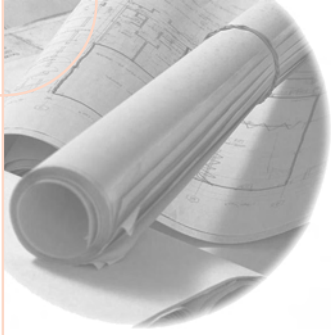


The Network Connection Center™



*Digital
Broadband
Series*



Homeowner's Manual

Home
Director™
The Power Behind Intelligent Living

First Edition (May 2000, updated September 2000)

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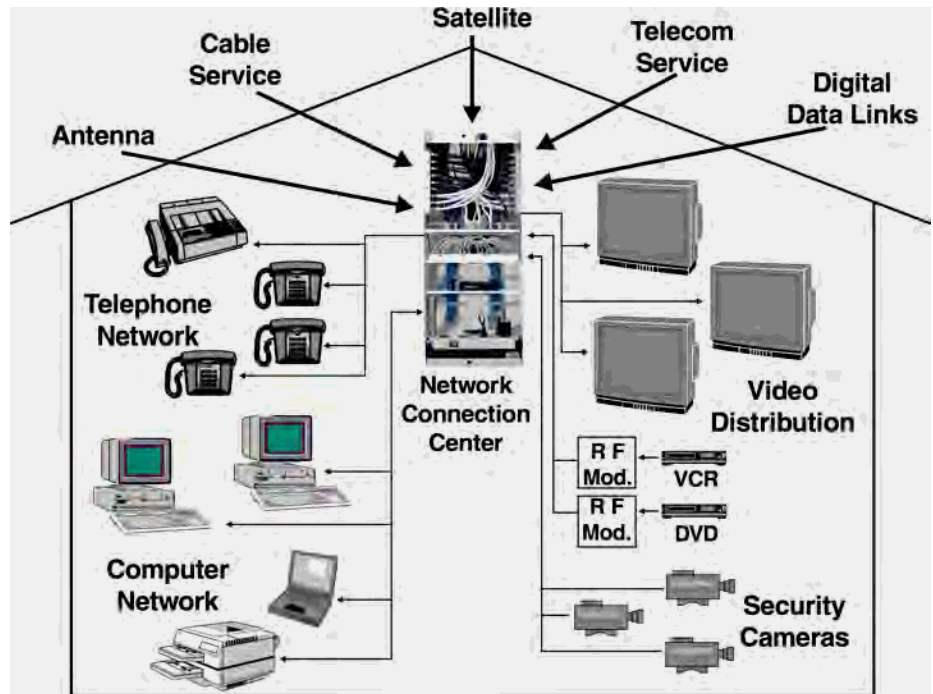
Introduction

Terms used in this manual

This manual provides you with basic information about the features of the Network Connection Center. For your convenience, there is a glossary at the end of this manual. Please refer to this section for questions concerning terms used in this document.

Diagram of the Network Connection Center

This diagram shows how various systems and devices are connected to the Network Connection Center. The system you purchased may include some or all of these connections.



System overview

The Network Connection Center consists of four main network components:

- Network Connection Center
- Cables and wires*
- Network connections called *wall taps**
- Network accessories, such as video cameras*

*May be provided by your installer.

Network Connection Center

The Network Connection Center links the home network together. All incoming signals generated from external sources (for example, cable TV or satellite) enter the Network Connection Center and are distributed throughout the network. All signals generated from internal sources (for example, telephone or cameras) are routed to the Network Connection Center and are either distributed throughout the system or sent out of the home.

The table below summarizes the features of the Starter Pack, Basic, and Personal models of the Network Connection Center.

	Video distribution	Telephone distribution	Camera module	Computer network
Starter Pack SP01, SP03	passive input distributes to 4 locations	4x8		Option
Basic models BL02, BL03	CATV distributes to 6 locations	4x8		Option
Personal model PL00	8 inputs distribute to 8 locations	4x8		Option
Personal model PL01	8 inputs distribute to 8 locations	4x8	6 in-home cameras	Option
Personal model PL02	16 inputs distribute to 16 locations	4x16	6 in-home cameras	Option
Personal model PL03 (for dual cable)	8 inputs distribute to 8 locations	4x8	6 in-home cameras	Option



Note

Camera kit is required for camera support in the Personal models.



Note

Options described in this document are available in all models of the Network Connection Center. For more information about options, please contact your installer.

Cables and wires

To ensure consistent and reliable data transmission, only the highest quality cables and wires are used with the Network Connection Center. There are two types of cables that are used in the Network Connection Center:

- Series 6 coaxial cables (RG6)
- Category 5 twisted pair wires (CAT5)

The Network Connection Center uses these cables and wires to distribute signals throughout your home. The RG6 cables distribute radio frequency (RF) modulated television and high frequency satellite signals throughout the system. The CAT5 wires distribute telephone and data signals throughout the system for your residential and home office telephones, fax machines, modems, and other devices.

Wall taps

Wall taps are wall-mounted connections in various locations throughout your home. These taps are connected to the Network Connection Center by RG6 cables and CAT5 wires.

