

QUICK START

DevCom2000 Mobile 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 HART[®] Communication Foundation (HCF) worldwide. The latest DDs are included as part of the DevCom2000 Mobile installation. Visit the HCF website (www.hartcomm.org) or the ProComSol website (www.procomsol.com) for update information.

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

Step 1: Install the DevCom2000 Mobile application

Insert the DevCom2000 Mobile SD Card into the SD slot of the Mobile device. Connect the Mobile to your PC and verify the ActiveSync program is running.

Note: The step in this paragraph is only required if the SD Card is not supplied, but instead the DD Library is supplied as a program install. When the DD library is installed, it is placed in the “C:\HCF\DDL\Mobile\Library” directory on the PC. Copy the Library folder to the SD Card on the Mobile so that the path appears as “SD Card\Library”. Please note that on some Mobile devices “SD Card” may have slightly different text. (Note: You will overwrite the existing SD Card\Library subdirectory if this is an update.)

Insert the DevCom2000 Mobile installation CD into the CD drive on your computer. The DevCom2000 Mobile installation will automatically start and guide you through the installation process. Install DevCom2000 Mobile in its default location. If the installation program does not begin automatically, please go to Start→Run→ and enter “CDRom drive letter”:\setup.exe. This will begin the installation program. After the install is finished on the PC, select “Device” on the Mobile to finish installation. See Section 4.2 for details.

Step 2: 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. The preferred interface is a Bluetooth HART Modem - ProComSol, Ltd model HM-BT-BAT-ER. See Section 4.4 for details.

Step 3: 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. Using the clips from the HART interface, connect 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 Mobile’s are not rated for intrinsic safety and should only be connected in a safe area).

Step 4: Activate DevCom2000 Mobile

Launch DevCom2000 Mobile by selecting the DevCom2000 Mobile icon from the Start menu.

You will now be asked to Activate DevCom2000 Mobile. You can use it for 10 days before you need to Activate it. Select "No" to continue in Demo mode. Activation only needs to occur once. See Section 4.3 for details.

On some Mobile devices another step is required in order to select the DD library location. This is only required if the SD card has a name that is not standard. In this case a screen will come up where the user will need to select the path of the DD Library in the Mobile device. The selection will appear in the box at the bottom of the screen.

Step 5: Browse the Device

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

By default, DevCom2000 Mobile will open the Browser window. The organization of the data in this explorer-style window is dictated by the device DD. The top tree-pane of this window shows the logical groups of field device data. These are called "Menus". The bottom data-pane shows the data, any sub-groups and any standard operating procedures 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 6: Modify the Device's Configuration

The Browser allows access to all of the data exactly as described by the product's 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 7: 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 8: Exit

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

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1 INTRODUCTION

The Smart Device Communicator (DevCom2000 Mobile) 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 Mobile.

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

1.1 Acronyms and Definitions

| Acronym | Definition |
|-------------------|--|
| DD | Device Description File. This contains the device information. |
| DDL | Device Description Language |
| HCF | HART Communication Foundation |
| DevCom2000 Mobile | Smart Device Communicator |

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 Mobile user manual is organized into the following sections:

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

1.4 Getting Help

If you need help or encounter problems when using DevCom2000 Mobile or this guide, please contact ProComSol, Ltd. See Appendix C 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 Mobile version and serial number
- Mobile information: make, model, and operating environment (Windows version)
- Device information: make, model, and device revision
- Point of contact: complete mailing address, telephone number, and e-mail address,
- The date and time of the problem occurrence.

2 OVERVIEW OF DEVCOM2000 MOBILE

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 Mobile 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 Mobile accesses and presents field device data based solely on its DD. No other files, information or custom drivers are required. DevCom2000 Mobile 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 Mobile allows viewing and modifying of field device parameters based on the DD. Using the device's DD, DevCom2000 Mobile performs various tests to verify the proper operation of the HART device. DevCom2000 Mobile runs as a standalone software package and must have a HART compatible modem attached to the system to interrogate the HART base devices.

3 SYSTEM REQUIREMENTS

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

| | |
|--------------------|--|
| Mobile Device | Processor Speed: 624 Mhz Memory RAM: 128 MB Memory ROM: 256 MB Screen: 256-color VGA SD Card or Micro SD Card Slot |
| SD Card | 500 Meg or greater (included with software) |
| HART Modem | Bluetooth to HART modem - ProComSol, Ltd supplies HART modems |
| Communication Port | Bluetooth |
| Operating System | Pocket PC 2003, Windows Mobile 5.0, Windows Mobile 6.x |

4 DEVCOM2000 MOBILE INSTALLATION

4.1 Prerequisites

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

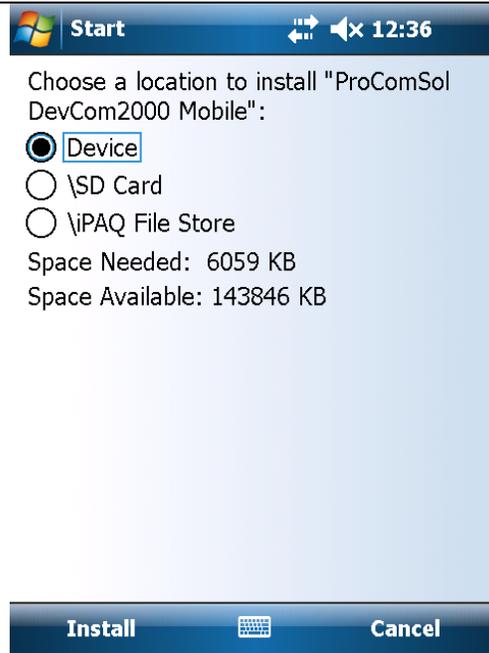
- Microsoft Windows
- HART communication interface
- HART field device
- Mobile Syncing using Windows ActiveSync

4.2 Installing the DevCom2000 Mobile Application

To install the DevCom2000 Mobile application, perform the following steps:

| Step | Action |
|------|---|
| 1 | Insert the DevCom2000 Mobile SD Card into the SD slot of the Mobile device. Connect the Mobile to your PC and verify the ActiveSync program is running. : |
| 2 | Note: The step in this paragraph is only required if the SD Card is not supplied, but instead the DD Library is supplied as a program install. When the DD library update is installed, it is placed in the “C:\HCF\DDL\Mobile\Library” directory on the PC. Copy the Library folder to the SD Card on the Mobile so that the path appears as “SD Card\Library”. Please note that on some Mobile devices “SD Card” may have slightly different text. (Note: You will overwrite the existing SD Card\Library subdirectory if this is an update.) |
| 3 | Insert the DevCom2000 Mobile CD into the CD-ROM drive. Auto run should begin installation, if not: |
| 4 | Click Start and choose Run . From the Run window, click Browse . |
| 5 | In the Look In box, browse to your CD drive. |
| 6 | Double-click the drive to access the CD content. |
| 7 | Look for the setup.exe file and double-click the same. This process will take you through a sequence of installation wizard steps. |
| 8 | Follow the instructions on the upcoming screens to complete the Installation. |
| 9 | Once completed on the PC, a step remains on the Mobile. Select the “Device” option on the screen below: |

