DMX Format

Data format description:

For 16 bits, the high byte comes first and the low byte follows, which can be understood as high byte coarse adjustment and low byte fine adjustment.
Dimmer is normalized data, for 8 bits, it is (n/255) x1.0; for 16 bits, it is (n/65535) x 1.0.
CCT is normalized data, for 8 bits, it is (n/255) x range + low cct.
Remarks: The minimum color temperature for Bi-color is 3200K, n= 0, CCT = 3200; n=255, CCT = 5600;
For other data fields, please refer to the Value column.
When the DMX menu Reduce Channels is On, the Fan Control data field and subsequent data will not take effect.

Bi-color Version

CCT

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	
02	03/04	CCT	3200K(2700K) -> 5600K	
03	05	Fan Control	Fan Control Param Table	0%~3% : Use Fan Mode of Fixture Menu 4%~22%: Auto 23%~41%: Off (reserved) 42%~50%: Low 61%~78%: Mid 79%~100% High

High Temp

CCT: 5600K

8b	16b	Parameter	Fuction
01	01/02	Dimmer	close -> open
02	03	Fan Control	Fan Control Param Table

Low Temp

CCT: 2700K/3200K

8b	16b	Parameter	Fuction
01	01/02	Dimmer	close -> open
02	03	Fan Control	Fan Control Param Table

5-color Version

CCT

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03/04	CCT	3200K(2700K) -> 5600K	0% ~ 100 %

8b	16b	Parameter	Fuction	Value
03	05/06	G/M	-1.0 -> +1.0	0%~4% : no effect; 5%~8%: full -green; 9%~47%: -99%~-1%; 48%~57%: no effect; 58%~96%: 1%~ 99%; 97%~100% full +green
04	07	Fan Control	Fan Control Param Table	0%~3% : Use Fan Mode of Fixture Menu 4%~22%: Auto 23%~41%: Off (reserved) 42%~50%: Low 61%~78%: Mid 79%~100% High

HSI

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03/04	Hue	0~360	0% ~ 100%
03	05/06	Saturation	0 -> 1	0% ~ 100%
04	07	Fan Control	Fan Control Param Table	Reference to CCT

xy

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03/04	x	0 ~ 0.8	0% ~ 100%
03	05/06	y	0 ~ 0.8	0% ~ 100%
04	07	Fan Control	Fan Control Param Table	Reference to CCT

Gel

8b	16b	Parameter	Fuction	value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03/04	CCT	3200K or 5600K	0%~49% 3200K 50%~100% 5600K
03	05	Match	Color(0), no color(2)	0%~33%. Best Color; 34%~66%: N/A; 67~100% : No Color Gel
04	06	Brand	Rosco,Lee	l0~50%:Rosco; 51~100%: LEE
05	07	Category	TBD	started from 0%, step is 20%
06	08	Gel	Number	started from 0, step is 2
07	09	Fan Control	Fan Control Param Table	Reference to CCT

Category depends on Brand
Rosco: Color Correction/CalColor/Storaro Selection/CineLux
LEE: Color Correction/Color Filters/600 Series/Cosmetic Filters/700 Series
Gel Number depends on Brand+Category

Source Matching

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03	Category	started from 0, step is 20%，目前只支持Incandescent/Fluorescent/Discharge/Other	
03	04	Source	Number	started from 0, step is 2
04	05	Fan Control	Fan Control Param Table	Reference to CCT

Source Number depends Category

RGBW

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03/04	R	0.0 ~ 1.0	0% ~ 100%
03	05/06	G	0.0 ~ 1.0	0% ~ 100%
04	07/08	B	0.0 ~ 1.0	0% ~ 100%
05	09/10	W	0.0 ~ 1.0	0% ~ 100%
06	11/12	WP-CCT	2000K-20000K	Reference to CCT
07	13/14	WP-G/M	-1.0 ~ +1.0	Reference to CCT
08	15	Fan Control	Fan Control Param Table	Reference to CCT

