



Universe 1



Universe 2

Manual:
R=1
G=4
B=5
D=6

Manual:
D=1
R=6
G=7
B=8



50% Red on A



Lamp A



Lamp B

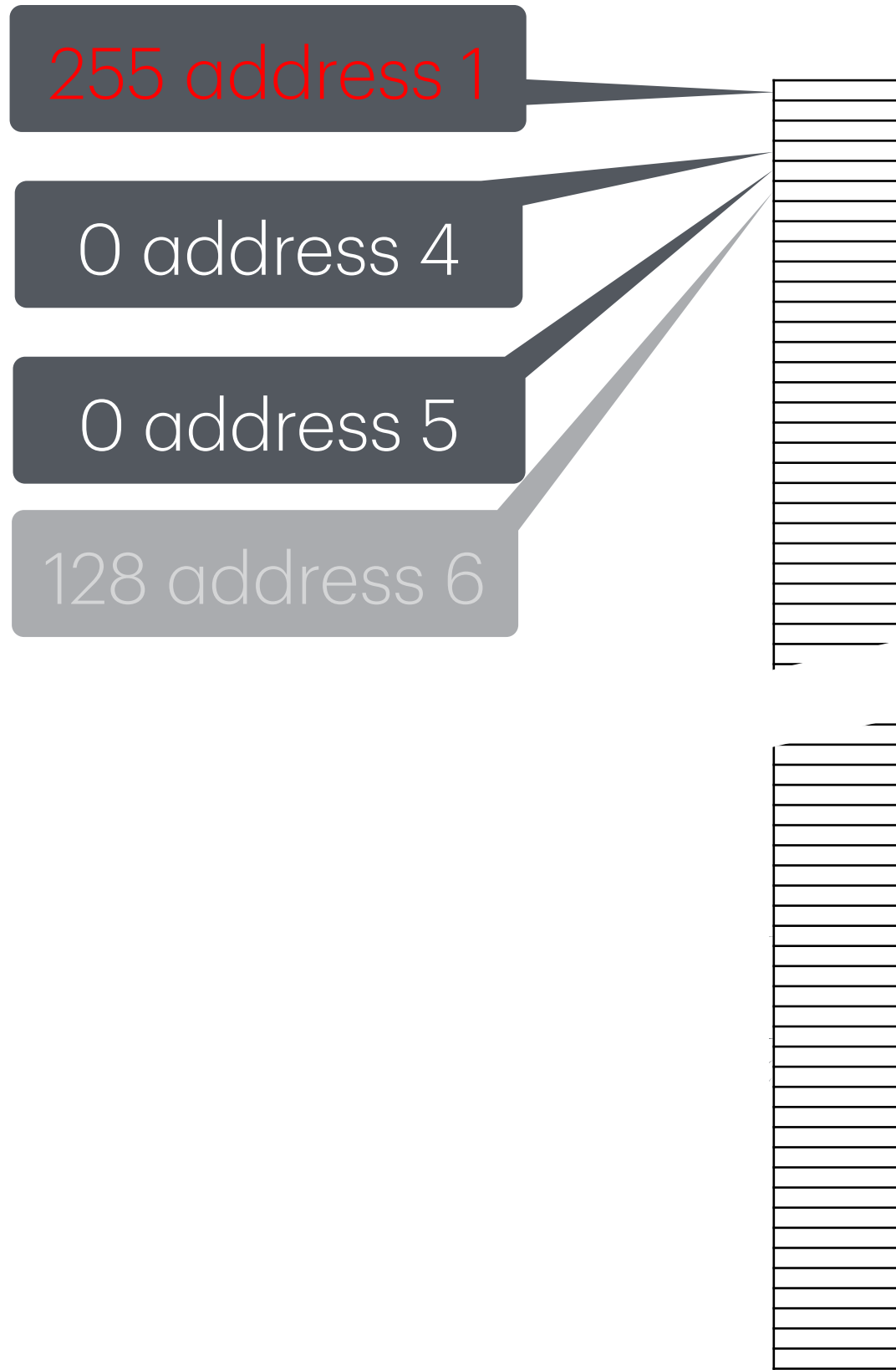


Lamp C



Lamp D

512 channels (bytes)





