

# ETC Reference Guide

## High End Systems SolaPix 7 DMX Channel Map

SolaPix 7 Software Version 1.3.1 and Earlier, 2.0.2 and Later

Base Module	
Channel	Function
1	Pan Coarse
2	Pan Fine
3	Tilt Coarse
4	Tilt Fine
5	Color Mode
6	Red
7	Green
8	Blue
9	White
10	Color Correction
11	Section Selection
12	Module Priority
13	Zoom Coarse
14	Zoom Fine
15	Strobe Mode
16	Strobe
17	Dimmer Coarse
18	Dimmer Fine
19	mSpeed
20	Fan Speed
21	Control

Flex/Macro Module	
Channel	Function
1	Flex/Macro Mode
2	Flex/Macro Speed
3	Flex/Macro Crossfade
4	Flex/Macro Strobe Mode
5	Flex/Macro Strobe
6	Flex/Macro 1 - Red
7	Flex/Macro 1 - Green
8	Flex/Macro 1 - Blue
9	Flex/Macro 1 - White
10	Flex/Macro 2 - Red
11	Flex/Macro 2 - Green
12	Flex/Macro 2 - Blue
13	Flex/Macro 2 - White
14	Flex/Macro 3 - Red
15	Flex/Macro 3 - Green
16	Flex/Macro 3 - Blue
17	Flex/Macro 3 - White

Pixel Module			
Channel	Function	Channel	Function
1	Pixel 1 - Red	15	Pixel 4 - Blue
2	Pixel 1 - Green	16	Pixel 4 - White
3	Pixel 1 - Blue	17	Pixel 5 - Red
4	Pixel 1 - White	18	Pixel 5 - Green
5	Pixel 2 - Red	19	Pixel 5 - Blue
6	Pixel 2 - Green	20	Pixel 5 - White
7	Pixel 2 - Blue	21	Pixel 6 - Red
8	Pixel 2 - White	22	Pixel 6 - Green
9	Pixel 3 - Red	23	Pixel 6 - Blue
10	Pixel 3 - Green	24	Pixel 6 - White
11	Pixel 3 - Blue	25	Pixel 7 - Red
12	Pixel 3 - White	26	Pixel 7 - Green
13	Pixel 4 - Red	27	Pixel 7 - Blue
14	Pixel 4 - Green	28	Pixel 7 - White



# ETC Reference Guide

## SolaPix 7 DMX Channel Map

---

### Notes:

Due to the modular control and individual module addressing of the SolaPix 7, there are six recommended library layouts. We suggest that console libraries follow these guidelines:

1. Base Module
2. Flex Module
3. Pixel Module
4. Base + Flex + Pixel Modules
  - a. Base Control is on the source fixture number.
  - b. Flex/Macro Mode, Flex/Macro Speed, and Flex/Macro Crossfade (Flex addresses 1-3) should all be included on the source fixture number.
  - c. Pixel Modules should start with Pixel 1 as the .1 address.
  - d. Flex/Macros 1 through 3 (Flex addresses 4-15) should be compound addresses .8, .9, .10.
  - e. Flex/Macro and Pixel RGBW control options utilize virtual console dimming when available. The dimmer control in the Base Module is a source over all output including Base, Flex, and Pixel Modules.
5. Base + Flex Modules
  - a. Base Control is on the source fixture number.
  - b. Flex/Macro Mode, Flex/Macro Speed, and Flex/Macro Crossfade (Flex addresses 1-3) should all be included on the source fixture number.
  - c. Flex/Macros 1 through 3 (Flex addresses 4-15) should be compound addresses .1, .2, .3.
  - d. Flex/Macro RGBW control options utilize virtual console dimming when available. The dimmer control in the Base Module is a source over all output including Base and Flex Modules.
6. Base + Pixel Modules
  - a. Base Control is on the source fixture number.
  - b. Pixel Modules should start with Pixel 1 as the .1 address.
  - c. Pixel RGBW control options utilize virtual console dimming when available. The dimmer control in the Base Module is a source over all output including Base and Pixel Modules.

