

Before You Begin

Before you install the SOHO 6 Wireless, you must have:

- A computer with a 10/100BaseT Ethernet card installed and a Web browser, such as Internet Explorer.
- A functional Internet connection—this connection must be a cable or DSL modem with a 10/100BaseT port, an ISDN router, or a direct LAN connection. If the Internet connection is not functional, call your ISP.
- Two straight-through Ethernet network cables with RJ45 connectors. Crossover cables, which are often red or orange in color, are not satisfactory. The SOHO 6 Wireless package includes one cable—a second cable may have been supplied with your modem, if not, you will need to purchase a second cable. Make sure that the cables are of sufficient length to connect the modem or router to the SOHO 6 Wireless and the SOHO 6 Wireless to your computer.
- The method of network address assignment used by your ISP. The possible methods are static addressing, DHCP, or PPPoE—call your ISP to determine this, if necessary.
- The two antennae supplied with the SOHO 6 Wireless attached to the appliance.

NOTE

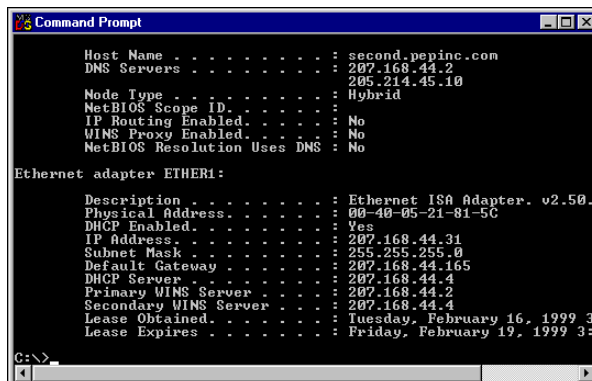
The SOHO 6 Wireless *must* be installed to provide a separation distance of at least 20 centimeters from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

- The SOHO 6 Wireless serial number—found on the bottom of the appliance.

Examine and record your current TCP/IP settings

Examine the current TCP/IP settings of your computer and record them in the table below.

- 1 Select **Start** ⇒ **Programs** ⇒ **Accessories** ⇒ **Command Prompt**.
The Command Prompt window appears.
- 2 At the prompt, type `ipconfig/all` and then press **Enter**.
The TCP/IP settings are displayed.



```
Command Prompt
Host Name . . . . . : second.pepinc.com
DNS Servers . . . . . : 207.168.44.2
                    205.214.45.10
Node Type . . . . . : Hybrid
NetBIOS Scope ID. . . . . :
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
NetBIOS Resolution Uses DNS : No

Ethernet adapter ETHER1:

Description . . . . . : Ethernet ISA Adapter. v2.50.
Physical Address. . . . . : 00-40-05-21-81-5C
DHCP Enabled. . . . . : Yes
IP Address. . . . . : 207.168.44.31
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 207.168.44.165
DHCP Server . . . . . : 207.168.44.4
Primary WINS Server . . . . . : 207.168.44.2
Secondary WINS Server . . . . . : 207.168.44.4
Lease Obtained. . . . . : Tuesday, February 16, 1999 3:
Lease Expires . . . . . : Friday, February 19, 1999 3:
C:\>
```

- Record the TCP/IP settings in the table below.

TCP/IP Settings Table:

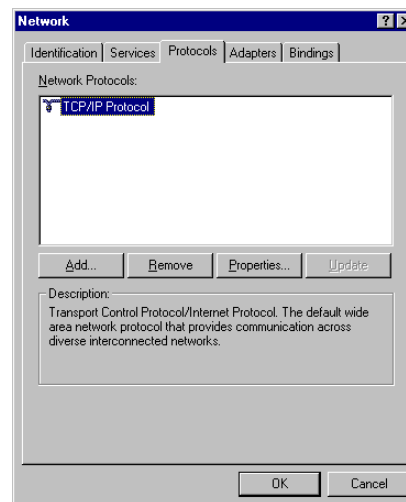
TCP/IP Setting		Value
IP Address		. . .
Subnet Mask		. . .
Default Gateway		. . .
DNS Server(s)	Primary	. . .
	Secondary	. . .