Address 10



Manual:
R=1
G=2
B=3
D=4
T=5
P=6



Address 30

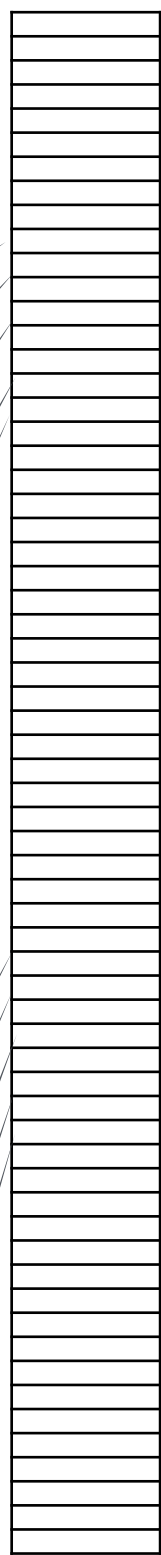


100% Red Tilt 180°

- 255 address 10
- 0 address 11
- 0 address 12
- 255 address 13
- 128 address 14

100% Green Pan 90°

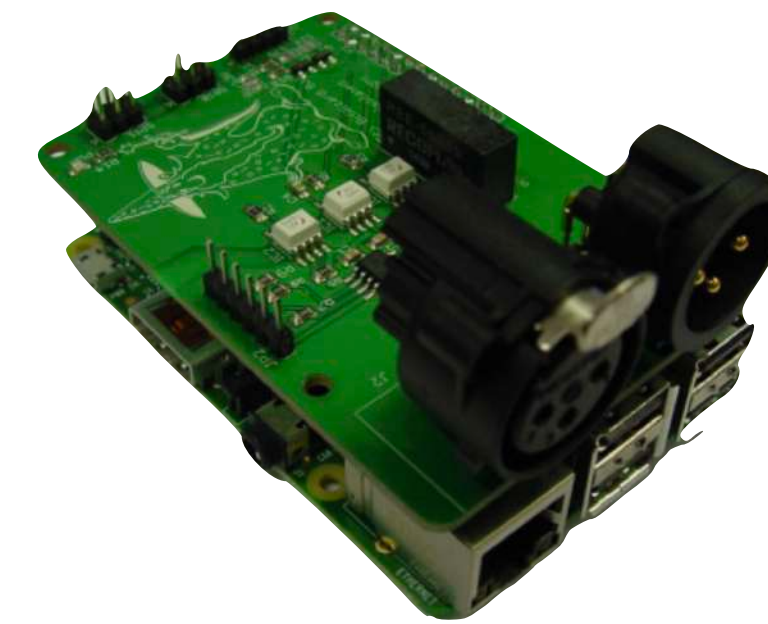
- 0 address 30
- 255 address 31
- 0 address 32
- 255 address 33
- 128 address 35



Zelf aan de slag...

Wat heb je nodig?

- Apparaat (lamp) met DMX aansluiting
- Drie-polige DMX kabel (110 ohm) (geen XLR, dat is voor audio)
- Raspberry Pi
- Serieel (DMX) omzetter:
 - HAT voor Raspberry Pi: BitWizard € 30
 - of bijv. een Entec USB/Serieel aansluiting € 78
- Open Lighting Architecture software (open source)



Open Light Architecture

Installatie

- `sudo apt install ola`
- Voor Entec:
 - `/etc/ola/ola-opendmx.conf: enabled = false`
 - `/etc/ola/ola-ftdidmx.conf : enabled = true`
- Voor Bitwizard:
 - `/etc/ola/ola-uartdmx.conf: enabled = true, device = /dev/ttyAMA0`
 - `raspi-config` Interface options / Serial Port: No
 - `/boot/config.txt: enable_uart=1, dtoverlay=disable-bt, init_uart_clock=16000000`
 - `init-script: sudo pinctrl set 18 op dh`

OLA Webinterface

http://a.b.c.d:9090



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leo2

+

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Active Universes

Universe #	Universe Name
2	leo2

Server Info

Hostname	dmx
Primary IP	192.168.1.68
Primary Broadcast Address	192.168.1.255
Primary MAC Address	dc:a6:32:ba:18:63
Instance Name	OLA Server
Version	0.10.9
Started	Thu Sep 11 05:56:51 2025

OLA Webinterface

http://a.b.c.d:9090



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SettingsRDMRDM PatcherDMX MonitorDMX Console

Universe Settings

Universe Id2

Universe Nameleo2

Merge ModeLTP

Input Ports

Device	Description
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Output Ports

