



RCA

digital | **BROADBAND**
Wireless Cable
Gateway

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10111010110111100110100
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10110110101100101111110
11010110110110011100111
011101001110111101101101



Safety Information

CAUTION: Disconnect power before servicing.

CAUTION: To ensure reliable operation and to prevent overheating, provide adequate ventilation for this modem and keep it away from heat sources. Do not locate near heat registers or other heat-producing equipment. Provide for free air flow around the cable modem and its power supply.

CABLE INSTALLER:

This reminder is provided to call your attention to Article 820-40 of the National Electrical Code (Section 54 of the Canadian Electrical Code, Part 1) which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

DOCSIS compliant

This product was designed according to Data Over Cable Service Interface Specifications. It will operate on any DOCSIS-compliant Hybrid Fiber Coax (HFC) cable system and offers DOCSIS Baseline Privacy to promote secure Internet transactions.

Power cord Requirement

This product must be operated with the supplied line cord or with a line cord meeting IEC227 H03 VV-F or IEC227 H03 VVH2-F having conductors with a cross-sectional area not less than .75mm².

Operating Information

Operating Temperature: 0° - 40° C (32° - 104° F)

Storage Temperature: -30° to 65° C

Power Pack

The power pack is intended to serve as mains disconnect device and so allows to turn off the cable modem. This pack shall be easily accessible in an emergency

If you purchased this product at a retail outlet, please read the following:

Product Registration

Please fill out the product registration card that came with this product and return it immediately. Returning the card allows us to contact you if needed.

Keep your sales receipt to obtain warranty parts and service and for proof of purchase. Attach it here and record the serial and model numbers in case you need them. The numbers are located on the back of the product.

Model No. _____ Serial No. _____



Table of Contents

Chapter 1: Overview and Setup

Introduction	4
Wireless Cable Gateway Features	4
What's on the CD-ROM	5
Computer Requirements	6
Wireless Cable Gateway Overview	6
Contact Your Local Cable Company	7
System Overview	8
Your PC: Installing a PC Network Card	8
Your PC: Installing a TCP/IP Stack	9
Your PC: Configuring DHCP, TCP/IP, and DNS	10

TOC to be updated

Chapter 2: Connections and Setup

Connecting Your Devices	13
Ethernet Connection	13
USB Connector	13
Connecting the Cable Modem Using Windows Me for USB Connection	14
Activating the Wireless Cable Gateway	15
Initialization	15
Buttons	16
Reset Switch	17
Software Download Indicator	17
Mandatory User Configuration	18



Table of Contents

Chapter 3: Networking and Advanced Settings

Advanced User Configuration	10
Three Networking Modes	20
Status Web Page Group	21
Software Web Page	21
Connection Web Page	21
Security Web Page	22
Diagnostics Web Page	22
Basic Web Page Group	23
Setup Web Page	23
DHCP Web Page	24
Advanced Web Page Group	25
Options Web Page	25
IP Filtering Web Page	26
MAC Filtering Web Page	26
Port Filtering Web Page	26
Forwarding Web Page	27
Port Triggers Web Page	27
DMZ Host Web Page	28
Routing Information Protocol Setup	28
Firewall Web Pages Group	29
Time of Day	29
Web Filter Web Page	29
Event Log Web Page	30
Parental Control Web Pages Group	30
Wireless Web Pages Group	31



Table of Contents

Enable Web Page	31
Basic Web Page	31
Privacy Web Page	31
Advanced Web Page	32
Access Control Page	32
Determining Wifi MAC address	34

Chapter 4: Additional Information

Troubleshooting	35
Front of the Unit (DCW615)	36
Front of the Unit (DCW625/TCW690)	37

TOC to be updated

Care and Cleaning	41
Service Information	41
FCC Declaration of Conformity and Industry Canada Information	42
Additional FCC Information	43
Product Specifications	45



Chapter 1: Overview and Setup

Introduction

Wireless Cable Gateway Features

Thank you for purchasing the Wireless Cable Gateway. This device delivers the highest performance in data over cable technology. Ideal for home and small business users, this easy-to-use communication device offers reliable connectivity as well as remarkable data transfer rates—up to 600 times faster than a 56K dial-up modem. Once the gateway is activated, you are online to enjoy real-time 3D animation, video conferencing, and perform other data intensive tasks.

The Wireless Cable Gateway provides high-speed, reliable and secure transport capabilities and is designed with DOCSIS upgrade ability for both DOCSIS 1.0 and 1.1. The gateway offers anti-spoofing functions, resulting in greater subscriber privacy and higher system availability. Advanced features such as HomePNA2.0, WLAN IEEE 802.11b, NAT, Firewall, VPN pass through and CableHome are also available now and can be configured.



Chapter 1: Overview and Setup

What's on the CD-ROM

If you connect a PC using the USB port on your gateway, you'll need the USB drivers found on the CD-ROM.

CD-ROM Contents:

- Electronic copy of this user's guide (.pdf format)
- Adobe Acrobat Reader – application you can load to read .pdf format, if you don't have it loaded already
- USB drivers – required if connecting by USB

Chapter 1: Overview and Setup

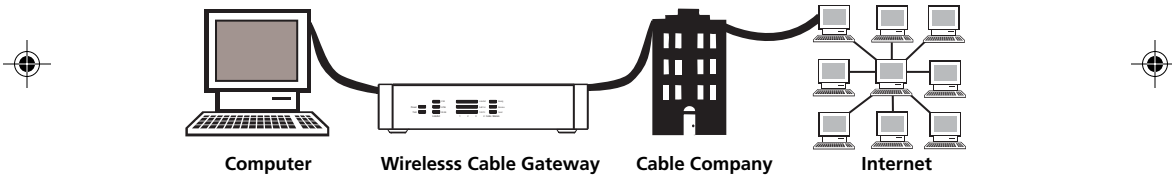
Computer Requirements

- USB 1.0 or 1.1 (PC only), Ethernet (10/100), 802.11b, or HPNA 1.0 or 2.0 connectivity
- A TCP/IP network protocol for each machine
- A network cable with RJ-45 connector for Ethernet connection
- Microsoft Internet Explorer 4.0 or later, or Netscape Navigator 4.0 or later. (5.0 and 4.7 or later, respectively, are strongly recommended.)
- Windows Me, 2000, or XP for USB

Wireless Cable Gateway Overview

Cable Internet Service Requirements

- Cable company that offers DOCSIS-compliant Internet services



What the Wireless Cable Gateway Does

The Digital Wireless Cable Gateway serves as a two-way high-speed bridge between your personal computer and a cable Internet Service Provider (ISP). It converts information that originates from the Internet or your computer into electronic messages that can be transported over the same wires your cable company uses to transport video signals.

What the Wireless Cable Gateway Needs to Do Its Job

- **The Right Cable Company:** Make sure your cable company provides data services that use cable TV industry-standard DOCSIS technology.
- **The Internet Service Provider (ISP):** Your cable company provides you access to an Internet Service Provider (ISP). The ISP is your gateway to the Internet. It provides you with a pipeline to access Internet content on the World Wide Web (WWW).



Chapter 1: Overview and Setup

Check with your cable company to make sure you have everything you need to begin; they'll know if you need to install special software or re-configure your computer to make your cable Internet service work for you.

Contact Your Local Cable Company

You will need to contact your cable company to establish an Internet account before you can use your gateway. You should have the following information ready (which you will find on the sticker on the gateway) :

- The serial number
- The model number
- The Media Access Control (MAC) address

Record your information here:

	
S.N.	XXXXXXXXXXXXXXXXXX
MODEL:	DCWXXX
MAC:	009064XXXXXX

Serial Number: _____

Model Number: _____

MAC Address: _____

Please verify the following with the cable company:

- The cable service to your home supports DOCSIS-compliant two-way modem access.
- Your Internet account has been set up.
- You have a cable outlet near your PC and it is ready for cable modem service.

