

## 7.2 DMX Protocol

58/25/23/27/70/55 Channels:

CHANNEL						VALUE	FUNCTION
58ch	25ch	23ch	27ch	70ch	55ch		
1	1	1	1	1	1	000-255	<b>PAN</b> 0°→540°
2	2	2	2	2	2	000-255	<b>PAN FINE</b>
3	3	3	3	3	3	000-255	<b>TILT</b> 0°→450°
4	4	4	4	4	4	000-255	<b>TILT FINE</b>
5	5	5	5	5	5	000-127 128-189 190-193 194-255	<b>PAN INFINITY</b> Null CCW Rotation, Fast to Slow Stop CW Rotation, Slow to Fast
6	6	6	6	6	6	000-127 128-189 190-193 194-255	<b>TILT INFINITY</b> Null CW Rotation, Fast to Slow Stop CCW Rotation, Slow to Fast
7	7	7	7	7	7	000-255	<b>PAN/TILT SPEED</b> Fast to Slow
	8	8	8			000-255	<b>RED ALL</b> 0%→100%
	9	9	9			000-255	<b>GREEN ALL</b> 0%→100%
	10	10	10			000-255	<b>BLUE ALL</b> 0%→100%
	11	11	11			000-255	<b>WHITE ALL</b> 0%→100%
8				8	8	000-255	<b>RED 1</b> 0%→100%
9				9	9	000-255	<b>GREEN 1</b> 0%→100%
10				10	10	000-255	<b>BLUE 1</b> 0%→100%
11				11	11	000-255	<b>WHITE 1</b> 0%→100%

				<b>12</b>		000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>STROBE 1</b> Close Open Strobe from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Random Strobe from Slow to Fast Open
				<b>13</b>		000-255	<b>DIMMER 1</b> 0%→100%
				<b>14</b>		000-255	<b>DIMMER FINE 1</b>
<b>12</b>				<b>15</b>	<b>12</b>	000-255	<b>RED 2</b> 0%→100%
<b>13</b>				<b>16</b>	<b>13</b>	000-255	<b>GREEN 2</b> 0%→100%
<b>14</b>				<b>17</b>	<b>14</b>	000-255	<b>BLUE 2</b> 0%→100%
<b>15</b>				<b>18</b>	<b>15</b>	000-255	<b>WHITE 2</b> 0%→100%
				<b>19</b>		000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>STROBE 2</b> Close Open Strobe from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Random Strobe from Slow to Fast Open
				<b>20</b>		000-255	<b>DIMMER 2</b> 0%→100%
				<b>21</b>		000-255	<b>DIMMER FINE 2</b>
<b>16</b>				<b>22</b>	<b>16</b>	000-255	<b>RED 3</b> 0%→100%
<b>17</b>				<b>23</b>	<b>17</b>	000-255	<b>GREEN 3</b> 0%→100%
<b>18</b>				<b>24</b>	<b>18</b>	000-255	<b>BLUE 3</b> 0%→100%

19				25	19	000-255	<b>WHITE 3</b> 0%→100%
				26		000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>STROBE 3</b> Close Open Strobe from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Random Strobe from Slow to Fast Open
				27		000-255	<b>DIMMER 3</b> 0%→100%
				28		000-255	<b>DIMMER FINE 3</b>
20				29	20	000-255	<b>RED 4</b> 0%→100%
21				30	21	000-255	<b>GREEN 4</b> 0%→100%
22				31	22	000-255	<b>BLUE 4</b> 0%→100%
23				32	23	000-255	<b>WHITE 4</b> 0%→100%
				33		000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>STROBE 4</b> Close Open Strobe from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Random Strobe from Slow to Fast Open
				34		000-255	<b>DIMMER 4</b> 0%→100%
				35		000-255	<b>DIMMER FINE 4</b>
24				36	24	000-255	<b>RED 5</b> 0%→100%
25				37	25	000-255	<b>GREEN 5</b> 0%→100%

