



Bad Boy[®] Spot DMX Mapping

DMX512 Channel Mapping

Channel	Function	Default DMX Value	DMX Percent	Snap	Refer To Additional Table...
1	Intensity - Hi Byte	0	0%	N	
2	Intensity - Lo Byte	0	0%	N	
3	Pan - Hi Byte	127 (32767)	50%	N	
4	Pan - Lo Byte	255	100%	N	
5	Tilt - Hi Byte	127 (32767)	50%	N	
6	Tilt - Lo Byte	255	100%	N	
7	Cyan - Hi Byte	0	0%	N	
8	Cyan - Lo Byte	0	0%	N	
9	Cyan Control	0	0%	Y	Wheel Control
10	Yellow - Hi Byte	0	0%	N	
11	Yellow - Lo Byte	0	0%	N	
12	Yellow Control	0	0%	Y	Wheel Control
13	Magenta - Hi Byte	0	0%	N	
14	Magenta - Lo Byte	0	0%	N	
15	Magenta Control	0	0%	Y	Wheel Control
16	Designer - Hi Byte	0	0%	N	
17	Designer - Lo Byte	0	0%	N	
18	Designer Control	0	0%	Y	Wheel Control
19	Gobo1 - Hi Byte	0	0%	N	
20	Gobo1 - Lo Byte	0	0%	N	
21	Gobo1 Control	0	0%	Y	Wheel Control
22	Gobo1 Index - Hi Byte	127 (32767)	50%	N	
23	Gobo1 Index - Lo Byte	255	100%	N	
24	Index1 Control	0	0%	Y	Wheel Control
25	Gobo2 - Hi Byte	0	0%	N	
26	Gobo2 - Lo Byte	0	0%	N	
27	Gobo2 Control	0	0%	Y	Wheel Control
28	Gobo2 Index - Hi Byte	127 (32767)	50%	N	
29	Gobo2 Index - Lo Byte	255	100%	N	
30	Index2 Control	0	0%	Y	Wheel Control
31	Zoom - Hi Byte	127 (32767)	50%	N	
32	Zoom - Lo Byte	255	100%	N	
33	Edge - Hi Byte	127 (32767)	50%	N	
34	Edge - Lo Byte	255	100%	N	
35	Beam Iris - Hi Byte	255	100%	N	
36	Beam Iris - Lo Byte	255	100%	N	
37	Strobe	0	0%	N	Strobe
38	Frost	0	0%	N	
39	Focus Time	255	100%	Y	Timing Channels
40	Color Time	255	100%	Y	Timing Channels
41	Beam Time	255	100%	Y	Timing Channels
42	Control	0	0%	Y	Control Channels

Bad Boy Spot DMX Mapping

Wheel Control

DMX Value	DMX Percent	Function	Notes
0-9	1%	Continuous	Continuous wheel positioning
10-19	5%	Discrete	Positioning limited to half panel increments
20-39	7-15%	Spin	Continuous range from full reverse spin to no spin to full forward spin
40-43	16%	Slow Random	Random strobe - slow rate
44-46	17%	Medium Random	Random strobe - medium rate
47-49	18%	Fast Random	Random strobe - fast rate
50-255	19-100%	Speed Range	Variable strobe rate from slow to max speed

Gobo Wheel

Position	DMX Value	DMX Percent	Notes
Open	0	0%	DMX values are for full panel positions (Continuous mode).
1	7641	11%	
2	16023	24%	
3	24398	37%	
4	32768	50%	
5	41142	62%	
6	49511	75%	
7	57894	88%	

