

ELATION© EMOTION™												
DMX Channel Values / Functions - STANDARD PROTOCOL (32 DMX Channels)												
Specifications are subject to change without any prior written notice.												
Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default			
1	Pan	Pan Coarse	0	255	0%	100%	00h	FFh	128			
2	Pan	Pan Fine	0	255	0%	100%	00h	FFh	0			
3	Tilt	Tilt Coarse	0	255	0%	100%	00h	FFh	128			
4	Tilt	Tilt Fine	0	255	0%	100%	00h	FFh	0			
5	Zoom	Digital Zoom Smallest	0		0%		00h		192			
		Digital Zoom Largest	128		50%		80h					
		Optical Zoom Smallest	129		51%		81h					
		Optical Zoom Largest	255		100%		FFh					
6	Focus	Focus In	0		0%		00h		128			
		Focus Out	255		100%		FFh					
7	Control [Indexed]	The Control channel should not be crossfaded. No shutter channel requirement.								0		
		Safe (Normal Operation)	0	3	0%	1%	00h	03h				
		TBD	4	27	2%	11%	04h	1Bh				
		Shutter channel to 0 for access to the following commands.										
		Display Off (Send 20 Packets)	28	31	11%	12%	1Ch	1Fh				
		Display On (Send 20 Packets)	32	35	13%	14%	20h	23h				
		TBD	36	63	14%	25%	24h	3Fh				
		Home All (Send 20 Packets)	64	67	25%	26%	40h	43h				
		Reserved	68	71	27%	28%	44h	47h				
		Lamp On	72	75	28%	29%	48h	4Bh				
		Lamp Off	76	79	30%	31%	4Ch	4Fh				
		Shutdown (Send 80 packets)	80	83	31%	33%	50h	53h				
		Graphic System Reset	84	87	33%	34%	54h	57h				
		Lamp Brightness	88	91	35%	36%	58h	5Bh				
		Lamp Eco	92	95	36%	37%	5Ch	5Fh				
		Reserved	96	107	38%	42%	60h	6Bh				
		Projector Floor Orientation	108	111	42%	44%	6Ch	6Fh				
		Projector Ceiling Orientation	112	115	44%	45%	70h	73h				
		Projector Front Orientation	116	119	45%	47%	74h	77h				
		Projector Rear Orientation	120	123	47%	48%	78h	7Bh				
		TBD	124	247	49%	97%	7Ch	F7h				
		DMX HUD in Blue	248		97%	0%	F8h	00h				
		DMX HUD in Green	249		98%	0%	F9h	00h				
		DMX HUD in Red	250		98%	0%	FAh	00h				
		DMX HUD in White	251		98%	0%	FBh	00h				
		General HUD in Blue	252		99%	0%	FCh	00h				
		General HUD in Green	253		99%	0%	FDh	00h				
		General HUD in Red	254		100%	0%	FEh	00h				
		General HUD in White	255		100%	0%	FFh	00h				
		8	Intensity	Normal Dimming	0	255	0%	100%	00h		FFh	0
		9	Strobe [Note 5]	Open	0	0	0%	0%	00h		00h	0
				Periodic	0	84	0%	33%	00h		54h	
Synchronous Random	85			167	33%	65%	55h	A7h				
Random Random	168			255	66%	100%	A8h	FFh				
Open	255			255	100%	100%	FFh	FFh				
10	Iris	Closed	0		0%		00h		255			
		Open	255		100%		FFh					

