XGA VIEWER

OPERATIONS MANUAL

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C.P.: 76120
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Introduction
The XGA Viewer application will allow you to download, view, and report on the data logged by your Super Systems gas analyzer unit(s).

Standard Usage
The following illustrates the typical usage of the application.

Step 1: Gather data with your gas analyzer unit
In most cases this is as simple as having your analyzer unit turned on.   Our instruments are always logging input data as long as they are powered up.

Step 2: Download the data
Downloading the data consists of properly connecting the PC or Laptop containing the XGA Viewer software to the analyzer unit, and pressing the "Download Data" button on the application interface.

Step 3: Review and report on the data
Once the data has been downloaded the analyzer unit may be disconnected as all data is stored locally on the PC.

More details on how to perform these tasks are provided later in this manual.

Compatible Products
The application will work with the following SSi products:
- MGA6000
- MGA6010
- PGA3500
- PGA3510

Prerequisites
For XGA Viewer to be installed and run properly, several prerequisites must be met. These include the following:
- Microsoft .NET Framework 2.0 (or higher).
- SQL Compact 3.5.
- Mobile Device Center (Windows Vista, 7, & 8) or ActiveSync (Windows XP)

These prerequisites will be installed automatically when the **"setup.exe"** installation program is run from the installation folder or disc.

Installation
Note: Before beginning the installation, the person performing the installation must have administrative rights on the local computer, or the installation will not be successful. Double-click on the **"setup.exe"** file from the setup CD. This will begin the installation wizard for the software*.* The first screen displayed is an introductory screen. Click on the **Cancel** button to cancel the installation of the XGA Viewer. The cancellation must be confirmed. Click on the **Next >** button to continue with the installation.

If prerequisites must be installed, the **setup.exe** program will install them.
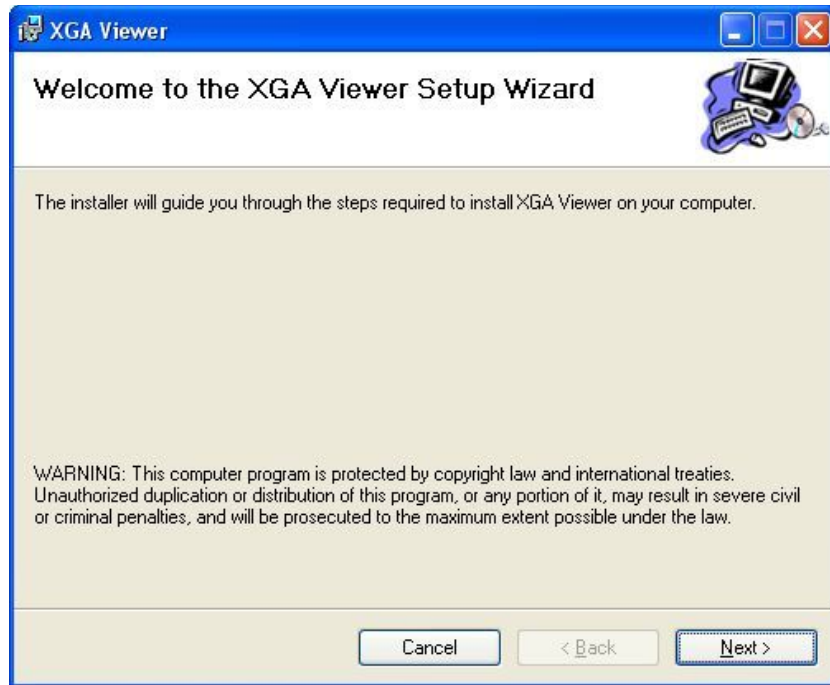
Figure 1 – First installation screen

The second screen will allow the user to select the location for the installation of the software. The default path is "C:\SSi\XGAViewer\". To change this path, the user can either type in the new path, or click on the **Browse...** button and select the new path from the dialog box that is displayed. Clicking on the **Disk Cost...** button will display all of the available hard drives – network and local – and the amount of disk space available on each drive. This will allow the user to determine if there is enough disk space available to install the software to another location. The two options near the bottom right – "Everyone" and "Just Me" will allow the user the option of installing the software for the user that is currently logged on to the target computer ("Just Me") or to install the software so that anyone logged on to the target computer can access the software ("Everyone"). The **< Back** button will display the first screen again, and the **Next >** button will continue with the installation.
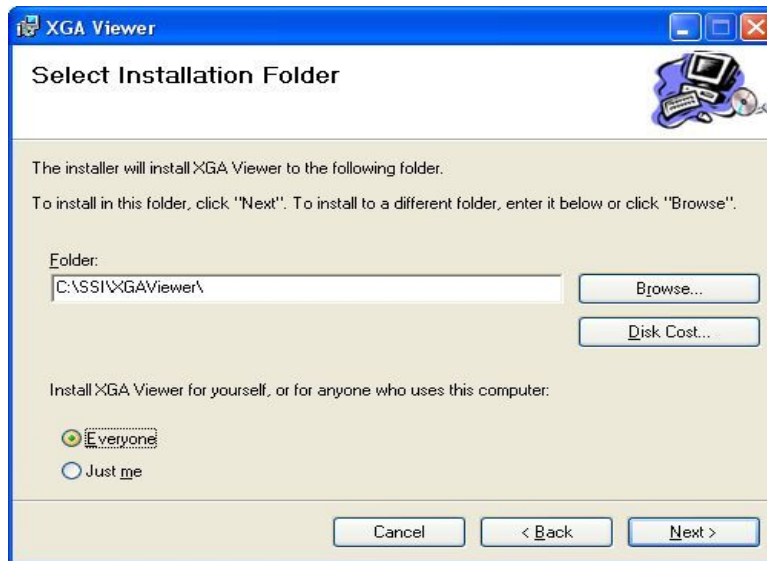
Figure 2 – Installation selection screen

The third screen will allow the user to begin the installation. Clicking on the **< Back** button will display the second screen, and clicking on the **Next >** button will begin the installation of the XGA Viewer software.
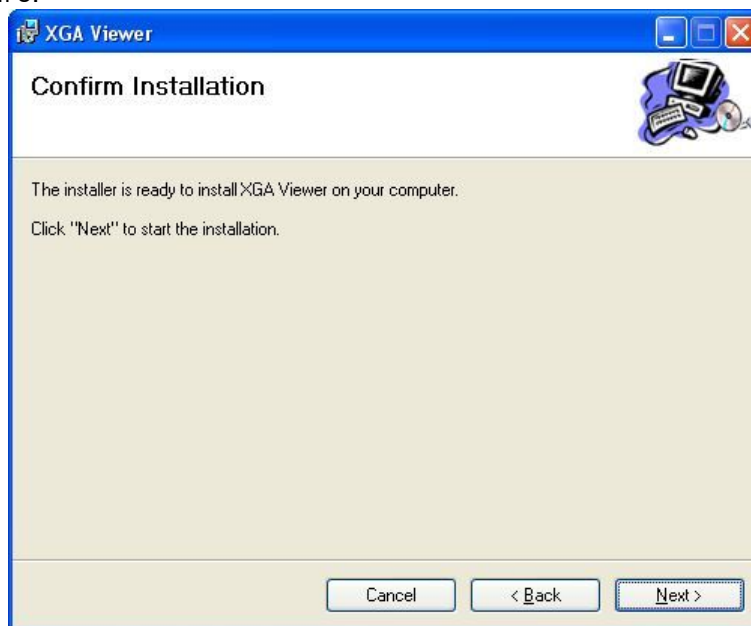
Figure 3 – Installation confirmation screen

The next screen will display the progress of the installation. Once the installation has completed, the final screen will be displayed.
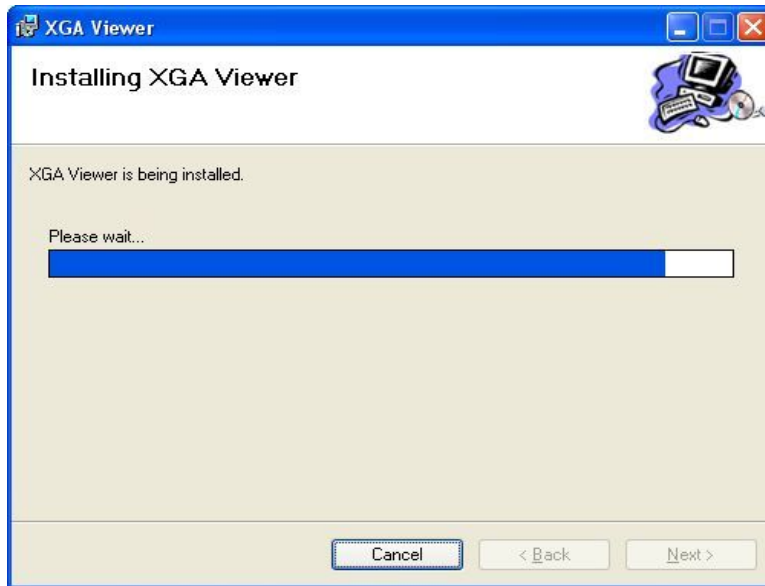
Figure 4 - Installation progress screen

Once the final screen is displayed, the XGA Viewer software has been installed and can be run at any time. Click on the **Close** button to close out the installation screen.
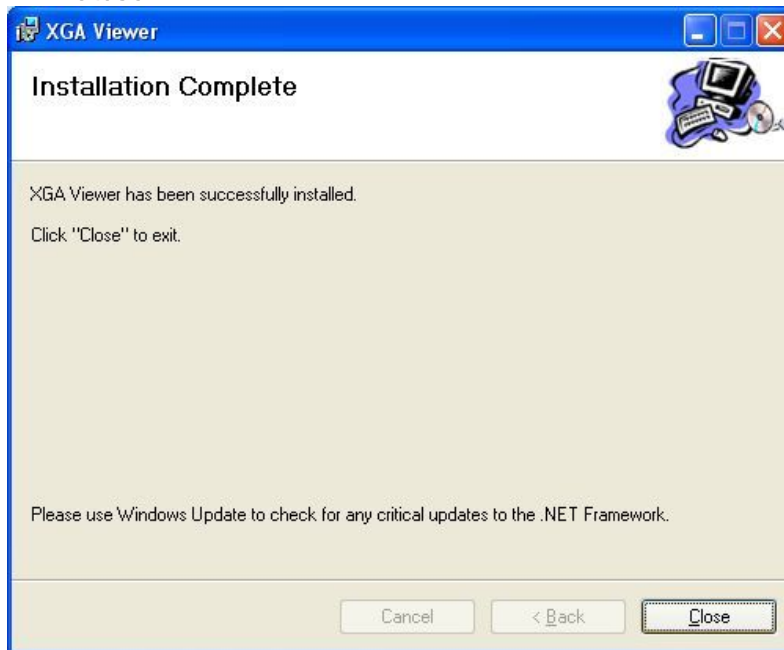
Figure 5 - Installation completion screen

Connecting the Computer to the Gas Analyzer (MGA or PGA)

In order to be able to communicate with your analyzer, the computer where the XGA software is installed must be connected to it via Ethernet with compatible TCP/IP settings.   There are two common configurations for accomplishing this: a USB connection, a direct connection with a crossover cable, and plugging both the analyzer and the computer into a LAN.   The crossover cable and LAN methods require compatible TCP/IP settings.

It is likely that some configuration to either the PC or the analyzer will be needed before a connection can be established. If you are having troubles establishing a connection with a crossover cable or using a LAN after reading the instructions for your configuration, see the Troubleshooting Ethernet Connection Problems section of this manual.

USB Connection
The gas analyzer can be connected directly to a local computer using a USB cable. Windows uses special software to transfer files and information between the data logger and the local computer when connected via USB. If you are using Windows XP, this software is called ActiveSync. If you are using Windows Vista, Windows 7, or Windows 8, the software is called Mobile Device Center. If the required software was not installed prior to installing XGA Viewer, the XGA Viewer setup utility (run from setup.exe) would have installed the required software.

To connect the gas analyzer to a local computer with USB, first make sure that the instrument is turned on. Next, identify the USB connection point used to connect the data logger to the local computer (Figure 6). To connect the data logger to the computer, you will need a USB cable with cable ends that look like those in Figure 7.
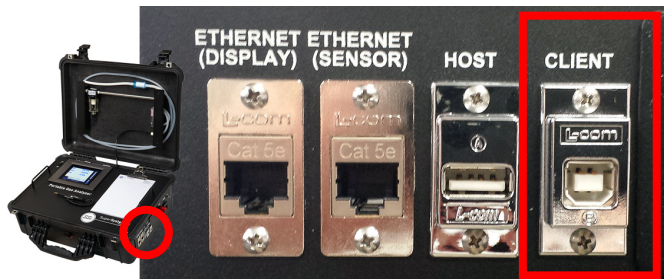
Figure 6 – Location of USB connection point for connecting instrument to local computer

Figure 7 – USB connection types Standard-A (left), Standard-B (right)

Connect the instrument to the local computer via USB. If you are connecting the instrument to the computer via USB for the first time, you may see a message on the screen saying that Windows is installing drivers, especially on Windows Vista, Windows 7, and Windows 8. Windows may also ask you if you want to set up the device. If this happens, allow Windows to install the drivers, but close the device setup window from ActiveSync or Mobile Device Center.

