

x.Spot/x.SpotXtreme Reduced DMX Protocol

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
BASIC FIXTURE FUNCTIONS					
1	Pan Coarse	Coarse-adjusts pan to approximately 2 degrees of desired position	0-255	0-100	00-FF
2	Pan Fine	Fine-adjusts pan position in increments less than 1 degree	0-255	0-100	00-FF
3	Tilt Coarse	Coarse-adjusts tilt to approximately 2 degrees of desired position	0-255	0-100	00-FF
4	Tilt Fine	Fine-adjusts tilt position in increments less than 1 degree	0-255	0-100	00-FF
5	Lamp Function	Normal Shutter Functions	0-31	0-12	00-1F
		Lamp Assisted Strobes <i>boosts the Lamp above 700 Watts for periodic and random strobes set in Shutter channel 6.</i>	32-63	13-25	20-3F
		Lamp Effects <i>boosts the lamp above 700 watts for Boost to White, Boost to Black, or Lightning effects set in Shutter channel 6.</i>	64-95	35-37	40-5F
		Dual Dimming <i>adds electronic dimming to the mechanical dimming set in the DIM channel 7. (0%–100%)</i>	96-127	38-50	60-7F
		Electronic Dimming Only <i>Lamp output varies from a minimum–700W; does not go to black</i>	128-159	50-62	80-9F
		Reserved	160-191	63-75	A0-BF
		Reserved	192-223	75-88	C0-DF
		Normal Shutter Functions	224-255	88-100	E0-FF
6	Shutter, Normal Function <i>Lamp Function channel set from 0-31</i>	Close	0-23	0-9	00-17
		Periodic Strobe (variable)	24-49	9-19	18-31
		Random/Random Strobe (variable)	50-75	20-29	32-4B
		Random/Synchronous Strobe (variable)	76-101	30-40	4C-65
		Ramp Open/Snap Shut (variable)	102-127	40-50	66-7F
		Snap Open/Ramp Shut (variable)	128-153	50-60	80-99
		Ramp Open/Ramp Shut (variable)	154-179	60-70	9A-B3
		Random Ramp/Snap (variable)	180-205	71-80	B4-CD
		Random Snap/Ramp (variable)	206-231	81-91	CE-E7
	Open	232-255	91-100	E8-FF	
	Shutter, Lamp Assisted Strobes <i>Lamp Function channel set from 32–63</i>	Close	0-23	0-9	00-17
		Periodic Strobe (variable, Lamp assisted)	24-49	9-19	18-31
		Random/Rand Strobe (variable, Lamp assisted)	50-75	20-29	32-4B
		Random/Sync (variable, Lamp assisted)	76-101	30-40	4C-65
		Ramp Open/Snap Shut (variable)	102-127	40-50	66-7F
		Snap Open/Ramp Shut (variable)	128-153	50-60	80-9A
		Ramp Open/Ramp Shut (variable)	154-179	60-70	9A-B3
		Random Ramp/Snap (variable)	180-205	71-80	B4-CD
Random Snap/Ramp (variable)		206-231	81-91	CE-E7	
Open	232-255	91-100	E8-FF		

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
6	Shutter, Lamp Effect <i>Lamp Function channel set from 64–95</i>	Close	0-23	0-9	00-17
		Periodic lamp strobes	24-49	9-19	18-31
		Random random lamp strobes	50-75	20-29	32-4B
		Synchronous random lamp strobes	76-101	30-40	4C-65
		Boost lamp 1.0 second, black	102-105	40-41	66-69
		Boost lamp 0.75 second, black	106-109	42-43	6A-6D
		Boost lamp 0.66 second, black	110-113	43-44	6E-71
		Boost lamp 0.5 second, black	114-117	45-46	72-75
		Boost lamp 0.33 second, black	118-121	46-47	76-79
		Boost lamp 0.25 second, black	122-127	48-50	7A-7F
		Boost lamp 1.0 second, white	128-131	50-51	80-83
		Boost lamp 0.75 second, white	132-135	52-53	84-87
		Boost lamp 0.66 second, white	136-139	53-55	88-8B
		Boost lamp 0.50 second, white	140-143	55-56	8C-8F
		Boost lamp 0.33 second, white	144-147	56-58	90-93
		Boost lamp 0.25 second, white	148-153	58-60	94-99
		Lightning strike 1	154-157	60-62	9A-9D
		Lightning strike 2	158-161	62-63	9E-A1
		Lightning strike 3	162-165	64-65	A2-A5
		Lightning strike 4	166-169	65-66	A6-A9
	Lightning strike 5	170-173	67-68	AA-AD	
	Lightning strike 6	174-179	68-70	AE-B3	
