

## Near Real-Time Non-Intrusive Voice Band Analysis

Monitors Speech & Noise Level, Line & Acoustic Echo, and Traffic Classifier

Accepts A-Law,  $\mu$ -Law, 16-bit Linear PCM and Wave Files

Manual, Batch, and Auto Processing Modes

Reports results in Voice Band Events and Summary Analysis Files (\*.CSV)

Database and File Based Reporting Options

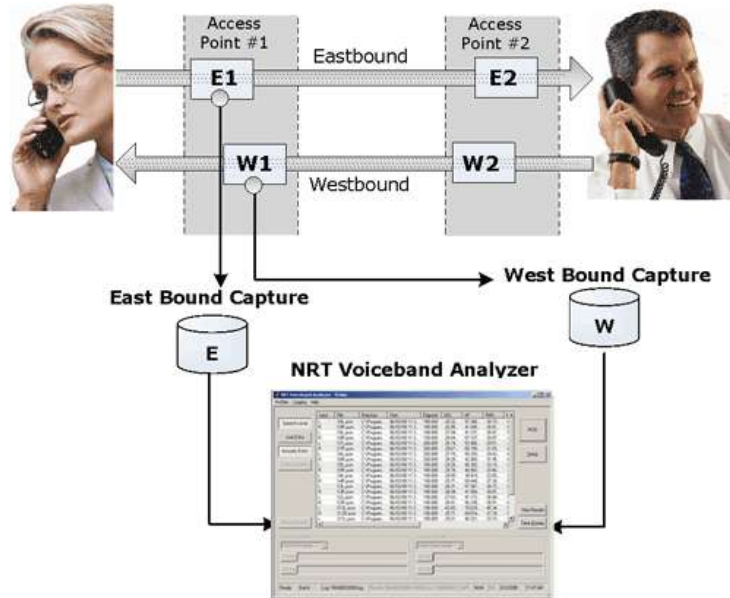
Built-in & Customized File Naming Conventions

Archive Data Files

Supports 1-, 2-, 3-, and 4-Port Signal Data Analysis

Works with TDM, VoIP, and Wireless Captured Files

## Near Real-time Voice-band Analyzer



### Overview

The Near Real-time Voice-band Analyzer (VBA) is an analysis tool for monitoring the quality of voice band traffic over VoIP, TDM and wireless networks. It can host an arbitrary number of analysis algorithms. Built-in algorithms include ITU-T P.56 Active Voice Level analysis, Line Echo (Hybrid) analysis, Acoustic Echo analysis, and Traffic Classifier analysis. Other analysis modules such as ITU-T P.561, P.562, and P.563 can be hosted as plug-ins.

The VBA application can operate on previously captured files, making it a near-real time (as opposed to a strictly real-time) tool. It supports on A-Law,  $\mu$ -Law, 16-bit PCM (Intel), 16-bit PCM (Motorola), and MS Wave file formats.

VBA works in conjunction with GL's TDM, Packet, and Wireless non-intrusive capture products:

- VBA with GL's TDM T1 E1 Call Capture and Analysis, or
- VBA with GL's VoIP PacketScan™
- VBA with GL's GSM, CDMA, and 3G Call Capture Products

### Main Features

- Near real-time (NRT) non-intrusive analysis platform
- Supports 1-, 2-, 3-, and 4-port signal data analysis
- Manual, batch, and automatic processing modes
- Accepts A-Law,  $\mu$ -Law, 16-bit linear PCM, and WAV input data from files
- Hosts built-in P.56 Active Voice Level analysis, Hybrid Echo analysis, Acoustic Echo analysis, Traffic Classifier analysis and other optional analysis algorithms as plug-ins
- Allows grouping files together into sets and routes file data to appropriate inputs using user-specified file naming conventions. GL Call Capture and Analysis (CCA) rules are built-in
- User-selectable analysis output fields
- Native analysis output mode directly compatible with Microsoft® Excel and other readily available analysis tools
- Voice Band Status (\*\_vbs.csv) files are generated for all modules; Additionally Voice Band Event (\*\_vbe.csv) files are generated for Traffic Classifier and Acoustic Echo modules
- Directly compatible with many GL data capture products, including Call Capture and Analysis (T1/E1 lines), 2-Wire Voice/Data Capture (Analog), and PacketScan™ (VoIP)
- Compatible with products of other vendors provided only that their file-naming conventions could be used to group files into sets and associate files with algorithm inputs

