Virtual Processor / Chroma Keyer

VRP-70HS/S *Primatte® RT Plus*

Chroma Keyer

Color Adjustment

Routing Switcher

Camera Selector *DSK*

Process Amplifier

Delay Line
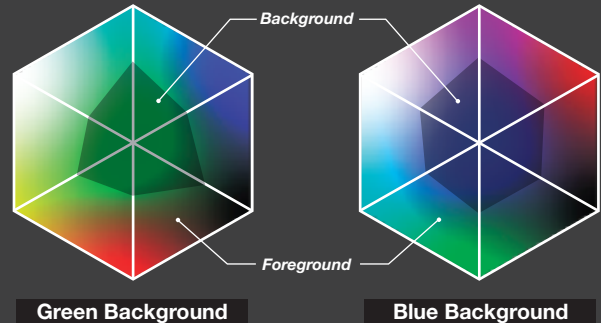
VRP-70HS & VRP-70S Come with Primatte®

Primatte® RT Plus

High-quality Primatte® Chroma Keys Provided in Real Time

VRP-70HS & VRP-70S feature Primatte® RT Plus, a top-of-the-line chroma keyer. Primatte® RT Plus is an improved version of the Primatte® chroma keyer that has already grown to popular standing in the NLE and computer graphics industry. Primatte® RT Plus delivers real time high-quality chroma keying with an instinctively simple operational environment.

Color Space Divided into 6 parts to Flexibly Accommodate Variations in the Foreground Colors

As shown in the diagram, the color space can be divided into six parts, and the range of colors used for the foreground colors can be set flexibly by setting the color parameters. The adjustment ranges of the boundary colors which are combined can also be set individually for each color so that the ideal combination environment is delivered without having to worry about color blur in the foreground.

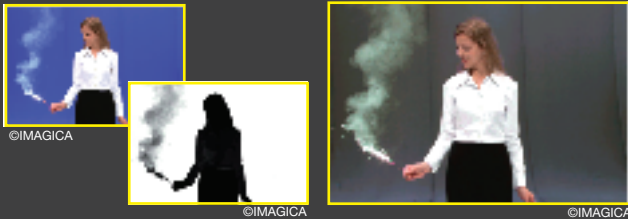
Green Background   **Blue Background**

Color Spill Enhancing/Replacement Function

Adjust properties of sampled foreground color to remove color spill using enhanced detail and transparency adjustments. Using a replacement function, background colors remaining on the edges can be replaced with other color schemes sampled from background coloring.

Semi-transparent Chroma Keying

Chroma keying for smoke, water, glass, hair, and other semi-transparent objects is done effortlessly.

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Auto Chroma Key Function

Parameters can be calibrated automatically by background color cursor sampling.

White/Black Background Processing

Chroma keying can be processed even when there is no color information, such as when black or white is being used as the background color.
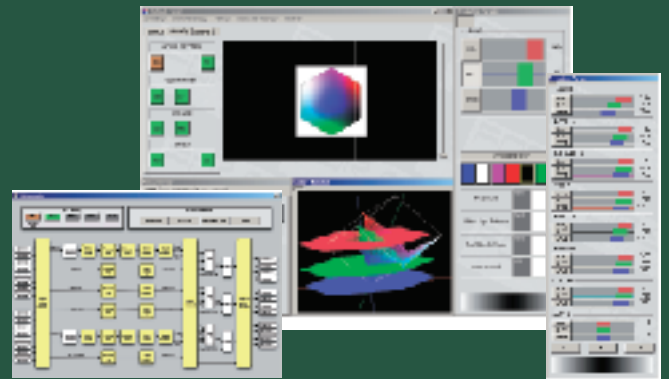
Two Channels of Chroma Key

Two channels of chroma key available with a VRP-7CK/7SCK option.

Remote Control Unit: VRP-RUA

- Up to five VRP series units can be operated from one remote control unit.
- RS-232C, RS-422 and GPI connectors provided to facilitate PC interfacing.
- Real time monitoring of settings and adjustments without affecting the output.

Remote Control Software: VRP-7GUI

This GUI control software enables various controls and adjustments for the VRP-70HS or VRP-70S to be performed from a PC. The user-friendly interface makes it easy to set the parameters and functions. Either a PCI board (7GUIP) or USB adapter (7GUIU) can be selected for the ARCNET communication device that is supplied with the product.

