

# DMX CHARTS

RDM Model ID: 0xD159

RDM Personality ID List

ID	DMX Mode	Footprint
1	BASIC	12CH
2	STANDARD	21CH
3	FX 1	28CH
4	FX 2	32CH
5	FX 3	39CH
6	EXTENDED	42CH
7	BASIC SECTORS	256CH

## DMX BASIC MODES

PARAMETER		BASIC (12ch)	STANDARD (21ch)
PIXELS LEDs	DIMMER	1	1
	DIMMER FINE	-	2
	STROBE	-	3
	RED	3	4
	RED FINE	-	5
	GREEN	4	6
	GREEN FINE	-	7
	BLUE	5	8
	BLUE FINE	-	9
	WHITE	6	10
	WHITE FINE	-	11
BEAM LEDs	DIMMER	7	12
	DIMMER FINE	-	13
	STROBE	8	14
COLORS	COLOR MACRO	9	15
	CCT	-	16
	GMT	-	17
XFADE	XFADE PROTOCOL	10	18
	XFADE TO PIXEL ENGINE	11	19
	XFADE WHITE TO COLOR	-	20
	CONTROL	12	21
HARD LED PIXELS If selected, hard led main dimmer works as master		(if choosed on menu) +49 dimmer channels	(if choosed on menu) +49 dimmer channels

## DMX ADVANCED MODES

	PARAMETER	FX 1 (28ch)	FX 2 (32ch)	FX 3 (39ch)	EXTENDED (42ch)
MASTER	DIMMER	1	1	1	1
	DIMMER FINE	2	2	2	2
	STROBE	3	3	3	3
PIXELS LEDs	DIMMER	4	4	4	4
	DIMMER FINE	5	5	5	5
	STROBE	6	6	6	6
	RED	7	7	7	7
	RED FINE	8	8	8	8
	GREEN	9	9	9	9
	GREEN FINE	10	10	10	10
	BLUE	11	11	11	11
	BLUE FINE	12	12	12	12
	WHITE	13	13	13	13
	WHITE FINE	14	14	14	14
BEAM LEDs	DIMMER	15	15	15	15
	DIMMER FINE	16	16	16	16
	STROBE	17	17	17	17
PIXELS LEDs FX	PATTERN SELECTOR	-	18	18	18
	PATTERN SPEED	-	19	19	19
	PATTERN FADE	-	20	20	20
	PATTERN TRANSITION	-	21	21	21
	PATTERN XFADE	-	22	22	22
	DIMMER	-	23	23	23
	STROBE	-	24	24	24
	RED	-	25	25	25
	GREEN	-	26	26	26
	BLUE	-	27	27	27
	WHITE	-	28	28	28
BEAM LEDs FX	PATTERN SELECTOR	18	-	29	29
	PATTERN SPEED	19	-	30	30
	PATTERN FADE	20	-	31	31
	PATTERN TRANSITION	21	-	32	32
	PATTERN XFADE	22	-	33	33
	DIMMER	23	-	34	34
	STROBE	24	-	35	35

COLORS	COLOR MACRO	25	29	36	36
	CCT	-	-	-	37
	GMP	-	-	-	38
XFADE	XFADE PROTOCOL	26	30	37	39
	XFADE TO PIXEL ENGINE	27	31	38	40
	XFADE WHITE TO COLOR	-	-	-	41
	CONTROL	28	32	39	42
BEAM LAYER If selected, hard led main dimmer works as master		(if choosed on menu) +49 dimmer ch	(if choosed on menu) +49 dimmer ch	(if choosed on menu) +49 dimmer ch	(if choosed on menu) +49 dimmer ch

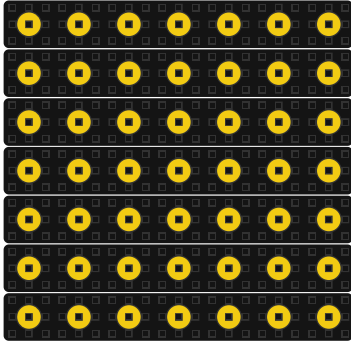
## DMX BASIC SECTORS

PARAMETER		BASIC SECTORS (256ch)
PIXELS LAYER	DIMMER	1
	DIMMER FINE	2
	STROBE	3
SECTORS	SECTOR 1 RGBW	4
	SECTOR 2 RGBW	8
	[...]	...
	SECTOR 48 RGBW	192
	SECTOR 49 RGBW	196
BEAM LAYER	DIMMER	200
	DIMMER FINE	201
	STROBE	202
SECTORS	LED 1	203
	[...]	...
	LED 49	251
COLORS	CCT	252
	GMP	253
XFADE	XFADE TO PIXEL ENGINE	254
	XFADE WHITE TO COLOR	255
	CONTROL	256

## PIXEL DEFINITION

The fixture offers multiple layers of LED control, each with its own configuration, channel mapping, and DMX settings.