CCT & RGBW

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03/04	CCT	2000K-20000K	Reference to CCT
03	05/06	G/M	-1.0 ~ +1.0	Reference to CCT
04	07/08	Cross Fade	0.0 ~ 1.0	0% ~ 100%
05	09/10	R	0.0 ~ 1.0	0% ~ 100%
06	11/12	G	0.0 ~ 1.0	0% ~ 100%
07	13/14	B	0.0 ~ 1.0	0% ~ 100%
08	15/16	W	0.0 ~ 1.0	0% ~ 100%
09	17/18	WP-CCT	2000K-20000K	Reference to CCT
10	19/20	WP-G/M	-1.0 ~ +1.0	Reference to CCT
11	21	Fan Control	Fan Control Param Table	Reference to CCT

CCT & HSI

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03/04	CCT	2000K-20000K	Reference to CCT
03	05/06	G/M	-1.0 ~ +1.0	Reference to CCT
04	07/08	Cross Fade	0.0 ~ 1.0	0% ~ 100%

8b	16b	Parameter	Fuction	Value
05	09/10	Hue	0~360	0% ~ 100%
06	11/12	Saturation	0.0 ~ 1.0	0% ~ 100%
07	13/14	WP-CCT	2000K-20000K	Reference to CCT
08	15/16	WP-G/M	-1.0 ~ +1.0	Reference to CCT
09	17	Fan Control	Fan Control Param Table	Reference to CCT

Efffect

8b	16b	Parameter	Fuction	Value
01	01/02	Dimmer	close -> open	0% ~ 100%
02	03	Effect Selection	(0~18)*10	Reference to Effect Selection Table
03	04/05	Effect Parameter 1		
04	06/07	Effect Parameter 2		
05	08/09	Effect Parameter 3		
06	10/11	Effect Parameter 4		
07	12/13	Effect Parameter 5		
08	14/15	Effect Parameter 6		
09	16/17	Effect Parameter 7		
10	18/19	Effect Parameter 8		
11	20/21	Effect Parameter 9		
12	22/23	Effect Parameter 10		
13	24	Fan Control	Fan Control Param Table	Reference to CCT

Effect Selection Table

8b	16b	Effect Selection	Toliman Support	Vega Support
0 – 9		No Effect	Y	Y
10 – 19		Candle	N	Y
20 – 29		Clouds Passing	Y	Y
30 – 39		Club Lights	N	Y
40 – 49		Cop Car	N	Y
50 – 59		Explosion	Y	Y
60 – 69		Fire	Y	Y
70 – 79		Fireworks	Y	Y
80 – 89		Fluorescent Flicker	N	Y
90 – 99		Lightning	Y	Y
100 – 109		Paparazzi	Y	Y
110 – 119		Party Effect	N	Y
120 – 129		Pulsing	Y	Y
130 – 139		Light Strobe	Y	Y
140 – 149		Television	Y	Y
150 – 159		Welding	Y	Y

8b	16b	Effect Selection	Toliman Support	Vega Support
160 – 169		Process Effect	Y	Y
170 – 179		Fade In/Out	Y	Y
180 – 255		Reserved for future use	-	-

Effect Candle

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 84 85 – 170 171 – 255	0 – 21.504 21.505 – 43.520 43.521 – 65.535	0 – 33 34 – 66 67 –100	CCT Range100 1.400 → 1.700 K 1.700 → 2.000 K 2.000 → 2.300 K
2	0 – 255	0 – 65.535	0 – 100	Speed 0 → 120 changes / min

Effect Clouds Passing

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Offset Offset Number 0 – 50
2	0 – 127 128 – 255	0 – 32.767 32.768 – 65.535	0 – 50 51 – 100	Speed 2 x Slower → Default
3	255	65.535	100	Sync

