

# SB5102 Cable Modem User Guide

Click your selection (there is a complete [Contents](#) on page vii):

## Introduction

Introduces your SB5102 cable modem and the controls on the [Front Panel](#) and [Rear Panel](#).

## Before You Begin

Lists the items needed to install your SB5102 cable modem and describes [Precautions](#), [Signing Up for Service](#), and [Computer System Requirements](#).

## Installation and Configuration Overview

Provides an overview and links for cabling and configuring your SB5102 cable modem.

## Troubleshooting

Provides suggestions to fix common problems.

## Contact Us

Provides contact information.

## Frequently Asked Questions

Provides answers to common questions about the SB5102 cable modem.

## Motorola SB5102 Cable Modem



## SAFETY AND REGULATORY INFORMATION

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS DEVICE TO RAIN OR MOISTURE. THE DEVICE SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE DEVICE.

**CAUTION:** TO ENSURE REGULATORY AND SAFETY COMPLIANCE, USE ONLY THE PROVIDED POWER AND INTERFACE CABLES. TO PREVENT ELECTRICAL SHOCK, DO NOT USE THIS PLUG WITH AN EXTENSION CORD, RECEPTACLE, OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

**CAUTION:** DO NOT OPEN THE UNIT. DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE INSTALLATION AND TROUBLESHOOTING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.

**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the Equipment.

It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damaging the equipment by local lightning strikes and other electrical surges.



This product was qualified under test conditions that included the use of the supplied cable between system components. To be in compliance with regulations, the user must use this cable and install it properly.



*Different types of cord sets may be used for connections to the main supply circuit. Use only a main line cord that complies with all applicable product safety requirements of the country of use.*

Installation of this product must be in accordance with national wiring codes.

To prevent overheating, do not block the ventilation holes on the sides of the cable modem.

Wipe the cable modem with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the unit or use forced air to remove dust.

This device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Be sure that the outside cable system is grounded, so as to provide some protection against voltage surges and built-up static charges. Article 820-40 of the NEC (Section 54, Part I of the Canadian Electrical Code) provides guidelines for proper grounding and, in particular, specifies the CATV cable ground shall be connected in the grounding system of the building, as close to the point of cable entry as practical.

### **Caring for the Environment by Recycling**



When you see this symbol on a Motorola product, do not dispose of the product with residential or commercial waste.

#### **Recycling your Motorola Equipment**

Please do not dispose of this product with your residential or commercial waste. Some countries or regions, such as the European Union, have set up systems to collect and recycle electrical and electronic waste items. Contact your local authorities for information about practices established for your region. If collection systems are not available, call Motorola Customer Service for assistance.

### **REGULATORY INFORMATION**

#### **FCC Declaration of Conformity**

According to 47CFR, Parts 2 and 15 for Class B Personal Computers and Peripherals; and/or CPU Boards and Power Supplies used with Class B Personal Computers, Motorola, Inc. Connected Home Solutions, 101 Tournament Drive, Horsham, PA 19044, 1-215-323-1000, declares under sole responsibility that the product identifies with 47CFR Part 2 and 15 of the FCC Rules as a Class B digital device. Each product marketed is identical to the representative unit tested and found to be compliant with the standards. Records maintained continue to reflect the equipment being produced can be expected to be within the variation accepted, due to quantity production and testing on a statistical basis as required by 47CFR 2.909. The above named party is responsible for ensuring that the equipment complies with the standards of 47CFR, Parts 2 and 15.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### **Canada - Industry Canada (IC)**

This Class B digital device complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This product is provided with a separate a separate *Regulatory, Safety, Software License, and Warranty Information* card. If one is not provided with this product, please ask your service provider or point-of-purchase representative, as the case may be.

- THIS PRODUCT IS IN COMPLIANCE WITH ONE OR MORE OF THE STANDARDS LISTED ON THE *REGULATORY, SAFETY, SOFTWARE LICENSE, AND WARRANTY INFORMATION* CARD. NOT ALL STANDARDS APPLY TO ALL MODELS.
- NO WARRANTIES OF ANY KIND ARE PROVIDED BY MOTOROLA WITH RESPECT TO THIS PRODUCT, EXCEPT AS STATED ON THE *REGULATORY, SAFETY, SOFTWARE LICENSE, AND WARRANTY INFORMATION* CARD. MOTOROLA'S WARRANTIES DO NOT APPLY TO PRODUCT THAT HAS BEEN REFURBISHED OR REISSUED BY YOUR SERVICE PROVIDER.

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# Contents

<b>Introduction</b> .....	1
<b>Front Panel</b> .....	2
<b>Rear Panel</b> .....	3
<b>Before You Begin</b> .....	4
<b>Precautions</b> .....	5
<b>Signing Up for Service</b> .....	6
<b>Computer System Requirements</b> .....	7
Ethernet Card .....	7
<b>Installation and Configuration Overview</b> .....	8
<b>Cabling and Startup for a Single User</b> .....	9
<b>Configuring TCP/IP</b> .....	11
<b>Configuring TCP/IP in Windows 98, Windows 98 SE, or Windows Me</b> .....	12
<b>Configuring TCP/IP in Windows 2000</b> .....	15
<b>Configuring TCP/IP in Windows XP</b> .....	19
<b>Verifying the IP Address</b> .....	25
<b>Verifying the IP Address in Windows 98, Windows 98 SE, or Windows Me</b> .....	26
<b>Verifying the IP Address in Windows 2000 or Windows XP</b> .....	27
<b>Renewing Your IP Address</b> .....	28
<b>Cabling for Multiple Users</b> .....	29