# ETC Reference Guide

## SolaPix 7 DMX Channel Map

### Base Module

Channel	Function	Function Range	Decimal Low	Decimal High	Percent Low	Percent High	Controller Default	Unit	Range Low	Range High
1/2	Pan (Coarse/Fine)	See note <a href="#">2 on page 9</a>	0	65535	0%	100%	32767	°	-270	270
3/4	Tilt (Coarse/Fine)	See note <a href="#">2 on page 9</a>	0	65535	0%	100%	32767	°	-127.5	127.5
5	Color Mode	RGB	0	15	0.00%	5.88%	0	N/A	N/A	N/A
		RBG	16	31	6.27%	12.16%				
		BRG	32	47	12.55%	18.43%				
		BGR	48	63	18.82%	24.71%				
		GRB	64	79	25.10%	30.98%				
		GBR	80	95	31.37%	37.25%				
		CMY	96	111	37.65%	43.53%				
		CYM	112	127	43.92%	49.80%				
		YCM	128	143	50.20%	56.08%				
		YMC	144	159	56.47%	62.35%				
		MCY	160	175	62.75%	68.63%				
		MYC	176	191	69.02%	74.90%				
		Cycle	192	207	75.29%	81.18%				
		Random	208	223	81.57%	87.45%				
		Reserved	224	255	87.84%	100.00%				
6	Red	Off to Full	0	255	0%	100%	255	%	0	100
7	Green	Off to Full	0	255	0%	100%	255	%	0	100
8	Blue	Off to Full	0	255	0%	100%	255	%	0	100
9	White	Off to Full	0	255	0%	100%	255	%	0	100
10	Color Correction	Off	0	0	0%	0%	0	%	0	100
		Warm to Cool	1	255	0%	100%				

# ETC Reference Guide

## SolaPix 7 DMX Channel Map

Channel	Function	Function Range	Decimal Low	Decimal High	Percent Low	Percent High	Controller Default	Unit	Range Low	Range High
11	Section Selection (see note <a href="#">1 on page 9</a> )	All Pixels	0	2	0.00%	0.78%	0	N/A	N/A	N/A
		Center	3	4	1.18%	1.57%				
		Ring 1	5	6	1.96%	2.35%				
		NA - Ring 2 *	7	8	2.75%	3.14%				
		NA - Ring 3 *	9	10	3.53%	3.92%				
		Center & Ring 1	11	12	4.31%	4.71%				
		NA - Center & Ring 2 *	13	14	5.10%	5.49%				
		NA - Center & Ring 3 *	15	16	5.88%	6.27%				
		NA - Rings 1 & 2 *	17	18	6.67%	7.06%				
		NA - Rings 1 & 3 *	19	20	7.45%	7.84%				
		NA - Rings 2 & 3 *	21	22	8.24%	8.63%				
		NA - Center, Ring 1, & Ring 2 *	23	24	9.02%	9.41%				
		NA - Ring 1, Ring 2, & Ring 3 *	25	26	9.80%	10.20%				
		NA - Center, Ring 2, & Ring 3 *	27	28	10.59%	10.98%				
		NA - Center, Ring 1, & Ring 3*	29	30	11.37%	11.76%				
		Sector 1	31	32	12.16%	12.55%				
		Sector 2	33	34	12.94%	13.33%				
		Sector 3	35	36	13.73%	14.12%				
		Sector 4	37	38	14.51%	14.90%				
		Sector 5	39	40	15.29%	15.69%				
		Sector 6	41	42	16.08%	16.47%				
		Sector 1 & 4	43	44	16.86%	17.25%				
		Sector 1, 4, & Center	45	46	17.65%	18.04%				
		Sector 2 & 5	47	48	18.43%	18.82%				
		Sector 2, 5, & Center	49	50	19.22%	19.61%				
		Sector 3 & 6	51	52	20.00%	20.39%				
		Sector 3, 6, & Center	53	54	20.78%	21.18%				
		Sector 1, 3, & 5	55	56	21.57%	21.96%				
		Sector 1, 3, 5, & Center	57	58	22.35%	22.75%				
		Sector 2, 4, & 6	59	60	23.14%	23.53%				
		Sector 2, 4, 6, & Center	61	62	23.92%	24.31%				
		Sector 1, 2, & 3	63	64	24.71%	25.10%				
		Sector 2, 3, & 4	65	66	25.49%	25.88%				
		Sector 3, 4, & 5	67	68	26.27%	26.67%				
		Sector 4, 5, & 6	69	70	27.06%	27.45%				
		Sector 1, 5, & 6	71	72	27.84%	28.24%				
		Sector 1, 2, & 6	73	74	28.63%	29.02%				
		Reserved	75	255	29.41%	100.00%				
* Note: Placeholder. The complete image is not available on the SolaPix 7. This image is blank to preserve the alignment of the rest of the sector selection options with other fixtures in the SolaPix family.										