Effect Club Lights

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 31 32 – 63 64 – 95 96 – 127 128 – 159 160 – 191 192 – 223 224 – 255	0 – 7.936 7.937 – 16.128 16.129 – 24.320 24.321 – 32.767 32.768 – 40.704 40.705 – 48.896 48.897 – 57.088 57.089 – 65.535	0 – 12 13 – 25 26 – 37 38 – 49 50 – 62 63 – 75 76 – 87 88 – 100	Color Variety 3 Colors 6 Colors 9 Colors 12 Colors 15 Colors 18 Colors 21 Colors 24 Colors
2	0 – 255	0 – 65.535	0 – 100	Speed 0 → 120 changes / min

Effect Cop Car

Effect Parameter	8b	16b	Percent Function	Function

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 27 28 – 55 56 – 83 84 – 111 112 – 139 140 – 167 168 – 195 196 – 223 224 – 255	0 – 6.912 6.913 – 14.080 14.081 – 21.248 21.249 – 28.416 28.417 – 35.584 35.585 – 42.752 42.753 – 49.920 49.921 – 57.088 57.089 – 65.535	0 – 11 12 – 21 22 – 32 33 – 43 44 – 54 55 – 65 66 – 76 77 – 87 88 – 100	Color Combinations Just Blue Blue and Red Blue and White Blue, Red and White Blue and Amber Blue, Red and Amber Red and Amber Amber Red
2	0 – 31 32 – 63 64 – 95 96 – 127 128 – 159 160 – 191 192 – 255	0 – 7.936 7.937 – 16.128 16.129 – 24.320 24.321 – 32.767 32.768 – 40.704 40.705 – 48.896 48.897 – 65.535	0 – 12 13 – 25 26 – 37 38 – 49 50 – 62 63 – 75 76 – 100	Flash Pattern Single Flash Double Flash Quint All Flash Quint Flash Quad Flash Cycle All Reserved for future us e

Effect Explosion

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Decay Decay 4 → 0.5 second s
2	250 – 255	64.224 – 65.535	98 – 100	Trigger
3	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
4	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green –99% → –1% neutral no effect 1% → 99% full plus green
5	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
6	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
7	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Fire

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 84 85 – 170 171 – 255	0 – 21.504 21.505 – 43.520 43.521 – 65.535	0 – 33 34 – 66 67 – 100	CCT Range 1.800 → 2.200 K 2.200 → 2.600 K 2.600 → 3.000 K
2	0 – 255	0 – 65.535	0 – 100	Speed 0 → 180 changes / mi n

Effect Fireworks

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 63 64 – 127 128 – 191 192 - 219 220 – 255	0 – 16.128 16.129 – 32.767 32.768 – 49.343 49.344 – 56.539 56.540 – 65.535	0 – 25 26 – 50 51 – 75 76 – 85 86 – 100	Color Combinations Colors White Colors and White Warm Colors Cool Colors
2	0 – 255	0 – 65.535	0 – 100	Speed 10 → 0,5 s between firework s

Effect Fluorescent Flicker

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Speed 2 → 6 seconds of still
2	0 – 255	0 – 65.535	0 – 100	Frequency 3 → 10 flickers per secon d
3	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
4	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green –99% → –1% neutral no effect 1% → 99% full plus green
5	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
6	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
7	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Lightning

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Frequency 2 → 14 lightning strikes se t
2	0 – 255	0 – 65.535	0 – 100	Speed 0 → 10 flashes / second
3	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
4	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green –99% → –1% neutral no effect 1% → 99% full plus green
5	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color

Effect Parameter	8b	16b	Percent Function	Function
6	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
7	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Paparazzi

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Frequency 6 → 120 Flashes / min
2	0 – 127 128 – 255	0 – 32.767 32.768 – 65.535	0 – 50 51 – 100	Flash Type Flash Bulb Modern Flash
3	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
4	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green –99% → –1% neutral no effect 1% → 99% full plus green
5	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
6	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
7	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Party Effect

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation
2	0 – 255	0 – 65.535	0 – 100	Speed Loop 60 s → 1 s

Effect Pulsing

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Frequency 5 → 90 Pulses / minute
2	0 – 255	0 – 65.535	0 – 100	Pulse Duration 4 → 0.25 seconds
3	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K

