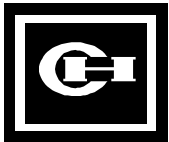

D820 Micro PanelMate Getting Started User's Guide



Cutler-Hammer

EAT•N

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Guide. This chapter describes what is in this manual and provides information on Support Services.

About This Manual

Purpose

This manual focuses on developing a sample program for the D820 unit using the Micro PanelMate Configuration Editor.

What's Inside

This manual is organized in the following way:

Preface

Chapter 1: How a Micro PanelMate Enhances the D50/D300 Series of PLCs

Chapter 2: How to Begin

Chapter 3: Understanding the Micro PanelMate Configuration Editor

Chapter 4: Downloading the Sample Configuration



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If you are in the U.S. or Canada, you can take advantage of our toll-free line for technical assistance with hardware and software product selection, system design and installation, and system debugging and diagnostics. Technical support engineers are available for calls during regular business hours (8 am - 5:30 pm EST) by calling 1-800-809-2772. International calls can be made to either the Tech Line at 1-800-809-2772 (toll call) or the Cutler-Hammer main business line at 614-882-3282.

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Westerville, OH 43081**



Table of Contents

Chapter 1 How a Micro PanelMate Enhances the D50/D300 Series of PLCs.....	1
What Role a Micro PanelMate Plays in Factory Automation	2
How the Micro PanelMate Partners with a Host Device.....	3
How Operators Interact with the Micro PanelMate	4
Chapter 2 How to Begin.....	5
System Requirements	6
Installing the Micro PanelMate Configuration Editor	7
Chapter 3 Understanding the Micro PanelMate Configuration Editor	9
The Micro PanelMate Configuration Editor Main Screen	10
How the Page Directory Operates	12
How to Setup the D820 Hardware Configuration.....	14
How to Use the Data Reference Editor	15
D50/D300 Node List Editor	16
How to Define the Page Properties.....	18
How to Use the Integrity Check	24
How to Use the Built-in Simulator	26
Chapter 4 Downloading the Sample Configuration.....	30
The GPC Programming Software Main Screen (D50/D300).....	31
How to Connect the Micro PanelMate to your Personal Computer	32
Preparing the D800 for Download.....	33
How to Download the Sample Application into the D820	34

Chapter 1

How a Micro PanelMate Enhances the D50/D300 Series of PLCs

In this chapter, you will learn:

- What role a Micro PanelMate unit plays in factory automation
- How the Micro PanelMate partners with a Host Device
- How operators interact with the Micro PanelMate

What Role a Micro PanelMate Plays in Factory Automation

The Micro PanelMate Series offered by Cutler-Hammer allows for easy access to the Host Device without expensive modules and hard-wired devices.

Traditionally, an operator workstation consisted of numerous pushbuttons, thumbwheel switches, and pilot lights tied into input and output cards. The traditional devices were expensive and required hours of cutout and wiring time.

The Micro PanelMate Series not only eliminates the need for these traditional devices; it also adds advanced capabilities not available in hard-wired devices.

How the Micro PanelMate Partners with a Host Device

Micro PanelMate Series units can communicate to:

- A variety of Host Devices
- One Host or multiple Host Devices on supported networks
- Multiple networked Host Devices simultaneously from the same “page” (screen)

Since the Micro PanelMate Series is built to be a direct connect interface (not requiring any additional hardware/modules), connecting to a host device is as simple as “plug and play”.

A single communication port is available on the back of the Micro PanelMate to connect to virtually any device. RS-232, RS-422/485, and Current Loop can all be accommodated. Therefore, the Micro PanelMate offers the following connectivity advantages:

- Micro PanelMate can attach to the Host Device with a single cable connection
- Micro PanelMate does not require input/output points for communication
- Micro PanelMate needs one cut-out in the panel thus reducing assembly time

The Micro PanelMate reduces programming time and cost because:

- Micro PanelMate is usually the “master” device when it communicates to the Host Device
- Micro PanelMate handles the intricate communication to and from the Host Device
- Micro PanelMate **does not** require additional code for the Host Device to send data to the Micro PanelMate (unlike a hardwire device)
- Built-in navigational tools are in the Micro PanelMate, thus reducing programming in the Host Device to guide the operator through operation

How Operators Interact with the Micro PanelMate

Operators interact with the Micro PanelMate two ways:

- Operators monitor events through the Micro PanelMate
- Operators take action through the Micro PanelMate

Monitoring is supported with the following capabilities:

- On-screen representation of status
- Annunciation of alarm information
- Presentation of instructions capabilities.

Action is supported via the following operations:

- Tactile feedback keys that provide input into the Micro PanelMate
- Momentary pushbuttons
- Navigational Keys



Chapter 2

How to Begin

In this chapter, you will learn:

- System Requirements
- Installing the Micro PanelMate Configuration Editor

System Requirements

The following information provides a guideline for the software and hardware requirements for installing and running the Micro PanelMate Configuration Editor:

Operating System	Microsoft Windows version 3.X Windows 95 Windows NT
Microprocessor	386 required (486/66 MHz or Higher recommended)
Memory	4 MB required
Hard disk space	4 MB Typical
Disk Drive	One 3.5-inch high-density drive
Video Adapter	VGA or higher resolution Recommended environment is 640x480 with 256 colors
Display Device	Color or gray scale monitor or other display device (LCD, gas plasma, etc.) Monochrome displays are not recommended.
Pointing Device	Microsoft Mouse or compatible pointing device

If you are using a network to install or run the Micro PanelMate Configuration Editor Software, you must have a network compatible with your Windows operating environment, such as Microsoft Networks (Windows NT, Windows for Workgroups, or LAN Manager), Novelle NetWare®, Artisoft® LANtastics, or Banyan® VINES®.

Installing the Micro PanelMate Configuration Editor

The following procedure describes how to install the Micro PanelMate Configuration Editor Software to your computer's hard disk from the supplied floppy disks:

Microsoft® Windows® 3.X

1. If you are running a virus-detection utility, disable it before running Setup. If you do not disable the utility, Setup may conflict with it and not run.
2. Start Windows and make sure that you close all open applications.
3. Insert the diskette labeled Configuration Editor Software Disk 1 in drive A: or drive B:.
NOTE: Software can only be installed from a 3.5-inch high-density drive.
4. In Window 3.X Program Manager, choose Run from the File Menu.
5. In the Command Line box, type the letter of the drive that contains the diskette with the Micro PanelMate Configuration Editor Software, followed by a colon and the word setup. For example, if your floppy drive were A:, type: A:SETUP.
6. Choose the **OK** button, and then follow the instructions on the screen.

Microsoft® Windows® 95 or Microsoft® Windows® NT

1. Start Windows 95/NT. Note that if you have any programs that launch automatically at startup, close all open applications prior to running Setup.
2. If you are running a virus-detection utility, disable it before running Setup. If you do not disable the utility, Setup may conflict with it and not run.
3. Insert the diskette labeled Configuration Editor Software Disk 1 in drive A: or drive B:.
NOTE: Software can only be installed from a 3.5-inch high-density drive.
4. Click on the Start icon.
5. Choose Run
6. In the Command Line box, type the letter of the drive that contains the diskette with the Micro PanelMate Configuration Editor Software, followed by a colon and the word setup. For example, if your floppy drive were A:, type: A:SETUP.
7. Choose the **OK** button, and then follow the instructions on the screen.

