

DMX PROTOCOL

Basic Mode	Extended Mode	DMX Value	Percent	Function
1	1	0 - 19	0 - 7	Shutter, Strobe, Reset, Lamp On/Off
		20 - 49	8 - 19	Shutter closed
		50 - 72	20 - 28	Shutter open
		73 - 79	29 - 31	Strobe, fast to slow
		80 - 99	32 - 39	Shutter open
		100 - 119	40 - 47	Opening pulse, fast to slow
		120 - 127	48 - 50	Closing pulse, fast to slow
		128 - 147	51 - 57	Shutter open
		148 - 167	58 - 65	Random strobe, fast
		168 - 187	66 - 73	Random strobe, medium
		188 - 190	74 - 74	Random strobe, slow
		191 - 193	75	Shutter open
		194 - 196	76	Random opening pulse, fast
		197 - 199	77	Random opening pulse, slow
		200 - 202	78 - 79	Random closing pulse, fast
		203 - 207	80 - 81	Random closing pulse, slow
		208 - 217	82 - 85	Shutter open
		218 - 227	86 - 89	Reset fixture*
		228 - 237	90 - 93	Shutter open
		238 - 247	94 - 97	Lamp on
248 - 255	98 - 100	Shutter open		
			Lamp off*	<p><i>*If disabled in software, this command works only if the following effects are selected:</i></p> <ul style="list-style-type: none"> • Color wheel 1 to slot 1 • Color wheel 2 to slot 1 • Prism in, no rotation • Gobo wheel 1 open • Gobo wheel 2 open
2	2	0 - 255	0 - 100	Coarse Dimmer (MSB) Closed to open
-	3	0 - 255	0 - 100	Fine Dimmer (LSB) Closed to open
3	4	0	0	Color Wheel 1, Coarse (MSB) <i>Continuous Scroll: full color positions</i> Open
		17	4	Slot 1 (Red 308)
		34	9	Slot 2 (Magenta 507)
		51	13	Slot 3 (Purple 502 IAD)
		68	17	Slot 4 (Blue 104)
		85	22	Slot 5 (Green 206)
		102	26	Slot 6 (Yellow 601)
		119	30	Slot 7 (Orange 306M)
		136	35	Slot 8 (Purple 509)
		153	56	Open
		154 - 158	66 - 67	<i>Stepped Scroll</i> Slot 8 (Purple 509)
		159 - 163	67 - 68	Slot 7 (Orange 306M)
		164 - 168	69 - 70	Slot 6 (Yellow 601)
		169 - 173	70 - 72	Slot 5 (Green 206)
		174 - 178	72 - 73	Slot 4 (Blue 104)
		179 - 183	74 - 75	Slot 3 (Purple 502 IAD)
		184 - 188	75 - 76	Slot 2 (Magenta 507)
		189 - 193	77 - 78	Slot 1 (Red 308)
		194 - 198	80 - 81	Open
		199 - 219	82 - 88	<i>Continuous Rotation</i> CW, fast to slow
220 - 240	89 - 96	CCW, slow to fast		
241 - 245	96 - 97	<i>Random Color</i> Fast		
246 - 250	98 - 98	Medium		
251 - 255	99 - 100	Slow		
-	5	0 - 255	0 - 100	Color Wheel 1, Fine (LSB)