Effect Parameter	8b	16b	Percent Function	Function
4	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green -99% → -1% neutral no effect 1% → 99% full plus green
5	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
6	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
7	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Light Strobe

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Speed 1 → 25 flashes / second
2	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
3	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green -99% → -1% neutral no effect 1% → 99% full plus green
4	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
5	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
6	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Television

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 84 85 – 170 171 – 255	0 – 21.504 21.505 – 43.520 43.521 – 65.535	0 – 32 33 – 66 67 – 100	CCT Range 2.800 → 4.700 K 4.700 → 6.500 K 6.500 → 10.000 K
2	0 – 255	0 – 65.535	0 – 100	Speed 4 → 24 changes / min

Effect Welding

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Speed Slow → fast

Effect Parameter	8b	16b	Percent Function	Function
2	0 – 255	0 – 65.535	0 – 100	Min Intensity Level 0% → 75% minimum intensity leve l
3	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
4	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green -99% → -1% neutral no effect 1% → 99% full plus green
5	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
6	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
7	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Process

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	Speed 1s->10s
2	0 – 255	0 – 65.535	0 – 100	Min Intensity Level 0~100%
3	0 – 84 85 – 170 171 – 255	0 – 21.504 21.505 – 43.520 43.521 – 65.535	0 – 33 34 – 66 67 –100	Direction Dark → Bright (once) Bright → Dark (once) both direction (loop)
4	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
5	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green -99% → -1% neutral no effect 1% → 99% full plus green
6	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
7	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
8	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Effect Fade In/Out

Effect Parameter	8b	16b	Percent Function	Function
1	0 – 255	0 – 65.535	0 – 100	In Intensity 0~100%
2	0 – 255	0 – 65.535	0 – 100	In Duration 0~60

Effect Parameter	8b	16b	Percent Function	Function
3	0 – 255	0 – 65.535	0 – 100	Hold Duration 0~300
4	0 – 255	0 – 65.535	0 – 100	Out Intensity 0~100%
5	0 – 255	0 – 65.535	0 – 100	Out Duration 0~60
6	0 – 255	0 – 65.535	0 – 100	Color Temperature CCT 2.000 → 20.000 K
7	0 – 10 11 – 20 21 – 119 120 – 145 146 – 244 245 – 255	0 – 4.587 4.588 – 9.830 9.831 – 30.145 30.146 – 39.976 39.977 – 60.292 60.293 – 65.535	0 – 4 5 – 8 9 – 47 48 – 57 58 – 96 97 - 100	Green–Magenta Point neutral no effect full minus green –99% → –1% neutral no effect 1% → 99% full plus green
8	0 – 255	0 – 65.535	0 – 100	Crossfade to Color White → RGBW Color
9	0 – 255	0 – 65.535	0 – 100	Hue 0 → 360°
10	0 – 255	0 – 65.535	0 – 100	Saturation 0 → 1.0 Saturation

Light Engine Ultimate

8b	16b	Parameter	Fuction
01	01/02	Dimmer	Master Dimmer
02	03/04	Mode	Color Mode Selection
03	05/06	Num	Light Engine Num
04	07/08	Param	Color Paramter #1
05	09/10	Param	Color Paramter #2
06	11/12	Param	Color Paramter #3
07	13/14	Param	Color Paramter #4
08	15/16	Param	Color Paramter #5
09	17/18	Param	Color Paramter #6
10	19/20	Param	Color Paramter #7
11	21/22	Param	Color Paramter #8
12	23/24	Param	Color Paramter #9
.	.	...	...
27	53/54	Param	Color Paramter #24
28	55	Fan Control	Fan Control Param Table

Color Mode Selection Mapping (Light Engine Ultimate)

8b	16b	Mode Selection
0 – 9	0 – 9	CCT Mode
10 – 19	10 – 19	HSI Mode
20 – 29	20 – 29	xyY Mode

8b	16b	Mode Selection
30 – 39	30 – 39	Source Matching
40 – 255	40 – 255	Reserved

Light Engine Num Mapping (Light Engine Ultimate)