Step Action

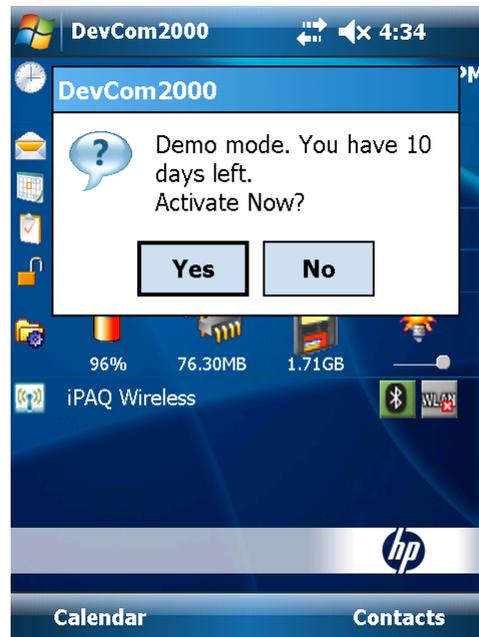


4.3 Activating DevCom2000 Mobile

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

Step Action

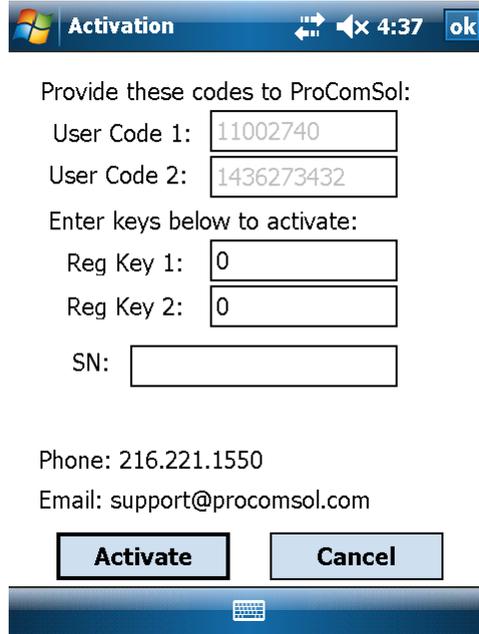
- 1 Start the DevCom2000 Mobile Application. The following Demo mode window is displayed:



Step Action

If you want to evaluate DevCom2000 Mobile before purchasing, select “No”. You will have 10 days of unlimited program use before you will need to purchase a license.

2 If “Yes” is selected, the following window appears:



You will then need to contact ProComSol, Ltd to obtain the registration keys. You must supply the User Codes to ProComSol, Ltd support personnel. You can activate in any of the following ways:

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

3. Or, send a fax to ProComSol, Ltd (216.221.1554) containing your company name, Serial Number, and User Codes.

The above information will be processed at ProComSol, Ltd and an appropriate response will contain the required Reg Keys. The user will need to enter the Reg Keys and the Serial Number.

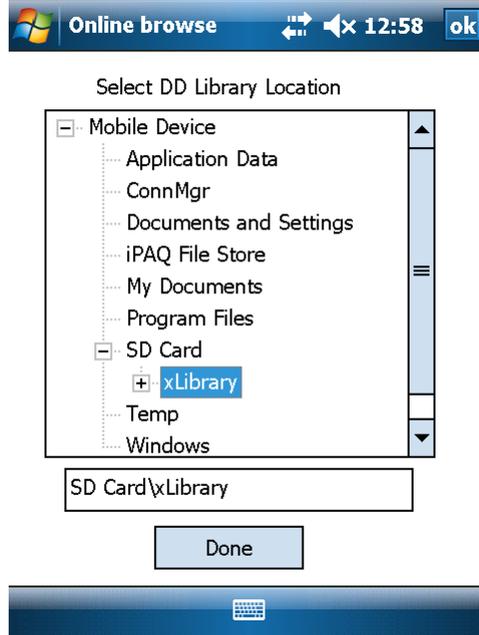
If successful, the program continues as normal. You will not need to perform the activation process again.

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

4 On some Mobile devices another step is required in order to select the DD library location. This is only required if the SD card has a name that is not standard. In this case a screen will

Step Action

come up where the user will need to select the path of the DD Library in the Mobile device. The selection will appear in the box at the bottom of the screen.



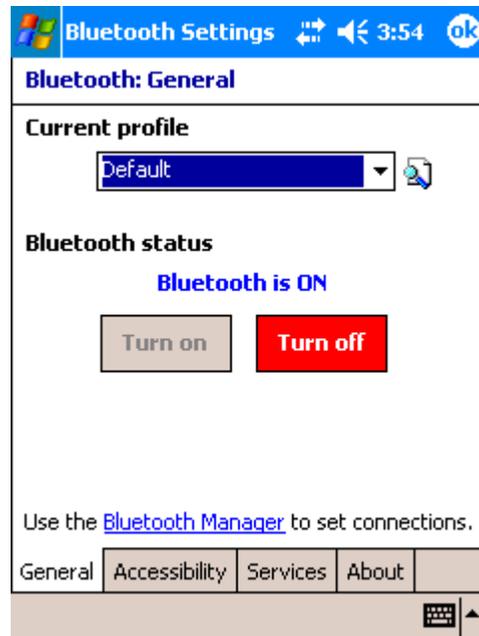
4.4 Bluetooth Settings on the Mobile

Bluetooth must be enabled on the Mobile. To enable and setup the Mobile for Bluetooth communications with a Bluetooth HART Modem, perform the following.

- | Step | Action |
|------|--|
| 1 | Tap Start → Settings . Then select the “Connections” tab. The following screen is displayed: |



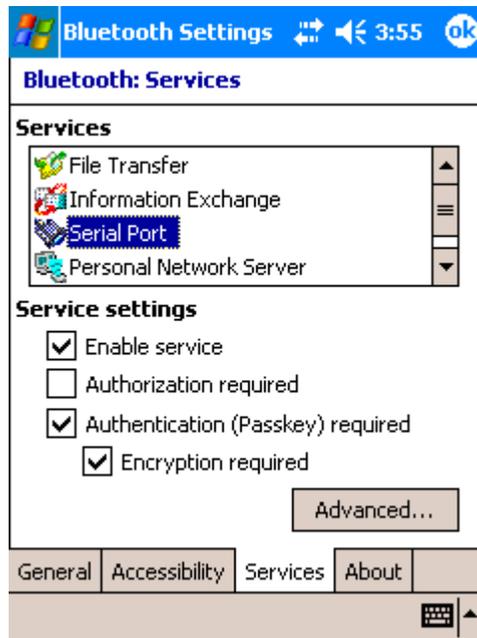
- 2 Select the Bluetooth icon. Make sure Bluetooth is turned on. If not, select “Turn On” from this screen:



- Step Action
- 3 Select the “Accessibility” tab and verify the following settings:

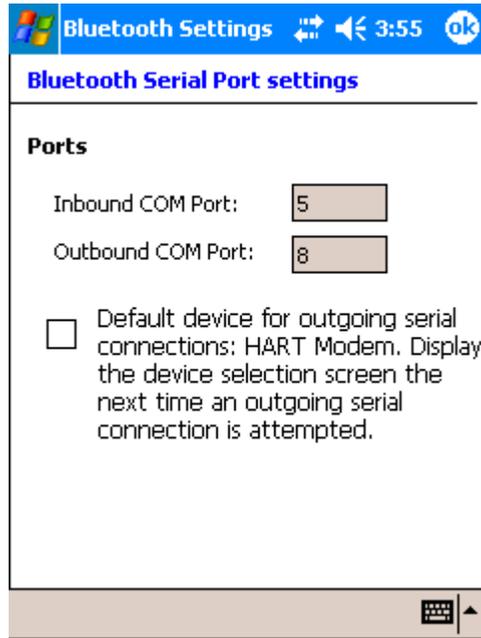


- 4 Select the “Services” tab and verify the following settings for Serial Port:



- 5 Select the “Advanced” tab to see what outgoing COM port was assigned to the Modem. It is shown as COM8 below. Also make sure the box is unchecked as shown:

Step Action



4.5 Connecting to the HART Network

The DevCom2000 Mobile 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 Mobile 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 Mobile. This manual uses the HART modem manufactured by ProComSol, Ltd, called the HM-BT-BAT-ER. It uses the Bluetooth interface.

Turn the HM-BT-BAT-ER on. It is assumed you have already performed the Bluetooth pairing procedure. See the HM-BT-BAT-ER documentation for details. Using the clips on the wires from the HART modem, 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 Mobile Hardware Setup

4.6 Uninstalling the DevCom2000 Mobile Application

To uninstall the DevCom2000 Mobile application, perform the following steps on the PC:

| Step | Action |
|------|---|
| 1 | Click Start → Programs → ProComSol → DevCom2000 Mobile → Uninstall DevCom2000 Mobile |
| 2 | Or, Click Start → Settings → Control Panel → Add/Remove Programs |

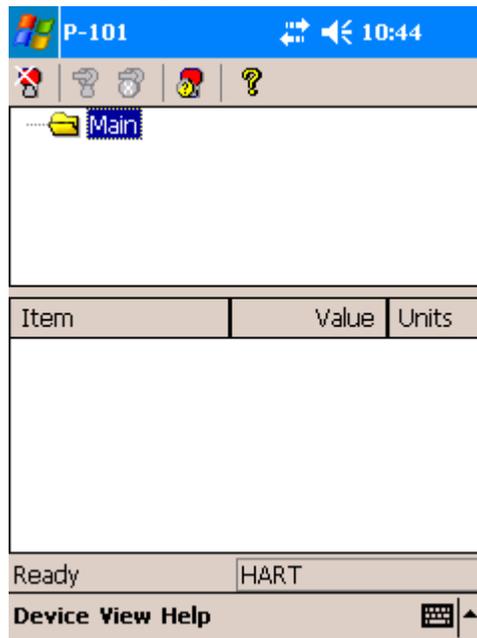
| Step | Action |
|------|---|
| 3 | In the <i>Add/Remove Programs</i> dialog window, select the DevCom2000 Mobile program that you want to uninstall. |
| 4 | Click Remove . |
| 5 | Click OK to confirm the removing of the selected application. |

5 USING DEVCOM2000 MOBILE

5.1 Starting DevCom2000 Mobile

The HART compatible field device must be connected to a Mobile running DevCom2000 Mobile 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 Mobile computer. With the physical connection established, launch DevCom2000 Mobile by clicking the DevCom2000 Mobile icon on your program screen. You can also start the application by going to your Mobile's Start Menu and selecting **Start → DevCom2000 Mobile**.

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



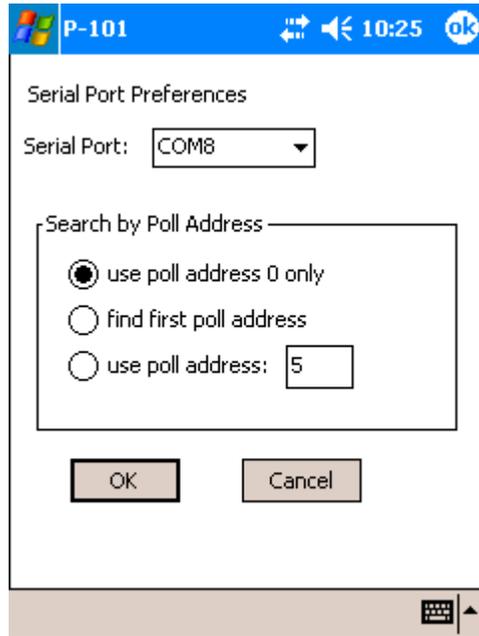
DevCom2000 Mobile will then automatically identify the field device and open a communication channel to (i.e., a connection with) the field device.

2 Setting Preferences **Device → Preferences**

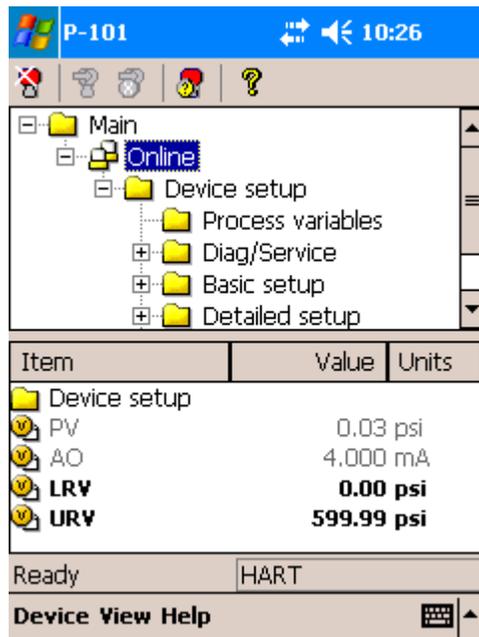
If communications cannot be established, you may need to change the communication settings using the Preferences dialog box.

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

Step Action



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



The top pane of the window shows the menu structure and the bottom pane of the window displays corresponding parameters of the menu selected.