# ETC Reference Guide

## SolaPix 7 DMX Channel Map

Channel	Function	Function Range	Decimal Low	Decimal High	Percent Low	Percent High	Controller Default	Unit	Range Low	Range High
12	Module Priority	Pixel Over Flex/Macro Over Base	0	7	0%	3%	8	N/A	N/A	N/A
		Flex/Macro Over Pixel Over Base	8	15	3%	6%				
		Pixel Over Base	16	23	6%	9%				
		Flex/Macro Over Base	24	31	9%	12%				
		Base	32	39	13%	15%				
		Pixel	40	47	16%	18%				
		Reserved	48	255	19%	100%				
Note: In all pixel modes, each pixel must be set at RGB 0% in order for the lower priority control to take effect.										
13/14	Zoom (Coarse/Fine)	Narrow to Wide	0	65535	0%	100%	0	°	XX	XX
15	Strobe Mode	Off	0	15	0%	6%	0	N/A	N/A	N/A
		Synchronous	16	31	6%	12%				
		Random	32	47	13%	18%				
		Random Pixel	48	63	19%	25%				
		Random Pixel/Color	64	79	25%	31%				
		Synchronous Random	80	95	31%	37%				
		Reserved	96	255	38%	100%				
16	Strobe	Off	0	23	0%	9%	255	N/A	N/A	N/A
		Slow to Fast	24	229	9%	90%				
		Open	230	255	90%	100%				
17/18	Dimmer (Coarse/Fine)	Off to Full	0	65535	0%	100%	0	%	0	100
19	mSpeed	Off	0	3	0%	1%	0	s	252.7	0.15
		Slow to Fast	4	255	2%	100%				
20	Fan Speed	Idle	0	9	0%	4%	0	N/A	N/A	N/A
		Slow to Fast	10	215	4%	84%				
		Auto	216	225	85%	88%				
		Studio	226	235	89%	92%				
		Reserved	236	255	93%	100%				
Note: To change "Idle" or "Slow to Fast" ranges (0-100%), you can use a fader or go directly to the target range value. To change "Auto" or "Studio" ranges, you must start at value 0 and go directly to the target range value. After a pause of approximately 3 seconds, the action occurs. The "Auto" and "Studio" control settings are retained in the fixture's memory and will override any settings that were previously made in the fixture's user interface. "Slow to Fast" is not retained and is only active while the fixture is receiving a DMX value in this range.										

# ETC Reference Guide

## SolaPix 7 DMX Channel Map

Channel	Function	Function Range	Decimal Low	Decimal High	Percent Low	Percent High	Controller Default	Unit	Range Low	Range High
21	Control	Disable	0	9	0%	4%	0	N/A	N/A	N/A
		Reserved	10	19	4%	7%				
		Display Off	20	28	8%	11%				
		Display On	29	35	11%	14%				
		Reserved	36	48	14%	19%				
		Home All	49	68	19%	27%				
		Shutdown	69	75	27%	29%				
		Red Shift Off	76	85	30%	33%				
		Red Shift On	86	95	34%	37%				
		LED PWM 2.4 kHz	96	105	38%	41%				
		LED PWM 16 kHz	106	115	42%	45%				
		Independent Base Intensity	116	125	45%	49%				
		Master Base Intensity	126	135	49%	53%				
		Reserved*	136	255	53%	100%				
		Reserved <sup>†</sup>	136	185	53%	73%				
		LED PWM 2.4 kHz (B) <sup>†</sup>	186	195	73%	76%				
		LED PWM 16 kHz (B) <sup>†</sup>	196	205	77%	80%				
		Reserved <sup>†</sup>	206	255	81%	100%				
Note: To change a "Control" range, you must start at value 0 and go directly to the target range value. After a pause of approximately 3 seconds, the action occurs.										
* Applicable only to SolaPix 7 software v1.3.1 and earlier. See note <a href="#">3 on page 10</a> for software compatibility details.										
<sup>†</sup> Applicable only to SolaPix 7 software v2.0.2 and later. See note <a href="#">3 on page 10</a> for software compatibility details.										

