iQ Explorer for DPC™ Setup Guide

Minimum PC Requirements:
- Windows XP Operating System (Any Service Pack)
- Microsoft .NET Framework 1.1 or newer
- Serial Port or USB to Serial Adaptor
- USB Port

438-960 Kit Hardware:
- 110-4438 - AI Server
- 110-4463 - Power Supply
- 200-1126 - Serial Cable
- 200-1141 - ArcNet Cable
- 200-1554 - Null Modem Serial Cable
- 200-1552-03 - Ethernet Patch Cable
- 200-1553-03 - Ethernet Crossover Cable
- 433-37 - USB Software Key
- 437-00245 - iQ Explorer Installation Disc

Networking Basics:
There are two types of network configurations iQ Explorer can be used with, peer-to-peer or a standard network. In a peer-to-peer configuration, a PC would be connected directly to the DPC generator without being connected to the company's main computer network (LAN). With a standard network configuration, the iQ Explorer can be installed on any PC that is connected to the company's computer network (LAN) as long as the DPC generator is connected to that same network through an AI Server. This configuration will be the best choice for most situations, but it will require some support from the IT staff for the local network.

The type of network that DPC generators use is ArcNet, which was the first widely available networking system for computers and became popular in the 1980's. Since today's office and factory networks have evolved into Ethernet networks, the 110-4438 AI Server converter is necessary for DPC generators to communicate via Ethernet.

Software Installation:
1. Insert the iQ Explorer CD into the CD-ROM drive of your computer. The CD should start automatically. If the menu does not start, go to "Start" → "Run" and type in d:\setup.exe (where d: is your CD-ROM drive).

2. The iQ Explorer setup window will appear. Follow the on-screen instructions to complete the installation process, and remove the CD from the CD-ROM when finished. The software installation will check to see if the Microsoft .NET Framework is installed. If it is not installed, go to "Start" → "Run" and type in d:\dotnetfx.exe (where d: is your CD-ROM drive) to install the .NET Framework. After restarting the computer, the installation can be started again.

3. Insert 433-37 USB Software Key into any available USB port on the computer and a *Found New Hardware* window will appear. When prompted to search Windows Update for the driver, select "No, not this time" and click "Next". *NOTE: iQ Explorer will only run for 45 minutes without the USB Software Key.*

4. Select "Install the software automatically (Recommended)" and click "Next".

5. Click "Finish" to end the *Found New Hardware* wizard.

6. Do not start iQ Explorer at this time.

AI Server Setup:

1. Before continuing with the installation, the choice between a peer-to-peer or a standard network configuration must be made. If a standard network will be used, the local IT staff must provide a **fixed IP address** from the network that can be assigned to the AI Server. Keep this IP address for future reference.

   Note: If the AI Server is purchased as part of a 438-960 kit, the factory default IP address set by Dukane is 192.168.0.1. The AI Server setup steps can be skipped if a peer-to-peer network connection is being used since the AI Server has already been configured at the factory.

