DMX REFERENCE

TYR

Pulse



Manufacturer	Pulse
GDTF file	Pulse_TYR_75991.gdtf
GDTF revision	1st Release · 2024-10-15
Generated	2026-11-24

Contents

1 About this manual 2
2 Quick reference 2
3 Safety instructions 3
4 Installation 4
5 Connections 4
6 Operation 5
7 Functions at a glance 5
8 DMX channels 8
Mode 4-Channel DMX Mode 8
Mode 12Ch Extended DMX Mode 9
9 Technical specifications 11
10 Maintenance and cleaning 12
11 Troubleshooting 12
12 Disposal 13

1 About this manual

This document describes the TYR by Pulse. It was compiled from the GDTF file Pulse_TYR_75991.gdtf from the GDTF-Share library.

File revision: “1st Release”.

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 Pulse; 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
Weight	7.8 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
4-Channel DMX Mode	4	128	1, 5, 9, 13, ...
12Ch Extended DMX Mode	12	42	1, 13, 25, 37, ...

No light? Check these channels

- 12Ch Extended DMX Mode: CH 1 Dimmer above 0


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

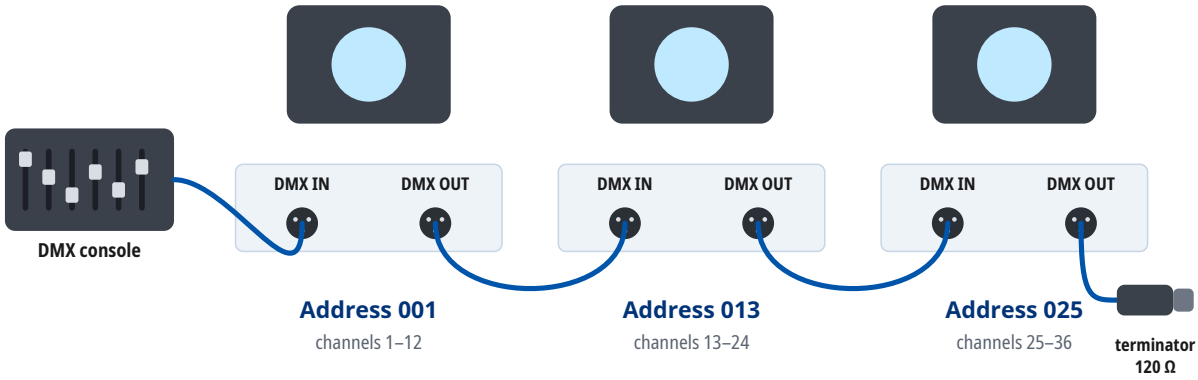
⚠ **WARNING**

- 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.
- Weight of the device: 7.8 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 12Ch Extended DMX Mode: every unit occupies 12 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 “12Ch Extended DMX Mode”: 12.
- 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 “12Ch Extended DMX Mode”, you can use, for example, the start addresses 1, 13, 25, 37.
- 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

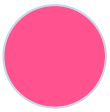
	4-Channel DMX Mode 4 channels	12Ch Extended DMX Mode 12 channels
Dimmer		1
Shutter / strobe		2
Color mixing	1–4	9–12
Effects / macros		3, 5–8