Note: It is important to supply power to the modem at all times. Keeping your modem plugged in will keep it connected to the Internet. This means that it will always be ready when you are. To disconnect your computer from the Internet, use the ON/OFF button to put the modem in standby mode.

Important Information

Your cable company should always be consulted before installing a new cable outlet. Do not attempt any rewiring without contacting your cable company first.



Chapter 1: Overview and Setup

System Overview

The Wireless Cable Gateway is connected between your cable company and the PCs within your home, as pictured previously in the Wireless Cable Gateway Overview. The connection to the cable company is made by a coaxial cable, and is referred to as the WAN (Wide Area Network) side of your Wireless Cable Gateway. The connections to your PCs are made by your choice of several standard home networking methods: Ethernet, USB, or 802.11g Wireless. These are referred to as the LAN (Local Area Network) side of your Wireless Cable Gateway. Multiple PCs can use any or all of the LAN side connections simultaneously to share your single cable company connection, up to a maximum of 254 PCs total.

Unlike a simple hub or switch, the gateway's setup consists of more than simply plugging hardware together. You'll need to configure your networked PCs to accept the IP addresses the gateway assigns them (if applicable), and you will also need to configure the gateway with settings provided by your cable company.

This installation guide takes you through all the necessary steps for easy installation. Please refer to the troubleshooting section for any improper behavior.

Even if you consider to use the gateway in a wireless mode only, it is highly recommended to perform all the settings through a wired connection: USB or Ethernet first.

- If you intend to connect the Gateway through USB, please go to Chapter 2, *USB Connection*, page XX.
- If you intend to connect the Gateway through Ethernet, please go to Chapter 2, *Ethernet Connection*, page XX.
- If you already have a network card, follow the next section.

Your PC: Installing a PC Network Card

If your PC does not already support Ethernet or USB, you must install a network interface card. Following is an example setup procedure:

1. Install an Ethernet card on your motherboard, following the card's directions.
2. Power up your PC and follow the **Add New Hardware Wizard's** instructions to install the driver. When asked to restart your computer at the end of the installation, click **Yes**.
3. After restarting the system, right-click **My Computer** on the desktop, select **Properties**, click the **Device Manager** tab, and then double-click **Network adapters** to confirm that the Ethernet driver is properly installed.

Chapter 1: Overview and Setup

Your PC: Installing a TCP/IP Stack

Follow these instructions to install the TCP/IP protocol stack on one of your PCs *only* after a network card has been successfully installed inside the PC. These instructions are for Windows Me. For TCP/IP setup under Windows NT, 2000, and XP, refer to your Windows documentation.

1. Click the **Start** button. Choose **Settings** and then **Control Panel**.

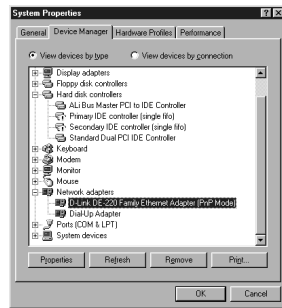


Fig. 1

2. Double-click on the **Network** icon to bring up your Network window. Select the **Configuration** tab.
3. Click the **Add** button.
4. Double-click on **Protocol**.

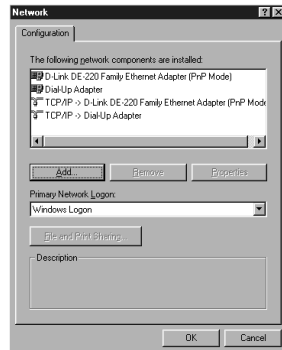


Fig. 2

5. Highlight **Microsoft** under the list of manufacturers.
6. Find and double-click **TCP/IP** in the list to the right (see Figure 9).

Chapter 1: Overview and Setup

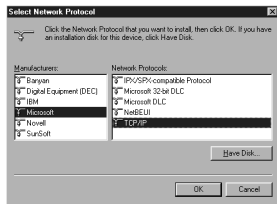


Fig. 3

7. After a few seconds, the main Network window will appear. The TCP/IP Protocol should now be listed.

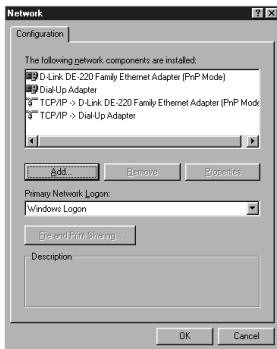


Fig. 4

8. Click the OK button again. Windows may ask you for the original Windows installation disk or additional files. Supply them by pointing to the correct file location, e.g., D:\win9x, c:\windows\options\cabs, etc. (if "D" is the letter of your CD-ROM drive).

9. Windows will ask you to restart the PC. Click the Yes button.

The TCP/IP installation is now complete.

Your PC: Configuring DHCP on a TCP/IP Stack on a PC

These instructions will help you configure each of your computers to be able to communicate with the gateway to obtain an IP (or TCP/IP) address automatically (called DHCP, Dynamic Host Configuration Protocol).

Find out which operating system your computer is running by clicking the **Start** button and then going to the **Settings** option. Then click **Control Panel** and double-click the **System** icon. If your Start menu doesn't have a Settings option, you're running Windows XP. Click the Cancel button when done.

You may need to do this for each computer you are connecting to the gateway.

Chapter 1: Overview and Setup

Important: These instructions apply only to Windows Me, 2000, or XP machines. For TCP/IP setup under Windows NT, see your Windows manual. By default Windows 2000, Me, and XP have TCP/IP installed and set to obtain an IP address automatically.

The next few pages tell you, step by step, how to configure your network settings, based on the type of Windows operating system you are using. Make sure that an Ethernet card or adapter has been successfully installed in each PC you want to configure.

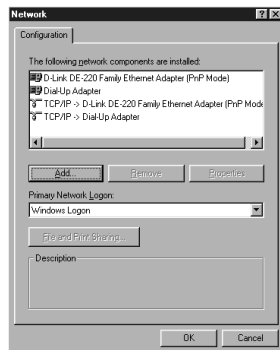


Fig. 5

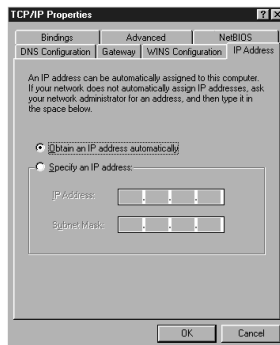


Fig. 6

Configuring Windows Me PCs

1. Go to the Network screen by clicking the **Start** button. Click **Settings** and then **Control Panel**. From there, double-click the **Network** icon.
2. On the Configuration tab, select the **TCP/IP** line for the applicable Ethernet adapter. Do not choose a TCP/IP entry whose name mentions DUN, PPPoE, VPN, or AOL. If TCP/IP appears by itself, select that line. (If there is no TCP/IP line listed, you need to install a TCP/IP stack). Refer to *Your PC: Installing a TCP/IP Stack*. Click the **Properties** button.
3. Click the **IP Address** tab. Select **Obtain an IP address automatically**.
4. Now click the **Gateway** tab to ensure that the Installed gateway field is left blank. Click the **OK** button.
5. Click the **OK** button again. Windows may ask you for the original Windows installation disk or additional files. Supply them by pointing to the correct file location, e.g., D:\win9x, c:\windows\options\cabs, etc. (if "D" is the letter of your CD-ROM drive).
6. Windows may ask you to restart your PC. Click the **Yes** button. If Windows does not ask you to restart, restart your computer anyway.



Chapter 1: Overview and Setup

Configuring Windows 2000 PCs

1. Go to the Network screen by clicking the **Start** button. Click **Settings** and then **Control Panel**. From there, double-click the **Network and Dial-up Connections** icon.
2. Select the **Local Area Connection** icon for the applicable Ethernet adapter (it's usually the first Local Area Connection listed). Double-click the **Local Area Connection**. Click the **Properties** button.
3. Select **Internet Protocol (TCP/IP)**, and click the **Properties** button.
4. Select **Obtain an IP address automatically**. Once the new window appears, click the **OK** button. Click the **OK** button again to complete the PC configuration.
5. Restart your computer.

