

Remote Device Management



Remote Device Management is a protocol that expands the capabilities of DMX, providing a method for two-way communication between the console and the other devices in your rig, such as fixtures.

ZerOS' implementation of RDM is called "RigSync" which allows ZerOS to manage the rig – ensuring the console and lighting rig are synchronised, not just at the point of "patching" but continuously through the performance. New fixtures are automatically added, problems such as collisions in DMX addresses are automatically fixed, and settings such as modes and alignments are automatically kept in sync between the console and the rig. If a new fixture is added, ZerOS automatically assigns it settings, adjusting other fixtures if necessary to ensure the rig works. Patched fixtures which don't support remote management are avoided rather than ignored.

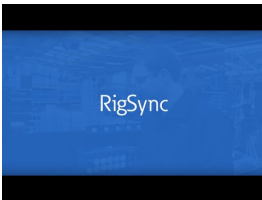
ZerOS will patch RDM fixtures with dimmers first, then LED fixtures, and then moving lights, in the order of their current DMX address.

When RigSync discovers RDM fixtures, "RigSync is processing x devices" will be shown at the top of the Output window, whilst ZerOS processes the fixtures and patches them. If any of the devices patched by RigSync go offline, whether that be because they lose DMX connection or power, an error notification will be shown in the Output window. You will be able to view the errors, or dismiss them. A red cross will be displayed next to the fixture numbers of fixtures that are currently offline.



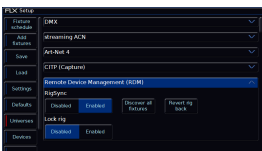
Take a look at this video to see RDM in action.

<https://youtu.be/UUMojZT59Vw>



Take a look at this video to see RigSync in action.

https://youtu.be/e6mF8Qb_4ic



RigSync can be enabled or disabled within the RDM panel of the "Universes" tab within Setup. On FLX, RigSync is disabled by default. On FLX S, RigSync is enabled by default on DMX port 1.

Discover All Fixtures

The **Discover all fixtures** button discovers and patches all possible fixtures at the point it's pressed. Although this usually happens automatically when RigSync is enabled, there are situations when it won't. For example, if you delete a fixture that was discovered by RigSync, that fixture won't be rediscovered and repatched unless you press

Discover all fixtures.

Revert Rig

The **Revert rig back** button reverts all fixtures to the settings they had when they were first discovered by RigSync. For example, if the whole rig was DMX Address 1, RigSync will remember those settings (and store them in the showfile) before automatically changing the DMX addresses so they don't clash. Selecting **Revert rig back** will put all the fixtures back to DMX Address 1, and not automatically change them again.

Lock Rig

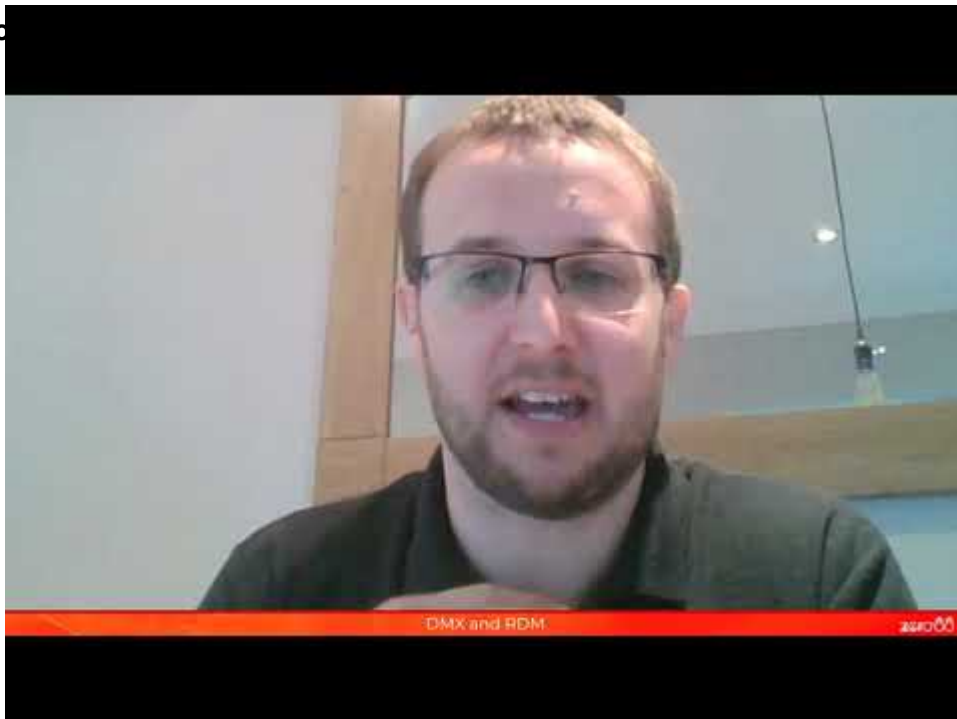
By default, Lock Rig is disabled. However when enabled, "Lock rig" instructs RigSync to continuously and automatically revert any changes which are made to settings on fixtures that could affect the show – such as DMX Address, Pan/Tilt Settings or Personality/Mode. When changes such as these are made on a fixture, RigSync will detect them and revert them back. These changes can continue to be made from the console without disabling "Lock Rig".