The DevCom2000 Mobile 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

| Step | Action |
|------|--|
| | are specified by the field device's manufacturer in the DD itself. |
| 4 | Select the required menu to configure or review the field device's data. |

5.2 Getting Familiarized with DevCom2000 Mobile Explorer

5.2.1 Using the Menu Bar Menus

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

| Menu | Explanation |
|---|--|
| <div style="border: 1px solid black; padding: 5px;"> <p>New Device Preferences Document Device Exit</p> </div> | <p>The Device Menu offers the following sub-menu options:</p> <p>New Device - Connect to a new device or reconnect to the same device.</p> <p>Preferences – Brings up the Preferences dialog box.</p> <p>Document Device – Brings up the Document Device dialog box.</p> <p>Exit - Exit DevCom2000 Mobile.</p> |
| <div style="border: 1px solid black; padding: 5px;"> <p>✓ Toolbar ✓ Status Bar</p> <hr style="width: 50%; margin-left: 0;"/> <p>Device Condition Available DDs</p> </div> | <p>The View Menu offers the following sub-menu options:</p> <p>Toolbar - Hide or show the Tool Bar.</p> <p>Status Bar - Hide or show the Status Bar.</p> <p>Device Condition – View detailed device status.</p> <p>Available DDs – Shows what DDs are available to DevCom2000 Mobile</p> |
| <div style="border: 1px solid black; padding: 5px;"> <p>DevCom2000 Help Device Help About DevCom2000 PDA</p> </div> | <p>The Help menu offers the following sub-menu options:</p> <p>DevCom2000 Mobile Help – Brings up Help information for the DevCom2000 Mobile application.</p> <p>Device Help – Brings up help information for the connected device (if available).</p> <p>About DevCom2000 Mobile – Shows copyright information, support information, and application Serial Number.</p> |

5.2.2 Using the Pop-up Menus

When you tap and hold a menu item, a Pop-up menu will appear with different functionality depending on what menu item type was selected. A summary:

| Menu | Explanation |
|---|--|
| <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Open Help Device Details </div> | <p>The Menu Pop-up Menu offers the following sub-menu options:</p> <p>Open – Opens the selected menu.</p> <p>Help – Brings up help information on the selected menu.</p> <p>Device Details – Brings DD information for the connected device. Only works on the Online menu.</p> |
| <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Edit Help DisplayValue </div> | <p>The Variable Pop-up Menu offers the following sub-menu options:</p> <p>Edit – Brings up the Edit menu for the selected variable.</p> <p>Help - Brings up help information on the selected variable.</p> <p>Display Value – Shows the selected variable on the full screen with scroll bars. This is so the entire variable can be seen without abbreviations.</p> |
| <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Execute Help </div> | <p>The Method Pop-up Menu offers the following sub-menu options:</p> <p>Execute – Starts the selected Method in a new window.</p> <p>Help – Brings up help information for the selected Method.</p> |

5.2.3 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 Mobile 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 | |

| Button | Description | Corresponding Menu Option |
|---|--|--------------------------------|
|  | Cancel parameter changes | |
|  | View more status on Device and Communication (Command 48 status) | View → Device Condition |
|  | Shows About screen | Help → About |

5.2.4 Familiarizing with Icons

DevCom2000 Mobile 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 |

6 FUNCTIONS AND BASIC OPERATIONS

6.1 Overview

DevCom2000 Mobile 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)

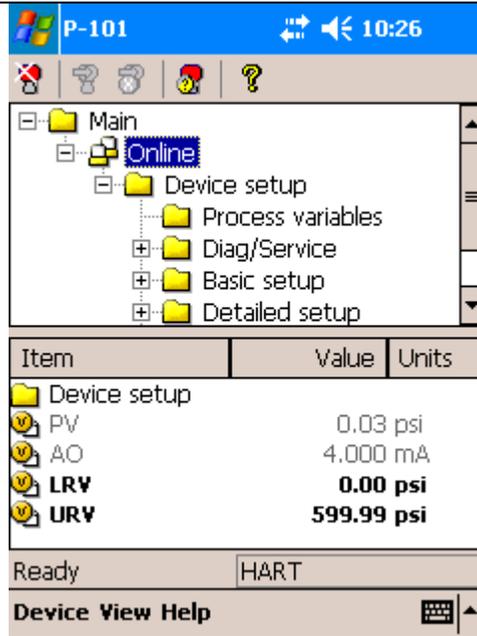
This option helps to perform various tests on the device for instance, Self Test and Loop Test. A Method or SOP is a series of steps that are executed in a sequence results in the completion of some device related tasks. When a method gets invoked, it gives various warning messages and options to the 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 Mobile, perform the following steps:

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

Step Action



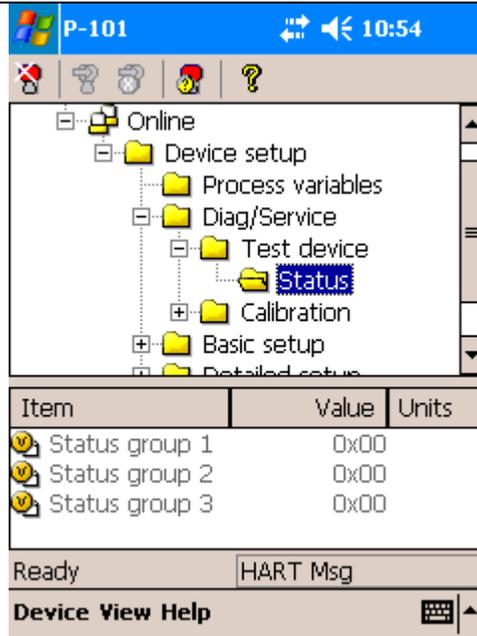
The top pane of the window shows the menu structure and the bottom pane of the window displays corresponding parameters of the menu selected.

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 Mobile 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:

Step Action



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

6.3 Configuring Device Information

6.3.1 Overview

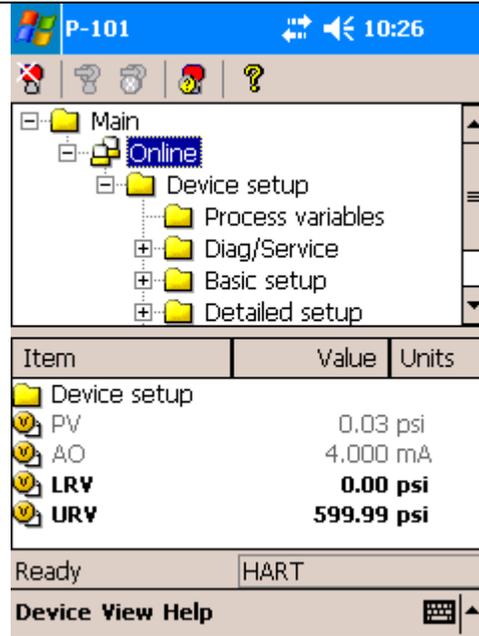
DevCom2000 Mobile allows you to view and configure the field device parameters based on the device description. However, the device vendor defines most of the parameters at the factory. These parameters become read only for the users and the user cannot modify the values. The related variables are grouped 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:

Step Action



The top pane of the window shows the menu structure and the bottom 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 Mobile:

Bold Font: Modifiable Values

Normal Font: Menu Item

Gray Font: Dynamic or Read Only Variables

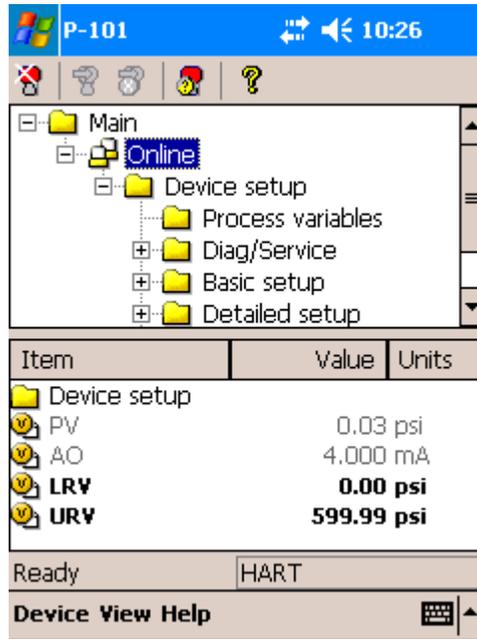
- 4 Select the parameter and configure the values, as required.
- 5 The subsequent topics explain how to configure device parameters.

