

The Devices tab displays settings for any devices connected to the console which can be remotely configured.

Click on the following Devices to find out more...

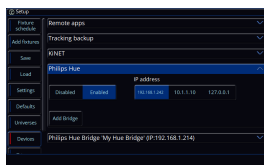
- [Remote Apps](#)
- [Tracking Backup](#)
- [KINET](#)
- [Philips Hue](#)
- [Art-Net Devices](#)
- [Enttec USB to DMX Devices](#)
- [RDM Devices](#)

Philips Hue



FLX S24, FLX S48, FLX and ZerOS Server can control the full range of Philips Hue Smart Light Bulbs and Philips Hue Smart Plugs when connected via Ethernet to a Philips Hue Bridge. Smart Light Bulbs are controlled within ZerOS in the same way as a LED fixture, whilst Smart Plugs are controlled like a relay. These can be programmed into standard cues, allowing simultaneous control with the rest of the entertainment lighting system.

[Click here to head to the Philips Hue website](#)



Philips Hue can be enabled from the Devices tab of Setup, in the Philips Hue panel. Once enabled, the Philips Hue network settings can then be configured.

IP ADDRESS

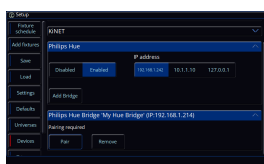
The IP address options will allow you to configure the Philips Hue network settings. You can choose between using a DHCP address, or a static IP address.

The Hue connection will be set to a Static IP address of 192.168.1.10 (Subnet Mask 255.255.255.0) by default.

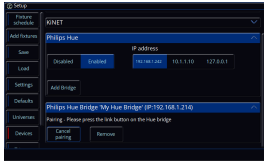
Hue Bridges will default to DHCP. Therefore, if you have a DHCP server on your console's network, you will be able to connect the Hue Bridge, and simply choose **DHCP** on your console. The DHCP server will then ensure your console and your Hue Bridge can talk to one another. If you do not have a DHCP server on your console's network, the Hue Bridge's network settings will need to be manually configured, to a static IP address in range of your console.

[For information on network settings, see the Networking chapter.](#)

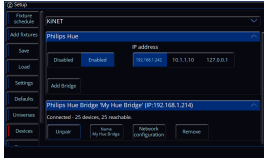
Philips Hue Smart Bulbs and Smart Plugs must be paired to a Hue Bridge first, prior to connecting the Hue Bridge to your console. To pair Hue Smart Bulbs and Smart Plugs with a Hue Bridge, the Hue Bridge must be connected to the Internet. Once paired, the Hue Bridge can then be connected to your console's network.



Once the network settings have been configured, Hue Bridges on your console's network should automatically appear after a few seconds, and will be displayed as separate panels in the Device tab. Once a Hue Bridge has been found, it will be displayed with its name and IP address shown.



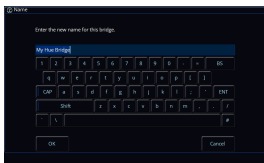
You will then need to pair your console with your Hue Bridge. To do this, click the "Pair" button in the Hue Bridge's panel within the Devices tab. The console will then be ready to pair. You can then press the large link button on top of the Hue Bridge.



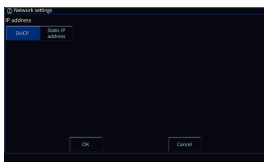
Once paired, ZerOS will detect all of the Smart Light Bulbs and Smart Plugs that may be connected to the Hue Bridge, and add them into the console. This functionality is very similar to RigSync detecting and patching RDM fixtures.

Once ZerOS has been paired with a Hue Bridge, it will have control. No other Philips Hue controls, such as Smart Switches or the Philips Hue app, will be able to take control, until ZerOS has been unpaired.

After all the Smart Light Bulbs and Smart Plugs have been added in, you can then exit Setup on your console by tapping the **Setup** key. You will then be able to control and program the connected Smart Light Bulbs and Smart Plugs. The Smart Light Bulbs and Smart Plugs will be named using their preconfigured Hue names.



Hue Bridges can be renamed from ZerOS. To rename a Hue Bridge, click the Name button within a Hue Bridge's panel in the Devices tab.

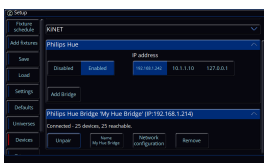


It is possible to remotely change a detected Hue Bridge's network settings from ZerOS. To do this, click the "Network Configuration" button within the Hue Bridge's panel in the Devices tab. You can then choose whether the bridge is set to DHCP, or a Static IP address.

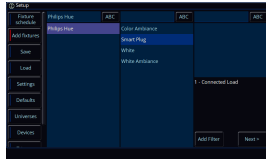


If a Hue Bridge does not automatically appear in Devices, ensure the network settings on both the Hue Bridge and ZerOS are correct.

