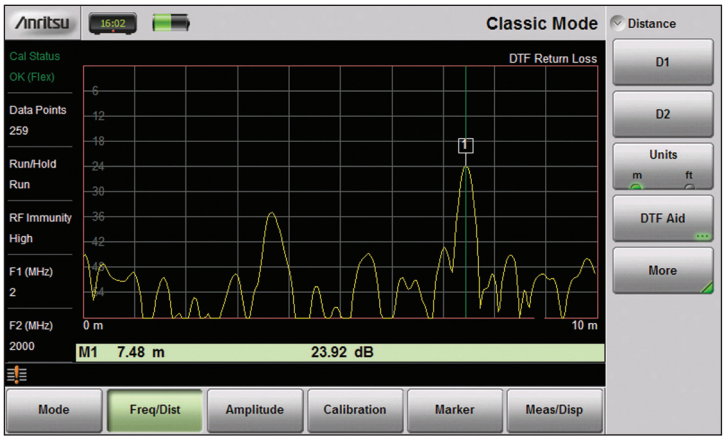
Cable & Antenna Analyzer



Classic mode selector screen. Same familiar layout as D models.

Classic Mode Measurement Selector Screen

The Site Master S331P classic mode was developed based on customer feedback. Many of our loyal customers have asked us to create an easy to use GUI like the one they have become accustomed to on the Site Master D models. The result of that valuable feedback is what we are proud to call Classic Mode.

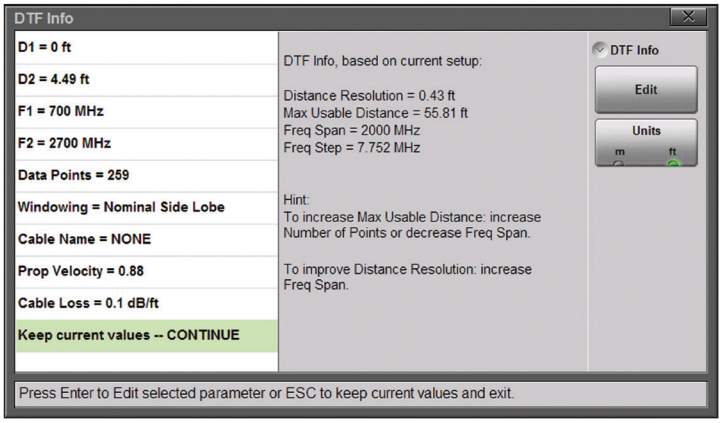


Distance-to-Fault (DTF) measurement screen.

Classic Mode Distance-to-Fault Measurement

Here is an example of the Classic Mode Distance-to-Fault (DTF) measurement screen. Notice the Distance menu buttons labeled “D1” and “D2” just as they are in the D models.

These changes allow users experienced with older Site Master models to become immediately productive with the Site Master S331P, which saves training costs and downtime.



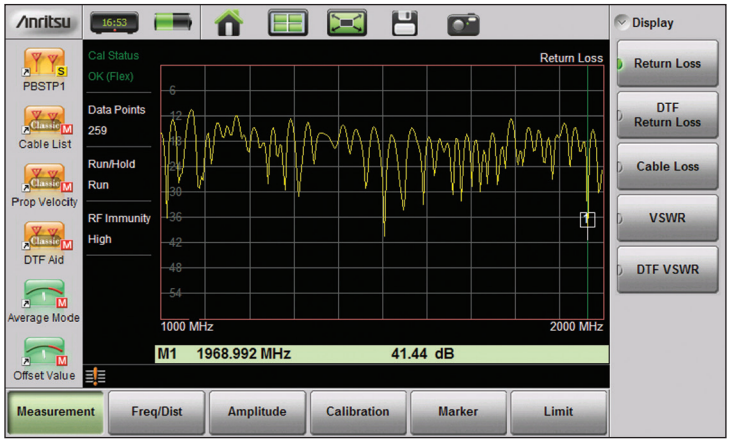
DTF Aid Parameter Screen. Same familiar layout as D models.

Classic Mode Distance-to-Fault Aid Menu Screen

DTF Aid screen contains the same options in a similar layout format as the Site Master D models. Former Site Master D model users should have no difficulty setting DTF parameters in Classic Mode. We’ve even added some useful hints to help optimize the settings.