NOTE: If there is any question as to whether the computer is detecting the data logger and connecting to it properly, check the "My Computer" window in Windows XP or the "Computer" window in Windows Vista, 7, & 8. The data logger should appear in this window with a mobile or portable device icon, as shown in Figure 8. Other devices, such as smartphones, may also appear as part of the same list.

Figure 8 - Device Icons in Windows XP (left) and Windows Vista, 7, or 8 (right)

Once the instrument is connected to the computer via USB, you may start XGA Viewer.

Direct Connection to Computer Using Ethernet Crossover Cable
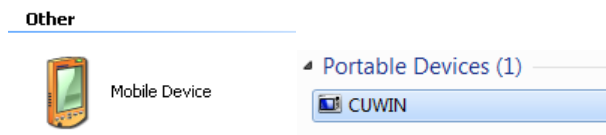With this configuration the laptop or PC is connected directly to the analyzer with an Ethernet crossover cable.
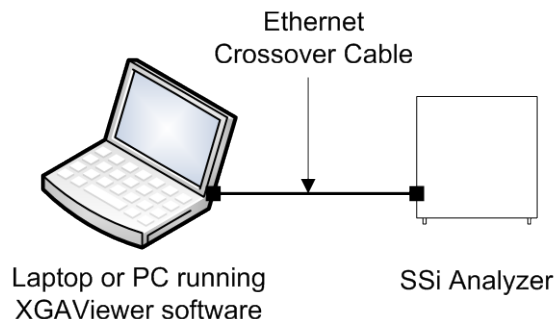
Figure 9 - Direct Connection with Ethernet Crossover Cable

Figure 10 - Location of Ethernet port for cable connection

NOTE: Some PGA units will have only one Ethernet port. If only one is available, use that one.

To get this configuration working correctly you must set the TCP/IP settings of both the analyzer and the PC to be compatible.   Below are our recommended settings for this TCP/IP v4:
On the analyzer:
- IP Address: 192.168.1.205
- Net Mask: 255.255.255.0
- Gateway: 192.168.1.1

Consult the manual for your analyzer for instructions on how to change these values. Also note that the last number in the IP address can be different and does not need to be 205 – it just has to be different than the computer.   Also if you own more than one SSi analyzer, you may want to configure each one to have a different IP Address by changing the last number (again, using the TCP/IP v4 protocol as the example).
On the PC:
- IP Address: 192.168.1.100
- Net Mask: 255.255.255.0
- Gateway: 192.168.1.1

To set the IP address on your PC or laptop:
- Open the "Control Panel"
- Open "Network Connections"

- Click "Local Area Connection" and choose "Properties"
- Select "Internet Protocol (TCP/IP)" in the list box and choose "Properties".

On this screen you will need to choose the "Use the following IP address" option and enter the values listed above.   Be sure to confirm and close all dialogs after making your changes.

Ethernet Network Connection
Another common configuration is to have the PC/laptop connected to the same local area network as the analyzer.

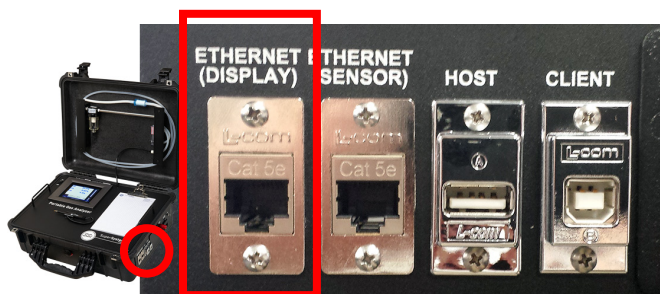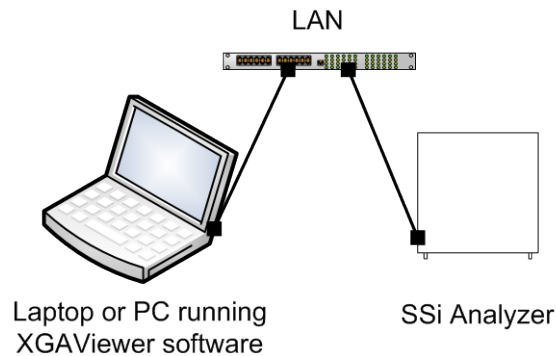Figure 11 – Ethernet network connection
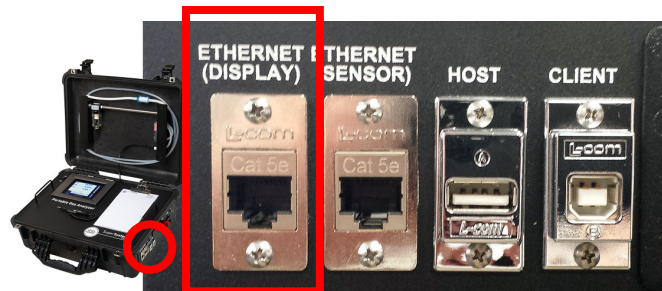
Figure 12 – Location of Ethernet port for cable connection

NOTE: Some PGA units will have only one Ethernet port. If only one is available, use that one.

To get this configuration working correctly you must set the TCP/IP settings of the analyzer to be compatible with your network.   Your PC should already be configured correctly.
Ask your IT department or network administrator for appropriate IP Address / Net Mask / Gateway settings.

Starting the Software

> **IMPORTANT!**
>
> Mobile Device Center/ActiveSync, Microsoft .NET Framework 2.0 or higher, and SQL Compact 3.5 must be installed before XGA Viewer can be run. The **setup.exe** program that installs the software will automatically install Mobile Device Center/ActiveSync, Microsoft .NET Framework 2.0 or higher, and SQL Compact 3.5 if needed. See the Installation section for more information.

Note: The XGA Viewer software cannot be run without at least one PGA or MGA set up. If the software has never been run before, The XGA Viewer software will display the *Configure Analyzers* screen (see the menu section Options Button→ Instruments Setup below for information on how to set up an instrument through the software). If no instruments are set up and the user closes down the *Configure Analyzers* screen, then the XGA Viewer software will shut down. When the software is started back up again, the user will again be presented with the *Configure Analyzers* screen. Once an instrument has been added, the *Configure Analyzers* screen will no longer be displayed at start up.

XGA Viewer
When the SSi XGA Viewer software is first started, the screen that will be displayed will be the Main screen. *Note: When the SSi XGA Viewer software is run for the very first time, the user will need to set up an instrument either as a PGA or an MGA before the Main screen will be displayed. The software cannot run without at least one instrument set up. See the section* Instruments Setup *under the* Options Button *section for more instructions on how to set up or modify an instrument*. Once an instrument is set up and selected from the **Instrument** drop-down box, the user can begin to download the initial data from the device by clicking on the **Download Data** button. *Note: If there is a lot of data to download, the download process may take a few minutes to complete*. See the section Download Data Button for more information on downloading data from a device.

Figure 13 shows the XGA Viewer chart screen, where most of the functions of the XGA Viewer program can be found. Note the **Instrument** drop-down box in the top right corner of the screen and the green circle in that box. A green circle indicates an ActiveSync or Mobile Device Center connection, while a blue circle indicates an Ethernet RPC connection.
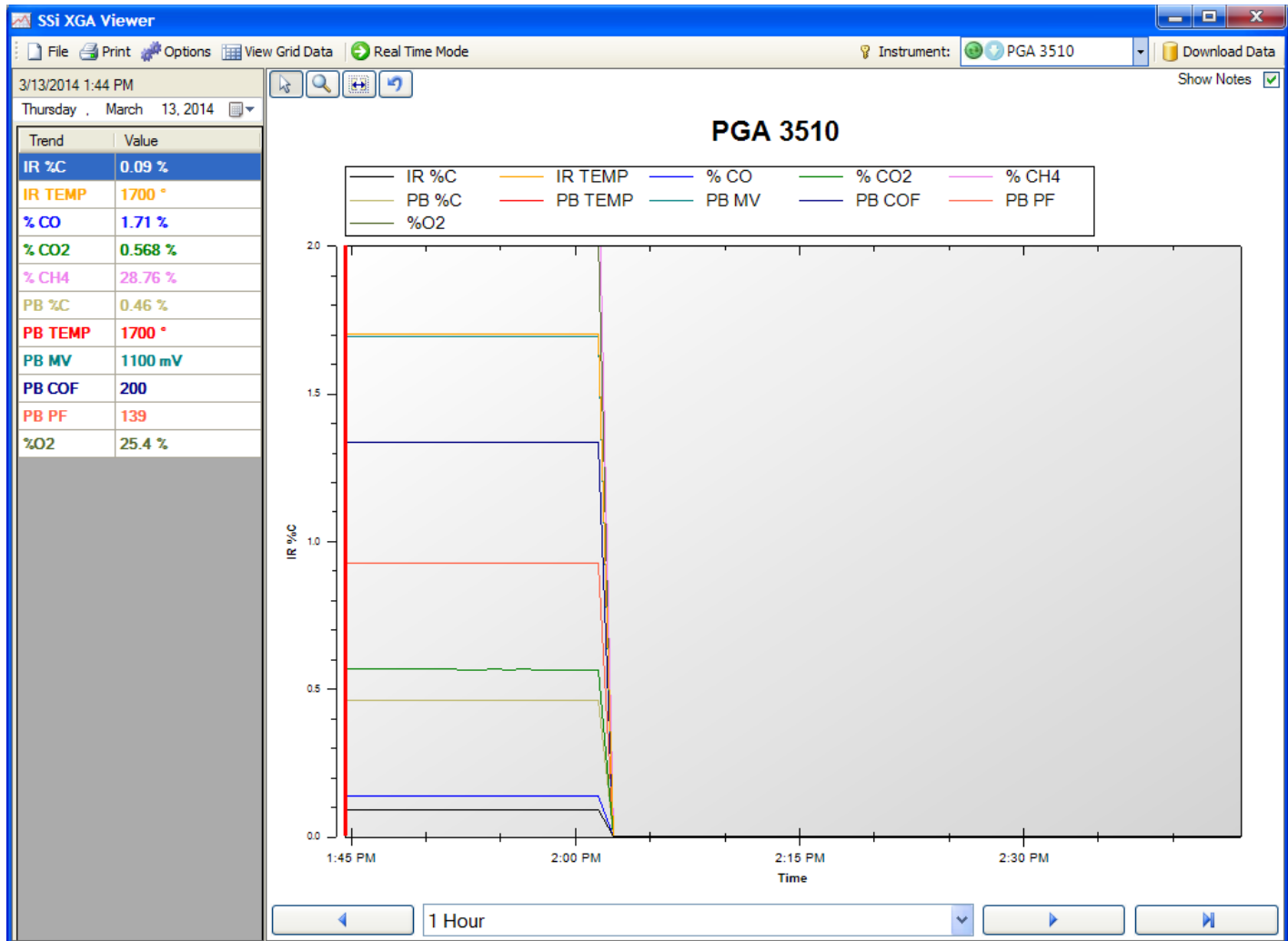
Figure 13 - XGA Viewer chart screen

<u>File Button</u>

Save Graph Image As
This menu option will allow the user to save an image of the graph. Clicking on this menu option will display a common Windows Save As dialog. The user will have to provide a name and a location for the image, as well as select the type of image to save the graph as. There are five options for image types: .png, .gif, .jpg, .tif, or .bmp.

Check for Software Updates
This menu option will check for any available updates to the SSi XGA Viewer software over the Internet. *Note: An Internet connection must be available before the* Check For Software Updates *menu option can be used*. If there is an update available, a message will be displayed to the user asking for permission to install the update.

Figure 14 - "Update is available" box

Clicking on the **No** button will not update the software. Clicking on the **Yes** button will update the software. Note: It is important to save any changes before updating the software. When the update begins, the SSi XGA Viewer software will shut down and an update screen will be displayed, detailing the progress of the update. Once the update is complete, the SSi XGA Viewer software will restart.

Figure 15 - Upgrade progress box

If there is no update available, or if there is no Internet connection, the SSi XGA Viewer software will display a message.

