

# ETC Reference Guide

## High End Systems SolaWash 2000 DMX Channel Map

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### SolaWash 2000 DMX Channel Map

Standard Protocol	
Channel	Function
1	Pan Coarse
2	Pan Fine
3	Tilt Coarse
4	Tilt Fine
5	Color Mode
6	Cyan
7	Magenta
8	Yellow
9	CTO
10	Color Wheel 1 Mode
11	Color Wheel 1
12	Color Wheel 2 Mode
13	Color Wheel 2
14	Blade 1 Angle A
15	Blade 1 Angle B
16	Blade 2 Angle A
17	Blade 2 Angle B
18	Blade 3 Angle A
19	Blade 3 Angle B
20	Blade 4 Angle A
21	Blade 4 Angle B
22	Frame Rotation Coarse
23	Frame Rotation Fine
24	Diffusion Light
25	Diffusion Medium
26	Focus Coarse
27	Focus Fine
28	Zoom Coarse
29	Zoom Fine
30	Iris
31	Strobe Mode
32	Strobe
33	Dimmer Coarse
34	Dimmer Fine
35	Mspeed
36	Control



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## SolaWash 2000 DMX Channel Map

### SolaWash 2000 Standard Protocol

Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Defaults	
1 / 2	Pan (Coarse / Fine)	See note <a href="#">4 on page 6</a>	0	65535	0%	100%	0000h	FFFFh	32767	
3 / 4	Tilt (Coarse / Fine)	See note <a href="#">4 on page 6</a>	0	65535	0%	100%	0000h	FFFFh	32767	
5	Color Mode	Pure Mix	0	31	0%	12%	00h	1Fh	0	
		Cycle	32	47	13%	18%	20h	2Fh		
		Random	48	63	19%	25%	30h	3Fh		
		Continuous	64	79	25%	31%	40h	4Fh		
		Reserved (see note <a href="#">3 on page 6</a> )	80	255	31%	100%	50h	FFh		
6	Cyan	Pure Mix								255
		Full Saturation to Open	0	255	0%	100%	00h	FFh		
		Cycle and Random								0
		Slow to Fast	0	255	0%	100%	00h	FFh		
		Continuous Mode (see note <a href="#">1 on page 6</a> )								0
Positioning from 0-360 degrees	0	255	0%	100%	00h	FFh				
7	Magenta	Full Saturation to Open	0	255	0%	100%	00h	FFh	255	
8	Yellow	Full Saturation to Open	0	255	0%	100%	00h	FFh	255	
9	CTO	Full Saturation to Open	0	255	0%	100%	00h	FFh	255	
10	Color Wheel 1 Mode	Indexed (see note <a href="#">1 on page 6</a> )	0	15	0%	6%	00h	0Fh	0	
		Forward Spin	16	31	6%	12%	10h	1Fh		
		Reverse Spin	32	47	13%	18%	20h	2Fh		
		Continuous (see note <a href="#">1 on page 6</a> )	48	63	19%	25%	30h	3Fh		
		Scan	64	79	25%	31%	40h	4Fh		
		Random	80	95	31%	37%	50h	5Fh		
		Reserved (see note <a href="#">3 on page 6</a> )	96	255	38%	100%	60h	FFh		

