DMX REFERENCE

FREAX

Portman Lights



Manufacturer	Portman Lights
GDTF file	Portman_Lights_Freax_170060.gdtf
GDTF revision	1_19 · 2026-11-19
Generated	2026-11-24

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1 About this manual

This document describes the FREAX by Portman Lights. It was compiled from the GDTF file Portman_Lights_Freax_170060.gdtf from the GDTF-Share library.

File revision: “1_19”.

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 Portman Lights; 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

DMX modes

Mode	Channels	Units in one universe	First start addresses
Super Simple	8	64	1, 9, 17, 25, ...
Standard	15	34	1, 16, 31, 46, ...
Standard Fine	22	23	1, 23, 45, 67, ...
Fractions	42	12	1, 43, 85, 127, ...
Fractions Fine	76	6	1, 77, 153, 229, ...
Pixel Full	114	4	1, 115, 229, 343
Pixel Full Fine	220	2	1, 221

No light? Check these channels

- Super Simple: CH 1 Dimmer 1 above 0; CH 6 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 7 Dimmer 2 above 0; CH 8 Shutter 2 at 0–4 “Open” or 126–129 or 246–255
- Standard: CH 1 Dimmer 1 above 0; CH 6 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 8 Dimmer 2 above 0; CH 9 Shutter 2 at 0–4 “Open” or 126–129 or 246–255
- Standard Fine: CH 1 Dimmer 1 above 0; CH 11 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 13 Dimmer 2 above 0; CH 15 Shutter 2 at 0–4 “Open” or 126–129 or 246–255
- Fractions: CH 1 Dimmer 1 above 0; CH 22 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 24 Dimmer above 0 (the same in each of the 12 cells); CH 36 Shutter 2 at 0–4 “Open” or 126–129 or 246–255
- Fractions Fine: CH 1 Dimmer 1 above 0; CH 43 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 45 Dimmer above 0 (the same in each of the 12 cells); CH 69 Shutter 2 at 0–4 “Open” or 126–129 or 246–255
- Pixel Full: CH 1 Dimmer 1 above 0; CH 46 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 48 Dimmer above 0 (the same in each of the 60 cells); CH 108 Shutter 2 at 0–4 “Open” or 126–129 or 246–255
- Pixel Full Fine: CH 1 Dimmer 1 above 0; CH 91 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 93 Dimmer above 0 (the same in each of the 60 cells); CH 213 Shutter 2 at 0–4 “Open” or 126–129 or 246–255



Read the manual before use



Do not stare into the light



Indoor use only

3 Safety instructions



Read the manual before use



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

- 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.

4 Installation

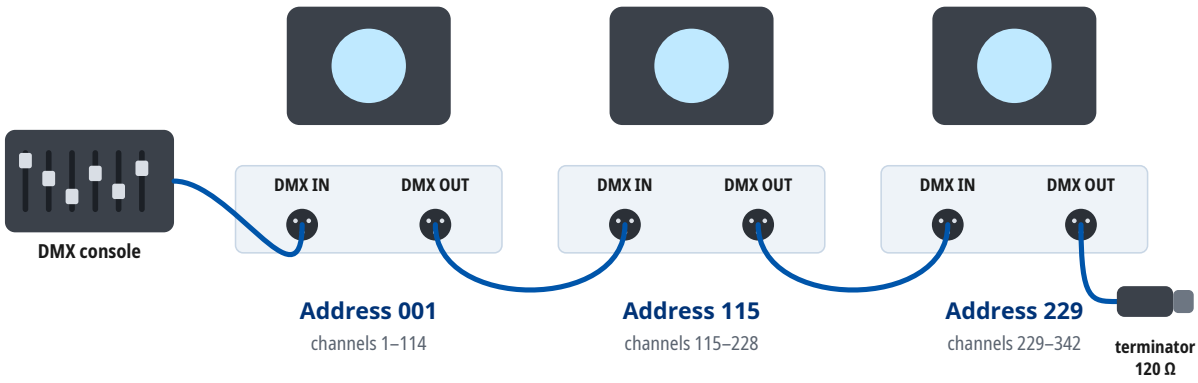
⚠ WARNING

- 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.
- 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 Pixel Full: every unit occupies 114 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 “Pixel Full Fine”: 220.
- 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 “Pixel Full Fine”, you can use, for example, the start addresses 1, 221.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

7 Functions at a glance

Functions in each DMX mode

	Super Simple 8 channels	Standard 15 channels	Standard Fine 22 channels	Fractions 42 channels	Fractions Fine 76 channels	Pixel Full 114 channels	Pixel Full Fine 220 channels
Pan / Tilt	✓	✓	✓	✓	✓	✓	✓
Dimmer	**1, 7**	**1, 8**	**1, 13**	**1, 24–35**	13 channels (1–67)	91 channels (1–166)	91 channels (1–211)
Dimmer resolution	8 bit	8 bit	16 bit	8 bit	16 bit	8 bit	16 bit
Shutter / strobe	**6, 8**	**6, 7, 9, 10**	**11, 12, 15, 16**	**22, 23, 36, 37**	**43, 44, 69, 70**	**46, 47, 108, 109**	**91, 92, 213, 214**
Color mixing	**2–5**	**2–5 ***	**4× (3–9) ***	**2–21 ***	**20× (3–41) ***	64 channels (2–85) *	**44× (3–89) ***
Color wheel		**11**	**17**	**38**	**71**	**110**	**215**
Effects / macros		**12–14**	**18, 20, 21**	**39–41**	**72, 74, 75**	**111–113**	**216, 218, 219**
Pixel control				**12 cells**	**12 cells**	**11 + 60 cells**	**11 + 60 cells**

* The function works only when another channel switches it on; see the DMX table.

Color wheel 1



Open

White
DMX 10–40

Color wheel 2

1 Open
DMX 0–10

2 040 R255 G0 B0
DMX 40

3 041 R255 G8 B0
DMX 41

4 042 R255 G16 B0
DMX 42

5 043 R255 G24 B0
DMX 43

6 044 R255 G32 B0
DMX 44

7 045 R255 G40 B0
DMX 45

8 046 R255 G48 B0
DMX 46

9 047 R255 G56 B0
DMX 47

10 048 R255 G64 B0
DMX 48

11 049 R255 G72 B0
DMX 49

12 050 R255 G80 B0
DMX 50

13 051 R255 G88 B0
DMX 51

14 052 R255 G96 B0
DMX 52

15 053 R255 G104 B0
DMX 53

16 054 R255 G112 B0
DMX 54

17 055 R255 G120 B0
DMX 55

18 056 R255 G128 B0
DMX 56

19 057 R255 G136 B0
DMX 57

20 058 R255 G144 B0
DMX 58

21 059 R255 G152 B0
DMX 59

22 060 R255 G160 B0
DMX 60

23 061 R255 G168 B0
DMX 61

24 062 R255 G176 B0
DMX 62

25 063 R255 G184 B0
DMX 63

26 064 R255 G192 B0
DMX 64

27 065 R255 G200 B0
DMX 65

28 066 R255 G208 B0
DMX 66

29 067 R255 G216 B0
DMX 67

30 068 R255 G224 B0
DMX 68

31 069 R255 G232 B0
DMX 69

32 070 R255 G240 B0
DMX 70

33 071 R255 G248 B0
DMX 71

34 072 R255 G255 B0
DMX 72

35 073 R247 G255 B0
DMX 73

36 074 R239 G255 B0
DMX 74

37 075 R231 G255 B0
DMX 75

38 076 R223 G255 B0
DMX 76

39 077 R215 G255 B0
DMX 77

40 078 R207 G255 B0
DMX 78

41 079 R199 G255 B0
DMX 79

42 080 R191 G255 B0
DMX 80

43 081 R183 G255 B0
DMX 81

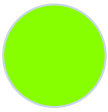
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DMX 82

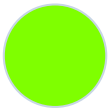
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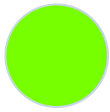
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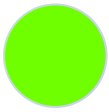
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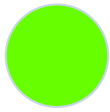
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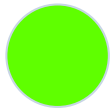
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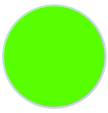
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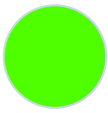
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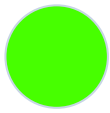
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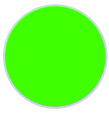
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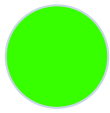
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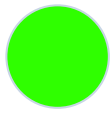
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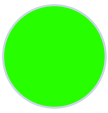
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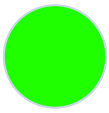
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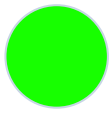
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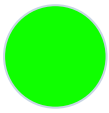
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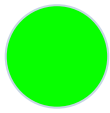
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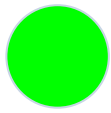
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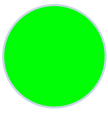
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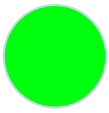
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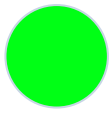
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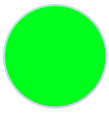
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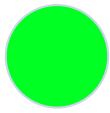
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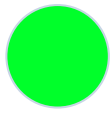
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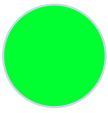
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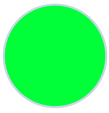
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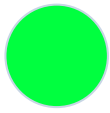
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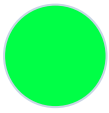
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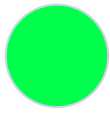
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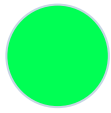
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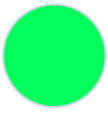
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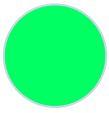
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113 R0 G255 B63
DMX 113