Site Master S331P Cable & Antenna Analyzer Features

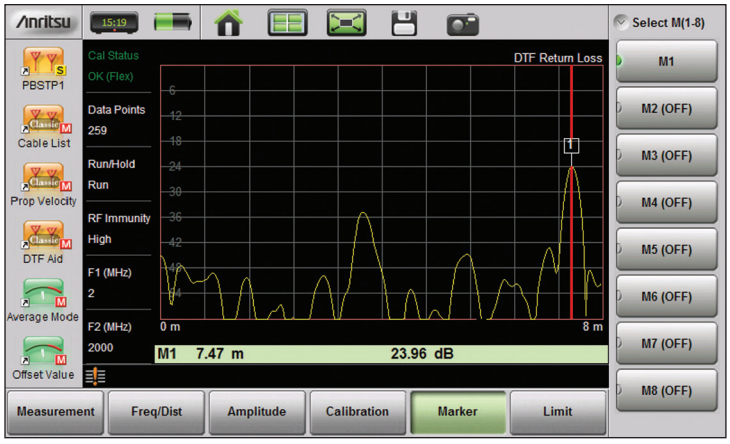
Cable & Antenna Analyzer



Easier access to desired measurement types in Advanced Mode

Advanced Mode Measurement Selector Screen

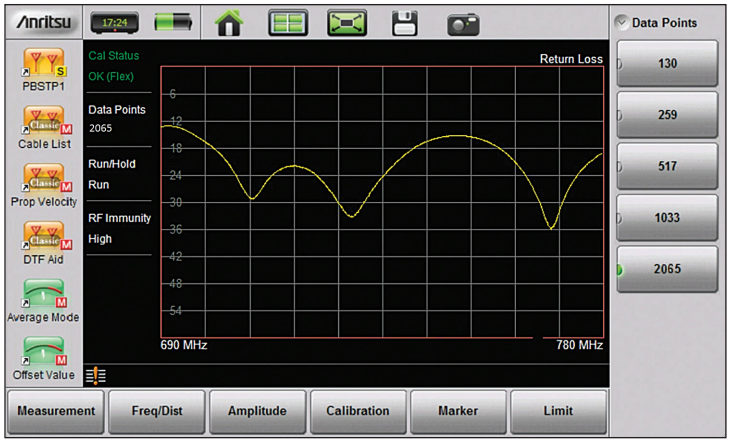
In Advanced Mode, users no longer need to press the Mode key before selecting desired measurement. Users are now able to select the desired measurement directly, simply by pressing the primary menu key "Measurement" then choose the desired measurement from the secondary menu keys on the right side.



8 Markers in Advanced Mode provides more flexibility

More Markers in Advanced Mode

In Advanced Mode you have 8 markers available to you. That's 2 additional markers which can be used as you wish, either as additional regular markers, additional delta markers, or additional bounded markers, providing more flexibility than Classic Mode.



With 1033 datapoints you can extend the maximum Distance-to-Fault range easily

2065 Datapoints

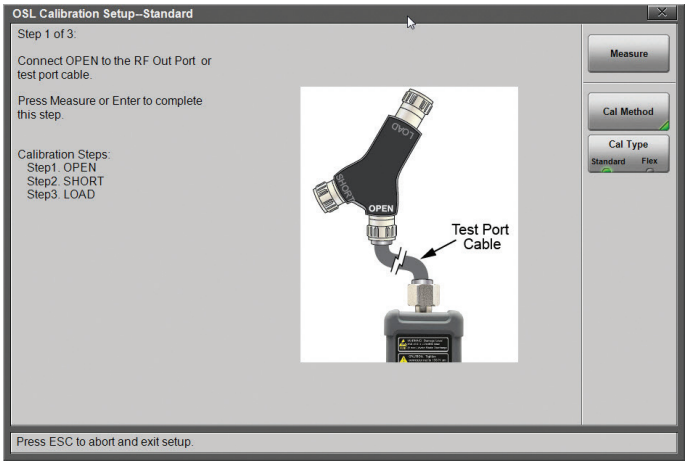
You have up to 2065 datapoints available for use. Increased datapoints can be used to provide better frequency resolution for your VSWR/RL measurements, or they can be used to extend the maximum distance range for your Distance-to-Fault (DTF) measurements without sacrificing distance resolution. A handy feature at your fingertips.

