

7. DMX PROTOCOL

Channel	Value	Percent	Function
1			Shutter, dimmer, strobe effect, reset <i>With dimming disabled in PER → INT (default)</i>
	0-18	0-7	Shutter closed
	19-38	7-14	Shutter open
	0-38	0-14	<i>With dimming enabled in PER → INT</i> Continuous dimming, 0% - 100% intensity
	39-95	15-37	Strobe slow → fast
	96-103	38-40	Shutter open
	104-151	41-59	Random strobe slow → fast
	152-159	60-62	Shutter open
	160-199	63-78	Music triggered shutter
	200-207	79-81	Shutter open
	208-219	82-85	Lamp on
	220-239	86-93	Shutter open
240-247	94-96	Lamp off (must be held for 5 seconds. 8 min. delay before lamp can be restruck)	
248-251	97-98	Shutter open	
252-255	99-100	Reset (must be held for 5 seconds to blackout and reset)	

Channel	Value	Percent	Function
2			Gobo selection, gobo shake, music trig gobo chase
			Gobo indexing: select gobo (set indexing angle on channel 3)
	0-7	0 - 2	Gobo 1: Spring wheel
	8-15	3-5	Gobo 2: Blade
	16-23	6-8	Gobo 3: Tricone
	24-31	9-11	Gobo 4: Space badge
	32-39	12-14	Gobo 5: Blender
	40-47	15-18	Gobo 6: Red revolver
	48-55	19-21	Gobo 7: Radial burst
	56-63	22-24	Gobo 8: Molecule
			Gobo rotation: select gobo (set movement on channel 3)
	64-71	25-27	Gobo 1: Spring wheel
	72-79	28-30	Gobo 2: Blade
	80-87	31-33	Gobo 3: Tricone
	88-95	34-37	Gobo 4: Space badge
	96-103	38-40	Gobo 5: Blender
	104-111	41-43	Gobo 6: Red revolver
	112-119	44-46	Gobo 7: Radial burst
	120-127	47-49	Gobo 8: Molecule
			Gobo shake
	128-141	50-55	Gobo 1, shake fast → slow
	142-155	56-61	Gobo 2, shake fast → slow
	156-169	62-66	Gobo 3, shake fast → slow
	170-183	67-71	Gobo 4, shake fast → slow
	184-197	72-77	Gobo 5, shake fast → slow
	198-211	78-82	Gobo 6, shake fast → slow
	212-225	83-88	Gobo 7, shake fast → slow
226-239	89-93	Gobo 8, shake fast → slow	
		Music triggered gobo chase	
240-245	94-96	Fast	
246-250	97-98	Medium	
251-255	99-100	Slow	
3			Gobo indexing angle, gobo rotation movement, music trig gobo rotation
			Gobo indexing angle (select gobo on channel 2)
	0-255	0-100	Indexing 0-395°
			Gobo rotation: set movement (select gobo on channel 2)
	0-7	0 -2	Stop
	8-77	3-29	Rotation CW slow → fast
	78-147	30-57	Rotation CCW fast→slow
	148-153	58-59	Stop
	154-223	60-87	Rotation CW slow → fast
	224-239	88-93	Rotation shake
			Music triggered rotation
	240-245	94-96	Fast
	246-250	97-98	Medium
251-255	99-100	Slow	

Channel	Value	Percent	Function	
4			Pan (mirror drum swivel) position, shake and music trig	
	0	0	Maximum left pan	
	63	24	Neutral	
	127	50	Maximum right pan	
	128 - 182	51 - 71	Narrow shake (slow → fast)	
	183 - 239	72 - 93	Wide shake (slow → fast)	
	240 - 244	94 - 95	Music trig pan, fast	
	245 - 249	96 - 97	Music trig pan, slow	
	250 - 255	98 - 100	Music trig pan, dynamic	
	5			Tilt (mirror drum rotation) rotation, shake and music trig
0 - 1		0	No rotation	
2 - 63		1 - 24	Clockwise rotation (slow → fast)	
64 - 65		25	No rotation	
66 - 127		26 - 49	Counterclockwise rotation (fast → slow)	
128 - 129		50	No rotation	
130 - 184		51 - 72	Narrow shake (slow → fast)	
185 - 239		73 - 93	Wide shake (slow → fast)	
240 - 244		94 - 95	Mirror drum rotation music trig, fast	
245 - 249		96 - 97	Mirror drum rotation music trig, slow	
250 - 255		98 - 100	Mirror drum rotation music trig, dynamic	
6*				Pan & tilt macros (DMX mode 2 only)
		0 - 15	0 - 5	No Macro
	16 - 31	6 - 11	Macro 1	
	32 - 47	12 - 18	Macro 2	
	48 - 63	19 - 24	Macro 3	
	64 - 79	25 - 30	Macro 4	
	80 - 95	31 - 37	Macro 5	
	96 - 111	38 - 43	Macro 6	
	112 - 127	44 - 49	Macro 7	
	128 - 143	50 - 55	Macro 8	
	144 - 159	56 - 62	Macro 9	
	160 - 175	63 - 68	Macro 10	
	176 - 191	69 - 74	Macro 11	
	192 - 207	75 - 81	Macro 12	
	208 - 255	82 - 100	Reserved. No function	
7*			Effects macros (DMX mode 2 only)	
	0 - 15	0 - 5	No Macro	
	16 - 31	6 - 11	Macro 1	
	32 - 47	12 - 18	Macro 2	
	48 - 63	19 - 24	Macro 3	
	64 - 79	25 - 30	Macro 4	
	80 - 95	31 - 37	Macro 5	
	96 - 111	38 - 43	Macro 6	
	112 - 127	44 - 49	Macro 7	
	128 - 143	50 - 55	Macro 8	
	144 - 159	56 - 62	Macro 9	
	160 - 175	63 - 68	Macro 10	
	176 - 191	69 - 74	Macro 11	
	192 - 207	75 - 81	Macro 12	
	208 - 255	82 - 100	Reserved. No function	

Channel	Value	Percent	Function
8*	0-7	0-2	Pan & tilt speed (Mode 2 only)
	8-240	3-94	Tracking (default)
	241-245	95-96	Fast → slow
	246-250	97-98	Blackout during gobo changes
	251-255	99-100	Blackout during pan and tilt changes
9*	0-7	0-2	Effect speed (Mode 2 only)
	8-255	3-100	Tracking (default)
			Fast → slow

* Channels 6-9 are available in DMX mode 2 only. In DMX mode 1, pan & tilt speed and effects speed are set to 'tracking'.