Flow

PanaView™

Installation Guide

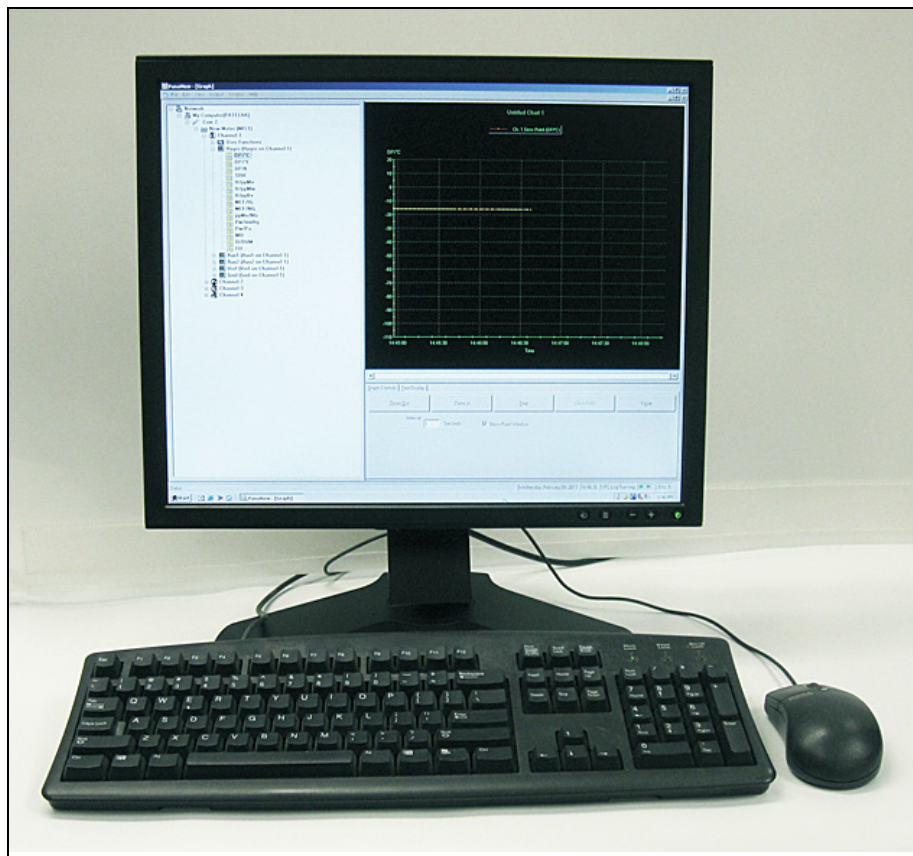# Panametrics

PanaView™

Graphical User Interface

Installation Guide

Software Version 1.6.3
910-211 Rev. I
May 2020

panametrics.com

[no content intended for this page]

END USER LICENSE AGREEMENT

[PANAVIEW SOFTWARE VERSION 1.6.3]

YOU MUST READ AND ACCEPT ALL TERMS AND CONDITIONS OF THIS AGREEMENT BEFORE USING THIS SOFTWARE. GE INFRASTRUCTURE SENSING, LLC. ("LICENSOR") AGREES TO LICENSE THE SOFTWARE TO YOUR COMPANY ("LICENSEE") ONLY UNDER THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THESE TERMS, PROMPTLY RETURN THE CD, DOCUMENTATION AND ALL OTHER COMPONENTS OF THE SOFTWARE TO THE LICENSOR AND/OR PERMANENTLY DELETE ALL ELECTRONIC FILES RELATED THERETO TO RECEIVE A REFUND OF LICENSE FEES PAID.

1. Definitions.

1.1   "Documentation" shall mean any Licensor user manuals and other printed materials delivered to Licensee in conjunction with the Programs.

1.2   "Intellectual Property Rights" shall mean patent rights (including patent applications and disclosures), copyrights, moral rights, trademark/service mark rights, trade dress rights, trade secrets, know-how and any other intellectual property rights recognized in any country or jurisdiction in the world.

1.3   "Monitoring Software" means Software designed for the remote, real-time performance, health, failure, tracking and/or up-time monitoring and management of field equipment and related systems.

1.4   "Programs" shall mean the Vitality computer software program referenced above, including all modifications, enhancements, and revisions thereto that are either: (i) expressly authorized by Licensor in writing; or (ii) created by Licensor pursuant to a software support agreement between the parties, if any.

1.5   "Sales Documentation" means the terms and conditions and other legal documentation accompanying the Baker Hughes-provided products with which the Programs are intended to operate.

2. License.

2.1   License Grant. Subject to the terms of this Agreement, Licensor grants Licensee a non-transferable, non-exclusive license to install the Program on one personal computer and use the Programs and Documentation to support any number or combination of authentic instruments provided by Baker Hughes and/or its affiliate(s) networked on the one personal computer. Licensee may make one additional copy of the Programs and Documentation solely for archival purposes.

2.2   License Restrictions. All Programs are licensed and not sold. Except as otherwise expressly provided in this Agreement, Licensee shall not make any copies of the Products or Documentation, and shall not decompile, disassemble, decrypt, extract or otherwise reverse engineer the Products, except as permitted by applicable local law with prior written notice to Licensor. Any modifications, revisions, changes or enhancements made by Licensee to the Products or Documentation, or any reverse engineering of the Programs without Licensor's express prior written permission shall be deemed a material breach of this Agreement, and any Intellectual Property Rights created without permission shall become Licensor's sole property without any additional Licensor action necessary to perfect its ownership rights and interests. Notwithstanding anything to the contrary in this Agreement, all rights, title and ownership of any such modifications, revisions, changes and enhancements shall reside solely in Licensor. Except as expressly provided in Section 12.1, Assignment, the Programs shall not be sold, leased, assigned, transferred, distributed or sublicensed, in whole or in part. Licensee shall not delete or in any manner alter copyright, trademark or other proprietary rights notices of Licensor or its suppliers appearing on the Programs and Documentation. IF LICENSEE TRANSFERS POSSESSION OF ANY COPY OF THE SOFTWARE TO ANOTHER PARTY WITHOUT WRITTEN CONSENT OF LICENSOR, THIS AGREEMENT IS AUTOMATICALLY TERMINATED.

3. OTHER AGREEMENTS.

The Programs are intended to be used only with other Baker Hughes-sourced hardware and/or software, the sale, lease, and/or licensing of which is governed by the Sales Documentation. Accordingly, the use of the Programs shall be governed first by the Sales Documentation and then this Agreement. To the extent of a conflict between the Sales Documentation and this Agreement, the Sales Documentation shall control. In the event that there is no applicable Sales Documentation, the terms of this Agreement shall control the use of the Programs.

4. TAXES.

Licensee shall, in addition to any license payments required hereunder, pay all applicable sales, use, transfer, value-added or other taxes and all duties, whether international, national, state or local, however designated, which are levied or imposed by reason of the transaction(s) contemplated hereby, excluding only income taxes on net profits which may be levied

against Licensor. Licensee shall reimburse Licensor for the amount of any such taxes or duties paid or accrued directly by Licensor as a result of said transaction(s). If Licensee is prohibited by law from making payments hereunder free of such deductions or withholdings, Licensee shall immediately notify Licensor and pay Licensor any additional sum(s) equal to such deduction or withholding.

5. WARRANTIES.

5.1   Limited Program Warranty. Licensor warrants that the media on which the Products are distributed shall be free from defects for a period of ninety (90) days after delivery. As Licensee's sole and exclusive remedy and Licensor's entire liability for any breach of this warranty, Licensor shall, at its sole option: (i) repair or replace, at no additional charge to Licensee, any defective media; or (ii) if, despite using its reasonable efforts, Licensor is unable replace the media, refund to Licensee the applicable license fees paid for the non-conforming media after Licensee returns the media to Licensor, less a reasonable license fee for the period during which Licensee had use of the Program, using straight-line depreciation assuming a useful life of the Program of three (3) years. The limited warranty set forth herein shall automatically become null and void if a party other than Licensor modifies the Programs in any way.

5.2   Disclaimer Of Warranties. EXCEPT FOR THE EXPRESS MEDIA WARRANTY ABOVE, THE PROGRAMS AND DOCUMENTATION ARE PROVIDED "AS-IS", WITH ALL FAULTS. LICENSOR MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED. LICENSOR EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. LICENSOR DOES NOT WARRANT THAT THE PROGRAMS SHALL BE ERROR-FREE OR THAT THEY SHALL FUNCTION WITHOUT INTERRUPTION.

5.3   Additional Warranty Disclaimer for Monitoring Software. While the Monitoring Software provides advisory information regarding equipment condition, it is virtually impossible to guaranty that each and every fault condition can be foreseen or detected. THEREFORE, LICENSOR EXPRESSLY DISCLAIMS ANY WARRANTY THAT THE MONITORING SOFTWARE WILL DETECT ANY PARTICULAR FAILURE OR PROVIDE ANY PARTICULAR AMOUNT OF ADVANCE WARNING OF AN IMPENDING FAILURE OR CONDITION OF THE MONITORED EQUIPMENT.

5.4   Except as expressly authorized by Licensor in writing, all Third-Party Software shall carry only the warranties provided by the owners thereof and Licensor gives no warranties for such Third-Party Software.

5.5   Excluded Uses. UNLESS EXPRESSLY PROVIDED IN A SEPARATE WRITTEN AGREEMENT, THE SOFTWARE MAY NOT BE USED AS ON-LINE CONTROL EQUIPMENT IN HAZARDOUS ENVIRONMENTS REQUIRING FAIL-SAFE PERFORMANCE, SUCH AS IN THE OPERATION OF NUCLEAR FACILITIES, AIRCRAFT NAVIGATION OR COMMUNICATION SYSTEMS, AIR TRAFFIC CONTROL, DIRECT LIFE SUPPORT MACHINES, OR WEAPONS SYSTEMS, IN WHICH THE FAILURE OF THE SOFTWARE COULD LEAD DIRECTLY TO DEATH, PERSONAL INJURY, OR SEVERE PHYSICAL OR ENVIRONMENTAL DAMAGE.

IF, IN BREACH OF THIS SECTION 5.5, ANY SUCH USE OCCURS, LICENSOR DISCLAIMS ALL LIABILITY FOR ANY NUCLEAR OR OTHER DAMAGES, INJURY OR CONTAMINATION, AND IN ADDITION TO ANY OTHER LEGAL OR EQUITABLE RIGHTS OF LICENSOR, LICENSEE SHALL INDEMNIFY AND HOLD LICENSOR HARMLESS AGAINST ANY SUCH LIABILITY. IF LICENSOR AGREES IN WRITING TO ANY SUCH USE, THE PARTIES SHALL AGREE UPON SPECIAL TERMS AND CONDITIONS THAT PROVIDE LICENSOR PROTECTIONS AGAINST NUCLEAR AND OTHER LIABILITY WHICH ARE ACCEPTABLE TO LICENSOR UNDER THE THEN CURRENT LAWS THAT APPLY.

6. Limitations of Liability.

6.1   Exclusion of Damages. WHETHER ANY REMEDY SET FORTH HEREIN FAILS OF ITS ESSENTIAL PURPOSE OR OTHERWISE, IN NO EVENT SHALL LICENSOR BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL LOSS, LIABILITY OR DAMAGES OF ANY KIND (INCLUDING BUT NOT LIMITED TO LOSS OF USE, DATA, BUSINESS OR PROFITS) WHETHER ARISING UNDER A THEORY OF CONTRACT, TORT (INCLUDING NEGLIGENCE), BREACH OF WARRANTY, PRODUCT LIABILITY OR OTHERWISE, AND REGARDLESS OF WHETHER LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSS, LIABILITY OR DAMAGES.

6.2   Total Liability. IN NO EVENT SHALL LICENSOR'S CUMULATIVE LIABILITY ARISING FROM OR RELATED TO THIS AGREEMENT, FROM ALL CAUSES OF ACTION OF ANY KIND, WHETHER ARISING UNDER A THEORY OF CONTRACT, TORT (INCLUDING NEGLIGENCE), BREACH OF WARRANTY, PRODUCT LIABILITY OR OTHERWISE, EXCEED THE TOTAL AMOUNT OF LICENSE FEES ACTUALLY RECEIVED BY LICENSOR FROM LICENSEE UNDER THIS AGREEMENT. SOME STATES OR JURISDICTIONS DO NOT ALLOW EXCLUSION OF IMPLIED WARRANTIES OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

6.3   Additional Limitation on Liability for Monitoring Software. License acknowledges that the Monitoring Software generates advisory information but does not perform any automated control, and Licensor has no control over decisions made or actions taken on the basis of any such generated information. Licensee assumes total responsibility for Licensee's use of the

advisory information generated by the Monitoring Software. THEREFORE, TO THE EXTENT THE SOFTWARE INCLUDES MONITORING SOFTWARE, LICENSEE BEARS THE ENTIRE RISK OF ANY LIABILITY ARISING OUT OR RELATING TO THE USE OF THE SOFTWARE.

6.4   Basis of the Bargain. All warranty disclaimers and liability limitations set in this Agreement shall apply upon delivery of the Programs to Licensee. Licensee acknowledges that Licensor has set its prices and entered into this Agreement in reliance upon such disclaimers of warranty and the limitations of liability and that the same forms an essential basis of the bargain between the parties.

7. INDEMNIFICATION.

Licensee shall indemnify, defend and hold Licensor harmless from and against all claims, liabilities, actions, suits, demands, fines, penalties and all costs and expenses incurred by Licensor in connection therewith (including reasonable attorneys' fees) arising out of or related to: (a) Licensee's use of the Programs in combination with software or hardware not specifically approved by Licensor in writing; (b) Licensor's compliance with designs or specifications provided by Licensee; (c) any modification, enhancement or revision made to the Programs by anyone other than Licensor; or (d) Licensee's failure to use any modification, enhancement or revision provided to Licensee by Licensor for the purpose of avoiding a claim of infringement.

8. Termination.

8.1   Termination for Breach. Either party may terminate this Agreement with respect to one or all of the Programs in the event of a breach or default by the other party; provided, however, no such termination shall occur until the non-breaching/defaulting party shall have given written notice of the breach or default to the breaching/defaulting party and such breach or default shall not have been cured within five (5) days in the event of a monetary breach or default and thirty (30) days in the event of a non-monetary breach or default.

8.2   Automatic Termination. This Agreement shall terminate automatically if: (i) either party becomes the subject of any voluntary or involuntary petition in bankruptcy or any proceeding relating to insolvency, receivership, liquidation or composition for the benefit of creditors, and in the case of an involuntary petition or proceeding such petition or proceeding is not dismissed within sixty (60) days of filing; or (ii) Licensee fails to pay license fees when due or commits a material breach of the license provisions in paragraph 2 above.

8.3   Effect of Termination. Upon any termination of this Agreement or of any individual Program license, Licensee shall promptly return to Licensor or, at Licensor's election, destroy the applicable Programs and Documentation and all copies and portions thereof, in all forms and types of media related thereto, and provide Licensor with an written certification signed by a duly authorized representative of Licensee, certifying to Licensee's compliance with the foregoing. Licensee's exclusive remedy for breach shall be the return of all license fees received by Licensor related to the affected Programs.

8.4   Nonexclusive Remedy. Except as provided otherwise in this Agreement, all remedies of either party shall be non-exclusive and shall be without prejudice to any other right or remedy of such party.

9. SURVIVAL.

All provisions of this Agreement relating to liability, warranties, indemnities or confidentiality, and the provisions of Sections 7, 10 and 11 of this Agreement, shall survive the expiration or termination of this Agreement.

10. GOVERNING LAW.

10.1   This Agreement shall be governed by and construed in accordance with the laws of: (i) the State of New York, if Licensee has a primary residence, or is incorporated in the USA; or (ii) England, if Licensee has a primary residence, or is incorporated outside the USA; excluding in any case conflict of law rules. The parties acknowledge and agree that the United Nations Convention on Contracts for the International Sale of Goods, and the Uniform Computer Information Transactions Act as enacted by any State, will not apply to this Agreement.

