

MAC 700 Profile DMX protocol

16-bit Basic Mode	16-bit Extended Mode	DMX Value	Percent	Function
1	1	0 - 19	0 - 7	Shutter, strobe, reset, lamp on/off Shutter closed (lamp switches to 400 W mode after 10 seconds while shutter is closed)
		20 - 49	8 - 19	Shutter open
		50 - 72	20 - 28	Strobe, fast → slow
		73 - 79	29 - 30	Shutter open
		80 - 99	31 - 39	Opening pulse, fast → slow
		100 - 119	40 - 47	Closing pulse, fast → slow
		120 - 127	48 - 50	Shutter open
		128 - 147	51 - 57	Random strobe, fast
		148 - 167	58 - 65	Random strobe, medium
		168 - 187	66 - 73	Random strobe, slow
		188 - 190	74	Shutter open
		191 - 193	75	Random opening pulse, fast
		194 - 196	76	Random opening pulse, slow
		197 - 199	77	Random closing pulse, fast
		200 - 202	78 - 79	Random closing pulse, slow
		203 - 207	80 - 81	Shutter open
		208 - 217	82 - 85	Reset fixture* **
218 - 227	86 - 89	Shutter open		
228 - 237	90 - 93	Lamp on		
238 - 242	94 - 95	400 W mode (active until 700 W value is selected)		
243 - 247	96 - 97	700 W mode		
248 - 255	98 - 100	Lamp off*		
2	2	0 - 255	0 - 100	Dimmer (MSB) Closed → open
-	3	0 - 255	0 - 100	Dimmer, fine (LSB)
3	4	0 - 255	0 - 100	Cyan (MSB) White → full cyan
		0	0	Cyan range in random CMY color when set on channel 11 (basic) or 16 (extended) Normal (full range)
		1 - 127	1 - 50	Minimum cyan setting (127 = full cyan)
		128 - 254	51 - 99	Maximum cyan setting (128 = no cyan)
255	100	Normal (full range)		
-	5	0 - 255	0 - 100	Cyan, fine (LSB)
4	6	0 - 255	0 - 100	Magenta (MSB) White → full magenta
		0	0	Magenta range in random CMY color when set on channel 11 (basic) or 16 (extended) Normal (full range)
		1 - 127	1 - 50	Minimum magenta setting (127 = full magenta)
		128 - 254	51 - 99	Maximum magenta setting (128 = no magenta)
255	100	Normal (full range)		
-	7	0 - 255	0 - 100	Magenta, fine (LSB)
5	8	0 - 255	0 - 100	Yellow (MSB) White → full yellow
		0	0	Yellow range in random CMY color when set on channel 11 (basic) or 16 (extended) Normal (full range)
		1 - 127	1 - 50	Minimum yellow setting (127 = full yellow)
		128 - 254	51 - 99	Maximum yellow setting (128 = no yellow)
255	100	Normal (full range)		
-	9	0 - 255	0 - 100	Yellow, fine (LSB)

**If disabled in the control menu, Reset fixture and Lamp off work only if the following effects are selected:*

- Color wheel to slot 1 – DMX value 17 on channel 6 (in basic mode) or 10 (extended mode)
- Prism on, no rotation – DMX value 80-89 on channel 14 (basic) or 19 (extended)
- Gobo wheel 1 open – DMX value 0 on channel 7 (basic) or 12 (extended)
- Gobo wheel 2 open – DMX value 0 on channel 10 (basic) or 15 (extended)

