Avenue Model 9690

Audio Compliance and Monitoring Software User Guide

Revision 1.0 SW v1.0.0

ENSEMBLE
DESIGNS

Purveyors of Fine Video Gear—Loved by Engineers Worldwide

Clearly, Ensemble wants to be in the broadcast equipment business. It's so rare anymore to find a company of this caliber that has not been gobbled up by a large corporation. They are privately held so they don't have to please the money people. They really put their efforts into building products and working with customers.

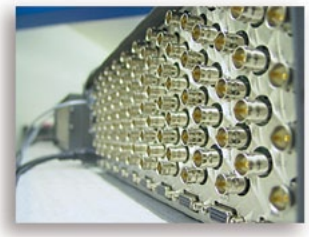
I'm really happy with the Avenue products and Ensemble's service, and even more important my engineers are happy. We've continued to upgrade the product and add more cards. We will be rebuilding our production control room and we will use Avenue again.

~ *Don McKay, Vice President Engineering, Oregon Public Broadcasting*

Who is Ensemble Designs?

By Engineers, For Engineers

In 1989, a former television station engineer who loved designing and building video equipment, decided to start a new company. He relished the idea of taking an existing group of equipment and adding a few special pieces in order to create an even more elegant ensemble. So, he designed and built his first product and the company was born.



Avenue frames handle 270 Mb/s, 1.5 Gb/s and 3 Gb/s signals, audio and MPEG signals. Used worldwide in broadcast, mobile, production, and post.

Focused On What You Need

As the company has grown, more former TV station engineers have joined Ensemble Designs and this wealth of practical experience fuels the company's innovation. Everyone at the company is focused on providing the very equipment you need to complete your ensemble of video and audio gear. We offer those special pieces that tie everything together so that when combined, the whole ensemble is exactly what you need.

We're focused on processing gear– 3G/HD/SD/ASI video, audio and optical modules.

Notably Great Service for You

We listen to you – just tell us what you need and we'll do our best to build it. We are completely focused on you and the equipment you need. Being privately held means we don't have to worry about a big board of directors or anything else that might take attention away from real business. And, you can be sure that when you call a real person will answer the phone. We love this business and we're here to stay.

Come on by and visit us. Drop in for lunch and a tour!

Bricks and Mortar of Your Facility

The bricks and mortar of a facility include pieces like up/downconverters, audio embedders, video converters, routers, protection switches and SPGs for SD, HD and 3Gb/s. That's what we're focused on, that's all we do – we make proven and reliable signal processing and infrastructure gear for broadcasters worldwide, for you.

Shipped with care to television broadcasters and video facilities all over the world.

Contents

Audio Compliance and Monitoring Software Option for Avenue Systems

Overview

Audio Compliance and Monitoring Software is an option that can be installed for compliance verification and archiving. It gives you the ability to monitor and log levels of audio occurring in selected Avenue modules so that you can show whether audio levels are exceeding a certain configurable limit. You can log both raw data and over limit events. In addition to monitoring and logging, the software can be configured to send email alerts or text messages when audio levels are too high.

Note: The software uses your computer's system time when creating log entries.

For broadcasters in the United States, these capabilities are meant specifically to address the need to comply with the Commercial Advertisement Loudness Mitigation (CALM) Act passed in 2010. This law requires broadcasters to ensure that the audio level in commercials is not louder than the regular programming. For broadcasters around the world, this software allows them to monitor and log audio levels to meet their own needs with respect to either government regulations or industry standards and practices.

Requirements

While it is not necessary to install or use Avenue PC, this software does require that you have at least one Avenue Frame connected to a network. This enables the software to communicate with hardware in the Avenue chassis.

For details on Avenue Frame network specifications, please refer to the "Model 5030/5035 System Control Manual" and the "Avenue System Overview Manual."