RT Plus Chroma Keyer

Crammed with Virtual Studio/RCG System Peripherals

In a normal virtual studio or RCG system installation not only will you need a chroma keyer, but you'll also need camera selectors, delay lines, routing switchers, DSKs, process amplifiers, color adjustment functions, and various other video peripherals. All of these functions have been crammed into the compact 2U VRP-70HS or VRP-70S chassis. This compactness saves installation space and also makes a major contribution to system simplification.

VRP-70HS: HD and SD Formats Supported

VRP-70S: SD Formats Supported

A sister model of the VRP-70HS, this unit supports SD-SDI inputs and output signals only. It carries the same functions as the VRP-70HS.

Full Range of Inputs and Outputs

Under its standard specifications, the unit comes with 8 inputs and 4 outputs which can be optionally expanded up to 16 inputs and 12 outputs. All the inputs and outputs can be assigned without restriction to ensure that several different kinds of systems are flexibly accommodated.

Proc Amp and Color Adjustment Functions

All the inputs come with Proc Amp and color adjustment functions. These functions eliminate the feeling that something is not quite right about the color tones used for the foreground and background after combination, and enable more natural-looking composite screens to be created.

Camera Delay Lines

Delay from 0H to 10 frames can be added to the camera inputs. Optimally make delay adjustments suited to your system needs.

Texture Input

By adding an optional texture input, it is possible to add another CG input line. Max. 2 inputs.
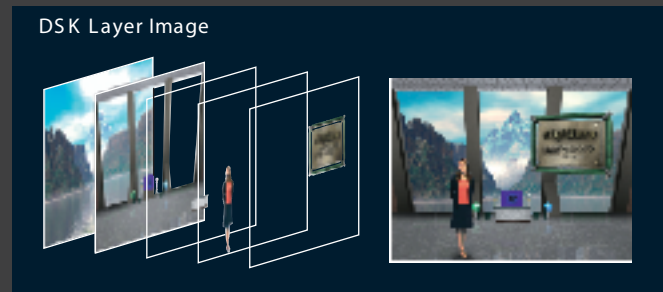
GPI and Tally Functions Provided

The unit comes with GPI and tally functions which are vital for constructing systems. They enable tally lighting which is coupled with video wall displays in a virtual studio or RCG system.

Redundant Power Supply Supported

An optional power supply can be installed to ensure full power redundancy.
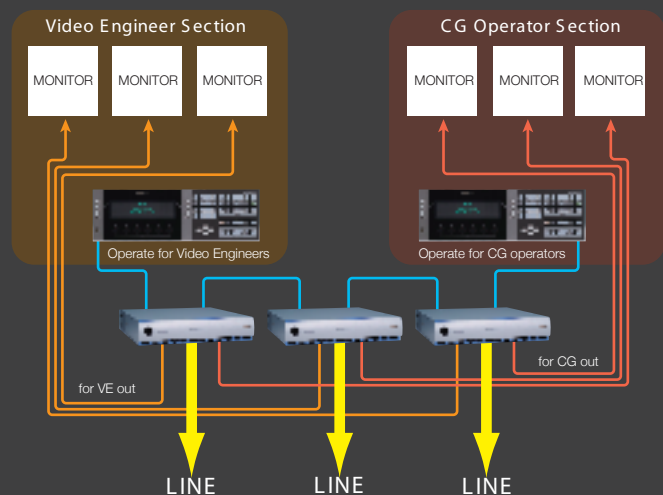
DSKs with 5-layer Configuration Provided for 3 channels

DSKs for three channels are provided. Each DSK can combine and output up to five input source layers without restriction. With the VRP-70HS/S at hand, complex composition outputs can be displayed just the way you want to.

DSK Layer Image

Example of System Construction

Use of a multiple number of VRP-70HS/S units and remote control units enables the video materials required by video engineers or CG operators to be monitored with no adverse effects on the main line. Many different kinds of studio operations can be flexibly accommodated.
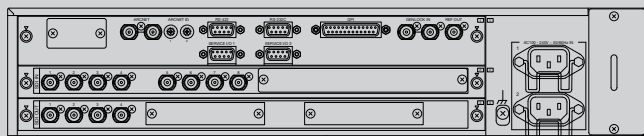
Video Engineer Section
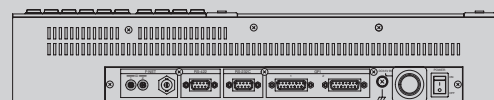
MONITOR MONITOR MONITOR

