
MAPS™ FXO FXS Emulator using tProbe™

Automated Analog Terminal (FXO) and Network Port (FXS)

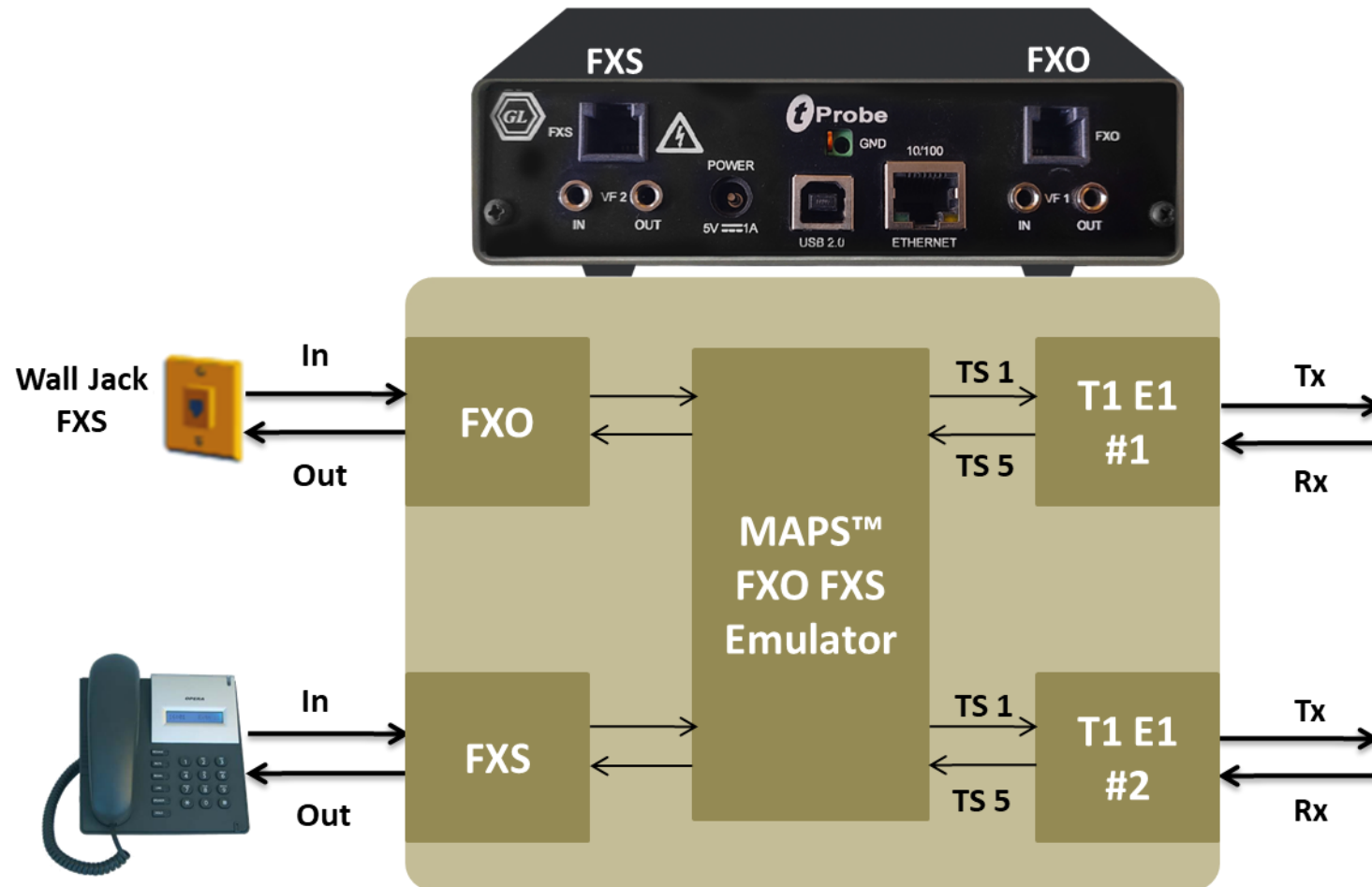


818 West Diamond Avenue - Third Floor, Gaithersburg, MD 20878
Phone: (301) 670-4784 Fax: (301) 670-9187 Email: info@gl.com
Website: <https://www.gl.com>

What is FXO and FXS?

- Foreign Exchange Subscriber (FXS) and Foreign Exchange Office (FXO) are interfaces commonly used with analog phones and phone lines
- FXO stands for Foreign Exchange Office
 - FXO is the plug on the phone or fax machine, or the plug(s) on your analog phone system
 - FXO receives the analog line
- FXS stands for Foreign Exchange Subscriber
 - FXS is the plug on the wall that delivers a ring signal and dial tone
 - FXS delivers the analog line to the subscriber

MAPS™ FXO FXS Emulator



tProbe™ T1 E1 Analyzer

- tProbe™ T1 E1 is an enhanced USB Based T1 and E1 solution that is capable of both T1 and E1 interfacing
- Available with Dual T1 E1, FXO, FXS, DTE, and DCE interfaces
- Forward thinking hardware design for future daughter board expansion applications
- Connects to a PC via a USB 2.0 port
- Access Remotely

Back Panel



Front Panel



Why the product is superior?

- Portable with advanced test features such as Pulse Shape Analysis and Jitter Management and Analysis
- “Cross-port Through “ Mode and “Cross-port Transmit” Mode- these settings make cabling with Drop insert and Fail-Safe Inline Monitoring very easy
- Enhanced VF Drop and VF Insert Capabilities (Including 3.5mm or Bantam Physical connection options)
- Improved circuitry for very accurate Digital Line Level measurements
- Forward thinking hardware design for future daughter board expansion applications
- Available with Dual T1 E1, FXO, FXS, DTE and DCE Interface
- Enhanced to support voiceband measurement

Main Features

- Script based simulation of 2-Wire Telephone Port (FXO) and Telephone Wall Jack (FXS) for complete automation
- GUI and CLI based testing of FXO/FXS for automation and remote access
- Standalone testing of FXO/FXS with loopback
- Supports input and output signals of 8K samples/sec, u-law, A-law, and 16-bit Linear PCM
- FXO/FXS termination supports for over 70 different termination characteristics (different countries)
- Handle FXO-FXS responses - Caller ID Detection, Continuous monitoring of Voltage and Current, and High and Low Voltage/Currents Triggers
- Loudspeaker provided to hear the voice being transmitted on FXO/FXS ports
- Send/Receive fax image (TIFF format) file over FXO and FXS ports
- Voiceband Measurement Tests using VF Ports

Applications

- Testing (simulation, and monitoring) 911, E-911, and NG-911 systems
- Testing gateways, VoIP ATAs, telephone lines, handsets, VoIP PBX
- Voice quality testing, 2-Wire call automation, Caller ID
- Monitoring signaling, voice, and tones on telephone lines non-intrusively
- Generation and reception of traffic on 2-Wire telephone lines
- Provides fault insertion, and erroneous call flows testing capability
- Ready scripts make testing procedure simpler, less time consuming and hence time to market products
- Remote operation of FXO FXS ports over TCP/IP

Digital Signal Formats

FXO/FXS supports following digital signal formats:

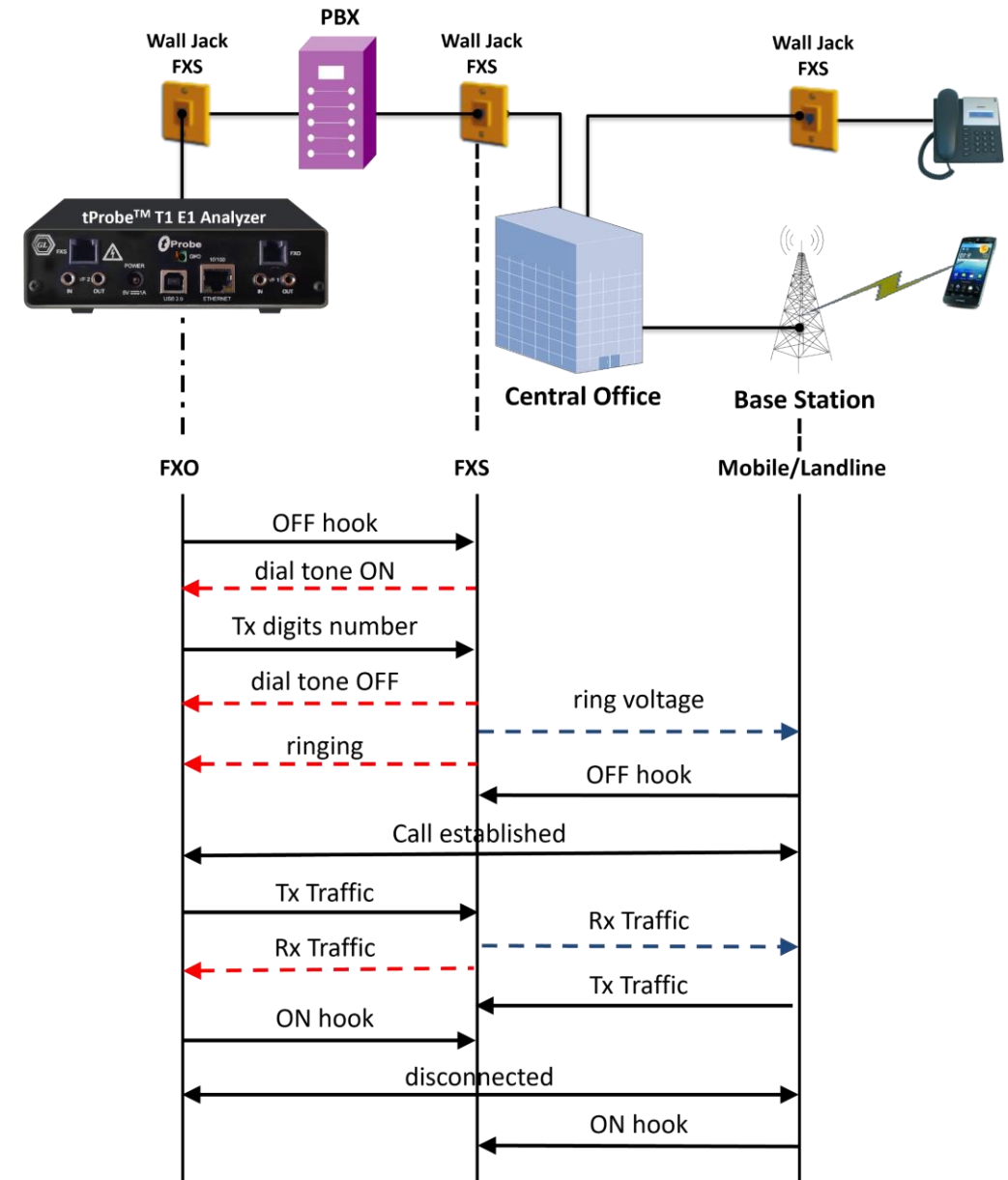
- **A-Law:** This is the 8-bit codebook format typically used in E1 systems
- **Mu-Law:** This is the 8-bit codebook format typically used in T1 systems
- **16-bit Linear:** This is a 16-bit linear signal. Intel (“little-endian”) byte ordering is used. (Currently this feature is supported only by FXO)

Supported Protocols

- Script based simulation of 2-Wire Telephone Port (FXO) and Telephone Wall Jack (FXS) for complete automation
- T1 Wink Start (R1 wink)
- T1 Loop Start and T1 Ground Start
- T1 Feature Group D (FGD)
- T1 Immediate Start
- T1 CAMA (Centralized Automated Message Accounting)
- E1 MFC-R2 (All variants, full/semi compelled) - Defined by the ITU Recommendations Q.421-Q.442 - uses multi-frequency compelled signaling protocol to exchange address information
- E1 European Digital CAS (EUC)
- E1 Digital E & M
- E1 International Wink Start
- E1 Sweden P7
- Any User-Defined CAS Protocol

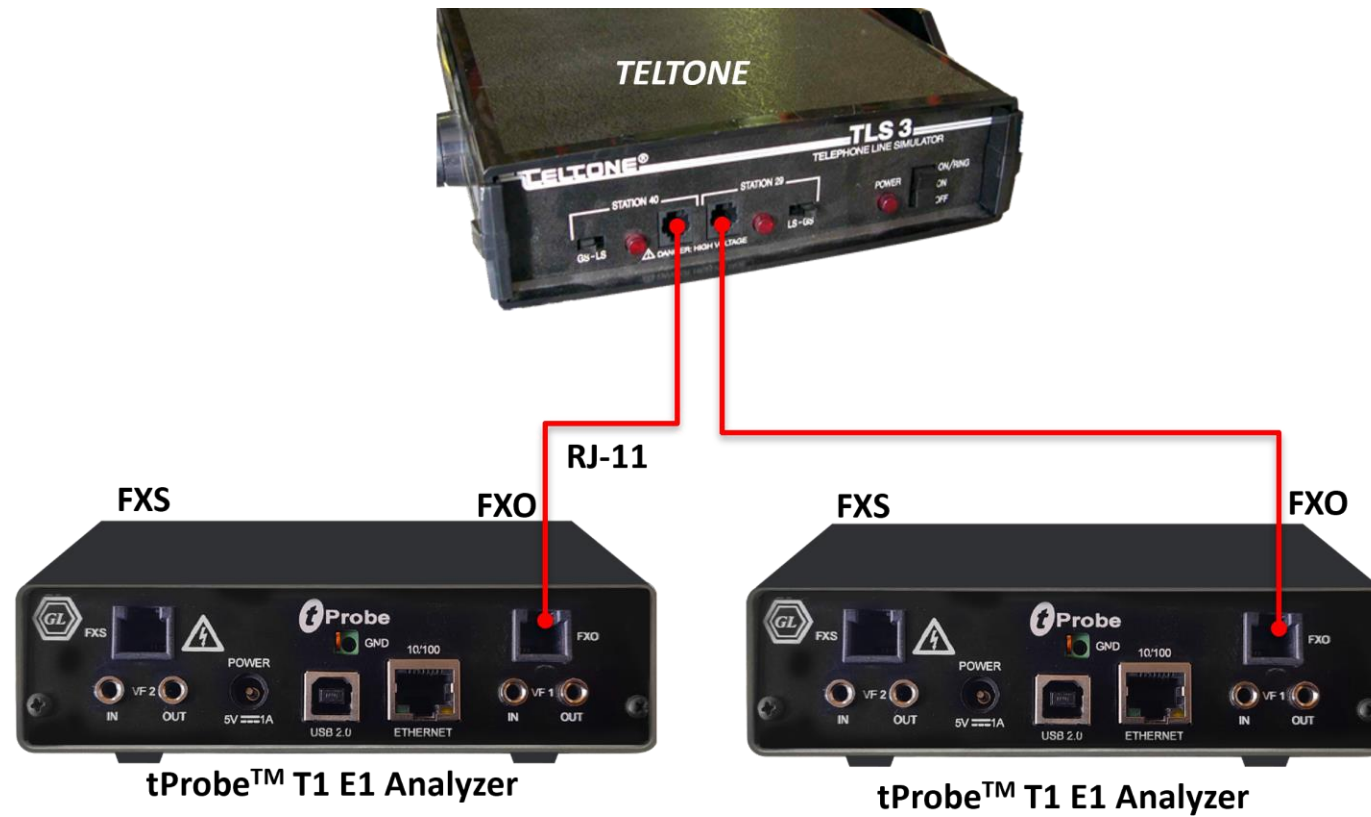
tProbe™ FXO Port to Mobile or Landline Phone

- MAPS™ FXO FXS sets up the call from tProbe™ FXO port to the Landline or Mobile phone through the wall jack FXS, local PBX, and central office of the service provider and base station



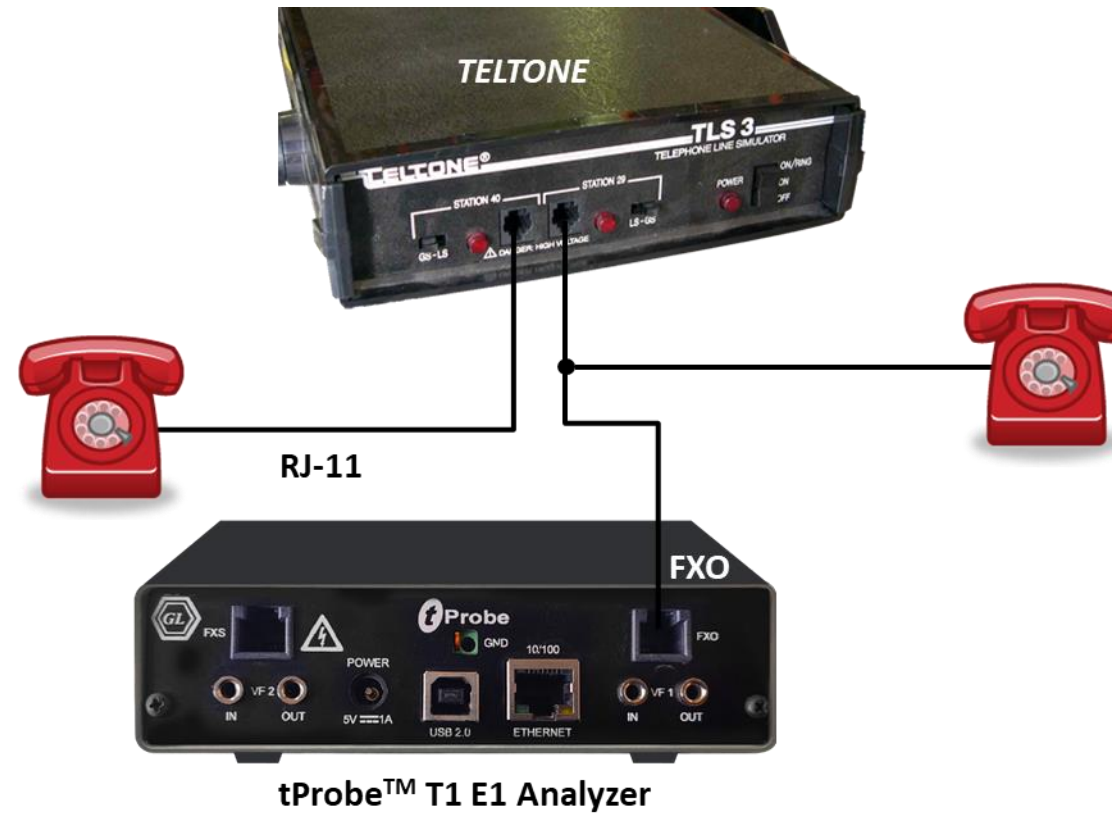
tProbe1 (FXO) to tProbe2 (FXO) via Teltone TLS 3

