

# A Glossary Of Video Tape Terms

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**BAG TRACK:** This term usually refers to the sound track. It is usually used only in reference to the separate sound tape used in double system recording and editing. In a sense, videotape is a magnetic medium too but the term "Mag Track" is only used in reference to sound tape and not to sound on a videotape picture.

**GAIN (Video):** To adjust the picture contrast. The term "To ride the gain" (when used in connection with visual images) is to either mechanically or manually check and adjust that contrast.

**GENERATION:** This refers to the number of times a DUPE is removed from the original master video tape. For example, the video tape used by the VTR during the actual shooting is a first generation tape. The edited DUPE made from those original tapes would then be once removed from the original and be called 2nd generation tapes. Third generation tapes would be those DUPES made from that tape, etc.

**GHOSTING:** Repetitive secondary picture images. This is usually caused by reflections. This effect is often seen on home TV screens when there are big buildings around the receivers.

**HEAD:** The scanning device on the VTR which records or plays-back the video information from the videotape. There is also a sound (audio) head on a VTR that records the sound track separately on a special portion of the videotape. Generally, however, the term "Head" is most used in reference to the picture head.

**HELICAL SCAN RECORDER:** A videotape recorder which records information diagonally. This is used in one inch,  $\frac{3}{4}$ ,  $\frac{1}{2}$ , or  $\frac{1}{4}$  inch tape work.

**HIGHBAND RECORDING:** High band recording is like FM Radio compared to the lesser quality and noisier AM frequencies. High band recordings use a 10 megacycle band to carry its information and this high quality signal band is now the industry standard for 2 inch quadruplex broadcast videotape work.

**HUE:** Red, green, blue, yellow are hues. In essence, this is the basic color with no saturation (white) within it.

**IMAGE ORTHONICON:** A type of television picture pickup tube which has mostly been replaced by the newer Plumbicon tube.

**INTERSYNC:** An Ampex trademark name for their accessory that synchronized the output of two separate videotape recorders or any combination of live camera sources.

**INTERLOCK:** To run sound and picture together when they are on separate pieces of film and/or tape. This refers to double system editing techniques.

**JACK:** A female fitting into which a plug can be put to make an electrical connection.

**LIP SYNC:** Dialogue taping. Lip sync can be recorded directly on the videotape by the VTR for single system (one piece of tape) editing; or it can be recorded on the tape and transferred over to a separate audio tape at a later date for double system editing; or it can be recorded separately on a different sound recording machine for subsequent editorial work.

**LINE FEED:** A coaxial cable either connecting a place where a shooting is taking place to a distant videotape recording facility; or connecting a station where a program is originating to other stations broadcasting that show or commercial.

**LOW BAND RECORDING:** This is a Video recording in a low

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**SCRATCHES:** A tape that has been physically damaged. This can occur if there is dirt on the VTR head or if the tape is improperly handled.

**SECOND GENERATION:** A copy of an original tape recording. Third generation is a copy made from that 2nd generation copy, etc.

**SHARING THE TIME:** This is a business arrangement where two or more people share the use of the same equipment.

**SINGLE SYSTEM:** Sound and picture recorded on the same piece of tape or film.

**SKEWING:** A zig-zag pattern in the screen. The accessory trademarked by Ampex as AMTEC eliminates this effect.

**SLANT-TRACK:** Helical Scan Recordings.

**SWITCHER:** This device permits the selection of a particular camera's picture when more than one is being used.

**SYNC (AUDIO):** Proper synchronization of picture and sound. i.e., when a person is talking and the sound is heard precisely when the lips move to form that word, then the picture is said to be in SYNC. Obviously, OUT OF SYNC is when this alignment is not correct. Special care must be given to SYNC when you work in double system (separate picture and sound).

**SYNC GENERATOR:** A device that emits synchronizing pulses to help control the scanning and brightness of a TV picture.

**SYSTEM:** Equipment which when combined, form an organized group.

**TAKE:** A term often used in reference to the number of times the same scene has been shot (Scene 1, Take 1 or Scene 1, Take 2); or it can also mean a "Buy" or a "Print" or a "Good Scene" (That is a TAKE).