CG Operator Section

MONITOR MONITOR MONITOR

Operate for Video Engineers

Operate for CG operators

for VE out

for CG out

LINE   LINE   LINE

Specifications

	VRP-70HS (HD/SD switchable model)	VRP-70S (SD model)
Standard	HD: 1080/59.94i, 50i, 720/60p, 59.94p (Selectable at menu) SD: 525/60 or 625/50 (Selectable at menu)	SD: 525/60 or 625/50 (Selectable at menu)
Video Input	HD-SDI: 1.485/1.001Gbps or SD-SDI: 270Mbps, 75Ω, 8ea. (max. 16ea.), BNC	SD-SDI: 270Mbps, 75Ω, 8ea. (max. 16ea.), BNC
Reference Input	BB: 0.429Vp-p (NTSC) / 0.45Vp-p (PAL) or Tri-level Sync: 0.3Vp-p, 75Ω or loopthrough, 1ea., BNC	BB: 0.429Vp-p (NTSC) / 0.45Vp-p (PAL) 75Ω or loopthrough, 1ea., BNC
Video Output	HD SDI: 1.485/1.001Gbps or SD-SDI: 270Mbps, 75Ω, 4ea. (max. 12ea.), BNC	SD-SDI: 270Mbps, 75Ω, 4ea. (max. 12ea.), BNC
Processing	4:2:2:4 component	
Quantity	Y: 10-bit, C: 10-bit, K: 10-bit	
Chroma Keyer	Primatte®RT Plus	
	4:4:4:4 RGBA 13-bit internal process (Color space convert and up-sampling process)	
Proc Amp	Video Level: 50% - 150% / Y Level: 50% - 150% / Black Level: -50% - +50%	
Color Adjustment	Chroma Level: 50% - 150% / Chroma Phase: -50º - +50º / P$_B$P$_R$ Balance Level: -50% - +50%	
DSK Function	Key Mix Mode: Normal, Add, Full / Mix Layers: up to 5 layer / Transition time: 0 sec - 30 sec	
	Key Clip: 0% - 100% / Key Gain: 0% - 3,199%	
Event Memory	100 events	
Camera Input Delay	0H - 10 frames	
Interfaces	ARCNET: 75Ω or loopthrough, 1ea., BNC (Max. cable length: 200m (5C-2V))	
	RS-422: 1ea., 9-pin D-sub (female)	
	RS-232C: 1ea., 9-pin D-sub (male)	
	GPI: 1ea., 25-pin D-sub (female) (10-input, 12-output)	
Temperature / Humidity	10°C - 40°C / 30% - 90% (no condensation)	
Power / Consumption	100VAC - 240VAC, 50/60Hz / Approx. 160VA (158W)	100VAC - 240VAC, 50/60Hz / Approx. 130VA (124W)
Dimensions / Weight	430 (W) x 88 (H) x 530 (D) mm EIA 2RU / Approx. 15kg	
Accessories	Operation manual / AC cord / Rack mount brackets	
Common Options	VRP-RUA: Remote control unit (Rack mount brackets are separate option) / VRP-7PS: Redundant power supply unit	
	VRP-7GUIP: Remote control software (for PCI board) / VRP-7GUIU: Remote control software (for USB adapter)	
Options	VRP-7IOA: HD/SD additional output card (4 outputs)	VRP-7SIOA: Additional output card (4 outputs)
	VRP-7IOB: HD/SD additional I/O card* (8 inputs, 4 outputs) *Required VRP-7IOA	VRP-7SIOB: Additional I/O card* (8 inputs, 4 outputs) *Required VRP-7SIOA
	VRP-7CK: HD/SD additional chroma keyer card	VRP-7SCK: Additional chroma keyer
	VRP-7TEX: HD/SD additional texture input card	VRP-7STEX: Additional texture input card

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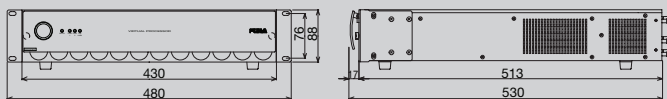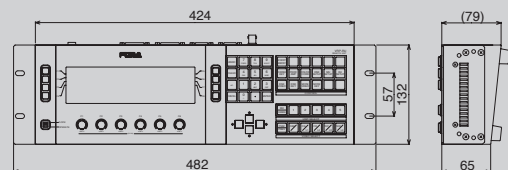
VRP-70HS/S Rear Panel

VRP-RUA Rear Panel

VRP-70HS/S External Dimensions

VRP-RUA External Dimensions