

# Triggering Eos from QLab using OSC<sup>1</sup>

When playing back lighting and sound cues simultaneously, it is often desirable to have these execute at exactly the same time. This can be done using Open Sound Control (OSC), which allows sound to trigger lighting, or vice versa, using only a network connection between the devices - no additional hardware required (unlike MIDI).

This note shows how to send triggers from QLab to the lighting desk. It is also possible to trigger QLab from the lighting desk<sup>2</sup>.

If you are using the Nomad back-up, the set-up will differ from these instructions.

This note covers:

- Setting up the Network Connection
- Creating OSC commands in QLab
- Sorting it out if it is not working

## Setting Everything Up

If you are lucky the connection and configurations will already be in place between the Tower's sound Mac Mini and the lighting desk and you can go straight to the section on sending OSC commands. If not, you will have to follow the instructions below.

Normally there is a direct ethernet connection between port 2 on the rear of the lighting desk and the Mac Mini and this is the one to use for OSC. Port 1 is used to connect to the LX Wi-Fi network.

To configure this connection between QLab and the lighting desk:

- Set up the network on the lighting desk
- Set up the network on the sound Mac Mini
- Configure the lighting desk to receive OSC
- Configure QLab to send OSC to the lighting desk

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<sup>1</sup> This note is based on

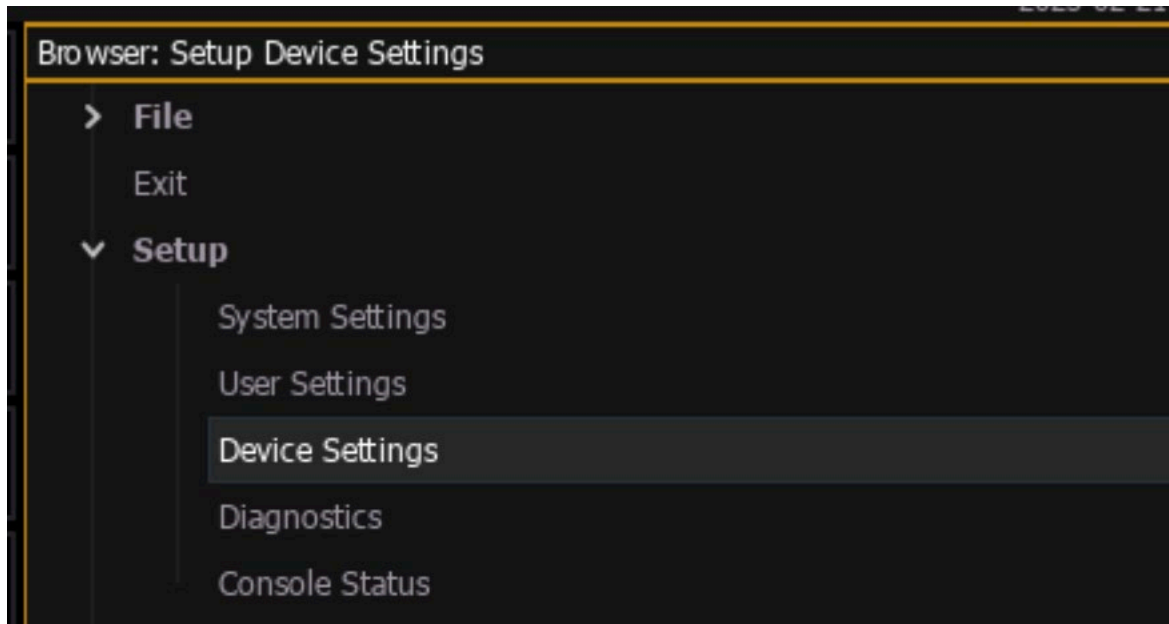
[https://support.etconnect.com/ETC/Consoles/Eos\\_Family/Software\\_and\\_Programming/Triggering\\_Eos\\_from\\_QLab\\_using\\_OSC](https://support.etconnect.com/ETC/Consoles/Eos_Family/Software_and_Programming/Triggering_Eos_from_QLab_using_OSC)

<sup>2</sup> The process is very similar. See:

[https://support.etconnect.com/ETC/Consoles/Eos\\_Family/Software\\_and\\_Programming/Triggering\\_QLab\\_from\\_Eos\\_using\\_OSC](https://support.etconnect.com/ETC/Consoles/Eos_Family/Software_and_Programming/Triggering_QLab_from_Eos_using_OSC).