10.2   Any dispute arising out of or in connection with this Agreement shall be finally settled in accordance with the International Chamber of Commerce (ICC) Rules of Arbitration in the English language and by a single arbitrator appointed under said Rules. The seat, or legal place, of arbitration shall be: (i) New York, N.Y., if Licensee has a primary residence, or is incorporated in the USA; or (ii) Geneva, Switzerland, if Licensee has a primary residence, or is incorporated outside the USA. This Section shall in no way be construed to prevent or otherwise limit Licensor from seeking any relief pursuant to Section 11 below.

11. INJUNCTIVE RELIEF

If Licensee breaches, or threatens breach of any part of this Agreement, Licensee acknowledges and agrees that Licensor will be greatly damaged, and such breach (es) will be irreparable and damages associated therewith will be difficult to quantify; therefore, Licensor may apply to any court of competent jurisdiction, who, notwithstanding the Governing Law provisions above, will apply the laws of its own jurisdiction in determining whether relief shall be granted to Licensor, for injunctive or other equitable relief to restrain such breach or threat of breach, without impairing, invalidating, negating or voiding Licensor's other rights to relief either at law or in equity.

12. GENERAL

12.1   Assignment. Licensee may assign this entire Agreement with the sale of any of its Baker Hughes instruments provided that Licensee and its assignee agree in writing to comply with all provisions of this Agreement. Otherwise, Licensee may not assign this Agreement without Licensor's prior written consent. Any other attempted assignment shall be null and void and shall automatically terminate this Agreement.

12.2   Compliance with Laws and Export. Each party shall comply in all material respects with all laws, rules, approvals, registrations and regulations of the United States and other countries that may be applicable to the Programs or to each party's activities under this Agreement.Licensee agrees not to re-export U.S. or EU origin software or Documentation in violation of the applicable export control laws. In case of software or Documentation to be exported outside the U.S. and/or EU that are considered or likely to be considered as "dual use", Licensee shall (or shall cause the end user of the software or Documentation to) provide to Licensor, promptly upon its request, an "End User Statement" in accordance with the applicable legal requirements. Licensor shall not be liable to Licensee for any delay and shall not be considered in breach of its obligations in the event of Licensee's failure or delay in providing such statement.

12.3   Severability. If any or all of the covenants hereunder are determined by a court of competent jurisdiction to be invalid or unenforceable, by reason that the breadth of restrictions are too great, or for any other reason, these covenants shall be modified and interpreted to extend over the maximum geographic area, period of time, range of activities or other restrictions to which they may be enforceable.

12.4   Force Majeure. Licensor shall not be responsible for any failure or delay in its performance under this Agreement due to causes beyond its reasonable control, including but not limited to, labor disputes, strikes, lockouts, shortages of or inability to obtain labor, energy, raw materials or supplies, war, riot, act of God or governmental action.

12.5   Entire Agreement. This Agreement is the complete and exclusive agreement between the parties with respect to the subject matter hereof, superseding and replacing any and all prior or contemporaneous agreements, communications, and understandings (both written and oral) regarding such subject matter. Any waiver, modification or amendment of any provision of this Agreement shall be effective only if in writing and signed by duly authorized representatives of the parties hereto.

12.6   Attorney's Fees. In the event that either party resorts to legal action to enforce its rights under this Agreement, the prevailing party in such action shall be entitled to have all costs and expenses incurred in such action, including courts costs and reasonable attorney's fees, paid by the other party.

12.7   3rd Party Components and Licenses. The log4net.dll component is included with the Vitality binary distribution under licenses and warranties of Apache License 2.0 from http://www.apache.org/licenses/LICENSE-2.0.txt. Redistribution of this component is compatible with the Apache License 2.0.

12.8   Except as otherwise expressly provided, nothing in this Agreement is intended to confer benefits, rights or remedies unto any third party other than the parties hereto under the United Kingdom Contracts (Rights of Third Parties) Act (1999), where applicable, or any other law. Licensee and Licensor shall be entitled to modify, vary, amend and/or extinguish such rights without the consent of any third parties.

13. NOTICE TO U.S. GOVERNMENT END USERS:

13.1   This Article 13 applies only if this Agreement is for the direct or indirect sale to any agency of the U.S. government and/or is funded in whole or in part by any agency of the U.S. government.

13.2   Licensee agrees that the Programs and Documentation (collectively "Products") provided by Licensor have been entirely developed at private expense and meet the definition of "commercial-off-the-shelf" ("COTS"), "commercial item" and/or "commercial computer software" as those terms are defined in Federal Acquisition Regulation ("FAR") or any other applicable authority (e.g., the Defense FAR Supplement ("DFARS")). As such, the Products provided under this Agreement and under the conditions of Section 11.1 are provided to the government with "Limited Rights," as that term is defined at FAR

52.227-14 and/or pursuant to the terms of the DFARS, as applicable. Use, duplication or disclosure by the government is subject to the restrictions set forth at FAR 52.227-14, FAR 52.227-19 and/or DFARS 252.227-7015, as applicable.

13.3   To the extent the Buy American Act, Trade Agreements Act, or any other domestic preference requirements are applicable to this Agreement, the country of origin of Products/Parts is unknown unless otherwise specifically stated by Licensor in this Agreement. Licensee agrees that any Software offered by Licensor are exempt from the Service Agreement Act of 1965 (FAR 52.222-41). The version of any applicable FAR clause listed in this Article 11 shall be the one in effect on the effective date of this Agreement.

13.4   If Licensee is an agency of the U.S. government, then as permitted by FAR 12.302, Licensee agrees that all paragraphs of FAR 52.212-4 (except those listed in 12.302(b)) are replaced with the terms and conditions of this Agreement. Licensee further agrees the subparagraphs of FAR 52.212-5 apply only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the agreement price.

13.5   If Licensee is procuring the Products as a contractor, or subcontractor at any tier, on behalf of any agency of the U.S. government, then Licensee agrees that FAR 52.212-5(e) or 52.244-6 (whichever is applicable) applies only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the agreement price. If the reasonableness of the price cannot be established through adequate price competition, or if cost or pricing data should be required for any other reason, or if any of the Products cannot be considered a "commercial item", Licensor may terminate this Agreement without penalty and be reimbursed for work done before the effective date of termination.

BY CLICKING THE ACCEPTANCE BUTTON and/OR ACCESSING, USING OR INSTALLING ANY PART OF THE PROGRAMS OR DOCUMENTATION, YOU: 1) represent that YOU ARE authorized and have authority to bind YOUR company to all terms OF THIS AGREEMENT; 2) acknowledge that YOU have read AND AGREE TO BIND YOURSELF AND YOUR COMPANY TO all Terms of THIS AGREEMENT; and 3) agree that the act of accepting will attribute YOUR signature to THE AGREEMENT with intent to create a binding record of agreement with the same legal effect, validity and enforceability of a handwritten signature and paper document. IF YOU DO NOT UNDERSTAND OR AGREE TO ALL OF THE TERMS OF THIS AGREEMENT, THE BUTTON INDICATING NON-ACCEPTANCE MUST BE SELECTED, AND YOU MAY NOT ACCESS, USE OR INSTALL ANY PART OF THE PROGRAMS OR DOCUMENTATION.

[no content intended for this page]

Chapter 1. Features & Capabilities

Chapter 2. Installation

Chapter 3. Initial Setup

Chapter 4. Setting Up a Meter

Chapter 5. Running PanaView

Chapter 6. Data Handling

Appendix A. Menu Map

Chapter 1.   Features & Capabilities

1.1   Introduction

PanaView is a graphical user interface (GUI) that permits interactive communication between a BH 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 BH instruments

1.3   Supported Meters

Version 1.6.3 of PanaView supports the following BH meters:

- Most legacy IDM protocol BH instruments

- Most PanaLink™ protocol BH instruments

- BH Sentinel™ flow meters

- BH Safire 2 flow meters

1.4   PanaCom ActiveX Software

Although the PanaView GUI is the component of the software package that is visible to the user, it is really just one part of a sophisticated program. Beneath the surface, PanaCom™ is seamlessly enabling the PC to communicate with the BH instrument. *Figure 1* below illustrates the relationship between the various components of the system.

As indicated, PanaCom not only interfaces with the standard PanaView GUI, but it can be programmed to interact directly with customized versions of PanaView or with OLE compliant Windows applications. In fact, PanaCom is compatible with any process control/automation software that supports ActiveX technology. For more information on PanaCom, contact your BH sales engineer.
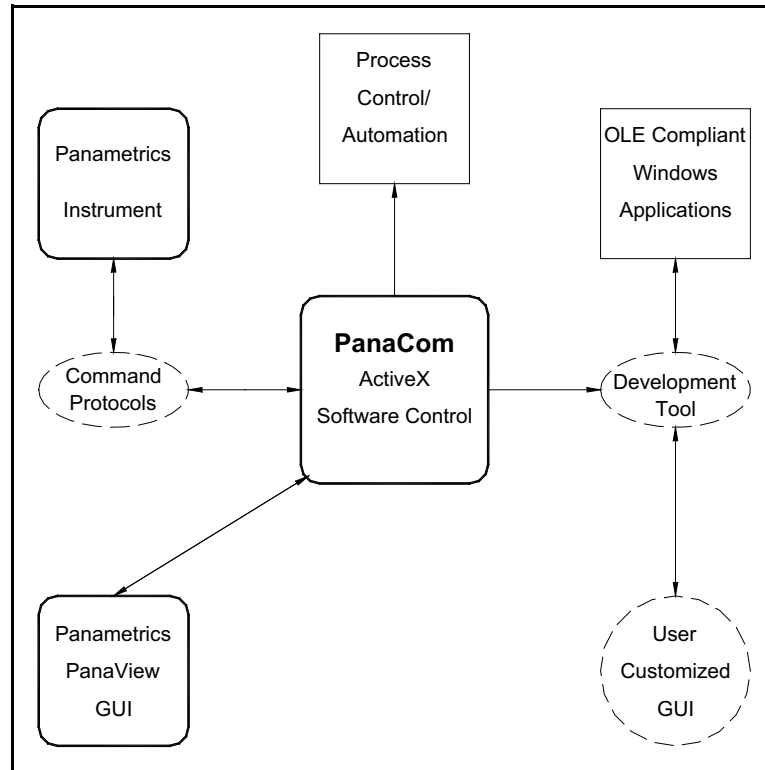
Figure 1: The PanaView/PanaCom System

1.5　Advanced Capabilities

In addition to the features described in *"Basic Features" on page 1*, PanaView offers some very useful advanced functionality. Users can consult the comprehensive online help files to quickly answer questions.

1.6　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.

1.7　Electronic Documentation

As an added convenience, an electronic version of this complete manual is supplied along with .exe / installer through shared media. A file named *"Help.pdf"* is included 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 "PanaViewSEN898Suite.exe" file, double click on it.

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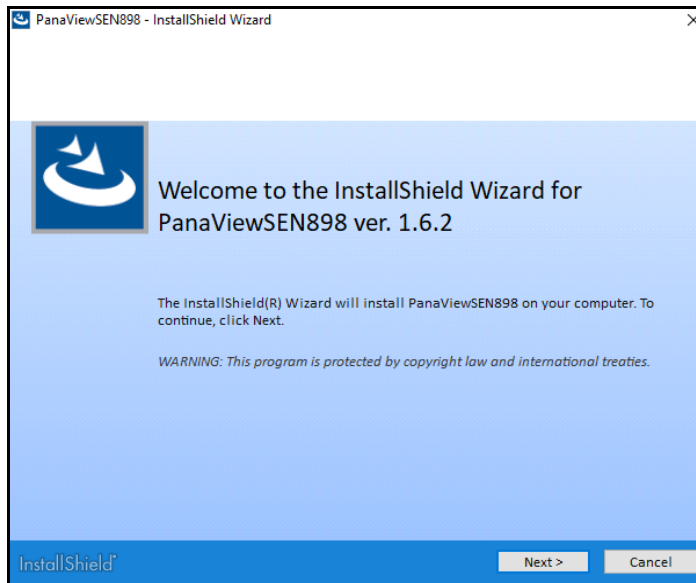
Figure 2: *Install-Shield Wizard* **Screen**

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 3* below appears.
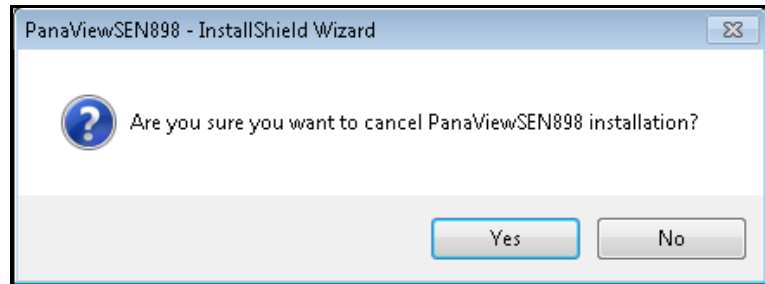
Figure 3: Cancel Installation Screen

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 4 below opens. Click the radio button for *"I accept the terms in the licence agreement"* and Click [Next] button to continue.
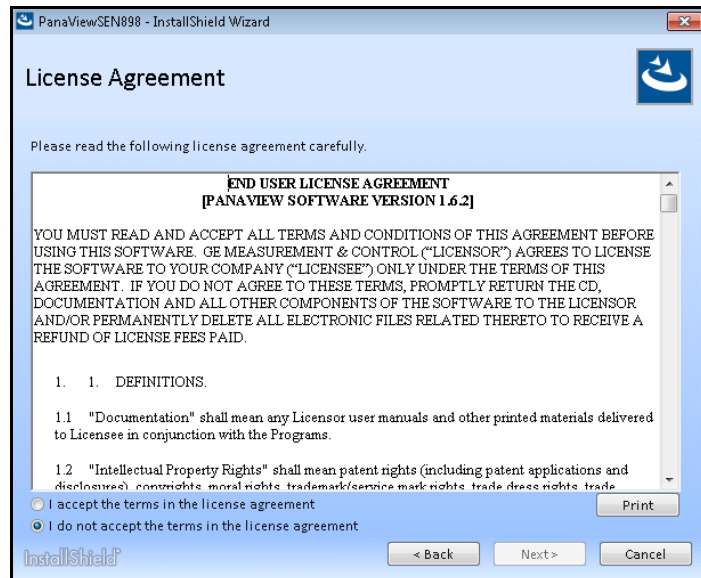
Figure 4: Licence Agreement Screen

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 5 below). The screen shown in Figure 6 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.
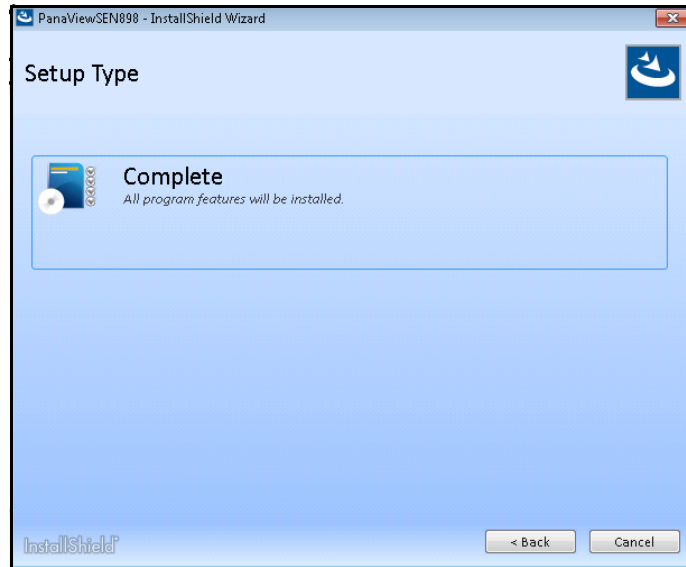
Figure 5: Setup Type Screen
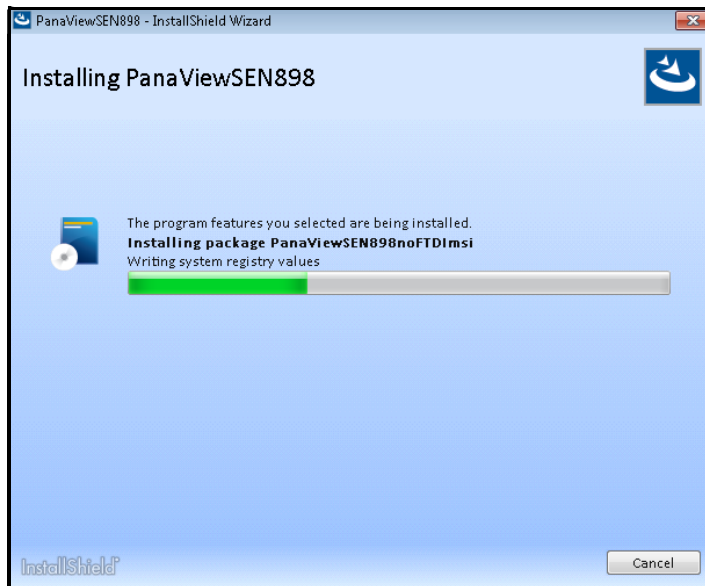
Figure 6: Installing Panaview Screen

