INTRODUCTION

Welcome to Broadband Blaster World! Your new Digital Subscriber Line (DSL) modem takes you to a world of digital entertainment and exploration by giving you fast Internet connection through existing telephone lines.

Creative Broadband Blaster DSL Bridge 8012-V uses the most advanced "splitterless" Asymmetric DSL (ADSL) technology that transforms ordinary telephone lines into broadband high-speed digital lines for fast Internet access. Broadband Blaster 8012-V is compliant with both ITU G.Lite and G.DMT standards that provides downstream data transmission up to 8 Mbps and upstream data transmission up to 1 Mbps, depending upon your agreement with your DSL service provider.

Broadband Blaster DSL Bridge 8012-V is equipped with an Ethernet interface

This User Manual will help you during hardware installation, as well as setting up the computer's networking configurations. Utilizing the Windows plug-and-play feature.

This section provides you with safety instructions and information you should know before using your Broadband Blaster DSL Bridge 8012-V:

- ❑ Important Safety Instructions
- ❑ Model and Serial Numbers
- ❑ Minimum System Requirements
- ❑ Package Contents
- ❑ Getting Started

Important Safety Instructions

This section provides basic safety information for your Creative Broadband Blaster DSL Bridge 8012-V modem.

Prior to using your modem, carefully read and understand the safety instructions. These instructions must be followed to reduce the risk of fire, electric shock, or personal injury.

- Make sure that your modem is not exposed to direct sunlight or excessive heat radiation.
- Keep your modem at a place where there is minimum risk of spilling any liquid.
- The surrounding ambient temperature must not exceed 40^0C (104^0F).
- Avoid humid conditions. Do not place the product near a water source or outlet such as a bath tub, sink, wash bowl, laundry tub, swimming pool, rain, wet or humid wall, and so on.
- Never clean your modem with a damp cloth or use any liquid cleaner.
- Do not press, put any weight, or bend the power cord connected to telephone equipment.
- To avoid risk of an electric shock during lightning, do not use any telephone equipment that is connected to an electric socket.
- In case of a gas leak, do not use any electric switch that is located in the vicinity of the leak.
- To report a gas leak, do not use any telephone equipment that is connected to an electric power outlet in the vicinity of the leak.
- Do not use any electric product, electric cord, or power socket that is even partially damaged.
- Do not expose yourself to dangerous voltages by opening the cover of your modem or dismantling it.
- You must not access the internal assembly or circuit board of your modem — none of its parts are user replaceable.
- Do not dispose off the batteries in fire — they may explode and cause injury. Besides, you must follow the local codes for special disposal instructions.
- If your modem needs any service or repairs, only qualified service personnel must handle it.

Model and Serial Numbers

Your Broadband Blaster DSL Bridge 8012-V has model and serial numbers. You can find it on the bottom of your modem. Note down the model and serial numbers for future reference.

Minimum System Requirements

For a proper operation of your Creative Broadband Blaster DSL Bridge 8012-V, refer to the minimum system requirements listed below:

- Intel® Pentium® 100 MHz or equivalent processor
- Microsoft Windows® 95
- 20 MB of free hard disk space
- 32 MB of RAM
- Installed Network Interface Card with an RJ-45 port

Package Contents

Before you begin hardware installation, check your Broadband Blaster 8012-V package to ensure all the following items are available:

- Broadband Blaster DSL Bridge 8012-V unit
- One CD-ROM that contains
  - a) Diagnostic program (BBUI)
  - b) User Manual (PDF)
  - c) Acrobat Reader
- Power adapter
- RJ-11 Phone cable
- RJ-45 Ethernet cable

Getting Started

Before you begin hardware or software installation and configuration, read this section carefully:

- You must sign up with ISP — your Internet Service Provider.

- Obtain the confirmation that the DSL Service has been enabled on your telephone line.

- For your computer connected to the Ethernet port of 8012-V, follow these steps : "Hardware Installation".

- If you ran into any technical issues or need clarification on certain technical terms, please refer to the Appendix on Troubleshooting in this manual .

1. HARDWARE INSTALLATION

Creative Broadband Blaster DSL Bridge 8012-V modem is equipped with a 10/100 BaseT Ethernet interface .