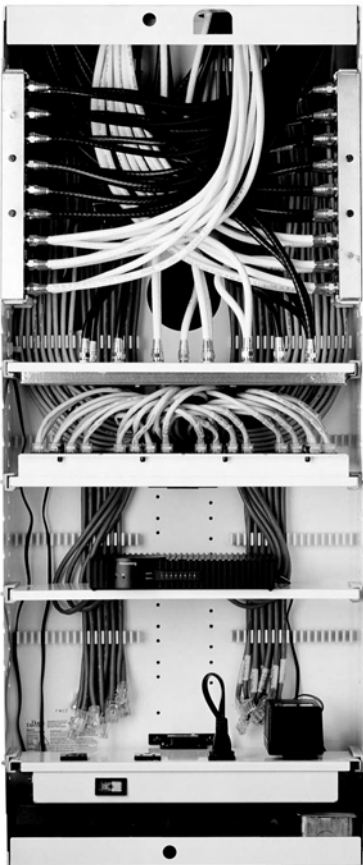
Network accessories

Some models may include network accessories such as satellite dishes or cameras for the television or camera options. See “Network accessories” on page 25 for more information.

Network Connection Center

Your Network Connection Center is installed with a specific installation configuration. If you require changes to the configuration or if you experience problems with your system, contact your installer.

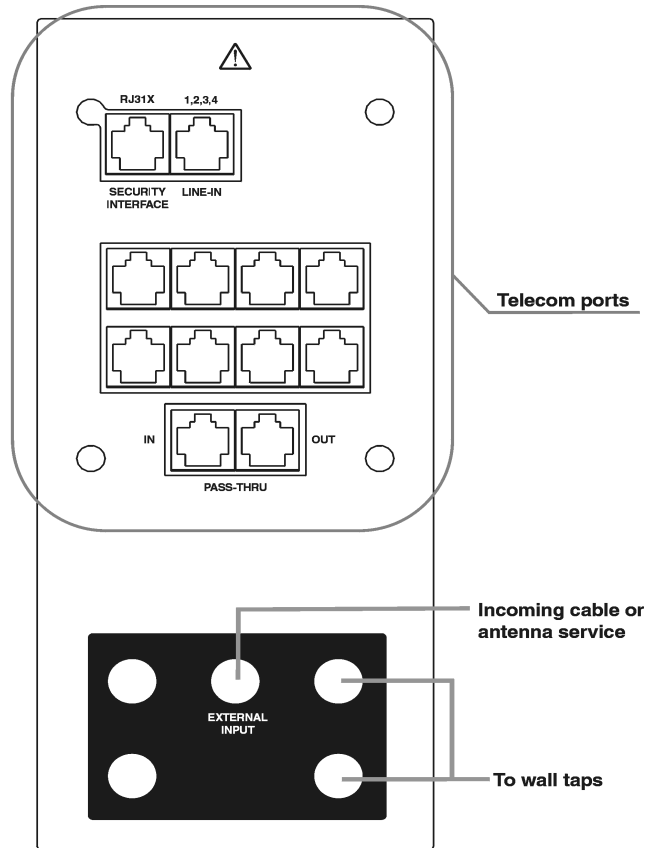
The photo below shows one of the models of the Network Connection Center. The modules installed in your Network Connection Center depend on the model and options you choose.



Starter Pack models

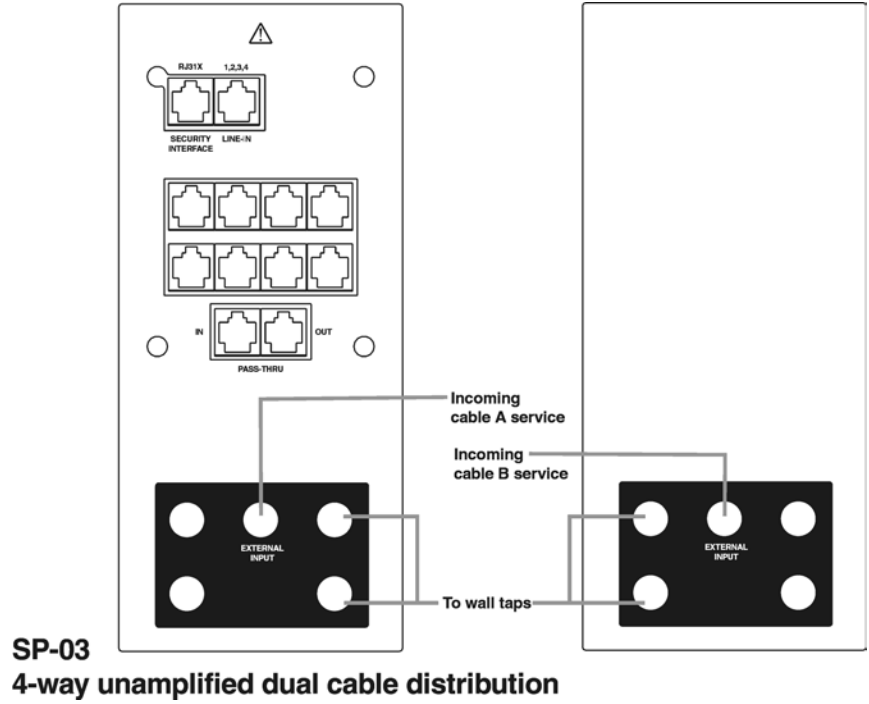
Video functionality

The Starter Pack model SP01 includes the Starter Connection Module that provides one passive CATV or antenna input for distribution to four locations in the home.