	Reserved. Default Black.	180-231	71-91	B4-E7	
	Open	232-255	91-100	E8-FF	
	Shutter, Electronic Dimming: <i>Lamp Function channel set from 128-159</i>	Close	0-23	0-9	00-17
		Periodic Strobe (variable)	24-49	9-19	18-31
		Random/Rand Strobe (variable)	50-75	20-29	32-4B
		Random/Sync (variable)	76-101	30-40	4C-65
Ramp Open/Snap Shut (variable)		102-127	40-50	66-7F	
Snap Open/Ramp Shut (variable)		128-153	50-60	80-99	
Ramp Open/Ramp Shut (variable)		154-179	60-70	9A-B3	
Random Ramp/Snap (variable)		180-205	71-80	B4-CD	
Random Snap/Ramp (variable)		206-231	81-91	CE-E7	
Open	232-255	91-100	E8-FF		
7	Dim	Mechanical dimming only, from closed–open	0-255	0-100	00-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
8	Frost	Open (No Frost)	0	0	00
		Variable Frost (open to closed)	1-127	1-49	01-7F
		Full Frost	128-135	50-53	80-87
		Periodic Frost Strobe (slow to fast)	136-151	53-59	88-97
		Random Frost Strobe (slow to fast)	152-167	60-66	98-A7
		Ramp Open/Snap Shut	168-183	66-72	A8-B7
		Snap Open/Ramp Shut	184-199	72-78	B8-C7
		Ramp Open/Ramp Shut	200-215	78-84	C8-D7
		Random Ramp/Snap	216-231	85-91	D8-E7
		Random Snap/Ramp	232-247	91-97	E8-F7
9	Focus	Open (No Frost)	248-255	97-100	F8-FF
9	Focus	Auto or Manual Focus In to Out	0-255	0-100	00-FF
10	Zoom	Zoom from In to Out	0-255	0-100	00-FF
11	Control (Set Shutter Channel to "0" to access Control channel settings except for Pan/Tilt Mspeed Off)	Safe	0-9	0-4	00-09
		Pan and Tilt Mspeed Off	10-19	4-8	0A-13
		Display Off	20-28	8-11	14-1C
		Display Dim	30-38	12-15	1E-26
		Display Bright	40-48	16-19	28-30
		Home All	60-68	24-27	3C-44
		Lamp On	80-88	31-35	50-58
		Lamp Off	90-98	35-38	5A-62
		Shutdown	120-130	47-51	78-82
		Reserved	131-149	51-58	83-95
		Home Pan/Tilt	160-168	63-66	A0-A8
		Home Color System	170-178	67-70	AA-B2
		Home Gobo System	180-188	70-74	B4-BC
		Home Strobe/Dim	190-198	75-78	78-C6
		Home Focus/Zoom/Frost	200-208	78-82	C8-D0
Home Iris	210-218	82-86	D2-DA		

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
SLOT 1: SIX-WHEEL COLOR MIXING MODULE					
12	Color Function <i>(Colormixing wheels perform continuous using Quick Path method for Indexed, Blink and Continuous)</i>	Indexed	0-15	0-6	0-0F
		Forward Spin	16-31	6-12	10-1F
		Reverse Spin	32-47	13-18	20-2F
		Continuous	48-63	19-25	30-3F
		Indexed	64-79	25-31	40-4F
		Slow Scan (defined using Indexed color wheel operation)	80-95	31-37	50-5F
		Fast ScanS (defined using Indexed color wheel operation)	96-111	38-44	60-6F
		Random - Static COlor pseudo-random color chase. Rate set by Static color channel.	112-127	44-50	70-7F
		Indexed Blink (defined using Continuous wheel operation)	128-143	51-56	80-8F
		TBD	144-239	57-62	90-9F
		Continuous	240-255	63-100	A0-FF
13	Static Color Position	Indexed Mode			
		Color Position 1 Open (White)	0-23	0-9	0-17
		Position 1 2	24-42	2-17	18-2A
		Position 2	43-61	17-24	2B-3D
		Position 2 3	62-80	24-31	3E-50
		Position 3	81-99	32-38	51-62
		Position 3 4	100-118	39-46	63-76
		Position 4	119-137	47-54	77-89
		Position 4 5	138-156	54-61	8A-9C
		Position 5	157-175	62-69	9D-AF
		Position 5 6	176-194	69-76	B0-C2
		Position 6	195-213	77-84	C3-D5
		Position 6 1	214-232	84-91	D6-E8
		Position 1 Open (White)	233-255	91-100	E9-FF
		Continuously Variable Forward Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Forward Spin Slowest to Fastest	4-255	2-100	04-FF
		Continuously Variable Reverse Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Reverse Spin Slowest to Fastest	4-255	2-100	04-FF
		Random Mode			