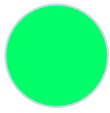
76 
114 R0 G255 B70
DMX 114

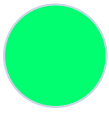
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115 R0 G255 B77
DMX 115

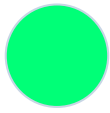
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116 R0 G255 B84
DMX 116

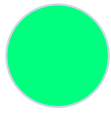
79 
117 R0 G255 B91
DMX 117

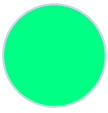
80 
118 R0 G255 B98
DMX 118

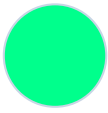
81 
119 R0 G255 B105
DMX 119

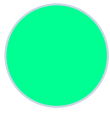
82 
120 R0 G255 B112
DMX 120

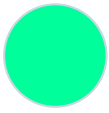
83 
121 R0 G255 B119
DMX 121

84 
122 R0 G255 B126
DMX 122

85 
123 R0 G255 B133
DMX 123

86 
124 R0 G255 B140
DMX 124

87 
125 R0 G255 B147
DMX 125

88 
126 R0 G255 B154
DMX 126

89
127 R0 G255 B161
DMX 127

90
128 R0 G255 B168
DMX 128

91
129 R0 G255 B175
DMX 129

92
130 R0 G255 B182
DMX 130

93
131 R0 G255 B189
DMX 131

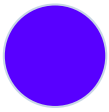
94
132 R0 G255 B196
DMX 132

95
133 R0 G255 B203
DMX 133

96
134 R0 G255 B210
DMX 134

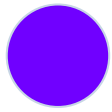
97 135 R0 G255 B217 DMX 135
98 136 R0 G255 B224 DMX 136
99 137 R0 G255 B231 DMX 137
100 138 R0 G255 B238 DMX 138
101 139 R0 G255 B245 DMX 139
102 140 R0 G255 B252 DMX 140
103 141 R0 G255 B255 DMX 141
104 142 R0 G247 B255 DMX 142
105 143 R0 G239 B255 DMX 143
106 144 R0 G231 B255 DMX 144
107 145 R0 G223 B255 DMX 145
108 146 R0 G215 B255 DMX 146
109 147 R0 G207 B255 DMX 147
110 148 R0 G199 B255 DMX 148
111 149 R0 G191 B255 DMX 149
112 150 R0 G183 B255 DMX 150
113 151 R0 G175 B255 DMX 151
114 152 R0 G167 B255 DMX 152
115 153 R0 G159 B255 DMX 153
116 154 R0 G151 B255 DMX 154
117 155 R0 G143 B255 DMX 155
118 156 R0 G135 B255 DMX 156
119 157 R0 G127 B255 DMX 157
120 158 R0 G119 B255 DMX 158
121 159 R0 G111 B255 DMX 159
122 160 R0 G103 B255 DMX 160
123 161 R0 G95 B255 DMX 161
124 162 R0 G87 B255 DMX 162
125 163 R0 G79 B255 DMX 163
126 164 R0 G71 B255 DMX 164
127 165 R0 G63 B255 DMX 165
128 166 R0 G55 B255 DMX 166
129 167 R0 G47 B255 DMX 167
130 168 R0 G39 B255 DMX 168
131 169 R0 G31 B255 DMX 169
132 170 R0 G23 B255 DMX 170
133 171 R0 G15 B255 DMX 171
134 172 R0 G7 B255 DMX 172
135 173 R0 G0 B255 DMX 173
136 174 R8 G0 B255 DMX 174
137 175 R16 G0 B255 DMX 175
138 176 R24 G0 B255 DMX 176
139 177 R32 G0 B255 DMX 177
140 178 R40 G0 B255 DMX 178
141 179 R48 G0 B255 DMX 179
142 180 R56 G0 B255 DMX 180
143 181 R64 G0 B255 DMX 181
144 182 R72 G0 B255 DMX 182

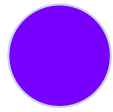
145 
183 R80 G0 B255
DMX 183

146 
184 R88 G0 B255
DMX 184

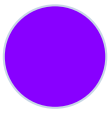
147 
185 R96 G0 B255
DMX 185

148 
186 R104 G0 B255
DMX 186

149 
187 R112 G0 B255
DMX 187

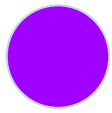
150 
188 R120 G0 B255
DMX 188

151 
189 R128 G0 B255
DMX 189

152 
190 R136 G0 B255
DMX 190

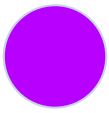
153 
191 R144 G0 B255
DMX 191

154 
192 R152 G0 B255
DMX 192

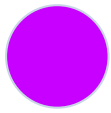
155 
193 R160 G0 B255
DMX 193

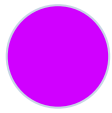
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194 R168 G0 B255
DMX 194

157 
195 R176 G0 B255
DMX 195

158 
196 R184 G0 B255
DMX 196

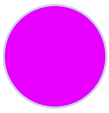
159 
197 R192 G0 B255
DMX 197

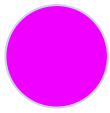
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198 R200 G0 B255
DMX 198

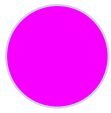
161 
199 R208 G0 B255
DMX 199

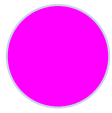
162 
200 R216 G0 B255
DMX 200

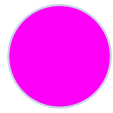
163 
201 R224 G0 B255
DMX 201

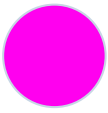
164 
202 R232 G0 B255
DMX 202

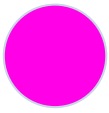
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203 R240 G0 B255
DMX 203