- It is also possible to establish call from tProbe™ FXO port to another tProbe™ FXO port via a Teltone Switch. Teltone Switch (TLS) provides two FXS ports in it and acts as a local exchange connecting the two lines



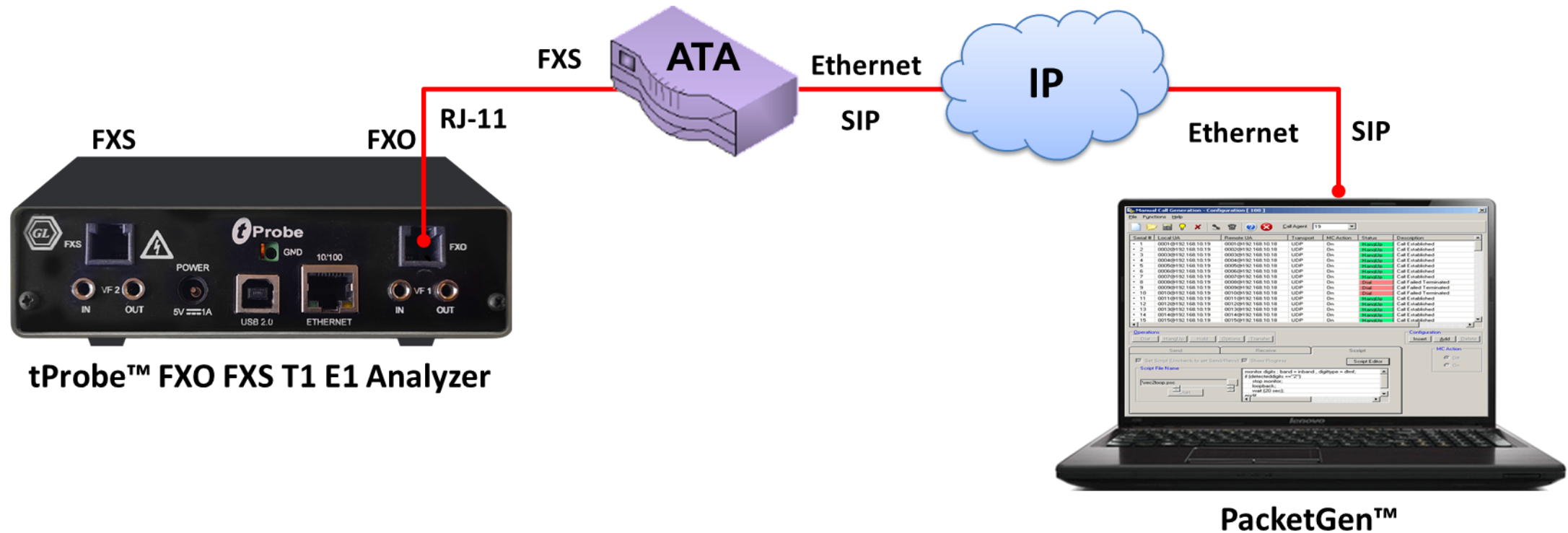
tProbe™ FXO Call Monitoring

- Connection of tProbe™ FXO port in non-intrusive monitor mode via a Teltone Switch



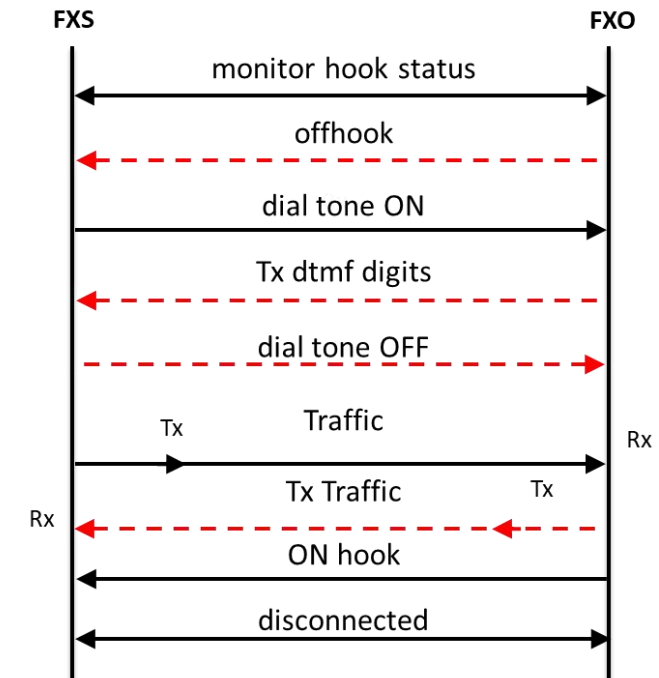
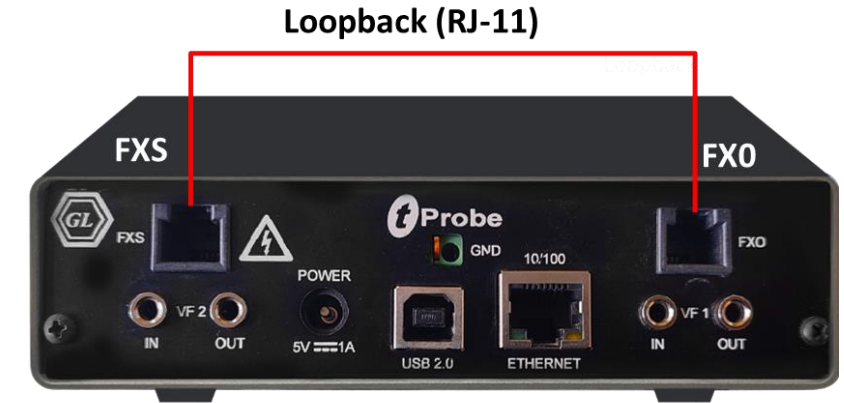
tProbe™ FXO Port to IP via ATA

- FXO port is connected to VoIP phone or PC with a local network via an ATA device
- The test scenario depicts the call established between tProbe™ FXO port and VoIP phone via ATA



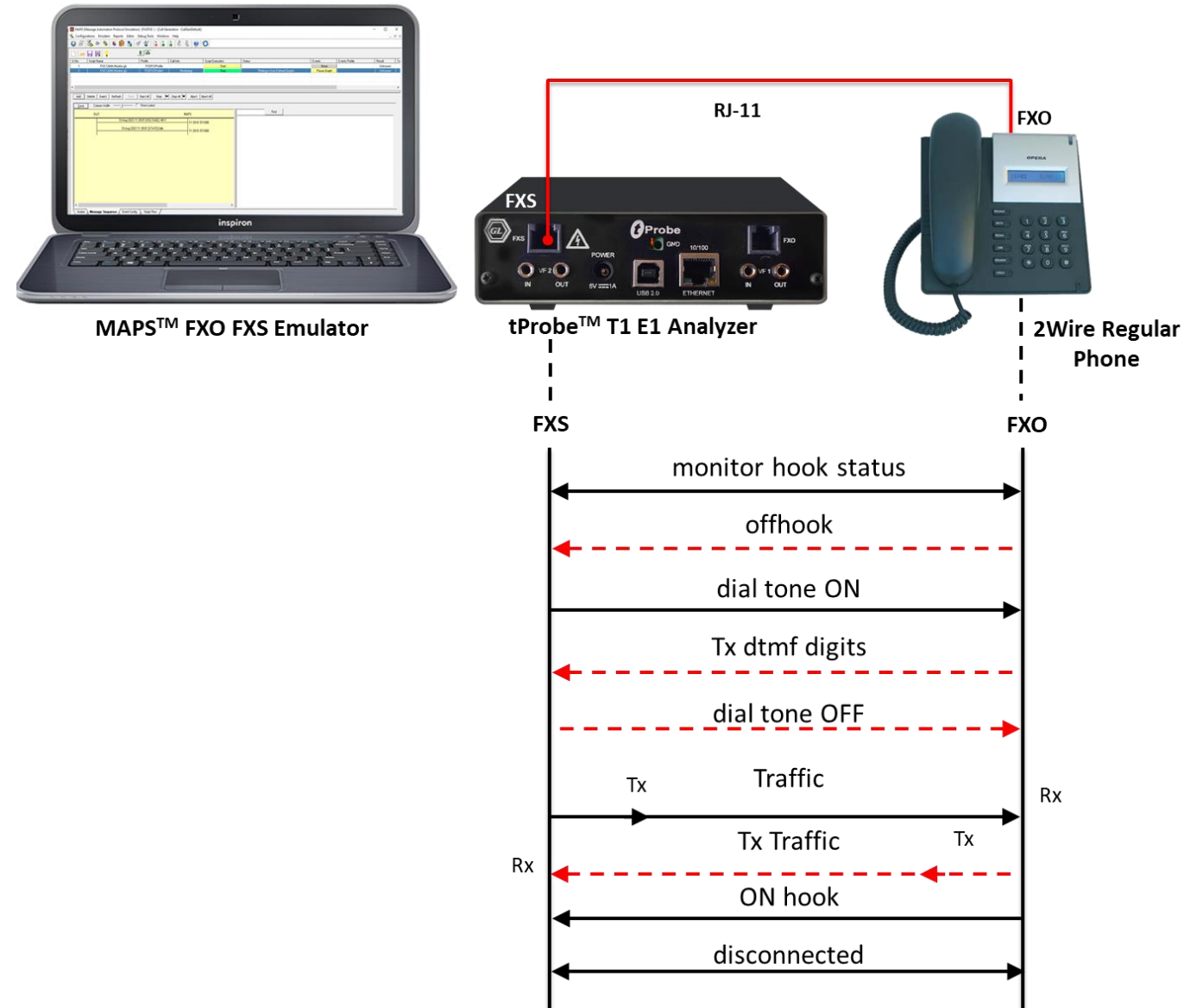
tProbe™ FXO FXS Ports in Loopback

- Script initializes tProbe™ FXO port and tProbe™ port parameters, places the call from the tProbe™ FXO port to tProbe™ FXS port by sending DTMF digits, answers the call by asserting off-hook, captures the incoming traffic into the file and transmits traffic to the other end



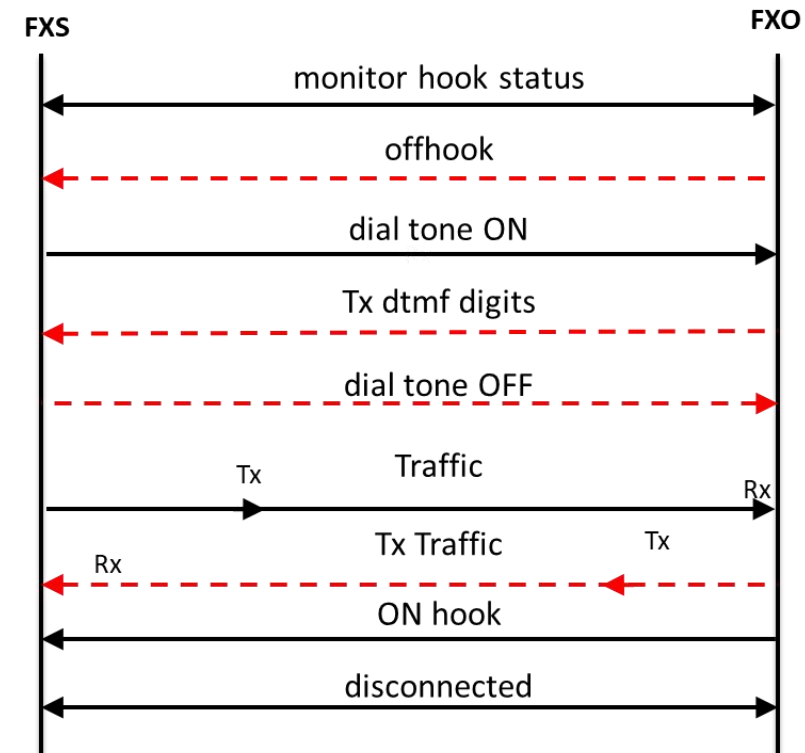
tProbe™ FXS Port to Mobile or Landline Phone

- Depicts the call from tProbe™ FXS port to regular phone (2-Wire phone) via RJ-11 cable. Places the ring to regular phone (2-Wire phone), captures the incoming traffic into the file and transmits traffic to the other end



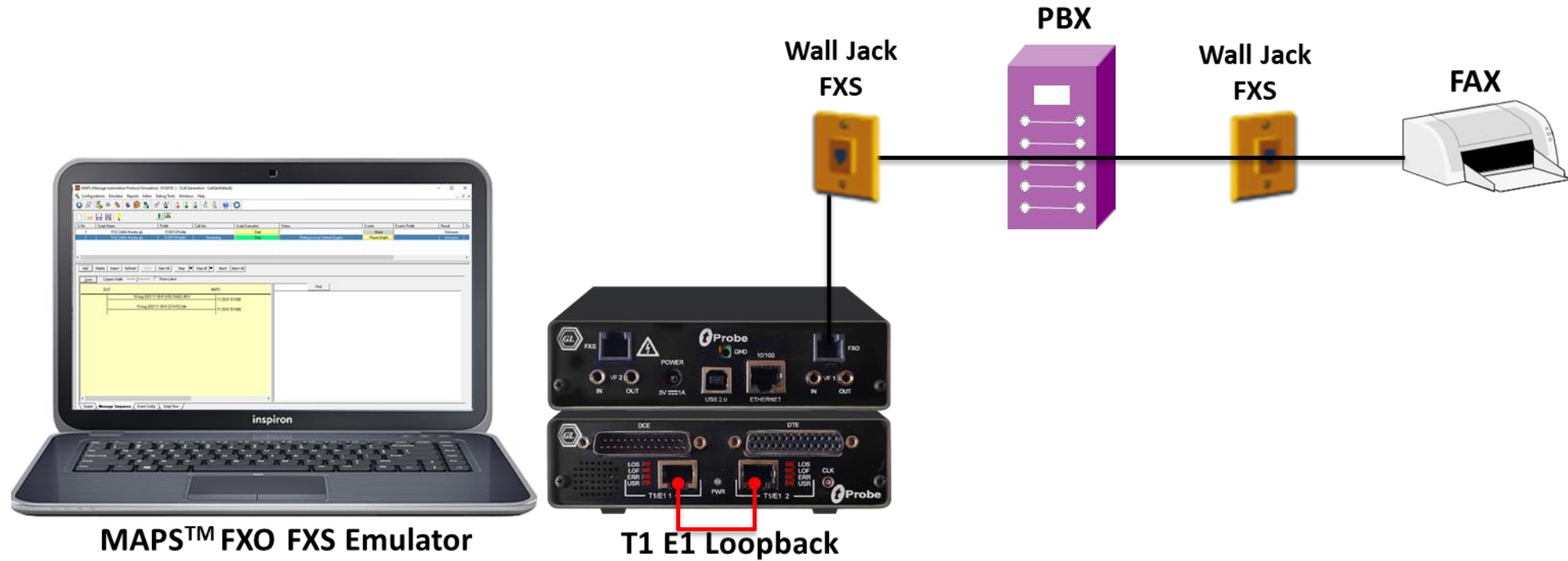
tProbe™ FXS Port to FXO on GL's Dual UTA

- The call flow between tProbe™ FXS port to GL's Dual UTA via RJ-11 cable, with Dual UTA HD initiating call



