

Configuring for Ethernet: Windows 2000

Check to ensure that your computer and network adaptors are supported on the Columbia network. A description of computer systems and adaptors supported at Columbia can be found here:

<http://www.columbia.edu/acis/support/supported.html>

Setting Up a Wired Ethernet Connection

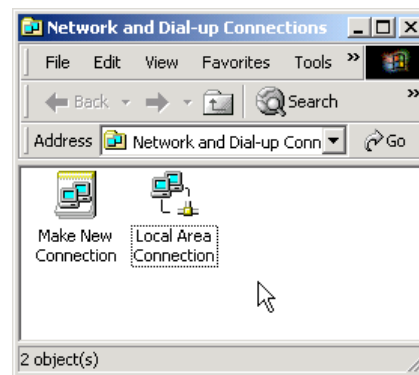
Step 1. Install your Ethernet card

Install your Ethernet card according to the manufacturer's directions.

To confirm that your Ethernet card is installed properly, right-click **My Network Places** and select **Properties**.

If your Ethernet card is installed correctly, you will see an icon for **Local Area Connection**.

If you do not see this icon, you will need to re-install your Ethernet card according to the manufacturer's directions or contact the manufacturer for help.



Step 2. Connect your computer to the network

To connect your computer to the Ethernet jack, plug one end of the network cable into the network card or port in your computer and the other into the Ethernet jack on the wall.

You can start using the network right away; no further configuration is necessary.

If your Ethernet jack has an orange port, plug your cable directly into that port. If you live in a single room and have two orange ports, try the one on the right side first, as this is usually the single activated port.

If your jack does not have an orange port, you may have an old-style jack that uses a LanCan. In this case, plug your Ethernet cable into the center port of the LanCan, and then plug the LanCan into the Data port of the jack. If you do not have a LanCan, you should call the Computing Helpdesk at 854-1919.

Note: If you move your computer from one location to another, you may need to release and renew your DHCP lease to get an IP (network) address appropriate to your location. See Appendix B for instructions on how to do this.

Step 3. Test your connection

Test your connection by running a network software program such as Netscape.

Troubleshooting Wired Ethernet Connections

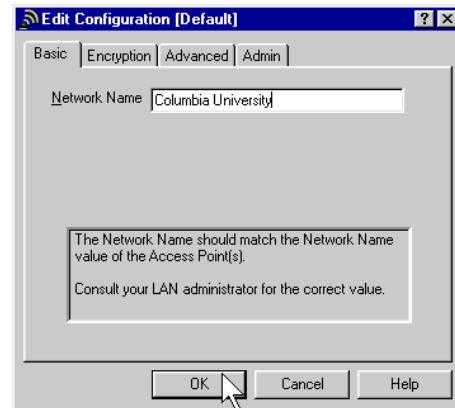
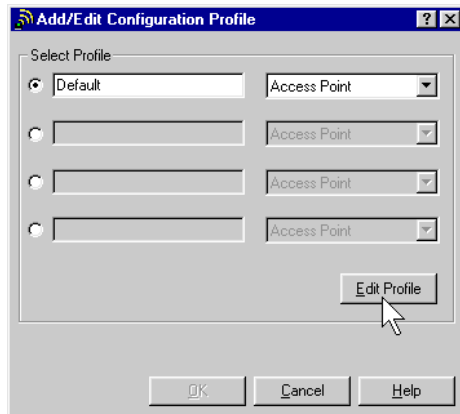
If you have trouble getting a wireless network connection, you should check the following:

- **Reboot your computer.** Rebooting is always a good and easy first step in problem resolution.
- **Network Control Panel settings.** (1) Double-check that you have configured the Network Control Panel correctly, as described in Appendix A. (2) Check to make sure you are configured to obtain an IP address automatically (equivalent to using the DHCP protocol). See Appendix A.
- **Release/Renew your DHCP lease.** See Appendix B for instructions on releasing and renewing your lease, particularly if you have changed locations.
- **Driver version.** Many cards have outdated drivers, even out of the box. You should make sure your card has the most recent drivers.
- **Check your cable.** Be sure you are have properly connected your Ethernet cable to the correct jack

Setting Up a Wireless Ethernet Connection

Step 1. Install Your Wireless Ethernet Card

Install your card and software according to the manufacturer's directions. You should also install the latest card drivers from the CD that came with your card.



When you see the **Add/Edit Configuration Profile** screen click **Edit Profile**.

Enter **Columbia University** in the **Network Name** box. Click **OK**, and then click **OK** again.

Click **OK** until you exit out of the Network window. Windows may request that you insert your Windows 2000 CD.

Step 2. Using Your Wireless Connection

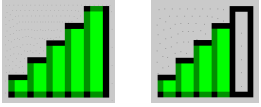
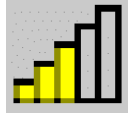
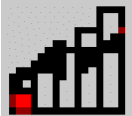
Go to a location on campus where wireless networking is available. A list is at:

<http://www.columbia.edu/acis/access/oncampus/wireless/coveragemap.html>

Start up your computer and make sure you are connected. You can do this by checking the connection icon on the task bar, shown here.