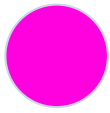
166 
204 R248 G0 B255
DMX 204

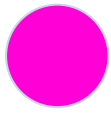
167 
205 R255 G0 B255
DMX 205

168 
206 R255 G0 B247
DMX 206

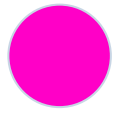
169 
207 R255 G0 B239
DMX 207

170 
208 R255 G0 B231
DMX 208

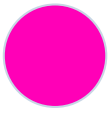
171 
209 R255 G0 B223
DMX 209

172 
210 R255 G0 B215
DMX 210

173 
211 R255 G0 B207
DMX 211

174 
212 R255 G0 B199
DMX 212

175 
213 R255 G0 B191
DMX 213

176 
214 R255 G0 B183
DMX 214

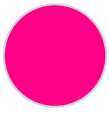
177 
215 R255 G0 B175
DMX 215

178 
216 R255 G0 B167
DMX 216

179 
217 R255 G0 B159
DMX 217

180 
218 R255 G0 B151
DMX 218

181 
219 R255 G0 B143
DMX 219

182 
220 R255 G0 B135
DMX 220

183 
221 R255 G0 B127
DMX 221

184 
222 R255 G0 B119
DMX 222

185
223 R255 G0 B111
DMX 223

186
224 R255 G0 B103
DMX 224

187
225 R255 G0 B95
DMX 225

188
226 R255 G0 B87
DMX 226

189
227 R255 G0 B79
DMX 227

190
228 R255 G0 B71
DMX 228

191
229 R255 G0 B63
DMX 229

192
230 R255 G0 B55
DMX 230

193 231 R255 G0 B47
DMX 231

194 232 R255 G0 B39
DMX 232

195 233 R255 G0 B31
DMX 233

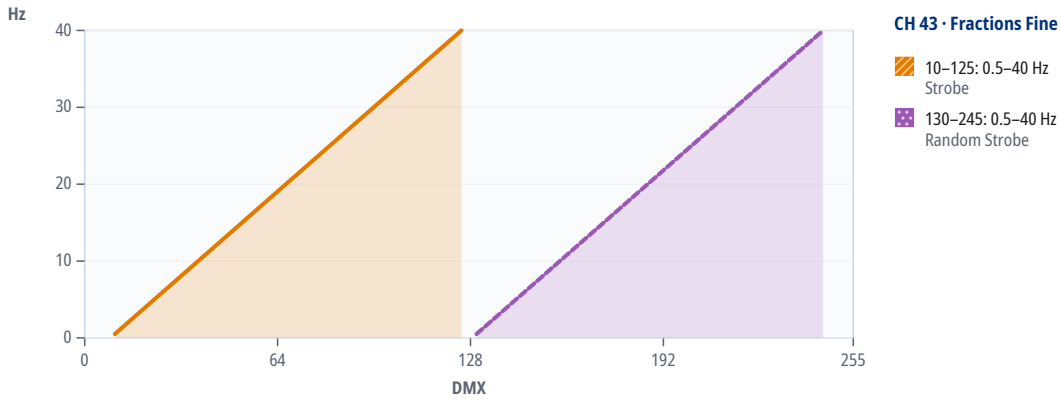
196 234 R255 G0 B23
DMX 234

197 235 R255 G0 B15
DMX 235

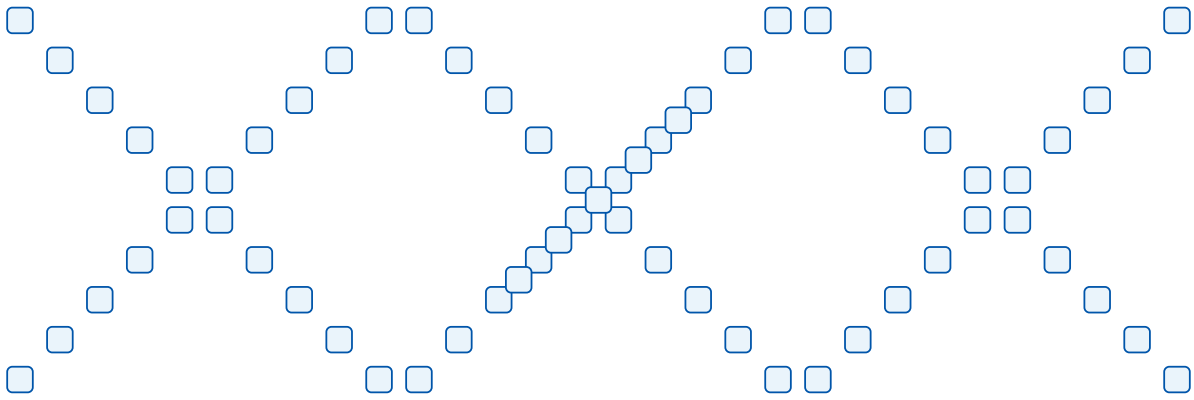
198 236 R255 G0 B7
DMX 236

199 237 R255 G0 B0
DMX 237–238

Strobe rate



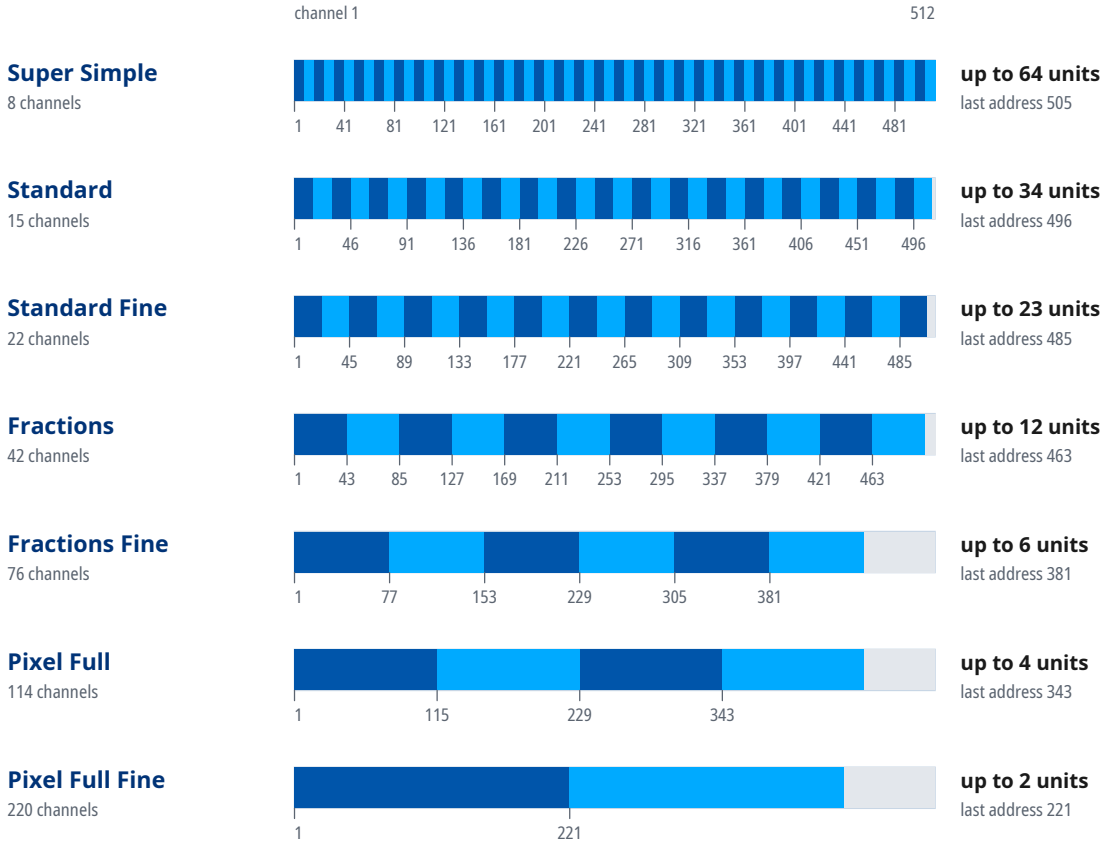
Cells (pixels)



Cells where the GDTF file places them (seen from above), 65 in all in the mode “Fractions Fine”.

8 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Pixel Full Fine”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U3 · 221	11	U6 · 1	16	U8 · 221
2	221	7	U4 · 1	12	U6 · 221	17	U9 · 1
3	U2 · 1	8	U4 · 221	13	U7 · 1	18	U9 · 221
4	U2 · 221	9	U5 · 1	14	U7 · 221	19	U10 · 1
5	U3 · 1	10	U5 · 221	15	U8 · 1	20	U10 · 221

Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

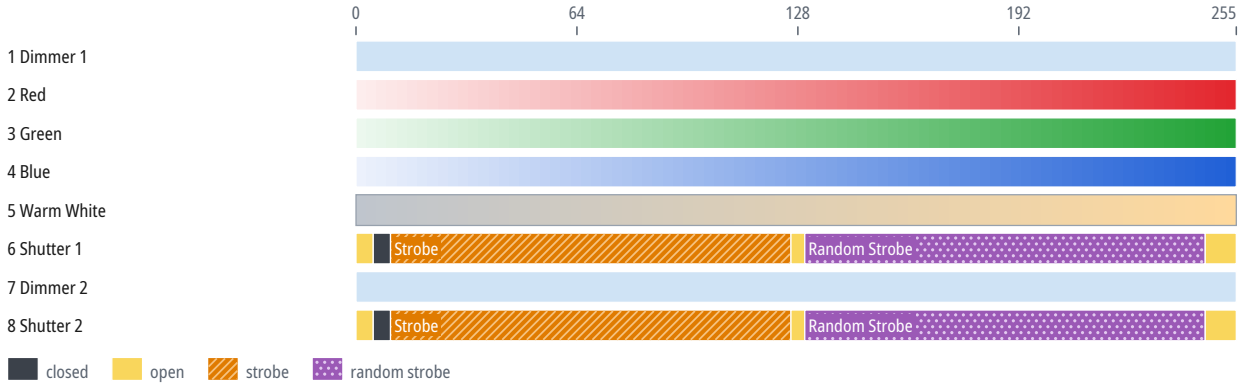
RDM personalities

Mode	Channels	RDM personality
Super Simple	8	1
Standard	15	2
Standard Fine	22	3
Fractions	42	4
Fractions Fine	76	5
Pixel Full	114	6
Pixel Full Fine	220	7

Mode Super Simple

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 6 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 7 Dimmer 2 above 0; CH 8 Shutter 2 at 0–4 “Open” or 126–129 or 246–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 Red 255, CH 3 Green 255, CH 4 Blue 255, CH 5 Warm White 255, CH 7 Dimmer 2 255.

