



# **BAD BOY HP WITH FRAMING DMX512 OPERATION**

This data map contains instructions for using the menu system and controlling the Bad Boy HP Framing luminaire by DMX512.

+ **DMX512 OPERATION**

# DMX512 OPERATION

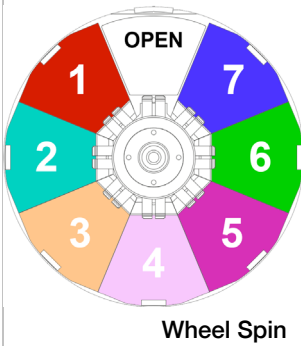
## DMX Channel Mapping

Table 1-1: Bad Boy Framing DMX Channel Mapping

Chan	Function	Description	8-Bit Value	16-Bit Value	DMX Percent	
1	INTENSITY	Intensity Adjustment	home: 0		0%	
		Out	0		0%	
		Full	255		100%	
2	PAN	Pan linear coarse adjustment	home: 127	32768	50%	
		0°	0		0%	
		615°	255		100%	
3	Pan Fine	Pan fine adjustment	home: 0		0%	
4	TILT	Tilt linear coarse adjustment	home: 127	32768	50%	
		0°	0		0%	
		260°	255		100%	
5	Tilt Fine	Tilt fine adjustment	home: 0		0%	
6	CYAN	Cyan Color Mix	home: 0		0%	
		Mix	[Mode: Continuous]		0-255	0-100%
			Open		0	0%
			Full		255	100%
		Wheel Spin	[Mode: Spin]		0-255	0-100%
			<i>Clockwise</i>		0-126	0-49%
			Fast		0	0%
			Slow		126	49%
			Stop		127-128	50%
			<i>Counter-Clockwise</i>		129-255	51-100%
			Slow		129	51%
			Fast		255	100%
			7		YELLOW	Yellow Color Mix
Mix	[Mode: Continuous]	0-255		0-100%		
	Open	0		0%		
	Full	255		100%		
Wheel Spin	[Mode: Spin]	0-255		0-100%		
	<i>Clockwise</i>	0-126		0-49%		
	Fast	0		0%		
	Slow	126		49%		
	Stop	127-128		50%		
	<i>Counter-Clockwise</i>	129-255		51-100%		
	Slow	129		51%		
	Fast	255		100%		
	8	MAGENTA		Magenta Color Mix		home: 0
Mix			[Mode: Continuous]	0-255	0-100%	
			Open	0	0%	
			Full	255	100%	
Wheel Spin			[Mode: Spin]	0-255	0-100%	
			<i>Clockwise</i>	0-126	0-49%	
			Fast	0	0%	
			Slow	126	49%	

**Table 1-1: Bad Boy Framing DMX Channel Mapping (Continued)**

Chan	Function	Description	8-Bit Value	16-Bit Value	DMX Percent
		Stop	127-128		50%
		<i>Counter-Clockwise</i>	129-255		51-100%
		Slow	129		51%
		Fast	255		100%
<b>9</b>	<b>COLOR MIX CONTROL</b>	Sets color mix control mode	home: 0		0%
		Continuous	0-9		1%
		Spin Cyan	10-19		5%
		Spin Yellow	20-29		9%
		Spin Magenta	30-39		13%
		Spin ALL mixers	40-49		17%
		Reserved	50-255		19-100%
<b>10</b>	<b>DESIGNER COLOR</b>	Color Wheel Choice	home: 0		0%
	<b>Color Choice</b>	[Mode: Continuous, Discrete, Strobe]	0-255		0-100%
		Open	0		0%
		Color 1: Deep Red	32		12%
		Color 2: Turquoise	64		25%
		Color 3: 3200K CTO	96		37%
		Color 4: Minus Green Daylight	128		50%
		Color 4 / Color 5 Split	145		56%
		Color 5: Rosy Magenta	160		62%
		Color 6: Green	192		75%
		Color 7: UV Blue	224		87%
		Open	255		100%
	<b>Wheel Spin</b>	[Mode: Spin]	0-255		0-100%
		<i>Clockwise</i>	0-126		0-49%
		Fast	0		0%
		Slow	126		49%
		Stop	127-128		50%
		<i>Counter-Clockwise</i>	129-255		51-100%
		Slow	129		51%
		Fast	255		100%
<b>11</b>	<b>DESIGNER CONTROL</b>	Sets Designer Wheel control mode	home: 0		0%
		Continuous	0-9		1%
		Discrete	10-19		5%
		Spin	20-39		11%
		Strobe Random - Slow	40-43		16%
		Strobe Random - Medium	44-46		17%
		Strobe Random - Fast	47-49		18%
		Linear Strobe Rate	50-255		19-100%
		Slow	50		19%
		Fast	255		100%



