

# ColorBeam2500E AT - DMX protocol

Version 1.1

Mode / Channel		Value	Function	Type of control
1	2			
1	1	0 - 255	<b>Pan</b> Pan movement by 530°	proportional
2	2	0 - 255	<b>Pan Fine</b> Fine control of pan movement	proportional
3	3	0 - 255	<b>Tilt</b> Tilt movement by 260°	proportional
4	4	0 - 255	<b>Tilt fine</b> Fine control of tilt movement	proportional
5	5	0	<b>Pan/Tilt speed , Pan/Tilt time</b> Max. speed (tracking mode)*	step
		1 - 255	<b>P./T. speed-set Speed Mode in menu: Pan/Tilt Mode</b> Speed from max. to min. (vector mode)**	proportional
		1 - 255	<b>P./T. time - set Time Mode in menu: Pan/Tilt Mode</b> Time from 0,1 s to 25,5 s. ***	proportional
6	6	0 - 49	<b>Power/Special functions</b> Reserved To activate following functions, stop in DMX value for at least 3 s and shutter must be closed at least 3 s. („Shutter,Strobe” channel 23 (29) must be at range: 0-31 DMX).****	
		50 - 59	Pan/Tilt speed mode	step
		60 - 69	Pan/Tilt time mode	step
		70 - 79	Blackout while pan/tilt moving	step
		80 - 89	Disabled blackout while pan/tilt moving	step
		90 - 99	Blackout while colour wheel moving	step
		100 - 109	Disabled blackout while colour wheel moving	step
		110 - 119	Blackout while gobo 1/gobo 2 moving	step
		120 - 129	Disabled blackout while gobo 1/gobo 2 moving <i>To activate following functions, stop in DMX value for at least 3 s.</i>	step
		130 - 139	Lamp On,reset(total reset except pan/tilt reset)	step
		140 - 149	Pan/Tilt reset	step
		150 - 159	Colour system reset	step
		160 - 169	Gobo system reset	step
		170 - 179	Dimmer/Strobe reset	step
		180 - 189	Focus/Zoom/Frost reset	step
		190 - 199	Iris/Prism reset	step
200 - 209	Total reset	step		
210 - 229	Reserved	step		
230 - 239	Lamp Off	step		
240 - 255	Reserved	step		

**Notes:** \* Range 0-255 DMX at max.speed (0 DMX):

pan=4.5 s  
tilt=3.6 s

\*\* Range 0-255 DMX at min. speed (255 DMX):

pan=37min.10 s  
tilt=19 min.34 s

\*\*\* Short times are not used for long tracks (e.g. 0.5s for track 0-255 DMX). Times are restricted by mechanical parameters of the fixture.

\*\*\*\* The switch-functions have priority to the equivalent functions in menu „Personality” but the setting by DMX is not saved to the memory (after switching the fixture on,the setting from menu „Personality” is loaded and after that can be changed by DMX value on the channel 6).

## DMX protocol

50 - 59 Pan/Tilt speed mode  
60 - 69 Pan/Tilt time mode  
70 - 79 Blackout while pan/tilt moving  
80 - 89 Disabled blackout while pan/tilt moving  
90 - 99 Blackout while colour wheel moving  
100 - 109 Disabled blackout while colour wheel moving  
110 - 119 Blackout while gobo1/gobo2 moving  
120 - 129 Disabled blackout while gobo1/gobo2moving

## menu „Personality”

Pan/Tilt mode--->Speed Mode  
Pan/Tilt mode--->Time Mode  
Active blackout While-->Pan/Tilt Moving-->On  
Active blackout While-->Pan/Tilt Moving-->Off  
Active blackout While-->Colour Wheel Moving-->On  
Active blackout While-->Colour Wheel Moving-->Off  
Active blackout While-->Gobo Wheels Moving-->On  
Active blackout While-->Gobo Wheels Moving-->Off

