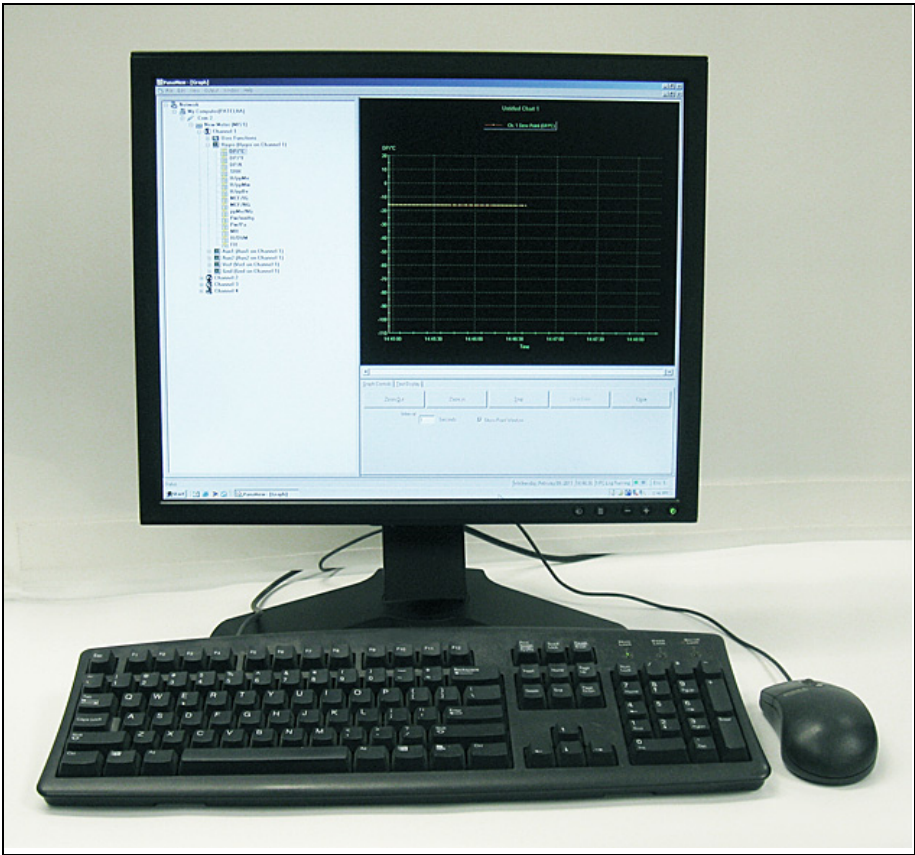# PanaView™

Installation Guide

PanaView™

Graphical User Interface

Installation Guide

Software Version 1.6.2
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panametrics.com

[no content intended for this page]

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[PANAVIEW SOFTWARE VERSION 1.6.2]

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Chapter 1.   Features & Capabilities

1.1   Introduction

PanaView is a graphical user interface (GUI) that permits interactive communication between a Panametrics instrument and a personal computer (PC) that is running under a 32-bit or 64-bit Windows 7, Windows 8 or higher operating system. The interface has been carefully designed to present the same appearance and functionality as most familiar Windows software applications. As a result, anyone familiar with using common Windows programs should have no difficulty using PanaView.

1.2   Basic Features

The following primary tasks may be performed with PanaView software:

- Save the instrument's programmed site file data to the hard drive on the PC

- Display text output of the live measurement data on the computer monitor

- Display the live measurement data on the computer monitor in graphical format

- Create and save graph and log files to the hard drive on the computer

- Create custom templates for displaying text, graph, or log data

- Interface with multiple Panametrics instruments

1.3   Supported Meters

Version 1.6.2 of PanaView supports the following Panametrics meters:

- Most legacy IDM protocol Panametrics instruments

- Most PanaLink™ protocol Panametrics instruments

- Panametrics Sentinel™ flow meters

- Panametrics Safire 2 flow meters

1.4   Advanced Capabilities

In addition to the features, PanaView offers some very useful advanced functionality. To learn about the full range of PanaView's functionality, continue reading this manual.

1.5   Windows Shortcuts

The instructions in this manual use the simple, direct approach to accomplishing the desired tasks. That is, the use of the standard menus on the menu bar is emphasized. However, as in any other conventional Windows program, many tasks may be completed by alternate methods. For example, a *right mouse click* or a *keyboard shortcut* may provide a more convenient route to the desired result. Since these are standard Windows procedures, they are covered in detail in the documentation that came with your PC's operating system, and specific shortcut instructions are not included in this manual.

1.6   Electronic Documentation

As an added convenience, an electronic version of this complete manual is supplied along with .exe / installer in the *"Manual"* directory on the shared media. This file is an Adobe *Portable Document Format* file, and it may be opened with Adobe *Acrobat Reader.*

Acrobat Reader is a free application that may be downloaded from many web sites, including the Adobe web site, https://get.adobe.com/reader/.

Chapter 2.   Installation

2.1   Introduction

PanaView is supplied through shared media that includes the basic program, along with sample applications and interactive demonstrations. The underlying PanaCom ActiveX software is automatically installed during the PanaView installation.

Before beginning the installation, make sure the personal computer system meets the requirements listed in the next section.

2.2   Personal Computer Requirements

For optimum performance of the PanaView software, the personal computer must meet the following minimum requirements:

- 32-bit or 64-bit CPU

- 64 MB random access memory (RAM)

- 100 MB available hard drive space

- 32-bit or 64-bit Windows 7, Windows 8 or higher operating system

- Internet Explorer 7.0 or higher installed

- Display monitor and graphics card

- To begin the installation, proceed to the next section.

2.3   Software Installation

2.3.1   The InstallShield Wizard

After verifying that the personal computer meets the minimum requirements listed in the previous section, proceed as follows:

1.   After downloading or copying the "PanaViewSEN898_1.6.2.exe" file, double click on it.

2.   The *Install-Shield* wizard, shown in *Figure 1* below will launch and guide you through the installation process. Click [Next] button to continue.
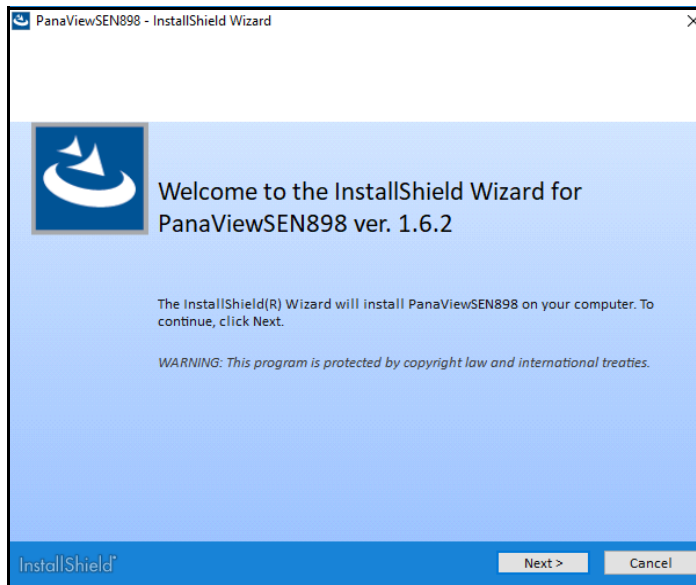
Figure 1: *Install-Shield Wizard* **Screen**

2.3.2 The [Back] and [Cancel] Buttons

If the [Cancel] button is chosen at any of the installation screens, the dialog box shown in *Figure 2* below appears.
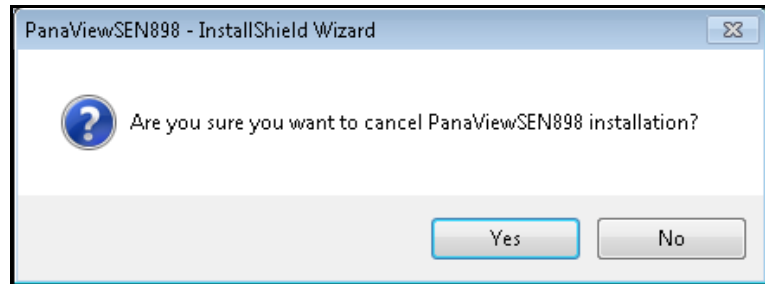
Figure 2: Cancel Installation Screen

At the screen shown above, the following two options are available:

- Click the [No] button to return to the installation process

- Click the [Yes] button to terminate the installation process and return to Windows

On all but the first installation screen (where the [Back] button is grayed out), you may return to the previous installation screen to make corrections by clicking on the [Back] button.

2.3.3 File Installation

3. Next, the *End User Licence Agreement* shown in Figure 3 below opens. Click the radio button for *"I accept the terms in the licence agreement"* and Click [Next] button to continue.
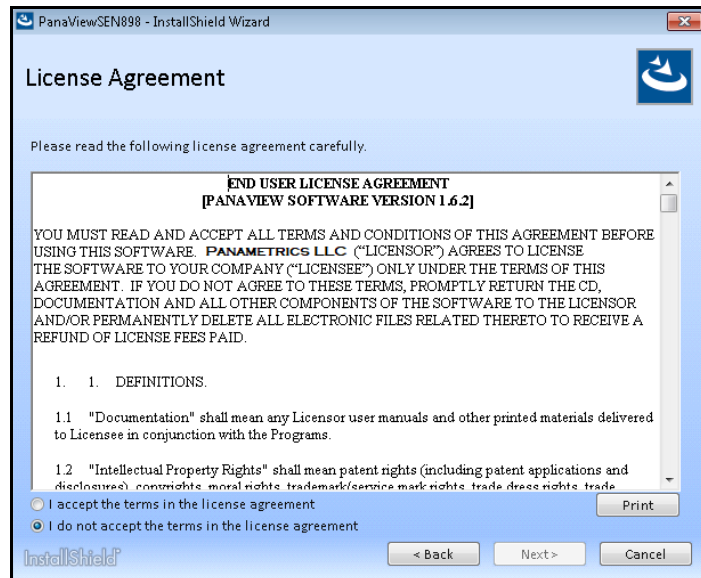
Figure 3: Licence Agreement Screen

Note: *For a complete copy of this agreement, see* "END USER LICENSE AGREEMENT" *on page iii of this manual.*

4. Choose [Complete] to install all program features (see Figure 4 below). The screen shown in Figure 5 appears and confirms the start of Panaview Installation. Refer to "The [Back] and [Cancel] Buttons" on page 5 to know the specific function of them.
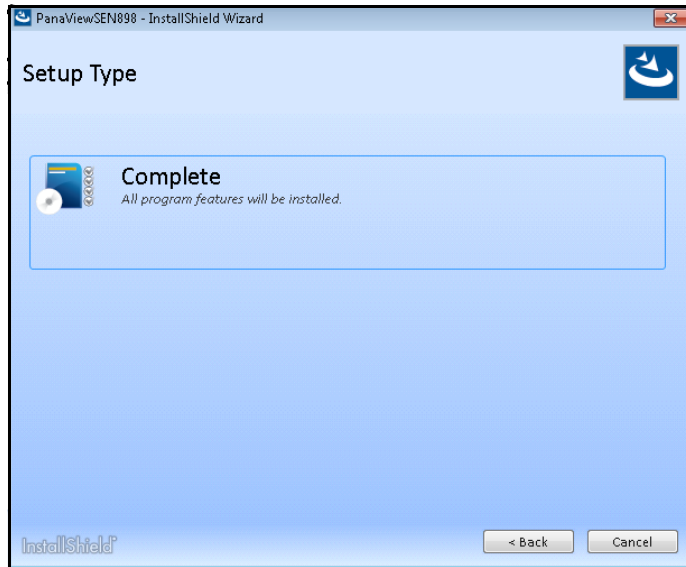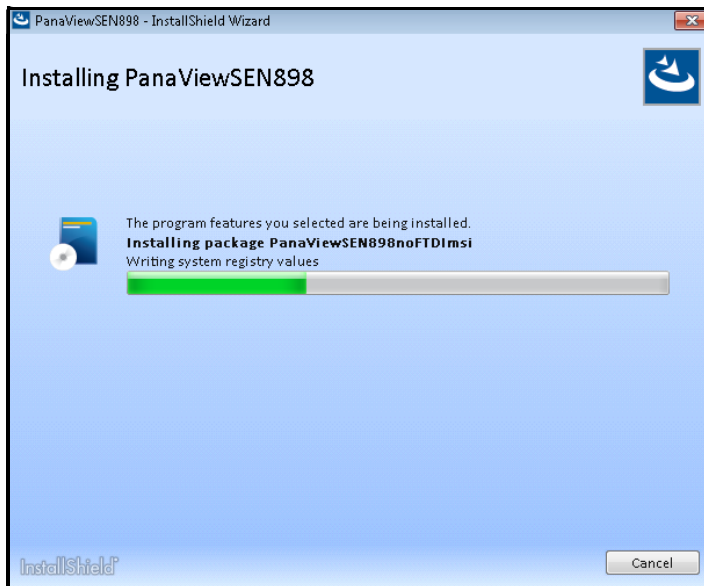
Figure 4: Setup Type Screen

Figure 5: Installing Panaview Screen

5. Click [Extract] button from dialog box (see the Figure 6 below) to extract and install FTDI CDM drivers. The PanaView may be installed by clicking on [Cancel] button if FTDI CDM drivers are already available.

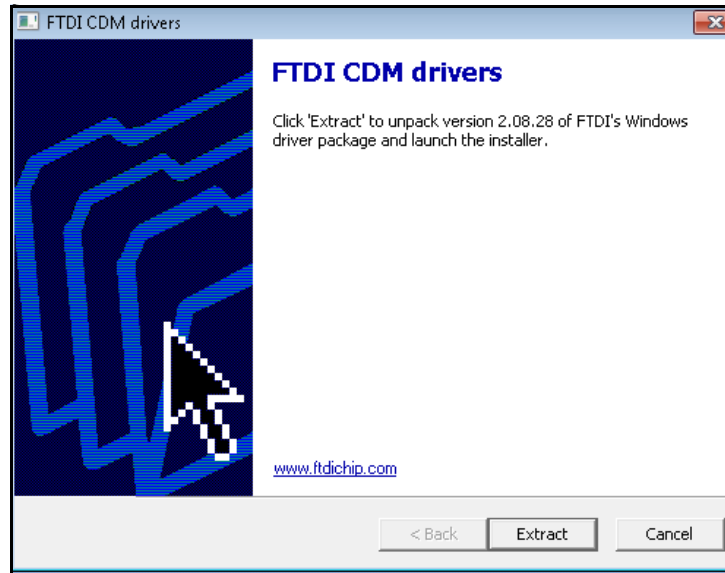**IMPORTANT:** *The communication ports will not work if FTDI CDM drivers are unavailable in the computer.*

Figure 6: FTDI CDM drivers Screen

6. After extracting FTDI CDM drivers, the dialog box shown in Figure 7 below opens. Click [next] to install software drivers that some computer devices need in order to work.
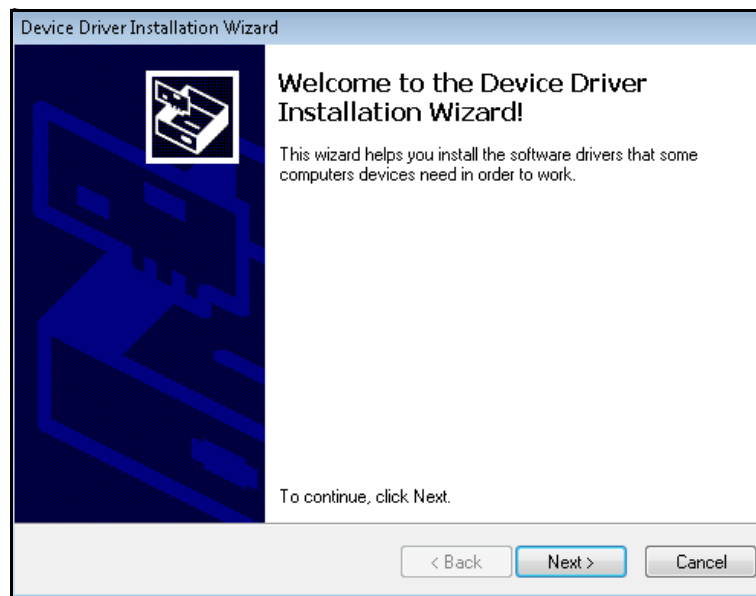
Figure 7: Device Driver Installation Screen

Note: The PanaView may be installed by clicking on [Cancel] *button.*

7. After Successful installation of FTDI CDM drivers, the dialog box shown in Figure 8 below opens. Click [Finish] to continue with PanaView installation.
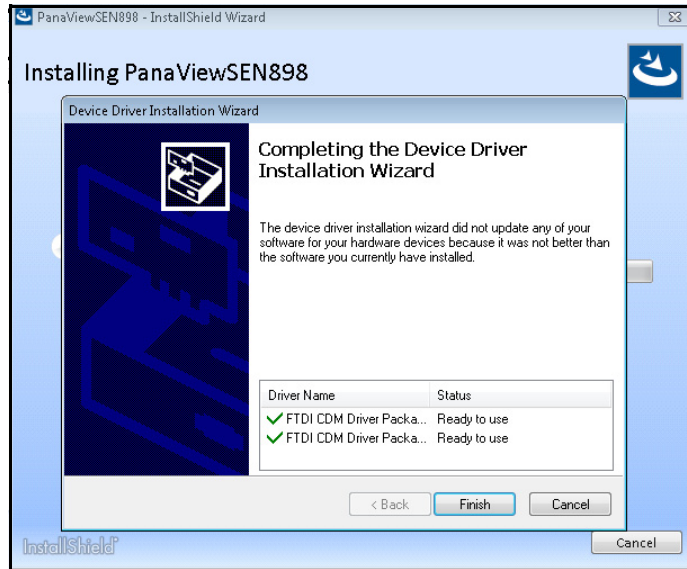
Figure 8: Successful Device Driver Installation Screen

8. After all of the PanaView files have been copied to your hard drive, the screen shown in *Figure 9* below opens. Click [Finish] button to close the InstallShield Wizard.

Figure 9: InstallShield Wizard Completed Screen

PanaView may be launched either by selecting PanaView in the *Windows Start Menu* or by double-clicking a *PanaView Shortcut* (created by the user) on the Windows desktop.

Proceed to the next section to set up your hardware.

2.4   Hardware Installation

2.4.1   Installation Requirements

After the PanaView software has been installed in accordance with the instructions in the previous section of this chapter, the system hardware must be properly set up. To complete this task, the following items are required:

- A personal computer or laptop computer with PanaView installed and with either an available Serial Port or an available USB Port equipped with an *RS232-to-USB* converter.

- A Panametrics instrument that has been configured for use with PanaView and which has an available serial port or Ethernet interface.

Note: *Check with Panametrics to make sure that your instrument is equipped with the necessary hardware and software versions for PanaView compatibility.*

- For RS232 applications, a serial cable with the proper connectors for the available serial ports (typically, this will be a cable with female DB-9 connectors at both ends)

- For RS485 applications, communications must be sent through an *RS485-to-RS232* converter.

Note: *The RS232 standard specifies a maximum cable length of 50 feet. For longer cables, consult Panametrics for details.*

2.4.2   Installation Procedure

If all of the hardware requirements have been met, proceed as follows for RS232/RS485 applications:

1. Set up the Panametrics instrument in accordance with the instructions provided in the *User's Manual* supplied with the instrument.

2. Switch OFF the Panametrics instrument.

CAUTION!   **Failure to switch off the instrument before proceeding to the next step may cause damage to the personal computer and/or to the instrument.**

3. Using the serial cable, connect the serial port on the personal computer to the serial port on the instrument.

4. Switch ON the Panametrics instrument.

Your system is now ready to use the PanaView interface. Proceed to *Chapter 3.“Initial Setup”*, for instructions on using the PanaView software.

[no content intended for this page]

Chapter 3.   Initial Setup

3.1   Introduction

Before proceeding with this chapter, make sure that the PanaView software has been installed in accordance with the instructions provided in *Chapter 2."Installation"*. Also, be certain that the personal computer has been restarted since the completion of the installation procedure. Then, follow the instructions in this chapter to perform the initial PanaView configuration.

3.2   Starting PanaView

The PanaView program may be launched from the Windows desktop in any of the following conventional ways:

- Use *"My Computer"* to navigate to the PanaView directory and double-click *"PanaView.exe"* file

- Use *"Windows Explorer"* to navigate to the PanaView directory and double-click *"PanaView.exe"* file

- Use the *"Start Menu"* to navigate to the PanaView listing and click on it

- Double-click on a PanaView *"Shortcut"* that was created on the desktop for this purpose.

Note: *If necessary, consult your Windows documentation for detailed instructions on any of the above procedures.*

Proceed to the next section for instructions on completing the first-time startup of PanaView.

3.3   First-Time Startup

Launch the PanaView program by one of the methods listed in , and proceed as follows:

1. The *Version number* of your PanaView software, which may not be the same as the example in *Figure 10* below, is shown in the initial screen.
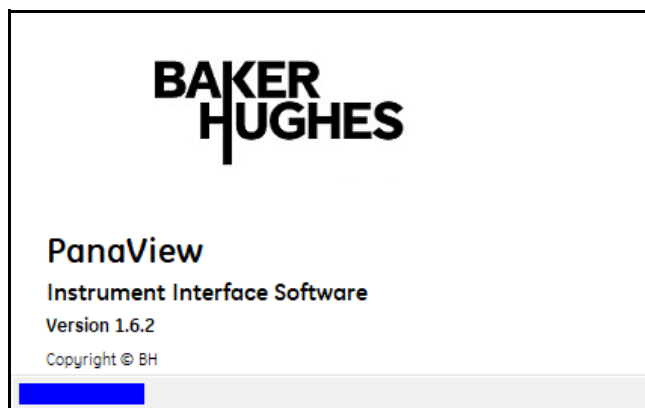
Figure 10: Initializing Screen

Note: *When PanaView is launched for the first time after installation, the following directories are created:*

   • C:\GEData\PanaViewSEN898\Logs

   • C:\GEData\PanaViewSEN898\Chart

   These directories are used to store any Log or Chart (Graph) files *that are generated during your PanaView sessions.*

2. As shown in *Figure 11* below, the default initial PanaView window contains only the following basic components of the interface (listed from top to bottom):

Note: *To make the image in* Figure 11 *below more readable on this page, the window was compressed both vertically and horizontally from its actual dimensions.*
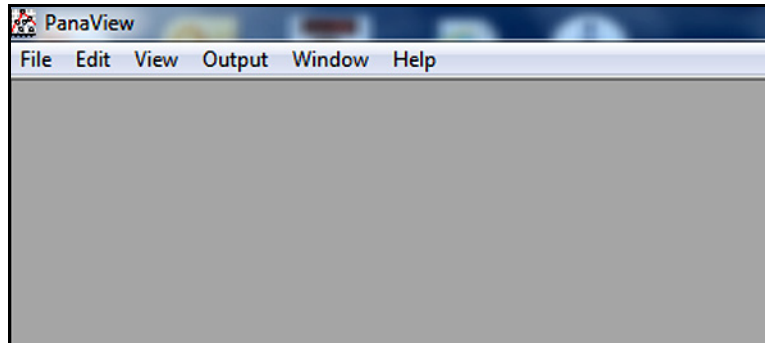

Figure 11: The Basic PanaView Window

- **Title Bar** - shows the PanaView name on the left side, and the standard Windows control boxes on the right side

- **Menu Bar** - contains the *File, Edit, View, Output, Window,* and *Help* menus on the left side

- **Display Window** - by default, it is blank on initial startup

- **Status Bar** - by default on initial startup, it shows status messages (see *Figure 13 on page 13*) such as: date, time, number of active logs, and number of communication errors (from left to right)

For instructions on customizing the default startup window to make the interface more personal, proceed to the next section.

3.4 The View Menu

Prior to setting up communications with a meter, the *"View"* menu (see *Figure 12* below) provides three options for customizing the PanaView interface:

- Comm Status (Off by default)

- Status Bar (On by default)

- Preferences

Note: *The* Refresh *option in the* View *menu is not active at this time.*
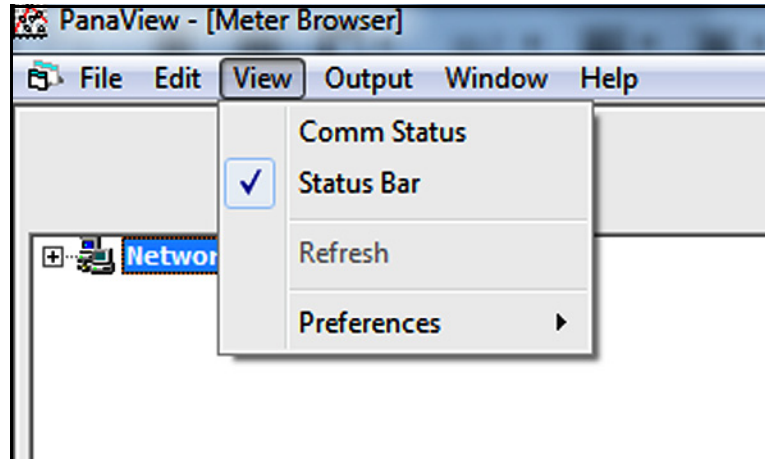
Figure 12: The View Menu

Access the *"View"* menu by clicking on it in the menu bar, and proceed to the appropriate section for a discussion of the options listed above.