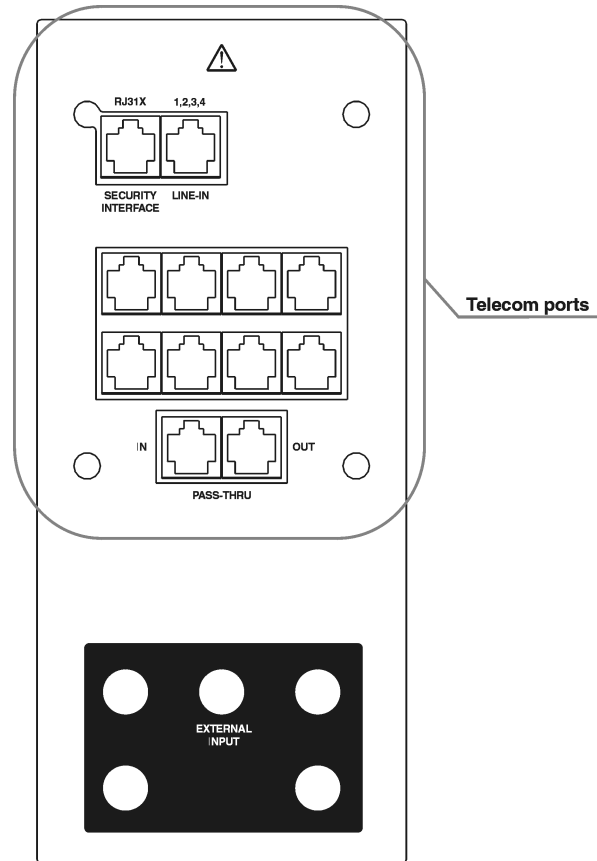
SP-01
4-way unamplified cable distribution

For dual cable systems, the Starter Pack model SP03 includes the Starter Connection Module and a 4x Video Distribution Module.



Telecom functionality

The Starter Connection Module provides four incoming telephone lines and eight output ports. It can distribute up to four lines to eight wall taps throughout the house.



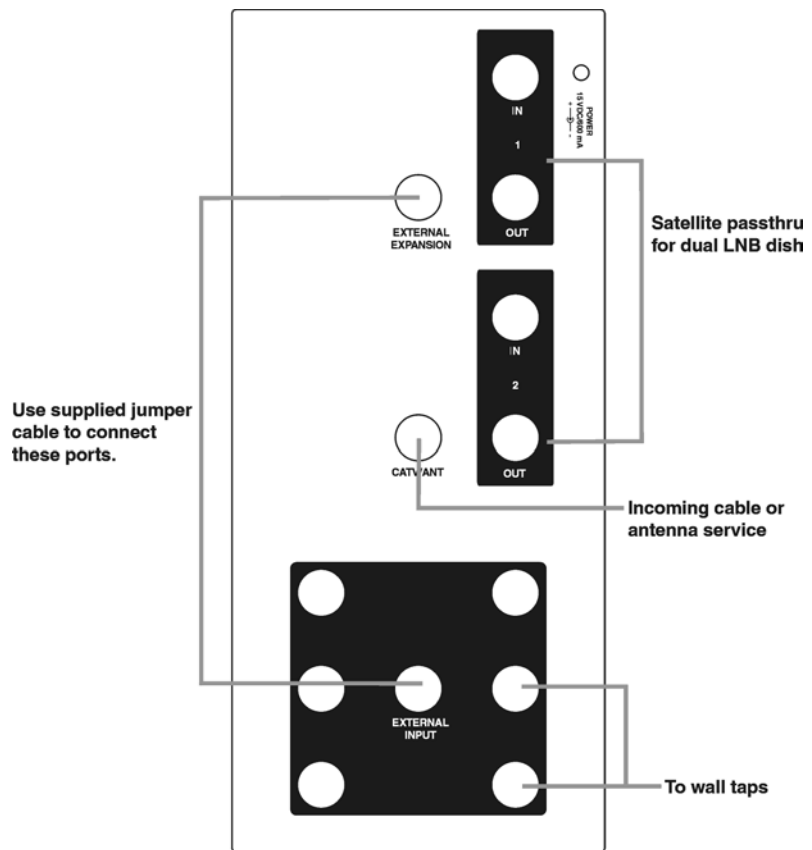
Video amplifier modules

The video amplifier modules included in each Network Connection Center model are described on the following pages.