**TECHNICAL DIRECTOR:** The man in charge of the technical quality of the videotape picture signal during production. He adjusts brightness, contrast, color balance, etc. On some simple jobs he might also operate the equipment controlling cuts, dissolves, fades during production.

**TELCO FEED or TELCO LINE or TELCO PATCH:** These are terms which refer to incoming or outgoing video and/or audio signals going over telephone company lines. You use a "Patch" to connect up the various lines into complete circuits.

**TELECINE:** The term often used to describe the room where the film chain equipment is located within the videotape facility or station. A combination of the words TELEVISION and CINEMA is how this word came into existence.

**TEST PATTERN:** The specially designed artwork card used to help line up and adjust equipment before taping or studio programming.

**THE READ OUT:** The information. For example, the code numbers of a particular picture frame displayed visually on a nixie tube display.

**TRANSPORT:** To move.

**THE TRANSPORT:** Usually used to mean the device that moves the medium of information i.e. the tape transport.

**TIME CODE:** A code using time as its measuring and location system. For example, the Ampex RA 4000 uses hours, minutes, seconds and frame numbers as its address. A readout in a nixie tube using a time code in videotape will have places for 8 digits.

**TIME SHARING:** The ability to use something for more than 1 purpose at the same time.

**TONE:** A pure hue with white and black added. For example, beige and tan are tones.

**24 HOUR CAPACITY:** A time code that recycles its numbering sequence again when it goes around the clock (24 hours with no A.M. or P.M. differential).

**VELOCITY COMPENSATOR:** The accessory put into a VTR to eliminate horizontal distortions (banding).

**VIDEO SWITCH:** A control panel that allows for selection of material from different sources, i.e., VTR 2 or VTR 1 to a film chain.

**VTR:** The videotape recording and playback machine.

**VOICE-OVER:** A spoken message delivered off Camera. This is the opposite of a LIP SYNC recording which is done live as the actors are being photographed. An unseen narrator would be considered "Voiceover".

**WARM:** Refers to color balance of the scene being too much toward the yellow or red end of the spectrum. Cold is when the colors lean toward the blue or green.

**WOW:** A form of distortion in sound reproducing systems caused by periodic variation in the speed of medium and characterized its effect on pitch.

**VIDEOTAPE:** The technology which records picture and sound using magnetic information as its methodology of recording, storing and reproducing. The word can be used to describe the actual tape itself of the entire production process . . . i. e. let's videotape this production.

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**DISTORTION:** Quality difference between that which has been recorded and that which is reproduced.

**DOWN TIME:** Time used for maintenance or repair of equipment. Sometimes this term is also used to mean unsold or unused time.

**DOUBLE SYSTEM:** A term meaning (in both Tape and Film) that the sound and picture are on two different pieces of tape or film. Separate sound allows greater flexibility and editing possibilities than working with the sound and picture combined on a single strip. Sound for double system work can be recorded separately on its own equipment other than the videorecorder as the taping proceeds; or it can be recorded thru the videotape recorder (which has its own separate sound recording head) and transferred to a second piece of film or tape.

**DUB:** One of the two terms used to describe a videotape duplicate. This corresponds to prints in film releasing. Dupe is now a more generally used term. To Dub is also a term used to mean to copy (in video terms.)

**DUBBER:** In video tape this term is usually used to mean a video tape recorder in its playback function.

**DYNAMIC RANGE:** The range between the softest and the loudest sound the tape recorder or other device can reproduce without undesirable distortion.

**EDITEC:** The Ampex trademarked name for its accessory which is put into the videotape recorder to permit electronic edits.

**ELECTRONIC CAMERA:** A camera is a lightproof box (with accessories) with a lens at one end through which light passes and is recorded or passed along by a light sensitive material. In Electronic Cameras the light energy is translated into electric impulses and then sent along for immediate use (live broadcast) or recording (videotape).

**ELECTRONIC EDITING:** The editing of videotape by selecting and electronically reassembling the selected section of the best "take" to produce a finished program or commercial. Electronic editing is a post production (after shooting) procedure.