2. The AI Server will be configured using HyperTerminal, a terminal program that is included with Windows. HyperTerminal can be found at "Start" → "All Programs" → "Accessories" → "Communications" → "HyperTerminal". Click on "HyperTerminal" and the window below will appear. Type "AI Server" in the "Name" box and click "OK".
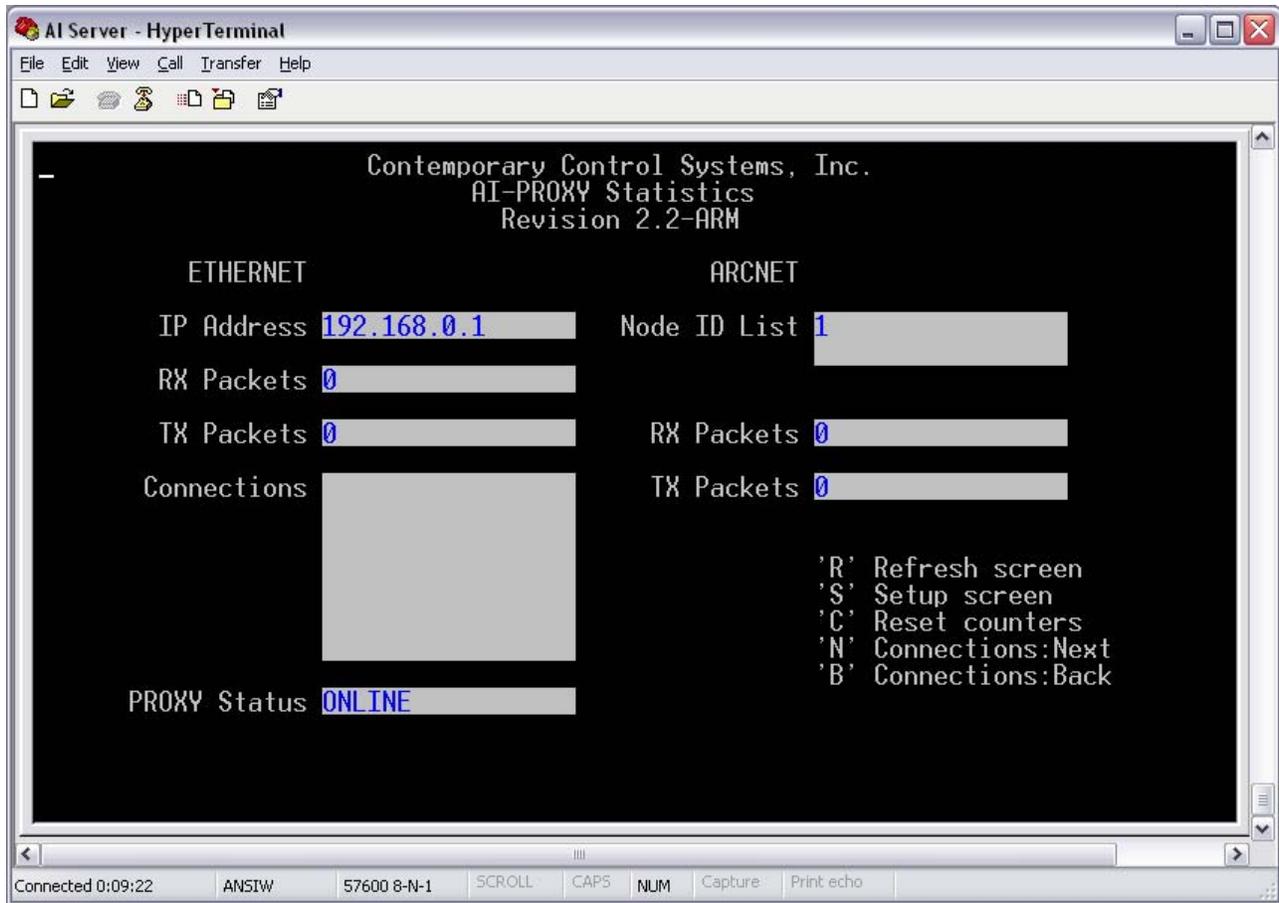
3. The window below will appear next and will allow the selection of the COM port being used to