VR Stage Lighting Artnet Grid Node Manual

Thank you for purchasing the VR Stage Lighting Artnet Grid node and supporting the VR Stage Lighting project! This is the manual/guide for the VR Stage Lighting ArtNet Grid Node application, outlining its features, settings, and troubleshooting steps.

About:

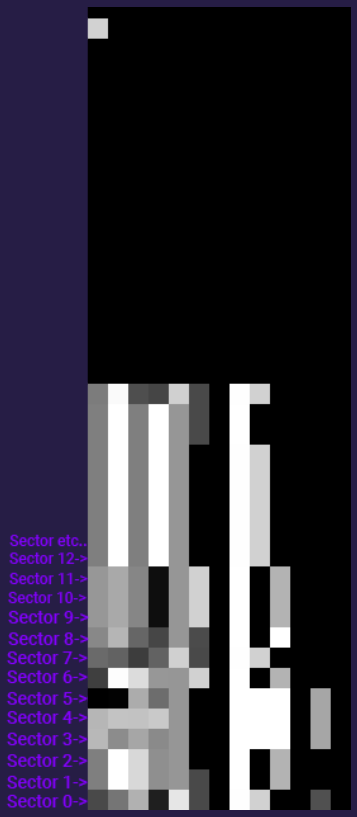
The VR Stage Lighting Artnet Grid Node is an Artnet node that can take DMX512 signals over ethernet and convert them into colored squares that the VRSL shaders can read as well as other formats including MIDI and OSC. The Grid node will show up in Artnet compatible software and hardware as a proper Artnet node.

The grid supports 1½ Universes and arranges them into 13 columned rows called “Sectors' '. Each sector represents 1 unique VRSL fixture in Unity/VRChat. The grid’s resolution is 208px by 1080px. This is so that it

can fit in a standard 16:9 stream on the right side. Please refer to the “DMX via Stream Panel Guide.pdf” that is available with the official VRSL Github download for how to use this grid with OBS.

Here is the expected channel format for each “Sector”:

1. Pan (Left/Right Rotation)
2. Fine-Pan
3. Tilt (Up/Down Rotation)
4. Fine-Tilt
5. SpotLight Radius/Cone Width (Will show up as "Motor Speed" in some software)
6. Intensity
7. Strobe (0-009 is off, 010-255 is slow to fast)
8. Red Intensity
9. Green Intensity
10. Blue Intensity
11. Unused (Labeled as "White Intensity" in some software)
12. GOBO selection (1 through 6; Labeled as "Programmes" in some software)
13. GOBO Spin Speed (WIP); Labeled as "Speed/Sensitivity");

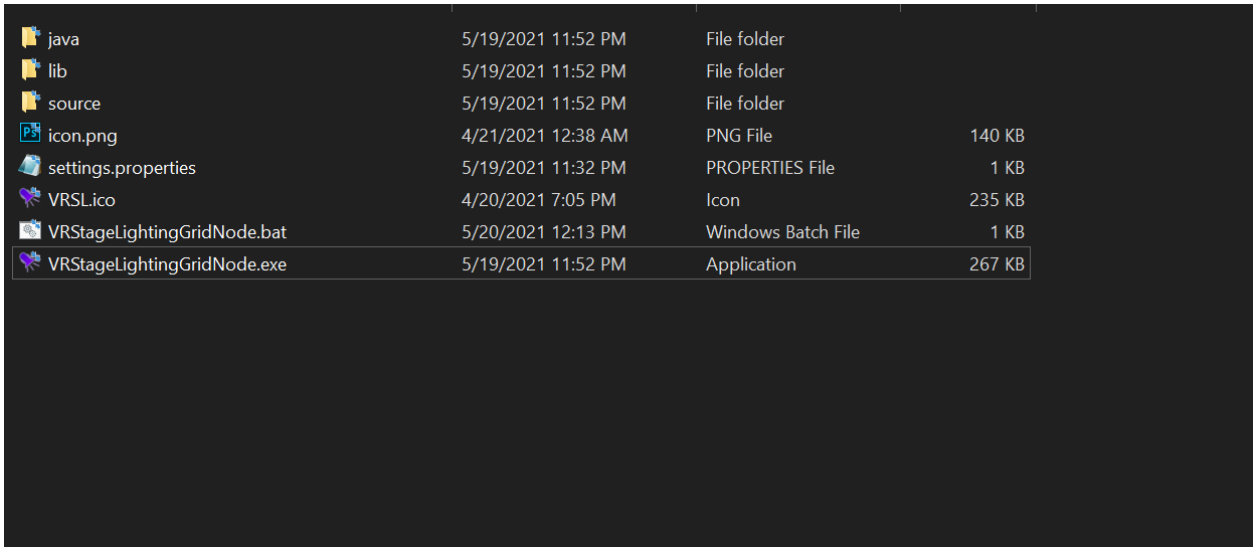


Features:

- Reads Artnet signals from a specified IP address.
- Convert incoming Artnet signals as pixel data.
- Convert incoming Artmet signals as MIDI data to a midi device.
- Convert incoming Artnet signals as OSC.
- Batch file for optional debug mode.
- 208px by 1080px resolution
- 60hz update rate.

Installation:

-Purchase the VR Stage Lighting Artnet Grid Node and download a copy.
-Unzip the file to a folder somewhere on your computer and run the included executable.
-If the executable doesn't run, ensure that Java is installed on your system and try again.

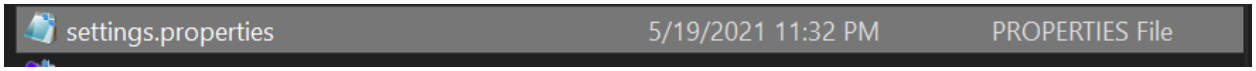


Debug Mode:

An optional debug mode to read the console output is available. Just run the included .bat file instead of the normal executable, and both the grid and a console window will appear with various helpful information.

Configuring Settings:

The VR Stage Lighting Artnet Grid Node comes with a .properties file that can be edited in a text editor of your choice to configure the different properties of the node. Ensure to modify only the value on the right side of the = sign for each property. Remember to save as well otherwise the properties will not be applied the next time the application is run. The different properties and what they do will be listed below:

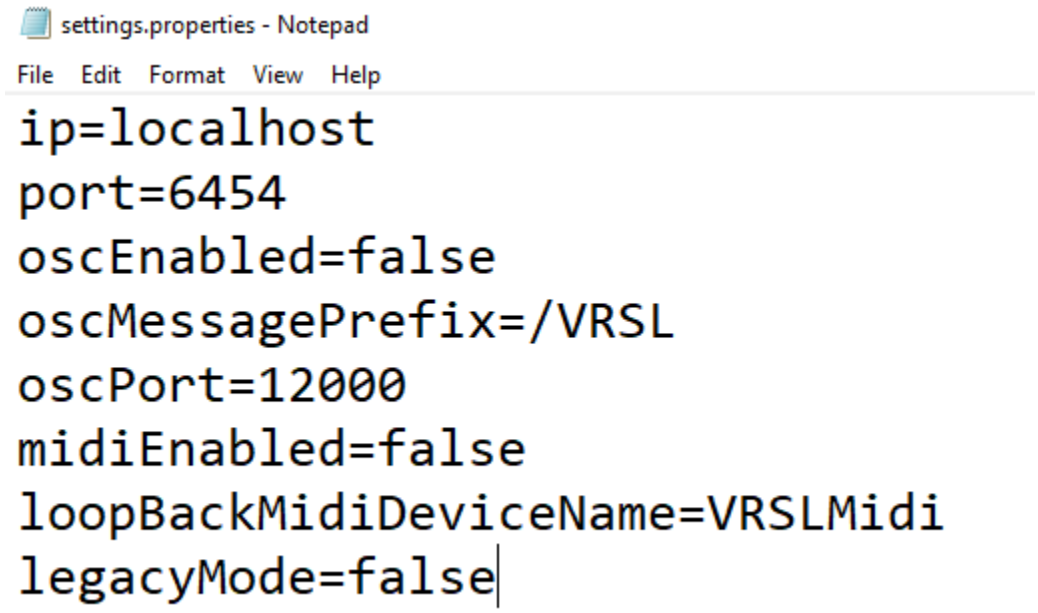


- ***ip:*** The ip address the node will try to read Artnet signals from. By default it is set to “localhost” aka “127.0.0.1” aka the loopback ip. You can type a custom ip address here if you want to read from another source. The format should be an ipv4 in this format “xxx.xxx.xxx.xxx”. This ip address will also be the same address the OSC signals will be sent out to.
- ***port:*** The port the node will try to read from. The default port is the default Artnet port: 6454. This can be changed if needed.
- ***oscEnabled:*** Enable OSC output from the node when set to “true”. All new incoming Artnet signals will be converted into OSC integer messages.
- ***oscMessagePrefix***: The prefix of the title of all OSC messages. The default prefix is “/VRSL”. The suffix will always be “/” then the channel DMX channel number.
- ***oscPort:*** The port the outputted OSC messages will go to. The default port is 12000.
- ***midiEnabled:*** Enable MIDI output from the node when set to “true”. All new incoming Artnet signals will be converted into MIDI control Change messages sent to the specified MIDI device.