# ETC Reference Guide

## SolaPix 7 DMX Channel Map

### Flex/Macro Module

Channel	Function	Function Range	Decimal Low	Decimal High	Percent Low	Percent High	Controller Default	Unit	Range Low	Range High
1	Flex/Macro Mode	Off	0	0	0%	0%	0	N/A	N/A	N/A
		Macro 1	1	1	0%	0%				
		Macro 2	2	2	1%	1%				
		Macro 3	3	3	1%	1%				
		...	-	-	-	-				
		Macro 99	99	99	39%	39%				
		Reserved	100	255	39%	100%				
2	Flex/Macro Speed	Reverse, Fast to Slow	0	126	0%	49%	192	%	-100	100
		Stop	127	128	50%	50%				
		Forward, Slow to Fast	129	255	51%	100%				
3	Flex/Macro Crossfade	Stop to Fast	0	255	0%	100%	128	%	0	100
4	Strobe Mode	Off	0	15	0%	6%	0	N/A	N/A	N/A
		Synchronous	16	31	6%	12%				
		Random	32	47	13%	18%				
		Synchronous Random	48	63	19%	25%				
		Reserved	64	255	25%	100%				
5	Strobe	Off	0	23	0%	9%	255	Hz	0.8	31.25
		Slow to fast	24	229	9%	90%				
		Open	230	255	90%	100%				
6	Flex/Macro 1 - Red	Off to Full	0	255	0%	100%	255	%	0	100
7	Flex/Macro 1 - Green	Off to Full	0	255	0%	100%	255	%	0	100
8	Flex/Macro 1 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
9	Flex/Macro 1 - White	Off to Full	0	255	0%	100%	255	%	0	100
10	Flex/Macro 2 - Red	Off to Full	0	255	0%	100%	255	%	0	100
11	Flex/Macro 2 - Green	Off to Full	0	255	0%	100%	255	%	0	100
12	Flex/Macro 2 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
13	Flex/Macro 2 - White	Off to Full	0	255	0%	100%	255	%	0	100
14	Flex/Macro 3 - Red	Off to Full	0	255	0%	100%	255	%	0	100
15	Flex/Macro 3 - Green	Off to Full	0	255	0%	100%	255	%	0	100
16	Flex/Macro 3 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
17	Flex/Macro 3 - White	Off to Full	0	255	0%	100%	255	%	0	100