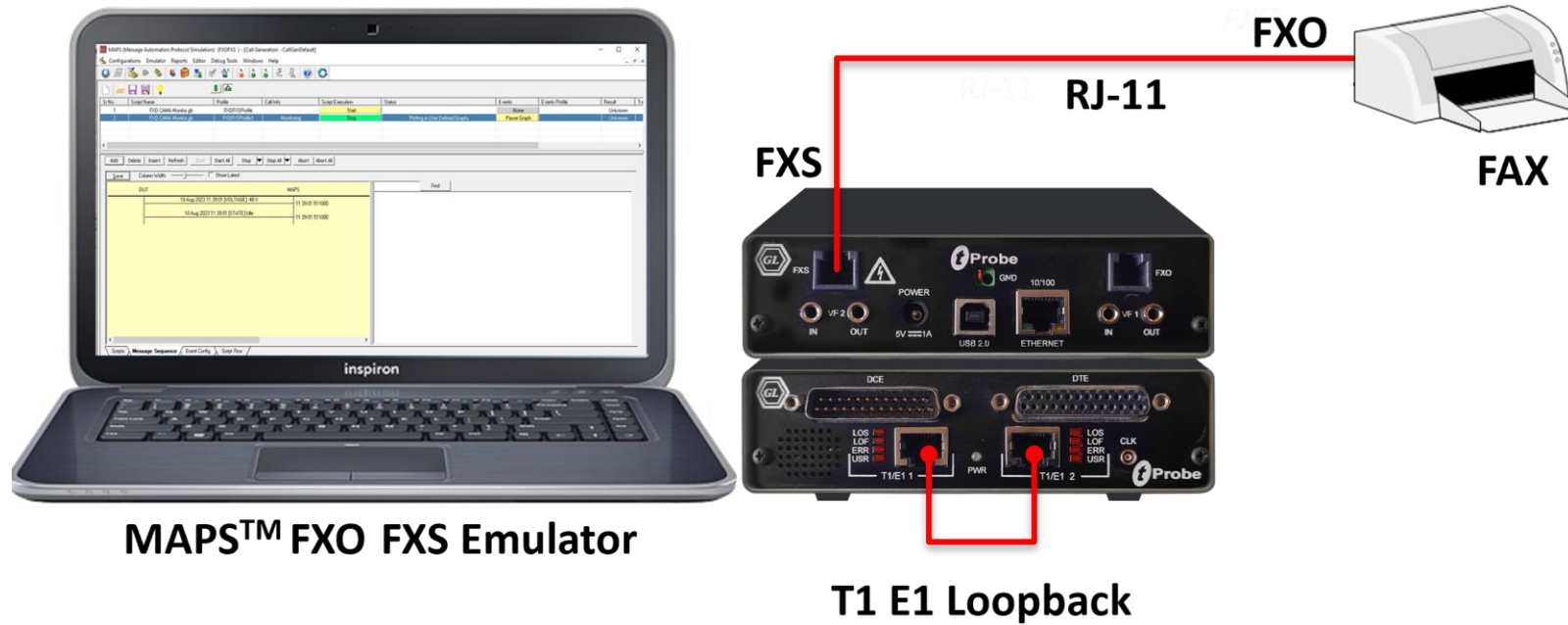
FAX Simulation over Analog Lines

Send / Receive FAX over FXO Port

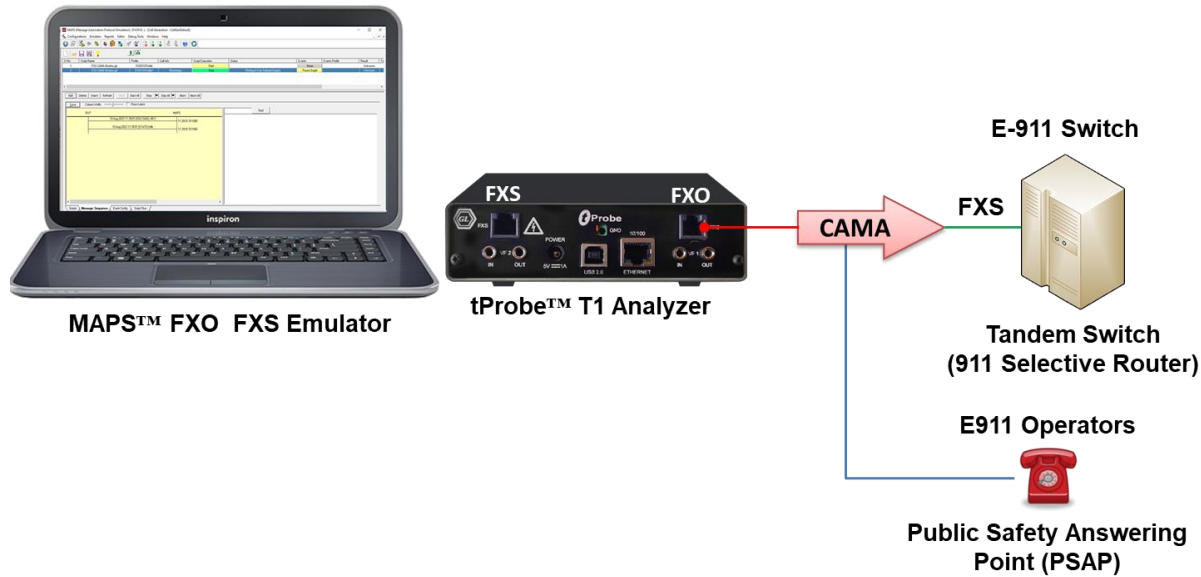


FAX Simulation over Analog Lines (Contd.)

Send / Receive FAX over FXS Port

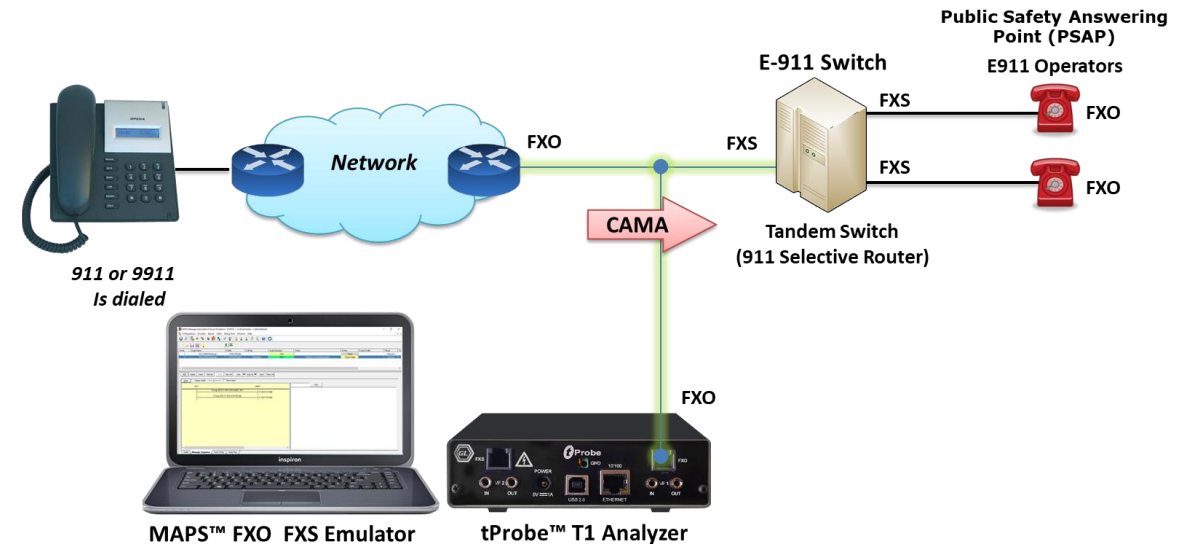


CAMA Call Generation and Monitor



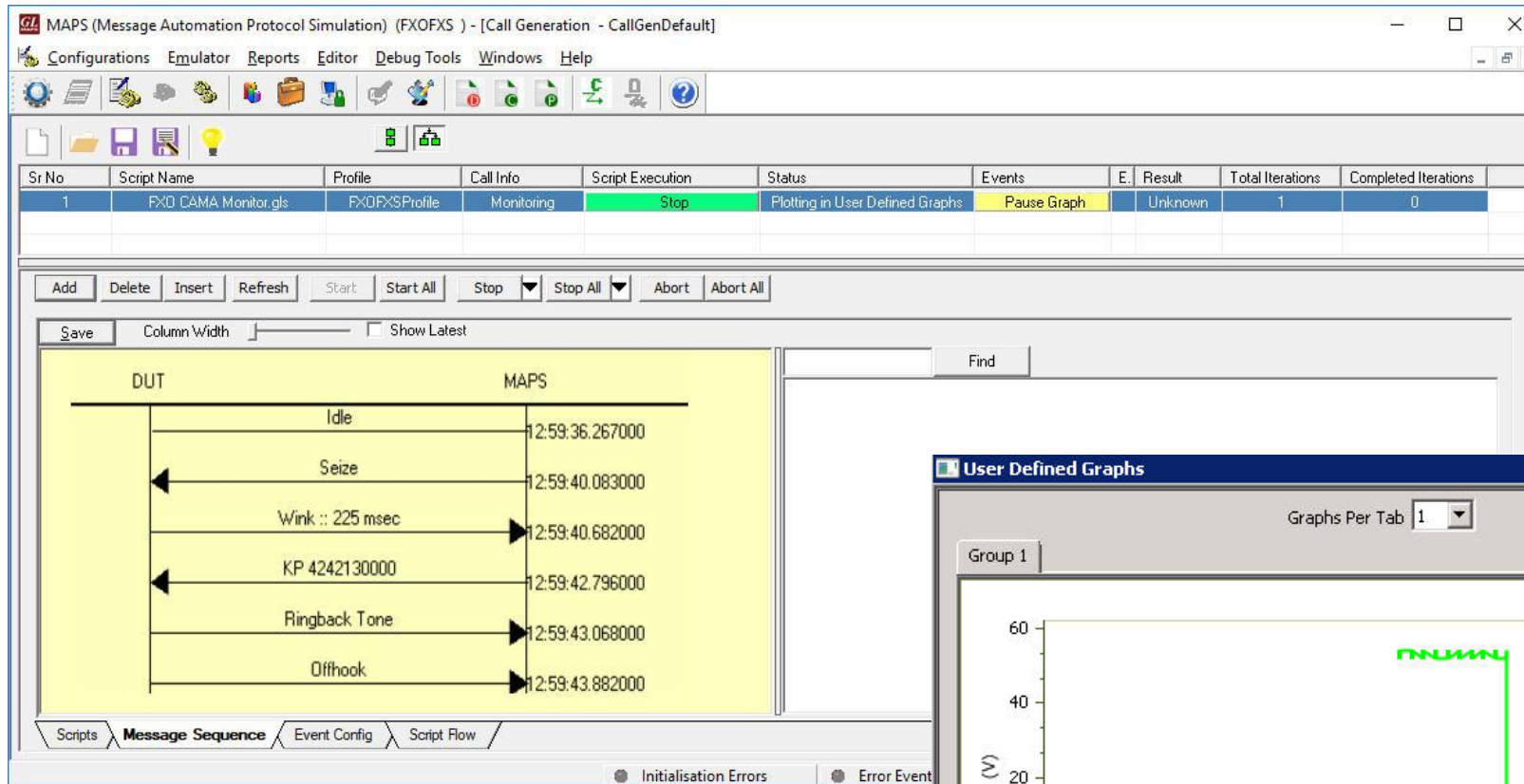
- The tProbe™ FXO port can be directly connected to 911 selective router or PSAP on CAMA-type circuits for simulation of CAMA calls to the selective router or PSAP
- The script will seize the line, wait for wink, dial ANI and wait for call connect

- The tProbe™ T1 FXO port can be tapped onto CAMA-type circuits for non-intrusive monitoring of 911 service

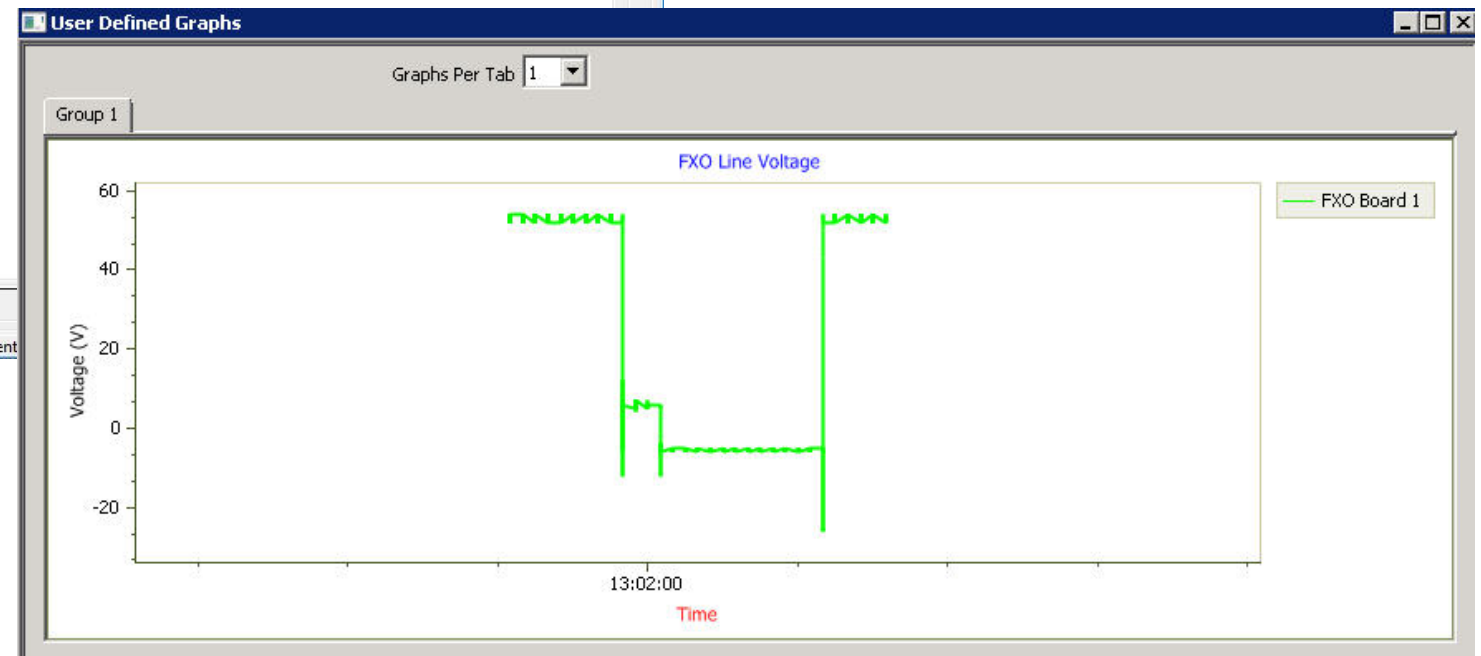


FXO Monitoring of CAMA Type Trunks

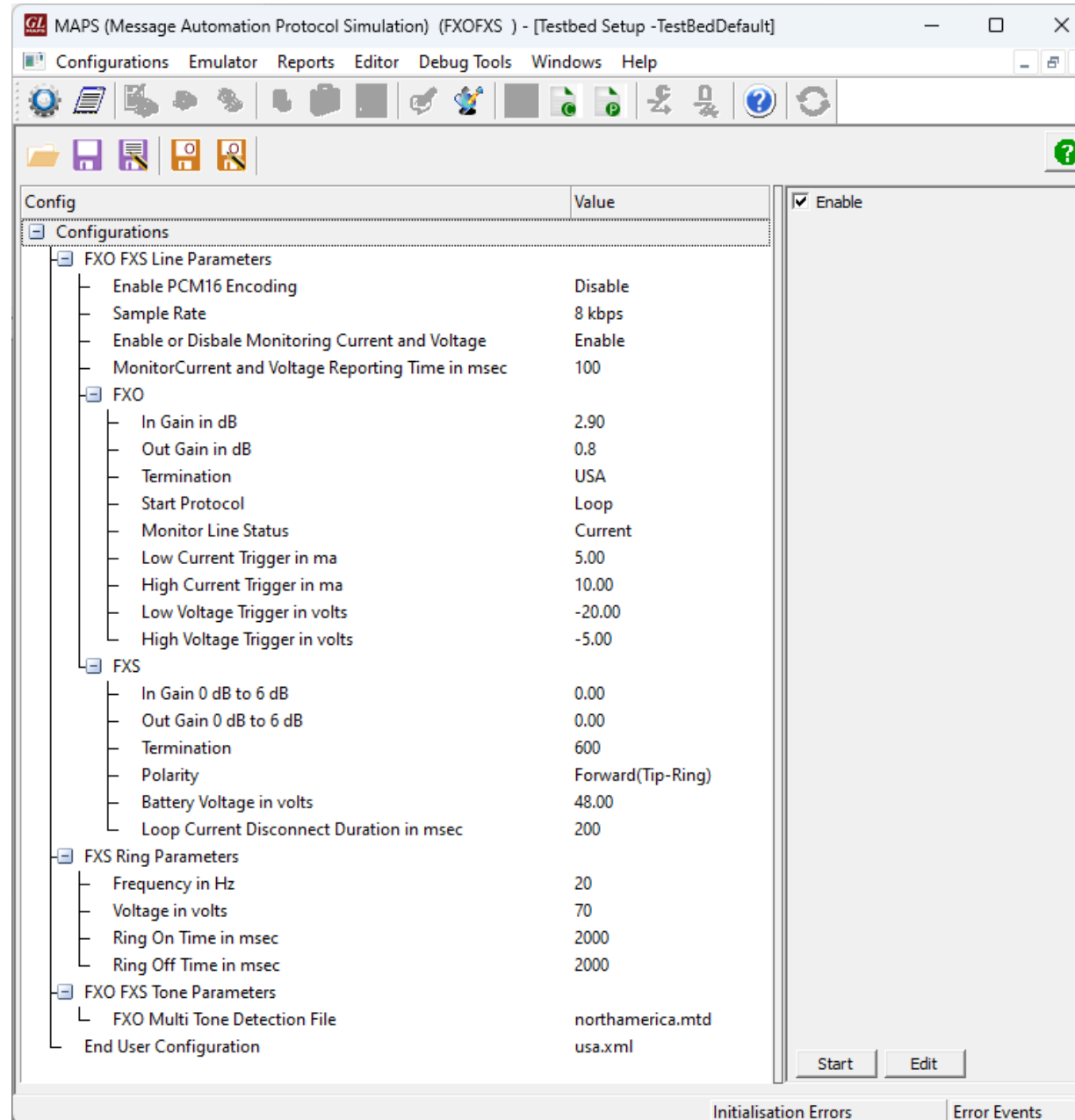
FXO CAMA Monitor Message Sequence



FXO CAMA Signal Monitoring



Testbed Configuration



Profile Configuration

GL MAPS (Message Automation Protocol Simulation) (FXO/FXS) - [Profile Editor -USA]

