

# CNOE

## IP Address Configuration

### Introduction

The CNOE comes with a default IP address of 10.10.10.10. A PC on the network running Windows ME/2000/XP can very easily add an additional IP address to an existing adapter, and configure a new IP address for the CNOE using RPCSW32. RPCSW32 should be installed from the CD or downloaded from [www.niobrara.com](http://www.niobrara.com).

#### **Set Windows IP to the CNOE's Default IP Subnet**

In the Control Panel of Windows there is an icon for Network Connections (See Figure 1). Double-click the Network Connections icon.

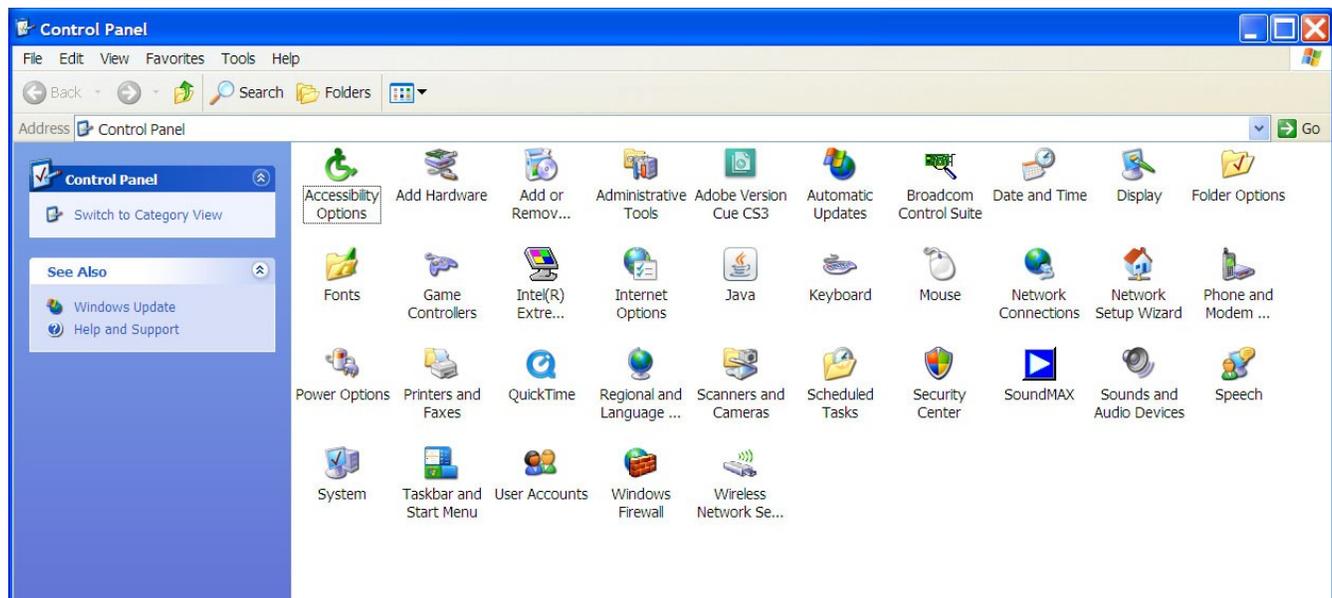


Figure 1: Windows XP Control Panel.

The Network Connections window will show various network connections and adapters for the computer being used. There may be more than one adapter depending on the system. Right-click the icon which represents the adapter connecting to the CNOE, then select Properties (See Figure 2).