Figure 16 - "No updates are available" box

About
Selecting this option will bring up details on the version number and revision history of the software.
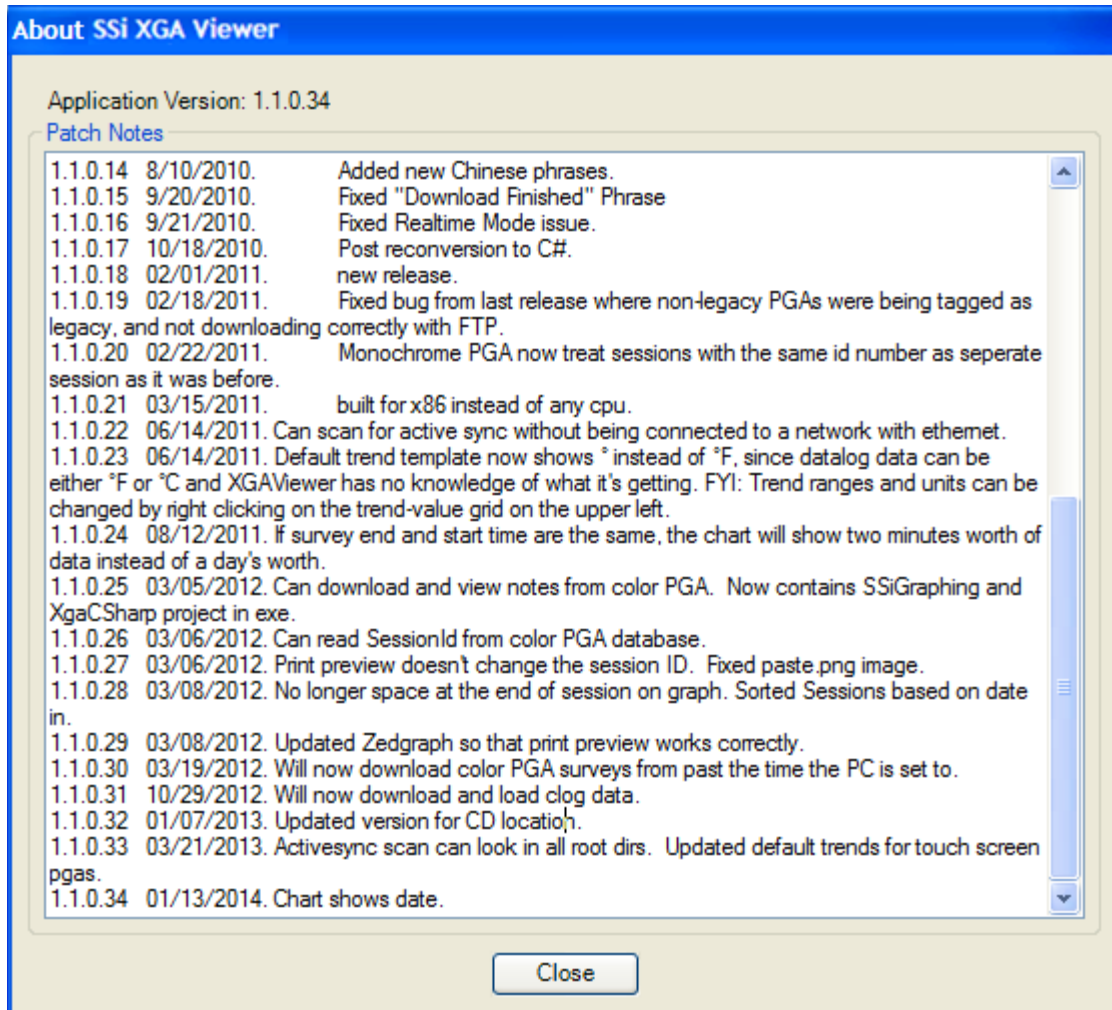
Figure 17 – "About" window

Exit

This menu option will exit the SSi XGA Viewer software. **It is important to save any changes before shutting the software down.**

Print Button

Print Chart

This Menu option will allow the user to print out the selected chart to a local printer or a printer on a network.

Note: There must be at least one printer setup up on the computer running the SSi XGA Viewer software in order to be able to print a chart.

Print Preview Chart

This menu option will allow the user to see a preview of the chart before actually printing the chart out.

If there is more than one page to the report, the user can view each page by changing the "Page" number in the top right of the screen. The printer button - 🖨 - will print the to the last printer used from the SSi XGA Viewer software. If nothing has been printed from the software, the graph will print to the default printer set up on the local computer.
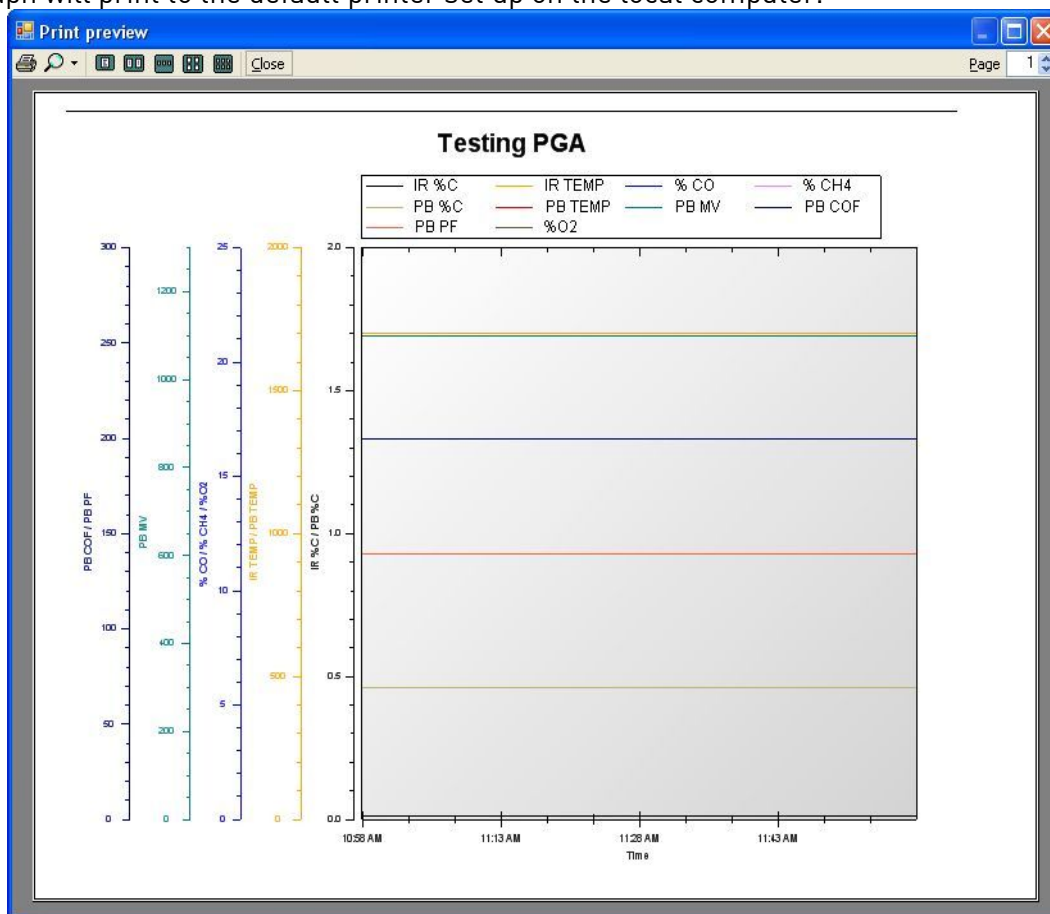
Figure 18 - Print Preview window

Print Notes
Selecting this menu option will bring up a Print dialog box from which you can print all of the notes *currently displayed* on the XGA Viewer trend chart.

Print Preview Notes
This option will bring up a window to preview the printout session notes that will be printed when **Print Notes** is selected.

Options Button

Instruments Setup
This menu option will allow the user to set up a PGA or MGA instrument for the SSi XGA Viewer software. Clicking on this menu option will display the *Configure Analyzers* screen, from which the user can add, modify, or delete an instrument.

Figure 19 – Configure Analyzers window

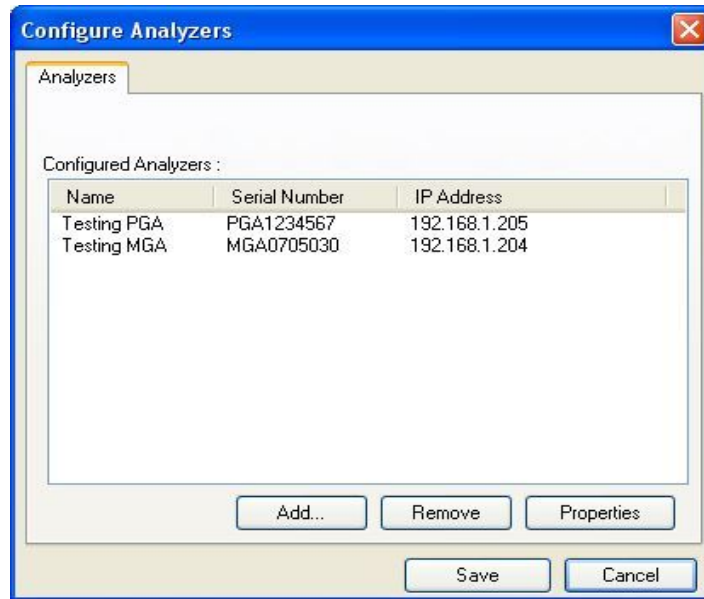This screen will display all of the instruments that have been set up through the SSi XGA Viewer software. The instrument's Name, Serial Number, and IP Address will be displayed in the "Configured Analyzers" area.

Add An Instrument
Click on the **Add** button to add an instrument. This will display the *Add New Instrument* screen.

Figure 20 – Add New Instrument window

The instrument setup contains four fields:
- Instrument Name – This is the name for the instrument. This name will be the referenced name for the instrument throughout the SSi XGA Viewer software.
- Serial Number – This is the serial number from the instrument. The serial number can be found on the *About/Sign On* screen on both the PGA and the MGA (Menu Option 10).
- IP Address – This will be the IP address for the instrument. The IP address can be found on the *Set IP Address* screen on both the PGA and the MGA (Menu Option 26).
- Model – This is the model type of the instrument. The model can be either **PGA** or **MGA**.
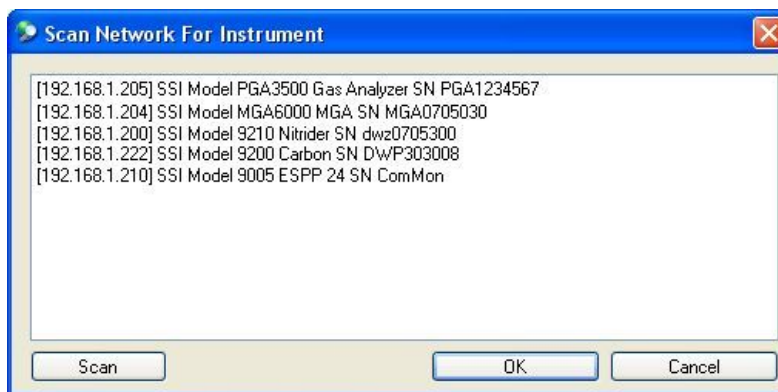
Figure 21 – Scan window

If all of the fields are known, the user can manually enter the information in. Note: Data from the instrument is stored on the local computer by Serial Number, so it is **very** important that the serial number entered is correct.   However, the **Scan** link will scan the available network and will display any SSi instrument located on that network.

When the screen is first displayed, it will automatically begin a scan of the network. To manually begin a scan of the network, click on the **Scan** button. *Note: The user will be unable to make any changes to the software while a scan is in progress*. A typical scan will only take a few seconds. *Note: If there are any other SSi instruments located on the network being scanned, such as a 9200 controller, these instruments will be displayed as well*. Select the desired instrument by clicking on that instrument (the selected instrument will be highlighted in blue) and click on the **OK** button. The fields from the *Add New Instrument* screen will be populated with the appropriate information. The Instrument name will be filled in unless the user has inserted some text already. This name can be changed if desired. Once all four fields are populated with the appropriate data, the user can click on the **OK** button to add the instrument, or the **Cancel** button to cancel the add process. The "Configured Analyzers" area will be re-populated to reflect the changes.

Remove An Instrument
To remove an instrument from the SSi XGA Viewer software's setup, select the desired instrument from the "Configured Analyzers" list and click on the **Remove** button. This will delete the selected instrument from the software's setup. *Note: Removing an instrument will not delete the actual logged data from the SSi XGA Viewer's installation folder*.

Modify An Instrument
To modify an instrument in the SSi XGA Viewer software's setup, select the desired instrument from the list and click on the **Properties** button. This will display the *Properties* screen, which is identical to the *Add New Instrument* screen in both form and function. Modify the desired information and click on the **Save** button to save the information, or the **Cancel** button to cancel the modification.

Once all of the necessary instruments have been added, deleted, or modified, click on the **Save** button to save these changes, or click on the **Cancel** button to cancel all of the changes.

