

# Line Sweep Tools FAQ

*This set of Frequently Asked Questions (FAQ) answers common questions relating to Anritsu's Line Sweep Tools software.*

*Q. Which instruments and trace types will Line Sweep Tools work with?*

*A. Line Sweep Tools will work with the instruments and traces in this table:*

## Instruments Supported by Anritsu's Line Sweep Tools

Product Family	Instrument	Cable and Antenna Analyzer Mode Measurements	Transmission Measurement	Two Port Cable Loss	Passive Inter-Modulation (PIM) Measurements	Smith Chart	
Site Master	S113B	X				X*	
	S114B	X				X*	
	S251B	X				X*	
	S331B	X				X*	
	S332B	X				X*	
	S113C	X				X*	
	S114C	X				X*	
	S251C	X				X*	
	S331C	X				X*	
	S332C	X				X*	
	S810C	X				X*	
	S820C	X				X*	
	S820E	X		X	X		X
	S311D	X		X			X*
	S312D	X		X			X*
	S331D	X		X			X*
	S332D	X		X			X*
	S325D	X					X*
	S810D	X			X		X*
	S820D	X			X		X*
	S331E	X		X			X
	S332E	X		X		X	X
S361E	X		X			X	
S362E	X		X		X	X	
S331L	X						
PIM Master	MW82119A				X		
	MW82119B	X			X	X	

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Product Family	Instrument	Cable and Antenna Analyzer Mode Measurements	Transmission Measurement	Two Port Cable Loss	Passive Inter-Modulation (PIM) Measurements	Smith Chart
<b>Spectrum Master Supporting PIM Analyzers MW8208A MW8209A MW8219A</b>	MS2711E				X	
	MS2712E				X	
	MS2713E				X	
	MS2721B				X	
	MS2722C				X	
	MS2723C				X	
	MS2724C				X	
	MS2725C				X	
	MS2726C				X	
<b>Cell Master</b>	MT8212A	X				X*
	MT8212B	X				X*
	MT8212E	X	X		X	X
	MT8213E	X	X		X	X
<b>BTS Master</b>	MT8222A	X			X	X
	MT8221B	X			X	X
	MT8222B	X			X	X
	MT8220T	X		X	X	X

Notes:

1) Line Sweep Tools can also make use of Hand Held Software Tool files captured by the discontinued "A" series Site Masters.

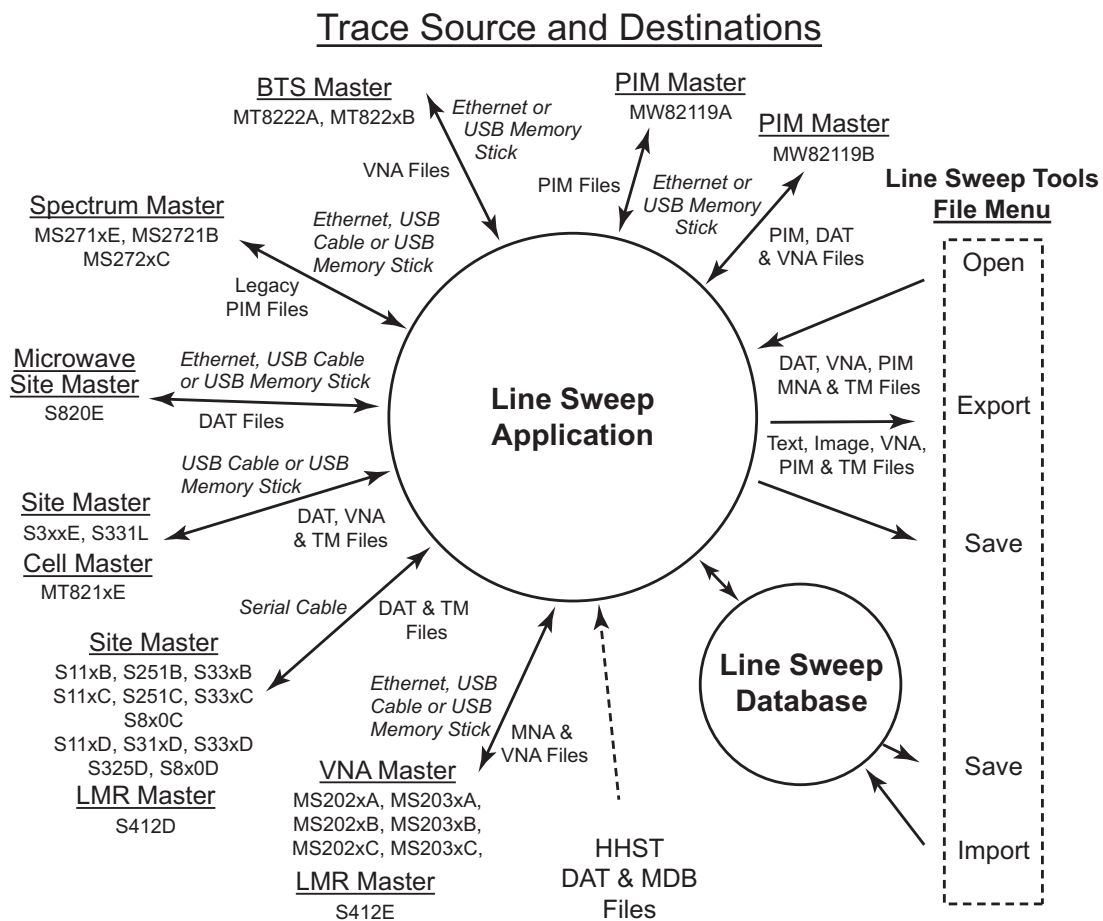
2) X\* = For these instruments, the Smith Chart is created by LST from other traces.