Configuring Windows XP PCs

The following instructions assume you are running Windows XP with the default interface. If you are using the Classic interface (where the icons and menus look like previous Windows versions), please follow the instructions for Windows 2000.

1. Go to the Network screen by clicking the **Start** button and then **Control Panel**. From there, double-click the **Network Internet Connections** icon and then the **Network Connections** icon.
2. Select the **Local Area Connection** icon for the applicable Ethernet adapter (it's usually the first Local Area Connection listed). Double-click the **Local Area Connection**. Click the **Properties** button.
3. Select **Internet Protocol (TCP/IP)**, and click the **Properties** button.
4. Select **Obtain an IP address automatically**. Once the new window appears, click the **OK** button. Click the **OK** button again (or the **Close** button if any settings were changed) to complete the PC configuration.
5. Restart your computer.




Chapter 2: Connections and Setup

Connecting Your Devices


Ethernet Connection

1. Before you begin, make sure that all of your hardware is powered off, including the gateway, PCs, hubs, and switches.
2. Connect one end of an Ethernet cable to one of the Ethernet ports on the back of the gateway and the other end to a standard port on a network device, e.g., a PC, print server, hub, or switch.
3. Connect the coaxial cable from the wall to the CABLE jack on the back of the gateway.
4. Connect the power supply cable to the Power jack on the back of the gateway, then plug the supplied power cable into an AC power outlet. Go to section, *Activating the Wireless Cable Gateway*, page 15.

USB Connection



The cable modem CD included with your modem contains the drivers and other information you need to install your cable modem. Follow instructions 1 through 5 to connect the cable modem to the USB port on your computer. **Instructions must be followed in the order they appear.**



1. Connect one end of the coaxial cable to the cable connection in the wall. Attach the other end of the coaxial cable to the connector on the cable modem labeled "CABLE" (Fig. 2) on page 8
2. Insert the plug from the AC power supply into the power AC jack on cable modem and the two-prong plug into the AC outlet.
3. Insert the supplied cable modem CD-ROM. Wait momentarily for the cable modem CD window display.
4. Close all open applications and dialog boxes, including the cable modem CD window.

Note: Open applications may interfere with your cable modem installation.

5. Connect one end of the USB cable to the USB port located on the back of your computer. Connect the other end of the USB cable to the USB port on the cable modem's back panel.

Note: Use only the power supply that accompanied this unit. Using other power supplies may damage the unit. Next, you need to install the USB drivers for your operation system, (Installation for Windows Me is described hereafter:)

Chapter 2 *Illustrations contained in this document are for representation only.*

13

Chapter 2: Connections and Setup

Connecting the Cable Modem Using Windows Me for USB Connection



Fig. 7



Fig. 8

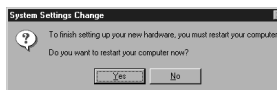


Fig. 9

6. Windows Me will briefly display the "found New Hardware Wizard," and automatically proceed to the "add New Hardware Wizard" (Fig. 7).

Choose the Automatic search for a better driver (Recommended) option, and click "Next."

Note: If Windows Me does not recognize the cable modem's presence, i.e., the "add New hardware Wizard" did not automatically appear, your BIOS settings may not permit USB and/or Plug-and-Play devices. Please contact your computer's customer service department.

7. The automatic search should find and install the driver for the "RCA or Thomson USB Cable Modem" (Fig.8). Click on "Finish" to complete the process.

8. When the "System Settings Change" window appears, click "Yes" to restart your computer (Fig. 9).

9. The Thomson cable modem installation is now complete. To validate a proper installation, perform the following instructions.

- Click on "Start" icon in the lower left-hand corner of your screen.
- Select "Settings," followed by "Control Panel." The "Control Panel" window appears.
- Double-click on the "System" icon, and select the "Device Manager."

Chapter 2: Connections and Setup

- Scroll down the list until you come to "Network Adapters." Double-click on "Network Adapters."
- The "RCA or Thomson USB Cable Modem" should exist. If "RCA or Thomson USB Cable Modem" does not exist, the cable modem was NOT installed correctly. Uninstall the drivers and start the process again.

Activating the Wireless Cable Gateway

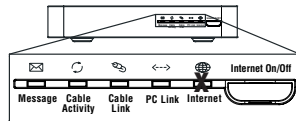
Initialization

Turn on the gateway's POWER switch (DCW615) or the ON/OFF button on the front (DCW625/TCW690). The Power indicator on the front of the unit comes on.

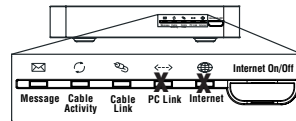
Initialization Modes

After you install the cable modem and turn it on for the first time (and each time the modem is reconnected to the power), it goes through five steps before it can be used. Each of these steps is represented by a different pattern of flashing lights on the front of the modem.

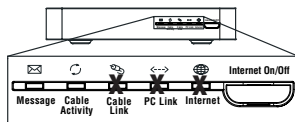
Note: All indicators flash once prior to the initialization sequence.



1. Tuning – The cable modem is functional and searching for a downstream cable modem service channel on your cable system.

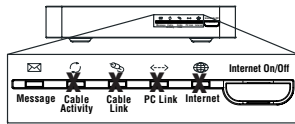


2. Ranging – The modem is now tuned to a downstream cable modem channel and can now receive data. Now it searches for an upstream channel so that it can send data.

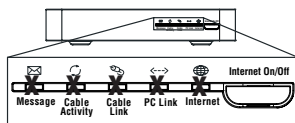


3. Connecting – The cable modem is now communicating start-up data both down-stream and upstream. The cable company is establishing IP connectivity with your modem.

Chapter 2: Connections and Setup



4. Configuring – The cable modem received its IP address and is downloading its configuration file from the Internet Service Provider (ISP).



5. Registering – The cable modem configuration is complete. It is registering its "as-configured" settings with your Cable Operator. Once complete, the POWER (INTERNET)*, PC LINK, and CABLE (CABLE ACTIVITY)* indicators stop flashing and remain on.



Buttons

INTERNET ON/OFF* – Turns the Internet connection ON and OFF for additional security. In OFF mode, the CABLE ACTIVITY LED is also disabled.

Important: Do not press this button when transmitting data over the Internet. The information will be lost and your Internet connection disabled.

Indicators – Operational Mode



INTERNET* – Indicates whether the Internet Connection is active.

CABLE LINK* – Indicates the status of your cable connection. The light is off when no cable connection is detected and fully lit when the modem is registered with the network and data can be sent.

PC LINK – Indicates whether the connection between the computer and the modem is active (ready to transmit/receive) or actually transmitting/receiving. The light is off when no carrier is present (or the modem is in standby mode), on when the carrier is present but there's no transmit/receive activity, and flashing when there is transmit/receive activity.

Chapter 2: Connections and Setup

USB* – Indicates the PC-LINK status for the USB connection

ETHERNET* – Indicates the PC-LINK status for the Ethernet connection

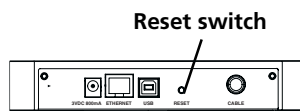
Note: If all of the lights are flashing sequentially, it means the cable modem is automatically updating its system software. Please wait for the lights to stop flashing. You cannot use your modem during this time. Do not remove the power supply or reset the cable modem during this process.

* Actual button or LED names may vary per model.

Reset Switch

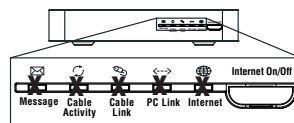
The reset switch can be found behind a "toothpick hole" on the back panel. It performs two functions:

- **Basic Reset** – Press and release the switch to make it perform the same function as disconnecting the power from the modem. It will start up again in Initialization Mode, see page 24.
- **Factory Default Reset** – Unplug the modem from the AC power. Press and hold the reset switch while plugging the modem into AC power. Continue holding the switch. Release the switch when all lights come on (about 6 seconds). This will return the modem to a factory "out of box" condition. This should only be done if the cable modem has been taken out of service in one location and is being reconnected to a different service, or if instructed to do so by your cable company.



