

QUICK START GUIDE

PLC WorkShop SuperSuite/Suite for Modicon

PLC WorkShop for Modicon

Modicon Simulator

FTVersionTrak/FTVersionTrak PE

FasTrak
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This is a Quick Start guide, not a comprehensive manual. Its purpose is to get you started, and many features are not mentioned. For detailed descriptions of the features, refer to the PLC WorkShop for Modicon help system.

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Chapter 1 – System Requirements and Installation

Using the Quick Start Guide

Welcome to the Quick Start Guide for the PLC WorkShop for Modicon Suite/Super Suite. The purpose of this Quick Start Guide is to get you using the software quickly. For this reason, this guide does not contain comprehensive information about all facets of the Suite/Super Suite. For detailed descriptions of features, please refer to the online help included with each application.

PLC Workshop for Modicon Suite/SuperSuite Requirements

PLC Support

Supports the entire line of Quantum, Compact, TSX Compact, Momentum, 984, Micro, and 584 Modicon PLCs

Operating Systems

Client/Workstations

Windows XP Professional w/SP1 or later

Windows Vista Business or Enterprise

Windows 7 32-Bit or 64-Bit

Windows 8

Database Operating Systems

Windows Server 2003 SP1 or later

Windows Server 2008

Windows XP Professional SP1A or later

Windows Vista Business or Enterprise

Windows 7 32-Bit or 64-Bit

Windows 8

Note: Home/consumer versions of Windows are not supported.

Supported Databases

MS SQL Server 2005

MS SQL Server 2005 Express (included)

MS SQL Server 2008

MS SQL Server 2008 Express

Communications Support

Supports all methods of communications including Serial with modem support (COM 1–COM 4), Modbus Plus including Applicom, TCP/IP, and TCP/IP to Modbus Plus Bridges

Hardware Requirements

PC Platform

Recommended – 1 GHz or greater

Memory

Recommended – 512 MB or greater

Hard Disk Space Required

100 MB for client, 525 MB minimum for database

NOTE: You must be logged in as the administrator to install the PLC WorkShop Suite/Super Suite for Modicon.

Installing the PLC WorkShop for Modicon Suite/SuperSuite

Installing the PLC WorkShop for Modicon Suite/Super Suite consists of installing PLC WorkShop for Modicon, Modicon Simulator, and FTVersionTrak. The Suite includes the basic version of FTVersionTrak (PE), while the SuperSuite include the full version. Contact Sales if you want to upgrade.

Installing PLC WorkShop for Modicon

1. Insert the PLC WorkShop for Modicon CD in your PC's CD-ROM drive. You must be an Administrator to install PLC WorkShop for Modicon.
2. The setup program should start automatically. If not, manually run the setup program. (The set up program can be found at `x:\setup.exe`, where `x` is the letter of the CD-ROM drive).
3. To install PLC WorkShop for Modicon, click **INSTALL MOD WORKSHOP** and follow the instructions that appear.
4. To install 505 Simulator, click **INSTALL MOD SIMULATOR** and follow the instructions that appear.

5. When the installations are completed, click **EXIT**.
6. Remove the PLC WorkShop for Modicon CD from your PC.

Installing FTVersionTrak

Please refer to the FTVerisonTrak installation guide.

Chapter 2 – Using FTVersionTrak

Using FTVersionTrak with PLC WorkShop for Modicon

This guide describes using the basic version (FTVersionTrak PE), as well as the complete version (FTVersionTrak). The Suite includes FTVersionTrak PE, while the SuperSuite includes FTVersionTrak.

After installing FTVersionTrak, do the following to create a repository and begin experiencing the benefits of using FTVersionTrak to track, manage, and compare changes to your PLC WorkShop for Modicon program files.

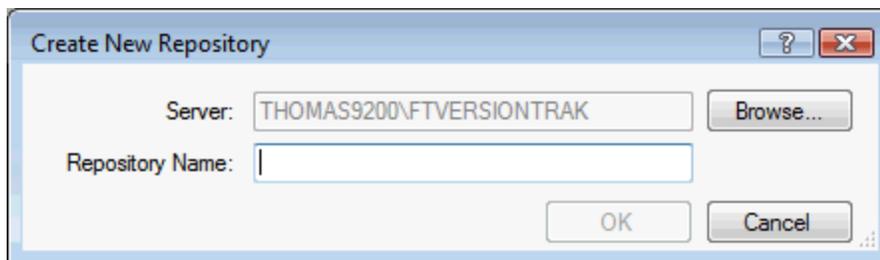
To create your FTVersionTrak repository:

1. Start your PLC WorkShop for Modicon application.
2. At the top of the PLC WorkShop for Modicon window, you should see the following FTVersionTrak toolbar:



3. Click the  button on the toolbar to launch the FTVersionTrak client. The following dialog box appears. (Note: Users of the PLC WorkShop for Modicon

SuperSuite will need to select a server first. See the online help for detailed information.)



4. Enter a name for your FTVersionTrak repository and click **OK** to create the repository. Once the repository is created, you may close the FTVersionTrak client.

Certain aspects of the PLC WorkShop for Modicon environment are different when your PLC WorkShop for Modicon programs are protected by FTVersionTrak. Most differences occur automatically when opening and closing PLC WorkShop for Modicon files. All other version control features can be accessed using the FTVersionTrak toolbar.

FTVersionTrak Toolbar

The FTVersionTrak toolbar consists of buttons that represent version control options available in PLC WorkShop for Modicon. View the FTVersionTrak toolbar by clicking **FTVersionTrak Toolbar** on the **Toolbars** menu.



Button	Function
	Connect to the FTVersionTrak repository and add the active program
	Get a version of the active program file and place it into your working directory
	Check out the active program
	Check in the active program
	Undo checkout of the active program
	Compare the working copy of the active program to the version in the repository

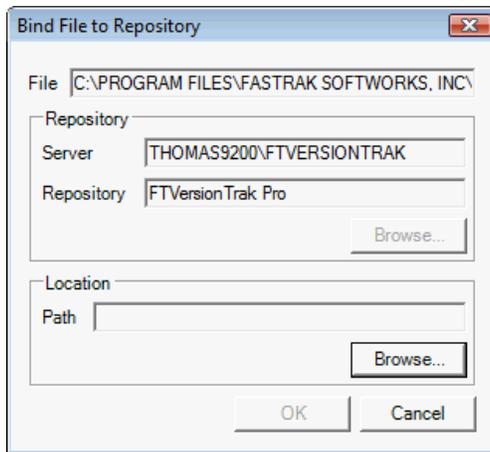
-  View the version history of the active program
-  Electronically sign the active program
-  Launch the FTVersionTrak client application

Adding Files to the FTVersionTrak Repository

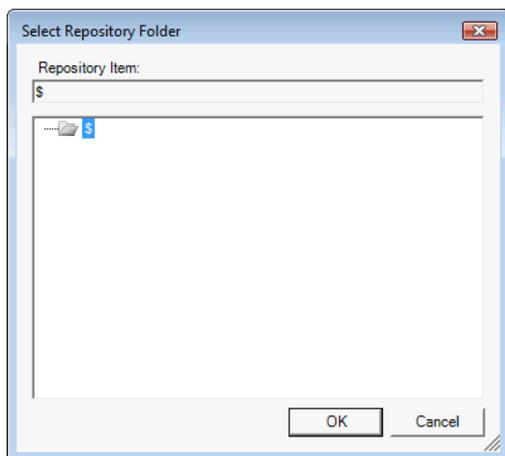
Before FTVersionTrak can begin securing your program files, they must be added to the FTVersionTrak repository. The repository is a secure, compressed database that exists apart from your local file system. This database keeps track of any changes made to the files added to it, as well as securing them from accidental or unauthorized deletion or removal.

To add a PLC WorkShop for Modicon file to the FTVersionTrak repository:

1. Open the program file in PLC WorkShop for Modicon.
2. Click  on the FTVersionTrak toolbar. The Bind File to Repository dialog box appears.



3. Under **Location**, click **Browse**. The Select Repository Folder dialog box appears.

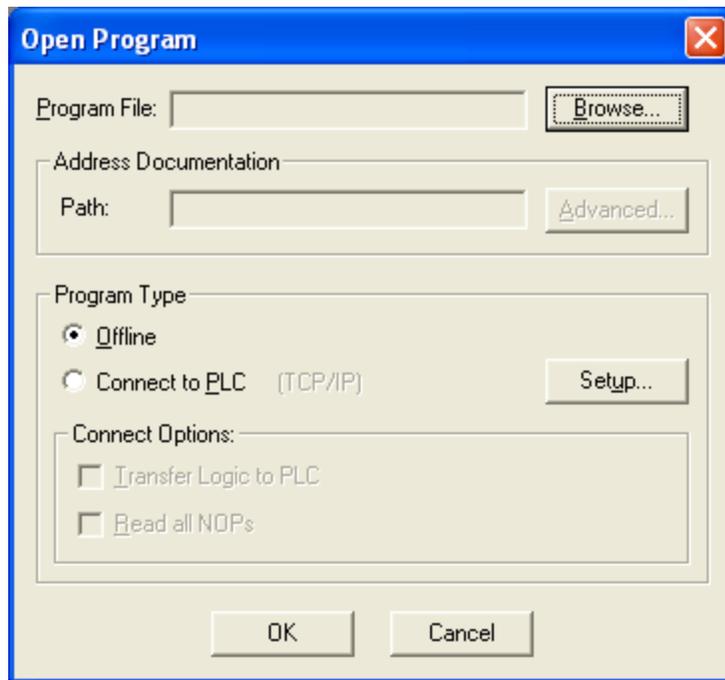


4. By default, no repository folders have been created. Click **OK** to add your program file to the root of the repository (this can always be changed later). Click **OK** to return to the Add File to Repository dialog box.
5. Click **OK** in the Add File to Repository dialog box. The program is added to the repository, and FTVersionTrak will begin to manage the changes to your program.

