Tel: +1-800-832-3873
E-mail: techline@littelfuse.com
www.littelfuse.com/mp8000

Expertise Applied | Answers Delivered

MP8000
SOFTWARE
Instruction Manual

REVISION 0-B-030818

All brand or product names appearing in this document are the trademark or registered trademark of their respective holders. No Littelfuse trademarks may be used without written permission. Littelfuse products appearing in this document may be covered by U.S. and Foreign patents.

Littelfuse, Inc. reserves all rights and benefits afforded under federal and international copyright and patent laws in its products, including without limitation software, firmware, and documentation.

The information in this document is provided for informational use only and is subject to change without notice. Littelfuse, Inc. has approved only the English language document.

For warranty or license details, visit www.littelfuse.com or contact your customer service representative.

TABLE OF CONTENTS

SECTION   **PAGE**

1.0 INTRODUCTION

1.1 Manual Overview

The MP8000 Software manual describes the features and abilities of the MP8000 software. The MP8000 software program is designed to interact with the MP8000 Motor Relay product. The software allows a user to see real time values, change configuration settings, and view device fault logs and information. In addition, this manual includes a troubleshooting section for dealing with possible issues that could arise when dealing with the software.

1.2 System Requirements

In order to run and use the MP8000 Software program, the following system requirements must be met in order to assure proper functionality of the software.

OPERATING SYSTEM	Microsoft Windows 7 or later (32 or 64 bit)
.NET FRAMEWORK	.NET Framework version 4.5 or greater
CPU	Intel Core i5 or better recommended
RAM	4GB or greater
ETHERNET	Ethernet port or compatible USB-to-Ethernet adapter

NOTE: This software can be run without administrative privileges. *HOWEVER,* this program communicates with MP8000 devices over TCP/IP. More specifically, the software listens for MP8000 broadcast packets on UDP port 17186, and connects to and reads data from an MP8000 over Modbus. As such, the program must be allowed through the firewall settings on the computer it is running on to insure proper functionality. Allowing a program through a firewall may require administrator permissions.

2.0 GETTING STARTED

This section of the document describes the process of unzipping, installing, and running the MP8000 Software program. Unless the files have been acquired by a different source, an active internet connection is required to download the program files necessary for running the MP8000 Software program.

2.1 Unzipping and running

Step 1: Extract the ZIP folder (if you haven't already) after downloading.

    1a. Click the **"Extract all files"** button
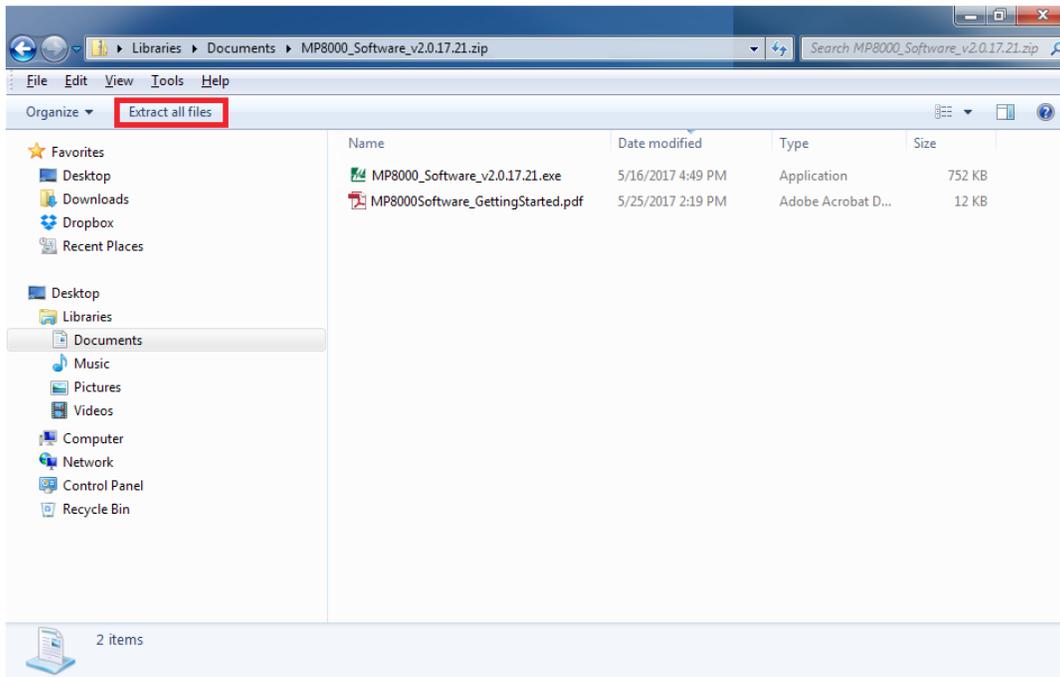
Figure 2.1 – Extracting all files

1b. Make sure the **"Show extracted files when complete"** checkbox is selected, then click the **"Extract"** button at the bottom of the window.
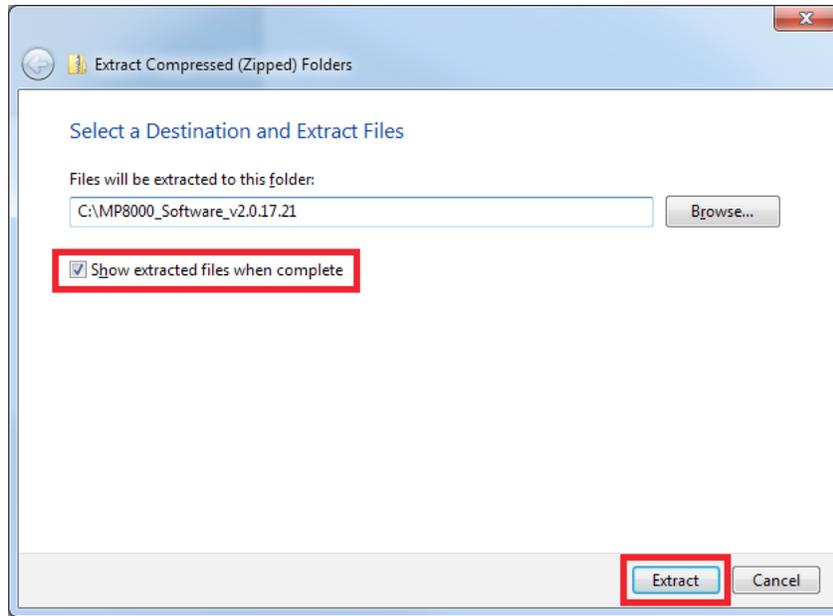
Figure 2.2 – Actually Extracting