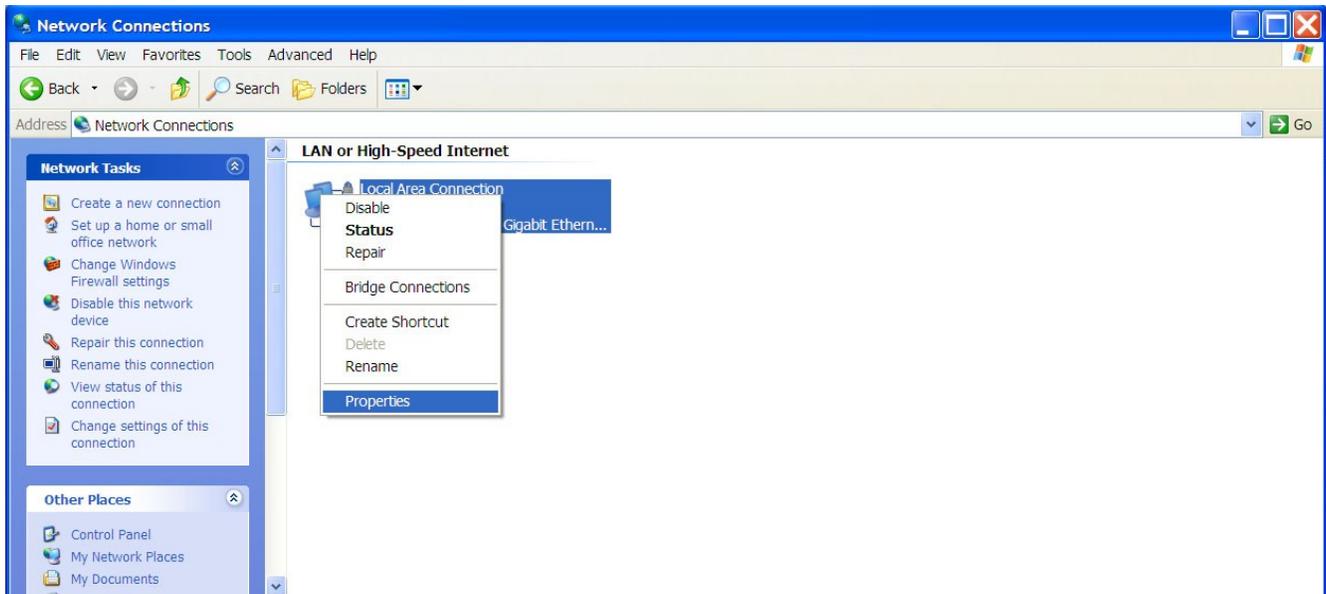
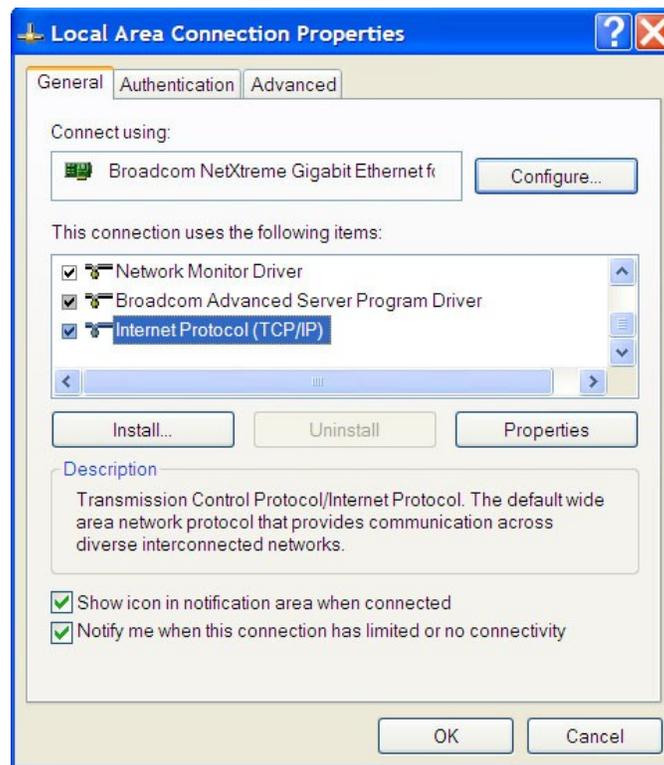


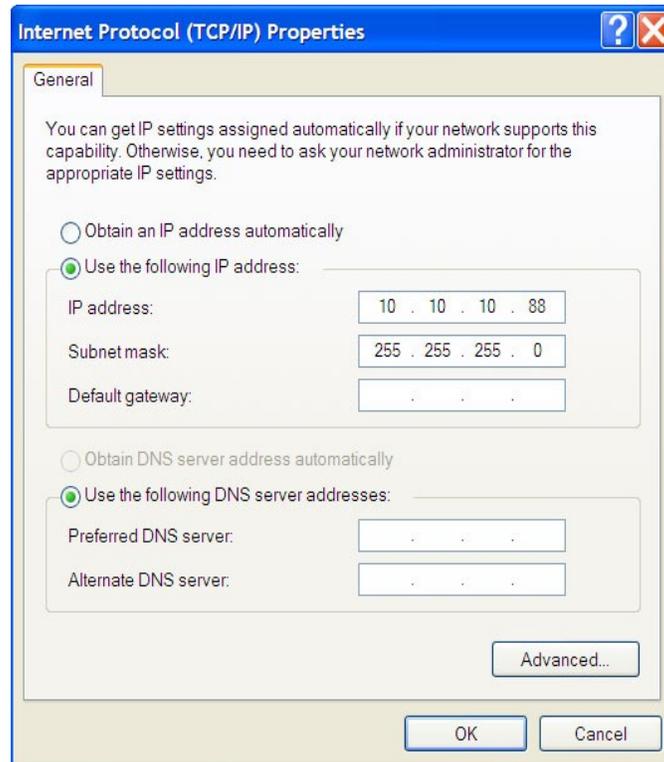
Figure 2: Windows XP Network Connections

In the Local Area Connection Properties window find Internet Protocol (TCP/IP). Select Internet Protocol (TCP/IP) and click the Properties button (See Figure 3).



*Figure 3: Windows XP Local Area Connection Properties.*

In the Internet Protocol (TCP/IP) Properties window click the Use the following IP address (See Figure 4). Type in an IP address of 10.10.10.XX. XX must be some number between 0 and 255, and must not be 10. 88 is used in the case below. Subnet mask should be 255.255.255.0. It is not necessary to change the Default gateway or the DNS server addresses. Click Ok. Now the PC is set to the same subnet as the CNOE.