8b	16b	Engine Num
0 – 29	0 – 29	2 Engines
30 – 39	30 – 39	Reserved
40 – 49	40 – 49	4 Engines
50 – 79	50 – 79	Reserved
80 – 89	80 – 89	8 Engines
90 – 255	90 – 255	Reserved

Color Paramter #1~#24 for CCT Mode (Light Engine Ultimate)

Color Paramter	8b	16b	Parameter	Fuction	Value
#01	01	01/02	Engine 1th Dimmer	close -> open	0 ~ 100%
#02	02	03/04	Engine 1th CCT	2000K ~ 20000K	refer CCT
#03	03	05/06	Engine 1th G/M	-1.0 ~ 1.0	refer CCT
#04	04	07/08	Engine 2th Dimmer	close -> open	0 ~ 100%
#05	05	09/10	Engine 2th CCT	2000K ~ 20000K	refer CCT
#06	06	11/12	Engine 2th G/M	-1.0 ~ 1.0	refer CCT
#07	07	13/14	Engine 3th Dimmer	close -> open	0 ~ 100%
#08	08	15/16	Engine 3th CCT	2000K ~ 20000K	refer CCT
#09	09	17/18	Engine 3th G/M	-1.0 ~ 1.0	refer CCT
#10	10	19/20	Engine 4th Dimmer	close -> open	0 ~ 100%
#11	11	21/22	Engine 4th CCT	2000K ~ 20000K	refer CCT
#12	12	23/24	Engine 4th G/M	-1.0 ~ 1.0	refer CCT
#13	13	25/26	Engine 5th Dimmer	close -> open	0 ~ 100%
#14	14	27/28	Engine 5th CCT	2000K ~ 20000K	refer CCT
#15	15	29/30	Engine 5th G/M	-1.0 ~ 1.0	refer CCT
#16	16	31/32	Engine 6th Dimmer	close -> open	0 ~ 100%
#17	17	33/34	Engine 6th CCT	2000K ~ 20000K	refer CCT
#18	18	35/36	Engine 6th G/M	-1.0 ~ 1.0	refer CCT
#19	19	37/38	Engine 7th Dimmer	close -> open	0 ~ 100%
#20	20	39/40	Engine 7th CCT	2000K ~ 20000K	refer CCT
#21	21	41/42	Engine 7th G/M	-1.0 ~ 1.0	refer CCT

Color Paramter	8b	16b	Parameter	Fuction	Value
#22	22	43/44	Engine 8th Dimmer	close -> open	0 ~ 100%
#23	23	45/46	Engine 8th CCT	2000K ~ 20000K	refer CCT
#24	24	47/48	Engine 8th G/M	-1.0 ~ 1.0	refer CCT

When Light Engine Num == 2, Color Paramter #1~#6 is Valid; #7~#24 is Ignored

Color Paramter #1~#24 for HSI Mode (Light Engine Ultimate)