5. Click [Extract] button from dialog box (see the Figure 7 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.*
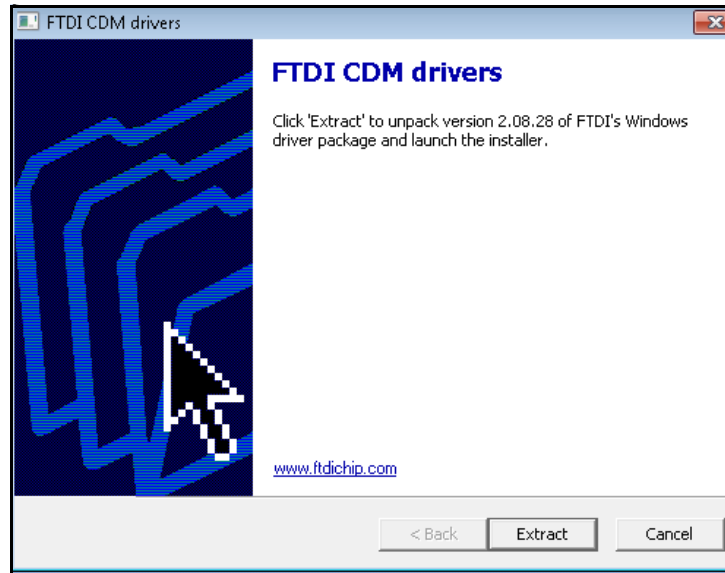
Figure 7: FTDI CDM drivers Screen

6. After extracting FTDI CDM drivers, the dialog box shown in Figure 8 below opens. Click [next] to install software drivers that some computer devices need in order to work.
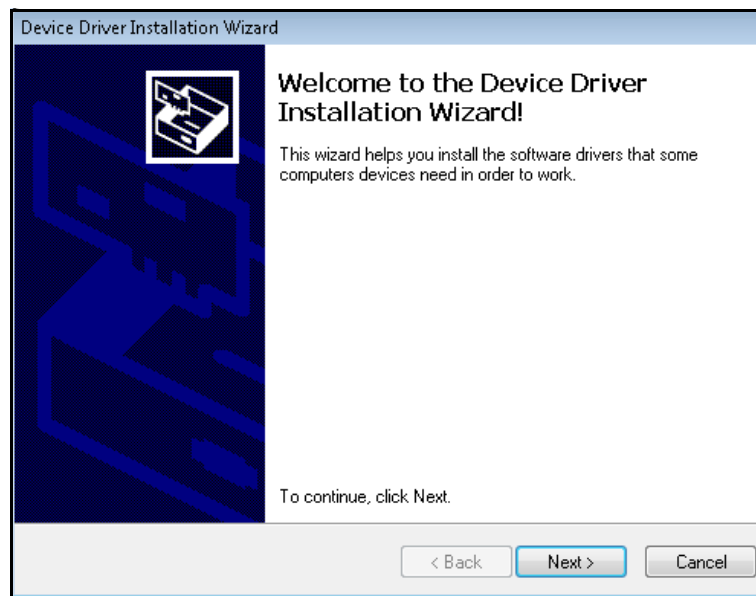
Figure 8: Device Driver Installation Screen

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 9 below opens. Click [Finish] to continue with PanaView installation.
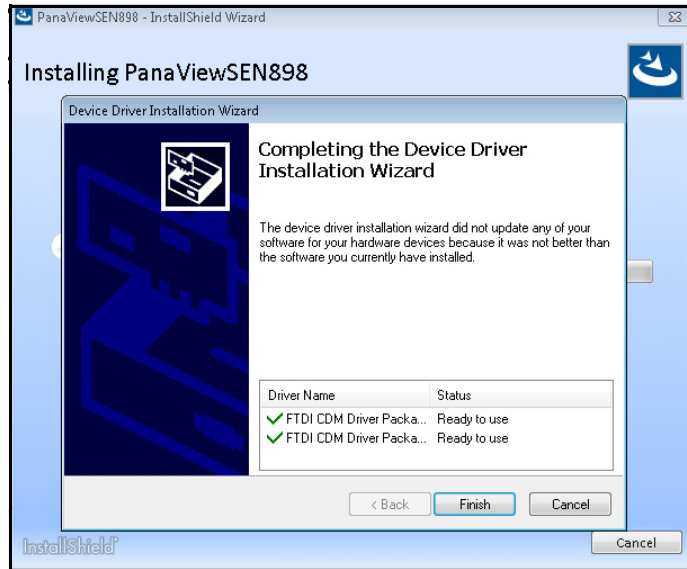
Figure 9: Successful Device Driver Installation Screen

8. After all of the PanaView files have been copied to your hard drive, the screen shown in *Figure 10* below opens. Click [Finish] button to close the InstallShield Wizard.

Figure 10: 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 BH instrument that has been configured for use with PanaView and which has an available serial port or Ethernet interface.

Note: *Check with BH 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 BH 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 BH instrument in accordance with the instructions provided in the *User's Manual* supplied with the instrument.

2. Power down both the personal computer and the BH instrument.

CAUTION! **Failure to power down both devices 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. Power up the BH instrument and then power up the personal computer.

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 *"Starting PanaView" on page 11*, and proceed as follows:

1.   The *Version number* of your PanaView software, which may not be the same as the example in *Figure 11* below, is shown in the initial screen.
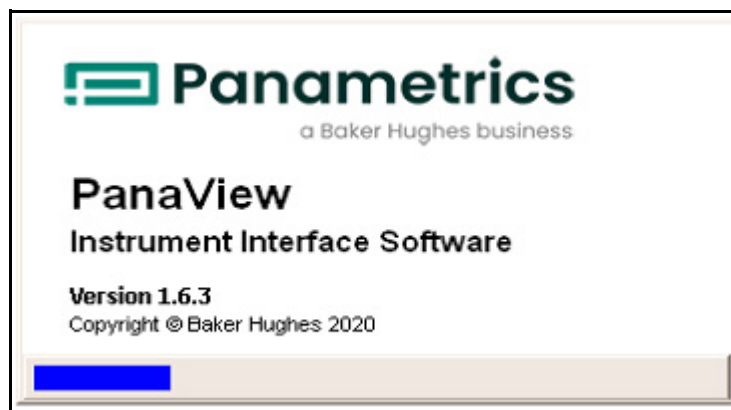
Figure 11: Initializing Screen

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 12* 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 12 *below more readable on this page, the window was compressed both vertically and horizontally from its actual dimensions.*
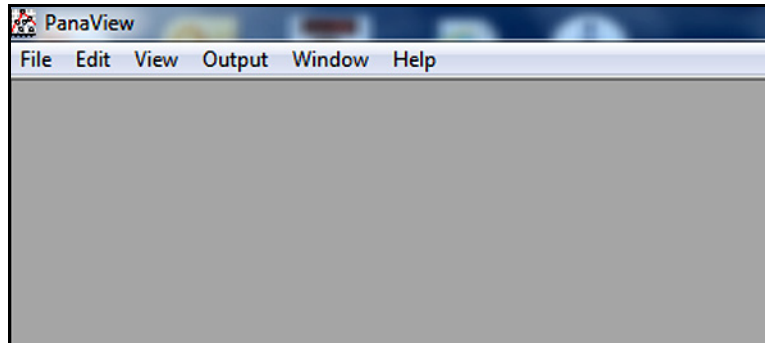
Figure 12: The Basic PanaView Window

- **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 14 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 13* 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.*
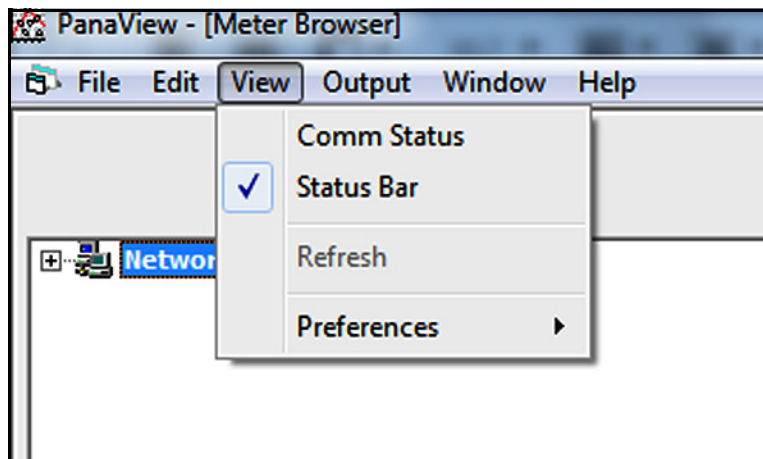
Figure 13: The View Menu

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 13 on page 13*. When toggled *"On"*, the Comm Status bar appears just above the main Status bar (see *Figure 14* below) and displays the following serial communications categories, from left to right:
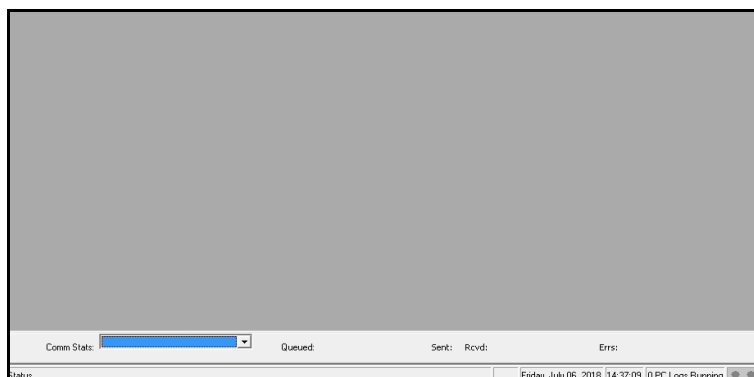
Figure 14: The Comm Status Bar

Note: *To make the image in Figure 14 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 14 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 13 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 15* 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.
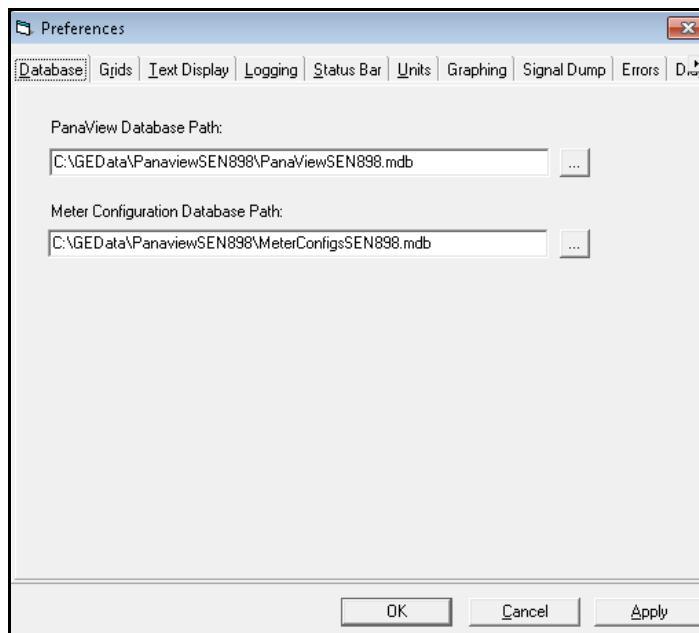

Figure 15: The Database Tab

3.4.3.2   The Grids Tab

In the *"Preferences"* box, click the *"Grids"* tab as shown in *Figure 16* 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.
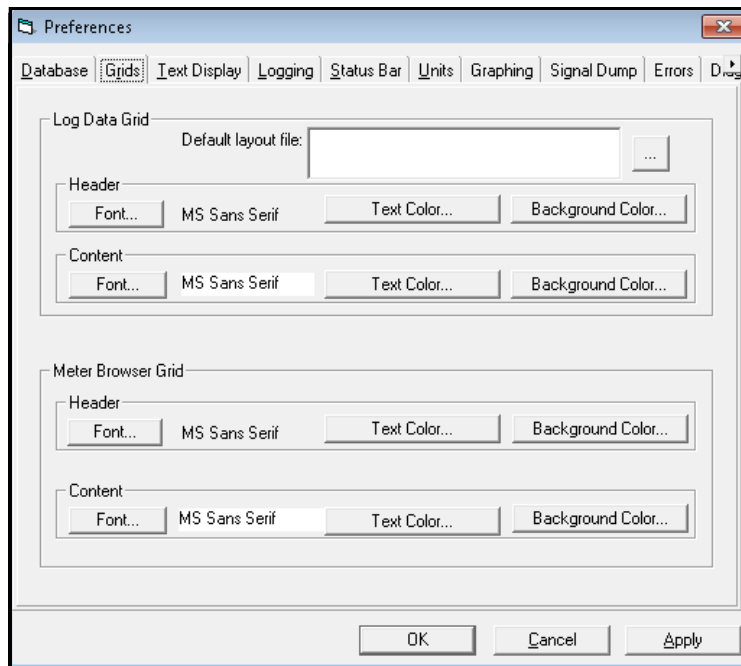
Figure 16: The Grids Tab

3.4.3.3   The Text Display Tab

In the *"Preferences"* box, click the *"Text Display"* tab (see *Figure 17* 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.
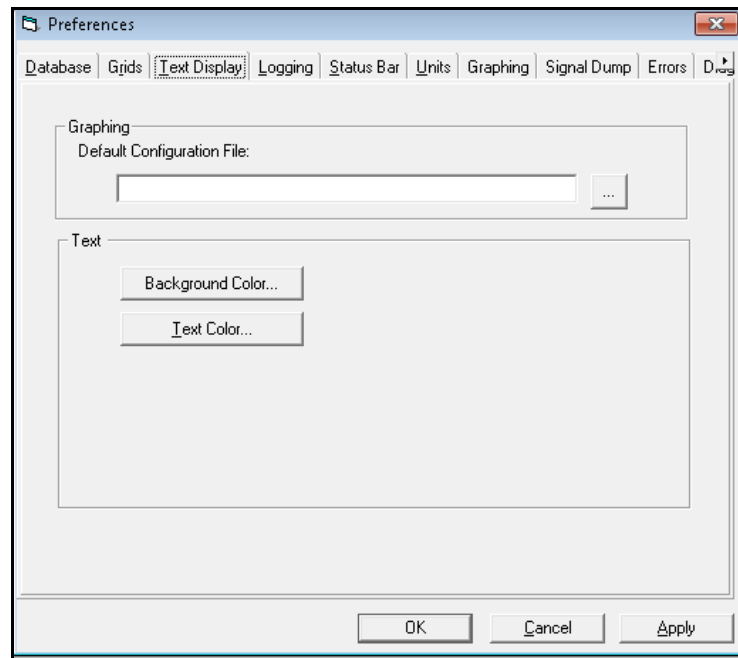
Figure 17: The Text Display Tab