Color wheel

1 Open RGB

2 Color 1 - LEE 790

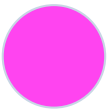
3 Color 2 - LEE 157



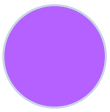
4 Color 3 - LEE 332



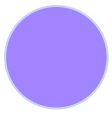
5 Color 4 - LEE 328



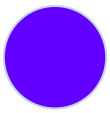
6 Color 5 - LEE 345



7 Color 6 - LEE 194



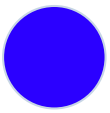
8 Color 7 - LEE 181



9 Color 8 - LEE 071



10 Color 9 - LEE 120



11 Color 10 - LEE 079



12 Color 11 - LEE 132



13 Color 12 - LEE 200



14 Color 13 - LEE 161



15 Color 14 - LEE 201



16 Color 15 - LEE 202

17 Color 16 - LEE 117



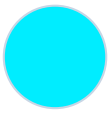
18 Color 17 - LEE 353



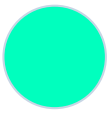
19 Color 18 - LEE 118



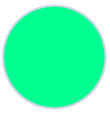
20 Color 19 - LEE 116



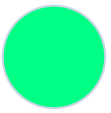
21 Color 20 - LEE 124



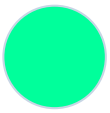
22 Color 21 - LEE 139



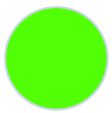
23 Color 22 - LEE 089



24 Color 23 - LEE 122



25 Color 24 - LEE 738



26 Color 25 - LEE 088

27 Color 26 - LEE 100

28 Color 27 - LEE 104



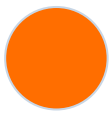
29 Color 28 - LEE 179



30 Color 29 - LEE 105



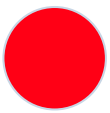
31 Color 30 - LEE 021



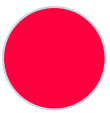
32 Color 31 - LEE 778



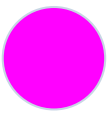
33 Color 32 - LEE 135



34 Color 33 - LEE 164



35 Color 34 - Magenta

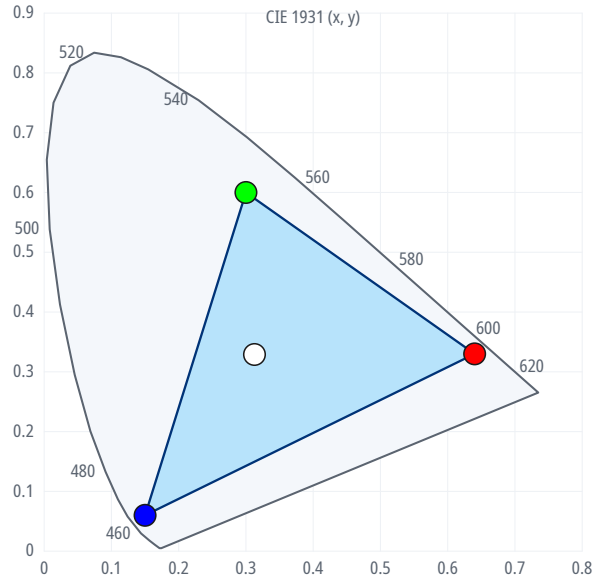


36 Color 35 - Medium Lavender



37 Color 36 - White

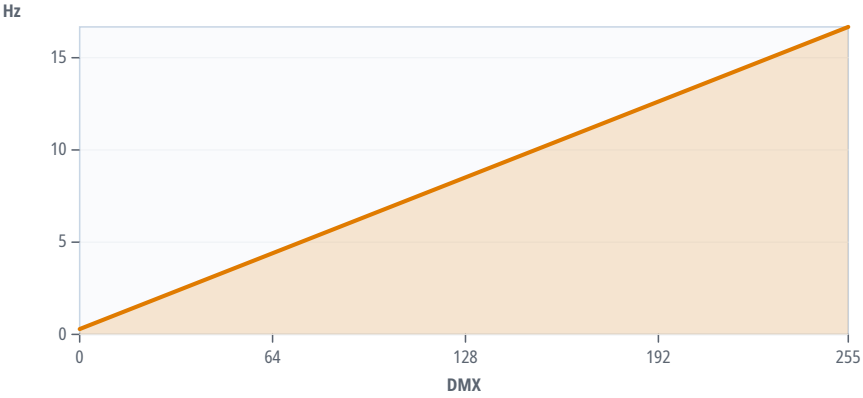
LED colors and the colors they mix



LED	x	y
Strobe	0.313	0.329
Plate R	0.640	0.330
Plate G	0.300	0.600
Plate B	0.150	0.060

