

Release Notes

v3.0001 for Sage 925VST/325EV Responder

This document describes a new software release (v3.0001) for the 925VST Handheld VoIP Service Tester and 325EV Packet Voice Responder. This software supersedes Version 2.6000 and is available now.

New Features

1. *Streamlined "Environment" Settings* —

Criteria Template: Enabled or Disabled

TX Level Point (TLP): -50 to 0 dB, default 0 dB (This setting applies to PVIT Send, PVIT Send/Measure, Echo sounder, Echo generator, telemetry package of DTMF Callback director, and Fax test.)

Note: The SMOS Director and Responder functions have their own TLP settings. DTMF digit levels are set within the F1 (Dig Setup) key at the "Enter Far End #" screen

No Answer Timeout: 1 to 99 seconds, default 40 seconds

Max Wait Dial-Tone: 1 to 99 seconds, default 10 seconds

Audible Alert: Enabled or Disabled

Backlight Timeout: 1 to 99 seconds, default 15 seconds.

Display Contrast

2. *Export Data & Receive Data* — These new complementary functions allow a user to conveniently and reliably transmit test results data to a remote location.

Export Data function allows the user the choice of sending all data or only new data that has never been sent. It is located in the 925VST menu structure at *Main Menu/View Results/Export All*

Receive Data function is available in Responder mode. It does not store received data. Instead, it prints out received data through the serial port, in real time. This function is located in the 925VST menu structure at *Main Menu/Setup/Responder Mode/Receive Data*

A complimentary *Centralized Data* option is available in the Sage 945RTS. This option will receive data and store it for later review and/or post processing by the user.

3. *Echo Sounder*

a. *One-Shot and Continuous Modes* — A one-shot mode has been added to provide the capability to capture transient echoes, which only occur at initial excitation of a circuit.

After the Echo Sounder test function has been invoked, there is a new menu, which allows user to select "One Shot" (F1 key) or "Continuous" (F2 key). No test signal has been sent at this point.



- One shot* only sends the probing signal once, and then displays the result. *Continuous* functions as it used to. A user can press BACK to halt the test and return to the select menu.
- b. *Run Time Print* — During setup of the Echo Sounder test, the user can elect to have the 925VST stream the echo results out the serial port to a PC. Each result is time stamped with the elapsed time from start of the Echo Sounder test. This function is accessed at Main Menu/Test/Echo Sounder/F2 (SETUP)/Run time Print/1 (Yes) or 2 (No)
 - c. *G.131 Echo Mask* — This enhancement works in conjunction with the latest 925VST template tool version 2.1, to automatically classify an echo sounder test as Pass or Fail. It is based on the ITU-T Recommendation G.131 *Control of talker echo*. It works by taking into account both the delay and echo path loss, to calculate whether the resulting echo is acceptable per G.131.
4. ***View Current Echo Generator Setup Parameters During a Test*** — Once the Echo Generator function has been launched, pressing the INFO button displays a snapshot of the current echo settings without interrupting the echo function. The displayed settings will reflect any temporary echo parameter changes invoked by far end DTMF command digits.
5. ***PVIT Measure***
- a. *Min Event Time* — In the setup menu for PVIT measure, a new item has been added: *Min Event Time*. Any event with duration shorter than this threshold will be ignored and not reported. This feature is introduced because many highly compressive codecs exhibit a known tendency to generate a large number of short (~6 milliseconds) voice clips. Since these codec artifacts are generally considered harmless, the *Min Event Time* parameter provides a means to ignore them.
 - b. *Limited PVIT Events Storage* — In order to control the size of internally stored results files, the 925VST will now limit the number of stored PVIT events to 99 per PVIT results file. The events storage operates on a first in, first out basis, so the last 99 events will always be stored. Although only the last 99 events are stored, *all* events detected during the course of the test are included in the summary test statistics.
 - c. *Expanded PVIT Test Statistics* — PVIT statistics now include count, average, min, and max for each type of event. It now also provides a percentage value for Frame Loss, Positive Frame Slip and Negative Frame Slip. A summary statistic for "No Signal" has also been added.
6. ***Adjustable Dial Digit Parameters*** — For all tests, at the screen "Enter Far End #", the user can make the following adjustments. These adjustments are applied globally within the 925VST, and will remain the digit parameter settings for all tests until modified within any test.
- a. *Digit On/Off Time* — At the "Enter Far End #" screen, the user can press the F1 (Dig Setup) key and adjust the on/off time of digits over a range of 40 to 180 milliseconds (default 100). The one setting is applied to both On and Off times.
 - b. *Digit Level* — At the "Enter Far End #" screen, the user can press the F1 (Dig Setup) key and adjust the transmit level of the dual tones making up DTMF digits. The one setting applies to both tones at once, and can be varied over a range of -30 dBm to +3 dBm. Factory default is -7 dBm per tone.
 - c. *Adjustable Pause Length* — At the "Enter Far End #" screen, the user can press the F1 (Dig Setup) key and adjust the length of the pause (-) character over a range of 1 to 9 seconds. (Note that the pause character can be entered by press the right-arrow key.)