Step 2: Once the program files are extracted, run the program by double-clicking on the .exe file.
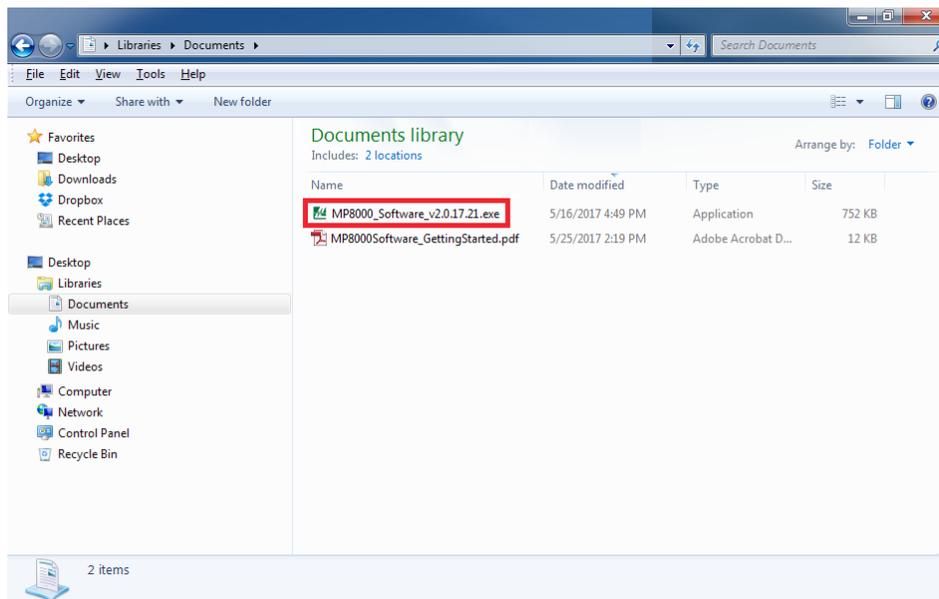
Figure 2.3 – Extracted files

MP8000 Software

Step 3: In order to use the MP8000 Software program, you must read and agree to the license agreement.
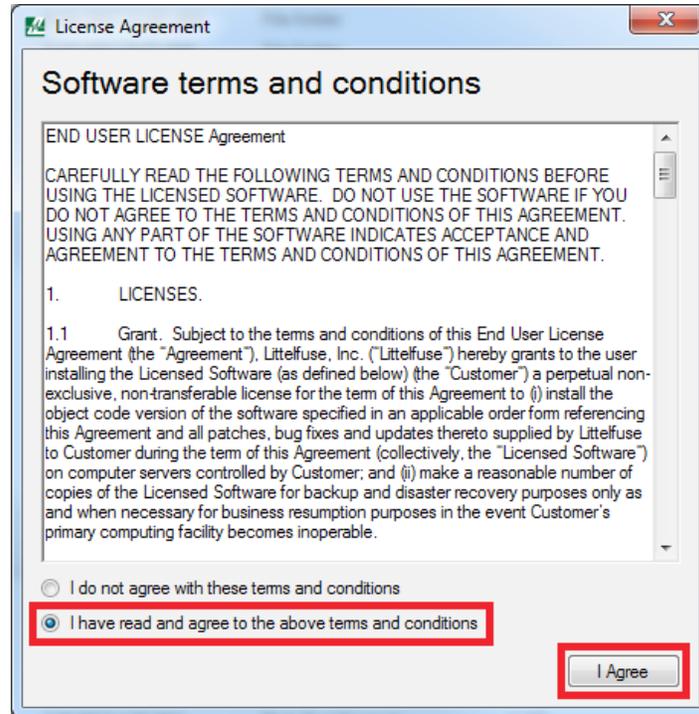
Figure 2.4 – License Agreement

Step 4: Allow the program through the firewall.

> **NOTE:** *If Windows prompts you to allow the program through the firewall, you must do this in order for this program to work. If you do not have administrative rights on your machine, you may need to contact your system administrator. The MP8000 software will NOT work unless it is allowed through the firewall.*
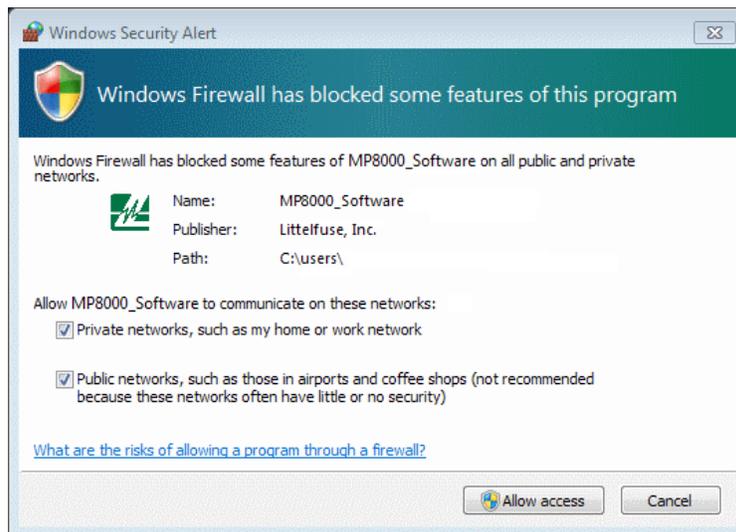
Figure 2.5 – Firewall Alert

Step 5: Wait for the program to discover units.

Once the program starts up and has been allowed through the firewall, the MP8000 software will begin scanning for MP8000 units. Any units found will be displayed in the left-hand sidebar, as shown below. To select a unit, click on the unit in the left hand side bar.
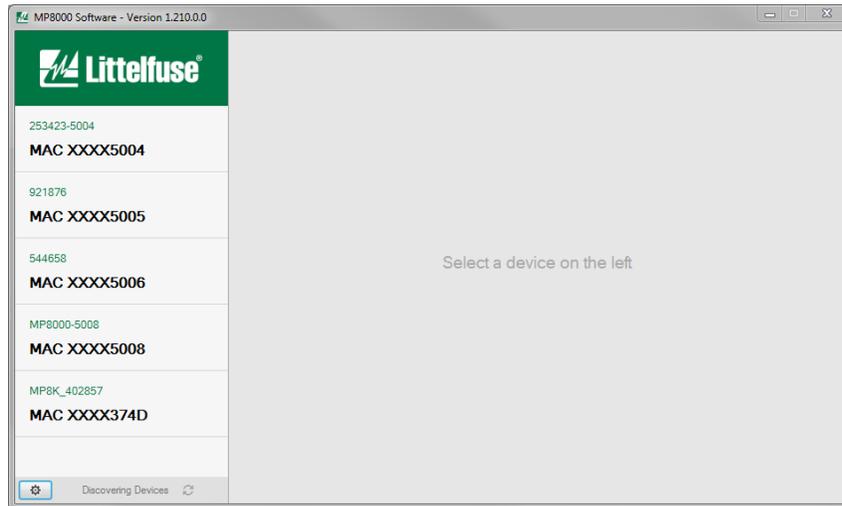
Figure 2.6 – Unit Detection