If you need to manually connect to a Hue Bridge, click the Add Bridge button in the Philips Hue panel, and type in the IP address of your bridge.



To remove a Hue Bridge that has been manually added, click the Remove button within the added Hue Bridge's panel.



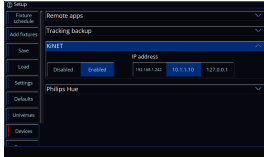
Philips Hue Smart Light Bulbs and Smart Plugs will be automatically added, but are also available in Add Fixtures.

Philips Hue Gradient lights will be treated as a single full colour Smart Bulb, with a single set of colour controls for the whole strip.

KiNET

KiNET, an Ethernet-based lighting control protocol from Color Kinetics, is designed to enable larger lighting projects and provide control over luminaires which is beyond the limitations of other protocols. ZerOS can use KiNet to control a range of Color Kinetics architectural luminaires.

[Click here to find out more about Color Kinetics](#)



KiNET can be enabled from the Devices tab of Setup, in the KiNET panel. Once enabled, the KiNET protocol network settings can then be configured.

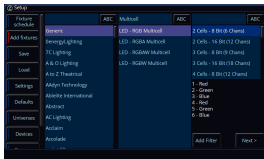
IP ADDRESS

The IP address options will allow you to configure KiNET network settings. You can choose between using a DHCP address, or a static IP address.

KiNET will be set to a Static IP address of 10.0.0.1 (Subnet Mask 255.0.0.0) by default.

[For information on network settings, see the Networking chapter.](#)

Once KiNET has been configured, KiNET devices on the network will then automatically appear in the Devices tab. For each KiNET device that appears, you can use the device's Universe field to assign a Desk Universe to it. Fixtures can be patched onto this assigned Desk Universe in the usual way from Add Fixtures.



If patching Color Kinetics fixtures with multiple cells, go to Add Fixtures, and under Generic, you can choose an RGB, RGBA, RGBAW or RGBW multicell fixture. You can then choose the relevant number of cells from the Mode column.

Remote Apps

ZerOS consoles can be remotely controlled using free remote applications, compatible with iOS, Android and Windows 10.

There are two applications available:

- "ZerOS Remote" enables wireless control of your rig, allowing you to manipulate, control and playback your shows. This is available for iOS and Android devices including iPads and tablets, but is mainly designed for use on smart phones.
- "ZerOS Monitor" emulates a wireless additional external touchscreen monitor. This is available for iOS, Android and Windows 10.

If you're on an iOS device...

- [Click here to go to the App store to download the Remote app](#)
- [Click here to go to the App store to download the Monitor app](#)

If you're on an Android device...

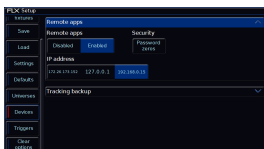
- [Click here to go to the Google Play store to download the Remote app](#)
- [Click here to go to the Google Play store to download the Monitor app](#)

If you're on a Windows device...

[Click here to download ZerOS Monitor for Windows.](#)

When running the ZerOS Monitor app on Windows 10, keyboard shortcuts are available to remotely control the console.

[Click here to find out more about keyboard shortcuts.](#)



To enable access to the console from these apps, change "Remote" to "Enabled".

Security

Your network should already include security measures to ensure unauthorised access isn't possible, however the password on the console adds an additional layer of security (this security is simply a password the remote will prompt you for before connecting - ensure you change the password from the default one). To disable this level of security, leave the Password option blank – this will disable the password.

IP Address

The IP address options will allow you to configure your Remote network settings. You can choose between using a DHCP address, or a static IP address.

The Remote connection will be set to a Static IP address of 192.168.1.10 (Subnet Mask 255.255.255.0) by default.

[For information on network settings, see the Networking chapter](#)

Once you have configured your console's remote settings, connect your remote device to the same network as your console. You can then start the app on the remote device, and your console should be found. Press on the name of your console, and click the connect button.

[Click here to find out how to build a Remote Network.](#)

On ZerOS Server, when the Remote is enabled, the IP address and subnet are displayed on the front display when the "Remote" LED is illuminated. The IP address will be displayed first, and then the display will cycle to show the subnet.

If you see 0.0.0.0 shown on the front display when the "Remote" LED is illuminated, this means ZerOS Server's Remote IP has been set to DHCP, however there is no DHCP Server on the network.

Take a look at this training session for more information on the Remote Apps...



<https://youtu.be/LjHvt6vVI-0>

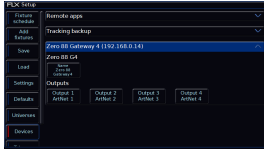
RDM Devices

Some RDM devices are not "fixtures", and don't have any DMX control channels. If RigSync discovers an RDM device with no DMX channels, the device will be displayed in the Devices tab of Setup, along with options applicable to that device.

