

# DMX protocol

ERA 800 Performance firmware version 1.0.0.

Channel	DMX Value	Function	Fade type	Default value
1	0 - 19	<b>Strobe/shutter effect</b> Shutter closed	Snap	0
	20 - 24	Shutter open		
	25 - 64	Strobe, fast → slow		
	65 - 69	Shutter open		
	70 - 84	Opening pulse, slow → fast		
	85 - 89	Shutter open		
	90 - 104	Closing pulse, slow → fast		
	105 - 109	Shutter open		
	110 - 124	Random strobe, slow → fast		
	125 - 129	Shutter open		
	130 - 144	Random opening pulse, slow → fast		
	145 - 255	Shutter open		
	2	0 - 65535		
3	<b>Dimmer fade, fine (LSB)</b>		Fade	0
4	0 - 65535	<b>Cyan (MSB)</b> 0 → 100%	Fade	0
5		<b>Cyan fine (LSB)</b> 0 → 100%	Fade	0
6	0 - 65535	<b>Magenta (MSB)</b> 0 → 100%	Fade	0
7		<b>Magenta fine (LSB)</b> 0 → 100%	Fade	0
8	0 - 65535	<b>Yellow (MSB)</b> 0 → 100%	Fade	0
9		<b>Yellow fine (LSB)</b> 0 → 100%	Fade	0
10	0 - 65535	<b>CTO (MSB)</b> 0 → 100%	Fade	0
11		<b>CTO fine (LSB)</b> 0 → 100%	Fade	0
12		<b>Color wheel Indexing</b> <i>Solid colors</i> Open	Fade	0
	0 - 6	Color 1		
	7 - 13	Color 2		
	14 - 20	Color 3		
	21 - 27	Color 4		
	28 - 34	Color 5		
	35 - 41	Color 6		
	42 - 48	<i>Split colors</i> Continuous color wheel indexing		
	49 - 127	<b>Continuous rotation</b> CW, fast → slow		
	128 - 190	Stop (wheel stops at current position)		
	191 - 192	CCW slow → fast		
	193 - 255			

Table 1: DMX Protocol

Channel	DMX Value	Function	Fade type	Default value
13	0 - 6	<b>Gobo wheel 1</b> <b>Gobo selection</b> Open	Snap	0
	7 - 13	Gobo 1		
	14 - 20	Gobo 2		
	21 - 27	Gobo 3		
	28 - 34	Gobo 4		
	35 - 41	Gobo 5		
	42 - 48	Gobo 6		
	49 - 55	Gobo 1 shake		
	56 - 62	Gobo 2 shake		
	63 - 69	Gobo 3 shake		
70 - 76	Gobo 4 shake			
77 - 83	Gobo 5 shake			
84 - 90	Gobo 6 shake			
91 - 171	<b>Continuous gobo wheel rotation</b> CCW fast → slow			
172 - 174	Stop (wheel stops at current position)			
175 - 255	CW slow → fast			
14	0 - 127	<b>Gobo wheel 1</b> <b>Gobo indexing/rotation</b> Gobo indexing 0 - 360°	Snap	0
	128 - 190	Gobo rotation CW fast → slow		
	191 - 192	Stop		
	193 - 255	Gobo rotation CCW slow → fast		
15	0 - 255	<b>Gobo wheel 1</b> <b>Gobo indexing/rotation fine</b> Indexed position / rotation speed fine	Fade	0
16	0 - 6	<b>Gobo wheel 2</b> <b>Gobo selection</b> Open	Snap	0
	7 - 13	Gobo 1		
	14 - 20	Gobo 2		
	21 - 27	Gobo 3		
	28 - 34	Gobo 4		
	35 - 41	Gobo 5		
	42 - 48	Gobo 6		
	49 - 55	Gobo 7		
	56 - 62	Gobo 1 shake		
	63 - 69	Gobo 2 shake		
	70 - 76	Gobo 3 shake		
	77 - 83	Gobo 4 shake		
	84 - 90	Gobo 5 shake		
	91 - 97	Gobo 6 shake		
98 - 104	Gobo 7 shake			
105 - 178	<b>Continuous gobo wheel rotation</b> CCW fast → slow			
179 - 182	Stop (wheel stops at current position)			
183 - 255	CW slow → fast			
17	0 - 5	<b>Animation</b> Open	Snap	0
	6 - 128	Indexing CCW 0° → 540°		
	129 - 191	Continuous rotation CW fast → slow		
	192	Stop		
	193 - 255	Continuous rotation CCW slow → fast		
18	0 - 255	<b>Frost 1: Light frost</b> No frost → full frost	Fade	0
19	0 - 255	<b>Frost 2: Heavy frost</b> No frost → full frost	Fade	0
20	0 - 10	<b>Rotating Prism 1 deployment</b> Off	Snap	0
	11 - 255	On		
21	0 - 127	<b>Rotating Prism 1 movement</b> Indexing 0° - 360°	Snap	0
	128 - 190	Rotation CW fast → slow		
	191 - 192	Stop		
	193 - 255	Rotation CCW slow → fast		