<b>Troubleshooting</b> .....	<b>30</b>
Front-Panel Lights and Error Conditions .....	32
<b>Contact Us</b> .....	<b>33</b>
<b>Frequently Asked Questions</b> .....	<b>34</b>
<b>Glossary</b> .....	<b>36</b>
<b>Software License</b> .....	<b>38</b>

## Easier!

*Unlike dial-up modems or ISDN, you're always on, always connected.*

## Faster!

*Your cable modem is up to 100 times faster than a dial-up modem. It lets you enjoy surfing the Web without the long wait. Because many network and other factors can affect performance, the actual speed will vary.*

## Better!

*Your cable modem is made by the company with over 50 years of cable TV expertise.*

## Introduction

Congratulations, you have a new Motorola® SB5102 cable modem. It provides high-speed access to the Internet and other online services. This cable modem transmits and receives data much faster than traditional dial-up or ISDN modems. Unlike a dial-up modem, your cable modem is always online. *Just open your browser and surf!*

You can use your high-speed, upgradeable cable modem to connect one or more computers in your home or business to the Internet. You can connect:

- A single computer equipped with an [Ethernet](#) adapter directly to the Ethernet port on the SB5102 cable modem
- Up to 63 computers to a single SB5102 cable modem using an Ethernet hub as shown in "[Cabling for Multiple Users](#)" on page 29

The model number on your cable modem may be different than in the illustrations and screen images in this guide.

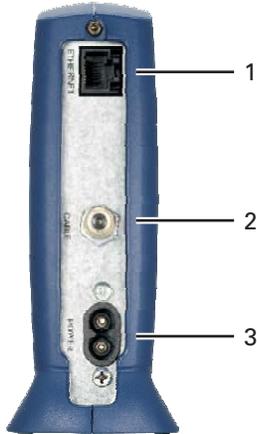


## Front Panel

The lights provide information about power, communications, and errors:

Key	Light	Flashing	On
1	<b>Power</b>	Startup diagnostics in progress	The cable modem is powered on
2	<b>Receive</b>	Scanning for a receive ( <a href="#">downstream</a> ) channel connection	The downstream channel is connected
3	<b>Send</b>	Scanning for a send ( <a href="#">upstream</a> ) channel connection	The upstream channel is connected
4	<b>Online</b>	Scanning for a network connection	The startup process is complete
5	<b>PC/Activity</b>	Transmitting or receiving data	A device, such as a computer or hub, is connected to the Ethernet connector on the back of the SB5102.

During normal operation, the Power, Receive, Send, and Online lights are on and the PC/Activity light flashes when the cable modem is transferring data.



## Rear Panel

The rear panel provides cabling connectors and the power receptacle.

	<b>Key Item</b>	<b>Description</b>
1	<b>ETHERNET</b>	Provides a connection to Ethernet equipped computers using a cable terminated with an RJ-45 connector.
2	<b>CABLE</b>	Provides a connection to the <a href="#">coaxial cable (coax)</a> outlet.
3	<b>POWER</b>	Provides AC power to the cable modem.

## ❑ Before You Begin

Before you begin the installation, check that you received the following items with your SB5102 cable modem:

### Item

**AC connector**



**10/100Base-T Ethernet cable**



### Description

Connects the SB5102 cable modem to the AC electrical outlet

Connects to the [Ethernet](#) port

You will need 75-ohm [coaxial cable](#) with [F-type connectors](#) to connect your cable modem to the nearest cable outlet. If a TV is connected to the cable outlet, you may need a 5-900 MHz RF [splitter](#) and a total of three coaxial cables to connect both the TV and the cable modem. The coaxial cable and RF splitter are available at consumer electronic stores.

**To avoid damaging your cable modem or PC with static electricity:**



*Always make the wall connection first.*



Before you connect or disconnect the Ethernet cable, *always touch the coaxial cable connector on the cable modem.*

## ⚠ Precautions

Postpone cable modem installation until there is no risk of thunderstorm or lightning activity in the area.

To avoid damaging the cable modem with static electricity:

- Always first connect the coaxial cable to the grounded cable TV wall outlet.
- Before you connect or disconnect the Ethernet cable from your cable modem or PC, always touch the coaxial cable connector on the cable modem to release any static charges.

The SB5102 cable modem must be installed in a vertical position.

To prevent overheating the cable modem, do not block the ventilation holes on its sides.

Do not open the cable modem. Refer all service to your cable service provider.

Wipe the cable modem with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the unit or use forced air to remove dust.



This product is for indoor use only. Do not route the Ethernet cable outside of the building. Exposure of the cables to lightning could create a safety hazard and damage the product.

## Signing Up for Service

You must sign up with a cable service provider to access the Internet and other online services.

To activate your service, call your local cable service provider.

*To receive data service, you need to provide the [MAC address](#) printed on the bar code label marked **CM HFC MAC ID** on the bottom of the cable modem. You can record it here:*

00 : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_

You should ask your cable service provider the following questions:

- Do you have any special system requirements?
- When can I begin to use my cable modem?
- Are there any files I need to [download](#) after I am connected?
- Do I need a user name or password to access the Internet or use e-mail?

*You can use any Web browser such as Microsoft® Internet Explorer or Netscape Navigator® with your SB5102 cable modem.*

## ❑ Computer System Requirements

Your SB5102 cable modem is compatible with Microsoft Windows®, Macintosh®, and UNIX® computers. Windows® 95 is not supported by the SB5102. You must have the latest version of your operating system installed with all current patches and revisions.

