

Introduction

Important Rules for safe Operation

In addition to the careful attention devoted to quality standards in the manufacture of your TurboComm DOCSIS Cable modem, safety is a major factor in the design of every product. However, safety is your responsibility, too.

This section lists important information that will help assure your enjoyment and proper use of the TurboComm Cable Modem and accessory equipment. Please read them carefully before operating and using your modem.

Installation

Read and Follow Instructions

You should read all the safety and operating instructions before operating the modem. Follow all operating instructions.

Retain Instructions

You should save all the safety and operating instructions, for your future reference.

Heed Warnings

Comply with all warnings on the products and in the operating instructions.

Check Power Sources

Operate this product only from the type of power source indicated on the product's marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.

Be Careful of Overloading

Do not overload wall outlets or extension cords, as this can result in a risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicated damage or deteriorated insulation, have it replaced by your

service technician.

Protect Power Cords

Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords where they are attached to plugs and convenience receptacles, and examine the point where they exit from the product.

Check Ventilation

Slots and openings in the enclosure are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. Do not block or cover these openings. Never block these openings by placing the product on a bed, sofa, rug, or other similar surface. Never place this product near or over a radiator or heat register, or any other heat source (including amplifiers). Do not place this product in a built-in installation, such as a bookcase or equipment rack, unless you provide proper ventilation.

Do Not Use Accessories

Do not use attachments, unless they are recommended by TurboComm, as they may cause electrical or fire hazards,

Use the Recommended AC Adaptor

You must use the adaptor that comes with your TurboComm Cable Modem.

Do Not Use Near Water

Do not use this product near water – for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool, and the like.

Do Not Place Near High Temperature Source – for example near a steamer, kitchen range fire, and the like.

Use Caution in Mounting This Product

Do not place this product on an unstable surface or support. The product may fall, causing serious injury to a child or adult, as well as serious damage to the product.

Use Care in Moving Product and Cart Combinations

Quick stops, excessive force and uneven surfaces may cause the product and cart combination to overturn.

Ground the Cable System

Be sure that the outside cable system is grounded, so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electric Code, ANSI/NFPA No. 70-1984(Section 54 of the Canadian Electrical Code, Part I) provides information with respect to proper grounding of the cable modem.

Do not disconnect RF cable from your TurboComm Cable Modem while the power to your modem is on

Use

Unplug Power Before Cleaning

Do not use liquid cleaner or aerosol cleaner. Use a damp cloth for cleaning.

Keep Objects Out of Openings

Never push objects of any kind into this product through openings, as they may touch dangerous voltage or “short-out” parts, which could result in a fire or electric shock. Never spill liquid on the product.

Protect From Lightning

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet, and disconnect the cable system. This will prevent damage to the product due to lightning and power line surges. Take at least 10 seconds between DC plug off and on.

Service

Do Not Remove Covers

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet carefully, as the AC adaptor may be hot. Refer servicing to Qualified Service Personnel Under the Conditions Listed Below

When the power supply cord or plug is damaged.

If liquid has been spilled or objects have fallen into the product.

If the product has been exposed to rain or water.

If the product doesn't operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions.

If the product has been dropped or the cabinet has been damaged.

When the product exhibits a distinct change in performance, such as the inability to perform basic functions – this indicates a need for service.

Require Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks recommended by TurboComm to determine that the product is in safe operating condition.

Overview

The modem provides you with high-speed data communications over the television cable network by following the widely accepted DOCSIS/MCNS standards being developed by the multimedia cable network system consortium. Those standards offer a combination of high performance and interoperability among many of the cable system operators in North America.

Working of Cable modem

Digital signals are represented by high and low electrical voltage levels. And how fast these levels can switch and still be transmitted is determined by the "Bandwidth" of the transmission system. The pair of wires used in a telephone connection have greatly limited bandwidth, because of their electrical characteristics. So what we do is connect a device called a modem between the computer output and the phone line. The modem generates an electrical wave whose strength and phase change in step with the highs and lows of the computer's digital output. It's because of the "smoothness" of the resultant signal that a higher data rate can be transmitted.

A cable modem Modulates and Demodulates electrical signals in the same sense that the telephone modem does. However, since coaxial cable can carry much higher wave frequencies, cable modems are far more sophisticated. Their internals can include a tuner, a bridge, a router, an encryption/decryption device, an SNMP agent and an Ethernet hub. Furthermore, none of the

activity caused by these circuits and codes disturbs your regular cable TV reception.

Connecting a cable modem to a computer

To connect to Ethernet or USB on a PC running a supported Windows version, we recommend using the Installation Assistant on the EC420 Installation CD-ROM. Insert the EC420 CD-ROM in the CD-ROM device, agree to the License Agreement, and the following window is displayed:

To start the Installation Assistant, click Installation Assistant. The procedures it guides you through are described in the following sections in this guide:

Ethernet

USB

Getting Started

Making sure that you've received the following items. If any item is missing or damaged, contact your dealer immediately.

- TurboComm DOCSIS Cable Modem, Model EC420

- Ethernet Cable (6 feet)

- USB Cable (4 feet)

- AC Adaptor (AD-121AN)

- This Manual

Basic EC420 Network Requirements

- An EC420

- A connection to your cable TV system

- A subscription to cable modem service from your cable TV provider

- One or more computers with minimum:

 - Pentium-class processor or faster

 - 16Mb of memory

 - 10Mb of hard disk space available

- Windows 98, Windows 98SE, Windows Me, Windows 2000, Windows XP, Macintosh, or Linux with operating system CD-ROM available

- A wired network adaptor for each computer on the network

 - For wired connections, Ethernet cables

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 UNDESIRE OPERATION.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV

INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

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