Mode / Channel		Value	Function	Type of control
1	2			
	7	0 - 9 10 - 31 32 - 63 64 - 95 96 - 127 128 - 159 160 - 191 192 - 223 224 - 255	<b>Pan/Tilt macro selection</b> Disabled pan/tilt macro Reserved Figure of circle (from small to large) Figure of horizontal eight (from small to large) Figure of vertical eight (from small to large) Figure of rectangle (from small to large) Figure of triangle (from small to large) Figure of star (from small to large) Figure of cross (from small to large)	step step proportional proportional proportional proportional proportional proportional
	8	0 1 - 127 128 - 129 130 - 255	<b>Pan/Tilt macro speed</b> No macro generation Macro generation from fast to slow-forwards No macro generation Macro generation from slow to fast-backwards	step proportional step proportional
7	9	0 18 37 55 73 91 110 128 - 129 130 - 139 140 - 149 150 - 159 160 - 169 170 - 179 180 - 189 190 - 215 216 - 217 218 - 243 244 - 249 250 - 255	<b>Colour wheel</b> Open/white Deep red Deep blue Green Orange 6000 K temperature filter UV filter White Deep red Deep blue Green Orange 6000 K temperature filter UV filter Forwards rainbow effect from fast to slow No rotation Backwards rainbow effect from slow to fast Random colour selection by audio control (Set microphone sensitivity in menu „Personality”) Auto random colour selection from fast to slow	proportional proportional proportional proportional proportional proportional proportional step step step step step step proportional step proportional step proportional
8	10	0 - 255	<b>Cyan</b> Cyan (0-white, 255-full cyan)	proportional
9	11	0 - 255	<b>Magenta</b> Magenta (0-white, 255-full magenta)	proportional
10	12	0 - 255	<b>Yellow</b> Yellow (0-white, 255-full yellow)	proportional
11	13	0 - 255	<b>Conversion temperature filter 3200K</b> (0-5600K, 255-3200K)	proportional
	14	0 - 3 4 - 7 8 - 11 12 - 15 16 - 19 20 - 23 24 - 27 28 - 31 32 - 35 36 - 39 40 - 43 44 - 47 48 - 51 52 - 55 56 - 59 60 - 63 64 - 67 68 - 71	<b>CMY Colour macros</b> No function Macro 1 Macro 2 Macro 3 Macro 4 Macro 5 Macro 6 Macro 7 Macro 8 Macro 9 Macro 10 Macro 11 Macro 12 Macro 13 Macro 14 Macro 15 Macro 16 Macro 17	step step step step step step step step step step step step step step step step step



Mode / Channel		Value	Function	Type of control	
1	2				
13	17	34 - 37	<b>Rotation - set rotation on channel(s) 14 (18,19;9,10)</b> Gobo 1	step	
		38 - 41	Gobo 2	step	
		42 - 45	Gobo 3	step	
		46 - 49	Gobo 4	step	
		50 - 53	Gobo 5	step	
		54 - 57	Gobo 6	step	
			<b>Shaking gobos from slow to fast</b>		
			<b>Index - set indexing on channel(s) 14 (18, 19;9,10)</b>		
		58 - 69	Gobo 1	proportional	
		70 - 81	Gobo 2	proportional	
		82 - 93	Gobo 3	proportional	
		94 - 105	Gobo 4	proportional	
106 - 117	Gobo 5	proportional			
118 - 129	Gobo 6	proportional			
	<b>Shaking gobos from slow to fast</b>				
	<b>Rotation - set rotation on channel(s) 14 (18,19;9,10)</b>				
130 - 141	Gobo 1	proportional			
142 - 153	Gobo 2	proportional			
154 - 165	Gobo 3	proportional			
166 - 177	Gobo 4	proportional			
178 - 189	Gobo 5	proportional			
190 - 201	Gobo 6	proportional			
202 - 221	Forwards gobo wheel 1 rotation from fast to slow	proportional			
222 - 223	No rotation				
224 - 243	Backwards gobo wheel 1 rotation from slow to fast	proportional			
244 - 249	Random gobo 1 selection by audio control (Set microphone sensitivity in menu „Personality“)	step			
250 - 255	Auto random gobo 1 selection from fast to slow	proportional			
14	18	0 - 255	<b>Gobo 1 indexing and rotation</b> <b>Gobo indexing - set position on channel 13 (17)</b> Gobo indexing	proportional	
		0	<b>Gobo rotation - set position on channel 13 (17)</b> No rotation	step	
		1 - 127	Forwards gobo rotation from fast to slow	proportional	
		128 - 129	No rotation	step	
		130 - 255	Backwards gobo rotation from slow to fast	proportional	
	19	0 - 255	<b>Gobo 1 fine indexing and rotation</b> <b>(set position on channel 13 (17))</b> Fine indexing (rotating)	proportional	
15	20	0 - 9	<b>Rotating gobo wheel 2</b> <b>Index - set indexing on channel(s) 16 (21, 22)</b> Open/hole	step	
		10 - 13	Gobo 1	step	
		14 - 17	Gobo 2	step	
		18 - 21	Gobo 3	step	
		22 - 25	Gobo 4	step	
		26 - 29	Gobo 5	step	
		30 - 33	Gobo 6	step	
			<b>Rotation - set rotation on channel(s) 16 (21, 22)</b>		
		34 - 37	Gobo 1	step	
		38 - 41	Gobo 2	step	
		42 - 45	Gobo 3	step	
		46 - 49	Gobo 4	step	
		50 - 53	Gobo 5	step	
		54 - 57	Gobo 6	step	
			<b>Shaking gobos from slow to fast</b>		
			<b>Index - set indexing on channel(s) 16 (21, 22)</b>		
		58 - 69	Gobo 1	proportional	
		70 - 81	Gobo 2	proportional	
82 - 93	Gobo 3	proportional			
94 - 105	Gobo 4	proportional			
106 - 117	Gobo 5	proportional			
118 - 129	Gobo 6	proportional			