Once a unit has been selected, the real time page opens up and the MP8000 Software starts reading values from the selected unit. This is shown in the screenshot below.
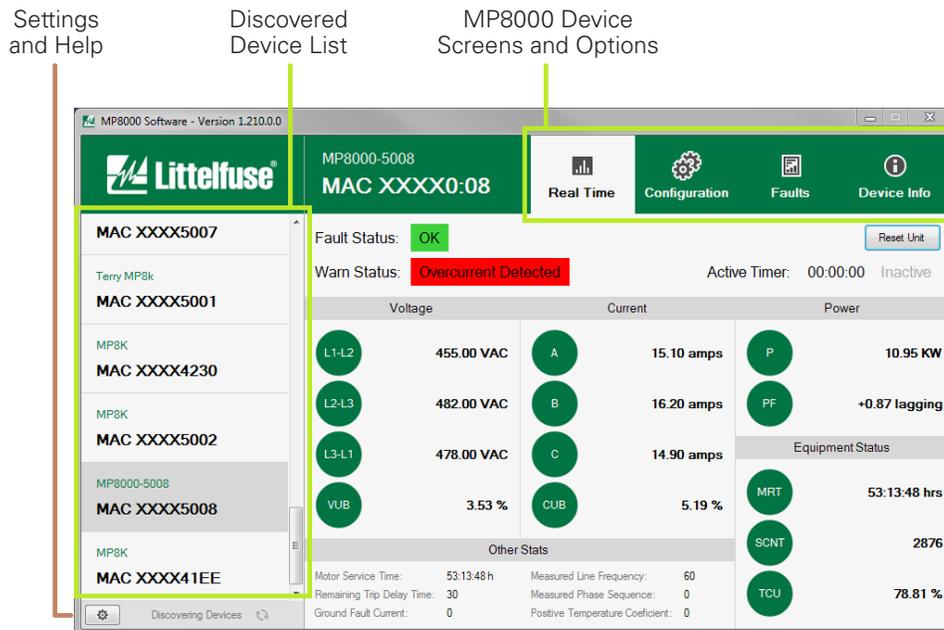
Figure 2.7 – Real Time Screen Breakdown

The rest of the document gives more explanation to each screen in the MP8000 software.

2.2 Connection Diagrams

The MP8000 Software supports three network setups: one where the computer running the MP8000 Software and the MP8000 unit are both connected to a DHCP enabled router, a network with where a static IP address is assigned, and a point-to-point connection between the computer running the MP8000 Software and an MP8000 unit without using a router.

The first two setups are shown below in Figure 2.8. In this setup, both the computer and the MP8000 unit are connected to either a DHCP-enabled router with Ethernet cables or a network where a static IP address is assigned.
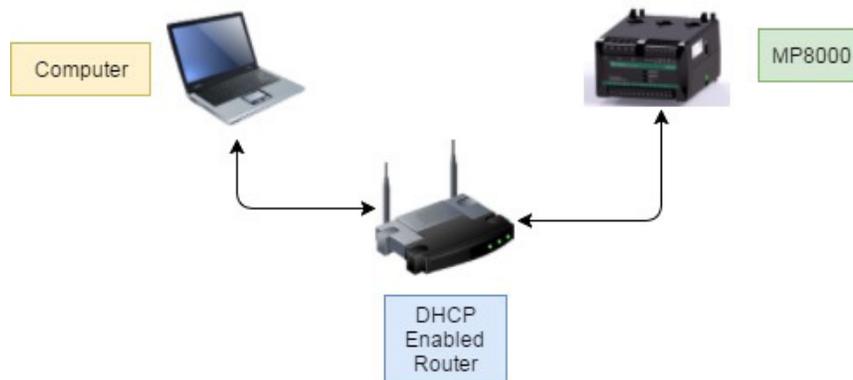
Figure 2.8 – DHCP or Static IP Connection Diagram

In the second setup, an MP8000 Unit is connected directly to the computer running the MP8000 Software with an Ethernet Cable. This setup is shown below in Figure 2.9. In order for the MP8000 Software to detect units on a point-to-point connection, some Windows network settings need to be changed.

Figure 2.9 – Point-to-Point Connection

To configure your Windows machine for a point-to-point connection with an MP8000, follow the steps below.

1. Open the computer's Control Panel.

2. In the Control Panel, search for the Network and Sharing Center link (shown in Figure 10 below).
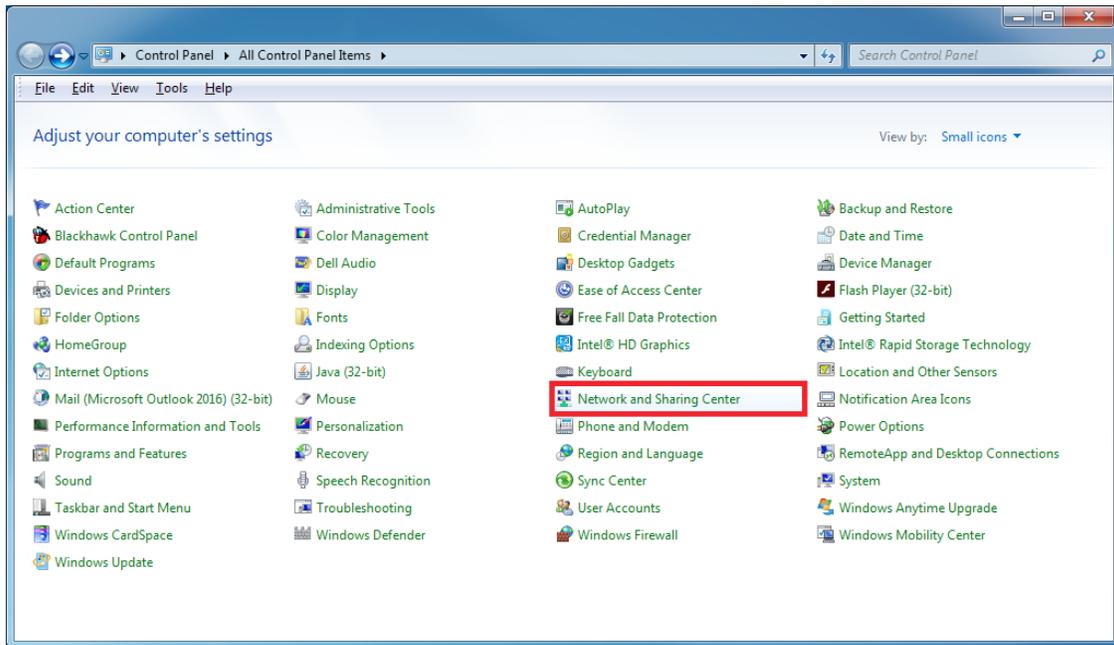
Figure 10 – Control Panel view showing Network and Sharing Center link