*Figure 4: Windows XP Internet Protocol (TCP/IP) Properties.*

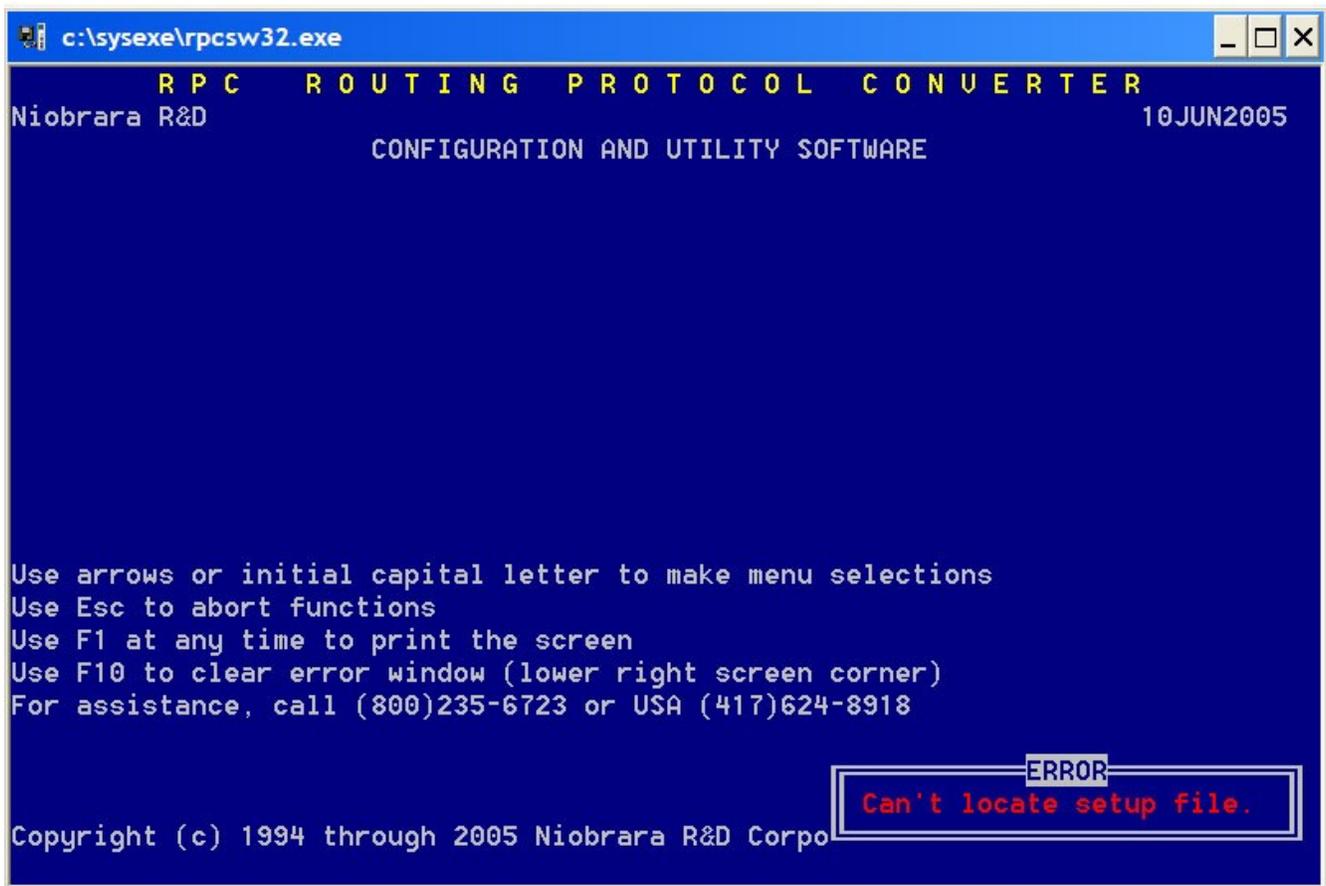
## Setup CNOE using RPCSW32.exe

Double-click RPCSW32 icon to start the RPC software (See Figure 5).



Figure 5: RPCSW32 Icon.

The RPC software is DOS based, so it will open in a terminal window (See Figure 6). The first time the software is started, there will be an error which reads “Can't locate setup file.” This happens because there is no setup file yet. Use the [F10] key to clear the error.