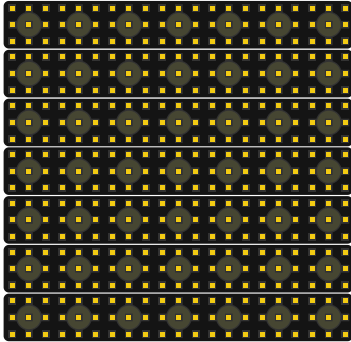
The DMX modes selectable in the PIXELS LAYER menu, used as a pixel engine, have independent DMX settings. These can be set to Follow Fixture (to be appended after the main mode and Beam Layer, if active) or configured to operate under a different controller, such as a media server, using a separate protocol (e.g., main and beam on DMX with a console, and pixels on ArtNet with a media server).



### BEAM LAYER

Consists of 49 warm white LEDs arranged in a 7x7 grid. Each LED is controlled by a single dimmer channel.

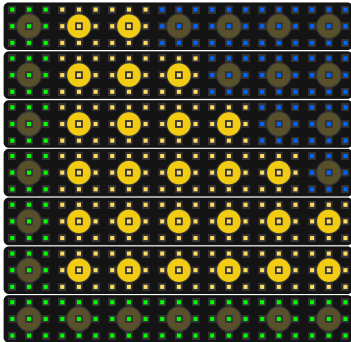
- **DMX Channels:** 49 (1 per LED).
- **Channel Order:** Sequential from left to right, top to bottom.



### PIXELS LAYER

Contains 441 RGBW LEDs arranged in a 21x21 grid, with each LED controlled by four channels (RGBW).

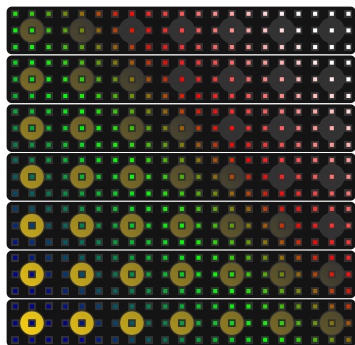
- **DMX Channels:** 1,764 (4 per LED).
- **Channel Order:** Sequential from left to right, top to bottom.



### 49S MODE

The panel is divided into 49 sectors, each containing 3x3 Pixel LEDs and one Beam LED. Each sector operates in RGBW, with the white channel controlling both the Pixel LEDs in the sector and the Beam LED.

- **DMX Channels:** 196 (4 per sector).
- **Channel Order:** Sequential by sector from left to right, top to bottom.



## EXTENDED PIXELS MODE

### Pixels Mode Only

Available exclusively as a pixel engine.

Provides individual control of all 441 Pixel LEDs in RGBW. Each LED is managed by four channels (RGBW).

- **DMX Channels:** 1,764 (4 per LED).
- **Channel Order:** Sequential from left to right, top to bottom, covering all 441 pixels in the 21x21 grid.

### Pixels + Beam Mode

Available only when no main mode is selected (PIXELS ONLY in the menu).

Combines control of the 441 Pixel LEDs with the 49 Beam LEDs.

Pixel LEDs are controlled individually in RGBW, followed by sequential control of each Beam LED in warm white.

- **DMX Channels:** 1,813 (1,764 for Pixels + 49 for Beam).
- **Channel Order:**
  - **Pixels:** Sequential from left to right, top to bottom, covering all 441 LEDs in the 21x21 grid.
  - **Beam LEDs:** Sequential from left to right, top to bottom, covering all 49 LEDs in the 7x7 grid, added after the Pixels in the DMX table.

CHANNEL DEFINITION

Dimmer					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
Dimmer	0	255	0	65535	Default @ 0 (Linear Dimmer 0 - 100%)

Strobe					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
Open	0	4	-	-	Default @ 255
Strobe (slow to fast)	5	44	-	-	
Open	45	46	-	-	
Pulse In (slow to fast)	47	86	-	-	
Open	87	88	-	-	
Pulse Out (slow to fast)	89	128	-	-	
Close	129	130	-	-	Random flash on all fixture
Random (slow to fast)	131	170	-	-	
Open	171	172	-	-	
Random single pixels (slow to fast)	173	212	-	-	Flash on random pixels
Open	213	214	-	-	
Spikers (slow to fast)	215	254	-	-	Flash on low light
Open	255	255	-	-	