Chapter 3

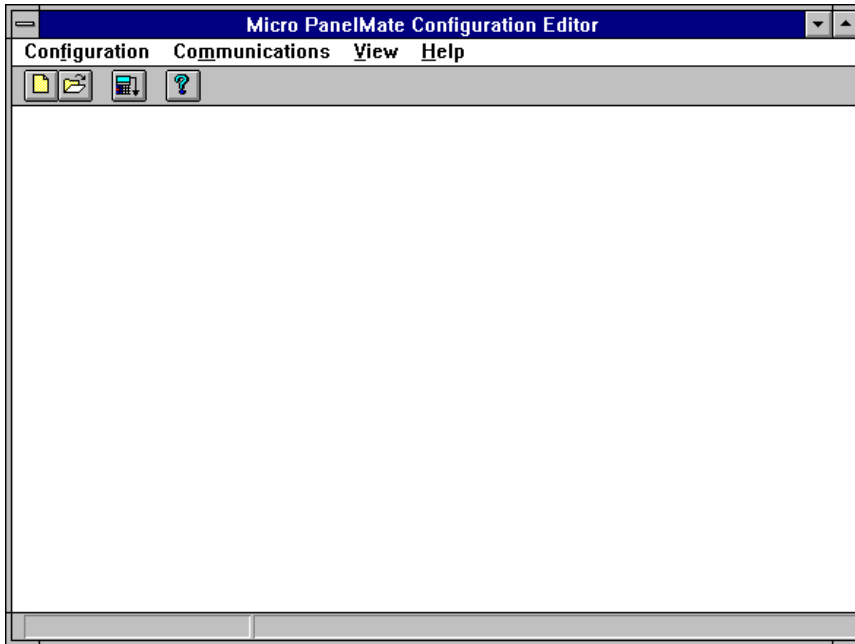
Understanding the Micro PanelMate Configuration Editor


In this chapter, you will learn:

- About the Micro PanelMate Configuration Editor Main Screen
- How the Page Directory operates
- How to setup the D820 hardware configuration
- How to use the Data Reference Editor
- About the D50/D300 Node List Editor
- How to manipulate pages
- How to use the Integrity Check
- How to use the built-in Simulator

The Micro PanelMate Configuration Editor Main Screen

The Setup program creates a group named “Micro PanelMate” with the Configuration Editor icon. Double click on the icon to launch the program bringing you to the Main Screen.



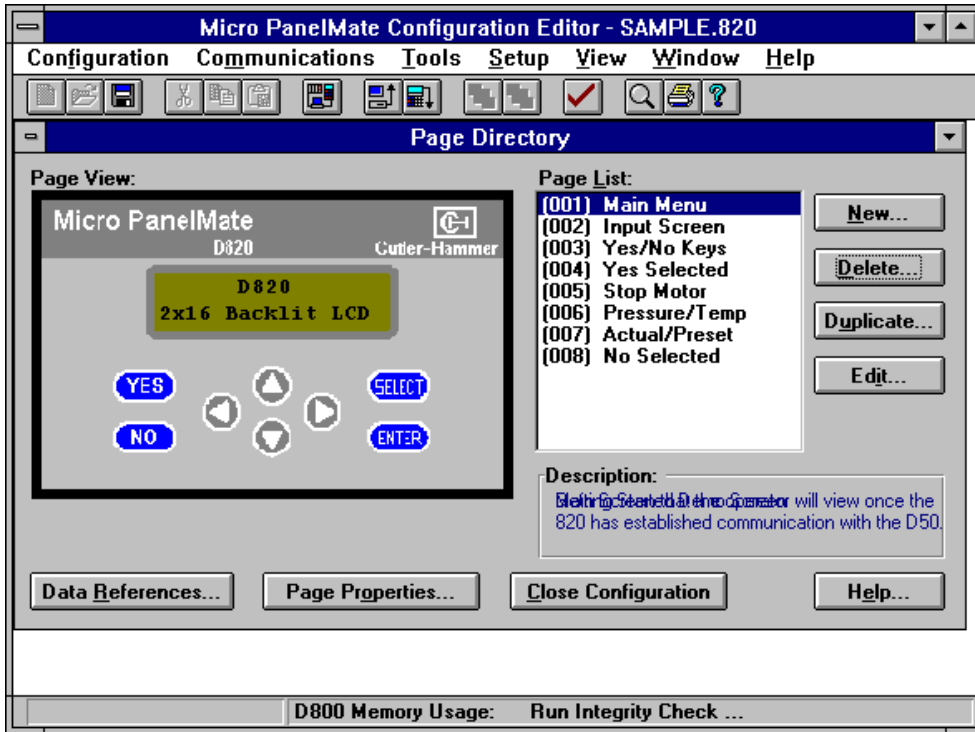
At this time you can either select Open from the Configuration Menu or select the  icon depicting an opening folder.

The sample configurations for the Micro PanelMate Series were loaded into your directory (MPM_D800 default) during setup.

Select Sample.820 by either typing sample.820 in the area referenced as File Name or use the mouse to select D820 Configuration (*.820) under the List File of Type field.

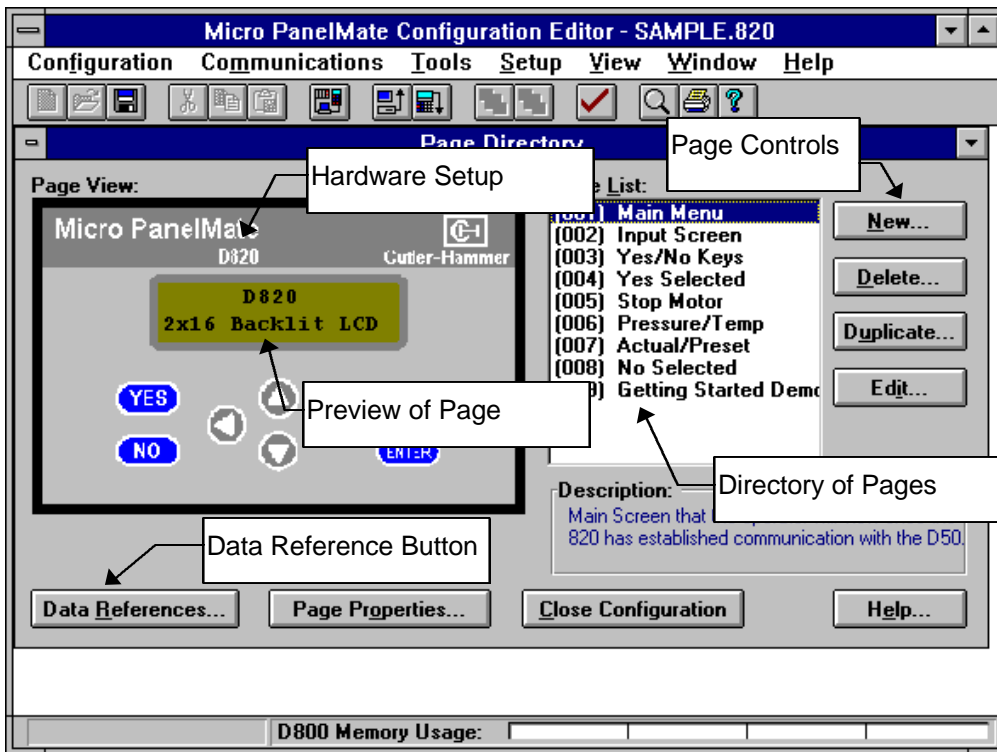
Once having selected the file, sample.820, click the **OK** button. At this time, the Micro PanelMate Configuration Editor will return to the Main Screen with the sample configuration open.

