

A.C. (Alternating Current) – An electric current, such as normal household current, that reverses direction in a circuit at regular intervals.

A.C. Only – A device for use on alternating current (A.C.) circuits only.

Active Equipment – Energized equipment used for receiving or transmitting analog or digital signals (e.g., hubs, routers, PBXs, etc.).

Adapter – An accessory used for interconnecting non-mating devices or converting an existing device to a new or modified use.

Administration – The method for labeling, documentation, and usage needed to implement moves, additions, and changes to a telecommunications infrastructure.

AFCI – An arc-fault circuit interrupter is a device intended to provide protection from the effects of arc faults.

Air Gap Switch – A mechanical switch which is capable of creating a space between two contacts.

AL/CU – A marking designation used on certain devices to indicate their suitability for connection to either aluminum or copper conductors. Also referred to as CO/ALR.

Analog Signal – A signal that uses continuous physical variables such as voltage amplitude or frequency variations to transmit information. Contrast with Digital Signal.

Angle Plug – A plug that allows the attached flexible cord to exit at a right angle to the plug face.

ANSI (American National Standards Institute) – An organization that identifies industrial and public requirements for national consensus standards and coordinates and manages their development, resolves national standards problems, and ensures effective participation in international standardization.

Asynchronous Transfer Mode (ATM) – A high-speed switching transmission protocol that uses payload packages organized into 53-byte cells to carry data.

Attenuation – The decrease in power received from power transmitted due to loss through transmission lines; measured in decibels.

Attenuation-to-Crosstalk Ratio (ACR) – The difference between attenuation and crosstalk measured in decibels (dB) at a given frequency. This difference is critical to ensure that the signal sent down the twisted-pair cable is stronger at the receiving end of the cable than any interference signals (crosstalk) from other cable pairs.

Attenuator – Electrical or optical element that reduces (attenuates) the intensity of the signal passing through it.

Automatic Grounding – A component that provides automatic grounding of an electrical wiring device when installed in a grounded metal enclosure. Eliminates the need for a bonding jumper.

AWG (American Wire Gauge) – Standard American measuring scheme for classifying wires according to the diameter of the conductors.

Back Wire Terminal – A termination that can be accomplished by inserting a pre-stripped solid or stranded conductor into a wiring device terminal opening, followed by tightening the adjacent terminal screw.

Backbone Cabling – The physical interconnections between the entrance facility, equipment room, and various floors or telecommunications rooms.

Ballast – Used for energizing fluorescent lamps. It is constructed of coil windings or solid-state electronic components.

Bandwidth – A measure of the amount of information which can pass through a channel, expressed in Hertz (Hz). Higher bandwidth means greater capacity to carry data.

Bar Coil – A bar coil is constructed of a ferrite bar and is wrapped with copper wire. This device is used to reduce RFI generated by a dimmer or other electronic switching devices.

Bend Radius – The minimum radius to which a cable or fiber can be bent before excessive signal attenuation occurs.

BICSI (Building Industry Consulting Service International) – An industry association dedicated to the design and installation of communication wiring.

Binding Post – Type of connecting device used in audio speaker circuits. A knurled nut is tightened over a speaker wire conductor inserted through a hole in a threaded post. Binding posts may also offer a female jack connection for use of banana-type jacks.

Bit Error Rate (BER) – The ratio of incorrectly transmitted bits to total transmitted bits. A primary specification for all transmission systems, it is usually expressed as a power of 10. The number of errors made in a digital transmission as compared to complete accuracy.

Box Mounted Dimmers/Fan Speed Control – Any dimmer or fan speed control that mounts in or on a NEMA standard switch box.

Bulb Sing (Filament Hum) – The audible noise which can come from an incandescent lamp controlled by a dimmer.

Bundle – More than one cable held in a single Grip.

Byte – A data unit made up of eight bits, sometimes referred to as an octet. Megabytes and gigabytes are commonly used measures of storage or memory capacity.

Cable – One or more electrical and/or optical conductors within a protective sheath.

Cable Assembly – A cable that has connectors installed on one or both ends. See Jumper and Pigtail.

Cable Modem – A modem used to link cable-supplied data to a computer network; for example, when a CATV provider offers high-speed, cable-based Internet service.

California Title 24 – In an effort to reduce electrical power consumption, California has enacted new requirements for residential lighting. These requirements are that all permanently installed fixtures must be either high efficacy, controlled by a manual-on/automatic-off vacancy sensor or controlled by a dimmer. Visit www.energy.ca.gov/title24 for additional information.



Campus – A complex of buildings which operates as one continuous facility – e.g., multibuilding corporate headquarters, university, military base.

Candelabra – A small screw-base threaded lampholder accepting a bulb approximately 1/2" in diameter commonly used in night lights, indicator lights and Christmas tree bulbs.

Candlepower – a measurement of light at the source, not the object you light up.

Cascade Cable – A specialized cable used to link compatible computer network hardware (usually hubs) together to form a compound device that acts as a single, larger device. In the P&S Home Network Center, a cascade cable can link two hub modules to increase the number of ports available.

Category 3 – 100 ohm twisted-pair copper cable that meets or exceeds specifications in ANSI/TIA/EIA-568-B.2, Commercial Building Telecommunications Cabling Standard, and ISO/IEC 11801, Generic Cabling for Customer Premises, for transmissions up to 16 MHz.

Category 5 – 100 ohm twisted-pair copper cable that meets or exceeds specifications in ANSI/TIA/EIA-568-B.2 Annex N, Commercial Building Telecommunications Cabling Standard. Category 5 is no longer recognized for new commercial installation.

Category 5e – An enhanced form of Category 5, supporting high-speed data transmission per TIA/EIA-568-B.1.



Category 6 – 100 ohm twisted-pair copper cable that meets or exceeds specifications in ANSI/TIA/EIA-568-B.2-1, Commercial Building Telecommunications Cabling Standard, and ISO/IEC 11801, Generic Cabling for Customer Premises, for transmissions up to 250 MHz. Positive power sum attenuation-to-crosstalk ratio is characterized to 200 MHz.