The image is a screenshot of a DOS terminal window. The title bar at the top reads "c:\sysex\rpcsw32.exe". The main text in the window is as follows:

```
RPC ROUTING PROTOCOL CONVERTER
Niobrara R&D 10JUN2005
CONFIGURATION AND UTILITY SOFTWARE

Use arrows or initial capital letter to make menu selections
Use Esc to abort functions
Use F1 at any time to print the screen
Use F10 to clear error window (lower right screen corner)
For assistance, call (800)235-6723 or USA (417)624-8918

Copyright (c) 1994 through 2005 Niobrara R&D Corpo
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In the bottom right corner, there is a red-bordered box containing the text "ERROR" in a small font, and below it, "Can't locate setup file." in a larger, red font.

Figure 6: RPCSW32.exe

Once the error is cleared the communications configuration screen will appear (See Figure 7). Use the arrow keys to change the selection. Use the [Space Bar] to cycle through the choices in each selection.

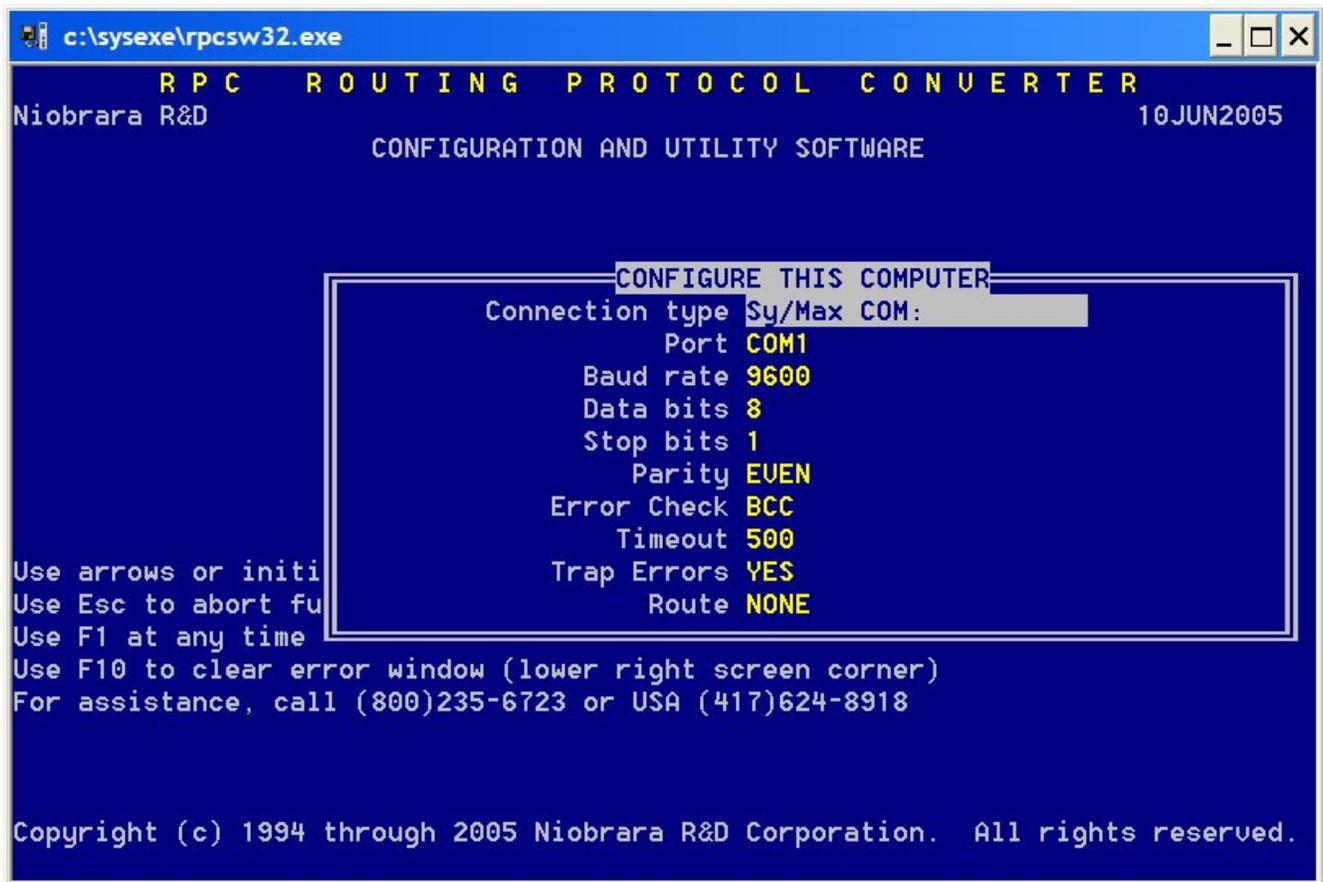


Figure 7: RPC configuration utility software.

Press the [Space Bar] to change the Connection type from Sy/Max COM: to Modbus TCP (See Figure 8). Host should be set to the current address of the CNOE, which in this case is 10.10.10.10. Port should be 502. Leave Timeout leave at 500. Leave Trap Errors at YES. Index should be 255. Press [Enter].