# ETC Reference Guide

## SolaPix 7 DMX Channel Map

---

### Pixel Module

Channel	Function	Function Range	Decimal Low	Decimal High	Percent Low	Percent High	Controller Default	Unit	Range Low	Range High
1	Pixel 1 - Red	Off to Full	0	255	0%	100%	255	%	0	100
2	Pixel 1 - Green	Off to Full	0	255	0%	100%	255	%	0	100
3	Pixel 1 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
4	Pixel 1 - White	Off to Full	0	255	0%	100%	255	%	0	100
5	Pixel 2 - Red	Off to Full	0	255	0%	100%	255	%	0	100
6	Pixel 2 - Green	Off to Full	0	255	0%	100%	255	%	0	100
7	Pixel 2 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
8	Pixel 2 - White	Off to Full	0	255	0%	100%	255	%	0	100
9	Pixel 3 - Red	Off to Full	0	255	0%	100%	255	%	0	100
10	Pixel 3 - Green	Off to Full	0	255	0%	100%	255	%	0	100
11	Pixel 3 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
12	Pixel 3 - White	Off to Full	0	255	0%	100%	255	%	0	100
13	Pixel 4 - Red	Off to Full	0	255	0%	100%	255	%	0	100
14	Pixel 4 - Green	Off to Full	0	255	0%	100%	255	%	0	100
15	Pixel 4 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
16	Pixel 4 - White	Off to Full	0	255	0%	100%	255	%	0	100
17	Pixel 5 - Red	Off to Full	0	255	0%	100%	255	%	0	100
18	Pixel 5 - Green	Off to Full	0	255	0%	100%	255	%	0	100
19	Pixel 5 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
20	Pixel 5 - White	Off to Full	0	255	0%	100%	255	%	0	100
21	Pixel 6 - Red	Off to Full	0	255	0%	100%	255	%	0	100
22	Pixel 6 - Green	Off to Full	0	255	0%	100%	255	%	0	100
23	Pixel 6 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
24	Pixel 6 - White	Off to Full	0	255	0%	100%	255	%	0	100
25	Pixel 7 - Red	Off to Full	0	255	0%	100%	255	%	0	100
26	Pixel 7 - Green	Off to Full	0	255	0%	100%	255	%	0	100
27	Pixel 7 - Blue	Off to Full	0	255	0%	100%	255	%	0	100
28	Pixel 7 - White	Off to Full	0	255	0%	100%	255	%	0	100

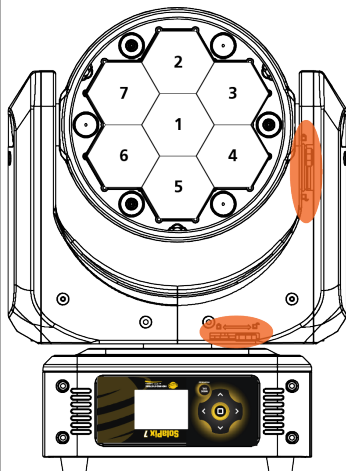


# ETC Reference Guide

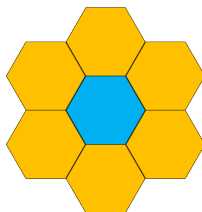
## SolaPix 7 DMX Channel Map

### Notes

- 1 Face layout: Pan = 128 DMX; Tilt = 40 DMX  
(Note how the fixture head is oriented in relation to the pan and tilt locks.)



**Pixels**



**Rings**

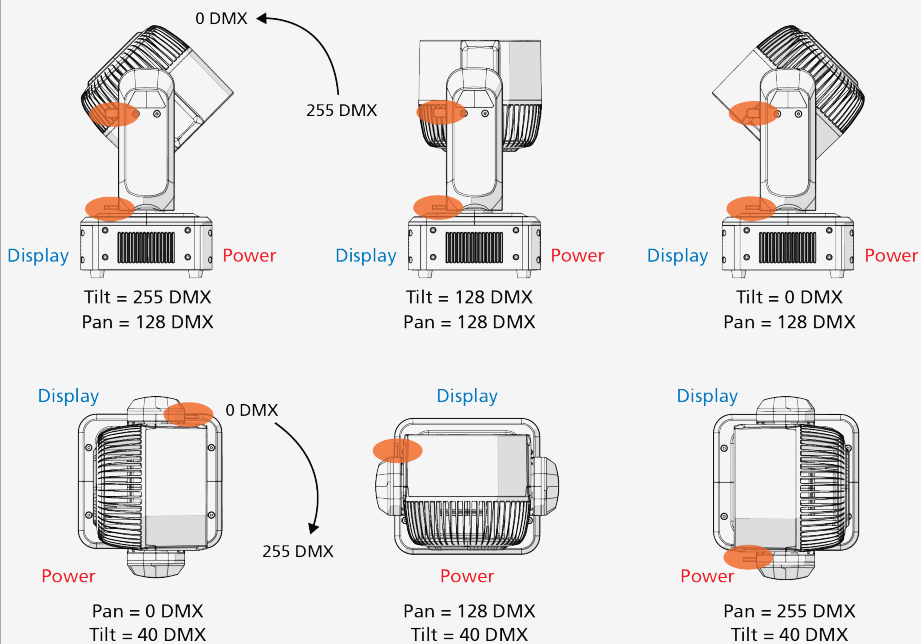
Center
Ring 1



**Sectors**

Center
Sector 1
Sector 2
Sector 3
Sector 4
Sector 5
Sector 6

- 2 **DMX Fixture Orientation**  
Tilt Movement Range: 255°  
Pan Movement Range: 540°  
Pan and tilt lock locations are highlighted in orange.