3.4.1 Comm Status

This option permits the user to toggle communications status bar to ON and OFF. The default state is *"Off"* as indicated by the absence of a check mark in *Figure 12 on page 13*. When toggled *"On"*, the Comm Status bar appears just above the main Status bar (see *Figure 13* below) and displays the following serial communications categories, from left to right:
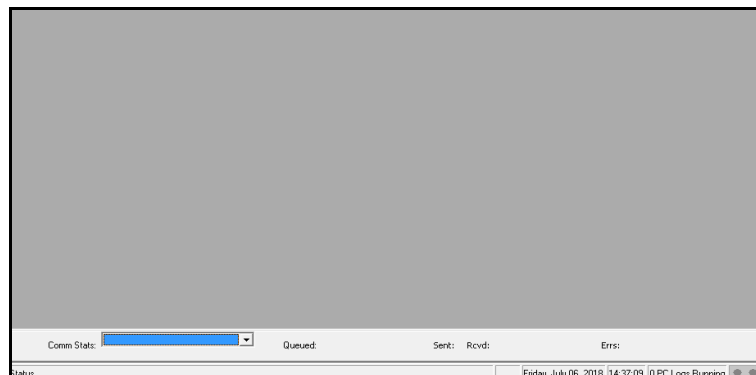
Figure 13: The Comm Status Bar

Note: To make the image in Figure 13 more readable on this page, the window was compressed horizontally from its actual dimensions.

- "Comm Stats: port number" on page 14

- "Queued" on page 14

- Sent

- Rcvd

- Errs

Of course, all of the above categories will be empty, unless PanaView has actively engaged in serial communications.

Note: The Comm Status bar reverts to its default "Off" state whenever PanaView is closed.

3.4.1.1   Comm Stats: port number

If a user wish to see command queue for different COM port numbers or TCP/IPs, use [Comm Stats] dropdown button on communications status bar and select appropriate COM port number or TCP/IP.

3.4.1.2   Queued

The maximum allowed queue is 1000. If user keeps continue to collect and log data, the *PanaView* alerts with a *Warning Message* at 80% of queues limit.
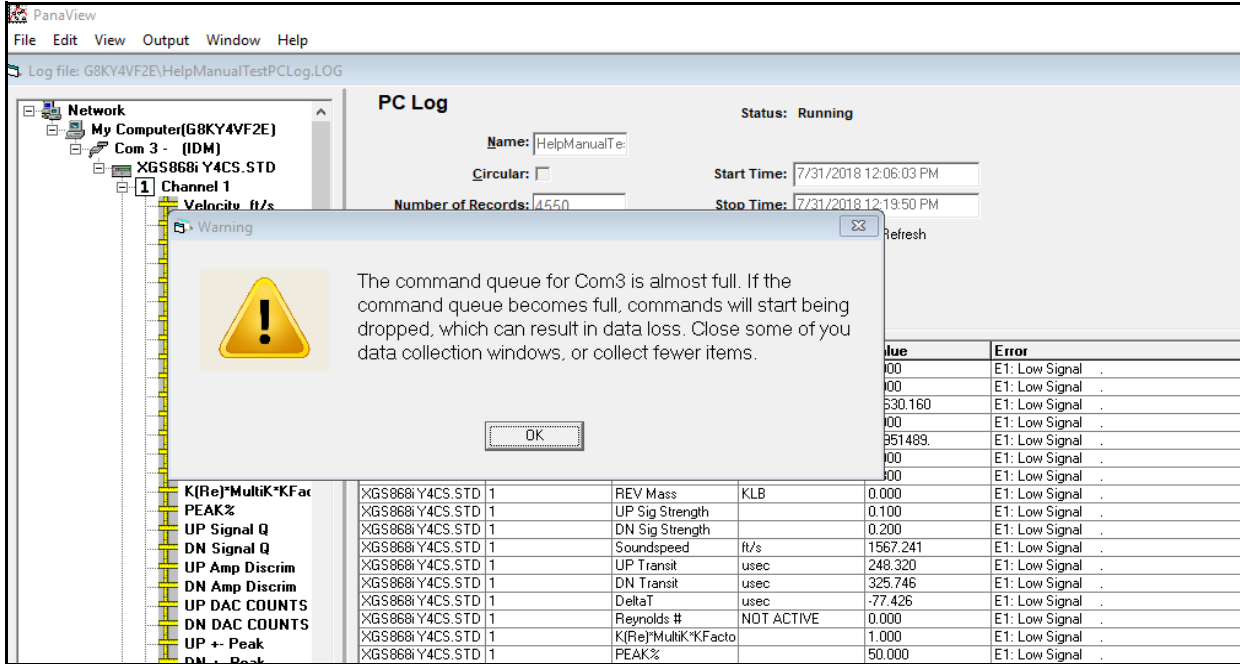
3.4.2 Status Bar

The main *Status* bar shown in *Figure 13 on page 13* is always visible when PanaView is first started. However, it may be toggled on and off at any time during a PanaView session by selecting or deselecting it in the *"View"* menu. Its current state is indicated by the absence or presence of a check mark to its left in the *View* menu.

The decision to turn the Status Bar *"On"* or *"Off"* is based on a balance between information and display area. Turning the Status Bar *"Off"* creates a larger display area, but the information displayed is no longer visible.

3.4.3 Preferences

To access the *"Preferences"* option (see *Figure 12 on page 13*), click on it in the *"View"* menu. Then, click on any of the tabs and proceed to the appropriate section for instructions.

Note: *Within any of the tabs, click* [Apply] *button and then the* [OK] *button to accept any changes and then close the* "Preferences" *box. To abort the process, click the* [Cancel] *button instead.*

3.4.3.1   The Database Tab

In the *"Preferences"* box, click the *"Database"* tab as shown in *Figure 14* below to display the currently used database files (**.mdb*). If alternative files are available from previous PanaView installations on the same computer or from a PanaView installation on a different computer, the *PanaView* database file or the *Meter Configuration* database file may be changed by clicking on the button to the right of the appropriate text box.
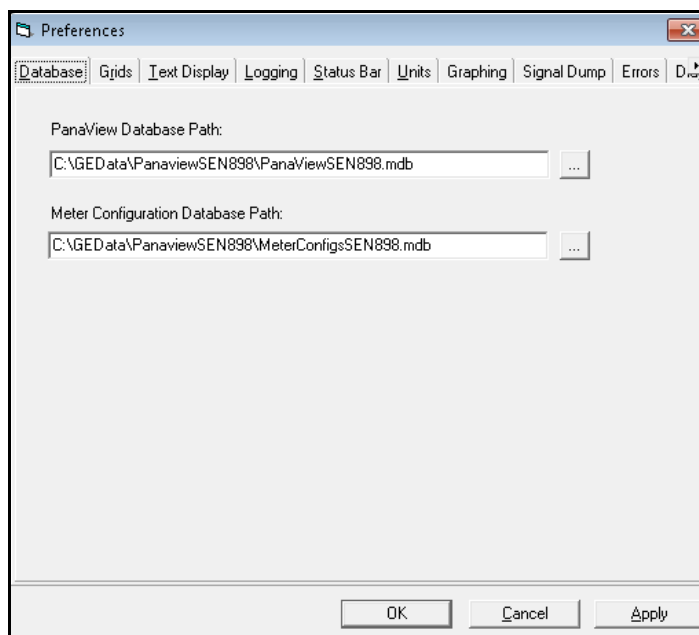
Figure 14: The Database Tab

3.4.3.2   The Grids Tab

In the *"Preferences"* box, click the *"Grids"* tab as shown in *Figure 15* below to display the current grid settings. The settings for either of the following grids may be revised:

- For the *Log Data Grid*, the [Font], [Text Color], and [Background Color] may be changed by clicking on the appropriate button(s). If a *Default Layout File* (*.grx) has been created (see *Chapter 6."Data Handling"*), it may be loaded by clicking on the button to the right of that text box.

- For the *Meter Browser Grid*, the [Font], [Text Color], and [Background Color] may be changed by clicking on the appropriate button(s).

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
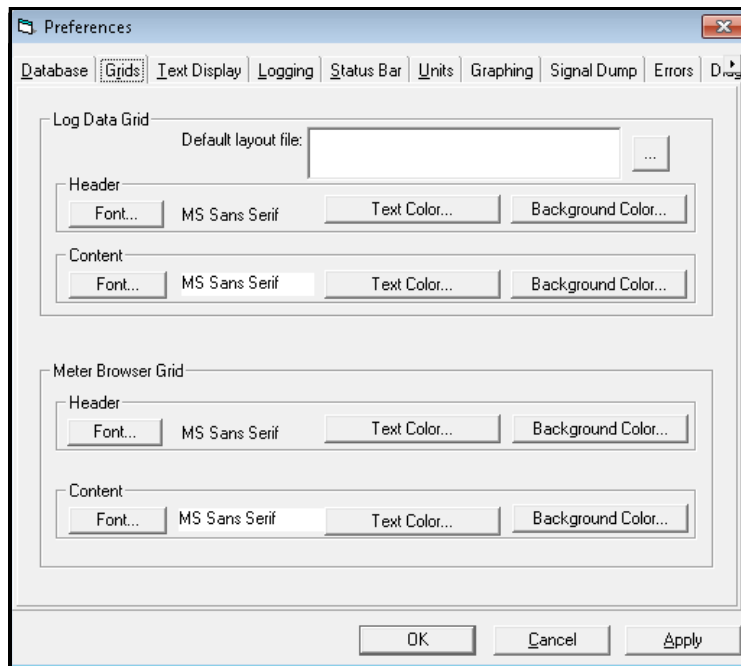
Figure 15: The Grids Tab

3.4.3.3   The Text Display Tab

In the *"Preferences"* box, click the *"Text Display"* tab (see *Figure 16* below) to display the current settings. The settings for either of the following displays may be revised:

- For *Graphing,* the *Default Configuration File* is initially blank. If a *Default Configuration File* (*.oc2) has been created, it may be loaded by clicking on the button to the right of that text box.

- For *Text,* the [Background Color] and [Text Color] may be changed by clicking on the appropriate button(s).

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
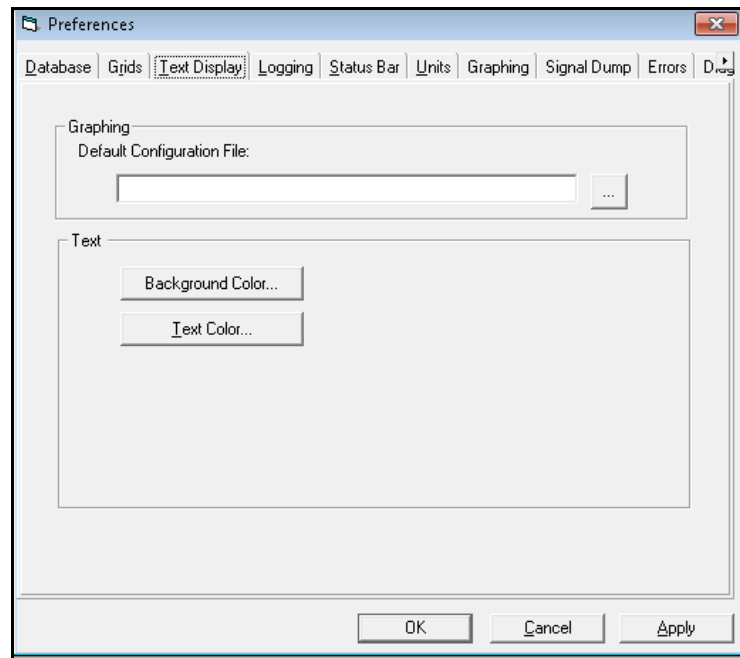
Figure 16: The Text Display Tab

3.4.3.4 The Logging Tab

In the *"Preferences"* box, click the *"Logging"* tab as shown in *Figure 17* below to display the *Log File Directory*. To specify a different directory for storing log files, click button to the right of the text box, select directory and click [Apply] button to save the changes.
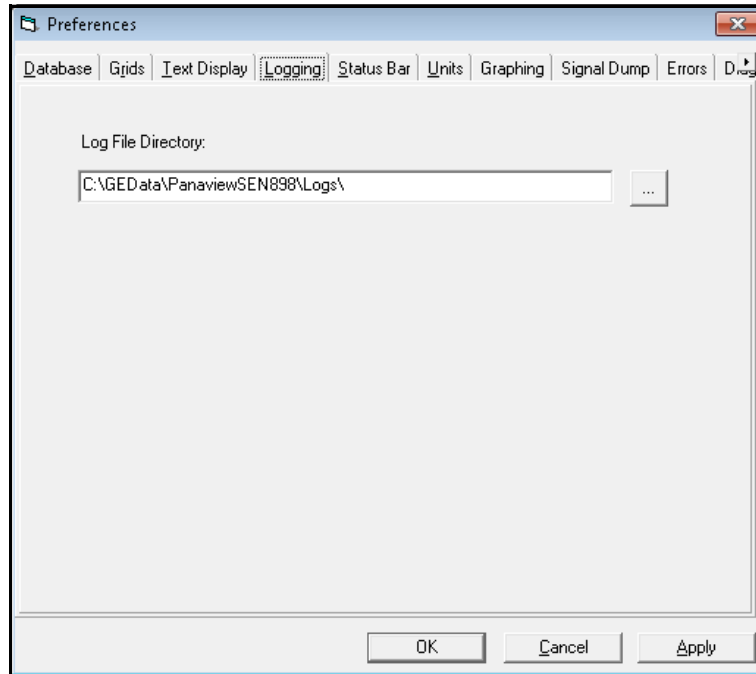
Figure 17: The Logging Tab

3.4.3.5 The Status Bar Tab

In the *"Preferences"* box, click the *"Status Bar"* tab as shown in *Figure 18* below to display the current settings. The settings for any of the following items may be revised:

- The *Font* may be changed by clicking on the [Select Font] button and specifying the new font, style and size.

- Check the selection box to display *Status Messages* or uncheck the selection box to turn off *Status Messages*.

- Check the selection box to display the *Date* or uncheck the selection box to turn off the *Date*. If the date is turned on, select the desired date *format* from the drop down list box.

- Check the selection box to display the *Time* or uncheck the selection box to turn off the *Time*. If the date is turned on, select the desired time *format* from the drop down list box.

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
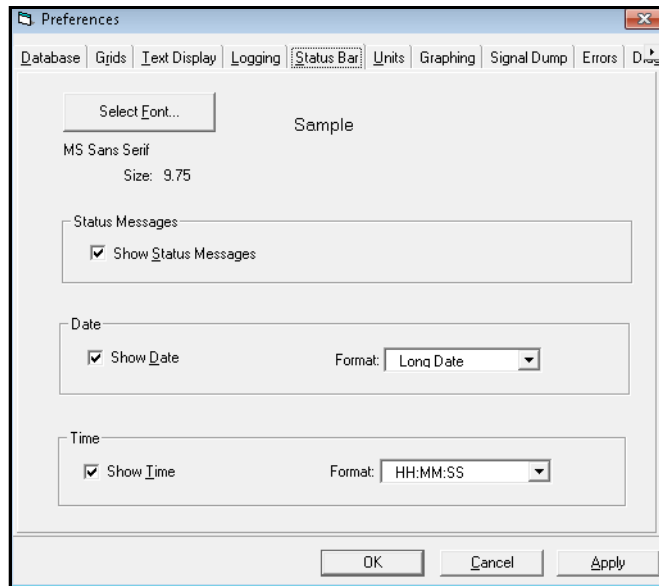
Figure 18: The Status Bar Tab

3.4.3.6   The Units Tab

Note: *This tab applies to* PT878, PM880 *and* PT878GC *meters only.*

- In the *"Preferences"* box, click the *"Units"* tab (see *Figure 19* below) to display or edit the available units.

- Click the radio button to select either *metric* or *English* units.

- For the PT878GC, you can also select from four pressure units: kPa, bar, psia and MMHG. Click desired units from the drop-down list.

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
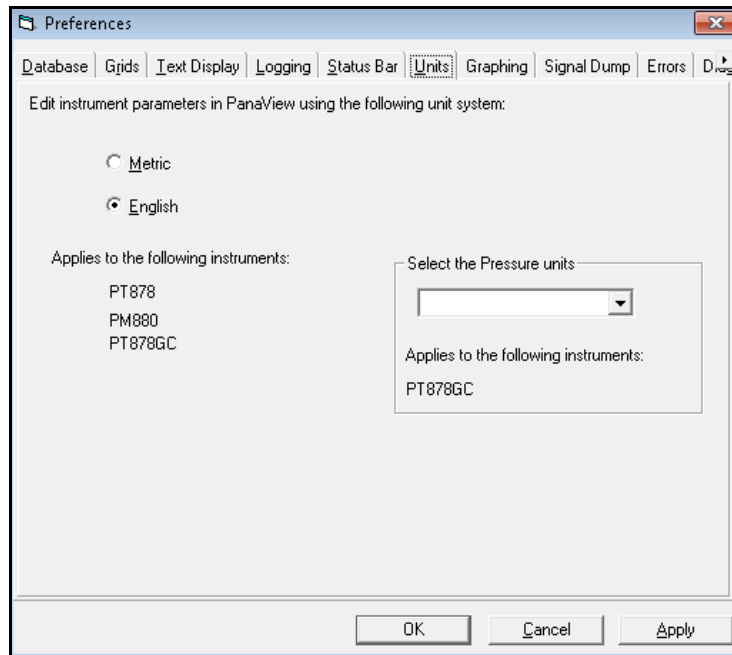
Figure 19: The Units Tab

3.4.3.7 The Graphing Tab

In the "*Preferences*" box, click the "*Graphing*" tab as shown in Figure 20 below to display the current settings. The settings for any of the following items may be revised:

- **Graph Items Limit:** Click in the text box and specify the limit.

- **Timeline Maximum Display (minutes):** Click in the text box and specify the limit.

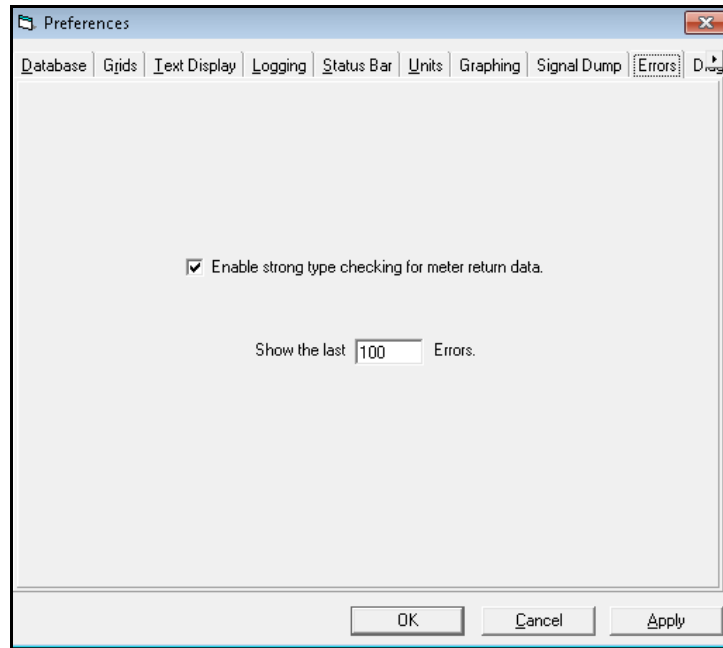Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
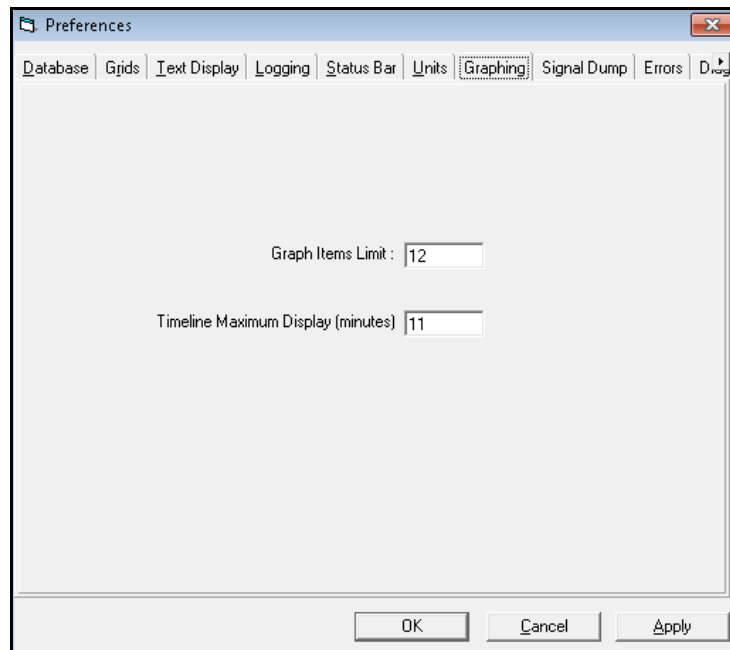
**Figure 20: The Graphing Tab**

3.4.3.8   The Signal Dump Tab

In the *"Preferences"* box, click the *"Signal Dump"* tab as shown in Figure 21 below to display the current settings. The settings for any of the following items may be revised:

- Click the radio button to select or cancel the selection of *"Include full header"*.

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
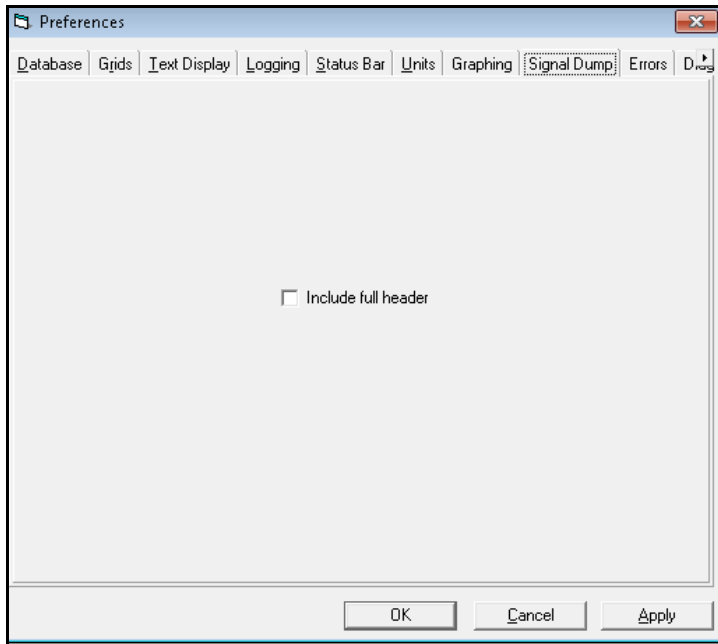
Figure 21: The Signal Dump Tab

3.4.3.9 The Errors Tab

In the "*Preferences*" box, click the "*Errors*" tab as shown in Figure 22 below to display the current settings. The settings for any of the following items may be revised:

- Click the radio button to select or cancel the selection of *"Enable strong type checking for meter return data"*.

- The default Number of errors displayed is set to 100. Click in the text box and make changes if required.

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.

Figure 22: The Errors Tab

3.4.3.10 The Diagnostic Dump Tab

Note: *This tab applies to Safire, Sentinel and LCT8 meters only.*

In the "*Preferences*" box, click the "*Diagnostic Dump*" tab as shown in Figure 23 below to display the current settings. The settings for any of the following items may be revised:

- The default Number of records per file is set to 10000. Click in the text box and make changes if required.

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
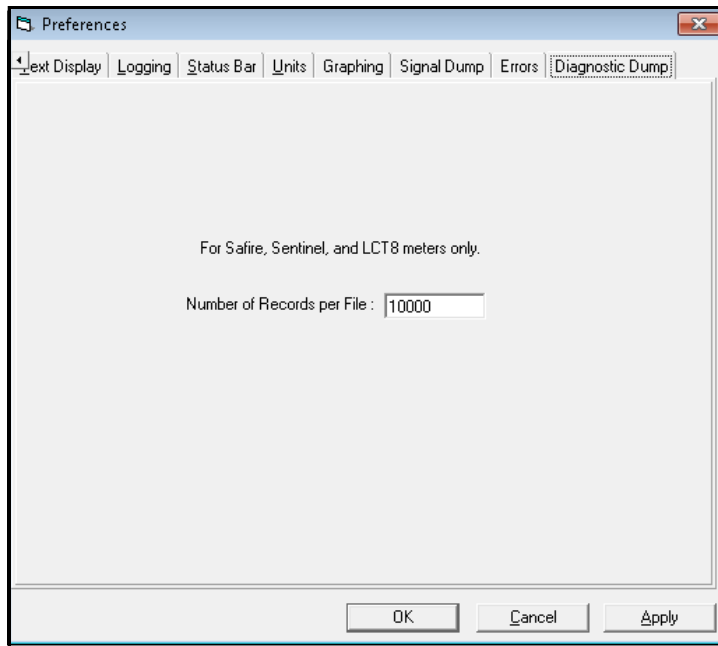
Figure 23: The Diagnostic Dump Tab

3.5   The Help Menu

The *"Help"* menu, as shown in *Figure 24* below, is the primary source of information regarding the PanaView software and your PanaView installation. This menu includes the following three options:

- Contents

- Search for Help On...

- About PanaView

- Version Information
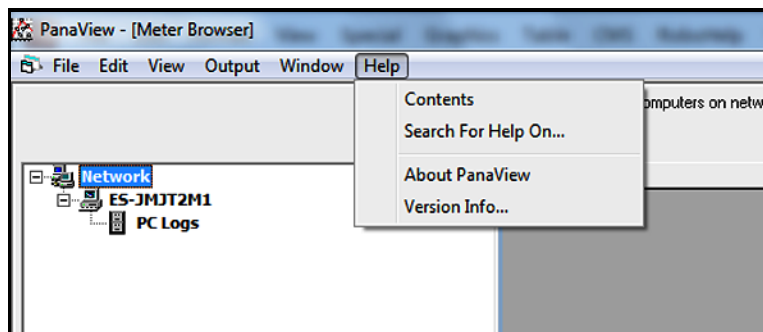
Figure 24: The Help Menu

Access the *"Help"* menu by clicking on it in the menu bar, and proceed to the appropriate section for a discussion of the options listed above.

3.5.1   Contents

The *"Contents"* option lists the available PanaView general information categories in the online help file in a *table of contents* format. To access this information, simply click *"Contents"* option and then click desired topic in the listing that appears.