- At the prompt, type `exit` and then press **Enter** to close the command prompt window.

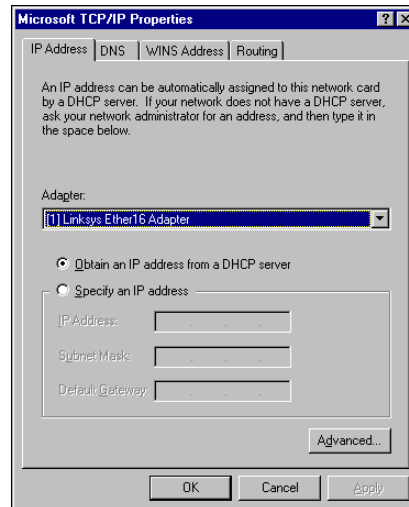
Determine and configure your DHCP status

The most common method to distribute IP addresses is to use Dynamic Host Configuration Protocol (DHCP). When you connect your computer to the network, a DHCP server at your ISP automatically assigns it a network IP address. This eliminates the ISP from having to manually assign and manage IP addresses.

- Click **Start** ⇒ **Settings** ⇒ **Control Panel**.
The Control Panel window appears.
- Double-click the **Network** icon.
The Network dialog box appears.



- Click the **Protocols** tab and then double-click the **TCP/IP** network component.
The TCP/IP Properties dialog box appears.



- 4 Select the **Obtain an IP address automatically** option.

NOTE

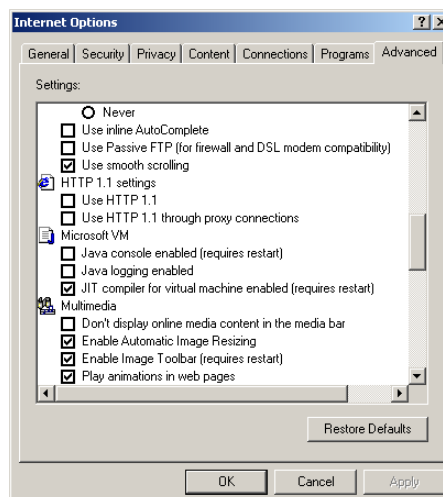
On Windows NT, you must be certain that you have full administrative rights on the computer or you will not be able to change your TCP/IP Properties settings.

- 5 Click **OK** to close the TCP/IP Properties dialog box.
- 6 Click **OK** again to close the Network dialog box.
- 7 Close the Control Panel window.

Disable the HTTP proxy setting of your Web browser

To configure a SOHO 6 you must access the configuration pages in the SOHO 6 with your Web browser. If the HTTP proxy setting in your browser is enabled, you cannot open these pages to complete the configuration procedure.

- 1 Open Internet Explorer.
- 2 Select **Tools** ⇒ **Internet Options**.
The Internet Options window appears.
- 3 Click the **Advanced** tab and then scroll down to the HTTP 1.1 settings.

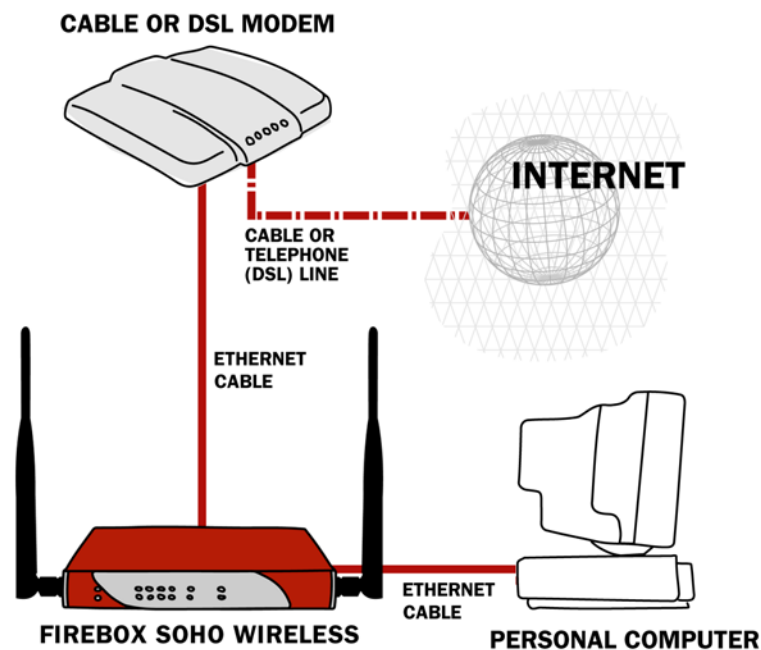


- 4 Clear all of the **HTTP 1.1 settings** checkboxes.
- 5 Click **OK** to close the Internet Options window.