Capacitor – An electronic device capable of storing an electrical charge. Used in circuits for a variety of functions often to reduce or eliminate noise.

CATV – Community Antenna Television, known as cable television.

CE Marking – A product marking required in Europe that indicates conformity to the “common level of safety” and is used to insure “free movement of goods” within the 19 countries of the European Union.

CEC – Canadian Electrical Code.

Centralized Cabling – An optical fiber cabling configuration, based on TIA/EIA-568-B.1, Optical Fiber Cabling Guidelines, from the work area to a centralized cross-connect using pull-through cables, an interconnect, or splice in the telecommunications room.

Channel – The complete communications path between telecommunications room equipment and workstation equipment, which includes cross-connects and patch cords.

Choke – A device used to filter RFI noise generated by dimmers or other electronic switching devices.

Circuit Breaking Capability – Capability of a plug/receptacle combination to break live circuits up to their maximum load rating. Except in emergency situations, plugs and receptacles should not be engaged or disengaged while power is on.

Circuit Breaking Rating – A rating which indicates the ability of a connector to make and/or break a circuit under load. Such ratings are determined through testing by qualified laboratories.

Cladding – In fiber cable, the transparent outer concentric glass layer that surrounds the optical fiber core and has a lower index of refraction than the core. It provides total internal reflection and protects against scattering from contaminants at the core surface.

Clamping Voltage – The peak voltage that can be measured after a surge protective device has limited or “clamped” a transient voltage surge. Clamping voltage must be determined by using IEEE Standard C62 testing and evaluated by UL Standard 1449.

Clock Hanger – A single receptacle generally recessed behind a special cover plate having a hook or other means of supporting a wall-hung clock.

CO/ALR – A marking designation used on certain devices to indicate their suitability for connection to either aluminum or copper conductors.

Coaxial Cable – An electrical-transmission cable with a center conductor, insulating spacer, and an outer electrical shield. Provides high quality signal transmission for video and data applications.

Combination Wall Plates – A multiple gang wall plate with different openings in each gang for different devices.

Communications Plenum Cable (CMP) – Cable listed as suitable for use in ducts, plenums, and other spaces used for environmental air. It has adequate fire-resistant and low smoke-producing characteristics. Cables must pass required test for fire and smoke characteristics of wires and cables, NFPA 262 or UL 910.

Communications Riser Cable (CMR) – Cable listed as suitable for use in a vertical run in a shaft or from floor to floor. It has fire-resistant characteristics capable of preventing the carrying of fire from floor to floor. Cables must pass requirements of the Standard Test for Flame Propagation Height of Electrical and Optical-Fiber Cable Installed Vertically in Shafts, ANSI/UL 1666.

Configuration – A description of the arrangement, size, and number of contacts in an insert assembly. Typical configuration descriptions include the number of wires and poles and the presence of a separate grounding contact. The combination of such factors determine the connector’s electrical rating.

Connecting Block – A plastic block with metal wiring clips used to establish an electrical connection.

Connector – A mechanical device used to provide a means for aligning, attaching, and achieving continuity between conductors or optical fibers.

Connector Grip – A strain-relief grip for specific customer requirements. Usually attached to a connector retaining nut.

Connector, Small Form Factor – An optical fiber duplex connector with a footprint approximating that of an 8-position outlet connector typically used with 4-pair copper connectors.

Consolidation Point (CP) – A location for interconnection between horizontal cables extending from building pathways and horizontal cables extending into furniture pathways.

Cord Connector – A portable receptacle, which is provided, with means for attachment to a flexible cord and which is not intended for permanent mounting.

Core – The central, light-carrying part of an optical fiber through which light pulses are transmitted.

Corrosion-Resistant – A device constructed of special materials and/or suitably plated to withstand corrosive environments.

Cross-Connect – System component where jumper wires and patch cords are used to rearrange communications circuits in order to administer the network. Usually located in a telecommunications room or equipment room.

Crosstalk – Undesired signal in one circuit transferred from another circuit by induction.

CSA (Canadian Standards Association) – An organization serving a function for Canadian electrical manufacturers similar to that provided in the U.S. by Underwriters Laboratories, Inc. (UL). CSA develops safety and performance standards for electrical products that parallel, but are not always identical to, UL standards. CSA tests products and grants paying clients “certification” that their products meet CSA standards.

C-UL [®] _{UL} – UL certification to CSA requirements, C-UL is a marking approved by the Standards Council of Canada. C-UL can be used on products to be installed in accordance with the Canadian Electrical Code.

Current – The flow of electrons through an electrical conductor, measured in amperes.

Daisy Chain – A cabling method (topology) of connecting devices in series. Daisy chaining is no longer recommended.

dB (Decibel) – The standard unit of measure of signal gain or loss, used in attenuation and crosstalk measurements.

DBS (Direct Broadcast Satellite) – Satellite television service that is purchased through a subscription (DirecTV, DISH Network).

D.C. (Direct Current) – An electric current, for example, battery power, that flows only in one direction through a circuit.

Dedicated Circuit – A circuit established to provide control voltage and current to one load or one type of load, such as an electric range or a computer.

Deep Wall Plate – A wall plate that provides greater clearance for device mounting straps than standard wall plates.

Demarcation Point – The interface which marks the division between telephone company facilities and private building wiring, where ownership and operational control changes.

De-Rating – When two or more dimmers are ganged and heat sinking material is removed, it is important to “de-rate” or lower the wattage rating of the dimmer. This is due to the heat rise caused by the devices.

Digital Signal (DS) – A signal with a fixed number of discrete values. Commonly, a binary signal with two values that are used to transmit the two states (0,1) used by digital computers. Most data transmission in optical fibers is by digital optical pulses. Contrast with Analog Signal.

Dimmer – A switch with electronic components that permits variable control of lighting intensity.

Dimming Ballast – A special ballast used with fluorescent dimmers to control the light intensity of fluorescent lamps.

Direct-Buried Cable – A telecommunications cable designed to be installed under the surface of the earth, in direct contact with the soil.

Disconnect Use Only – Description of a connector not designed for engaging or disengaging under load. Such connectors are commonly used as cost-effective hard wiring alternatives.