**ENCODE:** To prepare a program into computer code information from a language.

**ERROR RATE:** The ratio of mistakes caused by computer malfunction to the total amount of information called for.

**EQUALIZATION (Audio):** Adjustment of audio level and frequency response.

**EVALUATE:** Quality Determination.

**FILM CHAIN:** A term in tape used to encompass the total grouping of equipment used to convert film picture frames to electronic picture frames on videotape. This group of equipment usually contains 35mm projectors, 16mm projectors, 35mm slide projectors.

**FLUTTER:** Very short, rapid variations in tape motion causing similar variations in sound pitch and volume, not present in the original sound. A form of distortion.

**FRAME:** A full TV picture combining the half picture information of two fields.

**FREEZE FRAME:** To hold a single frame or picture for a period of time, thus freezing the action.

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**CHROMINANCE:** The term used to indicate both the hue and saturation of a color.

**CINCHING:** This is a term used to describe a folded up or buckled tape caused by the sudden stopping of a spinning reel of tape. This sudden stopping causes one layer of tape to slide over another and possibly be trapped or folded as other layers are wound on. Cinched tape can become unusable.

**CLOGGED HEAD:** A buildup of oxide on the video recorder head that can cause "Noise" breakup or loss of picture. Clogged heads can also physically scratch the videotape material being played through it.

**CODE GENERATOR:** A module that will put an identification code onto the medium carrying your picture and or track information.

**COERCIVITY:** Demagnetizing force or field intensity required to reduce the induction of a piece of tape from full to zero. Coercivity is usually marked in a scale of measurements called oersteds.

**COLOR BARS:** These are established color standards set up by the Society of Motion Pictures and Television Engineering to appear at the beginning of each tape. These color bars are not broadcast over the air but are used within the station to set up proper color balancing of that tape for the reproduction of viewing. Sometimes within the videotape facility you will see these color bars on the Monitors or videotape recorders viewing screens as the engineers check the machines.

**CONTRAST:** The difference in intensity between colors and/or the black and white parts of a picture. State of being contrasted.

**CONTRAST RATIO:** Brightness range between blacks and whites.

**CROSSTALK:** A signal from one part of a videotape interfering with another part. Sometimes two completely different channels can have this interference.

**CUE:** Depending on situation of usage, it can mean to signal an actor, to start or stop a Video Recorder, can mean to place a mark or signal for a future reference.

**CUT:** An instantaneous picture change from scene to scene or camera to camera. Sometimes this term is also used to mean "Stop recording" or "stop the action."

**DEBUG:** To work to correct a program or machine's malfunctions.

**DECODE:** To take computer code information and change it back into language.

**DETAIL:** The quality of detail is the number of individual bits of pictorial elements that can be reproduced. Extended treatment of, or attention to particular items.

**DIRECT POSITIVE:** A type of positive film print made without a negative. You can make a direct positive film print from a videotape picture tube if you wish to edit or screen your material on film.

**DISC RECORDING:** Magnetic information put down on a disc instead of the more familiar tape base.

**DISSOLVE:** As one scene is fading out another scene is simultaneously coming in. At the middle of the DISSOLVE both scenes are on the screen with the same 50% exposure. In single camera taping techniques the DISSOLVES are added in post production. In multiple camera work the DISSOLVES can be made as the taping proceeds by use of a control panel.

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**A & B ROLLS:** Two separate reels of film or tape on which sequences which are to have special effects, (such as dissolves) put between them are alternately positioned on those different reels.

**ACCESS TIME:** The time between the moment information is called for and the time it is delivered. Instant access usually means before the eye can perceive a time lag.

**ADDRESS:** The location.

**AMTEC:** An Ampex trademark. Accessory standing for Automatic Time Element Compensator.

**BANDING, Color:** A visual disturbance characterized by horizontal variations in color hue caused when a video tape is played back on a video recorder with a slight difference of speed than it was recorded at. This disturbance is corrected by the addition of a Velocity Compensator Module to the VTR.

**BANK:** A section of a Computer that has a specific purpose.

**BIAS:** A signal added during recording to avoid or neutralize inherent non-linearity of magnetic systems. The most commonly used bias is an alternating current of high frequency.