For more details, please visit our web page <http://www.gl.com/voicebandanalyzer.html>.



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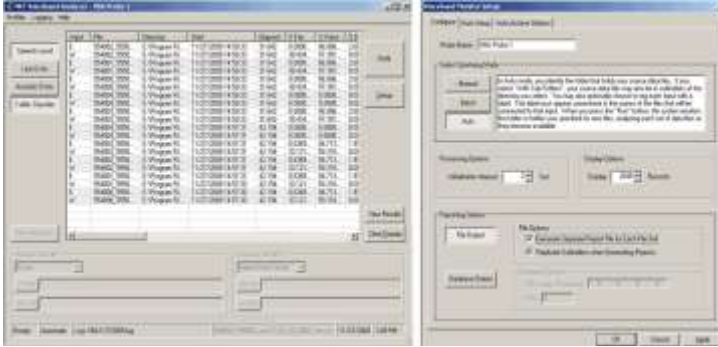
Web Page Address: <http://www.gl.com/> • E-Mail Address: [gl-info@gl.com](mailto:gl-info@gl.com)

## Operation Modes

The VBA operates in three fundamental modes: **Manual**, **Batch** and **Automatic**.

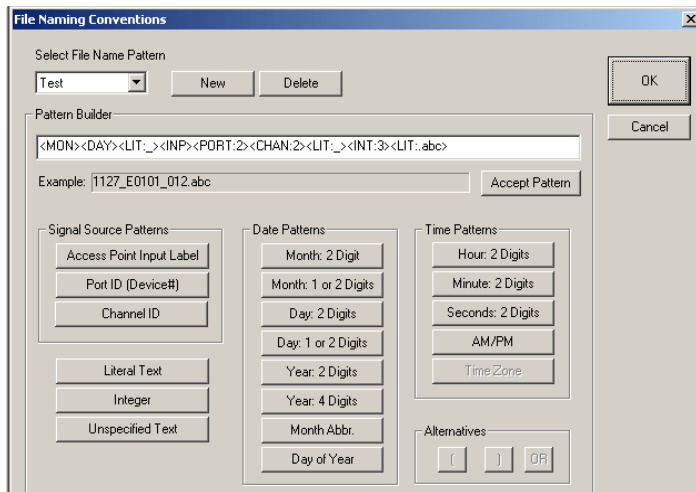
In **manual** mode, the user specifies the files to be analyzed. This is useful for quick analysis, and for verifying algorithm configuration before a **batch** or **auto** run.

**Batch** mode allows users to analyze an entire set of data stored in a designated folder or subfolders. In **automatic** mode, the process continues indefinitely until the user manually stops the analysis.



## File Naming Conventions

The file name convention allows users to identify source data files and to group them into data sets in Batch or Auto Mode operations. The built-in naming conventions are **CCA – Standard**, **CCA-MFCR2**, and **CCA-ISDN**, which are compatible with GL's Call Capture and Analysis application. The application also allows users to customize the naming convention according to user's requirements and create corresponding a file name pattern.