Configurations Emulator Reports Editor Debug Tools Windows Help

Profiles (Edit-F2)

#	Profiles (Edit-F2)
1	FXO/FXSProfile
2	FXO/FXSProfile1

Config

Config	Value
FXO/FXSProfile	
FXO/FXS Parameters	
FXO Card Number	1
FXS Card Number	2
Rx Timeslot	1
Tx Timeslot	5
Dialing Mode	Digits Dialing
Dial Digit Parameters	
Dial Digits	345
Dial Digit Power in db	-11
OnTime in msec	100
Off time in msec	100
Dial Pulse Parameters	
Dial Pulse Onhook Timer	35
Dial Pulse Offhook Timer	15
Inter Digit Pulse Timer	500
Signaling Parameters	
Tone	4
Tone 1	
Tone Name	Dial Tone
Tone name defined in MTD file	Dial Tone
Frequency 1 in Hz	350
Frequency 2 in Hz	440
Power in dBm	-10
On Time in msec	3000
Off Time in msec	0
Tone 2	
Tone Name	Ringback Tone
Tone name defined in MTD file	Ringback Tone
Frequency 1 in Hz	440
Frequency 2 in Hz	480
Power in dBm	-10
On Time in msec	2000
Off Time in msec	4000

Enable

Add Insert Delete

Properties

Insert Delete Clear

Initialisation Errors Error Events Captured Errors

Global Configuration

MAPS (Message Automation Protocol Simulation) (FXOFSX) - [Global Configuration -Globalprofile]

Configurations Emulator Reports Editor Debug Tools Windows Help

Config Global Configuration

Config	Value	Enable
Timers		<input checked="" type="checkbox"/>
FXO FXS Common Timers		
Call Duration in msec	120000	
Call Answer Time in msec	10000	
Inter Call Duration in msec	10000	
FXO Specific Timers		
Detect Dial Tone Timer in msec	30000	
Detect Ringback Tone Timer in msec	30000	
FXS SpecificTimers		
Ring Status true Timer in msec	30000	
Detect Offhook Timer in msec	30000	
RingTimer in msec	40000	
Receive Digits Timer in msec	30000	
Path Verification Parameters		
Path Verification Burst Duration in ms	1000	
Speech Path Threshold Level in dBm	-40.00	
Path Verification Timeout in msec	15000	
FXO Specific Parameters		
Maximum Number Of Ringback Before Disconnect Call	20	
FXS Specific Parameters		
Minimum Expected Number Of Dial Digits	2	
FXO FXS Common Parameters		
Rx File Naming Convention	Sequential	
Enable or Disable Speaker		
FXO Speaker	Off	
FXS Speaker	Off	
Vf Output Gain in dB	0.00	
Tone acceptance values		
Frequency Deviation in Hz	15	
On Time Deviation in msec	50	
Off Time Deviation in msec	50	
Perform Call Setup	True	
Voiceband Measurement		
Traffic Options		
Record Call	Disable	
VG6 VG3 Circuit Selection	VG3	
Voiceband Measurement Parameters		
Tone 1004 Hz Net Loss Test Parameters		
Tone Power in dBm	-13	
Tone Duration in ms	10000	
Report Frequency in ms	1000	
VG3 Pass Fail Requirement		
Min Pass Power	1.00	

Apply Edit

Initialisation Errors Error Events Capturec

FXO FXS Call Simulation

Call Simulation

GL MAPS (Message Automation Protocol Simulation) (FXO/FXS) - [Call Generation - CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Event...	Result	Total Iterations	Completed Iterations
1	FXO Placecall.gls	FXO/FXSProfile	1,1	Start	Call Disconnected	None		Pass	1	1
2	FXS AnswerCall.gls	FXO/FXSProfile	2,1	Start	Call Disconnected	None		Pass	1	1
3	FXS Placecall.gls	FXO/FXSProfile		Start		None		Unknown	1	0
4	FXO Answercall.gls	FXO/FXSProfile		Start		None		Unknown	1	0

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Save Column Width Show Latest

MAPS DUT

SEIZURE::Offhook 16:53:51.958000

Tone Detected :: Dial Tone 16:53:55.066000

DIALING::Digits - 345 16:53:55.066000

Tone Detected :: Ringback Tone 16:54:00.666000

Tone Detected :: Ringback Tone 16:54:06.766000

CONNECTED 16:54:13.278000

File Transmitted :: mu-law samples\vijay.pcm 16:54:33.342000

DISCONNECT :: Low Line Voltage 16:56:04.216000

DISCONNECTED :: Onhook 16:56:04.216000

File Recorded :: MAPS\Recv Files\FxoFxs/E0.pcm 16:56:13.297000

Scripts Message Sequence Event Config Script Flow

Initialisation Errors Error Events

EventType :: File Transmitted

File Name :: mu-law samples\vijay.pcm

Event Log

Events

Event Log Error Events Captured Errors

Date/Time	Captured Events	Call Trace Id	Script Name	Script Id
2014-12-4 16:57:16.993000	FxoBoardCount = 2	GetBoardCount	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:21.213000	FxoFxsType = FXSIN_OUT	2,1	FXS AnswerCall.gls	CGProtScriptId_24440240-4607-3616
2014-12-4 16:57:21.213000	FxoFxsType = FXSLOOPCUR	2,1	FXS AnswerCall.gls	CGProtScriptId_24440240-4607-3616
2014-12-4 16:57:23.329000	MonitorHiLoopCurrentTaskId = 12	1,1	FXO Placecall.gls	CGProtScriptId_24440958-4608-3616
2014-12-4 16:57:24.940000	Placing the Call	1,1	FXO Placecall.gls	CGProtScriptId_24440958-4608-3616
2014-12-4 16:57:25.067000	FxoFxsType = FXSHOOKSTATUS	2,1	FXS AnswerCall.gls	CGProtScriptId_24440240-4607-3616
2014-12-4 16:57:25.067000	Fxs Hook Status : offhook	2,1	FXS AnswerCall.gls	CGProtScriptId_24440240-4607-3616
2014-12-4 16:57:25.068000	Sending Dial tone	2,1	FXS AnswerCall.gls	CGProtScriptId_24440240-4607-3616
2014-12-4 16:57:26.949000	Monitoring Dial Tone	1,1	FXO Placecall.gls	CGProtScriptId_24440958-4608-3616
2014-12-4 16:57:27.221000	Loop Current = 12.100000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.229000	Fxo Line Voltage = -12.000000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.321000	Loop Current = 12.100000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.331000	Fxo Line Voltage = -11.000000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.423000	Loop Current = 12.100000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.431000	Fxo Line Voltage = -9.000000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.523000	Loop Current = 12.100000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.531000	Fxo Line Voltage = -9.000000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.623000	Fxo Line Voltage = -9.000000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724
2014-12-4 16:57:27.631000	Loop Current = 12.100000	Monitoring In Progress	MonitorCurrent-Voltage.gls	ProtScriptId_24436658-4606-3724

Save Events

Clear ☐ Capture Events to file

Voiceband Measurements

Voiceband measurement on 2-Wire

and VF ports includes below tests:

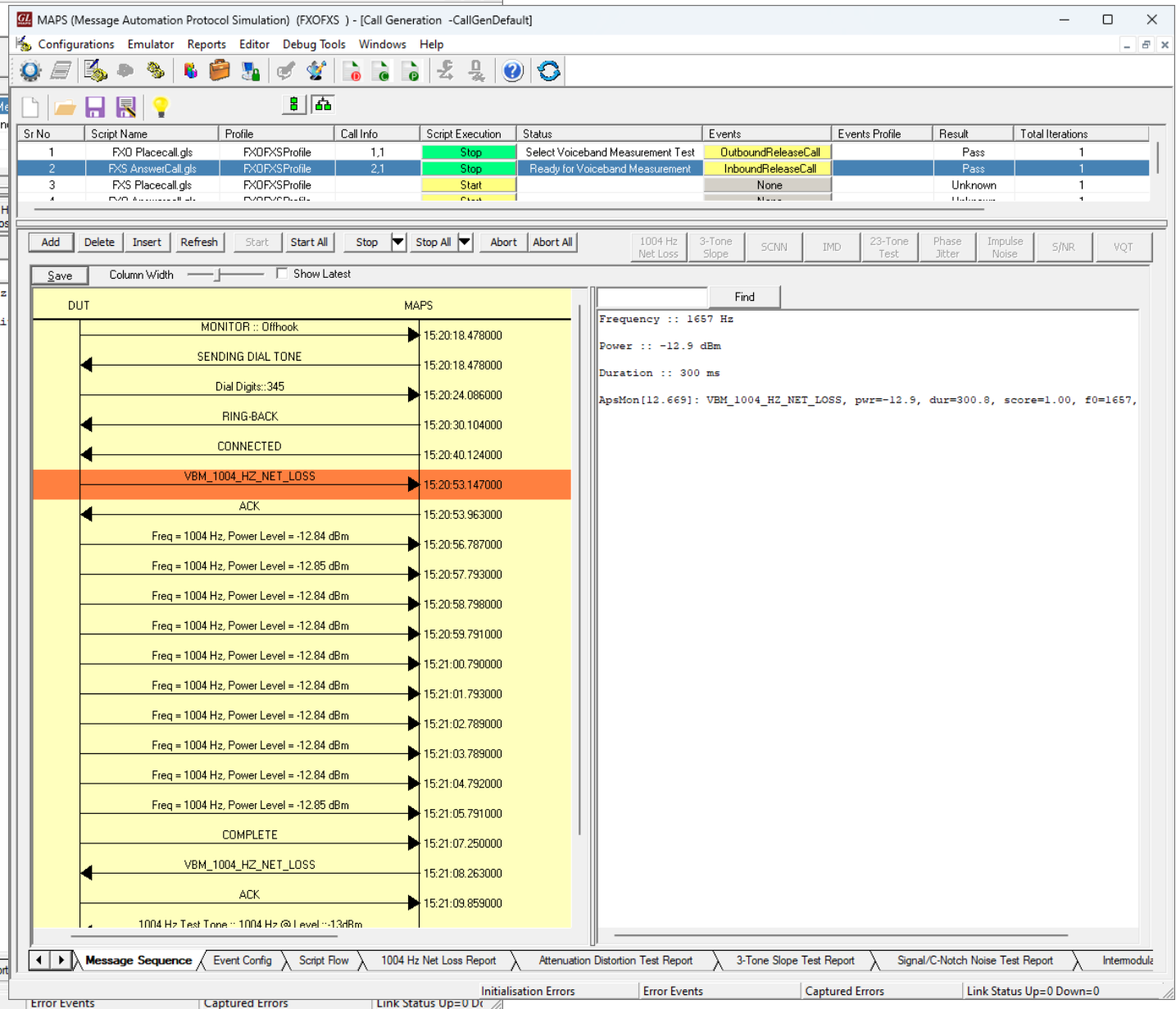
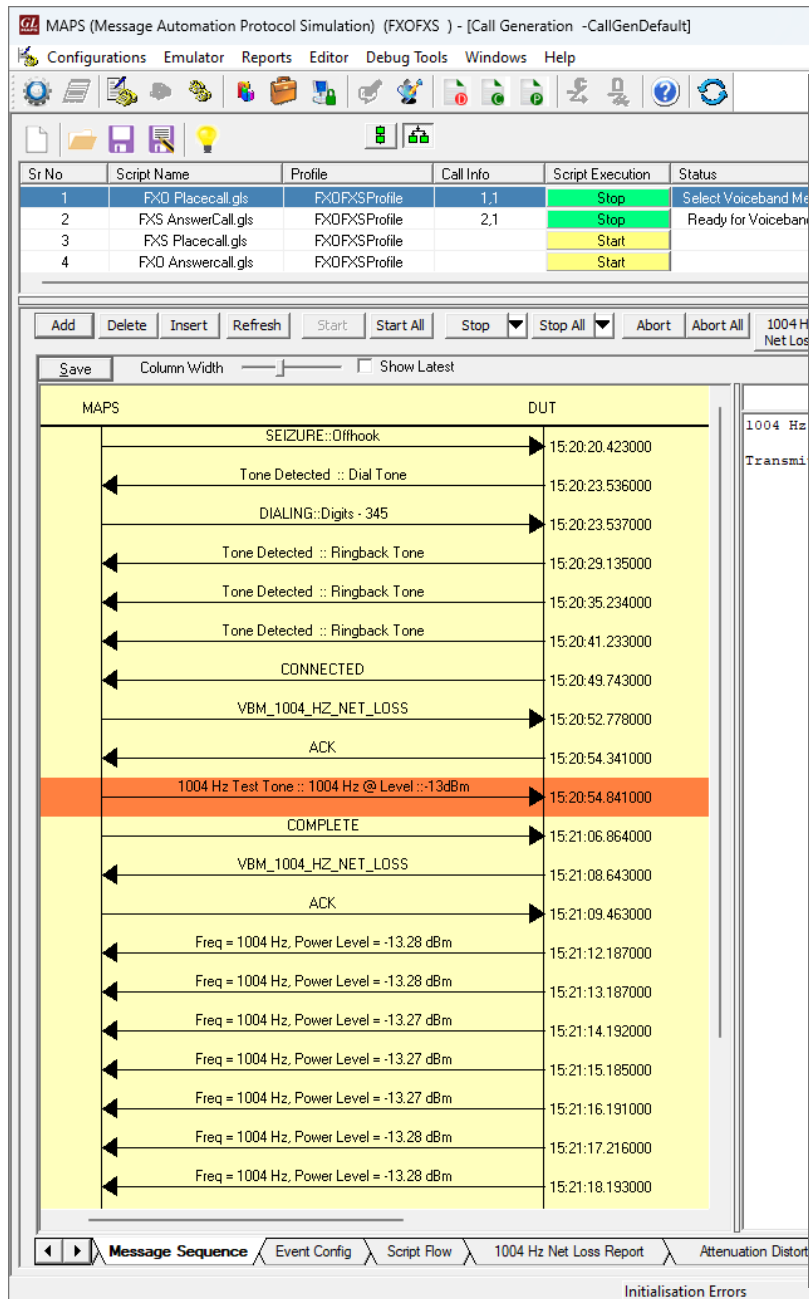
- 1004 Hz Net Loss
- Attenuation Distortion
- 3-Tone Slope (Gain Slope)
- C-Notched Noise (CNN) Test
- Intermodulation Distortion (IMD)
- Impulse Noise
- Signal-to-Noise Ratio and Level
- Voice Quality Test (VQT)
- Twenty- three Tone Test

The screenshot displays the GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -Default-FXOFXS] interface. The interface includes a menu bar (Configurations, Emulator, Reports, Editor, Debug Tools, Windows, Help) and a toolbar. Below the toolbar is a table with columns: Sr No, Script Name, Profile, Call Info, Script Execution, Status, Events, Events Profile, Result, and Total Iterations. The table contains four rows of test configurations. The 'Events' column for the first row is highlighted, and a dropdown menu is open, showing a list of available voiceband measurement tests. The tests listed are: OutboundReleaseCall, InboundReleaseCall, None, 1004 Hz Net Loss, Attenuation Distortion 304-3004 Hz, Attenuation Distortion 404-2804 Hz, Attenuation Distortion 504-2504 Hz, 3-Tone Slope, C-Notched Noise, IMD, Impulse Noise, S/NR, VQT, and 23-Tone Test.

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall	OutboundReleaseCall		
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall			
3	FXS Placecall.gls	FXDFXSProfile		Start		None			
4	FXD Answercall.gls	FXDFXSProfile		Start		None			

Below the table, there are buttons for Add, Delete, Insert, Refresh, Start, Start All, Stop, Stop All, Abort, and Abort All. There are also buttons for 1004 Hz Net Loss and 3-Tone Slope. Below these buttons is a section for MAPS and DUT, with a table showing the sequence of events: SEIZURE::Offhook, Tone Detected :: Dial Tone, and DIALING::Digits - 345, with corresponding timestamps. A Find button is also present.