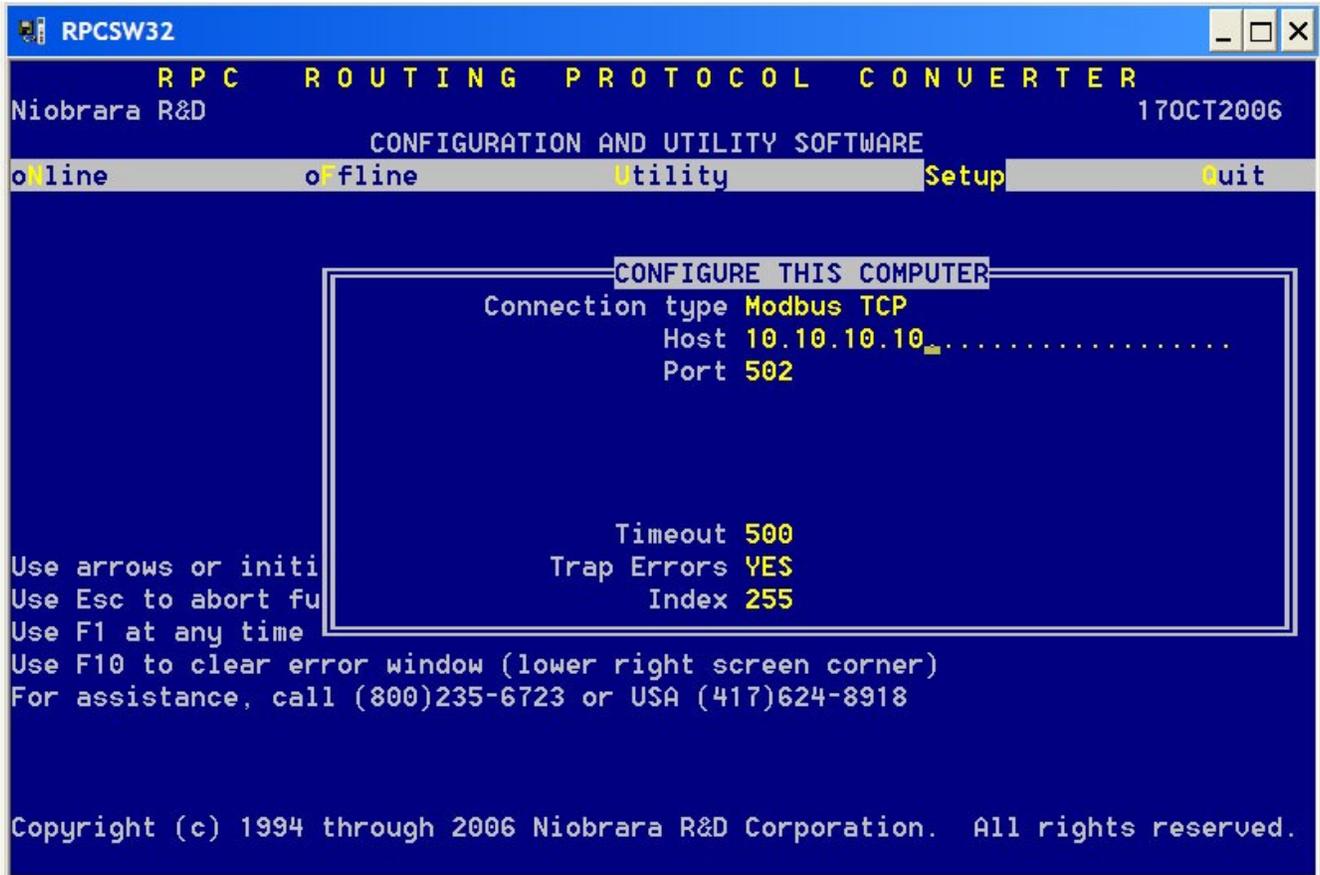


Figure 8: Using RPC software to setup the Connection type and Host IP address.

Press [N] when asked to save this configuration to a startup file (See Figure 9).

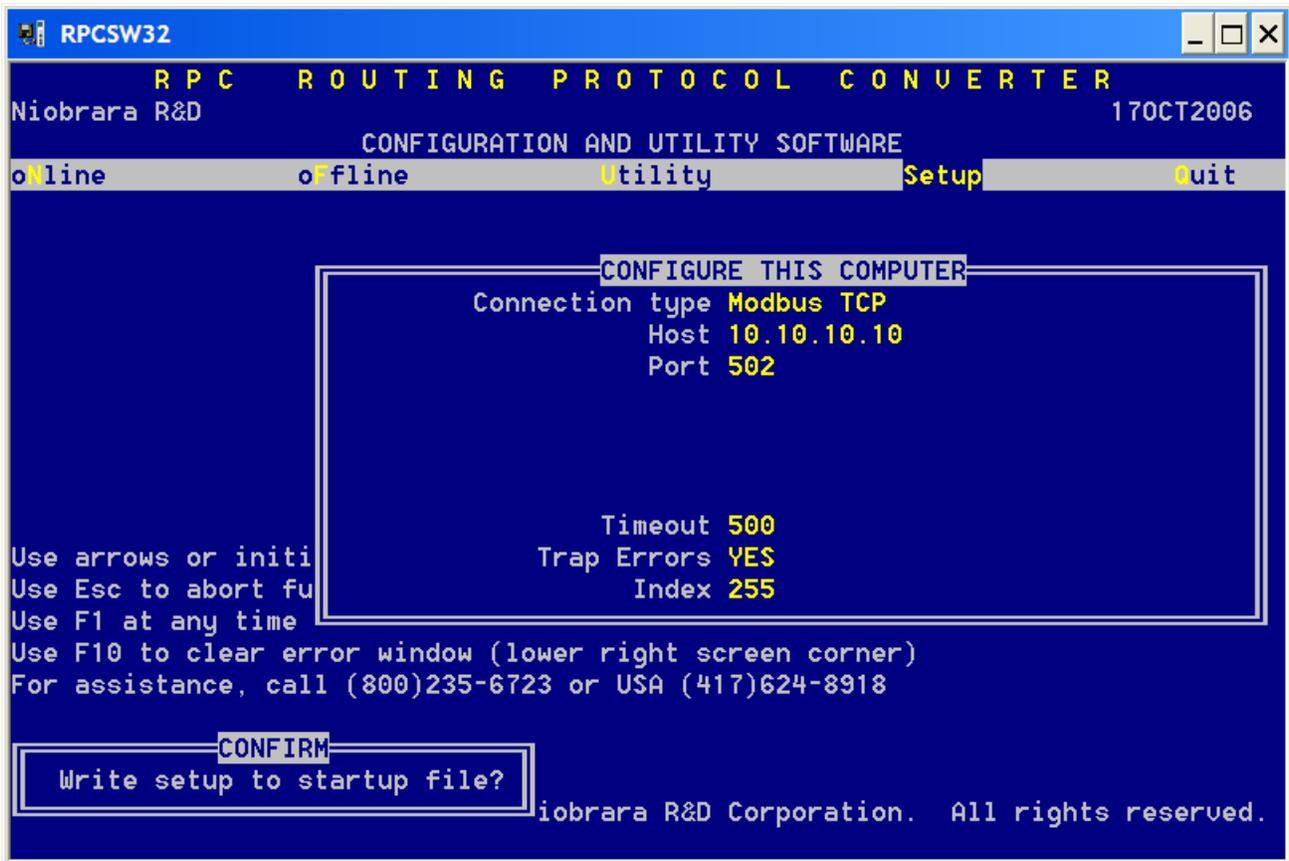


Figure 9: Write setup to startup file?

Arrow over to the oFfline menu or press the [F] key. Arrow down to Edit configuration in memory or press the [E] key (See Figure 10).

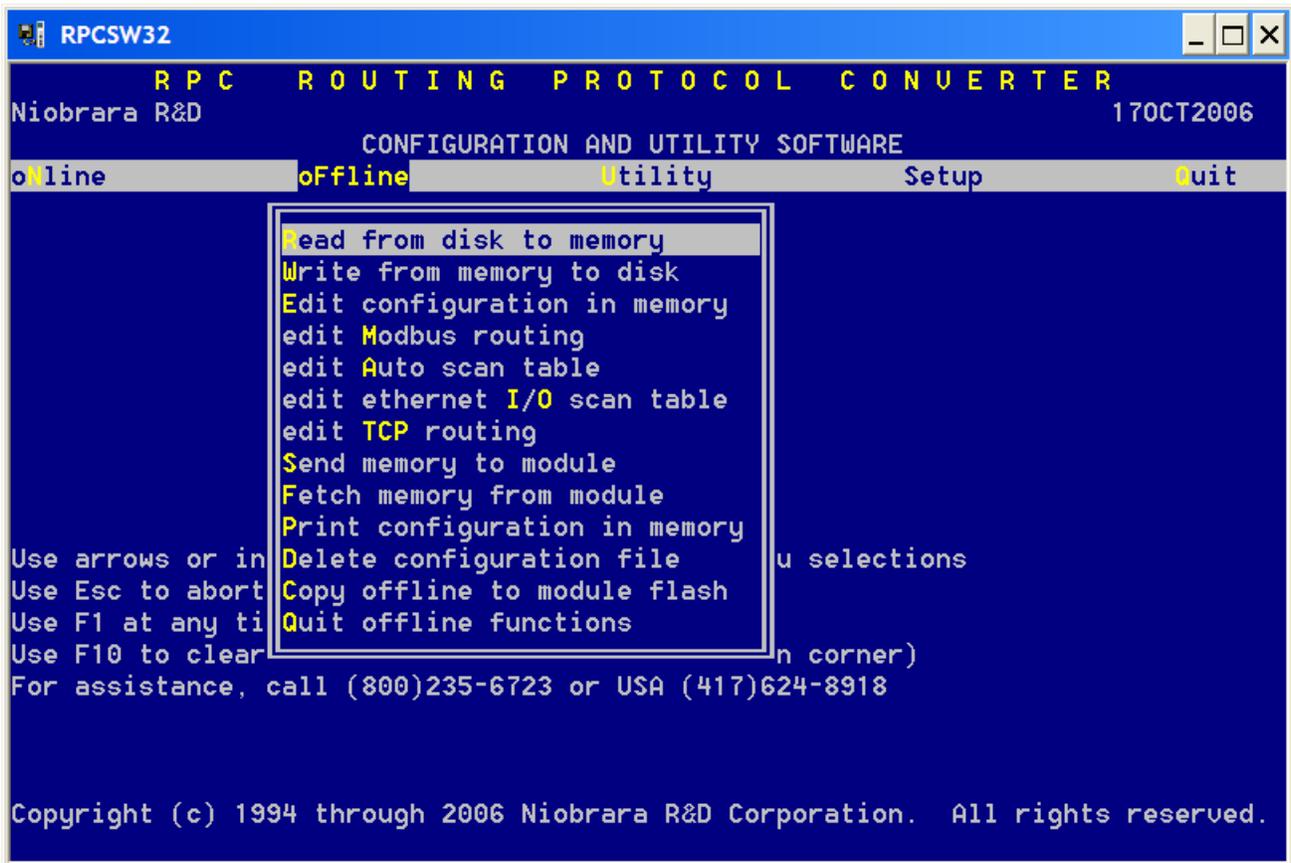


Figure 10: RPC oFfline menu

Use this screen to set up the Ethernet port. Use the arrow keys to move the selection bar to the Ethernet port. Drop is not used, and may be left at