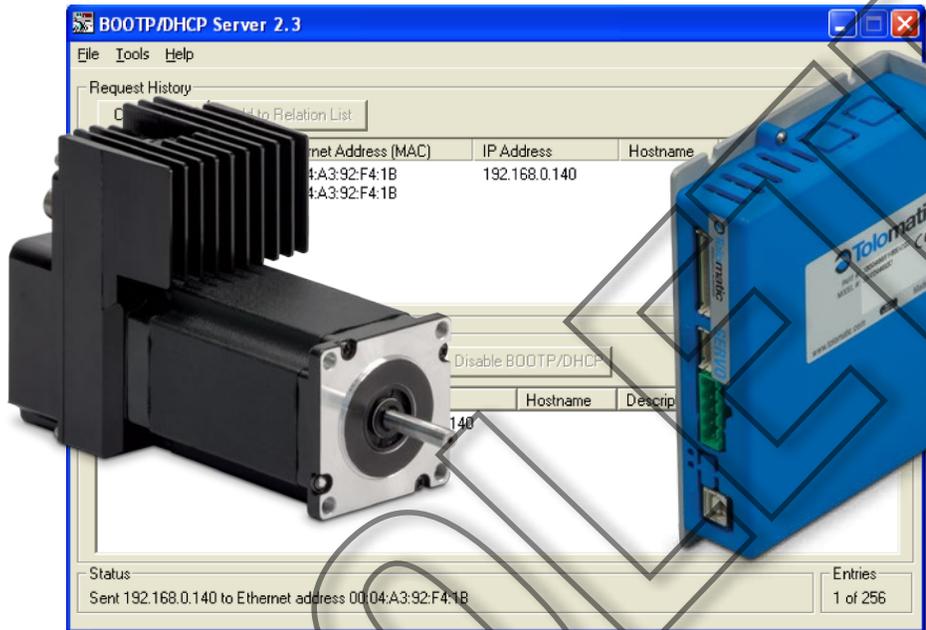


Setting ACS drive IP address automatically with Rockwell BOOTP/DHCP Server



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System Requirements

Tolomatic's ACS Drive uses the Tolomatic Motion Interface (TMI) software which is dependent on .NET4. Please reference the TMI User Guide 3600-4164 for minimum requirements.

Hardware

Tolomatic ACS Stepper Drive: P/N 36049666

Tolomatic ACS Servo Drive: P/N 36049662

Tolomatic ACSI - EIP motors

Software

Tolomatic Motion Interface (TMI), version 2.4 or higher.

BOOTP/DHCP Server v2.3 by Rockwell

Cabling

Tolomatic ACS Stepper Drive: USB Type B cable

Tolomatic ACS Servo Drive: USB Type B cable

Network connection

Tolomatic ACSI Motor/Drive/Controller: μ USB Type B

1.0 Introduction

This document describes how to use the Rockwell BOOTP/DHCP server application included with the RSLogix5000 software with the Tolomatic ACS drive. This application is used to assign IP addresses to EtherNet/IP™ devices via DHCP. The ACS drive only supports DCHP. BOOTP is not supported at this time. Many IP addresses can be assigned to a network of ACS drives that are uniquely identified by their MAC address.



NOTE: Windows Firewall may interfere with the procedure. It is recommended to turn the Windows Firewall OFF before proceeding with the procedure.

2.0 ACS / TMI Setup

Run Tolomatic Motion Interface and connect to the ACS drive. Configure the actuator and motor, set the ACS Drive for EtherNet/IP on the Mode Setup tab.

