

# G-1 - DMX Protocol



Protocol Rev. 1

Mode
Default (12 Channels)

Valid From Firmware Version
1.0

Channel	Name	DMX Value	DMX Percentage	Description	Info	Default DMX Value	Fader Type		
1	Shutter	0	7	0,0%	2,7%	Closed		10 (3,9%)	Snap
		8	12	3,1%	4,7%	Open	①		
		13	17	5,1%	6,7%	Open, Black Out on Color Gobo Change	Slow -> Fast ①		
		18	88	7,1%	34,5%	Strobe	Slow -> Fast		
		89	108	34,9%	42,4%	Pulse - Open	Slow -> Fast		
		109	128	42,7%	50,2%	Pulse - Close	Slow -> Fast		
		129	178	50,6%	69,8%	Strobe - Random			
		179	198	70,2%	77,6%	Random Lightning	Fast -> Slow		
		199	208	78,0%	81,6%	Random Double Strobe	Fast -> Slow		
		209	218	82,0%	85,5%	Random Triple Strobe	Fast -> Slow		
		219	228	85,9%	89,4%	White Noise	Fast -> Slow		
		229	255	89,8%	100,0%	Open			
2	Intensity	0	65535	0,0%	100,0%	No light -> Maximum light		0 (0%)	Fade
3	Macro	0	4	0,0%	1,6%	Disabled (See Note ①)		0 (0%)	Fade
		5	9	2,0%	3,5%	Macro 1 (Pseudo Iris Open)			
		10	14	3,9%	5,5%	Macro 2 (Pseudo Iris Open/Close)			
		15	19	5,9%	7,5%	Macro 3 (Pseudo Iris Close)			
		20	24	7,8%	9,4%	Macro 4 (Pseudo Iris Random)			
		25	29	9,8%	11,4%	Macro 5 (Open <-> Smallest Aperture Switch)			
		30	34	11,8%	13,3%	Macro 6 (Cross)			
		35	39	13,7%	15,3%	Macro 7 (Cross Red Green)			
		40	44	15,7%	17,3%	Macro 8 (Square <-> Cross-hair)			
		45	49	17,6%	19,2%	Macro 9 (Random Gobo)			
		50	54	19,6%	21,2%	Macro 10 (Gobo switch only)			
		55	59	21,6%	23,1%	Macro 11 (Omni wheel <-> Wheel)			
		60	64	23,5%	25,1%	Macro 12 (Triangle Square <-> Square)			
		65	69	25,5%	27,1%	Macro 13 (Dot Circle <-> Cross-hair)			
		70	74	27,5%	29,0%	Macro 14 (Random position Effect Area 1)			
		75	79	29,4%	31,0%	Macro 15 (Random position Effect Area 2)			
		80	84	31,4%	32,9%	Macro 16 (Random Color)			
		85	89	33,3%	34,9%	Macro 17 (Random Color and Gobo)			
		90	94	35,3%	36,9%	Macro 18 N/A			
		95	99	37,3%	38,8%	Macro 19 N/A			
		100	104	39,2%	40,8%	Macro 20 N/A			
		105	109	41,2%	42,7%	Macro 21 N/A			
		110	114	43,1%	44,7%	Macro 22 N/A			
		115	119	45,1%	46,7%	Macro 23 N/A			
		120	124	47,1%	48,6%	Macro 24 N/A			
		125	129	49,0%	50,6%	Macro 25 N/A			
		130	134	51,0%	52,5%	Macro 26 N/A			
		135	139	52,9%	54,5%	Macro 27 N/A			
		140	144	54,9%	56,5%	Macro 28 N/A			
		145	149	56,9%	58,4%	Macro 29 N/A			
		150	154	58,8%	60,4%	Macro 30 (Open <-> To Current Gobo)			
		155	159	60,8%	62,4%	Macro 31 (Aperture 1 (Smallest) <-> To Current Gobo)			
		160	164	62,7%	64,3%	Macro 32 (Aperture 2 <-> To Current Gobo)			
		165	169	64,7%	66,3%	Macro 33 (Aperture 3 (Medium) <-> To Current Gobo)			
		170	174	66,7%	68,2%	Macro 34 (Aperture 4 <-> To Current Gobo)			
		175	179	68,6%	70,2%	Macro 35 (Aperture 5 (Largest) <-> To Current Gobo)			
		180	184	70,6%	72,2%	Macro 36 (Open <-> To Current Gobo)			
		185	189	72,5%	74,1%	Macro 37 (Gobo 1 (Bar 0°) <-> To Current Gobo)			
		190	194	74,5%	76,1%	Macro 38 (Gobo 2 (Bar 90°) <-> To Current Gobo)			
195	199	76,5%	78,0%	Macro 39 (Gobo 3 (Galaxy Dots) <-> To Current Gobo)					