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

Strobe rate

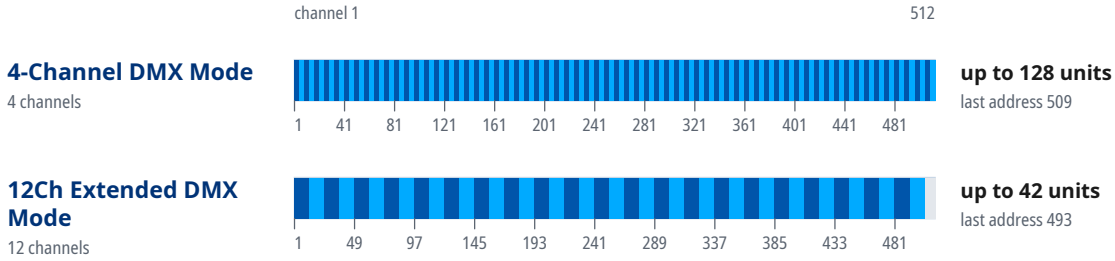


CH 2 · 12Ch Extended DMX Mode

0–255: 0.289–16.7 Hz
StrobeRate 1

8 DMX channels

Units in one DMX universe

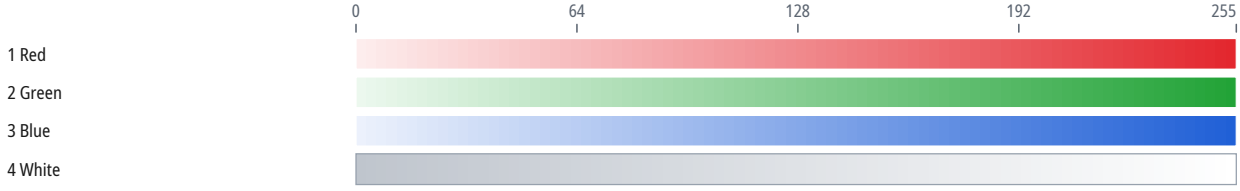


Start addresses of 20 units in the mode “12Ch Extended DMX Mode”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	61	11	121	16	181
2	13	7	73	12	133	17	193
3	25	8	85	13	145	18	205
4	37	9	97	14	157	19	217
5	49	10	109	15	169	20	229

Mode 4-Channel DMX Mode

Channel functions at a glance

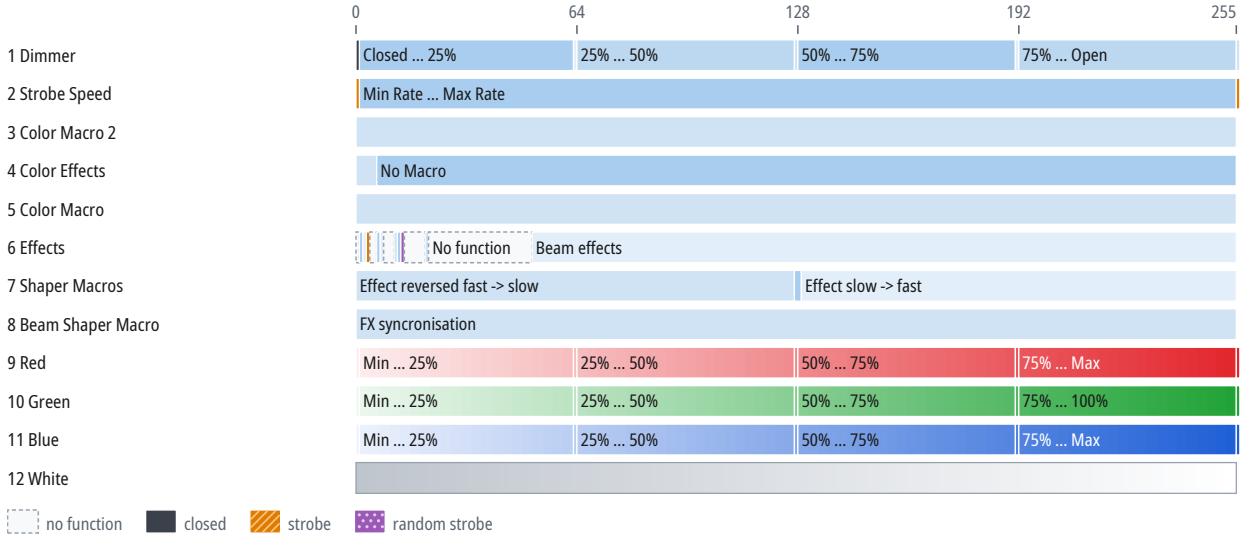


CH	Function	DMX	Description
1	Red	0–255	
2	Green	0–255	
3	Blue	0–255	
4	White	0–255	

