JB LIGHTING

SPARX 9

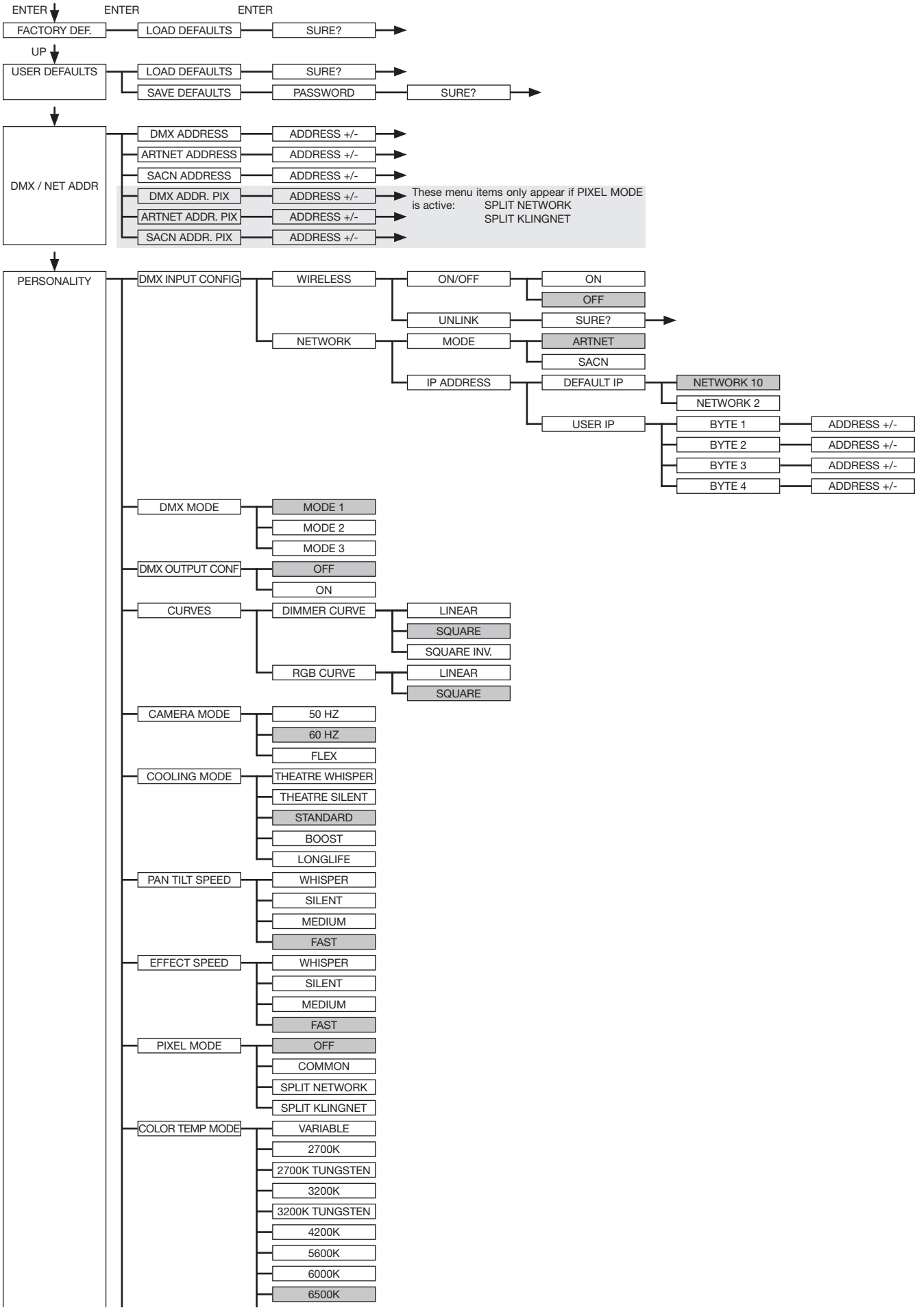
DMX chart

Version 1.01

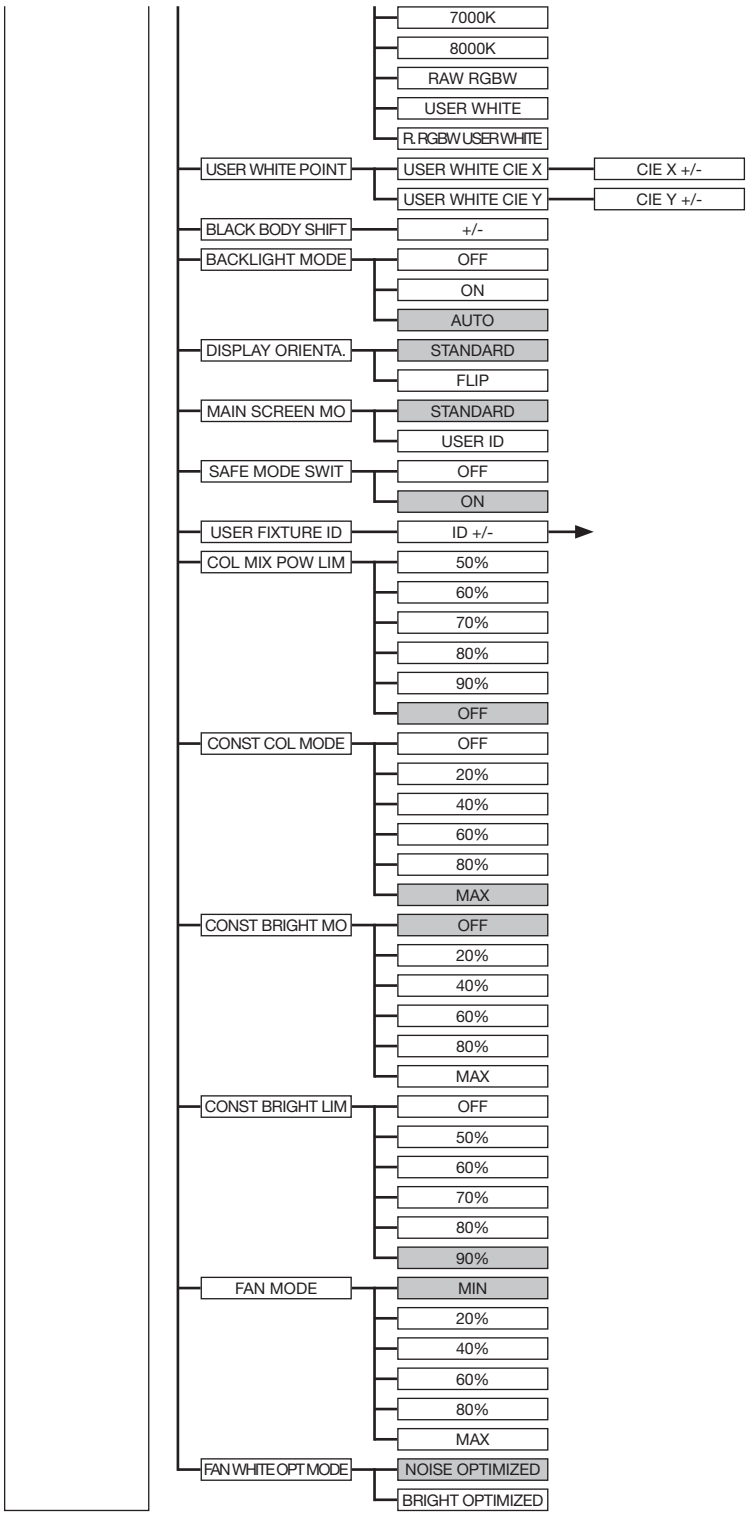
Software >= 1.0.0

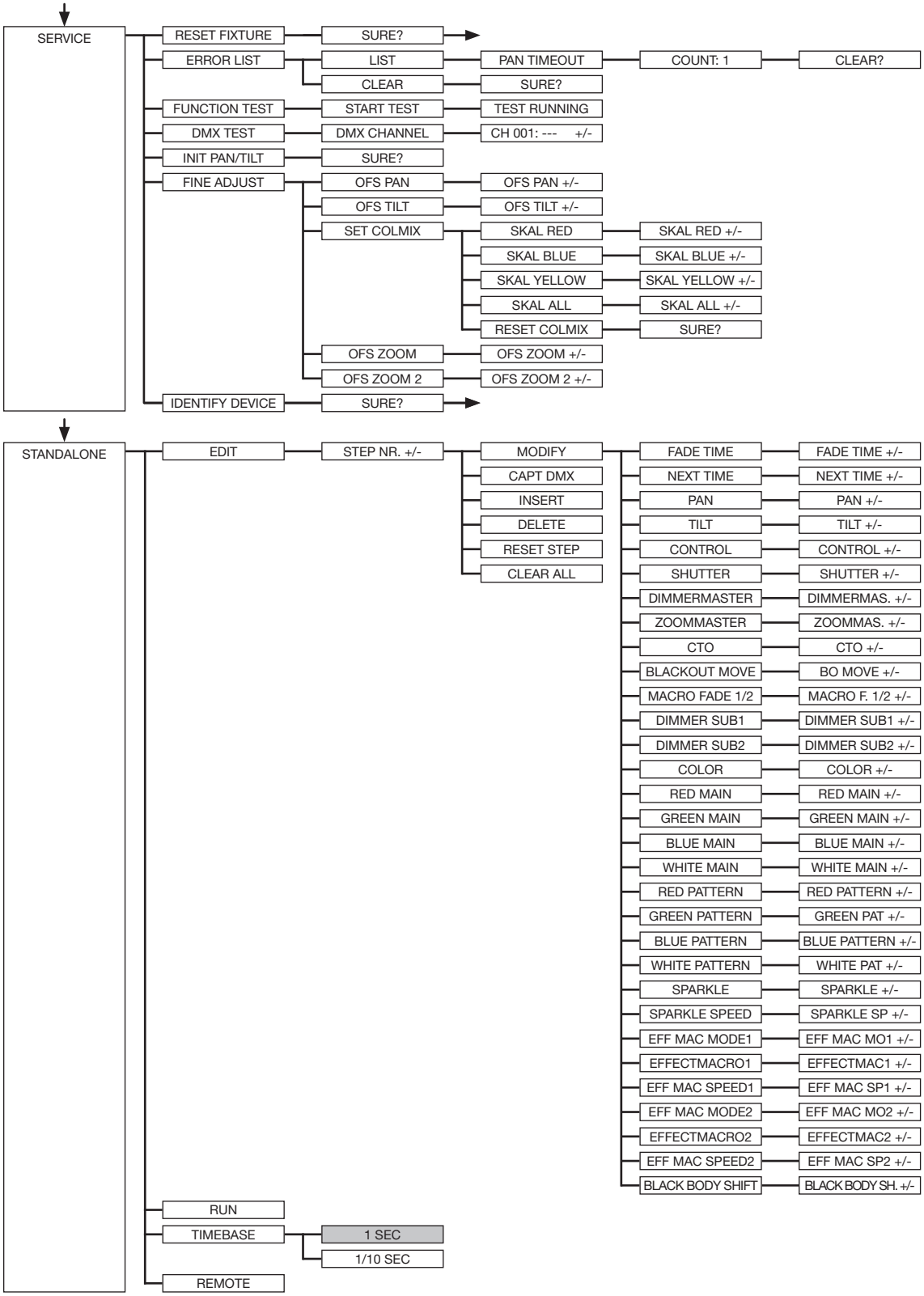
Inhalt / Content

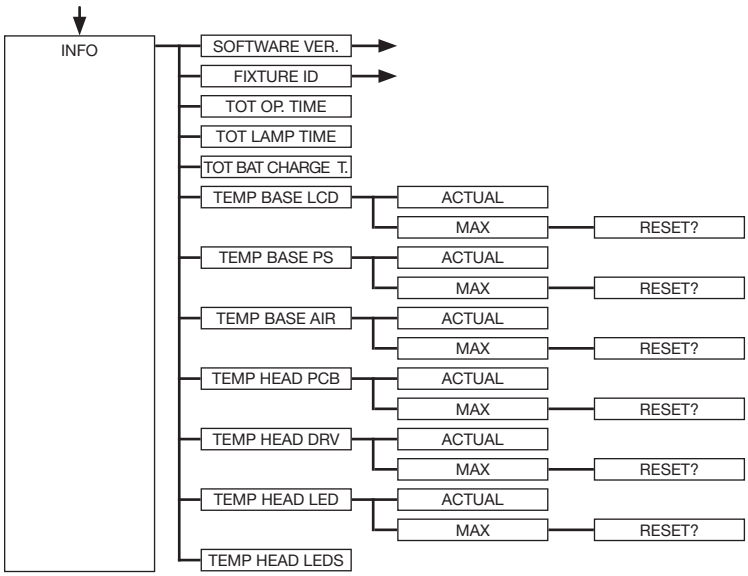
1.0 Menu overview



grey - corresponds to the default setting


7000K
8000K
RAW RGBW
USER WHITE
R. RGBW USER WHITE
USER WHITE POINT
USER WHITE CIE X
CIE X +/-
USER WHITE CIE Y
CIE Y +/-
BLACK BODY SHIFT
+/-
BACKLIGHT MODE
OFF
ON
AUTO
DISPLAY ORIENTA.
STANDARD
FLIP
MAIN SCREEN MO
STANDARD
