

# SPARX 12

DMX chart

Version 1.03

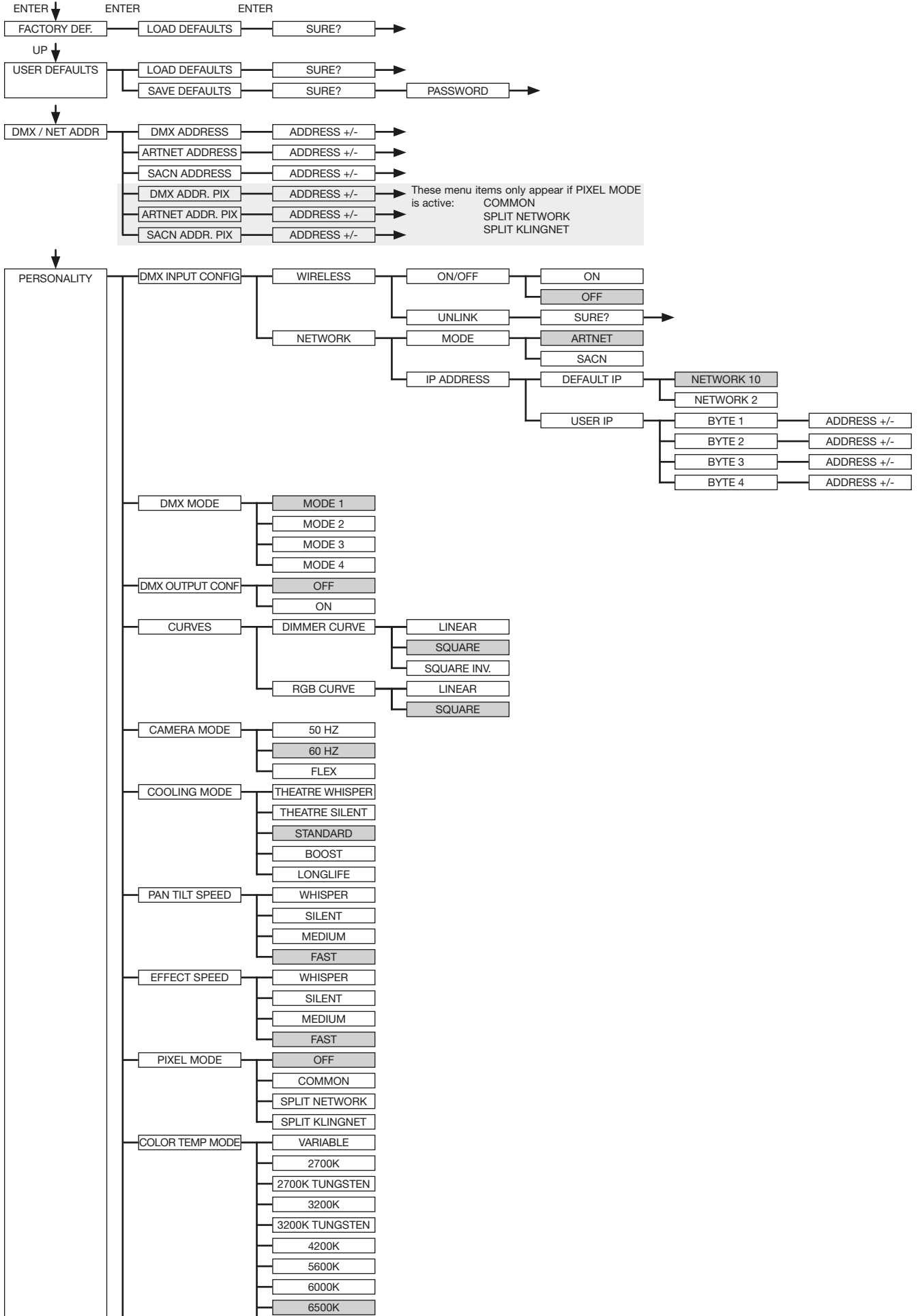
Software  $\geq$  1.0.0



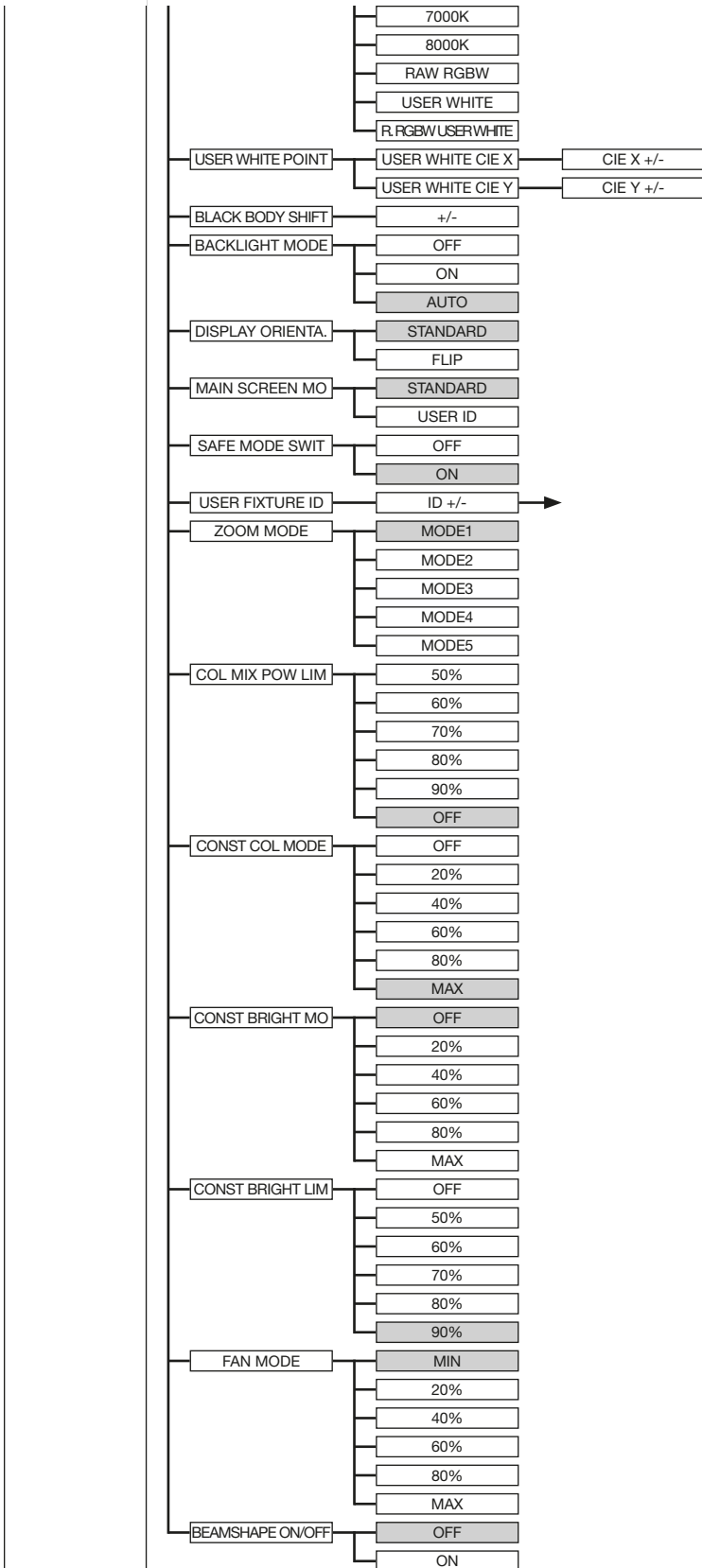
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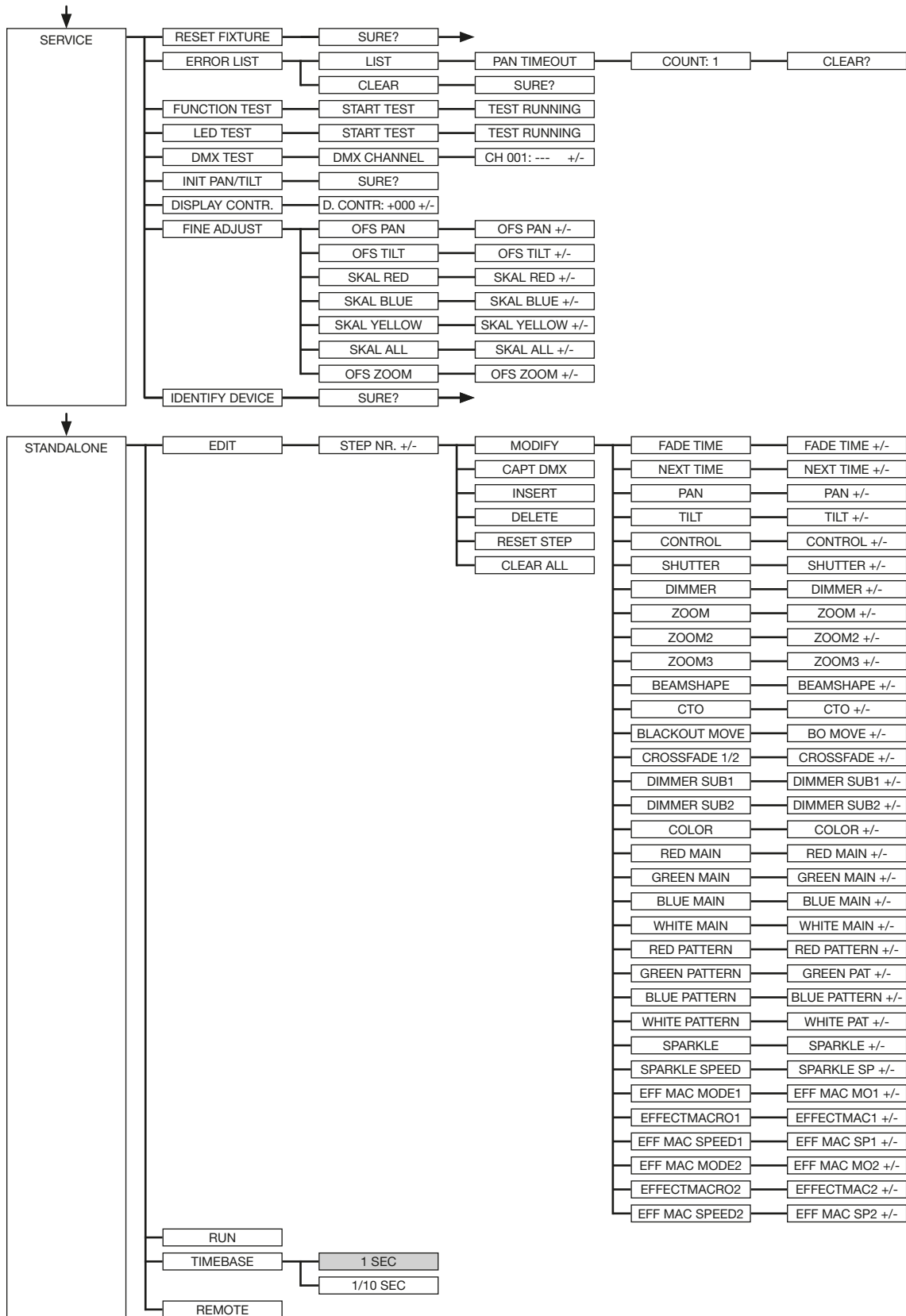
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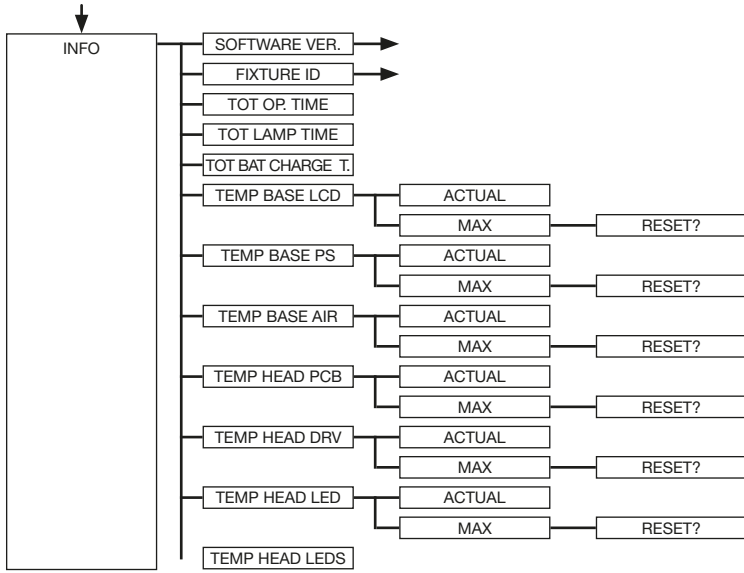
## 1.0 Menu overview



