DMX REFERENCE

84 Strobe

84 RGB Strobe 20W

Kadence



Manufacturer	Kadence
GDTF file	Kadence_84_Strobe_85120.gdtf
GDTF revision	Ver 8 · 2025-02-01
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1 About this manual

This document describes the 84 RGB Strobe 20W by Kadence. It was compiled from the GDTF file Kadence_84_Strobe_85120.gdtf from the GDTF-Share library.

File revision: “Ver 8”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by Kadence; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Power consumption	1,300 W
Weight	6 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 2 - RGBW	17	30	1, 18, 35, 52, ...

No light? Check these channels

- Mode 2 - RGBW: CH 1 Dimmer above 0


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

3 Safety instructions


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 100–240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

⚠ **CAUTION**

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

⚠ **WARNING**

- This device produces very intense flashes of light.
- Flash rates of about 3 to 30 flashes per second carry the highest risk for people with photosensitive epilepsy.
- Do not aim the device into the eyes of the audience or performers at close range.
- At public events, always give clear advance notice that strobe effects will be used.

4 Installation

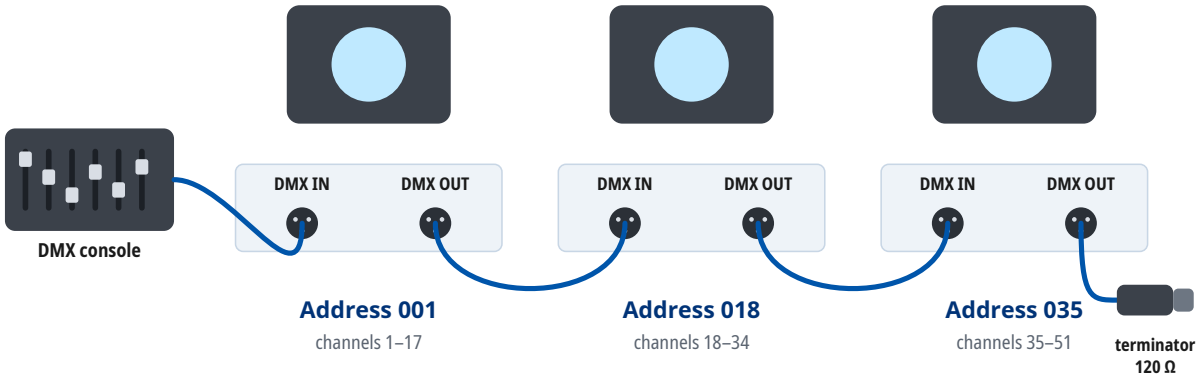
⚠ **WARNING**

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 6 kg.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.
- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

5 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

DMX line



Mode 2 - RGBW: every unit occupies 17 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

6 Operation

Setting the DMX address

- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Mode 2 - RGBW”: 17.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “Mode 2 - RGBW”, you can use, for example, the start addresses 1, 18, 35, 52.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

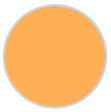
7 Functions at a glance

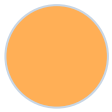
Functions in each DMX mode

	Mode 2 - RGBW 17 channels
Dimmer	1
Shutter / strobe	11
Color mixing	2–5, 14–17
Color wheel	6
Effects / macros	7–10, 12, 13

Color wheel

1
Color Macro: Open
DMX 0

2 
White 2700 K
DMX 1

3 
White 2700 K (Halogen lamp mode)
DMX 3

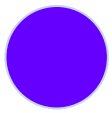
4
White 3200 K
DMX 4

5
White 3200 K (Halogen lamp mode)
DMX 6

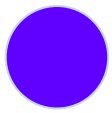
6
White 4200 K
DMX 7

7
White 5600 K
DMX 10

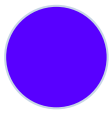
8
White 8000 K
DMX 13

9 
Blue
DMX 16

10 
Blue + Green >> 0...38
DMX 17

11 
Blue + Green >> 01
DMX 18

12 
Blue + Green >> 02
DMX 19

13 
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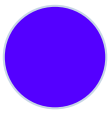
14 
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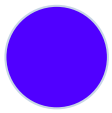
15 
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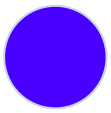
DMX 22