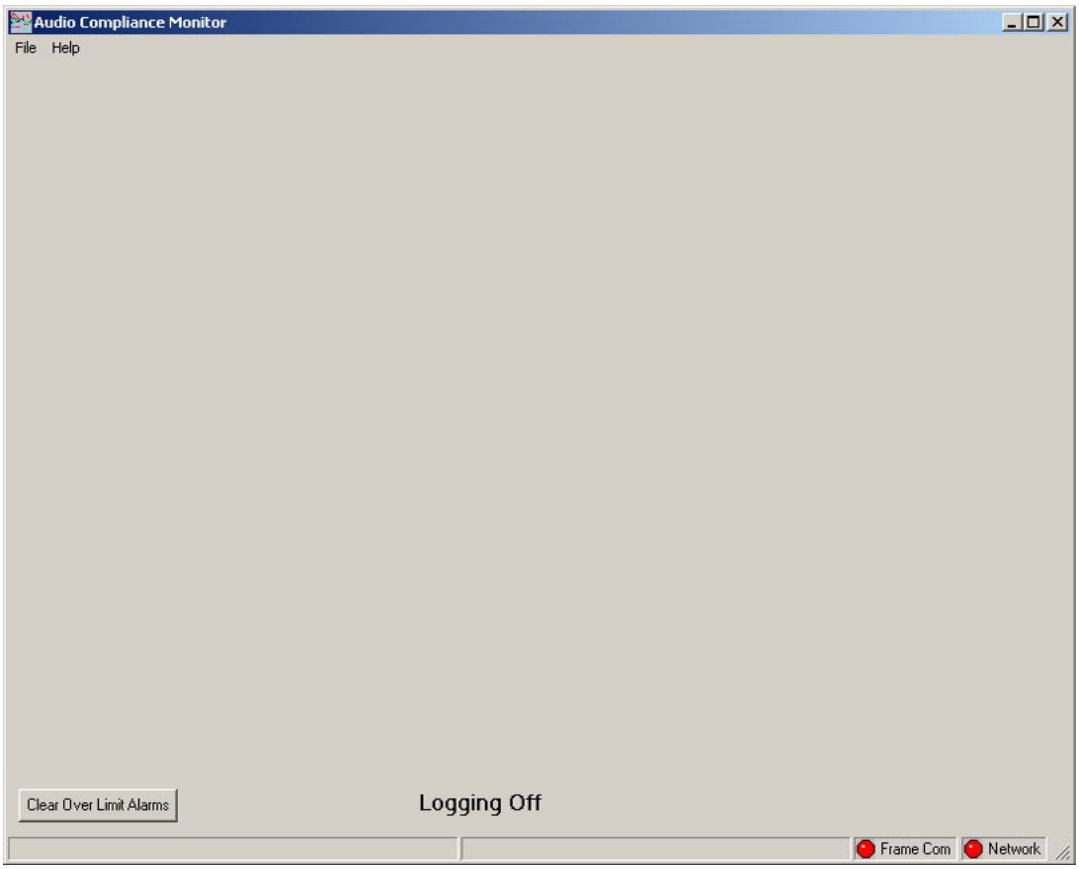
Supported Modules

The Audio Compliance and Monitoring Software option will operate on the following modules:

- 7555 HD/SD Video Processing Frame Synchronizer
- 7660 HD/SD Embedder, Disembedder and Data Inserter
- 9550 3G/HD/SD Video Processing Frame Synchronizer
- 9600 3G/HD/SD Embedder, Disembedder and Data Inserter

Configuring Audio Compliance and Monitoring Software

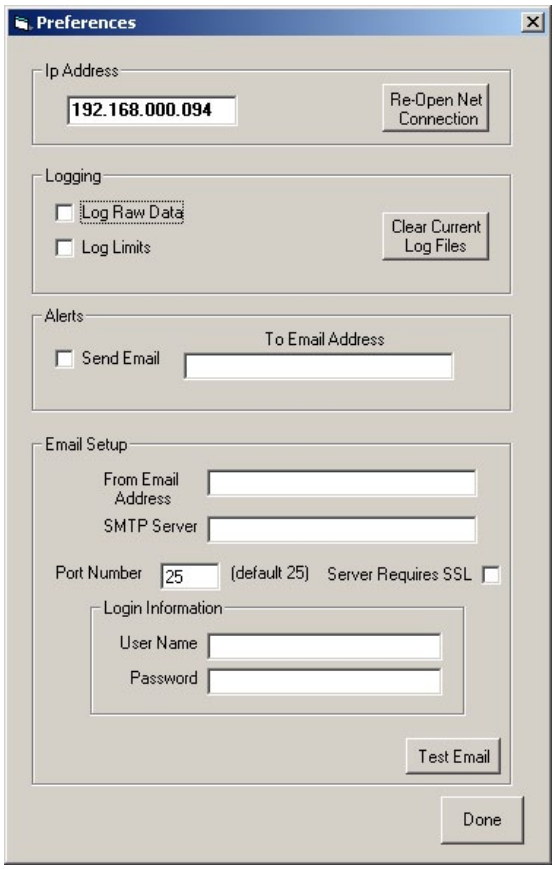
From the **Start** menu of your PC, launch the Audio Compliance Monitor software. The initial **Audio Compliance Monitor** window displays. If you have not yet configured the software, this window is largely blank. It will display charts after you have configured the software and assigned modules.



Initial view of the Audio Compliance Monitor window before configuring and assigning modules.

Connecting to your Network

1. From the **File** menu, select **Preference[s]**. The **Preference[s]** window displays.



Preferences window before configuring

2. In the **IP Address** field, enter the IP address of the target Avenue Frame that you want to monitor (for example, 192.168.000.094). Note that you can target any Avenue Frame on your network. As long as you have successfully connected with an Avenue Frame, all Avenue Frames on the network will be visible to Audio Compliance Monitor.

