

Mercury

App K

APEX INSTRUMENTS, INC.

Appendix K Automated Mercury Source Sampler –
Model XC-6000EPC

Advanced Network Configuration

Advanced Network Configuration



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The Apex XC-6000 MercSampler console is equipped with a versatile TCP/IP based network communications system. For many applications, the pre-configured network settings will perform all desired communications, but in certain cases a more advanced network configuration may be required. This manual is designed to assist the end-user with the customized configuration of the XC-6000 communications system.

When the unit is in its factory-default state, the XC-6000 will utilize the following IP addresses for TCP/IP (Ethernet) communication:

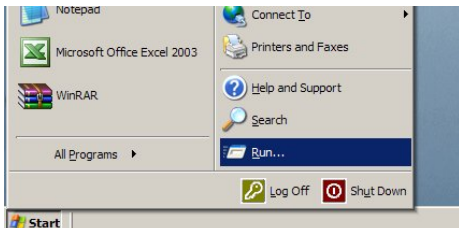
XC-6000 Internal Router:	192.168.1.1
XC-6000:	192.168.1.2
XC-6000Modbus (option:)	192.168.1.3

The XC-6000 software application will only communicate with the XC-6000.

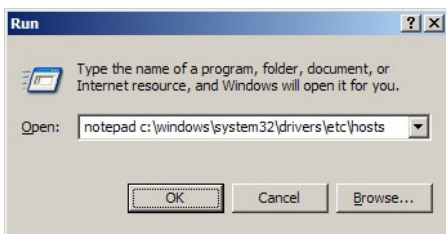
The most common configuration for the XC-6000 is a direct cable connection between the front panel Ethernet jack and the Ethernet jack on a PC. The PC may use the router to obtain an IP address automatically (192.168.1.5 is the lowest IP address that will be assigned.) This configuration is programmed at the factory.

In order for the PC to recognize the XC-6000 network address, an entry must be added to the Windows HOSTS file.

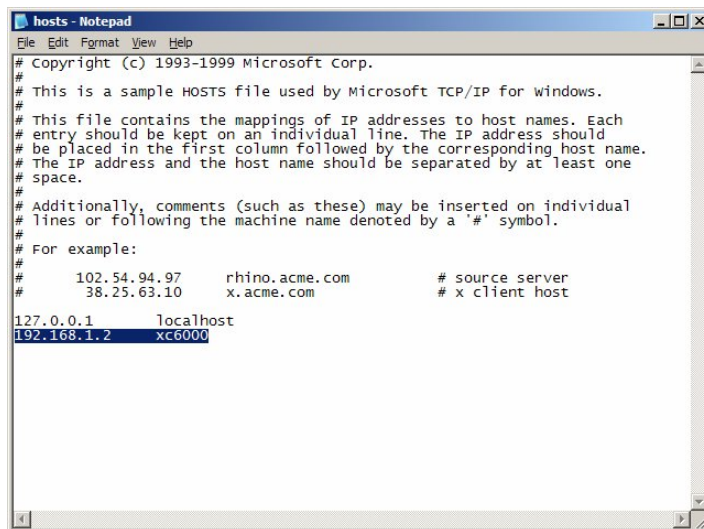
1. Click the Windows Start button (located in the lower left corner of the screen.)
2. Click the Run... button



3. Type "notepad c:\windows\system32\drivers\etc\hosts" into the Run... window.



4. The Notepad text editor window should appear, with the Windows HOSTS file loaded.
5. This file enables the user to specify a DNS entry for a static IP address, which is needed for some system configurations.



Hosts File

6. Add the text highlighted above: 192.168.1.2 xc6000
7. Save the HOSTS file by selecting File -> Save from Notepad's top menu.

Once the IP address of the XC-6000 is added the HOSTS file, the unit should be able to connect over TCP/IP.

