Appendix A
Studio Beam™ DMX Protocol

Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	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
		Indexed	16-31	6-12	10-1F
		Pure Mix	32-47	13-18	20-2F
		Spin	48-63	19-25	30-3F
		Cycle (Speed is set by the Cyan channel)	64-79	25-31	40-4F
		Color Scan (Speed or fixed position set individually on Cyan, Magenta, and Yellow channels)	80-95	31-37	50-5F
		Random (Speed is set by the Cyan channel)	96-111	38-44	60-6F
		Blink Continuous	112-127	44-50	70-7F
		MSpeed Controlled			
		Continuous	128-143	50-56	80-8F
		Indexed	144-159	57-62	90-9F
		Pure Mix	160-175	63-69	A0-AF
		Spin	176-191	69-75	B0-BF
		Cycle (Speed is set by the Cyan channel)	192-207	75-81	C0-CF
		Color Scan (Speed or fixed position set individually on Cyan, Magenta, and Yellow channels)	208-223	82-87	D0-DF
		Random (Speed is set by the Cyan channel)	224-239	88-94	E0-EF
		Blink Continuous	240-255	94-100	F0-FF
6	Cyan Color Wheel	**Continuous Mode Absolute position across color mix portion of wheel**			
		Open	0	0	00
		Discrete Color (Deep Red) position	57	22	39
		Cyan Full Saturation	105	41	69
		Cyan Low Saturation	255	100	FF
		Indexed Mode			
		Open Position 1	0-15	0-6	00-0F
		Discrete Color (Deep Red) Position 2	16-47	6-18	10-2F

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Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
6 (cont.)	Cyan Color Wheel (cont.)	Cyan Full Saturation Position 3	48-79	19-31	30-4F
		Cyan Position 4	80-111	31-44	50-6F
		Cyan Position 5	112-143	44-56	70-8F
		Cyan Position 6	144-175	56-69	90-AF
		Cyan Position 7	176-207	69-81	B0-CF
		Cyan Low Saturation	208-239	82-94	D0-EF
		Open	240-255	94-100	F0-FF
		Pure Mix Mode (Absolute position across color mix portion of wheel)			
		Cyan Full Saturation	0	0	00
		Cyan Low Saturation	255	100	FF
		Spin Mode			
		Continuous Positioning	0-127	0-50	00-7F
		Spin Reverse (fastest to slowest)	128-187	50-73	80-BB
		Spin Stop	188-195	74-77	BC-C3
		Spin Forward (slowest to fastest)	196-255	77-100	C4-FF
		Color Scan Mode			
		Continuous Positioning	0-127	0-50	00-7F
		Scanning (slowest to fastest)	128-255	50-100	80-FF
		Cycle & Random Modes (sets the rate for all color wheels)			
		Slow Rate	0	0	00
		Fast Rate	255	100	FF
		Audio Modulation Mode: Select Audio Function in Control Channel			
		Full Movement. Maximum amplitude music causes full scale movement.			
		Saturated cyan to white, slow decay	0-7	0-3	00-07
		Saturated cyan to white, medium decay	8-15	3-6	08-0F
		Saturated cyan to white, fast decay	16-23	6-9	10-17
		White to saturated cyan, fast decay	24-31	9-12	18-1F
		White to saturated cyan, medium decay	32-39	13-15	20-27
		White to saturated cyan, slow decay	40-47	16-18	28-2F
		Limited movement. Cyan channel sets the maximum travel position. Decay rate is medium for all settings.			
		Saturated cyan to white. No to full movement	48-79	19-31	30-4F
		White to saturated cyan. Full to no movement	80-111	31-44	50-6F
		Middle out. Limited movement. The center of the mix media is the center of the modulation. Cyan setting controls modulation size. Decay rate is medium.			
		More to less saturated cyan	112-143	44-56	70-8F
		Less to more saturated cyan	144-175	56-69	90-AF
		Reserved for future use			
		To be determined	176-255	69-100	B0-FF

Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
7 (cont.)	Magenta Color Wheel	**Continuous Mode**			
		Open	0	0	00
		Discrete color (CTO) position	57	22	39
		Magenta Full Saturation	105	41	69
		Magenta Low Saturation	255	100	FF
		Indexed Mode			
		Open Position 1	0-15	0-6	00-0F
		Discrete color (CTO) position 2	16-47	6-18	10-2F
		Magenta Full Saturation Position 3	48-79	19-31	30-4F
		Magenta Position 4	80-111	31-44	50-6F
		Magenta Position 5	112-143	44-56	70-8F
		Magenta Position 6	144-175	56-69	90-AF
		Magenta Position 7	176-207	69-81	B0-CF
		Magenta Low Saturation 8	208-239	82-94	D0-EF
		Open Position 1	240-255	94-100	F0-FF
		Pure Mix Mode			
		Magenta Full Saturation	0	0	00
		Magenta Low Saturation	255	100	FF
		Spin Mode			
		Continuous Positioning	0-127	0-50	00-7F
		Spin Reverse (fastest to slowest)	128-187	50-73	80-BB
		Spin Stop	188-195	74-77	BC-C3
		Spin Forward (slowest to fastest)	196-255	77-100	C4-FF
		Color Scan Mode			
		Continuous Positioning	0-127	0-50	00-7F
		Scanning (slowest to fastest)	128-255	50-100	80-FF
		Audio Modulation Mode: Select Audio Function in Control Channel			
		Full Movement. Maximum amplitude music causes full scale movement.			
		Saturated magenta to white, slow decay	0-7	0-3	00-07
		Saturated magenta to white, medium decay	8-15	3-6	08-0F
		Saturated magenta to white, fast decay	16-23	6-9	10-17
		White to saturated magenta, fast decay	24-31	9-12	18-1F
		White to saturated magenta, medium decay	32-39	13-15	20-27
		White to saturated magenta, slow decay	40-47	16-18	28-2F
		Limited movement. Magenta channel sets the maximum travel position. Decay rate is medium for all settings.			
		Saturated magenta–white. No–full movement	48-79	19-31	30-4F
		White–saturated magenta. Full–no movement	80-111	31-44	50-6F

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Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
7 (cont.)	Magenta Color Wheel (cont.)	***Middle out. Limited movement. The center of the mix media is the center of the modulation. Magenta setting controls modulation size. Decay rate is medium.***			
		More to less saturated magenta	112-143	44-56	70-8F
		Less to more saturated magenta	144-175	56-69	90-AF
		Reserved for future use			
		To be determined	176-255	69-100	B0-FF
8	Yellow Color Wheel	**Continuous Mode**			
		Open	0	0	00
		Discrete color (Deep Blue) position	57	22	39
		Yellow Full Saturation	105	41	69
		Yellow Low Saturation	255	100	FF
		Indexed Mode			
		Open Position 1	0-15	0-6	00-0F
		Discrete color (Deep Blue) Position 2	16-47	6-18	10-2F
		Yellow Full Saturation Position 3	48-79	19-31	30-4F
		Yellow Position 4	80-111	31-44	50-6F
		Yellow Position 5	112-143	44-56	70-8F
		Yellow Position 6	144-175	56-69	90-AF
		Yellow Position 7	176-207	69-81	B0-CF
		Yellow Low Saturation Position 8	208-239	82-94	D0-EF
		Open Position 1	240-255	94-100	F0-FF
		Pure Mix Mode			
		Yellow Full Saturation	0	0	00
		Yellow Low Saturation	255	100	FF
		Spin Mode			
		Continuous Positioning	0-127	0-50	00-7F
		Spin Reverse (fastest to slowest)	128-187	50-73	80-BB
		Spin Stop	188-195	74-77	BC-C3
		Spin Forward (slowest to fastest)	196-255	77-100	C4-FF
		Color Scan Mode			
		Continuous Positioning	0-127	0-50	00-7F
		Scanning (slowest to fastest)	128-255	50-100	80-FF
		Audio Modulation Mode: Select Audio Function in Control Channel.			
		Full Movement. Maximum amplitude music causes full scale movement.			
		Saturated yellow to white, slow decay	0-7	0-3	00-07
		Saturated yellow to white, medium decay	8-15	3-6	08-0F
		Saturated yellow to white, fast decay	16-23	6-9	10-17
		White to saturated yellow, fast decay	24-31	9-12	18-1F

Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
8	Yellow Color Wheel (cont.)	White to saturated yellow, medium decay	32-39	13-15	20-27
		White to saturated yellow, slow decay	40-47	16-18	28-2F
		Limited movement. Yellow channel sets the maximum travel position. Decay rate is medium for all settings.			
		Saturated yellow–white. No–full movement	48-79	19-31	30-4F
		White–saturated yellow. Full–no movement	80-111	31-44	50-6F
		Middle out. Limited movement. The center of the mix media is the center of the modulation. Yellow setting controls modulation size. Decay rate is medium.			
		More to less saturated yellow	112-143	44-56	70-8F
		Less to more saturated yellow	144-175	56-69	90-AF
		Reserved for future use			
		To be determined	176-255	69-100	B0-FF
9	Beam Shaping	Continuous Positioning	0-127	0-50	00-7F
		Spin Reverse (fastest to slowest)	128-187	50-73	80-BB
		Spin Stop	188-195	74-77	BC-C3
		Spin Forward (slowest to fastest)	196-255	77-100	C4-FF
		Audio Modulation Mode			
		Full movement. Maximum amplitude music will cause full scale movement			
		Forward, slow decay	0-7	0-3	00-07
		Forward, medium decay	8-15	3-6	08-0F
		Forward, fast decay	16-23	6-9	10-17
		Reverse, fast decay	24-31	9-12	18-1F
		Reverse, medium decay	32-38	13-15	20-27
		Reverse, slow decay	40-47	16-18	28-2F
		Middle out. The center of movement is the vertical spread when the fixture base is horizontal. The channel setting controls modulation amplitude. Decay rate is medium.			
		Forward	48-79	19-31	30-4F
		Reverse	80-111	31-44	50-6F
		Reserved for future use			
		To be determined	112-255	44-100	70-FF
10	Zoom	Zoom In	0	0	00
		Zoom Out	255	100	FF

Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
11	Frost	Continuous Positioning (open to closed)	0-127	0-50	00-7F
		Closed	128-135	50-53	80-87
		Periodic Strobe	136-151	53-59	88-97
		Random Strobe	152-167	60-65	98-A7
		Ramp Open / Snap Shut	168-183	66-72	A8-B7
		Snap Open / Ramp Shut	184-199	72-78	B8-C7
		Ramp Open / Ramp Shut	200-215	78-84	C8-D7
		Random Ramp Open / Snap Shut	216-231	85-91	D8-E7
		Random Snap Open / Ramp Shut	232-247	91-97	E8-F7
		Open	248-255	97-100	F8-FF
		Audio Modulation Mode			
		Full movement. Maximum amplitude music causes full scale movement.			
		No frost to frost, slow decay	0-7	0-3	00-07
		No frost to frost, medium decay	8-15	3-6	08-0F
		No frost to frost, fast decay	16-23	6-9	10-17
		Frost to no frost, fast decay	24-31	9-12	18-1F
		Frost to no frost, medium decay	32-39	13-15	20-27
		Frost to no frost, slow decay	40-47	16-18	28-2F
		Limited Movement			
		No frost to frost, No movement to full movement	48-79	19-31	30-4F
		Frost to no Frost. Full movement to no movement	80-111	31-44	50-6F
		Reserved for future use			
		To be determined			
12	Shutter	**Normal shutter functions. No lamp or dimming functions selected in the Control channel.**			
		Close	0-23	0-9	00-17
		Periodic Strobe	24-49	9-19	18-31
		Random Strobe	50-75	20-29	32-4B
		Synchronous Random Strobe	76-101	30-40	4C-65
		Ramp Open / Snap Shut	102-127	40-50	66-7F
		Snap Open / Ramp Shut	128-153	50-60	80-99
		Ramp Open / Ramp Shut	154-179	60-70	9A-B3
		Random Ramp Open / Snap Shut	180-205	71-80	B4-CD
		Random Snap Open / Ramp Shut	206-231	81-91	CE-E7
		Open	232-255	91-100	E8-FF

Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
12	Shutter (cont.)	**Lamp assisted strobes. Accessed when the Control channel is set in the range 134-137**			
		The shutter functions are the same as in the normal shutter function range. Periodic strobes, random random and random synchronous strobes are lamp assisted.			
		Lamp functions. Accessed when the Control channel is set in the range 138-141			
		For lamp boost effects, the lamp is boosted above the 700 Watt level for the specified period of time. The lamp is also boosted during the lightning effects.			
		Before another boost or lightning effect can occur, the shutter channel must be moved to either closed or open, or the control channel must be moved outside the lamp function range.			
		Boost functions to black will boost the lamp for the specified time then close the shutter. Boost functions to white will boost the lamp for the specified time, then leave the shutter open with the lamp dimmed.			
		When lightning functions are selected, the dim channel scales the overall brightness of the lightning stroke. Dim at 255 will yield maximum brightness.			
		Close	0-23	0-9	00-17
		Periodic lamp strobes	24-49	9-19	18-31
		Random random lamp strobes	50-75	20-29	32-4B
		Synchronous random lamp strobes	76-101	30-40	4C-65
		Boost lamp1.0 second, black	102-105	40-41	66-69
		Boost lamp .75 second, black	106-109	42-43	6A-6D
		Boost lamp .66 second, black	110-113	43-44	6E-71
		Boost lamp .5 second, black	114-117	45-46	72-75
		Boost lamp .33 second, black	118-121	46-47	76-79
		Boost lamp .25 second, black	122-127	48-50	7A-7F
		Boost lamp1.0 second, white	128-131	50-51	80-83
		Boost lamp .75 second, white	132-135	52-53	84-87
		Boost lamp .66 second, white	136-139	53-55	88-8B
		Boost lamp .5 second, white	140-143	55-56	8C-8F
		Boost lamp .33 second, white	144-147	56-58	90-93
		Boost lamp .25 second, white	148-153	58-60	94-99
		Lightning strike 1	154-157	60-62	9A-9D
		Lightning strike 2	158-161	62-63	9E-A1
		Lightning strike 3	162-165	64-65	A2-A5
		Lightning strike 4	166-169	65-66	A6-A9
		Lightning strike 5	170-173	67-68	AA-AD
		Lightning strike 6	174-179	68-70	AE-B3
		To be determined, default black	180-231	71-91	B4-E7
		Open	232-255	91-100	E8-FF

Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
12 (cont.)	Shutter (cont.)	**Lamp Dimming only. Accessed when the Control Channel is set in the range 146-149.**			
		The shutter functions are the same as the normal shutter function range. Dimming is accomplished electronically, lowering the lamp power. Dimming will not go to black. Strobes are mechanical and will go to black.			
13	Dim	Close	0	0	00
		Open	255	100	FF
14	MSpeed	Disable	0-3	0-1	00-03
		Longest (252.7 sec.)	4	2	04
		Shortest (0.15 sec.)	255	100	FF
15	Macro	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
16	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
		Lamp On	80-88	31-35	50-58
		Lamp Off	90-98	35-38	5A-62
		Lock *(send for 5 seconds)*	110-118	43-46	6E-76
		Shutdown *(send for 5 seconds)*	120-130	47-51	78-82
		Lamp Functions. No shutter channel requirement.			
		Lamp assisted strobes (Periodic and Random strobe functions are lamp assisted. Ramp functions are not lamp assisted.)	134-137	53-54	86-89
		Lamp functions (modifies the shutter channel)	138-141	54-55	8A-8D
		Lamp/mechanical dimming (Lamp output will vary from a minimum to 700 Watts as the mechanical dimming ranges from 0-100%)	142-145	56-57	8E-91
		Lamp only dimming (Electronic dimming only from a minimum to 700 Watts.)	146-149	57-58	92-95

Table A-1 Studio Beam Standard Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
16 (cont.)	Control (cont.)	**Reserved for future use.**			
		To be determined	150-169	59-66	AA-AD
		Audio Modulation Functions. No shutter channel requirement			
		Cyan Modulation	170-173	67-68	AA-AD
		Magenta Modulation	174-177	68-69	AE-B1
		Yellow Modulation	178-181	70-71	B2-B5
		Cyan & Magenta Modulation	182-185	71-73	B6-B9
		Cyan & Yellow modulation	186-189	73-74	BA-BD
		Magenta and Yellow Modulation	190-193	75-76	BE-C1
		Modulate all colors	194-197	76-77	C2-C5
		Frost Modulation	198-201	78-79	C6-C9
		Beam Shaping Modulation	202-205	79-80	CA-CD
		Dim Modulation	206-209	81-82	CE-D1
		Lamp and Dim Modulation	210-213	82-84	D2-D5
		Lamp Modulation (long sustain)	214-217	84-85	D6-D9
		Lamp Modulation (medium sustain)	218-221	85-87	DA-DD
		Lamp Modulation (short sustain)	222-225	87-88	DE-E1
		Reserved for future			
		To be determined	226-255	89-100	E2-FF