6.3.2 Variable

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

| Step | Action |
|------|--------|
|------|--------|

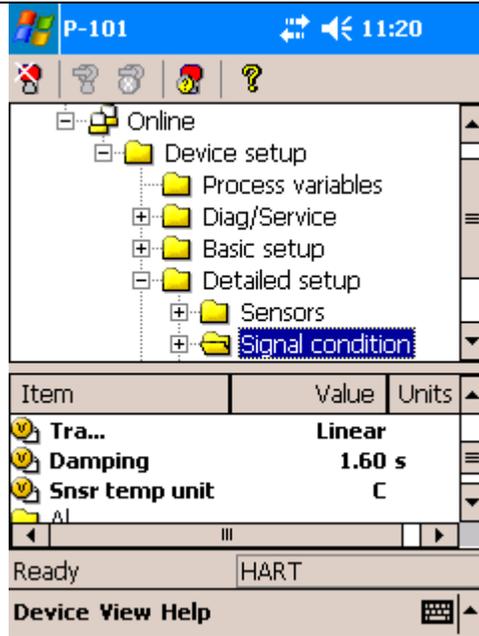
- 1 Ensure that the application is running and communications have been established:



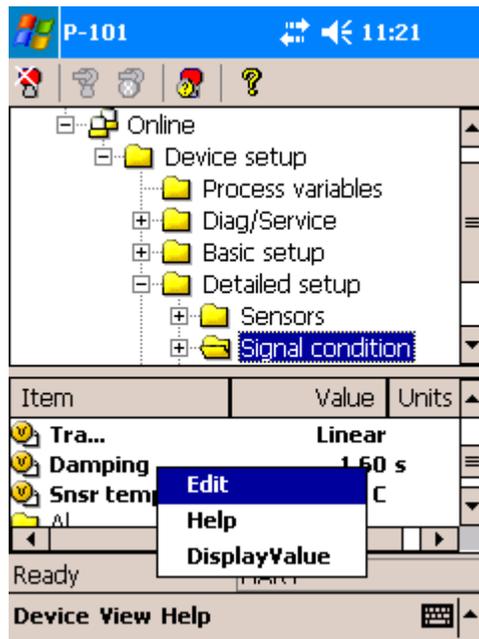
Expand the menu by clicking the “+” sign and double-click to view the device parameters.

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

Step Action

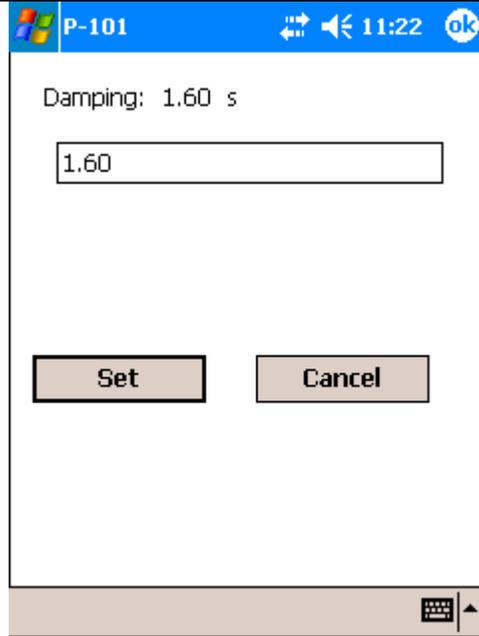


- 3 Tap and hold the variable to edit it. A pop-up menu will appear on the screen:

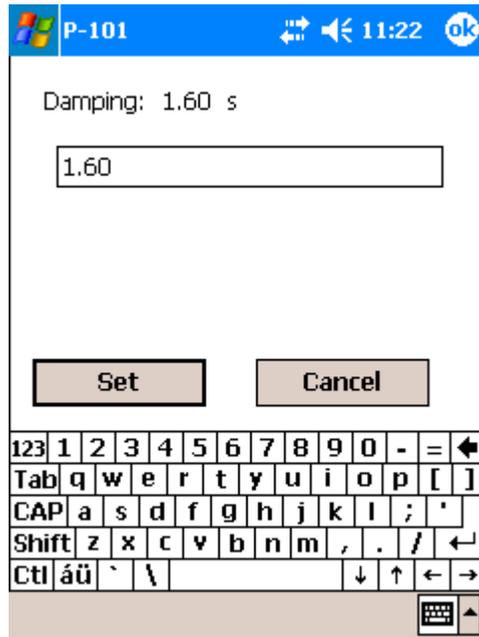


- 4 Select "Edit". The following dialog box appears on the screen:

Step Action



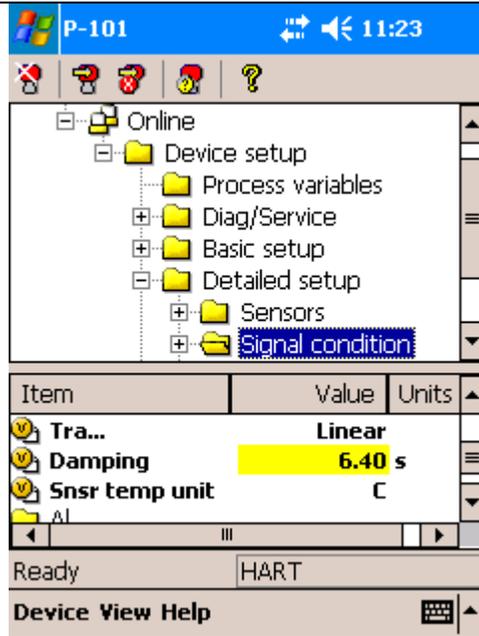
- 5 Tap the Keyboard icon to bring up a keyboard for data entry. The screen will now look like this:



Note that there are several ways to enter data using the Mobile. See Appendix B for more options.