“Disconnect Use Only” Rating – A rating of the current-carrying capability of individually engaged pin and sleeve contacts. Such ratings are established through testing for compliance with applicable standards or codes, as well as wire conductor size and insulation as defined in the National Electrical Code® (NEC®).

Dispersion – The spreading of light pulses as they travel through an optical fiber.

Door Switch – A momentary contact switch normally installed in a door-jamb. The switch is activated when the door is opened or closed.

Double Pole Switch (double-pole single-throw) – A switch that makes or breaks the connection of conductors of a single branch circuit.

Double Weave – Mesh braid with rows of two strands each.

DSL (Digital Subscriber Line) – A new digital connection method that provides high-speed Internet or other network connections over standard telephone wire.

Dual Cable Systems – CATV systems in which the incoming service is provided over two different cables, sometimes called A/B cable systems. For example, a system in which one cable (cable A) carries channels 2-50 and the other cable (cable B) carries channels 51-100. This is an older method of providing service, used when the initially installed cable lacks capacity to meet current needs.

Duplex Receptacle – Two receptacles in a common housing or mounting means which accepts two plugs.

Dustproof – A receptacle so constructed or protected that dust will not interfere with its operation.

DVD (Digital Video Disc) – An acronym commonly used to describe a device that plays DVD-format discs. Such devices (both dedicated DVD players and computer DVD drives) can supply video or other signals through a video or computer network.

DV/DT (Delta Voltage/Delta Time) – DV/DT is the rate of change in voltage over a certain time frame.

Electronic Industries Alliance (EIA) – Industry trade association which works with the Telecommunications Industry Association (TIA) in developing standards.

EMI – Electromagnetic interference or unwanted signal pick-up. One of two types of electrical “noise” caused by varying magnetic fields conducted into branch wiring from inductive load switching.

Energy – A measure of electrical power rated in joules.

Entrance Facility (EF) (telecommunications) – An entrance to a building for both public and private network service cables (including antennae) encompassing the entrance point at the building wall and continuing to the entrance room or space.

Equipment Room (ER) – A centralized space for telecommunications equipment serving one or multiple buildings. It contains more complex equipment than the telecommunications room, which serves each floor of a building.

Ethernet – The most commonly used protocol (language) in computer networking. Originally supported (and still commonly used) in 10 Mbps form (10Base-T), 100 Mbps Ethernet (Fast Ethernet or 100Base-T) is also available.

External Video – A video signal provided by an external source, such as cable, satellite, or antenna-received broadcast.

Fan Hum – Noise created by a fan motor when controlled by a standard speed control.

Far-End Crosstalk (FEXT) – Crosstalk measured at the cable end opposite from where the signal originates.

FCC – Federal Communications Commission.

F Connector – The 75 ohm radio frequency connector used with coaxial cable to attach drop cables to taps and other devices. The F connector does not have center pins. The F connector uses the solid copper center conductor of the coaxial cable itself as the center pin to establish the connection.

FDI (Fiber Distributed Data Interface) – An ANSI standard for 100 Mbps fiber physical and data protocols, generally used in “backbone” applications.

Fed Spec – Devices which comply with Federal Specifications such as W-C-596 for connecting and W-S-896 for switches. Fed Spec Standards for switches and connecting devices include NEMA Performance Standards.

Feed Through – The practice of wiring a single branch circuit through a device and feeding power to other devices wired downstream. (Feeding through a GFCI would provide protection to downstream receptacles.)

Fiber (Optical Fiber) – A thin filament of glass or plastic capable of carrying information in the form of light.

Fiber Optics – Communications scheme which converts electrical energy to light in order to transmit through optical fiber.

Field Adjustable Trim Potentiometer – A small, typically screwdriver-adjustable, variable resistor. Used to adjust minimum level of light or speed of a fan.

Firestop – A material or device installed in a cable pathway to prevent the passage of flames, smoke, and gases.

Flanged Inlet – A plug which is intended for flush mounting on an appliance or equipment and which serves to connect utilization equipment to a cord connector.

Flanged Outlet – A receptacle which is intended for flush mounting on an appliance or equipment which is intended to establish electrical connection with an inserted plug.

Fluorescent Lamp – A glass housing that contains phosphorus in a sealed vacuum. When the phosphorus is excited from a voltage charge, it becomes ionized and gives off light.

Fluorescent Starter – A device rated in watts having a voltage-sensitive switch and a capacitor whose function is to provide a high-voltage pulse to start a fluorescent lamp.

Flush Wall Plate – A wall plate designed to mount flush with the wall surface or the plane surface of electrical equipment.

Foot-Candle – The amount of light one candle generates one foot away.

Four-Way Switch – A switch which is used in conjunction with two three-way switches to control one light or other connected equipment from three or more locations.

Floor Receptacle – A receptacle with a protective cover plate intended for mounting flush with the surface of the floor.

Frequency – The number of cycles completed by a signal in one second, expressed in Hertz.

Fusible Mechanical Interlock – A switchable IEC pin and sleeve receptacle that is mechanically interlocked to ensure that a plug cannot be engaged or disengaged under load. Fusible mechanical interlocks include a fusible disconnect switch inside a single, non-metallic enclosure. They are typically used to provide overload protection for portable equipment at the source of power access.

Fusion Splice – A permanent joint accomplished by applying localized heat sufficient to fuse or melt the ends of two optical fibers together, forming a continuous single fiber.

Gang – The space required for one wiring device, wall plate, etc.

GFCI (Ground Fault Circuit Interrupter) – A personnel protection device that detects current leakage and removes power to the receptacle.

Gigabit Ethernet – A carrier-sense multiple access with collision detection LAN standard developed by the IEEE 802 group operating at one Gb/s.

GigaHertz – A unit of frequency equal to one billion Hertz.

Grip – A flexible wire mesh cable holding device.

Ground Conductor – A conductor (identified as the bare or green conductor, normally non-current carrying) which is intentionally connected to earth ground to provide an intentional path for fault current to ground.

Grounding – A system in a connector assembly to ensure ground continuity. Ground conductors connect normally nonenergized metal components to earth and are not part of the electrical circuit.