## Set Up The Network on the Lighting Desk

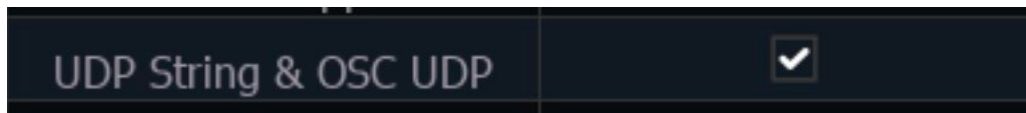
To edit the network settings, click [displays] to open the file browser and navigate to Setup>Device Settings>Network



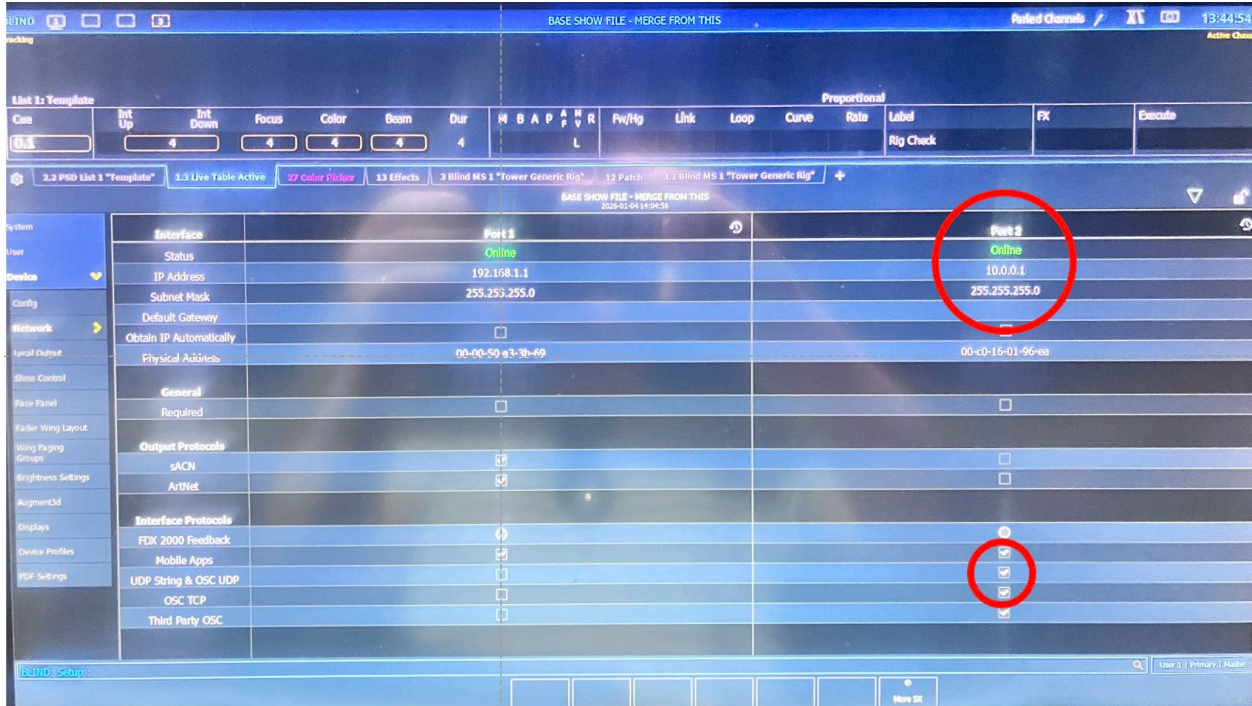
Make sure the IP address for port 2 is 10.0.0.1 and the subnet mask is 255.255.255.0

If you need to change it a reboot will be required.

Once this is set, scroll down to the Interface Protocols section. Ensure that UDP Strings & OSC is ticked for the port 2.