USER ID
SAFE MODE SWIT
OFF
ON
USER FIXTURE ID
ID +/-
COL MIX POW LIM
50%
60%
70%
80%
90%
OFF
CONST COL MODE
OFF
20%
40%
60%
80%
MAX
CONST BRIGHT MO
OFF
20%
40%
60%
80%
MAX
CONST BRIGHT LIM
OFF
50%
60%
70%
80%
90%
FAN MODE
MIN
20%
40%
60%
80%
MAX
FAN WHITE OPT MODE
NOISE OPTIMIZED
BRIGHT OPTIMIZED


SERVICE
RESET FIXTURE
SURE?
ERROR LIST
LIST
PAN TIMEOUT
COUNT: 1
CLEAR?
CLEAR
SURE?
FUNCTION TEST
START TEST
TEST RUNNING
DMX TEST
DMX CHANNEL
CH 001: --- +/-
INIT PAN/TILT
SURE?
FINE ADJUST
OFS PAN
OFS PAN +/-
OFS TILT
OFS TILT +/-
SET COLMIX
SKAL RED
SKAL RED +/-
SKAL BLUE
SKAL BLUE +/-
SKAL YELLOW
SKAL YELLOW +/-
SKAL ALL
SKAL ALL +/-
RESET COLMIX
SURE?
OFS ZOOM
OFS ZOOM +/-
OFS ZOOM 2
OFS ZOOM 2 +/-
IDENTIFY DEVICE
SURE?
STANDALONE
EDIT
STEP NR. +/-
MODIFY
CAPT DMX
INSERT
DELETE
RESET STEP
CLEAR ALL
FADE TIME
FADE TIME +/-
NEXT TIME
NEXT TIME +/-
PAN
PAN +/-
TILT
TILT +/-
CONTROL
CONTROL +/-
SHUTTER
SHUTTER +/-
DIMMERMASTER
DIMMERMAS. +/-
ZOOMMASTER
ZOOMMAS. +/-
CTO
CTO +/-
BLACKOUT MOVE
BO MOVE +/-
MACRO FADE 1/2
MACRO F. 1/2 +/-
DIMMER SUB1
DIMMER SUB1 +/-
DIMMER SUB2
DIMMER SUB2 +/-
COLOR
COLOR +/-
RED MAIN
RED MAIN +/-
GREEN MAIN
GREEN MAIN +/-
BLUE MAIN
BLUE MAIN +/-
WHITE MAIN
WHITE MAIN +/-
RED PATTERN
RED PATTERN +/-
GREEN PATTERN
GREEN PAT +/-
BLUE PATTERN
BLUE PATTERN +/-
WHITE PATTERN
WHITE PAT +/-
SPARKLE
SPARKLE +/-
SPARKLE SPEED
SPARKLE SP +/-
EFF MAC MODE1
EFF MAC MO1 +/-
EFFECTMACRO1
EFFECTMAC1 +/-
EFF MAC SPEED1
EFF MAC SP1 +/-
EFF MAC MODE2
EFF MAC MO2 +/-
EFFECTMACRO2
EFFECTMAC2 +/-
EFF MAC SPEED2
EFF MAC SP2 +/-
BLACK BODY SHIFT
BLACK BODY SH. +/-
RUN
TIMEBASE
1 SEC
1/10 SEC
REMOTE