### Ethernet Card

You can use the Ethernet connection with any Windows, Macintosh, Linux®, or UNIX computer equipped with a Ethernet, Fast Ethernet, or Gigabit Ethernet card.

*Your Ethernet card must be installed in your computer before you install the cable modem.* If it is not installed, follow the installation instructions provided with your Ethernet card.

## ❑ Installation and Configuration Overview

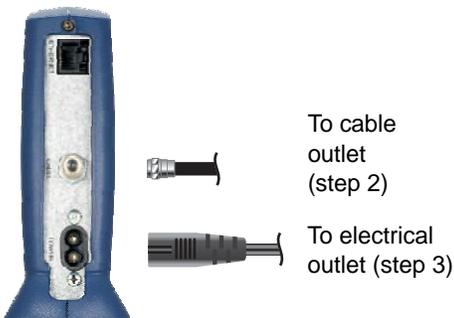
To install and configure your cable modem:

- 1 Install the cables as described in *one* of:
  - “Cabling and Startup for a Single User” on page 9
  - “Cabling for Multiple Users” on page 29
- 2 Configure [TCP/IP](#) and verify the [IP address](#) for your computer following *one* of:
  - “Configuring TCP/IP” on page 11
  - Your Macintosh or UNIX user manual

## ▣ Cabling and Startup for a Single User

Allow 5 to 30 minutes to power up the first time because the SB5102 cable modem must find and lock on the appropriate channels for communications.

- 1 Be sure your computer is on and the cable modem is unplugged.
- 2 Connect one end of the coaxial cable to the cable outlet or splitter. Connect the other end of the coaxial cable to the CABLE connector on the cable modem.  
*Hand-tighten the connectors to avoid damaging them.*
- 3 Plug the power cord into the POWER connector on the cable modem and the electrical outlet. *This turns the SB5102 cable modem on. You do not need to unplug it when not in use.*
- 4 Check that the lights on the cable modem front cycle through this sequence:
  - Power flashes during the self-test and changes to solid green when the self-test is successfully complete.
  - Receive flashes while scanning for the receive ([downstream](#)) channel and changes to solid green when it is connected.
  - Send flashes while scanning for the send ([upstream](#)) channel and changes to solid green when it is connected.
  - Online flashes while the cable modem downloads configuration data and changes to solid green when the download is complete.

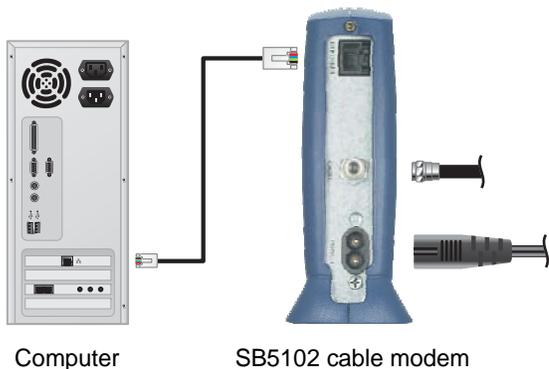


SB5102 cable modem

*Always connect coaxial cable to the wall outlet first.*

## Cabling and Startup for a Single User, continued

- 5 Connect the provided Ethernet cable to the Ethernet connector on the cable modem. Connect the other end to the Ethernet port on your computer.
- 6 Perform the procedures for [“Configuring TCP/IP”](#) on page 11.



## Configuring TCP/IP

The SB5102 cable modem contains all required software. You do not need to configure the cable modem, but you must be sure that your computer is configured for [TCP/IP](#) (a protocol for communication between computers). Perform *one* of:

- [“Configuring TCP/IP in Windows 98, Windows 98 SE, or Windows Me”](#) on page 12
- [“Configuring TCP/IP in Windows 2000”](#) on page 15
- [“Configuring TCP/IP in Windows XP”](#) on page 19
- Follow the instructions in your Macintosh or UNIX user manual

After configuring TCP/IP, perform *one* of the following to verify the [IP address](#):

- [“Verifying the IP Address in Windows 98, Windows 98 SE, or Windows Me”](#) on page 26
- [“Verifying the IP Address in Windows 2000 or Windows XP”](#) on page 27
- Follow the instructions in your Macintosh or UNIX user manual

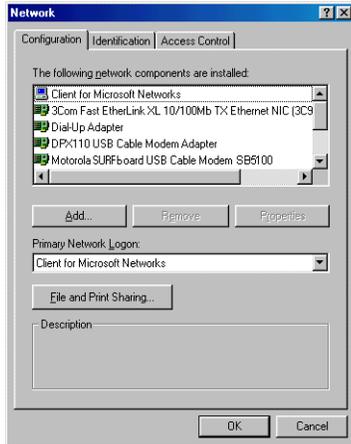
Your cable service provider may provide additional instructions to set up your computer.

## ❑ Configuring TCP/IP in Windows 98, Windows 98 SE, or Windows Me

- 1 On the Windows Desktop, click **Start**.
- 2 Select **Settings** and then **Control Panel** from the pop-up menus.
- 3 Double-click the **Network** icon on the Control Panel window.
- 4 Select the **Configuration** tab on the Network window.
- 5 Verify that TCP/IP is installed for the adapter that will be used to connect to the SB5102 cable modem. If TCP/IP is installed, then skip to step 10. If TCP/IP is not installed for the adapter, continue with step 6.