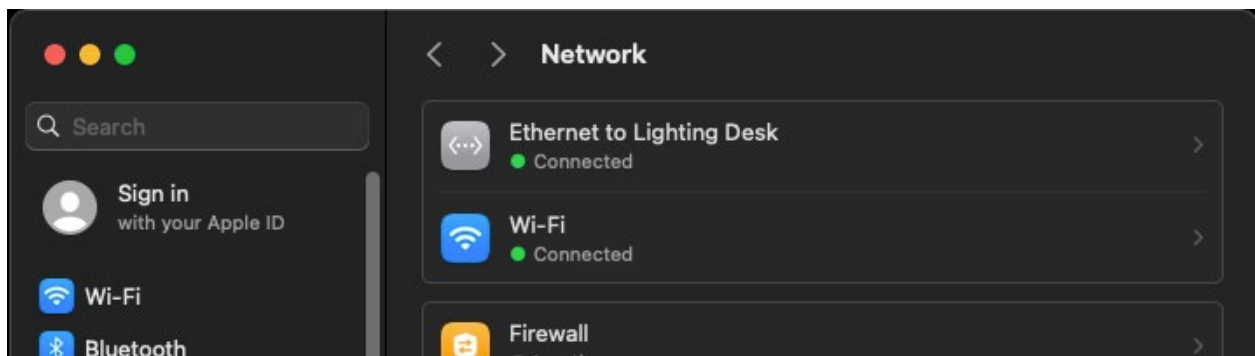
The screen should look like this:



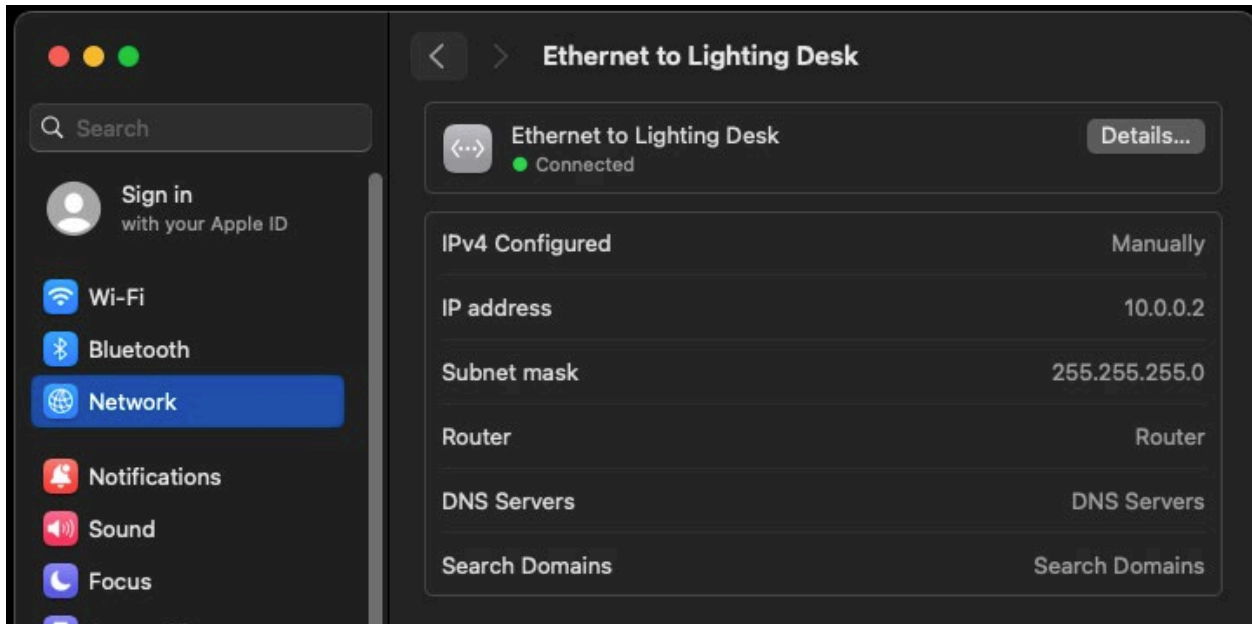
## Set Up the Network on the Sound Mac Mini

QLab runs on macOS, so go to the Apple menu (top left of the screen) > System Settings > Network.