grey - corresponds to the default setting







## 2.0 Control options

### 2.1 DMX

#### 2.1.1 Overview of DMX channels Sparx 12

The Sparx 12 comes with 4 DMX modes. Each mode is selectable in the menu at PERSONALITY -> DMX MODE. The selected mode will be shown in the main menu. Single pixel control can be added to each mode PERSONALITY -> PIXELMODE

	<b>Mode 1(M1) 34 channels</b>	<b>Mode 2 (M2) 49 channels</b>	<b>Mode 3 (M3) 23 channels</b>
Channel 1	Pan	Pan	Pan
Channel 2	Pan fine	Pan fine	Pan fine
Channel 3	Tilt	Tilt	Tilt
Channel 4	Tilt fine	Tilt fine	Tilt fine
Channel 5	Control channel	Control channel	Control channel
Channel 6	Shutter	Shutter	Shutter
Channel 7	Dimmer	Dimmer	Dimmer
Channel 8	Zoom (master)	Dimmer fine	Zoom (master)
Channel 9	Zoom 2	Zoom (master)	Zoom 2
Channel 10	Zoom 3	Zoom 2	Zoom 3
Channel 11	Beamshape	Zoom 3	Beamshape
Channel 12	CTO	Beamshape	CTO
Channel 13	Blackout move	Beamshape fein	Color wheel emulation
Channel 14	Layer 1 / 2 crossfade	CTO	Red background color (main)
Channel 15	Dimmer sub1 (inner zone)	CTO fine	Green background color (main)
Channel 16	Dimmer sub2 (outer ring)	Blackout move	Blue background color (main)
Channel 17	Color wheel emulation	Layer 1 / 2 crossfade	White background color (main)
Channel 18	Red background color (main)	Layer 1 / 2 crossfade fine	Sparkle
Channel 19	Green background color (main)	Dimmer sub1 (inner zone)	Sparkle speed
Channel 20	Blue background color (main)	Dimmer sub1 fine (inner zone)	Effect macro mode Layer
Channel 21	White background color (main)	Dimmer sub2 (outer ring)	Effect macro Layer
Channel 22	Red foreground color (pattern)	Dimmer sub2 fine (outer ring)	Effect macro speed Layer
Channel 23	Green foreground color (pattern)	Color wheel emulation	Transition pixel mode
Channel 24	Blue foreground color (pattern)	Red background color (main)	
Channel 25	White foreground color (pattern)	Red background color fine (main)	
Channel 26	Sparkle	Green background color (main)	
Channel 27	Sparkle speed	Green background color fine (main)	
Channel 28	Effect macro mode Layer 1	Blue background color (main)	
Channel 29	Effect macro Layer 1	Blue background color fine (main)	
Channel 30	Effect macro speed Layer 1	White background color (main)	
Channel 31	Effect macro mode Layer 2	White background color fine (main)	
Channel 32	Effect macro Layer 2	Red foreground color (pattern)	
Channel 33	Effect macro speed Layer 2	Red foreground color fine (pattern)	
Channel 34	Transition pixel mode	Green foreground color (pattern)	
Channel 35		Green foreground color fine (pattern)	
Channel 36		Blue foreground color (pattern)	
Channel 37		Blue foreground color fine (pattern)	
Channel 38		White foreground color (pattern)	
Channel 39		White foreground color fine (pattern)	
Channel 40		Sparkle	
Channel 41		Sparkle speed	
Channel 42		Effect macro mode Layer 1	
Channel 43		Effect macro Layer 1	
Channel 44		Effect macro speed Layer 1	
Channel 45		Effect macro mode Layer 2	
Channel 46		Effect macro Layer 2	



<b>Mode 4 (M4) 96 channels</b>	<b>Single pixel control Sparx12 - 76 channels „addable“ to every mode</b>
Pan	Red (LED group 1)
Pan fine	Green (LED group 1)
Tilt	Blue (LED group 1)
Tilt fine	White (LED group 1)
Control channel	Red (LED group 2)
Shutter	Green (LED group 2)
Dimmer	Blue (LED group 2)
Zoom (master)	White (LED group 2)
Zoom 2	Red (LED group 3)
Zoom 3	Green (LED group 3)
Beamshape	Blue (LED group 3)
CTO	White (LED group 3)
Pan/tilt speed	Red (LED group 4)
Effect speed	Green (LED group 4)
Blackout move	Blue (LED group 4)
Red glow	White (LED group 4)
Green glow	Red (LED group 5)
Blue glow	Green (LED group 5)
White glow	Blue (LED group 5)
Layer 1 / 2 crossfade	White (LED group 5)
Dimmer sub1 (inner zone)	Red (LED group 6)
Segment shutter	Green (LED group 6)
Color wheel emulation	Blue (LED group 6)
Red background color (main)	White (LED group 6)
Green background color (main)	Red (LED group 7)
Blue background color (main)	Green (LED group 7)
White background color (main)	Blue (LED group 7)
Red foreground color (pattern)	White (LED group 7)
Green foreground color (pattern)	Red (LED group 8)
Blue foreground color (pattern)	Green (LED group 8)
White foreground color (pattern)	Blue (LED group 8)
Sparkle	White (LED group 9)
Sparkle speed	Red (LED group 9)
Effect macro	Green (LED group 9)
Segment (mapping)	Blue (LED group 9)
Pattern mode	White (LED group 10)
Pattern	Red (LED group 10)
Pattern- / macro speed	Green (LED group 10)
Color spread	Blue (LED group 10)
Segment shutter	White (LED group 10)
Color wheel emulation	Red (LED group 11)
Red background color (main)	Green (LED group 11)
Green background color (main)	Blue (LED group 11)
Blue background color (main)	White (LED group 11)
White background color (main)	Red (LED group 12)
Red foreground color (pattern)	Green (LED group 12)

