

DMX protocol

Robin iBOLT™ - DMX protocol			
Version: 1.8 Mode 1-Standard 16-bit			
Mode/Total channels	DMX Value	Function	Type of control
1/37			
<b>1</b>		<b>Pan</b>	
	0 - 255	Pan movement by 540°/360° (128=default)	proportional
<b>2</b>		<b>Pan Fine</b>	
	0 - 255	Fine control of pan movement (0=default)	proportional
<b>3</b>		<b>Tilt</b>	
	0 - 255	Tilt movement by 265° (128=default)	proportional
<b>4</b>		<b>Tilt fine</b>	
	0 - 255	Fine control of tilt movement (0=default)	proportional
<b>5</b>		<b>Pan control</b>	
	0	Pan range 540°, shortcut Off (0=default)	step
	1	Pan range 360°, shortcut On	step
	2-127	No function (Pan range 540°, shortcut Off)	
	128-189	Continuous rotation fast -> slow , Forwards	proportional
	190-193	Stop rotation	step
<b>6</b>	194-255	Continuous rotation slow -> fast , Backwards	proportional
		<b>Pan/Tilt speed , Pan/Tilt time</b>	
	0	Standard mode (0=default)	step
	1	Max. Speed Mode	step
		<b>Pan/Tilt speed mode</b>	
	2 - 255	Speed from max. to min.	proportional
	<b>Pan/Tilt time mode</b>		
2 - 255	Time from 0.2 s to 25.5 sec.	proportional	
<b>7</b>		<b>Power/Special functions</b>	
	0 - 1	No function (0=default) <i>To activate following functions (2-129DMX), stop in DMX value for at least 3 s and shutter must be closed at least 3 sec. („Shutter,Strobe“ channel 35 must be at range: 0-31 DMX). Corresponding menu items are temporarily overridden.</i>	
	2-3	DMX input: Wired DMX *	step
	4-5	DMX input: Wireless DMX *	step
		<i>* function is active only 10 seconds after switching the fixture on</i>	
	6-21	Reserved	
	22-23	Standby mode: On (fixture effects are deactivated, light output is closed)	step
	24-25	Standby mode: Off	step
	26-27	Pressure test: On ( fixture does not respond to DMX during the test except values 28-29 (Pressure test Off))	step
	28-29	Pressure test: Off	step
	30-41	Reserved	
	42-43	Graphic display: On	step
	44-45	Graphic display: Off	step
	46-47	Pan/Tilt mode: Speed	step
48-49	Pan/Tilt mode: Time	step	
50-51	Quiet mode: Fans On at blackout	step	
52-53	Quiet mode: Fans Off at blackout	step	

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1/37	DMX Value		
	54-121	Reserved	
	122-123	Dimmer curve: Linear	step
	124-125	Dimmer curve: Square law	step
	126-127	Parking position: On	step
	128-129	Parking position: Off	step
		<i>To activate following functions (130-255 DMX), stop in DMX value for at least 3 seconds.</i>	
	130-131	Total fixture reset (including pan/tilt)	step
	132-133	Pan/Tilt reset	step
	134-135	Colour wheels reset	step
	136-137	Gobo wheels reset	step
	138-139	Zoom/Focus/prisms/frost reset	step
	140-219	Reserved	
		<i>The following three commands define transition from gobo rotation to gobo indexing:</i>	
	218-219	Gobo indexing: Maximum speed and shortcut	step
	220-221	Gobo indexing: Follow speed and direction	step
	222-223	Gobo indexing: Maximum speed and follow direction	step
	224-233	Reserved	
	234-235	Fans mode: Auto	step
	236-237	Fans mode: High	step
	238-239	Reserved	
	240 - 255	Fans mode: Quiet - fan noise control from min. to max.	proportional
<b>8</b>		<b>Safety control</b>	
	0-1	No function (0=default)	step
	2-40	Raw DMX	proportional
		<i>To switch the Sky mode On, select option on this channel, set the channel Shutter/Strobe at 160-191 DMX and the channel Dimmer intensity at 1-120 DMX. Stop at DMX values for at least 3 seconds at the same time on the three channels.</i>	
	41-42	Sky mode On	step
	43-44	Sky mode Off	step
	45-255	Raw DMX	proportional
<b>9</b>		<b>Colour wheel</b>	
		<b>Continual positioning</b>	
	0	Open/white (0=default)	proportional
	9	Deep Red	proportional
	18	Deep Blue	proportional
	27	Yellow	proportional
	37	Light green	proportional
	46	Magenta	proportional
	55	Lavender	proportional
	64	Pink	proportional
	73	Dark green	proportional
	82	CTO 2700K	proportional
	91	Blue	proportional
	101	Orange	proportional
	110	CTO 3200K	proportional
	119	UV (Congo blue)	proportional