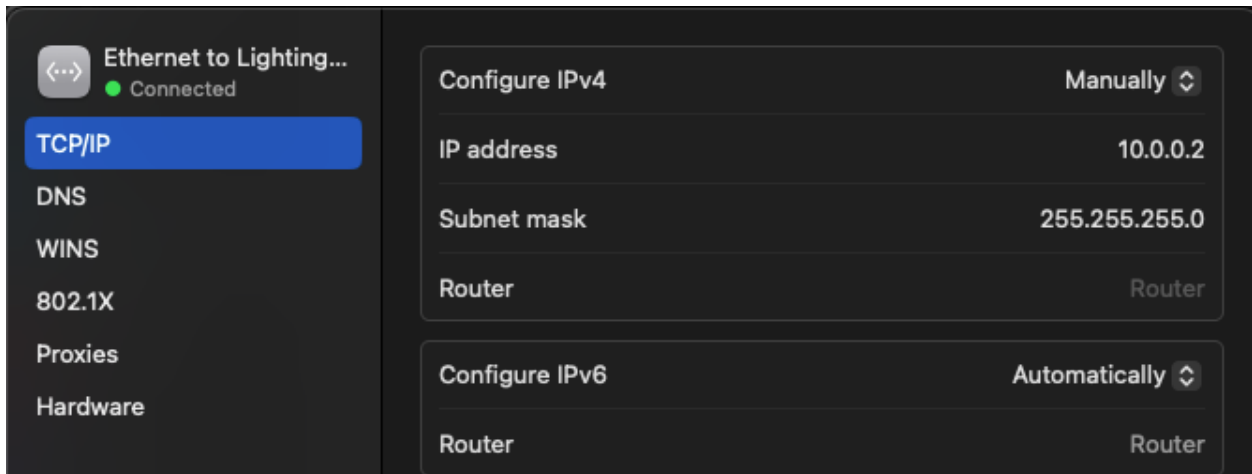
Choose the relevant network interface from the list (should be set up as Ethernet to Lighting Desk)



This should display this screen:



If the IP address and subnet mask are not 10.0.0.2 and 255.255.255.0 then click the Details button in the top right of the menu and amend the values in the TCP/IP tab.



Hit OK and exit System Settings.

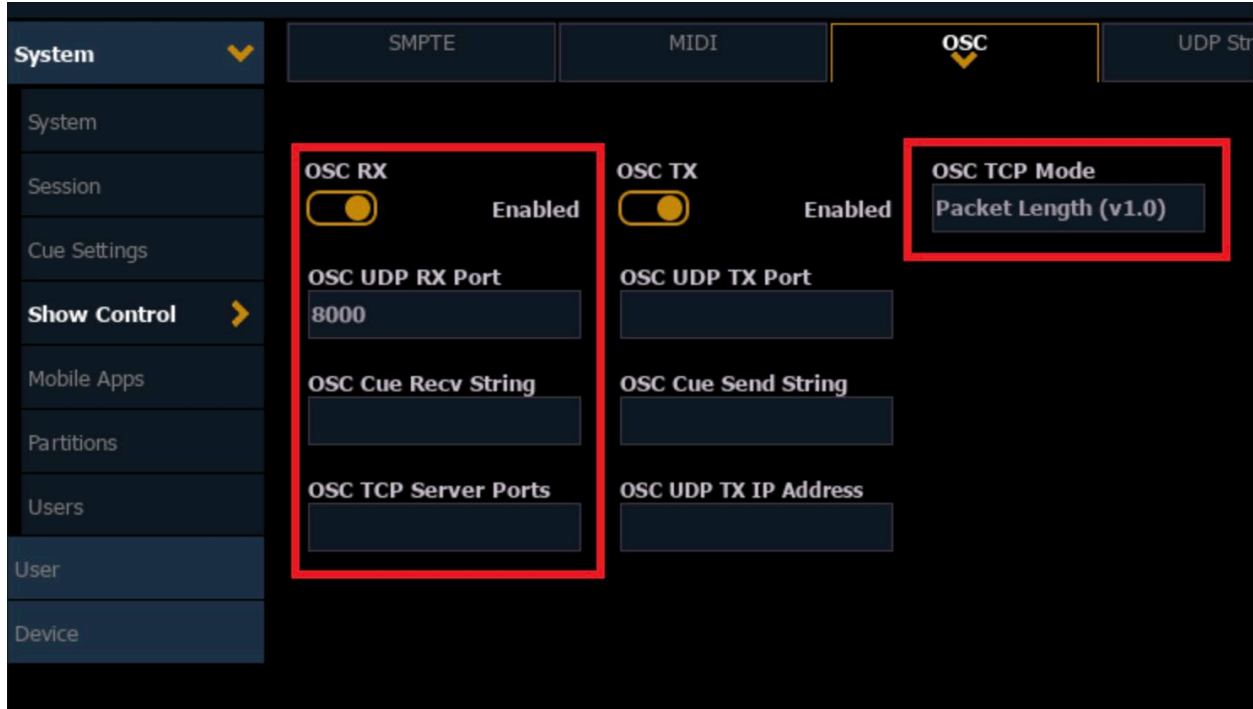
You will now have a network connection between QLab and the lighting desk.

