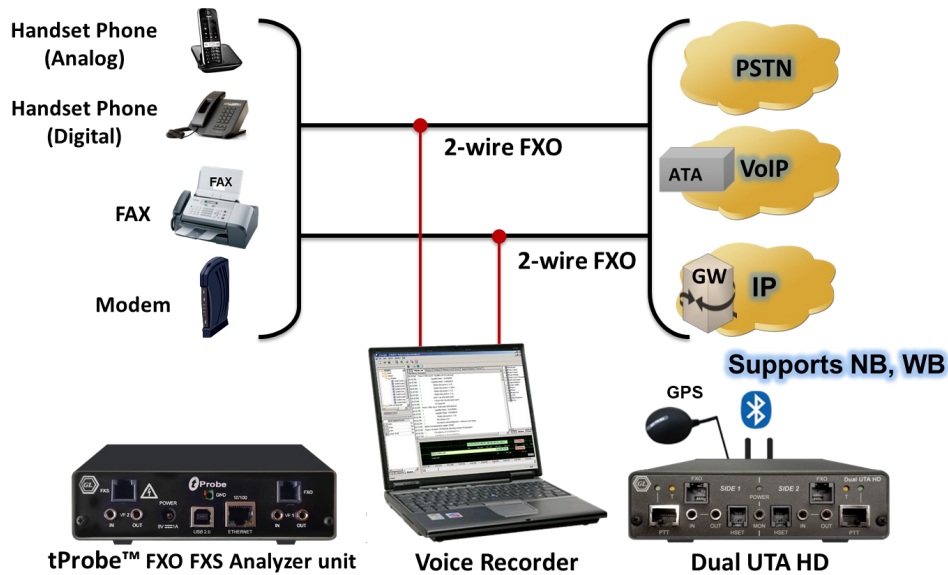


2-Wire Voice / Data Capture



Overview

GL provides two different solutions to capture signals on 2-Wire analog lines (FXO ports):

- Using Voice Recorder with Dual UTA HD
- Using tProbe™ FXO

GL's **Voice Recorder** is used with [Dual Universal Telephony Adapter HD](#) hardware to non-intrusively capture the voice, fax, or modem traffic over a 2-wire Analog interface.

The **Dual UTA HD** is a comprehensive hardware device designed to interface two completely separate networks to test the voice quality. The Dual UTA HD can be directed to automatically send and record sample voice files between nodes of a telephony network, which can then be submitted to software application for analysis.

GL's [tProbe™](#) is an enhanced USB based **T1 E1 VF FXO FXS Datacom Analyzer / Emulator**. The FXO port on the **tProbe™** permit non-intrusive capture and analysis of voiceband signal from a two-wire telephone line. This feature allows you to capture and analyze data from a two-wire telephone line, as well as to generate and transmit analog data onto that two-wire line.

FXO FXS testing can also be performed using [MAPS™ FXO FXS Emulator](#) application. MAPS™ provides a facility to place call/answer incoming call on both FXO and FXS ports, and automate the entire testing process using scripts.

For more details, refer to [2-Wire Voice / Data Capture](#) and [MAPS™ FXO FXS](#) webpages.



GL Communications Inc.