16 
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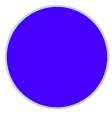
DMX 23

17 
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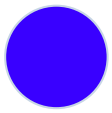
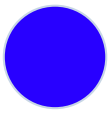
DMX 24

18 
Blue + Green >> 08
DMX 25

19 
Blue + Green >> 09
DMX 26

20 
Blue + Green >> 10
DMX 27

21 
Blue + Green >> 11
DMX 28

22 
Blue + Green >> 12
DMX 29

23 
Blue + Green >> 13
DMX 30

24 
Blue + Green >> 14
DMX 31

25 
Blue + Green >> 15
DMX 32

26 
Blue + Green >> 16
DMX 33

27 
Blue + Green >> 17
DMX 34

28 
Blue + Green >> 18
DMX 35

29 
Blue + Green >> 19
DMX 36

30 
Blue + Green >> 20
DMX 37

31 
Blue + Green >> 21
DMX 38

32 
Blue + Green >> 22
DMX 39

33 
Blue + Green >> 23
DMX 40

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Blue + Green >> 24
DMX 41

35 
Blue + Green >> 25
DMX 42

36 
Blue + Green >> 26
DMX 43

37 
Blue + Green >> 27
DMX 44

38 
Blue + Green >> 28
DMX 45

39 
Blue + Green >> 29
DMX 46

40 
Blue + Green >> 30
DMX 47

41
Blue + Green >> 31
DMX 48

42
Blue + Green >> 32
DMX 49

43
Blue + Green >> 33
DMX 50

44
Blue + Green >> 34
DMX 51

45
Blue + Green >> 35
DMX 52

46
Blue + Green >> 36
DMX 53

47
Blue + Green >> 37
DMX 54

48
Blue + Green >> 38
DMX 55

49 
LightBlue
DMX 56

50 
Green + Blue << 0...38
DMX 57

51 
Green + Blue << 01
DMX 58

52 
Green + Blue << 02
DMX 59

53 
Green + Blue << 03
DMX 60

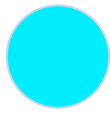
54 
Green + Blue << 04
DMX 61

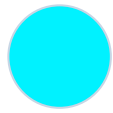
55 
Green + Blue << 05
DMX 62

56 
Green + Blue << 06
DMX 63

57 
Green + Blue << 07
DMX 64

58 
Green + Blue << 08
DMX 65

59 
Green + Blue << 09
DMX 66

60 
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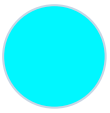
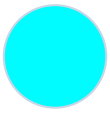
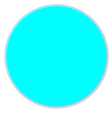
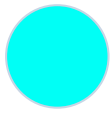
DMX 67

61 
Green + Blue << 11
DMX 68

62 
Green + Blue << 12
DMX 69

63 
Green + Blue << 13
DMX 70

64 
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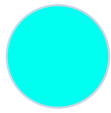
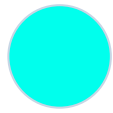
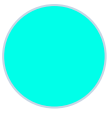
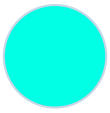
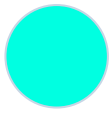
65 
Green + Blue << 15
DMX 72

66 
Green + Blue << 16
DMX 73

67 
Green + Blue << 17
DMX 74

68 
Green + Blue << 18
DMX 75

69 
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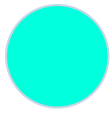
DMX 76

70 
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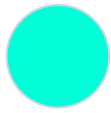
DMX 77

71 
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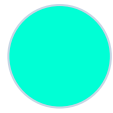
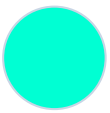
DMX 78

72 
Green + Blue << 22
DMX 79

73 
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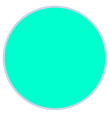
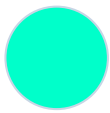
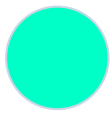
DMX 80