## Configure the Lighting Desk to Receive OSC

To edit the network settings on the lighting desk, click [displays] to open the file browser and navigate to Setup>System Settings>Show Control, then OSC.

The OSC options are divided into RX (receiving) on the left, and TX (transmitting) on the right. We need to set the RX values, as Eos will be the receiving device.

Your window should look like this:



Check window has these settings:

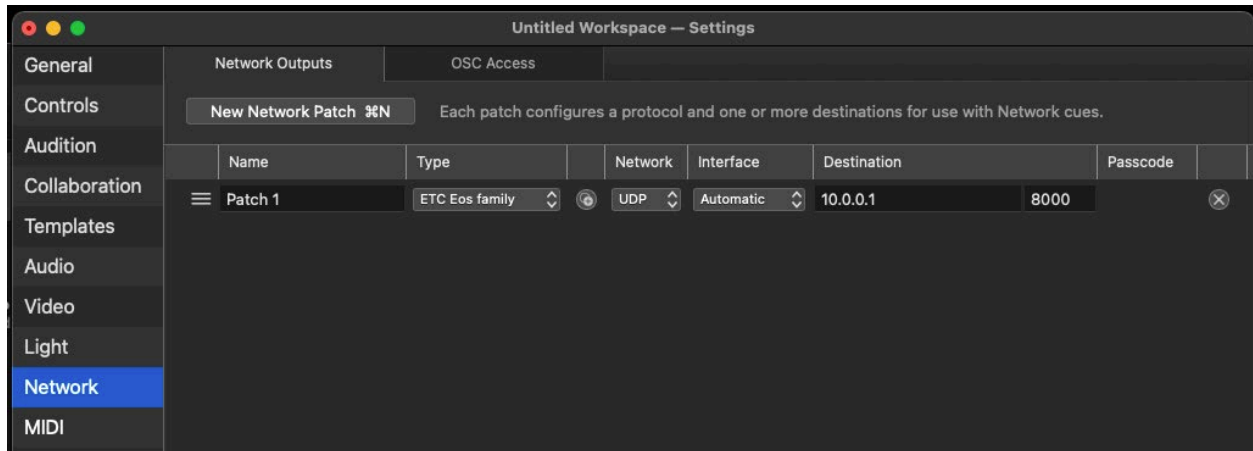
- **OSC RX:** Enabled
- **OSC RX Port:** 8000 (this is an arbitrary number, it just needs to match QLab)
- **OSC Cue Recv String:** leave blank
- **OSC TCP Mode:** leave at Packet Length (v1.0) as seen below

Eos is now set up to receive OSC on IP address 10.0.0.1, port 8000. Now let's configure QLab.

