HIGH RESOLUTION IMAGE COMBINER
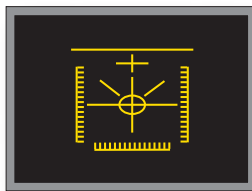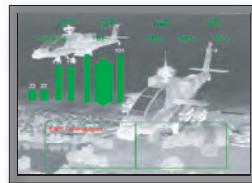

Background

Foreground

An illustration of chroma-key technique. The foreground image contains a color that can be keyed on, in this case black. The combiner makes the foreground image transparent where it finds the key color, allowing the background image to show through.

The SynchroMaster 555 overlayer/keyer digitizes, synchronizes, and combines images from two high resolution computer sources into one composite image, at up to 1920 x 1200 pixel resolution.

SYNCHROMASTER 555
Overlayer / Keyer

The new SynchroMaster® 555 overlayer/keyer combines images from two high resolution computer sources or image generators into a composite image. The two signals, one foreground and one background, are digitized, synchronized, and combined at up to 1920 x 1200 pixel resolution.

The SynchroMaster 555 offers color keying of RGB analog and DVI sources with exceptional image quality. The unit supports one dual RGB or DVI channel and a second RGB channel. It can synchronize and combine signals of different line and frame rates and interlacing formats. Using a chroma-key technique, one signal is made visible through the other wherever a color falls within a specified color range. Either channel can be configured as the foreground or the background signal. The output signal is genlocked to one of the two inputs, and is available in either RGB or DVI format.

The SynchroMaster 555 features an easy-to-use interface for selecting a key color. The user simply moves a cursor over the image being keyed on until it is positioned over the desired color.

In a typical aircraft or helicopter simulation, one image generator produces the background, an out-the-window display, and a second produces the foreground, a heads-up display (HUD). The SynchroMaster 555 combines the two images into a pilot's view through the HUD. Important in simulation, the architecture offers very low latency.

Superior image quality, input versatility, and operational simplicity make the SynchroMaster 555 an excellent solution for applications in simulation and command-and-control.

Specifications

High Resolution Graphics Inputs

Analog RGB	Interlaced or non-interlaced	
	Number	2
	Video level	Nominal 0.7V p-p (1.0V composite p-p)
	Intput impedance	75 ohms
	Sample rate	Up to 205 MHz
	Horizontal scan rate	15 kHz to 100 kHz non-interlaced
	Frame rate	Up to 100 Hz
	Resolution	640 x 480 - 1920 x 1200 pixels
	Sync	3 wire (sync on green, bi-level or tri-level),
		4 wire (separate composite sync),
		5 wire (separate H and V sync)
	Sync level	0.3V p-p (3 wire bi-level),
		0.6V p-p (3 wire tri-level),
DVI		1 to 5V (4 and 5 wire)
	Number	1
	Resolution	640 x 480 - 1600 x 1200 pixels
	Maximum bandwidth	1.65 Gbps / channel (DVI single link)

High Resolution Graphics Output

Analog RGB		
	Video level	Nominal 0.7V pk-pk
	Output impedance	75 ohms
	Sample rate	Up to 205 MHz
	Resolution	640 x 480 - 1920 x 1200 pixels
	Sync	3 wire (sync on green),
		4 wire (separate composite sync),
		5 wire (separate H and V sync)
	Sync level	0.3V p-p (3 wire), 5V (4 and 5 wire)
DVI		
	Resolution	640 x 480 - 1600 x 1200 pixels
	Maximum bandwidth	1.65 Gbps / channel (DVI single link)

Functions

Chroma key	1-bit key with interactive color selection
Image controls	Brightness, contrast, gamma, zoom, pan
Test signals	Internally generated test signals

Control

Network connection		
	Type	10/100 Base-T Ethernet (TCP/IP)
	Connector type	RJ 45
	Function	Command line control via internal Telnet server
RS-232 serial		
	Connector type	RJ11
	Baud rate	9600 baud to 115k baud
	Function	Command line control of all system functions

Other

Power	100-264 VAC, 50/60 Hz, 35 W maximum
Size	17.25" (w), 12" (d), 1.75" (h) excluding rack mount ears
Weight	10 lbs

RGB SPECTRUM ®
visual resource management™