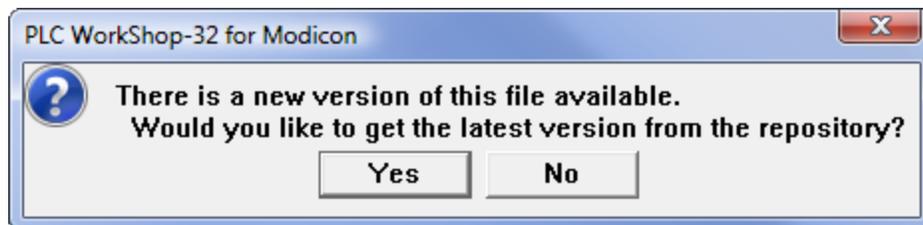
Opening PLC WorkShop for Modicon Files

Once a PLC WorkShop for Modicon file has been added to the FTVersionTrak repository and the latest version placed in your working directory, FTVersionTrak's seamless integration automates the version control process. Follow this procedure when opening PLC WorkShop for Modicon files protected by FTVersionTrak for best results:

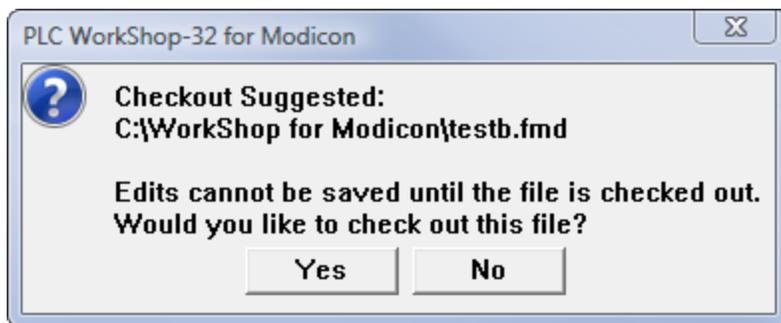
1. After launching PLC WorkShop for Modicon, open the program by clicking **Open** on the **File** menu or by clicking the  toolbar button. The Open Program dialog box appears.



2. Click **Browse** and browse for the file. The file should be located in the directory specified in the get operation. Select the file and click **Open**. Click **OK** in the Open Program dialog box.
3. FTVersionTrak compares your version of the program with the version stored in the repository. If a newer version of the program is available, a message appears, allowing you to get the latest version.



- Click **Yes** to get the latest version.
 - Click **No** to open the older version of the program.
4. FTVersionTrak then verifies the check out status of the file. If the file is checked out to you, it opens normally. If not, a message appears, allowing you to check out the file.



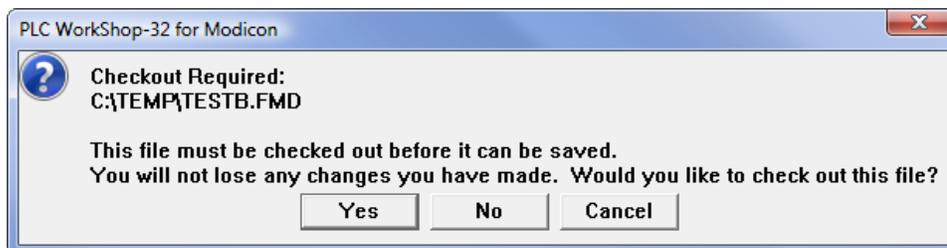
- Click **Yes** to check out the file.
 - Click **No** to open the file without checking it out.
 - The program opens in PLC WorkShop for Modicon.
5. After the program opens, the FTVersionTrak toolbar becomes active. The actions available using the FTVersionTrak toolbar pertain to the active program.

Saving PLC WorkShop for Modicon Files

Edits to PLC WorkShop for Modicon files protected by FTVersionTrak are not complete until they have been saved and checked in. PLC WorkShop for Modicon automates this process to prevent accidental loss of changes to the program. The following processes illustrate the various scenarios a user encounters when attempting to save a PLC WorkShop for Modicon file protected by FTVersionTrak.

Saving a PLC WorkShop for Modicon File That Has Not Been Checked Out

If you attempt to save a file that is tracked by FTVersionTrak, but not checked out, then you will be prompted to check out the file.



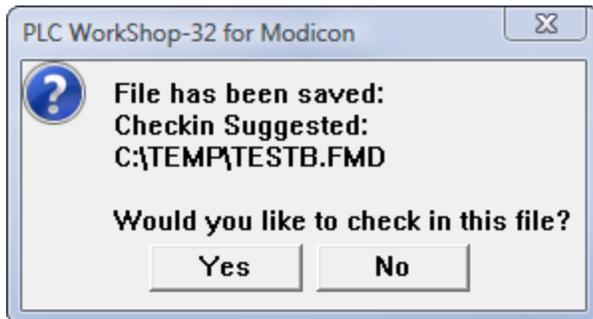
Clicking **Yes** displays the Check Out dialog box. After the file is checked out, PLC WorkShop for Modicon saves the file.

NOTE: Depending on the FTVersionTrak Options set in PLC WorkShop for Modicon, available by clicking **Application Setup** on the **Options** menu, you may be prompted to check in the file after it has been saved. Otherwise, you can check in the file by clicking  in the FTVersionTrak toolbar.

If you click **No**, the Save As dialog box appears. If the file is not checked out, you must save the file with a different filename to keep any changes made to the file.

Saving a PLC WorkShop for Modicon File that is Currently Checked Out

When you choose to save a program that is checked out to you, PLC WorkShop for Modicon can also check in the file for you automatically. Clicking **Application Setup** on the **Options** menu displays the FTVersionTrak Options available in PLC WorkShop for Modicon. Selecting the **Ask to Check In File After Save** check box displays the following message after each save:



Clicking **Yes** displays the Check In dialog box. After the file is checked in, PLC WorkShop for Modicon keeps the file checked out to you so that you may continue editing the program. Clicking **No** saves the working copy on your computer but does not write any changes to the FTVersionTrak repository. The file can be checked in manually by clicking  on the FTVersionTrak toolbar.

Closing PLC WorkShop for Modicon Files

The procedure to close a PLC WorkShop for Modicon file is slightly different when the file is protected by FTVersionTrak. Depending on the file's status, FTVersionTrak offers a number of different options to the user to prevent the loss of data.

Closing Programs that are Checked Out

If the program file being closed is checked out to the current user, FTVersionTrak displays a prompt suggesting the file be checked in.



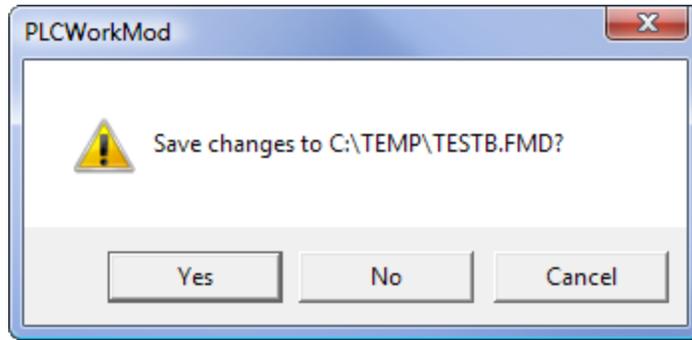
Click **Yes** to display the Check In dialog box. After the file is checked in, the file closes normally. Click **No** to close the file, leaving it checked out.

NOTE: If the file contains edits that have not been saved, PLC WorkShop for Modicon will prompt the user to save the file before continuing.

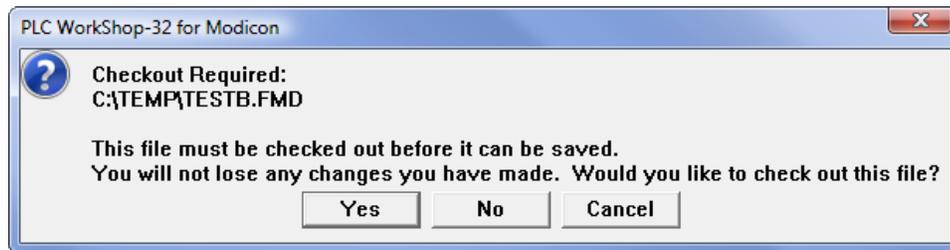
Closing Programs that are Checked In

If a program file being closed has been checked in and no edits remain pending, the file closes normally. However, if the file being closed is checked in (or has not yet been checked out) and edits have been made to the program that have not yet been saved, PLC WorkShop for Modicon will not immediately close the program.