With the sample.820 configuration open, you should see the following screen:



This main screen is the total focal point for the configuration. All aspects of the D820 can be both viewed and controlled through this main screen through either the drop menus or the toolbar.

How the Page Directory Operates



The Page Directory is the heart of the Micro PanelMate Configuration Editor. Once you become familiar with the fundamentals of how this directory operates creating and editing a configuration is extremely simple.

The following pages will define each aspect of the Page Directory. Each topic will be broken down and demonstrated via the sample.820 application that was already opened and downloaded to your Micro PanelMate D820.

Directory of Pages

The Page List is located on the right side of the Page Directory. It will display, in numeric order, all pages in the configuration. This quick listing allows you to step through the pages available in your configuration without having to remember what each page number is and/or description. By double clicking on any page, you will be taken directly into the Page Editor.

Preview of Pages

To enhance the Page List, the Micro PanelMate Configuration Editor also has an unique feature, page preview. As you step through the pages in the Page List, the D820 will display the actual page on the display. Therefore, instead of opening each individual page to review its contents, simply preview them via the D820's window. Once you have found the page you would like to edit, either double click the image of the page on the D820 display, double click the actual page number in the Page List, or select the **Edit** button.

Hot Key for Data References

Since the Micro PanelMate Series of Operator Interface Terminals utilizes a spreadsheet format for data references, the opportunity to edit these tags is available from several locations. The easiest, and most obvious, is the **Data References** button located on the bottom left hand corner of the Page Directory. This button will take you directly to the **PLC Data Reference Editor** dialog box.

Page Controls

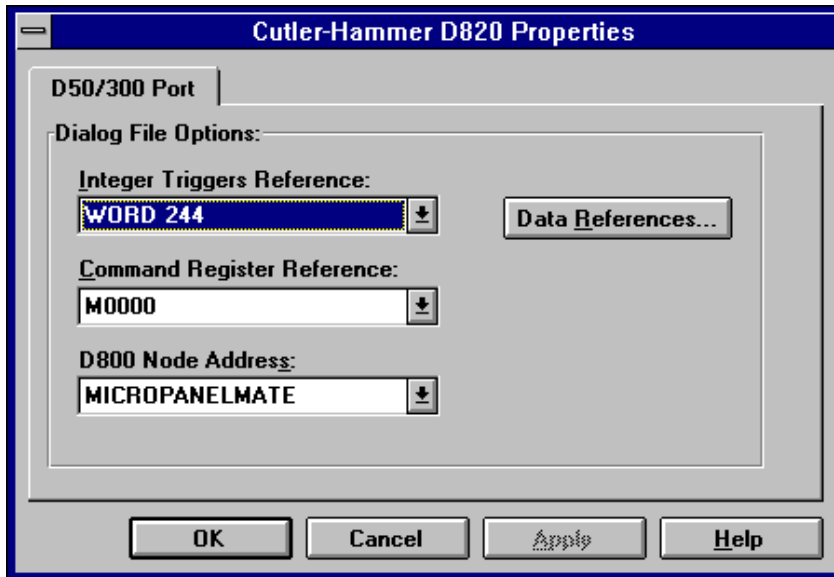
The **New**, **Delete**, **Duplicate**, and **Edit** buttons are used exclusively for the maintenance of pages. If a page is currently highlighted, such as page [001] Main Menu in the previous example, the **Delete**, **Duplicate**, and **Edit** buttons will bring up the associated dialog box. The **New** button will trigger a dialog box to create a new page with a unique page number.

Prior to creating, deleting, duplicating, or editing a page, let's explore the method of setting up the D820 and its respective data tags.

How to Setup the D820 Hardware Configuration

This task can be accomplished several ways. The easiest is by double clicking the picture of the D820. Keep in mind that you want to double click anywhere but the preview of the page. If you accidentally double click the preview of the page, you will be taken into the Page Editor. Although this is not a problem, this manual will not cover the Page Editor until later on. Simply close the Page Editor and double click on the D820.

You may double click on the D820 or choose the D800 selection from the Setup Menu to setup the hardware. The following dialog box will appear:

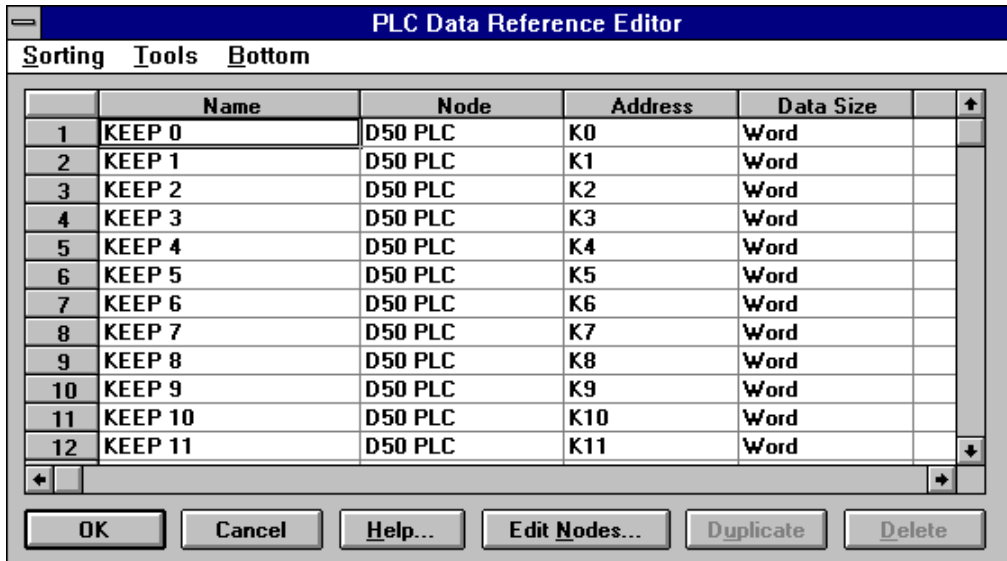


This dialog box defines the serial port and the dialog file locations within the PLC data table. The Integer Triggers Reference field allows you to enter a reference in which the D820 will read and write page numbers internal to the PLC. The Command Register Reference field allows you to specify a reference location where the D820 will write the **YES** and **NO** keys. The D800 Node Address field allows you to enter the physical node address of the D820.

In order to understand this dialog box, we must explore the Data Reference Editor. So click on the **Data References** button.