Software Download Indicator

Software downloading or update in progress. Lights flash sequentially from top to bottom.



Chapter 2: Connections and Setup

Mandatory User Configuration

This feature allows you to configure the gateway to function in your network and gain access to the Internet through your cable company. Your ISP may require the use of a Host Name and Domain Name. You will need to get the setup information from your ISP. If you do not have this information, please contact your ISP before proceeding.

The instructions from your ISP will tell you how to set up your PC for Internet access.

Also, you must disable any Internet log-on software (such as Ivasion Winpoet or Enernet 300) and any firewall software (such as ZoneAlarm and Watchdog) on all of your PCs.



Fig. 10

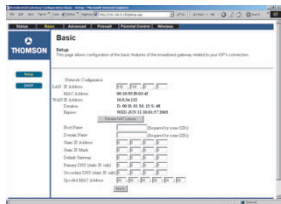


Fig. 11

1. Open your web browser. (It's all right if you get an error message at this point. Continue following these directions). Enter <http://192.168.100.1> in the browser's Address field if your gateway is in the CM Mode, or <http://192.168.0.1> if it is in the RG or CH Mode. Press the Enter key.
2. An Enter Network Password window appears (for Windows XP users, the screen may look different). Leave the User Name field empty, and enter **admin** in lowercase letters in the Password field (**admin** is the default password). Then, click the OK button.
3. If you are in CM or CH mode, the Basic webpage group hyperlink is visible. In this case, select the Basic Setup web page by using the hyperlinks in the sidebar at the left of the screen. Otherwise, skip to step 4. Based on the setup instructions from your cable company, you may need to enter the following information.

LAN IP Address: The value for the gateway's local IP address is shown on the Setup screen. The default value is 192.168.0.1. We recommend you keep this setting.

Host Name and Domain Name: These fields allow you to provide a host name and domain name for the gateway. These fields are usually left blank. If requested by your cable company, complete these two fields.

Chapter 2: Connections and Setup

Static IP Address and IP Mask: If your cable company says that you are connected through a static or fixed IP address, you should enter the field of **Default Gateway, Primary DNS and/or Secondary DNS** also.

Spoofed MAC Address: You can give a spoofed MAC Address to hide your gateway's real MAC address. However, this is **NOT** recommended, as this could cause an address conflict, causing your connection to the network to be rejected.



Fig. 12

4. The gateway provides a Status Security webpage where you can change the web page's access password and restore factory default of the gateway. Also, you can enable/disable the DHCP Server function and change the default "admin" password to the desired password.


IMPORTANT: If you have previously enabled any Internet-Sharing Proxy server software on any of your PCs, disable it.

Some examples of Internet-sharing software are Internet LanBridge, Wingate, ICS, and Sygate. To disable your Internet-sharing software:

- If you are running Netscape Navigator: Click Edit >> Preference >> Advanced >> Proxies >, and click Direct Connection to the Internet.
 - If you are running Internet Explorer v5 or better, click Start >> Settings >> Control Panel >> Internet Options >> Connections >> LAN Settings. Remove the checks from all three boxes. Click OK to continue.
5. Click the **Apply** button to save your settings. Close the web browser.
 6. Restart your computers so that they can obtain the gateway's new settings.

Your PC should now be able to access the Internet. The next steps are now:

1. Configure your Gateway such that it is able to support additional PCs through a wired or wireless connection.
2. Define the Firewall settings (optional).



Chapter 3: Networking and Advanced Settings

Advanced User Configuration

Three Networking Modes

Your gateway can be configured to provide connectivity between your cable company and your home LAN in any one of three Networking Modes: CM, RG, and CH. This mode setting is under the control of your cable company, who can select the mode to match the level of home networking support for which you have subscribed. All units ship from the factory set for the RG mode, but a configuration file which the cable company sends the cable modem section during its initialization can change it. This instruction book describes the RG mode as available out of the factory.

The Wireless Cable Gateway offers local management capability through a built in HTTP server and a number of diagnostic and configuration web pages. These pages are available from <http://192.168.0.1> in Residential Gateway (RG) and Cable Home (CH) modes, and <http://192.168.100.1> in Cable Modem (CM) mode. Not all pages are available in some modes.

Some information on two of the following web pages MUST BE configured, as explained in Mandatory User Configuration: Status...Security web page and Basic...Setup web page.

In addition, more configuration and diagnostics are possible through the following additional web pages, most of which are aimed at controlling the advanced networking functions of the gateway.

To navigate between pages, use the hyperlinks on the sidebar which appear on the left side of all pages.

Your cable company may not support the reporting of some items of information listed on your gateway's internal web pages. In such cases, the information field appears blank. This is normal.

In the CM Mode, the simplest configuration mode of the gateway, or in the CH Mode, where you have subscribed to an outside service (your cable company or another party) to remotely manage your home network configuration, you will see only the Status and Wireless web page hyperlinks in the sidebar, indicating only these page groups are available.

In the RG Mode, the mode where you manage your home network configuration, you will see web page hyperlinks to all five page groups: Status, Basic, Advanced, Firewall, and Wireless. The following section explains all of the available pages for all of the modes.

Chapter 3: Networking and Advanced Settings

Status Web Page Group



Fig. 12

Software Web Page (Fig. 12)

The *Information* section of this page provides hardware and software information about your gateway that may be useful to your cable company. You can view your operating software version but not change it. This is because your gateway adheres to the DOCSIS Cable Modem standard, which requires that your cable company perform any software upgrade of the gateway from the gateway WAN side.

The *Status* section of this page shows how long your gateway has operated since last being powered up, and some key information the Cable Modem section received during the initialization process with your cable company. If *Network Access* shows "Allowed," then your cable company has configured your gateway to have Internet connectivity. If *Network Access* shows otherwise, you may not have Internet access, and should contact your cable company to resolve this.



Fig. 13

Connection Web Page (Fig. 13)

This page reports diagnostic information about the initialization and operating status of your gateway that can be useful at the time of installation. It can also be useful to your cable company's support technician if you're having problems.

Chapter 3: Networking and Advanced Settings



Fig. 14

Security Web Page (Fig. 14)

This page is used to set a password that enables you to access all the internal web pages as explained before under Mandatory User Configuration. The password can be a maximum of 8 characters and is case sensitive. In addition, this page can be used to restore the gateway to its original factory settings. Use this with caution, as all the settings you have made will be lost. To perform this reset, set Restore Factory Defaults to YES and click Apply. This has the same affect as a factory reset using the rear panel reset switch, where you hold in the switch until all indicators come on, then release.

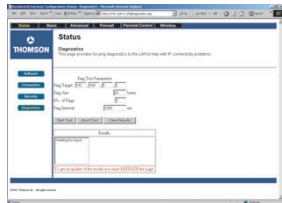


Fig. 15

Diagnostics Web Page (Fig. 15)

This page verifies you have IP connectivity from your gateway to other IP addresses on the WAN or LAN side, such as when you want to confirm you have successfully configured one of your PCs for TCP/IP operation.

When you *ping* an Internet device, you send a packet to its TCP/IP stack, and it sends one back to yours. Enter the IP address you want to *ping*, then click Start Test. Wait a few seconds, then click your web browser's *refresh* button. Success reported in the *Results* box means IP connectivity is working from your CM TCP/IP stack to the target's stack.

Note: Firewalls may cause pings to fail but still provide you TCP/IP access to selected devices behind them. Keep this in mind when pinging a device that may be behind a firewall. Ping is most useful to verify connectivity with PCs you know have no firewall, such as your own PCs on your LAN side.