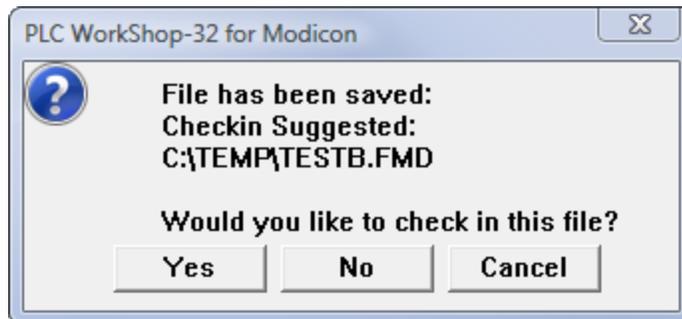
PLC WorkShop for Modicon first prompts the user to save the file.



- Click **No** to lose any unsaved changes and close the program.
- Click **Cancel** to cancel the save and keep the program open.
- Click **Yes** to save the file. PLC WorkShop for Modicon then prompts the user to check out the file.



- Click **No** to display the Save As dialog box and save the file to another file name.
- Click **Yes** to display the Check Out dialog box.
- Once the file has been checked out, PLC WorkShop for Modicon prompts the user to check the file back in to the repository.



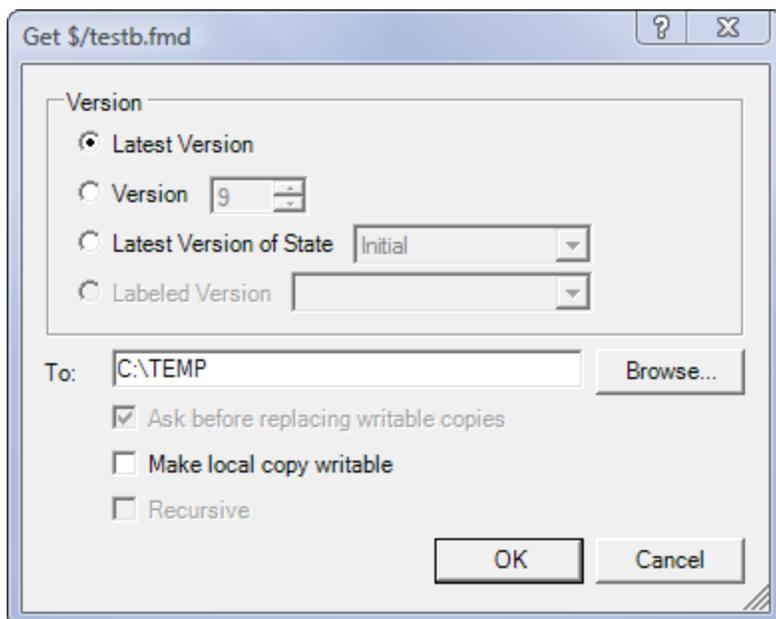
- Click **No** to close the program without writing any changes to the repository. The file is still checked out to the user.
- Click **Yes** to write changes to the repository and close the program.

Getting Versions of a File

The Get action retrieves a version of the active program from the repository and places it in your working directory as a read-only copy to review or check out.

To get a version of the active PLC WorkShop for Modicon program:

1. Click  on the FTVersionTrak toolbar. The Get dialog box appears.



2. Select the options of the version you would like to get under **Version**:
 - Selecting **Latest Version** places the latest version of the file into your working directory.
 - Selecting **Version** allows you to choose the version you would like to get.
 - Selecting **Latest Version of State** allows you to choose a version with a particular repository file state.
 - Selecting **Labeled Version** allows you to choose a version with a particular label.
3. In the **To** box, enter the directory in which to place the working copy or click **Browse** to locate the desired directory. If a working directory has been set, it appears in the text box. If a working directory has not been set, the text box appears as

blank.

4. Select the **Overwrite working copies** checkbox to automatically overwrite any files located within the directory assigned in the **To** box with the Get target files of the same name.
5. Select the **Make Writable** check box to remove the read-only status from the program file.

NOTE: Making working copies writable is not recommended for files you wish to keep under version control. Do not select this option if you plan on checking out and editing the file.

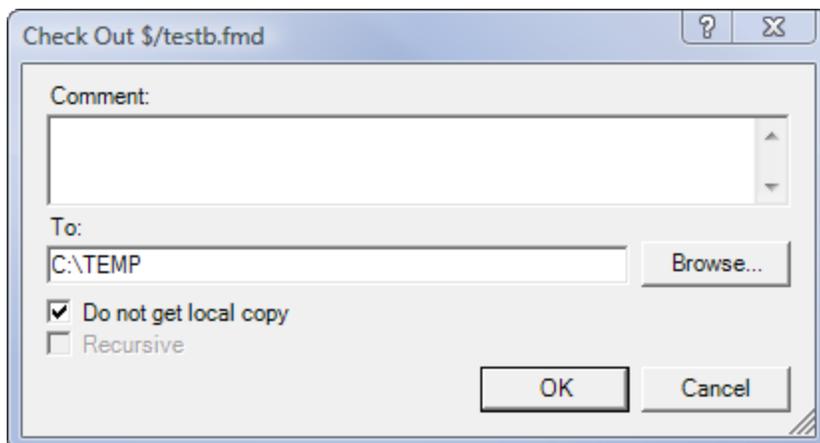
6. Click **OK** when finished. A version of the file is placed in the selected directory.

NOTE: If the path selected in the **To** box is the same as the path of the active program file, the active file will be overwritten even if the Overwrite working copies check box is not selected. If you proceed to overwrite the active program file, the program will exit and any existing changes will be lost. You must open the program again to continue.

Checking Out Files

To make changes to your PLC WorkShop for Modicon program using FTVersionTrak, it must first be checked out. Checking out a file places a writable copy of the file within the user's working directory. If the file is already present in the working directory (following a Get action, for example) then FTVersionTrak removes the read-only status on the file while it is checked out.

1. Click  on the FTVersionTrak toolbar. The Check Out dialog box appears.



2. In the **To** box, enter the directory in which to place the working copy or click **Browse** to browse for the directory. If a working directory has been set, it appears in the text box. If a working directory has not been set, the text box appears as blank.
3. Select the **Do not get local copy** check box if you do not wish to get the version of the repository file while checking the file out.

NOTE: Using the **Do not get local copy** option only checks out the file. This is helpful if your working copy is different than the latest version within FTVersionTrak.

4. If you want, enter a comment about the check out within the **Comment** box. This comment may be edited when the file or folder is checked in. Click **OK** when finished.

After checking out a file or folder, the following options are available:

- Check In the file or folder to write any edits to FTVersionTrak and create a new version.
- Undo the Check Out to cancel any changes made to the file or folder.

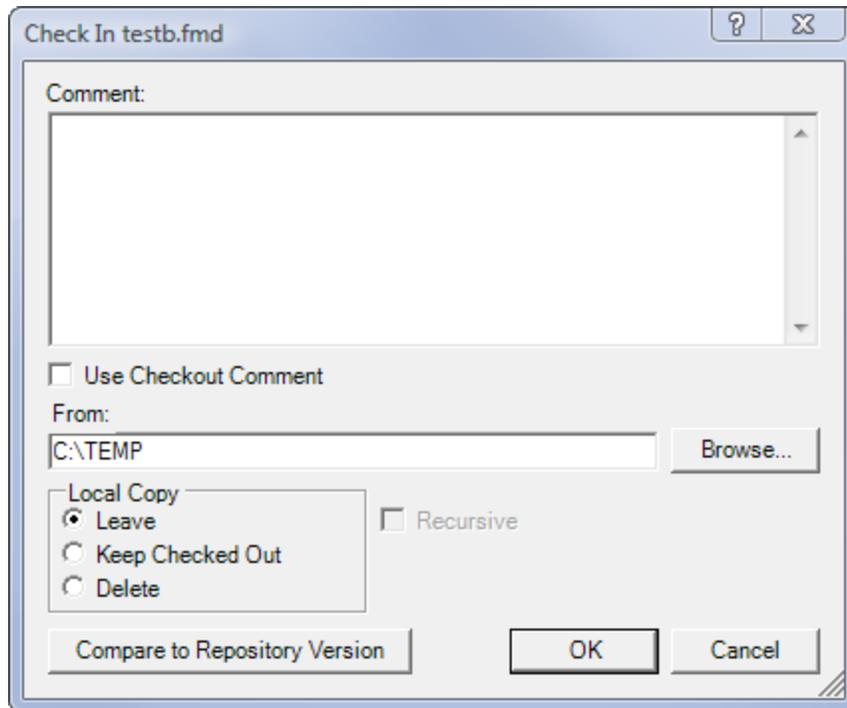
Checking In Files

Check in the program file to write changes to the master copy located in the FTVersionTrak repository. After you check the file in, other users will be able to Get the

modified file, view the changes you have made to the file, and check out the file to work on it as well.

To check in the active PLC WorkShop for Modicon file:

1. Click  on the FTVersionTrak toolbar. The Check In dialog box appears.



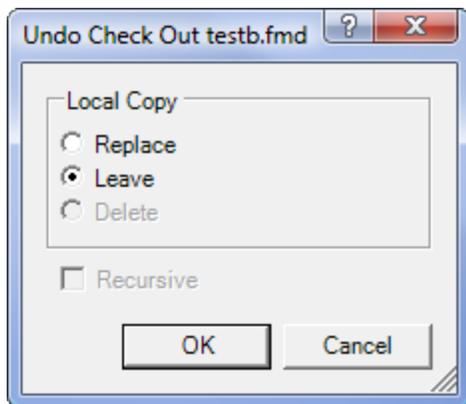
2. In the **Comment** box, type a comment for the check in (optional). If a comment was entered during checkout, it will appear by default in the text box. Select the **Use Checkout Comment** check box to use this comment.
3. The **From:** box will display the local path that the new version will be written from (usually the working directory). Click **Browse** to browse to a different directory.
4. Select the **Keep checked out** check box to write any changes to the repository but keep the program checked out to you.
5. Select the **Delete local copy** check box to remove the working copy on your local system after the check in.
6. Click **Compare** to compare the differences between the version being checked in and another version in the repository.
7. Click **OK** when finished to check in the items.