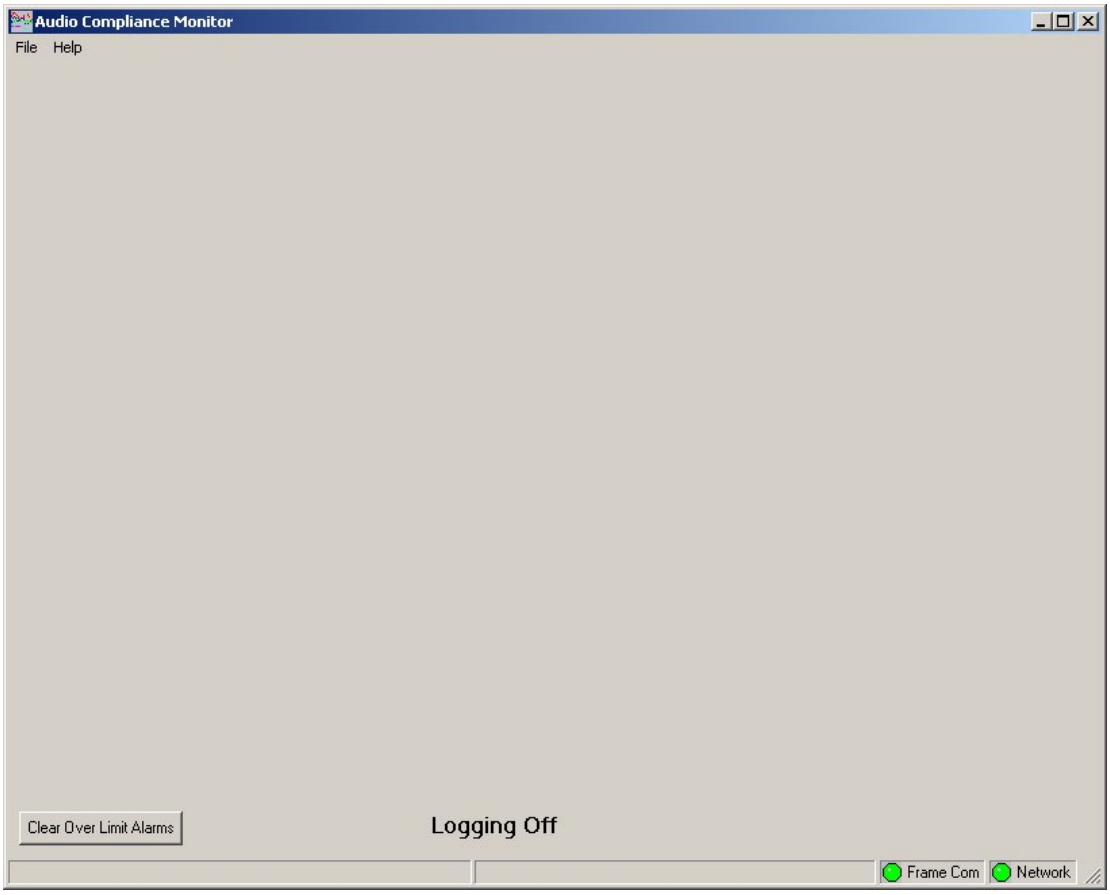
3. Click the **Re-Open Net Connection** button next to the **IP Address** field.

4. At the bottom of the **Preferences** window, click **Done**.

If you have successfully connected Audio Compliance Monitor to your network, the Frame Com and Network indicators in the lower right area will illuminate green in the still largely blank main **Audio Compliance Monitor** window.

These indicators will turn red if and when communication breaks with module. They will return to green when communication is restored. The software will automatically attempt to reconnect with the network if communication breaks.

If these circles remain red rather than green, double-check that you have the correct IP address for your network, and that there are not any network connectivity problems.



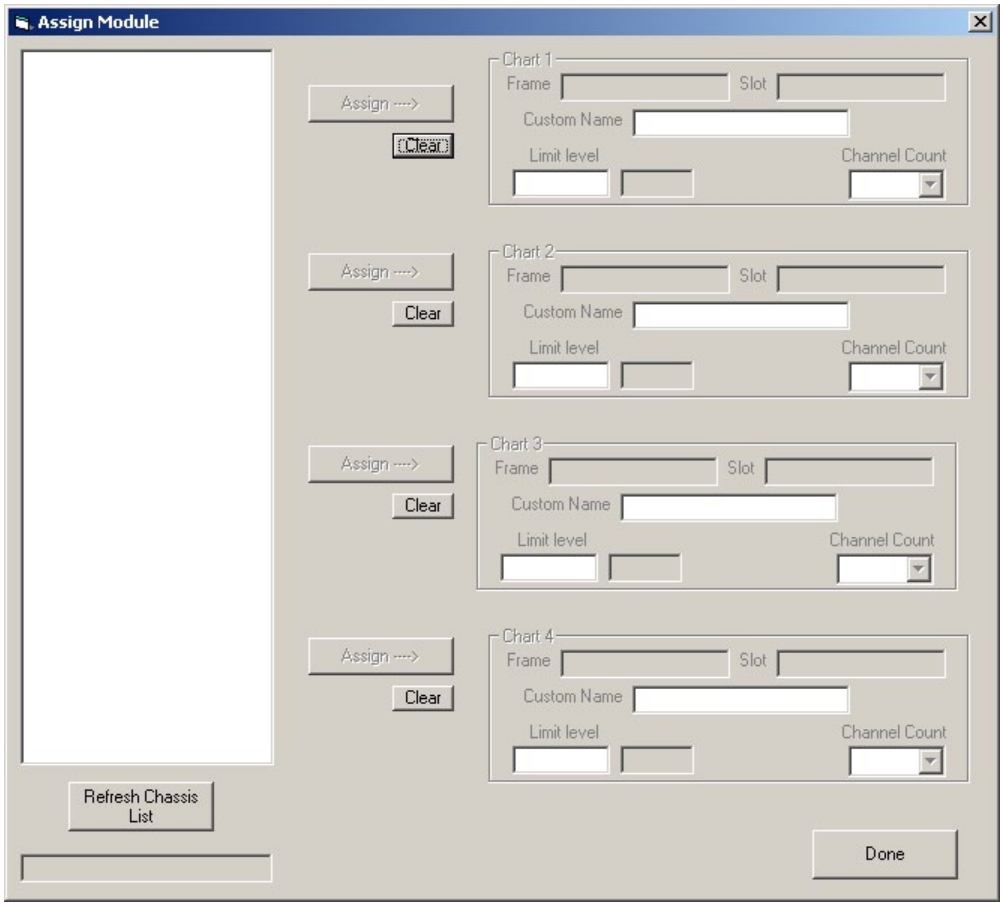
The Audio Compliance Monitor window after connecting successfully to the network, and before assigning modules.

