DMX protocol

Applicable when running MAC Viper Wash firmware version: 1.1.0

Basic 16-bit Mode	16-bit Extended Mode	DMX Value	Percent	Function	Fade type	Default value
1	**1**	0 - 19 20 - 49 50 - 200 201 - 210 211 - 255	0 - 7 8 - 19 20 - 78 79 - 82 82 - 100	**Strobe/shutter** Shutter closed (Lamp switches to 800 watt mode after shutter is closed for 10 seconds) Shutter open Strobe, slow → fast Shutter open Random strobe, slow → fast	Snap	30
2	**2**	0 - 65535	0 - 100	**Dimmer fade (MSB)** Closed → open	Fade	0
	3			**Dimmer fade, fine (LSB)**	Fade	0
3	**4**	0 - 255	0 - 100	**Cyan** White → full cyan	Fade	0
4	**5**	0 - 255	0 - 100	**Magenta** White → full magenta	Fade	0
5	**6**	0 - 255	0 - 100	**Yellow** White → full yellow	Fade	0
6	**7**	0 - 255	0 - 100	**CTO** Open (6000 K) → warm (3200 K)	Fade	0
7	**8**	0 1 - 14 15 16 - 29 30 31 - 44 45 46 - 59 60 61 - 74 75 76 - 89 90 91 - 104 105 106 - 119 120 121 - 125 126 - 130 131 - 135 136 - 140 141 - 145 146 - 150 151 - 155 156 - 160 161 - 200 201 - 203 204 - 243 244 - 247 248 - 251 252 - 255	0 1 - 5 6 6 - 11 12 12 - 17 18 18 - 23 23 24 - 29 29 30 - 35 35 36 - 41 41 41 - 46 47 47 - 49 49 - 51 51 - 53 53 - 55 55 - 57 57 - 59 59 - 61 61 - 63 63 - 78 79 80 - 95 95 - 96 97 - 98 98 - 100	**Color Wheel – *MAC Viper Wash DX only*** *Continuous Scroll* Open Open → Slot 1 Slot 1 Slot 1 → Slot 2 Slot 2 Slot 2 → Slot 3 Slot 3 Slot 3 → Slot 4 Slot 4 Slot 4 → Slot 5 Slot 5 Slot 5 → Slot 6 Slot 6 Slot 6 → Slot 7 Slot 7 Slot 7 → Open Open *Stepped Scroll (snap to full color positions)* Slot 1 Slot 2 Slot 3 Slot 4 Slot 5 Slot 6 Slot 7 Open *Continuous Rotation* CW, Fast → Slow Stop, color wheel stops at current position CCW, Slow → Fast *Random color* Fast Medium Slow	Snap	0

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8	9	0 - 255	0 - 100	**Iris – *MAC Viper Wash DX only*** Open → closed	Fade	0
9	10	0 - 255	0 - 100	**Internal barndoor 1 – *MAC Viper Wash DX only*** Out → in	Fade	0
10	11	0 - 255	0 - 100	**Internal barndoor 2 – *MAC Viper Wash DX only*** Out → in	Fade	0
11	12	0 - 9 10 11 - 99 100 101 - 189 190 191 - 200 201 - 255	0 - 4 4 4 - 39 99 39 - 74 74 75 - 78 79 - 100	**Internal barndoors rotation – *MAC Viper Wash DX only*** -10° → -1° 0° 1° → 89° 90° 91° → +179° 180° 181° → 190° No function	Fade	100
12	13	0 - 255	0 - 100	**Zoom** Flood → spot	Fade	32768
13	14	0 - 65535	0 - 100	**Focus** Infinity → near	Fade	32768
14	15	0 - 65535	0 - 100	**Pan, 16-bit (MSB and LSB)** Left → right (32768 = neutral)	Fade	32768
15	16					
16	17	0 - 65535	0 - 100	**Tilt, 16-bit (MSB and LSB)** Up → down (32768 = neutral)	Fade	32768
17	18					