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<b>1/37</b>	<b>DMX Value</b>		
	128-129	White	step
		<b>Positioning</b>	
	130-134	Deep Red	step
	135-138	Deep Blue	step
	139-143	Yellow	step
	144-147	Light green	step
	148-152	Magenta	step
	153-157	Lavender	step
	158-161	Pink	step
	162-166	Dark green	step
	167-171	CTO 2700K	step
	172-176	Blue	step
	177-180	Orange	step
	181-185	CTO 3200K	step
	186-189	UV (Congo blue)	step
	190-215	Forwards rainbow effect from fast to slow	proportional
	216-217	No rotation	step
	218-243	Backwards rainbow effect from slow to fast	proportional
	244-249	Reserved	
	250-255	Auto random colour selection from fast to slow	proportional
<b>10</b>		<b>Colour wheel - fine positioning</b>	
	0 - 255	Fine positioning (0=default)	proportional
<b>11</b>		<b>Cyan</b>	
	0 - 255	Cyan from min. saturation --> full cyan (0=default)	proportional
<b>12</b>		<b>Magenta</b>	
	0 - 255	Magenta from min. saturation --> full magenta (0=default)	proportional
<b>13</b>		<b>Yellow</b>	
	0 - 255	Yellow from min. saturation --> full yellow (0=default)	proportional
<b>14</b>		<b>Virtual colour wheel</b>	
		<i>The following channels are disabled: 9-13</i>	
	0	No function (0=default)	step
	1-2	Filter 4 (Medium Bastard Amber)	step
	3-4	Filter 10 (Medium Yellow)	step
	5-6	Filter 19 (Fire)	step
	7-8	Filter 26 (Bright Red)	step
	9-10	Filter 58 (Lavender)	step
	11-12	Filter 68 (Sky Blue)	step
	13-14	Filter 71 (Tokyo Blue)	step
	15-16	Filter 79 (Just Blue)	step
	17-18	Filter 88 (Lime Green)	step
	19-20	Filter 90 (Dark Yellow Green)	step
	21-22	Filter 100 (Spring Yellow)	step
	23-24	Filter 101 (Yellow)	step
	25-26	Filter 102 (Light Amber)	step
	27-28	Filter 103 (Straw)	step
	29-30	Filter 104 (Deep Amber)	step
	31-32	Filter 105 (Orange)	step
	33-34	Filter 106 (Primary Red)	step

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	35-36	Filter 111 (Dark Pink)	step
	37-38	Filter 115 (Peacock Blue)	step
	39-40	Filter 116 (Medium Blue-Green)	step
	41-42	Filter 117 (Steel Blue)	step
	43-44	Filter 118 (Light Blue)	step
	45-46	Filter 119 (Dark Blue)	step
	47-48	Filter 120 (Deep Blue)	step
	49-50	Filter 121 (Filter Green)	step
	51-52	Filter 128 (Bright Pink)	step
	53-54	Filter 131 (Marine Blue)	step
	55-56	Filter 132 (Medium Blue)	step
	57-58	Filter 134 (Golden Amber)	step
	59-60	Filter 135 (Deep Golden Amber)	step
	61-62	Filter 136 (Pale Lavender)	step
	63-64	Filter 137 (Special Lavender)	step
	65-66	Filter 138 (Pale Green)	step
	67-68	Filter 139 (Primary Green)	step
	69-70	Filter 141 (Bright Blue)	step
	71-72	Filter 147 (Apricot)	step
	73-74	Filter 148 (Bright Rose)	step
	75-76	Filter 152 (Pale Gold)	step
	77-78	Filter 154 (Pale Rose)	step
	79-80	Filter 157 (Pink)	step
	81-82	Filter 158 (Deep Orange)	step
	83-84	Filter 162 (Bastard Amber)	step
	85-86	Filter 164 (Flame Red)	step
	87-88	Filter 165 (Daylight Blue)	step
	89-90	Filter 169 (Lilac Tint)	step
	91-92	Filter 170 (Deep Lavender)	step
	93-94	Filter 172 (Lagoon Blue)	step
	95-96	Filter 179 (Chrome Orange)	step
	97-98	Filter 180 (Dark Lavender)	step
	99-100	Filter 181 (Congo Blue)	step
	101-102	Filter 197 (Alice Blue)	step
	103-104	Filter 201 (Full C.T. Blue)	step
	105-106	Filter 202 (Half C.T. Blue)	step
	107-108	Filter 203 (Quarter C.T. Blue)	step
	109-110	Filter 204 (Full C.T. Orange)	step
	111-112	Filter 205 (Half C.T. Orange)	step
	113-114	Filter 206 (Quarter C.T. Orange)	step
	115-116	Filter 247 (Filter Minus Green)	step
	117-118	Filter 248 (Half Minus Green)	step
	119-120	Filter 281 (Three Quarter C.T. Blue)	step
	121-122	Filter 285 (Three Quarter C.T. Orange)	step
	123-124	Filter 352 (Glacier Blue)	step
	125-126	Filter 353 (Lighter Blue)	step
	127-128	Filter 715 (Cabana Blue)	step
	129-130	Filter 778 (Millennium Gold)	step