Basic BL02 model

The Basic BL02 model includes the Basic Video Amplifier Module and has the following features:

- One input for cable TV or antenna
- Six external outputs
- Satellite TV passthru for satellite dual LNB dish

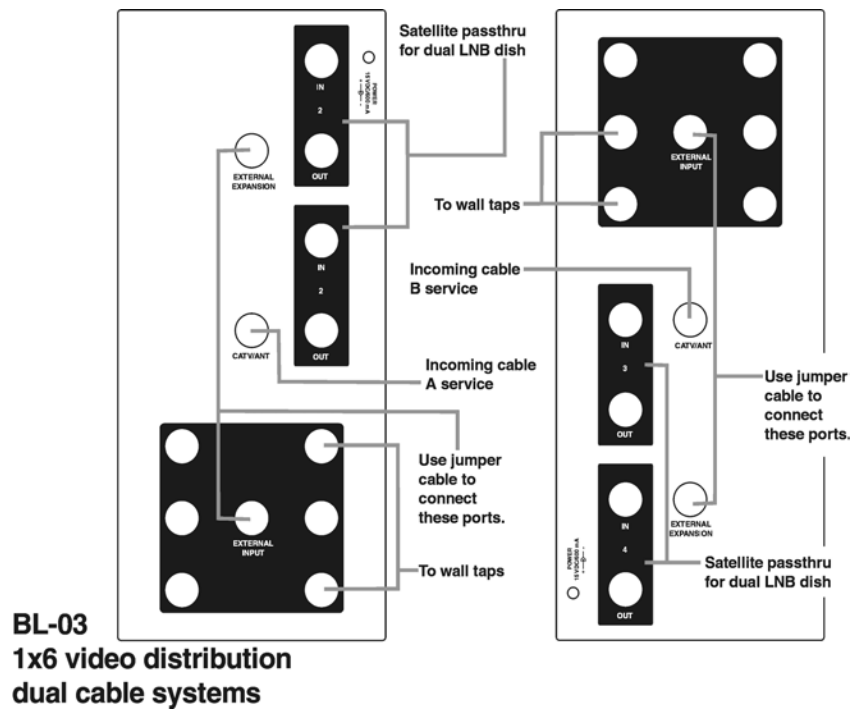


BL-02
1x6 video distribution

Basic BL03 model

The Basic BL03 model includes the Basic Video Amplifier Module and the Basic Video Amplifier “B” Module. This video amplifier designed for dual cable has the following features:

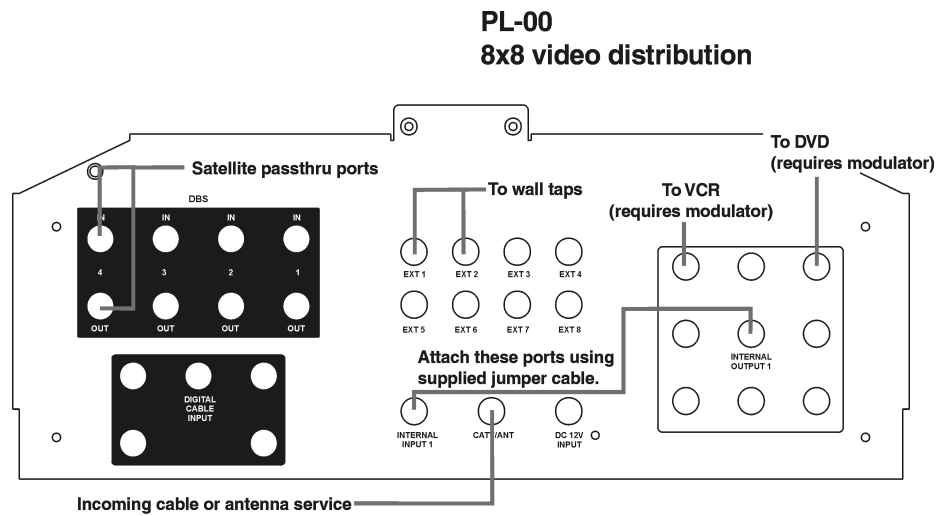
- One input for cable A TV or antenna
- One input for cable B TV or antenna
- Six external outputs for cable A
- Six external outputs for cable B
- Satellite TV passthru for satellite dual LNB dish



Personal PL00 model

The Personal PL00 model includes the Enhanced Video Amplifier and the 8x Video Distribution Unit and has the following features:

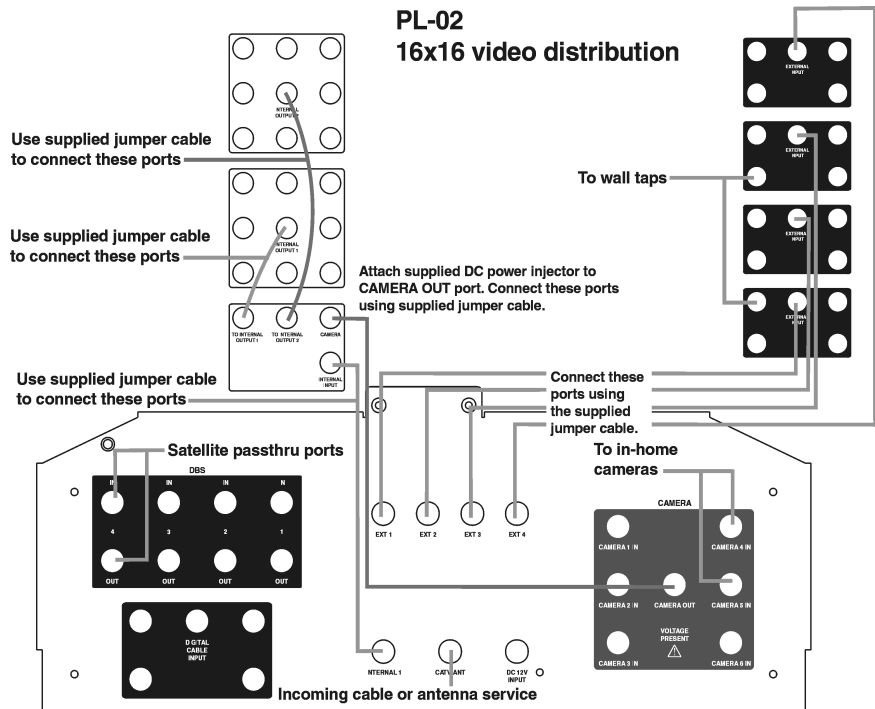
- One input for cable TV or antenna
- One input for digital bypass
- Eight internal ports
- Eight external outputs
- Satellite TV passthru for 4 satellite LNB connections