configure the AI Server. For most serial ports, the COM port will be COM1 or COM2. USB to serial adapters are typically assigned COM4 or higher. Select the appropriate COM port from the "Connect using:" drop down box and click "OK".
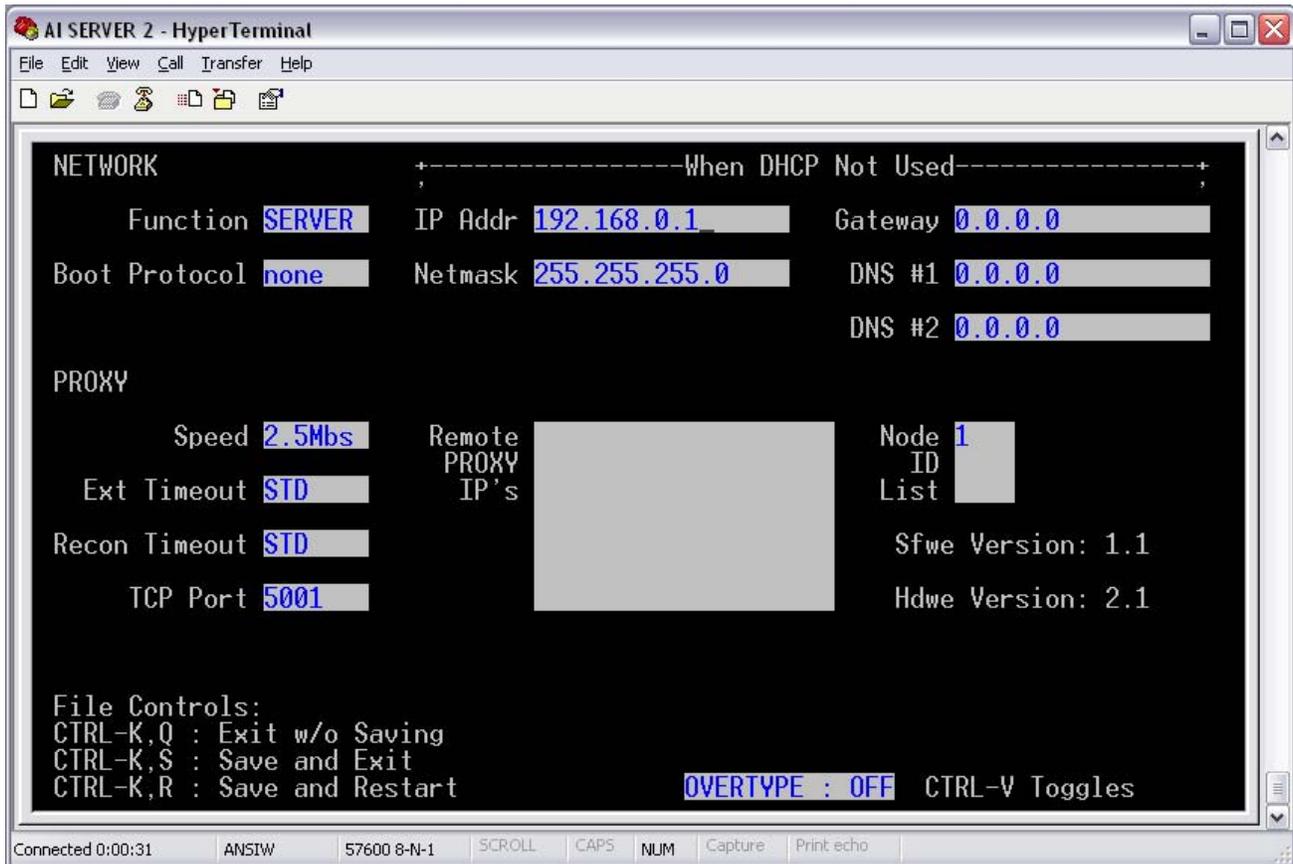
4. The port settings window will appear next. Select the following settings and click "OK" when completed: Bits per second = 57600, Data bits = 8, Parity = None, Stop bits = 1, Flow control = None.