This chapter provides information about your Broadband Blaster 8012-V, as well as hardware installation. To ensure the proper setup and performance, before you begin connecting cables and devices to your Broadband Blaster 8012-V, you must carefully go through the following sections:

❑   Backside View of Broadband Blaster 8012-V
❑   Connecting Microfilters
❑   Hardware Installation
❑   Indicator LEDs on Broadband Blaster 8012-V

Backside View of Broadband Blaster 8012-V

Located at the rear panel of your Creative Broadband Blaster DSL Bridge 8012-V (see Figure 1-1) are several connectors that allow you to attach your computer and a telephone equipment, as shown in Figure 1-3.
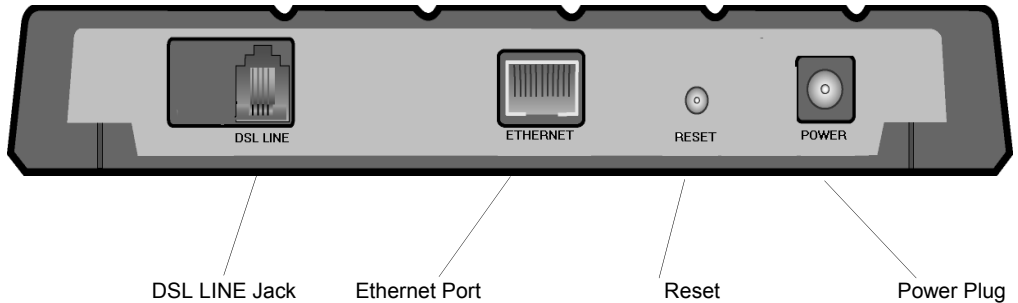

Figure 1-1: Backside view of Broadband Blaster 8012-V

DSL LINE jack
Using the RJ-11 phone cable, connect your DSL-enabled telephone line (the wall phone outlet) to the DSL LINE jack located on your Broadband Blaster 8012-V.

Ethernet port
Using the RJ-45 Ethernet cable, the Ethernet port connects your Creative Broadband Blaster 8012-V to the Ethernet Network Interface Card in a PC.

Power socket
Use ONLY the supplied DC power adapter to power the Broadband Blaster 8012-V.

Reset Switch
This switch has no function during hardware installation. It is meant for restoring Broadband Blaster 8012-V configuration settings to the default values.

Connecting Microfilters

Each analog device, such as a telephone equipment, fax machine, or answering machine that you connect on your DSL line requires a microfilter, as illustrated in Figure 1-2.

1. Plug one end of a RJ-11 telephone cable into a microfilter and connect the analog device to the other end of this RJ-11 cable.

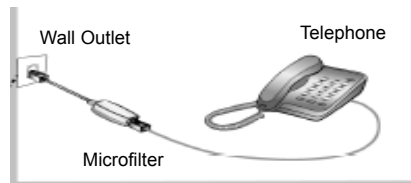2. Plug the other end of this microfilter, the end that has a RJ-11 connector, into a telephone wall outlet.

Figure 1-2

Hardware Installation
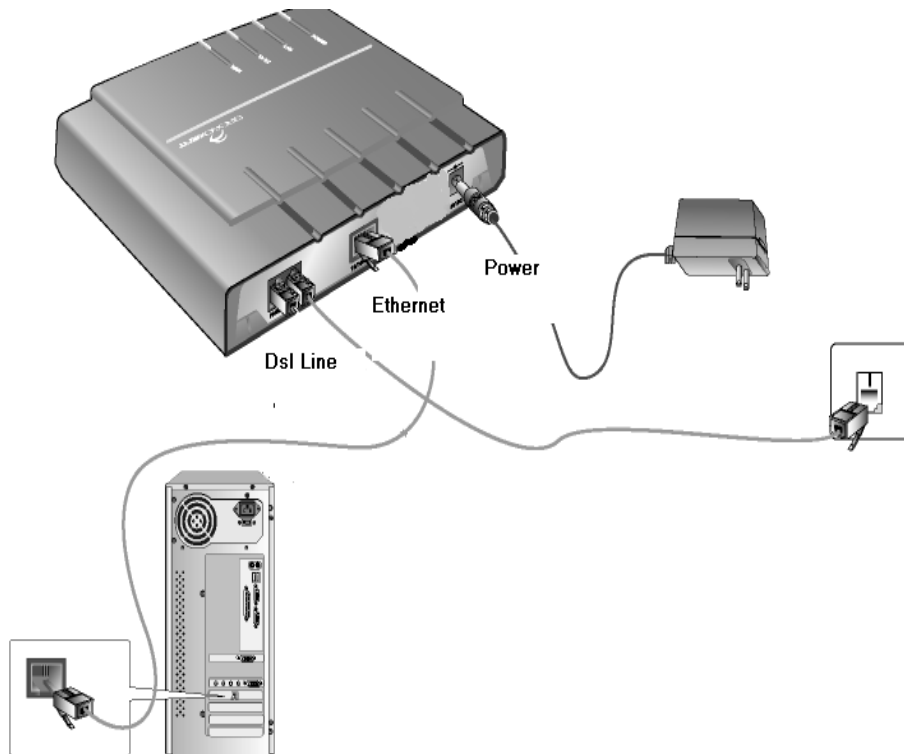
Connect your Broadband Blaster 8012-V :