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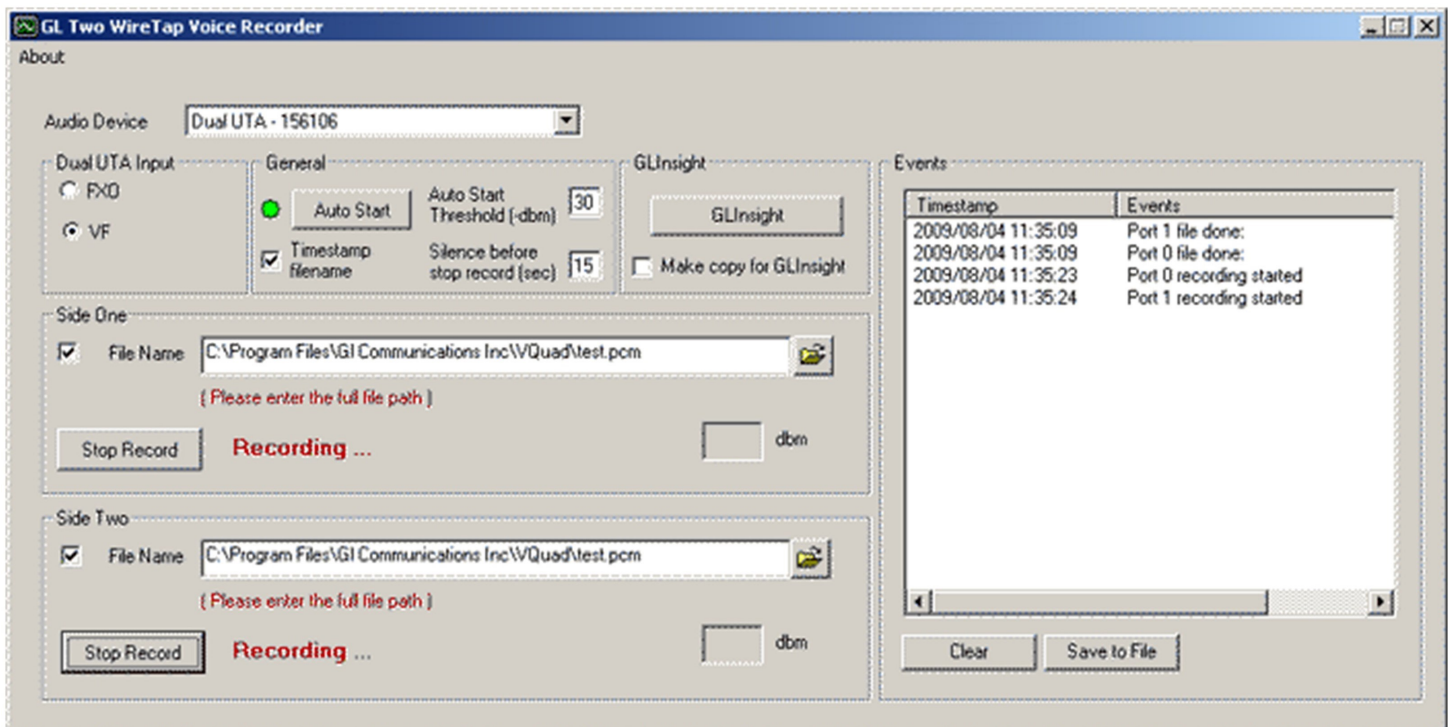
(Web) www.gl.com - (V) +1-301-670-4784 (F) +1-301-670-9187 - (E-Mail) info@gl.com

Main Features

- A USB plug 'n' play recorder that does not tie up the sound card on the PC
- Enables recording of the following transmissionsED-137B Volume 1 Radio
 - Data (Modem)
 - Fax
 - Mobile Fax
 - T.38 Fax
 - Passive Voice
 - X, Y, Z Modem and others
- Non-intrusive, bi-directional traffic capture into a single PCM file
- Supports all types of measurements associated with a 2-wire analog call
- Use with GL Insight™ for modem / fax data analysis, or Adobe Audition for voice analysis
- Use with [Voice-band Analyzer \(VBA\)](#) application to perform voice band analysis
- Provides bottom-up deep diagnosis of the call
- Provide info from data pump layer up to tiff picture
- Helps solve interoperability issues
- Diagnoses physical layer problems
- Diagnoses network layer problems

Voice, Modem and Fax Data Capture with Dual UTA HD

Voice Recorder software allows to non-intrusively capture the signals on FXO or VF ports on DUAL UTA HD connected to 2-wire lines. The Dual UTA HD unit supports 2 FXO ports and can be connected directly to the 2-wire lines. One can non-intrusively 'tap' into the analog 2-wire line via the RJ-11 interface and capture the bi-directional voice/data. The recorded voice/data is automatically saved into a single PCM file. The recording can be automated using auto trigger options, or manually controlled. For more information, please visit [Automated FXO testing using Dual UTA HD](#).