Install the SOHO 6 appliance

A maximum of four computers, printers, scanners, or other network peripherals can connect directly to the SOHO 6. These connections use the four, Ethernet ports (0-3). To connect a maximum of four appliances, use the SOHO 6 as a network hub.

- 1 Shut down your computer.
- 2 If you connect to the Internet using a DSL or cable modem, disconnect the power from this device.
- 3 Disconnect the Ethernet cable that connects your DSL, cable modem, or other Internet connection to your computer. Connect this cable to the WAN port on the SOHO 6.
The SOHO 6 is connected directly to the modem or other Internet connection.
- 4 Connect one end of the straight-through Ethernet cable supplied with your SOHO 6 to any one of the four, numbered, Ethernet ports (labeled 0-3) on the SOHO 6. Connect the other end into the Ethernet port of your computer.



- 5 If you connect to the Internet using a DSL or cable modem, restore the power to this device. The indicator lights flash and then stop. The modem is ready for use.
- 6 Attach the AC adapter to the SOHO 6 and then connect it to a power source.
- 7 Restart your computer.

Configure the External Network of the SOHO 6

Follow the instructions below to begin configuring the external network of your SOHO 6 and then proceed to the specific, IP address assignment method utilized by your system: DHCP client, Manual Configuration (static addressing), or PPPoE client.

Contact your ISP to determine which method they use to assign your IP address.

- 1 With your Web browser, go to the System Status page using the Trusted IP address of the SOHO 6. For example, go to: <http://192.168.111.1>.
- 2 From the navigation bar on the left side, select **Network** => **External**.
- 3 Proceed to the following configuration instructions as appropriate to your system.

The DHCP Client

The default configuration of the SOHO 6 is set to receive the external IP address information using DHCP. If your ISP supports this method, the SOHO 6 receives the information when it reboots and connects to the Internet. The SOHO 6 does not require any additional configuration.

Your installation is now complete and you should be able to use your Internet connection. Verify this by accessing the Internet.

Manual Configuration

If your ISP assigns static IP addresses, you must enter the TCP/IP settings into the SOHO 6 manually.

- 1 From the **Configuration Mode** drop list, select **Manual Configuration**.
The Manual Configuration page appears.

The screenshot shows the web interface for configuring the external network. On the left is a navigation menu with categories: System Status, Network (selected), External (selected), Trusted, Optional (802.11b), Wireless Configuration, Routes, Network Statistics, Dynamic DNS, Administration, System Security, VPN Manager Access, Update, Upgrade, View Configuration File, Firewall, Incoming, and Outgoing. The main content area is titled 'Network' and 'External Network Configuration'. It features a 'Configuration Mode' dropdown menu set to 'Manual Configuration'. Below this are input fields for: IP Address (100.0.0.53), Subnet Mask (255.255.255.0), Default Gateway (100.0.0.1), Primary DNS (192.168.130.3), Secondary DNS (192.168.130.245), and DNS Domain Suffix (watchguard.com). At the bottom are 'Submit' and 'Reset' buttons.

- 2 Type the TCP/IP settings you recorded from your computer during the installation process, see “Examine and record your current TCP/IP settings” on page 1.
- 3 Click **Submit**.

Your installation is now complete, and you should be able to use your Internet connection. Verify this by accessing the Internet.

The PPPoE Client

If your ISP assigns IP addresses using PPPoE, your PPPoE login name and password are required to configure the SOHO 6.

- 1 From the **Configuration Mode** drop list, select **PPPoE Client**.
The PPPoE Client configuration page appears.