3. In the left pane of the Network and Sharing Center, click on the *Change adapter settings* link (shown in Figure 11 below).
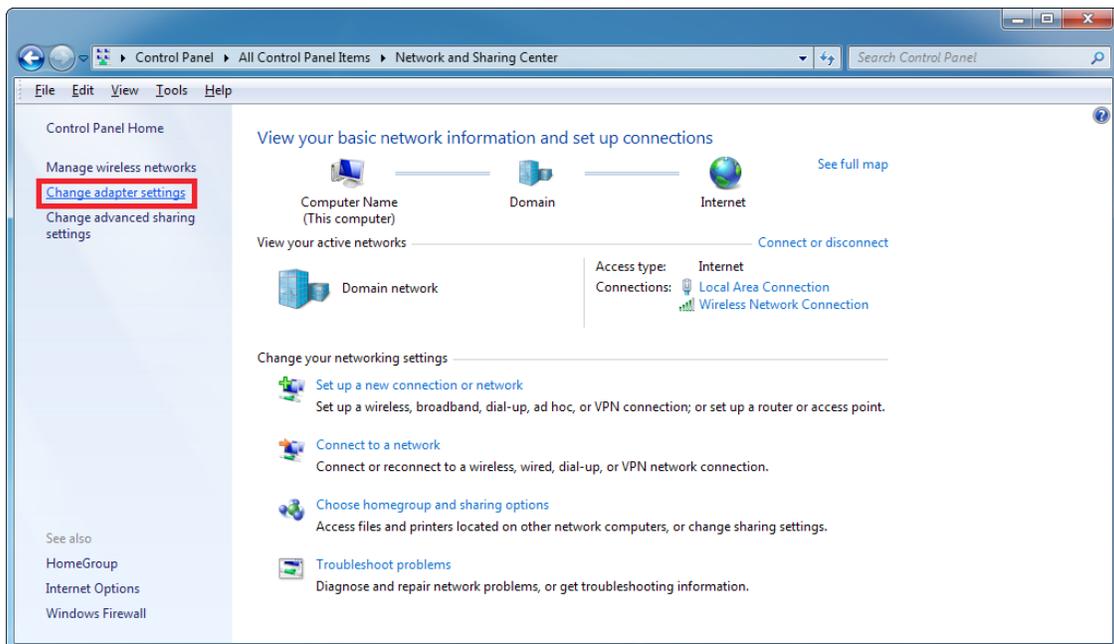
Figure 11 – Network and Sharing Center Change adapter settings link

4. In the *Change adapter settings* link, you will see icons representing all of the available Ethernet and Bluetooth connections. The Ethernet port on PCs is usually listed as "Local Area Connection" (as shown in Figure 12 below). Be sure to choose the correct Ethernet port for your machine.
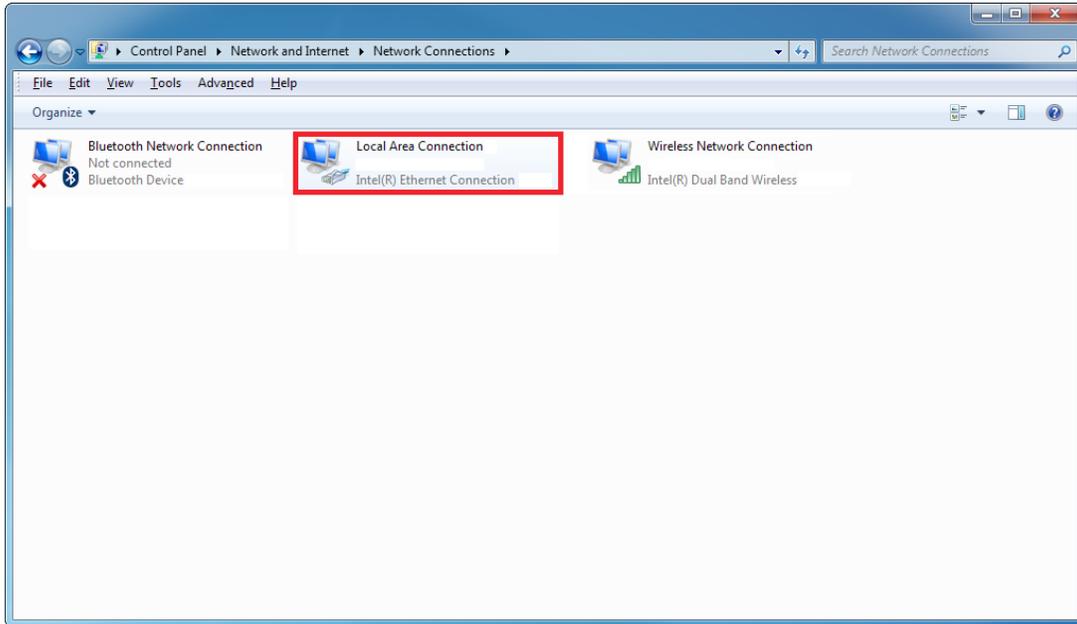
Figure 12 – Local Area Connection

5. Right-clicking the "Local Area Connection" icon will bring up a sub-menu. Select "Properties" from the sub-menu (shown in Figure 13 below).
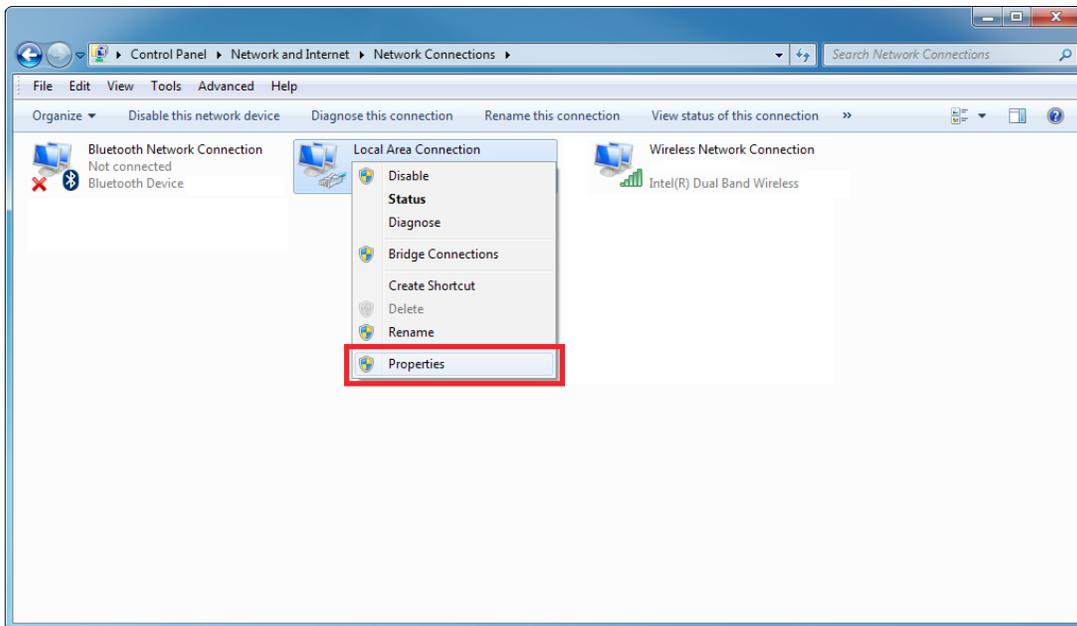
Figure 13 – Local Area Connection "Properties" selection

