

QUICK START

DevCom2000 uses Device Descriptions (DDs) to access data stored in the memory of the smart field device. These DDs are developed by the manufacturer for their products and, in turn, distributed by the FieldComm Group (FCG) worldwide. The latest DDs are included as part of the DevCom2000 installation. Visit the FCG website (www.fieldcommgroup.org) or the ProComSol website (www.procomsol.com) for update information.

The following steps will allow you to install and quickly begin using DevCom2000:

Step 1: Install the DevCom2000 application

Insert the DevCom2000 installation USB into the USB port on your computer. The DevCom2000 installation will automatically start and guide you through the installation process. Install DevCom2000 in its default location. If the installation program does not begin automatically, please launch the Windows File Explorer and go to the USB drive. Right click on DevCom2000Setup.exe and select “Run as Administrator”. This will begin the installation program. Note that Administrator credentials are only needed for program installation.

Step 2: Activate DevCom2000

Launch DevCom2000 by clicking the DevCom2000 icon on your desktop. You can also start the application by going to your computer's Start Menu and selecting **Start → ProComSol → DevCom2000 → DevCom2000** to launch the program.

You will now be asked to Activate DevCom2000. If you have Activation Codes (located on the Quick Start Card or email), select the Activation method of your choice (Manual or Online). Select the Evaluate option if you do not have Activation Codes. You can use DevCom2000 for 10 days before you need to activate it.

If you are Activating DevCom2000 by the online method, select online activation. You will be asked to enter the License ID and Password on the next screen. Once entered, DevCom2000 will connect to the Internet to verify the information. If you do not have an internet connection, you can activate DevCom2000 by email or phone using the Manual Activation method. Activation details are fully explained later in this manual.

Activation only needs to occur once.

Step 3: Connect the communication interface

Connecting to a HART device requires special interface hardware to be attached to your computer. These interfaces (HART Modems) are available from ProComSol, Ltd and other sources. The interface should be connected and configured.

Step 4: Connect to the field device

Find a connection point for the device's 2-wire 4-20mA loop you wish to communicate with. For communications you must have a suitable load resistance or a 250Ω resistor must be placed in series with the device. Connect the HART interface clips to the HART device. While the HART Communication signal is available anywhere along the 4-20mA wiring, it is often easiest to connect across the field device's terminals (caution should be observed when working in a hazardous area, many PC's are not rated for intrinsic safety and should only be connected in a safe area).

Step 5: Set the DevCom2000 Serial Port

DevCom2000 starts with a default serial port of COM99. It must be changed by the user. Go to the **Options** → **Basic** menu on the DevCom2000 menu bar and change the COM Port to the appropriate serial port for the HART Modem. Also change the Modem Type to the appropriate modem type. The other settings on the Options tabs typically do not need to be changed.

Step 6: Browse the Device

Operating DevCom2000 is similar to working with Windows Explorer. DevCom2000 communicates to the field device, establishes a connection, and learns its identity. Once DevCom2000 knows its identity, the device's DD file is loaded. From this point forward, operation of DevCom2000 is determined by the DD created by the field device manufacturer. If a DD for the device is not present, a generic DD will be used.

By default, DevCom2000 will open the Browser window. The organization of the data in this explorer-style window is determined by the device DD. The left hand tree-pane of this window shows the logical groups of field device data. These are called "Menus". The right hand data-pane shows the data, any sub-menus, and any standard operating procedures (Methods) found on a given menu.

You can browse through the field device data by expanding (click "+" symbol) or collapsing (click the "-" symbol) the menus in the tree-pane. You can also double-click the folder symbol when seen on the data-pane.

Step 7: Modify the Device's Configuration

The Browser window allows access to all of the data exactly as described by the device manufacturer's DD. When you find elements of the field device's configuration you want to change, simply double-click and edit the data. Once you have changed the configuration to suit your needs, press the Send icon  to commit the data and transfer it to the field device.

Step 8: Performing Maintenance and Testing the Field Device

Many devices perform Methods or Standard Operating Procedures (SOPs) that may need to be performed to ensure the device is in peak condition. These Methods may include calibrating the loop current, trimming the transducer values or performing some diagnostic test on the field device. Methods appear in the data-pane just like data does. Double-click on the Method and it will start running in a separate window. The Method will guide you through the process ensuring the procedure is completely and consistently performed. When the Method is complete the window will disappear.

Step 9: Exit

When you are through working on the field device simply exit DevCom2000. Once the program exits, you can then disconnect the HART interface hardware.

Table of Contents

QUICK START	1
1 Introduction.....	5
1.1 Acronyms and Definitions	5
1.2 Conventions Used in This Manual.....	5
1.3 Document Organization	6
1.4 Getting Help.....	6
2 Overview of DevCom2000	7
3 System Requirements.....	8
4 DevCom2000 Installation	9
4.1 Prerequisites	9
4.2 Installing the DevCom2000 Application	9
4.3 Activating DevCom2000	9
4.4 Connecting to the HART Device.....	12
4.5 Uninstalling the DevCom2000 Application.....	13
5 Using DevCom2000.....	14
5.1 Starting DevCom2000	14
5.2 Getting Familiarized with DevCom2000 Explorer.....	16
6 Functions and Basic Operations.....	21
6.1 Overview	21
6.2 Viewing Device Configuration (typical, actual view may change based on DD).....	21
6.3 Configuring Device Information.....	23
6.4 Calibrating HART Field Devices.....	30
6.5 Viewing the Device Status.....	31
6.6 Viewing the Communication Log.....	32
6.7 Viewing the Event-Status Log.....	34
6.8 Document Device Functions.....	35
6.9 Download Configuration to Device	41
6.10 CalCheck (Calibration Check).....	43
6.11 License File Transfers.....	89
6.12 Options Menu.....	54
6.13 Trending.....	73

6.14 DD Functions	83
6.15 HART-IP Communication	96
Appendix A Troubleshooting Guide	80
Appendix B Contact Information.....	83

1 INTRODUCTION

The Smart Device Communicator (DevCom2000) allows access to and management of a HART compatible field device's configuration and calibration. This manual provides the information about the Hardware setup, Communication with Smart devices, and functions of DevCom2000.

DevCom2000 is unique in that it uses the DD of the connected device to determine what information to display, what variables are available to edit, and what procedures to follow for calibration, setup, and maintenance.

1.1 Acronyms and Definitions

Acronym	Definition
COTS	Commercial-off-the-Shelf
DD	Device Description File. This contains the device information.
DDL	Device Description Language
FCG	FieldComm Group
DevCom2000	Smart Device Communicator Software

1.2 Conventions Used in This Manual

Following formatting conventions are used in this guide:

Convention	Description
Words in bold type	Field names including buttons in the display, or important phrases.
→ Arrow	Windows pull down menus and their options are separated by →. For example, click Device → New Device to connect to a new device.
Courier font	Information that you type, parts of the code quoted for explanations or as examples.
UPPERCASE	Acronyms
UPPERCASE within angle brackets	Command keys For example, press <ENTER>.

1.3 Document Organization

DevCom2000 user manual is organized into the following sections:

-
- | | |
|------------------|--|
| Section 1 | Describes the scope and objective of DevCom2000 user manual along with the organization of the remaining part of the manual. |
| Section 2 | Provides an overview of the DevCom2000 application and its architecture. |
| Section 3 | Provides the information pertaining to hardware and software requirements for the DevCom2000 application. |
| Section 4 | Provides the steps to install, activate, and uninstall the DevCom2000 application. |
| Section 5 | Provides the steps to start the DevCom2000 application and connecting to field devices. |
| Section 6 | This section explains different aspects of the DevCom2000 application and its functionalities. |

1.4 Getting Help

If you need help or encounter problems when using DevCom2000 or this guide, please contact ProComSol, Ltd. See Appendix B for contact information. Please provide the following information.

Create a text description of the problem. If possible, provide the text in event sequence, which will enable the duplication of the problem. Provide information about the system. This information must include:

- DevCom2000 version and License ID
- The loaded DD file name. This information is shown at the bottom of the DevCom2000 screen if connected to a HART device.
- HART Device information: make, model, and device revision
- The HART Modem manufacturer and model
- Point of contact: telephone number, and e-mail address,

2 OVERVIEW OF DEVCOM2000

Field devices such as flow, pressure, level, temperature transmitters, and valve positioners provide the physical connection to the process. These devices allow the control system to monitor and manipulate process conditions. HART devices maintain a real-time database of process, configuration, identification, and diagnostic information. This information can be accessed using the HART Field Communications Protocol.

HART devices are capable of providing functions and features far beyond the basic task of providing a process input or accepting a control output to manipulate process conditions. Many HART compatible device manufacturers create a DD (Device Description) describing all of these functions and features specific to that device. The DD also provides information essential to the successful configuration and calibration of the device.

DevCom2000 uses these DD's to access the data stored in a device, providing full configuration and setup support for all registered HART DD's.

DevCom2000 accesses and presents field device data based solely on its DD. No other files, information or custom drivers are required. DevCom2000 is intended to monitor and configure a single device at a time, it is directly connected to the current loop of the particular device and:

- Provides user interface to configure the HART field device,
- Provides a means to configure and view all the parameters related to HART field device, and
- Provides an option to view the detailed status and diagnostic capability of the device.

DevCom2000 allows viewing and modifying of field device parameters based on the DD. Using the device's DD, DevCom2000 performs various tests to verify the proper operation of the HART device.

DevCom2000 runs as a standalone software package and must have a HART compatible modem attached to the system to interrogate the HART devices. A HART modem is not required for HART-IP communications to a WirelessHART Gateway or HART-IP enabled Multiplexer/Gateway. In this case, an Ethernet connection to the network containing the Gateway is required.

3 SYSTEM REQUIREMENTS

The following minimum system requirements are recommended for operation of DevCom2000.

PC	Processor Speed: Pentium, 600 MHz Memory: 256 MB Hard Disk Space: 500 MB Monitor: 256-color VGA
HART Modem	USB to HART modem, or Bluetooth to HART modem, or RS-232 to HART modem. ProComSol, Ltd supplies HART modems. Not needed for HART-IP.
Communication Port	USB, Bluetooth, or RS-232. Ethernet for HART-IP.
Operating System	Windows 10

4 DEVCOM2000 INSTALLATION

4.1 Prerequisites

You need to be familiar with the basic functions of the following when installing the DevCom2000 tool:

- Microsoft Windows
- HART communication interface
- HART field device

4.2 Installing the DevCom2000 Application

To install the DevCom2000 application in a standalone system, perform the following steps:

Step	Action
1	Insert the DevCom2000 USB into the USB Port. Auto run should begin installation, if not:
2	Launch Windows File Explorer.
3	Navigate to the USB drive.
5	Look for the DevCom2000Setup.exe file and right click on it.
6	Select Run As Administrator
7	The installation begins. It will take you through a sequence of installation wizard steps.
8	Follow the instructions on the upcoming screens to complete the Installation.

4.3 Activating DevCom2000

DevCom2000 must be activated before use. If the program is not activated, it will not run after 10 days. The following procedure will activate the software.

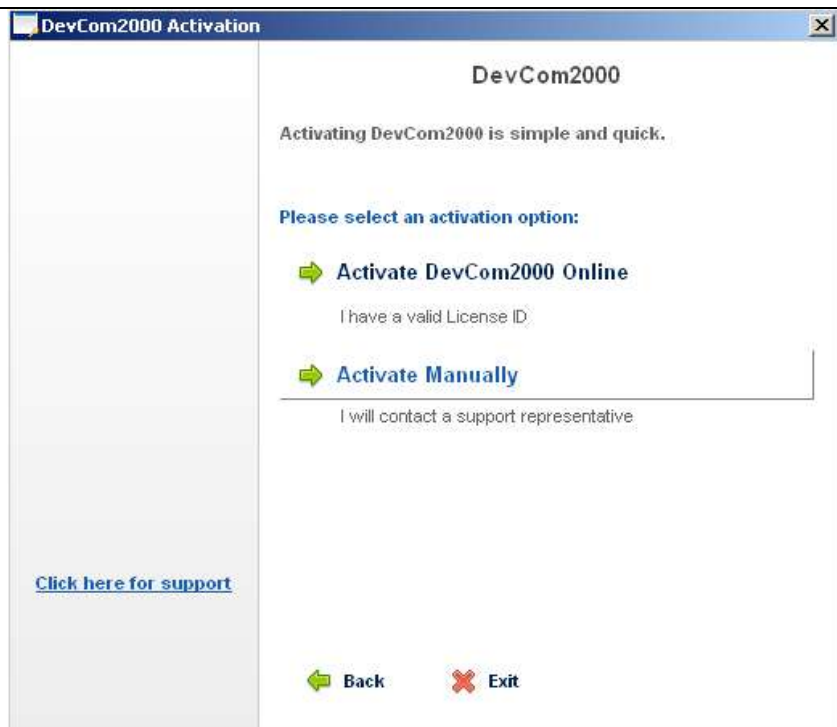
Step	Action
------	--------

- 1 Start the DevCom2000 Application. The following Activation window is displayed:



If you want to evaluate DevCom2000 before purchasing, select the “Evaluate DevCom2000” option. You will have 10 days of unlimited program use before you will need to purchase a license. Select “Purchase DevCom2000 Online” to go to the ProComSol, Ltd website to purchase a license.

-
- 2 If “Activate DevCom2000” is selected, the following window appears:
-



- 3 If the “Activate DevCom2000 Online” option is selected, the following window appears.



Enter the information from the Activation label on the CD case. Select “Continue” to process the information.

If the codes were successfully entered, the program will continue as normal. You will not need to perform the activation process again.

- 4 If the “Activate Manually” option is selected, the following window appears:

You will then need to contact ProComSol, Ltd to obtain the Activation Codes. You must supply the User Codes to ProComSol, Ltd support personnel (Your user codes will be different than those shown here). You can register manually in any of the following ways:

1. Call ProComSol, Ltd at 216.221.1550. Have the LicenseID and User Codes ready.
2. Or, send an email to support@procomsol.com containing your company name, LicenseID, and User Codes.

The above information will be processed at ProComSol, Ltd and an appropriate response will contain the required Activation Code information that the user will need to enter.

If successful, the program continues as normal. You will not need to perform the activation process again.

- 5 We have tried to make the Activation process as easy as possible. Contact ProComSol, Ltd if you have any difficulties.

4.4 Connecting to the HART Device

The DevCom2000 application communicates with the HART Field Devices through a HART compatible communication interface (e.g., a "HART Modem"). Using this communication interface you will transmit real-time HART data between DevCom2000 and the connected HART compatible field device.

There are a wide variety of HART compatible interfaces. Please follow the manufacturer's instruction for connecting your interface to the PC. This manual uses the HART modem manufactured by ProComSol, Ltd, called the HM-USB-ISO. It uses the USB interface.

Insert the USB connector on the HM-USB-ISO into your computer's USB port. Using the clips on the wires from the HART interface, connect to the device across the 4-20ma signal. If a suitable load resistance is not available, a 250Ω resistor must be placed in series with the device power supply.

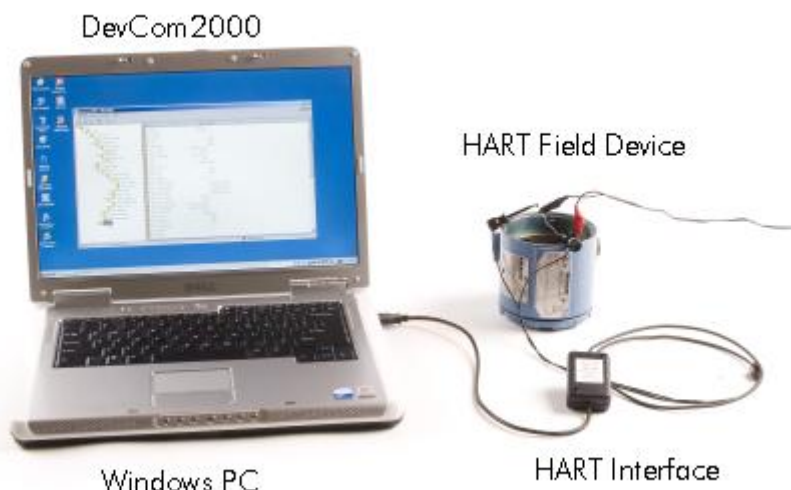


Figure 1 Typical DevCom2000 Hardware Setup

4.5 Uninstalling the DevCom2000 Application

To uninstall the DevCom2000 application, perform the following steps:

Step	Action
1	Click Start → Programs → ProComSol → DevCom2000 → Uninstall DevCom2000
2	Or, Click Start → Settings → Control Panel → Add/Remove Programs
3	In the <i>Add/Remove Programs</i> dialog window, select the DevCom2000 program that you want to uninstall.
4	Click Remove .
5	Click OK to confirm the removing of the selected application.

5 USING DEVCOM2000

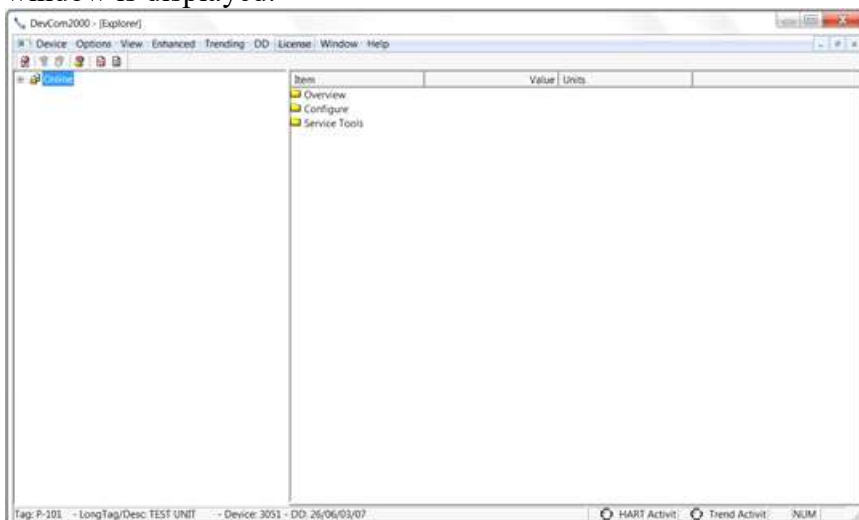
5.1 Starting DevCom2000

The HART field device must be connected to a PC or tablet running DevCom2000 to configure or calibrate the field device, or to view the field device's data. Make sure to establish the physical connection between the field device and the DevCom2000 computer. With the physical connection established, launch DevCom2000 by clicking the DevCom2000 icon on your desktop. You can also start the application by going to your computer's Start Menu and selecting **Start → ProComSol → DevCom2000**.

If your computer is running an anti-virus program such as McAfee, you may get a message about a program wanting to access the internet. This is normal. DevCom2000 uses TCP/IP to communicate with the Communication Log program.

Step	Action
------	--------

- | | |
|---|--|
| 1 | Start the DevCom2000 Application. The following application window is displayed: |
|---|--|

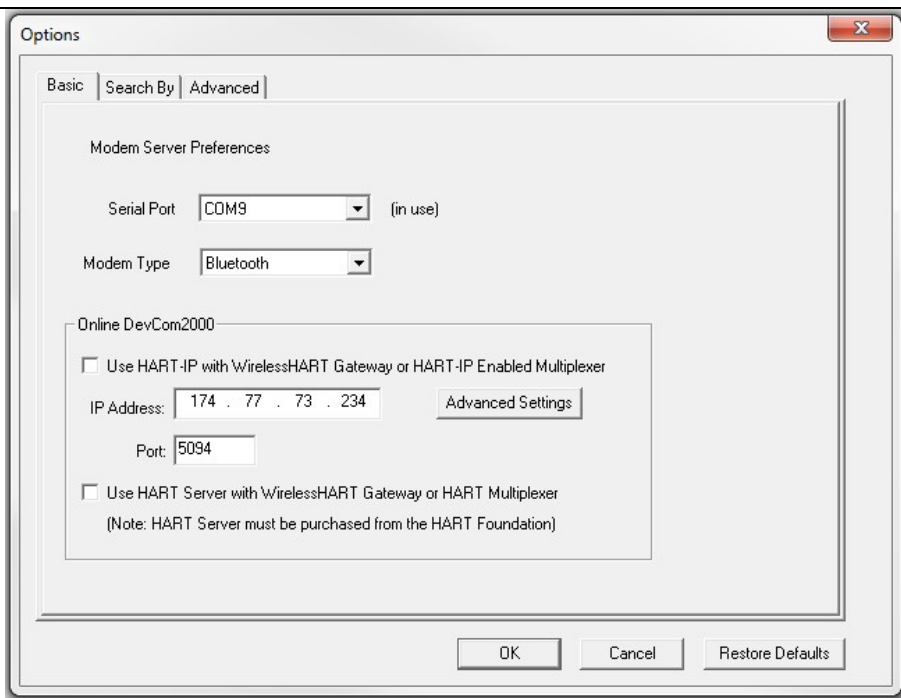


DevCom2000 will then automatically identify the field device and open a communication channel to (i.e., a connection with) the field device.

- | | |
|---|--|
| 2 | Setting Options Options → Basic |
|---|--|

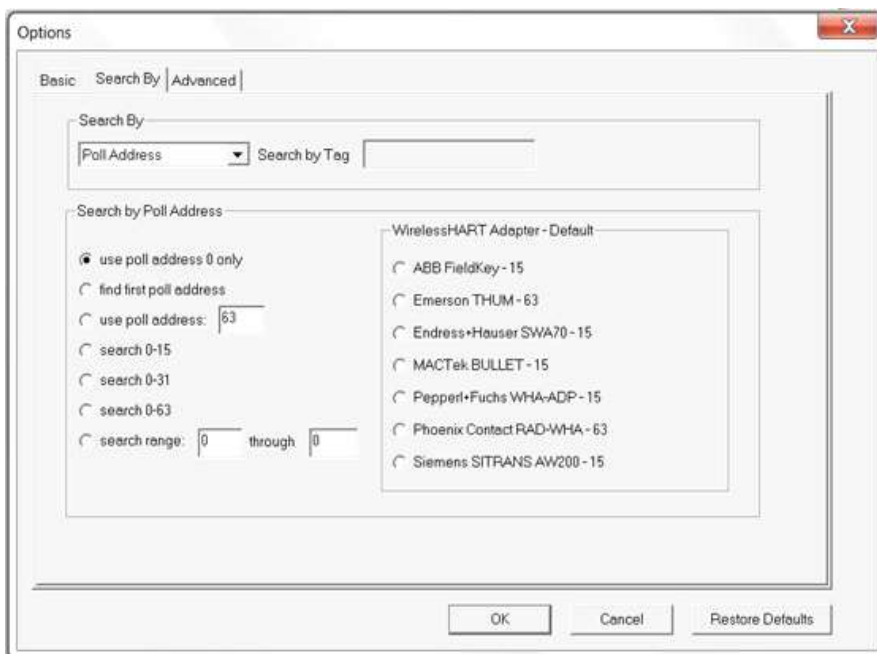
If communications cannot be established, you may need to change the communication settings using the Options dialog box.

The serial port box will show the available COM ports. Select the one your HART modem is using.



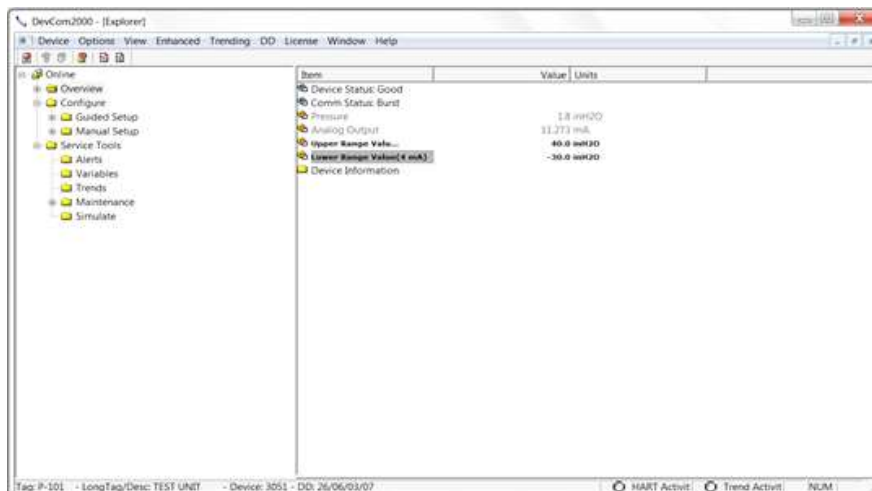
Also verify the Modem Type matches your physical modem.

- 3 You may also change the polling options for the computer. If you do not know the poll address of the device you are trying to communicate with, use the default address 0 setting. To do this either click on the **Search By** tab or go to **Options**→**Search**



Make sure that **Poll Address** under **Search By** is selected.

- 4 When the device is connected to DevCom2000, the browser window appears with online (i.e. root menu) selected.



The left pane of the window shows the menu structure and the right pane of the window displays corresponding parameters of the menu selected.

The DevCom2000 screens shown in this document are only an example of what you may see when connected to your field device. What you see is actually controlled by the DD and the device. The menus, data, status and configurations displayed are specified by the field device's manufacturer in the DD itself.

- 5 Select the required menu to configure or review the field device's data.

5.2 Getting Familiarized with DevCom2000 Explorer

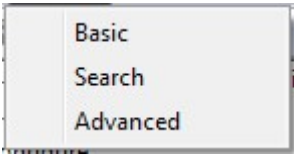
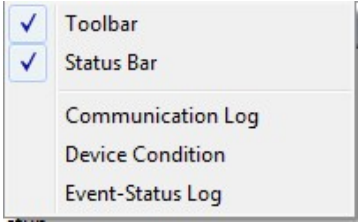
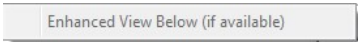
5.2.1 Using the Menus

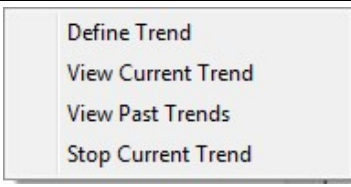
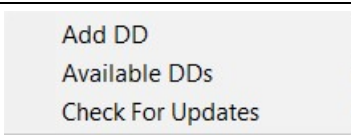
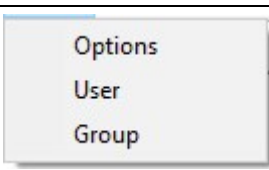
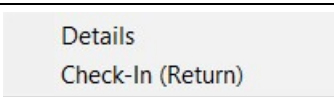
DevCom2000 Explorer provides visual representation and structure of the application window.

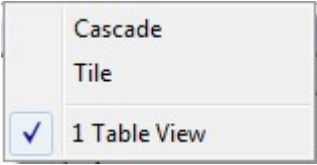
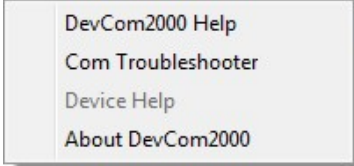
Menu

Explanation

	The Device Menu offers the following sub-menu options: New Device - Connect to a new device or reconnect to the same device. Document Device – Brings up the Document Device dialog box used to save the device configuration as a text and pdf file. Download / View – Brings up the Download dialog box which provides Configuration File features.
--	---

	CalCheck - Brings up the Calibration Check dialog box used to document the calibration performance of the device. Config Change Bit - Brings up the Configuration Change Bit dialog box to manage this status bit. Burst Mode - Brings up the Burst Mode dialog box to enable/disable Burst Mode. Device Identity - Brings up the Device Identity dialog box that provides identity information for the device. Exit - Exit DevCom2000.
	The Options Menu offers the following sub-menu options: Basic- Select what COM port the device is connected to and whether to use a WirelessHART gateway. Search- Search by Poll Address, Long or Short Tag. Advanced- Select HART Master, Language, and DD Startup.
	The View Menu offers the following sub-menu options: Toolbar - Hide or show the Tool Bar. Status Bar - Hide or show the Status Bar. Communication Log – Open the Communication Log window. Device Condition – View detailed device status. Event-Status Log – View log of events and status changes
Example of available Enhanced Menus:  No Enhanced Menus available: 	The Enhanced menu offers enhanced device menus. Some devices do not have enhanced menus and this menu will only say “Enhanced View Below (if available).”

