Digital Lighting control (from computer)

Various way to control digital lights from your computer over DMX

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DMX Controllers

To send DMX from your computer to the fixtures you need a hardware controller or converter

DMX Controllers

ENTTEC

hain through USB.

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ArtNet

Art-Net uses ethernet for transmitting lighting data, making it easy to transfer of large amounts of DMX512 data over a wide area using standard networking technology. It is an implementation of DMX512-A protocol over UDP. This can be done through a LANcable or wireless to a receiver/converter.

To receive ArtNet data & convert it to DMX you need a hardware converter. *

For HKU students the Blackbox JK is equipped with ArtNet, not for loan.

more info: https://art-net.org.uk/

*Do you have some Arduino experience? Build your own!

https://www.instructables.com/Arduino-Artnet-Node/

QLC+

QLC+ is a feee software package for controlling DMX-512 systems from PC or MAC. You can connect it to your system via a number of different interfaces: USB-to-DMX adapters, DMX-to-Ethernet adapters, WiFi, Ethernet, and more. It's useful as a diagnostic tool when you need to send DMX from your laptop without doing any programming.

QLC+ Startup Guide

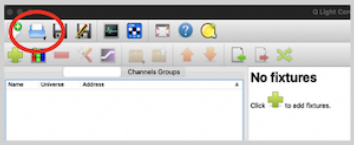
Use this startup guide when working with a pre-programmed version of QLC (template), like installed in the Blackboxes. The added fixtures and virtual console will be different in every Blackbox, depending on the facilities.

QLC+ STARTUP GUIDE

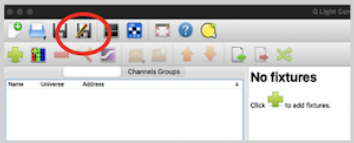
Start the software QLC+ from the Desktop

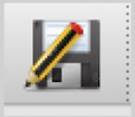
Choose button "Q light Controller Plus"
The Fixure editor is only used when we want to add lamps that are not in the default system.

The template file will be empty, you need to **OPEN** your own file or our Blackbox standard template file in QLC+

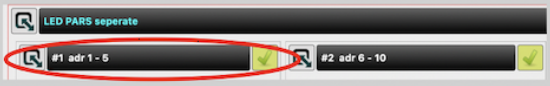


When the files is open, first before anything else, **SAVE-AS** this template under your own name! Otherwise any mistakes or alterations will alter the template standard file