Site Master S331P Cable & Antenna Analyzer Features

Cable & Antenna Analyzer

OSL Calibration just got a lot easier!

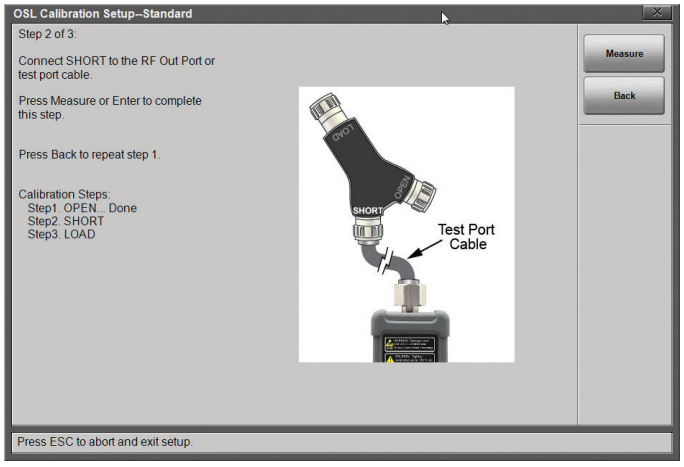
The S331P guides you through the entire OSL calibration process with not only text instructions, but with actual on-screen photos to aid the user during the entire process.



Step 1

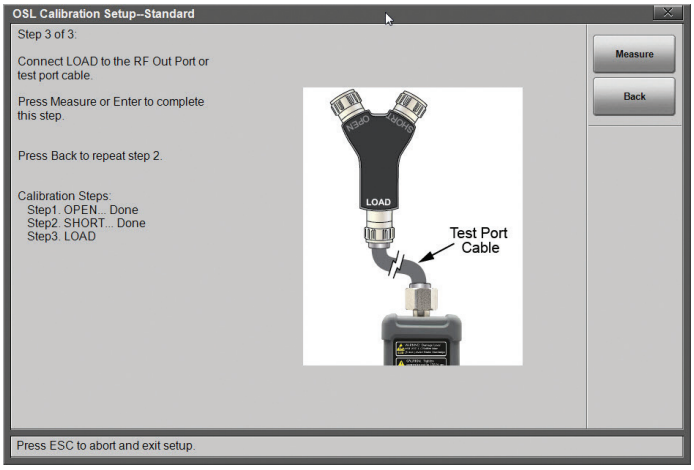
Connect OPEN as shown.

S331P will automatically guide you through the entire OSL calibration sequence step by step with pictures and instructions on screen.



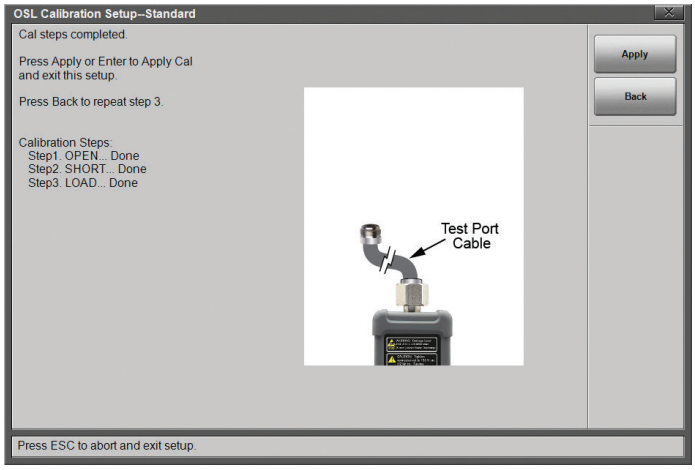
Step 2

Connect SHORT as shown.



Step 3

Connect LOAD as shown.