The bars on the connection icon indicate the strength (and speed) of your wireless connection. The following table shows how the connection icon looks in relation to your connection and explains what each variation of the icon means.

Icon	Description	Icon Bar Color
	If you see <i>green bars</i> , you are connected and have good performance.	Green
	If you see <i>yellow bars</i> , you are connected, but may have slower performance. If you want better performance, you can move to another location.	Yellow
	If you see <i>one red bar</i> , you have no connection at all and will need to move to another location to connect.	Red

Run a network software program such as Netscape Navigator. You should be able to connect to the Internet and browse the Web just as you would with a wired connection.

Troubleshooting Wireless Connections

If you have trouble getting a wireless network connection, you should check the following:

Signal strength. If you see red or clear bars instead of yellow or green bars in the task bar, you are out of range and do not have a connection. You may then want to move to another location where the signal is stronger.

Card installation. A single green light will appear on your card if the card and its drivers are installed properly in your computer. (A second, yellow, blinking light indicates the flow of data over the network.) If you do not see a green light, check to make sure you followed the hardware and software installation procedures for your card.

Updated Operating System. Make sure your Operating System has been upgraded with the latest Service Packs.

Driver version. Many cards have outdated drivers, even out of the box. You should make sure your card has the most recent drivers.

Network Control Panel settings. (1) Double-check that you have configured the Network Control Panel correctly, as described in Appendix A. (2) Check to make sure you are configured to obtain an IP address automatically (equivalent to using the DHCP protocol). See Appendix A.

Password prompt. If you are prompted for an ID and/or password when you try to connect to the wireless network, it means that you are connecting to a non-AcIS access point. You should report this to *consultant@columbia.edu* and move to a location served by an AcIS access point to try again.

Reboot your computer. Rebooting is always a good and easy first step in problem resolution.

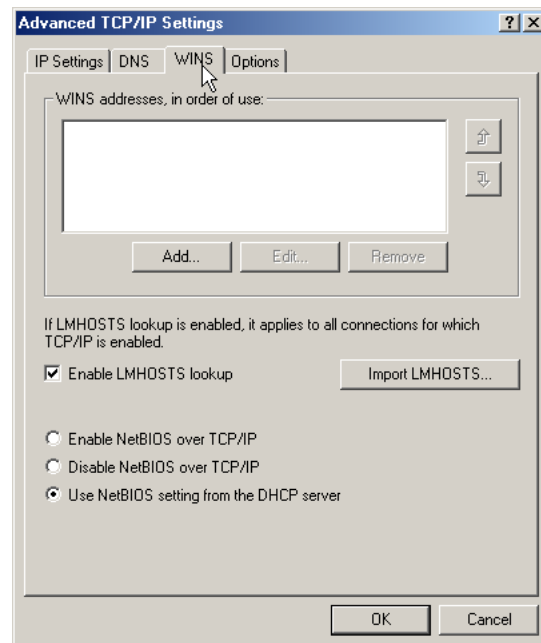
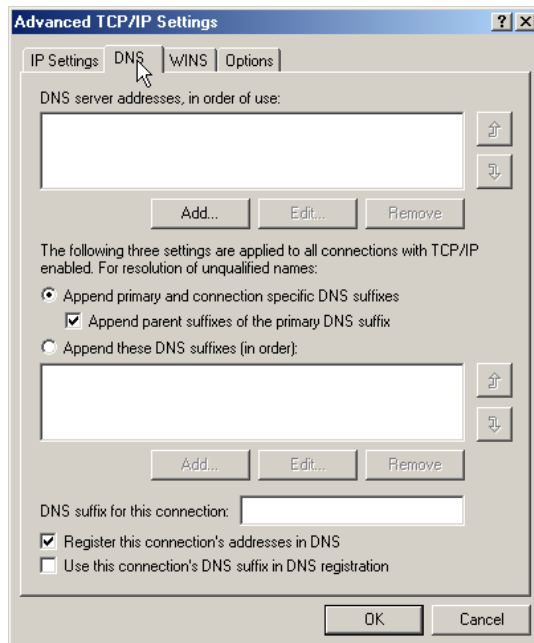
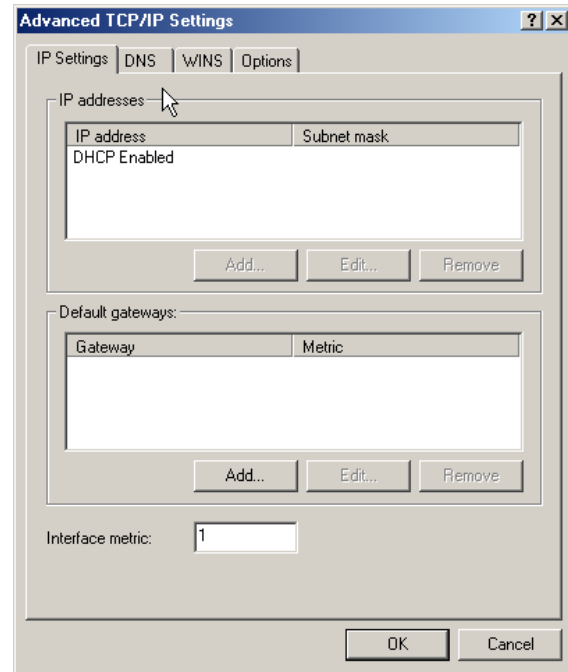
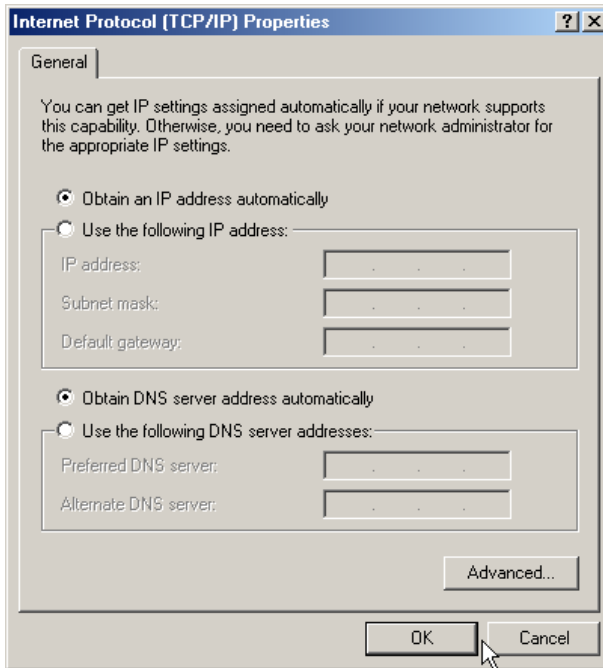
For More Help