Data Backup

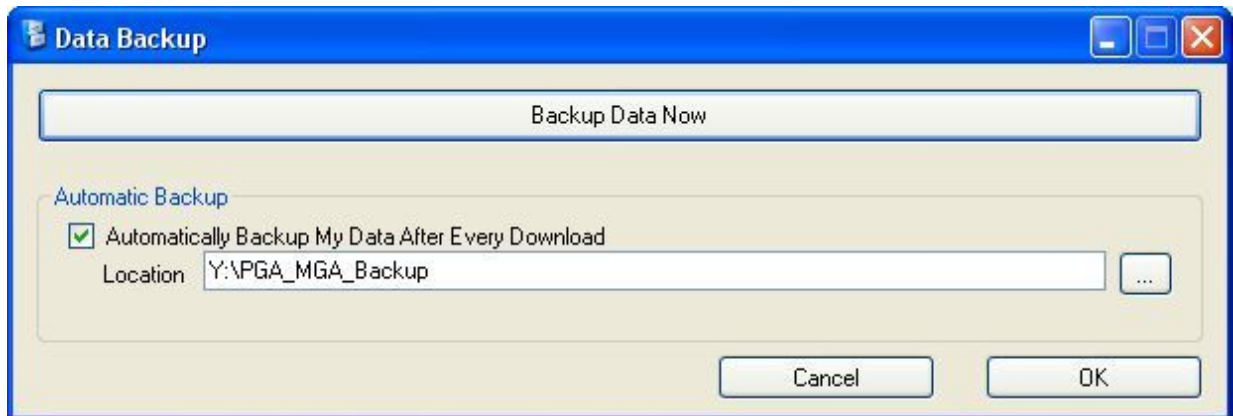Figure 22 – "Browser For Folder" window for Data Backup

Figure 23 – "Data Backup" options

This menu option will allow the user to back up the logged data from any instruments that have been set up through the SSi XGA Viewer software to a central network location. Clicking on this menu option will display the *Data Backup* screen, which will allow the user to set the backup options for the logged data.

The **Backup Data Now** button acts as a run-once backup, which will back up all of the logged data to a specified location only once. Once this button is clicked, the user will have to specify the location for the backup of the logged data.

The user can select an existing location for the backup, or the user can create a new folder in a specified location for the backup. Select the desired folder and click on the **OK** button to start the backup process, or click on the **Cancel** button to cancel the backup. Once the **OK** button is clicked, the backup process will begin.

The "Automatic Backup" area will allow the user to set up the SSi XGA Viewer software to automatically backup the logged data whenever the logged data is downloaded. Checking the "Automatically Backup My Data After Every Download" checkbox will back up the logged data every time the logged data is downloaded. The user must specify a location for the backup. *Note: If no backup location is provided, the backup will not take place*. Click on the folder browsing button, [...], to display the *Browse For Folder* screen. The user can select an existing location for the backup, or the user can create a new folder in a specified location for the backup. Select the desired folder and click on the **OK** button to set the backup location, or click the **Cancel** button to not set the backup location. *Note: The user may see a DOS-style screen while the logged data is downloading. This is normal and the DOS-style screen will close when the backup has finished*.

Language
The **Language** option allows you to select among eight different languages to use for the XGA Viewer interface. These languages are English (en), Spanish (es), Portuguese (pt), Italian (it), Japanese (ja), French (fr), Thai (th), and Chinese (zh).
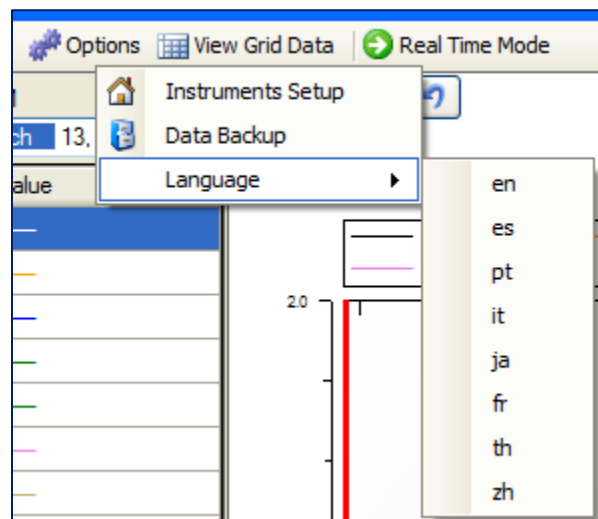

Figure 24 – Language selections

View Grid Data Button
This menu option will allow the viewer to see the logged data in a tabular format, instead of in a chart format.
The tabular data will appear on a separate screen. To close the grid view screen, click on the red "X" - [X] - in the top right of the screen.

Figure 25 - Data Grid

Export Button
The **Export** button will allow the user to export the data to three different formats so that the data can be viewed as a separate file. The three formats are: CSV, TSV, and TXT. Clicking on this button will display a sub-menu filled with the various export functions. Exporting the tabular data to any format will require the user to give a file name and a location for the file in the common Windows Save As dialog.

Data To CSV
This option will export the tabular data to a CSV (*.csv) format. CSV stands for Comma Separated Values. A .csv file is typically viewed through a spreadsheet program, such as Microsoft Excel, with each column in the tabular data corresponding to a column in the .csv file, and each row in the tabular data corresponding to a row in the .csv file.

Data To TSV
This option will export the tabular data to a TSV (*.tsv) format. TSV stands for Tab Separated Values. A .tsv file is typically viewed through a text-editing program, such as Microsoft's Notepad or WordPad, or Helios' TextPad. Each column in the tabular data corresponds to a

column in the .tsv file separated by a tab, and each row in the tabular data corresponds to a row in the .tsv file.

Data To TXT
This option will export the tabular data to a TXT (*.txt) format. TXT stands for text, and .txt files usually contain no special formatting. A .txt file is typically viewed through a text-editing program, such as Microsoft's Notepad or WordPad, or Helios' TextPad. Each column in the tabular data corresponds to a column in the .txt file separated by a tab, and each row in the tabular data corresponds to a row in the .txt file.

Print Preview Button
This menu option will display a print preview dialog identical to the *Print Preview Chart* menu option from the **Print** menu button, except that the print preview will be of the tabular data instead of the chart. The functionality of the print preview will be identical to the **Print** menu's print preview.

Print Button
This menu option will print out the tabular data, and the functionality is identical to the functionality of the *Print Chart* menu option from the **Print** menu button, except that the tabular data will be printed instead of the chart.

Real Time Mode Button
When the Real Time Mode is turned on, the SSi XGA Viewer software will automatically download logged data every 60 seconds. When Real Time Mode is turned off, the **Real Time Mode** button will have a light blue background. When Real Time Mode is turned on, the **Real Time Mode** button will have an orange background and there will be a sixty-second countdown next to the button - - and the arrow buttons and chart interval drop-down list will be disabled. Every time the countdown hits zero, the chart and the variables on the left will be updated with the latest information. When the SSi XGA Viewer software is in Real Time Mode, the **Download Data** button is disabled. *Note: The SSi XGA Viewer software does not automatically back up the logged data while it is in Real Time Mode. To back up the logged data, Real Time Mode must be turned off.*

Instrument Menu Button
This menu option will allow the user to modify a template for the instrument that is selected in the instrument drop-down list - , or modify the setup of the selected instrument (PGA only).

Edit Template
This option will allow the user to modify the template that is used for the selected instrument. *Note: The template will vary depending on whether the instrument is a PGA or an MGA.* Clicking on this option will display the *Edit Template* screen.

The *Edit Template* screen will display all of the existing trends for the template. The name of the trend and a description of the trend will be displayed. The user will be able to add, remove, or modify existing trends.
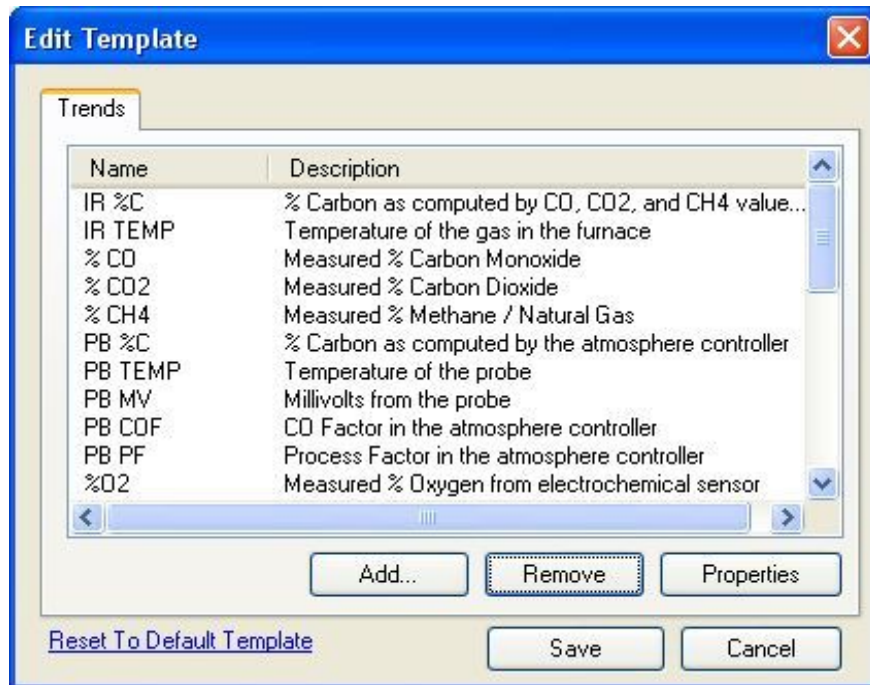
Figure 26 – "Edit Template" window

Add A Trend
Click on the **Add...** button to add a new trend to the template. The new trend will be displayed at the bottom of the list and the name will be "NEW_TREND" with a description of "New Trend".
Note: Adding a new trend will simply add the default information. Once the trend is added, the user will have to modify the trend to get the relevant information to display on the chart. See the section Modify A Trend in this section of the manual for more information on how to modify the trend once it is created.

Remove A Trend
To remove a trend from the template's setup, select the desired trend from the list and click on the **Remove** button. This will delete the selected trend from the template's setup.

Modify A Trend
To modify a trend in the template, select the desired trend and then click on the **Properties** button. This will display the *Edit Trend* screen with the *General* tab displayed.
There are four tabs on the Edit Trend screen:
- General – This tab contains general information about the trend, such as name, description, etc.
- Formatting – This tab contains information about the formatting of the trend, such as the units, decimal places, etc.
- Data – This tab contains information about where the data for the trend is coming from.
- Advanced – This tab contains advanced information, such as using an algebraic expression to format the data.

General Tab:
The "Trend Name" will be the name for the trend. This is how the trend will be identified on the chart, tabular data, and any printed material. The name should be both short and descriptive.
The "Trend Description" will be a brief description of what the trend is. This will be displayed on the *Edit Template* screen. The description, like the name, should be both short and descriptive of the trend.

The "Enable this trend" checkbox will enable the trend, which means that the SSi XGA Viewer software will begin to display the data logging for that value. *Note: All of the variables are logged all of the time, but the user can decide which to display and which to not*.
The "This trend may be viewed on the chart" checkbox will allow the trend to be viewed on the chart display.
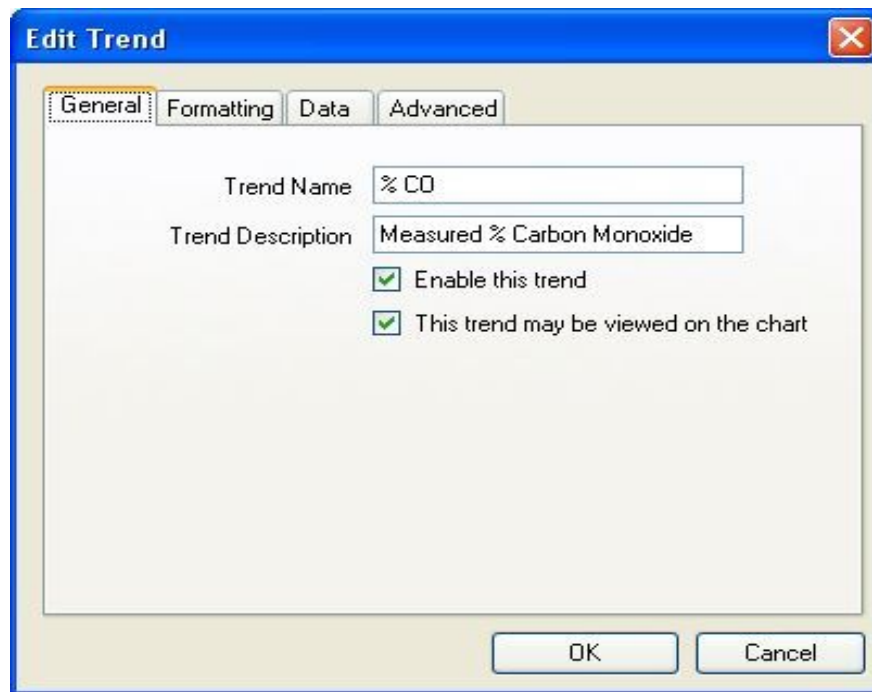
Figure 27 - "Edit Trend" window – General tab

Formatting Tab:
The "Units" will be the display units for the trend. This could be a % for a gas trend, such as %C, or it could be °F or °C for a temperature trend.
The "Decimal Places" will be the number of decimal places to display on the trend. This value can range anywhere from **0** to **4** decimal places displayed.