Colors (RED - GREEN - BLUE - WHITE)					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
Color	0	255	0	65535	Linear 0 - 100% Default @ 255 (8bit) / 65535 (16bit)

Pattern Selector					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
No pattern	0	9	-	-	Default @ 0
Pattern 1	10	14	-	-	
Pattern 2	15	19	-	-	
Pattern 3	20	24	-	-	
Pattern 4	25	29	-	-	
Pattern 5	30	34	-	-	
Pattern 6	35	39	-	-	
Pattern 7	40	44	-	-	
Pattern 8	45	49	-	-	
Pattern 9	50	54	-	-	

### Pattern Selector

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Pattern 10	55	59	-	-	
Pattern 11	60	64	-	-	
Pattern 12	65	69	-	-	
Pattern 13	70	74	-	-	
Pattern 14	75	79	-	-	
Pattern 15	80	84	-	-	
Pattern 16	85	89	-	-	
Pattern 17	90	94	-	-	
Pattern 18	95	99	-	-	
Pattern 19	100	104	-	-	
Pattern 20	105	109	-	-	
Pattern 21	110	114	-	-	
Pattern 22	115	119	-	-	
Pattern 23	120	124	-	-	
RESERVED	125	255	-	-	

### Pattern Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Indexing	0	127	-	-	Default @ 0
CW from fast to slow	128	190	-	-	
Stop	191	192	-	-	
CCW from slow to fast	193	255	-	-	

### Pattern Fade

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0% - 100% (From 0 ms to 5000 ms)	0	255	-	-	Default @ 0 Sets the fade time for LEDs in an effect. For example, with the channel set to 1 second, pixels transitioning from on to off will fade out over 1 second.

### Pattern Transition

Function	8 bit value		16 bit value		Note
	From	To	From	To	
No fade	0	0	-	-	Default @ 0 Sets the fade time for transitions between effects. For example, with the channel set to 1 second, transitioning from one effect to another will take 1 second to fade.
0% - 100% (From 0 ms to 5000 ms)	1	255	-	-	

### Pattern Xfade

Function	8 bit value		16 bit value		Note
	From	To	From	To	
FX opacity 0%	0	0	-	-	Default @ 0 At 0, only the background color is visible. At 255, the pixel effect fully overlays the background. Values between 0 and 255 gradually blend the pixel effect with the background color.
Fx opacity 0% - 100%	1	255	-	-	

### Color Macro

Function	8 bit value		16 bit value		Note
	From	To	From	To	
No function	0	1	-	-	Default @ 0
Red	2	3	-	-	
Green	4	5	-	-	
Blue	6	7	-	-	
Cyan	8	9	-	-	
Magenta	10	11	-	-	
Yellow	12	13	-	-	
Dirty white	14	15	-	-	
Alice blue	16	17	-	-	
Congo blue	18	19	-	-	
Dark steel blue	20	21	-	-	
Deep lavender	22	23	-	-	
Lilac ting	24	25	-	-	
Daylight blue	26	27	-	-	
Flame red	28	29	-	-	
Bastard amber	30	31	-	-	
Deep orange	32	33	-	-	
Pale gold	34	35	-	-	
Apricot	36	37	-	-	
Bright blue	38	39	-	-	
Primary green	40	41	-	-	
Special lavender	42	43	-	-	
Pale lavender	44	45	-	-	
Deep golden amber	46	47	-	-	
Medium blue	48	49	-	-	
Bright pink	50	51	-	-	
Mauve	52	53	-	-	
Dark green	54	55	-	-	
Lee green	56	57	-	-	
Dark blue	58	59	-	-	
Light blue	60	61	-	-	
Steel blue	62	63	-	-	
Medium blue-green	64	65	-	-	
Peacock blue	66	67	-	-	
Magenta	68	69	-	-	
Dark pink	70	71	-	-	
Middle rose	72	73	-	-	
Light salmon	74	75	-	-	
English rose	76	77	-	-	
Light rose	78	79	-	-	
Orange	80	81	-	-	