Mode 1(M1) 34 channels	Mode 2 (M2) 49 channels	Mode 3 (M3) 23 channels
Channel 47	Effect macro speed Layer 2	
Channel 48	Transition pixel mode	
Channel 49	Transition pixel mode fine	
Channel 50		
Channel 51		
Channel 52		
Channel 53		
Channel 54		
Channel 55		
Channel 56		
Channel 57		
Channel 58		
Channel 59		
Channel 60		
Channel 61		
Channel 62		
Channel 63		
Channel 64		
Channel 65		
Channel 66		
Channel 67		
Channel 68		
Channel 69		
Channel 70		
Channel 71		
Channel 72		
Channel 73		
Channel 74		
Channel 75		
Channel 76		
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Channel 78		
Channel 79		
Channel 80		
Channel 81		
Channel 82		
Channel 83		
Channel 84		
Channel 85		
Channel 86		
Channel 87		
Channel 88		
Channel 89		
Channel 90		
Channel 91		
Channel 92		
Channel 93		
Channel 94		
Channel 95		
Channel 96		
Channel 97		

<b>Mode 4 (M4) 96 channels</b>	<b>Single pixel control Sparx18/30 - 148/244 channels „addable“ to every mode</b>
Green foreground color (pattern)	Blue (LED group 12)
Blue foreground color (pattern)	White (LED group 12)
White foreground color (pattern)	Red (LED group 13)
Sparkle	Green (LED group 13)
Sparkle speed	Blue (LED group 13)
Effect macro	White (LED group 13)
Segment (mapping)	Red (LED group 14)
Pattern mode	Green (LED group 14)
Pattern	Blue (LED group 14)
Pattern- / macro speed	White (LED group 14)
Color spread	Red (LED group 15)
Layer 1 / 2 crossfade	Green (LED group 15)
Dimmer sub2 (outer ring)	Blue (LED group 15)
Segment shutter	White (LED group 15)
Color wheel emulation	Red (LED group 16)
Red background color (main)	Green (LED group 16)
Green background color (main)	Blue (LED group 16)
Blue background color (main)	White (LED group 16)
White background color (main)	Red (LED group 17)
Red foreground color (pattern)	Green (LED group 17)
Green foreground color (pattern)	Blue (LED group 17)
Blue foreground color (pattern)	White (LED group 17)
White foreground color (pattern)	Red (LED group 18)
Sparkle	Green (LED group 18)
Sparkle speed	Blue (LED group 18)
Effect macro	White (LED group 18)
Segment (mapping)	Red (LED group 19)
Pattern mode	Green (LED group 19)
Pattern	Blue (LED group 19)
Pattern- / macro speed	White (LED group 19)
Color spread	
Segment shutter	
Color wheel emulation	
Red background color (main)	
Green background color (main)	
Blue background color (main)	
White background color (main)	
Red foreground color (pattern)	
Green foreground color (pattern)	
Blue foreground color (pattern)	
White foreground color (pattern)	
Sparkle	
Sparkle speed	
Effect macro	
Segment (mapping)	
Pattern mode	
Pattern	
Pattern- / macro speed	
Color spread	
Transition pixel mode	

## 2.1.2 DMX channel assignment Mode 1 / 2 / 3 - Modi with optimized channel quantity

M1	M2	M3	Funktion	DMX
1	1	1	<b>Pan (X)</b> movement 540.73°	000-255
2	2	2	<b>Pan (X)</b> fine	000-255
3	3	3	<b>Tilt (Y)</b> movement 323.79°	000-255
4	4	4	<b>Tilt (Y)</b> fine	000-255
5	5	5	<p><b>Control channel</b>            To enable uniform dimming manually via faders for all light mixing consoles, 5 different settings for the DMX smoothing are available. If the DMX signal is interrupted or too few packets are sent on some DMX consoles, this channel can be used to adjust the response of the headlamp. The Minimum DMX Smoothing setting should work on most popular consoles. The values for DMX smoothing must be permanently applied. For the other values such as Cooling Mode, Color Temperature, Zoom Modes ..... the values must be present for 2 seconds, then the device will be permanently switched over. The exception is the setting of the COOLING-MODE, here it depends on the switch SAFE MODE SWITCH, if it is on OFF the COOLING-MODES can be switched directly, if this is ON the DIMMER and SHUTTER must get the DMX-value 0. Only then can be switched.</p>	
			<p><b>Setting for minimal DMX smoothing</b>            (A dimmed shutter sequence is possible)            Dimmer fade out via fader (fast - slow)            Not used</p>	000-007
			<p><b>Setting for minimum / medium DMX smoothing</b>            Dimmer fade out via fader (fast - slow)            Not used</p>	008-031
			<p><b>Setting for medium DMX smoothing</b>            Dimmer fade out via fader (fast - slow)</p>	032-039
			<p><b>Setting for medium DMX smoothing</b>            Dimmer fade out via fader (fast - slow)</p>	040-063
			<p><b>Setting for medium DMX smoothing</b>            Dimmer fade out via fader (fast - slow)</p>	064-071
			<p><b>Color Mix Power Limit - Sets the total power consumptio</b>            50%            60%            70%            80%            90%            Off</p>	072-072 073-073 074-074 075-075 076-076 077-077
			<p><b>Constant Color Mode - Adjust color fidelity</b>            Off            20%            40%            60%            80%            Max</p>	078-078 079-079 080-080 081-081 082-082 083-083
			<p><b>Constant Brightness Mode - setting for constant brightness control</b>            Off            20%            40%            60%            80%            Max</p>	084-084 085-085 086-086 087-087 088-088 089-089

	<p><b>Constant Brightness Limit - Sets the limit for constant brightness control</b></p> <p>off 090-090  50% 091-091  60% 092-092  70% 093-093  80% 094-094  90% 095-095</p>
	<p><b>Setting for medium/maximum DMX smoothing</b></p> <p>Dimmer fade out via fader (fast - slow) 096-103</p>
	<p><b>BACKLIGHT MODE - Display backlight configuration</b></p> <p>AUTO - the fixture controls the backlight automatically 104-104  ON - the backlight is always on 105-105  OFF - the backlight is always off until a key is pressed 106-106</p>
	<p><b>DISPLAY ORIENTATION - display flip or not</b></p> <p>STANDARD - the display can be read when the headlamp is on a surface 107-107  FLIP - the display orientation is rotated by 180 °, hanging readable 108-108  not used 109-109</p>
	<p><b>MAIN SCREEN MODE - view of the main screen</b></p> <p>STANDARD - the main screen displays the DMX address, the DMX mode, and when wireless is enabled, the field strength. 110-110  USER FIXTURE ID - the main screen displays the user definable fixture ID / headlight number 111-111  not used 112-112</p>
	<p><b>USER FIXTURE ID SET - set fixture ID</b></p> <p>the USER ID can be set. The headlamp takes the 16-bit value of Pan for the fixture id 113-113</p>
	<p><b>USER CIE - set the white color of RAW RGB USER WHITE</b></p> <p>USER CIE X - The headlamp takes the 16-bit value of Pan for the USER CIE X 114-114  USER CIE Y - The headlamp takes the 16-bit value of Pan for the USER CIE Y 115-115</p>
	<p><b>BLACK BODY SHIFT - set of green shift</b></p> <p>BLACK BODY SHIFT - The headlamp takes the 16-bit value of Pan for the BLACK BODY SHIFT. Values from -99 to +99 (DMX values 0 to 65535, 32768 is no shift) 116-116  not used 117-127</p>
	<p><b>Setting for maximum DMX smoothing</b></p> <p>Dimmer fade out via fader (fast - slow) 128-135</p>
	<p><b>DIMMER CURVE - selection of dimmer curve</b></p> <p>LINEAR - linear dimmer curve 136-136  SQUARE - exponential dimmer curve 137-137  SQUARE INVERSE - exponential inverse dimmer curve 138-138  not used 139-139</p>
	<p><b>RGBW(Y) CURVE - selection of RGBW(Y) curve</b></p> <p>LINEAR - linear frost curve 140-140  SQUARE - exponential RGB(Y) curve 141-141  not used 142-142</p>
	<p><b>PAN/TILT SPEED - selection of PAN/TILT speed</b></p> <p>WHISPER 146-146  SILENT 147-147  MEDIUM 148-148  FAST 149-149</p>