Undoing a Check Out

Undo the check out if you decide not to save any changes to the repository or create a new version of the PLC WorkShop for Modicon program. Undoing a checkout leaves the file in the state it was in before you checked it out. No new version is created, and no record of the checkout will be left.

To undo a check out of the active PLC WorkShop for Modicon program:

1. Click  in the FTVersionTrak toolbar. The Undo Check Out dialog box appears.



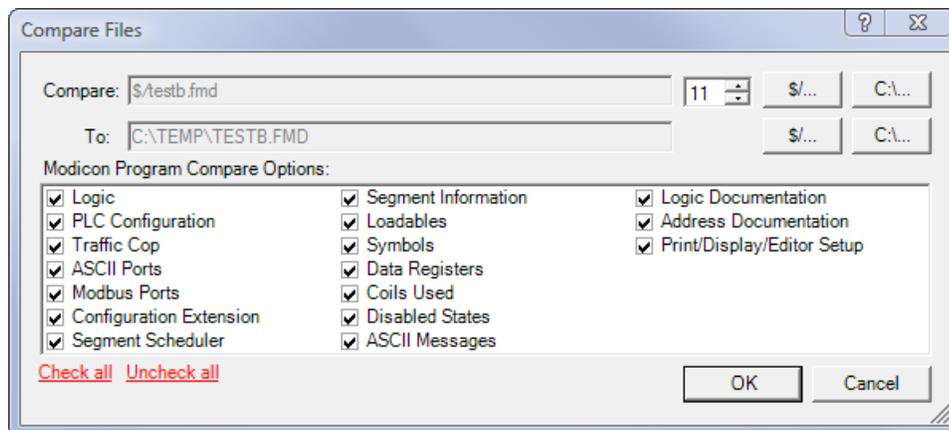
2. Select a Local Copy option:
 - Select **Replace** to replace the local copy of the checked out file with the latest version within the repository.
 - Select **Leave** to leave the existing copy of the checked out file on your local system.
 - Select **Delete** to delete the local copy from the checkout location. If the file was checked out to a location other than the working directory, the location indicated at check out will be deleted and any other copies will be retained.
3. Click **OK** when finished to return to the main window.

Comparing PLC WorkShop for Modicon Files

One of the most useful features of FTVersionTrak is the ability to compare the contents of two PLC WorkShop for Modicon files to each other. Within PLC WorkShop for Modicon, you may compare two different versions of the same PLC WorkShop for Modicon program to each other, or compare a version in the FTVersionTrak repository to the working copy on your local hard drive.

To compare the working copy of the active PLC WorkShop for Modicon program to the latest version in the repository:

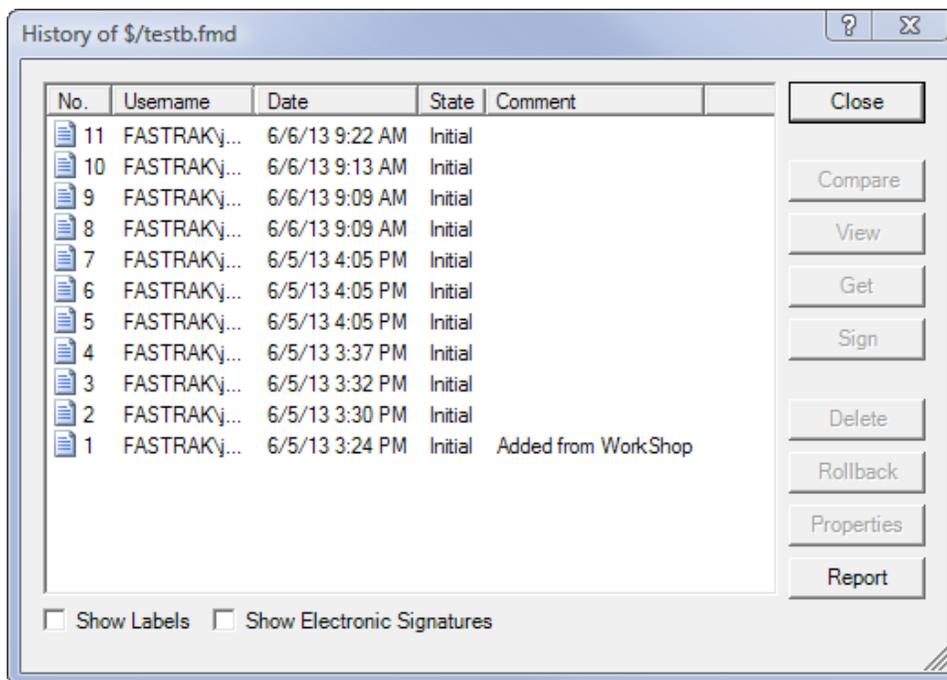
1. Click the  button on the FTVersionTrak toolbar. The Compare Files dialog box appears.



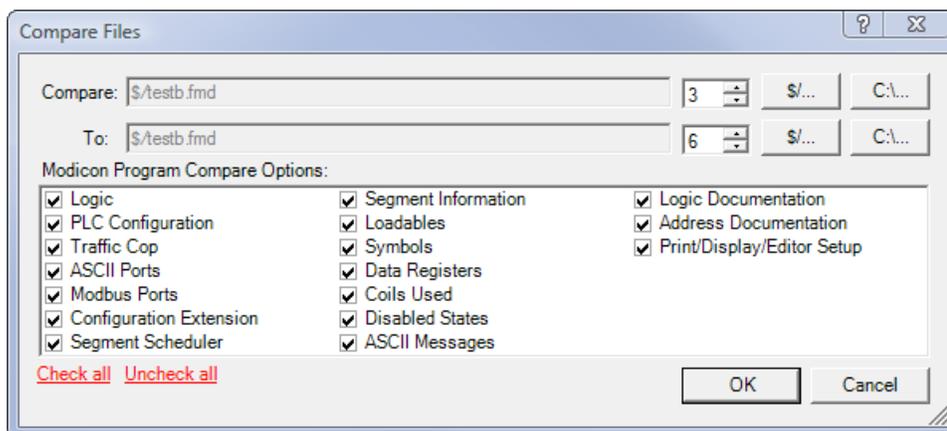
2. Click **OK** to view the file compare results. See the FTVersionTrak documentation for more information on file compare results.

To compare the difference between two version of the active PLC WorkShop for Modicon program:

1. Click  on the FTVersionTrak toolbar. The History dialog box appears.



2. Select the first version of the file you would like to compare. Hold down the **CTRL** key and select the second version of the file you would like to compare. Click **Compare**. The Compare Files dialog box appears.



3. Click **OK** to view the file compare results. See the FTVersionTrak documentation for more information on file compare results.

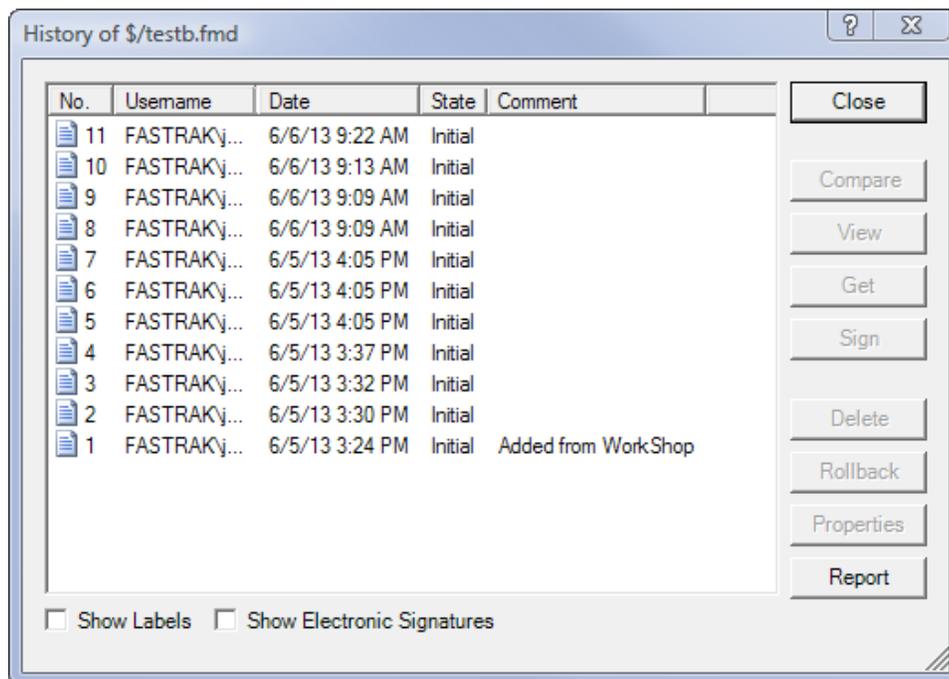
NOTE: Clicking **Compare** without selecting more than one version will compare the selected version to the working copy. Clicking **Compare** without selecting any version will compare the latest version to the working copy.