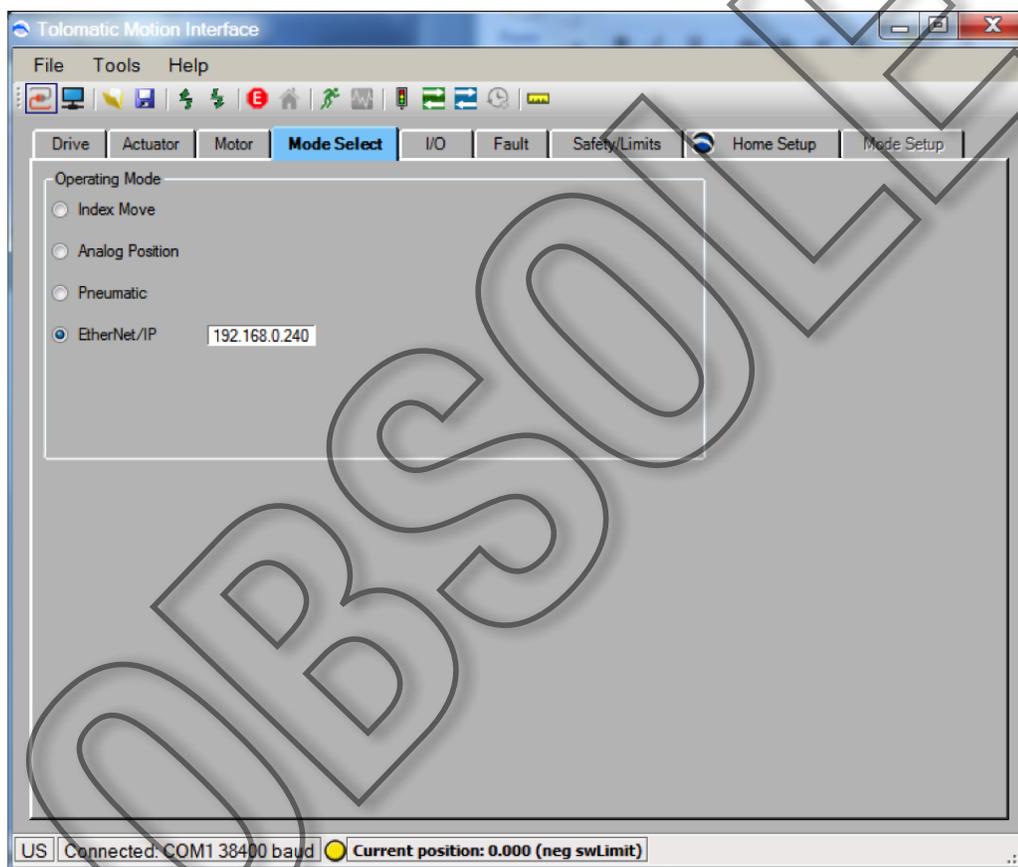


Figure 2-1; Tolomatic Motion Interface Dialog

Open the 'ACS Internet Protocol Properties' window (menu option Tools- > EtherNet/IP setup). In this window you will see the default values for IP address, Subnet Mask, and Default Gateway parameters.

Check the box for 'Obtain an IP Address automatically'. Set the Subnet Mask and Default Gateway to match your network.

For ACS I Motor/Drive/Controllers Infrastructure Mode automatically has DHCP enabled. The ACS I can also be configured using the TCP/IP EtherNet/IP Object (0xF5).

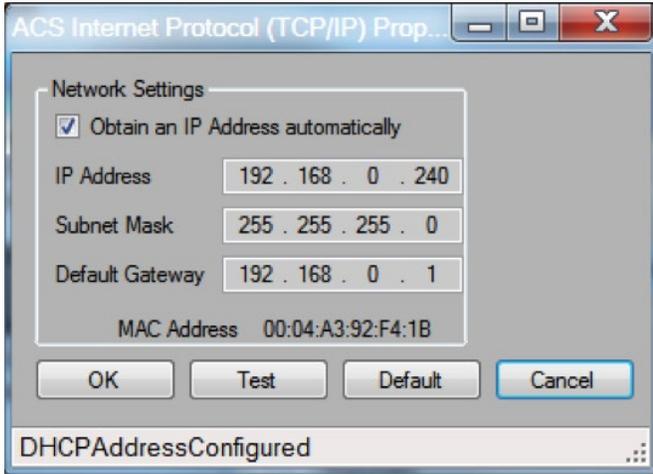


Figure 2-2; IP Address Display

Click 'OK' and write settings to Flash: File→Write Current Settings to Drive Flash.

Obtain MAC Address (00:04:A3:92:F4:1B in this example) from the Drive Info area on the Drive tab, or from a label on the cover of the ACS drive.