6. The "Local Area Connection Properties" window will open (Figure 14).

7. Highlight "Internet Protocol Version 4 (TCP/IPv4) in the items list and then click the "Properties" button on the right-hand side of the window (both shown in Figure 14 below).
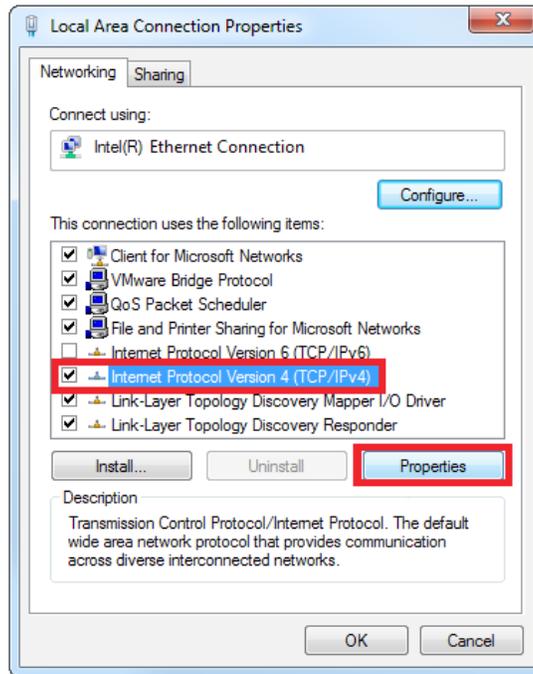
Figure 14 – Local Area Connection Properties window

8. When the Internet Protocol Version 4 (TCP/IPv4) Properties window opens, you will see that your computer is configured to either "Obtain an IP address automatically" (shown in Figure 15 below) OR "Use the following IP address" (using a static IP address, shown in Figure 16 below).
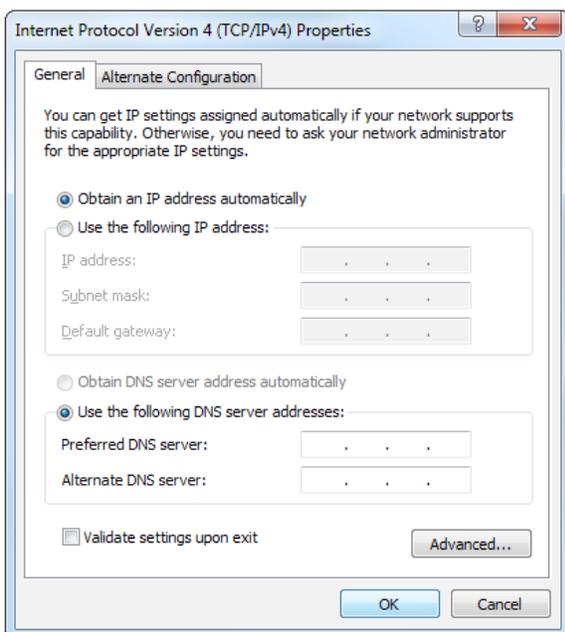
Figure 15 – Obtain an IP address automatically   **Figure 16** – Using a static IP address
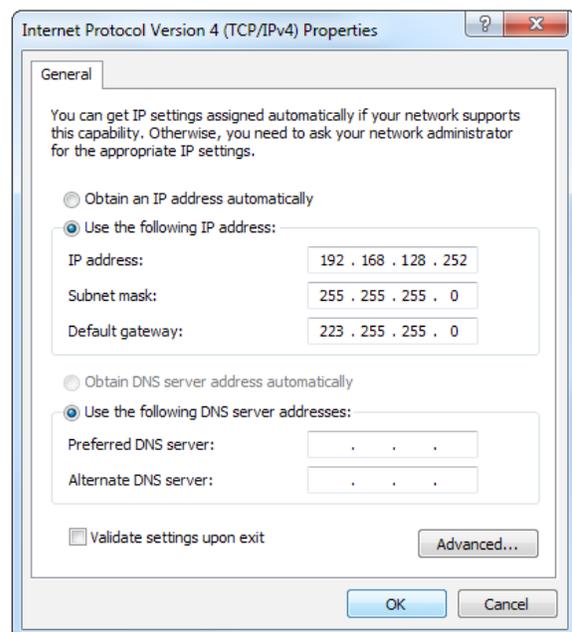
9. **IF YOUR COMPUTER IS CONFIGURED TO USE A STATIC IP ADDRESS, MAKE SURE AND RECORD THE VALUES LISTED IN ALL OF THE RELEVANT FIELDS.**

10. In order for the point-to-point connection to function properly, the Internet Protocol Version 4 (TCP/IPv4) Properties must be configured as follows (shown in Figure 17 below).

    - IP address: 10.106.0.1
    - Subnet Mask: 255.255.0.0
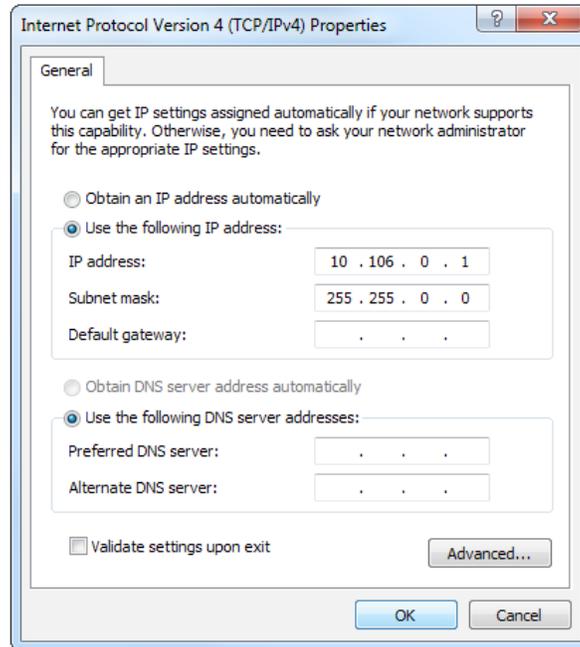
Figure 17 – Point-to-Point Communication TCP/IPv4 settings

11. Click the "OK" button to save changes.

12. The computer is now properly configured for point-to-point communications. You can now connect your computer to an MP8000 with an Ethernet cable. Keep in mind that the MP8000 Software can take up to 120 seconds to discover units on a point to point connection.