Assigning Modules and Setting Audio Level Limits

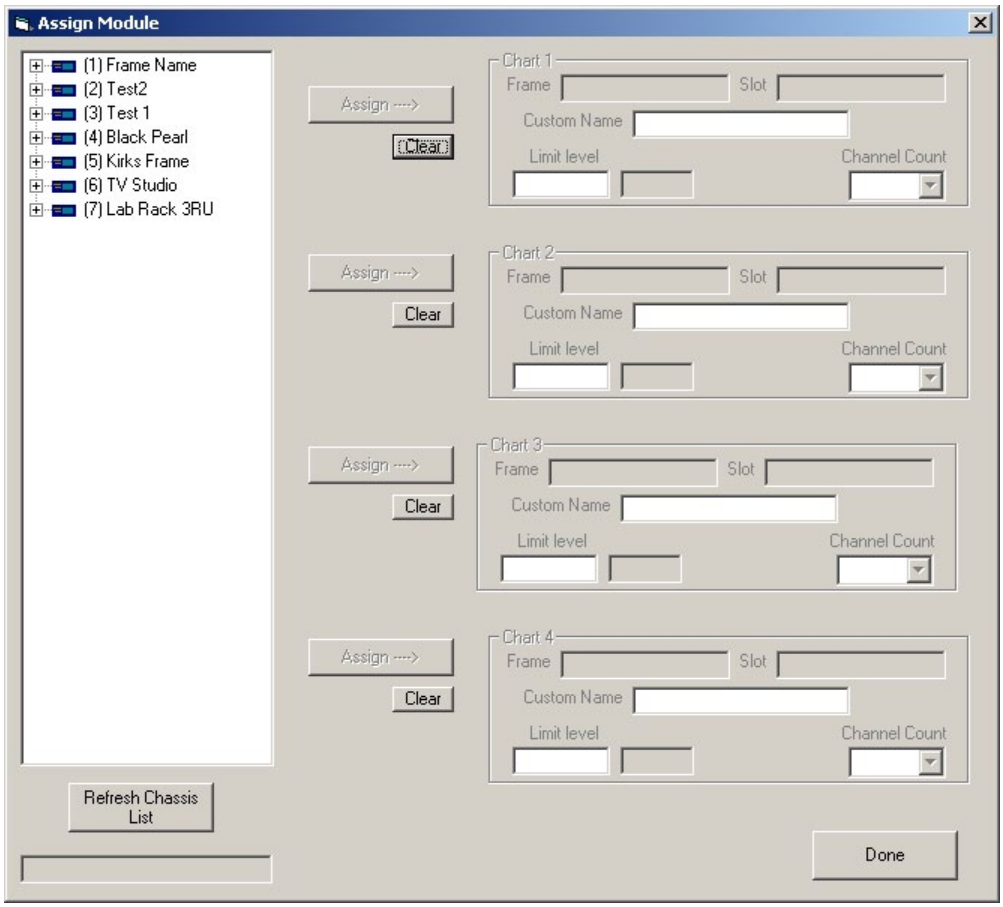
From the **Assign Module** window, you can assign up to four modules for monitoring. You can navigate among the frames on your network to assign the individual Avenue modules that you want to monitor. Only those modules that can be monitored by Audio Compliance Monitor will display under each frame name. Modules that do not have the functionality to allow for audio compliance monitoring will not be visible and cannot be selected or assigned.

To Assign a Module:

1. From the **File** menu, select **Assign Module**. The **Assign Module** window displays.



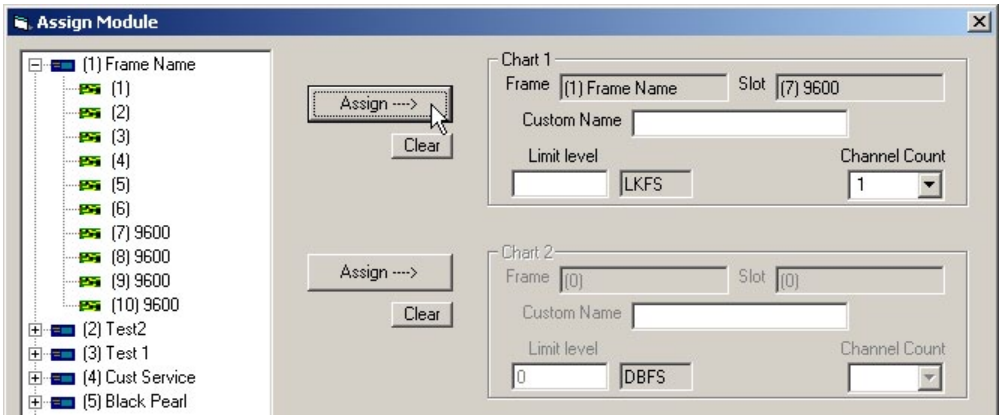
The initial view of the Assign Module window



The Assign Module window after refreshing the chassis list

2. In the lower left area of the window, click the **Refresh Chassis List** button. All of the Avenue Frames that are on your network will display in the left column of the **Assign Module** window.