3.5.2   Search For Help On...

The *"Search For Help On..."* option lists the available PanaView general information categories in the online help file in an *index* format. To access this information, simply click *"Search For Help On..."* option and then click desired topic in the listing that appears.

3.5.3   About PanaView and Version Information

The *"About PanaView"* option provides information on your version of the software and about your computer system. To access this information, simply click *"About PanaView"* option and a screen similar to the one on the left in *Figure 25* below opens. To access data on the PanaView components for this version, click on *"Version Info"* and a screen similar to the one on the right in *Figure 25* below opens.

- The screen shown on the left in *Figure 25* below shows the *version number* of the currently installed copy of PanaView, which may differ from the example shown here.

- The screen on the right in *Figure 25* below, which includes the version information, lists data on the various components of the PanaView software.

- To exit the *"Help"* menu and return to the main PanaView window, simply click [OK] button. Otherwise, to examine the information relating to your personal computer system, click [System Info...] button.

Figure 25: The About PanaView and Version Information Screens

3.6   Exiting PanaView

PanaView may be closed by any of the methods that are used for any other standard Windows program. The two most common methods are:

- Click *"File"* to open the file menu and then click on "Exit" to close the program

- Click [X] control box on the right side of the title bar

Proceed to *Chapter 4."Setting Up a Meter"*, to continue the setup of your PanaView software.

Chapter 4.   Setting Up a Meter

4.1   Introduction

After your hardware and software have been installed as described in *Chapter 2."Installation"* and *Chapter 3."Initial Setup"* of this manual and in the instrument's *User's Manual*, the procedure for establishing communications with a meter may be started. To set up a meter in PanaView, the following steps must be completed in the order described in this chapter:

- "Opening the New Meter Browser" on page 27

- "The PanaView Network Tree" on page 27

- "Adding a New Communication Port" on page 29

- "Setting up Ethernet Communications" on page 32

- "Adding a New Meter" on page 33

- "Adding an Additional Meter" on page 40

Proceed to the next section to learn how PanaView connects to a Panametrics instrument.

4.2   Opening the New Meter Browser

The first step in setting up a meter is to open the *"New Meter Browser,"* which is located in the *"File"* menu. To accomplish this, click *"File"* menu on the menu bar, and then click *"New Meter Browser"* option (see *Figure 26* below). For setting up Sentinel LCT4 and LCT8 meter, refer to Appendix B. "Running PanaView for SEN898 meter"
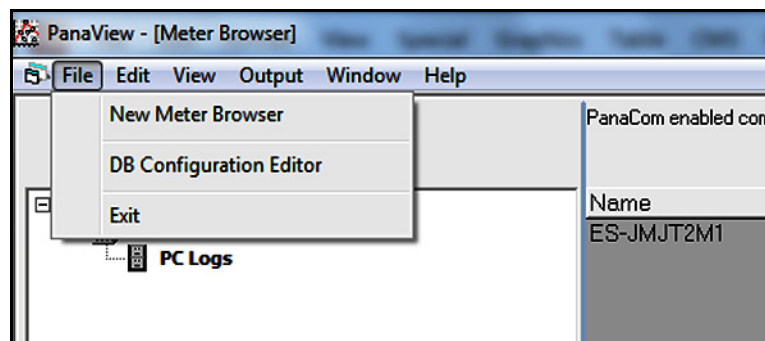
Figure 26: File Menu

Proceed to the next section to select the computer name in the PanaView network tree.

4.3   The PanaView Network Tree

The *"New Meter Browser"* window consists of two panes:

- *PanaView network tree* pane on the left

- The *details* pane on the right

Figure 27 below shows the initial appearance of the browser window. With the *network* branch highlighted in the left pane, the *computer name* that was specified during the installation procedure is listed in the right pane. Any other computers that were installed on the network are also listed here.
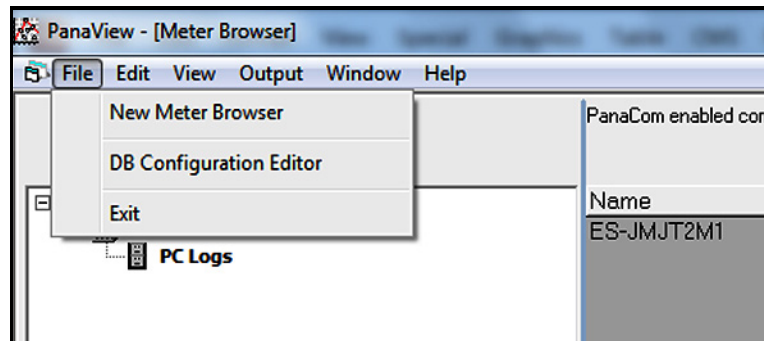
Figure 27: Network Branch

Note: *The network tree works just like the directory tree that is used in Windows Explorer. That is, if a branch has a "+" sign to its left, that branch contains other branches. Just click "+" sign to expand the branch and display those other branches. The "+" sign is then replaced by a "–" sign its left. To collapse a branch with a "–" sign.*

With the *"New Meter Browser"* window open, complete the following steps:

1. Expand the *network* branch by clicking on the "+" sign to its left. Then, highlight the *My Computer (Name)* branch and the *Meter Browser* window will look like *Figure 28* below.
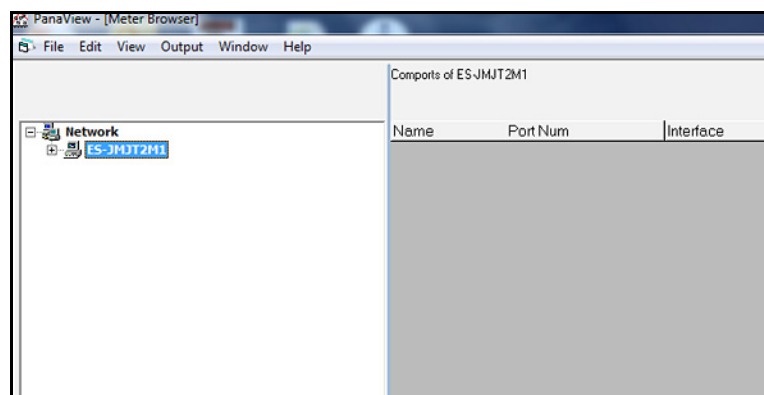
Figure 28: My Computer Branch

Note: *The right pane in* Figure 28 *above lists all of the communication ports, along with their configuration parameters, that are currently assigned to the named computer. If this is the initial meter setup, the list is empty.*

2. Fully expand the network tree by clicking on the "+" sign next to the *My Computer (Name)* branch (see *Figure 29* below).
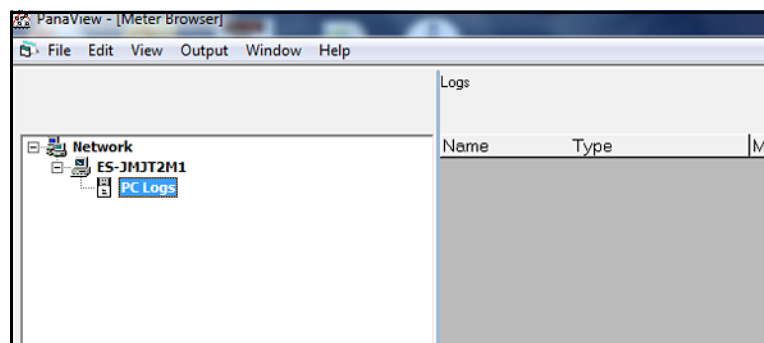
Figure 29: PC Logs Branch

Note: *Step 3 is just included for reference, as PanaView's logging feature is discussed in* Chapter 6."Data Handling".

3. Click *PC Logs* branch and all available PC logs (and their parameters) that have been created on the named computer are listed in the details pane on the right. If no logs have yet been created, the details pane is empty.

IMPORTANT: *During initialization, PanaView creates special subdirectories to store its log and chart (graph) files (see "First-Time Startup" on page 11). If these subdirectories are removed, attempts to access the PC logs will generate an error message.*

4. Highlight the *My Computer (Name)* branch by clicking on it.

Proceed to the next section to add a communication port to the selected computer.

4.4 Adding a New Communication Port

Before a meter can be set up on the network, the serial communications port to be used by that meter must be added to the PanaView network and configured. To accomplish this, proceed as follows:

1. Open the *"New Meter Browser"* window and expand the network tree as shown in *Figure 28 on page 28*. Then, click and highlight the *My Computer (Name)* branch.

2. Pull down the *"Edit"* menu by clicking on it in the menu bar.

3. Click *"New"* menu option to select it, and a submenu opens with two choices on it (see *Figure 30* below).
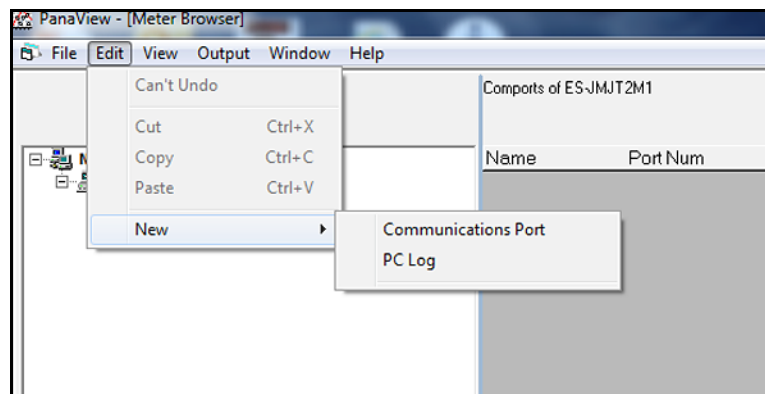
Figure 30: Edit Menu

Note: *The only available option on the* "Edit" *menu is* "New." *The other options become active during relevant procedures.*

4. Click *"Communications Port"* option to select it (see *Figure 31 on page 30*). The dialog box shown in *Figure 31* below opens, with *"Untitled/Empty"* as the default *"Name."*
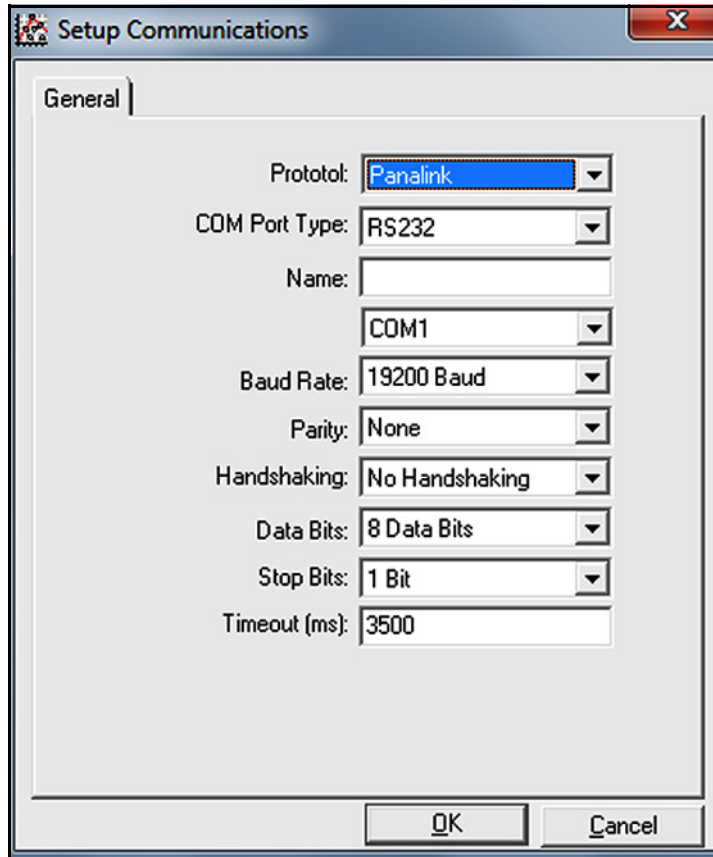
Figure 31: Setup Communications Screen

The dialog box in *Figure 31* above permits the user to name the communication port (the name *"Comport"* is used for this example) and to set up all of its parameters.

IMPORTANT: *During meter initialization, the baud rate specified above must be the same as the meter's baud rate setting.*

The following serial port parameters are available in the *Setup Communications* dialog box:

⚠️ **CAUTION!**   **Contact your Panametrics representative before entering communication port settings different from those of your meter. Changing these settings may render your meter inoperable and require reloading of the meter software.**

Note: *The* "Name" *and* "Timeout (ms)" *parameters must be entered manually. All others are selected by clicking on the down arrow to the right of the list box to drop down a list of available options.*

• **Protocol** - Select the type of protocol
  Default: Panalink
  Options: Panalink, IDM

• **Port Number** - select the number of the serial port on the PC
  Default: Depends on the PC's specific hardware configuration
  Options: Depends on the PC's specific hardware configuration

• **Name** - Enter a name for the port (optional)
  Default: Untitled
  Options: Enter any name that fits in the text box

- **COM Port Type** - Select the type of serial port available
  Default: RS232
  Options: RS485HD, RS485FD, IR232®, TCP/IP (Ethernet)

IMPORTANT: *If you select TCP/IP, the menu changes. Proceed to "Setting up Ethernet Communications" on page 32.*

Note: *If you select IR232, you must disable the drivers in the infrared device connected to your PC for the device to work with PanaView. From the* Control Panel*, click* System *icon, and then on the* Hardware *tab. Click on* Device Manager*, and then on the specific infrared device listed under* Infrared Devices*. Finally, click on* Disable *to disable the device drivers.*

- **Baud Rate** - Select the data transfer speed to be used
  Default: 115,200 Baud
  Options: 4800, 9600, 19200, 38400, 57600, 115200

Note: *A baud rate of 115,200 is suitable for almost all applications. If you experience periodic communication reliability problems, you may wish to consider lowering the baud rate on your instrument and in PanaView.*

- **Parity** - Select the parity setting to be used
  Default: None
  Options: Even, Mark, None, Odd, Space

- **Handshaking** - Select the type of handshaking protocols used
  Default: No Handshaking
  Options: No Handshaking, XON/XOFF, RTS/CTS, RTS and
  XON/XOFF

- **Data Bits** - Select the number of data bits in a word
  Default: 8 Data Bits
  Options: 7 Data Bits, 8 Data Bits

- **Stop Bits** - Select the number of stop bits in a word
  Default: 1 Bit
  Options: 1 Bit, 2 Bits

- **Timeout (ms)** - Enter the time interval that must pass before a
  communications attempt is aborted
  Default: 3000 (5000 if you choose IDM as Protocol)
  Options: Keep the default value unless instructed otherwise

IMPORTANT: *Remember that the choices made above must match those that were made in setting up the meter's serial port.*

5. After all of the communications port parameters have been set, click [OK] button (see *Figure 31 on page 30*).

Note: *To abort the addition of the communications port, click* [Cancel] *button instead of the* [Apply] *button.*

6. Wait a few seconds for the information to be processed and registered (the buttons are greyed out during this period). The new successfully created communications port will be added to the network tree as shown in Figure 32 below.
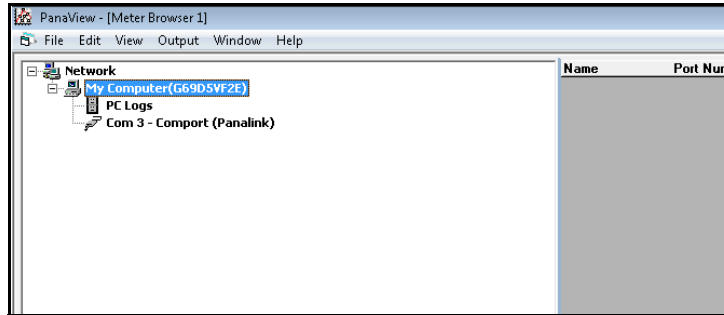
Figure 32: Added New Communication Port to Network Tree

Proceed to *"Adding a New Meter" on page 33* to set up a new meter on the newly installed communication port.

4.5 Setting up Ethernet Communications

If user selected TCP/IP in *Step 4 on page 29*, a *Setup Communications* window similar to *Figure 33* below opens.

1. Type in the desired *Name* and *Timeout* (in milliseconds).

2. In the *IP Address* text box, enter the IP address supplied with your documentation. In the *Port Number* box, enter the port number supplied with your documentation (The default number is **2101**).

3. Click [OK] to complete data entry. If the connection is successful, a *"TCPIP socket connected"* screen will open.
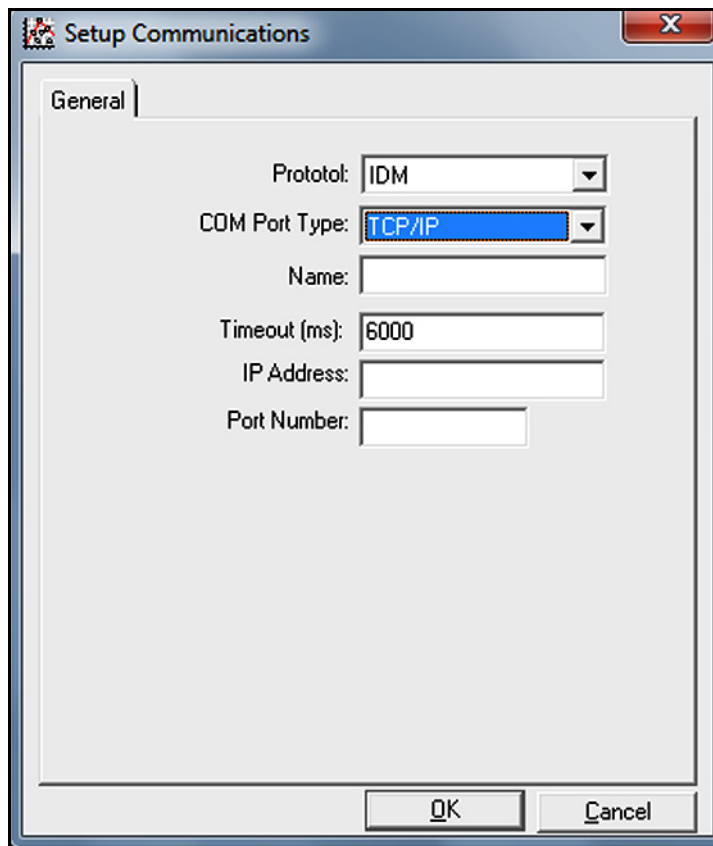
Figure 33: Setup Communications for TCP/IP

4.6 Adding a New Meter

A meter may be set up on any communications port that has been added to the network in accordance with the procedures in the "Adding a New Communication Port" on page 29. For earlier software versions, to manually add the first new meter to the PanaView network, proceed as follows:

1. Notice in *Figure 34* below that the network tree now has the newly configured communication port listed.
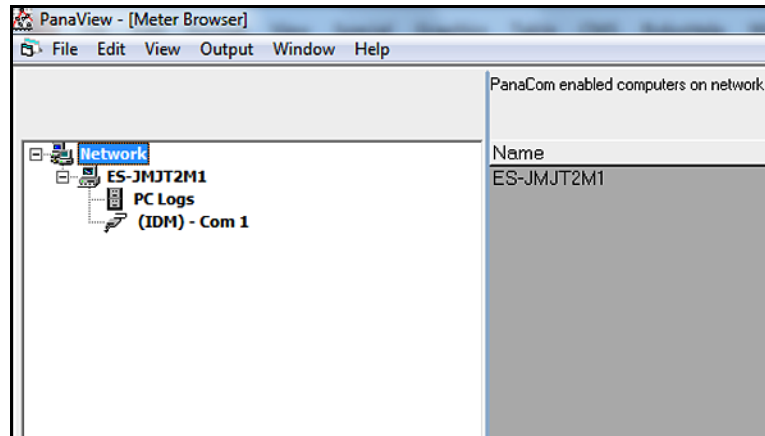
Figure 34: The New Serial Port Branch

Note: *In this example, the communication port has been named* "Untitled" *and is located on COM3 COM3 (see step 6,* "Adding a New Communication Port" on page 29 *for an example of titled communication port). Whatever name was entered in the setup process appears in the details pane if the communications port is highlighted.*

2. Click and highlight the communication port to which the meter will be added and then open the "*Edit*" menu on the menu bar (see Figure 35 below).

<p align="center">**OR**</p>

3. Using the right mouse button (right-click), click and highlight the communication port to which the meter will be added (see Figure 36 below)

4. Click *"New"* option in the *"Edit"* menu.

5. Click *"Meter"* menu option.
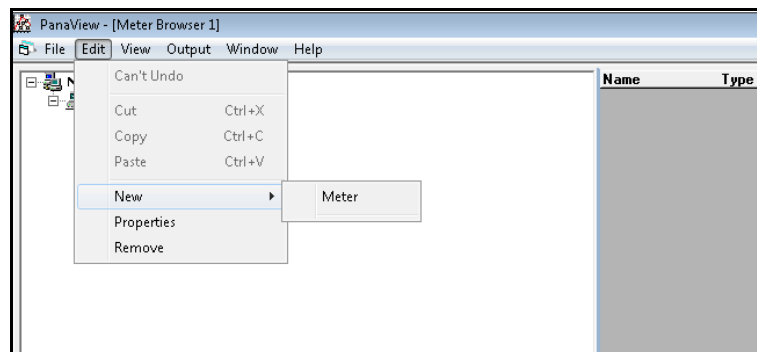
Figure 35: Add New Meter (using the Edit Menu)
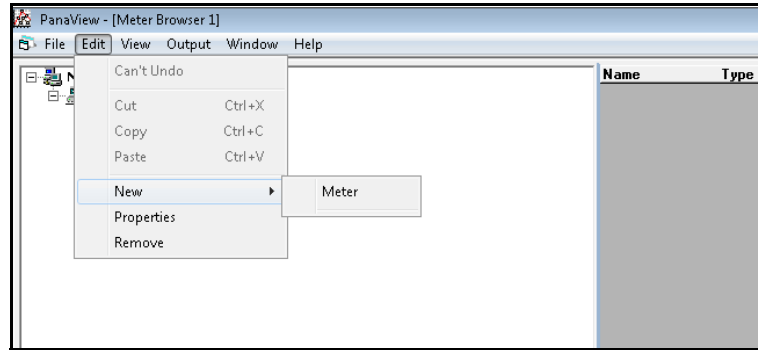
Figure 36: Add New Meter (using the Right-click option)

6. After selecting the "*New*" and "*Meter*" options, the dialog box shown in Figure 37 below opens (If *Panalink* selected as protocol while "Adding a New Communication Port" on page 29, go to step 7 in page 34). Enter *Network ID* or *Node ID* and click [OK] to initialize New Meter.
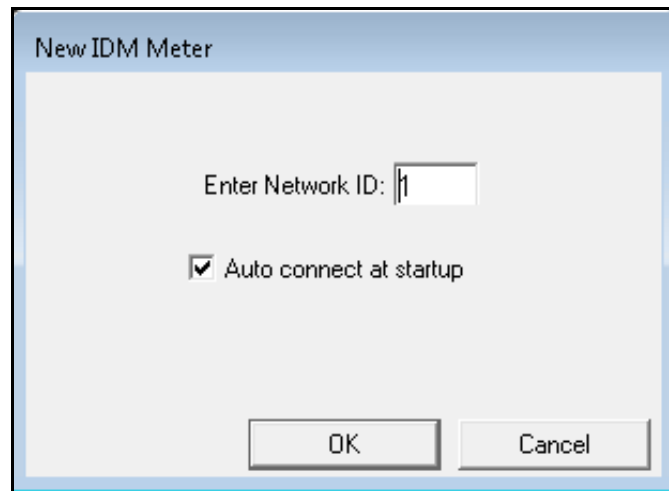
Figure 37: Add IDM New Meter

After the initialization has been completed, PanaView adds the new meter to the PanaView network tree. Go to "Adding a New Meter" on page 33 for further instructions.

7. After selecting the *"New"* and *"Meter"* options, the dialog box shown in Figure 38 below opens. Select the *"I don't know the node ID of the meter I am adding to the network"* radio button and then click [OK] button.

Note: *When installing the first meter on the network, even if you know the node ID assigned to the meter, it is more foolproof to allow PanaView to retrieve the information directly from the meter. If the* "I know the node ID of the meter I am adding to the network." *option is selected instead, go to* Step 12 on page 37.
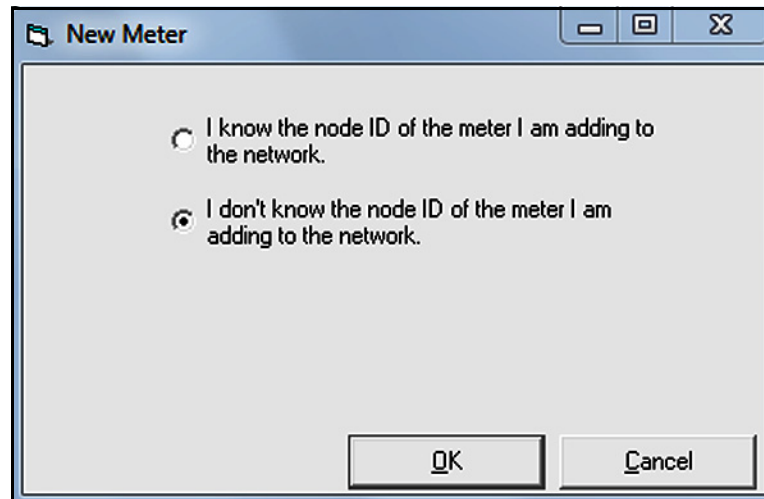
Figure 38: The Node ID Dialog Box

8. Select the *"It is the only meter connected to the communication port"* radio button from the dialog box (see *Figure 39* below) and then click [OK] button. In most instances, users connect their PC to one instrument only via a direct serial cable.
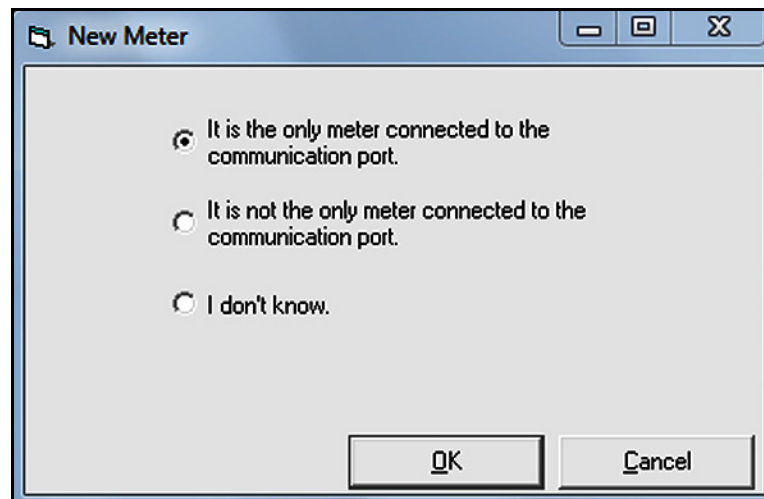
Figure 39: The Only Meter Dialog Box

9. Select the *"I wish to use this Node ID"* radio button on a dialog box showing the Node ID (16 in this example) of the meter (see *Figure 40* below) and then click [OK] button.