Channel functions at a glance

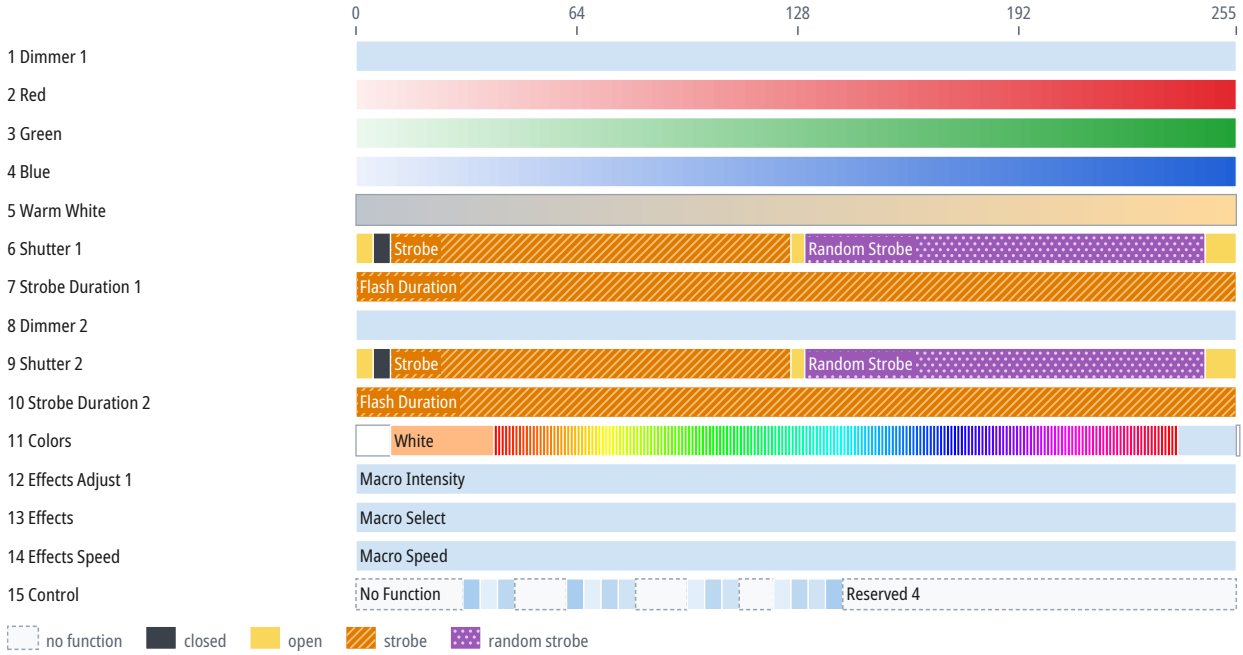


CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Red	0–255	
3	Green	0–255	
4	Blue	0–255	
5	Warm White	0–255	
6	Shutter 1	0–4	Open
		5–9	Closed
		10–125	Strobe (0.5–40 Hz)
		126–129	Open 2
		130–245	Random Strobe (0.5–40 Hz)
		246–255	Open 3
7	Dimmer 2	0–255	
8	Shutter 2	0–4	Open
		5–9	Closed
		10–125	Strobe (0.5–40 Hz)
		126–129	Open 2
		130–245	Random Strobe (0.5–40 Hz)
		246–255	Open 3

Mode Standard

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 6 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 8 Dimmer 2 above 0; CH 9 Shutter 2 at 0–4 “Open” or 126–129 or 246–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 Red 255, CH 3 Green 255, CH 4 Blue 255, CH 5 Warm White 255, CH 8 Dimmer 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Red		When CH 11 is 0–9:
		0–255	
3	Green		When CH 11 is 0–9:
		0–255	
4	Blue		When CH 11 is 0–9:
		0–255	
5	Warm White		When CH 11 is 0–9:
		0–255	
6	Shutter 1		Same as CH 6 in the mode “Super Simple” (p. 13)
7	Strobe Duration 1		Flash Duration
		0–255	Flash Duration (0–0.65 s)
8	Dimmer 2	0–255	
9	Shutter 2		Same as CH 8 in the mode “Super Simple” (p. 13)
10	Strobe Duration 2		Flash Duration
		0–255	Flash Duration (0–0.65 s)
11	Colors	0–9	Open
		10–39	White

CH	Function	DMX	Description
11	Colors (continued)	40	040 R255 G0 B0
		41	041 R255 G8 B0
		42	042 R255 G16 B0
		43	043 R255 G24 B0
		44	044 R255 G32 B0
		45	045 R255 G40 B0
		46	046 R255 G48 B0
		47	047 R255 G56 B0
		48	048 R255 G64 B0
		49	049 R255 G72 B0
		50	050 R255 G80 B0
		51	051 R255 G88 B0
		52	052 R255 G96 B0
		53	053 R255 G104 B0
		54	054 R255 G112 B0
		55	055 R255 G120 B0
		56	056 R255 G128 B0
		57	057 R255 G136 B0
		58	058 R255 G144 B0
		59	059 R255 G152 B0
		60	060 R255 G160 B0
		61	061 R255 G168 B0
		62	062 R255 G176 B0
		63	063 R255 G184 B0
		64	064 R255 G192 B0
		65	065 R255 G200 B0
		66	066 R255 G208 B0
		67	067 R255 G216 B0
		68	068 R255 G224 B0
		69	069 R255 G232 B0
		70	070 R255 G240 B0
		71	071 R255 G248 B0
		72	072 R255 G255 B0
		73	073 R247 G255 B0
		74	074 R239 G255 B0
		75	075 R231 G255 B0
		76	076 R223 G255 B0
		77	077 R215 G255 B0
		78	078 R207 G255 B0
		79	079 R199 G255 B0
		80	080 R191 G255 B0
		81	081 R183 G255 B0

CH	Function	DMX	Description
11	Colors (continued)	82	082 R175 G255 B0
		83	083 R167 G255 B0
		84	084 R159 G255 B0
		85	085 R151 G255 B0
		86	086 R143 G255 B0
		87	087 R135 G255 B0
		88	088 R127 G255 B0
		89	089 R119 G255 B0
		90	090 R111 G255 B0
		91	091 R103 G255 B0
		92	092 R95 G255 B0
		93	093 R87 G255 B0
		94	094 R79 G255 B0
		95	095 R71 G255 B0
		96	096 R63 G255 B0
		97	097 R55 G255 B0
		98	098 R47 G255 B0
		99	099 R39 G255 B0
		100	100 R31 G255 B0
		101	101 R23 G255 B0
		102	102 R15 G255 B0
		103	103 R7 G255 B0
		104	104 R0 G255 B0
		105	105 R0 G255 B7
		106	106 R0 G255 B14
		107	107 R0 G255 B21
		108	108 R0 G255 B28
		109	109 R0 G255 B35
		110	110 R0 G255 B42
		111	111 R0 G255 B49
		112	112 R0 G255 B56
		113	113 R0 G255 B63
		114	114 R0 G255 B70
		115	115 R0 G255 B77
		116	116 R0 G255 B84
		117	117 R0 G255 B91
		118	118 R0 G255 B98
		119	119 R0 G255 B105
		120	120 R0 G255 B112
		121	121 R0 G255 B119
		122	122 R0 G255 B126
		123	123 R0 G255 B133

CH	Function	DMX	Description
11	Colors (continued)	124	124 R0 G255 B140
		125	125 R0 G255 B147
		126	126 R0 G255 B154
		127	127 R0 G255 B161
		128	128 R0 G255 B168
		129	129 R0 G255 B175
		130	130 R0 G255 B182
		131	131 R0 G255 B189
		132	132 R0 G255 B196
		133	133 R0 G255 B203
		134	134 R0 G255 B210
		135	135 R0 G255 B217
		136	136 R0 G255 B224
		137	137 R0 G255 B231
		138	138 R0 G255 B238
		139	139 R0 G255 B245
		140	140 R0 G255 B252
		141	141 R0 G255 B255
		142	142 R0 G247 B255
		143	143 R0 G239 B255
		144	144 R0 G231 B255
		145	145 R0 G223 B255
		146	146 R0 G215 B255
		147	147 R0 G207 B255
		148	148 R0 G199 B255
		149	149 R0 G191 B255
		150	150 R0 G183 B255
		151	151 R0 G175 B255
		152	152 R0 G167 B255
		153	153 R0 G159 B255
		154	154 R0 G151 B255
		155	155 R0 G143 B255
		156	156 R0 G135 B255
		157	157 R0 G127 B255
		158	158 R0 G119 B255
		159	159 R0 G111 B255
		160	160 R0 G103 B255
		161	161 R0 G95 B255
		162	162 R0 G87 B255
		163	163 R0 G79 B255
		164	164 R0 G71 B255
		165	165 R0 G63 B255