The screenshot shows the 'External Network Configuration' page in the SOHO 6 Web Management Interface. On the left is a navigation menu with categories: System Status, Network (selected), Administration, and Firewall. Under 'Network', 'External' is selected. The main content area shows 'Configuration Mode' set to 'PPPoE Client'. Below this are input fields for 'Name', 'Domain', and 'Password'. There is also an 'Inactivity Timeout (minutes)' field set to '0'. Two checkboxes are present: 'Automatically restore lost connections' and 'Enable pppoe debug trace'. At the bottom are 'Submit' and 'Reset' buttons.

- 2 Type the PPPoE login name and password supplied by your ISP.
 - 3 Select the **Automatically restore lost connections checkbox**.
This option keeps a constant flow of traffic between the SOHO 6 and the PPPoE server. This option allows the SOHO 6 to keep the PPPoE connection open during a period of frequent packet loss. If the flow of traffic stops, the SOHO 6 reboots. This provides for a more consistent Internet connection but will be seen as continuous traffic by the ISP and regulated as such.
 - 4 Click **Submit**.
- Your installation is now complete, and you should be able to use your Internet connection. Verify this by accessing the Internet.

Troubleshooting the Connection

You can monitor the connection traffic through the SOHO 6 using the Event Log.

- 1 With your Web browser, go to the System Status page using the Trusted IP address of the SOHO 6. For example, go to: <http://192.168.111.1>.
- 2 From the navigation bar on the left side, select **Logging**.

Configure the Wireless Network

The SOHO 6 Wireless protects computers that are connected to it by Ethernet cable or wireless connection. Because WatchGuard is concerned about the security of your network, the wireless network is disabled on the SOHO 6 Wireless by default. This allows you to enable the wireless network after you set up the desired security.

Configure the Optional Network for wireless networking

To activate the wireless network, you must enable the optional network. Follow these instructions to configure the optional network:

- 1 Type the IP address of the trusted network in your browser window to connect to the System Status page of the SOHO 6 Wireless.
The default IP address is: <http://192.168.111.1>
- 2 From the navigation bar on the left side, select **Network ⇒ Optional (802.11b)**.
The Optional Network Configuration page appears.
- 3 Select the **Enable Optional Network checkbox**.
- 4 Type the IP Address and Subnet Mask of the wireless network in the applicable fields.
The default IP Address is 192.168.112.1. The default Subnet Mask is 255.255.255.0.

- 5 Select the **Enable DHCP Server on the Optional Network** checkbox.
- 6 Type the first IP address that is available for the computers from the DHCP server in the applicable field.
The default is 192.168.112.2.
- 7 Type the WINS Server address, DNS Server primary address, DNS Server secondary address, and DNS Domain server suffix.
- 8 Click **Submit**.
- 9 Reboot the SOHO 6 if necessary.

Configure Security

- 1 From the navigation bar on the left side, select **Network** ⇒ **Wireless Configuration**.
The Wireless Network Configuration page appears.
- 2 From the **Encryption** drop-down list, select the level of encryption you want applied to your wireless connections.

Disabled

The default is Disabled, and you should use this option for the initial connection. Your wireless connection is not using WEP when Disabled is selected.

40/64 bit WEP or 128 bit WEP

Once you complete the initial connection between your computer and the SOHO 6 Wireless, you can change this option to use WEP. Select either 40/64 bit or 128 bit based on what the wireless networking card in your computer supports.

- 3 If you are using WEP encryption, type a hexadecimal number in the Key text boxes.
You can type up to four keys that the wireless network will use to connect. If you have 40/64 bit WEP, the key must be 10 characters. If you have 128 bit WEP, the key must be 26 characters.
- 4 If you typed more than one key, select which key you want to use from the **Default Key** drop-down list.
- 5 Select the **Authentication** mode you want to use for your wireless network connection.

Open System

This option does not support shared keys. If you disable encryption, this is the only option.

Shared Key

This option supports shared keys. If you enabled WEP, this option is enabled.

Change the Basic Settings

The SSID is the SOHO 6 Wireless identification number, and it is used to create the wireless connection with the wireless computers.

To change the SSID of the SOHO 6 Wireless:

- In the Basic Settings section, type a new identification in **SSID** text box.