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Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
11	Cyan (Mod 1)	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
12	Magenta (Mod 2)	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
13	Yellow (Mod 3)	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
14	Color Effect [Note 1]	TBD	0	255	0%	100%	00h	FFh	0
15	Gobo 1 Control	TBD	0	255	0%	100%	00h	FFh	128
16	Gobo 1 Control Fine	TBD	0	255	0%	100%	00h	FFh	0
17	Gobo 1	TBD	0	255	0%	100%	00h	FFh	0
18	Content 1 Control [Note 2]	TBD	0	255	0%	100%	00h	FFh	0
19	Content 1 [Note 7]	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
20	Content 1 Effect [Note 3]	TBD	0	255	0%	100%	00h	FFh	0
21	Content 1 Effect Speed	TBD	0	255	0%	100%	00h	FFh	0
22	Gobo2 Control	TBD	0	255	0%	100%	00h	FFh	128
23	Gobo 2 Control Fine	TBD	0	255	0%	100%	00h	FFh	0
24	Gobo 2	TBD	0	255	0%	100%	00h	FFh	0
25	Content 2 Control [Note 2]	TBD	0	255	0%	100%	00h	FFh	0
26	Content 2 [Note 7]	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
27	Content 2 Effect [Note 3]	TBD	0	255	0%	100%	00h	FFh	0
28	Content 2 Effect Speed	TBD	0	255	0%	100%	00h	FFh	0
29	Transition (T-Handle)	Transition Between Layers	0	255	0%	100%	00h	FFh	128
30	Transition Effect [Note 4]	TBD	0	255	0%	100%	00h	FFh	0
31	Keystone Horizontal	TBD	0	255	0%	100%	00h	FFh	128
32	Keystone Vertical	TBD	0	255	0%	100%	00h	FFh	128

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Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default			
1	Pan	Pan Coarse	0	255	0%	100%	00h	FFh	128			
2	Pan	Pan Fine	0	255	0%	100%	00h	FFh	0			
3	Tilt	Tilt Coarse	0	255	0%	100%	00h	FFh	128			
4	Tilt	Tilt Fine	0	255	0%	100%	00h	FFh	0			
5	Zoom	Digital Zoom Smallest	0		0%		00h		192			
		Digital Zoom Largest	128		50%		80h					
		Optical Zoom Smallest	129		51%		81h					
		Optical Zoom Largest	255		100%		FFh					
6	Focus	Focus In	0		0%		00h		128			
		Focus Out	255		100%		FFh					
7	Control [Indexed]	The Control channel should not be crossfaded. No shutter channel requirement.								0		
		Safe (Normal Operation)	0	3	0%	1%	00h	03h				
		TBD	4	27	2%	11%	04h	1Bh				
		Shutter channel to 0 for access to the following commands.										
		Display Off (Send 20 Packets)	28	31	11%	12%	1Ch	1Fh				
		Display On (Send 20 Packets)	32	35	13%	14%	20h	23h				
		TBD	36	63	14%	25%	24h	3Fh				
		Home All (Send 20 Packets)	64	67	25%	26%	40h	43h				
		Reserved	68	71	27%	28%	44h	47h				
		Lamp On	72	75	28%	29%	48h	4Bh				
		Lamp Off	76	79	30%	31%	4Ch	4Fh				
		Shutdown (Send 80 packets)	80	83	31%	33%	50h	53h				
		Graphic System Reset	84	87	33%	34%	54h	57h				
		Lamp Brightness	88	91	35%	36%	58h	5Bh				
		Lamp Eco	92	95	36%	37%	5Ch	5Fh				
		Reserved	96	107	38%	42%	60h	6Bh				
		Projector Floor Orientation	108	111	42%	44%	6Ch	6Fh				
		Projector Ceiling Orientation	112	115	44%	45%	70h	73h				
		Projector Front Orientation	116	119	45%	47%	74h	77h				
		Projector Rear Orientation	120	123	47%	48%	78h	7Bh				
		TBD	124	247	49%	97%	7Ch	F7h				
		DMX HUD in Blue	248		97%	0%	F8h	00h				
		DMX HUD in Green	249		98%	0%	F9h	00h				
		DMX HUD in Red	250		98%	0%	FAh	00h				
		DMX HUD in White	251		98%	0%	FBh	00h				
		General HUD in Blue	252		99%	0%	FCh	00h				
		General HUD in Green	253		99%	0%	FDh	00h				
		General HUD in Red	254		100%	0%	FEh	00h				
		General HUD in White	255		100%	0%	FFh	00h				
		8	Intensity	Normal Dimming	0	255	0%	100%	00h		FFh	0
		9	Strobe [Note 5]	Open	0	0	0%	0%	00h		00h	0
Periodic	0			84	0%	33%	00h	54h				
Synchronous Random	85			167	33%	65%	55h	A7h				
Random Random	168			255	66%	100%	A8h	FFh				
Open	255			255	100%	100%	FFh	FFh				
10	Iris	Closed	0		0%		00h		255			
		Open	255		100%		FFh					