Basic Mode	Extended Mode	DMX Value	Percent	Function
4	6	Color Wheel 2, Coarse (MSB)		
		<i>Continuous Scroll: full color positions:</i>		
		0	0	Open
		17	4	Slot 1 (Green 208)
		34	9	Slot 2 (Blue 102)
		51	13	Slot 3 (Pink 312)
		68	17	Slot 4 (Red 301)
		85	22	Slot 5 (Yellow 603)
		102	26	Slot 6 (Half Minus Green)
		119	30	Slot 7 (CTC 5500-4200)
		136	35	Slot 8 (CTC 3200-4100)
		153	56	Open
		<i>Stepped Scroll</i>		
		154 - 158	61 - 63	Slot 8 (CTC 3200-4100)
		159 - 163	67 - 68	Slot 7 (CTC 5500-4200)
		164 - 168	69 - 70	Slot 6 (Half Minus Green)
		169 - 173	70 - 72	Slot 5 (Yellow 603)
		174 - 178	72 - 73	Slot 4 (Red 301)
		179 - 183	74 - 75	Slot 3 (Pink 312)
		184 - 188	75 - 76	Slot 2 (Blue 102)
		189 - 193	77 - 78	Slot 1 (Green 208)
194 - 198	80 - 81	Open		
<i>Continuous Rotation</i>				
199 - 219	82 - 88	CW, fast to slow		
220 - 240	89 - 96	CCW, slow to fast		
<i>Random color</i>				
241 - 245	96 - 97	Fast		
246 - 250	98 - 98	Medium		
251 - 255	99 - 100	Slow		
-	7	0 - 255	0 - 100	Color Wheel 2, Fine (LSB)
5	8	Gobo Wheel 1, Gobo and Function Selection		
		<i>Select gobo with indexed position</i>		
		0 - 11	0 - 4	Open
		12 - 15	4 - 5	Slot 1 (Fire Sun)
		16 - 19	6 - 7	Slot 2 (Rotator)
		20 - 23	7 - 9	Slot 3 (Indigo Waves)
		24 - 27	9 - 10	Slot 4 (Limbo)
		28 - 31	11 - 12	Slot 5 (Water 4)
		32 - 35	12 - 13	Slot 6 (Flames 6)
		<i>Select gobo with continuous rotation</i>		
		36 - 39	14 - 15	Slot 1 (Fire Sun)
		40 - 43	15 - 16	Slot 2 (Rotator)
		44 - 47	17 - 18	Slot 3 (Indigo Waves)
		48 - 51	18 - 20	Slot 4 (Limbo)
		52 - 55	20 - 21	Slot 5 (Water 4)
		56 - 59	22 - 23	Slot 6 (Flames 6)
		<i>Select gobo with indexed position and shake</i>		
		60 - 71	23 - 27	Gobo 1, slow to fast
		72 - 83	28 - 32	Gobo 2, slow to fast
		84 - 95	33 - 37	Gobo 3, slow to fast
		96 - 107	37 - 107	Gobo 4, slow to fast
		108 - 119	42 - 46	Gobo 5, slow to fast
		120 - 131	47 - 51	Gobo 6, slow to fast
		<i>Select gobo with continuous rotation and shake</i>		
		132 - 143	52 - 56	Gobo 6, slow to fast
		144 - 155	56 - 61	Gobo 5, slow to fast
		156 - 167	61 - 65	Gobo 4, slow to fast
		168 - 179	66 - 70	Gobo 3, slow to fast
		180 - 191	70 - 75	Gobo 2, slow to fast
192 - 203	75 - 79	Gobo 1, slow to fast		
<i>Gobo scroll with continuous rotation</i>				
204 - 229	80 - 90	CW scroll, slow to fast		
230 - 255	90 - 100	CCW scroll, fast to slow		

Basic Mode	Extended Mode	DMX Value	Percent	Function
6	9	0 - 255	0 - 100	Gobo Wheel 1, Coarse Rotation (MSB) <i>If indexed position is selected</i> Rotation angle, 0 - 395°
		0 - 2	0	<i>If continuous rotation is selected</i> No rotation
		3 - 127	1 - 50	CW, slow - fast
		128 - 252	51 - 99	CCW, fast - slow
		253 - 255	100	No rotation
7	10	0 - 255	0 - 100	Gobo Wheel 1, Fine Rotation (LSB)
8	11	0	0	Gobo Wheel 2 <i>Continuous Scroll: full positions</i> Open
		11	4	Slot 1 (Crackle)
		22	8	Slot 2 (Triangles 2)
		33	13	Slot 3 (Tye Dye)
		44	17	Slot 4 (Splodge)
		55	21	Slot 5 (Ninestar)
		66	26	Slot 6 (Bio)
		77	30	Slot 7 (Leaf Breakup (Medium))
		88	34	Slot 8 (Zig Zags)
		99	39	Slot 9 (Two Tone)
		110 - 112	43 - 44	Open
		113 - 121	44 - 47	<i>Stepped Scroll</i> Slot 9 (Two Tone)
		122 - 130	48 - 51	Slot 8 (Zig Zags)
		131 - 139	51 - 54	Slot 7 (Leaf Breakup (Medium))
		140 - 148	55 - 58	Slot 6 (Bio)
		149 - 157	58 - 61	Slot 5 (Ninestar)
		158 - 166	62 - 65	Slot 4 (Splodge)
		167 - 175	65 - 68	Slot 3 (Tye Dye)
		176 - 184	68 - 72	Slot 2 (Triangles 2)
		185 - 193	72 - 76	Slot 1 (Crackle)
194 - 202	76 - 79	Open		
203 - 221	79 - 87	<i>Continuous Rotation</i> CW, fast - slow		
222 - 240	87 - 94	CCW, slow - fast		
241 - 245	94 - 96	<i>Random Gobo</i> Fast		
246 - 250	96 - 98	Medium		
251 - 255	98 - 100	Slow		
9	12	0 - 15	0 - 5	Gobo/Color Macros No macro
		16 - 55	6 - 21	Gobo wheel 2, shake, slow - fast
		56 - 95	22 - 37	Color wheel 1, shake, slow - fast
		96 - 135	37 - 53	Color wheel 2, shake, slow - fast
		136 - 175	53 - 68	Gobo wheel 2 and color 1, shake, slow - fast
		176 - 215	69 - 84	Gobo wheel 2 and color 2, shake, slow - fast
		216 - 255	85 - 100	Gobo wheel 2, color 1, and color 2, shake, slow - fast
10	13	0 - 9	0 - 3	Gobo Animation Angle and Function Open
		10 - 19	4 - 7	Vertical indexed position
		20 - 29	8 - 11	Horizontal indexed position
		30 - 39	12 - 15	Vertical continuous rotation
		40 - 49	16 - 19	Horizontal continuous rotation
		50 - 139	20 - 54	Angled indexed position, vertical to horizontal
		140 - 229	55 - 89	Angled continuous rotation, horizontal to vertical
		230 - 235	90 - 92	Open
		236 - 239	93	<i>Animation macros</i> Macro 1
		240 - 243	94 - 95	Macro 2
		244 - 247	96	Macro 3
		248 - 251	97 - 98	Macro 4
		252 - 255	99 - 100	Macro 5