CH	Function	DMX	Description
11	Colors (continued)	166	166 R0 G55 B255
		167	167 R0 G47 B255
		168	168 R0 G39 B255
		169	169 R0 G31 B255
		170	170 R0 G23 B255
		171	171 R0 G15 B255
		172	172 R0 G7 B255
		173	173 R0 G0 B255
		174	174 R8 G0 B255
		175	175 R16 G0 B255
		176	176 R24 G0 B255
		177	177 R32 G0 B255
		178	178 R40 G0 B255
		179	179 R48 G0 B255
		180	180 R56 G0 B255
		181	181 R64 G0 B255
		182	182 R72 G0 B255
		183	183 R80 G0 B255
		184	184 R88 G0 B255
		185	185 R96 G0 B255
		186	186 R104 G0 B255
		187	187 R112 G0 B255
		188	188 R120 G0 B255
		189	189 R128 G0 B255
		190	190 R136 G0 B255
		191	191 R144 G0 B255
		192	192 R152 G0 B255
		193	193 R160 G0 B255
		194	194 R168 G0 B255
		195	195 R176 G0 B255
		196	196 R184 G0 B255
		197	197 R192 G0 B255
		198	198 R200 G0 B255
		199	199 R208 G0 B255
		200	200 R216 G0 B255
		201	201 R224 G0 B255
		202	202 R232 G0 B255
		203	203 R240 G0 B255
		204	204 R248 G0 B255
		205	205 R255 G0 B255
		206	206 R255 G0 B247
		207	207 R255 G0 B239

CH	Function	DMX	Description
11	Colors (continued)	208	208 R255 G0 B231
		209	209 R255 G0 B223
		210	210 R255 G0 B215
		211	211 R255 G0 B207
		212	212 R255 G0 B199
		213	213 R255 G0 B191
		214	214 R255 G0 B183
		215	215 R255 G0 B175
		216	216 R255 G0 B167
		217	217 R255 G0 B159
		218	218 R255 G0 B151
		219	219 R255 G0 B143
		220	220 R255 G0 B135
		221	221 R255 G0 B127
		222	222 R255 G0 B119
		223	223 R255 G0 B111
		224	224 R255 G0 B103
		225	225 R255 G0 B95
		226	226 R255 G0 B87
		227	227 R255 G0 B79
		228	228 R255 G0 B71
		229	229 R255 G0 B63
		230	230 R255 G0 B55
		231	231 R255 G0 B47
		232	232 R255 G0 B39
		233	233 R255 G0 B31
		234	234 R255 G0 B23
		235	235 R255 G0 B15
		236	236 R255 G0 B7
		237	237 R255 G0 B0
		238–254	Spin slow to fast
		255	Open
12	Effects Adjust 1		Macro Intensity
		0–255	Macro Intensity
13	Effects		Macro Select
		0–255	Macro Select
14	Effects Speed		Macro Speed
		0–255	Macro Speed
15	Control	0–30	No Function
		31–35	1200 Hz
		36–40	2400 Hz
		41–45	12000 Hz

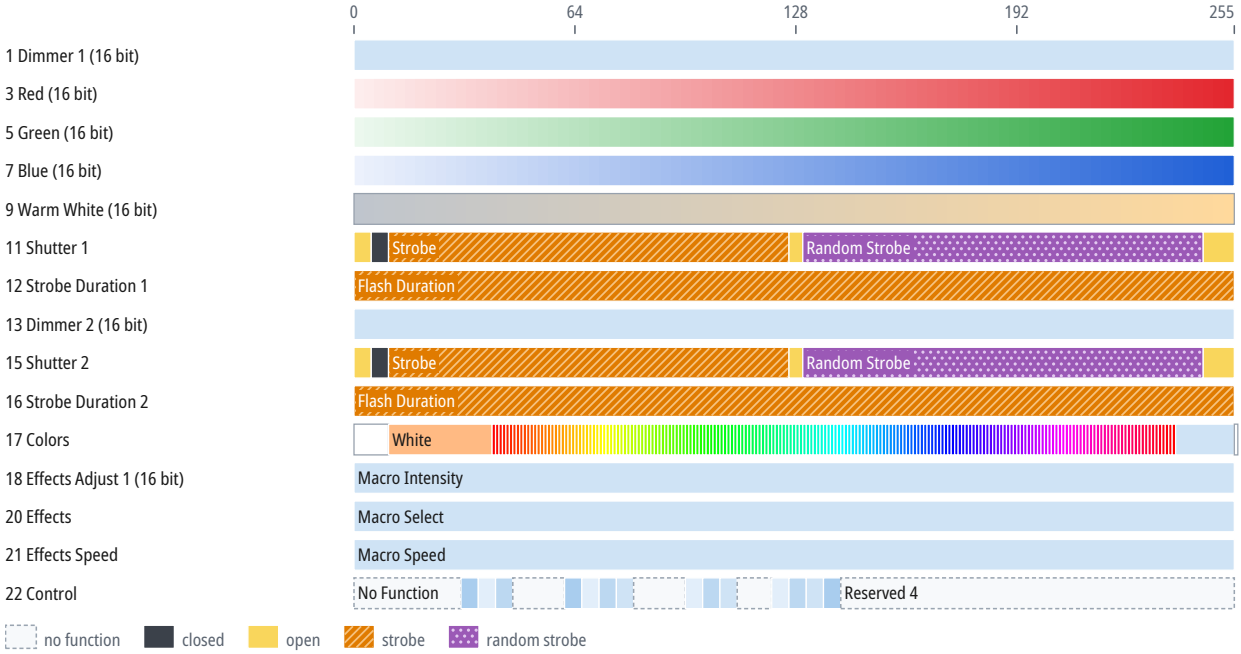
CH	Function	DMX	Description
15	Control (continued)	46–60	Reserved 1
		61–65	Linear
		66–70	Square
		71–75	Inverted Square
		76–80	S-Curve
		81–95	Reserved 2
		96–100	Smooth
		101–105	Medium
		106–110	Dimmer Fade: Fast
		111–120	Reserved 3
		121–125	Off / Low Power
		126–130	Silent
		131–135	Smart
		136–140	Beast
		141–255	Reserved 4

Mode Standard Fine

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 11 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 13 Dimmer 2 above 0; CH 15 Shutter 2 at 0–4 “Open” or 126–129 or 246–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 3 Red 255, CH 5 Green 255, CH 7 Blue 255, CH 9 Warm White 255, CH 13 Dimmer 2 255.