DMX Channel Values / Functions - EXTENDED PROTOCOL (54 DMX Channels)

Specifications are subject to change without any prior written notice.

Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
11	Cyan (Mod 1)	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
12	Magenta (Mod 2)	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
13	Yellow (Mod 3)	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
14	Color Effect [Note 1]	TBD	0	255	0%	100%	00h	FFh	0
15	Gobo 1 Control	TBD	0	255	0%	100%	00h	FFh	128
16	Gobo 1 Control Fine	TBD	0	255	0%	100%	00h	FFh	0
17	Gobo 1	TBD	0	255	0%	100%	00h	FFh	0
18	Content 1 Control [Note 2]	TBD	0	255	0%	100%	00h	FFh	0
19	Content 1 [Note 7]	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
20	Content 1 Brightness		0	255	0%	100%	00h	FFh	128
21	Content 1 Contrast		0	255	0%	100%	00h	FFh	128
22	Content 1 Effect [Note 3]	TBD	0	255	0%	100%	00h	FFh	0
23	Content 1 Effect Speed	TBD	0	255	0%	100%	00h	FFh	0
24	Gobo2 Control	TBD	0	255	0%	100%	00h	FFh	128
25	Gobo 2 Control Fine	TBD	0	255	0%	100%	00h	FFh	0
26	Gobo 2	TBD	0	255	0%	100%	00h	FFh	0
27	Content 2 Control [Note 2]	TBD	0	255	0%	100%	00h	FFh	0
28	Content 2 [Note 7]	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
29	Content 2 Brightness		0	255	0%	100%	00h	FFh	128
30	Content 2 Contrast		0	255	0%	100%	00h	FFh	128
31	Content 2 Effect [Note 3]	TBD	0	255	0%	100%	00h	FFh	0
32	Content 2 Effect Speed	TBD	0	255	0%	100%	00h	FFh	0
33	Transition (T-Handle)	Transition Between Layers	0	255	0%	100%	00h	FFh	128
34	Transition Effect [Note 4]	TBD	0	255	0%	100%	00h	FFh	0
36	Collage Configuration [Indexed]	College Grid Size Selection	0	255	0%	100%	00h	FFh	0
37	Collage Cell [Indexed]	College Cell Selection	0	255	0%	100%	00h	FFh	0
38	Collage Blend Adjust [Indexed]	College Blend Region Adjust	0	255	0%	100%	00h	FFh	0
39	Collage Edge Control Alignment Pattern [Indexed]	Blend ON/OFF, Alignment Pattern	0	255	0%	100%	00h	FFh	0
40	Collage Variable Blend Horizontal Coarse	Horizontal Variable Blend	0	255	0%	100%	00h	FFh	128

