ultimatte 11 HD SD
hardware

30 years of innovation . . .

A special 30th anniversary edition, the first multi-definition Ultimatte. Standard definition or high definition, have it either way.

30 years of industry leading innovations and refinements means the newest Ultimatte hardware is unrivalled in quality, performance, and ease of use.

The new Smart Remote 2, with its touch screen control panel, organizes and informs in a way that is intuitive and efficient.

Our nuanced algorithms focused on real-world bluescreen environments are what make virtual studios a viable production genre.

A clear, easy upgrade path from standard to high definition means years of return from your investment.

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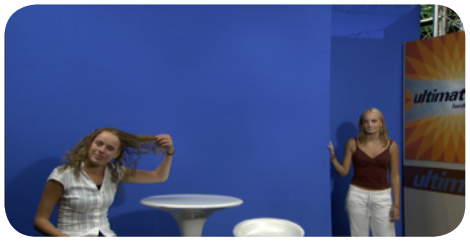
. . . from the bluescreen experts



TRANS-FORMING . . .

The new Ultimatte 11 HD/SD is more than just an affordable high definition Ultimatte. Hundreds of algorithmic changes combine to create performance unmatched by anything we, or anyone else, have ever seen. These changes represent the experience of thirty years of devotion to a science invented by us and a passion that still drives us to this day.

A VIRTUAL SET . . .

As a cost effective alternative to constructing expensive physical sets that will withstand the scrutiny of high definition, the virtual studio has evolved into a realistic alternative to the practical set. High definition video though also presents challenges to the high definition virtual studios. The increased clarity makes it more evident than ever that a virtual set is just that, virtual. The Ultimatte 11 addresses this challenge of the virtual studio with the introduction of a new feature set that transforms a virtual set into a Living Set.

INTO A . . .

A camera leaves a “stamp” on everything it records. A film camera has film grain as its signature and a video camera has electronic noise characteristics. Real foreground elements from a camera juxtaposed against a perfectly clean virtual background will create a fake looking composite. To address this problem the Ultimatte 11 introduces a new feature set, the Living Set. The Living Set samples the noise characteristics of the camera and then proportionally composites that “stamp” on the virtual background, creating the same noise characteristics matching the foreground camera.