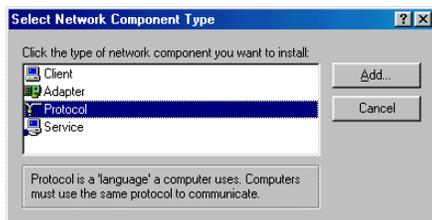
To access an electronic version of this guide please visit:

<http://broadband.motorola.com/consumers/support>

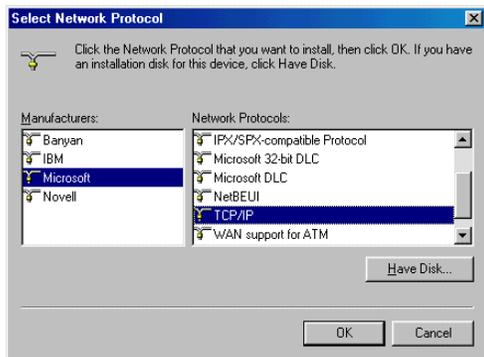


Although your SB5102 cable modem model number may be different than in the images in this guide, the procedure is the same.

## Configuring TCP/IP in Windows 98, Windows 98 SE, or Windows Me, continued



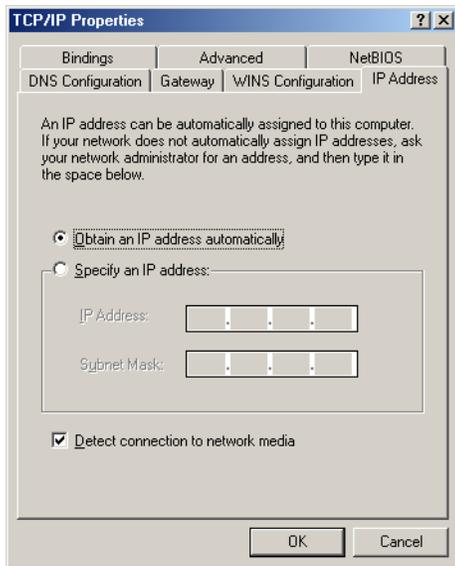
- 6 Select the adapter to be used for the SB5102 cable modem connection and then click **Add**.
- 7 Double-click the **Protocol** option on Select Network Component Type window.
- 8 Click **Microsoft** in the Manufacturers section and click **TCP/IP** in the Network Protocol section of Select Network Protocol window.
- 9 Click **OK**.



## Configuring TCP/IP in Windows 98, Windows 98 SE, or Windows Me, continued

- 10 Click **TCP/IP** on the Network window. If there is more than one TCP/IP entry, choose the one for the Ethernet card connected to the cable modem.
- 11 Click **Properties**. The TCP/IP window is displayed.
- 12 Click the **IP Address** tab.
- 13 Click **Obtain an IP address automatically**.
- 14 Click **OK** to accept the TCP/IP settings.
- 15 Click **OK** to close the Network window.
- 16 Click **OK** when prompted to restart your computer and click **OK** again.

When you complete TCP/IP configuration, go to [“Verifying the IP Address in Windows 98, Windows 98 SE, or Windows Me”](#) on page 26.

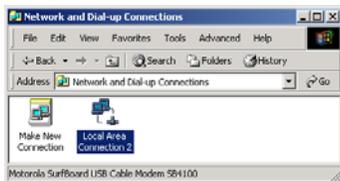
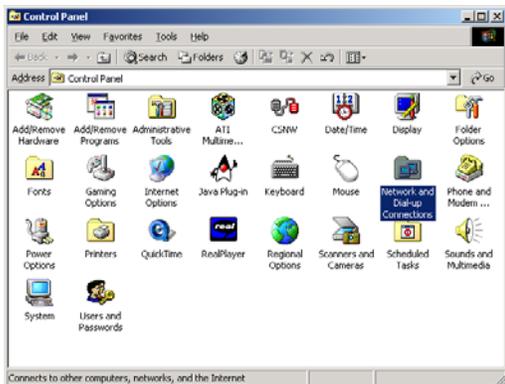


## ❖ Configuring TCP/IP in Windows 2000

- 1 On the Windows Desktop, click **Start**.
- 2 Select **Settings** and then **Control Panel** from the pop-up menus.
- 3 Double-click the **Network and Dial-up Connections** icon on the Control Panel window.

In the steps that follow, a connection *number* such as 1, 2, or 3 is a reference displayed on PCs with multiple network interfaces. PCs having only one network interface may display only the label *Local Area Connection*.

- 4 On the Network and Dial-up Connections window, double-click **Local Area Connection *number***. The value of *number* varies from system to system. The Local Area Connection *number* Status window is displayed.



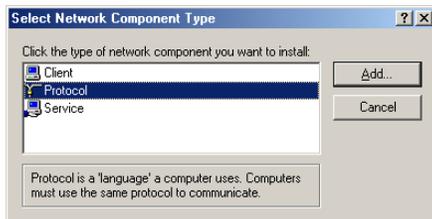
## Configuring TCP/IP in Windows 2000, continued

- 5 Click **Properties**. Information similar to the lower window is displayed.
- 6 If Internet Protocol (TCP/IP) is in the list of components, TCP/IP is installed. You can skip to step 10.

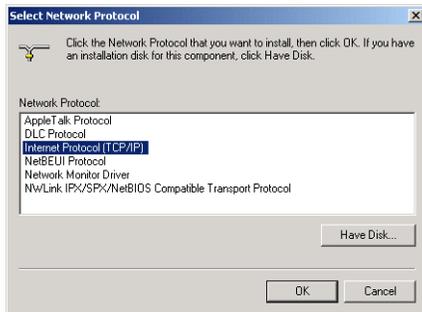
If Internet Protocol (TCP/IP) is not in the list, click **Install**. The Select Network Component Type window is displayed. Continue with step 7.