INFO
SOFTWARE VER.
FIXTURE ID
TOT OP. TIME
TOT LAMP TIME
TOT BAT CHARGE T.
TEMP BASE LCD
ACTUAL
MAX
RESET?
TEMP BASE PS
ACTUAL
MAX
RESET?
TEMP BASE AIR
ACTUAL
MAX
RESET?
TEMP HEAD PCB
ACTUAL
MAX
RESET?
TEMP HEAD DRV
ACTUAL
MAX
RESET?
TEMP HEAD LED
ACTUAL
MAX
RESET?
TEMP HEAD LEDS

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

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

	Single pixel control Sparx 9 - 28 channels „addable“ to every mode
	Red (LED group 1)
	Green (LED group 1)
	Blue (LED group 1)
	White (LED group 1)
	Red (LED group 2)
	Green (LED group 2)
	Blue (LED group 2)
	White (LED group 2)
	Red (LED group 3)
	Green (LED group 3)
	Blue (LED group 3)
	White (LED group 3)
	Red (LED group 4)
	Green (LED group 4)
	Blue (LED group 4)
	White (LED group 4)
	Red (LED group 5)
	Green (LED group 5)
	Blue (LED group 5)
	White (LED group 5)
	Red (LED group 6)
	Green (LED group 6)
	Blue (LED group 6)
	White (LED group 6)
	Red (LED group 7)
	Green (LED group 7)
	Blue (LED group 7)
	White (LED group 7)

2.1.2 DMX channel assignment

M1	M2	M3	Funktion	DMX
1	1	1	**Pan** (X) movement 540.73°	000-255
2	2	2	**Pan** (X) fine	000-255
3	3	3	**Tilt** (Y) movement 237.78°	000-255
4	4	4	**Tilt** (Y) fine	000-255
5	5	5	**Control channel** 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.	
			Setting for minimal DMX smoothing (A dimmed shutter sequence is possible) Dimmer fade out via fader (fast - slow) Not used	000-007 008-031
			Setting for minimum / medium DMX smoothing Dimmer fade out via fader (fast - slow) Not used	032-039 040-063
			Setting for medium DMX smoothing Dimmer fade out via fader (fast - slow)	064-071
			Color Mix Power Limit - Sets the total power consumption 50% 60% 70% 80% 90% Off	 072-072 073-073 074-074 075-075 076-076 077-077
			Constant Color Mode - Adjust color fidelity Off 20% 40% 60& 80% Max	 078-078 079-079 080-080 081-081 082-082 083-083
			Constant Brightness Mode - setting for constant brightness control Off 20% 40% 60% 80% Max	 084-084 085-085 086-086 087-087 088-088 089-089

			Constant Brightness Limit - Sets the limit for constant brightness control	
			off	090-090
			50%	091-091
			60%	092-092
			70%	093-093
			80%	094-094
			90%	095-095
			Setting for medium/maximum DMX smoothing	
			Dimmer fade out via fader (fast - slow)	096-103
			BACKLIGHT MODE - Display backlight configuration	
			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
			DISPLAY ORIENTATION - display flip or not	
			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
			MAIN SCREEN MODE - view of the main screen	
			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
			USER FIXTURE ID SET - set fixture ID	
			the USER ID can be set. The headlamp takes the 16-bit value of Pan for the fixture id	113-113
			USER CIE - set the white color of RAW RGB USER WHITE	
			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
			BLACK BODY SHIFT - set of green shift	
			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
			Setting for maximum DMX smoothing	
			Dimmer fade out via fader (fast - slow)	128-135
			DIMMER CURVE - selection of dimmer curve	
			LINEAR - linear dimmer curve	136-136
			SQUARE - exponential dimmer curve	137-137
			SQUARE INVERSE - exponential inverse dimmer curve	138-138
			not used	139-139
			RGBW(Y) CURVE - selection of RGBW(Y) curve	
			LINEAR - linear frost curve	140-140
			SQUARE - exponential RGB(Y) curve	141-141
			not used	142-142
			PAN/TILT SPEED - selection of PAN/TILT speed	
			WHISPER	146-146
			SILENT	147-147
			MEDIUM	148-148
			FAST	149-149