Viewing File History

Each PLC WorkShop for Modicon file that is managed by FTVersionTrak is given its own history. As you check out, edit, and check in your programs, the history is updated to reflect these changes. Viewing history is the best way to get a clear picture of the changes a program has gone through.

To view the active PLC WorkShop for Modicon program's version history:

1. Click  in the FTVersionTrak toolbar. The History dialog box appears.



2. The History dialog box displays all the version information of the selected file. Each version displayed in the History dialog box contains the following information:
 - **Version** - The version number of the listed version.
 - **Username** - The name of the user that created the listed version.

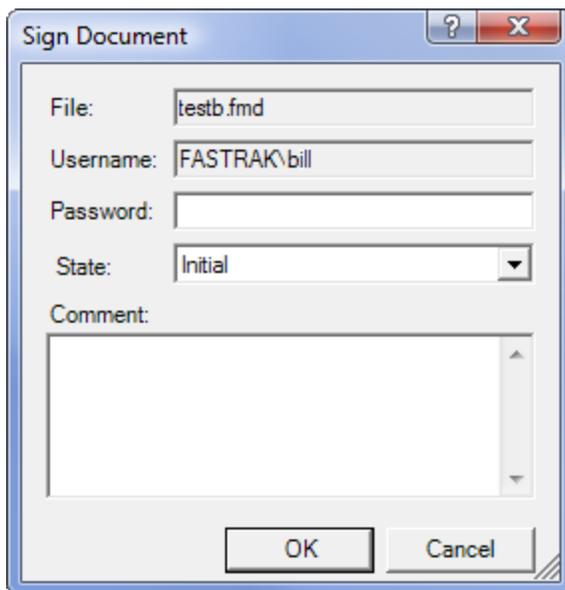
- **Date** - The date and time the listed version was added to the repository.
 - **State** - The version state of the file when it was added to the repository.
 - **Comment** - The contents of the optional comment created when the file was checked in.
3. The following two optional version histories may be viewed by selecting the appropriate check boxes at the bottom of the History dialog box:
- **Show Labels** - Select this option to display any associated labels with the repository file. Each label will appear as a separate version of the file, with the tag *Label* substituted for the version number.
 - **Show Electronic Signatures** - Select this option to display any associated electronic signatures with the repository file. Each signature will appear as a separate version of the file, with the tag *Signature* substituted for the version number.
4. The buttons on the right side of the History dialog box are used to manage a file's history:
- **Close** - Closes the History dialog box and returns to the main window.
 - **Compare** - Selecting a version and clicking **Compare** will compare the selected version with the copy in the user's working directory. Selecting two versions and clicking **Compare** will compare the two versions to each other.
 - **View** - Launches the application associated with the selected version, and opens the version of the file within the application as a read-only document.
 - **Get** - Retrieves the selected version of the file to the user's local working directory.
 - **Sign** - Electronically signs the selected version of the file, and allows the option to change the version state.
 - **Delete** - Deletes the selected version.
 - **Rollback** - Reverts the most recent version of the repository file to the selected version. Rollback is only available if the file has more than one version, and can only be selected when a version other than the latest version is selected.
 - **Properties** - View the properties of the selected version, and allow the option to change the version comment.
 - **Report** - Generates a history report of the selected repository file.

Electronically Signing PLC WorkShop for Modicon Files

Electronic signatures can be used as an approval method to verify that a certain user has seen a selected version of a repository file, and can also be used to advance the version state of the repository file. FTVersionTrak's electronic signatures conform with portions of FDA 21 CFR Part 11 regulations.

To electronically sign the active PLC WorkShop for Modicon program:

1. Click  on the FTVersionTrak toolbar. The Sign Document dialog box appears.



2. The **File** and **Username** boxes are filled with the selected file and current user, respectively. Type the current user's password in the **Password** box.
3. Select the current version state of the file from the **State** box and type any comments in the **Comment** box (optional).
4. Click **OK** when finished to return to the main window.

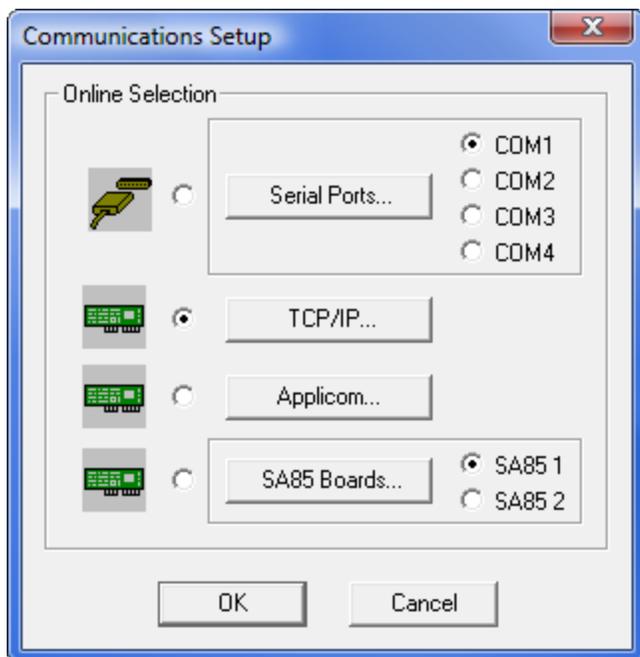
Chapter 3 – Using PLC WorkShop for Modicon

Communications Setup

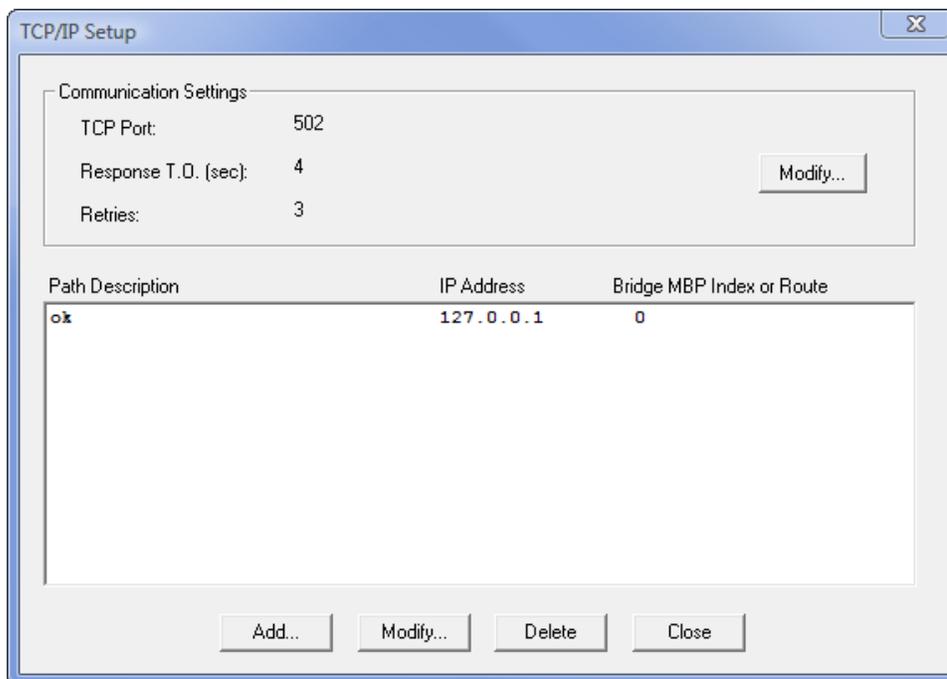
Use the Communication Setup options to configure how PLC WorkShop for Modicon will communicate with your PLCs. These options determine the communication parameters used in standard communication. Another set of options can be configured when the Fast Connect option is used.

Four communication methods are supported: **Serial Ports**, **TCP/IP**, **Applicom**, and **SA85 Boards**. Only one communication method can be used at a time. Use the following instructions to specify how Modicon WorkShop will communicate with your PLCs.

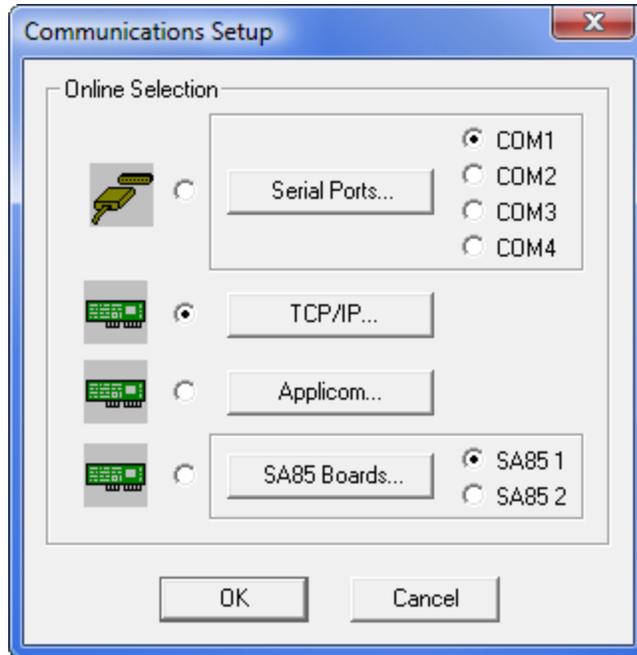
1. Click **Communications Setup** on the **File** menu. The Communications Setup dialog box appears.



2. Click the type of communication you want to configure. For example, to configure TCP/IP, click **TCP/IP**. A dialog box containing additional settings is displayed. For example, a TCP/IP Setup dialog box is displayed if you click **TCP/IP**.