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

Step Action



8 Click on the **Send** icon  to commit the changes to the device.

6.3.3 Edit Display

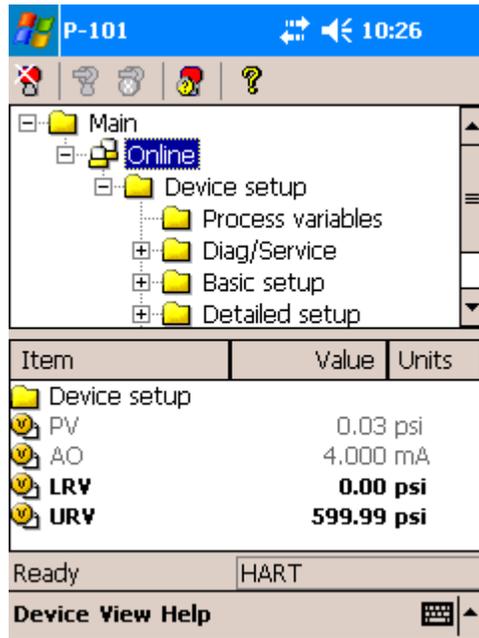
The Edit Display is a variation on the Variable edit. An additional window helps the user view a group of parameters based on the DD. You can also modify a single parameter from this group. Parameters linked to the edited field will be updated automatically

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

Step Action

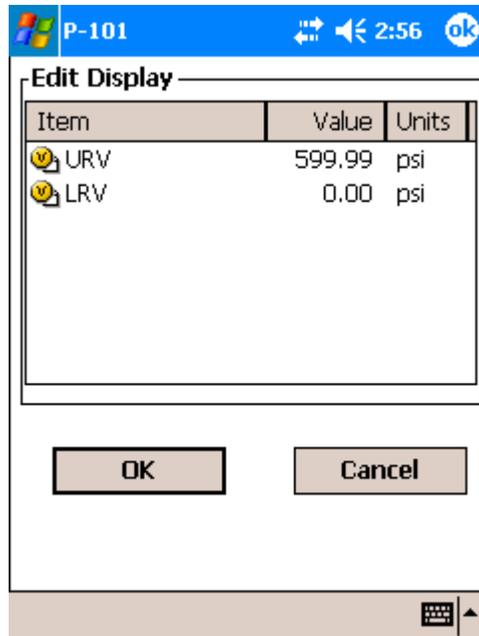
1 Ensure that the application is running and communications have been established

Step Action



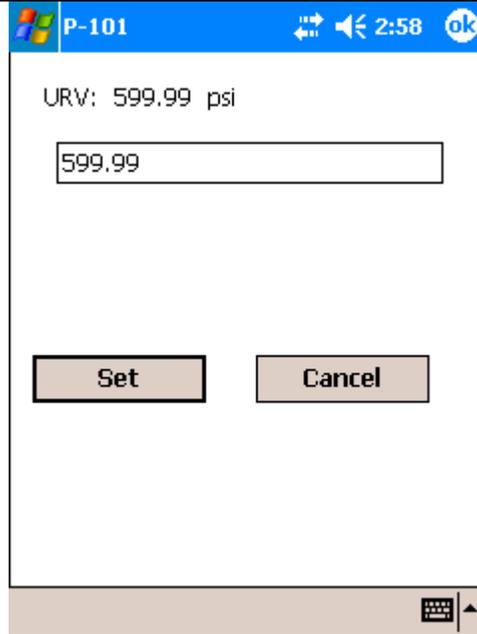
Expand the menu by clicking the “+” sign and double-click to view the device parameters.

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



- 3 Double click the parameter you wish to edit from within the Edit Display box. The following dialog box appears on the screen:

Step Action



- 4 Make the change to the value, as required.
- 5 Click **Set** to accept the changes. Or press **Cancel** to cancel the changes.
- 6 Click **OK** to close the Edit Display dialog box.
- 7 Click on the **Send** icon  to commit the changes to the device.

6.3.4 Executing Methods or Standard Operating Procedures

Methods are defined in the DD file for the device that DevCom2000 Mobile 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,

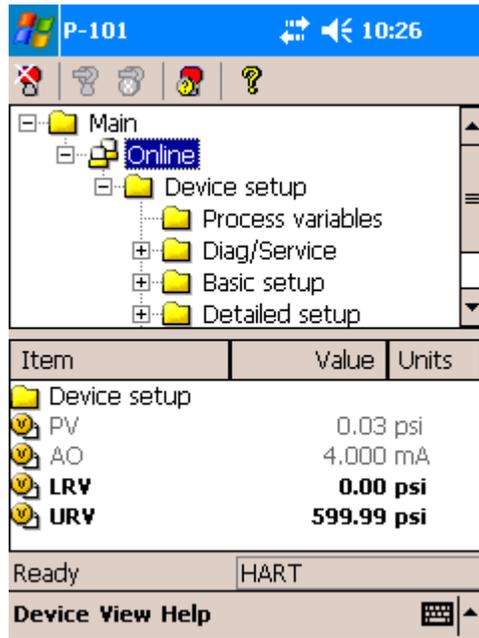
- Setting high and low range calibration points
- Calibration of the device
- Run the advanced diagnostic test procedure
- Execute tests to gather information on device operation.

To execute a Method, perform the following steps:

Step Action

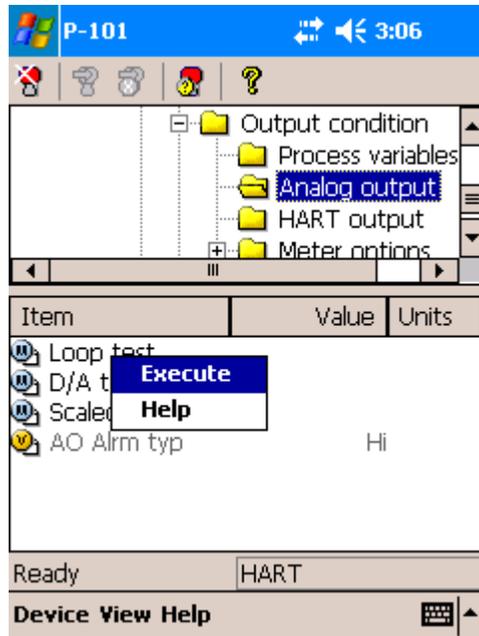
- 1 Ensure that the application is running and communications have been established:

Step Action



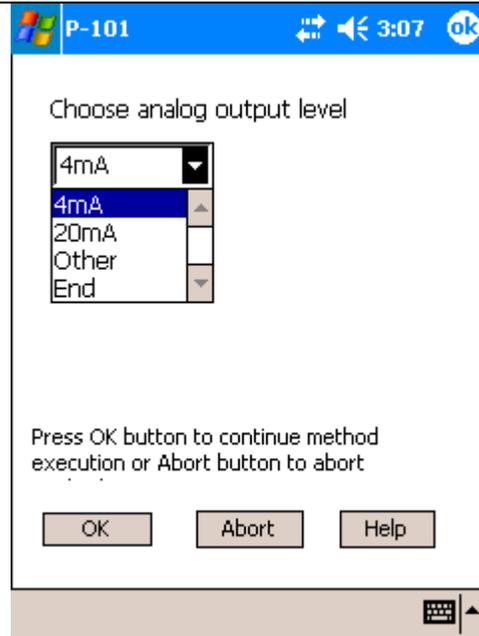
Expand the menu by clicking the “+” sign and double-click to view the device parameters.