Device	Description
☒ UART native DMX	/dev/ttyAMA0

OLA Webinterface

http://a.b.c.d:9090

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Universes

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[illegible]

DEMO



Command Line

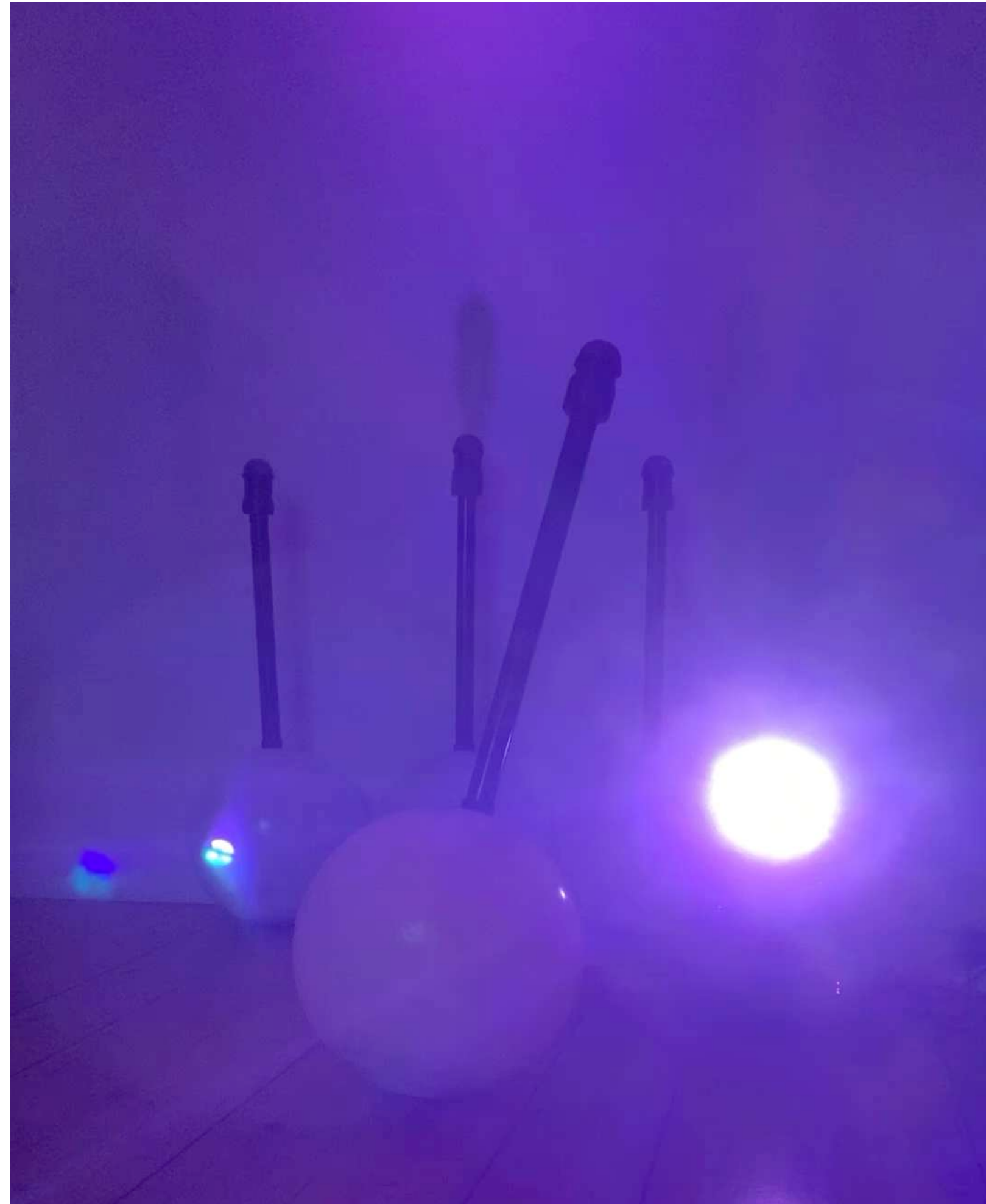
ola_streaming_client

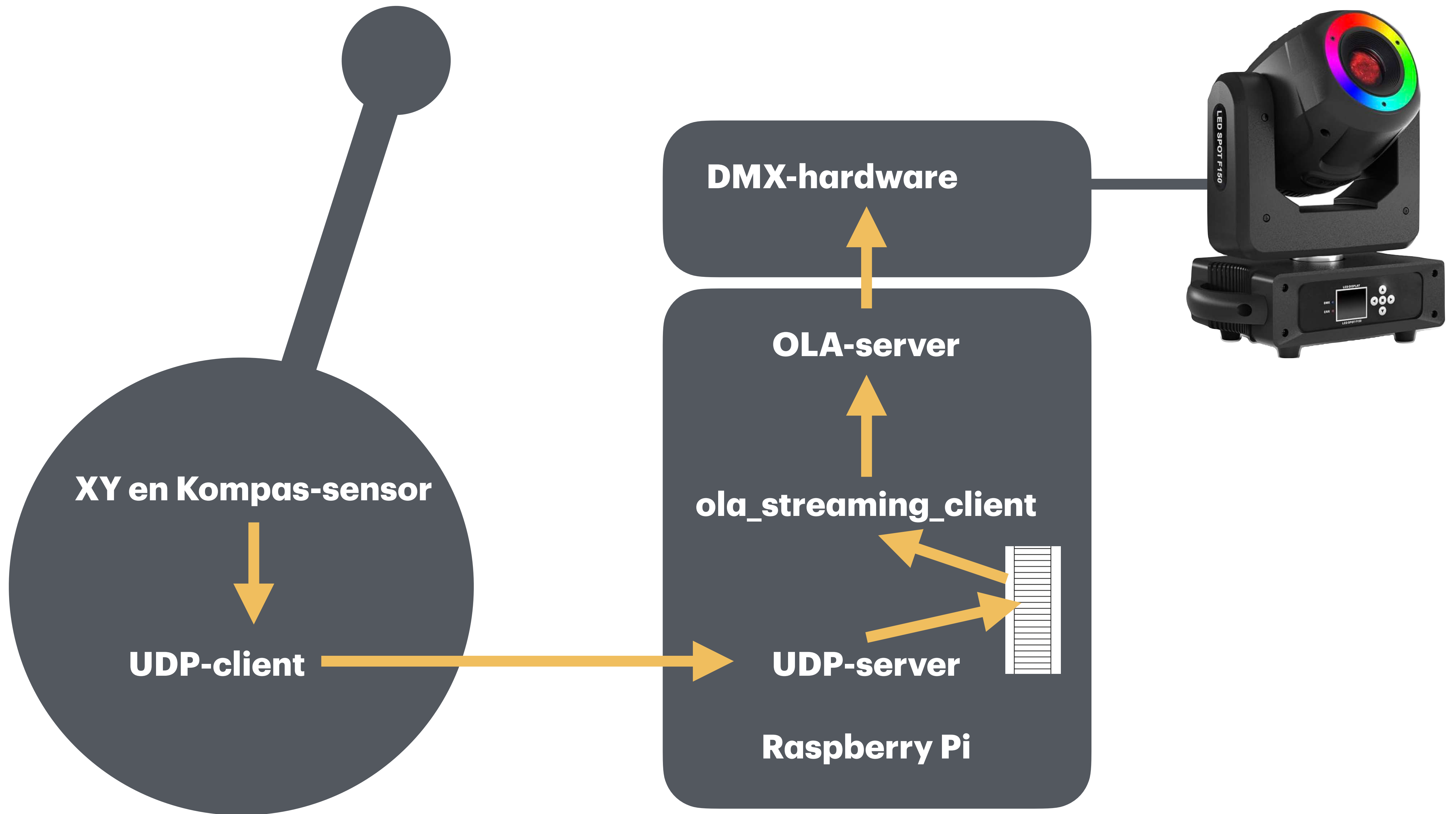
```
$ ola_streaming_client -u 2 -d 32,75,255,0,255,0,0,0,0,0,0,0,0..... . (512)
```

```
$ echo 32,75,255,0,255,0,0,0,0,0,0,0,0..... . (512) >bestand
```

```
$ ola_streaming_client -u 2 <bestand
```

DEMO





Pseudo-code

```
cmd := exec.Command("ola_streaming_client -u 2")
```

```
while true
```

```
    var bu2 [512]byte
```

```
    Read UDP-bytes en vul bu2 op de juiste kanalen
```

```
    var su2 string
```

```
    UDP server converteert array naar string :
```

```
    "0,0,0,22,34,255,,0,0,0,0,0" (10 x seconde)
```

```
    cmd.Write(su2)
```