Personal PL02 model

The Personal PL02 model includes the Enhanced Video Amplifier, the 16x Internal Video Distribution Module, and the 16x External Video Distribution Module. It has the following features:

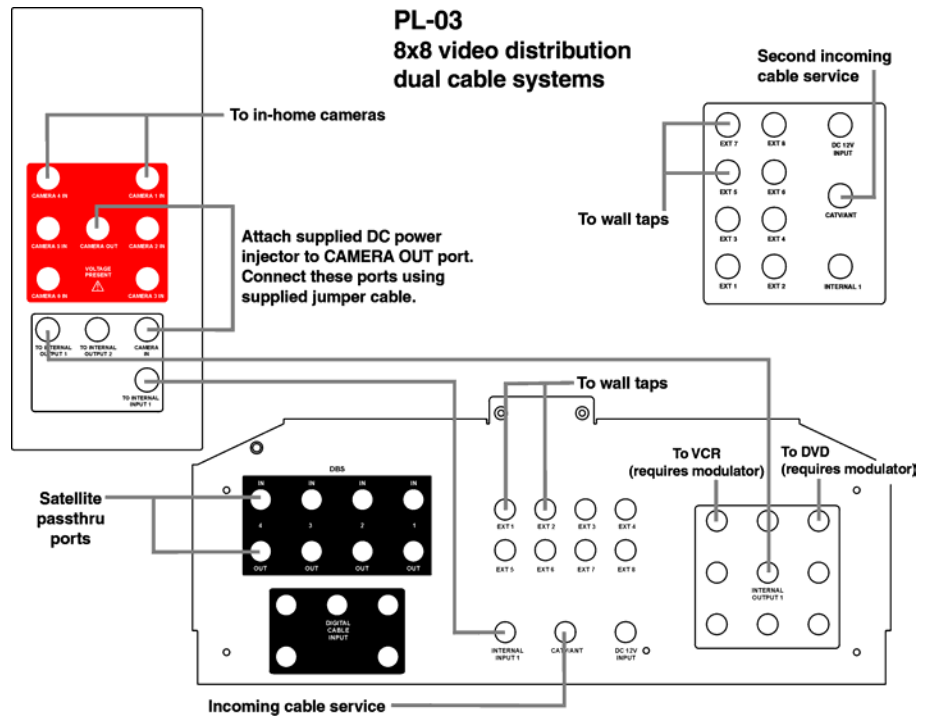
- One input for cable TV or antenna
- One input for digital bypass
- Six ports for in-home cameras (camera kit is required for camera support)
- 16 internal ports
- 16 external outputs
- Satellite TV passthru for 4 satellite LNB connections



Personal PL03 model

The Personal PL03 model for dual cable systems includes the Enhanced Video Amplifier, the Enhanced Video Module, and the 8x Video Distribution Unit. This video amplifier designed for dual cable has the following features:

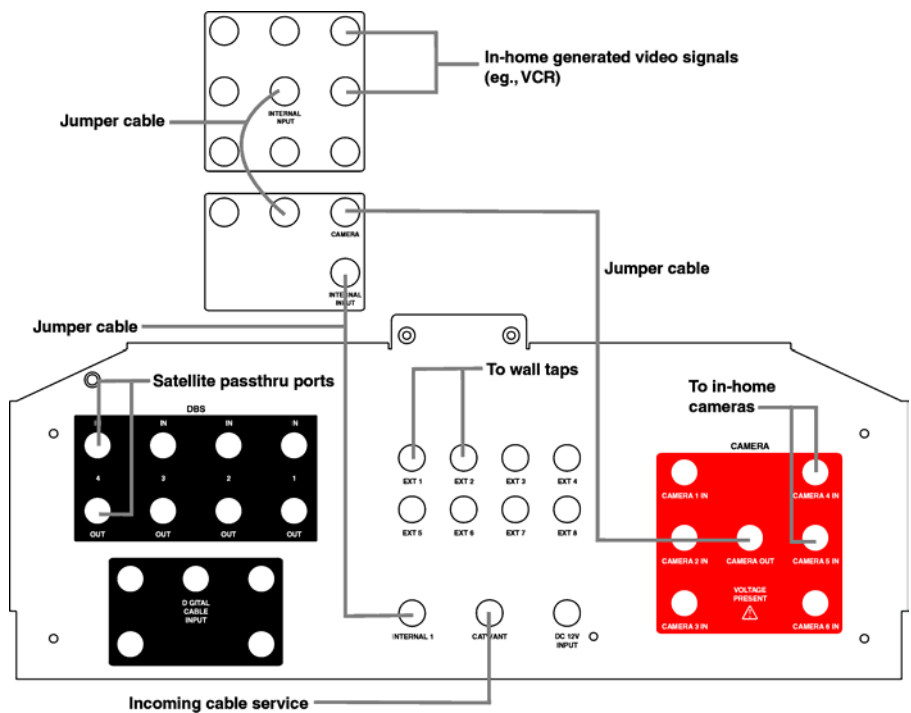
- One input for cable A TV or antenna
- One input for cable B TV or antenna
- One input for digital bypass
- Six ports for in-home cameras (camera kit is required for camera support)
- Eight internal ports
- Eight external outputs for cable A
- Eight external outputs for cable B
- Satellite TV passthru for 4 satellite LNB connections