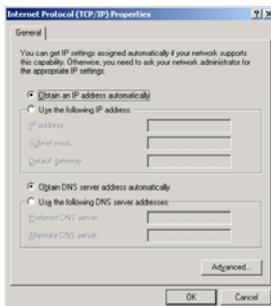
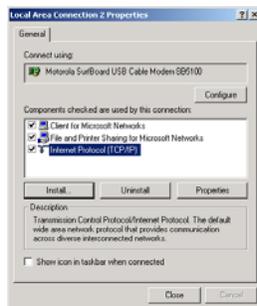
## Configuring TCP/IP in Windows 2000, continued



- 7 Click **Protocol** on the Select Network Component Type window and click **Add**. The Select Network Protocol window is displayed.
- 8 Click **Internet Protocol (TCP/IP)** in the Network Protocol section on the Select Network Protocol window.
- 9 Click **OK**. The Local Area Connection *number* Properties window is re-displayed.



## Configuring TCP/IP in Windows 2000, continued

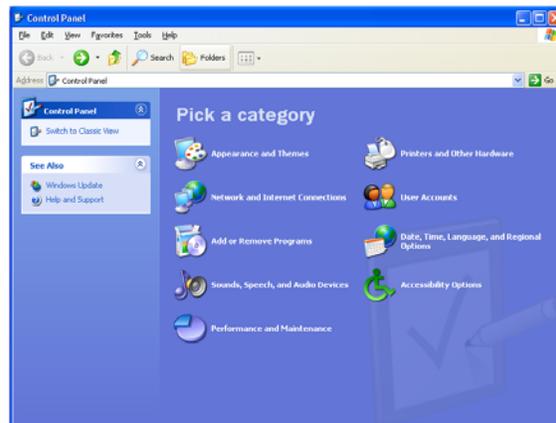


- 10 On the Local Area Connection *number* Properties window, be sure the box next to **Internet Protocol (TCP/IP)** is checked.
- 11 Click **Properties**. The Internet Protocol (TCP/IP) Properties window is displayed as shown at bottom left.
- 12 Be sure **Obtain IP address automatically** and **Obtain DNS server address automatically** are selected.
- 13 Click **OK** to accept the TCP/IP settings.
- 14 Click **OK** to close the Local Area Connection *number* Properties window.
- 15 Click **OK** when prompted to restart your computer and click **OK** again.

When you complete the TCP/IP configuration, go to [“Verifying the IP Address in Windows 2000 or Windows XP”](#) on page 27.

## ❑ Configuring TCP/IP in Windows XP

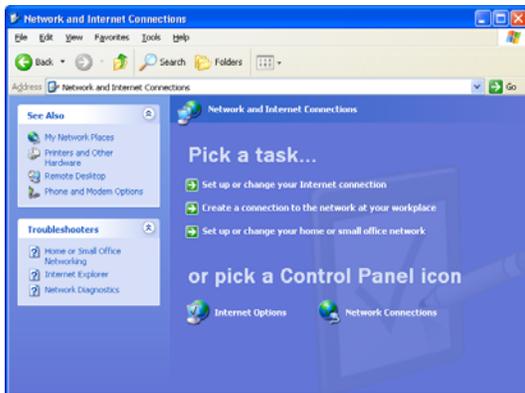
- 1 On the Windows desktop, click **Start** to display the Start window shown at left.
- 2 Click **Control Panel** to display the Control Panel window. The display varies, depending on your Windows XP view options. If the display is a Category view as shown below, continue with step 3. Otherwise, skip to step 5.



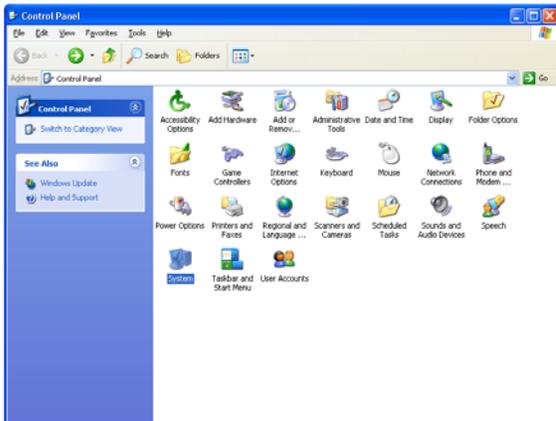
- 3 Click **Network and Internet Connections** to display the Network and Internet Connections window.

## Configuring TCP/IP in Windows XP, continued

- 4 On the Network and Internet Connections Pick a task window, click **Network Connections** to display the LAN or High-speed Internet connections. Skip to step 6.



