

9581 SST

Return Path Analyzer

- Catch “Bursty” Ingress and Impulse Noise Interference to Voice Services with Extremely High Spectrum Acquisition Speed
- Manage Service Quality Efficiently with 24/7 Monitoring and Configurable SNMP Alarms
- Align and Troubleshoot Reverse Path Quickly and Easily, and Cost-Effectively Consolidate Installation and Network Maintenance Support Equipment in the Head-End
- Scalable and Cost-Effective in Every Configuration



The 9581 SST™ is the hub of the Guardian System II™ for return path maintenance; providing installation, reverse sweep, and ingress spectrum information to field technicians using Trilithic's field units. When used in a Guardian System II, the 9581 SST shares spectrum information with the monitoring facility and the field units, speeding up problem identification and shortening repair times. The 9581 SST monitors the return band, generates SNMP traps, and relays monitored data to NOCs and designated network engineers. Extremely flexible, each SST supports up to twelve distribution technicians and a virtually unlimited number of installers. It can provide live spectrum information and recent historical data to as many as eight independent monitoring sites, each using its own SNMP trap criteria. Traps sent to each of these sites can be configured for different ingress severity alarm limits and persistence.

Ability to Capture all Types of Ingress

Cutting-edge DSP technology gives the 9581 SST unmatched power for capturing all types of ingress, including the short bursts that degrade VoIP services. Up to 100 times faster than analog-based analyzers, the 9581 SST captures and analyzes the entire spectrum of all connected nodes in microseconds and re-scans them up to 120 times per second. Thanks to the 9581 SST's unmatched scanning speed and high re-scan rate, the NOC operator or field technician never misses an ingress outbreak capable of disrupting return services.

Features a Wide Selection of Operating Modes

A wide selection of operating modes makes the 9581 SST a highly versatile return path troubleshooting aid. Through the Viewer II™ software, the operator can view node spectrum information at resolutions from 30 kHz to 3 MHz to facilitate troubleshooting.

The operator can also select averaging and continuously running maximum and minimum functions to diagnose immediate problems and long-term performance issues.

TrafficControl™, a data processing mode unique to the 9581 SST, lets the operator analyze ingress hidden inside occupied frequency bands. TrafficControl automatically removes all legitimate TDMA signals from the displayed spectrum, leaving an easily analyzed spectrum composed solely of noise and ingress.

9581 SST

Return Path Analyzer

Versatile, Flexible, and Scalable

The 9581 SST simultaneously supports:

- Installation tests
- Distribution sweep and maintenance
- Return path performance monitoring

Each 9581 SST can:

- Support up to 16 individual nodes
- Support up to 12 distribution technicians with R4, and up to 6 with R5
- Support dozens of installers
- Send traps and live spectrum data to as many as eight server sites

Efficient Distribution Maintenance

The 9581 SST transmits sweep and return spectrum information to 860 DSP™ Field Analyzers and RSVP²™ installation testers, updating all field displays every 0.8 seconds regardless of the number of instruments being supported.

Fast and Accurate Installations

The RSVP² Installer's return tester and 860 DSPi™ field analyzer with the VP-1 option analyze data from the 9581 SST to evaluate the reverse power level and C/(N+I) from the subscriber to the head-end.

Superior Return Monitoring

When used with Viewer II monitoring software, the 9581 SST can dispatch traps to as many as eight servers, each provided with its own SNMP trap criteria. Each client user has independent selection of display resolution and may choose any available detector settings without interference to other users or loss of speed.

The Guardian System II

The Guardian System II is a powerful, flexible system of field and central office products, supporting all aspects of return path management, including installation, distribution system alignment, ingress control, ingress monitoring, and real-time troubleshooting. All elements of the return maintenance process are closely linked for maximum efficiency, flexibility and optimum cost-effectiveness.