Software

- Commercieel:

- Qlab

- Sweetlight

- Daslight

- Free:

- ASLS Studio

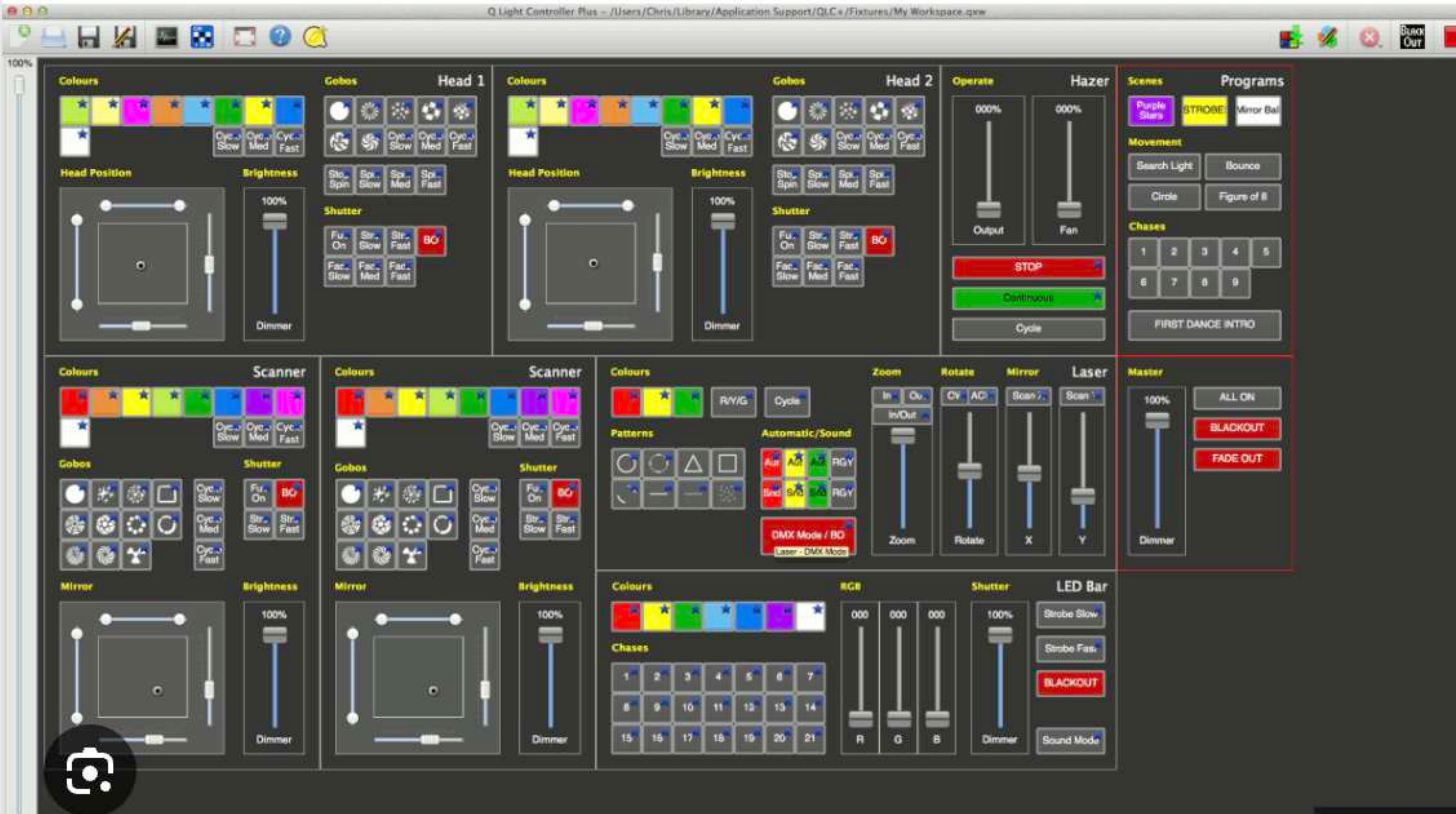
- DMXControl

- Open Source

- OLA

- QLC+

QLC+



Beperkingen

- Vergeet de terminator niet
- Max. ca. 20 apparaten per universe (theorie: $512/\text{aantal kanalen van de fixtures}$)