Note: PanaView gets this Node ID directly from the meter. Do <u>not</u> use a different Node ID for a single-meter setup.
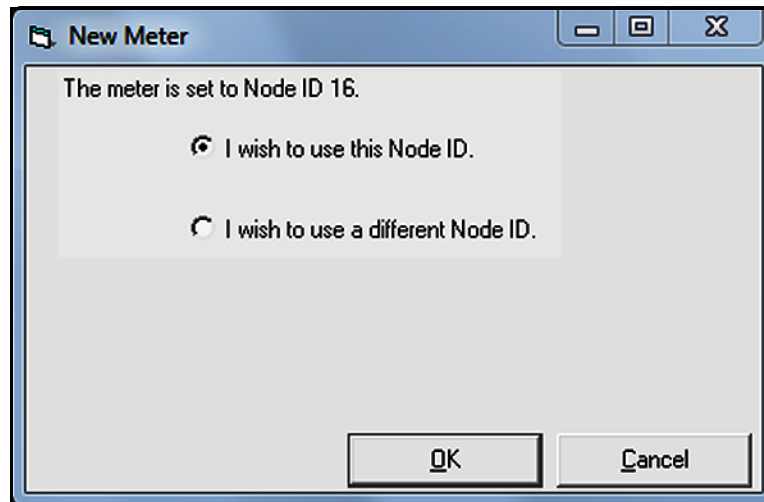
Figure 40: Node ID Confirmation

IMPORTANT: *Ensure that the meter is not Powered-off or already Connected by other user, otherwise the PanaView will throw an error (see Figure 41 below).*
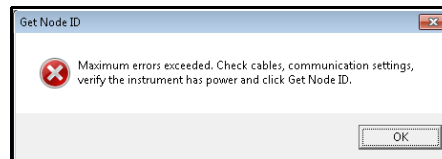
Figure 41: Get Node ID Error

10. At the dialog box shown in Figure 42 below, click [OK] button to add the meter and configure it.
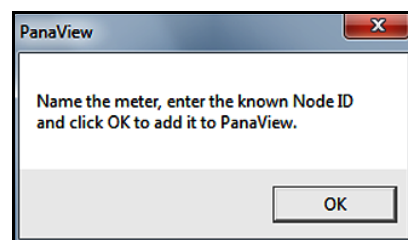
Figure 42: Confirmation Dialog Box

11. Enter a *name in dialog box* (see Figure 43 below) for the new meter. Click [OK] button to initialize the new meter and proceed from page 38.

The *Node ID* and *Meter Communication Parameters* have been entered automatically by PanaView. In addition, PanaView populates certain other fields, such as *Model Name, Firmware Version* and *PCI Order Number* with data retrieved from the Panametrics instrument.

Figure 43: Add Meter Dialog Box

12. Enter a *Name* and *Node ID* in dialog box (see *Figure 44* below) for the new meter and Click [OK] button to initialize the new meter.

Note: *If you don't remember or unsure about the Node ID, Click* [Get Node ID] *button in the dialog box and proceed from step 7 in page 34.*

The *Meter Communication Parameters* have been entered automatically by PanaView. In addition, PanaView populates certain other fields, such as *Model Name, Firmware Version* and *PCI Order Number* and retrieves data from the Panametrics instrument once the add new meter initialized.

Figure 44: Add Meter Dialog Box

After completing *Step 11 on page 36* or *Step 12* on page 37, **do not** make any inputs with either the mouse or the keyboard until the new meter initialization process is completed. While the meter is initializing, the information shown in *Figure 45* below is added to the new meter dialog box.

Figure 45: Initialization Screen

Note: *The "Clock" text box has been filled in with the current date and time, the meter data (an IGM in this example) has been added, and the active communications status is displayed along the bottom of the dialog box.*

After the initialization has been completed, PanaView adds the new meter to the PanaView network tree and automatically closes the *"Add New Meter"* dialog box (see *Figure 46* below).
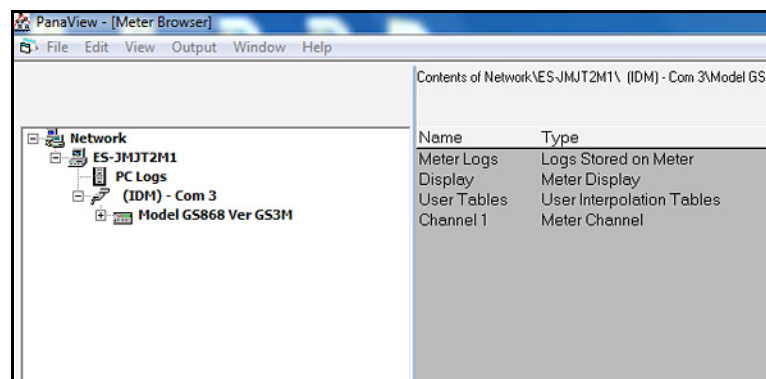
Figure 46: Updated Network Tree

Note: *A Panametrics GS868 flowmeter was used for this example, as is indicated in* Figure 46 *above. The information shown in the right pane and in the branches available under the* "New Meter" *branch in the left pane of the window reflect the specific meter that was actually installed.*

This completes the set up of the new meter in PanaView. Proceed to *Chapter 5."Running PanaView"* for information on using the PanaView interface to communicate with the attached meter. Otherwise, continue with the next section to install an additional meter.

4.7   Adding an Additional Meter

An additional meter may be added to the PanaView network at any time in either of the following situations:

- Replace the existing meter with a different one (see *"Replace the Existing Meter" on page 40*)

- Keep the existing meter and add an additional meter (see *"Keep the Existing Meter" on page 40*)

Proceed to the appropriate section for specific instructions.

4.7.1   Replace the Existing Meter

To replace a meter that is already installed on the PanaView network with a different meter on the same or different communication port, complete the following steps:

1.   Remove the existing meter from the network, as described in *"Removing the Meter" on page 48*.

Note: Ignore the steps "1 and 2" if you want to replace existing meter on the same communication port.

2.   Remove the existing communication port from the network, as described in the in *"Removing the Communication Port" on page 44*.

3.   Add the communication port back onto the network by following the instructions in *"Adding a New Communication Port" on page 29*.

4.   Add the replacement meter by following the instructions in *"Adding a New Meter" on page 33*.

Note: Failure to remove the old meter and/or communication port first may result in some of the old meter's properties (such as the name) being assigned to the new meter.

4.7.2   Keep the Existing Meter

To keep the existing meter and add an additional meter to a different communication port, complete the following steps:

1.   Add the new communications port to the PanaView network by following the instructions that begin in *"Adding a New Communication Port" on page 29*.

2.   Determine the *Node ID* of the second meter. Consult the *User's Manual* for the meter for instructions on finding the assigned Node ID in the meter's menu system.

3.   Change the Node ID of the existing meter to any value between 16 and 99 that is different from that of the new meter. Refer to *"Editing the Meter Settings" on page 46* for specific instructions.

IMPORTANT: *The new communication port must be different from the one to which the existing meter is already attached.*

4.   Add the new meter to the new communication port by following the instructions that begin in *"Adding a New Meter" on page 33*, with one exception:

   a.   At the Node ID dialog box (see *Figure 38 on page 35*), select the *"I know the node ID of the meter I am adding to the network"* option and Click [OK] button.

   b.   When you reach the dialog box shown in *Figure 44 on page 38*, enter the known Node ID for the second meter.

   c.   Click [Set Node ID] button to register the entered value, and then Click [OK] button to complete the process.

The PanaView network tree will now show two attached communication ports, with one meter attached to each port.

Chapter 5.   Running PanaView

5.1   Introduction

After at least one meter has been added to the PanaView network in accordance with the instructions in *Chapter 4."Setting Up a Meter"*, the many interactive features in the PanaView interface may be accessed. To navigate through the PanaView program, refer to the menu map in *Figure 85 on page 70*. If it is not already running, launch PanaView. A screen like the one shown in *Figure 47* below opens (the exact PanaView version number and meter details will reflect your specific installation):
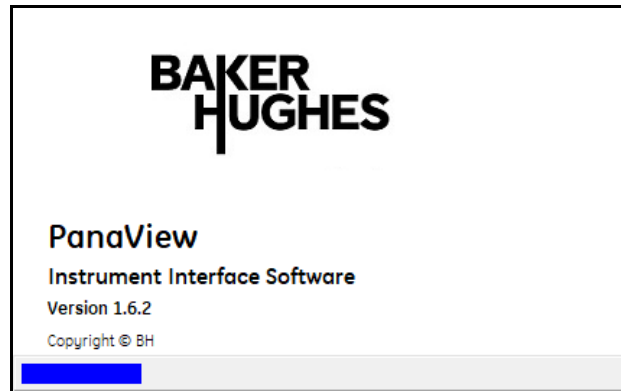
Figure 47: The Bootup Screen

With some meters, the bootup screen displays the meter model, serial port, and node ID during the initialization process. In these cases, a progress bar across the bottom of the screen indicates the percentage of the initialization that has been completed.

5.2   Initialization Error

Ensure the meter is turned on before launching PanaView otherwise an attempt to initialize the meter will fail as shown in *Figure 48* below. Check all the *Communication ports, Power Cable Connections, Switch-on the meter* and then right-click [Meter - nodeXX not Initialized], select appropriate option to re-initialize the meter.
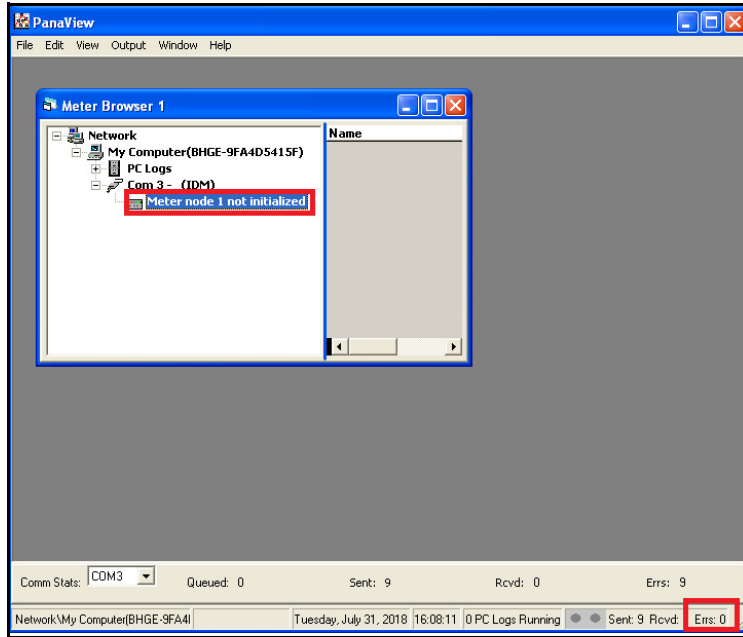
Figure 48: Initialization Error

Click on [Error] (as highlighted in *Figure 48)* to see the errors list as shown in the below figure.
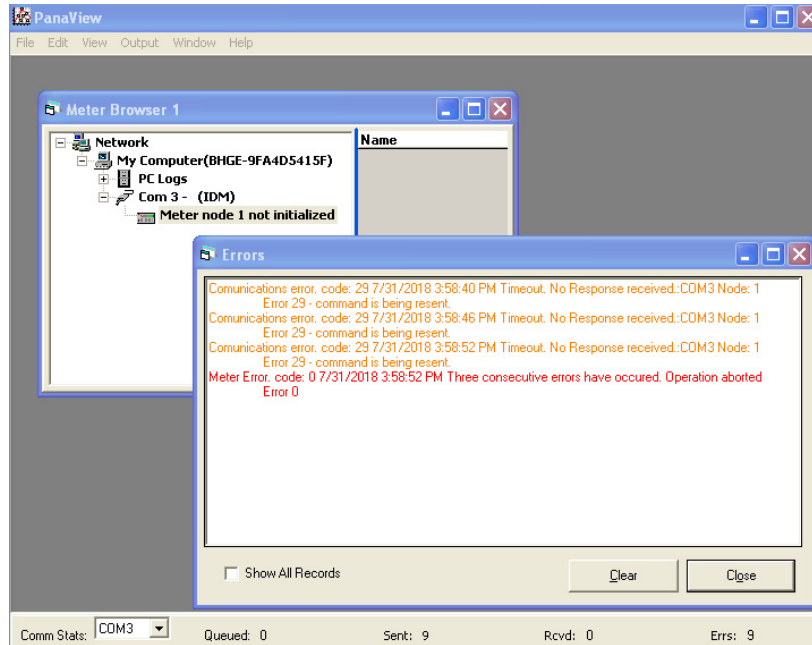
5.3 Communication Port Settings

During the initial addition of a communication port to the PanaView network, various port parameters were specified. If it ever becomes necessary or desirable to change any of these settings, this is easily accomplished as follows:

Note: *Tasks that were described in detail in previous chapters, such as how to open a particular menu, are simply stated without details in this chapter.*

1. Open the *"New Meter Browser"* from the *"File"* menu.

2. Fully expand the *network tree* and highlight the chosen communication port (see *Figure 49* below).
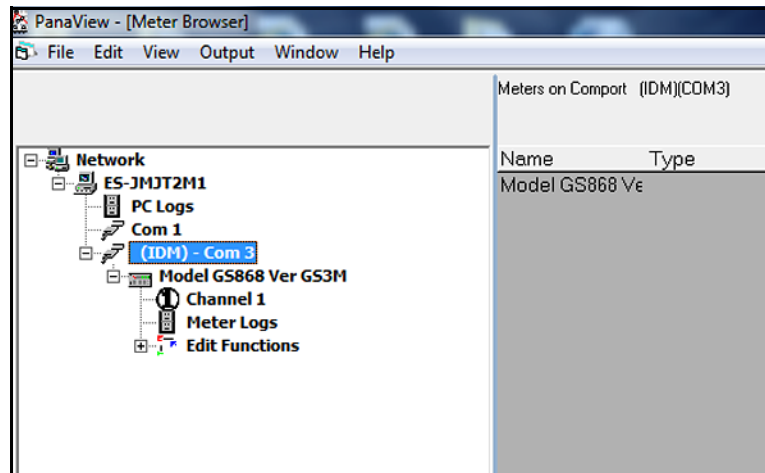
Figure 49: The Serial Port Branch

3. With the desired communication port highlighted, open the edit menu as shown in *Figure 50* below.
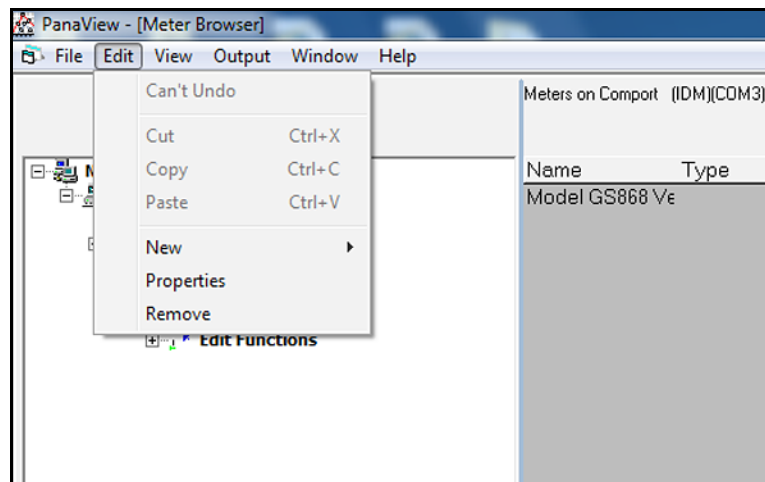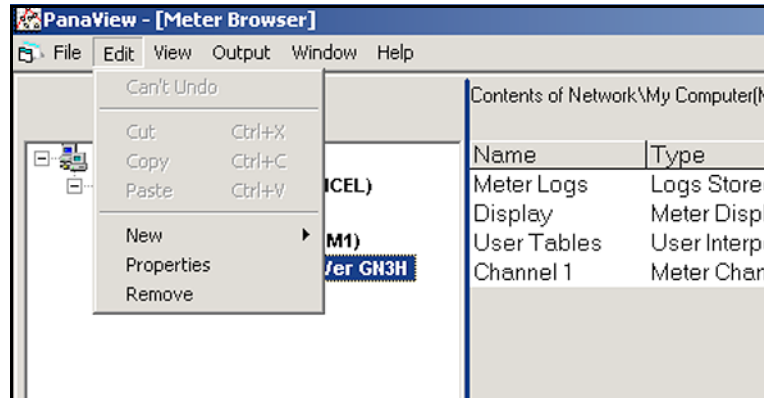

Figure 50: The Edit Menu

There are now three available options on the *"Edit"* menu:

- **New** – Functionality discussed in *Chapter 4."Setting Up a Meter"*

- **Properties** – Use to edit the existing port settings

- **Remove** – Use to delete the port from the PanaView network

IMPORTANT: *The PC's port parameters <u>must</u> be identical to those programmed into the meter's serial port, as described in the meter's User's Manual.*

Proceed to the appropriate section for a discussion of the **Properties** (see *"Editing the Communication Port Settings" on page 44*) and **Remove** (see *"Removing the Communication Port" on page 44*) options.

5.3.1 Editing the Communication Port Settings

To edit the existing settings for a communication port, complete the following steps:

1. From the *"Edit"* menu shown in *Figure 50 on page 43*, Click *"Properties"* option to open the dialog box shown in *Figure 51* below.

2. See *"Adding a New Communication Port" on page 29*, for instructions on choosing the communication port parameters.

3. When all of the desired changes have been made to the parameter settings, Click [OK] button.
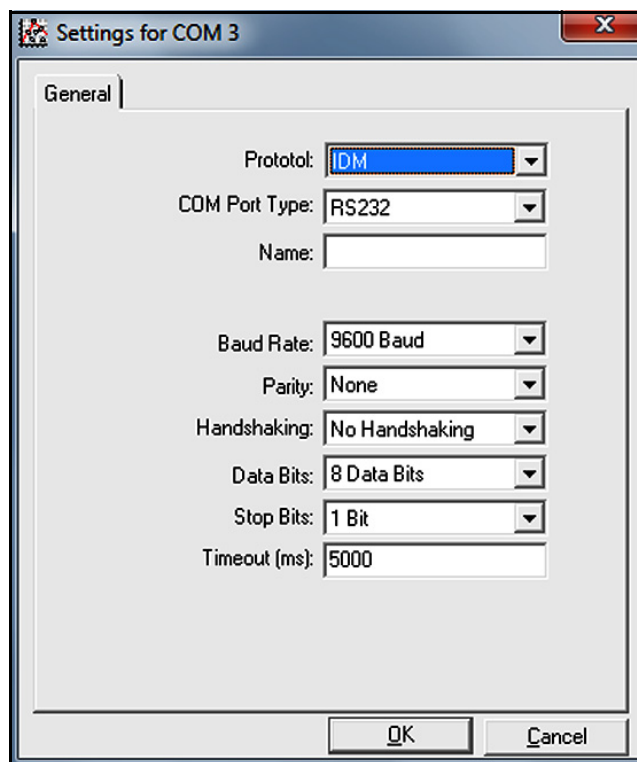
Figure 51: Communication Port Settings

5.3.2 Removing the Communication Port

To remove a communication port from the PanaView network, complete the following steps:

1. From the *"Edit"* menu shown in *Figure 50 on page 43*, Click *"Remove"* option to open the dialog box shown in *Figure 52* below.
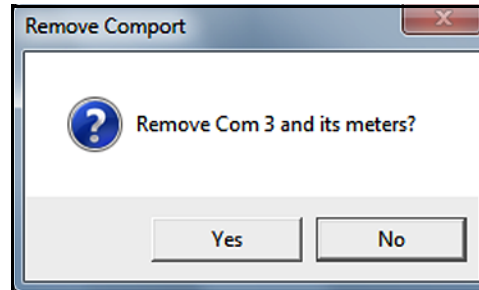
Figure 52: Port Removal Confirmation

2. Click [Yes] button to remove the selected port (and all of its linked meters) from the PanaView network, or click [No] button to abort the operation.

After responding to the above prompt, you are returned to the *"New Meter Browser"* window.

5.4 Meter Configuration Settings

During the initial addition of a meter to the PanaView network, various settings were specified. If it ever becomes necessary or desirable to change any of these settings, this is easily accomplished as follows:

Note: *Tasks that were described in detail in previous chapters, such as how to open a particular menu, are simply stated without details in this chapter.*

1. Open the *"New Meter Browser"* from the *"File"* menu.

2. Fully expand the *network tree* and highlight the chosen meter (see *Figure 53* below).
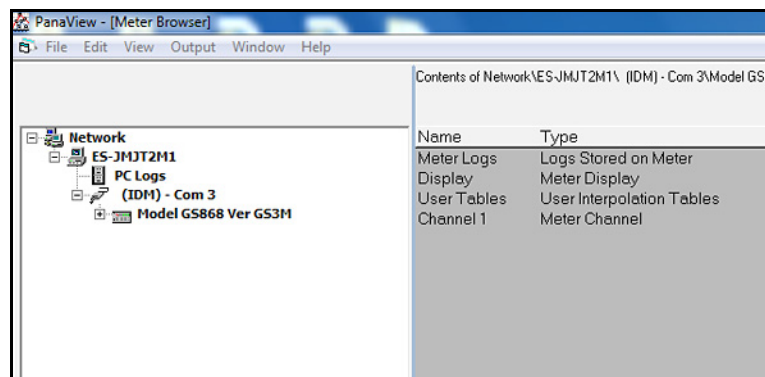
Figure 53: The Meter Branch

3. With the desired meter highlighted, open the *"Edit"* menu as shown in *Figure 54* below.

Figure 54: The Edit Menu

There are three available options on the *"Edit"* menu:

- **New** – Functionality discussed in Chapter 4, *Setting Up a Meter*

- **Properties** – Use to edit the current settings

- **Remove** – Use to delete the meter from the PanaView network

Proceed to the appropriate section for a discussion of the **Properties** (see *"Editing the Meter Settings" on page 46*) and **Remove** (see *"Removing the Meter" on page 48*) options.

5.4.1 Editing the Meter Settings

To edit the existing settings for a meter, complete the following steps:

1. From the *"Edit"* menu shown in *Figure 54 on page 46*, click *"Properties"* option to open the dialog box shown in *Figure 55* below.

2. The *meter name* may be edited directly in the text box shown.

3. Some meters have an *Auto Cal Interval* (the time between automatic calibration sequences), which may be edited directly in the text box.
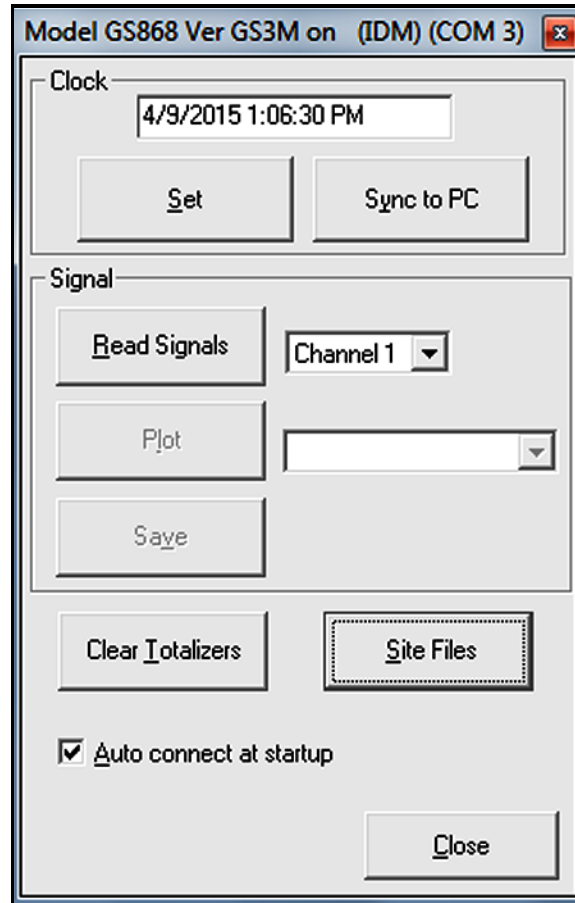
Figure 55: Meter Settings

4. The meter's *Time* may be reset in three different ways:

    •   Manually enter the time and date in the text box

    •   Click [Sync to PC] button to have PanaView set the time and date to the current PC setting

    •   Click [Set] button to open the dialog box shown in *Figure 56* below. Set the desired date and time as indicated, and click [OK] button.
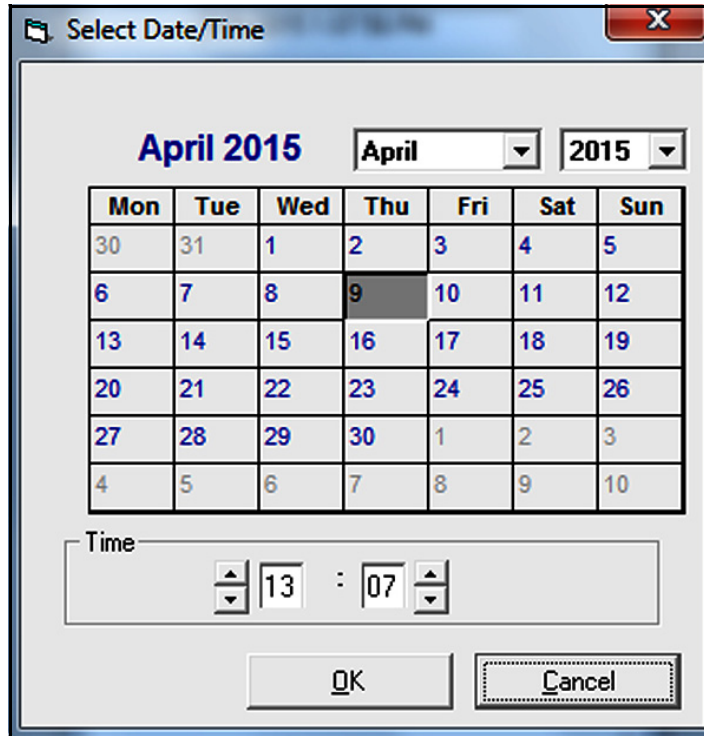
Figure 56: The Date/Time Dialog Box

IMPORTANT: *Never change a meter's Node ID to the same value as another meter on the same PanaView network. Also, Node ID values below 16 are not accepted by PanaView.*

5. The *Node ID* may be reset in three different ways:

    - Manually edit the *Master ID*, *Node ID* and *(Meter) ID* values in the text boxes

    - Click [Set Node ID] button to have PanaView re-initialize the meter

    - Click [Get Node ID] button to begin the node ID setup sequence described in *"Adding a New Meter" on page 33*.