26				38	26	000-255	<b>BLUE 5</b> 0%→100%
27				39	27	000-255	<b>WHITE 5</b> 0%→100%
				40		000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>STROBE 5</b> Close Open Strobe from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Random Strobe from Slow to Fast Open
				41		000-255	<b>DIMMER 5</b> 0%→100%
				42		000-255	<b>DIMMER FINE 5</b>
28				43	28	000-255	<b>LED WHITE 1</b> 0%→100%
29				44	29	000-255	<b>LED WHITE 2</b> 0%→100%
30				45	30	000-255	<b>LED WHITE 3</b> 0%→100%
31				46	31	000-255	<b>LED WHITE 4</b> 0%→100%
32				47	32	000-255	<b>LED WHITE 5</b> 0%→100%
33				48	33	000-255	<b>LED WHITE 6</b> 0%→100%
34				49	34	000-255	<b>LED WHITE 7</b> 0%→100%
35				50	35	000-255	<b>LED WHITE 8</b> 0%→100%
36				51	36	000-255	<b>LED WHITE 9</b> 0%→100%
37				52	37	000-255	<b>LED WHITE 10</b> 0%→100%
38				53	38	000-255	<b>LED WHITE 11</b> 0%→100%
39				54	39	000-255	<b>LED WHITE 12</b> 0%→100%

40				55	40	000-255	<b>LED WHITE 13</b> 0%→100%
41				56	41	000-255	<b>LED WHITE 14</b> 0%→100%
42				57	42	000-255	<b>LED WHITE 15</b> 0%→100%
43				58	43	000-255	<b>LED WHITE 16</b> 0%→100%
44				59	44	000-255	<b>LED WHITE 17</b> 0%→100%
45				60	45	000-255	<b>LED WHITE 18</b> 0%→100%
							<b>CTO(8000K-2500K)</b>
						000	Null
						001-004	8000K
						005-009	7900K
						010-013	7800K
						014-018	7700K
						019-022	7600K
						023-027	7500K
						028-031	7400K
						032-036	7300K
						037-040	7200K
						041-045	7100K
						046-049	7000K
						050-054	6900K
						055-058	6800K
	12	12	12			059-063	6700K
						064-067	6600K
						068-072	6500K
						073-076	6400K
						077-081	6300K
						082-085	6200K
						086-090	6100K
						091-094	6000K
						095-099	5900K
						100-103	5800K
						104-108	5700K
						109-112	5600K
						113-117	5500K
						118-121	5400K
						122-126	5300K
						127-130	5200K
						131-135	5100K

						136-139	5000K
						140-144	4900K
						145-148	4800K
						149-153	4700K
						154-157	4600K
						158-162	4500K
						163-166	4400K
						167-171	4300K
						172-175	4200K
						176-180	4100K
						181-184	4000K
						185-189	3900K
						190-193	3800K
						194-198	3700K
						199-202	3600K
						203-207	3500K
						208-211	3400K
						212-216	3300K
						217-220	3200K
						221-225	3100K
						226-229	3000K
						230-234	2900K
						235-238	2800K
						239-243	2700K
						244-247	2600K
						248-255	2500K
						<b>COLOR MACRO</b>	
						000-009	Open
						010-014	LEE 790-Moroccan Pink
						015-019	LEE 157-Pink
						020-024	LEE 332-Special Rose Pink
						025-029	LEE 328-Follies Pink
						030-034	LEE 345-Fuchsia Pink
						035-039	LEE 194-Surprise Pink
	13	13	13			040-044	LEE 181-Congo Blue
						045-049	LEE 071-Tokyo Blue
						050-054	LEE 120-Deep Blue
						055-059	LEE 079-Just Blue
						060-064	LEE 132-Medium Blue
						065-069	LEE 200-Double CT Blue
						070-074	LEE 161-State Blue
						075-079	LEE 201-Full CT Blue
						080-084	LEE 202-Half CT Blue
						085-089	LEE 117-Steel Blue
						090-094	LEE 353-Lighter Blue