3. From the left column of the **Assign Module** window, expand the Avenue Frame that you want to work with by clicking the [+] symbol next to the name of the frame. When expanded, each frame will show placeholders for the 10 slots in the frame. Those modules in the frame that are capable of being monitored by Audio Compliance Monitor will show their module number; for example, 9600. Empty slots, or slots containing modules that cannot be monitored, will show as empty.



Assigning an Avenue 9600 module to Chart 1

4. Select the module you want to assign, then click one of the four **Assign** buttons corresponding to the Chart you want (**Chart 1**, **Chart 2**, **Chart 3**, or **Chart 4**). The Frame and Slot fields will reflect your choice by automatically populating these fields with the Frame number, Name, the Slot number and module number.

5. In the **Custom Name** field, enter a descriptive name for the module.

6. In the **Limit level** field, enter a number, such as "-15," for example, to indicate the level that represents the audio limit that is acceptable for your broadcast purposes.

7. From the **Channel Count** drop-down menu, select the number of channels that you want to monitor per module (up to sixteen channels). Each channel is represented by a uniquely colored line in its corresponding chart.

8. After you have finished assigning modules for monitoring, click **Done** in the lower right area of the **Assign Module** window. The **Audio Compliance Monitor** window now displays charts according to your module assignments.

Reading the Charts

Each chart uses a red line to represent the limit that you specified in the **Limit Level** field. The limit can be unique for each chart. Note that the red line is flat and does not change (unless you change its configuration in the **Limit level** field). The remaining lines represent the module's audio channels (up to sixteen) and their audio level activity in real time. Each audio channel is represented by a uniquely colored line for each chart.

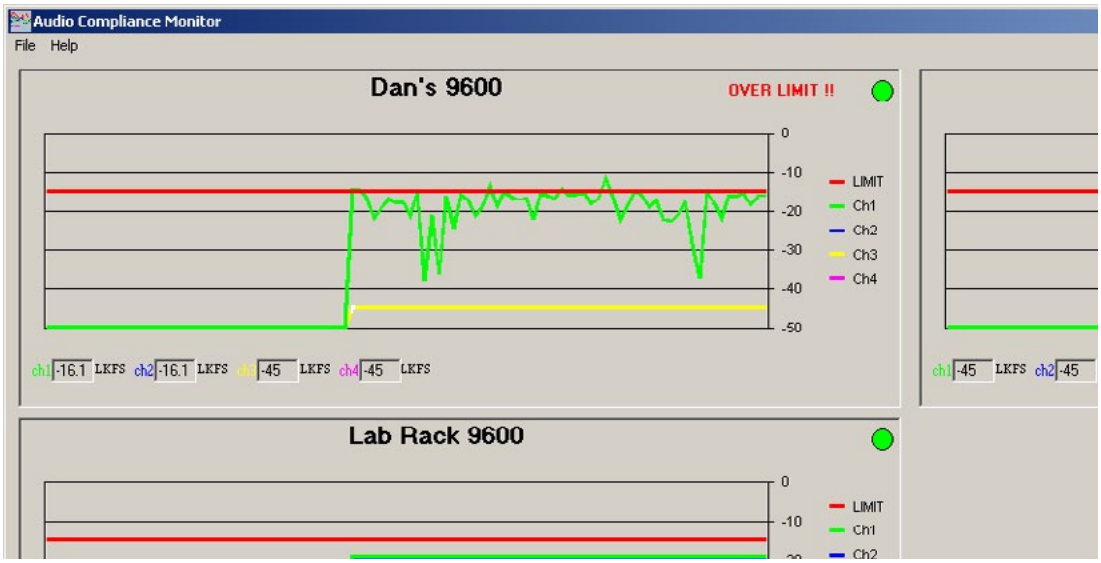
Resizing the Chart Window

You can reduce the size of the **Audio Compliance Monitor** window to show only one chart if you like, or stretch the window to show up to four charts. When you close the Audio Compliance and Monitoring software, the chart window will remember its size from the last time it was open when you re-launch.

The Audio Compliance Monitor window after assigning three modules for monitoring

Over Limit Alarm

When one of the channels hits a level that exceeds your specified limit, the over limit alarm displays in that module's chart, as shown here in red text:

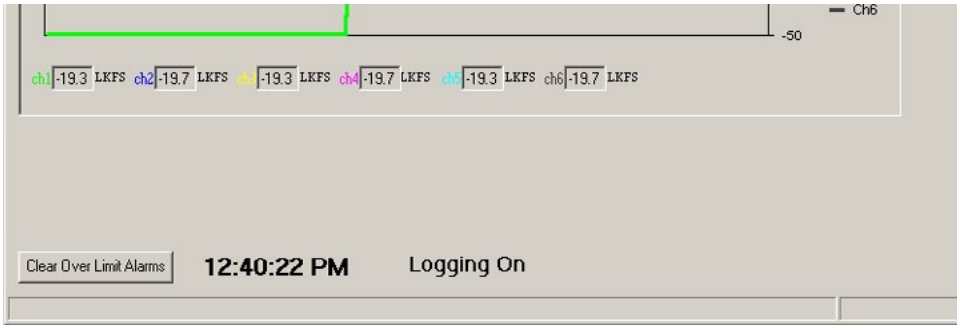


*An example of the **Over Limit Alarm** displaying in a module's chart*

If configured to do so with the **Log Limits** checkbox in the **Preferences** window, a log event will be recorded each time a channel level exceeds the limit.