**BINARY:** Having 2 states. Such as on and off, or having either a positive or negative electrical charge, etc.

**BIT:** A unit of information noted by the absence or presence of a property (i.e. an on or off signal).

**BIT RATE:** The speed at which a bit passes by a certain point.

**BREAKUP:** A momentary image distortion.

**BRIGHTNESS:** The overall intensity of light.

**BUY:** To accept a particular take of a scene. The term "A Print" is a buy.

**CAPSTAN:** A rotating spindle used to move things.

**CASSETTE:** (Cartridge) Pre-packaged in self-enclosed format.

**COLD:** Refers to color balance of the scene when it begins to blue or green. **WARM** is when the colors lean to the yellow or red.

**COLOR BALANCE:** Adjusting the color to meet a desired standard. For example, color balancing to the colors of the color bars, color balancing to skin tones, or color balancing to the sponsors' product packaging. In multiple camera taping, cameras are usually balanced for matching skin tones.

**CHROMA CONTROL:** The control for adjusting the color saturation (amount of white) in the reproduced picture.

**CHROMA KEY:** One way of inserting one image over a background of a second image. i.e., you can chroma key a regular size man into a background of a normal size shoe to make it appear as if the shoe were gigantic or the man was very small. In filmmaking this technique is called "Blue Process" photography. In essence, all matting techniques are simply different ways of eliminating predetermined objects around one scene and putting what is left within a second scene.

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frequency carrier band (5 megacycles). This was the old standard recording band. Some older TV station equipment is still low band. All newer VTR equipment has both low & high band capabilities.

**IMMEDIATE ACCESS:** The ability to retrieve or store information instantly.

**INPUT:** To store.

**INTERFACE:** The physical connection or the act of connecting two or more pieces of equipment.

**KINESCOPE RECORDING:** A film made from recording its pictures from a television monitor. A kinescope can be made as a negative from which you can then make prints, or it can be made as a direct positive print right off the tube for quick use. Kinescope can be used as a film print for delayed station or out of the way station usage. Kinescopes were often used years ago when shows were done live and there was no other method available to record the show for future use. In many was the very poor quality of older type kinescopes spurred the research and development of the videotape industry.

**MAGNETIC FILM:** Sprocketed base with a magnetic coating for audio recording and playback.

**MEMORY:** Storage of information.

**MILLI SECOND:** A Millionth of a second.

**MODULE:** A module is a unit by itself. This allows removal or addition of sections. Through interfacing, modules can be added or subtracted to fulfill different functions. Modularization of key parts can facilitate repair and service. Modularization of new equipment allows for upgrading of older equipment and the ability to use older equipment for new and larger tasks, i.e., the Editec module in the Ampex VR 2000 B.

**MONITOR:** To view. Or, the TV set is often called a Monitor.

**MULTIPLEX:** To take or be capable of taking several different signals and send them thru one source.

**NANO SECOND:** 1 Billionth of a second.

**NIXIE:** A type of light on a computer which changes electrical information into visual information.

**NOISE:** Unwanted sound created in small amounts by electronic equipment, heads and also by rough or non-homogeneous oxide coatings on magnetic tape. This term is often used to describe problems showing up as dots of black or white on the playback monitor.

**OERSTED:** Unit of measurement of magnetic field strength used by tape manufacturers to describe the coercivity of a tape.

**OPTICAL EFFECTS:** A film term sometimes used in tape to mean special effects. This can be dissolves, fade, titles or more complicated effects. In film this work was done by lenses so the term "Opticals" came into use.

**OSCILLOSCOPE:** A testing instrument, for example, it can show visual patterns of current voltage.

**OUTPUT:** Also MAXIMUM UNDISTORTED OUTPUT. The useful power delivered by a recorder using a particular type of tape. In computer terms, Output can mean to retrieve.

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**OXIDE:** The magnetic particles which, when properly disbursed in a plastic binder and coated on a backing or base, form the magnetic tape.

**PACKING DENSITY:** In computers, the term is used to mean the amount of bits per a given space.

**PATCH:** A plug in connection between two lines. There can be video (picture) patches or audio (sound) patches or both.

**PLUMBICON CAMERA:** An electronic camera that uses Plumbicon tubes as part of its overall components.

**PLUMBICON TUBE:** A color television pickup tube patented by the N.A. Phillips Co.

**PRE-PRODUCTION:** All activities prior to the actual taping.

**PRODUCTION/POST PRODUCTION:** Production usually refers to the actual shooting although in a scene the word "Production" could be used to include all the activities up to the dupeing (Printing) of the final tapes. Post production usually refers to all editorials or completion activities.