7. *Now, there is a SETUP menu within each director and responder function —*

SMOS Director

Voice Duration: 5 to 60 seconds, default 9 seconds
TX TLP: -30 to 10 dB, default 0 dB
RX TLP: -30 to 10 dB, default 0 dB
'Pause' digit duration: 1 to 9 seconds, default 1 second

DTMF Callback Director

Test Digit on/off time: 40 ms to 190 ms, default 50 ms
Note: it can only be a multiple of 10 ms

Echo Sounder

Run time Print: Yes/No [If "yes," prints time stamped results line for each echo sample. Time stamp reflects elapsed time since the call connection was established]
Signal Level: -30 to 0 dBm, default -10 dBm
Transient echo convergence threshold: -20 to -90 dB, default -50 dB

PVIT Measure

Noise Filter: C-message, or Psophometric, default C-message
Test Timeout: 1 to 99999 seconds, 0 means never timeout, default 300 seconds

PVIT Send

PVIT Level: -40 to 3 dBm, default -16 dBm

PVIT Meas/Send

Noise Filter: C-message, or Psophometric, default C-message
Test Timeout: 1 to 99999 seconds, 0 means never timeout, default 300 seconds
PVIT Level: -40 to 3 dBm, default -16 dBm

PVIT Responder

Signal Level: -40 to 3 dBm, default -16 dBm
Test Timeout
Uses the timeout setting of PVIT Measure

FAX TX

Either V.27 or V.17, default is V.17

SMOS Responder

TPT Duration: 2 to 99 seconds, default 10 seconds
TX TLP: -30 to 10 dB, default 0 dB
RX TLP: -30 to 10 dB, default 0 dB

Echo Generator

Echo-1
Level: -40 to 9 dB, default -10 dB
Delay: 16 to 600 ms, Default 30 ms
Turn Echo-1 on/off
Echo-2
Same options as Echo-1, separately adjustable
Test Timeout



Uses the timeout setting of PVIT Measure

Enhancements

1. ***Serial Port Now Echoes Command Characters*** — When logged in via the serial port as "test," the 925VST previously did not echo command characters. Consequently, users couldn't see their typed characters unless they activated local echo in their communications program.
2. ***Improved Software Installer Tool Reliability*** — The 925VST Software Installer tool is now more resistant to failed software updates.
3. ***925/325 Responder Functions Answer In One Ring*** — Previously, the responder functions would wait for two full rings to answer. They now answer in one.
4. ***4-Wire Dry Echo Sounder Test Starts More Quickly*** — In 4-Wire Dry mode, there is no need for Echo Sounder to wait 4 seconds before starting. It no longer waits.
5. ***More Robust Telemetry*** — Increased randomness of telemetry to avoid long tones which could be degraded in packet networks.
6. ***4 Wire Dialing*** — The 925VST now supports dialing DTMF digits in 4-Wire Dry mode. Once the screen displays "Go off hook and dial ", the user can press the NEXT key, and the unit will dial the previously entered phone number.

Corrections

1. ***Test Timeout Timer No Longer Shuts Unit Down*** — On PVIT and Echo Generator responder functions, expiration of the timeout timer would shut the unit down instead of returning it to a state of waiting for the next call. This no longer happens.
2. ***Last Work Order is Now Correctly Deleted*** — If there was only one test result stored in the 925VST, and a user deleted it, the system did not delete the associated Work Order. It now does.
3. ***Responder Abort Now Correctly Disconnects*** — Previously, if a user pressed the F2 key to abort a test while the responder function was transmitting Test Progress Tone (initial answer tone), the unit would not hang up the line. It now does.