Clearing the Over Limit Alarm

To clear the over limit alarm, click the **Clear Over Limit Alarms** button in the lower left area of the charts window. Any instances of the over limit alarm message will be cleared from the charts.

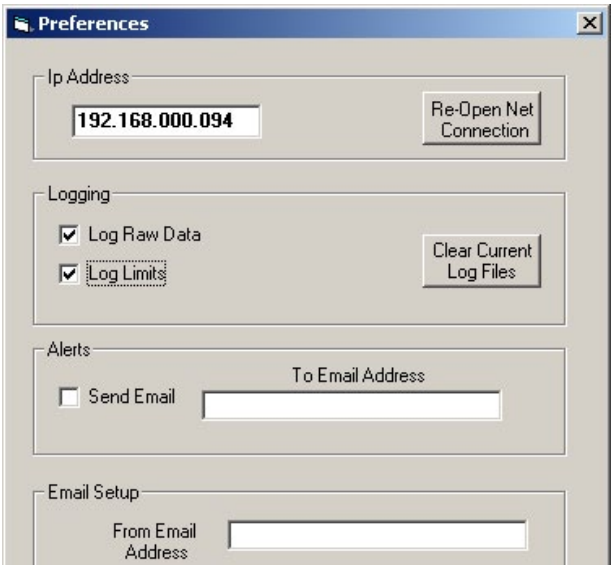


*The **Clear Over Limit Alarms** button in the lower left area of the charts window*

Logging

Note: The software uses your computer's system time when creating log entries.

Audio Compliance Monitor offers two logging options: (1) logging raw data, and (2) logging over limit events. You can use one or both of them.



The Log Raw Data checkbox and Log Over Limits checkbox

Logging Raw Data

Logging raw data means that the levels of all of the selected channels for all assigned modules are being continously recorded each second. When Log Raw Data is turned on, you will see the message "Logging On" in the lower left area of the charts window. When turned off, the message will be "Logging Off."

To Log Raw Data:

1. From the **File** menu, select **Preferences**. The **Preferences** window displays.
2. Under **Logging**, select the **Log Raw Data** checkbox.
3. Click **Done** to save your settings.

Logging Over Limit Events

You can log instances in which the audio levels exceed the defined limit for each assigned module.

To Log Over Limit Events:

1. From the **File** menu, select **Preferences**. The **Preferences** window displays.
2. Under **Logging**, select the **Log Limits** checkbox.
3. Click **Done** to save your settings.

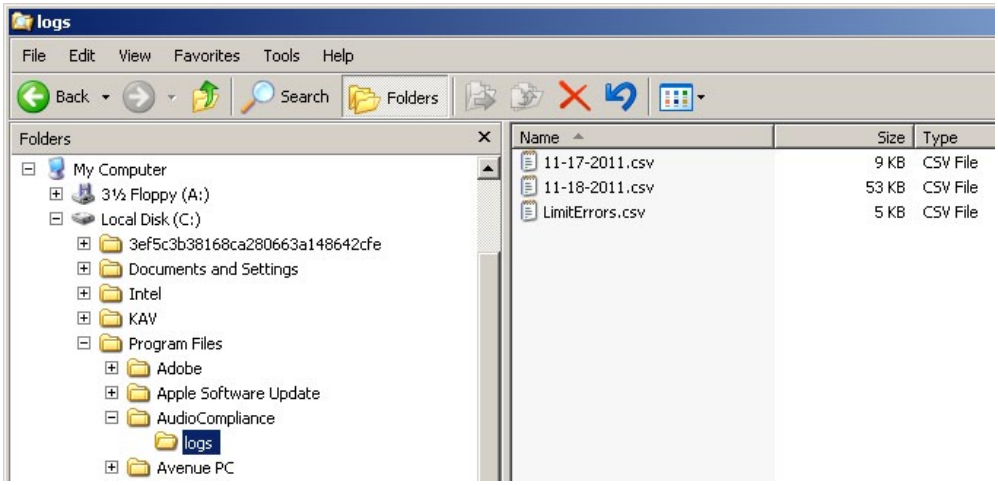
Working with Log Files

Use Microsoft Excel, OpenOffice, or any program that can read comma separated values to open the .csv log files. The application creates two types of log files; one for logging raw data, the other for logging over the limit events.

Accessing Log Files

The log files are stored in the following installation sub-directory:

C:\Program Files\AudioCompliance\logs



Windows Explorer showing the location of the log files: C:\Program Files\ AudioCompliance\logs

Raw Data Log Files

The log files for capturing raw data are named with the date (for example, "12-13-2011.csv"). The fields it captures are: Date, Time, and a numeric field for each channel being tracked per module. The software creates one raw data log file per day.