	The Trending menu offers the following sub-menu options: Define Trend – Brings up the Define Trend dialog box where a trend is started. View Current Trend – Brings up a real-time graph of values currently being trended. View Past Trends – Brings up the View Trend dialog which contains past trend files. Selected trend files can then be graphed. Stop Current Trend – Stops the current log in process.
	The DD menu offers the following sub-menu options: Add DD – Brings up the dialog that adds a DD to the library. Available DDs – Brings up a browser of all the DDs installed in the library. Check For Updates – Shows current DD Library version and checks for DD library update
	The Cloud menu offers the following sub-menu options (Note that a Cloud Subscription is required for Cloud services): Options - Brings up the Options dialog box to enable or disable Cloud access. User - Brings up the User dialog box to configure the user and cloud access. Group - Brings up the Group dialog box to configure Group membership.
	The License window offers the following sub-menu options: Details – Shows License ID and Password information. Check-In (return) – Returns license to our server and closes program

	The Window menu offers the following sub-menu options: Cascade – Organizes open windows in a cascade arrangement. Tile – Organizes open windows as tiles 1 Table View – List of the open windows. Click to select the window to view
	The Help menu offers the following sub-menu options: DevCom2000 Help – Brings up Help information for the DevCom2000 application. Com Troubleshooter – Brings up the DevCom2000 Com Troubleshooter. Device Help – Brings up help information for the connected device (if available). About DevCom2000 – Shows copyright information, support information, and application Version Number.

5.2.2 Using the Toolbar

When you start the application, by default, the toolbar buttons appears on the main window. If it fails to display, click **View → Toolbar** option from the menu bar to bring up the toolbar.

Following are the buttons available in the DevCom2000 application toolbar to perform the necessary tasks:

Button	Description	Corresponding Menu Option
	Connect to a new device	Device → New Device
	Send parameter changes to the device	
	Cancel parameter changes	
	View more status on Device and Communication (Command 48 status)	View → Device Condition
	View Communication log	View → Communication log
	View Event log	View → Event-Status log

5.2.3 Icons

DevCom2000 application uses different icons to represent different elements of the application. Following table lists the icons and their meanings:

Icon	Meaning
	Indicates a menu or submenu in the navigation tree
	Indicates a currently selected menu or submenu in the navigation tree
	Online menu icon. The actual DD menu comes under this.
	Indicates a “Variable” item
	Indicates a “Method” (Standard Operating Procedure) item
	Indicates an “Edit Display” item
	Indicates an “Image” item
	Indicates a “Graph” item

6 FUNCTIONS AND BASIC OPERATIONS

6.1 Overview

DevCom2000 allows the user to monitor and configure a single device at a time in the field. Each device is associated with the DD when the device information is present. A DD may contain any of the following parameters/elements:

Variable

A variable is defined as the data contained in the device (e.g. Device Firmware Version). There are two types of variables:

Editable Variable – It allows the operator to modify the value and download it to the device.

Non-Editable Variable – It is a read-only data from the device.

Edit Display

This option is used to view a group of parameters. You can also modify a single parameter from this group, based on which other parameters of the device get altered.

For example, if the Engineering Unit of the device is modified, the corresponding Low Limits and High Limits change as per the Engineering Unit set.

Method / Standard Operating Procedure (SOP)

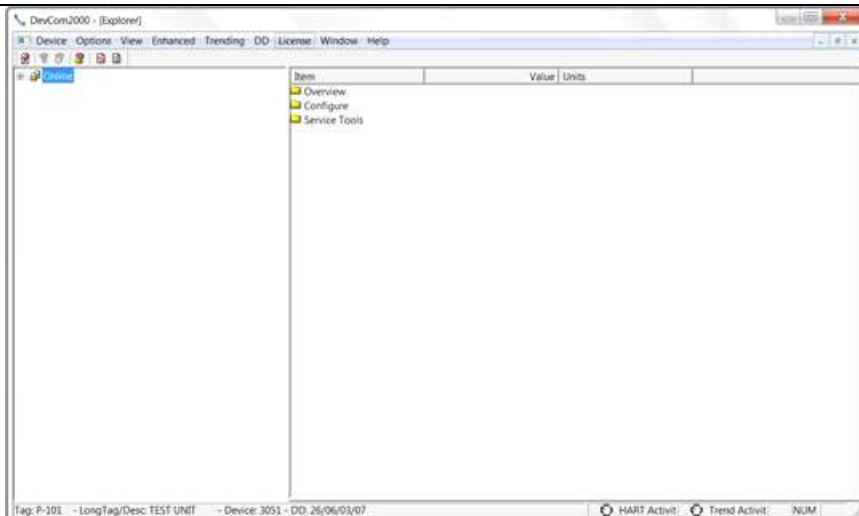
This option helps to perform various tests on the device for instance, Self Test and Loop Test. A Method or SOP is a series of steps that are executed in a sequence results in the completion of some device related tasks. When a method gets invoked, it gives various warning messages and options to the user, by which the user can thoroughly test the device. If a test is aborted by operator command at any stage of the sequence, the method invokes additional steps to bring the device back to its original state before the test.

6.2 Viewing Device Configuration (typical, actual view may change based on DD)

To view the configuration of the device that is connected to DevCom2000, perform the following steps:

Step	Action
1	Ensure that the application is running and communications have been established:

Step	Action
------	--------

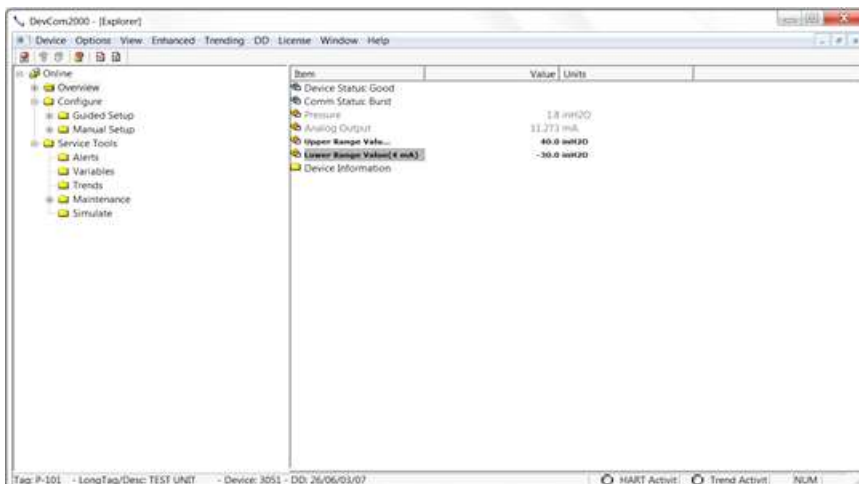


The left pane of the window shows the menu structure and the right pane of the window displays corresponding parameters of the menu selected.

The menus are displayed depending on the type of device that is being connected. These menus are displayed based on the DD file of the particular device.

If no DD is available for the device the DevCom2000 will select the standard DD. This should provide limited functionality for the device. NOTE: If a parameter is updated that is not supported by the device you will receive an error.

-
- 2 Expand the menu by clicking the “+” sign and double-click to view the device parameters. Below is an example of an expanded menu:



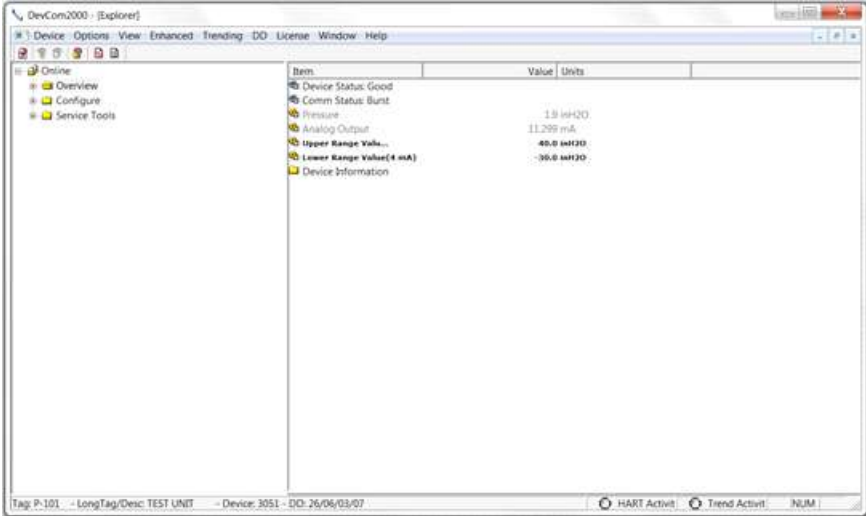
-
- 3 Select the menu and view the associated parameters to view the device information.
-

6.3 Configuring Device Information

6.3.1 Overview

DevCom2000 allows you to view and configure the field device parameters based on the device description. However, the device vendor defines most of the parameters at the factory. These parameters become read only for the users and the user cannot modify the values. The related variables are grouped under various menus of different levels as defined in the DD file. Expand or collapse the tree view using the “+” or “-” sign to access the device configuration parameters.

Following table describes the details about the device configuration:

Step	Action
1	Ensure that the application is running and communications have been established:
	 The left pane of the window shows the menu structure and the right pane of the window displays corresponding parameters of the menu selected.
2	Expand the menu by clicking the “+” sign and double-click to view the device parameters.
3	There are three types of variables: dynamic, read/write and read only. The parameters that are grayed out indicate that these are dynamic variables (variables that get updated online by the device) or read only variables. Following points describe how the device parameters represents their status when connected to DevCom2000: Bold Font: Modifiable Values Normal Font: Menu Item Gray Font: Dynamic or Read Only Variables
4	Select the parameter and configure the values, as required.

Step	Action
------	--------

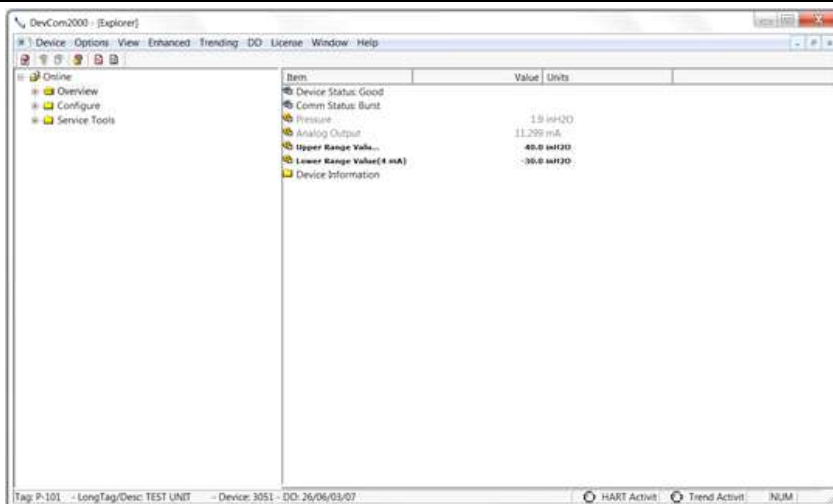
5	The subsequent topics explain how to configure device parameters.
---	---

6.3.2 Variable

To edit the parameter variables of the connected device, perform the following steps:

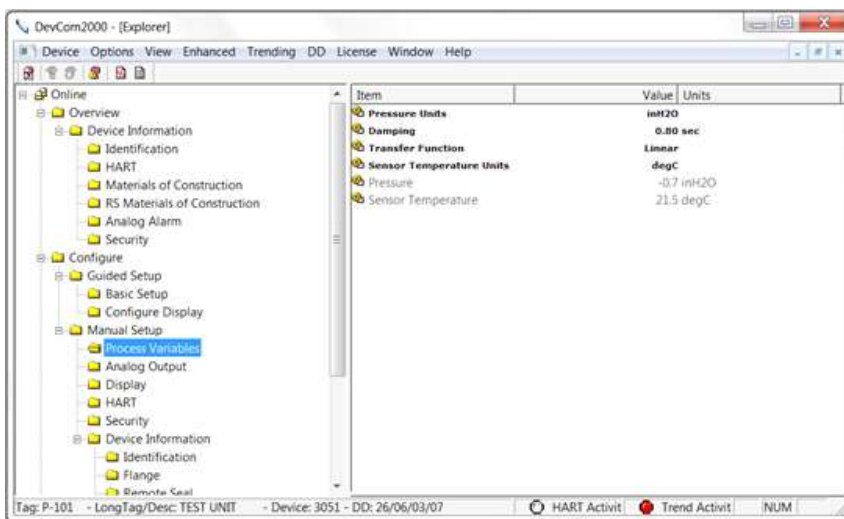
Step	Action
------	--------

1	Ensure that the application is running and communications have been established:
---	--



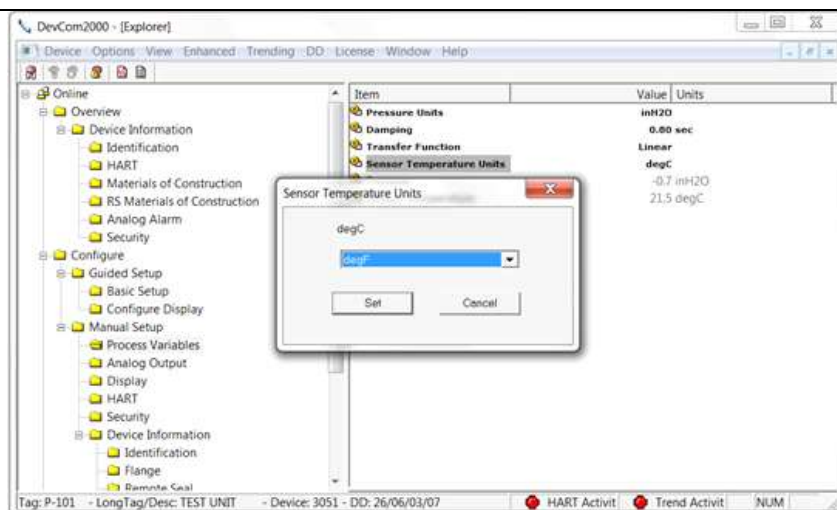
Expand the menu by clicking the “+” sign and double-click to view the device parameters.

2	Select the menu where the editable parameter is present as shown below:
---	---

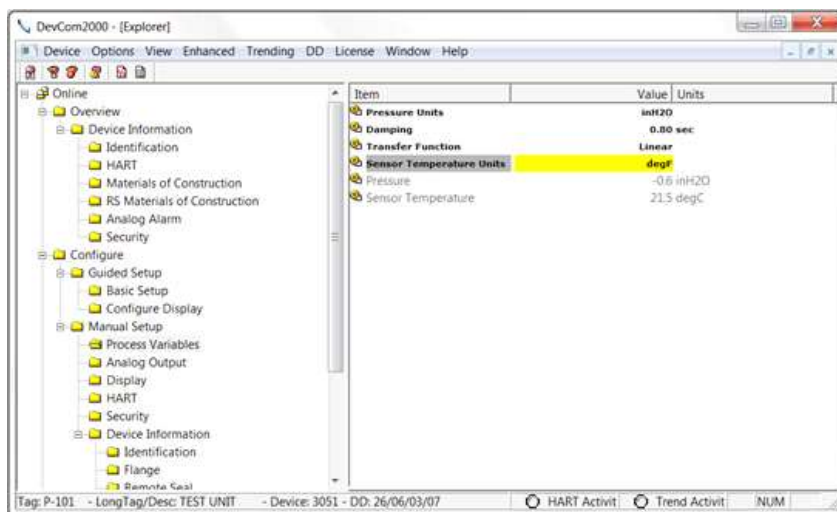


3	Double-click the variable to edit it. The following dialog box appears on the screen:
---	---

Step	Action
------	--------

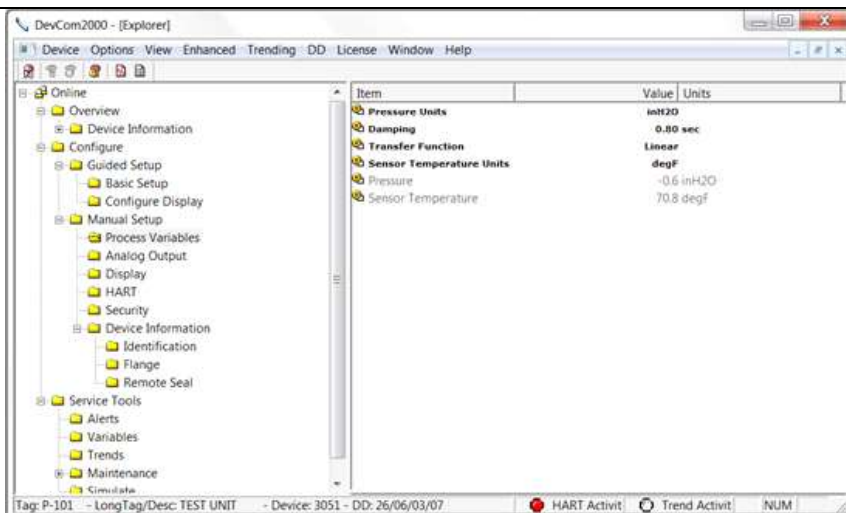


- 4 Make the changes to the parameter value, as required.
- 5 Click **Set** to accept the changed value. The change gets reflected as shown:



- 6 Click on the **Send** icon  to commit the changes to the device.
- 7 When the value is no longer yellow, the variable has been changed in the device.

Step	Action
------	--------



The Send and Cancel Icon will now be grey as well. This indicates that there are no new changes to be sent to the device.

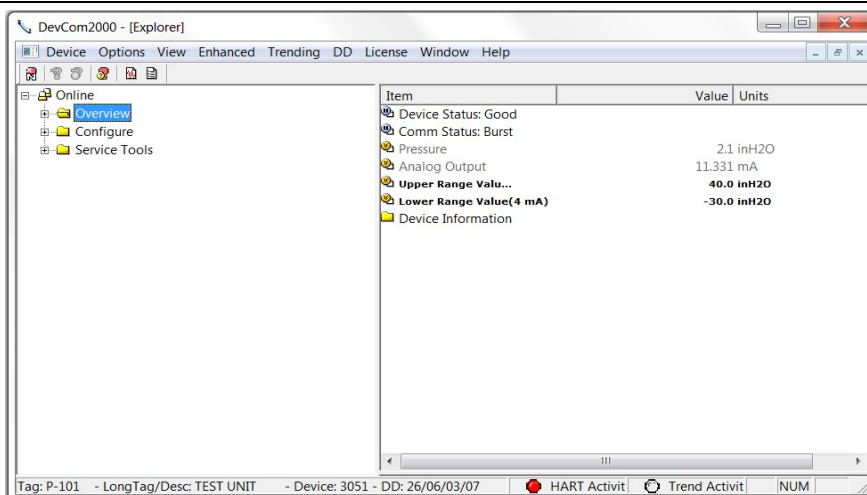
6.3.3 Edit Display

The Edit Display is a variation on the Variable edit. An additional window helps the user view a group of parameters based on the DD. You can also modify a single parameter from this group. Parameters linked to the edited field will be updated automatically.

To view and configure these variables, perform the following steps:

Step	Action
------	--------

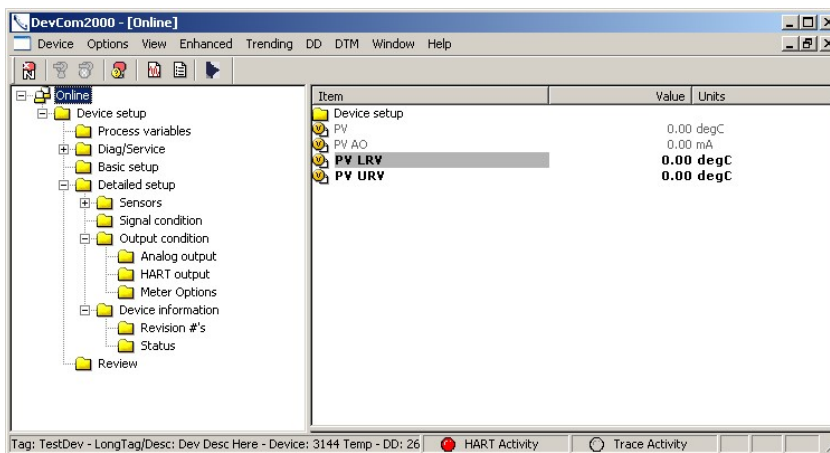
- 1 Ensure that the application is running and communications have been established
-



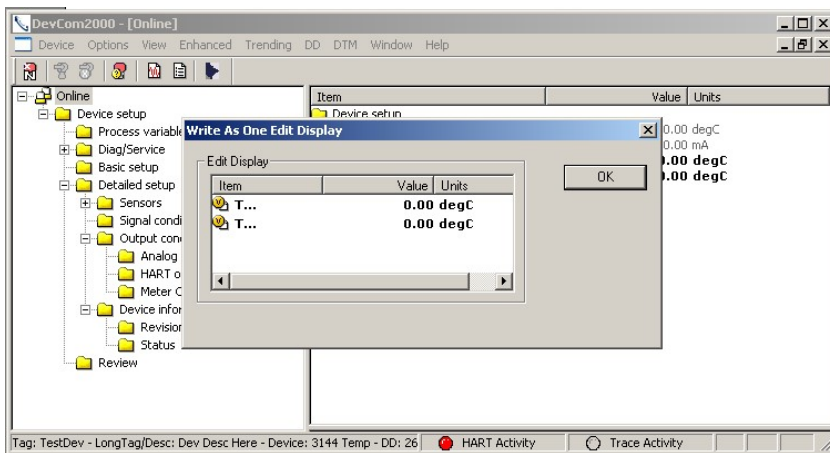
Expand the menu by clicking the “+” sign and double-click to view the device parameters.

Step	Action
------	--------

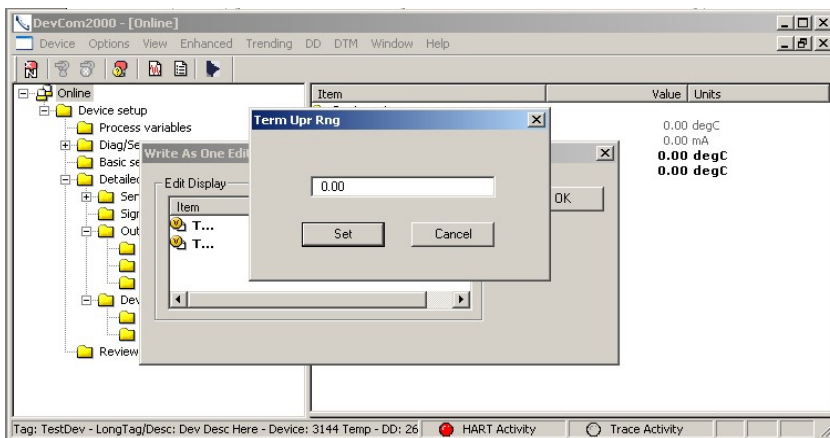
- | | |
|---|--|
| 2 | Select the menu where the required variable is present as shown below: |
|---|--|



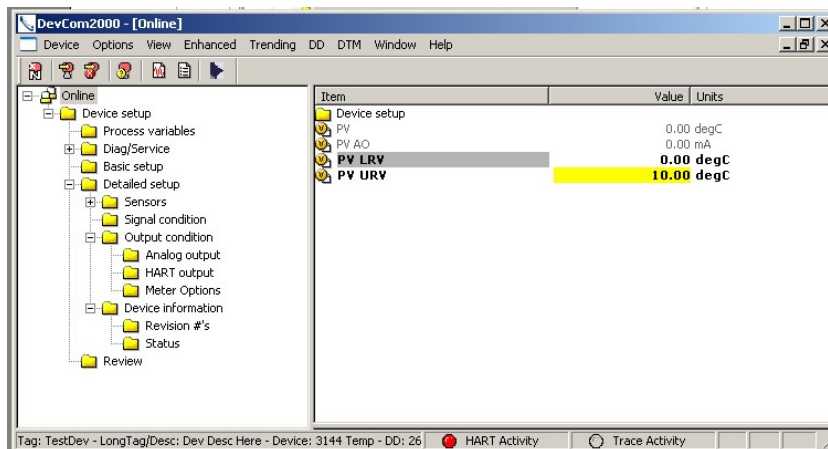
- | | |
|---|--|
| 3 | Double click the parameter you wish to edit. The following dialog box appears on the screen: |
|---|--|



- | | |
|---|--|
| 4 | Double click the parameter you wish to edit. The following dialog box appears on the screen: |
|---|--|

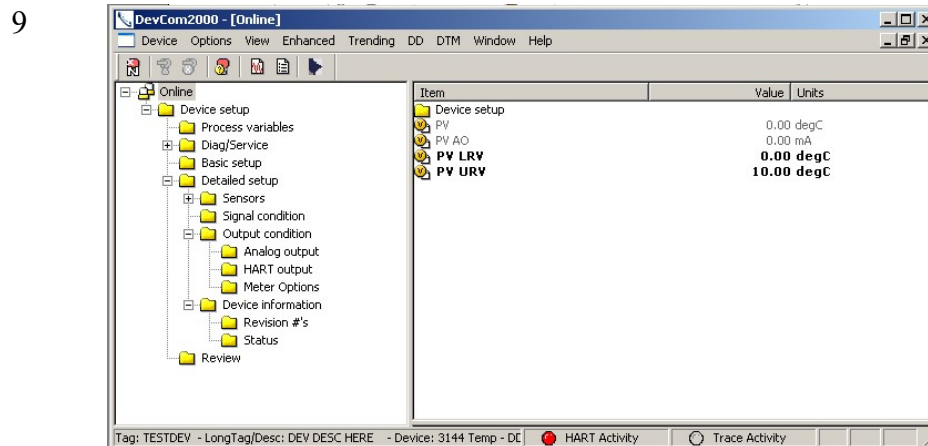


- | Step | Action |
|------|---|
| 5 | Make the change to the value, as required. |
| 6 | Click Set to accept the changes. Or press Cancel to cancel the changes. |
| 7 | Click OK to close the dialog box. |



Again the yellow means the parameter is changed and ready to be sent to the device.

- | | |
|---|---|
| 8 | Click on the Send icon  to commit the changes to the device. |
|---|---|



After being sent the change is reflected in the device info.

6.3.4 Executing Methods or Standard Operating Procedures

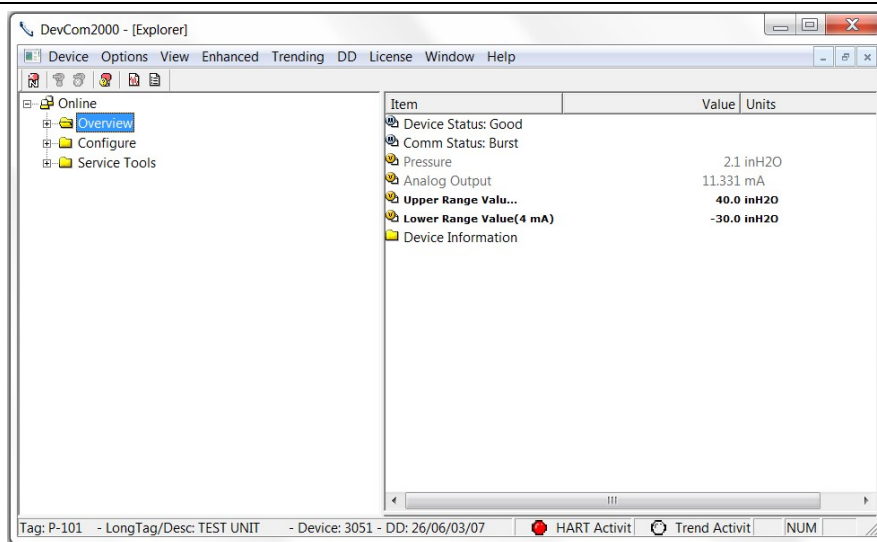
Methods are defined in the DD file for the device that DevCom2000 is connected to. You can select the Method and execute it for calibrating the device, trouble shooting, etc. Method execution leads you through a number of steps, like in a wizard.