*** A five-second delay for the Reset fixture command can be set in the control menu under JRES.*

16-bit Basic Mode	16-bit Extended Mode	DMX Value	Percent	Function
6	10			Color wheel (MSB)
				<i>Continuous scroll</i>
		0	0	Open
		1 - 16	1 - 6	Open → slot 1
		17	7	Slot 1 (Blue 110)
		18 - 33	8 - 12	Slot 1 → slot 2
		34	13	Slot 2 (Green 206 IAD)
		35 - 50	14 - 19	Slot 2 → slot 3
		51	20	Slot 3 (Pink 312)
		52 - 67	21 - 26	Slot 3 → slot 4
		68	27	Slot 4 (Orange 306M)
		69 - 84	28 - 32	Slot 4 → slot 5
		85	33	Slot 5 (Half minus green)
		86 - 101	34 - 39	Slot 5 → slot 6
		102	40	Slot 6 (CTC 3200 - 4100K)
		103 - 118	41 - 46	Slot 6 → slot 7
		119	47	Slot 7 (CTC 5500 - 2800K)
		120 - 135	48 - 52	Slot 7 → slot 8
		136	53	Slot 8 (Red 308)
		137 - 152	54 - 59	Slot 8 → open
		153	60	Open
				<i>Stepped scroll</i>
		154 - 158	61 - 62	Slot 8 (Red 308)
		159 - 163	63 - 64	Slot 7 (CTC 5500 - 2800K)
		164 - 168	65 - 66	Slot 6 (CTC 3200 - 4100K)
		169 - 173	67 - 68	Slot 5 (Half minus green)
		174 - 178	69 - 70	Slot 4 (Orange 306M)
		179 - 183	71 - 72	Slot 3 (Pink 312)
		184 - 188	73 - 74	Slot 2 (Green 206 IAD)
		189 - 193	75 - 76	Slot 1 (Blue 110)
		194 - 198	77 - 78	Open
				<i>Continuous rotation</i>
199 - 219	79 - 86	CW, fast → slow		
220 - 240	87 - 94	CCW, slow → fast		
		<i>Random color</i>		
241 - 245	95 - 96	Fast		
246 - 250	97 - 98	Medium		
251 - 255	99 - 100	Slow		
-	11	0 - 255	0 - 100	Color Wheel: fine (LSB)

16-bit Basic Mode	16-bit Extended Mode	DMX Value	Percent	Function
7	12			Gobo wheel 1 (rotating gobos): gobo selection, shake, rotation <i>Indexed gobo: set angle on channel 8 (basic) or 13 (extended)</i>
		0 - 11	0 - 4	Open
		12 - 15	4 - 5	Gobo 1 (Spiral)
		16 - 19	6 - 7	Gobo 2 (Radial Circles)
		20 - 23	7 - 9	Gobo 3 (Fused Dichro Red/Yellow)
		24 - 27	9 - 10	Gobo 4 (Milky Way)
		28 - 31	11 - 12	Gobo 5 (Water)
		32 - 35	12 - 13	Gobo 6 (Flames)
				<i>Select gobo with continuous gobo rotation: set gobo rotation speed on channel 8 (basic) or 13 (extended)</i>
		36 - 39	14 - 15	Gobo 1 (Spiral)
		40 - 43	15 - 16	Gobo 2 (Radial Circles)
		44 - 47	17 - 18	Gobo 3 (Fused Dichro Red/Yellow)
		48 - 51	18 - 20	Gobo 4 (Milky Way)
		52 - 55	20 - 21	Gobo 5 (Water)
		56 - 59	22 - 23	Gobo 6 (Flames)
				<i>Select gobo with indexed position and shake: set angle on channel 8 (basic) or 13 (extended)</i>
		60 - 71	23 - 27	Gobo 1, slow → fast
		72 - 83	28 - 32	Gobo 2, slow → fast
		84 - 95	33 - 36	Gobo 3, slow → fast
		96 - 107	37 - 41	Gobo 4, slow → fast
		108 - 119	42 - 46	Gobo 5, slow → fast
120 - 131	47 - 51	Gobo 6, slow → fast		
		<i>Select gobo with continuous gobo rotation and shake: set gobo rotation speed on channel 8 (basic) or 13 (extended)</i>		
132 - 143	52 - 56	Gobo 6, slow → fast		
144 - 155	57 - 61	Gobo 5, slow → fast		
156 - 167	62 - 65	Gobo 4, slow → fast		
168 - 179	66 - 70	Gobo 3, slow → fast		
180 - 191	71 - 75	Gobo 2, slow → fast		
192 - 203	76 - 80	Gobo 1, slow → fast		
		<i>Gobo wheel scroll with continuous gobo rotation: set gobo rotation speed on channel 8 (basic) or 13 (extended)</i>		
204 - 229	81 - 90	CW scroll, slow → fast		
230 - 255	91 - 100	CCW scroll, fast → slow		
8	13			Rotating gobo: indexing, speed (MSB) <i>If indexed gobo is selected on channel 7 (basic) or 12 (extended)</i> Rotating gobo indexing, 0 → 395°
				<i>If continuous gobo rotation is selected on channel 7 (basic) or 12 (extended)</i>
		0 - 2	0	No rotation
		3 - 127	1 - 50	CW, slow → fast
		128 - 252	51 - 99	CCW, fast → slow
253 - 255	100	No rotation		
9	14	0 - 255	0 - 100	Rotating gobo, fine indexing (LSB) <i>If indexed gobo is selected on channel 7 (basic) or 12 (extended)</i>