1004 Hz Net Loss Test



Attenuation Distortion Test

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events
1	FXD Placecall.gls	FXDPXSPProfile	1,1	Stop	Attenuation Distortion Test in Progress...	Out
2	FXS AnswerCall.gls	FXDPXSPProfile	2,1	Stop	Attenuation Distortion Test in Progress...	Inb
3	FXS Placecall.gls	FXDPXSPProfile		Start		
4	FXD Answercall.gls	FXDPXSPProfile		Start		

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All 1004 Hz Net Loss

Save Column Width Show Latest

DUT MAPS

MONITOR :: Offhook 15:25:35.681000

SENDING DIAL TONE 15:25:35.681000

Dial Digits::345 15:25:41.277000

RING-BACK 15:25:47.284000

CONNECTED 15:25:57.303000

VBM_ATTEN_DIST_304 15:26:10.815000

ACK 15:26:11.625000

Freq = 1005 Hz, Power Level = -12.8 dBm 15:26:14.811000

Freq = 306 Hz, Power Level = -13.7 dBm, 1004Hz Net Loss = 0 15:26:19.812000

Freq = 405 Hz, Power Level = -13.3 dBm, 1004Hz Net Loss = -0.90 15:26:24.815000

Freq = 505 Hz, Power Level = -13.1 dBm, 1004Hz Net Loss = -0.50 15:26:29.810000

Freq = 604 Hz, Power Level = -13 dBm, 1004Hz Net Loss = -0.30 15:26:34.811000

Freq = 704 Hz, Power Level = -12.9 dBm, 1004Hz Net Loss = -0.20 15:26:39.816000

Freq = 806 Hz, Power Level = -12.8 dBm, 1004Hz Net Loss = -0.09 15:26:44.815000

Freq = 905 Hz, Power Level = -12.8 dBm, 1004Hz Net Loss = 0.00 15:26:49.816000

Freq = 1104 Hz, Power Level = -12.9 dBm, 1004Hz Net Loss = 0.00 15:26:54.812000

Freq = 1204 Hz, Power Level = -13 dBm, 1004Hz Net Loss = -0.09 15:26:59.915000

Freq = 1306 Hz, Power Level = -13 dBm, 1004Hz Net Loss = -0.20 15:27:04.914000

Freq = 1405 Hz, Power Level = -13 dBm, 1004Hz Net Loss = -0.20 15:27:09.911000

Freq = 1505 Hz, Power Level = -13 dBm, 1004Hz Net Loss = -0.20 15:27:14.810000

Frequency :: 1004 Hz
Power :: -13
Duration :: 300 ms
ApsMon[13.18]

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed Iter
1	FXD Placecall.gls	FXDPXSPProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDPXSPProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDPXSPProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDPXSPProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All 1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Save Column Width Show Latest

MAPS DUT

SEIZURE::Offhook 15:25:37.582000

Tone Detected :: Dial Tone 15:25:40.694000

DIALING::Digits - 345 15:25:40.695000

Tone Detected :: Ringback Tone 15:25:46.393000

Tone Detected :: Ringback Tone 15:25:52.392000

Tone Detected :: Ringback Tone 15:25:58.393000

CONNECTED 15:26:06.902000

VBM_ATTEN_DIST_304 15:26:10.337000

ACK 15:26:12.128000

Attenuation Distortion :: 1004 Hz @ Level ::-13.0dBm 15:26:12.643000

Attenuation Distortion :: 304 Hz @ Level ::-13.0dBm 15:26:17.663000

Attenuation Distortion :: 404 Hz @ Level ::-13.0dBm 15:26:22.684000

Attenuation Distortion :: 504 Hz @ Level ::-13.0dBm 15:26:27.703000

Attenuation Distortion :: 604 Hz @ Level ::-13.0dBm 15:26:32.722000

Attenuation Distortion :: 704 Hz @ Level ::-13.0dBm 15:26:37.663000

Attenuation Distortion :: 804 Hz @ Level ::-13.0dBm 15:26:42.684000

Attenuation Distortion :: 904 Hz @ Level ::-13.0dBm 15:26:47.703000

Attenuation Distortion :: 1104 Hz @ Level ::-13.0dBm 15:26:52.723000

Attenuation Distortion :: 1204 Hz @ Level ::-13.0dBm 15:26:57.743000

Attenuation Distortion :: 1304 Hz @ Level ::-13.0dBm 15:27:02.763000

Frequency :: 1249 Hz
Power :: -13.0 dBm
Duration :: 300 ms

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test Report

Initialisation Errors Error Events

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation

Initialisation Errors Error Events Captured Errors Link Status Up=0 Down=0

GL Communications

3-Tone Slope (Gain Slope)Test

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement
3	FXS Placecall.gls	FXDFXSProfile		Start	
4	FXD Answercall.gls	FXDFXSProfile		Start	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Save Column Width Show Latest

DUT MAPS

MONITOR :: Offhook 15:34:12.119000

SENDING DIAL TONE 15:34:12.119000

Dial Digits::345 15:34:17.713000

RING-BACK 15:34:23.723000

CONNECTED 15:34:33.742000

VBM_3TONE_SLOPE 15:34:47.654000

ACK 15:34:48.465000

Freq = 405 Hz, Power Level = -13.3 dBm 15:34:52.480000

Freq = 1005 Hz, Power Level = -12.8 dBm, 404Hz Gain Slope = 0.5 15:34:59.480000

Freq = 2806 Hz, Power Level = -13.2 dBm, 2804Hz Gain Slope = 0.4 15:35:06.378000

VBM_3TONE_SLOPE 15:35:16.384000

ACK 15:35:17.986000

3-Tone Slope :: 404Hz @ Level ::-13.0 dBm 15:35:25.423000

3-Tone Slope :: 1004Hz @ Level ::-13.0 dBm 15:35:32.443000

3-Tone Slope :: 2804Hz @ Level ::-13.0 dBm 15:35:39.364000

FIN 15:35:41.384000

ACK 15:35:43.083000

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test

Initialisation Errors

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed Iter
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Save Column Width Show Latest

MAPS DUT

SEIZURE::Offhook 15:34:14.043000

Tone Detected :: Dial Tone 15:34:17.156000

DIALING::Digits - 345 15:34:17.157000

Tone Detected :: Ringback Tone 15:34:22.853000

Tone Detected :: Ringback Tone 15:34:28.853000

Tone Detected :: Ringback Tone 15:34:34.852000

CONNECTED 15:34:43.362000

VBM_3TONE_SLOPE 15:34:47.209000

ACK 15:34:48.869000

3-Tone Slope :: 404Hz @ Level ::-13.0 dBm 15:34:56.404000

3-Tone Slope :: 1004Hz @ Level ::-13.0 dBm 15:35:03.321000

3-Tone Slope :: 2804Hz @ Level ::-13.0 dBm 15:35:10.244000

VBM_3TONE_SLOPE 15:35:16.770000

ACK 15:35:17.584000

Freq = 405 Hz, Power Level = -13.8 dBm 15:35:21.602000

Freq = 1005 Hz, Power Level = -13.3 dBm, 404Hz Gain Slope = 0.5 15:35:28.502000

Freq = 2806 Hz, Power Level = -13.7 dBm, 2804Hz Gain Slope = 0.4 15:35:35.606000

FIN 15:35:41.823000

ACK 15:35:42.643000

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation

Initialisation Errors Error Events Captured Errors Link Status Up=0 Down=0

3-Tone Slope :: 404Hz
Transmitting On Card :: 1 Timeslot :: 5

Signal/C-Notched Noise Level Test

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No

Script Name

Profile

Call Info

Script Execution

Status

Event

1

FXD Placecall.gls

FXDFXSProfile

1,1

Stop

Select Voiceband Measurement Test

OutboundReleaseCall

2

FXS AnswerCall.gls

FXDFXSProfile

2,1

Stop

Ready for Voiceband Measurement

InboundReleaseCall

3

FXS Placecall.gls

FXDFXSProfile

Start

4

FXD Answercall.gls

FXDFXSProfile

Start

Add

Delete

Insert

Refresh

Start

Start All

Stop

Stop All

Abort

Abort All

Save

Column Width

Show Latest

DUT

MAPS

MONITOR :: Offhook

15:54:28.387000

SENDING DIAL TONE

15:54:28.387000

Dial Digits::345

15:54:33.982000

RING-BACK

15:54:40.005000

CONNECTED

15:54:50.023000

VBM_CNN

15:55:03.557000

ACK

15:55:04.365000

Measurement :: C-MSG Noise = 41.9 dBmC

15:55:08.430000

Measurement :: C-MSG = 77.3 dBmC

15:55:08.431000

Measurement :: C-MSG Noise = 41.9 dBmC

15:55:09.406000

Measurement :: C-MSG = 77.3 dBmC

15:55:09.411000

Measurement :: C-MSG Noise = 41.9 dBmC

15:55:10.409000

Measurement :: C-MSG = 77.3 dBmC

15:55:10.411000

Measurement :: C-MSG Noise = 42 dBmC

15:55:11.405000

Measurement :: C-MSG = 77.3 dBmC

15:55:11.410000

Measurement :: C-MSG Noise = 41.9 dBmC

15:55:12.407000

Measurement :: C-MSG = 77.3 dBmC

15:55:12.409000

Measurement :: C-MSG Noise = 41.9 dBmC

15:55:13.405000

Measurement :: C-MSG = 77.3 dBmC

15:55:13.407000

Measurement :: C-MSG Noise = 41.9 dBmC

15:55:14.406000

Frequency ::

Power :: -12

Duration ::

ApsMon[13.24]

Message Sequence

Event Config

Script Flow

1004 Hz Net Loss Report

Attenuation Distortion Test Report

Initialisation Errors

Error Events

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No

Script Name

Profile

Call Info

Script Execution

Status

Events

Events Profile

Result

Total Iterations

Completed

1

FXD Placecall.gls

FXDFXSProfile

1,1

Stop

Select Voiceband Measurement Test

OutboundReleaseCall

Pass

1

2

FXS AnswerCall.gls

FXDFXSProfile

2,1

Stop

Ready for Voiceband Measurement

InboundReleaseCall

Pass

1

3

FXS Placecall.gls

FXDFXSProfile

Start

None

Unknown

1

4

FXD Answercall.gls

FXDFXSProfile

Start

None

Unknown

1

Add

Delete

Insert

Refresh

Start

Start All

Stop

Stop All

Abort

Abort All

Save

Column Width

Show Latest

MAPS

DUT

SEIZURE::Offhook

15:54:30.304000

Tone Detected :: Dial Tone

15:54:33.413000

DIALING::Digits - 345

15:54:33.414000

Tone Detected :: Ringback Tone

15:54:39.114000

Tone Detected :: Ringback Tone

15:54:45.113000

Tone Detected :: Ringback Tone

15:54:51.112000

CONNECTED

15:54:59.622000

VBM_CNN

15:55:03.178000

ACK

15:55:04.735000

CNN Test Tone :: 1004 @ Level :: -13 dBm

15:55:05.242000

VBM_CNN

15:55:23.333000

ACK

15:55:24.143000

Measurement :: C-MSG Noise = 41.7 dBmC

15:55:28.176000

Measurement :: C-MSG = 76.8 dBmC

15:55:28.179000

Measurement :: C-MSG Noise = 41.7 dBmC

15:55:29.077000

Measurement :: C-MSG = 76.8 dBmC

15:55:29.079000

Measurement :: C-MSG Noise = 41.7 dBmC

15:55:30.175000

Measurement :: C-MSG = 76.8 dBmC

15:55:30.178000

Measurement :: C-MSG Noise = 41.7 dBmC

15:55:31.177000

Measurement :: C-MSG = 76.8 dBmC

15:55:31.179000

Frequency :: 1050 Hz

Power :: -13.3 dBm

Duration :: 300 ms

ApsMon[23.414]: VBM_CNN, pwr=-13.3, dur=300.6, score=1.00, f0=1050, p0=-13.3

Message Sequence

Event Config

Script Flow

1004 Hz Net Loss Report

Attenuation Distortion Test Report

3-Tone Slope Test Report

Signal/C-Notch Noise Test Report


Intermodulation

Initialisation Errors

Error Events

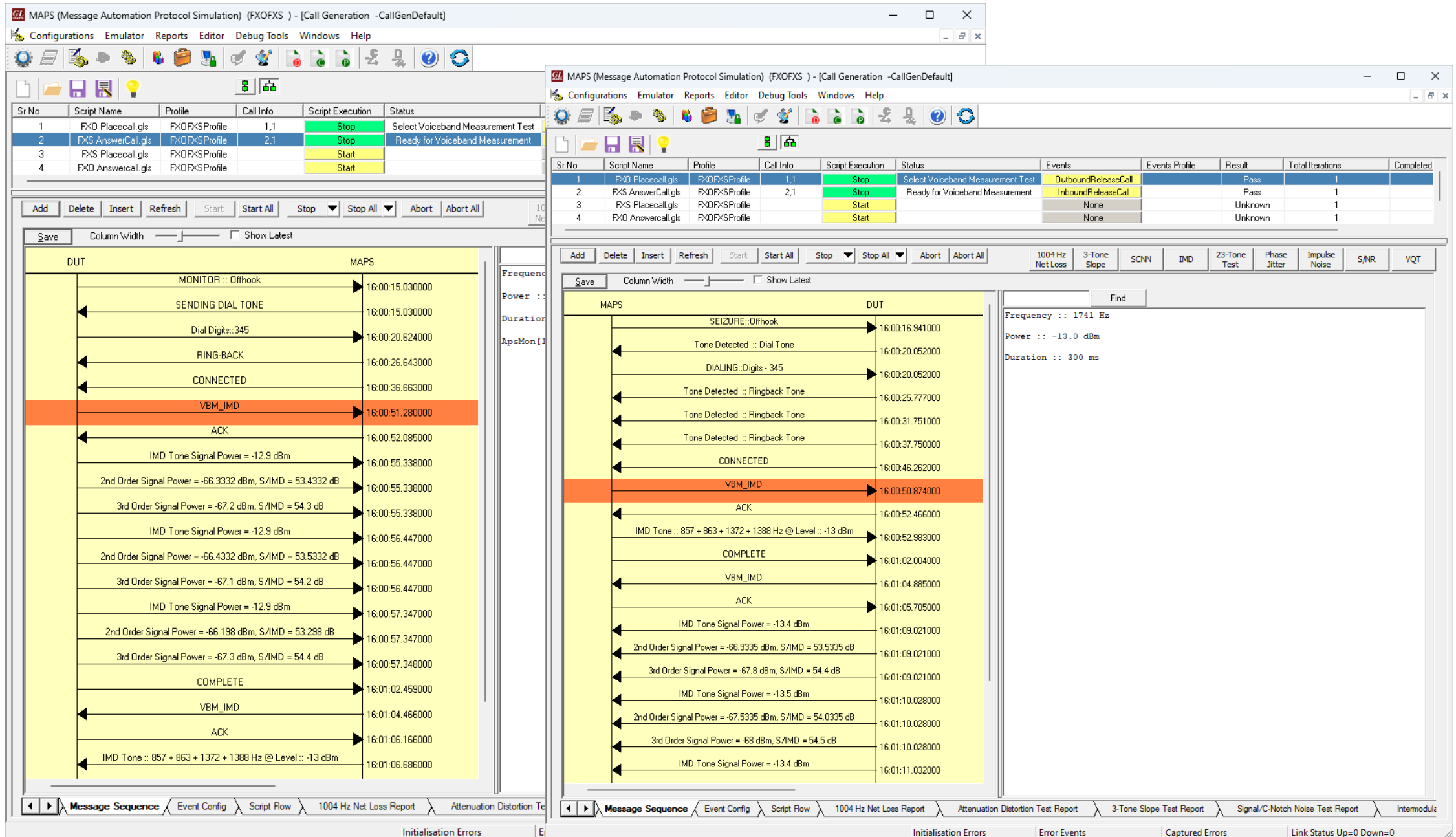
Captured Errors

Link Status Up=0 Down=0

 GL Communications

29

Intermodulation Distortion (IMD) Test



Impulse Noise Test

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All 1004 Hz Net Loss 3-Tone Slope

Save Column Width Show Latest

DUT MAPS

1004 Hz

Transmitting On Card

MONITOR :: Offhook 16:07:28.939000

SENDING DIAL TONE 16:07:28.939000

Dial Digits::345 16:07:34.520000

RING-BACK 16:07:40.524000

CONNECTED 16:07:50.542000

VBM_IMPULSE_NOISE 16:08:04.260000

ACK 16:08:05.063000

Impulse Noise Hold Tone :: 1004 Hz @ Level :: -13.0 dBm 16:08:06.783000

FIN 16:09:08.417000

ACK 16:09:09.223000

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All 1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Save Column Width Show Latest

Find

1004 Hz

Transmitting On Card :: 1 Timeslot :: 5

MAPS DUT

SEIZURE::Offhook 16:07:30.823000

Tone Detected :: Dial Tone 16:07:33.958000

DIALING::Digits - 345 16:07:33.958000

Tone Detected :: Ringback Tone 16:07:39.656000

Tone Detected :: Ringback Tone 16:07:45.659000

Tone Detected :: Ringback Tone 16:07:51.657000

CONNECTED 16:08:00.164000

VBM_IMPULSE_NOISE 16:08:03.802000

ACK 16:08:05.476000

Impulse Noise Hold Tone :: 1004 Hz @ Level :: -13.0 dBm 16:08:05.984000

FIN 16:09:08.025000

ACK 16:09:09.610000

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation

Initialisation Errors Error Events

Signal-to-Noise Ratio and Level Test

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Prof...	Result	Total Iterations	Completed Iterations
1	FXD Placecall.gls	FXDProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	0
2	FXS AnswerCall.gls	FXDProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	0
3	FXS Placecall.gls	FXDProfile		Start		None		Unknown	1	0
4	FXD Answercall.gls	FXDProfile		Start		None		Unknown	1	0