Mode / Channel		Value	Function	Type of control
1	2			
15	20		<b>Shaking gobos from slow to fast</b> <b>Rotation - set rotation on channel(s) 16(21,22)</b>	
		130 - 141	Gobo 1	proportional
		142 - 153	Gobo 2	proportional
		154 - 165	Gobo 3	proportional
		166 - 177	Gobo 4	proportional
		178 - 189	Gobo 5	proportional
		190 - 201	Gobo 6	proportional
		202 - 221	Forwards gobo wheel 2 rotation from fast to slow	proportional
		222 - 223	No rotation	step
		224 - 243	Backwards gobo wheel 2 rotation from slow to fast	proportional
244 - 249	Random gobo 2 selection by audio control (Set microphone sensitivity in menu „Personality“)	step		
250 - 255	Auto random gobo 2 selection from fast to slow	proportional		
16	21		<b>Gobo 2 indexing and rotation</b> <b>Gobo indexing - set position on channel 15 (20)</b>	proportional
		0 - 255	Gobo indexing	
		0	No rotation	step
		1 - 127	Forwards gobo rotation from fast to slow	proportional
		128 - 129	No rotation	step
130 - 255	Backwards gobo rotation from slow to fast	proportional		
	22		<b>Gobo 2 fine indexing and rotation</b> <b>(set position on channel 15 (20))</b> Fine indexing (rotating)	proportional
17	23		<b>Prism</b> Open/hole	step
		0-19		step
		20 - 127	6-facet rotating prism Prism/gobo macros	
		128 - 135	Macro 1	step
		136 - 143	Macro 2	step
		144-151	Macro 3	step
		152 - 159	Macro 4	step
		160 - 167	Macro 5	step
		168 - 175	Macro 6	step
		176 - 183	Macro 7	step
		184-191	Macro 8	step
		192 - 199	Macro 9	step
		200- 207	Macro 10	step
		208 - 215	Macro 11	step
		216 - 223	Macro 12	step
		224 - 231	Macro 13	step
232 - 239	Macro 14	step		
240 - 247	Macro 15	step		
248 - 255	Macro 16	step		
18	24		<b>Prism rotation</b> No rotation	step
		0		proportional
		1 - 127	Forwards Effect rotation from fast to slow	step
		128 - 129	No rotation	proportional
130 - 255	Backwards Effect rotation from slow to fast			
19	25		<b>Frost</b> Open	step
		0		proportional
		1 - 179	Frost from 0% to 100%	proportional
		180 - 189	100% frost	proportional
		190 - 211	Pulse closing from slow to fast	proportional
212 - 233	Pulse opening from fast to slow	proportional		
234 - 255	Ramping from fast to slow	proportional		

Mode / Channel		Value	Function	Type of control
1	2			
20	26	0	<b>Iris</b> Open	step proportional step
		1 - 179	From max. diameter to min. diameter	
		180 - 191	Closed	
			<b>Pulse effects with Iris blackout</b>	proportional proportional step step step
		192 - 219	Pulse opening from slow to fast	
		220 - 247	Pulse closing from fast to slow	
		248 - 249	Random pulse opening (fast)	
	250 - 251	Random pulse opening (slow)	step step step	
	252 - 253	Random pulse closing (fast)		
	254 - 255	Random pulse closing (slow)		
21	27	0 - 84	<b>Zoom</b> Zoom 6.5°	step step step
		85-169	Zoom 8.2°	
		170-255	Zoom 10°	
22	28	0 - 255	<b>Focus</b> Continuous adjustment from far to near	proportional
23	29	0 - 31	<b>Shutter, strobe</b> Shutter closed, Lamp power reduced to 800W	step step
		32 - 63	Shutter open, Full lamp power	
		64 - 95	Strobe-effect from slow to fast (max. 15 flashes/s)	proportional step
		96 - 127	Shutter open, Lamp power reduced to 800 W	
		128 - 143	Opening pulse in sequences from slow to fast	proportional proportional
		144 - 159	Closing pulse in sequences from fast to slow	
		160 - 191	Shutter open, Electronic strobing „ZAP” from slow to fast (from 7 to 33 flashes/s)	proportional step
192 - 223	Random strobe-effect from slow to fast			
224 - 255	Shutter open, Full lamp power			
24	30	0 - 255	<b>Dimmer intensity</b> Dimmer intensity from 0% to 100%	proportional
	31	0 - 255	<b>Fine dimmer intensity</b> Dimmer intensity fine	proportional