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Basic 16-bit Mode	16-bit Extended Mode	DMX Value	Percent	Function	Fade type	Default value
				Fixture control/settings		
				(hold for number of seconds indicated to activate)		
		0 - 9	0 - 4	*No function (disables calibration) – 5 sec.*		
		10 - 14	4 - 5	Reset entire fixture – 5 sec.		
		15 - 19	6 - 7	Reset dimmer and shutter only – 5 sec.		
		20 - 24	8 - 9	Reset color (CMY and CTO plus color wheel if fitted) only – 5 sec.		
		25 - 29	10 - 11	Reset beam (zoom, focus plus iris if fitted) only – 5 sec.		
		30 - 34	12 - 13	Reset pan and tilt only – 5 sec.		
		35 - 39	14 - 15	*No function*		
		40 - 44	16 - 17	Lamp on		
		45 - 49	18 - 19	Lamp off – 5 sec.		
		50 - 54	20 - 21	*No function*		
		55 - 59	21 - 23	Enable calibration – 5 sec.		
		60 - 64	23 - 25	Linear dimming curve – 1 sec. (menu override, setting unaffected by power off/on)		
		65 - 69	25 - 27	Square law dimming curve – 1 sec. (menu override, factory default setting, setting unaffected by power off/on)		
		70 - 74	28 - 29	Inverse square law dimming curve – 1 sec. (menu override, setting unaffected by power off/on)		
		75 - 79	29 - 31	S-curve dimming curve– 1 sec. (menu override, setting unaffected by power off/on)		
		80 - 84	32 - 33	Normal pan and tilt speed – 1 sec. (menu override - setting returns to MENU setting after power on/off)		
		85 - 89	34 - 35	Fast pan and tilt speed – 1 sec. (default setting, menu override - setting returns to MENU setting after power on/off)		
		90 - 94	35 - 37	Slow pan and tilt speed – 1 sec. (menu override - setting returns to MENU setting after power on/off)		
		95 - 99	37 - 39	Effect shortcuts = ON – 1 sec. (default setting, menu override, setting stays at factory default ON at power off/on)		
18	**19**	100 - 104	39 - 41	Effect shortcuts = OFF – 1 sec. (menu override, setting returns to factory default ON at power off/on)	Snap	0
		105 - 109	41 - 43	Disable zoom/focus linking– 1 sec.		
		110 - 114	43 - 45	Enable zoom/focus linking, near distance – 1 sec.		
		115 - 119	45 - 46	Enable zoom/focus linking, medium distance (default setting) – 1 sec.		
		120 - 124	47 - 48	Enable zoom/focus linking, far distance – 1 sec.		
		125 - 126	49	Ballast output full, set to 100% (default setting)		
		127 - 128	50	Ballast output reduced to 90%		
		129 - 130	50 - 51	Ballast output reduced to 80%		
		131 - 132	51 - 52	Ballast output reduced to 70%		
		133 - 134	52	Ballast output reduced to 60%		
		135 - 139	53 - 54	Auto blackout = ON – 1 sec.		
		140 - 144	55 - 56	Auto blackout = OFF – 1 sec. (default setting)		
		145 - 149	57 - 58	*No function*		
		150 - 154	59 - 60	Turn on control panel display		
		155 - 159	61 - 62	Turn off control panel display – 1 sec.		
		160 - 164	62 - 63	*No function*		
		165 - 169	64 - 66	Store pan and tilt calibration – 5 sec.		
		170 - 174	66 - 68	Store dimmer calibration – 5 sec.		
		175 - 179	68 - 70	Store cyan calibration – 5 sec.		
		180 - 184	70 - 72	Store magenta calibration – 5 sec.		
		185 - 189	72 - 74	Store yellow calibration – 5 sec.		
		190 - 194	74 - 76	Store CTC calibration – 5 sec.		
		195 - 199	76 - 78	Store all CMY and CTC calibration – 5 sec.		
		200 - 214	78 - 84	*No function*		
		215 - 219	84 - 86	Store internal barndoors calibration – 5 sec.		
		220 - 224	86 - 88	Store iris calibration – 5 sec.		
		225 - 229	88 - 89	Store focus calibration – 5 sec.		
		230 - 234	90 - 91	Store zoom calibration – 5 sec.		
		235 - 239	92 - 93	Store pan calibration – 5 sec.		
		240 - 244	94 - 95	Store tilt calibration – 5 sec.		
		245 - 249	96 - 97	Reset all calibration values to factory defaults – 5 sec.		
		250 - 255	98 - 100	*No function*		
-	**20**			Reserved for future use		
-	**21**			Reserved for future use		
-	**22**			Reserved for future use		

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-	23			Reserved for future use		
-	24			Reserved for future use		

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MSB = Most significant byte
LSB = Least significant byte