HD/SD Digital Color Corrector

DCC-70HS

A superb HD and SD color corrector, the DCC-70HS provides precise control of all color correction parameters, optimizing the appearance of video source signals.

- Up to 32-bit, high linear, control for every color correction parameter.
- Independent or group adjustable white level, black level, and gamma parameters.
- Independently adjustable video, chroma, setup levels, and hue.
- "Unity button" allows one touch re-setting of all color parameters to unity.
- One of 3 color correction modes available, Balanced, Differential, or Sepia.
- Adjustable white and black clip parameters.
- One control unit can control up to 4 DCC-70HS units.

Create the Color You Want with the DCC-70HS

Multi-Bit Rate/Multi-Format

DCC-70HS is an HD/SD-switchable color corrector, supporting various SD and HD formats. The DCC-70HS includes all functions available in the DCC-700H HD Color Corrector, with additional unique and more advanced features, all packaged in a 1RU/half 19" R compact frame.

Operative HD formats: 1080/59.94i, 1080/50i, 720/60p, 720/59.94p.
Operative SD formats: 525/60 (NTSC), 625/50 (PAL).
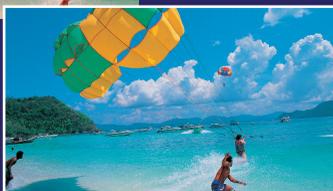*Other formats will soon become available.

Versatile Color Correction

There are 3 different color correction modes available: Balance mode for R/G/B color correction; Differential mode for Y/PB/PR color correction; and Sepia mode for mono-tone color correction.

Balance mode

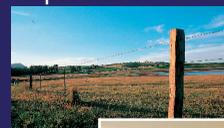Provides correction of white-unbalanced pictures.

Differential mode

provides correction without affecting white-balance.

Sepia mode

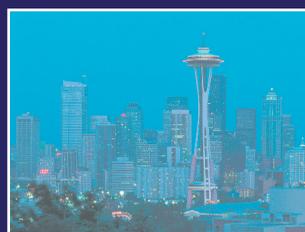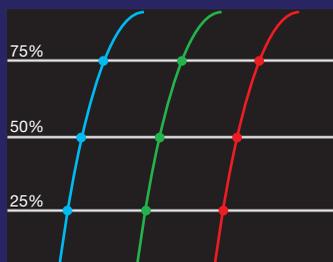provides mono-tone color effects.

With variable weather conditions encountered during outside recordings, certain colors in the recorded picture need to be corrected. Also when multiple cameras are used for outside recordings, each recorded picture needs to be adjusted to the same color. Balance mode can provide the best performance for such needs, enabling the up-sampling of 4:2:2 10-bit digital input signal to RGB 4:4:4 matrices, resulting in improved picture quality.

When signals from component VTRs need to be color-corrected or process amp controlled, Differential mode can provide the best performance. Differential mode enables the up-sampling of Y/PB/PR input signals to 4:4:4, without changing the Y/PB/PR format.

Sepia mode can provide the best performance in commercial and TV program production for color effects and histric scenes.

Overall the unsurpassed internal 32-bit signal processing provides smooth and precise color correction, satisfying user requirements.

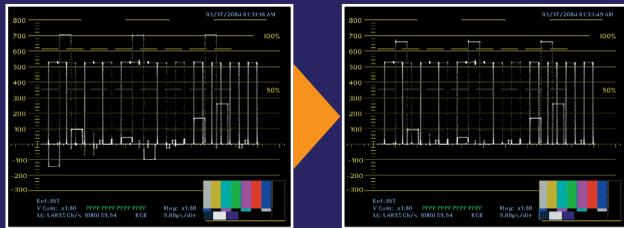## Gamma Correction

75%

50%

25%

Gamma Correction

Independent R/G/B gamma controls are available. In each gamma control, 3 different tone ranges can be selected: high tone range where gamma center is allocated at 75%, middle tone range where gamma center is allocated at 50%, and low tone range where gamma center is allocated at 25%. More advanced gamma adjustments are also possible.
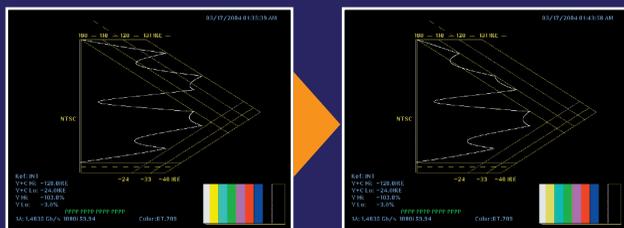
RGB/PʙPʀ Clip