Channel functions at a glance

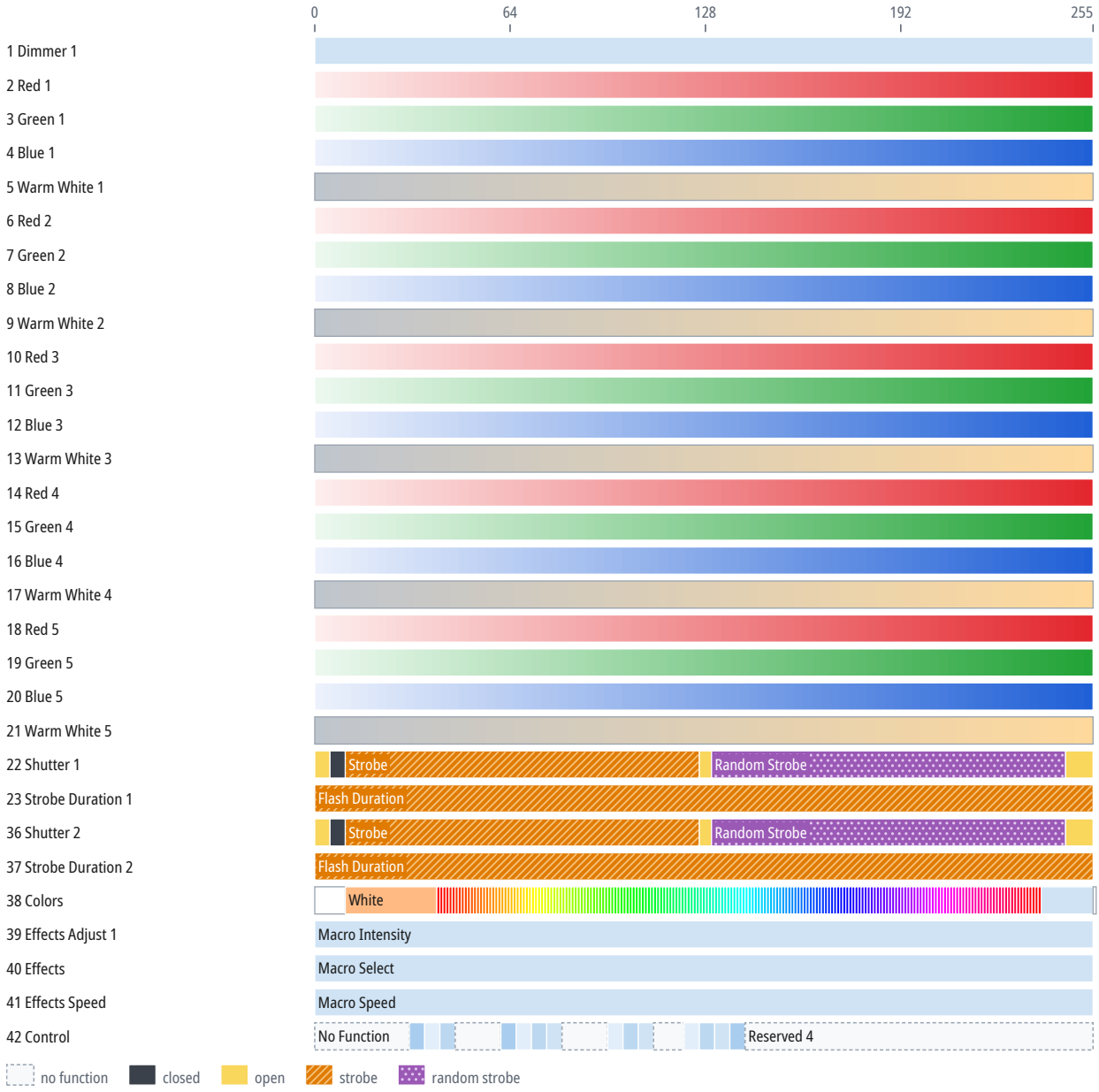


CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Dimmer 1 Fine	0–255	Fine adjustment of CH 1
3	Red		When CH 17 is 0–9:
		0–255	
4	Red Fine	0–255	Fine adjustment of CH 3
5	Green		When CH 17 is 0–9:
		0–255	
6	Green Fine	0–255	Fine adjustment of CH 5
7	Blue		When CH 17 is 0–9:
		0–255	
8	Blue Fine	0–255	Fine adjustment of CH 7
9	Warm White		When CH 17 is 0–9:
		0–255	
10	Warm White Fine	0–255	Fine adjustment of CH 9
11	Shutter 1		Same as CH 6 in the mode “Super Simple” (p. 13)
12	Strobe Duration 1		Same as CH 7 in the mode “Standard” (p. 14)
13	Dimmer 2	0–255	
14	Dimmer 2 Fine	0–255	Fine adjustment of CH 13
15	Shutter 2		Same as CH 8 in the mode “Super Simple” (p. 13)
16	Strobe Duration 2		Same as CH 10 in the mode “Standard” (p. 14)
17	Colors		Same as CH 11 in the mode “Standard” (p. 14)
18	Effects Adjust 1		Same as CH 12 in the mode “Standard” (p. 19)
19	Effects Adjust 1 Fine	0–255	Fine adjustment of CH 18
20	Effects		Same as CH 13 in the mode “Standard” (p. 19)
21	Effects Speed		Same as CH 14 in the mode “Standard” (p. 19)
22	Control		Same as CH 15 in the mode “Standard” (p. 19)

Mode Fractions

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 22 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 24 Dimmer above 0 (the same in each of the 12 cells); CH 36 Shutter 2 at 0–4 “Open” or 126–129 or 246–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 Red 1 255, CH 3 Green 1 255, CH 4 Blue 1 255, CH 5 Warm White 1 255, CH 6 Red 2 255, CH 7 Green 2 255, CH 8 Blue 2 255, CH 9 Warm White 2 255, CH 10 Red 3 255, CH 11 Green 3 255, CH 12 Blue 3 255, CH 13 Warm White 3 255, CH 14 Red 4 255, CH 15 Green 4 255, CH 16 Blue 4 255, CH 17 Warm White 4 255, CH 18 Red 5 255, CH 19 Green 5 255, CH 20 Blue 5 255, CH 21 Warm White 5 255, CH 24 Dimmer 255 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Red 1		When CH 38 is 0–9:
		0–255	
3	Green 1		When CH 38 is 0–9:
		0–255	
4	Blue 1		When CH 38 is 0–9:
		0–255	
5	Warm White 1		When CH 38 is 0–9:
		0–255	
6	Red 2		When CH 38 is 0–9:
		0–255	
7	Green 2		When CH 38 is 0–9:
		0–255	
8	Blue 2		When CH 38 is 0–9:
		0–255	
9	Warm White 2		When CH 38 is 0–9:
		0–255	
10	Red 3		When CH 38 is 0–9:
		0–255	
11	Green 3		When CH 38 is 0–9:
		0–255	
12	Blue 3		When CH 38 is 0–9:
		0–255	
13	Warm White 3		When CH 38 is 0–9:
		0–255	
14	Red 4		When CH 38 is 0–9:
		0–255	
15	Green 4		When CH 38 is 0–9:
		0–255	
16	Blue 4		When CH 38 is 0–9:
		0–255	
17	Warm White 4		When CH 38 is 0–9:
		0–255	
18	Red 5		When CH 38 is 0–9:
		0–255	
19	Green 5		When CH 38 is 0–9:
		0–255	
20	Blue 5		When CH 38 is 0–9:
		0–255	
21	Warm White 5		When CH 38 is 0–9:

CH	Function	DMX	Description
21	Warm White 5 (continued)	0–255	
22	Shutter 1		Same as CH 6 in the mode “Super Simple” (p. 13)
23	Strobe Duration 1		Same as CH 7 in the mode “Standard” (p. 14)
24	Dimmer 2	0–255	
36	Shutter 2		Same as CH 8 in the mode “Super Simple” (p. 13)
37	Strobe Duration 2		Same as CH 10 in the mode “Standard” (p. 14)
38	Colors		Same as CH 11 in the mode “Standard” (p. 14)
39	Effects Adjust 1		Same as CH 12 in the mode “Standard” (p. 19)
40	Effects		Same as CH 13 in the mode “Standard” (p. 19)
41	Effects Speed		Same as CH 14 in the mode “Standard” (p. 19)
42	Control		Same as CH 15 in the mode “Standard” (p. 19)

CH 24–35: 12 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 24); the table below gives each cell's channel numbers.

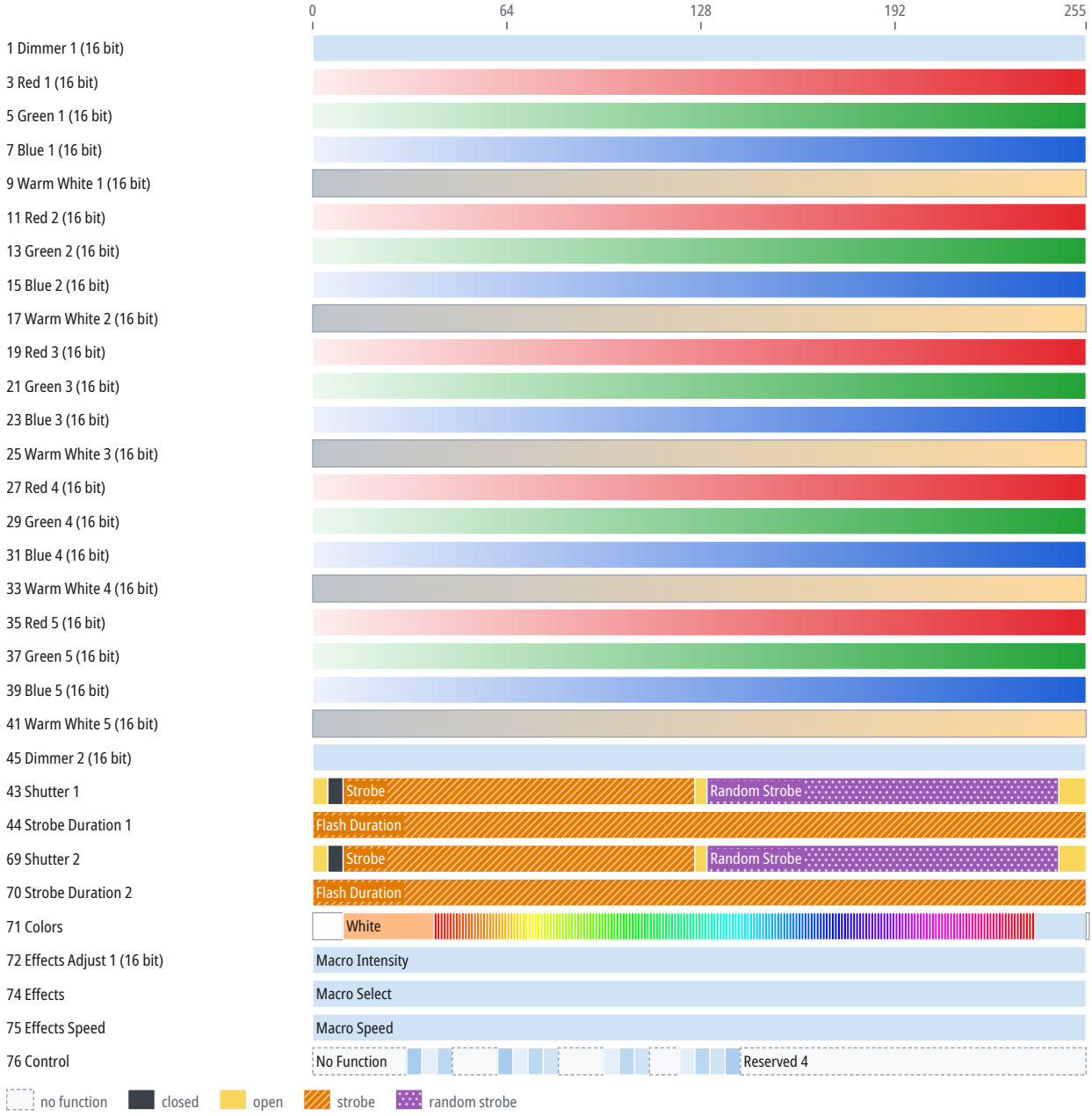
Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	24	2	25	3	26	4	27	5	28	6	29
7	30	8	31	9	32	10	33	11	34	12	35