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<b>1/37</b>	<b>DMX Value</b>		
	131-132	Filter 793 (Vanity Fair)	step
	133-255	Reserved	
<b>15</b>		<b>CMY and Colour wheel time</b>	
	0	Function is off (0=default)	step
	1 - 255	Time of CMY and Colour wheel movement (0.1sec-->25.5sec.)	proportional
<b>16</b>		<b>Zoom/Focus/Prism time</b>	
	0	Function is off (0=default)	step
	1 - 255	Time of zoom/focus movement (0.1 sec-->25.5 sec.)	proportional
	1-50	Time of prism movement (0.1 sec-->5 sec.)	proportional
<b>17</b>		<b>Static gobo wheel</b>	
	0-3	Open/hole	step
		<b><u>Positioning</u></b>	
	4-9	Gobo 1	step
	10-15	Gobo 2	step
	16-21	Gobo 3	step
	22-27	Gobo 4	step
	28-33	Gobo 5	step
	34-39	Gobo 6	step
	40-45	Gobo 7	step
	46-51	Gobo 8	step
	52-57	Gobo 9	step
	58-63	Gobo 10	step
	64-69	Beam reducer 1	step
	70-75	Beam reducer 2	step
	76-81	Beam reducer 3	step
	82-87	Beam reducer 4	step
		<b><u>Shaking gobos from slow to fast</u></b>	
	88-95	Gobo 1	proportional
	96-103	Gobo 2	proportional
	104-111	Gobo 3	proportional
	112-119	Gobo 4	proportional
	120-127	Gobo 5	proportional
	128-135	Gobo 6	proportional
	136-143	Gobo 7	proportional
	144-151	Gobo 8	proportional
	152-159	Gobo 9	proportional
	160-167	Gobo 10	proportional
	168-175	Beam reducer 1	proportional
	176-183	Beam reducer 2	proportional
	184-191	Beam reducer 3	proportional
	192-199	Beam reducer 4	proportional
	200-201	Open/hole	step
	202 - 222	Forwards gobo wheel rotation from fast to slow	proportional
	223 - 243	Backwards gobo wheel rotation from slow to fast	proportional
	244 - 249	Reserved	
	250 - 255	Auto random gobo selection from fast to slow	proportional
<b>18</b>		<b>Rotating gobo wheel</b>	
		<i>Index - set indexing on channel 20</i>	

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<b>1/37</b>	<b>DMX Value</b>		
	0	Open/Hole (default)	step
	1-4	Hole (flat field)	step
	5-7	Gobo 1	step
	8-10	Gobo 2	step
	11-13	Gobo 3	step
	14-16	Gobo 4	step
	17-19	Gobo 5	step
	20-22	Gobo 6	step
	23-25	Gobo 7	step
	26-28	Gobo 8	step
	29-31	Gobo 9	step
		<i>Rotation - set rotation on channel 20</i>	
	32-34	Gobo 1	step
	35-37	Gobo 2	step
	38-40	Gobo 3	step
	41-43	Gobo 4	step
	44-46	Gobo 5	step
	47-49	Gobo 6	step
	50-52	Gobo 7	step
	53-55	Gobo 8	step
	56-59	Gobo 9	step
		<b>Continual positioning</b>	
		<i>Index - set indexing on channel 20</i>	
	60	Open/hole	proportional
	67	Gobo 1	proportional
	74	Gobo 2	proportional
	81	Gobo 3	proportional
	88	Gobo 4	proportional
	95	Gobo 5	proportional
	102	Gobo 6	proportional
	109	Gobo 7	proportional
	116	Gobo 8	proportional
	123	Gobo 9	proportional
	130	Open/hole	proportional
		<b>Continual positioning</b>	
		<i>Rotation - set rotation on channel 20</i>	
	131	Open/hole	proportional
	138	Gobo 1	proportional
	145	Gobo 2	proportional
	152	Gobo 3	proportional
	159	Gobo 4	proportional
	166	Gobo 5	proportional
	173	Gobo 6	proportional
	180	Gobo 7	proportional
	187	Gobo 8	proportional
	194	Gobo 9	proportional
	201	Open/hole	proportional
	202 - 222	Forwards gobo wheel rotation from fast to slow	proportional