## Buyers Guide:

[VBA032](#) - Voice-band Analyzer

[VBA034](#) - Acoustic Echo Analysis for VBA

[VBA035](#) - Traffic Analysis for VBA

## Related Software

[XX030](#) - Call Capture and Analysis Software (T1 or E1)

CDR032 – Call Data Record

[PKV100](#) - PacketScan™ (Real-time and Offline)

[PKV101](#) - PacketScan™ - Offline

[PKS100](#) - PacketGen™ (includes PacketScan™)

[PKB070](#) - Audio Processing Utility

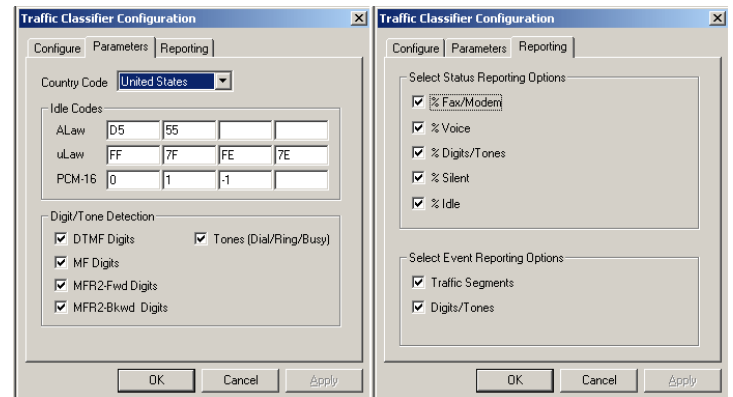
[VQT035](#) - 2-Wire Voice/Data Capture

## Reporting Parameters & Fields

VBA allows setting various parameters and customizing output fields for the built-in **P.56 Active Speech Level**, **Line echo**, **Acoustic echo**, and Traffic Classifier modules.

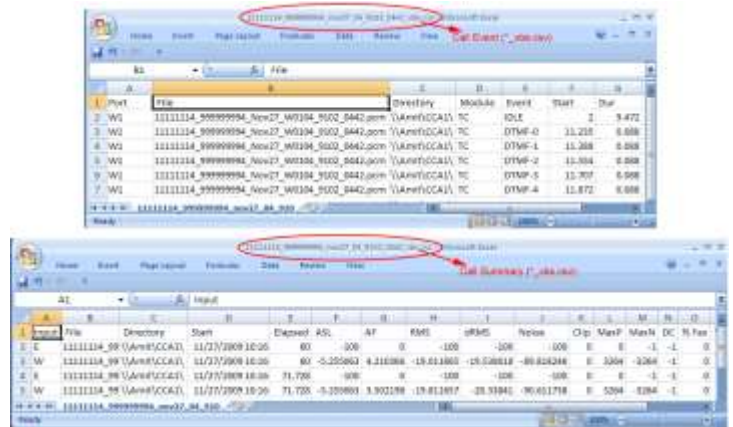
The Active speech level is reported either in units of dBm (P.56 standard) or as dB relative to a full-scale square wave (PCM standard). The Line & Acoustic echo modules include **Echo Path Model** parameters. The echo path model allows adjusting: "**Tail Length**" and "**Tail Offset**" parameters. In addition, Line echo module allows adjusting **Double Talk Detection** sensitivity.

Traffic Classifier algorithm allows Idle Code settings for signaling bits and options to detect DTMF, MF, MFR2-fwd, MFR2-bkwd digits, and Tones (Dial/Ring/Busy).



## Reports

Two types of Result files are generated based on the VBA Algorithms selected. Voice Band Event (\*\_vbe.csv) and Voice Band Status (\*\_vbs.csv). The **Voiceband Status** output file contains an overall summary of the call, including the input direction (E / W), the call duration, the elapsed time and various measurements based on the modules selected. The **Voiceband Event** output file contains various signaling (ISDN, CAS, SS7) events, spurious acoustic echo, start time, event duration, and so on.



## Related Hardware

[UTE001](#) - Portable USB based Dual T1 or E1 Laptop Analyzer

[HTE001](#) - Universal HD T1 or E1 PCI Cards

[HUT001/HUE001](#) - Basic Universal HD T1/E1 Software