	<p><b>EFFECT SPEED - selection of effect speed</b></p> <p>WHISPER 150-150</p> <p>SILENT 151-151</p> <p>MEDIUM 152-152</p> <p>FAST 153-153</p> <p>Not used 154-159</p>	
	<p><b>COOLING MODE - adjust the fan volume and brightness</b></p> <p>This takes place with dimmer / shutter set to closed (DMX 000) then after 2 seconds the fixture will switch this option, except the switch "SAFE MODE SWITCH" in the PERSONALITY menu is set to OFF, then the changeover can take place directly without dimmer and shutter having to be closed.</p> <p>THEATRE WHISPER 160-160</p> <p>THEATRE SILENT 161-161</p> <p>STANDARD 162-162</p> <p>BOOST 163-163</p> <p>LOGLIFE 164-164</p> <p>not used 165-169</p>	
	<p><b>COLOR TEMPERATURE - adjustment of the color temperature of the fixture</b></p> <p>Color temperature 2000K (CTO 2000K - 20000K) 170-170</p> <p>Color temperature 2700K (CTO 2700K - 2700K) 171-171</p> <p>Color temperature 2700K tungsten dim out 172-172</p> <p>Color temperature 3200K (CTO 3200K - 2700K) 173-173</p> <p>Color temperature 3200K tungsten dim out 174-174</p> <p>Color temperature 4200K (CTO 4200K - 2700K) 175-175</p> <p>Color temperature 5600K (CTO 5600K - 2700K) 176-176</p> <p>Color temperature 6000K (CTO 6000K - 2700K) 177-177</p> <p>Color temperature 6500K (CTO 6500K - 2700K) 178-178</p> <p>Color temperature 7000K (CTO 7000K - 2700K) 179-179</p> <p>Color temperature 8000K (CTO 8000K - 2700K) 180-180</p> <p>RAW RGBW 181-181</p> <p>USER WHITE 182-182</p> <p>RAW RGBW USER WHITE 183-183</p> <p>Not used 184-184</p>	
	<p><b>ZOOM MODE - zoom modi</b></p> <p><u>Mode 1:</u> Zoom / Zoom2 / Zoom3: Zoom2 / 3 TwinZoom -&gt; Masterzoom controls to the lower zoom value (Zoom2 or 3) then takes it to the higher zoom value and then moves to both DMX255 185-185</p> <p><u>Mode 2:</u> Zoom / Zoom2 / Zoom3: Masterzoom „takes“ the low zoom value and moves it to the higher zoom value and then takes both to DMX255 186-186</p> <p><u>Mode 3:</u> Zoom / Zoom2 / Zoom3: Master zoom scales both zoom from the set value Zoom2 / Zoom3 to DMX255 187-187</p> <p><u>Mode 4:</u> Zoom / Zoom2 / Zoom3: Zoom3 acts as frost. Masterzoom pushes the frost intelligently 188-188</p> <p><u>Mode 5:</u> Zoom / Zoom2 / zoom3: Master zoom acts as a switchover between TwinZoom mode and Zoom / Frost mode. Zoom DMX 000 -&gt; Zoom2 / 3 in Zoom / Frost mode, Zoom DMX 255 -&gt; Zoom2 / 3 in TwinZoom mode 189-189</p>	
	<p><b>FAN MODE - Sets the basic volume in the selected COOLING MODE</b></p> <p>min 190-190</p> <p>20% 191-191</p> <p>40% 192-192</p> <p>60% 193-193</p> <p>80% 194-194</p> <p>Max 195-195</p>	
	<p><b>BEAMSHAPE ON / OFF - Setting whether a beamshape is mounted or not</b></p> <p>off 196-196</p> <p>on 197-197</p> <p>Not used 198-207</p>	

			<b>Camera mode - Sets the LED refresh rate</b> Camera Mode, 50Hz (after 2 seconds) Camera Mode, 60Hz (after 2 seconds) Camera Mode, FLEX 600Hz (after 2 seconds) Not used  <b>RESET - Performing a complete fixture reset</b> Reset (after 2 seconds) Not used	208-215 216-223 224-231 232-239  240-247 248-255
6	6	6	<b>Shutter</b> Shutter closed Shutter open Shutter pulse opening >10Hz (0,6 sec - 4,8 sec) Shutter open Fade effect with dimmer (slow - fast) Shutter open Shutter closed Shutter pulse opening <10Hz (0,6 sec - 4,8 sec) Shutter open Shutter pulse closing (0,6 sec - 4,8 sec) Shutter closed Shutter fade, 0% (0,6 sec - 4,8 sec) Shutter open Shutter fade, 100% (0,6 sec - 4,8 sec) Shutter closed Shutter random 100% (0,6 sec - 4,8 sec) Shutter open Shutter random 0% (0,6 sec - 4,8 sec) Shutter closed Shutter random fade 0% (0,6 sec - 4,8 sec) Shutter open Shutter random fade 100% (0,6 sec - 4,8 sec) Shutter open	000-015 016-095 096-110 111-111 112-125 126-126 127-127 128-142 143-143 144-158 159-159 160-174 175-175 176-190 191-191 192-206 207-207 208-222 223-223 224-238 239-239 240-254 255-255
7	7	7	<b>Dimmer 0 - 100%</b>	000-255
	8		<b>Dimmer fine 16Bit</b>	000-255
8	9	8	<b>Zoom 0-100% (master, narrow 3° - wide 70°)</b>	000-255
9	10	9	<b>Zoom 2 0-100% (inner zone, narrow 3° - wide 70°)</b>	000-255
10	11	10	<b>Zoom 3 0-100% (outer ring respectively frost, narrow 3° - wide 70°)</b>	000-255
11	12	11	<b>Beamshape positioning / rotation</b> Beamshape positioning 0° - 360° Beamshape rotation right (fast - slow) Beamshape rotation stop Beamshape rotation left (slow - fast)	000-191 192-222 223-224 225-255
	13		<b>Beamshape positioning / rotation fine 16Bit</b>	000-255
12	14	12	<b>CTO 0 - 100%</b>	000-255
	15		<b>CTO fine 16Bit</b>	000-255

13	16		<b>Blackout Move</b> Not used Selection of segments for shutter effects in link with the shutter channel Not used Blackout at pan/tilt Blackout on color change Not used Blackout at pan/tilt and color change The fade time of the dimmer can be set from slow to 5sec - max.	000-000 001-070 071-095 096-127 128-159 160-223 224-255
14	17		<b>Crossfade layer 1/2 0 - 100%</b>	000-255
	18		<b>Crossfade layer 1/2 fein 16Bit</b>	000-255
15	19		<b>Dimmer sub1 0 - 100% (inner zone)</b>	000-255
	20		<b>Dimmer sub1 fine 16Bit (inner zone)</b>	000-255
16	21		<b>Dimmer sub2 0 - 100% (outer ring)</b>	000-255
	22		<b>Dimmer sub2 fine 16Bit (outer ring)</b>	000-255
17	23	13	<b>Color wheel emulation</b> Inactive, color mixing only via RGB White (according to color temperature setting headlights) White / red Red Red / yellow Yellow Yellow / magenta Magenta Magenta / green Green Green / orange Orange Orange / blue Blue Blue / turquoise Turquoise Turquoise / white White 2700 Kelvin White 2700 Kelvin, tungsten dimming White 3200 Kelvin White 3200 Kelvin, tungsten dimming White 4200 Kelvin White 5600 Kelvin White 6000 Kelvin White 6500 Kelvin White 7000 Kelvin White 8000 Kelvin Color change effect (fast - slow) Color change effect (stop) Color change effect (fast - slow)	000-000 001-003 004-007 008-011 012-015 016-019 020-023 024-027 028-031 032-035 036-039 040-043 044-047 048-051 052-055 056-059 060-063 064-064 065-065 066-066 067-067 068-068 069-069 070-070 071-071 072-072 073-191 192-222 223-224 225-255
18	24	14	<b>Red background color (main) 0-100%</b>	000-255
	25		<b>Red background color (main) fine 16 Bit</b>	000-255



19	26	15	<b>Green</b> background color (main) 0-100%	000-255
	27		<b>Green</b> background color (main) fine 16 Bit	000-255
20	28	16	<b>Blue</b> background color (main) 0-100%	000-255
	29		<b>Blue</b> background color (main) fine 16 Bit	000-255
21	30	17	<b>White</b> background color (main) 0-100%	000-255
	31		<b>White</b> background color (main) fine 16 Bit	000-255
22	32		<b>Red</b> foreground color (pattern) 0-100%	000-255
	33		<b>Red</b> foreground color (pattern) fine 16 Bit	000-255
23	34		<b>Green</b> foreground color (pattern) 0-100%	000-255
	35		<b>Green</b> foreground color (pattern) fine 16 Bit	000-255
24	36		<b>Blue</b> foreground color (pattern) 0-100%	000-255
	37		<b>Blue</b> foreground color (pattern) fine 16 Bit	000-255
25	38		<b>White</b> foreground color (pattern) 0-100%	000-255
	39		<b>White</b> foreground color (pattern) fine 16 Bit	000-255
26	40	18	<b>Sparkle - glitter effect</b> Sparkle effect inactive Sparkle effect intensity (minimum - maximum)	000-000 001-255
27	41	19	<b>Sparkle speed</b> <b>Sparkle effect complete fixture</b> Faded (slow -> fast) Switched (slow -> fast) <b>Sparkle effect color neutral complete fixture</b> Faded (slow -> fast) Switched (slow -> fast) <b>Sparkle effect inner zone of the fixture</b> Faded (slow -> fast) Switched (slow -> fast) <b>Sparkle effect color neutral inner zone of the fixture</b> Faded (slow -> fast) Switched (slow -> fast) <b>Sparkle effect outer area of the fixture</b> Faded (slow -> fast) Switched (slow -> fast) <b>Sparkle effect color neutral outer area of the fixture</b> Faded (slow -> fast) Switched (slow -> fast) Switched (fast)	000-015 016-031 032-047 048-063 064-079 080-095 096-111 112-127 128-143 144-159 160-175 176-191 192-255