6. Four of the *Meter Communication Parameters* may be edited by selecting one of the alternate choices in the list boxes shown in *Figure 55 on page 47*. See *"Adding a New Meter" on page 33*, for a discussion of these parameters and the available options.

IMPORTANT: *The PC's port parameters <u>must</u> be identical to those programmed into the meter's serial port.*

5.4.2 Removing the Meter

To remove a meter from the PanaView network, complete the following steps:

1. From the *"Edit"* menu shown in *Figure 55 on page 47*, click *"Remove"* option to open the dialog box shown in *Figure 57* below.

Figure 57: Meter Removal Confirmation

2.   Click the [Yes] button to remove the selected meter from the PanaView network, or click [No] button to abort the operation.

After responding to the above prompt, you are returned to the *"New Meter Browser"* window.

5.5   Multiple PanaView Windows

For convenience in monitoring outputs from multiple meters or multiple outputs from a single meter, PanaView has been designed to permit the simultaneous display of more than one output window. To accomplish this, proceed as follows:

Note: *As an example we will open and arrange both a* "Meter Browser" *window and a* "Text Display" *window.*

1.   Launch PanaView and open the *"File"* menu.

2.   Click *"New Meter Browser"* option (see *Figure 26 on page 27*) to open a screen similar to *Figure 46 on page 39*.

3.   Open the *"Output"* menu and click *"Text Display"* option (this menu is discussed in detail in *Chapter 6."Data Handling"*) to open a window similar to *Figure 61 on page 52*. By default, this window is stacked on top of the previously visible *"Meter Browser"* window.

4.   To rearrange the two open windows, open the *"Window"* menu (see *Figure 58* below).
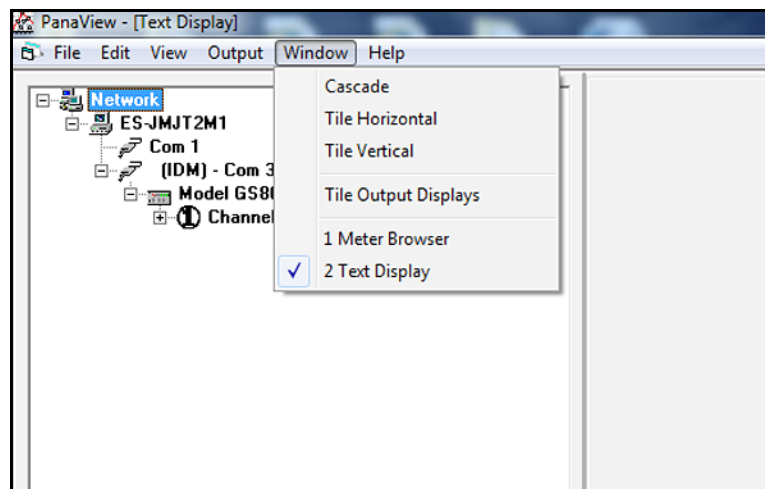
Figure 58: The Window Menu

The PanaView *"Window"* menu is identical to that in any other Windows application. That is, the entries below the divider line represent all of the currently open windows, with the active window having a check mark next to its name. In the example shown in *Figure 59 on page 50*, notice that the *"Meter Browser"* and *"Text Display"* windows are open, with the *"Text Display"* window marked as the active window.

There are four methods, which are consistent with standard Windows conventions, available for manipulating the two open windows (the *Tile Output Displays* option is discussed in *Chapter 6."Data Handling"*):

Note: *For a detailed discussion on using the* "Window" *menu, refer to any Microsoft Windows*® *manual.*

- Make a window active and maximized in size by clicking on its *Name*

- Show both windows in an overlay format by clicking on *Cascade*

- Show both windows, with each taking up one half of the screen height, by clicking on *Tile Horizontal*

- Show both windows, with each taking up one half of the screen width, by clicking on *Tile Vertical*

As an example, the currently open *"Meter Browser"* and *"Text Display"* windows used for this discussion are shown in the *"Tile Horizontal"* format in *Figure 59 on page 50*, with the *"Text Display"* window as the active window.

Note: *In any of the display modes, only one window can be active at any given time. To make another window active, simply click anywhere in its title bar.*
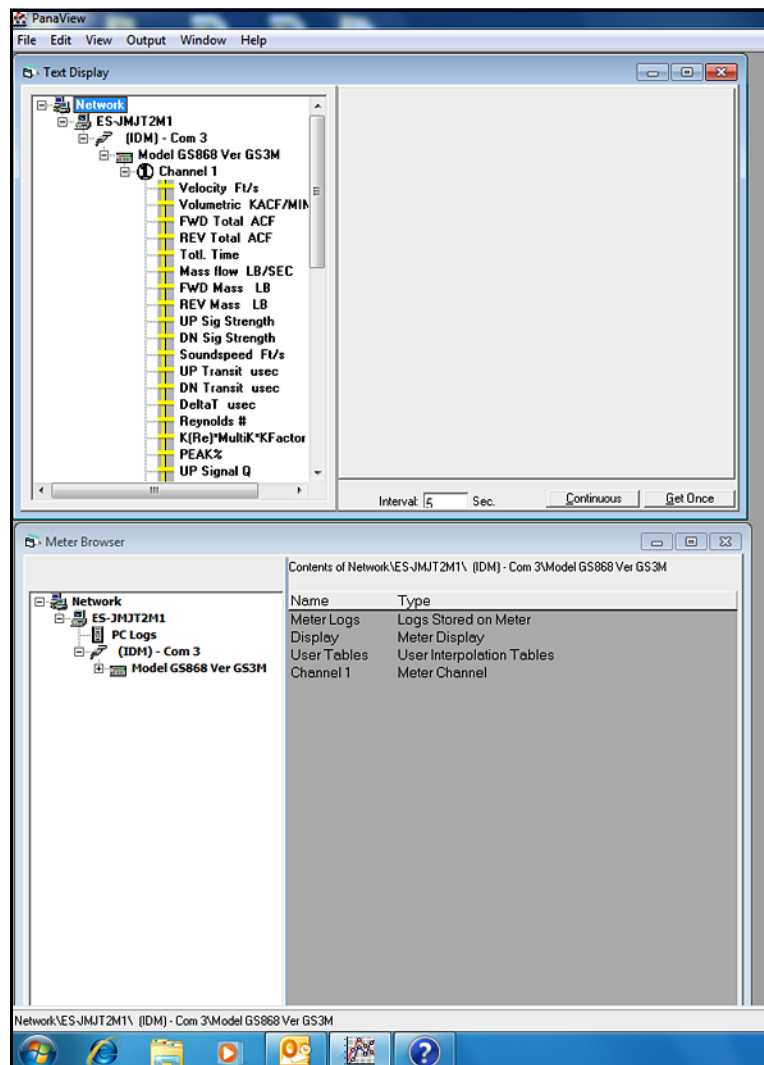
Figure 59: Horizontally Tiled Windows

Chapter 6.   Data Handling

6.1   Introduction

After PanaView has been installed and configured in accordance with the instructions provided in the previous chapters of this manual, you are ready to begin using PanaView to view, manipulate and save data. To illustrate the complete process, we will assume that neither the Panametrics instrument nor the PanaView software is currently running.

6.2   Preparing to Work with Data

To begin working with data, complete the following steps:

1. Power up the meter and wait until it has initialized and is displaying its normal default screen.

2. Launch PanaView and wait until it initializes the meter (see *Figure 47 on page 41*) and displays the basic PanaView window (see *Figure 11 on page 12*).

3. As described in *Chapter 5.“Running PanaView”*, open the *“Meter Browser”* window and highlight the meter to be used.

At this time, any of PanaView's comprehensive data handling capabilities may be used. These include:

- Collecting and displaying live data in text format

- Collecting and displaying live data in graphical format

- Collecting and logging live data

- Displaying a log file in text format

- Displaying a log file in graphical format

To access PanaView's data handling options, pull down the *“Output”* menu, as shown in *Figure 60* below.
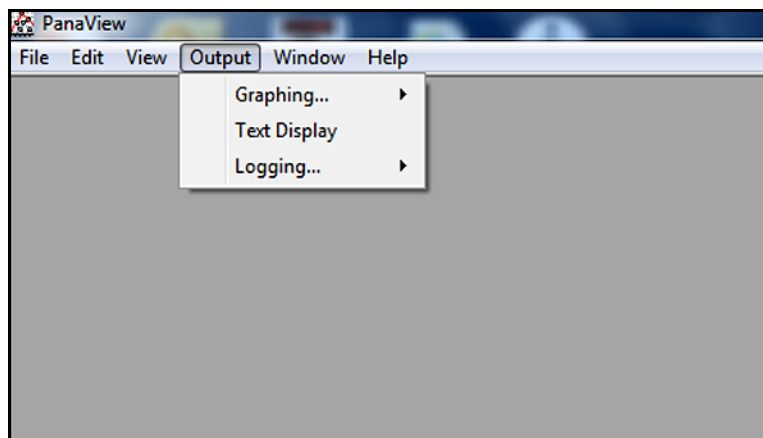
Figure 60: The *Output* Menu

IMPORTANT: *This manual provides only an overview of the general data handling procedures. Since each instrument has its own unique user interface, see the instrument's* User's Manual *for information specific to your particular instrument.*

Proceed directly to the appropriate section for instructions on each of the following output options:

- “The Text Display Output” on page 52

- “The Graphical Display Output” on page 54

- “The Logging Output” on page 61

6.3   The Text Display Output

To collect data from the instrument and display it on a text screen, complete the following steps:

1.   Complete Steps 1-3 in *"Preparing to Work with Data" on page 51*.

2.   Pull down the *"Output"* menu and click *"Text Display"* option (see *Figure 60 on page 51*).

Note: *The* "Text Display" *window that appears after Step 2 is actually stacked on top of any previously opened windows (such as the* "Meter Browser" *window).*

3.   Using the *"Window"* menu, as described in *"Multiple PanaView Windows" on page 49*, arrange the open windows in the desired format. For this discussion, *Figure 61* below shows the *"Text Display"* window in its maximized (full-screen) size.
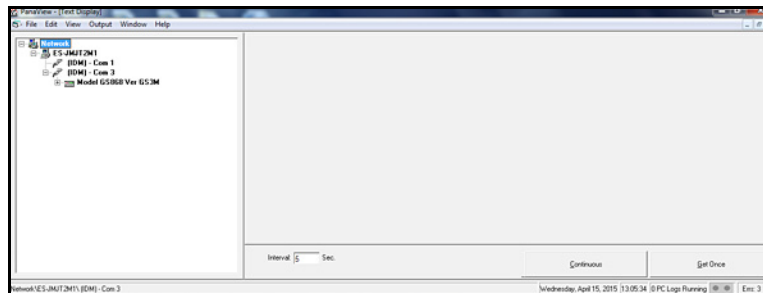
Figure 61: The *Text Display* Window

Note: Figure 61 *above has been compressed both vertically and horizontally for improved clarity.*

4.   The left pane of the *"Text Display"* window contains the standard PanaView network tree. Expand this tree as far as necessary, and double-click desired process parameter to display it in the right pane of the window.

Note: *Refer to your instrument's* User's Manual *for details on selecting a display parameter and the appearance of the* "Text Display" *window for your specific meter.*

5.   Before actual data values can be displayed in the text pane, activate one of the following data collection modes (see *Figure 61 on page 52*):

   •   Click [Get Once] button at the bottom of the right pane in the *"Text Display"* window. The current value of the selected process parameter, as specified in the PanaView network tree, is displayed in the right pane of the *"Text Display"* window.

   •   Enter an *"interval"* in the text box at the bottom of the right pane in the *"Text Display"* window. Then, click [Continuous] button to begin collecting data for display in the right pane of the *"Text Display"* window.

Note: *Any value entered in the* "Interval" *text box is overridden if the* "Max. Comm Rate" *box is checked.*

6.   If the [Continuous] option was selected in Step 5 above, click [Stop] button, which has replaced the original [Continuous] button, when you wish to terminate data collection.

The *"Text Display"* window may be left open while other tasks are performed, or it may be closed by clicking on the lower [X] control button at the far right of the menu bar.

IMPORTANT: *If you click upper* [X] *control button at the far right of the PanaView title bar, you will exit PanaView completely.*

6.3.1   Displaying Multiple Process Parameters

The procedure for displaying a single process parameter in a text screen may be repeated to simultaneously display multiple process parameters. To do so, proceed as follows:

1.   Display the first process parameter in a text screen, as described in the previous section.

2. Repeat Step 1 for any desired additional process parameters, by double clicking on them in the PanaView network tree. PanaView automatically tiles the multiple text screens in the right pane of the *"Text Display"* window.

3. As in any standard Windows application, the multiple text screens may be resized by dragging their borders. Also, the individual panes within a parameter's text screen may be resized by dragging the borders within that text screen.

4. To close an open text screen, right click anywhere within that screen (except in the title bar or the error section) and click [Remove] option that pops up in the context menu.

Note: *After resizing or removing any of the multiple text screens, the default tiled layout may be restored by opening the* "Window" *menu (see* Figure 58 on page 49*) and clicking on the* "Tile Output Displays" *option.*

6.3.2 Displaying Multiple Text Windows

The procedures for displaying one or more process parameters in a single *"Text Display"* window may be repeated to open multiple *"Text Display"* windows. To do so, proceed as follows:

1. To open another *"Text Display"* window, repeat the steps in *"The Text Display Output" on page 52* and *"The left pane of the "Text Display" window contains the standard PanaView network tree. Expand this tree as far as necessary, and double-click desired process parameter to display it in the right pane of the window." on page 52*.

2. To display the desired process parameter(s) in the new window, repeat Steps 1-4 above.

3. Arrange the multiple *"Text Display"* windows as desired via the *"Window"* menu (see *Figure 58 on page 49*).

6.4 The Graphical Display Output

To collect data from the instrument and display it graphically in a new format, complete the steps in the following sections.

6.4.1 Setting Up a Graph

1. Perform Steps 1-3 in *"Preparing to Work with Data" on page 51*.

2. Pull down the *"Output"* menu and click *"Graphing - New"* option (see *Figure 60 on page 51*).

Note: *The* "Graph" *window is stacked on top of any previously opened windows (such as the* "Meter Browser" *window).*

3. Using the *"Window"* menu, as shown in *Figure 58 on page 49*, arrange the open windows in the desired format. *Figure 62* below shows the *"Graph"* window in its maximized (full-screen) size.
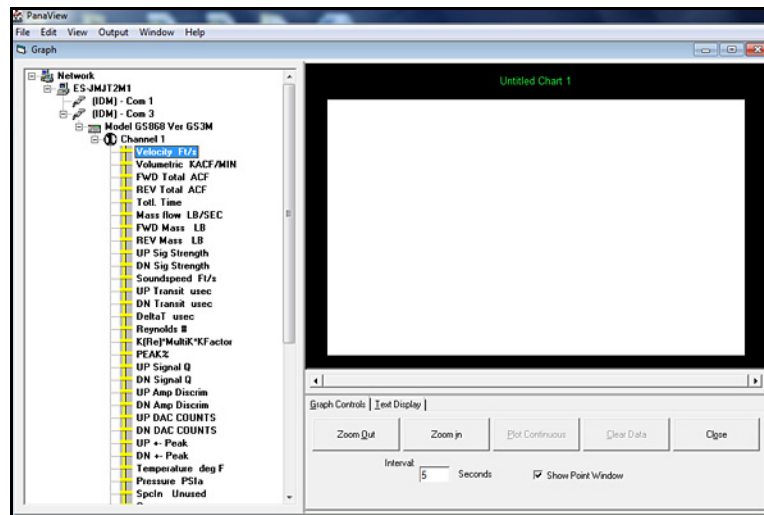
Figure 62: The *Graph* Window

The *"Graph"* window shown in *Figure 62 on page 54* has three panes:

- **Left pane** - PanaView network tree
- **Top right pane** - Graph with default chart style
- **Bottom right pane** - Graph controls or text display

Note: *The three panes of the "Graph" window may be resized by simply dragging their borders.*

6.4.2 Graphing Data

The PanaView network tree has already been described, and the display pane shows only a graph in the default style with no data points. Thus, we need only discuss the use of the bottom right pane. To begin graphing your data, proceed as follows:

1. Expand the network tree as far as necessary and double click process parameter to be graphed. The grid for the selected graph appears in the display pane, with *"Time"* as the x-axis and the parameter *"Value"* as the y-axis. In addition, a *legend* appears above the graph, which indicates the name, data point shape and line color for that parameter.

2. If desired, a second parameter may be added to the graph by repeating Step 1. In this case, the parameter *"Value"* is shown as a *right* y-axis (**Y2**).

Note: *Only two parameters may be graphed for a meter channel. However, you can open another window and graph two parameters for any other active meter channels.*

3. To begin plotting data for the selected parameter(s), enter a time *"Interval"* for data sampling in the text box provided (the default value is 5 seconds).

4. Click [Plot Continuous] control button to begin graphing the selected process parameter(s) as a function of time, at the interval specified in Step 3.

5. While PanaView is graphing the data, the following actions are available for the control pane:

    • Change the sampling interval by entering a new value.

    • Click [Zoom Out] control button to increase the size of the intervals shown on the x-axis.

    • Click [Zoom In] control button to decrease the size of the intervals shown on the x-axis.

Note: *The zoom buttons may be clicked multiple times to enhance the effect.*

    • Click *"Text Display"* tab to view the data being graphed in the text format described in the previous section.

6. After you have finished graphing your data, click [Stop] control button, which has replaced the original [Plot Continuous] control button.

6.4.3 Setting the Graph Properties

To customize a graph display, PanaView has a comprehensive *"2D Chart Control Properties"* feature. To access this feature, right click graph to open the dialog box shown in *Figure 63* below. The chart (graph) properties available using this dialog box are listed in *Table 1 on page 56*.
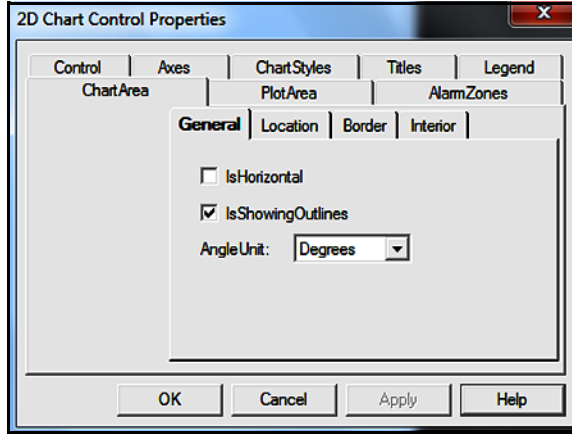
Figure 63: *Chart Properties* **Dialog Box**

Table 1: Chart (Graph) Properties

Main Tab	Sub-Tab	Comments
Control	Border	
	Interior	
Axes	General	X, Y, and Y2 axes may be independently configured.
	Annotation	
	Scale	
	Title	
	Grid	
	Grid Style	
	Font	
Chart Styles	Line Style	Style names may be added to or removed from the list.
	Symbol Style	
Titles	General	Header and Footer may be independently configured.
	Label	
	Location	
	Border	
	Interior	
	Font	
Legend	General	
	Location	
	Border	
	Interior	
	Font	

Table 1: Chart (Graph) Properties

Main Tab	Sub-Tab	Comments
Chart Area	General	Set interior background color to white before printing graph.
	Location	
	Border	
	Interior	
Plot Area	General	

Any property change made by selecting an item from a drop-down list automatically appears on the graph. However, changes made to a value in a text box do not take effect until you click [Apply] button. To close the *"Chart Properties"* dialog box and return to the *"Graph"* window, click [OK] button.

Note: *You may click* [Cancel] *button at any time to keep all of the original graph properties.*

The options available on the eight tabs in the *"Chart Properties"* dialog box are easy to use. They are described in *Table 1 on page 56*.

6.4.4 Creating Chart Templates

After setting up a chart (graph), as described in the previous section, you will find that several new menu options are now available in the *"File"* menu (see *Figure 64* below).
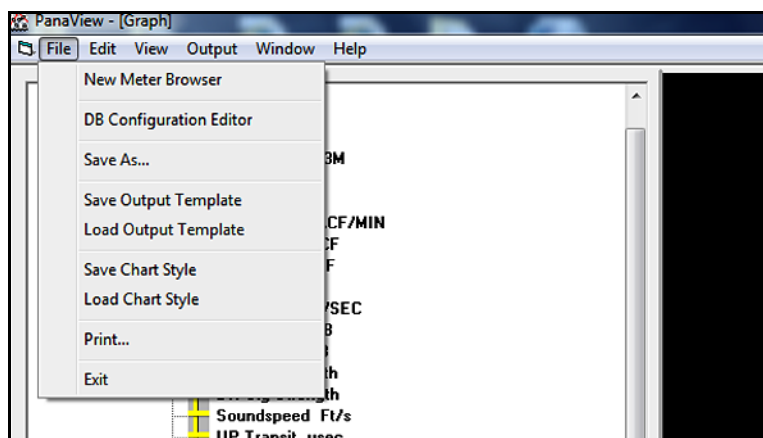
Figure 64: The *File Menu* for Graphs

Use the new *"File"* menu options as follows:

- Click *"Print"* menu option to open the standard Windows print dialog box to print out a copy of the current graph.