Figure 1-3

Indicator LEDs on Broadband Blaster 8012-V

Indicator LEDs on Broadband Blaster 8012-V

Your Broadband Blaster DSL Bridge 8012-V features indicator LEDs which provides you with your DSL connection status. Refer to the Figure 1-4 and Table 1-1 for the function of each LED.
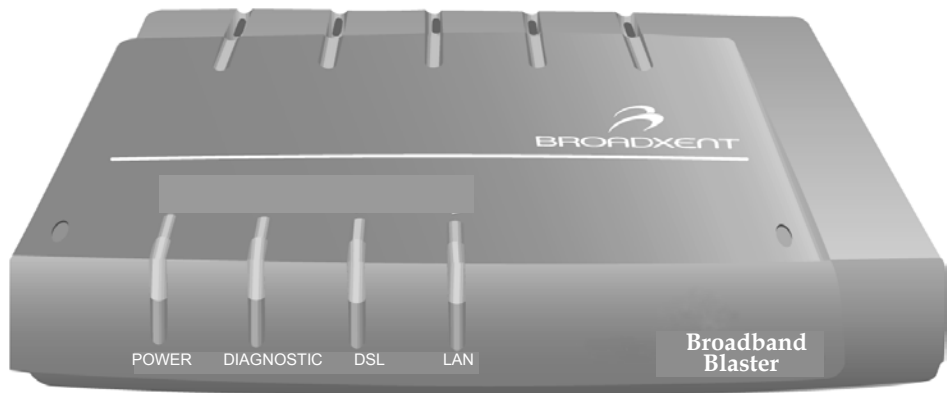

Table 1-1: Description of LEDs

LED	Description
POWER	ON when your 8012-V is properly connected to a power source.
DIAGNOS-TIC	ON when 8012-V performs self-test at the initial power up. Once the normal operation is detected, the LED will remain off.
DSL	Flashes for a few seconds and stays ON when a DSL connection is established.
LAN	ON when an Ethernet connection is detected between 8012-V Lan Port and PC Ethernet card, Flashes when Data is transferring during access to Internet.

TECHNICAL SPECIFICATIONS

This section provides certain technical specifications for the Broadband Blaster DSL Bridge 8012-V:

Data Encapsulation Protocol:

- RFC 1483 Multiprotocol Encapsulation over ATM Adaptation Layer 5

ADSL Line Interface:

- ANSI T1.413
- ITU G.992.1 (G.DMT)
- ITU G.992.2 (G.LITE)

Electrical:

- AC Adapter
  Input 120 VAC, 60 Hz, 23 W
  Output 16V AC, 750mA

Interface:

- Ethernet 10/100 Base-T (LAN)
- RJ-11 (WAN)

Dimensions:

- Length: 191 mm (7.5 in)
- Width: 165 mm (6.5 in)
- Height: 36 mm (1.4 in)

TROUBLESHOOTING

This appendix provides tips and solutions for resolving some of the problems that you may encounter while setting, installing, or using Creative Broadband Blaster DSL Bridge 8012-V:

A. Broadband Blaster LED Status

Observe the LEDs on your Broadband Blaster to check if the device is functioning properly or not.

1. Normal Setup Status

When your Broadband Blaster 8012-V is powered up, after a few seconds, all the LEDs go into their correct states:

Power   - ON when your Broadband Blaster is connected to a power source

Diagnostic - ON and then OFF (diagnostic test) when the Modem is first powered on.

LAN   - ON if the Ethernet is detected

DSL   - DSL connection is established

2. The Power LED is OFF

Cause   Your Broadband Blaster does not have power.

Solution   Try the following steps:
- ❑ Check the power adapter to make sure it is properly connected to the modem and the power outlet

3. The LAN LED is OFF

Cause   Your Broadband Blaster is not properly connected to a computer through the Ethernet port.

Solution   Try the following steps:

- ❏ Ensure that both ends of the RJ-45 Ethernet cable are plugged in securely — one end to the Ethernet port of 8012-V and other end to the Network Interface Card on the computer.
- ❏ Ensure that you have used a straight Ethernet cable. However.
- ❏ Ensure that your Ethernet card is functioning properly and you have properly installed its driver. Each Ethernet card comes with its own driver.
- ❏ Ensure that you have configured your computer's Networking Properties correctly according to the information provided by your DSL service provider.