How to Use the Data Reference Editor

Once having clicked the **Data References** button, the following dialog box will appear:

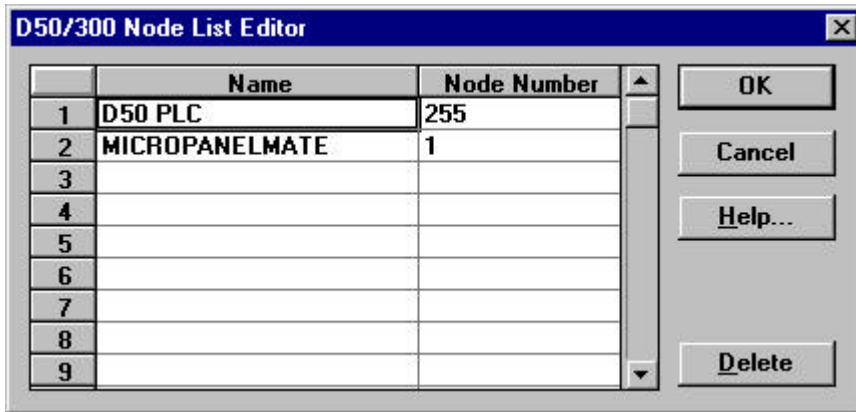


The Micro PanelMate Series of Operator Interface Terminals utilizes a spreadsheet format for data tags. This matrix can be exported, imported, duplicated, etc. The advantage of this format is the fact that you can import your entire label listing directly from the GPC programming software for the D50/D300, thus eliminating the need for creating new information and doubling your development time.

Let us take a look at the **Edit Nodes** dialog box. Setting your nodes up prior to creating your data tags on a new application will help expedite your development. Keep in mind, that since you are editing an existing configuration (sample.820), these attributes have already been set.

D50/D300 Node List Editor

Once you have selected the **Edit Nodes** button in the PLC Data Reference Editor, the following dialog box will appear:



As mentioned earlier, it is easiest to create and edit data tags if these nodes have been assigned first.

The current example places the D50 PLC at node address 255. The reason for selection of this node address is because of the D50/D300 structure. An address of 255 is a global address. Therefore, if you have changed your D50/D300 address, the 255 will ignore its setting and still allow the Micro PanelMate to talk to the D50/D300 without any problems.

Since the Micro PanelMate also resides on the D50/D300 network, it must also have a node address. For this example, we are using node 1.

Network Tip: If you are using multiple D50/D300 PLCs on your network and would like information from any of them, simply place them into your D50/D300 Node List Editor and reference them in your Data Reference Editor. This will allow the Micro PanelMate to gather information from all PLCs located on the network.

Select the **Cancel** button to return to the Data Reference Editor. If you would like additional information on the D50/D300 network, please refer to the D50/D300 Hardware Guide.

Once having returned to the Data Reference Editor, you have the following options:

1. Editing an Existing Reference
2. Creating a New Reference
3. Duplicating an Existing Reference
4. Delete References
5. Purging Unused References
6. Sorting Your References
7. Importing/Exporting References

Since your demo application has already included an entire Data Reference Spreadsheet, using the Data Reference Editor in detail is not necessary. However, please feel free to navigate through this dialog box in order to familiarize yourself with its features. If you desire additional information, use the on-line help.

If you click on the Node column, you will notice a dropdown listing of all the nodes available. Currently, there are the D50 PLC and the MICROPANELMATE. As mentioned in the **D50/D300 Node List Editor** topic, you can place as many nodes as are supported on the D50/D300 network in this listing.

Select the **Cancel** button to return to the **Cutler-Hammer D820 Properties** dialog box. The values you see under the Integer Trigger and Command Word are references that are in the Data Reference Editor. The Node address is coming directly from the Node Editor.

Select the **Cancel** button once again to return to the Page Directory screen. Your hardware configuration is complete. We are now ready to look at the pages.

How to Define the Page Properties

Although you have an entire configuration already loaded into your D820, let us go ahead and create a new page. Select the **New** button on the right hand side of the Page Directory and the following dialog box will appear:

The screenshot shows a dialog box titled "Page Properties" with a "Display" tab. The dialog contains the following fields and controls:

- Page Name:** An empty text input field.
- Page Number:** A text input field containing the number "9".
- Open Options:** A group box containing three radio buttons: Clear, Cover, and Overlay.
- Page Linking:** A group box containing two rows. The first row has "Previous Page" with a text input field containing "0" and a "Browse..." button. The second row has "Next Page" with a text input field containing "0" and a "Browse..." button.
- Description:** A large empty text area.
- Buttons:** At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

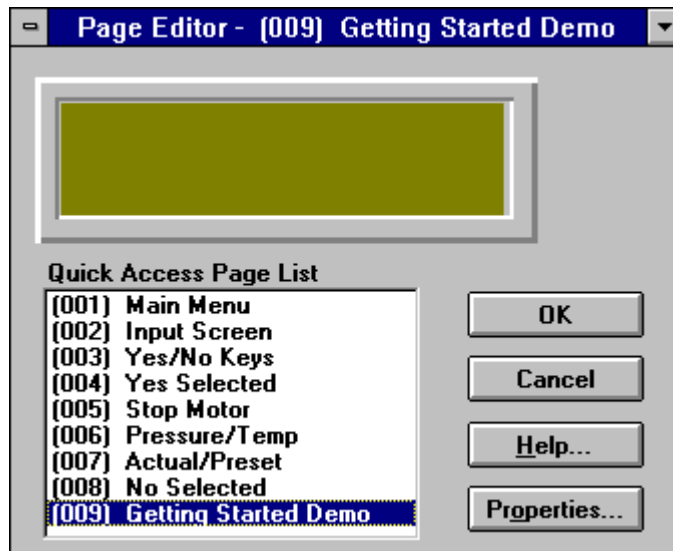
Use a descriptive name for the Page Name field. Keep in mind that the name will appear along with the page number when we return to the Page Directory. The advantage of using a descriptive name is the fact that you will be able to easily identify it when looking at the Page List. Note that in the Page Number field, you may enter any number between 1 and 400.

The Open Options fields cannot be configured for a D820 unit.

The Previous Page and Next Page fields allow this page to either return to where it came from or go to another page (linking). If you choose to leave zeros in both the Previous Page and Next Page fields, the D820 will be forced to stay on that page until the D50/D300 decides to trigger another page through ladder logic.

The description simply allows you to explain, in detail, what the purpose of this page is relative to the configuration. As you will see, the sample.820 has descriptions for every page. This allows you to understand each page even though you did not do the original development.

In Page Name field, type: Getting Started Demo. In the Previous Page field, type: 7. In the Next Page field, type: 1. In the description field, type: Getting Started Demo Screen. Click the **OK** button. At this time, you should see the following dialog box:



The image of the Page Editor depicts the actual D820 screen (2 lines by 16 characters). You are allowed to place up to three objects on the page at any one time.

Page Objects



The three icons listed above are the tools available for the D820 for creating a page.



The arrow icon is the Select Objects tool. This allows you to select a singular object or group of objects on the page window. Use this tool when you want to move an object, edit an object, or select an object.