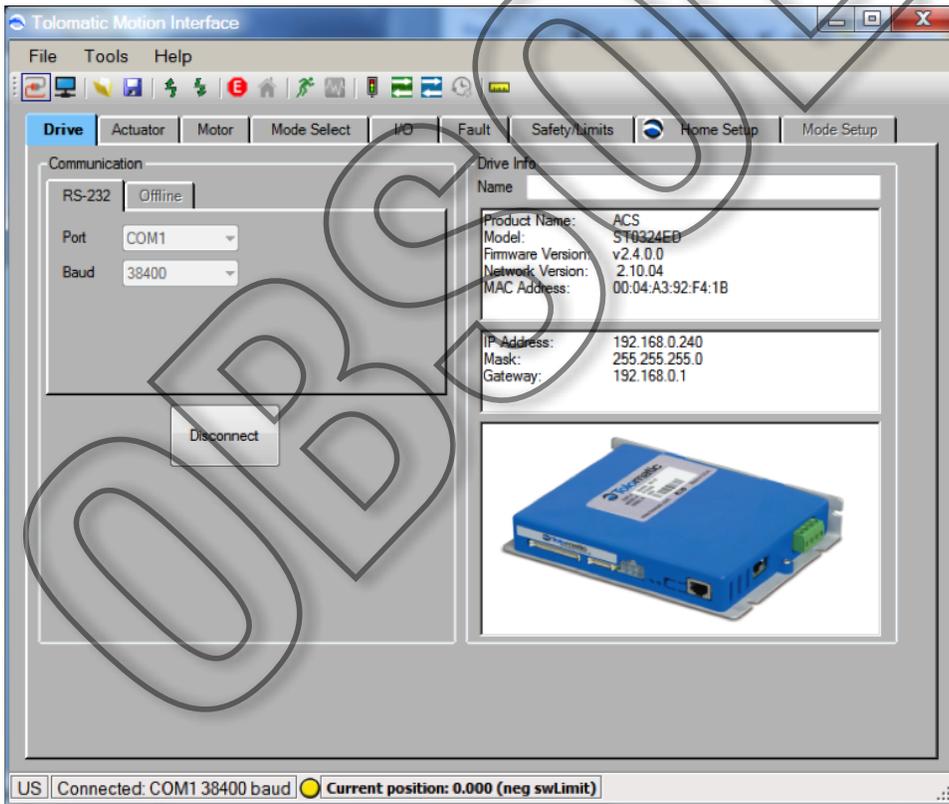


Figure 2-3; MAC Address Window

Disconnect TMI saving settings to flash.

Cycle Power on the ACS drive, it will now boot with DHCP enabled.