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
3	Macro	200	204	78,4%	80,0%	Macro 40 (Gobo 4 (Japanese Fan) <-> To Current Gobo)		0 (0%)	Fade
		205	209	80,4%	82,0%	Macro 41 (Gobo 5 (Spiked Star) <-> To Current Gobo)			
		210	214	82,4%	83,9%	Macro 42 (Gobo 6 (Triangle Square) <-> To Current Gobo)			
		215	219	84,3%	85,9%	Macro 43 (Gobo 7 (Dot Circle) <-> To Current Gobo)			
		220	224	86,3%	87,8%	Macro 44 (Gobo 8 (Cross-hair) <-> To Current Gobo)			
		225	229	88,2%	89,8%	Macro 45 (Gobo 9 (Square) <-> To Current Gobo)			
		230	234	90,2%	91,8%	Macro 46 (Gobo 10 (Omni Wheel) <-> To Current Gobo)			
		235	239	92,2%	93,7%	Macro 47 (Gobo 11 (Triangle) <-> To Current Gobo)			
		240	244	94,1%	95,7%	Macro 48 (Gobo 12 (Wheel) <-> To Current Gobo)			
		245	249	96,1%	97,6%	Macro 49 (Gobo 13 (Square dotted) <-> To Current Gobo)			
		250	254	98,0%	99,6%	Macro 50 (Gobo 14 (Snake) <-> To Current Gobo)			
		255	255	100,0%	100,0%	Disabled			
		4 5	Pan	Depending On Pan Mode					
0	65535			0,0%	100,0%	-270° to 270° / 540° Mode	540°	32767 (50%)	Fade
0	65535			0,0%	100,0%	-180° to 180° / 360° Mode	360°		
0	65535			0,0%	100,0%	-180° to 180° / 360° Mode (Shortest Path)	360° Shortest Path		
Pan Mode Continuous Rotation									
0	32766			0,0%	49,9%	CCW - Counter Clockwise	Fast -> Slow		Fade
32767	32767	50,0%	50,0%	Stopped	Stopped				
32768	65535	50,1%	100,0%	CW - Clockwise	Slow -> Fast				
6 7	Tilt	0	65535	0,0%	100,0%	-120° to 120°		32767 (50%)	Fade
8	Pan Mode	0	7	0,0%	2,7%	540° Mode	Mode for Pan	0 (0%)	Snap
		8	15	3,1%	5,9%	360° Mode			
		16	23	6,3%	9,0%	360° Shortest Path Mode			
		24	31	9,4%	12,2%	Continuous Rotation Mode			
		32	143	12,5%	56,1%	Reserved			
		144	151	56,5%	59,2%	Store Pan/Tilt Pos 1	See Note ②	0 (0%)	Snap
		152	159	59,6%	62,4%	Store Pan/Tilt Pos 2			
		160	167	62,7%	65,5%	Store Pan/Tilt Pos 3			
		168	175	65,9%	68,6%	Store Pan/Tilt Pos 4			
		176	183	69,0%	71,8%	Store Pan/Tilt Pos 5			
		184	191	72,2%	74,9%	Store Pan/Tilt Pos 6			
		192	199	75,3%	78,0%	Store Pan/Tilt Pos 7			
		200	207	78,4%	81,2%	Store Pan/Tilt Pos 8			
		208	215	81,6%	84,3%	Store Pan/Tilt Pos 9			
		216	223	84,7%	87,5%	Sequential Stored Positions Fade	Slow -> Fast		
		224	231	87,8%	90,6%	Sequential Stored Positions Snap	Slow -> Fast		
		232	239	91,0%	93,7%	Random Stored Positions Fade	Slow -> Fast		
240	247	94,1%	96,9%	Random Stored Positions Snap	Slow -> Fast				
248	255	97,3%	100,0%	540° Mode	Mode for Pan				
9	Gobo	0	4	0,0%	1,6%	Open		0 (0%)	Fade
		5	8	2,0%	3,1%	Aperture 1 (Smallest)			
		9	12	3,5%	4,7%	Aperture 2			
		13	16	5,1%	6,3%	Aperture 3 (Medium)			
		17	20	6,7%	7,8%	Aperture 4			
		21	24	8,2%	9,4%	Aperture 5 (Largest)			
		25	28	9,8%	11,0%	Open			
		29	32	11,4%	12,5%	Gobo 1 (Bar 0°)			
		33	36	12,9%	14,1%	Gobo 2 (Bar 90°)			
		37	40	14,5%	15,7%	Gobo 3 (Galaxy Dots)			
		41	44	16,1%	17,3%	Gobo 4 (Japanese Fan)			
		45	48	17,6%	18,8%	Gobo 5 (Spiked Star)			
		49	52	19,2%	20,4%	Gobo 6 (Triangle Square)			
		53	56	20,8%	22,0%	Gobo 7 (Dot Circle)			
		57	60	22,4%	23,5%	Gobo 8 (Cross-hair)			
		61	64	23,9%	25,1%	Gobo 9 (Square)			
65	68	25,5%	26,7%	Gobo 10 (Omni Wheel)					
69	72	27,1%	28,2%	Gobo 11 (Triangle)					