**PROGRAM:** A plan of instruction telling the computer to perform certain operations in order to handle a problem.

**PROGRAMMER:** A person who plans and writes out a program. In many cases this will now be the producer, director, or the videotape editor themselves once enough experience is gained.

**QUADRUPLEX:** Method of recording video on tape using four

rotating heads, each of which places a recording track crosswise on the moving video tape.

**RANDOM ACCESS:** Random access is the ability to recall information independent of the location of the material, i.e. in the beginning, middle or end of the stored material. In our business this stored material would be picture or sound information.

**READ OUT:** To speak the information.

**READOUT:** How the equipment produces the information, i.e. visually on a nixie tube display or on punch cards, etc.

**REAL TIME:** Actual Time.

**REAL TIME:** To perform so fast that it would seem that no time has actually passed.

**RECORDING ENGINEER:** In tape terms he is the man operating the VTR. In Sound terms he is the man who records sound.

**RELIABILITY:** The ability to poreate without malfunctions.

**RESOLUTION:** The sharpness of the edges within the television picture. High resolution is a desirable quality.

**RETRIEVE:** To recover stored information. When you want to see a particular picture frame or sequence you are retrieving it.

**RF:** Abbreviation for radio frequency.

**RGB CHANNELS:** The red, green and blue color channels.

**ROLL:** Vertical flipovers of the picture. Or to start the cameras, tape recorders, or sound recorders.

**SATURATION:** The amount of white mixed in with a color is called the saturation. Deep colors (not dark) are said to be highly saturated or, magnetization to the point beyond which a further increase in the intensity of the magnetizing force will produce no further magnetization.

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THE CARE AND FEEDING OF A PORTAPAK

DO...

Make sure tape is threaded correctly. Make sure tape is threaded through the large and small pinch rollers and not between the small roller and the black plastic guide. To be sure check diagram on inside cover of VTR.

Operate VTR in horizontal position whenever possible. This helps avoid tape snarls.

VTR cover is closed and fastened to avoid top falling off and dust getting in.

Keep lens cap ON and F-stop CLOSED whenever you are not looking through viewfinder and ready to tape. Do not forget that permanent or temporary "burns" can be made on the camera vidicon tube when pointed at a very bright object; e.g. the sun, a pool of water, chrome on a car, etc. SOMETIMES IT CAN HAPPEN IN ONLY A FEW DISASTROUS SECONDS. Be very aware of where your lens is. This can occur even when machine is

Check battery power...stay out of "red" zone. Use A/C power whenever possible.

Pause in "stop" before going to and from the other modes of operation.

Make sure both camera and microphone cables are securely fastened. Mic cable can con

Make sure cameraperson and audioperson (or interviewer) work as a team. Get together your signals for starting and stopping. Avoid embarrassing recordings.

Remember that instant replay is great, but when you are in the field and operating on battery power, rewind and fast forward use up a lot of battery power.

Store camera in brown case so that the lens points towards you when packing it away. Otherwise, damage might occur to vidicon.

Store tape in tape case. Keep away from extreme temperatures and strong magnetic fields.

DO NOT...

Do not point camera at sun or other very bright object EVER...even when machine is "

Do not place heavy objects on top of the VTR.

Do not hold tape in "pause" mode any longer than 30 seconds because heads will get d

Do not carry camera or store in case with lens point straight down...vidicon will "flake" and get dirty.

Do not plug in AC charter while it is "on"...you could short and permanently damage VTR.

Do not touch side of tape that touches heads...the grease and dirt from your hands could clog and dirty the heads and make an uneven or unviewable picture

Do not make unnecessary noises holding and focusing camera when using camera microphone.

Do not place subjects to be taped in front of a strong back-lit area; e.g. a window...the automatic gain control will cause your subjects to be blacked out... a silhouette effect.

Do not drag the VTR around by pulling on the cables instead of picking it up.

Do not attempt to clean heads on the VTR.

Do not store equipment in trunk of car...always transport inside car.

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