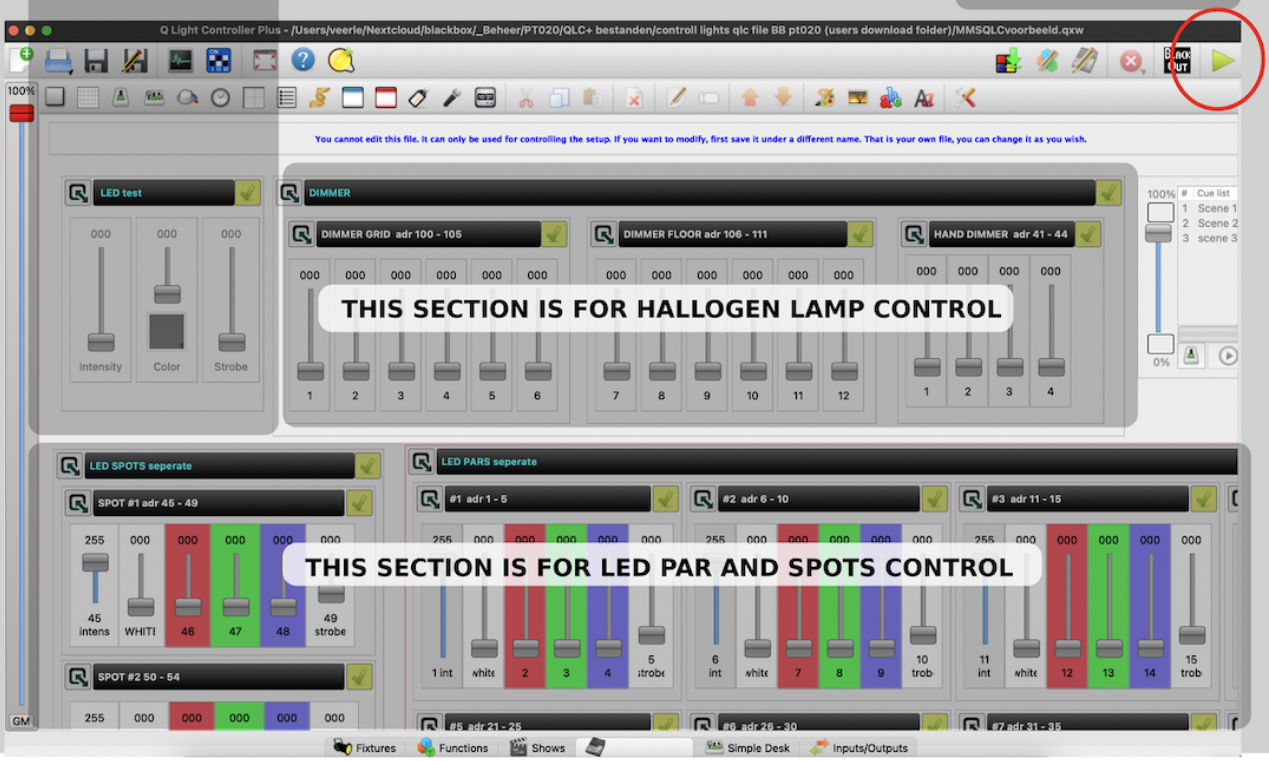
This part controls **ALL** lamps in the same colour, can be handy for extra worklights, but turn these faders off when you want individual lamp control.



The lamp adresses are located on the side of the LED Par and Spots, in QLC+ you can find the corresponding lamp adresses in the template.

PLAY is used to start the lights.

STOP is used to edit the template and change the graphic user interface.



Download

Download QLC here

Go for the stable 4.x.x version if you are practising to use this tool in the Blackbox @ HKU

Emu

EMU (free) is an easy-to-use audio to DMX software package that enables you to pre-program your entire light show in advance

Emu

EMU info & download

EMU (the software by ENTTEC) is designed for musicians, DJs and live artists with live performances in mind,
The interface is quick to learn and easy to use
EMU allows for the synchronisation of lighting and music with oscillators in real time, though MIDI.

Whether you want to control LED washes, moving heads, dimmer packs, smoke machines, scanners, moonflowers… You name it, you can control them using EMU’s audio to DMX or Art-Net output.

Download EMU here (register first)

EMU tutorials

https://www.youtube.com/embed/ENoRfXE_G10

Touchdesigner

Controlling digital lights from Touchdesigner with a DMX controller

Touchdesigner

In Touchdesigner DMX data is sent to the daisy-chain of fixtures through USB (via an ENTTEC available at the uitleen) or ArtNet.

- Check out the .tox for fixtures to control the lights in the Blackbox.

https://www.youtube.com/embed/byyrxDm8sVc

Touchdesigner .tox for various fixtures

DMX Config	TOX	Example fixtures
5 channels: Intensity Red Green Blue Strobe	ETC_Colorsource_Par.tox	ETC ColorSource Spot jr (inventory Blackboxes & klein Zaal) ETC ColorSource Par (inventory Blackboxes) ColorSource Spot Deep Blue (inventory Kleine Zaal)

6 channels: Red Green Blue White Amber Uv	6CH_Par_RGBWAU.tox	High End PAR uitleen Theater : type & DMX traits: Elation SIXPAR 100 >> Mid Range PAR uitleen Theater type & DMX traits: 5PXHEX
7 channels: Red Green Blue White Amber Uv Master Dimmer	7CH_Par_RGBWAUI.tox	High End PAR uitleen Theater : type & DMX traits: Elation SIXPAR 100 Mid Range PAR uitleen Theater type & DMX traits: 5PXHEX >>

14 channels (see manual)	Moving_Head_Briteq_BT_W19L10ZOOM_14ch.tox	 Briteq BT-W19L10 Zoom (uitleen Oudenoord) type & DMX traits BT-W19L10

Easy DMX_Out for Artnet (use a merge to connect multiple fixtures, dive in & adjust de DMX out to use another interface)

dmx_out_Artnet_2023.tox

Patch for the Blackbox @ Janskerkhof (to connect with OSC via ipad)

RemoteControlLights (TouchOSC_ArtNet).toe

Resolume Arena

Resolume Arena can output the color or brightness of your pixels to LED strips or other light fixtures via DMX.