Mode Fractions Fine

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 43 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 45 Dimmer above 0 (the same in each of the 12 cells); CH 69 Shutter 2 at 0–4 “Open” or 126–129 or 246–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 3 Red 1 255, CH 5 Green 1 255, CH 7 Blue 1 255, CH 9 Warm White 1 255, CH 11 Red 2 255, CH 13 Green 2 255, CH 15 Blue 2 255, CH 17 Warm White 2 255, CH 19 Red 3 255, CH 21 Green 3 255, CH 23 Blue 3 255, CH 25 Warm White 3 255, CH 27 Red 4 255, CH 29 Green 4 255, CH 31 Blue 4 255, CH 33 Warm White 4 255, CH 35 Red 5 255, CH 37 Green 5 255, CH 39 Blue 5 255, CH 41 Warm White 5 255, CH 45 Dimmer 255 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Dimmer 1 Fine	0–255	Fine adjustment of CH 1
3	Red 1		When CH 71 is 0–9:
		0–255	
4	Red 1 Fine	0–255	Fine adjustment of CH 3
5	Green 1		When CH 71 is 0–9:
		0–255	
6	Green 1 Fine	0–255	Fine adjustment of CH 5
7	Blue 1		When CH 71 is 0–9:
		0–255	
8	Blue 1 Fine	0–255	Fine adjustment of CH 7
9	Warm White 1		When CH 71 is 0–9:
		0–255	
10	Warm White 1 Fine	0–255	Fine adjustment of CH 9
11	Red 2		When CH 71 is 0–9:
		0–255	
12	Red 2 Fine	0–255	Fine adjustment of CH 11
13	Green 2		When CH 71 is 0–9:
		0–255	
14	Green 2 Fine	0–255	Fine adjustment of CH 13
15	Blue 2		When CH 71 is 0–9:
		0–255	
16	Blue 2 Fine	0–255	Fine adjustment of CH 15
17	Warm White 2		When CH 71 is 0–9:
		0–255	
18	Warm White 2 Fine	0–255	Fine adjustment of CH 17
19	Red 3		When CH 71 is 0–9:
		0–255	
20	Red 3 Fine	0–255	Fine adjustment of CH 19
21	Green 3		When CH 71 is 0–9:
		0–255	
22	Green 3 Fine	0–255	Fine adjustment of CH 21
23	Blue 3		When CH 71 is 0–9:
		0–255	
24	Blue 3 Fine	0–255	Fine adjustment of CH 23
25	Warm White 3		When CH 71 is 0–9:
		0–255	
26	Warm White 3 Fine	0–255	Fine adjustment of CH 25
27	Red 4		When CH 71 is 0–9:
		0–255	
28	Red 4 Fine	0–255	Fine adjustment of CH 27

CH	Function	DMX	Description
29	Green 4		When CH 71 is 0–9:
		0–255	
30	Green 4 Fine	0–255	Fine adjustment of CH 29
31	Blue 4		When CH 71 is 0–9:
		0–255	
32	Blue 4 Fine	0–255	Fine adjustment of CH 31
33	Warm White 4		When CH 71 is 0–9:
		0–255	
34	Warm White 4 Fine	0–255	Fine adjustment of CH 33
35	Red 5		When CH 71 is 0–9:
		0–255	
36	Red 5 Fine	0–255	Fine adjustment of CH 35
37	Green 5		When CH 71 is 0–9:
		0–255	
38	Green 5 Fine	0–255	Fine adjustment of CH 37
39	Blue 5		When CH 71 is 0–9:
		0–255	
40	Blue 5 Fine	0–255	Fine adjustment of CH 39
41	Warm White 5		When CH 71 is 0–9:
		0–255	
42	Warm White 5 Fine	0–255	Fine adjustment of CH 41
43	Shutter 1		Same as CH 6 in the mode “Super Simple” (p. 13)
44	Strobe Duration 1		Same as CH 7 in the mode “Standard” (p. 14)
45	Dimmer 2	0–255	
46	Dimmer 2 Fine	0–255	Fine adjustment of CH 45
69	Shutter 2		Same as CH 8 in the mode “Super Simple” (p. 13)
70	Strobe Duration 2		Same as CH 10 in the mode “Standard” (p. 14)
71	Colors		Same as CH 11 in the mode “Standard” (p. 14)
72	Effects Adjust 1		Same as CH 12 in the mode “Standard” (p. 19)
73	Effects Adjust 1 Fine	0–255	Fine adjustment of CH 72
74	Effects		Same as CH 13 in the mode “Standard” (p. 19)
75	Effects Speed		Same as CH 14 in the mode “Standard” (p. 19)
76	Control		Same as CH 15 in the mode “Standard” (p. 19)

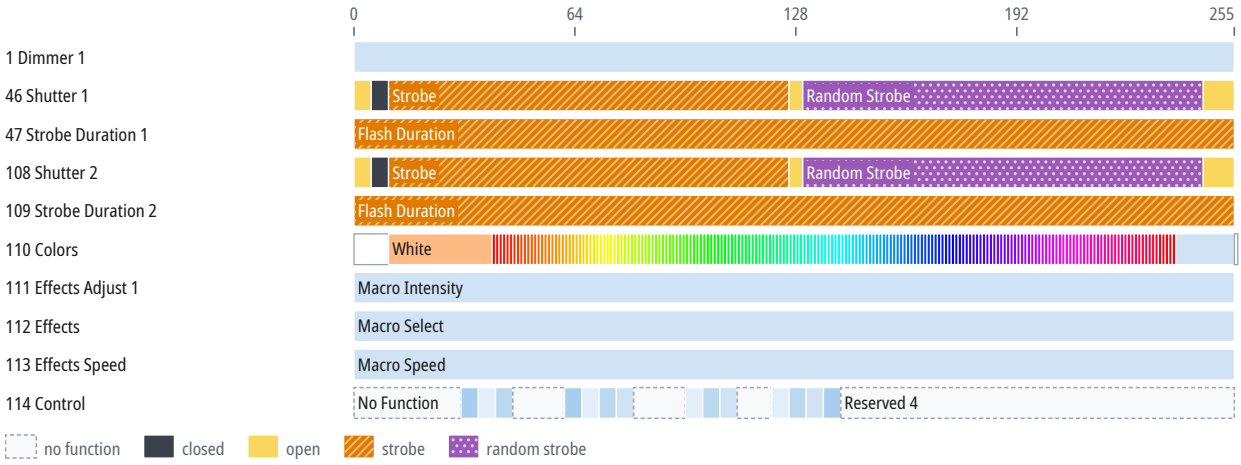
CH 45–68: 12 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 45–46); the table below gives each cell's channel numbers.

Cell	Dimmer	Dimmer Fine	Cell	Dimmer	Dimmer Fine	Cell	Dimmer	Dimmer Fine	Cell	Dimmer	Dimmer Fine
1	45	46	2	47	48	3	49	50	4	51	52
5	53	54	6	55	56	7	57	58	8	59	60
9	61	62	10	63	64	11	65	66	12	67	68

Mode Pixel Full

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 46 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 48 Dimmer above 0 (the same in each of the 60 cells); CH 108 Shutter 2 at 0–4 “Open” or 126–129 or 246–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 Red 255 (the same in each of the 11 cells), CH 3 Green 255 (the same in each of the 11 cells), CH 4 Blue 255 (the same in each of the 11 cells), CH 5 Warm White 255 (the same in each of the 11 cells), CH 48 Dimmer 255 (the same in each of the 60 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Red 1		When CH 110 is 0–9:
		0–255	
3	Green 1		When CH 110 is 0–9:
		0–255	
4	Blue 1		When CH 110 is 0–9:
		0–255	
5	Warm White 1		When CH 110 is 0–9:
		0–255	
46	Shutter 1		Same as CH 6 in the mode “Super Simple” (p. 13)
47	Strobe Duration 1		Same as CH 7 in the mode “Standard” (p. 14)
48	Dimmer 2	0–255	
108	Shutter 2		Same as CH 8 in the mode “Super Simple” (p. 13)
109	Strobe Duration 2		Same as CH 10 in the mode “Standard” (p. 14)
110	Colors		Same as CH 11 in the mode “Standard” (p. 14)
111	Effects Adjust 1		Same as CH 12 in the mode “Standard” (p. 19)
112	Effects		Same as CH 13 in the mode “Standard” (p. 19)
113	Effects Speed		Same as CH 14 in the mode “Standard” (p. 19)
114	Control		Same as CH 15 in the mode “Standard” (p. 19)

CH 2–45: 11 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 2–5); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Warm White	Cell	Red	Green	Blue	Warm White
1	2	3	4	5	2	6	7	8	9
3	10	11	12	13	4	14	15	16	17
5	18	19	20	21	6	22	23	24	25
7	26	27	28	29	8	30	31	32	33
9	34	35	36	37	10	38	39	40	41
11	42	43	44	45					

CH 48–107: 60 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 48); the table below gives each cell's channel numbers.

