

Technical information sheet



TIS#: 286

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Issued by: Chris Lawlor

Subject Matter
Using Bridge with a direct PC to Recorder connection

This technical information sheet will explain the steps required to create a Bridge session over a direct PC to recorder connection. It assumes Windows XP, although the procedures are similar for other versions of Windows.

1. Connect the recorder to your PC's LAN port using a crossover cable.

**NOTE: A crossover cable must be used to make this connection.
A straight-through cable will not work.**

2. In order for these devices to communicate, the IP addresses must be configured properly. Most PCs are configured to be assigned an IP address by a DHCP server. Since we are not connected to a DHCP server, we must configure the address manually. We will assume that the recorder is configured with the default IP address of 192.168.111.222 and subnet mask of 255.255.255.0.

	Recorder	PC
IP Address	192.168.111.222	192.168.111.1
Subnet Mask	255.255.255.0	255.255.255.0

If you are not using the default recorder IP address, we will need to determine a pair of IP addresses that are addressed within the same network, i.e. are compatible with each other.

Compatibility depends on the subnet mask. Generally, wherever there is a 255 in the subnet mask, the corresponding section of the connected device's IP address must be identical. For a subnet mask of 255.255.255.0, the first three subsets of the IP address must be the same in the recorder and the PC. Conversely, wherever there is a 0 in the subnet mask, the corresponding section of the IP addresses must be different. The subnet mask in each device must be identical.

3. To enter the IP address of the recorder
 - a. Log in as engineer.
 - b. Go to the operator page
 - c. Go to Network → Address
 - d. set IP address lookup to 'Specify an IP address'
 - e. enter the desired IP address and subnet mask.