LIVING SET

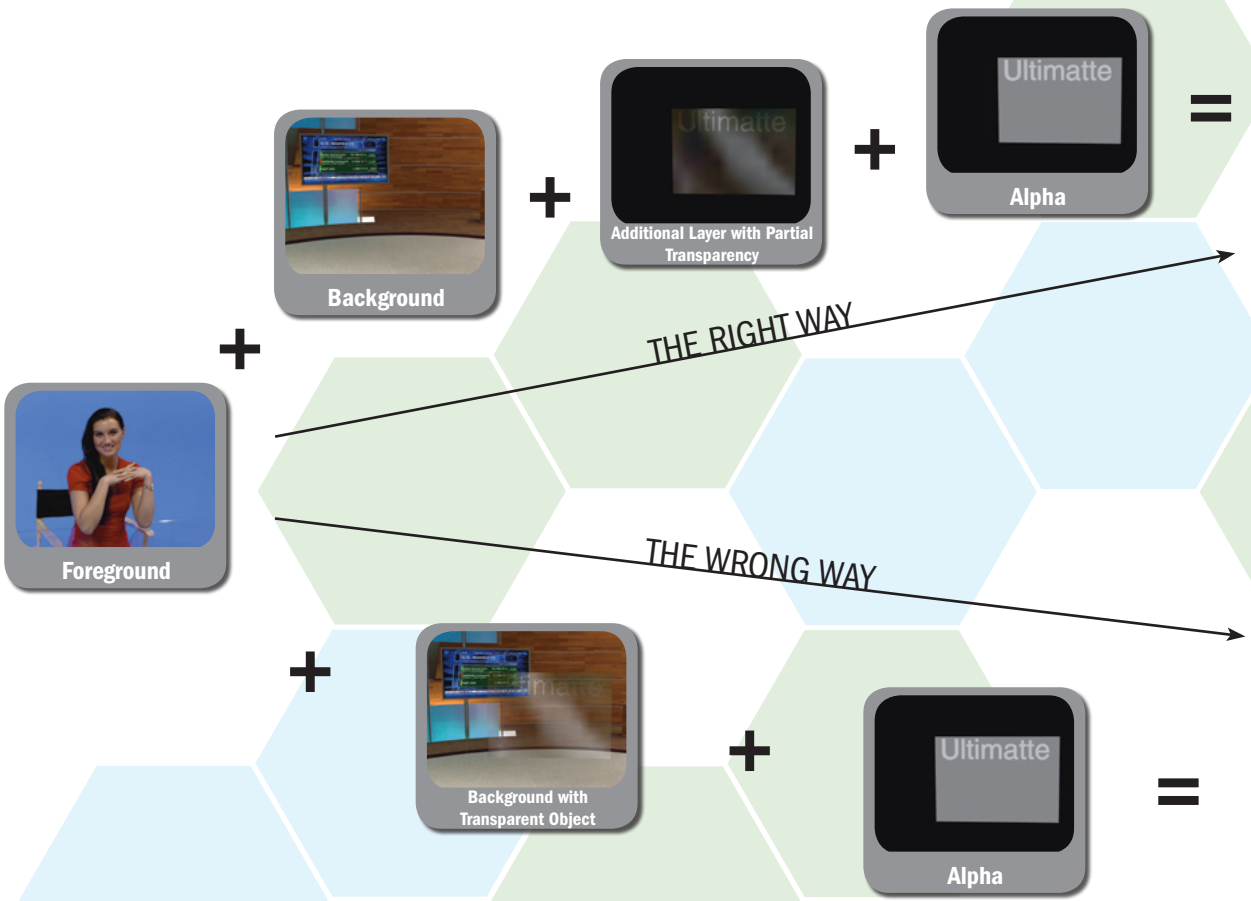
To help create the Living Set, the Ultimatte 11 introduces the Clean-up Windows. The typical blue screen is never lit evenly enough that the masks introduced to turn on the background can blend seamlessly. To help blend the brightness variation, soft edge masks are used. Because the soft edge mask will cause the actor to become transparent if he walks into it, there is a limit on its width. If the soft mask is not wide enough to hide the variation, the clean-up control is typically used to make up the difference resulting in the typical loss of important floor shadows and detail. The Ultimatte 11’s Clean-up Windows changes how the soft edge mask works. Instead of merely dissolving on the background, thereby limiting the usable area, it uses the soft edge mask to modulate the clean-up control. The actor can now walk into the soft mask area without becoming transparent. The end result is that the clean-up control is now variable instead of universal and, less of it is needed.

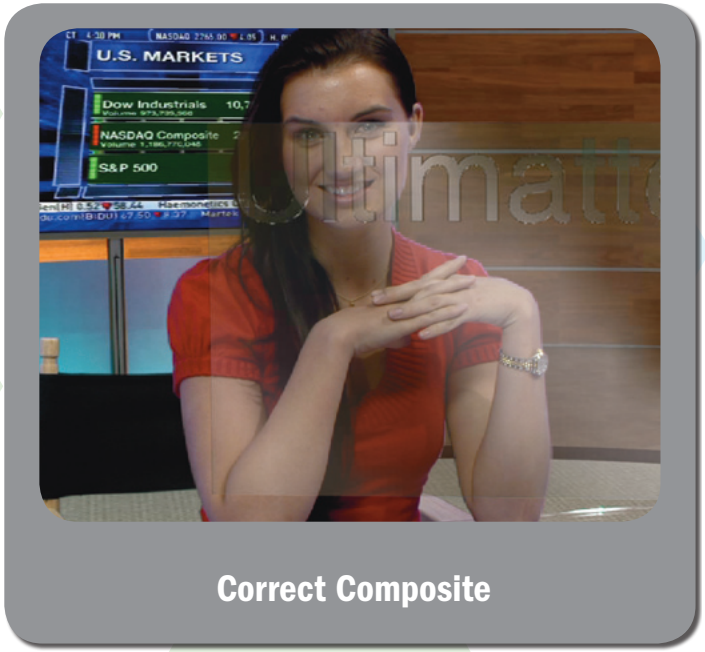
TRANSPARENCY LAYER

The layering feature allows a third element to be added to the composite output in order to create a more dramatic look.