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<b>1/37</b>	<b>DMX Value</b>		
	223 - 243	Backwards gobo wheel rotation from slow to fast	proportional
	244 - 249	Reserved	
	250 - 255	Auto random gobo selection from fast to slow	proportional
<b>19</b>		<b>Rotating gobo wheel - fine positioning</b>	
	0 - 255	Fine positioning (0=default)	proportional
<b>20</b>		<b>Rot. Gobo indexing/rotation</b>	
		<i>Gobo indexing - set position on channel 18</i>	
	0 - 255	Gobo indexing (128=default)	proportional
		<i>Gobo rotation - set position on channel 18</i>	
	0	No rotation	step
	1 - 127	Forwards gobo rotation from fast to slow	proportional
	128	No rotation (128=default)	step
	129 - 255	Backwards gobo rotation from slow to fast	proportional
<b>21</b>		<b>Rot. Gobo indexing/rotation - fine</b>	
	0-255	Fine indexing/rotation (0=default)	proportional
<b>22</b>		<b>Prism wheel 1</b>	
		<i>This wheel is blocked If Rotating gobo wheel &gt;0 DMX</i>	
	0 - 3	Open position/hole (0=default)	step
		<i>Index - set indexing on channel 23</i>	
	4-7	Prism 1 - 6-facet linear	step
	8-11	Prism 2 - cylindrical	step
	12-15	Prism 3 - 8-facet 12° circular	step
		<i>Rotation - set rotation on channel 23</i>	
	16-19	Prism 1 - 6-facet linear	step
	20-23	Prism 2 - cylindrical	step
	24-27	Prism 3 - 8-facet 12° circular	step
	28-255	Reserved	
<b>23</b>		<b>Prism wheel 1 indexing/rotation</b>	
		<i>Prism indexing - set position on channel 22</i>	
	0 - 255	Prism 1 indexing	proportional
		<i>Prism 1 rotation - set position on channel 22</i>	
	0	No rotation	step
	1 - 127	Forwards prism rotation from fast to slow	proportional
	128	No rotation (128=default)	step
	129-255	Backwards prism rotation from slow to fast	proportional
<b>24</b>		<b>Prism wheel 2</b>	
	0 - 3	Open position/hole (0=default)	step
		<i>Index - set indexing on channel 25</i>	
	4-7	Prism 1 - 6-facet linear	step
	8-11	Prism 2 - 32-facet circular	step
	12-15	Prism 3 - 8-facet 18° circular	step
		<i>Rotation - set rotation on channel 25</i>	
	16-19	Prism 1 - 6-facet linear	step
	20-23	Prism 2 - 32-facet circular	step
	24-27	Prism 3 - 8-facet 18° circular	step
	28-255	Reserved	
<b>25</b>		<b>Prism wheel 2 indexing/rotation</b>	
		<i>Prism indexing - set position on channel 24</i>	