4. The DSL LED keeps blinking

Cause   Your Broadband Blaster DSL Bridge 8012-V is not properly configured/setup or your DSL service is down.

Solution   Try the following solutions:

- ❏ Make sure that your telephone line has been activated for DSL service.
- ❏ Check your telephone line for dial-tone. If your telephone line is down, you will not have DSL service. Contact your telephone company.
- ❏ Ensure that the telephone cable is connected correctly to your Broadband Blaster.
- ❏ Try connecting the RJ-11 cable again after a few minutes as external interference might have introduced noise into your DSL line.
- ❏ Check with your DSL service provider.

B. Possible Problems

1) Broadband Blaster DSL Bridge 8012-V is not recognized by the Ethernet port on my computer

Cause   1. The Ethernet card on your computer may be faulty or the driver is not properly installed.

2. Broadband Blaster 8012-V is not cproperly connected or the Ethernet configuration is improper.

Solution   Try the following:

- ❏ Make sure that straight Ethernet cable is securely connected between Ethernet port on 8012-V and Ethernet card on your PC. Do not use crossed Ethernet cable.
- ❏ Try another straight Ethernet cable.
- ❏ Make sure that you have properly installed the driver for your Ethernet card. Each Ethernet card comes with its own driver.
- ❏ Reconfigure your computer for DSL connection, as per information provided by your service provider.

2) The telephone line is noisy

Cause   You may hear slight noise on your telephone while the modem is in operation. If the noise level becomes too loud , try the solution.

Solution   Try the following:

- ❏ Ensure that each analog device such as a telephone, fax machine, and answering machine, sharing the same telephone line as your DSL modem, is connected to the telephone wall socket via an independent microfilter.
- ❏ Check if you have connected the microfilters properly.
- ❏ If your service provider has installed a splitter, do not use the microfilters.

3) Broadband Blaster does not connect to the Internet or the DSL LED keeps on blinking

Cause   You did not connect your Broadband Blaster correctly and securely.

Solution   Try the following:

- ❏ Make sure that your telephone line has been activated for the DSL service.
- ❏ Be sure that your computer is connected to your Broadband Blaster using a straight Ethernet cable.

❏ Be sure that the phone line from the wall outlet is DSL enabled and is connected securely to the LINE jack of your Broadband Blaster.

❏ Reconfigure your computer for DSL connection, as per information provided by your service provider. If you are required to specify your IP address, be sure that you have typed values for IP address, Subnet Mask provided by your DSL service provider correctly.

4) The Internet connection is slow

Cause   Your computer may not have enough cache or you must clear your cache.

Solution   Try the following:

❏ Clear the cache on your Internet browser:

On Internet Explorer window, click **Tools** menu and click **Internet Options**. On the "Internet Options" window, click the **General** tab. Then, under "History" click **Clear History** and click **Yes** to empty the cache. Also for "Days to keep pages in history:" make the adjustment according to your requirement.

Important: Your browser automatically stores all recently visited sites on a cache memory on your computer. Next time when you access a recently visited website, your browser immediately delivers the cached date on to the screen. You should always empty the cache on a regular basis and after a session of heavy web browsing.

❏ Delete temporary Internet files:

On the Internet Explorer go to the **Internet Options** window and click the **General** tab. Under "Temporary Internet files," click **Delete Files** and click **Yes** to delete all temporary Internet files.

❏ Close all the open applications and reboot your computer:

Click **Start -> Shutdown -> select Restart -> Yes**. If warm reboot is unsuccessful, shut off power to the computer and turn on after waiting for a few seconds.

C. Diagnostic Utility (BBui)

- System Tray Icon Status

Your DSL Ethernet Port is not communicating with your PC.
 - Cable is not connected correctly, check connecting between your DSL modem and your PC.
 - The Ethernet cable or Ethernet card may defective.

Your DSL Ethernet Port is communicating with your PC.

Handshaking / Training
Your Broadband Blaster DSL modem is attempting to connect to the Internet by going through a "handshaking" process with the equipment located at your DSL service provider's location. This initiation process should not take more than a few minutes to complete. If the yellow icon does not change into green status then the equipment at the DSL Service provider's location might be experiencing problem.

DSL Connected
Your Broadband Blaster DSL modem is currently connected to the Internet.
To learn more about your DSL modem, please refer to the User's Manual in the Broadband Blaster DSL Modem Installation CD-ROM.

GLOSSARY

In order to understand a new technology, it is important that you understand its terminology. This section offers basic explanation to some of the common networking and DSL terms.