The "area" section will set up how the trend is displayed on the chart. The "Color" will be the color of the trend line and trend information displayed on the left of the screen. The "Chart Min" will be the minimum value for the range of the chart. The "Chart Max" will be the maximum value for the range of the chart.
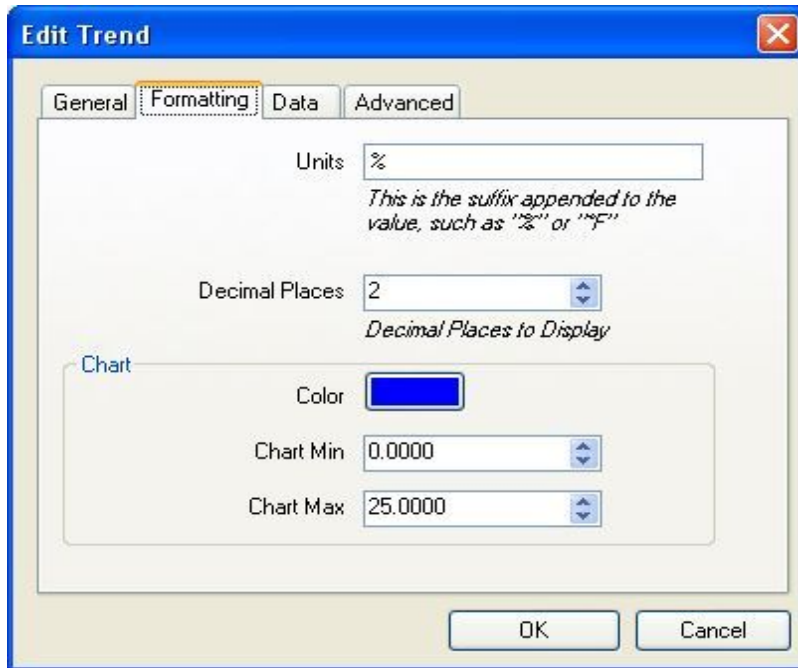
Figure 28 – "Edit Trend" window – Formatting tab

Data Tab:
Note: Each trend value has a specific location in the data log files. Do not modify any of these values without first contacting Super Systems Inc.
The "Channel" will be the specific channel to pull the data from.
The "Slot" will be the specific slot to pull the data from.
The "Decimal Places" will be the number of source decimal places for the logged data.
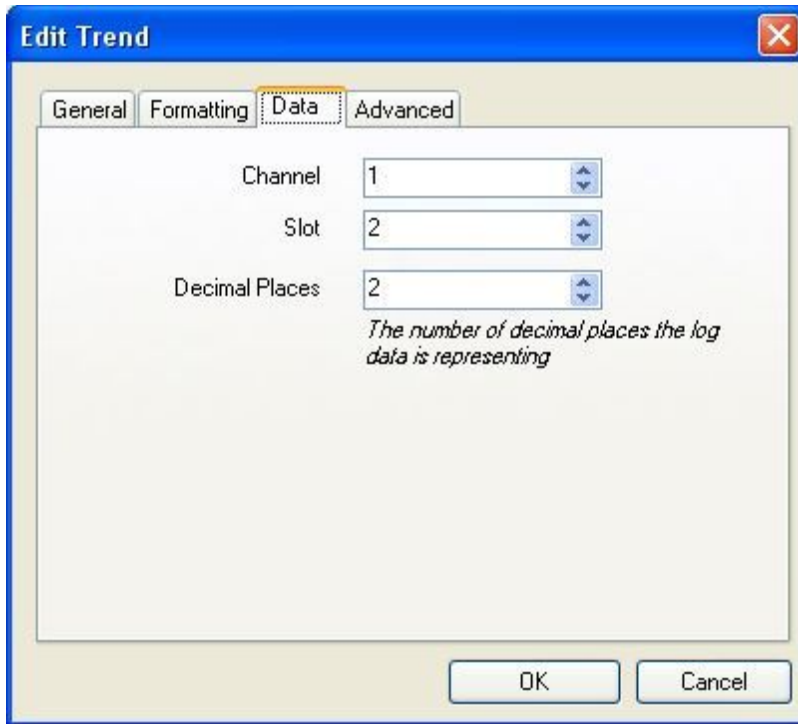
Figure 29 - "Edit Trend" window - Data tab

Advanced Tab:
The "Expression" will be an algebraic expression that can be used to translate the data. Use an "x" to represent the data in the equation. For example, to subtract 100 from the values, use the following expression: "x – 100". With this example, a value of 1700 °F will be displayed as 1600 °F.
The "Special Values" will display the specified values ("Message") when the current value ("Data") is present. A common use for the special values is when the value reaches **0**. The "Data" would be 0, and the "Message" would be "----", which means that whenever that trend had a value of **0**, the trend's display on the left of the screen would display a line of dashes. The "Message" field can contain either numbers or text.
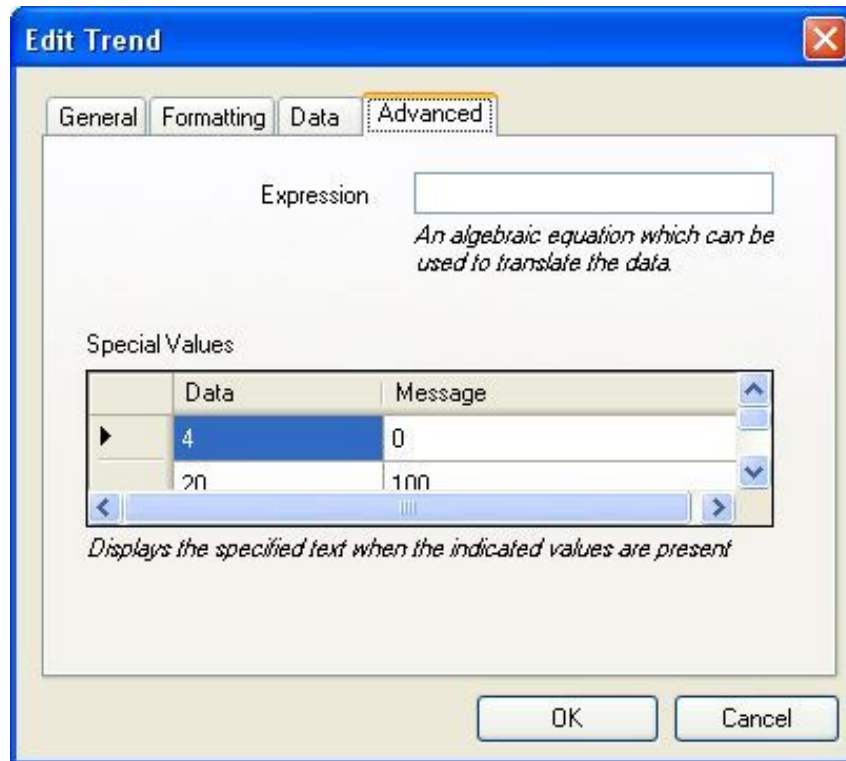
Figure 30 - "Edit Trend" window - Advanced tab

PGA Setup
Note: The operator will need to download data from the PGA using the **Download Data** *button*
before the PGA Setup menu can be used. See the Download Data Button *section below for*
information on downloading the data from the instrument.

The PGA Setup menu will allow the user to set up the variables that will help define a session on
the PGA. Depending on the PGA unit that you have, there will be several tabs associated with
the PGA Setup.

Older style PGA units (i.e., PGA3500) will have these tabs:
- Site Names
- Equipment Types
- Equipment Names
- Operators
- Notes

Newer style PGA units (i.e., PGA3510) will have only Equipment Types, Equipment Names, and
Operators.

Site Names:
(**NOTE:** This tab is associated only with older style PGA units, such as the PGA3500.)
The site names will include any site or location where the PGA or MGA will be used. A "site" can
be a city, state, building, or even a section of a building. To add a site name, enter the new site
name in the text box and click on the **Add…** button. To remove a site name, select the site name

from the list and click on the **Remove** button. There can be a maximum of sixteen (16) site names.

Figure 31 - "PGA Setup" window – Site Names tab

Equipment Types:

The equipment types will list the different types of equipment, such as furnaces or generators, that the PGA or MGA will be used on. To add an equipment type, enter the new equipment type name in the text box and click on the **Add...** button. To remove an equipment type, select the equipment type from the list and click on the **Remove** button. There can be a maximum of sixteen (16) equipment types.
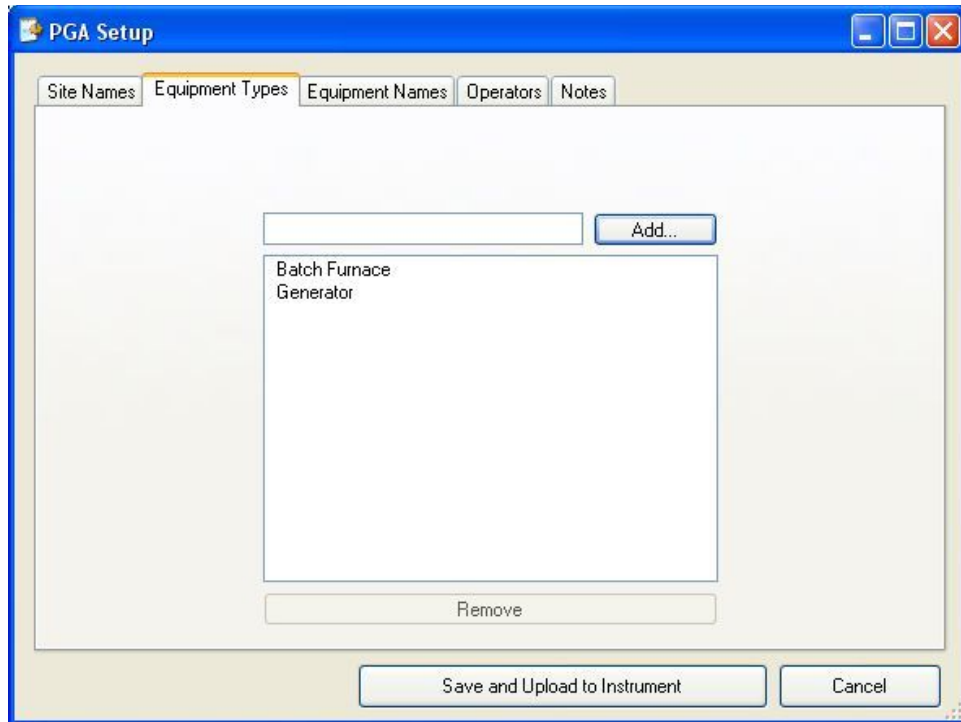
Figure 32 – "PGA Setup" window – Equipment Types tab

Equipment Names:
The equipment names will list the names of any of the equipment types. For instance, if there are two batch furnaces, the "Equipment Types" will have "Batch Furnace", but the "Equipment Names" will have "FCE 1" and "FCE 2". To add an equipment name, enter the new equipment name in the text box and click on the **Add...** button. To remove an equipment name, select the equipment name from the list and click on the **Remove** button. There can be a maximum of sixteen (16) equipment names.
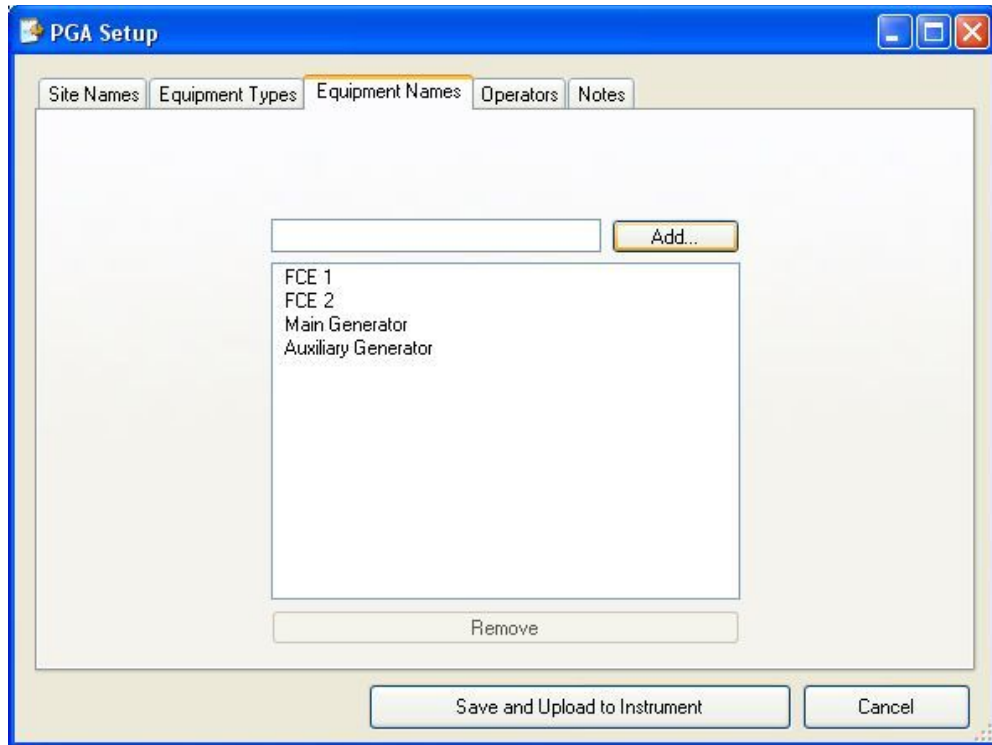
Figure 33 - "PGA Setup" window - Equipment Names tab