Engineer Network-Address No Batch In Progress 11:10:54 AM 1/30/06 98%

Archive Save/Restore Config Security Network System

Instrument number 20684 Address

MAC address 00:0A:8D:80:50:0 Name

IP address lookup Specify an IP address ▼

IP address 192.168.111.222

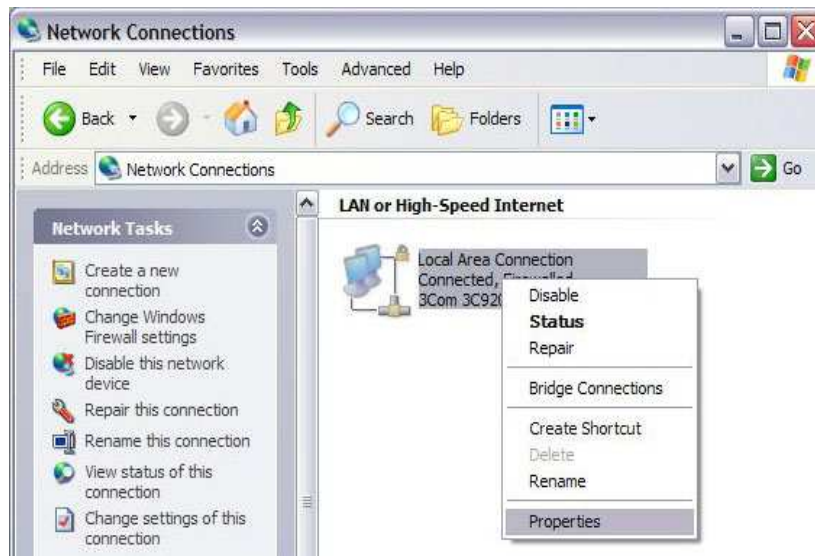
Subnet mask 255.255.255.0

Default gateway 0.0.0.0

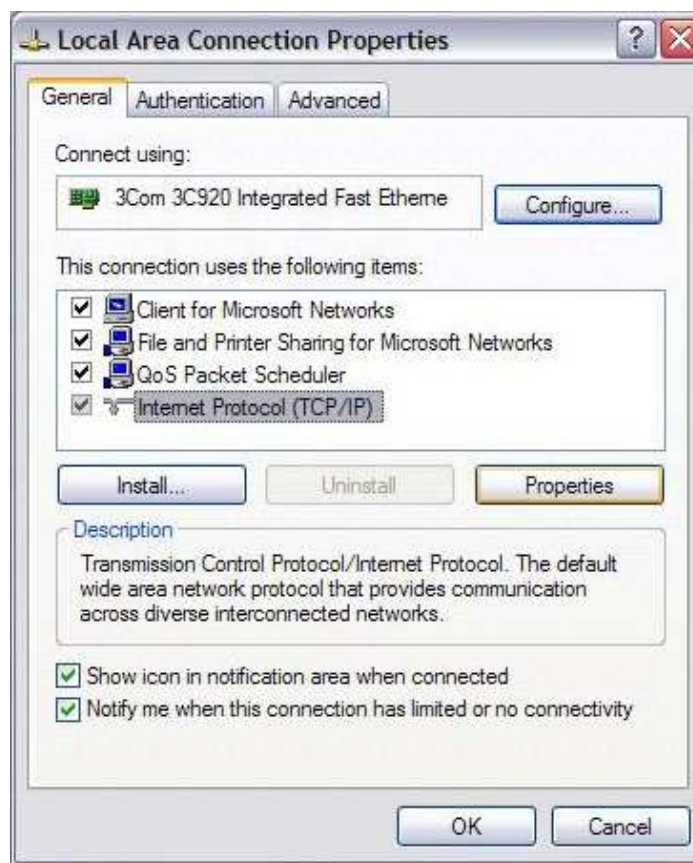
SNTP enable ☐

Apply Discard

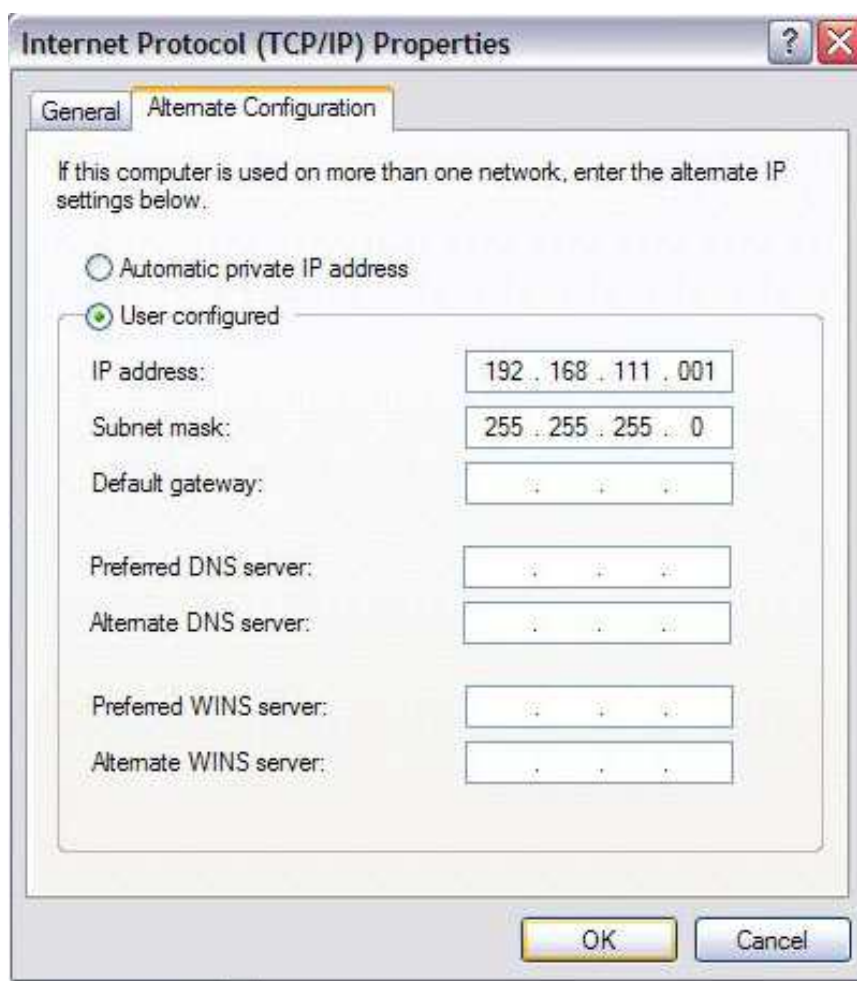
4. Now we must set the IP address of the PC.
 - a. Open the Network Connections window. This can be found in Start → Settings → Control Panel.
 - b. Right-click on the Local Area Connection icon and select Properties.