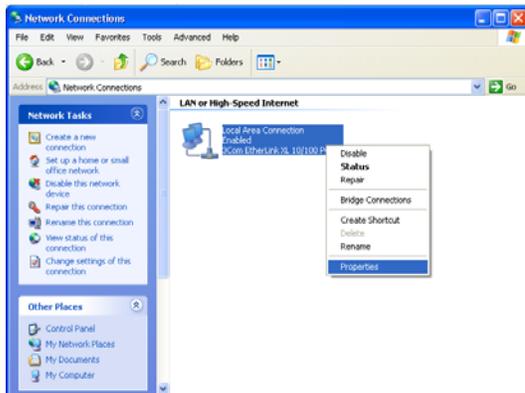
## Configuring TCP/IP in Windows XP, continued



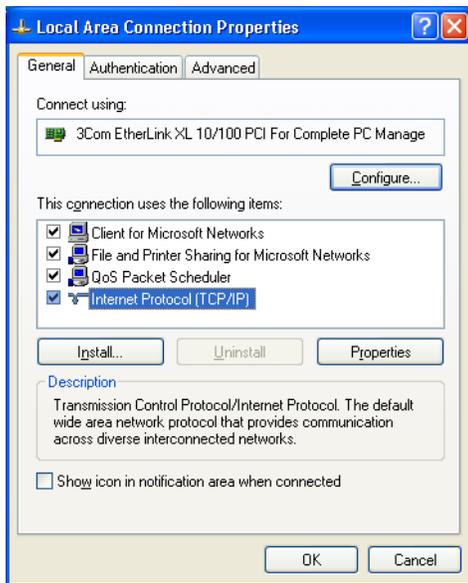
- 5 If a classic view similar to at left is displayed, click **Network Connections** to display the LAN or High-speed Internet connections.

## Configuring TCP/IP in Windows XP, continued

- 6 Right-click on your network connection. If more than one connection is displayed, be sure to select the one for your network interface.
- 7 Select **Properties** from the pop-up menu to display the Local Area Connection Properties window.

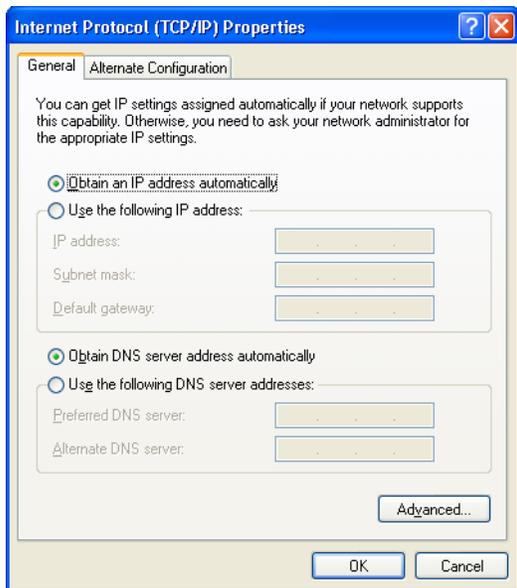


## Configuring TCP/IP in Windows XP, continued



- 8 On the Local Area Connection Properties window, be sure Internet Protocol (TCP/IP) is checked. If it is not checked, check it.
- 9 Select **Internet Protocol (TCP/IP)** and click **Properties** to display the Internet Protocol (TCP/IP) Properties window.

## Configuring TCP/IP in Windows XP, continued



**10** On the Internet Protocol (TCP/IP) Properties window, verify that the settings are correct, as shown at left.

**11** Click **OK** to close the TCP/IP Properties window.

**12** Click **OK** to close the Local Area Connection Properties window.

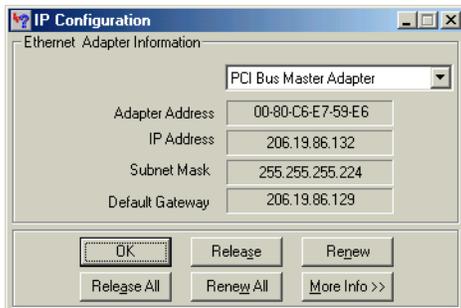
When you complete the TCP/IP configuration, go to [“Verifying the IP Address in Windows 2000 or Windows XP”](#) on page 27.

## ▣ Verifying the IP Address

The following subsections describe verifying an IP Address. Perform the appropriate procedure for your Windows version:

- [“Verifying the IP Address in Windows 98, Windows 98 SE, or Windows Me”](#) on page 26
- [“Verifying the IP Address in Windows 2000 or Windows XP”](#) on page 27

For a Macintosh or UNIX system, refer to your user guide.



*The values for Adapter Address, IP Address, Subnet Mask, and Default Gateway on your PC will be different than in the image above.*

Adapter Address	00-80-C6-E7-59-E6
IP Autoconfiguration Address	169.254.191.251

*In Windows 98 Second Edition, if IP Autoconfiguration Address is displayed, call your service provider.*

## ❖ Verifying the IP Address in Windows 98, Windows 98 SE, or Windows Me

To check the IP address:

- 1 On the Windows Desktop, click **Start**.
- 2 Select **Run**. The Run window is displayed.
- 3 Type **winipcfg.exe** and click **OK**. A window similar to the example at top left is displayed.
- 4 Select your adapter name — the Ethernet card.
- 5 Click **Renew**.
- 6 Click **OK** after the system displays an IP address.

If after performing this procedure your computer cannot access the Internet, call your cable service provider for help.

## ❖ Verifying the IP Address in Windows 2000 or Windows XP

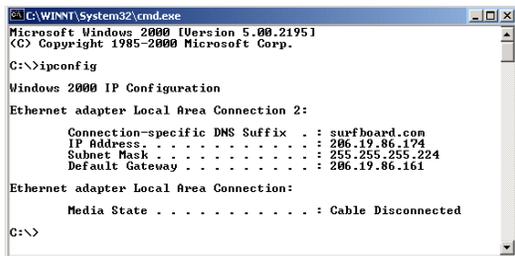
To check the IP address:

- 1 On the Windows Desktop, click **Start**.
- 2 Select **Run**. The Run window is displayed.
- 3 Type **cmd** and click **OK**. A window like the one at upper left is displayed.
- 4 Type **ipconfig** and press ENTER to display your IP configuration. A display, like the window at upper left, indicates a normal configuration.