			EFFECT SPEED - selection of effect speed	
			WHISPER	150-150
			SILENT	151-151
			MEDIUM	152-152
			FAST	153-153
			Not used	154-156
			FAN WHITE OPT MODE - work with optimized noise or brightness	
			Noise-optimized operation (only for boost and standard mode)	157-157
			Brightness-optimized work (only for boost and standard mode)	158-158
			not used	159-159
			COOLING MODE - adjust the fan volume and brightness	
			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
			LONGLIFE	164-164
			not used	165-169
			COLOR TEMPERATURE - adjustment of the color temperature of the fixture	
			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	184-189
			FAN MODE - Sets the basic volume in the selected COOLING MODE	
			min	190-190
			20%	191-191
			40%	192-192
			60%	193-193
			80%	194-194
			Max	195-207
			Camera mode - Sets the LED refresh rate	
			Camera Mode, 50Hz (after 2 seconds)	208-215
			Camera Mode, 60Hz (after 2 seconds)	216-223
			Camera Mode, FLEX 600Hz (after 2 seconds)	224-231
			Not used	232-239
			RESET - Performing a complete fixture reset	
			Reset (after 2 seconds)	240-247
			Not used	248-255

6	6	6	**Shutter** 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	**Dimmer** 0 - 100%	000-255
	8		**Dimmer** fine 16Bit	000-255
8	9	8	**Zoom** 0-100% (master, narrow 3° - wide 70°)	000-255
9	10	9	**CTO** 0 - 100%	000-255
	11		**CTO** fine 16Bit	000-255
10	12		**Blackout Move** 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
11	13		**Crossfade layer 1/2** 0 - 100%	000-255
	14		**Crossfade layer 1/2** fein 16Bit	000-255
12	15		**Dimmer sub1** 0 - 100% (inner zone)	000-255
	16		**Dimmer sub1** fine 16Bit (inner zone)	000-255
13	17		**Dimmer sub2** 0 - 100% (outer ring)	000-255
	18		**Dimmer sub2** fine 16Bit (outer ring)	000-255

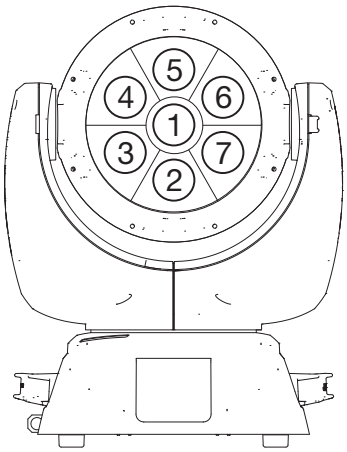
14	19	10	**Color wheel emulation**	
			Inactive, color mixing only via RGB	000-000
			White (according to color temperature setting headlights)	001-003
			White / red	004-007
			Red	008-011
			Red / yellow	012-015
			Yellow	016-019
			Yellow / magenta	020-023
			Magenta	024-027
			Magenta / green	028-031
			Green	032-035
			Green / orange	036-039
			Orange	040-043
			Orange / blue	044-047
			Blue	048-051
			Blue / turquoise	052-055
			Turquoise	056-059
			Turquoise / white	060-063
			White 2700 Kelvin	064-064
			White 2700 Kelvin, tungsten dimming	065-065
			White 3200 Kelvin	066-066
			White 3200 Kelvin, tungsten dimming	067-067
			White 4200 Kelvin	068-068
			White 5600 Kelvin	069-069
			White 6000 Kelvin	070-070
			White 6500 Kelvin	071-071
			White 7000 Kelvin	072-072
			White 8000 Kelvin	073-191
			Color change effect (fast - slow)	192-222
			Color change effect (stop)	223-224
			Color change effect (fast - slow)	225-255
15	20	11	**Red** background color (main) 0-100%	000-255
	21		**Red** background color (main) fine 16 Bit	000-255
16	22	12	**Green** background color (main) 0-100%	000-255
	23		**Green** background color (main) fine 16 Bit	000-255
17	24	13	**Blue** background color (main) 0-100%	000-255
	25		**Blue** background color (main) fine 16 Bit	000-255
18	26	14	**White** background color (main) 0-100%	000-255
	27		**White** background color (main) fine 16 Bit	000-255
19	28		**Red** foreground color (pattern) 0-100%	000-255
	29		**Red** foreground color (pattern) fine 16 Bit	000-255
20	30		**Green** foreground color (pattern) 0-100%	000-255
	31		**Green** foreground color (pattern) fine 16 Bit	000-255