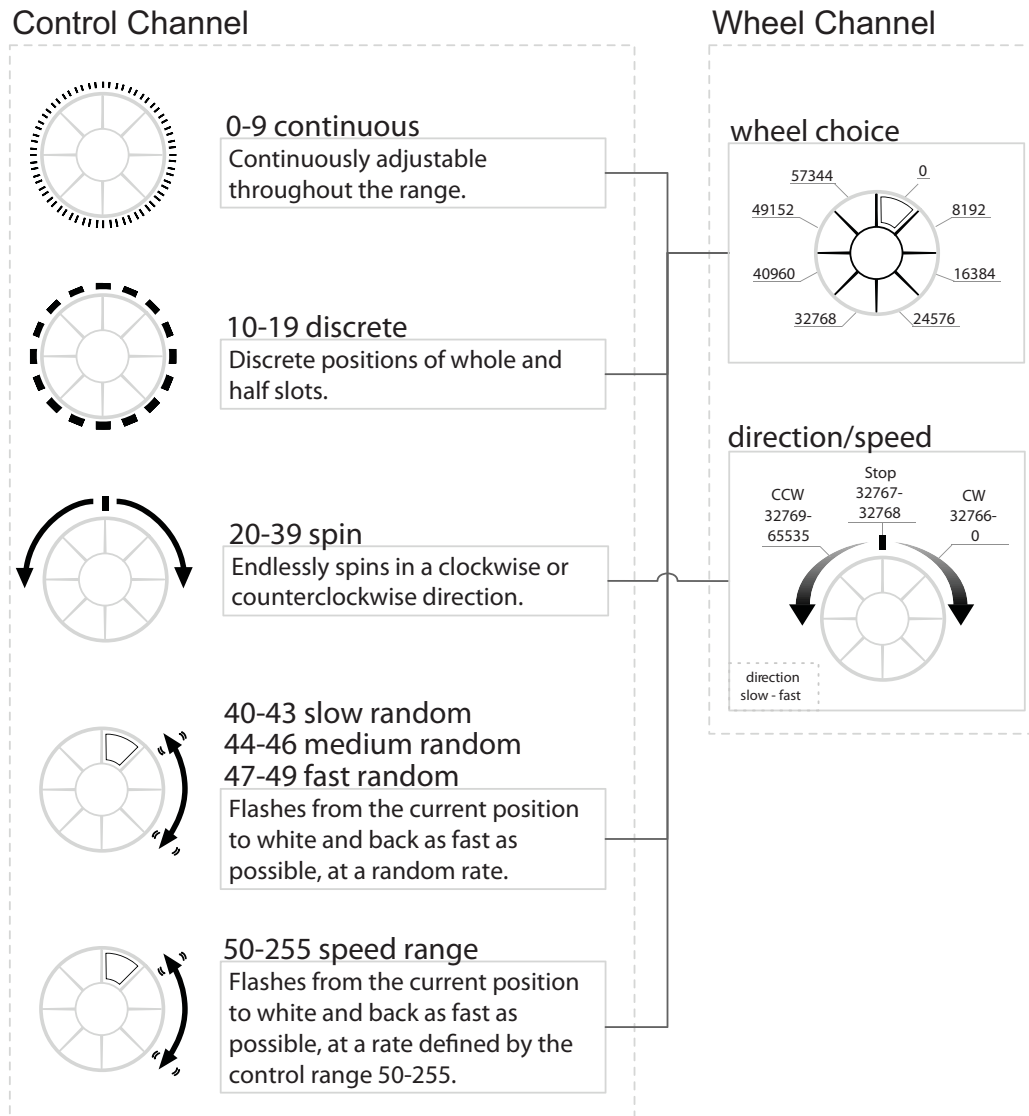
CMY Color Wheels

Position	DMX Value	DMX Percent	Notes
Open	0	0%	DMX values are for full panel positions (Continuous mode). * This chart applies to all color wheels.
1	8192	12%	
2	16384	25%	
3	24576	37%	
4	32768	50%	
5	40960	62%	
6	49152	75%	
7	57344	87%	

* The wheels are open at DMX value 0 and fully saturated at DMX value 65535.

Bad Boy Spot DMX Mapping

The diagram below illustrates the wheel control modes:



Strobe Control

DMX Value	DMX Percent	Function	Notes
0-9	1%	Open	Strobe fully open
10-19	5%	Closed	Strobe fully closed
20-59	7-23%	Pulse	Dimmer wheel spin: fast CW - slow - fast CCW
60-99	23-38%	Ceiling Fan	Strobe blade spin: fast CW - slow - fast CCW
100-102	39%	Slow Random	Random strobe - slow rate
103-106	41%	Medium Random	Random strobe - medium rate
107-109	42%	Fast Random	Random strobe - fast rate
110-255	43-100%	Speed Range	Variable strobe rate from slow to max speed