28	42	20	<b>Effect macro mode layer 1</b> Color set 1 Effects faded 000-000 Effects switched 001-001 Effects forward crossfaded (crossfade over effect macro speed DMX 000 <-> 255) 002-002 Effects backward crossfaded (crossfade over effect macro speed DMX 000 <-> 255) 003-003 <u>Regular interval:</u> Effect random flash fast 004-004 Effect random snap open / ramp close 005-005 Effect random flash slow 006-006 Effect random ramp open / snap close 007-007 <u>Random interval:</u> Effect random flash fast 008-008 Effect random snap open / ramp close 009-009 Effect random flash slow 010-010 Effect random ramp open / snap close 011-011 Not used 012-031 From DMX 32 color set 2, from DMX 64 color set 3, from DMX 96 color set 4	
29	43	21	<b>Effect macro layer 1</b> Macros switched off 000-000 <b>Static color effects - fixture 2 colors</b> <b>Inner zone - background color (main)</b> <b>Outer ring - foreground color (pattern)</b> <b>Color wheel emulation overwrites background color (main)</b> Beam fixture 2 colors segment shutter complete fixture 001-001 Beam fixture 2 colors segment shutter inner zone 002-002 Beam fixture 2 colors segment shutter outer ring 003-003 Beam fixture 2 colors segment shutter off 004-004 <b>Color wheel emulation overwrites foreground color (pattern)</b> Beam fixture 2 colors segment shutter complete fixture 005-005 Beam fixture 2 colors segment shutter inner zone 006-006 Beam fixture 2 colors segment shutter outer ring 007-007 Beam fixture 2 colors segment shutter off 008-008 Beam fixture 2 colors segment shutter complete fixture 009-010 Numbers 1-9, 0 011-020 Numbers 1-9 turned 180 ° 021-029 Smiley small 030-030 Smiley big 031-031 Smiley small turned 180 ° 032-032 Smiley small turned 180 ° 033-033 Static beams Foreground (pattern) 034-038 Static rings foreground color (pattern) 039-043 Static double rings foreground color (pattern) 044-052 <b>Running effects - fixture inside and outside area</b> <b>Background color (main), foreground color (pattern)</b> <b>Color wheel emulation responds according to the selected color set - effect macro mode Layer 1</b> Pattern rings 053-059 Pattern cake pieces small 060-069 Pattern cake pieces big 070-079 Pattern lines horizontally 080-086	

			Pattern lines vertically Pattern lines diagonally Pattern propeller Pattern half / half vertical Pattern half / half horizontal Pattern half / half diagonal Pattern spiral Color spread effects <b>Running Effects - Headlight inner area</b> <b>Background color (Main), Foreground color (Pattern / Pattern)</b> <b>Color wheel emulation responds according to the selected color set - effect</b> <b>macromode Layer 1</b> Pattern rings Pattern cake pieces small Pattern lines horizontally Pattern lines vertically Pattern lines diagonally Pattern propeller Pattern half / half vertical Pattern half / half horizontal Pattern half / half diagonal Pattern spiral Color spread effects <b>Running effects - headlight outer ring</b> <b>Background color (main), foreground color (pattern)</b> <b>Color wheel emulation responds according to the selected color set - effect</b> <b>macromode layer 1</b> 1 point is running 2 points are running 3 points are running Colorsread effects	087-093 094-107 108-114 115-116 117-118 119-122 123-129 130-138  139-145 146-165 166-172 173-179 180-193 194-200 201-202 203-204 205-208 209-215 216-224  225-245 246-248 249-251 252-255
30	44	22	<b>Effect macro speed 1</b> Forward (fast -> slow) Backwards (slow -> fast)	000-127 128-255
31	45		<b>Effect macro mode layer 2</b> Same assignment as effect macromode Layer 1	000-100
32	46		<b>Effect macro layer 2</b> Same assignment as effect macro Layer 1	000-100
33	47		<b>Effect macro speed 2</b> Same assignment as effect macro speed 1	000-100
34	48	23	<b>Transition pixel mode</b>	000-255
	49		<b>Transition pixel mode</b> fine 16Bit	000-255

## 2.1.3 DMX channel assignment mode 4 with extended programming options

M4	Funktion	DMX
1	<b>Pan (X)</b> movement 540.73°	000-255
2	<b>Pan (X)</b> fine	000-255
3	<b>Tilt (Y)</b> movement 323.79°	000-255
4	<b>Tilt (Y)</b> fine	000-255
5	<p><b>Control channel</b>            To enable uniform dimming manually via faders for all light mixing consoles, 5 different settings for the DMX smoothing are available. If the DMX signal is interrupted or too few packets are sent on some DMX consoles, this channel can be used to adjust the response of the headlamp. The Minimum DMX Smoothing setting should work on most popular consoles. The values for DMX smoothing must be permanently applied. For the other values such as Cooling Mode, Color Temperature, Zoom Modes ..... the values must be present for 2 seconds, then the device will be permanently switched over. The exception is the setting of the COOLING-MODE, here it depends on the switch SAFE MODE SWITCH, if it is on OFF the COOLING-MODES can be switched directly, if this is ON the DIMMER and SHUTTER must get the DMX-value 0. Only then can be switched.</p> <p><b>Setting for minimal DMX smoothing</b>            (A dimmed shutter sequence is possible)            Dimmer fade out via fader (fast - slow)            Not used</p> <p><b>Setting for minimum / medium DMX smoothing</b>            Dimmer fade out via fader (fast - slow)            Not used</p> <p><b>Setting for medium DMX smoothing</b>            Dimmer fade out via fader (fast - slow)</p> <p><b>Color Mix Power Limit - Sets the total power consumption</b>            50%            60%            70%            80%            90%            Off</p> <p><b>Constant Color Mode - Adjust color fidelity</b>            Off            20%            40%            60%            80%            Max</p> <p><b>Constant Brightness Mode - setting for constant brightness control</b>            Off            20%            40%            60%            80%            Max</p>	<p>000-007 008-031</p> <p>032-039 040-063</p> <p>064-071</p> <p>072-072 073-073 074-074 075-075 076-076 077-077</p> <p>078-078 079-079 080-080 081-081 082-082 083-083</p> <p>084-084 085-085 086-086 087-087 088-088 089-089</p>

	<p><b>Constant Brightness Limit - Sets the limit for constant brightness control</b>  off  50%  60%  70%  80%  90%</p> <p><b>Setting for medium/maximum DMX smoothing</b>  Dimmer fade out via fader (fast - slow)</p> <p><b>BACKLIGHT MODE - Display backlight configuration</b>  AUTO - the fixture controls the backlight automatically  ON - the backlight is always on  OFF - the backlight is always off until a key is pressed</p> <p><b>DISPLAY ORIENTATION - display flip or not</b>  STANDARD - the display can be read when the headlamp is on a surface  FLIP - the display orientation is rotated by 180 °, hanging readable  not used</p> <p><b>MAIN SCREEN MODE - view of the main screen</b>  STANDARD - the main screen displays the DMX address, the DMX mode, and when wireless is enabled, the field strength.  USER FIXTURE ID - the main screen displays the user definable fixture ID / headlight number  not used</p> <p><b>USER FIXTURE ID SET - set fixture ID</b>  SET - the USER ID can be set. The headlamp takes the 16-bit value of Pan for the fixture id</p> <p><b>USER CIE - set the white color of RAW RGB USER WHITE</b>  USER CIE X - The headlamp takes the 16-bit value of Pan  USER CIE Y - The headlamp takes the 16-bit value of Pan</p> <p><b>BLACK BODY SHIFT - set of green shift</b>  BLACK BODY SHIFT - The headlamp takes the 16-bit value of Pan, Values from -99 to +99 (DMX values 0 to 65535, 32768 is no shift)  not used</p> <p><b>Setting for maximum DMX smoothing</b>  Dimmer fade out via fader (fast - slow)</p> <p><b>DIMMER CURVE - selection of dimmer curve</b>  LINEAR - linear dimmer curve  SQUARE - exponential dimmer curve  SQUARE INVERSE - exponential inverse dimmer curve  not used</p> <p><b>RGBW(Y) CURVE - selection of RGBW(Y) curve</b>  LINEAR - linear frost curve  SQUARE - exponential RGB(Y) curve  not used</p> <p><b>PAN/TILT SPEED - selection of PAN/TILT speed</b>  WHISPER  SILENT  MEDIUM  FAST</p>	<p>090-090  091-091  092-092  093-093  094-094  095-095</p> <p>096-103</p> <p>104-104  105-105  106-106</p> <p>107-107  108-108  109-109</p> <p>110-110  111-111  112-112</p> <p>113-113</p> <p>114-114  115-115</p> <p>116-116  117-127</p> <p>128-135</p> <p>136-136  137-137  138-138  139-139</p> <p>140-140  141-141  142-142</p> <p>146-146  147-147  148-148  149-149</p>
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	<b>EFFECT SPEED - selection of effect speed</b>	150-150
	WHISPER	151-151
	SILENT	152-152
	MEDIUM	153-153
	FAST	154-159
	Not used	
	<b>COOLING MODE - adjust the fan volume and brightness</b>	
	This takes place with dimmer / shutter set to closed (DMX 000) then after 2 seconds the fixture will switch this option, except the switch "SAFE MODE SWITCH" in the PERSONALITY menu is set to OFF, then the changeover can take place directly without dimmer and shutter having to be closed.	
	THEATRE WHISPER	160-160
	THEATRE SILENT	161-161
	STANDARD	162-162
	BOOST	163-163
	LOGLIFE	164-164
	not used	165-169
	<b>COLOR TEMPERATURE - adjustment of the color temperature of the fixture</b>	
	Color temperature 2000K (CTO 2000K - 20000K)	170-170
	Color temperature 2700K (CTO 2700K - 2700K)	171-171
	Color temperature 2700K tungsten dim out	172-172
	Color temperature 3200K (CTO 3200K - 2700K)	173-173
	Color temperature 3200K tungsten dim out	174-174
	Color temperature 4200K (CTO 4200K - 2700K)	175-175
	Color temperature 5600K (CTO 5600K - 2700K)	176-176
	Color temperature 6000K (CTO 6000K - 2700K)	177-177
	Color temperature 6500K (CTO 6500K - 2700K)	178-178
	Color temperature 7000K (CTO 7000K - 2700K)	179-179
	Color temperature 8000K (CTO 8000K - 2700K)	180-180
	RAW RGBW	181-181
	USER WHITE	182-182
	RAW RGBW USER WHITE	183-183
	Not used	184-184
	<b>ZOOM MODE - zoom modi</b>	
	<u>Mode 1:</u> Zoom / Zoom2 / Zoom3: Zoom2 / 3 TwinZoom -> Master-zoom controls to the lower zoom value (Zoom2 or 3) then takes it to the higher zoom value and then moves to both DMX255	185-185
	<u>Mode 2:</u> Zoom / Zoom2 / Zoom3: Masterzoom „takes“ the low zoom value and moves it to the higher zoom value and then takes both to DMX255	186-186
	<u>Mode 3:</u> Zoom / Zoom2 / Zoom3: Master zoom scales both zoom from the set value Zoom2 / Zoom3 to DMX255	187-187
	<u>Mode 4:</u> Zoom / Zoom2 / Zoom3: Zoom3 acts as frost. Masterzoom pushes the frost intelligently	188-188
	<u>Mode 5:</u> Zoom / Zoom2 / zoom3: Master zoom acts as a switchover between TwinZoom mode and Zoom / Frost mode. Zoom DMX 000 -> Zoom2 / 3 in Zoom / Frost mode, Zoom DMX 255 -> Zoom2 / 3 in TwinZoom mode	189-189
	<b>FAN MODE - Sets the basic volume in the selected COOLING MODE</b>	
	min	190-190
	20%	191-191
	40%	192-192
	60%	193-193
	80%	194-194
	Max	195-195