Product Family	Instrument	Common Field Mode Measurements	Insertion Loss	Smith Chart	Common Vector Network Analyzer Measurements
<b>LMR Master</b>	S412D	X		X*	
	S412E	X	X	X	X
<b>VNA Master</b>	MS2024A	X		X	X
	MS2026A	X		X	X
	MS2034A	X		X	X
	MS2036A	X		X	X
	MS2024B	X	X	X	X
	MS2025B	X	X	X	X
	MS2026B			X	X
	MS2028B			X	X
	MS2034B	X	X	X	X
	MS2035B	X	X	X	X
	MS2026C			X	X
	MS2028C			X	X
	MS2036C			X	X
	MS2038C			X	X

Common Field Mode Measurements:	Common Vector Network Analyzer Measurements:
<ul style="list-style-type: none"> <li>• Return Loss (RL)</li> <li>• Voltage Standing Wave Ratio (VSWR)</li> <li>• Distance to Fault, Return Loss (DTF-RL)</li> <li>• Distance to Fault, VSWR (DTF-VSWR)</li> <li>• Cable Loss (CL)</li> <li>• Smith Chart</li> <li>• Phase</li> </ul>	<ul style="list-style-type: none"> <li>• LogMag vs. Frequency – S11, S12, S22</li> <li>• LogMag vs. Frequency – S21</li> <li>• LogMag vs. Distance – S11, S22</li> <li>• SWR vs. Frequency – S11, S22</li> <li>• SWR vs. Distance – S11</li> <li>• Phase vs. Frequency – S11, S12, S21, S22</li> <li>• Phase vs. Distance – S11</li> <li>• LogMag/2 vs. Frequency – S11</li> <li>• Real Impedance vs. Frequency – S11</li> <li>• Imaginary Impedance vs. Frequency – S11</li> <li>• Smith Chart vs. Frequency – S11, 12, 21, 22</li> <li>• Group Delay – S11, S12, S21</li> <li>• Vector Voltmeter</li> </ul>

Q. Which traces can go to which instruments, or to a PC?

A. This is a diagram of how files are opened, saved, and exported. Left of the diagram are instruments supported by Line Sweep Tools. Above the arrow line is the medium that the measurement plots transfer between Line Sweep Tools and the instrument. Below the arrow line is the file type that is being transferred between the instrument and Line Sweep Tools.



## **BTS Master (VNA Files)**

- *Line Sweep Tools will open VNA files via Ethernet, a USB Memory Stick, or USB cable using the Open and Capture commands.*
- *Files can be returned to the instrument via USB cable or Ethernet using the Upload to Instrument command.*
- *Files can also be saved to the PC or USB memory stick as VNA files using the Export command.*

## **Spectrum Master (Legacy PIM Files)<sup>5</sup>**

- *Line Sweep Tools will open PIM files via Ethernet, a USB Memory Stick, or USB cable using the Open and Capture commands.*
- *Files can be returned to the instrument via USB cable or Ethernet using the Upload to Instrument command.*
- *Files can also be saved to the PC or USB memory stick as VNA files using the Export command.*