A Few examples of methods include:

- Setting high and low range calibration points
- Calibration of the device
- Run the advanced diagnostic test procedure
- Execute tests to gather information on device operation.

To execute a Method, perform the following steps:

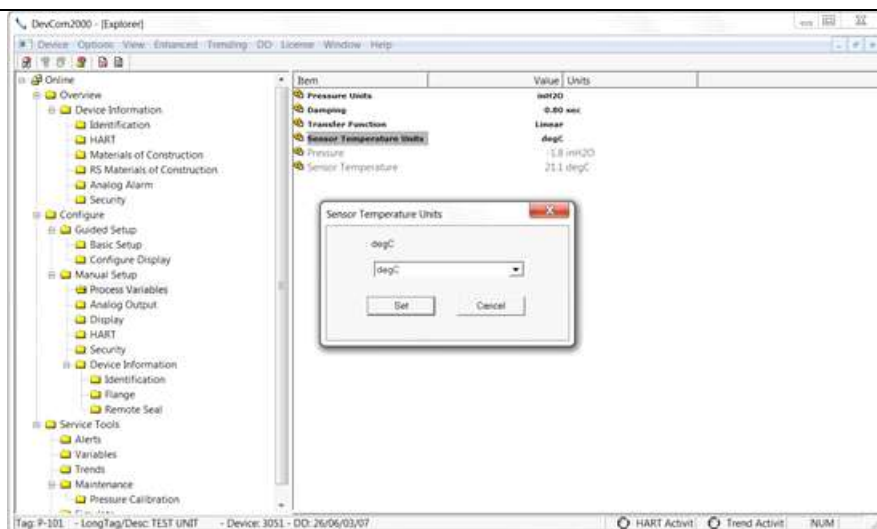
Step	Action
1	Ensure that the application is running and communications have been established:



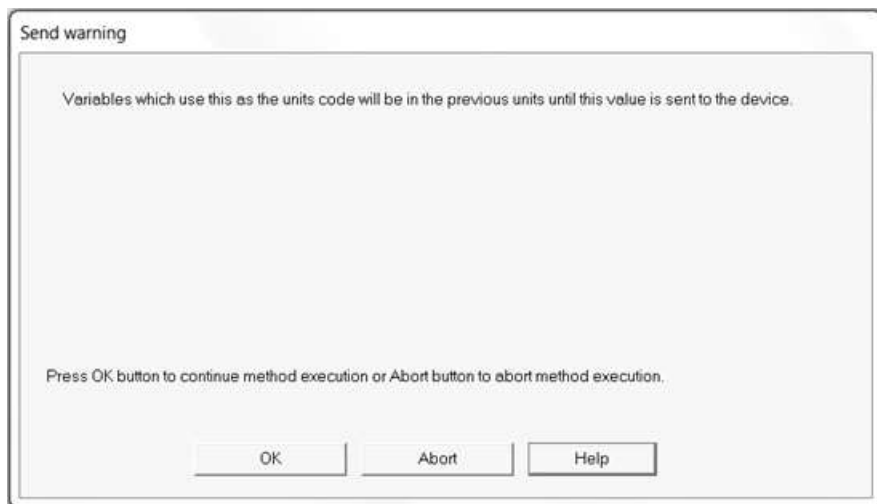
Expand the menu by clicking the “+” sign and double-click to view the device parameters.

2	Select the menu where the method is present and double-click to execute it.
3	Below is an example of a Method dialog box:

Step	Action
------	--------



Click Set to open a Method dialog box:



-
- | | |
|---|---|
| 4 | Click OK to move to the next dialog in the Method sequence. |
| 5 | Or, click Abort to cancel the Method execution. |
| 6 | Click Help to get specific help for that step of the Method. This Help information is provided by the device DD. |
-

6.4 Calibrating HART Field Devices

Calibration of field devices and loop test are achieved by executing the Methods or Standard Operating Procedures that are specific to device. Methods are defined based on the test parameters specific to the device, providing information for the calibration of that device.

See the previous section for Method execution.

6.5 Viewing the Device Status

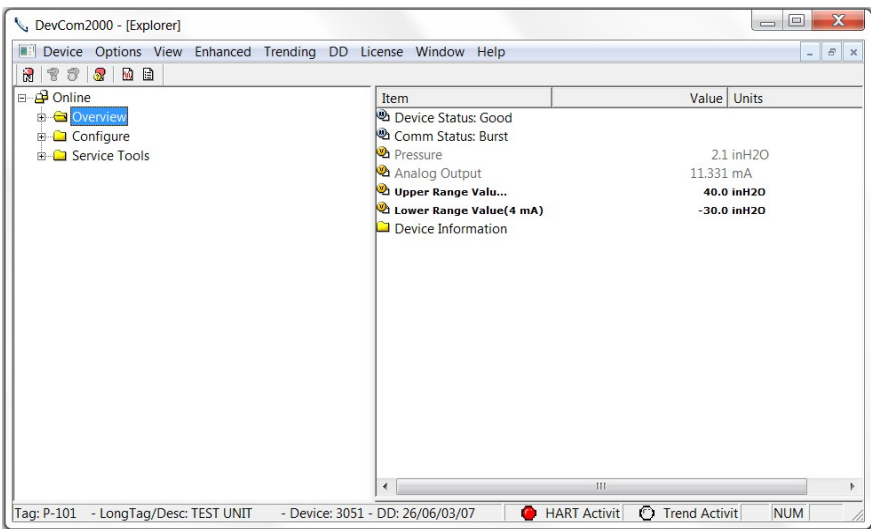
DevCom2000 provides the user with the ability to monitor the device specific status of the device and the communication network.

When there is error communicating with the device, it is recognized and indicated to the user. The user can view more details of such errors, using the **View → Device Condition** from the main window.

To view the device and communication status, perform the following steps:

Step	Action
------	--------

1	Ensure that the application is running and communications have been established:
---	--

2	
---	---

Expand the menu by clicking the “+” sign and double-click to view the device parameters.

3	Select View → Device Condition from the main window or choose the status icon  from the toolbar. Following window is displayed:
---	---

Step	Action
------	--------



The *Device Status* tab option shows the status of the device and the communication network. The individual status is indicated by green and red LEDs.

4	Additional tabs may be available depending on the DD.
---	---

5	Click X to close the Status window.
---	--

6.6 Viewing the Communication Log

DevCom2000 allows the user to view the actual communications between DevCom2000 and the device. You can view send commands and received responses.

If your computer is running an anti-virus program such as McAfee, you may get a message about a program wanting to access the internet when you open the Communication Log. This is normal. DevCom2000 uses TCP/IP to communicate with the Communication Log program.

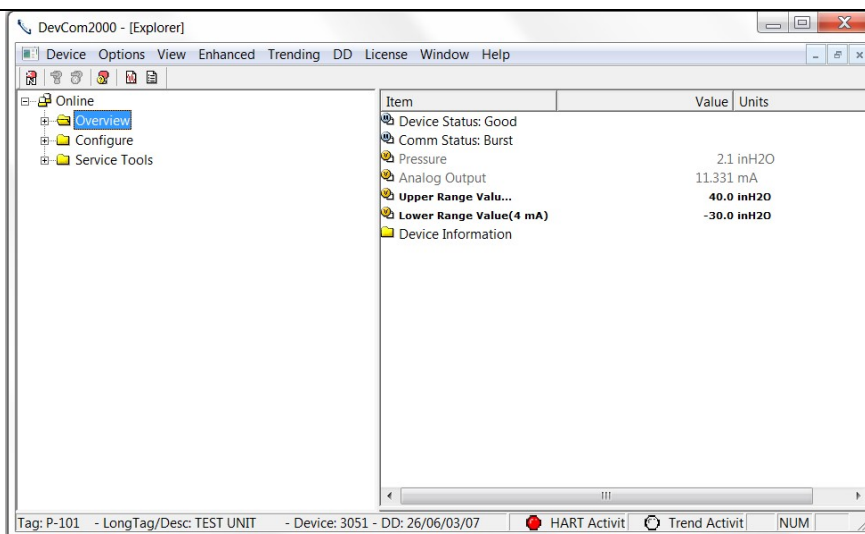
If no data appears in the Communication Log, this may be due to an anti-virus program. Close the Log window and re-launch.

To view the communication log, perform the following steps:

Step	Action
------	--------

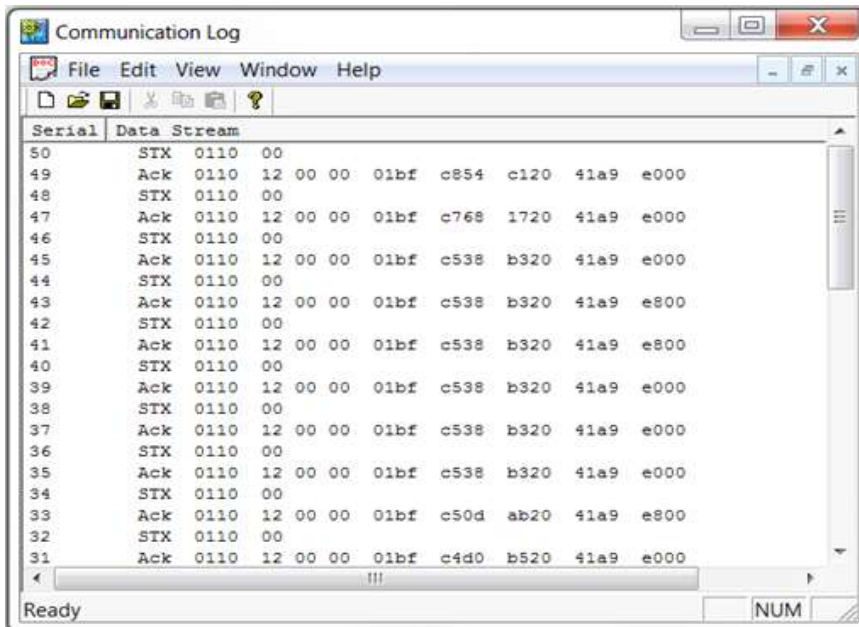
1	Ensure that the application is running and communications have been established
---	---

Step Action



Expand the menu by clicking the “+” sign and double-click to view the device parameters.

-
- 2 Select **View → Communication Log** from the main window or choose the communications log icon  from the toolbar. Following window is displayed:



Note: The communications log lists actual HART commands and the responses from the unit. A good understanding of the HART protocol is required to interpret this data.

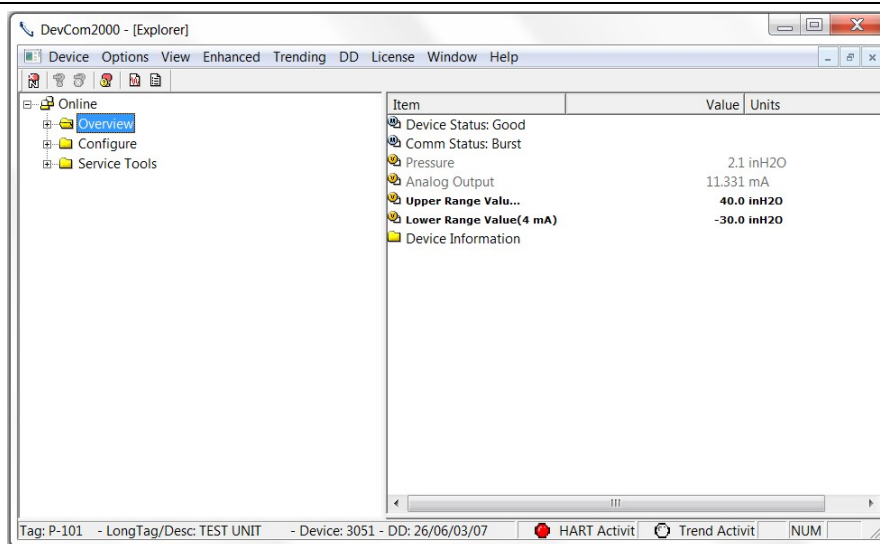
-
- 3 Select **File → Exit** to get back to the main window. Or, close the Communication Log window by clicking on the X.
-

6.7 Viewing the Event-Status Log

DevCom2000 allows the user to view the error conditions of the device and the communication network.

To view the Event-Status Log, perform the following steps:

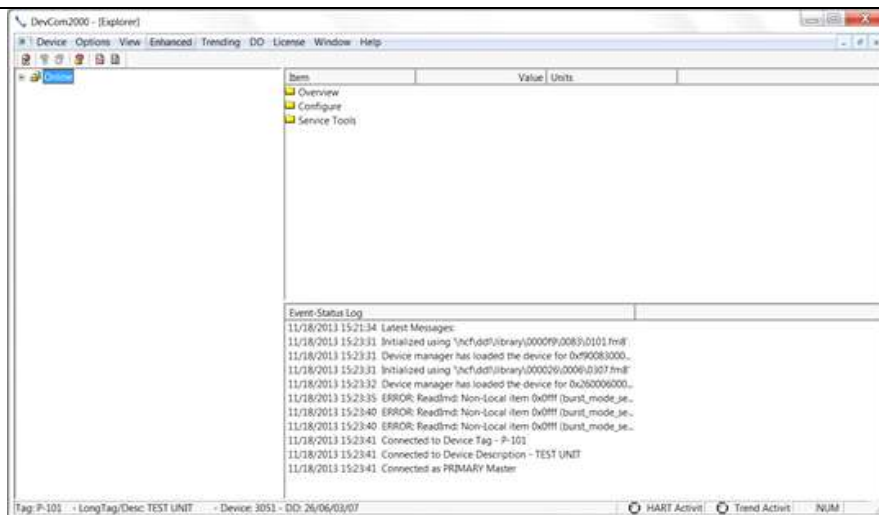
Step	Action
1	Ensure that the application is running and communications have been established:



Expand the menu by clicking the “+” sign and double-click to view the device parameters.

2	Select View → Event-Status Log from the main window or choose the Event-Status log icon  from the toolbar. An additional Event Status window is displayed:
---	--

Step	Action
------	--------



- | | |
|---|--|
| 3 | To close, go to View → Event-Status Log menu option or click on the  icon to go back to the original window. |
|---|--|

6.8 Document Device Functions

6.8.1 Saving Device Configuration to Disk

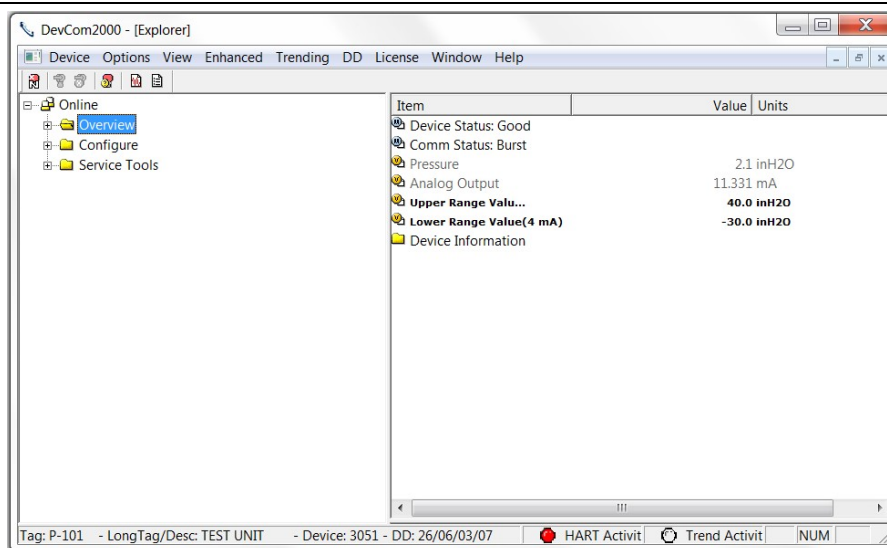
HART Device configurations can be saved to disk as a text file to document the device. Fields are delimited with a comma so that the data can be imported into configuration management software packages. A PDF version of the configuration is also created.

To save device configurations to disk, perform the following steps:

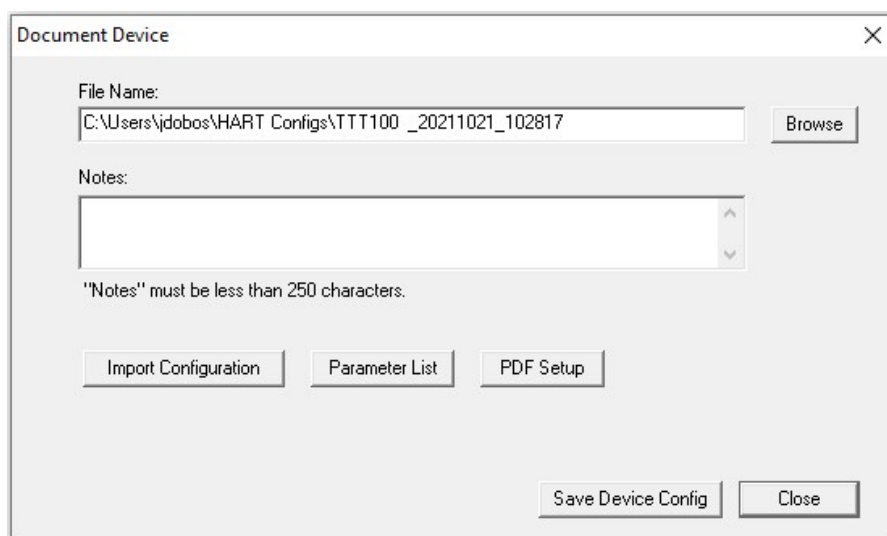
Step	Action
------	--------

- | | |
|---|--|
| 1 | Ensure that the application is running and communications have been established: |
|---|--|

Step	Action
------	--------



-
- 2 Select **Device** → **Document Device** from the main window. The Document Device Dialog Box is displayed:



-
- 3 The default directory is based on Windows User Accounts. The default file name is Tag_Date_Time. The directory and filename can be changed by the user. Use the “Browse” button to change directories and/or filenames also.
-
- 4 Enter a Note in the Notes: field if desired. Maximum of 250 characters.
-
- 5 Import Configuration, Parameter List, and PDF Setup are described below.
-

Step	Action
6	Press the “Save Device Config” button to save device configuration.
7	If the filename has already been used, the following Dialog Box is displayed when Save Device Config is pressed:



Append: Adds the number shown to the end of the file name

Overwrite: Deletes and writes over the existing file

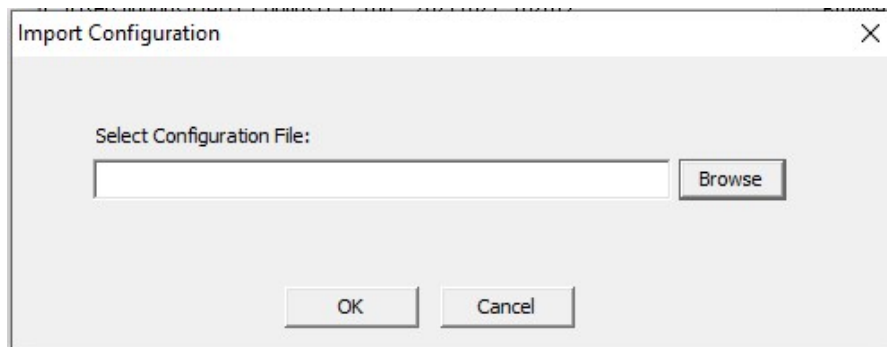
Cancel: Returns to the previous menu

6.8.2 Import Configuration Data from Emerson Hand held

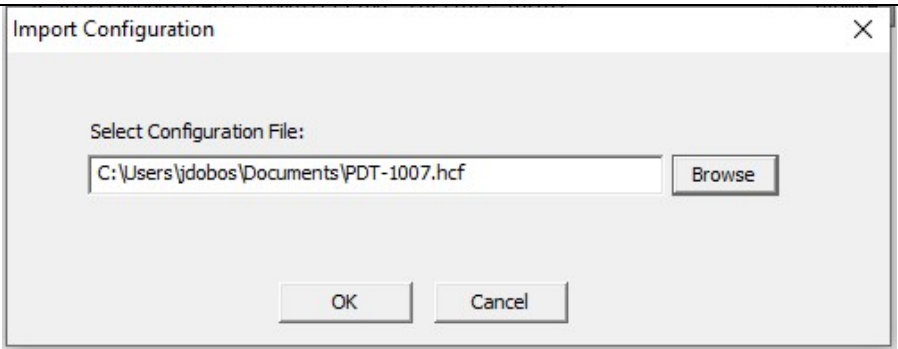
HART Device configurations can be imported from files saved by an Emerson 375, 475, or Trex. This function takes the input .hcf file and converts it to the ProComSol format. This is just like if DevCom2000 was connected to the instrument and saved the configuration. The imported configuration is added to the local data base and can be viewed, downloaded, etc.

To import a hand held configuration file, perform the following steps:

Step	Action
1	Click “Import Configuration”. The following dialog box appears:



2	Click “Browse” to select the .hcf file to import.
---	---

Step	Action
	
3	Click “OK” to perform the import.
4	The imported file uses the Tag information, Date, and Time to create a filename. The text file and pdf files are created. When done, the pdf file is displayed.

6.8.3 Create Parameter List

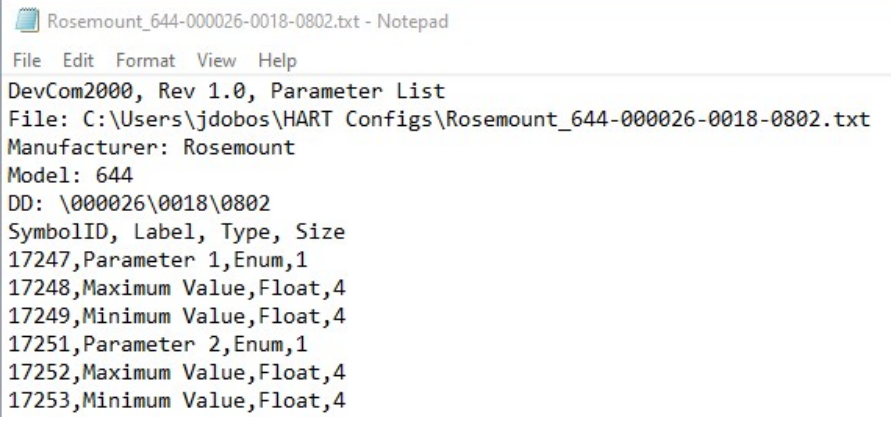
The HART Device parameter list can be extracted from the device and saved to a text file. This information is useful for the VirtualDevCom Lab View library. The symbol ID, symbol Label, symbol type, and symbol size information are extracted for the connected device. This information is saved in a text file.

To extract the parameter list, perform the following steps:

Step	Action
1	Click “Parameter List”.
2	The parameter list is created and saved to a file. The parameter list filename consists of the device manufacturer name, the model, and the DD file code. It is a text file.

The resulting text file is opened when complete.

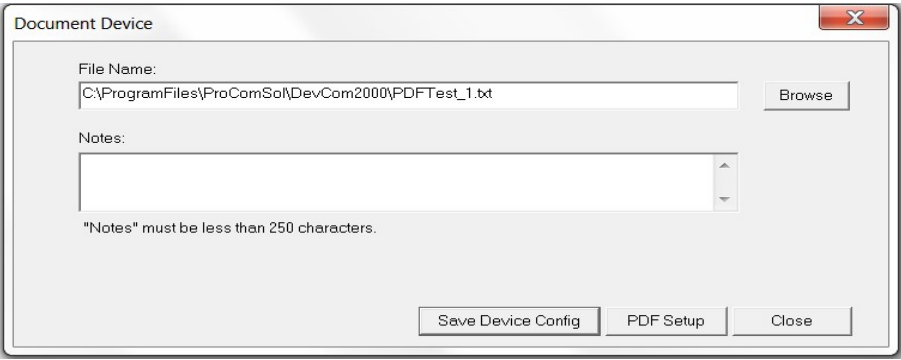
Here is a partial example:

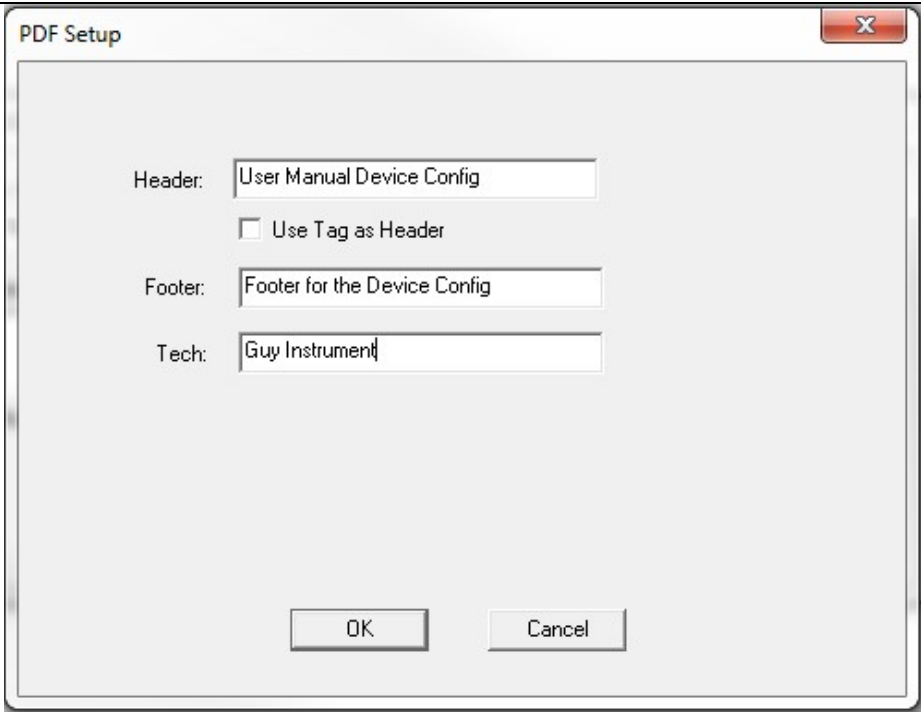
Step	Action
	

6.8.4 Setup PDF Header and Footer

The HART Device configuration PDF file can be customized. A header, footer, and technician name can be stored and used for each saved configuration. This is useful for contractors. The customer information can be added to the PDF files to make a nice looking report.