						095-099	LEE 118-Light Blue
						100-104	LEE 116-Medium Blue Green
						105-109	LEE 124-Dark Green
						110-114	LEE 139-Primary Green
						115-119	LEE 089-Moss Green
						120-124	LEE 122-Fern Green
						125-129	LEE 738-JAS Green
						130-134	LEE 088-Lime Green
						135-139	LEE 100-Spring Yellow
						140-144	LEE 104-Deep Amber
						145-149	LEE 179-Chrome Orange
						150-154	LEE 105-Orange
						155-159	LEE 021-Gold Amber
						160-164	LEE 778-Millennium Gold
						165-169	LEE 135-Deep Gold Amber
						170-174	LEE 164-Flame Red
						175-179	Open
						180-201	CW Rotation, Fast to Slow
						202-207	Stop
						208-229	CCW Rotation, Slow to Fast
						230-234	Open
						235-239	Random Color: Fast
						240-244	Random Color: Medium
						245-249	Random Color: Slow
						250-255	Open
						<b>PIXEL EFFECT SELECT</b>	
						000-004	Open
						005-009	LED1
						010-014	LED2
						015-019	LED3
						020-024	LED4
						025-029	LED5
						030-034	LED1+2
						035-039	LED2+3
46	14		14	61		040-044	LED3+4
						045-049	LED4+5
						050-054	LED1+3
						055-059	LED2+4
						060-064	LED3+5
						065-069	LED1+4
						070-074	LED2+5
						075-079	LED1+2+5
						080-084	LED1+2+4
						085-089	LED1+2+3
						090-094	LED2+3+4

						095-099 100-104 105-109 110-114 115-119 120-124 125-129 130-134 135-139 140-144 145-149 150-154 155-159 160-164 165-169 170-174 175-179 180-184 185-189 190-194 195-199 200-204 205-209 210-214 215-219 220-224 225-229 230-234 235-239 240-244 245-255	LED3+4+5 LED1+4+5 LED1+2+5 LED1+2+4+5 LED1+2+3+4 LED2+3+4+5 LED1+3+4+5 LED1+2+3+4+5 Built-in Mode 1 Built-in Mode 2 Built-in Mode 3 Built-in Mode 4 Built-in Mode 5 Built-in Mode 6 Built-in Mode 7 Built-in Mode 8 Built-in Mode 9 Built-in Mode 10 Built-in Mode 11 Built-in Mode 12 Built-in Mode 13 Built-in Mode 14 Built-in Mode 15 Built-in Mode 16 Built-in Mode 17 Built-in Mode 18 Built-in Mode 19 Built-in Mode 20 Randomly Light Up a Pixel Randomly Light Up two Pixels Null
47	15		15	62		000-127 128-189 190-193 194-255	<b>PIXEL EFFECT SPEED</b> Null Fast to Slow Stop Slow to Fast
48				63		000-009 010-014 015-019 020-024 025-029 030-034 035-039 040-044	<b>BACKGROUND COLOR</b> Open LEE 790-Moroccan Pink LEE 157-Pink LEE 332-Special Rose Pink LEE 328-Follies Pink LEE 345-Fuchsia Pink LEE 194-Surprise Pink LEE 181-Congo Blue

						045-049 050-054 055-059 060-064 065-069 070-074 075-079 080-084 085-089 090-094 095-099 100-104 105-109 110-114 115-119 120-124 125-129 130-134 135-139 140-144 145-149 150-154 155-159 160-164 165-169 170-174 175-179 180-201 202-207 208-229 230-234 235-239 240-244 245-249 250-255	LEE 071-Tokyo Blue LEE 120-Deep Blue LEE 079-Just Blue LEE 132-Medium Blue LEE 200-Double CT Blue LEE 161-State Blue LEE 201-Full CT Blue LEE 202-Half CT Blue LEE 117-Steel Blue LEE 353-Lighter Blue LEE 118-Light Blue LEE 116-Medium Blue Green LEE 124-Dark Green LEE 139-Primary Green LEE 089-Moss Green LEE 122-Fern Green LEE 738-JAS Green LEE 088-Lime Green LEE 100-Spring Yellow LEE 104-Deep Amber LEE 179-Chrome Orange LEE 105-Orange LEE 021-Gold Amber LEE 778-Millennium Gold LEE 135-Deep Gold Amber LEE 164-Flame Red Open CW Rotation, Fast to Slow Stop CCW Rotation, Slow to Fast Open Random Color: Fast Random Color: Medium Random Color: Slow Open
49	16	19	16	64	46	000-005 006-255	<b>INTENSITY</b> Blackout Flash Intensity, minimum to maximum
50	17	20	17	65	47	000-255	<b>DURATION</b> Flash Duration, minimum to maximum
51	18	21	18	66	48	000-005 006-255	<b>RATE</b> No Flash Flash Rate, Slow to Fast
52	19	22		67	49		<b>EFFECTS</b>