ADSL - Asymmetric Digital Subscriber Line — A Digital Subscriber Line (DSL) technology that allows digital data to be sent over existing telephone lines and the downstream data rates are appreciably higher than the upstream data rates. Many different DSL technologies have been developed and ADSL is undoubtedly the most popular DSL technology for individuals and small businesses because ADSL offers higher downstream (or download) data rates than upstream (or upload) data rates.

Analog signal - A continuous signal, which is having a continuous range of values, for example the voice signal on the Public Telephone System.

ATM - Asynchronous Transfer Mode — A dedicated connection transfer technology in which the information is organized into fixed-length cells, each of 53 bytes. In ATM a virtual circuit, which is defined by VCI and VPI values, is setup between two devices to communicate over the network. An ATM network handles data in gigabits per second.

ATM Adaptation Layer (AAL) - In the ATM layer model, above the Physical layer rests the ATM layer and the ATM Adaptation layer. The AAL performs the task of mapping between the ATM layer and the higher layers. The four AALs recommended by ITU-T are AAL1, AAL2, AAL3/4, and AAL5.

ATM Layer - In the ATM layer modem, the ATM layer is above the Physical layer. The ATM layer is responsible for transporting information across the network.

ATU-C - The Transceiver Unit installed at a telephone company's central office to connect multiple DSL users to a high-speed backbone network.

ATU-R - The digital Transceiver Unit (or equipment) installed at a customer's premises for connecting to the DSL line.

Backbone - The part of the communications network intended and designed to carry the bulk of the traffic. It provides connectivity between various sub-networks in an enterprise's wide area network.

Bandwidth - A measure of the maximum rate of data transfer. Greater bandwidth allows the transfer of more information in a given period of time. For digital services, the bandwidth is usually expressed in bits or bytes per second.

Binary - A number system that has only two digits 0 and 1.

BPS - Bits Per Second — A measurement of data transmission speed.

Bridge - A hardware device that links two or more local area networks (LANs) and manages the transfer of data between these LANs.

BritePort - A term coined by Broadxent, Inc. that refer to a DSL equipment at customer's premises.

Broadband - A transmission media that can handle the transmission of multiple messages, at different frequencies, at a time. The broadband signals use analog carriers.

Browser - See *Web browser*.

Cable modem - A modem that sends and receives digital data on the same cable that brings television broadcast signals to your home.

CAP - Carrierless Amplitude Phase modulation — A modulation technique used for transmitting digital data using an analog carrier. ADSL modems use either CAP modulation or Discrete Multitone (DMT) modulation.

CO - Central Office — a telephone company's office facility that handles the switching of telephone calls on the public switched telephone (PSTN) for a small regional area.

CPE - Customer Premises Equipment — The equipment installed at a customer's premises for the DSL service, for example a DSL modem.

Desktop - When a graphical user interface (GUI) is used to access applications such as with the Macintosh or Windows, the on-screen background is said to be the desktop.

DHCP - Dynamic Host Configuration Protocol — A method of assigning a temporary IP address to a host, such as a computer, connected on a specific network. With dynamic addressing, a particular host has a different IP address each time it connects to the network. (also see *IP Address* and *Static IP Address*)

Digital - Having discrete values, for example the data represented by binary numbers (0's and 1's). Computers communicate using digital data.

DMT - Discrete Multitone — A method of modulating digital signals over an analog carrier.

DMZ - Demilitarized Zone — a computer host or small network inserted as a "neutral zone" between a company's private network and the outside public network. It prevents outside users from getting direct access to a server that has company data. The DMZ is a subnetwork (subnet) that may sit between firewalls or off one leg of a firewall. It is also an optional and more secure approach to a firewall and effectively acts as a proxy server as well.

DNS - Domain Name System — This allows you to specify a symbolic name, a meaningful and easy-to-remember "handle," instead of an IP address. The DNS is the way that Internet domain name is located and translated into numeric Internet Protocol addresses.

DNS Server - A server that contains both the English and numerical addresses of all computers connected to the Internet. When you specify an e-mail or IP address using the "English" domain name, the DNS server will return the corresponding numeric address.

Domain Name - The Internet address or the URL of a website.

Downstream - Data transfer from the telecommunication network to the customer's premises.

Driver - A program that a computer uses to control the operation of a peripheral device, such as a keyboard, modem, monitor, card, or cable.

DSL - Digital Subscriber Line — A technology that transforms ordinary telephone lines into high-speed digital lines for fast Internet access. This technology uses a digital coding technique to get large capacity out of your existing phone line without interfering with regular services — you can talk on your phone and at the same time surf the Web. Thus DSL provides simultaneous Internet and voice/fax capabilities over a single telephone line without any interference.