3.4.3.4   The Logging Tab

In the *"Preferences"* box, click the *"Logging"* tab as shown in *Figure 18* 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.
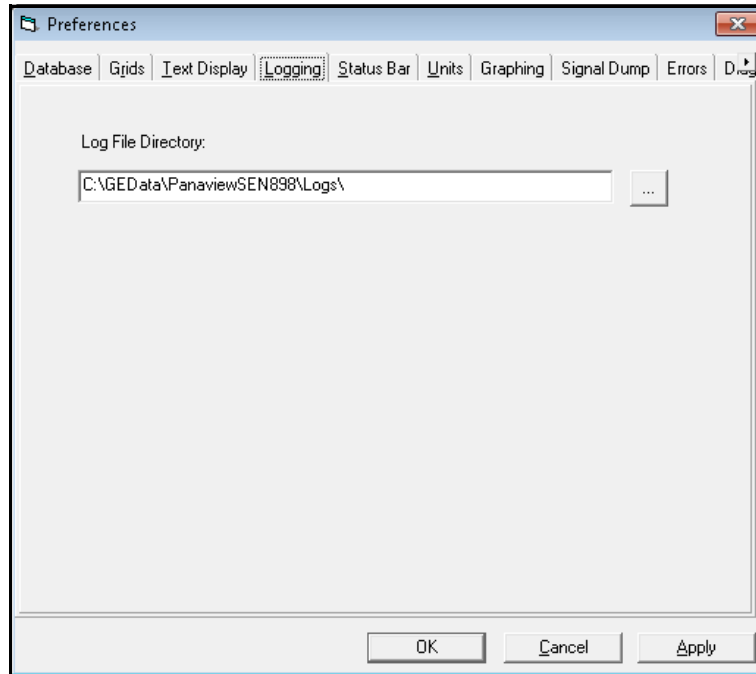
Figure 18: The Logging Tab

3.4.3.5   The Status Bar Tab

In the *"Preferences"* box, click the *"Status Bar"* tab as shown in *Figure 19* 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.
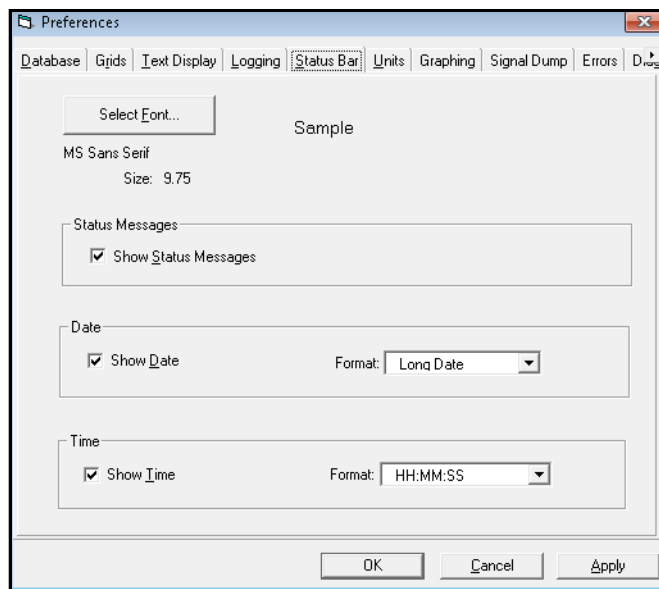
Figure 19: The Status Bar Tab

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 20* 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.
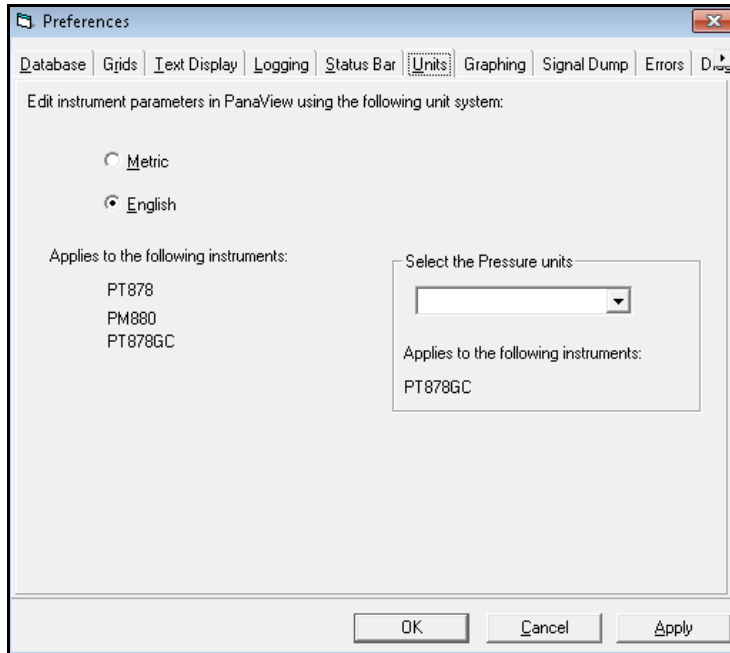
Figure 20: The Units Tab

3.4.3.7   The Graphing Tab

In the *"Preferences"* box, click the *"Graphing"* tab as shown in Figure 21 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.
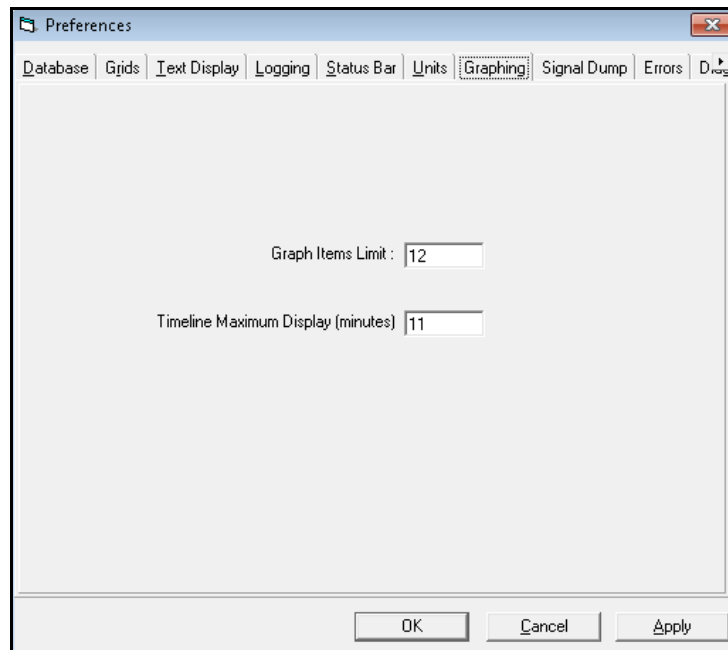
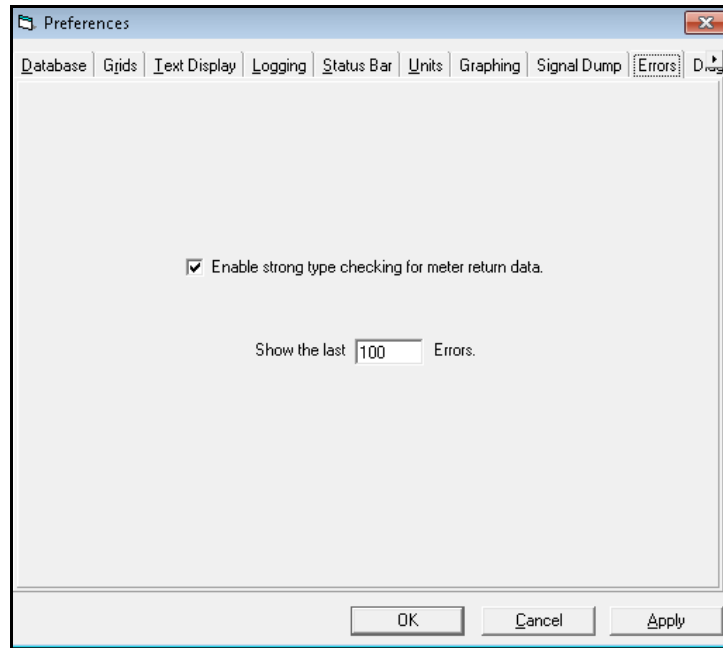**Figure 21: The Graphing Tab**

3.4.3.8   The Signal Dump Tab

In the "*Preferences*" box, click the "*Signal Dump*" 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 "*Include full header*".

Click [OK] or [Apply] button to save the changes or click [Cancel] button to ignore.
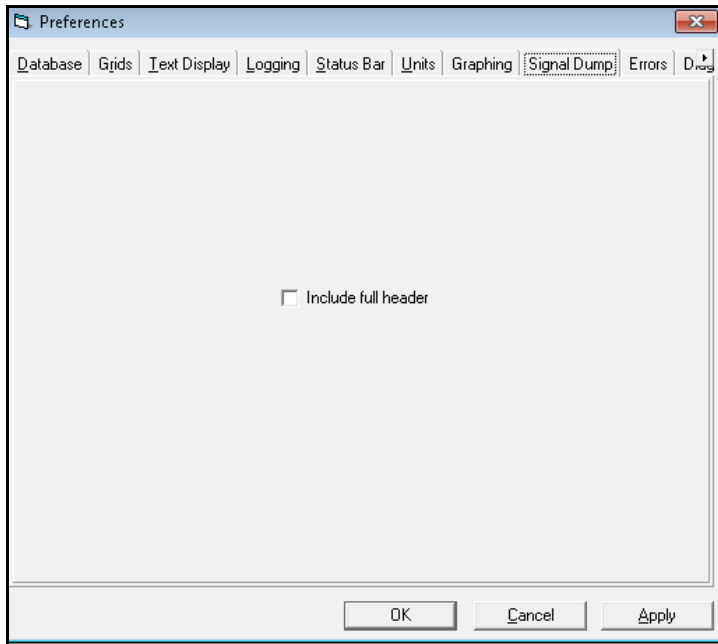
Figure 22: The Signal Dump Tab

3.4.3.9   The Errors Tab

In the "*Preferences*" box, click the "*Errors*" tab as shown in Figure 23 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 23: 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 24 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.
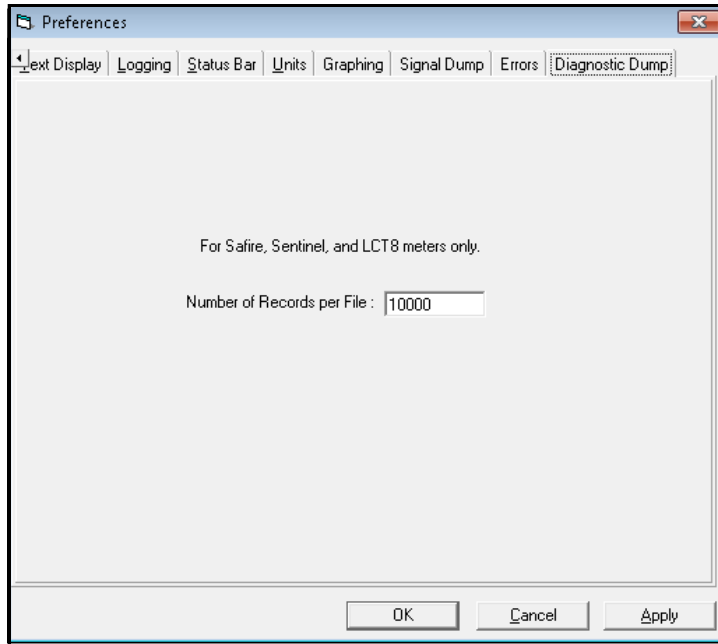
Figure 24: The Diagnostic Dump Tab

3.5   The Help Menu

The *"Help"* menu, as shown in *Figure 25* 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
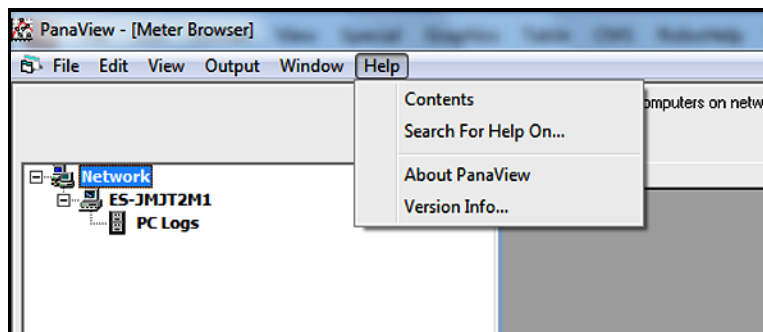
Figure 25: The Help Menu

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 26* 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 26* below opens.

- The screen shown on the left in *Figure 26* 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 26* 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.
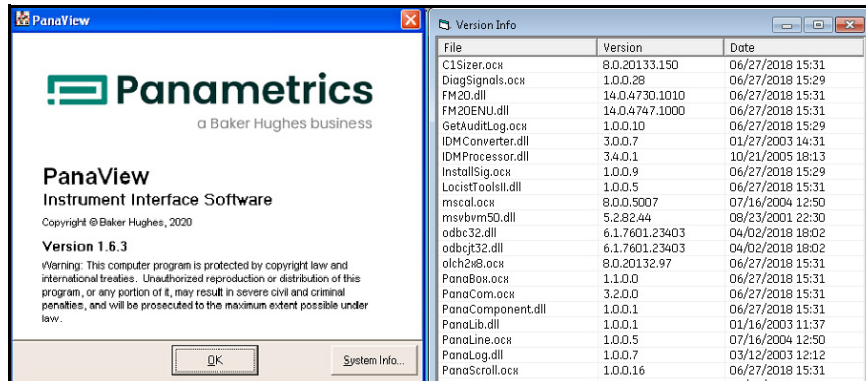
Figure 26: The About PanaView and Version Information Screens

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 BH 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 27* below).
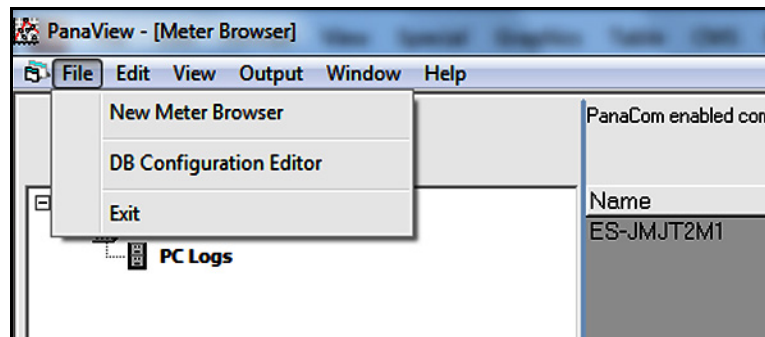
Figure 27: File Menu

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 28 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.
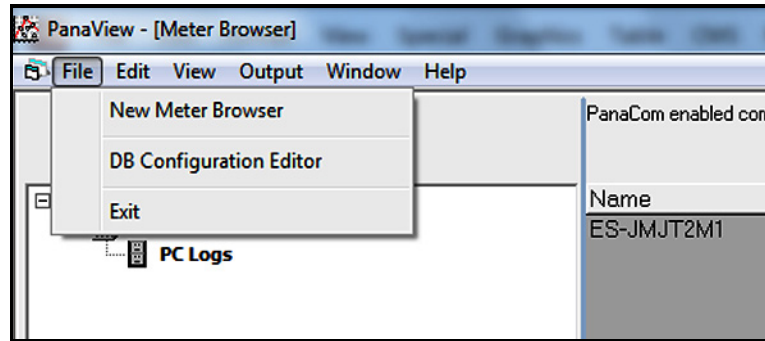
Figure 28: Network Branch

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 29* below.
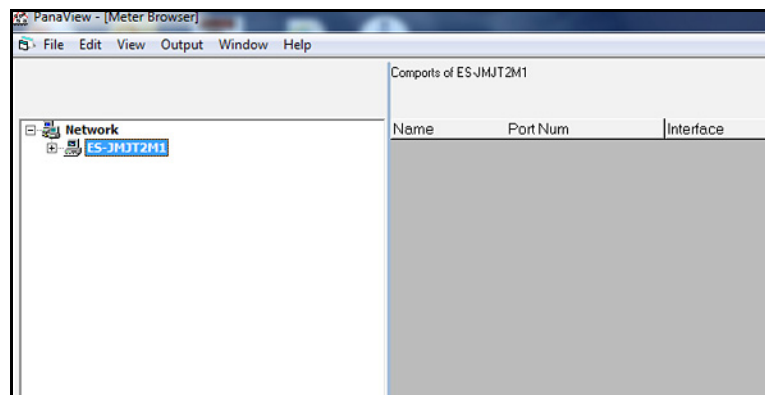
Figure 29: My Computer Branch

Note: *The right pane in* Figure 29 *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 30* below).
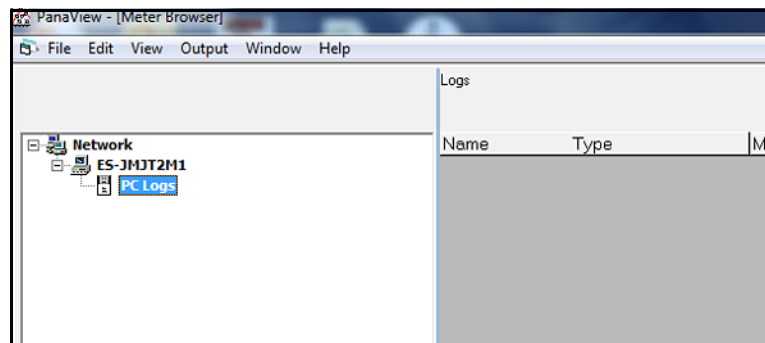

Figure 30: PC Logs Branch

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 29 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.