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Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Defaults	
11	Color Wheel 1	Indexed, Scan, and Blink Modes								
		1. Open (White)	0	16	0%	6%	00h	10h	0	
		2. (Open/Red)	17	32	7%	13%	11h	20h		
		3. (Red)	33	48	13%	19%	21h	30h		
		4. (Red/Blue)	49	64	19%	25%	31h	40h		
		5. (Blue)	65	80	25%	31%	41h	50h		
		6. (Blue/Green)	81	96	32%	38%	51h	60h		
		7. (Green)	97	112	38%	44%	61h	70h		
		8. (Green/Orange)	113	128	44%	50%	71h	80h		
		9. (Orange)	129	144	51%	56%	81h	90h		
		10. (Orange/Magenta)	145	160	57%	63%	91h	A0h		
		11. (Magenta)	161	176	63%	69%	A1h	B0h		
		12. (Magenta/Dark Blue)	177	192	69%	75%	B1h	C0h		
		13. (Dark Blue)	193	208	76%	82%	C1h	D0h		
		14. (Dark Blue/Open)	209	224	82%	88%	D1h	E0h		
		1. Open (White)	225	255	88%	100%	E1h	FFh		
		Spin and Random Modes								
		Stop to Fastest	0	255	0%	100%	00h	FFh		
		Continuous Mode								
		Positioning from 0-360 degrees	0	255	0%	100%	00h	FFh		
12	Color Wheel 2 Mode	Indexed (see note <a href="#">1 on page 6</a> )	0	15	0%	6%	00h	0Fh		0
		Forward Spin	16	31	6%	12%	10h	1Fh		
		Reverse Spin	32	47	13%	18%	20h	2Fh		
		Continuous (see note <a href="#">1 on page 6</a> )	48	63	19%	25%	30h	3Fh		
		Scan	64	79	25%	31%	40h	4Fh		
		Random	80	95	31%	37%	50h	5Fh		
		Reserved (see note <a href="#">3 on page 6</a> )	96	255	38%	100%	60h	FFh		

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## SolaWash 2000 DMX Channel Map

Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Defaults	
13	Color Wheel 2	Indexed, Scan, and Blink Modes								
		1. Open (White)	0	16	0%	6%	00h	10h	0	
		2. (Open/Magenta)	17	32	7%	13%	11h	20h		
		3. (Magenta)	33	48	13%	19%	21h	30h		
		4. (Magenta/Pink)	49	64	19%	25%	31h	40h		
		5. (Pink)	65	80	25%	31%	41h	50h		
		6. (Pink/Minus Green)	81	96	32%	38%	51h	60h		
		7. (Minus Green)	97	112	38%	44%	61h	70h		
		8. (Minus Green/CTB-1)	113	128	44%	50%	71h	80h		
		9. (CTB-1)	129	144	51%	56%	81h	90h		
		10. (CTB-1/CTB-2)	145	160	57%	63%	91h	A0h		
		11. (CTB-2)	161	176	63%	69%	A1h	B0h		
		12. (CTB-2/Amber)	177	192	69%	75%	B1h	C0h		
		13. (Amber)	193	208	76%	82%	C1h	D0h		
		14. (Amber/Open)	209	224	82%	88%	D1h	E0h		
		1. Open (White)	225	255	88%	100%	E1h	FFh		
		Spin and Random Modes								
		Stop to Fastest	0	255	0%	100%	00h	FFh		
Continuous Mode										
Positioning from 0-360 degrees	0	255	0%	100%	00h	FFh				
14	Blade 1 Angle A	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
15	Blade 1 Angle B	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
16	Blade 2 Angle A	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
17	Blade 2 Angle B	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
18	Blade 3 Angle A	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
19	Blade 3 Angle B	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
20	Blade 4 Angle A	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
21	Blade 4 Angle B	Removed to Inserted	0	255	0%	100%	00h	FFh	0	
22 / 23	Frame Rotation (Coarse / Fine)	-45-45 degrees	0	15	0%	6%	00h	0Fh	32767	
24	Diffusion Light	Removed	0	0	0%	0%	00h	00h	0	
		Hard to Soft Edge	1	255	0%	100%	01h	FFh		
25	Diffusion Medium	Removed	0	0	0%	0%	00h	00h	0	
		Hard to Soft Edge	1	255	0%	100%	01h	FFh		
26 / 27	Focus (Coarse / Fine)	Focus	0	65535	0%	100%	00h	FFFFh	0	
28 / 29	Zoom (Coarse / Fine)	3.8-55 degrees	0	65535	0%	100%	00h	FFFFh	0	
30	Iris	Closed to Open	0	255	0%	100%	00h	FFh	255	
31	Strobe Mode	Normal	0	31	0%	12%	00h	1Fh	0	
		Random	32	63	13%	25%	20h	3Fh		
		Synchronous Random	64	95	25%	37%	40h	5Fh		
		Reserved (see note <a href="#">3 on page 6</a> )	96	255	38%	100%	60h	FFh		

