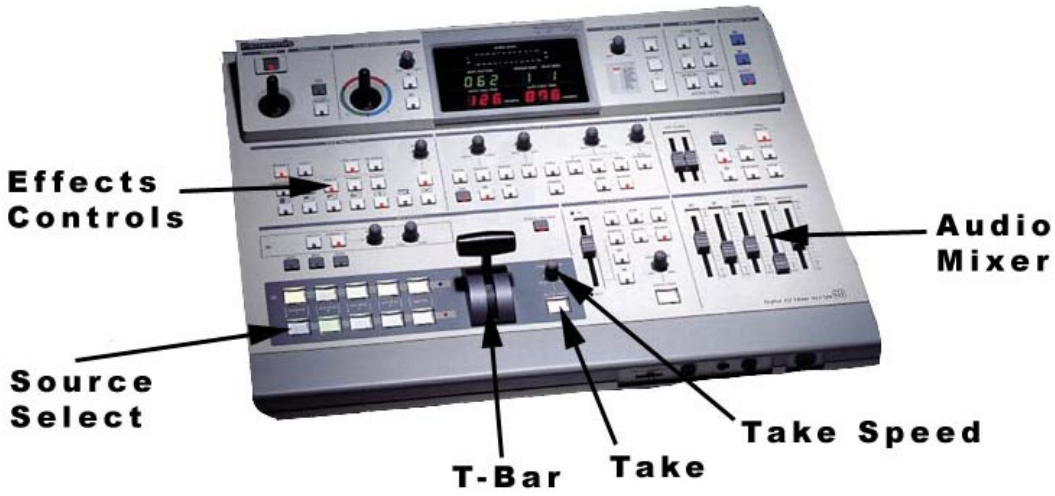
Video Mixers



Video mixers are used to combine and select sources for playback and recording. A mixer allows you to select a source, then use a particular **transition** (such as a wipe or crossfade) to blend from the previous source to the new one.

Traditional video mixers have two **busses**, an A bus and a B bus. Much like a two-scene preset light board, when the A bus is active, a new source can be selected on the B bus. This selection is accomplished with the **source select buttons.**

Once a transition is selected, the **t-bar** can be used to manually fade from one bus to the other, applying the transition as quickly or as slowly as the bar is moved.

Alternately, for more precisely repeatable control, the **take button** can be used instead of the t-bar. A **take speed** control allows you to select the speed at which the transition will be applied.

Note a problem: If the T-Bar is on the A bus, and you use the take button to crossfade to the B bus, the t-bar is “lost” – IE, touching the t-bar will snap the output back to the A bus (since that’s where the bar starts its movement.) This is obviously not the desired effect.

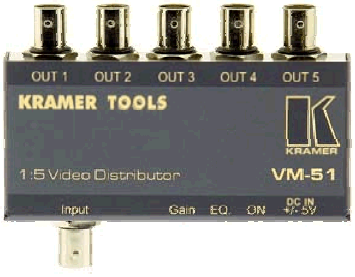
The **effects controls** allow you to select transitions, apply video effects (such as negative, solarizing, and other special effects), as well as apply **chroma keying** (making a video transparent based on a certain color) or **luminance keying** (making a video transparent based on a certain brightness).

Some modern video mixers use the bus system in a slightly different way. Instead of the T-Bar transitioning between busses, the t-bar transitions between a **current source** and a **next source.** The source select buttons allow you to cue up a source as "next" or to **cut** directly to it. The Take button still acts as an alternative to the t-bar.

The benefit here is that the take button and the T-bar ALWAYS fade from the current source to the next source. The t-bar can never get lost.

Video Routing and Distribution

The **matrix switcher** is a staple of video routing. A matrix switcher consists of a number of inputs and a number of outputs. Any input can be routed to any combination of outputs.



A **Distribution Amplifier** or **DA** allows one video source to be routed out to multiple outputs. Simply using a "Y" splitter will result in significant signal degradation; a DA avoids this problem by adding power to the signal. A DA may also be useful when the video signal is being run over long distances.

Video Signal Cabling

Composite Video: A single RCA or BNC cable is used to carry a composite signal. This is VHS quality video.

S-Video: A 5-pin tubular connector carries an S signal, a slightly higher quality video format.

Component Video: Three, four, and five wire cables are used to split the video signal into its various components. This is the highest quality analog video.
Digital Video: The most common digital video interface is FireWire, found on many video mixers, computers, cameras, and playback devices. Maintaining a digital format through the entire editing and playback process results in lossless video. (Video which has not suffered any signal degradation.)