- If you have a laptop computer, bring it along with your modem and all cables and manuals to the Computing Support Center, 102 Philosophy Hall, Monday through Thursday, 10am-5pm and Friday, 12 noon - 5pm. **This carry-in service is available for laptop computers only, and you must remain with the consultant while your problem is diagnosed.**
- For telephone support, call the Columbia Computing Helpdesk at 212-854-1919, Monday through Thursday, 8am-8pm and Friday, 8am-5pm.
- Send electronic mail to *consultant@columbia.edu*
- Students in URH residence halls should contact their RCC (Residential Computing Consultant) or send electronic mail to *rhno@columbia.edu*. The RHNO Home Page is at:
<http://www.columbia.edu/acis/rhno>
- For more information about using the campus network, see
<http://www.columbia.edu/acis/networks>
- For information about printing to AcIS printers from URH undergraduate residence hall rooms and Mobile Networking locations, see:
<http://www.columbia.edu/acis/facilities/printers/>

Appendix A: Default TCP/IP Settings: Configure for DHCP

For both wired and wireless Ethernet connections, TCP/IP settings will be assigned to you by the Columbia network. The default settings that Windows uses (as shown below) are correct for this type of configuration.

To make sure that your computer is configured correctly, go to the **Start -> Settings -> Control Panel**. Select **Network**, right-click on **Local Area Connection** and then select **Properties**. Select **TCP/IP** protocol and select **Properties**. Check that the following items are correct:




Appendix B — Releasing and Renewing Your DHCP Lease

In order to be used on the network, your computer must have an IP (network) address appropriate to your location. If you move your computer from one location to another, you may need to release the current lease and request a new one. The process you will use to do this is called “releasing and renewing your DHCP lease.”

To release and renew your DHCP lease, you will run a program called **ipconfig**.

Step 1. View your existing lease

1. Click  and select **Run**.
2. Type **command** in the **Run** pop-up window and then click **OK**. A DOS window (command prompt) is displayed.
3. At the prompt, type **ipconfig**. Your IP address is displayed. In the example shown below, the IP address is 128.59.31.133.

```
C:\>ipconfig

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . . . . . : columbia.edu
    IP Address . . . . . : 128.59.31.133
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 128.59.31.1
```

Step 2. Release your lease

At the command prompt, type **ipconfig/release**. Your lease will be released as shown below:

```
C:\> ipconfig/release

Windows 2000 IP Configuration

IP Address successfully released for adapter "Local Area Connection"
```

Step 3. Renew your lease

1. At the command prompt, type **ipconfig/renew**. You will receive a new lease, and the connection information for your new lease will be displayed. The IP address may not be the same as the one you saw in step 1.

```
C:\> ipconfig/renew

Windows 2000 IP Configuration

Ethernet Local Area Connection:

    Connection-specific DNS Suffix . . . . . : columbia.edu
    IP Address . . . . . : 128.59.31.133
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 128.59.31.1
```

2. Type **exit** to return to Windows 2000.