Chapter 3: Networking and Advanced Settings

Basic Web Page Group

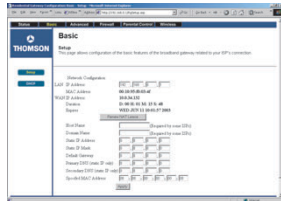


Fig. 16

Setup Web Page (Fig. 16)

This page gives you the ability to enter some data your cable company may require, as explained before in Mandatory User Configuration. In addition, it enables you to change your default LAN side IP address from 192.168.0.1, and to view your WAN side IP address and lease information.

Your gateway can provide NAT/PAT (Network and Port Address Translation) as an element of security to prevent others from reaching your PCs when not authorized. To accomplish this, the gateway watches packets you send from your PC to Internet sites. Each time you send to a site (destination IP address) and application at that site (port), it translates your PC's original IP and source port to new ones, and adds a row to its Connection Table maintained internally. (Note the different meaning of 'connection' here to describe an IP connection versus a physical cabling connection). If and when that site/application replies, it looks up the connection and reverses the IP/port process to direct the response to your PC.

The Connection Table manages itself, but you can also force this table to be cleared manually. To do this, click the Renew NAT Lease button.

You can enter a spoofed MAC address that causes your gateway networking stack to use that MAC address when communicating instead of the usual WAN MAC address (CM label + 2, as explained in Chapter 1). Enter the desired MAC address and press Apply.

Caution: If you enter a MAC address in use by another party, it can cause an address conflict on the network that could affect both you and that party.

Chapter 3: Networking and Advanced Settings

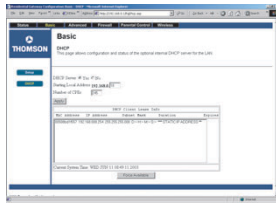


Fig. 17

DHCP Web Page (Fig. 17)

This page gives you the ability to activate and deactivate the DHCP server function of your gateway, and, if the DHCP server is activated, to see DHCP leases it has provided.

With this function activated, your cable company's DHCP server provides one IP address for your gateway, and your gateway's

DHCP server provides IP addresses, starting at the address you set in Starting Local Address, to your PCs. A DHCP server *leases* an IP address with an expiration time.

To change the lowest IP address that your gateway will issue to your PCs, enter it into the *Starting Local Address* box and then click Apply.

To set the maximum number of PCs to which the gateway will issue IP addresses, enter it in the *Number of CPEs* box and then click Apply. (*CPE* is another term sometimes used for PC.) The *DHCP Client Lease Info* section shows leases the gateway DHCP server has made, including the IP and MAC addresses of each PC's TCP/IP stack. Since MAC addresses are unique and permanently fixed into hardware, you can identify any PC listed by its MAC address. The gateway provides leases for 1 hour, and has an automatic renewal mechanism that will keep extending a lease as long as the associated PC remains active. If your PC is set to "obtain an IP address automatically," it is set to perform DHCP each time it is rebooted.

You can cancel an IP address lease by selecting it in the DHCP Client Lease Info list and then clicking the Force Available button. If you do this, you may have to perform a DHCP Renew on that PC, so it can obtain a new lease.

Chapter 3: Networking and Advanced Settings

Advanced Web Page Group

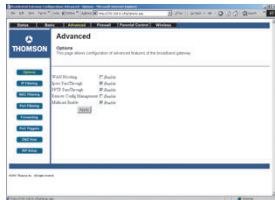


Fig. 18

Options Web Page (Fig. 18)

This page allows you to enable/disable some features of the Wireless Cable Gateway. Check *WAN Blocking* and then Apply to prevent others on the WAN side from being able to ping your gateway. With *WAN Blocking* on, your gateway will not respond to pings it receives, effectively "hiding" your gateway.

Check *Ipsec Pass Through* and then Apply to enable IpSec type packets to pass WAN \leftrightarrow LAN. IpSec (IP Security) is a security mechanism used in Virtual Private Networks (VPNs). E.g., your employer may offer VPN connectivity to your office network to provide security.

Click *PPTP Pass Through* and then Apply to enable PPTP type packets to pass WAN \leftrightarrow LAN. PPTP (Point to Point Tunneling Protocol) is another mechanism sometimes used in VPNs.

Click *Remote Config Management* and then Apply to make the configuration web pages in your gateway accessible from the WAN side. Then you could, for example, access your home gateway configuration from your workplace, if that location also had Internet connectivity. Page access is limited to only those who know the gateway access password you set using the Status...Security web page.

Click *Multicast Enable* and then Apply to enable multicast traffic to pass WAN \leftrightarrow LAN. You may need to enable this to see some types of broadcast streaming and content on the Internet, such as webcasting of a popular live event.

Chapter 3: Networking and Advanced Settings

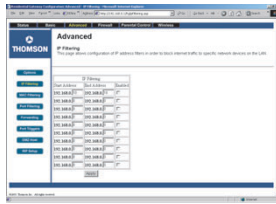


Fig. 19

IP Filtering Web Page (Fig. 19)

This page enables you to enter the IP address ranges of PCs on your LAN that you don't want to have outbound access to the WAN. These PCs can still communicate with each other on your LAN, but packets they originate to WAN addresses are blocked by the gateway.

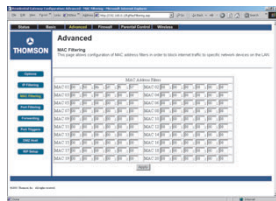


Fig. 20

MAC Filtering Web Page (Fig. 20)

This page enables you to enter the MAC address of specific PCs on your LAN that you wish to NOT have outbound access to the WAN. As with IP filtering, these PCs can still communicate with each other through the gateway, but packets they send to WAN addresses are blocked.

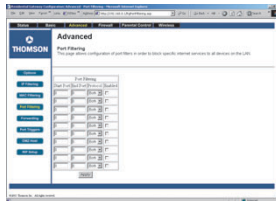


Fig. 21

Port Filtering Web Page (Fig. 21)

This page enables you to enter ranges of destination ports (applications) that you don't want your LAN PCs to send packets to. Any packets your LAN PCs send to these destination ports will be blocked. For example, you could block access to worldwide web browsing (HTTP = port 80) but still allow email service (SMTP port 25 and POP-3 port 110). To enable filtering, set Start Port and End Port for each range, and click Apply. To block only one port, set both Start and End ports the same.

Chapter 3: Networking and Advanced Settings

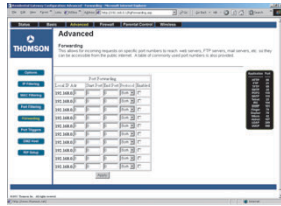


Fig. 22

Forwarding Web Page (Fig. 22)

For LAN \leftrightarrow WAN communications, the gateway normally only allows you to originate an IP connection with a PC on the WAN; it will ignore attempts of the WAN PC to originate a connection onto your PC. This protects you from malicious attacks from outsiders. However, sometimes you may wish for anyone outside to be able to originate a connection to a particular PC on your LAN if the destination port (application) matches one you specify.

This page allows you to specify up to 10 such rules. For example, to specify that outsiders should have access to an FTP server you have running at 192.168.0.5, create a rule with that address and Start Port = 20 and End Port = 21 (FTP port ranges) and Protocol = TCP (FTP runs over TCP vs the other transport protocol, UDP), and click Apply. This will cause inbound packets that match to be forwarded to that PC rather than blocked. As these connections are not tracked, no entry is made for them in the Connection Table. The same IP address can be entered multiple times with different ports.

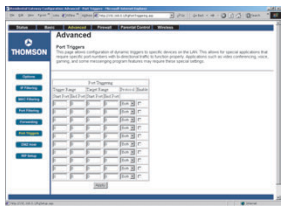


Fig. 23

Port Triggers Web Page (Fig. 23)

Some Internet activities, such as interactive gaming, require that a PC on the WAN side of your gateway be able to originate connections during the game with your game playing PC on the LAN side. You could use the Advanced...Forwarding page to construct a forwarding rule during the game, and then remove it afterwards (to restore full protection to your LAN PC) to facilitate this. Port Triggering is an elegant mechanism that does this work for you, each time you play the game.