13. To restore the computer to the settings necessary for communication on the user's usual network, repeat steps 1-8 and re-establish the IP address, Subnet mask, Default gateway, Preferred DNS server, and Alternate DNS server as they were recorded in step 9.

MP8000 Software

3.0 REAL-TIME SCREEN OVERVIEW

The real time screen provides updates every second for all the motor's vital measurements. The real time screen is divided up into various sections, including sections for voltage, current, power, and other motor measurements, as shown below in Figure 3.1.
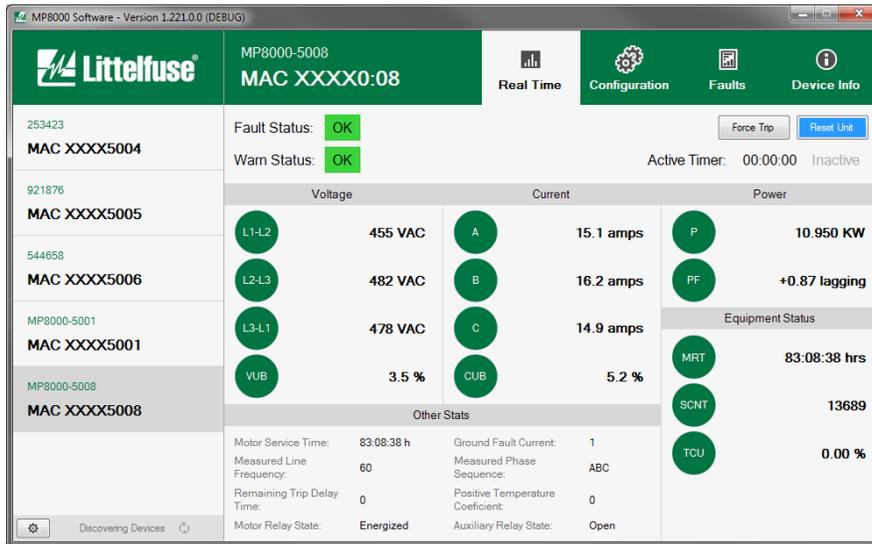
Figure 3.1 – Real Time Screen

The fault and warn status indicators on the real time screen will display a message in red if the motor encounters a warning or fault status change. An example of this is shown below in Figure 3.2.
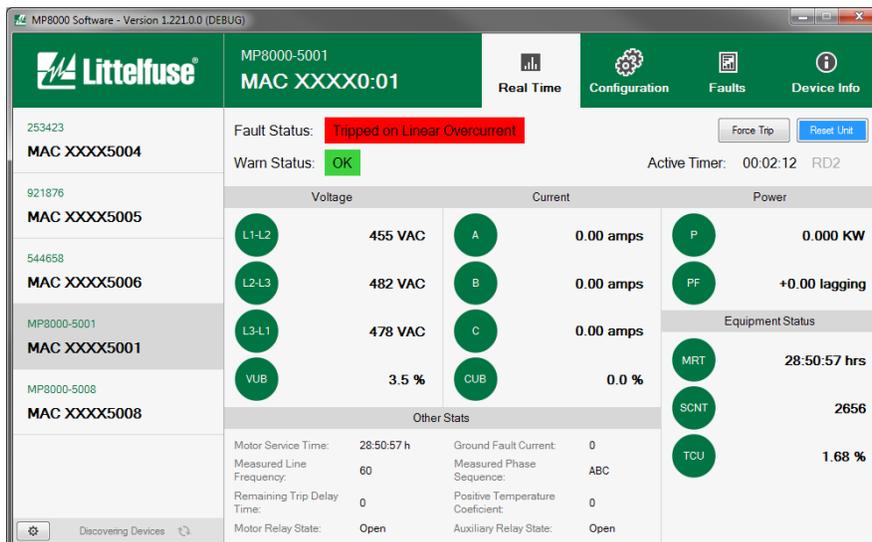
Figure 3.2 – Real Time Screen with Fault Status Shown

For more details on each real time value, please see the full instruction manual for the MP8000.

MP8000 Software

4.0 CONFIGURATION SCREEN OVERVIEW

This section describes configuration screen of MP8000 Software program. The configuration screen is divided into two sections: a basic settings page and an advanced settings page. The settings listed on each screen control the various function of the MP8000. For more information on what each setting controls, please see the full MP8000 instruction manual.

4.1 Basic Configuration Screen

Shown below in Figure 4.1 is a screenshot of the basic configuration screen.
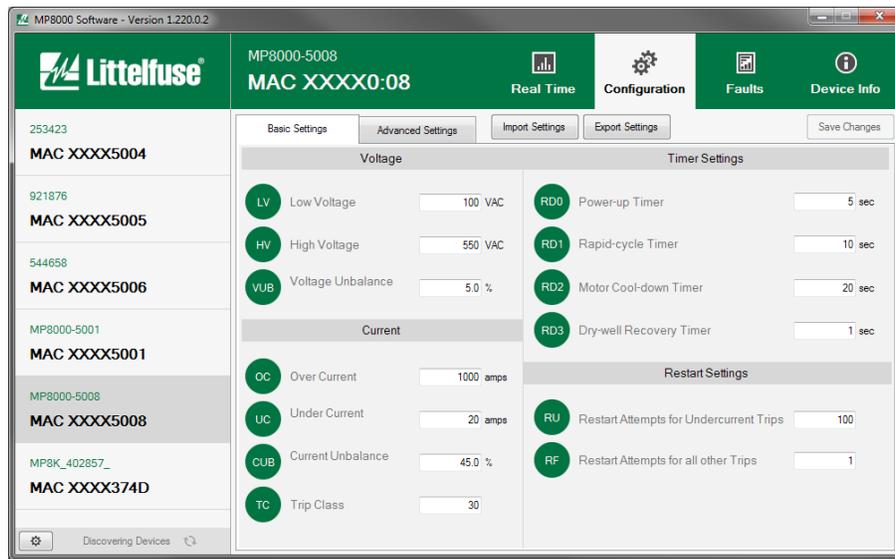
Figure 4.1 – Basic Configuration Page