**Table 1-1: Bad Boy Framing DMX Channel Mapping (Continued)**

Chan	Function	Description	8-Bit Value	16-Bit Value	DMX Percent		
<b>12</b>	<b>FIXED GOBO</b>	Fixed Gobo Wheel Choice / Modifier	home: 0	0	0%		
		Discrete Choice	0-21	0-5631			
		Continuous Choice	22-211	5632-54271			
		Wheel Spin Negative	212-232	54272-59647			
		Stop	233-234	59648-60159			
		Wheel Spin Positive	235-255	60160-65535			
		<i>Fixed Gobo Discrete Positions</i>					
		Open	0	0			
		POS 1: Bramble Breakup		1-804			
		POS 2: Digital Camo		805-1609			
		POS 3: Less Squares		1610-2413			
		POS 4: Corrosion		2414-3218			
		POS 5: Ghost Maze		3219-4022			
		POS 6: Sunburst Breakup		4023-4827			
		POS 7: Oak Foliage		4828-5631			
		<i>Fixed Gobo Continuous Positions</i>					
		Open		5632			
		POS 1: Bramble Breakup		11712			
		POS 2: Digital Camo		17792			
		POS 3: Less Squares		23872			
		POS 4: Corrosion		29952			
		POS 5: Ghost Maze		36031			
		POS 6: Sunburst Breakup		42111			
		POS 7: Oak Foliage		48191			
		<b>13</b>	Fixed Gobo Fine	Fixed Gobo Fine adjustment	home: 0		0%
		<b>14</b>	TBD	RESERVED			
		<b>15</b>	TBD	RESERVED			
<b>16</b>	<b>ROTATING GOBO</b>	Rotating Gobo 2 Choice / Modifier	home: 0	0	0%		
		Discrete Choice		0-5631			
		Continuous Choice		5632-54271			
		Wheel Spin CCW		54272-59647			
		Stop		59648-60159			
		Wheel Spin CW		60160-65535			
		<i>Rotating Gobo Discrete Positions</i>					
		Open	0	0			
		POS 1: Pebbles Less		1-804			
		POS 2: Starry Night		805-1609			
		POS 3: Clubbed Spiral		1610-2413			
		POS 4: Deco Wave		2414-3218			
		POS 5: Rubberband Ball		3219-4022			
		POS 6: Nouveau Swirl		4023-4827			
		POS 7: Super Alpha		4828-5631			
		<i>Rotating Gobo Continuous Positions</i>					
		Open		5632			
		POS 1: Pebbles Less		11452			
		POS 2: Starry Night		17532			