Making video amplifier connections

Video signals are distributed to televisions throughout your home by connecting coax cable that carries the video signal (for example, from the cable provider or from the VCR) to the internal ports and then connecting coax cable from the wall taps to the external ports. Depending on the NCC model you have, these ports may be on the video amplifier or on the video distribution unit.

To bring in a video signal to the connection center, connect the coax carrying the signal to an internal input port. To activate a wall tap in a room (where all video signals from the connection center will be available), connect the coax cable labeled for that room to an external output port.



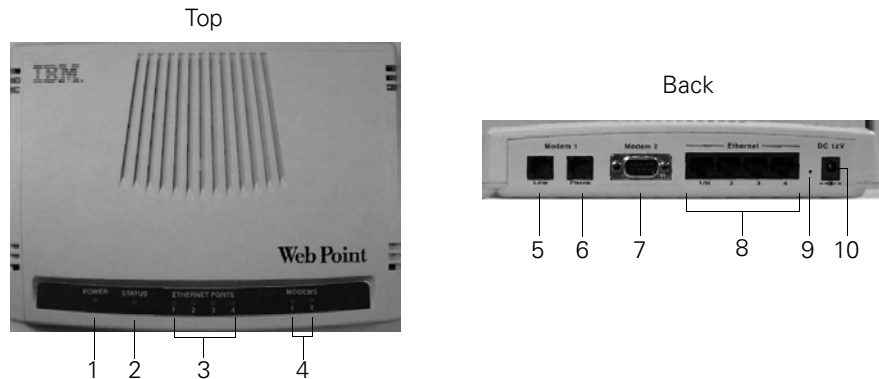
Web Point Internet Distribution Center

The Web Point Internet Distribution Center (Web Point) is an integrated analog router and 4-port Ethernet hub with one 56k V.90 internal modem. It is a device that lets you set up a network of computers for simultaneous Internet access.



Caution!

Before you make any connection changes in the video amplifier module, be sure to disconnect the power to the Network Connection Center.



- 1 Power LED - When this light is on, it indicates that Web Point has power.
- 2 Status LED - When this light is on, it indicates that Web Point is connected to the Internet.
- 3 Ethernet Port LED - Each Ethernet port has an LED. When the green light is on, it indicates that port is active.
- 4 Modem Led - The internal and the external modem each have an LED. When the light is on, it indicates that there is an active connection to that particular modem.
- 5 Modem Line Port - This is the connector for the internal modem.
- 6 Modem Phone Port - This is the connector for a phone line.
- 7 External Modem Serial Connector - This 9-pin connector is for an external modem. For details on connecting and configuring an external modem, see the *Web Point Internet Distribution Center Reference* on the *EasyStart CD* included in the Web Point Internet Distribution Center package.
- 8 Ethernet Port - There are four Ethernet ports: 1/H, 2, 3, 4.
- 9 Reset Switch - This switch enables you to reset all the Web Point settings to the factory defaults.
Important Note: If you reset Web Point, all of your current settings are lost.
- 10 DC Power Input - DC power is connected to this port.

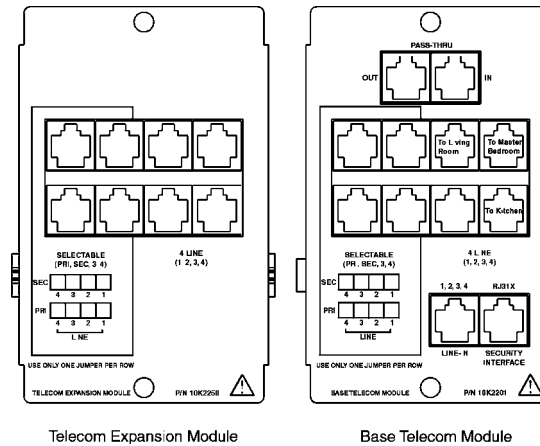
Telecom Units

The Telecom Unit distributes all phone and data lines to various telecom/telephone connections throughout your home. Each model of the Network Connection Center includes a Base Telecom Module. Telecom Expansion Modules are added for further flexibility. The combination of modules included with each model and their functionality are described below.