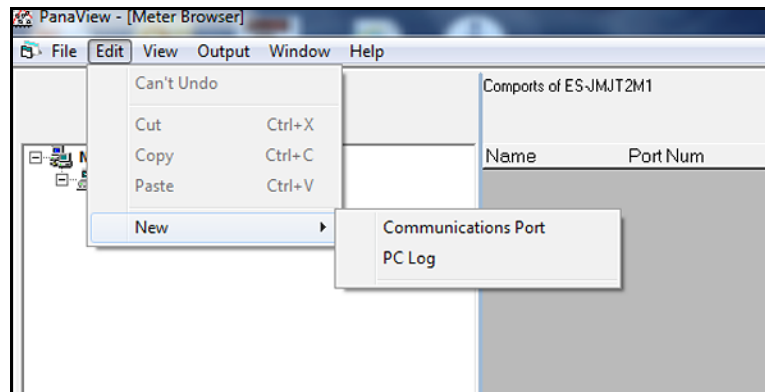3. Click *"New"* menu option to select it, and a submenu opens with two choices on it (see *Figure 31* below).

Figure 31: 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 32 on page 30*). The dialog box shown in *Figure 32* below opens, with *"Untitled/Empty"* as the default *"Name."*
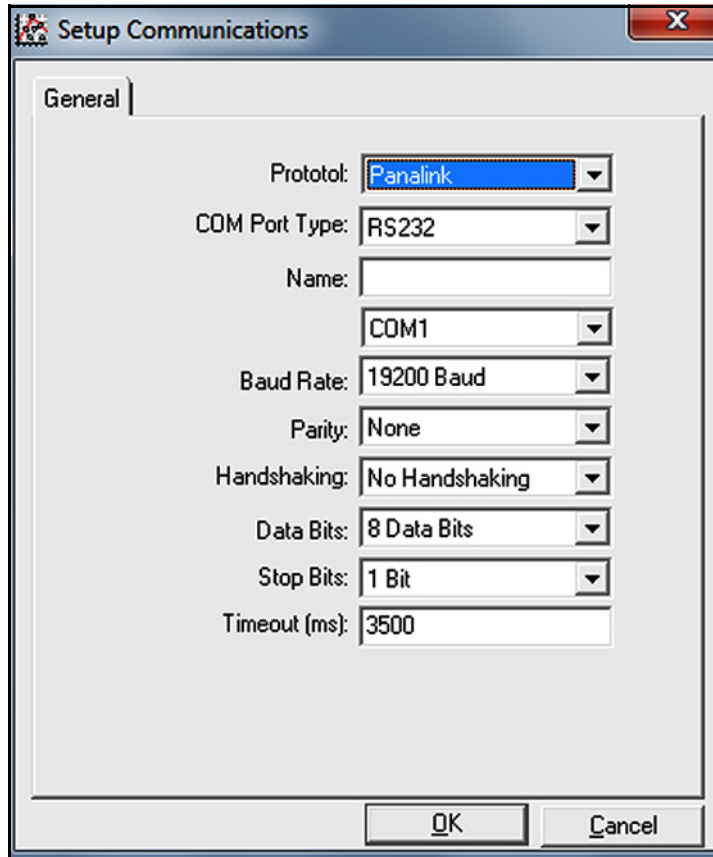
Figure 32: Setup Communications Screen

The dialog box in *Figure 32* 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 BH 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.*

- **Name** - 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 32 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 33 below.
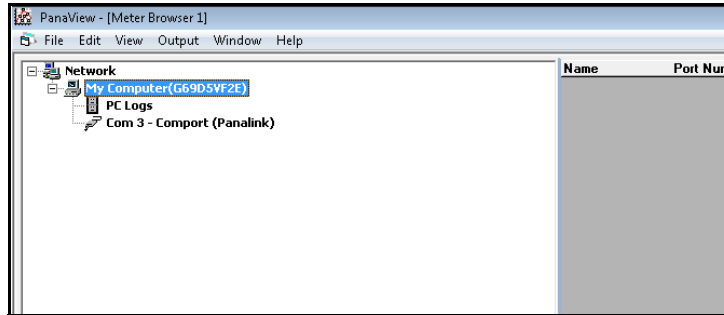
Figure 33: Added New Communication Port to Network Tree

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 34* 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.
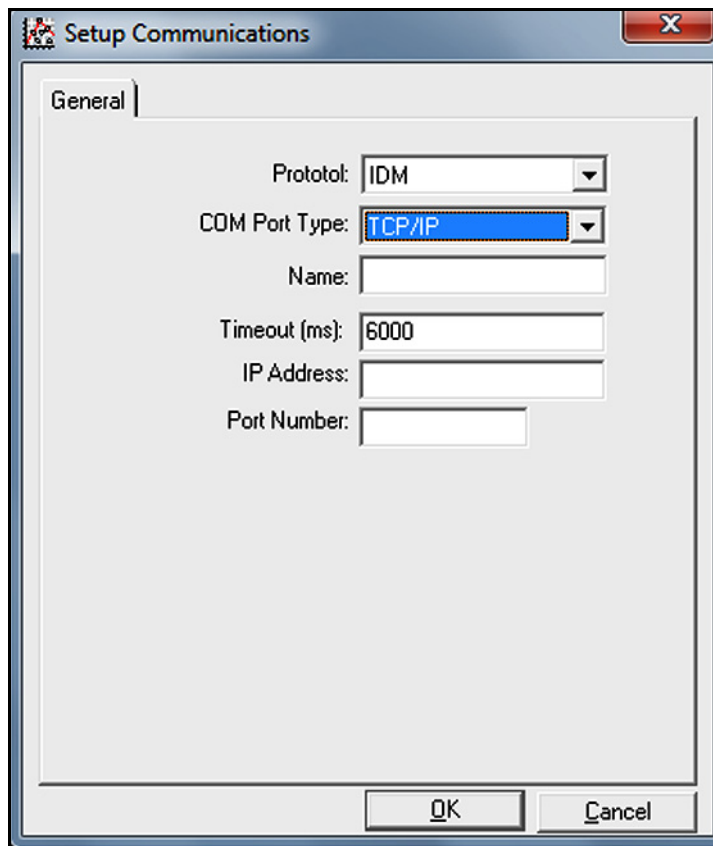
Figure 34: Setup Communications for TCP/IP

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 35* below that the network tree now has the newly configured communication port listed.
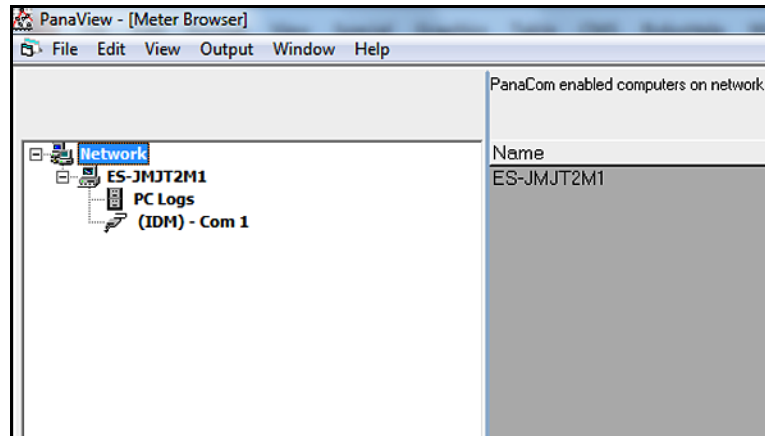
Figure 35: The New Serial Port Branch

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 36 below).

OR

3. Using the right mouse button (right–click), click and highlight the communication port to which the meter will be added (see Figure 37 below).

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

5. Click *"Meter"* menu option.
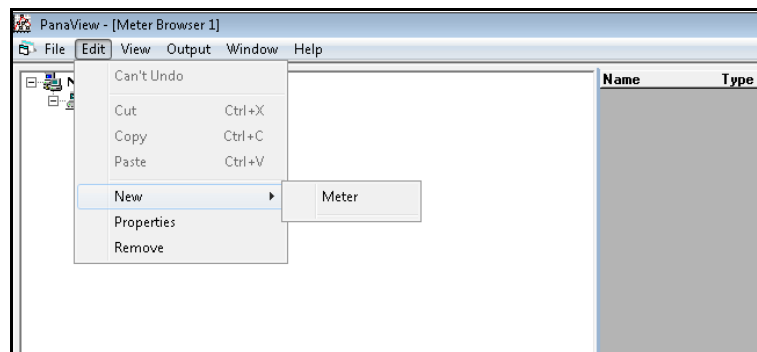
Figure 36: Add New Meter (using the Edit Menu)
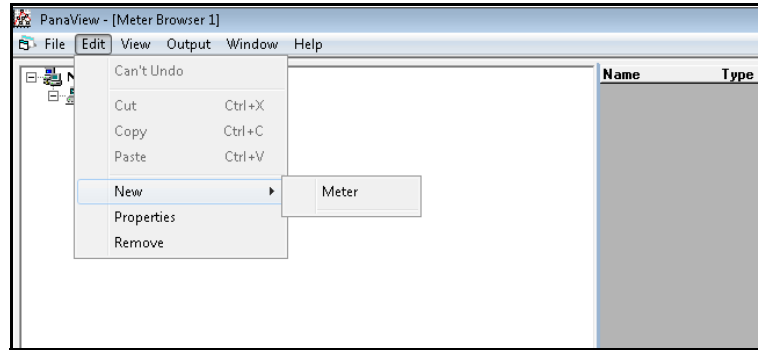
Figure 37: Add New Meter (using the Right-click option)

6. After selecting the *"New"* and *"Meter"* options, the dialog box shown in Figure 38 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.
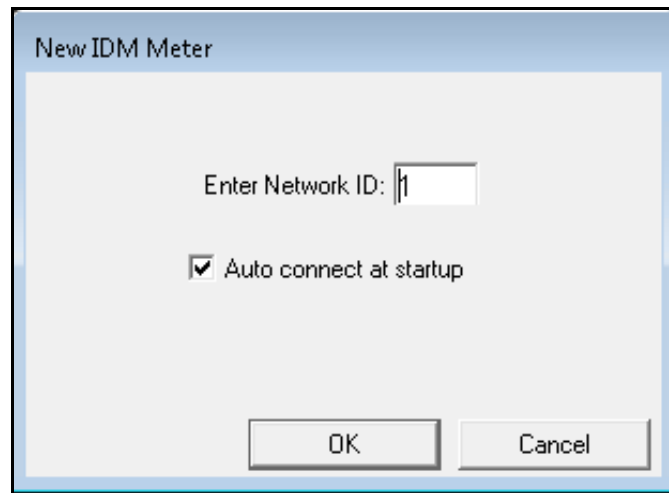

Figure 38: Add IDM New Meter

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 39 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.
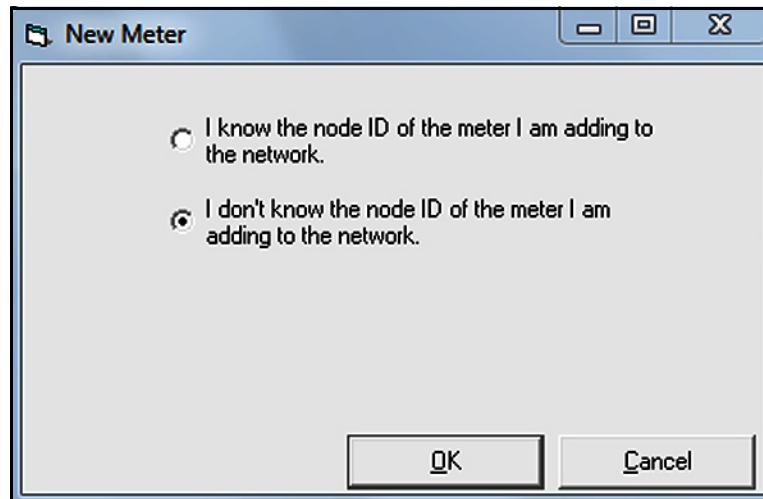
Figure 39: The Node ID Dialog Box

8. Select the *"It is the only meter connected to the communication port"* radio button from the dialog box (see *Figure 40* below) and then click [OK] button. In most instances, users connect their PC to one instrument only via a direct serial cable.
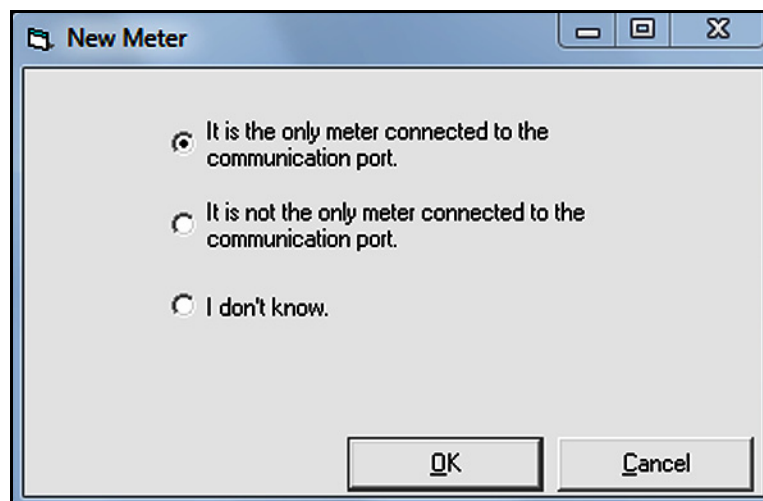

Figure 40: The Only Meter Dialog Box

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 41* 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.
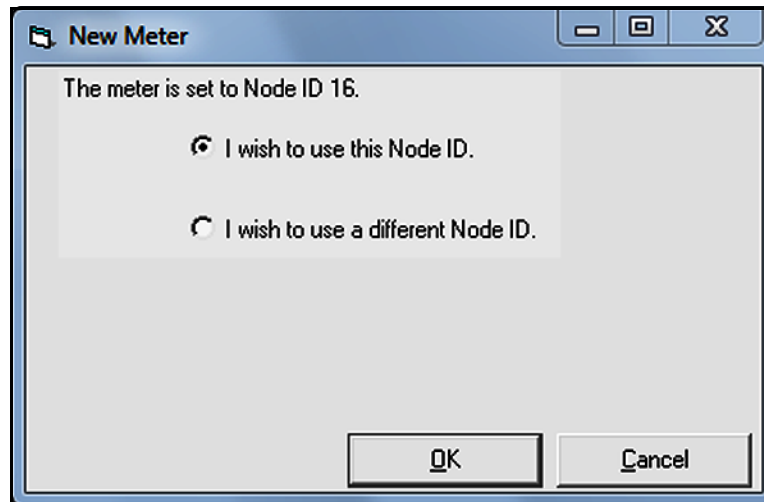
Figure 41: Node ID Confirmation

IMPORTANT: *Ensure that the meter is not Powered-off or already Connected by other user, otherwise the PanaView will throw an error (see Figure 42 below).*
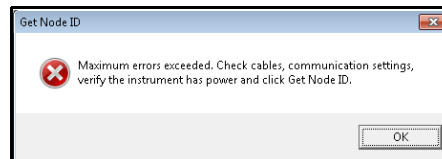
Figure 42: Get Node ID Error

10. At the dialog box shown in Figure 43 below, click [OK] button to add the meter and configure it.
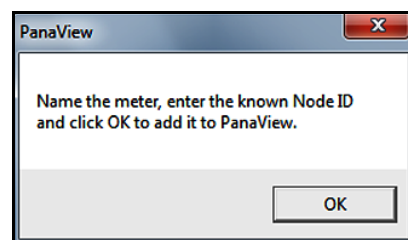
Figure 43: Confirmation Dialog Box

11. Enter a *name in dialog box* (see Figure 44 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 BH instrument.

Figure 44: Add Meter Dialog Box

12. Enter a *Name* and *Node ID* in dialog box (see *Figure 45* 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 BH instrument once the add new meter initialized.

