

Skypanel®

S30

S60

DMX Protocol V4.0

LIGHTING – TECHNICAL INFORMATION

DMX protocol version 4.0

Used in fixtures from firmware version 1.xx

Sxx-RP

Overview

8 bit 1 channel per function	16 bit 2 channels per function	Coarse / fine 1-2 channels per function
DMX mode 1*	DMX mode 2	DMX mode 3

* = Factory default

Mode 1: 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2			Reserved for future use
3			Reserved for future use
4			Reserved for future use
5			Reserved for future use

Mode 2: 16 bit resolution per function

DMX Channel	Value	Percent	Function
1	HI	0 - 100	Dimmer closed → open
2	LO		
3			Reserved for future use
4			Reserved for future use
5			Reserved for future use
6			Reserved for future use

Mode 3: Coarse / fine channel per function

Each of the 256 coarse steps is divided in 256 fine steps. Use this mode when your lighting control desk does not support true 16 bit resolution.

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Dimmer fine
3			Reserved for future use
4			Reserved for future use
5			Reserved for future use
6			Reserved for future use

Sxx-C (Color)

Overview

8 bit 1 channel per function	16 bit 2 channels per function	Coarse / fine 1-2 channels per function
DMX mode 1 White & RGBW	DMX mode 6 White & RGBW	DMX mode 11 White & RGBW
DMX mode 2 White	DMX mode 7 White	DMX mode 12 White
DMX mode 3 White & H S I	DMX mode 8 White & H S I	DMX mode 13 White & H S I
DMX mode 4 RGBW	DMX mode 9 RGBW	DMX mode 14 RGBW
DMX mode 5 H S I	DMX mode 10 H S I	DMX mode 15 H S I

= Factory default

GN saturation

The value describes the shift from the neutral point to full minus green or full plus green in percent.

(Reference: Rosco Cinegel #3304 and #3308)

Mode 1: White & RGBW, 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Color temperature CCT 2.800 K → 10.000 K
3	0 - 10 11 - 20 21 - 119 120 - 145 146 - 244 245 - 255	0 - 4 5 - 8 8 - 46 47 - 57 57 - 96 96 - 100	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
4	0 – 255	0 - 100	Xfade to color White → RGBW color
5	0 – 255	0 - 100	Intensity red 0% → 100%
6	0 – 255	0 - 100	Intensity green 0% → 100%
7	0 – 255	0 - 100	Intensity blue 0% → 100%
8	0 – 255	0 - 100	Intensity white 0% → 100%

Mode 1: White & RGBW, 8 bit resolution per function - continued

9			Reserved for future use
10			Reserved for future use
11			Reserved for future use
12			Reserved for future use

Mode 2: White, 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Color temperature CCT 2.800 K → 10.000 K
3	0 - 10	0 - 4	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
	11 - 20	5 - 8	
	21 - 119	8 - 46	
	120 - 145	47 - 57	
	146 - 244	57 - 96	
	245 - 255	96 - 100	
4			Reserved for future use
5			Reserved for future use
6			Reserved for future use
7			Reserved for future use

Mode 3: White & H S I, 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Color temperature CCT 2.800 K → 10.000 K
3	0 - 10	0 - 4	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
	11 - 20	5 - 8	
	21 - 119	8 - 46	
	120 - 145	47 - 57	
	146 - 244	57 - 96	
	245 - 255	96 - 100	
4	0 – 255	0 - 100	Xfade to color White → RGBW color

Mode 3: White & H S I, 8 bit resolution per function - continued

5	0 – 255	0 - 100	Hue 0° → 360°
6	0 – 255	0 - 100	Saturation 0 → full saturated
7			Reserved for future use
8			Reserved for future use
9			Reserved for future use
10			Reserved for future use

Mode 4: RGBW, 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 - 100	Intensity red 0% → 100%
3	0 – 255	0 - 100	Intensity green 0% → 100%
4	0 – 255	0 - 100	Intensity blue 0% → 100%
5	0 – 255	0 - 100	Intensity white 0% → 100%
6			Reserved for future use
7			Reserved for future use
8			Reserved for future use
9			Reserved for future use