To customize the PDF output, perform the following steps:

Step	Action
1	Press the “PDF Setup” button on Document Device Dialog Box: 
2	The PDF Setup Dialog box is displayed:

Step	Action
	
3	Enter data as needed and press OK. The data is saved for future configuration saves.
4	Below is a sample PDF file.

Step	Action
------	--------

User Manual Device Config

DevCom2000, Rev 4.6, Device Configuration File

File: C:\Program Files\ProComSol\DevCom2000\TESTDEV_1-1.pdf
 Tag: TESTDEV
 LongTag/Desc: DEV DESC HERE
 Device ID: 1
 DD: 26/10/01/08
 Date (yyyy-mm-dd): 2011-02-17
 Time (hr-mn-sc): 03:58:57 PM
 Tech: Guy Instrument
 Notes: this is a saved device config

Label	Value	Units
Xfer fnctn	Linear	
AO	0.00	mA
AO alrm typ	Hi	
Unit	ohm	
Term temp unit	degR	
% rng	0.00	
Term temp	0.00	degC
Term UpR Rng	10.00	degC
Term Lor Rng	0.00	degC
Term temp USL	0.00	degC
Term temp LSL	0.00	degC
Term temp damp	0.00	s
Diff min span	0.00	
Snsr1	0.00	ohm
Snsr1 snsr s/n	1	
Snsr1 UpR Rng	0.00	ohm
Snsr1 Lor Rng	0.00	ohm
Snsr1 USL	0.00	ohm
Snsr1 LSL	0.00	ohm
Snsr1 damp	0.00	s
Snsr1 Min Span	0.00	ohm
Snsr 1 Type	Ohms	
Snsr 1 Conn	2 Wire	
Meter typ	Eng unit	
Meter decimal pt	Floating decimal pt	
Meter bar graph	Bar graph off	
50/60 Hz filter	60 Hz	
Snsr 1 Cal Mode	Factory Trim	

Footer for Dev Config

Page 1 of 3

6.9 Download Configuration to Device

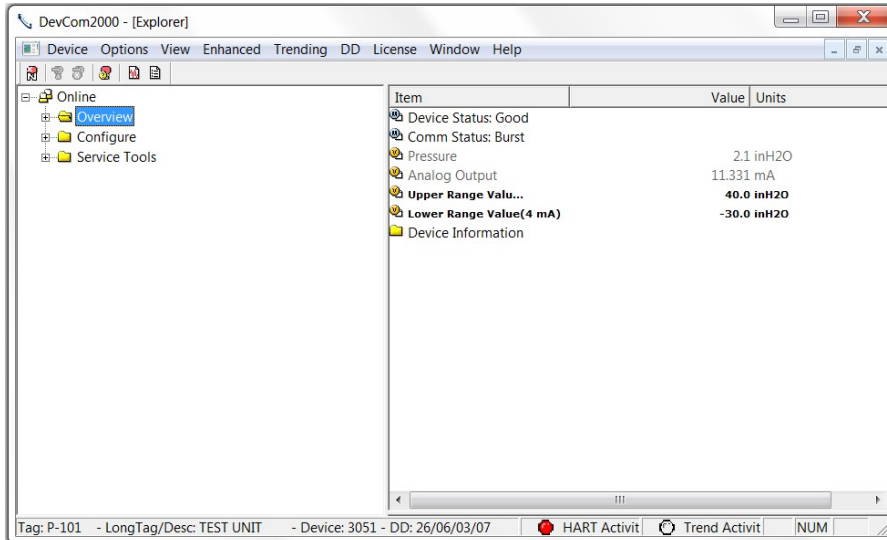
Saved configuration files can be downloaded back to devices. This is useful for “Cloning” a device, either for replacement or plant setup.

To save device configurations to disk, perform the following steps:

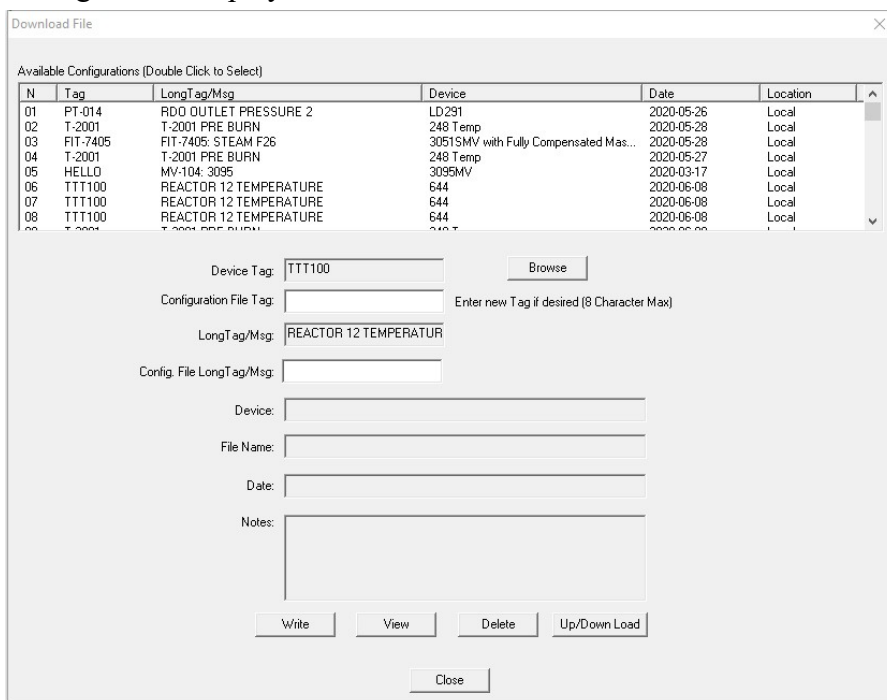
Step	Action
------	--------

- | | |
|---|--|
| 1 | Ensure that the application is running and communications have been established: |
|---|--|

Step Action



- 2 **Select Device → Download** from the main window. The Download Dialog Box is displayed:



Location is either:

Local - Stored on the hard drive of this computer

Cloud - Stored on the cloud

Local/Cloud - Stored at both locations

- 3 The available configurations are displayed. You can sort on each column by clicking it.
-

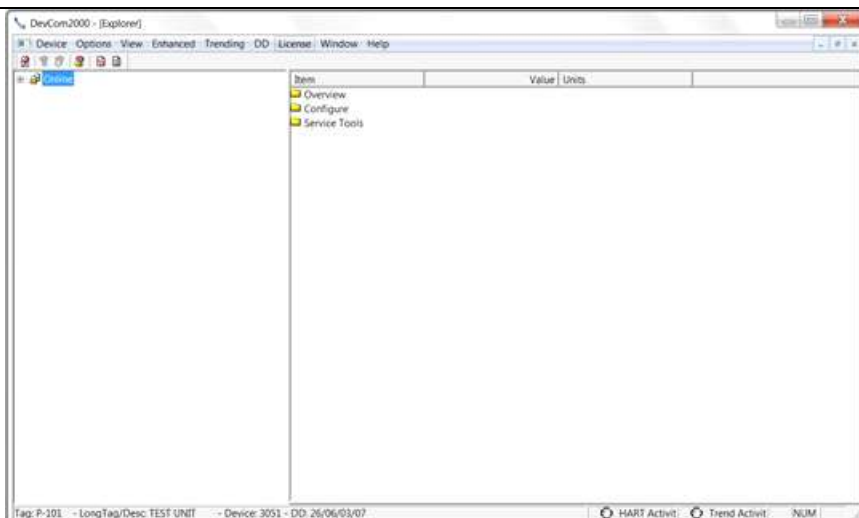
Step	Action
	To get details about a configuration, double click on the desired configuration. The details will be displayed below.
4	You can change the desired Tag by editing the Configuration File Tag box. You can change the desired Description by editing the Config. File LongTag/Desc box.
5	Press the “Write” button to write device configuration to the device. The device must be the same type as the configuration file. If they are different, the write operation will be aborted.
6	You can view the PDF file for the configuration file by double clicking on the desired configuration and clicking “View”.
7	You can delete configurations by double clicking on the desired configuration and clicking “Delete”.
8	Click “Browse” to load a configuration stored in another directory or on another location on your network.
9	Click Up/Down Load to copy the configuration from the cloud to the local hard drive. Or to copy the configuration to the cloud from the local hard drive. A Cloud subscription is required for this feature.

6.10 CalCheck (Calibration Check)

6.10.1 Saved Calibration Checks

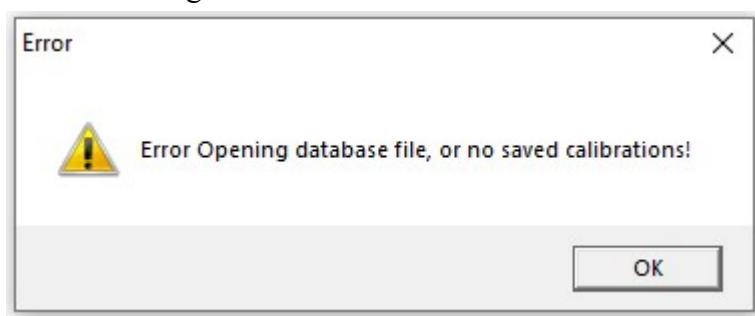
The HART compatible field device must be connected to a PC or tablet running DevCom2000 to calibrate the field device, or to view the field device's data. Make sure to establish the physical connection between the field device and the DevCom2000 computer. With the physical connection established, launch DevCom2000 by clicking the DevCom2000 icon on your desktop. You can also start the application by going to your computer's Start Menu and selecting **Start → Programs → ProComSol → DevCom2000**.

Step	Action
1	Start the DevCom2000 Application. The following application window is displayed:



DevCom2000 has automatically identified the field device, opened a communication channel to (i.e., a connection with) the field device, and loaded the proper DD.

- 2 To start a CalCheck, click **Device → CalCheck** on the top menu bar. The first time CalCheck is run, an error message will appear. This is normal and can be ignored:



- 3 The Calibration Check dialog box now appears. It will show a list of completed calibrations. Double click a calibration to view its details in the edit boxes below.

Calibration Check

Available Calibrations (Double Click to Select)

N	Tag	LongTag/Msg	Device	Date	Location	As
01	T-11402A	PUMP 2	PR 5335	2021-08-25	Local	Found
02	T-11402A	PUMP 2	PR 5335	2021-08-25	Local	Left
03	T-002	T-001: 3144	3144 Temp	2021-09-23	Local	Found
04	P-1011	P-1011: 3095	3095MV	2021-09-23	Local	Left
05	P-1011	P-1011: 3095	3095MV	2021-09-23	Local	Found
06	P-1001	P-1001: 3051	3051	2021-09-30	Local	Left
07	P-1001	P-1001: 3051	3051	2021-09-30	Local	LeftP...

Tag:

LongTag/Msg:

Device:

As Found/As Left:

File Name:

Date:

Notes:

View

New

Delete

Close

- To get details about a calibration, double click on the desired configuration. The details will be displayed below. For example:

Calibration Check

Available Calibrations (Double Click to Select)

N	Tag	LongTag/Msg	Device	Date	Location	As
10	P-1011	P-1011: 3095	3095MV	2021-10-01	Local	Left
11	P-1001	P-1001: 3051	3051	2021-10-01	Local	Found
12	T-104	TT-104: TMT162	TMT162	2021-10-01	Local	Left
13	P-1001	P-1001: 3051	3051	2021-10-01	Local	Left
14	P-1001	P-1001: 3051	3051	2021-10-01	Local	Left
15	P-1001	P-1001: 3051	3051	2021-10-01	Local	Left
16	TTT100	REACTOR 12 TEMPERAT...	644	2021-10-20	Local	Left

Tag:

P-1001

LongTag/Msg:

P-1001: 3051

Device:

3051

As Found/As Left:

Left

File Name:

C:\Users\jdobos\HART CalChecks\P-1001 _20211001_150241

Date:

2021-10-01 (Year-Month-Day)

Notes:

Test the string2

View

New

Delete

Close

Click “View” to see the recorded data points.

- The CalCheck Data screen shows the expected, read, and error information for the PV and AO parameters. The error is full scale error.

CalCheck Data

PV Data

Point	Expected	Read	Error
1	-0.43 psi	0.13 psi	2.54 %
2	10.60 psi	0.13 psi	47.46 %
3	21.64 psi	0.13 psi	97.46 %

AO Data

Point	Expected	Read	Error
1	4.000 mA	4.404 mA	2.53 %
2	12.000 mA	4.404 mA	47.47 %
3	20.000 mA	4.404 mA	97.47 %

Calibration Type: As Left

View PDF

OK

6 Click “View PDF” to see the calibration report as a PDF file.

Device Calibration Check: Rev 1.0

File: C:\Users\jdobos\HART CalChecks\P-1001 _20211001_150241
 Tag: P-1001
 LongTag/Msg: P-1001: 3051
 Model: 3051
 Device ID: 7356126
 Date (yyyy-mm-dd): 2021-10-01
 Time (hr:mn:sc): 03:02:43 PM
 Tech: J. Dobos
 Notes: Test the string2
 URV: 21.64 psi
 LRV: -0.43 psi
 Number of Points: 3
 Calibration Type: As Left
 Calibrator: Meriam 100, SN: 789, Cal Due: 2024/12/25

Point	PV Expected	PV Read	PV Error	AO Expected	AO Read	AO Error
1	-0.43 psi	0.13 psi	2.54 %	4.000 mA	4.404 mA	2.53 %
2	10.60 psi	0.13 psi	47.46 %	12.000 mA	4.404 mA	47.47 %
3	21.64 psi	0.13 psi	97.46 %	20.000 mA	4.404 mA	97.47 %

I certify that this electronic signature is the legal equivalent to my hand written signature.
 I further certify that I performed the Calibration Check on the indicated date and that I followed the appropriate procedures.

Signed by: Not Signed, on 2021-10-01

6.10.2 New Calibration Check

To create a new calibration, click New on the Calibration Check Screen.

1

Calibration Check

Available Calibrations (Double Click to Select)

N	Tag	LongTag/Msg	Device	Date	Location	As
01	T-11402A	PUMP 2	PR 5335	2021-08-25	Local	Found
02	T-11402A	PUMP 2	PR 5335	2021-08-25	Local	Left
03	T-002	T-001: 3144	3144 Temp	2021-09-23	Local	Found
04	P-1011	P-1011: 3095	3095MV	2021-09-23	Local	Left
05	P-1011	P-1011: 3095	3095MV	2021-09-23	Local	Found
06	P-1001	P-1001: 3051	3051	2021-09-30	Local	Left
07	P-1001	P-1001: 3051	3051	2021-09-30	Local	LeftP...

Tag:

LongTag/Msg:

Device:

As Found/As Left:

File Name:

Date:

Notes:

View

New

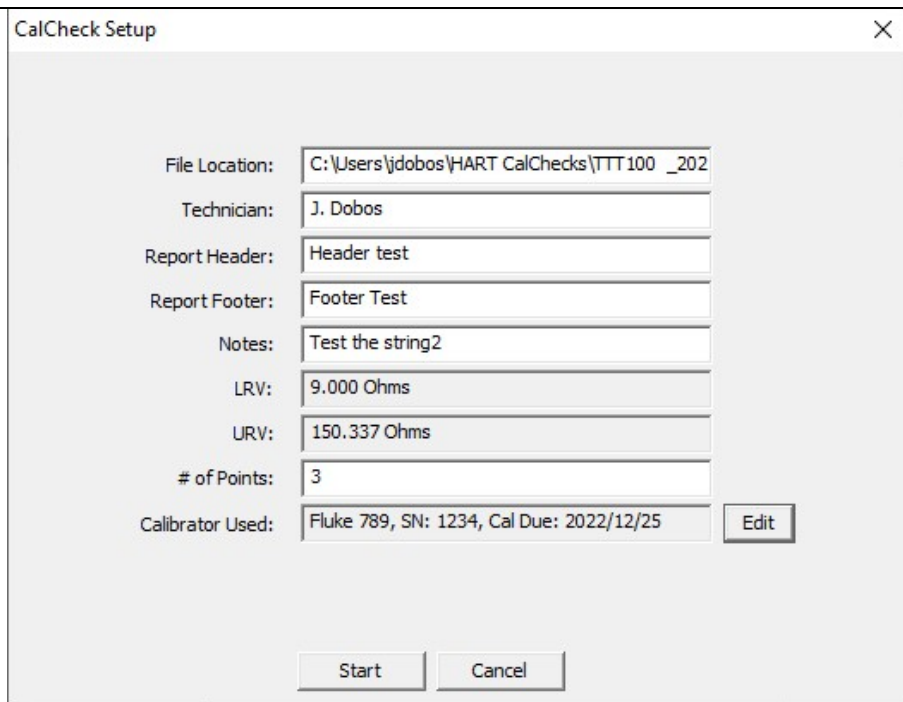
Delete

Close

- 2 The Calibration Setup screen appears. Enter the data. The default file name is the tag, followed by the date. You can edit this to whatever you want.

The LRV and URV are read from the device and cannot be edited.

The # of Points is the number of points you want to check between the LRV and the URV. The minimum is 2.

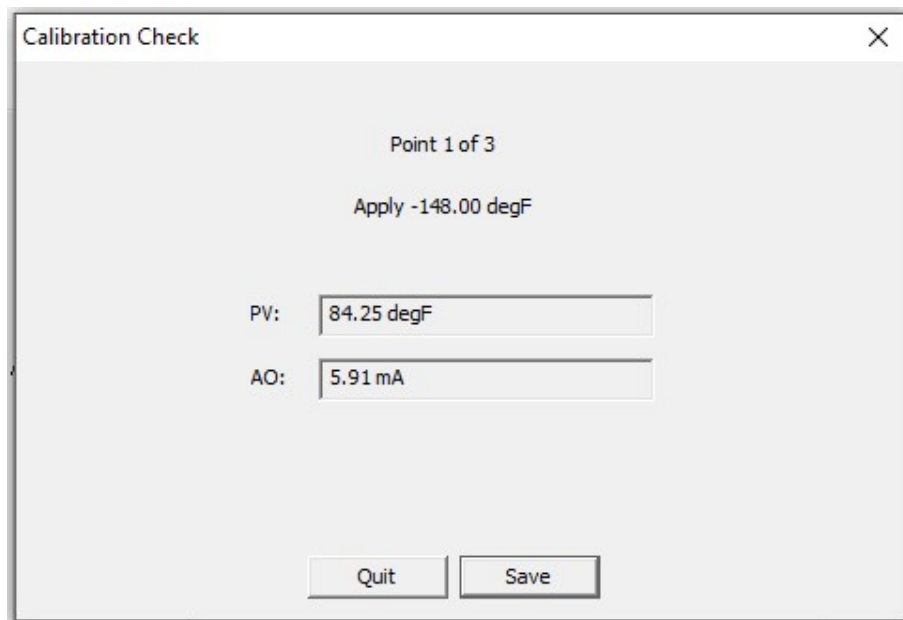


The CalCheck Setup dialog box contains the following fields and buttons:

- File Location: C:\Users\jdobos\HART CalChecks\TTT100 _202
- Technician: J. Dobos
- Report Header: Header test
- Report Footer: Footer Test
- Notes: Test the string2
- LRV: 9.000 Ohms
- URV: 150.337 Ohms
- # of Points: 3
- Calibrator Used: Fluke 789, SN: 1234, Cal Due: 2022/12/25
- Edit button
- Start button
- Cancel button

Once satisfied with your entries, click Start to begin.

- 3 The Calibration Check screen now appears for each calibration point. It tells the user what value to the connected calibrator to. It also shows the PV and AO values that DevCom2000 is reading from the connected device via HART.



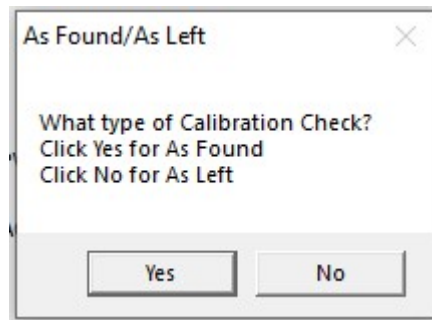
The Calibration Check dialog box displays the following information and controls:

- Point 1 of 3
- Apply -148.00 degF
- PV: 84.25 degF
- AO: 5.91 mA
- Quit button
- Save button

The user clicks “Save” to record these values and to move to the next point. Click “Quit” to stop the calibration at any time.

- 4 After the last point is saved, the user is prompted to declare this

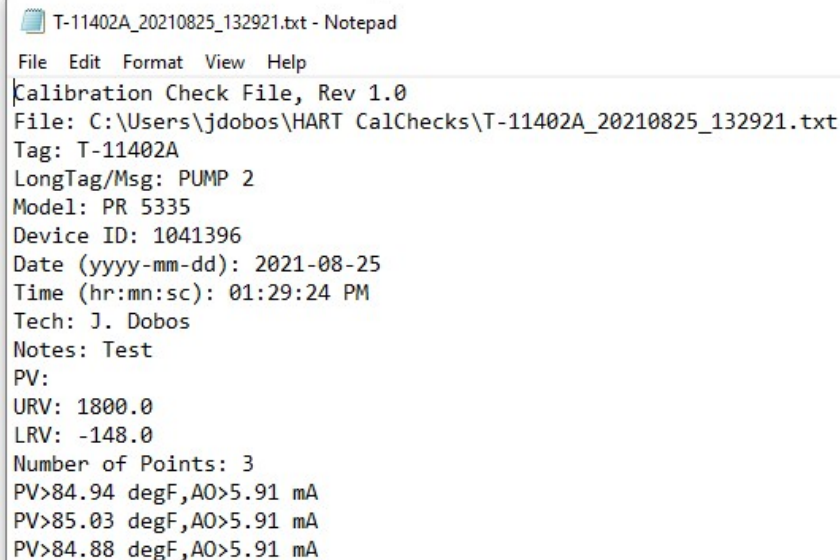
calibration to be either “As Found” or “As Left”. Click the appropriate button.



-
- 5 The electronic Signature screen is then shown. Please read the statement carefully, and if you agree, enter your name in the box and click “I Accept”.



-
- 6 The calibration results screen is shown and the calibration report PDF file is opened.
-
- 7 The CalCheck data is also saved as a text file. Use Windows File Explorer to open the desired CalCheck file. The filename and location are shown in Step 8 above.
-



T-11402A_20210825_132921.txt - Notepad

File Edit Format View Help

Calibration Check File, Rev 1.0
File: C:\Users\jdobos\HART CalChecks\T-11402A_20210825_132921.txt
Tag: T-11402A
LongTag/Msg: PUMP 2
Model: PR 5335
Device ID: 1041396
Date (yyyy-mm-dd): 2021-08-25
Time (hr:mn:sc): 01:29:24 PM
Tech: J. Dobos
Notes: Test
PV:
URV: 1800.0
LRV: -148.0
Number of Points: 3
PV>84.94 degF,AO>5.91 mA
PV>85.03 degF,AO>5.91 mA
PV>84.88 degF,AO>5.91 mA

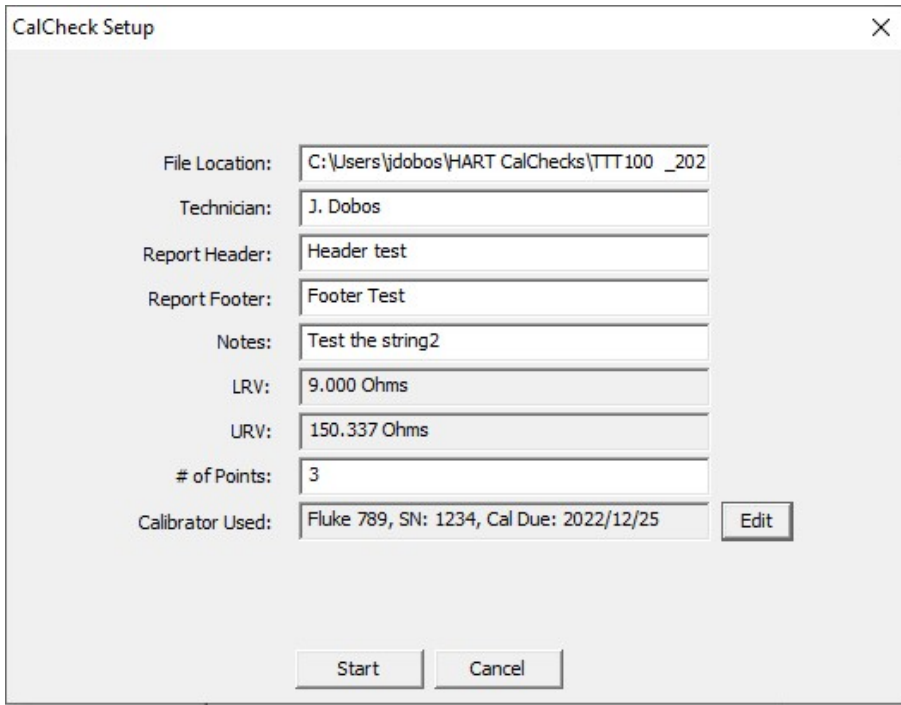
As you can see, the header information is stored along with the saved points.

- 8 Based on the results of the CalCheck, the user can then perform Trim operations with DevCom2000 using HART. Dismiss the CalCheck screens and navigate through the device menus to find the appropriate Trim Method for the connected device. Once trimmed, run CalCheck again to verify the device is now operating within limits.

6.10.3 Calibrator Data Entry (Optional)

If you use several different calibrators in your shop, you can save the details of each one and associated it with a CalCheck.

1



The image shows a 'CalCheck Setup' dialog box with the following fields and values:

Field	Value
File Location:	C:\Users\jdobos\HART CalChecks\TTT100 _202
Technician:	J. Dobos
Report Header:	Header test
Report Footer:	Footer Test
Notes:	Test the string2
LRV:	9.000 Ohms
URV:	150.337 Ohms
# of Points:	3
Calibrator Used:	Fluke 789, SN: 1234, Cal Due: 2022/12/25

Buttons: Start, Cancel, Edit (next to Calibrator Used)

Click “Edit” to Create, Edit and Select the Calibrator used in this CalCheck.

2

The Calibration dialog box shows the saved calibrators.

Calibrator

Saved Calibrators:

N	Manufacturer	Model	Serial Number	Expiration Date
01	Beamex	21004	89021	2022/12/25
02	Fluke	789	1234	2022/12/25
03	Meriam	100	789	2024/12/25

Double Click on the Calibrator to use
Click on the Calibrator to Edit or Delete

Edit Delete

Add New Calibrator

Manufacturer:

Model:

Serial Number:

Expiration Date:
(yyyy/mm/dd)

Add New

OK No Calibrator Cancel

From here you have several options:

Select a Calibrator - Double click on the Calibrator to use

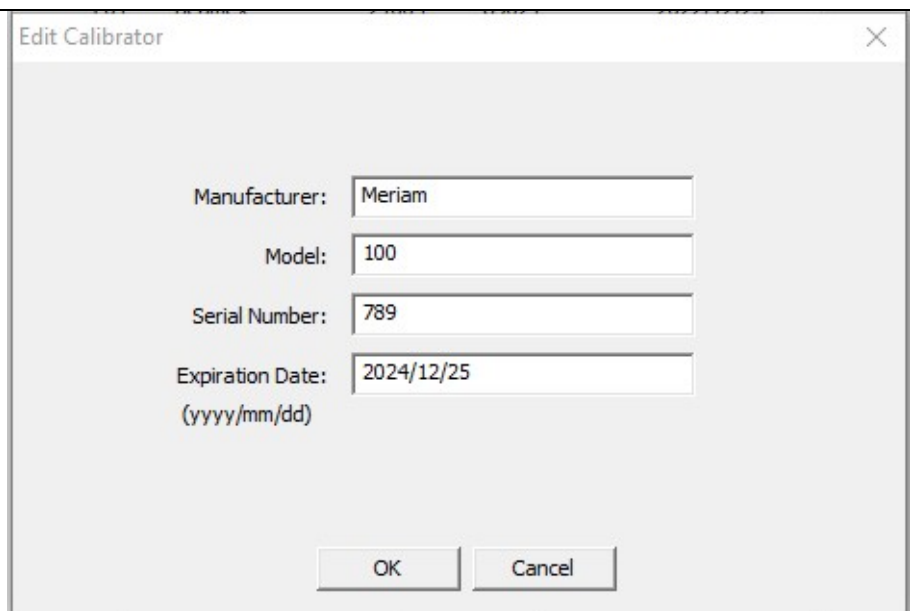
Edit a Calibrator - Click to select, then click “Edit”.

Delete a Calibrator - Click to select, then click “Delete”.

Add a Calibrator - Enter the Calibrator information, then click “Add New”.

Clear Calibrator for this CalCheck - Click “No Calibrator” to clear the Calibrator field on the New Calibration dialog box.