Color Paramter	8b	16b	Parameter	Fuction	Value
#01	01	01/02	Engine 1th Dimmer	close -> open	0 ~ 100%
#02	02	03/04	Engine 1th Hue	0 ~ 360°	0 ~ 100%
#03	03	05/06	Engine 1th Saturation	0 ~ 100%	0 ~ 100%
#04	04	07/08	Engine 2th Dimmer	close -> open	0 ~ 100%
#05	05	09/10	Engine 2th Hue	0 ~ 360°	0 ~ 100%
#06	06	11/12	Engine 2th Saturation	0 ~ 100%	0 ~ 100%
#07	07	13/14	Engine 3th Dimmer	close -> open	0 ~ 100%
#08	08	15/16	Engine 3th Hue	0 ~ 360°	0 ~ 100%
#09	09	17/18	Engine 3th Saturation	0 ~ 100%	0 ~ 100%
#10	10	19/20	Engine 4th Dimmer	close -> open	0 ~ 100%
#11	11	21/22	Engine 4th Hue	0 ~ 360°	0 ~ 100%
#12	12	23/24	Engine 4th Saturation	0 ~ 100%	0 ~ 100%
#13	13	25/26	Engine 5th Dimmer	close -> open	0 ~ 100%
#14	14	27/28	Engine 5th Hue	0 ~ 360°	0 ~ 100%
#15	15	29/30	Engine 5th Saturation	0 ~ 100%	0 ~ 100%
#16	16	31/32	Engine 6th Dimmer	close -> open	0 ~ 100%
#17	17	33/34	Engine 6th Hue	0 ~ 360°	0 ~ 100%
#18	18	35/36	Engine 6th Saturation	0 ~ 100%	0 ~ 100%
#19	19	37/38	Engine 7th Dimmer	close -> open	0 ~ 100%
#20	20	39/40	Engine 7th Hue	0 ~ 360°	0 ~ 100%
#21	21	41/42	Engine 7th Saturation	0 ~ 100%	0 ~ 100%
#22	22	43/44	Engine 8th Dimmer	close -> open	0 ~ 100%
#23	23	45/46	Engine 8th Hue	0 ~ 360°	0 ~ 100%
#24	24	47/48	Engine 8th Saturation	0 ~ 100%	0 ~ 100%

When Light Engine Num == 2, Color Paramter #1~#6 is Valid; #7~#24 is Ignored

Color Paramter #1~#24 for xyY Mode (Light Engine Ultimate)

Color Paramter	8b	16b	Parameter	Fuction	Value
#01	01	01/02	Engine 1th Dimmer	close -> open	0 ~ 100%

Color Paramter	8b	16b	Parameter	Fuction	Value
#02	02	03/04	Engine 1th x coordinate	0 ~ 0.8	0 ~ 100%
#03	03	05/06	Engine 1th y coordinate	0 ~ 0.8	0 ~ 100%
#04	04	07/08	Engine 2th Dimmer	close -> open	0 ~ 100%
#05	05	09/10	Engine 2th x coordinate	0 ~ 0.8	0 ~ 100%
#06	06	11/12	Engine 2th y coordinate	0 ~ 0.8	0 ~ 100%
#07	07	13/14	Engine 3th Dimmer	close -> open	0 ~ 100%
#08	08	15/16	Engine 3th x coordinate	0 ~ 0.8	0 ~ 100%
#09	09	17/18	Engine 3th y coordinate	0 ~ 0.8	0 ~ 100%
#10	10	19/20	Engine 4th Dimmer	close -> open	0 ~ 100%
#11	11	21/22	Engine 4th x coordinate	0 ~ 0.8	0 ~ 100%
#12	12	23/24	Engine 4th y coordinate	0 ~ 0.8	0 ~ 100%
#13	13	25/26	Engine 5th Dimmer	close -> open	0 ~ 100%
#14	14	27/28	Engine 5th x coordinate	0 ~ 0.8	0 ~ 100%
#15	15	29/30	Engine 5th y coordinate	0 ~ 0.8	0 ~ 100%
#16	16	31/32	Engine 6th Dimmer	close -> open	0 ~ 100%
#17	17	33/34	Engine 6th x coordinate	0 ~ 0.8	0 ~ 100%
#18	18	35/36	Engine 6th y coordinate	0 ~ 0.8	0 ~ 100%
#19	19	37/38	Engine 7th Dimmer	close -> open	0 ~ 100%
#20	20	39/40	Engine 7th x coordinate	0 ~ 0.8	0 ~ 100%
#21	21	41/42	Engine 7th y coordinate	0 ~ 0.8	0 ~ 100%
#22	22	43/44	Engine 8th Dimmer	close -> open	0 ~ 100%
#23	23	45/46	Engine 8th x coordinate	0 ~ 0.8	0 ~ 100%
#24	24	47/48	Engine 8th y coordinate	0 ~ 0.8	0 ~ 100%

When Light Engine Num == 2, Color Paramter #1~#6 is Valid; #7~#24 is Ignored

Color Paramter #1~#24 for Source Matching Mode (Light Engine Ultimate)