74 
Green + Blue << 24
DMX 81

75 
Green + Blue << 25
DMX 82

76 
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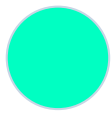
77 
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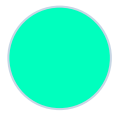
DMX 84

78 
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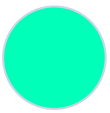
79 
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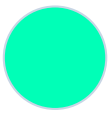
80 
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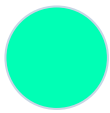
81 
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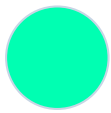
82 
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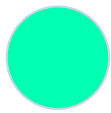
83 
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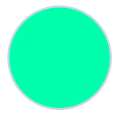
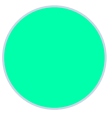
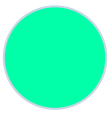
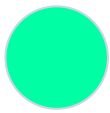
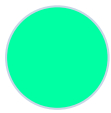
84 
Green + Blue << 34
DMX 91

85 
Green + Blue << 35
DMX 92

86 
Green + Blue << 36
DMX 93

87 
Green + Blue << 37
DMX 94

88 
Green + Blue << 38
DMX 95

89
Green
DMX 96

90
Green + Red >> 0...37
DMX 97

91
Green + Red >> 01
DMX 98

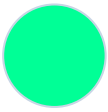
92
Green + Red >> 02
DMX 99

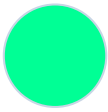
93
Green + Red >> 03
DMX 100

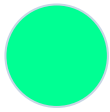
94
Green + Red >> 04
DMX 101

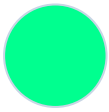
95
Green + Red >> 05
DMX 102

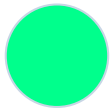
96
Green + Red >> 06
DMX 103

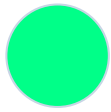
97 
Green + Red >> 07
DMX 104

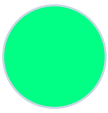
98 
Green + Red >> 08
DMX 105

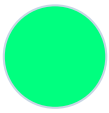
99 
Green + Red >> 09
DMX 106

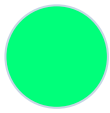
100 
Green + Red >> 10
DMX 107

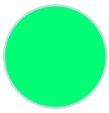
101 
Green + Red >> 11
DMX 108

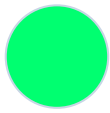
102 
Green + Red >> 12
DMX 109

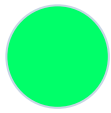
103 
Green + Red >> 13
DMX 110

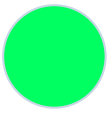
104 
Green + Red >> 14
DMX 111

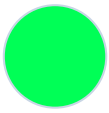
105 
Green + Red >> 15
DMX 112

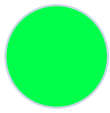