- 3 When “Edit” is clicked, the following Edit Calibrator dialog box is opened:



The 'Edit Calibrator' dialog box contains the following fields and buttons:

Manufacturer:	Meriam
Model:	100
Serial Number:	789
Expiration Date: (yyyy/mm/dd)	2024/12/25

Buttons: OK, Cancel

-
- 4 Make your edits and click “OK” when done.
-

6.11 Options Menu

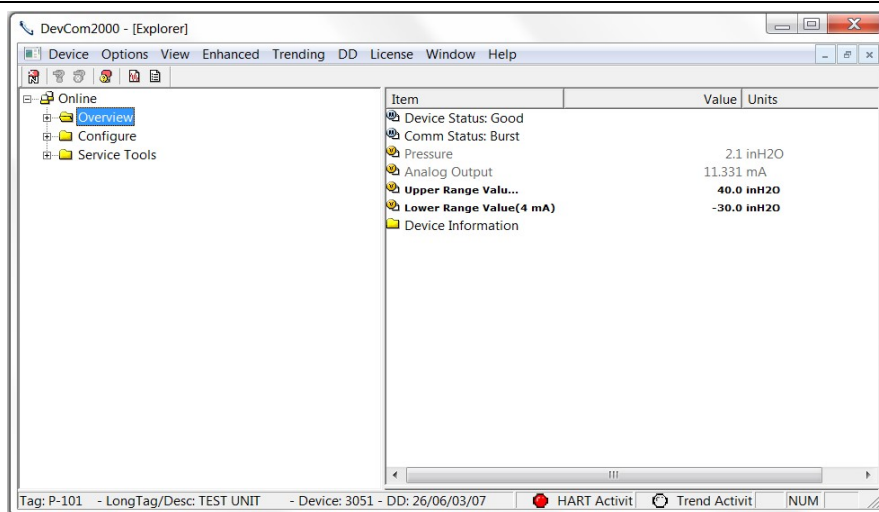
6.11.1 Options → Basic

6.12.1.1 Changing the COM port

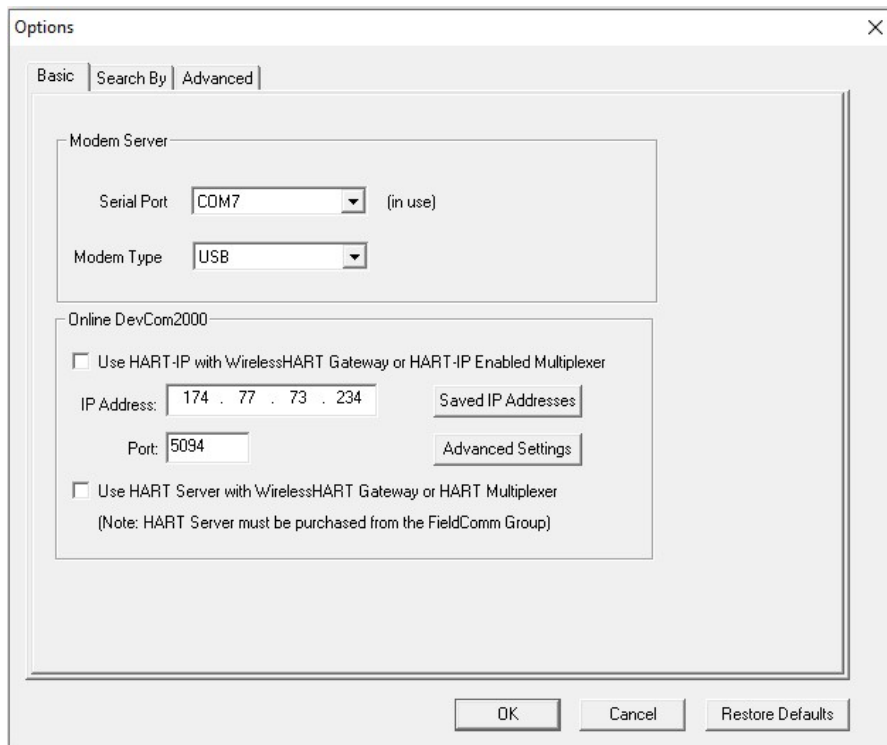
The **Basic** menu is used to set the COM port to the correct one that the device is connected to. To change the COM port, perform the following steps:

Step	Action
------	--------

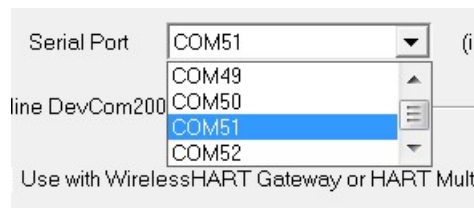
- | | |
|---|---|
| 1 | Ensure that the application is running. |
|---|---|
-



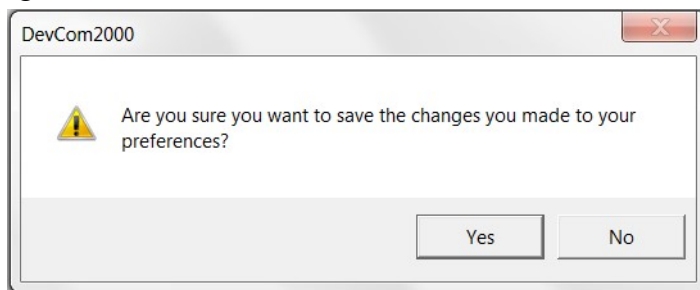
- | Step | Action |
|------|---|
| 2 | Select Options → Basic from the main window. The Options Dialog Box is displayed with the Basic tab selected: |



- | | |
|---|---|
| 3 | To change serial ports, Click on the drop down box: |
|---|---|



- | | |
|---|---|
| 4 | Once the desired COM port is selected click OK to save the changed settings. |
| 5 | Click Yes if you want to save the changes. Clicking No will not save the changes. |



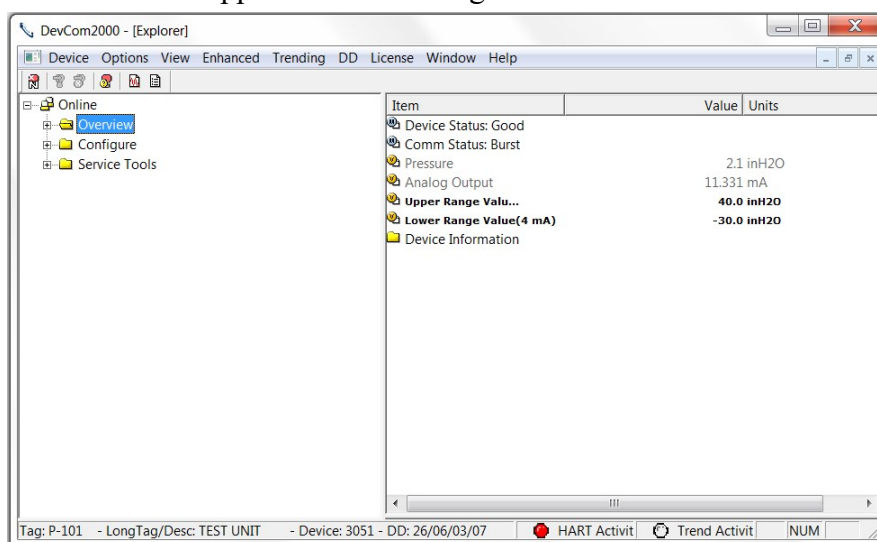
- | | |
|---|---|
| 6 | Select New Device from the Main screen to connect using the new |
|---|---|

Step	Action
	COM port.

6.12.1.2 Use HART-IP with a WirelessHART Gateway or HART-IP Multiplexer

The **Basic** menu is where DevCom2000 can be set to use HART-IP to communicate with a *WirelessHART* Gateway or HART-IP enabled Multiplexer/Gateway. To communicate using HART-IP with *WirelessHART* Gateway, perform the following steps:

Step	Action
1	Ensure that the application is running.



2	Select Options → Basic from the main window. The Options Dialog Box is displayed with the Basic tab selected:
---	---

Step	Action
-------------	---------------

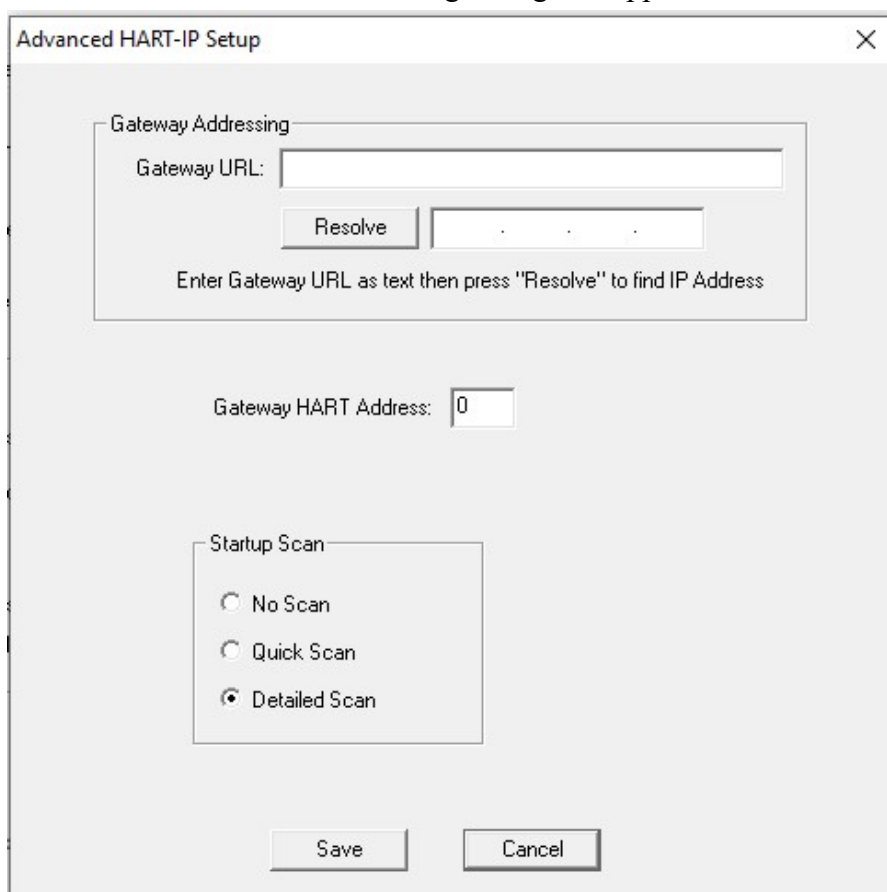
-
- | | |
|---|---|
| 3 | Click “Use HART-IP with <i>WirelessHART</i> Gateway or HART-IP enabled Multiplexer” |
|---|---|
-

Step	Action
------	--------

The Serial Port and Modem Type options will now be grayed out. **Un-checking** will make Serial Port and Modem Type selectable again.

- 4 Enter the IP Address of the HART-IP Gateway in the IP Address Field. Also enter the Port assigned to HART-IP in the Gateway. It is typically 5094.
- 5 Multiple IP Addresses can be saved to make connecting to different networks easier. Click Saved IP Addresses to configure and select additional IP Addressess. When clicked the following dialog box appears:

Step	Action
6	The saved IP Addresses are listed. From here you can Scan the network using the selected IP Address. This will update the tag details to the IP Address entry.
7	Delete will remove the IP Address from the list.
8	Add New will add the entered IP Address information to the list. Click Scan to get tag details for the added IP Address.
9	For more advanced settings related to HART-IP, click the “Advanced” button. The following dialog box appears:



The dialog box is titled "Advanced HART-IP Setup" and contains the following fields and controls:

- Gateway Addressing** section:
 - Gateway URL: A text input field.
 - Resolve: A button next to the Gateway URL field.
 - Enter Gateway URL as text then press "Resolve" to find IP Address: A text label below the Resolve button.
- Gateway HART Address: A numeric input field with the value 0.
- Startup Scan** section:
 - No Scan: A radio button.
 - Quick Scan: A radio button.
 - Detailed Scan: A radio button, which is selected.
- Save: A button at the bottom left.
- Cancel: A button at the bottom right.

Communicating to a HART-IP Gateway via its URL

Enter a URL text address in the URL field and click the “Resolve” button to convert it into an IP Address. The IP Address will populate the IP Address box if a successful conversion occurs.

Gateway Address

Some WirelessHART Gateways do not use the default address of 0. For these Gateways you must enter the correct Gateway Address in

Step	Action
------	--------

this field.

Startup Scan

Select the desired scan to occur when DevCom2000 launches.

No Scan - No scan occurs

Quick Scan - All devices are listed without a heirachery.

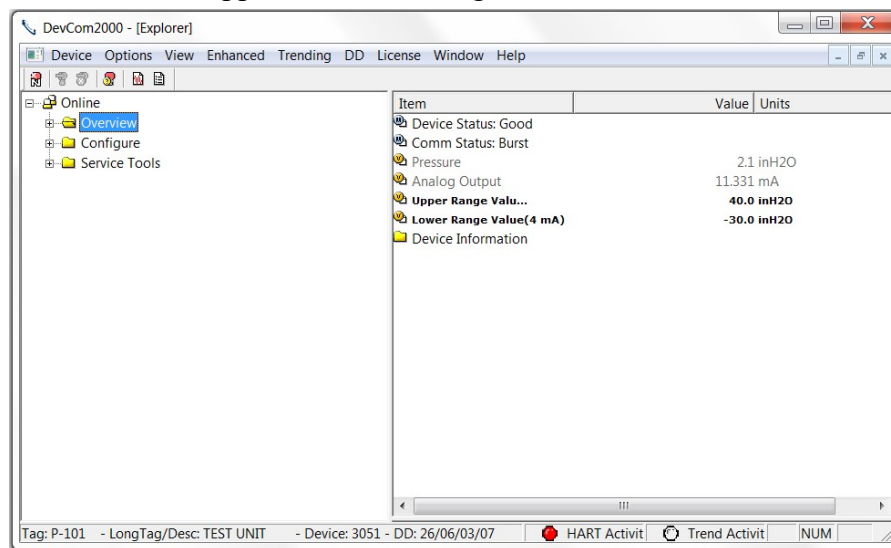
Detailed Scan - This scan takes typically takes longer. All devices are shown in a heirachrey. For instance, a wirelessHART adapter with several sub devices is shown as the root device and the sub devices are shown below it.

6.12.1.3 Using HART Server

HART Server is a program offered by the FieldComm Group to handle HART communications. It can be used for a single device connected by a modem or for multiple devices connected to a wirelessHART gateway or multiplexer. Note that it does not use HART-IP. To communicate with a WirelessHART Gateway or a HART multiplexer without HART-IP, perform the following steps:

Step	Action
------	--------

1 Ensure that the application is running.



2 Select **Options** → **Basic** from the main window. The Options Dialog Box is displayed with the Basic tab selected:

Step	Action
------	--------

Options

Basic | Search By | Advanced

Modem Server

Serial Port: COM7 (in use)

Modem Type: USB

Online DevCom2000

☒ Use HART-IP with WirelessHART Gateway or HART-IP Enabled Multiplexer

IP Address: 174 . 77 . 73 . 234 Saved IP Addresses

Port: 5094 Advanced Settings

☐ Use HART Server with WirelessHART Gateway or HART Multiplexer
(Note: HART Server must be purchased from the FieldComm Group)

OK Cancel Restore Defaults

- Click “Use HART server with WirelessHART Gateway or HART Multiplexer”

Options

Basic | Search By | Advanced

Modem Server

Serial Port: COM7 (in use)

Modem Type: USB

Online DevCom2000

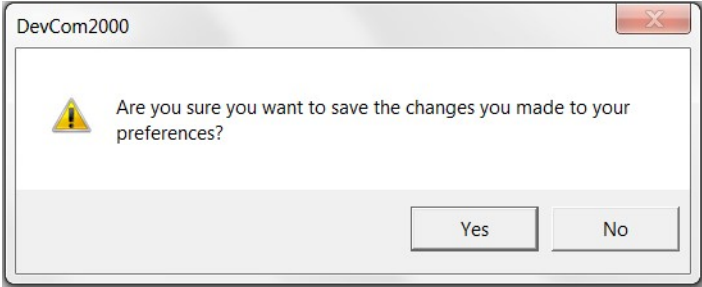
☒ Use HART-IP with WirelessHART Gateway or HART-IP Enabled Multiplexer

IP Address: 174 . 77 . 73 . 234 Saved IP Addresses

Port: 5094 Advanced Settings

☒ Use HART Server with WirelessHART Gateway or HART Multiplexer
(Note: HART Server must be purchased from the FieldComm Group)

OK Cancel Restore Defaults

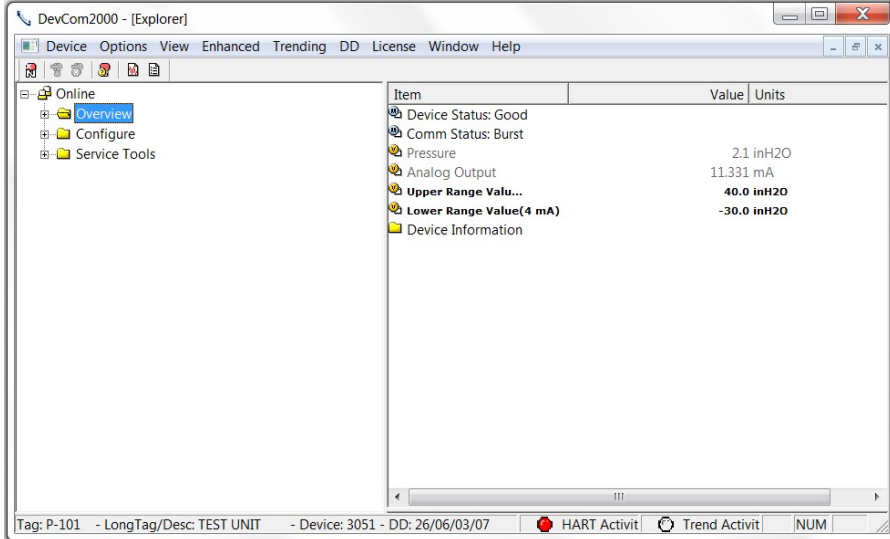
Step	Action
4	The Serial Port and Modem Type options will now be grayed out. Un-checking will make Serial Port and Modem Type selectable again. Click OK to save the changed settings.
5	Click Yes if you want to save the changes. Clicking No will not save the changes.
	
6	Restart DevCom2000 for the changes to take place.

6.11.3 Options → Search

6.12.3.1 Poll Address

The **Search** menu is used to change how DevCom2000 searches for a Device. The first option is to search by Poll Address. This searches for a specific poll address or set of addresses. To search for a device using Poll Address perform these steps:

Step	Action
1	Ensure that the application is running.



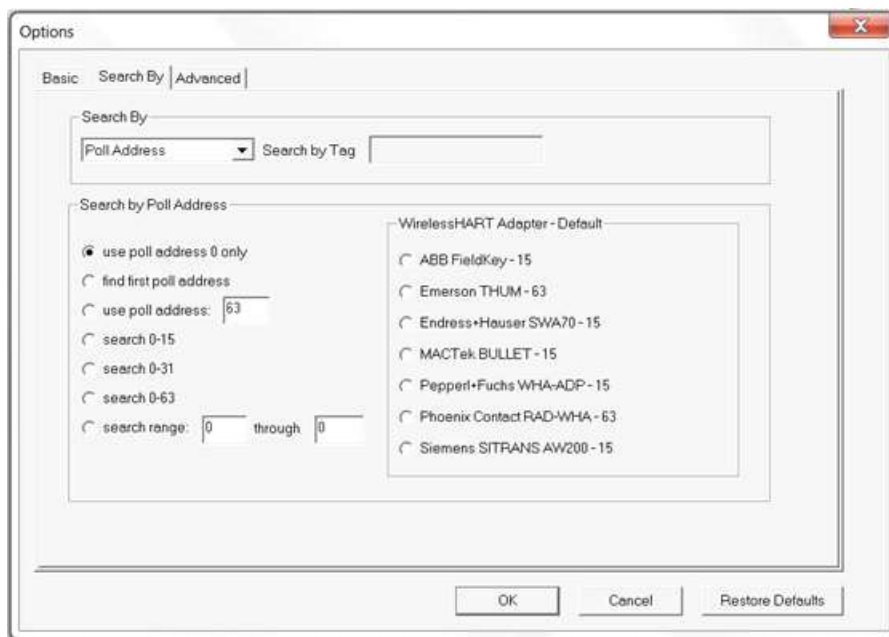
The screenshot shows the DevCom2000 Explorer application window. The title bar reads "DevCom2000 - [Explorer]". The menu bar includes "Device", "Options", "View", "Enhanced", "Trending", "DD", "License", "Window", and "Help". The left sidebar shows a tree structure under "Online" with folders "Overview", "Configure", and "Service Tools". The "Overview" folder is selected and highlighted in blue. The main pane displays a table with the following data:

Item	Value	Units
Device Status: Good		
Comm Status: Burst		
Pressure	2.1	inH2O
Analog Output	11.331	mA
Upper Range Value...	40.0	inH2O
Lower Range Value(4 mA)	-30.0	inH2O
Device Information		

The status bar at the bottom contains the following information: "Tag: P-101", "- LongTag/Desc: TEST UNIT", "- Device: 3051 - DD: 26/06/03/07", a red alarm icon labeled "HART Activit", a green trend icon labeled "Trend Activit", and a button labeled "NUM".

Step	Action
------	--------

- 2 Select **Options** → **Search** from the main window. The Options Dialog Box is displayed with the Search By tab selected:



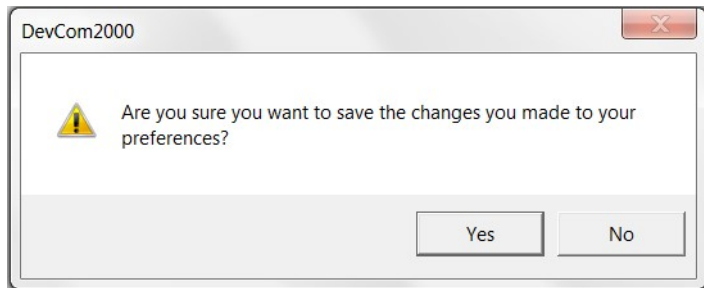
- 3 There are currently nine options for Poll address:
- “Use poll address 0 only” only searches at poll address 0 before not finding a device. This is the default setting.
 - “Find first poll address” searches poll addresses until it finds the first device it comes across.
 - “Use poll address: ___” If the poll address is know this options searches at a specific address (i.e. 5).
 - “Search 0-15” searches poll addresses 0 through 15.
 - “Search 0-31” searches poll addresses 0 through 31.
 - “Search 0-63” searches poll addresses 0 through 63
 - “Search range ___ through ___” searches between a users’ identified range of poll addresses.
 - “MACTek Bullet – 15” searches poll address 15.
 - “Emerson Process Management THUM - 63” searches poll address 63.

- 4 The Search by Tag option is grayed out when searching by poll address. Select a search by poll address option and Click OK to save the changed settings.

- 5 Click Yes if you want to save the changes. Clicking No will not save
-

Step	Action
------	--------

the changes.



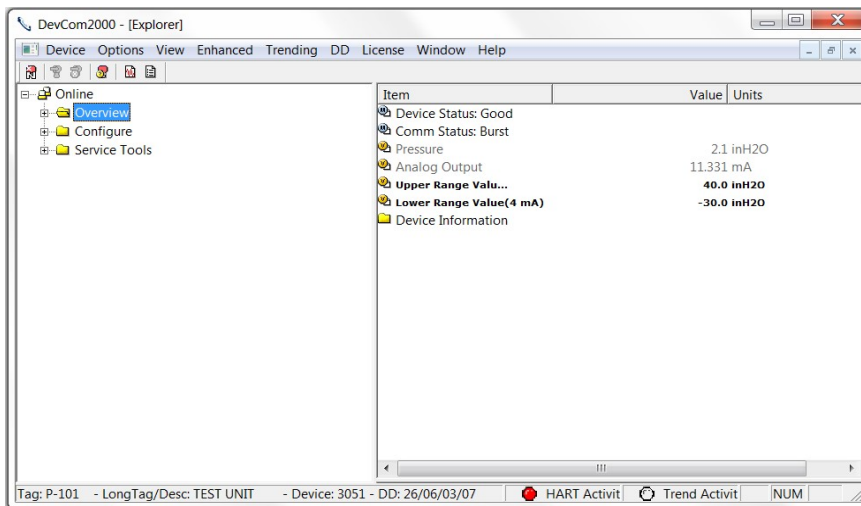
6	Reconnect to a new device.
---	----------------------------

6.12.3.2 Short Tag

The **Search** menu can also be used to search by a specific Tag name or Description. To search for a device based on a Tag name or a Description, perform the following steps:

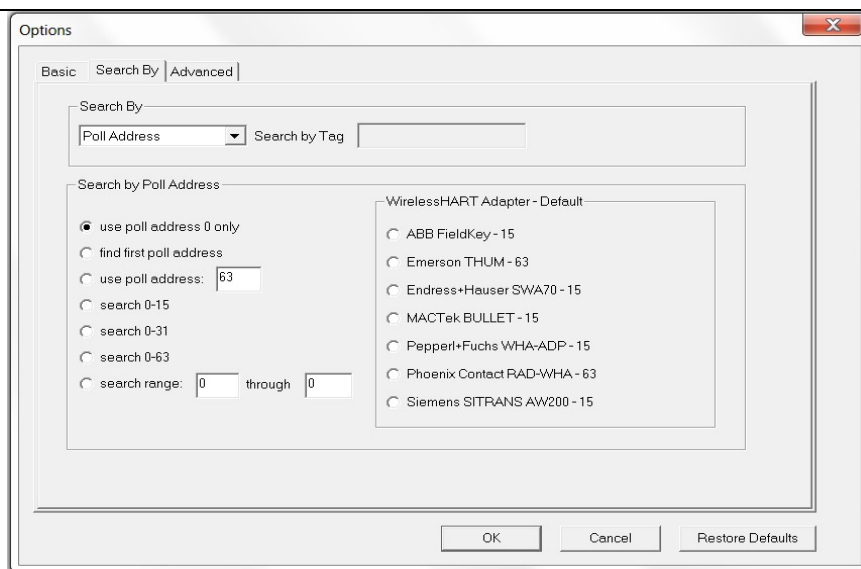
Step	Action
------	--------

1	Ensure that the application is running.
---	---

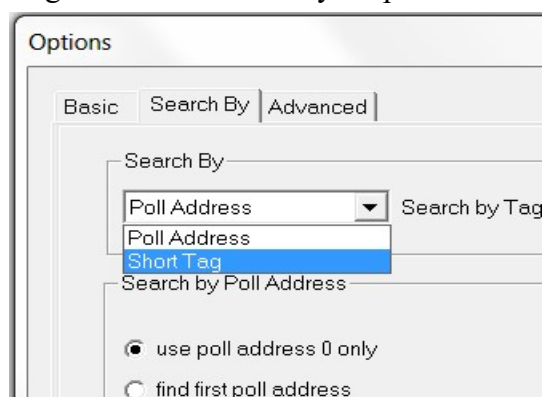


2	Select Options → Search from the main window. The Options Dialog Box is displayed with the Search By tab selected:
---	--

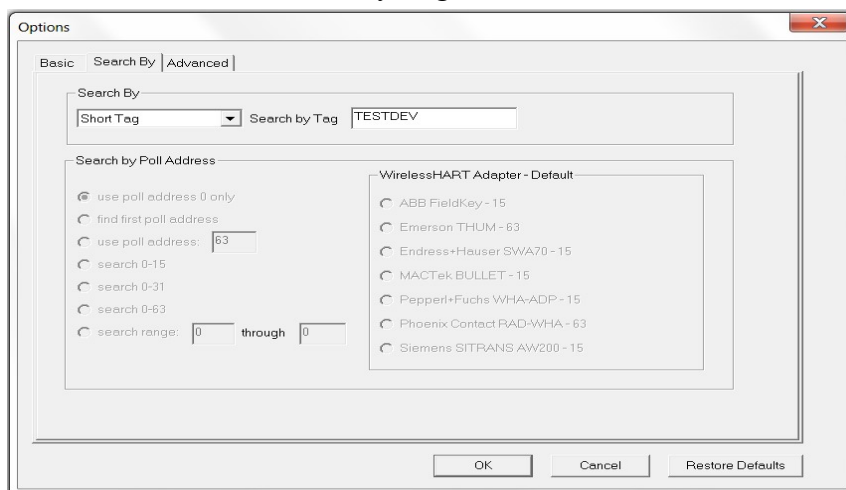
Step	Action
------	--------



- 3 Select "Short Tag" from the Search By drop down box.