Operators:

The operators tab will list any operators that would be starting a session on the PGA. To add an operator, enter the new operator in the text box and click on the **Add...** button. To remove an operator, select the operator from the list and click on the **Remove** button. There can be a maximum of sixteen (16) operators.
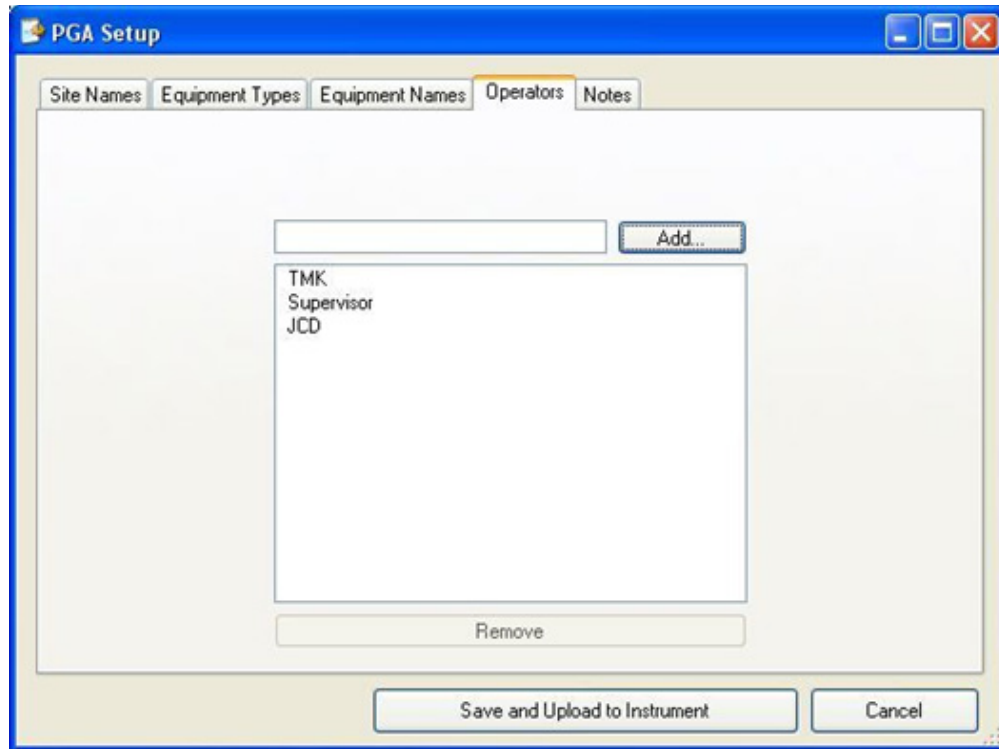
Figure 34 – "PGA Setup" window – Operators tab

Notes:
(**NOTE:** This tab is associated only with older style PGA units, such as the PGA3500.)
The notes will list any notes that the user would like to include during a session on the PGA, such as "Door Open" or "Possible Air Leak". To add a note, enter the new note in the text box and click on the **Add...** button. To remove a note, select the note from the list and click on the **Remove** button. There can be a maximum of sixteen (16) notes.
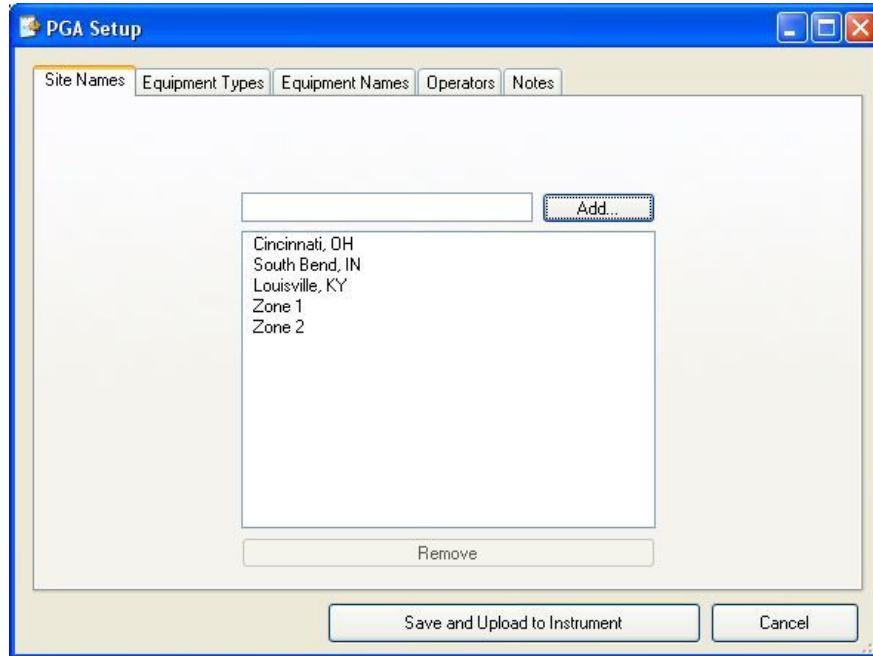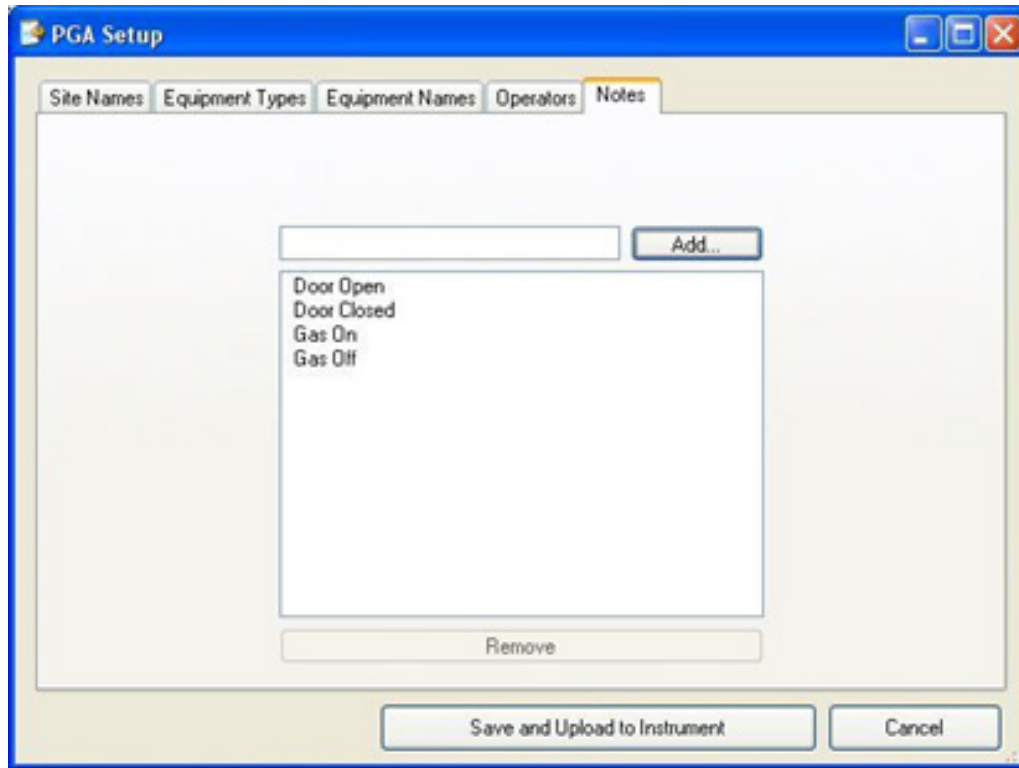
Figure 35 – "PGA Setup" window – Notes tab

Saving Changes To The Setup
To save any of the changes that have been made, click on the **Save and Upload to Instrument** button (PGA3500) or the **Upload Database** button (PGA3510). If there is a problem with the save, there will be an error message displayed.

Figure 36 – "Failed to upload" box

If the save completed successfully, there will be a message letting the user know that the items were uploaded and that the power to the PGA will need to be cycled before the changed can take effect.
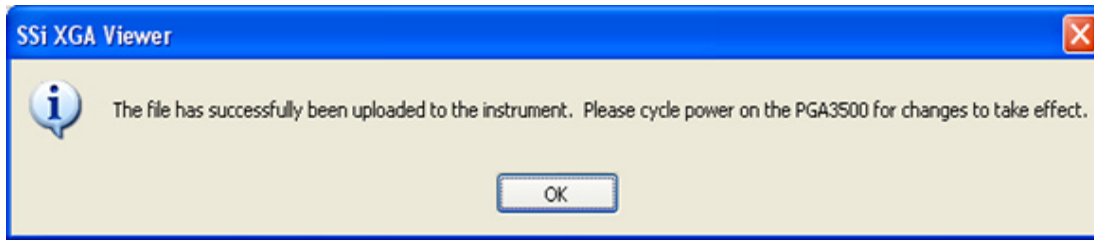
Figure 37 – Successful upload

Canceling Changes To The Setup
To cancel any changes made to the setup, click on the **Cancel** button.

Download Data Button
This menu option will allow the user to download the logged data from the selected instrument in the instrument drop-down list – [Testing PGA ▼]. Clicking on this button will display the *Downloading Data* screen. *Note: Once the screen is displayed, it will begin to download logged data immediately.*

When the *Downloading Data* screen is first displayed, it will attempt to connect to the instrument. Once connected, it will determine how many new files are present, and then it will begin to download each file to the instrument's folder on the local computer. *Note: Each instrument's folder on the local computer is named by the instrument's serial number.* The *Downloading Data* screen will display the progress of the download through a progress bar at the top of the screen. Each file being downloaded will be displayed on the screen as well. A white circle with an arrow – ⊙ – means that the file is being downloaded. A green circle with a check mark – ✓ – means that the file has been downloaded. The status of the download will be displayed above the progress bar during the download process. If there is an error during the download or the SSi XGA Viewer software cannot connect to the instrument, there will be a red circle with a white x – ✗ – detailing the error. If the user wishes to have the *Downloading Data* screen automatically close when the downloading process is finished, click on the "Close this dialog when downloading is complete" checkbox. If this checkbox is not checked, the user will have to manually close the *Downloading Data* screen by clicking on the **Cancel** button, or by clicking on the red X in the top right of the screen – ✗.
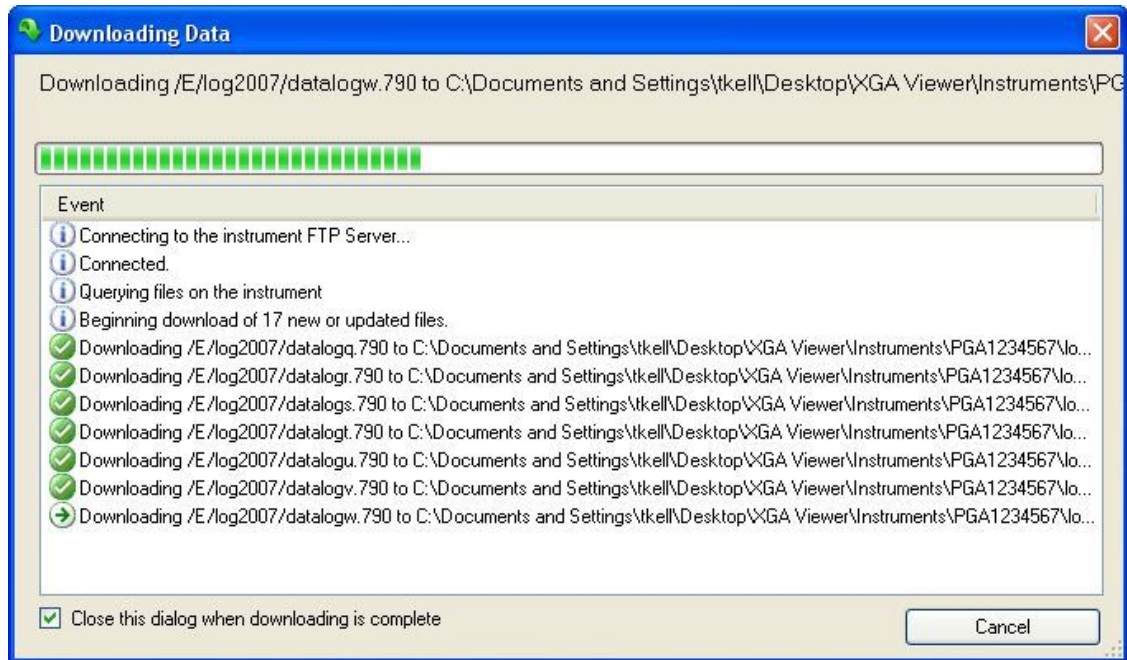
Figure 38 – "Downloading Data" window