- 2 Select the menu where the method is present and tap and hold to bring up the Method pop-up menu:



- 3 Select Execute to start the Method. Below is an example of a Method screen:

Step Action



- 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 and Communication Status

DevCom2000 Mobile 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.

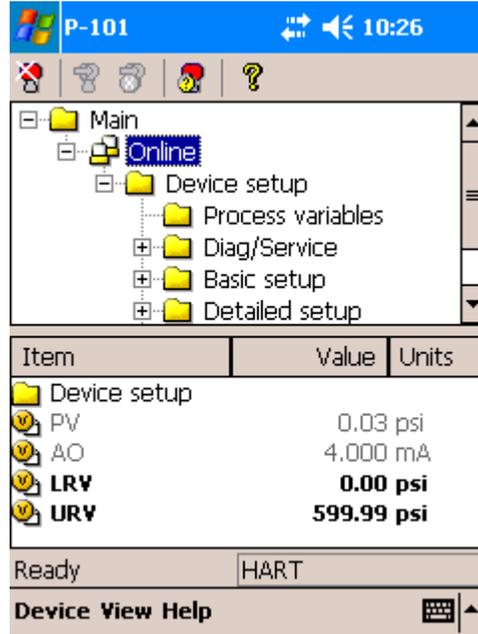
To view the device and communication status, perform the following steps:

Step Action

- 1 Ensure that the application is running and communications have

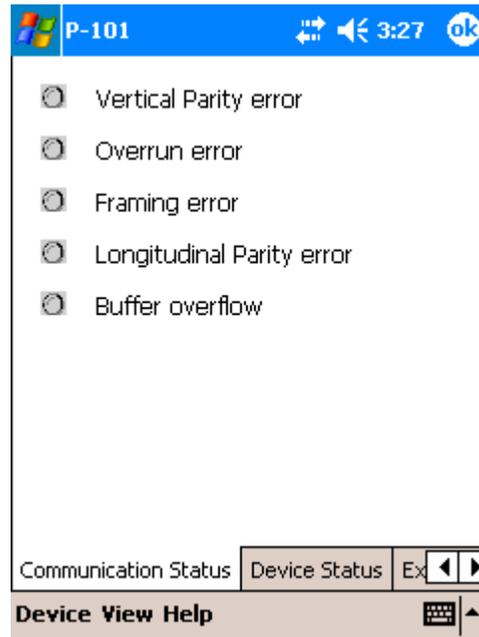
Step Action

been established:



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

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



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.

Step Action

- 3 Additional tabs may be available depending on the DD. Tap the arrow buttons to move amongst the tabs.
- 4 Click **X** to close the Status window.

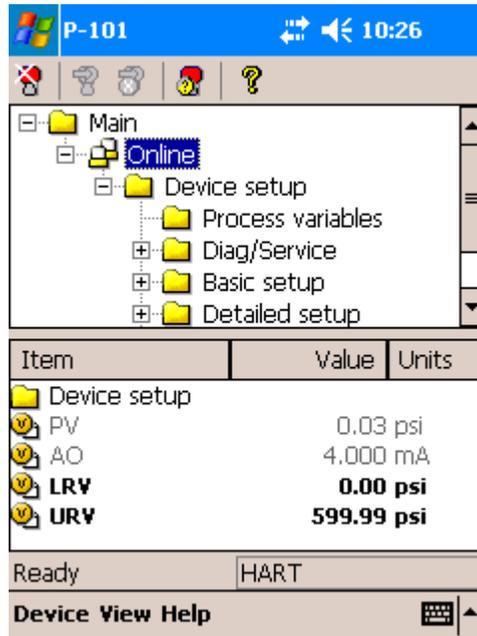
6.6 Saving Device Configuration To Memory

HART Device configurations can be saved to memory 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.