Table A-2 Studio Beam Flat Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
1	Pan Coarse	Pan, coarse adjustment	0-255	0-100	00-FF
2	Pan Fine	Pan, fine adjustment	0-255	0-100	00-FF
3	Tilt Coarse	Tilt, coarse adjustment	0-255	0-100	00-FF
4	Tilt Fine	Tilt, fine adjustment	0-255	0-100	00-FF
5	Dim	Dim setting, continuous	0-255	0-100	00-FF
6	Shutter	Open	0	0	00
		Periodic	1-26	0-10	01-1A
		Random/Random	27-52	11-20	1B-34
		Random/Synchronous	53-78	21-31	35-4E
		Ramp Open/Ramp Shut	79-104	31-41	4F-68
		Snap Open/Ramp Shut	105-120	41-47	69-78
		Ramp Open/Ramp Shut	121-146	48-57	79-92
		Random Ramp Open/Snap Shut	147-172	58-68	93-AC
		Random Snap Open/Ramp Shut	173-198	68-78	AD-C6
		To be determined, defaults Open	199-250	78-98	C7-FA
		Closed	251-255	98-100	FB-FF
7	Lamp Control	Lamp full power	0	0	0
		Lamp dim (full to dim)	1-128	0-50	1-80
		Lamp assists shutter strobes	129	51	81
		Lamp/mechanical dimming	130	51	82
		Periodic lamp strobes	131-156	51-61	83-9C
		Random lamp strobes	157-172	62-68	9D-AC
		Synchronous random strobe	173-198	68-78	AD-C6
		Boost lamp 1.0 second, black	199	78	C7
		Boost lamp .75 second, black	200	78	C8
		Boost lamp .66 second, black	201	79	C9
		Boost lamp .5 second, black	202	79	CA
		Boost lamp .33 second, black	203	80	CB
		Boost lamp .25 second, black	204	80	CC
		Boost lamp 1.0 second, white	205	80	CD
		Boost lamp .75 second, white	206	81	CE
		Boost lamp .66 second, white	207	81	CF
		Boost lamp .5 second, white	208	82	D0
		Boost lamp .33 second, white	209	82	D1
		Boost lamp .25 second, white	210	82	D2
		Lightning strike 1	211	83	D3
		Lightning strike 2	212	83	D4
		Lightning strike 3	213	84	D5
		Lightning strike 4	214	84	D6
		Lightning strike 5	215	84	D7

Table A-2 Studio Beam Flat Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
7 (cont.)	Lamp Control (cont.)	Lightning strike 6	216	85	D8
		To be determined	217-255	85-100	D9-FF
8	Cyan	Open White	0	0	0
		Cyan (0% to 100% saturation)	1-128	0-50	01-80
		Discrete color (deep red position)	129	51	81
		Open white	130	51	82
		Media Scan	131-172	51-68	83-AC
		Reverse Spin (fast to slow)	173-213	68-84	AD-D5
		Spin Stop	214	84	D6
		Forward Spin (slow to fast)	215-255	84-100	D7-FF
9	Magenta	Open White	0	0	0
		Magenta (0% to 100% saturation)	1-128	0-50	1-80
		Discrete color (CTO position)	129	51	81
		Open white	130	51	82
		Media Scan	131-172	51-68	83-AC
		Reverse Spin (fast to slow)	173-213	68-84	AD-D5
		Spin Stop	214	84	D6
		Forward Spin (slow to fast)	215-255	84-100	D7-FF
10	Yellow	Open White	0	0	0
		Yellow (0% to 100% saturation)	1-128	0-50	1-80
		Discrete color (deep blue position)	129	51	81
		Open white	130	51	82
		Media Scan	131-172	51-68	83-AC
		Reverse Spin (fast to slow)	173-213	68-84	AD-D5
		Spin Stop	214	84	D6
		Forward Spin (slow to fast)	215-255	84-100	D7-FF
11	Color Function	Safe (disables all Control settings)	0	0	0
		Blink (continuous to discrete)	1	0	1
		Color Cycle (Uses only the color mixing portion of all color wheels to cycle factory determined colors at variable speeds (slow to fast))	2-65	0-26	2-41
		Random (Uses only the color mixing portion of all color wheels to cycle factory- (slow to fast))	66-129	26-51	42-81
		To be determined, defaults to safe	130-255	51-100	82-FF
12	Beam Shaping	Open	0	0	1
		Continuous Positioning	1-127	0-50	1-7F
		Reverse Spin (fast to slow)	128-191	50-75	80-BF
		Spin Stop	192	75	C0
		Forward Spin (slow to fast)	193-255	75-100	C1-FF
13	Zoom	Zoom (In to Out)	0-255	0-100	0-FF

Table A-2 Studio Beam Flat Protocol DMX Values

Channel	Construct	Description	Value (dec.)	Value (%)	Value (hex)
14	Frost	Closed	0	0	0
		Continuous Positioning (closed to open)	1-127	0-50	1-7F
		Periodic Strobe	128-143	50-56	80-8F
		Random Strobe	144-159	57-62	90-9F
		Ramp Open/Snap Shut	160-175	63-69	A0-AF
		Snap Open/Ramp Shut	176-191	69-75	B0-BF
		Ramp Open/Ramp Shut	192-207	75-81	C0-DF
		Random Ramp Open/Snap Shut	208-223	82-91	D0-EF
		Random Snap Open/Ramp Shut	224-239	88-94	E0-EF
		Open	240-255	94-100	F0-FF
15	Control	Safe	0-9	0-4	0-9
		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
		Lamp On	80-88	31-35	50-58
		Lamp Off	90-98	35-38	5A-62
		Lock	110-118	43-46	6E-76
		Fixture Shutdown	120-130	47-51	78-82