

Glossary of CCTV Terms

24 Hour “Real Time” VCR	VCR that records images at 2-4 times the rate of a normal 24 hour VCR, up to 20 images per second.
3/100/100 Rule	When running parallel to cables carrying phone, data, or power, keep the coax cable 3 feet away for every 100 feet they run parallel for every 100 volts they carry.
Activity Detection	Feature that looks for changes in an image from frame to frame.
Alarm Recording	Starting recording, or increasing recording speed as a result of an external alarm trigger to the image management device.
Alarm Search	Feature that allows recording to be searched for alarm events.
Alarming	Ability of image management device to respond to an external alarm input. Response depends upon equipment features.
ALC	Video auto iris lens adjustment for iris speed, makes picture higher or lower contrast.
Amp	Electrical power, 1 amp = 1000 milliamps
Aperture	Lens opening that controls the amount of light reaching the imager.

Aspect Ratio		Ratio of picture width to picture height. 4:3 (4 units wide to 3 units high) in CCTV equipment.
Automatic Shutter (AES)	Electric	Electronically controlled shutter speed on a camera to adjust for changing light conditions. Also called electronic iris.
Automatic Control (AGC)	Gain	Electronic feature that automatically increases camera sensitivity under poor lighting conditions.
Automatic Control (ALC)	Lens	Output on camera that controls an auto iris lens. Causes lens to open or close depending upon amount of light being received.
Average Image Size		Average size of an image recorded by a DVR, used to estimate the storage capacity of a DVR.
Backfocus		Allows imager to move closer to or farther away from the lens.
Backlight		Lighting being a target that causes the target to appear dark or as a shadow.
Backlight Compensation (BLC)		Electronic processing of video that reduces the rear illumination and increases the brightness of the target. May be standard or zone selectable.
Balun		Device used to match coax cable to twisted pair cable.

Bandwidth	The amount of information a transmission media can send or receive at one time. The greater the bandwidth, the faster information can be sent.
BNC	Industry standard connector for coax cable in CCTV systems.
BNC-T	Mechanical connector used to split signals. Not recommended for CCTV.
Board Camera	Camera on circuit board.
Bridging	Second output (call monitor) for displaying a single camera without interrupting the sequence on the main display.
Bullet Camera	Small, cylindrical (typically) camera.
Byte	Single piece of digital information.
Call Monitor	Second output cameras can be viewed on by manual, automatic, or external control without affecting the main output.
Category 3 Cable	Cable with each pair twisted together, capable of sending data at speeds up to 16 Mbps. Used for telephone cabling and video transmission.
Category 5 Cable	Cable with each pair twisted together, capable of sending data at speeds up to 100 Mbps. Used for computer networking and video transmission.

CD	Common, inexpensive media for storing images. Typical capacity 600-800 MB.
C-Mount	Lens mount that extends 17.5mm into camera.
Coax Control System	System that send control signals over same coax cable as used for video.
Coaxial Cable	Primary cable for CCTV systems. Allows signals to run long distances with minimal loss. Typically center conductor surrounded by dielectric insulator with braided shield. 75 ohm, copper center, 95% shield copper braid for CCTV.
Coax Control	Control of positioning device by sending control signals up same coax cable that video travels on.
Covert Camera	Camera disguised as another device.
CS-Mount	Lens mount that extends 12.5mm into camera.
Day/Night Color	Color camera that produces images in color during good lighting (daytime) and black & white images during poor lighting (night).
DC Auto Iris	Lens that is controlled by the camera. Sensitivity adjustments are made on the camera.

Depth of Field	Range of which all objects in a lens field of view are in focus. The depth of field can change when the light level changes.
Digital Control System	Control of positioning devices by sending control signals over separate twisted pair cable.
Digital Signal Processing (DSP)	Electronic processing of video that cleans up noise and enhances the picture.
Digital Tape	Not very common, expensive media for storing images. Typical capacity 20GB (or more).
Digital Video Recorder (DVR)	Device that records images to hard disk drive or other digital recording media.
Distance Plus 4 Rule	Monitor size (inches) plus 4 gives optimum viewing distance.
Distribution Amplifier	Accepts video input, amplifies it, and splits it into multiple signals.
Dome Camera	Camera housing in plastic dome.
DSL	Digital Subscriber Line. High speed internet service provided by local phone company.
Duplex	Ability to perform two multiplexing functions at a time, multiplex display and multiplex recording.

DVD	Somewhat common, relatively expensive media for storing images. Typical capacity 4.7 – 9.4 GB.
Embedded DVR	Standalone DVR with video inputs and hard drive.
Ethernet	Set of standards for network infrastructure that describe cabling, connections, and data characteristics.
F Connector	Screw on type connector, common in cable TV and satellite equipment and cabling.
Fiber Optics	Transmission of light through optic fibers for communications and signaling.
Firewall	Electronic or software device designed to keep unauthorized users from accessing the network.
Floppy Disk	Common, inexpensive media for storing images. Typ. 1.44MB.
F-Number	Relative measurement of the light gathering ability of a lens. Each step up reduces available light by half, each step down increases light available by twice.
Focal Length	Distance from lens surface to imager. Larger focal length, narrower view. Smaller focal length, wider view.