DSLAM - DSL Access Multiplexer — A network device at a telephone company's office that receives signals from multiple customer DSL connections and puts the signal on a high-speed backbone line using multiplexing.

Dynamic IP address - See *DHCP*.

Ethernet - A local-area network (LAN) protocol that supports data transfer rates of 10 Mbps. It is one of the most widely implemented LAN standards that operates over the twisted pair or coaxial cable. A version of Ethernet, called 100 Base-T (or fast Ethernet), supports data transfer rates of 100 Mbps.

Ethernet card - A network interface card that plugs into a computer and allows the computer to send and receive data to and from a network.

Fast Ethernet - An Ethernet specification with a speed of 100 Mbps (10 times faster than 10BaseT).

Fixed IP Address - see *Static IP Address* and *IP Address*

Flash memory - A non-volatile memory on EEPROM chip, that can be erased and electrically and reprogramed.

FTP - File Transfer Protocol — A high-level protocol for transferring files from one computer to another. FTP is one of the basic Internet services.

G.DMT - An industry standard known as G.992.1, which refers to ADSL technology that uses DMT modulation and does not require a splitter box to be installed at the user's premises. This technology supports upstream data rates of up to 8 megabits per second and downstream data rates of up to 1.544 megabits per second.

G.Lite - A "splitterless" ADSL technology that uses CAP or DMT modulation and supports upstream data rates of up to 1.5 megabits per second and downstream data rates of up to 512 kilobits per second.

Gateway - A network device — A dedicated network machine that connects two or more separate networks that may use different protocols (such as ATM and TCP/IP) and translates the protocols.

Hardware - All the electric and mechanical parts and devices used in a computer or attached to it.

HTML - Hypertext Markup Language — The format used for writing documents to be viewed with a Web browser. Items in the document can be text, images, and/or links to other HTML documents, sites, and resources on the Internet.

Hub - A device used for connecting nodes in a star topology, that is all the nodes are connected to a central hub. A *passive* hub simply organizes the wiring, while an *active* hub besides organizing the wiring, regenerates and retransmits the signals.

Interface - The physical arrangement that supports the attachment of a device to a connector or to another device.

Internet - The world's largest computer network, linking computers and networks all over the world, that communicate via a standard TCP/IP protocol.

Internet Explorer - A popular Web browser from Microsoft.

IP Address - The address for a computer on a TCP/IP network. IP address refers to a particular machine on the network. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be 0 to 255, for example, 11.160.10.240 is an IP address. Any machine connected to the Internet is assigned an IP address. (also see *DHCP* and *Static IP Address*)

IPoA - IP over ATM — The ATM networks have a connection oriented network layer, while the Internet has connectionless network layer. The IPoA is the standard method used for sending IP packets over ATM.

ISDN - Integrated Services Digital Network — A special dial-up telephone wire connection that allows digital data transmission to co-exist with the telephone voice (analog) signals. ISDN requires a special phone line from the Telephone Company. The basic rate ISDN (also called 2B+D) is a four wire (two pairs of twisted telephone cable) connection that provides two B channels that transmits data at 64 kbps and third D channel that transmits data at 16 kbps.

ISP - Internet Service Provider — An organization that provides Internet access to the computer users.

LAN - Local Area Network — A computer network that spans a relatively small area. Most LANs are confined to an office, single building, or group of buildings.

LED - Light Emitting Diode — An electric component that emits light (turns ON) when current flows through it.

Local loop - The telephone lines running from a telephone company's central office in a local area to its customers' telephones at homes and offices.

Login - The account name (user name or user ID) and/or password used to access a computer system or a Web site.

kbps - Kilobits per second — a measure of data transfer speed.

KB - Kilobytes — 1,024 bytes.

Mac Address - Media Access Control — A unique address associated with an Ethernet card.

Mbps - Megabits per second — A measure of data transfer speed.

Megabits/Megabytes - One million bits/bytes.

Modem - A device that allows a computer to transmit data to other computers via telephone lines.

Multiplexing - Sending multiple signals on one channel by dividing time or frequency intervals among them.

NAT - Network Address Translation — An Internet standard that enables a local-area network to use one set of IP addresses for internal traffic and a second set of IP addresses for external traffic. NAT provides a type of firewall security by hiding internal IP addresses. Since they're used internally only, there's no possibility of conflict with IP addresses used by other companies and organizations.

Netscape Navigator/Communicator - A popular Web browser.

