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A/B Roll Edit
An edit using two players and one recorder, to permit special effects such as mixes and wipe.

Animation Effects
Effects in which the foreground image is inserted over the background image but does not completely replace it. (example: picture-in-picture)

Anti-Alias
In connection with video signals, anti-aliasing is the electronic process of smoothing out the "stairstepping" which is often seen along the edges of diagonal lines or curved surfaces in a digital effect, digitally generated wipe pattern, or text from a character generator. This "stairstepping," or aliasing,

Without Anti-alias Processing

With Anti-alias Processing
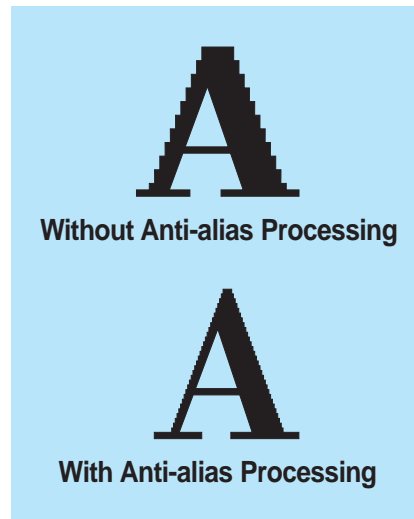
would not be present if it were possible to sample the signal at an infinite rate. Technical limitations, of cause, preclude sampling at infinite rates and therefore some degree of aliasing is unavoidable. To compensate, devices such as character generators and digital effects equipment often have special circuits to soften, or anti-alias, the stairstep edges making them less noticeable.

Auto Transition
A transition which occurs without manually controlling the switcher's fader lever. Auto transitions are triggered from the AUTO TRANS button or from the editor connected to the switcher.

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B-Y Signal
One of the two color difference signals in a component video signal. Generated by subtracting the blue signal (B) from the luminance (Y) signal.

Background Picture
In animation effects, the picture into which the foreground picture is inserted. In transition effects, the picture that is replaced as the effect progresses (FROM picture). The picture selected with the BACKGROUND bus buttons.

Background Through Mode
In the DFS-700/700P, the output mode in which the video input of the background bus and the video input of the foreground bus are mixed for output. Normally the two pictures are delayed by one frame, but in pre-read editing the background bus picture is delayed by four lines. Pre-read editing is enabled by inserting the input of the background bus into the output of the recorder VTR. In this state, the foreground bus input delay becomes one frame +

four lines. Therefore, the VTR output that is inserted into the foreground bus must be read ahead by one frame.

Black Burst
A video signal which has no luminance or chrominance components (except for the burst signal), but contains all other elements of a video signal. Black burst is the most common reference signal used for synchronizing equipment such as VTRs and cameras with the switcher to achieve correct timing. The DFS-700/700P offers three black burst outputs.
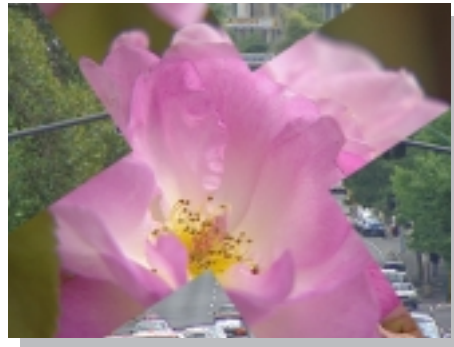
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Border

A thickened edging, similar to a picture frame, placed around a key signal, a digital effect, or along the edge of a wipe. The thickness, color and softness of the edge are generally adjustable. See also "**Soft Border**".

Wipe With Border

Wipe Without Border

Bus

An internal signal path for selection of input signals. Signals selected for input to the bus are passed on to the next process. The DFS-700/700P uses a foreground bus, background bus and an auxiliary bus for the selection of input signals.

Chroma/Chrominance

The color information in a composite video signal. This information describes the hue and saturation of a picture, but not the brightness. The brightness and contrast are described by the luminance component of the signal. The signals I, Q, R-Y and B-Y are all examples of chrominance information.

Chroma Key

Key effect in which a particular color (usually a highly saturated blue) is used to cut holes in a background picture.

Color Bar

A test signal displayed on a monitor screen as vertical stripes of different colors. Color-bar signals are most commonly used as a reference for adjusting monitors or adjusting the TBCs of VTRs by recording them to the tape and playing them back.

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Color Matte

An internally generated color signal with adjustable hue, saturation, and luminance. The DFS-700/700P has five internal color matte generators, which are used for color background, color border, drop shadow, DSK fill and DSK border.

Component Signal

A video signal with separate luminance (Y) and color difference (R-Y, B-Y) video components. As compared to the composite signal, the component signal provides high quality because of its wider chroma bandwidth (color detail) and absence of cross color/dot crawl.