5. Remove the 110-4438 AI Server from the box and insert the small termination plug into either of the ArcNet ports of the AI Server.

6. Plug the 110-4463 AC power supply into the terminal block on the AI Server.

7. Connect one side of the 200-1554 Null Modem Serial Cable into COM2 on the AI Server and the other side into the COM port or USB to Serial adapter.

8. The screen below will appear in the HyperTerminal window. Press the "S" key to proceed to the setup screen.

9. When the screen below appears, the cursor will be located in the "Function" field. Use the Spacebar to toggle to "SERVER".

10. Use the Tab key to navigate to the "IP Addr" field. Using the Left/Right arrow and Backspace keys, delete the default IP address. For a standard network configuration, enter the IP address obtained from the local IT staff. For a peer-to-peer configuration, enter "192.168.0.1" as shown.

11. After entering the correct IP address, the AI Server settings will need to be saved. Press "Ctrl + K" and then press "R" to save and restart the AI Server.

12. The screen from step 8 should reappear and display the IP address that was entered in the previous step.

13. Press the "S" key to proceed to the setup screen. Use the Tab key to navigate to the "Node ID" field and enter any value that is less than "240".

14. Press "Ctrl + K" and then press "R" to save and restart the AI Server.

15. The AI Server configuration is now complete. Disconnect the 200-1554 Null Modem Serial Cable and the AC power from the AI Server.

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Cable Connections:
1. Connect one end of the 200-1141 ArcNet cable to J503 or J504 on the rear panel of the DPC generator. Connect the other end to either ArcNet port of the AI Server. A termination plug is included with the AI Server and should be installed into the unused ArcNet port.

2. If a standard network configuration is being used, connect one end of the 200-1552-03 Ethernet patch cable to the Ethernet port of the AI Server. The other end will be connected to a router, switch or hub on the company's network (LAN).

3. If a peer-to-peer network configuration is being used, connect one end of the 200-1553-03 Ethernet crossover cable to the Ethernet port of the AI Server. Connect the other end to the Ethernet port of the PC running iQ Explorer.

4. Plug the 110-4463 AC power supply into the terminal block on the AI Server.

DPC Setup:
1. Turn on power to the DPC generator. From the main menu, scroll down to select the "NETWORK" menu option and press the enter key.

2. Select and enter the "DPC NAME" menu option to assign a name to the DPC generator.

3. Select and enter the "DPC ID" menu option to assign a network ID number to the DPC generator. This number must be between "240" and "250" and must not be duplicated if there are multiple generators on the network.

4. Verify that the DPC generator software version is compatible with the version of iQ Explorer that was installed. The software version is displayed when the generator powers up and can also be found by pressing the "INFO" key on the front panel. If the generator software needs to be updated, see Section 14 of the generator manual for instructions. The 200-1126 serial cable included with the kit will be used for updating the software.
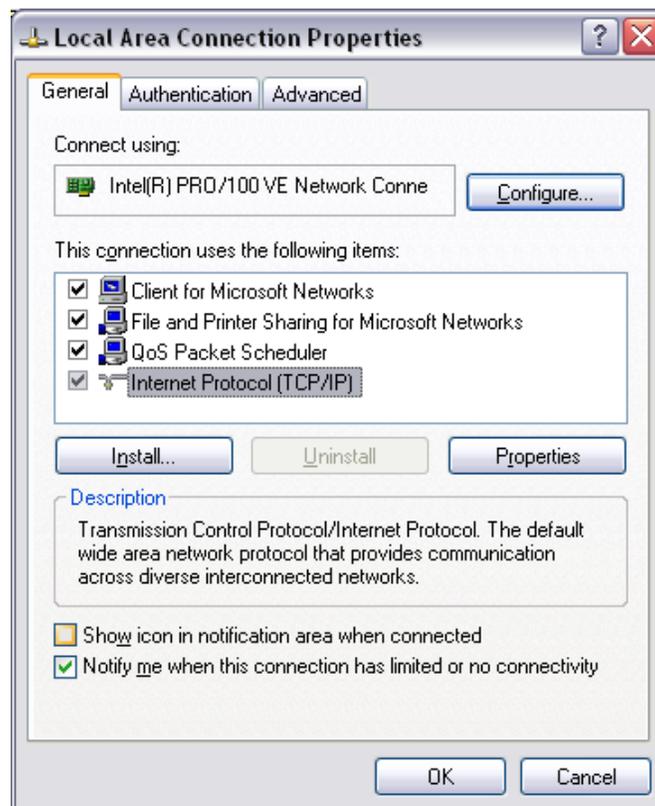
Software Compatibility Table