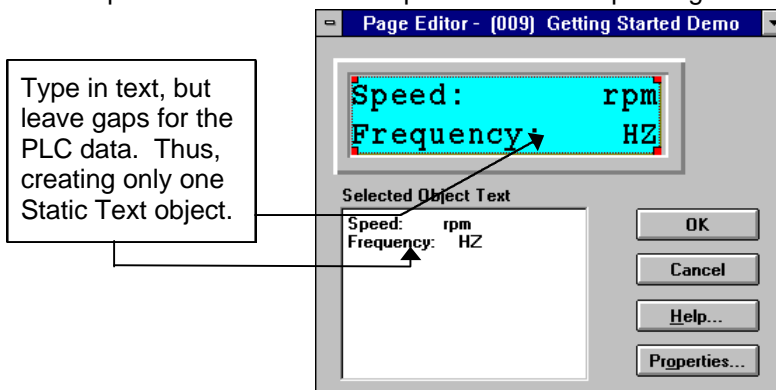
The “A” icon is the Static Text tool. This allows you to create text on the 2x16 display window. You are allowed to create up to three Static Text objects on one page. However, keep in mind that you can put text as one object and lay a PLC Data object on top.

To place text on the screen, follow these steps:

- 1 Select the Static Text tool.
- 2 Click on the page where you wish to place the text.
- 3 Type the text in the Selected Object Text field as shown in the figure below.
- 4 Click off the edit area to close the field.

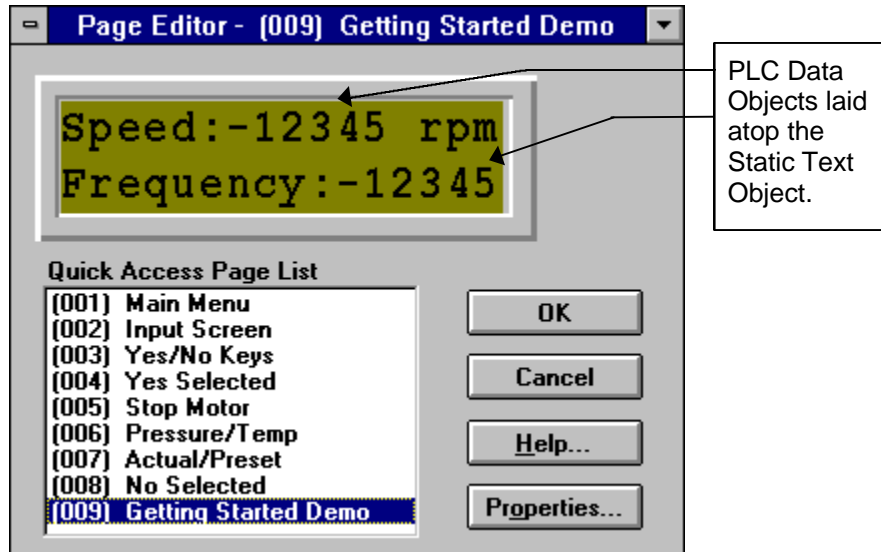
NOTE: If a space is entered as a Static Text object, the object cannot be selected or deleted.

The figure below shows you how to place two PLC Data objects on the page along with their respective Static Text descriptions without surpassing the three object limit.





The “PLC 123” icon is the PLC Data object tool. This tool allows you to place dynamic data from the PLC on the page. To continue with our previous example, select the PLC Data object, place the cursor after the Static Text “Speed:”, and click your left mouse button. Select the PLC Data object again and place another PLC Data object after the Static Text “Frequency:”. Your page should look like the following:



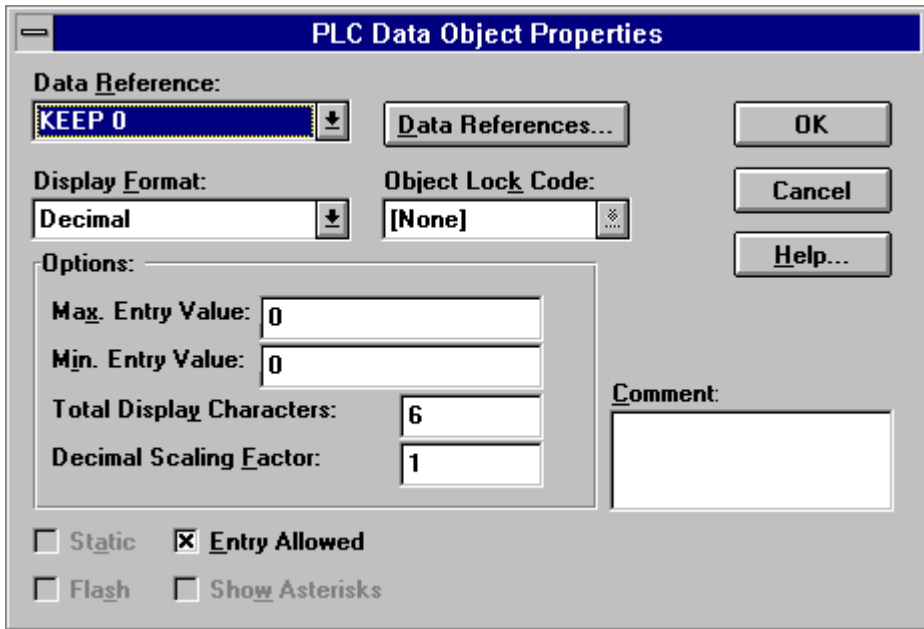
Do not be concerned that the second PLC Data object overlaps your Static Text object. In the following steps, we will format the PLC Data object's properties.

The properties we will assign for the PLC Data object are:

- 1 Location inside the PLC
- 2 Upper and Lower limits for data being entered
- 3 Format of the information being displayed

Choose the arrow icon and select the PLC Data object located on the top line of the D820. Once selected, the object will have green boxes on all four corners. While the object is selected, double click on the left mouse button, click the right mouse button, or choose the Object Properties selection from the Edit Menu.

At this time, your display should show the following dialog box:



The Data Reference drop down menu will give you all the locations in the PLC that are in your Data Reference Editor. If you do not see a reference you desire, simply select the **Data Reference** button and add the reference you desire. For this example, select Timer I SV in the Data Reference field.

The Display Format drop down menu allows you to scroll through the choices available for the PLC data objects displayed on the D820. The choices are shown below. Display format examples are shown in the parentheses.

Decimal (12345)	Decimal.1 (1234.5)	Decimal.2 (123.45)
Decimal.3 (12.345)	Decimal.4 (1.2345)	Decimal.5 (.12345)
Hexadecimal (3039)	Binary (0011000000111001)	ASCII (09)

These formats are provided in order to depict the PLC Data in the visual format that you would like the operator to view it. This does not affect the values inside the PLC, it strictly converts them back and forth for the operator's convenience. For this example, leave the format as decimal.

The Max. Entry Value field and Min. Entry Value fields are the next inputs necessary for the PLC Data object. These items allow you to restrict the access the operator has to the PLC data table. If you leave these values as zero, the D820 will not be able to enter any value into the PLC. For this example, place the value of 99 into the maximum area and 1 into the minimum area.

NOTE: Rather than placing zeros in the Max. Entry Value field and the Min. Entry Value field to disable operator entry, a better solution is to de-select the Entry Allowed box located on the bottom the dialog box. By taking the check mark away from Entry Allowed box, the PLC Data Object becomes a read only field versus a read/write field.