Composite Signal

A video signal in which the luminance signal (Y) and chroma signals (I/Q or R-Y/B-Y) are combined (interleaved) as one signal (NTSC or PAL). As compared to the component signal, the composite signal offers less chroma detail and exhibits color artifacts due to encoding limitations.

Crosspoint

An electronic switch where video signal lines cross. In video switchers, the crosspoint usually refers to the input select buttons on each bus (Foreground, Background or Auxiliary bus)

Cut

An instantaneous transition from one picture to another, or the instantaneous insertion or deletion of a key signal.

DME

An abbreviation for Digital Multi-Effects: effects in which the image geometry is manipulated using digital processing.

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Down Stream Keyer (DSK)

Effect used to superimpose characters or graphics over the output signal. The term "downstream" refers to the fact that superimposition takes place in the final stage of processing–after other effects have been applied. DSK requires a key source signal to define the outlines of the characters or graphics, and a key fill signal to fill the outlines. See also "**Title Key**".

Drop Shadow

A switcher function that gives the foreground key video the appearance of having a shadow. This function is often used with titling. In the DFS-700/700P certain characteristics of this shadow, such as width and position, are adjustable.

Original Video **Video With Drop Shadow**
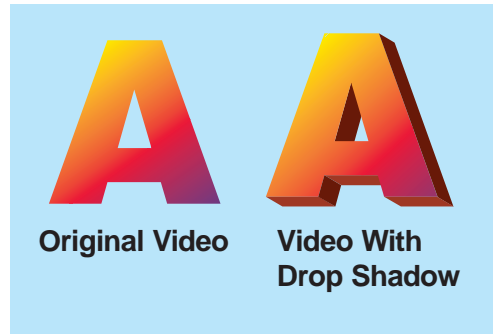
Editing Control Unit

A video editor with functions for remote control of VTRs, video switchers, audio switchers, and other video editing equipment. Editing control units provide synchronized control and timing of these devices. The Sony PVE and BVE Series of edit controllers are some examples.

External Key

An input signal to the switcher used exclusively as a key source. Typically this key source is selected automatically with the selection of the key fill. External key is the opposite of Self Keying.
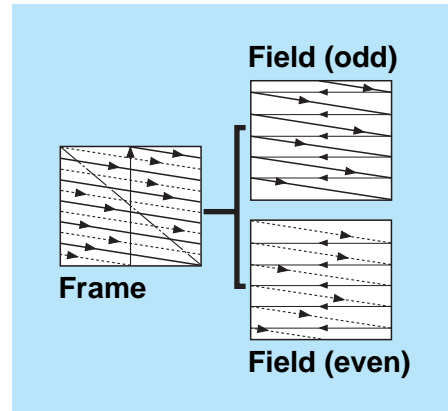
Fade-to-black

A transition mode in which one video signal is faded to the color black before the other video signal is faded up.

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Field

In the NTSC color television system, 262.5 horizontal scanning lines. Odd lines are scanned for the first field before returning to the top of the screen to scan even lines. A frame is composed of two fields: the odd and even fields.

Frame — Field (odd) — Field (even)

Flip-Flop Bus

A switcher bus configuration in which the video selected on one bus of the switcher is immediately transferred to the other bus at the completion of a transition. In the DFS-700/700P this type of bus is associated with the Foreground and Background buses, with the advantage being that the same background bus of the switcher always determines what source is on air. If the Foreground bus and Background bus are not the Flip-Flop type, the bus contributing to the program output depends on where the fader lever is positioned.

Foreground Picture

In animation effects, the picture inserted into the background picture. In transition effects, the picture left on the screen after the effect has completed (To picture). The picture selected with the Foreground bus buttons.

Frame

Two fields, containing all the information in a complete picture.

Frame Synchronizer

A device used to bring the timing of unsynchronized video into conformance with a local reference signal. In the DFS-700/700P, the frame synchronizers allow VTRs without TBCs to be used as input sources.

Gen-Lock

Used to synchronize output signals to a common external sync signal. Switcher gen-lock means that the program output and black burst outputs are synchronized to the signal input to the switcher's gen-lock connector.

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GPI

Abbreviation for General Purpose Interface. An interface for remote control of devices (usually a titler or switcher) lacking a serial interface. All edit control units provide some form of GPI Interface.

Hue

The attribute of colors that allows them to be encoded as red, green or blue. For example, red and pink have the same hue, but different saturation.

Key

(1) An effect where a portion of the background video scene is replaced by a new video scene or caption.
(2) The signal used to pass or block portions of the video signal associated with the key effect. Determines the shape of an inserted image in a key effect.

Key Effect

Key Clip

In luminance keys, the key clip specifies a reference luminance level to insert the key. The part of the signal above the reference level is used as the key source signal. See also "**Key Source**".