Bad Boy Spot DMX Mapping

Control Channels

DMX Value	DMX Percent	Function	Notes
10	3%	Recalibrate: All	
11	4%	Recalibrate: Erred Mechanisms	
12	4%	Recalibrate: Zoom/Edge	
14	5%	Recalibrate: Color	
16	6%	Recalibrate: Gobos	
18	7%	Recalibrate: Dimmer/Strobe/Iris	
19	7%	Recalibrate: Pan/Tilt	
20	7%	Lamp: Douse	
30	11%	Lamp: Start	
40	15%	Lamp Power Limit Select: 1400W	default
45	17%	Lamp Power Limit Select: 1200W	
50	19%	Lamp Power Limit Select: 900W	
55	21%	Lamp: Override Start-Up Power Limit	Overrides default setting: 3 minute warm-up at 1200W or less.
60	23%	Zoom Table Select: 30' Throw	default
62	24%	Zoom Table Select: 50' Throw	Zoom Tables maintain sharp focus on an image throughout the zoom range.
64	25%	Zoom Table Select: 75' Throw	
66	25%	Zoom Table Select: 100' Throw	
68	26%	Zoom Table Select: 300' Throw	
70	27%	Zoom Table Select: 15' Throw	
72	38%	Zoom Table Select: Narrow Throw	Narrow Throw may not maintain focus throughout the zoom range and cannot focus on Gobo Wheel 1 at the wide end of the range.
75	29%	Zoom Speed Select: Maintain Focus	default
77	30%	Zoom Speed Select: Move Fast	
80	31%	Gobo: Set Zero Position	Allows adjustment of the gobo wheel home position.
90	35%	Display: Turn Backlight ON	
95	37%	Display: Turn Backlight OFF	
100	39%	Pan: Lock	
102	40%	Pan: Unlock	
104	40%	Tilt: Lock	
106	41%	Tilt: Unlock	
108	42%	Pan/Tilt: Free Motion	
110	43%	Pan/Tilt: Free Lock	
112	43%	Pan/Tilt: End Free Motion	
114	44%	Comm Loss: No Fade Out	
116	45%	Comm Loss: Fade Out After 30s	
118	46%	Fade Out After 60s	
120	47%	Clear Logs	
122	47%	Invert Pan	

Bad Boy Spot DMX Mapping

Control Channels (Continued)

DMX Value	DMX Percent	Function	Notes
124	48%	Don't Invert Pan	
126	49%	Invert Tilt	
128	50%	Don't Invert Tilt	
130	50%	Swap Pan/Tilt	
132	51%	Don't Swap Pan/Tilt	
134	52%	Followspot: Intensity/Iris	
135	52%	Followspot: Intensity/Iris/Edge	
136	53%	Followspot: Intensity/Iris/Edge/Zoom	
137	53%	Followspot: Intensity/Iris/Zoom	
138	54%	End Followspot Mode	
139	54%	Followspot: Intensity	
140	54%	Followspot: Intensity/Edge	
141	55%	Followspot: Intensity/Edge/Zoom	
142	55%	Followspot: Intensity/Zoom	
143	56%	Followspot: Iris	
144	56%	Followspot: Iris/Edge	
145	56%	Followspot: Iris/Zoom	
146	57%	Followspot: Iris/Edge/Zoom	
147	57%	Followspot: Edge	
148	58%	Followspot: Edge/Zoom	
149	58%	Followspot: Zoom	
150	58%	Followspot: Turn intensity scaling ON	
152	59%	Followspot: Turn intensity scaling OFF	
154	60%	Followspot: Enable frost control	default
156	61%	Followspot: Enable screen brightness control (disable frost)	

Special Notes

Control Channels

All Control Channel functions require that the specified DMX value be held for at least 3 seconds, followed by an immediate change to DMX 0 (without any other DMX values in between).

Gobo: Set Zero Position

Set Zero Position Allows adjustment of the gobo wheel home position.

Zoom Tables

The zoom tables, which allow the fixture to maintain sharp focus on an image throughout the zoom range, are sensitive to the throw distance. For this reason, a variety of zoom table versions are available for use with different throws. The Zoom Table Select values are handled live to allow cue recall with different zoom tables. If the zoom value changes and the control channel is on one of the zoom select values, the indicated zoom table will be used for that zoom recall.

Note also that zoom table select is not persistent between power cycles, it always resets to the default 30' table at power-up.

Bad Boy Spot DMX Mapping

Timing Channels

Channel Functions

Timing channel control improves the timed moves of certain groups of parameters. Three timing channels are provided: one for Focus (Pan and Tilt), one for color parameters and one for beam parameters. Timing channels support time values of up to six minutes.

Channel Function / Timing Channel Relationship

Bad Boy Channel Function	Timing Channel		
	Focus Time	Color Time	Beam Time
Pan	♦		
Tilt	♦		
Cyan		♦	
Yellow		♦	
Magenta		♦	
Color Wheel		♦	
Beam			♦
Frost			♦
Rotating Gobo Wheels 1 & 2			♦
Gobo Index 1 & 2			♦

Timing Channel Mapping

Refer to the **Timing Channels Table** starting on the next page. The following guidelines apply:

- + A timing value of zero is full speed.
- + A time value of 100% (or 255 in DMX) causes the associated parameter(s) to follow cue fade time (console time) rather than the timing channel.
- + Timing channels can be set in either % or 0-255 (DMX) modes, with the values assigned - as shown in the tables.