Figure 45: 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 46* below is added to the new meter dialog box.

Figure 46: 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 47* below).
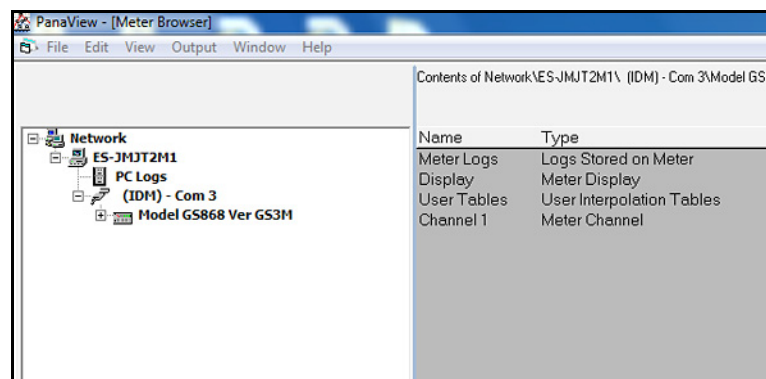

Figure 47: Updated Network Tree

Note: *A BH GS868 flowmeter was used for this example, as is indicated in* Figure 47 *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 39 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 45 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 86 on page 70*. If it is not already running, launch PanaView. A screen like the one shown in *Figure 48* below opens (the exact PanaView version number and meter details will reflect your specific installation):
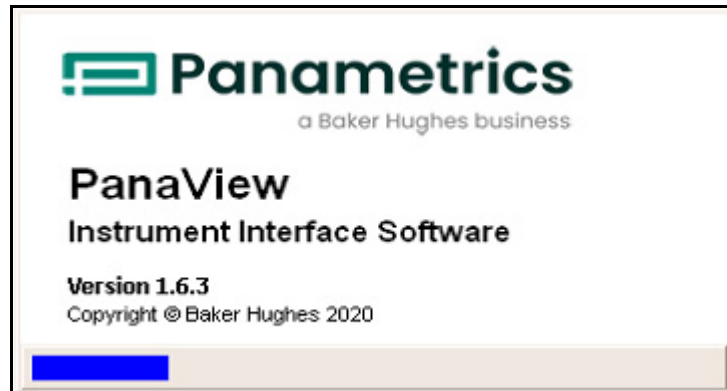
Figure 48: The Bootup Screen

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 49* 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.
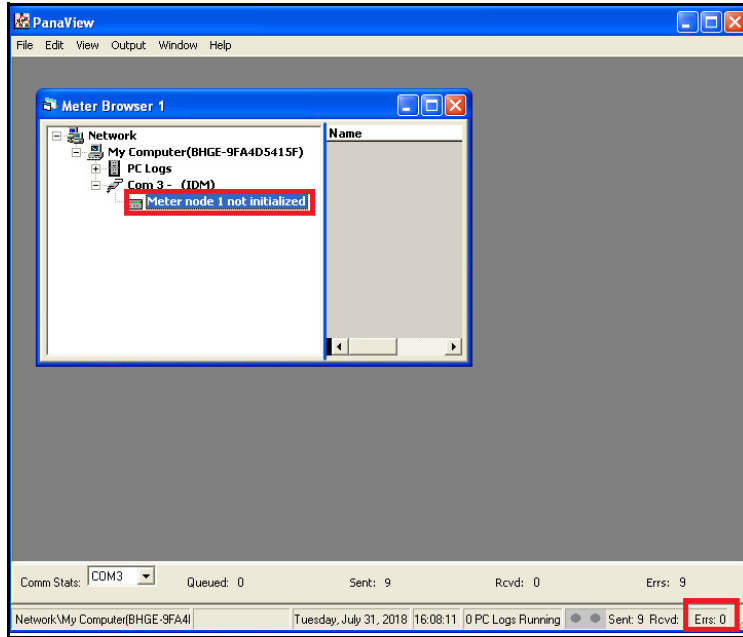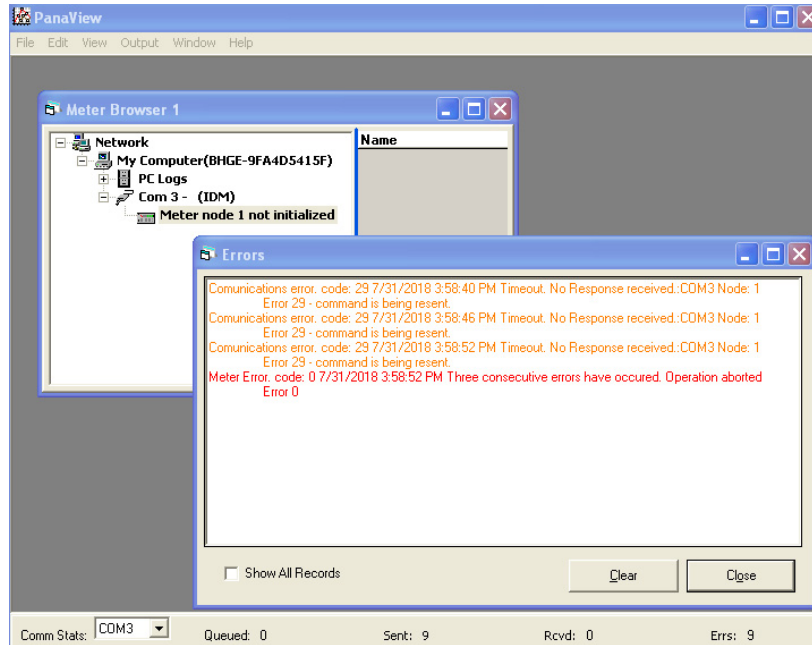
Figure 49: Initialization Error

Click on [Error] (as highlighted in *Figure 49)* 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 50* below).
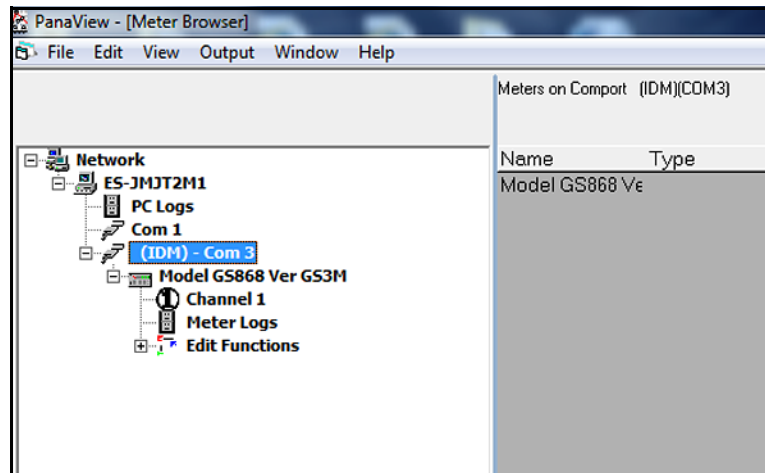
Figure 50: The Serial Port Branch

3.   With the desired communication port highlighted, open the edit menu as shown in *Figure 51* below.
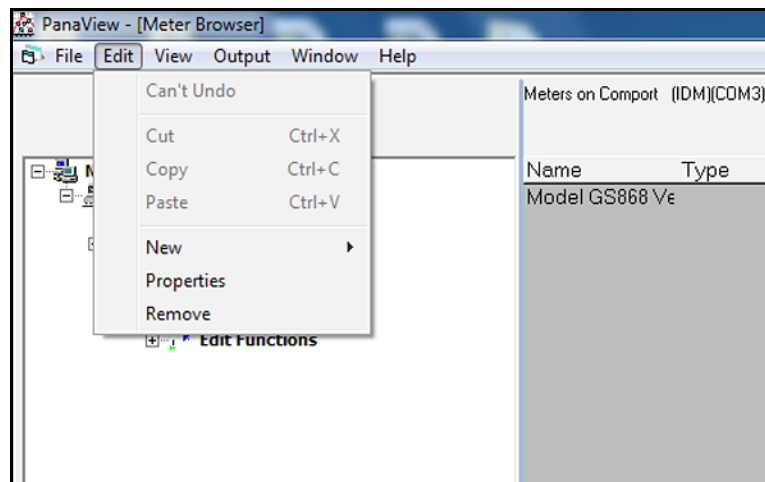
Figure 51: The Edit Menu

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 51 on page 43*, Click *"Properties"* option to open the dialog box shown in *Figure 52* 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.
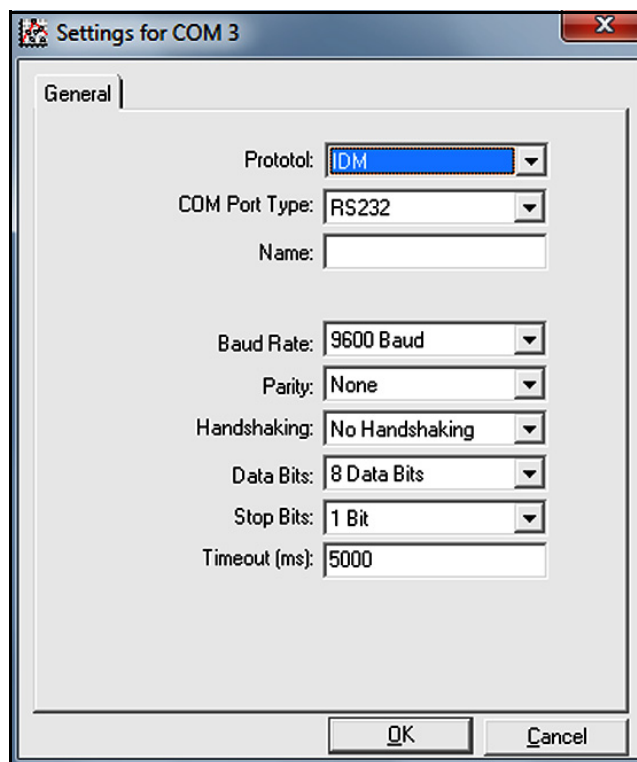
Figure 52: Communication Port Settings

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 51 on page 43*, Click *"Remove"* option to open the dialog box shown in *Figure 53* below.
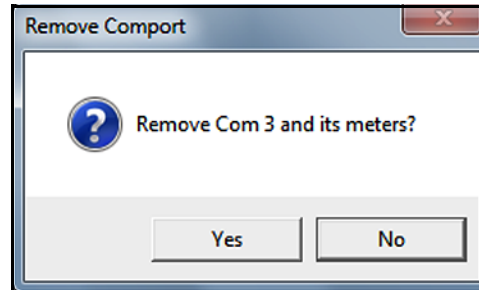
Figure 53: Port Removal Confirmation

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.

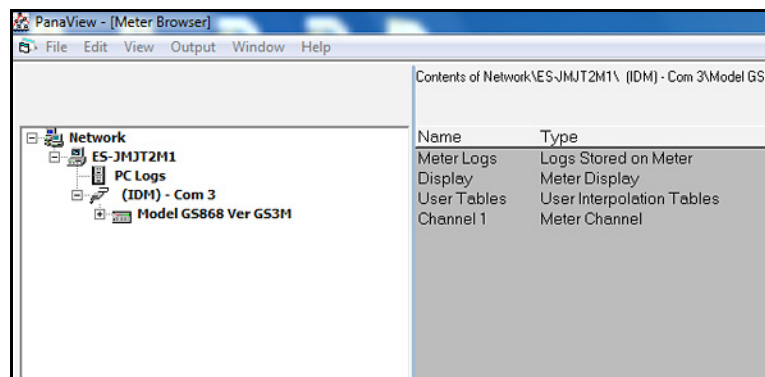2. Fully expand the *network tree* and highlight the chosen meter (see *Figure 54* below).

Figure 54: The Meter Branch

3. With the desired meter highlighted, open the *"Edit"* menu as shown in *Figure 55* below.
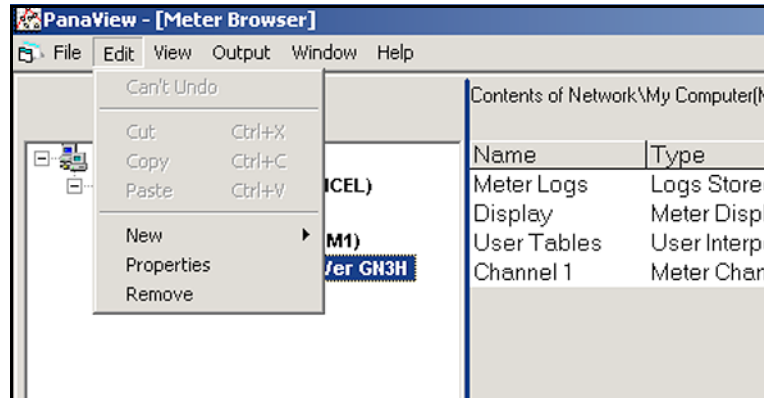
Figure 55: The Edit Menu

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 55 on page 46*, click *"Properties"* option to open the dialog box shown in *Figure 56* 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.
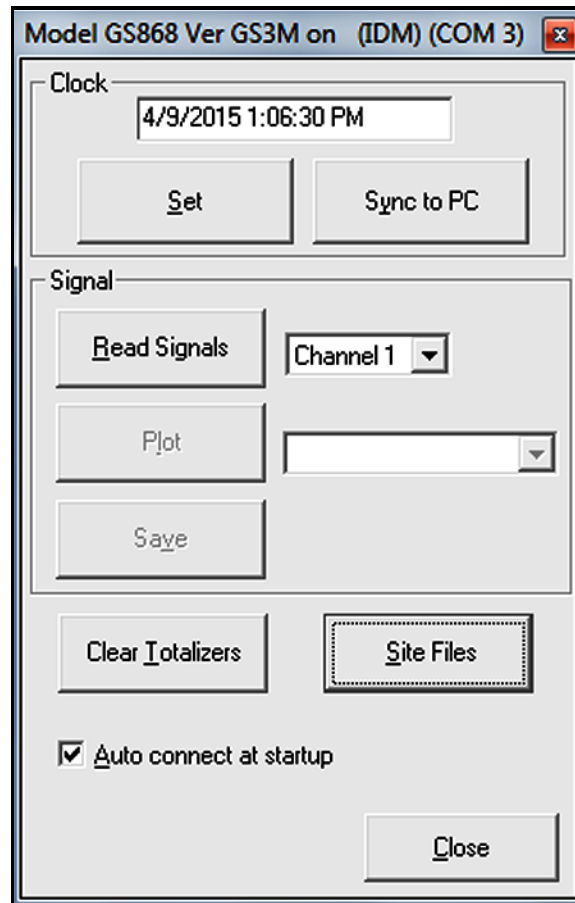
Figure 56: Meter Settings

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 57* below. Set the desired date and time as indicated, and click [OK] button.
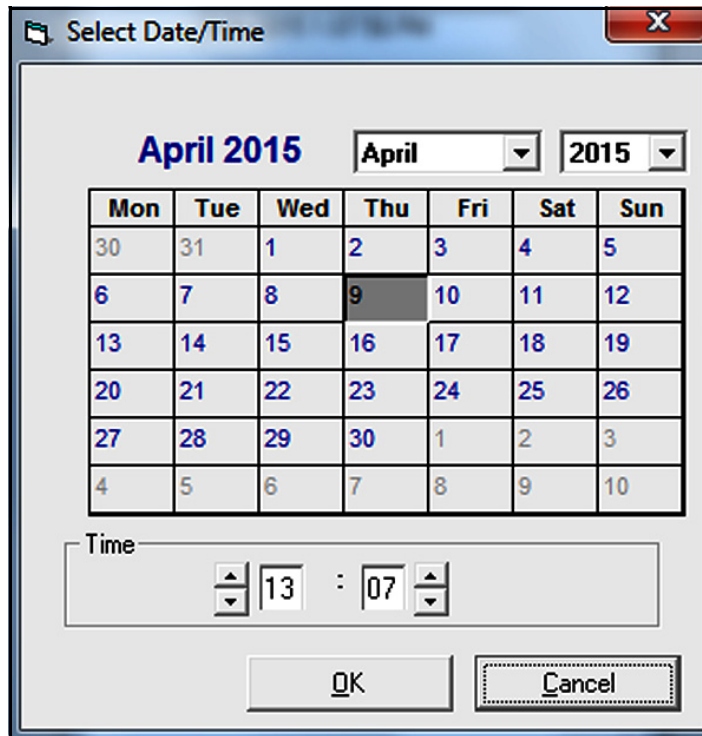
Figure 57: The Date/Time Dialog Box

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 56 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 56 on page 47*, click *"Remove"* option to open the dialog box shown in *Figure 58* below.