Channel	Name	DMX Value	DMX Percentage	Description	Info	Default DMX Value	Fader Type				
9	Gobo	73	76	28,6%	29,8%	Gobo 12 (Wheel)		0 (0%)	Fade		
		77	80	30,2%	31,4%	Gobo 13 (Square dotted)					
		81	84	31,8%	32,9%	Gobo 14 (Snake)					
		85	88	33,3%	34,5%	Open (Shake)	Slow -> Fast				
		89	92	34,9%	36,1%	Aperture 1 (Smallest) Shake	Slow -> Fast				
		93	96	36,5%	37,6%	Aperture 2 Shake	Slow -> Fast				
		97	100	38,0%	39,2%	Aperture 3 (Medium) Shake	Slow -> Fast				
		101	104	39,6%	40,8%	Aperture 4 Shake	Slow -> Fast				
		105	108	41,2%	42,4%	Aperture 5 (Largest) Shake	Slow -> Fast				
		109	112	42,7%	43,9%	Open Shake	Slow -> Fast				
		113	116	44,3%	45,5%	Gobo 1 (Bar 0°) Shake	Slow -> Fast				
		117	120	45,9%	47,1%	Gobo 2 (Bar 90°) Shake	Slow -> Fast				
		121	124	47,5%	48,6%	Gobo 3 (Galaxy Dots) Shake	Slow -> Fast				
		125	128	49,0%	50,2%	Gobo 4 (Japanese Fan) Shake	Slow -> Fast				
		129	132	50,6%	51,8%	Gobo 5 (Spiked Star) Shake	Slow -> Fast				
		133	136	52,2%	53,3%	Gobo 6 (Triangle Square) Shake	Slow -> Fast				
		137	140	53,7%	54,9%	Gobo 7 (Dot Circle) Shake	Slow -> Fast				
		141	144	55,3%	56,5%	Gobo 8 (Cross-hair) Shake	Slow -> Fast				
		145	148	56,9%	58,0%	Gobo 9 (Square) Shake	Slow -> Fast				
		149	152	58,4%	59,6%	Gobo 10 (Omni Wheel) Shake	Slow -> Fast				
		153	156	60,0%	61,2%	Gobo 11 (Triangle) Shake	Slow -> Fast				
		157	160	61,6%	62,7%	Gobo 12 (Wheel) Shake	Slow -> Fast				
		161	164	63,1%	64,3%	Gobo 13 (Square dotted) Shake	Slow -> Fast				
		165	168	64,7%	65,9%	Gobo 14 (Snake) Shake	Slow -> Fast				
		169	180	66,3%	70,6%	Effect Area 1 - Stepless Fade Through					
		181	192	71,0%	75,3%	Effect Area 2 - Stepless Fade Through					
193	202	75,7%	79,2%	Effect Area 1 - Oscillate	Fast -> Stop						
203	212	79,6%	83,1%	Effect Area 2 - Oscillate	Fast -> Stop						
213	233	83,5%	91,4%	Continuous CCW Gobo Wheel Spin	Fast -> Slow						
234	255	91,8%	100,0%	Continuous CW Gobo Wheel Spin	Slow -> Fast						
10	Color	<b>Full Color Positions</b>						0 (0%)	Fade		
		0	4	0,0%	1,6%	Open					
		5	9	2,0%	3,5%	Color 1 (Congo)					
		10	14	3,9%	5,5%	Color 2 (Red)					
		15	19	5,9%	7,5%	Color 3 (Green)					
		20	24	7,8%	9,4%	Color 4 (Blue)					
		25	29	9,8%	11,4%	Color 5 (Orange)					
		30	34	11,8%	13,3%	Color 6 (Light Green)					
		35	39	13,7%	15,3%	Color 7 (Pink)					
		40	44	15,7%	17,3%	Color 8 (Light Blue / CTB)					
		45	49	17,6%	19,2%	Color 9 (Lavender / Purple)					
		50	54	19,6%	21,2%	Color 10 (Fluerecent Green)					
		55	59	21,6%	23,1%	Color 11 (Magenta)					
		60	64	23,5%	25,1%	Color 12 (Cyan)					
		65	69	25,5%	27,1%	Color 13 (Yellow)					
		70	74	27,5%	29,0%	Color 14 (CTO)					
		<b>Stepless Color Positions</b>								0 (0%)	Fade
		75	79	29,4%	31,0%	Open	Max. -> ½				
		80		31,4%		½ Split Open / Color 1					
		81	89	31,8%	34,9%	Color 1 (Congo)	½ -> Max. -> ½				
		90		35,3%		½ Split Color 1 / Color 2					
		91	99	35,7%	38,8%	Color 2 (Red)	½ -> Max. -> ½				
		100		39,2%		½ Split Color 2 / Color 3					
		101	109	39,6%	42,7%	Color 3 (Green)	½ -> Max. -> ½				
		110		43,1%		½ Split Color 3 / Color 4					
		111	119	43,5%	46,7%	Color 4 (Blue)	½ -> Max. -> ½				
120		47,1%		½ Split Color 4 / Color 5							
121	129	47,5%	50,6%	Color 5 (Orange)	½ -> Max. -> ½						
130		51,0%		½ Split Color 5 / Color 6							
131	139	51,4%	54,5%	Color 6 (Light Green)	½ -> Max. -> ½						
140		54,9%		½ Split Color 6 / Color 7							
141	149	55,3%	58,4%	Color 7 (Pink)	½ -> Max. -> ½						