Mode 5: H S I, 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 - 100	Hue 0° → 360°
3	0 – 255	0 - 100	Saturation 0 → full saturated
4			Reserved for future use
5			Reserved for future use
6			Reserved for future use
7			Reserved for future use

Mode 6: White & RGBW, 16 bit resolution per function

DMX Channel		Value	Percent	Function
1	HI	0 – 65.535	0 - 100	Dimmer closed → open
2	LO			
3	HI	0 – 65.535	0 – 100	Color temperature CCT 2.800 K → 10.000 K
4	LO			
5	HI	0 - 5.000	0-7	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
6	LO	5.001 – 10.000	8-15	
		10.001 – 29.999	16-46	
		30.000 – 40.000	46-61	
		40.001 – 59.999	61-92	
		60.000 – 65.535	92-100	
7	HI	0 – 65.535	0 - 100	Xfade to color White → RGBW color
8	LO			
9	HI	0 – 65.535	0 - 100	Intensity red 0% → 100%
10	LO			
11	HI	0 – 65.535	0 - 100	Intensity green 0% → 100%
12	LO			
13	HI	0 – 65.535	0 - 100	Intensity blue 0% → 100%
14	LO			
15	HI	0 – 65.535	0 - 100	Intensity white 0% → 100%
16	LO			
17				Reserved for future use
18				Reserved for future use
19				Reserved for future use
20				Reserved for future use

Mode 7: White, 16 bit resolution per function

DMX Channel		Value	Percent	Function
1	HI	0 – 65.535	0 - 100	Dimmer closed → open
2	LO			
3	HI	0 – 65.535	0 – 100	Color temperature CCT 2.800 K → 10.000 K
4	LO			
5	HI	0 - 5.000	0-7	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
6	LO	5.001 – 10.000	8-15	
		10.001 – 29.999	16-46	
		30.000 – 40.000	46-61	
		40.001 – 59.999	61-92	
		60.000 – 65.535	92-100	

Mode 7: White, 16 bit resolution per function - continued

7				Reserved for future use
8				Reserved for future use
9				Reserved for future use
10				Reserved for future use

Mode 8: White & H S I, 16 bit resolution per function

DMX Channel		Value	Percent	Function
1	HI	0 – 65.535	0 - 100	Dimmer closed → open
2	LO			
3	HI	0 – 65.535	0 – 100	Color temperature CCT 2.800 K → 10.000 K
4	LO			
5	HI	0 - 5.000	0-7	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
6	LO	5.001 – 10.000	8-15	
		10.001 – 29.999	16-46	
		30.000 – 40.000	46-61	
		40.001 – 59.999	61-92	
		60.000 – 65.535	92-100	
7	HI	0 – 65.535	0 - 100	Xfade to color White → RGBW color
8	LO			
9	HI	0 – 65.535	0 - 100	Hue 0° → 360°
10	LO			
11	HI	0 – 65.535	0 - 100	Saturation White → full saturated
12	LO			
13				Reserved for future use
14				Reserved for future use
15				Reserved for future use
16				Reserved for future use

Mode 9: RGBW, 16 bit resolution per function

DMX Channel		Value	Percent	Function
1	HI	0 – 65.535	0 - 100	Dimmer
2	LO			closed → open
3	HI	0 – 65.535	0 - 100	Intensity red
4	LO			0% → 100%
5	HI	0 – 65.535	0 - 100	Intensity green
6	LO			0% → 100%
7	HI	0 – 65.535	0 - 100	Intensity blue
8	LO			0% → 100%
9	HI	0 – 65.535	0 - 100	Intensity white
10	LO			0% → 100%
11				Reserved for future use
12				Reserved for future use
13				Reserved for future use
14				Reserved for future use

Mode 10: H S I, 16 bit resolution per function

DMX Channel		Value	Percent	Function
1	HI	0 – 65.535	0 - 100	Dimmer
2	LO			closed → open
3	HI	0 – 65.535	0 - 100	Hue
4	LO			0° → 360°
5	HI	0 – 65.535	0 - 100	Saturation
6	LO			White → full saturated
7				Reserved for future use
8				Reserved for future use
9				Reserved for future use
10				Reserved for future use