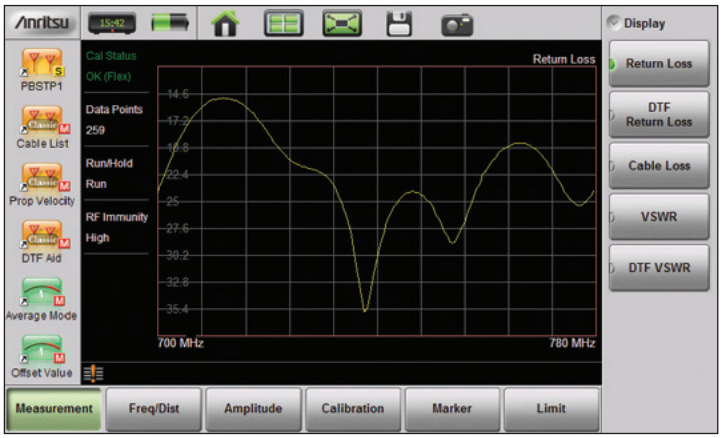


Step 4

Complete!

Site Master S331P Cable & Antenna Analyzer Features

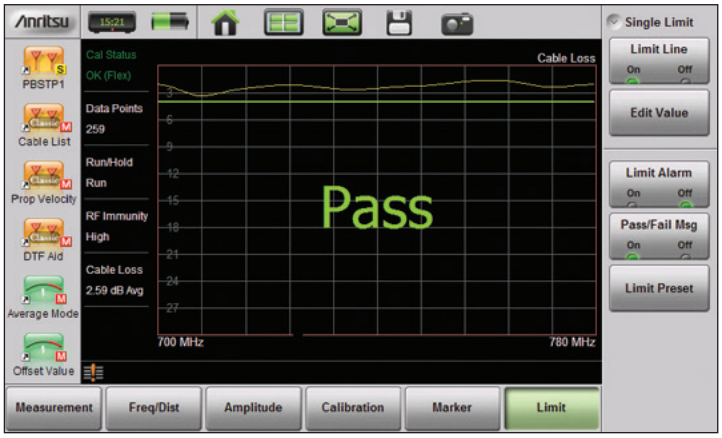
Cable & Antenna Analyzer



Return Loss measurement screen (Advanced Mode)

Return Loss/VSWR Measurement

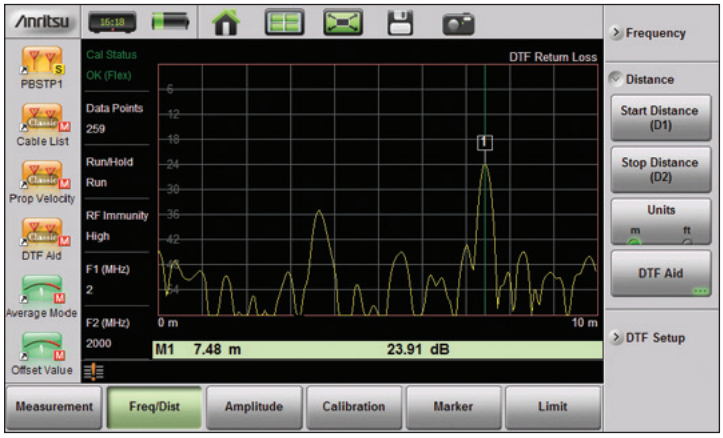
Poor Return Loss/VSWR can damage transmitters, reduce the coverage area, increase dropped and blocked calls, and lower data rates.



Cable Loss measurement screen (Advanced Mode)

Cable Loss Measurement

This is an important commissioning check. Excessive loss reduces the coverage area and can mask return loss issues, creating false good readings later.



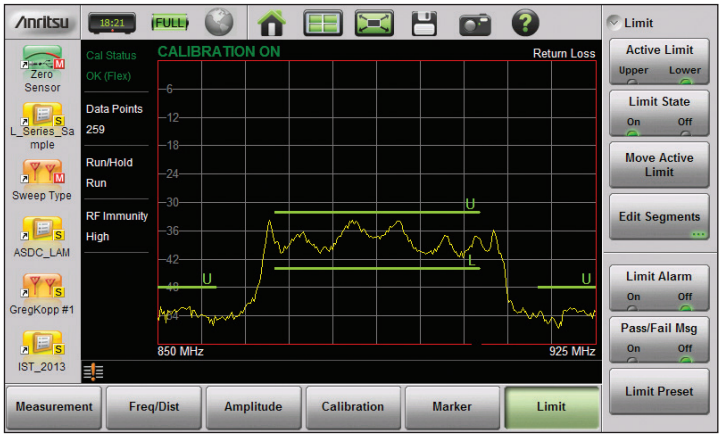
Distance-to-Fault measurement screen (Advanced Mode)