If an Autoconfiguration IP Address is displayed as in the window at bottom left, there is an incorrect connection between your PC and the cable modem or there are cable network problems. Check:

- Your cable connections
- Whether you can see cable-TV channels on your television

After verifying your cable connections and proper cable-TV operation, you can renew your IP address.



```
C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ipconfig

Windows 2000 IP Configuration

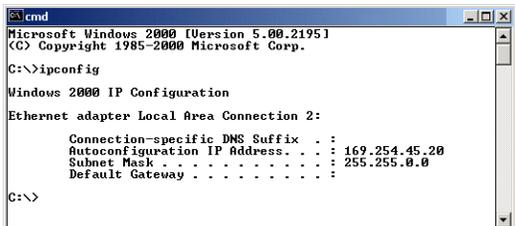
Ethernet adapter Local Area Connection 2:

    Connection-specific DNS Suffix  . : surfboard.com
    IP Address. . . . . : 206.19.86.174
    Subnet Mask . . . . . : 255.255.255.224
    Default Gateway . . . . . : 206.19.86.161

Ethernet adapter Local Area Connection:

    Media State . . . . . : Cable Disconnected

C:\>
```



```
cmd
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

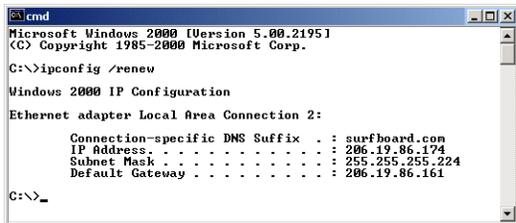
C:\>ipconfig

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection 2:

    Connection-specific DNS Suffix  . :
    Autoconfiguration IP Address. . . : 169.254.45.20
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . :

C:\>
```



```
Microsoft Windows [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ipconfig /renew

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection 2:

    Connection-specific DNS Suffix  . : surfboard.com
    IP Address . . . . . : 206.19.86.174
    Subnet Mask . . . . . : 255.255.255.224
    Default Gateway . . . . . : 206.19.86.161

C:\>_
```

## ❖ Renewing Your IP Address

To renew your IP address:

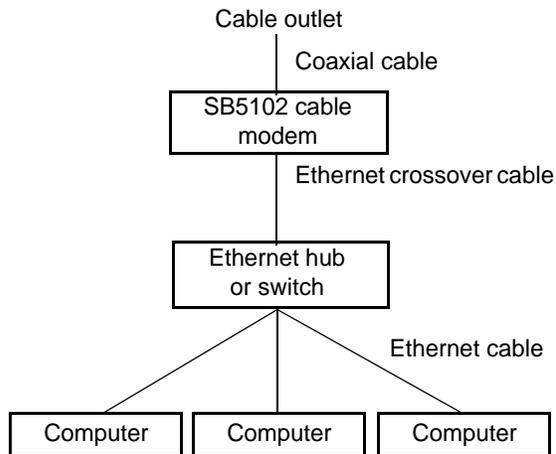
- 1 Type **ipconfig /renew** and press ENTER. If a valid IP address is displayed as shown at left, Internet access should be available.
- 2 Type **exit** and press ENTER to return to Windows.

If after performing this procedure your computer cannot access the Internet, call your cable service provider for help.

## ▣ Cabling for Multiple Users

Along with an optional hub or router, the SB5102 can serve as an Internet gateway for up to 63 computers. Please reference the diagram shown on the left.

Not all service providers support multiple user service. For information about multiple user service, contact your cable service provider.



## Troubleshooting

If the solutions listed here do not solve your problem, contact your cable service provider. Before calling your service provider, try *one* of:

- Unplugging and plugging in the cable modem power cord to restart the cable modem
- Pressing the reset button on the rear panel

Restarting or resetting the cable modem may take 5 to 30 minutes. Your service provider may ask for the status of the front-panel lights as described in "[Front-Panel Lights and Error Conditions](#)" on page 32.

### **Problem**

**Green POWER light is off**

### **Possible Solutions**

Check that the power cord is properly plugged into the electrical outlet and the cable modem.  
Check that the electrical outlet is working.

## Problem

### Cannot send or receive data

## Possible Solutions

Check the lights on the front panel. Note the first light from top to bottom that is off. This light indicates where the error occurred as described in [“Front-Panel Lights and Error Conditions”](#) on page 32.

If you have cable TV, check that your TV is working and the picture is clear. If you cannot receive your regular TV channels, your data service will not function.

Check the coaxial cable at the cable modem and wall outlet. Hand-tighten if necessary.

Check the IP address. Follow the steps in [“Verifying the IP Address in Windows 98, Windows 98 SE, or Windows Me”](#) on page 26 or [“Verifying the IP Address in Windows 2000 or Windows XP”](#) on page 27. Call your cable service provider if you need an IP address.

Check that the Ethernet cable is properly connected to the cable modem and your computer.

## Front-Panel Lights and Error Conditions

### Light Turns Off During Startup If

**Receive** The receive channel cannot be acquired

**Send** The send channel cannot be acquired

**Online** IP registration is unsuccessful

**Power** The cable modem is not properly plugged into the power outlet

### Turns Off During Normal Operation If

The receive channel is lost

The send channel is lost

The IP registration is lost

The cable modem is unplugged.