Caution!

Before you make any connection changes in the telecom module, unplug the Teleco NID cable from the Line In 1,2,3,4 port on the Base Telecom Module. Failure to do so may cause physical injury to you and to the telecom module.



Basic models BL02 and BL03

The Basic Model includes the 4x8 Telecom Unit which consists of one Base Telecom Module and has the following features:

- Four fixed ports, four lines
- Four selectable ports in a single group

Personal models PL00, PL01, and PL03

The Personal models PL01 and PL03 include the 4x8 Telecom Unit which consists of one Base Telecom Module has the following features:

- Four fixed ports, four lines
- Four selectable ports in a single group

Personal model PL02

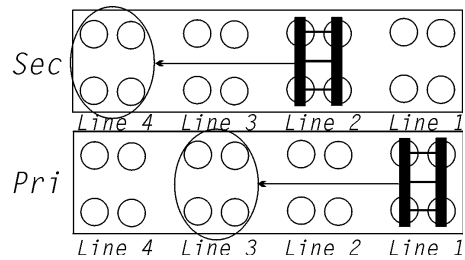
The Personal model PL02 include the 4x16 Telecom Unit which consists of one Base Telecom Module and one Telecom Expansion Module has the following features:

- Eight fixed ports, four lines
- Eight selectable ports in groups of four

Making telecom connections

You can have up to four different phone lines (phone numbers) on each Base Telecom Module. You can have some rooms in your house access you phone lines in a different order. For example, you can have lines 1 and 2 ring on your two-line phones in the kitchen, den, and master bedroom, and have lines 3 and 4 ring on your two-line phone in the study. To accomplish this you must configure the selectable ports on the telecom module:

- 1 Release the two black pins on the faceplate by gently pulling on each pin. Remove the faceplate.
- 2 Using needlenose pliers, pull out the jumper on the Pri row, and move it to Line 3. Pull out the jumper on the Sec row, and move it to Line 4.
- 3 Replace the faceplate and snap the pins in place.
- 4 Plug the cable for the study into one of the four selectable ports on the left side of the telecom module.
- 5 Plug the Teleco NID cable back into the "Line In 1,2,3,4" port.

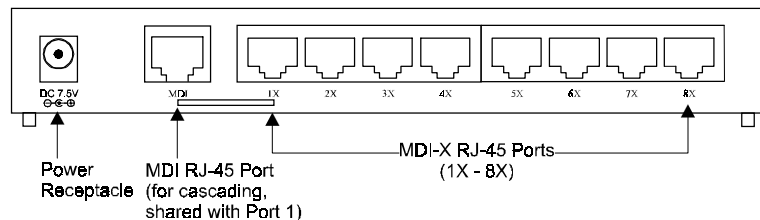


Computer networking unit

A computer networking unit can be installed in any of the Network Connection Center models. There are two networking unit options: the 8-port Ethernet 10 Mb (or 10BaseT) unit and the 8-port Ethernet 10/100 Mb (or 10/100BaseT) unit.

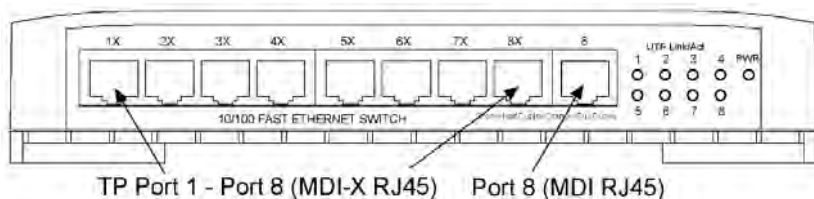
8-port Ethernet 10 Mb computer networking unit

The 8-port Ethernet 10 Mb (or 10BaseT) computer networking unit transfers data at a speed of 10 Mbs. The incoming data travels through the networking unit and back onto the network at 10 Mbs even if a computer sends data to the networking unit at a faster speed.



8-port Ethernet 10/100 Mb computer networking unit

The 8-port Ethernet 10/100 Mb (or 10/100BaseT) computer networking unit has auto-switching capability. Based on the speed a computer transmits data, this networking unit will transfer the data at a speed of up to 100 Mbs. The auto-switching capability keeps the network running to its full capacity. It allows the networking unit to localize each port and treat it as a separate network. The networking unit optimizes network performance by monitoring traffic between each port and preventing data collisions.



Caution!

Before you make any connection changes in the computer networking unit, be sure to disconnect the power to the Network Connection Center.

Making computer network connections

The computer networking units have eight ports labeled 1X through 8X that use RJ45 connectors to connect devices to the network.

Because telephones and the computer networking unit use the same kind of CAT5 cable, you can change the wall tap in a room from a phone line to a computer line (or vice versa) just by moving the cable in the NCC. For example, to change a wall tap that is a currently a phone line to a computer line, locate and unplug the CAT5 cable labeled for that location from the telecom module. Plug it into an available port on the computer networking unit. Unplug the phone from the wall tap and plug in your computer device.

Wall taps

Wall taps are wall-mounted connections in various places throughout your home. These taps are connected to the Network Connection Center by twisted pair wires (CAT5) or coaxial cables (RG6). These tap points may have a variety of ports that enable you to connect various devices such as telephones, fax machines, computers, TVs, or video cameras to your Network Connection Center.