zero. Ethernet cannot be changed. Protocol should be Modbus/TCP. IP Address, Subnet Mask, and Default Gate addresses should be set to match the network (See Figure 11 for example settings). The rest of the values may be left as they are. Press the [Escape] key to exit this screen and return to the main menu.

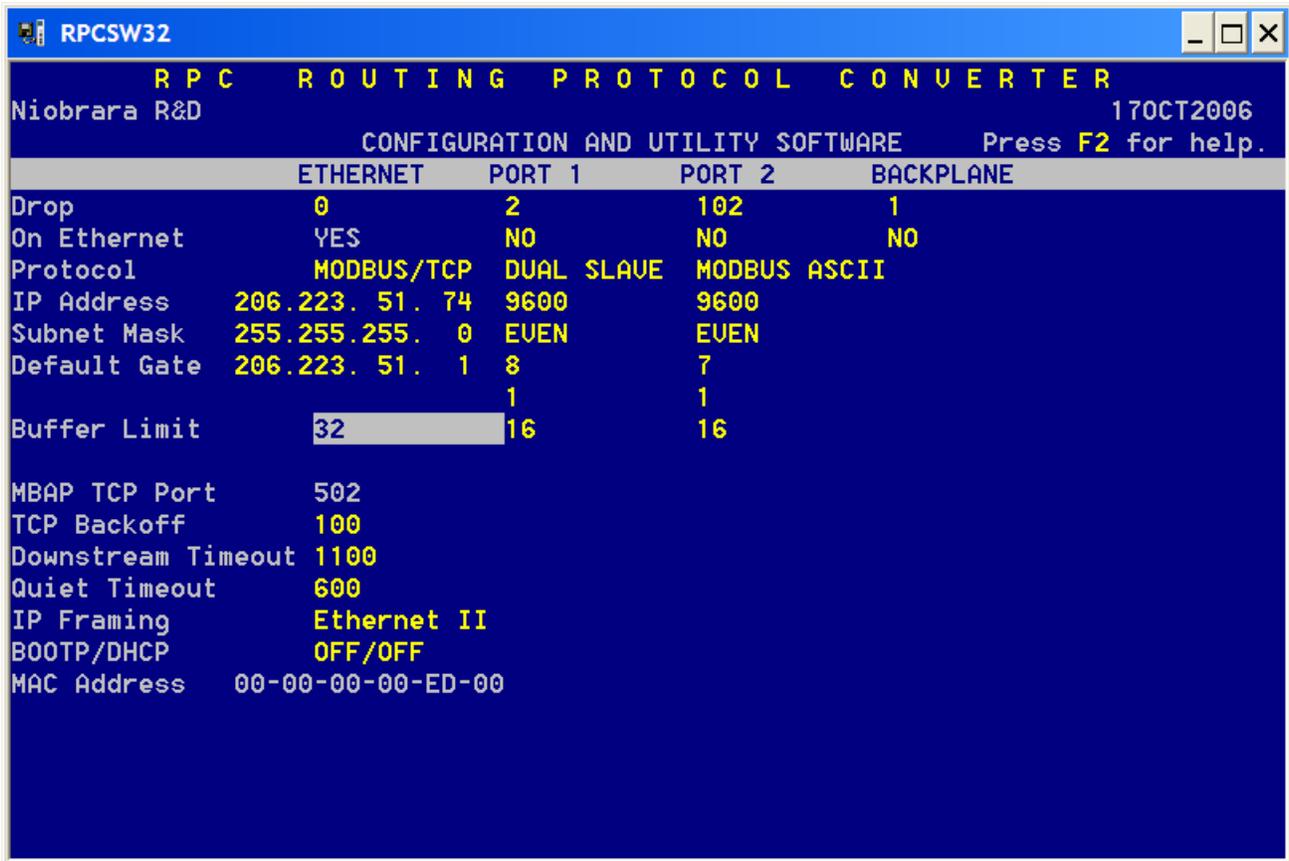


Figure 11: Example settings for IP, Subnet Mask and Default Gate Addresses



The screen will read “Sending port 0” (See Figure 13). The software then loses communications with the CNOE. This happens because the first port address to change is the Ethernet port. Press [Esc].



Figure 13: Error received on Send memory to module.