The default SSID is the 5 digit serial number for your SOHO 6 Wireless device. The first four digits of the serial number are the product code and are not part of the SSID. The next five digits after the product code are the serial number. The remaining characters are an encoded hash for security uses. The maximum identification length is 20 characters.

To change the Channel:

- From the **Channel** drop-down list, select the channel you want to use in your wireless connection.

Configure the Access Point Options

You can change the settings of how the SOHO 6 Wireless access point communicates with your wireless network.

Restrict Access by Hardware Address

- 1 Select **Enabled** from the **Restrict Access by Hardware Address** drop-down list.
- 2 Click **Edit**
The Allowed Hardware Addresses page appears.
- 3 Type the **MAC Address** of the computer you want to connect to the SOHO 6 Wireless.
- 4 Click **Submit**.

Configure the Beacon Rate

In the **AP Beacon Rate** text box, type the beacon rate in milliseconds (100 through 10,000) that you want the SOHO 6 Wireless to use.

The beacon rate is the rate the SOHO 6 Wireless sends out broadcasts so that the wireless computers can find it.

Broadcast SSID

If you want the SOHO 6 Wireless to broadcast a beacon rate, select **Enabled** from the **Broadcast SSID in AP Beacon Frames** drop-down list.

Respond to SSID query requests

Select **Enabled** in the **Respond to SSID Query Requests** drop-down list.

The wireless computers send out query requests to find if there are any wireless access points that it can connect to.

Log Authentication Events

Select **Enabled** from the **Log Authentication Events** drop-down list.

Configure the Advanced Settings

You can change Maximum Transmit Rate and Fragmentation Threshold.

- Select the rate per Mbits per second from the **Maximum Transmit Rate** drop-down list.
- Type a value from 256 to 4096 in the **Fragmentation Threshold** field.

Configure the Wireless Card on your Computer

In order to access the SOHO 6 Wireless that you have now configured for your wireless network, you must install and configure your wireless networking card. Refer to the manufacturer's documentation for instruction on installing and configuring the device.

Install additional computers

Although the SOHO 6 has only four, Ethernet ports (labeled 0-3), you can connect more than four appliances. Use one or more network hubs to make more connections.

The base model SOHO 6 includes a ten-seat license. This license allows a maximum of ten appliances on the trusted network to connect to the Internet at the same time. There can be more than ten appliances on the trusted network, but the SOHO 6 will only allow ten Internet connections. A seat is in use when an appliance connects to the Internet and is free when the connection is broken. License upgrades are available from the WatchGuard Web site:

<http://www.watchguard.com/sales/buyonline.asp>

To connect more than four appliances to the SOHO 6, these items are necessary:

- an Ethernet hub
- a straight-through Ethernet cable, with RJ-45 connectors for each computer
- a straight-through Ethernet cable to connect each hub to the SOHO 6

Follow the instructions in the sections above to prepare your computers to connect to the SOHO 6, see “Before You Begin” on page 1.

Register your SOHO 6 and Activate the LiveSecurity Service

Once the SOHO 6 is installed and configured, you need to register the unit and activate your bundled LiveSecurity Service subscription. Activation entitles you to receive threat alert notifications, expert security advice, free anti-virus protection, software updates, technical support by web or phone, and access to extensive online help resources and our user forum. You must also activate to retrieve feature keys for any upgrades you have purchased.

Be sure that you have the SOHO 6 serial number handy. You will need this during the registration process.

To register with the LiveSecurity Service:

- 1 Using your Web browser, go to:

<http://www.watchguard.com/activate>

NOTE

You *must* have JavaScript enabled on your browser to be able to activate LiveSecurity Service.

If you are a returning customer, log in with your user name and password then choose your product and continue by following the instructions on screen.

If you are a new WatchGuard customer, begin by creating a profile, then follow the instructions on screen for activating a product.

Please use the table below to record your LiveSecurity Service identification information:

Serial Number:	
LiveSecurity User Name:	
Password:	

The SOHO 6 serial number is located on the bottom of the appliance. You create a LiveSecurity Service user name and password when you register your SOHO 6.

Please keep this information in a secure place.