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<b>1/37</b>	<b>DMX Value</b>		
	0 - 255	Prism 1 indexing	proportional
		<b><i>Prism 1 rotation - set position on channel 24</i></b>	
	0	No rotation	step
	1 - 127	Forwards prism rotation from fast to slow	proportional
	128	No rotation (128=default)	step
	129-255	Backwards prism rotation from slow to fast	proportional
<b>26</b>		<b>Pattern selection</b>	
		<i>The channels are blocked: Prism Wheel 1/2, Prism Wheel 1/2 rot.</i>	
	0-3	Open position/hole (0=default)	step
		<b><i>Index - set indexing on channel 27</i></b>	
	4-5	Pattern 1	step
	6-7	Pattern 2	step
	8-9	Pattern 3	step
	10-11	Pattern 4	step
	12-13	Pattern 5	step
	14-15	Pattern 6	step
	16-17	Pattern 7	step
	18-19	Pattern 8	step
	20-21	Pattern 9	step
	22-23	Pattern 10	step
	24-25	<i>Pattern 11</i>	step
	26-27	<i>Pattern 12</i>	step
		<b><i>Rotation - set rotation on channel 27</i></b>	
	28-29	Pattern 1	step
	30-31	Pattern 2	step
	32-33	Pattern 3	step
	34-35	Pattern 4	step
	36-37	Pattern 5	step
	38-39	Pattern 6	step
	40-41	Pattern 7	step
	42-43	Pattern 8	step
	44-45	Pattern 9	step
	46-47	Pattern 10	step
	48-49	<i>Pattern 11</i>	step
	50-51	<i>Pattern 12</i>	step
		<b><i>Dynamic patterns-set rotation on channel 27</i></b>	
	52-53	Pattern 13	step
	54-55	Pattern 14	step
	56-57	Pattern 15	step
	58-59	Pattern 16	step
	60-61	Pattern 17	step
	62-63	Pattern 18	step
	64-65	<i>Pattern 19</i>	step
	66-67	<i>Pattern 20</i>	step
	68-255	Raw DMX	proportional
<b>27</b>		<b>Pattern rotation and indexing</b>	
		<i>The channels are blocked: Prism Wheel 1/2, Prism Wheel 1/2 rot.</i>	
		<b><i>Pattern indexing - set position on channel 26</i></b>	



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<b>1/37</b>	<b>DMX Value</b>		
	0 - 255	Pattern indexing	proportional
		<b>Pattern rotation - set position on channel 26</b>	
	0	No rotation	step
	1 - 127	Forwards pattern rotation from fast to slow	proportional
	128	No rotation (128=default)	step
	129-255	Backwards pattern rotation from slow to fast	proportional
<b>28</b>		<b>Beam shaper selection</b>	
		<i>The channels are blocked: Pris.Wheel 1 and 2, Static gobo, Rotating gobo, Frost ( Light frost only)</i>	
	0 - 3	Open position/hole (0=default)	step
		<b>Index - set indexing on channel 29</b>	
	4-7	Beam shaper 1	step
	8-11	Beam shaper 2	step
	12-15	Beam shaper 3	step
	16-19	Beam shaper 4	step
		<b>Rotation - set rotation on channel 29</b>	
	20-23	Beam shaper 1	step
	24-27	Beam shaper 2	step
	28-31	Beam shaper 3	step
	32-35	Beam shaper 4	step
	36-255	Reserved	
<b>29</b>		<b>Beam shaper rotation and indexing</b>	
		<b>Beam shaper indexing - set position on channel 28</b>	
	0 - 255	Shaper indexing	proportional
		<b>Beam shaper rotation - set position on channel 28</b>	
	0	No rotation	step
	1 - 127	Forwards shaper rotation from fast to slow	proportional
	128	No rotation (128=default)	step
	129-255	Backwards shaper rotation from slow to fast	proportional
<b>30</b>		<b>Frost</b>	
	0-3	Open (0=default)	step
	4-7	100% Frost	step
	8-255	Reserved	proportional
<b>31</b>		<b>Zoom</b>	
	0 - 255	Zoom from max. to min.beam angle (128=default)	proportional
<b>32</b>		<b>Zoom - fine</b>	
	0-255	Fine zooming (0=default)	proportional
<b>33</b>		<b>Focus</b>	
	0 - 255	Continuous adjustment from far to near (128=default)	proportional
<b>34</b>		<b>Focus - fine</b>	
	0- 255	Fine focusing (0=default)	proportional
<b>35</b>		<b>Shutter/ strobe</b>	
	0 - 31	Shutter closed	step
	32 - 63	Shutter open (32=default)	step
	64 - 95	Strobe-effect from slow to fast	proportional
	96 - 127	Shutter open	step
	128 - 143	Opening pulse in sequences from slow to fast	proportional
	144 - 159	Closing pulse in sequences from fast to slow	proportional

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<b>1/37</b>	<b>DMX Value</b>		
	160 - 191	Shutter open (Sky mode On)	step
	192 - 223	Random strobe-effect from slow to fast	proportional
	224 - 254	Shutter open	step
	255	Shutter closed	step
<b>36</b>		<b>Dimmer intensity</b>	
	0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
	1 - 120	(Sky mode On)	step
<b>37</b>		<b>Dimmer intensity - fine</b>	
	0 - 255	Fine dimming (0=default)	proportional
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