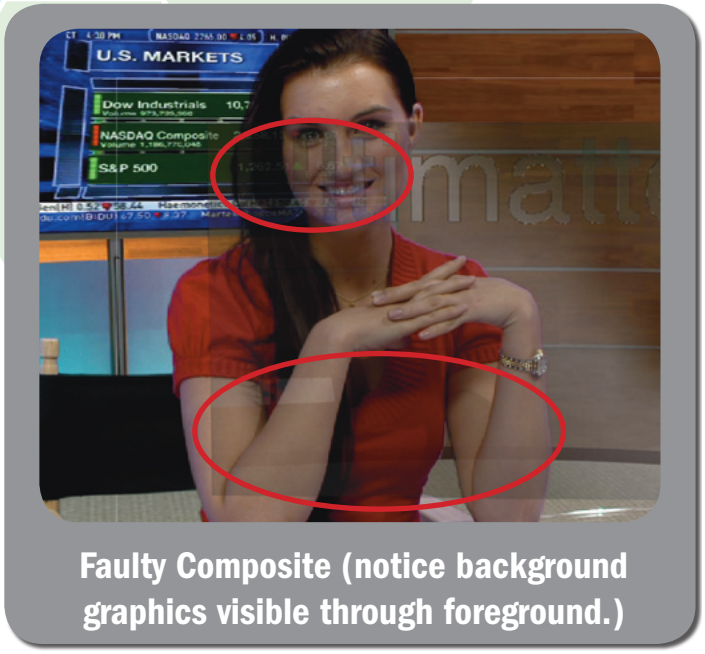
The traditional method of using a matte (alpha) to create a third layer does not allow semi-transparent elements to be layered properly.

A separate layer element together with its associated matte (alpha) can allow elements of various transparency levels to be added properly to the composite scene.





Correct Composite



Faulty Composite (notice background graphics visible through foreground.)

ADDITIONAL FEATURES

- Extended range matte controls to overcome foreground and wardrobe conflicts
- User adjustable foreground delay to compensate for virtual set render times
- Matte correction and sizing for targeted correction of overdense transitions
- Clean up shrink and blur
- Flare suppression controls
- Direct Ambience control allows background to affect color and brightness of foreground
- Indirect Ambience control allows background to affect color and brightness of foreground in subtle ways
- Foreground and Background Color Controls:
  - White levels: Master and R, G, B
  - Black Levels: Master and R, G, B
  - Contrast Levels: Master and R, G, B
  - Saturation Levels: Master and R, G, B
- Two External Matte Inputs and Internal Windows allow for sophisticated combinations of garbage mattes, layering mattes, holdout mattes and the new clean up garbage matte
- Clean up garbage matte that allows for variable clean up versus global clean up
- Monitor output can be switched without affecting FG+BG Out and can also be set to mirror for use as a talent monitor
- Layering with correct transparency levels

Video Inputs (All video inputs conform to SMPTE 259M and SMPTE 292M.)		
	Signal Type	Connector
	4 x SD/HD SDI inputs with active loop outputs: Foreground: 4:2:2 - user selectable Background: 4:2:2 - user selectable Layer: 4:2:2 - user selectable Matte In 1: 4:0:0/4:4 - user selectable Matte In 2: 4:0:0/4:4 - user selectable Reference: Fixed - Input 1	BNC (75 ohm)
Input Capture Range:	+/- 0.5H max relative to Reference (IN 1) Video timing	
Adjustable input delay	Input 1 and Input 2 up to 7 frames each	
Video Outputs (All video outputs conform to SMPTE 259M and 292M.)		
	Signal Type	Connector
	4 x SD/HD SDI: 2 x FG + BG (4:2:2/4:0:0) 1 x Matte Out (4:0:0) 1 x Monitor Out (4:2:2/4:0:0)	BNC (75 ohm)
Audio and data	All outputs include embedded audio and ancillary data from input 1.	
Control Interface		
	Purpose	Connector
RS-485	Smart Remote 2 connection	DB9 Male
RS-485 Loop Out	to other Main Units (4 max)	DB9 Female
RS-232	Computer Interface	DB9 Female
GPIO	3 GP In; 1 GP Out [Talley (contact closure TTL)]	DB9 Female
Ethernet	Control (future update) 10/100 Mbps	RJ-45
Power		
	Voltage	Current
	100 VAC to 240 VAC, 50 / 60 Hz	0.30 - 0.15 A
Operating Temperature		
	0°C to +50°C (+32°F to +112°F)	
Enclosure		
	Weight	Dimensions
	4.5kg (10 lbs)	H = 4.45 cm / 1.75 in (1RU) W = 43.18 cm / 17 in D = 30.48 cm / 12 in (not including front and back handles)

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