For more information about the lights, see ["Front Panel"](#) on page 2.

## Contact Us

For information about customer service, technical support, or warranty claims, see the *Regulatory, Safety, Software License, and Warranty Information* card provided with your SB5102 cable modem.

In the United States and Canada, if you need assistance while working with the SB5102 cable modem and related equipment supplied by Motorola:

**If you rent or lease your SB5102 cable modem**

Contact your cable service provider.

**If you own your SB5102 cable modem**

Call **1-877-466-8646** for technical and warranty support. Support is available 24 hours a day, seven days a week.

For answers to typical questions, see “[Frequently Asked Questions](#)” on page 34.

For information about Motorola consumer cable products, education, and support, visit [broadband.motorola.com/](http://broadband.motorola.com/).

## Frequently Asked Questions

Here are answers to questions our customers frequently ask.

**Q What is high-speed cable Internet access?**

**A** Cable Internet access uses cable television wires instead of telephone lines to connect to the Internet. It is extremely fast and affordable and does not tie up telephone lines for incoming or outgoing calls and faxes.

**Q How fast is a cable modem?**

**A** A cable modem offers Internet access at speeds up to 100 times faster than a traditional phone modem. You can experience speeds of over 1,000 Kbps. Network conditions such as traffic volume and the speed of the sites you visit can affect download speeds.

**Q Can I still watch cable TV while using my cable modem?**

**A** Yes, your cable TV line can carry the TV signal while you send and receive information on the Internet.

**Q What are CableLabs Certified, DOCSIS and Euro-DOCSIS?**

**A** CableLabs<sup>®</sup> Certified, [DOCSIS](#), and Euro-DOCSIS are the industry standards for high-speed data distribution over cable television system networks. They are intended to ensure that all compliant cable modems interface with all compliant cable systems. Your Motorola cable modem is DOCSIS or Euro-DOCSIS certified.

**Q** If I have a cable modem, can I still use my old 28.8 Kbps or 56 Kbps modem?

**A** Yes! Although once you've experienced the speed of cable Internet access, you'll never again want to wait for traditional dial-up services.

**Q** I have more than one computer. Do I need more than one SB5102 cable modem?

**A** No, not if your computers are connected on a network. The SB5102 cable modem supports current Internet connection sharing technologies to enable you to connect up to 63 PCs to the Internet using a single cable modem.

**Q** Do I need to change my Internet service provider (ISP)?

**A** Currently, most Internet service providers do not provide cable Internet access. Contact your cable company for your specific information.

**Q** Do I need to subscribe to cable TV to get cable Internet access?

**A** No, but you will need to subscribe to cable Internet service. Some systems require that you subscribe to basic service before you can get Internet access and/or offer a discount when you use your own cable modem. Check with your local cable company for specific information.

**Q** What type of technical support is available?

**A** For questions about your Internet service, connection, or cable modem, contact your cable service provider.

**Q** What do I do if my SB5102 cable modem stops working?

**A** "[Troubleshooting](#)" on page 30 provides tips to diagnose problems and simple solutions. If you continue to have problems, contact your cable service provider or Motorola as described in "[Contact Us](#)" on page 33.

## Glossary

<b>coaxial cable (coax)</b>	A type of wire consisting of a center wire surrounded by insulation and a grounded shield of braided wire. The shield minimizes electrical and radio frequency interference.
<b>DOCSIS</b>	The CableLabs Data-Over-Cable Service Interface Specification defines interface standards for cable modems and supporting equipment.
<b>download</b>	To copy a file from one computer to another. You can use the Internet to download files from a server to your home PC. A DOCSIS cable modem downloads its configuration from a server during start-up.
<b>downstream</b>	In a cable data network, downstream describes the direction of data received by your computer from the Internet.
<b>Ethernet</b>	The most widely used type of local area network (LAN). The most commonly installed Ethernet networks are called 10Base-T. 10Base-T provides transmission speeds up to 10 megabits per second (Mbps), usually over twisted-pair wire. Fast Ethernet (100Base-T) provides transmission speeds up to 100 Mbps.
<b>expansion slot</b>	An opening in a computer where a circuit board can be inserted to add new capabilities.
<b>F-type connector</b>	A connector used to connect coaxial cable to equipment.
<b>IP address</b>	An Internet Protocol address is an identifier for a computer or device on a TCP/IP network. Networks using the TCP/IP protocol route messages based on the destination IP address. Your cable service provider assigns your cable modem an IP address to provide a continuous Internet connection.

<b>MAC address</b>	The Media Access Control Address uniquely identifies each device that can be connected to an Ethernet network. It is permanently written to read-only memory (ROM) at the factory and printed on the rear panel of your SB5102 cable modem. You need to provide the MAC address to your cable service provider.
<b>MHz</b>	Mega Hertz. A measure of radio frequency - millions of cycles per second. One MHz means one million cycles per second.
<b>RJ-45</b>	The most common type of connector for Ethernet networks.
<b>splitter</b>	A splitter is a device that divides the signal power from an input cable equally between two or more signals, each carrying a selected frequency range.
<b>TCP/IP</b>	Transmission Control Protocol/Internet Protocol is a set of protocols that provides standards and rules for communication between networks.
<b>upstream</b>	In a cable data network, upstream describes the direction of data sent from your computer to the Internet.

# Software License

## SB5102 Cable Modem

Motorola, Inc., Connected Home Solutions (“Motorola”)  
101 Tournament Drive  
Horsham, PA 19044

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