- ***loopBackMidiDeviceName:*** The name of the MIDI device to be outputted to. The name is derived from the loopmidi software

(https://www.tobias-erichsen.de/software/loopmidi.html) that allows you to create virtual MIDI devices you can send the messages to, which can then be relayed into a software of your choice. The default MIDI Device name is “VRSLMidi”.

- ***legacyMode:*** An outdated version of the node that is in a 200x200, 2 column grid instead of a 208x1080 1 column grid. This was added as some older videos/shows still used this older format.



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Limitations:

-Due to limitations of this system, the range supported channels for Universe 1 is CH1-CH512 and the supported channels for Universe 2 is CH1- CH346. This is due to how the grid system is currently made, expansion settings are planned for future releases.

-Since 13 channels doesn’t fit evenly into 512, it is highly recommended to end Universe 1 on Channel 517 and begin Universe 2 on Channel 9. This is due to the fact that adding a 13 channel fixture on Channel 508 will result in it bleeding over to Universe 2.

- U1 Channel 508 to U2 Channel 8 will be reserved for auxiliary channels in future updates. Here is what is currently mapped to those channels by default:

--Channel 508: Disco Ball Intensity.

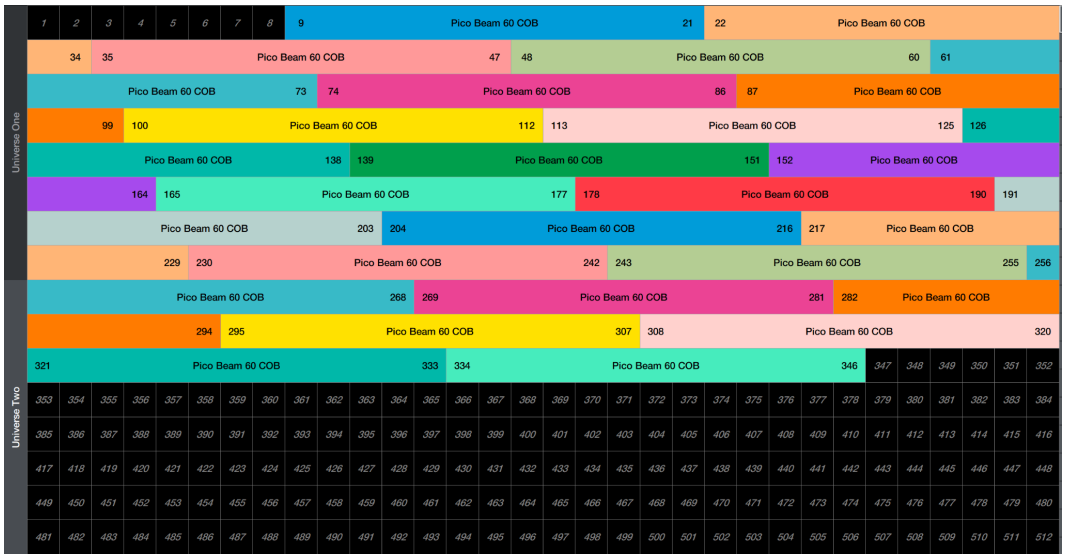
--Channel 509: GPU Particle Confetti (Coming Soon)

--Channel 510: Global Mover Speed (More Information Below)

--Channel 511-512: Fog Machines (Coming Soon).

--U2 Channel 1-8: Currently Unused; More Planned Features.

Here is the current max number of fixture combinations as illustrated in SoundSwitch:



(all 13 Channel fixtures in this image are Pico Beam 60s, the first few are just renamed for organization purposes as this is based off the Orion Venue).

-Due to these limitations, it is highly recommended to be efficient with how you map your fixtures. Using the Invert Pan and Invert Tilt functionalities on the VRSL fixtures in Unity to create mirrored setups are one of the best ways to minimize the number of unique fixtures needed.