Note: *For a more legible printout, make sure the graph has black text on a white background (see* "Setting the Graph Properties" on page 56*).*

- Click the *"Save As"* option to save the graphed data as a log file. When the dialog box in *Figure 65* below opens, enter a name for the log file and click the [OK] button to save the file as:

C:\Program Files\PanaView\Logs\Untitled.LOG
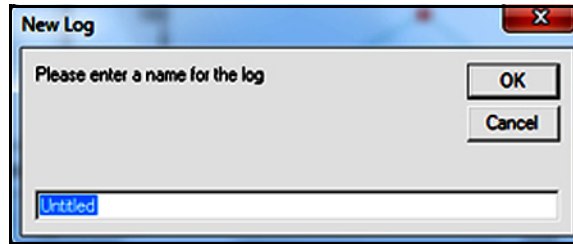
Figure 65: The *Save As* Dialog Box

- Click the *"Save Output Template"* option to save the current graph properties and parameters as a template for future graphs. When the dialog box in *Figure 66* below opens, enter a name for the chart (graph) template file and click the [Save] button to save the file as:

C:\Program Files\PanaView\Charts\Untitled.opt
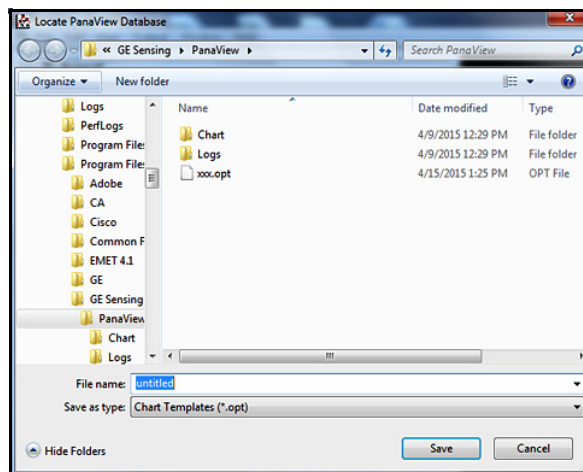
Figure 66: The *Save Output Template* Dialog Box

Note: *The following menu option only becomes active after clicking on the* [Clear Data] *button to delete the data points from the current graph.*

- Click *"Save Chart Style"* option to save only the current graph properties (and not the parameters to be graphed) as a template for future graphs. When the dialog box in *Figure 67* below opens, enter a name for the chart (graph) template file and click the [Save] button to save the file as:

C:\Program Files\PanaView\Charts\Untitled.opt.oc2
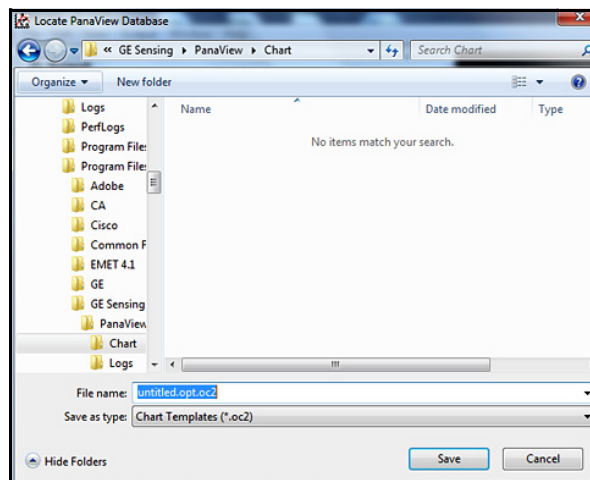
Figure 67: The *Save Chart Style* Dialog Box

IMPORTANT: *Remember that the* "Save Chart Style" *option saves only the graph properties, while the* "Save Output Template" *option saves both the graph properties and the parameters to be graphed.*

6.4.5 Using Chart Templates

After one or more chart templates has been created, as described in the previous section, these templates may be used to generate additional graphs in the same format. To do so, complete the following steps:

1.   Select a chart template using one of the following methods:

   •   Open the *"Output"* menu and click *"Graphing - From Template"* option (see *Figure 60 on page 51*) or open the *"File"* menu and click *"Load Output Template"* option (see *Figure 64 on page 57*). If any output templates (***.opt**) have been saved, select the desired file in the dialog box shown in *Figure 68* below. Then, Click [Open] button to load the properties and parameters to be graphed from the output template selected.
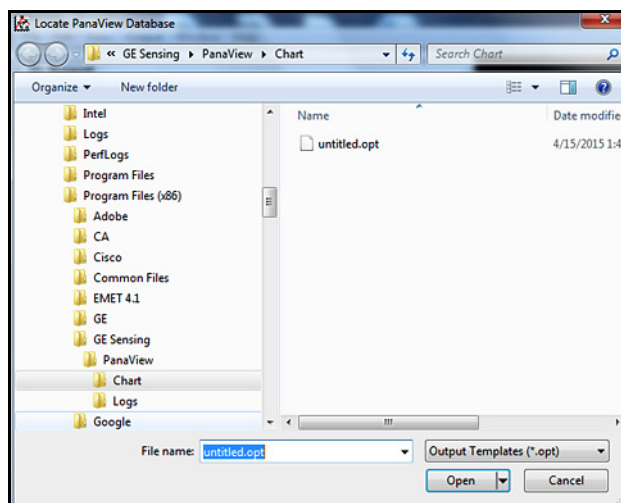
Figure 68: Opening an Output Template

Note: *The following menu option becomes active only after clicking on the* [Clear Data] *button to delete the data points from the current graph.*

- Open the *"File"* menu and click *"Load Chart Style"* option (see *Figure 64 on page 57*). If any chart templates (***.oc2**) have been saved, select the desired file at the dialog box shown in *Figure 69* below. Then, click the [Open] button to load the graph properties from the output template selected.
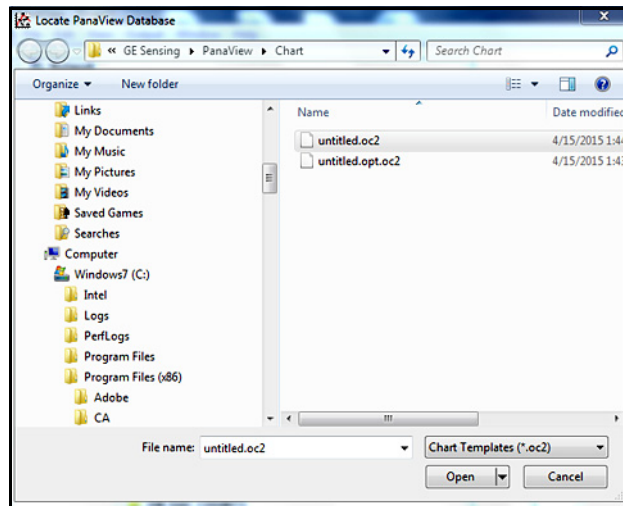
Figure 69: Opening a Chart Style Template

2. After you have finished creating the desired graphs, click the [Close] button in the lower right pane of the *"Graph"* window (see *Figure 62 on page 54*).

Note: *If you have not already saved the current graph as a chart template, you will be given an opportunity to do so when you close the* "Graph" *window.*

After the *"Graph"* window has been closed, continue with any of the other PanaView procedures described in this manual.

6.5   The Logging Output

PanaView can create and view log files of the following types:

- **Meter Logs** - log files stored in your meter's memory
  (see *"Creating Meter Logs" on page 61*)

Note: *Meter logs are further subdivided into* "Internal (A:)" *logs, which are stored in the meter's RAM, and* "External (B:)" *logs, which are stored on the meter's PCMCIA card.*

- **PC Logs** - log files stored on your PC's hard drive
  (see *"Creating PC Logs" on page 65*)

To create or view logs of the above types, proceed to the appropriate section of this chapter. *Figure 70* below illustrates the options available in the *Logging* output.
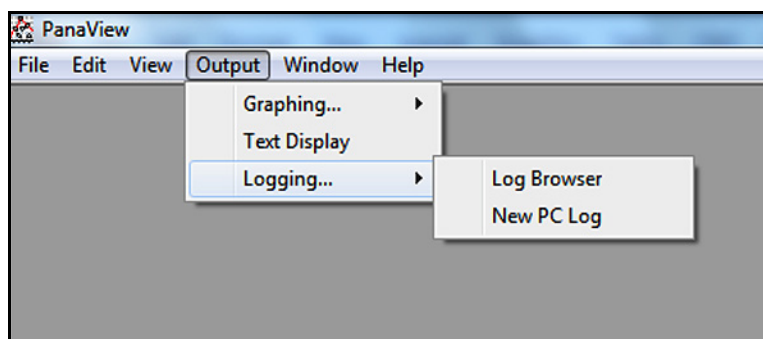
Figure 70: The Logging Output

6.5.1   Creating Meter Logs

To create a new meter log, complete the following steps:

1.   Open the *"Output"* menu (see *Figure 60 on page 51*), and click on *"Logging"* and then on the *"Log Browser"* option to open the dialog box shown in *Figure 71* below.
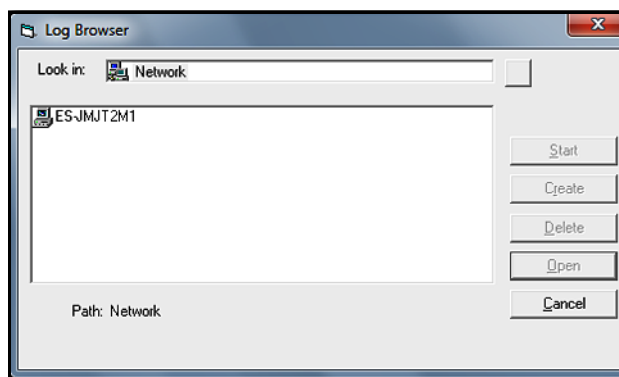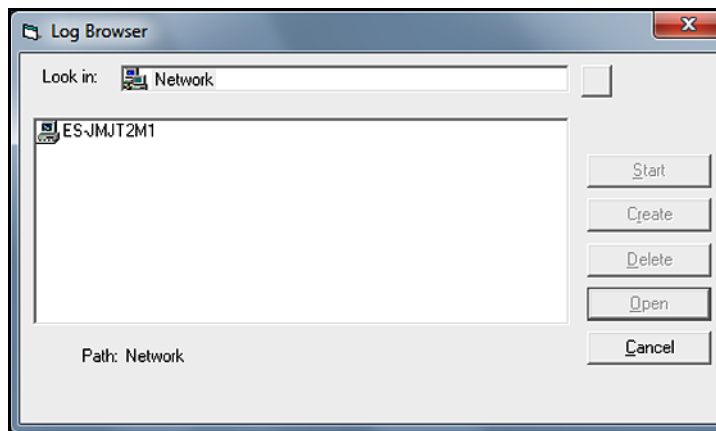

Figure 71: Computer Selection

Note: *If no log files have yet been created or if a log file has not yet been selected from the list, all of the buttons (except for* [Cancel]*) in the* "Log Browser" *dialog box are unavailable.*

2.   Navigate through the PanaView network tree as follows:

a.   Double-click *computer name* to move to the network level shown in *Figure 72* below.
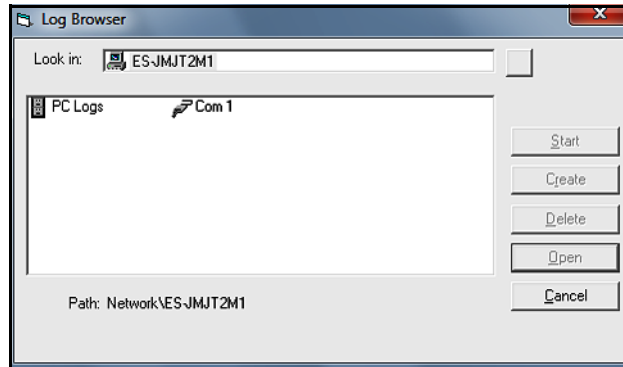
Figure 72: Communication Port Selection

b. Double-click *communication port name* to move to the network level shown in *Figure 73* below.
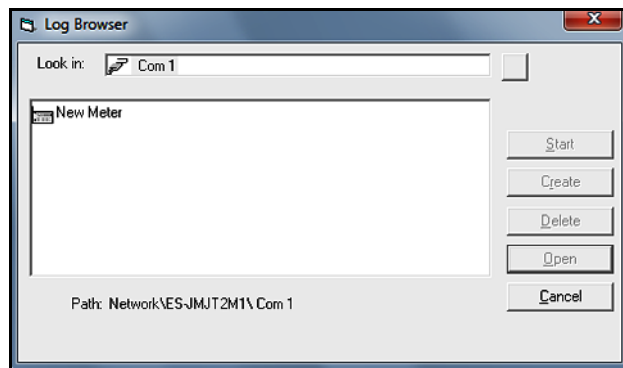
Figure 73: Meter Selection

c. Double-click *meter name* to move to the network level shown in *Figure 74* below
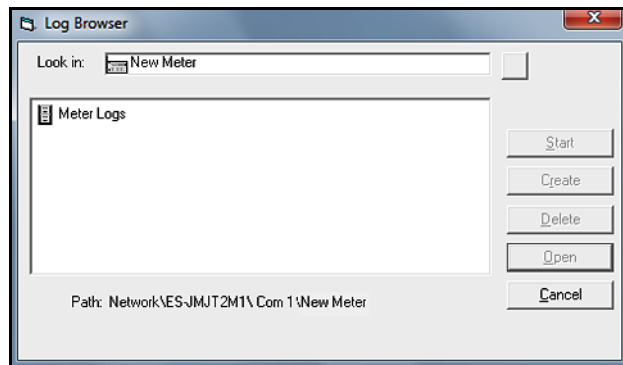
Figure 74: Log Type Selection

d. Double click on *meter logs* to move to the network level shown in *Figure 75* below.
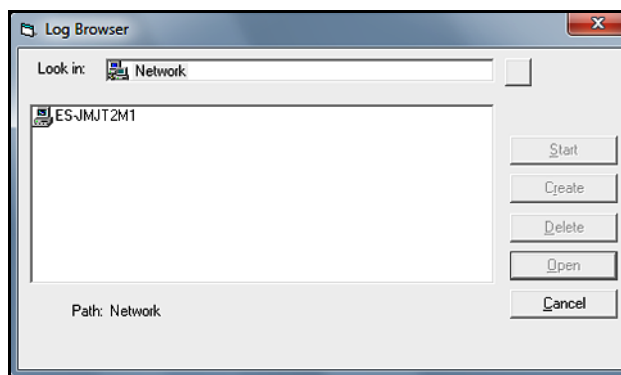
Figure 75: Create a Meter Log

e. At the dialog box shown in *Figure 75* above, click [Create] button to create a new meter log.

f. Enter a name for the log file in the dialog box shown in *Figure 76* below (*"Untitled"* is used here). Click [OK] button.
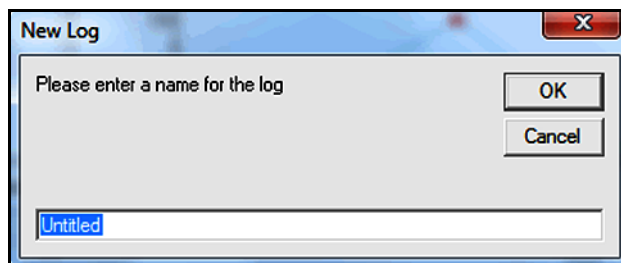
Figure 76: Log Name Dialog Box

3. At the *"Meter Log"* window shown in *Figure 77* below, the following log specifications may be entered:

- Select either *"Internal (A:)"* or *"External (B:)"* (if available) in the s*torage location* list box.

- Click [Sync to PC] button to synchronize the clocks on the meter and the PC.

- Enter the *Start Time* and *Stop Time* for the log.

- For a *circular log*, place a check mark in the text box. For a *standard log*, leave this box empty.

- Specify a sampling *interval* for the log in the text box.
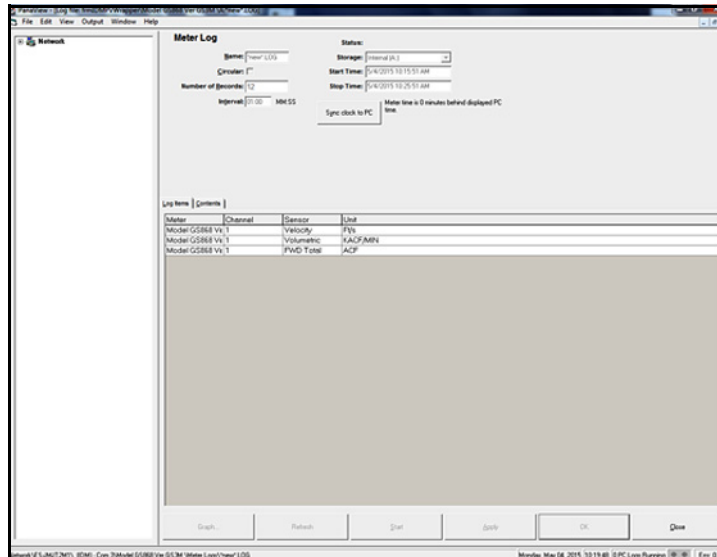
Figure 77: The Meter Log Window

4. Expand the network tree as far as necessary and double click process parameter(s) to be logged. As they are selected, the parameters are listed in the lower right pane of the *"Meter Log"* window (make sure that the *"Log Items"* tab in this pane is selected).

Note: *Refer to the meter's* User's Manual *for detailed information applicable to your specific meter.*

5. Click [Apply] button to record the log setup information, and then click [Start] button. Data logging begins when the preset *"Start Time"* is reached.

You may monitor the logging progress using one of these methods:

- Click *"Log Items"* tab (see *Figure 77 on page 64*) for a list of the parameters specified for logging.

- Click *"Contents"* tab (see *Figure 77 on page 64*) for a list of all the data points logged to date for the parameter currently highlighted on the *"Log Items"* tab.

- Click [Graph] button to display a graphical representation of the data logged to date.

Note: *The graph is displayed in its own window, which is opened on top of the* "Meter Log" *window. For instructions on using the* "Graph Log" *window, refer to* "The Graphical Display Output" on page 54.

- Click the [Refresh] button to update the information shown on the *"Contents"* tab and in the *"Graph Log"* window. Data logged since the last use of the [Refresh] button is added to the list and to the graph.

Remember that only two parameters per channel may be graphed, and that the same two parameters must be graphed for each channel (see *"Graphing Data" on page 55*) of a multi-channel graph display. After you have finished viewing the graph, click [Close] button to close the *"Graph"* window and leave the log running.

6. To manually terminate the logging process, click the [Stop] button, which has replaced the original [Start] button. Otherwise, the log stops automatically when the programmed *"Stop Time"* is reached.

6.5.2 Creating PC Logs

PC logs are created in much the same way as the meter logs described in the previous section. To create a new PC log:

1. Open the *"Output"* menu (see *Figure 60 on page 51*), and click *"Logging"* option to open the window shown in *Figure 78* below.
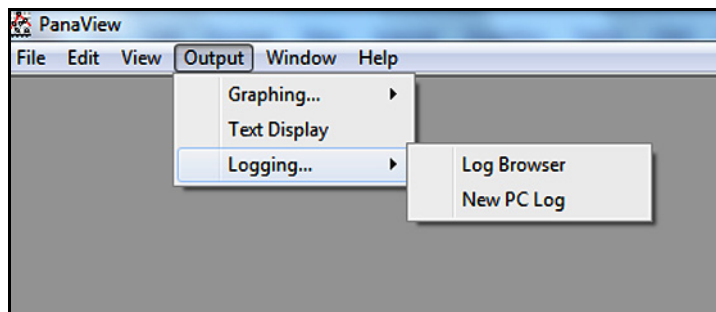
Figure 78: Selections in the Logging Option

2. Select one of the following two choices:

    *   Click *"New PC Log"* option and proceed to step 5.
    *   Click *"Log Browser"* option to open the dialog box shown in *Figure 79* below.

Figure 79: Computer Selection

Note: *If no log files have yet been created or if a log file has not yet been selected from the list, all of the buttons (except for* [Cancel]*) in the* "Log Browser" *dialog box are unavailable.*

3. Double-click *computer name* to advance to the dialog box shown in *Figure 80* below.
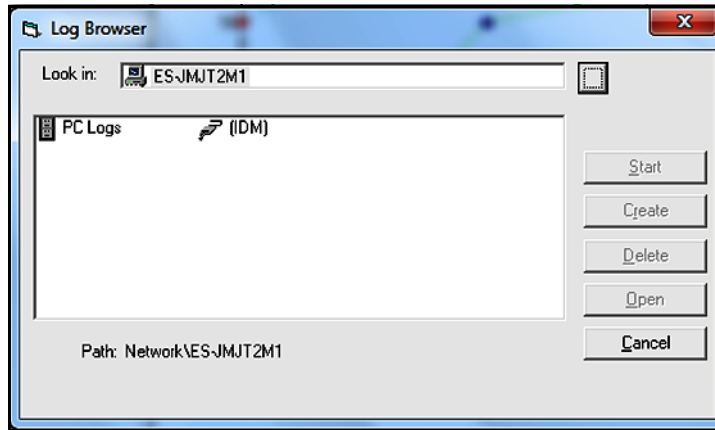
Figure 80: Log Type Selection

4. Double-click *PC logs* to advance to the dialog box shown in *Figure 81* below.
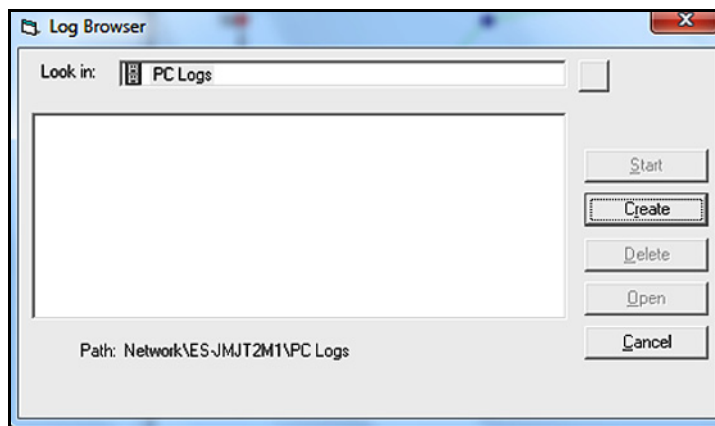
Figure 81: Create a PC Log

5. At the dialog box shown in *Figure 81 on page 66*, click [Create] button to create a new meter log.

6. Enter a log *file name* (*"Untitled"* is used here) in the dialog box shown in *Figure 82* below. Click [OK] button.
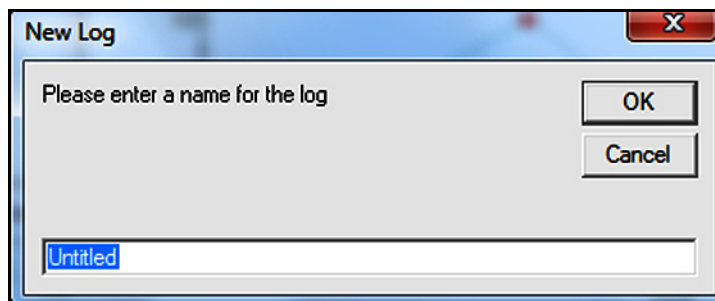
Figure 82: Log Name Dialog Box

7. At the resulting *"PC Log"* window shown in *Figure 83* below, place a check mark in the text box to create a *circular log*, or leave this box empty to create a linear log.
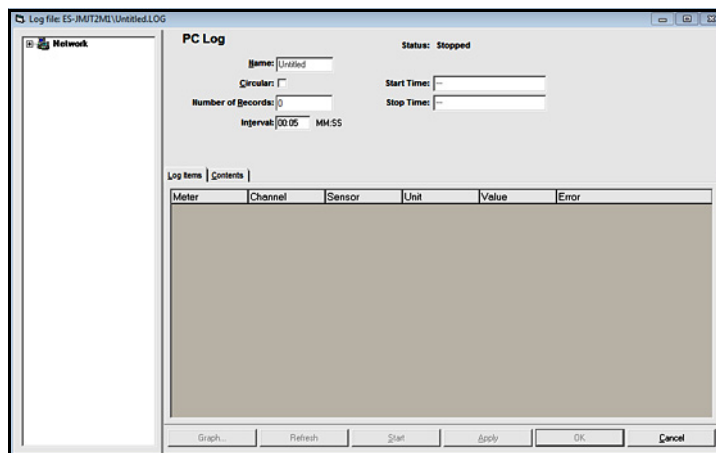
Figure 83: The PC Log Window

8.   Enter a sampling *interval* in the text box shown in *Figure 83 on page 67*, or check *"Max Comm Rate"* to sample data at the fastest speed allowable by the system (1 sec).

Note: "Start Time" *and* "Stop Time" *cannot be specified for PC logs. These options are inactive in the* "PC Log" *window.*

9.   Expand the network tree as far as necessary and double click on the process parameter(s) to be logged. As they are selected, the parameters are listed in the lower right pane of the *"PC Log"* window (make sure that the *"Log Items"* tab in this pane is selected).

Note: Refer to the meter's *User's Manual* for detailed information applicable to your specific meter.

10. Click [Apply] button to record the log setup information, and then click [Start] button to begin logging data immediately (the *"Start Time"* automatically appears in the *"PC Log"* window).

You may monitor the logging progress using one of these methods:

*   Click *"Log Items"* tab (see *Figure 83 on page 67*) for a list of the parameters specified for logging).

*   Click *"Contents"* tab (see *Figure 83 on page 67*) for a list of all the data points logged to date for the parameter currently highlighted on the *"Log Items"* tab).

*   Click [Graph] button to display a graphical representation of the data logged to date.

Note: The graph is displayed in its own window, which is opened on top of the "Meter Log" *window. For instructions on using the* "Graph Log" *window, refer to* "The Graphical Display Output" *on page 54.*

*   Click the [Refresh] button to update the information shown on the *"Contents"* tab and in the *"Graph Log"* window. Data logged since the last use of the [Refresh] button is added to the list and to the graph.

Remember that only two parameters per channel may be graphed, and that the same two parameters must be graphed for each channel (see *"Graphing Data" on page 55*) of a multi-channel graph display. After you have finished viewing the graph, click [Close] button to close the *"Graph"* window and leave the log running.

11. To terminate the logging process, click the [Stop] button, which has replaced the original [Start] button, and the *"Stop Time"* automatically appears in the *"PC Log"* window.

Because a PC log has no specific *"Stop Time,"* the log will continue to run until it is manually stopped (unless the PC is turned off or you run out of hard drive storage space).

6.5.3 Viewing Log Files

After one or more log files has been created, the logs may be viewed by using the *"Log Browser"* as follows:

1. Open the *"Output"* menu (see *Figure 60 on page 51*), and click *"Log Browser"* option.

2. Advance to either the *"PC Logs"* or *"Meter Logs"* dialog box as described in previous sections. Using a meter log as an example, a screen similar to that shown in *Figure 84* below opens.
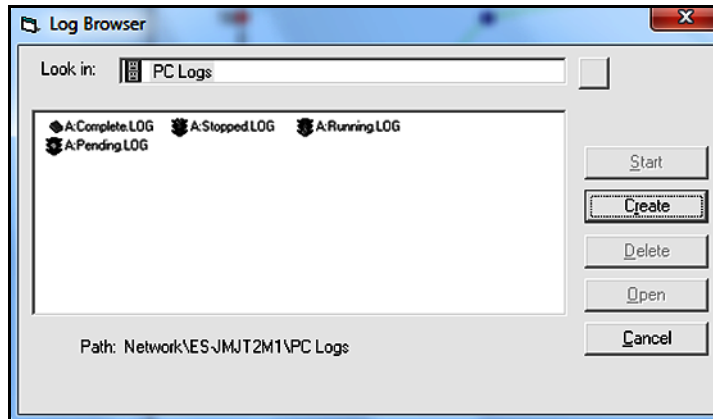
Figure 84: Selecting a Log File

Note that each of the log files in *Figure 84* above has a traffic light icon or a book icon next to its name. These icons indicate the current status of the log as follows:

- **Book** – The log has run to its specified stop time and is complete
  (see **A:Complete.LOG** in *Figure 84* above).
- **Red Light** – The log has not run to its specified stop time but has been manually stopped (see **A:Stopped.LOG** in *Figure 84* above).
- **Yellow Light** – The log has been set up but the specified start time has not yet been reached (see **A:Pending.LOG** in *Figure 84* above).
- **Green Light** – The log is currently running but is not yet complete
  (see **A:Running.LOG** in *Figure 84* above).

Note: *The* yellow light *icon and the* book *icon are only possible for meter logs, because PC logs have no specific* "Start Time" *or* "Stop Time."