3. In the dialog box, specify the settings required for the communication method you selected. These settings will vary for each communication method. See the online help for additional information.
4. In the Communications Setup dialog box, select the option button associated with the communication method you want to use. For example, to use TCP/IP, select the **TCP/IP** option button.



5. Click **OK**.

Fast PLC Connection Setup

The **Fast PLC Connect** option can be used to quickly connect to a PLC.

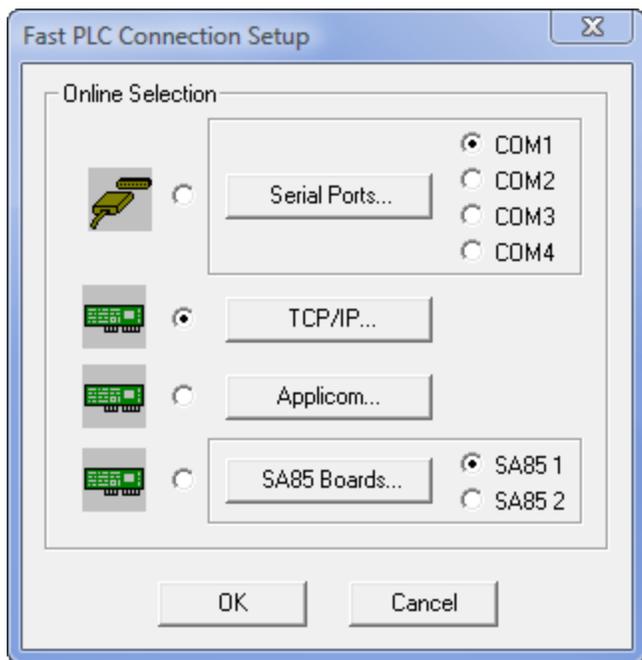
Use the Fast PLC Connect Setup options to configure how PLC WorkShop for Modicon will communicate with a PLC during a Fast PLC Connect. As with the standard connection option, the FastPLC Connection option supports four communication methods:

- **Serial Ports**
- **TCP/IP**

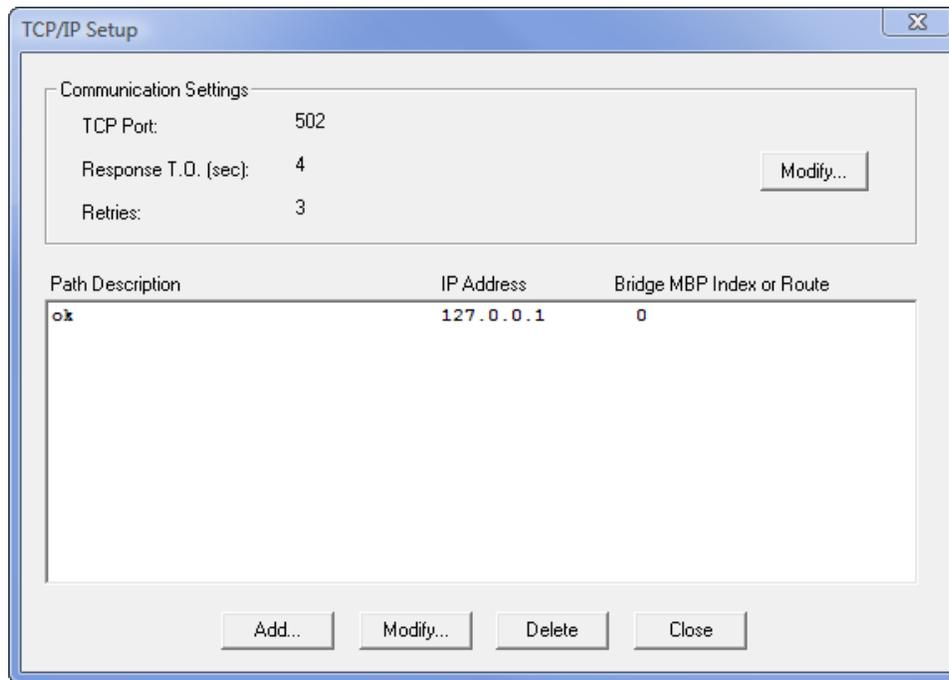
- **Applicom**
- **SA85 Boards**

Only one communication method can be used at a time. Use the following instructions to specify how PLC WorkShop for Modicon will communicate with your PLCs during a FastPLC Connect.

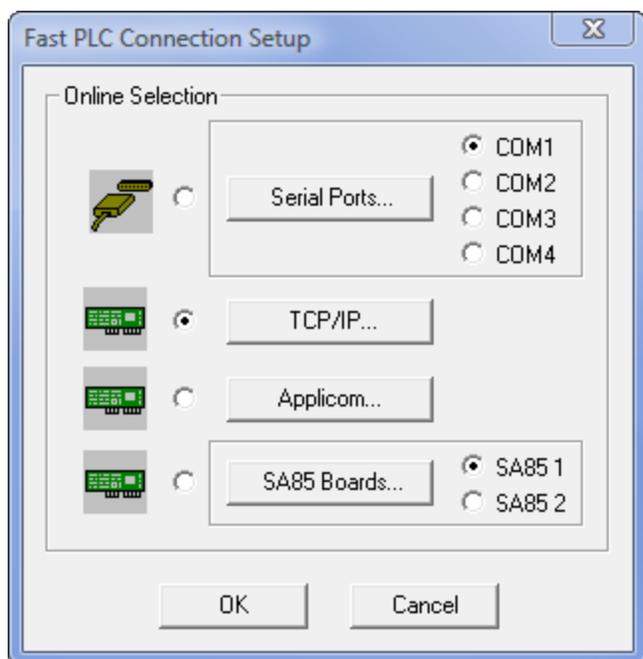
1. Click **Fast PLC Setup** on the **File** menu. The Fast PLC Connection Setup dialog box appears.



2. Click the type of communication you want to configure. For example, to configure TCP/IP, click **TCP/IP**. A dialog box containing additional settings is displayed. For example, a TCP/IP Setup dialog box is displayed if you click **TCP/IP**.



3. In the dialog box, specify the settings required for the communication method you selected. These settings will vary for each communication method. See the online help for additional information.
4. In the Communications Setup dialog box, select the option button associated with the communication method you want to use. For example, to use TCP/IP, select the **TCP/IP** option button. This communication method is the default method used during a Fast Connect.



5. Click **OK**.

Online Mode

In online mode, edits are done in the PLC. Logic, data, and configuration are read from the PLC memory. Only the documentation is read from the PLC WorkShop for Modicon file saved on disk (the .fmd file). PLC WorkShop for Modicon offers the following options for working with programs online:

Performing a Network Scan	Modbus, Modbus Plus, TCP/IP, and Applicom networks are scanned for devices that can attach to WorkShop.
Using Fast PLC Connect	Logic, data, and configuration are read from the PLC memory. Documentation is not associated with the program.
Opening a File While Going Online	Logic, data, and configuration are read from the PLC memory, and documentation from the .fmd file.

Loading a File While Going Online (Overwrites logic on the PLC)	Logic, data, and configuration from the .fmd file are transferred to the PLC (6x Register transfer optional), and documentation is read from the .fmd file.
Combining Programs	An existing .fmd file is combined with a program residing on the PLC for faster online functionality.
Loading an Offline Program Online (Overwrites PLC)	Logic, data, and configuration from the .fmd file are transferred to the PLC (6x Register transfer optional), and documentation is read from the .fmd file.
Saving a Program from the PLC to Disk	Logic, data, and configuration from the PLC are transferred to the .fmd file and saved with any existing documentation.

PLC WorkShop for Modicon allows both online and offline programs to be open at the same time. All programs are opened from the Open dialog box.

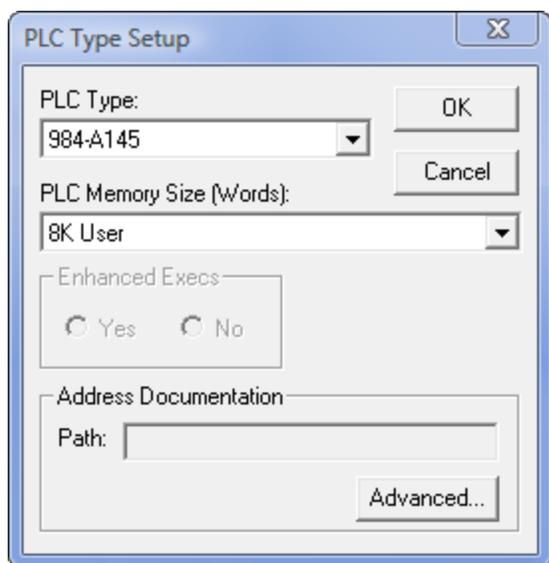
Offline Mode

In offline mode, logic, data, configuration, and documentation are edited in the PLC WorkShop for Modicon file saved to disk (the .fmd file). In offline mode, edits are performed without involving the PLC in any way.

Creating a New Program

New programs are created in offline mode only. Use the following procedure to create a new logic program and begin programming:

1. Click **New** from the **File** menu, click the  toolbar button, or press **CTRL+N**. The PLC Type Setup dialog box appears.