Foot-Candle (fc)	Measure of light intensity. 1 foot-candle (fc) = 10 lux.
Frame Integration	Feature that allows cameras to work at lower light levels by combining multiple images into a single image.
Full Body Camera	“Box” style camera, most flexible.
Gigabyte (GB)	1024 MB; 1,048,576 KB
Golden Rule of CCTV Sales	If you are designing the system, you are the expert.
Ground Isolation Transformer	Transformer that passes video but blocks ground loop voltages.
Ground Loop	Current flow over coax due to ground difference between devices.
Guard Tour	Programmed sequence of cameras to be viewed on monitors based on alarm input, keyboard command, or timer function.
Hardwire Control	Control of positioning devices by switching voltage on multi-conductor cabling.
Housing	Device to protect camera from environment, damage, tampering, or detection.
Hub	Switching and control point for PC network, routes signals to appropriate device.
Image Management	Process of arranging images from several sources for storage and/or viewing.

Image Storage Device	Device for making a permanent record of activity for review at a future time.
Imager	Device that receives light and converts it to an electrical signal. (chip, CCD)
Imager Format	Usable portion of the imager as measured diagonally across the chip.
Infrared Illuminator	Light source that emits light in the infrared (IR) range of the spectrum, invisible to human eye, but viewable by most black & white cameras.
Interleaving	Inserting cameras at a higher interval in recording sequence to get more video from those cameras.
Internet Transmission	Video Transmitting video over the Internet that is viewable by other devices connected to the Internet.
IP Address	Four sets of numbers separated by decimal points used to identify individual computers on a network using TCP/IP.
Iris	Adjustable mechanical aperture that allows control of amount of light that passes. Commonly fixed, manual or auto iris.
Kilobyte (KB)	1024 bytes.
Lens	Device that gathers light and focuses it on the imager.

Level	Video auto iris lens adjustment for iris control, makes picture brighter or darker.
Line Lock	Synchronizes camera operation to AC power phase.
Line of Sight	Direct, clear, unobstructed view from transmitter to receiver. Minimum 15 feet above any obstructions.
Lock Box	Protective box for VCR or DVR. Prevents tampering and damage.
Looping	Allowing video signals from each camera into an image management device to pass through to another device.
Loose Tube	Fiber optic cable that is filled with a gel to protect the fiber from damage and resist moisture.
Loss Budget	Difference between fiber optic transmitter power and receiver sensitivity. Losses from fiber cable, connectors, and splices cannot exceed this number. Minimum 3db margin for future.
Lux	Measure of light intensity. 1 lux = 0.1 foot-candle (fc).
Matrix Switcher	Switcher that accepts multiple camera inputs and switches them to multiple monitor outputs.
Megabyte (MB)	1024 KB

Milliamp (ma)	1/1000 of an amp.
Multimode	Fiber optic cable which allows light to travel down it on multiple paths. Less expensive, easier to work with, but shorter distances.
Multiple Camera Power Supply (MCPS)	Single power supply that provides multiple fused outputs for individual cameras.
Multiplex Display	Displaying multiple cameras on monitor in a split screen display.
Multiplex Recording	Recording each camera full frame, individually to the image storage device.
Multiplexer	Image management device that allows full frame recording of each camera and/or multiple camera display.
Multiplexer Effect	Reduction of number of images recorded per second when using a multiplexer as an image management device.
National Electric Code (NEC)	Installation standard for cabling.
Network	Two or more PC's connected together for the purpose of sharing data, peripherals, and resources.
Network Interface Card (NIC)	Device that allows devices to communicate on the network.
Network Manager	Person who is responsible for operation and maintenance of a computer network.

Network System	Operating	Coordinates sharing between computers. Common systems are Microsoft Windows NT and Novell Netware.
Network Transmission	Video	Transmitting video over a computer network that is viewable by other devices on the network.
Object Distance		The distance from the camera to the target area.
On Chip Lens		Miniature lens over each pixel of an imager.
Pan/Tilt		Allows horizontal (pan) and vertical (tilt) positioning of a camera.
Partitioning		Feature that limits a user's access features based on security level.
Patch Panel		Termination and/or splice point for cabling.
Pattern		Series of pan/tilt and zoom movements displayed in sequence.
PC Based DVR		DVR that uses video cards installed on a normal desktop PC.
Phase Adjust		Allows camera to be adjusted outside AC power phase.
Pinhole Lens		Lens that views through small hole so camera can be concealed.
Plenum		Environmental air space; may require use of plenum cable.