Port Triggering works as follows. Imagine you want to play a particular game with PCs somewhere on the Internet. You make a one time effort to set up a Port Trigger for that game, by entering into Trigger Range the range of destination ports your game will be sending to, and entering into Target Range the

Chapter 3: Networking and Advanced Settings

range of destination ports the other player (on the WAN side) will be sending to (ports your PC's game receives on). Application programs like games publish this information in user manuals. Later, each time you play the game, the gateway automatically creates the forwarding rule necessary (see Advanced...Forwarding discussion above). This rule is valid until 10 minutes after it sees game activity stop. After 10 minutes, the rule becomes inactive until the next matched outgoing traffic arrives.

For example, suppose you specify Trigger Range from 6660 to 6670 and Target Range from 113 to 113. An outbound packet arrives at the gateway with your game-playing PC source IP address 192.168.0.10, destination port 6666 over TCP/IP. This destination port is within the Trigger Range, so the gateway automatically creates a forwarding rule to forward any inbound packets destined for port 113 to your game-playing PC at 192.168.0.10.

You can specify up to 10 port ranges on which to trigger.

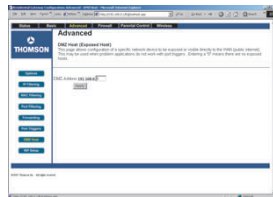


Fig. 24

DMZ Host Web Page (Fig. 24)

Use this page to designate one PC on your LAN that should be left accessible to all PCs from the WAN side, for all ports. For example, if you put an HTTP server on this machine, anyone will be able to access that HTTP server by using your gateway IP address as the destination. A setting of "0" indicates NO DMZ PC. "Host" is another Internet term for a PC connected to the Internet.

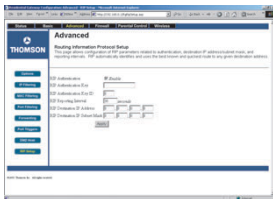


Fig. 25

Routing Information Protocol Setup (Fig. 25)

These very advanced Setups are usually not useful for a residential application unless a cable operator communicates the required settings.

Chapter 3: Networking and Advanced Settings

Firewall Web Pages Group

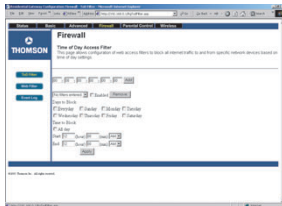


Fig. 26

Time of Day (Fig 26)

The Firewall ToD filter page allows you to control the internet access time period for a specific PC. This is a very useful Parental Control Feature on top of Content Filtering and Domain Blocking. It allows you to restrict the Internet access of some PCs to a limited period of time.

Remark: the PCs MAC address is used to prevent someone from bypassing the restriction by just changing an IP address or host name.



Fig. 27

Web Filter Web Page (Fig. 27)

This page allows you to enable, disable, and configure a variety of firewall features associated with web browsing, which uses the HTTP protocol and transports HTML web pages. On this page, you designate the gateway packet types you want to have forwarded or blocked. You can activate settings by checking them and clicking Apply. Here are some of your choices:

- Activate Keyword Blocking and specify some keywords in the Keyword List to cause blocking of web pages on the WAN side with the specified keyword in the content.
- Activate Domain Blocking and specify some Domain Names (e.g. disney.com) in the Domain List. If you select Deny Domains, the gateway blocks the listed domains. If you select Allow Domains, then access to the listed domains is allowed. If you select Always Block, your choices are always blocked. If you specify a time frame and weekday range, then your choices are only blocked during those date/time frames.

Other types of web-related filtering features can be activated from this page, including Filter Proxy, Filter Cookies, Filter Java Applets, Filter ActiveX, Filter Popup Windows, and Firewall Protection.

Chapter 3: Networking and Advanced Settings

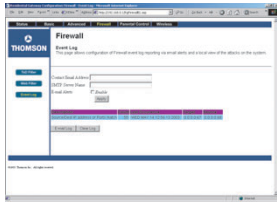


Fig. 28

Event Log Web Page (Fig. 28)

The gateway builds a log of firewall blocking actions that the Firewall has taken. Using this page lets you specify an email address to which you want the gateway to email this log. You must also tell the gateway your outgoing (i.e. SMTP) email server's name, so it can direct the email to it. Enable Email Alerts has the gateway forward email notices when Firewall protection events occur. Click E-mail Log to immediately send the email log. Click Clear Log to clear the table of entries for a fresh start.

The log of these events is also visible on the screen. For each blocking event type that has taken place since the table was last cleared, the table shows Description, Count, Last Occurrence, Target, and Source.

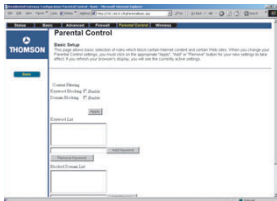


Fig. 29

Parental Control Web Pages Group (Fig. 29)

This Web page allows to block web pages based on keywords content or Domain name. By enabling the keyword blocking and adding words to the list, any web page containing one of these words will be blocked.

Similarly, any domain listed with the "Domain Blocking" activated will be rejected. A domain is a group of computers. For example, to block access to Yahoo and any computers related to its network, you would enter yahoo.com. Entering a domain name is easier than entering the IP addresses or individual host names to block.

Chapter 3: Networking and Advanced Settings

Wireless Web Pages Group

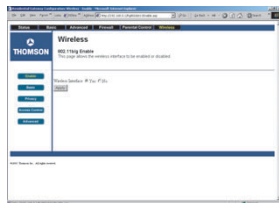


Fig. 30

Enable Web Page (Fig. 30)

Use this page to enable or disable the wireless functionality. If you enable it for the first time, proceed then to the "Basic" Web Page to configure the wireless settings.



Fig. 31

Basic Web Page (Fig. 31)

Use this page to configure the wireless channel you want to use and the name you will assign to your network (SSID). These must match the settings you make on your wireless-equipped PC you want to be a part of your local area network (LAN).

Once you have done your modifications, click on "Apply" to validate them. At that stage, you should be able to perform the first wireless connection with a wireless equipped PC. You can then move to the next step which is to secure the wireless connection by going to the Privacy Web page.

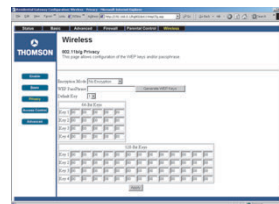


Fig. 32

Privacy Web Page (Fig. 32)

The Privacy feature in the wireless section encrypts, i.e. effectively "scrambles," all radio communication between your gateway and remote wireless-connected PCs. This provides Wired-Equivalent Privacy (WEP) on your wireless LAN. Use this page to activate encryption if desired, and set the type to use, as well as the encryption keys.

The longer the encryption key, the more difficult it is to decypher it for a "hacker." In order to generate the keys, composed of alphanumeric numbers, select a key number and

Chapter 3: Networking and Advanced Settings

type a word or sentence and click on "generate WEP keys." The gateway will automatically generate a key randomly. You have to write it down and use the same on the wireless equipped PC to allow proper descrambling.

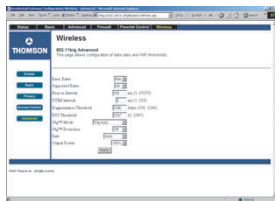


Fig. 33

Advanced Web Page (Fig. 33)

This page enables some advanced 802.11b settings to be made. The factory default values should provide good results in most cases. We don't recommend you change these settings unless you have technical knowledge of 802.11 wireless technology.