**Table 1-1: Bad Boy Framing DMX Channel Mapping (Continued)**

Chan	Function	Description	8-Bit Value	16-Bit Value	DMX Percent
		POS 3: Clubbed Spiral		24132	
		POS 4: Deco Wave		33082	
		POS 5: Rubberband Ball		36161	
		POS 6: Nouveau Swirl		42631	
		POS 7: Super Alpha		48711	
17	Rotating Gobo Fine	Rotating Gobo fine adjustment	home: 0		0%
18	ROTATING GOBO INDEX	Rotating Gobo 2 Index Modifier		32767	50%
		Continuous		0-65535	
		Spin CCW Fast to Slow		0-32767	
		Spin Stop		32767	
		Spin CW Fast to Slow		32768-65535	
		Spin Stop		65535	
19	Gobo 2 Index Fine	Gobo 2 Index fine adjustment	home: 0		0%
20	ZOOM	Zoom coarse adjustment	home: 94	home: 24000	36%
		7° (narrow)	0	0	0%
		56° (wide)	255	65535	100%
21	Zoom Fine	Zoom fine adjustment	home: 0		0%
22	EDGE	Edge coarse adjustment	home: 255	home: 65535	100%
		Near	0	0	0%
		Far	255	65535	100%
23	Edge Fine	Edge fine adjustment	home: 255		100%
24	BEAM IRIS	Iris control	home: 255		100%
		Small	0		0%
		Large	255		100%
25	STROBE	Strobe adjustment	home: 0		0%
		Open	0-9		1%
		Closed	10-19		5%
		<i>Pulse Clockwise</i>	20-39		7-15%
		Fast	20		7%
		Slow	39		15%
		<i>Pulse Counter-Clockwise</i>	40-59		15-23%
		Slow	40		15%
		Fast	59		23%
		<i>Ceiling Fan Clockwise</i>	60-79		23-30%
		Fast	60		23%
		Slow	79		30%
		<i>Ceiling Fan Counter-Clockwise</i>	80-99		31-38%
		Slow	80		31%
		Fast	99		38%
		Slow Random	100-102		40%
		Medium Random	103-106		41%
		Fast Random	107-109		42%
		<i>Speed</i>	110-255		43-100%
		Slow	110		43%
Fast	255		100%		
26	FROST	Frost Control	home: 0		0%
		None	0		0%
		Full	255		100%

**Table 1-1: Bad Boy Framing DMX Channel Mapping (Continued)**

Chan	Function	Description	8-Bit Value	16-Bit Value	DMX Percent
27	MACRO	Macro Control	TBD		TBD
28	MACRO SPEED	Macro Timing Adjustment	home: 0		0%
		Speed Slow to Fast, <i>Dependent on Selected Macro</i>			
		Min	0		
		Slow	60		
		Medium	120		
		Fast	200		
		Maximum	255		
29	FOCUS TIME		home: 255		100%
30	COLOR TIME	Refer to "Timing Channels" on page 10	home: 255		100%
31	IMAGE TIME		home: 255		100%
32	BEAM TIME		home: 255		100%
33	CONTROL		Control Channels	home: 0	
	<i>To command, the desired value must be snapped and held for 3-5 seconds THEN the channel must be snapped to 0</i>	Idle	0		
		Recalibrate: All	10		
		Recalibrate: Erred Mechanisms	11		
		Recalibrate: Zoom/Edge	12		
		Recalibrate: Color	14		
		Recalibrate: Gobos	16		
		Recalibrate: Framing Blades and Rotate	17		
		Recalibrate: Dimmer/Strobe/Iris	18		
		Recalibrate: Pan/Tilt	19		
		Lamp: Douse	20		
		Lamp: Start	30		
		Lamp Power Limit Select: HIGH (Default) [1630W]	40		
		Lamp Power Limit Select: MEDIUM [1400W]	45		
		Lamp Power Limit Select: LOW [1200W]	50		
		Lamp: Override Start-Up Power Limit	55		
		Zoom Normal	60		
		Zoom Table Select: 50' Throw	62		
		Zoom Table Select: 75' Throw	64		
		Zoom Table Select: 100' Throw	66		
		Zoom Table Select: 300' Throw	68		
		Zoom Short Throw	70		
		Zoom Table Select: Narrow Throw	72		
		Zoom Speed Select: Maintain Focus (default)	75		
		Zoom Speed Select: Move Fast	77		
		Gobo: Set Zero Position	80		
		Display: Turn Backlight ON	90		
		Display: Turn Backlight OFF	95		
	Pan: Lock	100			
	Pan: Unlock	102			