	<p><b>BEAMSHAPE ON / OFF - Set a beamshape is mounted or not</b>  off  on  Not used</p> <p><b>CAMERA MODE - Sets the LED refresh rate</b>  Camera Mode, 50Hz (after 2 seconds)  Camera Mode, 60Hz (after 2 seconds)  Camera Mode, FLEX 600Hz (after 2 seconds)  Not used</p> <p><b>RESET - performing a complete fixture reset</b>  Reset (after 2 seconds)  Not used</p>	<p>196-196  197-197  198-207</p> <p>208-215  216-223  224-231  232-239</p> <p>240-247  248-255</p>
6	<p><b>Shutter</b>  Shutter closed  Shutter open  Shutter pulse opening &gt;10Hz (0,6 sec - 4,8 sec)  Shutter open  Fade effect with dimmer (slow - fast)  Shutter open  Shutter closed  Shutter pulse opening &lt;10Hz (0,6 sec - 4,8 sec)  Shutter open  Shutter pulse closing (0,6 sec - 4,8 sec)  Shutter closed  Shutter fade, 0% (0,6 sec - 4,8 sec)  Shutter open  Shutter fade, 100% (0,6 sec - 4,8 sec)  Shutter closed  Shutter random 100% (0,6 sec - 4,8 sec)  Shutter open  Shutter random 0% (0,6 sec - 4,8 sec)  Shutter closed  Shutter random fade 0% (0,6 sec - 4,8 sec)  Shutter open  Shutter random fade 100% (0,6 sec - 4,8 sec)  Shutter open</p>	<p>000-015  016-095  096-110  111-111  112-125  126-126  127-127  128-142  143-143  144-158  159-159  160-174  175-175  176-190  191-191  192-206  207-207  208-222  223-223  224-238  239-239  240-254  255-255</p>
7	<b>Dimmer 0 - 100%</b>	000-255
8	<b>Zoom 0-100% (master, narrow 3° - wide 70°)</b>	000-255
9	<b>Zoom 2 0-100% (inner zone, narrow 3° - wide 70°)</b>	000-255
10	<b>Zoom 3 0-100% (outer ring, narrow 3° - wide 70°)</b>	000-255
11	<p><b>Beamshape positioning / rotation</b>  Beamshape positioning 0 ° -540 °  Beamshape rotation right (fast - slow)  Beamshape rotation stop  Beamshape rotation left (slow - fast)</p>	<p>000-191  192-222  223-224  225-255</p>
12	<b>CTO 0 - 100%</b>	000-255
13	<p><b>Pan/tilt speed</b>  Movement in real time  Movement delayed (fast - slow)</p>	<p>000-003  004-255</p>

14						<b>Effect speed</b> Effects in real time Effects delayed (fast - slow)	000-003 004-255	
15						<b>Blackout Move</b> Not used Selection of segments for shutter effects in link with the shutter channel Not used Blackout at pan/tilt Blackout on color change Not used Blackout at pan/tilt and color change The fade time of the dimmer can be set from slow to 5sec - max.	000-000 001-070  071-095 096-127 128-159 160-223 224-255	
16						<b>Red</b> Glow 0-100%	000-255	
17						<b>Green</b> Glow 0-100%	000-255	
18						<b>Blue</b> Glow 0-100%	000-255	
19						<b>White</b> Glow 0-100%	000-255	
20	Inner Zone LED -19 Layer 1		Inner Zone LED 1-19 Layer 2	58	Outer Ring LED 20-37 Layer 3		<b>Crossfade layer 0 - 100%</b>	000-255
21				59			<b>Dimmer sub1 0 - 100%</b>	000-255
22		40		60		78	<b>Segment shutter</b>	000-255
23		41		61		79	Outer Ring LED 20-37 Layer 4	<b>Color wheel emulation</b> Inactive, color mixing only via RGB White (according to color temperature settings of fixture) White / red Red Red / yellow Yellow Yellow / magenta Magenta Magenta / green Green Green / orange Orange Orange / blue Blue Blue / turquoise Turquoise Turquoise / white White 2700 Kelvin White 2700 Kelvin, tungsten dimming White 3200 Kelvin White 3200 Kelvin, tungsten dimming White 4200 Kelvin White 5600 Kelvin White 6000 Kelvin White 6500 Kelvin White 7000 Kelvin White 8000 Kelvin Color change effect (fast - slow) Color change effect (stop) Color change effect (fast - slow)



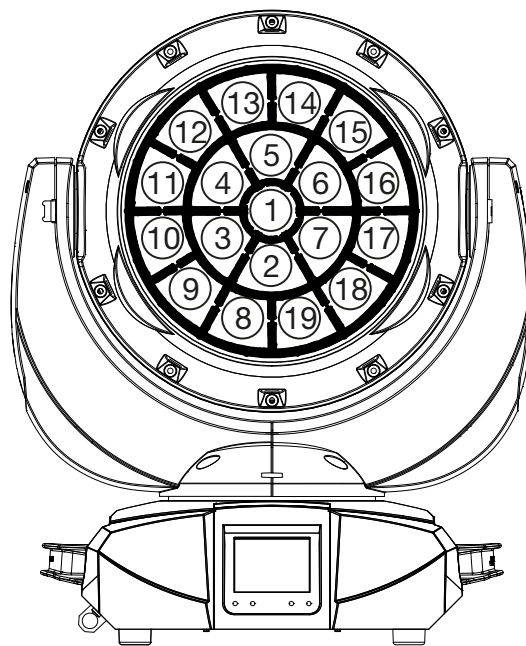
24	42	62	80	<b>Red</b> background color (main) 0-100%	000-255
25	43	63	81	<b>Green</b> background color (main) 0-100%	000-255
26	44	64	82	<b>Blue</b> background color (main) 0-100%	000-255
27	45	65	83	<b>White</b> background color (main) 0-100%	000-255
28	46	66	84	<b>Red</b> foreground color (pattern) 0-100%	000-255
29	47	67	85	<b>Green</b> foreground color (pattern) 0-100%	000-255
30	48	68	86	<b>Blue</b> foreground color (pattern) 0-100%	000-255
31	49	69	87	<b>White</b> foreground color (pattern) 0-100%	000-255
32	50	70	88	<b>Sparkle - glitter effect</b> Sparkle effect inactive Sparkle effect intensity (minimum - maximum)	000-000 001-255
33	51	71	89	<b>Sparkle speed</b> <b>Sparkle effect</b> Faded (slow -> fast) Switched (slow to fast) <b>Sparkle effect color neutral</b> Faded (slow -> fast) Switched (slow to fast)	000-015 016-031 032-047 048-255
34	52	72	90	<b>Effect macro (empty)</b>	000-255
35	53	73	91	<b>Mapping</b> 0-100%	000-255
				<b>Pattern mode</b> <b>Block 0-31: RGBW LED's of the inactive segment are deactivated.</b> Pattern faded Pattern switch Pattern switch with cross fade clockwise Pattern switch with cross fade anti clockwise Pixel random flash fast Pixel random snap open / ramp close Pixel random flash slow Pixel random ramp open / snap close Pixel random flash fast Pixel random snap open / ramp close Pixel random flash slow Pixel random ramp open / snap close Static effects <b>Block 32-63: RGBW LED's of the inactive segment illuminate in foreground (pattern) color</b> Pattern faded Pattern switch Pattern switch with cross fade clockwise Pattern switch with cross fade anti clockwise Pixel random flash fast Pixel random snap open / ramp close Pixel random flash slow Pixel random ramp open / snap close	000-000 001-001 002-002 003-003 004-004 005-005 006-006 007-007 008-008 009-009 010-010 011-011 012-031 032-032 033-033 034-034 035-035 036-036 037-037 038-038 039-039