[Click here for information on RigSync](#)

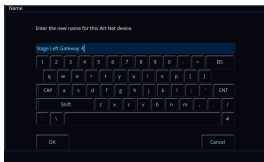
Art-Net Devices

If you enable the Art-Net protocol in the Universes tab of Setup, any Art-Net devices ZerOS can see will be displayed in the Devices tab.



In this image, [Zero 88 Gateway 4](#) can be seen by ZerOS. This is how most Ethernet to DMX gateways (sometimes referred to as "nodes") will be displayed in Devices.

In the panel header of an Art-Net device, the name of the device will be displayed, along with the IP address.

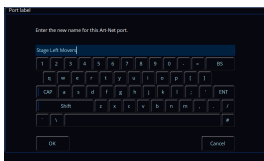


The name of Art-Net devices can be customised, by clicking on the "Name" field in the device's panel. This is very useful if you have multiple gateways in different locations, so you know which is which.



You can also remotely configure the individual DMX Output ports of the gateway using the "Outputs" fields. This allows you to choose which Art-Net universe that physical port will output. For example, you may configure all the ports to output Art-Net universe 1.

With some Ethernet to DMX Gateways, such as Gateway 4 and Gateway 8, you can remotely configure whether the port outputs streaming ACN or Art-Net data. This allows you to use the sACN standard for your DMX over Ethernet, and then just use Art-Net for configuration and monitoring. This is configured with the switch at the bottom of the Output port configuration window, if your particular Ethernet to DMX gateway has this capability.



Some Art-Net devices allow their individual DMX Output ports to be renamed. If they do, a "Port Label" field will be available to the left of the "Cancel" button.

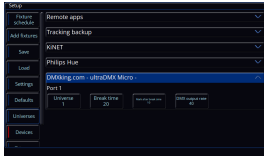
For example, if port 2 of the gateway is outputting universe 2, and your Stage Left Movers are on universe 2 connected to that port, you could rename the port, so you know exactly which fixtures are connected to this physical DMX output.

If you change a setting of an Art-Net device, but the setting reverts a second or two later, this suggests the device does not allow its settings to be remotely configured. Consult your Art-Net device's manual for configuration information.

Enttec USB to DMX Devices

USB to DMX devices which use Enttec's DMX USB Pro Widget API will be displayed within this panel. Many USB to DMX devices from many different manufacturers support this API.

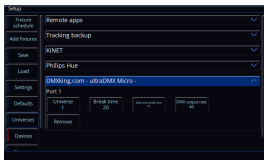
[Click here to find out more about Enttec](#)



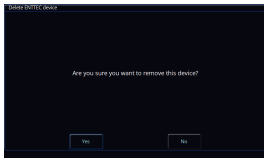
This image shows a [DMX King ultraDMX Micro](#) dongle connected to ZerOS.

The Desk Universe output from the USB to DMX dongle's port can be configured using the "Universe" field. The Enttec USB to DMX protocol allows for DMX timings to be edited, such as the Break Time (BT), Mark After Break Time (MAB) and DMX Output Rate (Hz).

The options available for each device depend on the device present.



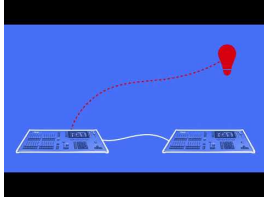
Upon unplugging a USB to DMX device, the device will remain displayed in the Devices tab of Setup. This allows you to continue configuring it. These settings will then take affect when the device is plugged back in. A Remove button is shown to allow you to Remove the device from the console.



Upon clicking Remove, ZerOS will ask you to confirm the operation.

Tracking Backup

Tracking backup allows a continuous and full back up of a master console to another device, which will automatically take over if anything happens to your main console. Tracking backup is ideal for show-critical scenarios where a backup solution must be provided.



<https://youtu.be/txg3IDjG01A>

Click the video for a description of Tracking Backup.



<https://youtu.be/L-dl4ZLf1gs>

The most common system to use with tracking backup, is a Master console and a Backup console networked together, which both have the ability to control any Ethernet devices on the network, such as an Ethernet to DMX gateway. The Master and Backup devices will then be able to send DMX to the Ethernet devices, using the sACN or Art-Net 4 protocols.

See the video to find out about the Zero 88 Gateway 4 and Gateway 8 Ethernet to DMX gateways.

[Click here to find out more about sACN](#)

[Click here to find out more about Art-Net](#)

Due to the way Art-Net data is cast, Art-Net cannot be used with tracking backup when Art-Net is configured to use a static IP.