4.2 Advanced Configuration Screen

Shown below in Figure 4.2 is a screenshot of the advanced configuration screen.
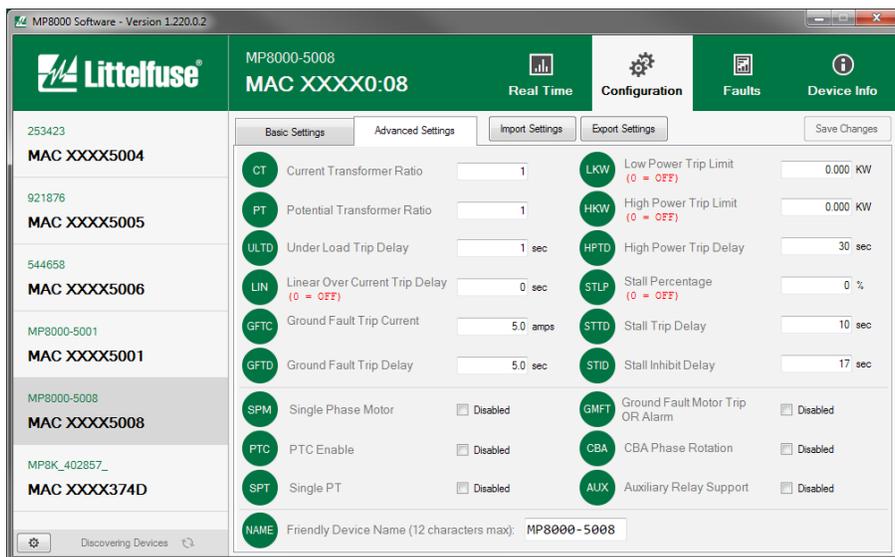
Figure 4.2 – Advanced Configuration Page

Whenever a change is made to the configuration values, the textbox field will turn green and a red save changes message will appear next to the save button. If you try to leave the configuration page without saving your changes, the MP8000 software will alert you to this fact and ask you if you want to continue without saving your changes. In the screenshot below, the High Voltage value was changed, as indicated by the green background on the textbox. In addition, you can also see the red "Unsaved changes" label next to the "Save Changes" button in the upper right. Clicking the "Saved Changes" button will save all configuration values in the MP8000 Software to the connected MP8000 unit.
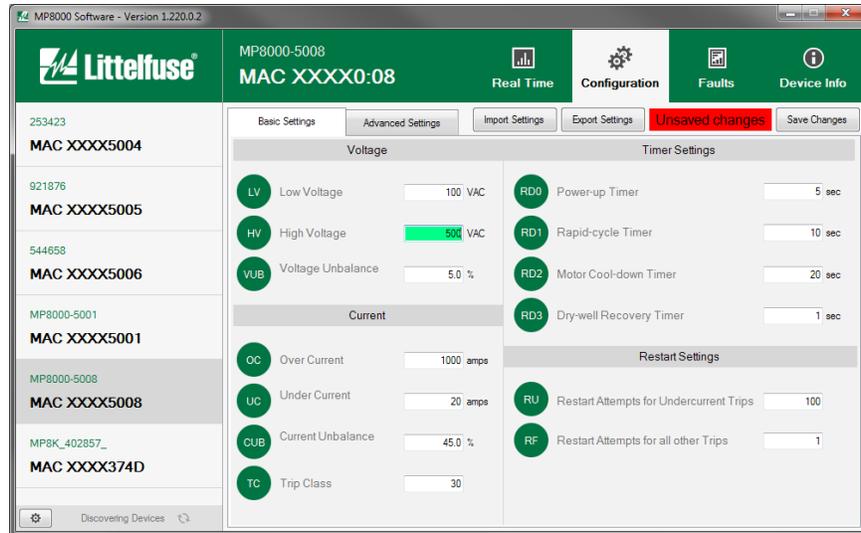
Figure 4.3 – Unsaved Changes

In addition to viewing and changing configuration values, the MP8000 Software allows users to export configuration settings. The exported configuration settings can then be imported for another unit.

5.0 FAULT LOG SCREEN OVERVIEW

This section describes the fault log screen, which is shown in figure 5.1 below. A fault log is generated by the MP8000 for any significant event that occurs, such as a motor fault or a firmware update. The fault log screen allows the user to view the various fault logs that have been generated by the MP8000 unit.
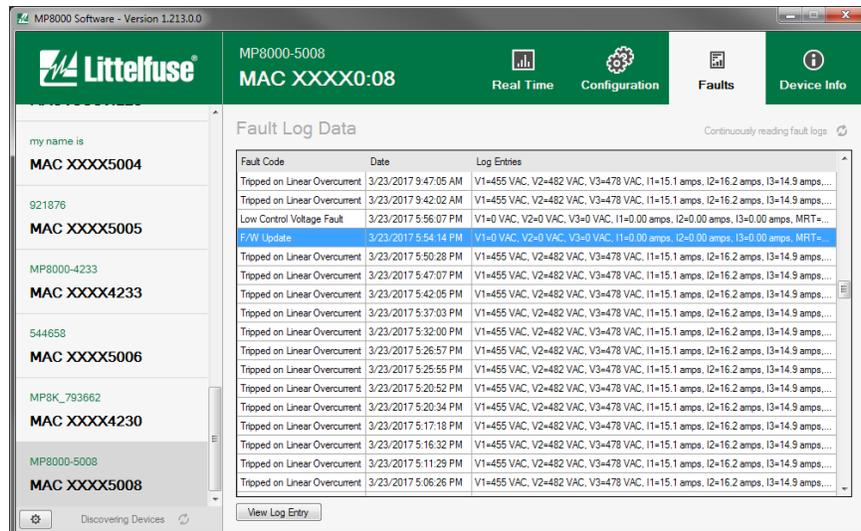
Figure 5.1 – Fault Log Screen

MP8000 Software

The fault screen lists all the faults in order from newest to oldest. An expanded fault log view can be shown by selecting a log entry in the row and then either double-clicking on the entry, or clicking the "View Log Entry" button at the bottom of the window. This will open an expanded data view window, as shown below in Figure 5.2.
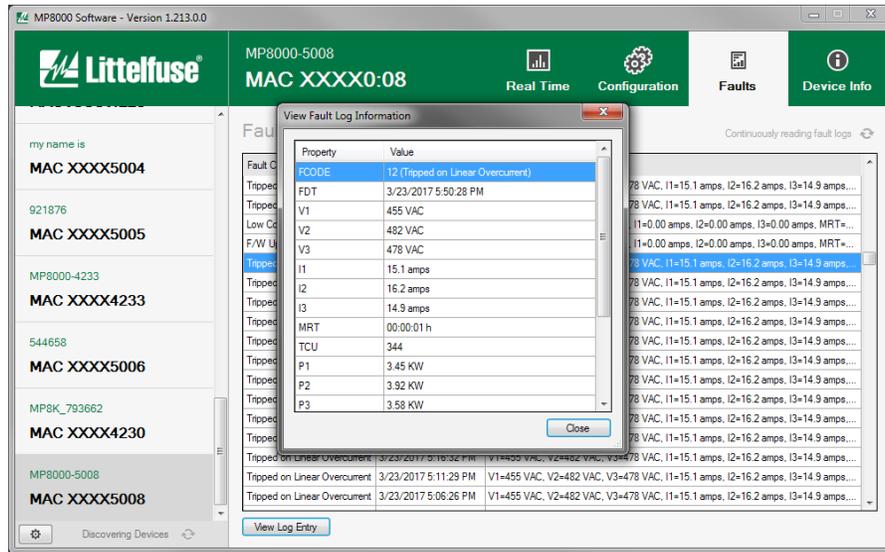
Figure 5.2 – Expanded Fault Log View