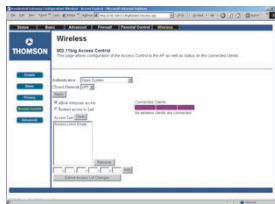


Fig. 34

Access Control Page (Fig. 34)

The Access Control feature enables you to restrict wireless access to specific computers. Use this feature to prevent outsider wireless PCs from connecting to your private network. The Access Control Web Page allows you to reinforce the security of the wireless connection by:

- Hiding the network Name to other PCs with the "Close Network" functionality activated (no SSID Broadcast (Network Name)).
 - Open System, Shared Key, Open System or Shared Key
- 802.11 networks use two authentication methods: open-system authentication and shared-key authentication. In both schemes, each mobile client (called a station) must authenticate to the access point.
- Open-system authentication might better be called "no authentication", because no actual authentication takes place: the station says "please authenticate me", and the Access Point does so, with no credential exchange.
 - Shared-key authentication is somewhat more robust (except that it depends on WEP). The station requests





Chapter 3: Networking and Advanced Settings

authentication, and the access point (AP) responds with a WEP-encrypted challenge. The station can decrypt the challenge and respond only if it has the correct WEP password.

When both "Open system and Shared key" options are selected, the authentication will be done according to the mobile client station request : with or without encryption?? In both of these methods, the station must also know the service set identifier (SSID) of the Access Point.

Your Gateway identifies wireless PCs by their WiFi MAC Address. This address consists of a string of 6 pairs of numbers 0 – 9 and letters A – F, such as 00 90 4B F0 FF 50. It is usually printed on the WiFi card of the device (e.g. the PCMCIA card in a laptop). It can also be determined from a Windows DOS prompt as explained below.



The Connected Clients list on the Access Control Web Page always shows PCs that currently have wireless connections to your Gateway. Your Gateway default access control configuration ("Allow everyone access") allows access within reception range by any computer that has your same privacy (key) settings. You might want to restrict the list of PCs having access to the network (e.g. excluding neighbors or PCs used locally only). The process is described below.

To restrict access to only specific computers:

1. Select "Restrict access to List."
2. Enter the WiFi MAC address of a PC you wish to have access.
3. Click on the "Add" button.
4. Repeat steps 2 and 3 for the other PCs you wish to have access.
5. Click on "Submit Access List Changes" to make the changes effective.

To remove access privileges for a listed computer:

1. Select the MAC address in the list.
2. Click on "Remove."
3. Click on "Submit Access List Changes" to make the changes effective.



Chapter 4: Additional Information

Troubleshooting

You can correct most problems you have with your product by consulting the troubleshooting list that follows. If you need service, please contact your service provider.

Unit won't turn on

- Make sure the unit is plugged in.
- Check the wall receptacle (or extension cord) to make sure it is "live" by plugging in something else.

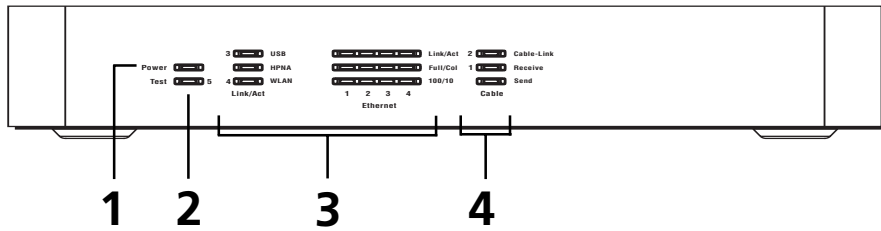
Gateway appears to be locked up

- Press and hold the Reset button on the back of the unit for 5 seconds. The unit reboots.

No connection after more than 5 minutes

- Make sure all connections are secure and try connecting to your service provider again. If you still have problems connecting to the network, contact your service provider.

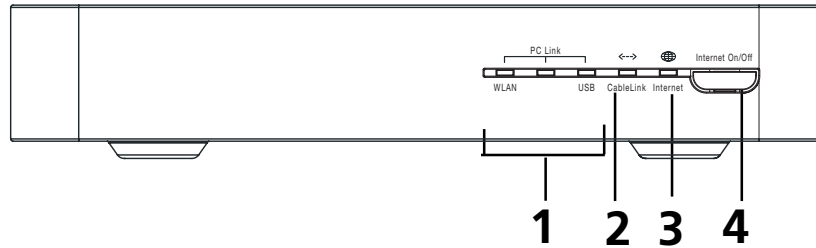
Chapter 4: Additional Information



Front of the Unit (DCW615)

- 1. Power** Indicates when the unit is on.
- 2. Test** Indicates when the unit goes through its self-diagnosis mode during boot-up and restart. It turns off upon successful completion of the startup sequence.
- 3. The LAN indicators**
 - USB** Indicates when the USB port is properly connected to your PC and active.
 - HPNA** Indicates when the HPNA port is plugged in and ready to transfer data.
 - WLAN** Indicates when the Wireless PC card is present.
 - Link/Act** Indicates steady on when link is established and blinks when data is flowing through the corresponding LAN port.
 - Full/Col** Indicates steady at full duplex mode, off at half duplex mode, and blinks when collisions are detected on the corresponding LAN port.
 - 100/10** Indicates steady on when a successful 100Mbps connection is made through the corresponding LAN port.
- 4. The WAN indicators**
 - Cable-Link** Indicates steady on when cable system initialization is complete and ready to transfer data. Blinks when scanning for a downstream DOCSIS RF carrier.
 - Receive** Blinks when user data is going through the cable modem to the PC.
 - Send** Blinks when user data is going through the cable modem from the PC.

Chapter 4: Additional Information



Front of the Unit (DCW625/TCW690)

1. The PC Link indicators

WLAN Indicates when the Wireless PC card is present.

PC Link Indicates steady on when link is established and blinks when data is flowing through the corresponding LAN port.

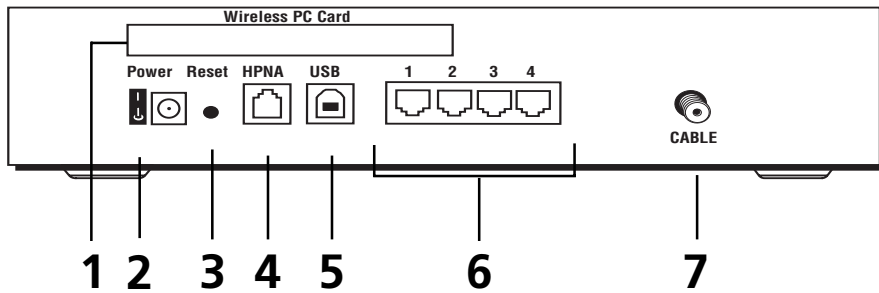
USB Indicates when the USB port is properly connected to your PC and active.

2. Cable-Link indicator Indicates steady on when cable system initialization is complete and ready to transfer data. Blinks when scanning for a downstream DOCSIS RF carrier.

3. Internet indicator Indicates when unit is on.

4. Internet On/Off Turns the unit on and off.

Chapter 4: Additional Information



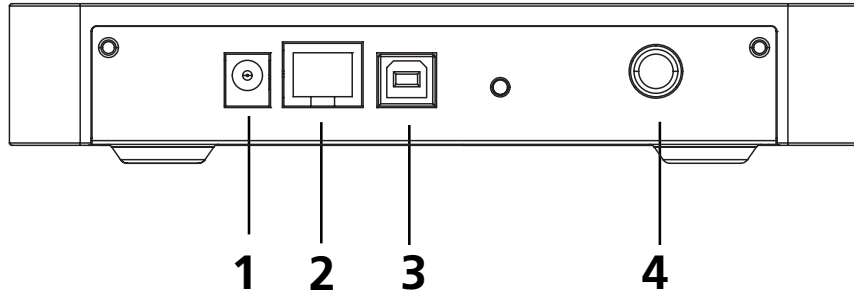
Back of the Unit (DCW615)

Description of Jacks (from left to right)

- | | |
|--------------------------|--|
| 1. Wireless PC card | Connects to the Wireless Network PC Card to enable wireless features. This is not hot swappable. |
| 2. Power switch and jack | Connects to the AC power adapter. |
| 3. Reset button | Resets the gateway's TCP/IP connections.