## **Site Master / Cell Master E Series (VNA Files)**

- *Line Sweep Tools will open VNA files via a USB cable and USB memory stick using the Open and Capture commands.*
- *Files can be returned to the instrument via USB cable using the Upload to Instrument command.*
- *VNA files from an instrument can also be saved to the PC or USB memory stick as VNA files using the Export command.*

## **Site Master / Cell Master E Series (DAT Files)**

- *Line Sweep Tools will open DAT files via a USB cable or USB memory stick using the Open and Capture commands.*
- *Files cannot be returned to the instrument as DAT files.*
- *Files can be saved to the PC or memory stick using the Save commands.*

## **Site Master B, C, D Series and LMR Master D Series**

- *Line Sweep Tools will open files via a serial cable using the Open and Capture commands.*
- *Files can be returned to Site Master D series instruments via serial cable using the Upload to Instrument command.*
- *DAT files can be saved to the PC using the Save commands.*

## **Site Master L Series**

- *Line Sweep Tools will open DAT files via a USB cable or USB memory stick using the Open and Capture commands.*
- *L Series DAT files are ONLY compatible with L Series instruments.*
- *DAT files can be saved to the PC using the Save commands.*

## VNA Master (MNA & VNA Files)

- *Line Sweep Tools will open files via Ethernet, USB cable and or USB Memory Stick using the Open and Capture commands.<sup>1</sup>*
- *Files cannot be returned to the instruments.*
- *Files can be saved to the PC using the Save commands.*
- *MNA Files can ONLY be saved on the PC as DAT files.*

### Notes:

1. *For the MS202xA and MS203xA instruments, USB is the ONLY supported means of communication for file transfer.*
2. *Files from an instrument can only be returned to the same instrument model. Files cannot be transferred between different instrument models.*
3. *VNA files returned/uploaded to their respective instruments will not contain the title or subtitle set in Line Sweep Tools. If a VNA file does not have a subtitle, the Filename will be applied to the measurement plot's subtitle when in Line Sweep Tools.*
4. *The Y-axis scale for Return Loss, Cable Loss and DTF-RL measurement files are positive, unlike the y-axis scale in HHST, to match common usage.*
5. *Legacy PIM measurement files for the MS271xE, MS2721B, and MS272xC handheld instruments are supported by this version of Line Sweep Tools.*

*Q. Can I send Line Sweep Tools files to someone else in electronic format?*

*A. Yes, you can. Line Sweep Tools can create a number of file formats, and each has different tools required on the recipient's end:*

LST Output type	File Reading Tool
VNA	MST, LST, and the originating instrument.
DAT	LST, HHST, and the originating instrument*
PIM	LST and the originating instrument
MNA	LST and the originating instrument
TM	The originating instrument
PDF	Adobe PDF reader
CSV	MS Excel or similar spreadsheet tool
BMP	MS Paint or similar bitmap file viewer
JPEG	Any photo viewer
PNG	Most Windows based image viewers

\* Except for the E series instruments.

*Q. Why would I choose to use LST over MST or HHST?*

*A. If you routinely work with many cable, antenna, or PIM traces, LST is optimized to speed up your work. If your work centers on spectrum traces, transmitter test, or backhaul test, MST supports these functions. HHST is the predecessor to LST and has been replaced by LST.*

*Q. I have some traces from a B series Site Master I want to view. Which program should I use?*

*A. LST will connect to that instrument and download files. It can also upload files to the instrument. In addition, the file format it creates can be read by users of HHST.*

*Q. Can I view files taken off instruments by MST?*

*A. Yes. Once saved by MST as a VNA file or as a DAT file, LST can open the trace file.*

*Q. Can I modify traces with LST to be viewed by MST?*

*A. Yes, as long as they started out as a VNA file. You will then need to use LST to export them as VNA files. Again, this means that the files are Cable and Antenna Analyzer files from a Site Master or Cell Master “E” series or from a member of the BTS Master family.*

*Q. Can I work with all VNA Master S parameter traces with Line Sweep Tools?*

*A. Line Sweep Tools is a tool for people doing large numbers of cable and antenna sweeps. It is designed to work with field mode traces from many Anritsu handheld instruments, including the VNA Master and LMR Master. LST also supports the S parameter equivalents to the field mode traces. For instance, it supports both Return Loss and Log Mag S11 vs. Frequency. Details are in the “Which instruments and trace types will Line Sweep Tools work with?” FAQ.*

*Q. Does LST work with the new PIM Master, the MW82119B?*

*A. Yes, LST v1.54 works with all trace types from the MW82119B.*