Polarized Antenna	Antenna that “spins” the RF signal when transmitting, helps prevent crosstalk.
Positioning Device	Device that allows a camera to be set to a specific scene view by adjusting horizontal, vertical, and zoom position.
Pre-Alarm	Images stored in memory of events just before an alarm condition. Used to show events leading up to an alarm.
Preset	Pre-selected camera view (pan/tilt/zoom) programmed into a unit and access via the keyboard or other input.
PSTN	Public Switched Telephone Network. Regular telephone line with dial tone.
Quad	Device that allows four cameras to be displayed and recorded simultaneously.
RCA Connector	Push on type connector, common in consumer audio/video equipment and cabling.
Real Time	In CCTV terms, 30 images per second.
Receiver/Driver	Device that receives digital control signals and converts them to relay or voltage outputs to control devices.
Reflectivity	The percentage of light that strikes an object that is reflected.

Refresh Rate	How fast pictures are updated. Real time refresh updates the images 30 times per second.
Removable Hard Drive	Not very common, variable cost media for storing images. Capacity depends on hard drive size.
Repeat Recording	Feature that rewinds the tape and starts recording over it when it reaches the end.
Resolution	A measure of the cameras ability to reproduce detail.
RF Modulator	Device that converts composite video (and audio) into a RF signal that can be tuned by a television tuner.
RJ45	Jack and plug used for data. Similar to telephone jack/plug, but is 8 pin instead of 4 pin.
Router	Bridge that handles different protocols and allows them to communicate.
Scanner	Device that allows horizontal (pan) positioning of a camera.
Sensitivity	The amount of light required to produce and image.
Siamese Cable	Coax cable and power cable in one overall jacketed cable.
Simplex	Ability to perform one multiplexing function at a time, multiplex display or multiplex recording.

Single Mode	Fiber optic cable which allows light to travel down it on one path. More expensive, harder to work with, but longer distances.
ST	Bayonet style connector for fiber, most popular for CCTV applications.
Switch Pulse (SW)	Signal from image storage device that tells the image management device it is ready to record the next frame of video.
Switcher	Devices that allows cameras to be manually or automatically sequenced for display/recording.
Target Area	The area to be viewed by a camera.
TCP/IP	Transfer Control Protocol / Internet Protocol. Networking protocol for transferring data between computers. Networking protocol used by the Internet.
Telephone Station Wire	Cable, Cable in which each wire is run parallel and covered by an overall jacket. This type of cable is not acceptable for data or video transmission.
Telephone Twisted Pair	Cable, Cable in which each pair of wires is twisted together and covered by an overall jacket. May also be known as UTP (unshielded twisted pair), Cat 3, or Cat 5.

Telephone Transmission	Video	Transmitting video images over the public telephone network using normal dial up telephone lines.
Terabyte (TB)		1024GB; 1,048,576 MB; 1,073,741,824 KB
Text Inserter		Device that overlays information received from an electronic device onto the video from a camera.
Tight Buffer		Fiber optic cable that has the jacket and buffer close to the fiber.
Time Lapse		Slowing the recording of an image to a rate of less than 30 images per second to extend recording time.
Time-Date Generator		Displays current time date information for recording with image.
Time-Date Search		Feature that allows video recording to be searched by time-date range.
Timer Recording		Automatic start and stop of recording based on a schedule.
Transformer		Steps 120VAC power down to lower voltage.
Uninterruptible Supply (UPS)	Power	AC power supply that switches to battery when AC power fails, uses inverter to convert battery DC back to AC.
Usable Video		Video signal less than 1 volt that produces a “usable” image.
Vandal Camera	Resistant	Camera housed in heavy duty protective housing.

Variable Speed	Pan/tilt and zoom that can be moved slowly or fast, depending how far the joystick is moved.
Varifocal Lens	Lens with a manually variable focal length.
Video Amplifier	Accepts input from video camera and boosts it to a higher level so it can travel longer distances.
Video Auto Iris Lens	Lens that samples the video signal and adjusts the aperture accordingly. Sensitivity adjustments are made on the lens.
Video Cassette Recorder (VCR)	Device that records images to, or plays back images from magnetic tape.
Video Coil Cord	Flexible coil cord that carries coax and multiple conductors.
Video Motion Detector	Device that analyses video signals for changes in brightness and/or contrast in specific areas.
Volt-Amp (VA)	Electrical power, voltage x amperage, same as watt.
Watermark	Security feature on recorded video that insures image has not been tampered with.
Watt	Electrical power, voltage x amperage, same as VA
Wave Division Multiplexing (WDM)	Process that allows multiple light signals at different frequencies to be carried on the same optic fiber at once.

White Balance	Keeps color camera picture color correct by keeping white of picture within established parameters.
Wide Dynamic Range	Features that compensates for uneven scene lighting by taking a high shutter speed image and low shutter speed image and combines them into one image.
Wireless	Transmitting video via radio frequency (RF) signals from one point to another.
Zoom (Electronic)	Allows all or part of picture to be enlarged electronically. Some loss image quality will occur.
Zoom Lens	Lens with a manually or motorized variable focal length.

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