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

1004 Hz Net Loss 3-Tone Slope

Save Column Width Show Latest

DUT MAPS

MONITOR :: Offhook 15:59:34.088000

SENDING DIAL TONE 15:59:34.089000

Dial Digits::345 15:59:39.576000

RING-BACK 15:59:45.593000

CONNECTED 15:59:49.613000

VBM_SNR 16:00:07.525000

ACK 16:00:09.034000

Measurement :: Freq = 1005 Hz, Power Level = -24.9 dBm, SNR = 33.42 16:00:12.080000

CONTINUE 16:00:18.077000

Measurement :: Freq = 1005 Hz, Power Level = -19.9 dBm, SNR = 34.45 16:00:20.080000

CONTINUE 16:00:26.074000

Measurement :: Freq = 1005 Hz, Power Level = -14.8 dBm, SNR = 35.84 16:00:28.087000

CONTINUE 16:00:34.074000

Measurement :: Freq = 1005 Hz, Power Level = -9.9 dBm, SNR = 36.20 16:00:36.073000

CONTINUE

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test Report 3-Tone Slope Test Report

Initialisation Errors Error Events

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Prof...	Result	Total Iterations	Completed Iterations
1	FXD Placecall.gls	FXDProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	0
2	FXS AnswerCall.gls	FXDProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	0
3	FXS Placecall.gls	FXDProfile		Start		None		Unknown	1	0
4	FXD Answercall.gls	FXDProfile		Start		None		Unknown	1	0

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Save Column Width Show Latest

MAPS DUT

SEIZURE::Offhook 15:59:35.954000

Tone Detected :: Dial Tone 15:59:39.064000

DIALING::Digits - 345 15:59:39.065000

Tone Detected :: Ringback Tone 15:59:44.662000

Tone Detected :: Ringback Tone 15:59:50.667000

CONNECTED 15:59:59.174000

VBM_SNR 16:00:07.138000

ACK 16:00:09.475000

SNR Test Tone :: 1004 @ Level :: -25 dBm 16:00:10.996000

CONTINUE 16:00:18.473000

SNR Test Tone :: 1004 @ Level :: -20 dBm 16:00:18.994000

CONTINUE 16:00:26.474000

SNR Test Tone :: 1004 @ Level :: -15 dBm 16:00:26.993000

CONTINUE 16:00:34.474000

SNR Test Tone :: 1004 @ Level :: -10 dBm

Find

Frequency :: 853 Hz

Power :: -13.0 dBm

Duration :: 300 ms

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation Test Report

Initialisation Errors Error Events Captured Errors Link Status Up=0 Down=0

Voice Quality (VQT) Test

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status
1	FXD PlaceCall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Save Column Width Show Latest

DUT MAPS

MONITOR :: Offhook	09:59
SENDING DIAL TONE	09:59
Dial Digits::345	09:59
RING-BACK	09:59
CONNECTED	09:59
VBM_VQT	09:59
ACK	09:59
[SYNC CODE: 2]	09:59
[SYNC CODE: 2]	09:59
ACK	09:59
FIN	10:00
ACK	10:00

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation

Initialisation Errors

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Prof...	Result	Total Iterations	Completed Iterations
1	FXD PlaceCall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	0
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	0

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All 1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Save Column Width Show Latest

MAPS DUT

SEIZURE::Offhook	09:59:04.450000
Tone Detected :: Dial Tone	09:59:07.562000
DIALING::Digits - 345	09:59:07.562000
Tone Detected :: Ringback Tone	09:59:13.284000
Tone Detected :: Ringback Tone	09:59:19.283000
Tone Detected :: Ringback Tone	09:59:25.282000
CONNECTED	09:59:33.790000
VBM_VQT	09:59:40.141000
ACK	09:59:42.500000
[SYNC CODE: 2]	09:59:47.800000
[SYNC CODE: 2]	09:59:50.811000
ACK	09:59:54.097000
Sending VQT File :: C:\VQT_Reference\VQuad_Auto\POLQA-uLaw\em1polqaula.pcm	09:59:55.618000
Receive File Completed :: C:\VQT_Degraded\1u\2024-07-16-09-59-55-Line002.pcm	10:00:03.635000
VQT Score: 4.18 :: 2024-07-16-09-59-55-Line002.pcm	10:00:08.920000
Sending VQT File :: C:\VQT_Reference\VQuad_Auto\POLQA-uLaw\em1polqaula.pcm	10:00:08.922000
Receive File Completed :: C:\VQT_Degraded\1u\2024-07-16-10-00-08-Line002.pcm	10:00:17.042000
VQT Score: 4.41 :: 2024-07-16-10-00-08-Line002.pcm	10:00:19.080000
FIN	10:00:21.094000
ACK	10:00:23.397000

Find

EventType :: Sending File

File Name :: C:\VQT_Reference\VQuad_Auto\POLQA-uLaw\em1polqaula.pcm

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report

Initialisation Errors Error Events Captured Errors Link Status Up=0 Down=0

Twenty-Three Tone Test

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed Iterations
1	FXD Placecall.gls	FXDProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	0
2	FXS AnswerCall.gls	FXDProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	0
3	FXS Placecall.gls	FXDProfile		Start		None		Unknown	1	0
4	FXD Answercall.gls	FXDProfile		Start		None		Unknown	1	0

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

1004 Hz Net Loss

Save Column Width Show Latest

MAPS DUT

SEIZURE::Offhook 16:26:48.084000

Tone Detected :: Dial Tone 16:26:51.197000

DIALING::Digits - 345 16:26:51.198000

Tone Detected :: Ringback Tone 16:26:56.798000

Tone Detected :: Ringback Tone 16:27:02.794000

Tone Detected :: Ringback Tone 16:27:08.795000

CONNECTED 16:27:17.302000

VBM_23TONE 16:27:20.845000

ACK 16:27:22.424000

23-Tone Test :: @ Level :: 23 16:27:22.943000

COMPLETE 16:27:33.963000

VBM_23TONE 16:27:36.875000

ACK 16:27:37.684000

23-TonePower = -23.81 dBm S/TD = 36.93 dB S/N = 38.80 IMD-2 = 59.901... 16:27:39.917000

23-TonePower = -23.81 dBm S/TD = 37.05 dB S/N = 38.70 IMD-2 = 87.601... 16:27:40.917000

23-TonePower = -23.81 dBm S/TD = 37.10 dB S/N = 38.70 IMD-2 = -100.00... 16:27:41.917000

23-TonePower = -23.81 dBm S/TD = 37.17 dB S/N = 38.90 IMD-2 = 64.601... 16:27:42.921000

23-TonePower = -23.81 dBm S/TD = 37.18 dB S/N = 38.90 IMD-2 = -100.00... 16:27:43.913000

23-TonePower = -23.81 dBm S/TD = 37.18 dB S/N = 38.90 IMD-2 = -100.00... 16:27:44.916000

23-TonePower = -23.81 dBm S/TD = 37.00 dB S/N = 38.70 IMD-2 = 74.701... 16:27:45.917000

Event Type 23-Tone Test

23-Tone Measurement Results :

Freq0 :: 203.125000 Power0 :: -39.116184 Phase0 :: -1.610668

Freq1 :: 359.375 Power1 :: -36.607269 Phase1 :: 1.557352

Freq2 :: 515.625 Power2 :: -36.551907 Phase2 :: -1.960179

Freq3 :: 671.875000 Power3 :: -36.510921 Phase3 :: -0.412509

Freq4 :: 828.125000 Power4 :: -36.379723 Phase4 :: -0.169534

Freq5 :: 984.375000 Power5 :: -36.405424 Phase5 :: -2.618033

Freq6 :: 1140.625000 Power6 :: -36.490013 Phase6 :: 2.048393

Freq7 :: 1296.875000 Power7 :: -36.630222 Phase7 :: 0.436845

Freq8 :: 1453.125000 Power8 :: -36.554638 Phase8 :: 1.027765

Freq9 :: 1609.375000 Power9 :: -36.535191 Phase9 :: 0.246479

Freq10 :: 1765.625000 Power10 :: -36.551468 Phase10 :: 1.911899

Freq11 :: 1921.875000 Power11 :: -36.503269 Phase11 :: -0.519585

Freq12 :: 2078.125000 Power12 :: -36.591675 Phase12 :: 3.052987

Freq13 :: 2234.375000 Power13 :: -36.553192 Phase13 :: 0.869665

Freq14 :: 2390.625000 Power14 :: -36.528492 Phase14 :: -1.318874

Freq15 :: 2546.875000 Power15 :: -36.467724 Phase15 :: 2.753381

Freq16 :: 2703.125000 Power16 :: -36.774891 Phase16 :: -2.756797

Freq17 :: 2859.375000 Power17 :: -36.804829 Phase17 :: -1.731699

Freq18 :: 3015.625000 Power18 :: -36.781094 Phase18 :: 1.444810

Freq19 :: 3171.875000 Power19 :: -36.755901 Phase19 :: -2.533336

Freq20 :: 3328.125000 Power20 :: -37.052563 Phase20 :: -1.437533

Freq21 :: 3484.375000 Power21 :: -39.087250 Phase21 :: 1.388995

Freq22 :: 3640.625000 Power22 :: -45.300224 Phase22 :: -2.754750

EDD_Freq0 :: 281.250000 EDD_Delay0 :: 1225.254761

EDD_Freq1 :: 437.500000 EDD_Delay1 :: 243.797287

EDD_Freq2 :: 593.750000 EDD_Delay2 :: 93.121750

EDD_Freq3 :: 750.000000 EDD_Delay3 :: 30.768955

EDD_Freq4 :: 906.250000 EDD_Delay4 :: -10.327639

EDD_Freq5 :: 1062.500000 EDD_Delay5 :: -22.747295

EDD_Freq6 :: 1218.750000 EDD_Delay6 :: -28.056647

EDD_Freq7 :: 1375.000000 EDD_Delay7 :: -45.384895

EDD_Freq8 :: 1531.250000 EDD_Delay8 :: -38.970829

EDD_Freq9 :: 1687.500000 EDD_Delay9 :: -26.818552

EDD_Freq10 :: 1843.750000 EDD_Delay10 :: -27.657681

EDD_Freq11 :: 2000.000000 EDD_Delay11 :: -21.600769

EDD_Freq12 :: 2156.250000 EDD_Delay12 :: -2.173969

EDD_Freq13 :: 2312.500000 EDD_Delay13 :: 3.140643

EDD_Freq14 :: 2468.750000 EDD_Delay14 :: 25.948025

EDD_Freq15 :: 2625.000000 EDD_Delay15 :: 47.404053

EDD_Freq16 :: 2781.250000 EDD_Delay16 :: 68.886780

EDD_Freq17 :: 2937.500000 EDD_Delay17 :: 103.565536

EDD_Freq18 :: 3093.750000 EDD_Delay18 :: 156.453918

EDD_Freq19 :: 3250.000000 EDD_Delay19 :: 275.128693

EDD_Freq20 :: 3406.250000 EDD_Delay20 :: 460.052277

Message Sequence Event Config Script Flow 1004 Hz Net Loss Report Attenuation Distortion Test Report

Initialisation Errors Error Events Captured Errors Link Status Up=0 Down=0

Voiceband Measurements Test Reports

1004Hz Net Loss Report

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations
1	FXD Placecall.gls	FXDFXSProfile	1,1	Start	Call Disconnected	None		Pass	1
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Start	Call Disconnected	None		Pass	1
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1
4	FXS AnswerCall.gls	FXDFXSProfile		Start		None		Unknown	1

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	Freq (Hz)	Power (dBm)	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 15:20:56					
2024-7-15 15:20:57					
2024-7-15 15:20:58					
2024-7-15 15:20:59					
2024-7-15 15:21:00					
2024-7-15 15:21:01					
2024-7-15 15:21:02					
2024-7-15 15:21:03					
2024-7-15 15:21:04					
2024-7-15 15:21:05					

1004 Hz Net Loss Report

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations
1	FXD Placecall.gls	FXDFXSProfile	1,1	Start	Call Disconnected	None		Pass	1
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Start	Call Disconnected	None		Pass	1
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1
4	FXS AnswerCall.gls	FXDFXSProfile		Start		None		Unknown	1

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	Freq (Hz)	Power (dBm)	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 15:21:12	VG3	1004	-13.28	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:13	VG3	1004	-13.28	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:14	VG3	1004	-13.27	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:15	VG3	1004	-13.27	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:16	VG3	1004	-13.27	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:17	VG3	1004	-13.28	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:18	VG3	1004	-13.28	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:19	VG3	1004	-13.27	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:20	VG3	1004	-13.28	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:21:21	VG3	1004	-13.27	Pass Power -14 to -12 dBm	Pass

1004 Hz Net Loss Report Attenuation Distortion Test Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report Impulse Noise Test Report

Attenuation Distortion Test Report

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]										
Configurations Emulator Reports Editor Debug Tools Windows Help										
Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	
1	FX0 Placecall.gls	FX0FXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall				
2	FXS AnswerCall.gls	FX0FXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall				
3	FXS Placecall.gls	FX0FXSProfile		Start		None				
4	FX0 Answercall.gls	FX0FXSProfile		Start		None				

Add	Delete	Insert	Refresh	Start	Start All	Stop	Stop All	Abort	Abort All	1004 Hz Net Loss	3-Tone Slope	SCNN
-----	--------	--------	---------	-------	-----------	------	----------	-------	-----------	------------------	--------------	------

Date/Time	Circuit Selected	Freq Range	Freq (Hz)	Power (dBm)	1004Hz Net Loss	VG3(6) Criteria
2024-7-15 15:28:38	VG3	304-3004	1005	-13.30	-0.3	Pass Power -14 to -12 dBm
2024-7-15 15:28:43	VG3	304-3004	306	-14.70	-1.40	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:28:48	VG3	304-3004	405	-13.80	-0.50	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:28:53	VG3	304-3004	505	-13.50	-0.20	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:28:58	VG3	304-3004	604	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:03	VG3	304-3004	704	-13.30	0.00	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:08	VG3	304-3004	806	-13.30	0.00	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:13	VG3	304-3004	905	-13.20	0.10	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:18	VG3	304-3004	1104	-13.30	0.00	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:23	VG3	304-3004	1204	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:28	VG3	304-3004	1306	-13.50	-0.20	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:33	VG3	304-3004	1405	-13.50	-0.20	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:38	VG3	304-3004	1505	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:43	VG3	304-3004	1604	-13.30	0.00	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:48	VG3	304-3004	1704	-13.30	0.00	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:53	VG3	304-3004	1806	-13.30	0.00	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:29:58	VG3	304-3004	1905	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:03	VG3	304-3004	2005	-13.50	-0.20	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:08	VG3	304-3004	2104	-13.50	-0.20	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:13	VG3	304-3004	2204	-13.50	-0.20	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:18	VG3	304-3004	2306	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:23	VG3	304-3004	2405	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:28	VG3	304-3004	2505	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:33	VG3	304-3004	2604	-13.40	-0.09	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:38	VG3	304-3004	2704	-13.60	-0.30	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:43	VG3	304-3004	2806	-13.70	-0.40	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:48	VG3	304-3004	2905	-13.80	-0.50	Pass Power -14.10 to -7.80 dBm
2024-7-15 15:30:53	VG3	304-3004	3005	-13.70	-0.40	Pass Power -14.10 to -7.80 dBm

Attenuation Distortion Test Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]										
Configurations Emulator Reports Editor Debug Tools Windows Help										
Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	
1	FX0 Placecall.gls	FX0FXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FX0FXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FX0FXSProfile		Start		None		Unknown	1	
4	FX0 Answercall.gls	FX0FXSProfile		Start		None		Unknown	1	

Add	Delete	Insert	Refresh	Start	Start All	Stop	Stop All	Abort	Abort All	1004 Hz Net Loss	3-Tone Slope	SCNN	IMD	23-Tone Test	Phase Jitter	Impulse Noise
-----	--------	--------	---------	-------	-----------	------	----------	-------	-----------	------------------	--------------	------	-----	--------------	--------------	---------------

Date/Time	Circuit Selected	Freq Range	Freq (Hz)	Power (dBm)	1004Hz Net Loss	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 15:26:14	VG3	304-3004	1005	-12.80	0.2	Pass Power -14 to -12 dBm	Pass
2024-7-15 15:26:19	VG3	304-3004	306	-13.70	-0.90	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:24	VG3	304-3004	405	-13.30	-0.50	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:29	VG3	304-3004	505	-13.10	-0.30	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:34	VG3	304-3004	604	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:39	VG3	304-3004	704	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:44	VG3	304-3004	806	-12.80	0.00	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:49	VG3	304-3004	905	-12.80	0.00	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:54	VG3	304-3004	1104	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:26:59	VG3	304-3004	1204	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:04	VG3	304-3004	1306	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:09	VG3	304-3004	1405	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:14	VG3	304-3004	1505	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:19	VG3	304-3004	1604	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:24	VG3	304-3004	1704	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:29	VG3	304-3004	1806	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:34	VG3	304-3004	1905	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:39	VG3	304-3004	2005	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:44	VG3	304-3004	2104	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:49	VG3	304-3004	2204	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:54	VG3	304-3004	2306	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:27:59	VG3	304-3004	2405	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:28:04	VG3	304-3004	2505	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:28:09	VG3	304-3004	2604	-12.90	-0.09	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:28:14	VG3	304-3004	2704	-13.00	-0.20	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:28:19	VG3	304-3004	2806	-13.20	-0.40	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:28:24	VG3	304-3004	2905	-13.20	-0.40	Pass Power -14.10 to -7.80 dBm	Pass
2024-7-15 15:28:29	VG3	304-3004	3005	-13.20	-0.40	Pass Power -14.10 to -7.80 dBm	Pass