3.0 Rockwell BOOTP/DHCP SERVER Setup

Open BOOTP/DHCP Software

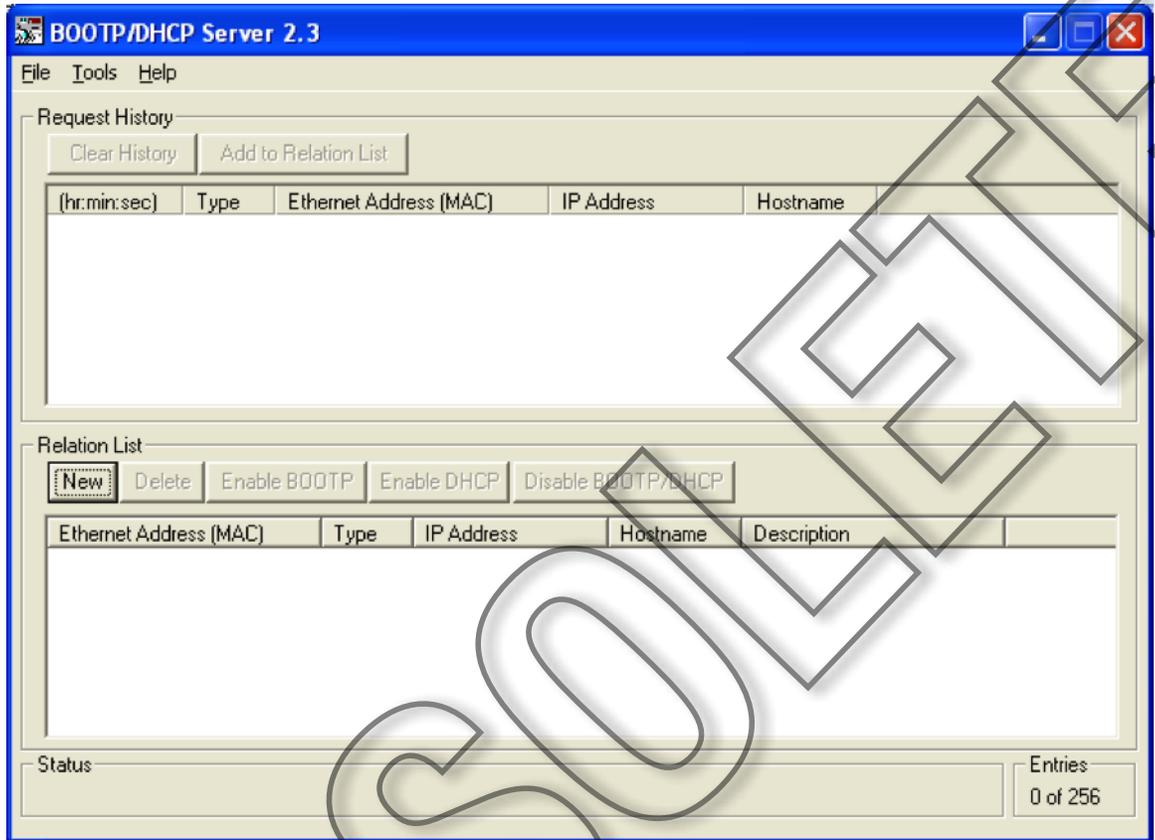


Figure 3-1; BOOTP/DHCP Server Configuration

Under the Relations list click 'NEW'
Enter the MAC address and IP address desired. Then click OK.

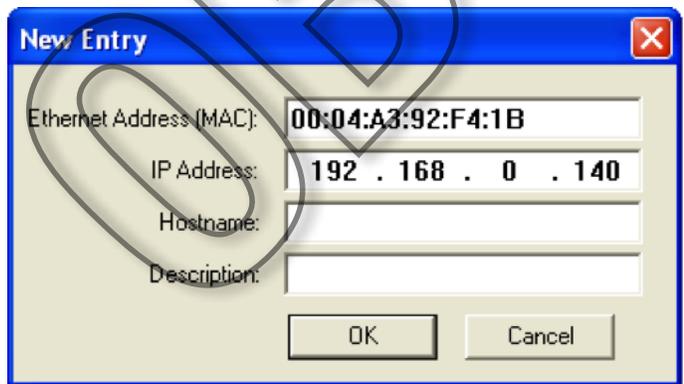


Figure 3-2; IP Address Entry Dialog

Confirm that the Relation List includes the newly added MAC address with desired IP address.

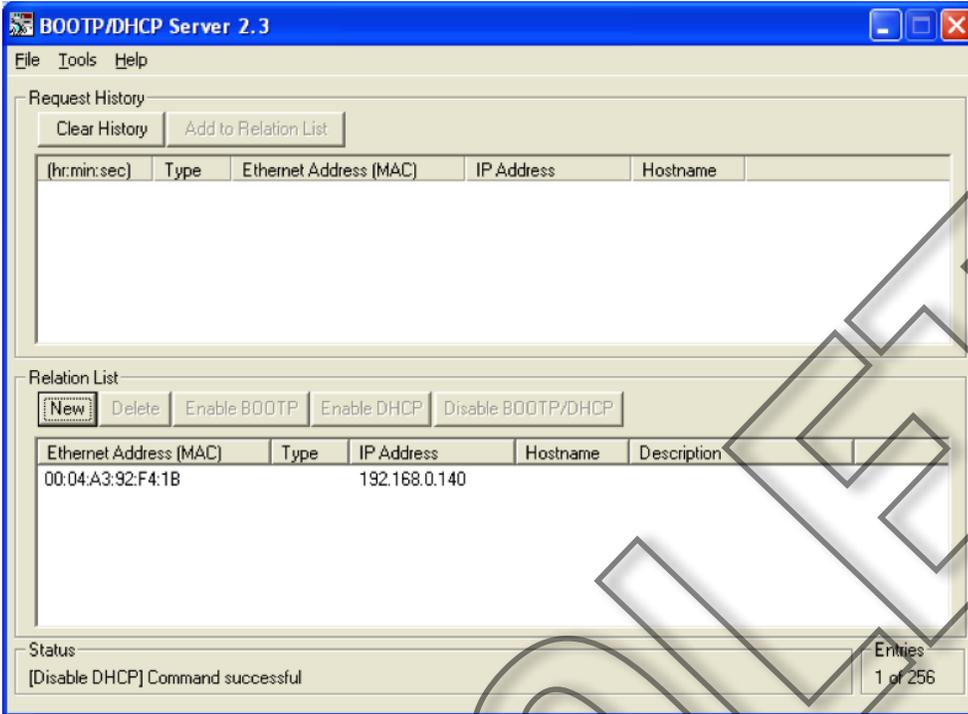


Figure 3-3; BOOTP/DHCP Server Configuration

Once the server software sends the IP address to the drive, a 'Request History' message should appear displaying the new IP address for the ACS drive.