Key Fill

A signal used to fill the hole cut with the key source signal.

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Key Frame

Key frames are used in both switcher and digital effects devices to create a sequence of independent events. One key frame is one event. A series of key frames can be sequenced with linear and/or non-linear transitions to create a complex user program effect, which may then be executed with a single command.

Key Gain

The sensitivity of the key circuit, which can be adjusted with the switcher's key gain control. It is adjusted to provide the desired edge sharpness.

Key Invert

A key mode which inverts the polarity of the key source signal to allow dark areas of the key source video to cut holes in the background instead of bright areas. A chroma key mode which inverts the foreground and background fill positions.

Key Mask

A signal used to hide a part of a title key or downstream key signal so that only the desired part is used.

Key Source

A signal used to cut a hole in a background picture for insertion of a key fill signal.

Lighting

A highlight effect produced by superimposing a full-strength video signal shaped by a wipe pattern over an attenuated (darkened) signal from the same video source. Spotlight is implemented by use of preset pattern and shadow.

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Linear Key

A key that is processed near unity gain by the switcher. The clip and gain control of a linear key have a very small adjustment range and keying is performed using the absolute signal level of the key source. A Linear Key is used when the key has already been properly shaped at the key source.

Looping/Loop-through

An input that includes two connectors. One connector accepts the input signal, and the other connector is used as an output for connecting the input signal to another piece of equipment.

Luminance Key

A key effect in which a luminance signal is used to define the outlines of characters or graphics.

Luminance Signal

The part of a video signal that carries brightness information. Also called the Y signal.

Mix/Dissolve

An effect in which one signal fades in while another fades out. Also called dissolve.
A transition between two video signals in which one signal is faded down as the other is faded up. A constant video output level is maintained at all times.

Pre-read Editing

An edit mode that allows the use of the recorder output (playback) as an edit input source. Pre-read allows not only the insertion of titles to be accomplished via one recorder but also A/B-roll editing via one player and one recorder. For pre-read editing, both the recorder VTR and editing control unit must be pre-read capable.

Pre-roll

To run a videotape a certain distance before the edit IN point in order to bring the tape to a steady speed and synchronize it with other tapes.

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Preview (PVW) Output

The output of the switcher that allows the next source selected for air to be viewed.

Program (PGM) Output

The on-air or final output of the switcher.

Postroll

To run a videotape a certain distance past the edit OUT point in order to monitor the video that follows.

R-Y Signal

One of the two color difference signals in a component video signal. Generated by subtracting the red signal (R) from the luminance (Y) signal.

RGB Signal

A signal format in which red, green, and blue signals are transmitted separately. A separate sync signal may be sent, or the sync signal can be added to the green signal. The DFS-700/700P uses the latter method.

Saturation

The extent to which a color has been diluted by white. Pure red is fully saturated, while pink is diluted.

Self Key

A key effect in which the key video serves as both the key source and fill.

SDI

A serial component digital signal. Allows the transmission of video, four channels of audio and timecode via one BNC connector. SDI is offered in two versions - 4:2:2 component and 4fsc composite.

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S-video Signal

A video signal deprived from separate luminance (Y) and chrominance (C) components. As opposed to composite video, S-video provides higher quality because interference between the Y and C signals is eliminated.

Snapshot

Data containing the setting of specific controls on a switcher control panel. Snapshots can be saved and recalled to restore the control panel to a desired state.

Soft Border

A wipe pattern border which is mixed on the edges to give a soft effect.
A border with edges that are not sharp transitions appear to be "fuzzy". With the DFS-700/700P the extent of this fuzziness is adjustable.

Subcarrier (SC)

The part of a video signal that carries color information. The amplitude represents saturation, and the relative phase against the color burst signal represents hue. Also called the color subcarrier.

Tally

A light which, when illuminated, indicates that the associated push-button has been selected or that the associated input to the switcher may be active in the program output.
An indication that a particular device is "on-line". This indication, usually a lamp or LED, can either be on the switcher itself or on a remote piece of equipment, such as a monitor or a camera. A source's Tally is activated automatically when the source is selected via the switcher's program bus.

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Title Key

Effect used to superimpose foreground characters or graphics on a background. Requires a key source signal to define the outlines of the characters or graphics, and a key fill signal to fill the outlines. See also "**Down Stream Key**".

Transition

A period during which one picture is replaced by another, or a period during which a key is inserted or deleted.

Transition Effects

An effect in which the foreground picture completely replaces the background picture.

Wipe

A transition effect in which one picture moves in to replace another. Often the new picture appears as a geometrical shape such as a circle or star.

YUV Signal

An analog component signal, consisting of a luminance (Y) signal, a color difference signal U (B-Y) and a color difference signal V (R-Y). Equivalent to the component signal.