Tutorials

Check out the explaination of the basics on the Resolume Website

add tutorials

tips for specific fixtures

add research Fidde with Grote Zaal lampen

Other related stuff to dive into

Other related stuff to dive into

Remote control of Lights through TouchOSC

TouchOSC is a modular control surface toolkit for designing and constructing custom controllers that can be used on a multitude of operating systems and devices. An easy way of designing your own OSC controls. Use the old version of TouchOSC Editor or new version to design custom sliders, faders and buttons, control other software through OSC using the app TouchOSC

Simple TouchOSC template to control 8 pars & 3 spots (5 channels). Open this patch in TouchOSC Editor to upload to your device. Any software that receives OSC massages can be connected.	Controlling LightPars&Spots.touchosc

How to use the templates:

1. Download and install the TouchOSC App on your tablet or smartphone
2. Download and install the TouchOSC desktop editor on your computer
3. Start the desktop editor and load a template
4. Check to make both devices on the same WiFi Network. Set the computer ipadres in the app.
5. In the App go to LAYOUT & tap ADD. Select your host (computer name running the desktop editor) Click on “sync” and the template will be sent to your tablet or smartphone.
6. The template will now appear on your tablet or smartphone list of templates

TouchOSC & Touchdesigner:

Control the lights* remotely with Touchdesigner & TouchOSC on Ipad with these 2 patches & ArtNet.	
Open this patch in TouchOSC Editor to upload to your device.	Controlling LightPars&Spots.touchosc
Open this patch in Touchdesigner, check OSC port & ArtNet connection.	RemoteControlLights (TouchOSC_ArtNet).toe
After connecting, slide all the faders once to refresh the connection with Touchdesigner & remove errors. This connection also works when TD is running in perform mode in the background. * these patches were designed for the fixtures in the Blackbox @Janskerkhof (8 pars & 3 spots) but can easily be adapted.	

TouchOSC & QLC

https://www.youtube.com/embed/AtVj61ShJ2o	tbd add example patch

Other related stuff to dive into

Visualizing shows

https://www.youtube.com/embed/_q0ZyGS0VWQ

Other related stuff to dive into

Combining Software

Sending DMX data from Touchdesigner over Artnet to Resolume.

https://www.youtube.com/embed/N4yEi33Fx1s

Sending OSC data from Isadora to QLC

Connecting EMU & Abelton

https://www.youtube.com/embed/-EIkUmzLFsQ

Other related stuff to dive into

MagicQ : lighting software mimicking a light console

MagicQ software offers powerful lighting control with loads of features that lighting designers have come to rely on, such as full lighting visualisation, pixel mapping, and HD media playback on up to 8 different layers, all integrated smoothly to streamline workflows, save time, and shorten learning curves on even the most complex lighting systems.

- MagicVis Visualiser
- Magic HD Pixel-Mapper
- Morphing
- Cloning
- Patch Offsetting
- Group and Palette FX

Chamsys MagicQ supports an extensive array of features to enable lighting designers to quickly and easily realise their innovative and imaginative designs. MagicQ offers lighting control on up to 256 universes with full lighting visualisation, pixel mapping, and HD media playback on up to 8 different layers, all integrated smoothly to streamline workflows, save time, and shorten learning curves on even the most complex lighting systems.

MagicQ PC is available free of charge for use on Windows, Mac and Linux with 64 universes of output fully enabled (via Art-net, sACN, Pathport) - no hardware required!

https://chamsyslighting.com/collections/software to download MagicQ

https://chamsyslighting.com/pages/video-tutorials to learn MagicQ