106 
Green + Red >> 16
DMX 113

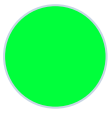
107 
Green + Red >> 17
DMX 114

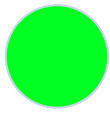
108 
Green + Red >> 18
DMX 115

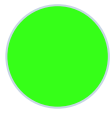
109 
Green + Red >> 19
DMX 116

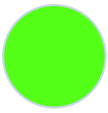
110 
Green + Red >> 20
DMX 117

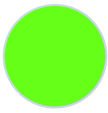
111 
Green + Red >> 21
DMX 118

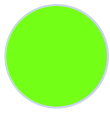
112 
Green + Red >> 22
DMX 119

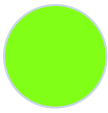
113 
Green + Red >> 23
DMX 120

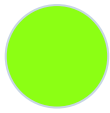
114 
Green + Red >> 24
DMX 121

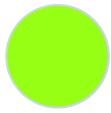
115 
Green + Red >> 25
DMX 122

116 
Green + Red >> 26
DMX 123

117 
Green + Red >> 27
DMX 124

118 
Green + Red >> 28
DMX 125

119 
Green + Red >> 29
DMX 126

120 
Green + Red >> 30
DMX 127

121 
Green + Red >> 31
DMX 128

122
Green + Red >> 32
DMX 129

123
Green + Red >> 33
DMX 130

124
Green + Red >> 34
DMX 131

125
Green + Red >> 35
DMX 132

126
Green + Red >> 36
DMX 133

127
Green + Red >> 37
DMX 134

128
Yellow
DMX 135

129
Red + Green << 0...38
DMX 136

130
Red + Green << 01
DMX 137

131
Red + Green << 02
DMX 138

132
Red + Green << 03
DMX 139

133
Red + Green << 04
DMX 140

134
Red + Green << 05
DMX 141

135
Red + Green << 06
DMX 142

136
Red + Green << 07
DMX 143

137
Red + Green << 08
DMX 144

138
Red + Green << 09
DMX 145

139
Red + Green << 10
DMX 146

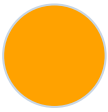
140
Red + Green << 11
DMX 147

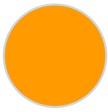
141
Red + Green << 12
DMX 148

142
Red + Green << 13
DMX 149

143
Red + Green << 14
DMX 150

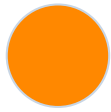
144
Red + Green << 15
DMX 151

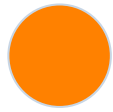
145 
Red + Green << 16
DMX 152

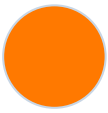
146 
Red + Green << 17
DMX 153

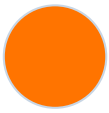
147 
Red + Green << 18
DMX 154

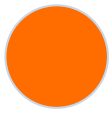
148 
Red + Green << 19
DMX 155

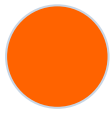
149 
Red + Green << 20
DMX 156

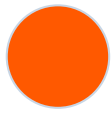
150 
Red + Green << 21
DMX 157

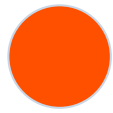
151 
Red + Green << 22
DMX 158

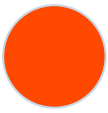
152 