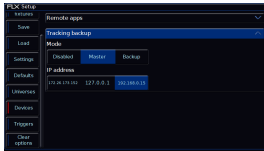
This is because when the Master and Backup synchronise, they will share the same Ethernet over DMX IP address when configured to use a static IP. This is fine for sACN, however because Art-Net data is unicast, no two Art-Net controllers can share the same IP. Therefore to use Tracking Backup with Art-Net, ensure your master is configured to use a DHCP address, or the Primary/Secondary IP. The backup will then use its respective setting when synchronised.

The following can be used as the backup device in a Tracking Backup system:

- Another console of the same type - for example a master and backup FLX
- [ZerOS Server](#) - running as the same desk type as the master console.
- [SCD Server](#) - running as the same desk type as the master console.
- [Phantom ZerOS on PC with an Unlock Dongle](#) - running as the same desk type as the master console.

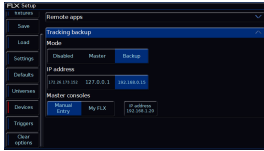
Ensure your backup device is licenced for the same number of DMX Channels as the master you are backing up if you wish the backup to fully takeover in the event that the master goes offline.

The Master and Backup device must be running the same software version.



To configure your Tracking Backup system, first choose "Master" on the console you wish to be the Master device. The IP address options will allow you to configure your Tracking Backup Master console network settings. You can choose between using a DHCP address, or a static IP address.

You can then exit Setup on the Master device, and continue to program or run your show.



On the console you wish to be the backup device, choose Backup under the Tracking Backup settings. The IP address options will allow you to configure your Tracking Backup Backup console network settings. You can choose between using a DHCP address, or a static IP address.

[For information on network settings, see the Networking chapter](#)

Both the Master and Backup device can have their own Remote connection enabled. This means you can remotely connect to the Master or Backup device in the system.

Once your network settings are configured, on both the Master and Backup devices, the Backup device will then display any Master consoles it can see on the network under "Master Consoles". The Desk Name of the Master console will be displayed. This can be configured in **Setup** -> **Settings** -> **Desk Name** on the Master console.

Click on the Master console you wish to backup. If it isn't displayed, your network settings are either incorrect, or the Master and Backup devices are not on the same network and port forwarding is required. In these cases **Manual Entry** can be chosen, and the IP address of the master console can be manually entered.

You can then exit Setup on the backup device.



Upon exiting Setup on the backup device, both the Master and Backup will receive a popup, asking you to confirm which show file you wish to use. This popup will display the IP address of the Master and Backup device, the show name of the Master and Backup device (if the show has been saved to USB), and the last time the show was saved to the devices internally.

ZerOS is therefore asking whether you wish to send the Master's show file over the network to the Backup, or the Backup's show file to the Master. In most cases you will require the backup to take the master's show file, and therefore the master show is sent to the backup.

Choosing to send the Master's show to the Backup, will overwrite the current show on the Backup.

Choosing to send the Backup's show to the Master, will overwrite the current show on the Master.

Therefore, a third option is provided, to allow you to save the current show to USB first.

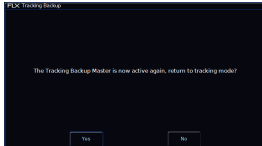


After choosing your show, the show will then be sent over the network. Once the Master and Backup are synchronised, the synchronisation screen will be shown on the Backup device (pictured).

The Backup device is now tracking the master, and programming changes made on the master, are automatically sent to the backup. If the Backup loses sight of the Master console on the network, whether that be because the Master loses power or network connection, the Backup device will automatically take control of the rig.

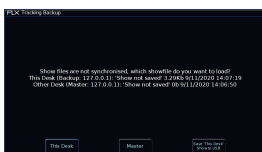
In the Synchronisation screen, the playback status table is shown, indicating which playbacks and cues are currently running on the master device currently in control (Stack 0 is the Master Playback).

A **Take Control!** button is provided in the Synchronisation screen, giving the option for the backup device to manually take control. Pressing this, would then result in the Master console tracking and backing up the Backup device, and the Master would then be displaying the Synchronisation screen.



If the Master has gone offline, the Backup will automatically take control. If the Master then comes back online, it will not automatically take control again. Instead, the Master will display a Take Control button, and the Backup device will alert you that the Master has come back online (pictured).

You can then choose for the Backup device to go back to tracking the master.



If whilst the Master has been offline changes have been made to the show file on the Backup device, again you can choose which show file you wish to use.

On ZerOS Server, when Tracking Backup is enabled to either Master or Backup modes, the IP address and subnet of Tracking Backup are displayed on the front display when the "Backup" LED is illuminated. The IP address will be displayed first, and then the display will cycle to show the subnet.

If you see 0.0.0.0 shown on the front display when the "Backup" LED is illuminated, this means ZerOS Server's Tracking Backup IP has been set to DHCP, however there is no DHCP Server on the network.