GSA (General Services Administration, Federal Supply Service) – The U.S. Government administration responsible for the approval of Federal Specifications used in the purchase of products by all Federal agencies.

Headroom – The overhead or margin, expressed in decibels, by which a communications system exceeds minimum requirements.

Heat Sink – A metal plate used for absorbing or removing heat from the switching device (triac) in a dimmer or fan speed control.

Heat Sink Dimmer/Fan Speed Control – Any dimmer or fan speed control that mounts onto a NEMA standard switch box, but whose strap protrudes beyond the box and onto the surface of the wall itself. Heat sink dimmers and fan controls will not accept a traditional wall plate and usually are supplied with their own unique cover.

Hertz – A unit of frequency, one cycle.

Home Network Center – In the P&S Home Network Wiring System, the center point for all network cabling. The Home Network Center is configured for varying network needs, with modules.

Home Run – Also known as star topology, a cabling system where individual cables are run directly from the telecommunications room to each work area outlet.

Home Theater – Home entertainment system using television video and multi-channel audio to more closely approximate a movie theater experience. Typical home theater systems incorporate traditional front right and left audio channels, a front center channel, and a two-speaker rear channel.

Horsepower Rated – A device having a marked horsepower rating is intended for control of motor loads.

Horizontal Cabling – The portion of the wiring system extending from the workstation to the horizontal cross-connect in the telecommunications room.

Horizontal Cross-Connect – The cross-connection between horizontal and other cabling, such as backbone cabling.

Horizontal Length – The cable distance from the workstation to the telecommunications room cross-connect, a maximum of 295 ft. (100 meters).

Hospital Grade – A device constructed to meet performance requirements of high abuse areas found in hospital locations, tested to "Hospital Grade" requirements of Underwriters Laboratories Standard UL 498.

Hub – Equipment which serves as a centralized connection point for a network or a portion of network. Hubs contain multiplexing, switching, and bridging functions and are not considered part of the cabling infrastructure.

IEC (International Electrotechnical Commission) – The IEC is a worldwide standards organization having 43 countries as its members. The United States is active in many areas of the IEC and the standards it develops.

IEEE – Institute of Electrical and Electronic Engineers.

Illuminated – A device that, when connected to an electrical circuit, is lighted in the area of the face or handle.

Illumination – What results from light use. Point a flashlight on an object and you light it up or "illuminate" it.

Impedance – The resistance or opposition to the flow of alternating current within a circuit.

Impedance Matching – Matching impedances of adjoining circuit elements so that power transfer across the interface is maximized, in order to improve performance or to accomplish a specific effect.

Incandescent Lamp – A light bulb which contains a filament in a sealed vacuum. When voltage is applied to the filament, it heats, producing light.

Inductive Load – Electrical devices made of coiled or wound wire that create a magnetic field when energized. Components such as motors, solenoids and coils are all inductive loads.

Infrared (I.R.) – The invisible light emitted by all people, animals, and objects. Infrared is measured in terms of micrometers on the wavelength spectrum.

Inlet (Male Base) – A plug which is intended for flush or surface mounting on an appliance or equipment and which serves to connect utilization equipment to a connector.

Insertion Loss – 1. The loss resulting from the insertion of a device in a transmission line. 2. In an optical fiber system, the loss of optical power caused by inserting a component, such as a connector, coupler, or splice into a previously continuous optical path.

Insulation Displacement Connector (IDC) – An electrical connection made by "punching down" a wire in a terminal, which cuts through the insulation to make contact with the conductor.

Interbuilding (Campus) Backbone – A backbone network providing communications among multiple buildings.

Interbuilding Backbone Cable – 1. Cable that runs between buildings in a campus environment. 2. Outside plant cabling.

Interchangeable – A device or combination of devices, each individually housed and having common mounting dimensions and intended for field installation on a single or multiple opening mounting strap. Also known as Despard®.

Interconnection – A connection scheme that provides for the connection of a cable to another cable or to an equipment cable.

Intermediate Cross-Connect (IC) – The cross-connection between the first and second level of backbone cabling.

Internal Video – A video signal provided by such in-home sources as a DVD player, VCR, camcorder, or video camera.

Intrabuilding Backbone Cable – Cable that runs between telecommunications rooms inside a building. Can be vertical or horizontal in physical configuration.

ISDN (Integrated Services Digital Network) – An integrated digital network in which the same time division switches and digital transmission paths are used to establish connections for different services, for example, telephony, data, telex, and fax.

Isolated Ground – A grounding type device in which the equipment ground contact and terminal are electrically isolated from the receptacle mounting means.

Jack – A device into which a plug is inserted in order to make electrical contact in a communication circuit.

Joule Rating – The measurement of a surge protective device's ability to absorb heat energy created by transient surges. Note that the Joule rating is not a part of IEEE or UL Standards. It is not as significant a specification as clamping voltage, maximum surge current and other parameters recognized by these agencies.

Jumper – 1. An assembly of twisted pairs without connectors, used to join telecommunications circuits/links at the cross-connect. 2. An optical fiber cable with connectors installed on both ends. See Cable Assembly.

Jumper Wire – A short length of twisted pair cable used to route a circuit between two cross-connect termination points.

Key – A lampholder with a means of switching the lamp on or off as part of the device.

Keyless – A lampholder with no means of switching the light on or off at the lampholder.

Lace – Strand of wire usually the same material as the mesh used to weave closed a split mesh.

Lampholder – A device that establishes mechanical and electrical connection to an inserted lamp.

LAN (Local Area Network) – A network of computers and peripheral devices with a limited area such as a department, single building, or campus environment.

Launch Cable – Length of optical fiber cable used to condition the launch of the optical time domain reflectometer test signal so that the correct results will be obtained.

Lighted Handle – A switch with an integral lamp in the actuator that lights when the switch is in the "OFF" position.

Light Source – Used in conjunction with a power meter, the test equipment unit that normally contains a light-emitting diode or laser used to create a light wavelength for testing optical fiber cable loss or continuity.

Link – The basic, permanently installed, horizontal cabling path between the work area outlet and telecommunications room cross-connect. Often referred to as the contractor link.