16-bit Basic Mode	16-bit Extended Mode	DMX Value	Percent	Function
10	15	Gobo wheel 2 (static gobos): gobo selection, wheel scroll, random gobo		
		<i>Continuous scroll</i>		
		0	0	Open
		0 - 10	1 - 3	Open → slot 1
		11	4	Slot 1 (Crackle)
		12 - 21	5 - 7	Slot 1 → slot 2
		22	8	Slot 2 (Triangles Small)
		23 - 32	9 - 12	Slot 2 → slot 3
		33	13	Slot 3 (Tye Dye)
		34 - 43	14 - 16	Slot 3 → slot 4
		44	17	Slot 4 (Globo)
		45 - 54	18 - 21	Slot 4 → slot 5
		55	21	Slot 5 (Worms)
		56 - 65	22 - 25	Slot 5 → slot 6
		66	26	Slot 6 (Bio)
		67 - 76	27 - 29	Slot 6 → slot 7
		77	30	Slot 7 (Leaf Breakup)
		78 - 87	31 - 33	Slot 7 → slot 8
		88	34	Slot 8 ("Les Mis" Whirl Pool)
		89 - 98	35 - 38	Slot 8 → slot 9
		99	39	Slot 9 (Two Tone)
		100 - 109	40 - 42	Slot 9 → open
		110 - 112	43	Open
		<i>Stepped scroll</i>		
		113 - 121	44 - 47	Slot 9 (Two Tone)
		122 - 130	48 - 51	Slot 8 ("Les Mis" Whirl Pool)
		131 - 139	52 - 54	Slot 7 (Leaf Breakup)
		140 - 148	55 - 58	Slot 6 (Bio)
		149 - 157	59 - 61	Slot 5 (Worms)
		158 - 166	62 - 65	Slot 4 (Globo)
		167 - 175	66 - 69	Slot 3 (Tye Dye)
		176 - 184	70 - 72	Slot 2 (Triangles Small)
185 - 193	73 - 76	Slot 1 (Crackle)		
194 - 202	77 - 79	Open		
<i>Continuous wheel rotation</i>				
203 - 221	80 - 87	CW, fast → slow		
222 - 240	88 - 94	CCW, slow → fast		
<i>Random gobo</i>				
241 - 245	95 - 96	Fast		
246 - 250	97 - 98	Medium		
251 - 255	99 - 100	Slow		
11	16	Static gobo/color wheel macros, random CMY		
		No macro		
		0 - 15	0 - 5	Static gobo wheel shake, slow → fast
		16 - 55	6 - 21	Color wheel shake, slow → fast
		56 - 95	22 - 37	Static gobo wheel and color wheel shake, slow → fast
		96 - 135	37 - 53	
		<i>Random CMY (set min. or max. limits on channels 3, 4 & 5 (basic) or 4, 6 & 8 (extended))</i>		
136 - 175	54 - 69	Fast		
176 - 215	70 - 84	Medium		
216 - 255	85 - 100	Slow		
12	17	Gobo animation wheel: position and function		
		0 - 9	0 - 3	Open
		10 - 19	4 - 7	Horizontal indexed position: set indexing on 13 (basic) or 18 (extended)
		20 - 29	8 - 11	Vertical indexed position: set indexing on channel 13 (basic) or 18 (extended)
		30 - 39	12 - 15	Horizontal position, continuous rotation: set direction & speed on channel 13 (basic) or 18 (extended)
		40 - 49	16 - 19	Vertical position, continuous rotation: set direction & speed on channel 13 (basic) or 18 (extended)
		50 - 139	20 - 54	Indexed angled position, horizontal → vertical: set indexing on channel 13 (basic) or 18 (extended)
		140 - 229	55 - 89	Angled position, vertical → horizontal, continuous rotation: set direction & speed on channel 13 (basic) or 18 (extended)
230 - 255	90 - 100	Open		