Color Macro

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Deep amber	82	83	-	-	
Straw	84	85	-	-	
Light amber	86	87	-	-	
Spring yellow	88	89	-	-	
Dark yellow green	90	91	-	-	
Just blue	92	93	-	-	
Sky blue	94	95	-	-	
Lavender	96	97	-	-	
Light lavender	98	99	-	-	
Pink carnation	100	101	-	-	
Medium pink	102	103	-	-	
Light pink	104	105	-	-	
Sunset red	106	107	-	-	
Dark amber	108	109	-	-	
Gold amber	110	111	-	-	
Medium amber	112	113	-	-	
Fire	114	115	-	-	
Surprise peach	116	117	-	-	
Straw tint	118	119	-	-	
Medium yellow	120	121	-	-	
Lee minus green	122	123	-	-	
Pale gold	124	125	-	-	
Orange	126	127	-	-	
Deep straw	128	129	-	-	
Rose purple	130	131	-	-	
Deep purple	132	133	-	-	
Soft green	134	135	-	-	
Reserved	136	209	-	-	
2700k	210	211	-	-	
2800k	212	213	-	-	
3000k	214	215	-	-	
3200k	216	217	-	-	
3400k	218	219	-	-	
3600k	220	221	-	-	
3800k	222	223	-	-	
4000k	224	225	-	-	
4200k	226	227	-	-	
4400k	228	229	-	-	
4600k	230	231	-	-	
4800k	232	233	-	-	
5000k	234	235	-	-	
5200k	236	237	-	-	
5400k	238	239	-	-	
5600k	240	241	-	-	
6000k	242	243	-	-	
6500k	244	245	-	-	
7000k	246	247	-	-	
8000k	248	249	-	-	
9000k	250	251	-	-	
10000k	252	253	-	-	
Full on	254	255	-	-	

# CCT (2800K - 10000K)

Function		8 bit value		16 bit value		Note
CCT(K) From	CCT(K) To	From	To	From	To	
2800	2900	0	4	0	910	Default @ 0
2900	3000	4	7	910	1820	
3000	3100	7	11	1820	2731	
3100	3200	11	14	2731	3641	
3200	3300	14	18	3641	4551	
3300	3400	18	21	4551	5461	
3400	3500	21	25	5461	6371	
3500	3600	25	28	6371	7282	
3600	3700	28	32	7282	8192	
3700	3800	32	35	8192	9102	
3800	3900	35	39	9102	10012	
3900	4000	39	43	10012	10923	
4000	4100	43	46	10923	11833	
4100	4200	46	50	11833	12743	
4200	4300	50	53	12743	13653	
4300	4400	53	57	13653	14563	
4400	4500	57	60	14563	15474	
4500	4600	60	64	15474	16384	
4600	4700	64	67	16384	17294	
4700	4800	67	71	17294	18204	
4800	4900	71	74	18204	19114	
4900	5000	74	78	19114	20025	
5000	5100	78	81	20025	20935	
5100	5200	81	85	20935	21845	
5200	5300	85	89	21845	22755	
5300	5400	89	92	22755	23665	
5400	5500	92	96	23665	24576	
5500	5600	96	99	24576	25486	
5600	5700	99	103	25486	26396	
5700	5800	103	106	26396	27306	
5800	5900	106	110	27306	28216	
5900	6000	110	113	28216	29127	
6000	6100	113	117	29127	30037	
6100	6200	117	120	30037	30947	
6200	6300	120	124	30947	31857	
6300	6400	124	128	31857	32768	
6400	6500	128	131	32768	33678	
6500	6600	131	135	33678	34588	
6600	6700	135	138	34588	35498	
6700	6800	138	142	35498	36408	
6800	6900	142	145	36408	37319	
6900	7000	145	149	37319	38229	
7000	7100	149	152	38229	39139	
7100	7200	152	156	39139	40049	
7200	7300	156	159	40049	40959	

### CCT (2800K - 10000K)

Function		8 bit value		16 bit value		Note
CCT(K) From	CCT(K) To	From	To	From	To	
7300	7400	159	163	40959	41870	
7400	7500	163	166	41870	42780	
7500	7600	166	170	42780	43690	
7600	7700	170	174	43690	44600	
7700	7800	174	177	44600	45510	
7800	7900	177	181	45510	46421	
7900	8000	181	184	46421	47331	
8000	8100	184	188	47331	48241	
8100	8200	188	191	48241	49151	
8200	8300	191	195	49151	50061	
8300	8400	195	198	50061	50972	
8400	8500	198	202	50972	51882	
8500	8600	202	205	51882	52792	
8600	8700	205	209	52792	53702	
8700	8800	209	213	53702	54613	
8800	8900	213	216	54613	55523	
8900	9000	216	220	55523	56433	
9000	9100	220	223	56433	57343	
9100	9200	223	227	57343	58253	
9200	9300	227	230	58253	59164	
9300	9400	230	234	59164	60074	
9400	9500	234	237	60074	60984	
9500	9600	237	241	60984	61894	
9600	9700	241	244	61894	62804	
9700	9800	244	248	62804	63715	
9800	9900	248	251	63715	64625	
9900	10000	251	255	64625	65535	