Distance-to-Fault (DTF) Measurement

DTF can be used to identify and precisely locate faulty cables, components, or connector pairs with poor Return Loss/VSWR in meters or feet. Use 2065 points in Advanced mode to get more maximum distance without sacrificing resolution.

Site Master S331P Cable & Antenna Analyzer Features

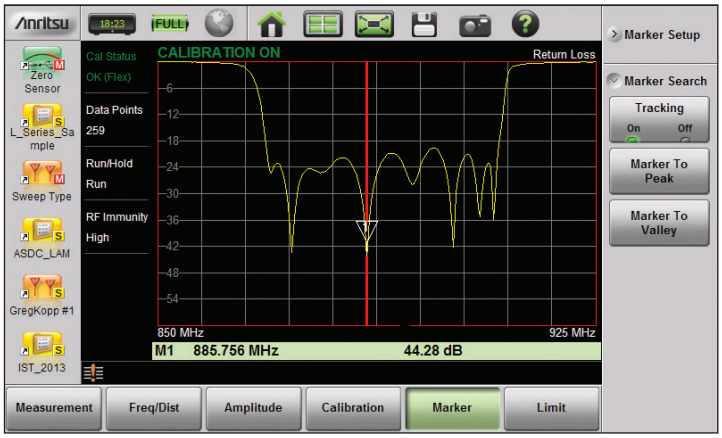
Cable & Antenna Analyzer



Upper/lower limits and segmented limit lines screen (Advanced Mode Only)

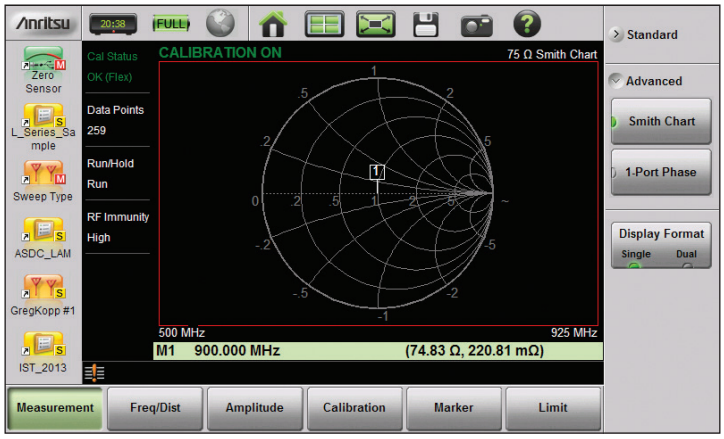
Feature additions/enhancements (Advanced Mode Only):

Upper/lower limits and segmented limit lines are now available. Up to 42 segments for both upper and lower limits may be created (84 segments total).



Marker peak/valley tracking screen (Advanced Mode Only)

Marker peak/valley tracking. This allows users to have the marker automatically track either the peak or valley response of a measurement, which is very useful when tuning devices.

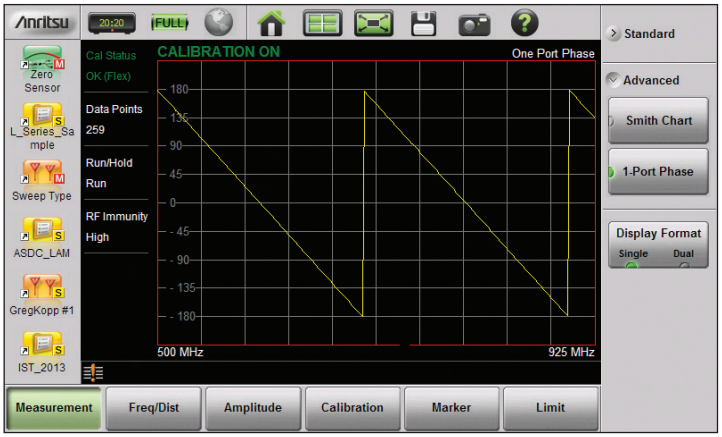


Smith Chart 50/75 Ω selectable screen (Advanced Mode Only)

Smith Chart (50/75 Ω selectable) has been added as an advanced measurement type. 75 Ω Smith Chart measurements are shown.