To connect via Ethernet follow these steps:

1. Open the XC-6000 application by double-clicking its shortcut.
2. Press the "Config / Utilities" button on the main screen.
3. Select "TCP/IP" button under the Connection Method.
4. Type in the IP address 192.168.1.2 and Port 81.
5. Single Click "Return" and the Main Screen will appear.
6. "End" the program and reopen the program by double-clicking the desktop icon.
7. Single click the "Connect" button. The screen should indicate the console ID, communication method and console date/time.

AUTOMATED MERCURY SOURCE SAMPLER

XC6000-Config/Utilities

Export To File

Dry Gas Meters Verifications

Sensors

Self Test

Set Clock

Reset XC6000

Clear Current Run

Connection Method

☒ TCP/IP ☐ COM Port

IP Address **Port #**

192.168.1.2 81

COM Ports (USB)

☐ COM 1 ☐ COM 9

☐ COM 2 ☐ COM 10

☐ COM 3 ☐ COM 11

☐ COM 4 ☐ COM 12

☐ COM 5 ☐ COM 13

☐ COM 6 ☐ COM 14

☐ COM 7 ☐ COM 15

☐ COM 8 ☐ COM 16

Locate COM Ports

Units and Formats

☐ Metric ☒ English-Metric

☐ 24Hr Clock ☐ dd-mm-yy

Protected password

Calibrations

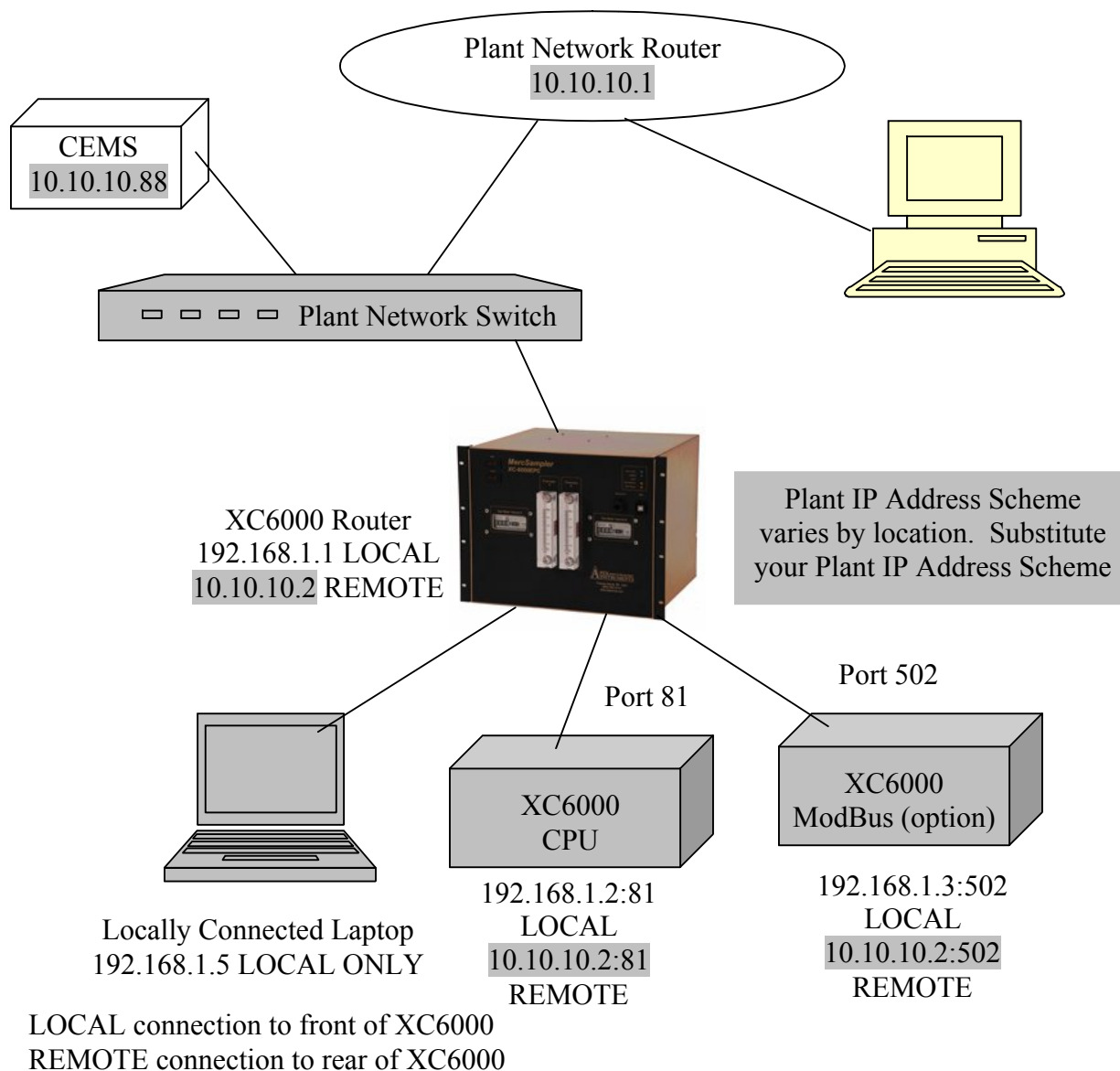
Monitor Scr.