Locking (Turnlok) – A device designated to lock in place when it is rotated in a clockwise direction. The device can then only be removed when turned in a counterclockwise direction.

Locking Switch – A switch with a separate actuator key, rather than a toggle, to prevent unauthorized use.

Loss – Attenuation of the optical signal, usually measured in dB.

Loss Budget – The total allowable loss between source and detector allocated among fiber, connectors, splices, and safety margin.

Low-Voltage – A device designed for use under 50 volts.

Lumen – One foot-candle falling on one square foot of area.

Lux – Luminance measured in metric units vs. English units. Lux is the measurement of actual light available at a given distance. Lux = one lumen incident per square meter of illuminated surface area.

Main Cross-Connect (MC) – A cross-connect used with first level backbone, entrance, or equipment cables.

Maintained Contact Switch – When the actuator is moved to the "ON" position, this switch makes and retains the circuit contact until the actuator is manually moved to the "OFF" position.

MAN (Metropolitan Area Network) – A data communications network that covers an area larger than a campus area and smaller than that of a wide area network. It usually interconnects two or more LANs and covers an entire metropolitan area, such as a large city and its suburbs.

Manual Controller – A horsepower rated switch without overload protection. Used for the operation of small A.C. or D.C. motors.

Maximum (Peak) Surge Current – The peak surge current a surge protective device can withstand, based on IEEE Standard C62.45 test waveforms.

Mbps (MegaBits Per Second) – One million bits per second.

Mechanical Interlock – A switchable IEC pin and sleeve receptacle that is mechanically interlocked to ensure that a plug cannot be engaged or disengaged under load. They are typically used to provide a disconnect point in power circuits supplying portable equipment.

Mechanical Splicing – For optical fibers, permanently joining two fibers together by mechanical means to enable a continuous signal.

Media (telecommunications) – Wire, cable, or conductors used for telecommunications.

Medium Base (Edison) – The most common type of screw-in lampholder found in everyday lighting fixtures, table lamps and accepting incandescent bulbs with screw bases approximately 1" in diameter.

Megahertz (MHz) – A unit of frequency equal to one million cycles per second (Hertz).

Mesh – The tubular open braid portion of a wire mesh grip.

Mesh Termination – The method of securing woven strands at the ends of a wire mesh grip.

Microprocessor – Single chip computer element containing the control unit, central processing circuitry; arithmetic and logic function.

Midget – A device with a body diameter smaller than those of devices of a similar rating.

MLD (Multi-Location Dimming) – This is achieved through the use of specific components designed to interface and allow dimming control from any location, master or remote. In a true MLD situation, the master unit performs all dimming and switching functions. The remote units provide input to the master (i.e.; dim, bright, on or off, as desired).

Mode – 1. Loosely, a possible light path followed by light rays, as in multimode or single-mode. 2. Strictly, a distribution of electromagnetic energy that satisfies Maxwell's equations and boundary conditions in guided wave propagation, such as through a waveguide or optical fiber.

Modular Jack – A female telecommunications connector, which is mounted in a fixed location. Jacks are specified in IEC 603-7 and FCC Part 68 Subpart F. Also see Outlet.

Modular Plug – A male telecommunications connector, specified in IEC 603-7 and FCC Part 68 Subpart F.

Modulation – A process whereby certain characteristics of a wave, often called the carrier, are varied or selected in accordance with a modulating function. This includes amplitude, frequency or phase, and other modulation techniques.

Mogul – The largest screw-in type of lampholder accepting incandescent lamp bulbs having screw bases approximately 1-1/2" in diameter. Used in street lighting fixtures and industrial high bay fixtures.

Molded On – A connector that is factory molded to a length of flexible cord.

Momentary Contact – A switch which establishes circuit contact when its actuator is moved to, and held in, the "ON" position. The circuit is broken when the actuator is allowed to return, of itself, to the "OFF" position (such a switch may also be furnished to operate in the opposite mode).

M.O.V. – Metal Oxide Varistor, primary component of TVSS.

MTP™ – Factory-terminated multiple-termination fiber optic connector for 12-strand ribbon-fiber optic cable. Most commonly used in backbone (riser) applications such as the P&S PFOB System. MTP is a trademark of US Conec Ltd.

Multimedia – Applications which communicate information using more than one cabling means.

Multimode Optical Fiber – An optical fiber cable that allows light to travel in many bound modes; used in LAN applications. Multimode fibers have a larger core than single-mode (core/cladding 62.5/125 micrometers).

Multiple Weave – Wire mesh grips woven utilizing single, double, and triple strands of each wire material.

Multiplexing – Combining a number of individual messages over a common path – usually by frequency division or time division.

Multi-User Telecommunications Outlet Assembly (MUTOA) – A device grouping several telecommunications outlets into one location.

Narrow Wall Plate – A cover plate designed for flush mounting on narrow partitions having a width dimension of two inches or less.

Near-End Crosstalk (NEXT) – Electrical noise coupled from one pair of wires to another, measured from where the signal is transmitted.

NEC (National Electrical Code®) – A code providing for practical safeguarding of persons and property from hazards arising from the use of electricity.

NEC Amperage Rating – The most widely recognized rating for industrial applications. A current-carrying capability of a pin and sleeve system in accordance with Underwriters Laboratories Standards and wire conductor size and insulation per the National Electrical Code. Determined by qualified laboratory testing.

NEMA (National Electrical Manufacturers' Association) – An organization of electrical manufacturers that establishes standards for manufacturing and testing of performance and reliability of electrical products. NEMA tests are often the basis or prerequisite for approval by the Federal Government and/or by Underwriters' Laboratories, Inc.

NEMA Type 1 Enclosures – Intended for indoor use primarily to provide a degree of protection against limited amounts of falling dirt in locations where unusual service conditions do not exist.

NEMA Type 3 Enclosures – Intended for outdoor use primarily to provide a degree of protection against rain, sleet, and windblown dust; and to be undamaged by the formation of ice on the enclosure. They are not intended to provide protection against conditions such as internal condensation or internal icing.