21	32		**Blue** foreground color (pattern) 0-100%	000-255
	33		**Blue** foreground color (pattern) fine 16 Bit	000-255
22	34		**White** foreground color (pattern) 0-100%	000-255
	35		**White** foreground color (pattern) fine 16 Bit	000-255
23	36	15	**Sparkle - glitter effect** Sparkle effect inactive Sparkle effect intensity (minimum - maximum)	 000-000 001-255
24	37	16	**Sparkle speed** **Sparkle effect** Faded (slow -> fast) Switched (slow -> fast) **Sparkle effect color neutral** Faded (slow -> fast) Switched (slow -> fast) Not used	 000-015 016-031 032-047 048-063 064-255
25	38	17	**Effect macro mode layer 1** Color set 1 Effects faded Effects switched Effects forward crossfaded (crossfade over effect macro speed DMX 000 <-> 255) Effects backward crossfaded (crossfade over effect macro speed DMX 000 <-> 255) <u>Regular interval:</u> Effect random flash fast Effect random snap open / ramp close Effect random flash slow Effect random ramp open / snap close <u>Random interval:</u> Effect random flash fast Effect random snap open / ramp close Effect random flash slow Effect random ramp open / snap close Not used From DMX 32 color set 2, from DMX 64 color set 3, from DMX 96 color set 4	 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
26	39	18	**Effect macro layer 1** Macros switched off **Static color effects - fixture 2 colors** **Inner zone - background color (main)** **Outer ring - foreground color (pattern)** **Color wheel emulation overwrites background color (main)** Beam fixture 2 colors segment shutter complete fixture Beam fixture 2 colors segment shutter inner zone Beam fixture 2 colors segment shutter outer ring Beam fixture 2 colors segment shutter off **Color wheel emulation overwrites foreground color (pattern)** Beam fixture 2 colors segment shutter complete fixture Beam fixture 2 colors segment shutter inner zone Beam fixture 2 colors segment shutter outer ring Beam fixture 2 colors segment shutter off Beam fixture 2 colors segment shutter complete fixture Not used Static beams Foreground (pattern) Static rings foreground color (pattern) Static double rings foreground color (pattern)	 000-000 001-001 002-002 003-003 004-004 005-005 006-006 007-007 008-008 009-010 011-033 034-038 039-043 044-052