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Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
41	Collage Variable Blend Horizontal Fine	Region Size Control	0	255	0%	100%	00h	FFh	0
42	Collage Variable Blend Vertical Coarse	Vertical Variable Blend Region Size Control	0	255	0%	100%	00h	FFh	128
43	Collage Variable Blend Vertical Fine		0	255	0%	100%	00h	FFh	0
44	Keystone Top Left X	Position Keystone Upper Left X	0	255	0%	100%	00h	FFh	0
45	Keystone Top Left Y	Position Keystone Upper Left Y	0	255	0%	100%	00h	FFh	0
46	Keystone Top Right X	Position Keystone Upper Right X	0	255	0%	100%	00h	FFh	0
47	Keystone Top Right Y	Position Keystone Upper Right Y	0	255	0%	100%	00h	FFh	0
48	Keystone Bottom Right X	Position Keystone Bottom Right X	0	255	0%	100%	00h	FFh	0
49	Keystone Bottom Right Y	Position Keystone Bottom Right Y	0	255	0%	100%	00h	FFh	0
50	Keystone Bottom Left X	Position Keystone Bottom Left X	0	255	0%	100%	00h	FFh	0
51	Keystone Bottom Left Y	Position Keystone Bottom Left Y	0	255	0%	100%	00h	FFh	0
52	Keystone Ratio X	Horizontal Keystone Distribution	0	255	0%	100%	00h	FFh	128
53	Keystone Ratio Y	Vertical Keystone Distribution	0	255	0%	100%	00h	FFh	128
54	Sync To Fixture ID [Note 8]		0	255	0%	100%	00h	FFh	0

NOTES

Indexed

Indicates that channel should not be crossfaded.

Note 1

Background Color Effects	DMX	Description
Cyan Magenta Yellow	0	Cyan - Set Cyan; Magenta - Set Magenta; Yellow - Set Yellow
Red Cycle	1	Mod1 - Red Speed. Mod2 - Green Level. Mod3 - Blue Level.
Green Cycle	2	Mod1 - Red Level. Mod2 - Green Speed. Mod3 - Blue Level.
Blue Cycle	3	Mod1 - Red Level. Mod2 - Green Level. Mod3 - Blue Speed.
Red Green Cycle	4	Mod1 - Red Speed. Mod2 - Green Speed. Mod3 - Blue Level.
Red Blue Cycle	5	Mod1 - Red Speed. Mod2 - Green Level. Mod3 - Blue Speed.
Green Blue Cycle	6	Mod1 - Red Level. Mod2 - Green Speed. Mod3 - Blue Speed.
Red Green Blue Cycle	7	Mod1 - Red Speed. Mod2 - Green Speed. Mod3 - Blue Speed.
Gradient Red	8	Mod1 - Red x Position. Mod2 - Red Y Position. Mod3 - Green Blue
Gradient Red 2	9	Mod1 - Red X Position. Mod2 - Red Y Position. Mod3 - Green Blue
Gradient Green	10	Mod1 - Green X Position. Mod2 - Green Y Position. Mod3 - Red Blue
Gradient Green 2	11	Mod1 - Green X Position. Mod2 - Green Y Position. Mod3 - Red Blue
Gradient Blue	12	Mod1 - Blue X Position. Mod2 - Blue Y Position. Mod3 - Red Green
Gradient Blue 2	13	Mod1 - Blue X Position. Mod2 - Blue Y Position. Mod3 - Red Green
Gradient Red Green	14	Mod1 - Red Multiplier. Mod2 - Green Multiplier. Mod3 - Rotation.
Gradient Red Delta	15	Mod1 - Red Multiplier. Mod2 - Green Multiplier. Mod3 - Blue Multiplier.
Gradient Red Delta 2	16	Mod1 - Red Multiplier. Mod2 - Green Multiplier. Mod3 - Blue Multiplier.
Gradient Green Delta	17	Mod1 - Red Multiplier. Mod2 - Green Multiplier. Mod3 - Blue Multiplier.
Gradient Green Delta 2	18	Mod1 - Red Multiplier. Mod2 - Green Multiplier. Mod3 - Blue Multiplier.
Gradient Blue Delta	19	Mod1 - Red Multiplier. Mod2 - Green Multiplier. Mod3 - Blue Multiplier.
Gradient Blue Delta 2	20	Mod1 - Red Multiplier. Mod2 - Green Multiplier. Mod3 - Blue Multiplier.