Mode 12Ch Extended DMX Mode

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 9 Red 255, CH 10 Green 255, CH 11 Blue 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0	Closed
		1–62	Closed ... 25%
		63	25%
		64–126	25% ... 50%
		127	50%
		128–190	50% ... 75%
		191	75%
		192–254	75% ... Open
		255	Open
2	Strobe Speed		Strobe Rate 1
		0	Min Rate
		1–254	Min Rate ... Max Rate
		255	Max Rate
3	Color Macro 2	0–255	
4	Color Effects		No Macro
		0–5	No effect
		6–255	No Macro
5	Color Macro	0–255	
6	Effects		Beam effects
		0	No function
		1	Wave (sine wave)
		2	Step (50/50 on/off)
		3	Pulse

CH	Function	DMX	Description
6	Effects (continued)	4–5	No function
		6	Double strobe
		7	Triple strobe
		8–10	No function
		11	Up-down-flash
		12	Up-flash-down-flash
		13	Random levels
		14–19	No function
		20	House light
		21–50	No function
		51–255	Beam effects
7	Shaper Macros	0–126	Effect reversed fast -> slow
		127–128	Effect stops
		129–255	Effect slow -> fast
8	Beam Shaper Macro		FX syncronisation
		0–255	FX syncronisation
9	Red	0	Min
		1–62	Min ... 25%
		63	25%
		64–126	25% ... 50%
		127	50%
		128–190	50% ... 75%
		191	75%
		192–254	75% ... Max
		255	Max
10	Green	0	Min
		1–62	Min ... 25%
		63	25%
		64–126	25% ... 50%
		127	50%
		128–190	50% ... 75%
		191	75%
		192–254	75% ... 100%
		255	100%

CH	Function	DMX	Description
11	Blue	0	Min
		1–62	Min … 25%
		63	25%
		64–126	25% … 50%
		127	50%
		128–190	50% … 75%
		191	75%
		192–254	75% … Max
		255	Max
12	White	0–255	

9 Technical specifications

Parameter	Value
Light source	discharge lamp
DMX connection	BNC IN/OUT
Power connectors	powerCON TRUE1 IN
Weight	7.8 kg
Operating temperature	0 to 40 °C

Speeds and ranges

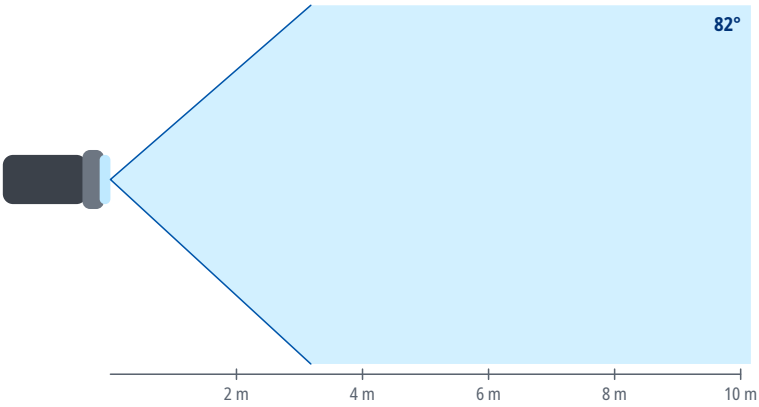
Parameter	Value
Strobe frequency	0.289–16.7 Hz

Dimensions

weight 7.8 kg



Spot diameter



Distance	Ø 82°
2 m	3.5 m
4 m	7 m
6 m	10.4 m
8 m	13.9 m
10 m	17.4 m
15 m	26.1 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.