GENERAL SPECIFICATIONS

Standard Connection	2 test ports
Optional Connections	TPM-8 is an 8 port expansion module for the 9581 SST Two TPM-8's allow for expansion up to 16 ports
Functions Simultaneously Supported	Reverse sweep, working with 9580 SSR field units or 860 DSP signal analyzer with Option SR-1 Reverse installation testing, working with RSVP² installer's reverse tester or 860 DSP signal analyzer with option VP-1 Reverse path ingress monitoring with SNMP alarms compatible with Viewer II software
Measurement Refresh Speed	Field equipment: Every 0.8 seconds Monitoring and alarming: Every 0.4 seconds with R4, Every 0.8 seconds with R5 Live-viewing functions: Every 0.4 seconds with R4, Every 0.8 seconds with R5



9581 SST

Return Path Analyzer

Spectrum Data Resolution (RBW)

Network Applications	30 kHz, 100 kHz, 300 kHz, 375 kHz, 3 MHz
Field Applications	375 kHz
Transient Troubleshooter Mode	375 kHz at high scan rate
Display Range	50 dB dynamic range, 1 dB measurement resolution
Level Accuracy	±1 dB

Spectrum Processing Modes (Available simultaneously)

Peak Mode	Single spectrum comprised of the peak values of all of the spectrum scans collected during the previous interval
AVG Mode	Single spectrum averaging all of the spectrum scans collected during the previous interval
TraffiControl Mode	Processes return spectra to remove all TDMA traffic to enhance ingress detection Updates every interval

Spectrum Scan Rate

ENM Mode	Supports both network and field applications: scans all test points at rate of 40 scans per second
SFM Mode	Supports only transient monitoring and analysis functions: scans all test points at rate of 120 scans per second

Field Unit Support

Field Functions Supported	R4 - Spectrum view: 0.3 to 65 MHz R5 - Spectrum view: 4.125 to 85.5 MHz Current node is automatically selected or user may select other nodes supported by the same SST. R4 - Sweep: 0.3 to 65 MHz R5 - Sweep: 4.125 to 85.5 MHz Up to 12 field units independently supported per SST with R4, and up to 6 with R5. Ranging test for installation verification. Typically supports 50 or more RSVP ² reverse installer's tester or 860 DSP with option VP-1, per SST.
---------------------------	--

9581 SST

Return Path Analyzer

Field Communications

Data Carrier	R4: 1 telemetry carrier for each 8 test ports R5: 1 telemetry carrier for each 16 test ports
Data Carrier Frequency Set Ranges	50.00 to 53.75 MHz and 70.00 to 75.75 MHz; or 80.5 to 92 MHz R5: 50 MHz to 1 GHz
Data Carrier Frequency Resolution	Center frequency is user-settable in 50 kHz steps
Data Carrier Occupied Bandwidth	R4: 475 kHz at -60 dB R5: 700 kHz at -60 dB

Network Support

Communications	10 Mbit/second Ethernet LAN connection 9581 SST functions as mini-server supporting up to 6 simultaneous users, each with a unique user name
Data Available per Test Point	Live spectrum scans, all detector modes Last ingress-affected spectrum Last test results versus 4 amplitude limit sets, user-settable persistence threshold Running, long-term maximum and minimum spectra (restartable by user) Peak, minimum, and average spectrum data compressions for last 30 minutes

Mechanical, Miscellaneous

SST Display Panel	1.5" x 2.75" backlit LCD (38mm x 70mm)
Controls	Tactile key pad
Dimensions (H x W x D)	3.5" x 17" x 12.3" (89mm x 432mm x 312mm)
Weight	7 lbs (3.18 Kg)
Power	90 to 264 VAC, 47 to 440 Hz

INCLUDES THE FOLLOWING:

A/C power line

User's manual

OPTIONAL ACCESSORIES:

SST Configure™ software

P/N 0930105000

ADIA™ software

P/N 2011093100

Guardian System II software

P/N 2011009100

Add 1 TPM-8 module: 9 test points (8 test points from module + 1 on 9581 SST)

P/N 2070923002

Add 2 TPM-8 modules: 16 test points

P/N 2070923002