Maint.

Not Connected.

Close

Config / Utilities Screen



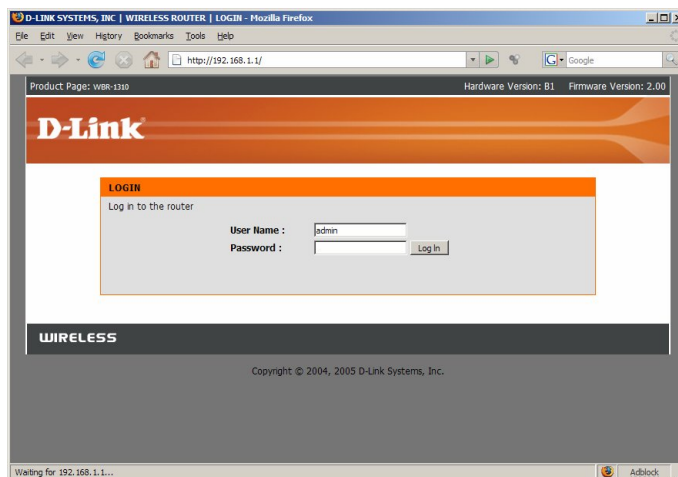
Example XC6000 Plant Network Connection

To connect the XC-6000 to a plant-wide network, the internal router must be connected to the plant router or switch using the XC6000 router WAN port. If the ModBus option is installed in the console, both the ModBus module and the XC-6000 will both connect to the plant network and DAHS using the XC6000 internal router.

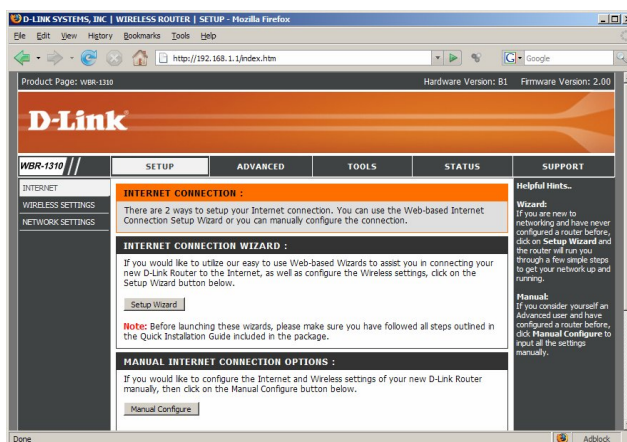
To connect the XC-6000 to a plant-wide network:

1. Obtain a suitable IP address from your plant's network administrator. The XC-6000 must have a fixed IP address on the plant network.
2. We will now configure the XC6000 internal router to respond using the IP address. Power on the XC-6000 console and connect a PC to the internal router using a network cable and the front-panel Ethernet jack.