NIC - Network Interface Card — A card that is installed in a computer so that it can be connected to a network. The NIC manages the flow of network information to and from the computer.

Octet - A group of eight binary bits. A less precise term for an octet is a byte.

Packet - A unit of information, which is data of a fixed length, sent as a whole from one device to another on a network. It contains a header with destination address and control information and a payload that has the user data.

Ping - Packet Internet Groper — An Internet program used to determine whether a specific IP address is accessible. It works by sending a packet to the specified address and waits for a reply. PING is used primarily to troubleshoot network connections.

Plug-and-Play - The capability of an operating system to automatically detect any new device attached to the computer.

POTS - Plain Old Telephone Service — The term refers to the conventional telephone service using Public Switched Telephone Network (PSTN).

POTS Splitter - The POTS splitter box enables the telephone line — the plain old telephone service (POTS) — to carry voice signals and digital signals simultaneously. The DSL-enabled line is connected to the POTS splitter and the splitter provides two outputs — one containing both the POTS and DSL signals and the other containing only the POTS signals. To install a splitter box, a technician from your telephone company must visit your home. However, on a dedicated DSL connection, a splitter box is not required. Also ADSL Lite or ADSL G. Lite does not require the installation of a splitter box at the user's premises, and this division is achieved with software rather than hardware. Thus a visit by a telephone company technician is not required.

PPP - Point-to-Point Protocol — A communication protocol for transmitting packets over point-to-point links, which is commonly used by ISPs to allow dial-up users to connect to the Internet.

PPPoA - The standard for using ATM Adaptation Layer 5 for framing PPP encapsulating packets, as described by RFC 2364.

PPPoE - PPP over Ethernet — A protocol used for transmitting packets over Ethernet, which is generally used by DSL service providers to allow users to connect to the Internet through their Ethernet servers.

Protocol - A set of agreed-upon rules for transmitting data between two devices. From a user's point of view, his computer must support the right protocols to make his machine communicate with other computers.

RADSL - A Rate Adaptive ADSL technology from Globespan Semiconductors.

Reboot - When a computer is shut down and restarted, it is rebooting.

RFC 1483 - Request For Comment 1483 — A standard method used for linking different devices to communicate with each other across networks and assure "inter-operability."

RFC 2364 - See *PPPoA*.

RJ-11 - A connector/socket for two pairs (four wires) of twisted pair cable that is used primarily to connect telephone equipment in the United States.

RJ-45 - A connector/socket for four pairs (either wires) of twisted pair cable that is used commonly to connect computers onto a local-area network, especially to the Ethernet. A RJ-45 connector looks similar to the RJ-11 connector used for connecting a telephone equipment, however RJ-45 is slightly wider than RJ-11.

Router - A hardware device that connects two separately functional networks that use same or different protocols. Routers look at the destination addresses on the packets passing through them and then decide the best route to send them on.

SDSL - Symmetrical DSL — A DSL technology that provides the same amount of bandwidth (up to 1.5 Megabits) both upstream and downstream.

Segment - A physical or logical portion of a network. An Ethernet segment does not cross any bridge or router, but includes everything up to a bridge or router connection.

Service Provider - See *ISP*.

SNMP - Simple Network Management Protocol — A protocol used commonly for managing network devices remotely.

Static IP address - A permanent IP address that is assigned to a node in a TCP/IP network. Servers and routers are usually assigned static IP addresses, while client stations are often assigned dynamic IP addresses from a DHCP server each time they come online. For users connected to the Internet via cable modems and DSL either in the office or at home using long term (static) IP addresses, it makes them more vulnerable to hacker attacks than IP addresses that are dynamically assigned. See dynamic IP address, IP address and DHCP.

Subnet address - The portion of IP address that identifies the subnet.

Subnet Mask - A 32-bit address string that is used to identify the bits of an IP address that are used for the subnet address. A Subnet Mask is usually represented in dotted-decimal notation, for example, 255.255.255.0.

Subnet or Subnetwork - Any network that is a part of a larger IP network and is identified by a subnet address.

Switch - A device used for connecting nodes in a star topology, that is all nodes are connected to a central switch. By monitoring packets, a switch learns which devices are connected to its ports and then sends a packet to the appropriate port only.

TCP/IP - Transmission Control Protocol/Internet Protocol. A suite of communication protocols that are used by computers or networking devices on the Internet so that they can communicate with each other. TCP/IP uses several protocols, the two main being TCP and IP.

Telco - The local telephone company office.

10 Base-T - Wiring standard used for Ethernet networks that can transmit data at up to 10 Mbps transmission using baseband unshielded twisted pair cable. Maximum allowable cable length is 100 meters (330 feet).