Figure 58: 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 27 on page 27*) to open a screen similar to *Figure 47 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 62 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 59* below).
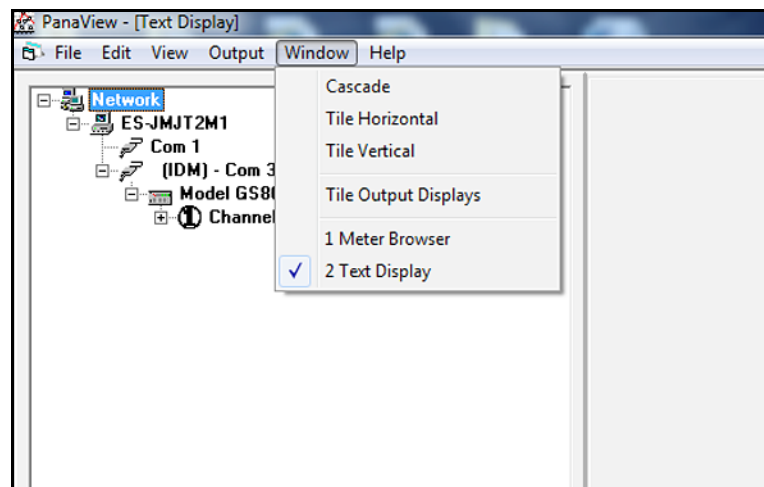

Figure 59: The Window Menu

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 60 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 60 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.*
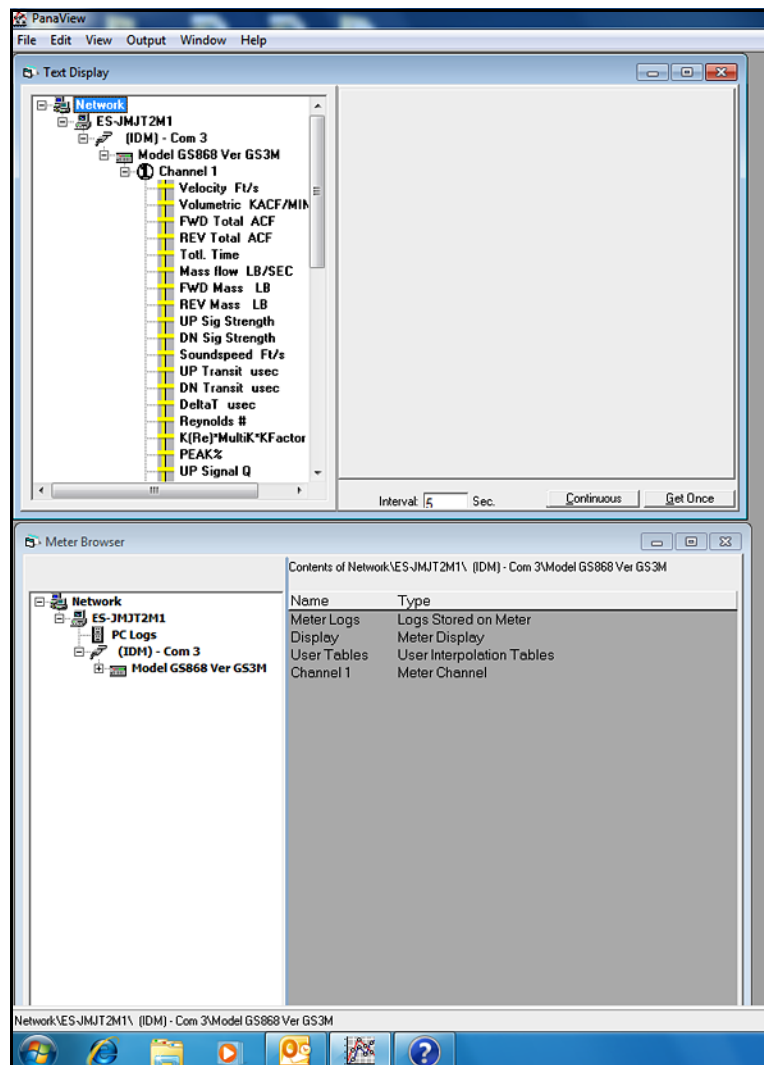

Figure 60: Horizontally Tiled Windows

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 BH 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 48 on page 41*) and displays the basic PanaView window (see *Figure 12 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 61* below.
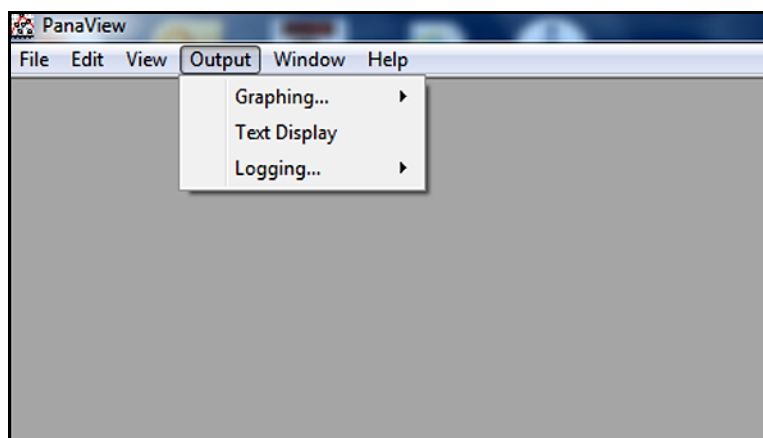

Figure 61: The *Output* Menu

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 61 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 62* below shows the *"Text Display"* window in its maximized (full-screen) size.
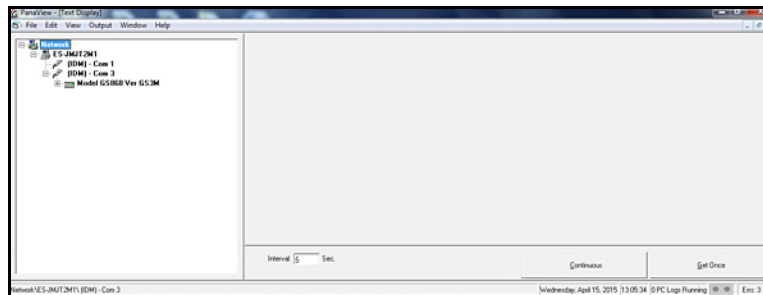
Figure 62: The *Text Display* Window

Note: Figure 62 *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 62 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 59 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 59 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 61 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 59 on page 49*, arrange the open windows in the desired format. *Figure 63* below shows the *"Graph"* window in its maximized (full-screen) size.
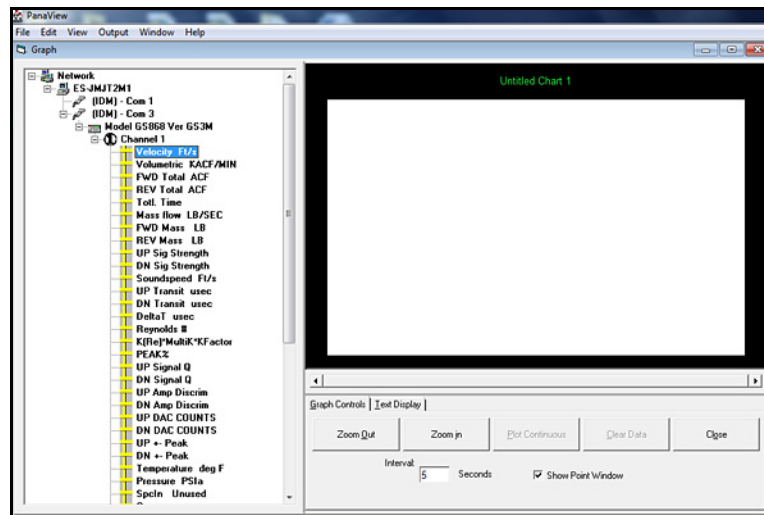
Figure 63: The *Graph* Window

The *"Graph"* window shown in *Figure 63 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 64* below. The chart (graph) properties available using this dialog box are listed in *Table 1 on page 56*.
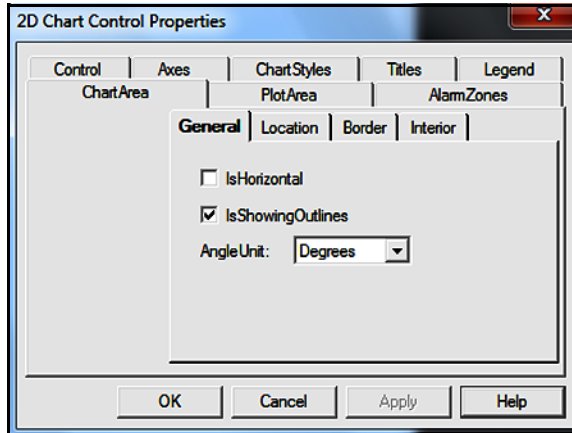

Figure 64: *Chart Properties* **Dialog Box**

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 65* below).
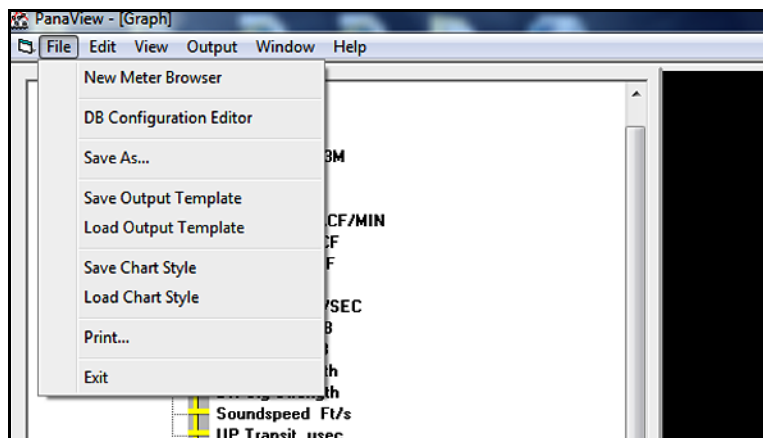
Figure 65: The *File Menu* **for Graphs**

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 66* 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
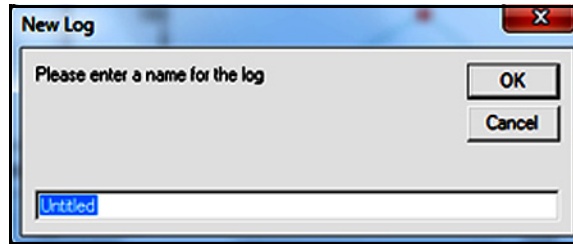
Figure 66: The *Save As* Dialog Box

- 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 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
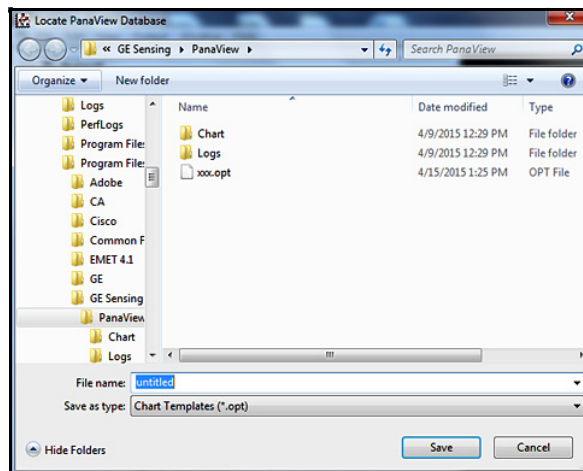
Figure 67: The *Save Output Template* Dialog Box

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 68* 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
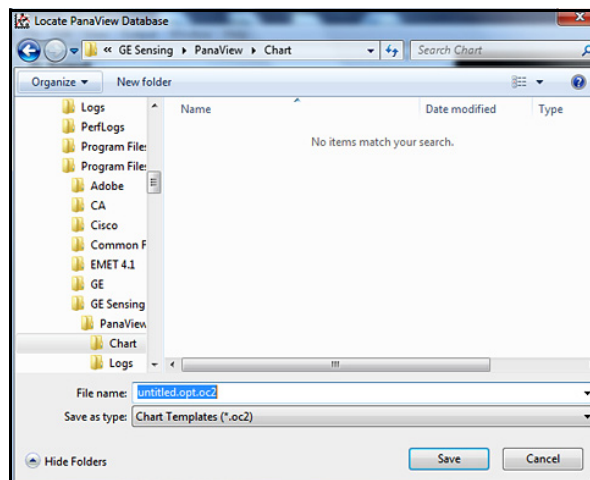
Figure 68: The *Save Chart Style* Dialog Box

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 61 on page 51*) or open the *"File"* menu and click *"Load Output Template"* option (see *Figure 65 on page 57*). If any output templates (***.opt**) have been saved, select the desired file in the dialog box shown in *Figure 69* below. Then, Click [Open] button to load the properties and parameters to be graphed from the output template selected.
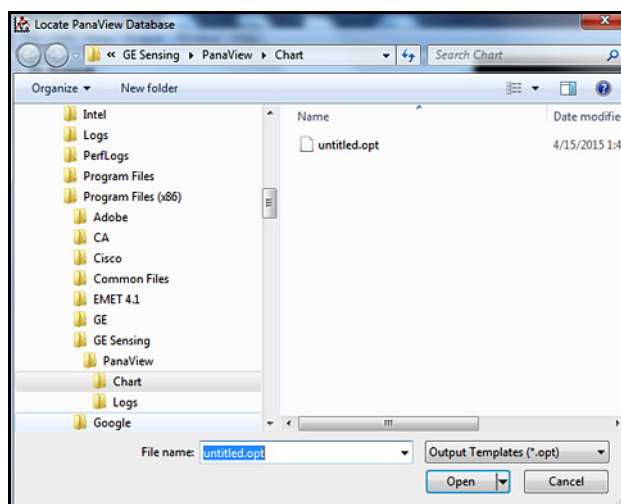
Figure 69: Opening an Output Template