NEMA Type 3R Enclosures – Intended for outdoor use primarily to provide a degree of protection against rain and sleet; and to be undamaged by the formation of ice on the enclosure. They are not intended to provide protection against conditions such as internal condensation, or internal icing.

NEMA Type 4 Enclosures – Enclosures intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water, hose-directed water, and external ice formation.

NEMA Type 4X Enclosures – Enclosures intended for indoor or outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, hose-directed water, and external ice formation.

NEMA Type 7 Enclosures – Intended for indoor use in locations classified as Class 1, Group A, B, C, or D, as defined in the National Electrical Code. They shall be capable of withstanding the pressures resulting from an internal explosion of specified gases, and contain such an explosion sufficient that an explosive gas-air mixture existing in the atmosphere surrounding the enclosure will not be ignited. Enclosed heat generating devices shall not cause external surfaces to reach temperatures capable of igniting explosive gas-air mixtures in the surrounding atmosphere. Enclosures shall meet explosion, hydrostatic, and temperature design tests.

NEMA Type 9 Enclosures – Intended for indoor use in locations classified as Class II, Groups E, F, or G, as defined in the National Electrical Code. They shall be capable of preventing the entrance of dust. Enclosed heat generating devices shall not cause external surfaces to reach temperatures capable of igniting or discoloring dust on the enclosure or igniting dust-air mixtures in the surrounding atmosphere. Enclosures shall meet dust penetration and temperature design tests, and aging of gaskets (if used).

NEMA Type 12 Enclosures – Intended for indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping non-corrosive liquids. They are not intended to provide protection against such conditions as internal condensation.

NEMA Type 13 Enclosures – Intended for indoor use primarily to provide a degree of protection against lint, dust, spraying of water, oil, and non-corrosive coolant. They are not intended to provide protection against conditions such as internal condensation.

Network – An interconnection of computers, peripherals, and data/voice communications facilities.

NFPA (National Fire Protection Association) – An organization devoted to promoting the science and improving the methods of Fire Protection. Membership is open to anyone interested. Every three years the NFPA produces a new edition of the NEC (see above). The NFPA also provides many other useful publications dealing with fire prevention.

N.P.S. – National Pipe Straight Thread.

N.P.T. – National Pipe Tapered Thread.

OFNP (Optical Fiber Non-conductive Plenum) – NFPA designation for optical fiber cable that contains no electrically conductive components and meets fire rating requirements for plenum (backbone) applications.

Ohm – The unit of measurement for electrical resistance.

Open System Architecture – International standards for data networking which allow multi-vendor/multi-product applications.

Optical Fiber – A thin filament of glass or plastic capable of carrying information in the form of light.

Optical Power Meter – Test equipment that measures in dBm the strength of a light wave over a fiber cable.

Optical Time Domain Reflectometer (OTDR) – An instrument that measures transmission characteristics of fiber by measuring the backscatter and reflection of injected light as a function of time. Used to measure attenuation of fiber, splices, connectors, and locate faults.

OSHA (Occupational Safety and Health Administration) – That part of the U.S. Department of Labor responsible for assuring that employers provide safe and healthful working conditions and equipment for employees, and that employees properly avail themselves of these conditions. Note: OSHA does not approve products. Compliance with OSHA regulations is contingent on approval or listing of the product by an authorized testing laboratory, such as UL, and proper installation and/or use of the product in accordance with OSHA guidelines.

Oversized Wall Plate – A wall plate with length and width dimensions greater than standard wall plates.

Outlet – A point on the wiring system at which current is taken to supply utilization equipment.

Outlet (DataCom) – A fixed connection where horizontal cable terminates and work area equipment can be connected.

Outside Plant (OSP) – Telecommunications infrastructure designed for installation exterior to buildings.

Pair – Two wires, twisted together with a reciprocal color code.

Pair Twist – The uniform twist of an insulated copper pair that helps to improve the effects of capacitance imbalance and electromagnetic induction.

Passive Infrared-(P.I.R.) – Typically this term is used in reference to detecting infrared. A P.I.R. detector functions as a receiver of infrared emitted from a transmitter, such as the human body.

Patch Cord – A length of cable, with connectors on the ends, used to join telecommunications links at a cross-connect.

Patch Panel – Connecting hardware that can be accessed with patch cords to form cross-connection (usually located in a telecommunications room) used to modify, reconfigure, or administer communications networks.

PBX (Private Branch Exchange) – A telephone switching system serving one organization or business, which is connected to the public telephone system.

Peripherals – Devices used to extend the capability of a computer or network. These can include printers, scanners, external drives, modems, and more.

Permanent Link – The transmission path between any two interfaces of cabling, excluding patch cords, equipment, and work area cables.

Phase Control – The electronic process of chopping or turning on and off the AC line every half line cycle. It is commonly used in dimming and fan speed control applications.

Pigtail – A short length of copper or optical fiber cable that has a pre-installed connector on one end. See Cable Assembly and Jumper.

Pin and Sleeve – Industrial wiring devices utilizing round pin-shaped blades and tubular designed sleeve contacts.

Pilot Light – A switch with an integral lamp in the actuator which lights when the switch is in the “ON” position.

Plenum – A chamber which forms part of a building’s air distribution system.

Plug – A device utilizing blades which, when inserted into a receptacle, establishes connection between the conductors of the attached flexible cord and the conductors connected to the receptacle.

Polarization (plugs and receptacles) – A means of assuring the mating of plugs and receptacles of the same rating in only the correct position.

Polarity – The alignment of a plug and receptacle to ensure correct connection.

Pole – The term “pole” as used in designating plugs and receptacles refers to a terminal to which a circuit conductor (always current carrying) is connected. In switches, the number of poles indicates the number of conductors being controlled.

Port – Hardware entity at the end of each link.

Potentiometer (POT) – A variable resistor, when used in a phase control it adjusts the light intensity.

Power Budget – In fiber optics, the difference between the strength of the signal transmitter and the sensitivity of the signal receiver. It represents the maximum acceptable loss for the combination of components and connectors used on a link.

Power Connector – A plug or receptacle that provides connection for distribution of secondary electrical power from a power source to electrical equipment, either portable or stationary.