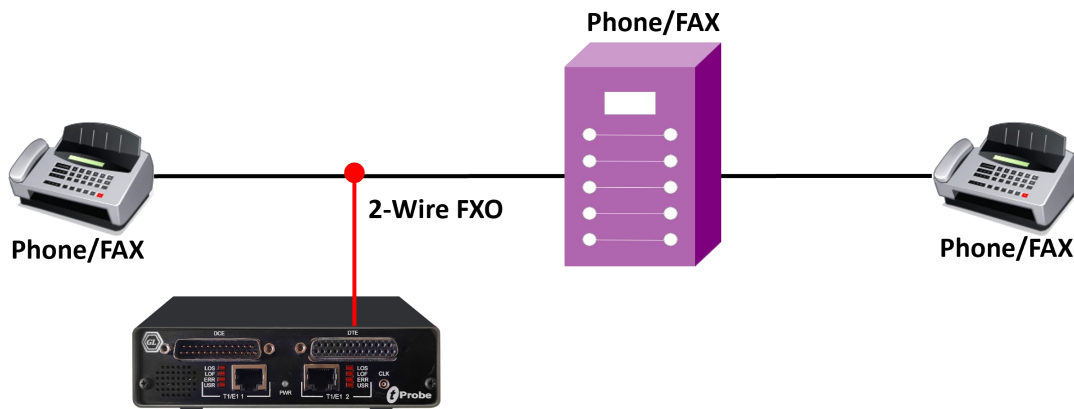
Two Wire Tap Voice Recorder

Voice, Modem and Fax Data Capture with tProbe™

tProbe™ FXO FXS permits non-intrusive capture and analysis of voiceband signal from a two-wire FXO / FXS lines. With the tProbe™ FXO call scripts, one can perform the basic operations during the call setup such as the Off-hook/On-hook, check dial tone, transmit / receive DTMF digits, monitor ring signal, and record traffic to pcm file.

The signals so monitored over the FXO ports can be captured as A-Law, μ -Law, 16-bit PCM (Intel), and 16-bit PCM (Motorola) file formats. For more information, please visit Analog [FXO FXS Testing using tProbe](#) webpage. With additional FAX simulator license (XXFT0), tProbe™ FXO port can be used to send/receive FAX over analog lines as shown in the figure below.