			Running effects - fixture inside and outside area **Background color (main), foreground color (pattern)** **Color wheel emulation responds according to the selected color set - effect macro mode Layer 1**	
			Pattern rings	053-059
			Pattern cake pieces small	060-069
			Pattern cake pieces big	070-079
			Pattern lines horizontally	080-086
			Pattern lines vertically	087-093
			Pattern lines diagonally	094-107
			Pattern propeller	108-114
			Pattern half / half vertical	115-116
			Pattern half / half horizontal	117-118
			Pattern half / half diagonal	119-122
			Pattern spiral	123-129
			Color spread effects	130-138
			Running Effects - Headlight inner area **Background color (Main), Foreground color (Pattern / Pattern)** **Color wheel emulation responds according to the selected color set - effect macromode Layer 1**	
			Pattern rings	139-145
			Pattern cake pieces small	146-165
			Pattern lines horizontally	166-172
			Pattern lines vertically	173-179
			Pattern lines diagonally	180-193
			Pattern propeller	194-200
			Pattern half / half vertical	201-202
			Pattern half / half horizontal	203-204
			Pattern half / half diagonal	205-208
			Pattern spiral	209-215
			Color spread effects	216-224
			Running effects - headlight outer ring **Background color (main), foreground color (pattern)** **Color wheel emulation responds according to the selected color set - effect macromode layer 1**	
			1 point is running	225-245
			2 points are running	246-248
			3 points are running	249-251
			Colorspread effects	252-255
27	40	19	**Effect macro speed 1**	
			Forward (fast -> slow)	000-127
			Backwards (slow -> fast)	128-255
28	41		**Effect macro mode layer 2**	
			Same assignment as effect macromode Layer 1	000-255
29	42		**Effect macro layer 2**	
			Same assignment as effect macro Layer 1	000-255
30	43		**Effect macro speed 2**	
			Same assignment as effect macro speed 1	000-255
31	44	20	**Black body shift**	
			Off	000-000
			Minus green (-1% -> -100%)	001-127
			Neutral white	128-128
			Plus green (+1% -> +100%)	129-255

32	45	21	**Transition pixel mode**	000-255
	46		**Transition pixel mode** fine 16Bit	000-255

Arrangement of LED groups 1-19 (Sparx 9)
The pan/tilt values are set to 0°/-77°; the display shows in the same direction as the LEDs.



Sparx 9

2.1.3 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!

2.1.4 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 fixture number
USER WHITE POINT - Setting the color temperature of the “white LED”
BLACK BODY SHIFT - Adjustment +- green
DIMMER CURVE - Dimmer curve adjustment
RGBW CURVE - Setting the RGBW curve
PAN / TILT SPEED - pan / tilt speed
EFFECT SPEED - effect speed
FAN WHITE OPTION MODE - working optimized for noise or brightness
COOLING MODE - Adjust the fan volume and brightness
COLOR TEMP MODE - setting the color temperature
FAN MODE - Sets the basic volume in the selected COOLING MODE
CAMERA MODE - Sets the LED refresh rate
RESET - A basic reset of the headlight is performed

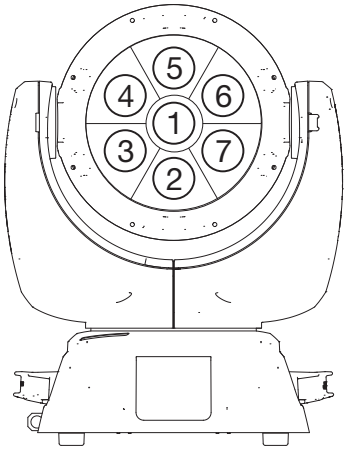
To enable uniform dimming manually via faders for all light mixing consoles, 5 different settings for the DMX smoothing are available. If the DMX signal is interrupted or too few packets are sent on some DMX consoles, this channel can be used to adjust the response of the headlamp. The Minimum DMX Smoothing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

2.1.5 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.

2.1.6 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.



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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 Befehl	SET Befehl	DISCO-VERY	Anmerkungen
RDM-Identifikation				
DISC_UNIQUE_BRANCH			✔	dient der Scheinwerferidentifikation
DISC_MUTE			✔	dient der Scheinwerferidentifikation
DISC_UN_MUTE			✔	dient der Scheinwerferidentifikation
RDM-Statusermittlung				
QUEUED_MESSAGE	✔			
STATUS_MESSAGES	✔			
STATUS_ID_DESCRIPTION	✔			
CLEAR_STATUS_ID		✔		
RDM-Information				
SUPPORTED_PARAMETERS	✔			
RDM-Konfiguration				
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 Befehl	SET Befehl	DISCO-VERY	Anmerkungen
RDM-Konfiguration				
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	✔	✔		
Fan Mode	✔	✔		
Fan White Option Mode	✔	✔		

2.5.5 RDM sensoren IDs

RDM-Sensor-ID	GET Befehl	SET Befehl	DISCO-VERY	Anmerkungen
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	✔	✔		

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