Mode 11: White & RGBW, Coarse/fine per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Dimmer fine
3	0 – 255	0 – 100	Color temperature CCT coarse 2.800 K → 10.000 K
4	0 – 255	0 - 100	Color temperature CCT fine
5	0 - 10	0 - 4	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
	11 - 20	5 - 8	
	21 - 119	8 - 46	
	120 - 145	47 - 57	
	146 - 244	57 - 96	
	245 - 255	96 - 100	
6	0 – 255	0 - 100	Xfade to color White → RGBW color
7	0 – 255	0 - 100	Intensity red coarse 0% → 100%
8	0 – 255	0 – 100	Red fine
9	0 – 255	0 - 100	Intensity green coarse 0% → 100%
10	0 – 255	0 – 100	Green fine
11	0 – 255	0 - 100	Intensity blue coarse 0% → 100%
12	0 – 255	0 – 100	Blue fine
13	0 – 255	0 - 100	Intensity white coarse 0% → 100%
14	0 – 255	0 – 100	White fine
15			Reserved for future use
16			Reserved for future use
17			Reserved for future use
18			Reserved for future use

Mode 12: White, Coarse / fine channel per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Dimmer fine
3	0 – 255	0 – 100	Color temperature CCT coarse 2.800 K → 10.000 K
4	0 – 255	0 - 100	Color temperature CCT fine
5	0 - 10	0 - 4	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
	11 - 20	5 - 8	
	21 - 119	8 - 46	
	120 - 145	47 - 57	
	146 - 244	57 - 96	
	245 - 255	96 - 100	
6			Reserved for future use
7			Reserved for future use
8			Reserved for future use
9			Reserved for future use

Mode 13: White & H S I, Coarse / fine channel per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Dimmer fine
3	0 – 255	0 – 100	Color temperature CCT coarse 2.800 K → 10.000 K
4	0 – 255	0 - 100	Color temperature CCT fine
5	0 - 10	0 - 4	GN saturation neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
	11 - 20	5 - 8	
	21 - 119	8 - 46	
	120 - 145	47 - 57	
	146 - 244	57 - 96	
	245 - 255	96 - 100	
6	0 – 255	0 - 100	Xfade to color White → RGBW color
7	0 – 255	0 - 100	Hue coarse 0° → 360°
8	0 – 255	0 – 100	Hue fine

Mode 13: White & H S I, Coarse / fine channel per function - continued

9	0 – 255	0 - 100	Saturation coarse 0 → full saturated
10	0 – 255	0 – 100	Saturation fine
11			Reserved for future use
12			Reserved for future use
13			Reserved for future use
14			Reserved for future use

Mode 14: RGBW, Coarse / fine channel per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Dimmer fine
3	0 – 255	0 - 100	Intensity red coarse 0% → 100%
4	0 – 255	0 – 100	Red fine
5	0 – 255	0 - 100	Intensity green coarse 0% → 100%
6	0 – 255	0 – 100	Green fine
7	0 – 255	0 - 100	Intensity blue coarse 0% → 100%
8	0 – 255	0 – 100	Blue fine
9	0 – 255	0 - 100	Intensity white coarse 0% → 100%
10	0 – 255	0 – 100	White fine
11			Reserved for future use
12			Reserved for future use
13			Reserved for future use
14			Reserved for future use

Mode 15: H S I, Coarse / fine channel per function

DMX Channel	Value	Percent	Function
1	0 – 255	0 - 100	Dimmer closed → open
2	0 – 255	0 – 100	Dimmer fine
3	0 – 255	0 - 100	Hue coarse 0° → 360°
4	0 – 255	0 – 100	Hue fine
5	0 – 255	0 - 100	Saturation coarse 0 → full saturated
6	0 – 255	0 – 100	Saturation fine
7			Reserved for future use
8			Reserved for future use
9			Reserved for future use
10			Reserved for future use