Art-RDM

As well as RigSync using RDM on the DMX ports on the rear of the console to keep your console and fixtures synchronised, RigSync will also use RDM over Art-Net if Art-Net is enabled.

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

To go in depth o



<https://youtu.be/Jdw1pHuELV8>

Sometimes, you may find that fixtures flicker, with the presence of RDM on the DMX line. If so, then unfortunately your fixtures are not truly DMX compliant.

To stop the flicker, you will need to remove RDM data from the fixture's DMX line. This can be done by either disabling RigSync completely, or disabling RigSync just on the DMX port the fixtures are connected to. Alternatively connect your non-compliant fixtures from a feed of a DMX Splitter with RDM removed.

Contact the fixture's manufacturer, to see if there is a firmware update to solve the flicker.



If you need to remove RDM from a DMX line, Splitter 8 has a switch to allow you to remove RDM data from the DMX Outputs. Watch the video to find out more.

[Click here to go to the Splitter 8 page.](https://youtu.be/ladTdTY33Eo)

<https://youtu.be/ladTdTY33Eo>

RigSync: The Concept

RigSync allows you to be completely unconcerned with the technical elements that allow consoles to talk to lighting rigs. RigSync doesn't simply read your rig or just patch your console, it manages your lighting rig with absolutely no interaction from you – ensuring your console and lighting rig are continuously synchronised and problem free by automatically and invisibly solving potential disputes such as collisions in DMX address or changes of fixture mode.

In a large percentage of low to medium sized events and venues, technicians are not concerned with DMX addresses so long as their fixtures are functioning correctly. Often, settings such as DMX address, mode, Pan / Tilt invert etc are not discussed or decided upon until the build. In these situations, the DMX addressing and patch processes (both on the physical fixtures and the console) often delay progress and are inefficient, resulting in messy notes on the back of a set list or within a script margin, while the console op shouts up to a technician in a cherry picker or up a ladder, attempting to get the rig and the console synchronised. The console op often is interrupted from their programming to test a fixture's new settings or, even worse, having to use trial and error to find the address or mode of an inaccessible fixture.

We see these as unnecessary steps that delay the operator from designing and programming their show, resulting in an inferior show. This is especially prevalent for the low end users we now see adopting colour mix and movers for the first time.

With RigSync, ZerOS manages the rig – ensuring the console and lighting rig are synchronised, not just at the point of “patching” but continuously through the performance. RigSync is the first implementation of DMX, RDM and ArtRDM in a lighting console that allows the installer and operator to be completely unconcerned and oblivious to the technical elements that allow their consoles to talk to their lighting rig. New fixtures are automatically added, problems such as collisions in DMX addresses are automatically fixed, and settings such as modes and alignments are automatically kept in sync between the console and the rig. If a new fixture is added, ZerOS automatically assigns it settings, adjusting other fixtures if necessary to ensure the rig works. Patched fixtures which don't support remote management are avoided rather than ignored.

RigSync only changes settings when it's necessary to make the rig work. When the show is over, the user can choose to revert the rig back to its original settings, ensuring touring venues are left happy.

Users can choose to disable RigSync per output of the console, addressing issues often experienced on lower value equipment where the DMX & RDM specifications haven't been accurately implemented.