Channel	Name	DMX Value	DMX Percentage	Description	Info	Default DMX Value	Fader Type		
10	Color	150	58,8%	½ Split Color 7 / Color 8		0 (0%)	Fade		
		151	159	59,2%	62,4%			Color 8 (Light Blue / CTB)	½ -> Max. -> ½
		160		62,7%	½ Split Color 8 / Color 9				
		161	169	63,1%	66,3%			Color 9 (Lavender / Purple)	½ -> Max. -> ½
		170		66,7%	½ Split Color 9 / Color 10				
		171	179	67,1%	70,2%			Color 10 (Fluerecent Green)	½ -> Max. -> ½
		180		70,6%	½ Split Color 10 / Color 11				
		181	189	71,0%	74,1%			Color 11 (Magenta)	½ -> Max. -> ½
		190		74,5%	½ Split Color 11 / Color 12				
		191	199	74,9%	78,0%			Color 12 (Cyan)	½ -> Max. -> ½
		200		78,4%	½ Split Color 12 / Color 13				
		201	209	78,8%	82,0%			Color 13 (Yellow)	½ -> Max. -> ½
		210		82,4%	½ Split Color 13 / Color 14				
		211	219	82,7%	85,9%			Color 14 (CTO)	½ -> Max. -> ½
		220		86,3%	½ Split Color 14 / Open				
		221	225	86,7%	88,2%			Open	½ -> Max.
		226	238	88,6%	93,3%			Continual CCW Gobo Wheel Spin	Fast -> Slow
239	241	93,7%	94,5%	Stopped	Stopped				
242	255	94,9%	100,0%	Continual CW Gobo Wheel Spin	Slow -> Fast				
11	Focus	0	255	0,0%	100,0%	Near -> Far	127 (50%)	Fade	
12	Control Channel	0	4	0,0%	1,6%	No Function	Reserved	0 (0%)	Snap
		5	9	2,0%	3,5%	Full Reset			
		10	14	3,9%	5,5%	Pan Reset			
		15	19	5,9%	7,5%	Tilt Reset			
		20	24	7,8%	9,4%	Gobo Reset			
		25	29	9,8%	11,4%	Color Reset			
		30	34	11,8%	13,3%	Focus Reset			
35	255	13,7%	100,0%	Reserved					

The G-1 operates in one mode only

- ① Set the shutter channel to "blackout on gobo/color change" when using the built-in macro effects to obtain additional blackouts during effect transitions.
- ② When storing internal position pre-sets by DMX hold the value on the pan-mode channel for 3 sec.

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