c. Select Network Protocol (TCP/IP) and click the Properties button.



d. Click on the Alternate Configuration tab, and select the User Configured radio button. Enter an IP address that is compatible with the recorder's IP address. Note that if you are using an earlier version of Windows, you may not have an Alternate Configuration tab. You should still have some sort of user configured option. The advantage of using the Alternate Configuration is that your PC will still be addressed normally (by a DHCP server) when one is available (for example, when you connect to your company's intranet).



e. Press OK to save your changes.

f. Changes to a PC's IP configuration do not always take effect immediately. To check if the change has been made, we will open a

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command prompt. To do this, go to Start → Run, type in 'cmd' without the quotes, and press OK.



g. In the CMD window, type in ipconfig and press enter. You should see something like this:

```
C:\> Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

H:\>c:
C:\>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : eurotherm_local
    IP Address. . . . .               : 149.121.3.62
    Subnet Mask . . . . .             : 255.255.252.0
    Default Gateway . . . . .         : 149.121.2.1

C:\>
```

h. If the information matches the entries you made in step d, then you can move on to step 4. If not, we can force the PC to make the change.

i. Still at the command prompt, type in the following and press enter:

ipconfig /release

when that command is finished, type in the following and press enter:

ipconfig /renew

This will probably take a minute or two to complete. When it does, it will probably return an error. This is OK, its actually exactly what we want to happen. The PC was looking for a DHCP server to give it an IP

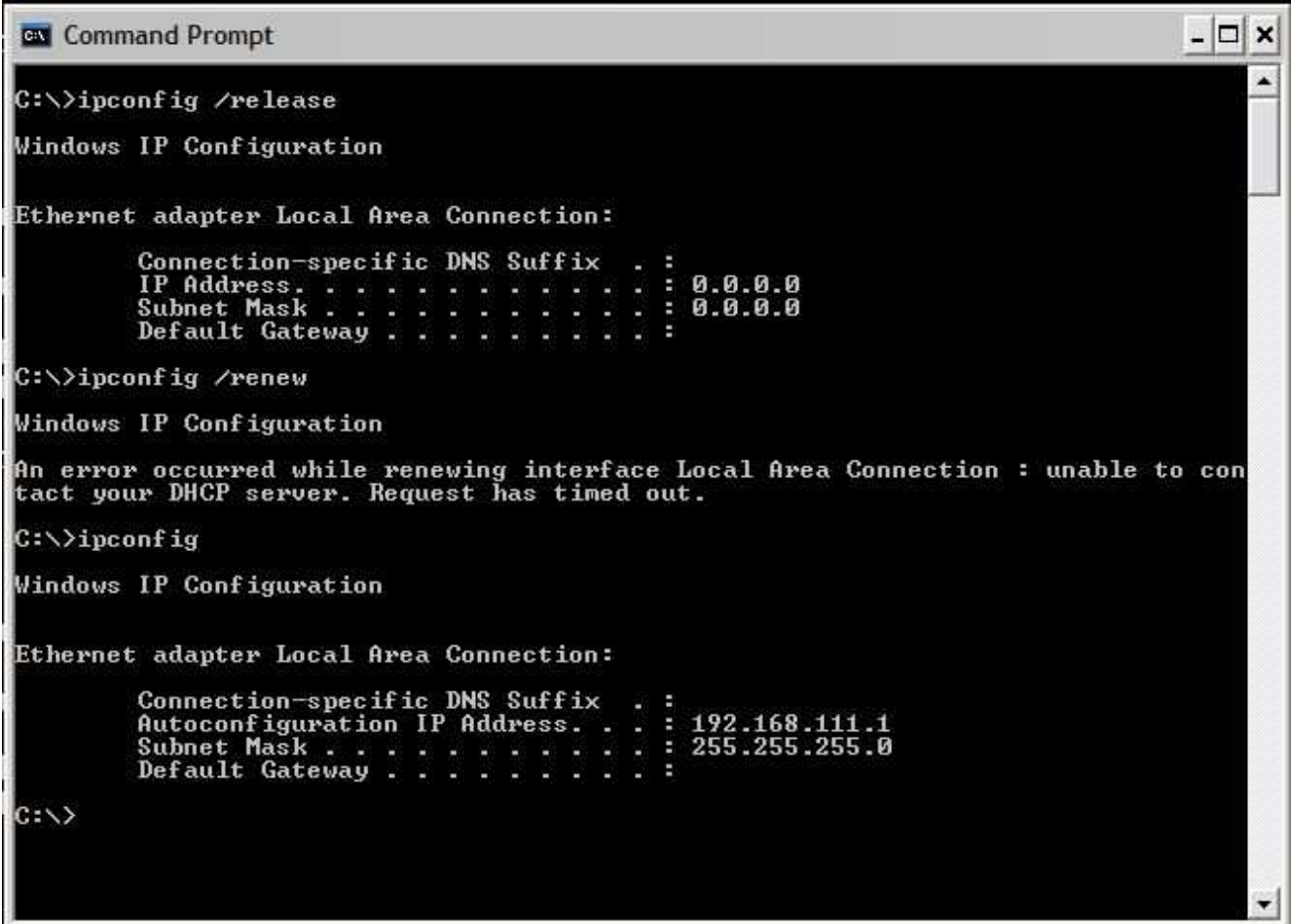
address, and when it couldn't find one, it should default to the alternate configuration we specified earlier. If you are using an earlier version of Windows, you may not get this error.