SSi XGA Viewer Main Screen Overview
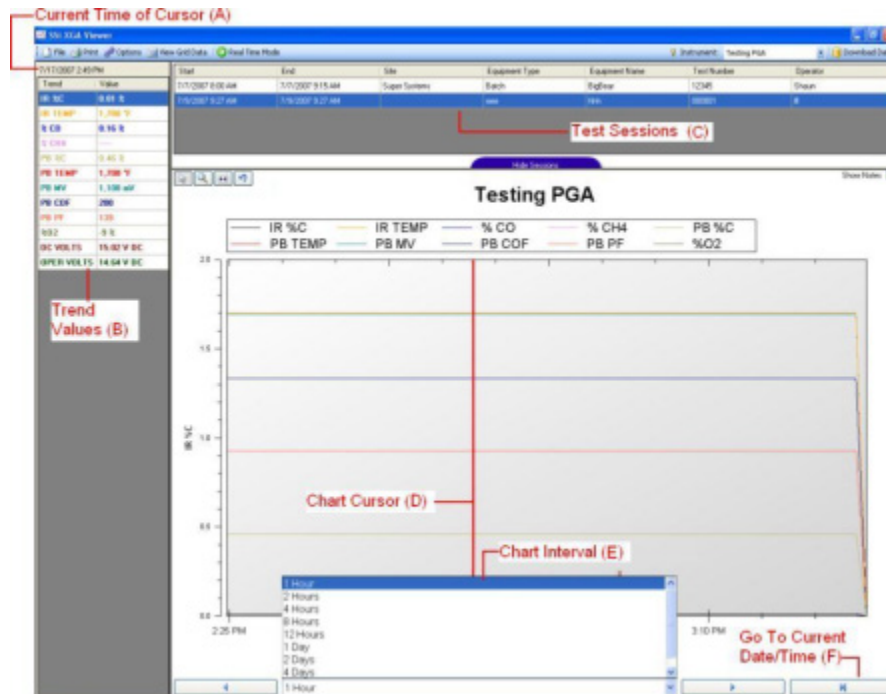
Figure 39 - XGA Viewer Main Screen Components

A) Current Time of Cursor – This will display the date/time that the cursor is displayed at on the chart. The date/time displayed will update as the cursor is moved along the chart interval's time period (X-axis).

B) Trend Values – This will display all of the selected trend data points at the specified time (cursor position).
C) Test Sessions – These are any test sessions that have been performed on the selected instrument (PGA only).
D) Chart Cursor – The chart cursor is the vertical red line on the chart. This is the cursor that will allow the user to view the trend data points for a specific date/time. Unless moved by the user, the cursor is located at the left of the chart.
E) Chart Interval – This is the range for the time period (X-axis) for the chart. The options for the interval are:
   a. 1 Hour
   b. 2 Hours
   c. 4 Hours
   d. 8 Hours
   e. 12 Hours
   f. 1 Day
   g. 2 Days
   h. 4 Days
   i. 1 Week
F) Go To Current Date/Time – This will allow the user to display the current date/time's data. Clicking on this button once will display the most recent *downloaded* data.

The left and right arrow buttons next to the chart interval will move the chart either backward or forward by the selected interval, which will allow the user to view previous data logged data at the selected interval.

Trend Values Context Menu
If the user right-clicks on any of the trend values (Item *B* above), a context menu will be displayed.
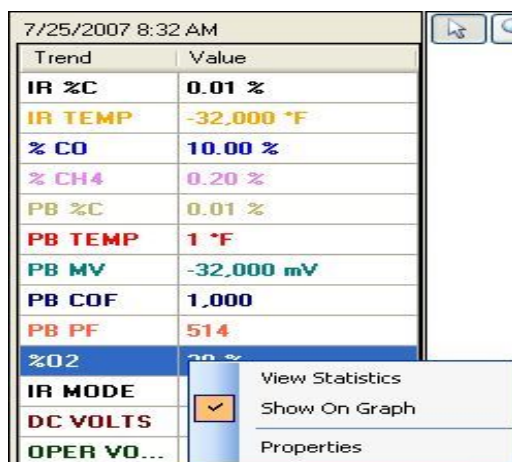
Figure 40 - Trend Values Context Menu

View Statistics
The *View Statistics* menu option will allow the user to view some basic statistics about the selected trend value.
The *Trend Analysis* screen contains five statistics that can be viewed.
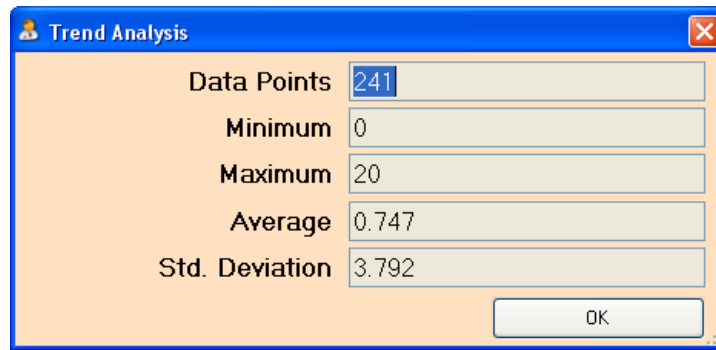
Figure 41 - Trend Analysis window

- Data Points – This is the number of data logged data points for the specific trend. These data points are dependent on the chart interval time framed chosen (Item E from above). For example, if the chart interval is 1 hour, then the number of data points would be 61. If the chart interval is 4 hours, then the number of data points would be 241.
- Minimum – This is the lowest value that the specific trend reached within the selected chart interval time frame.
- Maximum – This is the highest value that the specific trend reached within the selected chart interval time frame.
- Average – This is the average value for the specific trend value within the selected chart interval time frame. All of the trend's data points are added up and divided by the number of data points to determine the average trend value.
- Std. Deviation – This is the standard deviation for the specific trend value within the selected chart interval time frame. The standard deviation is a statistical value that determines how far from the average value each data point value was.

Show On Graph
This option will allow the user to view the specific trend value on the graph, or remove the trend value from the graph. If the trend value is viewed on the graph, there will be a check mark next to the *Show On Graph* menu option. If the trend value is not viewed on the graph, there will not be a check mark next to the *Show On Graph* menu option. *Note: If the trend value is not viewed on the graph, that trend's values will still be displayed on the left of the screen (Item B from above).*

Properties
This option will allow the user to modify the specific trend's properties, such as the formatting, or the name. This menu option will actually just display the *Edit Trend* screen (Modify A Trend section above) for the specific trend. Clicking on the *Properties* menu option is the same as clicking on the **Properties** button from the *Edit Template* screen (Instrument Menu Button section above).

Graph Manipulation Buttons

Cursor Button -
The cursor button will display the arrow cursor on the graph. This acts as the default setting for the graph and does not manipulate or change the graph in any way, but it will allow the user to move the graph's cursor.

Zoom Button -

The zoom button will allow the user to zoom in on a portion of the graph. To zoom in on a portion, click on the zoom button. The user will need to set the boundaries of the zoom by clicking on an area of the graph and dragging the cursor to include all of the desired area. Once this is done, the graph will display the new area and the graph will go back to cursor mode.
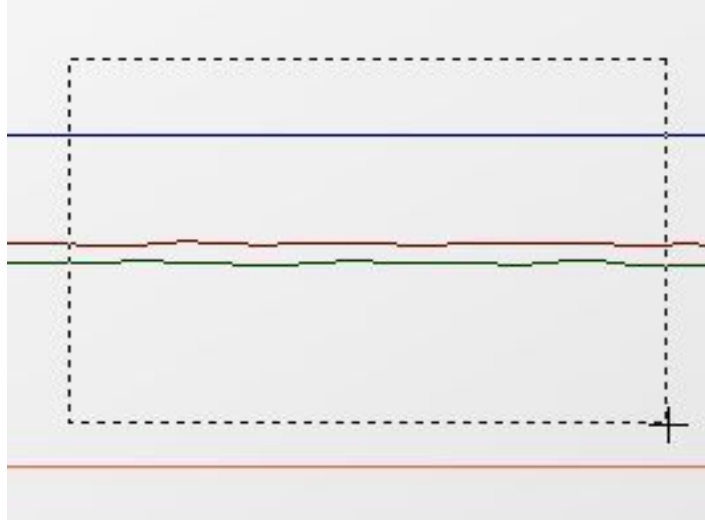
Figure 42 - Zoom window

Pan Button -

The pan button will allow the user to pan, or move, the chart's display forward or backward along the x-axis (time) or up or down along the y-axis (trend minimum and maximum). This feature is useful when the user wants to view trend data in the past, or to view a trend line on the chart that exceeds the chart's current maximum value. The chart will stay in pan mode until the user changes the mode to one of the other options.

Restore Button -

The restore button will undo any of changes made to the graph and re-display the default view.

Sessions

Figure 43 - Test Sessions shown

Figure 44 - Test Sessions hidden

Any sessions performed on the PGA can be downloaded and viewed through the XGA Viewer software.   A session will allow the user to identify the operation of the PGA and break all of the logged data into manageable sections. Once a session has been performed on the PGA and downloaded to the XGA Viewer software, the Test Session button will be displayed at the top of the graph. Clicking on this button will display the sessions that have been performed on the PGA, as well as changing the text on the button to "Hide Sessions". Clicking on the **Hide Sessions** button will hide the sessions again.

Figure 45 – Trend Chart and Test Sessions displayed on same screen

Note: A session does not need to be completed before it can be downloaded and viewed with the XGA Viewer software. The parts of a session displayed on the XGA Viewer are:
- Start – The date/time the session was started
- End – The date/time the session was ended
- Site – The site of the session
- Equipment Type – The type of equipment for the session
- Equipment Name – The name of the equipment for the session
- Test Number – The number assigned to the session
- Operator – The operator who performed the session

For a more detailed explanation about sessions, see the Instrument Menu Button→ PGA Setup menu section above. Double-clicking on a session record will re-size the graph's x-axis to start at the session's start time and end at the session's end time. Any notes entered during the session will be displayed on the graph as well. To hide the note, uncheck on the "Show Notes" check box in the top right corner of the graph. Checking the check box will show the notes on

the graph again. The session's start and stop time will be noted on the graph. Clicking on the arrow buttons at the bottom of the graph will essentially take the graph out of "Session" view and hide any visible notes.

Troubleshooting Ethernet Connection Problems
This section includes a list of tools and recommendations to use when diagnosing connection problems.

Compatible IP Address
The most common reason for lack of communication between the software and the analyzer is incorrect TCP/IP settings.   The first thing you should do is find out what the IP address is for both the laptop/PC and the analyzer.
Finding the IP Address of the analyzer:
- Look in the menu system for your particular product for the IP Address. If you have trouble finding it, consult your user manual.