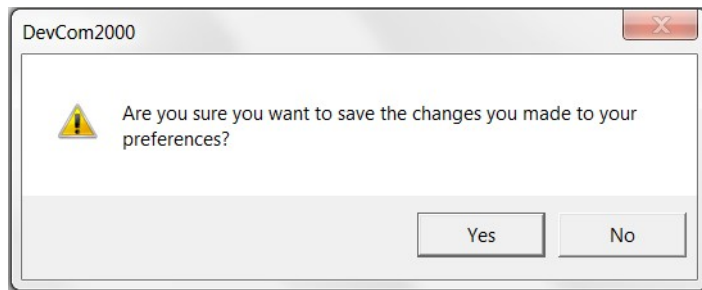
- 4 The poll address options will now be grayed out. Enter the tag to be searched for in the "Search by Tag" edit box.



Step	Action
------	--------

5 Click OK to save the changed settings.

6 Click Yes if you want to save the changes. Clicking No will not save the changes.



7 Reconnect to a new device.

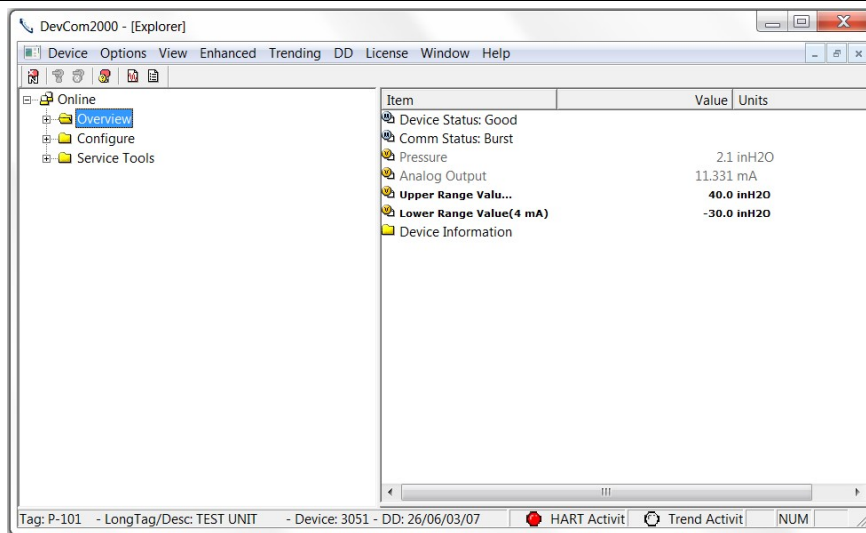
6.11.4 Options → Advanced

6.12.4.1 HART Master

The **Advanced** menu is used to change DevCom2000 settings. DevCom2000 can be a Primary or Secondary HART Master. To change the HART Master setting, perform the following steps:

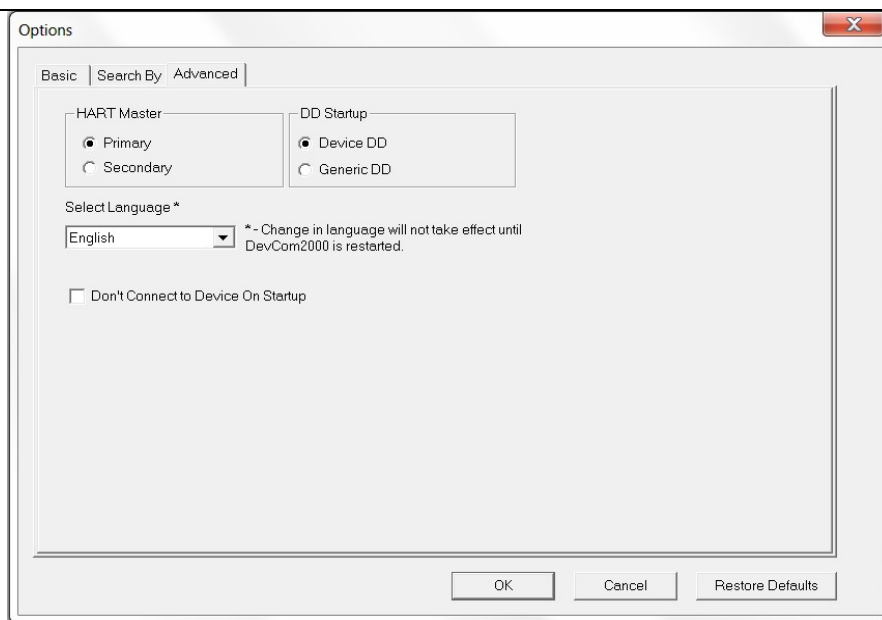
Step	Action
------	--------

1 Ensure that the application is running.

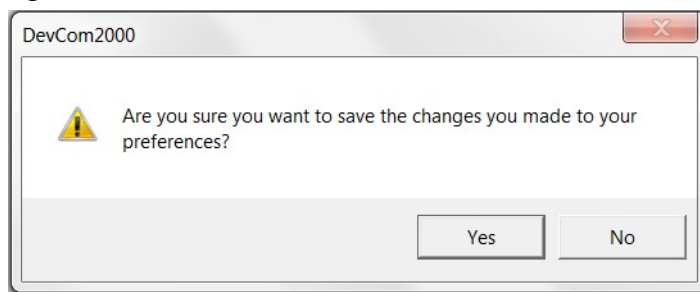


2 Select **Options → Advanced** from the main window. The Options Dialog Box is displayed with the Advanced tab selected:

Step	Action
------	--------



- | | |
|---|---|
| 3 | Under the section “HART Master” select either “Primary” or “Secondary”. Note that Secondary is the recommended setting. |
| 4 | Click OK to save the changed settings. |
| 5 | Click Yes if you want to save the changes. Clicking no will not save the changes. |



- | | |
|---|---|
| 6 | Restart DevCom2000 for the changes to take place. |
|---|---|

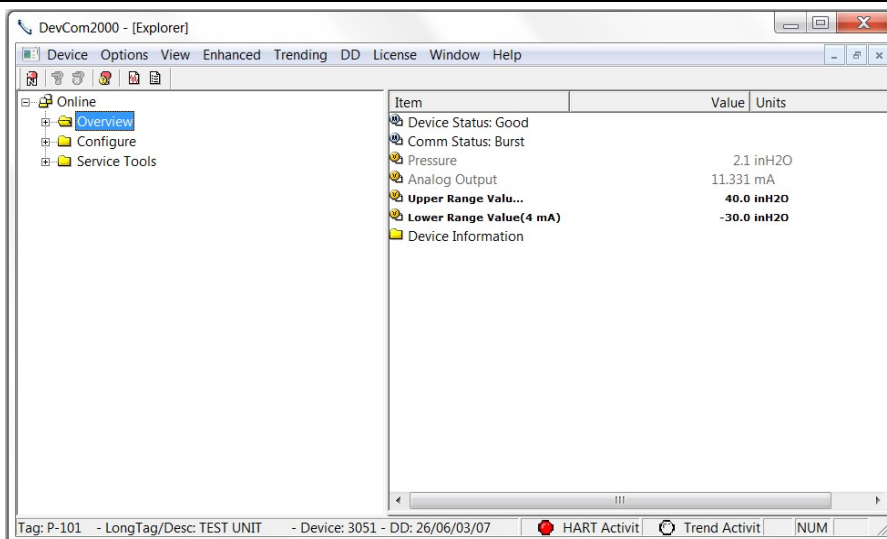
6.12.4.2 Language

Certain DD’s can be used in different languages. English is the default setting but some support other languages. Note that main program frame will always be English. Only the DD based items – menus, variables, etc. will change language. And will only change if the DD supports that language. In order to change the Language setting, perform the following steps:

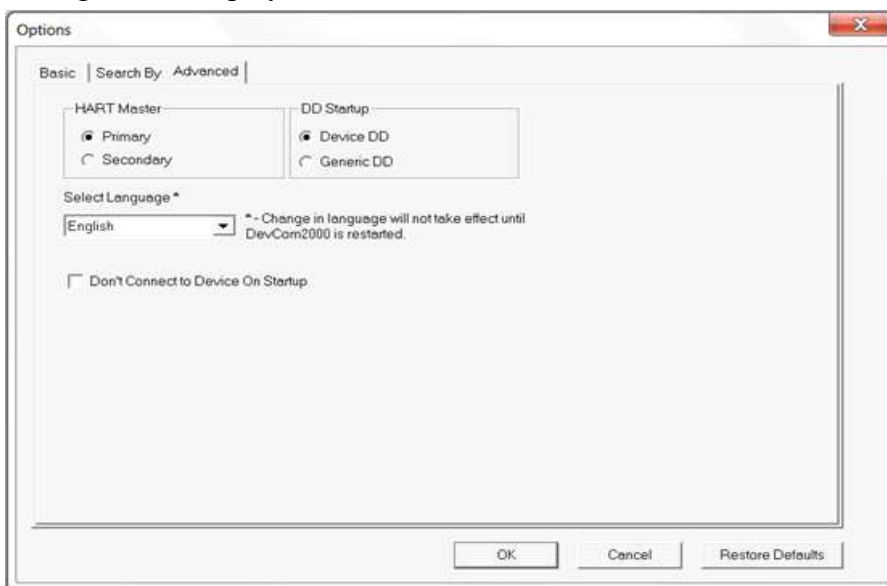
Step	Action
------	--------

- | | |
|---|---|
| 1 | Ensure that the application is running. |
|---|---|

Step Action

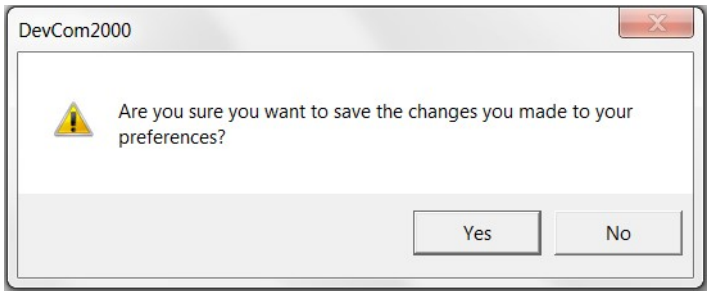


- 2 Select **Options** → **Advanced** from the main window. The Options Dialog Box is displayed with the Advanced tab selected:



- 3 Click the “Select Language” drop down to select a different language.



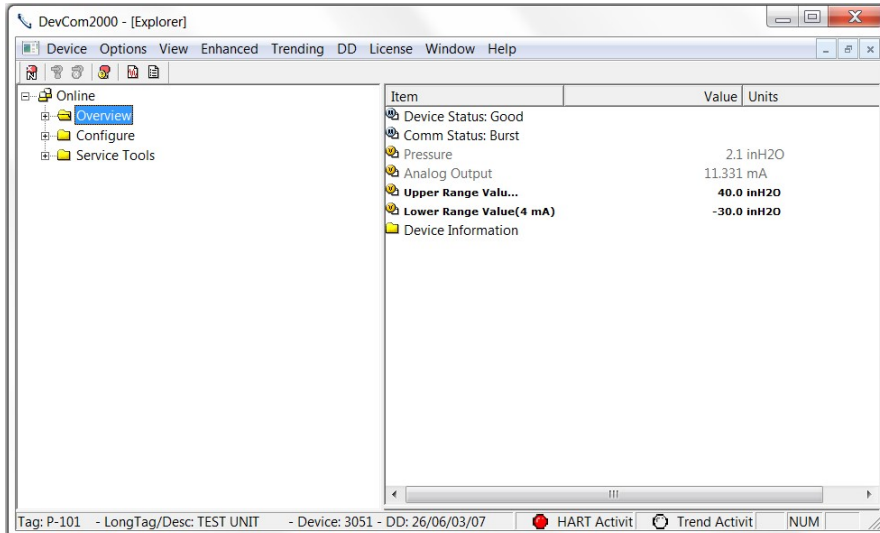
Step	Action
4	Select a language to translate the DD into. Click Okay to save the changed settings.
5	Click Yes if you want to save the changes. Clicking no will not save the changes.
	
6	Restart DevCom2000 for the changes to take place. If the language is supported the DD will be translated. If not, the DD with default to English.

6.12.4.3 DD Startup

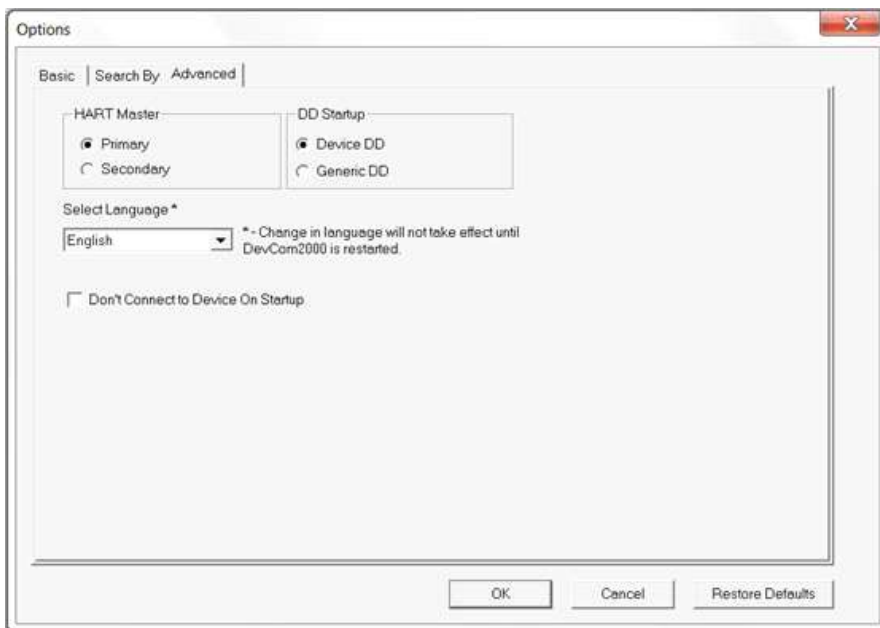
During normal startup of DevCom2000, the device is found and then the DD is loaded. If the DD cannot be found then a generic DD is loaded. **Advanced** has settings that can change what DD DevCom2000 loads with loading a device. To load a generic DD at start up or to not load a DD at all perform the following steps:

Step	Action
1	Ensure that the application is running.

Step	Action
------	--------

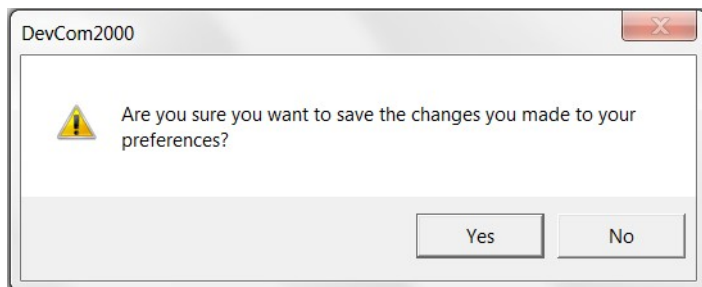


-
- 2 Select **Options** → **Advanced** from the main window. The Options Dialog Box is displayed with the Advanced tab selected:



-
- 3 Click either “Device DD” or “Generic DD” depending on which DD is to be loaded when connecting to a device.
 - 4 Check the “Don’t Connect to Device On Startup” to start DevCom2000 without connecting to a device. Clicking “New Device” will connect to a device after this start up.
 - 5 Click OK to save the changed settings.
-

Step	Action
6	Click Yes if you want to save the changes. Clicking no will not save the changes.



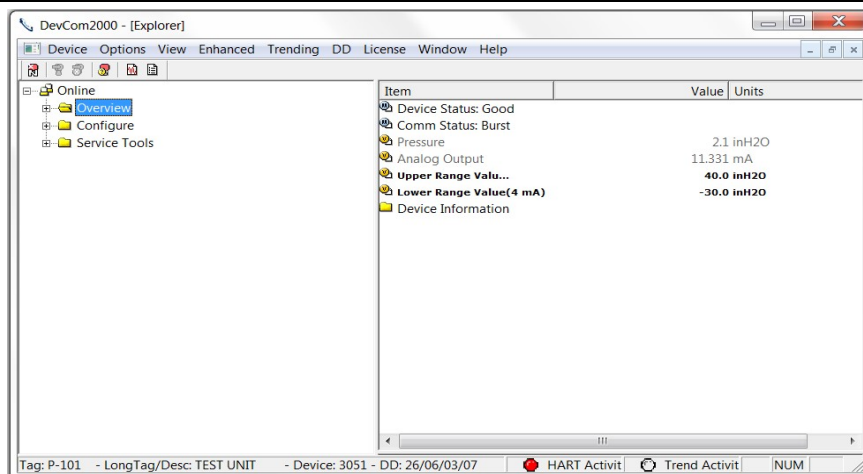
7	Restart DevCom2000 for the changes to take place.
8	If “Don’t Connect to Device On Startup” is checked the following message will be displayed on start up:



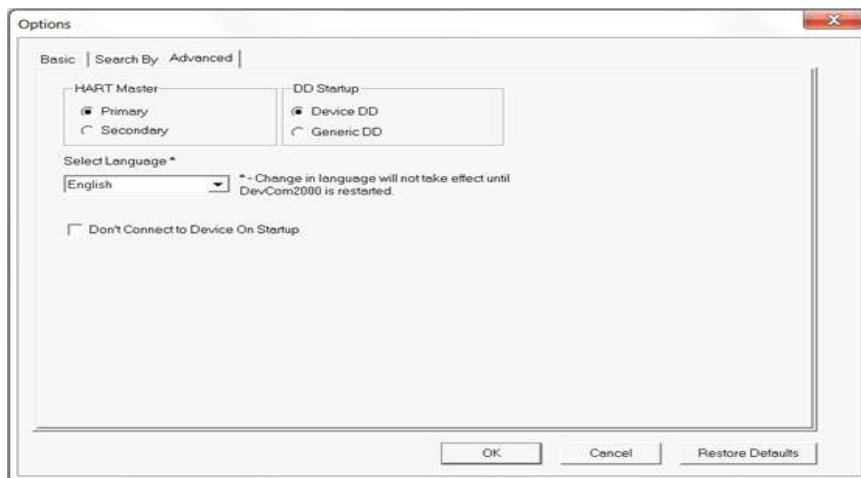
6.12.4.4 Default Settings

The “Default” button on the **Advanced** tab **Options** resets all the advanced options to their default settings. To return the settings to their default settings perform the following steps:

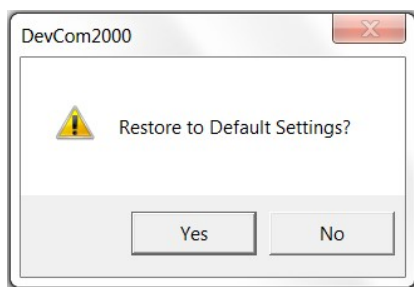
Step	Action
1	Ensure that the application is running.



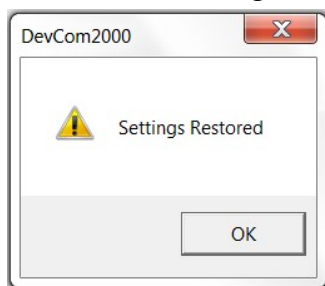
- | Step | Action |
|------|---|
| 2 | Select Options → Advanced from the main window. The Options Dialog Box is displayed with the Advanced tab selected: |



- | | |
|---|--|
| 3 | Click the “Restore Defaults” button. |
| 4 | DevCom2000 will ask if you want to restore the default settings. Click “Yes” |

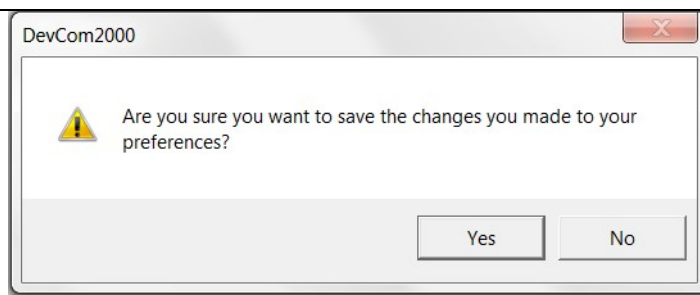


- | | |
|---|---|
| 5 | If the restore was successful the following dialog box will be shown: |
|---|---|



- | | |
|---|---|
| 6 | Click OK to save the changed settings. |
| 7 | Click Yes if you want to save the changes. Clicking no will not save the changes. |

Step	Action
------	--------



8	Restart DevCom2000 for the changes to take place.
---	---

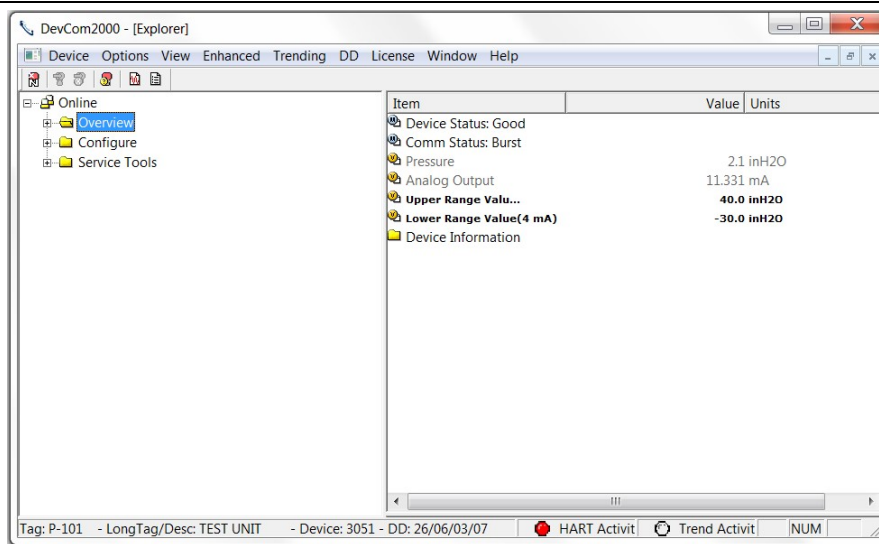
6.12 Trending

6.12.1 Define Trend

The **Trending** menu is used to track dynamic device parameters over a specified period of time. Once a parameter is tracked, it can be graphed and compared against other parameters tracked on the same time period. Before a parameter can be graphed, a trend must first be created. To create a trend, perform the following steps:

Step	Action
------	--------

1	Ensure that the application is running and is connected to a device.
---	--



2	Select Trending → Define Trend from the main window. The Define Trend Dialog Box is displayed:
---	---

Step	Action
------	--------

3 Select the information for the log file:

Select Parameters – Select up to four parameters to display at a time. More than four can be recorded. Press the CNTRL key to select multiple parameters.

Select All – All parameters are recorded, but only four are displayed.

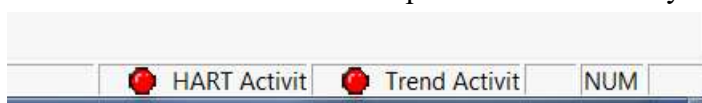
Enter Interval - Input a number and select an interval from the drop down box, i.e. Seconds, Minutes, Hours, and Days.

For How Long? – Input duration for how long to log the parameter(s). This part will be grayed out if the “Continuous” check box is selected. Unselect it for a finite duration.

Filename – The default directory is based on Windows User Accounts however a log file can be saved anywhere.

Create CSV File – When selected a .csv file is also created for use in

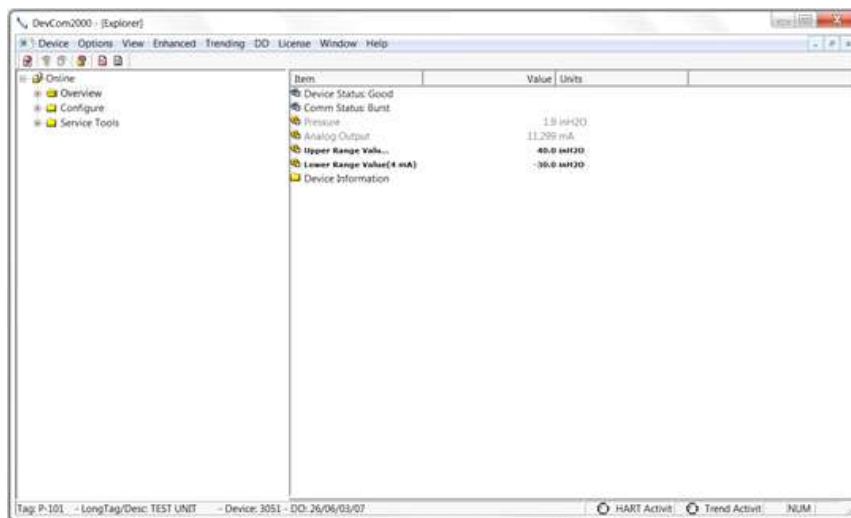
Step	Action
	3 rd party software. Continue Trend on DevCom2000 Restart – When selected, the define trend is automatically restarted whenever DevCom2000 is launched. Notes – The section can only be 250 characters long.
4	Click the “Start” button to start logging.
5	The logging will then be started. At the lower right hand corner of DevCom2000 the “Trend Activity” light will come on. This indicates that there is logging going on. You cannot start another log until this one is finished or the user stops the trend manually.



6.12.2 View Current Trend

When a trend is created DevCom2000 creates a window that shows the graph of the current trend. To view this trend, perform the following steps:

Step	Action
1	Ensure that the application is running and is connected to a device.



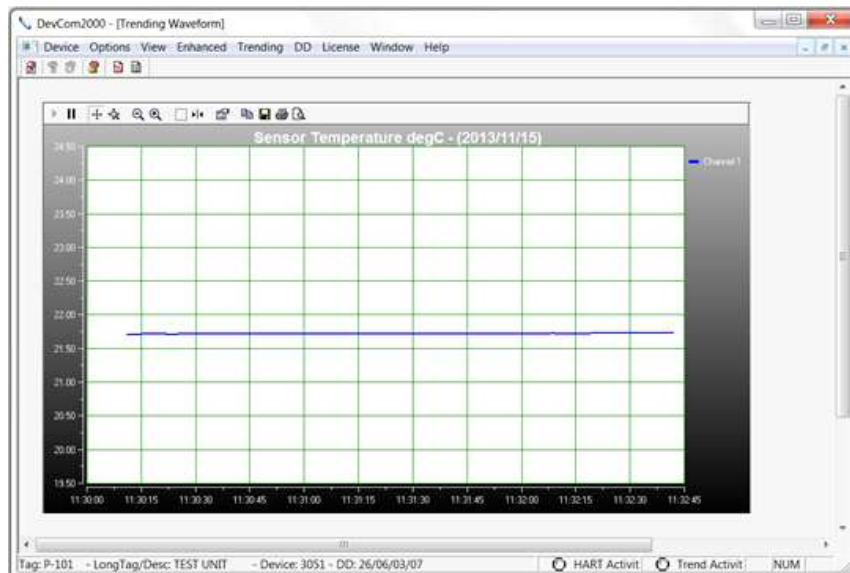
2	Ensure that a trend is in progress. The “Trend Activity” light at the bottom of the screen is on if a trend is in progress. If not then the light will be off.
---	--

Step	Action
------	--------



3	Select Trending → View Current Trend from the main window.
---	--

4	The DevCom2000 Trend dialog opens up.
---	--



The user can manipulate the graph as desired. “Tracking” is the term used to describe how the graph control follows the data, changing the axis in real time so that all of the data is shown. Below are the specific parts of the graph:

Tool Bar: There are multiple things that the user can do with the graph.