The Total Display Characters field determines the number of digits you will view on the D820. This is used to limit the viewing of an entire word and keep the focus on a specific number of digits. For this example, leave the number of digits at 6. Click the **OK** button to return to the D820 Page Editor.

Repeat the same steps for the PLC Data object on the bottom line, however, this time place the following information into the fields:

PLC Data Object Properties

Data Reference:
TIMER 1 PV [v] [Data References...]

Display Format: Decimal.1 [v]

Object Lock Code: [None] [v]

Options:

Max. Entry Value: 0000.0

Min. Entry Value: 0000.0

Total Display Characters: 3

Decimal Scaling Factor: 1

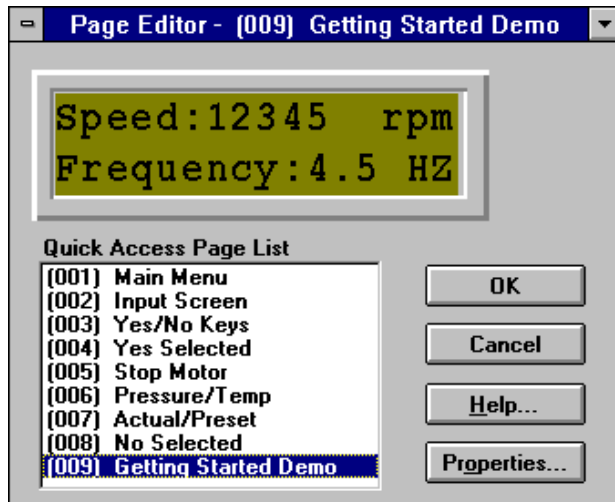
Comment:

Static Entry Allowed

Flash Show Asterisks

[OK] [Cancel] [Help...]

After you have configured the **PLC Data Object Properties** dialog box, your Page Editor should show the following:



Click the **OK** button to return to the Page Directory.

At this time, since your configuration has changed, it is time to learn about the Integrity Check.

How to Use the Integrity Check



The “check” icon is the Integrity Check Tool. You can also choose the Integrity Check selection in the Tool Menu. This feature enables you to verify the accuracy of the configuration. The configuration cannot be downloaded to the Micro PanelMate without first passing the Integrity Check. In addition, the simulator cannot be run without passing the Integrity Check.

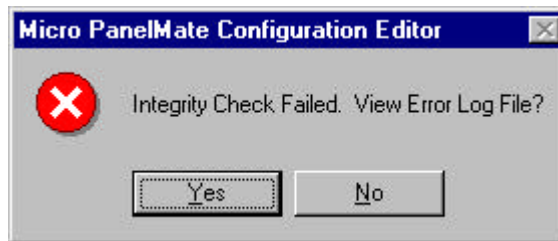
The Integrity Check will analyze the hardware setups of the Micro PanelMate, node addresses, dialog file, and command register. In addition all pages are verified for valid setups, PLC address assignments, PLC Data objects being covered, and invalid references. With this tool, you can be guaranteed that the configuration that you have created will download to the Micro PanelMate correctly.

At this time, click the Integrity Check icon.

After the Integrity Check passes, you should see the following message:



If your configuration does not pass the Integrity Check, you will receive the following message:



For this example, your Integrity Check should have passed. If it did not, please review the aforementioned steps and run the Integrity Check again. You may also click on the **Yes** button and view the error log stating why your configuration did not pass. Correct the error(s) listed in the log and run the Integrity Check again.

In addition to verifying the accuracy of your configuration, the Integrity Check also lists the memory usage via the D800 Memory Usage Percent bar located on the lower right hand side of the Micro PanelMate Configuration Editor status bar. This bar will increase as more pages are created.

The D800 Memory Usage Percent Bar has the following indicators:

- 1 Green: Current Configuration will download to the Micro PanelMate Series
- 2 Yellow: Current Configuration will download to the Micro PanelMate Series but you are approaching the maximum memory limit of the D800 page capacity.
- 3 Red: Current Configuration will probably not fit into the D800 memory.

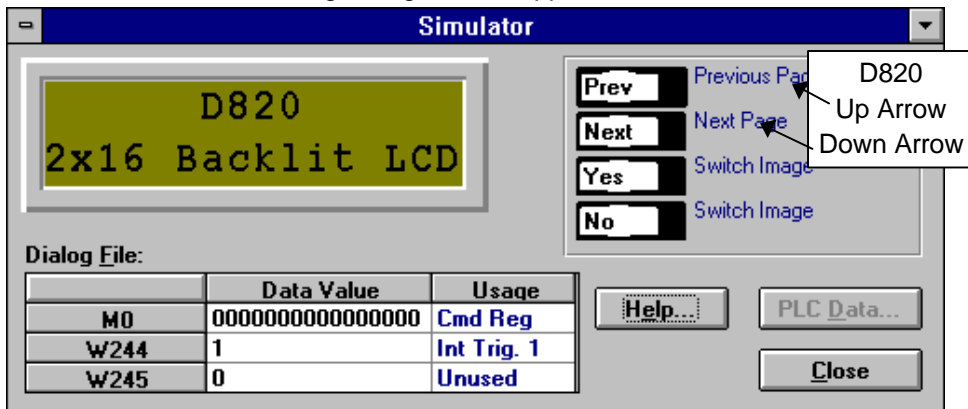
NOTE: Although some applications may download even while in the red, it is not advisable to allow this condition to occur. Remove and condense pages until the D800 Memory Usage Percent Bar returns to the yellow status.

How to Use the Built-in Simulator



The “PLC/PC/D800” icon represents the Simulator. You can also choose the Simulator selection from the Tool Menu. This feature allows you to debug an application without the need for having the PLC, personal computer, and D800 on-line together. The Simulator is extremely useful to walk through the configuration as an operator would see it, not as you had hoped the operator would see it.

Click on the icon and the following dialog box will appear:



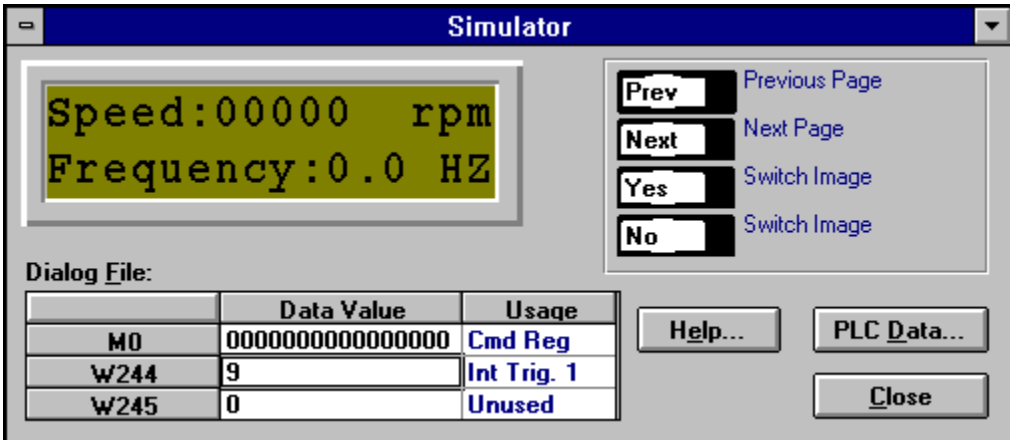
Once having entered this screen, simply click the **PREV** and **NEXT** buttons. This will simulate what the operator would see by using the **Up Arrow** and **Down Arrow** on the D820.