## Configure QLab to Send OSC to the Lighting Desk

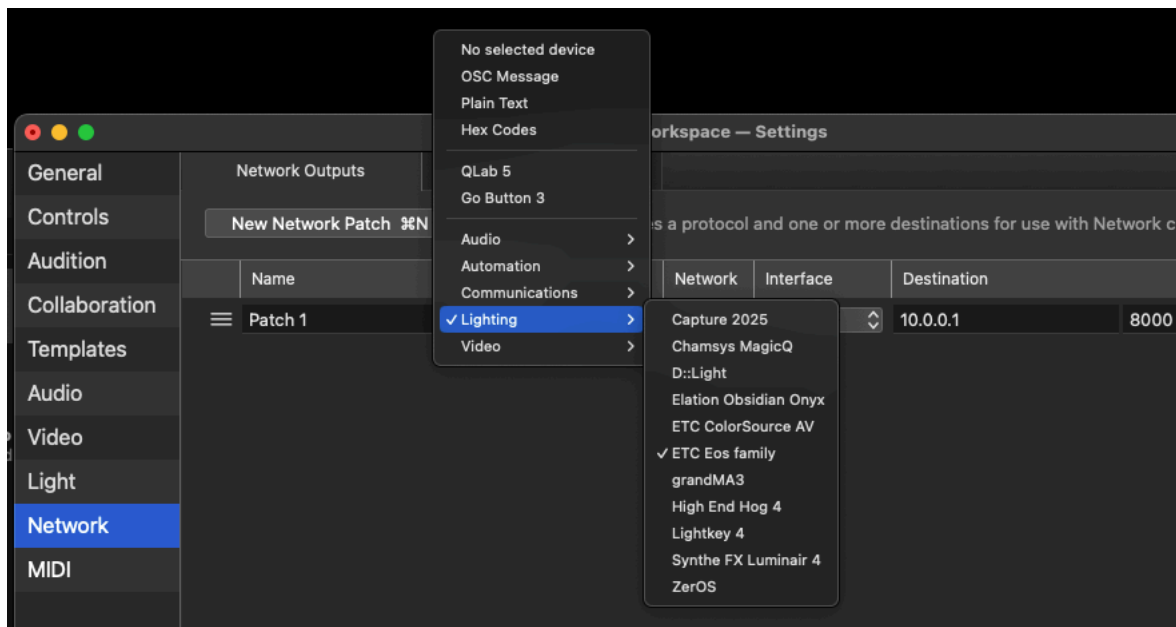
We need to tell QLab where to send its OSC commands.

Open up a QLab workspace, then click on the gear symbol (bottom right) for Workspace Preferences. Choose Network in the left-hand menu. The window should look like this:



Check the Type, Network, Interface and Destination are as in the above screenshot.

If you need to change the Type, you can find ETC EOS family in the sub-menu for lighting:



Now both devices have enough information to talk to each other.