The DCC-70HS has white and black clip controls for Y/Pʙ/Pʀ, in addition to independent white and black clip controls for RGB. The RGB clip controls are particularly useful when RGB computer graphics and still pictures are edited in Y/Pʙ/Pʀ format, for perfect legal color range adjustments between RGB and Y/Pʙ/Pʀ.
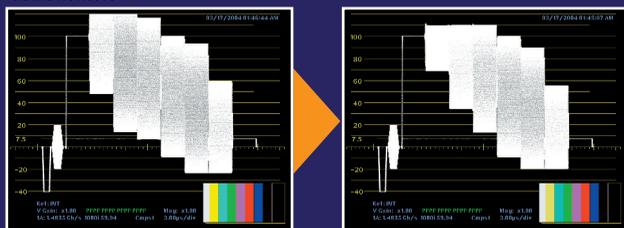
Composite Clip

Allow head

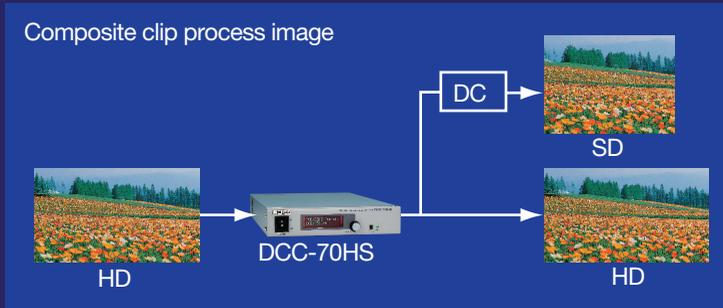Correct within SD color range

Waveform

Correct within SD color range

As well as white and black clip controls for Y/Pʙ/Pʀ and RGB modes, DCC-70HS also has Composite Clip control, enabling the control of color level differences when HD pictures are down-converted to SD. When Composite Clip is set on, HD color data can automatically be adjusted within SD color ranges, so that when HD and SD signals are simultaneously broadcast, any color differences can be completely eliminated.
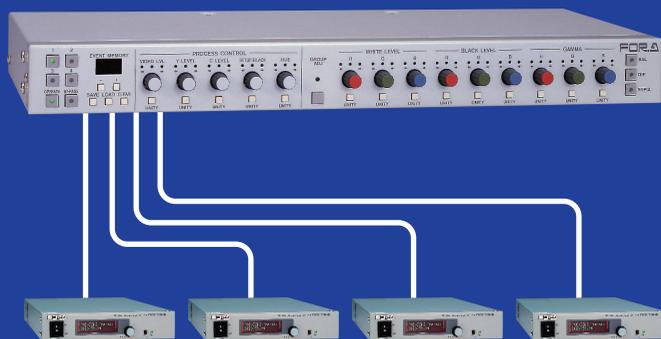
Composite clip process image

Other Features

● Independently adjustable video, chroma, setup levels, and hue.
● Adjustable Y-white and Y-black clip parameters.
● "Unity button" allows one toutch re-setting of all color parameters to unity. (DCC-OU)

Remote Control Unit
DCC-OU

The DCC-OU is a remote control unit for DCC-70HS (as well as for DCC-700 and DCC-700H). One unit can control up to 4 DCC-70HS units, in addition to ordinary processing amps, providing video, chroma and setup level, and chroma phase control. DCC-OU can also control white level, black level and gamma (white and black level controls are for component signal clips, whereas GBR and composite signal clips are controlled by DCC-70HS). Balance, Differential and Sepia modes are all selective. Event memory can also be controlled.
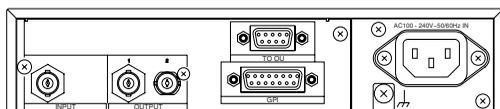
DCC-70HS Specifications