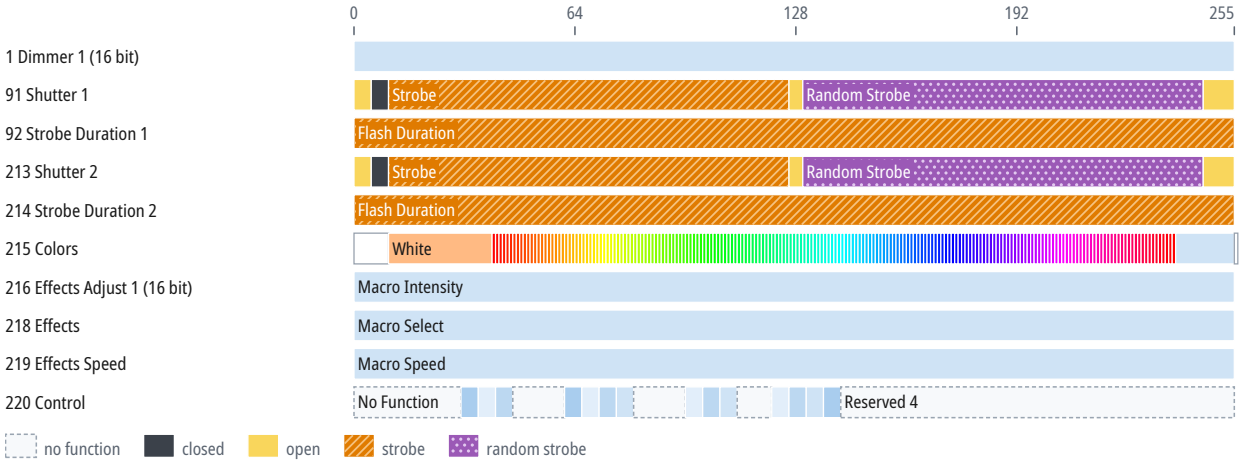
Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	48	2	49	3	50	4	51	5	52	6	53
7	54	8	55	9	56	10	57	11	58	12	59
13	60	14	61	15	62	16	63	17	64	18	65
19	66	20	67	21	68	22	69	23	70	24	71
25	72	26	73	27	74	28	75	29	76	30	77
31	78	32	79	33	80	34	81	35	82	36	83
37	84	38	85	39	86	40	87	41	88	42	89
43	90	44	91	45	92	46	93	47	94	48	95
49	96	50	97	51	98	52	99	53	100	54	101
55	102	56	103	57	104	58	105	59	106	60	107

Mode Pixel Full Fine

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 91 Shutter 1 at 0–4 “Open” or 126–129 or 246–255; CH 93 Dimmer above 0 (the same in each of the 60 cells); CH 213 Shutter 2 at 0–4 “Open” or 126–129 or 246–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 3 Red 255 (the same in each of the 11 cells), CH 5 Green 255 (the same in each of the 11 cells), CH 7 Blue 255 (the same in each of the 11 cells), CH 9 Warm White 255 (the same in each of the 11 cells), CH 93 Dimmer 255 (the same in each of the 60 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Dimmer 1 Fine	0–255	Fine adjustment of CH 1
3	Red 1		When CH 215 is 0–9:
		0–255	
4	Red 1 Fine	0–255	Fine adjustment of CH 3
5	Green 1		When CH 215 is 0–9:
		0–255	
6	Green 1 Fine	0–255	Fine adjustment of CH 5
7	Blue 1		When CH 215 is 0–9:
		0–255	
8	Blue 1 Fine	0–255	Fine adjustment of CH 7
9	Warm White 1		When CH 215 is 0–9:
		0–255	
90	Warm White 11 Fine	0–255	Fine adjustment of CH 89
91	Shutter 1		Same as CH 6 in the mode “Super Simple” (p. 13)
92	Strobe Duration 1		Same as CH 7 in the mode “Standard” (p. 14)
93	Dimmer 2	0–255	
94	Dimmer 2 Fine	0–255	Fine adjustment of CH 93
213	Shutter 2		Same as CH 8 in the mode “Super Simple” (p. 13)
214	Strobe Duration 2		Same as CH 10 in the mode “Standard” (p. 14)

CH	Function	DMX	Description
215	Colors		Same as CH 11 in the mode “Standard” (p. 14)
216	Effects Adjust 1		Same as CH 12 in the mode “Standard” (p. 19)
217	Effects Adjust 1 Fine	0–255	Fine adjustment of CH 216
218	Effects		Same as CH 13 in the mode “Standard” (p. 19)
219	Effects Speed		Same as CH 14 in the mode “Standard” (p. 19)
220	Control		Same as CH 15 in the mode “Standard” (p. 19)

CH 2–89: 11 cells of 8 channels each. Every cell works as cell 1 in the table above (CH 2–9); the table below gives each cell's channel numbers.

Cell	Dimmer Fine	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	Warm White
1	2	3	4	5	6	7	8	9
2	10	11	12	13	14	15	16	17
3	18	19	20	21	22	23	24	25
4	26	27	28	29	30	31	32	33
5	34	35	36	37	38	39	40	41
6	42	43	44	45	46	47	48	49
7	50	51	52	53	54	55	56	57
8	58	59	60	61	62	63	64	65
9	66	67	68	69	70	71	72	73
10	74	75	76	77	78	79	80	81
11	82	83	84	85	86	87	88	89

CH 93–212: 60 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 93–94); the table below gives each cell's channel numbers.

Cell	Dimmer	Dimmer Fine	Cell	Dimmer	Dimmer Fine	Cell	Dimmer	Dimmer Fine	Cell	Dimmer	Dimmer Fine
1	93	94	2	95	96	3	97	98	4	99	100
5	101	102	6	103	104	7	105	106	8	107	108
9	109	110	10	111	112	11	113	114	12	115	116
13	117	118	14	119	120	15	121	122	16	123	124
17	125	126	18	127	128	19	129	130	20	131	132
21	133	134	22	135	136	23	137	138	24	139	140
25	141	142	26	143	144	27	145	146	28	147	148
29	149	150	30	151	152	31	153	154	32	155	156
33	157	158	34	159	160	35	161	162	36	163	164
37	165	166	38	167	168	39	169	170	40	171	172
41	173	174	42	175	176	43	177	178	44	179	180
45	181	182	46	183	184	47	185	186	48	187	188
49	189	190	50	191	192	51	193	194	52	195	196
53	197	198	54	199	200	55	201	202	56	203	204
57	205	206	58	207	208	59	209	210	60	211	212

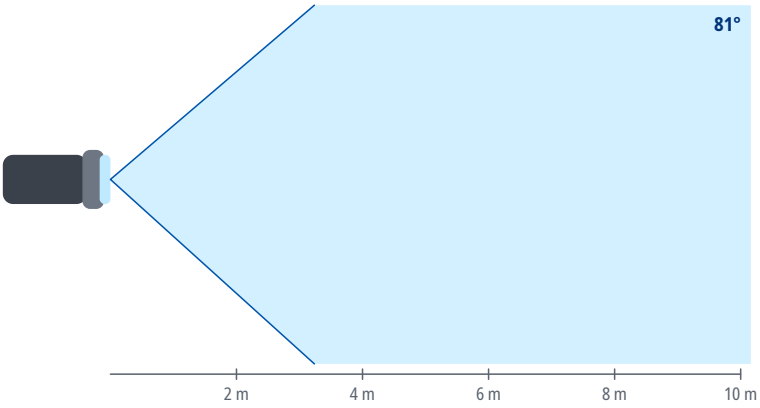
9 Technical specifications

Parameter	Value
Light source	LED
RDM	yes (manufacturer ID 0x01CC, device model ID 0x0013)
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.5–40 Hz
Strobe flash duration	0–0.65 s

Spot diameter



Distance	Ø 81°
2 m	3.4 m
4 m	6.8 m
6 m	10.2 m
8 m	13.7 m
10 m	17.1 m
15 m	25.6 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.