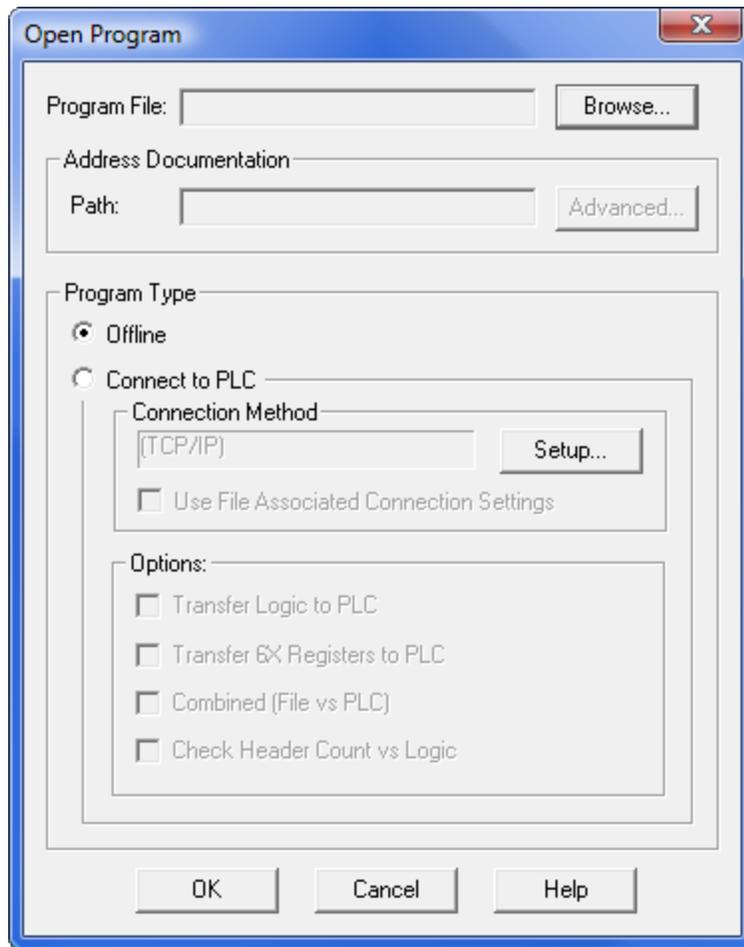
2. Select the PLC Type and the PLC Memory size of the PLC you are using. Note: With some PLCs, you may need to select additional options, such as Firmware and Enhanced Execs.
3. If you want to use shared address documentation, click **Advanced** to display the Shared Address Documentation dialog boxes and specify the separate database file. By default, documentation is saved with logic, data, and configuration in the same .fmd file. However, documentation can be shared with other applications and programs by saving it in a separate database file.

NOTE: Programs cannot be saved in demo mode.

Opening a File Offline

Logic, data, configuration, and documentation can be edited in the .fmd file without involving the PLC in any way. Do the following to open an existing .fmd file offline:

1. Click **Open** on the **File** menu, click the  toolbar button, or press **CTRL+O**. The Open Program dialog box appears.



2. Click **Browse** and select the .fmd file you want to use. .
3. Select the **Offline** option button

Converting a *.CFG Program

.cfg is the file extension used by ModSoft files. Do the following to convert a .cfg program:

1. Click **Open** from the **File** menu, click the  toolbar button, or press **CTRL+O**. The Open Program dialog box appears.
2. Click **Browse** and select the .cfg file to be converted. The logic and documentation of the .cfg file are imported into a new offline program. The new offline program is saved as a .fmd file.

NOTE: Programs cannot be saved in demo mode.

Programming Offline

When editing logic offline, the ladder is in Network Editor mode. Edits to each network are indicated by a change in the background color of the entire network. When edits have been completed, validate and enter the changes by clicking **Validate and Enter** on the **Program** menu, clicking the  toolbar button, or pressing **F8**. PLC WorkShop validates the changed networks, and if the networks are valid, enters them in the actual program. The network background color returns to the normal display..

Programming Online

When editing logic online, the ladder is (by default) in Node Editor mode. The Node Editor transfers logic immediately to the PLC after an instruction or address is inserted, replaced, or deleted. Edits to each instruction or address are indicated by a change in background color of the specific edit. When the edit has been completed, the logic is transferred to the PLC and the background color returns to the normal display.

Logic may also be edited online in Network Editor mode. However, while the PLC is in Run mode, network logic and coil values become unpredictable during network download and may produce unexpected and hazardous results. It is recommended that only an experienced user attempt programming in Network Editor mode online.

WARNING: Editing or modifying a program online may produce unexpected or hazardous results.

Chapter 4 – Using Modicon Simulator

Simulator Overview

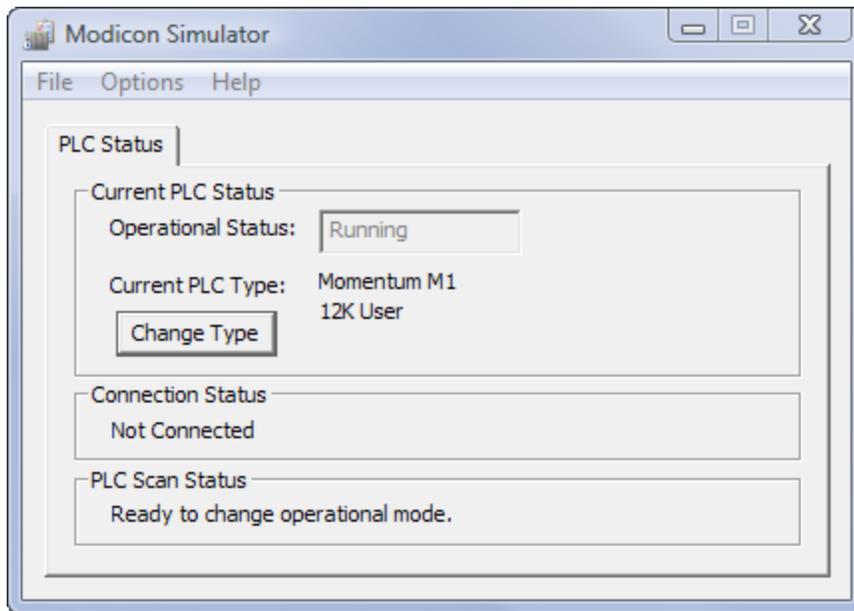
Modicon Simulator is designed to run and test ladder logic, special functions, PID loops, Analog alarms, and simulated I/O without the use of a PLC.

Starting Simulator

Use any of the following methods to start the Modicon Simulator:

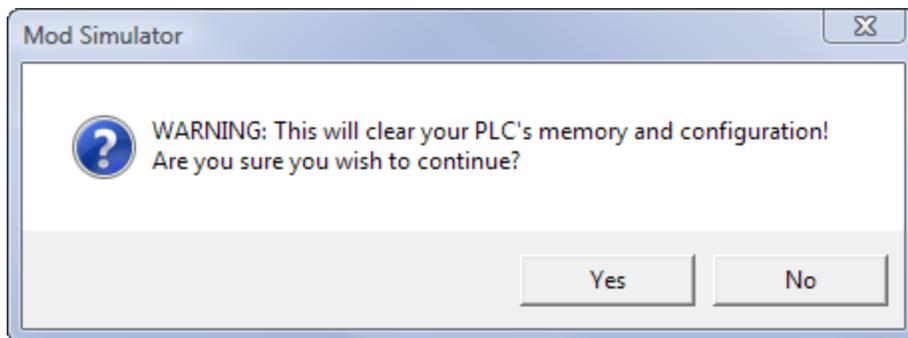
- Within PLC WorkShop for Modicon, click **Mod Simulator** from the **View** menu.
- Within PLC WorkShop for Modicon, click the **Simulator button**  on the main toolbar.
- Start Windows, click the **Start** button, click **All Programs**, click **FasTrak SoftWorks**, and then click **Modicon Simulator**.

After starting, the Modicon Simulator window is displayed:



Selecting PLC Type

1. Click the **Change Type** button if you want to change the type of PLC you want to simulate.
2. Click **Accept**. The following warning appears:

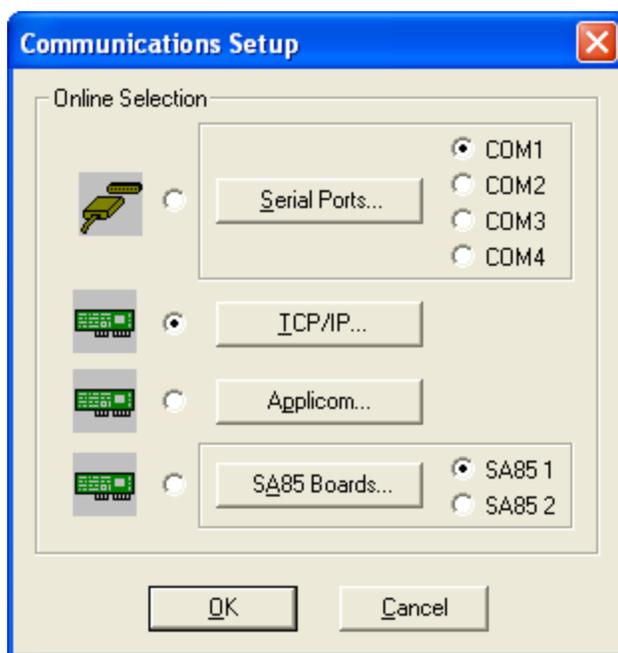


3. Click **Yes**. The simulator is now simulating the PLC type you selected.

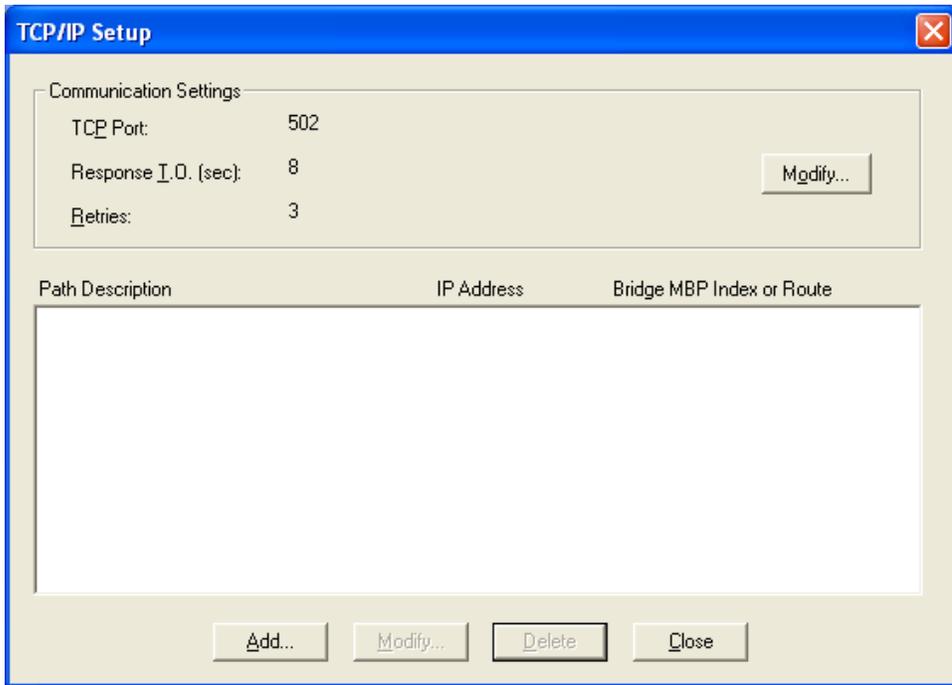
Setting Up Communications

Modicon Simulator uses the TCP/IP communication method for connection with PLC WorkShop for Modicon. Do the following in PLC WorkShop for Modicon to create a new TCP/IP connection to connect to the simulator:

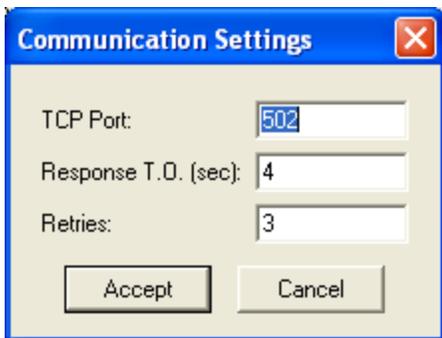
1. Click **Communications Setup** on the **File** menu. The Communications Setup dialog box appears.



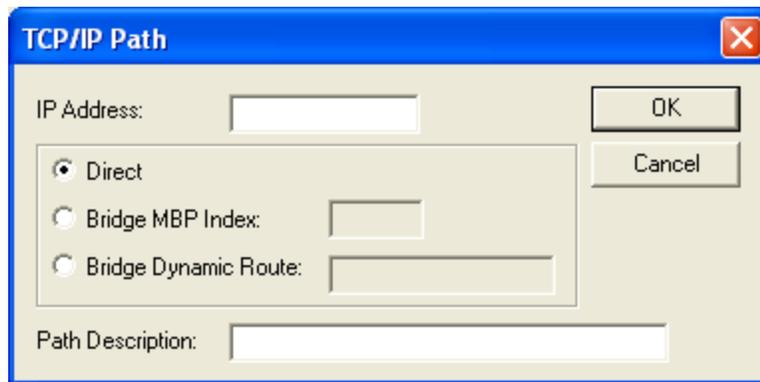
2. Click **TCP/IP**. The TCP/IP Setup dialog box appears.



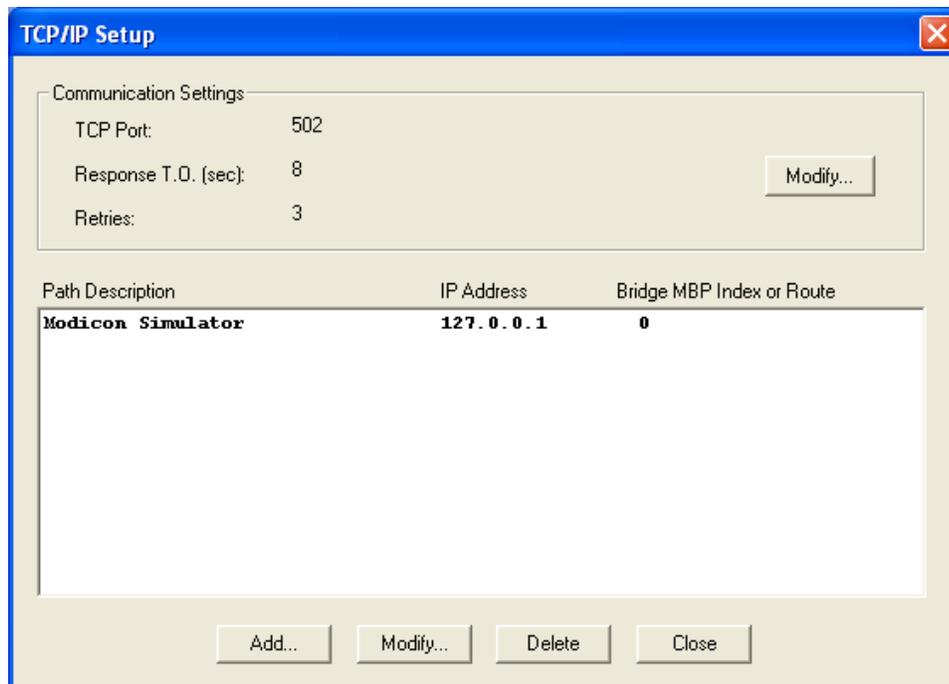
3. Click **Modify**. The Communication Settings dialog box appears.



4. In the **TCP Port** box, enter **502**. Click **Accept** to return to the TCP/IP Setup dialog.
5. In the TCP/IP Setup dialog box, click **Add**. The TCP/IP Path dialog box appears.



5. Enter an IP address of 127.0.0.1, which is the localhost (loopback address).
6. Enter a name for this connection (such as `Modicon Simulator`) in the **Path Description** box. Click **OK** when finished to return to the TCP/IP Setup dialog box. The new path appears in the path list.



5. Click **Close** to return to the **CommunicationSetup** dialog box.
6. Click **OK** to exit and return to the **PLC WorkShop** main window.

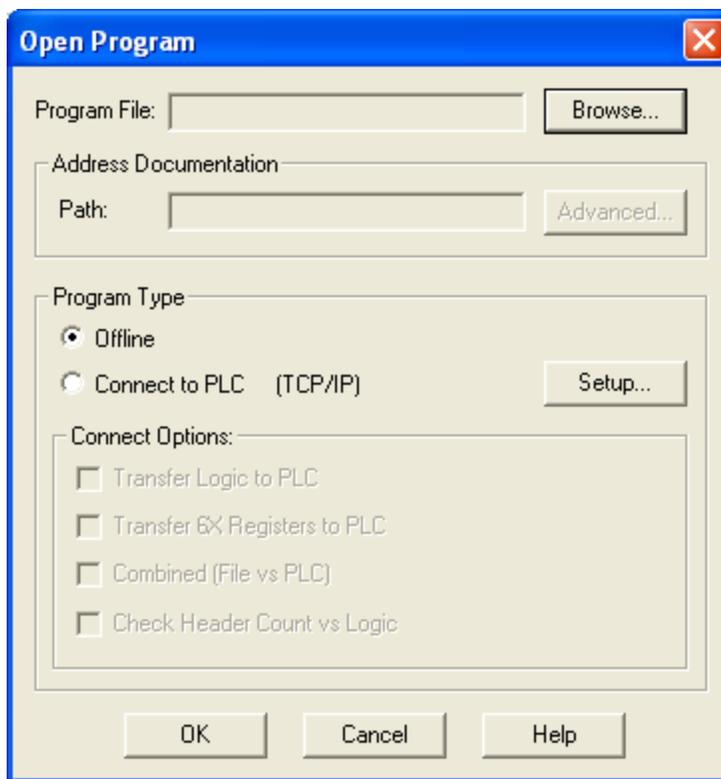
Connecting to Modicon Simulator

After PLC WorkShop for Modicon and Modicon Simulator are both running, and TCP/IP communications have been set up using a local host IP Address of **127.0.0.1**, connecting to the simulator is identical to going online to a PLC.

1. Within PLC WorkShop for Modicon, click **Open** on the **File** menu or click the



toolbar button. The Open Program dialog box appears.



NOTE: Modicon Simulator must be running before attempting to connect to it.

2. If you want, select a program to open online by clicking **Browse** and browsing for a .fmd file.

3. Select the **Connect to PLC** option button and verify that **TCP/IP** is displayed in the **Connection Method** box. If it is not, click **Setup** and select the **TCP/IP** option button.
4. If you are opening a program, verify that the **Transfer Logic to PLC** check box is selected and click **OK**. PLC WorkShop for Modicon is now connected to Modicon Simulator.

