



Release Notes

v5.7.8 for 960x Multi-Channel Test Unit

This document describes a new software release (v5.7.8) for the 960x. This software supersedes Version 5.2.25 and is available now.

NEW FEATURES

1. **SIP (Session Initiation Protocol) support** — 960B Units Equipped with Option 800, TCP/IP Remote Command Interface can now initiate and answer SIP calls over an IP network via an ethernet interface.
2. **Dual Direction Audio Level Meter** — 960B Units Equipped with Option 800, TCP/IP Remote Command Interface can now, using RTP (Real-Time Transport Protocol) monitor access, simultaneously measure the signal level of a tone in both directions of transmission. This function also simultaneously presents a spectrum analyzer display of each direction of transmission, making it easy to see foreign/spurious tones which may also be on the circuit.
3. **MoIP (Modem-over-IP)** — With this director/responder test, a user can quickly determine whether or not the device and network under test can handle various MoIP (Modem over IP) or VoIP (Voice over IP) calls. The test sends standards-based precursor signature tones by emulating a FAX call, a V34/V90 modem call or a voice call to test the gateway's call discrimination capability. After the signature tones, the test then measures the round-trip delay as the delay is a good indicator of the internal jitter buffer size. The test then starts simplex, full-duplex or half-duplex packet network impairments test by measuring in detail each individual packet loss event and its duration, and each individual voice jitter (gapping or jerking) event and its duration. The signal level change (gain) is also measured, and the codec type (PCM, ADPCM or VOCODER) is also detected.

ENHANCEMENTS

1. Considerable work was done to make it easy for a user to identify available choices in the various selection screens. This was done by disabling and "greying out" the unavailable choices.

For example, when in the test selection drop-down window, the INMD choice is greyed out if the T1/E1 is not configured for Dual Monitor mode. As another example, if the Test Type is "Idle", the Call Setup, Load Type and Log to Configuration buttons are all disabled (greyed out).

2. Enhanced results logging:
 - a. When PVIT results logging is enabled, the GUI now automatically logs events (such as frame slips, noise hits, etc.), too. The events are logged in a separate file. For example, if you defined the PVIT log name as PVIT_log, The GUI would generate two files: PVIT_log.csv and PVIT_log_events.csv
 - b. Final results are now always logged, and the user can choose whether to also log interim results
 - c. In the "Log to" configuration window, the program now presents a standard Windows file browser to make it easier for the user to specify the desired log file location
 - d. In the Span/Channel view, a user can now select multiple channels and enable logging on all of them with a single click on the new "Enable Log" button at the top of the screen. The logging function will use settings contained in the "Log Configuration" screen for each channel.
3. Expanded Windows 'tool tips' provide additional test results information:
 - a. In the SMOS and MOIP tests, hovering the PC mouse pointer over a graph point will display the x and y coordinates of that point. On other tests it will display the y coordinate value.

4. On SMOS and MOIP tests, the left side of the 'status bar' at the bottom of the screen will display informative test progress messages. You can enable or disable the status bar by clicking on View/Status Bar.
5. When making a Manual call from the test setup screen, you can now dial additional digits such as an access code or automated attendant control: a Dial Digits button was added at the top of the screen. Once you initiate a Manual call, the Dial Digits button is enabled. Clicking on it brings up a Send Digits screen resembling a calculator. You can select DTMF or MF digit type, then manually send additional digits by clicking on the appropriate digit buttons.
6. For ISDN calls, the call setup dialog box now has a window to enter the call originator's phone number.
7. PVIT results enhancements:
 - a. Under the TOTALS tab, if you hover your mouse pointer in the "Avg." column of Frame Loss, + and -Frame Slips, and Voice Clips to see a Windows "tool tip" displaying the Minimum and Maximum duration of each type of event. It also reports whether the frame slips were expansive or compressive in nature.
 - b. Clicking on a parameter will plot the events on a graph
 - c. The graphs are "un-dockable" so you can display multiple graphs simultaneously
 - d. The EVENTS tab reveals a time-stamped event log view that can be paused, resumed, or cleared. You also have the option of recording the log to a disk file for archiving or later review/analysis.
8. Added Audio Monitor Capability: Now, when you click on the Sig Bits button in the Span/Channel View, the resulting View Span Signaling Bits screen provides the ability to monitor audio being transmitted by the Far End, Near End, Both, or None. A scroll button is provided to select which channel to monitor.
9. The Fax test now presents a real-time display of the test progress. The display is a scrollable screen of the time-stamped events.
10. You can now initiate a reboot from within the 960x GUI — In the unlikely event of a misbehaving unit, you can remotely force the 960x to reboot: Go to the GUI "Home" page, click on the "Configure Unit" button, then click on the "Reboot" button.
11. Support multiple test result windows: Previously, although the 960 could run multiple tests simultaneously, only one channel's results window could be viewed. Now, a user can 'undock' the result panel, and keep it alive while he or she goes to other channel. In this way, a user can simultaneously watch/monitor more than one channel. The undocked panel will be destroyed when the test it is tied to is killed when the user changes the test on that channel, or exits the program.

To undock a results window panel, click on the thin vertical bar at the left of the results window.
12. In the IP Interface Configuration screen, you can now have the 960B obtain a dynamic IP address from a DHCP (Dynamic Host Configuration Protocol) server. Simply click in the DHCP check box.
13. On a TCP/IP 960B, the Span/Channel View will automatically display the maximum number of channel end points you can test, based on the provisioning of the 960B Ethernet interface:
 - 10Base Half duplex will support 24 end points
 - 10Base Full duplex will support 32 end points
 - 100Base Half duplex will support 48 end points
 - 100Base Full duplex will support 64 end points.

14. There is a new Manual Call dialogue box:
 - a. It has three buttons: Make Manul Call, Answer Manual Call, and Cancel
 - b. It also provides selection for DTMF or MF on CAS (circuit associated signaling) calls
 - c. When in ISDN mode, in addition to the Destination # entry window, it also has an Originater # entry window

CORRECTIONS

1. BERT Testing
 - a. The Configure BERT Test dialogue window:
 - 1) Will now remember what loop code the user specifies, and will properly display it.
 - 2) Will now accept user entered binary strings as valid entries for custom BERT patterns
 - b. The BERT test log now identifies the test pattern that was used for each test
2. If, while in the Span/Channel View, the <Enter> key was pressed one or more times, the Back button would appear not to function. This no longer happens.
3. When switching between an active and unused T1 span, the Audio monitor function would stop when the user switched to the inactive span. When the user switched back to the active span, the monitor function was still stopped, but the Audio monitor button would still display "Turn Audio Off", implying the Audio monitor function was running. This no longer happens. The Audio monitor function will be automatically restarted when returning to the active span.