Pressing the Reset button and holding it in for a few seconds will clear all of the gateway's data and restore the factory defaults. This should be done only after you have exhausted all troubleshooting options. By resetting the gateway, you clear all configurations you have set using the gateway web pages, and run the risk of creating conflicts between your PC's actual IP Addresses and the factory default addresses embedded into the gateway. |
| 4. HPNA | Connects to the telephone wiring in your house. |
| 5. USB | Connects to the USB jack on your PC. |
| 6. Ethernet ports | Connect to networked devices, such as PCs, print servers and any other Ethernet devices you want to put on your network. |
| 7. CABLE | Connects to the coaxial cable jack from your cable company. |

Chapter 4: Additional Information



Back of the Unit (DCW625/TCW690)

Description of Jacks (from left to right)

- | | |
|--------------------------|---|
| 1. Power switch and jack | Connects to the AC power adapter. |
| 2. HPNA | Connects to the telephone wiring in your house. |
| 3. USB | Connects to the USB jack on your PC. |
| 4. CABLE | Connects to the coaxial cable jack from your cable company. |



Chapter 4: Additional Information

Detailed Explanation of Jacks

The Wireless Cable Gateway provides the following data connections:

WAN Side:

Cable TV connection- connects to your cable service

LAN Side:

Ethernet RJ-45 jacks – connect up to four 10 or 100 Mbps Ethernet cables to PCs or to Ethernet switches to connect more PCs. Each PC must be equipped with an Ethernet network interface, and must have the TCP/IP protocol configured to operate over that interface.

USB- connects one USB cable to your PC. The PC must be equipped with a USB network interface. In addition, the USB driver on the DCW615 CD-ROM must be installed on the connected PC, and the PC must have the TCP/IP protocol configured to operate over that USB interface.

HPNA- connects one telephone cable from the gateway to your nearest telephone outlet, utilizing your home telephone wiring to extend your LAN to other rooms of your home. Then connect up to 254 PCs via telephone cables and HPNA adapters, to other telephone outlets in your home. Each PC must be equipped with an HPNA network interface (adapter), and must have the TCP/IP protocol configured to operate over that interface.

Wireless Card- utilizes the 2.4 GHz wireless 2-way technology built into the DCW615 to reach up to 254 PCs in your home. Each PC must be equipped with an 802.11b Wireless Interface, and must have the TCP/IP protocol configured to operate over that interface.



Chapter 4: Additional Information

Care and Cleaning

CAUTION: Unplug your unit before cleaning.

You can clean the unit as required, using a soft lint-free cloth. Be sure to occasionally dust the ventilation slots in the cabinet to help assure adequate ventilation.

Never use strong cleaning agents, such as ammonia-based cleaners, or abrasive powder. These types of cleaners will damage the unit.

Avoid placing drinks or vases with water on top of the unit. This could increase the risk of fire or shock hazard or damage to the unit.

Service Information

If you purchased or leased your Wireless Cable Gateway directly from your service provider, then warranty service for the unit may be provided through your service provider or its authorized representative. For information on 1) Ordering Service, 2) Obtaining Customer Support, or 3) Additional Service Information, please contact your service provider.



Chapter 4: Additional Information

FCC Declaration of Conformity and Industry Canada Information

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.

Trade Name: RCA	Model: DCW615, DCW625
Thomson	Model: TCW690
Equipment Classification:	Computing Device Accessory
Responsible Party:	Thomson Inc. 10330 N. Meridian Street Indianapolis, IN 46290 Telephone 580-634-0151

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 and 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 this equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your service provider or an experienced radio/TV technician for help.

FCC regulations state that unauthorized changes or modifications to this equipment may void the user's authority to operate it.




Chapter 4: Additional Information

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.


Additional FCC Information

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the back or bottom side of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular RJ11 plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.



The Ringer Equivalence Number (REN) is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. The REN number is located on the label of this product.



If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information please refer to the appropriate section of this manual. This product is not user serviceable. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.



Chapter 4: Additional Information

Connection to party line service is subject to state tariffs and may not be allowed. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure that the installation of this Wireless Cable Gateway does not disable alarm equipment. You may need to consult your Telephone Company or qualified installer.

This product meets the applicable Industry Canada technical specifications. The term "IC" before the certification / registration number only signifies that the Industry Canada technical specifications were met.

The Ringer Equivalence Number is an indication of the maximum number of devices allowed to connect to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five.





Chapter 4: Additional Information

Product Specifications

WAN	Cable Interface F type female 75 ohm
LAN	4 10/100 BASE-T 1 USB, 1.1 Connector Type B, 1 HomePNA2.0 RJ-11, 1 IEEE 802.11b (2.4 GHz Unlicensed ISM radio band)
System Power	12V/700mA
Power Supply	12V/1.25A
EMI/EMC	FCC Class B, CE Class B, VCCI Class B.
Operation Requirement	Operating Temp. 0°C to 40°C (32°F to 104°F) Storage Temp. -20°C to 70°C (-4°F to 158°F) Operating
Humidity	10% to 85% Non-Condensing Storage Humidity 5% to 90% Non-Condensing
Dimensions	186 x 155 x 63 (mm)

Main features:

Cable Modem Connection

- DOCSIS 1.0 and 1.1 RFI compliant
- 64/256QAM auto detection downstream
- QPSK/16QAM upstream
- Fragmentation and concatenation enabling Quality of Service (QoS) features
- IP and LLC filtering

HomePNA Interface

- Integrated 32 Mbps HomePNA 2.0
- HomePNA 2.0 allows you to share your cable access using existing home telephone wiring

USB Interface

- USB 1.1 compliant full speed (12 Mbps) device interface for Windows 98SE, Windows 2000, Windows Me, or Windows XP



Chapter 4: Additional Information

Wireless Interface

- 11 Mbps IEEE 802.11b Wireless LAN
- Frequency band: 2400-2497 MHz
- Supports 64/128 bit RC4 authentication and encryption
- Fallback rates of 5.5, 2, and 1Mbps
- Communicates with all Wi-Fi certified wireless adapters

Networking

- IEEE 802.1d compliant bridging
- DHCP Client
- DHCP Server
- DNS Relay
- ARP
- ICMP
- FTP/TFTP
- Telnet

Security and Firewall

- Password protected configuration via web browser
- IP filtering; allows you to configure IP address filters
- MAC filtering; allows you to configure MAC address filters
- Port filtering; allows you to configure TCP/UDP port filters
- URL content filtering
- URL filtering blocks Proxy, Cookies, Java and ActiveX
- Traffic and Security Event log
- PAP and CHAP authentication with PPP
- Stateful Packet Inspection to protect against both Denial of Service and Distributed Denial of



Chapter 4: Additional Information

Service attacks, including:

- Reassembly attacks
- SYN Attack (SYN Flood)
- ICMP Flood
- Ping of Death Attack
- Tear Drop Attack
- IP Spoofing Attack
- LAND Attack
- Jolt
- Winnuke Attack (Netbios out-of-bound)
- OverDrop
- BONK, BOINK
- Blind Spoofing
- Echo/Chargen
- Storm
- Smurf Attack
- Mime Flood
- De-Militarized Zone (DMZ) support, allowing a LAN side computer to expose all non-filtered ports to the WAN
- URL keyword blocking for web access control

NAT

- With popular ALG support
- With port triggers
- With port forwarding, including support for:



Chapter 4: Additional Information

- FTP
- IRC
- H.323
- Quake
- Blizzard games
- Chat ALG
- Real Audio/Video
- CUUSEME
- Netmeeting
- MS Games (excluding game zone)
- DIABOLO II
- Activision Games
- PCAnywhere
- SSL
- NNTP

Virtual Private Network (VPN) Feature

- PPTP and IPSec pass-through can be enabled/disabled





Visit the RCA web site at www.rca.com

Please do not send any products to the Indianapolis address listed in this manual or on the carton. This will only add delays in service for your product.

Thomson Inc.
10330 North Meridian Street
Indianapolis, IN 46290

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