36	54	74	92	Pixel random flash fast	} random interval	040-040	
				Pixel random snap open / ramp close			041-041
				Pixel random flash slow			042-042
				Pixel random ramp open / snap close			043-043
				Static effects		044-063	
				<b>Block 64-95: RGBW LED's of the inactive segment illuminate in background (main) color</b>			
				Pattern faded		064-064	
				Pattern switch		065-065	
				Pattern switch with cross fade clockwise		066-066	
				Pattern switch with cross fade anti clockwise		067-067	
				Pixel random flash fast	} regular interval	068-068	
				Pixel random snap open / ramp close			069-069
				Pixel random flash slow			070-070
				Pixel random ramp open / snap close			071-071
				Pixel random flash fast	} random interval	072-072	
				Pixel random snap open / ramp close			073-073
				Pixel random flash slow			074-074
				Pixel random ramp open / snap close			075-075
				Static effects		076-095	
				<b>Block 96-127: RGBW LED's of the inactive segment illuminate in Glow RGBW color. Glow RGBW overlays also the active LEDs.</b>			
				Pattern faded		096-096	
				Pattern switch		097-097	
				Pattern switch with cross fade clockwise		098-098	
				Pattern switch with cross fade anti clockwise		099-099	
				Pixel random flash fast	} regular interval	100-100	
				Pixel random snap open / ramp close			101-101
				Pixel random flash slow			102-102
				Pixel random ramp open / snap close			103-103
				Pixel random flash fast	} random interval	104-104	
				Pixel random snap open / ramp close			105-105
				Pixel random flash slow			106-106
				Pixel random ramp open / snap close			107-107
				Static effects		108-127	
				<b>Block 128-159: RGBW LED's of the inactive segment illuminate in Glow RGBW color. Only the inactive LEDs illuminate in Glow RGBW color.</b>			
				Pattern faded		128-128	
				Pattern switch		129-129	
				Pattern switch with cross fade clockwise		130-130	
				Pattern switch with cross fade anti clockwise		131-131	
				Pixel random flash fast	} regular interval	132-132	
				Pixel random snap open / ramp close			133-133
				Pixel random flash slow			134-134
				Pixel random ramp open / snap close			135-135
				Pixel random flash fast	} random interval	136-136	
				Pixel random snap open / ramp close			137-137
				Pixel random flash slow			138-138
				Pixel random ramp open / snap close			139-139
				Static effects		140-159	
				<b>Block 160-191: same as block 0-31 without glow RGBW. (use together with color spread channel - working with foreground color.</b>			
				Pattern faded		160-160	
				Pattern switch		161-161	
				Pattern switch with cross fade clockwise		162-162	
				Pattern switch with cross fade anti clockwise		163-163	
				Pixel random flash fast	} regular interval	164-164	
				Pixel random snap open / ramp close			165-165
				Pixel random flash slow			166-166
				Pixel random ramp open / snap close			167-167

				Pixel random flash fast Pixel random snap open / ramp close Pixel random flash slow Pixel random ramp open / snap close Static effects Macros, combined effects of segment, pattern mode and pattern Not used	} random interval	168-168 169-169 170-170 171-171 172-191 192-235 236-255
37	55	75	93	<b>Pattern - pattern process art</b> <b>(If pattern mode is set to „static“ you can choose the steps of the patterns with this channel)</b> Pattern inactiv <b>Process art 1:</b> 1, 2, 3, 4, 1, 2, 3, 4, Constitutiv, LED's are not holding, always start from the beginning <b>Process art 2:</b> 1, 2, 3, 4, 3, 2, 1, Constitutiv - degradativ, LEDs are not holding <b>Process art 3:</b> 1, 1+2, 1+2+3, 1+2+3+4, 1, 1+2, 1+2+3, 1+2+3+4 Constitutiv, holding start from the beginning <b>Process art 4:</b> 1, 1+2, 1+2+3, 1+2+3+4, 4+3+2, 4+3, 4, 0 Constitutiv, holding, degradativ adverse <b>Process art 5:</b> 1, 1+2, 1+2+3, 1+2+3+4, 3+2+1, 2+1, 1, 0 Constitutiv – degradativ , holding		000-000 001-001 002-002 003-003 004-004 005-005
				<b>Process art 6:</b> 1+3, 2+4 even - odd, complete pattern <b>Process art 7:</b> 1+4, 2+3 jump first pattern - last pattern / second pattern - second to last pattern / and so on Not used Random patterns 1 - 7 Not used		006-006 007-007 008-127 128-135 136-255
38	56	76	94	<b>Pattern speed</b> Clockwise (fast -> slow) Stop Anti clockwise (slow -> fast)		000-126 127-128 129-255
39	57	77	95	<b>Color spread</b> Color spread off Color spread snap increasing indexable clockwise Color spread snap increasing clockwise (fast - slow) Stop Color spread snap decreasing anti clockwise (slow - fast) Color spread fade decreasing indexable anti clockwise Color spread fade decreasing anti clockwise (fast - slow) Stop Color spread fade decreasing anti clockwise (slow - fast)		000-000 001-063 064-094 095-096 097-127 128-191 192-222 223-224 225-255
96				<b>Transition pixel mode</b>		000-255

## Arrangement of LED groups 1-19 (Sparx 12)

The pan/tilt values are set to 0°/-77°; the display shows in the same direction as the LEDs.



Sparx 12

### 2.1.4 TwinZoom effects with 2-colour beam

The Sparx 12 has the option of generating 2-colour TwinZoom effects. To do this, the effects macro channel layer 1 must be set to a DMX value of between 1 and 8. Select the settings according to the segment shutter and colour wheel emulation function. In order to fill the inner area with a colour, the background colour - main must be set. You can set the colour of the outer ring using the 2nd RGBW colour set - foreground colour - pattern. The TwinZoom can be used to obtain fantastic beam effects (use the Zoom, Zoom 2 and Zoom 3 channels for this). To do this, set the zoom mode to zoom mode 1.

### 2.1.5 Colour mixing / CTO

The Sparx 12 has a colour wheel emulation channel, main RGBW, pattern RGBW, glow RGBW and a CTO channel. In order to survey the functions, they are allocated different priorities. The colour wheel channel has first priority over the main RGBW. You can only work with the RGBW colour mixtures if the colour wheel channel is set to DMX value 000. The RGBW glow channels are used to generate basic lighting in the lighting field and to then superimpose this with the RGBW. The spotlight always mixes the colours using RGB in the optimum combination of RGBW channels. The white channel can be used to generate pastel colours as soon as the RGB channel has a DMX value of less than 255.

The CTO channel can be used both in conjunction with the colour wheel emulation channel and with RGBW colour mixing. It depends on the base colour adjustment in which the spotlight is operated. -> PERSONALITY -> COLOR TEMP MODE. If a fixed colour temperature value is set, e.g. 6500K, the spotlight can be set to between 6500K and 2700K using the CTO channel. In the PERSONALITY -> COLOR TEMP MODE -> VARIABLE, the CTO channel can be used to set the spotlight to 2000K-20000K. The DMX values of the CT channel x 100 correspond to the colour value in Kelvin, DMX32 -> CTO 3200K. The CTO always runs on the black body line!

### **2.1.6 Control channel**

The control channel can be used to switch various functions of the headlamp. The following functions can be switched.

Response of the headlamp when dimming via faders

COLOR MIX POWER LIMIT - Adjustment of total power consumption

CONSTANT COLOR MODE - Adjust color fidelity

CONSTANT BRIGHTNESS MODE - setting for constant brightness

CONSTANT BRIGHTNESS LIMIT - Setting the limit for constant regulation of the speed

BACKLIGHT MODE - Display backlight

DISPLAY ORIENTATION - Display orientation

MAIN SCREEN MODE - main screen view

USER FIXTURE ID SET - Set headlight number

DIMMER CURVE - Dimmer curve adjustment

RGBW (Y) CURVE - Setting the frost curve

PAN / TILT SPEED - pan / tilt speed

EFFECT SPEED - effect speed

COOLING MODE - Adjust the fan volume and brightness

COLOR TEMP MODE - setting the color temperature

ZOOM MODE - Setting the zoom modes

FAN MODE - Sets the basic volume in the selected COOLING MODE

BEAMSHAPE ON / OFF - Setting whether a beamshape is mounted or not

CAMERA MODE - Sets the LED refresh rate

RESET - A basic reset of the headlight is performed

To enable uniform dimming manually via faders for all light mixing consoles, 5 different settings for the DMX smoothing are available. If the DMX signal is interrupted or too few packets are sent on some DMX consoles, this channel can be used to adjust the response of the headlamp. The Minimum DMX Smoothing setting should work on most popular consoles. The values for DMX smoothing must be permanent.