Attenuation Distortion Test Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report Impulse Noise Test Report

3-Tone Slope (Gain Slope) Test Report

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed Iter
1	FXD Placecall.gls	FXDFXSProfile	1,1	Start	Call Disconnected	None		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Start	Call Disconnected	None		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	Freq (Hz)	Power (dBm)	404Hz Gain Slope	2804Hz Gain Slope	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 15:34:52	VG3	405	-13.30			Pass Power -14 to -9 dBm	Pass
2024-7-15 15:34:59	VG3	1005	-12.80	0.50		Pass Power -14 to -9 dBm	Pass
2024-7-15 15:35:06	VG3	2806	-13.20		0.40	Pass Power -14 to -9 dBm	Pass

3-Tone Slope Test Report Signal/C

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed Iter
1	FXD Placecall.gls	FXDFXSProfile	1,1	Start	Call Disconnected	None		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Start	Call Disconnected	None		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	Freq (Hz)	Power (dBm)	404Hz Gain Slope	2804Hz Gain Slope	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 15:35:21	VG3	405	-13.80			Pass Power -14 to -9 dBm	Pass
2024-7-15 15:35:28	VG3	1005	-13.30	0.50		Pass Power -14 to -9 dBm	Pass
2024-7-15 15:35:35	VG3	2806	-13.70		0.40	Pass Power -14 to -9 dBm	Pass

3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report Impulse Noise Test Report S/NR/Net Loss vs Level Test Report VQT Test Report

Signal/C-Notched Noise Level Test Report

GL MAPS (Message Automation Protocol Simulation) (FXOFSX) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXOFSXProfile	1,1	Start	Call Disconnected	None		Pass	1	
2	FXS AnswerCall.gls	FXOFSXProfile	2,1	Start	Call Disconnected	None		Pass	1	
3	FXS Placecall.gls	FXOFSXProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXOFSXProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	Freq (Hz)	C-MSG Power (dBmC)	C-MSG Noise Power (dBmC)	S/CNN (dB)	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 15:55:08	VG3	1004	77.3	41.9	35.4	S/CNN > 30 dB	Pass
2024-7-15 15:55:09	VG3	1004	77.3	41.9	35.4	S/CNN > 30 dB	Pass
2024-7-15 15:55:10	VG3	1004	77.3	41.9	35.4	S/CNN > 30 dB	Pass
2024-7-15 15:55:11	VG3	1004	77.3	42	35.3	S/CNN > 30 dB	Pass
2024-7-15 15:55:12	VG3	1004	77.3				
2024-7-15 15:55:13	VG3	1004	77.3				
2024-7-15 15:55:14	VG3	1004	77.3				
2024-7-15 15:55:15	VG3	1004	77.3				
2024-7-15 15:55:16	VG3	1004	77.3				
2024-7-15 15:55:17	VG3	1004	77.3				
2024-7-15 15:55:18	VG3	1004	77.3				
2024-7-15 15:55:19	VG3	1004	77.3				
2024-7-15 15:55:20	VG3	1004	77.3				

Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report

GL MAPS (Message Automation Protocol Simulation) (FXOFSX) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXOFSXProfile	1,1	Start	Call Disconnected	None		Pass	1	
2	FXS AnswerCall.gls	FXOFSXProfile	2,1	Start	Call Disconnected	None		Pass	1	
3	FXS Placecall.gls	FXOFSXProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXOFSXProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	Freq (Hz)	C-MSG Power (dBmC)	C-MSG Noise Power (dBmC)	S/CNN (dB)	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 15:55:28	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:29	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:30	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:31	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:32	VG3	1004	76.8	41.6	35.2	S/CNN > 30 dB	Pass
2024-7-15 15:55:33	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:34	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:35	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:36	VG3	1004	76.8	41.6	35.2	S/CNN > 30 dB	Pass
2024-7-15 15:55:37	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:38	VG3	1004	76.8	41.6	35.2	S/CNN > 30 dB	Pass
2024-7-15 15:55:39	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass
2024-7-15 15:55:40	VG3	1004	76.8	41.7	35.1	S/CNN > 30 dB	Pass

Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report Impulse Noise Test Report S/NR/Net Loss vs Level Test Report VQT Test Report 23-Tone Test Report

IMD Test Report

MAPS (Message Automation Protocol Simulation) (FXO/FXS) - [Call Generation -CallGenDefault]										
Configurations Emulator Reports Editor Debug Tools Windows Help										
Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add	Delete	Insert	Refresh	Start	Start All	Stop	Stop All	Abort	Abort All	1004 Hz Net Loss	3-Tone Slope	SCNN	IMD	23-Tone Test	Phase Jitter	Impulse Noise	S/NR	VQT
Date/Time	Circuit Selected	IMD Tone Power (dBm)	2nd Order IMD Power (dBm)	2nd Order S/IMD (dB)	3rd Order IMD Power (dBm)	3rd Order S/IMD (dB)												
2024-7-15 16:01:09	VG3	-13.40	-66.93	53.53	-67.80	54.40												
2024-7-15 16:01:10	VG3	-13.50	-67.53	54.03	-68.00	54.50												
2024-7-15 16:01:11	VG3	-13.40	-66.93	53.53	-67.40	54.00												

Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report

MAPS (Message Automation Protocol Simulation) (FXO/FXS) - [Call Generation -CallGenDefault]										
Configurations Emulator Reports Editor Debug Tools Windows Help										
Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add	Delete	Insert	Refresh	Start	Start All	Stop	Stop All	Abort	Abort All	1004 Hz Net Loss	3-Tone Slope	SCNN	IMD	23-Tone Test	Phase Jitter	Impulse Noise	S/NR	VQT
Date/Time	Circuit Selected	IMD Tone Power (dBm)	2nd Order IMD Power (dBm)	2nd Order S/IMD (dB)	3rd Order IMD Power (dBm)	3rd Order S/IMD (dB)												
2024-7-15 16:00:55	VG3	-12.90	-66.33	53.43	-67.19	54.29												
2024-7-15 16:00:56	VG3	-12.90	-66.43	53.53	-67.09	54.19												
2024-7-15 16:00:57	VG3	-12.90	-66.19	53.29	-67.30	54.40												

Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report Impulse Noise Test Report S/NR/Net Loss vs Level Test Report VQT Test Report 23-Tone Test Report

Impulse Noise Test

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	dBmC	Count	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 16:09:06	VG3	N/A	0	Pass Count <= 15 in 1 mins	Pass

Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report **Impulse Noise Test Report** S/NR/Net Loss vs Level Test Report VQT Test Report 23-Tone Test Report

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations
1	FXD Placecall.gls	FXDFXSProfile	1,1	Start	Call Disconnected	None		Pass	1
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Start	Call Disconnected	None		Pass	1
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

Date/Time	Circuit Selected	dBmC	Count	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 16:09:06	VG3	N/A	0	Pass Count <= 15 in 1 mins	Pass

Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report **Impulse Noise Test Report** S/NR/Net Loss vs Level Test Report VQT Test Report 23-Tone Test Report

Signal-to-Noise Ratio and Level Test Report

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation - CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Date/Time	Circuit Selected	Freq (Hz)	Power (dBm)	SNR	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 16:20:25	VG3	1005	-24.9	33.00	Pass Power -26 to -24 dBm	Pass
2024-7-15 16:20:33	VG3	1005	-24.9	33.00	Pass Power -26 to -24 dBm	Pass
2024-7-15 16:20:41	VG3	1005	-24.9	33.00	Pass Power -26 to -24 dBm	Pass
2024-7-15 16:20:49	VG3	1005	-24.9	33.00	Pass Power -26 to -24 dBm	Pass
2024-7-15 16:20:57	VG3	1005	-24.9	33.00	Pass Power -26 to -24 dBm	Pass
2024-7-15 16:21:05	VG3	1005	-24.9	33.00	Pass Power -26 to -24 dBm	Pass

MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation - CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Profile	Result	Total Iterations	Completed
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	
3	FXS Placecall.gls	FXDFXSProfile		Start		None		Unknown	1	
4	FXD Answercall.gls	FXDFXSProfile		Start		None		Unknown	1	

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

1004 Hz Net Loss 3-Tone Slope SCNN IMD 23-Tone Test Phase Jitter Impulse Noise S/NR VQT

Date/Time	Circuit Selected	Freq (Hz)	Power (dBm)	SNR	VG3(6) Criteria	VG3(6) Test Result
2024-7-15 16:21:17	VG3	1005	-25.3	33.29	Pass Power -26 to -24 dBm	Pass
2024-7-15 16:21:25	VG3	1005	-20.3	33.26	Pass Power -21 to -19 dBm	Pass
2024-7-15 16:21:33	VG3	1005	-15.3	35.64	Pass Power -16 to -14 dBm	Pass
2024-7-15 16:21:41	VG3	1005	-10.3	36.41	Pass Power -11 to -9 dBm	Pass
2024-7-15 16:21:49	VG3	1005	-5.3	35.80	Pass Power -6 to -4 dBm	Pass
2024-7-15 16:21:57	VG3	1005	-0.3	35.31	Pass Power -1 to 1 dBm	Pass

Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report Impulse Noise Test Report S/NR/Net Loss vs Level Test Report VQT Test Report 23-Tone Test Report

Voice Quality Test Report

GL MAPS (Message Automation Protocol Simulation) (FXOFXS) - [Call Generation -CallGenDefault]

Configurations Emulator Reports Editor Debug Tools Windows Help

Icons: Gear, Document, Folder, Lightbulb, Stop, Start, Stop All, Abort, Abort All

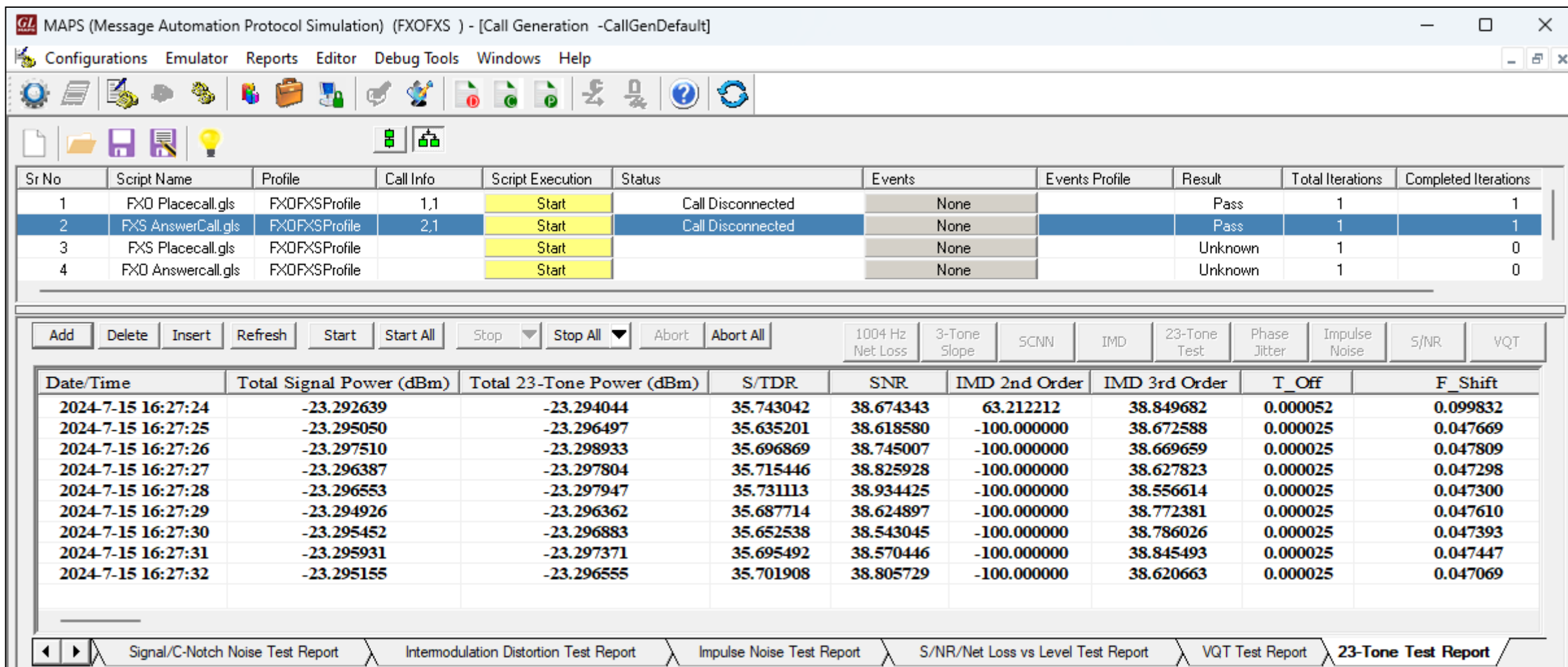
Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Events Prof...	Result	Total Iterations	Completed Iterations
1	FXD Placecall.gls	FXDFXSProfile	1,1	Stop	Select Voiceband Measurement Test	OutboundReleaseCall		Pass	1	0
2	FXS AnswerCall.gls	FXDFXSProfile	2,1	Stop	Ready for Voiceband Measurement	InboundReleaseCall		Pass	1	0
3	FXD PlaceCall.qls	FXDFXSProfile		Start		None		Unknown	1	0

Add Delete Insert Refresh Start Start All Stop Stop All Abort Abort All

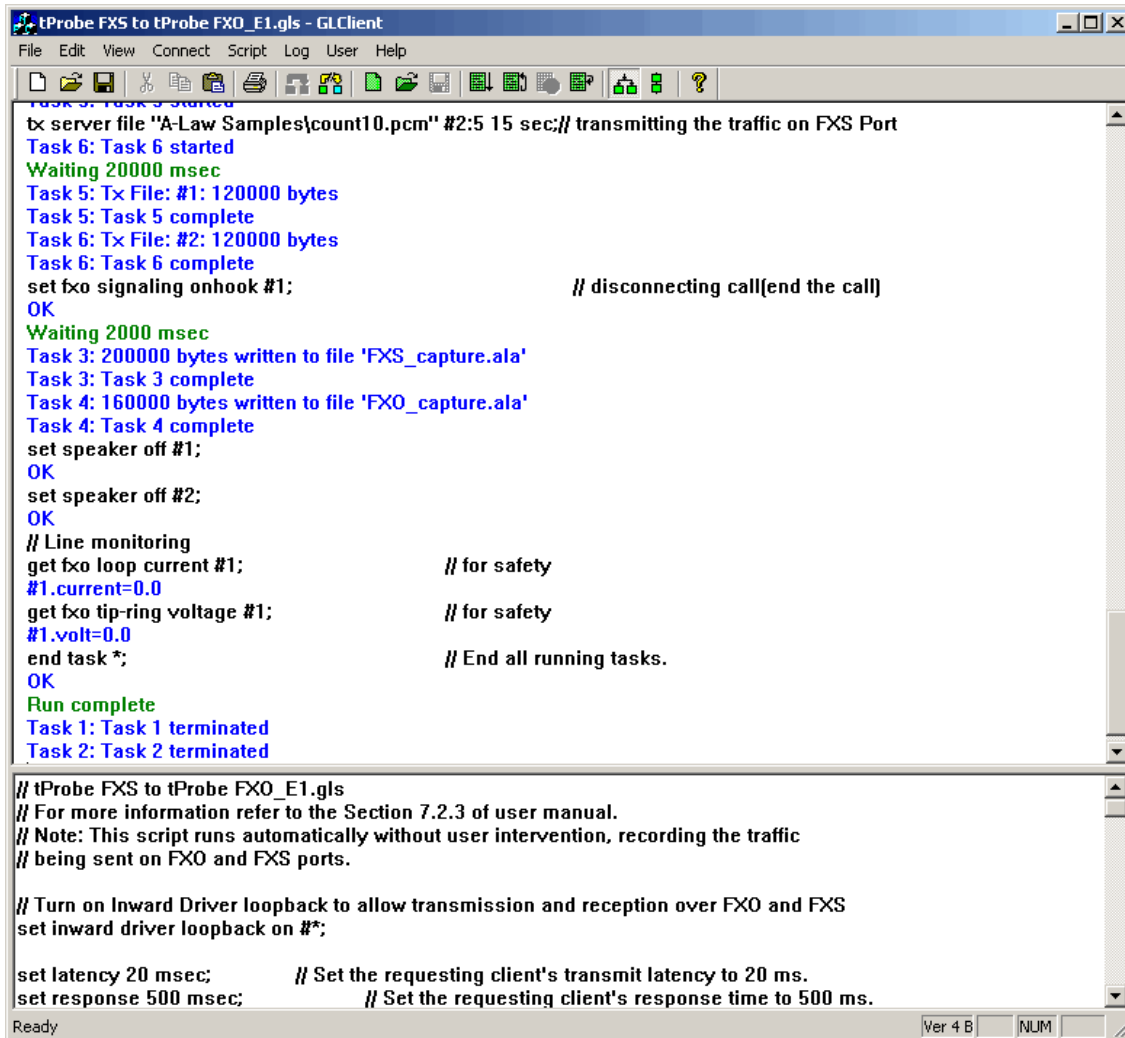
Date/Time	Circuit Selected	Caller Degraded File Name	Caller VQT Score	Callee to Caller Delay (msec)	Callee Degraded File Name	Callee VQT Score	Callee to Callee Delay (msec)
2024-7-16 10:00:19	VG3	2024-07-16-10-00-08-Line002.pcm	4.41	7.75	2024-07-16-09-59-55-Line002.pcm	4.18	27.38