Bad Boy Spot DMX Mapping

Timing Channels

% Value	DMX	= Seconds
	0	Full Speed
	1	0.2
	2	0.4
1	3	0.6
	4	0.8
2	5	1
	6	1.2
	7	1.4
3	8	1.6
	9	1.8
4	10	2
	11	2.2
	12	2.4
5	13	2.6
	14	2.8
6	15	3
	16	3.2
	17	3.4
7	18	3.6
	19	3.8
8	20	4
	21	4.2
	22	4.4
9	23	4.6
	24	4.8
10	25	5
	26	5.2
	27	5.4
11	28	5.6
	29	5.8
	30	6
12	31	6.2
	32	6.4
13	33	6.6
	34	6.8
	35	7.0
14	36	7.2
	37	7.4
15	38	7.6
	39	7.8
	40	8
16	41	8.2
	42	8.4
17	43	8.6
	44	8.8

Timing Channels (Continued)

% Value	DMX	= Seconds
	45	9
18	46	9.2
	47	9.4
19	48	9.6
	49	9.8
	50	10
20	51	10.2
	52	10.4
	53	10.6
21	54	11
	55	11
22	56	12
	57	12
	58	13
23	59	13
	60	14
24	61	14
	62	14
	63	15
25	64	15
	65	16
26	66	16
	67	16
	68	17
27	69	17
	70	18
28	71	18
	72	18
	73	19
29	74	19
	75	20
30	76	20
	77	20
	78	21
31	79	21
	80	21
	81	22
32	82	22
	83	23
33	84	23
	85	23
	86	24
34	87	24
	88	25
35	89	25

Bad Boy Spot DMX Mapping

Timing Channels (Continued)

% Value	DMX	= Seconds
	90	25
	91	26
36	92	26
	93	27
37	94	27
	95	27
	96	28
38	97	28
	98	29
39	99	29
	100	29
	101	30
40	102	30
	103	30
	104	31
41	105	31
	106	32
42	107	32
	108	32
	109	33
43	110	33
	111	34
44	112	34
	113	34
	114	35
45	115	35
	116	36
46	117	36
	118	36
	119	37
47	120	37
	121	38
48	122	38
	123	38
	124	39
49	125	39
	126	39
	127	40
50	128	40
	129	41
51	130	41
	131	41
	132	42
52	133	42
	134	43

Timing Channels (Continued)

% Value	DMX	= Seconds
53	135	43
	136	43
	137	44
54	138	44
	139	45
55	140	45
	141	45
	142	46
56	143	46
	144	47
57	145	47
	146	47
	147	48
58	148	48
	149	49
59	150	49
	151	49
	152	50
60	153	50
	154	50
	155	51
61	156	51
	157	52
62	158	52
	159	52
	160	53
63	161	53
	162	54
64	163	54
	164	54
	165	55
65	166	55
	167	56
66	168	56
	169	56
	170	57
67	171	57
	172	58
68	173	58
	174	58
	175	59
69	176	59
	177	59
	178	60
70	179	60

Bad Boy Spot DMX Mapping

Timing Channels (Continued)

% Value	DMX	= Seconds
	180	65
71	181	65
	182	65
	183	70
72	184	70
	185	75
73	186	75
	187	75
	188	80
74	189	80
	190	85
75	191	85
	192	85
	193	90
76	194	90
	195	95
77	196	95
	197	95
	198	100
78	199	100
	200	110
79	201	110
	202	110
	203	120
80	204	120
	205	120
81	206	130
	207	130
	208	140
82	209	140
	210	140
	211	150
83	212	150
	213	160
84	214	160
	215	160
	216	170
85	217	170
	218	180
86	219	180
	220	180
	221	190
87	222	190
	223	200
88	224	200

Timing Channels (Continued)

% Value	DMX	= Seconds
	225	200
	226	210
89	227	210
	228	210
	229	220
90	230	220
	231	230
91	232	230
	233	230
	234	240
92	235	240
	236	250
93	237	250
	238	250
	239	260
94	240	260
	241	270
95	242	270
	243	270
	244	280
96	245	280
	246	290
97	247	290
	248	290
	249	300
98	250	300
	251	310
99	252	310
	253	310
	254	310
100	255	Follows Cue Data

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VERSION: AUGUST 2015