Table 1: DMX Protocol

Channel	DMX Value	Function	Fade type	Default value
22	0 - 10	<b>Rotating Prism 2 deployment</b> Off On	Snap	0
	11 - 255			
23	0 - 127	<b>Rotating Prism 2 movement</b> Indexing 0° - 360° Rotation CW fast → slow Stop Rotation CCW slow → fast	Snap	0
	128 - 190			
	191 - 192			
	193 - 255			
24	0 - 255	<b>Iris</b> Open → closed	Fade	0
25	0 - 65535	<b>Zoom (MSB)</b> Wide → narrow	Fade	0
26		<b>Zoom fine (LSB)</b>	Fade	0
27	0 - 65535	<b>Focus (MSB)</b> Infinity → near	Fade	0
28		<b>Focus fine (LSB)</b>	Fade	0
29	0 - 255	<b>Framing blade 1: position</b> Out → in	Fade	0
30	0 - 126	<b>Framing blade 1: angle</b> Angle – Parallel Angle +	Fade	127
	127 - 128			
	129 - 255			
31	0 - 255	<b>Framing blade 2: position</b> Out → in	Fade	0
32	0 - 126	<b>Framing blade 2: angle</b> Angle – Parallel Angle +	Fade	127
	127 - 128			
	129 - 255			
33	0 - 255	<b>Framing blade 3: position</b> Out → in	Fade	0
34	0 - 126	<b>Framing blade 3: angle</b> Angle – Parallel Angle +	Fade	127
	127 - 128			
	129 - 255			
35	0 - 255	<b>Framing blade 4: position</b> Out → in	Fade	0
36	0 - 126	<b>Framing blade 4: angle</b> Angle – Parallel Angle +	Fade	127
	127 - 128			
	129 - 255			
37	0 - 126	<b>Framing module angle</b> Minimum (-60°) 0° Maximum (+60°)	Fade	127
	127 - 128			
	129 - 255			
38	0 - 65535	<b>Pan (MSB)</b> Left → right	Fade	32768
39		<b>Pan, fine (LSB)</b>		
40	0 - 65535	<b>Tilt (MSB)</b> Up → down	Fade	32768
41		<b>Tilt, fine (LSB)</b>		

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Channel	DMX Value	Function	Fade type	Default value
<b>42</b>		<b>Fixture control/settings</b> <i>(hold for number of seconds indicated to activate)</i>		
	0 - 9	<i>No function (disables calibration) – 5 sec.</i>		
	10 - 14	Reset entire fixture – 5 sec.		
	15	<i>No function</i>		
	16	Reset color – 5 sec.		
	17	Reset beam only– 5 sec.		
	18	Reset pan and tilt only – 5 sec.		
	19 - 22	<i>No function</i>		
	23	Linear dimming curve – 1 sec. <i>(menu override, setting unaffected by power off/on)</i>		
	24	Square law dimming curve – 1 sec. <i>(menu override, default setting, setting unaffected by power off/on)</i>		
	25	Inverse square law dimming curve – 1 sec. <i>(menu override, setting unaffected by power off/on)</i>	Snap	0
	26	S-curve dimming curve– 1 sec. <i>(menu override, setting unaffected by power off/on)</i>		
	27	<i>No function</i>		
	28	Fast pan and tilt speed– 1 sec. <i>(default setting, menu override - setting returns to MENU setting after power on/off)</i>		
	29	Smooth pan and tilt speed– 1 sec. <i>(menu override - setting returns to MENU setting after power on/off)</i>		
	30 - 51	<i>No function</i>		
	52	Control panel display = ON – 1 sec.		
	53	Control panel display = OFF – 1 sec.		
	54	Regulated fan speed, fixed light output intensity (default) – 1 sec.		
	55	Full fan speed, regulated light output intensity – 1 sec.		
56 -255	<i>No function</i>			

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