Site Master S331P Cable & Antenna Analyzer Features

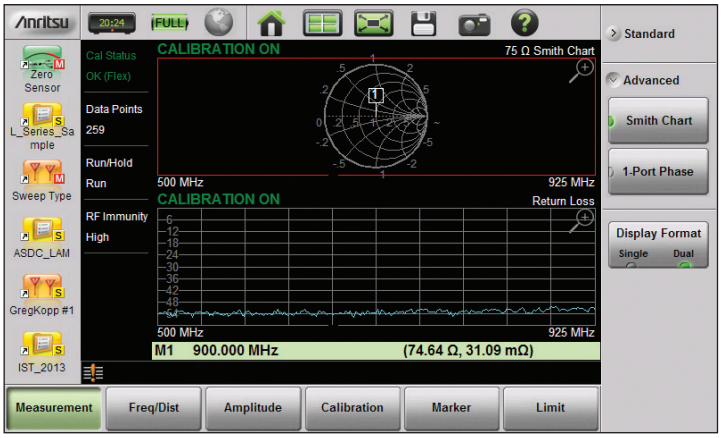
Cable & Antenna Analyzer



1-Port phase movement screen (Advanced Mode Only)

Feature additions/enhancements (Advanced Mode Only):

1-Port phase measurement has been added as an advanced measurement type.



Dual screen split horizontally screen (Advanced Mode Only)

Dual screen (split horizontally) has been added as an advanced measurement feature. Users may select any of the available measurement types when in dual screen mode.

Site Master S331P Cable & Antenna Analyzer Information

Cable & Antenna Analyzer

Physical Information

Test Port Connector
N(m)

Back

Front

Status
LED

External 10 MHz
Reference In

Micro USB Connector
With Latch

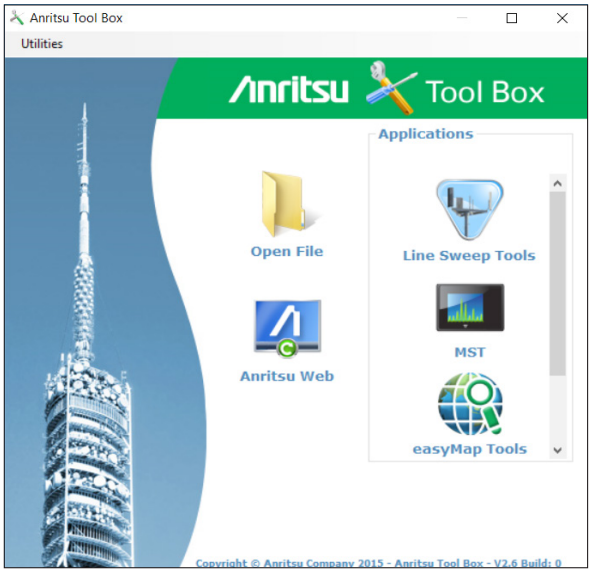
Site Master S331P Line Sweep and easyTest Tools

Line Sweep Tools™ (for your PC)

Collect Sweeps from Anritsu line sweep gear

Verify That cables and antenna systems meet specifications and that the sweeps were done properly

Report Findings quickly to the standards required by contract



The Anritsu Tool Box

The Anritsu Tool Box (included on disc or freely downloadable at www.anritsu.com) is a convenient central location where Anritsu supporting software programs and online support options can be found for most of our handheld product portfolio. Simply choose the desired application that suits your needs. The Anritsu Tool Box comes with LST and grows as more Anritsu tool box programs are added.

Marker and Limit Line Presets

Presets make applying markers and a limit line to similar traces quick and easy. They only need to be set once, and recorded. After this, applying them to a similar trace requires only one button push. This speeds up trace processing and makes providing consistent marker and limit line settings easy.