Powersum – A test method for four-pair cable which compares the sum of the pair-to-pair crosstalk from three pairs to the fourth pair.

Premises Wiring – The technology of wiring buildings and equipment for data, telephone, video and other electrical/electronic functions.

Preset – The ability of a dimmer or fan speed control to “remember” a desired level of output.

Pressure Termination – An electrical connection in which a stripped cable is secured in a wire well by a set screw. The simplest method of termination.

Propagation Delay – Time between when a signal is transmitted and when it is received at the opposite end of the cable.

Protocol – A set of rules governing the transmission of information over a data channel.

PDN (Public Data Network) – A network established and operated for the specific purpose of providing data transmission services to the public.

Pulling Grip – A reusable wire mesh grip for pulling cable, rope, or bare conductor.

Pulling Tension – The amount of pull (foot-pounds of tension) placed on a cable during installation.

Pull Switch – A switch with an actuator mechanism operated by a downward or outward pull.

Punchdown – Securing a conductor to a wiring terminal by placing the insulated conductor in the terminal groove and pushing down with a “punchdown” (impact) tool – creating an insulation displacement connection (IDC).

Push/Push – A means of achieving the preset features on a rotary dimmer or fan speed control. The secondary switching mechanism is activated by pushing the knob at any preset of light or speed.

RBOC – Regional Bell Operating Company, e.g., Bell Atlantic.

RCDD (Registered Communications Distribution Designer) – Professional certification granted by BICSI (Building Industry Consulting Services International).

Recessed F Connector – A type of video connector in which the termination is recessed for a smoother appearance and greater termination protection.

Receptacle – A contact device which is intended to establish electrical connection with an inserted plug.

Refractive Index – The ratio of the velocity of light in a vacuum to the velocity of light in a given material.

Relay Rack – A vertical metal frame that is equipped with threaded holes at a predefined spacing in accordance with EIA-310-D, on the front of the rack (or on both the front and rear sides of the rack). It is used to mount termination hardware, electronic equipment, or a combination of both. It can be floor mounted (free standing) or wall mounted.

Resistive Load – A device which opposes the flow of electric current. There is a voltage drop across a resistive load, which causes the device to dissipate heat.

Response Time – The interval time required for a device to perform its stated function in reaction to specific condition(s), such as a transient voltage surge or ground fault.

Return Loss – 1. Noise or interference caused by impedance of a cable, expressed in decibels. 2. The amount of reflected power compared to the amount of incident power at an interface, expressed in dB. Return loss is a critical factor in single-mode links because reflected light can destabilize some lasers.

RFI (Radio Frequency Interference) – Electrical noise.

Ring – One of the two conductors or cable pair in a telephone circuit.

Riser – The path between floors of a building.

RJ (Registered Jack) – Telephone and data jack applications registered with FCC.

RJ31X – A specialized jack used to allow security systems to take immediate control of a phone line, even when it is already in use. The security module used in the P&S Home Network Wiring Center includes an RJ31X jack for this purpose.

R.M.S. (Root Means Square) – Used as an A.C. value of voltage or current. Expressed, for example, as 120 volts AC RMS.

Rocker Switch – A switch that is operated by a paddle-type actuator, such as a decorator switch.

Rotary Dimming – Is achieved through the rotation of a knob of any style to control the lighting level components.

Rough-In – Stage of network installation during which boxes are mounted and cabling is run.

Safety Switch – Common term for an enclosed switch, commonly used in service or motor-circuit disconnect applications or as a motor controller. It is typically used to provide a disconnect point in power circuits supplying stationary or permanently installed equipment. Safety switches may be either fusible or non-fusible.

Scattering – A property of a fiber that causes light to deflect from the fiber, contributing to losses.

Sectional Wall Plate – Individual section wall plates with different openings that can be field assembled into a custom multi-gang wall plate.

Self Modulating – A video device, for example, a VCR or video camera, which supplies video signals to a specified CATV or UHF channel. No separate modulator is required.

Series Circuit – A circuit in which the components are arranged end to end to form a single path for current.

Service Loop – The slack which should be left in the cable at the communications outlet to accommodate future needs.

Shield – Metallic layer placed around a conductor or group of conductors to prevent electrostatic or electromagnetic coupling between the enclosed wires and external fields.

Side Wire Terminal – A termination that can be accomplished by a 3/4" turn looping pre-stripped solid or stranded conductor under terminal screws.

Signal-to-Noise Ratio (SNR) – The ratio between the detected signal power and noise in a receiver, expressed in dB. The prime determining factor in bit error rate.

Single-Mode Fiber – An optical fiber that will allow only one mode to propagate. This fiber is typically a step index fiber.

Single Receptacle – A receptacle which accepts only one plug.

Single Pole Switch – (single-pole single-throw)-A switch that makes or breaks the connection of one conductor and controls one load from one location.

Single Weave – A wire mesh grip woven with single strands of wire material.

Slant Symbol (/) – As used in wiring device ratings, indicates that two or more voltage potentials can be used.

Slide Switch – A switch having a sliding actuating member which makes or breaks the switch contact mechanism.

Slide Dimming – Is achieved through the linear movement up and down or horizontal of a slide mechanism to control the lighting level.

Splice Tray – A container used to organize and protect fiber splices, as well as a means for storing fiber slack.

Split Circuit – A duplex receptacle that can be wired for two separate circuits.

Split Mesh – A wire mesh grip separated at one row along the wire mesh axis utilizing an additional lace or rods to weave closed around cable.

Star Wiring – Called Star Topology and Home Run, a method of cabling each telecommunications outlet directly to the horizontal cross-connect in the telecommunications room with an individual pair of cables.

Straight Blade – A plug, connector, receptacle, flanged inlet or flanged outlet providing no locking features.

Straight Tip (ST) – A type of optical fiber connector identified by its bayonet housing. The ferrule may be metallic, ceramic, or plastic.

Strain Relief Grip – A wire mesh grip used to relieve strain or stress at the transition point between relatively flexible cable or conduit and the rigid connection point.

Stranded – A number of solid wires twisted together to form a flexible conductor.