Red + Green << 23
DMX 159

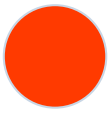
153 
Red + Green << 24
DMX 160

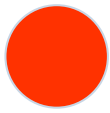
154 
Red + Green << 25
DMX 161

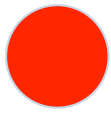
155 
Red + Green << 26
DMX 162

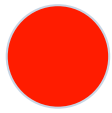
156 
Red + Green << 27
DMX 163

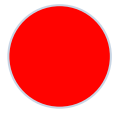
157 
Red + Green << 28
DMX 164

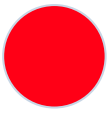
158 
Red + Green << 29
DMX 165

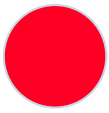
159 
Red + Green << 30
DMX 166

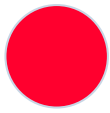
160 
Red + Green << 31
DMX 167

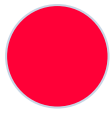
161 
Red + Green << 32
DMX 168

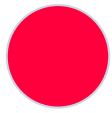
162 
Red + Green << 33
DMX 169

163 
Red + Green << 34
DMX 170

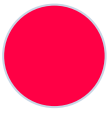
164 
Red + Green << 35
DMX 171

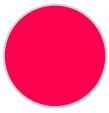
165 
Red + Green << 36
DMX 172

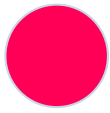
166 
Red + Green << 37
DMX 173

167 
Red + Green << 38
DMX 174

168 
Red
DMX 175

169 
Red + Blue >> 0...38
DMX 176

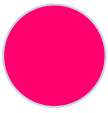
170 
Red + Blue >> 01
DMX 177

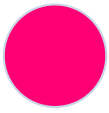
171 
Red + Blue >> 02
DMX 178

172 
Red + Blue >> 03
DMX 179

173 
Red + Blue >> 04
DMX 180

174 
Red + Blue >> 05
DMX 181

175 
Red + Blue >> 06
DMX 182

176 
Red + Blue >> 07
DMX 183

177 
Red + Blue >> 08
DMX 184

178 
Red + Blue >> 09
DMX 185

179 
Red + Blue >> 10
DMX 186

180 
Red + Blue >> 11
DMX 187

181 
Red + Blue >> 12
DMX 188

182 
Red + Blue >> 13
DMX 189

183 
Red + Blue >> 14
DMX 190

184 
Red + Blue >> 15
DMX 191

185
Red + Blue >> 16
DMX 192

186
Red + Blue >> 17
DMX 193

187
Red + Blue >> 18
DMX 194

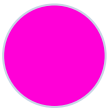
188
Red + Blue >> 19
DMX 195

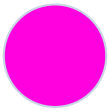
189
Red + Blue >> 20
DMX 196

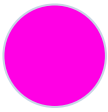
190
Red + Blue >> 21
DMX 197

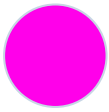
191
Red + Blue >> 22
DMX 198

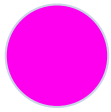
192
Red + Blue >> 23
DMX 199

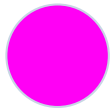
193 
Red + Blue >> 24
DMX 200

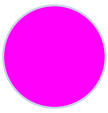
194 
Red + Blue >> 25
DMX 201

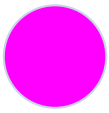
195 
Red + Blue >> 26