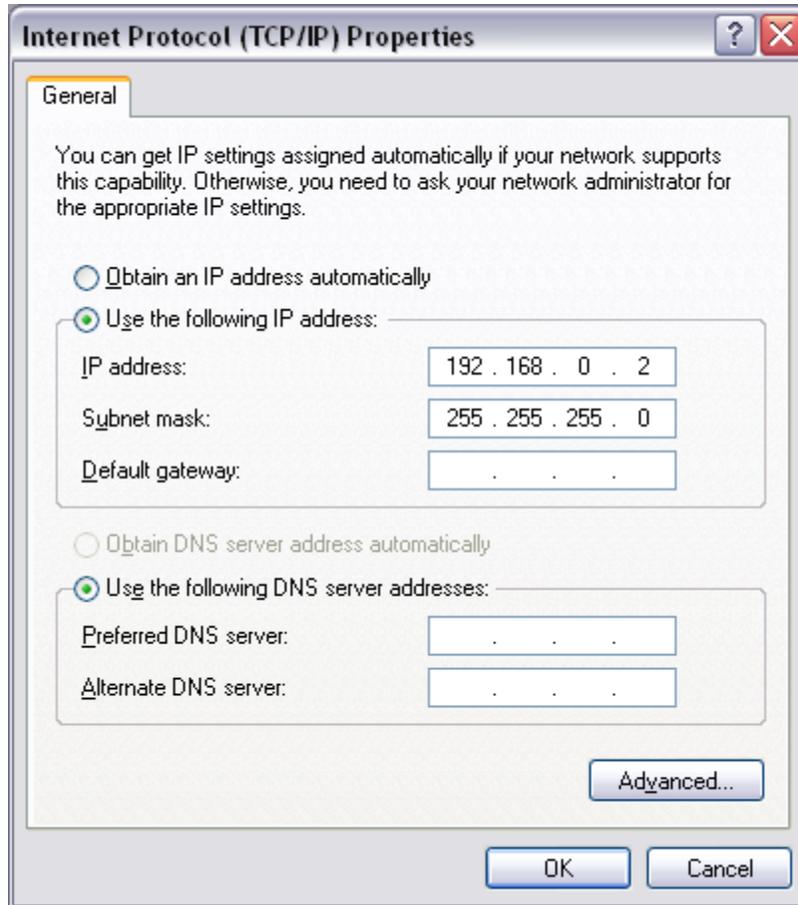| iQ Explorer Software Version	DPC 4+ Software Version
2.2	4.80
2.29	4.80

Starting iQ Explorer:

1. If a standard network configuration is being used, skip to step 7.

2. If a peer-to-peer network configuration is being used, the IP address will need to be set on the PC running iQ Explorer.

3. Open *Network Connections* in the Windows Control Panel. The window should be similar to the one pictured below. Right-click on Local Area Connection and select "Properties".
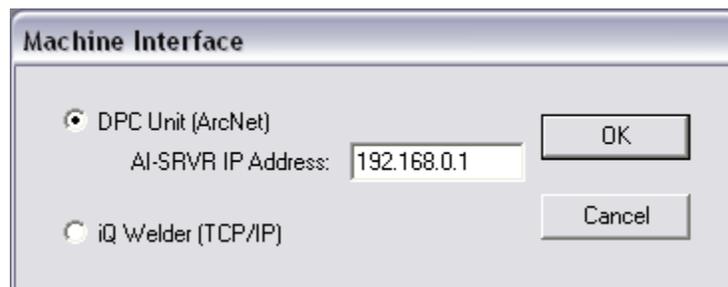
4. In the *Local Area Connection Properties* window, select "Internet Protocol (TCP/IP)" and click "Properties".

5. In the *Internet Protocol (TCP/IP) Properties* window, select "Use the following IP address:". Enter "192.168.0.2" in the "IP address" field and "255.255.255.0" in the "Subnet mask" field as shown below, then click "OK".

6. Click "OK" in the *Local Area Connection Properties* window and close the *Network Connections* window. It may be necessary to restart the computer before the changes take effect.

7. Launch the iQ Explorer software. A *Machine Interface* window will appear the first time the software starts. For a peer-to-peer network configuration, select "DPC Unit (ArcNet)" and enter "192.168.0.1" as shown. For a standard network configuration, select "DPC Unit (ArcNet)" and enter the IP address obtained from the local IT staff.

8. Click "OK" to complete the installation process.

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