						000-005 006-050 051-100 101-150 151-200 201-255	Null Ramp Up Ramp Down Ramp Up-Down Lightning Random
			19			000-005 006-050 051-100 101-150 151-200 201-255	<b>EFFECTS 1</b> Null Ramp Up Ramp Down Ramp Up-Down Lightning Random
			20			000-004 005-009 010-014 015-019 020-024 025-029 030-034 035-039 040-044 045-049 050-054 055-059 060-064 065-069 070-074 075-079 080-084 085-089 090-094 095-099 100-104 105-109 110-114 115-119 120-124 125-129 130-134 135-139 140-144 145-149 150-154	<b>EFFECTS 2</b> Null Show 1 Show 2 Show 3 Show 4 Show 5 Show 6 Show 7 Show 8 Show 9 Show 10 Show 11 Show 12 Show 13 Show 14 Show 15 Show 16 Show 17 Show 18 Show 19 Show 20 Show 21 Show 22 Show 23 Show 24 Show 25 Show 26 Show 27 Show 28 Show 29 Show 30

						155-159 160-164 165-169 170-174 175-179 180-184 185-189 190-194 195-199 200-204 205-209 210-214 215-219 220-224 225-229 230-234 235-239 240-244 245-255	Show 31 Show 32 Show 33 Show 34 Show 35 Show 36 Show 37 Show 38 Show 39 Show 40 Show 41 Show 42 Show 43 Show 44 Show 45 Show 46 Randomly Light Up a Pixel Randomly Light Up two Pixels Null
			21			000-127 128-189 190-193 194-255	<b>EFFECTS 2 SPEED</b> Null Fast to Slow Stop Slow to Fast
53	20	14	22	68	50	000-255	<b>ZOOM</b> Wide→Narrow
54	21	15	23	69	51	000-255	<b>ZOOM FINE</b>
55	22	16	24		52	000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>STROBE</b> Close Open Strobe from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Random Strobe from Slow to Fast Open
56	23	17	25		53	000-255	<b>DIMMER</b> 0%→100%
57	24	18	26		54	000-255	<b>DIMMER FINE</b> 0%→100%
58	25	23	27	70	55		<b>FUNCTION</b>

							(To activate following functions, stop in DMX value for at least 3 seconds.)
						000-029	Null
						030-039	Null
						040-049	Dimmer Curve Linear
						050-059	Dimmer Curve Square Law
						060-069	Dimmer Curve Inv SQ Law
						070-079	Dimmer Curve S
						080-089	Line Power Mode: Off
						090-099	Line Power Mode: On
						100-109	Null
						110-119	Led Frequency Setting Enable
						120-139	Led Frequency Setting Disable
						140-149	Null
						150-159	Pan/Tilt Reset
						160-199	Effect Reset
						200-209	Null
						210-219	Reset All
						220-229	Dimmer Speed: Fast
						230	Dimmer Speed: Smooth
						231	Pan Enable
						232-255	Pan Disable
							Null

35+ Channels:

CHANNEL	VALUE	FUNCTION
<b>Controlled by DMX</b>		
1	000-255	<b>PAN</b> 0°→540°
2	000-255	<b>PAN FINE</b>
3	000-255	<b>TILT</b> 0°→450°
4	000-255	<b>TILT FINE</b>
5	000-127	<b>PAN INFINITY</b>
	128-189	Null
	190-193	CCW Rotation, Fast to Slow
	194-255	Stop CW Rotation, Slow to Fast
6	000-127	<b>TILT INFINITY</b>
	128-189	Null CW Rotation, Fast to Slow