3. After you highlight the name of the desired log file, the following buttons become available:

- [Start] – resumes logging if the log is currently stopped

  or

  [Stop] – stops logging, if the log is currently running
- [Delete] – permanently deletes the log file
- [Open] – opens the log in the *"PC Log"* or *"Meter Log"* window

4. Click one of the buttons listed in Step 3 above.

For instructions on manipulating the information displayed in the log window, refer to *"Creating PC Logs" on page 65* or to *"Creating Meter Logs" on page 61*.

Appendix A. Menu Map

For convenient reference, a complete map of the PanaView menu system is shown in *Figure 85 on page 70*. The menu map consists of the PanaView *menu bar*, with all of the individual menus fully expanded.

When using the menu map, keep the following points in mind:

- All of the menu items shown are not available at all times - some items are grayed out or absent in certain situations

- See the appropriate sections of this manual and the programming sections of the *User's Manual* for your specific instrument for detailed information regarding each menu and submenu

The menu map should be used in conjunction with the detailed information presented in the main body of this manual.

```
┌────────────┐   ┌────────────┐   ┌────────────┐   ┌────────────┐   ┌────────────┐   ┌────────────┐
│    File    │   │    Edit    │   │    View    │   │   Output   │   │   Window   │   │    Help    │
└────────────┘   └────────────┘   └────────────┘   └────────────┘   └────────────┘   └────────────┘
      │                │                │                │                │                │
┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│New Meter     │  │  New      ▶   │  │ Comm Status  │  │ Graphing  ▶  │  │   Cascade    │  │   Contents   │
│   Browser    │  └──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘
└──────────────┘  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
┌──────────────┐  │ Properties   │  │ Status Bar   │  │ Text Display │  │Tile Horizontal│ │Search For Help│
│DB Config.    │  └──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘  │    On...     │
│   Editor     │  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐  └──────────────┘
└──────────────┘  │   Remove     │  │   Refresh    │  │ Log Browser  │  │ Tile Vertical│  ┌──────────────┐
┌──────────────┐  └──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘  │About PanaView│
│  Save As...  │                    ┌──────────────┐                    ┌──────────────┐  └──────────────┘
└──────────────┘                    │ Preferences  │                    │Tile Output   │  ┌──────────────┐
┌──────────────┐  ┌──────────────┐  └──────────────┘  ┌──────────────┐  │  Displays    │  │ Version Info..│
│Save Output   │  │Communication │                    │     New      │  └──────────────┘  └──────────────┘
│  Template    │  │    Port      │                    └──────────────┘  ┌──────────────┐
└──────────────┘  └──────────────┘                    ┌──────────────┐  │...Open Windows│
┌──────────────┐  ┌──────────────┐                    │From Template │  └──────────────┘
│Load Output   │  │   PC Log     │                    └──────────────┘
│  Template    │  └──────────────┘
└──────────────┘  ┌──────────────┐
┌──────────────┐  │    Meter     │
│Save Chart    │  └──────────────┘
│   Style      │  ┌──────────────┐
└──────────────┘  │  Meter Log   │
┌──────────────┐  └──────────────┘
│Load Chart    │
│   Style      │
└──────────────┘
┌──────────────┐
│   Print...   │
└──────────────┘
┌──────────────┐
│    Exit      │
└──────────────┘
```

Figure 85: Menu Map

Appendix B. Running PanaView for SEN898 meter

B.1 Connection

1. Follow till Step 4 in *"Adding a New Communication Port" on page 29*, enter the following communication port setting for SEN898.
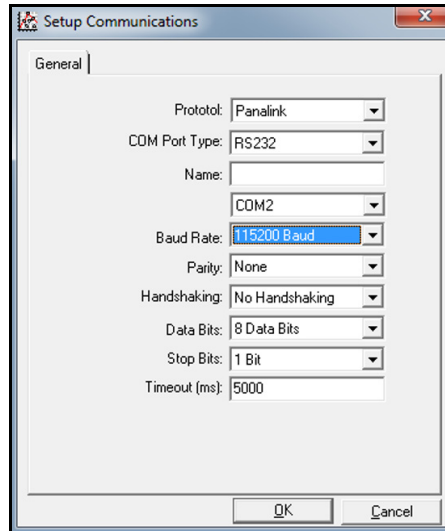
Note: *The default Baud Rate is 115200. The user can check or reprogram the default Baud Rate in the meter under CONFIG> Communication> Panalink> Baud Rate.*

2. After entering all the communications port parameters, click the "*OK*" button.

Note: *To abort the addition of the communications port, click the "Cancel" button instead of the "OK" button.*

3. Wait few seconds for the information to be processed and registered (the buttons are not enabled during this period). The newly created communications port will be added to the network tree as shown below.
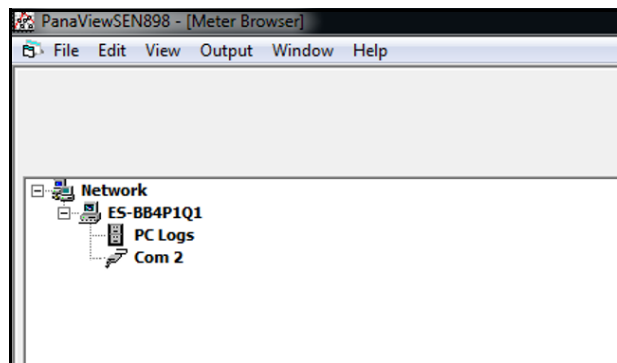
4. Follow the steps mentioned in *Chapter 4.6. "Adding a New Meter"* to add SEN898 meter to PanaView. After the initialization has been completed, PanaView adds the new meter to the PanaView network tree.

B.2   Meter Information

Expand the network branch by clicking on the "+" sign to meter's left. The expanded tree will show the programming menus available for the SEN898 meter.
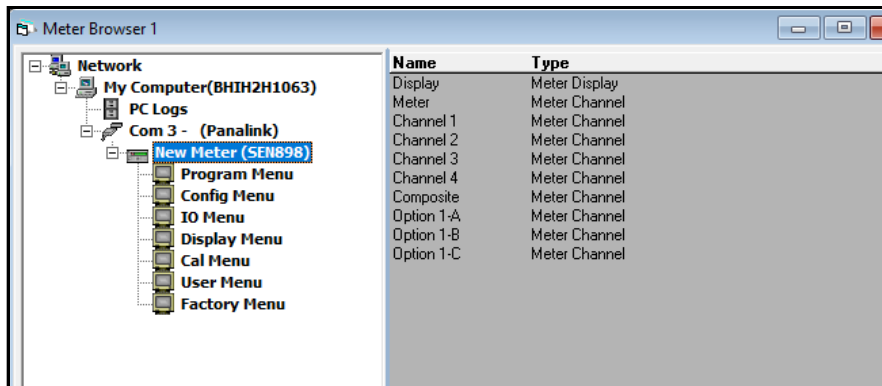
Highlight the meter name and right click to see the meter options.
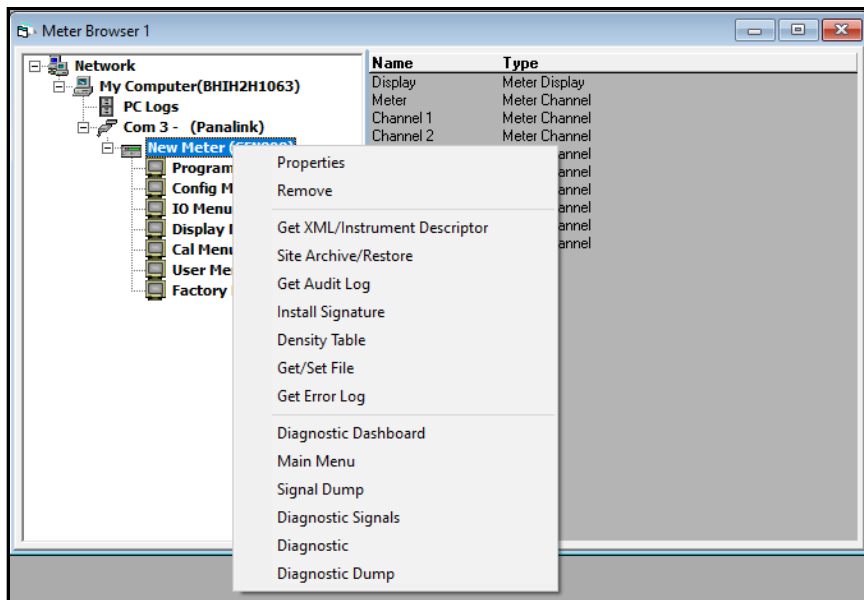
B.2.1   Diagnostic Dashboard

To perform meter diagnostic, click *"Diagnostic Dashboard"* in the meter options.
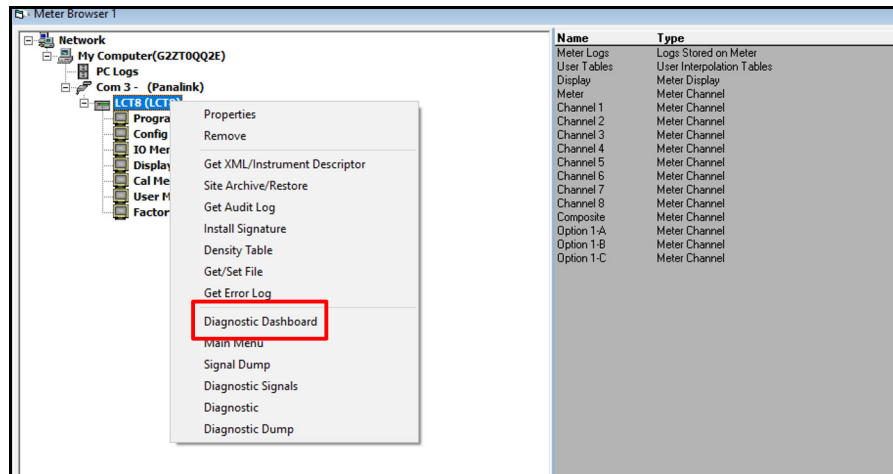
Up on clicking *"Diagnostic Dashboard"*, a new window (see Figure 86 below) will open for the user to perform diagnostics.
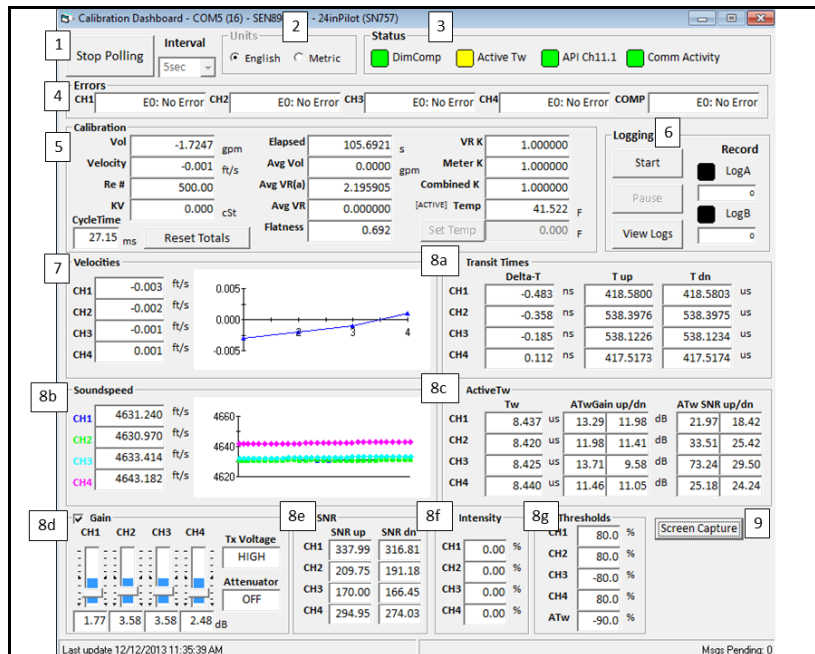
Figure 86: LCT4 meter diagnostic dashboard
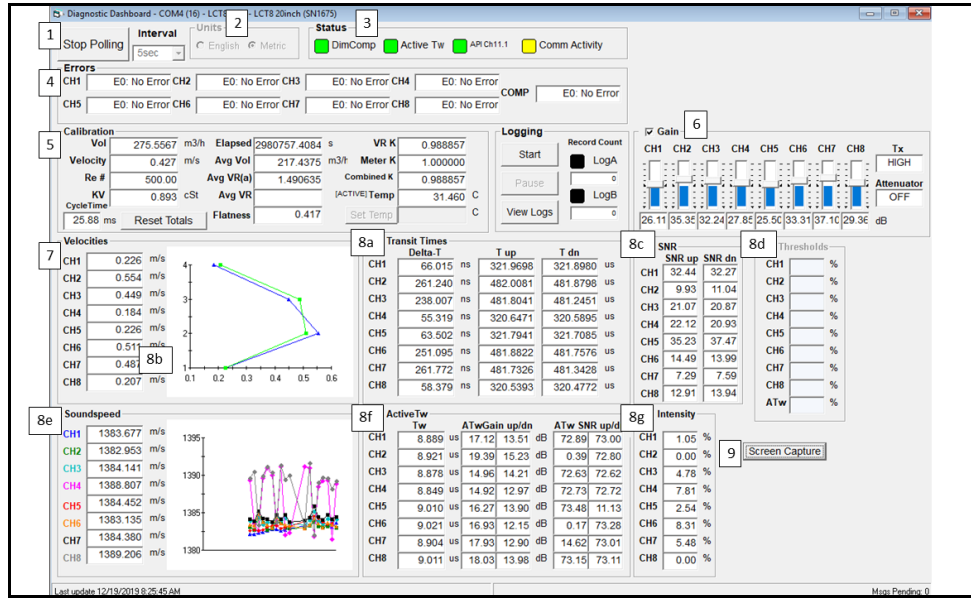
Figure 87: LCT8 meter diagnostic dashboard

The diagnostic dashboard is divided into different section as follows:

1. **Interval** - The user can start communication with the meter and select the communication interval in this section. By clicking the "*Start Polling*" button, PanaView begins communication with the meter, retrieves the meter's diagnostic data, and imports it into the dashboard. These data will be updated according to the selected interval. However, the meter's processing demands takes priority.

2. **Units** - User can choose between English and metric dashboard units in this section. The actual Meter units are unaffected by these changes.

3. **Status** - The status of the installation options is displayed in this section. Green is ON, Red is OFF, and No Color is for NOT installed. Only ATW's calibration mode uses Yellow.

4. **Errors** - All channels' errors are displayed in this section.

5. **Calibration** - User can reset totals or set an active temperature in this section.

6. **Logging** - This section creates diagnostic logs that are useful for troubleshooting.

7. **Velocities** - This section displays the flow profile in a graph along with the channel velocities.

8. This section displays critical diagnostic metrics for each channel:

    a. Delta Ts

    b. Speed of Sound with graphical display

    c. Signal information on Active Pulse Echo

    d. Gains with information on Transmit voltage

    e. SNR: Signal to Noise ratio of the Raw signal

    f. Intensity

    g. Set Thresholds

9. **Screen Capture** - This button captures the current dashboard's screen and save it as .jpeg image. Keep in mind that it will only capture an instant of what is currently visible on the screen.

B.2.2 Site Archive/Restore and Translate

The Site File can be saved to the PC and/or the meter for backup using the "*Site Archive/Restore*" function. To Archive the Site File, proceed as follows:

1. Select "*Site Archive/Restore*" in the meter options.
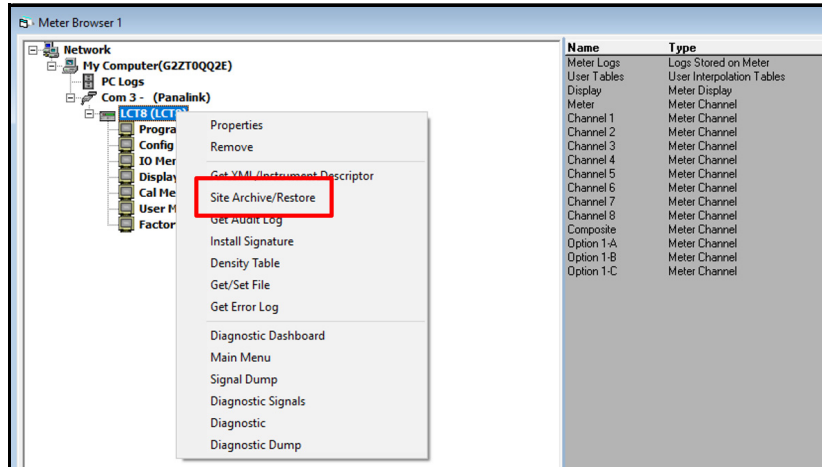
2. Select "*Archive*" button under Site File.
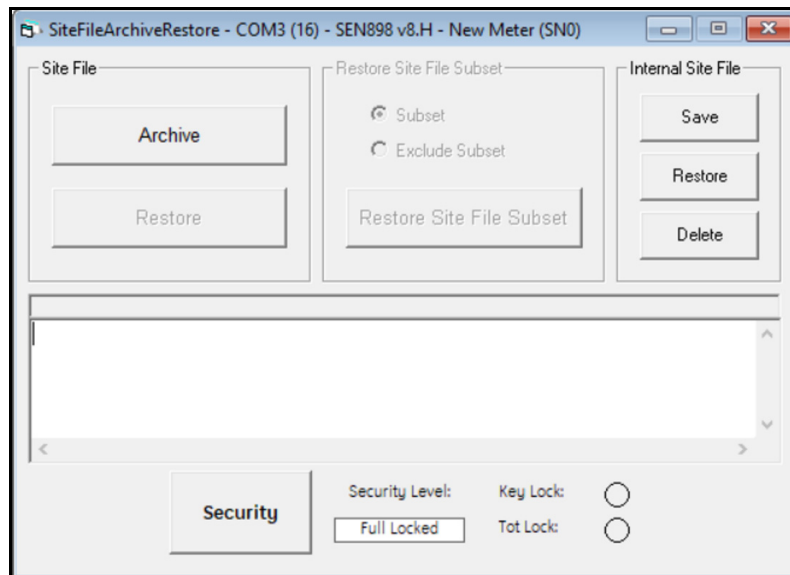
Note: *User and Admin security levels do not have access to the restore function. Otherwise, PanaView will throw an error.*
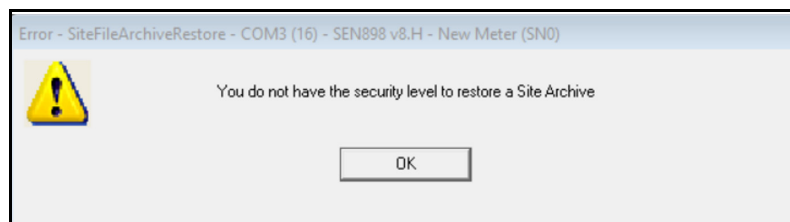
3. Browse to the location where you wish to save the Site File. Note that the default location for saving the Site File is C:\GEData\PanaViewSEN898\Sites.

Note: *All the Site File and log file are timestamped for easy identification. User are advised to save the file without modifying the file name.*

4. Up on saving the Site File, PanaView will display the progress of the archiving.
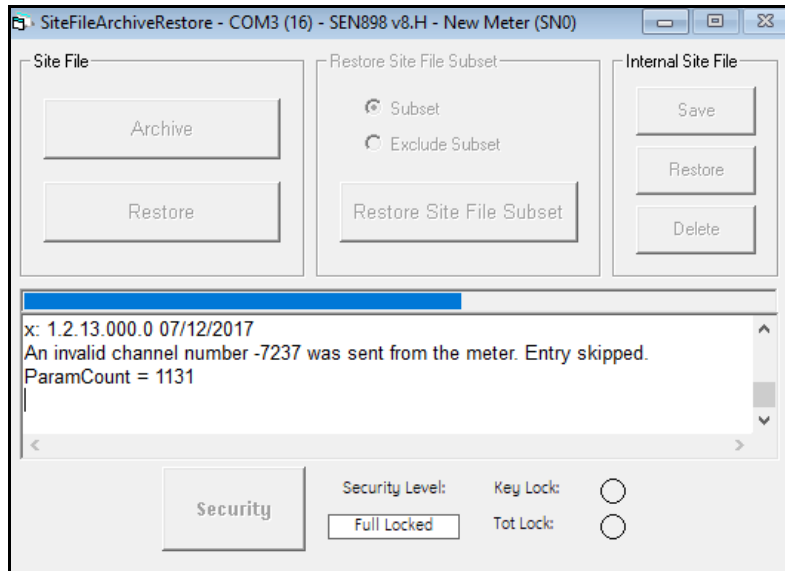
5. Ignore all the error shown while archiving. Archive will be processed even when there are errors.
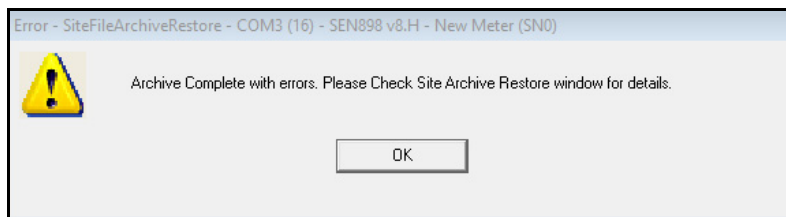
6. The following message will appear on PanaView once the archive is completed.
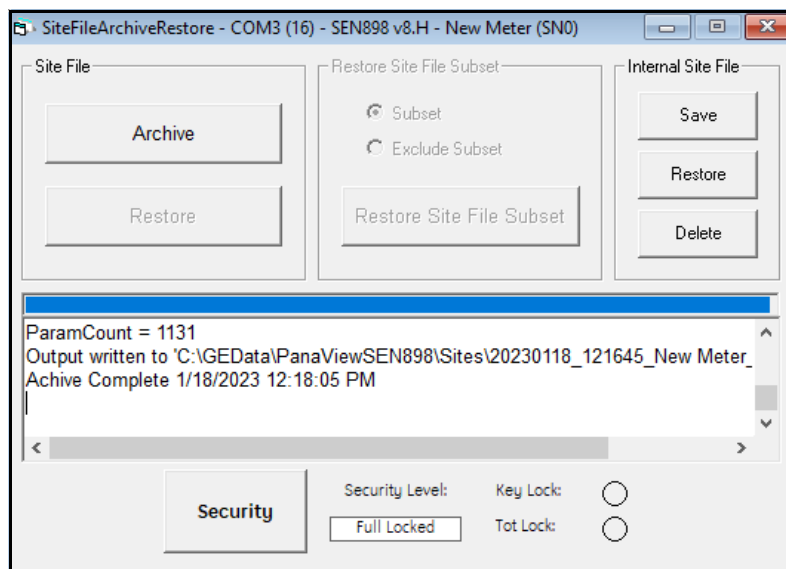
B.2.2.1 Translate the Site File

The Site File is not readable in XML format. The User must use PanaView to translate the Site File to see the actual parameters. Although a connection to a meter is not required, translation requires an XML file that was recently downloaded from a connection. Proceed as follows to translate the Site File:

1. Select "*Output> Site File Translator*".
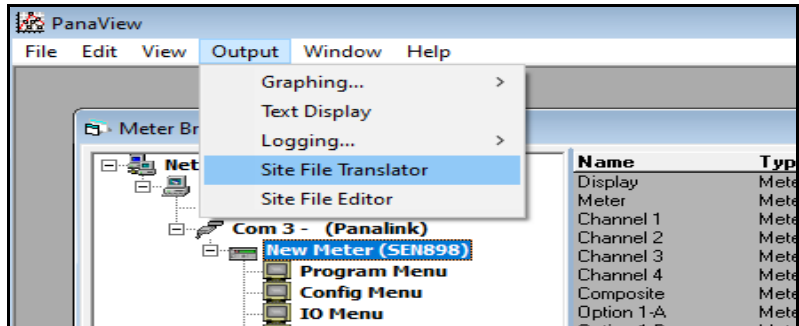
2. Click "*Translate Site File*".
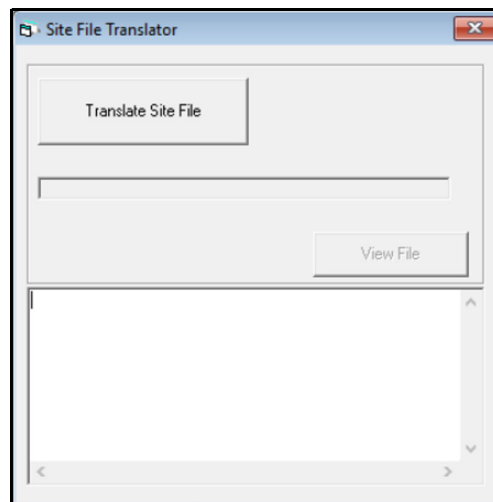
3. Browse to the file location and open the Site File for translation.
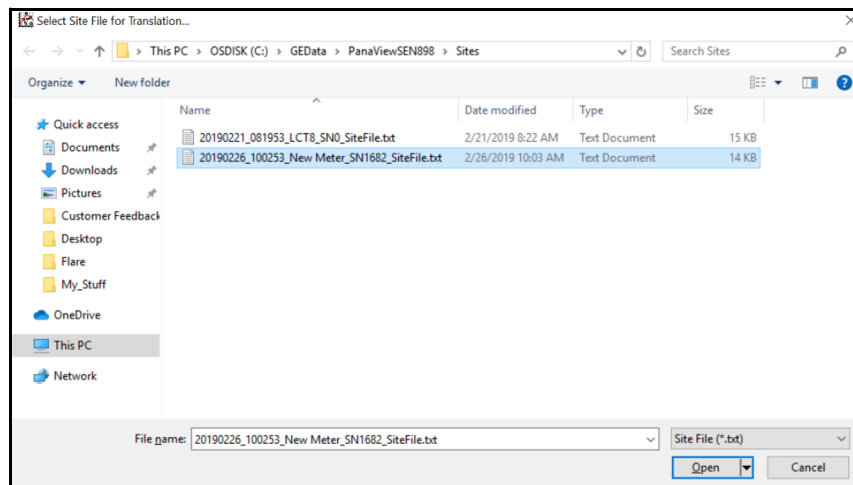
4. The user must choose the resource file needed for translation. The default location of the resource files is C:\GEData\PanaViewSEN898\Translations. Select one of the below mentioned resource file based on the meter:

   • "LCT4_ResourceFile.txt" for LCT, LNG and LCT4

   • "LCT8_ResourceFile.txt" for LCT8
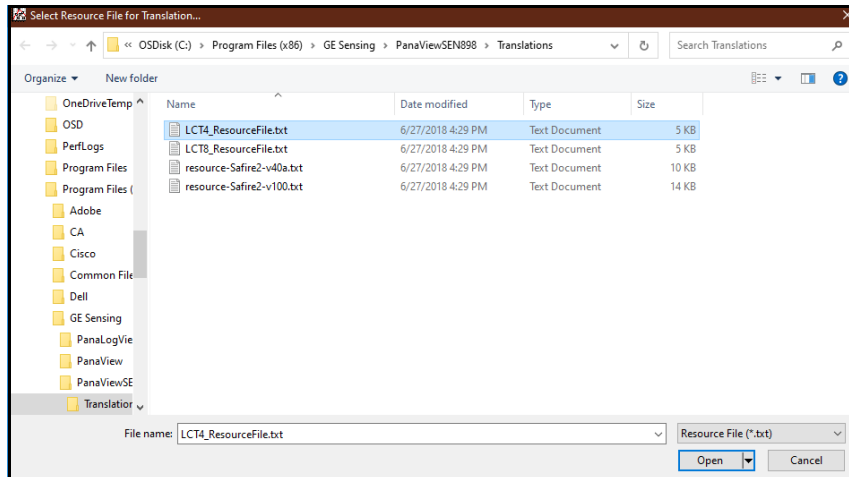
5. Navigate to the location where you want to save the translated Site File and click the "*Save*" button.