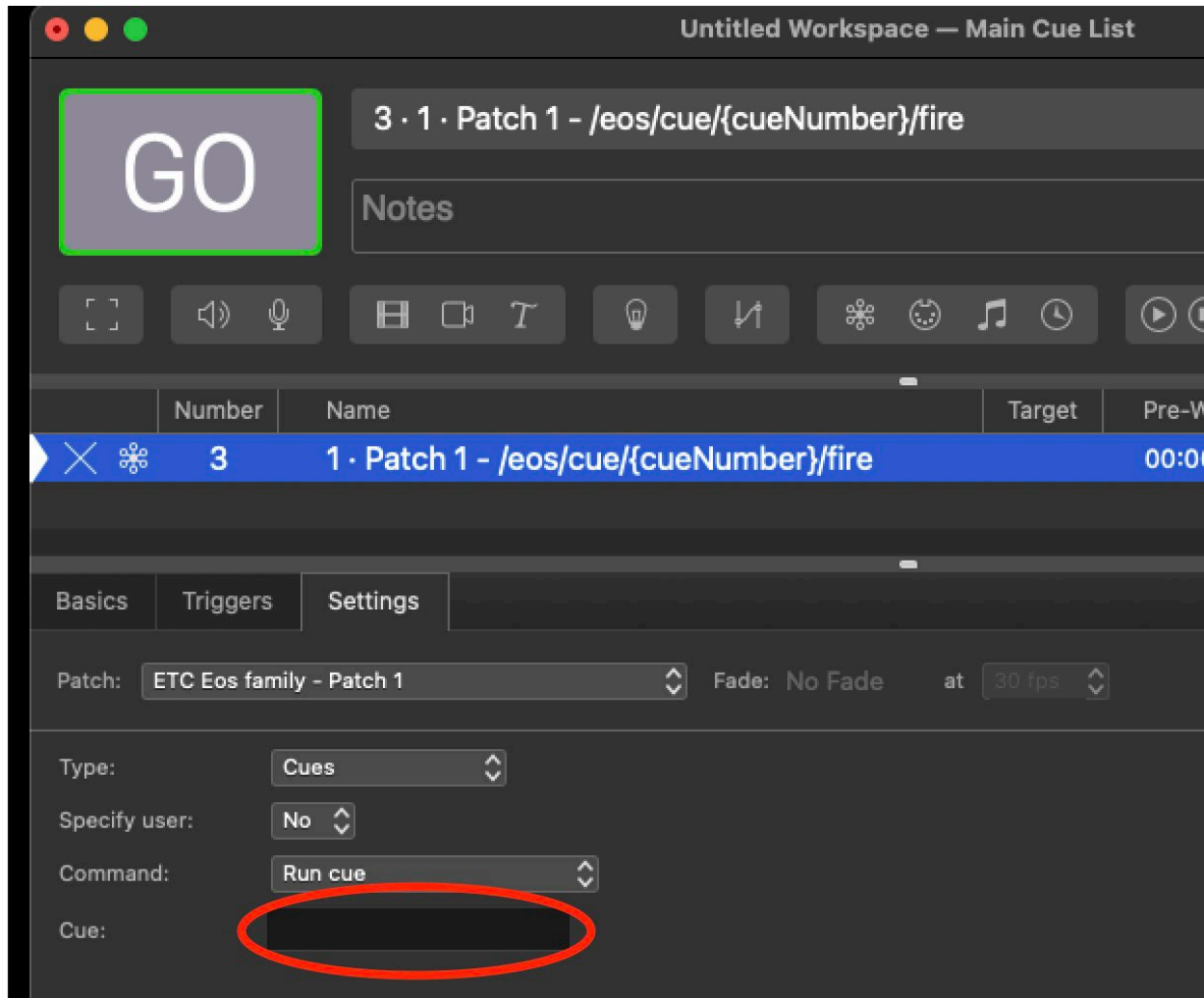
## Creating OSC Commands in QLab

Now the connection is in place, creating lighting cues in your show file is easy.

Insert a Network cue into your cue list, which looks like a little snowflake. - ❄️ - in the bar of cue types across the top. Drag one of these into the workspace, and select it.

Look at the details in the Inspector's Setting tab where you can see some options for the cue.

It should look like this:



First, make sure the patch is ETC Eos family – Patch 1.

QLab can send several different types of command to the lighting desk but we usually want to fire a cue, so make sure Cues is selected in the Type field.

Insert the cue number you want to run in the Cues box.

If you select your cue in QLab and hit GO, then the lighting cue should fire. If so, congratulations! If not, see below for troubleshooting tips.

## What can I send?

The most common scenario is to trigger a specific cue, as above, but there are many other options. Some examples include:

```
/eos/cue/3/9/fire - fires cue 9 from cuelist 3  
/eos/key/go_0 - presses the GO button  
/eos/sub/1/full - sends Submaster 1 to full
```

For a full list of supported inputs, see the OSC section of the Eos Manual.

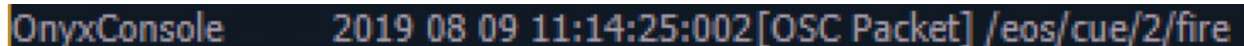
## It's Not Working!

If you followed the steps above, but the Eos cue won't fire, don't despair. There are many variables in a network system, and sometimes a little fault finding is required.

### The Eos Diagnostics Tab

Eos has a built-in diagnostics tab, which shows you what's happening on the console in real time. To access it, hold down the [Tab] key, and type in 99, then release the [Tab] key. In the window at the top, you will see a live stream of events within Eos.

On the right-hand side, ensure the Incoming OSC option is set to On. Now fire the Network cue from QLab. If the OSC is reaching Eos, you should see the following message.



```
OnyxConsole 2019 08 09 11:14:25:002[OSC Packet] /eos/cue/2/fire
```

This confirms that the OSC command made it. If you see this but nothing happens, check that you actually have a Cue 2, and that the cuelist is loaded on the master.

If you don't see this, the OSC message isn't getting through.

First, check a few basics:

- Are the Eos OSC RX port and the QLab network patch port definitely the same?
- Does Eos definitely think that the correct IP address is online? With an empty command line, press [About], and check that the expected IP appears here
- Is this IP address correctly entered in the QLab network patch?

## Network Connection Troubleshooting

If all of this is fine, we should confirm that the Mac and Eos can talk to each other at all. To do this, we will Ping the Eos from the Mac.

- Open the Terminal app on the Mac (Finder > Applications > Utilities > Terminal)

- Type in the following and hit Enter (with the IP address of your Eos): ping 10.101.92.101
- You should see the reply "64 bytes from 10.101.92.101"
- If not, you will get the failure message "Request timeout for icmp\_seq"

If your ping fails, investigate the cabling between your devices. Ensure both devices think the relevant network interface is online.