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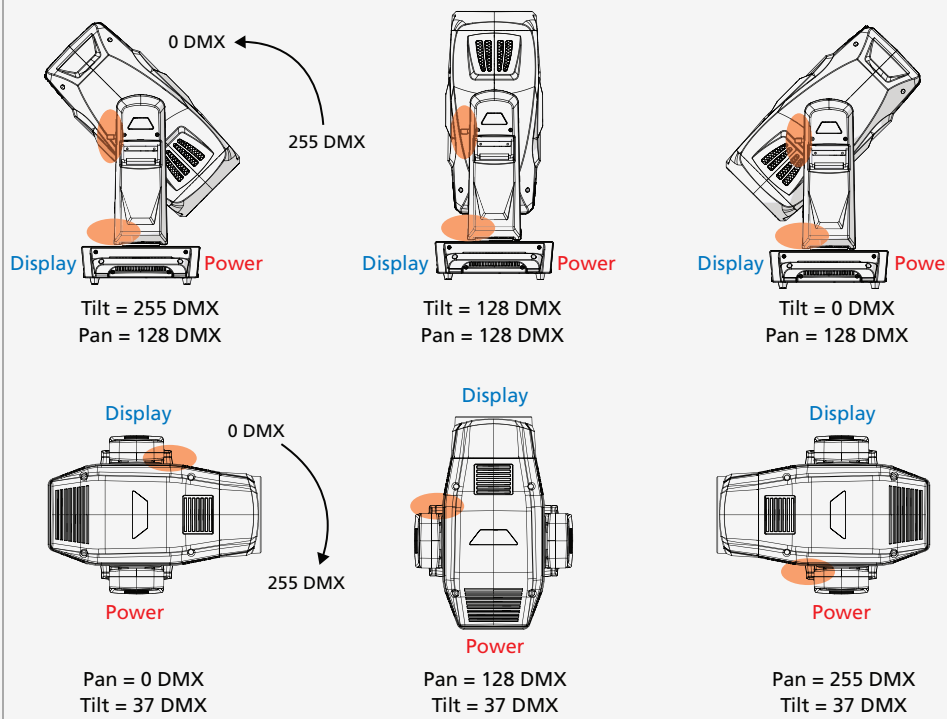
## SolaWash 2000 DMX Channel Map

Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Defaults	
32	Strobe	Closed	0	23	0%	9%	00h	17h	0	
		Slow to Fast	24	229	9%	90%	18h	E5h		
		Open	230	255	90%	100%	E6h	FFh		
33 / 34	Dimmer (Coarse / Fine)	Off to Full	0	65535	0%	100%	00h	FFFFh	0	
35	Mspeed	Disable	0	3	0%	1%	00h	03h	0	
		Longest (252.7 seconds)	4		2%		04h			
		Shortest (0.15 seconds)	255		100%		FFh			
36	Control	The Control channel should not be crossfaded. No shutter channel requirement.								0
		Safe (Normal Operation )	0	9	0%	4%	00h	09h		
		Pan & Tilt Mspeed Off	10	19	4%	7%	0Ah	13h		
		Display Off (send 20 packets)	20	28	8%	11%	14h	1Ch		
		Display On (send 20 packets)	29	35	11%	14%	1Dh	23h		
		Reserved (see note <a href="#">3 on page 6</a> )	36	48	14%	19%	24h	30h		
		Home All (send 20 packets)	49	68	19%	27%	31h	44h		
		Shutdown (send 80 packets)	69	75	27%	29%	45h	4Bh		
		No shutter channel requirement (see note <a href="#">2 on page 6</a> ).								
		Studio Fan Control Mode (send 20 packets)	76	82	30%	32%	4Ch	52h		
		Continuous Fan Control Mode (send 20 packets)	83	89	33%	35%	53h	59h		
		Standard Fan Control Mode (send 20 packets)	90	96	35%	38%	5Ah	60h		
		Disable Pan/Tilt Motors	97	103	38%	40%	61h	67h		
		Reserved (see note <a href="#">3 on page 6</a> )	104	130	41%	51%	68h	82h		
		Audio Sync	131	160	51%	63%	83h	A0h		
		Internal Prog 1 Scene 1-8 EEPROM	161	171	63%	67%	A1h	ABh		
		Internal Prog 2 Scene 9-16 EEPROM	172	182	67%	71%	ACH	B6h		
		Internal Prog 3 Scene 17-24 EEPROM	183	193	72%	76%	B7h	C1h		
		Internal Prog 4 Scene 25-32 EEPROM	194	204	76%	80%	C2h	CCh		
		Internal Prog 5 Scene 33-40 EEPROM	205	215	80%	84%	CDh	D7h		
Internal Prog 6 Scene 41-48 EEPROM	216	226	85%	89%	D8h	E2h				
Internal Prog 7 Scene 49-56 EEPROM	227	237	89%	93%	E3h	EDh				
Reserved (see note <a href="#">3 on page 6</a> )	238	255	93%	100%	Eeh	FFh				

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## SolaWash 2000 DMX Channel Map

### Notes

1	<p>Continuous/Indexed mode should take the quickest path from 255-0 and 0-255. Continuous mode color wheel aperture centers are as follows:</p> <table border="1" data-bbox="225 363 836 667"> <thead> <tr> <th>Color</th> <th>Center of Color DMX Value</th> </tr> </thead> <tbody> <tr> <td>Open</td> <td>0</td> </tr> <tr> <td>Red</td> <td>40</td> </tr> <tr> <td>Light Blue</td> <td>72</td> </tr> <tr> <td>Green</td> <td>110</td> </tr> <tr> <td>Orange</td> <td>144</td> </tr> <tr> <td>Magenta</td> <td>184</td> </tr> <tr> <td>Congo Blue</td> <td>219</td> </tr> </tbody> </table>	Color	Center of Color DMX Value	Open	0	Red	40	Light Blue	72	Green	110	Orange	144	Magenta	184	Congo Blue	219
Color	Center of Color DMX Value																
Open	0																
Red	40																
Light Blue	72																
Green	110																
Orange	144																
Magenta	184																
Congo Blue	219																
2	Fan control modes are not retentive. When the fixture is turned off it will default back to Standard mode.																
3	Reserved ranges should function according to the controller default value.																
4	<p><b>DMX Fixture Orientation</b> (Tilt Movement Range: 252°; Pan Movement Range: 540°) (Pan and tilt lock locations are highlighted in orange.)</p>  <p>Diagram 1: Tilt = 255 DMX, Pan = 128 DMX</p> <p>Diagram 2: Tilt = 128 DMX, Pan = 128 DMX</p> <p>Diagram 3: Tilt = 0 DMX, Pan = 128 DMX</p> <p>Diagram 4: Pan = 0 DMX, Tilt = 37 DMX</p> <p>Diagram 5: Pan = 128 DMX, Tilt = 37 DMX</p> <p>Diagram 6: Pan = 255 DMX, Tilt = 37 DMX</p>																
5	RDM Manufacturers ID: 0x4c52																
6	RDM Device ID: 0x50f																

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## SolaWash 2000 DMX Channel Map

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### Revision History

Revision	Change	Release Date
B	Updated the 16-bit function data and added the DMX Fixture Orientation information to the Notes.	June 2021
A	Initial release	February 2018