NOTE: The **YES** and **NO** keys are referenced in the sample.820 configuration. The simulator will not demonstrate the result when the operator selects the **YES** or **NO** key. The reason is the fact that the D820 writes the **YES** and **NO** keys as bits to the command word not to the D820 unit. Therefore, it is up to the PLC to use the **YES** and **NO** bits in its ladder logic to either start or stop a process or trigger a new page.

To demonstrate the action of the **YES** and **NO** keys, click your mouse on either one and watch the M0 field. Notice what happens? As you click the **YES** or **NO** buttons on the screen, the Simulator energizes the corresponding bit. For additional information on this feature, reference the D820 Hardware Users Manual or the Micro PanelMate Configuration Editor Users Manual.

Demonstrating Page 9

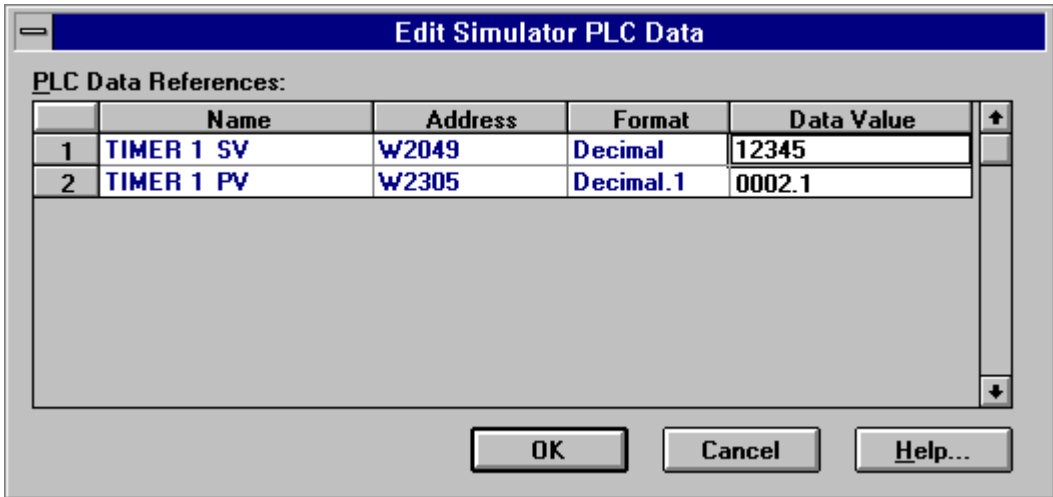
Let us take a moment to trigger the page we had just created, Page 9. Double click on the Data Value field for W244. Replace the current number with the number 9 and press the **Enter** key on your keyboard. The display of the D820 should reflect the following:



At this time, the Simulator is demonstrating what the operator would see when using the D820.

Since the operator would most likely see information on this page, other than zeros, the Simulator has the capability of mimicking a PLC's operation.

By clicking on the **PLC Data** button, the following dialog box should appear:



The **Edit Simulator PLC Data** dialog box allows you to place values into the PLC data fields as if the PLC were doing the action. Enter the values shown in the above figure and click the **OK** button when finished. The display for the D820 should reflect a 12345 in the RPM area and a 2.1 for frequency.

Try placing your cursor over the 2.1 and click. Notice anything? Nothing should have occurred because we did not select the **Entry Allowed** box in the **PLC Data Object Properties** dialog box. This is what the operator would also have seen by using the **SELECT** key. The **SELECT** key on the D820 will only access the RPM field and not the Frequency field.

Place your cursor over the numbers to the right of speed. Click on the numbers, you should see the following:



At this point, you can enter in a numeric value. Enter in the value between 1 and 99. If you enter a value outside this range, an error message will appear indicating your error. When the operator uses this screen during normal operation, the operator can alter the information by first using the **SELECT** key to highlight the PLC Data object and then the **ENTER** key to enter into the object.

After entering into the object, the operator can use the **Up Arrow** and **Down Arrow** keys to scroll through the numeric choices. The **Left Arrow** and **Right Arrow** keys move through the multiple digits of the PLC Data object.

Congratulations on completing the walk-through of the D820 Operator Interface Terminal. You have created data references, assigned hardware characteristics, performed an Integrity Check on a system, created a page, and simulated the application. Click the **Close** button to exit the **Simulator** dialog box.

You are now ready to create your own configuration. Keep in mind that the only item limiting you is your imagination!

Chapter 4

Downloading the Sample Configuration

In this chapter, you will learn:

- About the GPC programming software
- How to Download the sample ladder into the D50/D300 PLC
- How to Download the sample application into the D820

The GPC Programming Software Main Screen (D50/D300)

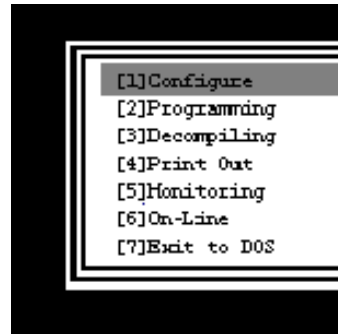
The following information will provide you with the steps necessary to download the sample ladder to the D50/D300 PLC.

The programming software for the D50/D300 PLC must be run under a DOS window or DOS environment. If you are not familiar with navigating around the D50/D300 off-line programming software, please refer to its respective programming manual.

NOTE: To proceed with the following download steps, you must have the D50 or D300 PLC, programming cable, and power source. The PLC must be connected to the personal computer. If you have questions on this procedure, please refer to the Cutler-Hammer D50/D300 programming hardware guide.

Upon running the GPC program, the following screen will appear:

1. Select [6] On-Line.
2. Select [2] Down Loading.
3. Enter the filename: CHDEMO
(Installed with GPC). If not on the hard drive, contact Cutler-Hammer at 1-800-809-2772.
4. Enter 255 for CPU ID.
5. Enter the password "PASSWORD".
6. Proceed with download.
7. Place the PLC back into run mode.
8. Disconnect the programming cable from the personal computer.