# ETC Reference Guide

## SolaPix 7 DMX Channel Map

---

3	<b>SolaPix 7 Software Compatibility</b> <p>SolaPix 7 software versions are not compatible with all SolaPix 7 fixtures.</p> <table><tr><th>Fixture Serial Number*</th><th>Compatible Software Versions</th></tr><tr><td>55099xxxxxxx</td><td>v1.3.1 and earlier<sup>†</sup></td></tr><tr><td>941022090001 and higher<sup>‡</sup></td><td>v2.0.2 and later</td></tr></table> <p>*The serial number label is located on the bottom of the fixture's upper enclosure.</p> <p><sup>†</sup>SolaPix 7 software version 1.3.1 is not backwards compatible with earlier versions of software. After you update a fixture to software version 1.3.1, you will be unable to upload software versions earlier than version 1.3.1 to that fixture.</p> <p><sup>‡</sup> These fixtures are labeled "CPU2" in the lower right corner of the UI display and below the fixture name on the bottom of the fixture's upper enclosure.</p>	Fixture Serial Number*	Compatible Software Versions	55099xxxxxxx	v1.3.1 and earlier <sup>†</sup>	941022090001 and higher <sup>‡</sup>	v2.0.2 and later
Fixture Serial Number*	Compatible Software Versions						
55099xxxxxxx	v1.3.1 and earlier <sup>†</sup>						
941022090001 and higher <sup>‡</sup>	v2.0.2 and later						
4	RDM Manufacturer ID: 0x4c52						
5	RDM Device IDs: <ul style="list-style-type: none"><li>• Base: 0x587</li><li>• Flex/Macro: 0x588</li><li>• Pixel: 0x589</li></ul>						

# ETC Reference Guide

## SolaPix 7 DMX Channel Map

---

### Revision History

Revision	Change	Release Date
I	Added LED PWM 2.4 KHz (B) and LED PWM 16 KHz (B) function ranges and two Reserved function ranges to channel 21, Control, in the Base Module for SolaPix 7 software v2.0.2 and later. Added note 3, SolaPix 7 Software Compatibility, to the Notes section. Updated the document layout to be consistent with other products' DMX channel maps.	May 2023
H	Expanded the function range of channel 12, Module Priority, in the Base Module to include Pixel, and adjusted the corresponding values accordingly.	January 2022
G	Corrected several Tilt values in the Base Module: Function Range is now 0° to 255° (was 0° to 277°), Range Low is now -127.5 (was -135), and Range High is now 127.5 (was 135). Corrected the Tilt Movement Range in Note 2 from 270° to 255°.	March 2021
F	Changed the Controller Default value for the Pan and Tilt channels from 32512 to 32767. Updated the DMX Fixture Orientation illustration to correct the "0 DMX" and "255 DMX" Pan values, which had been swapped. Removed the mSpeed information from the document.	December 2020
E	Added software version information to the document title.	August 2020
D	Added additional information to the notes for the Fan Speed channel (channel 20 in the Base Module) to clarify that the Fans Mode setting in the fixture UI is overridden by the Standard and Studio control settings.	August 2020
C	Added 5 - Color Mode to the Base Module. Added 4 - Strobe Mode and 5 - Strobe to the Flex/Macro Module. Added DMX Fixture Orientation graphic to the Notes. Added Independent Base Intensity and Master Base Intensity to the Control channel.	March 2020
B	On page 1, changed "Macro" to "Flex/Macro" and changed "Zone Selection" to "Section Selection". In the Flex Module table, changed "Zone" to "Flex/Module". Updated the Base Module table to include Ring 3 information. Updated the graphic in the Notes to add a graphic of the fixture and remove Pixel numbers from the Ring and Sector graphics.	November 2019
A	Initial release.	October 2019