6.0 DEVICE INFO SCREEN OVERVIEW

This section describes the device info screen of the MP8000 Software. The device info screen gives users information about an MP8000 unit at a glance. The device info screen displays an MP8000's MAC Address, IP Address, and firmware versions (both for the controller and the Bluetooth firmware revisions). In addition, various communication settings are shown on the device info screen as well. A screenshot of the device info screen is shown below in Figure 6.1.
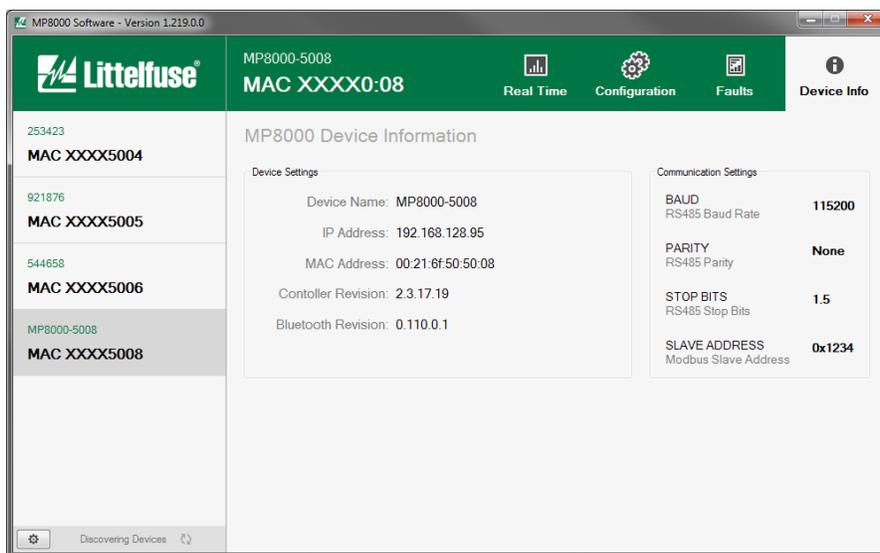
Figure 6.1 – Device Info Screen

7.0 TROUBLESHOOTING

The following sections describe possible scenarios that may require additional efforts to get working.

7.1 No Units Are Discovered

<u>**Symptom**</u>: MP8000 Software runs, but no units are discovered (shown in Figure 7.1 below).
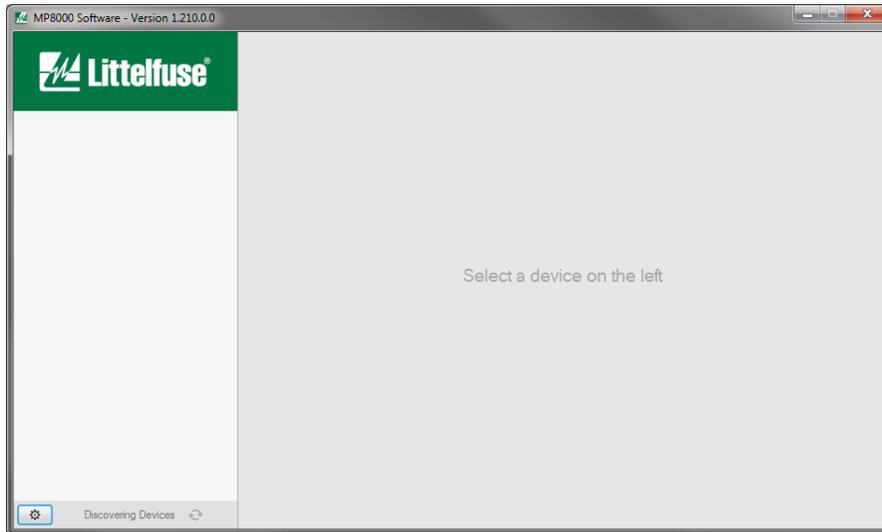
Figure 7.1 – No Units Discovered

<u>**Possible Solutions**</u>:

- Check that the MP8000 Software program is allowed through the firewall

- Check that your computer is connected to the same network that the MP8000 unit(s) is/are on

- Make sure that the MP8000 Software is not being blocked by any antivirus software

7.2 .NET Version Error

<u>**Symptom**</u>: Program failed to start because of a .NET framework error (shown below in Figure 7.2).
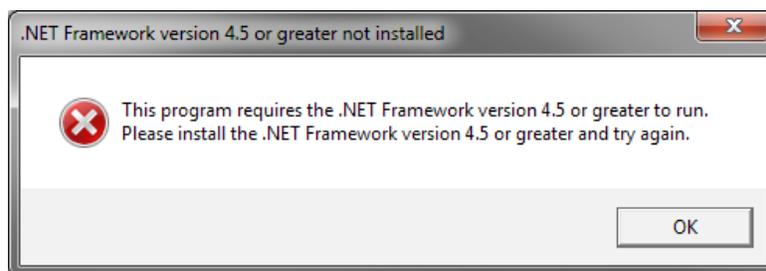
Figure 7.2 – .NET Framework Version Error

<u>**Possible Solutions**</u>:

- Check that you have a version of the .NET framework installed that is version 4.5 or greater

- The latest .NET version can be found here: https://www.microsoft.com/net/download/framework

7.3 Configuration Settings Fail to Write

Symptom: Unable to write a configuration value to an MP8000 unit (message shown below in Figure 7.3)
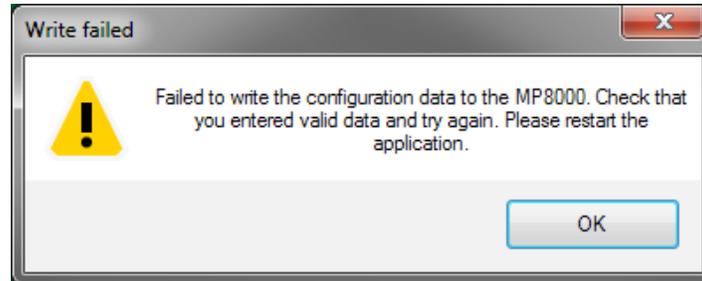
Figure 7.3 – Failed to Write Configuration Value

Possible Solutions:

- Check that you are writing a valid configuration value to the configuration memory. Please see the full MP8000 manual for more details on this. As a security measure, the program will restart if an attempt is made to write an incorrect value to the configuration memory.