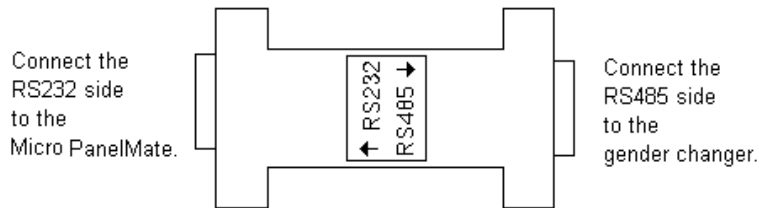
How to Connect the Micro PanelMate to your Personal Computer

The following items will be necessary in order to connect the Micro PanelMate to a D50 or D300 PLC:

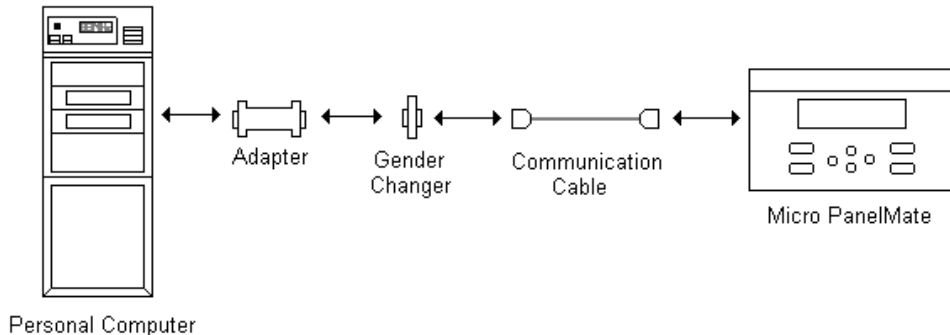
- 5VDC power supply
- RS232-RS485 Adapter (Catalog Number D50CPM485)
- D800CBLCH82 Communication Cable

Follow the steps below to connect to the D50/D300 PLC:

- 1 Connect the RS232-RS485 adapter to the personal computer. Make sure the RS232 side of the adapter is connected to the Micro PanelMate and the RS485 side of the adapter is connected to the gender changer.

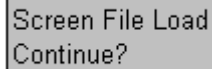


- 2 Connect the gender changer to the communication cable.
- 3 Connect the communication cable to the D820.



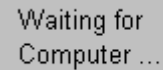
Preparing the D800 for Download

Once the Micro PanelMate is connected to the personal computer, hold the **ENTER** key down on the D820 while applying power. After the D820 powers up, the following message should appear on the display:

A rectangular box with a thin black border containing the text "Screen File Load" on the top line and "Continue?" on the bottom line.

Screen File Load
Continue?

Press the **YES** key to place the D820 into a download/upload state. Once having pressed the **YES** key, you should see the following:


A rectangular box with a thin black border containing the text "Waiting for" on the top line and "Computer ..." on the bottom line.

Waiting for
Computer ...

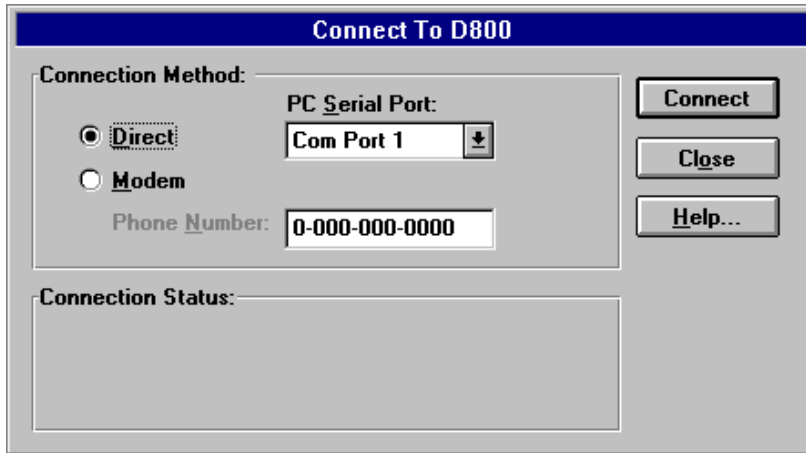
After viewing this message, return to the Micro PanelMate Configuration Editor and press the **Connect** button.

The Micro PanelMate Configuration Editor will display a status message in the window briefly. If the all connections were properly done, the display on the computer will change to the following screen listed on the next page. If the connections were not made, the Micro PanelMate Configuration Editor will display an error message along with a status message for correction. If you receive the error message, please verify the COM port, power on the D820, and cable pinouts.

How to Download the Sample Application into the D820

Choose the Download to D800 selection in the Communications Menu or click on the  icon located on the toolbar.

An Integrity Check must be performed successfully before the following dialog box will appear.



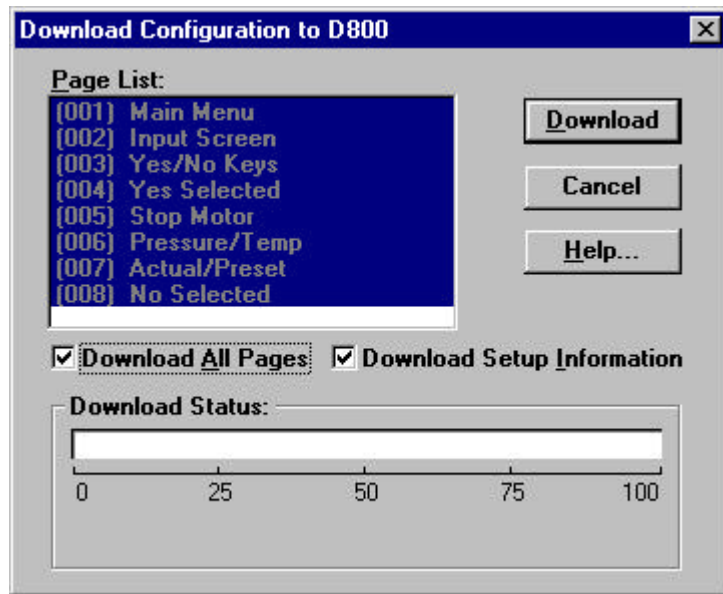
After you have prepared the D820 for downloading, select the serial port connected to the communication cable in the **Connect To D800** dialog box, then click the **Connect** key.

If the connection is not made, the Micro PanelMate Configuration Editor will display an error message along with a status message for correction. If you receive the error message, check the following items:

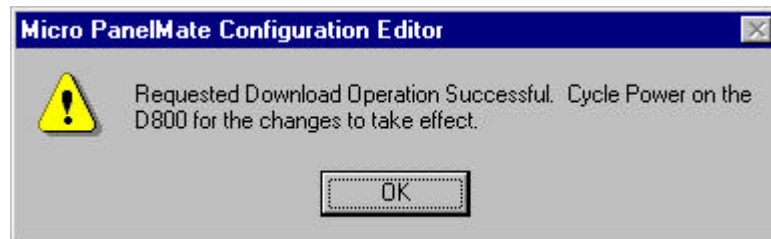
- Make sure you are using the correct communication port
- Make sure direct power is applied to the D820 unit
- Verify cable pinouts
- Make sure you are using the RS-232 to RS-485 adapter correctly

NOTE: The D800 Series have modem support built-in as a standard feature. The Micro PanelMate Configuration Editor Software can control your modem and allow for remote uploading/downloading to and from the D800. Additional information is available in the Micro PanelMate Configuration Editor Manual.

If the connections are done properly and communication has been established, the Micro PanelMate Configuration Editor Software will display the following dialog box:



At this time, the entire configuration is ready to be downloaded. Simply select the **Download** key and watch the Download Status indicator bar for an update. Once finished, the Micro PanelMate Configuration Editor will display the following message:



Once this message appears, disconnect the power cable from the D820 unit, disconnect the communication cable from the personal computer, and then plug the communication cable directly into the D50/D300 PLC. The demo is about to begin.