Strap Dimmer/Fan Speed Control – Any dimmer or fan speed control that will fit into a traditional NEMA standard switch box, without an external heat sink.

Subscriber Connector (SC) – A type of optical fiber identified by the square cross-section of its plastic housing.

Support Grip – A wire mesh grip used for permanent or temporary support of a length of cable.

Surface-Mounted – A device intended to be installed on the surface of a wall, panel, or equipment.

Surge-Suppression – The use of a device containing electronic components which limits peak voltage to a predetermined value when voltage spikes or surges appear on the connected line.

Switch – A device for making, breaking, or changing the connections in an electric current. An enclosed switch is located in a box or cabinet, may be fusible or non-fusible, and is commonly used in a service or motor-circuit disconnect capacity, as a disconnect when equipment is to be serviced, or as a motor controller.

"T" Rated Switch – A switch for tungsten filament lamps for both AC and DC current.

Tamper-Resistant – A receptacle which by its construction limits improper access to its energized contacts.

Tandem – A wall plate in which individual gangs are arranged vertically one above the other.

Telecommunications Room (TR) – An enclosed space for housing telecommunications equipment, cable terminations, and cross-connects. The room is the recognized cross-connect between the backbone cable and horizontal cabling.

Terminal – A terminal is a fixed location on a wiring device where a conductor is intended to be connected.

Three Position Center "OFF" – A two-circuit, three-position switch of either the maintained or momentary type, in which the "OFF" position is indicated by the centered position of the actuator.

Three-Way Switch (single-pole double-throw) – A switch which is used in pairs to control one load from two or more locations.

TIA (Telecommunications Industry Association) – Industry trade association which works with the Electronics Industry Association (EIA) in developing standards.

Tight-Buffered Cable – Type of cable construction in which each glass fiber is tightly buffered by a protective thermoplastic coating to a diameter of 900 microns. Increased buffering provides ease of handling and installing connectors.

Time Delay – A period of time when a load is energized or de-energized. At the end of the desired time period, the load changes state (i.e.; on or off).

Time Switch – An electronic or electromechanical control, used to schedule "turn on" and "turn off" time based on the time of day.

Timer – An electronic or electromechanical control, used to produce a time delay to control a load.

Tip – The positive conductor of a pair in a basic telephone circuit. The tip is grounded.

Toggle Switch – A switch having a lever-type actuating member which makes or breaks the switch contacts when its position is changed.

Toggle Dimming – Is achieved through up or down toggling of traditional switch style toggle used to control the dimming components.

Topology – The physical or geometric configuration of a local area network.

Toroid Choke – An electronic component constructed of a ferrite ring wrapped with copper wire, used to reduce RFI generated by an electronic switching device.

Touch Dimming – The ability of a dimmer to control lighting levels by sensing the touch of a hand to its sensor plate.

Transient Voltage Surge Suppressor (TVSS) – A device designed to protect sensitive electronic equipment from the harmful effects of transient voltage surges having entered the power line to which it is connected.

Transmitter (TX) – 1. An optoelectronic circuit that converts an electrical logic signal to an optical signal. 2. In fiber optics, using a source such as light-emitting diode or laser.

TRIAC (Bidirectional Triode Thyristor) – A solid-state output device capable of switching alternating current.

Trim Kit – For P&S Home Network Centers, a set of components enabling complete installation of capability-providing modules and cabling following cabinet rough-in, as well as providing a finished appearance.

Turnkey – An installation in which the user receives a complete, operational system, ready to be used.

Twisted Pair – Two insulated copper wires twisted together to reduce interference from each other.

UL (Underwriters' Laboratories, Inc.) – "An independent not-for-profit organization testing for public safety."

UL Listed – Indicates an item that has been tested and approved to the standards established by UL for safety.

UL Recognized – Refers to products that have been tested and approved to be used as component parts of equipment or products that are to be UL listed.

USOC (Uniform Service Order Code) – Bell system term to denote varying pin configurations on registered jacks (RJs).

UTP (Unshielded Twisted Pair) – Twisted-pair copper cables without metallic braid shielding – capable of high-speed voice and data transmission. The most common cabling used in the U.S. in structured wiring.

Varistor – Variable resistor.

Voltage – A difference of potential measured in volts. The electric pressure available to cause a flow of electrons.

Voltage Rating – Ratings that indicate the current-carrying capability of a connector up to a specified voltage. Voltage ratings are determined by the air gap between contacts and between contacts and the shell.

Wall Plate – A plate designed to enclose a device box, with or without a device installed in the box.

Watertight – A classification of a device and/or enclosure with design considerations for preventing water from entering under specific conditions.

Wavelength – The length of a wave measured from any point on one wave to the corresponding point on the next wave, such as from crest to crest. The wavelength of light is usually measured in nanometers (nm).

WD-1 – Standards Publications by NEMA. General requirements for wiring devices.

WD-5 – Has been merged with WD-1.

WD-6 – Standards Publications by NEMA. Wiring devices – dimensional requirements.

Weatherproof – A device constructed or protected such that exposure to weather will not interfere with successful operation (N.E.C.).

Wet Location; Cover Open – A cover, UL listed, in accordance with specific test standards for use in wet and damp locations with the cover opened (plug cap inserted) or closed.

Wet Location; Only with Cover Closed – A cover, UL listed, in accordance with specific test standards for use in damp locations with the cover closed, or wet locations only when the cover is closed.

Wide-Area Network (WAN) – Computer networks where devices are connected over extended distances using telecommunications links, such as telephone lines, satellites, and microwave connections, rather than a length of cable.

Wire Mesh Grip (Flexcor) – Woven wire mesh holding devices used to support, pull, or relieve strain exerted upon cables, conduit, tubing, and various other items.

Wiring Closet – Termination point for customer premises wiring offering access to service personnel.

Work Area Outlet – A connecting device in the work area where horizontal cable terminates and work area equipment can be connected. Also called information outlet and telecommunications outlet.

Workstation – The location where telecommunications cabling is connected to work area equipment (PCs and peripherals) by means of a telecommunications outlet. Also called work area outlet and information outlet.

Note: Some definitions courtesy of BICSI.