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 65 on page 57*). If any chart templates (***.oc2**) have been saved, select the desired file at the dialog box shown in *Figure 70* below. Then, click the [Open] button to load the graph properties from the output template selected.
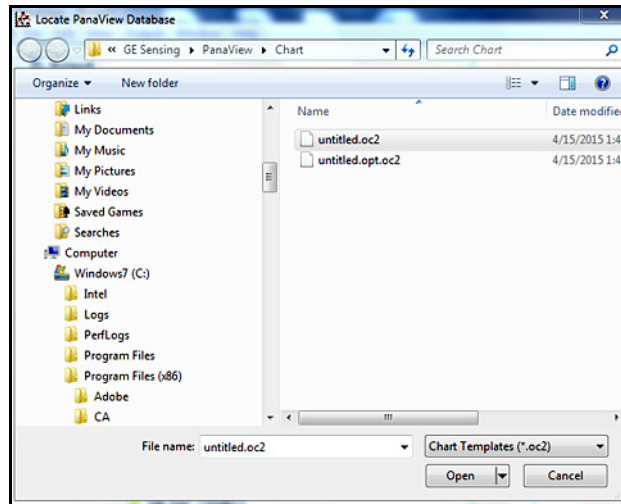
Figure 70: Opening a Chart Style Template

2. After you have finished creating the desired graphs, click the [Close] button in the lower right pane of the *"Graph"* window (see *Figure 63 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 71* below illustrates the options available in the *Logging* output.
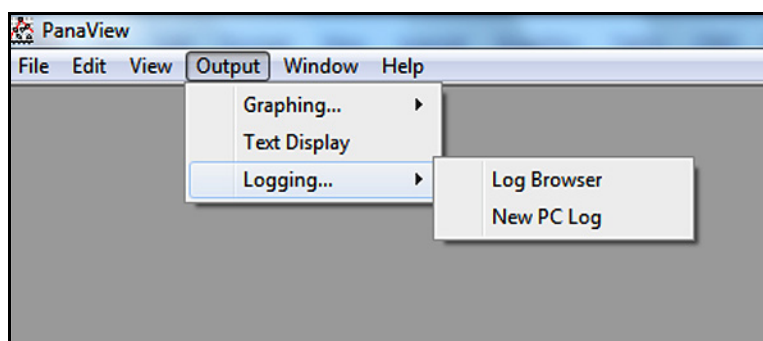
Figure 71: The Logging Output

6.5.1 Creating Meter Logs

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

1. Open the *"Output"* menu (see *Figure 61 on page 51*), and click on *"Logging"* and then on the *"Log Browser"* option to open the dialog box shown in *Figure 72* below.
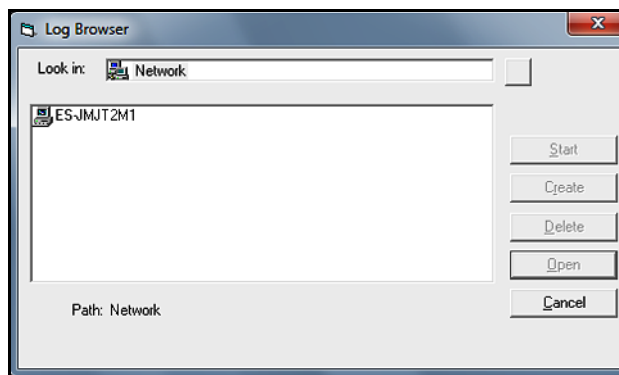
Figure 72: Computer Selection

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 73* below.
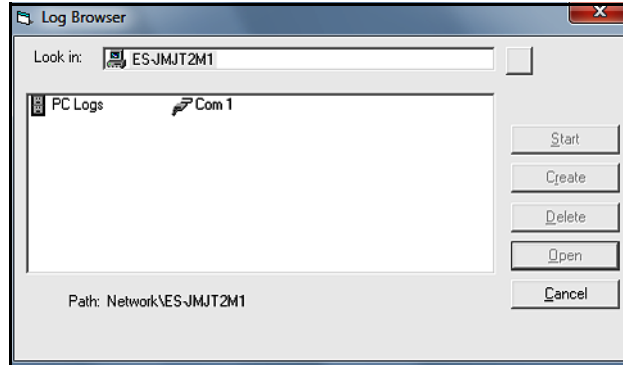
Figure 73: Communication Port Selection

b.   Double-click *communication port name* to move to the network level shown in *Figure 74* below.
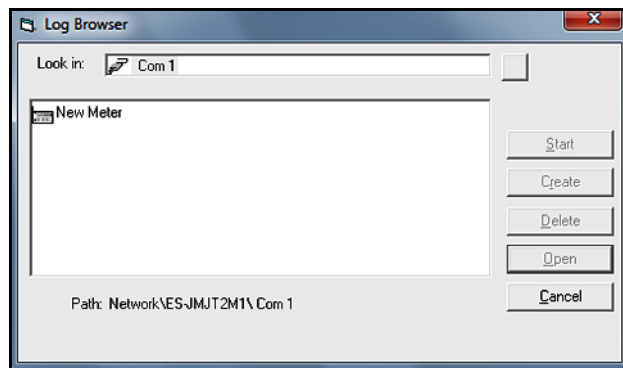
Figure 74: Meter Selection

c.   Double-click *meter name* to move to the network level shown in *Figure 75* below

Figure 75: Log Type Selection

d.   Double click on *meter logs* to move to the network level shown in *Figure 76* below.
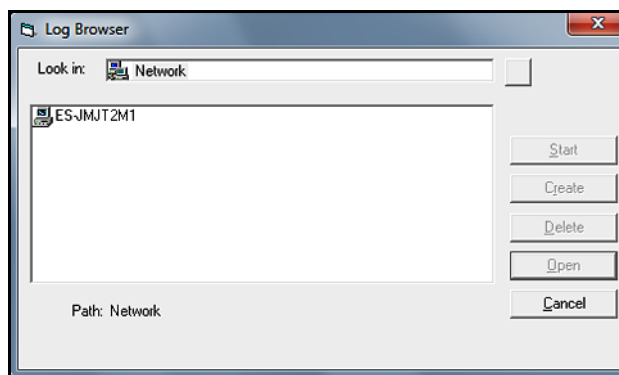
Figure 76: Create a Meter Log

e.   At the dialog box shown in *Figure 76* 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 77* below (*"Untitled"* is used here). Click [OK] button.
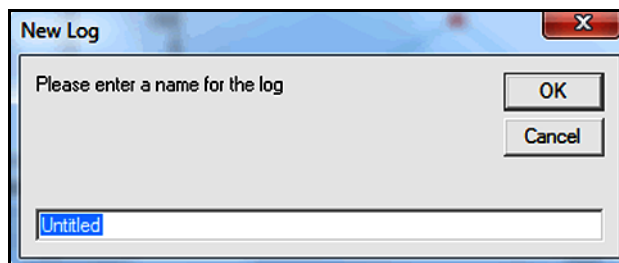
Figure 77: Log Name Dialog Box

3.   At the *"Meter Log"* window shown in *Figure 78* 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.
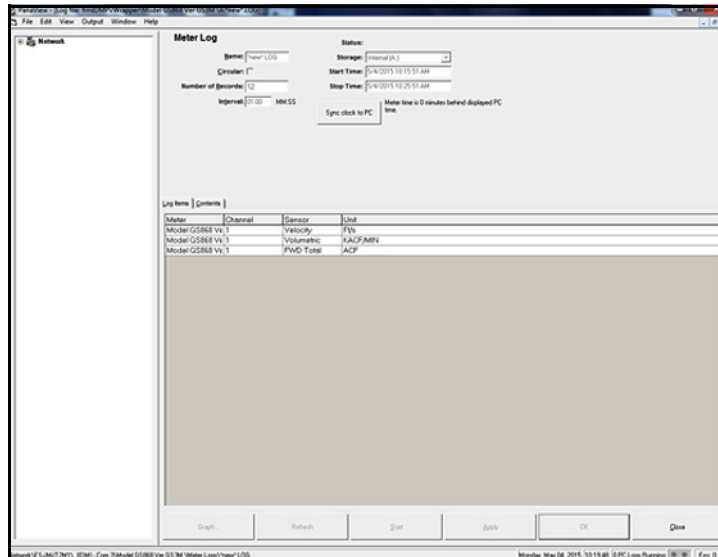
Figure 78: The Meter Log Window

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 78 on page 64*) for a list of the parameters specified for logging.

- Click *"Contents"* tab (see *Figure 78 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 61 on page 51*), and click *"Logging"* option to open the window shown in *Figure 79* below.
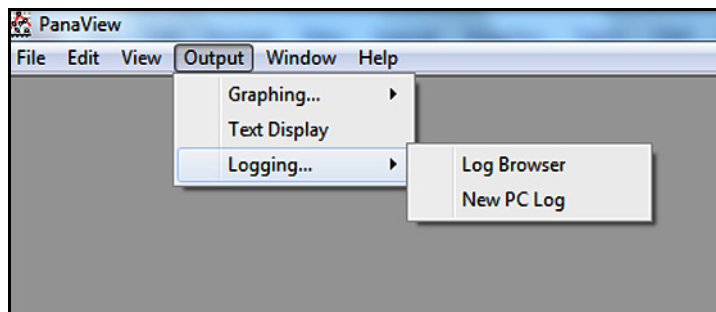

Figure 79: Selections in the Logging Option

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 80* below.
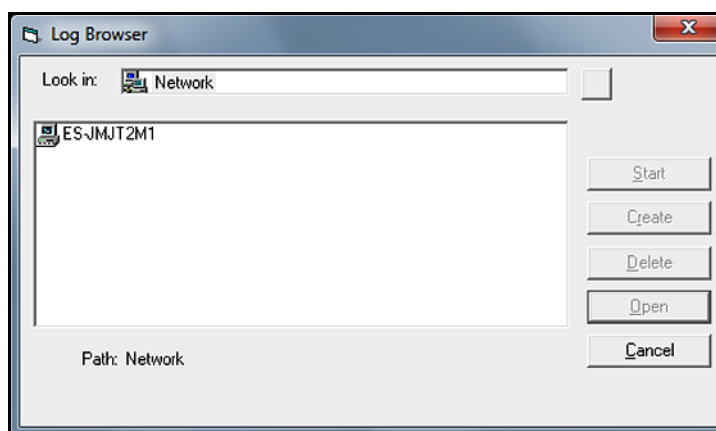
Figure 80: Computer Selection

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 81* below.
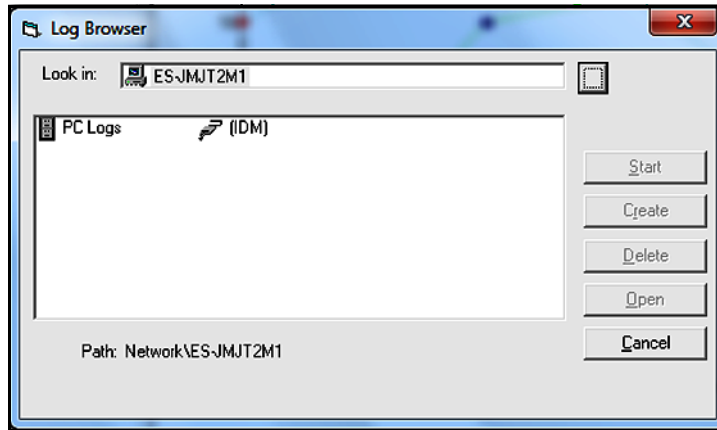
Figure 81: Log Type Selection

4. Double-click *PC logs* to advance to the dialog box shown in *Figure 82* below.
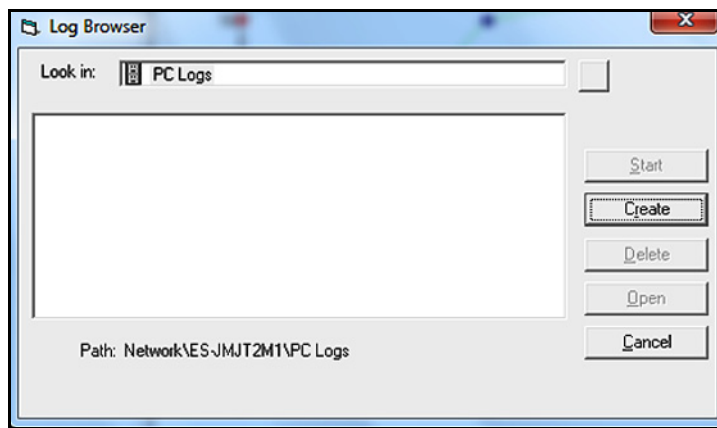
Figure 82: Create a PC Log

5. At the dialog box shown in *Figure 82 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 83* below. Click [OK] button.
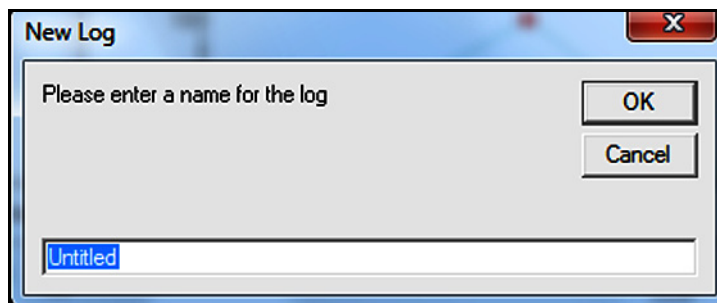
Figure 83: Log Name Dialog Box

7. At the resulting *"PC Log"* window shown in *Figure 84* below, place a check mark in the text box to create a *circular log*, or leave this box empty to create a linear log.
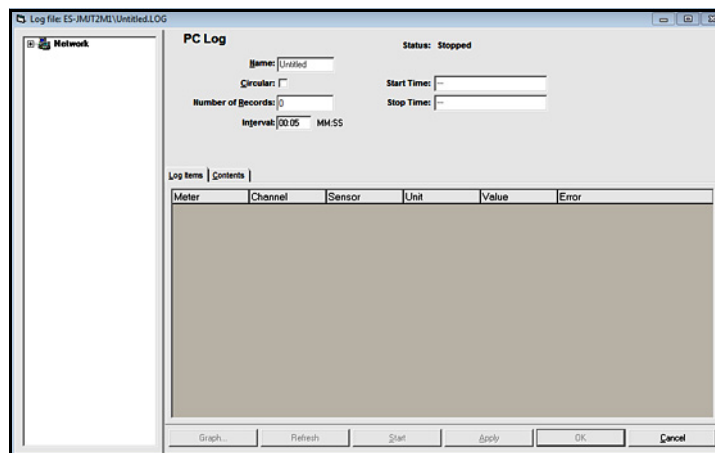
Figure 84: The PC Log Window

8. Enter a sampling *interval* in the text box shown in *Figure 84 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 84 on page 67*) for a list of the parameters specified for logging).

- Click *"Contents"* tab (see *Figure 84 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 61 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 85* below opens.
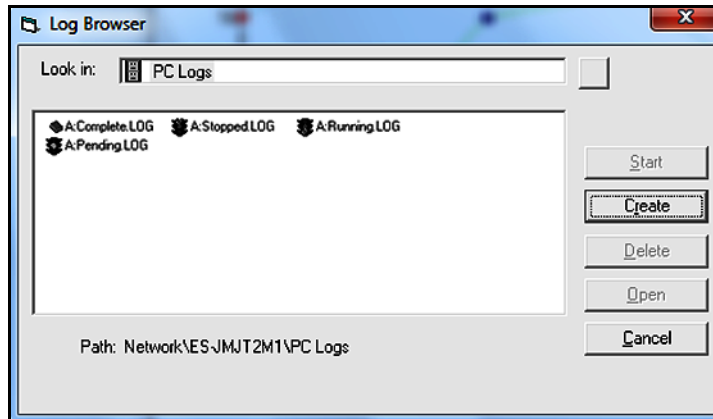

Figure 85: Selecting a Log File

Note that each of the log files in *Figure 85* 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 85* above).

* **Red Light** – The log has not run to its specified stop time but has been manually stopped (see **A:Stopped.LOG** in *Figure 85* 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 85* above).

* **Green Light** – The log is currently running but is not yet complete
  (see **A:Running.LOG** in *Figure 85* 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 86 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.

Figure 86: Menu Map

Customer Support Centers

U.S.A.
The Boston Center
1100 Technology Park Drive
Billerica, MA 01821
U.S.A.
Tel: 800 833 9438 (toll-free)
      978 437 1000
E-mail: custcareboston@ge.com

Ireland
Sensing House
Shannon Free Zone East
Shannon, County Clare
Ireland
Tel: +35 361 470200
E-mail: gesensingsnnservices@ge.com

910-211 Rev. I

Baker Hughes