DMX 202

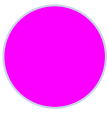
196 
Red + Blue >> 27
DMX 203

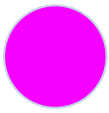
197 
Red + Blue >> 28
DMX 204

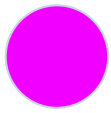
198 
Red + Blue >> 29
DMX 205

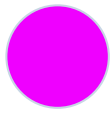
199 
Red + Blue >> 30
DMX 206

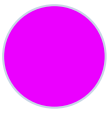
200 
Red + Blue >> 31
DMX 207

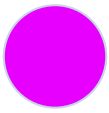
201 
Red + Blue >> 32
DMX 208

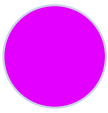
202 
Red + Blue >> 33
DMX 209

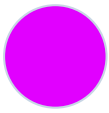
203 
Red + Blue >> 34
DMX 210

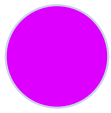
204 
Red + Blue >> 35
DMX 211

205 
Red + Blue >> 36
DMX 212

206 
Red + Blue >> 37
DMX 213

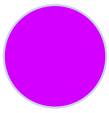
207 
Red + Blue >> 38
DMX 214

208 
Magenta
DMX 215

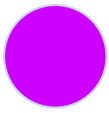
209 
Blue + Red << 0...30
DMX 216

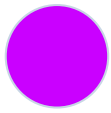
210 
Blue + Red << 01
DMX 217

211 
Blue + Red << 02
DMX 218

212 
Blue + Red << 03
DMX 219

213 
Blue + Red << 04
DMX 220

214 
Blue + Red << 05
DMX 221

215 
Blue + Red << 06
DMX 222

216 
Blue + Red << 07
DMX 223

217 
Blue + Red << 08
DMX 224

218 
Blue + Red << 09
DMX 225

219 
Blue + Red << 10
DMX 226

220 
Blue + Red << 11
DMX 227

221 
Blue + Red << 12
DMX 228

222 
Blue + Red << 13
DMX 229

223 
Blue + Red << 14
DMX 230

224 
Blue + Red << 15
DMX 231

225 
Blue + Red << 16
DMX 232

226 
Blue + Red << 17
DMX 233

227 
Blue + Red << 18
DMX 234

228 
Blue + Red << 19
DMX 235

229 
Blue + Red << 20
DMX 236

230 
Blue + Red << 21
DMX 237

231 
Blue + Red << 22
DMX 238

232 
Blue + Red << 23
DMX 239

233
Blue + Red << 24
DMX 240

234
Blue + Red << 25
DMX 241

235
Blue + Red << 26
DMX 242

236
Blue + Red << 27
DMX 243

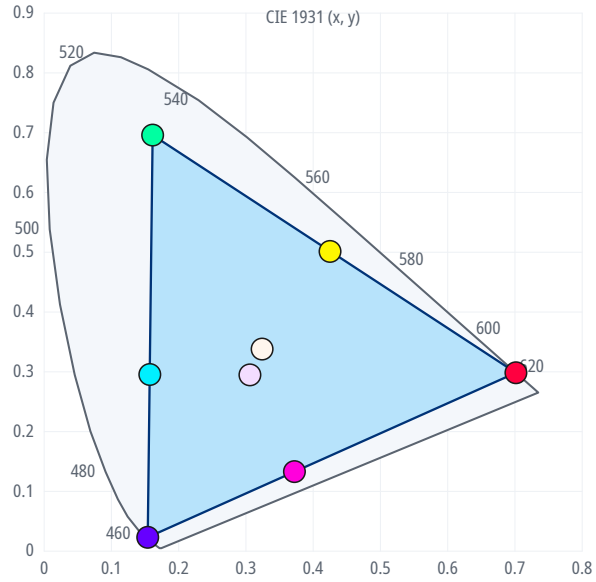
237
Blue + Red << 28
DMX 244

238
Blue + Red << 29
DMX 245

239
Blue + Red << 30
DMX 246

240
Blue 1
DMX 247–248

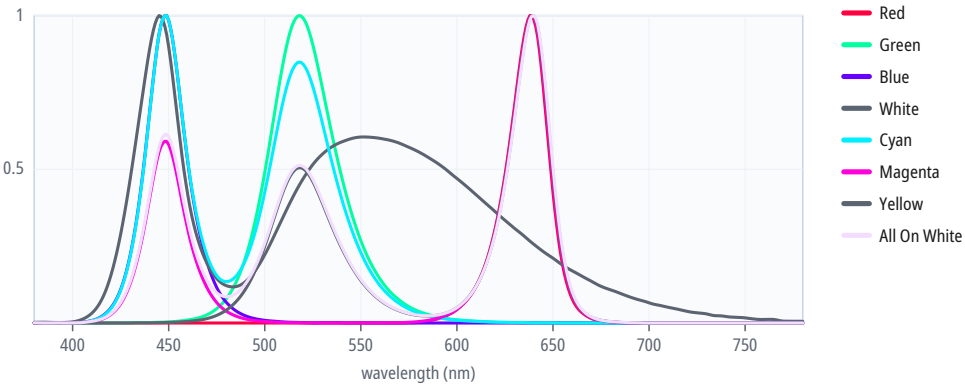
LED colors and the colors they mix



LED	x	y	nm
Red	0.701	0.298	626
Green	0.161	0.696	453
Blue	0.154	0.023	453
White	0.324	0.338	
Cyan	0.157	0.296	489
Magenta	0.372	0.133	-544
Yellow	0.425	0.501	571
All On White	0.306	0.295	

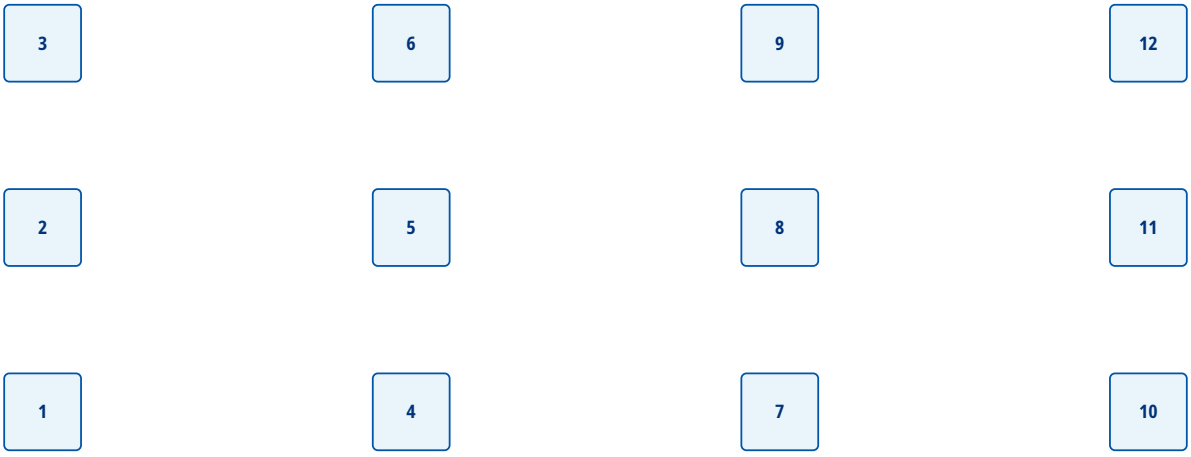
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources



Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

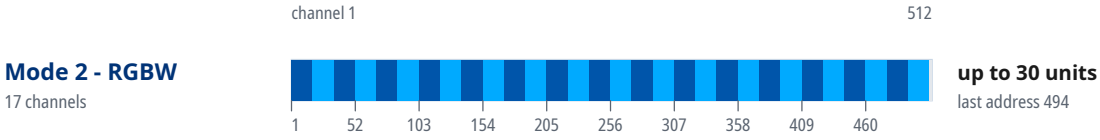
Cells (pixels)



12 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “Mode 2 - RGBW” drives them together.

8 DMX channels

Units in one DMX universe



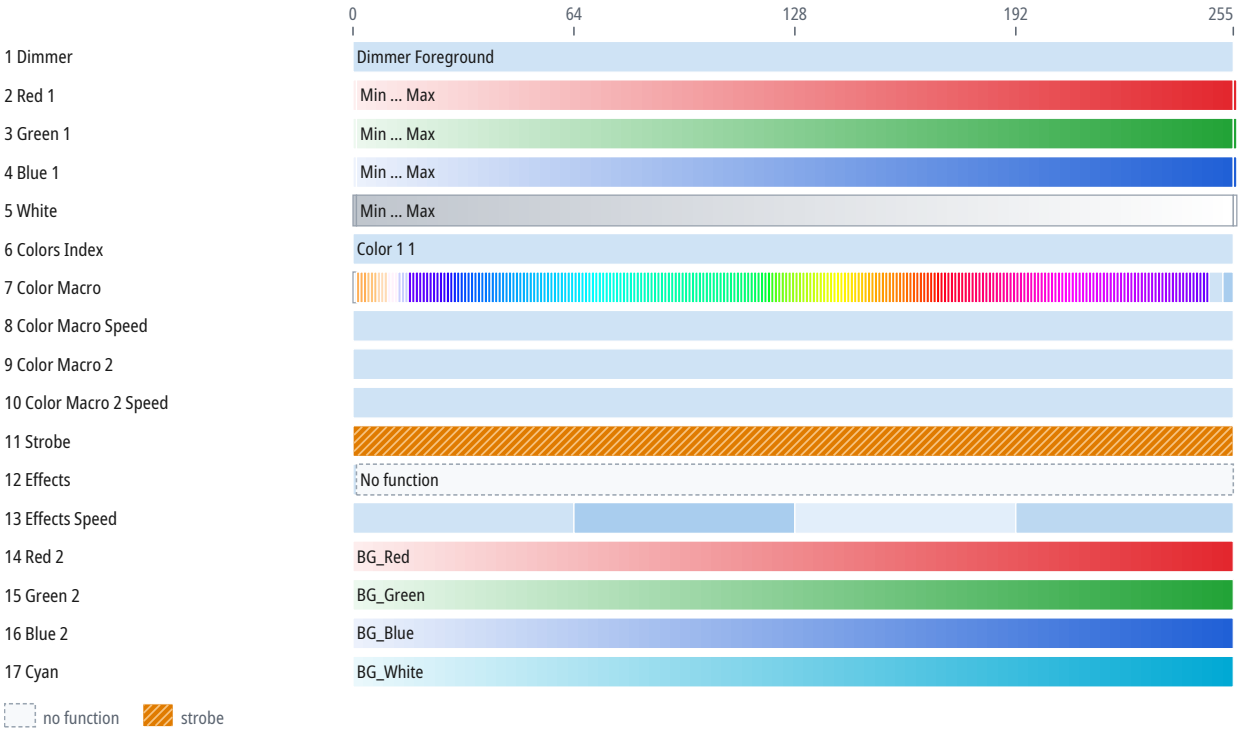
Start addresses of 20 units in the mode “Mode 2 - RGBW”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	86	11	171	16	256
2	18	7	103	12	188	17	273
3	35	8	120	13	205	18	290
4	52	9	137	14	222	19	307
5	69	10	154	15	239	20	324