Note 2

Gobo/Content Control		DMX
Content is taken from Stock Content.		
Gobo		0
Gobo inverted Black to Alpha		1
Gobo Black to Alpha		2
Gobo Negative		3
Gobo Negative Inverted Black to Alpha		4
Gobo Negative Black to Alpha		5
Gobo Black to Alpha		6
Content		7
Content on Gobo		8
Content on Gobo Inverted Black to Alpha		9
Content on Gobo Black to Alpha		10
Content on Negative Gobo		11
Content on Negative Gobo Inverted Black to Alpha		12
Content on Negative Gobo Black to Alpha		13
Gobo Color Distance from Black to Alpha		14
Gobo Inverted Color Distance from Black to Alpha		15
Gobo Set Black Transparent		16
Content is taken from User Content.		
Gobo		128
Gobo inverted Black to Alpha		129
Gobo Black to Alpha		130
Gobo Negative		131
Gobo Negative Inverted Black to Alpha		132
Gobo Negative Black to Alpha		133
Gobo Black to Alpha		134
Content		135
Content on Gobo		136
Content on Gobo Inverted Black to Alpha		137
Content on Gobo Black to Alpha		138
Content on Negative Gobo		139
Content on Negative Gobo Inverted Black to Alpha		140
Content on Negative Gobo Black to Alpha		141
Gobo Color Distance from Black to Alpha		142
Gobo Inverted Color Distance from Black to Alpha		143
Gobo Set Black Transparent		144

Note 3

Content Effects	DMX
None	0
Swap RGB to GBR	1
Swap RGB to BRG	2
Swap RGB to BGR	3
Swap RGB to RBG	4
Swap RGB to GRB	5
Color Invert	6
Color Invert GBR	7
Color Invert BRG	8
Solarize	9
Solarize 2	10
Solarize 3	11
Solarize 4	12
Edge Detect	13
Edge Detect BW	14
Edge Detect 2	15
Edge Detect 2 Color	16
Scene Change Detect	17
Rain Drop	18
Faux LED	19
Faux Tile	20
Pixelate	21
Gauss Blur	22
Sharpen	23
Cartoon	24
Color Deconverge	25
Fuzzifier	26
Prism	27
Gaussian Halo	28
Sepia	29
Red Tones	30
Fire Gradient	31
Gray Maker	32
Gray Maker 2	33
Posterize	34
Black White	35
Negative Art	36
Dot P	37
Horizontal Mirror	38
Tiles	39
RainbowCycle	40

Note 4	Transition Effects	DMX
	Crossfade	0
	Push Right	1
	Push Left	2
	Push Down	3
	Push Up	4
	Reveal Left	5
	Reveal Right	6
	Reveal Down	7
	Reveal Up	8
	Reveal Left Down	9
	Reveal Right Down	10
	Reveal Left Up	11
	Reveal Right Up	12
	Reveal Circle Out	13
	Reveal Circle In	14
	Reveal Rectangle Out	15
	Reveal Rectangle In	16
	Reveal Cross Out	17
	Reveal Cross In	18
	Pixelate Coarse	19
	Pixelate Medium	20
	Pixelate Fine	21
	Vertical Slats Coarse	22
	Vertical Slats Medium	23
	Vertical Slats Fine	24
	Horizontal Slats Coarse	25
	Horizontal Slats Medium	26
	Horizontal Slats Fine	27
	Swirl	28

Note 5	Strobe Modes
	Periodic - equal on and off times.
	Synchronous Random - unequal on and off times. All fixtures started at the same time with the same DMX value should strobe at the same time.
	Random Random - unequal on and off times. All fixtures will strobe differently.

Note 7	Video Capture
	Content value 255 selects video capture if a capture source is available. This selection is the same regardless of the Content Control value.

Note 8	Sync to Fixture ID
	Selects the fixture ID to which the content on both layers 1 & 2 will be synchronized during playback. Synchronization requires network connection of all the fixtures utilizing synchronization. Fixture ID's must be unique, i.e. cannot be duplicated.
	Fixture ID's are set by using the CMA application.

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