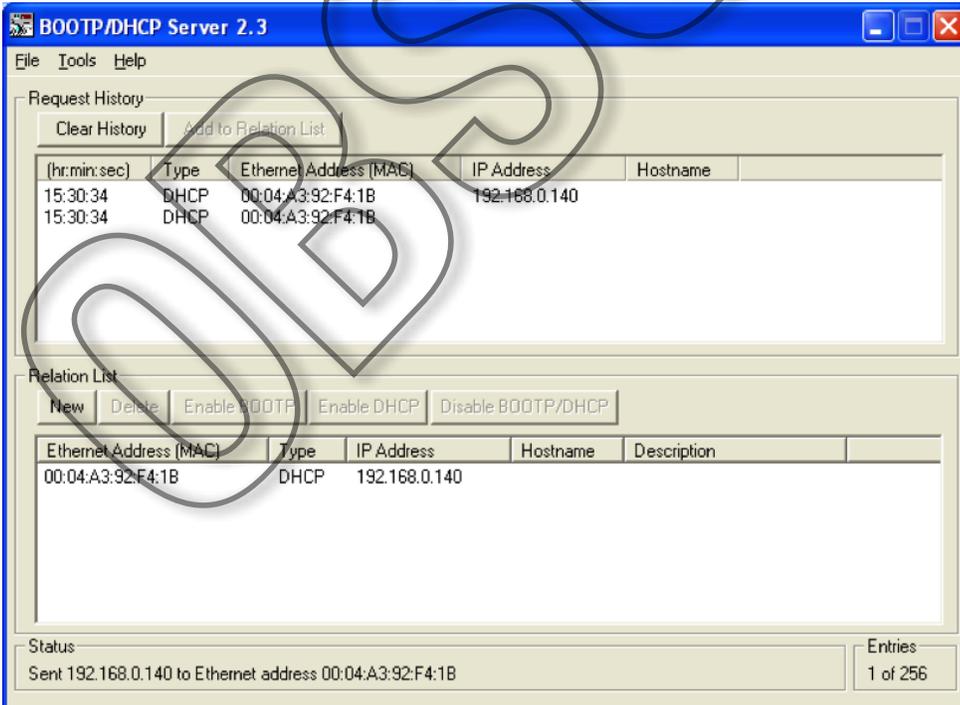


Figure 3-4; BOOTP/DHCP Server Configuration

4.0 Confirm IP Address

To verify that the IP address assignment was successful, connect the ACS drive with TMI and validate the updated IP address.

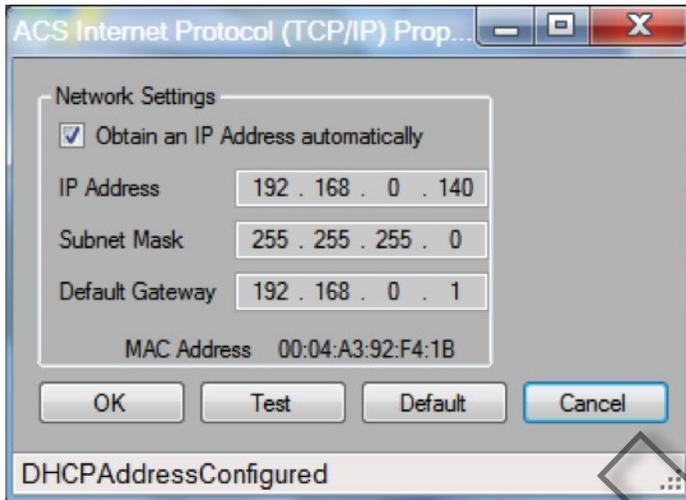


Figure 4-1; IP Address Dialog

On the DHCP Server software select the ACS drive MAC address and click Disable BOOTP/DHCP.