16-bit Basic Mode	16-bit Extended Mode	DMX Value	Percent	Function
13	18	0 - 255	0 - 100	Gobo animation wheel: indexed angled position, rotation direction and speed If indexed angled position is selected on channel 12 (basic) or 17 (extended) Indexed angle, min.→ max. Continuous rotation: set angle on channel 12 (basic) or 17 (extended)
		0 - 2	0	No rotation
		3 - 127	1 - 50	CCW, slow → fast
		128 - 252	51 - 99	CW, fast → slow
		253 - 255	100	No rotation
14	19	0 - 19	0 - 7	Prism Prism off
		20 - 79	8 - 31	Prism on, CCW rotation, fast → slow
		80 - 89	31 - 35	Prism on, no rotation
		90 - 149	35 - 58	Prism on, CW rotation, slow → fast
		150 - 255	59 - 100	Prism off
15	20	0 - 199	0 - 77	Iris (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	Random opening pulse, fast
		247 - 249	97	Random opening pulse, slow
		250 - 252	98 - 99	Random closing pulse, fast
		253 - 255	100	Random closing pulse, slow
-	21	0 - 255	0 - 100	Iris, fine (LSB)
16	22	0 - 255	0 - 100	Focus (MSB) Infinity → near
-	23	0 - 255	0 - 100	Focus, fine (LSB)
17	24	0 - 255	0 - 100	Zoom (MSB) Flood → spot
-	25	0 - 255	0 - 100	Zoom, fine (LSB)
18	26	0 - 255	0 - 100	Pan (MSB) Left → right (128 = neutral)
19	27	0 - 255	0 - 100	Pan, fine (LSB)
20	28	0 - 255	0 - 100	Tilt (MSB) Left → right (128 = neutral)
21	29	0 - 255	0 - 100	Tilt, fine (LSB)
22	30	0 - 2	0 - 1	Pan/tilt speed Tracking
		3 - 242	1 - 95	Fast → slow (vector control)
		243 - 245	96	Tracking, <i>PTSP = SLOW</i> (menu override)
		246 - 248	96 - 97	Tracking, <i>PTSP = NORM</i> (menu override)
		249 - 251	98	Tracking, <i>PTSP = FAST</i> (menu override)
		252 - 255	99 - 100	Blackout while moving

16-bit Basic Mode	16-bit Extended Mode	DMX Value	Percent	Function
23	31			Effects speed
				<i>Dimmer, CMY, animation wheel rotation, animation wheel angle, iris, zoom and focus</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 wheel</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, wheels 1 and 2</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, wheels 1 and 2</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</i>		
0 - 251	0 - 98	Normal (no blackout)		
252 - 255	99 - 100	Blackout while moving		