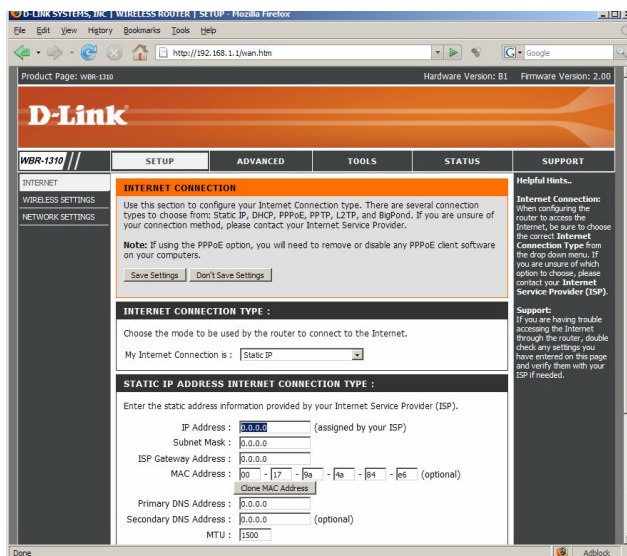
3. Once the PC has connected, open a web browser (Mozilla Firefox or Microsoft Internet Explorer.) In the address bar, type 192.168.1.1 and press <Enter.>
4. The router login screen should appear. Login as user: admin, no password.



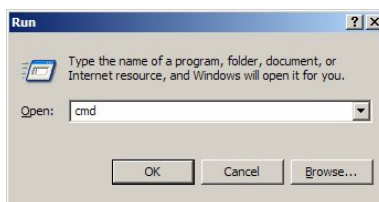
5. On the Setup / Internet page, select Manual Configure.



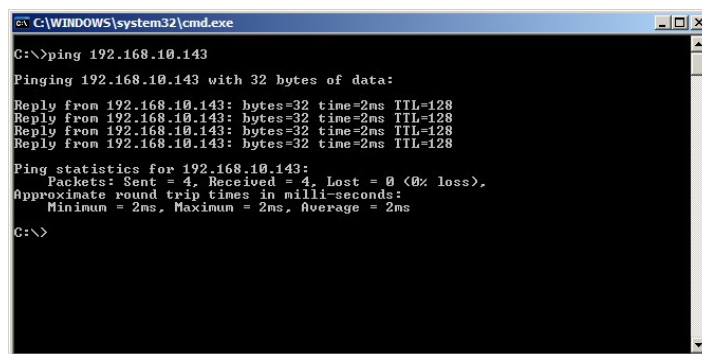
6. Under Internet Connection Type, select Static IP. Enter the static IP address obtained for the XC6000 from your network administrator. Please be sure to enter the correct subnet mask, gateway address, and DNS server. Press the Save Settings button when finished. This IP address is known as the WAN IP Address.
7. **IMPORTANT NOTICE:** The WAN IP address must be on a different subnet than the XC6000 internal IP address. The WAN IP address must not be 192.168.1.xxx.



8. Connect the XC-6000 to the plant-wide network using a network cable. Connect the PC to the same network.
9. On the PC, go to Start -> Run -> cmd.exe. A Command Prompt window will open.



10. Type: ping <IP ADDRESS> and press <ENTER.> Please substitute the IP address of the XC6000 (obtained from your network administrator) for <IP ADDRESS.> You should see a ping response from the XC6000. In the following example, we have used 192.168.10.143 for the XC6000 WAN IP address.



11. Open the XC-6000 application and press the Config / Utilities button. Enter the new IP address into the IP Address box and press "OK."
12. On the main screen, press the "Connect" button. The PC should communicate with the XC-6000.

Local connections to the XC-6000 console must be made through the switch or router on the plant network or using the USB cable communications. When making a local connection to the XC6000, please set your laptop or PC to obtain an IP address automatically, and use the XC6000 internal IP address 192.168.1.2:81.

XC-6000 Network Configuration Worksheet:

XC-6000 Serial Number: _____

XC-6000 Software Version: _____ --- _____

XC6000 WAN IP ADDRESS: _____ . _____ . _____ . _____

XC6000 MAC ID: _____ : _____ : _____ : _____ : _____ : _____

PC IP ADDRESS: _____