

LANCER

DMX Protocol Specification

V1.0

05/2024

Overview

8 bit 1 channel per function	16 bit 2 channels per function
DMX mode 2 CCT	DMX mode 7 CCT
DMX mode 22 Effect	

Mode 2: CCT, 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0-255	0-100	Dimmer closed → open
2	0-255	0-100	Color temperature CCT 2800K-6500K
3			Null
4	0-9 10-57 58-105 106-153 154-201 181-250 251-255	0-3 4-22 23-41 42-60 61-78 79-97 99-100	Fan control Use Fan Mode Setting of Fixture Menu Low Fan Mode Variable Fan Mode High Fan Mode Normal Full speed Fan Mode Fan Off
5-7			Reserved for future use

Mode 7: CCT, 16bit resolution per function

DMX Channel		Value	Percent	Function
HI	LO			
1	2	0-65535	0-100	Dimmer closed → open
3	4	0-65535	0-100	Color temperature CCT 2800 K → 6500 K
5	6			Null
7		0-9	0-3	Fan control Use Fan Mode Setting of Fixture Menu Low Fan Mode Variable Fan Mode High Fan Mode Normal Full speed Fan Mode Fan Off
Note: Fan Mode reverts to fixture menu setting, when DMX signal is lost.		10-57	4-22	
		58-105	23-41	
		106-153	42-60	
		154-201	61-78	
		181-250	79-97	
		251-255	99-100	
8-10				Reserved for future use

Mode 22: Effects, 8 bit resolution per function

DMX Channel	Value	Percent	Function
1	0-255	0-100	Master Intensity 0 % (closed) → 100% (open)
2	0-9 10-19 20-29 30-39 40-49 50-59 60-69 70-79 80-89 90-99 100-109 110-119 120-129 130-139 140-149 150-159 160-169 170-179 180-255	0-4 5-7 8-11 12-15 16-19 20-23 24-27 28-31 32-35 36-39 40-43 44-47 48-51 52-55 56-58 59-62 63-66 67-70 71-100	Effect Selection No Effect No Effect Candle Clouds Passing No Effect No Effect No Effect Fire Fireworks Light Strobe Lightning Paparazzi No Effect Television Explosion No Effect No Effect Welding Reserved for future use
3	0-255	0-100	Effect Parameter 1 See table below
4	0-255	0-100	Effect Parameter 2 See table below
5	0-255	0-100	Effect Parameter 3 See table below
6	0-255	0-100	Effect Parameter 4 (Reserved) See table below
7	0-255	0-100	Effect Parameter 5 (Reserved) See table below
8	0-255	0-100	Effect Parameter 6 (Reserved) See table below
9	0-255	0-100	Effect Parameter 7 (Reserved) See table below

Mode 22: Effects, 8 bit resolution per function, continued

DMX Channel	Value	Percent	Function
10 Note: Fan Mode reverts to fixture menu setting, when DMX signal is lost.	0-9	0-3	Fan control Use Fan Mode Setting of Fixture Menu
	10-57	4-22	Low Fan Mode
	58-105	23-41	Variable Fan Mode
	106-153	42-60	High Fan Mode
	154-201	61-78	Normal
	181-250	79-97	Full speed Fan Mode
	251-255	99-100	Fan Off
11-13			Reserved for future use

Candle

Effect Parameter	Value 8 bit	Percent	Function
1	0-84	0-33	CCT Range Not continuous, set range for random generation 4000 → 4400 K
	85-170	34-66	4400 → 4800 K
	171-255	67-100	4800 → 5200 K
2	0-255	0-100	Speed 0 → 120 changes / min

Clouds Passing

Effect Parameter	Value 8 bit	Percent	Function
1	0-255	0-100	Offset Offset Number 0 – 50 Every 5 DMX values is a new offset
2	0-127	0-50	Speed 2 x Slower → Default Speed
	128- 255	51-100	Default Speed → 2 x Faster

Fire

Effect Parameter	Value 8 bit	Percent	Function
1	0-84 85-170 171-255	0-33 34-66 67-100	CCT Range Not continuous, set range for random generation 4000 → 4400 K 4400 → 4800 K 4800 → 5200 K
2	0 - 255	0-100	Speed 0 → 180 changes / min

Fireworks

Effect Parameter	Value 8 bit	Percent	Function
1	0-84 85-170 171-255	0-33 34-66 67-100	CCT Range Not continuous, set range for random generation 4000 → 4400 K 4400 → 4800 K 4800 → 5200 K
2	0-255	0-100	Speed 10 → 0,5 s between fireworks

Strobe

Effect Parameter	Value 8 bit	Percent	Function
1	0-255	0-100	Speed 1 → 25 flashes / second
2	0-255	0-100	Color Temperature CCT 2800K-6500K

Lightning

Effect Parameter	Value 8 bit	Percent	Function
1	0-254 255	0-99 100	Frequency 2 → 14 lightning strikes set Random
2	0-254 255	0-99 100	Speed 0 → 10 flashes / second Random
3	0-255	0-100	Color Temperature CCT 2800 → 6500 K

Paparazzi

Effect Parameter	Value 8 bit	Percent	Function
1	0-255	0-100	Frequency 6 → 120 Flashes / min
2	0-127 128-255	0-50 51-100	Flash Type Flash Bulb Modern Flash
3	0-255	0-100	Color Temperature CCT 2800 → 6500 K

Television

Effect Parameter	Value 8 bit	Percent	Function
1	0-84 85-170 171-255	0-33 34-66 67-100	CCT Range Not continuous, set range for random generation 4000 → 4400 K 4400 → 4800 K 4800 → 5200 K
2	0-255	0-100	Speed 4 → 24 changes / min

Explosion

Effect Parameter	Value 8 bit	Percent	Function
1	0-255	0-100	Decay Decay 4 → 0.5 seconds
2	250-255	0-100	Trigger Manual (bump intensity to explode))
3	0-255	0-100	Color Temperature CCT 2800 → 6500 K

Welding

Effect Parameter	Value 8 bit	Percent	Function
1	0 - 255	0 - 100	Speed Slow → fast
2	0 - 255	0 - 100	Min Intensity Level 0% → 75% minimum intensity level
3	0 - 255	0 - 100	Color Temperature CCT 2800 → 6500 K