6. Once the above steps are completed, PanaView will start the translation.
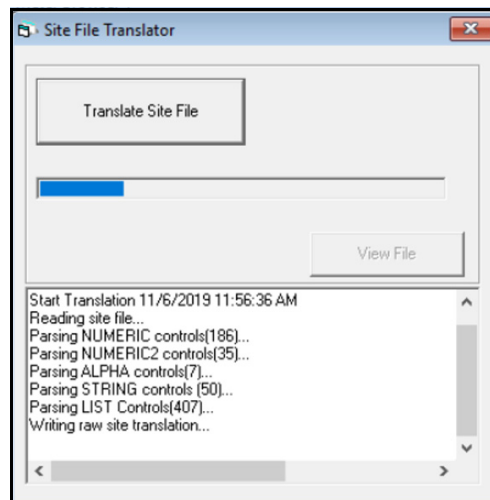
7. PanaView will notify the user once the translation is complete.
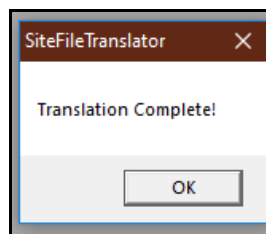
8. The user can open the translated file using the "*View File*" button.
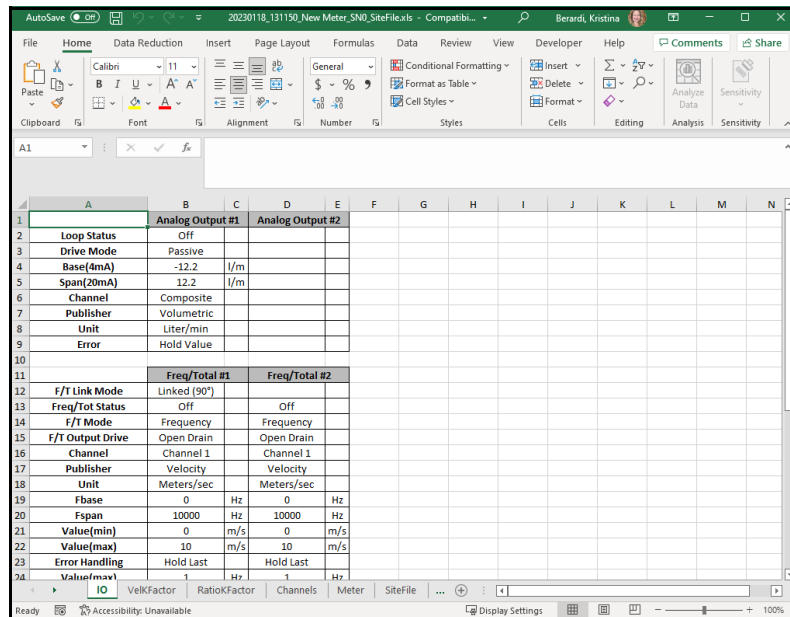
B.2.3 Audit Log

To view the sequence of changes made to the meter, follow the below steps:

1. Right-click on the meter name and select "*Get Audit Log*".
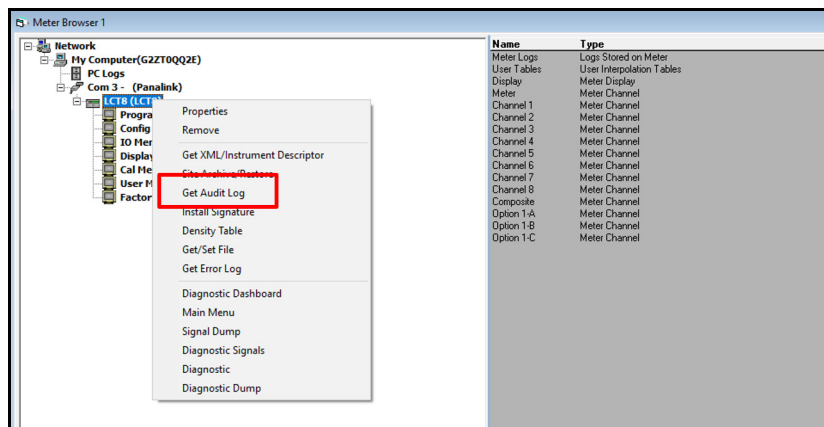
2. Click "*Get Audit Log*".
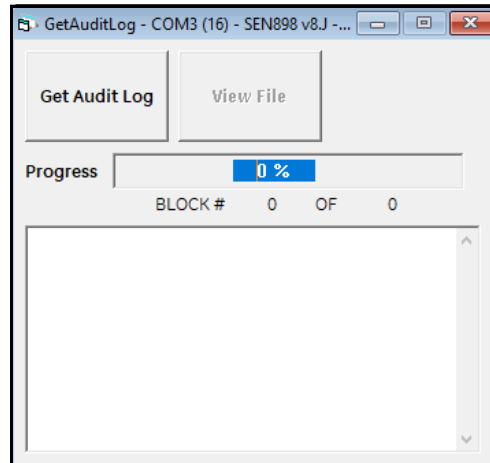
3. Navigate and choose the location to save the Audit Log.
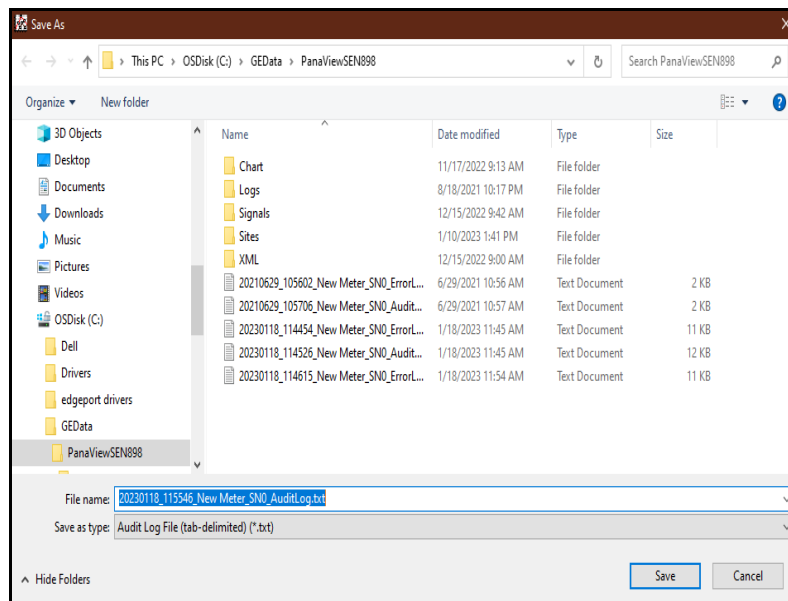
4. PanaView will display the progress of log generation. Once completed, the "*View File*" button will become active.
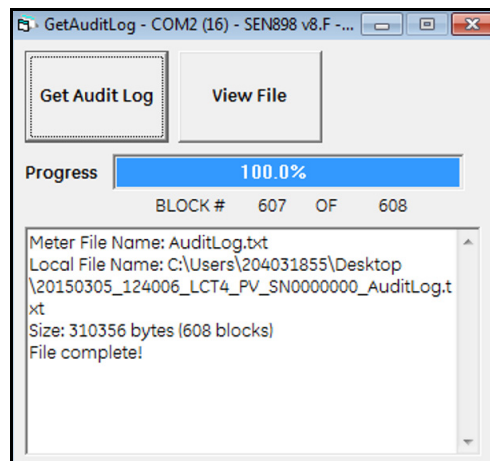
5.   User can click "*View file*" to open the Audit Log.
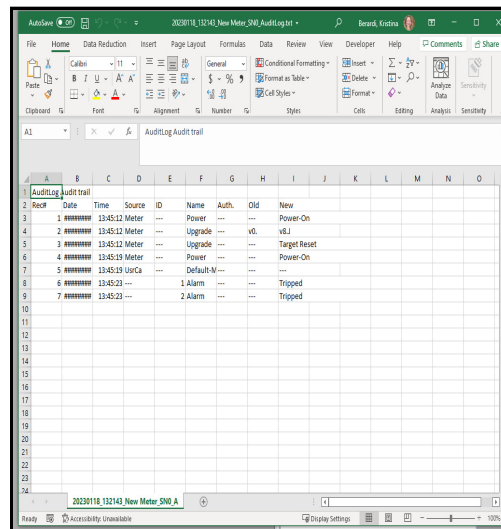
B.2.4 Error Log

The Audit log was divided into an Audit Part and an Error Part. The history of the errors in the meter will be displayed in the error log. To generate Error logs, follow the below steps:

1.   Right-click on the meter name and select "*Get Error Log*".
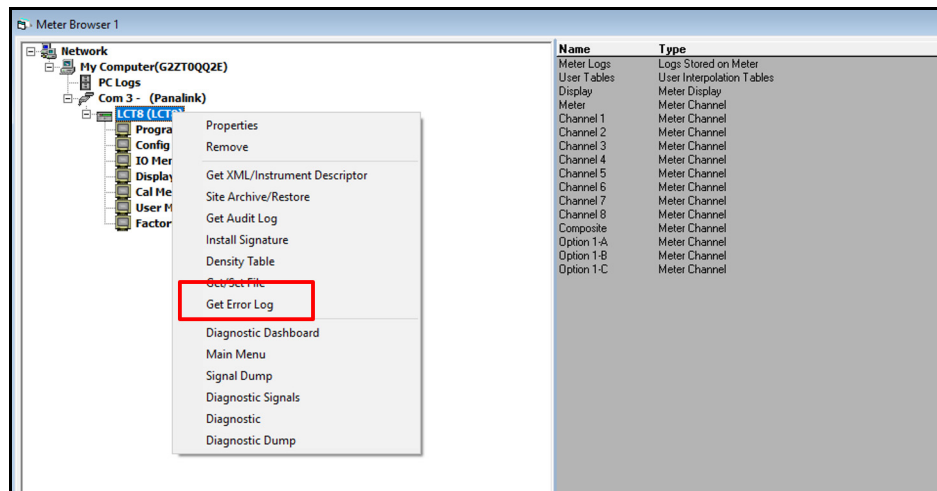
2. Click "*Get Error Log*".
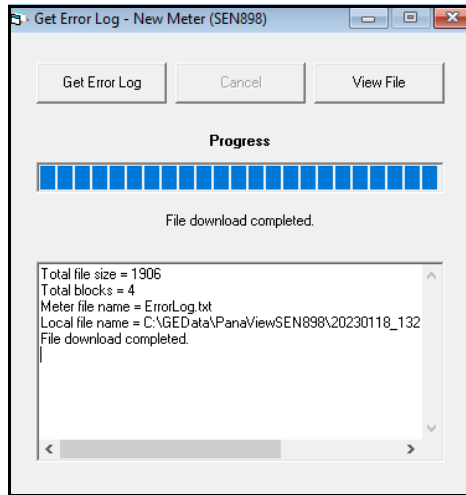
3. Navigate and choose the location to save the Error Log.
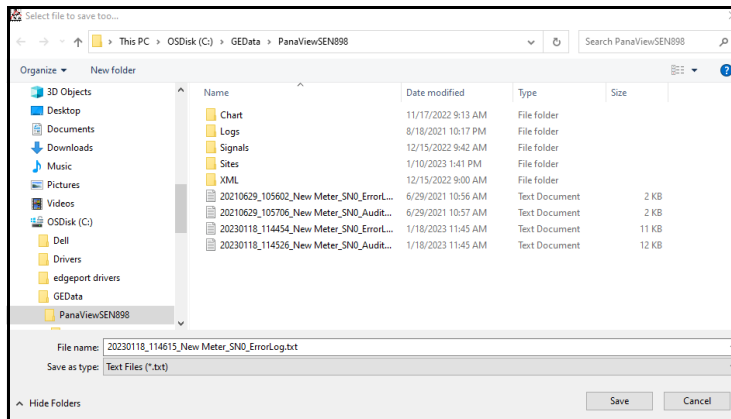
4. PanaView will display the progress of log generation. Once completed, the "*View File*" button will become active.
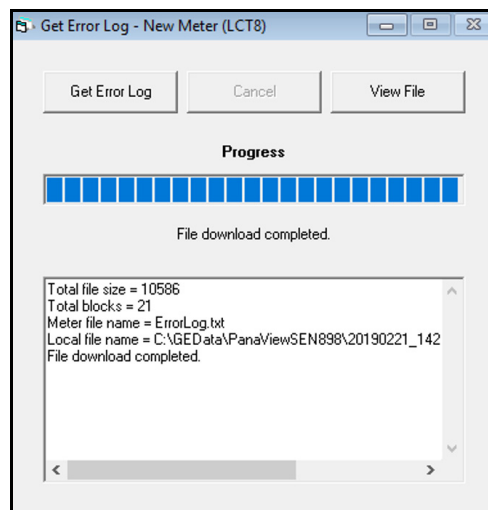
5.   The user can click "*View file*" to open the Error Log.
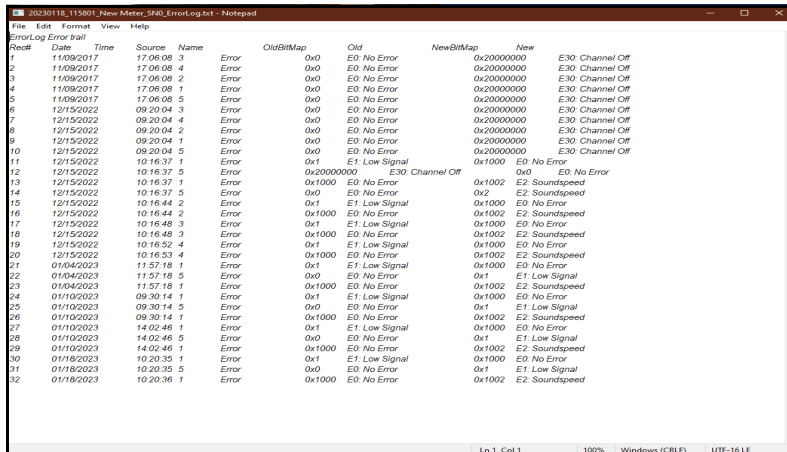
B.2.5 Signal Dump

The user can save all signal data to PC using the "*Signal Dump*" option. It is recommended to save the signal data of the meter at each connection. These data are integral part of troubleshooting process and are utilized to monitor the changes over time. To save the signal date, proceed as follows:

1.   Right-click on the meter name and select "*Signal Dump*".
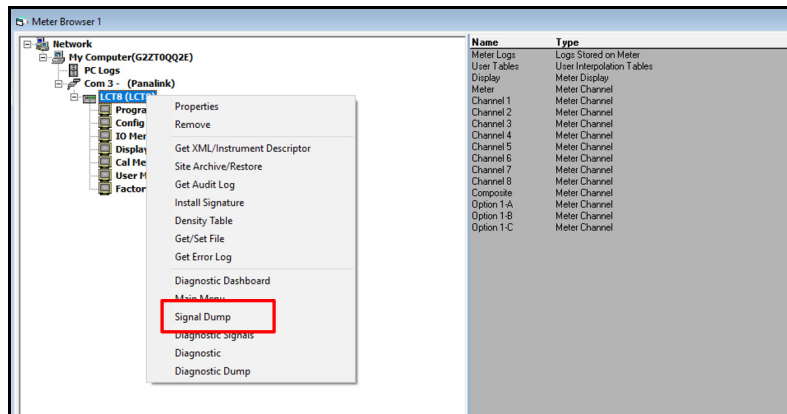
2. By altering the information in the fields, the user can choose which data is saved.
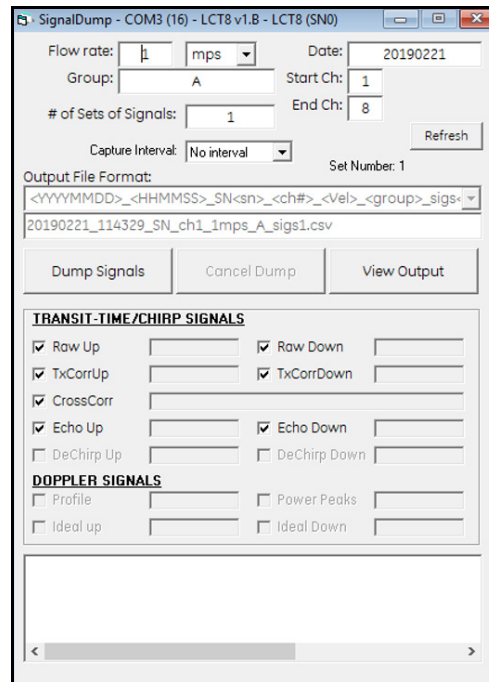
- **Flow rate** - User can change the flow rate if the signals are received at multiple flow (typically during calibration). The user can also change the units from the drop-down list.

- **Group** - allows the user to enter an identified that will be included in the file name.

- **Start Ch:/End Ch:** - allows the user to choose which channels' data should be saved.

- **# of Sets of Signals** - allows the user to choose the number of sets in a row. The default value is 1.

- The user can choose which signals to be kept by checking the boxes. It is recommended to keep all the signals data.

- Based on the information in the other boxes, the "*Output File Format*" box displays how the file will be named.

3. After customizing the fields, click the "*Dump Signals*" button.

4. Navigate and choose the location to save the Audit Log. The files are named based on the "*Output File Format*". The user is recommended not to change the file name at this stage.
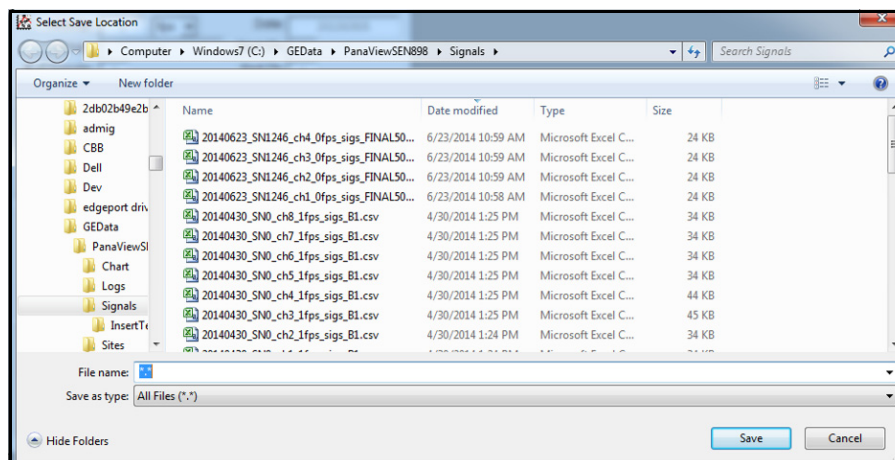
B.2.6 Diagnostic Signals

Diagnostic signals display the graph of actual signals at the time of capture. It is a quicker way of viewing the signals while troubleshooting. These signals are not included in the data collection since they are not saved and lack the level of detail seen in the "*Signal Dump*" option. However, it is an excellent tool for checking the quality of signals and spotting potential issues.

1. Right-click on the meter name and select "*Diagnostic Signals*".
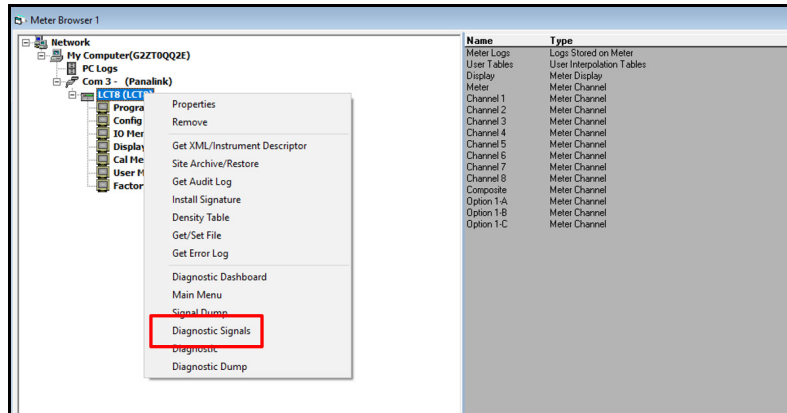
2. After choosing the channel you wish to view, press the "*Cache Signals*" button. This stores every signal from that channel so that the user can review it anytime.
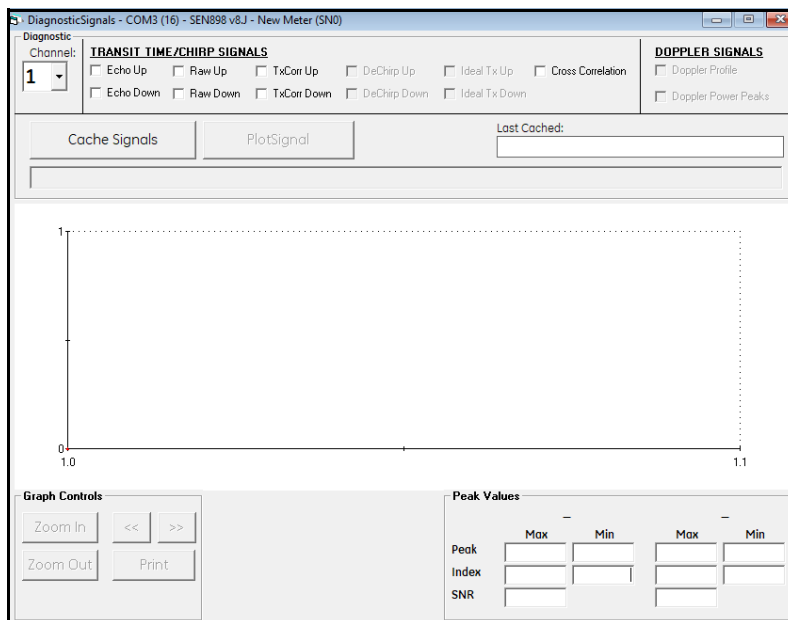
3. Once cached, the "*Last Cached*" area will turn green and show a time stamp.
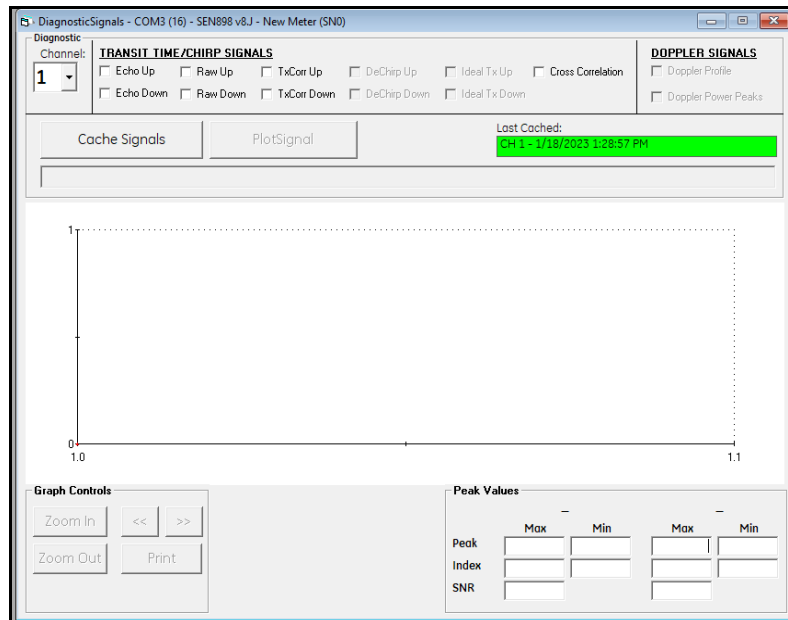
4. After cached, the user can select the signals to be displayed. As soon as a signal is selected, the "*PlotSignal*" button will become active.

Note: *Please note that the graph can only display two signals at once.*

5. Click "*PlotSignal*" to plot the chosen signal.

B.2.7 Flow Diagnostics

The user can view the key diagnostics parameters for specific channels by choosing "*Diagnostic*" in the meter options. It is a quicker way of viewing the flow properties while troubleshooting. It is advised to use "*Diagnostic Dashboard*" since it provides a good overview of all the parameters.

[no content intended for this page]

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