Finding the IP Address of the PC:
- Go to Start->Run and enter "CMD" to get to the command prompt
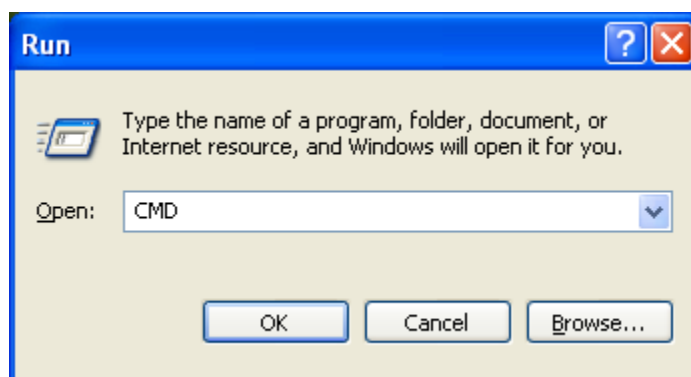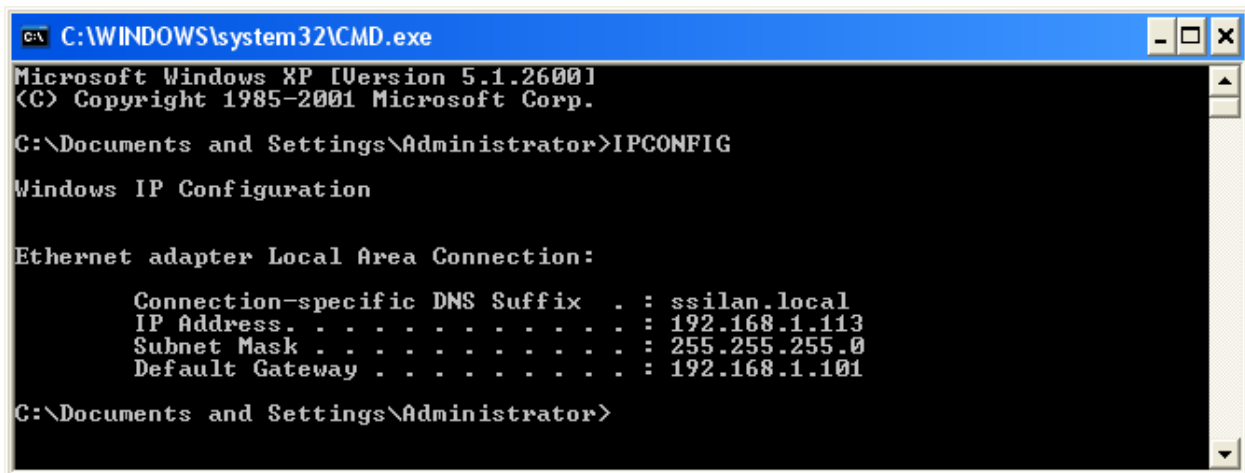
Figure 46 – "Run" dialog box

- At the command screen, type "IPCONFIG" and press enter. This will display your current TCP/IP settings.   More than one adapter may appear – you're looking for the IP Address of the "Local Area Connection".

Figure 47 – IPCONFIG IP configuration output
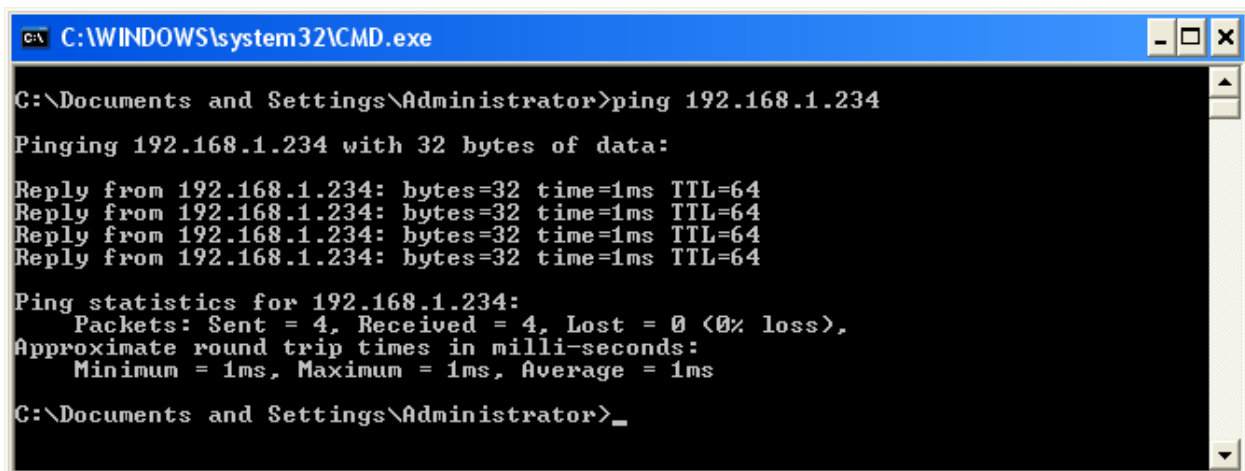
Once you have the IP Address for the PC/Laptop you should compare them and verify that the IP Addresses are compatible. **Typically this means that the first three numbers match up, and the forth number is different.**

Pinging the Instrument
Once you have verified that the IP Addresses are compatible you should try to ping the instrument.
How to ping the instrument:

- Go to Start->Run and enter "CMD" to get to the command prompt
- Type "PING 192.168.1.205" at the command prompt, substituting the IP Address with that of your instrument.   In the example below, an which had an IP address of 192.168.1.234 was being pinged.

Figure 48 - PING output

This represents a successful ping attempt.   Once we can ping the instrument the XGAViewer software usually does not have any problems communicating with it.

Ping Request Timeout

If you fail to get at ping response and instead get "Request timed out" messages, you should consider the following as they are common causes for communications problems:

- Recheck the physical connections – make sure all Ethernet wires are good and completely plugged in
- <u>Disable any firewalls or antivirus software</u>. Once you determine a particular firewall or anti-virus program is preventing communications you can figure out how to make an exception within the program for the XGAViewer software so that you can keep it running.

Further suggestions if the previous are not successful:

- If you are trying to connect over a LAN, consider trying the direct connection with a crossover cable and configuring a static IP address for your computer/laptop. See "Direct connection with a crossover" in this manual for more detailed instructions.
- If you are going through a router or hub, cycling the power to it may fix the problem
- Consider attempting to connect with a different PC or Laptop.   This may help narrow down the issue.

If you are unable to resolve the issue, please call Super Systems at 513-772-0060 for further support.

Revision History

Revision Level	Description	Date	MCO #
-	Initial Release	01/14/2008	N/A
A	Added "Connecting to your Analyzer" section; Added "Troubleshoot Connection Problems" section; Added note to "Installing the XGA Viewer Software" section; Added the "Overview" section; Added note to "Checking for Microsoft .NET Framework 2.0" section	06/19/2008	2069
B	Revised manual for software updates to XGA Viewer, including compatibility with newer instrumentation	6/20/2014	2106

Appendix 1: PGA3500/MGA6000 – Template Channel 1 Data Definitions
This section will display the channel 1 data definition variables for the PGA3500 and MGA6000 templates that are used in the XGA Viewer software. This section is meant to be a reference for users. *Note: These values are only suggested values, but it is recommended that these values be used*. The trend values in light blue apply to both the PGA and MGA template, while the trend values in light gray apply only to the PGA template. Each trend value has nine main points:

- Slot – The slot that the trend value will be located in
- Name – The name of the trend value
- Description – A description of the trend value
- Src Dec – The number of decimals that the source value has
- Disp Dec – The number of decimal places to display
- Units – This will be the units the value will be representing, such as % or °F/°C
- Min – This is the suggested chart y-axis minimum value
- Max – This is the suggested chart y-axis maximum value
- Exp – This can be an expression to view the data

Slot	Name	Description	Src Dec	Disp Dec	Units	Min	Max	Exp
0	IR %C	% Carbon as computed by CO, CO2, and CH4 values with IR Temperature	2	2	%	0.00	2.00	None
1	IR TEMP	Temperature of the gas in the furnace	0	0	°F or °C	0	2000	None
2	% CO	Measured % Carbon Monoxide	2	2	%	0	25	None
3	% CO2	Measured % Carbon Dioxide	4	3	%	0	2	None
4	% CH4	Measured % Methane / Natural Gas	2	2	%	0	25	None
5	PB %C	% Carbon as computed by the atmosphere controller	2	2	%	0.00	2.00	None
6	PB TEMP	Temperature of the probe	0	0	°F or °C	0	2000	None
7	PB MV	Millivolts from the probe	0	0	MV	0	1300	None
8	PB COF	CO Factor in the atmosphere controller	0	0	None	0	300	None
9	PB PF	Process Factor in the atmosphere controller	0	0	None	0	300	None
10	% O2	Measured % Oxygen from electrochemical sensor	1	0	%	0	25	None

Slot	Name	Description	Src Dec	Disp Dec	Units	Min	Max	Exp
11	FLOW	Flow Rate	0	0	SCFH	N/A	N/A	None
12	IR FACTOR	IR Adjustment Factor	0	0	None	N/A	N/A	None
13	CH4 FACTOR	CH4 Adjustment Factor	0	0	None	N/A	N/A	None
14	% H2	Measured % Hydrogen	2	2	%	0	50	None
15	4-20 IN	Measured value of 4-20 mA user input	0	0	Varies	0	100	4=0, 20=100
18	PRESSURE	Gas Pressure in instrument	2	2	kPa	Varies	Varies	None
19	SUGG COF	Suggested CO Factor	0	0	None	0	300	None
20	SUGG PF	Suggested Process Factor	0	0	None	0	300	None
21	FACTOR	Adjustment Factor	0	0	None	N/A	N/A	None
22	PUMP STATUS	Pump Status	N/A	N/A	None	N/A	N/A	None
23	IR MODE	Operating Mode	N/A	N/A	None	N/A	N/A	None
24	DC VOLTS	DC Voltage from internal power supply	2	2	V DC	N/A	N/A	None
25	OPER VOLTS	DC Voltage being used by instrument	2	2	V DC	N/A	N/A	None
26	BATT VOLTS	DC Voltage from battery	2	2	V DC	N/A	N/A	None
29	% HI CO2	Measured % CO2 from high range CO2 sensor	2	2	%	0.00	20.00	None
30	CALC DP	Calculated Dew Point Temperature	0	0	°F or °C	0	80	None
31	PUMP MODE	Pump Mode	0	0	None	0	1	0=MANUAL 1=MANUAL 2=AUTO

Table 1 – Template Channel 1 Data Definitions for PGA3500/MGA6000

Appendix 2: PGA3510/MGA6010 – Template Channel 1 Data Definitions
This section will display the channel 1 data definition variables for the PGA3510 and MGA6010 templates that are used in the XGA Viewer software. This section is meant to be a reference for users. *Note: These values are only suggested values, but it is recommended that these values be used.* The trend values in light blue apply to both the PGA and MGA template, while the trend values in light gray apply only to the PGA template. Each trend value has nine main points:

- Slot – The slot that the trend value will be located in
- Name – The name of the trend value
- Description – A description of the trend value
- Src Dec – The number of decimals that the source value has
- Disp Dec – The number of decimal places to display
- Units – This will be the units the value will be representing, such as % or °F/°C
- Min – This is the suggested chart y-axis minimum value
- Max – This is the suggested chart y-axis maximum value
- Exp – This can be an expression to view the data

Slot	Name	Description	Src Dec	Disp Dec	Units	Min	Max	Exp
0	IR %C	% Carbon as computed by CO, CO2, and CH4 values with IR Temperature	2	2	%	0.00	2.00	None
1	IR TEMP	Temperature of the gas in the furnace	0	0	°F or °C	0	2000	None
2	% CO	Measured % Carbon Monoxide	2	2	%	0	25	None
3	% CO2	Measured % Carbon Dioxide	4	3	%	0	2	None
4	% CH4	Measured % Methane / Natural Gas	2	2	%	0	25	None
5	PB %C	% Carbon as computed by the atmosphere controller	2	2	%	0.00	2.00	None
6	PB TEMP	Temperature of the probe	0	0	°F or °C	0	2000	None
7	PB MV	Millivolts from the probe	0	0	MV	0	1300	None
8	PB COF	CO Factor in the atmosphere controller	0	0	None	0	300	None
9	PB PF	Process Factor in the atmosphere controller	0	0	None	0	300	None
10	% O2	Measured % Oxygen from electrochemical sensor	1	0	%	0	25	None
11	FLOW	Flow Rate	0	0	SCFH	N/A	N/A	None

Slot	Name	Description	Src Dec	Disp Dec	Units	Min	Max	Exp
12	IR FACTOR	IR Adjustment Factor	0	0	None	N/A	N/A	None
13	CH4 FACTOR	CH4 Adjustment Factor	0	0	None	N/A	N/A	None
14	% H2	Measured % Hydrogen	2	2	%	0	50	None
15	K100PA	Sensor Pressure	2	2	Kilo pascals	0	300	None
16	IR COF	IR Suggested COF	0	0	none	1	999	None
17	IR PF	IR Suggested PF	0	0	none	1	999	None
18	CALC	Flag. 0 = COF, 1 = PF.	0	0	none	0	1	None
19	PUMP	Pump Mode	0	0	none	0	2	None
20	IR MODE	IR Control Mode	0	0	none	0	1	None
21	DC VOLT	DC Voltage	3	3	volts	0	25	None
22	PASS CODE 0	Level 1 Pass Code	0	0	none	0	30000	None
23	PASS CODE 1	Level 2 Pass Code	0	0	none	0	30000	None
24	CAL STAGE	Calibration Stage	0	0	none	0	19	None
25	PIC STAT	PIC Status	0	0	none	0	16	None
26	INT TIMER	Interval Timer	0	0	minute	0	9999	None
27	HIGH CO2	High CO2 Value	2	2	%	0	100	None

Table 2 – Template Channel 1 Data Definitions for PGA3510/MGA6010