Set the PC's TCP/IP address back to its original configuration. Then, using RPC software, go to Setup menu, then Serial communications, and change the Host to the value set in the offline setup (See the example in Figure 14). To ensure the rest of the setup is sent to the CNOE, Navigate to oFfline menu, choose Send memory to module, and press [Enter].

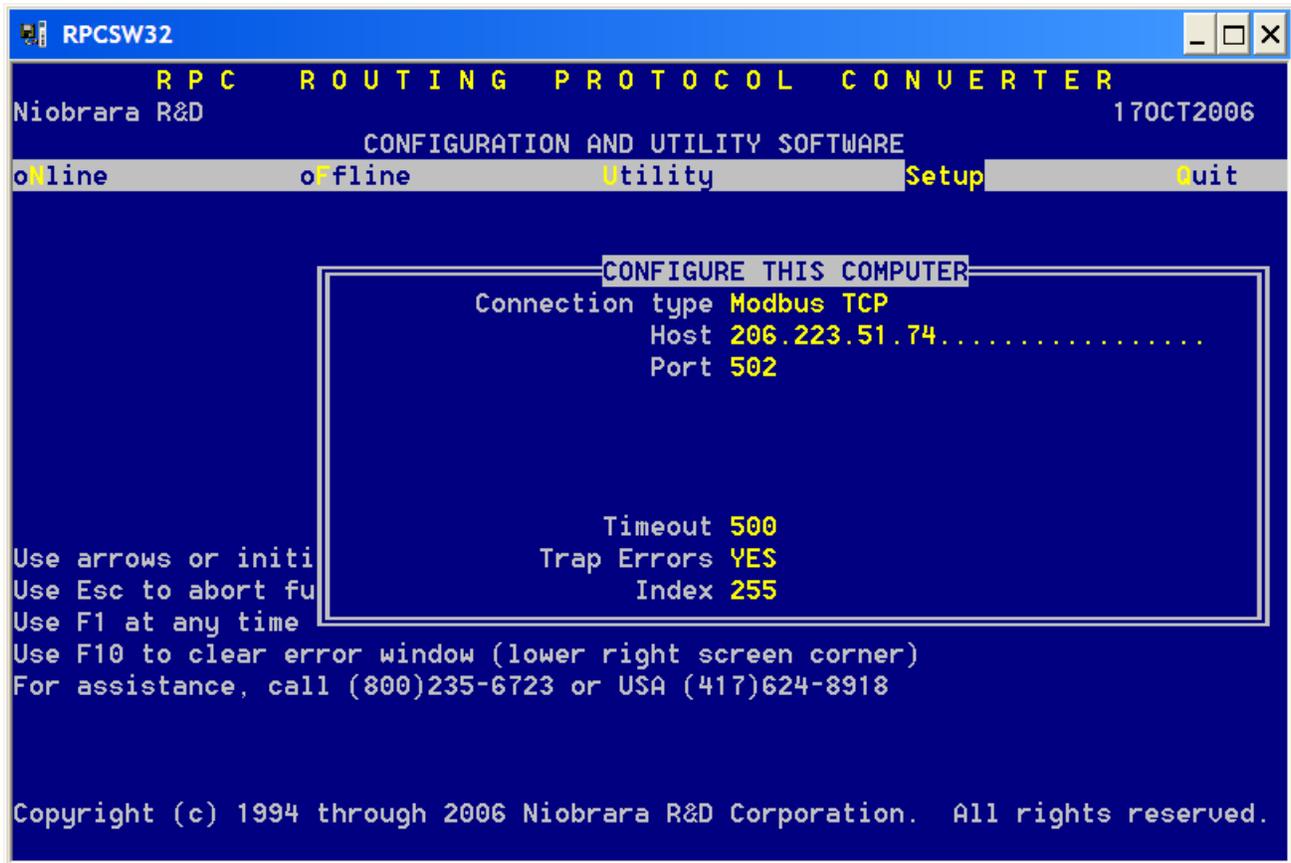


Figure 14: Change Setup Serial Communications

The CNOE's address is now configured. Once all the configuration is complete, write the configuration to EEPROM from the utility menu (See Figure 15).

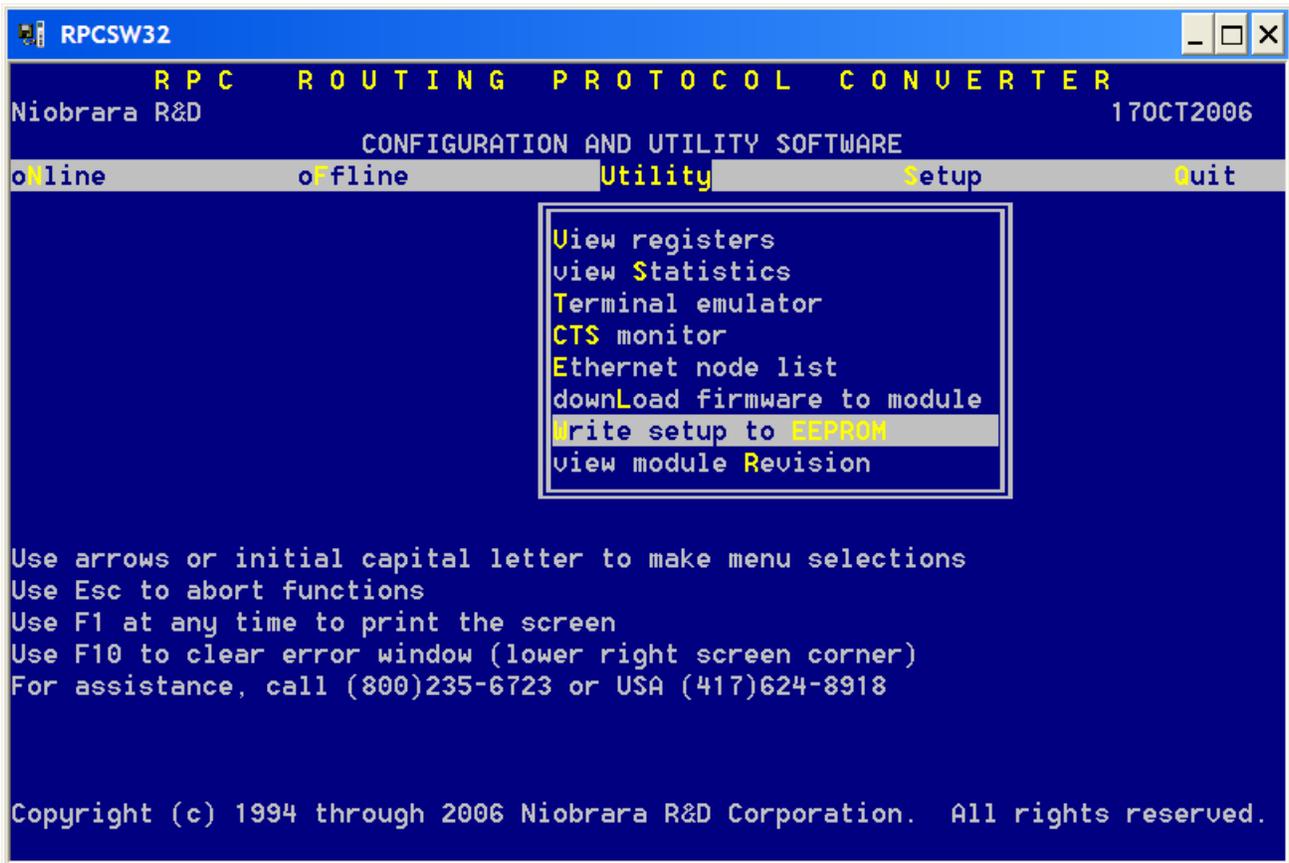


Figure 15: Write setup to EEPROM