	190-193 194-255	Stop CCW Rotation, Slow to Fast
7	000-255	<b>PAN/TILT SPEED</b> Fast to Slow
8	000-255	<b>LED WHITE 1</b> 0%→100%
9	000-255	<b>LED WHITE 2</b> 0%→100%
10	000-255	<b>LED WHITE 3</b> 0%→100%
11	000-255	<b>LED WHITE 4</b> 0%→100%
12	000-255	<b>LED WHITE 5</b> 0%→100%
13	000-255	<b>LED WHITE 6</b> 0%→100%
14	000-255	<b>LED WHITE 7</b> 0%→100%
15	000-255	<b>LED WHITE 8</b> 0%→100%
16	000-255	<b>LED WHITE 9</b> 0%→100%
17	000-255	<b>LED WHITE 10</b> 0%→100%
18	000-255	<b>LED WHITE 11</b> 0%→100%
19	000-255	<b>LED WHITE 12</b> 0%→100%
20	000-255	<b>LED WHITE 13</b> 0%→100%
21	000-255	<b>LED WHITE 14</b> 0%→100%
22	000-255	<b>LED WHITE 15</b> 0%→100%
23	000-255	<b>LED WHITE 16</b> 0%→100%
24	000-255	<b>LED WHITE 17</b> 0%→100%
25	000-255	<b>LED WHITE 18</b> 0%→100%
26	000-005	<b>INTENSITY</b> Blackout

	006-255	Flash Intensity, minimum to maximum
27	000-255	<b>DURATION</b> Flash Duration, minimum to maximum
28	000-005 006-255	<b>RATE</b> No Flash Flash Rate, Slow to Fast
29	000-005 006-050 051-100 101-150 151-200 201-255	<b>EFFECTS</b> Null Ramp Up Ramp Down Ramp Up-Down Lightning Random
30	000-255	<b>ZOOM</b> Wide→Narrow
31	000-255	<b>ZOOM FINE</b>
32	000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>STROBE</b> Close Open Strobe from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Random Strobe from Slow to Fast Open
33	000-255	<b>DIMMER</b> 0%→100%
34	000-255	<b>DIMMER FINE</b> 0%→100%
35	000-029 030-039 040-049 050-059 060-069 070-079 080-089 090-099 100-109	<b>FUNCTION</b> (To activate following functions, stop in DMX value for at least 3 seconds.) Null Dimmer Curve Linear Dimmer Curve Square Law Dimmer Curve Inv SQ Law Dimmer Curve S Line Power Mode: Off Line Power Mode: On Null Led Frequency Setting Enable

	110-119 120-139 140-149 150-159 160-199 200-209 210-219 220-229 230 231 230-255	Led Frequency Setting Disable Null Pan/Tilt Reset Effect Reset Null Reset All Dimmer Speed: Fast Dimmer Speed: Smooth Pan Enable Pan Disable Null
<b>Controlled by Art-Net</b>		
<b>1</b>	000-255	<b>RED 1</b> 0%→100%
<b>2</b>	000-255	<b>GREEN 1</b> 0%→100%
<b>3</b>	000-255	<b>BLUE 1</b> 0%→100%
<b>4</b>	000-255	<b>WHITE 1</b> 0%→100%
<b>5</b>	000-255	<b>RED 2</b> 0%→100%
<b>6</b>	000-255	<b>GREEN 2</b> 0%→100%
<b>7</b>	000-255	<b>BLUE 2</b> 0%→100%
<b>8</b>	000-255	<b>WHITE 2</b> 0%→100%
<b>9</b>	000-255	<b>RED 3</b> 0%→100%
<b>10</b>	000-255	<b>GREEN 3</b> 0%→100%
<b>11</b>	000-255	<b>BLUE 3</b> 0%→100%
<b>12</b>	000-255	<b>WHITE 3</b> 0%→100%
<b>13</b>	000-255	<b>RED 4</b> 0%→100%
<b>14</b>	000-255	<b>GREEN 4</b> 0%→100%
<b>15</b>	000-255	<b>BLUE 4</b> 0%→100%

16	000-255	<b>WHITE 4</b> 0%→100%
17	000-255	<b>RED 5</b> 0%→100%
18	000-255	<b>GREEN 5</b> 0%→100%
19	000-255	<b>BLUE 5</b> 0%→100%
20	000-255	<b>WHITE 5</b> 0%→100%