For example, an RJ-11 4-pin tap point for a telephone, fax machine, or computer modem provides a connection that can carry an internally generated telephone call to either an external or internal source. An RJ-45 8-pin tap point provides a connection that enables one computer to communicate to other computers that are on your home computer network.

An RG6 coax cable wall tap provides a connection that carries externally generated signals to your television set or VCR from the Home Network Connection Center. By connecting your TV to this wall tap, you may be able to view externally generated TV, satellite, cable TV, or antenna signals depending on the model of video distribution amplifier you purchased.

Some types of RG6 wall taps enable you to distribute signals internally. Certain wall taps can be used to send signals (such as VCR, Laser Disc, or video camera) back to the Network Connection Center to be distributed to other tap points in your home. For example, from the TV in the master bedroom you can watch the VCR located in your family room.

Network accessories

Video camera

If your Network Connection Center is a Personal model with a camera kit, you can have up to six cameras mounted at designated areas (for example, front door, nursery, play area). These cameras provide high-resolution black and white or color video with audio to any TV connected to a Network Connection Center TV port.

Once installed, the cameras are always active. To monitor a designated area, turn on any television connected to a TV port and view the channel assigned for the desired camera. Camera channels are preset by your installer. Your installer should provide you with all camera channel designations.

Satellite dish

If your Network Connection Center is installed with a Digital Broadcast Satellite (DBS) dish, a satellite decoder box is required for each television where you want satellite reception. Decoder boxes may be available from your installer or most electronic supply stores.

At the time of installation, your satellite dish should be connected directly to the video distribution amplifier in the Network Connection Center. Depending on the model installed, the video distribution amplifier can receive and distribute DBS video, audio, and satellite Internet services to either selected or all TV ports.

Cable modem

If your Network Connection Center is installed with a Computer Networking Unit, you can connect a cable modem to your system and distribute the service throughout your home. A cable modem uses the same type of coax that is used for cable TV connection to provide high speed Internet access.

You can order cable modem service and the necessary equipment from your local cable provider. Your installer will connect the cable modem using the Computer Networking Unit in the Network Connection Center to distribute cable modem service to every computer in your home.

Glossary

Term	Description
10Base-T	The Ethernet standard for Local Area Networks (LANs). The 10Base-T standard (also called twisted pair Ethernet) uses twisted pair cables with maximum lengths of 100 meters. The system operates at 10 Mbps and uses base band transmission methods.
10Base-T cable connectors	Specialized connectors (8-pin RJ-45) that are at the ends of a CAT5 wire.
10Base-T Network Interface Card	A specialized printed circuit board that plugs into a computer. It enables a computer to communicate with other computers or devices on a LAN.
ADSL	Asymmetric Digital Subscriber Line. A high-speed telephone line for Internet, intranet, and remote LAN access. Available in some areas.
Cascade port	A specialized port located on the back of the Computer Networking Module or a Web Point Internet Distribution Center that can expand network capacity to a maximum of 10 computers.
Category 5 (CAT5) wire	Wires that transmit information in a computer network or telephone system. Cable is twisted pair, and each end of the wire has an 8-pin RJ-45 connector. One end plugs into a computer network card or telephone, and the other end plugs into computer or telephone tap mounted in a wall. Also called CAT5 wire.
Coaxial cable	Electrical cables designed to transmit radio frequency (RF) modulated television and high frequency satellite signals throughout the system. Also called RG6 cable.
Computer network	A number of computers, printers, scanners, and other computer devices that communicate with one another through Cat 5 cabling and a shared protocol, such as Ethernet.
DBS	Direct Broadcast Satellite. A satellite system used in transmitting TV signals received by home satellite dishes.
Diplexer	A device used to split combined incoming video signals according to frequency. It enables more than one video signal to be sent to a TV by assigning a signal to a specific channel. For example, high-frequency satellite signals may be assigned to one channel and low-frequency TV signals may be assigned to another channel.
Ethernet	A specific type of LAN protocol. Ethernet is a widely implemented LAN protocol.

Term	Description
ISDN	Integrated Services Digital Network. A high-speed telephone line for transferring large amounts of data at high speeds (144K).
LAN	A local area data communications network spanning a limited geographical area (typically within a building). A LAN enables you to share disks, files, printers, and other devices under a form of standard control.
LED	Light Emitting Diode. Small lights (usually red, green, or yellow) that indicate electrical activity. LED indicators are on many of the modules in the Home Network Connection Center.
LNB	Low Noise Blocking Filter located on a satellite dish.
Module	A specialized printed circuit board used for a specific purpose.
Modulator	A device used to assign video signals to specific channels.
Network Interface Device (NID)	A device outside the home controlled by service providers such as telephone companies and cable TV providers to bring their service into the home.
Off-hook	When a phone is in use, or off the hook.
On-hook	When a phone is not being used.
RF	Radio Frequency
Surge	An unusual increase in the current transmitted along an electrical line, which may happen during thunderstorms or other abnormal electrical events.
Wall Tap	A specialized wall-mounted outlet (for example, phone, computer, or video).

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