### GMP

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	$\Delta UV$ from -0.025 to 0.00
Neutral / No Effect	127	128	-	-	
1% to 99%	129	253	-	-	$\Delta UV$ from 0.00 to +0.025
Full Plus Green	254	255	-	-	

Crossfade Hierarchy	
Following order must be read from bottom to top. First Level is CCT, Second level is Color Mix, Third level is Pixel Engine (ETH1 in case of double Protocol used), Fourth level is Pixel Engine (ETH2)	
ETH1 to ETH2	Fixture must be running a Pixel Engine using two protocols (Pixel Address -> Artnet+sAcn) Crossfade is inhibited in any other case.
Color to Pixel Engine	Fixture must be running a Pixel Engine. Pixel Engine is allocated on separated DMX Address. Crossfade is inhibited in any other case.
CCT to Color Mix	Crossfade running on Fixture Engine. Crossfades from CCT to Color Mix level. FXs and Tour FXs are running on Color Mix level.

#### Crossfade from ETH1 to ETH2

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear Crossfade	0	255	0	65535	Default @ 0 Crossfade from Pixel Engine running on first ETH protocol to second Pixel Engine running on second ETH protocol

#### Crossfade from Color to Pixel Engine

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear Crossfade	0	255	0	65535	Default @ 0 Crossfade from Color Layer to Pixel Engine

#### Crossfade from CCT to ColorMix

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear Crossfade	0	255	0	65535	Default @ 255 Crossfade from CCT Layer to ColorMix

### Control Channel

Function		8 bit value		Note
		From	To	
	No Function / Safe	0	1	Default @ 0
DISPLAY	ON	2	3	Hold 3s to take function
	10s	4	5	
	20s	6	7	
	30s	8	9	
FLIP DISPLAY	ON	10	11	
	OFF	12	13	
KEY LOCK	ON	14	15	
	OFF	16	17	
DIMMER CURVE	LINEAR	18	19	
	S-CURVE	20	21	
	SQUARE LAW	22	23	
	INVERSE SQUARE LAW	24	25	
	HIGH RES@LOW	26	27	
DIMMER SPEED PIXELS	AUTO	28	29	
	FAST	30	31	
	MEDIUM	32	33	
	SLOW	34	35	
	OFF	36	37	
DIMMER CURVE BEAM	LINEAR	38	39	
	S-CURVE	40	41	
	SQUARE LAW	42	43	
	INVERSE SQUARE LAW	44	45	
	HIGH RES@LOW	46	47	
	TUNGSTEN	48	49	
DIMMER SPEED BEAM	AUTO	50	51	
	FAST	52	53	
	MEDIUM	54	55	
	SLOW	56	57	
	OFF	58	59	
DIMMER	FADE OFF END	60	61	
	SNAP OFF END	62	63	
WHITE POINT	3200K	64	65	
	4000K	66	67	
	5600K	68	69	
	6000K	70	71	
	8000K	72	73	
	OFF	74	75	
LED FREQUENCY	600HZ	76	77	
	1200HZ	78	79	
	2000HZ	80	81	
	4000HZ	82	83	
	6000HZ	84	85	
	25KHZ	86	87	

### Control Channel

Function		8 bit value		Note
		From	To	
DMX FAULT	HOLD	88	89	
	BLACKOUT	90	91	
	STAND ALONE	92	93	
	EMERGENCY	94	95	
INVERT MAPPING	OFF	96	97	
	CW 90°	98	99	
	CW 180 °	100	101	
	CW 270°	102	103	
STANDALONE	MASTER	104	105	
	MASTER NO DMX	106	107	
	SLAVE	108	109	
	PIXELS LAYER TOUR FX	110	111	
	PIXELS LAYER CCT	112	113	
	PIXELS LAYER HSI	114	115	
	PIXELS LAYER FIXED COLORS	116	117	
	PIXELS LAYER WHITE PRESETS	118	119	
	PIXELS LAYER OFF	120	121	
	PIXELS LAYER COLOR MACRO	122	123	
	PIXELS LAYER MANUAL COLORS	124	125	
	BEAM LAYER OFF	126	127	
	BEAM LAYER TOUR FX	128	129	
	BEAM LAYER STATIC	130	131	
POWER MNG	DYNAMIC	132	133	
	CNST 50	134	135	
	CNST 70-30	136	137	
	CNST 30-70	138	139	
	Reserved	140	249	
	Reset dimmer setting to defaults	250	251	
	Reset all channel controlled	252	253	
	Reserved	254	255	