Naming Grid

A naming grid function makes changing file names, trace titles, and trace subtitles from field values to those required by contract simple and quick. Once the naming grid is populated with user defined file name segments, a few simple button presses will then fill out the file, title, and sub-title names. Quickly applied to multiple traces, the naming grid can save time, increase efficiency and accuracy.

Report Generator

The report generator will create a professional PDF or HTML based report. Reports includes GPS[1], power level[1], company logo[2], instrument and calibration status along with a display of all open traces. It also may contain additional information such as addresses and phone numbers.

HTML type reports may be post edited using programs such as Microsoft Word.

Line Sweep Tools (LST) is a free PC based program that increases productivity for people who deal with numerous Cable and Antenna traces every day. LST is the next generation of Anritsu's familiar Handheld Software Tools (HHST) and shares its user interface, giving a new face to the term "ease of use."

easyTest Tools™ (for your PC)

Cable Editor[3]

Instrument Cable Lists may be retrieved from the instrument, modified as required, and uploaded back into instrument.

Signal Standard Editor[3]

Signal Standard Lists may be retrieved from the instrument, modified as required, and uploaded back into instrument.

Distance to Fault[4] (DTF)

Easily convert Return Loss or VSWR traces to Distance to Fault traces with one button press.

Measurement Calculator

Provides quick conversion between commonly used measurement units such as VSWR, RL, and others.

Capture: Plots to Screen, Database, *.dat, *.jpg
Connect: To PC using USB, Ethernet, Serial
Download: Lists/measurements and live traces to PC for storage and analysis.
Upload[3]: Lists/measurements from PC to instrument.

Supported File Types

Input: *.dat, *.vna, *.mna, *.pim, *.tm
Output: *.dat, *.vna, *.pim, *.tm, *.csv, *.bmp, *.jpg, *.png

[1]Model dependent
[2]Optionally set by user
[3]Instrument type/model must match original
[4]Only *.dat and *.vna file types supported

easyTest Tools™

easyTest Tools allows users to create work instruction files on their PC, deliver these files by e-mail, and then display work instructions on the Site Master™ or Cell Master™ "E" series cable and antenna analyzers. These easyTest™ files provide step-by-step instructions for both the test setup and instrument operation.

easyTest works with the S331P, S331L, S331E, S332E, S361E, S362E, S820E, MT8212E, and MT8213E when operating in Cable and Antenna Analyzer mode.

Instrument Mode

Cable and Antenna Mode

PC Requirements

Anritsu's software tools runs on computers using Windows operating systems, specifically:
Windows XP, Service Pack 2 or higher, Windows Vista, Windows 7, 8, or 10.
PC must have at least 1 GB of RAM and 1 GB of available hard drive space.

Site Master S331P Ordering Information

Ordering Information

Model Number	Description
S331P	Cable and Antenna Analyzer (required one frequency option)
Frequency Options	
S331P-0704	150 kHz to 4 GHz
S331P-0706	150 kHz to 6 GHz

Calibration and Extended Warranty Options

Option	Description
S331P-ES510	Warranty Extension to 5 Years
S331P-ES513	Warranty Extension to 5 Years with Z540 Calibration
S331P-0098	Standard Calibration to ISO17025 and ANSI/NCS Z540-1. Includes calibration certificate.
S331P-0099	Premium Calibration to ISO17025 and ANSI/NCSL Z540-1.Includes calibration certificate, test report, and uncertainty data.

Standard Accessories (included with instrument)

Part Number	Description
2000-1867-R	Soft Carrying Case
2000-1816-R	USB-A to Micro-USB. 1.83 m (6 ft)
2000-1687-R	Torque Multplier (Nm)
	Standard Three-Year Warranty Certificate of Calibration and Conformance

Reference Documents (Soft copies available at www.anritsu.com)

Part Number	Description
11410-00964	Site Master™ S331P Technical Data Sheet
10580-00426	Site Master™ S331P User Guide
11410-00674	Cable and Antenna Analysis Troubleshooting Guide

For a full list of all accsssories for the Site Master S331P, please refer to the Technical Data Sheet (P/N 11410-00964).