Mode 2 - RGBW

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Red 1 255, CH 3 Green 1 255, CH 4 Blue 1 255, CH 5 White 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Dimmer Foreground
		0–255	Dimmer Foreground
2	Red 1		When CH 7 is 0:

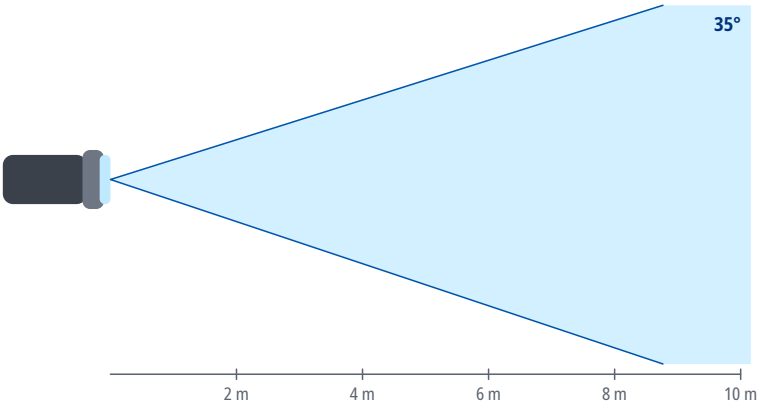
CH	Function	DMX	Description
2	Red 1 (continued)	0	Min
		1–254	Min ... Max
		255	Max
			When CH 7 is 1–255:
		0–255	
3	Green 1		When CH 7 is 0:
		0	Min
		1–254	Min ... Max
		255	Max
			When CH 7 is 1–255:
		0–255	
4	Blue 1		When CH 7 is 0:
		0	Min
		1–254	Min ... Max
		255	Max
			When CH 7 is 1–255:
		0–255	
5	White		When CH 7 is 0:
		0	Min
		1–254	Min ... Max
		255	Max
			When CH 7 is 1–255:
		0–255	
6	Colors Index		Color 1 1
		0–255	Color 1 1
7	Color Macro	0	Color Macro: Open
		1–2	White 2700 K
		3	White 2700 K (Halogen lamp mode)
		4–5	White 3200 K
		6	White 3200 K (Halogen lamp mode)
		7–9	White 4200 K
		10–12	White 5600 K
		13–15	White 8000 K
		16	Blue
		17–55	Blue + Green >> 0...38
		56	LightBlue
		57–95	Green + Blue << 0...38
		96	Green
		97–134	Green + Red >> 0...37
		135	Yellow
		136–174	Red + Green << 0...38
		175	Red

CH	Function	DMX	Description
7	Color Macro (continued)	176–214	Red + Blue >> 0...38
		215	Magenta
		216–246	Blue + Red << 0...30
		247	Blue
		248–251	Rainbow effect (with fade time)
		252–255	Rainbow effect
8	Color Macro Speed	0–255	
9	Color Macro 2	0–255	
10	Color Macro 2 Speed	0–255	
11	Strobe	0–255	
12	Effects	0	Zone Effects
		1–255	No function
13	Effects Speed	0–63	Speed from min to max without fade time (1–10 Hz)
		64–127	Speed from max to min without fade time (op direction) (10–1 Hz)
		128–191	Speed from min to max with fade time (1–10 Hz)
		192–255	Speed from max to min with fade time (op direction) (10–1 Hz)
14	Red 2	0–255	BG_Red
15	Green 2	0–255	BG_Green
16	Blue 2	0–255	BG_Blue
17	Cyan	0–255	BG_White

9 Technical specifications

Parameter	Value
Light	
Light source	LED
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	1,300 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	6 kg
Operating environment	
Operating temperature	0 to 45 °C

Spot diameter



Distance	Ø 35°
2 m	1.3 m
4 m	2.5 m
6 m	3.8 m
8 m	5 m
10 m	6.3 m
15 m	9.5 m

Spot diameter square to the beam axis, calculated from the beam angle.

10 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

11 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open.

12 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.