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

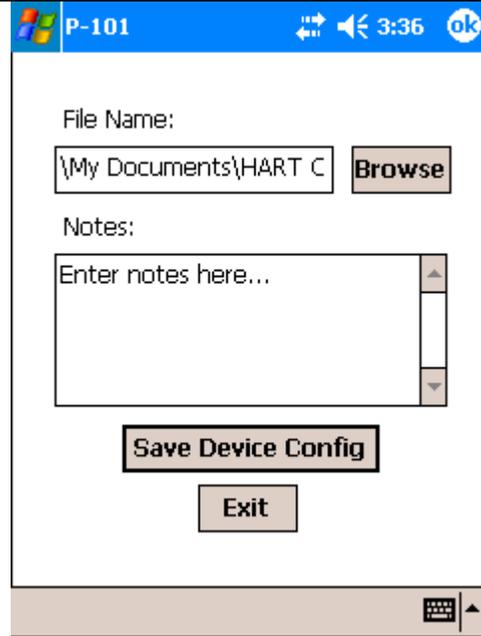
Step Action

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



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

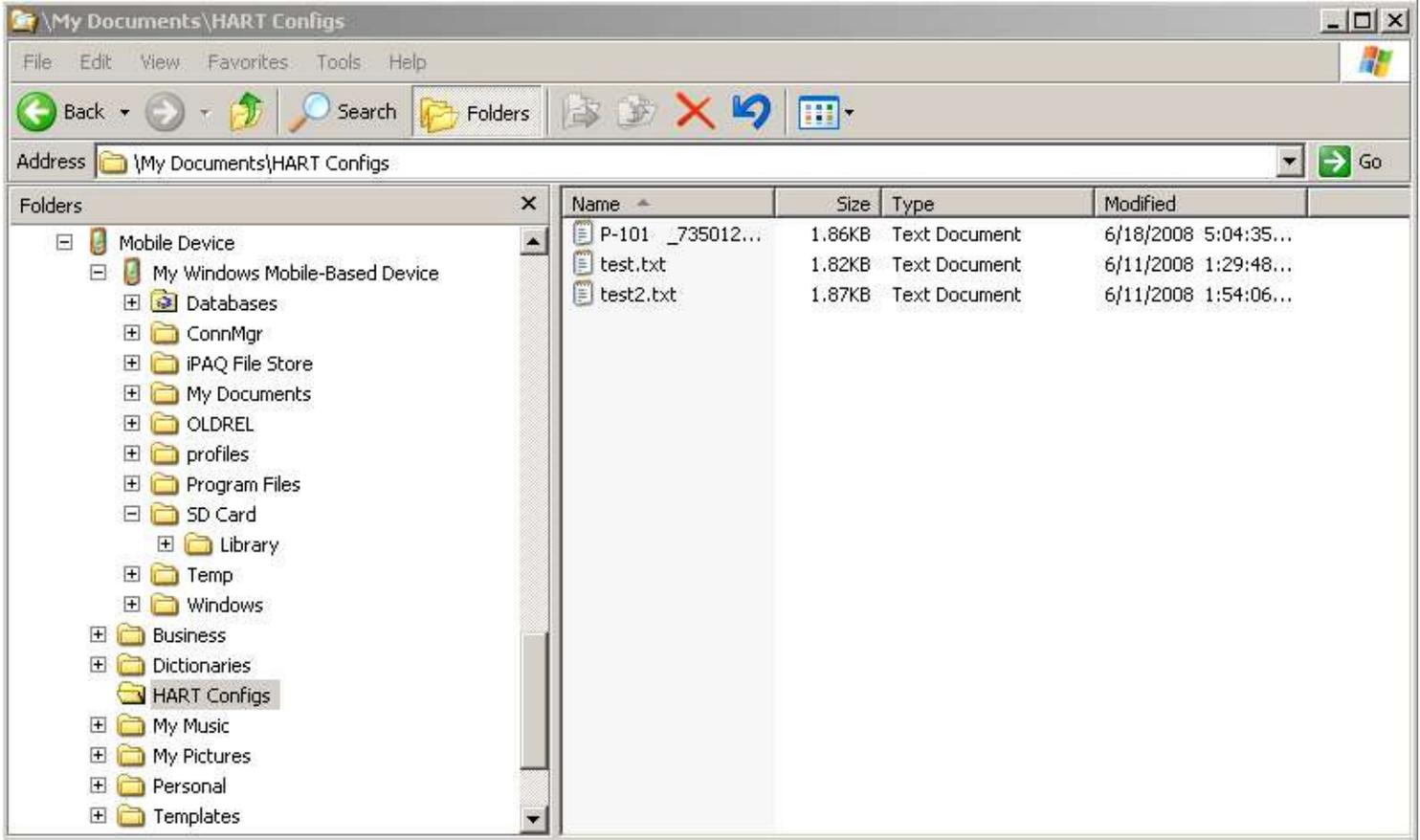
Step Action



- 3 The default directory is \HART Configs. The default file name is Tag_Device ID. The 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 255 characters.
 - 5 Press the “Save Device Config” button to save device configuration.
-

6.7 PC Interface to Mobile

The Windows Explorer program is a convenient way to copy configuration files back to the PC for archiving and storage. The Mobile looks like a disk to the Windows file system. Below is an example screen shot:



The default location for the saved configuration files is the directory “\My Documents\HART Configs”. Simply highlight the desired files and copy to your PC. Once on the PC, they can be viewed or imported to many different software packages.

6.8 DD Library Updates

When the DD library update is installed, it is placed in the “C:\HCF\DDL\Mobile\Library” directory on the PC. Copy the Library folder to the SD Card on the Mobile so that the path appears as “SD Card\Library”. Please note that on some Mobile devices “SD Card” may have slightly different text. (Note: You will overwrite the existing SD Card\Library subdirectory.)

Appendix A

Troubleshooting Guide

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.

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:

The system cannot find the path specified error box

Try the following:

1. Verify that the DevCom2000 Mobile SD Card is inserted into the SD slot of the Mobile.
2. Select the path of the DD Library in the Mobile device when starting up DevCom2000 Mobile.

Problem:

Serial Number does not match Activation input boxes

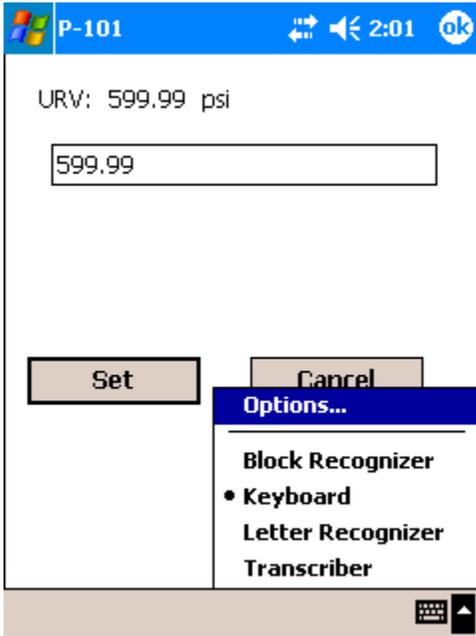
Note the following:

1. The Program Serial Number is different than the Activation Codes.
2. Activation Codes required after 10 days of Demo program use.

Appendix B

Mobile Data Input Guide

There are several different ways to enter data on a Mobile. Tap the up arrow next to the Input Panel icon. The following will appear:



Keyboard

Use the stylus to tap letters, numbers, and symbols on the on-screen keyboard to enter typed text directly onto the screen.

1. From any application, tap the up arrow next to the Input Panel icon.
2. Tap Keyboard to display a keyboard on the screen. Note: To see symbols, tap the 123 key.
3. Tap a letter, symbol, or number to enter information.
4. Tap OK.

Letter Recognizer

Use the stylus and Letter Recognizer to write letters, numbers, and symbols on the screen. Create words and sentences by writing in uppercase (ABC), lowercase (abc), and symbols (123) as instructed here.

1. From any application, tap the up arrow next to the Input Panel icon.
2. Tap Letter Recognizer.
3. Write a letter or symbol between the dashed line and baseline.
 - To display in uppercase, write a letter between the hatch marks labeled ABC.
 - To display in lowercase, write a letter between the hatch marks labeled abc.
 - Write a number or draw a symbol between the hatch marks labeled 123.

What you write will be converted to text.

Note: For the Letter Recognizer to work effectively, write characters between the dashed line and baseline.

- If you are writing a letter like “p,” write the top portion within the dashed line and baseline, and the tail portion below the baseline.

- If you writing a letter like “b,” write the bottom portion within the dashed line and baseline, and the top portion above the dashed line.

Note: To view help on using Letter Recognizer, open the program and tap the question mark next to the writing area.

Transcriber

Use the stylus and Microsoft Transcriber to write words, letters, numbers, and symbols anywhere on the screen.

1. From any application, tap the up arrow next to the Input Panel icon.
2. Tap Transcriber to display the Transcriber Intro screen.
3. Tap OK.
4. Tap New at the bottom of the screen.
5. Begin writing on the screen. What you write will be converted to text.

Note: To “teach” Transcriber your style of writing, tap on the “a” icon at the bottom of the screen to display the Letter Shapes screen and follow the instructions.

Block Recognizer

Write letters, numbers, and symbols using the stylus and Block Recognizer. Create words and sentences by writing letters and numbers in specific areas.

1. From any application, tap the up arrow next to the Input Panel button.
2. Tap Block Recognizer.
3. Write a word, letter, or symbol between the hatch marks.
 - To type text, write a letter between the hatch marks labeled “abc.”
 - To type numbers or symbols, write a number or symbol between the hatch marks labeled “123.” What you write will be converted to text.

Appendix C

Contact Information

ProComSol, Ltd

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

Phone: 216.221.1550

Fax: 216.221.1554

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

Web: www.procomsol.com