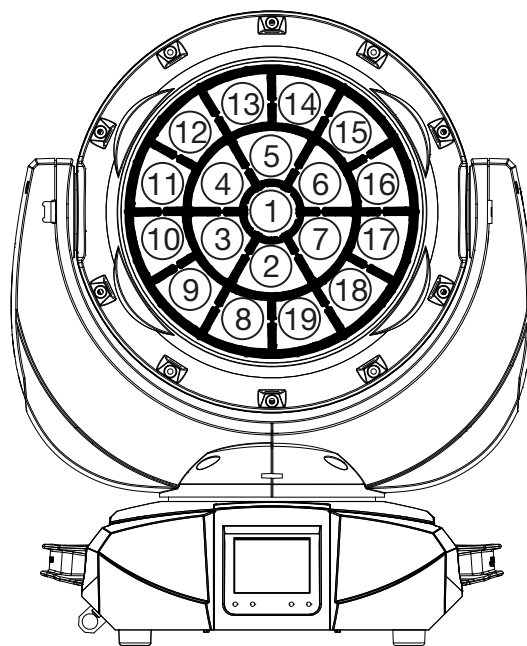
For the other values such as Cooling Mode, Color Temperature ..... the values must be present for 2 seconds, then the device is permanently switched over. The exception is the setting of the COOLING-MODE, here it depends on the switch SAFE MODE SWITCH, if it is on OFF the COOLING-MODES can be switched directly, if this is ON the DIMMER and SHUTTER must get the DMX-value 0. Only then can be switched.

### **2.1.7 Sparkle / sparkle speed**

This channel gives the Sparx 12 its name. This can be used to create unique effects in conjunction with the zoom and dimmer. Depending on the intensity, the lighting field is split into its base colours, i.e. the individual LEDs for full colours are dimmed in/out, mixed colours split into their base colours or the effect is performed with neutral colour depending on the sparkle speed channel's setting. The sparkle speed channel can also be used to select where the sparkle effect occurs, in the inner area, outer area or complete spotlight.

## 2.1.8 Pixel mode cross-fading (transition)

The pixel mode cross-fading channel can be used to switch or cross-fade between the internal effect engine and base functions, and real LED control. If this channel sends DMX value 255, the spotlight works at 100 % in individual LED control. The following channels for LED group 1-19 (-76 channels) can be “attached” to any spotlight operation mode -> PERSONALITY -> PIXEL MODE and are used to control the individual LEDs, always in the sequence red, green, blue, white. The following illustrations show the arrangement of the LED groups when the spotlight is controlled in a standing position with PAN/TILT values 127/60 and the display shows in the same direction as the LEDs.



Sparx 12

## 2.1.9 Special channels for Mode 4 with extended programming options

### Mapping

This channel splits the circular pattern of the pattern channel into different LED segments.

### Pattern mode

Across mapping, pattern and pattern speed, pattern mode controls whether an effect is to be faded, switched, static or runs via pixel flashes. Furthermore, a macro area helps you to program effects easily.

### Pattern / pattern speed

The pattern channel generates increasing, decreasing and random patterns that are controlled via the speed channel. They are always circular if the mapping channel is not active. The pattern mode channel determines the way in which this occurs.

### Colour spread

This channel generates an indexable or continuous colour spread using the effect's foreground colour.

## 2.2 Artnet

The spotlight can be controlled via Artnet - ArtNET 4. To do this, set the Artnet address via the menu item DMX / NET ADDR -> ARTNET ADDRESS and also select it via the menu item PERSONALITY -> DMX INPUT CONFIG -> NETWORK -> MODE -> ARTNET. In addition, define the IP address of the spotlight via PERSONALITY -> DMX INPUT CONFIG -> NETWORK -> IP ADDRESS.

## 2.3 Streaming ACN

The headlight can be controlled via sACN - Streaming ACN. To do this, set the sACN address via the menu item DMX / NET ADDR -> SACN ADDRESS and also select it via the menu item PERSONALITY -> DMX INPUT CONFIG -> NETWORK -> MODE -> SACN. In addition, define the IP address of the spotlight via PERSONALITY -> DMX INPUT CONFIG -> NETWORK -> IP ADDRESS.

## 2.4 Wireless-DMX

The Sparx 12 Profile is equipped with a Lumen Radio CRMX receiver for wireless DMX. The receiver can process both DMX and RDM. If there is a cable and wireless connection to the Sparx 12, the cable connection has priority! The received signal can be output via the DMX connection. To do this, set the DMX OUTPUT CONFIG setting to ON in the PERSONALITY menu. After confirming with ENTER, the spotlight will output the entire universe received via wireless DMX.

## 2.5 RDM

The Sparx 12 Profile can communicate via RDM (Remote Device Management) in accordance with ESTA American National Standard E1.20-2006. RDM is a bidirectional communication protocol for use in DMX512 control systems. It is the open standard for the configuration and status monitoring of DMX-512 devices. The RDM protocol enables data packets to be inserted into a DMX-512 data stream without affecting existing non-RDM devices. It enables a console or dedicated RDM controller to send commands to specific devices and receive messages. The Sparx 12 Profile can send and receive RDM via DMX and Artnet 4. The spotlight is also designed to send RDM via sACN and receive it via Artnet. The RDM functionality depends on the lighting control desk used, the operating instructions of the respective desk manufacturer must also be observed.

### 2.5.1 RDM-UID

Every Sparx 12 Profile has a factory-set RDM-UID (unique identification number), which makes it addressable and identifiable in RDM systems.

### 2.5.2 RDM-PIDs

The Sparx 12 Profile supports the RDM PIDs (parameter IDs) required by ESTA as well as manufacturer-specific PIDs.

### 2.5.3 Standard RDM parameter IDs

RDM parameter ID	GET	SET	DISCO- VERY	Note
RDM identification				
DISC_UNIQUE_BRANCH			✓	is used for fixture identification
DISC_MUTE			✓	is used for fixture identification
DISC_UN_MUTE			✓	is used for fixture identification
RDM status determination				
QUEUED_MESSAGE	✓			
STATUS_MESSAGES	✓			
STATUS_ID_DESCRIPTION	✓			
CLEAR_STATUS_ID		✓		
RDM information				
SUPPORTED_PARAMETERS	✓			
RDM configuration				
DEVICE_MODEL_DESCRIPTION	✓			
MANUFACTURER_LABEL	✓			
FACTORY_DEFAULTS		✓		

SOFTWARE_VERSION_LABEL	✓			
DMX_PERSONALITY		✓		
DMX_PERSONALITY_DESCRIPTION	✓			
DMX_START_ADDRESS		✓		
SENSOR_DEFINITION	✓			
DEVICE_HOURS	✓			
LAMP_HOURS	✓			
IDENTIFY_DEVICE		✓		
RESET_DEVICE		✓		
PERFORM_SELFTEST		✓		
SELFTEST_DESCRIPTION	✓			

## 2.5.4 Manufacturer specific RDM parameter IDs

RDM parameter ID	GET	SET	DISCO- VERY	Note
<b>RDM-Konfiguration</b>				
Battery Charge Hours	✓			
Error Number	✓			
Error	✓			
Select Next Error		✓		
Remove Error		✓		
Remove New Error Flag		✓		
User Defaults		✓		
User Fixture ID		✓		
Fixture Lock On/Off	✓	✓		
Dimmer Curve	✓	✓		
RGB Curve	✓	✓		
Camera Mode	✓	✓		
Cooling Mode	✓	✓		
Pan Tilt Speed	✓	✓		
Effect Speed	✓	✓		
Backlight Mode	✓	✓		
Disp Orientation	✓	✓		
Main Screen Mode	✓	✓		
Safe Mode Switch	✓	✓		
Beamshape	✓	✓		
Color Mix Power Limit	✓	✓		
Color Temperature Mode	✓	✓		
Constant Brightnes Limit	✓	✓		
Constant Brightness Mode	✓	✓		
Constant Color Mode	✓	✓		
Pixel Mode	✓	✓		
Zoom Mode	✓	✓		
User White Point	✓	✓		
Black Body Shift	✓	✓		

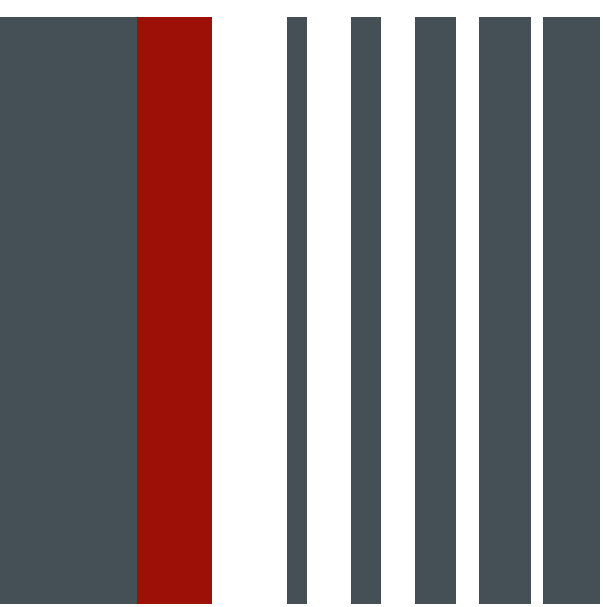


**2.5.5 RDM sensoren IDs**

RDM sensor ID	GET	SET	DISCO- VERY	Note
RDM-Sensoren				
Temp Sens Base LCD	✓	✓		
Temp Sens Base PS	✓	✓		
Temp Sens Base AIR	✓	✓		
Temp Sens Head PCB	✓	✓		
Temp Sens Head DRV	✓	✓		
Temp Sens Head LED	✓	✓		







JB-Lighting Lichtanlagentechnik GmbH  
Sallersteig 15  
89134 Blaustein  
Tel. +49 7304 9617-0  
Fax. +49 7304 9617-99  
info@jb-lighting.de  
www.jb-lighting.de

**JB LIGHTING**

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