Basic Mode	Extended Mode	DMX Value	Percent	Function
11	14	0 - 255	0 - 100	Gobo Animation Wheel, Angle / Speed <i>If indexed position is selected</i> Rotation angle, min.- max.
		0 - 2	0	<i>If continuous rotation is selected</i> No rotation
		3 - 127	1 - 50	CCW, slow - fast
		128 - 252	51 - 99	CW, fast - slow
		253 - 255	100	No rotation
12	15	0 - 19	0 - 7	Prism <i>Rotation</i> Prism out
		20 - 79	8 - 31	Prism in, CCW rotation, fast - slow
		80 - 89	31 - 35	Prism in, no rotation
		90 - 149	35 - 58	Prism in, CW rotation, slow - fast
		150 - 215	59 - 84	Prism out
				<i>Prism Macros</i>
		216 - 220	84 - 86	Macro 1
		221 - 225	87 - 88	Macro 2
		226 - 230	89 - 90	Macro 3
		231 - 235	91 - 92	Macro 4
		236 - 240	93 - 94	Macro 5
		241 - 245	95 - 96	Macro 6
		246 - 250	96 - 98	Macro 7
		251 - 255	98 - 100	Macro 8
13	16	0 - 199	0 - 77	Iris Coarse diameter (MSB), open - closed
		200 - 215	78 - 84	Closed
		216 - 229	85 - 89	Opening pulse, fast - slow
		230 - 243	90 - 94	Closing pulse, fast - slow
		244 - 246	95 - 96	Fast random opening pulse
		247 - 249	97	Slow random opening pulse
		250 - 252	98 - 99	Fast random closing pulse
		253 - 255	100	Slow random closing pulse
-	17	0 - 255	0 - 100	Iris Diameter, Fine (LSB)
14	18	0 - 255	0 - 100	Coarse Focus (MSB) Infinity - near
-	19	0 - 255	0 - 100	Fine Focus (LSB)
15	20	0 - 255	0 - 100	Coarse Zoom (MSB) Flood - spot
-	21	0 - 255	0 - 100	Fine Zoom (LSB)
16	22	0 - 255	0 - 100	Coarse Pan (MSB) Left - right
17	23	0 - 255	0 - 100	Fine Pan (LSB) Left - right
18	24	0 - 255	0 - 100	Coarse Tilt (MSB) Left - right
19	25	0 - 255	0 - 100	Fine Tilt (LSB) Left - right
20	26	0 - 2	0 - 1	Pan/Tilt Speed Tracking
		3 - 242	1 - 95	Fast - slow
		243 - 245	96	Tracking, PTSP SLOW (menu override)
		246 - 248	96 - 97	Tracking, PTSP NORM (menu override)
		249 - 251	98	Tracking, PTSP FAST (menu override)
		252 - 255	99 - 100	Blackout while moving

Basic Mode	Extended Mode	DMX Value	Percent	Function
21	27			Effects Speed
				<i>Dimmer, Animation, Zoom, and Focus Speed</i>
		0 - 2	0 - 1	Tracking
		3 - 245	1 - 96	Fast - slow
		246 - 251	96 - 98	Tracking
		252 - 255	99 - 100	Maximum speed
				<i>Color Speed</i>
		0 - 2	0 - 1	Tracking
		3 - 245	1 - 96	Speed, fast - slow
		246 - 248	96 - 97	Tracking, SCUT OFF (menu override)
		249 - 251	98	Tracking, SCUT ON (menu override)
		252 - 255	99 - 100	Blackout while moving
				<i>Gobo Selection Speed</i>
		0 - 245	0 - 96	Normal (no blackout)
		246 - 248	96 - 97	Normal, SCUT OFF (menu override)
		249 - 251	98	Normal, SCUT ON (menu override)
		252 - 255	99 - 100	Blackout while moving
				<i>Gobo Indexing Speed</i>
		0 - 2	0 - 1	Tracking mode
		3 - 245	1 - 96	Fast - slow
		246 - 251	96 - 98	Tracking
		252 - 255	99 - 100	Blackout while moving
				<i>Prism Speed</i>
		0 - 251	0 - 98	Normal (no blackout)
252 - 255	99 - 100	Blackout while moving		