For more details refer to [FAX Simulation over PSTN, T1 or E1](#).



```

tProbe FXO call Monitor_T1.gls - GLClient
File Edit View Connect Script Log User Help

OK
get fxo signaling #1;
#1.signaling=monitor mode
get fxo tip-ring voltage #1; // Get value of FXO port tip-ring voltage, typically 48 Volts
#1.volt=0.0
get fxo loop current #1; // Get loop current value, typically 0.0 mA in on-hook state.
#1.current=0.0
// Capture FXO line for 60 seconds. User can change this based on requirement
// The wait period also needs to be changed correspondingly.
// [Please read the "Note" in the beginning of the script]
rx server file "FXO_capture.ula" #1:1 60 sec; // capturing traffic on FXO port
Task 1: Task 1 started
Waiting 60000 msec

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

// Start monitoring the FXO port
set fxo signaling monitor #1;
get fxo signaling #1;

get fxo tip-ring voltage #1; // Get value of FXO port tip-ring voltage, typically 48 Volts
get fxo loop current #1; // Get loop current value, typically 0.0 mA in on-hook state.

// Capture FXO line for 60 seconds. User can change this based on requirement
// The wait period also needs to be changed correspondingly.
// [Please read the "Note" in the beginning of the script]
rx server file "FXO_capture.ula" #1:1 60 sec; // capturing traffic on FXO port
wait 60000; // Wait for the capturing to be complete

Ready
Ver 4 B NUM

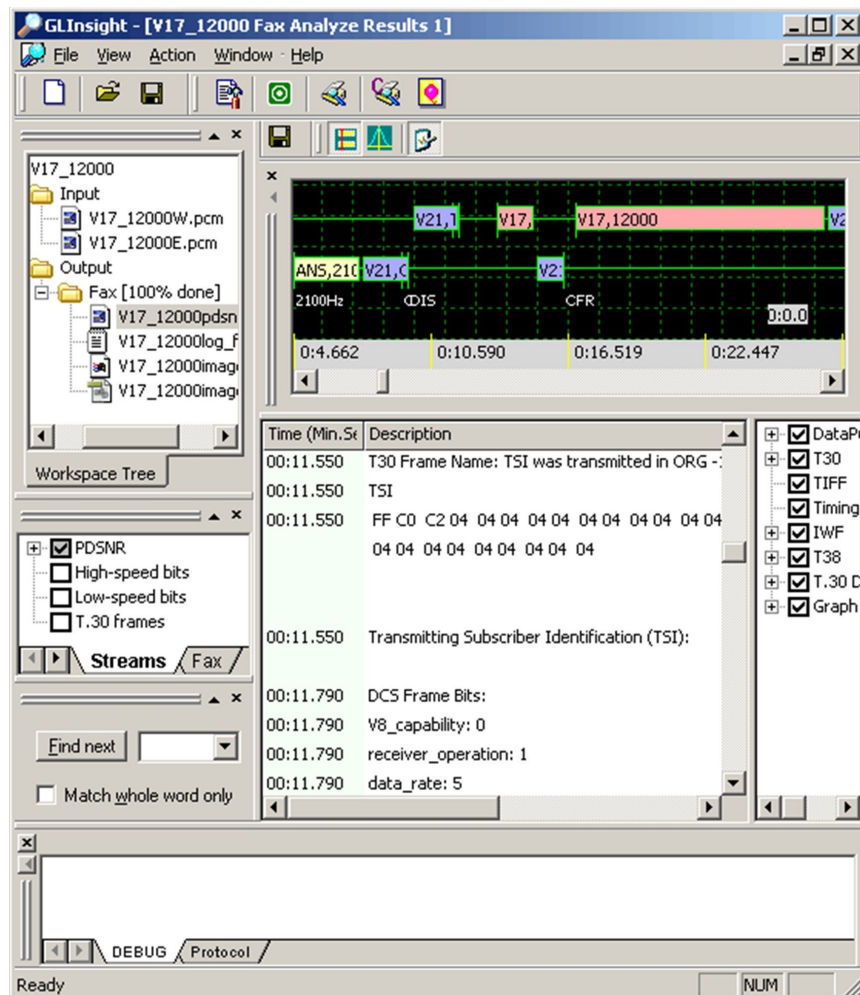
```

2-Wire Capture Using tProbe™

Modem and Fax Data Analysis with GLInsight™

[GLInsight™](#) verifies fax and modem calls by analyzing the recorded PSTN files (or IP stream). The Voice Recorder helps record these PSTN calls to the required location. The analyzer can then report with a detailed log file for easy event tracking.

- Supported Protocols for Fax over PSTN:
 - V.34HD, V.17, V.33, V.29, V.27, V.21, T.30, T4 / T6
- Supported Protocols for Modem over PSTN:
 - V.92 (Quick Connect and Modem-on-Hold supported. PCM-upstream not supported)
 - V.90, V.34, V.32bis / V.32
 - V.22bis / V.22, V.21, V.23
 - Bell 103 / Bell 212
- Supported Start-up Protocols
 - V.8
 - V.8bis
 - V.8 short



Fax/Modem Capture Analysis using GLInsight™

Buyer's Guide

Item No	Product Description
VQT035	2-Wire Voice/Data Capture
VQT251	Dual UTA HD Next generation Dual UTA with FXO Wideband support
PTE001	tProbe™ T1 E1 Base Unit
XX610	File based Record/Playback (Client side) and ClientDataTxRx (Server side)
XX620	Transmit/Detect digits

Item No	Related Software
FXT001	GLInsight™ for Fax Analysis TDM
FXT002	GLInsight™ for Fax Analysis IP
MDT001	GLInsight™ for Modem Analysis TDM
MDT002	GLInsight™ for Modem Analysis IP
VBA032	Near Real-time Voice-band Analyzer
SA048	Goldwave Software

Note: PCs which include GL hardware/software require Intel or AMD processors for compliance.

For more details, refer to [2-Wire Voice / Data Capture](#) and [MAPS™ FXO FXS](#) webpages.



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