12-13-2011.csv - OpenOffice.org Calc

File Edit View Insert Format Tools Data Window Help

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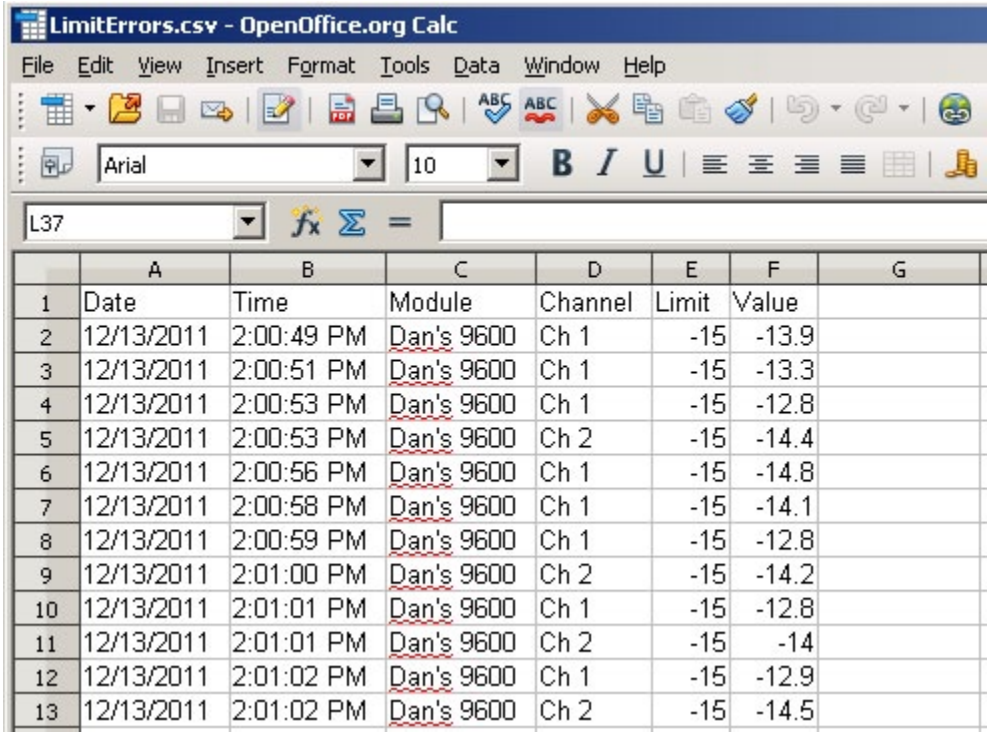
	A	B	C	D	E	F
1	raw Audio file samples					
2	Date	Time	Dan's 9600 Ch 1	Dan's 9600 Ch 2	Dan's 9600 Ch 3	Dan's 9600 Ch 4
3	12/13/2011	2:00:28 PM	-25.6	-27.5	-45	-45
4	12/13/2011	2:00:29 PM	-26.1	-27.7	-45	-45
5	12/13/2011	2:00:30 PM	-15.8	-17.6	-45	-45
6	12/13/2011	2:00:31 PM	-16.5	-18.5	-45	-45
7	12/13/2011	2:00:32 PM	-14.9	-16.7	-45	-45
8	12/13/2011	2:00:33 PM	-13.3	-15	-45	-45
9	12/13/2011	2:00:34 PM	-14.2	-16	-45	-45
10	12/13/2011	2:00:35 PM	-17.5	-19.3	-45	-45
11	12/13/2011	2:00:36 PM	-13.1	-14.9	-45	-45
12	12/13/2011	2:00:37 PM	-13.3	-15.3	-45	-45
13	12/13/2011	2:00:38 PM	-12.8	-14.5	-45	-45

Example of a raw data log file

Over the Limit Events Log File

The log file for capturing over the limit events is named "LimitErrors.csv." The fields that it captures are: Date, Time, Module, Channel, Limit, Value. This file is cumulative. It will add data for each day that the software is running.



	A	B	C	D	E	F	G
1	Date	Time	Module	Channel	Limit	Value	
2	12/13/2011	2:00:49 PM	Dan's 9600	Ch 1	-15	-13.9	
3	12/13/2011	2:00:51 PM	Dan's 9600	Ch 1	-15	-13.3	
4	12/13/2011	2:00:53 PM	Dan's 9600	Ch 1	-15	-12.8	
5	12/13/2011	2:00:53 PM	Dan's 9600	Ch 2	-15	-14.4	
6	12/13/2011	2:00:56 PM	Dan's 9600	Ch 1	-15	-14.8	
7	12/13/2011	2:00:58 PM	Dan's 9600	Ch 1	-15	-14.1	
8	12/13/2011	2:00:59 PM	Dan's 9600	Ch 1	-15	-12.8	
9	12/13/2011	2:01:00 PM	Dan's 9600	Ch 2	-15	-14.2	
10	12/13/2011	2:01:01 PM	Dan's 9600	Ch 1	-15	-12.8	
11	12/13/2011	2:01:01 PM	Dan's 9600	Ch 2	-15	-14	
12	12/13/2011	2:01:02 PM	Dan's 9600	Ch 1	-15	-12.9	
13	12/13/2011	2:01:02 PM	Dan's 9600	Ch 2	-15	-14.5	

Example of an over the limit events log file

Archiving Raw Data Log Files

For archiving the raw data log files, you can copy or move the ones that are not currently being used by the application to an archiving location of your choice. The raw data log file for the current day should not be accessed while the software is running, because it will cause a logging error.

Archiving Over the Limit Log Files

Unlike the raw data log files, the over the limit log file, always named "LimitErrors.csv," is cumulative. This means that this log file will accumulate data day after day, and could become quite large. When archiving this file, you can copy or move the file to the archiving location of your choice while the application is not running. Afterwards, you can either delete this file or clear it using the **Clear Current Log Files** button.