**Table 1-1: Bad Boy Framing DMX Channel Mapping (Continued)**

Chan	Function	Description	8-Bit Value	16-Bit Value	DMX Percent
		Tilt: Lock	104		
		Tilt: Unlock	106		
		Pan/Tilt: Free Motion	108		
		Pan/Tilt: Free Lock	110		
		Pan/Tilt: End Free Motion	112		
		No Fade Out	114		
		Fade Out After 30s	116		
		Fade Out After 60s	118		
		Clear Logs	120		
		Invert Pan	122		
		Don't Invert Pan	124		
		Invert Tilt	126		
		Don't Invert Tilt	128		
		Swap Pan/Tilt	130		
		Don't Swap Pan/Tilt	132		
		Followspot: Intensity/Iris	134		
		Followspot: Intensity/Iris/Edge	135		
		Followspot: Intensity/Iris/Edge/Zoom	136		
		Followspot: Intensity/Iris/Zoom	137		
		End Followspot Mode	138		
		Followspot: Intensity	139		
		Followspot: Intensity/Edge	140		
		Followspot: Intensity/Edge/Zoom	141		
		Followspot: Intensity/Zoom	142		
		Followspot: Iris	143		
		Followspot: Iris/Edge	144		
		Followspot: Iris/Zoom	145		
		Followspot: Iris/Edge/Zoom	146		
		Followspot: Edge	147		
		Followspot: Edge/Zoom	148		
		Followspot: Zoom	149		
		Followspot: Turn Intensity Scaling ON	150		
		Followspot: Turn Intensity Scaling OFF	152		
		FSC: Enable FROST Control	154		
		FSC: Disable FROST Control	156		
<b>34</b>	<b>SHUTTER 1 INSERT</b>	Blade 1 Position	home: 0		0%
	<i>Bottom Shutter</i>	Open	0		0%
		Inserted	255		100%
<b>35</b>	<b>SHUTTER 1 ANGLE</b>	Blade 1 Angle	home: 127		0%
		Clockwise	126-0		0%
		Open	127		50
		Counter-Clockwise	128-255		100%
<b>36</b>	<b>SHUTTER 2 INSERT</b>	Blade 2 Position	home: 0		0%
	<i>Left Shutter</i>	Open	0		0%
		Inserted	255		100%
<b>37</b>	<b>SHUTTER 2 ANGLE</b>	Blade 2 Angle	home: 127		0%
		Clockwise	126-0		0%
		Open	127		

**Table 1-1: Bad Boy Framing DMX Channel Mapping (Continued)**

Chan	Function	Description	8-Bit Value	16-Bit Value	DMX Percent
		Counter-Clockwise	128-255		100%
<b>38</b>	<b>SHUTTER 3 INSERT</b>	Blade 3 Position	home: 0		0%
	<i>Top Shutter</i>	Open	0		0%
		Inserted	255		100%
<b>39</b>	<b>SHUTTER 3 ANGLE</b>	Blade 3 Angle	home: 127		0%
		Clockwise	126-0		0%
		Open	127		
		Counter-Clockwise	128-255		100%
<b>40</b>	<b>SHUTTER 4 INSERT</b>	Blade 4 Position	home: 0		0%
	<i>Right Shutter</i>	Open	0		0%
		Inserted	255		100%
<b>41</b>	<b>SHUTTER 4 ANGLE</b>	Blade 4 Angle	home: 127		0%
		Clockwise	126-0		0%
		Open	127		
		Counter-Clockwise	128-255		100%
<b>42</b>	<b>FRAMING ROTATE</b>	Framing Mechanism rotation control	home: 127		50%
		(-) Angle	0		0%
		Center	128		50%
		(+) Angle	255		100%



## Framing

The blade positions are as follows:

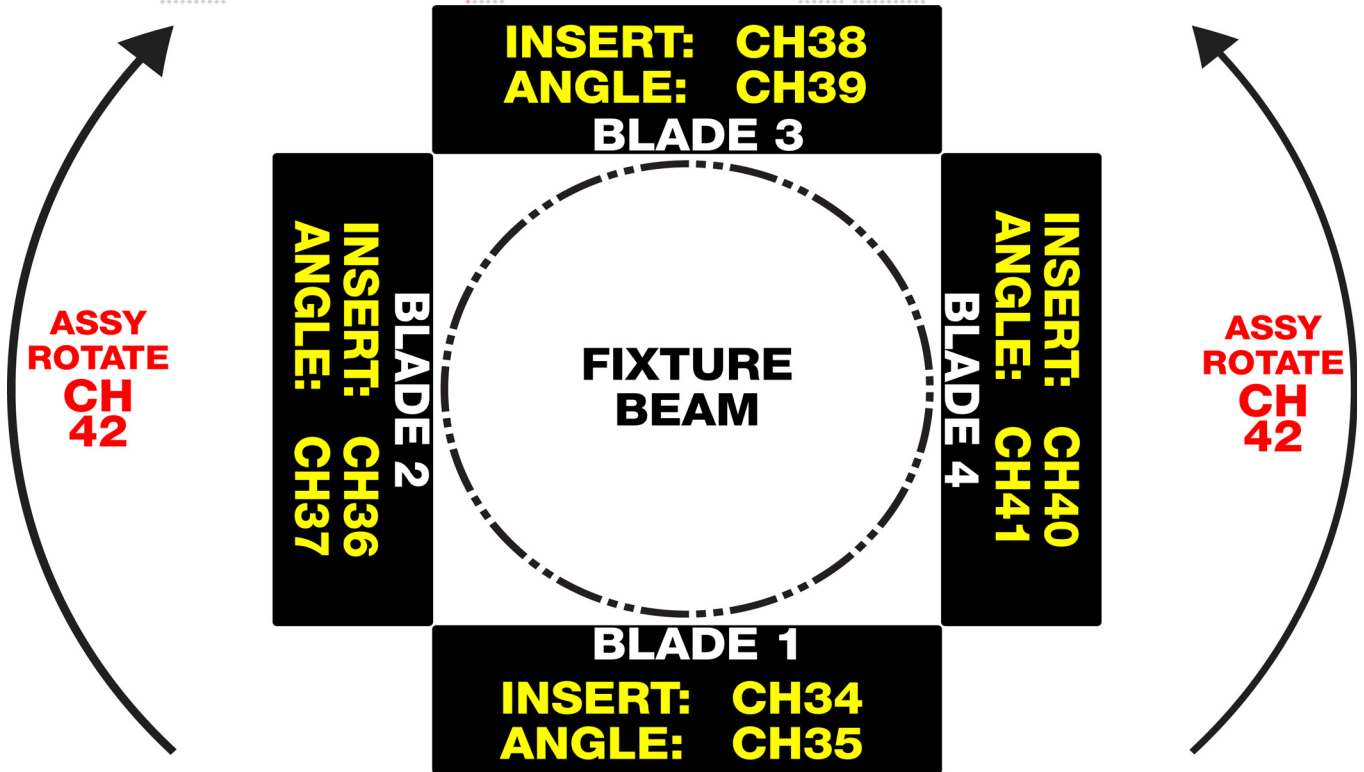


Figure 1-1: Blade Positions

## Timing Channels

### Channel Functions

Timing channel control improves the timed moves of certain groups of parameters. Four timing channels are provided for this purpose: Focus, Color, Beam, and Image.

Timing channels support time values of up to six minutes.