To check that we now have the proper IP address, type in the following and press enter:

ipconfig

The output should now match the IP address you entered in step d.

The above steps should look something like this:



```
C:\>ipconfig /release

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    IP Address. . . . .               : 0.0.0.0
    Subnet Mask . . . . .             : 0.0.0.0
    Default Gateway . . . . .         : 

C:\>ipconfig /renew

Windows IP Configuration

An error occurred while renewing interface Local Area Connection : unable to con
tact your DHCP server. Request has timed out.

C:\>ipconfig

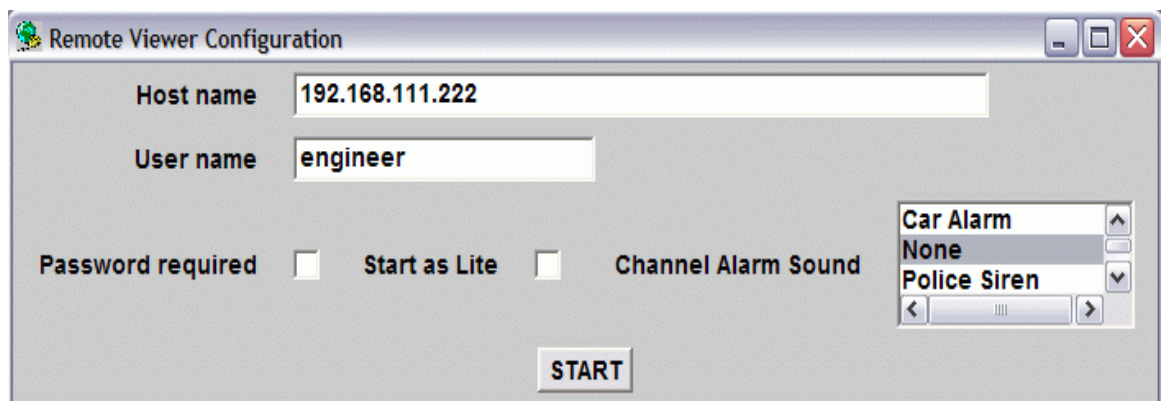
Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    Autoconfiguration IP Address. . . : 192.168.111.1
    Subnet Mask . . . . .             : 255.255.255.0
    Default Gateway . . . . .         : 

C:\>
```

4. We are now ready to start a Bridge session.
- First, open Bridge. You can find it under Start → Programs → Eurotherm → Bridge.
 - In the Host Name box, type in the IP address of the recorder. Again, the default is 192.168.111.222
 - The default user login is engineer, with no password required.



Bridge should now connect to the recorder.