



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:

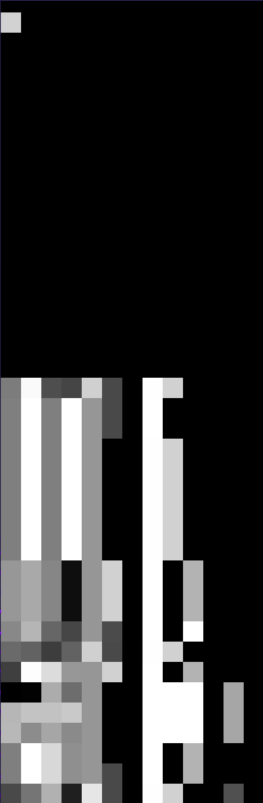
The VR Stage Lighting Artnet Grid Node is an Artnet node that can take DMX512 signals over ethernet and convert them into colored squares that the VRSL shaders can read as well as other formats including MIDI and OSC. The Grid node will show up in Artnet compatible software and hardware as a proper Artnet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



Sector etc.,
Sector 12->
Sector 11->
Sector 10->
Sector 9->
Sector 8->
Sector 7->
Sector 6->
Sector 5->
Sector 4->
Sector 3->
Sector 2->
Sector 1->
Sector 0->

Features:

- Reads Artnet signals from a specified IP address.
- Convert incoming Artnet signals as pixel data.
- Convert incoming Artnet 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.

java	5/19/2021 11:52 PM	File folder	
lib	5/19/2021 11:52 PM	File folder	
source	5/19/2021 11:52 PM	File folder	
icon.png	4/21/2021 12:38 AM	PNG File	140 KB
settings.properties	5/19/2021 11:32 PM	PROPERTIES File	1 KB
VRSLico	4/20/2021 7:05 PM	Icon	235 KB
VRStageLightingGridNode.bat	5/20/2021 12:13 PM	Windows Batch File	1 KB
VRStageLightingGridNode.exe	5/19/2021 11:52 PM	Application	267 KB

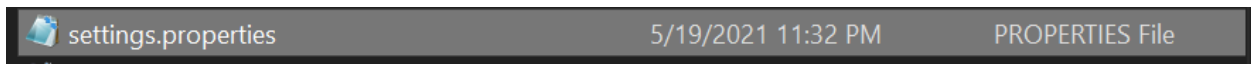
Debug Mode:

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.

VRStageLightingGridNode.bat	5/20/2021 12:13 PM	Windows Batch File
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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.

 settings.properties - Notepad

File Edit Format View Help

```
ip=localhost
port=6454
oscEnabled=false
oscMessagePrefix=/VRSL
oscPort=12000
midiEnabled=false
loopBackMidiDeviceName=VRSLMidi
legacyMode=false|
```

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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:

Universe One	1												Inner Front House Movers												13		14		Outer Front House Movers												26		27	
	Inner DJ Booth Movers												39		40		Outer DJ Booth Movers												52		53		1st C House Suspended Movers											
	65		66		2nd C House Suspended Movers												78		79		Rear C House Suspended Movers												91		92									
	Front House Speaker Movers												104		105		Outer FB Movers												117		118		Center House LightBars											
	130		131		House Left Blinders												143		144		House Center Blinders												156		157									
	House Right Blinders												169		170		Front House Left Par Light												182		183		Front House Right Par Light											
	195		196		Center House Par Lights												208		209		First Rear Par Lights												221		222									
	Second Rear Par Lights												234		235		Third Rear Par Lights												247		248		Inner Pole Par Lights											
	260		261		Outer Pole Par Lights												273		274		Inner FB Mover												286		287									
	Pico Beam 60 COB												299		300		Pico Beam 60 COB												312		313		Pico Beam 60 COB											
	325		326		Pico Beam 60 COB												338		339		Pico Beam 60 COB												351		352									
	Pico Beam 60 COB												364		365		Pico Beam 60 COB												377		378		Pico Beam 60 COB											
	390		391		Pico Beam 60 COB												403		404		Pico Beam 60 COB												416		417									
	417		Pico Beam 60 COB												429		430		Pico Beam 60 COB												442		443											
	Pico Beam 60 COB												455		456		Pico Beam 60 COB												468		469		Pico Beam 60 COB											
	481		482		Pico Beam 60 COB												494		495		Pico Beam 60 COB												507		Di...		Sc...		Gl...		L3000 Fo...			

Universe Two	1												Inner Front House Movers												13		14		Outer Front House Movers												26		27	
	Inner DJ Booth Movers												39		40		Outer DJ Booth Movers												52		53		1st C House Suspended Movers											
	65		66		2nd C House Suspended Movers												78		79		Rear C House Suspended Movers												91		92									
	Front House Speaker Movers												104		105		Outer FB Movers												117		118		Center House LightBars											
	130		131		House Left Blinders												143		144		House Center Blinders												156		157									
	House Right Blinders												169		170		Front House Left Par Light												182		183		Front House Right Par Light											
	195		196		Center House Par Lights												208		209		First Rear Par Lights												221		222									
	Second Rear Par Lights												234		235		Third Rear Par Lights												247		248		Inner Pole Par Lights											
	260		261		Outer Pole Par Lights												273		274		Inner FB Mover												286		287									
	Pico Beam 60 COB												299		300		Pico Beam 60 COB												312		313		Pico Beam 60 COB											
	325		326		Pico Beam 60 COB												338		339		Pico Beam 60 COB												351		352									
	Pico Beam 60 COB												364		365		Pico Beam 60 COB												377		378		Pico Beam 60 COB											
	390		391		Pico Beam 60 COB												403		404		Pico Beam 60 COB												416		417									
	417		Pico Beam 60 COB												429		430		Pico Beam 60 COB												442		443											
	Pico Beam 60 COB												455		456		Pico Beam 60 COB												468		469		Pico Beam 60 COB											
	481		482		Pico Beam 60 COB												494		495		Pico Beam 60 COB												507		Di...		Sc...		Gl...		L3000 Fo...			

Universe One	1	2	3	4	5	6	7	8	9	Pico Beam 60 COB												21	22	Pico Beam 60 COB																
	34		35		Pico Beam 60 COB												47		48		Pico Beam 60 COB												60		61					
	Pico Beam 60 COB								73		74		Pico Beam 60 COB												86		87		Pico Beam 60 COB											
	99		100		Pico Beam 60 COB												112		113		Pico Beam 60 COB												125		126					
	Pico Beam 60 COB								138		139		Pico Beam 60 COB												151		152		Pico Beam 60 COB											
	164				165				Pico Beam 60 COB												177		178		Pico Beam 60 COB												190		191	
	Pico Beam 60 COB								203		204		Pico Beam 60 COB												216		217		Pico Beam 60 COB											
	229				230				Pico Beam 60 COB												242		243		Pico Beam 60 COB												255		256	
	Pico Beam 60 COB								268		269		Pico Beam 60 COB												281		282		Pico Beam 60 COB											
294				295				Pico Beam 60 COB												307		308		Pico Beam 60 COB												320				
Universe Two	321		Pico Beam 60 COB												333		334		Pico Beam 60 COB												346		347	348	349	350	351	352		
	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384								
	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416								
	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448								
	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480								
	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512								

(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.