Report 3-Tone Slope Test Report Signal/C-Notch Noise Test Report Intermodulation Distortion Test Report Impulse Noise Test Report S/NR/Net Loss vs Level Test Report **VQT Test Report** 23-Tone Test Report

Twenty-Three Tone Test Report



tProbe™ Windows Client Server (WCS)



```
tProbe FXS to tProbe FXO_E1.gls - GLClient
File Edit View Connect Script Log User Help

Task 3: Task 3 started
tx server file "A-Law Samples\count10.pcm" #2:5 15 sec; // transmitting the traffic on FXS Port
Task 6: Task 6 started
Waiting 20000 msec
Task 5: Tx File: #1: 120000 bytes
Task 5: Task 5 complete
Task 6: Tx File: #2: 120000 bytes
Task 6: Task 6 complete
set fxs signaling onhook #1; // disconnecting call(end the call)
OK
Waiting 2000 msec
Task 3: 200000 bytes written to file 'FXS_capture.ala'
Task 3: Task 3 complete
Task 4: 160000 bytes written to file 'FXO_capture.ala'
Task 4: Task 4 complete
set speaker off #1;
OK
set speaker off #2;
OK
// Line monitoring
get fxs loop current #1; // for safety
#1.current=0.0
get fxs tip-ring voltage #1; // for safety
#1.volt=0.0
end task *; // End all running tasks.
OK
Run complete
Task 1: Task 1 terminated
Task 2: Task 2 terminated

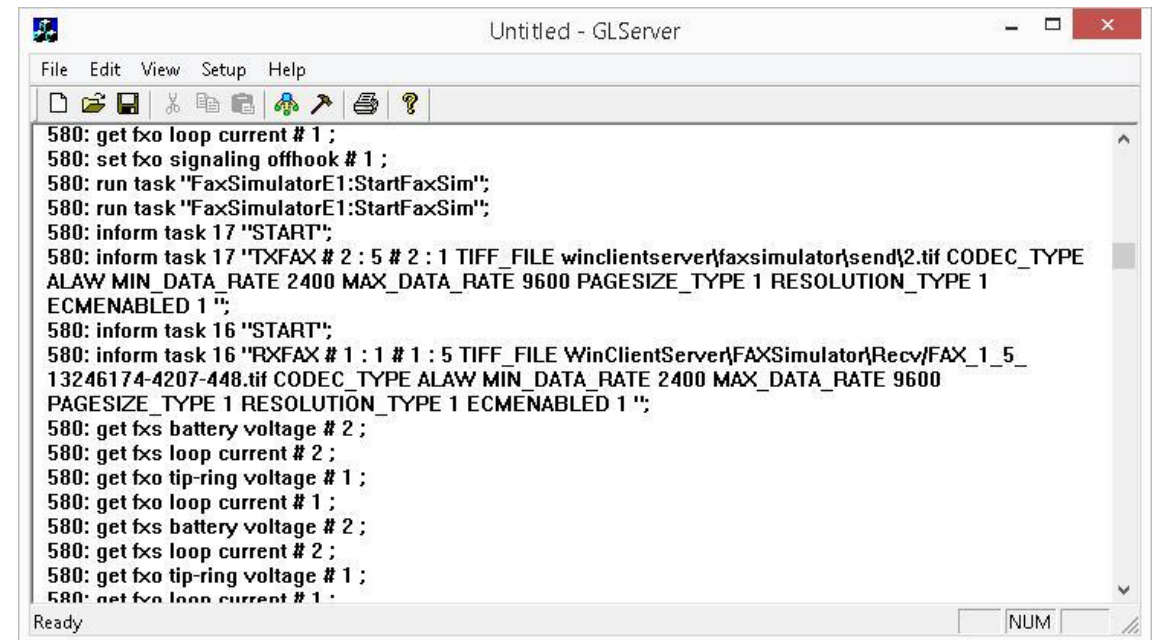
// tProbe FXS to tProbe FXO_E1.gls
// For more information refer to the Section 7.2.3 of user manual.
// Note: This script runs automatically without user intervention, recording the traffic
// being sent on FXO and FXS ports.

// Turn on Inward Driver loopback to allow transmission and reception over FXO and FXS
set inward driver loopback on #*;

set latency 20 msec; // Set the requesting client's transmit latency to 20 ms.
set response 500 msec; // Set the requesting client's response time to 500 ms.

Ready Ver 4 B NUM
```

WCS Server Log



```
Untitled - GLServer
File Edit View Setup Help

580: get fxs loop current # 1 ;
580: set fxs signaling offhook # 1 ;
580: run task "FaxSimulatorE1:StartFaxSim";
580: run task "FaxSimulatorE1:StartFaxSim";
580: inform task 17 "START";
580: inform task 17 "TXFAX # 2 : 5 # 2 : 1 TIFF_FILE winclientserver\xfaxsimulator\send\2.tif CODEC_TYPE
ALAW MIN_DATA_RATE 2400 MAX_DATA_RATE 9600 PAGESIZE_TYPE 1 RESOLUTION_TYPE 1
ECMENABLED 1 ";
580: inform task 16 "START";
580: inform task 16 "RXFAX # 1 : 1 # 1 : 5 TIFF_FILE WinClientServer\FAXSimulator\Recv\FAX_1_5_
13246174-4207-448.tif CODEC_TYPE ALAW MIN_DATA_RATE 2400 MAX_DATA_RATE 9600
PAGESIZE_TYPE 1 RESOLUTION_TYPE 1 ECMENABLED 1 ";
580: get fxs battery voltage # 2 ;
580: get fxs loop current # 2 ;
580: get fxs tip-ring voltage # 1 ;
580: get fxs loop current # 1 ;
580: get fxs battery voltage # 2 ;
580: get fxs loop current # 2 ;
580: get fxs tip-ring voltage # 1 ;
580: get fxs loop current # 1 ;

Ready NUM
```

WCS Sample Script

```
tProbe FXO to tProbe FXS_T1.gls - Notepad
File Edit Format View Help

// tProbe FXO to tProbe FXS_T1.gls
// For more information refer to the Section 6.2.3
// Note: This script runs automatically without user intervention, recording the traffic
// being sent on FXO and FXS ports.

// Turn on Inward Driver loopback to allow transmission and reception over FXO and FXS
set inward driver loopback on #*;

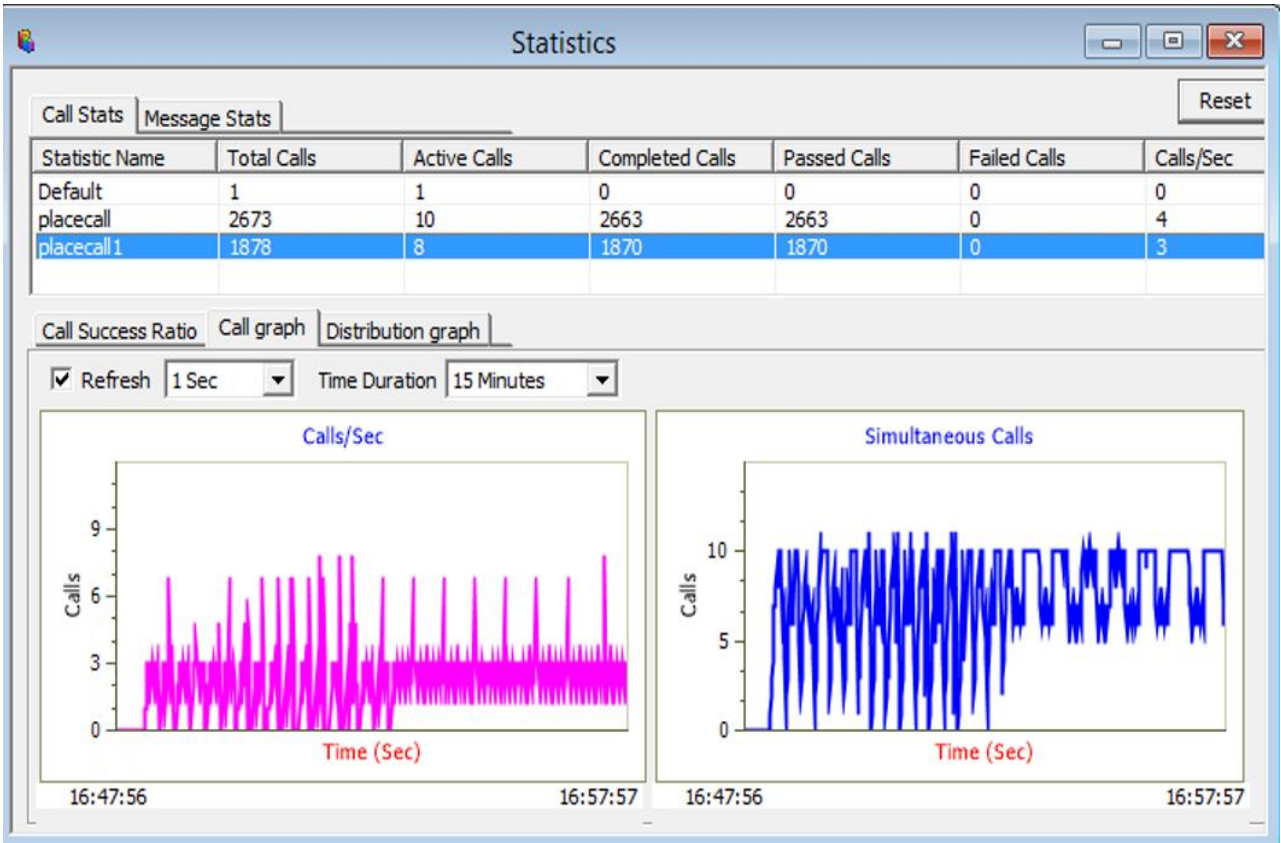
set latency 20 msec;           // Set the requesting client's transmit latency to 20 ms.
set response 500 msec;        // Set the requesting client's response time to 500 ms.

// Concurrent mode is appropriate for FXO and FXS scripts in most cases
concurrent:

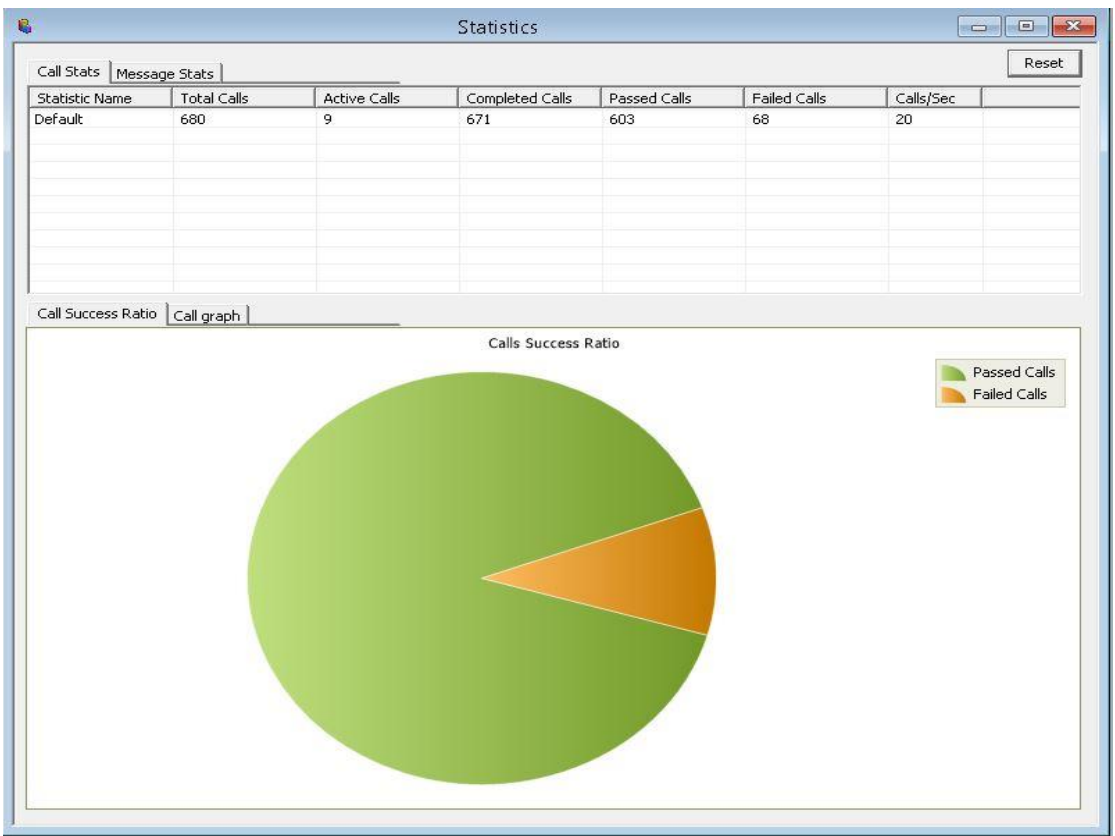
//FXO port initialization and setting the parameters |
set fxo on #1;                // Enabling the FXO on port 1
get fxo #1;                   // Get the status of FXO on port 1, By default it
allocates TS 0(In) and TS4 (Out)
set fxo termination "usa" #1; // Setting the termination as "USA"
get fxo termination #1;       // Getting the termination, which have been set earlier
set fxo encoding mulaw #1;    // Setting the encoding format as mulaw
get fxo encoding #1;          // Getting the encoding format, which have been set
earlier
set fxo in gain 0.0 db #1;     // Setting the Input gain of FXO on port 1 as 0.0 dB
get fxo in gain #1;           // Getting the Input gain, which have been set earlier
set fxo out gain 0.0 db #1;    // Setting the Output gain of FXO on port 1 as 0.0 dB
get fxo out gain #1;          // Getting the Output gain, which have been set earlier
set fxo sample rate 8 khz #1; // Setting the sampling rate 8000 hz or 8khz on port 1
get fxo sample rate #1;       // Getting the sampling rate, which have been set earlier
```


FXO FXS Call Ratio Statistics

Call Graph



Call Success Ratio Statistics



2-Wire FXO/FXS

2-Wire FXS

2-wire FXS

Audio Selection: ☐ None ☐ VF ☒ FXS

Ports: 2

Termination: 600

Polarity: Forward (Tip-Ring)


Encoding: A-law

Audio In: ☒ Tx Insert TS: 01 Gain: 0.000

Audio Out: ☒ Rx Drop TS: 01 Gain: 0.000

Dual Tone: Freq 1 (Hz): 340 Freq 2 (Hz): 440 Level 1 (dB): -10.5 Level 2 (dB): -10.5

Ring: Freq (Hz): 20 Voltage: 63.1 Cadency (ms): On: 2000 Off: 4000

Monitoring:  Loop Current mA: 0.0 mA

Battery Volt: 48.0

Apply Exit

2-Wire FXO

2-Wire FXO

Audio Selection: ☒ None ☐ VF ☐ FXO

Ports: 1

Signaling: on-hook off-hook monitor

Termination: USA

Start: ground

Encoding: A-law

Sample Rate: 8 kbps

Monitoring Information: Loop Current: 0.0 mA Tip Ring Voltage: 0 V Ring Detect Current: ☐ History: ☐ Clear

Caller ID: Clear

Audio In: ☐ Tx Insert TS: 00 Gain: 0.0 dB

Audio Out: ☐ Rx Drop TS: 00 Gain: 0.0 dB

Speaker: ☐

Default Exit

2-Wire FXO/FXS (Contd.)

- FXO port on tProbe™ allows to simulate a 2-Wire FXO device such as a telephone or a fax machine
- FXO port allows you to capture and analyze data from a 2-Wire telephone line, as well as to generate and transmit analog data to 2-Wire line
- The FXS port on tProbe™ emulates a 2-Wire FXS service such as a telephone wall jack
- This feature allows users to interface with an FXO device such as a telephone

Other Analog Testing Products

- **T1 E1 MAPS™ APS and ALS Simulation**

- Using a T1 connection to the APSCB24/48/96, generates a series of up to 384 analog ports with standard FXO interfaces
- MAPS™ APS can be connected to any ATS, PSTN, PBX, or Gateway that supports analog FXO interfaces

- **T1 E1 MAPS™ CAS Emulator**

- Automated test procedure allowing the users to establish calls and send/receive TDM traffic (DTMF/MF digits, Tones, Fax, Voice)
- Supports testing of various protocols - T1 Wink Start (R1 wink), T1 Loop Start and T1 Ground Start, T1 Feature Group D, T1 Immediate Start, E1 MFC-R2 (All variants, full/semi compelled), E1 European Digital CAS (EUC), E1 Digital E&M, E1 International Wink Start, and any user-defined CAS protocol

Other Analog Testing Products (Contd.)

- **VQuad™ Dual UTA**

Fax testing using the Dual UTA 2-Wire FXO or 4-Wire analog interfaces. Supports up to 4 simultaneous T.30 faxes

- **T1 E1 CAS Simulation and Analysis**

It can simulate and analyze any user-defined CAS protocols by providing signaling bit transitions and forward/backward frequency digits and tones. GL's CAS simulator and analyzer are client-side applications that works along with the GL's T1 E1 Analyzer

Thank you