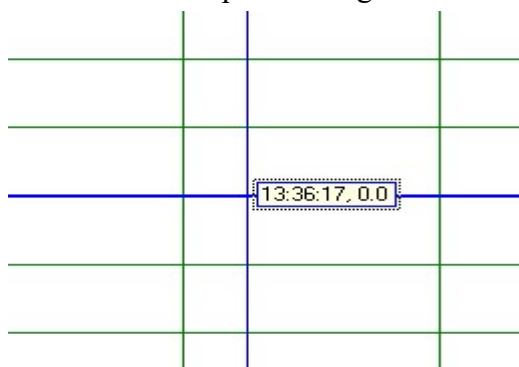
Resume All Tracking: The “Resume All” button -  - is grayed out while tracking. If either axis is changed or the “Pause” button is pressed, this will be come green -  - Pressing “Resume All Tracking” will resume the tracking on the graph.

Pause All Tracking: The “Pause” button -  - pauses the graph in its current state. Data is still added, however the current X-axis and Y-axis spans no longer change. Pressing the “Resume” button will continue tracking.

Scroll Axis: This is the default way to scroll both the X and Y-axis. The “Scroll Axis” button -  - allows the user to scroll in both directions on the graph.

Zoom Axis: The “Zoom Axis” button -  - allows the user to

Step	Action
	shrink or enlarge the scale of either axis. By moving up or down, left or right, the span of each axis is changed.
	<u>Zoom Out All Axis</u> : The “Zoom Out All Axis” button -  - zooms out both the X-axis and Y-axis at the same time giving the user a broader look at the graph.
	<u>Zoom In All Axis</u> : The “Zoom In All Axis” button -  - zooms in both the X-axis and Y-axis at the same time giving the user view over a smaller time period.
	<u>Zoom Box</u> : The “Zoom Box” button -  - changes the cursor allowing the user to select a specific area of the graph to zoom in on for a more detailed look.
	<u>Cursor</u> : The “Cursor” button -  - adds a cursor to the screen that gives the coordinates of the graph at a certain time. Clicking and moving the cursor can give the coordinates of any point on the graph. See below for an example of using the “Cursor” tool:



Properties: The “Properties” button -  - brings up the “Properties” dialog box which gives the user the ability to customize the graph as desired. Below is an example of one of the “Properties” tabs:



Copy To Clipboard: The “Copy To Clipboard” button -  - copies

Step	Action
	the graph to the clipboard to allow the graph to be pasted into documents like a report.
	<u>Save</u> : The “Save” button -  - saves the graph as a “*.bmp”.
	<u>Print</u> : The “Print” button -  - prints the graph.
	<u>Preview</u> : The “Preview” button -  - gives a print preview of the graph.
	Title : The title gives the name of the parameter being trended, the units that the parameter is being measured in, and the date(s) of the graph.
	(Parameter) (Units) - (Date)
	Pressure inH2O - (2011/03/14)
	Axis : The Y-axis is the units of the parameter. The X-axis is the time in HH:MM:SS format.
	Redraw : This section is disabled for View Current Trend .

6.12.3 View Past Trends

DevCom2000 keeps a list of trends that have been done in the past. These trends are saved so that they can be viewed at a later date. To select a trend to be viewed perform the following steps:

Step	Action
1	Ensure that the application is running, you do not have to be connected to a device to use View Past Trends .

2	Select Trending → View Past Trends from the main window.
3	The Select Trend To Graph dialog will open.

Step Action

N	Tag	LongTag/Desc	Device	Date	Start Time	File	Notes
01	T-101	TEST	1106744	2013-09-30	15:40:24	C:\Users\hni...	
02	T-101	TEST	1106744	2013-09-30	15:44:51	C:\Users\hni...	
03	T-101	TEST	1106744	2013-09-30	15:57:18	C:\Users\hni...	
04	T-101	TEST	1106744	2013-09-30	16:42:39	C:\Users\hni...	
05	T-104	VERIFY DESC...	3342378	2013-10-01	10:12:08	C:\Users\hni...	
06	T-104	VERIFY DESC...	3342378	2013-10-01	10:15:40	C:\Users\hni...	
07	POKEYT		7451130	2013-10-01	10:31:31	C:\Users\hni...	

This dialog box is very similar to the “Download/View” dialog box.

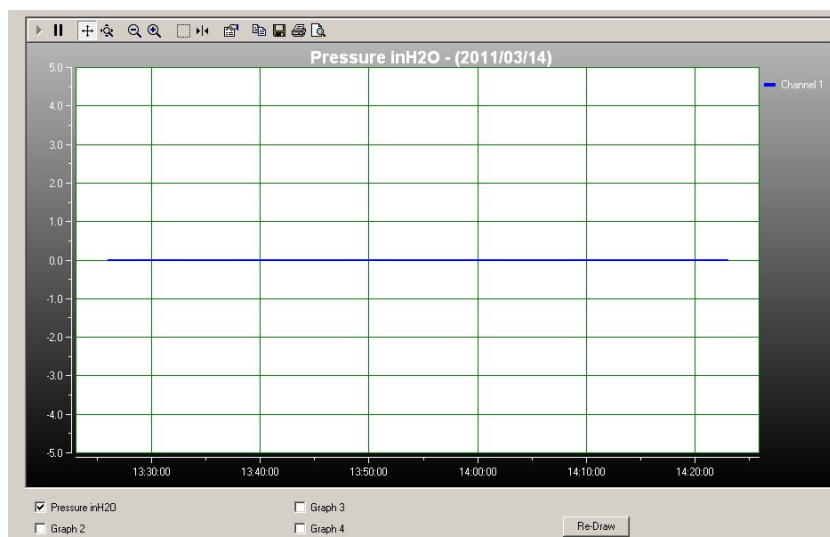
Data: Opens the text file where the data has been saved.

Delete: Deletes a previous trend from the database.

Close: Closes the dialog box.

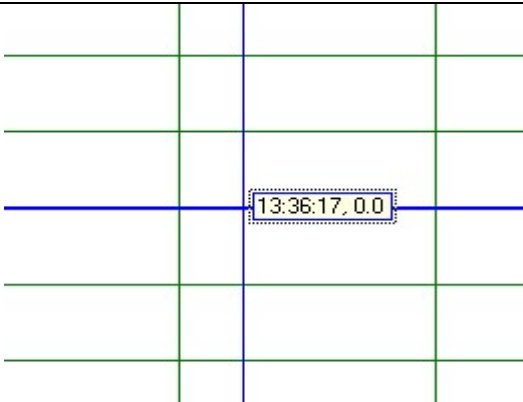
Trend: Opens the saved Trend and displays it graphically. Select a trend to graph and click “Trend”.

- 4 The **DevCom2000 Trend** dialog opens up when “Trend” is selected.

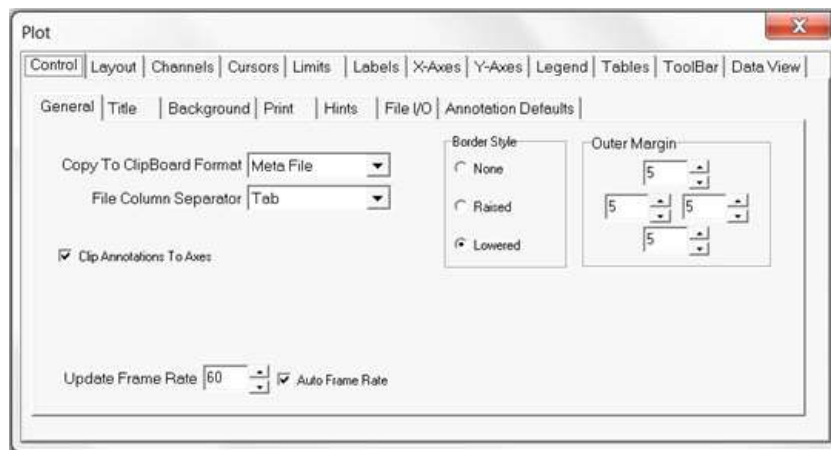


The user can manipulate the graph as desired. “Tracking” is the term used to describe how the graph control follows the data,

Step	Action
	changing the axis in real time so that all of the data is shown. Below are the specific parts of the graph: Tool Bar: There are multiple things that the user can do with the graph.  <u>Resume All Tracking:</u> The “Resume All” button -  - is grayed out while tracking. If either axis is changed or the “Pause” button is pressed, this will become green -  - Pressing “Resume All Tracking” will resume the tracking on the graph. <u>Pause All Tracking:</u> The “Pause” button -  - pauses the graph in its current state. Data is still added, however the current X-axis and Y-axis spans no longer change. Pressing the “Resume” button will continue tracking. <u>Scroll Axis:</u> This is the default way to scroll both the X and Y-axis. The “Scroll Axis” button -  - allows the user to scroll in both directions on the graph. <u>Zoom Axis:</u> The “Zoom Axis” button -  - allows the user to shrink or enlarge the scale of either axis. By moving up or down, left or right, the span of each axis is changed. <u>Zoom Out All Axis:</u> The “Zoom Out All Axis” button -  - zooms out both the X-axis and Y-axis at the same time giving the user a broader look at the graph. <u>Zoom In All Axis:</u> The “Zoom In All Axis” button -  - zooms in both the X-axis and Y-axis at the same time giving the user view over a smaller time period. <u>Zoom Box:</u> The “Zoom Box” button -  - changes the cursor allowing the user to select a specific area of the graph to zoom in on for a more detailed look. <u>Cursor:</u> The “Cursor” button -  - adds a cursor to the screen that gives the coordinates of the graph at a certain time. Clicking and moving the cursor can give the coordinates of any point on the graph. See below for an example of using the “Cursor” tool:

Step	Action
	

Properties: The “Properties” button -  - brings up the “Properties” dialog box which gives the user the ability to customize the graph as desired. Below is an example of one of the “Properties” tabs:



Copy To Clipboard: The “Copy To Clipboard” button -  - copies the graph to the clipboard to allow the graph to be pasted into documents like a report.

Save: The “Save” button -  - saves the graph as a “*.bmp”.

Print: The “Print” button -  - prints the graph.

Preview: The “Preview” button -  - gives a print preview of the graph.

Title: The title gives the name of the parameter being trended, the units that the parameter is being measured in, and the date(s) of the graph.

(Parameter) (Units) - (Date)

Pressure inH2O - (2011/03/14)

Axis: The Y-axis is the units of the parameter. The X-axis is the time in HH:MM:SS format.

Step	Action
------	--------

Redraw: Up to four parameters can be trended at the same time. By clicking the check box for a parameter u can show one or four at the same time for easy comparison over a period of time.

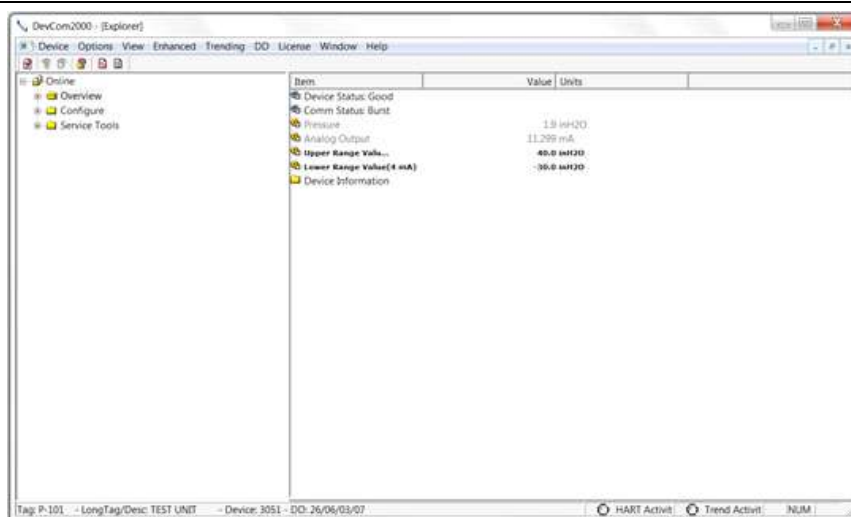
☒ Pressure inH2O	☐ Graph 3
☐ Graph 2	☐ Graph 4

Click “Redraw” and the parameters checked will be shown.

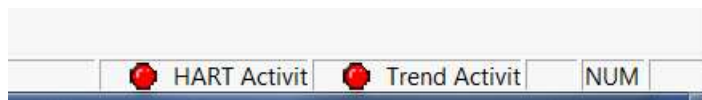
6.12.4 Stop Current Trend

Step	Action
------	--------

- | | |
|---|--|
| 1 | Ensure that the application is running and is connected to a device. |
|---|--|
-

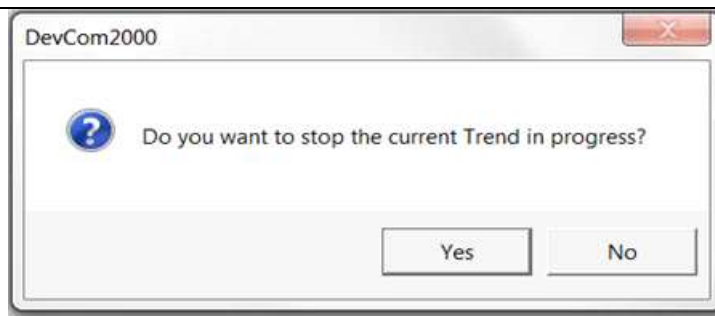


- | | |
|---|--|
| 2 | Ensure that a trend is in progress. The “Trend Activity” light at the bottom of the screen is on if a trend is in progress. If not then the light will be off. |
|---|--|



- | | |
|---|---|
| 3 | Select Trending → Stop Current Trend from the main window. |
| 4 | You will be asked if you want to stop the current trend. Click “Yes”. This will stop the current trend. |
-

Step	Action
------	--------



5	The “Trend Activity” light will now be off.
---	---



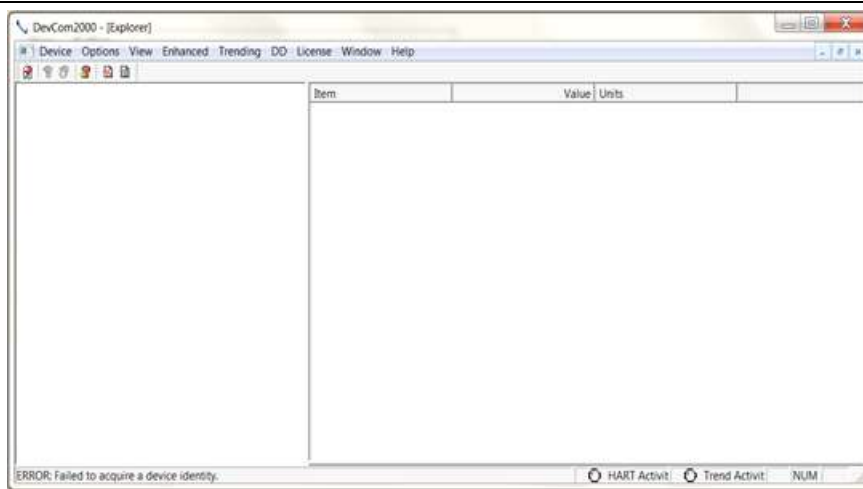
6.13 DD Functions

6.13.1 Adding a DD

DevCom2000 allows the user to add a DD to the library when necessary. Each DD must be in its appropriate destination for DevCom2000 to find the DD. The format is: “C:\HCF\DDL\Library\xxxxxx\yyyy\” where “xxxxxx” represents the manufacturer ID and “yyyy” represents the device ID. The user does not need to add the directory structure, DevCom2000 does that automatically. To add a DD perform the following steps:

Step	Action
------	--------

1	Ensure that the application is running, you do not have to be connected to a device to use Add DD .
---	--



2	Select DD → Add DD from the main window.
---	--

3	The Add DD dialog will open.
---	-------------------------------------

Step	Action
------	--------

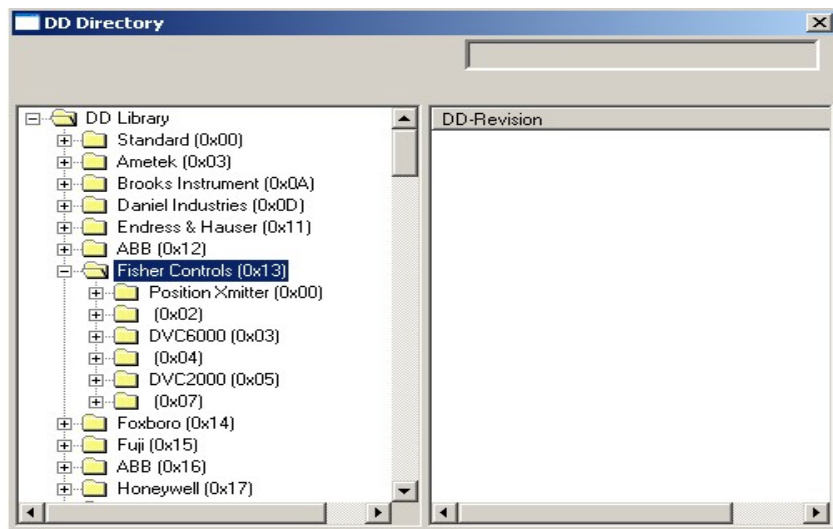
4	Click “Browse” and go to the location of the DD that is to be added.
---	--

5	The “DD Info” section will be populated. Confirm that it is the correct DD. Below is an example of 0000c2/0021/0201.fm6:
---	--

6	Input a “Label” for the DD if necessary. If not, Click “Add DD” to add the DD to the library.
---	---

6.13.2 Updating a DD Label

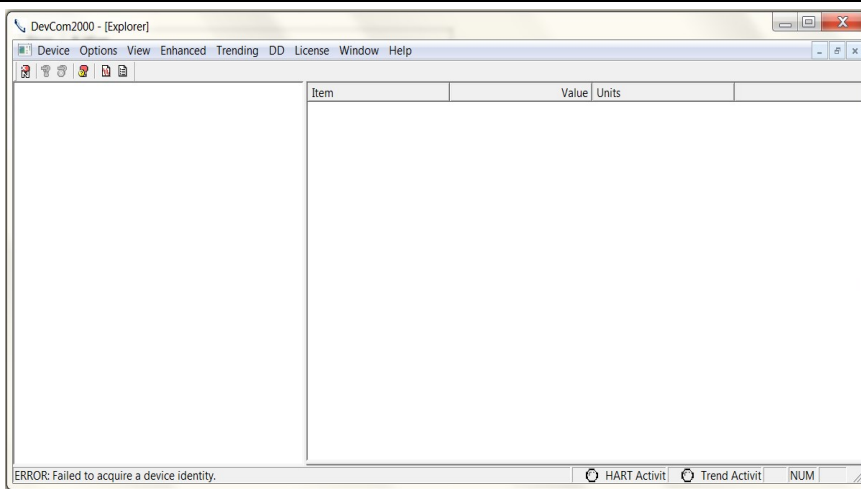
DevCom2000 allows the user to add a Label for a DD if there is not one already defined. Below is an example:



The manufacturer ID of Fisher Controls is 000013. Device IDs 0002, 0004, and 0007 all do not have a label. This is when updating a DD label is useful. To update the label perform the following steps:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Ensure that the application is running, you do not have to be connected to a device to use Add DD . |
|---|--|



- | | |
|---|---|
| 2 | Select DD → Add DD from the main window. |
| 3 | The Add DD dialog will open. |

Step	Action
------	--------

- 4 Click “Browse” and go to the location of the DD that is to have the label updated.
- 5 The “DD Info” section will be populated. Confirm that it is the correct DD. Below is an example of 0000c2/0021/0201.fm6:

- 6 Input a “Label” for the DD if necessary. Click “Update Label” to update the label.
- 7 Below is the new “Available DDs” sections where 000013/0002 is given the label “Updated Label”:

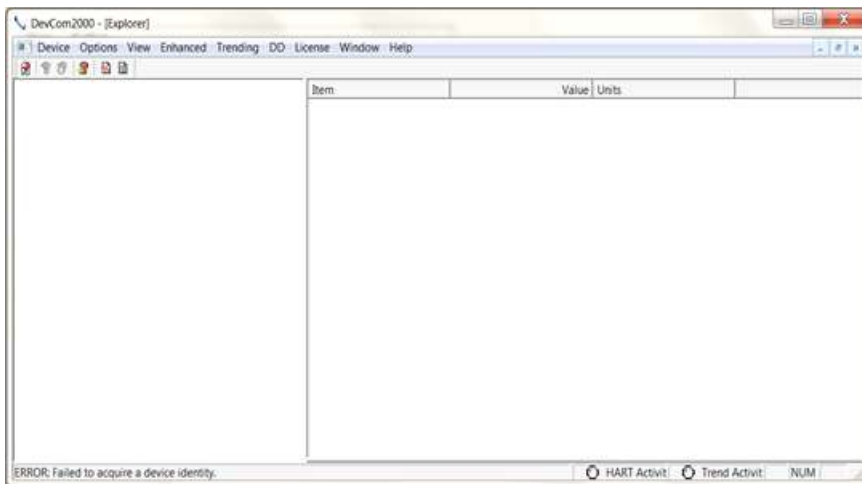
6.13.3 DD Library Updates

The DD Library is updated generally every quarter. Users are notified by email when this occurs. You can also check for updates by clicking **DD Library**→**Check for Updates**. DevCom2000 will then contact the

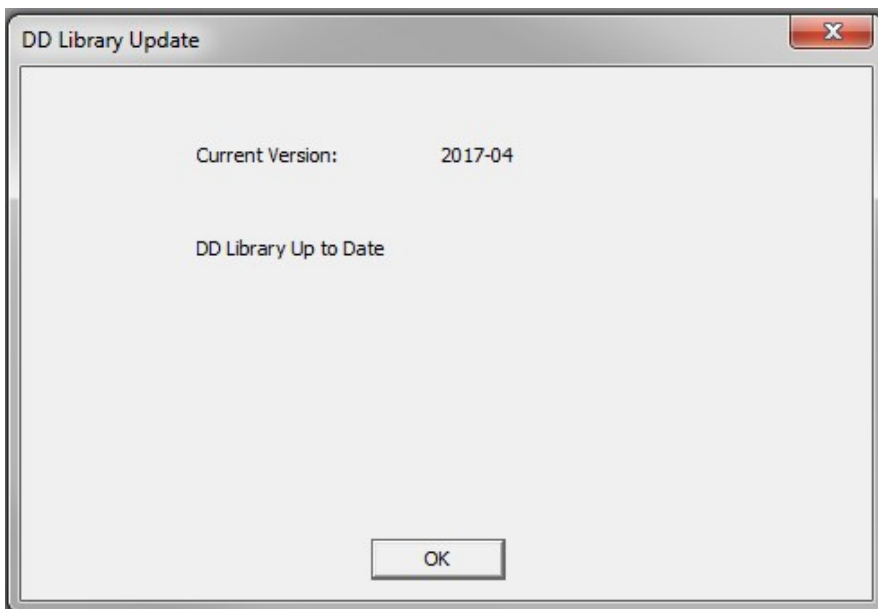
ProComSol DD Library Server and determine if a new DD Library is available. Note that you must have a valid DD Library Subscription.

To check for DD Library updates perform the following steps:

Step	Action
1	Ensure that the application is running, you do not have to be connected to a device to use Check for Updates . However you do need internet access.

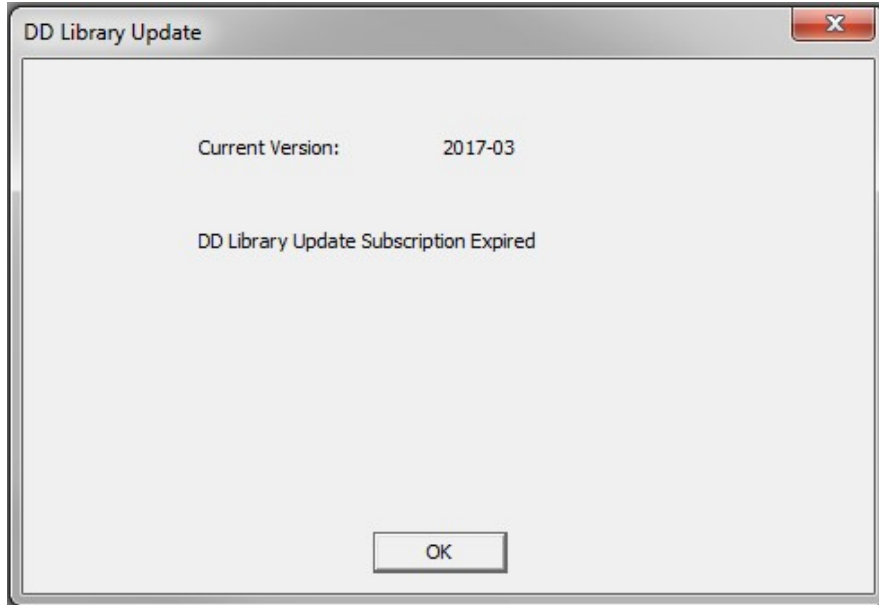


- 2 Select **DD → Check for Updates** from the main window.
- 3 The **DD Library Update** dialog box will open. What is displayed is based on the Current DD Library Version, Available DD Library Version, and status of the DD Library Subscription for this license.



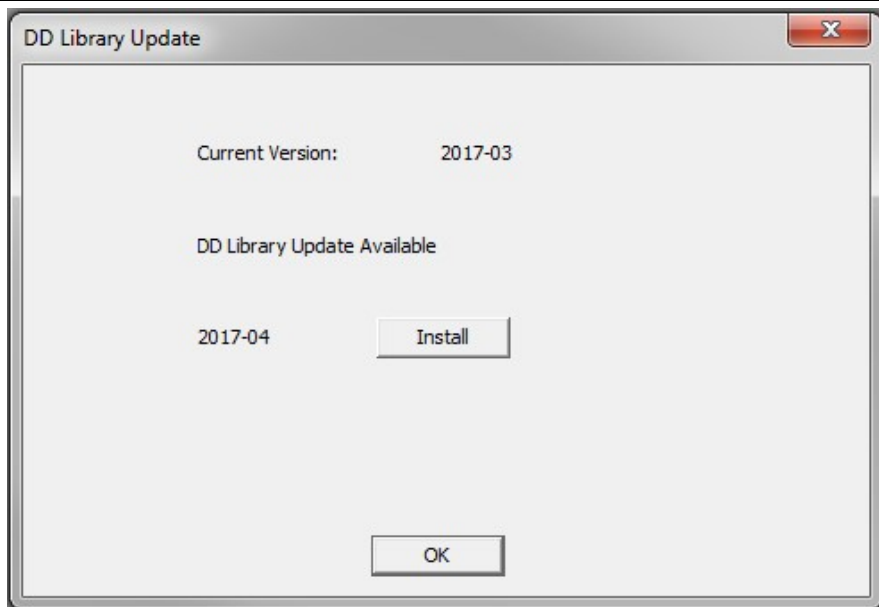
DD Library is current, no update required.

Step	Action
------	--------



DD Library subscription expired for this license. Contact ProComSol to renew your subscription.