Clearing Log Files

Note also the option to clear the current log files by clicking the **Clear Current Log Files** button. This clears both the current day's raw data log file as well as the LimitErrors log file. Make sure to archive log files before clearing the active log files to avoid losing data.

Logging Errors

If you encounter a logging error, quit the application, delete the working log files and restart. Opening a log file while the application is running will cause an error.

Alerts

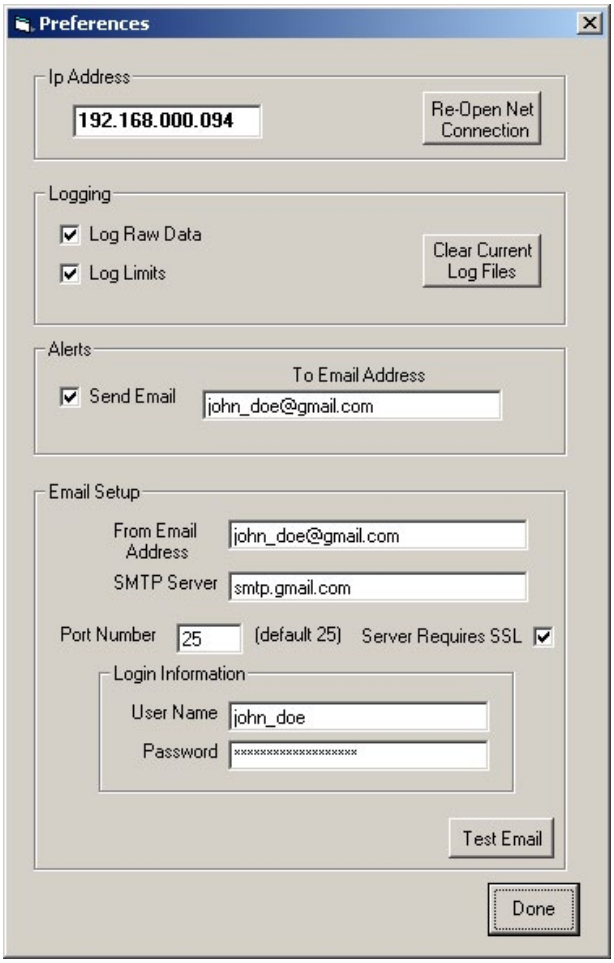
You can configure the software to send email alerts or text messages when an over the limit event occurs. This applies only if you have selected the **Log Limits** checkbox.

Configuring Email and Text Alerts

To enable email alerts, configure the outgoing mail parameters to match those of your email account. See the example below. The default Port Number is 25. If you want to use SSL to require a user name and password, select the **Server Requires SSL** checkbox.

Test Email

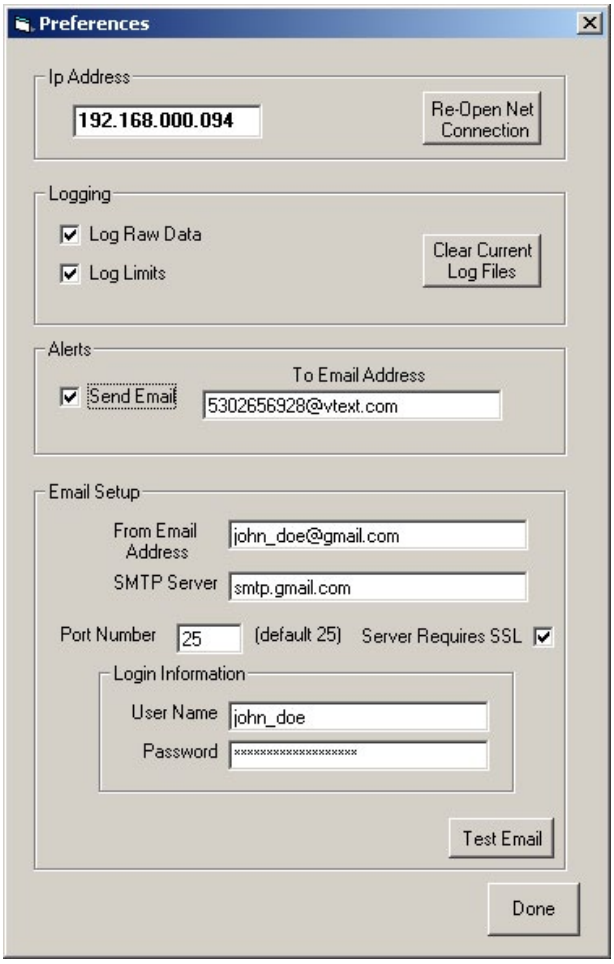
After you have entered your Email Setup configuration parameters, click the **Test Email** button. If successful, the message "Email sent" displays in red text. Otherwise, the message "Problem sending" displays.



Example of an email alert configuration

Text Messages

You can send text messages to a cell phone if the email address is set properly. Each cell phone carrier has a unique address format. Check with the appropriate cell phone carrier for the phone number to which you want to send a text.



Example of a text message alert configuration

Warranty

This product is covered by a five year limited warranty. If you require service (under warranty or not), please contact Ensemble Designs and ask for customer service. This will allow the service technician to provide any other suggestions for identifying the problem and recommend possible solutions.

Contact Us

You are welcome to contact Ensemble Designs at the following address:

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