		Random Stop	0-3	0-1	00-01
		Random Slowest to Fastest	4-255	2-100	04-FF
14	Cyan	Full Cyan to Open (White)	0-255	0-100	00-FF
15	Magenta	Full Magenta to Open (White)	0-255	0-100	00-FF
16	Yellow	Full Yellow to Open (White)	0-255	0-100	00-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
17	Color Temperature Orange (Always in Continuous Mode)	Open	0	0	0
		Variable CTO	1-169	1-66	01-A9
		Full CTO	170	67	AA
		Beam Flatness (only used in models equipped with Beam Flatener prior to 2002)	171-213	68-84	AB-D5
		Open	214-255	85-100	D6-FF
18	Color Temperature Blue (Always in Continuous Mode)	Open	0	0	0
		Variable CTB	1-169	1-66	01-A9
		Full CTB	170	67	AA
		Beam Flatness (only used in models equipped with Beam Flatener prior to 2002)	171-213	68-84	AB-D5
		Open	214-255	85-100	D6-FF
SLOT 2: DUAL ROTATING GOBOS MODULE					
19	Gobo1 Function	Indexed	0 - 15	0-6	0-0F
		Forward Rotate	16-31	6-12	10-1F
		Reverse Rotate	32-47	13-18	20-2F
		Forward Wheel Spin	48-63	19-25	30-3F
		Reverse Wheel Spin	64-79	25-31	40-4F
		Scan	80-95	31-37	50-5F
		Random	96-111	38-44	60-6F
		Blink Wheel	112-127	44-50	70-7F
		Blink Aperture	128-143	50-56	80-8F
		Reserved	144-239	57-94	9F-EF
		Continuous	240-255	95-100	F0-FF
20	Gobo 1 Position	Indexed Mode			
		Color Position 1 Open (White)	0-15	0-6	0-0F
		Position 2	16-47	6-12	10-1F
		Position 3	48-79	13-18	20-2F
		Position 4	80-111	19-25	30-3F
		Position 5	112-143	25-31	40-4F
		Position 6	114-175	31-37	50-5F
		Position 7	176-207	38-44	60-6F
		Position 8	208-239	44-50	70-7F
		Position 1 Open (White)	240-255	50-56	80-8F
		Forward Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Forward Spin Slowest to Fastest	4-255	2-100	04-FF
		Reverse Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Reverse Spin Slowest to Fastest	4-255	2-100	04-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
20	Gobo 1 Position <i>(continued)</i>	Scan Mode			
		Position 1 Open (White)	0-15	0-6	0-0F
		Position 2	16-47	6-12	10-1F
		Position 3	48-79	13-18	20-2F
		Position 4	80-111	19-25	30-3F
		Position 5	112-143	25-31	40-4F
		Position 6	114-175	31-37	50-5F
		Position 7	176-207	38-44	60-6F
		Position 8	208-239	44-50	70-7F
		Position 1	240-255	50-56	80-8F
		Random Mode			
		Random Stop	0-3	0-1	00-01
Random Slowest to Fastest	4-255	2-100	04-FF		
21	Gobo 1 Rotate	Indexed / Continuous Modes			
		Position 0-360 degrees	0-255	0-100	0-FF
		Forward Wheel Spin//Continuous Variable Forward Rotate Modes			
		Rotate Stop	0-3	0-1	0-3
		Forward Rotate Slowest to Fastest	4-255	2-100	4-FF
		Reverse Wheel Spin//Continuous Variable Reverse Rotate Modes			
		Rotate Stop	0-3	0-1	0-3
		Reverse Rotate Slowest to Fastest	4-255	2-100	4-FF
		Scan Mode			
		Scan Slowest to Fastest	0-255	0-100	0-FF
22	Effects Function	Indexed	0 - 15	0-6	0-0F
		Forward Rotate	16-31	6-12	10-1F
		Reverse Rotate	32-47	13-18	20-2F
		Forward Wheel Spin	48-63	19-25	30-3F
		Reverse Wheel Spin	64-79	25-31	40-4F
		Scan	80-95	31-37	50-5F
		Random	96-111	38-44	60-6F
		Blink Wheel	112-127	44-50	70-7F
		Blink Aperture	128-143	50-56	80-8F
		Reserved	144-239	57-94	9F-EF
		Continuous	240-255	95-100	F0-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
23	Effects Wheel Position	Indexed Mode			
		Color Position 1 Open (White)	0-15	0-6	0-0F
		Position 2	16-47	6-12	10-1F
		Position 3	48-79	13-18	20-2F
		Position 4	80-111	19-25	30-3F
		Position 5	112-143	25-31	40-4F
		Position 6	114-175	31-37	50-5F
		Position 7	176-207	38-44	60-6F
		Position 8	208-239	44-50	70-7F
		Position 1 Open (White)	240-255	50-56	80-8F