Twisted pair cable - A cable that consists of two wires twisted together. This cable is less expensive than coaxial, whereas it is thinner and can break more easily than a coaxial cable.

UPnP - Universal Plug and Play — a standard that uses Internet and Web protocols to enable devices such as PCs, peripherals, intelligent appliances, and wireless devices to be plugged into a network and automatically know about each other. With UPnP, when a user plugs a device into the network, the device will configure itself, acquire a TCP/IP address, and use a discovery protocol based on the Internet's Hypertext Transfer Protocol (HTTP) to announce its presence on the network to other devices.

Upstream - Data transfer from the customer's premises to the telecommunication network at CO.

URL - Universal Resource Locator — The addressing system that helps the users to locate websites on the Internet. It precisely tells the name of the server where a site's files are stored, the file's directory path, and its file name.

USB - Universal Serial Bus — A plug-and-play interface that allows the user to attach a device without having to add an adapter card and turning off the computer.

VCI - Virtual Channel Identifier — A numerical value assigned by your DSL Service Provider to your DSL device. VCI goes hand in hand with VPI to ensure connection with your DSL Service Provider's equipment.

VPI - Virtual Path Identifier — A numerical value assigned by your DSL Service Provider to your DSL device to ensure proper connection with the DSL equipment at the Telephone Company's office.

WAN - Wide Area Network — A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local-area networks (LANs).

Web browser - A program used to access the Internet resources available through the World Wide Web.

Web server - A host computer that sends Web page to other computers.

World Wide Web - A vast resource of information stored on computers and servers connected to the Internet.

xDSL - Various DSL technologies has been developed and the "x" indicates the type of technology being implemented.

WARRANTY INFORMATION

Broadxent warrants that equipment furnished will be free from defects in material and workmanship for a period of one year from the confirmed date of purchase of the product new from the retail location. Upon written notice of any such defect, the manufacturer will, at its option, repair or replace the defective item under the terms of this warranty, subject to the provisions and specific exclusions listed herein.

This warranty shall not apply to equipment that has been previously repaired or altered outside our facilities in any way, nor will it apply if the equipment has been used in a manner exceeding its specifications or if the serial number has been removed.

We do not assume liability for consequential damages as a result from our product use, and in any event our liability shall not exceed the original selling price of the equipment.

The equipment warranty of Broadxent, Inc. shall constitute the sole and exclusive remedy of any Buyer of the manufacturer's equipment and the sole and exclusive liability of the manufacturer, its successors or assigns, in connection with equipment purchase and in lieu of all other warranties expressed, implied or statutory, including, but not limited to, any implied warranty of merchantability or fitness and all other obligations or liabilities of the manufacturer, its successors, or assigns.

Print out and fill Registration card and send to Broadxent, Inc.

FCC Registration Information for Users

This product is compliant and registered with the CFR47-Part 68 of the Federal Communications Commission (FCC). The FCC requires us to provide you with the following information:

- •Connection to the nationwide telephone network should be made by using standard modular telephone jacks, type RJ-11.

- •This equipment may not be used with 'Party Line' services or with 'Coin Telephone' lines.

- •You should provide the FCC registration number and Ringer Equivalent Number (REN) of this product to your telephone company. The REN is useful in determining the number of devices you may connect to your telephone line and still have all of these devices ring when your telephone number is called.

- •If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. If advance notice is not practical, you will be notified as soon as possible. You will have an opportunity to correct the problem, and you will be informed of your right to file a complaint with the FCC. Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your product. If such changes are planned, you will be notified in advance.

- •If it is determined that the equipment still fails to operate properly, the FCC requires that the unit be disconnected from the telephone line until the problem has been corrected. Repair to this equipment can only be made by the manufacturer, its authorized agents, or other parties who are authorized by the FCC.

Broadxent 8012-V Product Registration
Name:
Company:
Address:
City/State/Zip:
Phone:
E-mail:
Serial Number:
Purchased from:
Date of Purchase:

Please print and fill up above Registration Card and send it to :

Broadxent, Inc.
188 Topaz Street
Milpitas, CA 95035
ATTN: Customer Service

CONTACT INFORMATION

Reach us by Phone:

General Line: (408)719-5100
General Fax: (408)262-1390

Reach us by E-Mail:

Send your questions and comments by e-mail to the following address:
E-Mail: adslsupport@broadxent.com

Reach us by Mail:

Broadxent, Inc. - A Subsidiary of Creative Technology, Ltd.
188 Topaz Street
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Reach us on the Web:

http://www.broadxent.com