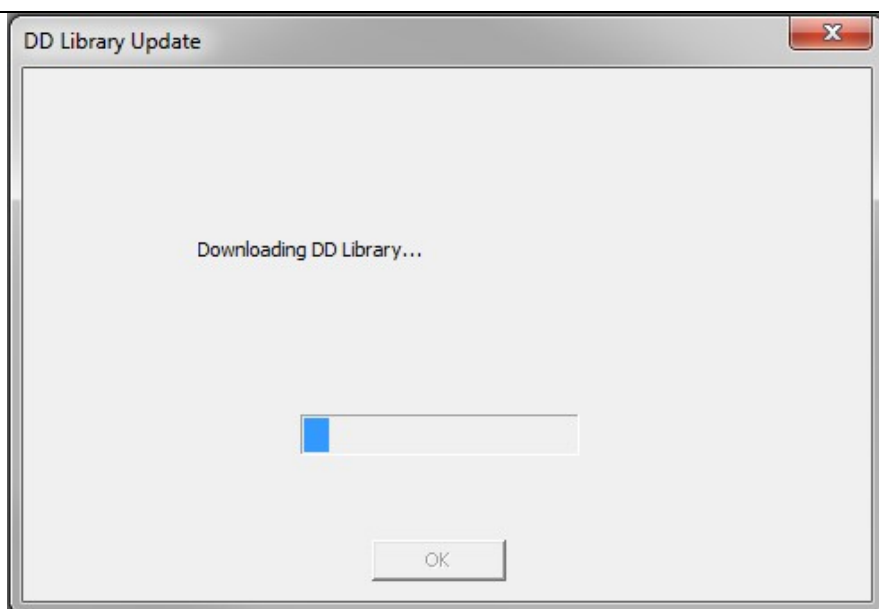
4



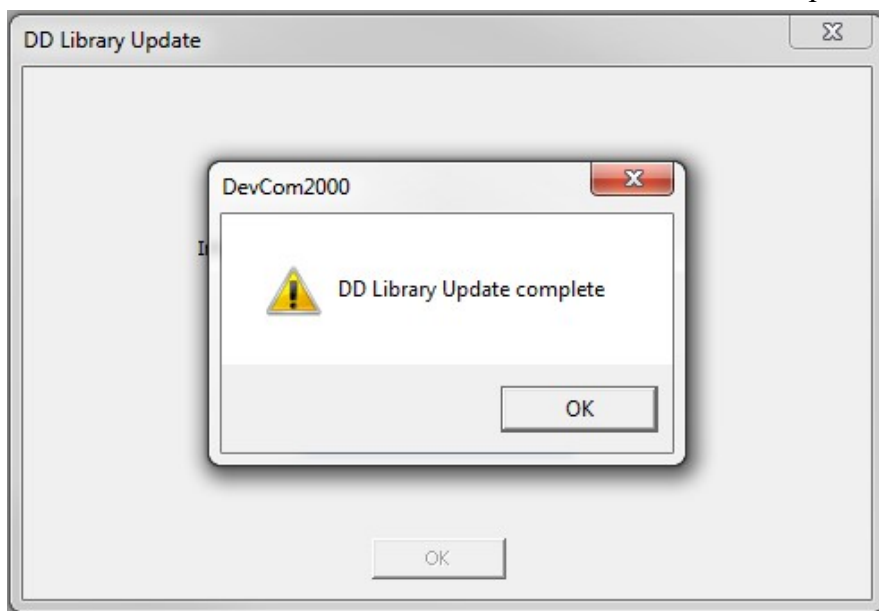
DD Library Update is available. Press "Install" to download the new library.

5 While the DD Library download and installation is occurring, a bar shows progress:

Step	Action
------	--------



6	The user is notified when the download and installation is complete:
---	--

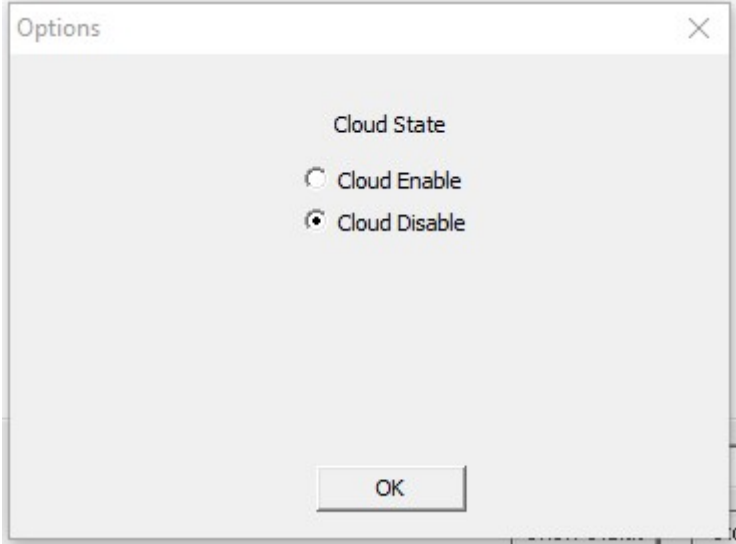


6.14 Cloud

DevCom2000 can be setup to use the Cloud for storing saved device Configuration files. It can also be used to save Trend files and Calibration Check files. The Cloud acts as data backup and platform for sharing data within a defined Group. A Cloud subscription is required for Cloud features.

6.14.1 Options

Click Cloud->Options to open the Cloud Options dialog box.

Step	Action
1	 When first opened, the current cloud state is shown.
2	Click Enable/disable as needed and click “OK” when done. When first enabled, go to the Cloud->User dialog box to setup the user.

6.14.2 User

Click Cloud->User to open the Cloud User Settings dialog box.

Step	Action
------	--------

Step	Action
------	--------

1

The dialog box titled "Cloud User Settings" contains the following fields and buttons:

- Email Address:
- Password:
- Group: Manage
- Subscription Status:
- Subscription End:
- User Logged Out
- Create Login
- OK

2 To create a new user, enter an email address and password, then click "Create".

3 If successful, a success message is shown and then the Cloud User Settings dialog box is updated with the data for the user:

The dialog box titled "Cloud User Settings" is updated with the following data:

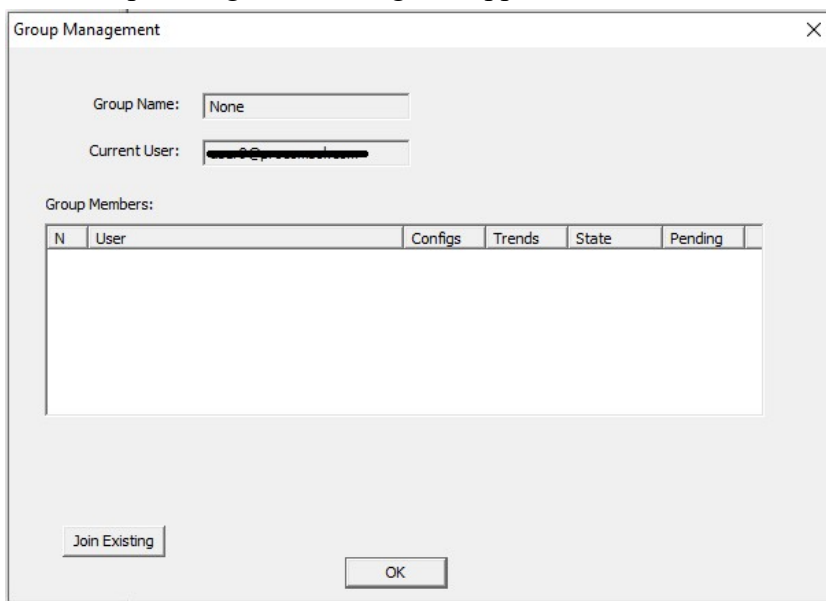
- Email Address:
- Password:
- Group: Manage
- Subscription Status:
- Subscription End:
- User Logged in
- Update User Logout
- OK

Step	Action
------	--------

Note the subscription status is “Active” and the end date of the subscription is also shown. If the subscription is “Inactive” and the current date is past the Subscription End date, contact ProComSol to purchase or renew the Cloud Subscription.

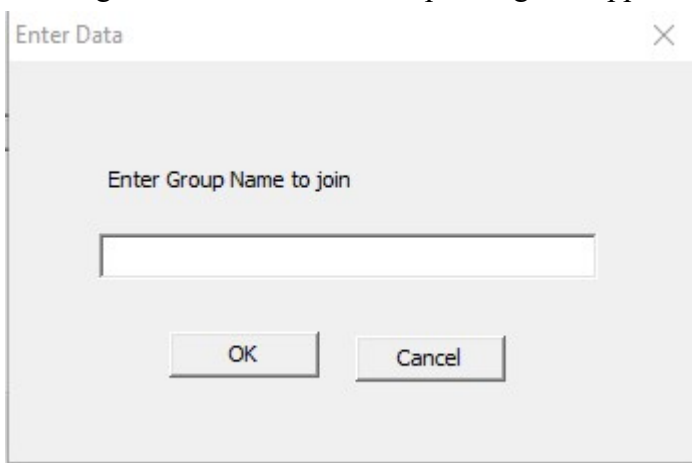
Group shows what Groups this user is a member.

- To manage Group memberships, click the “Manage” button. The Group Management dialog box appears:



The Group Management dialog box is shown. It has a title bar with 'Group Management' and a close button. Inside, there are two text boxes: 'Group Name' with the value 'None' and 'Current User' with a masked email address. Below these is a section titled 'Group Members:' containing a table with columns: N, User, Configs, Trends, State, Pending. The table is currently empty. At the bottom, there are two buttons: 'Join Existing' and 'OK'.

- To join an existing group in your company, click the Join Existing button. The Enter Group dialog box appears:



The Enter Data dialog box is shown. It has a title bar with 'Enter Data' and a close button. Inside, there is a text prompt 'Enter Group Name to join' above a single-line text input field. At the bottom, there are two buttons: 'OK' and 'Cancel'.

- Enter the name of the group to join. The Group Administrator will give you this name to use. After entering the name, click OK.
-

Step	Action
-------------	---------------

- | | |
|---|--|
| 7 | You will see the Group <name> join requested message. The join request was sent to the Group Administrator. The Administrator will review your request and approve if appropriate. |
|---|--|

6.14.1 Group

Click Cloud->Group to open the Cloud Group Settings dialog box.

Step	Action
-------------	---------------

- | | |
|---|--|
| 1 | In this example, the Administrator for the Testing Group has logged in and clicked Cloud->Group. The Group Management dialog box then appears: |
|---|--|
-

Step Action

Group Management

Group Name:

Current User:

Group Members:

N	User	Configs	Trends	State	Pending
00	user1@procomsol.com	29	0	Enabled	No
01	support@procomsol.com	30	0	Enabled	No
02	sales@procomsol.com	4	0	Enabled	No
03	user2@procomsol.com	14	0	Enabled	No
04	user0@procomsol.com	0	0	Enabled	Yes

Here the Administrator can see the status of each user in the Group.

Configs - The number of saved Device Configurations for that user.

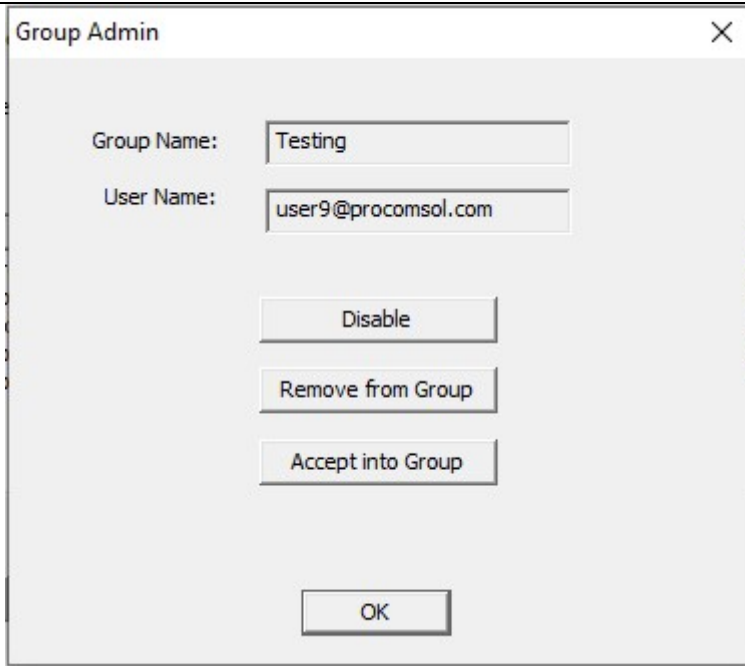
Trends - The number of saved Trends for that user.

State - Whether this user is enabled or disabled.

Pending - It shows Yes when a join request was received by the Administrator.

-
- 2 Double click on the user to perform various functions. When double clicked the Group Admin dialog box appears:
-

Step	Action
------	--------



The 'Group Admin' dialog box contains the following elements:

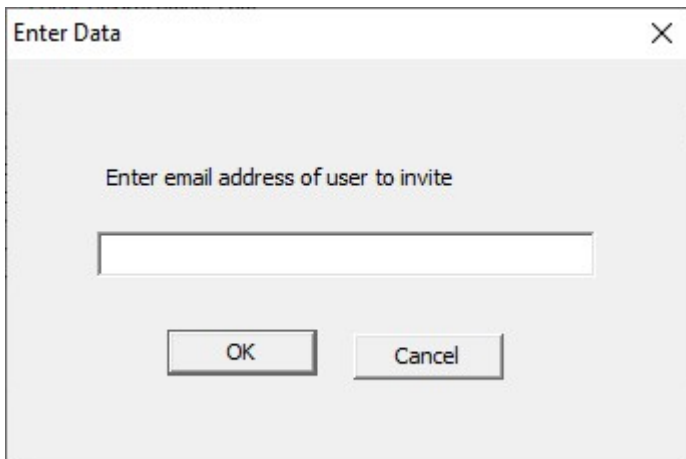
- Group Name:** A text field containing 'Testing'.
- User Name:** A text field containing 'user9@procomsol.com'.
- Buttons:** 'Disable', 'Remove from Group', 'Accept into Group', and 'OK'.

Click Disable to disable the user from using the Cloud functions. If the user was already disabled, this button will instead be Enable.

Click Remove from Group to disconnect the user from Group.

Click Accept into Group to respond to a user join request.

- | | |
|---|--|
| 3 | Click Invite User to send an email to invite a user to join the group. |
|---|--|



The 'Enter Data' dialog box contains the following elements:

- Text:** 'Enter email address of user to invite'.
- Text Field:** An empty text field for entering the email address.
- Buttons:** 'OK' and 'Cancel'.

6.15 Licensing

The license file can be transferred easily to other computers. The process is a “Check-In/Check-Out” process. When a license is on the computer, it is considered “Checked-Out”. When the license is on the license server, it is considered “Checked-In”. When the license is “Checked-in”, it can be “Checked-Out” by other users. This enables the license to be shared by many users, one at a time.

6.15.1 License Details

Click License->Details to get the LicenseID and Password information for the license. The information is very important for troubleshooting and subscription services.

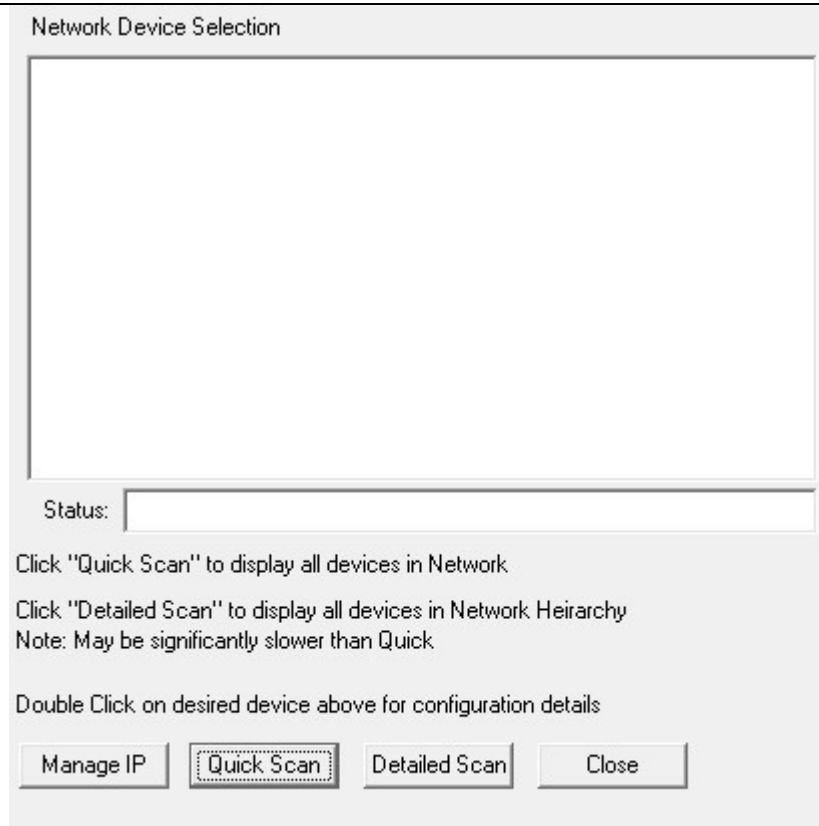
6.15.2 Check-In

To Check-In the license from the current computer to the License Server, perform the following steps:

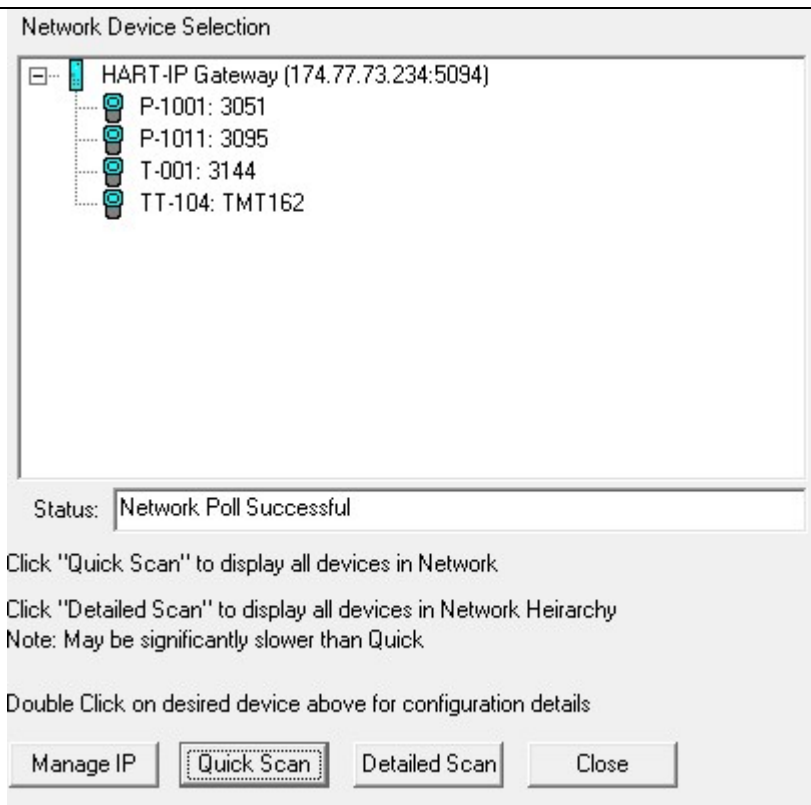
Step	Action
1	Verify your PC is connected to the Internet.
2	Select “Check-In” from the “License” Menu. If the current computer is not licensed, an error message will appear. If licensed, the program will contact the License Server via the internet. It will check-in the license using the License ID and Password used in Activation. The current computer will then become un-activated.

6.16 HART-IP Communication

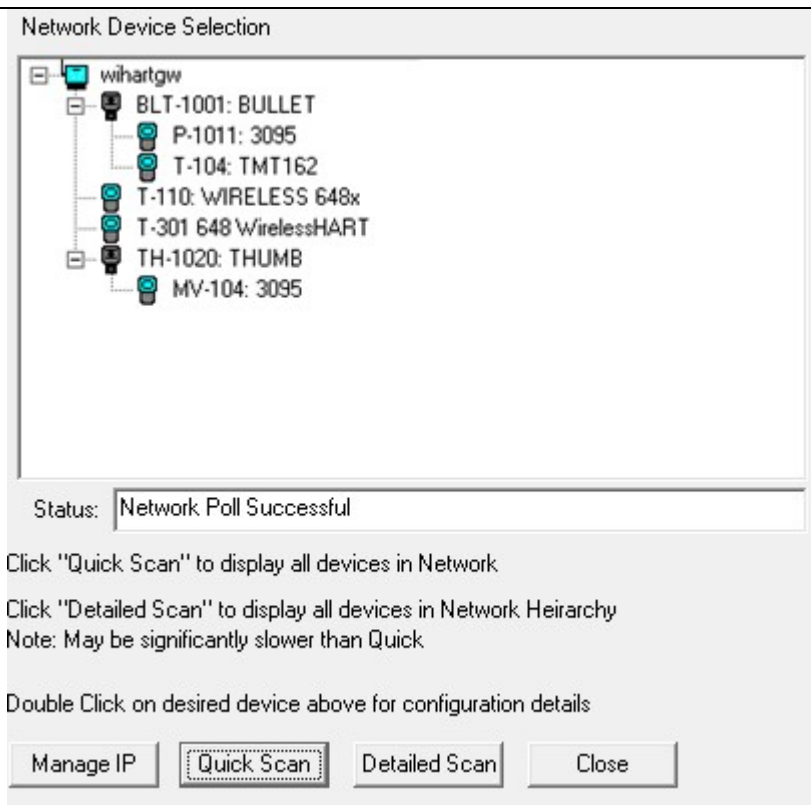
Step	Action
1	Ensure that settings for HART-IP have been made in the Options→Basic menu . Note that a HART Modem is NOT required, only Ethernet access to the HART-IP Gateway.
2	Click on “New Device” icon to start the connection process. The following screen will appear.



- 3 Click on “Quick Scan” to provide a simple list of all the devices on the HART-IP network. Below is a sample screen:



- 4 Click on “Detailed Scan” to display all the devices as a heirarchy. This will show what transmitters are connected to each WirelessHART adapter. Note that this listing may take significantly longer to generate than the Quick Scan. Below is a sample screen.

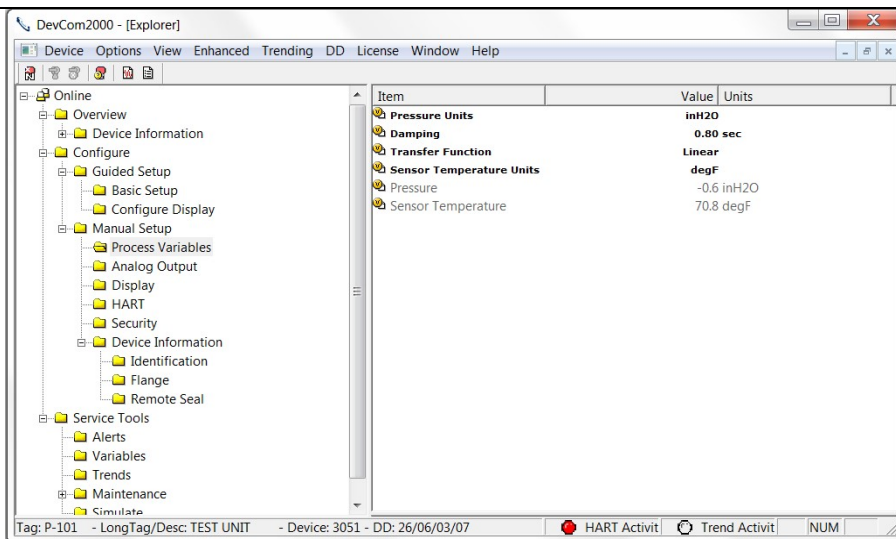


For both types of list displays, the following icons are used:

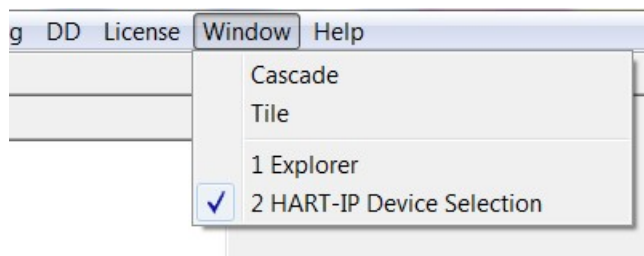
HART-IP Icons

-  = Gateway
-  = Adapter, *WirelessHART*
-  = Transmitter

- 5 Once a device list has been created, double click on the desired device to configure/review using DevCom2000. Below is a sample screen:



- 6 To switch to a different device on the *Wireless*HART network: **Select Window** on the MENU bar, then click on **HART-IP Device Selection** to bring up the **Device Menu Tree** again.



Appendix A

Troubleshooting Guide

For most error messages, there is a selection for “Com Troubleshooter”. This program will guide you through the steps to solve your communication problems. Below is a quick summary:

Problem:

Will not communicate

Hardware Check:

Verify the following:

1. Com port number on Preferences Dialog box matches HART interface hardware.
2. Loop power supply is on.
3. Loop resistance between 250 ohms and 1Kohms.
4. Loop current within HART limits.
5. If multi drop configuration, all transmitters in loop have unique addresses.
6. HART interface hardware connected across loop resistor or across transmitter terminals.

Software Check:

Sometimes the application does not end cleanly and the communication process is still running in an unknown state. When this happens, it must be closed out before restarting DevCom2000.

Perform the following:

1. Close DevCom2000.
2. Press **CTRL-ALT-DEL** to bring up the Windows Security Screen.
3. Click on Task Manager.
4. Select the Processes tab.
5. In the list of running tasks, select HModemSvr.exe.
6. Click on the End Process button on the dialog box.
7. Restart DevCom2000.

Problem:

Get the message “Error opening COMx”

Verify the following:

1. Com port number on Preferences Dialog box matches HART interface hardware.
2. HART interface hardware installed.

Problem:**No data in the Communication Log**

Verify the following:

1. Verify that the “HART Activity” LED indicator on the bottom of the screen is flashing red. If not, open a menu that has dynamic data that is being refreshed like PV or AO.
2. For Windows Vista and Windows 7 users, you may need to perform the following:
 - a) Open the “hosts” file using Notepad. It is located in the following directory:
C:\WINDOWS\system32\drivers\etc\hosts
 - b) Make sure this line appears (without preceding # character)
127.0.0.1 localhost
 - c) Make sure the following line does NOT appear:
:: 1 localhost
if it is there, comment it out by placing # character in front like this:
#:: 1 localhost
 - d) Restart the Communication logger.

Note: To modify this file, you may need to perform the following in Windows:

- a) Go to Control Panel → Folder Options
 - b) Select the View tab
 - c) Remove the check next to Hide extensions for known file types
 - d) Make the edit changes above
 - e) Save the document to your documents
 - f) copy the saved document to the above directory
 - g) Delete the original hosts file
 - h) remove the .txt extension from the new hosts file
3. Turn off firewall protection temporarily to see if it is blocking the TCP/IP communications between DevCom2000 and the Communication Logger.

Problem:**The system cannot find the path specified error box**

Try the following:

1. Verify that the device library (C:\HCF\DDL\Library) is on Drive C:
2. if not, copy to drive C.

Problem:**Activation by Internet blocked by Firewall**

Try the following:

1. Allow one time access to internet via your computer’s Firewall settings.
2. Disable Firewall.
3. Use manual activation method.

Problem:**Active Windows not shown in Windows drop down list**

Try the following:

1. Select **Window**→**Cascade** or **Window**→**Tile**.
2. All Windows will now be shown

Problem:**When using HART Server for WirelessHART in Windows 7, the device selection screen does not appear**

Try the following:

1. Start Windows Explorer.
2. Go to directory "C:\Program Files\ProComSol\Common"
3. Run "RegisterSELECT.bat" as an Administrator

Appendix B

Contact Information

ProComSol, Ltd
Process Communications Solutions
13001 Athens Ave
Suite 220
Lakewood, OH 44107
USA

Phone: 216.221.1550

Email: sales@procomsol.com
support@procomsol.com

Web: www.procomsol.com