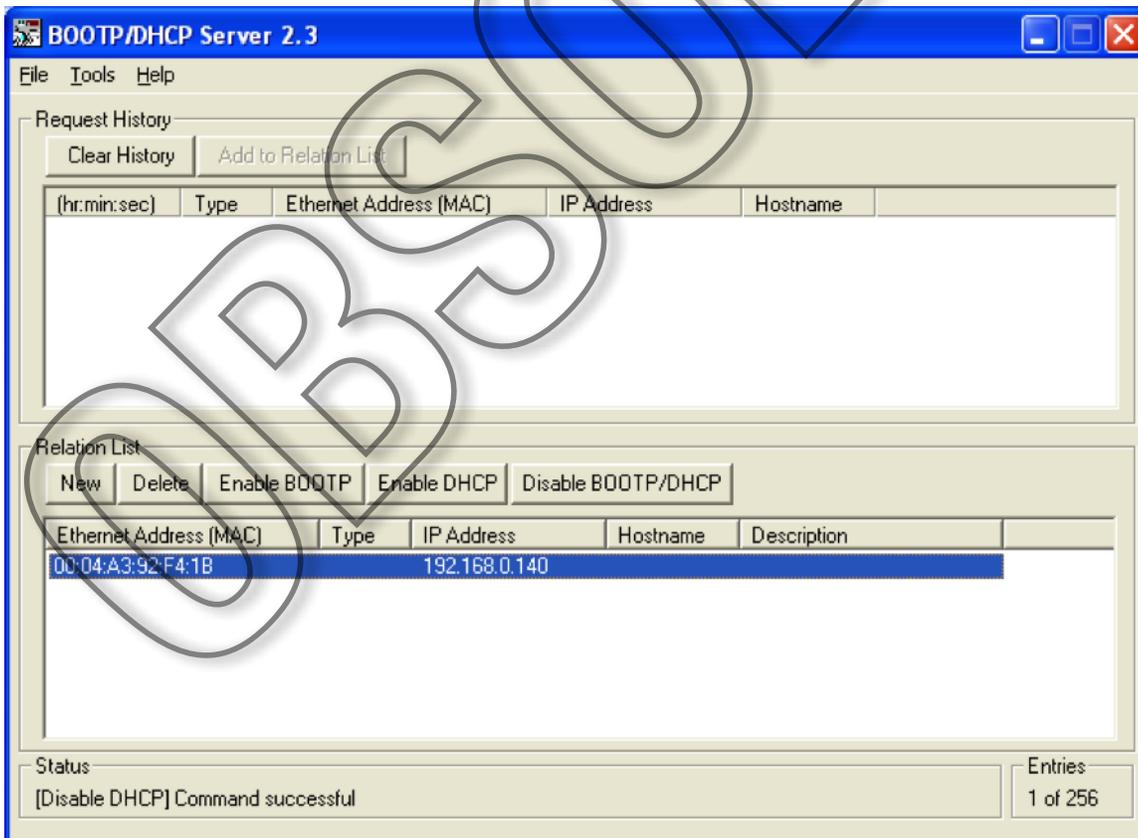


Figure 4-2; BOOTP/DHCP Server Configuration

Confirm the 'Obtain an IP Address automatically' check box is unchecked. This will require the window to be reopened.

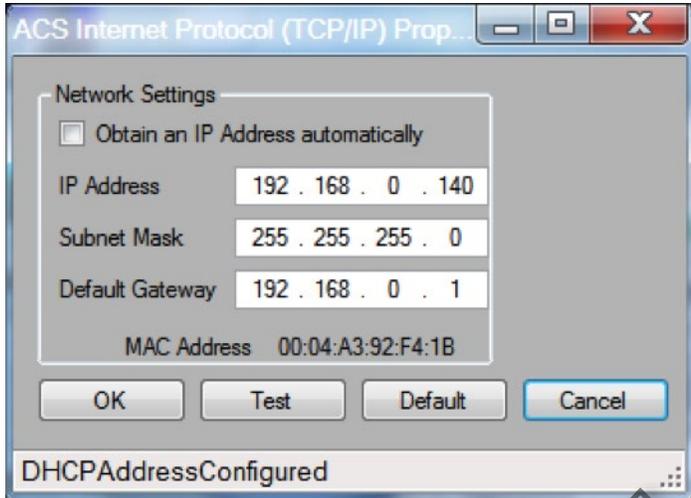


Figure 4-3; IP Address Dialog

The process is now complete.

5.0 Conclusion

This tutorial went through the process of using Rockwell's BOOTP/DHCP Server to automatically assign IP addresses to Tolomatic ACS drives. The second ACS drive connection to TMI was only to show the ACS drive's behavior using DHCP. Normally only the initial TMI connection and configuration is necessary. Using DHCP, many IP addresses can be assigned to a network of ACS drives that are uniquely identified by their MAC addresses.