Studio Command H DMX Protocol

Channel	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
1	Pan	Pan, coarse adjustment	0-255	0-100	00-FF
2	Pan	Pan, fine adjustment	0-255	0-100	00-FF
3	Tilt	Tilt, coarse adjustment	0-255	0-100	00-FF
4	Tilt	Tilt, fine adjustment	0-255	0-100	00-FF
5	Color Function	*Full Speed Control*			
		Continuous	0-15	0-6	00-0F
		Cycle (Speed is set by the Cyan channel)	16-31	6-12	10-1F
		Random (Speed is set by the Cyan channel)	32-47	13-18	20-2F
		TBD	48-127	19-50	30-7F
		MSpeed Controlled			
		Continuous	128-143	50-56	80-8F
		Cycle (Speed is set by the Cyan channel)	144-159	57-62	90-9F
		Random (Speed is set by the Cyan channel)	160-175	63-69	A0-AF
		TBD	176-255	69-100	B0-FF
6	Cyan Wheel	*Continuous Mode. Absolute position across 360 degrees*			
		Cyan Full Saturation	0	0	00
		Open	255	100	FF
		Cycle & Random Modes (sets the rate for all color wheels when Color function parameter = 16-47)			
		Slow Rate	0	0	00
		Fast Rate	255	100	FF
7	Magenta Wheel Wheel	Magenta Full Saturation	0	0	00
		Open	255	100	FF
8	Yellow Wheel Wheel	Yellow Full Saturation	0	0	00
		Open	255	100	FF
9	Zoom	Zoom Narrow	0	0	00
		Zoom Wide	255	100	FF
10	Shutter Function	Open, activate Control channel	0-23	0-9	00-17
		Periodic Strobe	24-49	9-19	18-31
		Random Random Strobe	50-75	20-29	32-4B
		Synchronous Random Strobe	76-101	30-40	4C-65
		Open	102-255	40-100	66-FF
11	MSpeed	Disable	0-3	0-1	00-03
		Longest (252.7 sec.)	4	2	04
		Shortest (0.15 sec.)	255	100	FF
12	Macro (Note 1)	Macro Off	0-5	0-2	00-05
		Pan sweep, small to large angle	6-62	2-24	06-3E
		Macro Off	63-65	25-25	3F-41
		Tilt sweep, small to large angle	66-122	26-48	42-7A
		Macro Off	123-125	48-49	7B-7D
		Clockwise circle, small to large	126-160	49-63	7E-A0
		Macro Off	161-163	63-64	A1-A3
		Counterclockwise circle, small to large	164-198	64-78	A4-C6
		Reserved	199-255	78-100	C7-FF

13	Control	The Control channel should not be crossfaded.			
		Safe (disables all Control settings)	0-9	0-4	00-09
		Pan & Tilt MSpeed Off	10-19	4-7	0A-13
		Set Shutter channel to 0 for access to the following commands.			
		Display Off	20-28	8-11	14-1C
		Display Dim	30-38	12-15	1E-26
		Display Bright	40-48	16-19	28-30
		Home	60-68	24-27	3C-44
		Shutdown (send for 5 seconds)	80-130	31-51	50-82
		To be determined	131-255	52-100	83-FF

Note : The pan and tilt coarse channels set the center position of the position macro. The Mspeed channel is used to control the speed of the macros.

With the Mspeed set at the default value of DMX 0-4 all internal effects complete moves at approximately 2.5 seconds. This provides a pleasing look for those customers that do not want the additional variation given by using the Mspeed channel.

With the Mspeed set between DMX 5-255 all internal effects complete moves at the selected Mspeed time (up to 25 seconds).

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