Standard	HD SDI: 1080/59.94i, 1080/50i, 720p/59.94, 720p/60 (Selectable at menu) (Other formats will be released)
	SD SDI: 525/60 (NTSC) or 625/50 (PAL)
Video Input	HD SDI: 1.485Gbps or 1.485/1.001Gbps, SD SDI: 270Mbps, 75Ω, 1ea., BNC
Video Output	HD SDI: 1.485Gbps or 1.485/1.001Gbps, SD SDI: 270Mbps, 75Ω, 2ea., BNC
	(Output-1 has a Bypass function)
Processing	4:4:4 component, 14-bit (Max. 32-bit)
Sampling Frequency	HD SDI: Y: 74.25MHz, 74.25/1.001MHz, C: 37.125MHz, 37.125/1.001MHz
	SD SDI: Y: 13.5MHz, C: 6.75MHz
Quantization	Y: 10-bit, C: 10-bit
I/O Delay	HD SDI: Approx. 3.0μsec, SD SDI: Approx. 10μsec
Process Control	Video Level: 0% - 200%
	Y Level: 0% - 200%, Chroma Level: 0% - 200%, Hue: over 360º
	Setup Level: ±20% (When "Video Level" and "Y Level" are set to unity)
	YP$_B$P$_R$ Clip: Y-White Clip; Approx. +50% - Approx. +109%, Y-Black Clip; Approx. -7% - Approx. +50%
	P$_B$P$_R$ Clip: Approx. +50% - Approx. +111%
	RGB Clip: White; +50% - +300%, Black; -200% - +50%*
	Composite Clip: White; +50% - +150%, Black; -50% - +50%*
Color Correction	Mode: Balanced, Differential or Sepia (selectable)
	White Level: 0% - 200% ea., G, B and R
	Black Level: 0% - 200% ea., G, B and R
	Gamma Level: 50% - 150% ea., G, B and R (Adjustable between Highlight, Middle and Shadow level)
Interfaces	GPI: 1ea., 15-pin D-sub (female)
	RS-422: 1ea., 9-pin D-sub (female) (connection for DCC-OU)
Temperature / Humidity	5ºC - 40ºC / 30% - 90% (no condensation)
Power / Consumption	100VAC - 240VAC ±10%, 50/60Hz / 31VA (30W) (when 100VAC), 35VA (28W) (when 220VAC)
Dimensions / Weight	212 (W) x 44 (H) x 350 (D) mm / Approx. 3kg
Accessories	Operation manual / AC cord / Control cable (PC-2076-1, 10m)
Options	DCC-OU: Operation unit / Single mount or dual mount rack brackets

*Can be set only in the menu of the body, not DCC-OU.

DCC-OU Specifications

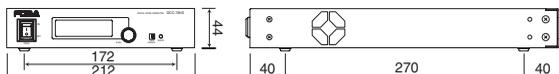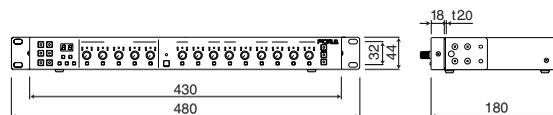|	
Interfaces	RS-422: 4ea., 9-pin D-sub (female)
Temperature / Humidity	10ºC - 40ºC / 30% - 90% (no condensation)
Power / Consumption	100VAC - 117VAC±10% or 220VAC - 240VAC, 50/60Hz / 10VA (when 100VAC)
Dimensions / Weight	430 (W) x 44 (H) x 180 (D) mm / Approx. 1.5kg
Accessories	Operation manual / AC cord / Rack mount brackets

DCC-70HS Rear Panel

DCC-OU Rear Panel

DCC-70HS External Dimensions

DCC-OU External Dimensions