**Table 1-2: Timing Channel Allocations**

Channel Function	Timing Channel
Pan	Focus
Tilt	
Cyan	Color
Yellow	
Magenta	
Color Wheel	
Zoom	Beam
Edge	
Iris	
Framing	
Fixed Gobo Wheel	Image
Rotating Gobo Wheel	
Rotating Gobo Index	
Effects Index	

### 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.

**Table 1-3: Timing Channels**

% Value	DMX	= Sec	% Value	DMX	= Sec	% Value	DMX	= Sec	% Value	DMX	= Sec
	0	Full	17	43	8.6		86	24		129	41
	1	0.2		44	8.8	34	87	24	51	130	41
	2	0.4		45	9		88	25		131	41
1	3	0.6	18	46	9.2	35	89	25		132	42
	4	0.8		47	9.4		90	25	52	133	42
2	5	1	19	48	9.6		91	26		134	43
	6	1.2		49	9.8	36	92	26	53	135	43
	7	1.4		50	10		93	27		136	43
3	8	1.6	20	51	10.2	37	94	27		137	44
	9	1.8		52	10.4		95	27	54	138	44
4	10	2		53	10.6		96	28		139	45
	11	2.2	21	54	11	38	97	28	55	140	45
	12	2.4		55	11		98	29		141	45
5	13	2.6	22	56	12	39	99	29		142	46
	14	2.8		57	12		100	29	56	143	46
6	15	3		58	13		101	30		144	47
	16	3.2	23	59	13	40	102	30	57	145	47
	17	3.4		60	14		103	30		146	47
7	18	3.6	24	61	14		104	31		147	48
	19	3.8		62	14	41	105	31	58	148	48
8	20	4		63	15		106	32		149	49
	21	4.2	25	64	15	42	107	32	59	150	49
	22	4.4		65	16		108	32		151	49
9	23	4.6	26	66	16		109	33		152	50
	24	4.8		67	16	43	110	33	60	153	50
10	25	5		68	17		111	34		154	50
	26	5.2	27	69	17	44	112	34		155	51
	27	5.4		70	18		113	34	61	156	51
11	28	5.6	28	71	18		114	35		157	52
	29	5.8		72	18	45	115	35	62	158	52
	30	6		73	19		116	36		159	52
12	31	6.2	29	74	19	46	117	36		160	53
	32	6.4		75	20		118	36	63	161	53
13	33	6.6	30	76	20		119	37		162	54
	34	6.8		77	20	47	120	37	64	163	54
	35	7		78	21		121	38		164	54
14	36	7.2	31	79	21	48	122	38		165	55
	37	7.4		80	21		123	38	65	166	55
15	38	7.6		81	22		124	39		167	56
	39	7.8	32	82	22	49	125	39	66	168	56
	40	8		83	23		126	39		169	56
16	41	8.2	33	84	23		127	40		170	57
	42	8.4		85	23	50	128	40	67	171	57

**Table 1-3: Timing Channels**

% Value	DMX	= Sec	% Value	DMX	= Sec
	172	58		216	170
68	173	58	85	217	170
	174	58		218	180
	175	59	86	219	180
69	176	59		220	180
	177	59		221	190
	178	60	87	222	190
70	179	60		223	200
	180	65	88	224	200
71	181	65		225	200
	182	65		226	210
	183	70	89	227	210
72	184	70		228	210
	185	75		229	220
73	186	75	90	230	220
	187	75		231	230
	188	80	91	232	230
74	189	80		233	230
	190	85		234	240
75	191	85	92	235	240
	192	85		236	250
	193	90	93	237	250
76	194	90		238	250
	195	95		239	260
77	196	95	94	240	260
	197	95		241	270
	198	100	95	242	270
78	199	100		243	270
	200	110		244	280
79	201	110	96	245	280
	202	110		246	290
	203	120	97	247	290
80	204	120		248	290
	205	120		249	300
81	206	130	98	250	300
	207	130		251	310
	208	140	99	252	310
82	209	140		253	310
	210	140		254	310
	211	150			
83	212	150	100	255	Follows Cue Data
	213	160			
84	214	160			
	215	160			