		Forward Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Forward Spin Slowest to Fastest	4-255	2-100	04-FF
		Reverse Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Reverse Spin Slowest to Fastest	4-255	2-100	04-FF
		Scan Mode			
		Position 1 Open (White)	0-15	0-6	0-0F
		Position 2	16-47	6-12	10-1F
		Position 3	48-79	13-18	20-2F
		Position 4	80-111	19-25	30-3F
		Position 5	112-143	25-31	40-4F
		Position 6	114-175	31-37	50-5F
		Position 7	176-207	38-44	60-6F
		Position 8	208-239	44-50	70-7F
		Position 1	240-255	50-56	80-8F
		Random Mode			
Random Stop	0-3	0-1	00-01		
Random Slowest to Fastest	4-255	2-100	04-FF		
24	Effects Rotate	Indexed / Continuous Modes			
		Position 0-360 degrees	0-255	0-100	0-FF
		Forward Wheel Spin//Continuous Vaible Forward Rotate Modes			
		Rotate Stop	0-3	0-1	0-3
		Forward Rotate Slowest to Fastest	4-255	2-100	4-FF
		Reverse Wheel Spin//Continuous Vaible Reverse Rotate Modes			
		Rotate Stop	0-3	0-1	0-3
		Reverse Rotate Slowest to Fastest	4-255	2-100	4-FF
Scan Mode					
Scan Slowest to Fastest	0-255	0-100	0-FF		

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
SLOT 3: ROTATING GOBO 2 AND IRIS MODULE					
25	Gobo 2 Function	Indexed	0 - 15	0-6	0-0F
		Forward Rotate	16-31	6-12	10-1F
		Reverse Rotate	32-47	13-18	20-2F
		Forward Wheel Spin	48-63	19-25	30-3F
		Reverse Wheel Spin	64-79	25-31	40-4F
		Scan	80-95	31-37	50-5F
		Random	96-111	38-44	60-6F
		Blink Wheel	112-127	44-50	70-7F
		Blink Aperture	128-143	50-56	80-8F
		Reserved	144-239	57-94	9F-EF
Continuous	240-255	95-100	F0-FF		
26	Gobo 2 Position	Indexed Mode			
		Color Position 1 Open (White)	0-15	0-6	0-0F
		Position 2	16-47	6-12	10-1F
		Position 3	48-79	13-18	20-2F
		Position 4	80-111	19-25	30-3F
		Position 5	112-143	25-31	40-4F
		Position 6	114-175	31-37	50-5F
		Position 7	176-207	38-44	60-6F
		Position 8	208-239	44-50	70-7F
		Position 1 Open (White)	240-255	50-56	80-8F
		Forward Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Forward Spin Slowest to Fastest	4-255	2-100	04-FF
		Reverse Spin Mode			
		Spin Stop	0-3	0-1	00-01
		Reverse Spin Slowest to Fastest	4-255	2-100	04-FF
		Scan Mode			
		Position 1 Open (White)	0-15	0-6	0-0F
		Position 2	16-47	6-12	10-1F
		Position 3	48-79	13-18	20-2F
		Position 4	80-111	19-25	30-3F
		Position 5	112-143	25-31	40-4F
		Position 6	114-175	31-37	50-5F
		Position 7	176-207	38-44	60-6F
		Position 8	208-239	44-50	70-7F
		Position 1	240-255	50-56	80-8F
		Random Mode			
		Random Stop	0-3	0-1	00-01
		Random Slowest to Fastest	4-255	2-100	04-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
27	Gobo 2 Rotate	Indexed / Continuous Modes			
		Position 0-360 degrees	0-255	0-100	0-FF
		Forward Wheel Spin//Continuous Variable Forward Rotate Modes			
		Rotate Stop	0-3	0-1	0-3
		Forward Rotate Slowest to Fastest	4-255	2-100	4-FF
		Reverse Wheel Spin//Continuous Variable Reverse Rotate Modes			
		Rotate Stop	0-3	0-1	0-3
		Reverse Rotate Slowest to Fastest	4-255	2-100	4-FF
		Scan Mode			
Scan Slowest to Fastest	0-255	0-100	0-FF		
28	Iris	Closed	0	0	0
		Variable Iris	1-127	1-50	01-7F
		Open	128-135	50-53	80-87
		Periodic Strobe (Variable)	136-151	53-59	88-97
		Random Strobe (Variable)	152-167	60-66	98-A7
		Ramp Open/Snap Shut (Variable)	168-183	66-72	A8-B7
		Snap Open/Ramp Shut (Variable)	184-199	72-78	B8-C7
		Ramp Open/Ramp Shut (Variable)	200-215	78-84	C8-D7
		Random Ramp/Snap (Variable)	216-231	85-91	D8-E7
		Random Snap/Ramp (Variable)	232-247	91-97	E8-F7
		Open	248-255	97-100	F8-FF