Color Paramter	8b	16b	Parameter	Fuction	Value
#01	01	01/02	Engine 1th Dimmer	close -> open	0 ~ 100%
#02	02	03/04	Engine 1th Category	Number	0 ~ 255, step:51
#03	03	05/06	Engine 1th Source Num	Number	0 ~ 255, step:3
#04	04	07/08	Engine 2th Dimmer	close -> open	0 ~ 100%

Color Paramter	8b	16b	Parameter	Fuction	Value
#05	05	09/10	Engine 2th Category	Number	0 ~ 255, step:5 1
#06	06	11/12	Engine 2th Source Num	Number	0 ~ 255, step:3
#07	07	13/14	Engine 3th Dimmer	close -> open	0 ~ 100%
#08	08	15/16	Engine 3th Category	Number	0 ~ 255, step:5 1
#09	09	17/18	Engine 3th Source Num	Number	0 ~ 255, step:3
#10	10	19/20	Engine 4th Dimmer	close -> open	0 ~ 100%
#11	11	21/22	Engine 4th Category	Number	0 ~ 255, step:5 1
#12	12	23/24	Engine 4th Source Num	Number	0 ~ 255, step:3
#13	13	25/26	Engine 5th Dimmer	close -> open	0 ~ 100%
#14	14	27/28	Engine 5th Category	Number	0 ~ 255, step:5 1
#15	15	29/30	Engine 5th Source Num	Number	0 ~ 255, step:3
#16	16	31/32	Engine 6th Dimmer	close -> open	0 ~ 100%
#17	17	33/34	Engine 6th Category	Number	0 ~ 255, step:5 1
#18	18	35/36	Engine 6th Source Num	Number	0 ~ 255, step:3
#19	19	37/38	Engine 7th Dimmer	close -> open	0 ~ 100%
#20	20	39/40	Engine 7th Category	Number	0 ~ 255, step:5 1
#21	21	41/42	Engine 7th Source Num	Number	0 ~ 255, step:3
#22	22	43/44	Engine 8th Dimmer	close -> open	0 ~ 100%
#23	23	45/46	Engine 8th Category	Number	0 ~ 255, step:5 1
#24	24	47/48	Engine 8th Source Num	Number	0 ~ 255, step:3

When Light Engine Num == 2, Color Paramter #1~#6 is Valid; #7~#24 is Ignored

RDM Support Command

Command	Hex	Description
DEVICE_INFO	0x0060	Device information
SOFTWARE_VERSION_LABEL	0x00c0	Software Label
IDENTIFY_DEVICE	0x1000	
COMM_STATUS	0x0015	
QUEUED_MESSAGE	0x0020	
STATUS_MESSAGES	0x0030	
SUPPORTED_PARAMETERS	0x0050	
PRODUCT_DETAIL_ID_LIST	0x0070	
DEVICE_MODEL_DESCRIPTION	0x0080	
MANUFACTURER_LABEL	0x0081	

Command	Hex	Description
DEVICE_LABEL	0x0082	
FACTORY_DEFAULTS	0x0090	
DMX_PERSONALITY	0x00e0	
DMX_PERSONALITY_DESC	0x00e1	
DMX_START_ADDRESS	0x00f0	
DMX_SLOT_INFO	0x0120	
DMX_SLOT_DESC	0x0121	
DMX_SLOT_DEFAULT_VALUE	0x0122	
SESNOR_DEFINITION	0x0200	
SENSOR_VALUE	0x0201	
DEVICE_HOURS	0x0400	
LAMP_HOURS	0x0401	
LAMP_STRIKES	0x0402	
LAMP_STATE	0x0403	
LAMP_ON_MODE	0x0404	
DEVICE_POWER_CYCLES	0x0405	
DIMMER_CURVE	0x0343	
DIMMER_CURVE_DESC	0x344	
DISPLAY_INVERT	0x0500	
DISPLAY_LEVEL	0x0501	